

**VOLTAGE RANGE: 100 - 800V**

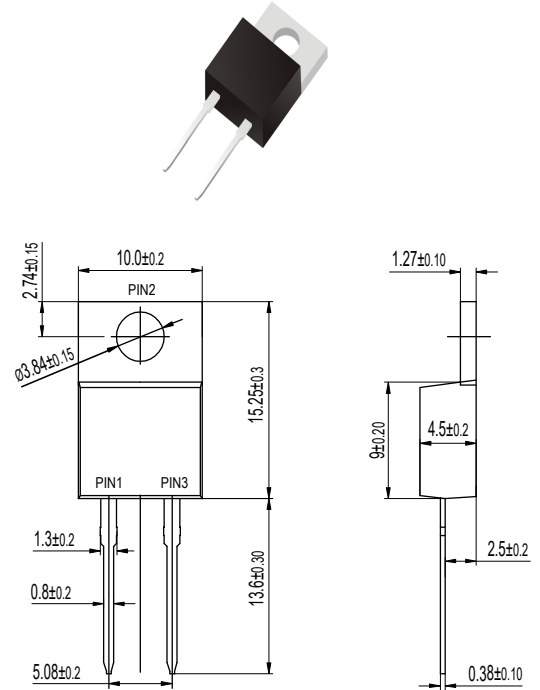
**CURRENT: 10A**

### Features

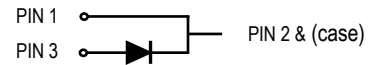
- Glass passivated chip junctions
- Super fast recovery time for switching mode application
- High Forward Surge Capability
- Low Reverse Current
- Lead free in compliance with EU RoHS 2011/65/EU directive

### Mechanical Data

- Circuit figure: Single positive
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated
- Weight: ITO-220AC 1.65 grams



TO-220AC



### Maximum Ratings And Electrical Characteristics $T_A = 25^\circ\text{C}$

RATINGS	SYMBOL	SF 1002	SF 1003	SF 1004	SF 1005	SF 1006	SF 1007	SF 1008	UNIT
Maximum repetitive reverse voltage	V <sub>RRM</sub>	200	300	400	500	600	700	800	V
Maximum RMS voltage	V <sub>RMS</sub>	140	210	280	350	420	490	560	V
Maximum DC blocking voltage	V <sub>DC</sub>	200	300	400	500	600	700	800	V
Maximum average forward current	I <sub>AV</sub>	10							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	150							A
Typical thermal resistance per diode (Note 1)	R <sub>θ-JC</sub>	2.5							°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
Typical forward voltage per leg at 10A	V <sub>F</sub>	1.00	1.30	1.70		2.80		V	
Maximum average reverse current at rated DC blocking voltage T <sub>J</sub> =25°C T <sub>J</sub> =125°C	I <sub>R</sub>	5 250							μA
Typical reverse recovery time (Note 2)	T <sub>RR</sub>	35							nS

Notes: 1. Thermal resistance from junction to case.  
2. Test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

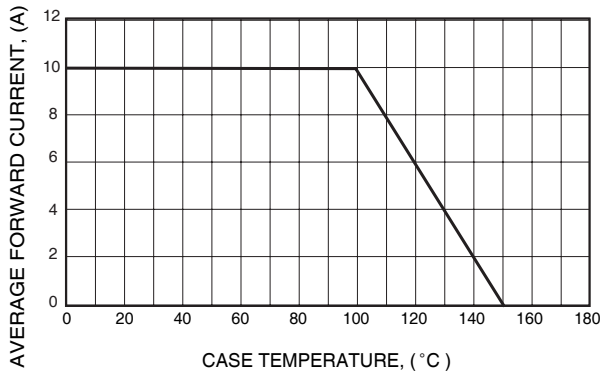


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

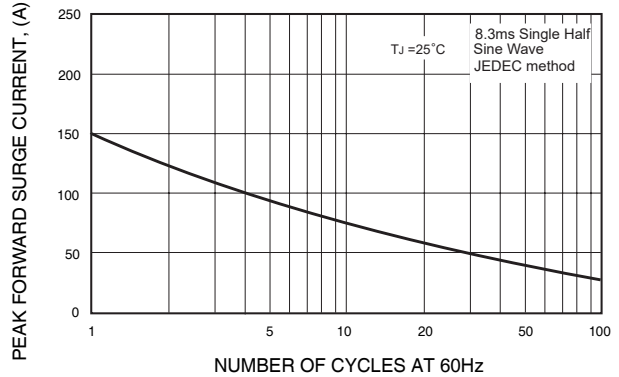


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

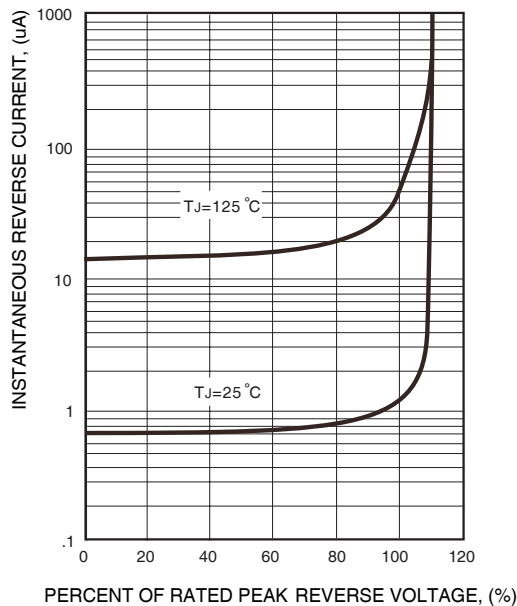


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

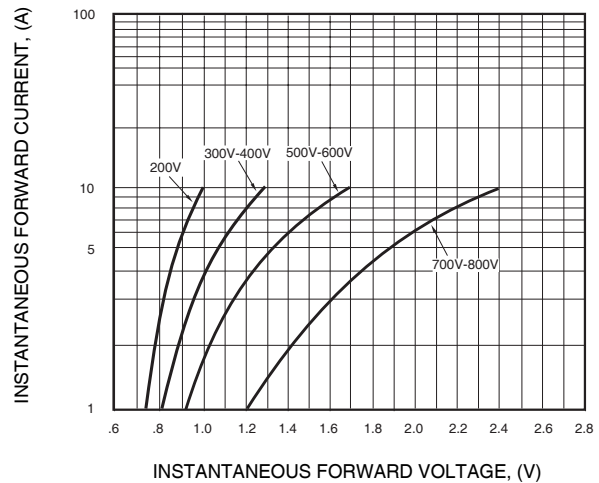
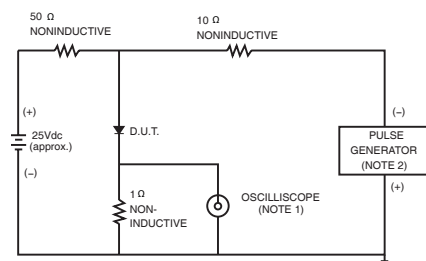


FIG.6- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

