

Pb Free Plating Product

## SFF1001G thru SFF1008G



10.0 Ampere Insulated Common Cathode Super Fast Recovery Rectifiers

**Features**

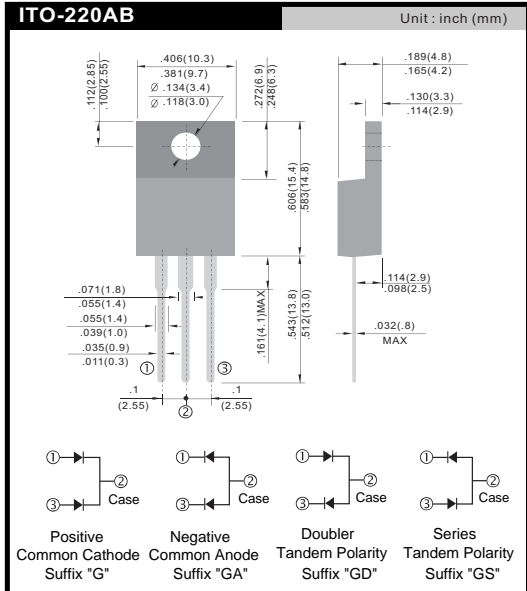
- ★ Super fast switching for high efficiency
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

**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: 2.0 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
		1001 G	1002 G	1003 G	1004 G	1005 G	1006 G	1007 G	1008 G	
Maximum repetitive peak reverse voltage	V <sub>R</sub> RM	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	V <sub>R</sub> MS	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>	10								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>F(SM)</sub>	125								A
Maximum instantaneous forward voltage (Note 1) I <sub>F</sub> = 5A	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>	70			50					pF
Typical thermal resistance	R <sub>θJC</sub>	8								°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 DC.

RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

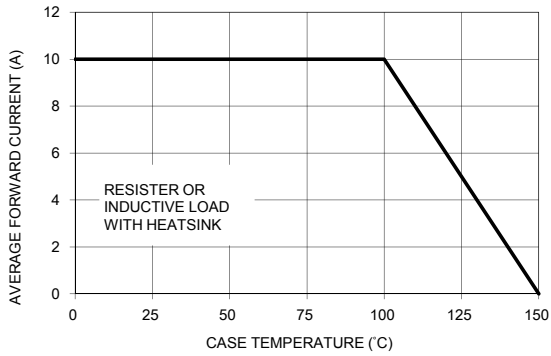


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

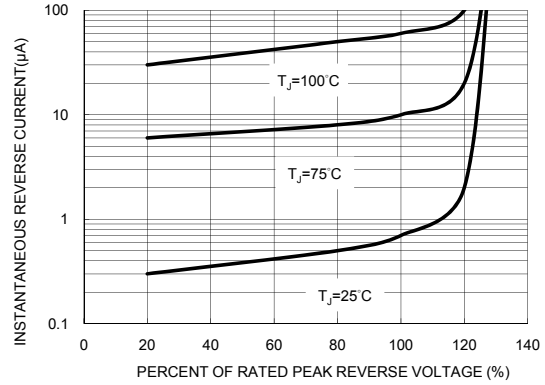


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

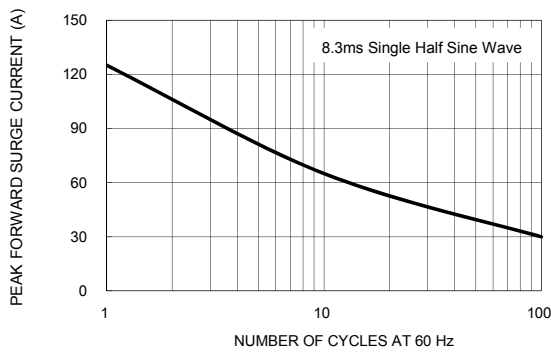


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

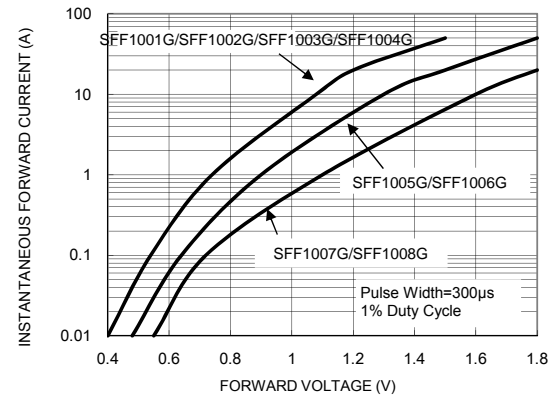


FIG. 5 TYPICAL JUNCTION CAPACITANCE

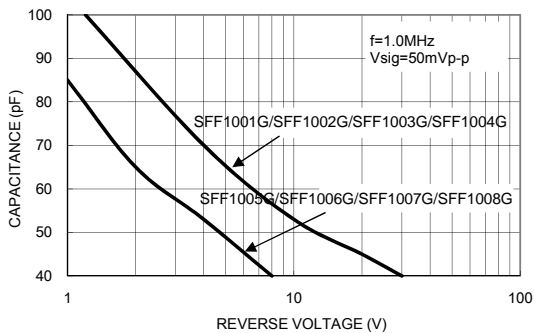


FIG. 6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

