



MASTER INSTRUMENT CORPORATION

**SURFACE MOUNT GLASS PASSIVATED RECTIFIER
S2AA THRU S2MA**

**VOLTAGE RANGE 50 to 1000 Volts
Forward Current 2.0 Amperes**

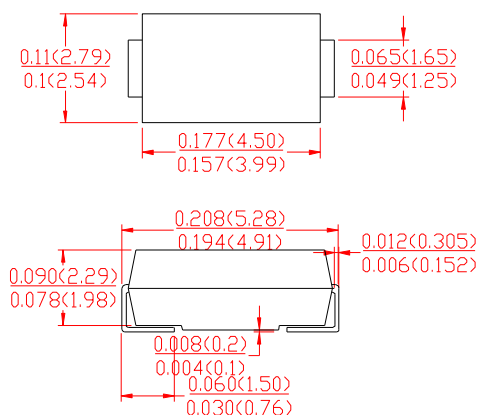
FEATURES

- l Plastic package has Unerwrites Laboratory Flammability Classification 94V-0
- l For surface mount applications
- l Low profile package
- l Built-in strain relief, ideal for automated placement
- l Glass Passivated chip junction
- l High temperature soldering: 250°C/10 seconds at terminals

MECHANICAL DATA

- l Case: JEDED SMA (DO-214AC) molded plastic body
- l Terminals: Solder Plated, solderable per MIL-STD-750 Method 2026
- l Polarity: Color band denotes cathode end
- l Weight: 0.002ounce, 0.064gram

SMA(DO-214AC)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	S2AA	S2BA	S2DA	S2GA	S2JA	S2KA	S2MA	UNITS	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts	
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	2.0							Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L=100^\circ\text{C}$	I_{FSM}	50							Amps	
Maximum Instantaneous reverse of 2.0A	V_F	1.15							Volts	
Maximum instantaneous Reverse Current at rated DC blocking voltage	$T_A=25^\circ\text{C}$	I_R							1.0	μA
	$T_A=125^\circ\text{C}$								125	
Typical thermal Resistance (Note 1)	R_{QJA}	53							$^\circ\text{C/W}$	
	R_{QJA}	16								
Operating and Storage Temperature Range	T_J	-55 to +150							$^\circ\text{C}$	
Typical reverse recovery time at $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{tr}=0.25\text{A}$	T_{rr}	2.0							μS	
Typical junction capacitance at 4.0V, 1MHz	C_j	30							μF	
Storage temperature range	T_{STG}	-55 to +150							$^\circ\text{C}$	

NOTES:

1. Thermal resistance from junction to ambient and from junction to lead mounted on
2. P.C.B. Mounted with 0.3×0.3”(8.0×8.0mm) copper pad areas.



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RATING AND CHARACTERISTIC CURVES S2AC Thru S2MC

FIG.1-FORWARD CURRENT DERATING CURVE

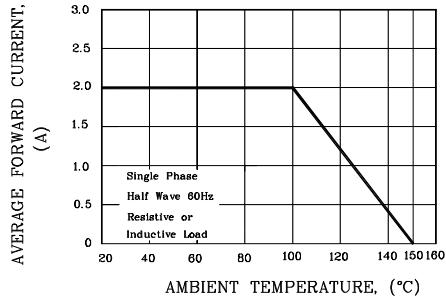


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

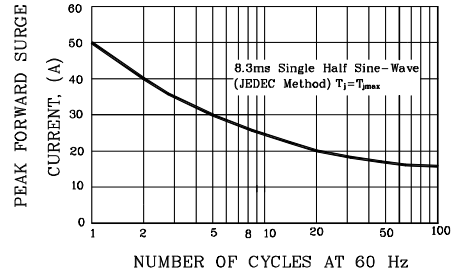


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

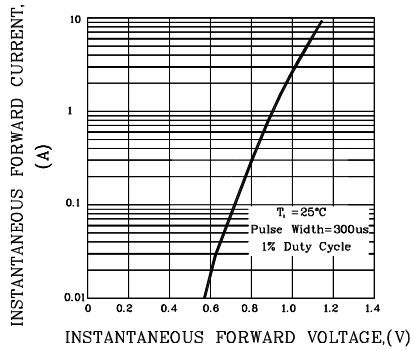


FIG.4-TYPICAL REVERSE CHARACTERISTICS

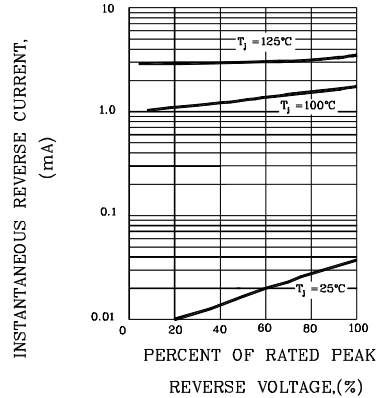


FIG.4-TYPICAL JUNCTION CAPACITANCE

