

SCHOTTKY BARRIER RECTIFIER

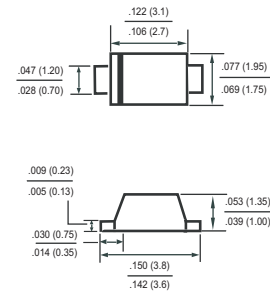
VOLTAGE RANGE 20 to 40 Volts CURRENT 1.0 Ampere

FEATURES

- * Metal silicon junction, majority carrier conduction
- * Guarding for overvoltage protection
- * High current capability
- * Low power loss, high efficiency
- * High surge capability
- * For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



SOD-123F



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	1N5817W	1N5818W	1N5819W	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	V
Maximum RMS voltage	V_{RMS}	14	21	28	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	V
Maximum Average Forward Rectified Current 0.375" (9.5 mm) Lead Length at $T_L = 90^\circ\text{C}$	$I_{F(AV)}$	1			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC method) at $T_L = 70^\circ\text{C}$	I_{FSM}	25			A
Typical Current Squared Time	I^2T	2.59			A ² S
Maximum Instantaneous Forward Voltage at 1 A Maximum Instantaneous Forward Voltage at 3.1 A	V_F	0.45 0.75	0.55 0.875	0.6 0.9	V
Maximum Instantaneous Reverse Current at $T_A = 25^\circ\text{C}$ Rated DC Reverse Voltage $T_A = 150^\circ\text{C}$	I_R	1 20			mA
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JL}$	50 15			$^\circ\text{C}/\text{W}$
Typical Junction Capacitance	C_j	110			pF
Storage and Operating Junction Temperature Range	T_j, T_{stg}	-55 ~ +125			$^\circ\text{C}$

RATING AND CHARACTERISTICS CURVES (1N5817W THRU 1N5819W)

Fig.1 Forward Current Derating Curve

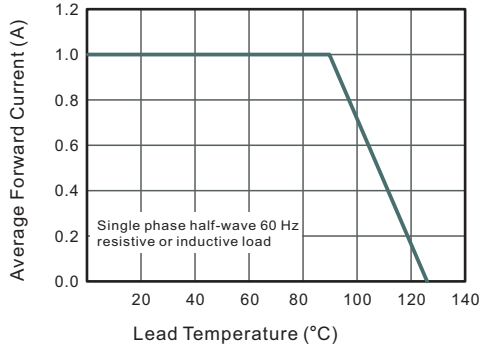


Fig.2 Typical Reverse Characteristics

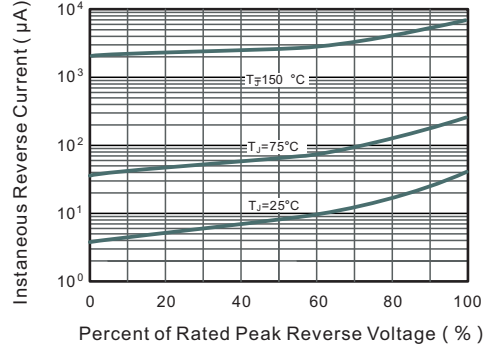


Fig.3 Typical Forward Characteristic

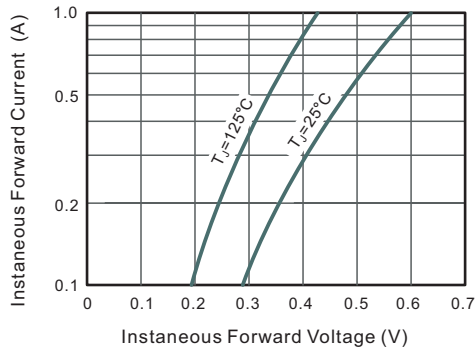


Fig.4 Typical Junction Capacitance

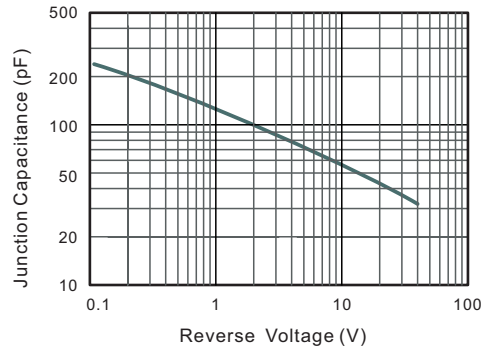


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

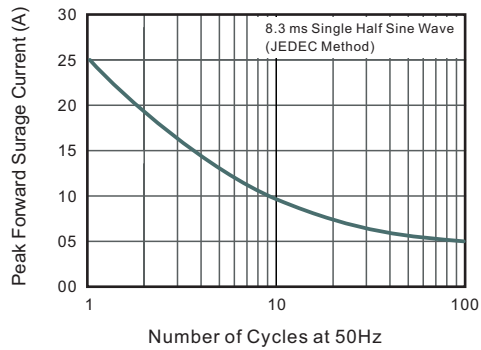
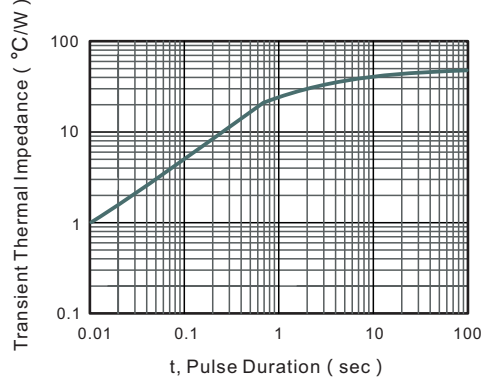
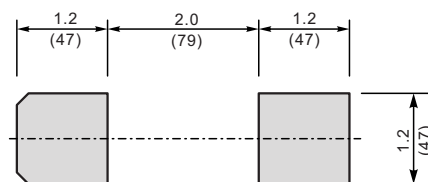


Fig.6- Typical Transient Thermal Impedance



The recommended mounting pad size



Unit: $\frac{\text{mm}}{\text{mil}}$

Marking

Type number	Marking code
1N5817W	12A
1N5818W	13A
1N5819W	14A

PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOD-123F/ SOD-123FL	-W/-T	3,000	15,000	---	---	178	390*205*31	120,000	6.964

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