

3SMC5.0AQ
THRU
3SMC170AQ



**SURFACE MOUNT SILICON
AUTOMOTIVE UNI-DIRECTIONAL
GLASS PASSIVATED JUNCTION
TRANSIENT VOLTAGE SUPPRESSORS
3000 WATT, 5.0 THRU 170 VOLT**

**Central
Semiconductor**

www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 3SMC5.0A series devices are surface mount uni-directional glass passivated junction Transient Voltage Suppressors designed to protect voltage sensitive components from high voltage transients. Manufactured and qualified to AEC-Q101.

Note: For bi-directional devices, please refer to the 3SMC5.0CAQ series data sheet.

Specified by
STAND-OFF VOLTAGE



SMC CASE

**MARKING CODE: SEE ELECTRICAL
CHARACTERISTICS TABLE**

MAXIMUM RATINGS: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Peak Power Dissipation (Note 1)
Peak Forward Surge Current (JEDEC Method)
Operating and Storage Junction Temperature

SYMBOL

P_{PK}	3000	W
I_{FSM}	200	A
T_J, T_{stg}	-65 to +150	$^{\circ}\text{C}$

UNITS

ELECTRICAL CHARACTERISTICS: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

TYPE	REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE		TEST CURRENT	MAXIMUM REVERSE LEAKAGE CURRENT	MAXIMUM CLAMPING VOLTAGE	PEAK PULSE CURRENT (Note 1)	MARKING CODE
	V_{RWM}	$V_{BR} @ I_T$		I_T	$I_R @ V_{RWM}$	$V_C @ I_{pp}$	I_{pp}	
	V	MIN V	MAX V	mA	μA	V	A	
3SMC5.0AQ	5.0	6.40	7.25	10	1000	9.2	326.0	CHDE
3SMC6.0AQ	6.0	6.67	7.67	10	1000	10.3	291.3	CHDG
3SMC6.5AQ	6.5	7.22	8.30	10	500	11.2	267.9	CHDK
3SMC7.0AQ	7.0	7.78	8.95	10	200	12.0	250.0	CHDM
3SMC7.5AQ	7.5	8.33	9.58	1.0	100	12.9	232.6	CHDP
3SMC8.0AQ	8.0	8.89	10.23	1.0	50	13.6	220.6	CHDR
3SMC8.5AQ	8.5	9.44	10.82	1.0	25	14.4	208.4	CHDT
3SMC9.0AQ	9.0	10.0	11.5	1.0	10	15.4	194.8	CHDV
3SMC10AQ	10	11.1	12.8	1.0	5.0	17.0	176.4	CHDX
3SMC11AQ	11	12.2	14.0	1.0	5.0	18.2	184.8	CHDZ
3SMC12AQ	12	13.3	15.3	1.0	5.0	19.9	150.6	CHEE
3SMC13AQ	13	14.4	16.5	1.0	5.0	21.5	139.4	CHEG
3SMC14AQ	14	15.6	17.9	1.0	5.0	23.2	129.4	CHEK
3SMC15AQ	15	16.7	19.2	1.0	5.0	24.4	123.0	CHEM
3SMC16AQ	16	17.8	20.5	1.0	5.0	26.0	115.4	CHEP
3SMC17AQ	17	18.9	21.7	1.0	5.0	27.6	106.6	CHER
3SMC18AQ	18	20.0	23.3	1.0	5.0	29.2	102.8	CHET
3SMC20AQ	20	22.2	25.5	1.0	5.0	32.4	92.6	CHEV
3SMC22AQ	22	24.4	28.0	1.0	5.0	35.5	84.4	CHEX
3SMC24AQ	24	26.7	30.7	1.0	5.0	38.9	77.2	CHEZ
3SMC26AQ	26	28.9	33.2	1.0	5.0	42.1	71.2	CHFE
3SMC28AQ	28	31.1	35.8	1.0	5.0	45.4	66.0	CHFG
3SMC30AQ	30	33.3	38.3	1.0	5.0	48.4	62.0	CHFK

Notes: (1) Non-repetitive 10x1,000 μs pulse

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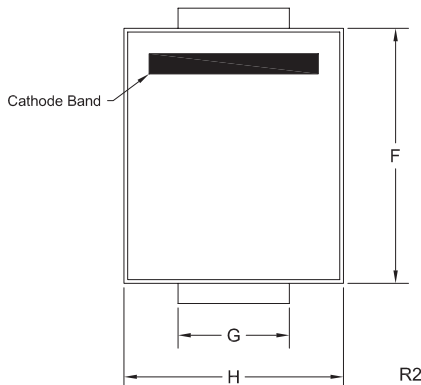
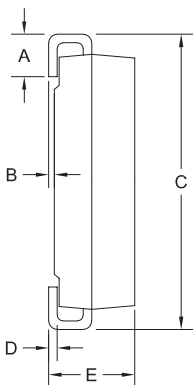
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$ unless otherwise noted)

TYPE	REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE		TEST CURRENT	MAXIMUM REVERSE LEAKAGE CURRENT	MAXIMUM CLAMPING VOLTAGE	PEAK PULSE CURRENT (Note 1)	MARKING CODE
	V_{RWM}	$V_{BR} @ I_T$		I_T	$I_R @ V_{RWM}$	$V_C @ I_{PP}$	I_{PP}	
	V	MIN V	MAX V	mA	μA	V	A	
3SMC33AQ	33	36.7	42.2	1.0	5.0	53.3	56.2	CHFM
3SMC36AQ	36	40.0	46.0	1.0	5.0	58.1	51.6	CHFP
3SMC40AQ	40	44.4	51.1	1.0	5.0	64.5	46.4	CHFR
3SMC43AQ	43	47.8	54.9	1.0	5.0	69.4	43.2	CHFT
3SMC45AQ	45	50.0	57.5	1.0	5.0	72.7	41.2	CHFV
3SMC48AQ	48	53.3	61.3	1.0	5.0	77.4	38.8	CHFX
3SMC51AQ	51	56.7	65.2	1.0	5.0	82.4	36.4	CHFZ
3SMC54AQ	54	60.0	69.0	1.0	5.0	87.1	34.4	CHGE
3SMC58AQ	58	64.4	74.1	1.0	5.0	93.6	32.0	CHGG
3SMC60AQ	60	66.7	76.7	1.0	5.0	96.8	31.0	CHGK
3SMC64AQ	64	71.1	81.8	1.0	5.0	103	29.2	CHGM
3SMC70AQ	70	77.8	89.5	1.0	5.0	113	26.6	CHGP
3SMC75AQ	75	83.3	95.8	1.0	5.0	121	24.8	CHGR
3SMC78AQ	78	86.7	99.7	1.0	5.0	126	22.8	CHGT
3SMC85AQ	85	94.4	108.2	1.0	5.0	137	20.8	CHGV
3SMC90AQ	90	100.0	115.5	1.0	5.0	146	20.6	CHGX
3SMC100AQ	100	111.0	128.0	1.0	5.0	162	18.6	CHGZ
3SMC110AQ	110	122.0	140.5	1.0	5.0	177	16.8	CHHE
3SMC120AQ	120	133.0	153.0	1.0	5.0	193	15.6	CHHG
3SMC130AQ	130	144.0	165.5	1.0	5.0	209	14.4	CHHK
3SMC150AQ	150	167.0	192.5	1.0	5.0	243	12.4	CHHM
3SMC160AQ	160	178.0	205.0	1.0	5.0	259	11.6	CHHP
3SMC170AQ	170	189.0	217.5	1.0	5.0	275	11.0	CHHR

SMC CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	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)

R1 (11-March 2025)

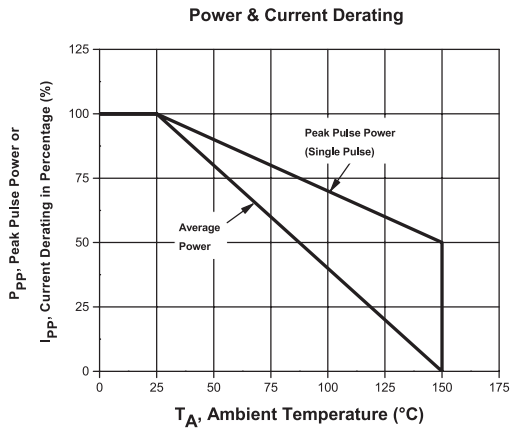
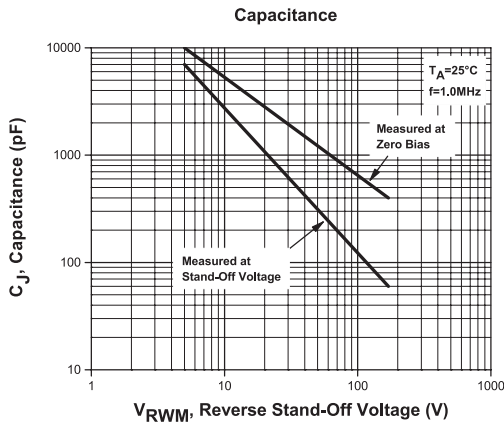
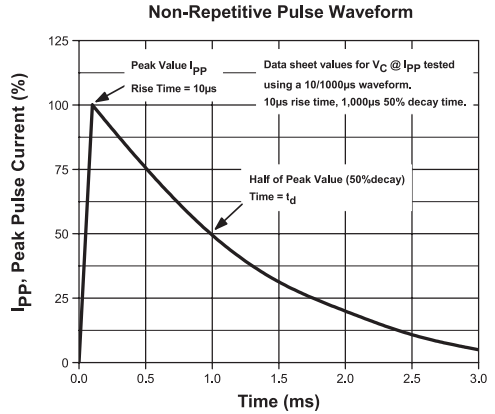
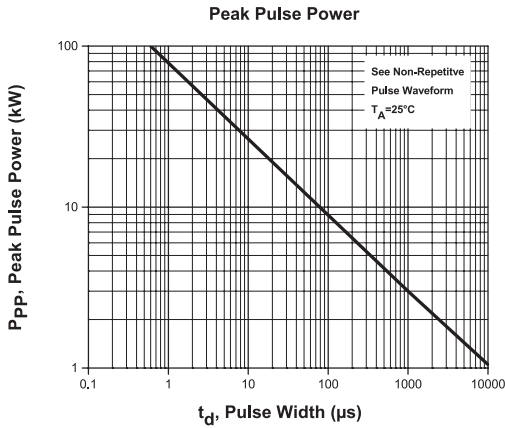
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TYPICAL ELECTRICAL CHARACTERISTICS



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

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

Worldwide Distributors:
www.centrasemi.com/wwdistributors

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