



**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**

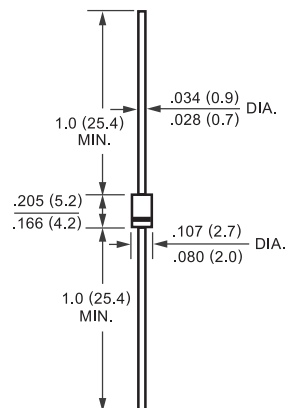
**FEATURES**

- \* 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

**DO-41**



Dimensions in inches and (millimeters)

**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%.

	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)	t <sub>rr</sub>	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

## RATING AND CHARACTERISTIC CURVES ( BA157 THRU BA159 )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

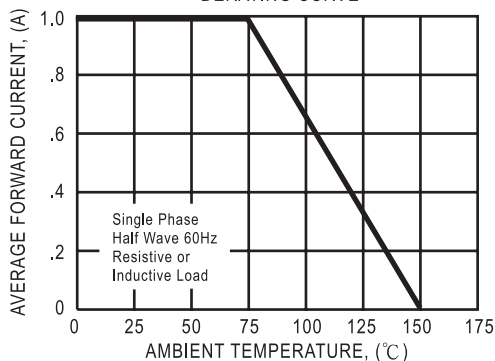


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

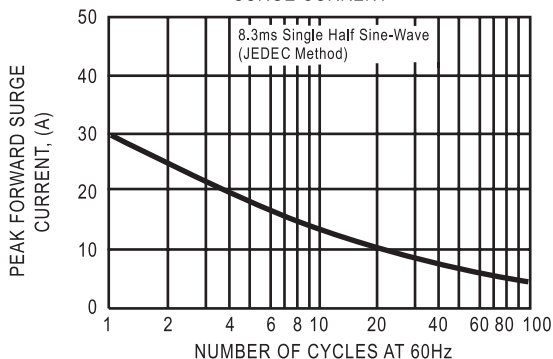


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

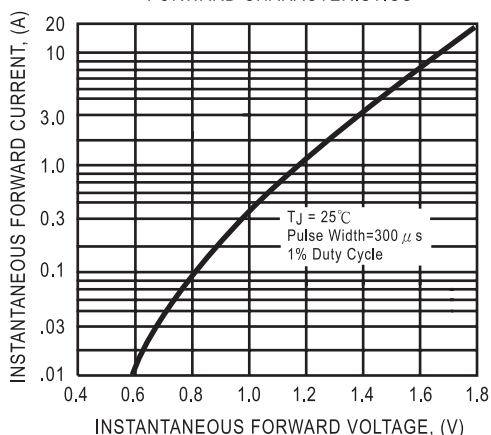


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

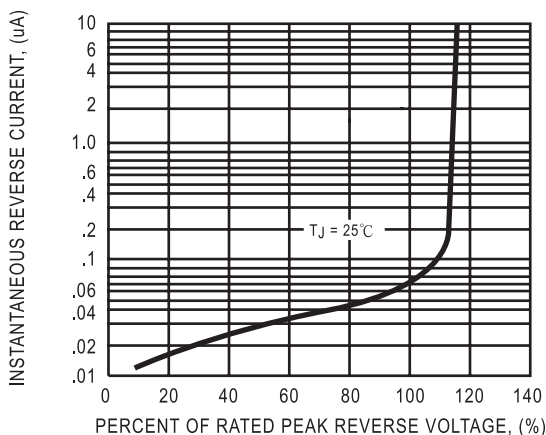


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

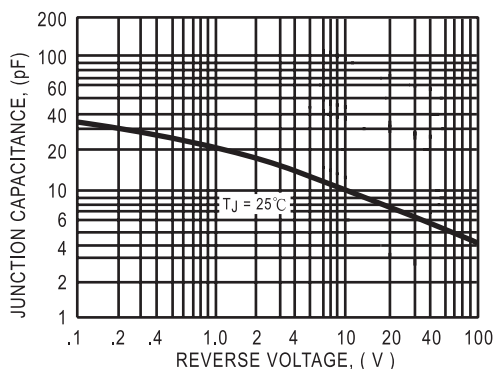
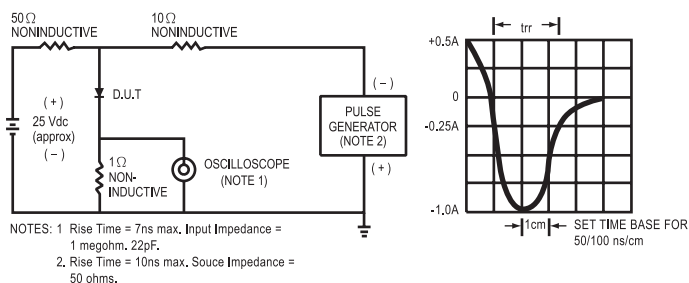


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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