

SR3045

Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 45 V

Forward Current - 30 A

Features

- Low Power Loss / High Efficiency
- Low Forward Voltage Drop
- High Current Capability
- Highly Stable Oxide Passivated Junction
- Guard-Ring for stress Protection
- High Surge Capability

Mechanical Data

Case: Molded plastic, D²PAK

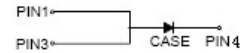
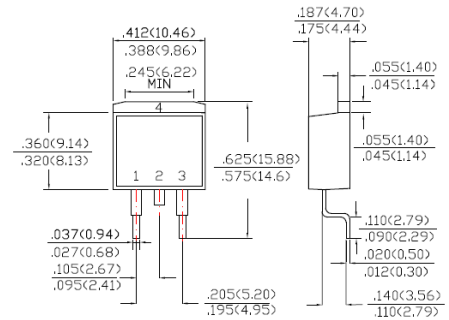
Epoxy: UL 94V-0 rate flame retardant

Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed

Polarity: As marked

Mounting position: Any

D²PAK



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS voltage	V_{RMS}	31.5	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Forward Rectified Current at $T_a = 25^\circ\text{C}$	$I_{F(AV)}$	30	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	400	A
Peak Forward Voltage ¹⁾ at $I_F = 30\text{ A}$	V_F	0.55	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25^\circ\text{C}$ $T_a = 100^\circ\text{C}$	I_R	0.1 20	mA
Typical Thermal Resistance ²⁾	$R_{\theta JC}$	2	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{op}	- 40 to + 150	$^\circ\text{C}$
Junction Temperature in DC Forward Current Without Reverse Bias. $T \leq 1\text{ hour}$ ³⁾	T_J	- 40 to + 200	$^\circ\text{C}$
Operating and Storage Temperature Range	T_{stg}	- 40 to + 175	$^\circ\text{C}$

¹⁾ 300us Pulse Width, 2%Duty Cycle.

²⁾ Thermal Resistance Junction to Case. Without Heatsink.

³⁾ Meets The Requiements Of IEC 61215 ed. 2 Bypass Diode Thermal Test.

TOP DYNAMIC

FIG.1 FORWARD CURRENT DERATING CURVE

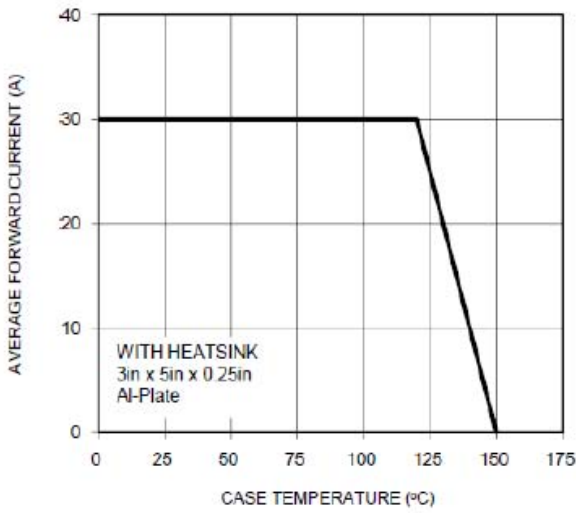


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

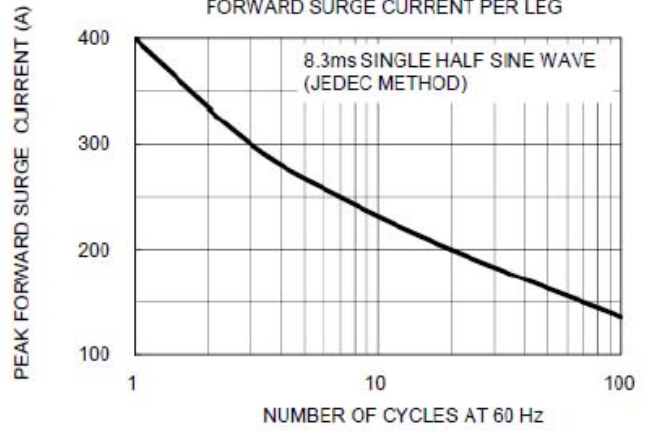


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

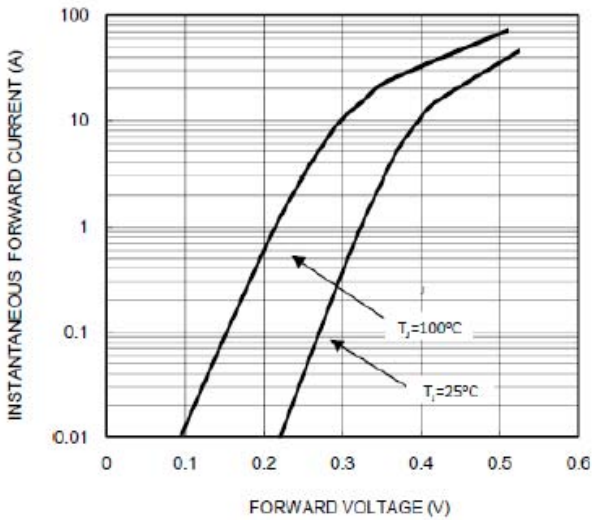


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

