



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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SPD605 thru SPD630 and SPD605SMS thru SPD630SMS

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

Voltage/Family

605 = 50V
610 = 100V
620 = 200V
630 = 300V

6.0 AMPS
50 – 300 VOLTS
40 ns HYPERFAST RECOVERY
RECTIFIER

FEATURES:

- Hyper Fast Reverse Recovery: 40ns Maximum ^{4/}
- PIV to 300 Volts
- 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

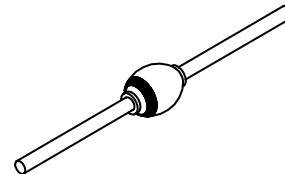
MAXIMUM RATINGS ^{3/}

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SPD605 SPD610 SPD620 SPD630	V_{RRM} V_{RWM} V_R	50 100 200 300 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	$R_{\theta JL}$ $R_{\theta JE}$	20 12 $^\circ C/W$

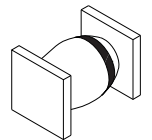
NOTES:

- 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 #: RH0087D

DOC



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**SPD605 thru SPD630
 and
 SPD605SMS thru SPD630SMS**

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}	0.975 1.08	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	C	.020	.035
D	1.000	---	D	.002	---

<p>AXIAL</p>	<p>SMS</p>
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