

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

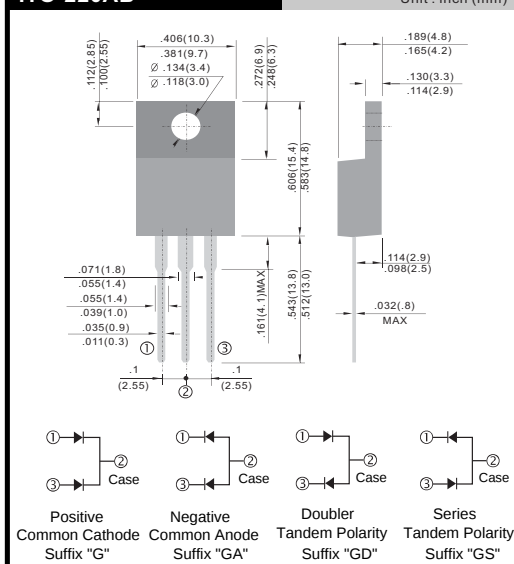
- ★ Automotive Inverters and Solar Inverters
- ★ Plating Power Supply, SMPS and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

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

ITO-220AB

Unit: inch (mm)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)**

PARAMETER	SYMBOL	SFF 1001 G	SFF 1002 G	SFF 1003 G	SFF 1004 G	SFF 1005 G	SFF 1006 G	SFF 1007 G	SFF 1008 G	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current	$I_{F(AV)}$	10								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	125								A
Maximum instantaneous forward voltage (Note 1) $I_F = 5A$	V_F	0.975		1.3		1.7				V
Maximum reverse current @ rated V_R $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	10		400						μA
Maximum reverse recovery time (Note 2)	t_{rr}	35								ns
Typical junction capacitance (Note 3)	C_J	70		50						pF
Typical thermal resistance	$R_{\theta JC}$	8								$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 to +150								$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 to +150								$^\circ\text{C}$

Note 1: Pulse Test with $PW=300\mu\text{s}$, 1% Duty CycleNote 2: Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$.

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

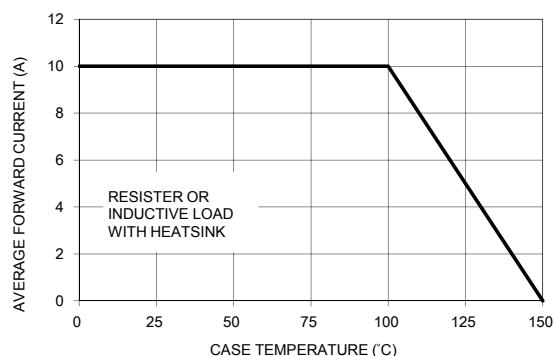


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

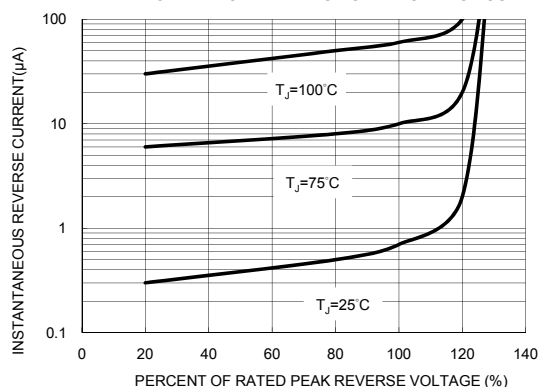


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

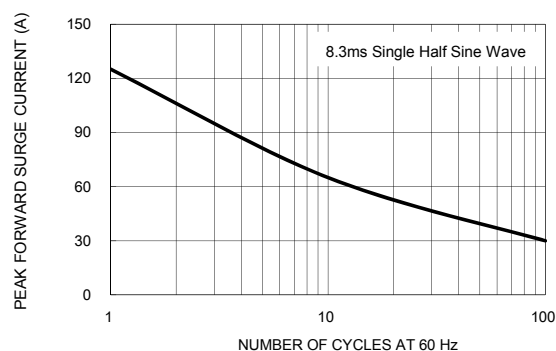


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

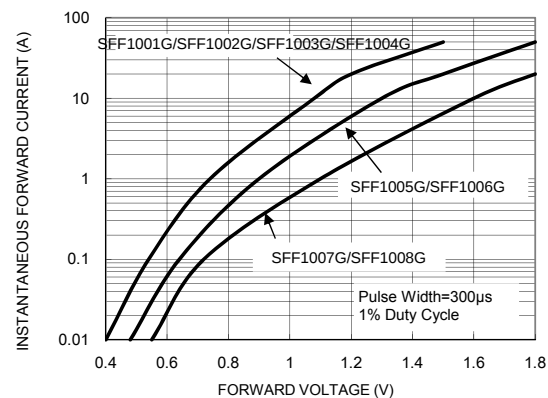


FIG. 5 TYPICAL JUNCTION CAPACITANCE

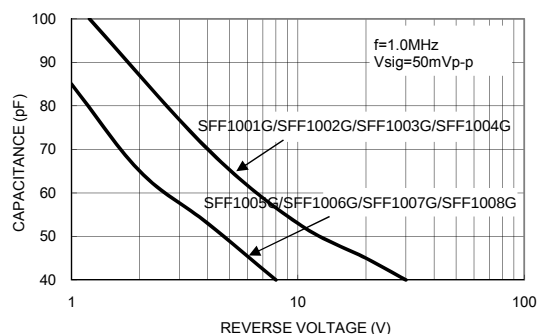


FIG. 6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

