

Pb Free Plating Product

60CTQ045



60 Ampere, 45 Volt Dual Common Cathode Super Schottky Barrier Rectifier

**Features**

- \* ThinkiSemi matured super barrier schottky
- \* Low forward voltage drop
- \* High current capability
- \* Low reverse leakage current
- \* High surge current capability

## Application

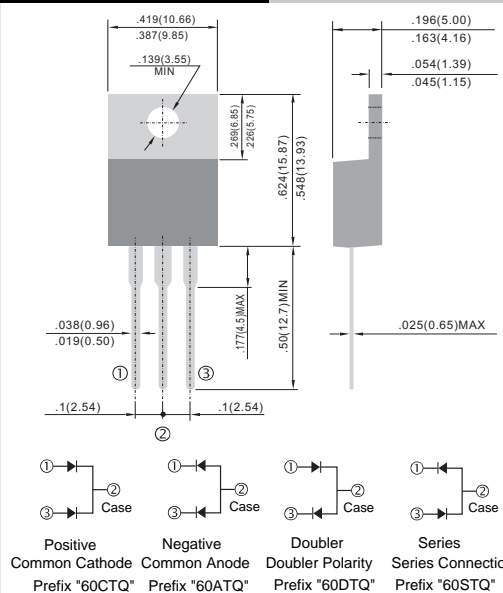
- \* Inverter/UPS
- \* Plating Power Supply/SMPS
- \* Car Audio Amplifier and Sound Device System

**Mechanical Data**

- \* Case: Heatsink Open Metal TO-220AB outline
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solderable per MIL-STD-202 method 208
- \* Polarity: As marked on diode body
- \* Mounting position: Any
- \* Weight: 2.0 gram approximately

TO-220AB/TO-220-3L

Unit : inch (mm)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)**

PARAMETER	SYMBOL	60CTQ045	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	45	V
Maximum RMS voltage	V <sub>RMS</sub>	32	V
Maximum DC blocking voltage	V <sub>DC</sub>	45	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	60	A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	250	A
Maximum instantaneous forward voltage (Note 1) I <sub>F</sub> = 30A, T <sub>J</sub> =25°C I <sub>F</sub> = 30A, T <sub>J</sub> =125°C I <sub>F</sub> = 60A, T <sub>J</sub> =25°C I <sub>F</sub> = 60A, T <sub>J</sub> =125°C	V <sub>F</sub>	0.55 0.53 0.73 0.76	V
Maximum reverse current @ rated V <sub>R</sub> T <sub>J</sub> =25°C T <sub>J</sub> =125°C	I <sub>R</sub>	0.1 40	mA
Voltage rate of change (Rated V <sub>R</sub> )	dV/dt	10000	V/μs
Typical thermal resistance	R <sub>θJC</sub>	1.5	°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +150	°C
Storage temperature range	T <sub>STG</sub>	- 55 to +175	°C

Note 1: Pulse test with PW=300μs, 1% duty cycle

RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

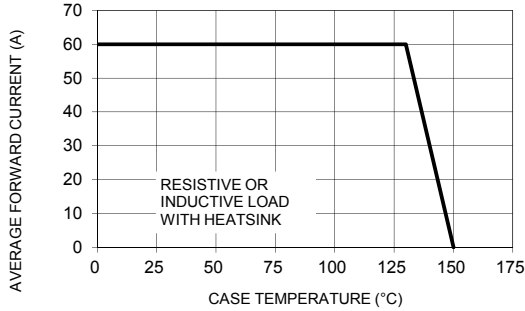


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

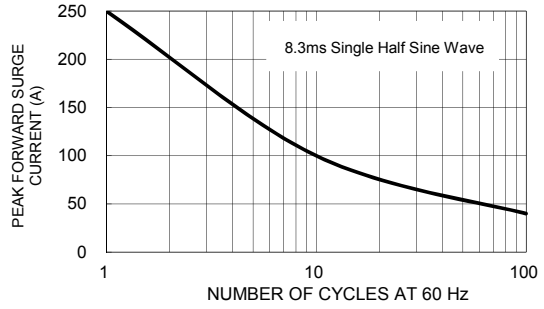


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

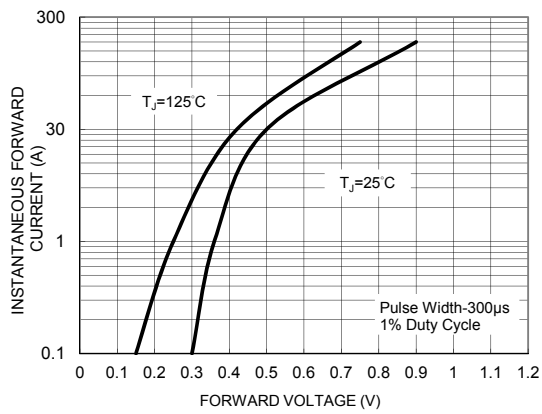


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

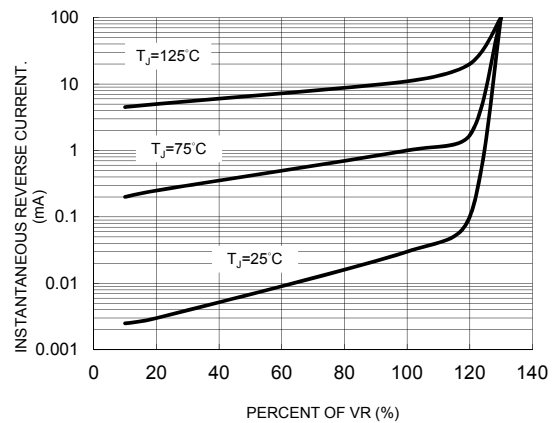


FIG. 5 TYPICAL JUNCTION CAPACITANCE

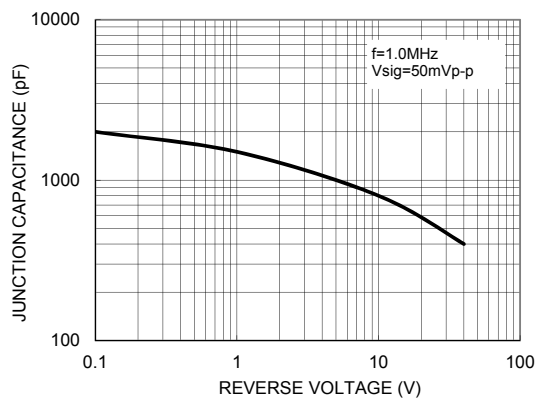


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

