

SF51 - SF59

PRV : 50 - 1000 Volts
Io : 5.0 Amperes

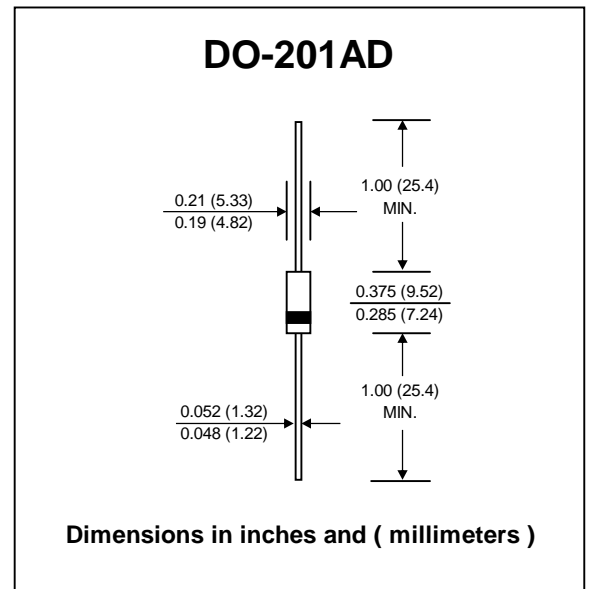
FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Super fast recovery time
- * 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

SUPER FAST 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 | SF51 | SF52 | SF53 | SF54 | SF55 | SF56 | SF57 | SF58 | SF59 | UNIT |
|---|--------|---------------|------|------|------|------|------|------|------|------|------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 50 | 100 | 150 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | VRMS | 35 | 70 | 105 | 140 | 210 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | VDC | 50 | 100 | 150 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 °C | IF(AV) | 5.0 | | | | | | | | | A |
| Maximum Peak Forward Surge Current, 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method) | IFSM | 135 | | | | | | | | | A |
| Maximum Peak Forward Voltage at IF = 5.0 A. | VF | 0.95 | | | 1.7 | | | 4.0 | | | V |
| Maximum DC Reverse Current Tj = 25 °C at Rated DC Blocking Voltage Tj = 100 °C | IR | 10 | | | | | | | | | µA |
| | IR(H) | 500 | | | | | | | | | µA |
| Maximum Reverse Recovery Time (Note 1) | Trr | 35 | | | | | | | | | ns |
| Typical Junction Capacitance (Note 2) | CJ | 50 | | | | | | | | | 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 (SF51 - SF59)

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

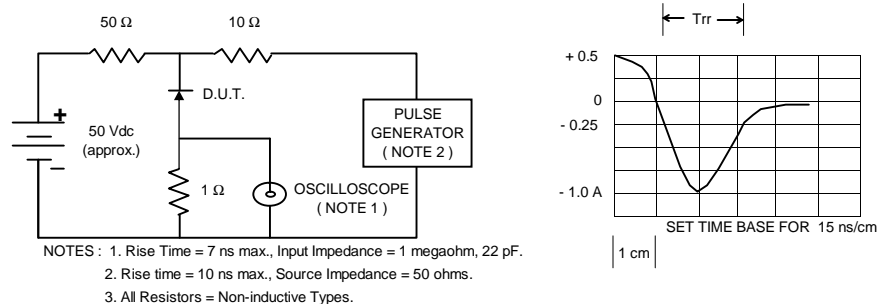


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

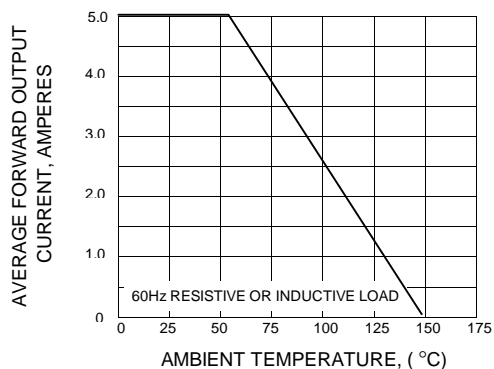


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

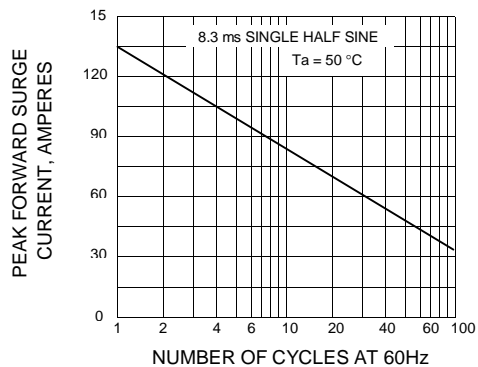


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

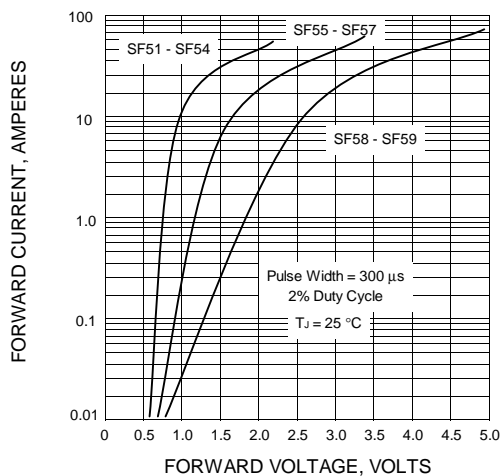


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

