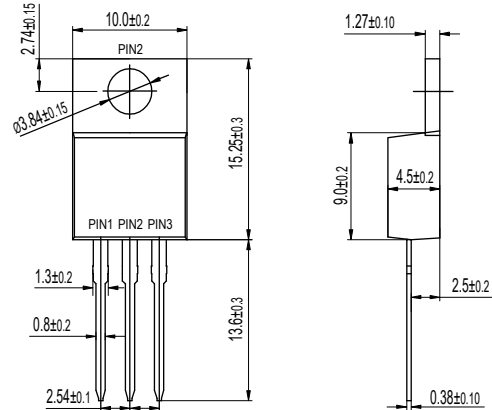
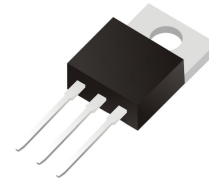


**VOLTAGE RANGE: 100 - 1000V**

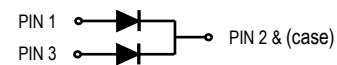
**CURRENT: 12A**

### Features

- 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



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



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

RATINGS	SYMBOL	FR 1201CT	FR 1202CT	FR 1204CT	FR 1206CT	FR 1208CT	FR 1210CT	UNIT
Maximum repetitive reverse voltage	VRRM	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	100	200	400	600	800	1000	V
Maximum average forward current per device per diode	I <sub>AV</sub>	12 6						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
Maximum forward voltage per leg at 6A	V <sub>F</sub>	1.30						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>	10 250						μA
Maximum reverse recovery time (Note 2)	T <sub>RR</sub>	150			250		500	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

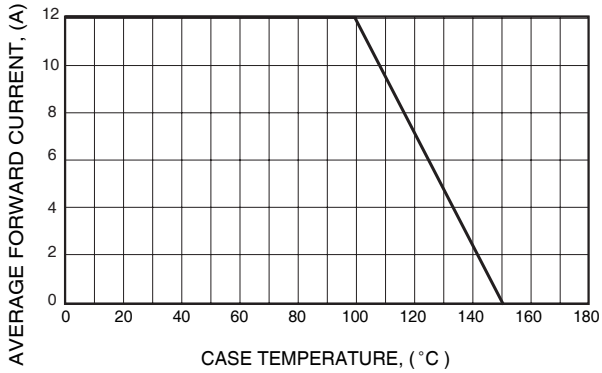


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

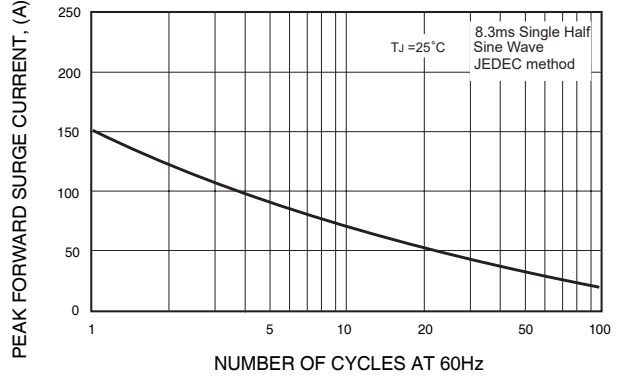


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

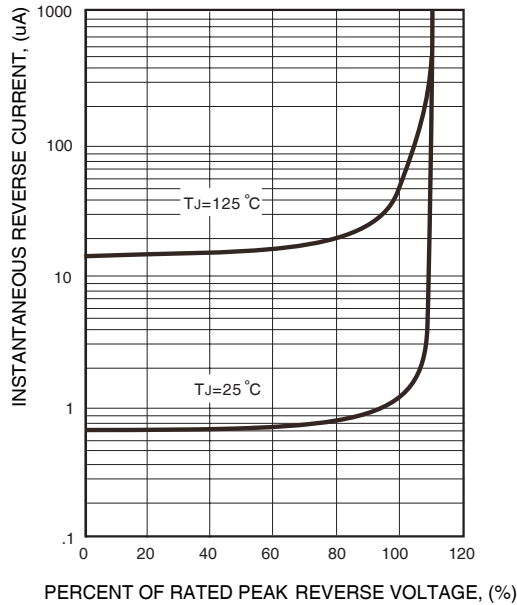


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

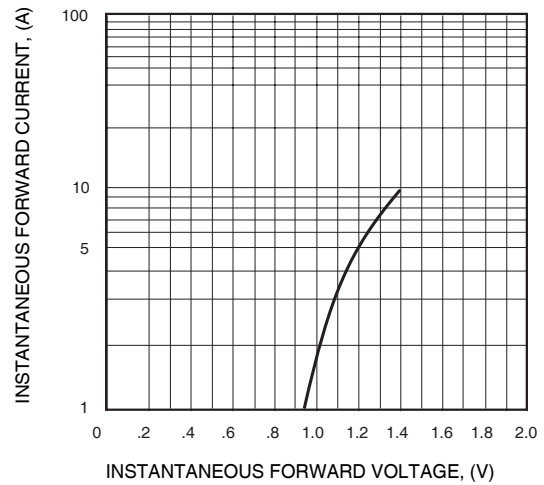
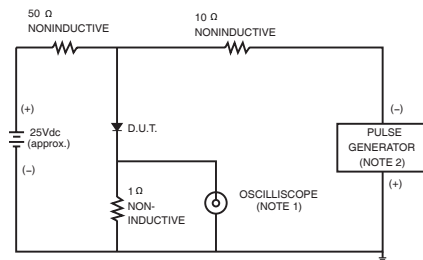


FIG.6- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

