

SOD-123FL



Bi-directional 

Uni-direction 

Features

- P_{PP} 200W
- V_{RWM} 5.0V- 440V

Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Peak power dissipation	P_{PPM}	W	with a 10/1000us waveform	200
Peak pulse current	I_{PPM}	A	with a 10/1000us waveform	See Next Table
Operating junction and storage temperature range	T_J, T_{STG}	°C		-55 ~ +150
Thermal resistance	$R_{\theta JL}$	°C/W	Between junction and lead	26
	$R_{\theta JA}$	°C/W	Between junction and Ambient	300

Electrical Characteristics (T_A=25°C unless otherwise noted)

Number		Code		Reverse Stand off Voltage	Breakdown Voltage V _{BR} @ I _T		Test Current	Clamping Voltage @ I _{pp}	Peak Pulse Current	Reverse Leakage @ V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	Min.(V)	Max.(V)	I _T (mA)	V _C MAX.(V)	I _{pp} (A)	I _R (uA)
SMF5.0A	SMF5.0CA	AE	NE	5.0	6.40	7.00	10	9.2	21.7	800
SMF6.0A	SMF6.0CA	AG	NG	6.0	6.67	7.37	10	10.3	19.4	800
SMF6.5A	SMF6.5CA	AK	NK	6.5	7.22	7.98	10	11.2	17.8	500
SMF7.0A	SMF7.0CA	AM	NM	7.0	7.78	8.60	10	12	16.6	200
SMF7.5A	SMF7.5CA	AP	NP	7.5	8.33	9.21	1	12.9	15.5	100
SMF8.0A	SMF8.0CA	AR	NR	8.0	8.89	9.83	1	13.6	14.7	50
SMF8.5A	SMF8.5CA	AT	NT	8.5	9.44	10.40	1	14.4	13.8	20
SMF9.0A	SMF9.0CA	AV	NV	9.0	10.00	11.10	1	15.4	13	10
SMF10A	SMF10CA	AX	NX	10.0	11.10	12.30	1	17	11.7	5
SMF11A	SMF11CA	AZ	NZ	11.0	12.20	13.50	1	18.2	11	1
SMF12A	SMF12CA	BE	OE	12.0	13.30	14.70	1	19.9	10	1
SMF13A	SMF13CA	BG	OG	13.0	14.40	15.90	1	21.5	9.3	1
SMF14A	SMF14CA	BK	OK	14.0	15.60	17.20	1	23.2	8.6	1
SMF15A	SMF15CA	BM	OM	15.0	16.70	18.50	1	24.4	8.2	1
SMF16A	SMF16CA	BP	OP	16.0	17.80	19.70	1	26	7.7	1
SMF17A	SMF17CA	BR	OR	17.0	18.90	20.90	1	27.6	7.2	1
SMF18A	SMF18CA	BT	OT	18.0	20.00	22.10	1	29.2	6.8	1
SMF20A	SMF20CA	BV	OV	20.0	22.00	24.50	1	32.4	6.1	1
SMF22A	SMF22CA	BX	OX	22.0	24.40	26.90	1	35.5	5.6	1
SMF24A	SMF24CA	BZ	OZ	24.0	26.70	29.50	1	38.9	5.1	1
SMF26A	SMF26CA	CE	PE	26.0	28.90	31.90	1	42.1	4.7	1
SMF28A	SMF28CA	CG	PG	28.0	31.10	34.40	1	45.4	4.4	1
SMF30A	SMF30CA	CK	PK	30.0	33.50	36.80	1	48.4	4.1	1
SMF33A	SMF33CA	CM	PM	33.0	36.70	40.60	1	53.3	3.7	1
SMF36A	SMF36CA	CP	PP	36.0	40.00	44.20	1	58.1	3.4	1
SMF40A	SMF40CA	CR	PR	40.0	44.40	49.10	1	64.5	3.1	1
SMF43A	SMF43CA	CT	PT	43.0	47.80	52.80	1	69.4	2.9	1
SMF45A	SMF45CA	CV	PV	45.0	50.00	55.30	1	72.7	2.7	1
SMF48A	SMF48CA	CX	PX	48.0	53.30	58.90	1	77.4	2.6	1
SMF51A	SMF51CA	CZ	PZ	51.0	56.70	62.70	1	82.4	2.4	1
SMF54A	SMF54CA	DE	PA	54.0	60.00	66.30	1	87.1	2.3	1
SMF58A	SMF58CA	DG	PC	58.0	64.40	71.20	1	93.6	2.1	1
SMF60A	SMF60CA	DK	CDK	60.0	66.70	73.70	1	96.8	2	1
SMF64A	SMF64CA	DM	CDM	64.0	71.10	78.60	1	103.0	1.9	1
SMF70A	SMF70CA	DP	CDP	70.0	77.80	86.00	1	113.0	1.7	1
SMF75A	SMF75CA	DR	CDR	75.0	83.30	92.10	1	121.0	1.6	1
SMF78A	SMF78CA	DT	CDT	78.0	86.70	95.80	1	126.0	1.5	1
SMF85A	SMF85CA	DV	CDV	85.0	94.4	104.0	1	137.0	1.4	1
SMF90A	SMF90CA	DX	CDX	90.0	100.0	111.0	1	146.0	1.3	1
SMF100A	SMF100CA	DZ	CDZ	100.0	111.0	123.0	1	162.0	1.2	1
SMF110A	SMF110CA	EE	CEE	110.0	122.0	135.0	1	177.0	1.1	1
SMF120A	SMF120CA	EG	CEG	120.0	133.0	147.0	1	193.0	1	1
SMF130A	SMF130CA	EK	CEK	130.0	144.0	159.0	1	209.0	0.9	1
SMF150A	SMF150CA	EM	CEM	150.0	167.0	185.0	1	243.0	0.8	1
SMF160A	SMF160CA	EP	CEP	160.0	178.0	197.0	1	259.0	0.7	1
SMF170A	SMF170CA	ER	CER	170.0	189.0	209.0	1	275.0	0.7	1
SMF180A	SMF180CA	ET	CET	180.0	201.0	222.0	1	292.0	0.7	1
SMF190A	SMF190CA	EV	CEV	190.0	209.0	243.0	1	308.0	0.6	1
SMF200A	SMF200CA	EX	CEX	200.0	224.0	247.0	1	324.0	0.6	1
SMF220A	SMF220CA	E22	CE22	220.0	246.0	272.0	1	356.0	0.5	1
SMF250A	SMF250CA	E25	CE25	250.0	279.0	309.0	1	405.0	0.5	1
SMF300A	SMF300CA	E30	CE30	300.0	335.0	371.0	1	486.0	0.4	1
SMF350A	SMF350CA	E35	CE35	350.0	391.0	432.0	1	567.0	0.3	1
SMF400A	SMF400CA	E40	CE40	400.0	447.0	494.0	1	648.0	0.3	1
SMF440A	SMF440CA	E44	CE44	440.0	492.0	543.0	1	713.0	0.3	1

Typical Characteristics

Fig. 1 Pulse Derating Curve

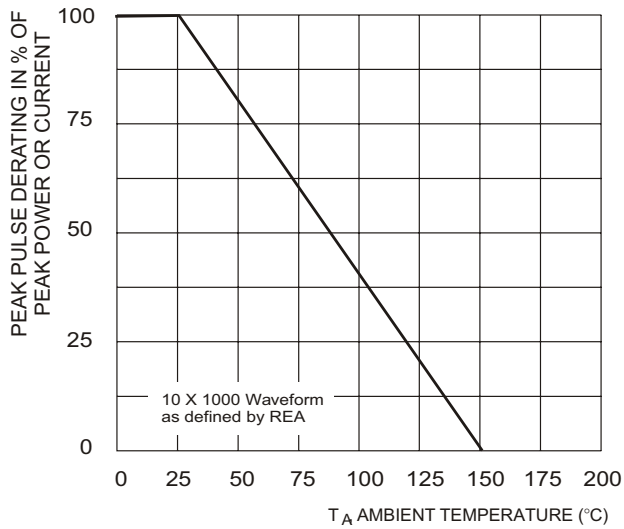


Fig. 2 Typical Total Capacitance

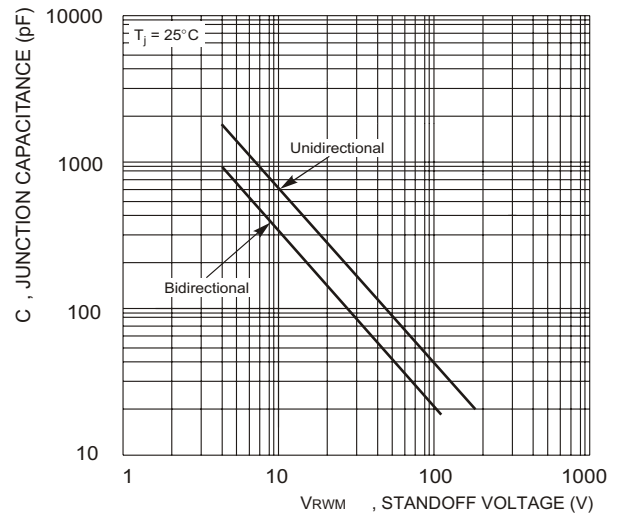


Fig. 3 Pulse rating curve

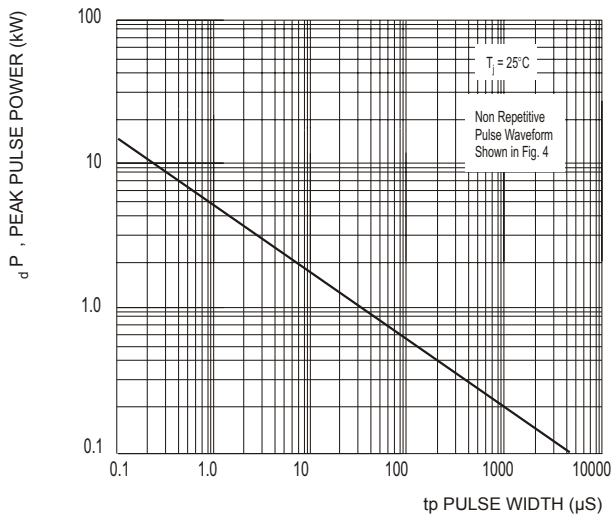


Fig. 4 Pulse Waveform

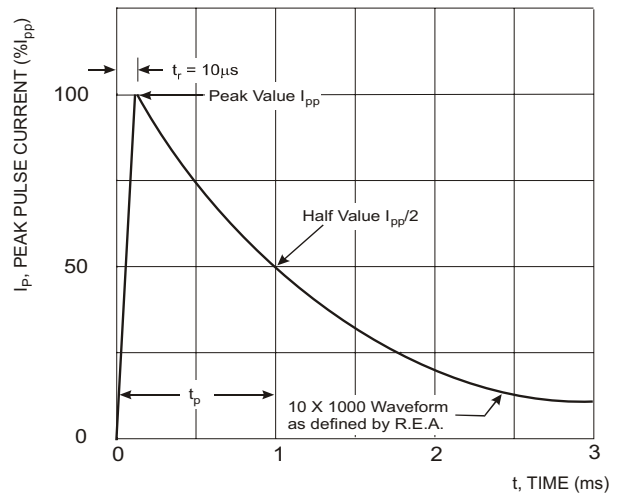


Fig. 5 Maximum Non-Repetitive Surge Current

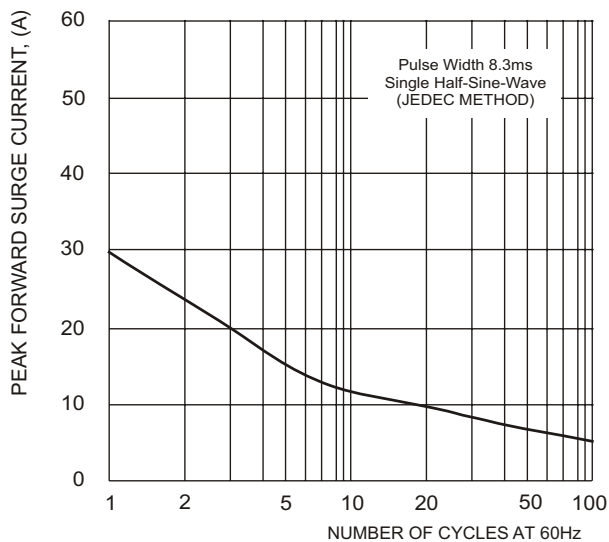
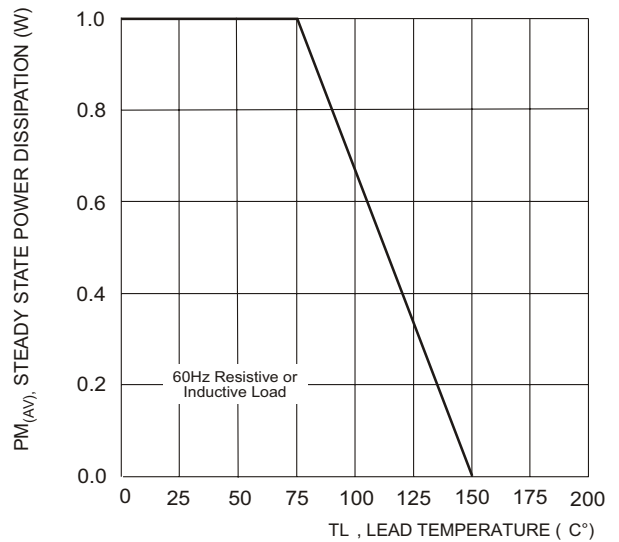
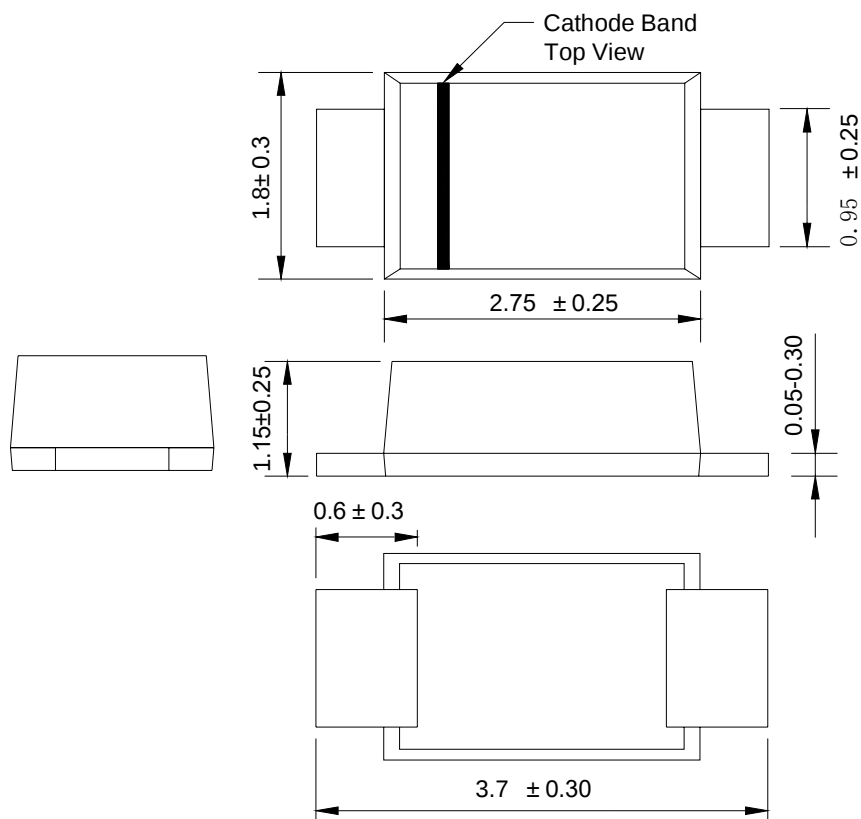


Fig. 6 Steady State Power Derating Curve

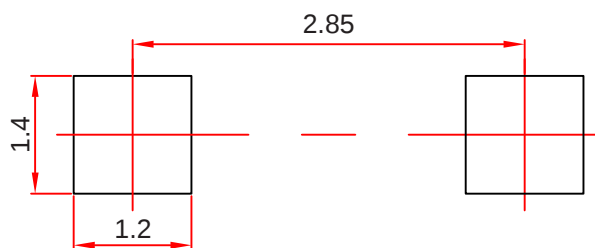


SOD-123FL Package outline Dimensions



Dimensions in millimeters

SOD-123FL Suggested pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.