

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - 100Volts
FORWARD CURRENT - 10.0 Amperes

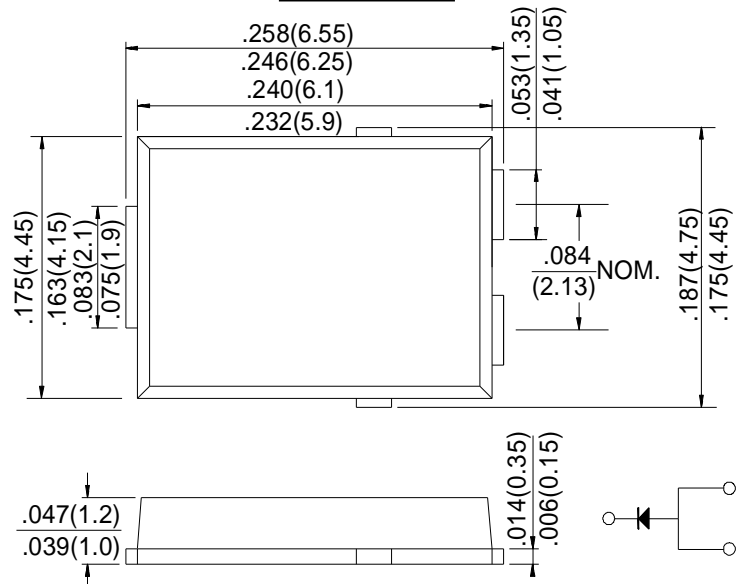
FEATURES

- 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	S10P100	UNIT		
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	100	V		
Maximum RMS Voltage		V _{RMS}	70			
Maximum DC Blocking Voltage		V _{DC}	100			
Maximum Average Forward Rectified Current		I _{F(AV)}	10	A		
Peak Forward Surge Current 10ms Single Half Sine-Wave Superimposed on Rated Load		I _{FSM}	180	A		
Instantaneous Forward voltage(Note 1)	I _F =5.0A	V _F	0.512(TYP.)		V	
	I _F =10A		0.625(TYP.)	0.68 (MAX.)		
	I _F =5.0A		0.453(TYP.)			
	I _F =10A		0.574 (TYP.)	0.62 (MAX.)		
Reverse Current (Note 2)	V _R =100V	I _R	TA=25°C	30.4 (TYP.)	150 (MAX.)	µA
			TA=125°C	10.4 (TYP.)	20 (MAX.)	mA
Typical Thermal Resistance(Note 3)		R _{θJA}	60	°C/W		
Typical Thermal Resistance		R _{θJL}	3			
Operating Temperature Range		T _J	-40 to +150	°C		
Storage Temperature Range		T _{STG}	-40 to +150	°C		

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

(2) Pulse test: Pulse width ≤ 40 ms

(3)Units mounted on recommended PCB 1 oz. pad layout

FIG.1-MAXIMUM FORWARD CURRENT DERATING CURVE

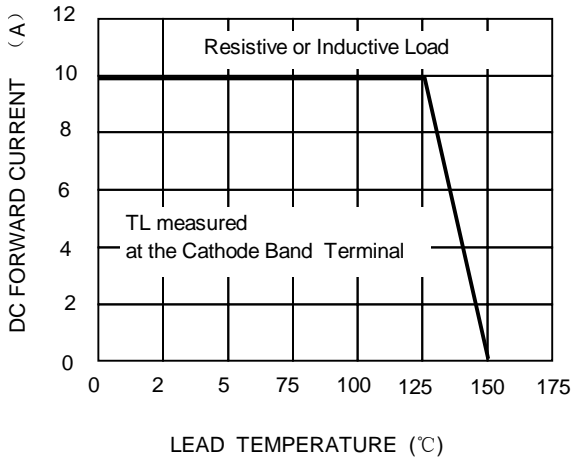


FIG.2-FORWARD POWER LOSS CHARACTERISTICS

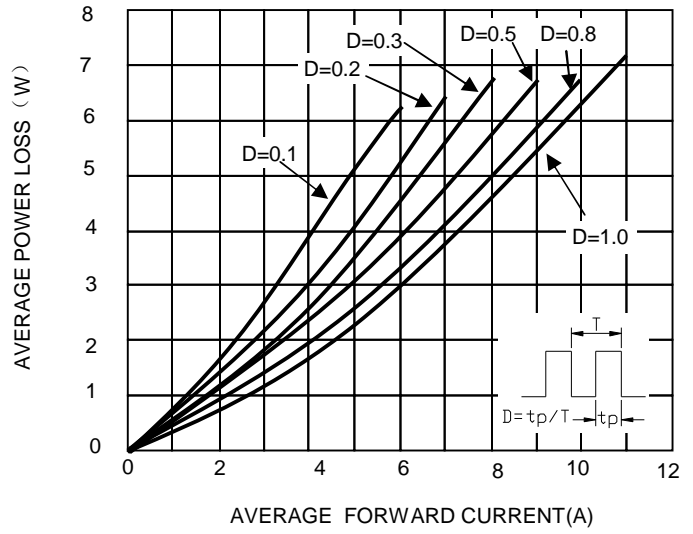


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

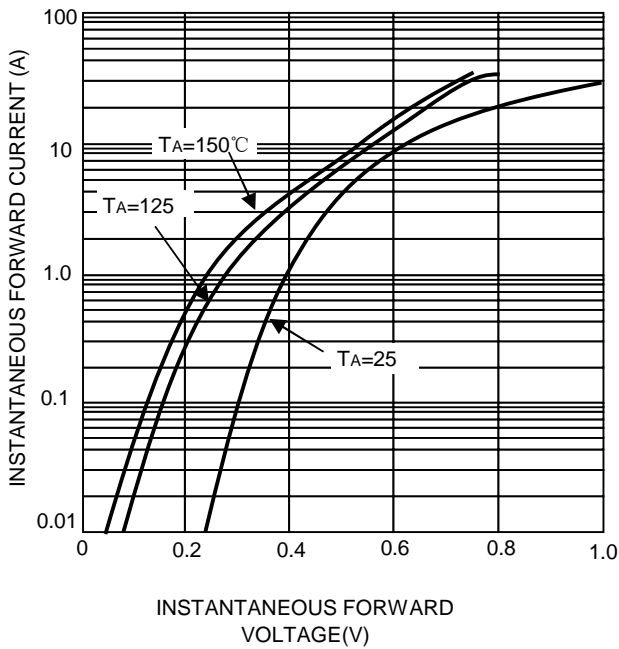


FIG.4-TYPICAL REVERSE CHARACTERISTICS

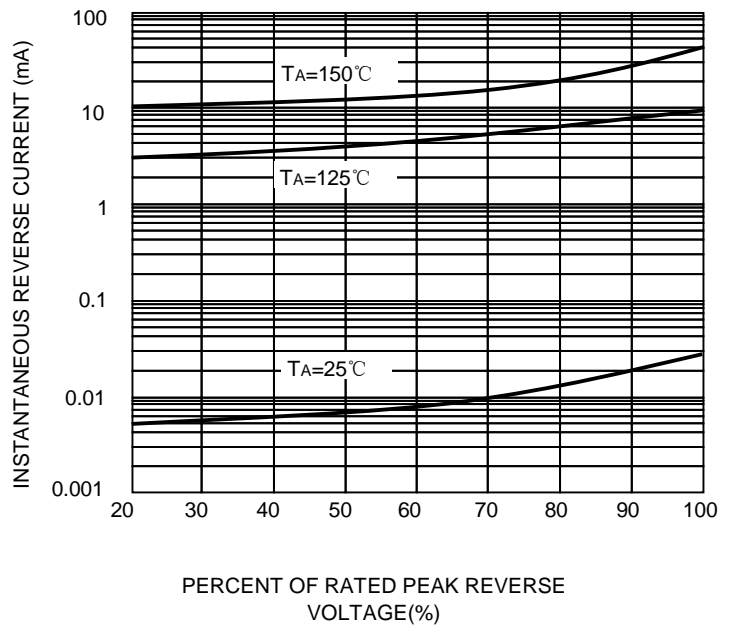


FIG.5-TYPICAL JUNCTION CAPACITANCE

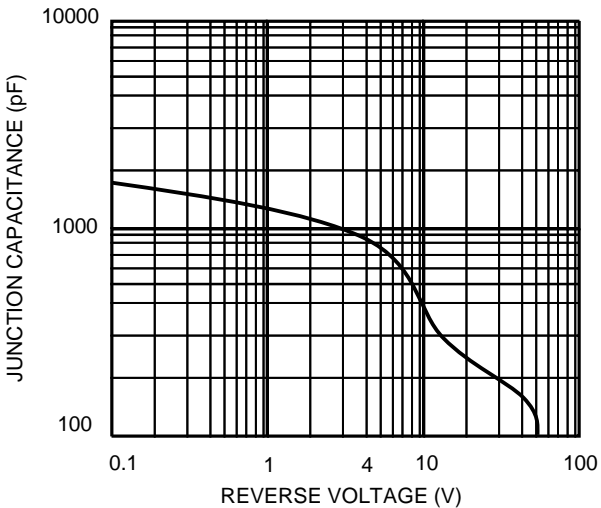


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

