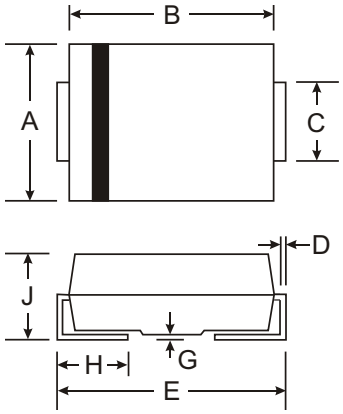
FR1A - FR1M

GLASS PASSIVATED FAST RECOVERY RECTIFIER

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



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		

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

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°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°C @ T_A = 125°C	I_R	5.0 100							μA
Maximum Full Load Reverse Current Full Cycle Average @ T_A = 75°C		50							μA
Maximum Reverse Recovery Time (See Note 1)	t_{rr}	150				250	500	500	ns
MaximumThermal Resistance (See Note 2)	$R_{\Theta JL}$	30							°C/W
Typical Junction Capacitance (See Note 3)	C_J	15							pF
Operating and Storage Temperature Rating	T_J, T_{STG}	-65 to +175							°C

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

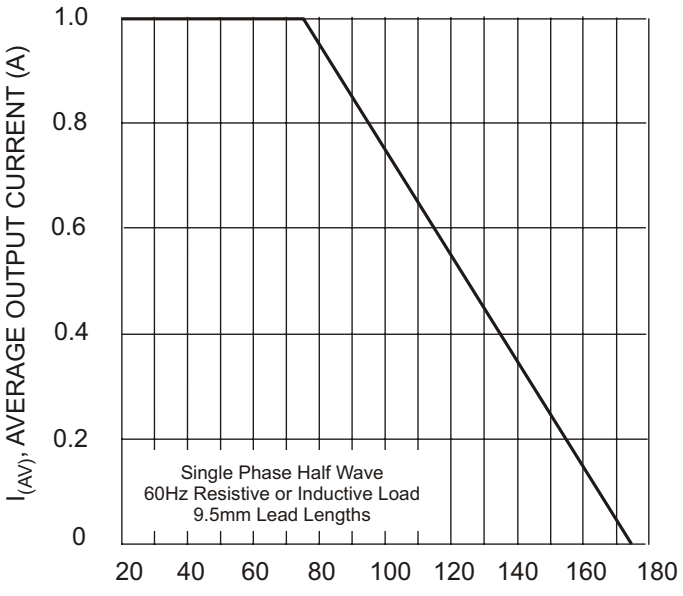


Fig. 1, Forward Current Derating Curve

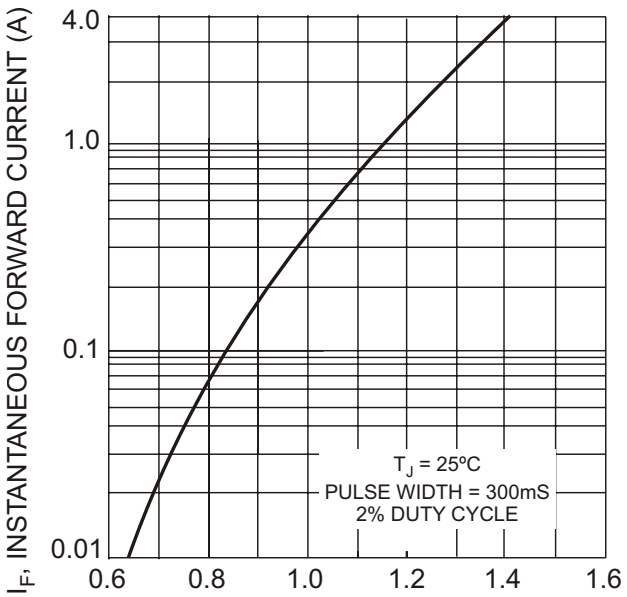


Fig. 2, Typical Forward Characteristics

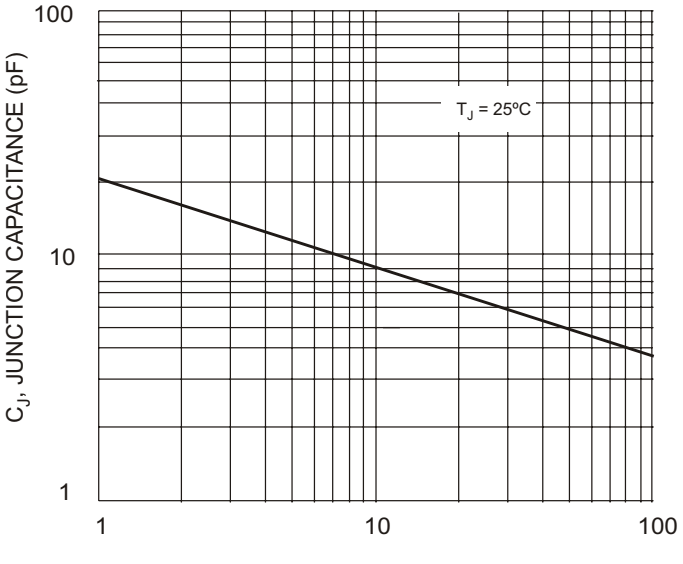


Fig. 3, Capacitance Characteristics

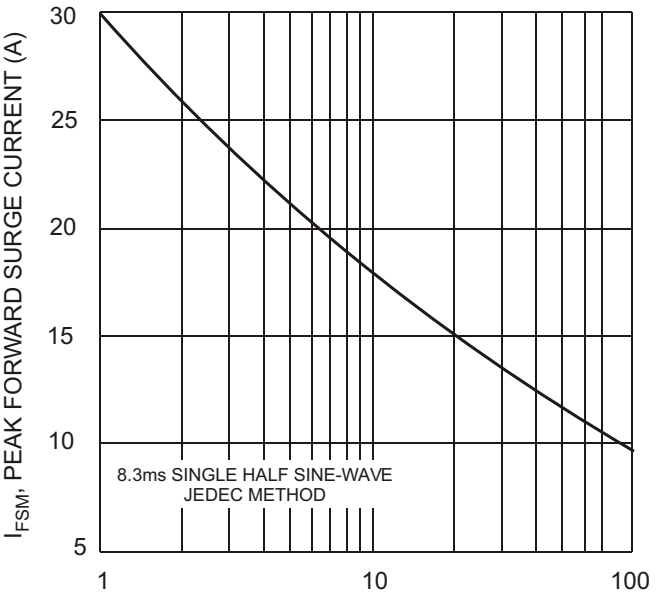


Fig. 4, Max Non-Repetitive Peak Forward Surge Current