

■ 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 (T_a=25°C Unless otherwise specified)

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, T _a =65°C	I _{F(AV)}	A	6.0							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C	I _{FSM}	A	200							
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C			400							
Current squared time @1ms ≤ t ≤ 8.3ms T _j =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 (T_a=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 _{rr} =0.25A	150			250	500		

■ THERMAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

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

■ PACKAGING INFORMATION

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
FR601G~FR607G	D1	Approximate 1.95	500	500	5000	Tape
FR601G~FR607G	C1	Approximate 1.95	100	100	5000	Bulk

■ CHARACTERISTICS (TYPICAL)

FIG.1: I_o-T_a Curve

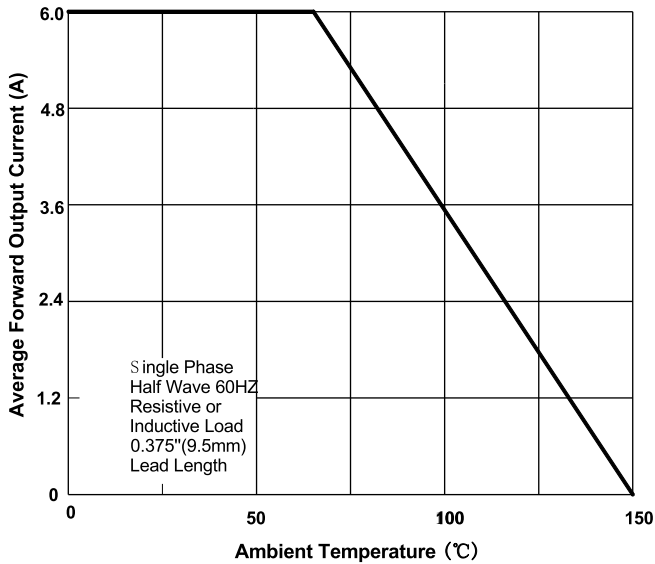


FIG.2: Forward Surge Current Capability

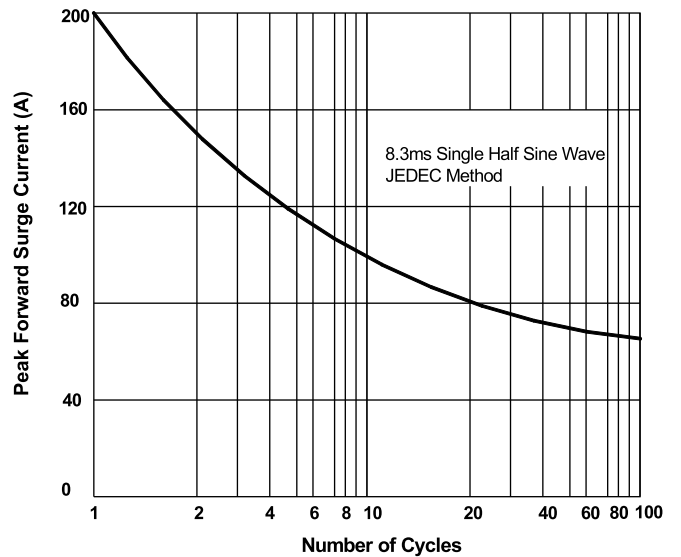


FIG.3: Forward Voltage

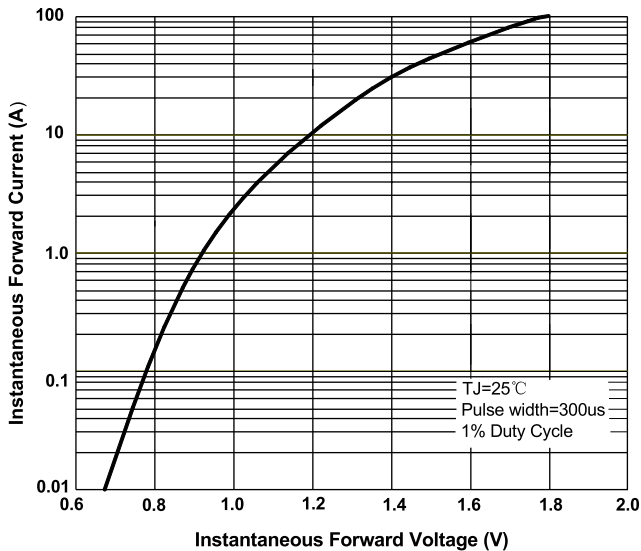


FIG.4: Typical Reverse Characteristics

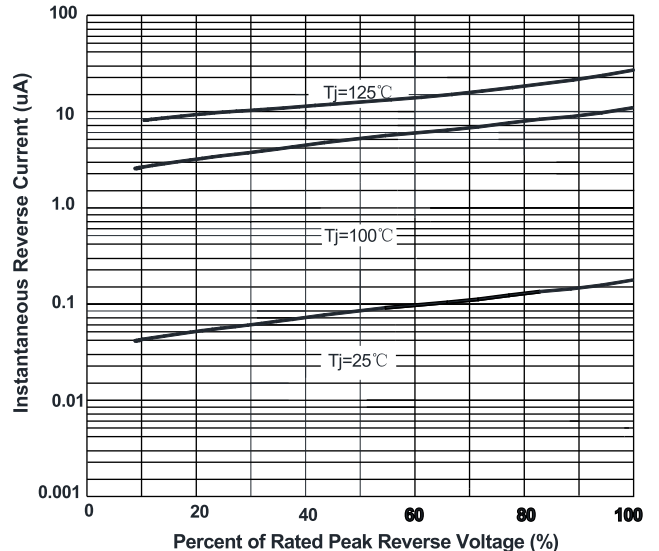
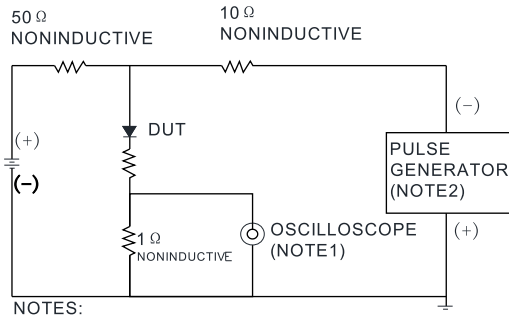
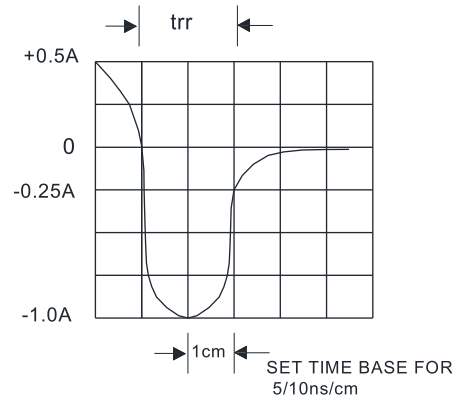


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

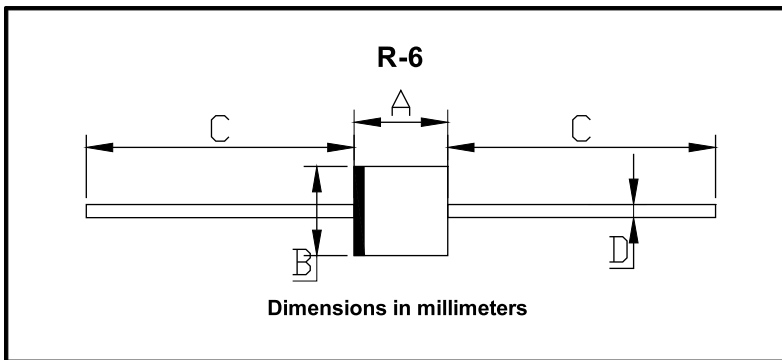


NOTES:

1. Rise Time=7ns max .Input Impedance=1M Ω 22pf
2. Rise Time=10ns max. Source Impedance=50 Ω



■ 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