



DATA SHEET

FR2A~FR2K

SURFACE MOUNT FAST RECOVERY RECTIFIER

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

SMB/DO-214AA

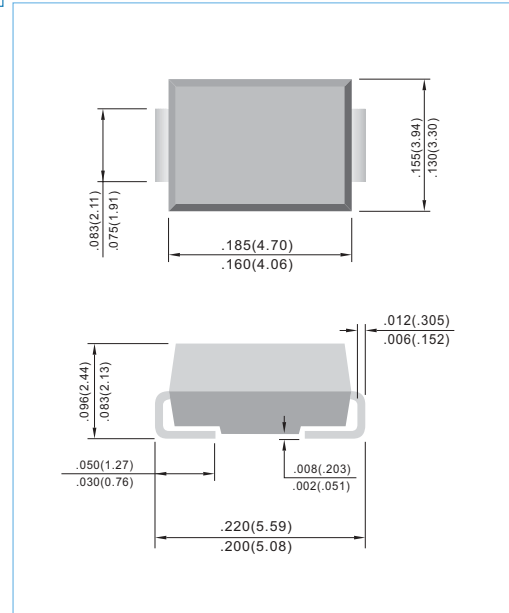
Unit: inch (mm)

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 $T_L=90^\circ\text{C}$	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 $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$	I_R	5.0 150						μA
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)	$R_{\theta JL}$	20						$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Rating	T_J, T_{STG}	-50 TO +150						$^\circ\text{C}$

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

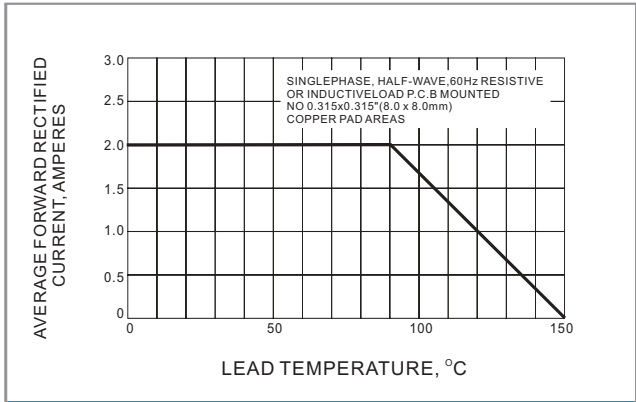


Fig.1 FORWARD CURRENT DERATING CURVE

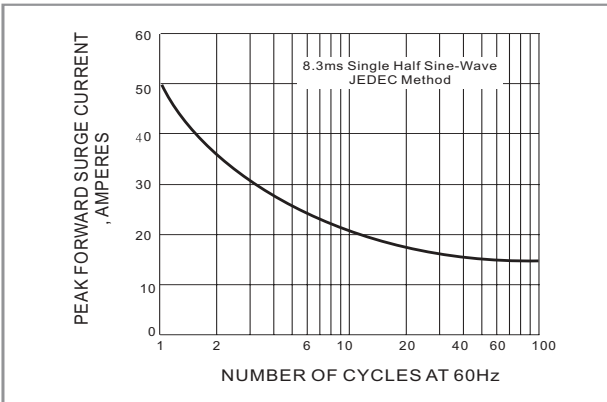


Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

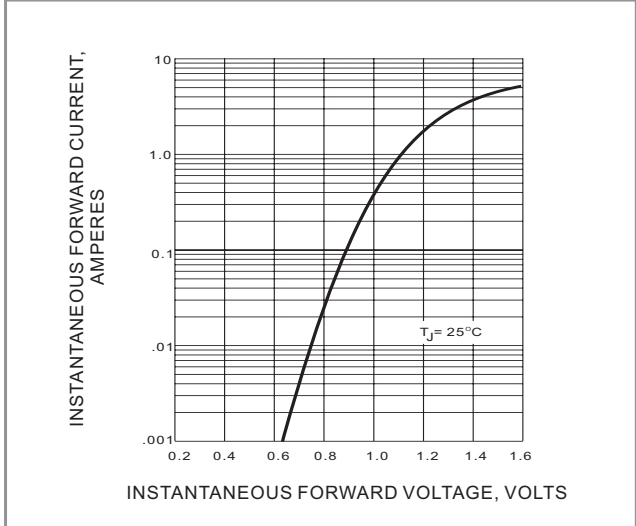


Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

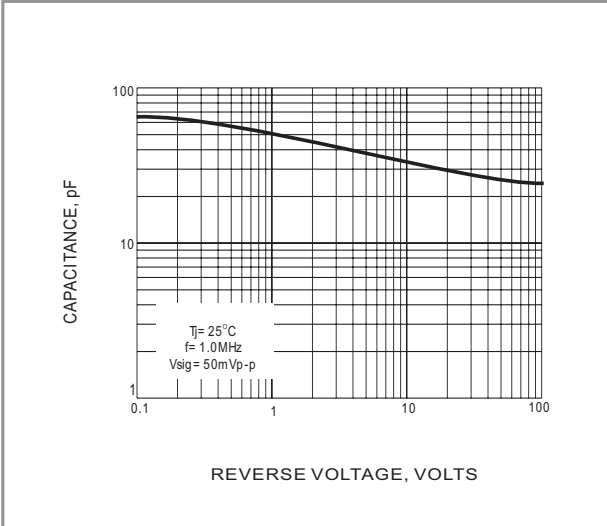


Fig.4 TYPICAL JUNCTION CAPACITANCE