

FR1001~FR1007

FAST RECOVERY PLASTIC RECTIFIER

VOLTAGE 50 to 1000 Volt **CURRENT** 10 Ampere

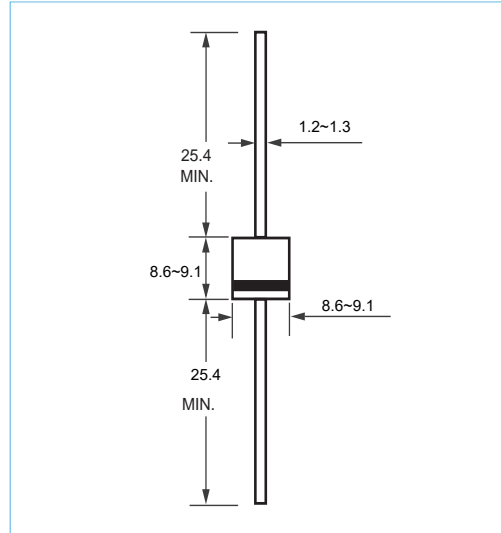
R-6 Unit:mm

FEATURES

- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Lead free in compliance with EU RoHS

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.

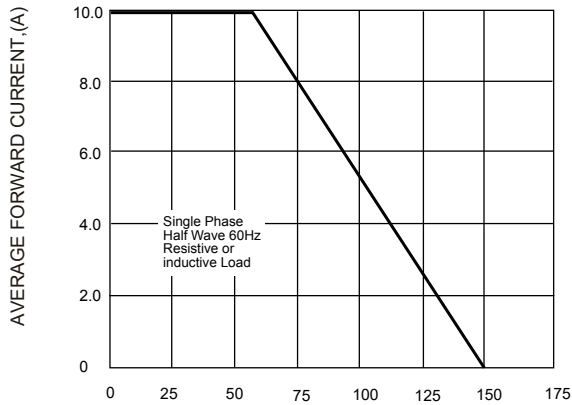
PARAMETER	SYMBOL	FR1001	FR1002	FR1003	FR1004	FR1005	FR1006	FR1007	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Current (see FIG.1)	$I_{F(AV)}$	10							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	300							A
Maximum Forward Voltage at 10 A	V_F	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	10 150							μA
Typical Junction Capacitance (Note1)	t_{rr}	150				250	500		ns
Reverse Recovery Time (Note 2)	C_J	150							pF
Thermal Resistance	$R_{\theta JA}$	10							$^{\circ}C / W$
Operating Junction Temperature Range	T_J	-55 to +150							$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150							$^{\circ}C$

NOTES:

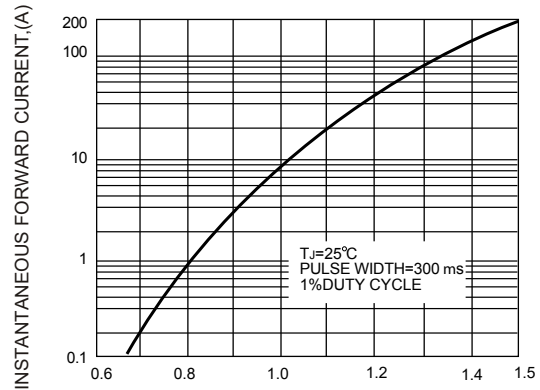
1. Measured at 1.0MHz and applied reverse voltage of 4.0 volt
2. Measured with $I_F = 0.5A$, $I_R = 1.0A$, $IRR = 0.25A$.

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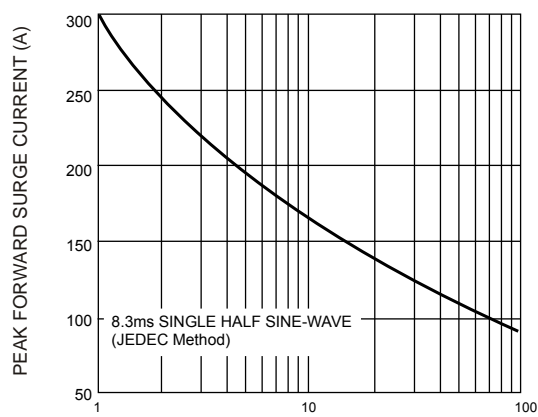
RATING AND CHARACTERISTIC CURVES



T_A , AMBIENT TEMPERATURE (°C)
Fig. 1 Forward Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics



NUMBER OF CYCLES AT 60Hz
Fig. 3 Peak Forward Surge Current

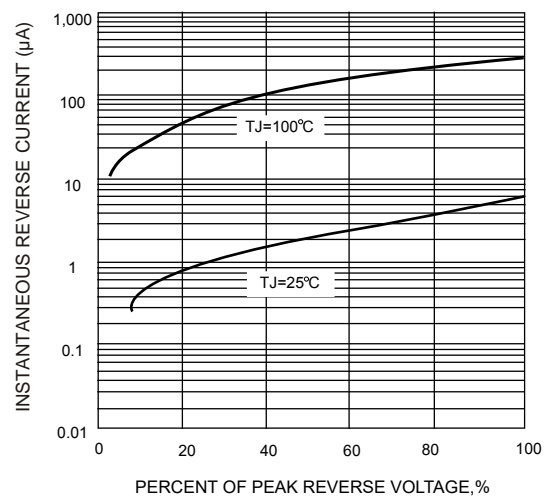


Fig. 4 TYPICAL REVERSE CHARACTERISTICS

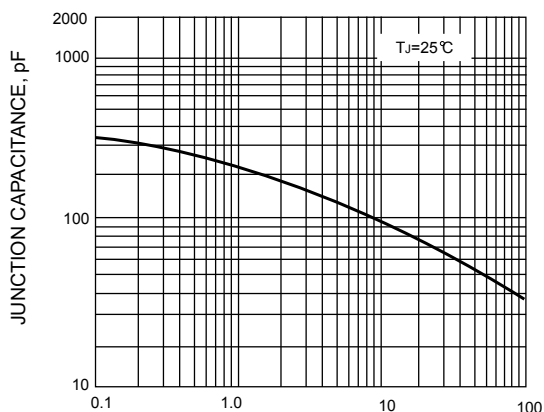


Fig. 4 Typical Junction Capacitance

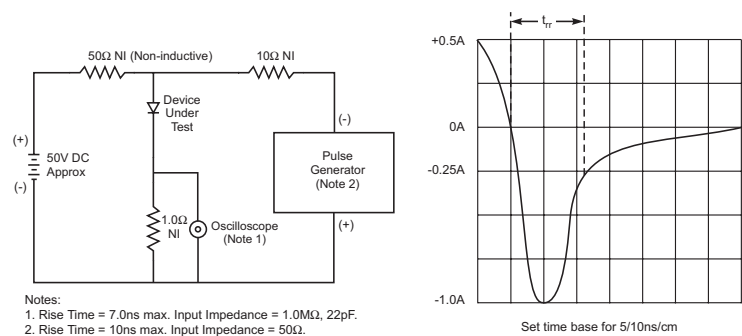


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

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

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ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
FR1001~FR1007	R-6	13 Inch	500