



Solid State Devices, Inc.

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SPD6626 thru SPD6631 SPD6626SMS thru SPD6631SMS

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SPD _ _ _

 | | |

 | | | L Screening ^{2/}

 | | | | |

 | | | | | | = Not Screened

 | | | | | | TX = TX Level

 | | | | | | TXV = TXV Level

 | | | | | | S = S Level

 | | | L Package Type

 | | | | |

 | | | | | | = Axial Leaded

 | | | | | | -01 = Axial w/ .040" lead diameter

 | | | | | | SMS = Surface Mount Square Tab

 | | | Voltage/Family

 | | | | | | | | |

 | | | | | | | | | 6626 = 200 V 6630 = 900 V

 | | | | | | | | | 6627 = 400 V 6631 = 1000 V

 | | | | | | | | | 6628 = 600 V 6631A = 1100 V

 | | | | | | | | | 6629 = 800 V 6631B = 1200 V

2.8 - 4 AMP

200 - 1200 VOLTS

30 - 60 nsec

HYPER FAST RECOVERY

RECTIFIER

FEATURES:

- Hyper Fast Recovery: 30 - 60 nsec maximum
- Guaranteed High Temp. trr: 90 - 120 nsec maximum
- PIV up to 1200 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

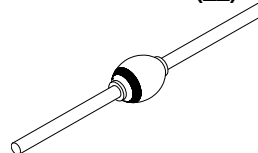
MAXIMUM RATINGS	Symbol	Value	Units	
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SPD6626	200	V	
	SPD6627	400		
	SPD6628	600		
	SPD6629	800		
	SPD6630	900		
	SPD6631	1000		
	SPD6631A	1100		
	SPD6631B	1200		
Average Rectified Forward Current Resistive Load, 60 Hz, Sine Wave, $T_A \leq 55^\circ\text{C}$ at .375"	SPD6626 - 6628 SPD6629 - 6631, 6631A, 6631B	I_o	4 2.8	A
Peak Surge Current Single 8.3 ms Pulse, Half Sine Wave, Superimposed on I_o , $T_A \leq 55^\circ\text{C}$	SPD6626 - 6630 SPD6631, 6631A, 6631B	I_{FSM}	75 60	A
Operating and Storage Temperature		T_{OP} & T_{stg}	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance	Junction to Lead, L = 0.375" (Axial Lead)	$R_{\theta JL}$	20	$^\circ\text{C/W}$
	-01 Variant	$R_{\theta JL}$	22	
	Junction to End Tab (Surface Mount)	$R_{\theta JE}$	14	

NOTES:

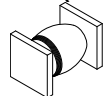
^{1/} For ordering information, price, operating curves, and availability - contact factory.

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

Axial Leaded (_)



Square Tab Surface Mount (SMS)





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SPD6626 thru SPD6631
SPD6626SMS thru SPD6631SMS

ELECTRICAL CHARACTERISTICS			Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop $T_A = 25^\circ\text{C}$, 300 μsec Pulse	SPD6626 -SPD6628	$I_F = 2 \text{ Adc}$ $I_F = 4 \text{ Adc}$	V_{F1} V_{F2}	— —	1.5 1.6	Vdc
	SPD6629 - SPD6630	$I_F = 1.4 \text{ Adc}$ $I_F = 3 \text{ Adc}$	V_{F1} V_{F2}	— —	1.6 1.8	Vdc
	SPD6631, 6631A, 6631B	$I_F = 1.4 \text{ Adc}$ $I_F = 2 \text{ Adc}$	V_{F1} V_{F2}	— —	1.7 1.95	Vdc
Reverse Leakage Current At Rated V_R , 300 μsec pulse minimum	SPD6626 - SPD6631	$T_A = 25^\circ\text{C}$	I_{R1}	—	10	μA
	SPD6631A, SPD6631B	$T_A = 25^\circ\text{C}$	I_{R1}	—	20	μA
	All	$T_A = 100^\circ\text{C}$	I_{R2}	—	1000	μA
Junction Capacitance $V_R = 10 \text{ V}_{\text{DC}}$, $T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$	SPD6626		C_J	—	100	pF
	SPD6627 - SPD6631, 6631A, 6631B				50	pF
Reverse Recovery Time $I_F = 500 \text{ mA}$, $I_R = 1 \text{ A}$, $I_{RR} = 250 \text{ mA}$	SPD6626 - SPD6628	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	t_{rr1} t_{rr2}	—	30 90	nsec
	SPD6629 - SPD6630	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	t_{rr1} t_{rr2}	—	50 100	nsec
	SPD6631, 6631A, 6631B	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	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 (-01 variant)	0.038"	0.042"
	D	0.950"	—
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:

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