

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV

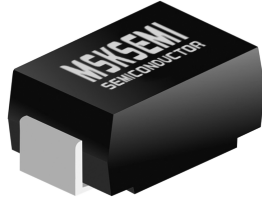


GDT



PLED

Product data sheet



SMB

### Features

- ✧ For surface mounted application
- ✧ Glass passivated junction chip
- ✧ Built-in strain relief, ideal for automated placement
- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-O
- ✧ Fast switching for high efficiency
- ✧ High temperature soldering: 260°C /10 seconds at terminals

### Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Terminals: Solder plated
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 16mm tape per E1A STD RS-481
- ✧ Weight: 0.09 gram

### Maximum Ratings and Electrical Characteristics

Rating 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%

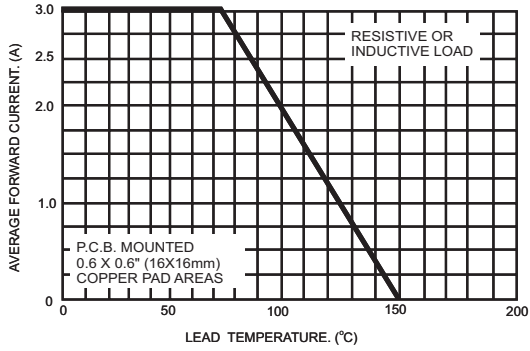
Type Number	Symbol	RS 3A	RS 3B	RS 3D	RS 3G	RS 3J	RS 3K	RS 3M	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current See Fig. 1 @ $T_L=75^\circ\text{C}$	$I_{(AV)}$	3.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	100							A
Maximum Instantaneous Forward Voltage @ 3.0A	$V_F$	1.3							V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	$I_R$	10 250							uA uA
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	150			250		500		nS
Typical Junction Capacitance ( Note 2 )	$C_j$	60							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	50.0 15.0							$^\circ\text{C}/\text{W}$ $^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

Notes: 1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

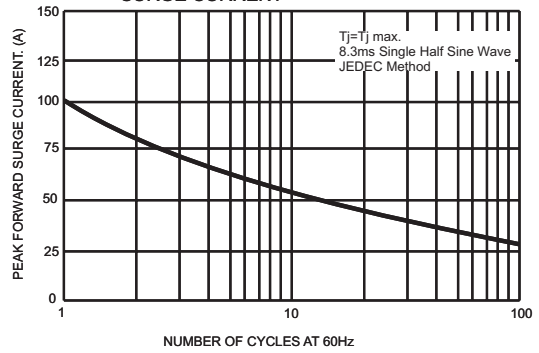
2. Measured at 1 MHz and Applied  $V_R=4.0$  Volts

3. Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted on P.C.B. with 0.6"x0.6" ( 16 x 16 mm ) Copper Pad Areas.

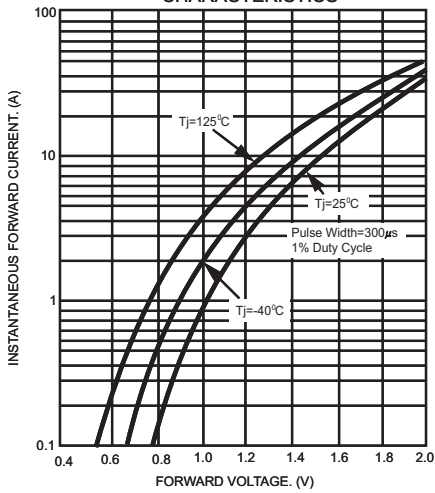
**FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE**



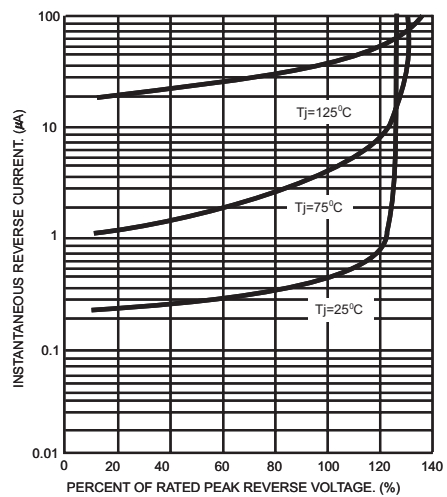
**FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



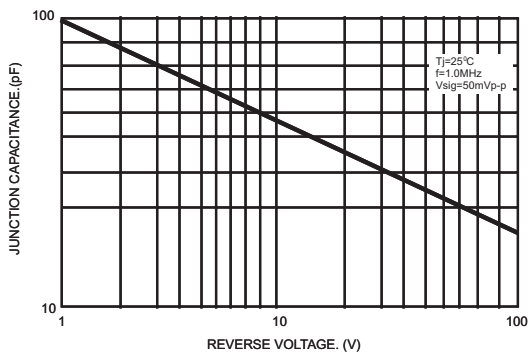
**FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



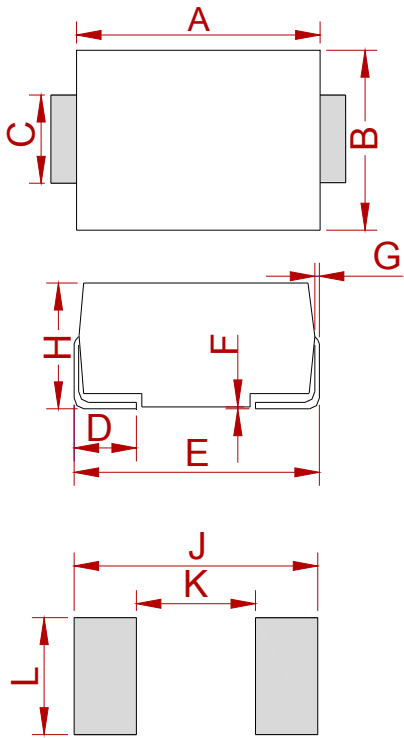
**FIG.4- TYPICAL REVERSE CHARACTERISTICS**



**FIG.5- TYPICAL JUNCTION CAPACITANCE**



**PACKAGE MECHANICAL DATA**



DO-214AA (SMB)

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.25	4.75	0.167	0.187
B	3.30	3.94	0.130	0.155
C	1.85	2.21	0.073	0.087
D	0.76	1.52	0.030	0.060
E	5.08	5.59	0.200	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.11	2.44	0.083	0.096
J	6.80		0.270	
K		2.60		0.100
L	2.40		0.090	

**REEL SPECIFICATION**

P/N	PKG	QTY
RS3A THRU RS3M	SMB	3000

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