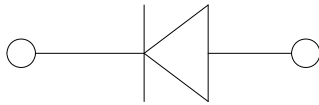
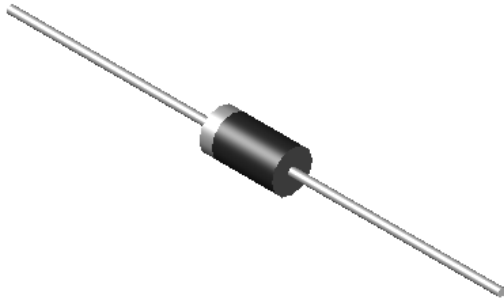


## Fast Recovery Rectifier



### 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 (Ta=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 <sub>RRM</sub>	V	50	100	200	400	600	800	1000	
Maximum RMS Voltage	V <sub>RMS</sub>	V	35	70	140	280	420	560	700	
Maximum DC blocking Voltage	V <sub>DC</sub>	V	50	100	200	400	600	800	1000	
Average Forward Current @60Hz sine wave, Resistance load, Ta=50°C	I <sub>F(AV)</sub>	A	3.0							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C	I <sub>FSM</sub>	A	125							
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C			250							
Current squared time @1ms≤t8.3≤ms Tj=25°C, Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> s	65							
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	C <sub>j</sub>	pF	40				34		23	
Storage Temperature	T <sub>stg</sub>	°C	-55 ~ +150							
Junction Temperature	T <sub>j</sub>	°C	-55 ~ +150							

### ■ Electrical Characteristics (Ta=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 <sub>F</sub>	V	I <sub>FM</sub> =3.0A	1.3						
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	μA	T <sub>j</sub> =25°C	2.5						
			T <sub>j</sub> =125°C	100						
Maximum reverse recovery time	t <sub>rr</sub>	ns	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>r</sub> =0.25A	150			250		500	



# FR301G THRU FR307G

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	FR301G	FR302G	FR303G	FR304G	FR305G	FR306G	FR307G
Typical Thermal Resistance	R <sub>θJA</sub>	°C/W	30						

## ■ Ordering Information (Example)

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<sub>o</sub>-T<sub>a</sub> Curve

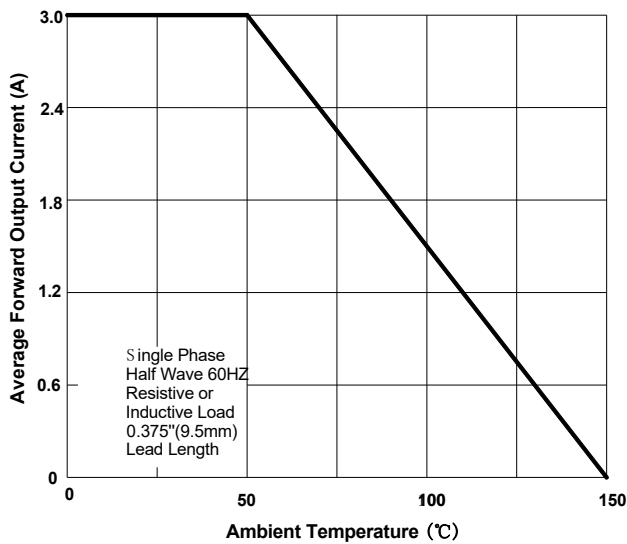


FIG.2: Forward Surge Current Capability

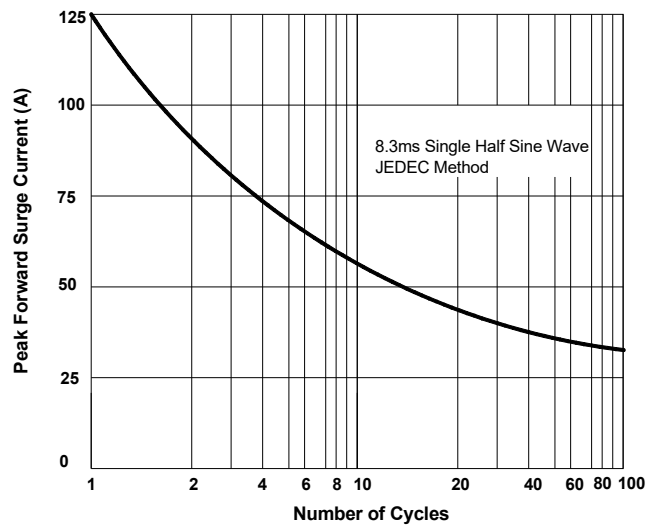


FIG.3: Forward Voltage

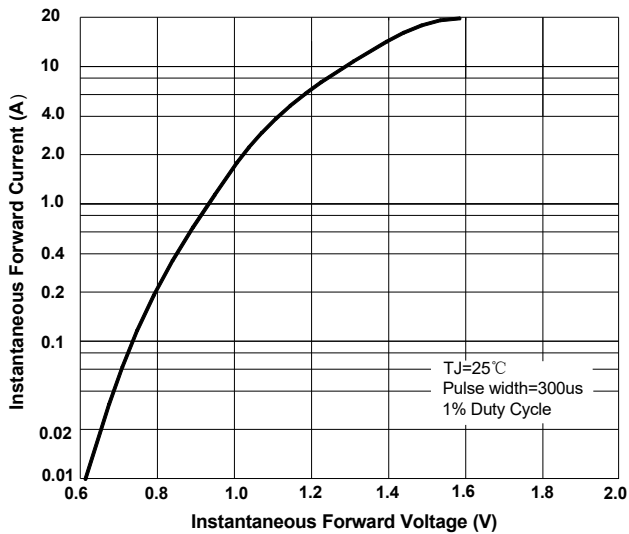


FIG.4: Typical Reverse Characteristics

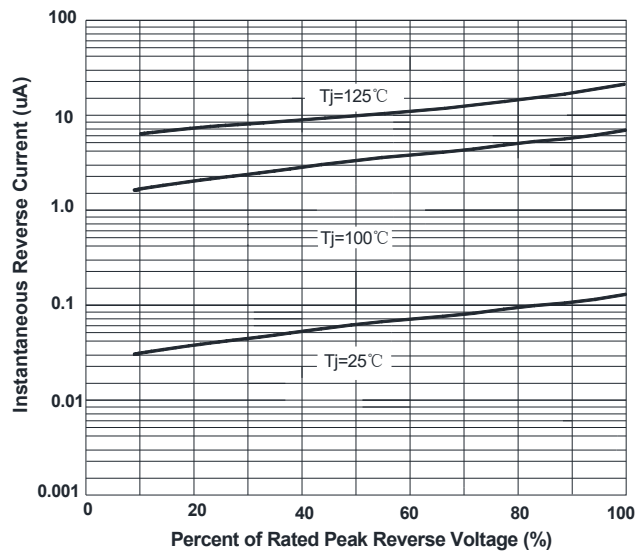
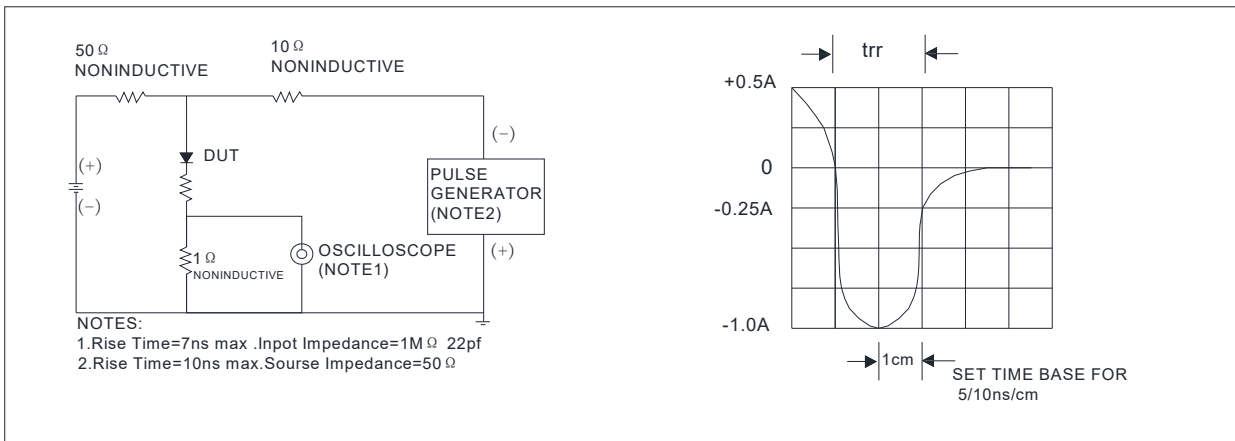
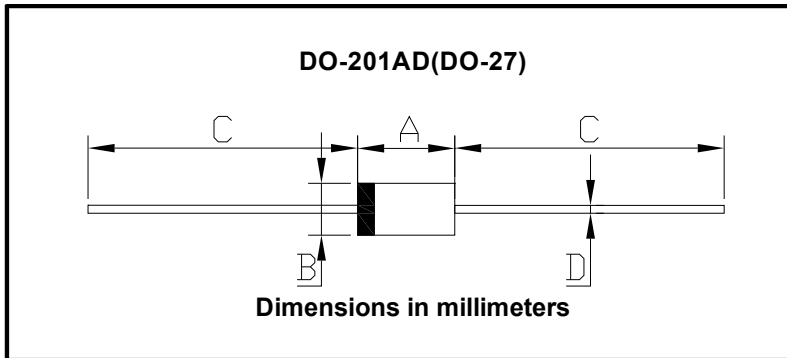


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



## ■ 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



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