FR301 THRU FR307

FAST RECOVERY RECTIFIER

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HORNBY ELECTRONIC

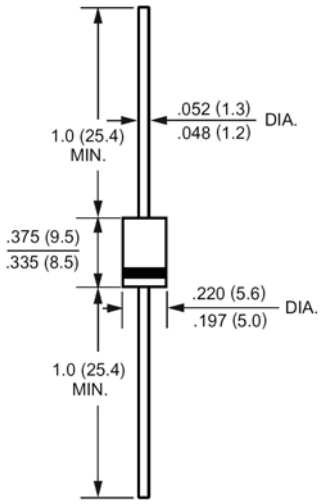
REVERSE VOLTAGE: **50 to 1000 VOLTS**

FORWARD CURRENT: **3.0 AMPERE**

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.

DO-201AD



Dimensions in inches and (millimeters)

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

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60H_Z, 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℃	I_R	10							**uAmp**
at Rated DC Blocking Voltage T_A=100℃		100							
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, Tstg	-55 to +150							**℃**

NOTES:

1- Measured at 1 MH_Z 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

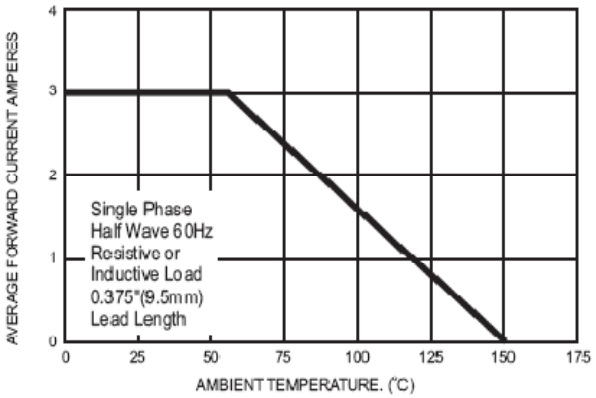

FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

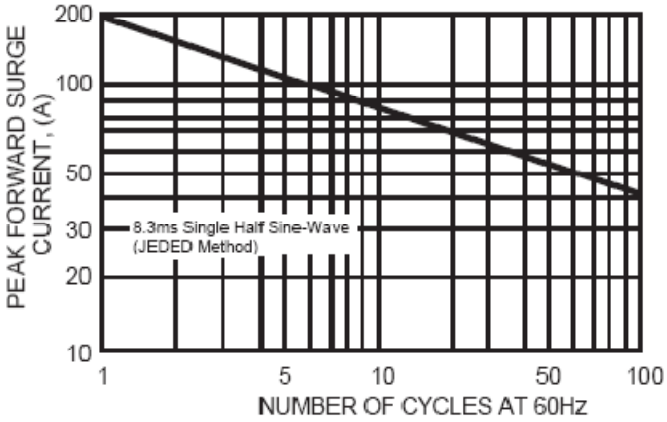

FIG.3- TYPICAL FORWARD CHARACTERISTICS

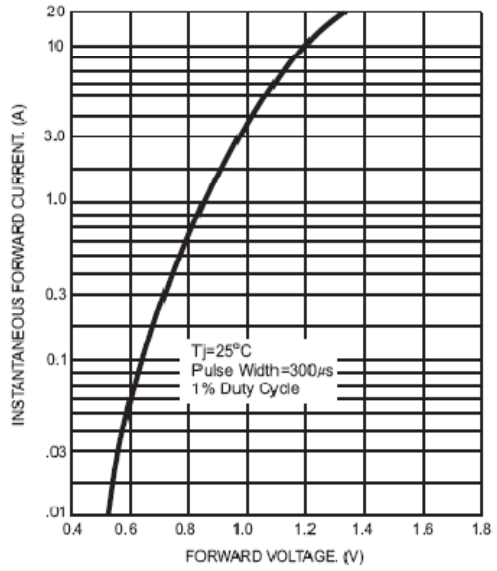

FIG.4- TYPICAL JUNCTION CAPACITANCE

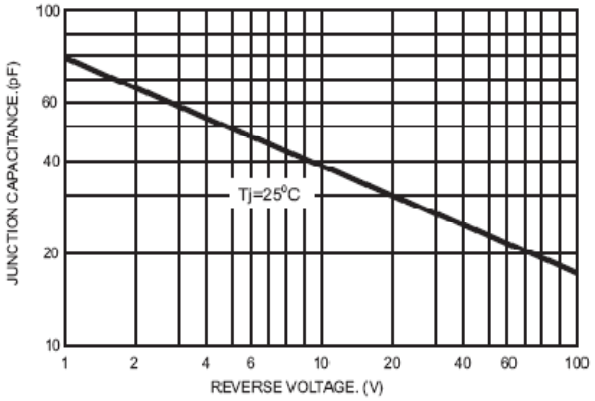

FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM