



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
 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

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SPD _ _ _

 | | |

 | | | **L Screening ^{2/}**

 | | | = Not Screened

 | | | TX = TX Level

 | | | TXV = TXV

 | | | S = S Level

 | | | **L Package Type**

 | | | = Axial Leaded

 | | | SMS = Surface Mount Square Tab

 | | | **L Family**

 | | | 6620 = 200V, 2A

 | | | 6621 = 400V, 2A

 | | | 6622 = 600V, 2A

 | | | 6623 = 800V, 1.5A

 | | | 6624 = 900V, 1.5A

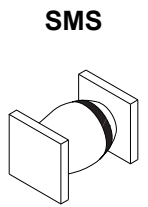
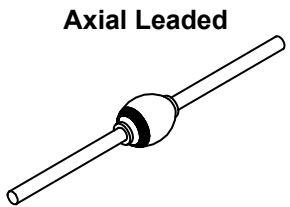
 | | | 6625 = 1000V, 1.5A

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	
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- $I_{FSM} = 15A$





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

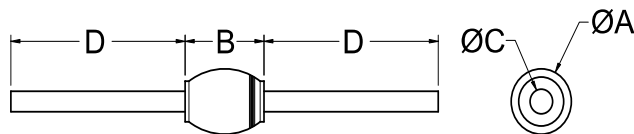
**SPD6620 thru SPD6625
 SPD6620SMS thru SPD6625SMS**

ELECTRICAL CHARACTERISTICS ^{3/}

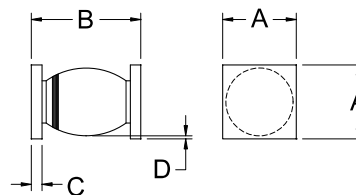
CHARACTERISTICS	SYMBOL	VALUE	UNIT	
Instantaneous Forward Voltage Drop (300 μ s Pulse, $T_A = 25^\circ\text{C}$)	V_{F1}	SPD6620 thru SPD6622 @ 1.2A SPD6623 and SPD6624 @ 1.0A SPD6625 @ 1.0A	1.40 1.55 1.75	Vdc
		SPD6620 thru SPD6622 @ 2.0A SPD6623 and SPD6624 @ 1.5A SPD6625 @ 1.5A	1.60 1.80 1.95	
Instantaneous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