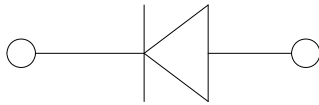
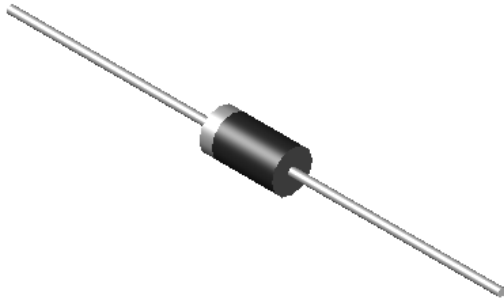


Fast Recovery Rectifier



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	FR501G	FR502G	FR503G	FR504G	FR505G	FR506G	FR507G	
Device marking code			FR501G	FR502G	FR503G	FR504G	FR505G	FR506G	FR507G	
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, Ta=50°C	$I_{F(AV)}$	A	5.0							
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^2t	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	FR501G	FR502G	FR503G	FR504G	FR505G	FR506G	FR507G
Maximum instantaneous forward voltage drop per diode	V_F	V	$I_{FM}=5.0A$	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	$I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$	150			250	500		



FR501G THRU FR507G

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	FR501G	FR502G	FR503G	FR504G	FR505G	FR506G	FR507G
Typical Thermal Resistance	R _{θJA}	°C/W	18						

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
FR501G~FR507G	D1	Approximate 1.05	1250	1250	12500	Tape
FR501G~FR507G	C1	Approximate 1.05	250	250	12500	Bulk

■ Characteristics (Typical)

FIG.1: I_o-T_a Curve

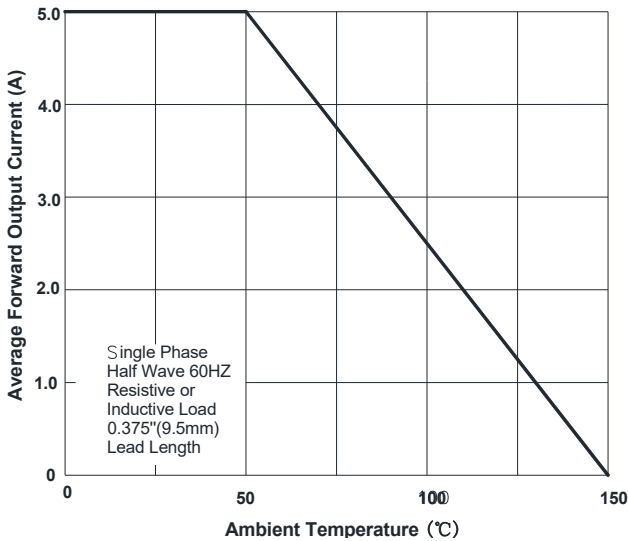


FIG.2: Forward Surge Current Capability

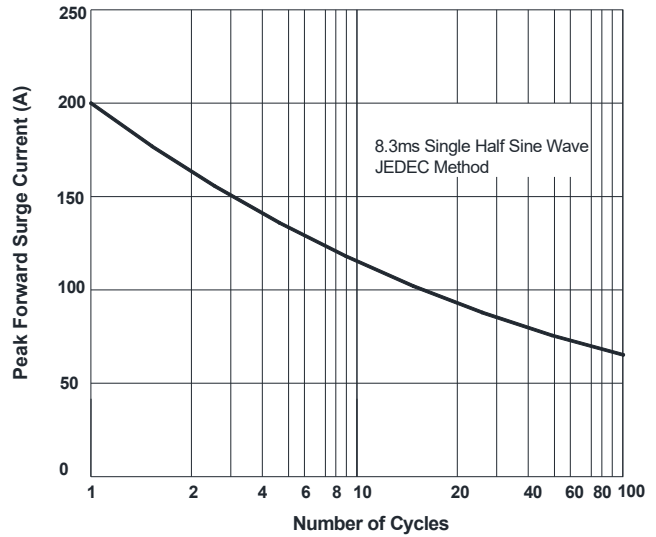


FIG.3: Forward Voltage

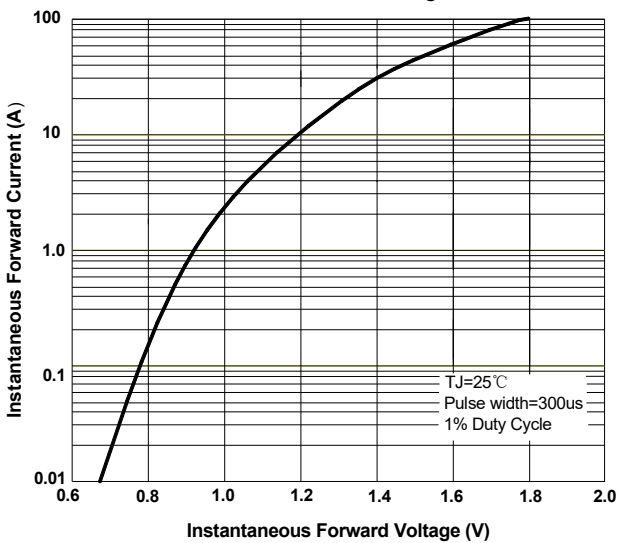


FIG.4: Typical Reverse Characteristics

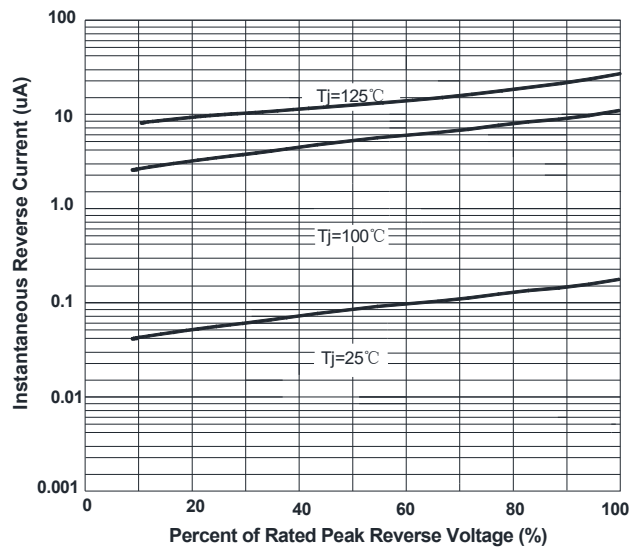
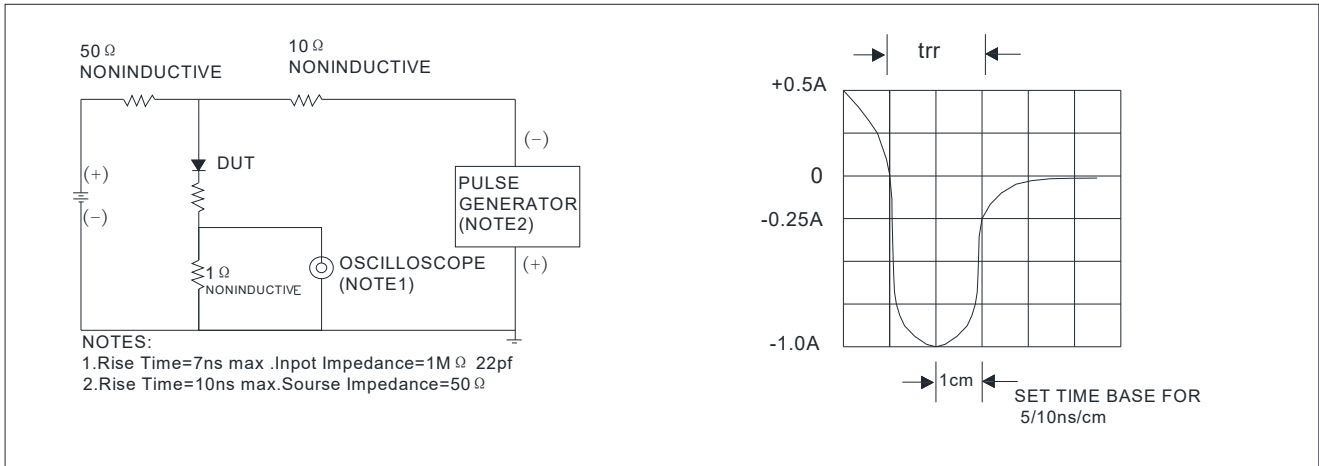
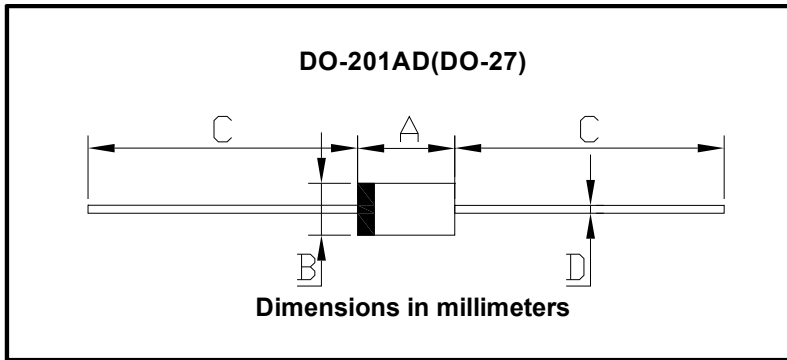


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ 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



FR501G THRU FR507G

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