### High Voltage XPT™

**IGBT**

**IXYX40N450HV**

- **$V_{CES} = 4500 \text{V}$**
- **$I_{C110} = 40 \text{A}$**
- **$V_{CE(sat)} \leq 3.9 \text{V}$**

#### Symbol | Test Conditions | Maximum Ratings
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$V_{CES}$ | $T_c = 25^\circ \text{C}$ to $150^\circ \text{C}$ | $4500 \text{ V}$
$V_{CGR}$ | $T_j = 25^\circ \text{C}$ to $150^\circ \text{C}$, $R_{GE} = 1 \text{M}\Omega$ | $4500 \text{ V}$
$V_{GES}$ | Continuous | $\pm 20 \text{ V}$
$V_{GEM}$ | Transient | $\pm 30 \text{ V}$
$I_{CES}$ | $T_c = 25^\circ \text{C}$ | $95 \text{ A}$
$I_{C110}$ | $T_c = 110^\circ \text{C}$ | $40 \text{ A}$
$I_{CM}$ | $T_c = 25^\circ \text{C}$, $1 \text{ms}$ | $350 \text{ A}$
$SSOA$ | $V_{GE} = 15 \text{V}$, $T_{ij} = 125^\circ \text{C}$, $R_G = 10 \text{M}\Omega$ | $I_{CM} = 120 \text{ A}$
$PC$ | $T_c = 25^\circ \text{C}$ | $660 \text{ W}$
$T_J$ | $T_{MD}$ | $150 \text{ °C}$
$T_{J,M}$ | $-55 \text{ °C}$ to $+150 \text{ °C}$ | $260 \text{ °C}$
$L_{C}$ | Maximum Lead Temperature for Soldering | $300 \text{ °C}$
$T_{SOL}$ | $1.6 \text{ mm (0.062in.)}$ from Case for $10 \text{s}$ | $260 \text{ °C}$
$F_c$ | Mounting Force | $20..120/4.5..27 \text{ N/lb}$
Weight | $6 \text{ g}$

#### Features

- High Voltage Package
- High Blocking Voltage
- High Peak Current Capability
- Low Saturation Voltage

#### Advantages

- Low Gate Drive Requirement
- High Power Density

#### Applications

- Switch-Mode and Resonant-Mode Power Supplies
- Uninterruptible Power Supplies (UPS)
- Laser Generators
- Capacitor Discharge Circuits
- AC Switches

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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.
Fig. 7. Transconductance

Fig. 8. Gate Charge

Fig. 9. Capacitance

Fig. 10. Reverse-Bias Safe Operating Area

Fig. 11. Maximum Transient Thermal Impedance

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