

SM5817 THRU SM5819

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER



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HORNBY ELECTRONIC

REVERSE VOLTAGE: 20 to 40 VOLTS

FORWARD CURRENT: 1.0 AMPERE

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low power loss, high efficiency
- Guardring for overvoltage protection
- For use in low voltage, high frequency inverters free wheeling, and porlarlity protection applications

MECHANICAL DATA

Case: Molded plastic, MELF

Epoxy: UL 94V-O rate flame retardant

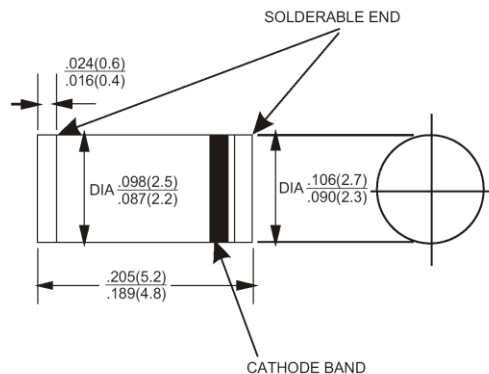
Terminals: Solder plated, solderable per MIL-STD-750, method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 0.005 ounce, 0.12 gram

MELF



Dimensions in inches and (millimeters)

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 current by 20%.

	Symbols	SM5817	SM5818	SM5819	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	Volts
Maximum RMS Voltage	V_{RMS}	14	21	28	Volts
Maximum DC Blocking Voltage	V_{DC}	20	30	40	Volts
Maximum Average Forward Rectified Current at $T_A=90$	$I_{(AV)}$	1.0			Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25			Amp
Maximum Forward Voltage at 1.0A DC	V_F	0.45	0.55	0.60	Volts
Maximum Forward Voltage at 3.0A DC		0.75	0.875	0.90	
Maximum Reverse Current at $T_A=25$ at Rated DC Blocking Voltage $T_A=100$	I_R	1.0 10			mAmp
Typical Junction Capacitance (Note 1)	C_J	110			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	80			/W
Operating and Storage Temperature Range	T_J, T_{stg}	-50 to +125			

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.5" (12.7mm) Lead Length.

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RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

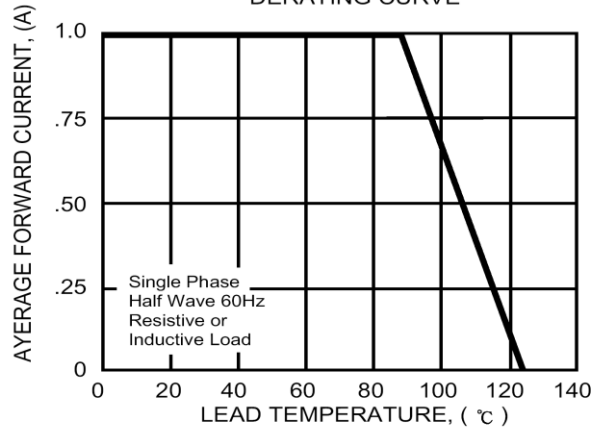


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

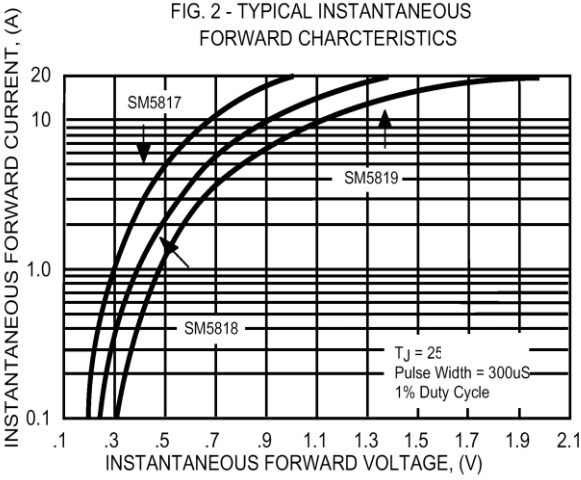


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

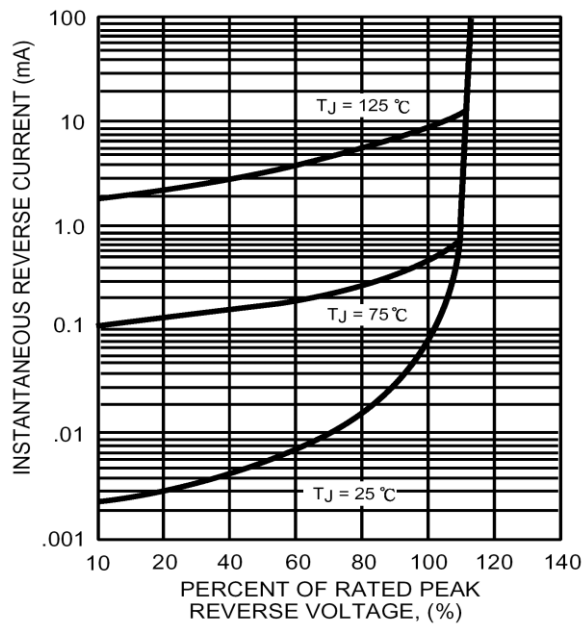


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

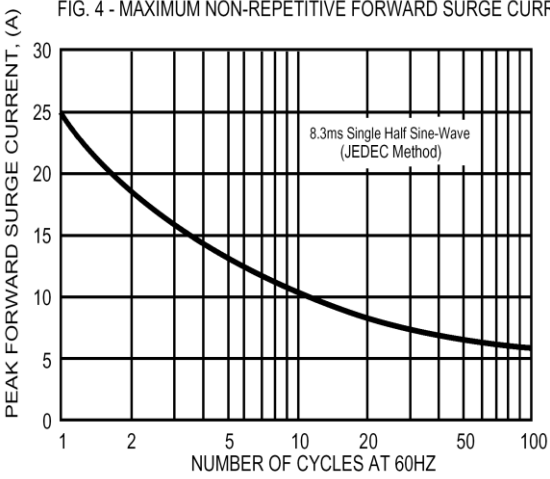


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

