



XIN SEMICONDUCTOR
ISO9002

HQ MARKING

FR301 THRU FR309

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

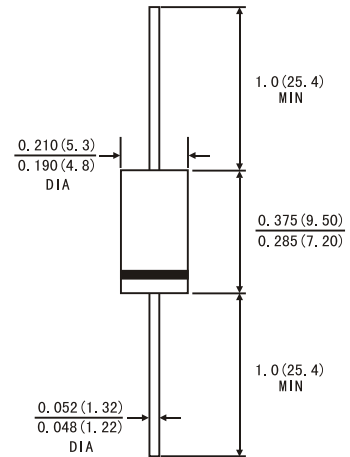
FEATURES

- 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		VRRM	50	100	200	400	600	800	1000	1200	1300	Volts
Maximum RMS Voltage		VRMS	35	70	140	280	420	560	700	840	910	Volts
Maximum DC Blocking Voltage		VDC	50	100	200	400	600	800	1000	1200	1300	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm)lead length at TA=75° C		I(AV)	3.0									Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		IFSM	200									Amps
Maximum Instantaneous Forward Voltage at 3.0A		VF	1.3									Volts
Maximum DC Reverse Current at rated DC blocking voltage	TA=25° C	IR	10									μA
	TA=55° C		150									
Maximum reverse recovery time(Note1)		Trr	150				200				ns	
Typical junction capacitance(Note2)		CJ	65									pF
Operating junction and storage temperature range		TJ TSTG	-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

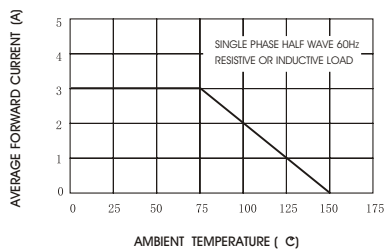


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

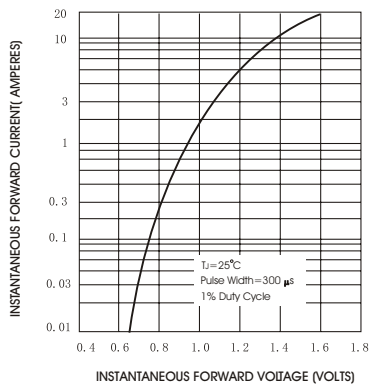


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

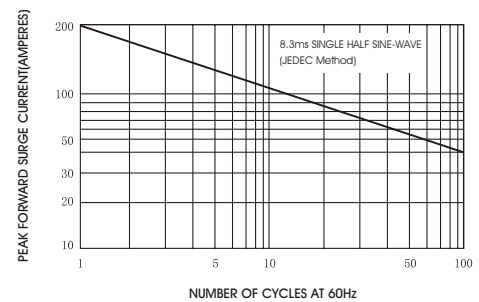


FIG.4-TYPICAL JUNCTION CAPACITANCE

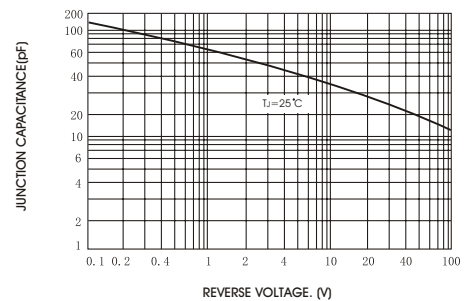
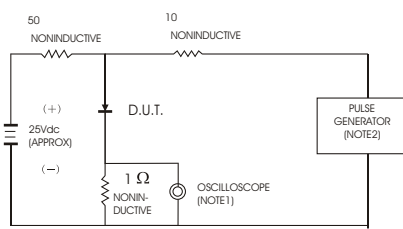


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

