

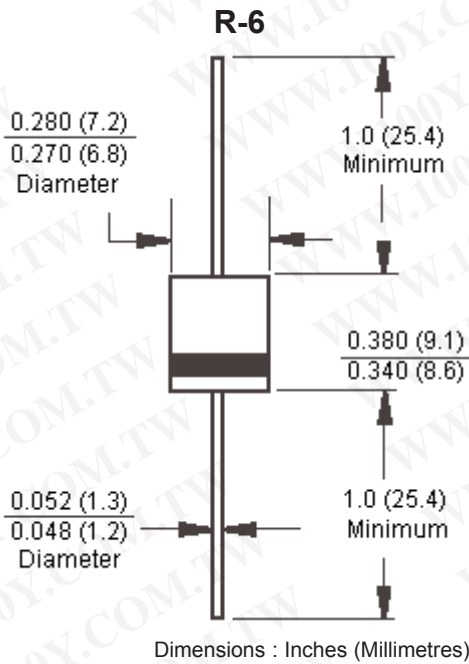
FR60xG Series



Features:

- Low forward voltage drop.
- High current capability.
- High reliability.
- High surge current capability.

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)



Mechanical Data:

Cases	: Moulded plastic.
Lead	: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed.
Polarity	: Colour band denotes cathode end.
High temperature soldering guaranteed	: 260°C/10 seconds/0.375 inch, (9.5mm) lead lengths at 5lbs., (2.3kg) tension.
Mounting position	: Any.
Weight	: 1.65 grams.



Maximum Ratings and Electrical Characteristics

Rating 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	Symbol	FR601G	FR602G	FR603G	FR604G	FR605G	FR607G	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	700	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	1000	
Maximum Average Forward Rectified Current 0.375 inch (9.5mm) Lead Length at $T_A = 55^\circ\text{C}$	$I_{(AV)}$	6.0						A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	250						
Maximum Instantaneous Forward Voltage at 6.0A	V_F	1.3						V
Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 125^\circ\text{C}$	I_R	5.0 200						μA μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	150				250	500	nS
Typical Junction Capacitance (Note 2)	C_j	50						pF
Typical Thermal Resistance	$R_{\theta JA}$	30						$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_J	-65 to +150						$^\circ\text{C}$
Storage Temperature Range	T_{STG}							

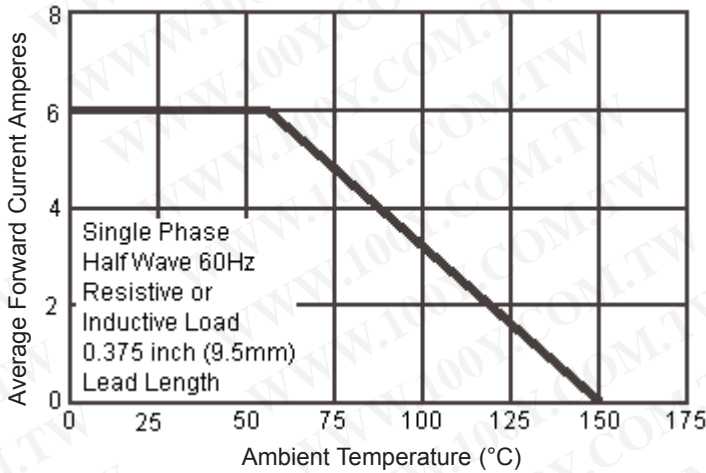
Notes: 1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.

2. Measured at 1MHz and Applied Reverse Voltage of 4.0 Volts DC.

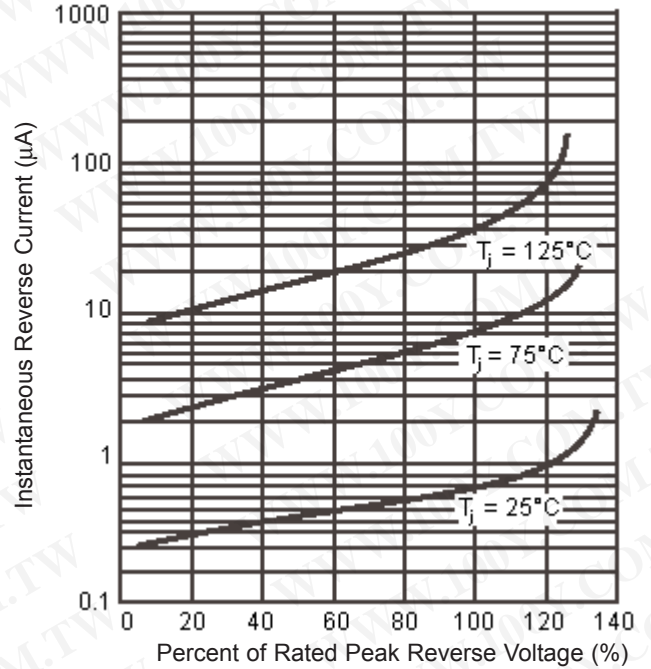
3. Mount on Cu-Pad Size 16mm x 16mm on PCB.

Ratings and Characteristic Curves (FR601G thru FR607G)

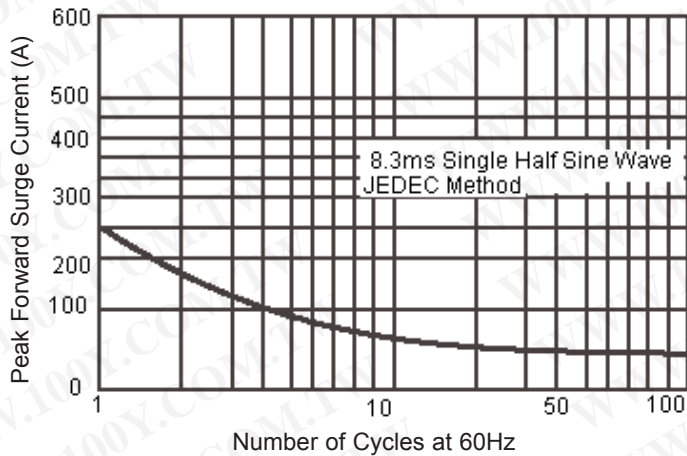
Maximum Forward Current Derating Curve



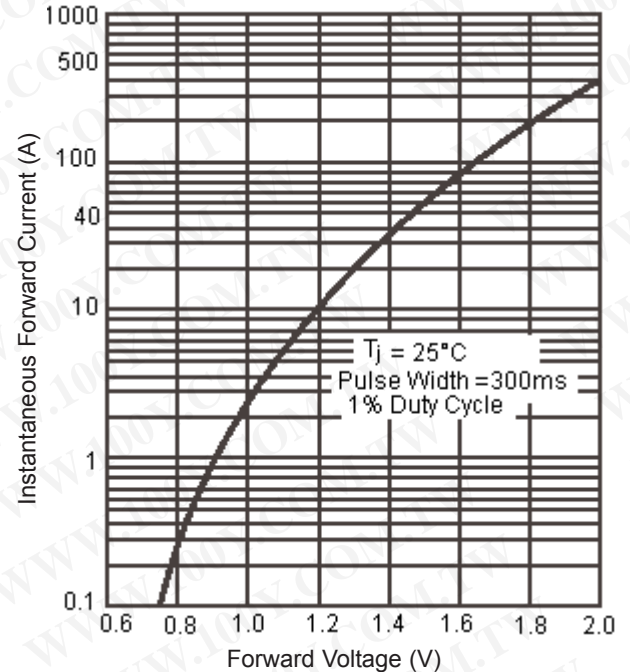
Typical Reverse Characteristics Per Leg



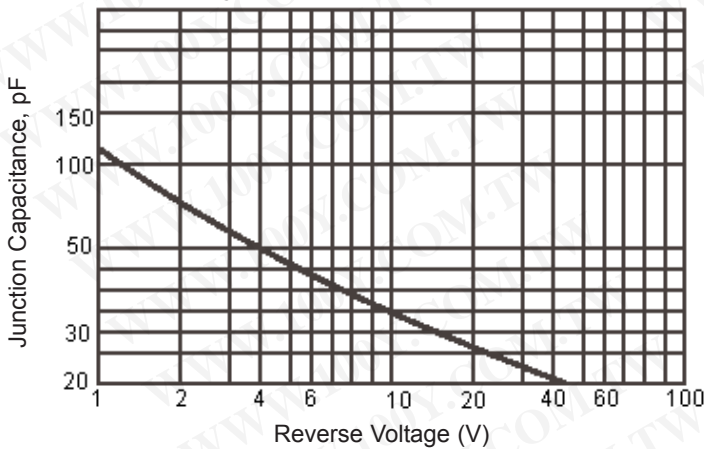
Maximum Non-Repetitive Forward Surge Current



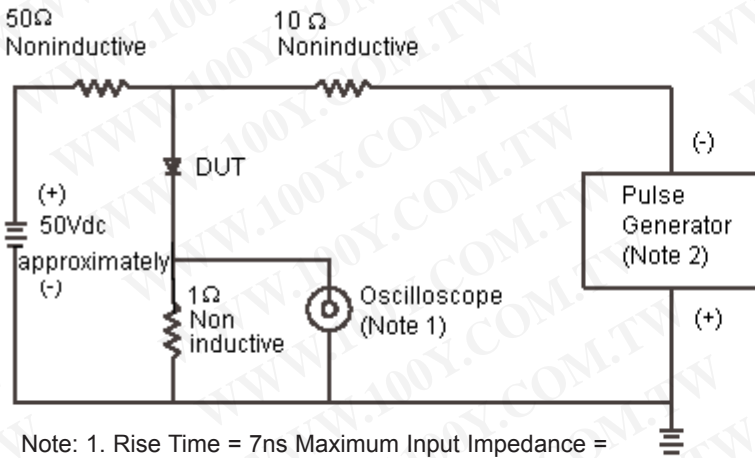
Typical Forward Characteristics



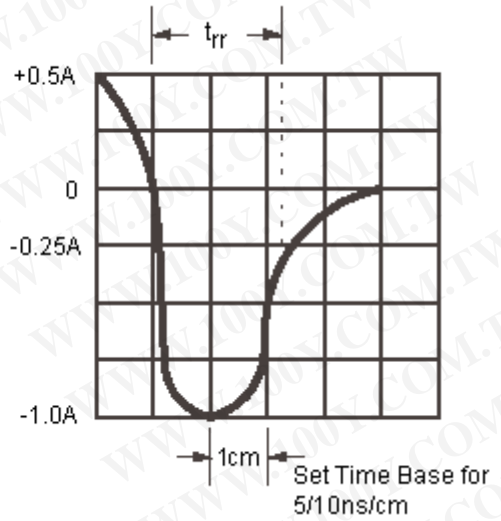
Typical Junction Capacitance



Reverse Recovery Time Characteristic and Test Circuit Diagram



- Note: 1. Rise Time = 7ns Maximum Input Impedance = 1 megohm 22pf
 2. Rise Time = 10ns Maximum Source Impedance = 50 ohms



Part Number Table

Description	Part Number
Diode, Fast, 6A, 50V	FR601G
Diode, Fast, 6A, 100V	FR602G
Diode, Fast, 6A, 200V	FR603G
Diode, Fast, 6A, 400V	FR604G
Diode, Fast, 6A, 600V	FR605G
Diode, Fast, 6A, 1000V	FR607G