Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

1N4148SM

DESIGNER'S DATA SHEET

200 mAMP
75 Volts
5 nsec
HYPER FAST RECTIFIER

Part Number / Ordering Information [1/]

1N4148SM__

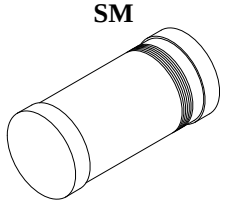
- **Screening**[2/] = None, TX = TX Level, TXV = TXV Level, S = S Level
- **Package**
  SM = Surface Mount Round Tab

Features:
- Hyper Fast Recovery: 5 nsec Max.
- Subminiature Surface Mount Package
- Round Tab Mounting (Square Tabs Available)
- Hermetically Sealed
- Planar Passivated Chip
- For High Efficiency Applications
- TX, TXV, and S-Level Screening Available[2/]

Maximum Ratings	Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	V_{RRM} V_{RWM} V_R	75	**Volts**
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T_A = 25ºC)	**Io**	200	**mAmps**
Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on Io, Allow Junction to Reach Equilibrium between Pulses, T_A = 25ºC)	I_{FSM}	2	**Amps**
Operating & Storage Temperature	**Top & Tstg**	-65 to +200	**ºC**
Maximum Thermal Resistance Junction to End Tab	$R_{\theta JE}$	0.35	**ºC/mW**

Notes:
1/ For Ordering Information, Price, Operating Curves, and Availability – Contact Factory.
2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

SM



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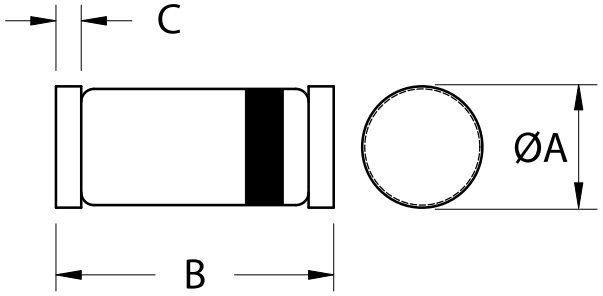
Electrical Characteristics		Symbol	Max	Units
Instantaneous Forward Voltage Drop (T_A = 25ºC, 300-500 µs pulse)	I_F = 10mA I_F = 100mA	$\mathbf{V_{F1}}$ $\mathbf{V_{F2}}$	0.8 1.2	$\mathbf{V_{DC}}$
Instantaneous Forward Voltage Drop (300-500 µs pulse)	I_F = 10mA, T_A = 150ºC I_F = 100mA, T_A = -55ºC	$\mathbf{V_{F3}}$ $\mathbf{V_{F4}}$	0.8 1.3	$\mathbf{V_{DC}}$
Reverse Leakage Current (T_A = 25ºC, 300 µs pulse minimum)	V_R = 20V V_R = 75V	$\mathbf{I_{R1}}$ $\mathbf{I_{R2}}$	25 500	**nA**
Reverse Leakage Current (T_A = 150ºC, 300 µs pulse minimum)	V_R = 20V V_R = 75V	$\mathbf{I_{R3}}$ $\mathbf{I_{R4}}$	35 75	**µA**
Junction Capacitance (V_R = 1.5 $\mathbf{V_{DC}}$, T_A = 25ºC, f = 1MHz)		$\mathbf{C_J}$	2.8	**pF**
Reverse Recovery Time (**I_F** = 10 mA, I_R = 10mA, I_{RR} = 1mA, T_A = 25ºC)		$\mathbf{t_{rr}}$	5	**nsec**

Case Outline: Surface Mount Round Tab (SM)



DIMENSIONS		
DIM	**MIN**	**MAX**
A	.056”	.064”
B	.130”	.146”
C	.010”	.022”