



FR3A THRU FR3M

3.0AMP Surface Mount Fast Recovery Rectifiers

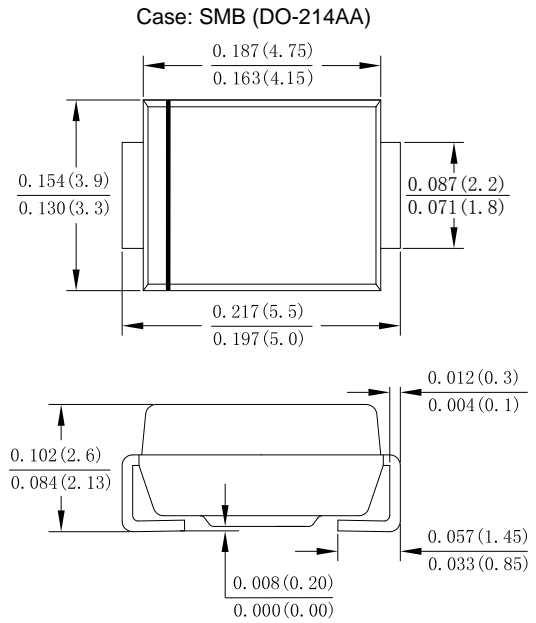
Features

- Deally Suited for Automatic Assembly
- Low Power Loss,High Efficiency
- For Use in Low Voltage Application
- Plastic Case Material has UL Flammability

Classification Rating 94V-0

Mechanical Data

- Case: Molded plastic SMB
- Terminals: Plated leads solderable per MIL-STD-750,Method 2026 guaranteed
- Polarity:Cathode Band or Cathode Notch
- Mounting Position: Any
- Making: Type Number



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load

For capacitive load derate current by 20%

Type Number	SYMBOL	FR3A	FR3B	FR3D	FR3G	FR3J	FR3K	FR3M	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average Rectified Output Current @ $T_L = 90^\circ C$	$I_{F(AV)}$	3.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	110							A
Forward Voltage @ $I_F = 3.0A$	V_{FM}	1.3							V
Peak Reverse Current @ $T_A = 25^\circ C$	I_R	5.0							uA
At Rated DC Blocking Voltage @ $T_A = 125^\circ C$		100							
I^2t Rating for Fusing ($t < 8.3ms$)	I^2t	50.2							A^2s
Maximum Reverse Recovery Time(Note 1)	T_{rr}	150				250	500		ns
Typical Junction Capacitance (Note 2)	C_J	60				25			pF
Typical Thermal Resistance Junction to Ambient(Note 3)	$R_{\theta JA}$	95							$^\circ C/W$
Operating Temperature Range	T_J	-55 to +150							$^\circ C$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ C$

Note:

- 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 4.0V D.C
3. $8.0MM^2$ (.013mm Thick) Land Areas.



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FIG.1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

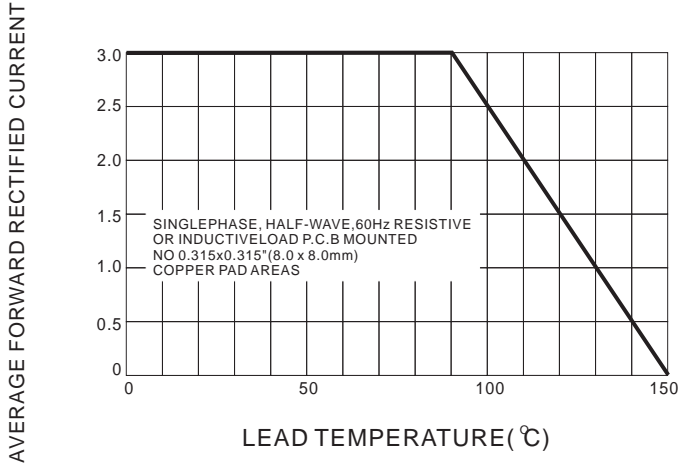


FIG.2 TYPICAL FORWARD CHARACTERISTICS

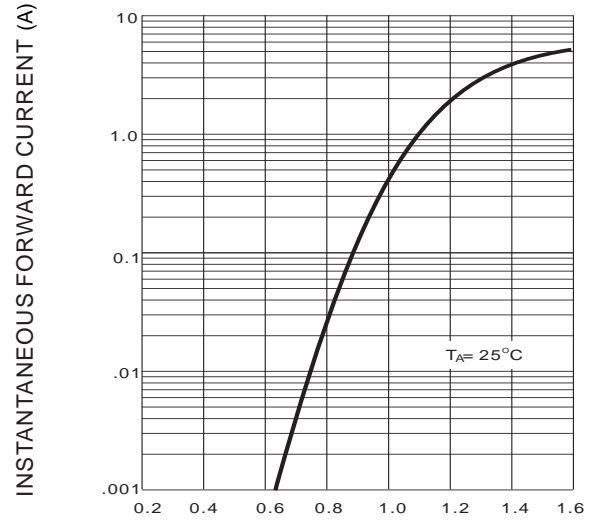
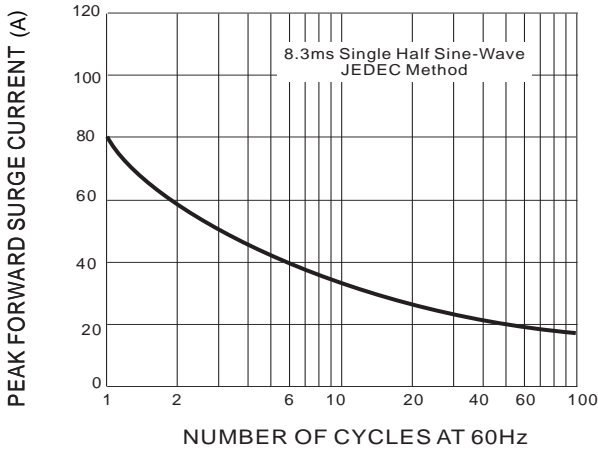


FIG.3 MAXIMUM NON-REPEITIVE SURGE CURRENT



INSTANTANEOUS FORWARD VOLTAGE (V)

FIG.4 TYPICAL JUNCTION CAPACITANCE

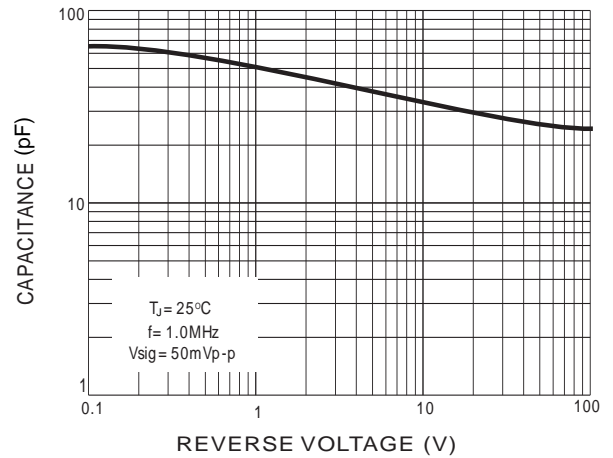


FIG.5 TYPICAL REVERSE CHARACTERISTICS

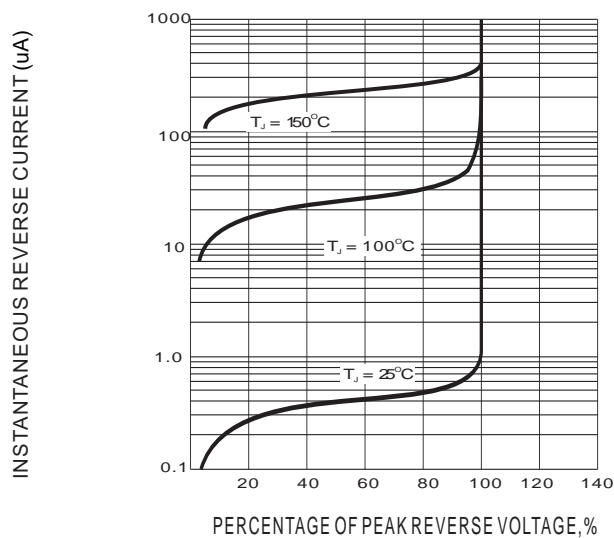
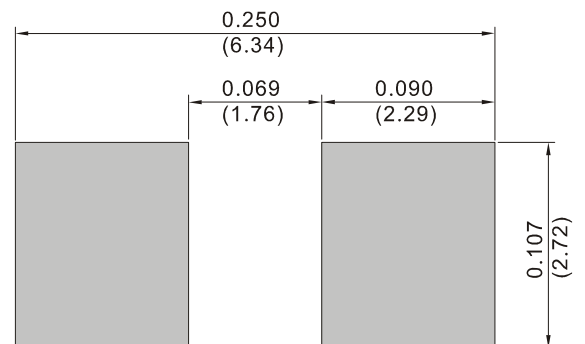


FIG.6 MOUNTING PAD LAYOUT





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