Solid State Devices, Inc. 14701 Firestone Blvd * La Mirada, Ca 90638 Phone: (562) 404-4474 * Fax: (562) 404-1773	SPD6620 thru SPD6625 Series				
ssdi@ssdi-power.com * www.ssdi-power.com Designer's Data Sheet Part Number/Ordering Information 1/ SPD	1.5 - 2 AMP ULTRAFAST RECOVERY RECTIFIER 200 – 1000 VOLTS 30 – 60 nsec FEATURES: • Ultrafast Reverse Recovery Time 30-60 ns Max ^{4/} • PIV to 1000 Volts (1200 V Version Available) • Hermetically Sealed • Low Reverse Leakage Current • Rugged Single Chip Construction • For High Efficiency Applications • Available in Axial, Round Tab & Square Tab Versions				
6620 = 200 V, 2 A 6623 = 800 V, 1.5 A 6621 = 400 V, 2 A 6624 = 900 V, 1.5 A 6622 = 600 V, 2 A 6625 = 1000 V, 1.5 A	 Metallurgically Bonded TX, TXV, and S-Level Screening Available^{2/} 				
MAXIMUM RATINGS ^{3/} RATING		SYMBOL	VALUE	UNIT	
Peak Repetitive Reverse Voltage and DC Blocking Voltage	V _{RRM} V _{RWM} V _R	200 400 600 800 900 1000	v		
Average Rectified Forward CurrentSPD662(Resistive Load, 60 Hz, Sine Wave, $T_L = 25^{\circ}C$)SPD662	lo	2 1.5	Α		
Peak Surge Current ^{5/} (8.3 msec Pulse, Half Sine Wave Superimposed on Io, allow junc equilibrium between pulses, $T_c = 25^{\circ}C$)	tion to reach	I _{FSM}	20	Α	
Operating & Storage Temperature		T_{OP} and T_{STG}	-65 to +175	°C	

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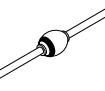
Operating & Storage Temperatu	re	T_{OP} and T_{STG}	-65 to +175
Thermal Resistance	Junction to Lead for Axial, L =.375" Junction to End Tab	R _{θJL} R _{θJE}	38 20

NOTES:

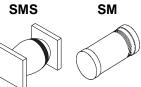
 $\underline{1}\!/$ For Ordering Information, Price, and Availability- Contact Factory.

- $\underline{\textbf{2}}\textbf{/}$ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.
- $\underline{3}\prime$ Unless Otherwise Specified, All Electrical Characteristics @25°C.
- $\underline{4}\!/$ Recovery Conditions: I_F = 0.5 Amp, I_R = 1.0 Amp rec. to .25 Amp.
- <u>5</u>/ SPD6625- I_{FSM} = 15A.
- $\underline{6}\prime$ SM Device Type SPD6623 & SPD6624 utilize VF & trr limits of SPD6625.

Axial Leaded



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°C/W

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	DATA SHEET #: RC0102H	DOCX
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SPD6620 thru SPD6625

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Series

ELECTRICAL CHARACTERISTICS ^{3/}						
CHARACTERISTICS			VALUE	UNIT		
Instantaneous Forward Voltage Drop	SPD6620 thru SPD6622 @ 1.2A SPD6623 and SPD6624 @ 1.0A SPD6625 @ 1.0A	<u>^{6/}</u> V _{F1}	1.40 1.55 1.75	Vdc		
(300 µs Pulse, T _A = 25°C)	SPD6620 thru SPD6622 @ 2.0A SPD6623 and SPD6624 @ 1.5A SPD6625 @ 1.5A	^{6∕} V _{F2}	1.60 1.80 1.95			
Instantaneous Forward Voltage Drop (300 μs Pulse, T _A = -55°C)	SPD6620 thru SPD6622 @ 2.0A SPD6623 and SPD6624 @ 1.5A SPD6625 @ 1.5A	<u>6</u> ∕ V F3	1.80 2.00 2.20	Vdc		
Maximum Reverse Leakage Current (Rated V _R , 300 μ s Pulse Minimum , T _A = 25°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°C)	SPD6620 Thru SPD6624 SPD6625	I _{R2}	150 200	μA		
Junction Capacitance (VR = 10 Vdc, T _A = 25°C , f = 1 MHz)	SPD6620 thru SPD6622 SPD6623 and SPD6624 SPD6625	CJ	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	<u>€</u> ∕ t _{rr}	30 50 60	ns		

DIMENSIONS (inches)								
			DIMENSIONS (inches)					
DIM.	SPD6620 -	SPD6623 -	SPD6625	DIM.		6620SMS -	SPD6623SMS -	SPD6625SMS
	SPD6622	SPD6624			SPE	06622SMS	SPD6624SMS	
A	.100/.128	.100/.120	.115/.128	Α		128/.132	.128/.132	.128/.132
В	.140/.190	.140/.165	.140/.165	В		190/.240	.190/.230	.190/.230
С	.027/.032	.027/.032	.028 /.033	С	.()23/.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 Ta					are Tab(SMS)			
Surface	e Mount Round	Tab (SM)				DIMENSION	S (inches)	
			SPD6620SM – SPD6622SM					
			DI	И.	MIN.	MAX.		
() ØA			A	1	.095	.105		
			В	}	.190	.210		
D			С	;	.010	.030		
⊸ B →			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 #: RC0102H	DOCX