



# FUKUCOM COMPANY LTD.

## 福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206



### DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

BA157  
THRU  
BA159

#### TECHNICAL SPECIFICATIONS OF FAST RECOVERY RECTIFIER

VOLTAGE RANGE - 400 to 1000 Volts

CURRENT - 1.0 Ampere

#### FEATURES

- \* Fast switching
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High surge capability
- \* High reliability

#### MECHANICAL DATA

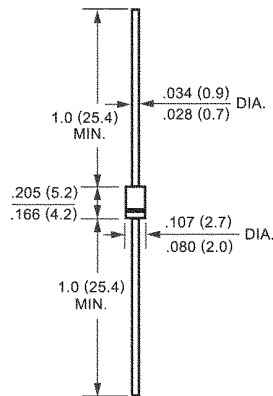
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Mounting position: Any
- \* Weight: 0.33 gram

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.



DO-41



Dimensions in inches and (millimeters)

|                                                                                                         | SYMBOL                            | BA157        | BA158 | BA159 | UNITS |
|---------------------------------------------------------------------------------------------------------|-----------------------------------|--------------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                  | V <sub>RRM</sub>                  | 400          | 600   | 1000  | Volts |
| Maximum RMS Voltage                                                                                     | V <sub>RMS</sub>                  | 280          | 420   | 700   | Volts |
| Maximum DC Blocking Voltage                                                                             | V <sub>DC</sub>                   | 400          | 600   | 1000  | Volts |
| Maximum Average Forward Rectified Current at T <sub>A</sub> = 75°C                                      | I <sub>O</sub>                    | 1.0          |       |       | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)       | I <sub>FSM</sub>                  | 30           |       |       | Amps  |
| Maximum Instantaneous Forward Voltage at 1.0A DC                                                        | V <sub>F</sub>                    | 1.3          |       |       | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage T <sub>A</sub> = 25°C                           | I <sub>R</sub>                    | 5.0          |       |       | uAmps |
| Maximum Full Load Reverse Current Full Cycle Average, .375"(9.5mm) lead length at T <sub>L</sub> = 55°C |                                   | 100          |       |       | uAmps |
| Maximum Reverse Recovery Time (Note 1)                                                                  | trr                               | 150          | 250   | 500   | nSec  |
| Typical Junction Capacitance (Note 2)                                                                   | C <sub>J</sub>                    | 15           |       |       | pF    |
| Operating and Storage Temperature Range                                                                 | T <sub>J</sub> , T <sub>STG</sub> | -65 to + 150 |       |       | °C    |

NOTES : 1. Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts



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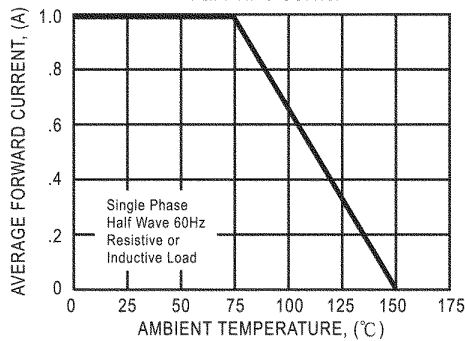
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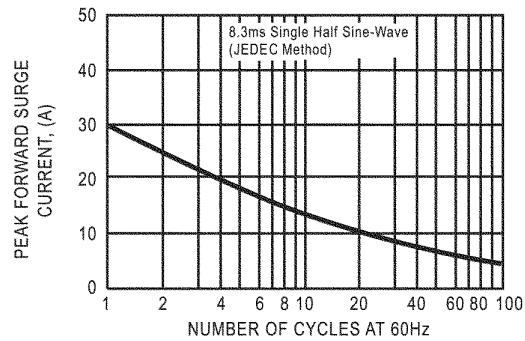
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**RATING AND CHARACTERISTIC CURVES ( BA157 THRU BA159 )**

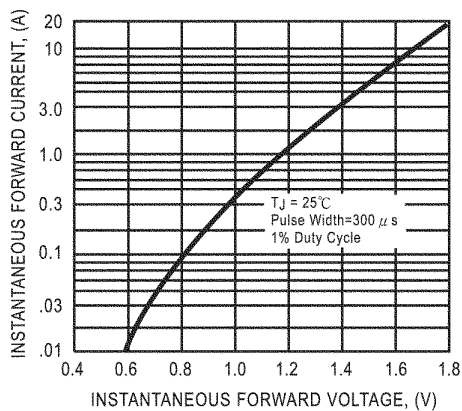
**FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE**



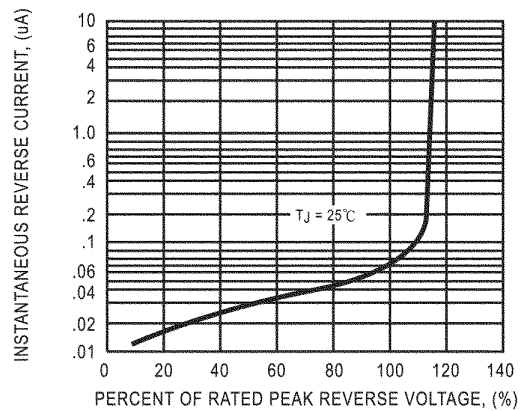
**FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



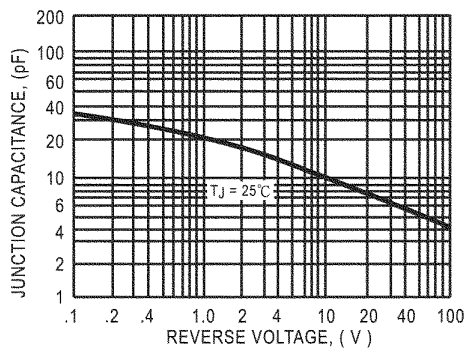
**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**



**FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**

