
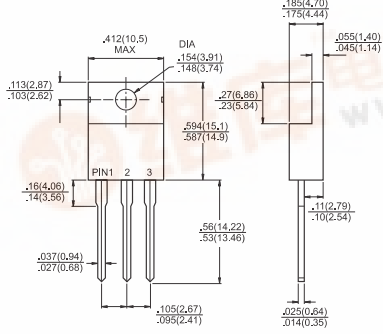
	<h1>FR1001G THRU FR1007G</h1> <h2>Isolation 10 AMPS. Glass Passivated Fast Recovery Rectifiers</h2>																							
	<p>Voltage Range 50 to 1000 Volts Current 10 Amperes</p>																							
<p>Features</p> <ul style="list-style-type: none"> ✧ Low forward voltage drop ✧ High current capability ✧ High reliability ✧ High surge current capability <p>Mechanical Data</p> <ul style="list-style-type: none"> ✧ Cases: TO-220 molded plastic ✧ Epoxy: UL 94V-0 rate flame retardant ✧ Terminals: Leads solderable per MIL-STD-202, Method 208 guaranteed ✧ Polarity: As marked ✧ High temperature soldering guaranteed: 260°C/10 seconds .16", (4.06mm) from case. ✧ Mounting position: Any ✧ Weight: 2.24 grams 	<p>TO-220</p>  <p>Dimensions in inches and (millimeters)</p>																							
<p>Maximum Ratings and Electrical Characteristics</p>																								
<p>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%</p>																								
<p>Type Number</p>	<p>Symbol</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>FR 1001G</td> <td>FR 1002G</td> <td>FR 1003G</td> <td>FR 1004G</td> <td>FR 1005G</td> <td>FR 1006G</td> <td>FR 1007G</td> </tr> </table>	FR 1001G	FR 1002G	FR 1003G	FR 1004G	FR 1005G	FR 1006G	FR 1007G	<p>Units</p>														
FR 1001G	FR 1002G	FR 1003G	FR 1004G	FR 1005G	FR 1006G	FR 1007G																		
<p>Maximum Recurrent Peak Reverse Voltage</p>	<p>V_{RRM}</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>50</td> <td>100</td> <td>200</td> <td>400</td> <td>600</td> <td>800</td> <td>1000</td> </tr> </table>						50	100	200	400	600	800	1000	<p>V</p>									
50	100	200	400	600	800	1000																		
<p>Maximum RMS Voltage</p>	<p>V_{RMS}</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>35</td> <td>70</td> <td>140</td> <td>280</td> <td>420</td> <td>560</td> <td>700</td> </tr> </table>						35	70	140	280	420	560	700	<p>V</p>									
35	70	140	280	420	560	700																		
<p>Maximum DC Blocking Voltage</p>	<p>V_{DC}</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>50</td> <td>100</td> <td>200</td> <td>400</td> <td>600</td> <td>800</td> <td>1000</td> </tr> </table>						50	100	200	400	600	800	1000	<p>V</p>									
50	100	200	400	600	800	1000																		
<p>Maximum Average Forward Rectified Current</p>	<p>$I_{(AV)}$</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td colspan="7">10</td> </tr> </table>						10							<p>A</p>									
10																								
<p>Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)</p>	<p>I_{FSM}</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td colspan="7">125</td> </tr> </table>						125							<p>A</p>									
125																								
<p>Maximum Instantaneous Forward Voltage @ 5.0A</p>	<p>V_F</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td colspan="7">1.3</td> </tr> </table>						1.3							<p>V</p>									
1.3																								
<p>Maximum DC Reverse Current @ $T_C=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_C=125^\circ\text{C}$</p>	<p>I_R</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td colspan="3"></td> <td>5.0</td> <td colspan="4"></td> </tr> <tr> <td colspan="3"></td> <td>100</td> <td colspan="4"></td> </tr> </table>									5.0								100					<p>uA uA</p>
			5.0																					
			100																					
<p>Maximum Reverse Recovery Time (Note 1)</p>	<p>T_{rr}</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>150</td> <td colspan="2"></td> <td></td> </tr> </table>			150				<table border="1" style="width: 100%; text-align: center;"> <tr> <td>250</td> </tr> </table>	250	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>500</td> </tr> </table>	500	<p>nS</p>											
150																								
250																								
500																								
<p>Typical Thermal Resistance (Note 2)</p>	<p>$R_{\theta jc}$</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td colspan="7">3.0</td> </tr> </table>						3.0							<p>$^\circ\text{C/W}$</p>									
3.0																								
<p>Operating and Storage Temperature Range</p>	<p>T_J, T_{STG}</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td colspan="7">-65 to +150</td> </tr> </table>						-65 to +150							<p>$^\circ\text{C}$</p>									
-65 to +150																								

Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$

2. Thermal Resistance from Junction to Case Per Leg Mounted on Heatsink size 2" x 3" x 0.25" Al-Plate



RATINGS AND CHARACTERISTIC CURVES (FR1001G THRU FR1007G)

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

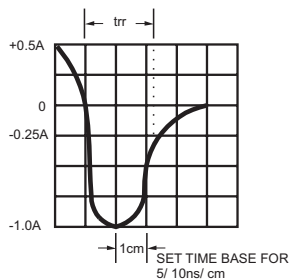
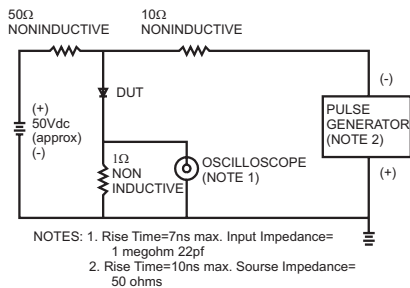


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

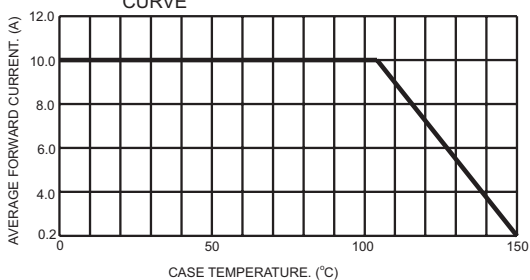


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

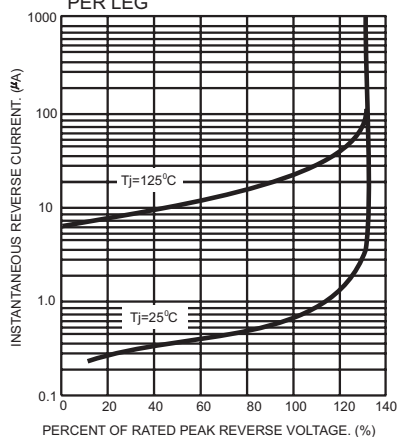


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

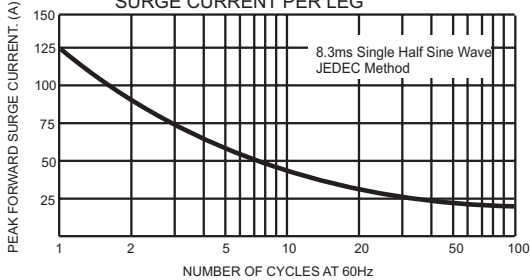


FIG.6- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

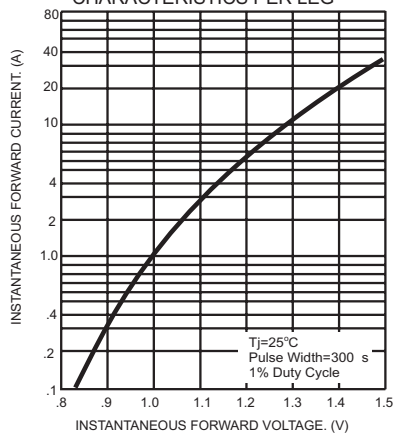


FIG.4- TYPICAL JUNCTION CAPACITANCE PER LEG

