

Pb Free Plating Product

SFF1601GD thru SFF1608GD



16.0 Amperes Insulated Doubler Polarity Super Fast Recovery Rectifiers

**Features**

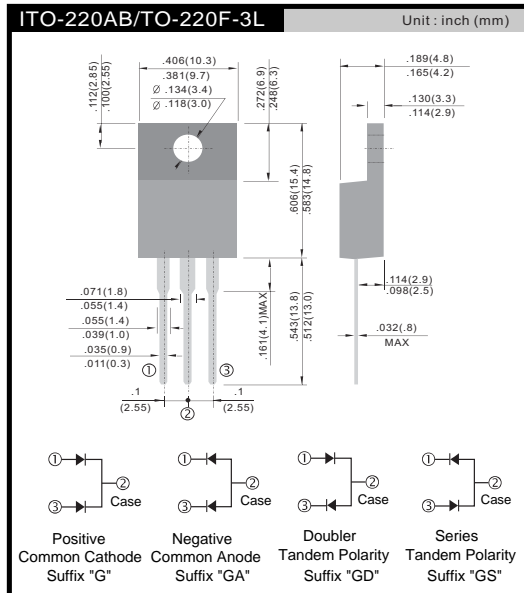
- \* Super fast switching for high efficiency
- \* Low forward voltage drop
- \* High current capability
- \* Low reverse leakage current
- \* High surge current capability

**Application**

- \* Automotive Inverters and Solar Inverters
- \* Plating Power Supply, SMPS and UPS
- \* Car Audio Amplifiers and Sound Device Systems

**Mechanical Data**

- \* Case: ITO-220AB full plastic isolated package
- \* 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: 1.75 gram approximately



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)										
PARAMETER	SYMBOL	SFF	SFF	SFF	SFF	SFF	SFF	SFF	SFF	UNIT
		1601GD	1602GD	1603GD	1604GD	1605GD	1606GD	1607GD	1608GD	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	16								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	125								A
Maximum instantaneous forward voltage (Note 1) I <sub>F</sub> = 8 A	V <sub>F</sub>	0.975			1.3		1.7			V
Maximum reverse current @ Rated V <sub>R</sub> T <sub>J</sub> =25 °C T <sub>J</sub> =125 °C	I <sub>R</sub>					10		400		μA
Maximum reverse recovery time (Note 2)	T <sub>rr</sub>					35				ns
Typical junction capacitance (Note 3)	C <sub>j</sub>	80			50					pF
Typical thermal resistance	R <sub>θJC</sub>					3.0				°C/W
Operating junction temperature range	T <sub>J</sub>					- 55 to +150				°C
Storage temperature range	T <sub>STG</sub>					- 55 to +150				°C

Note 1: Pulse Test with PW=300μs, 1% Duty Cycle  
 Note 2: Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A.  
 Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

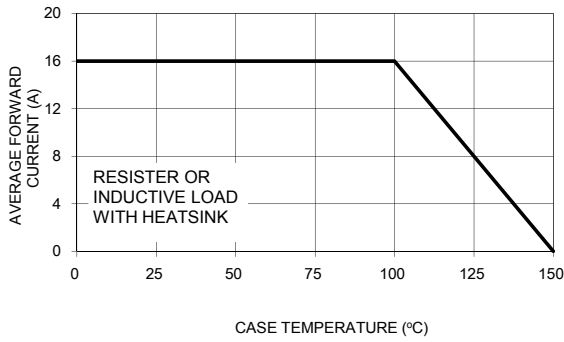


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

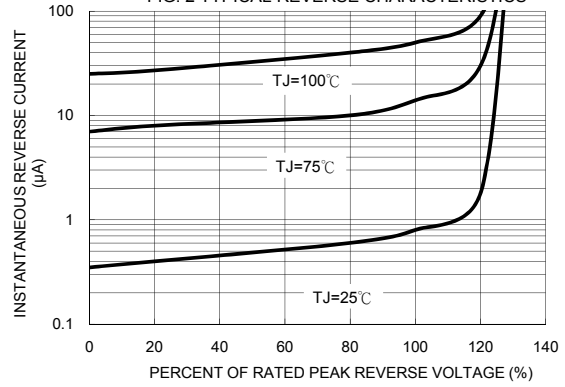


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

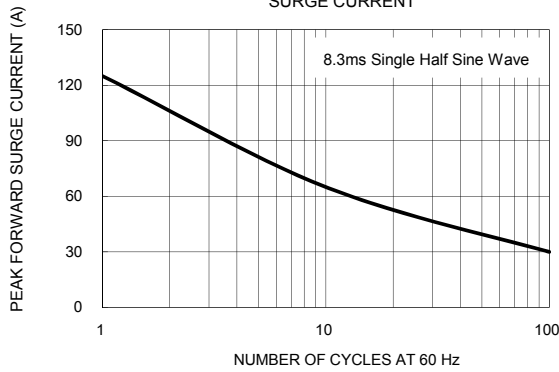


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

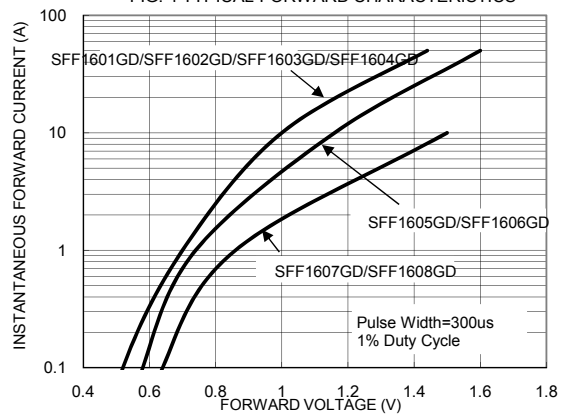


FIG. 5 TYPICAL JUNCTION CAPACITANCE

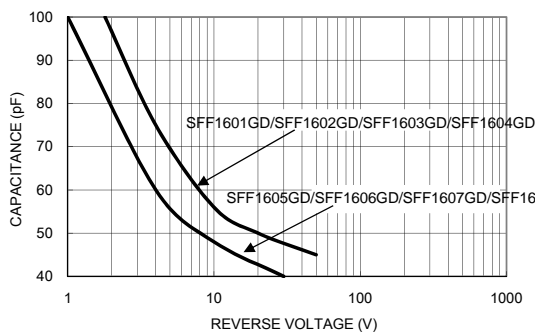


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

