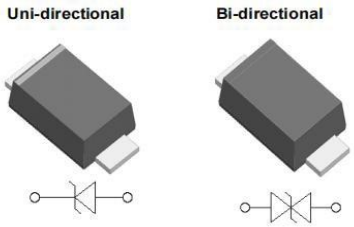
MOSPEC

SMA6L Series

Transient Voltage Suppressors

FEATURES：

- For surface mounted applications
- 600W peak pulse power capability on 10/1000μs waveform
- Excellent clamping capability
- Fast response time
- High temperature soldering guaranteed: 260℃/10 seconds
- Molding compound meets UL 94 V-0 flammability rating
- RoHS compliant.



SMAF

MECHANICAL DATA：

- Case : Molded plastic body
- Polarity：Polarity symbol marking on body

MAXIMUM RATINGS (Ratings at 25 ℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at T_A=25ºC by 10x1000μs waveform	P_{PPM}	600	W
Power Dissipation on infinite heat sink at T_L=50℃	$P_{M(AV)}$	3.3	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave	I_{FSM}	100	A
Maximum Instantaneous Forward Voltage at 50A for Unidirectional	V_F	3.5	V
Operating Temperature Range	T_J	-55~+150	°C
Storage Temperature Range	T_{STG}	-55~+150	°C

Electrical Characteristics

P/N		Marking		VR (V)	VBR @ IT (V)		IT (mA)	IR@ VR (μA)		Ipp (A)	VC@ Ipp (V)
Uni	Bi	Uni	Bi		MIN	MAX		Uni	Bi		
SMA6L5.0A	SMA6L5.0CA	AE	WE	5	6.4	7	10	800	800	65.3	9.2
SMA6L6.0A	SMA6L6.0CA	AG	WG	6	6.67	7.37	10	800	800	58.3	10.3
SMA6L6.5A	SMA6L6.5CA	AK	WK	6.5	7.22	7.98	10	500	500	53.6	11.2
SMA6L7.0A	SMA6L7.0CA	AM	WM	7	7.78	8.6	10	200	200	50	12
SMA6L7.5A	SMA6L7.5CA	AP	WP	7.5	8.33	9.21	1	100	100	46.6	12.9
SMA6L8.0A	SMA6L8.0CA	AR	WR	8	8.89	9.83	1	50	50	44.2	13.6
SMA6L8.5A	SMA6L8.5CA	AT	WT	8.5	9.44	10.4	1	20	20	41.7	14.4
SMA6L9.0A	SMA6L9.0CA	AV	WV	9	10	11.1	1	10	10	39	15.4
SMA6L10A	SMA6L10CA	AX	WX	10	11.1	12.3	1	5	5	35.3	17
SMA6L11A	SMA6L11CA	AZ	WZ	11	12.2	13.5	1	1	1	33	18.2
SMA6L12A	SMA6L12CA	BE	XE	12	13.3	14.7	1	1	1	30.2	19.9
SMA6L13A	SMA6L13CA	BG	XG	13	14.4	15.9	1	1	1	28	21.5
SMA6L14A	SMA6L14CA	BK	XK	14	15.6	17.2	1	1	1	25.9	23.2
SMA6L15A	SMA6L15CA	BM	XM	15	16.7	18.5	1	1	1	24.6	24.4
SMA6L16A	SMA6L16CA	BP	XP	16	17.8	19.7	1	1	1	23.1	26
SMA6L17A	SMA6L17CA	BR	XR	17	18.9	20.9	1	1	1	21.8	27.6
SMA6L18A	SMA6L18CA	BT	XT	18	20	22.1	1	1	1	20.6	29.2
SMA6L20A	SMA6L20CA	BV	XV	20	22.2	24.5	1	1	1	18.6	32.4
SMA6L22A	SMA6L22CA	BX	XX	22	24.4	26.9	1	1	1	16.9	35.5
SMA6L24A	SMA6L24CA	BZ	XZ	24	26.7	29.5	1	1	1	15.5	38.9
SMA6L26A	SMA6L26CA	CE	YE	26	28.9	31.9	1	1	1	14.3	42.1
SMA6L28A	SMA6L28CA	CG	YG	28	31.1	34.4	1	1	1	13.3	45.4
SMA6L30A	SMA6L30CA	CK	YK	30	33.3	36.8	1	1	1	12.4	48.4
SMA6L33A	SMA6L33CA	CM	YM	33	36.7	40.6	1	1	1	11.3	53.3
SMA6L36A	SMA6L36CA	CP	YP	36	40	44.2	1	1	1	10.4	58.1
SMA6L40A	SMA6L40CA	CR	YR	40	44.4	49.1	1	1	1	9.3	64.5
SMA6L43A	SMA6L43CA	CT	YT	43	47.8	52.8	1	1	1	8.7	69.4
SMA6L45A	SMA6L45CA	CV	YV	45	50	55.3	1	1	1	8.3	72.7
SMA6L48A	SMA6L48CA	CX	YX	48	53.3	58.9	1	1	1	7.8	77.4
SMA6L51A	SMA6L51CA	CZ	YZ	51	56.7	62.7	1	1	1	7.3	82.4
SMA6L54A	SMA6L54CA	RE	ZE	54	60	66.3	1	1	1	6.9	87.1
SMA6L58A	SMA6L58CA	RG	ZG	58	64.4	71.2	1	1	1	6.5	93.6
SMA6L60A	SMA6L60CA	RK	ZK	60	66.7	73.7	1	1	1	6.2	96.8
SMA6L64A	SMA6L64CA	RM	ZM	64	71.1	78.6	1	1	1	5.9	103
SMA6L70A	SMA6L70CA	RP	ZP	70	77.8	86	1	1	1	5.3	113
SMA6L75A	SMA6L75CA	RR	ZZ	75	83.3	92.1	1	1	1	5	121
SMA6L78A	SMA6L78CA	RT	ZT	78	86.7	95.8	1	1	1	4.8	126
SMA6L85A	SMA6L85CA	RV	ZV	85	94.4	104	1	1	1	4.4	137

Ratings and Characteristic Curves (T_A=25°C unless otherwise noted)

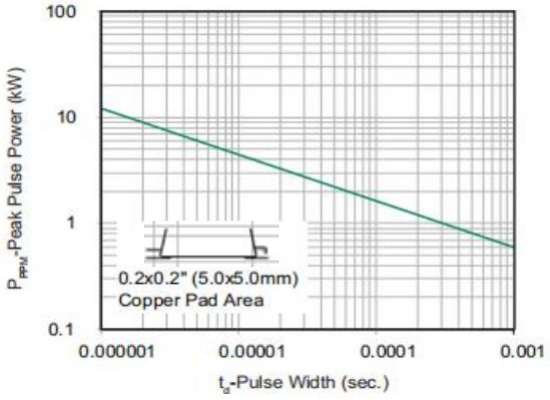


Figure 1. Peak Pulse Power Rating Curve

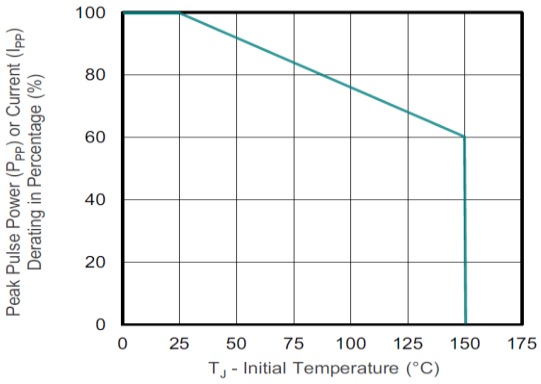


Figure 2. Pulse Derating Curve

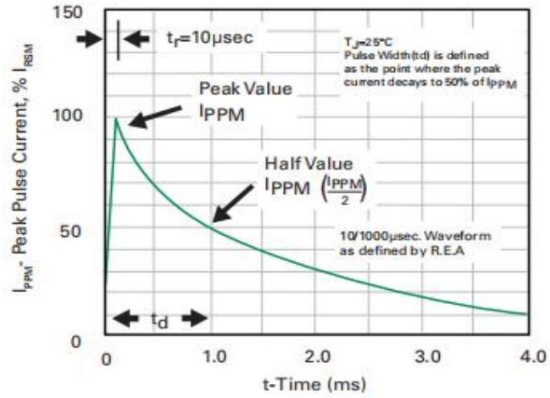


Figure 3. Pulse Waveform

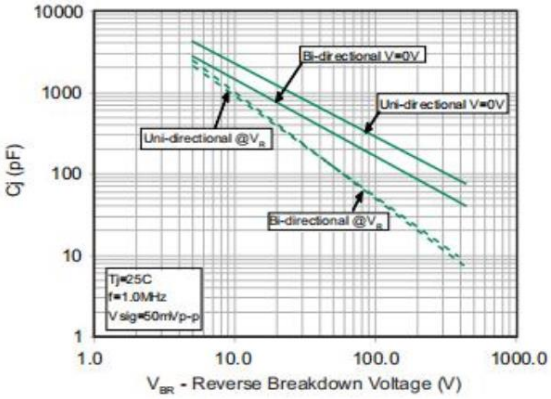


Figure 4. Typical Junction Capacitance

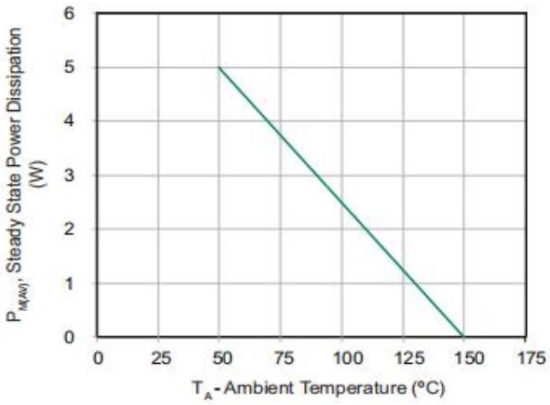


Figure 5. Steady State Power Dissipation Derating Curve

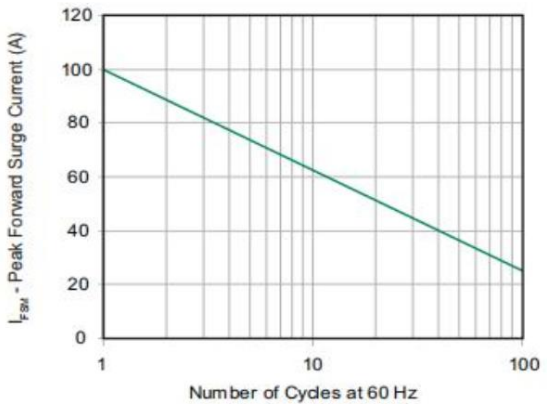
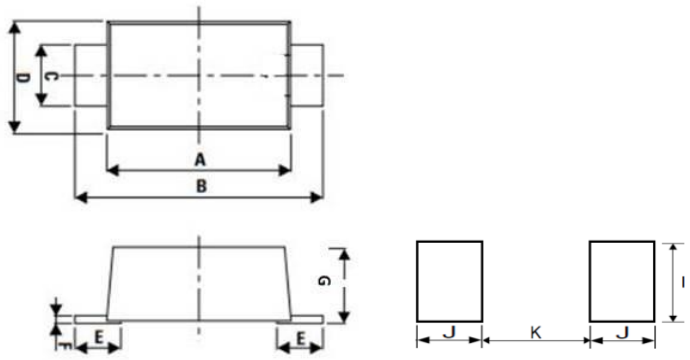


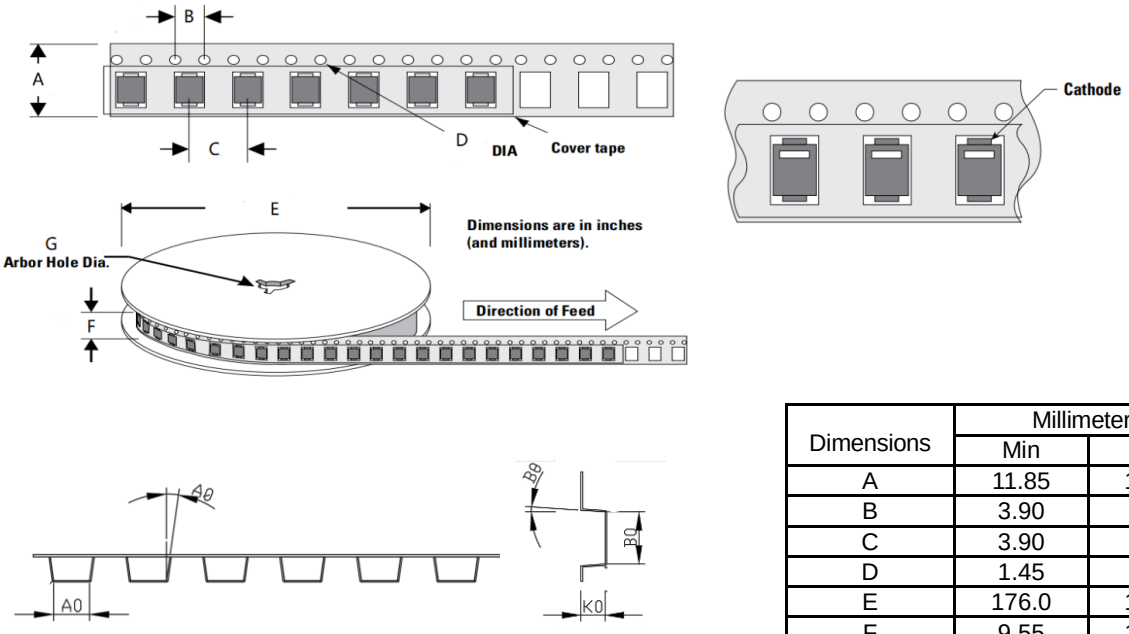
Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

・SMAF Package outlines : Dimensions in millimeters



Dimensions	Millimeters	
	Min	Max
A	3.30	4.40
B	4.40	5.40
C	1.25	1.60
D	2.40	2.75
E	0.60	1.30
F	0.10	0.30
G	0.90	1.33
I	1.52	
J	1.20	
K		3.20

・Tape & Reel Information



Dimensions	Millimeters	
	Min	Max
A	11.85	12.15
B	3.90	4.10
C	3.90	4.10
D	1.45	1.65
E	176.0	180.0
F	9.55	14.50
G	12.50	14.50
A0	2.70	3.00
B0	4.90	5.40
K0	1.33	2.46
Aθ	--	6^{o}
Bθ	--	6^{o}

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