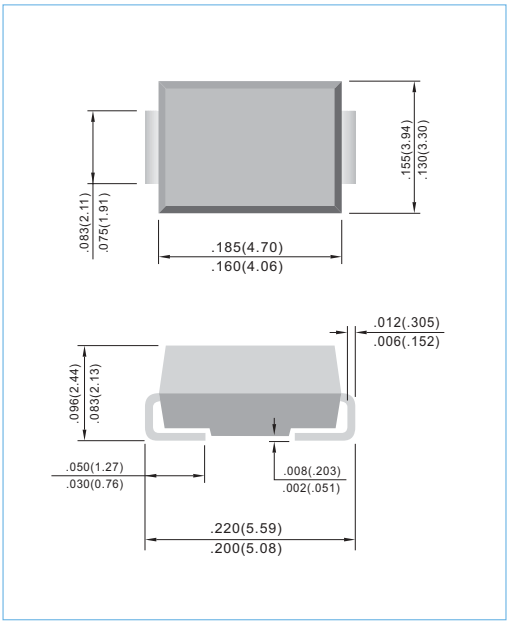
DATA SHEET

FR2A~FR2K

SURFACE MOUNT FAST RECOVERY RECTIFIER

VOLTAGE 50 to 800 Volts **CURRENT** 2.0 Ampere

SMB/DO-214AA Unit: inch (mm)



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
- Both normal and Pb free product are available :
  Normal : 80~95% Sn, 5~20% Pb
  Pb free: 98.5% Sn above

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.

PARAMETER	SYMBOL	FR2A	FR2B	FR2D	FR2G	FR2J	FR2K	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	V
Maximum Average Rectified Current at T_L=90 °C	I_O	2.0						A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	50						A
Maximum Forward Voltage at 2.0A	V_F	1.3						V
Maximum DC Reverse Current T_A=25°C at Rated DC Blocking Voltage T_A=125°C	I_R	5.0 150						uA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	150				250	500	ns
Maximum Junction capacitance (Note 2)	C_J	40						pF
Typical Junction Resistance(Note 3)	RθJL	20						°C / W
Operating Junction and Storage Temperature Rating	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 MHz and applied V_r = 4.0 volts.
3. 8.0 mm^2 (.013mm thick) land areas.

RATING AND CHARACTERISTIC CURVES

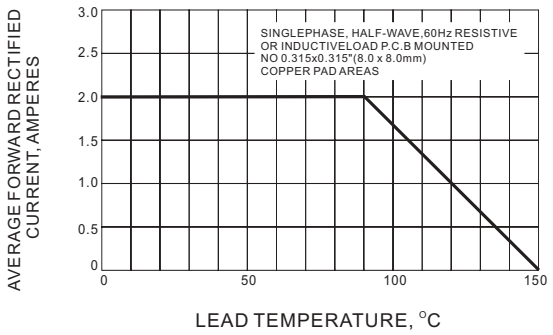


Fig.1 FORWARD CURRENT DERATING CURVE

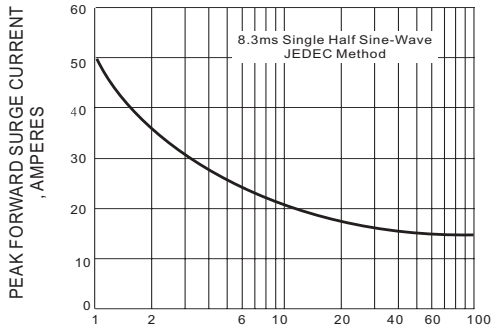


Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

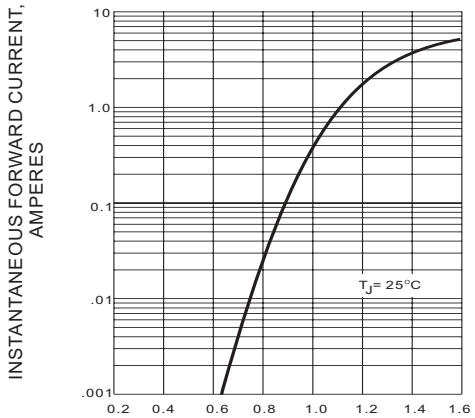


Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

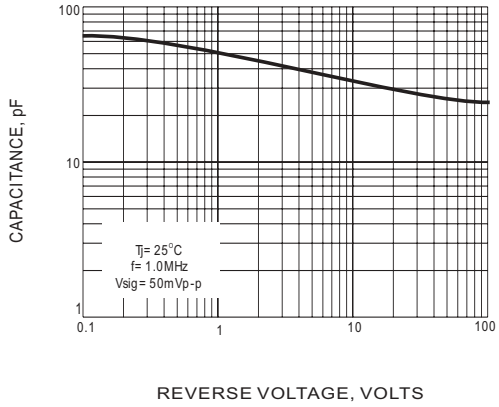


Fig.4 TYPICAL JUNCTION CAPACITANCE