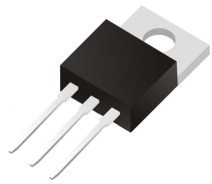
SF1001CT - SF1006CT

SUPER FAST RECTIFIERS

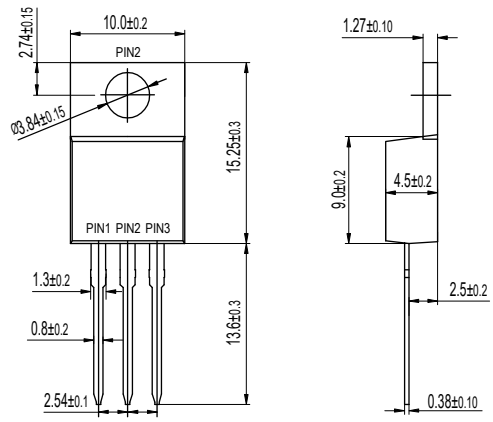
VOLTAGE RANGE: 100 - 600V

CURRENT: 10A

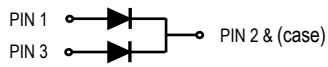


Feaures

- 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



TO-220AB



Mechanical Data

- Circuit figure: Common Cathode
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated
- Weight: TO-220AB 1.85 grams

RoHS COMPLIANT

Maximum Ratings And Electrical Characteristics T_A = 25°C

RATINGS	SYMBOL	SF 1001CT	SF 1002CT	SF 1003CT	SF 1004CT	SF 1005CT	SF 1006CT	UNIT
Maximum repetitive reverse voltage	V_{RRM}	100	200	300	400	500	600	V
Maximum RMS voltage	V_{RMS}	70	140	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	100	200	300	400	500	600	V
Maximum average forward current	I_{AV}	10						A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150						A
Typical thermal resistance per diode(Note 1)	$R_{\theta-JC}$	2.5						°C/W
Operating junction temperature range	T_J	-55 to +150						°C
Storage temperature range	T_{STG}	-55 to +150						°C
Typical forward voltage per leg at 5A	V_F	1.00		1.30		1.70		V
Maximum average reverse current T_J=25°C at rated DC blocking voltage T_J=125°C	I_R	5 250						μA
Typical reverse recovery time(Note 2)	T_{RR}	35						nS

Notes: 1. Thermal resistance from junction to case.

2. Test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

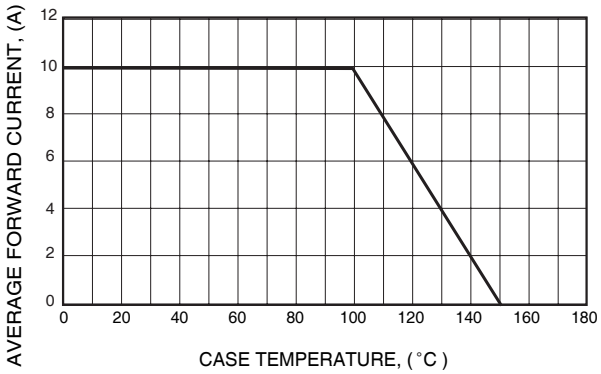


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

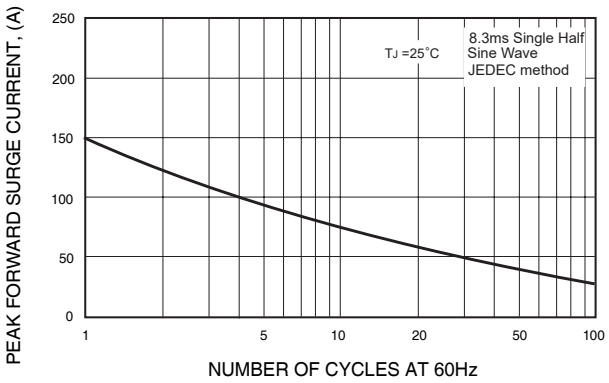


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

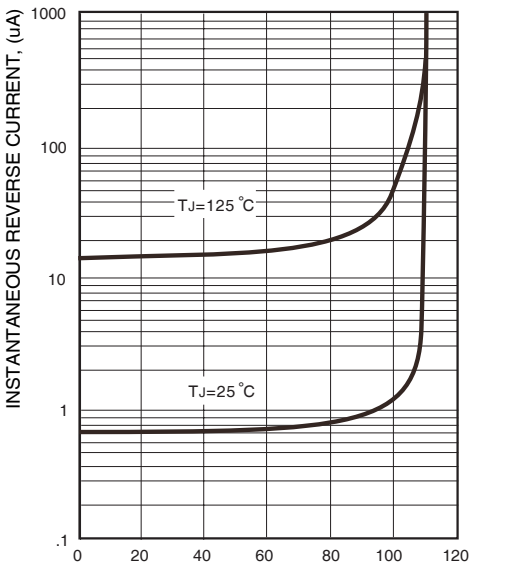


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

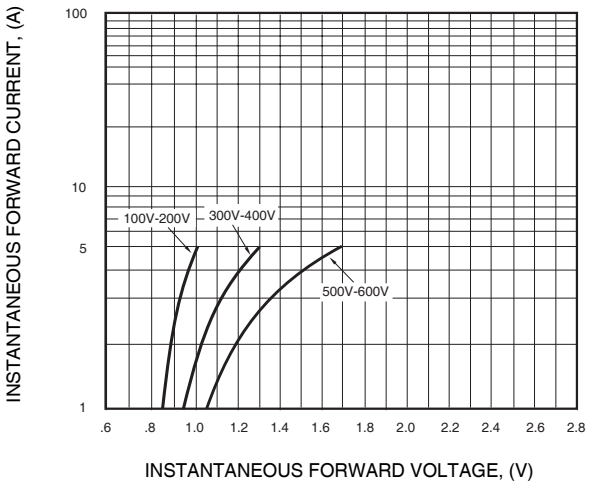
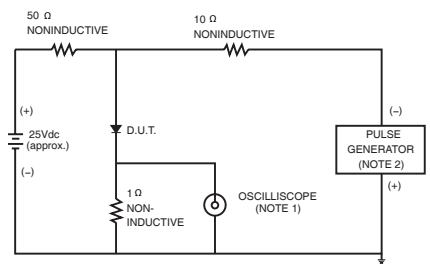


FIG.6- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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