FR1A THRU FR1K

SURFACE MOUNT FAST SWITCHING RECTIFIER
VOLTAGE - 50 TO 800 Volts CURRENT - 1.0 Ampere

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

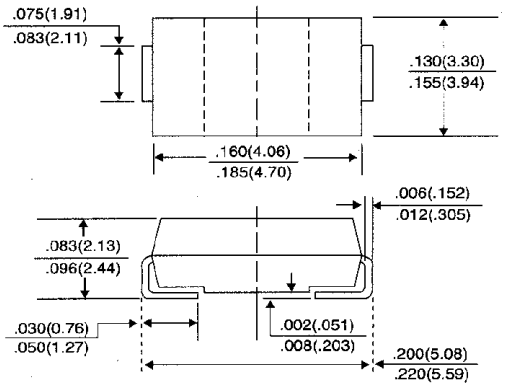
Terminals: Solder plated solderable per MIL-STD-750. Method 2026

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	FR1A	FR1B	FR1D	FR1G	FR1J	FR1K	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	$I_{(AV)}$	1.0						Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30						Amps
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.3						Volts
Maximum DC Reverse Current T_A = 25°C at Rated DC Blocking Voltage T_A = 125°C	I_R	5.0 150						μA
Maximum Reverse Recovery Time (NOTE 1) T_J = 25°C	T_{RR}	150				250	500	nS
Typical Junction Capacitance (NOTE 2)	C_J	12						pf
Maximum Thermal Resistance (NOTE 3)	RΘJL	30						°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.

SURGE COMPONENTS, INC. 1016 GRAND BLVD., DEER PARK, NY 11729
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RATING AND CHARACTERISTIC CURVES
FR1A THRU FR1K

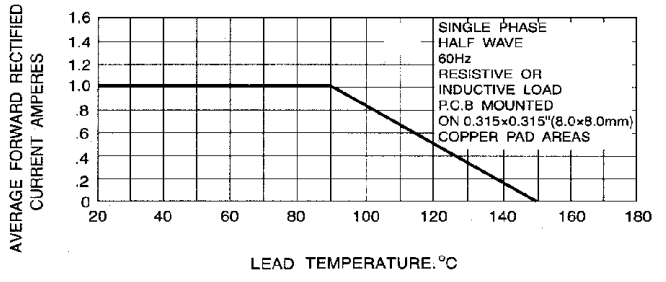

Fig. 1 – FORWARD CURRENT DERATING CURVE

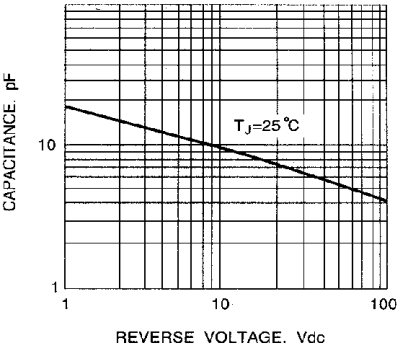

Fig. 2 – TYPICAL JUNCTION CAPACITANCE

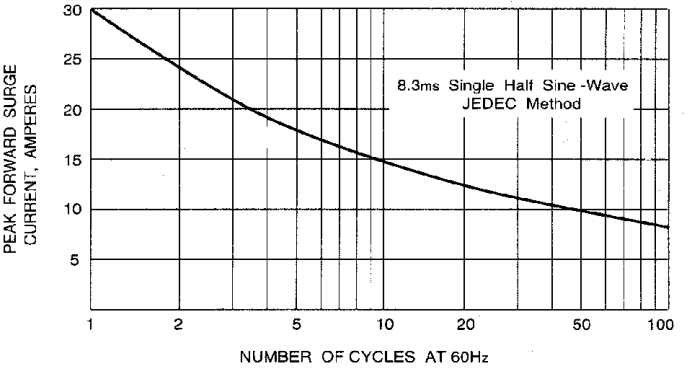

Fig. 3 – PEAK FORWARD SURGE CURRENT

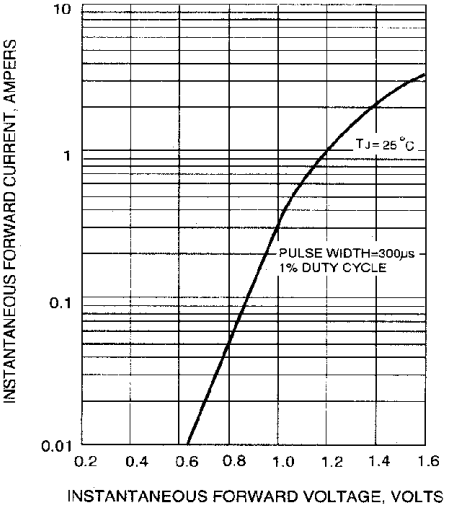

Fig. 4 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

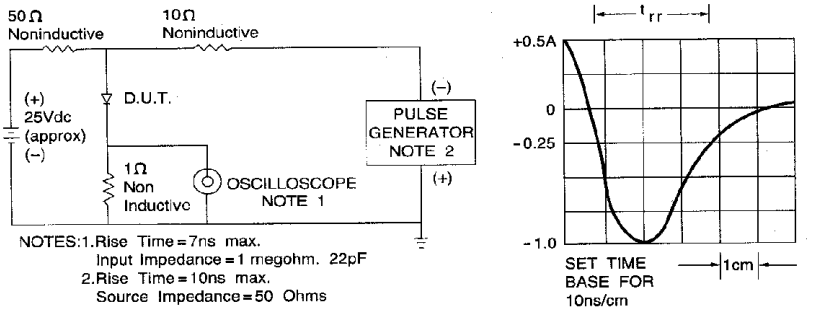

Fig. 5-REVERSE RECOVERY TIME CHARACTERISTIC
AND TEST CIRCUIT DIAGRAM

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