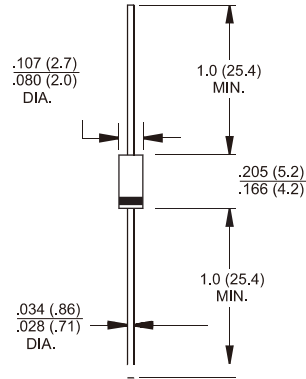


# 1N5391S - 1N5399S

## 1.5 AMPS. Silicon Rectifiers

### DO-41



Dimensions in inches and (millimeters)  
Marking Diagram



1N539XS = Specific Device Code  
G = Green Compound  
Y = Year  
WW = Work Week

## Features

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

## Mechanical Data

- ✧ Cases: Molded plastic DO-41
- ✧ Epoxy: UL 94V-O rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202,
- ✧ Polarity: Color band denotes cathode.
- ✧ High temperature soldering guaranteed: 260°C/10 seconds
- ✧ Weight: 0.40 grams

## 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 5391S	1N 5392S	1N 5393S	1N 5395S	1N 5397S	1N 5398S	1N 5399S	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 @ $T_L = 90^\circ\text{C}$	$I_{F(AV)}$	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 @ 1.5A	$V_F$	1.1	1.0						V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage (Note 1) @ $T_A=125^\circ\text{C}$	$I_R$					5.0			$\mu\text{A}$
Typical Junction Capacitance (Note 2)	$C_j$					30			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$					65			$^\circ\text{C/W}$
	$R_{\theta JL}$					25			
	$R_{\theta JC}$					22			
Operating Temperature Range	$T_J$					-65 to +125		$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$					-65 to +150		$^\circ\text{C}$	

Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle.  
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.  
3. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.

RATINGS AND CHARACTERISTIC CURVES (1N5391S THRU 1N5399S)

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

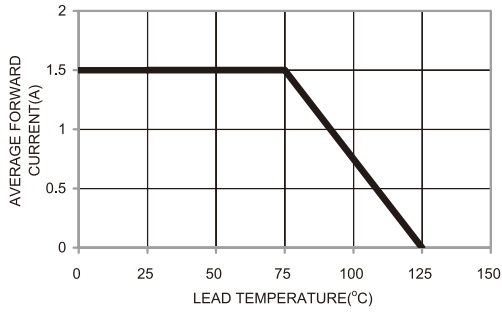


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

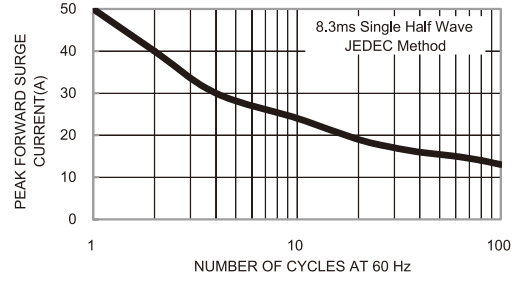


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

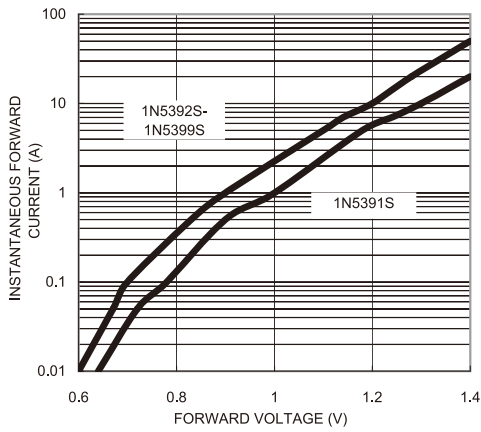


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

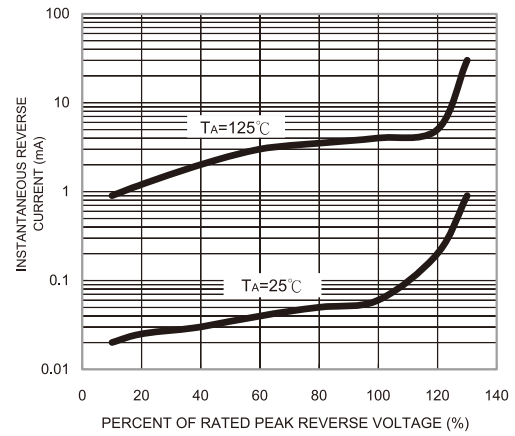


FIG. 5 TYPICAL JUNCTION CAPACITANCE

