



PRELIMINARY

SOLID STATE DEVICES, INC.

14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773

Designer's Data Sheet

FEATURES:

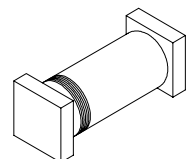
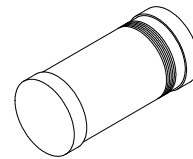
- Hyper Fast Recovery: 5 nsec maximum
- Subminiature Surface Mount Package
- Square Tab Mounting (Round Tabs Available)
- Hermetically Sealed
- Planar Passivated Chip
- For High Efficiency Applications
- Replaces 1N4148 - 1N4151 types
- TX, TXV, and Space Level Screening Available

SPD48SM & SMS thru SPD51SM & SMS

200 mAMP
50 - 125 VOLTS
5 nsec
HYPER FAST
RECTIFIER

SURFACE MOUNT
ROUND TAB
"SM"

SURFACE MOUNT
SQUARE TAB
"SMS"



Maximum Ratings		SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and DC Blocking Voltage	SPD48SM & SMS	V_{RRM} V_{RWM} V_R	50	Volts
	SPD49SM & SMS		75	
	SPD50SM & SMS		100	
	SPD51SM & SMS		125	
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, $T_A = 25^\circ\text{C}$)		I_o	200	mAmps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I_o , allow junction to reach equilibrium between pulses, $T_A = 25^\circ\text{C}$)		I_{FSM}	4	Amps
Operating and Storage Temperature		T_{OP} & T_{STG}	-65 TO +200	$^\circ\text{C}$
Maximum Thermal Resistance Junction to End Tab		$R_{\theta JE}$	0.35	$^\circ\text{C}/\text{mW}$

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

DATA SHEET #: RH0085C

SPD48SM & SMS thru SPD51SM & SMS

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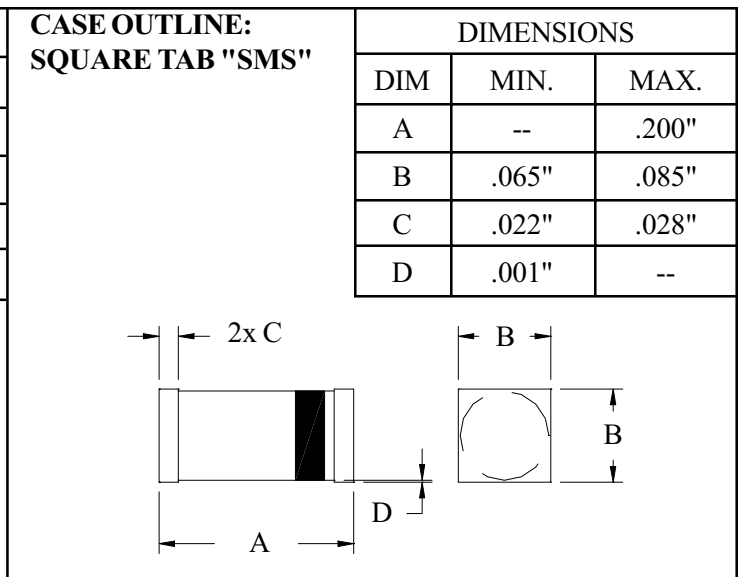
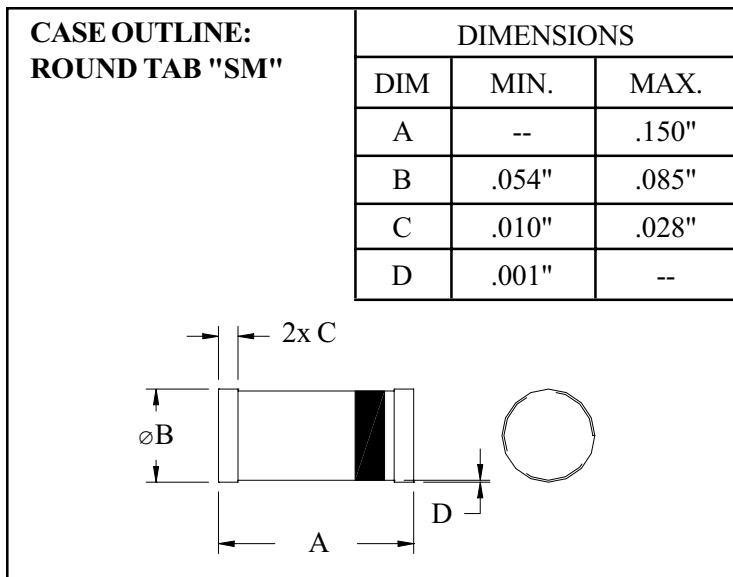


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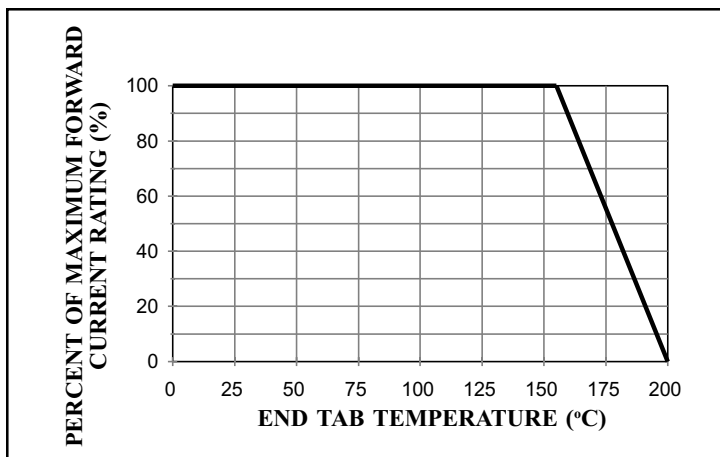
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Electrical Characteristics		SYMBOL	MAXIMUM	UNITS
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, 300 - 500 μs Pulse)	$I_F = 10 \text{ mA}_{\text{DC}}$	V_{F1}	1.0	V_{DC}
	$I_F = 100 \text{ mA}_{\text{DC}}$		1.2	
Instantaneous Forward Voltage Drop ($T_A = -55^\circ\text{C}$, 300 - 500 μs Pulse)	$I_F = 10 \text{ mA}_{\text{DC}}$	V_{F2}	1.1	V_{DC}
	$I_F = 100 \text{ mA}_{\text{DC}}$		1.3	
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs minimum Pulse)		I_{R1}	400	nA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs minimum Pulse)		I_{R2}	40	μA
Junction Capacitance ($V_R = 10 \text{ V}_{\text{DC}}$, $T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$)		C_J	2.8	pF
Reverse Recovery Time ($I_F = 50 \text{ mA}$, $I_R = 100 \text{ mA}$, $I_{\text{RR}} = 25 \text{ mA}$, $T_A = 25^\circ\text{C}$)		t_{RR}	5	nsec



TYPICAL OPERATING CURVES

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



FORWARD VOLTAGE

