



# S2A THRU S2M

## SURFACE MOUNT GLASS PASSIVATED SILICON RECTIFIER

**REVERSE VOLTAGE:** 50 to 1000 VOLTS

**FORWARD CURRENT:** 2.0 AMPERE

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Low forward voltage drop
- Suffix "H" indicates Halogen-free parts, ex. S2AH

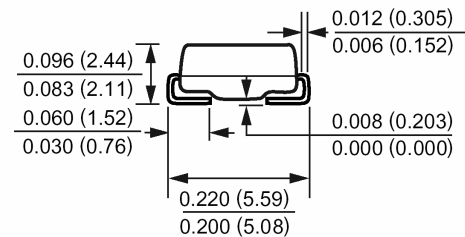
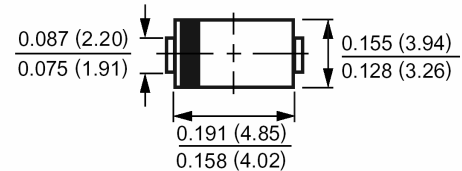
### MECHANICAL DATA

Case : Molded plastic, DO-214AA(SMB)

Terminals : Solder plated, solderable per MIL-STD-750, method 2026 guaranteed

Polarity : Color band denotes cathode end

### DO-214AA(SMB)



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%.

Parameter	Symbols	S2A	S2B	S2D	S2G	S2J	S2K	S2M	Units
Maximum Recurrent 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							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	50							Amp
Maximum Forward Voltage at 2.0A	$V_F$	1.10							Volts
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$	$I_R$	5.0 125.0							$\mu\text{Amp}$
Typical Junction Capacitance (Note 1)	$C_J$	30							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	16							$^\circ\text{C/W}$
Maximum Reverse Recovery Time (Note 3)	$T_{RR}$	2							$\mu\text{S}$
Operating Junction Temperature Range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150							$^\circ\text{C}$

#### NOTES:

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

2- Thermal resistance from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas

3- Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{RR}=0.25\text{A}$ .



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### RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

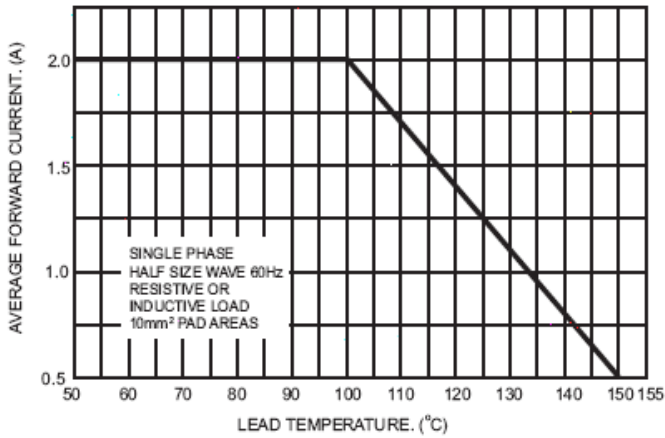


FIG.2- TYPICAL REVERSE CHARACTERISTICS

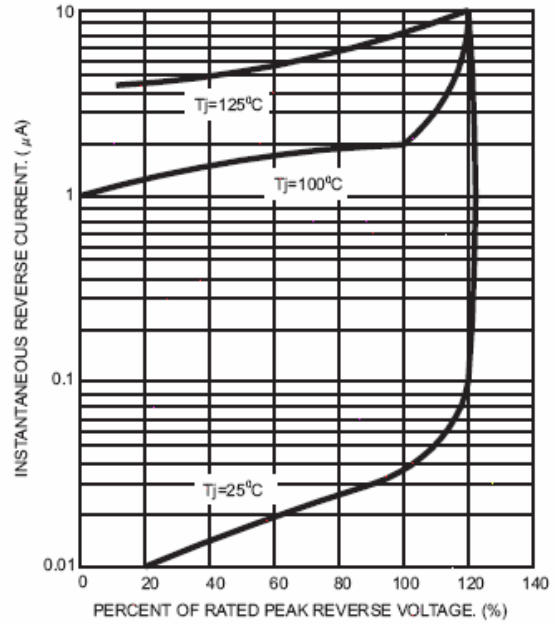


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

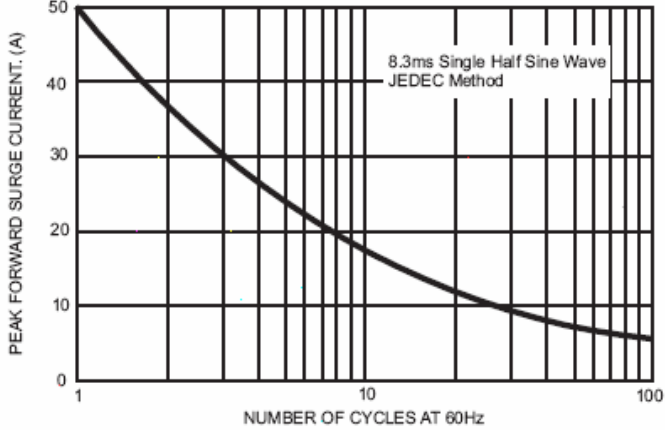


FIG.4- TYPICAL JUNCTION CAPACITANCE

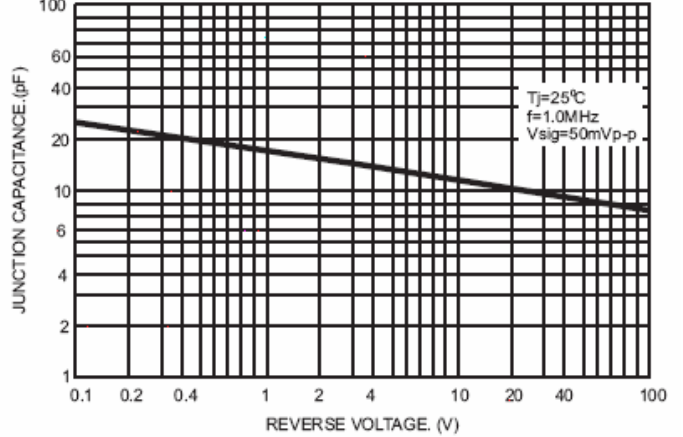


FIG.5- TYPICAL FORWARD CHARACTERISTICS

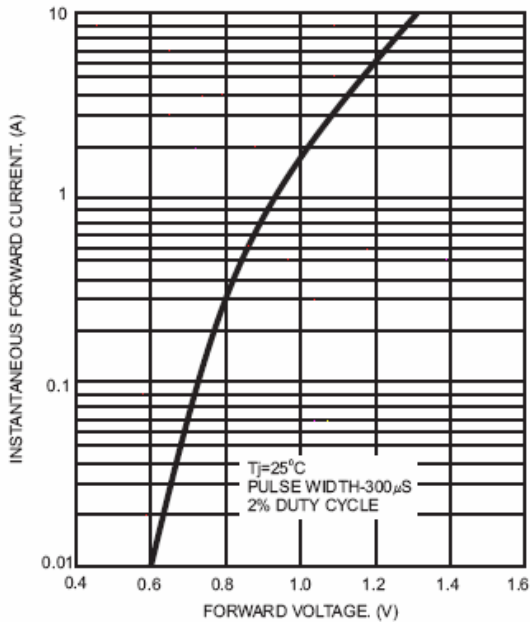


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

