



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

SPD5807 thru SPD5811
SPD5807SMS thru SPD5811SMS
SPD5807ASMS thru SPD5811ASMS

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SPD

— — —

Screening ^{2/}

— = Not Screened

TX = TX Level

TXV = TXV

S = S Level

Package Type

— = Axial Leaded

SMS = Surface Mount Square Tab

ASMS = SMS with .240" Max. Body Length

Voltage/Family

5807 = 50V

5809 = 100V

5811 = 150V

6.0 AMPS
50 — 150 VOLTS
40 ns HYPERFAST RECOVERY
RECTIFIER

FEATURES:

- Hyper Fast Reverse Recovery: 40ns Maximum ^{4/}
- PIV to 150 Volts (Voltages Up To 300V Available)
- Hermetically Sealed
- Low Forward Voltage Drop
- Void Free Chip Construction
- For High Efficiency Applications
- Available in Axial & Square Tab Versions
- TX, TXV, and S-Level Screening Available ^{2/}
- Replacement for: 1N 5807, US thru 1N5811, US

MAXIMUM RATINGS ^{3/}

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SPD5807 V_{RRM} SPD5809 V_{RWM} SPD5811 V_R	50 100 150	Volts
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, $T_A = 25^\circ\text{C}$)	I_O	6.0	Amps
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}	125	Amps
Operating & Storage Temperature	T_J and T_{STG}	-65 to +175	$^\circ\text{C}$
Thermal Resistance Junction to Lead for Axial, $L = .375"$ Junction to End Tab for Surface Mount	$R_{\theta JL}$ $R_{\theta JE}$	20 12	$^\circ\text{C/W}$

NOTES:

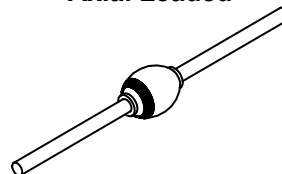
^{1/} For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.

^{2/} Screened to MIL-PRF-19500.

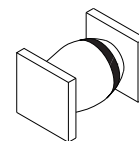
^{3/} Unless Otherwise Specified, All Electrical Characteristics @25°C.

^{4/} $I_F = 500\text{mA}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{mA}$, $T_A = 25^\circ\text{C}$

Axial Leaded



SMS



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

DATA SHEET #: RC0108B

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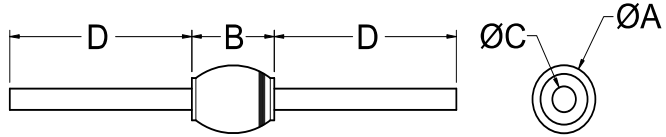
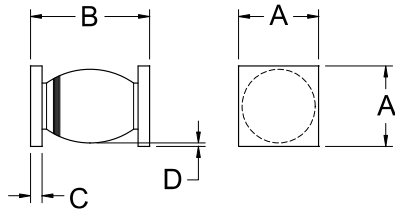
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ELECTRICAL CHARACTERISTICS ^{3/}

CHARACTERISTICS		SYMBOL	VALUE	UNIT
			MAX	
Instantaneous Forward Voltage Drop	$I_F = 6.0 \text{ Adc}, T_A = +25^\circ\text{C}, 300\mu\text{s pulse}$	V_{F1}	0.975	Vdc
	$I_F = 6.0 \text{ Adc}, T_A = -55^\circ\text{C}, 300\mu\text{s pulse}$	V_{F2}	1.08	
Reverse Leakage Current	Rated $V_R, T_A = +25^\circ\text{C}, 300\mu\text{s pulse minimum}$	I_{R1}	20	μA
	Rated $V_R, T_A = +100^\circ\text{C}, 300\mu\text{s pulse minimum}$	I_{R2}	1	mA
Junction Capacitance $V_R = 10 \text{ Vdc}, f = 1\text{MHz}, T_A = 25^\circ\text{C}$		C_J	100	pF
Reverse Recovery Time $I_F = 500\text{mA}, I_R = 1\text{A}, I_{RR} = 250\text{mA}, T_A = 25^\circ\text{C}$		t_{rr}	40	ns

Package Outlines:

DIMENSIONS (inches)			DIMENSIONS (inches)		
DIM.	Minimum	Maximum	DIM.	Minimum	Maximum
A	.130	.170	A	.172	.180
B	---	.240	B	.200	.290 (SMS)
C	.038	.042	B	.200	.240 (ASMS)
D	1.000	---	C	.020	.035
AXIAL			D	.002	---
			SMS		
					

NOTES:

1/ For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screened to MIL-PRF-19500.

3/ Unless Otherwise Specified, All Electrical Characteristics @25°C.

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