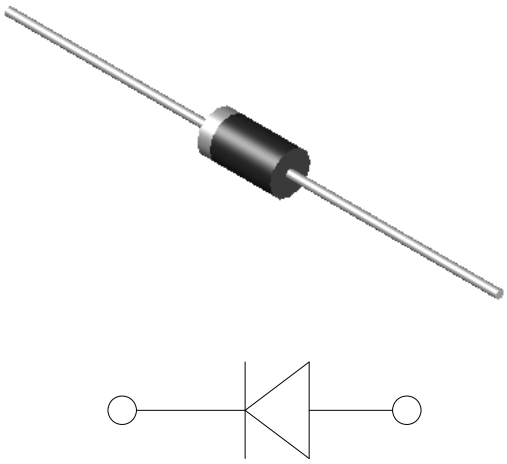
Fast Recovery Rectifier



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℃ 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℃	$I_{F(AV)}$	A	5.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	200						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			400						
Current squared time @1ms≤t8.3≤ms Tj=25℃， Rating of per diode	I^2t	A^2s	166						
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	70				56		
Storage Temperature	T_{stg}	℃	-55 ~ +150						
Junction Temperature	T_j	℃	-55 ~ +150						

■Electrical Characteristics（T_a=25℃ 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℃	2.5						
			T_j =125℃	100						
Maximum reverse recovery time	t_{rr}	ns	I_F=0.5A,I_R=1.0A, I_{rr}=0.25A	150				250	500	

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	FR501G	FR502G	FR503G	FR504G	FR505G	FR506G	FR507G
Typical Thermal Resistance	$R_{\theta J-A}$	℃/W	18						

■Ordering Information (Example)

PREFERED 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: Io-Ta Curve

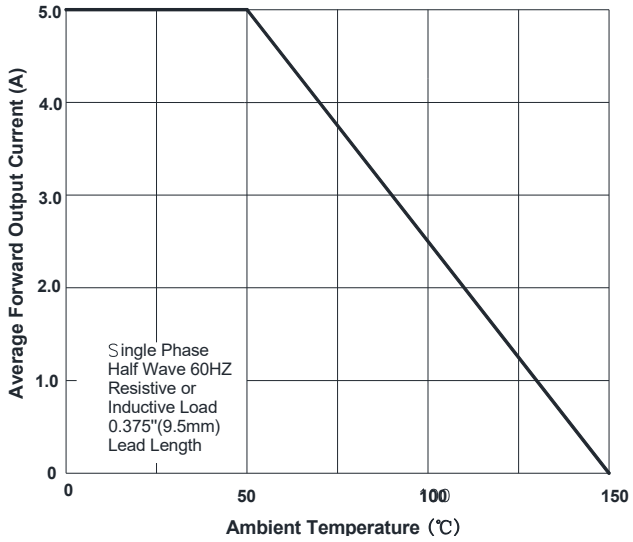


FIG.2: Forward Surge Current Capability

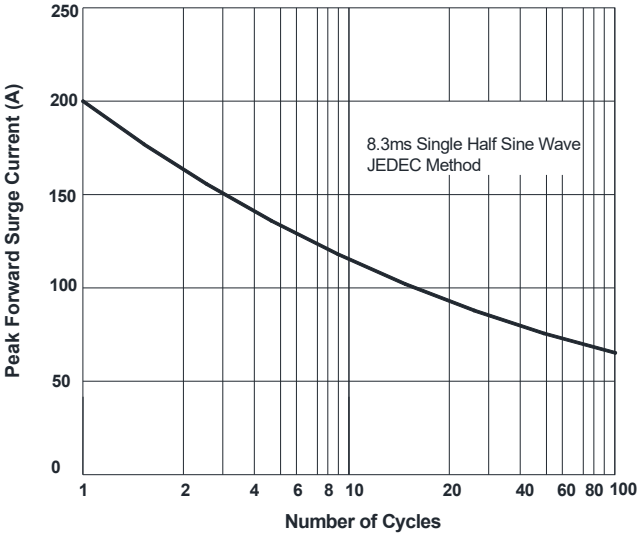


FIG.3: Forward Voltage

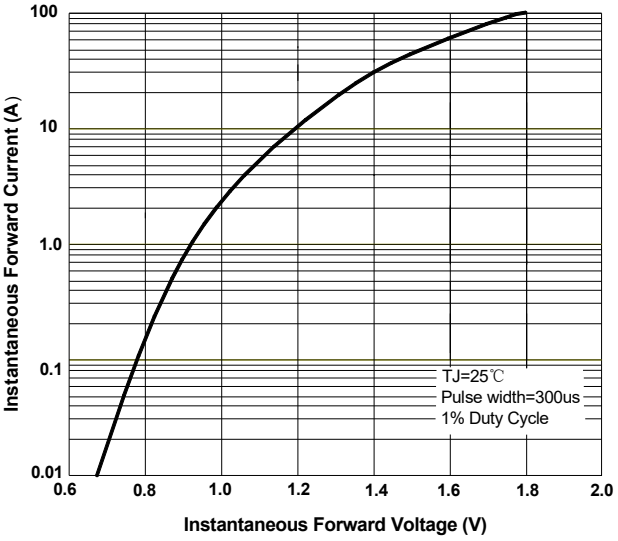


FIG.4: Typical Reverse Characteristics

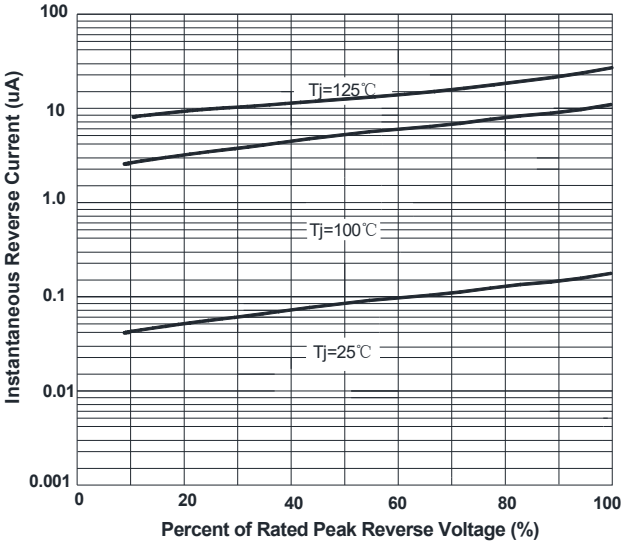
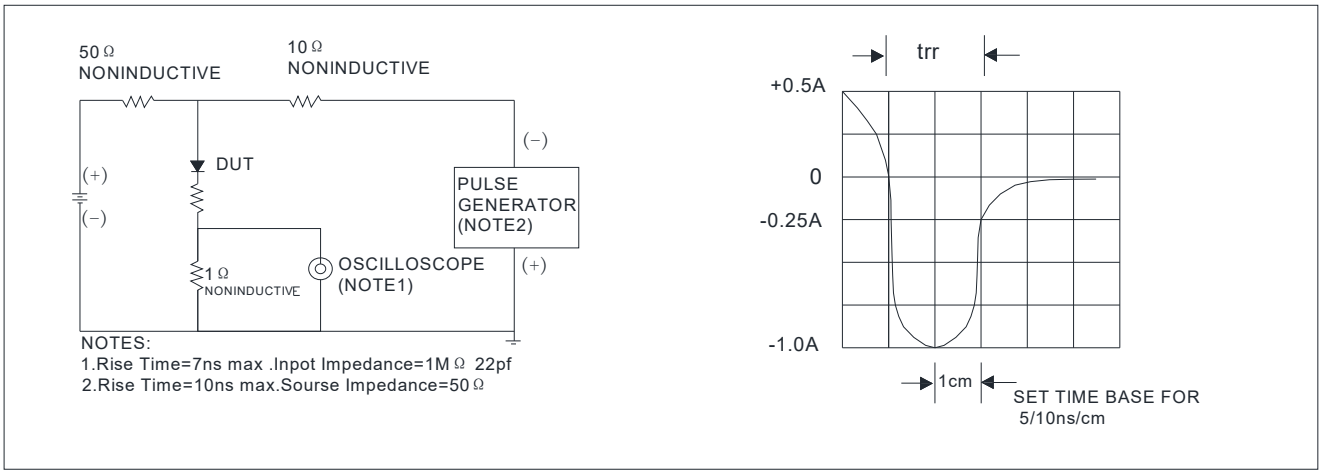
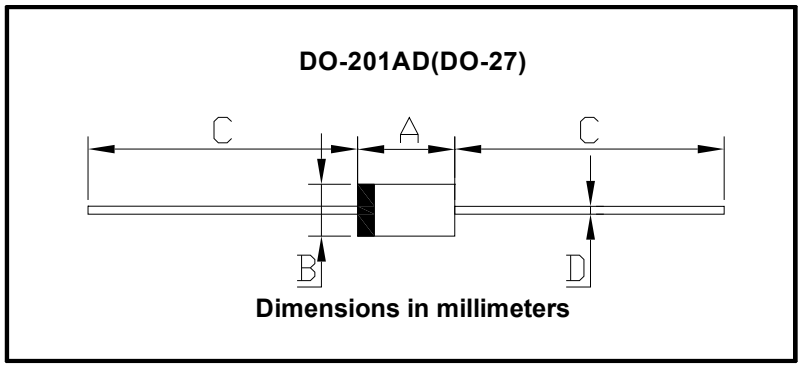


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ 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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