



THE DATASHEET OF FR303BULK



FR301 - FR307-STR

PRV : 50 - 1000 Volts

Io : 3.0 Amperes

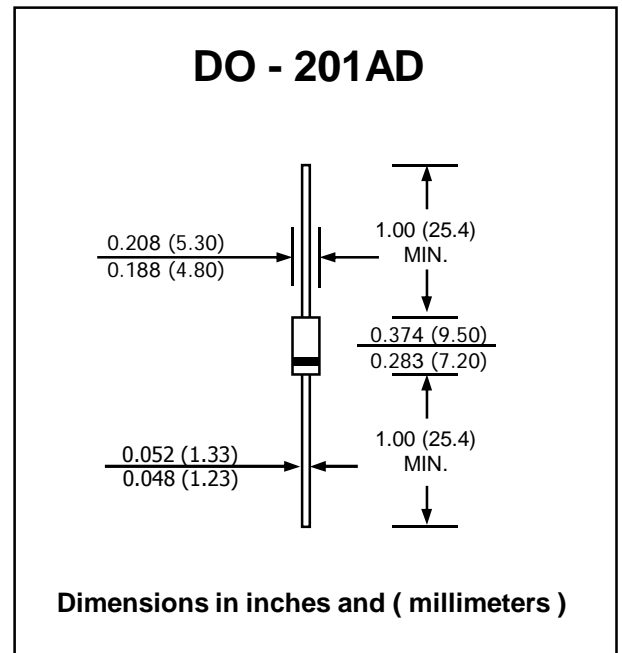
FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Pb / RoHS Free

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 : 1.16 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 | FR301 | FR302 | FR303 | FR304 | FR305 | FR306 | FR307 | FR307-STR | UNIT |
|--|--------|---------------|-------|-------|-------|-------|-------|-------|-----------|------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1000 | V |
| Maximum RMS Voltage | VRMS | 35 | 70 | 140 | 280 | 420 | 560 | 700 | 700 | V |
| Maximum DC Blocking Voltage | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1000 | V |
| Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 °C | IF(AV) | 3.0 | | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method) | IFSM | 200 | | | | | | | | A |
| Maximum Peak Forward Voltage at IF = 3 A | VF | 1.3 | | | | | | | | V |
| Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C | IR | 10 | | | | | | | | μA |
| | IR(H) | 150 | | | | | | | | μA |
| Maximum Reverse Recovery Time (Note 1) | Trr | 150 | | | 250 | 500 | 250 | | | ns |
| Typical Junction Capacitance (Note 2) | CJ | 60 | | | | | | | | pF |
| 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.
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

RATING AND CHARACTERISTIC CURVES (FR301 - FR307-STR)

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

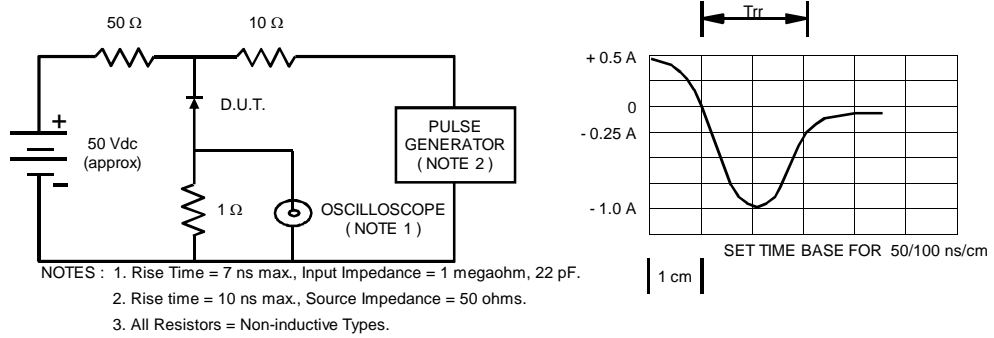


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

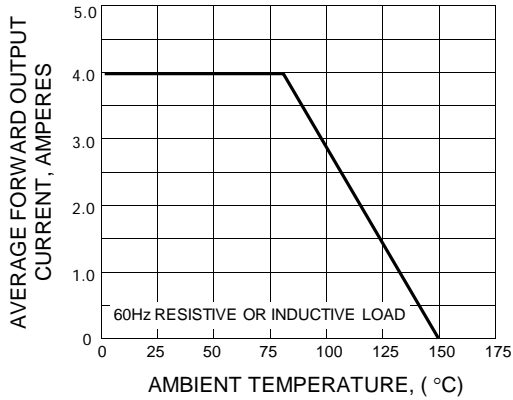


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

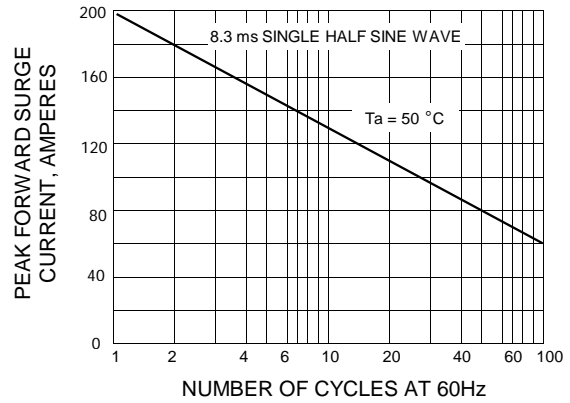
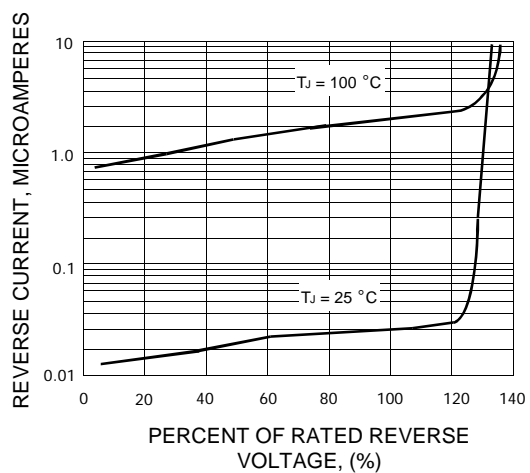


FIG.4 - TYPICAL FORWARD CHARACTERISTICS





FIG.5 - TYPICAL REVERSE CHARACTERISTICS



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