

SMLJ5.0A~SMLJ440CA

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR POWER 3000 Watt

BREAK DOWN VOLTAGE 5.0 to 440 Volt

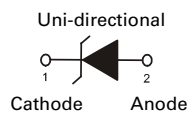
SMC / DO-214AB Unit:mm

FEATURES

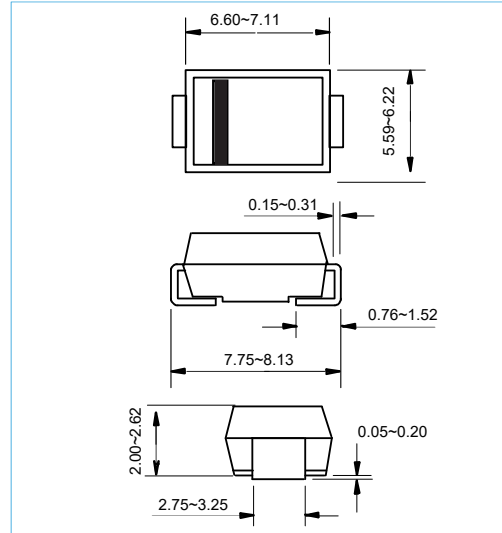
- Glass passivated junction
- Excellent clamping capability
- Plastic Material has UL Flammability Classification 94V-0
- Low dynamic impedance
- High temperature soldering : 260°C /10 seconds at terminals
- ESD IEC-61000-4-2 Air ±30kV, Contact ±30kV
- Lead free in compliance with EU RoHS 2.0

MECHANICAL DATA

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



For Uni-directional use A Suffix for types SMLJ5.0A thru types SMLJ440A. For Bi-directional use CA Suffix for types SMLJ5.0CA thru types SMLJ440CA.



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.

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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 (μ A)
		UNI	BI		MIN	MAX				
SMLJ5.0A	SMLJ5.0CA	DDE	IDE	5.0	6.40	7.00	10	9.2	326.0	1000
SMLJ6.0A	SMLJ6.0CA	DDG	IDG	6.0	6.67	7.37	10	10.3	291.3	1000
SMLJ6.5A	SMLJ6.5CA	DDK	IDK	6.5	7.22	7.98	10	11.2	267.9	500
SMLJ7.0A	SMLJ7.0CA	DDM	IDM	7.0	7.78	8.60	10	12.0	250.0	200
SMLJ7.5A	SMLJ7.5CA	DDP	IDP	7.5	8.33	9.21	1	12.9	232.5	100
SMLJ8.0A	SMLJ8.0CA	DDR	IDR	8.0	8.89	9.83	1	13.6	220.6	50
SMLJ8.5A	SMLJ8.5CA	DDT	IDT	8.5	9.44	10.40	1	14.4	208.3	25
SMLJ9.0A	SMLJ9.0CA	DDV	IDV	9.0	10.00	11.10	1	15.4	194.8	10
SMLJ10A	SMLJ10CA	DDX	IDX	10.0	11.10	12.30	1	17.0	176.4	5
SMLJ11A	SMLJ11CA	DDZ	IDZ	11.0	12.20	13.50	1	18.2	164.8	5
SMLJ12A	SMLJ12CA	DEE	IEE	12.0	13.30	14.70	1	19.9	150.7	5
SMLJ13A	SMLJ13CA	DEG	IEG	13.0	14.40	15.90	1	21.5	139.5	5
SMLJ14A	SMLJ14CA	DEK	IEK	14.0	15.60	17.20	1	23.2	129.3	5
SMLJ15A	SMLJ15CA	DEM	IEM	15.0	16.70	18.50	1	24.4	122.9	5
SMLJ16A	SMLJ16CA	DEP	IEP	16.0	17.80	19.70	1	26.0	115.4	5
SMLJ17A	SMLJ17CA	DER	IER	17.0	18.90	20.90	1	27.6	108.7	5
SMLJ18A	SMLJ18CA	DET	IET	18.0	20.00	22.10	1	29.2	102.7	5
SMLJ20A	SMLJ20CA	DEV	IEV	20.0	22.20	24.50	1	32.4	92.6	5
SMLJ22A	SMLJ22CA	DEX	IEX	22.0	24.40	26.90	1	35.5	84.5	5
SMLJ24A	SMLJ24CA	DEZ	IEZ	24.0	26.70	29.50	1	38.9	77.1	5
SMLJ26A	SMLJ26CA	DFE	IFE	26.0	28.90	31.90	1	42.1	71.2	5
SMLJ28A	SMLJ28CA	DFG	IFG	28.0	31.10	34.40	1	45.4	66.1	5
SMLJ30A	SMLJ30CA	DFK	IFK	30.0	33.30	36.80	1	48.4	62.0	5
SMLJ33A	SMLJ33CA	DFM	IFM	33.0	36.70	40.60	1	53.3	56.3	5
SMLJ36A	SMLJ36CA	DFP	IFP	36.0	40.00	44.20	1	58.1	51.6	5
SMLJ40A	SMLJ40CA	DFR	IFR	40.0	44.40	49.10	1	64.5	46.5	5
SMLJ43A	SMLJ43CA	DFT	IFT	43.0	47.80	52.80	1	69.4	43.2	5
SMLJ45A	SMLJ45CA	DFV	IFV	45.0	50.00	55.30	1	72.7	41.2	5
SMLJ48A	SMLJ48CA	DFX	IFX	48.0	53.30	58.90	1	77.4	38.7	5
SMLJ51A	SMLJ51CA	DFZ	IFZ	51.0	56.70	62.70	1	82.4	36.4	5
SMLJ54A	SMLJ54CA	DGE	IGE	54.0	60.00	66.30	1	87.1	34.4	5
SMLJ58A	SMLJ58CA	DGG	IGG	58.0	64.40	71.20	1	93.6	32.0	5
SMLJ60A	SMLJ60CA	DGK	IGK	60.0	66.70	73.70	1	96.8	31.0	5
SMLJ64A	SMLJ64CA	DGM	IGM	64.0	71.10	78.60	1	103.0	29.1	5
SMLJ70A	SMLJ70CA	DGP	IGP	70.0	77.80	86.00	1	113.0	26.5	5
SMLJ75A	SMLJ75CA	DGR	IGR	75.0	83.30	92.10	1	121.0	24.8	5
SMLJ78A	SMLJ78CA	DGT	IGT	78.0	86.70	95.80	1	126.0	23.8	5
SMLJ85A	SMLJ85CA	DGV	IGV	85.0	94.40	104.00	1	137.0	21.9	5
SMLJ90A	SMLJ90CA	DGX	IGX	90.0	100.00	111.00	1	146.0	20.5	5
SMLJ100A	SMLJ100CA	DGZ	IGZ	100.0	111.00	123.00	1	162.0	18.5	5
SMLJ110A	SMLJ110CA	DHE	IHE	110.0	122.00	135.00	1	177.0	16.9	5
SMLJ120A	SMLJ120CA	DHG	IHG	120.0	133.00	147.00	1	193.0	15.5	5
SMLJ130A	SMLJ130CA	DHK	IHK	130.0	144.00	159.00	1	209.0	14.3	5
SMLJ150A	SMLJ150CA	DHM	IHM	150.0	167.00	185.00	1	243.0	12.3	5
SMLJ160A	SMLJ160CA	DHP	IHP	160.0	178.00	197.00	1	259.0	11.6	5
SMLJ170A	SMLJ170CA	DHR	IHR	170.0	189.00	209.00	1	275.0	10.9	5
SMLJ180A	SMLJ180CA	DHT	IHT	180.0	201.00	222.00	1	292.0	10.9	5
SMLJ200A	SMLJ200CA	DHV	IHV	200.0	224.00	247.00	1	324.0	9.2	5
SMLJ220A	SMLJ220CA	DHX	IHX	220.0	246.00	272.00	1	356.0	8.4	5
SMLJ250A	SMLJ250CA	DHZ	IHZ	250.0	279.00	309.00	1	405.0	7.4	5
SMLJ300A	SMLJ300CA	DJE	IJE	300.0	335.00	371.00	1	486.0	6.1	5
SMLJ350A	SMLJ350CA	DJG	IJG	350.0	391.00	432.00	1	567.0	5.3	5
SMLJ400A	SMLJ400CA	DJK	IJK	400.0	447.00	494.00	1	648.0	4.6	5
SMLJ440A	SMLJ440CA	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

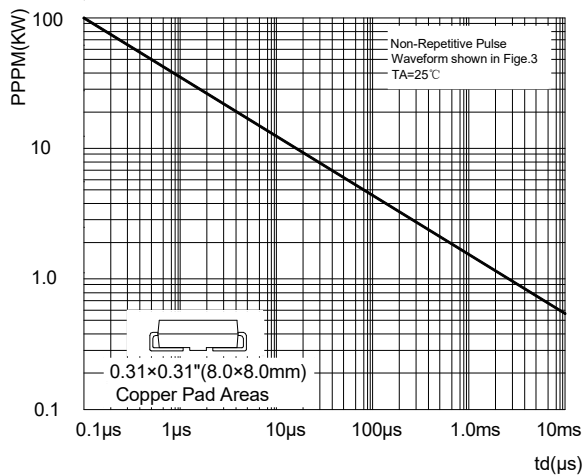


FIG2: Pulse Power or Current vs. Initial Junction Temperature

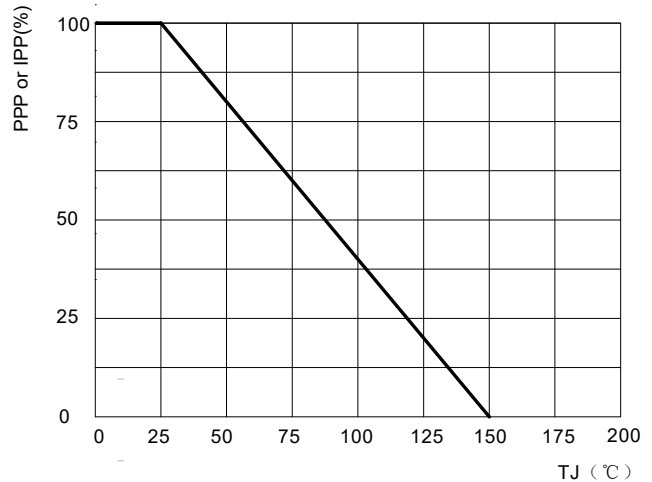


FIG3: Pulse Waveform

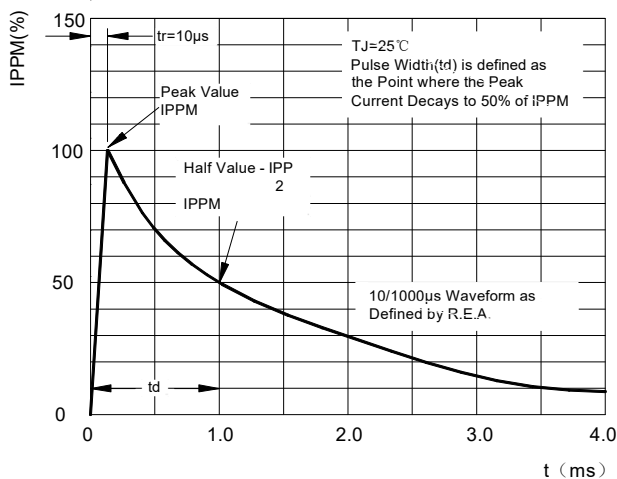


FIG4: Typical Transient Thermal Impedance

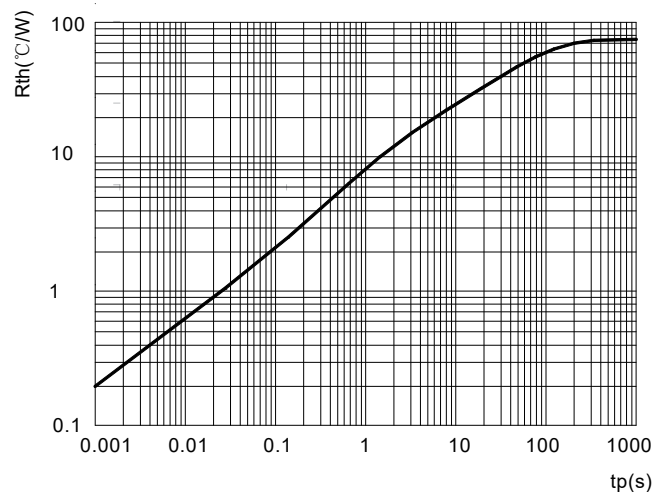


FIG5: Maximum Non-Repetitive Surge Current

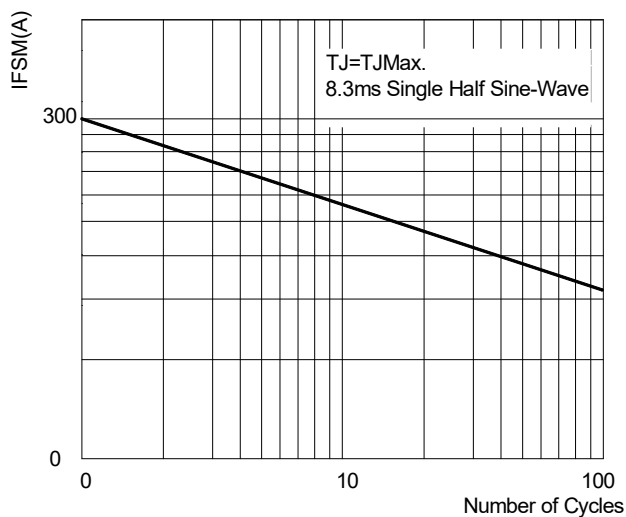
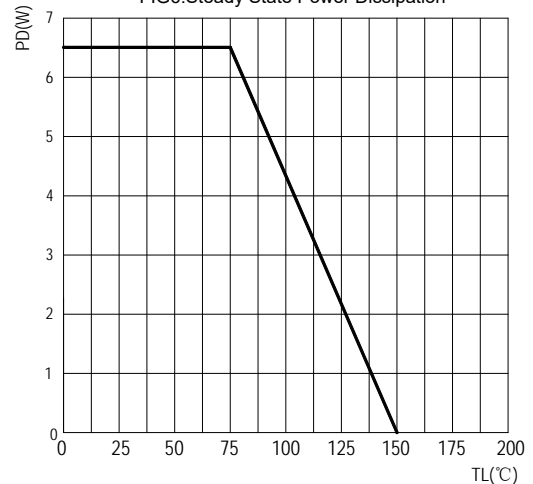


FIG6: Steady State Power Dissipation

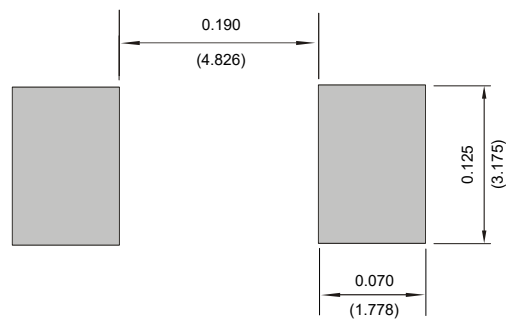


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MOUNTING PAD LAYOUT

SMC / DO-214AB

Unit:Inch(mm)



ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
SMLJ5.0A~SMLJ440CA	SMC	13 Inch	3000