

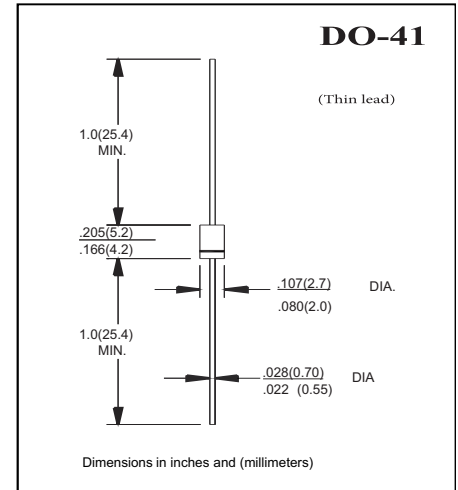
FAST RECOVERY RECTIFIER

FEATURES

- Low cost construction
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
260°C/10 secods/.375”(9.5mm)lead length at 5 lbs(2.3kg) tension

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.012 ounce, 0.33 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25 °C ambient temperature unless otherwise specified Single Phase, half wave, 60Hz, resistive or inductive load for capacitive load derate current by 20%

	SYMBOLS	BA157	BA158	BA159	UNITS
Maximum Repetitive 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 0.375”(9.5mm) lead length at $T_A = 75^\circ\text{C}$	$I_{(AV)}$	1.0			Amp
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	30			Amps
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.3			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_A = 25^\circ\text{C}$	5.0		μA
		$T_A = 100^\circ\text{C}$	100		
Maximum Reverse Recovery Time (Note 3) $T_J = 25^\circ\text{C}$	t_{rr}	150	250	300	ns
Typical Junction Capacitance (Note 1)	C_J	15			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50			$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	(-55 to +150)			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-55 to +150)			$^\circ\text{C}$

Notes:

1. Measured at 1.0MHz and Applied Reverse Voltage of 4.0Volits.
2. Thermal Resistance from junction to Ambient at .375”(9.5mm)lead length, P.C.board mounted.
3. Reverse Recovery Test Conditions: $I_f = 0.5\text{A}$, $I_r = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$

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RATING AND CHARACTERISTIC CURVES BA157 - BA159

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

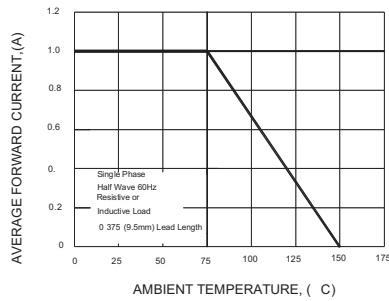


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

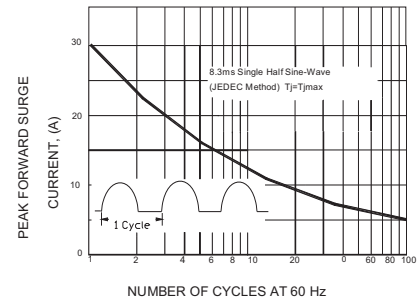


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

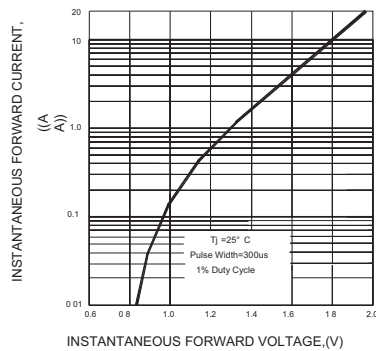


FIG.4-TYPICAL REVERSE CHARACTERISTICS

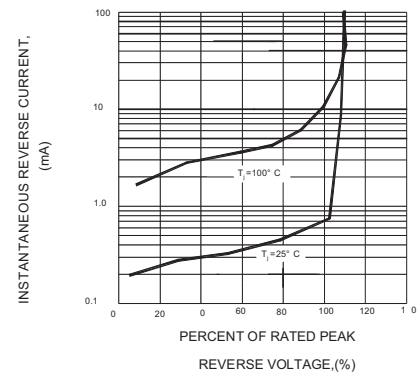


FIG.5-TYPICAL JUNCTION CAPACITANCE

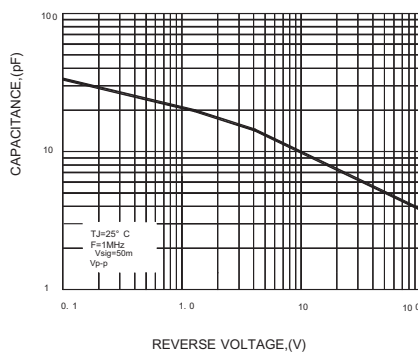
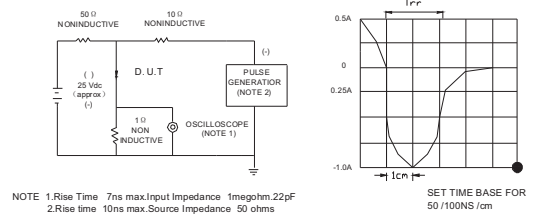


FIG.6 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



Disclaimer

All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.