Solid State Devices, Inc.
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Phone: (562) 404-4474 * Fax: (562) 404-1773
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1N6626 – 1N6631
Series

2.3 – 1.8 AMP
HYPER FAST RECOVERY
RECTIFIER
200 - 1200 VOLTS
30 - 60 nsec

Designer's Data Sheet

Part Number/Ordering Information[1/]

1N __ __ __

Screening[2/]
__ = Not screened
TX = TX Level
TXV = TXV Level
S = S Level

Package Type
__ = Axial Leaded
SMS = Surface Mount Square Tab

Voltage/Family

6626 = 200V	6630 = 900V
6627 = 400V	6631 = 1000V
6628 = 600V	6631A = 1100V
6629 = 800V	6631B = 1200V

FEATURES:
- Hyper Fast Recovery: 30 - 60 nsec maximum
- PIV up to 1200 Volts
- Low Reverse Leakage Current
- Hermetically Sealed
- Void Free Construction
- For High Efficiency Applications
- Typical Weight: 0.75 g (Axial Leaded); 0.45 g (SMS)
- TX, TXV, and Space Level Screening Available[2/]
- QPL registered devices per MIL-PRF-19500/590 may be available, contact factory

MAXIMUM RATINGS[3/]		SYM	VALUE	UNIT
Peak Repetitive Reverse Voltage and DC Blocking Voltage	**1N6626** **1N6627** **1N6628** **1N6629** **1N6630** **1N6631** **1N6631A** **1N6631B**	V_{RRM} V_{RWM} V_R	200 400 600 800 900 1000 1100 1200	V_{DC}
Average Rectified Forward Current[4/] (Average current with a half sine wave including reverse voltage amplitude equal to the magnitude of the full rated V_{RWM})	**1N6626 - 6628** **1N6629 - 6631**	I_{O1}	2.3 1.8	**A**
Peak Surge Current (t_p = 8.3 ms Pulse, Half Sine Wave, Superimposed on I_O, T_A = 25°C)	**1N6626 - 6630** **1N6631**	I_{FSM}	75 60	**A**
Storage Temperature		T_{stg}	-65 to +175	°C
Maximum Operating Temperature		T_J	+150	°C
Maximum Thermal Resistance	Junction to Lead, L = 0.375" (Axial Lead) Junction to End Tab (Surface Mount)	$R_{\theta JL}$ $R_{\theta JE}$	22 6.5	°C/W

NOTES:

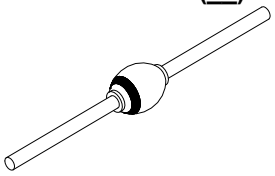
1/ For ordering information, price, operating curves, and availability- Contact factory.

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

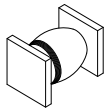
3/ Unless otherwise specified, all electrical characteristics @ 25°C.

4/ Derate linearly 1.33 percent/°C for T_L > +75°C (Axial Leaded); Derate linearly 2.5 percent/°C for T_{EC} > +110°C (SMS).

Axial Leaded (__)



Square Tab Surface Mount (SMS)



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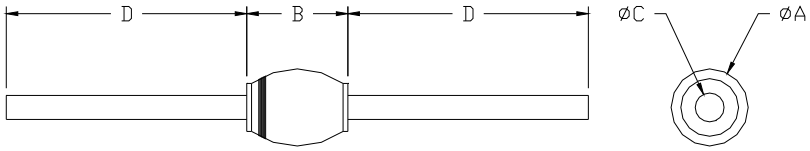
ELECTRICAL CHARACTERISTICS[3/]			SYM	MIN	MAX	UNIT
Instantaneous Forward Voltage Drop (T_A = 25°C, 300 µsec Pulse)	**1N6626 - 1N6628**	I_F = 2 Adc I_F = 4 Adc	V_{F1} V_{F2}	- -	1.35 1.50	V_{DC}
	1N6629 - 1N6630	I_F = 1.4 Adc I_F = 3 Adc	V_{F1} V_{F2}	- -	1.4 1.7	V_{DC}
	1N6631	I_F = 1.4 Adc I_F = 2 Adc	V_{F1} V_{F2}	- -	1.6 1.95	V_{DC}
Breakdown Voltage (I_R = 50 µA dc pulsed)	**1N6626 - 1N6631**		B_{VR}	110% of Rated	-	-
	1N6631A, 1N6631B			105% of Rated	-	
Reverse Leakage Current (At Rated V_R, 300 µsec pulse minimum)	**1N6626 - 1N6630**	T_J = 25°C T_J = 150°C	I_{R1} I_{R2}	- -	2.0 500	µA
Reverse Leakage Current (At Rated V_R, 300 µsec pulse minimum)	**1N6631**	T_J = 25°C T_J = 150°C	I_{R1} I_{R2}	- -	4.0 600	µA
Junction Capacitance (V_R = 10 V_{DC}, T_A = 25°C, f = 1 MHz)			C_J	-	40	pF
Reverse Recovery Time (I_F = 500 mA, I_R = 1 A, I_{RR} = 250 mA)	**1N6626 - 1N6628**	T_J = 25°C	t_{rr}	-	30	nsec
	1N6629 - 1N6630	T_J = 25°C	t_{rr}	-	50	nsec
	1N6631	T_J = 25°C	t_{rr}	-	60	nsec

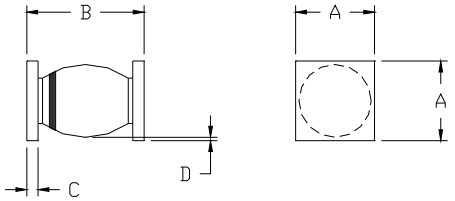
Case Outline: (Axial)



DIM	MIN	MAX
A	0.115"	0.137"
B	0.130"	0.300"
C	0.037"	0.042"
D	0.900"	1.300"

Note: Dimensions prior to soldering

Case Outline: (SMS)



DIM	MIN	MAX
A	0.137"	0.148"
B	0.200"	0.225"
C	0.019"	0.028"
D	0.003"	--

Note: Dimensions prior to soldering

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