



PRELIMINARY

Solid State Devices, Inc.

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Designer's Data Sheet**Part Number/Ordering Information ^{1/}**

1N70

L Screening ^{2/}

— = Not Screened

TX = TX Level

TXV = TXV

S = S Level

L Package Type

— = Axial Leaded

SMS = Surface Mount Square Tab

Voltage/Family

66 = 50V

67 = 100V

68 = 150V

1N7066 thru 1N7068**and****1N7066SMS thru 1N7068SMS****10 AMP****50 — 150 VOLTS****30 ns HYPERFAST RECOVERY
RECTIFIER****FEATURES:**

- **Hyper Fast Reverse Recovery: 30ns Maximum^{4/}**
- **High Surge Current: 325 A Maximum**
- **Hermetically Sealed**
- **Low Forward Voltage Drop .95 @10A**
- **Void Free Chip Construction**
- **Solid Silver Leads**
- **Available in Axial & Square Tab Versions**
- **TX, TXV, and S-Level Screening Available ^{2/}**
- **Axial Lead Higher Current Replacements for:
1N5807, 1N5809, 1N5811**
- **Possible SMS Replacements for Stud Mount :
1N5812, 1N5814, 1N5816**

MAXIMUM RATINGS ^{3/}

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage And DC Blocking Voltage	1N7066 1N7067 1N7068 V_{RRM} V_{RWM} V_R	50 100 150	Volts
Average Rectified Forward Current (Axial TL $\leq 55^\circ\text{C}$; SMS TEC $\leq 100^\circ\text{C}$) ^{5/}	I_O	10	Amps
Peak Surge Current (8.3 ms pulse, half sine wave, superimposed on I_O , allow junction to reach equilibrium between pulses, $T_A = 25^\circ\text{C}$)	I_{FSM}	325	Amps
Operating & Storage Temperature	T_J and T_{STG}	-65 to +175	$^\circ\text{C}$
Thermal Resistance	Junction to Lead for Axial, L = .125" Junction to End Tab for Surface Mount $R_{\theta JL}$ $R_{\theta JE}$	8 4.5	$^\circ\text{C/W}$

NOTES:

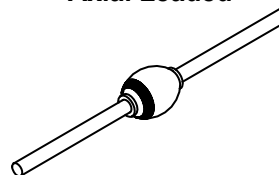
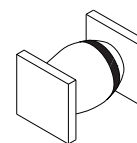
1/ For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

3/ Unless Otherwise Specified, All Electrical Characteristics @25°C.

4/ $I_F = 1\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.1\text{A}$, $T_A = 25^\circ\text{C}$

5/ Operating at higher I_O currents may be achieved based on specific application and device mounting if T_J is maintained below 175°C.

Axial Leaded**SMS**

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

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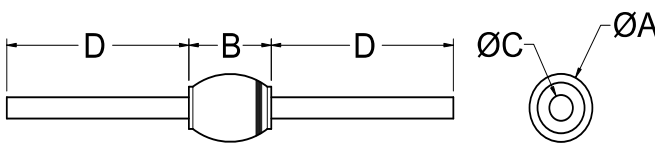
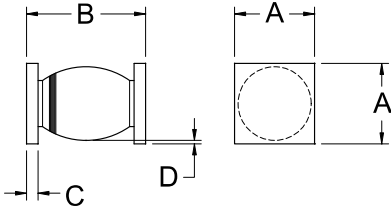
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**1N7066 thru 1N7068
and
1N7066SMS thru 1N7068SMS**

ELECTRICAL CHARACTERISTICS ^{3/}

CHARACTERISTICS	SYMBOL	VALUE	UNIT
		MAX	
Instantaneous Forward Voltage Drop $I_F = 6.0 \text{ Adc}, T_A = +25^\circ\text{C}, 300\mu\text{s pulse}$ $I_F = 10 \text{ Adc}, T_A = 25^\circ\text{C}, 300\mu\text{s pulse}$ $I_F = 20 \text{ Adc}, T_A = 25^\circ\text{C}$ $I_F = 6 \text{ Adc}, T_A = 125^\circ\text{C}$ $I_F = 6 \text{ Adc}, T_A = -55^\circ\text{C}$	V_{F1} V_{F2} V_{F3} V_{F4} V_{F5}	0.900 0.950 1.020 0.85 1.05	Vdc
Reverse Leakage Current Rated $V_R, T_A = +25^\circ\text{C}, 300\mu\text{s pulse minimum}$ Rated $V_R, T_A = +100^\circ\text{C}, 300\mu\text{s pulse minimum}$	I_{R1} I_{R2}	20 1	μA mA
Junction Capacitance $V_R = 10 \text{ Vdc}, f = 1\text{MHz}, T_A = 25^\circ\text{C}$	C_J	80	pF
Reverse Recovery Time $I_F = 1\text{A}, I_R = 1\text{A}, I_{RR} = 0.1\text{A}, T_A = 25^\circ\text{C}$	t_{rr}	30	ns

Package Outlines:

DIMENSIONS (inches)			DIMENSIONS (inches)		
DIM.	Minimum	Maximum	DIM.	Minimum	Maximum
A	.135	.165	A	.172	.180
B	.135	.155	B	.180	.220
C	.037	.042	C	.020	.028
D	1.000	---	D	.002	---
AXIAL 			SMS 		

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