

BA157 THRU BA159



1.0 AMP FAST RECOVERY RECTIFIERS

FEATURES

- * Low forward voltage drop
- * Low leakage current
- * High reliability
- * High current capability

MECHANICAL DATA

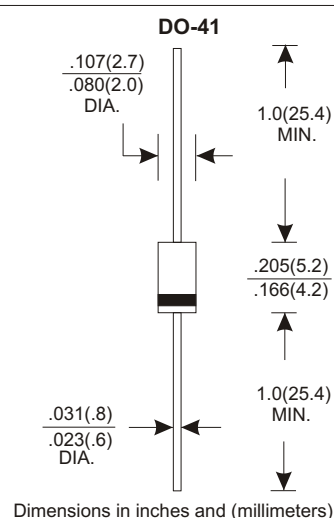
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant method 208 guaranteed
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.34 grams
- * Both normal and Pb free product are available:
- * Normal: 80~95%Sn, 5~20%Pb
- * Pb free: 99 Sn above can meet Rohs environment substance directive request

VOLTAGE RANGE

400 to 1000 Volts

CURRENT

1.0 Ampere



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	BA157	BA158	BA159	UNITS
Maximum Recurrent Peak Reverse Voltage	400	600	1000	V
Maximum RMS Voltage	280	420	700	V
Maximum DC Blocking Voltage	400	600	1000	V
Maximum Average Forward Rectified Current				
.375"(9.5mm) Lead Length at Ta=75°C	1.0			A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	36			A
Maximum Instantaneous Forward Voltage at 1.0A	1.3			V
Maximum DC Reverse Current Ta=25°C	5.0			uA
at Rated DC Blocking Voltage Ta=100°C	50			uA
Maximum Reverse Recovery Time (Note 1)	150		250	nS
Typical Junction Capacitance (Note 2)	15			pF
Operating and Storage Temperature Range Tj, TSTG	-65 — +150			°C

NOTES:

1. Reverse Recovery Time test condition: IF=1.0A, VR=30V.
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES (BA157 THRU BA159)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

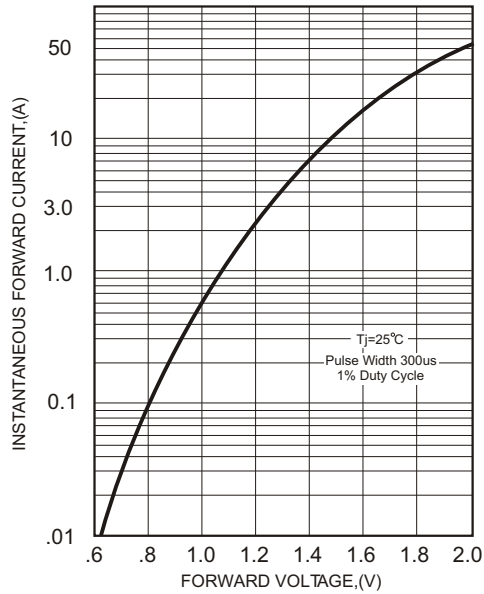


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

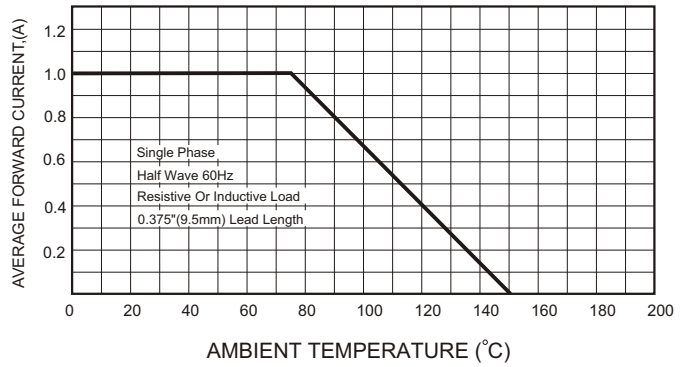


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

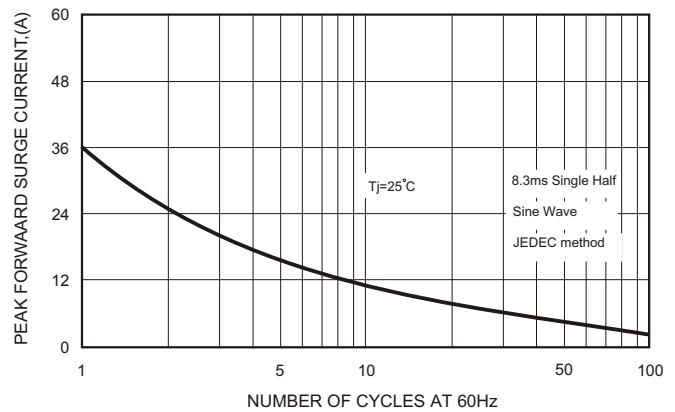
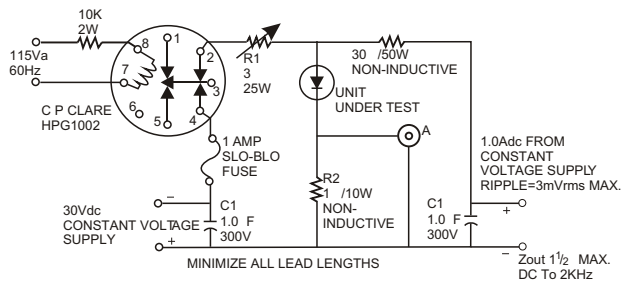


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



A-TEKTRONIX 545A K PLUG IN
PRE AMP P6000 PROBE OR EQUIVALENT
R1- ADJUSTED FOR 14 BETWEEN
POINT 2 OF RELAY AND RECTIFIER
INDUCTIVE=3.8 H
R2- TEN 1W 10 1% CARBON CORE
IN PARALLEL
 $T_A = 25 \pm 10^\circ\text{C}$ FOR RECTIFIER

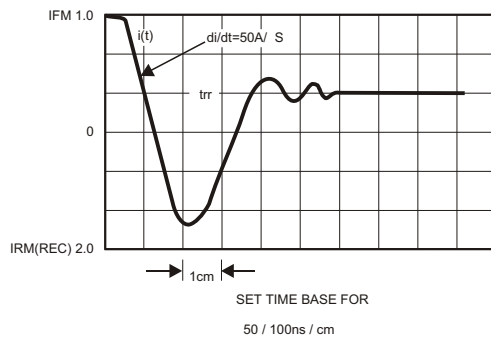


FIG.5-TYPICAL JUNCTION CAPACITANCE

