

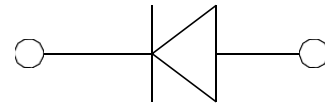
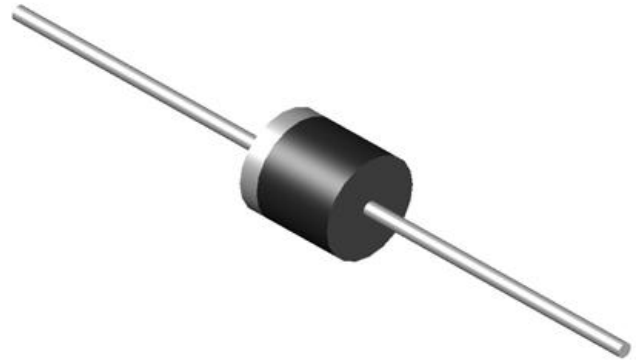
FR601G THRU FR607G FAST RECOVERY RECTIFIERS

Features

- High efficiency
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Glass passivated chip junction
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Mechanical Data

- **Package:** R-6
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
 - **Polarity:** Color band denotes cathode end



Maximum Ratings and Electrical Characteristics

PARAMETER	SYMBOL	UNIT	FR601G	FR602G	FR603G	FR604G	FR605G	FR606G	FR607G	
Device marking code			FR601G	FR602G	FR603G	FR604G	FR605G	FR606G	FR607G	
Maximum Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000	
Maximum RMS Voltage	VRMS	V	35	70	140	280	420	560	700	
Maximum DC blocking Voltage	VDC	V	50	100	200	400	600	800	1000	
Average Forward Current @60Hz sine wave, Resistance load, Ta=65°C	I _{F(AV)}	A	6.0							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C	I _{FSM}	A	200							
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C			400							
Current squared time @1ms≤t≤8.3ms Tj=25°C, Rating of per diode	I ² t	A ² s	166							
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	C _j	pF	70				56			
Storage Temperature	T _{stg}	°C	-55 ~ +150							
Junction Temperature	T _j	°C	-55 ~ +150							

Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	FR601G	FR602G	FR603G	FR604G	FR605G	FR606G	FR607G
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =6.0A	1.3						
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _j =25°C	2.5						
			T _j =125°C	100						
Maximum reverse recovery time	t _r	ns	I _F =0.5A, I _R =1.0A, I _r =0.25A	150			250		500	

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Thermal Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	FR601G	FR602G	FR603G	FR604G	FR605G	FR606G	FR607G
Typical Thermal Resistance	R _{θJA}	°C/W	15						

Characteristics (Typical)

FIG.1: I_o-T_a Curve

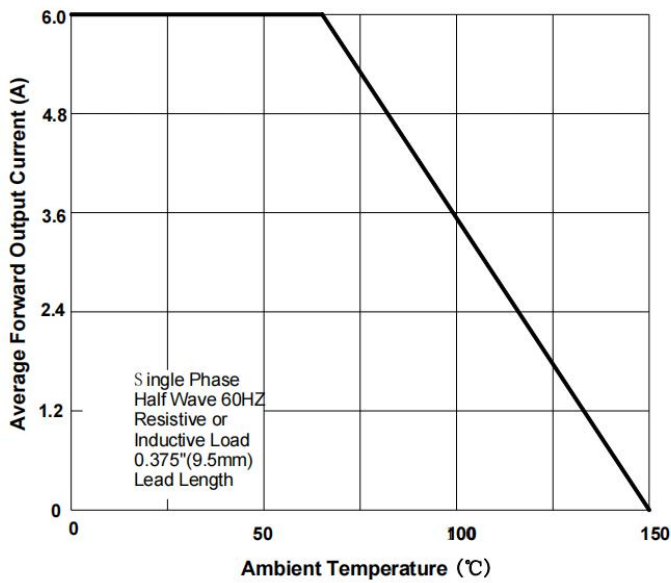


FIG.2: Forward Surge Current Capability

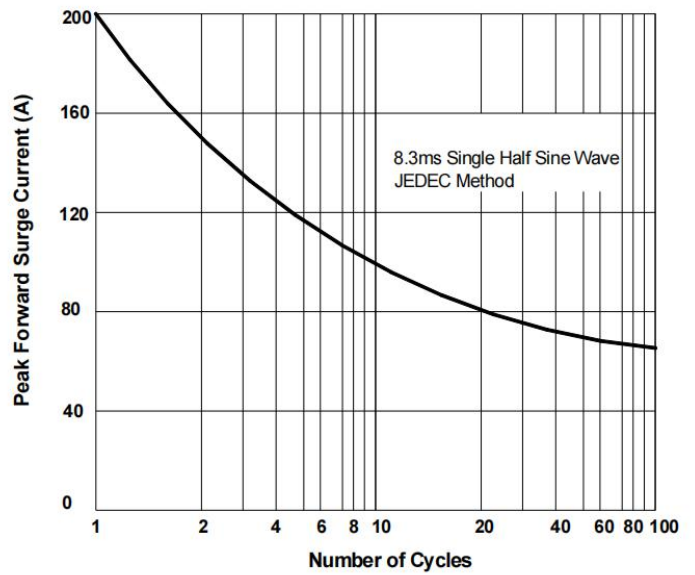


FIG.3: Forward Voltage

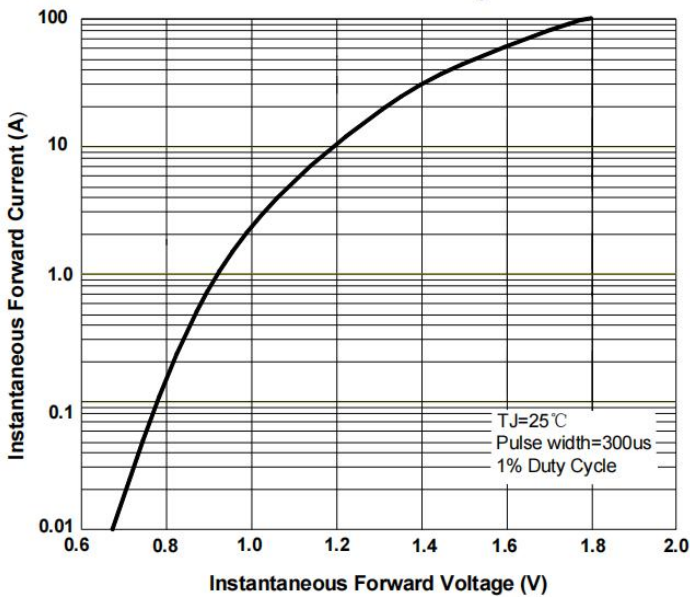
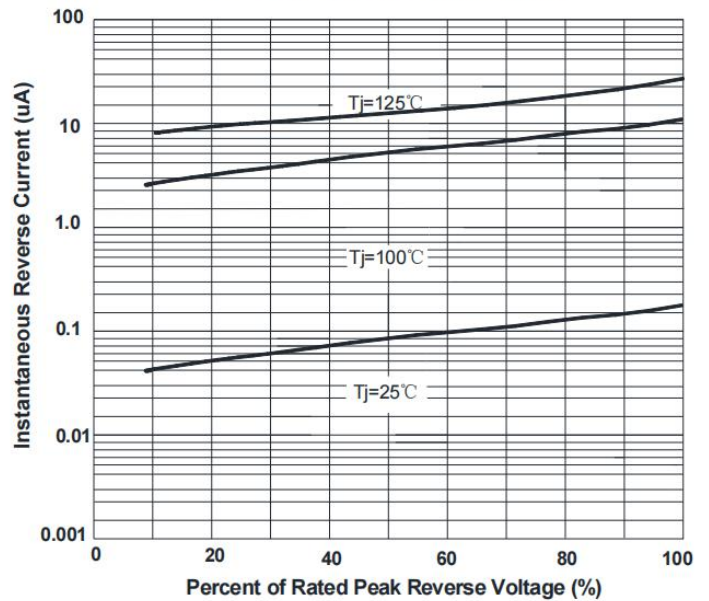
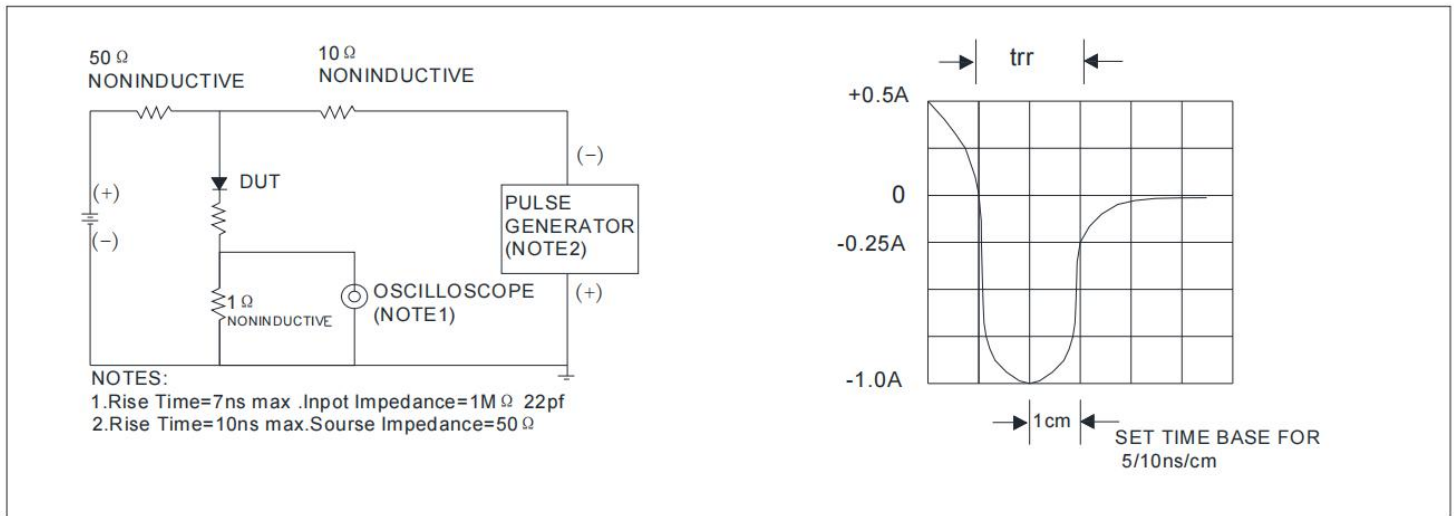


FIG.4: Typical Reverse Characteristics

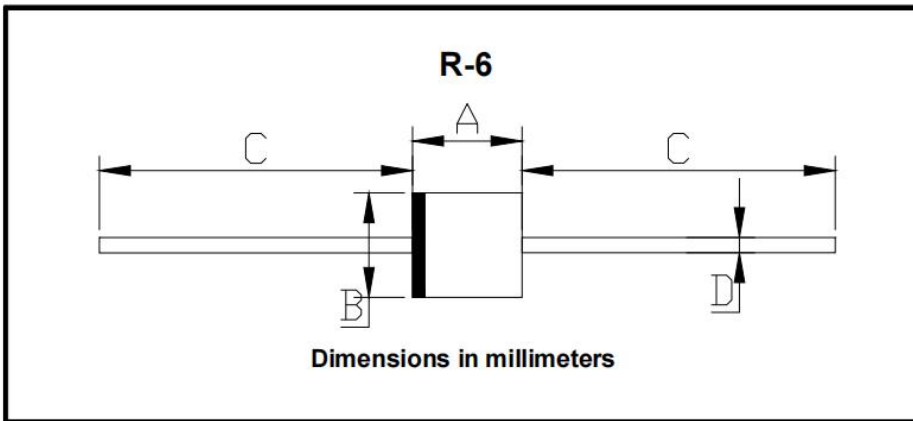


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FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



Outline Dimensions



R-6		
Dim	Min	Max
A	8.60	9.10
B	8.60	9.10
C	25.4	/
D	1.20	1.32