

FR251 THRU FR257

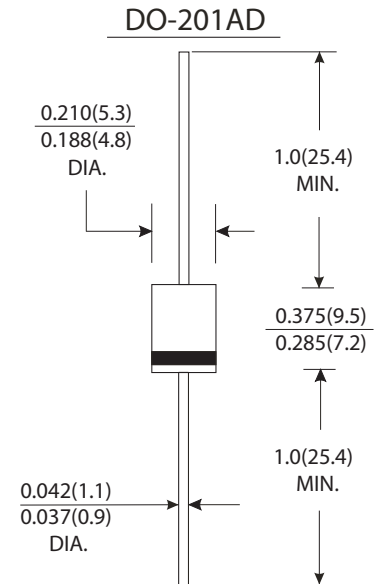
CURRENT 2.5 Amperes
VOLTAGE 50 to 1000 Volts

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 251	FR 252	FR 253	FR 254	FR 255	FR 256	FR 257	Units
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length T _A =75 °C	I _(AV)	2.5							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC) method	I _{FSM}	150							Amps
Maximum instantaneous forward voltage at 2.5A	V _F	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage	I _R	5.0							μA
Maximum full load reverse current full cycle average. 0.375"(9.5mm) lead length at T _L =55 °C		100							
Maximum reverse recovery time (Note 1)	T _{rr}	150				250	500		ns
Typical junction capacitance (Note 2)	C _J	60							pF
Operating junction and storage temperature range	T _J T _{STG}	-65 to +150							°C

Notes:

- (1) Test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A.
- (2) Measured at 1MHz and applied reverse voltage of 4.0 Volts.

RATINGS AND CHARACTERISTIC CURVES FR251 THRU FR257

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

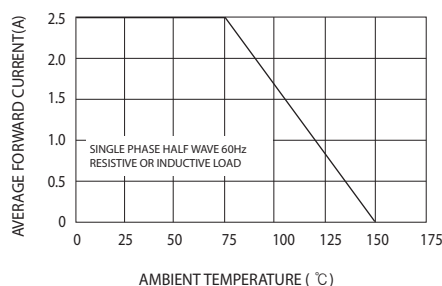


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

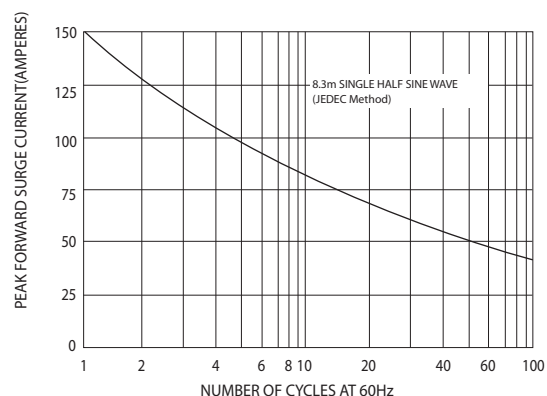


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

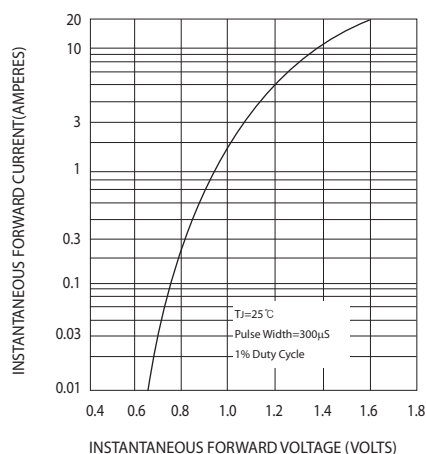


FIG.4-TYPICAL JUNCTION CAPACITANCE

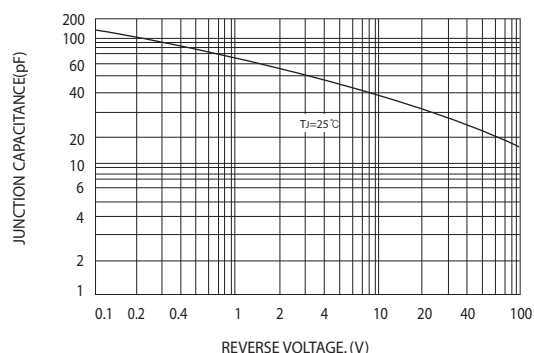
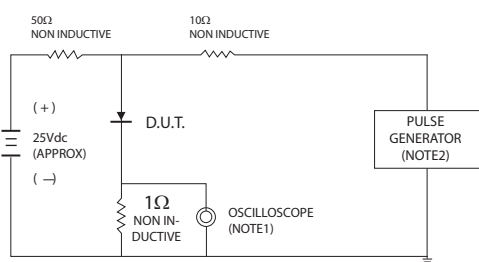


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

