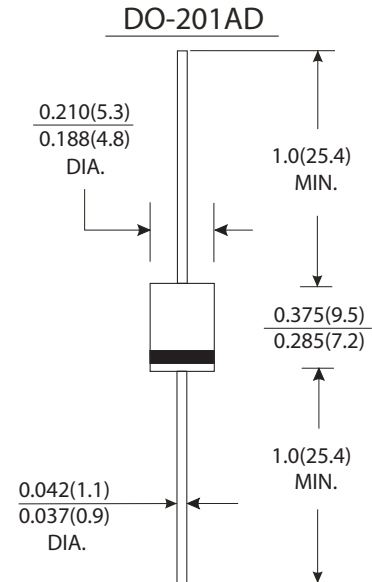


### Features

- Fast switching
- Low leakage
- Low forward voltage drop
- High current capability
- High current surge
- High reliability

### Mechanical Data

- Case : JEDEC DO-201AD molded plastic body
- Terminals : Plated axial lead solderable per MIL-STD-750, method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight : 0.041 ounce, 1.18 gram



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

(Ratings at 25 °C ambient temperature unless otherwise specified, Single phase, half wave 60Hz, resistive or inductive load. For capacitive load, derate by 20%)

	Symbols	FR 301	FR 302	FR 303	FR 304	FR 305	FR 306	FR 307	Units
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length at T <sub>A</sub> =75 °C	I <sub>(AV)</sub>	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	200							Amps
Maximum instantaneous forward voltage at 3.0A	V <sub>F</sub>	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> =25 °C	10							μA
	T <sub>A</sub> =55 °C	150							
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	150			250	500		ns	
Typical junction capacitance (Note 2)	C <sub>J</sub>	65							pF
Operating junction and storage temperature range	T <sub>J</sub> T <sub>STG</sub>	-65 to +150							°C

#### Notes:

- (1) Test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A.
- (2) Measured at 1MHz and applied reverse voltage of 4.0 Volts.

## RATINGS AND CHARACTERISTIC CURVES FR301 THRU FR307

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

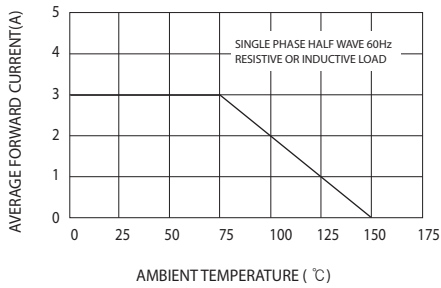


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

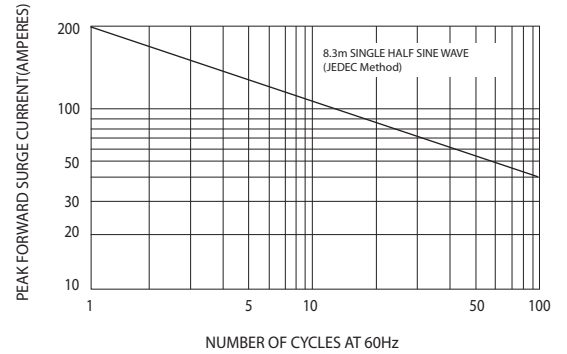


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

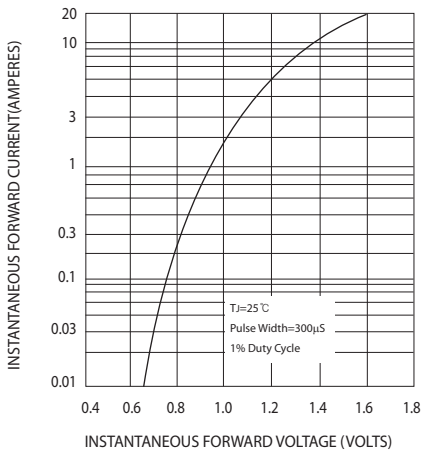


FIG.4-TYPICAL JUNCTION CAPACITANCE

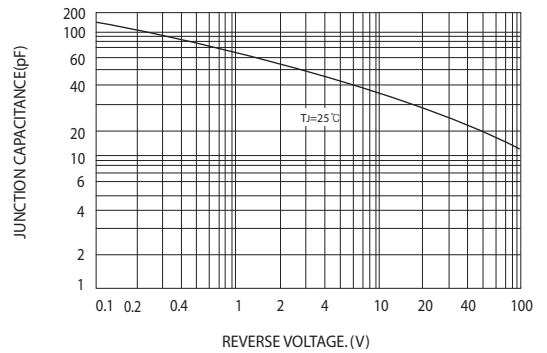
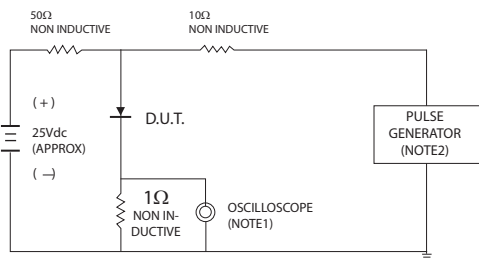


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time=7ns max. input impedance=1 megohm 22pF  
 2. Rise Time=10ns max. source impedance =50 ohms

