

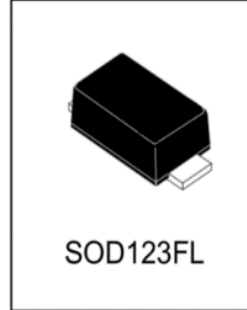
# SODJ\*\*\***(C)**A-SH

## SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

### 200 Watt Peak Pulse Power

#### Features

- \* For surface mounted applications in order to optimize board space
- \* Low profile package
- \* Excellent clamping capability
- \* IEC61000-4-2 ESD 15kV Air,8kV contact compliance
- \* Protects one I/O line
- \* Lead-free parts meet RoHS requirements
- \* Suffix "-SH" indicates Halogen-free part, ex.SODJ5.0A-SH.



#### Applications

- \* Personal digital assistants (PDA)
- \* Cellular handsets & Accessories
- \* Portable devices
- \* Portable instrumentation
- \* Handhelds and notebooks
- \* Digital cameras

We declare that the material of product is  
Halogen free (green epoxy compound)

#### Mechanical data

- \* **Epoxy** : UL94-V0 rated flame retardant
- \* **Case** : Molded plastic, SOD123-FL/MINI SMA
- \* **Terminals** :Plated terminals, solderable per MIL-STD-750,Method 2026
- \* **Polarity** : Indicated by cathode band; Bidirectional without color band.
- \* **Mounting Position** : Any
- \* **Weight** :15mg

#### 1.Maximum ratings and Electrical Characteristics(AT T =25 AoC unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNITS
Peak Power Dissipation at $T_A=25^{\circ}\text{C}$ , $T_P=1\text{ms}$ (Note 1)	$P_{PPM}$	Minimum 200	Watts
Steady State Power Dissipation at $T_C=75^{\circ}\text{C}$ (Note 2)	$P_{M(AV)}$	0.5	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Unidirectional Only, Superimposed on Rated Load(JECED Method) (Note 3)	$I_{FSM}$	20	Amps
Operating Temperature Range	$T_J$ ,	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$

#### NOTES:

1. Non-repetitive current pulse, per Fig. 3 and derated above  $T_A=25^{\circ}\text{C}$  per Fig. 2.
2. 8.0mm<sup>2</sup> (.013mm thick) land areas
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

## SODJ\*\*\***(C)**A-SH

UNI-DIRECTIONAL PART NUMBER	Bidirectional-DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @IPP VC (V)	REVERSE LEAKAGE @VRWM IR (uA)	IPPM (A)	Marking Code	
									Uni	Bi
SODJ5.0A-SH	SODJ5.0CA-SH	5	6.4	7	10	9.2	400	21.7	KE	AE
SODJ6.0A-SH	SODJ6.0CA-SH	6	6.67	7.37	10	10.3	400	19.4	KG	AG
SODJ6.5A-SH	SODJ6.5CA-SH	6.5	7.22	7.98	10	11.2	250	17.9	KK	AK
SODJ7.0A-SH	SODJ7.0CA-SH	7	7.78	8.6	10	12	100	16.7	KM	AM
SODJ7.5A-SH	SODJ7.5CA-SH	7.5	8.33	9.21	1	12.9	50	15.5	KP	AP
SODJ8.0A-SH	SODJ8.0CA-SH	8	8.89	9.83	1	13.6	25	14.7	KR	AR
SODJ8.5A-SH	SODJ8.5CA-SH	8.5	9.44	10.4	1	14.4	10	13.9	KT	AT
SODJ9.0A-SH	SODJ9.0CA-SH	9	10	11.1	1	15.4	5	13	KV	AV
SODJ10A-SH	SODJ10CA-SH	10	11.1	12.3	1	17	2.5	11.8	KX	AX
SODJ11A-SH	SODJ11CA-SH	11	12.2	13.5	1	18.2	2.5	11	KZ	AZ
SODJ12A-SH	SODJ12CA-SH	12	13.3	14.7	1	19.9	2.5	10.1	LE	BE
SODJ13A-SH	SODJ13CA-SH	13	14.4	15.9	1	21.5	1	9.3	LG	BG
SODJ14A-SH	SODJ14CA-SH	14	15.6	17.2	1	23.2	1	8.6	LK	BK
SODJ15A-SH	SODJ15CA-SH	15	16.7	18.5	1	24.4	1	8.2	LM	BM
SODJ16A-SH	SODJ16CA-SH	16	17.8	19.7	1	26	1	7.7	LP	BP
SODJ17A-SH	SODJ17CA-SH	17	18.9	20.9	1	27.6	1	7.2	LR	BR
SODJ18A-SH	SODJ18CA-SH	18	20	22.1	1	29.2	1	6.8	LT	BT
SODJ20A-SH	SODJ20CA-SH	20	22.2	24.5	1	32.4	1	6.2	LV	BV
SODJ22A-SH	SODJ22CA-SH	22	24.4	26.9	1	35.5	1	5.6	LX	BX
SODJ24A-SH	SODJ24CA-SH	24	26.7	29.5	1	38.9	1	5.1	LZ	BZ
SODJ26A-SH	SODJ26CA-SH	26	28.9	31.9	1	42.1	1	4.8	ME	CE
SODJ28A-SH	SODJ28CA-SH	28	31.1	34.4	1	45.4	1	4.4	MG	CG
SODJ30A-SH	SODJ30CA-SH	30	33.3	36.8	1	48.4	1	4.1	MK	CK
SODJ33A-SH	SODJ33CA-SH	33	36.7	40.6	1	53.3	1	3.8	MM	CM
SODJ36A-SH	SODJ36CA-SH	36	40	44.2	1	58.1	1	3.4	MP	CP
SODJ40A-SH	SODJ40CA-SH	40	44.4	49.1	1	64.5	1	3.1	MR	CR
SODJ43A-SH	SODJ43CA-SH	43	47.8	52.8	1	69.4	1	2.9	MT	CT
SODJ45A-SH	SODJ45CA-SH	45	50	55.3	1	72.7	1	2.8	MV	CV
SODJ48A-SH	SODJ48CA-SH	48	53.3	58.9	1	77.4	1	2.6	MX	CX
SODJ51A-SH	SODJ51CA-SH	51	56.7	62.7	1	82.4	1	2.4	MZ	CZ
SODJ54A-SH	SODJ54CA-SH	54	60	66.3	1	87.1	1	2.3	NE	DE
SODJ58A-SH	SODJ58CA-SH	58	64.4	71.2	1	93.6	1	2.1	NG	DG
SODJ60A-SH	SODJ60CA-SH	60	66.7	73.7	1	96.8	1	2.1	NK	DK
SODJ64A-SH	SODJ64CA-SH	64	71.1	78.6	1	103	1	1.9	NM	DM
SODJ70A-SH	SODJ70CA-SH	70	77.8	86	1	113	1	1.8	NP	DP
SODJ75A-SH	SODJ75CA-SH	75	83.3	92.1	1	121	1	1.7	NR	DR
SODJ78A-SH	SODJ78CA-SH	78	86.7	95.8	1	126	1	1.6	NT	DT
SODJ85A-SH	SODJ85CA-SH	85	94.4	104	1	137	1	1.5	NV	DV
SODJ90A-SH	SODJ90CA-SH	90	100	111	1	146	1	1.4	NX	DX
SODJ100A-SH	SODJ100CA-SH	100	111	123	1	162	1	1.2	NZ	DZ
SODJ110A-SH	SODJ110CA-SH	110	122	135	1	177	1	1.1	PE	EE
SODJ120A-SH	SODJ120CA-SH	120	133	147	1	193	1	1.0	PG	EG
SODJ130A-SH	SODJ130CA-SH	130	144	159	1	209	1	1.0	PK	EK
SODJ150A-SH	SODJ150CA-SH	150	167	185	1	243	1	0.8	PM	EM
SODJ160A-SH	SODJ160CA-SH	160	178	197	1	259	1	0.8	PP	EP
SODJ170A-SH	SODJ170CA-SH	170	189	209	1	275	1	0.7	PR	ER
SODJ180A-SH	SODJ180CA-SH	180	198	221	1	291	1	0.7	PT	ET
SODJ190A-SH	SODJ190CA-SH	190	209	233	1	307	1	0.7	PV	EV
SODJ200A-SH	SODJ200CA-SH	200	220	246	1	324	1	0.6	PX	EX
SODJ220A-SH	SODJ220CA-SH	220	246	272	1	356	1	0.56	PY	EY

# SODJ<sup>\*\*\*</sup>(C)A-SH

## 2. Ratings and Characteristic Curves ( TA = 25°C unless otherwise noted )

Fig. 1-Peak Pulse Power Rating Curve

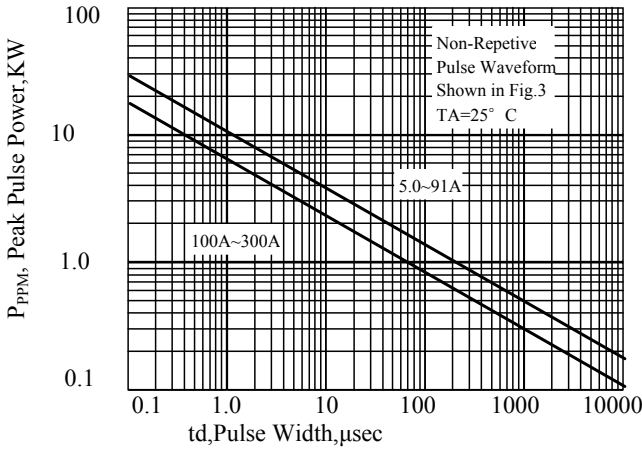


Fig. 2-Power Derating Curve

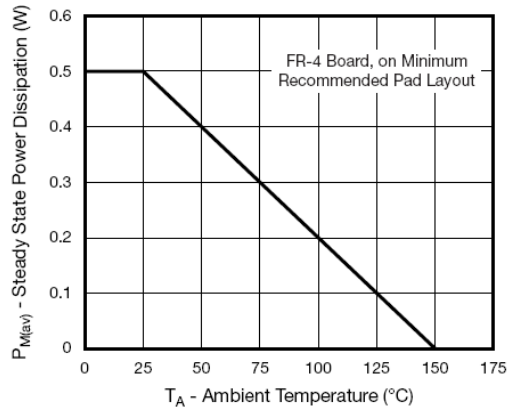


Fig. 3-Pulse Waveform

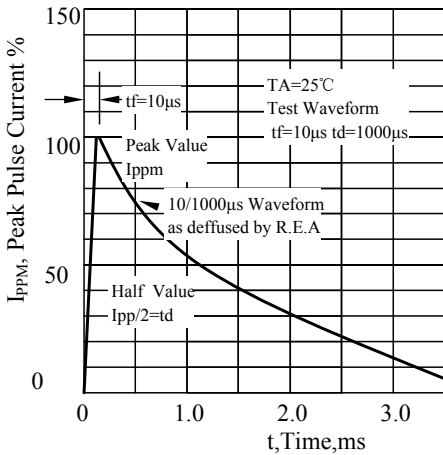


Fig. 4-Typical Junction Capacitance Unidirectional

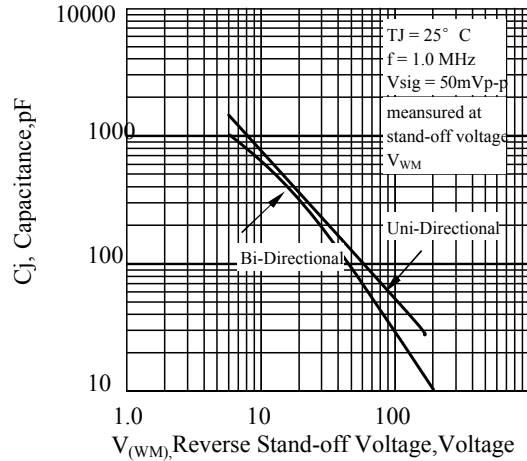


Fig 5 - typical transient thermal impedance

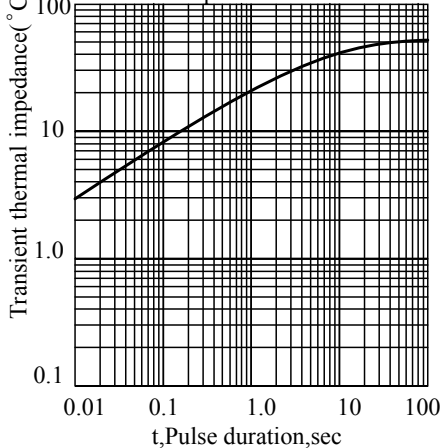
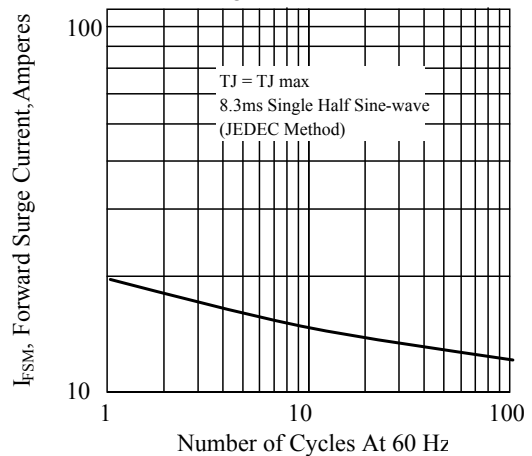
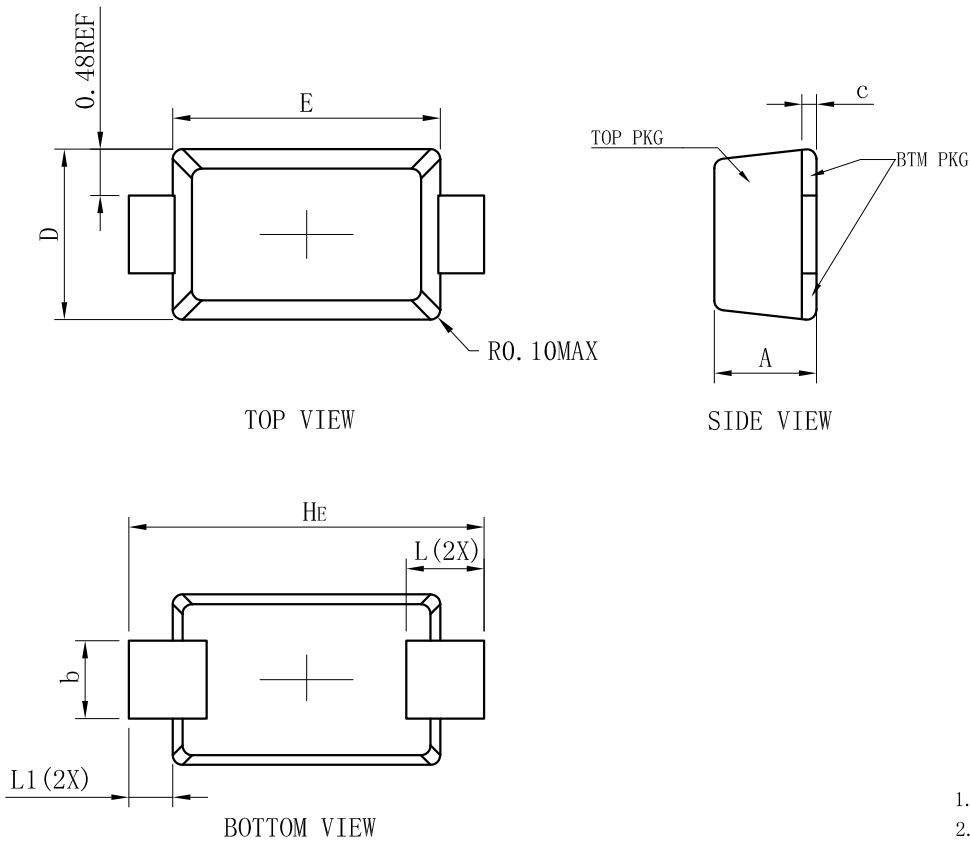


Fig. 6-Maximum Non-Repetitive Peak Forward Surge Current Unidirectional



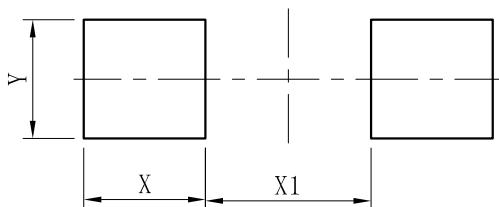
### 3. dimension:



#### GENERAL NOTES

1. Top package surface finish  $Ra0.4 \pm 0.2\mu m$
2. Bottom package surface finish  $Ra0.7 \pm 0.2\mu m$
3. Side package surface finish  $Ra0.4 \pm 0.2\mu m$

#### Suggested solder pad layout



DIM	(mm)
X	1.20
Y	1.10
X1	2.00

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## 功率产品包装规范

Document Number: APS-QA-QS-009

Revision C

Page 3 of 6



### 8.1.2 Label position and QA stamp position.(Empty area) 标签张贴位置及QA印章位置。(印章盖 标签空白区)



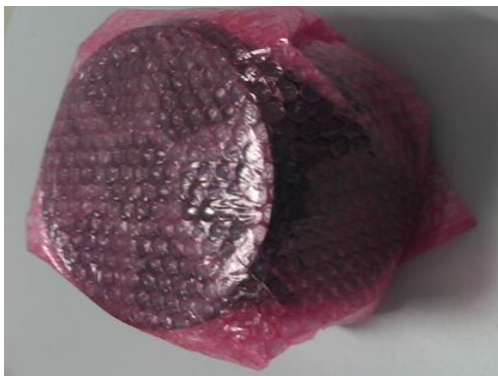
7英寸卷盘标签张贴及QA印章位置



13英寸卷盘标签张贴及QA印章位置

### 8.1.3 Ensure direction In the same reel. The same steel coil plate direction, With antistatic bubble to package reel. Refer to the below picture.

同一箱内的卷盘方向一致,用防静电泡沫对卷盘进行包裹。



7英寸卷盘防静电泡沫包裹



13英寸卷盘防静电泡沫包裹



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## 功率产品包装规范

Document Number: APS-QA-QS-009

Revision C

Page 4 of 6

8.1.4 Put in the antistatic packing box after packaged reels. And QA stamp on the box label .

将包装好的卷盘放入防静电纸箱中，并 盒标签上盖章。



7 英寸卷盘内盒及标签



13 英寸卷盘内盒及标签

8.1.5 Product use printing inner box. 产品使用LRC印字内箱。



7英寸卷盘内箱印字（侧面）



13英寸卷盘内箱印字（正面）

8.1.6 Inner box packing quantity requirement. 内盒包装数量要求。

Product Description	QTY
SOD123-FL	1-10Reels
SOD323-HE	1-10Reels
SMA-FL	1-7Reels
SMB-FL	1-4Reels

8.1.7 With transparent tape sealing. 透明胶带封箱。





Proprietary Information

# Title: Power Packages Product Packing Specification 功率产品包装规范

Document Number: APS-QA-QS-009

Revision C

Page 5 of 6



7英寸内箱封盒



13英寸内箱封盒

### 8.1.8 Outer box size and packing quantity requirement, 外箱尺寸及包装数量要求。

Product Description	卷盘尺寸	Height (H)	Width (W)	Length (L)	Max. Qty
Power Device	7 英寸	410mm	400mm	445mm	12
Power Device	13 英寸	410mm	400mm	445mm	5



7 英寸卷盘产品装箱



13 英寸卷盘产品装箱

统一方向





Proprietary Information

# Title: Power Packages Marking & Taping Specification

## 功率封装字模和编带规范

Document Number: APS-QA-QS-010

Revision C

Page 6 of 9

### 8.2 Standard Products Taping Specification

标准产品编带规范

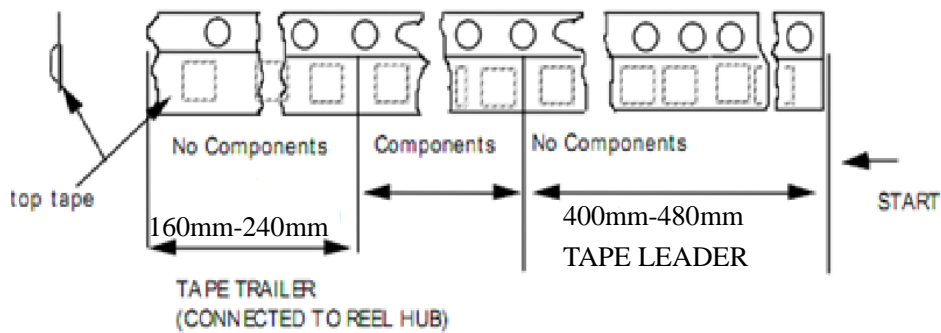
#### 8.2.1 Tape length of no component

空带长度说明

Taping leader length 引导部分: 440mm±40mm , Tape trailer 尾部: 200mm±40mm

Figure 4

Tape Ends For Finished Goods Reel



8.2.2 Component packaging orientation: The cathode lead is close to the carrier tape's index hole.

产品放置方向: 印阴极带引脚邻近载带索引孔





Proprietary Information

# Title: Power Packages Marking & Taping Specification

功率封装字模和编带规范

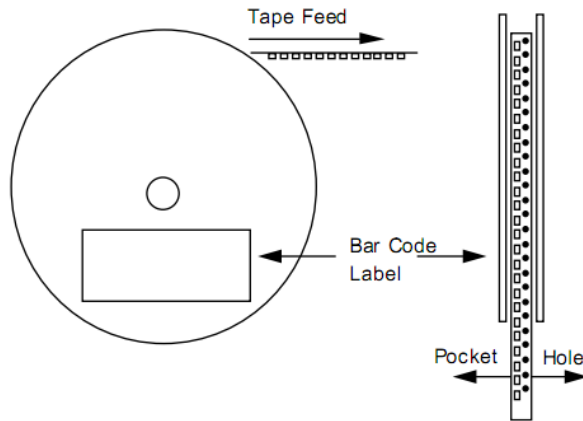
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Revision C

Page 7 of 9

## 8.2.3 Tape enwind orientation

编带缠绕方向要求



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[P6KE13CA](#) [P6KE43CA](#) [P6KE6.8CA](#) [P6KE8.2](#) [P6SMBJ20CA](#) [JANTX1N6072A](#) [SR2835ESKG](#) [SA90CA](#)