

# 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  $\text{C}$ /10 seconds at terminals

### MECHANICAL DATA

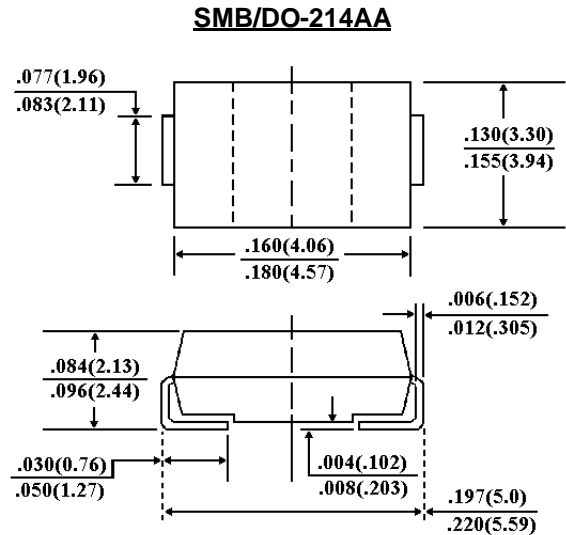
Case: JEDEC DO-214AA molded plastic

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



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $\text{C}$  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 $T_L=90 \text{ C}$	$I_{(AV)}$	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 $T_A=25 \text{ C}$ At Rated DC Blocking Voltage $T_A=125 \text{ C}$	$I_R$	5.0 200						$\mu\text{g A}$
Maximum Reverse Recovery Time (Note 1) $T_J=25 \text{ C}$	$T_{RR}$	150				250	500	nS
Typical Junction capacitance (Note 2)	$C_J$	40						pF
Maximum Thermal Resistance (Note 3)	$R_{\text{KJL}}$	20.0						$\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-50 to +150						$\text{C}$

### 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

# RATING AND CHARACTERISTIC CURVES

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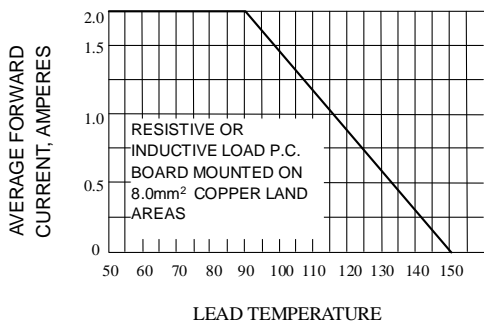


Fig. 1-FORWARD CURRENT DERATING CURVE

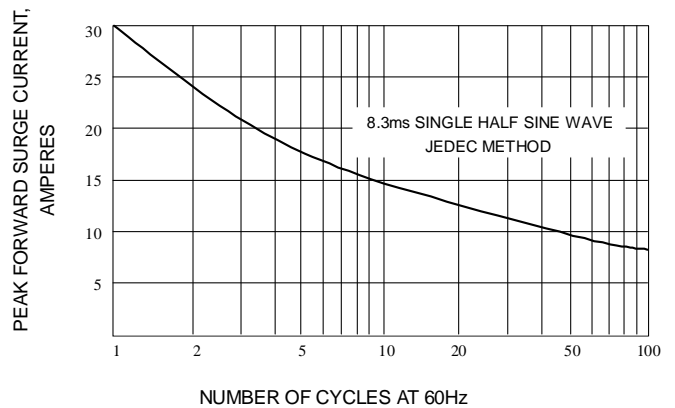


Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

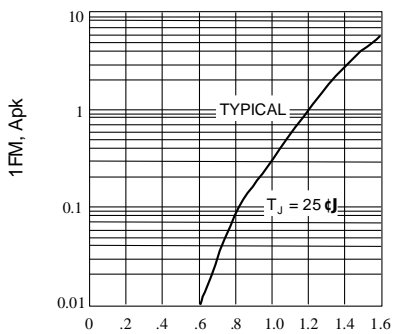


Fig. 3-FORWARD CHARACTERISTICS

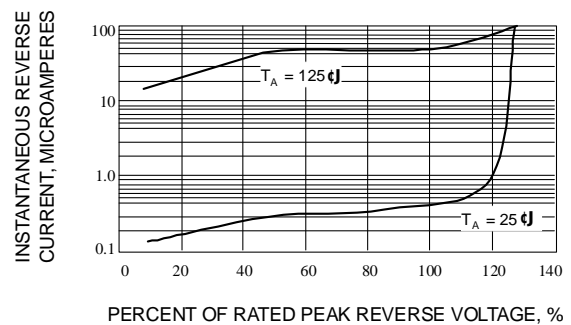


Fig. 4-TYPICAL REVERSE CHARACTERISTICS

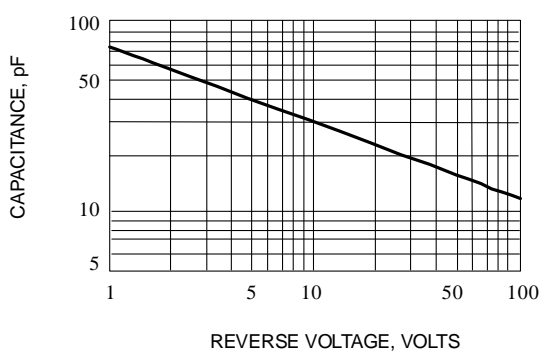


Fig. 5-TYPICAL JUNCTION CHARACTERISTICS

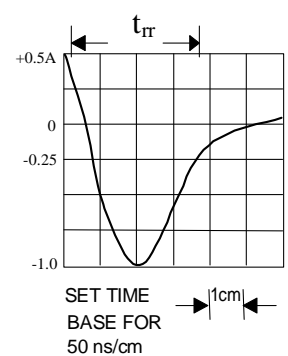
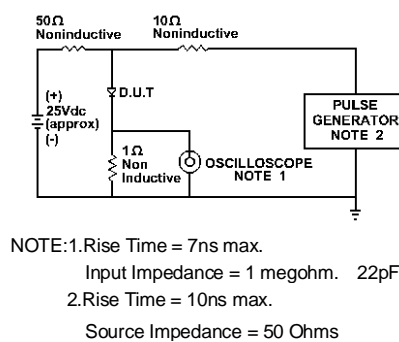


Fig. 6-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM