Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

3000W, 10V - 100V Surface Mount Transient Voltage Suppressor

FEATURES

- Ideal for automated placement
- Glass passivated junction
- Excellent clamping capability
- Fast response time: Typically less than 1.0ps
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
V_{WM}	10 - 100	V
V_{BR}	11.1 - 123	V
P_{PK}	3000	W
$T_{J\ MAX}$	175	°C
Package	DO-214AB (SMC)	
Configuration	Single die	

APPLICATIONS

- Immunization of sensitive devices in automotive, telecommunications, consumer electronics, and industrial equipment from electrostatic discharge (ESD) and transient voltages induced by load switching and lightning.

MECHANICAL DATA

- Case：DO-214AB (SMC)
- Molding compound meets UL 94V-0 flammability rating
- Part no. with suffix "H" means AEC-Q101 qualified
- Packing code with suffix "G" means green compound (halogen-free)
- Moisture sensitivity level: level 1, per J-STD-020
- Terminal：Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity：As marked
- Weight： 0.29 g (approximately)

DO-214AB (SMC)

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)			
PARAMETER	**SYMBOL**	**VALUE**	**UNIT**
Peak power dissipation at T_A=25°C, Tp=1ms[1]	P_{PK}	3000	W
Steady state power dissipation at T_A=25°C	P_D	6.5	W
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	300	A
Forward Voltage @ I_F=100A for Unidirectional only [2]	V_F	3.5 /5.0	V
Junction temperature	T_J	-55 to +175	°C
Storage temperature	T_{STG}	-55 to +175	°C

Notes:

1. Non-repetitive current pulse per Fig. 3 and derated above T_A=25°C per Fig. 2
2. V_F=3.5V on SMDJ10A - SMDJ90A devices and V_F=5.0V on SMDJ100A

Devices for bipolar applications

1. For bidirectional use CA suffix for SMDJ10A – SMDJ64A
2. Electrical characteristics apply in both directions

THERMAL PERFORMANCE

PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-ambient thermal resistance	$R_{\theta JA}$	75	°C/W
Junction-to-lead thermal resistance	$R_{\theta JL}$	15	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

Part number		Marking code		Breakdown voltage V_{BR}@I_T (V)		Test current I_T (mA)	Working stand-off voltage V_{WM} (V)	Maximum Reverse Leakage I_R@V_{WM} (μA)	Maximum peak impulse current I_{PPM} (A)	Maximum clamping voltage V_C@I_{PPM} (V)
UNI.	BI.	UNI.	BI.	MIN.	MAX.					
SMDJ10A	SMDJ10CA	PDX	DDX	11.1	12.3	1	10	5	176.5	17.0
SMDJ11A	SMDJ11CA	PDZ	DDZ	12.2	13.5	1	11	1	164.8	18.2
SMDJ12A	SMDJ12CA	PEE	DEE	13.3	14.7	1	12	1	150.8	19.9
SMDJ13A	SMDJ13CA	PEG	DEG	14.4	15.9	1	13	1	139.5	21.5
SMDJ14A	SMDJ14CA	PEK	DEK	15.6	17.2	1	14	1	129.3	23.2
SMDJ15A	SMDJ15CA	PEM	DEM	16.7	18.5	1	15	1	123.0	24.4
SMDJ16A	SMDJ16CA	PEP	DEP	17.8	19.7	1	16	1	115.4	26.0
SMDJ17A	SMDJ17CA	PER	DER	18.9	20.9	1	17	1	108.7	27.6
SMDJ18A	SMDJ18CA	PET	DET	20.0	22.1	1	18	1	102.7	29.2
SMDJ20A	SMDJ20CA	PEV	DEV	22.2	24.5	1	20	1	92.6	32.4
SMDJ22A	SMDJ22CA	PEX	DEX	24.4	26.9	1	22	1	84.5	35.5
SMDJ24A	SMDJ24CA	PEZ	DEZ	26.7	29.5	1	24	1	77.1	38.9
SMDJ26A	SMDJ26CA	PFE	DFE	28.9	31.9	1	26	1	71.3	42.1
SMDJ28A	SMDJ28CA	PFG	DFG	31.1	34.4	1	28	1	66.1	45.4
SMDJ30A	SMDJ30CA	PFK	DFK	33.3	36.8	1	30	1	62.0	48.4
SMDJ33A	SMDJ33CA	PFM	DFM	36.7	40.6	1	33	1	56.3	53.3
SMDJ36A	SMDJ36CA	PFP	DFP	40.0	44.2	1	36	1	51.6	58.1
SMDJ40A	SMDJ40CA	PFR	DFR	44.4	49.1	1	40	1	46.5	64.5
SMDJ43A	SMDJ43CA	PFT	DFT	47.8	52.8	1	43	1	43.2	69.4
SMDJ45A	SMDJ45CA	PFV	DFV	50.0	55.3	1	45	1	41.3	72.7
SMDJ48A	SMDJ48CA	PFX	DFX	53.3	58.9	1	48	1	38.8	77.4
SMDJ51A	SMDJ51CA	PFZ	DFZ	56.7	62.7	1	51	1	36.4	82.4
SMDJ54A	SMDJ54CA	PGE	DGE	60.0	66.3	1	54	1	34.4	87.1
SMDJ58A	SMDJ58CA	PGG	DGG	64.4	71.2	1	58	1	32.1	93.6
SMDJ60A	SMDJ60CA	PGK	DGK	66.7	73.7	1	60	1	31.0	96.8
SMDJ64A	SMDJ64CA	PGM	DGM	71.1	78.6	1	64	1	29.1	103
SMDJ70A		PGP		77.8	86.0	1	70	1	26.5	113
SMDJ75A		PGR		83.3	92.1	1	75	1	24.8	121
SMDJ78A		PGT		86.7	95.8	1	78	1	23.8	126
SMDJ85A		PGV		94.4	104	1	85	1	21.9	137
SMDJ90A		PGX		100	111	1	90	1	20.5	146
SMDJ100A		PGZ		111	123	1	100	1	18.5	162

ORDERING INFORMATION					
PART NO.	**PART NO. SUFFIX**	**PACKING CODE**	**PACKING CODE SUFFIX(*)**	**PACKAGE**	**PACKING**
SMDJxxxx (Note 1)	H	R7	G	SMC	850 / 7" Plastic reel
		R6		SMC	3,000 / 13" Paper reel
		M6		SMC	3,000 / 13" Plastic reel
		V7		Matrix SMC	850 / 7" Plastic reel
		V6		Matrix SMC	3,000 / 13" Plastic reel

Note :

1. "xxxx" defines voltage from 10V (SMDJ10A) to 100V (SMDJ100A)

*: Optional available

EXAMPLE					
EXAMPLE P/N	**PART NO.**	**PART NO. SUFFIX**	**PACKING CODE**	**PACKING CODE SUFFIX**	**DESCRIPTION**
SMDJ10AHR7G	SMDJ10A	H	R7	G	AEC-Q101 qualified Green compound

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Peak Pulse Power Rating Curve

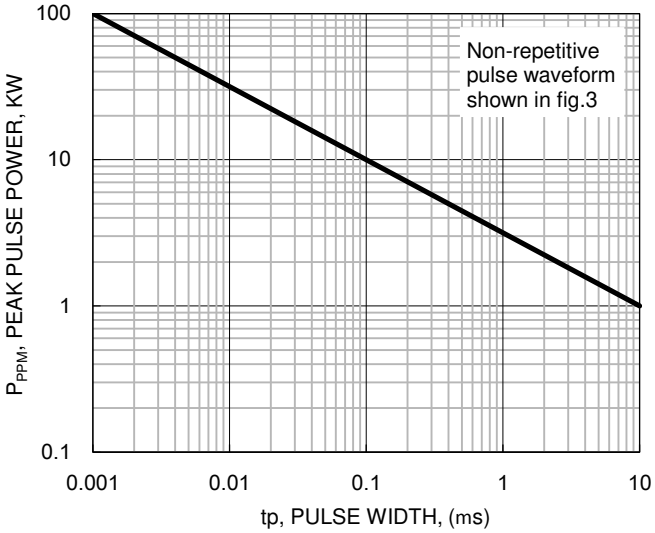


Fig.2 Pulse Derating Curve

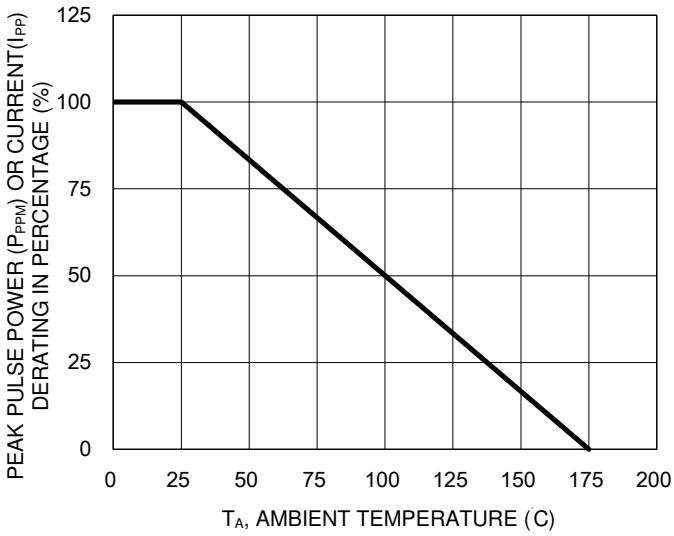


Fig.3 Clamping Power Pulse Waveform

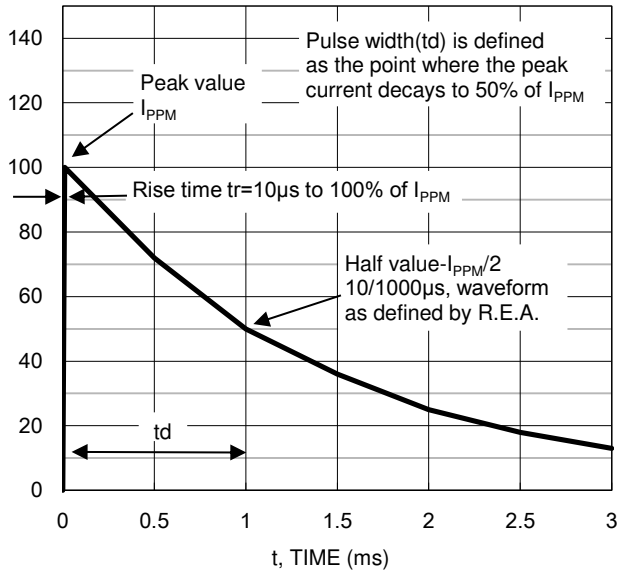
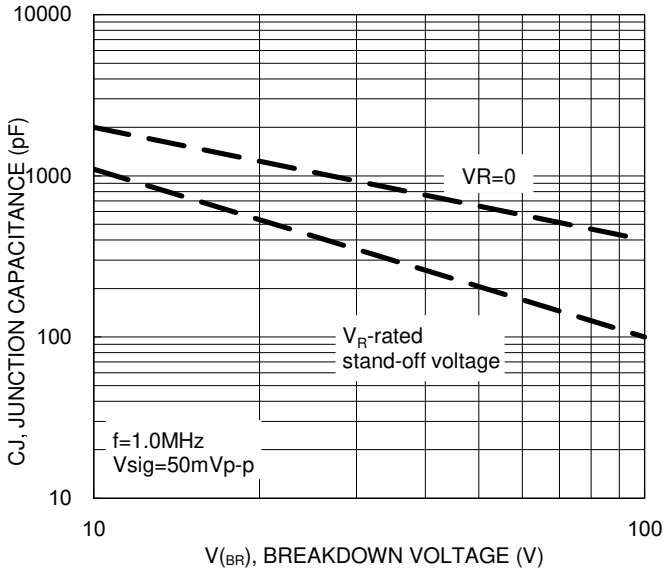


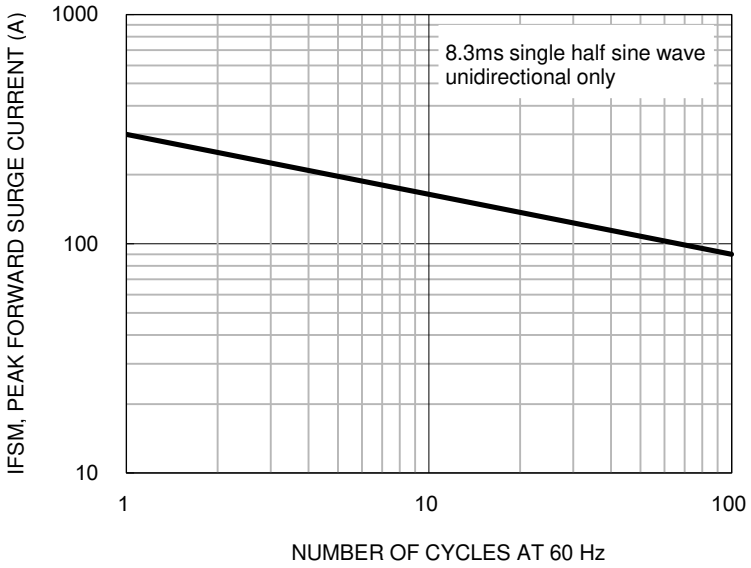
Fig.4 Typical Junction Capacitance



CHARACTERISTICS CURVES

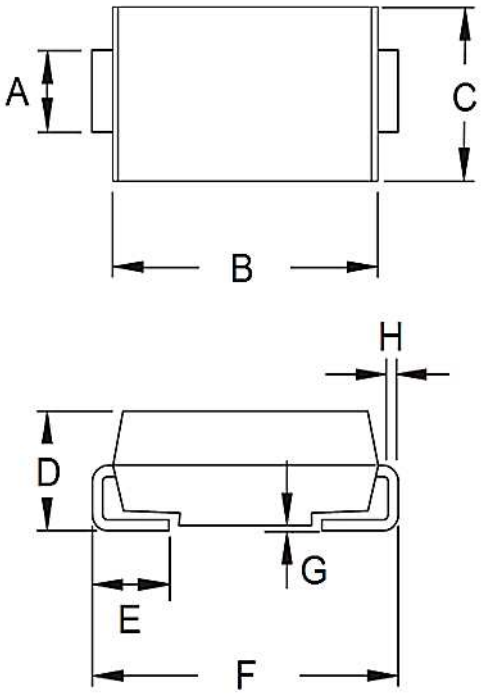
(T_A = 25°C unless otherwise noted)

Fig.5 Maximum Non-repetitive Forward Surge Current



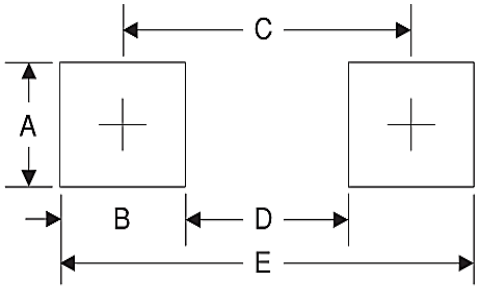
PACKAGE OUTLINE DIMENSIONS

DO-214AB (SMC)



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	2.90	3.20	0.114	0.126
B	6.60	7.11	0.260	0.280
C	5.59	6.22	0.220	0.245
D	2.00	2.62	0.079	0.103
E	1.00	1.60	0.039	0.063
F	7.75	8.13	0.305	0.320
G	0.10	0.20	0.004	0.008
H	0.15	0.31	0.006	0.012

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	3.30	0.130
B	2.50	0.098
C	6.80	0.268
D	4.40	0.173
E	9.40	0.370

MARKING DIAGRAM

P/N =Marking Code
G =Green Compound
YW =Date Code
F =Factory Code

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