



FR2A THRU FR2M

2A Fast Recovery Surface Mount Rectifier

Voltage Range 50 to 1000 Volts
Current 2.0 Amperes

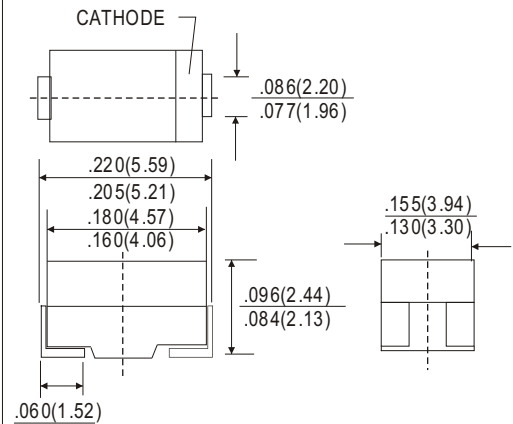
Features

- * Low profile package
- * Plastic package has under writers laboratory 94V-0
- * Ideal for surface mounted application
- * Glass passivated chip junction
- * Built-in strain relief design
- * Fast switching for high efficient
- * High temperture soldering : 250°C/10 seconds at terminals

Mechanical Data

- * Case: JEDEC DO-214AA molded plas body
- * Terminal: Solder plated, solderable per MIL-STD-750 method 2026
- * Polarity: Color band denotes cathode
- * Weight: 0.093 grams

DO-214AA(SMB)



Dimensions in inches and (millimeters)

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	Symbols	FR2A	FR2B	FR2D	FR2G	FR2J	FR2K	FR2M	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at $T_J=90^{\circ}\text{C}$	I_o	2.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	50							Amps
Typical Junction Capacitance (Note1)	C_J	40							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	18							$^{\circ}\text{C/W}$
Storage Temperature Range	T_{STG}	-55 to +150							$^{\circ}\text{C}$
Operating Temperature Range	T_{OP}	-55 to +150							$^{\circ}\text{C}$

Electrical characteristics ($A_T=25^{\circ}\text{C}$ unless otherwise noted)

Characteristics	Symbols	FR2A	FR2B	FR2D	FR2G	FR2J	FR2K	FR2M	Units
Maximum Forward Voltage at $I_o=2.0\text{A}$	V_F	1.3							Volts
Maximum Reverse Current at 25°C	I_R	5							μA
Maximum Reverse Current at 100°C	I_R	50							μA
Maximum Reverse Recovery Time (Note 3)	T_{RR}	150				250	500		nS
Marking		SMF 201B	SMF 202B	SMF 203B	SMF 204B	SMF 205B	SMF 206B	SMF 207B	

Notes: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

2. Thermal Resistance from Junction to lead P.C.B. mounted on 0.3x0.3"(8.0x8.0mm) copper pad areas

[Http://www.upm.com.tw](http://www.upm.com.tw)

E-mail: upm.tw@msa.hinet.net



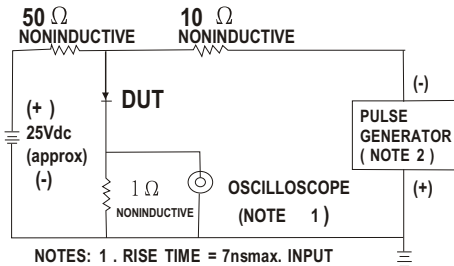
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RATINGS AND CHARACTERISTIC CURVES (FR2A THRU FR2M)

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. RISE TIME = 7nsmax. INPUT IMPEDANCE= 1 MEGOHM 22pf
2. RISE TIME = 10ns max. SOURCE IMPEDANCE = 50ohmsf

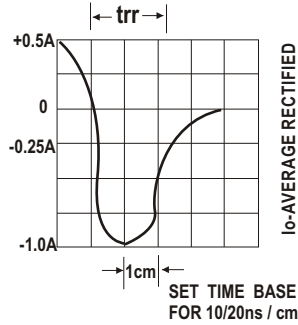


FIG.2 MAXIMUM FORWARD CURRENT DERATING CURVE

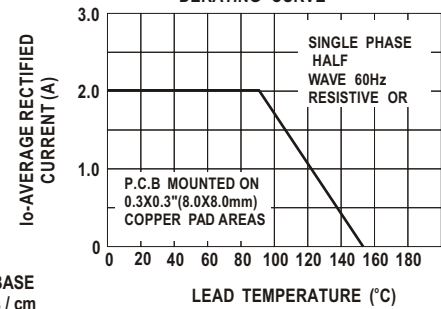


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

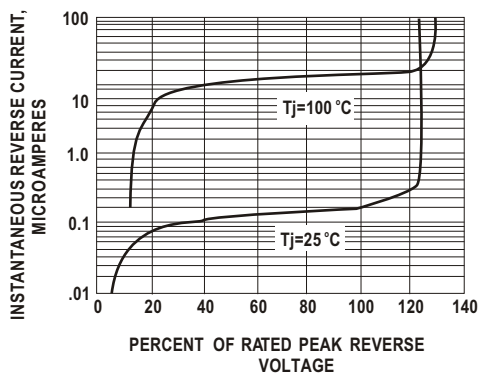


FIG.4 MAXIMUM FORWARD SURGE CURRENT

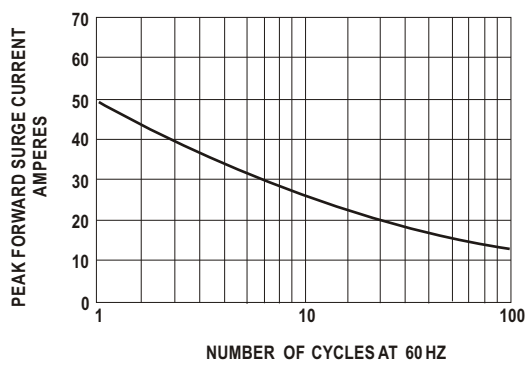


FIG. 5 TYPICAL JUNCTION CAPACITANCE

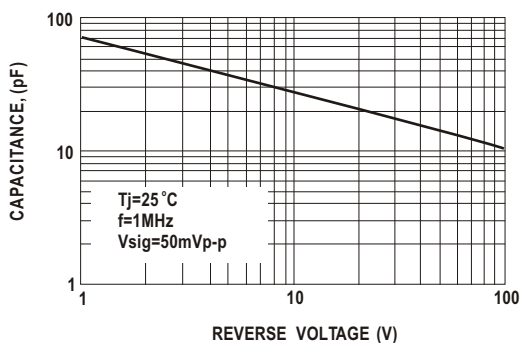


FIG. 6 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

