

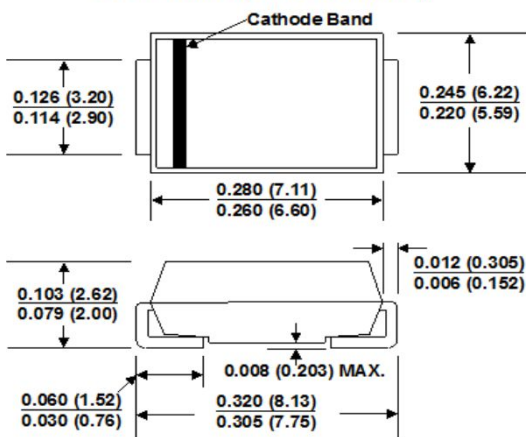
3KASMC SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

STAND-OFF VOLTAGE - 12 TO 58 Volts

3000 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 $\Delta V_{BR} = 0.1\% \times V_{BR} @ 25^\circ\text{C} \times \Delta T$
- ⊙ Low profile package
- ⊙ Built-in strain relief
- ⊙ Glass passivated junction
- ⊙ Low inductance
- ⊙ Excellent clamping capability
- ⊙ Repetition Rate (duty cycle): 0.01%
- ⊙ Fast response time: typically less than 1.0ps from 0 Volts to BV
- ⊙ AEC-Q101 qualified
- ⊙ High temperature soldering: 260°C/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 denoted positive end (cathode) except Bidirectional

Standard Packaging: 16mm tape (EIA STD RS-481)

Weight: 0.007 ounce, 0.21 gram

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 μ s waveform (Note 1,2 ,FIG.1)	P_{PPM}	Minimum 3000	Watts
Peak Pulse Current of on 10/1000 μ s 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) (Note2, 3)	I_{FSM}	300	Amps
Operating junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Notes :

- 1.Non-repetitive current pulse , per Fig. 3 and derated above $T_A = 25^\circ\text{C}$ 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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3KASMC PART NUMBER		DEVICE MARKING CODE		REVERSE STAND- OFF VOLTAGE $V_{RWM}(V)$	BREAKDOWN VOLTAGE $V_{BR}(V) @ I_T$		TEST CURRENT I_T (mA)	MAXIMUM CLAMPING VOLTAGE $@ I_{pp} V_c(V)$	PEAK PULSE CURRENT I_{pp} (A)	REVERSE LEAKAGE @ V_{RWM} $I_R(\mu A)$
					MIN	MAX				
UNI- POLAR	BI-POLAR	UNI	BI							
12A	12CA	LEE	HEE	12.0	13.30	14.70	1	19.9	150.8	2
13A	13CA	LEG	HEG	13.0	14.40	15.90	1	21.5	139.5	2
14A	14CA	LEK	HEK	14.0	15.60	17.20	1	23.2	129.3	2
15A	15CA	LEM	HEM	15.0	16.70	18.50	1	24.4	123.0	2
16A	16CA	LEP	HEP	16.0	17.80	19.70	1	26.0	115.4	2
17A	17CA	LER	HER	17.0	18.90	20.90	1	27.6	108.7	2
18A	18CA	LET	HET	18.0	20.00	22.10	1	29.2	102.7	2
20A	20CA	LEV	HEV	20.0	22.20	24.50	1	32.4	92.6	2
22A	22CA	LEX	HEX	22.0	24.40	26.90	1	35.5	84.5	2
24A	24CA	LEZ	HEZ	24.0	26.70	29.50	1	38.9	77.1	2
26A	26CA	LFE	HFE	26.0	28.90	31.90	1	42.1	71.3	2
28A	28CA	LFG	HFG	28.0	31.10	34.40	1	45.4	66.1	2
30A	30CA	LFK	HFK	30.0	33.30	36.80	1	48.4	62.0	2
33A	33CA	LFM	HFM	33.0	36.70	40.60	1	53.3	56.3	2
36A	36CA	LFP	HFP	36.0	40.00	44.20	1	58.1	51.6	2
40A	40CA	LFR	HFR	40.0	44.40	49.10	1	64.5	46.5	2
43A	43CA	LFT	HFT	43.0	47.80	52.80	1	69.4	43.2	2
45A	45CA	LFV	HFV	45.0	50.00	55.30	1	72.7	41.3	2
48A	48CA	LFX	HFX	48.0	53.30	58.90	1	77.4	38.8	2
51A	51CA	LFZ	HFZ	51.0	56.70	62.70	1	82.4	36.4	2
54A	54CA	LGE	HGE	54.0	60.00	66.30	1	87.1	34.4	2
58A	58CA	LGG	HGG	58.0	64.40	71.20	1	93.6	32.1	2

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RATINGS AND CHARACTERISTIC CURVES

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Peak Pulse Power Rating Curve

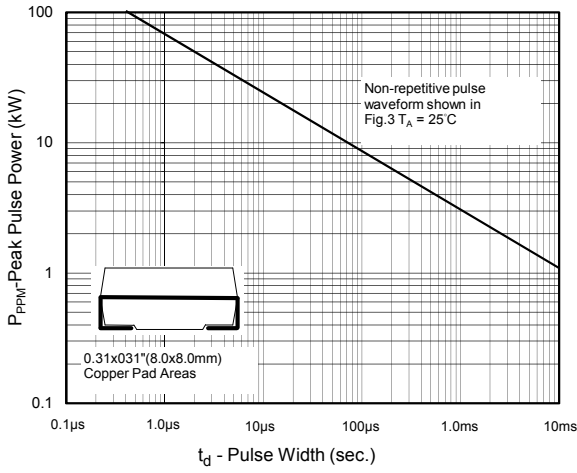


Fig. 2 - Pulse Derating Curve

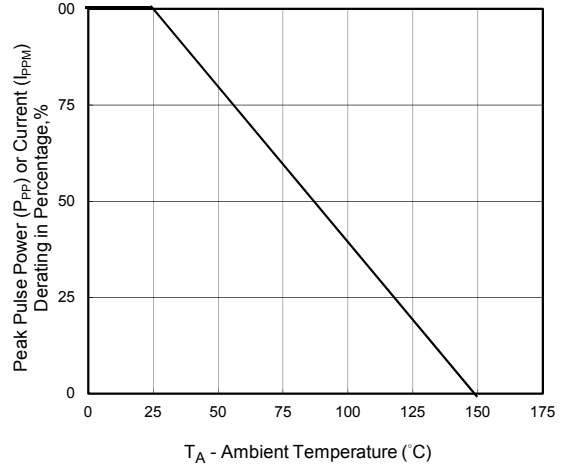


Fig. 3 - Pulse Waveform

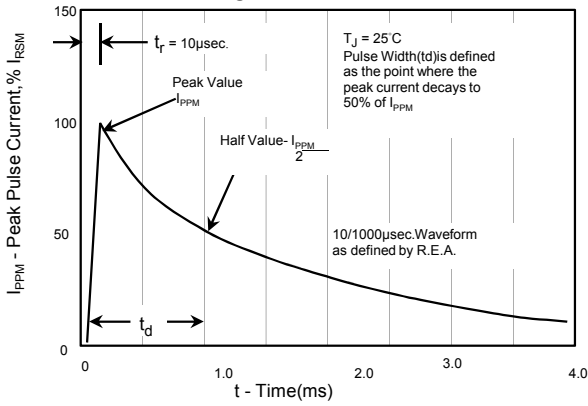


Fig. 4 - Typical Junction Capacitance

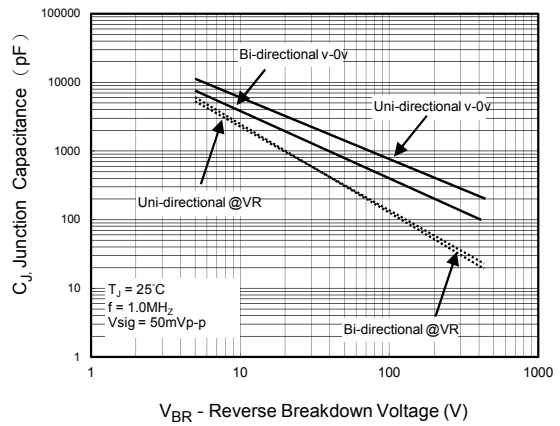


Fig. 5 - Steady State Power Derating Curve

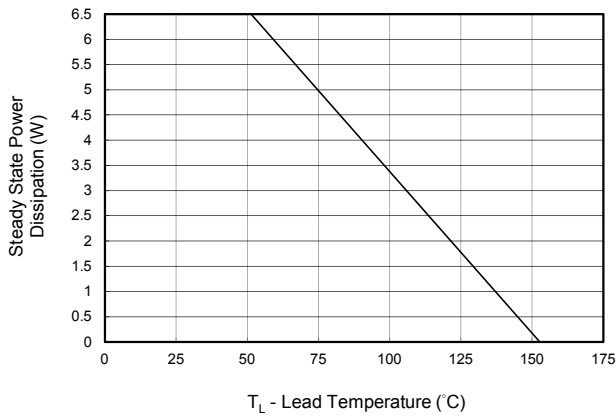
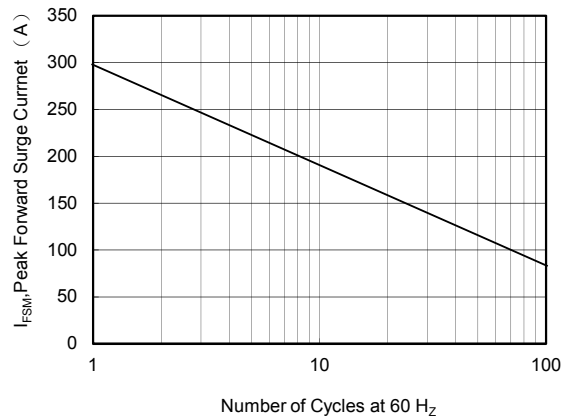


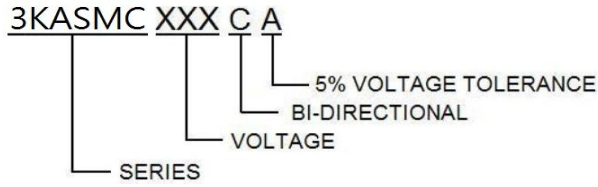
Fig. 6 - Maximum Non-repetitive Forward Surge current uni-directional only



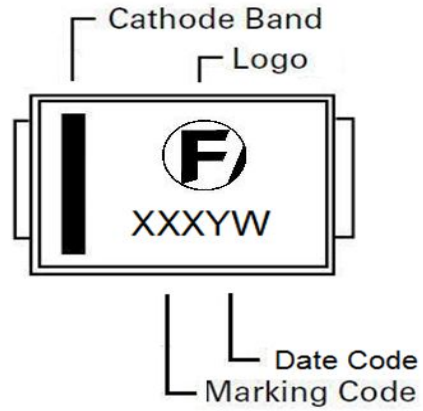
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Part Numbering System



Part Marking System



Packaging

Part number	Component Package	Quantity	Packaging Option	Packaging Specification
3KASMC xxxXX	DO-214AB	3000	Tape & Reel - 16mm/13" tape	EIA STD RS-481
3KASMC xxxXX	DO-214AB	500	Tape & Reel - 16mm/ 7" tape	EIA STD RS-481