

FEATURES

- Low leakage
- Low forward voltage drop
- High current capability
- High current surge
- High reliability
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

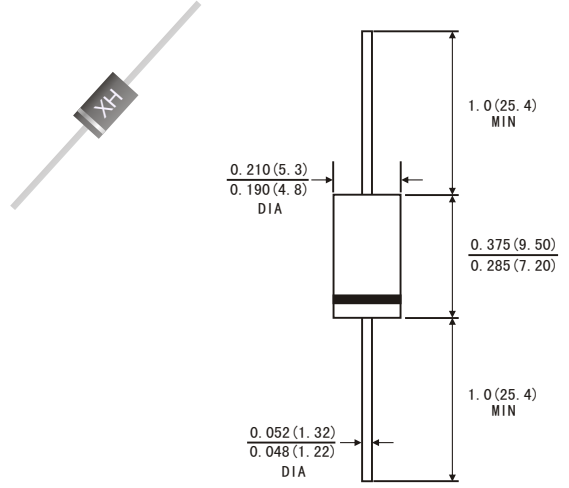
(Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.)

| | Symbols | FR 301 | FR 302 | FR 303 | FR 304 | FR 305 | FR 306 | FR 307 | 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 at T _A =55°C | I _(AV) | 3.0 | | | | | | | 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 3.0A | V _F | 1.2 | | | | | | | Volts |
| Maximum DC Reverse Current at rated DC blocking voltage | T _A =25°C | 10 | | | | | | | μA |
| | T _A =100°C | 150 | | | | | | | |
| Maximum reverse recovery time(Note1) | t _{rr} | 150 | | | | 250 | 500 | | ns |
| Typical junction capacitance(Note2) | C _J | 60 | | | | | | | 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 D.C.

DO-201AD



Dimensions in inches and (millimeters)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

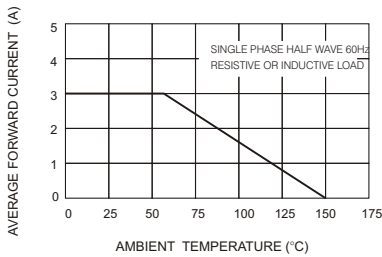


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

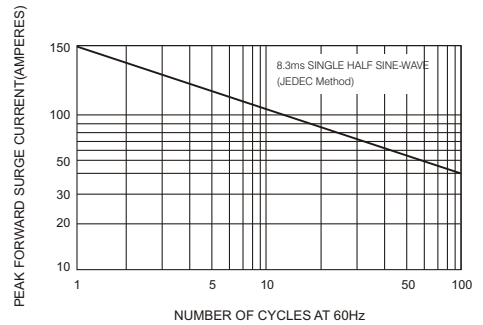


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

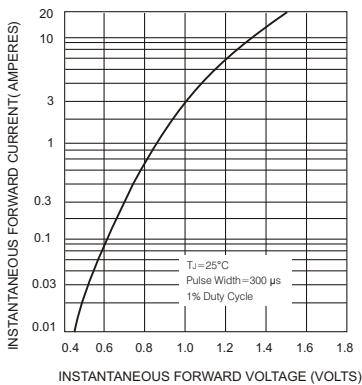


FIG.4-TYPICAL JUNCTION CAPACITANCE

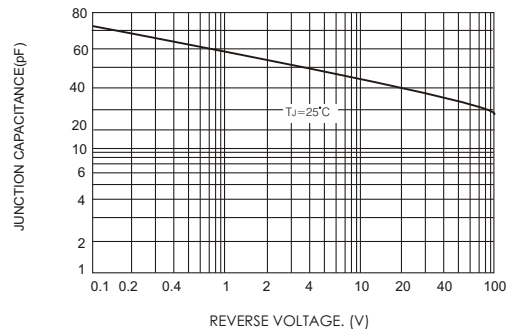
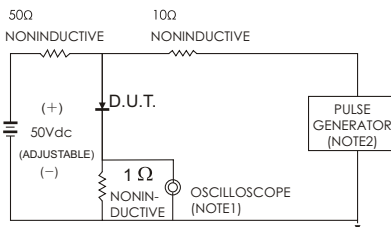


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

