



# SURFACE MOUNT GLASS PASSIVATED RECTIFIER S1A ~ S1M

## Surface Mount Glass Passivated Rectifier

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Built-in strain relief, ideal for automated placement
- Glass passivated chip junction
- High temperature soldering guaranteed 265°C /5 seconds  
260°C/ 10 seconds
- RoHS and REACH compliance



DO-214AC (SMA)

**RoHS**  
COMPLIANT

### Mechanical Data

<b>Case:</b>	DO-214AC, transfer molded plastic
<b>Epoxy:</b>	Meets UL 94V-0 flammability rating
<b>Terminals:</b>	Solder plated, solderable per MIL-STD 750, Method 2026
<b>Polarity:</b>	Cathode indicated by color band
<b>Mounting position:</b>	Any
<b>Weight:</b>	0.002 Ounce, 0.064 gram

### Maximum Ratings *(T<sub>Ambient</sub>=25°C unless noted otherwise)*

Symbol	Description	S1A	S1B	S1D	S1G	S1J	S1K	S1M	Unit	Conditions
<b>V<sub>RRM</sub></b>	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
<b>V<sub>RMS</sub></b>	Max RMS Voltage	35	70	140	280	420	560	700	V	
<b>V<sub>DC</sub></b>	Max DC Blocking Voltage	50	100	200	400	600	800	1000	V	
<b>I<sub>(AV)</sub></b>	Max Average Forward Rectified Current	1.0							A	TA=105°C
<b>I<sub>FSM</sub></b>	Peak Forward Surge Current	40				30			A	8.3ms single half sine-wave (JEDEC)
<b>t<sub>π</sub></b>	Maximum Reverse Recovery Time	1.8							μA	IF=0.5A, IR=1.0A, IRR=0.25A
<b>T<sub>J</sub>, T<sub>STG</sub></b>	Operating and Storage Temperature Range	-55 to +150							°C	

**Electrical Characteristics** ( $T_{Ambient}=25^{\circ}C$  unless noted otherwise)

Symbol	Description	S1A	S1B	S1D	S1G	S1J	S1K	S1M	Unit	Conditions
$V_F$	Max Instantaneous Forward Voltage	1.1							V	$I_F(AV)=1.0A$
$I_R$	Max DC Reverse Current at Rated DC Blocking Voltage	1.0					5.0		$\mu A$	$T_A=25^{\circ}C$
		50								$T_A=125^{\circ}C$
$C_J$	Typical Junction Capacitance	12							pF	At 1MHz, reversed voltage of 4V
$R_{\theta-JA}$	Typical Thermal Resistance	75					85		$^{\circ}C/W$	Note 2
$R_{\theta-JL}$		27					30			

**Note:**

- Single phase, half wave, 60Hz, resistive or inductive load. Derate current by 20% for capacitive load
- Thermal resistance from junction to ambient at .375" (9.5mm) lead length, PCB mounted

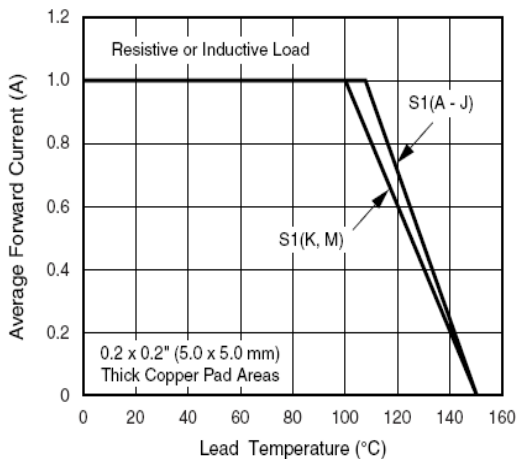
**Typical Characteristics Curves**


Figure 1. Forward Current Derating Curve

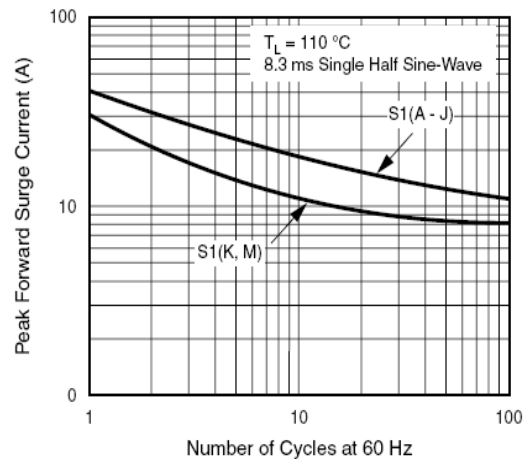


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

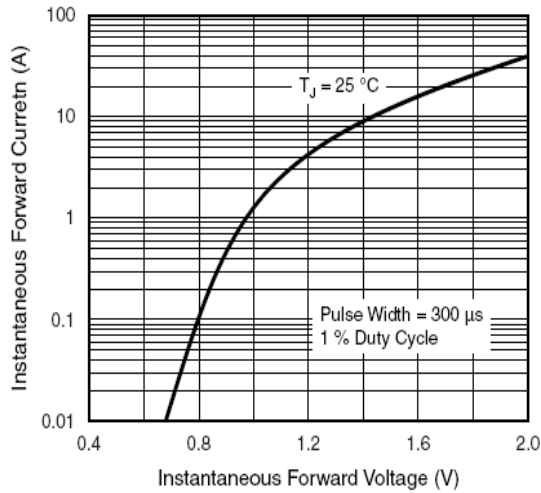


Figure 3. Typical Instantaneous Forward Characteristics

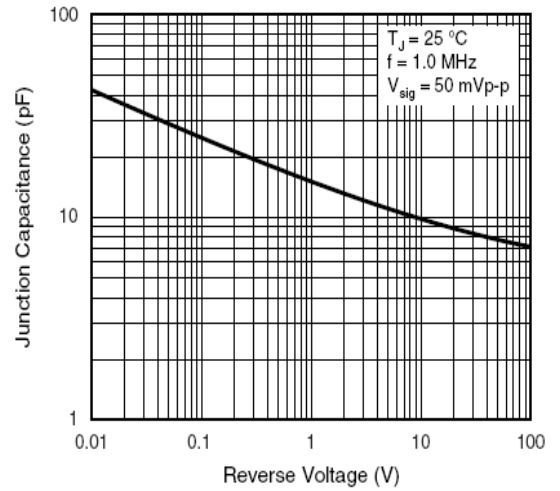


Figure 5. Typical Junction Capacitance

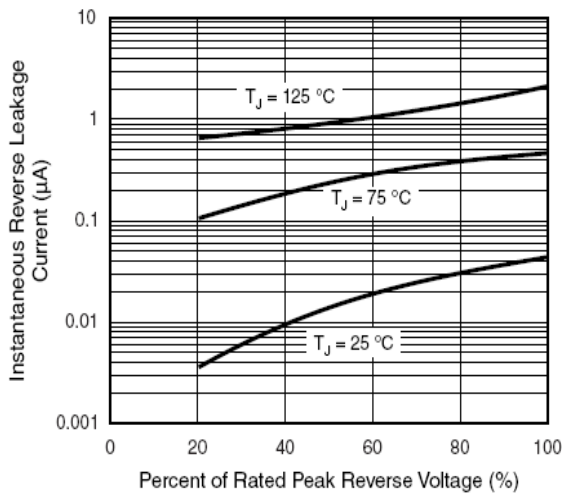


Figure 4. Typical Reverse Leakage Characteristics

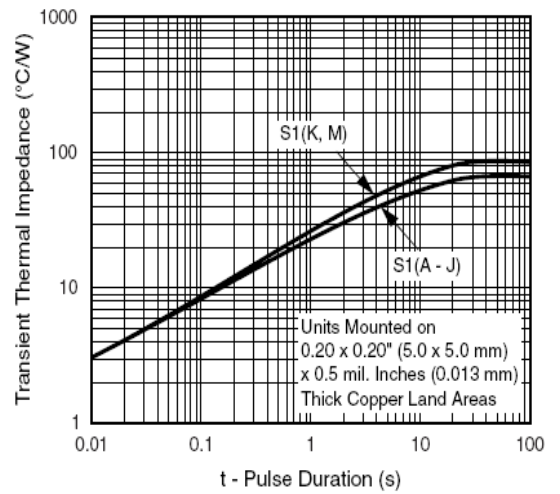
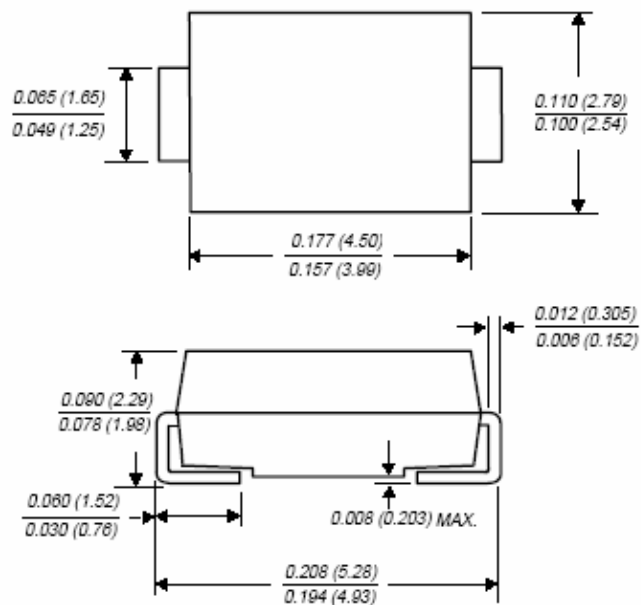


Figure 6. Typical Transient Thermal Impedance

Dimensions in inch (mm)

*Dimensions in inches and (millimeters)***DO-214AC(SMA)****Contact us:****US HEADQUARTERS****MEI SEMI INC.**

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