

3.0SMCJ10A-AU ~ 3.0SMCJ220CA-AU Series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Voltage

10~220 V

Power

3000 W

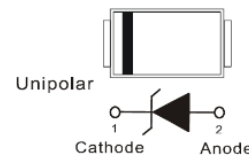
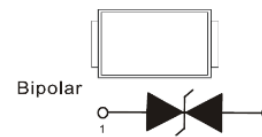
Features

- ISO10605(C=330 pF,R=330Ω): ± 30kV Air, ± 30kV Contact
- HBM ≥ ± 8 kV & CDM ≥ ± 2 kV
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : Molded plastic, SMC
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.266 grams

SMC



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNIT
Peak Pulse Power Dissipation(tp = 10 / 1000 us)	P _{PP} (1)	3000	W
Peak Forward Surge Current(8.3 ms single half sine-wave)	I _{FSM} (3)	300	A
Peak Pulse Current on tp = 10 / 1000 us waveform(Fig.2)	I _{PPM} (1)	See table 1	A
ISO10605(C = 330 pF, R = 330 Ω) (Air)	V _{ESD}	±30	kV
ISO10605(C = 330 pF, R = 330 Ω) (Contact)		±30	
Typical Thermal Resistance Junction to Ambient	R _{θJA} (2)	125	°C/W
Operating Junction Temperature Range	T _J	-55~150	°C
Storage Temperature Range	T _{STG}	-55~150	°C

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Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Part Number		V _{RWM}	V _{BR}			I _R		V _{C@I_{PP}}		Marking Code	
			Min.	Max.	I _T	@ V _{RWM}		V	A	UNI.	BI.
UNI.	BI.	V	V	V	mA	UNI.	BI.				
3000W Transient Voltage Suppressor											
3.0SMCJ10A-AU	3.0SMCJ10CA-AU	10	11.1	12.8	1	3	3	17	176.4	HDX	IDX
3.0SMCJ11A-AU	3.0SMCJ11CA-AU	11	12.2	14	1	3	3	18.2	184.8	HDZ	IDZ
3.0SMCJ12A-AU	3.0SMCJ12CA-AU	12	13.3	15.3	1	3	3	19.9	150.6	HEE	IEE
3.0SMCJ13A-AU	3.0SMCJ13CA-AU	13	14.4	16.5	1	3	3	21.5	139.4	HEG	IEG
3.0SMCJ14A-AU	3.0SMCJ14CA-AU	14	15.6	17.9	1	3	3	23.2	129.4	HEK	IEK
3.0SMCJ15A-AU	3.0SMCJ15CA-AU	15	16.7	19.2	1	3	3	24.4	123	HEM	IEM
3.0SMCJ16A-AU	3.0SMCJ16CA-AU	16	17.8	20.5	1	3	3	26	115.4	HEP	IEP
3.0SMCJ17A-AU	3.0SMCJ17CA-AU	17	18.9	21.7	1	3	3	27.6	106.6	HER	IER
3.0SMCJ18A-AU	3.0SMCJ18CA-AU	18	20	23.3	1	3	3	29.2	102.8	HET	IET
3.0SMCJ20A-AU	3.0SMCJ20CA-AU	20	22.2	25.5	1	3	3	32.4	92.6	HEV	IEV
3.0SMCJ22A-AU	3.0SMCJ22CA-AU	22	24.4	28	1	3	3	35.5	84.4	HEX	IEX
3.0SMCJ24A-AU	3.0SMCJ24CA-AU	24	26.7	30.7	1	3	3	38.9	77.2	HEZ	IEZ
3.0SMCJ26A-AU	3.0SMCJ26CA-AU	26	28.9	33.2	1	3	3	42.1	71.2	HFE	IFE
3.0SMCJ28A-AU	3.0SMCJ28CA-AU	28	31.1	35.8	1	3	3	45.4	66	HFG	IFG
3.0SMCJ30A-AU	3.0SMCJ30CA-AU	30	33.3	38.3	1	3	3	48.4	62	HFK	IFK
3.0SMCJ33A-AU	3.0SMCJ33CA-AU	33	36.7	42.2	1	3	3	53.3	56.2	HFM	IFM
3.0SMCJ36A-AU	3.0SMCJ36CA-AU	36	40	46	1	3	3	58.1	51.6	HFP	IFP
3.0SMCJ40A-AU	3.0SMCJ40CA-AU	40	44.4	51.1	1	3	3	64.5	46.4	HFR	IFR
3.0SMCJ43A-AU	3.0SMCJ43CA-AU	43	47.8	54.9	1	3	3	69.4	43.2	HFT	IFT
3.0SMCJ45A-AU	3.0SMCJ45CA-AU	45	50	57.5	1	3	3	72.7	41.2	HFV	IFV
3.0SMCJ48A-AU	3.0SMCJ48CA-AU	48	53.3	61.3	1	3	3	77.4	38.8	HFX	IFX
3.0SMCJ51A-AU	3.0SMCJ51CA-AU	51	56.7	65.2	1	3	3	82.4	36.4	HFZ	IFZ
3.0SMCJ54A-AU	3.0SMCJ54CA-AU	54	60	69	1	3	3	87.1	34.4	HGE	IGE
3.0SMCJ58A-AU	3.0SMCJ58CA-AU	58	64.4	74.1	1	3	3	93.6	32	HGG	IGG
3.0SMCJ60A-AU	3.0SMCJ60CA-AU	60	66.7	76.7	1	3	3	96.8	31	HGK	IGK
3.0SMCJ64A-AU	3.0SMCJ64CA-AU	64	71.1	81.8	1	3	3	103	29.2	HGM	IGM
3.0SMCJ70A-AU	3.0SMCJ70CA-AU	70	77.8	89.5	1	3	3	113	26.6	HGP	IGP

Note:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2
2. Mounted on a FR4 PCB, single-sided copper, mini pad
3. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only, duty cycle=4 per minute maximum

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Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Part Number		V _{RWM}	V _{BR}			I _R		V _C @I _{PP}		Marking Code	
			Min.	Max.	I _T	@ V _{RWM}					
UNI.	BI.	V	V	V	mA	UNI.	BI.	V	A	UNI.	BI.
3000W Transient Voltage Suppressor											
3.0SMCJ75A-AU	3.0SMCJ75CA-AU	75	83.3	95.8	1	3	3	121	24.8	HGR	IGR
3.0SMCJ78A-AU	3.0SMCJ78CA-AU	78	86.7	99.7	1	3	3	126	22.8	HGT	IGT
3.0SMCJ85A-AU	3.0SMCJ85CA-AU	85	94.4	108.2	1	3	3	137	20.8	HGV	IGV
3.0SMCJ90A-AU	3.0SMCJ90CA-AU	90	100	115.5	1	3	3	146	20.6	HGX	IGX
3.0SMCJ100A-AU	3.0SMCJ100CA-AU	100	111	128	1	3	3	162	18.6	HGZ	IGZ
3.0SMCJ110A-AU	3.0SMCJ110CA-AU	110	122	140.5	1	3	3	177	16.8	HHE	IHE
3.0SMCJ120A-AU	3.0SMCJ120CA-AU	120	133	153	1	3	3	193	15.6	HHG	IHG
3.0SMCJ130A-AU	3.0SMCJ130CA-AU	130	144	165.5	1	3	3	209	14.4	HHK	IHK
3.0SMCJ150A-AU	3.0SMCJ150CA-AU	150	167	192.5	1	3	3	243	12.4	HHM	IHM
3.0SMCJ160A-AU	3.0SMCJ160CA-AU	160	178	205	1	3	3	259	11.6	HHP	IHP
3.0SMCJ170A-AU	3.0SMCJ170CA-AU	170	189	217.5	1	3	3	275	11	HHR	IHR
3.0SMCJ180A-AU	3.0SMCJ180CA-AU	180	198	230.4	1	3	3	292	10.3	HHT	IHT
3.0SMCJ190A-AU	3.0SMCJ190CA-AU	190	209	243.2	1	3	3	308	9.7	HHV	IHV
3.0SMCJ200A-AU	3.0SMCJ200CA-AU	200	220	256	1	3	3	324	9.3	HHX	IHX
3.0SMCJ210A-AU	3.0SMCJ210CA-AU	210	231	268.8	1	3	3	340	8.8	HHZ	IHZ
3.0SMCJ220A-AU	3.0SMCJ220CA-AU	220	242	281.6	1	3	3	356	8.4	HIE	IIE

Note:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2
2. Mounted on a FR4 PCB, single-sided copper, mini pad
3. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only, duty cycle=4 per minute maximum

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TYPICAL CHARACTERISTIC CURVES

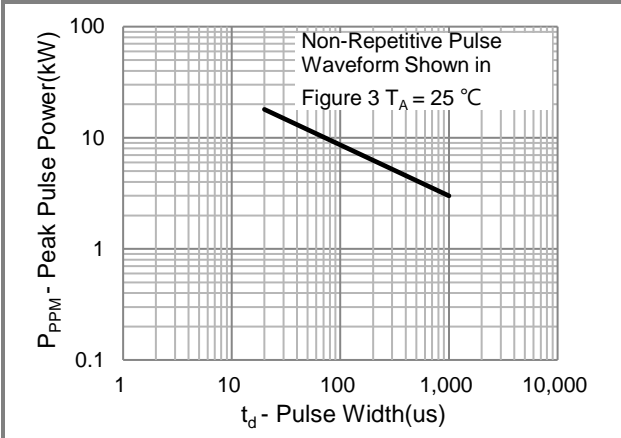


Fig.1 Pulse Power Rating Curve

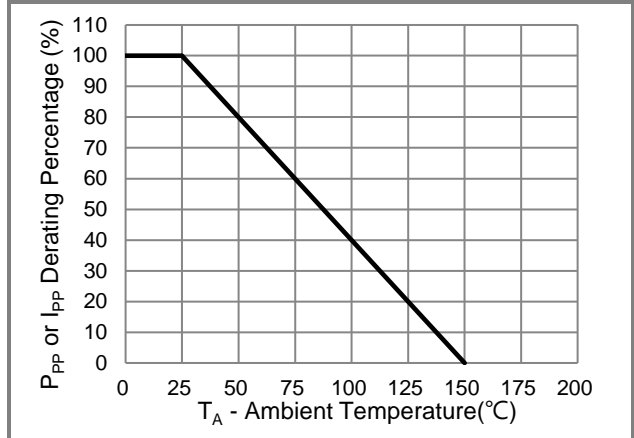


Fig.2 Derating Curve

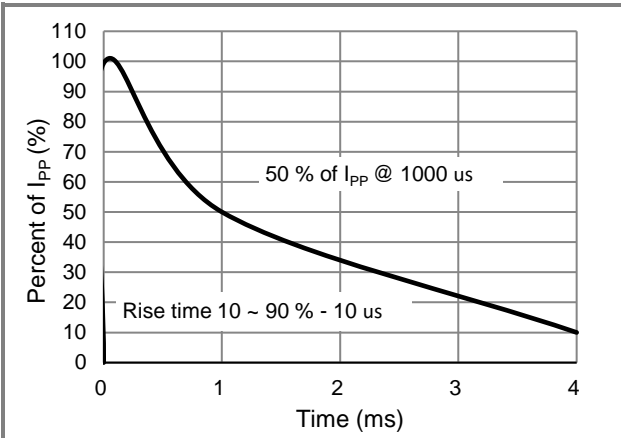


Fig.3 10/1000us Pulse Waveform

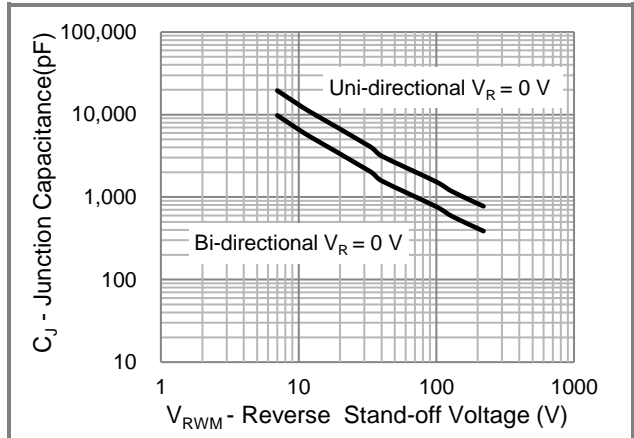


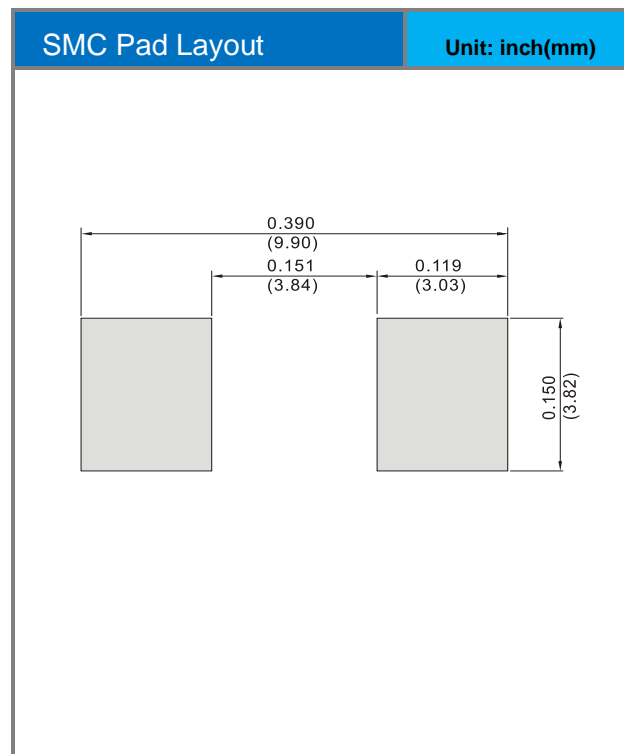
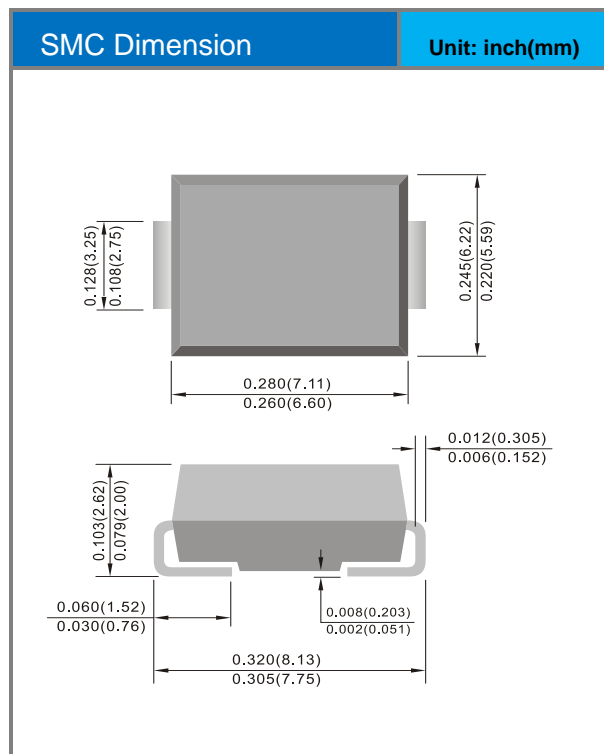
Fig.4 Typical Capacitance

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
3.0SMCJxxxxA-AU	SMC	0.8K pcs / 7" reel	See Table

Packaging Information & Mounting Pad Layout



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