



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638
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SPD5807 thru SPD5811 SPD5807SMS thru SPD5811SMS

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SPD

— — —

Screening ^{2/}

— = Not Screened
TX = TX Level
TXV = TXV Level
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: 1N5807, US thru 1N5811, US

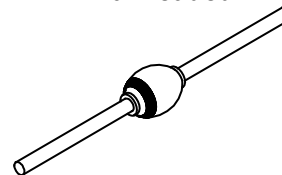
MAXIMUM RATINGS ^{3/}

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

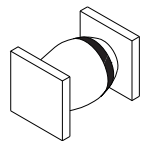
NOTES:

- ^{1/} For ordering Information, price, operating curves, and availability- Contact factory.
- ^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.
- ^{3/} Unless otherwise specified, all electrical characteristics @25°C.
- ^{4/} $I_F = 500mA$, $I_R = 1A$, $I_{RR} = 250mA$, $T_A = 25^\circ C$.

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 #: RC0108E

DOC



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**SPD5807 thru SPD5811
 SPD5807SMS thru SPD5811SMS**

ELECTRICAL CHARACTERISTICS ^{3/}				
CHARACTERISTICS		SYMBOL	VALUE	UNIT
			MAX	
Instantaneous Forward Voltage Drop $I_F = 6.0 \text{ Adc}, 300\mu\text{s pulse}$	$T_A = +25^\circ\text{C}$	V_{F1}	0.975	Vdc
	$T_A = -55^\circ\text{C}$	V_{F2}	1.08	
Reverse Leakage Current Rated V_R , 300 μs pulse min	$T_A = +25^\circ\text{C}$	I_{R1}	20	μA
	$T_A = +100^\circ\text{C}$	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		

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