



ELECTRONICS INDUSTRY (USA) CO., LTD.



103 MOO 4, LATKRABANG EXPORT PROCESSING ZONE, LATKRABANG, BANGKOK 10520, THAILAND
 TEL. : (66 2) 326-0102, 739-4580 FAX. : (66 2) 326-0933 E-mail : eicfirst @ iname.com http. :// www.eicsemi.com

FR501 - FR507

PRV : 50 - 1000 Volts
Io : 5.0 Amperes

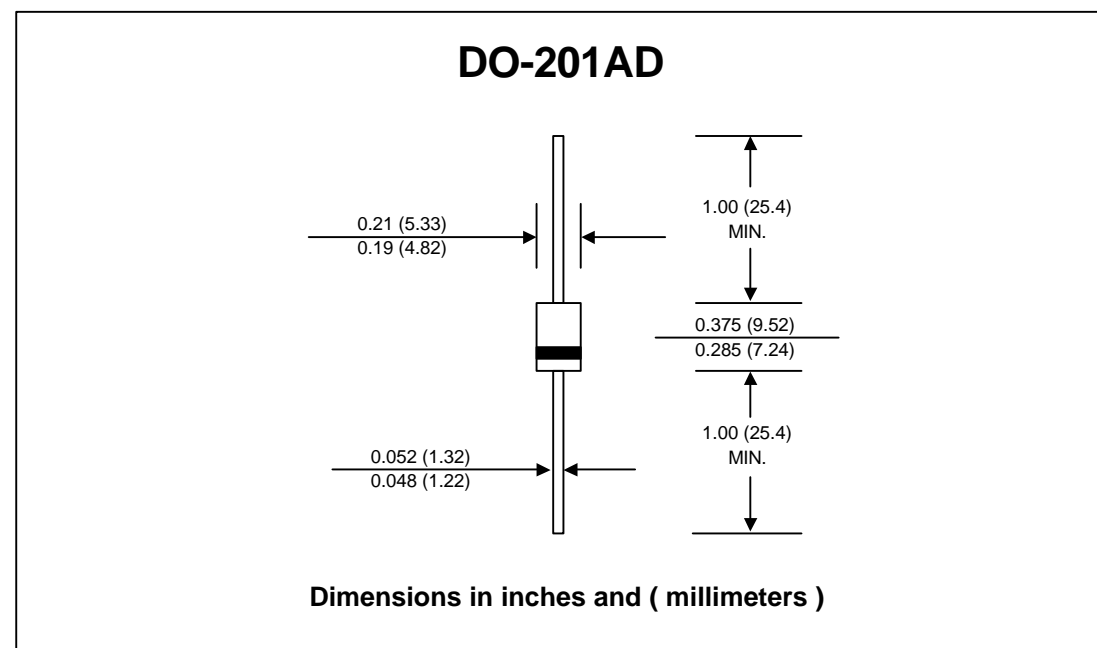
FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency

MECHANICAL DATA :

- * Case : DO-201AD Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 1.21 grams

FAST RECOVERY RECTIFIER DIODES



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| RATING | SYMBOL | FR501 | FR502 | FR503 | FR504 | FR505 | FR506 | FR507 | UNITS |
|--|--------|---------------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | VRMS | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Current Half-Wave Resistive Load Ta = 75 °C | IF(AV) | 5.0 | | | | | | | Amps. |
| Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method) | IFSM | 300 | | | | | | | Amps. |
| Maximum Peak Forward Voltage at IF = 5 Amps. | VF | 1.3 | | | | | | | Volts |
| Maximum DC Reverse Current at VRRM | IR | 10 | | | | | | | µA |
| Maximum Reverse Recovery Time (Note 1) | Trr | 150 | | | 250 | | 500 | | ns |
| Junction Temperature Range | TJ | - 65 to + 150 | | | | | | | °C |
| Storage Temperature Range | TSTG | - 65 to + 150 | | | | | | | °C |

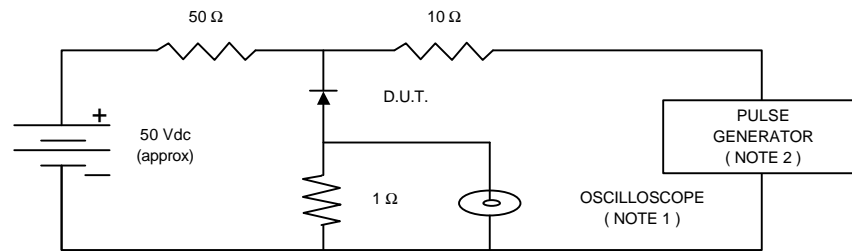
Notes :

(1) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.

UPDATE : AUGUST 26, 1999

RATING AND CHARACTERISTIC CURVES (FR501 - FR507)

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.
 3. All Resistors = Non-inductive Types.

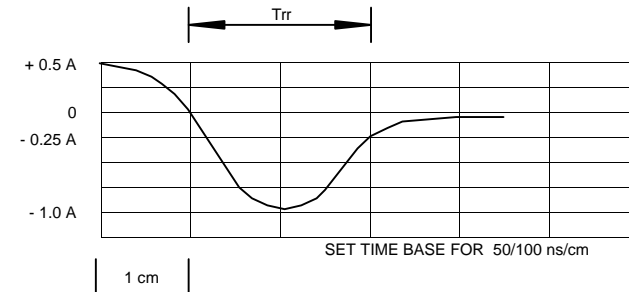


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

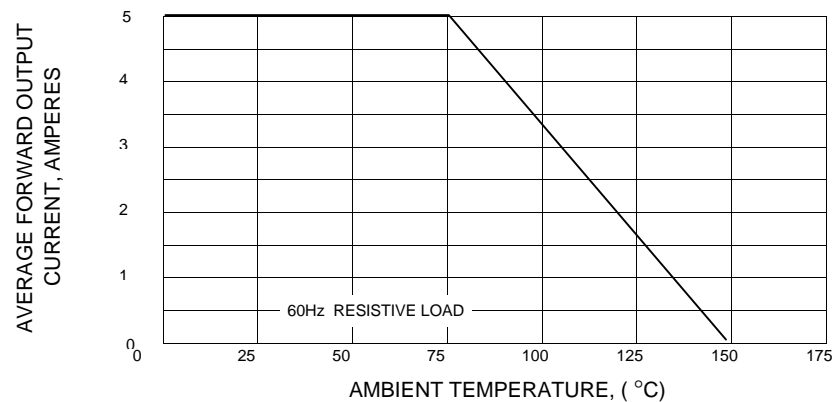


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

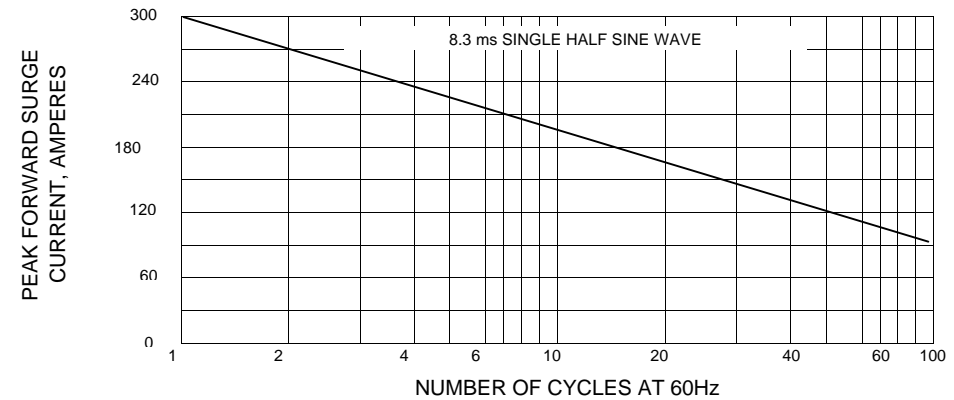


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

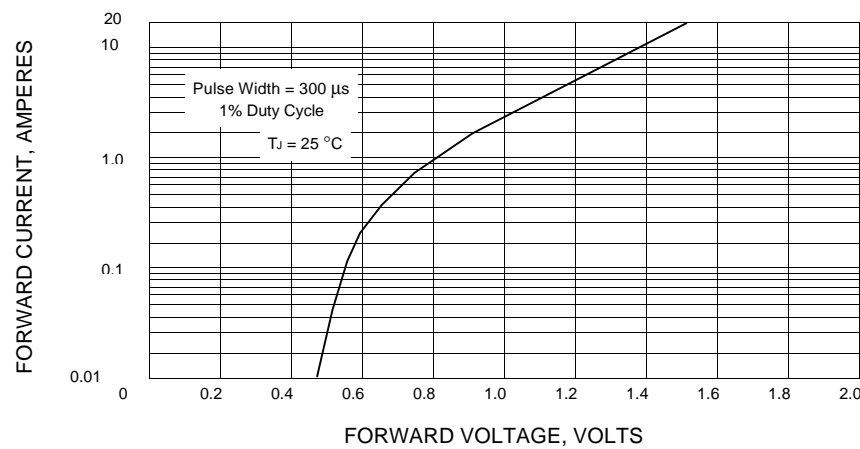


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

