

FR601 THRU FR607

FAST RECOVERY RECTIFIER

REVERSE VOLTAGE: 50 to 1000 VOLTS
FORWARD CURRENT: 6.0 AMPERE

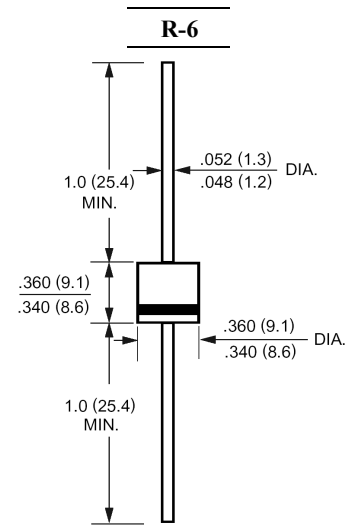


FEATURES

- Low cost
- Diffused junction
- Low forward voltage drop
- High current capability
- Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228

MECHANICAL DATA

Case: Molded plastic, R-6
 Epoxy: UL 94V-O rate flame retardant
 Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
 Polarity: Color band denotes cathode end
 Mounting position: Any
 Weight: 0.07ounce, 2.1gram



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

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

	Symbols	FR601	FR602	FR603	FR604	FR605	FR606	FR607	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_A=55$	$I_{(AV)}$	6.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	300							Amp
Maximum Forward Voltage at 6.0A DC and 25	V_F	1.3							Volts
Maximum Reverse Current at $T_A=25$ at Rated DC Blocking Voltage $T_A=100$	I_R	10.0 1000							uAmp
Typical Junction Capacitance (Note 1)	C_J	150							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	10							/W
Maximum Reverse Recovery Time (Note 3)	T_{RR}	150			250		500		nS
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150							

NOTES:

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- Thermal Resistance From Junction to Ambient 0.375"(9.5mm) lead length P.C.B. Mounted with 0.8x0.8"(20x20mm) copper pads.
- 3- Reverse Recovery Test Conditions : $I_F=.5A$, $I_R=1A$, $I_{RR}=.25A$.

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RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

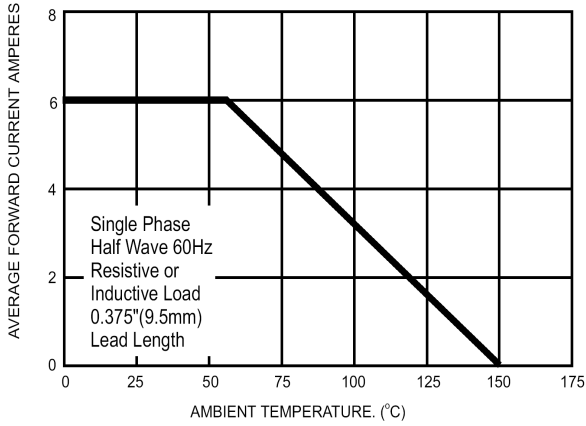


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

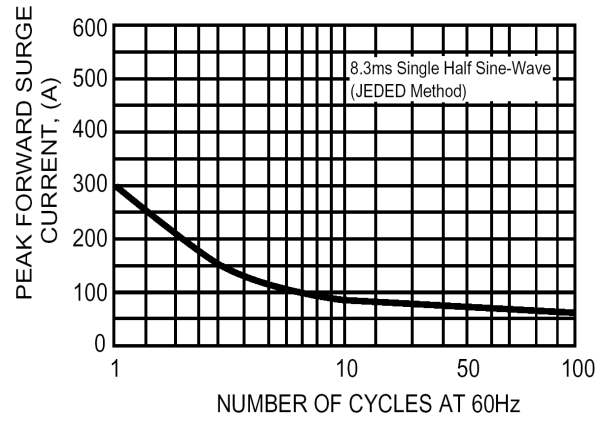


FIG.3- TYPICAL FORWARD CHARACTERISTICS

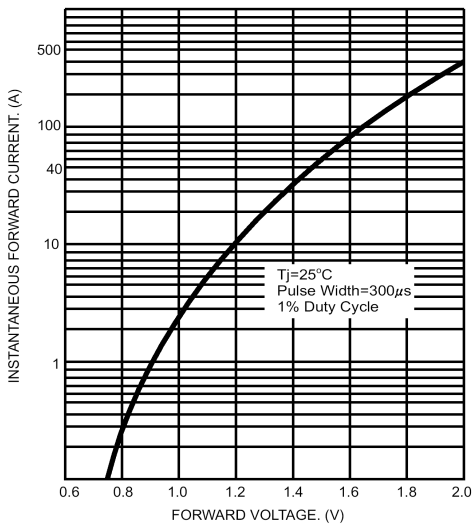


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

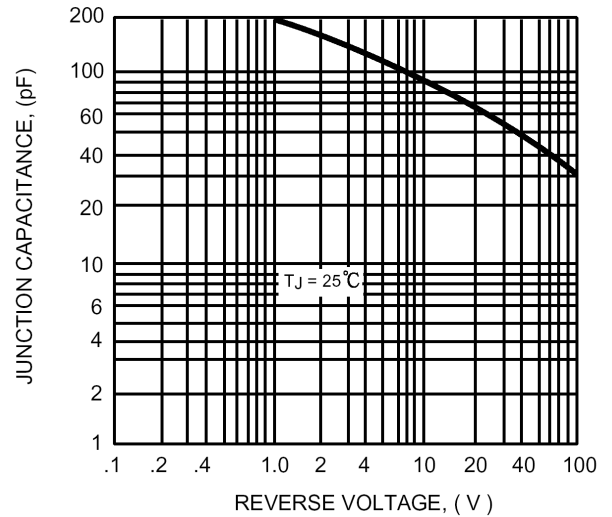
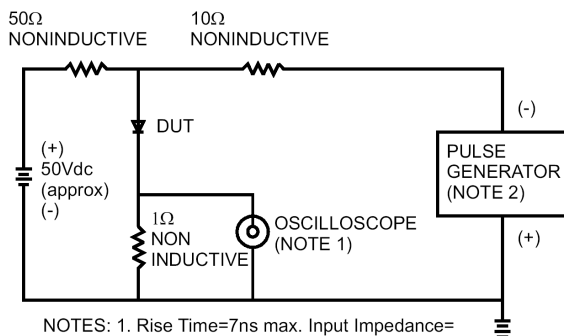


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf
2. Rise Time=10ns max. Source Impedance=50 ohms

