

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - 45Volts
FORWARD CURRENT - 10.0 Amperes

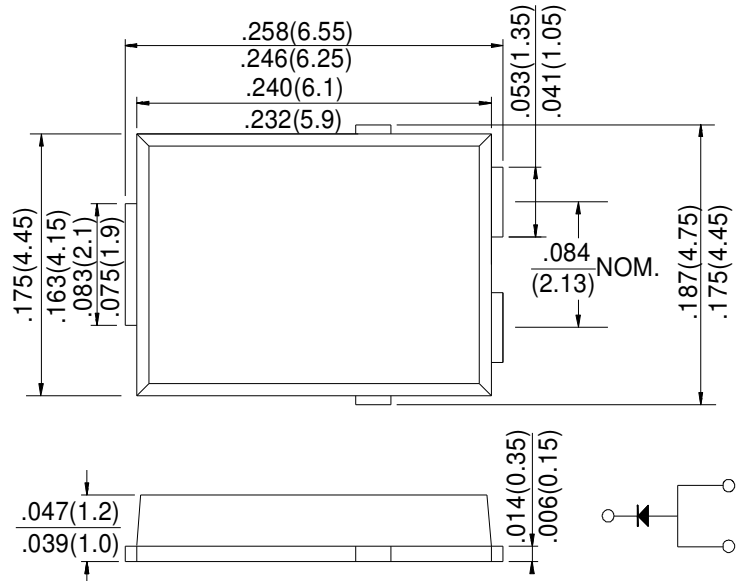
FEATURES

- Very low profile - typical height of 1.1 mm
- Ideal for automated placement
- Trench Schottky technology
- Low forward voltage drop, low power losses
- High efficiency operation
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC

MECHANICAL DATA

- Case: TO-277A (SMPC)
- Molding compound meets UL 94 V-0 flammability rating
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

TO-277A



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave ,60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	S10P45A		UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	45		V
Maximum RMS Voltage	VRMS	31.5		V
Maximum DC Blocking Voltage	VDC	45		V
Maximum DC Forward Current (Note 1)	IF	10		A
Peak Forward Surge Current 10ms Single Half Sine-Wave Superimposed on Rated Load	IFSM	120		A
Instantaneous Forward voltage @IF=10A TA=25°C (Note 2)	VF	0.50 (TYP.)	0.57 (MAX.)	V
Maximum DC Reverse Current @ Tj=25°C	IR	0.5		mA
at Rated DC Blocking Voltage @ Tj=125°C		50		
Typical Thermal Resistance (Note 3)	RθJA	90		°C/W
Operating Temperature Range	TJ	-55 to +150		°C
Storage Temperature Range	TSTG	-55 to +150		°C

Notes:(1) Mounted on 30 mm x 30 mm pad areas aluminum PCB

(2)Pulse test: 300 μs pulse width, 1 % duty cycle

(3) Free air, mounted on recommended copper pad area; thermal resistance RθJA - junction to ambient

FIG.1 - MAXIMUM NON-REPETITIVE SURGE CURRENT

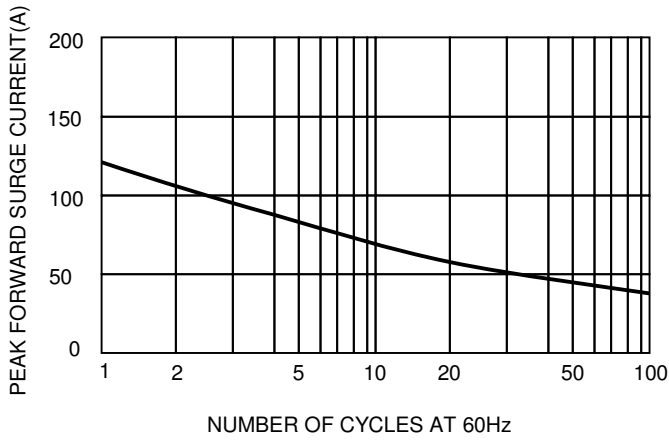


FIG.2-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

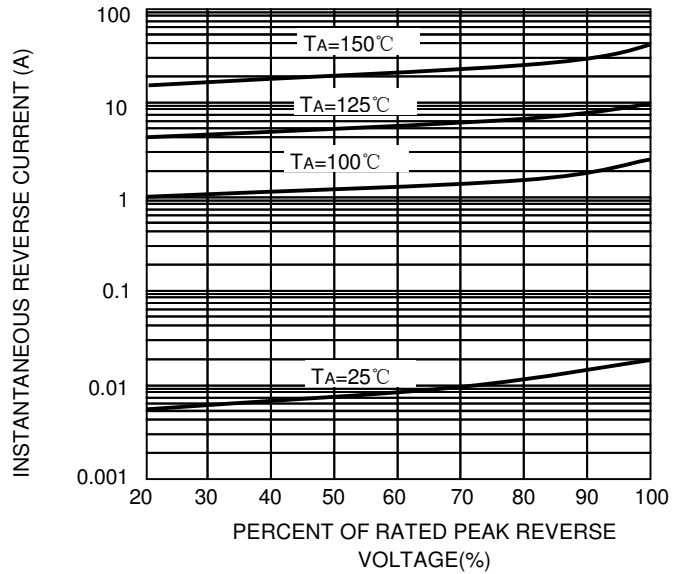


FIG.3-TYPICAL REVERSE CURRENT

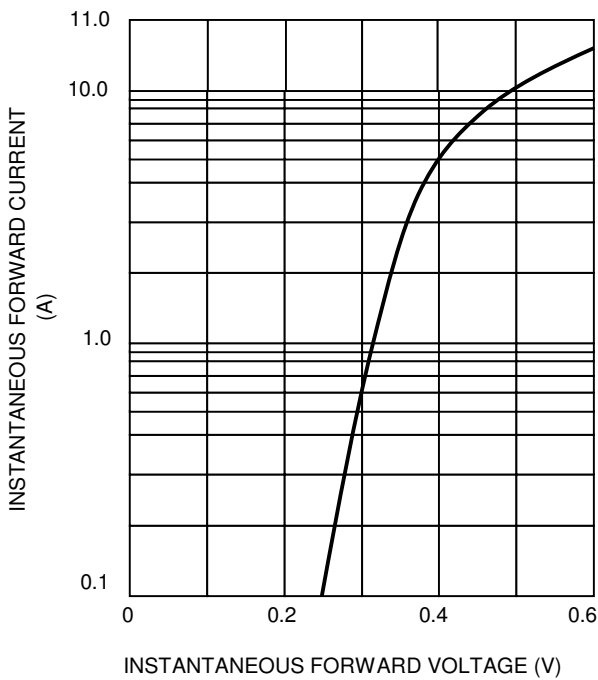
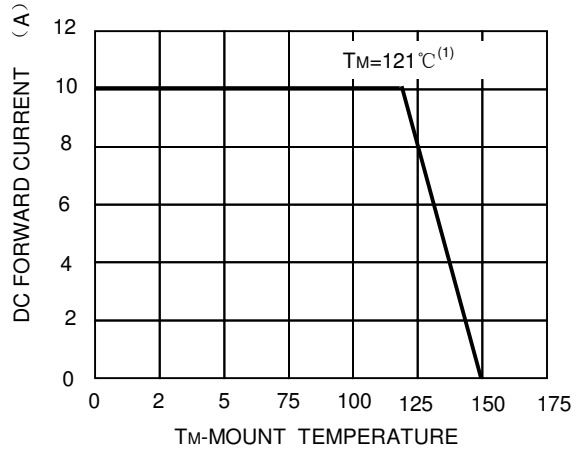


FIG.4-MAXIMUM FORWARD CURRENT DERATING CURVE



NOTE: (1) Mounted on 30 mm x 30 mm aluminum PCB; T_M measured at the terminal of cathode band (R_{θJM} = 4 °C/W)