

FR101 THRU FR107	
1.0 AMP. Fast Recovery Rectifiers	
<p><b>Features</b></p> <ul style="list-style-type: none"> <li>• Low forward voltage drop</li> <li>• High current capability</li> <li>• High reliability</li> <li>• High surge current capability</li> </ul>	<p>Voltage Range 50 to 1000 Volts Current 1.0 Ampere</p> <p><b>DO-41</b></p>
<p><b>Mechanical Data</b></p> <ul style="list-style-type: none"> <li>• Cases: Molded plastic</li> <li>• Epoxy: UL 94V-0 rate flame retardant</li> <li>• Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed</li> <li>• Polarity: Color band denotes cathode end</li> <li>• High temperature soldering guaranteed: 250°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension</li> <li>• Weight: 0.34 gram</li> </ul>	<p>Dimensions in inches and (millimeters)</p>

### Maximum Ratings and Electrical Characteristics

Rating 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%

Symbols	FR101	FR102	FR103	FR104	FR105	FR106	FR107	Units
Maximum Recurrent Peak Reverse Voltage	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 @ T <sub>A</sub> = 55°C	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	1.2							V
Maximum DC Reverse Current @ T <sub>A</sub> =25°C at Rated DC Blocking Voltage @ T <sub>A</sub> =100°C	5.0 100							uA uA
Maximum Reverse Recovery Time ( Note 1 )	150		250		500			nS
Typical Junction Capacitance ( Note 2 )	15							pF
Operating Temperature Range T <sub>J</sub>	-65 to +125							°C
Storage Temperature Range T <sub>STG</sub>	-65 to +150							°C

Notes: 1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

## RATINGS AND CHARACTERISTIC CURVES (FR101 THRU FR107)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

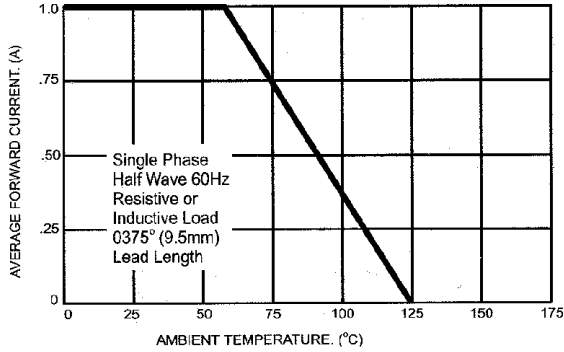


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

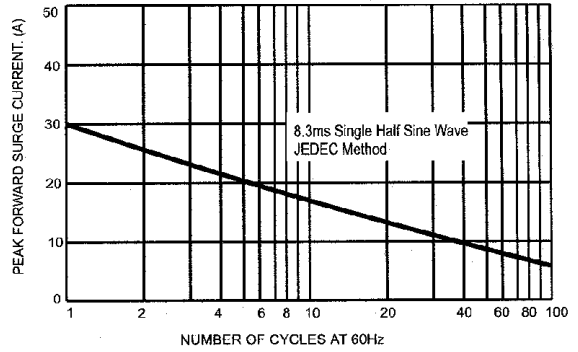


FIG.3- TYPICAL FORWARD CHARACTERISTICS

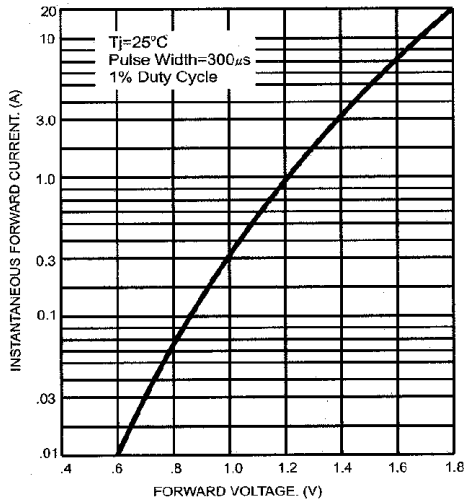


FIG.4- TYPICAL JUNCTION CAPACITANCE

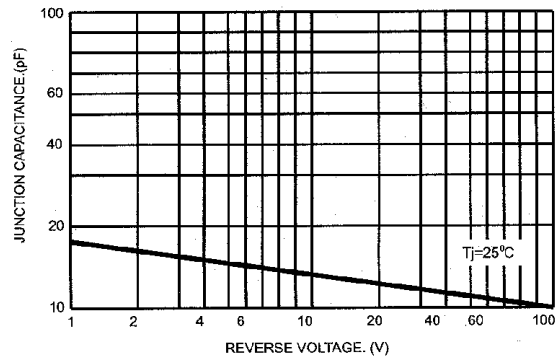
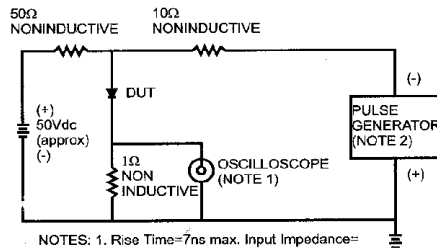


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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

