

## FEATURES

- For surface mounted application
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Excellent clamping capability
- Fast response time: Typically less than 1.0ps from 0 volt to BV min.
- Typical  $I_R$  less than  $1\mu A$  above 10V'
- High temperature soldering guaranteed:260°C/ 10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- 3000 watts peak pulse power capability with a 10 x 1000 us waveform by 0.01% duty cycle



SMC(DO-214AB)

## MECHANICAL DATA

- Case: Molded plastic
- Terminals: Solder plated
- Polarity: Indicated by cathode band
- Standard packaging: 12mm tape (EIA STD RS-481)
- Weight: 0.007ounce,0.21 grams.

## DEVICES FOR BIPOLAR APPLICATION

For bidirectional use C or CA suffix for types SMDJ5.0 thru types SMDJ170 (e.g.SMDJ5.0CA, SMDJ170CA),electrical characteristics apply in both directions.

## MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.

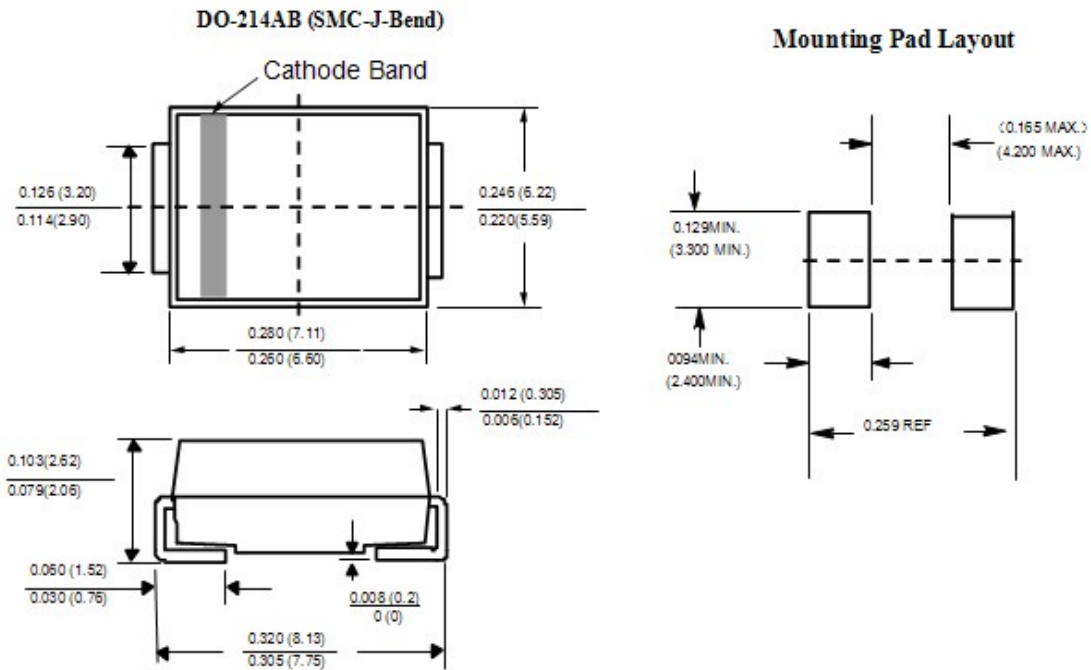
Type Number	Symbol	Value	Units
Peak Power Dissipation at $T_A=25^\circ C$ , $T_p=1ms$ (Note 1)	$P_{PPM}$	Minimum 3000	Watts
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) (Note 2, 3) - Unidirectional Only	$I_{FSM}$	300	Amps
Maximum Instantaneous Forward Voltage at 100A for Unidirectional Only	$V_F$	3.5/5.0	Volts
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to + 150	$^\circ C$

Notes: 1. Non-repetitive Current Pulse Per Fig. 3 and Derated above  $T_A=25^\circ C$  Per Fig. 2.

2. Mounted on  $5.0mm^2$  (.013 mm Thick) Copper Pads to Each Terminal.

3. 8.3ms Single Half Sine-wave or Equivalent Square Wave, Duty Cycle=4 pulses Per Minute Maximum.

### PACKAGE DIMENSIONS



### ELECTRICAL CHARACTERISTICS

Part Number		Marking code		Reverse Stand-Off Voltage	Breakdown Voltage @IT		Test Current	Maximum Clamping Voltage @IPP	Peak Pulse Current	Reverse Leakage @VRWM
(UNI)	(BI)	(UNI)	(BI)	VRWM (V)	VBR MIN. (V)	VBR MAX. (V)	IT (mA)	VC (V)	IPP (A)	IR (μ A)
SMDJ5.0A	SMDJ5.0CA	HDE	IDE	5.0	6.40	7.25	10	9.2	326.1	800
SMDJ6.0A	SMDJ6.0CA	HDG	IDG	6.0	6.67	7.67	10	10.3	291.3	800
SMDJ6.5A	SMDJ6.5CA	HDK	IDK	6.5	7.22	8.30	10	11.2	267.9	500
SMDJ7.0A	SMDJ7.0CA	HDM	IDM	7.0	7.78	8.95	10	12.0	250.0	200
SMDJ7.5A	SMDJ7.5CA	HDP	IDP	7.5	8.33	9.58	1	12.9	232.6	100
SMDJ8.0A	SMDJ8.0CA	HDR	IDR	8.0	8.89	10.23	1	13.6	220.6	50
SMDJ8.5A	SMDJ8.5CA	HDT	IDT	8.5	9.44	10.82	1	14.4	208.3	20
SMDJ9.0A	SMDJ9.0CA	HDV	IDV	9.0	10.00	11.50	1	15.4	194.8	10
SMDJ10A	SMDJ10CA	HDX	IDX	10.0	11.10	12.80	1	17.0	176.5	5

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(UNI)	(BI)	(UNI)	(BI)	VRWM (V)	VBR MIN. (V)	VBR MAX. (V)	IT (mA)	VC (V)	IPP (A)	IR (μ A)
SMDJ11A	SMDJ11CA	HDZ	IDZ	11.0	12.20	14.00	1	18.2	164.8	2
SMDJ12A	SMDJ12CA	HEE	IEE	12.0	13.30	15.30	1	19.9	150.8	2
SMDJ13A	SMDJ13CA	HEG	IEG	13.0	14.40	16.50	1	21.5	139.5	2
SMDJ14A	SMDJ14CA	HEK	IEK	14.0	15.60	17.90	1	23.2	129.3	2
SMDJ15A	SMDJ15CA	HEM	IEM	15.0	16.70	19.20	1	24.4	123.0	2
SMDJ16A	SMDJ16CA	HEP	IEP	16.0	17.80	20.50	1	26.0	115.4	2
SMDJ17A	SMDJ17CA	HER	IER	17.0	18.90	21.70	1	27.6	108.7	2
SMDJ18A	SMDJ18CA	HET	IET	18.0	20.00	23.30	1	29.2	102.7	2
SMDJ20A	SMDJ20CA	HEV	IEV	20.0	22.20	25.50	1	32.4	92.6	2
SMDJ22A	SMDJ22CA	HEX	IEX	22.0	24.40	28.00	1	35.5	84.5	2
SMDJ24A	SMDJ24CA	HEZ	IEZ	24.0	26.70	30.70	1	38.9	77.1	2
SMDJ26A	SMDJ26CA	HFE	IFE	26.0	28.90	33.20	1	42.1	71.3	2
SMDJ28A	SMDJ28CA	HFG	IFG	28.0	31.10	35.80	1	45.2	66.1	2
SMDJ30A	SMDJ30CA	HFK	IFK	30.0	33.30	38.30	1	48.4	62.0	2
SMDJ33A	SMDJ33CA	HFM	IFM	33.0	36.70	42.20	1	53.3	56.3	2
SMDJ36A	SMDJ36CA	HFP	IFP	36.0	40.00	46.00	1	58.1	51.6	2
SMDJ40A	SMDJ40CA	HFR	IFR	40.0	44.40	51.10	1	64.5	46.5	2
SMDJ43A	SMDJ43CA	HFT	IFT	43.0	47.80	54.90	1	69.4	43.2	2
SMDJ45A	SMDJ45CA	HFV	IFV	45.0	50.00	57.50	1	72.7	41.3	2
SMDJ48A	SMDJ48CA	HPX	IFX	48.0	53.30	61.30	1	77.4	38.8	2
SMDJ51A	SMDJ51CA	HFZ	IFZ	51.0	56.70	65.20	1	82.4	36.4	2
SMDJ54A	SMDJ54CA	HEG	IGE	54.0	60.00	69.00	1	87.1	34.4	2
SMDJ58A	SMDJ58CA	HGG	IGG	58.0	64.40	74.10	1	93.6	32.1	2
SMDJ60A	SMDJ60CA	HGK	IGK	60.0	66.70	76.70	1	96.8	31.0	2
SMDJ64A	SMDJ64CA	HGM	IGM	64.0	71.10	81.80	1	103	29.1	2
SMDJ70A	SMDJ70CA	HGP	IGP	70.0	77.80	89.50	1	113	26.5	2

Part Number		Marking code		Reverse Stand-Off Voltage	Breakdown Voltage @IT		Test Current	Maximum Clamping Voltage @IPP	Peak Pulse Current	Reverse Leakage @VRWM
(UNI)	(BI)	(UNI)	(BI)	VRWM (V)	VBR MIN. (V)	VBR MAX. (V)	IT (mA)	VC (V)	IPP (A)	IR (μ A)
SMDJ75A	SMDJ75CA	HGR	IGR	75.0	95.80	95.80	1	121	24.8	2
SMDJ78A	SMDJ78CA	HRT	IRT	78.0	99.70	99.70	1	126	23.8	2
SMDJ85A	SMDJ85CA	HGV	IGV	85.0	108.20	104.00	1	137	21.9	2
SMDJ90A	SMDJ90CA	HGX	IGX	90.0	115.50	111.00	1	146	20.5	2
SMDJ100A	SMDJ100CA	HGZ	IGZ	100.0	128.00	123.00	1	162	18.5	2
SMDJ110A	SMDJ110CA	HHE	IHE	110.0	140.50	135.00	1	177	16.9	2
SMDJ120A	SMDJ120CA	HHG	IHG	120.0	153.00	147.00	1	193	15.5	2
SMDJ130A	SMDJ130CA	HHK	IHK	130.0	165.50	159.00	1	209	14.4	2
SMDJ150A	SMDJ150CA	HHM	IHM	150.0	192.50	185.00	1	243	12.3	2
SMDJ160A	SMDJ160CA	HHP	IHP	160.0	205.00	197.00	1	259	11.6	2
SMDJ170A	SMDJ170CA	HHR	IHR	170.0	217.50	209.00	1	275	10.9	2

### PACKAGING

Part Number	Component Package	Quantity
SMDJxxxXX	DO-214AB	500

**RATINGS AND CHARACTERISTIC CURVES** (TA=25 unless

otherwise noted)

FIG 1 - Peak Pulse Power Rating Curve

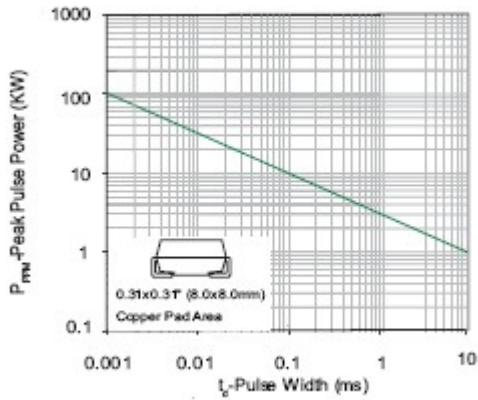


FIG. 2 - Peak Pulse Power or Current Derating Curve vs Initial Junction Temperature

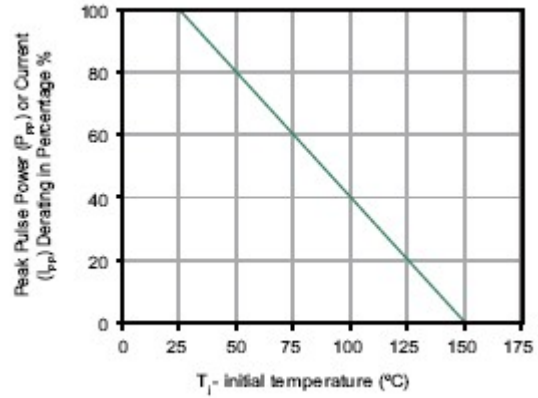


FIG. 3 - Pulse Waveform

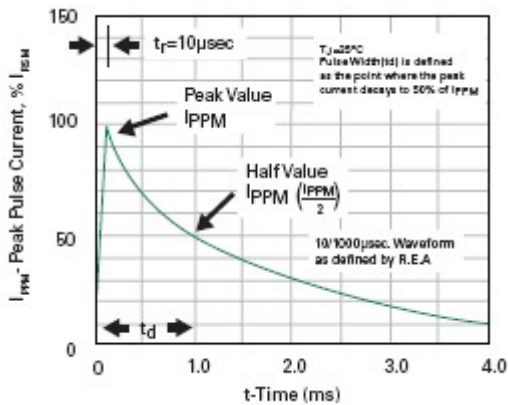


FIG. 4 - Typical Junction Capacitance

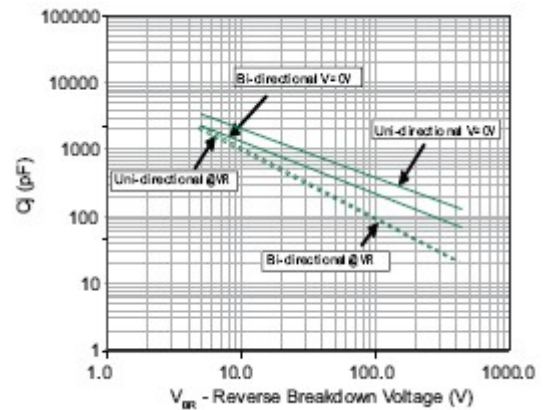


FIG. 5 - Steady State Power Derating Curve

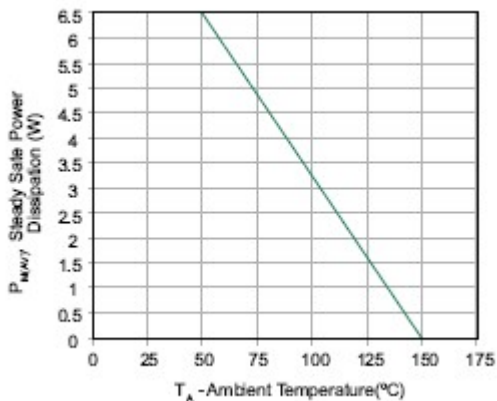
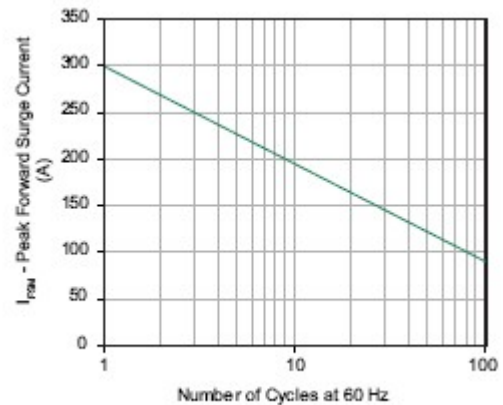


FIG.6 - Maximum Non-Repetitive Peak Forward Surge Current Uni-Directional only



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