

1.5SMCJ5.0A-AU ~ 1.5SMCJ220CA-AU Series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR PEAK PULSE POWER 1500 Watt

STAND-OFF VOLTAGE

5 to 220 Volt

SMC / DO-214AB

Unit : inch(mm)

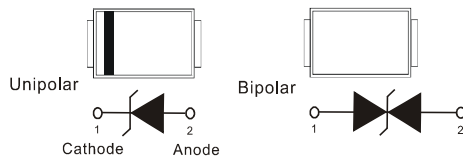
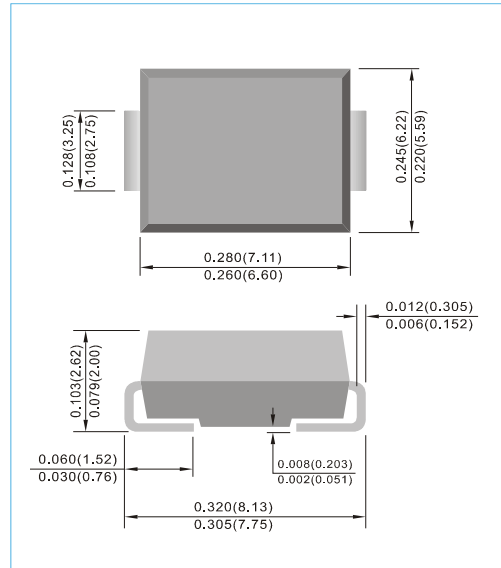
Recongized File # E210467

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- ESD IEC-61000-4-2 Air \pm 30kV, Contact \pm 30kV
- For surface mounted applications in order to optimize board space.
- Low inductance
- High temperature soldering : 260°C /10 seconds at terminals
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: JEDEC DO-214AB, Molded plastic over passivated junction.
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard Packaging: 16mm tape (EIA-481)
- Approx. Weight: 0.266 grams



DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 1.5SMCJ5.0 thru types 1.5SMCJ220.
Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.
For Capacitive load derate current by 20%.

Rating	Symbol	Value	Unit
Peak Power Dissipation at $T_A = 25^\circ\text{C}$, $t_p = 1\text{ms}$ (Notes 1)	P_{PP}	1500	W
Power Dissipation on Infinite Heat Sink at $T_L = 50^\circ\text{C}$	P_D	6.5	Watts
Peak Pulse Current on $t_p = 10/1000\mu\text{s}$ waveform (Notes 1)	I_{PPM}	See table	A
Typical Thermal Resistance Junction to Air (Notes 2)	$R_{\theta JA}$	50	$^\circ\text{C} / \text{W}$
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (Notes 3)	I_{FSM}	200	A
ESD IEC-61000-4-2 (Air) ESD IEC-61000-4-2 (Contact)	V_{ESD}	± 30 ± 30	kV
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

NOTES :

1. Non-repetitive current pulse, per Fig. 3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 2.
2. Mounted on 2mm^2 (0.013mm thick) land areas.
3. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minutes maximum.
4. A transient suppressor is selected according to the working peak reverse voltage (V_{RWM}), which should be equal to or greater than the DC or continuous peak operating voltage level.

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Part Number		Reverse Stand-off Voltage	Break down Voltage		Test Current	Reverse Leakage		Max. Clamp Voltage 10/1000µs	Peak Pulse Current 10/1000µs	Marking Code	
			V _{BR} @ I _T			I _R @ V _{RWM}					
		V _{RWM} (Notes 4)	Min.	Max.	I _T	UNI	BI	V _C @ I _{PP}	I _{PP}		
UNI	BI	V	V	V	mA	µA	µA	V	A	UNI	BI
1500W Transient Voltage Suppressor											
1.5SMCJ5.0A-AU	1.5SMCJ5.0CA-AU	5	6.4	7.25	10	1000	2000	9.2	163	GDE	BDE
1.5SMCJ6.0A-AU	1.5SMCJ6.0CA-AU	6	6.67	7.67	10	1000	2000	10.3	145.6	GDG	BDG
1.5SMCJ6.5A-AU	1.5SMCJ6.5CA-AU	6.5	7.22	8.3	10	500	1000	11.2	133.9	GDK	BDK
1.5SMCJ7.0A-AU	1.5SMCJ7.0CA-AU	7	7.78	8.95	10	200	400	12	125	GDM	BDM
1.5SMCJ7.5A-AU	1.5SMCJ7.5CA-AU	7.5	8.33	9.58	1	100	200	12.9	116.3	GDP	BDP
1.5SMCJ8.0A-AU	1.5SMCJ8.0CA-AU	8	8.89	10.23	1	50	100	13.6	110.3	GDR	BDR
1.5SMCJ8.5A-AU	1.5SMCJ8.5CA-AU	8.5	9.44	10.82	1	25	50	14.4	104.2	GDT	BDT
1.5SMCJ9.0A-AU	1.5SMCJ9.0CA-AU	9	10	11.5	1	10	20	15.4	97.4	GDV	BDV
1.5SMCJ10A-AU	1.5SMCJ10CA-AU	10	11.1	12.8	1	5	5	17	88.2	GDX	BDX
1.5SMCJ11A-AU	1.5SMCJ11CA-AU	11	12.2	14	1	1	1	18.2	82.4	GDZ	BDZ
1.5SMCJ12A-AU	1.5SMCJ12CA-AU	12	13.3	15.3	1	1	1	19.9	75.3	GEE	BEE
1.5SMCJ13A-AU	1.5SMCJ13CA-AU	13	14.4	16.5	1	1	1	21.5	69.7	GEG	BEG
1.5SMCJ14A-AU	1.5SMCJ14CA-AU	14	15.6	17.9	1	1	1	23.2	64.7	GEK	BEK
1.5SMCJ15A-AU	1.5SMCJ15CA-AU	15	16.7	19.2	1	1	1	24.4	61.5	GEM	BEM
1.5SMCJ16A-AU	1.5SMCJ16CA-AU	16	17.8	20.5	1	1	1	26	57.7	GEP	BEP
1.5SMCJ17A-AU	1.5SMCJ17CA-AU	17	18.9	21.7	1	1	1	27.6	53.3	GER	BER
1.5SMCJ18A-AU	1.5SMCJ18CA-AU	18	20	23.3	1	1	1	29.2	51.4	GET	BET
1.5SMCJ20A-AU	1.5SMCJ20CA-AU	20	22.2	25.5	1	1	1	32.4	46.3	GEV	BEV
1.5SMCJ22A-AU	1.5SMCJ22CA-AU	22	24.4	28	1	1	1	35.5	42.2	GEX	BEX
1.5SMCJ24A-AU	1.5SMCJ24CA-AU	24	26.7	30.7	1	1	1	38.9	38.6	GEZ	BEZ
1.5SMCJ26A-AU	1.5SMCJ26CA-AU	26	28.9	33.2	1	1	1	42.1	35.6	GFE	BFE
1.5SMCJ28A-AU	1.5SMCJ28CA-AU	28	31.1	35.8	1	1	1	45.4	33	GFG	BFG
1.5SMCJ30A-AU	1.5SMCJ30CA-AU	30	33.3	38.3	1	1	1	48.4	31	GFK	BFK
1.5SMCJ33A-AU	1.5SMCJ33CA-AU	33	36.7	42.2	1	1	1	53.3	28.1	GFM	BFM
1.5SMCJ36A-AU	1.5SMCJ36CA-AU	36	40	46	1	1	1	58.1	25.8	GFP	BFP
1.5SMCJ40A-AU	1.5SMCJ40CA-AU	40	44.4	51.1	1	1	1	64.5	23.2	GFR	BFR
1.5SMCJ43A-AU	1.5SMCJ43CA-AU	43	47.8	55	1	1	1	69.4	21.6	GFT	BFT
1.5SMCJ45A-AU	1.5SMCJ45CA-AU	45	50	57.5	1	1	1	72.7	20.6	GFV	BFV
1.5SMCJ48A-AU	1.5SMCJ48CA-AU	48	53.3	61.3	1	1	1	77.4	19.4	GFX	BFX
1.5SMCJ51A-AU	1.5SMCJ51CA-AU	51	56.7	65.2	1	1	1	82.4	18.2	GFZ	BFZ
1.5SMCJ54A-AU	1.5SMCJ54CA-AU	54	60	69	1	1	1	87.1	17.2	GGE	BGE
1.5SMCJ58A-AU	1.5SMCJ58CA-AU	58	64.4	74.1	1	1	1	93.6	16	GGG	BGG
1.5SMCJ60A-AU	1.5SMCJ60CA-AU	60	66.7	76.7	1	1	1	96.8	15.5	GGK	BGK
1.5SMCJ64A-AU	1.5SMCJ64CA-AU	64	71.1	81.8	1	1	1	103	14.6	GGM	BGM
1.5SMCJ70A-AU	1.5SMCJ70CA-AU	70	77.8	89.5	1	1	1	113	13.3	GGP	BGP
1.5SMCJ75A-AU	1.5SMCJ75CA-AU	75	83.3	95.8	1	1	1	121	12.4	GGR	BGR
1.5SMCJ78A-AU	1.5SMCJ78CA-AU	78	86.7	99.7	1	1	1	126	11.4	GGT	BGT
1.5SMCJ85A-AU	1.5SMCJ85CA-AU	85	94.4	108.2	1	1	1	137	10.4	GGV	BGV
1.5SMCJ90A-AU	1.5SMCJ90CA-AU	90	100	115.5	1	1	1	146	10.3	GGX	BGX
1.5SMCJ100A-AU	1.5SMCJ100CA-AU	100	111	128	1	1	1	162	9.3	GGZ	BGZ
1.5SMCJ110A-AU	1.5SMCJ110CA-AU	110	122	140.5	1	1	1	177	8.4	GHE	BHE
1.5SMCJ120A-AU	1.5SMCJ120CA-AU	120	133	153	1	1	1	193	7.9	GHG	BHG
1.5SMCJ130A-AU	1.5SMCJ130CA-AU	130	144	165.5	1	1	1	209	7.2	GHK	BHK
1.5SMCJ150A-AU	1.5SMCJ150CA-AU	150	167	192.5	1	1	1	243	6.2	GHM	BHM
1.5SMCJ160A-AU	1.5SMCJ160CA-AU	160	178	205	1	1	1	259	5.8	GHP	BHP
1.5SMCJ170A-AU	1.5SMCJ170CA-AU	170	189	217.5	1	1	1	275	5.5	GHR	BHR
1.5SMCJ180A-AU	1.5SMCJ180CA-AU	180	198	230.4	1	1	1	292	5.1	GHT	BHT
1.5SMCJ190A-AU	1.5SMCJ190CA-AU	190	209	243.2	1	1	1	308	4.8	GHV	BHV
1.5SMCJ200A-AU	1.5SMCJ200CA-AU	200	220	256	1	1	1	324	4.6	GHX	BHX
1.5SMCJ210A-AU	1.5SMCJ210CA-AU	210	231	268.8	1	1	1	340	4.4	GHZ	BHZ
1.5SMCJ220A-AU	1.5SMCJ220CA-AU	220	242	281.6	1	1	1	356	4.2	GIE	BIE

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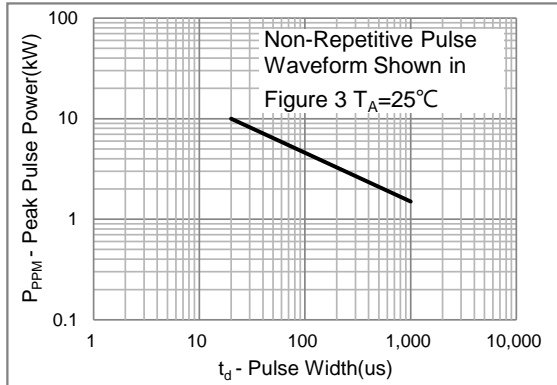


Fig.1 Peak Pulse Power Rating Curve

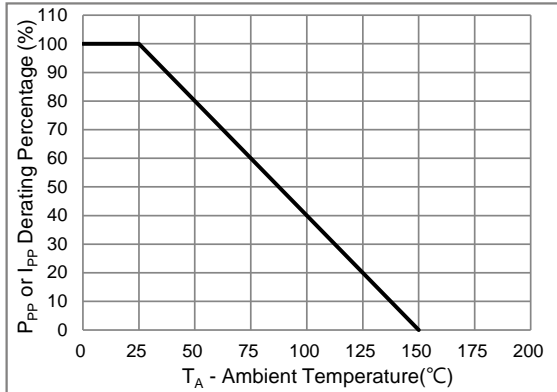


Fig.2 Derating Curve

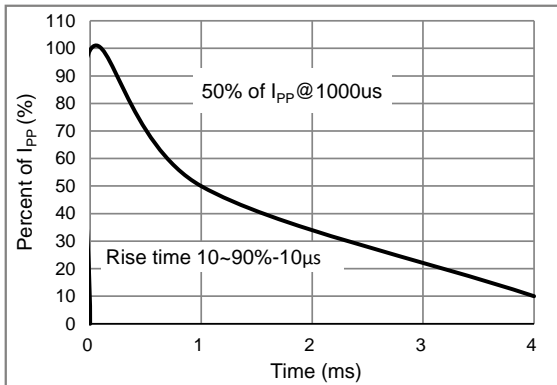


Fig.3 10/1000us Pulse Waveform

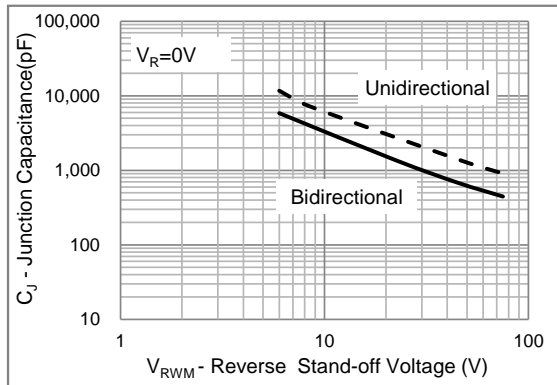


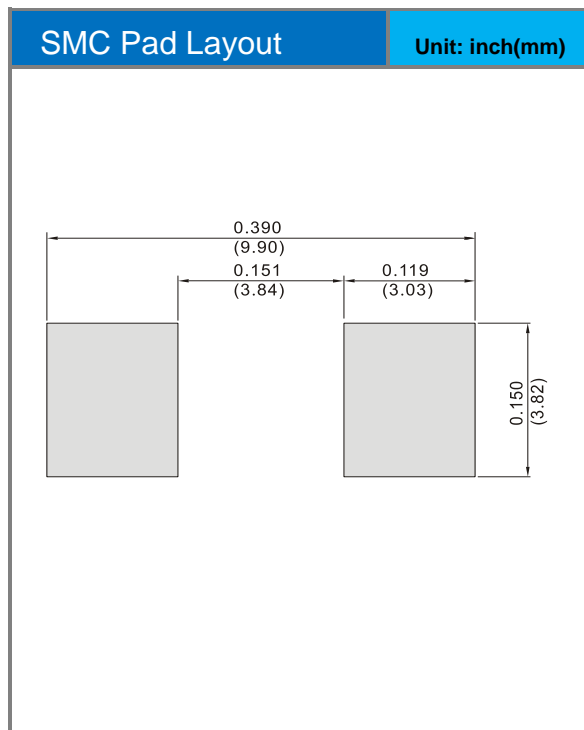
Fig.4 Typical Capacitance

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
1.5SMCJxxxA-AU	SMC	0.8K pcs / 7" reel	See Table
1.5SMCJxxxA-AU	SMC	3K pcs / 13" reel	See Table

Mounting Pad Layout



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