

**描述 / Descriptions**

表面贴装瞬态电压抑制器功率：400W,反向浪涌电压：5.0V~440V，SMA 封装。  
Surface mount transient voltage suppressor power 400 watts,Stand-Off Voltage：5.0V~440V，SMA package.

**特征 / Features**

玻璃钝化，低电感，适用表面贴装。无卤产品。  
Glass passivated junction, Low inductance, For surface mounted applications. HF product.

**用途 / Applications**

一般用途。  
General purpose.

**内部等效电路 / Equivalent Circuit**

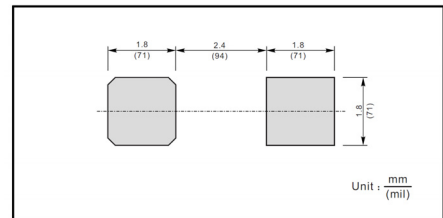


**引脚排列 / Pinning**



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



**印章代码 / Marking**

见印章说明。See Marking Instructions.

**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak Pulse Power Dissipation on T <sub>A</sub> =25°C (Note 1,2,4, Fig1)	P <sub>PPM</sub>	400	W
Peak Forward Surge Current (Note 3, Fig 4)	I <sub>FSM</sub> (UNI)	60	A
Peak Pulse Current on 10/1000 us waveform (Note 1, Fig 3)	I <sub>PPM</sub>	see Table 1	A
ESD Voltage per IEC6100-4-2	Contact	V <sub>ESD1</sub>	±30
	Air	V <sub>ESD2</sub>	±30
Typical Thermal Resistance Junction to Ambient(Note 2)	R <sub>θJA</sub>	30	°C/W
Operating Junction Temperature and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-65 ~ +150	°C

Note:

1. Non-repetitive current pulse, per Fig.3 and derated above T<sub>A</sub> = 25°C per Fig. 2.
2. Mounted on 5mm<sup>2</sup> copper pads to each terminal.
3. Peak Forward Surge Current : 8.3ms single half sine-wave Superimposed on rated load (JEDEC method).
4. Peak pulse power waveform is 10/1000μS.

**电性能参数 / Electrical Characteristics(Ta=25°C)**

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>		I <sub>T</sub>	I <sub>R</sub> @ V <sub>R</sub> RM	V <sub>C</sub> @ I <sub>PP</sub>	I <sub>PP</sub>	SMA	
		V <sub>R</sub> RM	Min	Max					Device Marking Ccode	
UNI	BI	V	V	V	mA	uA	V	A	UNI	BI
SMAJ5.0A	SMAJ5.0CA	5	6.4	7	10	800	9.2	43.5	AE	WE
SMAJ6.0A	SMAJ6.0CA	6	6.67	7.37	10	800	10.3	38.8	AG	WG
SMAJ6.5A	SMAJ6.5CA	6.5	7.22	7.98	10	500	11.2	35.7	AK	WK
SMAJ7.0A	SMAJ7.0CA	7	7.78	8.6	10	200	12.0	33.3	AM	WM
SMAJ7.5A	SMAJ7.5CA	7.5	8.33	9.21	1	100	12.9	31.0	AP	WP
SMAJ8.0A	SMAJ8.0CA	8	8.89	9.83	1	50	13.6	29.4	AR	WR
SMAJ8.5A	SMAJ8.5CA	8.5	9.44	10.4	1	20	14.4	27.8	AT	WT
SMAJ9.0A	SMAJ9.0CA	9	10	11.1	1	10	15.4	26.0	AV	WV
SMAJ10A	SMAJ10CA	10	11.1	12.3	1	5	17.0	23.5	AX	WX
SMAJ11A	SMAJ11CA	11	12.2	13.5	1	1	18.2	22.0	AZ	WZ
SMAJ12A	SMAJ12CA	12	13.3	14.7	1	1	19.9	20.1	BE	XE
SMAJ13A	SMAJ13CA	13	14.4	15.9	1	1	21.5	18.6	BG	XG
SMAJ14A	SMAJ14CA	14	15.6	17.2	1	1	23.2	17.2	BK	XK
SMAJ15A	SMAJ15CA	15	16.7	18.5	1	1	24.4	16.4	BM	XM
SMAJ16A	SMAJ16CA	16	17.8	19.7	1	1	26.0	15.4	BP	XP
SMAJ17A	SMAJ17CA	17	18.9	20.9	1	1	27.6	14.5	BR	XR
SMAJ18A	SMAJ18CA	18	20	22.1	1	1	29.2	13.7	BT	XT
SMAJ20A	SMAJ20CA	20	22.2	24.5	1	1	32.4	12.3	BV	XV
SMAJ22A	SMAJ22CA	22	24.4	26.9	1	1	35.5	11.3	BX	XX
SMAJ24A	SMAJ24CA	24	26.7	29.5	1	1	38.9	10.3	BZ	XZ
SMAJ26A	SMAJ26CA	26	28.9	31.9	1	1	42.1	9.5	CE	YE
SMAJ28A	SMAJ28CA	28	31.1	34.4	1	1	45.4	8.8	CG	YG
SMAJ30A	SMAJ30CA	30	33.3	36.8	1	1	48.4	8.3	CK	YK
SMAJ33A	SMAJ33CA	33	36.7	40.6	1	1	53.3	7.5	CM	YM
SMAJ36A	SMAJ36CA	36	40	44.2	1	1	58.1	6.9	CP	YP
SMAJ40A	SMAJ40CA	40	44.4	49.1	1	1	64.5	6.2	CR	YR
SMAJ43A	SMAJ43CA	43	47.8	52.8	1	1	69.4	5.8	CT	YT

**电性能参数 / Electrical Characteristics(Ta=25°C)**

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>R</sub> RM	Min	Max	I <sub>T</sub>	I <sub>R</sub> @ V <sub>R</sub> RM	V <sub>C</sub> @ I <sub>PP</sub>	I <sub>PP</sub>	Device Marking Ccode	UNI
UNI	BI	V	V	V	mA	uA	V	A	UNI	BI
SMAJ45A	SMAJ45CA	45	50	55.3	1	1	72.7	5.5	CV	YV
SMAJ48A	SMAJ48CA	48	53.3	58.9	1	1	77.4	5.2	CX	YX
SMAJ51A	SMAJ51CA	51	56.7	62.7	1	1	82.4	4.9	CZ	YZ
SMAJ54A	SMAJ54CA	54	60	66.3	1	1	87.1	4.6	RE	ZE
SMAJ58A	SMAJ58CA	58	64.4	71.2	1	1	93.6	4.3	RG	ZG
SMAJ60A	SMAJ60CA	60	66.7	73.7	1	1	96.8	4.1	RK	ZK
SMAJ64A	SMAJ64CA	64	71.1	78.6	1	1	103.0	3.9	RM	ZM
SMAJ70A	SMAJ70CA	70	77.8	86	1	1	113.0	3.5	RP	ZP
SMAJ75A	SMAJ75CA	75	83.3	92.1	1	1	121.0	3.3	RR	ZR
SMAJ78A	SMAJ78CA	78	86.7	95.8	1	1	126.0	3.2	RT	ZT
SMAJ85A	SMAJ85CA	85	94.4	104	1	1	137.0	2.9	RV	ZV
SMAJ90A	SMAJ90CA	90	100	111	1	1	146.0	2.7	RX	ZX
SMAJ100A	SMAJ100CA	100	111	123	1	1	162.0	2.5	RZ	ZZ
SMAJ110A	SMAJ110CA	110	122	135	1	1	177.0	2.3	SE	VE
SMAJ120A	SMAJ120CA	120	133	147	1	1	193.0	2.1	SG	VG
SMAJ130A	SMAJ130CA	130	144	159	1	1	209.0	1.9	SK	VK
SMAJ150A	SMAJ150CA	150	167	185	1	1	243.0	1.6	SM	VM
SMAJ160A	SMAJ160CA	160	178	197	1	1	259.0	1.5	SP	VP
SMAJ170A	SMAJ170CA	170	189	209	1	1	275.0	1.5	SR	VR
SMAJ180A	SMAJ180CA	180	201	222	1	1	292.0	1.4	ST	VT
SMAJ200A	SMAJ200CA	200	224	247	1	1	324.0	1.2	SV	VV
SMAJ220A	SMAJ220CA	220	246	272	1	1	356.0	1.1	SX	VX
SMAJ250A	SMAJ250CA	250	279	309	1	1	405.0	1.0	SZ	VZ
SMAJ300A	SMAJ300CA	300	335	371	1	1	486.0	0.8	TE	UE
SMAJ350A	SMAJ300CA	350	391	432	1	1	567.0	0.7	TG	UG
SMAJ400A	SMAJ350CA	400	447	494	1	1	648.0	0.6	TK	UK
SMAJ440A	SMAJ400CA	440	492	543	1	1	713.0	0.6	TM	UM

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Peak Pulse Power Rating Curve

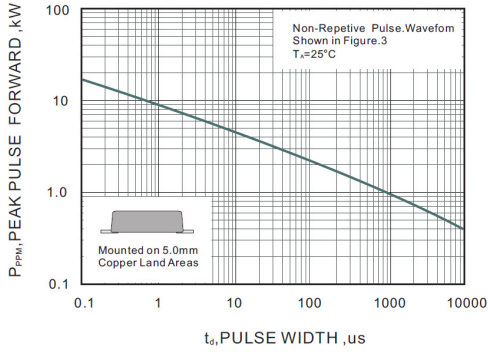


Fig.2 Forward Current Derating Curve

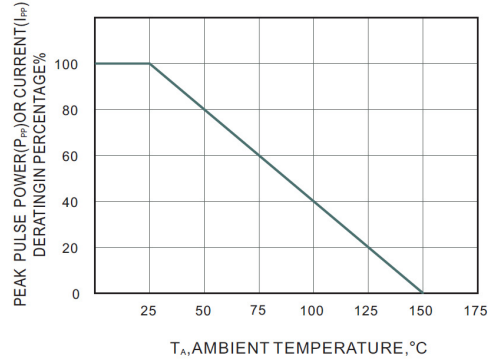


Fig.3 Pulse Waveform

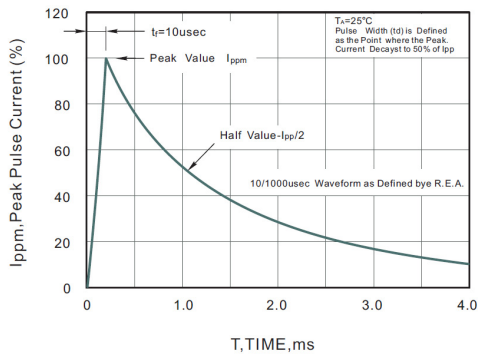
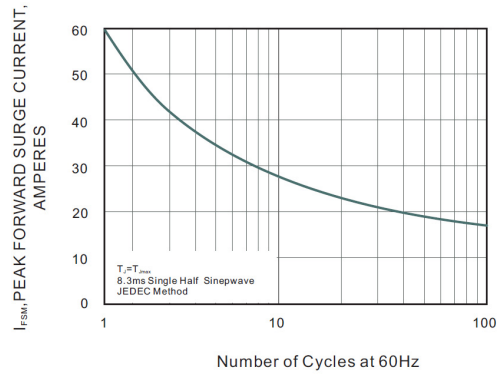
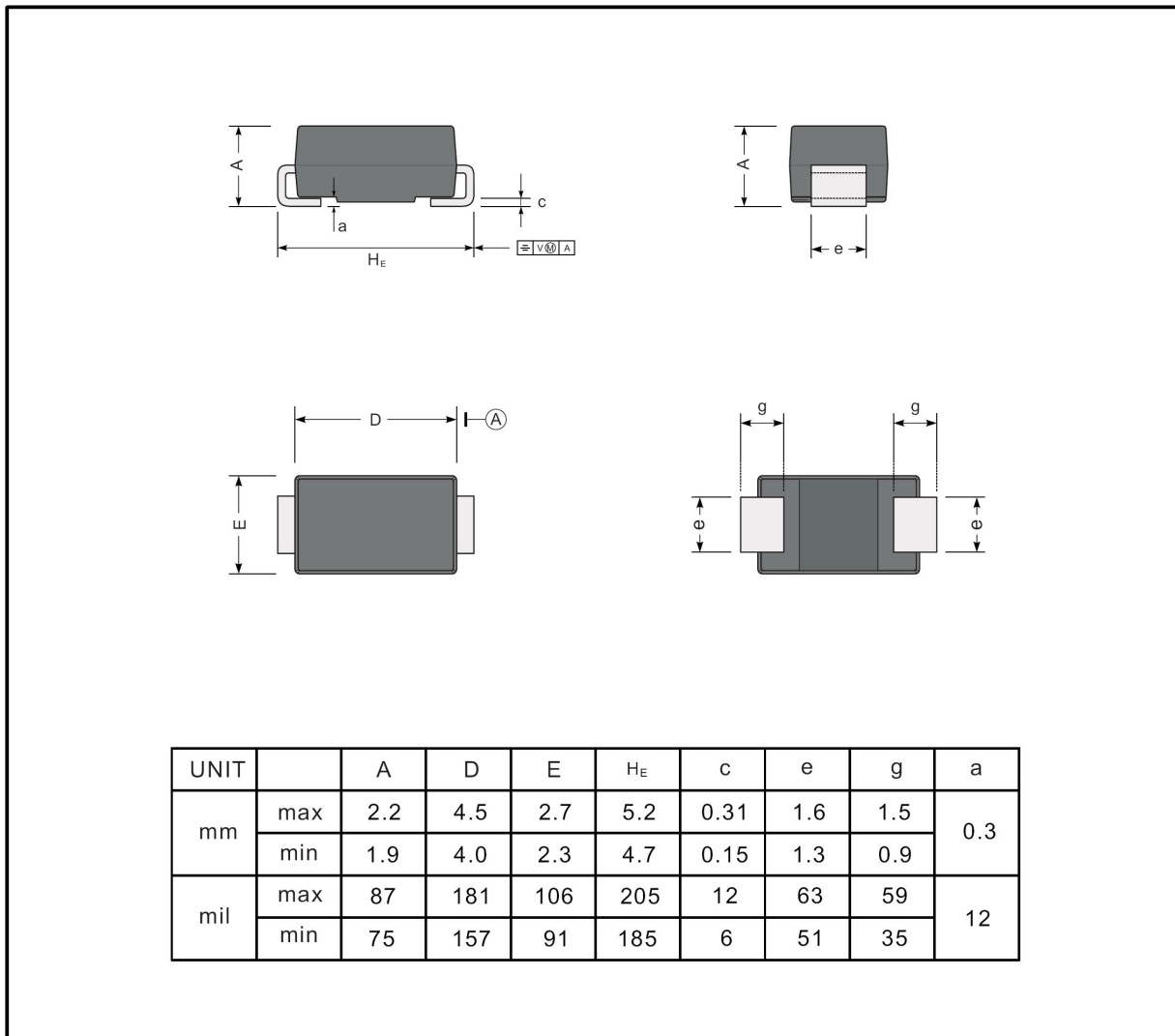


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

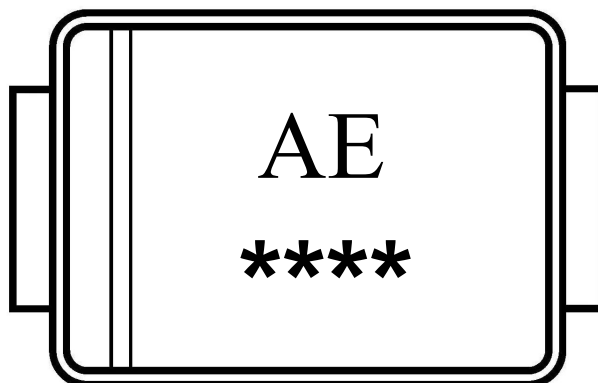


外形尺寸图 / Package Dimensions

SMA



印章说明 / Marking Instructions



说明：

AE : 为型号代码

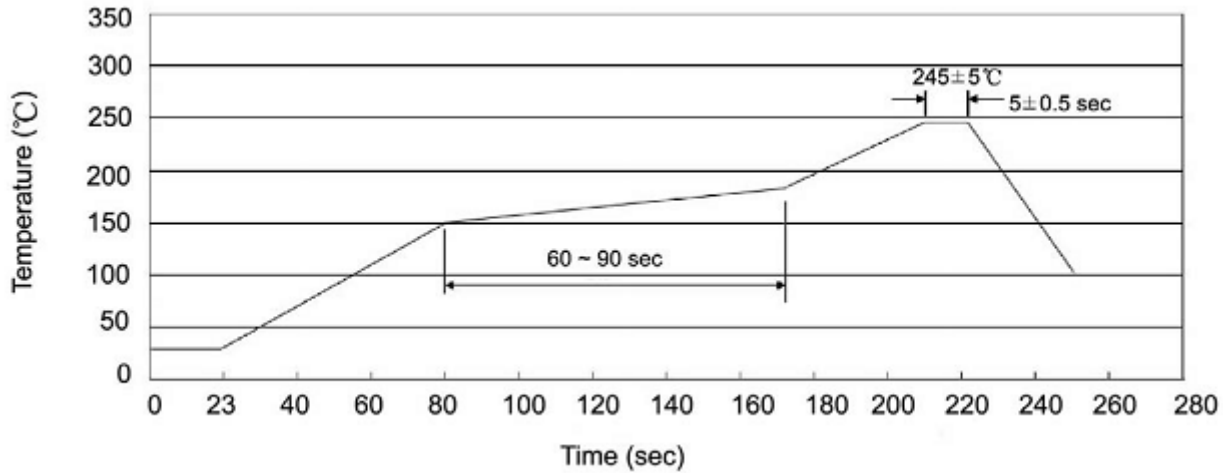
\*\*\*\* : 为生产批号追溯码，第1个\*为年月代码，后面3个\*为当月小批号代码

Note:

AE : Product Type Code

\*\*\*\* : Lot No. Code ,The 1st \* means:YM Code ,The last 3 \* means:little Lot No  
Code

**回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)**



说明：

- 1、预热温度  $25 \sim 150^\circ\text{C}$ ，时间  $60 \sim 90\text{sec}$ ；
- 2、峰值温度  $245 \pm 5^\circ\text{C}$ ，时间持续为  $5 \pm 0.5\text{sec}$ ；
- 3、焊接制程冷却速度为  $2 \sim 10^\circ\text{C}/\text{sec}$ 。

Note:

- 1.Preheating: $25 \sim 150^\circ\text{C}$ , Time: $60 \sim 90\text{sec}$ .
- 2.Peak Temp.: $245 \pm 5^\circ\text{C}$ , Duration: $5 \pm 0.5\text{sec}$ .
3. Cooling Speed:  $2 \sim 10^\circ\text{C}/\text{sec}$ .

**耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions**

温度： $260 \pm 5^\circ\text{C}$

时间： $10 \pm 1$  sec.

Temp.: $260 \pm 5^\circ\text{C}$

Time: $10 \pm 1$  sec

**包装规格 / Packaging SPEC.**

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SMA	5000	2	10000	5	50000	13" ×12	340X340X40	350X350X230

**使用说明 / Notices**



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[HF](#) [3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [JANTX1N6126A](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#) [SCM1293A-04SO](#)  
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