

1.0A Surface Mount Fast Recovery Rectifier

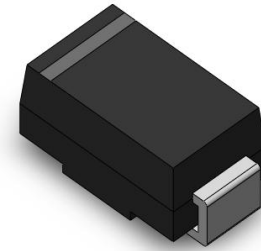
FR1AA~FR1MA
DO-214AC(SMA)

Features

- ◆ For Surface Mounted Applications.
- ◆ Low Profile Package.
- ◆ Built-in Strain Relief.
- ◆ Easy Pick and Place.
- ◆ Plastic Material Used Carries Underwriters Laboratory Classification 94V-0.
- ◆ Fast Switching.
- ◆ Glass Passivated Chip Junction.
- ◆ High Temperature Soldering: 250 °C /10 Seconds at Terminals.
- ◆ Lead Free.

Mechanical Data

- ◆ Case: Molded Plastic.
- ◆ Terminals: Solder Plated.
- ◆ Polarity: Indicated by Cathode Band.
- ◆ Weight: 0.064 grams.

DO-214AC(SMA)


Maximum Ratings and Electrical Characteristics (at T_A =25°C unless otherwise noted)

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%.

Ratings	Symbol	FR1AA	FR1BA	FR1DA	FR1GA	FR1JA	FR1KA	FR1MA	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
Maximum Average Forward Rectified Current at T _L = 90℃	I_O	1.0							A
Maximum Overload Surge 8.3ms Single Half Sine-wave	I_{FSM}	30							A
Maximum Forward Voltage at 1.0A and 25℃	V_F	1.3							V
Maximum Reverse Current at 25℃	I_R	5							μA
Maximum Reverse Recovery Time (Note 3)	T_{RR}	150				250	500		ns
Typical Junction Capacitance (Note 1)	C_J	15							pF
Typical Thermal Resistance (Note 2)	θ_{JL}	30							℃/W
Storage Temperature Range	T_{STG}	-55 to +150							℃
Operating Temperature Range	T_J	-55 to +150							℃

Notes: 1. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V.

2. Thermal Resistance from Junction to Terminal 5.0mm² (.013 mm Thick) Land Areas.

3. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

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Rating and Characteristic Curves

Fig1. Derating Curve Output Rectified Current

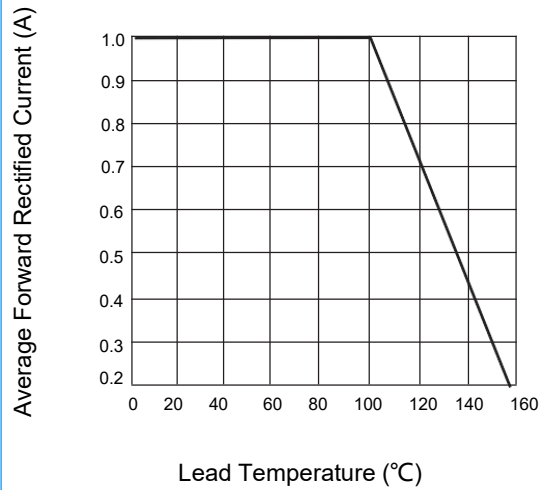


Fig2. Maximum Non-repetitive Peak Forward Surge Current

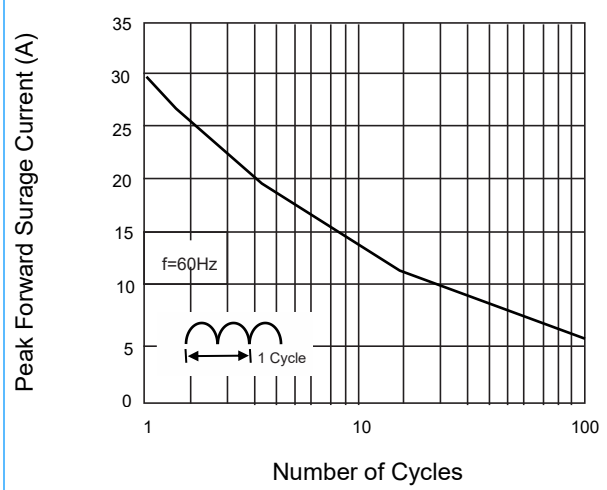


Fig3. Typical Forward Voltage Characteristics

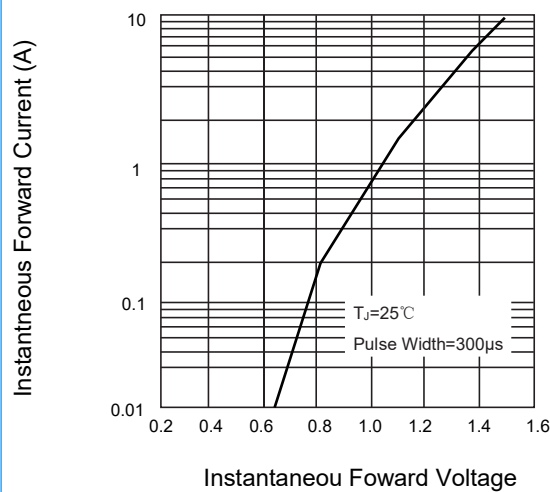
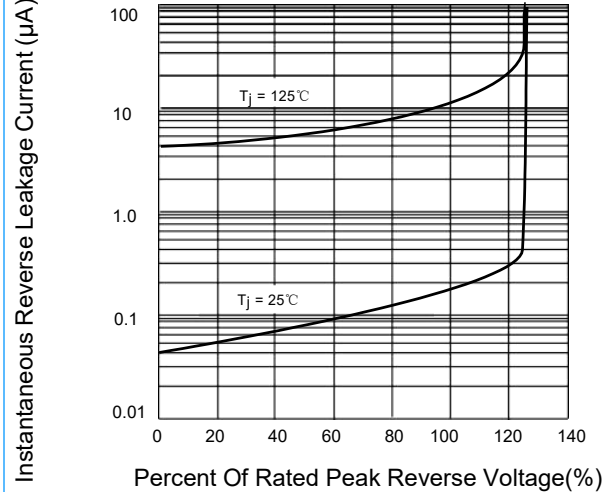


Fig4. Reverse Leakage Characteristics

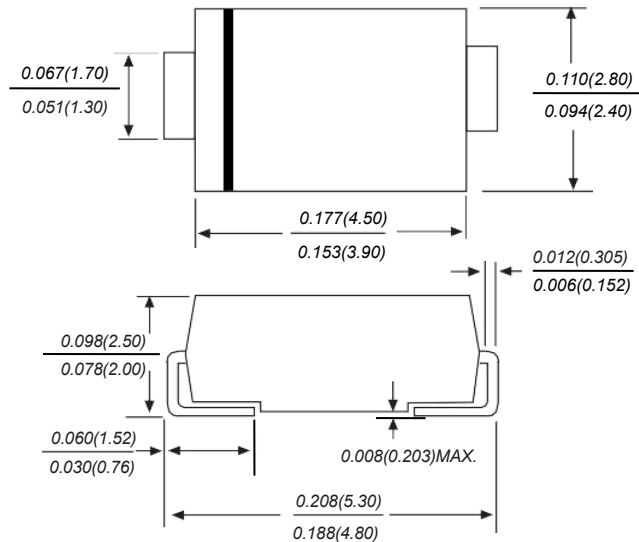


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Package Outline

DO-214AC(SMA)


Dimensions in inches and (millimeters)

Packaging Information

Part Number	Component Package	Quantity
FR1AA~FR1MA	DO-214AC(SMA)	5000 PCS/REEL

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