

BA157 - BA159

PRV : 400 - 1000 Volts
Io : 1.0 Ampere

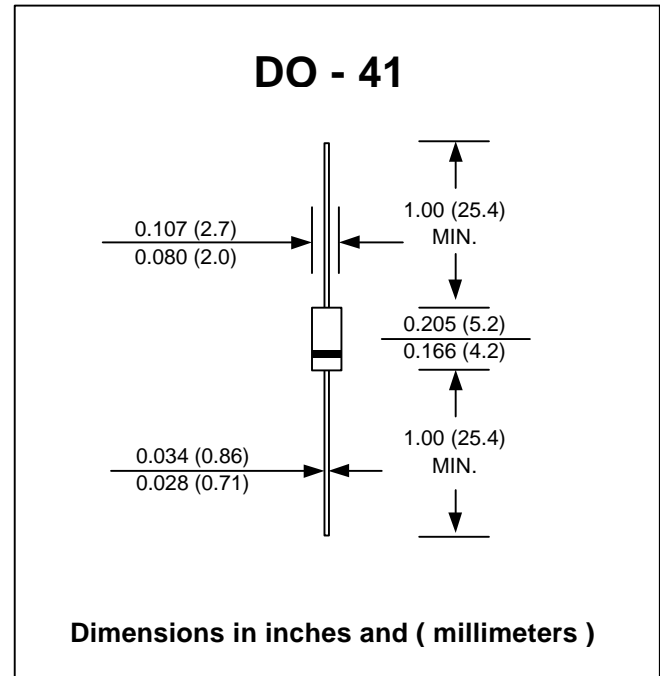
FEATURES :

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

MECHANICAL DATA :

- * Case : DO-41 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 : 0.34 gram

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 | BA157 | BA158 | BA159 | UNIT |
|---|--------|---------------|-------|-------|------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 400 | 600 | 1000 | V |
| Maximum RMS Voltage | VRMS | 280 | 420 | 700 | V |
| Maximum DC Blocking Voltage | VDC | 400 | 600 | 1000 | V |
| Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 45 °C | IF(AV) | 1.0 | | | A |
| Peak Forward Surge Current, 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method) | IFSM | 35 | | | A |
| Maximum Peak Forward Voltage at IF = 1.0 Amp. | VF | 1.3 | | | V |
| Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C | IR | 5.0 | | | µA |
| | IR(H) | 100 | | | µA |
| Maximum Reverse Recovery Time (Note 1) | Trr | 150 | | 250 | ns |
| Typical Junction Capacitance (Note 2) | CJ | 20 | | | 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 (BA157 - BA159)

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

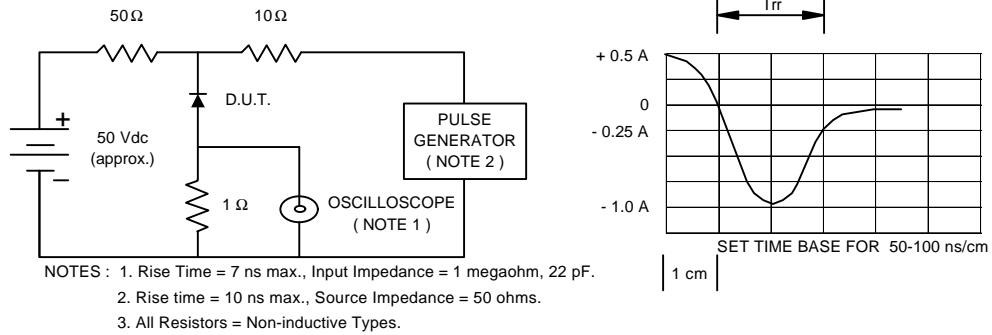


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

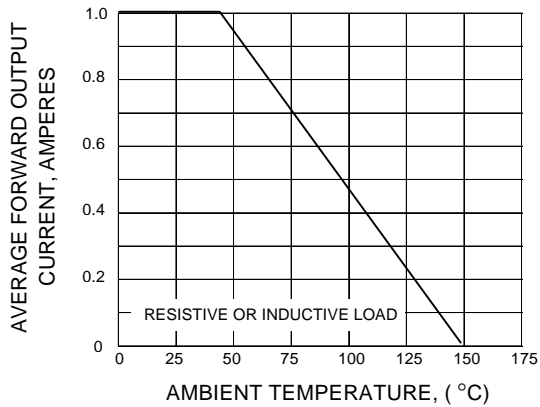


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

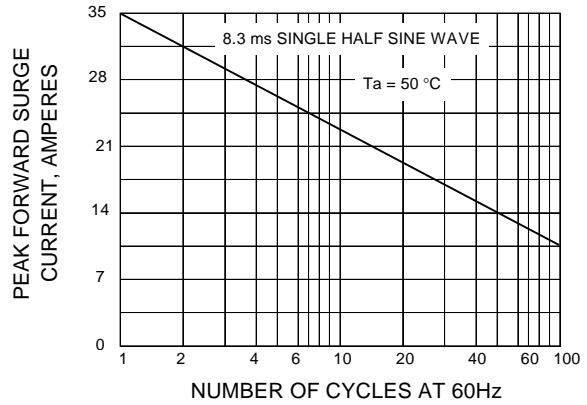


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

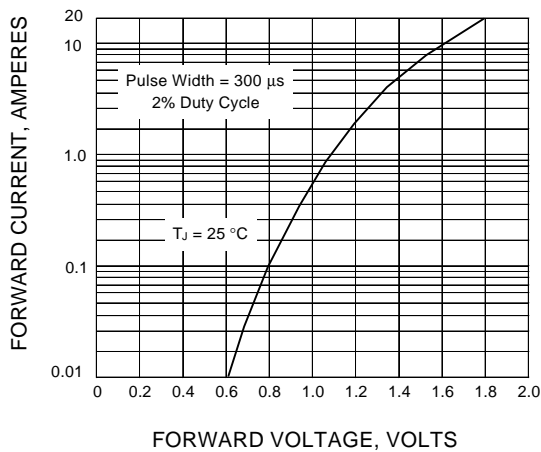


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

