SZCJ

Shenzhen Changji Semiconductor Co., LTD.

SMAG Plastic-Encapsulate Diodes

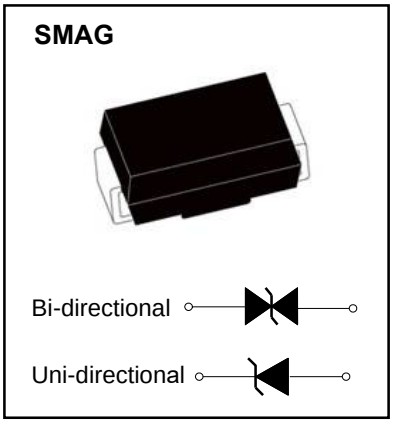
CJSMAJ SERIES Transient Voltage Suppressor Diodes

Features

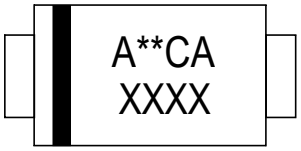
- P_{PP} 400W
- V_{RWM} 5V- 100V
- Glass passivated chip

Applications

- Clamping Voltage



Marking



Cathode Band:for uni-directional products only
A**CA = Device code, **=Voltage
C:Bi-directional or not
XXXX=Data Code

Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Peak pulse power dissipation	P_{PPM}	W	with a 10/1000us waveform	400
Peak pulse current(note 1)	I_{PPM}	A	with a 10/1000us waveform	See Next Table
Power dissipation	P_D	W	On infinite heat sink at T_L=50℃	3.3
Peak forward surge current	I_{FSM}	A	8.3 ms single half sine-wave uni-directional only (note 2)	60
Operating junction and storage temperature range	T_J,T_{STG}	℃		-55 to +150

Electrical Characteristics（T_a=25℃ Unless otherwise specified）

Item	Symbol	Unit	Conditions	Max
Maximum instantaneous forward Voltage	V_F	V	at 25A for uni-directional only	3.5
Thermal resistance	$R_{\theta JL}$	℃/W	junction to lead T_L=50℃	30
	$R_{\theta JA}$	℃/W	junction to ambient T_A=25℃	120

Notes:

(1) Non-repetitive current pulse, per Fig. 3 and derated above TA= 25℃per Fig.2
(2) 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minutes maximum

Electrical Characteristics (T_A=25℃ unless otherwise noted)

Part Number		Device Marking Code		Breakdown Voltage VBR@IT		Test Current	Max Reverse Leakage @VRWM	Reverse Standoff Voltage	Max Peak Pulse Current(1)	Max Clamping Voltage @Ipp
UNI	BI	UNI	BI	Min.(V)	Max.(V)	IT(mA)	IR(uA)	V_{RWM}(V)	IPP(A)	Vc(V)
CJSMAJ5.0A	CJSMAJ5.0CA	A5.0A XXXX(2)	A5.0CA XXXX	6.40	7.00	10	800	5	43.5	9.2
CJSMAJ6.0A	CJSMAJ6.0CA	A6.0A XXXX	A6.0CA XXXX	6.67	7.37	10	800	6	38.8	10.3
CJSMAJ6.5A	CJSMAJ6.5CA	A6.5A XXXX	A6.5CA XXXX	7.22	7.98	10	500	6.5	35.7	11.2
CJSMAJ7.0A	CJSMAJ7.0CA	A7.0A XXXX	A7.0CA XXXX	7.78	8.60	10	200	7	33.3	12.0
CJSMAJ7.5A	CJSMAJ7.5CA	A7.5A XXXX	A7.5CA XXXX	8.33	9.21	1	100	7.5	31.0	12.9
CJSMAJ8.0A	CJSMAJ8.0CA	A8.0A XXXX	A8.0CA XXXX	8.89	9.83	1	50	8	29.4	13.6
CJSMAJ8.5A	CJSMAJ8.5CA	A8.5A XXXX	A8.5CA XXXX	9.44	10.40	1	20	8.5	27.8	14.4
CJSMAJ9.0A	CJSMAJ9.0CA	A9.0A XXXX	A9.0CA XXXX	10.00	11.10	1	10	9	26.0	15.4
CJSMAJ10A	CJSMAJ10CA	A10A XXXX	A10CA XXXX	11.10	12.30	1	5	10	23.5	17.0
CJSMAJ11A	CJSMAJ11CA	A11A XXXX	A11CA XXXX	12.20	13.50	1	5	11	22.0	18.2
CJSMAJ12A	CJSMAJ12CA	A12A XXXX	A12CA XXXX	13.30	14.70	1	5	12	20.1	19.9
CJSMAJ13A	CJSMAJ13CA	A13A XXXX	A13CA XXXX	14.40	15.90	1	5	13	18.6	21.5
CJSMAJ14A	CJSMAJ14CA	A14A XXXX	A14CA XXXX	15.60	17.20	1	5	14	17.2	23.2
CJSMAJ15A	CJSMAJ15CA	A15A XXXX	A15CA XXXX	16.70	18.50	1	5	15	16.4	24.4
CJSMAJ16A	CJSMAJ16CA	A16A XXXX	A16CA XXXX	17.80	19.70	1	5	16	15.4	26.0
CJSMAJ17A	CJSMAJ17CA	A17A XXXX	A17CA XXXX	18.90	20.90	1	5	17	14.5	27.6
CJSMAJ18A	CJSMAJ18CA	A18A XXXX	A18CA XXXX	20.00	22.10	1	5	18	13.7	29.2
CJSMAJ20A	CJSMAJ20CA	A20A XXXX	A20CA XXXX	22.20	24.50	1	5	20	12.3	32.4
CJSMAJ22A	CJSMAJ22CA	A22A XXXX	A22CA XXXX	24.40	26.90	1	5	22	11.3	35.5
CJSMAJ24A	CJSMAJ24CA	A24A XXXX	A24CA XXXX	26.70	29.50	1	5	24	10.3	38.9
CJSMAJ26A	CJSMAJ26CA	A26A XXXX	A26CA XXXX	28.90	31.90	1	5	26	9.5	42.1
CJSMAJ28A	CJSMAJ28CA	A28A XXXX	A28CA XXXX	31.10	34.40	1	5	28	8.8	45.4
CJSMAJ30A	CJSMAJ30CA	A30A XXXX	A30CA XXXX	33.30	36.80	1	5	30	8.3	48.4
CJSMAJ33A	CJSMAJ33CA	A33A XXXX	A33CA XXXX	36.70	40.60	1	5	33	7.5	53.3
CJSMAJ36A	CJSMAJ36CA	A36A XXXX	A36CA XXXX	40.00	44.20	1	5	36	6.9	58.1
CJSMAJ40A	CJSMAJ40CA	A40A XXXX	A40CA XXXX	44.40	49.10	1	5	40	6.2	64.5
CJSMAJ43A	CJSMAJ43CA	A43A XXXX	A43CA XXXX	47.80	52.80	1	5	43	5.8	69.4
CJSMAJ45A	CJSMAJ45CA	A45A XXXX	A45CA XXXX	50.00	55.30	1	5	45	5.5	72.7
CJSMAJ48A	CJSMAJ48CA	A48A XXXX	A48CA XXXX	53.30	58.90	1	5	48	5.2	77.4
CJSMAJ51A	CJSMAJ51CA	A51A XXXX	A51CA XXXX	56.70	62.70	1	5	51	4.9	82.4

Electrical Characteristics (T_A=25℃ unless otherwise noted)

Part Number		Device Marking Code		Breakdown Voltage VBR@IT		Test Current	Max Reverse Leakage @VRWM	Reverse Standoff Voltage	Max Peak Pulse Current(1)	Max Clamping Voltage @Ipp
UNI	BI	UNI	BI	Min.(V)	Max.(V)	IT(mA)	IR(uA)	V_{RWM}(V)	IPP(A)	Vc(V)
CJSMAJ54A	CJSMAJ54CA	A54A XXXX	A54CA XXXX	60.00	66.30	1	5	54	4.6	87.1
CJSMAJ58A	CJSMAJ58CA	A58A XXXX	A58CA XXXX	64.40	71.20	1	5	58	4.3	93.6
CJSMAJ60A	CJSMAJ60CA	A60A XXXX	A60CA XXXX	66.70	73.70	1	5	60	4.1	96.8
CJSMAJ64A	CJSMAJ64CA	A64A XXXX	A64CA XXXX	71.10	78.60	1	5	64	3.9	103.0
CJSMAJ70A	CJSMAJ70CA	A70A XXXX	A70CA XXXX	77.80	86.00	1	5	70	3.5	113.0
CJSMAJ75A	CJSMAJ75CA	A75A XXXX	A75CA XXXX	83.30	92.10	1	5	75	3.3	121.0
CJSMAJ78A	CJSMAJ78CA	A78A XXXX	A78CA XXXX	86.70	95.80	1	5	78	3.2	126.0
CJSMAJ85A	CJSMAJ85CA	A85A XXXX	A85CA XXXX	94.40	104.00	1	5	85	2.9	137.0
CJSMAJ90A	CJSMAJ90CA	A90A XXXX	A90CA XXXX	100.00	111.00	1	5	90	2.7	146.0
CJSMAJ100A	CJSMAJ100CA	A100A XXXX	A100CA XXXX	111.00	123.00	1	5	100	2.5	162.0

Notes:

(1) Waveform of CJSMAJ5.0A -CJSMAJ100CA are defined as per fig.3
(2) XXXX=Code

Typical Characteristics

Figure 1. Peak Pulse Power Rating Curve

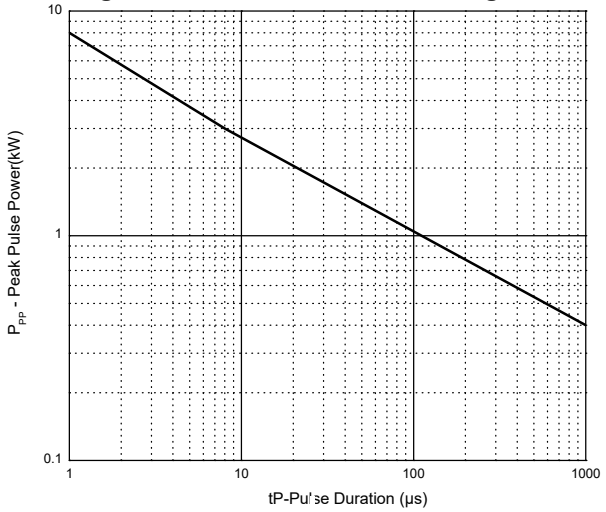


Figure 2. Pulse Derating Curve

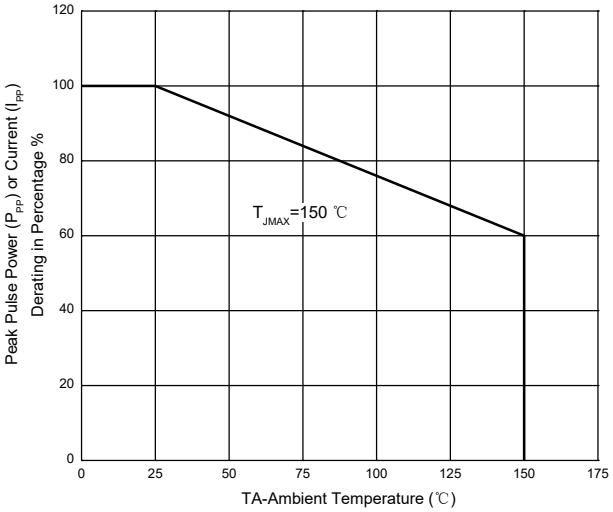


Figure 3. Pulse Waveform

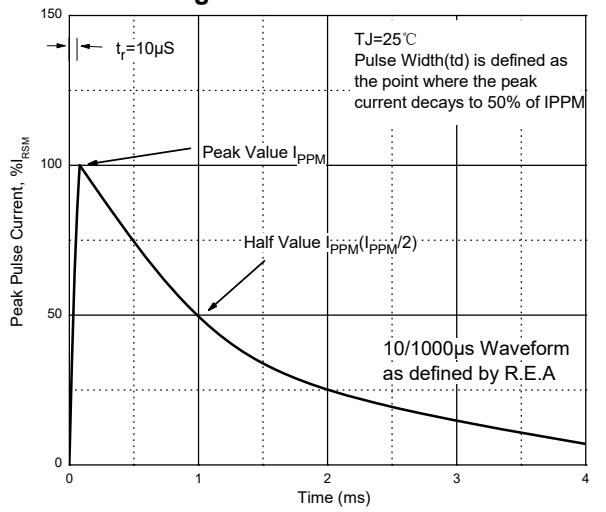


Figure 4. Typical Junction Capacitance

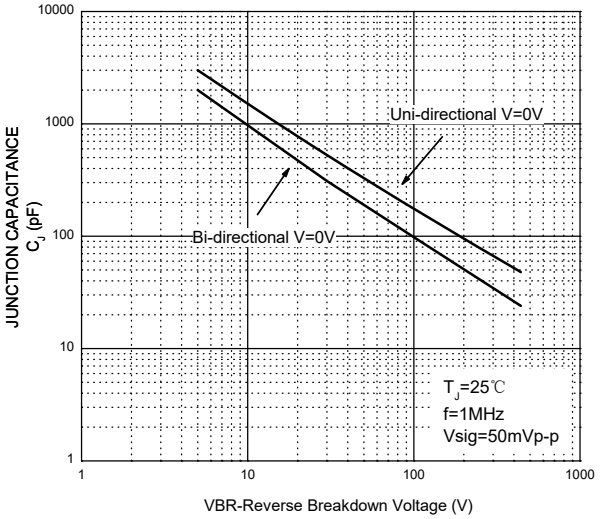


Figure 5. Steady State Power Dissipation Derating Curve

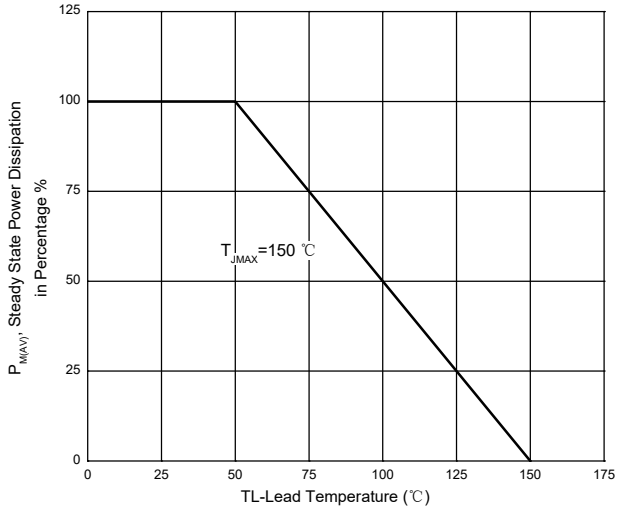
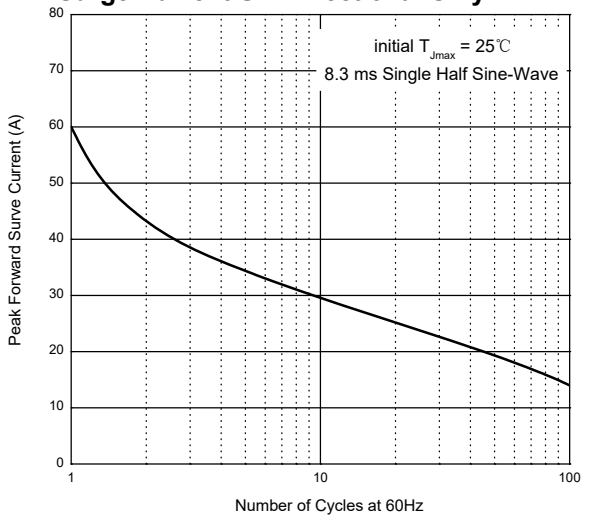
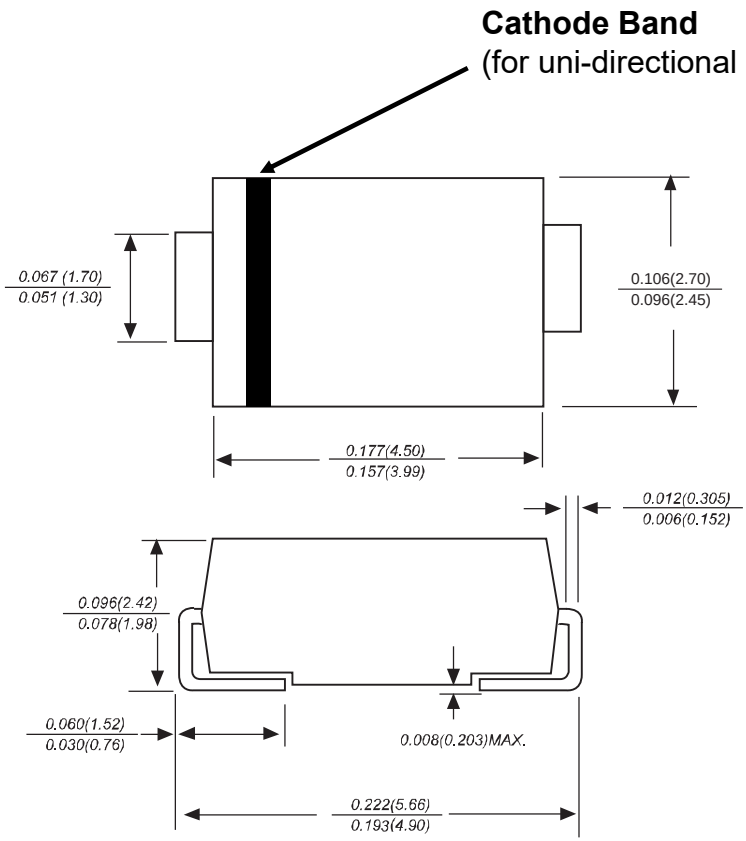


Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

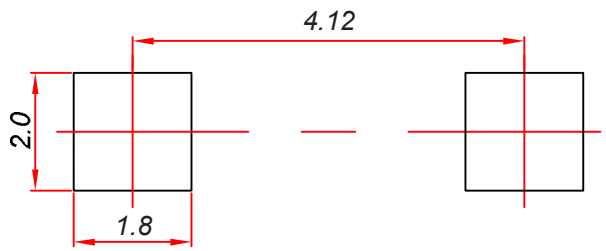


SMAG Package Outline Dimensions



Dimensions in inches and (millimeters)

SMAG Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

NOTICE

SZCJ reserves the right to make modifications,enhancements,improvements,corrections or other changes without further notice to any product herein.SZCJ does not assume any liability arising out of the application or use of any product described .

Reel Taping Specifications For Surface Mount Dev ices- SMAG

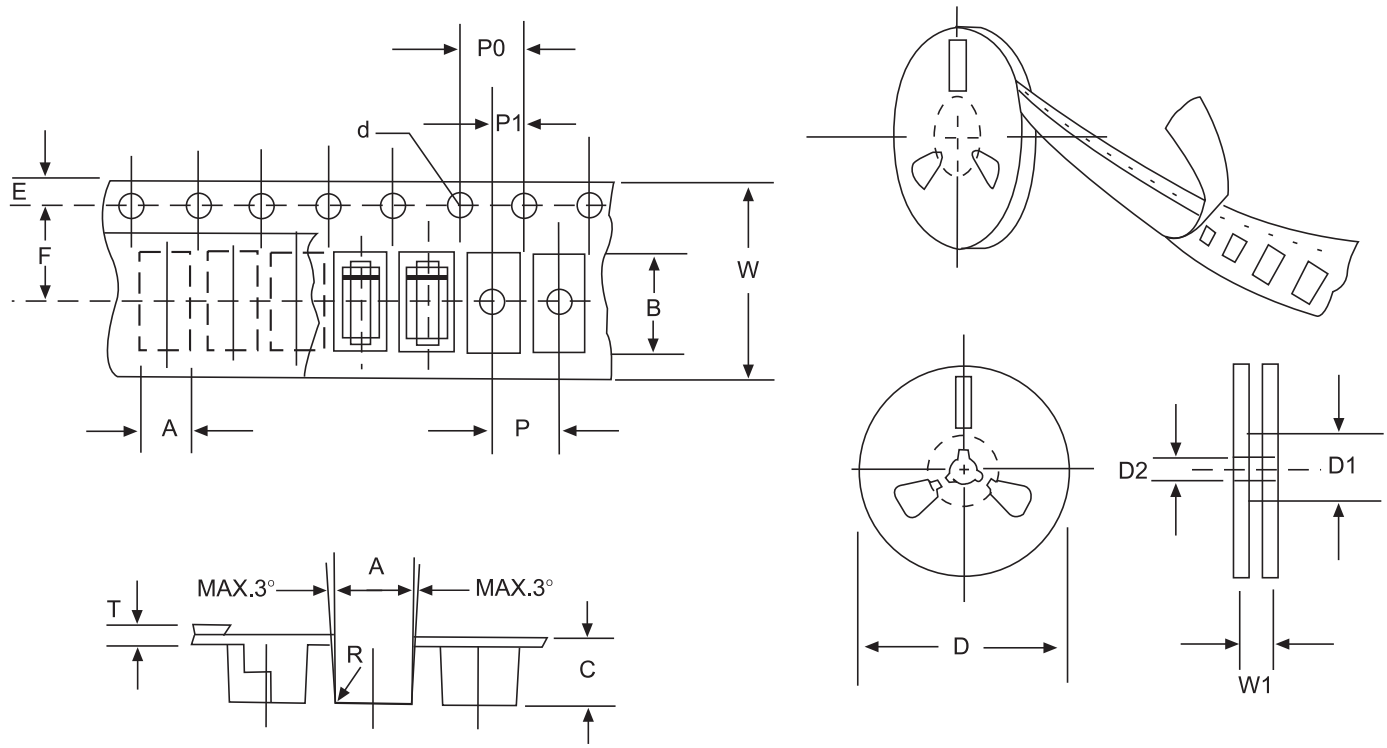


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	SMAG mm(inch)
Carrier width	A	2.79±0.1(0.110±0.004)
Carrier length	B	5.33±0.1(0.210±0.004)
Carrier depth	C	2.36±0.1(0.093±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	279±2.0 (11± 0.079)
Reel inner diameter	D1	75 ±1.0 (2.95 ±0.039)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Strocket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	5.5±0.05(0.217±0.002)
Punch hole pitch	P	4.0±0.1(0.157±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Totall tape thickness	T	0.28±0.02(0.011±0.0008)
Tape width	W	12.0±0.2(0.472±0.008)
Reel width	W1	16.8±2.0(0.661±0.079)

NOTE:Devices are packed in accordance with EIA standard RS-481-A and specification given above.