Surface Mount Schottky Barrier Rectifiers

Reverse Voltage - 100 Volts
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

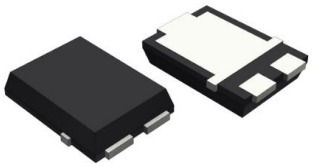
- Case: TO-277A (SMPC)

Molding compound meets UL 94 V-0 flammability rating

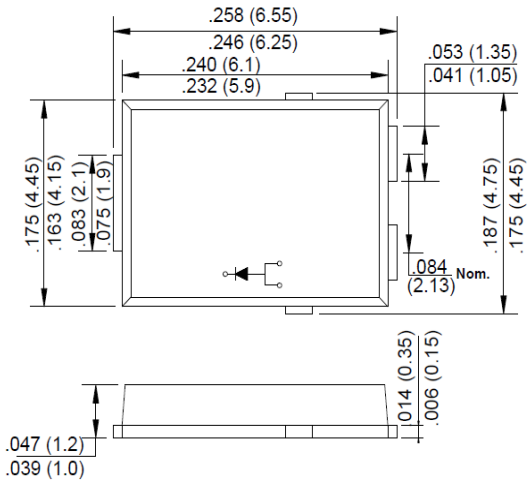
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

Note: Products with logo HY or hy are made by HY Electronic (Cayman) Limited.

TO-277A



RoHS COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25℃ 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 Repetitive Peak Reverse Voltage			V_{RRM}	100		V
Maximum RMS Voltage			V_{RMS}	70		V
Maximum DC Blocking Voltage			V_{DC}	100		V
Maximum Average Forward Rectified Current			$I_{F(AV)}$	10.0		A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)			I_{FSM}	180		A
Peak Forward Voltage (Note1)	I_F=5.0A	T_A=25℃	V_F	0.512(TYP.)		V
	I_F=10.0A			0.625(TYP.)	0.68 (MAX.)	
	I_F=5.0A	T_A=125℃		0.453(TYP.)		
	I_F=10.0A			0.574 (TYP.)	0.62 (MAX.)	
Reverse Current(Note2)	V_R=100V	TA=25℃	I_R	30.4 (TYP.)	150 (MAX.)	μA
		TA=125℃		10.4 (TYP.)	20 (MAX.)	mA
Typical Thermal Resistance (Note3)			$R_{\theta JA}$	60		℃/W
Typical Thermal Resistance			$R_{\theta JL}$	3		℃/W
Operating Temperature Range			T_J	-40 to+150		℃
Storage Temperature Range			T_{STG}	-40 to+150		℃

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

(4) The typical data above is for reference only .

FIG.1-MAXIMUM FORWARD CURRENT DERATING CURVE

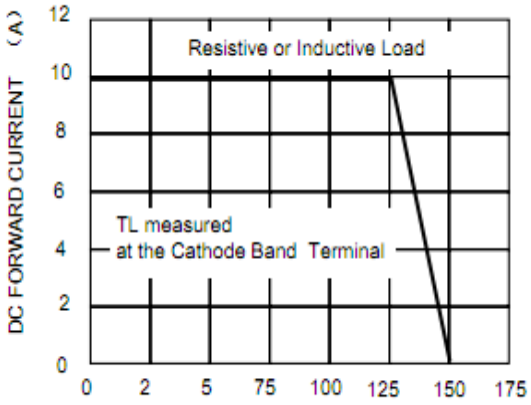
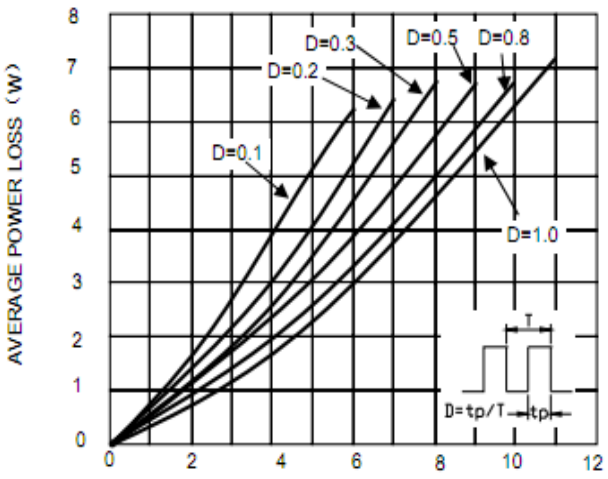
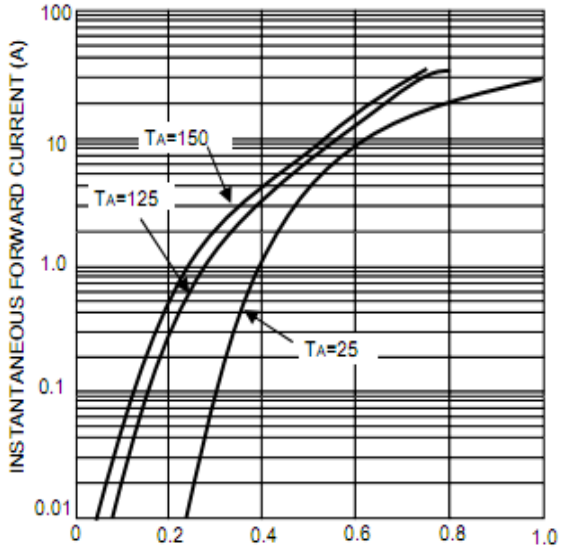


FIG.2-FORWARD POWER LOSS CHARACTERISTICS



LEAD TEMPERATURE (℃)

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



AVERAGE FORWARD CURRENT(A)

FIG.4-TYPICAL REVERSE CHARACTERISTICS

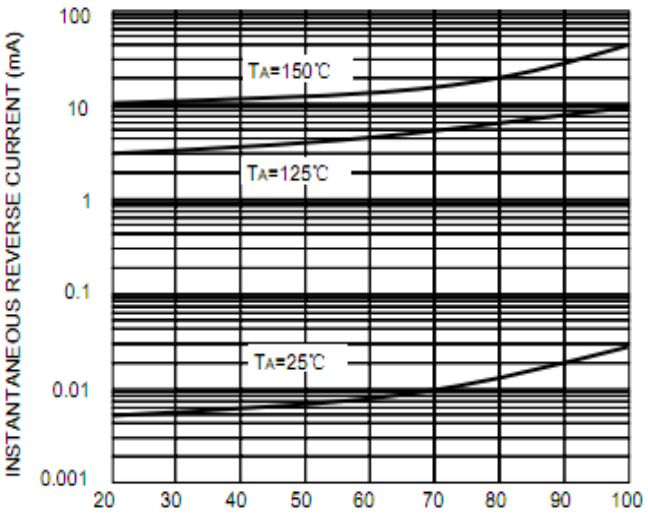


FIG.5-TYPICAL JUNCTION CAPACITANCE

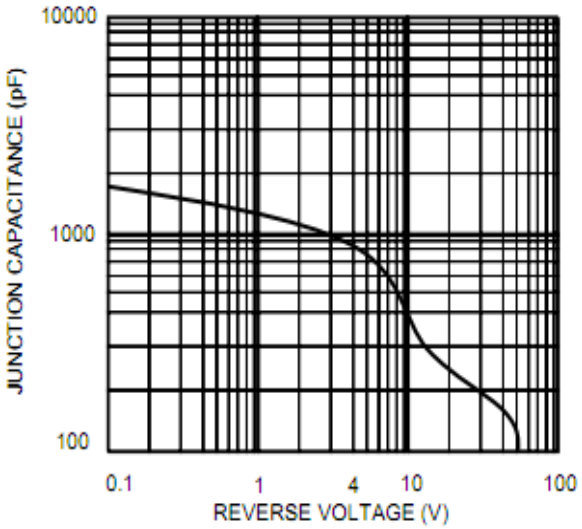
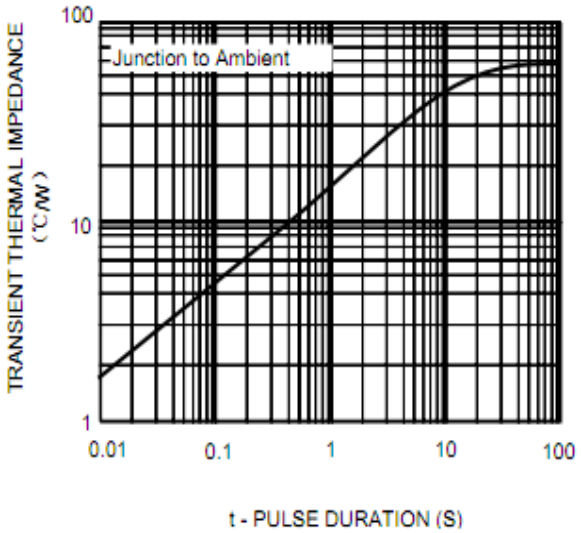


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.

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