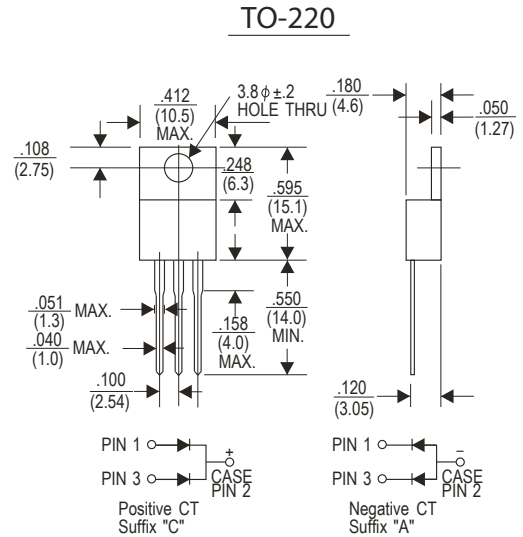


### Features

- Fast switching
- Low leakage
- Low forward voltage drop
- High current capability
- High current surge
- High reliability

### Mechanical Data

- Case : JEDEC TO-220 molded plastic body
- Terminals : Lead solderable per MIL-STD-750, method 2026
- Polarity : As marked
- Mounting Position : Any
- Weight : 0.08 ounce, 2.24 gram



### 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 by 20%)

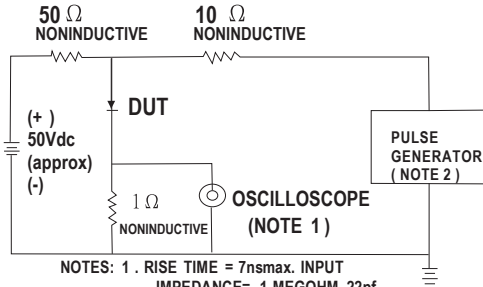
	Symbols	FR 1601	FR 1602	FR 1603	FR 1604	FR 1605	FR 1606	FR 1607	Units
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current See Fig. 2	I <sub(av)< sub=""></sub(av)<>	16.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	150							Amps
Maximum instantaneous forward voltage at 8.0A	V <sub>F</sub>	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage	T <sub>C</sub> =25 °C	10							μ A
	T <sub>C</sub> =125 °C	100							
Maximum reverse recovery time (Note 1)	T <sub>rr</sub>	150				250	500		ns
Typical thermal resistance (Note 2)	R <sub>θJC</sub>	3.0							°C/W
Operating junction and storage temperature range	T <sub>J</sub> T <sub>STG</sub>	-55 to +150							°C

#### Notes:

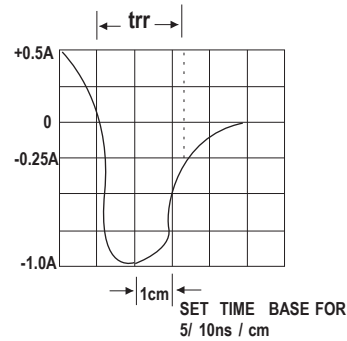
- (1) Test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A.
- (3) Thermal resistance from junction to case mounted on heatsink.

## RATINGS AND CHARACTERISTIC CURVES FR1601 THRU FR1607

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

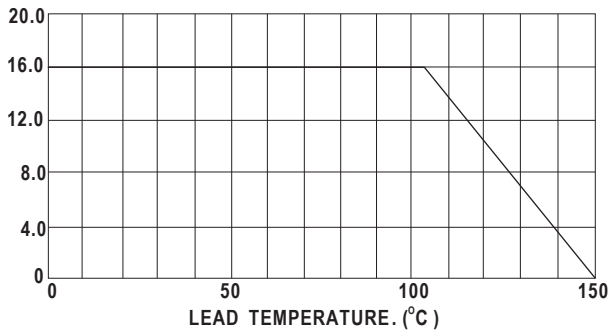


NOTES: 1. RISE TIME = 7ns max. INPUT IMPEDANCE = 1 MEGOHM 22pf  
 2. RISE TIME = 10ns max. SOURCE IMPEDANCE = 50ohmsf



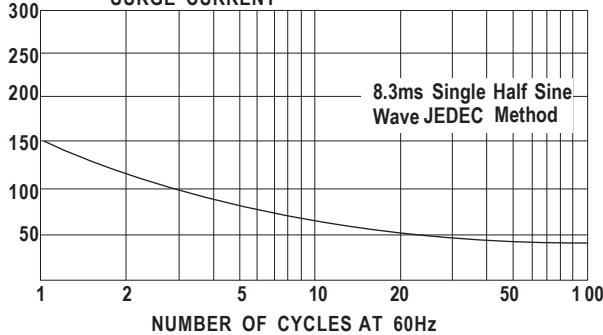
AVERAGE FORWARD CURRENT (A)

FIG. 2- MAXIMUM FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT. (A)

FIG. 4 - MAXIMUM NON - REPETITIVE FORWARD SURGE CURRENT



CAPACITANCE. (pF)

FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

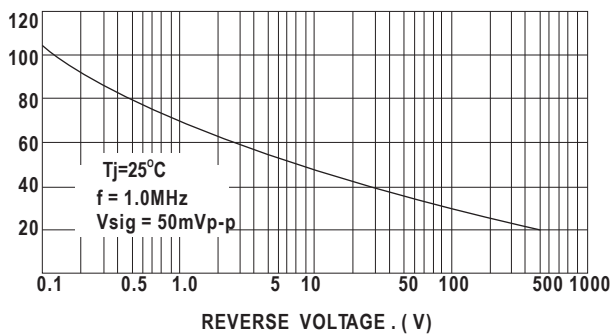


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

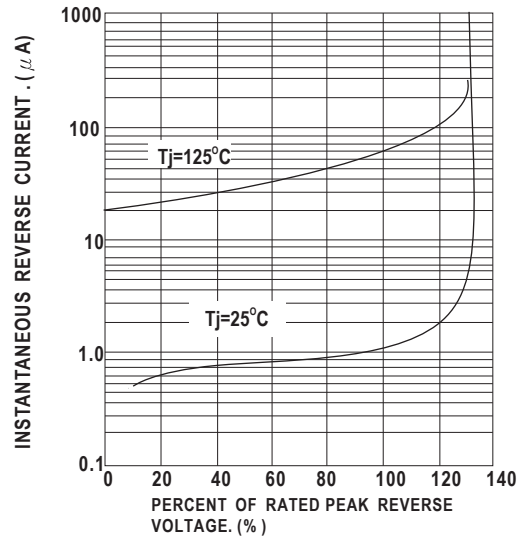


FIG. 6 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

