



XIN SEMICONDUCTOR
ISO9002

HQ MARKING

FR301 THRU FR309

FAST RECOVERY RECTIFIER
Reverse Voltage: 50 to 1400 Volts
Forward Current:3.0Amperes

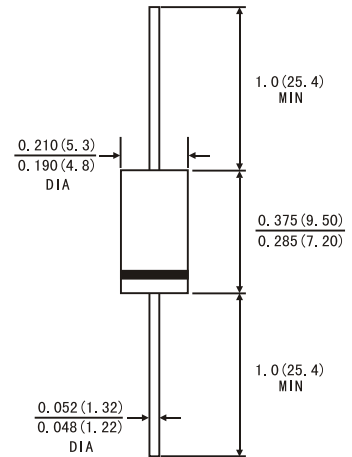
FEATURES

- 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 leads, solderable per MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.041 OUNCE,1.18 grams

DO-201AD



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Type Number	Symbols	FR 301	FR 302	FR 303	FR 304	FR 305	FR 306	FR 307	FR 308	FR 309	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	1200	1300	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	840	910	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	1200	1300	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm)lead length at T _A =75° C	I(AV)	3.0									Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	200									Amps
Maximum Instantaneous Forward Voltage at 3.0A	V _F	1.3									Volts
Maximum DC Reverse Current at rated DC blocking voltage	T _A =25° C	10									μA
	T _A =55° C	150									
Maximum reverse recovery time(Note1)	T _{rr}	150				200				ns	
Typical junction capacitance(Note2)	C _J	65									pF
Operating junction and storage temperature range	T _J T _{STG}	-65 to +150									°C

Note: 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 FR301 THRU FR309

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

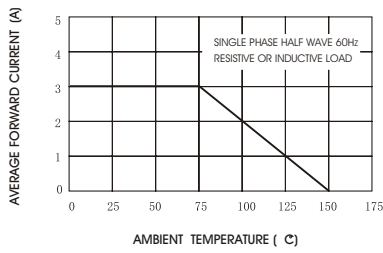


FIG. 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

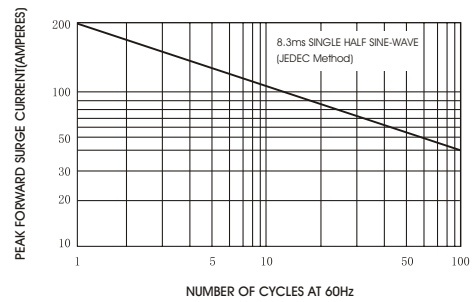


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

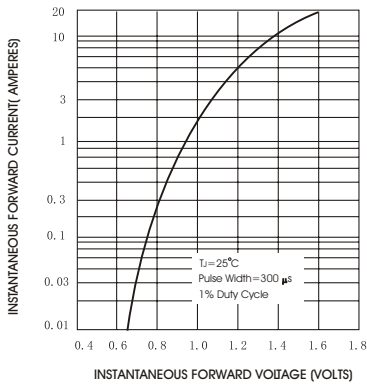


FIG. 4-TYPICAL JUNCTION CAPACITANCE

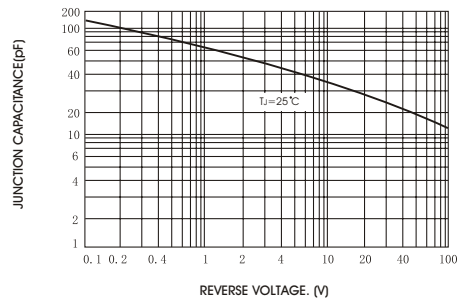
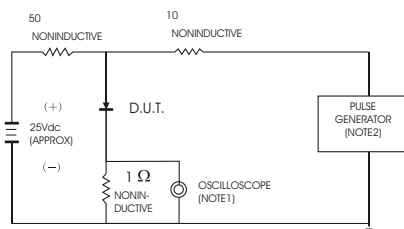


FIG. 5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

