Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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1N7066 thru 1N7068 and 1N7066SMS thru 1N7068SMS

10 AMP
100 – 200 VOLTS
30 ns HYPERFAST RECOVERY RECTIFIER

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 = 100V
  - 67 = 150V
  - 68 = 200V

FEATURES:

- **Hyper fast reverse recovery: 30ns maximum** [4/]
- **High surge current: 300 A maximum**
- **Hermetically sealed**
- **Low forward voltage drop .95 @10A**
- **Void free ceramic frit glass construction**
- **High temperature category I eutectic metallurgical bond**
- **Solid silver leads**
- **Available in axial & square tab versions**
- **TX, TXV, and S-level screening available** [2/]
- **Available as a QPL product per MIL-PRF-19500/768**
- **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	1N7066	V_{RRM}	100	Volts
and	1N7067	V_{RWM}	150	
DC Blocking Voltage	1N7068	V_R	200	
Average Rectified Forward Current (Axial $T_L \le 55°C$; SMS $T_{EC} \le 100°C$) [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}	300	Amps
Operating & Storage Temperature		T_J and T_{STG}	-65 to +175	°C
Thermal Resistance	Junction to Lead for Axial, L =.125"	$R_{\theta JL}$	8	°C/W
	Junction to End Tab for Surface Mount	$R_{\theta JE}$	4.5	

NOTES:

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

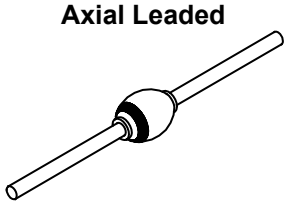
2/ Screening based on MIL-PRF-19500. Screening flows available on request.

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

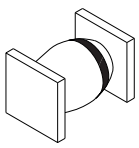
4/ I_F = 1A, I_R = 1A, I_{RR} = 0.1A, T_A = 25°C

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.	DATA SHEET #: RC0119H	DOC

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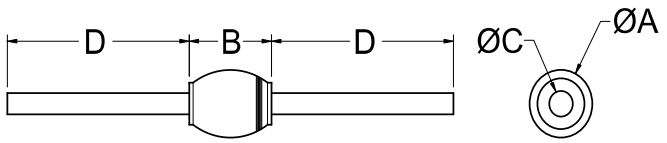
ELECTRICAL CHARACTERISTICS [3/]

CHARACTERISTICS		SYMBOL	LIMIT	UNIT
Instantaneous Forward Voltage Drop 300 µs pulse	I_F= 6.0 Adc	V_{F1}	0.900	Vdc
	I_F= 10 Adc	V_{F2}	0.950	
	I_F= 20 Adc	V_{F3}	1.020	
	I_F= 6.0 Adc, T_A= +125°C	V_{F4}	0.850	
	I_F= 6.0 Adc, T_A= -55°C	V_{F5}	1.050	
Reverse Leakage Current At rated V_R, 300 µs pulse	T_A= +25°C	I_{R1}	20	µA
	T_A= +125°C	I_{R2}	1	mA
Breakdown Voltage I_R= 100 µA	1N7066	BV_R	110	V
	1N7067		160	
	1N7068		210	
Junction Capacitance V_R= 10 Vdc, f= 1 MHz		C_J	80	pF
Reverse Recovery Time I_F= 1 A, I_R= 1 A, I_{RR}= 0.1 A		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	.900	1.30	D	.002	---

AXIAL



SMS