

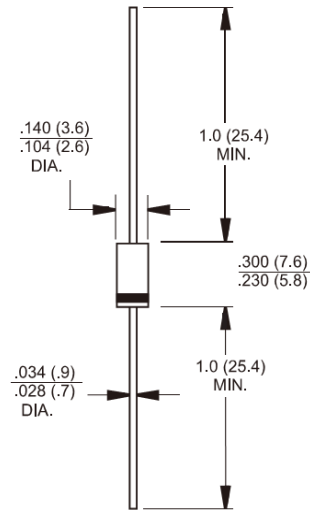
DO-15

Features

- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10s / .375", (9.5mm) lead lengths at 5 lbs, (2.3kg) tension
- ✧ Weight: 0.40 grams



Dimensions in inches and (millimeters)

Marking Diagram



- 1N539X = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

Maximum Ratings and Electrical Characteristics

Rating 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%

Type Number	Symbol	1N 5391	1N 5392	1N 5393	1N 5395	1N 5397	1N 5398	1N 5399	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ $T_A=75^\circ C$	$I_{F(AV)}$	1.5							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	50							A
Maximum Instantaneous Forward Voltage (Note 1) @ 1.5A	V_F	1.1	1.0						V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A=25^\circ C$ @ $T_A=125^\circ C$	I_R					5			uA
						50			uA
Maximum Full Load Reverse Current, Full Cycle Average .375"(9.5mm) Lead Length @ $T_A=75^\circ C$	$I_{R(AV)}$					30			uA
Typical Junction Capacitance (Note 2)	C_j					50			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$					60			$^\circ C/W$
	$R_{\theta JC}$					5			
	$R_{\theta JL}$					12			
Operating Temperature Range	T_J					- 65 to + 150		$^\circ C$	
Storage Temperature Range	T_{STG}					- 65 to + 150		$^\circ C$	

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle
Note 2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.
Note 3: Mount on Cu-Pad Size 10mm x 10mm on PCB

RATINGS AND CHARACTERISTIC CURVES (1N5391 THRU 1N5399)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

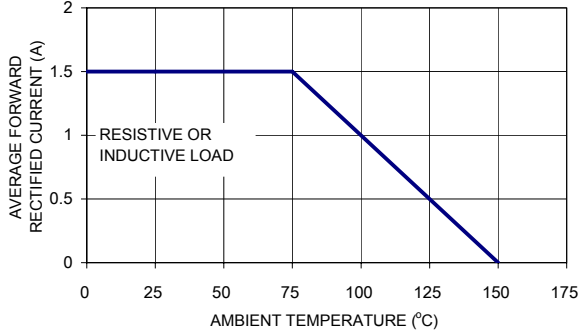


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

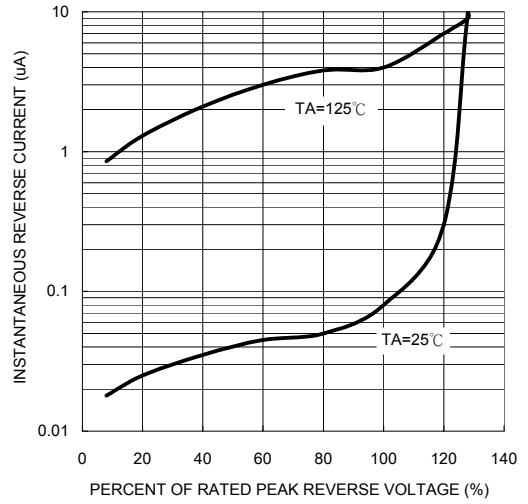


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

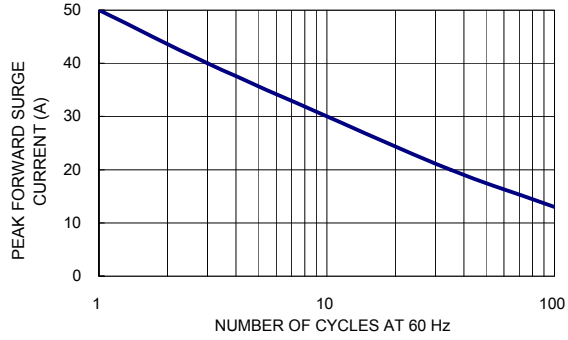


FIG. 5- TYPICAL FORWARD CHARACTERISTICS

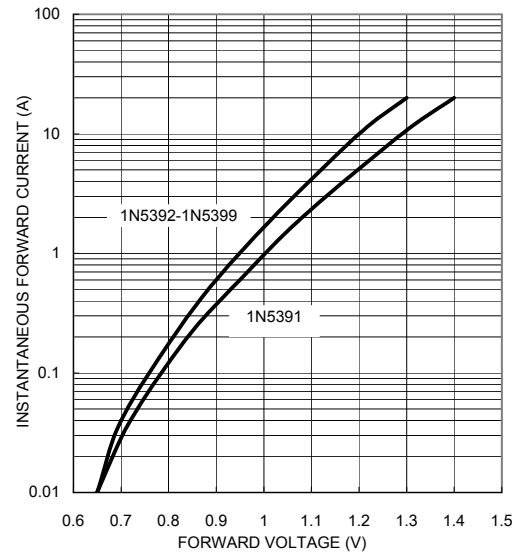


FIG. 4- TYPICAL JUNCTION CAPACITANCE

