

SMDJ5.0A~SMDJ440CA

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR POWER 3000 Watt

BREAK DOWN VOLTAGE 5.0 to 440 Volt

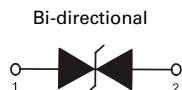
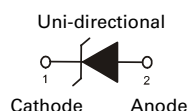
SMC / DO-214AB Unit:mm

FEATURES

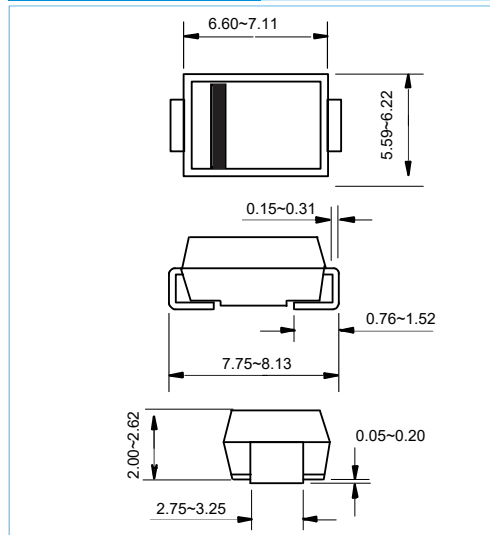
- Glass passivated junction
- Excellent clamping capability
- Plastic Material has UL Flammability Classification 94V-O
- Low dynamic impedance
- High temperature soldering : 260°C /10 seconds at terminals
- ESD IEC-61000-4-2 Air ±30kV, Contact ±30kV
- Lead free in compliance with EU RoHS 2.0

MECHANICAL DATA

- Case: Molded plastic over passivated junction.
- Polarity: Color band denotes cathode end



For Uni-directional use A Suffix for types SMDJ5.0A thru types SMDJ440A.
For Bi-directional use CA Suffix for types SMDJ5.0CA thru types SMDJ440CA.



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Rating	Symbol	Value	Units
Peak Pulse Power Dissipation on $T_A = 25^\circ\text{C}$ (Notes 1,2, Fig.1)	P_{PP}	3000	Watts
Typical Thermal Resistance Junction to Air (Notes 2)	$R_{\theta JA}$	75	$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +175	$^\circ\text{C}$

NOTES :

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 2.
2. Mounted on 5mm² copper pads to each terminal.

SMDJ5.0A~SMDJ440CA

ELECTRICAL CHARACTERISTICS @25°C

Part Number (Uni)	Part Number (Bi)	Marking		Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T (mA)	Maximum Clamping Voltage V_C @ I_{PP} (V)	Maximum Peak Pulse Current I_{PP} (A)	Maximum Reverse Leakage I_R @ V_R (μA)
		UNI	BI		MIN	MAX				
SMDJ5.0A	SMDJ5.0CA	DDE	IDE	5.0	6.40	7.00	10	9.2	326.0	1000
SMDJ6.0A	SMDJ6.0CA	DDG	IDG	6.0	6.67	7.37	10	10.3	291.3	1000
SMDJ6.5A	SMDJ6.5CA	DDK	IDK	6.5	7.22	7.98	10	11.2	267.9	500
SMDJ7.0A	SMDJ7.0CA	DDM	IDM	7.0	7.78	8.60	10	12.0	250.0	200
SMDJ7.5A	SMDJ7.5CA	DDP	IDP	7.5	8.33	9.21	1	12.9	232.5	100
SMDJ8.0A	SMDJ8.0CA	DDR	IDR	8.0	8.89	9.83	1	13.6	220.6	50
SMDJ8.5A	SMDJ8.5CA	DDT	IDT	8.5	9.44	10.40	1	14.4	208.3	25
SMDJ9.0A	SMDJ9.0CA	DDV	IDV	9.0	10.00	11.10	1	15.4	194.8	10
SMDJ10A	SMDJ10CA	DDX	IDX	10.0	11.10	12.30	1	17.0	176.4	5
SMDJ11A	SMDJ11CA	DDZ	IDZ	11.0	12.20	13.50	1	18.2	164.8	5
SMDJ12A	SMDJ12CA	DEE	IEE	12.0	13.30	14.70	1	19.9	150.7	5
SMDJ13A	SMDJ13CA	DEG	IEG	13.0	14.40	15.90	1	21.5	139.5	5
SMDJ14A	SMDJ14CA	DEK	IEK	14.0	15.60	17.20	1	23.2	129.3	5
SMDJ15A	SMDJ15CA	DEM	IEM	15.0	16.70	18.50	1	24.4	122.9	5
SMDJ16A	SMDJ16CA	DEP	IEP	16.0	17.80	19.70	1	26.0	115.4	5
SMDJ17A	SMDJ17CA	DER	IER	17.0	18.90	20.90	1	27.6	108.7	5
SMDJ18A	SMDJ18CA	DET	IET	18.0	20.00	22.10	1	29.2	102.7	5
SMDJ20A	SMDJ20CA	DEV	IEV	20.0	22.20	24.50	1	32.4	92.6	5
SMDJ22A	SMDJ22CA	DEX	IEX	22.0	24.40	26.90	1	35.5	84.5	5
SMDJ24A	SMDJ24CA	DEZ	IEZ	24.0	26.70	29.50	1	38.9	77.1	5
SMDJ26A	SMDJ26CA	DFE	IFE	26.0	28.90	31.90	1	42.1	71.2	5
SMDJ28A	SMDJ28CA	DFG	IFG	28.0	31.10	34.40	1	45.4	66.1	5
SMDJ30A	SMDJ30CA	DFK	IFK	30.0	33.30	36.80	1	48.4	62.0	5
SMDJ33A	SMDJ33CA	DFM	IFM	33.0	36.70	40.60	1	53.3	56.3	5
SMDJ36A	SMDJ36CA	DFP	IFP	36.0	40.00	44.20	1	58.1	51.6	5
SMDJ40A	SMDJ40CA	DFR	IFR	40.0	44.40	49.10	1	64.5	46.5	5
SMDJ43A	SMDJ43CA	DFT	IFT	43.0	47.80	52.80	1	69.4	43.2	5
SMDJ45A	SMDJ45CA	DFV	IFV	45.0	50.00	55.30	1	72.7	41.2	5
SMDJ48A	SMDJ48CA	DFX	IFX	48.0	53.30	58.90	1	77.4	38.7	5
SMDJ51A	SMDJ51CA	DFZ	IFZ	51.0	56.70	62.70	1	82.4	36.4	5
SMDJ54A	SMDJ54CA	DGE	IGE	54.0	60.00	66.30	1	87.1	34.4	5
SMDJ58A	SMDJ58CA	DGG	IGG	58.0	64.40	71.20	1	93.6	32.0	5
SMDJ60A	SMDJ60CA	DGK	IGK	60.0	66.70	73.70	1	96.8	31.0	5
SMDJ64A	SMDJ64CA	DGM	IGM	64.0	71.10	78.60	1	103.0	29.1	5
SMDJ70A	SMDJ70CA	DGP	IGP	70.0	77.80	86.00	1	113.0	26.5	5
SMDJ75A	SMDJ75CA	DGR	IGR	75.0	83.30	92.10	1	121.0	24.8	5
SMDJ78A	SMDJ78CA	DGT	IGT	78.0	86.70	95.80	1	126.0	23.8	5
SMDJ85A	SMDJ85CA	DGV	IGV	85.0	94.40	104.00	1	137.0	21.9	5
SMDJ90A	SMDJ90CA	DGX	IGX	90.0	100.00	111.00	1	146.0	20.5	5
SMDJ100A	SMDJ100CA	DGZ	IGZ	100.0	111.00	123.00	1	162.0	18.5	5
SMDJ110A	SMDJ110CA	DHE	IHE	110.0	122.00	135.00	1	177.0	16.9	5
SMDJ120A	SMDJ120CA	DHG	IHG	120.0	133.00	147.00	1	193.0	15.5	5
SMDJ130A	SMDJ130CA	DHK	IHK	130.0	144.00	159.00	1	209.0	14.3	5
SMDJ150A	SMDJ150CA	DHM	IHM	150.0	167.00	185.00	1	243.0	12.3	5
SMDJ160A	SMDJ160CA	DHP	IHP	160.0	178.00	197.00	1	259.0	11.6	5
SMDJ170A	SMDJ170CA	DHR	IHR	170.0	189.00	209.00	1	275.0	10.9	5
SMDJ180A	SMDJ180CA	DHT	IHT	180.0	201.00	222.00	1	292.0	10.9	5
SMDJ200A	SMDJ200CA	DHV	IHV	200.0	224.00	247.00	1	324.0	9.2	5
SMDJ220A	SMDJ220CA	DHX	IHX	220.0	246.00	272.00	1	356.0	8.4	5
SMDJ250A	SMDJ250CA	DHZ	IHZ	250.0	279.00	309.00	1	405.0	7.4	5
SMDJ300A	SMDJ300CA	DJE	IJE	300.0	335.00	371.00	1	486.0	6.1	5
SMDJ350A	SMDJ350CA	DJG	IJG	350.0	391.00	432.00	1	567.0	5.3	5
SMDJ400A	SMDJ400CA	DJK	IJK	400.0	447.00	494.00	1	648.0	4.6	5
SMDJ440A	SMDJ440CA	DJM	IJM	440.0	492.00	543.00	1	713.0	4.2	5

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RATING AND CHARACTERISTIC CURVES

FIG1: Peak Pulse Power Rating Curve

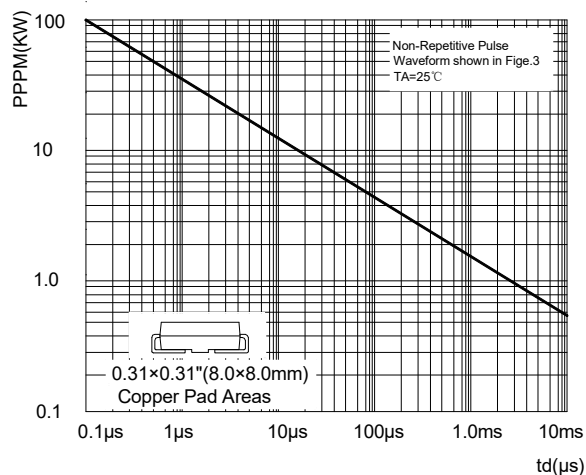


FIG2: Pulse Power or Current vs. Initial Junction Temperature

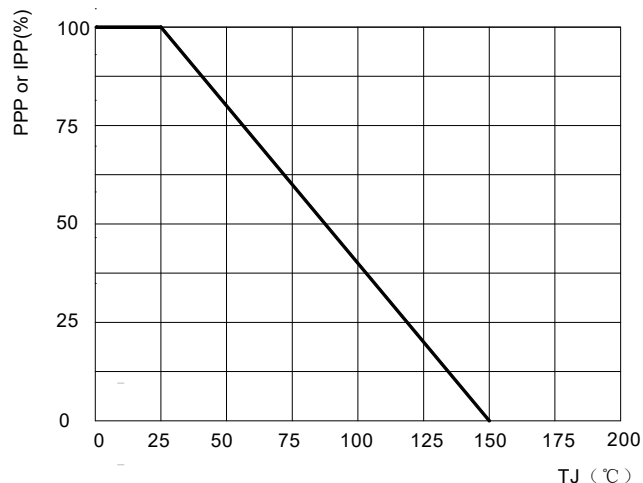


FIG3: Pulse Waveform

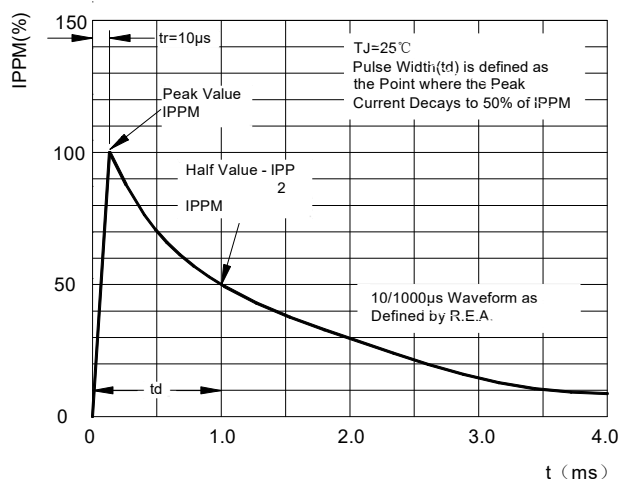


FIG4: Typical Transient Thermal Impedance

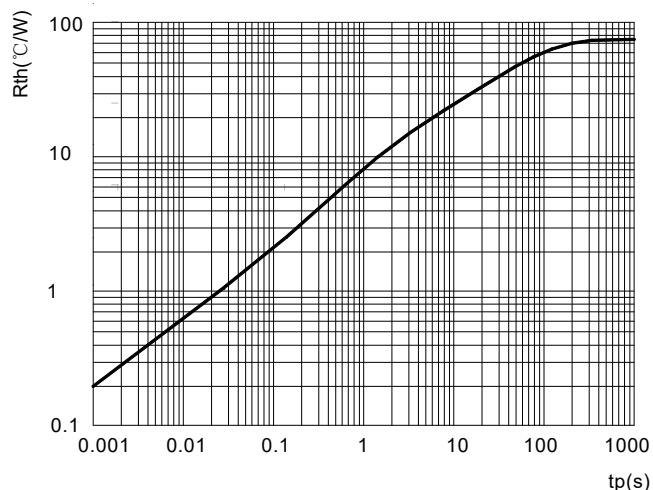


FIG5: Maximum Non-Repetitive Surge Current

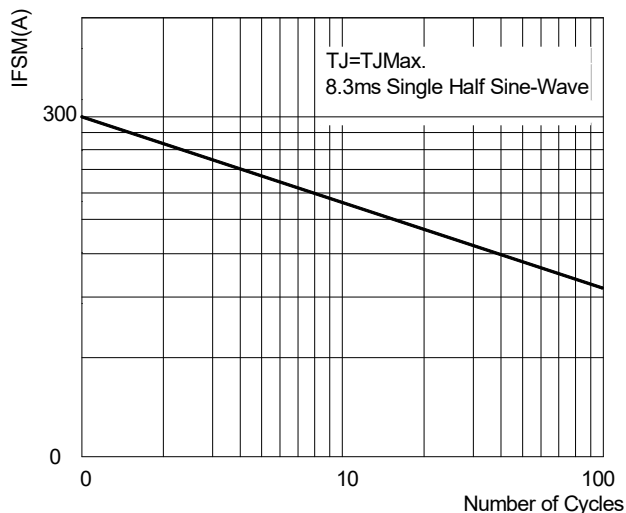
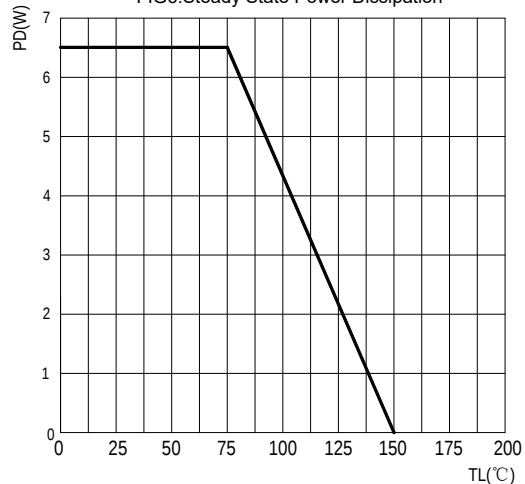


FIG6: Steady State Power Dissipation

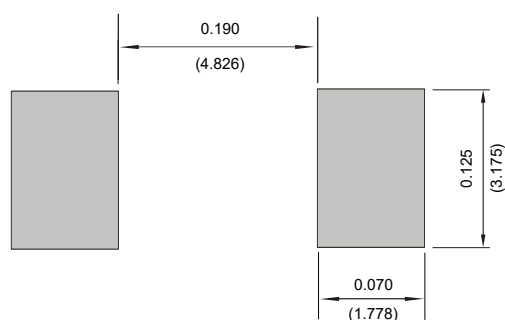


SMDJ5.0A~SMDJ440CA

MOUNTING PAD LAYOUT

SMC / DO-214AB

Unit:Inch(mm)



ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
SMDJ5.0A~SMDJ440CA	SMC	13 Inch	3000