



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

1N7066FL thru 1N7068FL Series

10 AMP SOLAR ARRAY BYPASS / BLOCKING DIODE
100 – 200 VOLTS

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

1N70 _ _ _

L Screening ^{2/}
 _ = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

Package Type
 FL = Flat Leads

Voltage/Family
 66 = 100V
 67 = 150V
 68 = 200V

FEATURES:

- Flat leads provides stress relief (customizable to customer specifications)
- Ideal for welding to BUS bar
- Solid silver leads eliminates plating issues
- PIV to 200 volts
- High surge current: 350 A maximum
- Hermetically sealed
- Low forward voltage drop .95 @10A
- Void free ceramic frit glass construction
- High temperature category I eutectic metallurgical bond
- Hyper fast reverse recovery: 30ns maximum^{4/}
- TX, TXV, and S-level screening available^{2/}
- Higher current replacements for: 1N5807, 1N5809, 1N5811

TYPICAL APPLICATIONS:

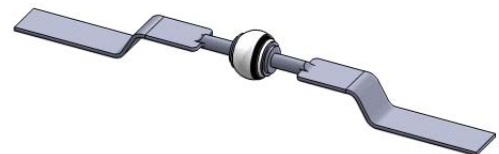
- Photovoltaic (PV) panels

MAXIMUM RATINGS ^{3/}		SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage and DC Blocking Voltage	1N7066FL	V_{RRM}	100	Volts
	1N7067FL	V_{RWM}	150	
	1N7068FL	V_R	200	
Average Rectified Forward Current (Axial $T_L \leq 55^\circ C$) ^{5/}		I_o	10	Amps
Peak Surge Current (8.3 ms pulse, half sine wave, superimposed on I_o , V_{RWM} = rated, allow junction to reach equilibrium between pulses, $T_A = 25^\circ C$)		I_{FSM}	350	Amps
Operating & Storage Temperature		T_J and T_{STG}	-65 to +175	$^\circ C$
Thermal Resistance	Junction to Lead, L = .125"	$R_{\theta JL}$	8	$^\circ C/W$

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

Flat Leads





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

1N7066FL thru 1N7068FL Series

ELECTRICAL CHARACTERISTICS^{3/}

CHARACTERISTICS	SYMBOL	LIMIT	UNIT	
Instantaneous Forward Voltage Drop 300 μ s 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}	1.050	
	$I_F = 6.0$ Adc, $T_A = +125^\circ\text{C}$	V_{F4}	0.850	
	$I_F = 6.0$ Adc, $T_A = +150^\circ\text{C}$	V_{F5}	0.780	
	$I_F = 6.0$ Adc, $T_A = -55^\circ\text{C}$	V_{F6}	1.050	
Reverse Leakage Current At rated V_R , 300 μ s pulse	$T_A = +25^\circ\text{C}$	I_{R1}	1	μA
	$T_A = +125^\circ\text{C}$	I_{R2}	100	μA
	$T_A = +150^\circ\text{C}$	I_{R3}	500	μA
Breakdown Voltage $I_R = 100 \mu\text{A}$	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	

Fig.1 Typical Leakage Current
 I_R vs V_R vs T_C

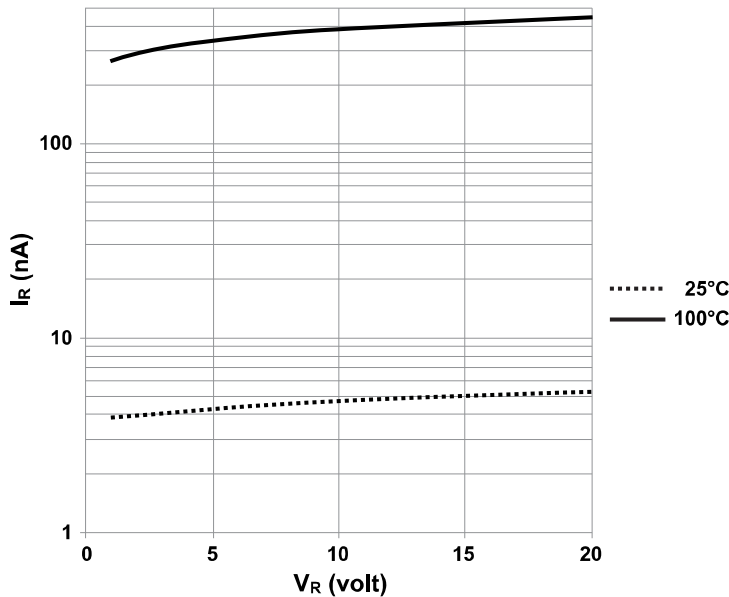
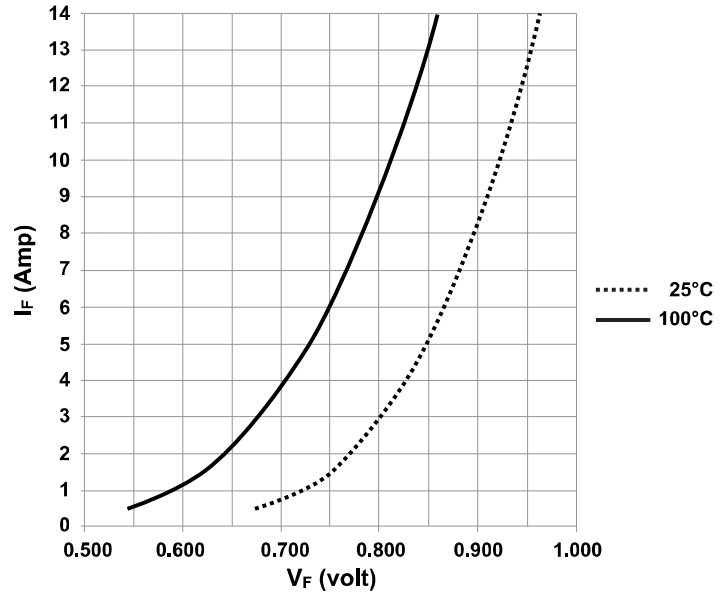


Fig.2 Typical Forward Voltage
 I_F vs V_F vs T_C



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

DATA SHEET #: RC0180A

DOC

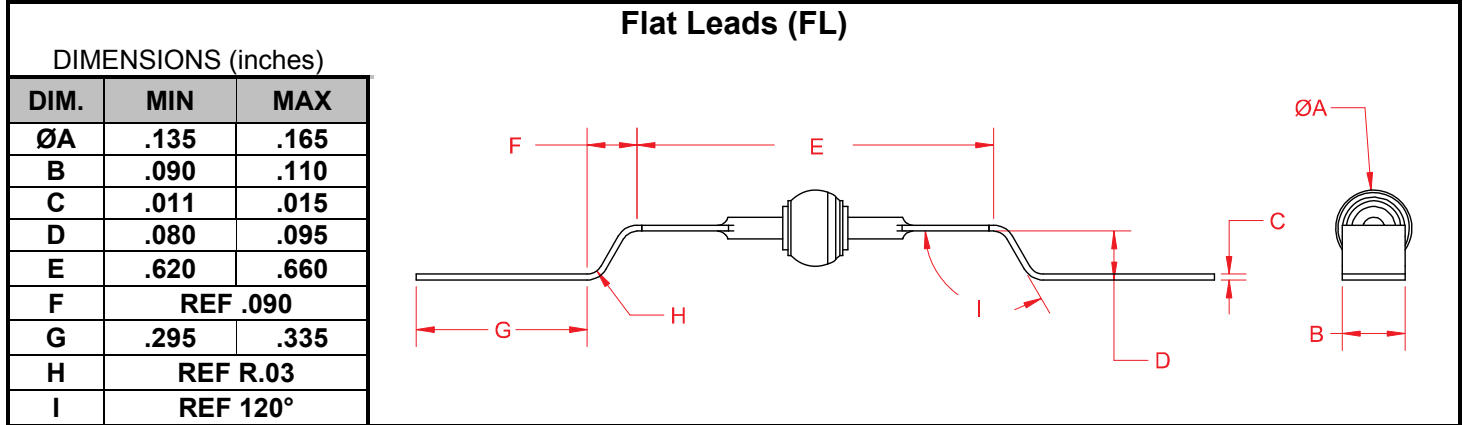


Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

1N7066FL thru 1N7068FL Series

Package Outlines:



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