



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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SPD5807 thru SPD5811 Series

6.0 AMPS
50 – 150 VOLTS
40 ns HYPERFAST RECOVERY
RECTIFIER

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

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**

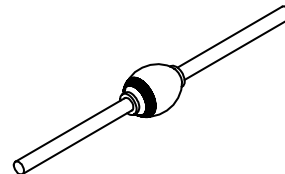
MAXIMUM RATINGS ^{3/}

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, $T_A = 25^\circ C$)	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, $L = .375"$ Junction to End Tab for Surface Mount	20 12	$^\circ C/W$

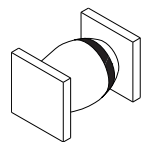
NOTES:

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

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 #: RC0108A

DOC



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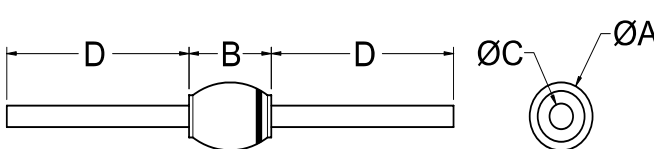
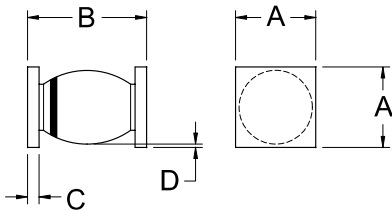
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ELECTRICAL CHARACTERISTICS ^{3/}

CHARACTERISTICS		SYMBOL	VALUE	UNIT
			MAX	
Instantaneous Forward Voltage Drop	$I_F = 6.0 \text{ Adc}, T_A = +25^\circ\text{C}, 300\mu\text{s pulse}$ $I_F = 6.0 \text{ Adc}, T_A = -55^\circ\text{C}, 300\mu\text{s pulse}$	V_{F1} V_{F2}	0.95 1.05	Vdc
Reverse Leakage Current	Rated $V_R, T_A = +25^\circ\text{C}, 300\mu\text{s pulse minimum}$ Rated $V_R, T_A = +100^\circ\text{C}, 300\mu\text{s pulse minimum}$	I_{R1} I_{R2}	20 1	μA 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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