

FR301 THRU FR307

FAST RECOVERY RECTIFIER

REVERSE VOLTAGE: 50 to 1000 VOLTS
FORWARD CURRENT: 3.0 AMPERE

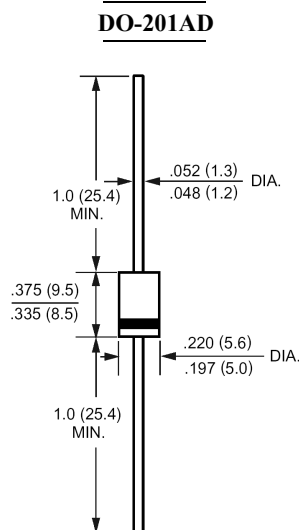
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FEATURES

- High surge current capability
- Void-free Plastic in a DO-201AD package.
- 3.0 ampere operation at $T_A=55$ with no thermal runaway.
- Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage.

MECHANICAL DATA

Case: Molded plastic, DO-201AD
Epoxy: UL 94V-O rate flame retardant
Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
Polarity: Color band denotes cathode end
Mounting position: Any
Weight: 0.04ounce, 1.1gram



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	FR301	FR302	FR303	FR304	FR305	FR306	FR307	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 .375"(9.5mm) Lead Length at $T_A=55$	$I_{(AV)}$	3.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200							Amp
Maximum Forward Voltage at 3.0A DC and 25	V_F	1.3							Volts
Maximum Reverse Current at $T_A=25$ at Rated DC Blocking Voltage $T_A=100$	I_R	5.0 500							uAmp
Typical Junction Capacitance (Note 1)	C_J	60							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	22							/W
Maximum Reverse Recovery Time (Note 3)	T_{RR}	150			250		500		nS
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150							

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance From Junction to Ambient 0.375"(9.5mm) lead length P.C.B. Mounted with 0.8x0.8" (20x20mm) copper pads

3- Reverse Recovery Test Conditions : $I_F=.5A$, $I_R=1A$, $I_{RR}=.25A$.

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RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

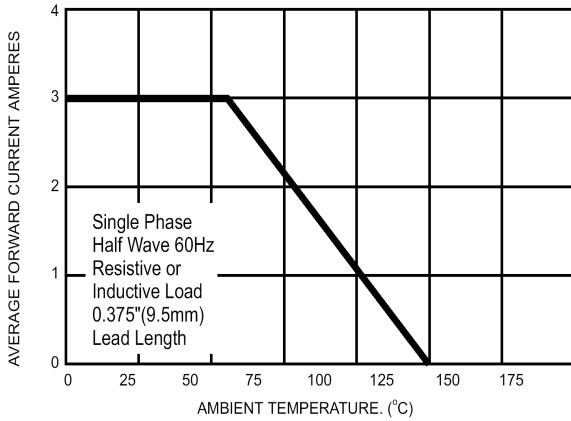


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

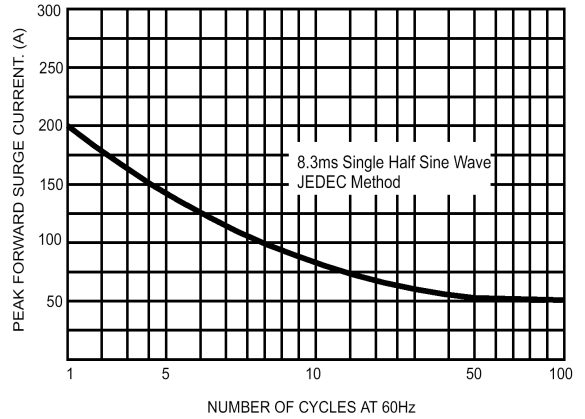


FIG.3- TYPICAL FORWARD CHARACTERISTICS

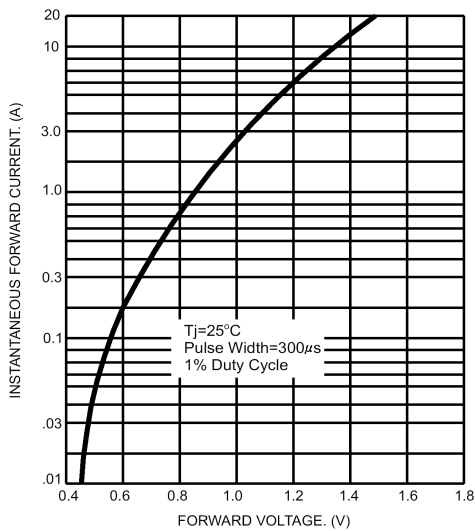


FIG.4- TYPICAL JUNCTION CAPACITANCE

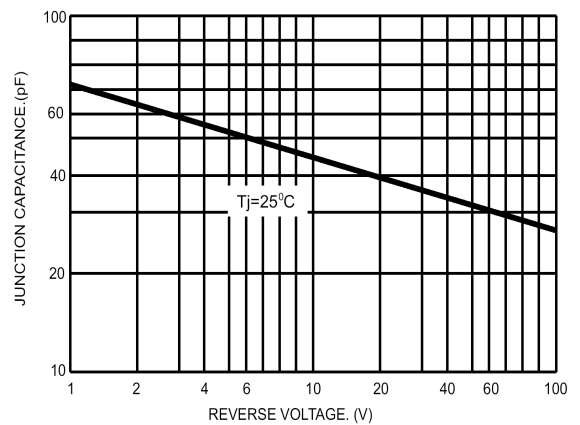


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

