Application Guide
Electronic Components

KEMET

CHARGED.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why Choose KEMET</td>
<td>4</td>
</tr>
<tr>
<td><strong>Low Voltage and DC Applications</strong></td>
<td></td>
</tr>
<tr>
<td>DC Power Distribution</td>
<td>5</td>
</tr>
<tr>
<td>Solid State Drive (SSD)</td>
<td>6</td>
</tr>
<tr>
<td><strong>AC and Power Applications</strong></td>
<td></td>
</tr>
<tr>
<td>AC to DC Converter</td>
<td>18</td>
</tr>
<tr>
<td>H-Bridge Inverter</td>
<td>19</td>
</tr>
<tr>
<td>Voltage Source Inverter</td>
<td>20</td>
</tr>
<tr>
<td>Smart Meter</td>
<td>21</td>
</tr>
<tr>
<td><strong>Automotive Applications</strong></td>
<td></td>
</tr>
<tr>
<td>Automotive: Safety</td>
<td>23</td>
</tr>
<tr>
<td>Automotive: Infotainment/Control</td>
<td>24</td>
</tr>
<tr>
<td>Automotive: Powertrain</td>
<td>25</td>
</tr>
<tr>
<td><strong>Smartphone/Tablet</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Laptop Computer</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Network Switch</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Flat Panel TV</strong></td>
<td></td>
</tr>
<tr>
<td><strong>High Efficiency Appliances</strong></td>
<td></td>
</tr>
<tr>
<td><strong>High-End Audio</strong></td>
<td></td>
</tr>
<tr>
<td><strong>AR/VR Headset</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Wearable Device/IoT</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Drone</strong></td>
<td></td>
</tr>
</tbody>
</table>
Why Choose KEMET

KEMET Electronics Corporation is a leading global supplier of electronic components. We offer our customers the broadest selection of capacitor technologies in the industry, along with an expanding range of electromagnetic compatibility solutions and supercapacitors. Our vision is to be the preferred supplier of electronic component solutions for customers demanding the highest standards of quality, delivery and service.
Low Voltage and DC Applications
DC POWER DISTRIBUTION

1. **SMT ALUMINUM ELECTROLYTIC**
   A750, A765, EDH, EDK, EV, EXV

2. **KO-CAP®**
   T520, T521, T530

3. **POWER INDUCTOR**
   MPC, CPI, HDI, PLC, SBC

4. **MLCC**
   X7R, X5R

5. **ALUMINUM POLYMER**
   A700, A720

6. **CHIP INDUCTORS**
   PWS, PWI, PWR, PWF
SOLID STATE DRIVE (SSD)

1. MLCC
   X7R, X5R

2. KO-CAP
   T545

3. RADIAL ALUMINUM ELECTROLYTICS
   A765, ESK, ESH, ESC, ESG

4. RADIAL SUPERCAPACITORS
   HVZ SERIES

5. INDUCTORS
   PWS, PWI, PWR, PWF
1. ALUMINUM POLYMER
   A700, A720

2. KO-CAP
   T520, T528, T521, T529

3. MLCC
   C0G, X7R, X5R

4. FLEX SUPPRESSOR
   EFH, EFG, EFF

5. RF MLCC
   CBR

6. ACOUSTIC MODULE
   MINIATURE ACUTATOR Rxx

7. CHIP INDUCTORS
   RMS
HIGH EFFICIENCY APPLIANCES

1. EMI CORE
   - ESD

2. ALUMINUM ELECTROLYTIC
   - ALC10, ALC40, EDH, ESK, ELH

3. FILM
   - C4AE

4. MLCC
   - C0G, X7R, X5R

5. FILM OR RC SNUBBER
   - R71, R73, R76, C4AS, F43

6. KO-CAP
   - T520, T521

7. RADIAL SUPERCAPACITOR
   - FG, FE, FM, FR
HIGH-END AUDIO

1. **CLASS II MLCC**
   - X7R, X5R

2. **KO-CAP**
   - T520, T521, T530

3. **SNAP-IN ALUMINUM ELECTROLYTIC**
   - ALC10S

4. **POWER INDUCTOR**
   - MPC, CPI, HDI, PLC, MPL, MPLC, MPGH

5. **LEADED CERAMIC**
   - Goldmax

6. **LEADED FILM**
   - A50

7. **CLASS I MLCC**
   - U2J, COG

8. **POLYPROPYLENE FILM**
   - R75

9. **LEADED INDUCTOR**
   - SBC, SBCP
AR/VR HEADSET

1. ALUMINUM POLYMER
   A700, A720

2. KO-CAP
   T520, T528, T521, T529

3. MLCC
   C0G, X7R, X5R

4. FLEX SUPPRESSOR
   EFH, EFG, EFF

5. RF MLCC
   CBR

6. ACOUSTIC MODULE
   MINIATURE ACUTATOR Rxx

7. CHIP INDUCTORS
   RMS
WEARABLE DEVICE/IOT

1. **ALUMINUM POLYMER**
   A700, A720

2. **KO-CAP**
   T520, T528, T521, T529

3. **MLCC**
   C0G, X7R, X5R

4. **FLEX SUPPRESSOR**
   EFH, EFG, EFF

5. **RF MLCC**
   CBR

6. **ACOUSTIC MODULE**
   MINIATURE ACTUATOR Rxx

---

**WEARABLE DEVICE/IOT BLOCKS**

- **POWER BLOCKS**
- **DIGITAL BLOCKS**
- **RF/ANALOG BLOCKS**
### DRONE

- **BATTERY**
- **POWER MANAGEMENT IC**
- **MCU**
- **LED DRIVER**
- **ALTIMETER**
- **COMMUNICATIONS MODULE** (RF, BT, WIFI, GPS)
- **IMU** (ACCELEROMETER, MAG, GYRO)
- **MOTOR DRIVER** (4)

#### Components

1. **ALUMINUM POLYMER**
   - A700, A720

2. **KO-CAP**
   - T520, T528, T521, T529

3. **MLCC**
   - C0G, X7R, X5R

4. **FLEX SUPPRESSOR**
   - EFH, EFG, EFF

5. **RF MLCC**
   - CBR

6. **CHIP INDUCTORS**
   - RMS

---

KEMET
APPLICATION GUIDE
Page 16
AC and Power Applications
AC TO DC CONVERTER

1. ALUMINUM ELECTROLYTIC
   ALC10, ALC40, ALS30, EDH, EDK

2. KO-CAP
   T520, T521, T530

3. MLCC
   X7R, X5R

4. AC LINE FILTER
   SS, SU, SC

5. TRANSFORMER
   EB

6. X/Y SAFETY CAP
   C900, R46, R47

7. POWER INDUCTOR
   MPC, CPI, HDI, PLC, MPL, MPLC, MPGH

8. FB INLET FILTER

9. EMI CORE
   ESD
H-BRIDGE INVERTER

1. CERAMIC
   X7R, X5R

2. KO-CAP
   T520, T521

3. POWER FILM
   C44H, C44P

4. PULSE CAPS
   R71, R76

5. CURRENT SENSOR
   CT

6. CERAMIC
   HV C0G

7. ALUMINUM ELECTROLYTIC
   ALC10, ALC40, ALS30, EDH, EDK
VOLTAGE SOURCE INVERTER

1. AC INDUCTOR
   FELCO

2. DC LINK
   C4AE

3. POWER FILM
   C44H, C44P

4. CURRENT SENSOR
   CT

5. ALUMINUM ELECTROLYTIC
   ALC10, ALC40, ALS30, ALS60
SMART METER

1. **VARIABLE**
   VP

2. **CERAMIC**
   X7R, X5R, C0G, CBR

3. **POLYMER**
   A700, T520, T521

4. **SMT ALUMINUM ELECTROLYTIC**
   A750, A765, EDH, EDK, EEV, EXV

5. **FILM**
   F862

6. **CURRENT SENSOR**
   CT

7. **POWER INDUCTOR**
   MPCx

8. **COMMON MODE CHOKE**
   SS, SC, SCR

9. **SUPERCAPACITOR**
   HVZ
Automotive Applications
AUTOMOTIVE: SAFETY

1. MLCC
   - C0G, X7R, X5R

2. KO-CAP
   - T591, T598

3. TANTALUM MnO₂
   - T491, T495, T498

4. AXIAL ALUMINUM ELECTROLYTIC
   - PEG225, PEG126, PEH226

5. POWER INDUCTOR
   - DPCV

6. TOROIDAL COIL
   - HHBC, PHBC

7. FILM CAPACITOR
   - F862, SMC, SPC

8. SUPERCAPACITOR
   - FE, FG
AUTOMOTIVE: INFOTAINMENT/CONTROL

1. **MLCC**
   - C0G, X7R, X5R

2. **KO-CAP**
   - T591, T598

3. **TANTALUM MnO₂**
   - T491, T495, T498

4. **ALUMINUM ELECTROLYTIC**
   - A765, EDH, EDK, ESK, ESH

5. **FLEX SUPPRESSOR**
   - EF

6. **POWER INDUCTOR**
   - DPCV

7. **TOROIDAL COIL**
   - HHBC, PHBC

8. **EMI CORE**
   - ESD
**AUTOMOTIVE: POWERTRAIN**

1. **MLCC**
   - C0G, X7R, X5R

2. **KO-CAP**
   - T591, T598

3. **TANTALUM MnO₂**
   - T491, T495, T498

4. **FILM CAPACITOR**
   - C4AE, F862, SMC, SPC

5. **AXIAL ALUMINUM ELECTROLYTIC**
   - PEG225, PEG126, PEH226

6. **POWER INDUCTOR**
   - DPCV

7. **TRANSFORMER**
   - CUSTOM

8. **TOROIDAL COIL**
   - HHBC, PHBC

9. **AC LINE FILTER**
   - SS, SU, SC

10. **EMI CORE**
    - ESD
Corporate Headquarters

KEMET Corporation
2835 KEMET Way
Simpsonville, SC 29681
USA
864.963.6300
www.kemet.com

Countries and Areas listed below represent KEMET operations throughout the world.

Bulgaria  China  Finland  Germany  Hong Kong

India  Indonesia  Italy  Japan  Macedonia

Malaysia  Mexico  Portugal  Singapore  South Korea

Sweden  Taiwan  United Kingdom  USA