VISHAY MAS 威世马来
GENERAL SEMICONDUCTOR

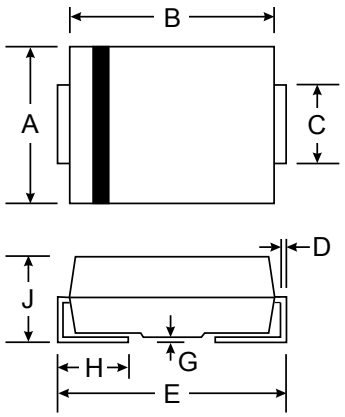
GLASS PASSIVATED FAST RECOVERY RECTIFIER

FR1A - FR1M

Vishaymas General Semiconductor

Features

- For Surface Mounted Applications
- High Temperature Metallurgically Bonded Contacts
- 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 - DO-214AA		
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	I_R	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

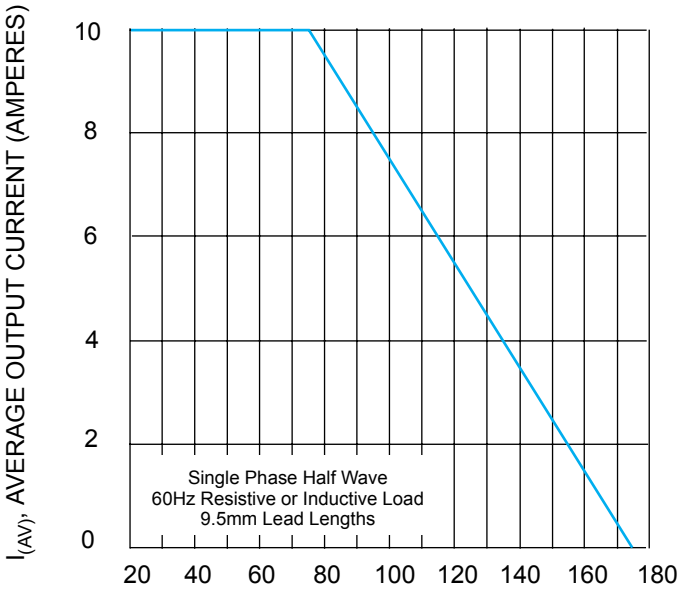
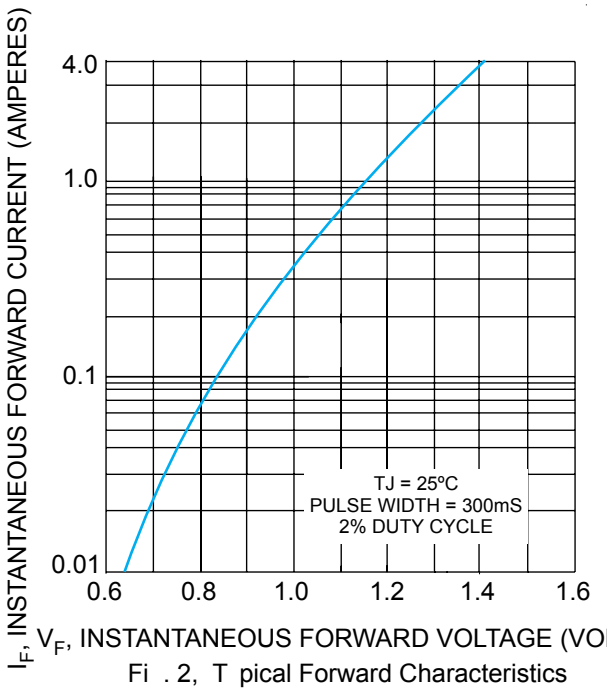


Fig. 1, Forward Current Derating Curve



Fi . 2, T pical Forward Characteristics

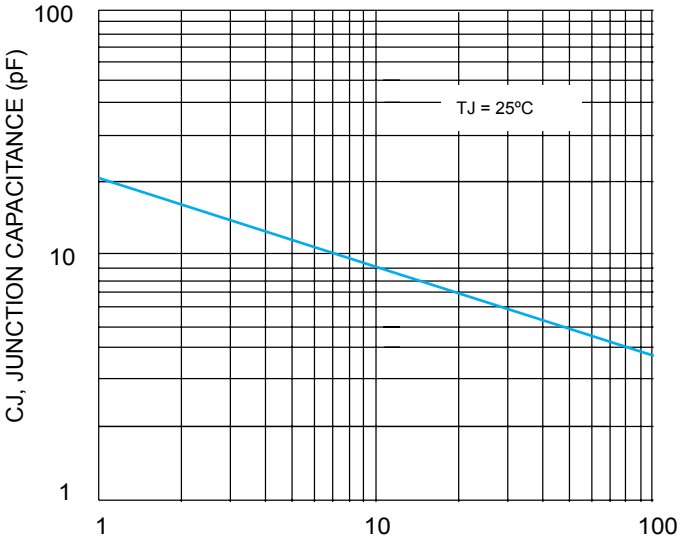


Fig. 3, Forward Current Derating Curve

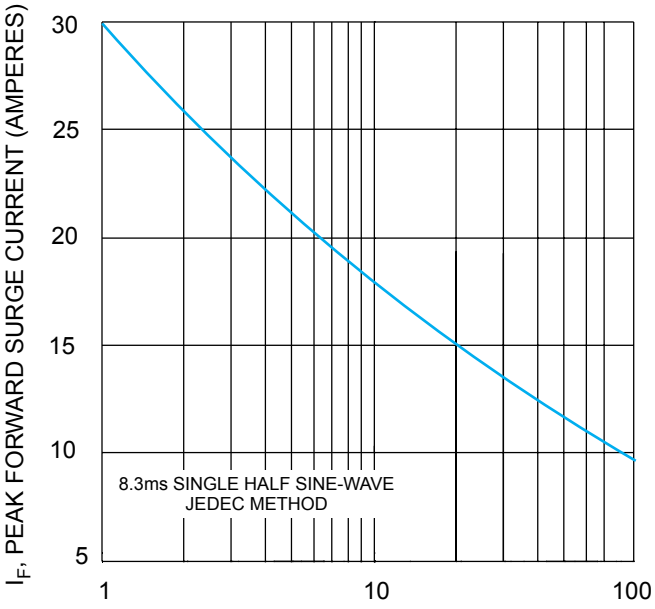


Fig. 4, Max Non-Repetitive Peak Forward Surge Curren