

RoHS Compliant Product

A suffix of "-C" specifies halogen-free and lead-free

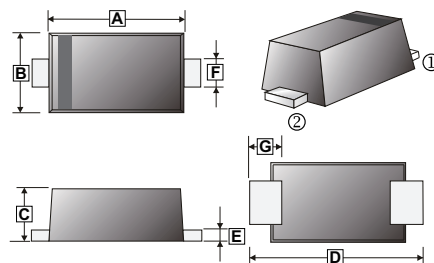
FEATURES

- Glass Passivated Chip
- Low Leakage
- Uni-directional Types
- Excellent Clamping Capability
- Very Fast Response Time
- RoHS Compliant
- 200W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle): 0.01%

MECHANICAL DATA

- Epoxy: UL94V-0 rate flame retardant
- Case: SOD-123FL
- Lead: Solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

SOD-123FL



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.40	3.10	E	0.05	0.30
B	1.40	2.10	F	0.60	1.35
C	0.80	1.55	G	0.80 TYP.	
D	3.30	3.95			

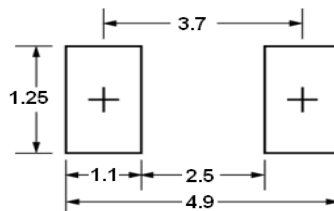
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123FL	3K	7 inch

ORDER INFORMATION

Part Number	Type
S2FL5.0A-C~S2FL220A-C	Lead (Pb)-free and Halogen-free

Mounting Pad Layout



*Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25 $^{\circ}$ C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.
 For capacitive load, de-rate current by 20%.)

Ratings	Symbol	Value	Units
Peak Power Dissipation @10/1000 μ s waveform ¹	P _{PP}	200	W
Peak Pulse Current @10/1000 μ s waveform ¹	I _{PP}	See Next Table.	A
Power Dissipation on Infinite Heatsink	T _L =70 $^{\circ}$ C P _D	0.4	W
Peak Forward Surge Current, 8.3ms single half sine-wave unidirectional only ²	I _{FSM}	20	A
Maximum Instantaneous Forward Voltage @25A for unidirectional only	V _F	3.5	V
Operating Junction & Storage Temperature Range	T _J , T _{STG}	-55~150	$^{\circ}$ C

Notes:

1. Non-repetitive current pulse per Fig.5 and de-rated above T_A=25 $^{\circ}$ C per Fig.1.
2. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.

ELECTRICAL CHARACTERISTICS (Rating TA=25°C unless otherwise specified)

Part Number	Marking Code	Reverse Stand-Off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Maximum Clamping Voltage V_C @ I_{PP}	Peak Pulse Current	Reverse Leakage I_R @ V_{RWM}
			Min.	Max.				
Directional	Directional	V_{RWM}	V_{BR}		I_T	V_C	I_{PP}	I_R
Uni	Uni	V	V	V	mA	V	A	μA
S2FL5.0A-C	FE	5	6.4	7	10	9.2	21.74	400
S2FL6.0A-C	FG	6	6.67	7.37	10	10.3	19.42	400
S2FL6.5A-C	FK	6.5	7.22	7.98	10	11.2	17.86	250
S2FL7.0A-C	FM	7	7.78	8.6	10	12	16.67	100
S2FL7.5A-C	FP	7.5	8.33	9.21	1	12.9	15.5	50
S2FL8.0A-C	FR	8	8.89	9.83	1	13.6	14.71	25
S2FL8.5A-C	FT	8.5	9.44	10.4	1	14.4	13.89	10
S2FL9.0A-C	FV	9	10	11.1	1	15.4	12.99	5
S2FL10A-C	FX	10	11.1	12.3	1	17	11.76	2.5
S2FL11A-C	FZ	11	12.2	13.5	1	18.2	10.99	2.5
S2FL12A-C	HE	12	13.3	14.7	1	19.9	10.05	2.5
S2FL13A-C	HG	13	14.4	15.9	1	21.5	9.3	1
S2FL14A-C	HK	14	15.6	17.2	1	23.2	8.62	1
S2FL15A-C	HM	15	16.7	18.5	1	24.4	8.2	1
S2FL16A-C	HP	16	17.8	19.7	1	26	7.69	1
S2FL17A-C	HR	17	18.9	20.9	1	27.6	7.25	1
S2FL18A-C	HT	18	20	22.1	1	29.2	6.85	1
S2FL19A-C	HB	19	21.1	23.3	1	30.6	6.54	1
S2FL20A-C	HV	20	22.2	24.5	1	32.4	6.17	1
S2FL22A-C	HX	22	24.4	26.9	1	35.5	5.63	1
S2FL24A-C	HZ	24	26.7	29.5	1	38.9	5.14	1
S2FL26A-C	JE	26	28.9	31.9	1	42.1	4.75	1
S2FL28A-C	JG	28	31.1	34.4	1	45.4	4.41	1
S2FL30A-C	JK	30	33.3	36.8	1	48.4	4.13	1
S2FL33A-C	JM	33	36.7	40.6	1	53.3	3.75	1
S2FL36A-C	JP	36	40	44.2	1	58.1	3.44	1
S2FL40A-C	JR	40	44.4	49.1	1	64.5	3.1	1
S2FL43A-C	JT	43	47.8	52.8	1	69.4	2.88	1
S2FL45A-C	JV	45	50	55.3	1	72.7	2.75	1

ELECTRICAL CHARACTERISTICS (Rating TA=25°C unless otherwise specified)

Part Number	Marking Code	Reverse Stand-Off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Maximum Clamping Voltage V_C @ I_{PP}	Peak Pulse Current	Reverse Leakage I_R @ V_{RWM}
			Min.	Max.				
Directional	Directional	V_{RWM}	V_{BR}		I_T	V_C	I_{PP}	I_R
Uni	Uni	V	V	V	mA	V	A	μA
S2FL48A-C	JX	48	53.3	58.9	1	77.4	2.58	1
S2FL51A-C	JZ	51	56.7	62.7	1	82.4	2.43	1
S2FL54A-C	XE	54	60	66.3	1	87.1	2.3	1
S2FL58A-C	XG	58	64.4	71.2	1	93.6	2.14	1
S2FL60A-C	XK	60	66.7	73.7	1	96.8	2.07	1
S2FL64A-C	XM	64	71.1	78.6	1	103	1.94	1
S2FL70A-C	XP	70	77.8	86	1	113	1.77	1
S2FL75A-C	XR	75	83.3	92.1	1	121	1.65	1
S2FL78A-C	XT	78	86.7	95.8	1	126	1.59	1
S2FL80A-C	XB	80	88.8	97.6	1	129	1.55	1
S2FL85A-C	XV	85	94.4	104	1	137	1.46	1
S2FL90A-C	XX	90	100	111	1	146	1.37	1
S2FL100A-C	XZ	100	111	123	1	162	1.23	1
S2FL110A-C	TE	110	122	135	1	177	1.13	1
S2FL120A-C	TG	120	133	147	1	193	1.04	1
S2FL130A-C	TK	130	144	159	1	209	0.96	1
S2FL140A-C	TB	140	155	171	1	224	0.89	1
S2FL150A-C	TM	150	167	185	1	243	0.82	1
S2FL160A-C	TP	160	178	197	1	259	0.77	1
S2FL170A-C	TR	170	189	209	1	275	0.73	1
S2FL180A-C	TT	180	200	220	1	292	0.68	1
S2FL190A-C	TV	190	211	232	1	308	0.65	1
S2FL200A-C	TX	200	224	247	1	324	0.62	1
S2FL220A-C	TZ	220	246	272	1	356	0.56	1

Note:

1. The available parts are 'A' type only, the parts without A (V_{BR} is $\pm 10\%$) is not available.

RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Pulse Derating Curve

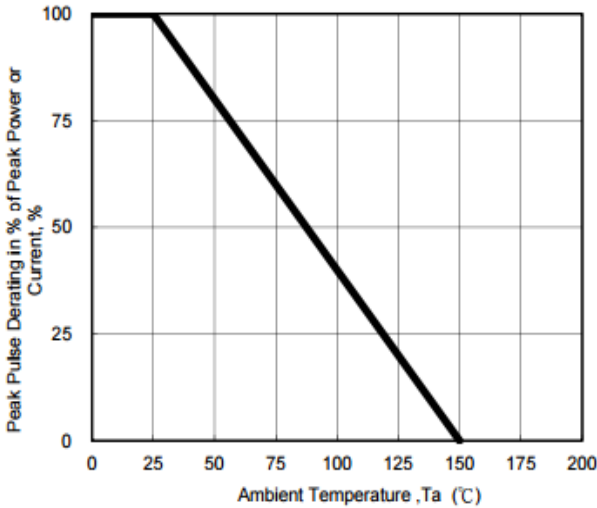


Fig. 2 - Maximum Non-Repetitive Surge Current

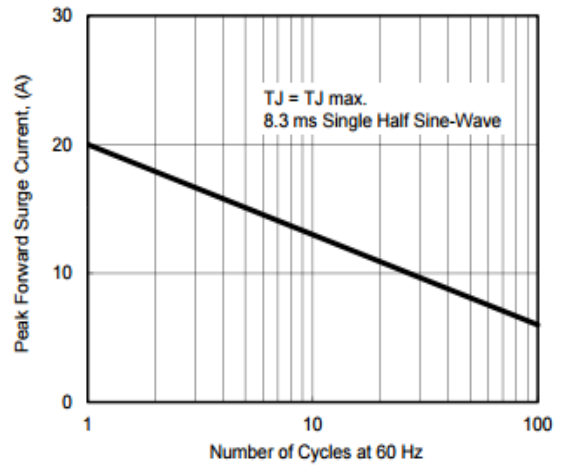


Fig. 3 - Steady State Power Derating Curve

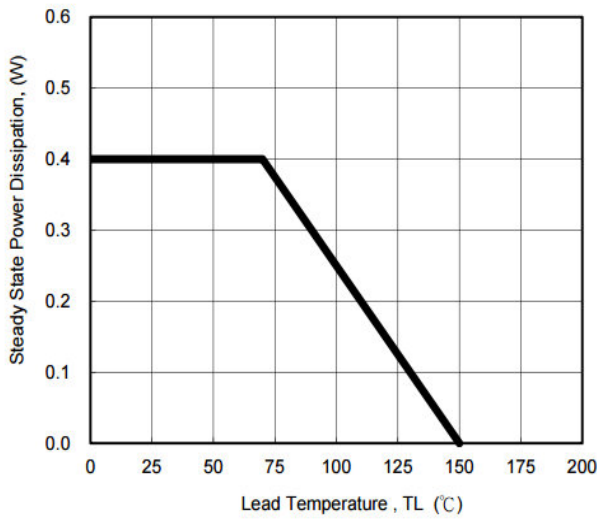


Fig. 4 - Peak Pulse Power Rating Curve

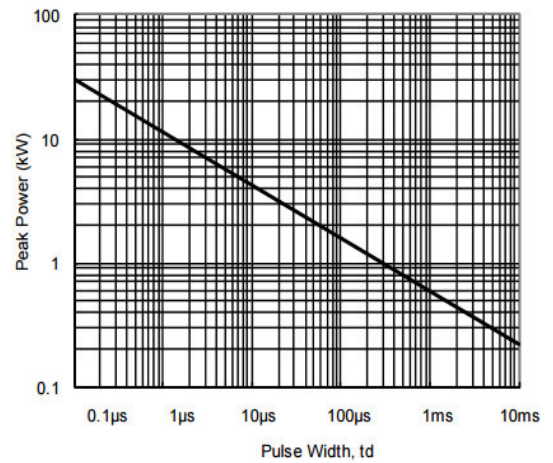


Fig. 5 - Pulse Waveform

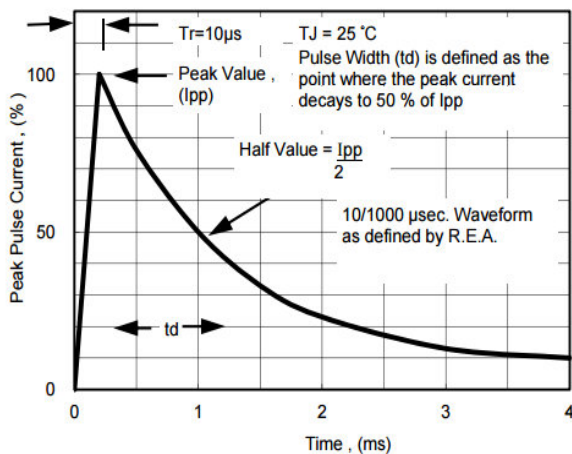


Fig. 6 - Typical Junction Capacitance

