



# S3AB~ S3MB SURFACE MOUNT GLASS PASSIVATED RECTIFIER

## Surface Mount Glass Passivated Rectifier

### Features

- Glass passivated chip junction
- Built in strain relief
- High current capability
- Low forward voltage drop
- Fast switching speed for high efficiency
- High temperature Soldering guaranteed: 260°C/ 10 seconds at terminals
- RoHS and REACH compliance



DO-214AA (SMB)

### Mechanical Data

<b>Case:</b>	JEDEC DO-214AA (SMB), 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>	0.003 ounce, 0.093 gram

### Maximum Ratings ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	S3AB	S3BB	S3DB	S3GB	S3JB	S3KB	S3MB	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 at Ambient Temperature	3.0							A	TL=75°C (note 2)
<b>I<sub>FSM</sub></b>	Peak Forward Surge Current	100							A	8.3ms single half sine-wave (JEDEC)
<b>t<sub>rr</sub></b>	Maximum Reverse Recovery Time	2.5							μS	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	



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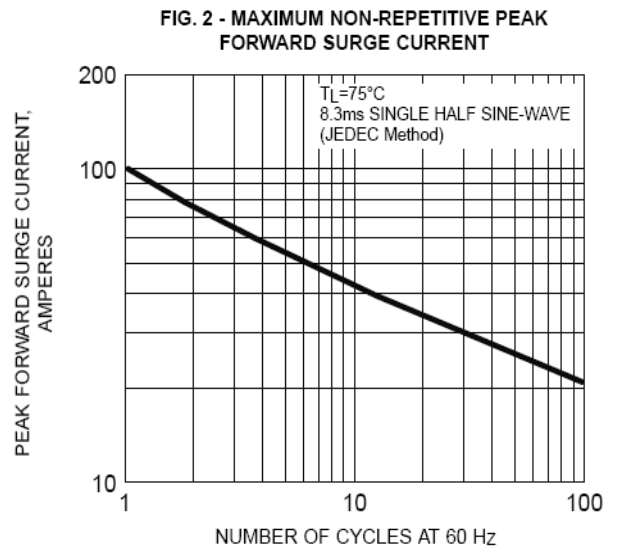
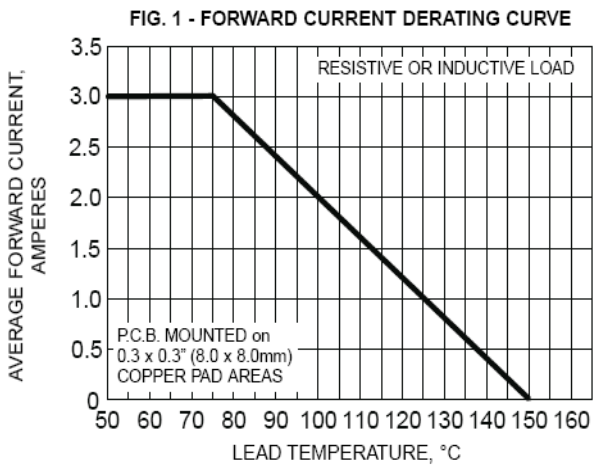
## Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	S3AB	S3BB	S3DB	S3GB	S3JB	S3KB	S3MB	Unit	Conditions
$V_F$	Max Instantaneous Forward Voltage	1.2							v	$I_F(AV)=3.0A$
$I_R$	Max DC Reverse Current at Rated DC Blocking Voltage	5.0							$\mu A$	$T_A=25^{\circ}C$
		250								$T_A=125^{\circ}C$
$C_J$	Typical Junction Capacitance	60							pF	At 1MHz, reversed voltage of 4V
$R_{\theta-JA}$	Typical Thermal Resistance	47							$^{\circ}C/W$	Note 2
$R_{\theta-JL}$		13								

**Note:**

- Single phase, half wave, 60Hz, resistive or inductive load. Derate current by 20% for capacitive load
- Thermal Resistance from junction to ambient and from junction to lead mounted on PCB with 0.3" x 0.3" (8.0mm x 8.0mm) copper pad areas.

## Typical Characteristics Curves





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FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

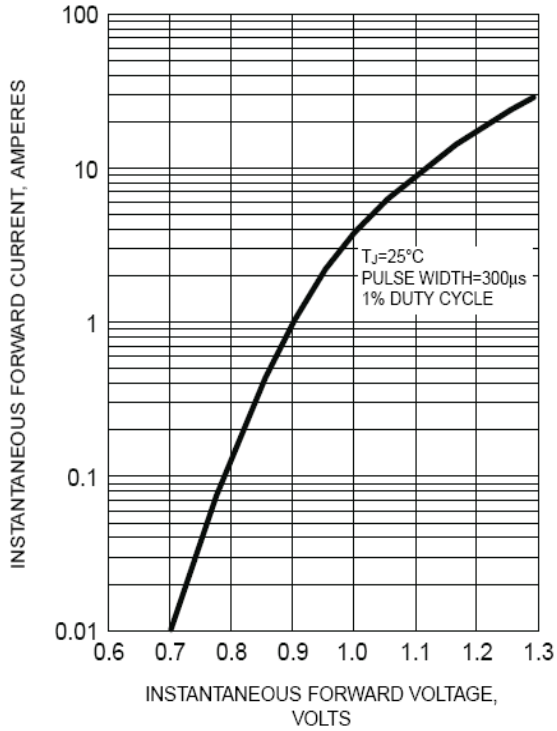


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

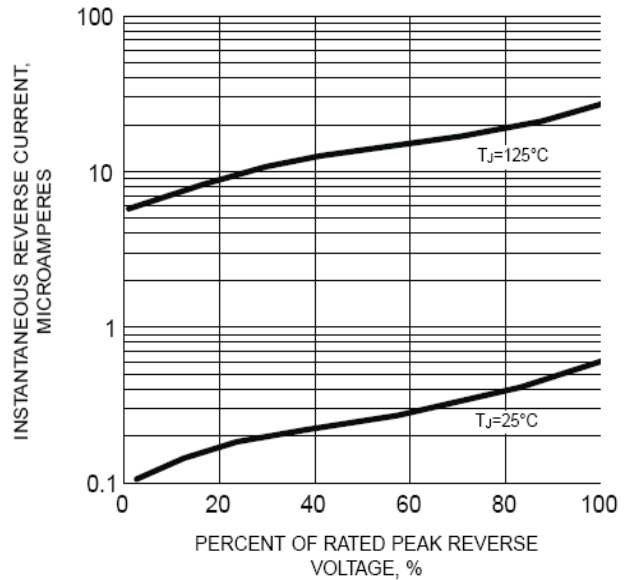


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

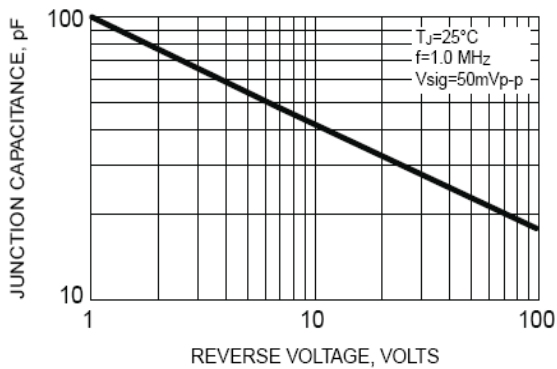
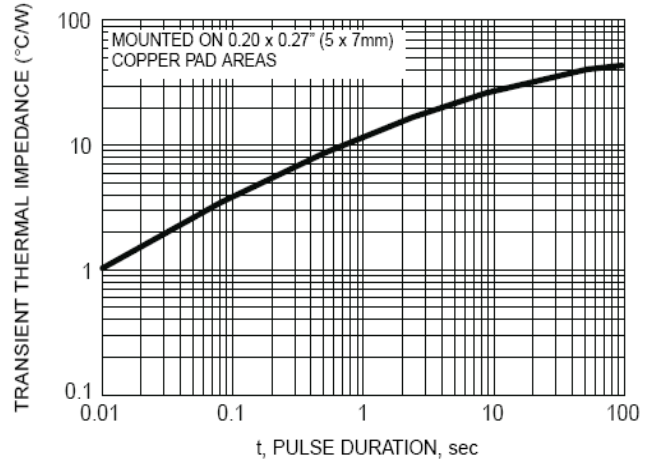


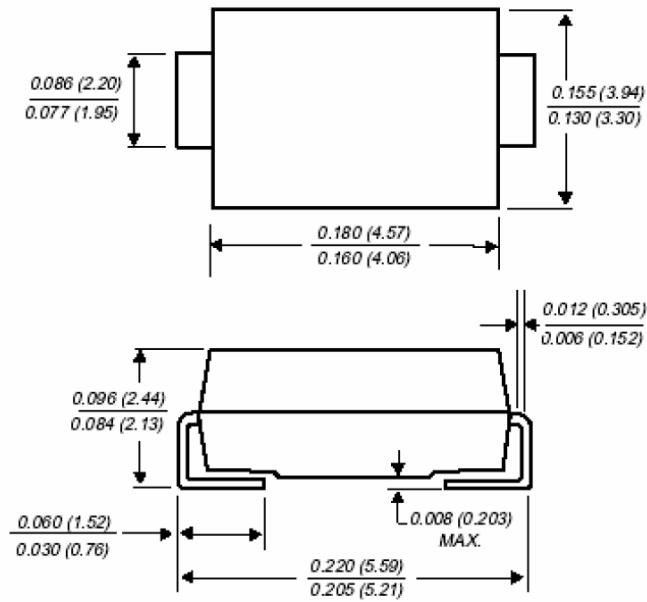
FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE





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Dimensions in inch (mm)



Dimensions in inches and (millimeters)

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