

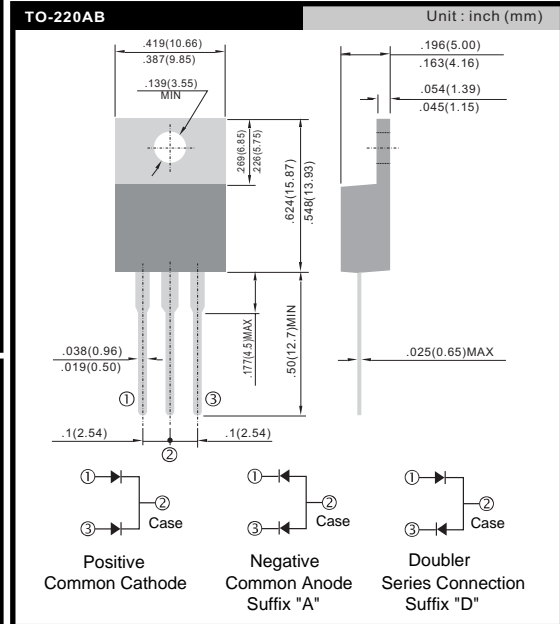
Pb Free Plating Product

# SF1601G thru SF1608G



16.0 Ampere Glass Passivated Super Fast Recovery Rectifier Diodes

<p><b>Features</b></p> <ul style="list-style-type: none"> <li>* Fast switching for high efficiency</li> <li>* Low forward voltage drop</li> <li>* High current capability</li> <li>* Low reverse leakage current</li> <li>* High surge current capability</li> </ul> <p>Application</p> <ul style="list-style-type: none"> <li>* Automotive Environment DC Motor Control</li> <li>* Plating Power Supply UPS</li> <li>* Amplifier and Sound Device System</li> </ul>
<p><b>Mechanical Data</b></p> <ul style="list-style-type: none"> <li>* Case: Molded plastic TO-220AB Heatsink</li> <li>* Epoxy: UL 94V-0 rate flame retardant</li> <li>* Terminals: Solderable per MIL-STD-202 method 208</li> <li>* Polarity: Color band denotes cathode</li> <li>* Mounting position: Any</li> <li>* Weight: 2.03 grams</li> </ul>



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Common Cathode Common Anode Suffix "A" Anode and Cathode Coexistence Suffix "D"	SYMBOL	SF1601G SF1601GA SF1601GD	SF1602G SF1602GA SF1602GD	SF1604G SF1604GA SF1604GD	SF1605G SF1605GA SF1605GD	SF1606G SF1606GA SF1606GD	SF1608G SF1608GA SF1608GD	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	600	V
Maximum RMS Voltage	VRMS	35	70	140	210	280	420	V
Maximum DC Blocking Voltage	VDC	50	100	200	300	400	600	V
Maximum Average Forward Rectified Current Tc=100°C	IF(AV)	16.0						A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	IFSM	175			150			A
Maximum Instantaneous Forward Voltage @ 8.0 A	VF	0.98			1.3		1.7	V
Maximum DC Reverse Current @Tj=25°C At Rated DC Blocking Voltage @Tj=125°C	IR				10.0			uA
					250			uA
Maximum Reverse Recovery Time (Note 1)	Trr				35			nS
Typical junction Capacitance (Note 2)	CJ				90			pF
Typical Thermal Resistance (Note 3)	RθJC				2.2			°CW
Operating Junction and Storage Temperature Range	TJ, TSTG	-55 to + 150						°C

NOTES : (1) Reverse recovery test conditions IF= 0.5A, R= 1.0A, Irr = 0.25A.  
 (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.  
 (3) Thermal Resistance junction to case.

FIG.1 - FORWARD CURRENT DERATING CURVE

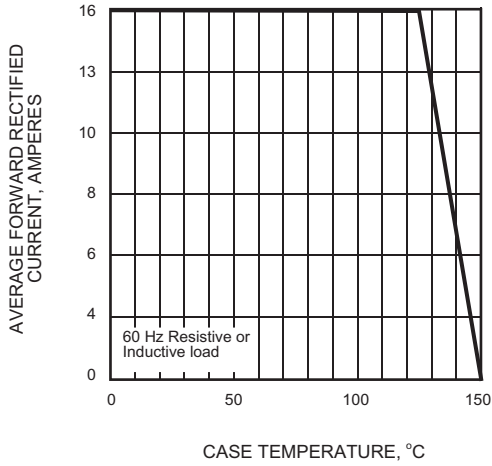


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

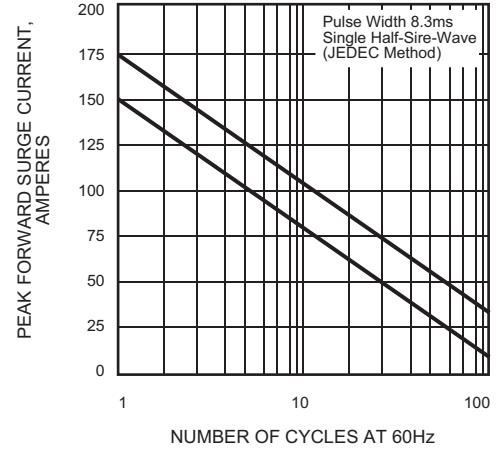


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

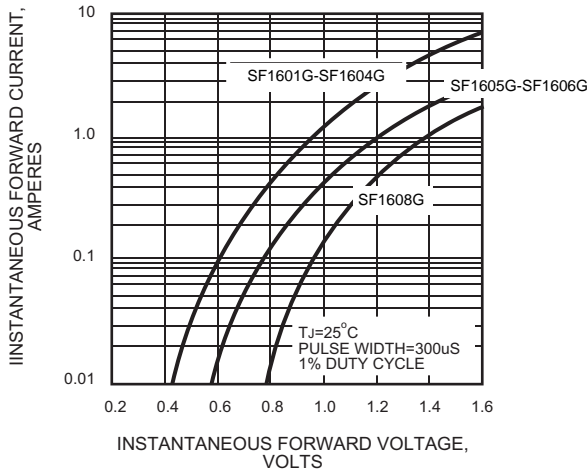


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

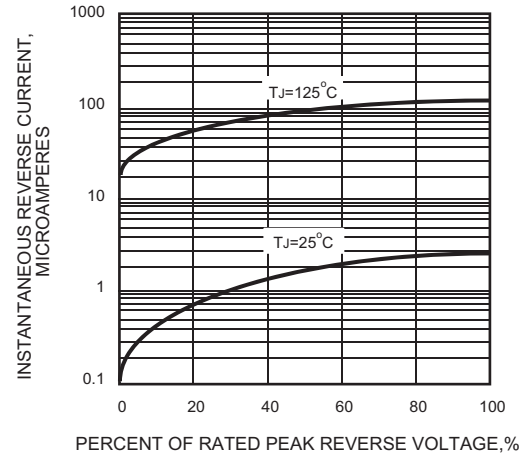


FIG.5 - TYPICAL JUNCTION CAPACITANCE

