

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°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO-214AA molded plastic

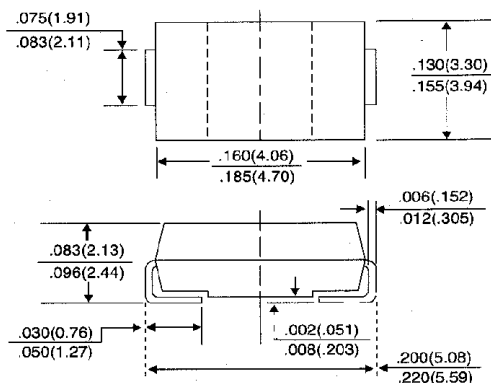
Terminals: Solder plated solderable per MIL-STD-750, Method 2026

Polarity: Indicated by cathode band

Standard Packaging: 12mm tape (EIA-481)

Weight: 0.003 ounces, 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°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°C at Rated DC Blocking Voltage T _A = 125°C	I _R	5.0 200						μA
Maximum Reverse Recovery Time (NOTE 1) T _J = 25°C	T _{RR}	150				250	500	nS
Typical Junction Capacitance (NOTE 2)	C _J	40						pf
Maximum Thermal Resistance (NOTE 3)	R _{θJL}	20.0						°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-50 to +150						°C

NOTES:

1. Reverse Recovery Test Conditions: 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 volts.
3. 8.0mm² (.013mm thick) land areas.

RATING AND CHARACTERISTIC CURVES FR2A THRU FR2K

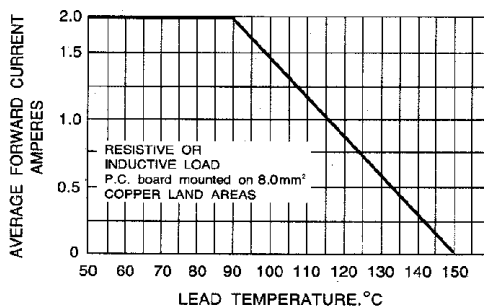


FIG. 1 - FORWARD CURRENT DERATING CURVE

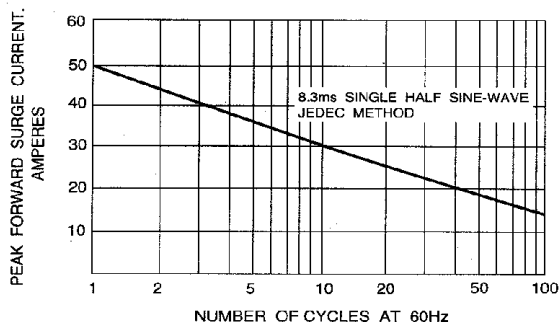


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

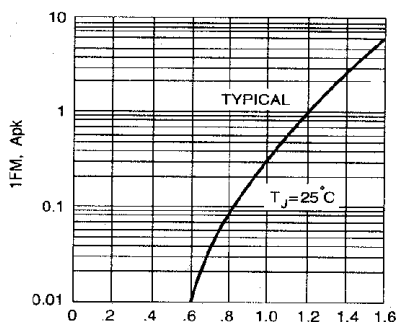


Fig. 3 - FORWARD CHARACTERISTICS

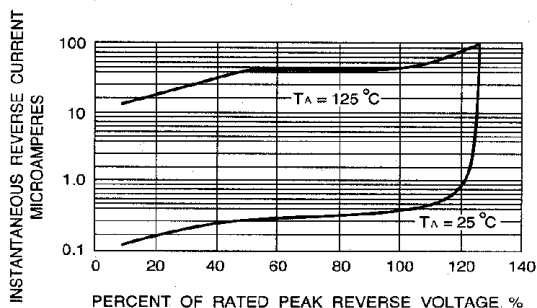


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

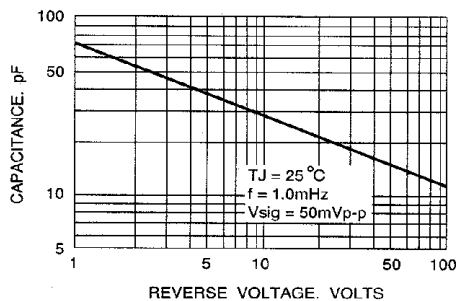


FIG. 5 - TYPICAL JUNCTION CHARACTERISTICS

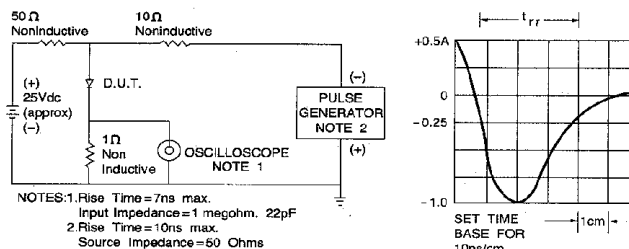


FIG. 6 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM