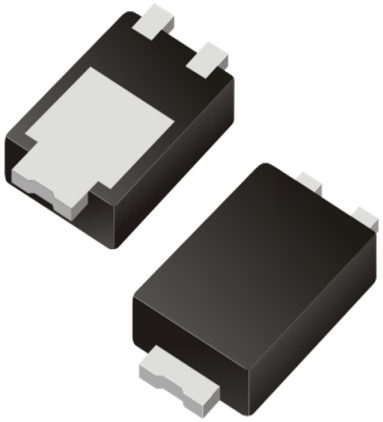
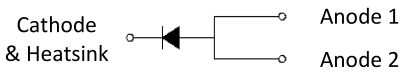
SP5300L

Surface Mounted Planar MOS-Controlled Schottky

Reverse Voltage - 300 V
Forward Current - 5.0A

TO-277B





Features

- Planar MOS-controlled Schottky technology
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case: TO-277B
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.003 ounce, 0.092 grams

Absolute Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	SP5300L	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	300	V
Maximum RMS voltage	V_{RMS}	210	V
Maximum DC Blocking Voltage	V_{DC}	300	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0	A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	80	A
Max Instantaneous Forward Voltage at 5 A	V_F	0.95	V
Maximum DC Reverse Current T_a = 25°C at Rated DC Reverse Voltage T_a =100°C	I_R	5.0 10	uA mA
Typical Thermal Resistance (1)	$R_{\theta JA}$ $R_{\theta JC}$	65 15	°C/W
Operating Junction Temperature Range	T_j	-55 ~ +150	°C
Storage Temperature Range	T_{stg}	-55 ~ +150	°C

(1) Polymide PCB, 2oz. Copper. Cathode pad dimensions 18.8mm x 14.4mm. Anode pad dimensions 5.6mm x 14.4mm

Typical Characteristics

Fig.1 Forward Current Derating Curve

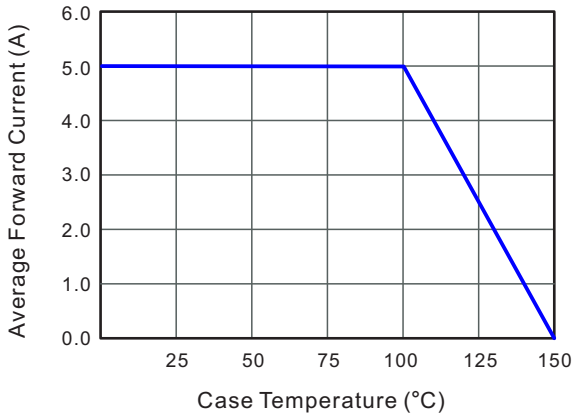


Fig.2 Typical Reverse Characteristics

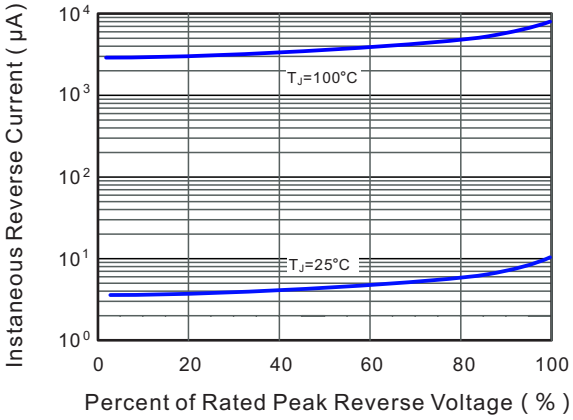


Fig.3 Typical Forward Characteristic

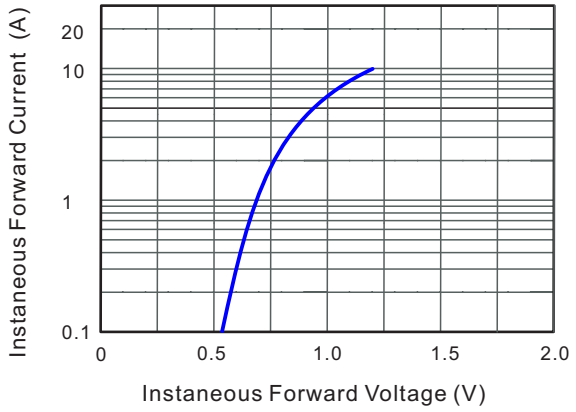
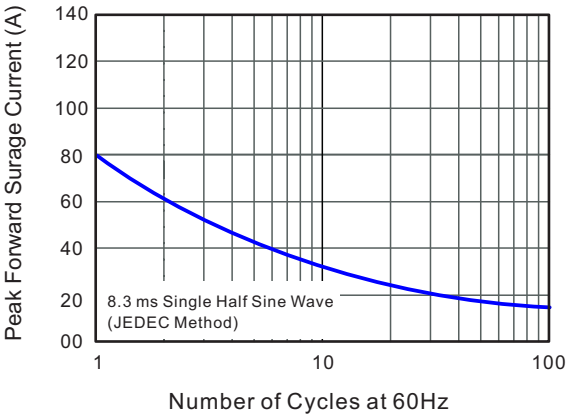
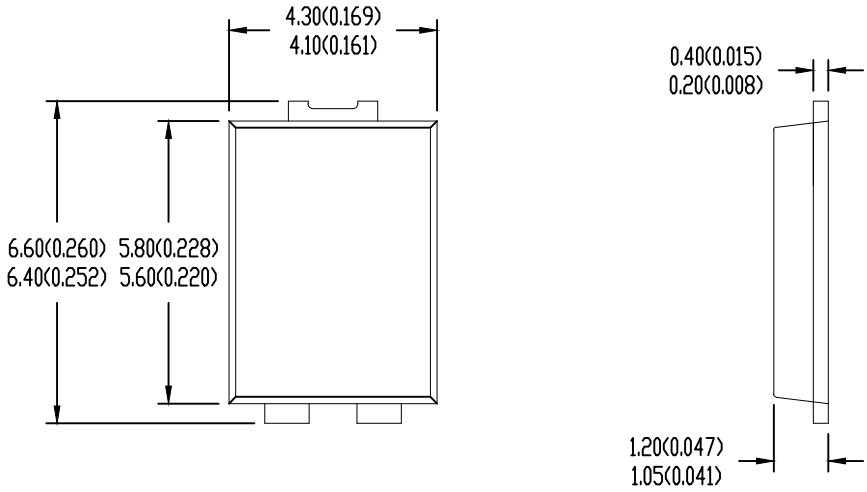
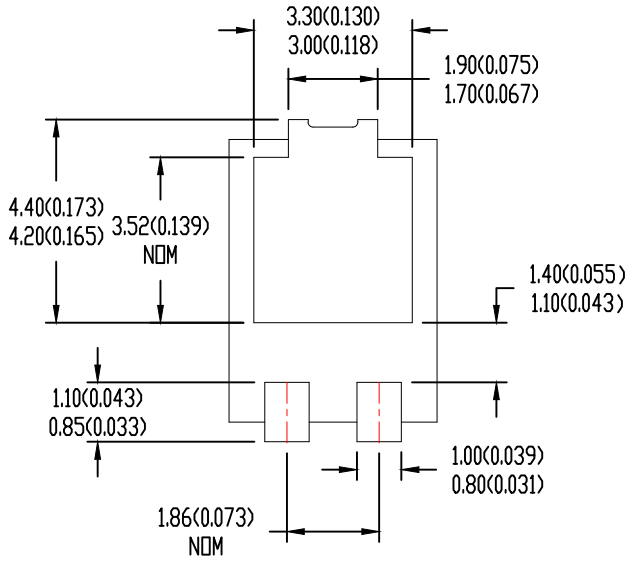


Fig.4 Maximum Non-Repetitive Peak Forward Surage Current

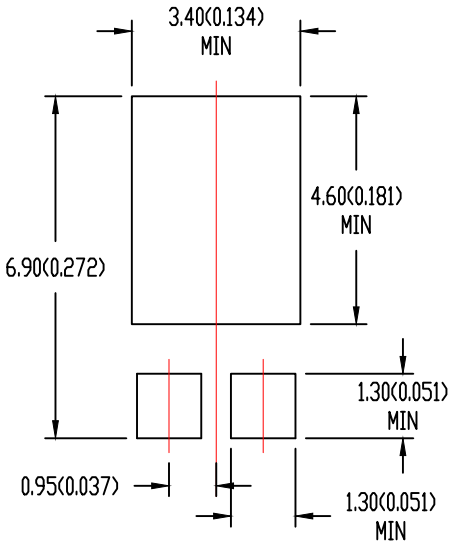


PACKAGE OUTLINE Dimensions in millimeters and (inches)





The recommended mounting pad size



Marking

Type number	Marking code
SP5300L	SP5300L