

1N5391/S - 1N5399/S

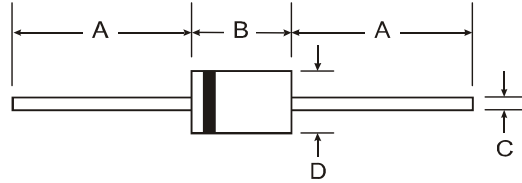
1.5A RECTIFIER

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 @ $T_A = 25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	1N5391/S	1N5392/S	1N5393/S	1N5395/S	1N5397/S	1N5398/S	1N5399/S	Unit
Peak Repetitive Reverse Voltage	V_{RRM}								V
Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V_R								V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1)	I_O				1.5				A
@ $T_A = 70^\circ\text{C}$									
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}				50				A
Forward Voltage Drop	V_{FM}				1.1				V
@ $I_F = 1.5\text{A}$									
Peak Reverse Leakage Current	I_{RM}				5.0				μA
@ $T_A = 25^\circ\text{C}$									
at Rated DC Blocking Voltage	I_{RM}				50				μA
@ $T_A = 100^\circ\text{C}$									
Typical Total Capacitance (Note 2)	C_T				20				pF
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$				25				$^\circ\text{C/W}$
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$				55				$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_{j, TSTG}$				-65 to +150				$^\circ\text{C}$

- 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*.

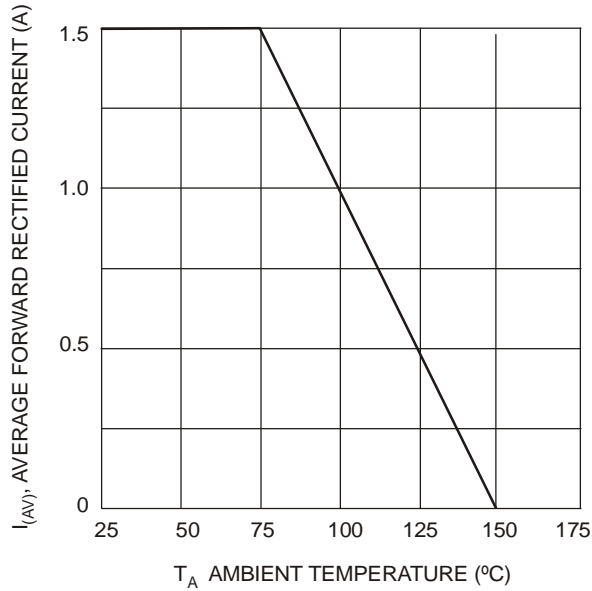


Fig. 1, Forward Current Derating Curve

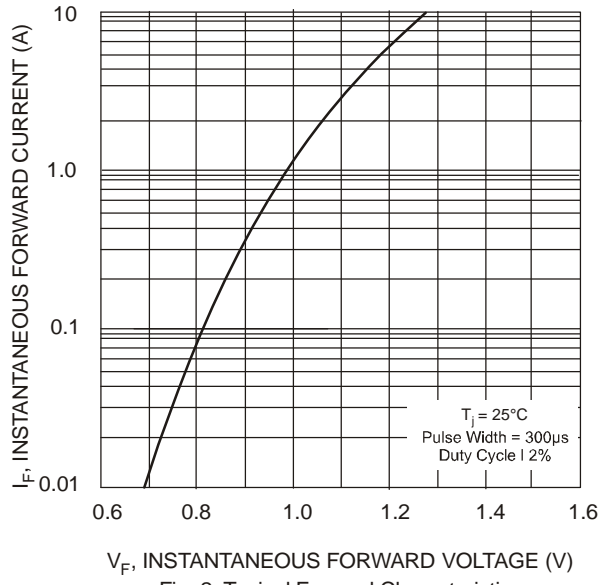


Fig. 2 Typical Forward Characteristics

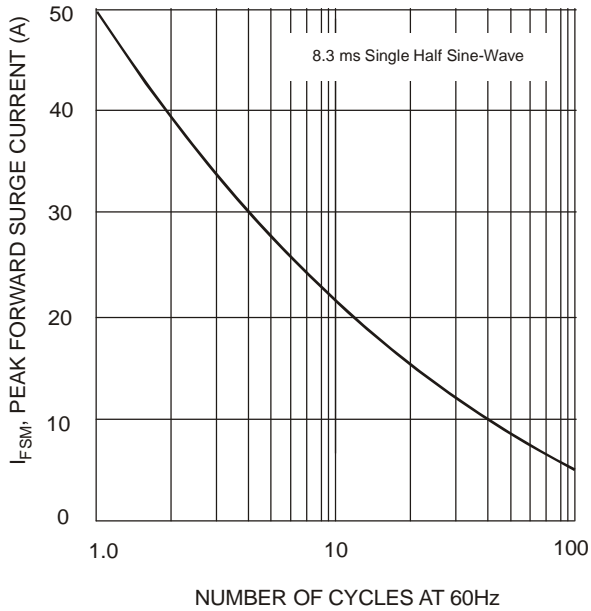


Fig. 3 Maximum Non-Repetitive Peak Forward Surge Current

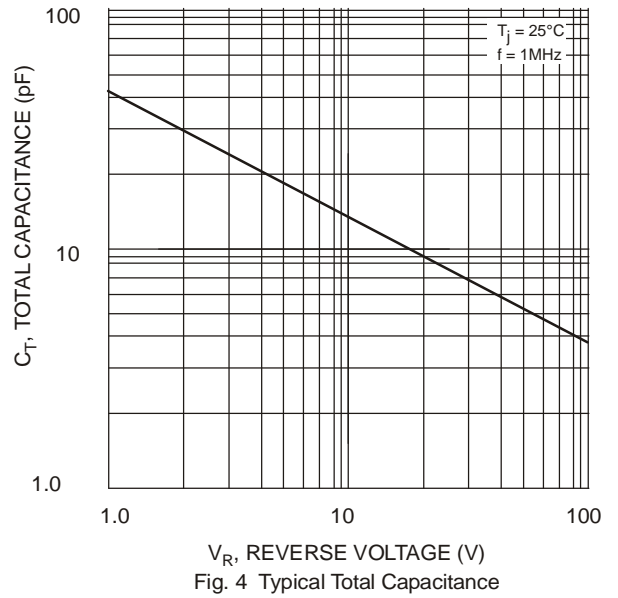


Fig. 4 Typical Total Capacitance

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>.

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.