

FR8A~FR8M

FAST RECOVERY PLASTIC RECTIFIER

VOLTAGE 50 to 1000 Volt **CURRENT** 8 Ampere

SMC / DO-214AB

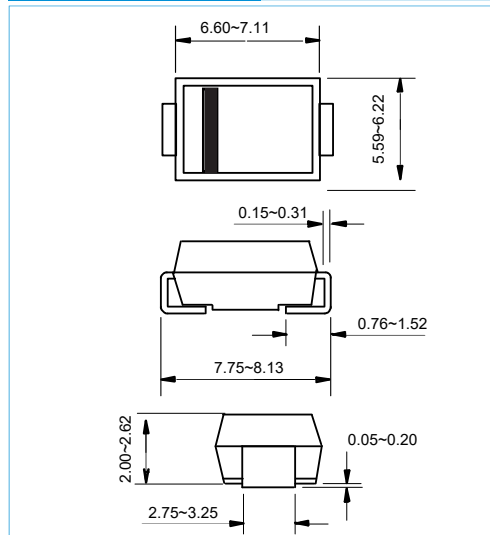
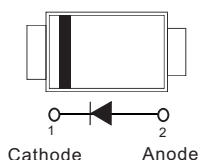
Unit:mm

FEATURES

- Fast Switching Speed For High Efficiency
- High Current Capability
- Low Forward Voltage Drop, High Efficiency
- Moisture Sensitivity Level 1
- Lead free in compliance with EU RoHS 2.0

MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	FR8A	FR8B	FR8D	FR8G	FR8J	FR8K	FR8M	UNITS
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 Current (see FIG.1)	$I_{F(AV)}$	8							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	300							A
Maximum Forward Voltage at 8 A	V_F	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}\text{C}$ $T_J=100^{\circ}\text{C}$	I_R	10 50							uA
Maximum Reverse Recovery Time(Note 1)	t_{rr}	150				250	500		ns
Operating Junction Temperature Range	T_J	-55 to +150							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C

NOTES:

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

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RATING AND CHARACTERISTIC CURVES

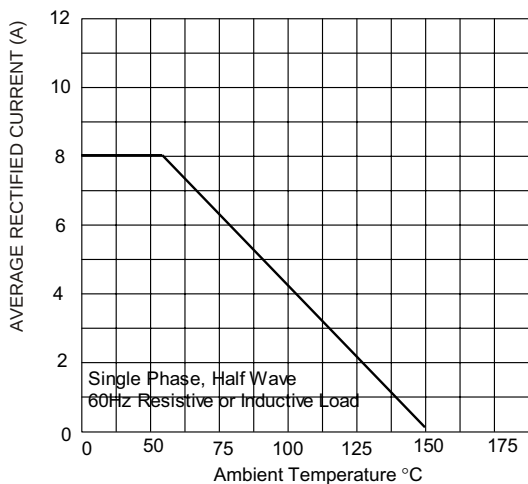


Fig. 1 Forward Current Derating Curve

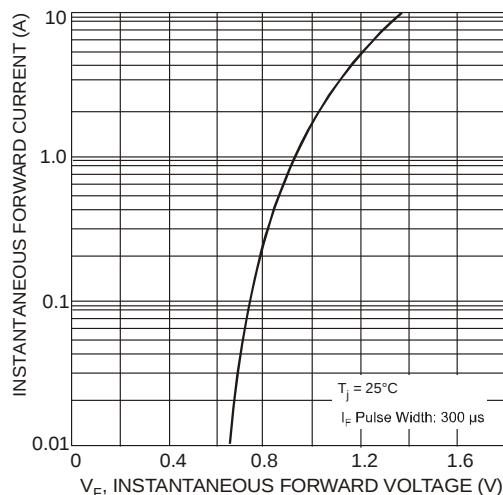


Fig. 2 Typical Forward Characteristics

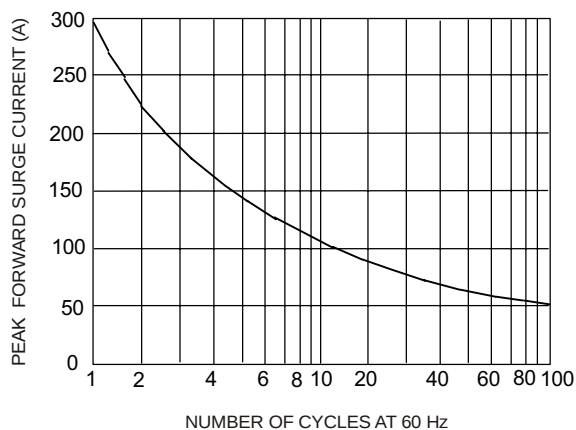


Fig. 3 Forward Surge Current Derating Curve

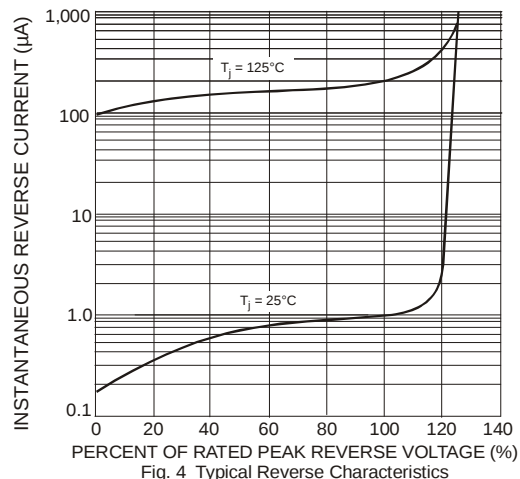
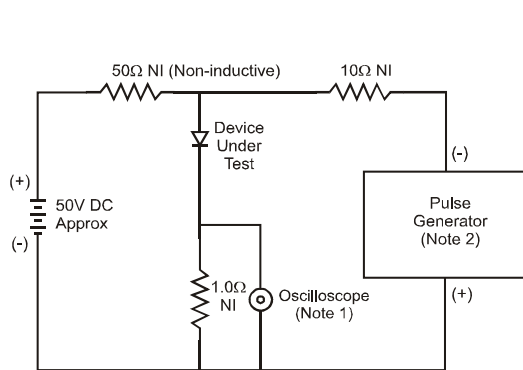


Fig. 4 Typical Reverse Characteristics



- Notes:
 1. Rise Time = 7.0ns max. Input Impedance = 1.0M Ω , 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50 Ω .

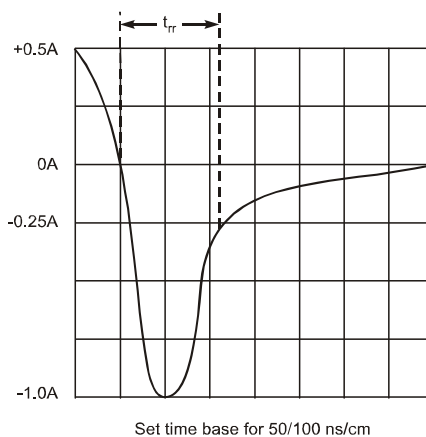


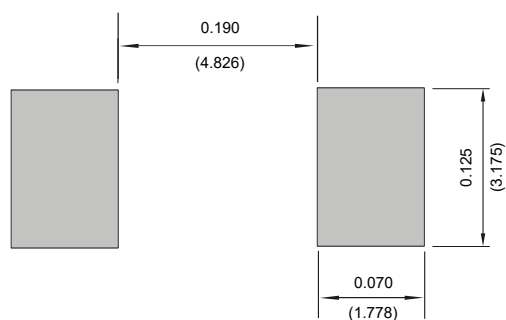
Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

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MOUNTING PAD LAYOUT

SMC / DO-214AB

Unit:Inch(mm)



ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
FR8A~FR8M	SMC	13 Inch	3000