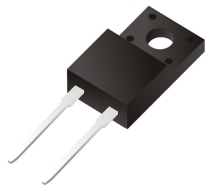
FR1001F - FR1010F

FAST RECOVERY RECTIFIERS

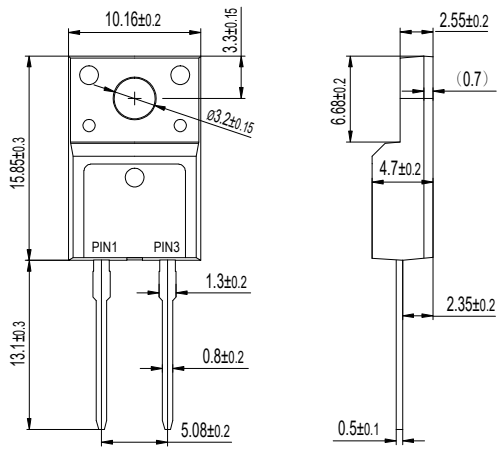
VOLTAGE RANGE: 100 - 1000V

CURRENT: 10A

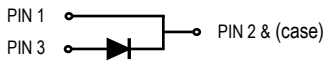


Feaures

- Glass passivated chip junctions
- Low reverse current operation
- High Junction Temperature
- Fast recovery time for switching
- High Forward Surge Capability
- Lead free in compliance with EU RoHS 2011/65/EU directive



ITO-220AC



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

RoHS COMPLIANT

Maximum Ratings And Electrical Characteristics T_A = 25°C

RATINGS	SYMBOL	FR 1001F	FR 1002F	FR 1004F	FR 1006F	FR 1008F	FR 1010F	UNIT
Maximum repetitive reverse voltage	V_{RRM}	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	100	200	400	600	800	1000	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}	120						A
Typical thermal resistance per diode(Note 1)	$R_{\theta-JC}$	4.0						°C/W
Operating junction temperature range	T_J	-55 to +150						°C
Storage temperature range	T_{STG}	-55 to +150						°C
Maximum forward voltage per leg at 10A	V_F	1.30						V
Maximum average reverse current T_J=25°C at rated DC blocking voltage T_J=125°C	I_R	10 250						μA
Maximum reverse recovery time(Note 2)	T_{RR}	150			250		500	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

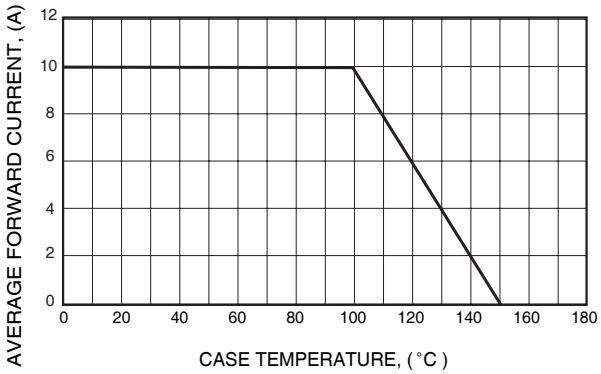


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

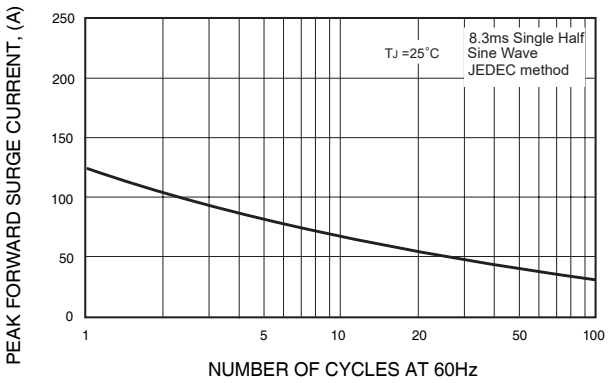


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

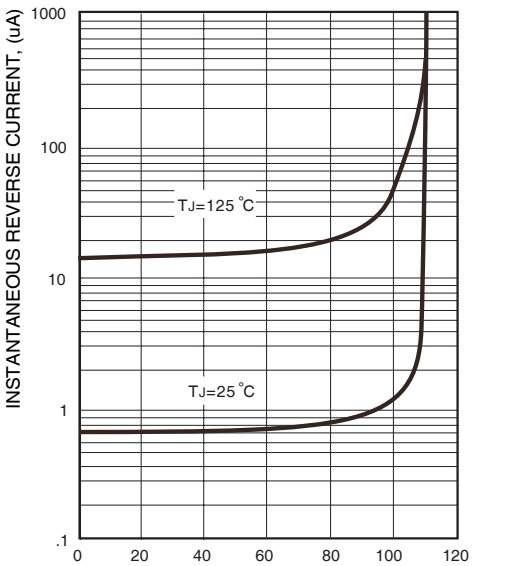


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

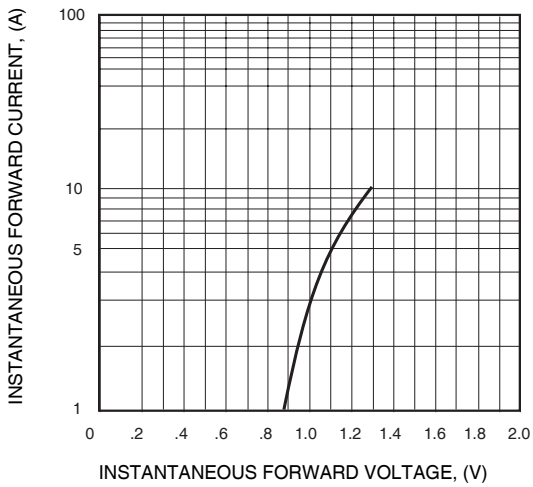
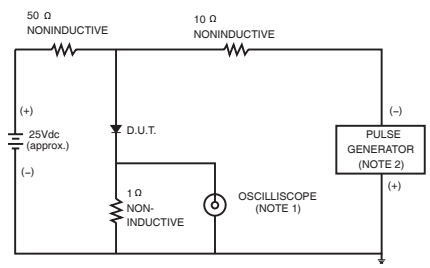


FIG.6- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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