

BA157 THRU BA159

Fast Silicon Rectifiers

Reverse Voltage – 400 to 1000 V

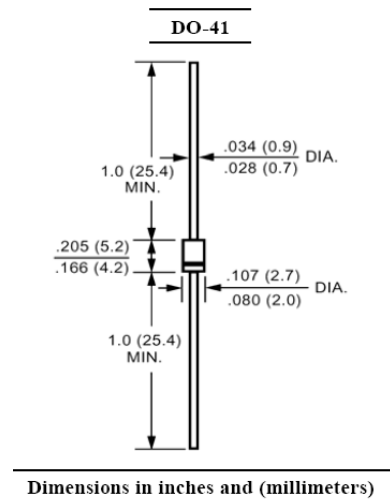
Forward Current – 1 A

Features

- Low forward voltage
- High current capability
- Low leakage current
- High surge capability

Mechanical Data

- Case: Molded plastic, DO-41
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

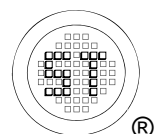
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	400 600 1000	V
Average Rectified Current	I_O	1 ¹⁾	A
Surge Forward Current, Half Cycle 50 Hz, starting from $T_j = 25^\circ\text{C}$	I_{FSM}	35	A
Junction Temperature	T_j	125	$^\circ\text{C}$
Operating and Storage Temperature Range	T_{stg}	- 65 to + 125	$^\circ\text{C}$

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

Characteristics at $T_j = 25^\circ\text{C}$

Parameter	Symbol	Typ.	Max.	Unit
Forward Voltage at $I_F = 1\text{ A}$	V_F	-	1.3	V
Reverse Current at $V_R = V_{RRM}$	I_R	-	5	μA
Total Capacitance at $V_R = 4\text{ V}$, $f = 1\text{ MHz}$	C_{tot}	15	-	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$, $I_R = 10\text{ mA}$, $I_{RR} = 1\text{ mA}$ at $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{RR} = 0.25\text{ A}$	t_{rr}	- - - - - -	300 300 500 150 150 250	ns
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	-	25 ¹⁾	K/W

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.



BA157 THRU BA159

FIG.1-FORWARD CURRENT DERATING CURVE

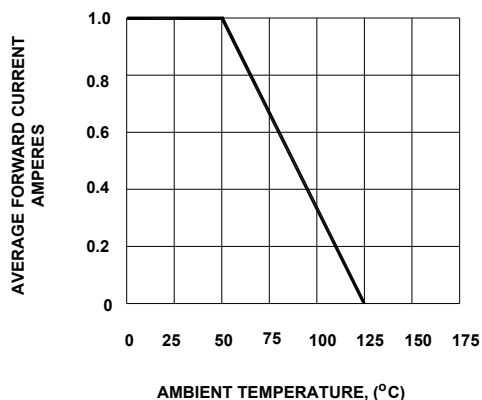


Fig.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

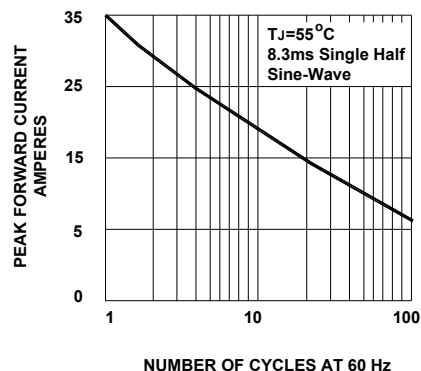


Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

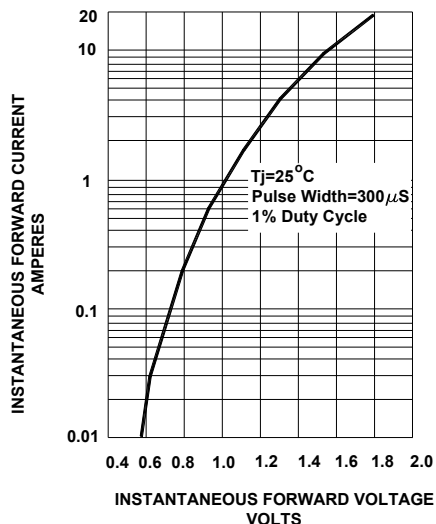


Fig.4- TYPICAL REVERSE CHARACTERISTICS

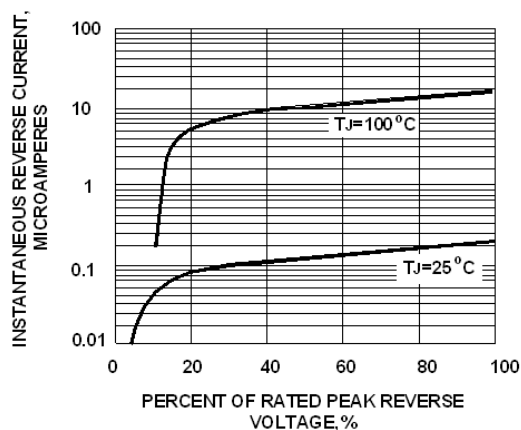


Fig.5- TYPICAL JUNCTION CAPACITANCE

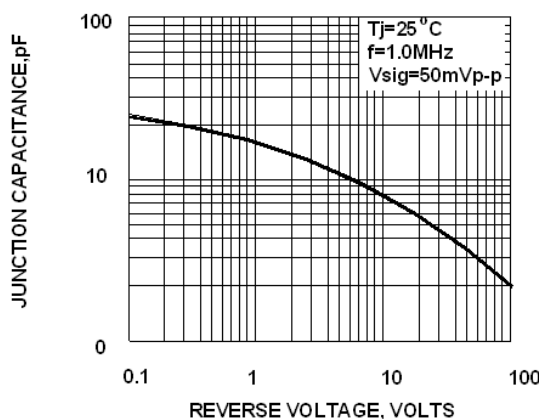


Fig.6- TYPICAL TRANSIENT THERMAL IMPEDANCE

