

1N5393 / 1N5397

General-Purpose Rectifiers

Features

- 1.5 A Operation at $T_A = 75^\circ\text{C}$ with No Thermal Runaway
- High Current Capability
- Low Leakage



DO-15
Color Band Denotes Cathode

Absolute Maximum Ratings⁽¹⁾

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Value		Units
		1N5393	1N5397	
V_{RRM}	Peak Repetitive Reverse Voltage	200	600	V
$I_{F(AV)}$	Average Rectified Forward Current .375-inch Lead Length at $T_A = 75^\circ\text{C}$		1.5	A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine Wave		50	A
T_{STG}	Storage Temperature Range	-55 to +150		°C
T_J	Operating Junction Temperature	-55 to +150		°C

Note:

1. These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	4.8	W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead ⁽²⁾	26	°C/W

Note:

2. Mounted on 0.375 inch (9.5 mm) PCB.

Electrical Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Value		Units
		1N5393	1N5397	
V_F	Forward Voltage at 1.5 A	1.4		V
I_R	Reverse Leakage at Rated V_R	$T_A=25^\circ\text{C}$	5.0	μA
		$T_A=100^\circ\text{C}$	300	μA
C_T	Total Capacitance $V_R = 4.0 \text{ V}$, $f = 1.0 \text{ MHz}$	25		pF

Typical Performance Characteristics

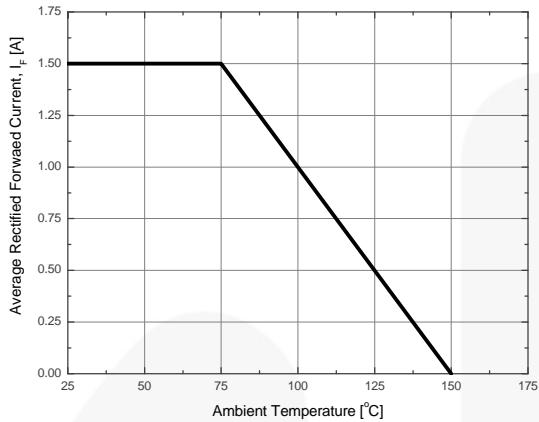


Figure 1. Forward Current Derating Curve

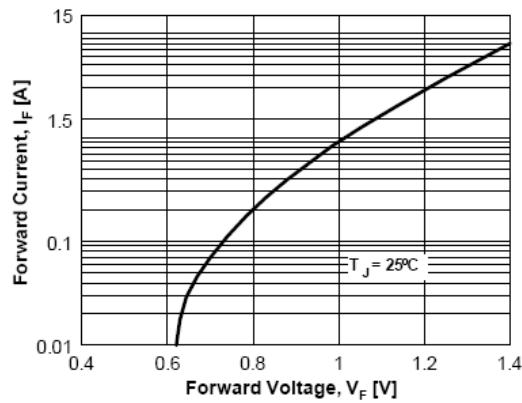


Figure 2. Forward Voltage Characteristics

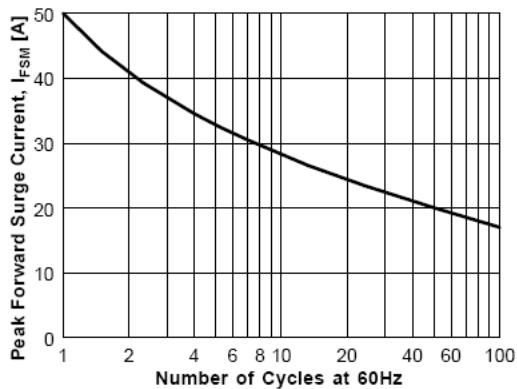


Figure 3. Non-Repetitive Surge Current

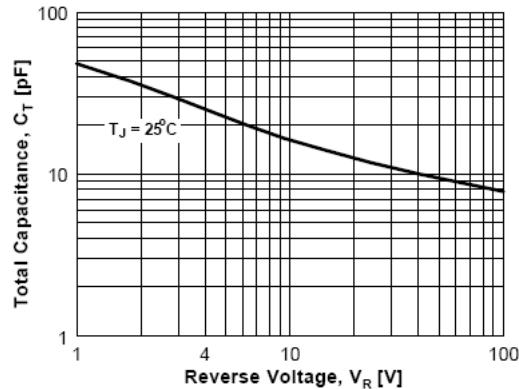


Figure 4. Total Capacitance

Physical Dimensions

DO-15

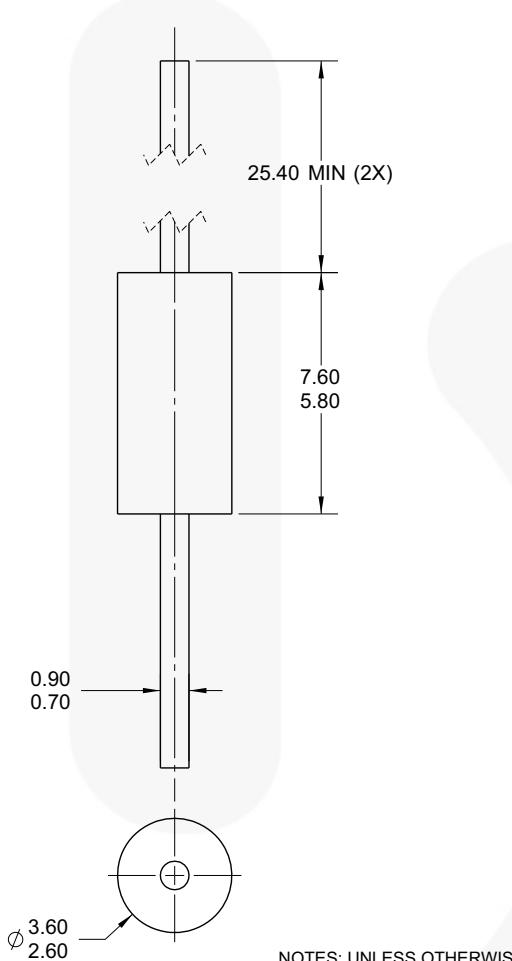


Figure 5. AXIAL LEADED, JEDEC DO204, VARIATION AC

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