



1N5391/S - 1N5399/S

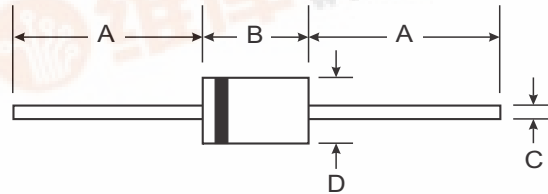
1.5A RECTIFIER

Features

- Diffused Junction
- 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 — Bright Tin. Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Mounting Position: Any
- 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

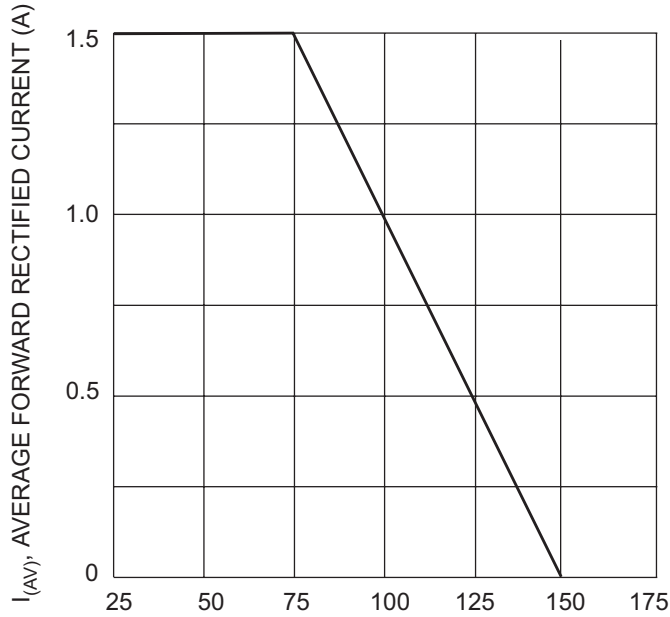
"S" Suffix Designates DO-41 Package
No Suffix Designates DO-15 Package

Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

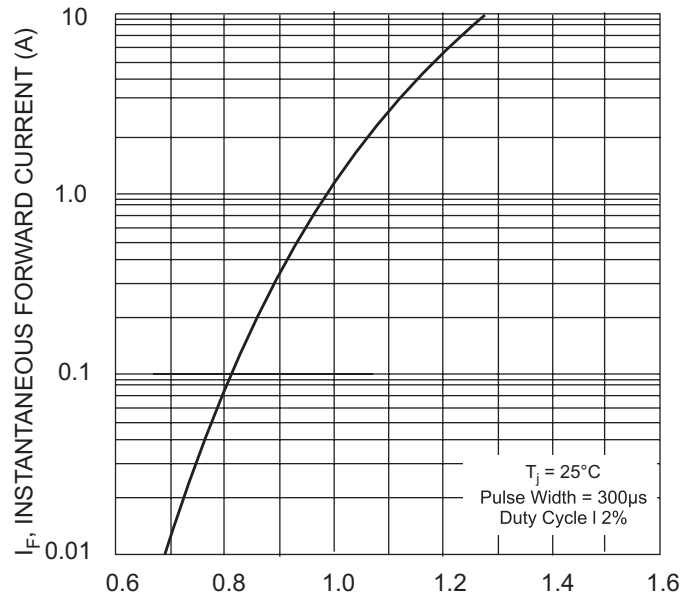
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

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

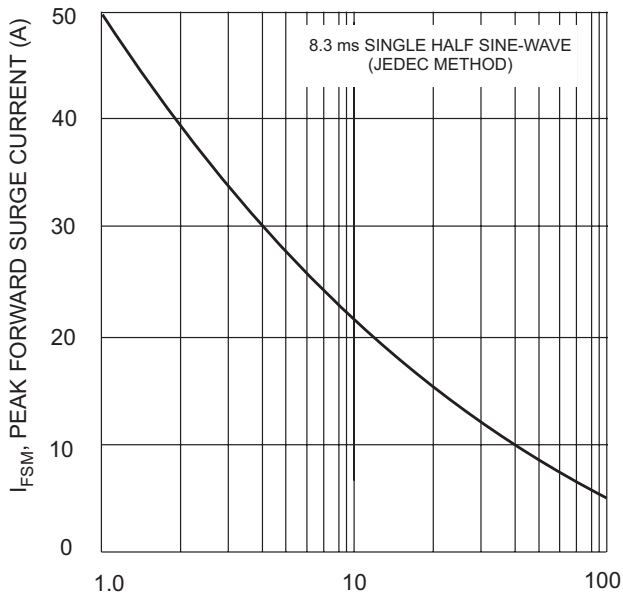
- Notes:
1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.
 2. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0V DC.
 3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.



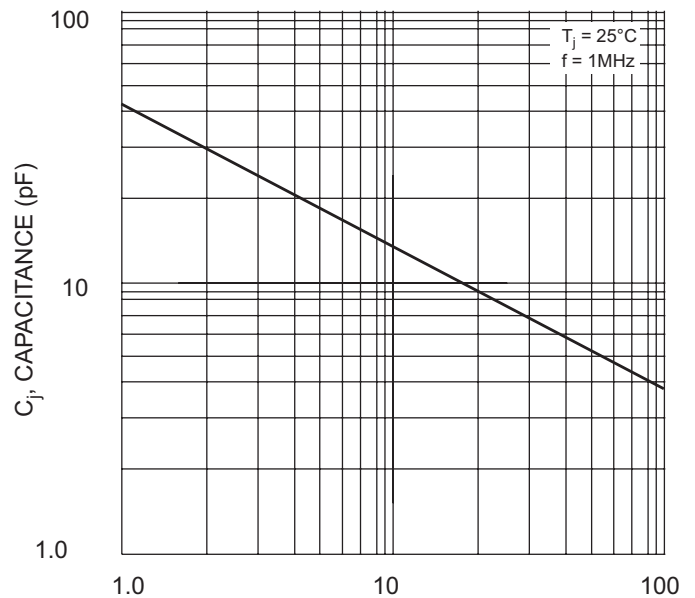
T_A AMBIENT TEMPERATURE (°C)
Fig. 1, Forward Current Derating Curve



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 Junction 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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