



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

SPD6620 thru SPD6625 Series

**1.5 - 2 AMP
 ULTRA FAST RECOVERY RECTIFIER
 200 – 1000 VOLTS
 30 – 60 nsec**

- 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^{2/}
 - Ruggedized Replacement for 1N6620 thru 1N6625, US

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
 SM = Surface Mount Round Tab

Family

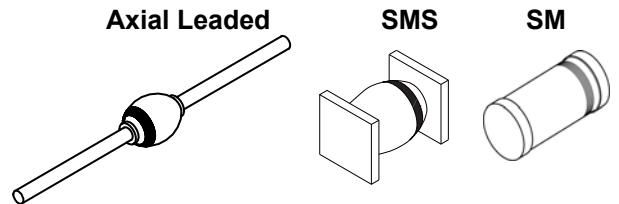
6620 = 200V, 2A	6623 = 800V, 1.5A
6621 = 400V, 2A	6624 = 900V, 1.5A
622 = 600V, 2A	6625 = 1000V, 1.5A

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, $L = .375"$ Junction to End Tab	$R_{\theta JL}$ $R_{\theta JE}$	38 20	$^\circ\text{C/W}$

NOTES:

- 1/ For Ordering Information, Price, 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/ Recovery Conditions: $I_F = 0.5$ Amp, $I_R = 1.0$ Amp rec. to .25 Amp.
- 5/ SPD6625- $I_{FSM} = 15A$.
- 6/ SM Device Type SPD6623 & SPD6624 utilize VF & trr limits of SPD6625.





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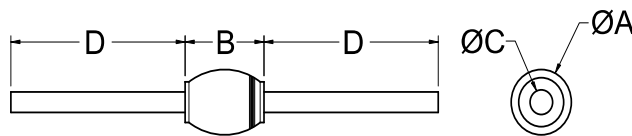
**SPD6620 thru SPD6625
 Series**

ELECTRICAL CHARACTERISTICS ^{3/}

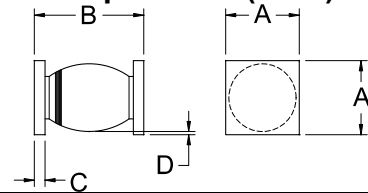
CHARACTERISTICS	SYMBOL	VALUE	UNIT	
Instantaneous Forward Voltage Drop (300 μ s Pulse, $T_A = 25^\circ\text{C}$)	SPD6620 thru SPD6622 @ 1.2A SPD6623 and SPD6624 @ 1.0A SPD6625 @ 1.0A	V_{F1}	1.40 1.55 1.75	Vdc
	SPD6620 thru SPD6622 @ 2.0A SPD6623 and SPD6624 @ 1.5A SPD6625 @ 1.5A	V_{F2}	1.60 1.80 1.95	
Instantaneous Forward Voltage Drop (300 μ s Pulse, $T_A = -55^\circ\text{C}$)	SPD6620 thru SPD6622 @ 2.0A SPD6623 and SPD6624 @ 1.5A SPD6625 @ 1.5A	V_{F3}	1.80 2.00 2.20	Vdc
Maximum Reverse Leakage Current (Rated V_R , 300 μ s Pulse Minimum , $T_A = 25^\circ\text{C}$)	SPD6620 Thru SPD6624 SPD6625	I_{R1}	2.0	μA
Maximum Reverse Leakage Current (Rated V_R , 300 μ s Pulse Minimum , $T_A = 100^\circ\text{C}$)	SPD6620 Thru SPD6624 SPD6625	I_{R2}	150 200	μA
Junction Capacitance ($V_R = 10\text{Vdc}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)	SPD6620 thru SPD6622 SPD6623 and SPD6624 SPD6625	C_J	24 17 13	pf
Maximum Reverse Recovery Time ($I_F = 500\text{mA}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{mA}$)	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 - SPD6624SMS	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/.230	.190/.230
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

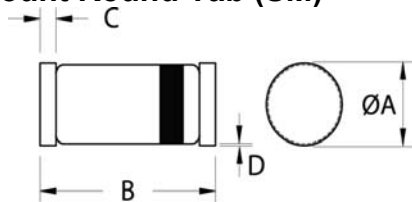
AXIAL ^{5/}



Surface Mount Square Tab(SMS)



Surface Mount Round Tab (SM)



DIMENSIONS (inches) SPD6620SM – SPD6622SM		
DIM.	MIN.	MAX.
A	.095"	.105"
B	.190"	.210"
C	.010"	.030"
D	---	---

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

DATA SHEET #: RC0102G

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