Pb Free Plating Product

SF1601G thru SF1608G

16.0 Ampere Glass Passivated Super Fast Recovery Rectifier Diodes

Features

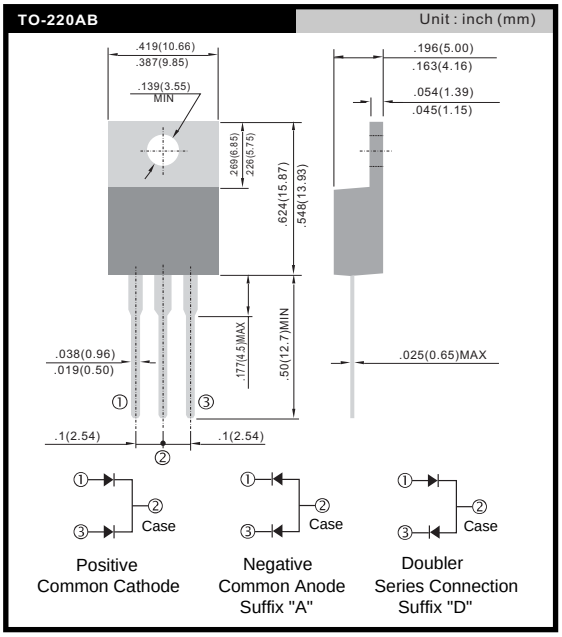
- Fast switching for high efficiency
- Low forward voltage drop
- High current capability
- Low reverse leakage current
- High surge current capability

Application

- Automotive Environment|DC Motor Control
- Plating Power Supply|UPS
- Amplifier and Sound Device System

Mechanical Data

- Case: Molded plastic TO-220AB Heatsink
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Solderable per MIL-STD-202 method 208
- Polarity: As marked on diode body
- Mounting position: Any
- Weight: 2.03 gram approximately



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ 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	V_{RRM}	50	100	200	300	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	V
Maximum Average Forward Rectified Current T_C=100℃	$I_{F(AV)}$	16.0						A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	175			150			A
Maximum Instantaneous Forward Voltage @ 8.0 A	V_F	0.98			1.3		1.7	V
Maximum DC Reverse Current @T_J=25℃ At Rated DC Blocking Voltage @T_J=125℃	I_R	10.0 250						uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	35						nS
Typical junction Capacitance (Note 2)	C_J	90						pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	2.2						℃W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 150						℃

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

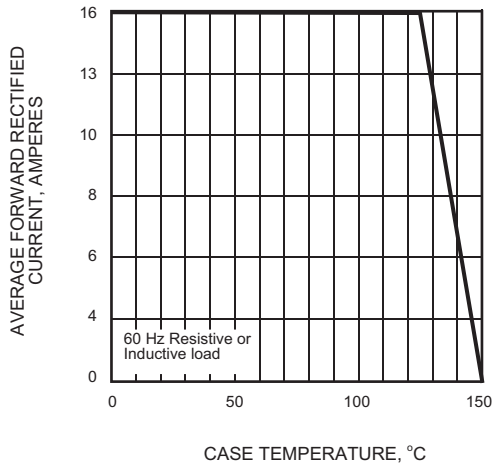


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

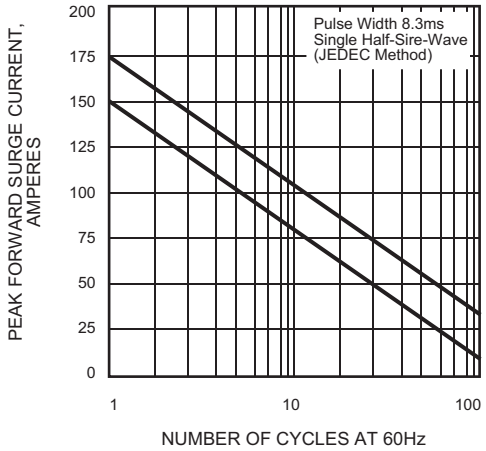


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

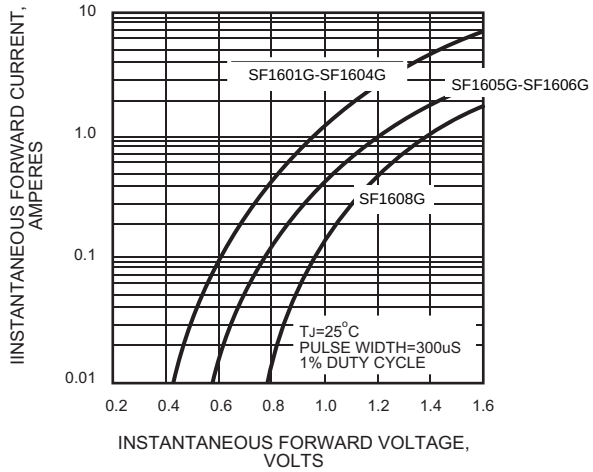


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

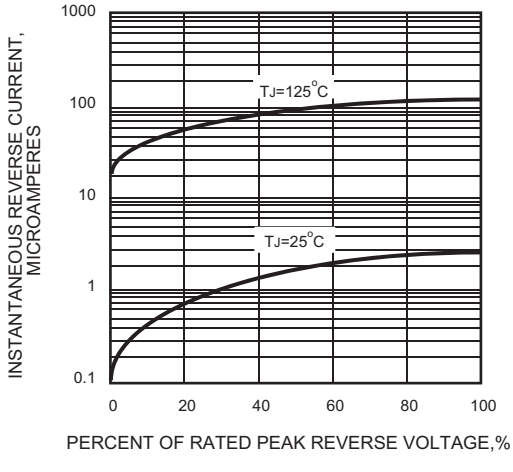


FIG.5 - TYPICAL JUNCTION CAPACITANCE