Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SPD48 thru SPD51
Series

200 mAMP
50 - 125 VOLTS
5 nsec
HYPERFAST RECTIFIER

DESIGNER'S DATA SHEET

Part Number / Ordering Information 1/

SPD ___ ___ ___

- **Screening** 2/
  - ___ = Not Screened
  - TX = TX Level
  - TXV = TXV Level
  - S = S Level (for SM, use –S)
- **Package**
  - ___ = Axial Leaded
  - SM = Surface Mount Round Tab
- **Voltage**
  - 48 = 50 V
  - 49 = 75 V
  - 50 = 100 V
  - 51 = 125 V

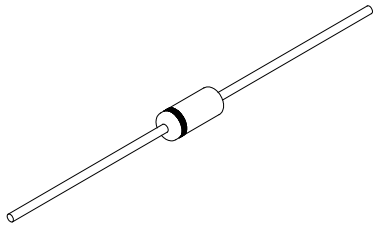
Features:

- Hyperfast Recovery: 5 nsec maximum
- Subminiature Surface Mount Package
- Round Tab Mounting
- Hermetically Sealed
- Planar Passivated Chip
- For High Efficiency Applications
- Replaces 1N4148, 1N4149, 1N4150, and 1N4151 Types
- TX, TXV and S – Level Screening Available 2/

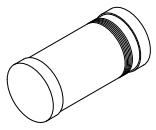
Maximum Ratings		Symbol	Value	Unit
Peak Repetitive Reverse and DC Blocking Voltage	**SPD48** **SPD49** **SPD50** **SPD51**	V_{RRM} V_{RWM} V_R	50 75 100 125	**V**
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T_A = 25ºC)		I_O	200	**mA**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on Io, Allow Junction to Reach Equilibrium Between Pulses, T_A = 25ºC)		I_{FSM}	4	**A**
Operating & Storage Temperature		T_{OP} & T_{STG}	-65 to +175	**°C**
Maximum Thermal Resistance	Junction to Lead, L = 3/8” Junction to End Tab	$R_{\theta JL}$ $R_{\theta JE}$	325 140	**°C/W**

NOTES: *Pulsed per MIL-STD-750.
1/ For ordering information, price, operating curves, and availability – contact factory.
2/ Screening based on MIL-PRF-19500. Screening flows available on request.

Axial



SM (Round)



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: RH0085H**	**DOCX**

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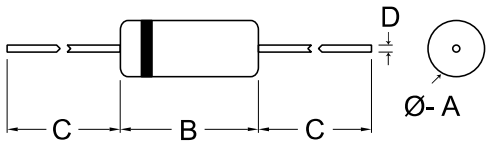
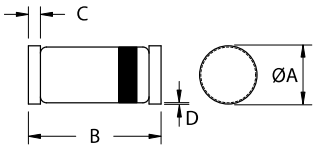
Electrical Characteristics		Symbol	Max	Unit
Instantaneous Forward Voltage Drop (T_A = 25ºC, pulsed)	I_F = 10 mA_{DC} I_F = 100 mA_{DC}	V_{F1}	1.0 1.2	V_{DC}
Instantaneous Forward Voltage Drop (T_A = -55ºC, pulsed)	I_F = 10 mA_{DC} I_F = 100 mA_{DC}	V_{F2}	1.1 1.3	V_{DC}
Reverse Leakage Current (Rated V_R, T_A = 25ºC, pulsed)		I_{R1}	400	nA
Reverse Leakage Current (Rated V_R, T_A = 100ºC, pulsed)		I_{R2}	40	µA
Junction Capacitance (V_R = 10 Vdc, T_A = 25ºC, f = 1 MHz)		C_J	2.8	pF
Reverse Recovery Time (**I_F** = 50 mA, I_R = 100 mA, I_{RR} = 25 mA, T_A = 25ºC)		t_{rr}	5	nsec

Case Outline: Axial (___)



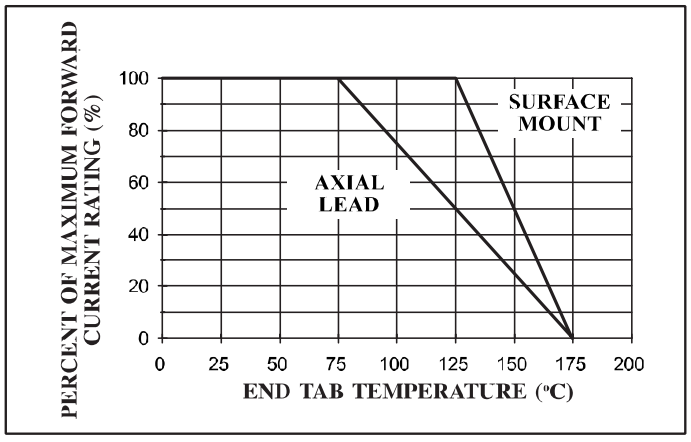
DIMENSIONS		
DIM	**MIN**	**MAX**
A	.050”	.075”
B	.080”	.120”
C	1.00”	---
D	.018”	.022”

Case Outline: Round Tab (SM)

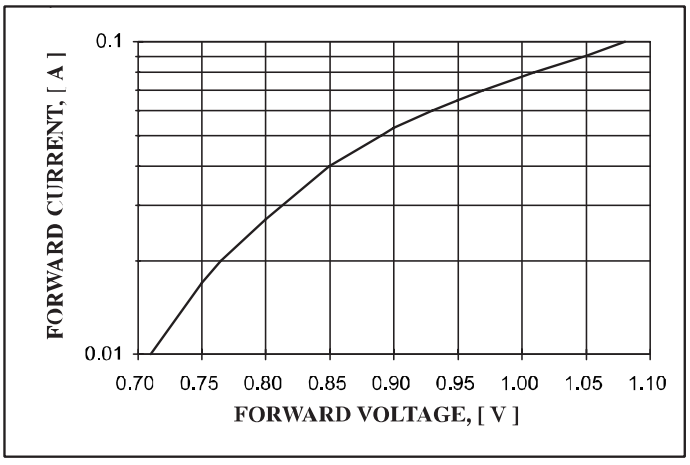


DIMENSIONS		
DIM	**MIN**	**MAX**
A	0.054”	0..085”
B	—	0.150”
C	0.010”	0.028”
D	.001”	—

TYPICAL OPERATING CURVES
(T_A = 25ºC unless otherwise specified)



TYPICAL FORWARD VOLTAGE



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