The XTR26020 Chipset is built upon the following product lines: XTR26020, XTR25020 and XTR40010.

XTR26020 is designed and tailored to properly drive market available normally-on (JFET, MESFET) as well as normally-off (MOSFET) transistors. This 2nd generation following the XTR26010 driver offers tremendously decreased package size that is 25% of equivalent XTR260010 and qty of required passive components decreased by 40%. Therefore the XTR26020 leads to a first ever compact Half Bridge solution. Also the XTR26020 introduces a transistor source current sense approach keeping backtrack compatibility with transistor de-saturation measurement strategy. Besides XTR26020 keeps XTR26010 features which made its success: isolated communication protocol, high switching frequency, cross conduction prevention inherent mechanism, on-chip soft shut-down switch, on-chip Miller clamp. For scaling-up ease in front of greater power FET gate size, XTR25020 can be used as sidekick to the XTR26020. XTR40010 in its XTR40012-S version brings an evolution the isolated transceiver with smaller footprint package.

The XTR26020 chipset can be associated with an Isolated Flyback DC-DC built upon XTR30017-FE, XTR2N0825-FE which are smaller footprint packaged version of the respectively production rated XTR30010/XTR2N0825 product lines.

Overall this chipset enables X-REL customers to meet a complete Half-Bridge Gate Drive block with its dedicated power supply block in 120mm x 32mm x 10mm mechanical size using a 6 layer PCB with active and passive components on one side except FETs on the second side for better thermal cooling efficiency.

This implementation demonstrate what can be achieved for Intelligent Power Modules (IPM) that requires the minimization of parasitic inductances and capacitances between the driver and the power switch, as well as the minimization of the number of passive components to allow miniaturization as well as increased reliability.

As any other X-REL Semiconductor product, the XTR26020 chipset is able to reliably operate from -60°C to well above +230°C, with expected lifetime of about 5 years at +230°C. Being operational at high temperatures is mandatory in applications where the environment is at elevated temperature or where a power device makes the temperature increase inside the application casing. Additionally, all X-REL Semiconductor products can be used in applications running at lower temperatures (e.g. from 100°C to 200°C) where extended lifetime is expected or where failing is not an option. For example, the expected lifetime of X-REL Semiconductor parts in a driver application operating at Tj=150°C is over 35 years.

For more details on X-REL Semiconductor products, visit www.x-relsemi.com/EN/Products or contact one of our sales representatives at www.x-relsemi.com/EN/Sales-Representatives

About X-REL Semiconductor (www.x-relsemi.com)
X-REL Semiconductor is a French fabless company commercializing off-the-shelf semiconductor products and ASIC’s, as well as customized electronic solutions for hi-rel hi-temp applications in markets such as Aeronautics & Space, Transportation & Automotive, Harsh Environments, Oil / Gas & Geothermal, Military, Energy and Industrial. X-REL Semiconductor is a spin-off of EASii IC.

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