

Trench Series XPT™ GenX5™ Discrete IGBTs

650V A5 Series (IXYP60N65A5, IXYH90N65A5 and IXYH120N65A5)

Problem/Solution

The all-new 650V XPT™ GenX5™ Trench IGBTs are the latest addition to the discrete IGBT product portfolio. Class A5 is a low-speed device, optimized for switching frequencies up to 5kHz.

Thin wafer technology and improved processes lead to low gate charge Q_G , resulting in low gate-current requirements. Surge current capability for $1\text{ms}@T_C=25^\circ\text{C}$ is rated up to 6 times nominal current. The positive temperature coefficient of the forward voltage simplifies paralleling.

Devices with a high current carrying capability of up to 120A are available. The new family offers improved thermal performance in a TO-220 and TO-247 package.

Technical resources *(Click on below icons to learn more)*



Series Page



IXYP60N65A5
Datasheet



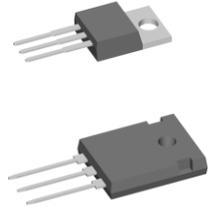
IXYH90N65A5
Datasheet



IXYH120N65A5
Datasheet

Benefits

- Scalable technology at low conduction losses
- Simplifies paralleling of devices
- Low gate-current demand
- Reduces effort in thermal design



Features

- Wide range of currents 60A, 90A and 120A with $1.30\text{V} < V_{CE(sat)} < 1.35\text{V} @ 150^\circ\text{C}$
- Rectangular Reverse Bias Safe Operating Area (RBSOA) Supports $V_{CE(max)}$ of 650V@150°C
- Low gate charge Q_G of 314nC down to 128nC
- Positive thermal coefficient of $V_{CE(sat)}$ and Low thermal resistance R_{thJC} down to 0.18 K/W

Markets/Applications

- Lamp ballast
- Welding machines
- Inrush current protection circuits
- Transformer-less solar power inverter
- Load switches

