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

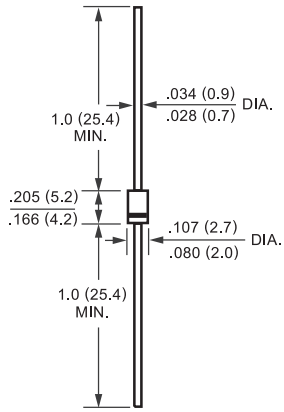
* Fast switching
* Low leakage
* Low forward voltage drop
* High current capability
* High surge capability
* High reliability

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_{RRM}	400	600	1000	Volts
Maximum RMS Voltage	V_{RMS}	280	420	700	Volts
Maximum DC Blocking Voltage	V_{DC}	400	600	1000	Volts
Maximum Average Forward Rectified Current at T_A = 75°C	I_O	1.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30			Amps
Maximum Instantaneous Forward Voltage at 1.0A DC	V_F	1.3			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A = 25°C	I_R	5.0			uAmps
Maximum Full Load Reverse Current Full Cycle Average, .375*(9.5mm) lead length at T_L = 55°C		100			uAmps
Maximum Reverse Recovery Time (Note 1)	trr	150	250	500	nSec
Typical Junction Capacitance (Note 2)	C_J	15			pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 150			°C

NOTES : 1. Test Conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A

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

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NEXT BACK EXIT

RATING AND CHARACTERISTIC CURVES (BA157 THRU BA159)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

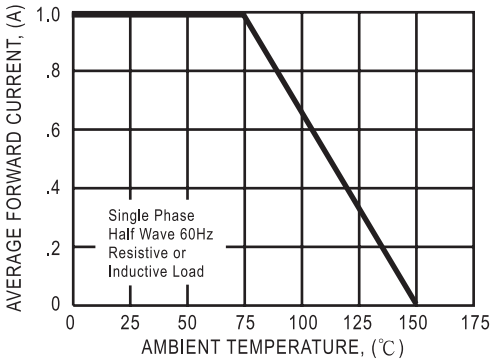


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

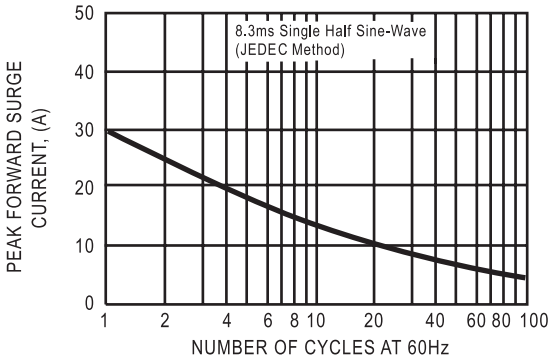


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

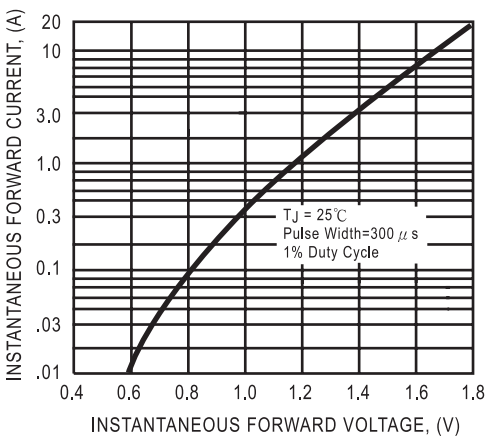


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

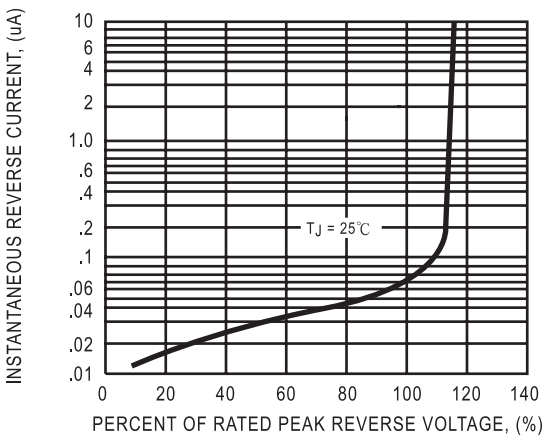


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

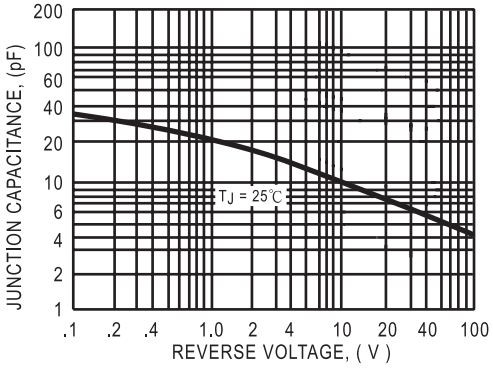
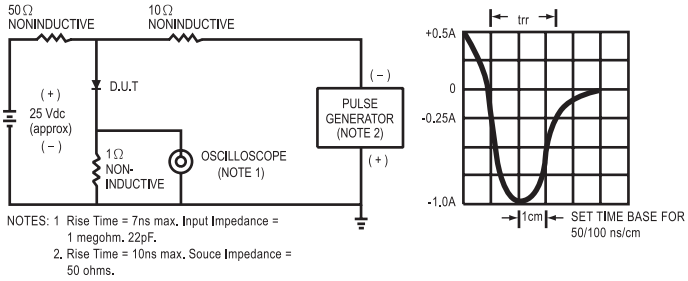


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.
2. Rise Time = 10ns max. Souce Impedance = 50 ohms.