

SMF5V0A-SMF51A

Surface Mount ESD Protection Diodes

BREAKDOWN VOLTAGE : 6.40 - 56.70 V

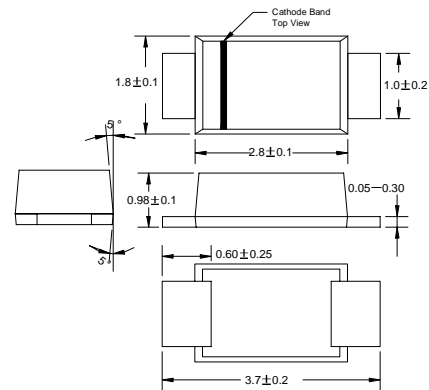
PEAK PULSE POWER : 200 W



SOD - 123FL

Features

- For surface mounted applications
- Low profile package
- Low incremental surge resistance,excellent clamping capability
- 200W peak pulse power capability with a 10/1000 μ s wave from,repitition rate (duty cycle):0.01%
- High temperature soldering guaranteed: 260 /10 seconds, at terminals



Mechanical Data

- Case: JEDEC SOD-123FL, molded plastic
- Polarity: Color band denotes positive end (cathode) except for bidirectional
- Marking code: see TABLE 1
- Weight:0.006 ounces, 0.02 gram
- Mounting position: Any

Dimensions in inches and (millimeters)

ABSOLUTE MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified

	SYMBOL	VALUE	UNITS
Non-repetitive peak pulse power dissipation with a 10/1000 μ s waveform (NOTE 1)	P_{PPM}	200	W
Peak pulse current 10/1000 μ s wavefrom (NOTE 1)	I_{PPM}	See Table1	A
Forward voltage @ $I_F=12A$	V_F	3.5	V
Thermal resistance junction to ambient	$R_{\theta JA}$	180	K/W
Operating temperature junction range	T_J	- 55 to +150	
Storage temperature range	T_{STG}	- 55 to +150	

NOTE:(1)Non-repetitive current pulse and derated above $T_A=25$

ELECTRICAL CHARACTERISTICS (Ratings at $T_J=25$ unless otherwise specified) uni-birectional only

Type	Marking Code UNI	$V_{(BR)}^{1)}$	I_T	V_{WM}	$I_D@V_{WM}$	$I_{PPM}^{2)}$	$V_C@I_{PPM}$
		V Min	m A	V	μ A	A	V
SMF5V0A	AE	6.40	10	5.0	400	21.7	9.2
SMF6V0A	AG	6.67	10	6.0	400	19.4	10.3
SMF6V5A	AK	7.22	10	6.5	250	17.9	11.2
SMF7V0A	AM	7.78	10	7.0	100	16.7	12.0
SMF7V5A	AP	8.33	1.0	7.5	50	15.5	12.9
SMF8V0A	AR	8.89	1.0	8.0	25	14.7	13.6
SMF8V5A	AT	9.44	1.0	8.5	10	13.9	14.4
SMF9V0A	AV	10.0	1.0	9.0	5.0	13.5	15.4
SMF10A	AX	11.1	1.0	10	2.5	11.8	17.0
SMF11A	AZ	12.2	1.0	11	2.5	11.0	18.2
SMF12A	BE	13.3	1.0	12	2.5	10.1	19.9
SMF13A	BG	14.4	1.0	13	1.0	9.3	21.5
SMF14A	BK	15.6	1.0	14	1.0	8.6	23.2
SMF15A	BM	16.7	1.0	15	1.0	8.2	24.4
SMF16A	BP	17.8	1.0	16	1.0	7.7	26.0
SMF17A	BR	18.9	1.0	17	1.0	7.2	27.6
SMF18A	BT	20.0	1.0	18	1.0	5.8	29.2
SMF20A	BV	22.2	1.0	20	1.0	6.2	32.4
SMF22A	BX	24.4	1.0	22	1.0	5.6	35.5
SMF24A	BZ	26.7	1.0	24	1.0	5.1	38.9
SMF26A	CE	28.9	1.0	26	1.0	4.8	42.1
SMF28A	CG	31.1	1.0	28	1.0	4.4	45.4
SMF30A	CK	33.3	1.0	30	1.0	4.1	48.4
SMF33A	CM	36.7	1.0	33	1.0	3.8	53.3
SMF36A	CP	40.0	1.0	36	1.0	3.4	58.1
SMF40A	CR	44.4	1.0	40	1.0	3.1	64.5
SMF43A	CT	47.8	1.0	43	1.0	2.9	69.4
SMF45A	CV	50.0	1.0	45	1.0	2.8	72.7
SMF48A	CX	53.3	1.0	48	1.0	2.6	77.4
SMF51A	CZ	56.7	1.0	51	1.0	2.4	82.4

Notes: (1) Pulse test $t_p = 5.0ms$

(2) Surge current waveform 10/1000 μs

Ratings AND Characteristic Curves

FIG.1 – PEAK PULSE POWER RATING CURVE

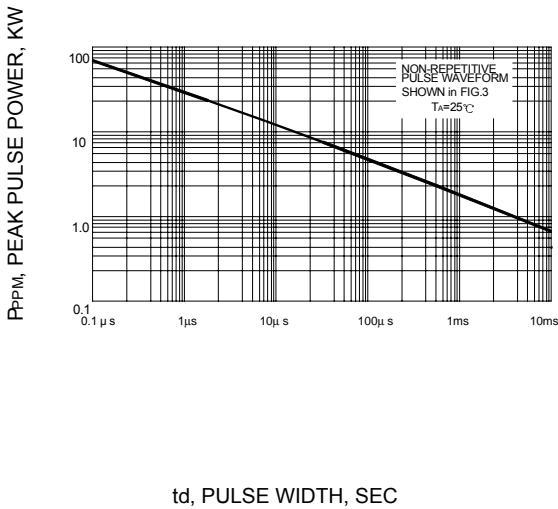


FIG.2 -- PULSE DERATING CURVE

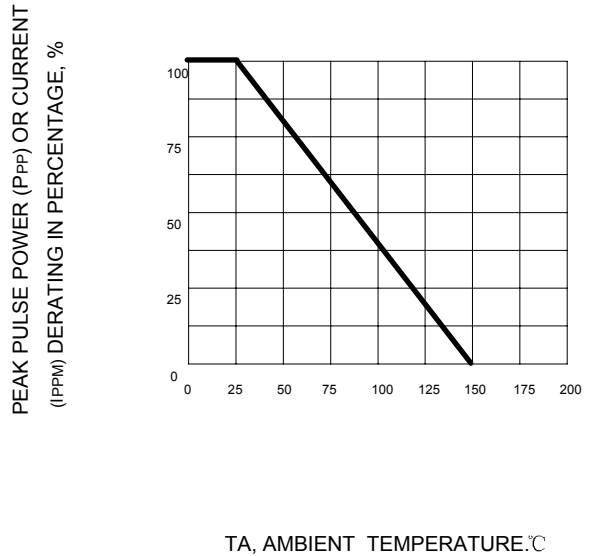


FIG.3 -- PULSE WAVEFORM

