

MASTER INSTRUMENT CORPORATION

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER
S5817 THRU S5819**

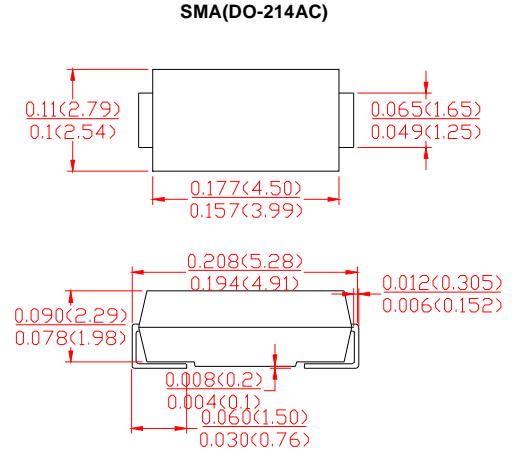
**VOLTAGE RANGE 20 to 40 Volts
Forward Current 1.0 Amperes**

FEATURES

- I Plastic package has Unerwrites Laboratory Flammability Classification 94V-0
- I For surface mount applications
- I Metal to silicon rectifier. Majority carrier conduction
- I Low power loss, high efficiency
- I High current capability, Low forward Voltage drop
- I High surge capability
- I For use in low voltage, high frequency inverters, Free wheeling, and polarity protection applications
- I High temperature soldering guaranteed: 260 °C/10 seconds at terminals

MECHANICAL DATA

- I Case: JEDED DO-214AC molded plastic.
- I Terminal: Solder Plated solder able per MIL-STD-750,method 2026
- I Polarity: Color band denotes cathode end
- I Weight: 0.002 ounce. 0.064gram



All Dimension in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Resistive or inductive load.

	Symbols	S5817	S5818	S5819	UNITS
Maximum Repetitive 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 $T_L=110^\circ\text{C}$	$I_{(AV)}$	1.0			Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25			Amps
Maximum Forward Voltage at 1.0A D.C. Maximum Forward Voltage at 3.0A D.C.	V_F	0.45 0.75	0.55 0.775	0.60 0.90	Volts
Maximum DC Reverse Current(Note 1) at Rated DC blocking voltage	$T_A=25^\circ\text{C}$	0.5			mA
	$T_A=125^\circ\text{C}$	20.0			
Maximum Thermal Resistance (Note 1)	R_{QJL}	20			$^\circ\text{C/W}$
Typical Junction Capacitance(Note 2)	C_J	65			pF
Operating Junction Temperature Range	T_J	-65°C to +125°C			$^\circ\text{C}$
Storage temperature range	T_{STG}	-65°C to +150°C			$^\circ\text{C}$

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient

MASTER INSTRUMENT CORPORATION

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER
S5817 THRU S5819

VOLTAGE RANGE 20 to 40 Volts
Forward Current 1.0 Amperes

RATINGS AND CHARACTERISTIC CURVES S5817 THRU S5819

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

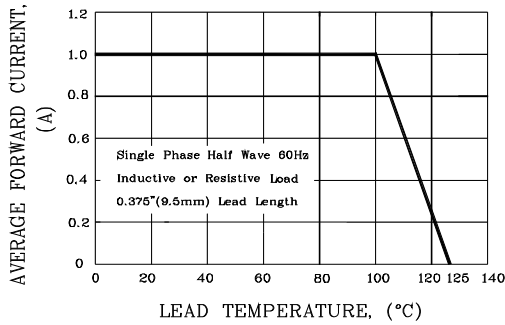


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

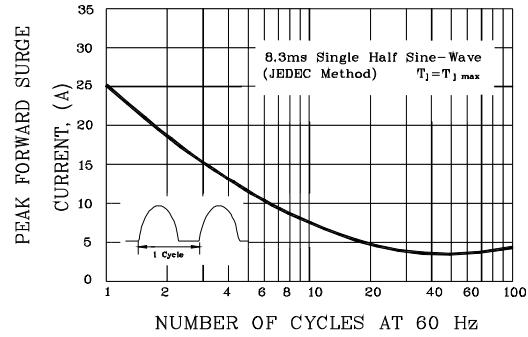


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

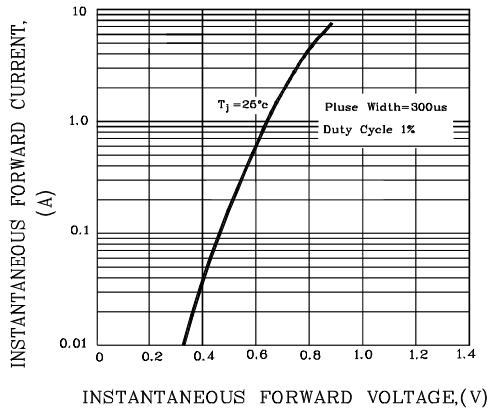


FIG.4-TYPICAL REVERSE CHARACTERISTICS

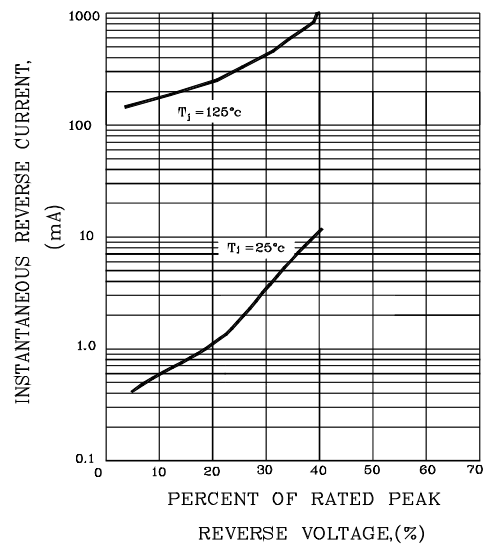


FIG.5-TYPICAL JUNCTION CAPACITANCE

