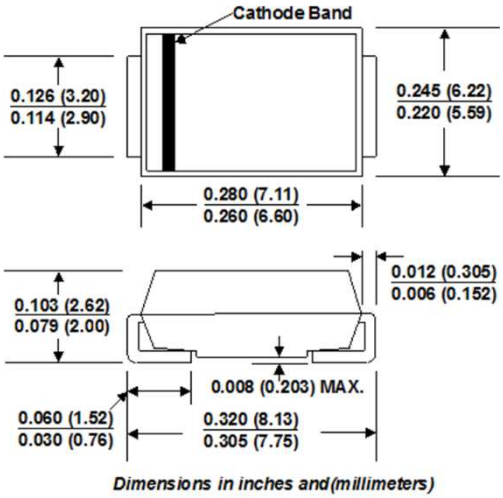
1.5KASMC SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR
STAND-OFF VOLTAGE - 5 TO 220 Volts
1500 Watt Peak Pulse Power

DO-214AB (SMC J-Bend)



Dimensions in inches and(millimeters)

FEATURES

- ◎ For surface mounted applications in order to optimize board space
- ◎ Halogen-Free
- ◎ RoHS compliant
- ◎ Typical maximum temperature coefficient $\triangle V_{BR}$=0.1%xV_{BR}@25℃x$\triangle$T
- ◎ Low profile package
- ◎ Built-in strain relief
- ◎ Glass passivated junction
- ◎ Low inductance
- ◎ Excellent clamping capability
- ◎ Repetition Rate(duty cycle):0.05%
- ◎ Fast response time: typically less than 1.0ps from 0 Volts to BV
- ◎ AEC-Q101 qualified
- ◎ High temperature soldering: 260℃/40 seconds at terminals
- ◎ Plastic package has Underwriters Laboratory Flammability 94V-O
- ◎ Matte Tin Lead-free plated

MECHANICAL DATA

Case: JEDEC DO214AB. Molded plastic over glass passivated junction
Terminal: Solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes positive end (cathode) except Bidirectional
Standard Packaging: 16mm tape(EIA STD RS-481)
Weight: 0.009ounce, 0.25gram

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000μs waveform (Note 1,2,FIG.1)	P_{PPM}	Minimum 1500	Watts
Peak Pulse Current of on 10/1000μs waveform (Note 1,FIG.3)	I_{PPM}	SEE TABLE 1	Amps
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method) (Note 2,3)	I_{FSM}	200	Amps
Operating junction and Storage Temperature Range	T_J , T_{STG}	-55 to + 150	℃

Notes :

1.Non-repetitive current pulse , per Fig. 3 and derated above T_A = 25℃ per Fig. 2 .

2.Mounted on 8.0mm x 8.0mm Copper Pads to each terminal

3.8.3ms single half sine-wave , or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

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1.5KASMC PART NUMBER		DEVICE MARKING CODE		REVERSE STAND-OFF VOLTAGE V_{RWM}(V)	BREAKDOWN VOLTAGE V_{BR}(V) @I_T		TEST CURRENT I_T (mA)	MAXIMUN CLAMPING VOLTAGE @Ipp Vc(V) (10/1000uS)	PEAK PULSE CURRENT Ipp (A) (10/1000uS)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc(V) (8/20uS)	PEAK PULSE CURRENT Ipp (A) (8/20uS)	REVERSE LEAKAGE @V_{RWM} I_R (μA)
UNI- POLAR	BI-POLAR	UNI	BI		MIN	MAX						
5.0A	5.0CA	SDE	FDE	5.0	6.40	7.00	10	9.2	163.0	12.0	815.0	800.0
6.0A	6.0CA	SDG	FDG	6.0	6.67	7.37	10	10.3	145.7	13.4	728.5	800.0
6.5A	6.5CA	SDK	FDK	6.5	7.22	7.98	10	11.2	134.0	14.6	670.0	500.0
7.0A	7.0CA	SDM	FDM	7.0	7.78	8.60	10	12.0	125.0	15.6	625.0	200.0
7.5A	7.5CA	SDP	FDP	7.5	8.33	9.21	1	12.9	116.3	16.8	581.5	100.0
8.0A	8.0CA	SDR	FDR	8.0	8.89	9.83	1	13.6	110.3	17.7	551.5	50.0
8.5A	8.5CA	SDT	FDT	8.5	9.44	10.40	1	14.4	104.2	18.7	521.0	20.0
9.0A	9.0CA	SDV	FDV	9.0	10.00	11.10	1	15.4	97.4	20.0	487.0	10.0
10A	10CA	SDX	FDX	10.0	11.10	12.30	1	17.0	88.3	22.1	441.5	5.0
11A	11CA	SDZ	FDZ	11.0	12.20	13.50	1	18.2	82.5	23.7	412.5	1.0
12A	12CA	SEE	FEE	12.0	13.30	14.70	1	19.9	75.4	25.9	377.0	1.0
13A	13CA	SEG	FEG	13.0	14.40	15.90	1	21.5	69.8	28.0	349.0	1.0
14A	14CA	SEK	FEK	14.0	15.60	17.20	1	23.2	64.7	30.2	323.5	1.0
15A	15CA	SEM	FEM	15.0	16.70	18.50	1	24.4	61.5	31.7	307.5	1.0
16A	16CA	SEP	FEP	16.0	17.80	19.70	1	26.0	57.7	33.8	288.5	1.0
17A	17CA	SER	FER	17.0	18.90	20.90	1	27.6	54.4	35.9	272.0	1.0
18A	18CA	SET	FET	18.0	20.00	22.10	1	29.2	51.4	38.0	257.0	1.0
20A	20CA	SEV	FEV	20.0	22.20	24.50	1	32.4	46.3	42.1	231.5	1.0
22A	22CA	SEX	FEX	22.0	24.40	26.90	1	35.5	42.3	46.2	211.5	1.0
24A	24CA	SEZ	FEZ	24.0	26.70	29.50	1	38.9	38.6	50.6	193.0	1.0
26A	26CA	SFE	FFE	26.0	28.90	31.90	1	42.1	35.7	54.7	178.5	1.0
28A	28CA	SFG	FFG	28.0	31.10	34.40	1	45.4	33.1	59.0	165.5	1.0
30A	30CA	SFK	FFK	30.0	33.30	36.80	1	48.4	31.0	62.9	155.0	1.0
33A	33CA	SFM	FFM	33.0	36.70	40.60	1	53.3	28.2	69.3	141.0	1.0
36A	36CA	SFP	FFP	36.0	40.00	44.20	1	58.1	25.9	75.5	129.5	1.0
40A	40CA	SFR	FFR	40.0	44.40	49.10	1	64.5	23.3	83.9	116.5	1.0
43A	43CA	SFT	FFT	43.0	47.80	52.80	1	69.4	21.7	90.2	108.5	1.0
45A	45CA	SFV	FFV	45.0	50.00	55.30	1	72.7	20.6	94.5	103.0	1.0
48A	48CA	SFX	FFX	48.0	53.30	58.90	1	77.4	19.4	100.6	97.0	1.0
51A	51CA	SFZ	FFZ	51.0	56.70	62.70	1	82.4	18.2	107.1	91.0	1.0
54A	54CA	SGE	FGE	54.0	60.00	66.30	1	87.1	17.3	113.2	86.5	1.0
58A	58CA	SGG	FGG	58.0	64.40	71.20	1	93.6	16.1	121.7	80.5	1.0
60A	60CA	SGK	FGK	60.0	66.70	73.70	1	96.8	15.5	125.8	77.5	1.0
64A	64CA	SGM	FGM	64.0	71.10	78.60	1	103.0	14.6	133.9	73.0	1.0
70A	70CA	SGP	FGP	70.0	77.80	86.00	1	113.0	13.3	146.9	66.5	1.0
75A	75CA	SGR	FGR	75.0	83.30	92.10	1	121.0	12.4	157.3	62.0	1.0
78A	78CA	SGT	FGT	78.0	86.70	95.80	1	126.0	11.9	163.8	59.5	1.0
85A	85CA	SGV	FGV	85.0	94.40	104.00	1	137.0	11.0	178.1	55.0	1.0
90A	90CA	SGX	FGX	90.0	100.00	111.00	1	146.0	10.3	189.8	51.5	1.0
100A	100CA	SGZ	FGZ	100.0	111.00	123.00	1	162.0	9.3	210.6	46.5	1.0
110A	110CA	SHE	FHE	110.0	122.00	135.00	1	177.0	8.5	230.1	42.5	1.0
120A	120CA	SHG	FHG	120.0	133.00	147.00	1	193.0	7.8	250.9	39.0	1.0
130A	130CA	SHK	FHK	130.0	144.00	159.00	1	209.0	7.2	271.7	36.0	1.0
150A	150CA	SHM	FHM	150.0	167.00	185.00	1	243.0	6.2	315.9	31.0	1.0
160A	160CA	SHP	FHP	160.0	178.00	197.00	1	259.0	5.8	336.7	29.0	1.0
170A	170CA	SHR	FHR	170.0	189.00	209.00	1	275.0	5.5	357.5	27.5	1.0
180A	180CA	SHT	FHT	180.0	201.00	222.00	1	292.0	5.1	379.6	25.5	1.0
200A	200CA	SHV	FHV	200.0	224.00	247.00	1	324.0	4.6	421.2	23.0	1.0
220A	220CA	SHX	FHX	220.0	246.00	272.00	1	356.0	4.2	462.8	21.0	1.0

For bidirectional type having Vrwm of 10 volts and less, the IR limit is double.

RATINGS AND CHARACTERISTIC CURVES

Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

Fig. 1 - Peak Pulse Power Rating

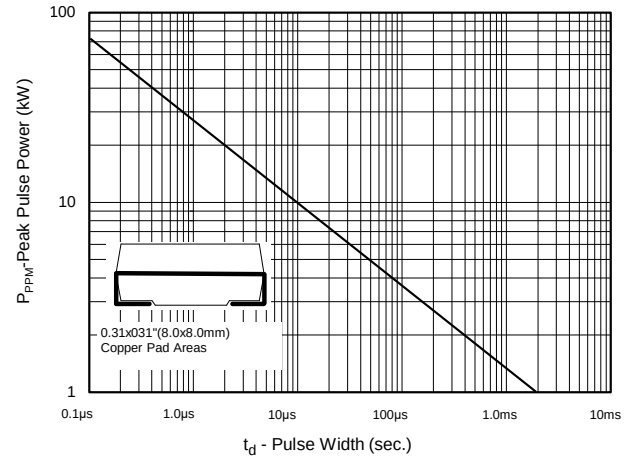


Fig.2 - Pulse Derating Curve

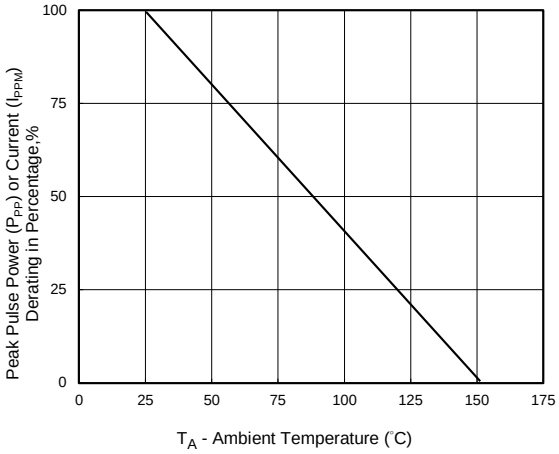


Fig.3 - Pulse Waveform

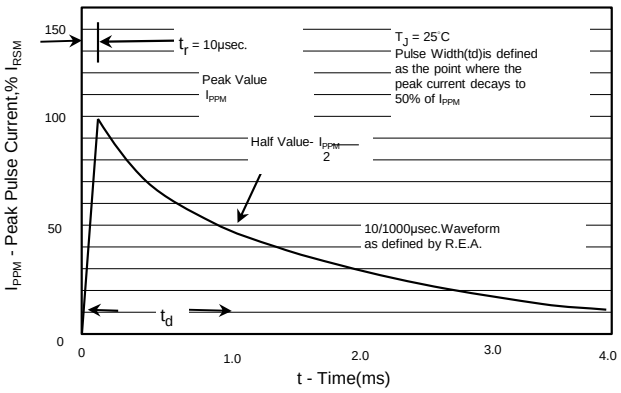


Fig. 4 - Typical Junction Capacitance

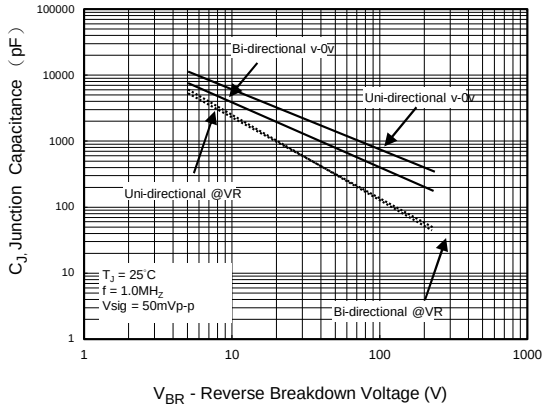


Fig. 5 - Steady State Power Derating Curve

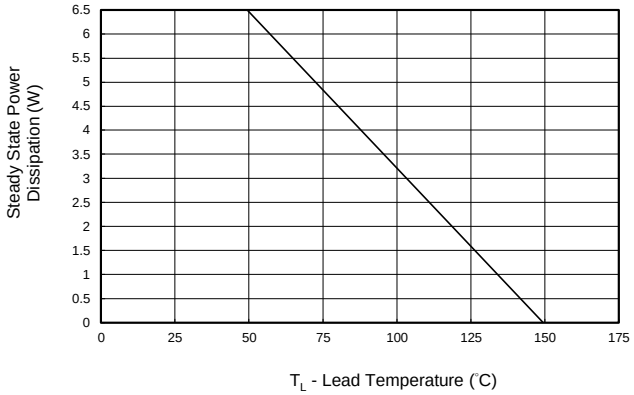
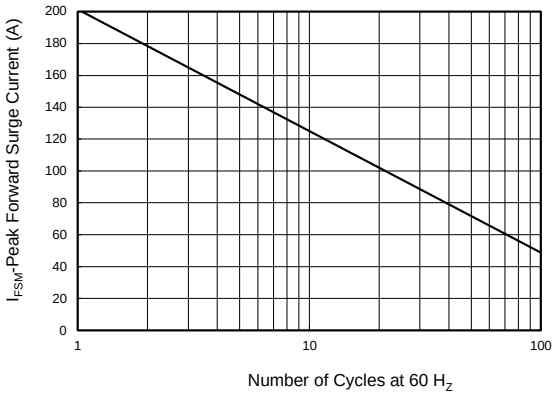


Fig.6 - Maximum Non-repetitive Forward Surge current uni-directional only



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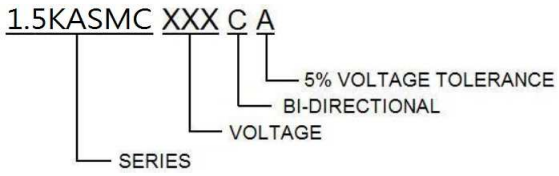
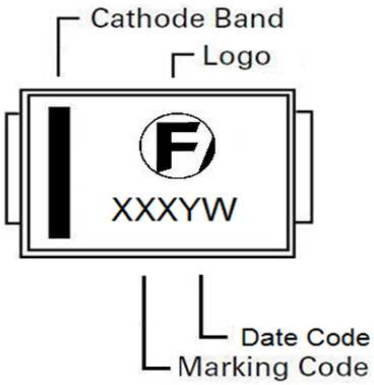
Part Numbering System



Part Marking System



Packaging

Part number	Component Package	Quantity	Packaging Option	Packaging Specification
1.5KASMC xxxXX	DO-214AB	3000	Tape & Reel - 16mm/13" tape	EIA STD RS-481
1.5KASMC xxxXX	DO-214AB	500	Tape & Reel - 16mm/ 7" tape	EIA STD RS-481