



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

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

Family

6620 = 200V, 2A

6621 = 400V, 2A

6622 = 600V, 2A

6623 = 800V, 1.5A

6624 = 900V, 1.5A

6625 = 1000V, 1.5A

SPD6620 thru SPD6625
SPD6620SMS thru SPD6625SMS

1.5 - 2 AMPS

200 — 1000 VOLTS

30 – 60 nsec ULTRA FAST RECOVERY
RECTIFIER

FEATURES:

- Ultra Fast Reverse Recovery Time 30-60 ns Max ^{4/}
- PIV to 1000 Volts (1200V Version Available)
- Hermetically Sealed
- Low Reverse Leakage Current
- Rugged Single Chip Construction
- For High Efficiency Applications
- Available in Axial, Round Tab & Square Tab Versions
- Metallurgically Bonded
- TX, TXV, and S-Level Screening Available
- Ruggedized Replacement for:
1N 6620 thru 1N6625, US

MAXIMUM RATINGS ^{3/}

RATING		SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SPD6620	V_{RRM} V_{RWM} V_R	200	Volts
	SPD6621		400	
	SPD6622		600	
	SPD6623		800	
	SPD6624		900	
	SPD6625		1000	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_L = 25^\circ\text{C}$)	SPD6620 thru SPD6622 SPD6623 thru SPD6625	I_O	2 1.5	Amps
Peak Surge Current ^{5/} (8.3 msec Pulse, Half Sine Wave Superimposed on I_O , allow junction to reach equilibrium between pulses, $T_C = 25^\circ\text{C}$)		I_{FSM}	20	Amps
Operating & Storage Temperature		T_{OP} and T_{STG}	-65 to +175	$^\circ\text{C}$
Thermal Resistance,	Junction to Lead for Axial, $L = .375"$	$R_{\theta JL}$	38	$^\circ\text{C/W}$
	Junction to End Tab	$R_{\theta JE}$	20	

NOTES:

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

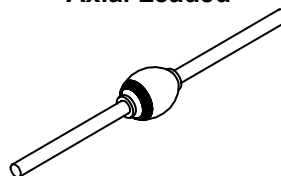
^{2/} Screened to MIL-PRF-19500.

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

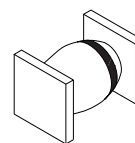
^{4/} Recovery Conditions: $I_F = 0.5$ Amp, $I_R = 1.0$ Amp rec. to .25 Amp.

^{5/} SPD6625- $I_{FSM} = 15A$

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 #: RC0102C

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**SPD6620 thru SPD6625
SPD6620SMS thru SPD6625SMS**

ELECTRICAL CHARACTERISTICS ^{3/}

CHARACTERISTICS		SYMBOL	VALUE	UNIT
Instantaneous Forward Voltage Drop (300 μs Pulse, T _A = 25°C)	SPD6620 thru SPD6622 @ 1.2A	V _{F1}	1.40	V _{dc}
	SPD6623 and SPD6624 @ 1.0A		1.55	
	SPD6625 @ 1.0A		1.75	
	SPD6620 thru SPD6622 @ 2.0A	V _{F2}	1.60	
	SPD6623 and SPD6624 @ 1.5A		1.80	
	SPD6625 @ 1.5A		1.95	
Instantaneous Forward Voltage Drop (300 μs Pulse, T _A = -55°C)	SPD6620 thru SPD6622 @ 2.0A	V _{F3}	1.80	V _{dc}
	SPD6623 and SPD6624 @ 1.5A		2.00	
	SPD6625 @ 1.5A		2.20	
Maximum Reverse Leakage Current (Rated V _R , 300 μs Pulse Minimum , T _A = 25°C)	SPD6620 Thru SPD6624 SPD6625	I _{R1}	2.0	μA
Maximum Reverse Leakage Current (Rated V _R , 300 μs Pulse Minimum , T _A = 100°C)	SPD6620 Thru SPD6624 SPD6625	I _{R2}	150 200	μA
Junction Capacitance (V _R = 10V _{dc} , T _A = 25°C , f = 1MHz)	SPD6620 thru SPD6622 SPD6623 and SPD6624 SPD6625	C _J	24 17 13	pf
Maximum Reverse Recovery Time (I _F = 500mA, I _R = 1A, I _{RR} = 250mA)	SPD6620 thru SPD6622 SPD6623 and SPD6624 SPD6625	t _{rr}	30 50 60	ns

DIMENSIONS (inches)				DIMENSIONS (inches)			
DIM.	SPD6620 - SPD6622	SPD6623 - SPD6624	SPD6625	DIM.	SPD6620SMS - SPD6622SMS	SPD6623SMS - SPD6625SMS	SPD6625SMS
A	.100/ .128	.100/ .120	.115/ .128	A	.128/ .132	.128/ .132	.128/ .132
B	.140 / .190	.140/ .165	.140/ .165	B	.190/ .240	.190/ .215	.190/ .215
C	.027 / .032	.027/ .032	.028 / .033	C	.023/ .027	.023/ .027	.023/ .027
D	1.0 Min	1.0 min	1.0 min	D	.001 min	.001 min	.001 min
AXIAL ^{5/} 				SMS ^{5/} 			

NOTES:

- 1/ For Ordering Information, Price, and Availability- Contact Factory.
2/ Screened to MIL-PRF-19500.
3/ Unless Otherwise Specified, All Electrical Characteristics @25°C.

- 4/ Recovery Conditions: $I_F = 0.5\text{ Amp}$, $I_R = 1.0\text{ Amp}$ rec. to .25 Amp.
5/ For information on operating curves, contact factory.

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