



PINGWEI ENTERPRISE

## FR101 THRU FR107

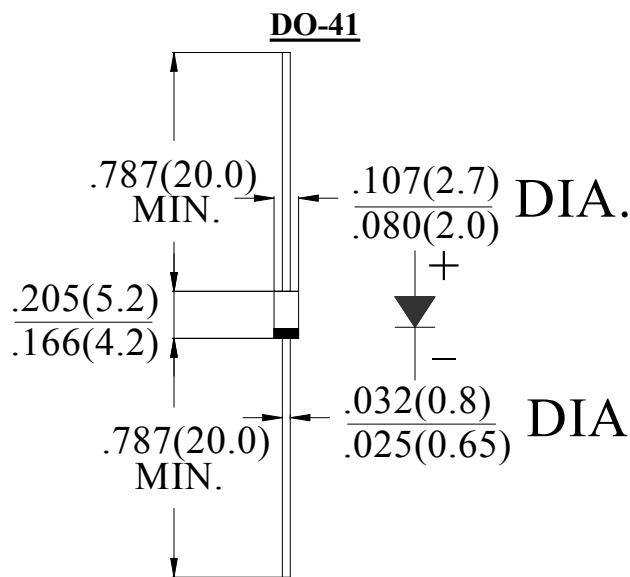
### 1.0AMP . FAST RECOVERY RECTIFIERS

#### 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



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%

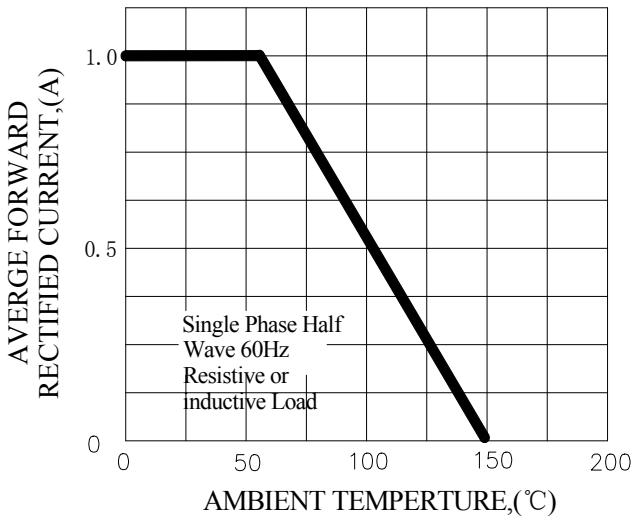
Type Number	SYM BOL	FR 101	FR 102	FR 103	FR 104	FR 105	FR 106	FR 107	units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30.0							A
Maximum Instantaneous forward Voltage at 1.0A DC	$V_F$	1.3							V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	$I_R$	5.0 100.0							$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	150			250		500		nS
Typical Junction Capacitance (Note 2)	$C_J$	15							pF
Typical Thermal Resistance (Note 3)	$R_{(JA)}$	75							$^\circ\text{C}/\text{W}$
Storage Temperature	$T_{STG}$	-55 to +150							$^\circ\text{C}$
Operation Junction Temperature	$T_J$	-55 to +150							$^\circ\text{C}$

#### Note:

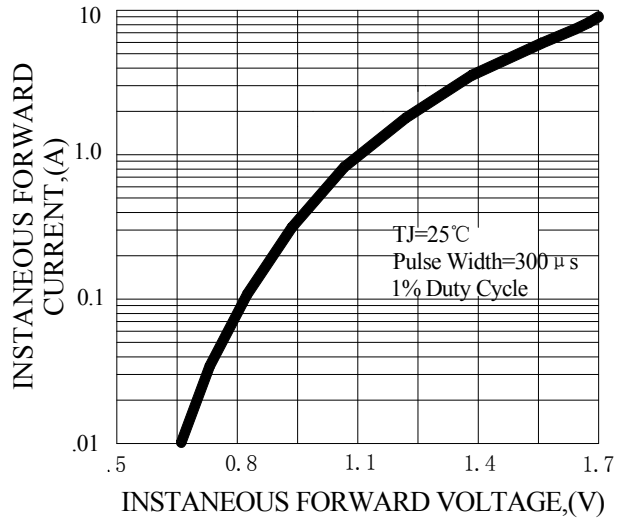
1. Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length, vertical P.C.Board Mounted.

**RATING AND CHARACTERISTIC CURVES (FR101 THRU FR107)**

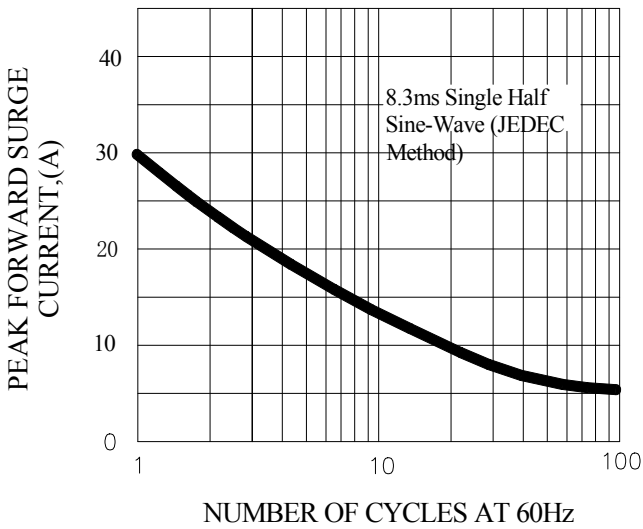
**FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE**



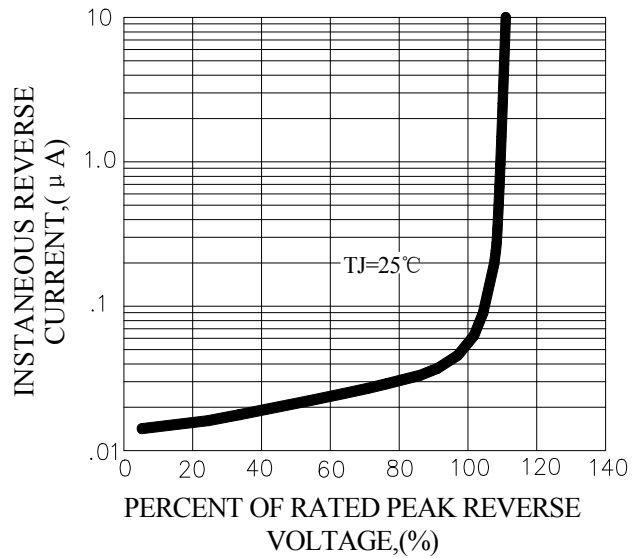
**FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



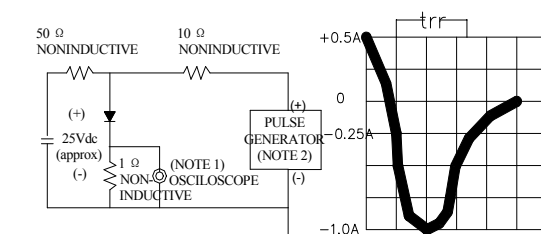
**FIG.3-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.4-TYPICAL REVERSE CHARACTERISTICS**



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



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