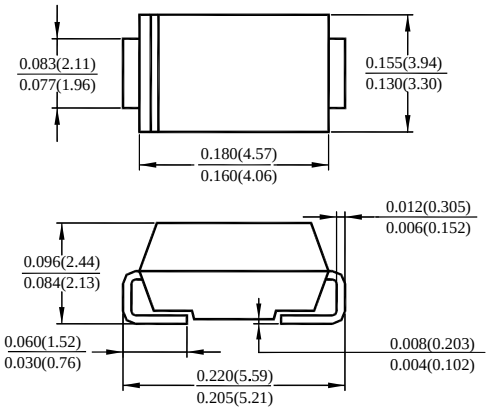
Surface Mount Rectifiers

S2A---S2M

FEATURES

For surface mounted application
Low forward voltage drop
High current capability
Easy pick and place
High surge current capability
Plastic material used carries Underwriters
Laboratory Classification 94V-O
High temperature soldering:
260°C / 10 seconds at terminals



Dimensions in inches and (millimeters)

DO-214AA (SMB)

MECHANICAL DATA

Case: Molded plastic
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Terminals: Solder plated
Polarity: Indicated by cathode band
Packaging: 12mm tape per EIA STD RS-481

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Type Number	Symbol	S2A	S2B	S2D	S2G	S2J	S2K	S2M	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T_L =100℃	$I_{(AV)}$	2.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	50							A
Maximum Instantaneous Forward Voltage @ 2.0A	V_F	1.15							V
Maximum DC Reverse Current @ T_A =25℃ at Rated DC Blocking Voltage @ T_A=125℃	I_R	5.0 125							uA uA
Typical Thermal Resistance (Note 3)	$R\theta_{JL}$ $R\theta_{JA}$	16 53							℃/W
Maximum Reverse Recovery Time (Note 1)	Trr	2.0							uS
Typical Junction Capacitance (Note 2)	Cj	30							pF
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	TSTG	-55 to +150							℃

Notes: 1. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A 2. Measured at 1 MHz and Applied V_R=4.0 Volts
3. Measured on P.C. Board with 0.4 x 0.4" (10 x 10mm) Copper Pad Areas.

S2A---S2M Typical Characteristics

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

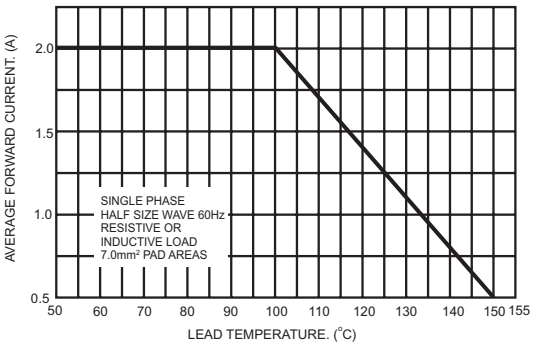

FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

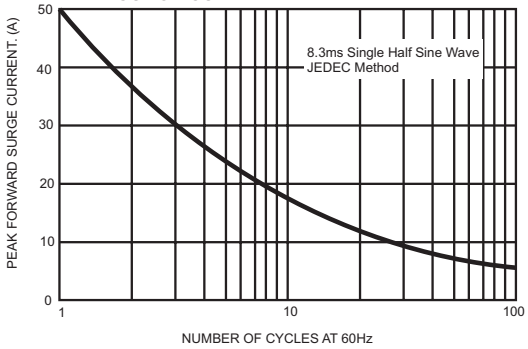

FIG.3- TYPICAL FORWARD CHARACTERISTICS

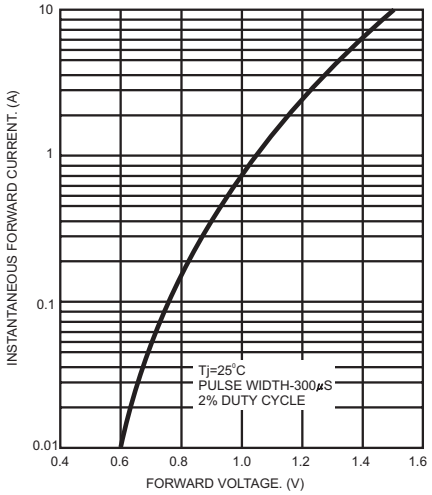

FIG.4- TYPICAL REVERSE CHARACTERISTICS

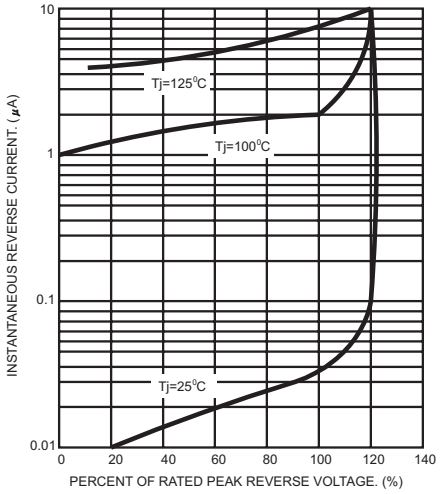

FIG.5- TYPICAL JUNCTION CAPACITANCE