

# 1N5391/S - 1N5399/S

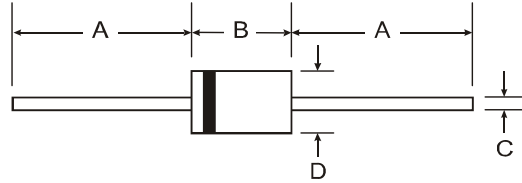
1.5A RECTIFIER

## Features

- Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Low Reverse Leakage Current
- Surge Overload Rating to 50A Peak
- **Lead Free Finish, RoHS Compliant (Note 3)**

## Mechanical Data

- Case: DO-41, DO-15
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish — Tin. Solderable per MIL-STD-202, Method 208 **(e3)**
- Polarity: Cathode Band
- Ordering Information: See Last Page
- Marking: Type Number
- Weight: DO-41 0.30 grams (approximate)  
DO-15 0.40 grams (approximate)



Dim	DO-41 Plastic		DO-15	
	Min	Max	Min	Max
A	25.40	—	25.40	—
B	4.06	5.21	5.50	7.62
C	0.71	0.864	0.686	0.889
D	2.00	2.72	2.60	3.60

All Dimensions in mm

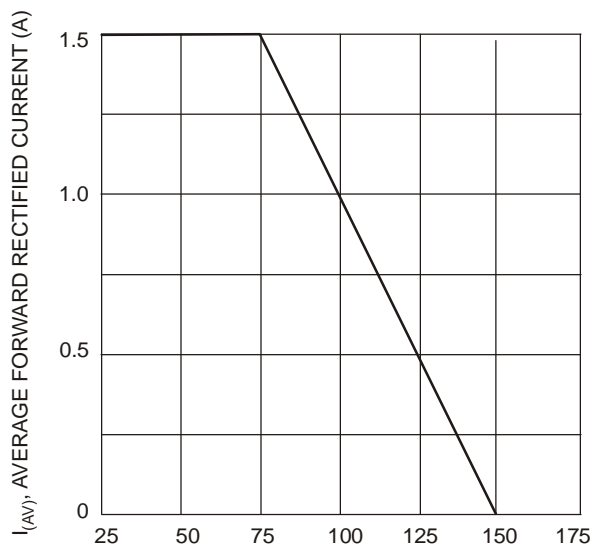
"S" Suffix Designates DO-41 Package  
No Suffix Designates DO-15 Package

## Maximum Ratings and Electrical Characteristics @T<sub>A</sub> = 25°C unless otherwise specified

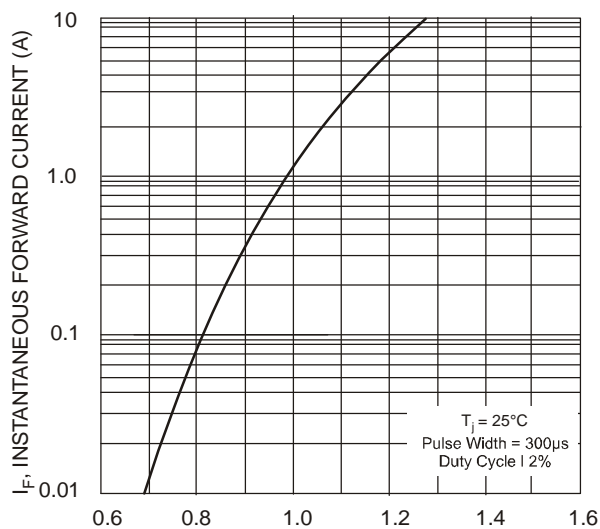
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	1N 5391/S	1N 5392/S	1N 5393/S	1N 5395/S	1N 5397/S	1N 5398/S	1N 5399/S	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>								
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @ T <sub>A</sub> = 70°C	I <sub>O</sub>	1.5							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	50							A
Forward Voltage Drop @ I <sub>F</sub> = 1.5A	V <sub>FM</sub>	1.1							V
Peak Reverse Leakage Current @ T <sub>A</sub> = 25°C	I <sub>RM</sub>	5.0							μA
at Rated DC Blocking Voltage @ T <sub>A</sub> = 100°C		50							
Typical Total Capacitance (Note 2)	C <sub>T</sub>	20							pF
Typical Thermal Resistance Junction to Lead	R <sub>θJL</sub>	25							°C/W
Typical Thermal Resistance Junction to Ambient (Note 1)	R <sub>θJA</sub>	55							°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150							°C

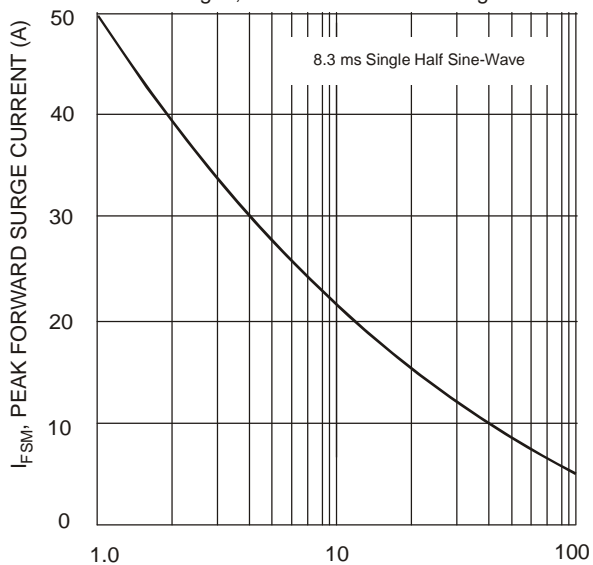
- Notes: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.  
3. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see *EU Directive Annex Notes 5 and 7*.



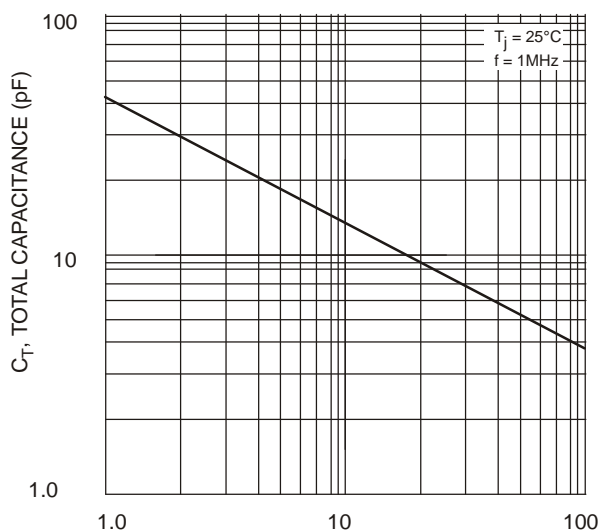
$T_A$  AMBIENT TEMPERATURE (°C)  
Fig. 1, Forward Current Derating Curve



$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics



NUMBER OF CYCLES AT 60Hz  
Fig. 3 Maximum Non-Repetitive Peak Forward Surge Current



$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typical Total Capacitance

## Ordering Information (Note 4)

Device	Packaging	Shipping
1N5391-B	DO-15	1K/Bulk
1N5391-T	DO-15	4K/Tape & Reel, 13-inch
1N5391S-A	DO-41	5K/Ammo Pack
1N5391S-B	DO-41	1K/Bulk
1N5391S-T	DO-41	5K/Tape & Reel, 13-inch
1N5392-B	DO-15	1K/Bulk
1N5392-T	DO-15	4K/Tape & Reel, 13-inch
1N5392S-A	DO-41	5K/Ammo Pack
1N5392S-B	DO-41	1K/Bulk
1N5392S-T	DO-41	5K/Tape & Reel, 13-inch
1N5393-B	DO-15	1K/Bulk
1N5393-T	DO-15	4K/Tape & Reel, 13-inch
1N5393S-A	DO-41	5K/Ammo Pack
1N5393S-B	DO-41	1K/Bulk
1N5393S-T	DO-41	5K/Tape & Reel, 13-inch
1N5395-B	DO-15	1K/Bulk
1N5395-T	DO-15	4K/Tape & Reel, 13-inch
1N5395S-A	DO-41	5K/Ammo Pack
1N5395S-B	DO-41	1K/Bulk
1N5395S-T	DO-41	5K/Tape & Reel, 13-inch
1N5397-B	DO-15	1K/Bulk
1N5397-T	DO-15	4K/Tape & Reel, 13-inch
1N5397S-A	DO-41	5K/Ammo Pack
1N5397S-B	DO-41	1K/Bulk
1N5397S-T	DO-41	5K/Tape & Reel, 13-inch
1N5398-B	DO-15	1K/Bulk
1N5398-T	DO-15	4K/Tape & Reel, 13-inch
1N5398S-A	DO-41	5K/Ammo Pack
1N5398S-B	DO-41	1K/Bulk
1N5398S-T	DO-41	5K/Tape & Reel, 13-inch
1N5399-B	DO-15	1K/Bulk
1N5399-T	DO-15	4K/Tape & Reel, 13-inch
1N5399S-A	DO-41	5K/Ammo Pack
1N5399S-B	DO-41	1K/Bulk
1N5399S-T	DO-41	5K/Tape & Reel, 13-inch

Notes: 4. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.

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