



SEMICONDUCTOR

DATA SHEET

FR201~FR207

FAST SWITCHING PLASTIC RECTIFIER VOLTAGE - 50 to 1000 Volts CURRENT - 2.0 Amperes

FEATURES

- High current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- 2.0 ampere operation at TA=55 °C with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Fast switching for high efficiency
- Low leakage
- High temperature soldering : 260°C /10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request.

MECHANICAL DATA

- Case: Molded plastic , DO-15
- Terminals: Phated axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.015 ounce, 0.4 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

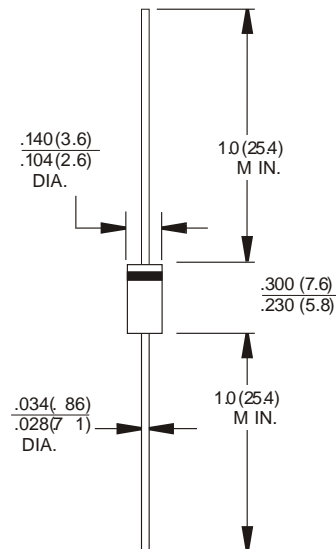
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.



DO-15

Unit:inch(mm)



	FR201	FR202	FR203	FR204	FR205	FR206	FR207	UNITS
Peak Reverse Voltage, Repetitive; VRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at TA=55 °C	2.0							A
Peak Forward Surge Current, IFM(surge) 8.3msec. single half sine-wave super imposed on rated load (JEDEC method)	70.0							A
Maximum Forward Voltage at 2.0A DC	1.3							V
Maximum Reverse Current TA=25°C	5.0							μA
at Rated DC Blocking Voltage TA=100°C	500							μA
Typical Junction capacitance (Note 1) CJ	35							pF
Typical Thermal Resistance (Note 3) RθJA	22							°C/W
Maximum Reverse Recovery Time(Note 2)	150				250	500		ns
Operating and Storage Temperature Range TJ,TSTG	-55 to +150							°C

NOTES :

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions: IF=.5A, IR=1A, Irr=.25A
3. Thermal Resistance from Junction to Ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B. mounted.

RATING AND CHARACTERISTIC CURVES

FR201~FR207

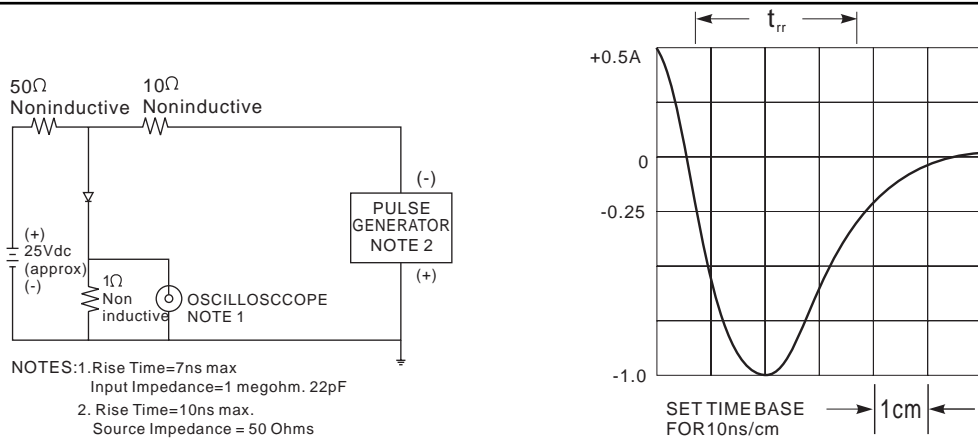


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

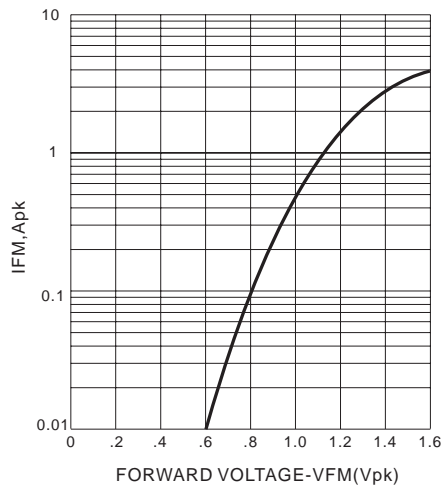


Fig. 2- FORWARD CHARACTERISTICS

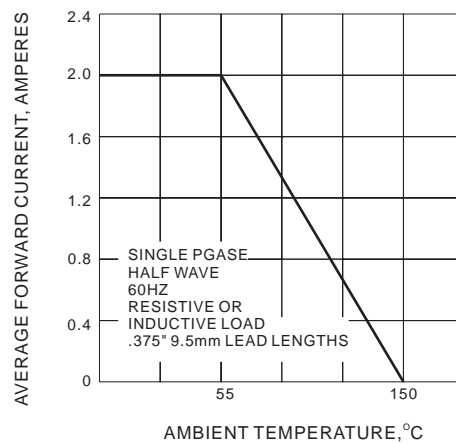


Fig. 3-FORWARD CURRENT DERATING CURVE

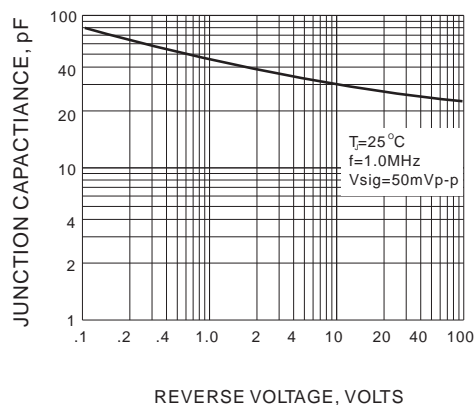


Fig. 4- TYPICAL JUNCTION CAPACITANCE

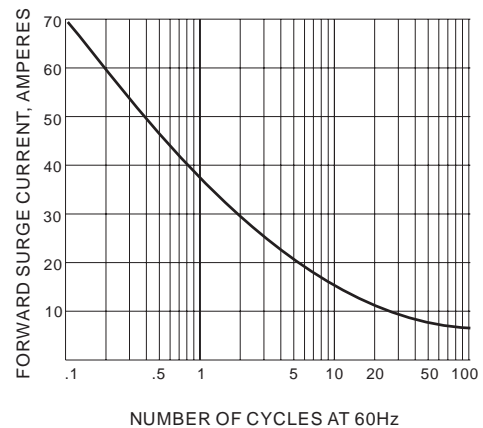


Fig. 5-PEAK FORWARD SURGE CURRENT