

■ 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:** DO-201AD(DO-27)
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	FR301G	FR302G	FR303G	FR304G	FR305G	FR306G	FR307G	
Device marking code			FR301G	FR302G	FR303G	FR304G	FR305G	FR306G	FR307G	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	50	100	200	400	600	800	1000	
Maximum RMS Voltage	V _{RMS}	V	35	70	140	280	420	560	700	
Maximum DC blocking Voltage	V _{DC}	V	50	100	200	400	600	800	1000	
Average Forward Current @60Hz sine wave, Resistance load, T _a =50 °C	I _{F(AV)}	A	3.0							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25 °C	I _{FSM}	A	125							
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25 °C			250							
Current squared time @1ms≤t ₁ ≤8.3ms T _j =25 °C, Rating of per diode	I ² t	A ² s	65							
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	C _j	pF	40				34		23	
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	FR301G	FR302G	FR303G	FR304G	FR305G	FR306G	FR307G	
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =3.0A	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 _{rr}	ns	I _F =0.5A, I _R =1.0A, I _r =0.25A	150				250		500	

■ **THERMAL CHARACTERISTICS** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	FR301G	FR302G	FR303G	FR304G	FR305G	FR306G	FR307G
Typical Thermal Resistance	$R_{\theta J-A}$	$^\circ\text{C/W}$	30						

■ **PACKAGING INFORMATION**

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
FR301G~FR307G	D1	Approximate 1.05	1250	1250	12500	Tape
FR301G~FR307G	C1	Approximate 1.05	250	250	12500	Bulk

■ **CHARACTERISTICS (TYPICAL)**

FIG.1: I_o - T_a Curve

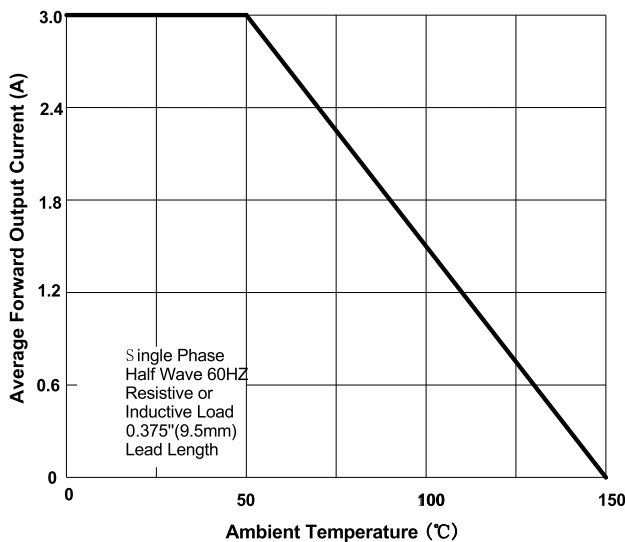


FIG.2: Forward Surge Current Capability

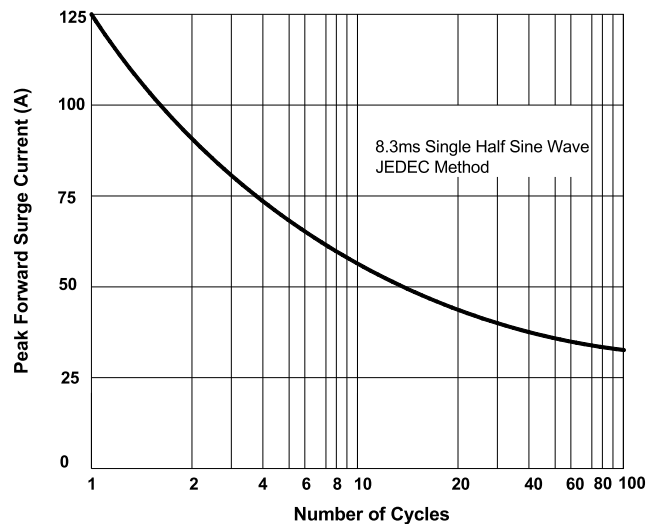


FIG.3: Forward Voltage

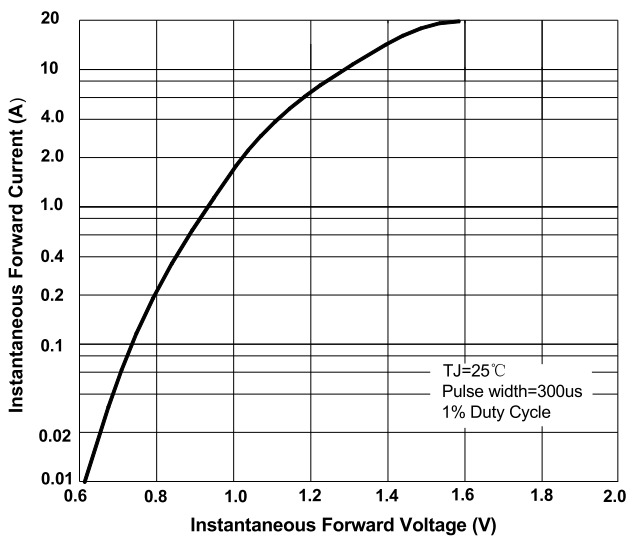


FIG.4: Typical Reverse Characteristics

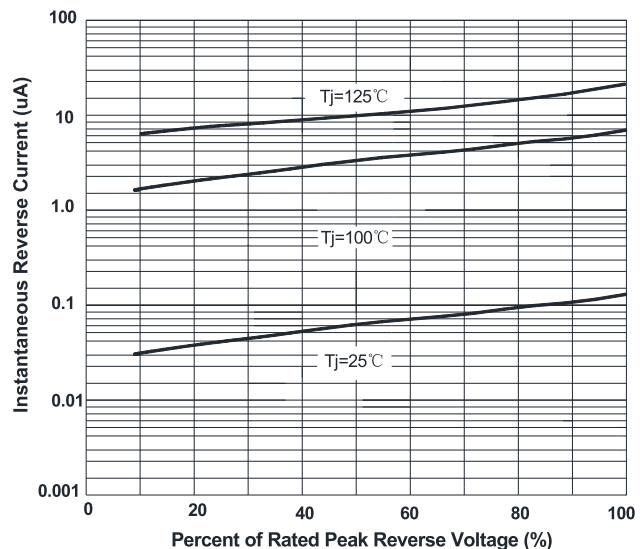
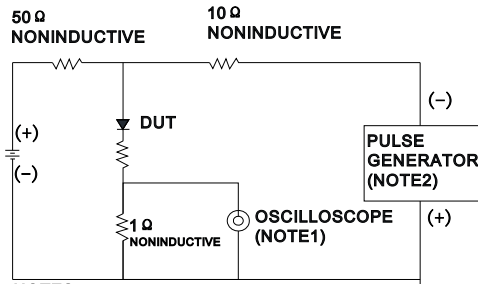
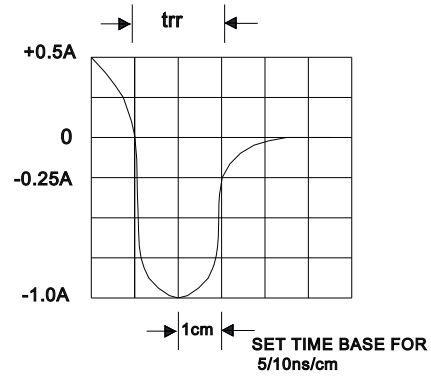


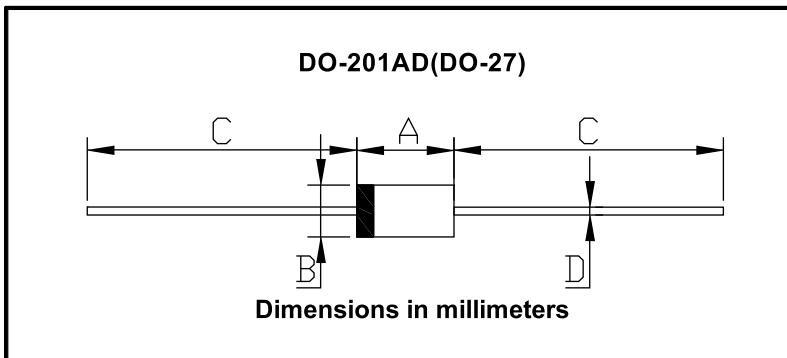
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



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



■ **OUTLINE DIMENSIONS**



DO-201AD(DO-27)		
Dim	Min	Max
A	8.50	9.50
B	5.00	5.60
C	25.4	/
D	1.20	1.30