PRELIMINARY

1N7066 thru 1N7068 and 1N7066SMS thru 1N7068SMS

Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
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Designer's Data Sheet

Part Number/Ordering Information [1/]

1N70 __ __ __

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

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 ≤ 55°C; SMS TEC ≤ 100°C) [5/]		I_O	10	Amps
Peak Surge Current (8.3 ms pulse, half sine wave, superimposed on Io, allow junction to reach equilibrium between pulses, T_A = 25°C)		I_{FSM}	325	Amps
Operating & Storage Temperature		T_J and T_{STG}	-65 to +175	°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	°C/W

NOTES:

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

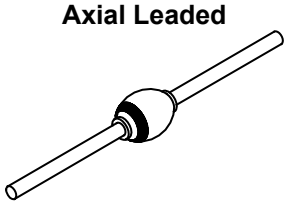
2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

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

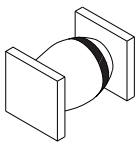
4/ I_F = 1A, I_R = 1A, I_{RR} = 0.1A, T_A = 25°C

5/ Operating at higher Io currents may be achieved based on specific application and device mounting if Tj is maintained below 175ºC.

Axial Leaded



SMS



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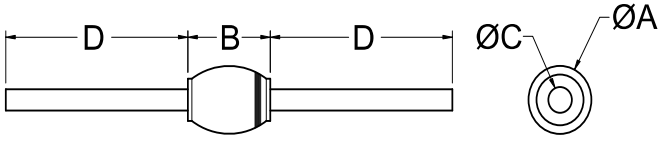
ELECTRICAL CHARACTERISTICS [3/]

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