



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

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

**10 AMP
 50 – 150 VOLTS
 30 ns HYPERFAST RECOVERY
 RECTIFIER**

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

1N70 — — —

- L **Screening ^{2/}**
 - = Not Screened
 - TX = TX Level
 - TXV = TXV
 - S = S Level
- Package Type**
 - = Axial Leaded
 - SMS = Surface Mount Square Tab

Voltage/Family

66 = 50V
 67 = 100V
 68 = 150V

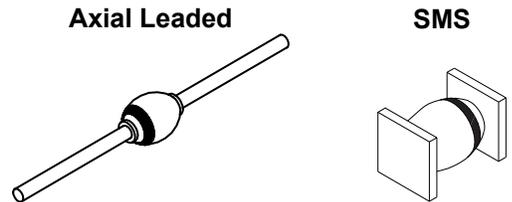
- FEATURES:**
- **Hyper Fast Reverse Recovery: 30ns Maximum^{4/}**
 - **High Surge Current: 325 A Maximum**
 - **Hermetically Sealed**
 - **Low Forward Voltage Drop .95 @10A**
 - **Void Free Chip Construction**
 - **Solid Silver Leads**
 - **Available in Axial & Square Tab Versions**
 - **TX, TXV, and 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	8 4.5	$^\circ\text{C}/\text{W}$

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.





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ELECTRICAL CHARACTERISTICS ^{3/}				
CHARACTERISTICS	SYMBOL	VALUE	UNIT	
		MAX		
Instantaneous Forward Voltage Drop	$I_F = 6.0 \text{ Adc}, T_A = +25^\circ\text{C}, 300\mu\text{s pulse}$	V_{F1}	0.900	Vdc
	$I_F = 10 \text{ Adc}, T_A = 25^\circ\text{C}, 300\mu\text{s pulse}$	V_{F2}	0.950	
	$I_F = 20 \text{ Adc}, T_A = 25^\circ\text{C}$	V_{F3}	1.020	
	$I_F = 6 \text{ Adc}, T_A = 125^\circ\text{C}$	V_{F4}	0.85	
	$I_F = 6 \text{ Adc}, T_A = -55^\circ\text{C}$	V_{F5}	1.05	
Reverse Leakage Current	Rated $V_R, T_A = +25^\circ\text{C}, 300\mu\text{s pulse minimum}$	I_{R1}	20	μA
	Rated $V_R, T_A = +100^\circ\text{C}, 300\mu\text{s pulse minimum}$	I_{R2}	1	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	---

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

DATA SHEET #: RC0119D

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