

RoHS Compliant Product

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

FEATURES

- For Surface Mounted Applications in order to Optimize Board Space
- Uni-Directional Types
- Glass Passivated Junction
- Low Inductance
- High Temperature Soldering: 260°C/10s at Terminals

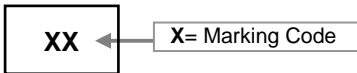
SOD-123FL



MECHANICAL DATA

- Case: SOD-123FL Molded Plastic
- Molding compound: UL Flammability Classification Rating 94V-0
- Terminals: Plated Leads Solderable Per MIL-STD-750, Method 2026
- Polarity: Color Band Denotes Cathode End
- Mounting Position: Any

MARKING



PACKAGE INFORMATION

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



ORDER INFORMATION

Part Number	Type
SDFL Series-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°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 @10/1000µs waveform ¹	P _{PP}	200	W
Peak Pulse Current @10/1000µs waveform ¹	I _{PP}	See Next Table.	A
Peak Forward Surge Current 8.3 ms single half sine-wave uni-directional only ²	I _{FSM}	20	A
Power Dissipation on infinite heatsink @T _L =75°C	P _D	0.4	W
Operating Junction & Storage Temperature Range	T _J , T _{STG}	-55~150	°C

Notes:

1. Non-repetitive current pulse and de-rated above T_A=25°C.
2. Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.

ELECTRICAL CHARACTERISTICS (Rating $T_A=25^\circ\text{C}$ 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.				
		V_{RWM}	V_{BR}		I_T	V_C	I_{PP}	I_R
Uni	Uni	V	V	V	mA	V	A	μA
SDFL5.0A-C	HE	5	6.4	7	10	9.2	21.7	500
SDFL6.0A-C	HG	6	6.7	7.4	10	10.3	19.4	500
SDFL6.5A-C	HK	6.5	7.2	8	10	11.2	17.9	250
SDFL7.0A-C	HM	7	7.8	8.6	10	12	16.7	100
SDFL7.5A-C	HP	7.5	8.3	9.2	1	12.9	15.5	50
SDFL8.0A-C	HR	8	8.9	9.8	1	13.6	14.7	25
SDFL8.5A-C	HT	8.5	9.4	10.4	1	14.4	13.9	10
SDFL9.0A-C	HV	9	10	11.1	1	15.4	13	5
SDFL10A-C	HX	10	11.1	12.3	1	17	11.8	2.5
SDFL11A-C	HZ	11	12.2	13.5	1	18.2	11	2.5
SDFL12A-C	IE	12	13.3	14.7	1	19.9	10.1	2.5
SDFL13A-C	IG	13	14.4	15.9	1	21.5	9.3	1
SDFL14A-C	IK	14	15.6	17.2	1	23.2	8.6	1
SDFL15A-C	IM	15	16.7	18.5	1	24.4	8.2	1
SDFL16A-C	IP	16	17.8	19.7	1	26	7.7	1
SDFL17A-C	IR	17	18.9	20.9	1	27.6	7.2	1
SDFL18A-C	IT	18	20	22.1	1	29.2	6.8	1
SDFL20A-C	IV	20	22.2	24.5	1	32.4	6.2	1
SDFL22A-C	IX	22	24.4	26.9	1	35.5	5.6	1
SDFL24A-C	IZ	24	26.7	29.5	1	38.9	5.1	1
SDFL26A-C	JE	26	28.9	31.9	1	42.1	4.8	1
SDFL28A-C	JG	28	31.1	34.4	1	45.4	4.4	1
SDFL30A-C	JK	30	33.3	36.8	1	48.4	4.1	1
SDFL33A-C	JM	33	36.7	40.6	1	53.3	3.8	1
SDFL36A-C	JP	36	40	44.2	1	58.1	3.4	1
SDFL40A-C	JR	40	44.4	49.1	1	64.5	3.1	1
SDFL43A-C	JT	43	47.8	52.8	1	69.4	2.9	1
SDFL45A-C	JV	45	50	55.3	1	72.7	2.8	1

ELECTRICAL CHARACTERISTICS (Rating $T_A=25^\circ\text{C}$ 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.				
		V_{RWM}	V_{BR}		I_T	V_C	I_{PP}	I_R
Bi	Bi	V	V	V	mA	V	A	μA
SDFL48A-C	JX	48	53.3	58.9	1	77.4	2.6	1
SDFL51A-C	JZ	51	56.7	62.7	1	82.4	2.4	1
SDFL54A-C	RE	54	60	66.3	1	87.1	2.3	1
SDFL58A-C	RG	58	64.4	71.2	1	93.6	2.14	1
SDFL60A-C	RK	60	66.7	73.7	1	96.8	2.07	1
SDFL64A-C	RM	64	71.1	78.6	1	103	1.94	1
SDFL70A-C	RP	70	77.8	86	1	113	1.77	1
SDFL75A-C	RR	75	83.3	92.1	1	121	1.65	1
SDFL78A-C	RT	78	86.7	95.8	1	126	1.59	1
SDFL85A-C	RV	85	94.4	104	1	137	1.46	1
SDFL90A-C	RX	90	100	111	1	146	1.37	1
SDFL100A-C	RZ	100	111	123	1	162	1.23	1
SDFL110A-C	SE	110	122	135	1	177	1.13	1
SDFL120A-C	SG	120	133	147	1	193	1.04	1
SDFL130A-C	SK	130	144	159	1	209	0.96	1
SDFL150A-C	SM	150	167	185	1	243	0.82	1
SDFL160A-C	SP	160	178	197	1	259	0.77	1
SDFL170A-C	SR	170	189	209	1	275	0.72	1
SDFL180A-C	TT	180	200	220	1	292	0.68	1

Notes:

- Surge waveform: 10/1000 μs
- V_{RWM} : Stand-off voltage -- Maximum voltage that can be applied
- V_{BR} : Breakdown voltage
- V_C : Clamping voltage -- Peak voltage measured across the suppressor at a specified I_{PP}
- I_R : Reverse leakage current

RATINGS AND CHARACTERISTIC CURVES

Fig.1 Derating Curve

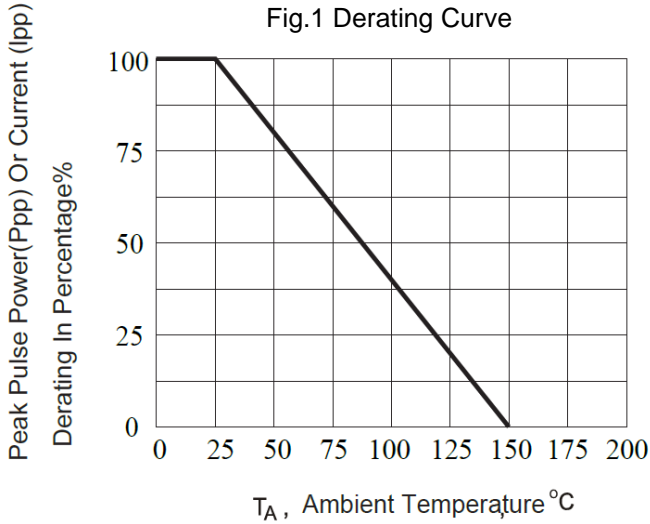


Fig. 2 Peak Pulse Power Rating Curve

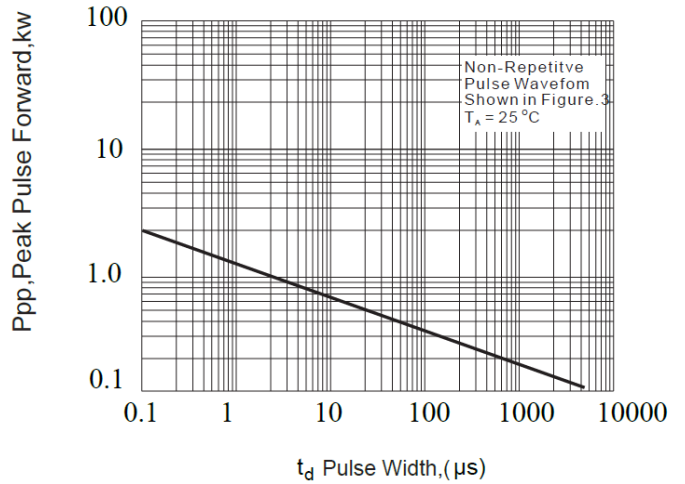


Fig.3 Clamping Power Pulse Waveform

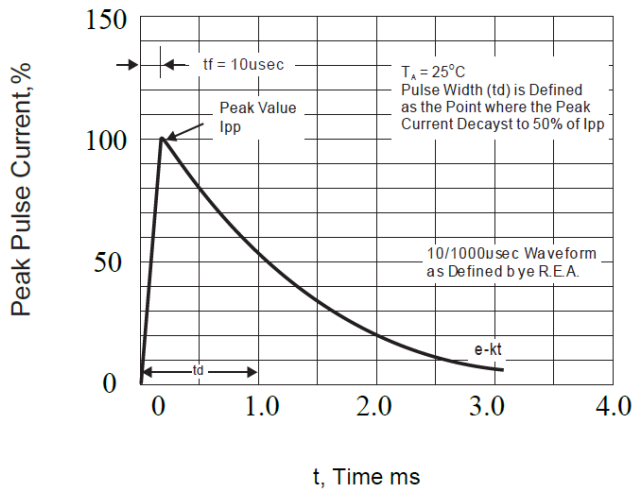
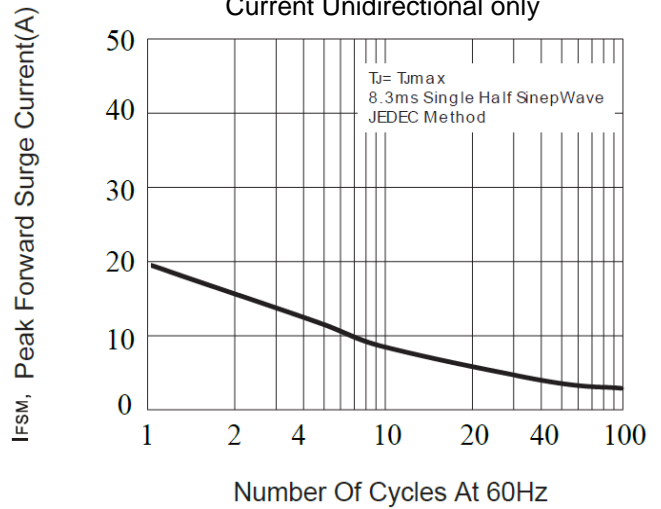
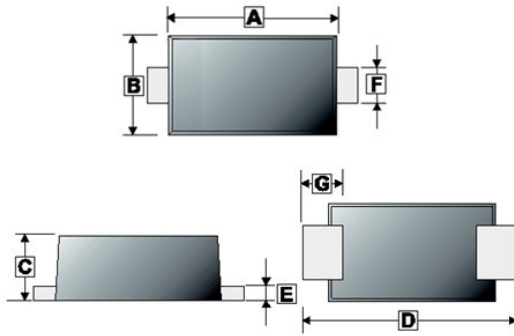


Fig. 4 Maximum Non-repetitive Forward Surge Current Unidirectional only



PACKAGE OUTLINE DIMENSIONS

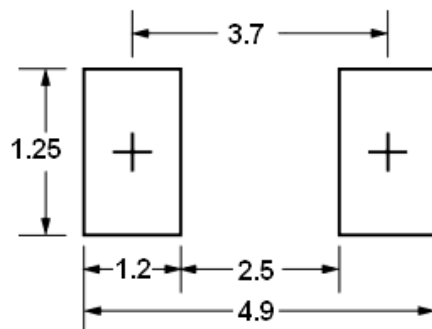
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REF.	Millimeter	
	Min.	Max.
A	2.40	3.10
B	1.40	2.10
C	0.80	1.55
D	3.30	4.00
E	0.05	0.30
F	0.50	1.35
G	0.80 TYP.	

MOUNTING PAD LAYOUT

SOD-123FL



*Dimensions in millimeters