Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
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SPD6626 thru SPD6631
SPD6626SMS thru SPD6631SMS

2.8 - 4 AMPS, 200 - 1000 VOLTS 30 - 60 nsec HYPER FAST RECOVERY RECTIFIER

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
- B = Axial w/ .040" lead diameter
- SMS = Surface Mount Square Tab

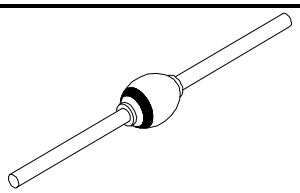
Voltage/Family

6626 = 200V	6629 = 800V
6627 = 400V	6630 = 900V
6628 = 600V	6631 = 1000V

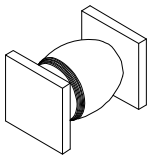
FEATURES:
- Hyper Fast Recovery: 30 - 60 nsec maximum
- Guaranteed High Temp. trr: 90 - 120 nsec maximum
- PIV up to 1000 Volts
- Low Reverse Leakage Current
- Hermetically Sealed
- Void Free Construction
- For High Efficiency Applications
- TX, TXV, and Space Level Screening Available [2/]
- Replacement for 1N6626 thru 1N6631

MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	**SPD6626** **SPD6627** **SPD6628** **SPD6629** **SPD6630** **SPD6631**	V_{RRM} V_{RWM} V_R	200 400 600 800 900 1000	**Volts**
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave) $T_A \leq 55^oC$ at .375"	**SPD6626 - 6628** **SPD6629 - 6631**	I_O	4 2.8	**Amps**
Peak Surge Current (Single 8.3 ms Pulse, Half Sine Wave, Superimposed on I_O, $T_A \leq 55^oC$)	**SPD6626 - 6630** **SPD6631**	I_{FSM}	75 60	**Amps**
Operating and Storage Temperature		T_{OP} & T_{stg}	-65 to +175	**°C**
Maximum Thermal Resistance Junction to Lead, L = 0.375" (Axial Lead) B Variant Junction to End Tab (Surface Mount)		$R_{\theta JL}$ $R_{\theta JL}$ $R_{\theta JE}$	20 22 14	**°C/W**

Axial Leaded (__)



Square Tab Surface Mount (SMS)



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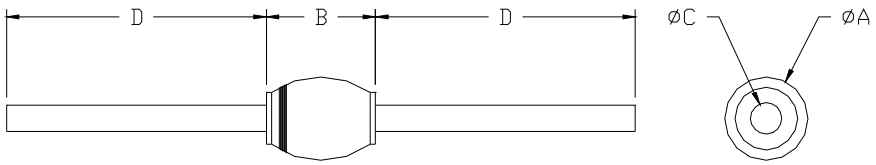
SPD6626SMS thru SPD6631SMS

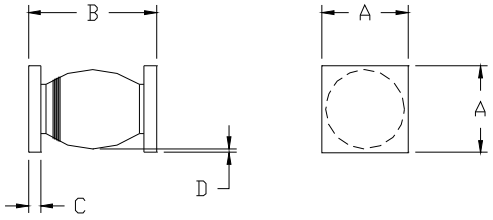
ELECTRICAL CHARACTERISTICS			Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop (T_A = 25°C, 300μsec Pulse)	**SPD6626 - SPD6628**	I_F = 2 Adc I_F = 4 Adc	V_{F1} V_{F2}	— —	1.5 1.6	**Vdc**
	SPD6629 - SPD6630	I_F = 1.4 Adc I_F = 3 Adc	V_{F1} V_{F2}	— —	1.6 1.8	**Vdc**
	SPD6631	I_F = 1.4 Adc I_F = 2 Adc	V_{F1} V_{F2}	— —	1.7 1.95	**Vdc**
Reverse Leakage Current (At Rated V_R, 300μsec pulse minimum)		T_A = 25°C T_A = 100°C	I_{R1} I_{R2}	— —	10 1000	**μA**
Junction Capacitance (V_R = 10 V_{DC}, T_A = 25°C, f = 1 MHz)	**SPD6626** **SPD6627 - SPD6631**		C_J	—	100 50	**pF**
Reverse Recovery Time (I_F = 500 mA, I_R = 1 A, I_{RR} = 250 mA)	**SPD6626 - SPD6628**	T_a = 25°C T_a = 100°C	t_{rr1} t_{rr2}	—	30 90	**nsec**
	SPD6629 - SPD6630	T_a = 25°C T_a = 100°C	t_{rr1} t_{rr2}	—	50 100	**nsec**
	SPD6631	T_a = 25°C T_a = 100°C	t_{rr1} t_{rr2}	—	60 120	**nsec**

Case Outline: (Axial)



DIM	MIN	MAX
A	—	0.165”
B	—	0.220”
C	0.047”	0.053”
C (B variant)	.038”	.042”
D	.950”	—

Case Outline: (SMS)



DIM	MIN	MAX
A	0.172”	0.180”
B	0.180”	0.280”
C	0.022”	0.028”
D	0.002”	—

Note: Dimensions prior to soldering.

NOTES:

1/ For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screening based on MIL-PRF-19500. Screening flows available on request.