



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

**SPD6627, SPD6627SMS,
SPD6628, and SPD6628SMS**

**4 AMPS, 400 thru 600 VOLTS
30 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

SMS = Surface Mount Square Tab

Voltage/Family

6627 = 400V

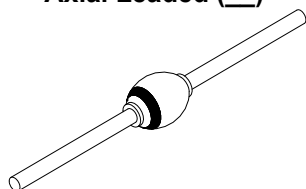
6628 = 600V

FEATURES:

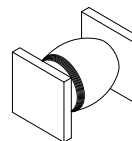
- Hyper Fast Recovery: 30 nsec maximum
- Guaranteed High Temp. trr: 60 nsec maximum
- PIV up to 600 Volts
- Low Reverse Leakage Current
- Hermetically Sealed
- Void Free Construction
- For High Efficiency Applications
- TX, TXV, and Space Level Screening Available
- Replacement for 1N6627 and 1N6628

MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SPD6627 SPD6628	V_{RRM} V_{RWM} V_R	400 600	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave)	$T_A=55^{\circ}\text{C}$ at .375"	I_O	4	Amps
Peak Surge Current (Single 8.3 ms Pulse, Half Sine Wave, Superimposed on I_O , $T_A=55^{\circ}\text{C}$)		I_{FSM}	75	Amps
Repetitive Peak Surge Current (8.3 ms Pulse, allow junction to reach equilibrium between pulses, $T_A=55^{\circ}\text{C}$)		I_{FRM}	20	Amps
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) Junction to End Tab (Surface Mount)		$R_{\theta JL}$ $R_{\theta JE}$	20 14	$^{\circ}\text{C/W}$

Axial Leaded (—)



Square Tab Surface Mount (SMS)



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

DATA SHEET #: RC0113A

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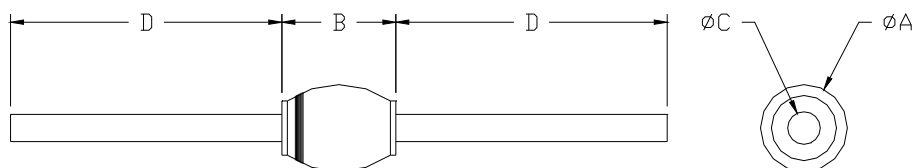
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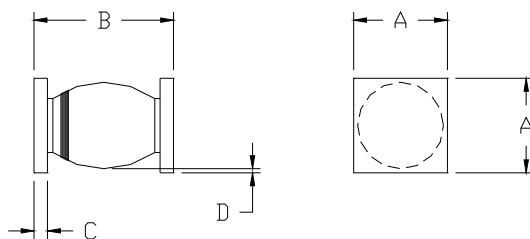
ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, 300 μsec Pulse)	$I_F = 3 \text{ A dc}$	V_{F1}	—	1.5	Vdc
	$I_F = 4 \text{ A dc}$	V_{F2}	—	1.6	
Reverse Leakage Current (At Rated V_R , 300 μsec pulse minimum)	$T_A = 25^\circ\text{C}$	I_{R1}	—	10	μA mA
	$T_A = 100^\circ\text{C}$	I_{R2}	—	1	
Junction Capacitance ($V_R = 10 \text{ V}_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$)		C_J	—	50	pF
Reverse Recovery Time ($I_F = 500 \text{ mA}$, $I_R = 1 \text{ A}$, $I_{RR} = 250 \text{ mA}$)	$T_A = 25^\circ\text{C}$	t_{rr1}	—	30	nsec
	$T_A = 100^\circ\text{C}$	t_{rr2}	—	60	

Case Outline: (Axial)



DIM	MIN	MAX
A	—	0.165"
B	—	0.220"
C	0.047"	0.053"
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/ Screened to MIL-PRF-19500.

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