

# FR2A THRU FR2K

## SURFACE MOUNT ULTRAFAST RECTIFIER VOLTAGE - 50 to 800 Volts CURRENT - 2.0 Amperes

### FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Fast recovery times for high efficiency
- Plastic package has Underwriters Laboratory

Flammability Classification 94V-O

- Glass passivated junction
- High temperature soldering:  
260 /10 seconds at terminals

### MECHANICAL DATA

Case: JEDEC DO-214AA molded plastic

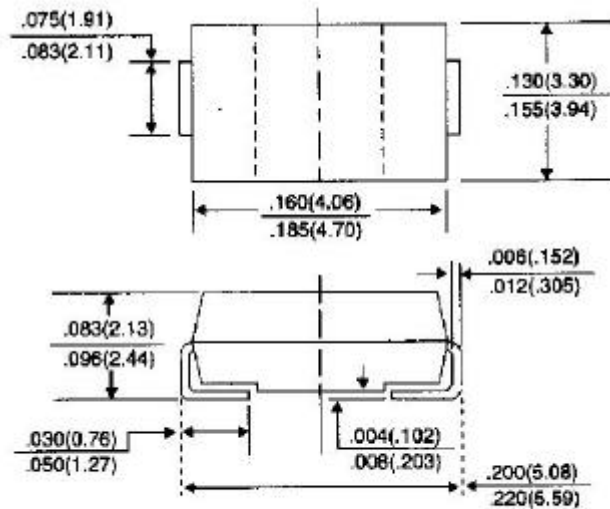
Terminals: Solder plated, solderable per MIL-STD-750,  
Method 2026

Polarity: Indicated by cathode band

Standard packaging: 12mm tape (EIA-481)

Weight: 0.003 ounce, 0.093 gram

### SMB/DO-214AA



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Resistive or inductive load.

For capacitive load, derate current by 20%.

	SYMBOLS	FR2A	FR2B	FR2D	FR2G	FR2J	FR2K	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	Volts
Maximum Average Forward Rectified Current, at $T_L=90$	$I_{(AV)}$	2.0						Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	50.0						Amps
Maximum Instantaneous Forward Voltage at 2.0A	$V_F$	1.30						Volts
Maximum DC Reverse Current $T_A=25$ At Rated DC Blocking Voltage $T_A=125$	$I_R$	5.0 200						A
Maximum Reverse Recovery Time (Note 1) $T_J=25$	$T_{RR}$	150				250	500	nS
Typical Junction capacitance (Note 2)	$C_J$	40						pF
Maximum Thermal Resistance (Note 3)	$R_{JL}$	20.0						/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-50 to +150						

### NOTES:

1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{rr}=0.25A$

2. Measured at 1 MHz and Applied reverse voltage of 4.0 volts
3. 8.0mm<sup>2</sup> (.013mm thick) land areas

## RATING AND CHARACTERISTIC CURVES

### FR2A THRU FR2K

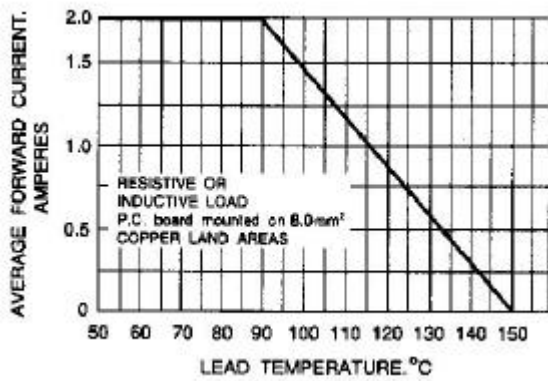


Fig. 1-FORWARD CURRENT DERATING CURVE

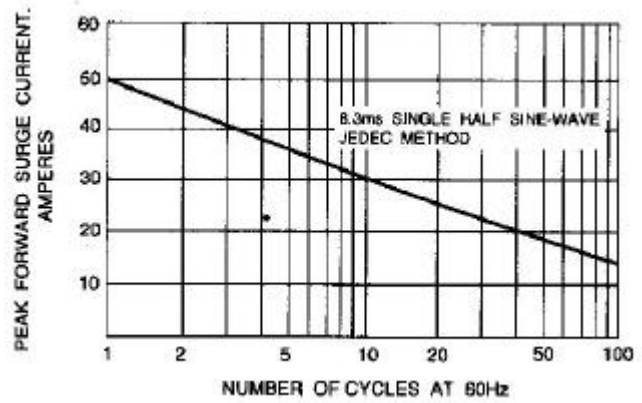


Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

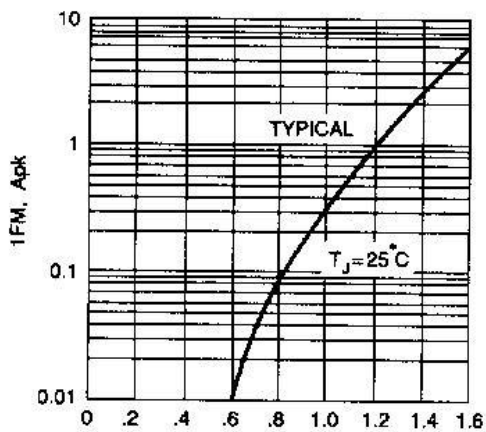


Fig. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

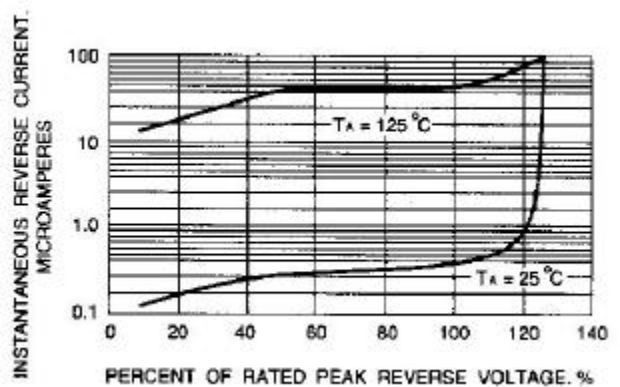


Fig. 4-TYPICAL REVERSE CHARACTERISTICS

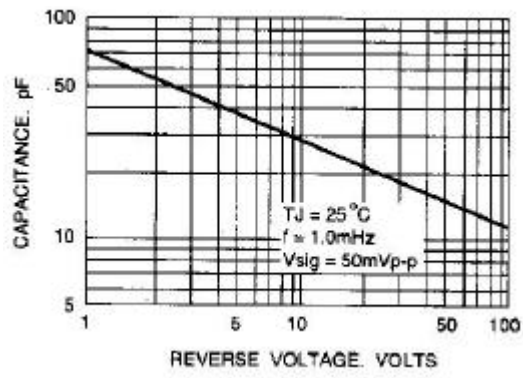


Fig. 5-TYPICAL JUNCTION CHARACTERISTICS

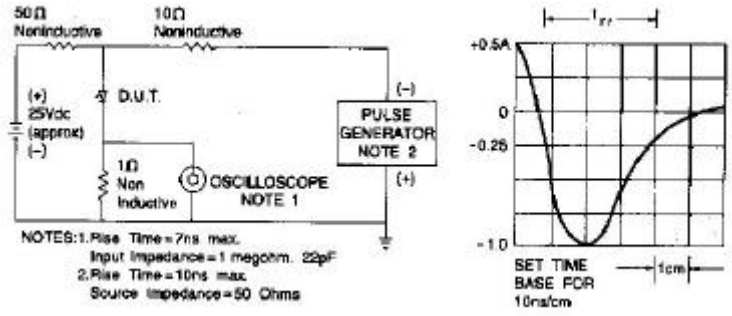


Fig. 6-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM