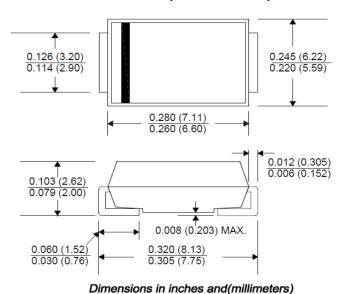


5.0SMDJ5.0 thru 5.0SMDJ170

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

DO-214AB (SMC J-Bend)



Agency	Agency File Number
A II.	E521119

PRIMARY CHARACTERISTICS					
Vrwm	5.0V to 170V				
VBR	6.4V to 209V				
Рррм	5000W				
TJ max	150°C				
Polarity	Uni-directional & Bi-directional				
Package	DO-214AB				

FEATURES

- For surface mounted applications in order to optimize board space
- Typical maximum temperature coefficient ∆VBR=0.1%xVBR@25°C x∆T
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Excellent clamping capability
- Repetition Rate (duty cycle):0.01%
- Fast response time: typically less than 1.0ps from 0 Volts to BV
- Meet MSL1 Level, per J-STD-020, LF maximum peak of 260 $^{\circ}\mathrm{C}$
- Plastic package has Underwriters Laboratory Flammability 94V-0
- Matte Tin Lead-free plated



MECHANICAL DATA

Case: JEDEC DO-214AB. Molded plastic

Terminal: Solderable per MIL-STD-750, Method 2026 **Polarity:** Color band denoted positive end (cathode)

except Bidirectional

DEVICES FOR BIPOLAR APPLICATION

- For Bidirectional use Suffix CA for types 5.0SMDJ5.0CA thru types 5.0SMDJ85CA
- Electrical characteristics apply in both directions

MAXIMUM RATINGS (25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000µs waveform (Note 1, 2)	Рррм	5000	Watts
Peak Pulse Current of on 10/1000µs waveform (Note 1)	ІРРМ	See Next Table	Amps
Peak Forward Surge Current,8.3ms Single Half Sine-Wave(Note 2, 3)	IFSM	300	Amps
Operating junction and Storage Temperature Range	TJ TSTG	-55 to +150	°C
Typical Thermal Resistance Junction to Lead	Rejl	15	°C/W
Typical Thermal Resistance Junction to Ambient	Reja	75	°C/W

Note

- (1) Non-repetitive current pulse above TA = 25 °C
- (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.





ELECTRICAL CHARACTERISTICS

	ART MBER		KING DDE	TEST CURRENT IT (mA)	111(1) 011		VOLTAGE VBR(V) @IT		VOLTAGE VBR(V) @IT		STAND- OFF VOLTAGE	MAXIMUM CLAMPING VOLTAGE	MAXIMUM PEAK PULSE CURRENT	MAXIMUM REVERSE LEAKAGE @ VRWM
UNI- POLAR	BI-POLAR	UNI	ВІ	, ,	MIN	MAX	VRWM(V)	@lpp Vc(V)	lpp (A)	IR(μA)				
5.0SMDJ5.0A	5.0SMDJ5.0CA	5RDE	5DDE	10	6.40	7.00	5.0	9.2	543.6	1050.0				
5.0SMDJ6.0A	5.0SMDJ6.0CA	5RDG	5DDG	10	6.67	7.37	6.0	10.3	485.5	1050.0				
5.0SMDJ6.5A	5.0SMDJ6.5CA	5RDK	5DDK	10	7.22	7.98	6.5	11.2	446.5	750.0				
5.0SMDJ7.0A	5.0SMDJ7.0CA	5PDM	5DDM	10	7.78	8.60	7.0	12.0	416.8	300.0				
5.0SMDJ7.5A	5.0SMDJ7.5CA	5PDP	5DDP	1	8.33	9.21	7.5	12.9	387.7	150.0				
5.0SMDJ8.0A	5.0SMDJ8.0CA	5PDR	5DDR	1	8.89	9.83	8.0	13.6	367.7	70.0				
5.0SMDJ8.5A	5.0SMDJ8.5CA	5PDT	5DDT	1	9.44	10.40	8.5	14.4	347.3	30.0				
5.0SMDJ9.0A	5.0SMDJ9.0CA	5PDV	5DDV	1	10.00	11.10	9.0	15.4	324.8	12.0				
5.0SMDJ10A	5.0SMDJ10CA	5PDX	5DDX	1	11.10	12.30	10.0	17.0	294.2	6.0				
5.0SMDJ11A	5.0SMDJ11CA	5PDZ	5DDZ	1	12.20	13.50	11.0	18.2	274.8	2.0				
5.0SMDJ12A	5.0SMDJ12CA	5PEP	5BEP	1	13.30	14.70	12.0	19.9	252.0	2.0				
5.0SMDJ13A	5.0SMDJ13CA	5PEQ	5BEQ	1	14.40	15.90	13.0	21.5	233.0	2.0				
5.0SMDJ14A	5.0SMDJ14CA	5PER	5BER	1	15.60	17.20	14.0	23.2	216.0	2.0				
5.0SMDJ15A	5.0SMDJ15CA	5PES	5BES	1	16.70	18.50	15.0	24.4	205.0	2.0				
5.0SMDJ16A	5.0SMDJ16CA	5PET	5BET	1	17.80	19.70	16.0	26.0	193.0	2.0				
5.0SMDJ17A	5.0SMDJ17CA	5PEU	5BEU	1	18.90	20.90	17.0	27.6	181.5	2.0				
5.0SMDJ18A	5.0SMDJ18CA	5PEV	5BEV	1	20.00	22.10	18.0	29.2	172.0	2.0				
5.0SMDJ20A	5.0SMDJ20CA	5PEW	5BEW	1	22.20	24.50	20.0	32.4	159.0	2.0				
5.0SMDJ22A	5.0SMDJ22CA	5PEX	5BEX	1	24.40	26.90	22.0	35.5	145.1	2.0				
5.0SMDJ24A	5.0SMDJ24CA	5PEZ	5BEZ	1	26.70	29.50	24.0	38.9	132.4	2.0				
5.0SMDJ26A	5.0SMDJ26CA	5PFE	5BFE	1	28.90	31.90	26.0	42.1	122.3	2.0				
5.0SMDJ28A	5.0SMDJ28CA	5PFG	5BFG	1	31.10	34.40	28.0	45.4	113.4	2.0				
5.0SMDJ30A	5.0SMDJ30CA	5PFK	5BFK	1	33.30	36.80	30.0	48.4	106.4	2.0				
5.0SMDJ33A	5.0SMDJ33CA	5PFM	5BFM	1	36.70	40.60	33.0	53.3	96.6	2.0				
5.0SMDJ36A	5.0SMDJ36CA	5PFP	5BFP	1	40.00	44.20	36.0	58.1	88.6	2.0				
5.0SMDJ40A	5.0SMDJ40CA	5PFR	5BFR	1	44.40	49.10	40.0	64.5	79.8	2.0				
5.0SMDJ43A	5.0SMDJ43CA	5PFT	5BFT	1	47.80	52.80	43.0	69.4	74.2	2.0				
5.0SMDJ45A	5.0SMDJ45CA	5PFV	5BFV	1	50.00	55.30	45.0	72.7	70.8	2.0				
5.0SMDJ48A	5.0SMDJ48CA	5PFX	5BFX	1	53.30	58.90	48.0	77.4	66.5	2.0				
5.0SMDJ51A	5.0SMDJ51CA	5PFZ	5BFZ	1	56.70	62.70	51.0	82.4	62.5	2.0				
5.0SMDJ54A	5.0SMDJ54CA	5RGE	5BGE	1	60.00	66.30	54.0	87.1	59.1	2.0				
5.0SMDJ58A	5.0SMDJ58CA	5PGG	5BGG	1	64.40	71.20	58.0	93.6	55.0	2.0				
5.0SMDJ60A	5.0SMDJ60CA	5PGK	5BGK	1	66.70	73.70	60.0	96.8	53.2	2.0				
5.0SMDJ64A	5.0SMDJ64CA	5PGM	5BGM	1	71.10	78.60	64.0	103.0	50.0	2.0				
5.0SMDJ70A	5.0SMDJ70CA	5PGP	5BGP	1	77.80	86.00	70.0	113.0	45.6	2.0				
5.0SMDJ75A	5.0SMDJ75CA	5PGR	5BGR	1	83.30	92.10	75.0	121.0	42.6	2.0				
5.0SMDJ78A	5.0SMDJ78CA	5PGT	5BGT	1	86.70	95.80	78.0	126.0	40.9	2.0				
5.0SMDJ85A	5.0SMDJ85CA	5PGV	5BGV	1	94.40		85.0	137.0	37.6	2.0				
5.0SMDJ90A	-	5PGX	-	1	100.00	111.00	90.0	146.0	35.3	2.0				
5.0SMDJ100A	-	5PGZ	-	1	111.00	123.00	100.0	162.0	31.8	2.0				
5.0SMDJ110A	-	5PHE	-	1	122.00	135.00	110.0	177.0	29.1	2.0				
5.0SMDJ120A	-	5PHG	-	1	133.00	147.00	120.0	193.0	26.7	2.0				
5.0SMDJ130A	-	5PHK	-	1		159.00	130.0	209.0	24.6	2.0				
5.0SMDJ150A	-	5PHM	-	1	167.00	185.00	150.0	243.0	21.2	2.0				
5.0SMDJ160A	-	5PHP	-	1	178.00	197.00	160.0	259.0	19.9	2.0				
5.0SMDJ170A	-	5PHR	-	1	189.00	209.00	170.0	275.0	18.7	2.0				

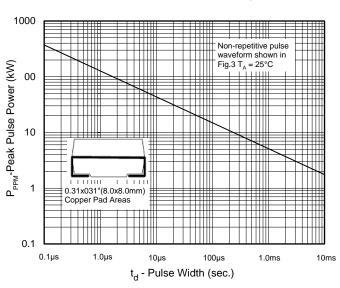
For bidirectional type having Vrwm of 10 volts and less, the IR limit is double

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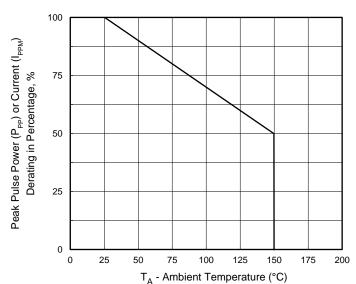


RATINGS AND CHARACTERISTICS CURVES (TA = 25°C unless otherwise noted)

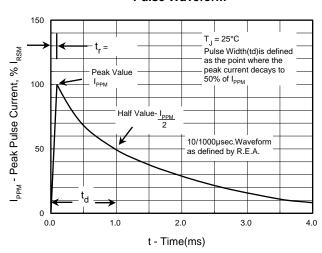
Peak Pulse Power Rating



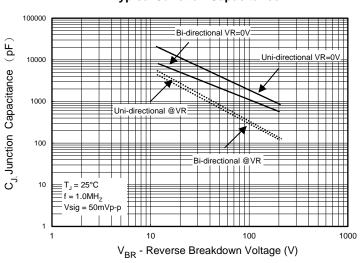
Pulse Derating Curve



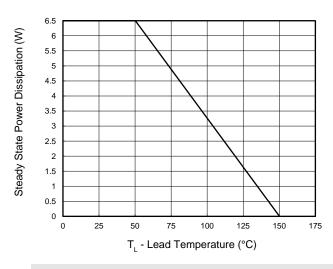
Pulse Waveform



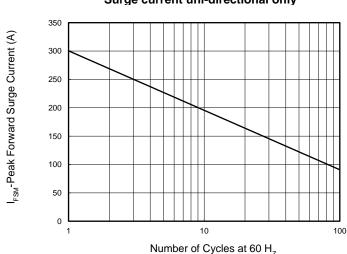
Typical Junction Capacitance



Steady State Power Derating Curve



Maximum Non-repetitive Forward Surge current uni-directional only



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5.0SMDJ5.0 thru 5.0SMDJ170

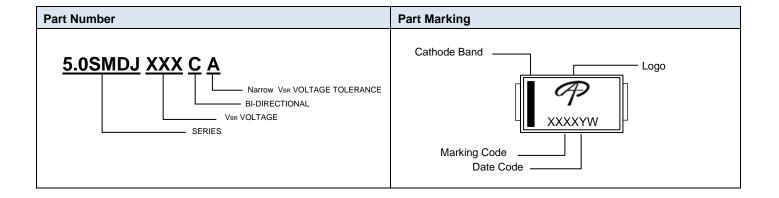
Ordering Information

Part Number	Quantity	Packing Option	Component Package	Packing Specification
5.0SMDJxxxA	3000	Tape & Reel - 16mm/13" tape	DO-214AB	EIA STD RS-481



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