Fast Recovery Diodes

FR3AC~FR3MC 50 to 1000V 3A DO-214AB(SMC)

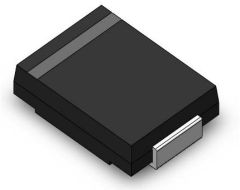
Features

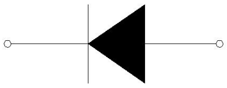
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated Junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 260 ℃ /10 seconds at terminals

Mechanical Date

- Case : Molded plastic body
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Polarity symbol marking on body
- Mounting Position : Any
- Weight : 0.008 ounce, 0.225 grams

DO-214AB(SMC)





Absolute Maximum Ratings and Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified. Single phase half-wave 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Ratings	Symbol	FR3AC	FR3BC	FR3DC	FR3GC	FR3JC	FR3KC	FR3MC	Unit
Maximum Repetitive 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
Maximum Average Forward Rectified Current at T_L=100℃	$I_{(AV)}$	3							A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	100							A
Maximum Instantaneous Forward Voltage at 3A	V_F	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A = 25℃ T_A = 125℃	I_R	2 200							μA
Maximum Reverse Recovery Time (Note 1)	Trr	150				250	500		ns
Typical Junction Capacitance (Note 2)	C_J	60							pF
Typical Thermal Resistance	R_{qJA}	47							℃/W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55 ~ +150							℃

Notes:

1. Reverse recovery time test condition: I_F=0.5A, I_R=1.0A, Irr=0.25A.

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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Rating and Characteristic Curves

Fig.1. Derating Curve Output Rectified Current

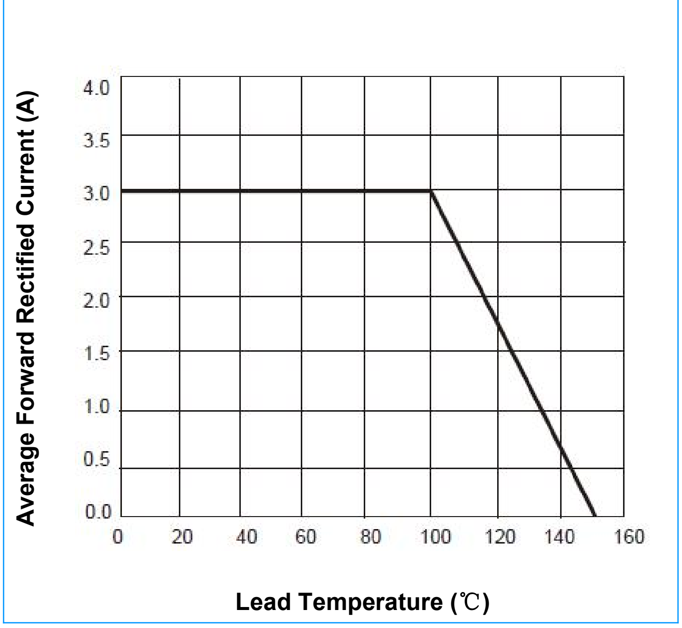


Fig.2. Maximum Non-Repetitive Peak Forward Surge Current

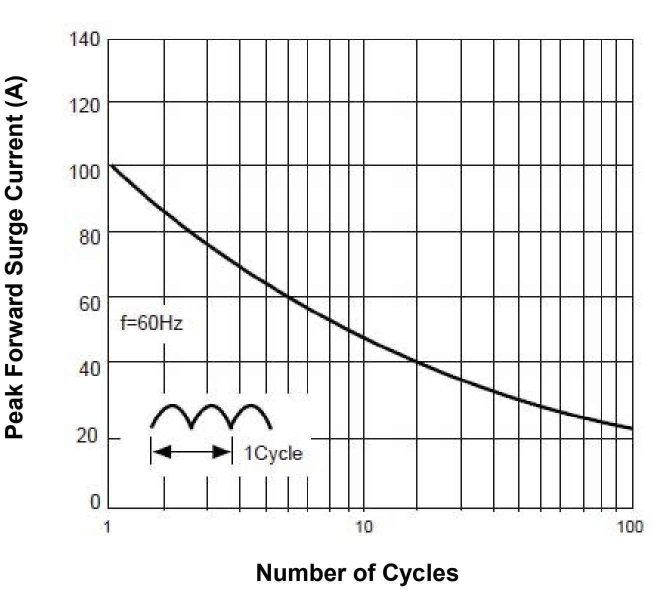


Fig.3. Typical Forward Voltage Characteristics

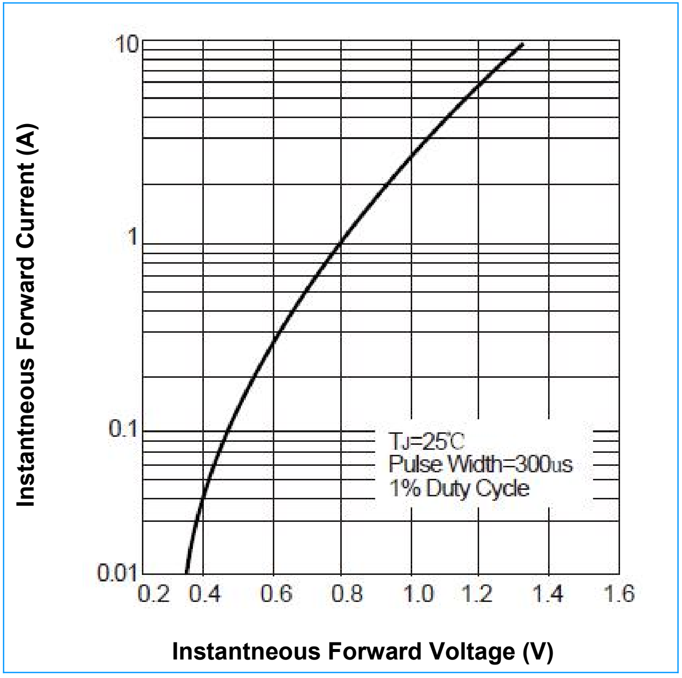
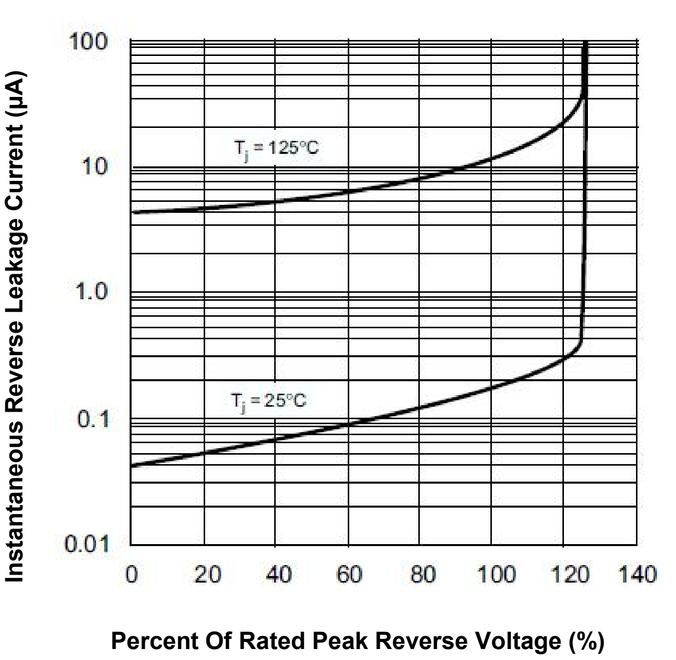
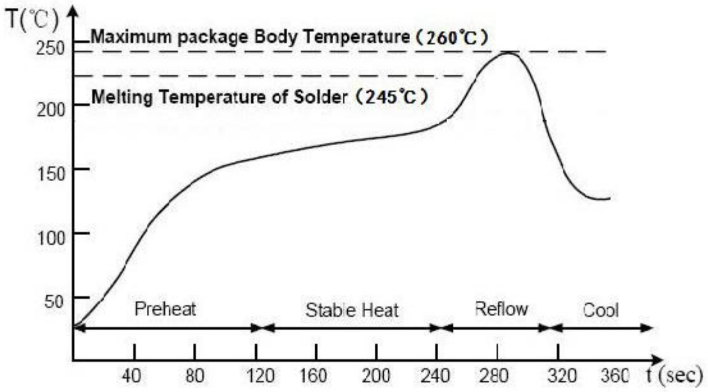


Fig.4. Typical Reverse Leakage Characteristics



Suggested Soldering Temperature Profile



Notes：

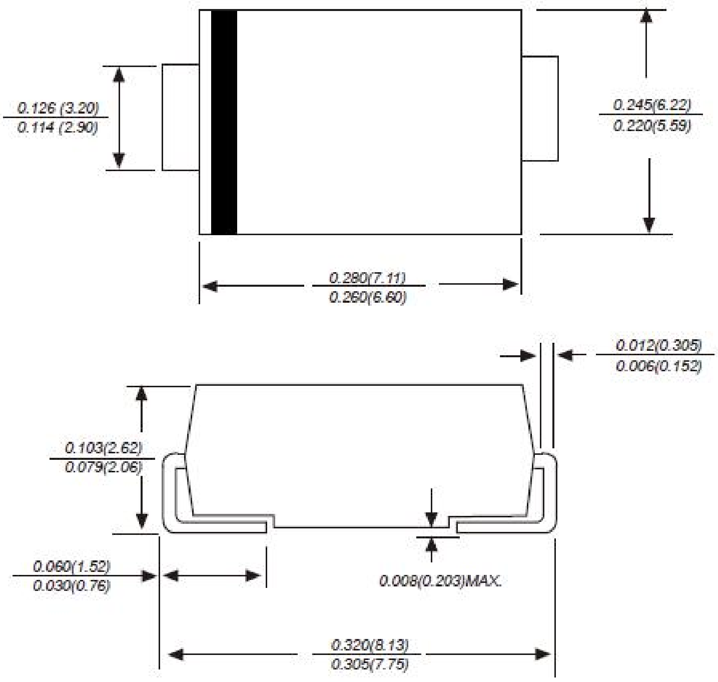
Recommended reflow methods: I_R *, vapor phase oven, hot air oven, wave solder.*

The device can be exposed to a maximum temperature of 260℃ for 10 seconds.

Devices can be cleaned using standard industry methods and solvents.

If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

DO-214AB(SMC) Package Outline



Dimensions in inches and (millimeters)

Fast Recovery Diodes

Packaging Information

Part Number	Component Package	Quantity
FR3AC~FR3MC	DO-214AB(SMC)	3000 PCS / Reel

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