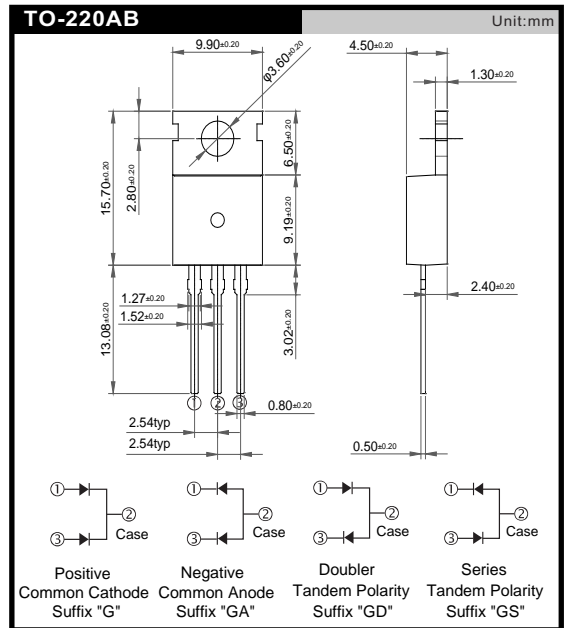


**Pb Free Plating Product**
**SF2004GD/SF2006GD/SF2008GD**


20 Ampere Heatsink Doubler Polarity Fast Recovery Half Bridge Rectifiers

- Features**
- ★ Latest GPP technology with super fast recovery time
  - ★ 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, Motor Control and UPS
  - ★ Car Audio Amplifiers and Sound Device Systems

- Mechanical Data**
- ★ Case: Heatsink TO-220AB/TO-220CE
  - ★ 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: 2.2 gram approximately


**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%.

	SYMBOL	SF2004GD	SF2006GD	SF2008GD	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	200	400	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	140	280	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	400	600	V
Maximum Average Forward Rectified Current T <sub>c</sub> =125°C	I <sub>F(AV)</sub>	20.0			A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	200	175		A
Maximum Instantaneous Forward Voltage @ 10.0 A	V <sub>F</sub>	0.98	1.30	1.70	V
Maximum DC Reverse Current @T <sub>J</sub> =25°C At Rated DC Blocking Voltage @T <sub>J</sub> =125°C	I <sub>R</sub>	10.0			uA
		250			uA
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	35			nS
Typical junction Capacitance (Note 2)	C <sub>J</sub>	120	70		pF
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150			°C

 NOTES : (1) Reverse recovery test conditions I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

FIG.1 - FORWARD CURRENT DERATING CURVE

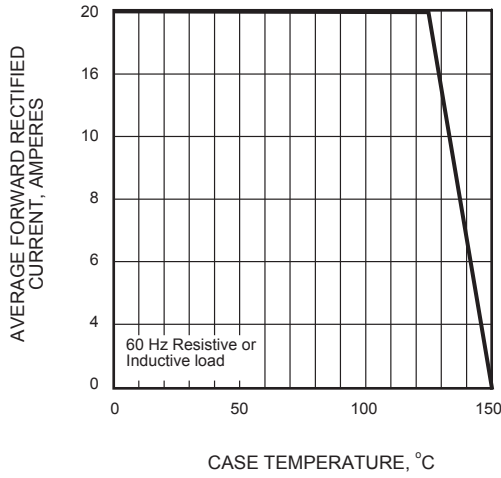


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

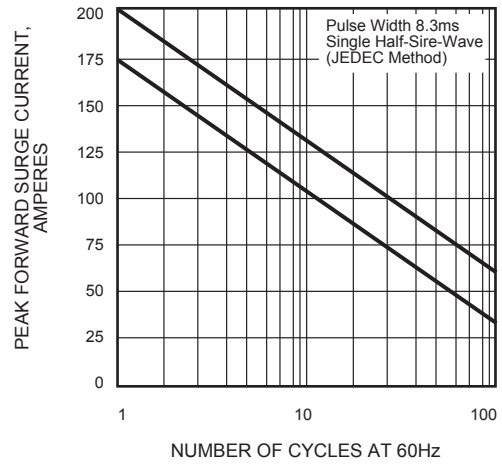


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

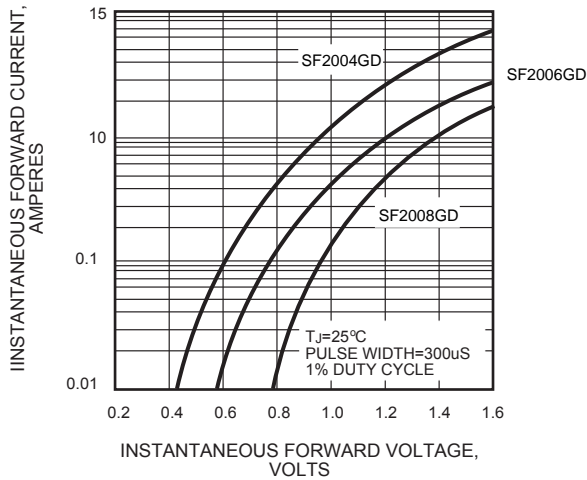


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

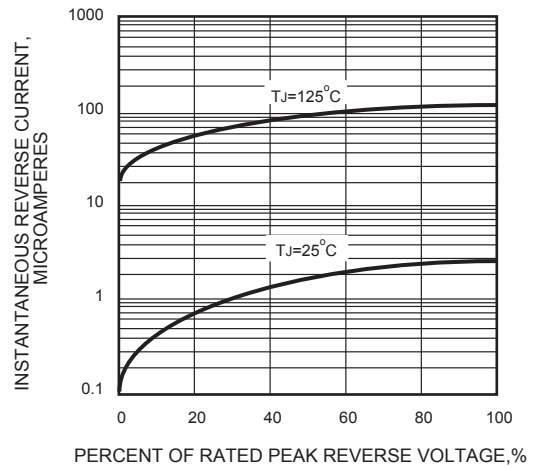


FIG.5 - TYPICAL JUNCTION CAPACITANCE

