

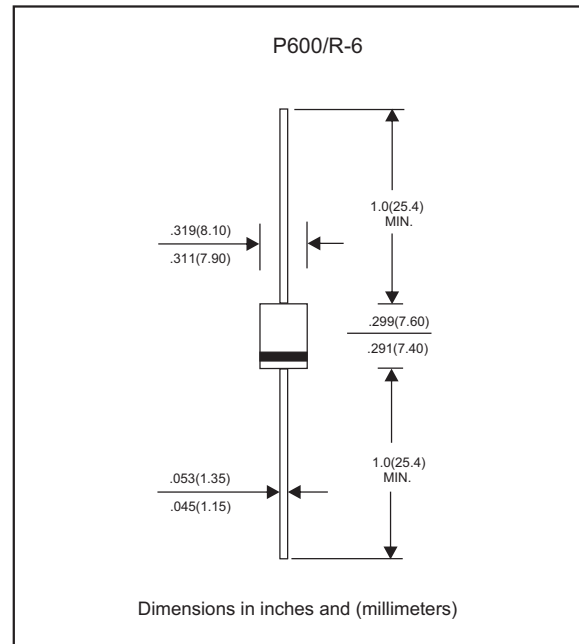
Features

- Axial lead type devices for through hole design.
- High current capability.
- Fast switching for high efficiency.
- High surge capability.
- Glass passivation junction chip insid.
- Lead-free parts meet RoHS requirments.
- Suffix "-H" indicates Halogen-free parts, ex. FR601G-H

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, P600
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	I_O			6.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			200	A
Reverse current	$V_R = V_{RRM} \quad T_J = 25^{\circ}\text{C}$	I_R			5.0	μA
	$V_R = V_{RRM} \quad T_J = 125^{\circ}\text{C}$				100	
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		100		pF
Storage temperature		T_{STG}	-65		+175	$^{\circ}\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	t_{rr}^{*5} (ns)	Operating temperature $T_J, (^{\circ}\text{C})$
FR601G	50	35	50	1.30	150	-55 to +150
FR602G	100	70	100			
FR603G	200	140	200			
FR604G	400	280	400			
FR605G	600	420	600		250	
FR606G	800	560	800			
FR607G	1000	700	1000			

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@ $I_F=6.0\text{A}$
- *5 Maximum Reverse recovery time, note 1

Note 1. Reverse recovery time test condition, $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Rating and characteristic curves (FR601G THRU FR607G)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

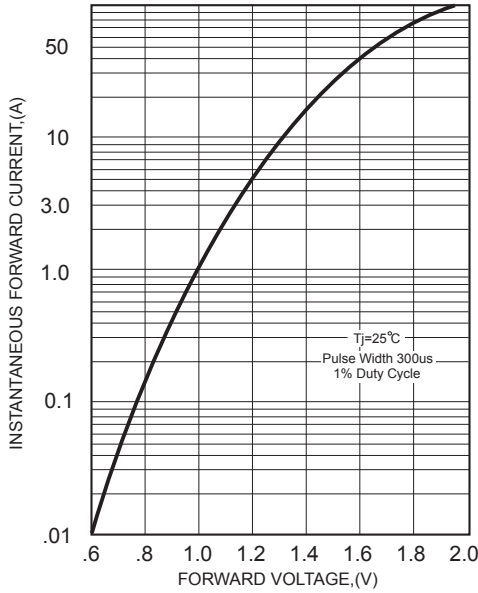


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

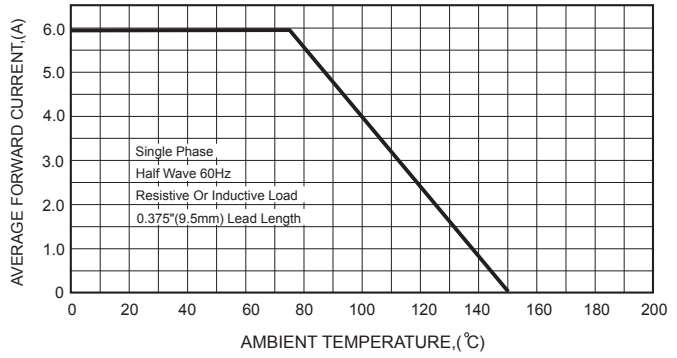


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

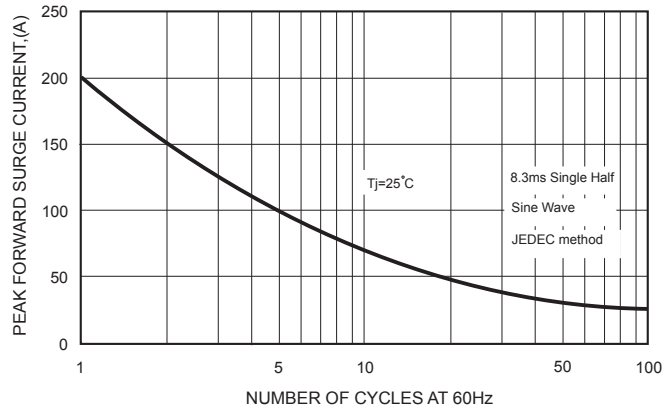
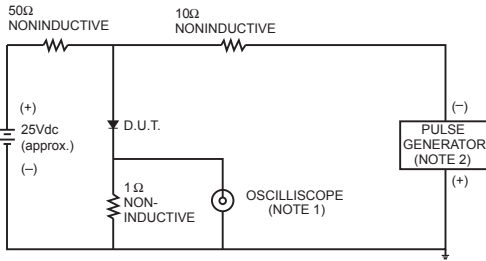


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

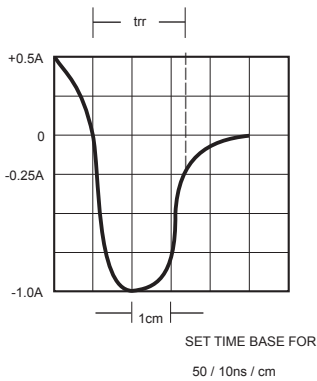
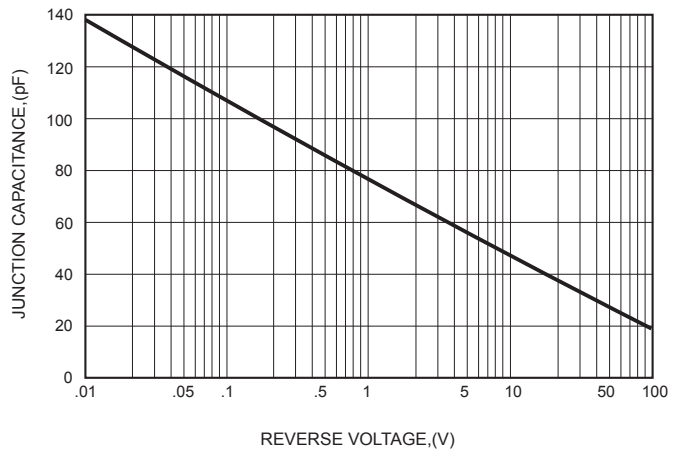




FIG.5-TYPICAL JUNCTION CAPACITANCE



Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
FR601G	FR601G
FR602G	FR602G
FR603G	FR603G
FR604G	FR604G
FR605G	FR605G
FR606G	FR606G
FR607G	FR607G