

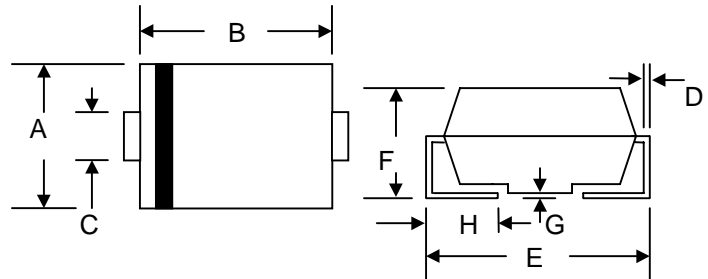
2.0A SURFACE MOUNT GLASS PASSIVATED FAST RECOVERY DIODE

FR2A – FR2M

Vishaymas General Semiconductor

Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Surge Overload Rating to 50A Peak
- Low Power Loss
- Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O



Mechanical Data

Case: SMB/DO-214AA, Molded Plastic

Terminals: Solder Plated, Solderable

per MIL-STD-750, Method 2026

Polarity: Cathode Band or Cathode Notch

Marking: Type Number

Weight: 0.093 grams (approx.)

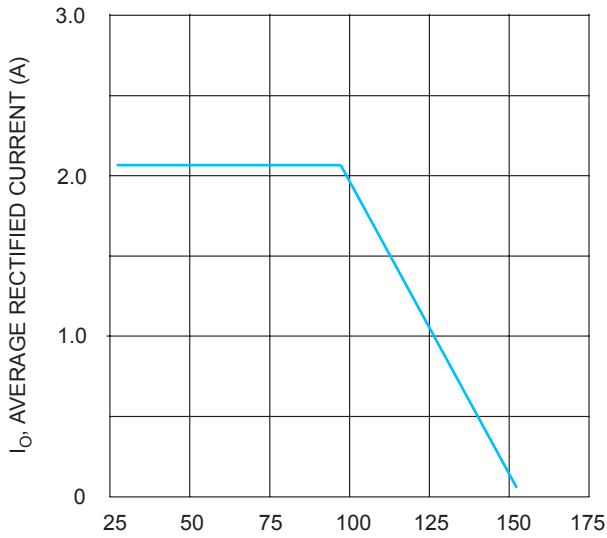
Lead Free: For RoHS / Lead Free Version

SMB/DO-214AA		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.70
C	1.91	2.11
D	0.152	0.305
E	5.08	5.59
F	2.13	2.44
G	0.051	0.203
H	0.76	1.27
All Dimensions in mm		

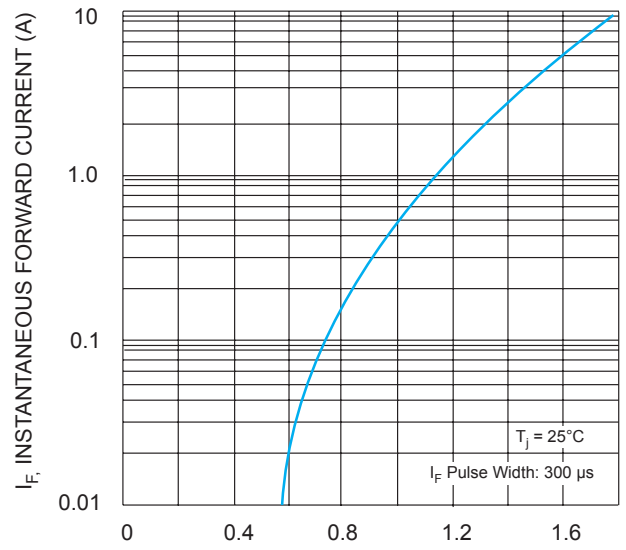
Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	FR2A	FR2B	FR2D	FR2G	FR2J	FR2K	FR2M	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V _{RWM}	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V _R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	560	700	V
Average Rectified Output Current @T _L = 100°C	I _O	2.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	50							A
Forward Voltage @I _F = 2.0A	V _{FM}	1.30							V
Peak Reverse Current @T _A = 25°C At Rated DC Blocking Voltage @T _A = 125°C	I _{RM}	5.0 200							μA
Reverse Recovery Time (Note 1)	t _{rr}	150					250	500	nS
Typical Junction Capacitance (Note 2)	C _j	50							pF
Thermal Resistance Junction to Ambient(Note3)	R _{θJA}	55							°C/W
Thermal Resistance Junction to Lead(Note3)	R _{θJL}	18							
Operating and Storage Temperature Range	T _j , T _{STG}	-55 to +150							°C

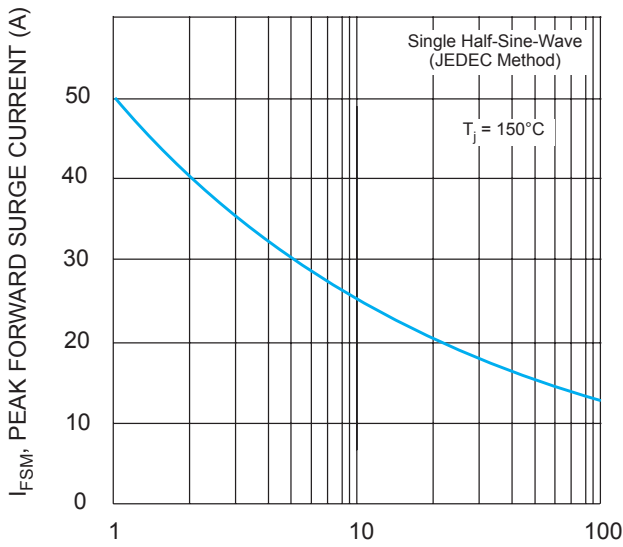
- Note: 1. Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
 3. Mounted on PCB with 7.0mm² copper pads.



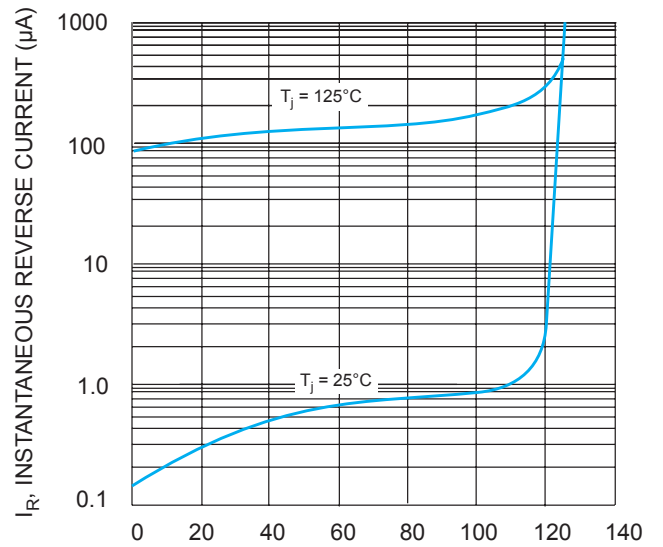
T_L , LEAD TEMPERATURE (°C)
Fig. 1 Forward Current Derating Curve



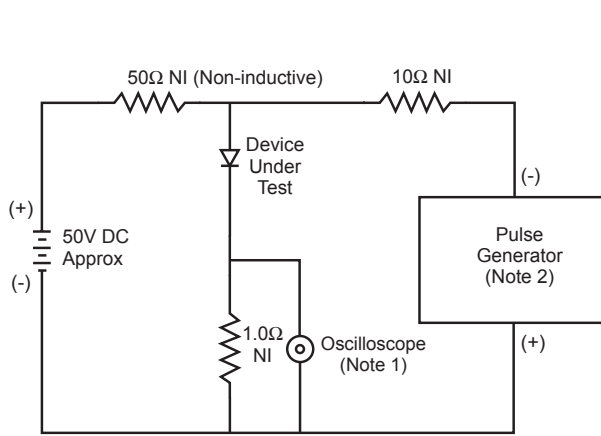
V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics



NUMBER OF CYCLES AT 60 Hz
Fig. 3 Forward Surge Current Derating Curve



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
Fig. 4, Typical Reverse Characteristics



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.

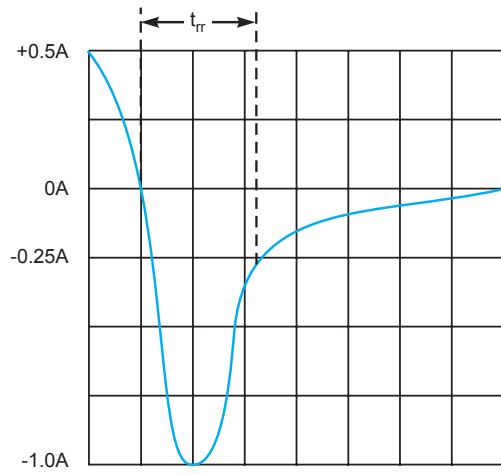


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

