High Voltage IGBTs

IXGH2N250
IXGT2N250

for Capacitor Discharge Applications

Symbol | Test Conditions | Maximum Ratings
---|---|---
$V_{CES}$ | $T_c = 25^\circ C$ to $150^\circ C$ | 2500 V
$V_{CGR}$ | $T_J = 25^\circ C$ to $150^\circ C, R_{GE} = 1M\Omega$ | 2500 V
$V_{GES}$ | Continuous | ± 20 V
$V_{GEM}$ | Transient | ± 30 V
$I_{CES}$ | $T_c = 25^\circ C$ | 5.5 A
$I_{C110}$ | $T_c = 110^\circ C$ | 2.0 A
$I_{CM}$ | $T_c = 25^\circ C, 1ms$ | 13.5 A
$SSOA$ | $V_{GE} = 15V, T_{VJ} = 125^\circ C, R_G = 50\Omega$ | $I_{CM} = 6$ A
(RBSOA) | Clamped Inductive Load | $V_{GE} \leq 2000$ V
$P_c$ | $T_c = 25^\circ C$ | 32 W
$T_J$ | -55 ... +150 °C | °C
$T_{PM}$ | 150 °C | °C
$T_{stg}$ | -55 ... +150 °C | °C
$T_I$ | 1.6mm (0.062 in.) from Case for 10s | 300 °C
$T_{SOLD}$ | Plastic Body for 10 seconds | 260 °C
$M_d$ | Mounting Torque (TO-247) | 1.13/10 Nm/lb.in.
Weight | TO-247 | 6 g
| TO-268 | 4 g

Features

- Optimized for Low Conduction and Switching Losses
- International Standard Packages

Advantages

- High Power Density
- Low Gate Drive Requirement

Applications

- Switched-Mode and Resonant-Mode Power Supplies
- Uninterruptible Power Supplies (UPS)
- Capacitor Discharge Circuits

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ADVANCE TECHNICAL INFORMATION

The product presented herein is under development. The Technical Specifications offered are derived from a subjective evaluation of the design, based upon prior knowledge and experience, and constitute a "considered reflection" of the anticipated result. IXYS reserves the right to change limits, test conditions, and dimensions without notice.

Note 1. Pulse test, t ≤ 300μs; duty cycle, d ≤ 2%.

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IXYS MOSFETs and IGBTs are covered 4,835,592 4,931,844 5,049,961 5,237,481 6,162,665 6,404,065 B1 6,683,344 6,727,585 7,005,734 B2 7,157,338 B2

by one or more of the following U.S. patents: 4,881,106 5,034,796 5,187,117 5,486,715 6,306,728 B1 6,583,505 6,771,478 B2 7,071,537
Fig. 1. Output Characteristics @ 25°C

Fig. 2. Extended Output Characteristics @ 25°C

Fig. 3. Output Characteristics @ 125°C

Fig. 4. Dependence of V_{CE(sat)} on Junction Temperature

Fig. 5. Collector-to-Emitter Voltage vs. Gate-to-Emitter Voltage

Fig. 6. Input Admittance
Fig. 7. Transconductance

Fig. 8. Gate Charge

Fig. 9. Reverse-Bias Safe Operating Area

Fig. 10. Capacitance

Fig. 11. Maximum Transient Thermal Impedance

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