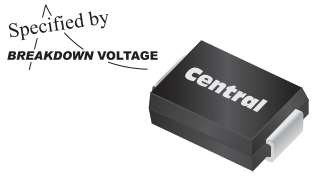
1.5SMC6.8CA
THRU
1.5SMC220CA

SURFACE MOUNT SILICON
BI-DIRECTIONAL
GLASS PASSIVATED JUNCTION
TRANSIENT VOLTAGE SUPPRESSORS
1500 WATT, 6.8 THRU 220 VOLT



SMC CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 1.5SMC6.8CA series devices are surface mount bi-directional glass passivated junction Transient Voltage Suppressors designed to protect voltage sensitive components from high voltage transients.

THIS DEVICE IS MANUFACTURED WITH A GLASS PASSIVATED CHIP FOR OPTIMUM RELIABILITY.

Note: For uni-directional devices, please refer to the 1.5SMC6.8A series data sheet.

MARKING CODE: SEE ELECTRICAL CHARACTERISTICS TABLE

MAXIMUM RATINGS: (T_A=25°C unless otherwise noted)	**SYMBOL**		**UNITS**
Peak Power Dissipation (Note 1)	P_{PK}	1500	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

TYPE	BREAKDOWN VOLTAGE V_{BR} @ I_T			TEST CURRENT I_T	WORKING PEAK REVERSE VOLTAGE V_{RWM}	MAXIMUM REVERSE LEAKAGE CURRENT I_R @ V_{RWM}	MAXIMUM CLAMPING VOLTAGE V_C @ I_{PP}	PEAK PULSE CURRENT (Note 1) I_{PP}	MAXIMUM TEMPERATURE COEFFICIENT ΘV_{BR}	MARKING CODE
	MIN V	NOM V	MAX V	mA	V	µA	V	A	% / °C	
1.5SMC6.8CA	6.45	6.8	7.14	10	5.8	2000	10.5	143	0.057	C6V8C
1.5SMC7.5CA	7.13	7.5	7.88	10	6.4	1000	11.3	132	0.061	C7V5C
1.5SMC8.2CA	7.79	8.2	8.61	10	7.02	400	12.1	124	0.065	C8V2C
1.5SMC9.1CA	8.65	9.1	9.55	1.0	7.78	100	13.4	112	0.068	C9V1C
1.5SMC10CA	9.5	10	10.5	1.0	8.55	20	14.5	103	0.073	C10C
1.5SMC11CA	10.5	11	11.6	1.0	9.4	5.0	15.6	96	0.075	C11C
1.5SMC12CA	11.4	12	12.6	1.0	10.2	5.0	16.7	90	0.078	C12C
1.5SMC13CA	12.4	13	13.7	1.0	11.1	5.0	18.2	82	0.081	C13C
1.5SMC15CA	14.3	15	15.8	1.0	12.8	5.0	21.2	71	0.084	C15C
1.5SMC16CA	15.2	16	16.8	1.0	13.6	5.0	22.5	67	0.086	C16C
1.5SMC18CA	17.1	18	18.9	1.0	15.3	5.0	25.2	59.5	0.088	C18C
1.5SMC20CA	19.0	20	21.0	1.0	17.1	5.0	27.7	54	0.090	C20C
1.5SMC22CA	20.9	22	23.1	1.0	18.8	5.0	30.6	49	0.092	C22C
1.5SMC24CA	22.8	24	25.2	1.0	20.5	5.0	33.2	45	0.094	C24C
1.5SMC27CA	25.7	27	28.4	1.0	23.1	5.0	37.5	40	0.096	C27C
1.5SMC30CA	28.5	30	31.5	1.0	25.6	5.0	41.4	36	0.097	C30C
1.5SMC33CA	31.4	33	34.7	1.0	28.2	5.0	45.7	33	0.098	C33C
1.5SMC36CA	34.2	36	37.8	1.0	30.8	5.0	49.9	30	0.099	C36C
1.5SMC39CA	37.1	39	41	1.0	33.3	5.0	53.9	28	0.100	C39C

Note 1: Non-repetitive 10x1,000µs pulse.

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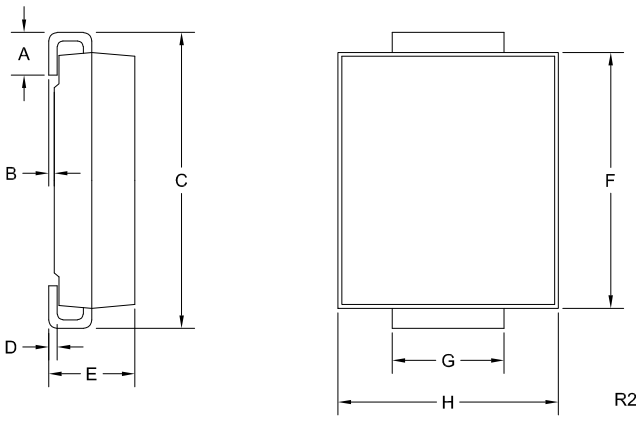
ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C unless otherwise noted)

TYPE	BREAKDOWN VOLTAGE V_{BR} @ I_T			TEST CURRENT I_T	WORKING PEAK REVERSE VOLTAGE V_{RWM}	MAXIMUM REVERSE LEAKAGE CURRENT I_R @ V_{RWM}	MAXIMUM CLAMPING VOLTAGE V_C @ I_{PP}	PEAK PULSE CURRENT (Note 1) I_{PP}	MAXIMUM TEMPERATURE COEFFICIENT ΘV_{BR}	MARKING CODE
	MIN V	NOM V	MAX V	mA	V	µA	V	A	% / °C	
1.5SMC43CA	40.9	43	45.2	1.0	36.8	5.0	59.3	25.3	0.101	C43C
1.5SMC47CA	44.7	47	49.4	1.0	40.2	5.0	64.8	23.2	0.101	C47C
1.5SMC51CA	48.5	51	53.6	1.0	43.6	5.0	70.1	21.4	0.102	C51C
1.5SMC56CA	53.2	56	58.8	1.0	47.8	5.0	77	19.5	0.103	C56C
1.5SMC62CA	58.9	62	65.1	1.0	53.0	5.0	85	17.7	0.104	C62C
1.5SMC68CA	64.6	68	71.4	1.0	58.1	5.0	92	16.3	0.104	C68C
1.5SMC75CA	71.3	75	78.8	1.0	64.1	5.0	103	14.6	0.105	C75C
1.5SMC82CA	77.9	82	86.1	1.0	70.1	5.0	113	13.3	0.105	C82C
1.5SMC91CA	86.5	91	95.5	1.0	77.8	5.0	125	12	0.106	C91C
1.5SMC100CA	95.0	100	105	1.0	85.5	5.0	137	11	0.106	C100C
1.5SMC110CA	104.5	110	115.5	1.0	94.0	5.0	152	9.9	0.107	C110C
1.5SMC120CA	114	120	126	1.0	102	5.0	165	9.1	0.107	C120C
1.5SMC130CA	123.5	130	136.5	1.0	111	5.0	179	8.4	0.107	C130C
1.5SMC150CA	142.5	150	157.5	1.0	128	5.0	207	7.2	0.108	C150C
1.5SMC160CA	152	160	168	1.0	136	5.0	219	6.8	0.108	C160C
1.5SMC170CA	161.5	170	178.5	1.0	145	5.0	234	6.4	0.108	C170C
1.5SMC180CA	171	180	189	1.0	154	5.0	246	6.1	0.108	C180C
1.5SMC200CA	190	200	210	1.0	171	5.0	274	5.5	0.108	C200C
1.5SMC220CA	209	220	231	1.0	185	5.0	328	4.6	0.108	C220C

SMC CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.030	0.060	0.76	1.52
B	0.002	0.008	0.05	0.20
C	0.305	0.320	7.75	8.13
D	0.006	0.012	0.15	0.31
E	0.079	0.103	2.00	2.62
F	0.260	0.280	6.60	7.11
G	0.108	0.128	2.75	3.25
H	0.220	0.245	5.59	6.22

SMC (REV: R2)

R10 (15-August 2019)

1.5SMC6.8CA
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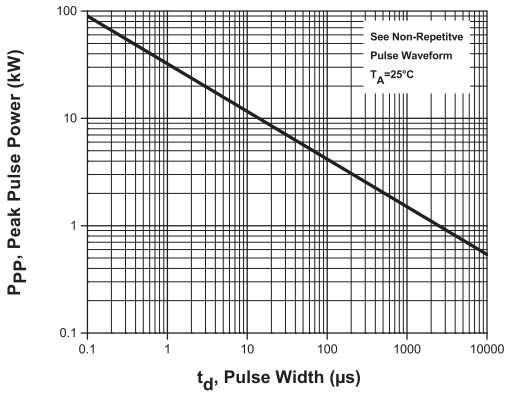
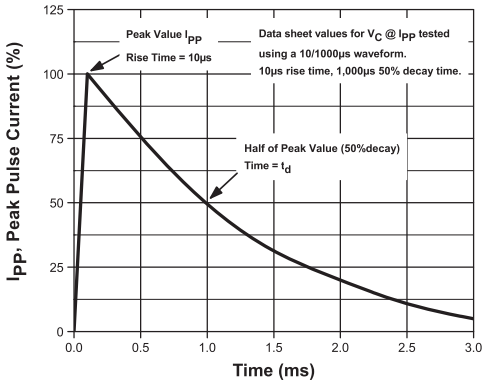
TYPICAL ELECTRICAL CHARACTERISTICS

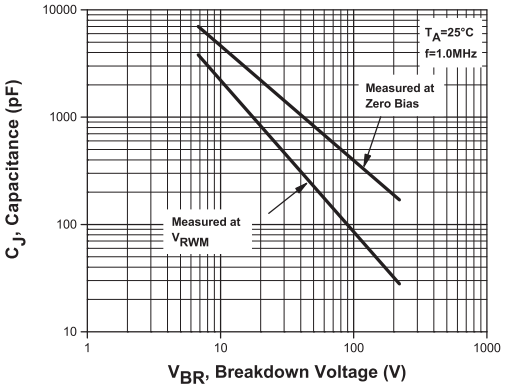
Peak Pulse Power



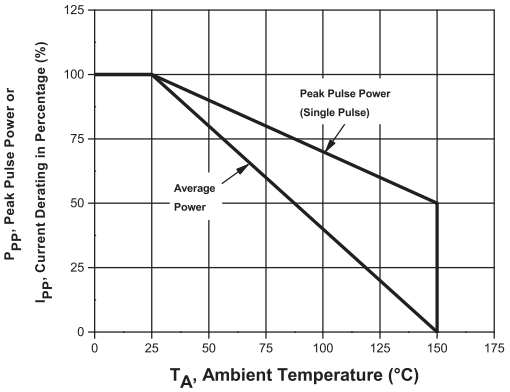
Non-Repetitive Pulse Waveform



Capacitance



Power & Current Derating



OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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