

## TRANSIENT VOLTAGE SUPPRESSOR

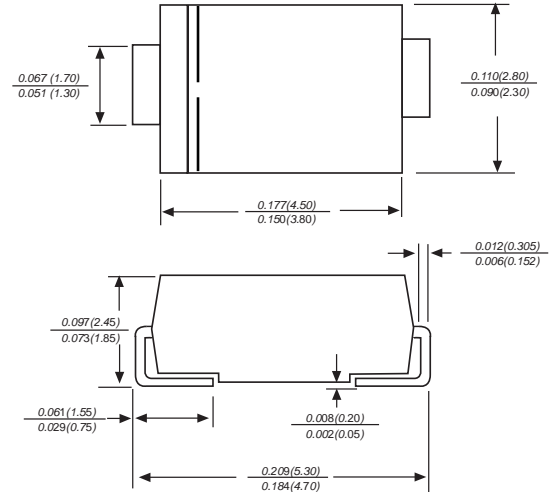
### Features

- ◆ For surface mounted applications in order to optimize board space
- ◆ Low profile package
- ◆ Low inductance
- ◆ Plastic package has underwriters laboratory flammability

### Mechanical Data

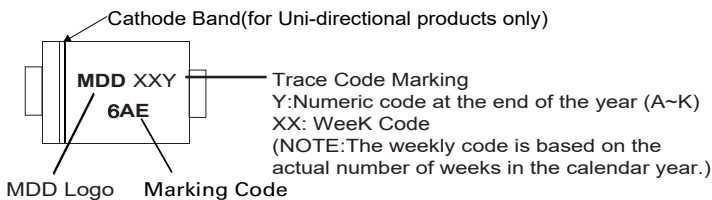
Case : JEDEC DO-214AC/SMA molded plastic body  
 Terminals : Solderable per MIL-STD-750, Method 2026  
 Polarity : Polarity symbol marking on body  
 Mounting Position : Any  
 Weight : 0.055 grams

**DO-214AC/SMA**

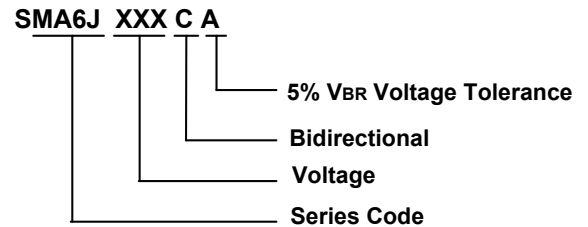


Dimensions in inches and (millimeters)

### Marking Code



### Part Number Code



### MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.			
Peak pulse power dissipation at 10/1000µs waveform	P <sub>PPM</sub>	600	W
Peak pulse current of at 10/1000µs waveform	I <sub>PPM</sub>	See Table1	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method)	I <sub>FSM</sub> (UNI)	60	A
Typical thermal resistance junction to ambient (Note 1)	R <sub>θJA</sub>	100	°C/W
Operating junction and Storage Temperature Range.	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

Note 1: Mounted on 8X8mm copper pads to each terminal.



# SMA6J5.0(C)A THRU SMA6J100(C)A

Stand-off Voltage - 5.0 to 100 Volts Peak Pulse Power: 600 Watts

## Electrical Characteristics (TA=25°C)

Table 1

Type		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current	Package	
			V <sub>BR</sub> @ I <sub>T</sub>						SMA	
			V <sub>RWM</sub>	Min	Max	I <sub>T</sub>	I <sub>R</sub> @ V <sub>RWM</sub>	V <sub>C</sub> @ I <sub>PP</sub>	I <sub>PP</sub>	Device Marking Ccode
UNI	BI	V	V	V	mA	µA	V	A	UNI	BI
SMA6J5.0A	SMA6J5.0CA	5.0	6.4	7.07	10	800	9.2	65.22	6AE	6HE
SMA6J6.0A	SMA6J6.0CA	6.0	6.67	7.37	10	800	10.3	58.25	6AG	6HG
SMA6J6.5A	SMA6J6.5CA	6.5	7.22	7.98	10	500	11.2	53.57	6AK	6HK
SMA6J7.0A	SMA6J7.0CA	7.0	7.78	8.6	10	200	12	50	6AM	6HM
SMA6J7.5A	SMA6J7.5CA	7.5	8.33	9.21	1	100	12.9	46.51	6AP	6HP
SMA6J8.0A	SMA6J8.0CA	8.0	8.89	9.83	1	50	13.6	44.12	6AR	6HR
SMA6J8.5A	SMA6J8.5CA	8.5	9.44	10.4	1	10	14.4	41.67	6AT	6HT
SMA6J9.0A	SMA6J9.0CA	9.0	10	11.1	1	5	15.4	38.96	6AV	6HV
SMA6J10A	SMA6J10CA	10	11.1	12.3	1	5	17	35.29	6AX	6HX
SMA6J11A	SMA6J11CA	11	12.2	13.5	1	5	18.2	32.97	6AZ	6WZ
SMA6J12A	SMA6J12CA	12	13.3	14.7	1	5	19.9	30.15	6BE	6XE
SMA6J13A	SMA6J13CA	13	14.4	15.9	1	1	21.5	27.91	6BG	6XG
SMA6J14A	SMA6J14CA	14	15.6	17.2	1	1	23.2	25.86	6BK	6XK
SMA6J15A	SMA6J15CA	15	16.7	18.5	1	1	24.4	24.59	6BM	6XM
SMA6J16A	SMA6J16CA	16	17.8	19.7	1	1	26	23.08	6BP	6XP
SMA6J17A	SMA6J17CA	17	18.9	20.9	1	1	27.6	21.74	6BR	6XR
SMA6J18A	SMA6J18CA	18	20	22.1	1	1	29.2	20.55	6BT	6XT
SMA6J20A	SMA6J20CA	20	22.2	24.5	1	1	32.4	18.52	6BV	6XV
SMA6J22A	SMA6J22CA	22	24.4	26.9	1	1	35.5	16.9	6BX	6XX
SMA6J24A	SMA6J24CA	24	26.7	29.5	1	1	38.9	15.42	6BZ	6XZ
SMA6J26A	SMA6J26CA	26	28.9	31.9	1	1	42.1	14.25	6CE	6YE
SMA6J28A	SMA6J28CA	28	31.1	34.4	1	1	45.4	13.22	6CG	6YG
SMA6J30A	SMA6J30CA	30	33.3	36.8	1	1	48.4	12.4	6CK	6YK
SMA6J33A	SMA6J33CA	33	36.7	40.6	1	1	53.3	11.26	6CM	6YM
SMA6J36A	SMA6J36CA	36	40	44.2	1	1	58.1	10.33	6CP	6YP
SMA6J40A	SMA6J40CA	40	44.4	49.1	1	1	64.5	9.3	6CR	6YR
SMA6J43A	SMA6J43CA	43	47.8	52.8	1	1	69.4	8.65	6CT	6YT
SMA6J45A	SMA6J45CA	45	50	55.3	1	1	72.7	8.25	6CV	6YV
SMA6J48A	SMA6J48CA	48	53.3	58.9	1	1	77.4	7.75	6CX	6YX
SMA6J51A	SMA6J51CA	51	56.7	62.7	1	1	82.4	7.28	6CZ	6YZ
SMA6J54A	SMA6J54CA	54	60	66.3	1	1	87.1	6.89	6RE	6ZE
SMA6J58A	SMA6J58CA	58	64.4	71.2	1	1	93.6	6.41	6RG	6ZG
SMA6J60A	SMA6J60CA	60	66.7	73.7	1	1	96.8	6.2	6RK	6ZK
SMA6J64A	SMA6J64CA	64	71.1	78.6	1	1	103	5.83	6RM	6ZM
SMA6J70A	SMA6J70CA	70	77.8	86	1	1	113	5.31	6RP	6ZP
SMA6J75A	SMA6J75CA	75	83.3	92.1	1	1	121	4.96	6RR	6ZR
SMA6J78A	SMA6J78CA	78	86.7	95.8	1	1	126	4.76	6RT	6ZT
SMA6J85A	SMA6J85CA	85	94.4	104	1	1	137	4.38	6RV	6ZV
SMA6J90A	SMA6J90CA	90	100	111	1	1	146	4.11	6RX	6MX
SMA6J100A	SMA6J100CA	100	111	123	1	1	162	3.7	6RZ	6MZ

## RATINGS AND CHARACTERISTICS CURVES ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Peak Pulse Power Rating Curve

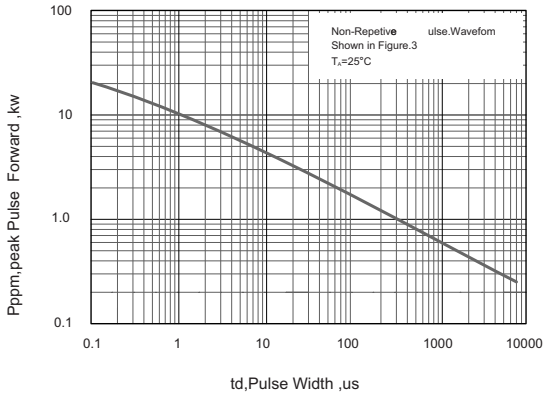


Fig.2 Forward Current Derating Curve

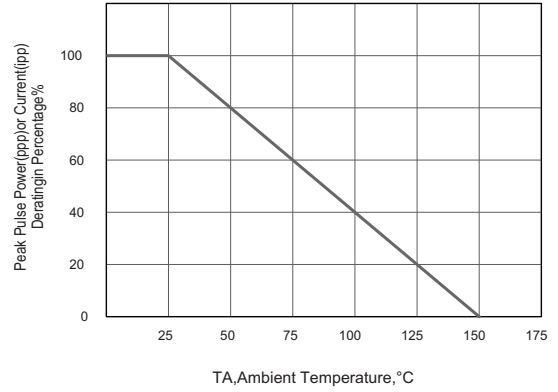


Fig.3 Pulse Waveform

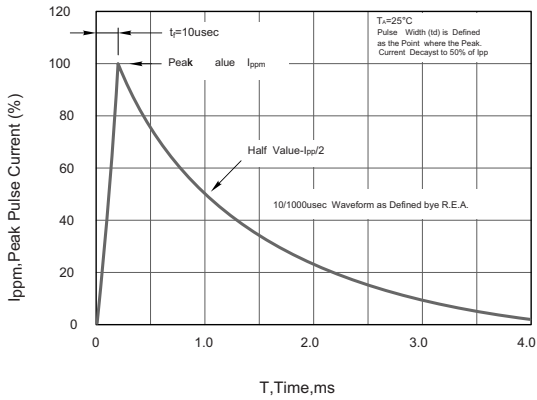
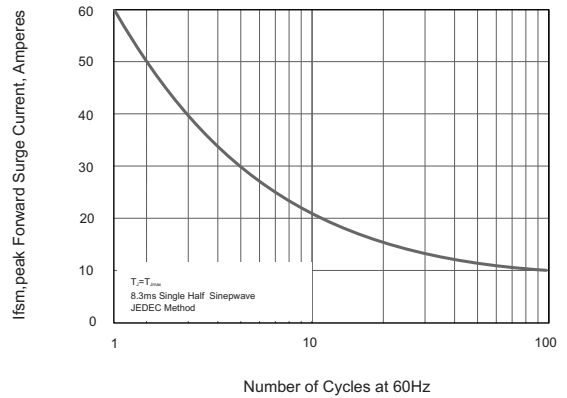
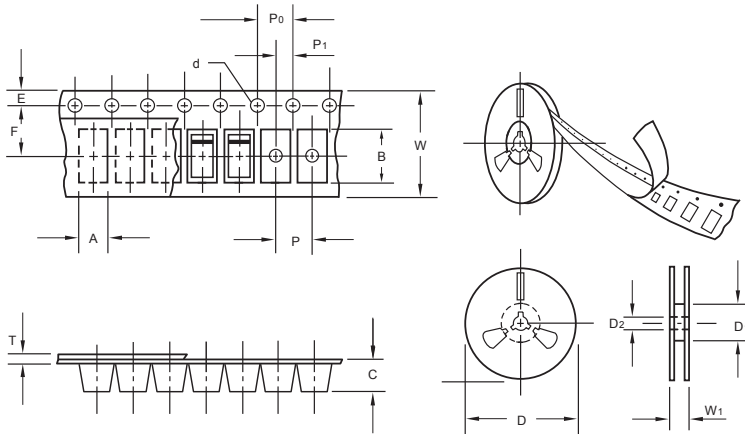


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



## Packing information



unit:mm

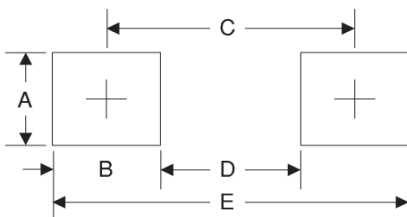
Item	Symbol	Tolerance	SMA
Carrier width	A	0.1	2.80
Carrier length	B	0.1	5.33
Carrier depth	C	0.1	2.36
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D <sub>1</sub>	min	50.00
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D <sub>1</sub>	min	62.00
Feed hole diameter	D <sub>2</sub>	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P <sub>0</sub>	0.1	4.00
Embossment center	P <sub>1</sub>	0.1	2.00
Overall tape thickness	T	0.1	0.28
Tape width	W	0.3	12.00
Reel width	W <sub>1</sub>	1.0	18.00

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

PACKAGE	REELSIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SMA	13"	5,000	4.0	10,000	340*350*40	330	370*370*370	80,000	11.0
SMA	13"	7,500	4.0	15,000	340*350*40	330	370*370*370	120,000	14.5

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.52	0.060
C	3.93	0.154
D	2.41	0.095
E	5.45	0.215

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