

**SUPER-FAST RECOVERY RECTIFIERS**

REV: 1.01

<b>Features</b>	<ul style="list-style-type: none"> <li>◆ Ultrafast 35 Nanosecond Recovery Time</li> <li>◆ 175° C Operating Junction Temperature</li> <li>◆ Popular TO-220AB Package</li> <li>◆ Epoxy Meets UL94 ,V0 @ 1/8"</li> <li>◆ High Temperature Glass Passivated Junction</li> <li>◆ Low Forward Voltage</li> <li>◆ Low Leakage Current</li> <li>◆ Reverse Voltage to 600 Volts</li> <li>◆ Pb-Free Packages are Available</li> </ul>	<b>Typical Reference Data</b>  VRRM= 200V IF(AV)= 10A  VRRM= 400V IF(AV)= 10A  VRRM= 600V IF(AV)=10A
<b>Mechanical Characteristics</b>	<ul style="list-style-type: none"> <li>● Case: Epoxy, Molded</li> <li>● Weight: 1.9 grams (approximately)</li> <li>● Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable</li> <li>● Lead Temperature for Soldering Purposes: 260° C Max. for 10 Seconds</li> <li>● Shipped 50 units per plastic tube</li> </ul>	

**MAXIMUM RATINGS**

Rating	Symbol	SF1002	SF1004	SF1006	Unit
Peak Repetitive Reverse Voltage	VRRM	200	400	600	V
Working Peak Reverse Voltage	VRWM				
DC Blocking Voltage	VR				
Average Rectified Forward Current	IF(AV)	5			A
Total Device, (Rated VR), TC = 150°C		10			
Peak Repetitive Forward Current (Rated VR, Square Wave, 20 kHz), TC = 150°C	IFM	16			A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave , single phase, 60 Hz)	IFSM	100			A
Operating Junction Temperature and Storage Temperature	TJ, Tstg	- 65 to +175			°C

**THERMAL CHARACTERISTICS (Per Diode Leg)**

Maximum Thermal Resistance, Junction to Case	R $\theta$ JC	3.0	2.0	°C/W
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**ELECTRICAL CHARACTERISTICS (Per Diode Leg)**

Maximum Instantaneous Forward Voltage (1) (IF = 8.0 Amps, TC = 25° C)	VF	1.1	1.4	1.7	V
Maximum Instantaneous Reverse Current (1) (Rated dc Voltage, TJ = 150° C)	IR	800	800	800	$\mu$ A
(Rated dc Voltage, TJ = 25° C)		10	10	10	
Maximum Reverse Recovery Time (IF = 0.5 A, IR = 1.0 A, IREC = 0.25 A)	Trr	35			ns

 (1) Pulse Test: Pulse Width = 300 $\mu$  s, Duty Cycle  $\leq$  2.0%.

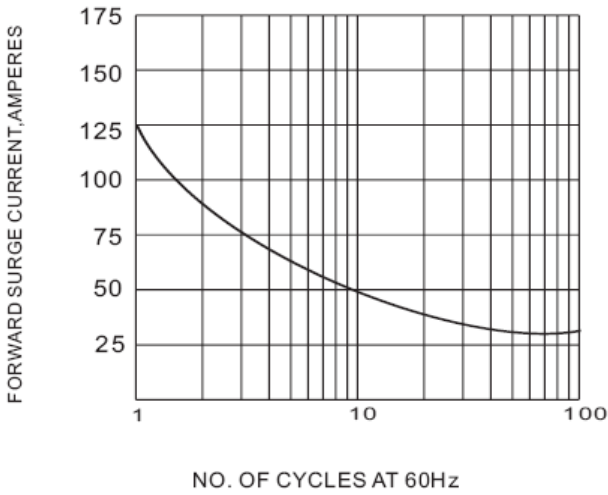


Fig.1 PEAK FORWARD SURGE CURRENT

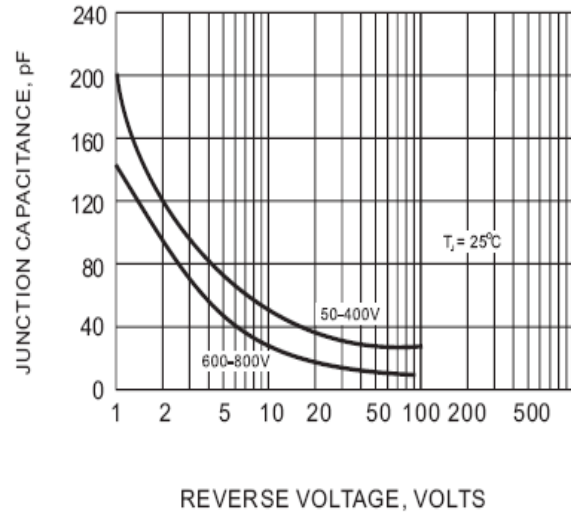


Fig.2 TYPICAL JUNCTION CRPACITANCES

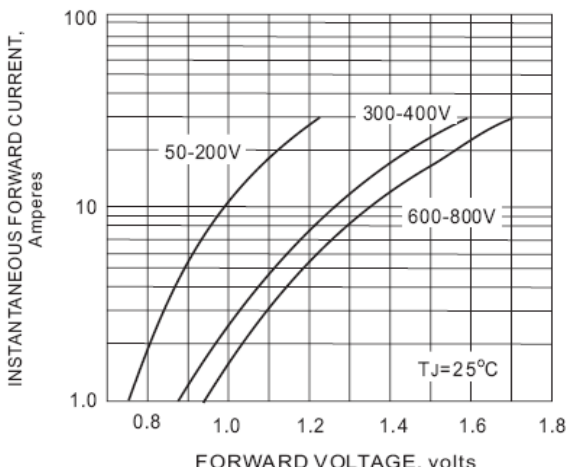


Fig.3 FORWARD CHARACTERISTICS

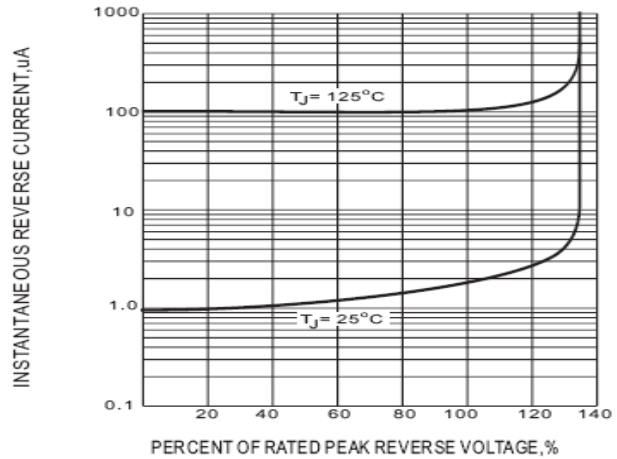


Fig.4 TYPICAL REVERSE CHARACTERISTICS

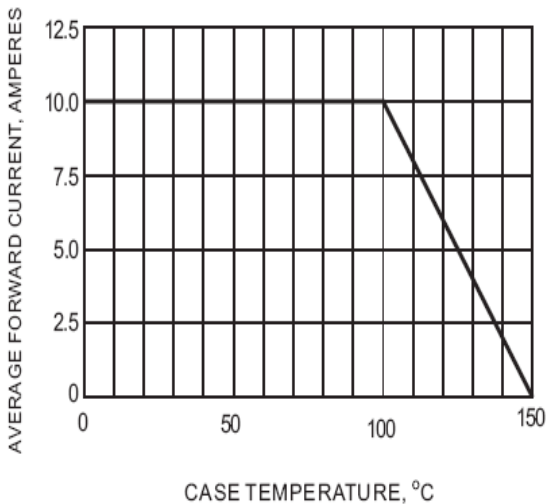


Fig.5 FORWARD CURRENT DERATING CURVE

# TO-220AB

