

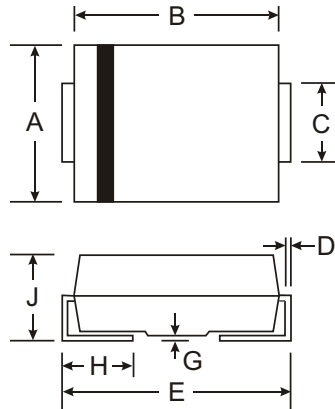
NOT RECOMMENDED FOR NEW DESIGNS,  
PLEASE USE RS1AB - RS1MB

### Features

- For Surface Mounted Applications
- Capable of Meeting Environmental Standards of MIL-STD-19500
- Plastic Material - UL Flammability Classification 94V-0
- High Reliability
- Submersible Temperature of 265 °C for 10 Seconds in Solder Bath
- Glass Passivated Junction

### Mechanical Data

- Case: SMB, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Approx. Weight: 0.093 grams
- Mounting Position: Any



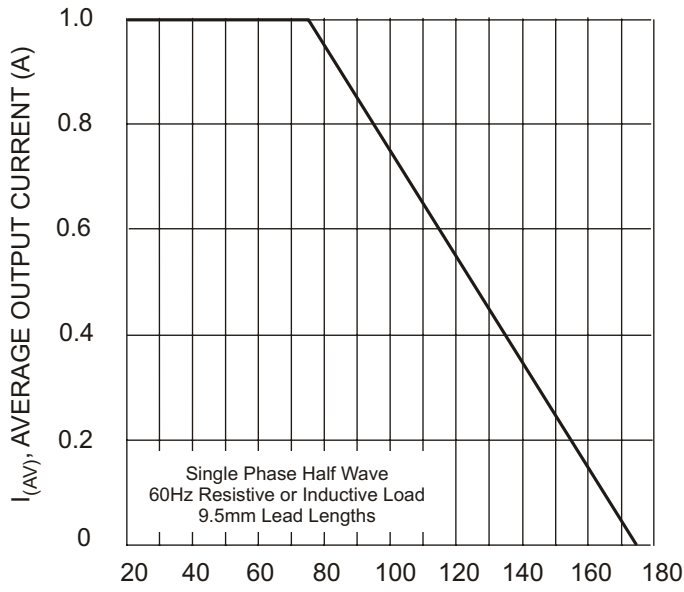
SMB		
Dim	Min	Max
A	3.30	3.94
B	4.00	4.65
C	1.95	2.21
D	0.15	0.40
E	5.00	6.00
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics

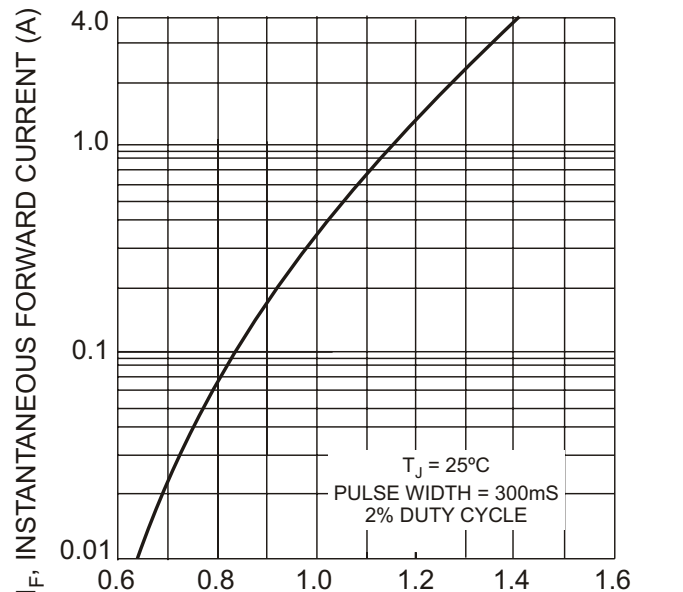
Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz resistive or inductive load.

Characteristic	Unit	FR1A	FR1B	FR1D	FR1G	FR1J	FR1K	FR1M	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 @ $T_A = 75^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage at 1.0 A	$V_F$	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A = 25^\circ\text{C}$ @ $T_A = 125^\circ\text{C}$	$I_R$	5.0							$\mu\text{A}$
Maximum Full Load Reverse Current Full Cycle Average @ $T_A = 75^\circ\text{C}$		50							$\mu\text{A}$
Maximum Reverse Recovery Time (See Note 1)	$t_{rr}$	150			250	500	500	ns	
Maximum Thermal Resistance (See Note 2)	$R_{\theta JL}$	30							$^\circ\text{C}/\text{W}$
Typical Junction Capacitance (See Note 3)	$C_J$	15							pF
Operating and Storage Temperature Rating	$T_J, T_{STG}$	-65 to +175							$^\circ\text{C}$

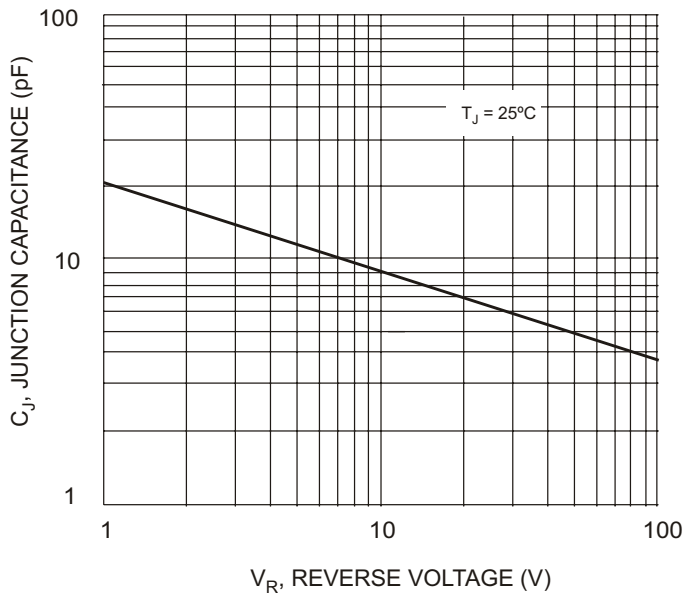
- Notes:
1. Reverse Recovery Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{RR} = 0.25\text{A}$
  2. Thermal Resistance from junction to lead with 6.0mm<sup>2</sup> copper pads
  3. Measured at 1.0MHz and applied reverse voltage of 4.0V



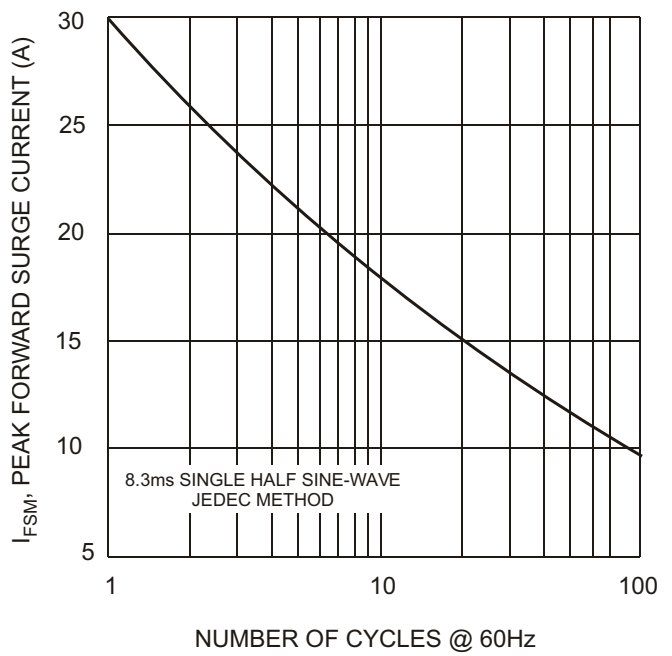
$T_A$ , AMBIENT TEMPERATURE (°C)  
Fig. 1, Forward Current Derating Curve



$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2, Typical Forward Characteristics



$V_R$ , REVERSE VOLTAGE (V)  
Fig. 3, Capacitance Characteristics



NUMBER OF CYCLES @ 60Hz  
Fig. 4, Max Non-Repetitive Peak Forward Surge Current