

AVX

50 Q 222 M A E A A

Range

General Purpose (* denotes special order)

5A	NP0 class I disc ceramic
5B*	P100 class I disc ceramic
5C*	N150 class I disc ceramic
5D*	N220 class I disc ceramic
5E*	N330 class I disc ceramic
5F*	N470 class I disc ceramic
5G	N750 class I disc ceramic
5H	N1500 class I disc ceramic
5I*	N2200 class I disc ceramic
5J*	N4700 class I disc ceramic
5K	SL disc ceramic
5M	Y5E class II disc ceramic
5N	Y5F class II disc ceramic
5O	Y5P class II disc ceramic
5P*	Y5R class II disc ceramic
5Q*	Y5T class II disc ceramic
5S	Y5U class II disc ceramic
5T	Y5V class II disc ceramic
5U	Z5V class II disc ceramic
5V*	Z4V class II disc ceramic
5W	Y5P class III disc ceramic
5Y	Y5U class III disc ceramic
5Z	Y5V class III disc ceramic

Professional Switch Mode Safety
(*denotes special order)

6A	NP0 class I disc ceramic
6B*	P100 class I disc ceramic
6C*	N150 class I disc ceramic
6D*	N220 class I disc ceramic
6E*	N330 class I disc ceramic
6F*	N470 class I disc ceramic
6G	N750 class I disc ceramic
6H	N1500 class I disc ceramic
6I*	N2200 class I disc ceramic
6J*	N4700 class I disc ceramic
61	Safety disc ceramic
62	Safety disc ceramic
63	Safety disc ceramic
67	Y5U / SM disc ceramic
68	Y5V / SM disc ceramic
6L	Y5P / SM disc ceramic
6M	X5E class II disc ceramic
6N	X5F class II disc ceramic
6O	X5P class II disc ceramic
6P*	X5R class II disc ceramic
6Q*	X5T class II disc ceramic
6S	X5U class II disc ceramic
6T	X5V class II disc ceramic
6U	Z5V class II disc ceramic
6V*	Z4V class II disc ceramic
6W	Y5P class III disc ceramic
6Y	Y5U class III disc ceramic
6Z	Y5V class III disc ceramic

Rated voltage (*denotes special order)

D	16V
F	25V
H	50V
K	100V
N	Safety
O	Safety
Q	500V
R	1000V
S	2000V
T	3000V
U	4000V
V	Safety
W	5000V
X*	6000V
Y*	7500V

Capacitance code

Capacitance tolerance

Lead form

D	2.5mm straight leads
A	5mm straight leads
E	6mm straight leads
B	7.5mm straight leads
C	10mm straight leads
P	12.5mm straight leads
O	5mm kinked leads
X	6mm kinked leads
R	7.5mm kinked leads
W	10mm kinked leads
N	5mm shouldered
Q	7.5mm shouldered

Diameter

A	4mm
B	5mm
C	6mm
D	7mm
E	8mm
F	9mm
G	10mm
H	11mm
J	13mm
K	15mm
M	19mm (0.8mm wire recommended)

Finishing

Low voltage

A	Phenolic
Q	Waxed phenolic
S	Epoxy (professional ≤ 8mm diameter)
D	Epoxy (professional ≥ 8mm diameter)

High voltage

C	Epoxy wire diameter 0.6mm
I	Epoxy wire diameter 0.8mm
L	Phenolic wire diameter 0.6mm

CAPACITORS

Ceramic - Single Layer

Package

A	Cardboard strips
E	Bulk 5mm free wire length
C	Bulk 10mm free wire length
D	Bulk 25mm free wire length
H	Tape & reel. Avisert straight legs
L	Tape & reel. Avisert/ Panasert kinked or shouldered legs
J	Tape & reel. Panasert straight legs
I	Ammo pack. Avisert straight legs
M	Ammo Pack. Avisert/ Panasert kinked or shouldered legs
K	Ammo pack. Panasert straight legs

AVX

HP 40 E 3 0102 M —

Range

HB	High voltage ceramic rod capacitors
HD	High voltage coated ceramic disc capacitor
HE	High voltage uncoated ceramic disc capacitor
HF	High voltage ceramic rod capacitor
HP	High voltage coated ceramic disc capacitor
HR	High voltage coated ceramic disc capacitor
HS	High voltage uncoated ceramic disc capacitor
HZ	High voltage radial ceramic disc capacitor
HT	High voltage coated ceramic disc capacitor
HU	High voltage uncoated ceramic disc capacitor

Size

Dielectric / class

A	P100 Class I
C	NP0 Class I
E	N4700 Class II
H	N33 Class I
N	N10000 Class II
T	N470 Class I
U	N750 Class I
V	N1500 Class I
W	+22% -56%
X	+22% -82%
0	Not specified (HD/HE/HR/HS/HB/HF series)

Voltage

L	1000V
M	1600V
N	2000V
P	2500V
Q	3000V

R	4000V
S	5000V
T	6000/6300V
U	8000/9000V
V	10kV
W	12.5kV
X	20/25kV
3	30kV
4	40kV
5	50kV
0	Not specified (HT/HU/HB/HF series)

Capacitance code

(Eg 0103 = 10000pF)

Digit 1	Leading 0
Digit 2/3	Significant value
Digit 4	Number of zeroes or 9 to multiply by 0.1 for values ≤ 9.9pF

Capacitance tolerance

Suffix

BC Components (clear text)

K 101 G 33 C0G H WG AP

Range

R	Miniature plate capacitor
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Capacitance code

Capacitance tolerance

Size code (Width x height in mm)

19	3.9 x 6.7
29	4.5 x 7.3
33	5.3 x 8.1
43	6.2 x 9.0
53	6.2 x 11.2
63	6.5 x 13.2

Dielectric / TCR characteristic

M7J	P100 / 30 ppm
C0G	NP0 / 30 ppm
P2G	N150 / 30 ppm
U2J	N750 / 120 ppm
P8K	N1500 +500/-0 ppm
SLO	+150 to -1500 ppm
Y5P	10% @ -30 to +85°C
X5U	+22 -58% @ -55 to +85°C
Z5U	+22 -82% @ -10 to +85°C

CAPACITORS

Ceramic - Single Layer

Voltage

F	50V
H	100V
L	500V
N	1000V

Package

WC	0.50 flange leads @ 0.100" spacing. Bulk
WD	0.167 flange leads @ 0.200" spacing. Bulk.
WE	0.167 flange leads @ 0.100" spacing. Bulk.
WF	0.50 flange leads @ 0.200" spacing. Bulk.
WG	18mm (Ho) flange leads @ 0.200" spacing. Tape & reel
WH	18mm (Ho) flange leads @ 0.100" spacing. Tape & reel
WJ	18mm (Ho) flange leads @ 0.200" spacing. Ammo pack
WK	18mm (Ho) flange leads @ 0.100" spacing. Ammo pack

Class code

AP	Class 1
SP	Class 2

BC Components (12NC Class 1 miniature plate)

2222 680 04 09 102

Prefix

2222	Capacitor
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Style

652	Class 1 miniature plate, 500V, 5.08mm pitch, long-lead. Bulk pack
653	Class 1 miniature plate, 500V, 5.08mm pitch, short-lead. Bulk pack
654	Class 1 miniature plate, 500V, 5.08mm pitch. Reel
678	Class 1 miniature plate, 100V, 2.54mm pitch. Reel
679	Class 1 miniature plate, 100V, 5.08mm pitch. Reel
680	Class 1 miniature plate, 100V, 2.54mm pitch, long-lead. Bulk pack
682	Class 1 miniature plate, 100V, 2.54mm pitch, short-lead. Bulk pack
681	Class 1 miniature plate, 100V, 5.08mm pitch, long-lead. Bulk pack
683	Class 1 miniature plate, 100V, 5.08mm pitch, short-lead. Bulk pack
688	Class 1 miniature plate, 100V, 2.54mm pitch. Ammo pack
689	Class 1 miniature plate, 100V, 5.08mm pitch. Ammo pack
691	Class 1 miniature plate, 500V, 5.08mm pitch. Ammo pack
694	Class 1 miniature plate, 1000V, 5.08mm pitch. For SL types

Dielectric

03	P100 < 10pF
04	P100 ≥ 10pF
09	NP0 < 10pF
10	NP0 ≥ 10pF
90	NP0 precision
33	N150 < 10pF
34	N150 ≥ 10pF
57	N750 < 10pF
58	N750 ≥ 10pF
69	N1500 < 10pF
70	N1500 > 10pF

Package

09	SL long-lead. Bulk
19	SL short-lead. Bulk
53	SL reel
63	SL ammo pack

Capacitance code

(Eg 107 = 0.01pF)

Digit 1/2	Significant value
Digit 3	7 x 0.01
	8 x 0.1
	9 x 1
	1 x 10
	2 x 100
	3 x 1000

BC Components (12NC Class 2 miniature plate)

2222 629 08 102

Prefix

2222	Capacitor
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Dielectric

629	Class 2 miniature plate, 63V, K14,000, Z5V
630	Class 2 miniature plate, 100V, K2000, Y5P
640	Class 2 miniature plate, 100V, K5000, X5U
655	Class 2 miniature plate, 500V, K2000, Y5P
693	Class 2 miniature plate, 1000V, K2000, Y5P
695	Class 2 miniature plate, 1000V, K5000, X5U

Style

08	2.54mm pitch long-lead. Bulk
09	5.08mm pitch long-lead. Bulk
18	2.54mm pitch short-lead. Bulk
19	5.08mm pitch short-lead. Bulk
51	2.54mm pitch. Reel
53	5.08mm pitch. Reel
61	2.54mm pitch. Ammo pack
63	5.08mm pitch. Ammo pack

CAPACITORS

Ceramic - Single Layer

Capacitance code

(Eg 107 = 0.01pF)

Digit 1/2	Significant value
Digit 3	7 x 0.01
	8 x 0.1
	9 x 1
	1 x 10
	2 x 100
	3 x 1000

BC Components (Clear text ceramic disc)

D 471 K 20 Y5P L 6 3 1 5

Range

D	General purpose ceramic disc
S	Safety, GAP-KAP or general, heavy duty
U	Semiconductor type ceramic disc
F	Low dissipation ceramic disc

Capacitance code

(Eg 107 = 0.01pF)

Digit 1/2	Significant value
Digit 3	9 x 0.1
	0 x 1
	1 x 10
	2 x 100
	3 x 1000
	4 x 10000

Capacitance tolerance

Size code

Refer to BC Components databook

Dielectric

Voltage (dc)

C	16V
E	25V
F	50V
L	500V
N	1KV
P	2KV
R	3KV
U	6KV
S	X1/Y2 250 V (type DN)

Lead diameter

5	0.5
6	0.6
8	0.8

Lead length / package

3	30mm lead length. Bulk
5	5.0mm lead length. Bulk
T	Tape & reel
U	Ammo pack

Lead style

I	Inside kink
K	Outside kink
L	Straight

Lead spacing

2	2.5
5	5.0
6	6.4
7	7.5
0	10.0

BC Components (12NC ceramic disc)

2252 50 1 00 1 1

Prefix

Range

50	NP0
51	N150
52	N220
53	N330
54	N470
55	N750
56	SLO
57	S3N
60	X7R
61	Y5P
64	Z5U
65	Z5V
70	Y5P low dissipation
71	Y5R low dissipation
76	Y5P
77	Y5R semiconductor type
78	Y5U
79	Y5V
81	Safety DN type
88	Gap-Kap
89	Non-codable

Voltage

General & low dissipation types

1	1KV
2	2KV
3	3KV
4	6KV
5	50V
6	100V
7	250V

CAPACITORS

Ceramic - Single Layer

8	500V
9	Non-codable

Semiconductor type

1	16V
2	25V
5	50V

Safety type

2	250V
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Lead style & package

00-52	Refer to Charcroft
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Capacitance

0-84	Refer to Charcroft
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Capacitance tolerance

0-9	Refer to Charcroft
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Beck

CD 10 K3 10N0 Z S AR

Type

CD	Standard disc
HD	High voltage to $\leq 8\text{KVdc}$
TD	Low voltage (Transcap)
GD	Close tolerance (Gimmicon)
YD	Suppression disc
SD	Suppression disc
ID	Isolation disc
LD	Leadless disc
RT	Radial tubular
MT	Miniature tubular

Size

Guide to finished dimensions

Dielectric

AG	P100
CG	NPO
HG	N033
LG	N075
PG	N150
RH	N220
SH	N330
TH	N470
UJ	N750
VK	N1000
WK	N1500
KL	N2200
DL	N3300
EM	N4700
FK	N5600

K1	K2300
K1	K0600
K1	K1100
K1	K1200
K1	K1700
K1	K2200
K1	K4700
K2	K3500
K3	K8000

Capacitance value

P	pF
N	nF
U	μF

Tolerance < 10pF

B	0.1pF
C	0.25pF
D	0.5pF
F	1pF

$\geq 10\text{pF}$

E	25%
F	1%
G	2%
H	2.5%
J	5%
K	10%
L	15%
M	20%
P	-0 + 100% (GMV)
S	-20% + 50%
T	-10% + 50%
W	-25% + 50%
X	-20% + 40%
Z	-20% + 80%

Finish

B	Bare bottoms
M	Mini spats
S	Standard

Voltage Code

AA	1000Vdc
AB	2000Vdc
AC	4000Vdc
AD	6000Vdc
AE	8000Vdc
AM	10Vdc
AN	12Vdc
AO	25Vdc
AP	30Vdc
AR	40Vdc

CAPACITORS

Ceramic - Single Layer

Dubilier

WD C x 1J 101 J C A TA

Range

WD Ceramic disc capacitor

Class

C Class 1
K Class 2
F Class 3

Lead/package options

Blank Standard type long straight lead
M 5mm straight cut lead. Loose
R Snap-in long lad. Taped
S Snap-in longlead. Loose

Voltage

1E 25V
1H 50V
1J 100V
2H 500V
3A 1KV
3D 2KV

Capacitance (pF)

< 10pF (Eg 103 = 10000pF)
Digit 1/2 Significant value
Digit 3 No of zeroes

> 10pf (Eg 1R0 = 1.0pF)
R Decimal point

Tolerance

C 25pF
D 0.5pF
J 5%
K 10%
M 20%
Z -20% + 80%

Dielectric

Class 1
C NPO
G S/L
Class 2
B Y5P
F Z5U
V Z5V
Y Y5V

Pitch (mm)

A 2.45
B 5
C 7.5
D 10

Package

TA Tape & ammo
TR Tape & reel

Johanson

500 U 15 N 1R0 B T 4 W

Voltage code

250 25V
500 50V
101 100V

Chip style

B Single border SLC capacitor
D Split-chip SLC capacitor
U Standard SLC capacitor
V Dual border SLC

Case size (width in inches)

Example
10 0.10"

Dielectric

A GBBL
N NP0
W X7R
X X5R
Z Z5U
Y Y5V

Others Refer to Charncroft

Capacitance code

(Eg 103 = 10000pF)
Digit 1/2 Significant value
Digit 3 No of zeroes

> 10pf (Eg 1R0 = 1.0pF)
R Decimal point

Capacitance tolerance

Termination

N TiW/Ni/Au
T TiW/Au

Marking

4 Standard (unmarked)

Package

Blank Vial pack
W Conductive waffle trays

CAPACITORS

Ceramic - Single Layer

Murata (global part no)

DC T 3U AF 501 K B4 B

Range

DC Leaded high frequency power ceramic disc capacitor

Series

A Disc type
 T Flange type
 W Water-cooling type
 5 Small type
 6 Small feed-thru type

Temperature characteristics

(coefficient - per degree C)

F3 F (+30% -80% @ -25 to +85 degree C)
 2A AH (+100 +/- 60ppm @ -25 to +85 degree C)
 C)
 2C CH (0 +/- 60ppm @ -25 to +85 degree C)
 3U UJ (-750 +/- 120ppm @ -25 to +85 degree C)

Voltage

D3 2kV high frequency
 AT 9kV high frequency
 B4 12kV high frequency
 AF 14kV high frequency
 C4 15kV high frequency
 AX 16kV high frequency
 D4 20kV high frequency
 E4 25kV high frequency
 F4 30kV high frequency
 AZ 31.5kV high frequency
 3D 2kV DC
 3G 4kV DC
 3H 5kV DC
 AD 7.5kV DC
 4C 15kV DC

Capacitance code

Capacitance tolerance

Diameter

DCA series

A2 40mm

DCT series

B3 60mm
 B4 80mm
 B5 110mm
 B6 140mm
 B8 200mm

DC5 series

C1 12mm
 C3 6.3mm

C4 30mm
 C6 20mm
 C8 20mm

DC6 series

E1 40mm
 E2 60mm

DCW series

F1 100mm
 F2 125mm
 F3 135mm

Package

B Bulk

Murata (global part no)

DD 1 04 -63 B 101 K 50

Range

DD Leaded ceramic disc capacitor (250V - 6.3kV)

Series

Blank 500V (DD10 series)
 1 50V (DD100 series)
 3 Surface layer type BC cap (DD300 series)
 4 Boundary layer type BC cap (DD400 series)

Diameter

04 4mm
 05 5mm
 06 6mm
 07 7.5mm (DD100/10) or 7mm (DD300/400)
 08 8mm
 09 9.5mm (DD100/10 only)
 10 10.5mm (DD100/10) or 10mm (DD300/400)
 11 11mm (DD100/10 only)
 12 12.5mm
 14 14.5mm (DD100/10 only)
 16 16.5 mm (DD100/10 only)
 18 18.5 mm (DD100/10 only)

Lead style

-63 Inside crimp
 -64 Inside crimp
 -989 Inside crimp taping
 -999 Inside crimp taping
 -959 Inside crimp taping

Temperature coefficient (per degree C)

CK 0 +/- 250ppm @ -20 to +85 degree C
 CJ 0 +/- 120ppm @ -20 to +85 degree C
 CH 0 +/- 60ppm @ -20 to +85 degree C

CAPACITORS

Ceramic - Single Layer

SL	+350 to -1000ppm @ +20 to +85 degree C
B	10% @ -25 to +85 degree C
E	+20% -55% @ -25 to +85 degree C
F	+30% -80% @ -25 to +85 degree C
SR	15% @ -25 to +85 degree C

Capacitance code (industry standard)

Capacitance tolerance

Voltage

Example 12 = 12V

Murata (global part no)

DE B B3 3A 102 K N2 A

Range

DE	Leaded high voltage 250V-6.3kV ceramic capacitor
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Series

1	IEC60384-14 Class Y1
2	IEC60384-14 Class Y2
J	250 Vac
A	Class 1 1-3.5kV DC
B	Class 2 1-3.5kV DC
C	Class 1,2 6.3kV DC
H	Guaranteed high temperature, low dissipation factor

Temperature characteristics (per degree C)

B3	B (10% @ -25 to +85 degree C)
E3	E (+20% -55% @ -25 to +85 degree C)
F3	F (+30% -80% @ -25 to +85 degree C)
C3	C (20% @ -25 to +85 degree C)
	C (+15% -30% @ +85 to +125 degree C)
R3	R (15% @ -25 to +85 degree C)
	R (+15% -30% @ +85 to +125 degree C)
1X	SL (+350 to -1000ppm @ -25 to +85 degree C)

Voltage

E2	250Vac
KH	250Vac X1, Y2
KY	250Vac X1, Y2
KX	250Vac X1, Y2
2E	250V DC
2H	500V DC
3A	1kV DC
3D	2kV DC
3F	3.15kV DC
3J	6.3kV DC

Capacitance code

Capacitance tolerance

Lead style

A2	Vertical crimp long leads. 5mm pitch
A3	Vertical crimp long leads. 7.5mm pitch
A4	Vertical crimp long leads. 10mm pitch
A5	Vertical crimp long leads. 10mm pitch
B2	Vertical crimp short leads. 5mm pitch
B3	Vertical crimp short leads. 7.5mm pitch
B4	Vertical crimp short leads. 10mm pitch
B5	Vertical crimp short leads. 10mm pitch
C1	Straight long leads. 5mm pitch
C3	Straight long leads. 7.5mm pitch
C4	Straight long leads. 10mm pitch
CD	Straight long leads. 5mm pitch
D1	Straight short leads. 5mm pitch
D3	Straight short leads. 7.5mm pitch
DD	Straight short leads. 7.5mm pitch
N2	Vertical crimp taping. 5mm pitch
N5	Vertical crimp taping. 10mm pitch
N7	Vertical crimp taping. 7.5mm pitch
P2	Straight taping. 5mm pitch
P3	Straight taping. 7.5mm pitch

Package

A	Ammo pack
B	Bulk

Murata (global part no)

DH R B3 4A 101 M 2B Hx B

Range

DH	Leaded, high voltage ceramic capacitor (10kV+)
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Series

R	Radial
S	Moulded

Temperature characteristic/coefficient

B3	B. 10% @ -25 to +85 degree C
F4	Z5V. +22% -82% τ = 10 to +85 degree C
4E	ZM. -4700 +/- 1000ppm @ +20 to +85 degree C

Voltage

4A	10kV DC
4B	12kV DC
4C	15kV DC
4D	20kV DC
4F	30kV DC
4G	40kV DC

Capacitance code

Capacitance tolerance

Lead style (DHR series)

2B	Straight long leads. 9.5mm pitch
2F	Straight long leads. 12.7mm pitch

Body diameter

CX	20mm
DX	24mm
HX	30mm
LX	38mm
NX	43mm
RX	52mm
TX	60mm

Package

B	Bulk
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Murata

RPE R1 1H 104 K 2 M1 A01 A

Range

RPE	Leaded, single layer ceramic capacitor
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Temperature characteristic (range)

1X	SL (+25 to +85 degree C)
2C	CH (-55 to +125 degree C)
2P	PH (-25 to +85 degree C)
2R	RH (-25 to +85 degree C)
2S	SH (-25 to +85 degree C)
2T	TH (-25 to +85 degree C)
3C	CJ (-55 to +125 degree C)
3P	PJ (-25 to +85 degree C)
3R	RJ (-25 to +85 degree C)
3S	SJ (-25 to +85 degree C)
3T	TJ (-25 to +85 degree C)
3U	UJ (-25 to +85 degree C)
4C	CK (-55 to +125 degree C)
5C	C0G (-55 to +125 degree C)
6C	C0H (-55 to +125 degree C)
6P	P2H (-55 to +85 degree C)
6R	R2H (-55 to +85 degree C)
6T	T2H (-55 to +85 degree C)
7U	U2J (-55 to +85 degree C)
B1	B (1/2Ur) (-25 to +85 degree C)
E4	Z5U (+10 to +85 degree C)
F1	F (1/2Ur) (-25 to +85 degree C)
F5	Y5V (-30 to +85 degree C)
R1	R (1/2Ur) (-55 to +125 degree C)
R6	X5R (-55 to +85 degree C)
R7	X7R (-55 to +125 degree C)

Voltage

1E	25V DC
1H	50V DC
2A	100V DC
2D	200V DC

Capacitance code

Capacitance tolerance

Size code (size in mm)

1	3.5 x 3.0
2	5.0 x 3.5
3	5.0 x 4.5
4	7.5 x 5.0
5	7.5 x 7.5
6	10.0 x 10.0
7	12.5 x 12.5
T	10.0 x 8.5

Lead type

A	Straight long bulk. 2.5mm pitch
B	Straight long bulk. 5mm pitch
C	Straight long bulk. Other pitch
E	Straight taped. 5mm pitch
K	Incrimp bulk. 5mm pitch
M	Incrimp taped. 5mm pitch
P	Outcrimp bulk. 2.5mm pitch
S	Outcrimp taped. 2.5mm pitch

Individual specification

A/C/E	Base metal inner electrode
Other	Precious metal inner electrode

Package

A	Ammo pack
B	Bulk

Murata (global part no)

GR M 18 8 B1 1H 102 K A01 K

Range

GRM	Single-layer ceramic chip capacitor. Reflow
GRP	Single-layer ceramic chip capacitor. Soldering electrode
ERF	High frequency/ high power single-layer ceramic chip capacitor
ERH	High frequency/ high power single-layer ceramic ribbon-type chip capacitor
ERA	High frequency single-layer ceramic chip
GQM	High frequency single-layer ceramic chip Reflow
GMA	Single-layer ceramic microchip capacitor
GNM	Single-layer ceramic chip capacitor array

CAPACITORS

Ceramic - Single Layer

LLL	Low ESL wide single-layer ceramic chip
LLA	Low ESL single-layer ceramic chip capacitor array
GJ6	Low dissipation single-layer ceramic chip
GA2	Single-layer ceramic chip capacitor (250Vac)
GA3	Safety single-layer ceramic chip capacitor

Size (L x W) in mm (EIA code)

03	0.6 x 0.3 (0201)
05	0.5 x 0.5
08	0.8 x 0.8
11	1.25 x 1.0
15	1.0 x 0.5 (0402)
18	1.6 x 0.8 (0603)
1X	Refer to Charcroft
21	2.0 x 1.25 (0805)
22	2.8 x 2.8
31	3.2 x 1.6 (1206)
32	3.2 x 2.5 (1210)
3X	Refer to Charcroft
42	4.2 x 2.0 (1808)
43	4.5 x 3.2 (1812)
52	5.7 x 2.8
55	5.7 x 5.0 (2220)

Dimensions in mm (T)

3	0.2
4	4 element array
5	0.5
6	0.6
7	0.7
8	0.8
9	0.85
A	1.0
B	1.25
C	1.6
D	2.0
E	2.5
M	1.15
N	1.35
R	1.8
Q	1.5
X	Refer to Charcroft

Temperature characteristics (degrees C)

1X	SL (+20 to +85 degree C)
2C	CH (-55 to +125 degree C)
2P	PH (-25 to +85 degree C)
2R	RH (-25 to +85 degree C)
2S	SH (-25 to +85 degree C)
2T	TH (-25 to +85 degree C)
3C	CJ (-55 to +125 degree C)
3P	PJ (-25 to +85 degree C)
3R	RJ (-25 to +85 degree C)
3S	SJ (-25 to +85 degree C)
3T	TJ (-25 to +85 degree C)
3U	UJ (-25 to +85 degree C)
4C	CK (-55 to +125 degree C)
5C	C0G (-55 to +125 degree C)

6C	C0H (-55 to +125 degree C)
6P	P2H (-55 to +85 degree C)
6R	R2H (-55 to +85 degree C)
6T	T2H (-55 to +85 degree C)
7U	U2J (-55 to +85 degree C)
B1	B(1/2Ur) (-25 to +85 degree C)
B3	B (-25 to +85 degree C)
E4	Z5U (+10 to +85 degree C)
F1	F(1/2Ur) (-25 to +85 degree C)
F5	Y5V (-30 to +85 degree C)
R1	R(1/2Ur) (-55 to +125 degree C)
R3	R (-55 to +125 degree C)
R7	X7R (-55 to +125 degree C)

Voltage (DC)

0J	6.3V
1A	10V
1C	16V
1E	25V
1H	50V
2A	100V
2D	200V
2E	250V
YD	300V
2H	500V
2J	630V
3A	1kV
3D	2kV
3F	3.15kV
E2	250Vac
GB	250Vac X2
GC	250Vac X1, Y2

Capacitance code

Capacitance tolerance

Individual specification code

A/B/C/W	Base metal inner electrode
Other	Precious metal inner electrode

Package

L	7" plastic tape & reel
D	7" paper tape & reel
K	13" plastic tape & reel
J	13" paper tape & reel
B	Bulk
C	Bulk case
T	Bulk tray

Murata

GRM40 COG 101 J 50 x PT

Range

GHM1030	630V single-layer ceramic chip capacitor
GHM1038	3.15KV single-layer ceramic chip capacitor
GHM1040	2KV - 3.15KV single-layer ceramic chip
GHM1525	250V single-layer ceramic chip capacitor
GHM1530	250V & 630V single-layer ceramic chip
GHM1535	250V & 630V single-layer ceramic chip
GHM1540	250V & 630V single-layer ceramic chip
GHM1545	250V & 630V single-layer ceramic chip
GHM2143	250VAC single-layer ceramic chip
GHM2145	250VAC single-layer ceramic chip
GHM2243	250VAC single-layer ceramic chip
GHM3045	250VAC IEC 374-14 single-layer ceramic chip
GHM3145	250VAC IEC 374-14 single-layer ceramic chip
GM250	Micro-chip single-layer ceramic chip capacitor for wire- or die-bonding
GM260	Micro-chip single-layer ceramic chip capacitor for wire- or die-bonding
GNM30-401	Single-layer 1206 ceramic chip array
GRH110	50V HiQ, high power, single-layer ceramic chip
GRH111	50-500V HiQ, high power, single-layer ceramic chip capacitor
GRH706	High frequency, solder-coated, single-layer ceramic chip capacitor
GRH708	High frequency, solder-coated, single-layer ceramic chip capacitor
GRH710	High frequency, solder-coated, single-layer ceramic chip capacitor
GRM33	Ultra-miniaturised single-layer ceramic chip capacitor
GRM36	50V miniature single-layer ceramic chip
GRM36-019	Thin type, miniature single-layer ceramic chip capacitor
GRM39	Miniature single-layer ceramic chip capacitor to 200V
GRM40	Miniature single-layer ceramic chip capacitor to 200V
GRM42-2	Miniature single-layer ceramic chip capacitor to 500V
GRM42-6	Miniature single-layer ceramic chip capacitor to 500V
GRM43-2	Miniature single-layer ceramic chip capacitor to 500V
GRM44-1	Miniature single-layer ceramic chip capacitor to 500V
GRM220	Smoothing, miniature single-layer ceramic chip capacitor
GRM225	Smoothing, miniature single-layer ceramic chip capacitor
GRM230	Smoothing, miniature single-layer ceramic chip capacitor

GRM235	Smoothing, miniature single-layer ceramic chip capacitor
GRM240-02	Smoothing, miniature single-layer ceramic chip capacitor
GRM420	Low distortion, 0603 single-layer ceramic chip capacitor (Nickel terminals)
GRM425	Low distortion, 0805 single-layer ceramic chip capacitor (Nickel terminals)
GRM430	Low distortion, 1206 single-layer ceramic chip capacitor (Nickel terminals)
GRM435	Low distortion, 1210 single-layer ceramic chip capacitor (Nickel terminals)
LL0306	Low ESL, wide width, single-layer ceramic chip capacitor
LL0508	Low ESL, wide width, single-layer ceramic chip capacitor
LL0612	Low ESL, wide width, single-layer ceramic chip capacitor

Dielectric

Capacitance code

Capacitance tolerance

Voltage

Murata control number

Blank Not applicable (GHM3045/3145 series)

Package or type designator

Blank	Not applicable (GHM1040 series)
PB	Bulk
PC	Bulk cassette
PM	Tray (GM250/260 series)
PT	Tape & reel
GB	Type designator (GHM3145 series)
GC	Type designator (GHM3045 series)

Murata

RPE131 xxx X7R 103 J 050V

Range

RPE110	Medium, radial, epoxy-coated single-layer ceramic capacitor
RPE113	Small, radial, epoxy-coated single-layer ceramic capacitor
RPE114	Small, radial, epoxy-coated single-layer ceramic capacitor
RPE117	Small, radial, epoxy-coated single-layer ceramic capacitor
RPE121	Medium, radial, epoxy-coated single-layer ceramic capacitor
RPE122	Medium, radial, epoxy-coated single-layer ceramic capacitor

CAPACITORS

Ceramic - Single Layer

RPE123	Small, radial, epoxy-coated single-layer ceramic capacitor
RPE131	Medium, radial, epoxy-coated single-layer ceramic capacitor
RPE132	Medium, radial, epoxy-coated single-layer ceramic capacitor

Package

Blank	Standard
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Dielectric

Capacitance code

Capacitance tolerance

Voltage

Examples

050V	50V
100V	100V
2K	2KV (GHM1040 series)
3K	3.15KV (GHM1040 series)

Murata

TZV02 Z 060 A A 110 T00 J

Range

TZBX4	Miniature ceramic chip trimmer capacitor
TZ03	Leaded ceramic trimmer capacitor
TZC03	Low profile ceramic chip trimmer capacitor
TZV02	Smallest ceramic chip trimmer capacitor
TZVX2	Smallest ceramic chip trimmer capacitor (pierced hole)
TZVY2	Small, thin ceramic chip trimmer capacitor

Dielectric

Capacitance range (pF)

(Range may vary slightly between series)

R5	0.65 - 2.5
030	1.5 - 3
060	2.0 - 6
070	2.0 - 7
100	3.0 - 10
110	3.0 - 11
121	10 - 120 (50V TZ03 series)
200	4.5 - 20
250	4.0 - 25
300	6.5 - 30
400	8.5 - 40
450	8.0 - 45
500	6.0 - 50
600	9.8 - 60
900	10 - 120 (50V TZ03 series)

Cover film (TZBX4 series only)

Blank	Not applicable
A	Without cover film (TZBX4 series)
B	With cover film (TZBX4 series)

Terminal type

A	Standard
BR	Bottom adjustable (TZ03 series)
ER	Top adjustable (TZ03 series)
FR	Self-standing (TZ03 series)
NR	Self-standing/bottom adjustable (TZ03 series)
TR	Top adjustable on tape & ammo pack (TZ03 series)
YR	Side adjustable (TZ03 series)

Other specification

110	Standard
130	Cross slot (TZC03 series)
169	Standard for TZ03 series

Package

Blank	Bulk
T00	7" reel
T01	13 reel

Capacitance tolerance

Vishay Vitramon

VJ0805A 101 J X B T M

Range

VJ0805	Single-layer ceramic chip (0805)
VJ1812	Tip'N' ring single-layer ceramic chip (1812)

Dielectric

A	NP0
H	X8R
Q	High-Q for HF applications
T	Y4T
U	Z5U
V	Y5V
X	BX
Y	X7R

Capacitance code (industry standard)

Capacitance tolerance

Termination

X	Nickel barrier
F	Silver palladium

Voltage

J	16V
X	25V
A	50/63V
B	100V
C	200V
P	250V
E	500V
G	1000V
H	3000V

Package

C	7" reel (cardboard tape)
T	7" reel (plastic tape)
R	13" reel (plastic tape)
P	13" reel (cardboard tape)

Marking

Blank	Not applicable
016D	Low profile VTOP chip (Dmax = 0.65mm)
021D	Low profile VTOP chip (Dmax = 0.45mm)
M	To CECC (from 0603 with capacitance code, from 1206 with Vitramon trademark)
V	Vitramon trademark (without capacitance code)

CAPACITORS

Multilayer Ceramic - Leaded

Charcroft

CK05 BX 103 K B

Range

CK05 MIL-spec VK20 cased radials
CK06 MIL-spec VK30 cased radials

Dielectric

BX BX

Capacitance code (industry standard)

Capacitance tolerance

Voltage

A 50/63V
B 100V
C 200V

Charcroft

VK20 B A 101 J B

Range

VK20 Cased radials to CECC 30601-009 / N0024
& F0002
VK21 Cased radials to CECC 30601-009 / N0024
& F0002
VK30 Cased radials to CECC 30601-009 / N0024
& F0002

Temperature range

B -55°C to +125°C

Dielectric

A NP0
Y X7R

Capacitance code (industry standard)

Capacitance tolerance

Voltage

A 50/63V
B 100V
C 200V

AVX

MR 051 A 561 J A A

Range

MR Radial Ceralam MLC capacitor

Size

Refer to Charcroft for dimensions

Dielectric

A NP0
C X7R
E Z5U

Capacitance code (industry standard)

Capacitance tolerance

Failure rate

A Not applicable
T CECC release

Leads

A Standard solderable
T Trimmed leads

AVX

MD 01 5 E 104 M A B X X

Range

MD Two pin DIP / DIPGuard, MLC capacitor
SR Radial SkyCap, MLC capacitor

Size

Refer to AVX catalogue for dimensions

Voltage

5 50V
1 100V
2 200V

Dielectric

A NP0
C X7R
E Z5U
G Y5V

Capacitance code (industry standard)

Capacitance tolerance

CAPACITORS

Multilayer Ceramic - Leaded

Failure rate

A	Not applicable (MD series)
T	CECC release (SR series)

Assembly method

Blank	Not applicable
B	Automated assembly (MD series)

Leads

Blank	Not applicable (MD series)
T	Trimmed leads (0.23")
A	Long leads (1.0" min)

Package

Blank	Not applicable (MD series)
TR1	Standard tape & reel 1
TR2	Standard tape & reel 2
AP1	Standard ammo pack 1
AP2	Standard ammo pack 2

AVX

MC 02 Y C 222 K A A

Range

MC	Axial or radial mini-ceramic capacitor
MA	Axial Ceralam, MLC capacitor

Size

Refer to AVX catalogue for dimensions

Voltage

Y	16V
Z	10V
1	100V
2	200V
5	50V
6	6V

Dielectric

A	NP0
C	X7R
E	Z5U
G	Y5V

Capacitance code

(Eg 103 = 10000pF)

Digit 1/2	Significant value
Digit 3	No of zeroes or decimal place (see below) > 10pf (Eg 1R0 = 1.0pF)
4	Multiply by 0.1
5	Multiply by 1

Capacitance tolerance

Failure rate

A	Standard
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Lead configuration

A	Axial
R	Radial (MC01 only)

AVX

SA 10 5 E 104 Z A A

Range

SA	Axial SpinGuard, MLC capacitor
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Case size

Refer to Charncroft for dimensions

Voltage

5	50V
1	100V
2	200V

Dielectric

A	NP0
C	X7R
E	Z5U

Capacitance code (industry standard)

Capacitance tolerance

Failure rate

A	Not applicable
T	CECC release

Package

A	Standard reels
B	1000 piece reels (refer to Charncroft)
C	Ammo pack
D-J	Special lead configurations
L	Twin coat leads (95/5 flash tin / lead)
M	26mm tape & reel
N	26mm ammo pack

BC Components (clear text)

K 103 K 15 X7R F 5 3 H 5

Range

A	Mono-axial leaded MLC
K	Mono-Kap leaded MLC

CAPACITORS

Multilayer Ceramic - Leaded

Capacitance code (industry standard)

Capacitance tolerance

Size code (mm)

Dielectric

C0G (NP0)
X7R
Z5U
Y5V

Voltage

E 25V
F 50V
H 100V

Lead diameter

5 0.5mm (0.020")

Package

3 Bulk with 30mm leads
TAA Taped on reel (mono-axial)
UAA Ammopack (mono-axial)

Lead style

L Straight lead
H High seated assembly
K Outward kink

Lead spacing

2 2.5mm
5 5.0mm

BC Components (12NC)

2252 30 2 00 102

Range

2252 Leaded MLC

Dielectric / tolerance

30 NP0 5%
31 NP0 10%
32 X7R 10%
33 X7R 20%
34 Z5U 20%
35 Z5U +80% -20%
36 Y5V +80% -20%

Voltage

2 25V
5 50V
6 100V

Package

00 15mm straight lead, bulk
02 15mm straight lead, reel
03 15mm straight lead, ammo pack
04 15mm outward kink, bulk
06 15mm outward kink, reel
07 15mm outward kink, ammo pack
08 15mm, high seated assembly, bulk
10 15mm, high seated assembly, reel
12 15mm, high seated assembly, ammo pack
14 20mm straight lead, bulk
16 20mm straight lead, reel
17 20mm straight lead, ammo pack
18 20mm outward kink, bulk
20 20mm outward kink, reel
21 20mm outward kink, ammo pack
22 20mm, high seated assembly, bulk
24 20mm, high seated assembly, reel
26 20mm, high seated assembly, ammo pack
38 30mm straight lead, bulk
40 30mm straight lead, reel
41 30mm straight lead, ammo pack
46 30mm high seated assembly, bulk
48 30mm high seated assembly, reel
50 30mm high seated assembly, ammo pack

Capacitance code

Dubilier

DR U 21 C 102 J B TA

Range

DA Axial MLC
DR Radial MLC

Voltage

A 100V
C 16V
E 25V
F 200V
U 50/63V

Case size

Dielectric

C NP0
G Y5V
R X7R
W Z5U

Capacitance Value

(Eg 102 = 1000pF)
Digit 1/2 Significant value
Digit 3 No of zeroes

Capacitance tolerance

C	0.25pF (DR series)
D	0.50pF (DR series)
J	5%
K	10%
M	20%
Z	-20% + 80% (DR series)

Pitch

Blank	DA series
A	2.54
B	5.08

Package

Blank	Loose
TA	Tape & ammo
TR	Tape & reel

EPCOS (Siemens)

B37979-x 5 101 -J

Range

B37979-x	Radial C0G MLC capacitors
B37986-x	Radial C0G MLC capacitors
B37893-x	Radial C0G MLC capacitors
B37981-x	Radial X7R MLC capacitors
B37987-x	Radial X7R MLC capacitors
B37984-x	Radial X7R MLC capacitors
B37981-x	Radial X7R MLC capacitors
B37982-x	Radial Z5U MLC capacitors
B37988-x	Radial Z5U MLC capacitors
B37985-x	Radial Z5U MLC capacitors
B37448-G	Radial SIBATIT-VS ceramic capacitors
B37449-G	Radial SIBATIT-VS ceramic capacitors

Voltage

1	100V
5	63V
6	63V (B37448/9 series only)

Capacitance code

Capacitance tolerance

Suffix

Blank	Standard
S38	B374448/9 (SIBATIT-VS series only)

Johanson

500 R15 N 101 J V 4 E

Voltage

100	10V MLC radial or chip capacitor
160	16V MLC radial or chip capacitor
250	25V MLC radial or chip capacitor
500	50V MLC radial or chip capacitor
630	63V MLC radial or chip capacitor
101	100V MLC radial or chip capacitor
201	200V MLC radial or chip capacitor
251	250V MLC radial or chip capacitor
501	500V MLC radial or chip capacitor
102	1KV MLC radial or chip capacitor
202	2KV MLC radial or chip capacitor
302	3KV MLC radial or chip capacitor

Range / case size

H42	High voltage/value MLC radial or chip capacitor (1515)
H47	High voltage/value MLC radial or chip capacitor (2520)
H51	High voltage/value MLC radial or chip capacitor (3530)
H62	High voltage/value MLC radial or chip capacitor (4540)
H66	High voltage/value MLC radial or chip capacitor (5550)
H70	High voltage/value MLC radial or chip capacitor (6560)
H72	High voltage/value MLC radial or chip capacitor (7565)

Dielectric

C	High-Q/porcelain NP0
N	NP0
W	X7R
X	X5R
Z	Z5U
Y	Y5V

Capacitance code

Capacitance tolerance

Termination

G	Gold-flashed nickel barrier (L series)
V	Nickel barrier SMD
Y	Palladium silver SMD
Q	Leaded & encapsulated

Marking

4	Standard (unmarked)
6	EIA J code
3	Specified

CAPACITORS

Multilayer Ceramic - Leaded

Package

E	7" tape & reel. Embossed
H	Hi-rel testing
R	13" tape & reel. Punched
S	Special part
T	7" tape & reel. Punched
U	13" tape & reel. Embossed
Y	5" tape & reel. Punched
Z	5" tape & reel. Embossed

Lead material

C	Standard
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Failure rate

A	Commercial
M	1%
p	0.1%
R	.01%
S	.001%

Kemet

C 052 C 102 K 2 R 5 C A

Range

C	Ceramic
---	---------

Series

052	Moulded radial
062	Moulded radial
114	Moulded axial
124	Moulded axial
192	Moulded axial
202	Moulded axial
222	Moulded axial
410	Animax conformally coated axial
412	Animax conformally coated axial
420	Animax conformally coated axial
430	Animax conformally coated axial
440	Animax conformally coated axial
512	Moulded radial
522	Moulded radial

Specification

C	Commercial
T	MIL-C-39014
K	MIL-C-11015
G	MIL-C-20

Capacitance code

Capacitance tolerance

Voltage

1	100V
2	200V
5	50V

Dielectric

G	Ultra-stable (C0G/NP0)
R	Stable (X7R)
U	General purpose (Z5U)

Internal construction

5	Standard
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Syfer

8111 M 100 0101 J C xxx

Size

8111	Dipped radial
8121	Dipped radial
8131	Dipped radial
8141	Dipped radial
8151	Dipped radial
8161	Dipped radial
8171	Dipped radial
8113	Moulded radial
8123	Moulded radial (CK05)
8133	Moulded radial (CK06)

Style

M	Dipped radial
N	Dipped radial
Z	Moulded radial

Voltage

050	50/63V
063	63V
100	100V
200	200V
500	500V
1K0	1KV
2K0	2KV
3K0	3KV
4K0	4KV
5K0	5KV

Capacitance code

(Eg 103 = 10000pF)	
Digit 1	Zero
Digit 2/3	Significant value
Digit 4	No of zeroes

> 10pf (Eg 2P20 = 2.2pF)	
P	Decimal point

Capacitance tolerance

Dielectric

C	C0G/NP0 (EIA) 1B/CG (CECC CG/BP (MIL)
X	2R1 (CECC X7R (EIA)
B	2X1 (CECC special order) BX (MIL special order)
R	2C1 (CECC special order) BZ (MIL special order)

Non-standard variation

Vishay

VP 31 B A 101 K A T

Range

CCR05	ESA/SCC 3001/018 moulded MLC capacitor
CCR06	ESA/SCC 3001/019 moulded MLC capacitor
CK05	MIL-C-11015D moulded radial MLC
CK06	MIL-C-11015D moulded radial MLC
VP	Moulded radial MLC capacitor
VK	Dipped radial MLC capacitor

Case size

Refer to Charncroft

Temperature range

B	-55 to +125 degree C
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Dielectric

A	NP0
U	Z5U
Y	X7R

Capacitance code (industry standard)

Capacitance tolerance

Voltage

X	25V
A	50/63V
B	100V
C	200V
E	500V
G	1000V

Package

Blank	Bulk
T	Tape & reel

CAPACITORS

Multilayer Ceramic (MLC) - SMD

AVX

0603 5 A 271 J A T 2 A

Case size

Voltage

Z	10V
Y	16V
3	25V
5	50/63V
1	100V
2	200V
P	250V Telco rating

Dielectric

A	NPO
C	X7R
E	Z5U
G	Y5V
X	X7R

Capacitance code

Capacitance tolerance

Release

A	Standard
H	Hi-rel
T	CECC release

Termination

T	Plated Ni & solder
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Package

1	Reel unmarked
2	7" reel
3	13" reel
9	Bulk unmarked

Special code

A	Standard product Unmarked (Tip & Ring parts)
R	0.018" thickness
S	0.022" thickness
T	0.026" thickness
U	0.020" thickness
V	0.030" thickness
W	0.040" thickness

Dubilier

DS U 0805 C 101 J N

Range

DS	Standard
DSHV	High voltage (500 - 5KV)

Voltage

A	100V
B	10V
C	16V
E	25V
F	200V
J	500V
M	1KV
P	2KV
R	3KV
T	4KV
V	5KV
U	50/63V

Case size

Dielectric

C	NPO
R	X7R
G	Y7V
W	Z5U

Capacitance Code

Capacitance tolerance

Plating

N	Nickel barrier
E	Silver enhanced

EPCOS (Siemens)

B37940-K5 010 - C 2 62

Range

B37940-K5	0805 63V C0G MLC chip capacitor
B37871-K5	1206 63V C0G MLC chip capacitor
B37949-K5	1210 63V C0G MLC chip capacitor
B37941-K5	0805 63V X7R MLC chip capacitor
B37872-K5	1206 63V X7R MLC chip capacitor
B37950-K5	1210 63V X7R MLC chip capacitor
B37953-K5	1812 63V X7R MLC chip capacitor
B37956-K5	2220 63V X7R MLC chip capacitor
B37942-K5	0805 63V Z5U MLC chip capacitor
B37873-K5	1206 63V Z5U MLC chip capacitor

CAPACITORS

Multilayer Ceramic (MLC) - SMD

B37951-K5	1210 63V Z5U MLC chip capacitor
B37954-K5	1812 63V Z5U MLC chip capacitor
B37957-K5	2220 63V Z5U MLC chip capacitor

Capacitance code

Capacitance tolerance

Capacitance value decimal (>10pF parts only)

Denotes value after the decimal point in >10pF parts

Examples

010-C62	Blank (no value after decimal point - 1.0pF)
010-C262	1.2pF
010-C562	1.5pF

Suffix

62	Standard
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Johanson

500 R15 N 101 J V 4 E

Voltage

100	10V MLC radial or chip capacitor
160	16V MLC radial or chip capacitor
250	25V MLC radial or chip capacitor
500	50V MLC radial or chip capacitor
630	63V MLC radial or chip capacitor
101	100V MLC radial or chip capacitor
201	200V MLC radial or chip capacitor
251	250V MLC radial or chip capacitor
501	500V MLC radial or chip capacitor
102	1KV MLC radial or chip capacitor
202	2KV MLC radial or chip capacitor
302	3KV MLC radial or chip capacitor

Range / case size

H42	High voltage/value MLC radial or chip capacitor (1515)
H47	High voltage/value MLC radial or chip capacitor (2520)
H51	High voltage/value MLC radial or chip capacitor (3530)
H62	High voltage/value MLC radial or chip capacitor (4540)
H66	High voltage/value MLC radial or chip capacitor (5550)
H70	High voltage/value MLC radial or chip capacitor (6560)
H72	High voltage/value MLC radial or chip capacitor (7565)
L07	LASERtrim, MLC tuner chip capacitor
R07	MLC chip capacitor (0402)
R14	MLC chip capacitor (0603)
R15	MLC chip capacitor (0805)

R18	MLC chip capacitor (1206)
S41	MLC chip capacitor (1210)
R29	MLC chip capacitor (1808)
S43	Tip & ring telecom MLC capacitors (1812)
S49	Tip & ring telecom MLC capacitors (1825)
S48	Tip & ring telecom MLC capacitors (2225)
T32	P series power Q MLC chip capacitors (6.5x5mm)
T44	P series power Q MLC chip capacitors (9.5x9mm)

Dielectric

C	High-Q/porcelain NP0
N	NP0
W	X7R
X	X5R
Z	Z5U
Y	Y5V

Capacitance code (industry standard)

Capacitance tolerance

Termination

G	Gold-flashed nickel barrier (L series)
V	Nickel barrier SMD
Y	Palladium silver SMD
Q	Leaded & encapsulated

Marking

4	Standard (unmarked)
6	EIA J code
3	Specified

Package

E	7" tape & reel. Embossed
H	Hi-rel testing
R	13" tape & reel. Punched
S	Special part
T	7" tape & reel. Punched
U	13" tape & reel. Embossed
Y	5" tape & reel. Punched
Z	5" tape & reel. Embossed

Kemet

C 0805 C 103 K 5 R A C /C-xxxx

Type

C	Ceramic
---	---------

Size code (EIA)

Eg 0805

Specification

C	Standard
---	----------

CAPACITORS

Multilayer Ceramic (MLC) - SMD

Capacitance value

Capacitance tolerance

Voltage

1	100V
2	200V
5	50/63V
3	25V
4	16V
8	10V

Dielectric / TCR characteristic

G	C0G (NPO / 30ppm)
R	X7R (15%)
U	Z5U (+22%-56%)
V	Y5V (+22%-82%)

Failure rate

A	Commercial
---	------------

End metallization

C	Standard (tin-plated nickel barrier)
---	--------------------------------------

Customer or taping spec

Phycomp (clear text)

0805 CG 102 J 8 B 2 0 0

Size

Dielectric

CG	NP0
2R	X7R
2F	Y5V
2E	Z5U

Capacitance code

Capacitance tolerance

Voltage

6	10V
7	16V
8	25V
9	50V
0	100V
B	200V
D	500V
E	1KV
G	3KV

Termination

A	AgPd (2220 only)
B	Ni-barrier

Packaging

2	7" reel paper
3	13" reel paper
B	7" reel blister
F	13" reel blister
P	Bulk case

Marking

0	No marking
2	North America only

Series

0	Ceramic class 1
D	BME class 2

Phycomp (12NC)

22 22 91 6 11 3 10

Range

22	SMD MLC
----	---------

Carrier

22	Blister
38	Paper
50	Blister (high voltage range)
54	Bulk
56	Bulk (high voltage range)

Series

00	1KV high voltage series
04	3KV high voltage series
06	50V low inductance
24	10V
55	10V compact series
58	50V Ni-barrier Class 2
59	50V AgPd Class 2
60	100V Ni-barrier
61	100V AgPd
62	Class 2 Z5U
78	16V
86	50V Class 1
87	25V compact series
88	25V AgPd compact series
89	50V Ni-barrier compact series
90	50V AgPd compact series
91	25V
93	200V
95	16V compact series
96	25V compact series
97	500V

CAPACITORS

Multilayer Ceramic (MLC) - SMD

Size

0	0805 0612 (22xx06 series)
1	1206 0805 (50V)
2	1210
3	1206 1808 (22xx00/04 series)
4	1812
5	2220 0603 (22xx62 series)
6	0603
7	0603 (22xx86 series) 0402 (Class 2 & compact series)
	1206 (22xx62 series)
9	0402

Package

1	7" reel
4	Bulk case (0603 / 0805 only)
5	13" reel
7	13" reel
8	13" reel (compact series)

Capacitance tolerance

Refer to Charcroft

Capacitance value

Syfer

1808 J A25 0102 J C T SP U

Case size

1808	Safety certified surge protection MLC chip capacitor
------	--

Termination

Voltage

A25	250Vac
-----	--------

Capacitance code

Digit 1	Leading 0
Digit 2/3	Significant value
Digit 4	Number of zeroes

Capacitance tolerance

Dielectric

C	C0G
---	-----

Package

T	7" tape & reel
R	13" tape & reel
B	Bulk

Safety mark

SP	Safety tested surge protection
----	--------------------------------

Marking

U	Unmarked
---	----------

Syfer

0805 J 100 0101 J C x T xxx

Case size

0805	MLC chip capacitor
------	--------------------

Termination

F	Silver palladium
J	Nickel barrier
A	High leach resistant silver palladium (special)

Voltage

>100V	Leading 0+ voltage (eg 063 = 63V)
100V+	Voltage (eg 630 = 630V)
1KV+	K represents 1000 (eg 5K0 = 5KV)

Capacitance (pF)

<10pF (Eg 103 = 10000pF)	
Digit 1	Leading 0
2/3	Significant value
Digit 4	No of zeroes

>10pF (Eg 1P0 = 1.0pF)

P	Decimal point
---	---------------

Capacitance tolerance

Dielectric code / class

C	1B/CG (CECC) C0G/NP0 (EIA) CG/BP (MIL)
X	2R1(CECC) X7R (EIA)
Y	Y57 (CECC)
Q	High Q high frequency

To special order

B	2X1 (CECC) 1BX (EIA)
R	2C1(CECC) BZ (MIL)

Packaging

T	Tape & reel (7" reel)
R	Tape & reel (13" reel)
B	Bulk pack tub
C	Bulk pack cassette

Special customer requirements

Vishay

VJ 0805 Y 103 J X B T M

Range

VJ MLC chip capacitor

Case size

Dielectric

A	NP0
Y	X7R
H	X8R
X	BX
T	Y4T
U	Z5U
V	Y5V
Q	'High Q'

Capacitance code

Capacitance tolerance

Terminations

X	Nickel barrier
F	Silver palladium

Voltage

J	16V
X	25V
A	50/63V
B	100V
C	200V
E	500V
G	1kV
H	3kV

Package

R	13" tape & reel. Plastic tape
P	13" tape & reel. Cardboard tape
T	7" tape & reel. Plastic tape
C	7" tape & reel. Cardboard tape

Marking

M	CECC marking (with capacitance code)
V	Vitramon (without capacitance code)

AVX

SMO 1 7 C 106 M A N 650

Range

CH	European version (surface mount & through-hole) SMPS capacitor
HV	High voltage SMPS capacitor
SK	SK series SMPS capacitor
SM0	Uncoated SMPS capacitor
SM5	Epoxy coated SMPS capacitor
SM9	Plastic case SMPS capacitor

Size code

Refer to AVX catalogue

Voltage

3	25V
5	50V
1	100V
2	200V
7	500V
A	1KV
G	2KV
H	3KV
J	4KV
K	5KV

Dielectric

A	C0G
C	X7R
E	Z5U

Capacitance code

Capacitance tolerance

Release

A	Standard
H	Hi-rel
T	CECC release

Termination

A	Not applicable
N	Straight lead
J	Leads formed in
L	Leads formed out
T	Ni plate solder plate

Height

650	0.65"
-----	-------

AVX

CH 52 5 C 106 M A 8 0 A 0

Range

CH	European version (surface mount & through-hole)
RH	European version (surface mount 'J' lead)

Size code

Refer to AVX catalogue

Voltage

5	50V
1	100V
2	200V
7	500V

Dielectric

A	C0G
C	X7R

Capacitance code

Capacitance tolerance

Release

A	Standard
H	Hi-rel
T	CECC release

Finish

A	Tape & reel (RH series)
3	Uncoated (CH series)
	Waffle pack (RH series)
4	Varnish
7	Varnish & end fill (multi-chip array)

Lead diameter

0	Dual in line
---	--------------

Lead space

S	CV radial
A	Dual-in-line

Lead style

0	Straight lead
2	2-lead radial
3	Low profile 'J' single chip
4	4 terminal
5	Low profile 'L' single-in-line
7	'L' dual-in-line
8	'J' dual-in-line

BC Components

2222 135 64 102

Prefix

Range

135	Radial low impedance (RLI series) aluminium electrolytic
136	Radial very low impedance (RVI series) aluminium electrolytic
140	Radial high temperature miniature (RTM series) aluminium electrolytic
150	Radial miniature low impedance (RMI series) aluminium electrolytic

Voltage, case code & quantity

Refer to Charcroft for individual part numbers

Capacitance code (μF)

Digit 1/2	Significant value
Digit 3	Position of decimal point
	2 = 0.001
	3 = 0.01
	4 = 0.1
	5 = 1.0
	6 = 10.0

Johanson

201 P03 W 245 K J 4

Voltage

500	50V MLC radial or chip capacitor
101	100V MLC radial or chip capacitor
201	200V MLC radial or chip capacitor
501	500V MLC radial or chip capacitor

Range / case size

P03	Switch-mode leaded ceramic capacitors
S48	Mini-switchmode leaded capacitors

Dielectric

N	NP0
W	X7R
Z	Z5U

Capacitance code

Capacitance tolerance

Lead style

J	J leads (formed in)
L	Leads (formed out)
N	Straight lead

Marking

4	Standard (unmarked)
3	Specified
C	Commercial
H	Group A tested

Arcotronics

ESS 016 K 0100 W A x

Range

ES5	Super miniature radial electrolytic
ESS	Super miniature radial electrolytic
ESK	General purpose miniature radial electrolytic
ESE-K	General purpose miniature radial electrolytic
ESH	General purpose miniature radial electrolytic
	ESB Low leakage current miniature radial electrolytic
ESX	Low impedance, low ESR miniature radial electrolytic
ESC	Low impedance, low ESR miniature radial electrolytic
ESG	Low impedance, low ESR miniature radial
ESN	Non-polar miniature radial electrolytic
ELH	General purpose radial electrolytic
ELG	General purpose radial electrolytic
EPC	Screw type radial electrolytic

Voltage

006	6.3V
010	10V
016	16V
025	25V
035	35V
050	50V
063	63V
080	80V
100	100V
160	160V
180	180V
200	200V
150	250V
350	350V
400	400V
450	450V

Capacitance tolerance

Rated capacitance (µF)

0R10	0.1mF
1R00	1mF
0100	100mF
1000	1000mF
10K0	10000mF
100K	100000mF

Leads

W	S type
C	Miniature S type
R	Snap-in 1st available size
F	Snap-in 2nd available size
G	Snap-in 3rd available size
H	Snap-in 4th available size

Package

A	Taping pitch 5mm
X	Taping for miniature S type
R	Taping straight leads
T	Standard leads - bulk
3	Leads cut 4.2 D > 10mm
5	Leads cut 4.2 D > 8mm

Part no check digit

BC Components

2222 048 35 102

Prefix

Range

002	High ripple current screw terminal (2222 002 HRC-ST series)
013	Radial, low-leakage current (RLC series) aluminium electrolytic
021	Axial standard miniature (ASM series) aluminium electrolytic
030	Axial standard (AS series) aluminium electrolytic
031	Axial standard (AS series) aluminium electrolytic
036	Radial semi-professional (RSP series) aluminium electrolytic
037	Radial standard miniature (RSM series) standard aluminium electrolytic
038	Radial standard ultra-miniature (RSU series) standard aluminium electrolytic
041	Axial standard high voltage (ASH series) aluminium electrolytic
042 1-4	Axial standard high voltage (ASH series) aluminium electrolytic
042 7	Axial standard high voltage lighting ballast (AHH-ELB series) aluminium electrolytic
042 8	Axial standard high voltage lighting ballast (AMH-ELB series) aluminium electrolytic
043 1-4	Axial standard high voltage (ASH series) aluminium electrolytic
0432 7	Axial standard high voltage lighting ballast (AHH-ELB series) aluminium electrolytic
043 8	Axial standard high voltage lighting ballast (AMH-ELB series) aluminium electrolytic
044	Radial standard high voltage (RSH series) standard aluminium electrolytic
047	Radial miniature semi-professional (RMS series) aluminium electrolytic
048	Radial miniature long-life (RML series) aluminium electrolytic
051	10-100V power economic. Printed wiring terminals (PEC-PW series)
053	200-400V power economic. Printed wiring terminals (PEC-PW series)

056	10-100V power standard miniature snap-in (PSM-SI series)
057	200-450V power standard miniature snap-in (PSM-SI series)
058	10-100V power long-life snap-in (PLL-SI)
059	200-400V power long-life snap-in (PLL-SI)
086	16-100V screw terminals (PS-ST series)
087	250-500V screw terminals (PS-ST series)
088	10-100V power high current screw terminal (PHC-ST series)
089	250-450V power high current screw terminal (PHC-ST series)
097 7	Radial low profile (RLP 7 series) standard aluminium electrolytic
114	10-100V power EuroDIN ST-STB terminals
115	250-400V power EuroDIN ST-STB terminals
116	Radial long-life (RLL series) aluminium electrolytic
117	Axial smallest diameter (ASD series) aluminium electrolytic
118	Axial high temperature (AHT series) aluminium electrolytic
119	Axial high temperature DIN 45910-T123 (AHT-DIN series series) electrolytic
120	Axial high temperature, high ripple current (ATC series) aluminium electrolytic
122	Radial solid aluminium pearl miniatures (SAL-RP series)
123	Axial solid aluminium (SAL-A series)
128	Radial solid aluminium pearls(SAL-RPM series)
132	Axial long-life DIN 45910-T123 (ALL-DIN series) aluminium electrolytic
133	Axial long-life DIN 45910-T123 (ALL-DIN)
134 5	Radial low profile (RLP 5 series) standard aluminium electrolytic
138	Axial miniature long life (AML series) aluminium electrolytic
148	Radial ultra-high CV (RUS) semi-professional aluminium electrolytic
151	Radial long-life high voltage (RLH series)aluminium electrolytic
152	Radial miniature high voltage (RMH series) aluminium electrolytic
154	10-100V power economic ST-STB terminals (PEC-ST/STB series)
155	250-400V power economic ST-STB terminals (PEC-ST/STB series)
157	Power ultra-miniature snap-in (PUM-SI)
159	Power ultra-long-life snap-in (PUL-SI series)
162	10-100V power long-life. Printed wiring terminals (PLL-PW series)
163	200-400V power long-life. Printed wiring terminals (PLL-PW series)
166	10-100V power standard miniature 4-terminal snap-in
167	200-400V power standard miniature 4-terminal snap-in
168	10-100V power long-life 4-terminal snap-in (PLL-4TSI series)
169	200-400V power long-life 4-terminal snap-in (PLL-4TSI series)

196	Double layer capacitor (DLC series)
198	Power high ripple current snap-in (PHR-SI)

Voltage, case code, quantity

Refer to Charchcroft for individual part numbers

Capacitance code (µF)

Digit 1/2	Significant value
Digit 3	Position of decimal point
	2 = 0.001
	3 = 0.01
	4 = 0.1
	5 = 1.0
	6 = 10.0

BC Components

3188 BA 942 U 005 A P A1

Range

3173	NAFTA power high ripple current long-life screw terminals (2251 007 PRL-LL-ST)
3186	Computer grade, power screw terminals
3188	Computer grade, long-life power screw terminal capacitors
3191	NAFTA output capacitors (2251 004 POC-ST)
3198	NAFTA power low voltage to -55 degree C (2251 005 PLV-ST series)
3199	NAFTA power performance-style (2251 006 PPS-ST series)
3410	Multi-pin snap-in 2251 064 MP-SI series)

Case size

Capacitance code

Capacitance tolerance

Voltage (DC)

005	5V
050	50V

Terminal style

A	High post
B	Low post
D	High current, low post
K	High current, high post
M	High current, high post M5 thread

Insulation/bracket Code

P/H/N -	Without brackets
R//X -	With brackets

Factory assigned number

CAPACITORS

Aluminium Electrolytic - Leaded

Dubilier

CEAJ 100 16 TR

Range

CEA	Axial
CEAJ	Axial, long life, high temperature
CEBM	Standard radial
CEBNP	Non-polar radial
CEBR	Reduced size radial
CEK	Miniature radial
CEKJ	Miniature 105°C
CEKR	Super-miniature
CLLA	Low leakage current
DJ3	High temperature
DJ4X	Low Impedance
DSH	Ultra low impedance
DSHS	Ultra low impedance, small size
DSHR	Ultra low impedance, reduced size

Capacitance (uF)

Voltage

Package

Blank	Loose
SI	Snap-in (DJ3/DJ4X)
SL	Straight lead
TA	Tape & ammo (DSHR/ DJ3/DJ4X)
TR	Tape & reel

Dubilier

DLSC 4700 D H 63

Range

DLSC	Screw terminals
DPG	High temperature snap-in
LCTP	3-pin snap-in
CLP	Standard temperature snap-in

Capacitance (uF)

Case diameter (mm)

A	22.4
B	25
C	30
D	35.7 DLSC 35.5 DPG/CLP 35 LCTP
E	51.6
F	64.3
G	76.9
H	91.0

Case height (mm)

A	20
B	25
C	30
D	35
E	40
F	45
G	50
J	55.7
K	80.7
L	105.7
M	143.2
N	144.5
P	220.7
R	221

Voltage

EPCOS (Siemens)

B41283-C 2 477 -T

Range

B41283-x	Axial aluminium electrolytic capacitor
B41010-x	Axial aluminium electrolytic capacitor
B43283-x	Axial aluminium electrolytic capacitor
B43050-x	Axial aluminium electrolytic capacitor
B41327-x	Radial aluminium electrolytic capacitor
B43327-x	Radial aluminium electrolytic capacitor
B41329-E	Radial aluminium electrolytic capacitor
B41293-x	Radial aluminium electrolytic capacitor
B41306-E	Radial, SMPS aluminium electrolytic capacitor
B43306-E	Radial, SMPS aluminium electrolytic capacitor
B41303-x	Radial, SMPS aluminium electrolytic capacitor
B43303-x	Radial, SMPS aluminium electrolytic capacitor
B41588-x	Axial, long-life aluminium electrolytic
B43588-x	Axial, long-life aluminium electrolytic
B41526-x	Radial, long-life aluminium electrolytic
B41534-x	Radial, long-life aluminium electrolytic
B41336-A	Radial, long-life SMPS aluminium electrolytic
B43503-x	Radial, long-life SMPS aluminium electrolytic
B41564-x	Radial, long-life SMPS aluminium electrolytic to DIN 41 248
B41431-x	Radial, long-life Sikorel SMPS aluminium electrolytic
B41550-A	Radial professional Sikorel 105 aluminium electrolytic
B41570-A	Radial professional Sikorel 105 aluminium electrolytic
B43550-x	Radial high performance aluminium electrolytic

Voltage

Varies with range. Consult Charcroft for part number

Capacitance code

Capacitance tolerance

CAPACITORS

Aluminium Electrolytic - Leaded

EPCOS (Siemens)

B25832-A 4 155 -K 1

Range

B25832-x	Power aluminium electrolytic
B25834-x	Long-life power aluminium electrolytic
B25835-x	Long-life single-pole power aluminium electrolytic
B25838-x	Long-life power aluminium electrolytic with integrated fuse
B25839-B	Long-life power aluminium electrolytic

Voltage (ac)

4	450Vac
6	660Vac

Capacitance code

Capacitance tolerance

Package

Blank	Not applicable (B25839 series)
1	Solderable tab connectors
4	Screw terminals
7	Tab connector (single pole B25835 series)
9	Dual tab connectors

Vishay (Roederstein)

EYM 0 1 C F 510 E 0 2 x

Range

EB	Axial aluminium electrolytic capacitor
EBC	Axial 105 degree C aluminium electrolytic
EBL	Axial 125 degree C aluminium electrolytic
EBM	Axial aluminium electrolytic capacitor
EBR	Axial aluminium electrolytic capacitor
EBT	Axial low ESR aluminium electrolytic
EBM	Axial aluminium electrolytic capacitor
EBU	Axial aluminium electrolytic capacitor
EBW	Axial low ESR aluminium electrolytic
ECA	SMD aluminium electrolytic capacitor
ECV	SMD aluminium electrolytic capacitor
EFB	Power aluminium electrolytic capacitor for flashlights
EG	Axial aluminium electrolytic capacitor
EGC	Axial 105 degree C aluminium electrolytic capacitor
EGCD	Solder ring power aluminium electrolytic capacitor
EGD	Solder ring power aluminium electrolytic capacitor
EGL	Axial 125 degree C aluminium electrolytic capacitor

EGM	Axial aluminium electrolytic capacitor
EGR	Axial aluminium electrolytic capacitor
EGT	Axial low ESR aluminium electrolytic
EGU	Axial aluminium electrolytic capacitor
EGW	Axial low ESR aluminium electrolytic
EKC	Radial aluminium electrolytic capacitor
EKE	Radial aluminium electrolytic capacitor
EKF	Radial aluminium electrolytic capacitor
EKI	Radial aluminium electrolytic capacitor
EKL	On request only
EKO	Radial aluminium electrolytic capacitor
EKS	Radial aluminium electrolytic capacitor
EKSU	Radial aluminium electrolytic capacitor
EL	Axial aluminium electrolytic capacitor
ELM	Axial aluminium electrolytic capacitor
EY	Solder lug power aluminium electrolytic
EYC	Snap-in power aluminium electrolytic
EYD	Solder pin power aluminium electrolytic
EYE	Screw terminal power aluminium electrolytic
EYK	Solder lug power aluminium electrolytic
EYL	Solder lug aluminium electrolytic capacitor
EYM	Screw terminal power aluminium electrolytic
EYP	Screw terminal power aluminium electrolytic
EYS	Snap-in power aluminium electrolytic
EYV	Solder pin power aluminium electrolytic
EYZ	Solder pin power aluminium electrolytic

Design code (digit 1)

0	Standard
1	Smooth foil, polarised
2	Bipolar
3	Smooth foil. Bipolar
4	Solder lug
5	Screw terminal

Design code (digit 2)

0	Standard design
1	Smooth case bottom, clamp (design A)
2	Threaded mounting stem (design B)
3	Terminal ring
4	Axial with angled negative wire
5	Radial with standard lead spacing. 5mm wires
6	Radial with snap-in leads
7	Radial with snap-in leads
8	Radial long leads, standard spacing bent open
9	Radial short leads, standard spacing bent open

Lead diameter (mm)

Radial	
N	3
M	4
A	5
B	6.3
P	8
C	8.5
D	10

CAPACITORS

Aluminium Electrolytic - Leaded

F	12.5
G	13
J	16
K	18

Axial

A	3.3
B	4.5
C	6
D	6.5
F	8
G	10
H	12
J	14
K	16
L	18
M	21
N	25
P	30

Can

L	22
A	25
B	30
C	35
D	40
M	45
E	50
G	60
H	65
K	76

Lead length

Radial

P	5
M	7
A	11
B	11.5
T	12
C	12.5
D	16
E	20
G	25
J	30
S	31.5
U	35
L	35.5
R	36.5
K	40

Axial

M	7
N	8
k	10
A	11
B	17
L	18
C	20
D	25
E	30
F	35
G	40

H	45
J	50
Can	
U	25
V	30
A	35
B	40
C	45
D	50
E	55
F	60
H	65
G	70
J	80
K	90
M	105
O	114
P	120
R	125
S	135
T	144
X	166

Capacitance code

(Eg 047 = 0.47uF)

Digit 1 No of places before the decimal point
Digit 2/3 Significant value

Voltage (DC)

A	4
B	6.3
C	10
T	22
D	16
Z	33
E	25
F	35
G	40
H	50
U	60
J	63
W	80
L	100
M	160
S	200
N	250
V	300
O	350
K	360
R	385
X	400
P	450
Y	500

Package style letter or first digit capacitance tolerance / special design

0	First digit for capacitance tolerance, standard design or insulation
10-99	Special design

A	Axial 3.3-16mm diameter. Reel
B	Axial 3.3-16mm diameter. Ammo pack
J	Radial 4-8mm diameter. 5mm pitch. Positive lead front. Reel
K	Radial 4-8mm diameter. 5mm pitch. Negative lead front. Reel
P	Radial 4-8mm diameter. 2.5mm pitch. Positive lead front. Reel
R	Radial 4-8mm diameter. 2.5mm pitch. Negative lead front. Reel
L	Radial 4-8mm diameter. 5mm pitch. Ammo pack
M	Radial 4-8mm diameter. 2.5mm pitch. Ammo pack
C	Radial 10 or 12.5mm diameter. 5 or 7.5mm pitch. Positive lead front. Reel
E	Radial 10 or 12.5mm diameter. 5 or 7.5mm pitch. Negative lead front. Reel
G	Radial 10 or 12.5mm diameter. 5 or 7.5mm pitch. Ammo pack

Capacitance tolerance / special design (second digit)

0	Standard design
1	Case insulation
2	Full insulation
3	-20% +50%
4	-10% +30%
5	-10% +50%
6	5%
7	10%
8	15%
9	20%
10-99	Other special design

Special coding

CAPACITORS

Aluminium Electrolytic - Surface Mount

BC Components

2222 085 23 109

Prefix

Range

085	Standard chip (CS series) non-solid aluminium electrolytic
139	Long life chip (CLL series) non-solid aluminium electrolytic
153	Vertical long-life (CLV series) non-solid aluminium electrolytic

Voltage, case code & quantity

Refer to Charcroft for individual part numbers

Capacitance code (uF)

Digit 1/2	Significant value
Digit 3	Position of decimal point
	2 = 0.001
	3 = 0.01
	4 = 0.1
	5 = 1.0
	6 = 10.0

Dubilier

DVCR 47 6.3

Range

DVC	Electrolytic 85 degree C
DVCNP	SMD - non polarised
DVCR	SMD 85 degree C - reduced size
DVJ	Electrolytic 105 degree C
DVJR	Electrolytic 105 degree C - reduced size
DVJL	Electrolytic 105 degree C - low impedance

Capacitance (uF)

Voltage

Vishay (Roederstein)

ECA 0 0 A A 510 A A 0

Range

ECA	SMD aluminium electrolytic capacitor
ECV	SMD aluminium electrolytic capacitor

Design code (digit 1)

0	Standard
1	Smooth foil. Polarised
2	Bipolar
3	Smooth foil. Bipolar

Design code (digit 2)

0	Standard design
---	-----------------

Case style

A	Standard
---	----------

Case size

A	3.0 x 5.7mm
B	4.0 x 5.7mm
C	5.0 x 5.7mm
D	6.3 x 5.7mm
E	8.0 x 6.2mm
F	8.0 x 10.2mm
G	10.0 x 10.2mm

Capacitance code

(Eg 047 = 0.47uF)

Digit 1	No of places before the decimal point
Digit 2/3	Significant value

Voltage (DC)

A	4
B	6.3
C	10
T	22
D	16
Z	33
E	25
F	35
G	40
H	50
U	60
J	63
W	80
L	100
M	160
S	200
N	250
V	300
O	350
K	360
R	385

X	400
P	450
Y	500

Package

A0	Standard
----	----------

Capacitance tolerance / special design (second digit)

0	Standard design
1	Case insulation
2	Full insulation
3	-20% +50%
4	-10% +30%
5	-10% +50%
6	5%
7	10%
8	15%
9	20%
10-99	Other special design

Arcotronics

402/1/ 50027/ 003

Range

402/1/ Castanet series tantalum

Series

50027 AHS series, shallow case, stud-mounting all-tantalum button capacitor

501471 PCAHS series, shallow case, PC-mounting all-tantalum button capacitor

50029 PAHS series, shallow case, potting tag-mounting all-tantalum button capacitor

50031 TAHS series, shallow case, double tag-mounting all-tantalum button capacitor

50028 AHSL series, deep case, stud-mounting all-tantalum button capacitor

50148 PCAHSL series, deep case, PC-mounting all-tantalum button capacitor

50030 PCHSL series, deep case, PC-mounting all-tantalum button capacitor

50032 TAHSL series, deep case, double tag-mounting all-tantalum button capacitor

50157 CA or CAE series, stud-mounted, all-tantalum button capacitor

50158 CAPC or CAEPC series, PC-mounted, all-tantalum button capacitor

50039 ANP series, stud-mounting, all-tantalum button capacitors

50040 ANPL series, stud-mounting, all-tantalum button capacitors

50041 PANP series, potting tag-mounting, all-tantalum button capacitors

50049 PCANP series, PC-mounting, all-tantalum button capacitors

50043 TANP series, double tag-mounting, all-tantalum button capacitors

Capacitance / voltage

Refer to Charcroft for individual part number

Arcotronics (TH series)

402/1/ 58 1 01 1 20

Range

402/1/ Castanet series tantalum

Series

58 TH series, leaded wet tantalum capacitor

Case size

1	T1
2	T2
3	T3
4	T4

Voltage

01	6V
02	8V
03	10V
04	15V
05	25V
06	30V
07	50V
08	60V
09	75V
10	100V
11	125V

Tolerance

0	20%
1	10%

Capacitance

Refer to Charcroft for individual part number

Arcotronics (SF/SFE series)

402/ SF 0068 M 025 D

Range

402/ Castanet tantalum

Series

SF Solid tantalum capacitor to CECC 30 201 040

SFE Extended range solid tantalum capacitor to CECC 30 201 040

Capacitance

Examples

005.6	5.6mF
0010	10mF
0330	330mF

Capacitance tolerance

Voltage

Examples

050	50V
6.3	6.3V

Case size

C	18.2x7.5mm diameter
D	20.8x9.1mm diameter

Arcotronics (R series)

402/1/ 507 22 101

Range

402/1/ Castanet series tantalum

Series

507 R series leaded wet tantalum to BS 9073

Package

20 Uninsulated T1 case
 22 Insulated T1 case
 24 Uninsulated T2 case
 26 Insulated T2 case
 28 Uninsulated T3 case
 30 Insulated T3 case
 32 Uninsulated T4 case
 34 Insulated T4 case

Capacitance/voltage

Refer to Charcroft for individual part number

AVX

TMH W 104 M 020 R

Range

TMH Minitan tantalum capacitor
 TAA Hermetic axial tantalum capacitor
 TAR Moulded axial tantalum capacitor
 TAP Dipped radial tantalum capacitor

Size

Capacitance code

Capacitance tolerance

Voltage

Lead configuration or package

TMH series (axial or radial)

R Radial
 A Axial

TAA series (axial)

G Tape & reel
 W Ammo pack

TAR series

Blank Standard

TAP series

C Shouldered leads
 B Kinked leads

S Straight leads
 CS Bulk
 RW Tape & reel
 RS Tape ammo pack

Dubilier

SH 10 16 TR

Range

SH Tantalum dipped

Capacitance (uF)

Voltage

Options

Blank 5mm pitch
 K 10% tolerance
 2.5P 2.5mm pitch
 TR Tape & reel

EPCOS (Siemens)

B45170-A 1 475 -M 9

Range

B45170-x Axial, long-life tantalum capacitor to CECC 30201
 B45181-x Radial, long-life tantalum capacitor to CECC 30200/1

Voltage

Varies with range. Consult Charcroft

Capacitance code

Capacitance tolerance

Suffix

Varies with range. Consult Charcroft.

Firadec

Clear text	CTC3D	10mF	10%	25V
UTE C 9-510 code	CTC3D	106	K	25V
Mil coded	CTC3D	10M	K	025

Range

CT4/E	CECC 30202-003 silver-cased axial wet tantalum
CT9/E	CECC 30202-004 silver-cased axial wet tantalum
CT79	CECC 30202-001/006/801 axial wet tantalum
CT79E/CMS	SMD wet tantalum chip
CT79EM	MIL C-39006/25 SMD wet tantalum chip
CT79M	MIL C-39006/22 SMD wet tantalum chip
CT79E-40W	CECC 30202-001/005/801 axial wet tantalum
CTS1	CECC 30201-001/2/801 metal-cased axial solid tantalum
CTS1M	CECC 30201-044/MIL C-39003/01 metal-cased axial solid tantalum
CTS4	CECC 30201-003 moulded radial solid
CTS44	CECC 30201-003 moulded axial solid
CTS5	CECC 302001-004 moulded radial solid
CTS13	CECC 30201-005 metal-cased axial solid
CTS20/E	CECC 30201-022 metal-cased axial solid
CTS21/E	CECC 30201-040 metal-cased axial solid
CTS21M	MIL C-39003/09 metal-cased axial solid
CTS23	CECC 30201-025 metal-cased axial solid
CTS23M	MIL C-39003/03 metal-cased axial solid
CTS26	CECC 30201-006 moulded radial solid
CTS27	CECC 30201-007/9/18 moulded radial solid
CTS32	CECC 30201-019/041 metal-cased axial solid
CTS33	CECC 30201-026 metal-cased axial solid
CTS33M	MIL C-39003/06 metal-cased axial solid
CTS41/RSE	CECC 30201-037 moulded radial solid
CTS44	Moulded axial solid tantalum
CTS55	Moulded axial solid tantalum

Capacitance code

Clear Text (Eg 10mF)

Industry standard (Eg 103 = 10000pF)

Digit 1/2	Significant value
Digit 3	No of zeroes

UTE C 9-510

Digit 1/2	Significant value
Letter	Multiplier
Eg	K = nF (eg 4K7 = 4.7nF)
	M = uF (eg 56M = 56mF)
	G = 1000uF (eg 56G = 56000mF)

Voltage

Actual voltage (eg 25V) or 3-digit code (eg 025)

Capacitance tolerance

Kemet

T 322 A 474 M 035 A S -C

Range

T Solid tantalum

Series

322	Sub-miniature moulded axial (CX01)
323	Sub-miniature moulded axial (CX05)
330	Precision moulded radial
340	Precision moulded radial
350	Dipped radial
351	Dipped radial
352	Dipped radial
353	Dipped radial
354	Dipped radial
355	Dipped radial
356	Dipped radial
368	UltraDip II radial
396	UltraDip III dipped three-leaded, straight
398	UltraDip III dipped three-leaded, stand-off
370	Moulded radial
378	Mil moulded radial (CX06)

Case size

Refer to Charcroft

Capacitance code

Capacitance tolerance

Voltage

002	2V (T322 / 323)
003	3V (T322 / 323)
004	4V (T322 / 323)
006	6.3V
010	10V
015	15V
016	16V
020	20V
025	25V
035	35V
050	50V

Failure rate

A Commercial

Lead material

S Standard

Specification

C Reeling per EIA RS-296

Vishay Sprague

150D 224 X0 006 A 2 P

Range

135D	Wet tantalum
137D	Wet tantalum
150D	Axial hermetically sealed solid tantalum (standard range)
152D	Axial hermetically sealed solid tantalum (extended range)
299D	Radial, triple lead, resin coated solid tantalum
422DI	High ripple current, resin coated, radial, power solid tantalum
489D	Standard radial solid tantalum to +85 degrees
489DE	CECC 30201-802, low IL radial solid tantalum to 85 degree C
489DX	BS / CECC 30201-027 radial solid tantalum to 85 degree C
499D	Low IL, standard radial solid tantalum to +125 degree C
499DE	CECC 30201-803 low IL radial solid tantalum to +125 degree C
499DX	BS / CECC 30201-017/032 low IL, radial solid tantalum to +85 degree C
550D	Axial solid tantalum for high frequency power supplies
735D	Wet tantalum to CECC
749DX	CECC 30201-001 / BS9073-N001, CECC30201-011/12/029 axial solid tantalum
752DE	CECC 30201-041 / 801 axial solid tantalum
790D	Radial moulded solid tantalum (standard, extended & CECC 30201-009/018)
CSR13	ESA/SCC 3002-002 / Mil C-39003/01 axial solid tantalum
CSR23	ESA/SCC 3002-001 / Mil C-39003/03 axial solid tantalum
CSR33	ESA/SCC 3002-006 axial solid tantalum
CTS1	CECC 30201-001 axial solid tantalum
CTS13	CECC 30201-005 axial solid tantalum
CTS21	CECC 30201-040 axial solid tantalum for high frequency power supplies
CTS23	CECC 30201-025 axial solid tantalum
CTS27	CECC30201-007 radial moulded solid tantalum
CTS32	CECC 30201-019 axial solid tantalum
CTS33	CECC 30201-026 axial solid tantalum
CTS48	CECC 30201-038 radial solid tantalum
CTS50	CECC 30201-042, low IL radial solid tantalum

Capacitance code

Capacitance tolerance

X5	5% (special order)
X9	10%
X0	20%

Voltage (DC)

Three digit code (example)

6R3	6.3V
063	63V
630	630V

Case code

Refer to Charcroft for dimensions

Style

Axial

0	Bare case
2	Standard (plastic film insulation)

Radial

B1	'Hockey stick' triple lead, 2.54mm lead space (299D series only)
1	Straight lead 2.5mm lead space, uneven length
2	Straight lead 2.5mm lead space, even length
3	Straight lead 5mm lead space, uneven length
4	Straight lead 5mm lead space, even length
6	Shouldered leads 5mm lead space
9	Snap-in 5mm lead space

Package

Axial

P	Reel (150-152D series)
R	Reel (150-152D series)

Radial

Blank	Not applicable (triple lead 299D series only)
B	Bulk (790D / CTS27 series)
G	Ammo pack (16.5mm)
H	Ammo pack (18.5mm)
I	Ammo pack - shouldered leads (A case)
X	Reel (H=16.5mm)
Y	Reel (H=18.5mm)
Z	Reel - shouldered leads (A case) 422/489/499/CTS48/CTS50 series
A	Ammo pack
B	Reel (positive leader)
C	Reel (negative leader)
V	Bulk

Arcotronics (SM series)

402 68 1 01 1 20

Range

402/1/ Castanet series tantalum

Series

68 SM series, surface mount, all-tantalum capacitor
 78 SMTH series, surface mount all-tantalum capacitor

Case size

1 T1
 2 T2
 3 T3
 4 T4

Voltage

01 6V
 02 8V
 03 10V
 04 15V
 05 25V
 06 30V
 07 50V
 08 60V
 09 75V
 10 100V
 11 125V

Tolerance

0 20%
 1 10%

Capacitance

Refer to Charcroft for individual part number

Arcotronics (SMF series)

402 SMF 0120 M 6.3 C

Range

402 Castanet tantalum

Series

SMF SMF series, low impedance surface mount solid tantalum

Capacitance

Examples
 0120 120 μ F
 0068 68 μ F
 08.2 8.2 μ F

Capacitance tolerance

Voltage

Examples
 6.3 6.3V
 063 63V

Case size

C 11x9mm
 D 11x12.5mm

AVX

TAJ B 335 M 016 R x *

Range

TAJ Solid tantalum chip capacitor
 TAC TACmicrochip tantalum chip capacitor
 TPS Low ESR solid tantalum chip capacitor

Case code

A 3216
 B 3528
 C 6032
 D 7343
 E 7343H
 L 0603
 R 0805
 V 6.1x7.3

Capacitance code

Digit 1/2 Significant value
 Digit 3 Multiplier
 4 = 0.1 (eg 0.33 μ F)
 5 = 1 (eg 3.3 μ F)
 6 = 10 (eg 33 μ F)
 7 = 100 (eg 330 μ F)

Capacitance tolerance

Voltage

Package

X 8mm tape & reel (TACmicrochip only)
 R 7" tape & reel
 S 13" tape & reel

Maximum ESR (TPS series only)

Maximum ESR at 100kHz @ 25 degrees C in milliohms

Special requirements

AVX

TAZ D 335 M 015 C R SZ 0000

Range

TAZ Tantalum chip capacitor (see CWR09)

Case code

Refer to Charcroft for dimensions

Capacitance code

Digit 1/2	Significant value
Digit 3	Multiplier
	4 = 0.1 (eg 0.33 uF)
	5 = 1 (eg 3.3 uF)
	6 = 10 (eg 33 uF)
	7 = 100 (eg 330 uF)

Capacitance tolerance

Voltage

Lead configuration

C	Chip
X	Extended range

Package

R	7" tape & reel
S	13" tape & reel

Failure rate

S	Standard
Z	Not applicable

Termination finish

0000	Fuse solder plated
0800	Hot solder dipped
0900	Gold plated

Dubilier

SHJL C 10 25 K xxxx

Range

SHJ	Standard surface mount
TCL	Surface mount to EIA standard 536BAAC
SHJL	Low ESR surface mount
TCJL	Low ESR surface mount

Case size

Capacitance value (uF)

Voltage

Capacitance tolerance

ESR Ohmic value

SHJL & TCJL parts only

EPCOS (Siemens)

B45196-E 1 225 -M 9

Range

B45196-x Long-life tantalum chip

Voltage

1	6.3V
2	10V
3	16V
4	20V
5	25V
6	35V

Capacitance code

Capacitance tolerance

Suffix

9 Standard

Firadec

Clear text	CTC3D	10µF
UTEC 9-510 code	CTC3D	106
Mil code	CTC3D	10M

Range

CTC1	CECC 30801-001 coated SMD solid tantalum chip. Low ESR
CTC2	CECC30801-006 coated SMD solid miniature tantalum chip
CTC3/E	CECC 30801-009/801 moulded SMD solid tantalum chip. Low profile
CTC4/RSE	CECC 30801-011 moulded SMD solid tantalum chip
CTC21/E	CECC 30801-013 moulded SMD solid tantalum chip
CTC23	Moulded SMD solid tantalum chip
CTC42/E	Moulded SMD solid tantalum chip
TCR	MIL C-55365/04 coated SMD solid tantalum chip

Capacitance code

Clear Text (Eg 10µF)

Industry standard (Eg 103 = 10000pF)

Digit 1/2	Significant value
Digit 3	No of zeroes

UTE C 9-510

Digit 1/2	Significant value
Letter	Multiplier
Eg	K = nF (eg 4K7 = 4.7nF)
	M = µF (eg 56M = 56µF)
	G = 1000µF (eg 56G = 56000µF)

Capacitance tolerance

Voltage

Actual voltage (eg 25V) or 3-digit code (eg 025)

Kemet

T 510 X 477 M 006 A S

Type

T	Tantalum
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Series

T491	Precision-moulded
T492	Precision-moulded, style CWR11 (MIL-C-55365/8)
T494	Low ESR, industrial grade
T495	Low ESR, surge robust
T496	Precision-moulded, fail-safe
T510	Ultra-low ESR

Case size (EIA / IECQ)

A	3216
B	3528
C	6032
D	7343
S	3216 Low profile
T	3528 Low profile
U	6032 Low profile
V	7343 Low profile
X	7343H

Capacitance code

Capacitance tolerance

Failure rate (1000 hrs)

A	Commerical
B	0.1%
C	0.01%
D	0.001%

Lead material

S	Standard solder-coated
G	Gold-plated

Vishay (Sprague)

293D 105 X0 020 A 2 T

Range

49BC/EC	See below
194D	Conformal coated solid tantalum chip
195D	Conformal coated solid tantalum chip
293D	IECQ 300801 moulded tantalum chip
592D	Low profile solid tantalum chip with conformal leads
593D	Low ESR solid tantalum chip for power applications
595D	Maximum CV tantalum chip with conformal terminals
793DE	CECC 30801/801 moulded tantalum chip
793DX	CECC 30801/005 moulded tantalum chip
893D	Moulded tantalum chip with high speed built-in fuse
CTC1	CECC 30801/001 conformal coated solid tantalum chip
CTC3	CECC 30801/009 moulded tantalum chip
CTC4	CECC 30801/011 moulded tantalum chip
CWR11	Mil C55365/8A moulded tantalum chip

Capacitance code

Capacitance tolerance

X5	5%
X9	10%
X0	20%

Voltage

Three digit code (example)

6R3	6.3V
063	63V
630	630V

Case code (A-H)

Refer to Charcroft for dimensions

Termination

2	Standard solderable coating (except 194D series 2 = gold plate)
4	Gold plate (595D series)
7	Hot solder dipped (194D series)
8	Electroplate (194D series)
B	Gold plate (Mil/CTC1 series)
C	Hot solder dipped (Mil/CTC1 series)
H	Electroplate (Mil/CTC1 series)

Package

B	Bulk
T	7" reel - cathode nearest sprocket hole (standard)
V	7" reel - anode nearest sprocket hole
W	13" reel - cathode nearest sprocket hole (standard)
X	13" reel - anode nearest sprocket hole

Vishay (Sprague)

49EC 225 L 010 M 0 A FT

Range

49BC/EC Conformal coated solid tantalum chip

Capacitance code

Case code

Refer to Charcroft for dimensions

Voltage (dc)

Three digit code (example)

6R3	6.3V
063	63V
630	630V

Capacitance tolerance

Finish

0 Unsleeved

Grade

A Industrial

Package

FT	Tape & reel
FB	Blister pack

Arcotronics

402/1/ 50165/ 003

Range

402/1/ Castanet series tantalum

Series

50165 M & extended ME series all-tantalum
capacitor modules to BS 9073 F021

801xx TM series all-tantalum capacitor modules to
BS/CECC30 202 009

Voltage/capacitance

Refer to Charcroft for individual part number

Advance Capacitors

C M CMF D 50 A

Range

Blank	Polyester
C	Polycarbonate

Style

M	Rectangular
T	Cylindrical plastic case
W	Cylindrical wrap/epoxy fill

Types

CMWF	CWD CWH CWG CWW CWL
CMF	CMD CMR CMG CMW CMK
CMTF	CTD CTR CTG CTW CTK
MWF	WD WH WG WW WK WX
MF	MD MR MG MW MK
MTF	TD TR TG TW TK

Voltage (DC)

D	63V
H	100V
R	160V
G	250V
W	400V
K	630V
X	1KV

Capacitance (uF)

02	0.01
04	0.015
06	0.022
08	0.033
010	0.047
015	0.068
2	0.1
4	0.15
6	0.22
8	0.33
10	0.47
15	0.68
20	1.0
25	1.5
30	2.2
35	3.3
40	4.7
45	6.8
50	10

Capacitance tolerance

A	10%
B	5%
C	2%
D	1%

Arcotronics

R 82 D C 4100 x DQ 30 K

Leads

A	Axial
R	Radial
P	Precision

Range

02	Precision radial film-foil capacitors (KP series)
04	Precision radial metallized polypropylene capacitors (MKP series)
12	Precision radial film-foil capacitors (KP series)
14	Precision radial metallized polypropylene capacitors (MKP series)
42	Precision radial metallized & film-foil capacitors (MKP-KP series)
48	Precision axial film capacitors (MKP series)
50	Axial polyester film capacitors (MKT series)
60	Radial polyester film capacitor (MKT series)
66	Radial polyester film capacitors (MKT series)
70	Axial polypropylene film capacitors (MKP series)
72	Axial film-foil capacitors for high currents (KP series)
73	Radial polypropylene film capacitors for high currents (KP series)
74	Radial polypropylene film capacitors for AC (MKP series)
75	Radial polypropylene film capacitors for DC & pulse (MKP series)
76	Radial polypropylene film capacitors for DC & pulse (MMKP series)
77	Radial polypropylene film capacitors for AC (MMKP series)
79	Radial polypropylene film capacitors (KP-MKP series)
82	Radial DIN44122 polyester film capacitors (MKT series)
84	Radial polyester film capacitors (MKT series)
SB	Stacked radial polyester film pulse caps (MKT series)

Voltage

C	50V
D	63V
E	100V
G	160V
I	250V
M	400V
W	500V
P	630V
Q	1000V
R	1250V
S	1500V
T	1600V
U	2000V
L	250Vac

K	275Vac
3	300Vac
N	400Vac
5	500Vac
7	700Vac
9	900Vac

Pitch (radials) or length (axials) in mm

C	5.0
D	7.5
F	10/11
H	14.0
I	15.0/16.5
K	20.5
N	22.5
Q	28.0
R	27.5
T	33.0

Dimensions (for precision caps)

M	5.0 x 11.0 x 6.3
A	6.25 x 6.25 x 11.0
W	6.25 x 6.25 x 11.0
B	7.5 x 7.5 x 13.0
I	7.5 x 7.5 x 13.0
C	10.0 x 10.0 x 13.0
D	12.5 x 12.5 x 13.0
Z	Special dimensions
P	A.48 series

Capacitance code

Internal capacitance code (for precision caps)

Package

DQ	Ammo pack
GY	355mm reel
CK	500mm reel
AA/SE	Loose, short leads
50/Z3	Loose, long leads

Internal code

Capacitance tolerance

AVX

CPM85 BT07 4 E 0104 K —

Range

CPM83	Radial metallized polyester film capacitor
CPM-N	Radial metallized polyester film capacitor
CMP85	Radial metallized polyester film capacitor
CPM50	Radial metallized polyester film capacitor
CPM13	Radial metallized polyester film capacitor

CPM8	Axial metallized polyester film capacitor
CPM72	Axial metallized polyester film capacitor

Identification code

Refer to Charncroft for 4 digit code

Voltage

C	25/40V
D	50/63V
E	100V
F	160/200V
G	250V
H	275/300V
I	400V
J	500V
K	600/630V
L	1kV
N	2kV
P	2.5kV
Q	3kV
R	4kV
S	5kV
T	6/6.3kV
U	8kV
V	10kV

Capacitance code

(Eg 8288 = 8.28pF)

Digit 1/3	Significant value (leading zero if only 2 significant digits)
Digit 3	No of zeroes or multiplier 9 = x0.1 8 = x.01

Capacitance tolerance

Suffix

DA	5.08mm lead space on tape or ammo pack
DB	5.08mm lead space on tape or ammo pack
DC	5.08mm lead space on tape or ammo pack
DD	5.08mm lead space on tape or ammo pack
EN	Radial. 7.5/10/15mm lead spacing tape & reel H = 16.5mm
SG	Axial. Ammopack
EP	Tape & reel H = 18.5mm
GA	Standard axial taped
GB	Standard axial taped
—	Bulk

BC Components

2222 MKT365 45 104

Prefix

Range

KT347	Speciality capacitors for high current/steep pulse applications
KT900	Starter capacitor
KP374	630V AC & pulse. High energy & repetition rate
KP375	AC & pulse. High energy & repetition rate
KP460	63V precision film capacitor. Reel
KP461	160V precision film capacitor. Reel
KP462	250V precision film capacitor. Reel
KP463	400V precision film capacitor. Reel
KP464	630V precision film capacitor. Reel
MKC344	Speciality capacitors for blocking, coupling, bypass & energy reservoir
MKP313	400V ignition
MKP335 5	275V X2 interference suppression
MKP336 2	275V X2 interference suppression
MKP338 2	275V miniature X2 interference suppression
MKP375	2500V AC & pulse. High energy & repetition rate
MKP378	AC & pulse. Low voltage, dipped
MKP379	AC & pulse. Low voltage, boxed
MKP416	63V precision film capacitor. Ammo pack
MKP417	160V precision film capacitor. Ammo pack
MKP418	250V precision film capacitor. Ammo pack
MKP419	400V precision film capacitor. Ammo pack
MKP420	630V precision film capacitor. Ammo pack
MKP479	AC & pulse. Low voltage, dipped
MKP435	275V X2 interference suppression. Insulated leads
MKP479	AC & pulse. Low voltage, dipped
MKT314	Discharge ignition
MKT365	5.0mm pitch general purpose epoxy dipped. Ammo pack
MKT370	5.08mm pitch general purpose epoxy boxed. Ammo pack
MKT371	7.62mm pitch general purpose epoxy boxed. Ammo pack
MKT372	10.00mm pitch general purpose epoxy boxed. Loose
MKT373	15.0 to 27.5mm pitch general purpose epoxy boxed. Loose
MKT467	10.00mm pitch general purpose miniature epoxy dipped. Loose
MKT468	15.0 to 27.5mm pitch general purpose miniature epoxy dipped. Loose
MKT470	5.0mm pitch general purpose high temperature. Ammo pack
MMKP383	AC & pulse for light ballast

Voltage, tolerance, package

For ranges not listed, refer to Charcroft for individual part numbers

KP/MKP375

14	630V
24	1000V
34	1600V
44	2000V

MKP378

64	630V
74	1000V
84	1600V
94	2000V

MKP383

00	250V
10	400V
20	630V
30	1000V
40	1400V
50	1600V
60	2000V
70	2500V

MKP479

34	160V
44	250V
54	40V
64	630V

MKT314

61	400V
69	250V

MKT365

15	63V 10% tolerance. Bent back leads
16	63V 5% tolerance. Bent back leads
25	100V 10% tolerance. Bent back leads
26	100V 5% tolerance. Bent back leads
45	250V 10% tolerance
46	250V 5% tolerance
55	400V 10% tolerance
56	400V 5% tolerance
75	63V 10% tolerance
76	63V 5% tolerance
85	100V 10% tolerance
86	100V 5% tolerance

MKT370

35	250V 10% tolerance
36	250V 5% tolerance
65	400V 10% tolerance
66	400V 5% tolerance
75	63V 10% tolerance
76	63V 5% tolerance
85	100V 5% tolerance
86	100V 10% tolerance

MKT371

38	63V 10% tolerance
39	63V 5% tolerance
68	100V 10% tolerance
69	100V 5% tolerance
78	250V 10% tolerance
79	250V 5% tolerance
88	400V 10% tolerance

89	400V 5% tolerance
MKT372	
41	250V 10% tolerance
51	400V 10% tolerance
MKT373	
23	100V 10% tolerance
43	250V 10% tolerance
53	400V 10% tolerance
MKT470	
35	250V 10% tolerance
36	250V 5% tolerance
65	400V 10% tolerance
66	400V 5% tolerance
75	63V 10% tolerance
76	63V 5% tolerance
85	100V 10% tolerance
86	100V 5% tolerance
MKT467 / MKT468	
04	100V 10% tolerance
05	100V 5% tolerance
16	250V 10% tolerance
17	250V 5% tolerance
28	400V 10% tolerance
29	400V 5% tolerance
40	630V 10% tolerance
41	630V 5% tolerance

Capacitance code (uF)

Digit 1/2	Significant value
Digit 3	Position of decimal point
	2 = 0.001
	3 = 0.01
	4 = 0.1
	5 = 1.0
	6 = 10.0

Dubilier

DPA 4.7 250 M

Range

DPA Axial polyester film capacitor

Capacitance value (uF)

Voltage

Capacitance tolerance

Dubilier

LBPP 0.1 160 K 7.5

Range

DNP	Naked polyester film
DP368	Dipped polyester
LBPP	Box polypropylene
LBMP	Box polyester

Capacitance value (uF)

Voltage

Capacitance tolerance

Pitch (mm)

Dubilier

DMP 10 10N J TR

Range

DMP	5mm boxed polyester
MMP	5mm boxed polyester

Voltage

Blank	63V
10	100V
25	250V
40	400V

Capacitance value (nF)

Capacitance tolerance

Package

TR	Tape & reel
TA	Tape & ammo (MMP series)

EPCOS (Siemens)

B31063-B 1 470 -H 7

Range

B31063-B	Axial, general purpose, Styroflex film-foil capacitor. Taped
B31861-C	Axial, long-life, Styroflex film-foil capacitor. Taped
B31531-B	Radial Styroflex film-foil capacitor. Plastic case

B33063-B	Axial polypropylene capacitor. Taped
B33061-C	Radial, polypropylene capacitor. Plug-in
B33531-A	Radial, polypropylene capacitor. Plastic case
B32529-x	5mm pitch, radial, polyester capacitor. Plastic case (MKT series)
B32520-x	7.5mm pitch, radial, polyester capacitor. Plastic case (MKT series)
B32521-x	10mm pitch, radial, polyester capacitor. Plastic case (MKT series)
B32522-x	15mm pitch radial, polyester capacitor. Plastic case (MKT series)
B32523-x	22.5mm pitch, radial, polyester capacitor. Plastic case (MKT series)
B32524-x	27.5mm pitch, radial polyester capacitor. Plastic case (MKT series)
B32560x	7.5mm pitch, radial stacked polyester capacitor (MKT series)
B32561x	10mm pitch, radial stacked polyester capacitor (MKT series)
B32562x	15mm pitch, radial stacked polyester capacitor (MKT series)
B32650-x	Radial polypropylene pulse capacitor (MKP series)
B32655-x	Radial polypropylene pulse capacitor (MKP series)
B32657-x	Radial polypropylene pulse capacitor (MKP series)
B32642-x	15mm pitch, radial polypropylene pulse capacitor (MFP series)
B32643-x	22.5mm pitch, radial polypropylene pulse capacitor (MFP series)
B32644-x	27.5mm pitch, radial polypropylene pulse capacitor (MFP series)
B32120-x	Axial cellulose acetate capacitor. (MKL/MKU series)

Voltage

Varies with series. Refer to Charcroft for individual voltage reference numbers

Capacitance code

Capacitance tolerance

Suffix

Varies with range. Consult Charcroft for correct suffix

EVOX-RIFA

MMK5 104 K 63 L 4 Bulk

Range

MMK	Radial polyester film capacitor
MCK	Radial polycarbonate film capacitor
PFR	Radial polypropylene foil capacitor
CMK	Radial polycarbonate film capacitor

PMR	Radial polypropylene film pulse capacitor
SF	Axial polystyrene foil capacitor
MMX-AC	Radial polyester film capacitor for RFI suppression

Capacitance code

Capacitance tolerance

Voltage (dc)

Lead length

L4	Standard (4mm)
----	----------------

Packing code

Bulk	Loose, boxed
Tray	Tray
Tube	Automatic insertion tubes
TR16	Tape & reel (16.5mm)
TR18	Tape & reel (18.5mm)
TA16	Ammo pack (16.5mm)
TA18	Ammo pack (18.5mm)

ICW

FPT 100m K 160V

Range

AX	250Vac (50Hz) axial 'wrap & end-seal' polypropylene caps
AP	500 & 660Vac low loss, axial 'wrap & end-seal' polypropylene caps
CCM	280Vac stud mounting polycarbonate caps
CPM	280Vac stud mounting polypropylene caps
COAX P	Coaxial mounting, high current, power polypropylene caps (63-1500V)
COAX T	Coaxial mounting, high current, power polyester caps (63-1500V)
CW	General purpose, axial 'wrap & end-seal' polycarbonate caps (63-630V)
FPP	Unhoused heavy current power polypropylene flatpack caps (63-1500V)
FPT	Unhoused heavy current power polyester flatpack caps (63-1500V)
OCC	Radial aluminium cased polycarbonate caps (63-400V)
OCT	Radial aluminium cased polyester caps (63-400V)
PCP	Radial, cylindrical, metal cased polypropylene caps (63-1500V)
PCT	Radial, cylindrical, metal cased polyester caps (63-1500V)
PFF	Axial 'wrap & seal' polypropylene film & foil caps (1000 & 1500V)
PW	Axial 'wrap & end-seal' polypropylene caps (160-630V)

PX	Audio grade axial 'wrap & end-seal' polypropylene caps (250V)
RNRC	Radial, rectangular, plastic cased polycarbonate caps (63-400V)
RNRP	Low loss radial, rectangular nylon cased polypropylene caps (160-630V)
RNRT	Radial rectangular, plastic cased polyester caps (63-400V)
SA	Audio grade axial 'wrap & end-seal' polypropylene caps (630V)
SMFP	Stud mounting, high current, power polypropylene caps (63-1500V)
SMFT	Stud mounting, high current, power polyester caps (63-1500V)
TW	General purpose axial 'wrap & end-seal' polyester caps (63-630V)

Capacitance value

≥ 1μF	eg 3μ3
≤ 1μF	eg 150N

Capacitance tolerance

Voltage

MFD

KP20 1U K 1500 to BSxxxx

Range

KP20	Axial polypropylene & foil AC pulse capacitor
KP29	Axial PTFE film & foil capacitor
MKC21	BS CECC 30 501-022 axial polycarbonate cap
MKC23	Axial polycarbonate capacitor (flattened case)
MKC41	Axial professional/military polycarbonate capacitor
MKC43	Axial polycarbonate AC capacitor (formerly SACT)
MKC46	Aluminium-cased polycarbonate AC cap (formerly 5CACC)
MKC48	Aluminium-cased polycarbonate AC cap (formerly 8CACC)
MKC49	Aluminium-cased, high value, polycarbonate capacitor
MKC54	Metal-cased, flattened, axial polycarbonate cap
MKC55	Axial polycarbonate cap (BS/CECC)
MKC56	Axial polycarbonate cap (ESA3006/001, MII-C-83421 & IEC 68)
MKC57	Axial polycarbonate cap (ESA3006/007, MII-C-83421 & IEC 68)
MKC61	Radial polycarbonate cap (BS9076 N0004)
MKC63	Radial polycarbonate cap (BS9076 F0027)
MKC69	Four terminal, fail-safe polycarbonate capacitor
MKC72	Nylon-cased, polycarbonate AC capacitor
MKC73	Nylon-cased polycarbonate AC capacitor
MKC74	Plastic-cased, polycarbonate capacitor

MKP26	Axial polypropylene AC capacitor
MKP27	Flat section, axial polypropylene AC capacitor
MKP33	Low loss, axial polypropylene cap (250VDC/150VAC)
MKP65	Flame retardant, radial polypropylene cap
MKP71	Nylon-cased polypropylene AC capacitor
MKT22	Miniature axial polyester capacitor
MKT30	Axial polyester capacitor
MKT31	Axial polyester capacitor
MKT68	Flame-retardant, radial polyester capacitor
MKT82	Low profile, axial polyester capacitor

Capacitance value

Examples

1u5	1.5μF
10u	10μF
10n	10nF

Capacitance tolerance

Voltage

Examples

1500	1500Vdc
500AC	500Vac

Other specification

Blank	Not applicable
to BS2011	BS approval
S	Base stud (MKC46/48/49 ranges only)

MFD

MKT90 1 100μ 100V K

Range

MKT90	Polyester capacitor for motor control (max length 43mm)
MKT91	Polyester capacitor for motor control (max length 56mm)

Version

1	Standard
2	Nylon bush
3	Nylon bushes
4	Nylon bushes
5	Brass terminations (M8)
6	Brass terminations (OBA)

Capacitance code

Example

100μ	100μF
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Voltage

Capacitance tolerance

Vishay (Roederstein)

MKT 1813 410 01 5 15R

Examples	110 100pF
	215 1500pF
	310 10000pF
	422 0.22uF
	547 4.7uF
	610 10uF

Range

MKT	Metallized polyester film capacitor
KC	Film/foil polycarbonate capacitor
MKC	Metallized polycarbonate film capacitor
KP	Film/foil polypropylene capacitor
MKP	Metallized polypropylene film capacitor

Construction, outer wrapping, case, approval

MKT

1813	CECC 30 401-064 axial plastic-wrapped, epoxy resin sealed
1816	CECC 30 400 axial plastic-wrapped, epoxy resin sealed
1817	CECC 30 400 radial flame retardant plastic case
1818	CECC 30 400 radial flame retardant plastic case
1820	CECC 30 400 radial flame retardant plastic case
1822	CECC 30 401-023 radial flame retardant plastic case
1823	CECC 30 401-068 radial flame retardant plastic case
1824	CECC 32 200 radial plastic moulded flame retardant case
1826	CECC 30 401-059 radial flame retardant plastic case

KP

1836	IEC 384-17 grade 1.2 radial flame retardant plastic case
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MKP

1837	CECC 31 200 radial flame retardant plastic case
1839	CECC 31 200 axial plastic-wrapped, epoxy resin sealed
1840	CECC 31 200 radial flame retardant plastic case
1841	CECC 31 200 radial flame retardant plastic
1845	CECC 31 200 axial metal foil-wrapped epoxy resin sealed
1846	CECC 31 200 radial flame retardant plastic
KC	
1850	CECC 31 700 radial flame retardant plastic
MKC	
1858	CECC 30 500 radial flame retardant plastic
1860	CECC 30 500 axial plastic-wrapped epoxy resin sealed
1862	CECC 30 500 radial flame retardant plastic

Voltage (dc)

04	40V
05	50V
06	63V
18	80V
01	100V
02	125V
51	150V
16	160V
22	200V
25	250V
30	300V
35	350V
40	400V
52	500V
66	600V
63	630V
75	750V
08	800V
10	1000V
12	1250V
15	1500V
13	1600V
20	2000V
32	3200V
15	4000V
50	5000V
80	8000V
11	10000V
21	12000V
55	15000V
61	16000V

Capacitance tolerance

Special coding

Capacitance code

Digit 1	Multiplier
Digit 2/3	Significant value

WIMA

MKS4 PCM10 1.0 20 63VDC 16.5/REEL

Range

SMD2220	Surface mount metallized polyester caps (2220 case)
SMD2824	Surface mount metallized polyester caps (2824 case)
SMD4036	Surface mount metallized polyester caps (4036 case)
SMD5045	Surface mount metallized polyester caps (5045 case)
SMD6560	Surface mount metallized polyester caps (6560 case)
SMD7.3	Surface mount metallized polyester caps (7.3mm case)
MKS02	2.5mm metallized polyester caps
MKS02	Low profile 2.5mm metallized polyester caps
MKC02	2.5mm metallized polycarbonate caps
FKS02	2.5mm polyester film & foil pulse caps
FKC02	2.5mm polycarbonate film & foil pulse caps
FKP02	2.5mm polypropylene film & foil pulse caps
MKS2	5mm metallized polyester caps
MKS2-i	5mm miniature polyester caps
MKS22	Slim-line 5mm metallized polyester caps
MKC2	5mm metallized polycarbonate caps
MKI2	5mm metallized polyphenylene-sulphide caps
MKP2	5mm metallized polypropylene caps
FKS2	5mm polyester film & foil pulse caps
FKC2	5mm polycarbonate film & foil pulse caps
FKI2	5mm polyphenylene-sulphide film & foil pulse caps
FKP2	5mm polypropylene film & foil pulse caps
MKS3	7.5mm metallized polyester caps
MKS33	7.5mm metallized polyester caps
MKC3	7.5mm metallized polycarbonate caps
MKS4	Metallized polyester caps for stringent applications
MKC4	Metallized polycarbonate caps for stringent applications
MKP4	Metallized polypropylene caps for stringent applications
MKS10	High reliability polyester pulse caps
MKC10	High reliability polycarbonate pulse caps
MKP10	High reliability polypropylene pulse caps
FKP1	High reliability polypropylene high current caps
FKS3	Polyester film & foil pulse caps
FKC3	Polycarbonate film & foil pulse caps
FKP3	Polypropylene film & foil pulse caps
MKB3	Axial metallized polycarbonate caps
MKB5	Axial metallized polycarbonate caps
MKB6	Axial metallized polycarbonate caps

Pitch (PCM)

Value

Capacitance tolerance

Voltage

Taping option

Beck

454 52 400 100 +1%

Range

454	Silver mica capacitor
CME	BS CECC 31300 clause 1.4 silvered mica capacitor
DME	BS CECC 31300 clause 1.4 silvered mica capacitor

Case code

Voltage

Capacitance (pF)

Capacitance tolerance (pF or %)

Tab Components

A1M 400 1000 +1%

Case code

Voltage

Capacitance (pF)

Tolerance (pF or %)

AVX (Thin-film)

0603 5 J 120 G A W TR

Size

Voltage

Z	10V
Y	16V
3	25V
5	50V
1	100V

Temperature coefficient (ppm/degree C)

J	30
K	60

Capacitance code

Capacitance tolerance

Type

A	Accu-F series thin-film chip capacitors
B	Accu-P series thin-film chip capacitors

Termination

T	Ni/High temperature solder
W	Ni/solder coated

Package

TR	7" Tape & reel
TR/3	13" Tape & reel

AVX (Multilayer)

AQ 11 E M 100 J A 1 B A

Range

AQ	High 'Q' series multilayer capacitors
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Case style

Refer to Charcroft

Voltage

5	50V
1	100V
E	150V
2	200V
9	300V
7	500V

Temperature coefficient

M	+90 / 20ppm
A	0 / 30ppm

Capacitance code

Capacitance tolerance

Release

A	Standard
H	Hi-rel
T	CECC release

Terminations

1	Pd/Ag
7	Ag/Ni/Au
J	Nickel barrier (Sn/Pb)

Package

B	Bulk
M	7" reel
R	13" reel
W	Waffle pack

Special code

A	Standard
---	----------

AVX (NPO chips)

0805 1 U 100 J A T M A

Size

Voltage

A	50V
B	100V
C	200V

Dielectric

U	Ultra-low ESR
---	---------------

Capacitance code

Capacitance tolerance

Release

A	Standard
H	Hi-rel
T	CECC release

Termination

Package

2	7" reel paper tape / unmarked
4	13" reel paper tape / unmarked
M	7" reel embossed tape / marked
R	13" reel embossed tape / marked
9	Bulk

Special code

A	Standard
---	----------

AVX (Multi-cap SLCs)

GH B 5 5 A 6R8 K N 6

Range

GH	Multi-cap SLC
----	---------------

Array code

B	2
C	3
D	4
E	5
F	6

Size code

2	.020"
3	.030"
4	.040"
5	.050"
Y	.025"
S	Special

Voltage

5	50V
1	100V

Dielectric

Capacitance code

Capacitance tolerance

Termination

N	99.99% pure sputtered gold over Ni
---	------------------------------------

Package

6	Waffle pack
6N	Antistatic waffle pack

AVX (Gigahertz SLCs)

GH 35 5 A 6R8 C A W

Range

GH	Gigahertz/Maxi single layer ceramics
GB	Gigahertz/Maxi single layer ceramics with borders

Case size

Refer to Charcroft

Voltage

5	50V
1	100V

Dielectric

A	Temperature compensation
4	Temperature compensation (GH series)
7	Temperature compensation (GH series)
8	Maxi-SLC (GH series)
Y	Temperature compensation (GH series)
B	X7U
C	X7R
E	Z5U
G	Y5V

Capacitance code

(Eg 8288 = 8.28pF)

Digit 1/3 Significant value (leading zero if only 2 significant digits)

Digit 3 No of zeroes or multiplier
 9 = x0.1
 8 = x.01

Capacitance tolerance

Termination

A	99.99% pure sputtered gold over Ti/W
N	99.99% pure sputtered gold over Ni

Package

6	Waffle pack
6N	Antistatic waffle pack

CAPACITORS

Microwave Capacitors

AVX (Mil-PRF-55681/4)

CDR12 BG 101 A K U M

Range

CDR11	Mil-PRF-55681/4
CDR12	Mil-PRF-55681/4
CDR13	Mil-PRF-55681/4
CDR14	Mil-PRF-55681/4

Voltage temperature limits

BG	+90 /-20 ppm with & without rated voltage from -55 to +125 degree C
BP	0 /-30 ppm with & without rated voltage from -55 to +125 degree C

Capacitance code (industry standard)

Rated voltage

A	50V
B	100V
C	200V
D	300V
E	500V

Capacitance tolerance

Termination

CDR11/13

M	Palladium silver
N	Silver, nickel, gold

CDR12/14

S	Solder coated, final
U	Base metallization, barrier metal, solder coated
W	Base metallization, barrier metal, tinned (tin or tin/lead alloy)

Failure rate

M
P
R
S

Phycomp (clear text)

0805 CG 102 J 9 B B 0 M

Size

Dielectric

CG NPO

Capacitance code

Capacitance tolerance

Voltage

9 50V

Termination

B Ni-barrier

Packaging

2	7" reel paper
3	13" reel paper
B	7" reel blister
F	13" reel blister
P	Bulk case

Marking

0 No marking
2 North America only

Series

M Microwave

Phycomp (12NC)

22 22 578 11 3 10

Range

22 SMD MLC

Carrier type

22	Blister
38	Paper
54	Bulk

Size / termination

578	0603 Ni-barrier
574	0805 Ni-barrier
576	1206 Ni-barrier

Package

1	7" reel
4	Bulk case (0603 / 0805 only)
5	13" reel

Capacitance tolerance

Refer to Charcroft

Capacitance value

AVX

CWR09 J B 225 J M A \TR

Range

CWR09 MIL-PRF-55365/4 tantalum chip capacitor
 CWR11 MIL-PRF-55365/8 tantalum chip capacitor

Voltage

C 4V
 D 6V
 F 10V
 H 15V
 J 20V
 K 25V
 M 35V
 N 50V

Termination

B Gold plated
 V Hot solder dipped
 K Solder fused

Capacitance code

Capacitance tolerance

Failure rate (1000 hours)

M 1% exponential
 P 0.1% exponential
 R 0.01% exponential
 S 0.001% exponential
 B 0.1% Weibull
 C 0.01% Weibull
 D 0.001% Weibull

Optional surge current

A 10 cycles @ 25 degree C
 B 10 cycles @ -55 and +85 degree C

Package

Blank Bulk
 \TR 7" tape & reel
 \TR13 13" tape & reel
 \W Waffle pack

AVX

THJ B 105 M 035 R **

Range

THJ High reliability & automotive tantalum chip cap

Case code

Refer to Charcroft for dimensions

Capacitance code

Capacitance tolerance

Voltage

006 6.3V
 010 10V
 016 16V
 020 20V
 025 25V
 035 35V

Package

X 4.25" reel
 R 7" reel
 S 13" reel

Special requirements

Firadec

Clear text	CTC3D	10mF	10%	25V
UTEC 9-510 code	CTC3D	106	K	25V
Clear text	CTC3D	10M	K	025

Range

CT4/E CECC 30202-003 silver-cased axial wet tantalum
 CT9/E CECC 30202-004 silver-cased axial wet tantalum
 CT79 CECC 30202-001/006/801 axial wet tantalum
 CT79E-40W CECC 30202-001/005/801 axial wet tantalum
 CT79E/CMS SMD wet tantalum chip
 CT79EM MIL C-39006/25 SMD wet tantalum chip
 CT79M MIL C-39006/22 SMD wet tantalum chip
 CTC1 CECC 30801-001 coated SMD solid tantalum chip. Low ESR
 CTC2 CECC30801-006 coated SMD solid miniature tantalum chip
 CTC3/E CECC 30801-009/801 moulded SMD solid tantalum chip. Low profile

CTC4/RSE	CECC 30801-011 moulded SMD solid tantalum chip
CTC21/E	CECC 30801-013 moulded SMD solid tantalum chip
CTC23	Moulded SMD solid tantalum chip
CTC42/E	Moulded SMD solid tantalum chip
CTS1	CECC 30201-001/2/801 metal-cased axial solid tantalum
CTS1M	CECC 30201-044/MIL C-39003/01 metal-cased axial solid tantalum
CTS4	CECC 30201-003 moulded radial solid tantalum
CTS5	CECC 30201-004 moulded radial solid tantalum
CTS13	CECC 30201-005 metal-cased axial solid tantalum
CTS20/E	CECC 30201-022 metal-cased axial solid tantalum
CTS21/E	CECC 30201-040 metal-cased axial solid tantalum
CTS21M	MIL C-39003/09 metal-cased axial solid tantalum
CTS23	CECC 30201-025 metal-cased axial solid tantalum
CTS23M	MIL C-39003/03 metal-cased axial solid tantalum
CTS26	CECC 30201-006 moulded radial solid tantalum
CTS27	CECC 30201-007/9/18 moulded radial solid tantalum
CTS32	CECC 30201-019/041 metal-cased axial solid tantalum
CTS33	CECC 30201-026 metal-cased axial solid tantalum
CTS33M	MIL C-39003/06 metal-cased axial solid tantalum
CTS41/RSE	CECC 30201-037 moulded radial solid tantalum
CTS44	Moulded axial solid tantalum
CTS55	Moulded axial solid tantalum
TCR	MIL C-55365/04 coated SMD solid tantalum chip

Capacitance code

Clear Text (Eg 10mF)

Industry standard (Eg 103 = 10000pF)

Digit 1/2	Significant value
Digit 3	No of zeroes

UTE C 9-510

Digit 1/2	Significant value
Letter	Multiplier
Eg	K = nF (eg 4K7 = 4.7nF)
	M = uF (eg 56M = 56µF)
	G = 1000uF (eg 56G = 56000µF)

Capacitance tolerance

Voltage

Actual voltage (eg 25V) or 3-digit code (eg 025)

Kemet (MIL-C-39003)

CSR xx B 565 K M

Range

CSR Fixed solid tantalum capacitors, established reliability

Case

09	Miniature (see Kemet MIL-C-39003 - T222)
13	Standard (see Kemet MIL-C-39003 - T212)
21	Standard, low ESR (see Kemet MIL-C-39003 - T262)
23	Extended range (see Kemet MIL-C-39003 - T242)
33	Extended range, low leakage (see Kemet MIL-C-39003 - T252)
91	Low polar 23(see Kemet MIL-C-39003 - T213)

Voltage (VDC @ 85 degree C)

B	6V
C	10V
D	15V
E	20V
F	35V
G	50V
H	75V
J	100V

Capacitance code

Capacitance tolerance

Failure rate

Graded

B	0.1%
C	0.01%
D	0.001%

Exponential

M	1%
P	0.1%
R	0.01%
S	0.001%

Kemet

CWR11 M H 105 K B

Range

CWR11 Fixed encapsulated hi-rel tantalum chip capacitors

Voltage

D	6V
F	10V
H	15V
J	20V
K	25V
M	35V

Termination finish code

H	Solder-plated
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Capacitance code

Capacitance tolerance

Failure rate (1000 hrs)

A	Commercial
B	0.1%
C	0.01%
D	0.001%

Kemet (MIL-C-39003)

T 216 A 105 K 050 C S x

Range

T	Tantalum
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Series

212	MIL-C-39003/01 (CSR13) hermetically sealed axial
213	MIL-C-39003/01 (CSR91) hermetically sealed non-polar axial
222	MIL-C-39003/01 (CSR09) hermetically sealed miniature axial
216	MIL-C-39003/10 (CSR13) hermetically sealed axial
242	MIL-C-39003/01 (CSR23) hermetically sealed, extended range axial
262	MIL-C-39003/09 (CSR21) hermetically sealed, low ESR axial
252	MIL-C-39003/06 (CSR33) hermetically sealed, extended range, low leakage axial
262	MIL-C-39003/09 (CSR21) hermetically sealed axial

Case size (Length x diameter in mm)

A-D	Refer to Charcroft
-----	--------------------

Capacitance code

Capacitance tolerance

Voltage rating (@ 85 degree C)

Failure rate

A	Commercial
---	------------

Graded

B	0.1%
C	0.01%
D	0.001%

Exponential

M	1%
P	0.1%
R	0.01%
S	0.001%

Lead material

S	Standard (solder-coated nickel)
---	---------------------------------

Specification

Blank	Not applicable
-------	----------------

Generic (MIL-C-49137)

CX 02 D 225 K

Type

CX	Conformal coated dipped radial tantalum
----	---

Style

01	T322
02	T363 (A,B,C,D cases)
05	T323
06	T378
12	T369 (A,B cases)

Voltage

D	6V
F	10V
H	15V
J	20V
K	25V
M	35V

Capacitance code

Capacitance tolerance

Kemet (MIL-C-49137)

T 322 A 474 M 035 A S C

Range

T Tantalum

Series

322 Mil-C-49137 (CX01) sub-miniature moulded axial
 323 Mil-C-49137 (CX05) sub-miniature moulded axial
 363 Mil-C-49137 (CX02) dipped radial
 369 Mil-C-49137 (CX12) dipped radial
 370 Mil-C-49137 (CX06) moulded radial
 378 Mil-C-49137 (CX06) moulded radial

Case size

Refer to Charcroft

Capacitance code

Capacitance tolerance

Voltage

035 35V

Failure rate

A Commercial

Graded

B 0.1%
 C 0.01%
 D 0.001%

Exponential

M 1%
 P 0.1%
 R 0.01%
 S 0.001%

Lead material

S Standard

Specification

Vishay Sprague (CECC/ESA/Mil)

150D 224 X0 006 A 2 P

Range

489DE CECC 30201-802, low IL radial solid tantalum to 85 degree C
 489DX BS / CECC 30201-027 radial solid tantalum to 85 degree C
 499DE CECC 30201-803 low IL radial solid tantalum to +125 degree C
 499DX BS / CECC 30201-017/032 low IL, radial solid tantalum to +85 degree C
 749DX CECC 30201-001 / BS9073-N001, CECC30201-011/12/029 axial solid tantalum
 752DE CECC 30201-041 / 801 axial solid tantalum
 790D CECC 30201-009/018 radial moulded solid tantalum
 CSR13 ESA/SCC 3002-002 / Mil C-39003/01 axial solid tantalum
 CSR23 ESA/SCC 3002-001 / Mil C-39003/03 axial solid tantalum
 CSR33 ESA/SCC 3002-006 axial solid tantalum
 CTS1 CECC 30201-001 axial solid tantalum
 CTS13 CECC 30201-005 axial solid tantalum
 CTS21 CECC 30201-040 axial solid tantalum for high frequency power supplies
 CTS23 CECC 30201-025 axial solid tantalum
 CTS27 CECC30201-007 radial moulded solid tantalum
 CTS32 CECC 30201-019 axial solid tantalum
 CTS33 CECC 30201-026 axial solid tantalum
 CTS48 CECC 30201-038 radial solid tantalum
 CTS50 CECC 30201-042, low IL radial solid tantalum

Capacitance code

Capacitance tolerance

X5 5% (special order)
 X9 10%
 X0 20%

Voltage (dc)

Three digit code (example)
 6R3 6.3V
 063 63V
 630 630V

Case code

Refer to Charcroft for dimensions

Style

Axial

0 Bare case
 2 Standard (plastic film insulation)

Radial

B1	'Hockey stick' triple lead, 2.54mm lead space (299D series only)
1	Straight lead 2.5mm lead space, uneven length
2	Straight lead 2.5mm lead space, even length
3	Straight lead 5mm lead space, uneven length
4	Straight lead 5mm lead space, even length
6	Shouldered leads 5mm lead space
9	Snap-in 5mm lead space

Package**Axial**

P	Reel (150-152D series)
R	Reel (150-152D series)

Radial

B	Bulk (790D / CTS27 series)
G	Ammo pack (16.5mm)
H	Ammo pack (18.5mm)
I	Ammo pack - shouldered leads (A case)
X	Reel (H=16.5mm)
Y	Reel (H=18.5mm)
Z	Reel - shouldered leads (A case) CTS48/CTS50 series
A	Ammo pack
B	Reel (positive leader)
C	Reel (negative leader)

Generic

CDR 01 B P 101 B K S M

Type

CDR MIL-C-55681 Ceramic. Dielectric, fixed chip.
Established reliability

Case size

01/31	0805
02/32	1805
03/33	1808
04/34	1812
05/35	1825
06	2225

Temperature range

B -55 to +125 degree C

Dielectric

P	30 ppm/degree C (with or without voltage)
X	15% (without voltage) +15% -25% (with voltage)

Capacitance (pF)

<10pF (Eg 103 = 10000pF)
Digit 1/2 Significant value
Digit 3 No of zeroes

>10pf (Eg 1R0 = 1.0pF)
R Decimal point

Rated voltage

A	50V
B	100V

Capacitance tolerance

Termination finish

S	Solder coated, final (SolderGuard I)
U	Base metallization, barrier metal, solder coated (SolderGuard I)
W	Base metallization, barrier metal, tinned or (tin/lead alloy) SolderGuard II
Y	Base metallization, barrier metal, tinned (100% tin) SolderGuard I

Failure rate (1000hrs)

M	1.0%
P	0.1%
R	0.01%
S	0.001%

Ashcroft

CK05 BX 103 K B

Range

CK05	MIL-spec VK20 cased radials
CK06	MIL-spec VK30 cased radials

Dielectric

BX	BX
----	----

Capacitance code

Capacitance tolerance

Voltage

A	50/63V
B	100V
C	200V

Ashcroft

VK20 B A 101 J B

Range

VK20	Cased radials to CECC 30601-009 / N0024 & F0002
VK21	Cased radials to CECC 30601-009 / N0024 & F0002
VK30	Cased radials to CECC 30601-009 / N0024 & F0002

Temperature range

B -55 to +125 degree C

Dielectric

A	NP0
Y	X7R

Capacitance code

Capacitance tolerance

Voltage

A	50/63V
B	100V
C	200V

AVX

CDR 01 BP 101 B K S M X

Range

CC	MIL-PRF-20 axial MLC capacitor
CK	MIL-PRF11015 axial MLC capacitor
CCR	MIL-PRF-20 axial MLC capacitor. Established reliability
CDR	MIL-C-55681 dielectric fixed chip ceramic capacitor. Established reliability
CKR	MIL-PRF-39014 2-pin DIP ceramic capacitor Established reliability

Case size

Refer to Charcroft for dimensions

Voltage / temperature limits

First digit

B	-55 degree C to +125 degree C
C	-55 degree C to +150 degree C

Second digit

G	+ 30 / -30% with or without voltage
H	+ 60 / -60% with or without voltage
R	+ 15 / -15% without voltage. + 15 / 40% with voltage
X	+ 15 / -15% without voltage. + 15 / 25% with voltage
P	0 / 30ppm/degree C with or without voltage

For CCR series refer to Charcroft

Capacitance code

Voltage

Blank	Not applicable (CKR/CC/CCR/CK series)
A	50V (CKR series)
B	100V (CKR series)

Capacitance tolerance

Termination

Blank	Not applicable (CKR/CC/CCR/CK series)
M	Palladium silver
N	Silver nickel gold
S	Solder coated
U	Base metallization/barrier/solder coated
W	Base metallization/barrier metal/tinned (tin or tin/lead alloy)

Failure rate

M	1.0%
P	0.1%
R	0.01%
S	0.001%

Version

Blank	Not applicable
V	Stand-off version (CKR0x/CC0x/CCR0x series only)

AVX

M123 A 01 BX B 103 K C

Range

M123	CKS series MIL-PRF-123 MLC capacitor
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Modification spec number

Slash sheet number

Voltage / temperature limits

First digit

B	-55 degree C to +125 degree C
---	-------------------------------

Second digit

X	+ 15 / -15% without voltage. + 15 / 25% with voltage
P	0 / 30ppm/degree C with or without voltage

Voltage

B	50V
C	100V

Capacitance code

Capacitance tolerance

Termination

C	Solder-coated copper
---	----------------------

Kemet

C 052 K 102 K X 5 C A

Range

C	MIL-C-20 / MIL-C-11015 / MIL-C-39014 ceramic capacitors
---	---

Case size

052	Ceramic moulded radial
056	Ceramic moulded radial
062	Ceramic moulded radial
066	Ceramic moulded radial
114	Ceramic moulded axial
124	Ceramic moulded axial
192	Ceramic moulded axial
202	Ceramic moulded axial

222	Ceramic moulded axial
512	Ceramic moulded radial (MIL-C-20)
522	Ceramic moulded radial (MIL-C-20)

Release

T	MIL-C-39014
K	MIL-C-11015
G	MIL-C-20

Capacitance code

(Eg 103 = 10000pF)	
Digit 1/2	Significant value
Digit 3	No of zeroes

>10pf (Eg 919 = 9.1pF)	
9	Divided by 10

Capacitance tolerance

Dielectric

G	Ultra-stable CG MIL-C-20 (EIA C0G)
X	Stable BX MIL-C-11015 / MIL-C-39014 (EIA X7R)
R	Stable BR MIL-C-11015 / MIL-C-39014 (EIA X7R)

Internal construction

5	Standard
---	----------

Lead material

C	Standard
---	----------

Failure rate

A	Commercial
M	1.0%
R	0.1%
R	0.01%
S	0.001%

Kemet

C 0805 P 101 K 1 G M C

Range

C	MIL-C-55681 ceramic capacitor
---	-------------------------------

Size

Specification

P	MIL-C-55681 (CDR01-CDR06)
N	MIL-C-55681 (CDR31-CDR35)

Capacitance code

Capacitance tolerance

Voltage

1	100V
5	50V

Dielectric

G	BP (C0G/NP0) 30 ppm/degree C
X	BX (15% without voltage / +15%-25% with voltage)

Failure rate

M	1.0%
P	0.1%
R	0.01%
S	0.001%

End metallisation

C	SolderGuard II (Mil Y, W)
H	SolderGuard I (Mil S, U)

Vishay Vitramon

CECC 32101-002 E 0805 CG F
1n0 J 100 S E7 T

Range

Release	CECC 32101-002 single-layer ceramic chip capacitors
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Assessment level

Size

Dielectric

Termination

J	Nickel barrier
F	Silver palladium

Capacitance code

(Example 1n0 = 1nF 10u = 10 Microfarad)	
p	Picofarad
n	Nanofarad
u	Microfarad

Capacitance tolerance

Voltage

Burn-in (short-term endurance test)

S	100% test
A	Sample test

Failure rate

(as per VG 95 215 Part 2)

Package

C	7" reel (cardboard tape)
T	7" reel (plastic tape)
R	13" reel (plastic tape)
P	13" reel (cardboard tape)

MFD

KP20 1U K 1500 to BSxxxx

Range

MKC41	Axial professional/military polycarbonate capacitor
MKC54	Metal-cased, flattened, axial polycarbonate cap
MKC55	Axial polycarbonate cap
MKC56	Axial polycarbonate cap (ESA3006/001, MII-C-83421 & IEC 68)
MKC57	Axial polycarbonate cap (ESA3006/007, MII-C-83421 & IEC 68)
MKC61	Radial polycarbonate cap
MKC63	Radial polycarbonate cap
MKC69	Four terminal, fail-safe polycarbonate capacitor
MKP65	Flame retardant, radial polypropylene cap
MKT22	Miniature axial polyester capacitor
MKT68	Flame-retardant, radial polyester capacitor

Capacitance value

Examples

1u5	1.5uF
10u	10uF
10n	10nF

Capacitance tolerance

Voltage

Examples

1500	1500Vdc
500AC	500Vac

Other specification

Vishay (Roederstein)

MKT 1813 410 01 5 15R

Range

MKT	Metallized polyester film capacitor
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KC	Film/foil polycarbonate capacitor
MKC	Metallized polycarbonate film capacitor
KP	Film/foil polypropylene capacitor
MKP	Metallized polypropylene film capacitor

Construction, outer wrapping, case, approval

MKT

1813	CECC 30 401-064 axial plastic-wrapped, epoxy resin sealed
1816	CECC 30 400 axial plastic-wrapped, epoxy resin sealed
1817	CECC 30 400 radial flame retardant plastic
1818	CECC 30 400 radial flame retardant plastic
1820	CECC 30 400 radial flame retardant plastic
1822	CECC 30 401-023 radial flame retardant plastic case
1823	CECC 30 401-068 radial flame retardant plastic case
1824	CECC 32 200 radial plastic moulded flame retardant case
1826	CECC 30 401-059 radial flame retardant plastic case
KP	
1836	IEC 384-17 grade 1.2 radial flame retardant plastic case
MKP	
1837	CECC 31 200 radial flame retardant plastic
1839	CECC 31 200 axial plastic-wrapped, epoxy resin sealed
1840	CECC 31 200 radial flame retardant plastic
1841	CECC 31 200 radial flame retardant plastic
1845	CECC 31 200 axial metal foil-wrapped epoxy resin sealed
1846	CECC 31 200 radial flame retardant plastic
KC	
1850	CECC 31 700 radial flame retardant plastic
MKC	
1858	CECC 30 500 radial flame retardant plastic
1860	CECC 30 500 axial plastic-wrapped epoxy resin sealed
1862	CECC 30 500 radial flame retardant plastic

Capacitance code

Digit 1	Multiplier
Digit 2/3	Significant value
Examples	110 100pF
	215 1500pF
	310 10000pF
	422 0.22uF
	547 4.7uF
	610 10uF

Voltage (dc)

04	40V
05	50V
06	63V
18	80V
01	100V
02	125V

51	150V
16	160V
22	200V
25	250V
30	300V
35	350V
40	400V
52	500V
66	600V
63	630V
75	750V
08	800V
10	1000V
12	1250V
15	1500V
13	1600V
20	2000V
32	3200V
15	4000V
50	5000V
80	8000V
11	10000V
21	12000V
55	15000V
61	16000

Capacitance tolerance

Special coding

Arcotronics

1.40 D C 4100 DQ 30 K

Range

1.40	Radial X2 class metallized polyester to EN132400 (MKT series)
R.46	Radial X2 class metallized polypropylene to EN132400 (MKP series)
1.47	Radial X2 class metallized polyester (MKT series)
1.58	Radial X2 class metallized polyester to EN132400
R.41	Radial Y2/X1 class metallised polyester to EN132400 (MKT series)
1.73	Radial Y2 class film-foil polypropylene to EN132400 (KP series)
1.43	Radial RC single unit
FA3	RC three-phase

Voltage

C	50V
D	63V
E	100V
G	160V
I	250V
M	400V
W	500V
P	630V
Q	1000V
R	1250V
S	1500V
T	1600V
U	2000V
L	250Vac
K	275Vac
3	300Vac
N	400Vac
5	500Vac
7	700Vac
9	900Vac

Pitch (radials) or length (axials) in mm

C	5.0
D	7.5
F	10/11
H	14.0
I	15.0/16.5
K	20.5
N	22.5
Q	28.0
R	27.5
T	33.0

Capacitance code

Package

DQ	Ammo pack
GY	355mm reel
CK	500mm reel
AA/SE	Loose, short leads
50/Z3	Loose, long leads

Internal code

Capacitance tolerance

BC Components

2222 370 75 104

Prefix

Range

MKP335 5	275V X2 interference suppression
MKP336 2	275V X2 interference suppression
MKP338 2	275V miniature X2 interference suppression
MKP435	275V X2 interference suppression. Insulated leads

Voltage, tolerance, package

Refer to Charcroft for individual part numbers

Capacitance code (mF)

Digit 1/2	Significant value
Digit 3	Position of decimal point
2	= 0.001
3	= 0.01
4	= 0.1
5	= 1.0
6	= 10.0

Beck

CD 10 K3 10N0 Z S xx

Type

CD	Standard disc
HD	High voltage to 8KVdc
TD	Low voltage (Transcap)
GD	Close tolerance (Gimmicon)
YD	Suppression disc
SD	Suppression disc
ID	Isolation disc
LD	Leadless disc
RT	Radial tubular
MT	Miniature tubular

Size

Guide to finished dimensions

Dielectric

AG	P100
CG	NP0
HG	N033
LG	N075
PG	N150
RH	N220
SH	N330
TH	N470
UJ	N750
VK	N1000
WK	N1500
KL	N2200
DL	N3300
EM	N4700
FK	N5600
K1	K2300
K1	K0600
K1	K1100
K1	K1200
K1	K1700
K1	K2200
Ki	K4700
K2	K3500
K3	K8000

Capacitance value

P	pF
N	1000pF
U	uF

Tolerance

< 10pF

B	0.1pF
C	0.25pF
D	0.5pF
F	1pF

≥ 10pF

E	25%
F	1%
G	2%
H	2.5%
J	5%
K	10%
L	15%
M	20%
P	-0+100% (GMV)
S	-20%+50%
T	-10%+50%
W	-25%+50%
X	-20%+40%
Z	-20%+80%

Finish

B	Bare bottoms
M	Mini spats
S	Standard

Voltage Code

AA	1000Vdc
AB	2000Vdc
AC	4000Vdc
AD	6000Vdc
AE	8000Vdc
AM	10Vdc
AN	12Vdc
AO	25Vdc
AP	30Vdc
AR	40Vdc

Dubilier

D2Y 0.01 250 M 22.5 x

Range

D2Y	Y2 EMI suppression
D2X	X2 EMI suppression

Capacitance (uF)

Voltage

Capacitance tolerance

Pitch (mm)

Package

Blank	Loose
TA	Tape & ammo
TR	Tape & reel
26	26mm lead length (D2X only)

Dubilier

WD2Y 101 K B C

Range

WD2Y	Safety Y2 class
------	-----------------

Capacitance code

Capacitance tolerance

Dielectric

B	Y5P
F	Y5V

Pitch (mm)

C	7.5
D	10

EPCOS (Siemens)

B81121-C-B 121

Range

B81121-C-B	Radial X2/Y capacitors
B85121-A-B	Feed-through X2/Y capacitors
B85321-A-B	Screw-mounting feed-through filters
B85331-A-B	Feed-through filter with mounting flange
B85313-A-x	VHF feed-through filter

Value

Varies with range. Consult Charncroft for individual part number

Murata (global part no)

DE B B3 3A 102 K N2 A

Range

DE	Leaded high voltage 250V-6.3kV ceramic capacitor
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Series

1	IEC60384-14 Class Y1
2	IEC60384-14 Class Y2
J	250 Vac
A	Class 1 1-3.5kV DC
B	Class 2 1-3.5kV DC
C	Class 1,2 6.3kV DC
H	Guaranteed high temperature, low dissipation factor

Temperature characteristics (per degree C)

B3	B (10% @ -25 to +85)
E3	E (+20% -55% @ -25 to +85)
F3	F (+30% -80 @ -25 to +85)
C3	C (20% @ -25 to +85)
	C (+15% -30% @ +85 to +125)
R3	R (15% @ -25 to +85)
	R (+15% -30% @ +85 to +125)
1X	SL (+350 to -1000ppm @ -25 to +85)

Voltage

E2	250Vac
KH	250Vac X1, Y2
KY	250Vac X1, Y2
KX	250Vac X1, Y2
2E	250V DC
2H	500V DC
3A	1kV DC
3D	2kV DC
3F	3.15kV DC
3J	6.3kV DC

Capacitance code

Capacitance tolerance

Lead style

A2	Vertical crimp long leads. 5mm pitch
A3	Vertical crimp long leads. 7.5mm pitch
A4	Vertical crimp long leads. 10mm pitch
A5	Vertical crimp long leads. 10mm pitch
B2	Vertical crimp short leads. 5mm pitch
B3	Vertical crimp short leads. 7.5mm pitch
B4	Vertical crimp short leads. 10mm pitch
B5	Vertical crimp short leads. 10mm pitch
C1	Straight long leads. 5mm pitch
C3	Straight long leads. 7.5mm pitch
C4	Straight long leads. 10mm pitch
CD	Straight long leads. 5mm pitch
D1	Straight short leads. 5mm pitch
D3	Straight short leads. 7.5mm pitch
DD	Straight short leads. 7.5mm pitch
N2	Vertical crimp taping. 5mm pitch
N5	Vertical crimp taping. 10mm pitch
N7	Vertical crimp taping. 7.5mm pitch
P2	Straight taping. 5mm pitch
P3	Straight taping. 7.5mm pitch

Package

A	Ammo pack
B	Bulk

Syfer

1808 J A25 0102 J C T SP U

Case size

1808	Y3/X2 safety certified surge protection MLC chip capacitor
------	--

Termination

Voltage

A25	250Vac
-----	--------

Capacitance code

Digit 1	Leading 0
Digit 2/3	Significant value
Digit 4	Number of zeroes

Capacitance tolerance

Dielectric

C	C0G
---	-----

Package

T	7" tape & reel
R	13" tape & reel
B	Bulk

Safety mark

SP	Safety tested surge protection
----	--------------------------------

Marking

U	Unmarked
---	----------

Vishay (Roederstein)

F1740- 268 -1511

Range

F1740	X1/X1Y 250Vac radial plastic can, paper suppression capacitor
F1746	X1/X1Y 250Vac radial aluminium can, paper suppression capacitor

Capacitance code

(Example 315 = 0.015uF)

Digit 1	2 = 1000pF 3 = 0.01uF 4 = 0.1uF
Digit 2/3	Significant value

Type

Approval marking

x5xx	Without UL mark
x4xx	With UL mark
x8xx	For washing machines & dishwashers
Series	
1x11	X1 type
3x01	X1Y type with tinned copper wire for direct PCB mounting
3x11	X1Y. 2x2700pF Y value
3x81	X1Y. 2x4700pF Y value
3x50	X1Y. 2x2700pF Y value (metal tag)
3x58	X1Y. 2x4700pF Y value (metal tag)
3x00	X1Y. 2x0.027uF Y value (3800 series only)
3x20	X1Y. 2x0.1uF Y value (3820 series only)
5x11	X1Y. Quadripole. 2x2700pF Y value
5x81	X1Y. Quadripole. 2x4700pF Y value

5x50	X1Y. Quadripole. 2x2700pF Y value (metal tag)
5x58	X1Y. Quadripole. 2x4700pF Y value (metal tag)

Vishay (Roederstein)

F1710 -210 -1900

Range

F1710	Class Y 250Vac polyester film suppression capacitor. Tinned copper leads
F1712	Class Y 250Vac polyester film suppression capacitor. Insulated leads

Capacitance code

(Example 315 = 0.015uF)

Digit 1	2 = 1000pF 3 = 0.01uF 4 = 0.1uF
Digit 2/3	Significant value

Type

1000	6mm lead length
1030	30mm lead length
1400	UL & CSA marks (F1712 only)
1900	16mm height. Tape & reel
1901	18.5mm height. Tape & reel

Vishay (Roederstein)

F1722 -310 -1 000

Range

F1722	X1 metallized film suppression AC capacitor
F1724	X1 metallized film suppression AC capacitor. Insulated leads
F1726	X1 Spark Quenching metallized film suppression AC capacitor/RC network
F1772	X2 metallized film suppression AC capacitor
F1773	CECC X2 metallized film suppression AC capacitor
F1774	X2 metallized film suppression AC capacitor. Insulated leads
F1776	X2 Spark Quenching metallized film suppression AC capacitor/RC network

Capacitance code

(Example 315 = 0.015uF)

Digit 1	2 = 1000pF 3 = 0.01uF 4 = 0.1uF
Digit 2/3	Significant value

Voltage

0	250/275Vac (F1726/1776 only)
1	275Vac
2	250Vac
4	440Vac

Package

000	6mm lead length
030	30mm lead length
900	16mm height. Tape & reel
901	18.5mm height. Tape & reel
400	With UL mark
000/xxxW	F1726/1776 RC networks only

Vishay (Roederstein)

MKP1842 -310 -4000

Range

MKP1842	Axial metallized polypropylene 400V 'across-the-line' AC caps
MKP184	Radial metallized polypropylene 400V 'across-the-line' AC caps

Capacitance code

(Example 315 = 0.015uF)	
Digit 1	2 = 1000pF 3 = 0.01uF 4 = 0.1uF
Digit 2/3	Significant value

Voltage

4000	400Vac (standard)
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Vishay (Roederstein)

RXX 223 Z CM CFO K

Range

RX	X1 250Vac RF suppression ceramic disc cap (phenol dipped)
RXW	X1 250Vac RF suppression ceramic disc cap (extended temp)
WYO	Y2 250Vac RF suppression ceramic disc cap
WKO	Y2/X1 400Vac safety suppression ceramic disc cap
WKP	Y1/X1 400Vac safety suppression ceramic disc cap

Capacitance code

(Example 315 = 0.015uF)	
Digit 1	2 = 1000pF 3 = 0.01uF 4 = 0.1uF
Digit 2/3	Significant value

Capacitance tolerance

Blank	Not applicable
-------	----------------

Voltage

CM	250V
CP	400V

Finish

BFO	WY series
xDx	WKO/WKP series (10x0.6mm leads)
xFx	WKO/WKP series (30x0.8mm leads)
xHx	WKO/WKP series (10x0.6mm leads)
xJx	WKO/WKP series (30x0.8mm leads)
CFO	0.1uF RX/RXW series
CPO	Other RX RXW series

Suffix

K	Standard suffix
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WIMA

MP3-X2 PCM10 1.0 20 63VDC 16.5/REEL

Range

MP3-X2	X2 metallized paper suppression caps to IEC384-14/2 & EN132400
MP3-X1	X1 metallized paper suppression caps to IEC384-14/2 & EN132400
MP3-Y2	Y2 metallized paper suppression caps to IEC384-14/2 & EN132400
MP30-Y2	Y2 metallized paper suppression caps to IEC384-14/2 & EN132400
MP3-Y1	Y1 metallized paper suppression caps to IEC384-14/2 & EN132400

Pitch (if applicable)

Value

Capacitance tolerance

Voltage

Taping option (if applicable)

BC Components

2222 808 23 508

Prefix

Range

808	General purpose trimmable capacitors
809	Professional (teflon foil) trimmable capacitors
813	General purpose trimmable capacitors
814	General purpose trimmable capacitors

Case size / pitch (mm)

808 series

11	7.5mm diameter 3.5/7.1mm pitch
20	5mm diameter 5.6mm pitch
23	5mm diameter 5.6mm pitch
31	10mm diameter 5/10mm (DIN) pitch
32	10mm diameter 7.5/5 (DIN) pitch (not for design-in)

51	7.5mm diameter 2.5/7.5mm pitch
61	10mm diameter 5/10mm (DIN) pitch

809 series

05	6x8mm case 5.08mm pitch
07	11x14x9 case 5.08/7.62/5.08mm pitch
08	10x11mm case 7.62/5.08mm pitch
09	Two tags. 8x9mm case 7.64mm pitch Three tags 5.08/5.08mm

813/814

Refer to Charcroft for individual part numbers

Capacitance

Refer to Charcroft for individual part numbers

R	N750 ppm
K	N1000 ppm
P	N1200 ppm

Maximum capacitance code

Terminal shape

A	Top adjustment (chip type)
B	Top adjustment (chip type) Rear adjustment (lead type)
C	Top adjustment (lead type)
D	Rear adjustment (lead type)
E	Top adjustment (lead type) Rear adjustment (chip type)
F	Top adjustment (lead type)
N	Rear adjustment (lead chip)
T	Top adjustment (taped)
Y	Side adjustment (lead type)

Individual specification

001	Standard type (TZS2/TZY2)
110	Standard without slot (TZV2/TZC3)
169	Standard (TZ03)
310	Standard plus slot (TZC3)
A10	Standard film no cover (TZB4)
B10	Standard film with cover (TZB4)

Package

A00	Ammo pack (radial taping)
B00	Bulk
M00	Magazine
R00	7" reel
R01	13" reel

Murata

TZ Y2 R 200 A 001 R00

Range

TZ	Trimmer capacitors
----	--------------------

Size / termination

03	6mm leaded
B4	4mm chip/leaded
C3	3mm chip
S2	2mm chip (1.0mm height)
Y2	2mm chip (1.25mm height)
V2	2mm chip (1.45mm height)

Temperature characteristics (per degree C)

Z	NP0 ppm
S	N150 ppm
N	N200 ppm
T	N450 ppm

AVX

W 3 A 4 3 C 103 K A T 3 A

Range

W 2- or 4-cap array

Size code

1 0405
2 0508
3 0612

Type

A Array

No of capacitors

Voltage

Z 10V
Y 16V
3 25V
5 50V
1 100V

Dielectric

A NP0/C0G
C X7R
G Y5V

Capacitance code

Capacitance tolerance

Failure rate

A Commercial
H Hi-rel
T CECC release

Terminations

T Plated Ni & solder

Package

1 7" reel embossed tape
2 7" reel paper tape
3 13" reel embossed tape
4 13" reel paper tape

Quantity (pcs / reel)

F 1000
A 2000, 4000 or 10000

AVX

LICA 3 T 802 P 1 C C 4

Style

LICA Low inductance decoupling capacitor arrays (refer to Charcroft for sizes)

Voltage

3 25V

Dielectric

T T60T

Cap section (EIA code)

102 1000pF
103 10nF
104 0.1μF

Capacitance tolerance

Height code

1 0.875mm
3 0.650mm

Termination

C C4 solder balls - 97/3
O Others
A Thin-film

Package

M 7" reel
R 13" reel
6 2"x2" waffle pack
C 4"x4" waffle pack
U Termination side up in 4"x4" waffle pack

Number of caps / parts

1 One
2 Two
4 Four

AVX

W 1 D 3 A 2 4 0 A

Range

W Dual / triple resonance capacitor

CAPACITORS

Capacitor Arrays

Size

1	0603
2	0805

Series

D	DRC
T	TRC

Number of elements

Dielectric

A	NP0
---	-----

First resonance code

0	None
2	880MHz
4	1800MHz
6	1900MHz
8	2400MHz

Second resonance code

(See above)

Third resonance code

(See above)

Package

A	7" reel paper tape (4k per reel)
---	----------------------------------

AVX

W 3 L 1 Y C 105 M A T 3 A

Range

W	Inter-digitated capacitor (IDC)
---	---------------------------------

Size

2	0508
3	0612

Type

L	Low inductance
---	----------------

Number of caps

Voltage

6	6.3V
Z	10V
Y	16V

Dielectric

C	X7R
---	-----

Capacitance code

Capacitance tolerance

Failure rate

C	Commercial
---	------------

Termination

T	Plated Ni and solder
---	----------------------

Package

1	7" reel embossed tape
3	13" reel embossed tape

Quantity (Pcs/reel)

F	1,000
---	-------

AVX

W 3 F 4 5 C 221 8 A T 3 A

Range

W	Capacitors / capacitor arrays
---	-------------------------------

Size

2	0805
3	1206

Type

F	Feedthrough
---	-------------

Number of elements

Voltage

5	50V
1	100V

Dielectric

A	NP0
X	X7R

Capacitance code

Capacitance tolerance

8	+50 -20%
---	----------

Failure rate

A	Commercial
---	------------

Termination

T	Plated
---	--------

Package

1	7" reel embossed tape
3	13" reel embossed tape

Quantity (Pcs/reel)

F	1,000
A	2,000, 4,000, 10,000

BI Technologies

C 10 1 102 M S 2

Range

C	Conformal coated SIP capacitor network
---	--

No of leads

Configuration

1	Standard
---	----------

Capacitance code

Capacitance tolerance

Dielectric

S	SL
X	X7R
Y	Y5V
N	NP0

Voltage (dc)

2	25V
5	50V
1	100V

Dubilier

DICA 4 U 0612 R 102 K N

Range

No of capacitors

Voltage

C	16V
E	25V
U	50V
A	100V

Case size

Dielectric

C	NP0
R	X7R
G	Y5V

Capacitance code

Capacitance tolerance

Termination

N	Nickel
---	--------

Murata

B 5 RC 0127 -33N

Range

B	Leaded ceramic capacitor network (bulk)
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No of terminals

Size of dielectric

Refer to Charcroft

Size

RC	15.3 x 9.5mm
ZC	19.8 x 9.5mm
XC	21.0 x 8.0mm
HC	24.0 x 9.5mm

Lead code

-33N	2.5mm pitch. Straight leads
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Murata

CG SD 8 X 102 M -T21

Range

CG	Low profile capacitor network
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Dimensions

SD	2.54mm pitch. 6.5mm height
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Number of elements

Circuit

X	Pull-up, pull-down circuit
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Capacitance code (industry standard)

Capacitance tolerance

Package

-T21 Three-pin, taped

Murata

GRM40 COG 101 J 50 x PT

Range

GNM30-401 Single-layer 1206 ceramic chip capacitor array

Dielectric

Capacitance code

Capacitance tolerance

M 20%

Voltage

Murata control number

Package

PB Bulk
PT Tape & reel

Phycomp (clear text)

0612 CG 102 J 9 B 2 0 0

Size

Dielectric

CG NP0

Capacitance code

Capacitance tolerance

Voltage

9 50/63V

Termination

B Ni-barrier

Package

2 7" reel paper
B 7" reel blister

Marking

0 No marking

Series

0 Ceramic

Phycomp (12NC Capacitor Arrays)

22 50 14 6 1 5 10

Range

22 Capacitor arrays

Carrier

50 Blister
55 Paper

Termination

10 16V
12 25V
14 50/63V NiSn

Size

6 0612 (4 x 0603)

Package

1 7" reel

Tolerance

5 5%
6 10%

Capacitance value

Syfer

0806 V 2K0 0334 K X B J W00 3

Size

Finish

B Unlacquered
V Lacquered

Voltage

050 50V
063 63V
100 100V
200 200V
500 500V

1K0	1KV
2K0	2KV
3K0	3KV
4K0	4KV
5K0	5KV

Capacitance code

< 10pF (Eg 103 = 10000pF)	
Digit 1	Leading 0
2/3	Significant value
Digit 4	No of zeroes

> 10pF (Eg 1P0 = 1.0pF)	
N	Decimal point

Capacitance tolerance

Dielectric

C	C0G
X	X7R

Package

B	Bulk pack
R	Taped 13" reels

Leads

J	J leads
L	L leads
N	Unleaded
S	Straight dual-in-line
W	4 terminals

Special requirements

No of chips

Vishay (Dale)

TCN 08 01 560 K

Range

TCN	Coated SIP capacitor array
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Number of pins

Schematic

Capacitance value (pF)

Capacitance tolerance

Vishay (Dale)

CS201 08 D 1 C 103 K 5

Range

CS201	D profile coated SIP capacitor network
CSCC	B or D profile coated SIP capacitor network

Number of pins

Package code

D	.300"
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Schematic

Dielectric

CS201 series

C	C0G
X	X7R

CSCC series

C0G	Standard
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Capacitance code

Capacitance tolerance

Voltage

2	25V (CSCC only)
5	50V

AVX

 CR 63 -562 J -UE

Range

CR Thick film chip resistors

Case size

63	2512
05	0402
10	0603
21	0805
32	1206

Resistance code

Resistance tolerance

Blank Jumper

Package

B	Bulk
T	7" punched paper tape & reel. 5000 pcs. (CR10/21/32)
H	7" punched paper tape. 10000 pcs (CR05/10)
D	10" punched paper tape. 10000 pcs (CR10/21/32)
K	13 punched paper tape. 20000 pcs (CR10/21/32)
UE	7" embossed plastic tape & reel (CR63)

BC Components

 2312 275 1 109

Prefix

Range

14. 6	0.25% SMD 0204 precision thin film resistor. MMA series. Blister tape
14. 7	0.1% SMD 0204 precision thin film resistor. MMA series. Blister tape
15. 1	1% SMD 0204 professional thin film resistor. MMA series. Blister tape
15. 5	0.5% SMD 0204 professional thin film resistor. MMA series. Blister tape
16. 1	1% SMD 0102 professional thin film resistor. MMU series. Blister tape
16. 5	0.5% SMD 0102 professional thin film resistor. MMU series. Blister tape
17. 6	0.25% SMD 0102 precision thin film resistor. MMU series. Blister tape
17. 7	0.1% SMD 0102 precision thin film resistor. MMU series. Blister tape
18. 7	0.1% SMD 0207 precision thin film resistor. MMB series. Blister tape
19. 3	5% SMD 0207 professional thin film resistor. MMB series. Blister tape

21. 1	1% SMD 0603 professional thin film resistor. MCT series. Paper tape
21. 5	0.5% SMD 0603 professional thin film resistor. MCT series. Paper tape
21. 6	0.25% SMD 0805 precision thin film resistor. MCT series. Paper tape
21. 7	0.1% SMD 0805 precision thin film resistor. MCT series. Paper tape
25. 5	0.5% SMD 0805 professional thin film resistor. MCU series. Paper tape
25. 6	0.25% SMD 0805 precision thin film resistor. MCU series. Paper tape
25. 7	0.1% SMD 0805 precision thin film resistor. MCU series. Paper tape
30. 1	+0/-30% SMD 0603 trimmable thin film resistor. TCT series. Paper tape
30. 2	+0/-20% SMD 0603 trimmable thin film resistor. TCT series. Paper tape
30. 3	+0/-10% SMD 0603 trimmable thin film resistor. TCT series. Paper tape
32. 1	+0/-30% SMD 0805 thin film resistor. TCU series. Paper tape
32. 2	+0/-20% SMD 0805 thin film resistor. TCU series. Paper tape
32. 3	+0/-10% SMD 0805 thin film resistor. TCU series. Paper tape
142 5	0.5% SMD 0204 precision thin film resistor. MMA series. Blister tape
155 3	5% SMD 0204 professional thin film resistor. MMA series. Blister tape
158 0	1% SMD 0204 high frequency thin film resistor. MMA HF series. Blister tape
159 2	2% SMD 0204 high pulse load thin film resistor. CMA series. Blister tape
165 2	2% SMD 0102 professional thin film resistor. MMU series. Blister tape
165 3	5% SMD 0102 professional thin film resistor. MMU series. Blister tape
168 0	2% SMD 0102 high frequency thin film resistor. MMU HF series. Blister tape
172 5	0.5% SMD 0102 precision thin film resistor. MMU series. Blister tape
181 6	0.25% SMD 0207 precision thin film resistor. MMB series. Blister tape
195 1	1% SMD 0207 professional thin film resistor. MMB series. Blister tape
195 2	2% SMD 0207 professional thin film resistor. MMB series. Blister tape
196 5	0.5% SMD 0207 professional thin film resistor. MMB series. Blister tape
198 0	2% SMD 0207 high frequency thin film resistor. MMB HF series. Blister tape
219 3	5% SMD 0603 high/low ohmic thin film resistor. OCT/NCT series. Paper tape
255 1	1% SMD 0805 professional thin film resistor. MCU series. Paper tape
259 3	5% SMD 0805 high/low ohmic thin film resistor. OCT/NCU series. Paper tape
275 1	1% SMD 0402 professional thin film resistor. MCS series. Paper tape
276 5	0.5% SMD 0402 professional thin film resistor. MCS series. Paper tape

340 2 +0/-20% SMD 1206 thin film resistor. TCA series. Paper tape
 396 7 0.1% SMD 1206 precision thin film resistor. MCA series. Paper tape

Resistance code (W)

(EG 333 = 33k Ω)

Digit 1/2	Significant value
Digit 3	7 0.1
	8 1.0
	9 10.0
	1 100
	2 1k
	3 10k
	4 100k
	5 1M
	6 10M

BI Technologies

BCR 1/10 103 J T

Range

BCR SMD thick film resistors

Size code

1	2512
1/2	2010
1/4	1210
1/8	1206
1/10	0805
1/16	0603
1/32	0402

Resistance code

Three digit code (2% & 5% tolerance devices - next letter G/I)

Digit 1/2	Significant value
Digit 3	No of zeroes (Eg 102 = 1000 Ω)

Four digit code (0.5% & 1% tolerance devices - next letter D/F)

Digit 1/3	Significant value
Digit 4	No of zeroes (Eg 1001 = 1000)

Resistance tolerance

Package

T	Tape & reel (paper tape / all tolerances)
E	Tape & reel (embossed tape - not available on 0.5% tolerance)

BI Technologies

BCT 20 1002 B T

Range

BCT SMD precision thin film resistors

Size code

20	0805
32	1206

Resistance code

Resistance tolerance

Package

T Tape & 7" reel (paper tape)

Dubilier

RTF 12 102 A

Range

RTF Surface mount thin film
 RPC Surface mount

Case size

04	0402
12	0805
16	0603
25	1206
33	1210
50	2010
100	2512

Resistance code

Resistance tolerance

Dubilier

RSPM 104 J

Range

RLSP	SMD low ohmic power metal strip resistors
RSPW	SMD power wirewound resistor
RSPM	SMD power metal film resistor

Resistance code**Resistance tolerance****EPCOS** (Siemens)

B54102-A1 100- X 60

Range

B54102-A	0805 thick film chip resistor
B54103-A	1206 thick film resistor

Resistance code**Resistance tolerance****Suffix**

60	Standard
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Phycomp (12NC)

2350 03410 10 1

Range

2350	Trimmable, surge & high precision resistors & resistor arrays / networks
2322	Fixed thick film resistors

Style**2322 prefix**

711 41	2% General purpose 1206 RC01 thick film resistor
711 61	5% General purpose 1206 RC01 thick film resistor
702 60	5% General purpose 0603 RC21 thick film resistor
702 65	2% General purpose 0603 RC21 thick film resistor
705 70	5% General purpose 0402 RC31 thick film resistor
705 75	2% General purpose 0402 RC31 thick film resistor

724 6	1% Precision TC100 1206 RC02H thick film resistor
734 6	1% Precision TC100 0805 RC12H thick film resistor
704 6	1% Precision TC100 0603 RC22H thick film resistor
706 7	1% Precision TC100 0402 RC32 thick film resistor
722 2	1% Precision TC50 1206 RC02G thick film resistor
732 6	1% Precision TC50 0805 RC12G thick film resistor
725 2	0.5% High precision TC50 1206 RC03G thick film resistor
738 2	0.5% High precision TC50 0805 RC13G thick film resistor
762 60	5% Power chip 2512 PRC221 thick film resistor
760 60	5% Power chip 2010 PRC111 thick film resistor
735 60	5% Power chip 1218 PRC201 thick film resistor
763 6	1% Power precision 2512 PRC221 thick film resistor
761 6	1% Power precision 2010 PRC111 thick film resistor
735 2	1% Power precision 1218 PRC201 thick film resistor
762 90/60	5% Power low ohmic 2512 PRC221 thick film resistor
760 90/60	5% Power low ohmic 2010 PRC111 thick film resistor
735 60	5% Power low ohmic 1218 PRC201 thick film resistor
762 91/80	2% Power low ohmic 2512 PRC221 thick film resistor
760 91/80	2% Power low ohmic 2010 PRC111 thick film resistor
735 2	2% Power low ohmic 1218 PRC201 thick film resistor 2350 prefix
510 10	5% Low ohmic 1206 LCR01 thick film resistor
511 10	5% Low ohmic 0805 LCR11 thick film resistor
510 11	2% Low ohmic 0805 LCR11 thick film resistor
510 12	1% Low ohmic 1206 LCR02 thick film resistor
520 10	5% High ohmic 1206 HRC01 thick film resistor
520 10	5% High ohmic 0805 HRC11 thick film resistor
522 10	5% High ohmic 0603 HRC21 thick film resistor
520 11	2% High ohmic 1206 HRC01 thick film resistor
521 11	2% High ohmic 0805 HRC11 thick film resistor
522 11	2% High ohmic 0603 HRC21 thick film resistor

500 11	0 to -20% Trimmable 1206 RC02TR thick film resistor
501 11	0 to -20% Trimmable 0805 RC12TR thick film resistor
502 11	0 to -20% Trimmable 0603 RC22TR thick film resistor
500 10	0 to -30% Trimmable 1206 RC02TR thick film resistor
501 10	0 to -30% Trimmable 0805 RC12TR thick film resistor
502 10	0 to -30% Trimmable 0603 RC22TR thick film resistor
750 6	5% Fusible 1206 FRC01 thick film resistor
550 10	5% Surge current 1206 SRC01 thick film resistor
550 11	2% Surge current 1206 SRC01 thick film resistor
61 6	0.5% High precision, high stability 1206 TFR01 thin film resistor
60 6	0.5% High precision, high stability 0805 TFR11 thin film resistor
60 6	0.5% High precision, high stability 0603 TFR21 thin film resistor
60 6	0.5% High precision, high stability 0402 TFR31 thin film resistor
614 6	0.5% High precision, high stability 0201 TFR41 thin film resistor
741 3	0.1% Ultra-high precision, high stability 1206 MPC01 thin film resistor
744 3	0.1% Ultra-high precision, high stability 0805 MPC11 thin film resistor
747 3	0.1% Ultra-high precision, high stability 0603 MPC21 thin film resistor
230 10	5% 10P8R 1206 RNA310 resistor network
321 2	5% 10P4R4C 1608 RCB210 resistor/capacitor network
46	5/10/20% 1608 CRB210 capacitor/resistor network
034 10	5% 4 x 0603 concave ARC241 resistor network
024 10	1% 4 x 0603 concave ARC242 resistor network
033 10	5% 4 x 0402 convex ARV241 resistor network
023 10	1% 4 x 0402 convex ARV242 resistor network

Package

Refer to Charcroft

Resistance code

(Eg 101 = 100W)

Digit 1/2 Significant value

Digit 3 No of zeroes

9 = No zeroes (eg >100 ohm)

Phycomp (Philips Part No)

RC01 104 IP5

Range

RC01	General purpose 1206 thick film SMD resistors
RC11	General purpose 0603 thick film SMD resistors
RC21	General purpose 0402 thick film SMD resistors
RC31	General purpose 1206 thick film SMD resistors
RC02H	Precision TC100 1206 thick film SMD resistors
RC12H	Precision TC100 0805 thick film SMD resistors
RC22H	Precision TC100 0603 thick film SMD resistors
RC32	Precision TC100 0402 thick film SMD resistors
RC02G	Precision TC50 1206 thick film SMD resistors
RC12G	Precision TC50 0805 thick film SMD resistors
RC03G	High precision TC50 1206 thick film SMD resistors
RC13G	High precision TC50 0805 thick film SMD resistors
TFR01	High precision, high stability 1206 thin film SMD resistors
TFR11	High precision, high stability 0805 thin film SMD resistors
TFR21	High precision, high stability 0603 thin film SMD resistors
TFR31	High precision, high stability 0402 thin film SMD resistors
TFR41	High precision, high stability 0201 thin film SMD resistors
MPC01	Ultra-high precision, high stability 1206 thin film SMD resistors
MPC02	Ultra-high precision, high stability 0805 thin film SMD resistors
MPC03	Ultra-high precision, high stability 0603 thin film SMD resistors
LCR01	Low ohmic 1206 thick film SMD resistors
LCR02	Low ohmic 1206 thick film SMD resistors
LCR11	Low ohmic 0805 thick film SMD resistors
HCR01	High ohmic 1206 thick film SMD resistors
HCR12	High ohmic 0805 thick film SMD resistors
HCR21	High ohmic 0603 thick film SMD resistors
PRC221	General purpose, precision, low ohmic, power, 2512 thick film SMD resistors
PRC111	General purpose, precision, low ohmic, power, 2010 thick film SMD resistors
PRC201	General purpose, precision, 1218 thick film SMD resistors
RC02TR	Trimmable 1206 SMD thick film resistors
RC12TR	Trimmable 0805 SMD thick film resistors
RC22TR	Trimmable 0603 SMD thick film resistors
FRC01	Fusible 1206 SMD thick film resistors
SRC01	Surge current 1206 SMD thick film resistors

Value (W)

Tolerance

IP1	1%
IP2	2%
IP5	5%

Vishay Precision

TNPW 1206 101 B T-9

Range

TNPW Commercial thin film precision chip resistors

Case size

Resistance code

Three digits (Eg 102 = 1000W)

Digit 1/2	Significant value
Digit 3	No of zeroes

Four digits (Eg 2503 = 250KW)

Digit 1/2	Significant value
Digit 3	No of zeroes

Low values (> 10W)

(Eg 0.022W = 0.022)

Use actual value

Resistance tolerance

For low values use actual tolerance (Eg 5%)

Temperature coefficient (or package)

T-1	100ppm per degree C
T-2	50ppm per degree C
T-9	25ppm per degree C
RT-1	Paper tape
RT-5	Paper tape (low values only)

Vishay (Dale)

WSL 1206 .01W +1%

Range

CPSM	Surface mount, power wirewound resistor
WSC	Surface mount, precision wirewound resistor
WSL	Surface mount, low value power metal strip resistor
WSR	Surface mount, low value power metal strip resistor

Power rating or case size

CPSM/WSC/WSR series

Power in watts

WSL series

Industry standard case size (eg 1206)

Resistance value in ohms

Resistance tolerance

Vishay (Dale)

RC 5100 103 G 40

Range

RC	One-surface terminated thick film chip resistor
RCW	Wrap-around thick film chip resistor
RCWP	Wrap-around, pre-tinned thick film chip resistor

Case size

Resistance code

Resistance tolerance

Termination or packaging

20	Gold (RC only)
40	Platinum gold (RC & RCW only)
42	Palladium silver (RC & RCW only)

Welwyn

WCR 060310K 0.1% 15PPM Ammo Pack

Range

WCR	General purpose surface mount resistors
CR	CECC surface mount resistors
HR	High value surface mount resistors
FCR	Fusing surface mount resistors
LRC	Low value flat chip resistors
LRF	Low value flat chip resistors
PFC	TaNFilm precision chip resistors / voltage dividers
PCF	Precision surface mount resistors
LRK	Thick film low resistance Kelvin flip chip resistors
PCR	Precision thick film surface mount resistors
PTCR	Surface mount thermistors
WRM	Mini Melf resistors

CHP	Metal glaze general purpose surface mount resistors
WSM	Moulded surface mount wirewound resistors
WBC	TaNsil wire bondable silicon chip resistors
PPS-1	Metal Glaze power pack surface mount high power density ceramic resistors
OARS	Surface mount sense resistors

Case size

Eg 0603

Resistance value in ohms

Resistance tolerance

Numeric eg 1% or IEC62 code

Temperature coefficient (per degree C)

Blank	Not applicable
V	5 ppm
T	10 ppm
Y	15 ppm (except CECC 40101-804 product)
D	25 ppm (except CECC 40101-804 product)
C	50 ppm
Z	100 ppm

Package

Ammo	Ammo pack
------	-----------

BC Components

2322 91.7 478

Prefix

Range

66	0.25% to 0.01% ultra-precision thin film. UXA 0204 series. Boxed
67	0.25% to 0.01% ultra-precision thin film. UXB 0207 series. Boxed
68	0.5% to 0.01% ultra-precision thin film. UXC 0309 series. Boxed
90. 1	1% professional thin film. MBA 0204 series. Boxed
90.5	0.5% professional thin film. MBA 0204 series. Boxed
90. 6	0.25% precision thin film. MBA 0204 series. Boxed
90. 7	0.1% precision thin film. MBA 0204 series. Boxed
91. 1	1% professional thin film. MBB 0207 series. Boxed
91. 5	0.5% professional thin film. MBB 0207 series. Boxed
91. 6	0.25% precision thin film. MBB 0274 series. Boxed
91. 7	0.1% precision thin film. MBB 0274 series. Boxed
92. 1	1% professional thin film. MBE 0414 series. Boxed
92. 5	0.5% professional thin film. MBE 0414 series. Boxed
92. 6	0.25% precision thin film. MBE 0414 series. Boxed
92. 7	0.1% precision thin film. MBE 0414 series. Boxed
156 2	1% precision metal film. MRS25 series. Ammo pack
157 2	1% precision metal film. MRS16S series. Ammo pack
187 53	5% precision metal film. SFR16S series. Ammo pack
181 43	5% precision metal film. SFR25 series. Ammo pack
186 76	5% precision metal film. SFRH series. Ammo pack
193 14	5% power metal film. PR01 series. Ammo pack
194 14	5% power metal film. PR02 series. Ammo pack
196 1	1% power metal film. PR01 series. Ammo pack
197 1	1% power metal film. PR02 series. Ammo pack
205 33	5% fusible metal film. 250V. NFR25 series. Ammo pack
207 23	5% fusible metal film. 350V. NFR25H series. Ammo pack

241 13	1% to 10% high ohmic, high voltage thick film. VR25 series. Ammo pack
242 13	1% to 5% high ohmic, high voltage thick film. VR37 series. Ammo pack
245 11	10%, 20% high voltage surge thick film resistor. LSR37 series. Ammo pack
244 13	1% to 5% high ohmic, high voltage thick film. VR68 series. Ammo pack
903 3	2% high frequency thin film. MBA 0204 HF series. Boxed
905 3	5% professional thin film. MBA 0204 series. Boxed
915 3	5% professional thin film. MBB 0207 series. Boxed
920 3	5% professional thin film. MBE 0414 series. Boxed
950 2	2% high pulse load carbon film. CBB 0207 series. Boxed

Resistance value

(EG 333 = 33kohm)

Digit 1/2	Digit 3	Significant value
	7	0.1
	8	1.0
	9	10.0
	1	100
	2	1k
	3	10k
	4	100k
	5	1M
	6	10M

Dubilier

DCR 25 5 T 10K *

Range

DCR Carbon film resistor

Type

12	0.125W
25	0.33W
25SS	0.25W
50	0.50W
50SS	0.50W
100	1W
200	2W

Resistance tolerance

5 5%

Package

T	Tape & ammo
BD	Tape & reel
A3	Aviset type 3
P	Pansert

Resistance value in ohms

Special order

PT26 26mm width taping. Weldable type with copper lead wire

Dubilier

DMR 16 T 75R

Range

DMR Metal film resistor

Rating (W)

16 0.4

Package

BD Tape & reel
T Tape & ammo

Resistance value in ohms

Dubilier

DZO 25 T

Range

DCO Carbon film zero-ohm jumper metal film resistor (suitable for Amistar)
DZO Steel slug zero-ohm jumper metal film resistor

Size

12 1/8W
25 1/4W

Package

BD Tape & reel
T Tape & ammo

Vishay (Dale)

FRJ -55

Range

FRJ Zero ohm jumper axial metal film resistor

Size

50 3.4mm body length
55 6.73mm body length

Vishay (Dale)

CCF -50 3010 F

Range

CCF Industrial axial metal film resistor
CMF Industrial axial metal film resistor
CPF Flameproof, industrial power axial metal film resistor
FP Pulse-withstanding protective axial metal film resistor

Size

CCF series

-2 2W (flameproof)
-07 1/4W
-50 1/3W

CMF series

Refer to Charcroft for others

CPF series

-1 1W
-2 2W
-3 3W

FP series

1/2P 1/2W
1P 1W
2P 2W
3P 3W
69P 2W

Resistance code

FP series

Example 1k00 = 1 kilohm

Other series

Three significant digits (1% or 2% tolerance)
Three significant digits + multiplier (5% tolerance)

Resistance tolerance

Temperature coefficient (per degree C)

Blank Not applicable (CCF series)
T-00 200ppm (CMR series)
T-0 150ppm (CMR series)
T-1 100ppm (CMR series)
T-2 50ppm (CMR series)
T-9 25ppm (CMR series)

Vishay (Dale)

HN 3 C 1003 G

Range

CT	Semi-precision axial metal film resistor
C	Semi-precision axial metal film resistor
FP	Semi-precision axial metal film resistor
HN	Semi-precision axial metal film resistor

Size

HN series

3	1/8W
4	1/4W
5	1/2W
6	1W

Other series

Refer to Charcroft

Resistance code

HN series

Three significant digits (1% & 2% tolerance)
3 significant digits + multiplier (5% tolerance)

Other series

Industry standard code

Resistance tolerance

HN series	Industry standard code
Others	Actual tolerance

Vishay (Sfernice)

RTO 20 F 100K +10% xxx

Range

RCH	Heatsink mounting thick film power resistor to 50W
RTO	Thick film power resistor to 20W
RPS	Heatsink-mounting power thick film resistor to 500W

Power rating (watts)

Connection style

RCH series

S	Flat with hole
R	Round lead
V	M2 screw

RTO series

F	Radial
C	Surface mount

RPS series

H	14kV dielectric strength
L	7 kV dielectric strength

DH	14kV dielectric strength (diagonal terminals)
DL	7 Kv dielectric strength (diagonal terminals)

Resistance value in ohms

Resistance tolerance

Custom specification

Vishay (Sfernice)

RPH 100 3.3kW +5% V xxx

Range

RPH	Heat-sink mounting thick film power resistor to 100W
-----	--

Power rating (W)

Resistance value in ohms

Resistance tolerance

Connection style

V	SM4 screw
F	Faston type

Custom specification

Vishay (Sfernice)

RTOP 200 3.2W+1% 3.2Z+1% V xxx

Range

RTOP	Heat-sink mounting power film resistor array (single)
DRTOP	Heat-sink mounting power film resistor array (dual)
TRTOP	Heat-sink mounting power film resistor array (triple)
QRTOP	Heat-sink mounting power film resistor array (quad)

Power rating (W)

Resistance value in ohms & tolerance

Repeat value & tolerance for each resistor

Connection style

V	Screw
F	Faston type
VS	Screw shunt
FS	Faston shunt

Custom specification

Welwyn

MFR 10K 0.1% 15PPM Ammo Pack

Range

MFR	Metal film resistors
MFR4P	Metal film resistors
WRN	Metal film resistors
MFP	Flameproof power metal film resistors
FA	Flameproof metal film resistors
MF-S	Power metal film resistors
MO-S	Power metal oxide film resistors
FA80	Flameproof power oxide resistors
2500	Low value metal film resistors
GCF	General purpose carbon film resistors
WL4	Jumper resistors

Resistance value in ohms

Resistance tolerance

Numeric eg 1% or IEC62 code

Temperature coefficient (per degree C)

Blank	Not applicable
V	5 ppm
T	10 ppm
Y	15 ppm (except CECC 40101-804 product)
D	25 ppm (except CECC 40101-804 product)
C	50 ppm
Z	100 ppm

Package

Ammo	Ammo pack
------	-----------

BC Components

2306 328 33 109

Prefix

Range

327 0	1% power axial cemented. PAC02 series. Ammopack
327 1	1% power axial cemented. PAC03 series. Ammopack
327 2	1% power axial cemented. PAC04 series. Ammopack
327 3	1% power axial cemented. PAC05 series. Ammopack
327 4	1% power axial cemented. PAC06 series. Ammopack
327 5	1% power axial cemented. PAC01 series. Ammopack
328 33	5% power axial cemented. AC01 series. Ammopack
329 03	5% power axial cemented. AC03 series. Ammopack
329 03	5% power axial cemented. AC04 series. Ammopack
329 05	5% power axial cemented. AC51 series. Ammopack
329 07	5% power axial cemented. AC07 series. Ammopack
329 10	5% power axial cemented. AC10 series. Ammopack
329 15	5% power axial cemented. AC15 series. Ammopack
329 20	5% power axial cemented. AC20 series. Ammopack

Resistance code

(EG 333 = 33kohms)

Digit 1/2	Digit 3	Significant value
	7	0.1
	8	1.0
	9	10.0
	1	100
	2	1k
	3	10k
	4	100k
	5	1M
	6	10M

Vishay (Dale)

EGS-1-80 49R9 F

Range

EGS-1-80	1W solderable, inductive moulded wirewound resistor
EGW-1	1W weldable, inductive moulded wirewound resistor
EGN-1-80	1W solderable non-inductive wirewound resistor
EGN-1-10	1W weldable non-inductive moulded wirewound resistor
EGS-2	1.5W solderable inductive moulded wirewound resistor
EGW-2	1.5W weldable inductive moulded wirewound resistor
EGN-2	1.5W solderable non-inductive moulded wirewound resistor
EGN-2-10	1.5W weldable non-inductive moulded wirewound resistor
EGS-3-80	2W solderable inductive moulded wirewound resistor
EGW-3	2W weldable inductive moulded wirewound resistor
EGN-3-80	2W solderable non-inductive moulded wirewound resistor
EGN-3-10	2W weldable non-inductive moulded wirewound resistor
ESS2-S	2W solderable inductive coated wirewound resistor
ESW-2A	2W weldable inductive coated wirewound resistor
ESN-2A	2W solderable non-inductive coated wirewound resistor
ESN-2A-10	2W weldable non-inductive coated wirewound resistor
ESS-2B	3W solderable inductive coated wirewound resistor
ESW-2B	3W weldable inductive coated wirewound resistor
ESN-2B	3W solderable non-inductive coated wirewound resistor
ESN-2B-10	3W weldable non-inductive coated wirewound resistor
ESS-5	5W solderable inductive coated wirewound resistor
ESW-5	5W weldable inductive coated wirewound resistor
ESN-5	5W solderable non-inductive coated wirewound resistor
ESN-5-10	5W weldable non-inductive coated wirewound resistor
EGS-10-80	7W solderable inductive coated wirewound resistor
EGW-10	7W weldable inductive coated wirewound resistor
EGN-10-80	7W solderable non-inductive coated wirewound resistor

EGN-10-10	7W welderlable non-inductive coated wirewound resistor
ESS-10	10W solderable inductive coated wirewound resistor
ESW-10	10W weldable inductive coated wirewound resistor
ESN-10	10W solderable non-inductive coated wirewound resistor
ESN-10-10	10W weldable non-inductive coated wirewound resistor

Resistance code

Resistance tolerance

Vishay (Dale)

 RH-5 .01 1%

Range

CA-1	1W power wirewound resistor
CA-2	2W power wirewound resistor
CA-4xxx	Axial wirewound power resistor
CA-4xxxF	Axial wirewound power fuse resistor
CP-2-10	1W welded low value power wirewound resistor
CP-2-13	1W welded 'open air' low value power wirewound resistor
CP-xF	Axial wirewound power fuse resistor
CPR-xF	Radial wirewound power fuse resistor
CW-1/2	.5W miniature, coated wirewound resistor
CW-1	1W miniature, coated wirewound resistor
CW-1M	1W miniature, coated wirewound resistor
CW-2M	3W miniature, coated wirewound resistor
G-1-80	1W precision, moulded wirewound resistor
G-2	1.5W precision, moulded wirewound resistor
G-3-80	2W precision, moulded wirewound resistor
G-5	4W/5W precision, silicone coated wirewound resistor
G-5C	5W/7W precision, silicone coated wirewound resistor
G-10	7/10W precision, silicone coated wirewound resistor
GN-1-80	1W precision, moulded non-inductive wirewound resistor
GN-2	1.5W precision, moulded non-inductive wirewound resistor
GN-3-80	2W precision, moulded non-inductive wirewound resistor
GN-5	4W/5W precision, coated non-inductive wirewound resistor
GN-5C	5W/7W precision, coated non-inductive wirewound resistor
GN-10	7/10W precision, coated non-inductive wirewound resistor
ENH-5	5W inductive wirewound resistor

ENH-10	10W inductive wirewound resistor
ENH-25	20W inductive wirewound resistor
ENH-50	30W inductive wirewound resistor
ERH-5	5W non-inductive wirewound resistor
ERH-10	10W non-inductive wirewound resistor
ERH-25	20W non-inductive wirewound resistor
ERH-50	30W non-inductive wirewound resistor
LVR-1	1W low value, precision axial wirewound resistor
LVR-3	3W low value, precision axial wirewound resistor
LVR-5	5W low value, precision axial wirewound resistor
LVR-10	10W low value, precision axial wirewound resistor
NH-5	5W non-inductive wirewound resistor
NH-10	10W non-inductive wirewound resistor
NH-25	25W non-inductive wirewound resistor
NH-50	50W non-inductive wirewound resistor
NH-100	100W non-inductive wirewound resistor
NH-250	250W non-inductive wirewound resistor
PH10-1	10W aluminium housed, thru-chassis, precision wirewound resistor
PH25	25W aluminium housed, thru-chassis, precision wirewound resistor
PH25A	25W aluminium housed, thru-chassis, precision wirewound resistor
PH-50	50W aluminium housed, thru-chassis, precision wirewound resistor
PH-100	100W aluminium housed, thru-chassis, precision wirewound resistor
RH-5	5W inductive wirewound resistor
RH-10	10W inductive wirewound resistor
RH-25	25W inductive wirewound resistor
RH-25-140	25W aluminium housed, chassis-mount inductive wirewound resistor
RH-50	50W inductive wirewound resistor
RH-50-126	50W aluminium housed, chassis-mount inductive wirewound resistor
RH-100	100W inductive wirewound resistor
RH-250	250W inductive wirewound resistor
RS-1/8	.125W precision, moulded wirewound resistor
RS-1/4	.4W precision, moulded wirewound resistor
RS-1/4-90	.4W precision, moulded miniature wirewound resistor
RS-1/2	.75W precision, moulded wirewound resistor
RS-1/2-90	.75W precision, moulded miniature wirewound resistor
RS-1A	1W precision, moulded wirewound resistor
RS-1A-90	1W precision, moulded miniature wirewound resistor
RS-1M	1W precision, moulded miniature wirewound resistor
RS-2	4W precision, coated wirewound resistor
RS-2M	3W precision, moulded miniature wirewound resistor
RS-2B	3W precision, coated wirewound resistor
RS-2C	2.5W precision, coated wirewound resistor
RS-2C-17	2.5W precision, coated wirewound resistor
RS-2C-23	2.5W precision, coated wirewound resistor

RS-5	5W precision, coated wirewound resistor
RS5-69	5W precision, coated wirewound resistor
RS-5-70	5W precision, coated wirewound resistor
RS-7	7W precision, coated wirewound resistor
RS-10	10W precision, coated wirewound resistor
RS-10-38	10W precision, coated wirewound resistor
RS-10-39	10W precision, coated wirewound resistor

Resistance value in ohms

Resistance tolerance

Vishay (Dale)

CP -5 3 100 +10%

Range

CP	Axial power wirewound resistor
CPCC	Fibre-glass core vertical mount power wirewound resistor
CPCF	Vertical mount, film power wirewound resistor
CPCL	Low value vertical mount power wirewound resistor
CPCP	Precision vertical mount wirewound resistor
CPL	Axial power wirewound resistor
CPR	Radial power wirewound resistor
CPSL	Four lead, power wirewound resistor
CPW	Axial power wirewound resistor

Power (W)

Mounting pads

Blank	None
3	Mounting pads

Resistance value in ohms

Resistance tolerance

Vishay (Dale)

NHL A -25 -06 Z 50W +5%

Range

HL	Industrial power wirewound resistor
NHL	Non-inductive, industrial, tubular, power wirewound resistor

Style

A	Adjustable
M	Miniature flat

T	Tapped
W	Tubular, wire leads
Z	Edgewound

Rating (watts)

Terminals

N	Nickel plated
Z	Tinned
W	Bare alloy (180 lead)

Resistance value in ohms

Resistance tolerance

Welwyn

W20 10K 0.1% 15PPM Ammo Pack

Range

W20	Vitreous enamelled wirewound resistors
V700	RB style vitreous enamelled wirewound resistors
WA80	General purpose cement coated wirewound resistors
AS	Semi-precision power wirewound resistors
SPH	General purpose fail-safe moulded wirewound resistors
SPF	General purpose fail-safe moulded wirewound resistors
SP20F	General purpose fail-safe moulded wirewound resistors
SPP	General purpose wirewound resistors
W30	Cement coated wirewound resistors
OAR	Open air sense resistors
LOB	Low resistance metal element resistors
WH	Aluminium housed wirewound resistors
PW	General purpose power wirewound resistors
PPW	Semi-precision power wirewound resistors
ALFR-2	Telecommunications line feed resistors
CW	Tubular cement coated wirewound resistors
1600	Tubular vitreous enamelled wirewound resistors
1900	Tubular vitreous enamelled wirewound resistors
U400	Vitreous enamelled heavy duty tapewound resistors

Resistance value in ohms

Resistance tolerance

Numeric eg 1% or IEC62 code

Temperature coefficient (per degree C)

Blank	Not applicable
V	5 ppm

T	10 ppm
Y	15 ppm (except CECC 40101-804 product)
D	25 ppm (except CECC 40101-804 product)
C	50 ppm
Z	100 ppm

Package

Ammo	Ammo pack
------	-----------

BC Components

 2322 205 33 478

Prefix

Range

205 33	5% fusible metal film. 250V. NFR25 series. Ammo pack
207 23	5% fusible metal film. 350V. NFR25H series. Ammo pack

Resistance code

(EG 333 = 33kohms)

Digit 1/2	Significant value
Digit 3	7 0.1
	8 1.0
	9 10.0
	1 100
	2 1k
	3 10k
	4 100k
	5 1M
	6 10M

Dubilier

 DFR 25 5 T 1K

Range

DFR	Fusible metal film
-----	--------------------

Rating (W)

25	0.25
50	0.5
100	1
200	2
300	3

Resistance tolerance

Package

T	Tape & ammo
BD	Tape & reel

Value (W)

Phycomp (12NC)

 2350 750 6 10 1

Range

2350	Trimnable, surge & high precision SMD resistors & resistor arrays/networks
------	--

Style

750 6	5% Fusible 1206 FRC01 thick film resistor
-------	---

Package

Refer to Charcroft

Resistance code

(Eg 101 = 100 ohm)

Digit 1/2	Significant value
Digit 3	No of zeroes
	9 = No zeroes (eg >100 ohm)

Phycomp (Phillips Part No)

 FRC01 104 IP5

Range

FRC01	Fusible 1206 SMD thick film resistors
-------	---------------------------------------

Resistance value in ohms

Resistance tolerance

IP1	1%
IP2	2%
IP5	5%

Vishay (Dale)

 CMF-55-39 1000 F T-1

Range

CMF-55-39	1/4W fusible axial metal film resistor
CMF-60-64	1/2W fusible axial metal film resistor

Resistance code

Resistance tolerance

Temperature coefficient (per degree C)

T-1	100ppm
-----	--------

Welwyn

WFF 10K 0.1% 15PPM Ammo Pack

Range

FA8025	Fusible metal film resistors
WFF	Fast fusible film resistors
FM	Fusible metal film resistors
FC4	Fusible carbon film resistors
WA84F	Fusible wirewound resistors

Resistance value in ohms

Resistance tolerance

Numeric eg 1% or IEC62 code

Temperature coefficient (per degree C)

Blank	Not applicable
V	5 ppm
T	10 ppm
Y	15 ppm (except CECC 40101-804 product)
D	25 ppm (except CECC 40101-804 product)
C	50 ppm
Z	100 ppm

Package

Ammo	Ammo pack
------	-----------

AVX

CJA1A 2E 103 J T

Range

CJA3A	Zero ohm jumper chip resistor network
CJA1A	Zero ohm jumper chip resistor network
CJB3A	Zero ohm jumper chip resistor network

Number of resistors

2E	Two resistor array
4E	Four resistor array

Resistance code

Resistance tolerance

Package

B	Bulk
T	Tape & reel

BC Components

2306 340 03 109

Prefix

Range

250	5% & 10% radial mounted power. RMW03 series. Loose
251	5% & 10% radial mounted power. RMW05 series. Loose
252	5% & 10% radial mounted power. RMW07 series. Loose
253	5% & 10% radial mounted power. RMW10 series. Loose
254 12	5% & 10% radial mounted power. RMW15 series. Loose
255 12	5% & 10% radial mounted power. RMW20 series. Loose
256	5% & 10% radial mounted power. RMF03 series. Loose
257	5% & 10% radial mounted power. RMF05 series. Loose
258	5% & 10% radial mounted power. RMF07 series. Loose
259	5% & 10% radial mounted power. RMF10 series. Loose
340 03	5% stand-up power. SMW02 series. Loose
341 03	5% stand-up power. SMW03 series. Loose
342 03	5% stand-up power. SMW05 series. Loose
345 03	5% stand-up power. SMF02 series. Loose
346 03	5% stand-up power. SMF03 series. Loose
347 03	5% stand-up power. SMF05 series. Loose

Resistance code

Dubilier

DWL 0.5 /TR

Range

DWL	Wire link resistors
-----	---------------------

Diameter (mm)

Package

TR	Tape & reel
----	-------------

EPCOS (Siemens)

B54102-A 000- X 60

Range

B54102-A	0805 thick film chip jumper resistor
B54103-A	1206 thick film jumper resistor

Capacitance code

000	Zero ohm
-----	----------

Capacitance tolerance

Special marking

60	Standard
----	----------

Phycomp (12NC)

2350 034 10 10 1

Range

2350	Trimmable, surge & high precision SMD resistors & resistor arrays/networks
2322	Fixed thick film SMD resistors

Style

2350 prefix	
550 10	5% Surge current 1206 SRC01 thick film SMD resistor
550 11	2% Surge current 1206 SRC01 thick film SMD resistor

Package

Refer to Charcroft

Resistance code

(Eg 101 = 100 ohm)

Digit 1/2	Significant value
Digit 3	No of zeroes

9 = No zeroes (eg >100 ohm)

Phycomp (Philips Part No)

SRC01 104 IP5

Range

SRC01 Surge current 1206 SMD thick film resistors

Resistance value in ohms

Resistance tolerance

IP1	1%
IP2	2%
IP5	5%

Vishay (Dale)

RNX -1/2 E 10k1 K K

Range

B	High voltage radial or lug carbon film resistor
D	High voltage radial or lug carbon film resistor
G	High voltage radial or lug carbon film resistor
H	High voltage radial or lug carbon film resistor
FHV	High voltage special purpose radial metal oxide resistor
HACW-2	Ultra high value oxide & carbon film resistor
HADW-2	Ultra high value oxide & carbon film resistor
M-51	Ultra high value hermetic oxide & carbon film resistor
HVW	Uncoated high voltage axial metal alloy resistor
HVX	Flameproof high voltage axial metal alloy resistor
MVW	Uncoated high voltage axial metal alloy resistor
RNX	High voltage special purpose axial metal oxide resistor
ROX	High voltage special purpose axial metal oxide resistor
SPW	High frequency carbon film resistor tubes

Voltage or size

Blank	Not applicable
Others	Refer to Charcroft

Optional construction

Blank	Not applicable
E	Epoxy (1/4 & 3/8 only)
N	Non-inductive
P	0.32" diameter leads

Resistance value

HVW/MVW/HVX series

Value in ohms (example 26.4k)

SPW series

Value in ohms (example 50)

Other series

Letter denotes decimal place

K	Kilo (x1000)
M	Mega (x1,000,000)
G	Giga (x1,000,000,000)
T	Tera (x1,000,000,000,000)

Resistance tolerance

HVW/MVW/HVX/SPW/B/H/D/G/HAXW/M-51 series

Tolerance as % (example 5%)

Other series

K	10%
J	5%
G	2%
F	1%
D	0.5%

Temperature coefficient (per degree C)

Blank	Not applicable
M	200ppm
K	100ppm
H	50ppm

Calibration voltage (in Vdc)

HACW-2/HDW-2/M-51 series only

Vishay (Dale)

RDX -2 A 2M50 1000-1 F K

Range

RDX	High voltage ratio divider metal oxide resistor
RJU	Ultra high value high power metal oxide resistor

Size

RJU series

Wattage at 125 degree C (example -40 = 40W)

RDX series

Minimum resistance at R1 (example -2 = 2 kohm)

Lead configuration

A	Axial
D	Radial tabs
C	Radial ends axial tap

Resistance code (R1 & R2)

Resistance ratio (R1 & R2)

Resistance tolerance

Temperature coefficient (per degree C)

M	200ppm
K	100ppm

Vishay (Dale)

 TA E W 2M50 +10%

Range

TA	Special purpose high voltage axial carbon film resistor
----	---

Size

E	0.5W @ 25 degree C (3kV)
F	1W @ 25 degree C (5kV)
K	01.5W @ 25 degree C (7.5kV)
C	2W @ 25 degree C (10kV)
Q	2.5W @ 25 degree C (12.5kV)
R	3W @ 25 degree C (15kV)

Type

W	Standard
---	----------

Resistance code

Resistance tolerance

Vishay (Dale)

 TD 20 S 1006/3300 F L

Range

TR	High voltage thick film resistor
TD	High voltage thick film divider

Length

Digit 1	Number of inches
Digit 2	Tenths of an inch

Power rating or TCR

TR series

C	1/4W
D	1/2W
F	1W
G	1.5W
H	2W
J	3W

TD series

Industry standard TCR code

Resistance value

Resistance ratio (TD series only)

Resistance or ratio tolerance

Style

Blank	Not applicable (TR series)
L	Leaded (TD series)
N	Non-leaded (TD series)

Vishay Precision

 RNP-10S A 821 J

Range

RNP-10S	10W power resistor (TO-126)
RNP-50S	50W high power resistor (TO-3)

TCR characteristic (ppm/degree C)

A	100
C	50

Resistance code

Resistance tolerance

Vishay Precision

 RPF -10 5.0W H

Range

RPF	High power resistor with heat sink (5% resistance ratio)
RPK	High power resistor with heat sink (10W 1% resistance ratio)

Power rating

-10	10W
-20	20W
-50	50W
-100	100W
-250	250W
-500	500W
-1000	1000W
-2000	2000W

Resistance tolerance

H	100ppm
K	10%

Package

Blank	Bulk (standard)
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Welwyn

HV 10K 0.1% 15PPM Ammo Pack

Range

T	High voltage precision thick film resistors
HV	High voltage thick film resistors
HVL	High voltage low inductance thick film resistors
GC	High value thick film resistors
F	High voltage thick film resistors
3810	Ultra-high voltage precision resistors
4500	High voltage planar
4530	High voltage planar dividers
PPR	Planar power resistors
WDBR	Ultra-low profile dynamic braking resistors

Resistance value in ohms

Resistance tolerance

Numeric eg 1% or IEC62 code

Temperature coefficient (per degree C)

Blank	Not applicable
V	5 ppm
T	10 ppm
Y	15 ppm (except CECC 40101-804 product)
D	25 ppm (except CECC 40101-804 product)
C	50 ppm
Z	100 ppm

Package

Ammo	Ammo pack
------	-----------

BC Components

2322 186 76 478

Prefix

Range

66	0.25% to 0.01% ultra-precision thin film. UXA 0204 series. Boxed
67	0.25% to 0.01% ultra-precision thin film. UXB 0207 series. Boxed
68	0.5% to 0.01% ultra-precision thin film. UXC 0309 series. Boxed
90. 6	0.25% precision thin film. MBA 0204 series. Boxed
90. 7	0.1% precision thin film. MBA 0204 series. Boxed
91. 6	0.25% precision thin film. MBB 0274 series. Boxed
91. 7	0.1% precision thin film. MBB 0274 series. Boxed
92. 6	0.25% precision thin film. MBE 0414 series. Boxed
92. 7	0.1% precision thin film. MBE 0414 series. Boxed
156 2	1% precision metal film. MRS25 series. Ammo pack
157 2	1% precision metal film. MRS16S series. Ammo pack
187 53	5% precision metal film. SFR16S series. Ammo pack
181 43	5% precision metal film. SFR25 series. Ammo pack
186 76	5% precision metal film. SFRH series. Ammo pack

Resistance code

(EG 333 = 33kohms)

Digit 1/2	Digit 3	Significant value
	7	0.1
	8	1.0
	9	10.0
	1	100
	2	1k
	3	10k
	4	100k
	5	1M
	6	10M

Dubilier

DMR 25 T 75R *

Range

Rating (W)

12	0.125
25	0.6
100	1
200	2

Package

BD	Tape & reel
T	Tape & ammo

Resistance value in ohms

Special order

PT26	26mm width taping
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Phycomp (12NC)

2350 61 6 10 1

Range

2350	Trimnable, surge & high precision SMD resistors & resistor arrays / networks
2322	Fixed thick film SMD resistors

Style

2322 prefix

724 6	1% Precision TC100 1206 RC02H thick film SMD resistor
734 6	1% Precision TC100 0805 RC12H thick film SMD resistor
704 6	1% Precision TC100 0603 RC22H thick film SMD resistor
706 7	1% Precision TC100 0402 RC32 thick film SMD resistor
722 2	1% Precision TC50 1206 RC02G thick film SMD resistor
732 6	1% Precision TC50 0805 RC12G thick film SMD resistor
725 2	0.5% High precision TC50 1206 RC03G thick film SMD resistor
738 2	0.5% High precision TC50 0805 RC13G thick film SMD resistor

2350 prefix

61 6	0.5% High precision, high stability 1206 TFR01 thin film SMD resistor
60 6	0.5% High precision, high stability 0805

60 6	TFR11 thin film SMD resistor 0.5% High precision, high stability 0603
60 6	TFR21 thin film SMD resistor 0.5% High precision, high stability 0402
614 6	TFR31 thin film SMD resistor 0.5% High precision, high stability 0201
741 3	TFR41 thin film SMD resistor 0.1% Ultra-high precision, high stability 1206
744 3	MPC01 thin film SMD resistor 0.1% Ultra-high precision, high stability 0805
747 3	MPC11 thin film SMD resistor 0.1% Ultra-high precision, high stability 0603
	MPC21 thin film SMD resistor

Package

Refer to Charcroft

Resistance code

(Eg 101 = 100 ohm)

Digit 1/2 Significant value

Digit 3 No of zeroes

9 = No zeroes (eg >100 ohm)

Phycomp (Philips Part No)

RC13G 104 IP1

Range

RC02H	Precision TC100 1206 thick film SMD resistors
RC12H	Precision TC100 0805 thick film SMD resistors
RC22H	Precision TC100 0603 thick film SMD resistors
RC32	Precision TC100 0402 thick film SMD resistors
RC02G	Precision TC50 1206 thick film SMD resistors
RC12G	Precision TC50 0805 thick film SMD resistors
RC03G	High precision TC50 1206 thick film SMD resistors
RC13G	High precision TC50 0805 thick film SMD resistors
TFR01	High precision, high stability 1206 thin film SMD resistors
TFR11	High precision, high stability 0805 thin film SMD resistors
TFR21	High precision, high stability 0603 thin film SMD resistors
TFR31	High precision, high stability 0402 thin film SMD resistors
TFR41	High precision, high stability 0201 thin film SMD resistors
MPC01	Ultra-high precision, high stability 1206 thin film SMD resistors
MPC02	Ultra-high precision, high stability 0805 thin film SMD resistors

MPC03	Ultra-high precision, high stability 0603 thin film SMD resistors
PRC221	General purpose, precision, low ohmic, power, 2512 thick film SMD resistors
PRC111	General purpose, precision, low ohmic, power, 2010 thick film SMD resistors
PRC201	General purpose, precision, 1218 thick film SMD resistors

Resistance value in ohms

Resistance tolerance

IP1	1%
IP2	2%
IP5	5%

Vishay (Dale)

ERC -50 2152 F

Range

CH	Precision axial metal film resistor
CJ	Precision axial metal film resistor
CT	Precision axial metal film resistor
ERC	Precision axial metal film resistor
HN	Precision axial metal film resistor (weldable)
HS	Precision axial metal film resistor (solderable)
HT	Precision axial metal film resistor (solderable)
HY	Precision axial metal film resistor (solderable)
NA	Precision axial metal film resistor
NC	Precision axial metal film resistor
NE	Precision axial metal film resistor

Size (at 70 degree C)

CT/NA/NC/NE series

50	1/4W
55	1/2W
60	1W
65	1W

Other series

50	1/10W
55	1/8W
55-200	1/4W
57	1/4W
60	1/4W
65	1/2W
70	3/4W

Resistance code

CT/NA/NC NE series

Example 10k0 = 10 kilohm

Other series

Three significant digits (1% or 2% tolerance)

3 significant digits + multiplier (5% tolerance)

Resistance tolerance

CT/NA/NC/NE series

Actual tolerance (example 1%)

Other series

Industry standard

Vishay (Dale)

PTF 56 20K01 B T-13

Range

PTF-51	1/2W precision industrial axial metal film resistor
PTF-56	1/8W precision industrial axial metal film resistor
PTF-65	1/4W precision industrial axial metal film resistor

Size

Refer to Charcroft for dimensions

Resistance code

R	ohm
k	1,000 ohm
M	1,000,000 ohm
Example : 51R1 = 51.5 ohm	

Resistance tolerance

Temperature coefficient (per degree C)

T-10	15ppm
T-13	10ppm
T-16	5ppm

Vishay (Dale)

FP 55 E 51k1 +1%

Range

FP	Precision flameproof axial metal film resistor
----	--

Size

Refer to Charcroft for dimensions

Temperature coefficient (per degree C)

E	25ppm
C	50ppm
D	100ppm

Resistance value

R	ohm
k	1,000 ohm

M 1,000,000 ohm

Example : 51R1 = 51.5 ohm

Resistance tolerance

Vishay Precision

E/H E 0210 B G M

Range

E/H	Thin film chip resistor to M55342
K/M	Thick film chip resistor to M55342

TCR characteristic (ppm/degree C)

E	25
H	50
K	100
M	300

Case size

Refer to Charcroft for case sizes

Termination

B	Solderable wraparound
R	Wraparound
S	One surface

Resistance code

Digit 1/2	Significant value
Digit 3	See below

Multiplier x1 (ohm)

A	0.1%
D	1%
G	2%
J	5%
M	10%

Multiplier x1000 (Kilohm)

B	0.1%
E	1%
H	2%
K	5%
N	10%

Multiplier x1,000,000 (Megohm)

C	0.1%
E	1%
H	2%
K	5%
N	10%

Failure rate

M	1.0%
P	0.1%
R	0.01%

Vishay Precision

RU 050 K 1kW J B

Range

L-NE	Low value thin film precision chip resistor
L-NS	Low value thin film precision chip resistor
M	Hi-rel cermet thick film wraparound chip resistors
RU	CECC thin film precision chip resistors (10-25 ppm/°C)
RV	CECC thin film precision chip resistors (50-100 ppm/°C)
P-NS	Commercial thin film precision chip resistor
P-NE	Commercial thin film precision chip resistor (standard chip)
P-HR	Hi-rel commercial thin film precision chip resistor
PTN	Commercial tantalum nitride film precision chip resistor
T	Topside cermet thick film wraparound chip resistors
T-NS	Wraparound thin film precision chip resistor (topside contacts)

Case size

TCR characteristic (ppm/degree C)

Y	10
E	25
H	50
K	100
L	200
M	300
P	0/350
S	Special

Resistance code

Industry standard except RU/RV series

RU/RV series

Actual value (Eg 1KW)

Resistance tolerance

N	Not trimmed
Other	Industry standard

Termination

B	Tinned over nickel barrier or solder coated (Pxx series)
E	Electro-plated Gold
G	Gold over nickel barrier
W	Wirebondable gold

Package

Blank	RU-RV series
T	Tape & reel
W	Waffle pack

Vishay Precision

TNPW 1206 101 B T-9

Range

TNPW	Commercial thin film precision chip resistors
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Case size

Resistance code

Three digits (Eg 102 = 1000 ohm)	
Digit 1/2	Significant value
Digit 3	No of zeroes

Four digits (Eg 2503 = 250 kilohm)

Digit 1/2	Significant value
Digit 3	No of zeroes

Low values (>10 ohm)

(Eg 0.022W = 0.022)

Use actual value

Resistance tolerance

Low values	Actual tolerance (Eg 5%)
Others	Industry standard code

Temperature coefficient (or package)

T-1	100ppm per degree C
T-2	50ppm per degree C
T-9	25ppm per degree C
RT-1	Paper tape
RT-5	Paper tape (low values only)

Vishay Precision

CNS 020 100KW +0.02%

Range

CNS020	Conformal radial discrete resistor
CNS021	Conformal radial discrete resistor
CS33	Dual value chip resistor
RMK22N	Single value chip resistor (N= Nichrome)
RMK33N	Dual value centre tap chip resistor (N= Nichrome)
RSK22N	Single value chip resistor (N= Nichrome)
TA22	Single value chip resistor
TA33	Dual value, centre tap chip resistor

Resistance value

Resistance tolerance

Matching tolerance

Blank	Not applicable
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Vishay Precision

 CS 22 H 1004 F B

Range

CS Single high value chip resistor

Size

22	0.6x0.6mm
33	0.8x0.8mm
44	1x1mm
55	1.3x1.3mm
515	3.8x1.3mm
522	6.5x6.5mm
0705	1.91x1.27mm
1206	3.2x1.6mm
2010	5.08x2.54mm

TCR characteristic (ppm/degree C)

H	50
K	100

Resistance code

Resistance tolerance

Termination

A	Aluminium
B	Tinned over nickel barrier
G	Gold over nickel barrier

Vishay Precision

 S 30D N C 6801 F N

Substrate

S	Silicon substrate dual value chip resistor
A	Alumina substrate dual value chip resistor

Chip type/size

30D	0.030x0.030mm. Isolated, equal value
30I	0.030x0.030mm. Isolated, unequal value
30R	0.030x0.030mm. Centre tap, equal value
30V	0.030x0.030mm. Centre tap, unequal value

Resistance tolerance (ratio)

N	Not applicable
Other	Industry standard code

TCR characteristic (ppm/degree C)

F	10
E	25
C	50

K	100
L	200
M	250
N	+50 -100
P	+0 - 100
T	+300 -100

Resistance ratio

(Eg 1001 = 1000 ohm)

Digit 1/3 Significant value

Digit 4 No of zeroes

> 10W (Eg 1R00 = 1 ohm)

R Decimal point

Resistance tolerance (absolute)

Element

N	Tamelox gold pads
TG	Gold backside. Tantalum nitride element
NG	Gold backside. Tamelox element
GT	TA2N gold pads

Vishay Precision

 RP 46 Z 10k W B

Range

RP Conformal radial discrete resistor

Case size

Refer to Charcroft

TCR characteristic (ppm/degree C)

Z	5
N	10
E	25
F	50

Resistance value

Resistance tolerance

Package

Blank	Not applicable (RP46)
B	Bulk
TP	Tape & reel
TF	Tape folded

Vishay Precision

S 40R D C 6801 F N

Range

S	Silicon substrate single value chip resistor
A	Alumina substrate single value chip resistor

Chip size

20	0.020x0.020
40	0.040x0.040
50	0.050x0.050

Resistance tolerance ratio

N	Not applicable
Other	Industry standard code

TCR characteristic (ppm per degree C)

F	10
E	25
C	50
K	100
L	200
M	250
N	+50-100
P	+0-250
S	+0-100
T	+300-100

Resistance code

Resistance tolerance (absolute)

Element technology

N	Tamelox gold pads
TG	Gold backside, tantalum nitride element
NG	Gold backside, Tamelox element
GT	TA ₂ N gold pads

Welwyn

RC 10K 0.1% 15PPM Ammo Pack

Range

RC	Precision metal film resistors
CAR	Ultra-precision metal film resistors
MAR40	Ultra-precision metal film resistors
MAR42	Ultra-precision metal film resistors
PR	Flameproof metal film resistors
RG	Precision non-military Metal Glaze resistors
4800	Ultra-precision bulk metal film resistors
MH	High voltage metal film resistors
TD4	Nickel film temperature sensor

Resistance value in ohms

Resistance tolerance

Numeric eg 1% or IEC62 code

Temperature coefficient per degree C

Blank	Not applicable
V	5 ppm
T	10 ppm
Y	15 ppm (except CECC 40101-804 product)
D	25 ppm (except CECC 40101-804 product)
C	50 ppm
Z	100 ppm

Package

Ammo	Ammo pack
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AVX

CRA3A 3E 103 J T

Range

CRA3A	Multiple resistor network chip
CRB3A	Multiple resistor network chip
CRB1A	Multiple resistor network chip
CRC1A	Multiple resistor network chip
CC3A	Multiple resistor network chip
CRB2A	Multiple resistor network chip
CJA3A	Zero ohm jumper chip resistor network
CJA1A	Zero ohm jumper chip resistor network
CJB3A	Zero ohm jumper chip resistor network
RNA4A	8-resistor resistor network chip

Number of resistors

2E	Two resistor array
4E	Four resistor array
8E	Eight resistor array

Resistance code

Resistance tolerance

Package

B	Bulk
T	Tape & reel

BI Technologies

62 8 J 330/470 F TR4

Range

62	Small outline SMD DIL thick film resistor network
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No of leads

7	14 leads
8	16 leads

Circuit type

A	Isolated
B	Bussed
J	Dual terminator
L	R/2R ladder (628 series only)
T	CCITT V.35 termination (627 series)
V	For Pentium, power supply applications (100W only)

Resistance code/s

(Eg 102 = 1000W)	
Digit 1/2	Significant value

Digit 3	No of zeroes
(Use -5 in place of 2nd resistor value for circuit only)	

Resistance tolerance

Blank	Standard (2%)
Other	Industry standard code

Package

Blank	Standard
TR4	Tape & reel

BI Technologies

654 2dB

Range

654	RF attenuator SMD precision thin film resistor network
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Attenuation (dB)

BI Technologies

66 4 A 1001 A TR

Range

66	.150" SMD DIL precision thin film resistor network
68	.300" DIL precision thin film resistor network
69	DIL precision thin film resistor networks

No of leads

4	8 leads
7	14 leads (except 69 series)
8	16 leads
9	14 leads (69 series only)

Circuit type

A	Isolated
B	Bussed
6	Binary (69 series only)
7	Decade (69 series only)

Resistance code

(Eg 1001 = 1000 ohm)	
Digit 1-3	Significant value
Digit 4	No of zeroes

Resistance tolerance (ratio)

A	0.1% (0.05%)
B	0.1% (0.1%)

D	0.5% (0.1%)
F	1% (0.5%)

Package

Blank	Standard (magazine)
TR4	Tape & reel

BI Technologies

88 7 -5 -R220/330 F

Range

88	DIL thick film resistor network
----	---------------------------------

No of leads

7	20-leads
8	18-leads

Circuit type

1	Bussed
3	Isolated
5	Dual terminator
6	SCSI circuit

Resistance code/s

(Eg 102 = 1000 ohm)
 Digit 1/2 Significant value
 Digit 3 No of zeroes
 (Use -5 in place of 2nd resistor value for circuit only)

Resistance tolerance

Blank	Standard (2%)
Other	Industry standard code

BI Technologies

89 8 -81 R10K

Range

89	R/2R ladder or DIL thick film resistor network
----	--

No of leads

8	16-leads
9	14-leads

No of bits

899 series

-1	Bussed
-3	Isolated
-5	Dual terminator
-10	10 bit R/R2 ladder

898 series

-81	8 bit R/R2 ladder
-82	8 bit R/R2 ladder

Resistance value

(Eg R10K = 10 kilohm)

Resistance tolerance

Blank	Standard (2%)
Other	Industry standard code

BI Technologies

BCN 4 D B 102 J 7

Range

BCN	SMD thick film resistor network
-----	---------------------------------

No of resistors

Configuration

D	Isolated
---	----------

Edge option

Blank	Scalloped edge
B	Square edge

Resistance code

Resistance tolerance

Package

7	7" reel
13	13" reel

BI Technologies

BCN 16 4 A B I 102 J 7

Range

BCN	SMD thick film resistor network
-----	---------------------------------

Width

16	1.6mm
31	3.1mm

No of resistors

Configuration

A	Isolated
---	----------

RESISTORS

Resistor Networks

R Bussed - reversed (BCN31)
S Bussed - standard (BCN31)

Edge option

Blank Scalloped edge (BCN 16 only)
B Square edge

Termination code

Blank Standard
I Interior concave termination (square edge package only)

Resistance code

Resistance tolerance

Package

7 7" reel
13 13" reel

BI Technologies

BPC 10 103 G

Range

BPC Non-inductive, planar thick film resistor network

Power rating (W)

3 3W
5 5W
7 7.5W
10 10W

Resistance code

Resistance tolerance

BI Technologies

L 08 5 C 331 /47 F xx

Range

BH High profile SIP conformal coated thick film resistor network
L Low profile SIP conformal coated thick film resistor network
M Low profile SIP conformal coated thick film resistor network
NQS SMD .25" pitch DIP precision thin film resistor network

T Super low profile SIP thick film resistor network

No of leads

Circuit type

NQS/L series

A Isolated
B Bussed

T series

3 Isolated
1 Bussed
5 Dual terminator

Lead code

Blank Standard
S Steel pins (L series)
C Copper pins (L series)

Resistance code

(Eg 102 = 1000 ohm)
Digit 1/2 Significant value
Digit 3 No of zeroes
-5 Circuit only

Resistance tolerance

TCR code per degree C

Blank Standard (100ppm)
P 50ppm (NQS series)
Q 25ppm (NQS series)

Package

Blank Standard (tube)
AP Ammo pack (L/M series)
M1 Tube (L/M series)
M2 Tube (L/M series)

BI Technologies

BHV 10 RS 470 J

Range

BHV SMD high voltage, high value conformal coated thick film resistor network

Voltage (KV)

Construction

RS Polymer coated substrate with solder pads

Resistance code

Resistance tolerance

Dubilier

9 E 103 G

No of pins

Type

M Isolated
E Common

Resistance tolerance (W)

(Eg 103 = 10 kilohm)

Digit 1/2 Significant value
Digit 3 No of zeroes

Dubilier

RN16 4 102 J

Range

RN16 Thick film resistor networks

No of resistors

Resistance code

Resistance tolerance

Murata (global part no)

RG LD 8 X 103 J 104 J T2

Range

RG Resistor network

Dimensions

LD 2.54mm pitch. 5.0mm height
LE 1.78mm pitch. 5.0mm height
SD 2.54mm pitch. 6.5mm height

Number of elements

Circuit type

X Pull-up, pull-down circuit
Y Isolated circuit
Z Double terminator circuit
M Divider circuit
L R/R2 ladder circuit

Resistor 1 : Resistance code

Resistor 1 : Resistance tolerance

Resistor 2 : Resistance code

Resistor 2 : Resistance tolerance

Package

T2 3 pin. Taped

Phycomp (12NC)

2350 230 10 10 101

Range

2350 Trimmable, surge & high precision SMD resistors & resistor arrays / networks

Style

230 10 5% 10P8R 1206 RNA310 SMD resistor network
321 2 5% 10P4R4C 1608 RCB210 SMD resistor/capacitor network
46 5/10/20% 1608 CRB210 SMD capacitor/resistor network
034 10 5% 4 x 0603 concave ARC241 SMD resistor network
024 10 1% 4 x 0603 concave ARC242 SMD resistor network
033 10 5% 4 x 0402 convex ARV241 SMD resistor network
023 10 1% 4 x 0402 convex ARV242 SMD resistor network

Package

Refer to Charcroft

Resistance code

(Eg 101 = 100 ohm)

Digit 1/2 Significant value
Digit 3 No of zeroes
9 = No zeroes (eg >100 ohm)

Phycomp (Philips Part No)

RNA310 104 IP5

Range

RNA310	10P8R 1206 SMD resistor network
ARC241	4x0603 concave SMD resistor array
ARC242	4x0603 concave SMD resistor array
ARV241	4x0603 convex SMD resistor array
ARV242	4x0603 convex SMD resistor array
ARV341	4x0402 convex SMD resistor array
ARV342	4x0402 convex SMD resistor array

Resistance value in ohms

Tolerance

IP1	1%
IP2	2%
IP5	5%

Vishay (Dale)

R-1C 16 A 1000 X J X B

Range

R-1C	Moulded, isolated, DIL metal film resistor network
R-4C	Moulded, isolated or common pin DIL metal film resistor network
CRA-06E	Thick film chip resistor array
CRA-06S	Thick film chip resistor array
CRA-12E	Thick film chip resistor array
CRA-06E	Thick film chip resistor array
CRA-06S	Thick film chip resistor array
CRC	Thick film resistor network
DFP	Flat pack thick film resistor network
MDP	Thick film resistor network
MSP	Thick film resistor network
SOGC	Small outline thick or thin film resistor network
SOMC	Small outline thick or thin film resistor network

Number of pins or terminals

Package / terminal finish

Blank	Not applicable
A	.195" high package(CSC/MSC series only)
B	.250" high package (CSC/MSC series only)
0	Gold finish (DFP series only)
1	Standard finish (DFP series only)

Schematic

Refer to Charcroft

Resistance code (R1)

Resistance code (R2)

Blank	Not applicable
-------	----------------

Temperature characteristic (per degree C)

Blank	Not applicable
B	10ppm
J	25ppm
H	50ppm
K	100ppm

Resistance tolerance

Package

Blank	Not applicable
RT-1	Tape & reel (CRA series)
RB-8	Embossed tape & reel

Vishay (Dale)

VTSR 24 03 xxxx G T-1

Range

VTSR	TSOP surface mount thin film resistor network
VSSR	S/QSOP surface mount thin film resistor network
VSOR	SOIC narrow, surface mount thin film resistor network

Number of leads

Schematic

Resistance code

Resistance tolerance

Temperature coefficient (per degree C)

T-1	100ppm
T-2	50ppm
T-9	25ppm
Blank	Not applicable (05/47 schematics)

Vishay (Dale)

MDM14-05 K 1003 F C

Range

MDM14-01	13 resistor network. One common pin
MDM-14-03	7 resistor network. Isolated resistors
MDM-14-05	12 resistor network. Resistor pairs
MDM-16-01	15 resistor network. One common pin
MDM-16-03	8 resistor network. Isolated resistors
MDM-16-05	12 resistor network. Resistor pairs

Temperature characteristic

Resistance code

Refer to Charcroft for -05 schematic networks

Resistance tolerance

Schematic

Vishay (Dale)

T10S 08 104

Range

T06S	6 pin, 4 bit, coated SIP R/2R ladder resistor network
T07S	7 pin, 5 bit, coated SIP R/2R ladder resistor network
T08S	8 pin, 6 bit, coated SIP R/2R ladder resistor network
T09S	9 pin, 7 bit, coated SIP R/2R ladder resistor network
T10S	10 pin, 8 bit, coated SIP R/2R ladder resistor network
T14L	14 pin, 10 bit DIP R/2R ladder resistor network
T16L	16 pin, 8 bit DIP R/2R ladder resistor network
T16LR	16 pin, 8 bit DIP R/2R ladder resistor network

Number of bits

See above for number of bits

Resistance code

Vishay Precision

MPM 1002 B W

Range

MPM	Moulded, surface mount resistor network (divider)
ORN	Moulded surface mount resistor network
ORNA2-1	2:1 ratio resistor network (divider)
ORNA5-1	5:1 ratio resistor network (divider)
ORNA10-1	10:1 ratio resistor network (divider)
ORNA20-1	20:1 ratio resistor network (divider)
ORNA25-1	25:1 ratio resistor network (divider)
ORNA50-1	50:1 ratio resistor network (divider)
ORNA100-1	100:1 ratio resistor network (divider)

Resistance code

Blank	As resistor 1 or not applicable (ORN series) (Eg 102 = 1000 ohm)
Digit 1/2	Significant value
Digit 3	No of zeroes

Resistance tolerance or R1/R2 ratio (ORNA series)

Tolerance

Z	0.1% (0.024% ratio)
A	0.1% (0.05% ratio)
C	0.1% (0.1% ratio)
C	0.25%
D	0.5%
F	1%

R1/R2 ratio (ORNA series)

Example	
2	2:1 ratio (see range for available ratios)

Package

Blank	Not applicable (ORN series)
T	Tape & reel
W	Waffle pack

Vishay Precision

OSOP A 1001 C T

Range

OSOP	Moulded, surface mount 25m pitch DIL resistor network
------	---

Schematic

A	10 equal, isolated resistors, wired directly across
---	---

Resistance code

Resistance tolerance

A	0.1% (0.05% ratio)
B	0.1% (0.1% ratio)
C	0.25%
D	0.5%
F	1%

Package

T	Tape & reel
W	Waffle pack

Vishay Precision

VTSR 24 01 x 1001 G T/R

Range

2M*	Custom, conformal SIL resistor network
2S*	Custom, conformal SIL resistor network
CNS*	Custom thin film SIL resistor network (except CNS471)
CS*	Custom low profile ceramic sandwich SIL thin film resistor network
CSD*	Custom ceramic sandwich DIL resistor network
CSO*	Custom, sandwich surface mount resistor network
HD*	Custom hermetic DIL resistor network
MH8*	Moulded DIL resistor network
MP*	SIL resistor network
NOMC*	Custom, moulded surface mount DIL resistor network
TOMC*	14- or 16-pin moulded surface mount resistor network
TSP*	Custom moulded SIL resistor network
TSP	Standard Tamelex moulded SIL resistor network
UT*	User trimmable custom resistor array
VTSR	24-pin surface mount resistor network (TSSOP)
VSSR	20-lead surface mount resistor network (S/QSOP)
VSOR	16-pin surface mount resistor network (narrow SOIC)
VTF*	Standard or custom, conformal SIP resistor network
WOMC	Custom, moulded surface mount resistor network

* Refer to Charcroft for individual part numbers

Number of pins/leads

Schematic

01	One common pin
03	Isolated resistors
05	Dual-line terminator, pulse squaring
06	Series connected
47	Differential terminator

TCR characteristic (ppm/degree C)

Blank	Not applicable
R	25
H	50
K	100

Resistance code

Resistance tolerance/ratio

A	0.1%	0.05%
B	0.1%	0.1%
C	0.25%	0.1%
D	0.5	0.1%
F	0.5%	0.1%
G	2%	
J	5%	

Package

T/R	Tape & reel
T	Tubes

Vishay Precision

SIRN 9 01 2501 B B

Range

SIRN	Standard single value resistor array
SRN	Alumina substrate standard resistor array

Number of pads

Schematic

01	One common pin
03	Isolated resistors

Resistance code

Resistance tolerance (absolute)

Resistance tolerance (ratio)

SIRN series

B	0.1%
C	0.25%
D	0.5%
F	1%
N	Not applicable

SRN series

A	0.05%
B	0.1%
C	0.1%
D	0.1%
F	0.5%

Vishay Precision

CNS471 Q 8

Range

CNS471 Decade divider, SIL thick film resistor network
 100-267 2 pin decade divider, SIL resistor network
 100-268 6 pin decade divider, SIL resistor network

Resistance tolerance/ratio

T	0.1%	0.01%
Q	0.1%	0.025%
A	0.1%	0.05%
B	0.1%	0.1%

Number of decades (CNS471 only)

Blank Not applicable

Vishay Precision

MC-16 A 1001 +0.25% +0.1% S

Range

MC-16 Sandwich, surface mount resistor networks
 MS Custom, conformal surface mount, resistor networks

Schematic

A 10 resistors
 B 32 resistors

Resistance code

Resistance tolerance

Example 0.25%

Resistance ratio

Example 0.1%

Package

S Stick
 W Waffle pack

Vishay Precision

TAS 329 1kW +0.1% +0.05%

Range

TAS Conformal SIL resistor network

Part number

Refer to Charcroft for individual part number

Resistance value

Resistance tolerance (per resistor)

Resistance ratio

Vishay Precision

RMKM S 5 08 10KW B

Range

RMKM Moulded surface mount 50mil pitch DIL resistor network

Package

S 16-pin dual-in-line

Number of resistors

Number of pins

Resistance code

Resistance tolerance

A	0.1% (0.05% ratio)
B	0.1% (0.1% ratio)
C	0.25%
D	0.5%
F	1%

Vishay Precision

LCC 20 B K 1003 J

Range

LCC Leadless, chip resistor network
 SLCC Hermetic leadless chip resistor network
 TLCC Thin, leadless, chip resistor network
 MPH Hermetic leadless chip resistor network

Number of pins

Blank MPH series

Schematic

Blank MPH series
 A Isolated resistors
 B Resistors to common
 A01 Resistors to common
 A03 Isolated resistors
 A06 Isolated resistors

TCR characteristic (ppm/degree C)

E 25
 H 50 ppm
 K 100 ppm
 M 300 ppm

Resistance code

SLCC series

Example

5.8KW 5.8 kil ohm

Others Industry Standards

Resistance tolerance/ ratio

A 0.1% (0.05% ratio)
 B 0.1% (0.1% ratio)
 D 0.5%
 F 1%
 G 2%
 J 5%
 K 10%
 S Special

Vishay Precision

SO 2 K 102 J B

Range

SO Small outline leadless chip resistor network

Number of resistors

TCR characteristic (ppm/degree C)

K 100
 L 200
 M 300

Resistance code

Resistance tolerance

Termination

B Solderable

Vishay Precision

TRA06E 10 02 101 J RT-1

Range

TRA06E 10-pin leadless thin film chip resistor array

Number of terminals

Circuit type

02 Standard

Resistance code

Resistance tolerance

Package

RT-1 Standard

Vishay Precision

MD8 5110k E24 +10

Range

MD8 8 resistor moulded DIL network (10-51K)
 MD15 15 resistor moulded DIL network (10-47K)

TCR characteristic (ppm/degree C)

5110K 50 (MD8 series)
 1047K 100 (MD8 series)
 5147K 50 (MD15 series)
 2222K 100 (MD15 series)

Resistance value

E24 Standard

Resistance tolerance

+10 1.0%

Package

Blank Stick

Vishay Precision

RMK 33 HT 1K +0.1% +0.5%

Range

RMK	Hermetic or silicon resistor network or chip
RMKT	Hermetic high temperature resistor network
RMKD	Dual hermetic high temperature resistor network
RMKQ	Quad hermetic high temperature resistor network
RMKS	Small outline hermetic high temperature resistor network
RMKC	Surface mount hermetic high temperature resistor network
RMKVD*	Custom low impedance voltage dividers

* Refer to Charcroft for order code

Schematic

Refer to Charcroft for details

Temperature

Blank	Standard temperature
HT	High temperature (standard)

Resistance value

Resistance tolerance (absolute)

Resistance tolerance (ratio)

Welwyn

4700 10K 0.1% Y Ammo Pack

Range

SOIC	TaNFilm resistor network on ceramic
SOIC	TaNSil resistor network on silicon
QSOP	TaNSil, resistor network on silicon
TaNCaP	AC line termination / T filter networks
QS001	TaNsil 0.25" high frequency termination resistor network on silicon
SOT	Surface mount divider network
4700	TaNFilm ultra precision SIP network
SMxxx	TaNFilm conformal coated SIP network
1900	TaNFilm DIP resistor network
M900	TaNFilm precision, moulded DIP resistor network
8900	TaNFilm flat pack resistor networks
CCN	TaNFilm chip carrier resistor network
SON	TaNFilm precision resistor array
WNCR	Chip resistor array
PCF	Chip resistor array
RC	Chip resistor-capacitor network
QRC	1284X2 TaNFCap IEEE 1284 integrated filter network

Resistance value in ohms

Resistance tolerance

Numeric eg 1% or IEC62 code

Temperature coefficient per degree C

Blank	Not applicable
V	5 ppm
T	10 ppm
Y	15 ppm (except CECC 40101-804 product)
D	25 ppm (except CECC 40101-804 product)
C	50 ppm
Z	100 ppm

Package

Ammo	Ammo pack
------	-----------

RESISTORS

Trimmer Potentiometers

BC Components

2312 30.1 109

Prefix

Range

30. 1	+0/-30% SMD 0603 trimmable thin film resistor. TCT series. Paper tape
30. 2	+0/-20% SMD 0603 trimmable thin film resistor. TCT series. Paper tape
30. 3	+0/-10% SMD 0603 trimmable thin film resistor. TCT series. Paper tape

Resistance code

(EG 333 = 33 kil ohm)

Digit 1/2	Digit 3	Significant value
7	0.1	
8	1.0	
9	10.0	
1	100	
2	1k	
3	10k	
4	100k	
5	1M	
6	10M	

Phycomp (12NC)

2350 500 10 x 101

Range

2350	Trimmable, surge & high precision resistors & resistor arrays / networks
2322	Fixed thick film resistors

Style

500 11	0 to -20% Trimmable 1206 RC02TR thick film SMD resistor
501 11	0 to -20% Trimmable 0805 RC12TR thick film SMD resistor
502 11	0 to -20% Trimmable 0603 RC22TR thick film SMD resistor
500 10	0 to -30% Trimmable 1206 RC02TR thick film SMD resistor
501 10	0 to -30% Trimmable 0805 RC12TR thick film SMD resistor
502 10	0 to -30% Trimmable 0603 RC22TR thick film SMD resistor

Package

Refer to Charcroft

Resistance code

(Eg 101 = 100W)

Digit 1/2	Digit 3	Significant value
		No of zeroes
9		No zeroes (eg >100W)

Phycomp (Philips Part No)

RC02TR 104 IP5

Range

RC02TR	Trimmable 1206 SMD thick film resistors
RC12TR	Trimmable 0805 SMD thick film resistors
RC22TR	Trimmable 0603 SMD thick film resistors

Resistance value in ohms

Resistance tolerance

IP1	1%
IP2	2%
IP5	5%

Welwyn

CRT 10K 0.1% Y Ammo

Range

CRT	Trimmable surface mount resistors
-----	-----------------------------------

Resistance value in ohms

Resistance tolerance

Numeric eg 1% or IEC62 code

Temperature coefficient per degree C

Blank	Not applicable
V	5 ppm
T	10 ppm
Y	15 ppm (except CECC 40101-804 product)
D	25 ppm (except CECC 40101-804 product)
C	50 ppm
Z	100 ppm

Package

Ammo	Ammo pack
------	-----------

Vishay (Dale)

RWR 74 S 49R9 F M

Range

RL	MIL-R-22684 metal film resistor
RLR	MIL-R-39017 semi-precision axial metal film resistor
RWR	MIL-R-39007 coated or moulded wirewound resistor

Size

RL series

07	1/4W
20	1/2W
32	1W
42	2W
60	1/2W (industrial)

RLR series

05	1/8W
07	1/4W
20	1/2W
32	1W

RWR series

71	2W
74	5W
78	10W
80	2W
81	1W
82	1.5W
84	7W
89	3W

Lead material

C	Solderable/weldable (RLR series)
S	Solderable, inductively wound
W	Weldable, inductively wound
N	Solderable, non-inductively wound
Z	Weldable, non-inductively wound

Resistance code

RLR series

1% or 2%	Three significant digits
5%	Three significant digits + multiplier

Resistance tolerance

Failure rate

M	1%
P	0.1%
R	0.01%
S	0.001%

Vishay (Dale)

RER40 102 F R

Range

RE60G	MIL-R-18546 5W inductive wirewound resistor
RE60N	MIL-R-18546 5W non-inductive wirewound resistor
RE65G	MIL-R-18546 10W inductive wirewound resistor
RE65N	MIL-R-18546 10W non-inductive wirewound resistor
RE70G	MIL-R-18546 20W inductive wirewound resistor
RE70N	MIL-R-18546 20W non-inductive wirewound resistor
RE75G	MIL-R-18546 50W inductive wirewound resistor
RE75N	MIL-R-18546 50W non-inductive wirewound resistor
RE77G	MIL-R-18546 100W inductive wirewound resistor
RE77N	MIL-R-18546 100W non-inductive wirewound resistor
RE80G	MIL-R-18546 250W inductive wirewound resistor
RE80N	MIL-R-18546 250W non-inductive wirewound resistor
RER40	MIL-R-39009 5W inductive wirewound resistor
RER45	MIL-R-39009 10W inductive wirewound resistor
RER50	MIL-R-39009 20W inductive wirewound resistor
RER55	MIL-R-39009 30W inductive wirewound resistor
RER60	MIL-R-39009 5W non-inductive wirewound resistor
RER65	MIL-R-39009 10W non-inductive wirewound resistor
RER70	MIL-R-39009 20W non-inductive wirewound resistor
RER75	MIL-R-39009 30W non-inductive wirewound resistor
RW67	MIL-R-26 5W precision, coated wirewound resistor
RW68	MIL-R-26 10W precision, coated wirewound resistor
RW69	MIL-R-26 3W precision, coated wirewound resistor
RW70	MIL-R-26 1W precision, moulded wirewound resistor
RW74	MIL-R-26 5W precision, coated wirewound resistor
RW78	MIL-R-26 10W precision, coated wirewound resistor
RW80	MIL-R-26 2W precision, moulded wirewound resistor

RW81 MIL-R-26 1W precision, moulded wirewound resistor

Resistance value

Resistance tolerance

Failure rate

Vishay (Dale)

RLV-40 3 100 5%

Range

RLV-20	MIL-R-49465 3W four lead power wirewound resistor
RLV21	MIL-R-49465 5W four lead power wirewound resistor
RLV22	MIL-R-49465 7W four lead power wirewound resistor
RLV23	MIL-R-49465 10W four lead power wirewound resistor
RLV-40	MIL-R-49465 3W axial power wirewound resistor
RLV-41	MIL-R-49465 5W axial power wirewound resistor
RLV-42	MIL-R-49465 7W axial power wirewound resistor
RLV-43	MIL-R-49465 10W axial power wirewound resistor

Mounting pads

Blank	None
3	Mounting pads

Resistance value in ohms

Resistance tolerance

Vishay (Dale)

RNC -50 H 2152 F

Range

RNC	MIL-R-55182 precision axial metal film resistor (solderable/weldable)
RNR	MIL-R-55182 precision axial metal film resistor (solderable)
RNN	MIL-R-55182 precision axial metal film resistor (weldable)

Size (at 70 degree C)

RNxxC/E series

50	1/20W (at 125 degree C)
55	1/10W (at 125 degree C)
60	1/8W (at 125 degree C)
65	1/4W (at 125 degree C)

RNxxD series

55	1/8W
60	1/4W
65	1/2W

Other series

50	1/10W
55	1/8W
60	1/4W
65	1/2W
70	3/4W

Temperature characteristic (per degree C)

RNC/RNR/RNN series

J	25ppm
H	50ppm
K	100ppm

RN series

E	25ppm
C	50ppm
D	+200ppm -500ppm

Resistance code

1% or 2%	Three significant digits
5%	Three significant digits + multiplier

Resistance tolerance

B	.1%
D	.5%
F	1%

Failure rate

Blank	Not applicable
-------	----------------

Vishay (Dale)

M83401 06 K 1003 F C

Release

Package

01	14 pin DIP
02	16 pin DIP
04	6 pin standard SIP
05	8 pin standard SIP
06	10 pin standard SIP
08	8 pin low profile SIP
09	10 pin low profile SIP

Temperature characteristic

Resistance code

Resistance tolerance

Schematic

Vishay Precision

D55342 E 07 B 1B00 R

Range

D55342	MIL-R-55342/7 thin film chip resistors (TNPWM type)
D55342	MIL-R-55342/x thick film chip resistors (RM type)

TCR characteristic (ppm/degree C)

E	25 (TNPWM type)
H	50 (TNPWM type)
K	100 (RM type)
M	300 (RM type)

Mil spec sheet number (type)

Termination

B	Pre-tinned nickel barrier wraparound
RM Series	
C	Untinned palladium silver, wraparound
S	Pre-tinned platinum gold, one surface
T	Untinned platinum gold, one surface
U	Untinned platinum gold, wraparound

Resistance value & tolerance

Letter denotes tolerance & decimal place
 Examples : 75G0 = 75 ohm 102A = 102 ohm
 Multiplier x1 (ohm)

A	0.1%
D	1%
G	2%
J	5%

Multiplier x1000 (Kilohm)

B	0.1%
E	1%
H	2%
K	5%

Multiplier x1,000,000 (Megohm)

C	0.1%
E	1%
H	2%
K	5%

Failure rate

Vishay (Dale)

M55432 M 02 B 10E0 R

Mil spec no

M55342 MIL-R-55432 thick film chip resistor

Temperature characteristic (ppm per degree C)

M	300ppm
K	100ppm

Mil spec sheet no

Termination

B	Wrap-around, pre-tinned nickel barrier (RCWPM)
C	Wrap-around, untinned palladium silver (RCWM)
S	One surface pre-tinned platinum gold (RCM)
U	Wraparound untinned platinum gold (RCWM)

Resistance code & tolerance

1-9xx ohms : multiplier x1 (eg 11D3 = 11.3 ohm)

D	1%
G	2%
J	5%
M	10%

1k-9xxxx : multiplier x1,000 (eg 10E0 = 10 Kil ohm)

E	1%
H	2%
K	5%
N	10%

1k-9xxxx : multiplier x10,000 (eg 22TH0 = 22 Meg ohm)

F	1%
T	2%
L	5%
P	10%

Failure rate

M	1%
P	0.1%
R	0.01%

AVX

Z 1 D 1 3 Y 680 M 510 K A T 2 A

Range

Z IPC

Size

1 0603
3 0612

Type

A Array
D Discrete resistor / capacitor

Number of elements

Voltage

3 25V

Dielectric

Y 500ppm/ degree C

Capacitance code

Capacitance tolerance

Resistance code

Resistance tolerance

Failure rate

A Commercial

Termination

T Plated Ni and solder

Package

2 7" reel paper tape

Special code

BI Technologies

CR 9 1 101 J 101 K S 5

Range

CR SIP conformal coated resistor / capacitor network

No of leads

Circuit

1 Standard

Resistance code

Resistance tolerance (TCR)

Capacitance code

Capacitance tolerance

Dielectric

S SL
X X7R
Y Y5V
N NP0

Voltage (DC)

2 25V
5 50V
1 100V

BI Technologies

RC 6 E 101 K 101 M 7

Range

RC SMD resistor / capacitor network

Size code

3 0805
4 1206
6 2512

Circuit type

E Standard

Resistance code

Resistance tolerance

Capacitance code

INTEGRATED PASSIVE COMPONENTS

Capacitor/Resistor Arrays

Capacitance tolerance

Package

7	7" tape & reel
13	13" tape & reel

Murata

ARC 10 S S 103 J 102 M -x

Range

ARC	Monolithic ceramic resistor/capacitor module
ARCL	Monolithic ceramic resistor/capacitor module
CNTL	Monolithic ceramic resistor/capacitor module

No of pins

Internal circuit type

Refer to Charcroft for schematics

Lead pitch

Blank	2.54mm inch pack
S	1.78mm shrink pack
W	2.54mm inch pack (CNTL only)

Resistance code

Resistance tolerance

Capacitance code

Capacitance tolerance

Special specifications

Phycomp (12NC Capacitor/resistor arrays)

22 50 3 6 0 1 5 0 01

Range

Carrier type

50	Blister
55	Paper

Dielectric

3	NP0 50V
4	X7R 50V

Size

7	0603
6	0805
3	1206
2	1608
0	2512

Type

0	A
1	B
2	C
3	D

Pack quantity

1	5000
2	4000

Capacitance tolerance

5	5%
6	10%
7	20%

Resistance tolerance

0	5%
3	10%
4	20%

Value

Refer to Charcroft

Phycomp (Philips Part No)

RCB210 104 IP5

Range

RCB210	10P4R4C 1608 SMD resistor/capacitor network
CRB210	10P4C4R 1608 SMD capacitor/resistor network

Value

Tolerance

IP1	1%
IP2	2%
IP5	5%

Vishay (Dale)

TRC 08 x 01 101 J /560 K

Range

TRC	Coated SIP resistor/capacitor network
CSRC	Coated SIP ECL/line terminator resistor/capacitor network
MDRC	Moulded 16 pin DIP resistor/capacitor network
VTSRC	TSOP thin film resistor/capacitor/ diode filter network
VSSRC	S/QSOP thin film resistor/capacitor/ diode filter network
VSORC	Wide SOIC thin film resistor/capacitor/ diode filter network

Number of pins

Package code

CSRC only

Schematic

Resistance code

Resistance tolerance

Capacitance value (pF)

Blank Not applicable (MDRC series)

Capacitance tolerance

Blank Not applicable (MDRC series)

Vishay (Dale)

CS206 08 B E C 101 G 330 K

Range

CS206	Conformal coated SIP resistor/capacitor network
-------	---

Number of pins

Package code

B	.250"
C	.350"
E	.325"

Schematic

Dielectric

C	C0G
X	X7R

Resistance code

Resistance tolerance

Capacitance code

Capacitance tolerance

Vishay Precision

VTSRC 20 AB 101 K 101 M T

Range

VTSRC	TSSOP resistor capacitor/network (see below for VSSRC1284)
VSSRC	SSOP resistor/capacitor network
VSORC	SOIC resistor/capacitor network

Number of leads

20 Standard

Schematic

Refer to Charcroft for diagram

Resistance code

Resistance tolerance

Capacitance code

Capacitance tolerance

Package

T/R	Tape & reel
T	Tube

Vishay Precision

VSSRC1284 -1 T/R

Range

VSSRC1284 SSOP resistor/capacitor network (R1/R2/C)

Value

R1 & R2 in ohms @10% tolerance.

C in pF @ 20% tolerance

-1	2.2K (R1) 33 (R2) 220pF (C)
-2	4.7K (R1) 33 (R2) 180pF (C)
-3	1K (R1) 33 (R2) 180pF (C)
-4	4.7K (R1) 10 (R2) 180pF (C)
-5	4.7K (R1) 27 (R2) 33pF (C)
-6	4.7K (R1) 270 (R2) 33pF (C)
-7	10K (R1) 10 (R2) 27pF (C)

Package

T/R	Tape & reel
T	Tube

Dubilier

TFC A 1206 C 221 M T E

Range

TFC Three-terminal surface mount chip EMI filters

Voltage

U 50V
A 100V

Case size

Dielectric

C NP0
R X7R

Capacitance code

Tolerance

Package

T Taped

Termination

E Ag/Pd
N Nickel barrier

Johanson

2450 BP 43 C 100

Centre frequency (MHz)

Filter type

BP Band pass SMD filter
LP Low pass SMD filter

Case size

41 2.54x3.18mm
43 3.63x4.45mm

Number of poles

B 2 poles
C 3 poles
D 4 poles

Bandwidth (MHz)

Syfer

1206 J 100 0102 M X T E01

Chip size

Termination

J Nickel barrier
F Silver Palladium

Voltage (Vdc)

050 50/63V
100 100V
200 200V
500 500V

Capacitance

< 10pF (Eg 103 = 10000pF)
Digit 1 Leading 0
2/3 Significant value
Digit 4 No of zeroes

> 10pF (Eg 1P00 = 1.0pF)

N Decimal point

Capacitance tolerance

Dielectric code

C C0G
X X7R

Packaging

T Tape & reel
B Bulk
R Large reel

Special Code

Beck / Oxley

TPS 014A Bu

Range

DBZ Solder mounted C filter
SLT1/C Solder mounted C filter
SLT/C Solder mounted C filter
SLT/P Solder/PCB mount or SMD Pi filters
TPS Solder mounted Pi filter

Part number

Refer to Charcroft for individual part numbers

Special coding

Blank No special conditioning
Bu Standard burn-in
Bx Burn-in to customer requirements

Dubilier

DFE 40 1 C 500 0102 M X N

Range

Case style

A	4mm A/F
4F	4.75mm A/F
6A	6.35mm A/F
90	9.8mm OD
40	4.4mm OD
60	6.0mm OD
63	6.35mm OD
SS	Solder-in style
6L	6.35mm A/F low profile
6P	6.0mm OD low profile

Thread

1	6-32 UNC
2	8-32 UNC
3	12-32 UNEF
4	1/4-28 UNF
5	2 BA
6	M3.5
7	M4
8	M5
9	M6

Electrical configuration

C	C section
L	L-C section
P	Pi section
T	T section

Voltage

050	50V
100	100V
200	200V
300	300V
500	500V

Capacitance (pF)

< 680pF (Eg 0472 = 4700pF)

Digit 1	Leading 0
2/3	Significant value
Digit 4	No of zeroes

> 1nF (Eg 1361 = 1.36nF)

Digit 1/3	Significant value
Digit 4	Position of decimal point

Beck / Oxley

TF 500 P P 2420

Range

TF	Solder mounted feedthrough capacitors
DF	Solder mounted feedthrough capacitors

Capacitance

Examples

100P	100pF
02N7	2700pF

Capacitance tolerance

P	-0+100%
Z	-20+80%
E	25%
M	20%

Capacitance tolerance

Refer to Charcroft for individual part numbers

Beck / Oxley

TPS 014A Bu

Range

DBZ	Solder mounted C filter
SLT1/C	Solder mounted C filter
SLT/C	Solder mounted C filter
SLT/P	Solder/PCB mount SMD Pi filters
TPS	Solder mounted Pi filter

Part number

Refer to Charcroft for individual part numbers

Special coding

Blank	No special conditioning
Bu	Standard burn-in
Bx	Burn-in to customer requirements

Beck / Oxley

DCS 204N Z G 02N7

Range

DCS	Solder mounted feedthrough capacitor
DCT	Miniature threaded or panel mount feedthrough capacitor
DLT	Miniature, microslim or panel mount threaded filter
DPT	Panel mount Pi filter
DTT	Panel mount T filter
DUT	Panel mount L filter
DXT	Panel mount twin T and Pi filter
DYT	Panel mount twin T and Pi filter
FLTM	Miniature threaded circuit filter
FLT8/P	M15733/61 miniature threaded pi circuit filter
MLT	Panel mounted multiway I & C filter
TCT	Miniature threaded feedthrough capacitor
TPT	Miniature threaded Pi filter

Part number

Refer to Charcroft for individual part numbers

Special codes

Series

Z	Seal position reversed	DCS
P	Headed wire	DCT (miniature)
Blank	UNF thread	Panel mount types & TCT/TPT
L	Long thread	
P	Pin replaces tag	
T	Toothed washer & nut	
N	No hardware	
Bu	Standard burn-in	
Bx	Customer burn-in	
/TVS	TVS type	DLT/FLTM series
/C	C type	
/L	L type	
/P	Pi type	FLMT series
/XH	Microslim version	
Blank	Tin finish	{ DCS/DCT/DLT/DPT DUT/DTT/TCT/TPT DXT/DYT
G	Gold finish	
S	Silver finish	

Capacitance

Examples

100p	100pF
02N7	2700pF

CONNECTORS & EMECH

Cambion

461 2871 01 03 10

Chokes

01	5%
02	10%
03	20%

Range

120	Solder terminal pin type
140	Solder terminal slotted
155	Wire wrap pin
160	Solder terminal - turret
180	Solder terminal - eyelet
200	Terminal board
350	Stand-off - metal
352	Stand-off - insulated
360	Plug component
400	Battery holder
410	Components clip
435	Tooling
445	Patch cord
450	Cage jack
460	Connector pin
461	Connector plug
506	Insulator
508	Insulator - round
515	Tuning core
530	Ceramic coil form
533	Coil form - shielded
534	Coils form - moulded
550	Choke - moulded
551	Choke - moulded
553	Choke - encapsulated
556	Variable coil - unshielded
558	Variable coil - shielded
570	Insulated terminal
571	Insulated terminal
572	Insulated terminal
702	IC socket adaptor
703	IC socket
709	PLCC socket

Colour code

00	No colour
10	Black
11	Brown
12	Red
13	Orange
14	Yellow
15	Green
16	Blue
17	Violet
18	Grey
19	White
20	Natural

Part number

Size or pin centre

01	Standard
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Plating finish or tolerance (standard chokes)

Plating

00	No plating
01	Silver
02	Nickel
03	Gold
04	Electro-tin
05	Electro-solder
06	Gold / tin
07	Cadmium
08	Bright alloy
09	Hot solder dip
10	Hot tin dip