

## FR304 THRU FR307

### 3.0AMPS . FAST RECOVERY RECTIFIERS

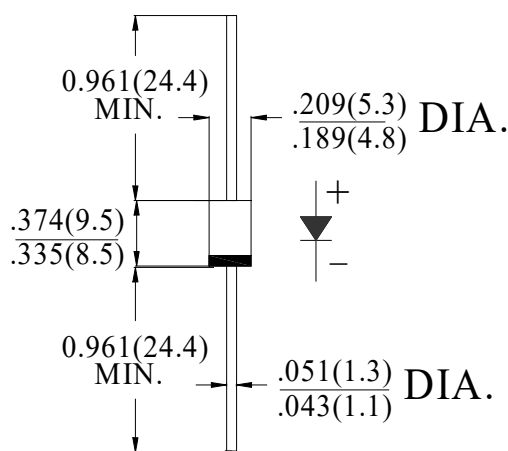
#### FEATURE

- . Fast switching
- . High current capability
- . Low forward voltage drop
- . Low power loss, high efficiency
- . High surge capability
- . High temperature soldering guaranteed  
260°C /10sec/ 0.375" lead length at 5 lbs tension

#### MECHANICAL DATA

- . Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C
- . Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- . Polarity: color band denotes cathode
- . Mounting position: any

#### DO-27/DO-201AD



Dimensions in inches and (millimeters)

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

Type Number	SYM BOL	FR304	FR305	FR307	units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	400	600	1000	V
Maximum RMS Voltage	$V_{RMS}$	280	420	700	V
Maximum DC blocking Voltage	$V_{DC}$	400	600	1000	V
Maximum Average Forward Rectified Current. 375"(9.5mm) lead length	$I_{F(AV)}$		3.0		A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$		90.0		A
Maximum forward Voltage at 3.0A DC	$V_F$		1.3		V
Maximum DC Reverse Current @ $T_j=25^\circ\text{C}$ at rated DC blocking voltage @ $T_j=125^\circ\text{C}$	$I_R$		5.0 200.0		$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	150	250	500	nS
Typical Junction Capacitance (Note 2)	$C_J$		60		pF
Typical Thermal Resistance (Note 3)	$R_{(JA)}$		50		$^\circ\text{C/W}$
	$R_{(JL)}$		10		
	$R_{(JC)}$		12		
Storage Temperature	$T_{STG}$		-55 to +150		$^\circ\text{C}$
Operation Junction Temperature	$T_j$		-55 to +150		$^\circ\text{C}$

#### Note:

1. Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length, vertical P.C.Board Mounted.

**RATING AND CHARACTERISTIC CURVES**

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

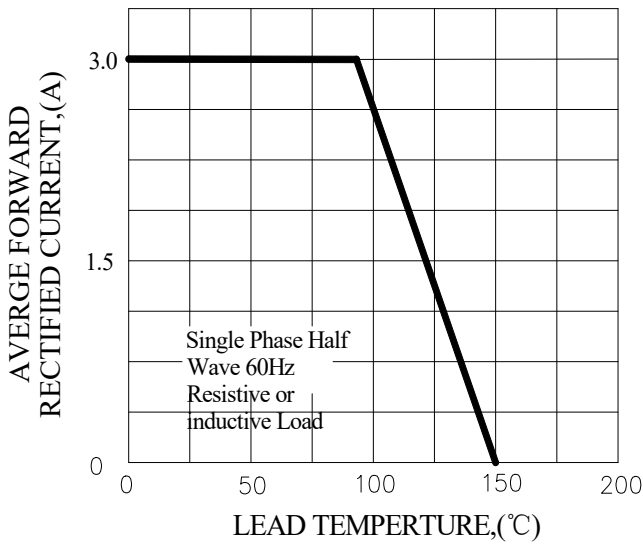


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

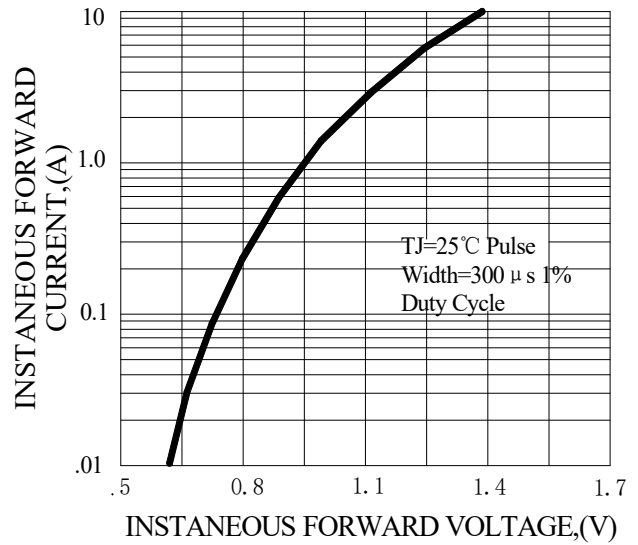


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

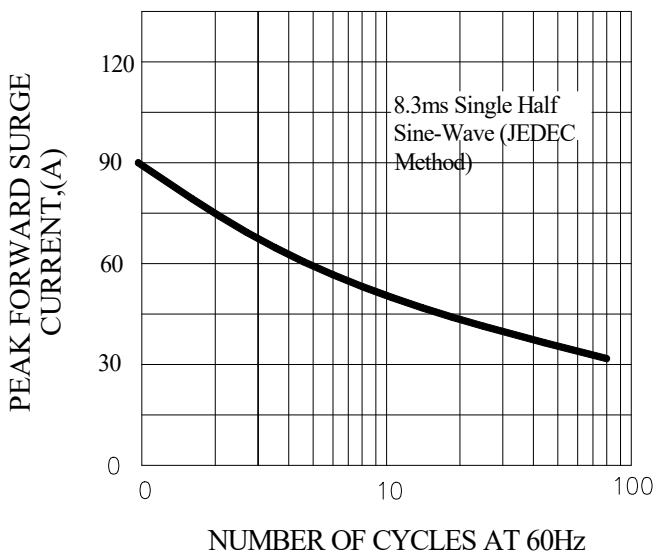


FIG.4-TYPICAL REVERSE CHARACTERISTICS

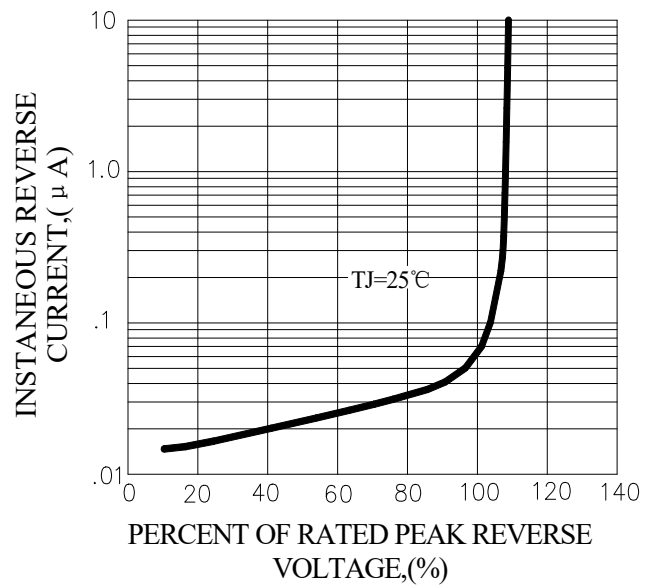
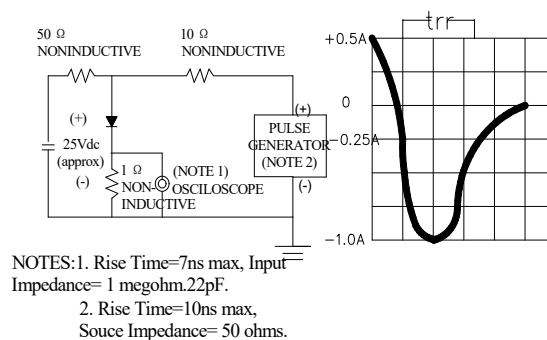
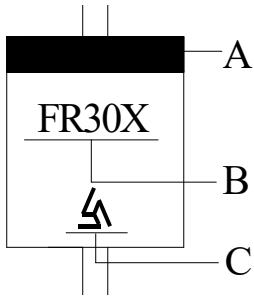


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



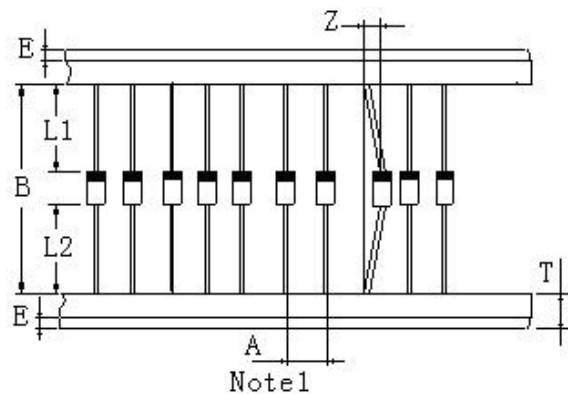
## Marking and packaging illustration

### 1、Marking



SYMBOL	Explanation
<b>A</b>	Color Band Denotes Cathode
<b>B</b>	Product Name
<b>C</b>	Trademark

### 2、Packaging



ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Component alignment	Z	1.2max	0.048max
Tape width	T	6.0±0.4	0.236±0.016
Exposed adhesive	E	0.8max	0.032max
Body eccentricity	L1-L2	1.0max	0.040max
Component	A	10.0±0.5	0.4±0.02
Inner tap	B	52.0~53.5	2.05~2.11
NOTE: Each component lead shall be sandwiched between tapes for a minimum of 2.5mm (0.1inch)			