

5SMC33A
THRU
5SMC170A



SURFACE MOUNT SILICON
UNI-DIRECTIONAL
GLASS PASSIVATED JUNCTION
TRANSIENT VOLTAGE SUPPRESSORS
5000 WATT, 33 THRU 170 VOLT

Specified by
STAND-OFF VOLTAGE



SMC CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 5SMC33A series devices are surface mount uni-directional glass passivated junction transient voltage suppressors designed to protect voltage sensitive components from high energy transients.

MARKING CODE: SEE ELECTRICAL CHARACTERISTICS TABLE

APPLICATIONS:

- Inductive load switching circuits
- Secondary lightning protection
- Telecommunication data lines

FEATURES:

- Glass passivated die
- High energy capability
- Excellent clamping ratio (V_C/V_{RWM})

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}

I_{FSM}

T_J, T_{stg}

5000

300

-65 to +150

UNITS

W

A


$^\circ\text{C}$

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	
5SMC33A	33	36.7	42.2	1.0	3.0	53.3	93.9	5C33A
5SMC36A	36	40.0	46.0	1.0	3.0	58.1	86.1	5C36A
5SMC40A	40	44.4	51.1	1.0	3.0	64.5	77.6	5C40A
5SMC43A	43	47.8	54.9	1.0	3.0	69.4	72.1	5C43A
5SMC45A	45	50.0	57.5	1.0	3.0	72.7	68.8	5C45A
5SMC48A	48	53.3	61.3	1.0	3.0	77.4	64.7	5C48A
5SMC51A	51	56.7	65.2	1.0	3.0	82.4	60.7	5C51A
5SMC54A	54	60.0	69.0	1.0	3.0	87.1	57.5	5C54A
5SMC58A	58	64.4	74.1	1.0	3.0	93.6	53.5	5C58A
5SMC60A	60	66.7	76.7	1.0	3.0	96.8	51.7	5C60A
5SMC64A	64	71.1	81.8	1.0	3.0	103	48.6	5C64A
5SMC70A	70	77.8	89.5	1.0	3.0	113	44.3	5C70A
5SMC75A	75	83.3	95.8	1.0	3.0	121	41.4	5C75A
5SMC78A	78	86.7	99.7	1.0	3.0	126	39.7	5C78A
5SMC85A	85	94.4	108.2	1.0	3.0	137	36.5	5C85A
5SMC90A	90	100.0	115.5	1.0	3.0	146	34.3	5C90A
5SMC100A	100	111.0	128.0	1.0	3.0	162	30.9	5C100A
5SMC110A	110	122.0	140.5	1.0	3.0	177	28.3	5C110A

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

R1 (10-September 2013)

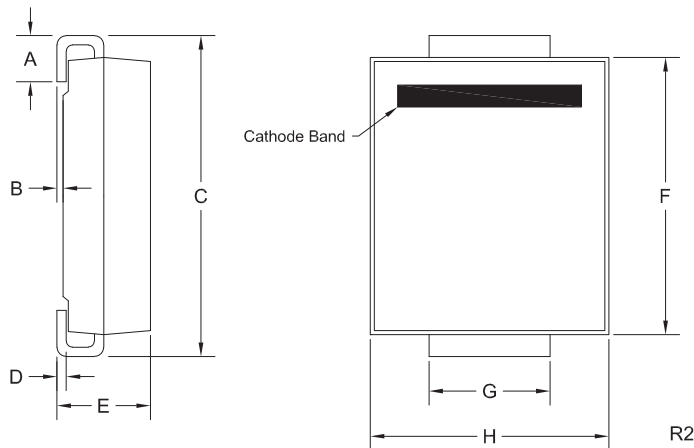
<p>5SMC33A THRU 5SMC170A</p> <p>SURFACE MOUNT SILICON UNI-DIRECTIONAL GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSORS 5000 WATT, 33 THRU 170 VOLT</p>	
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

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	
5SMC120A	120	133.0	153.0	1.0	3.0	193	26.0	5C120A
5SMC130A	130	144.0	165.5	1.0	3.0	209	24.0	5C130A
5SMC150A	150	167.0	192.5	1.0	3.0	243	20.6	5C150A
5SMC160A	160	178.0	205.0	1.0	3.0	259	19.3	5C160A
5SMC170A	170	189.0	217.5	1.0	3.0	275	18.2	5C170A

SMC CASE - MECHANICAL OUTLINE



DIMENSIONS				
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)

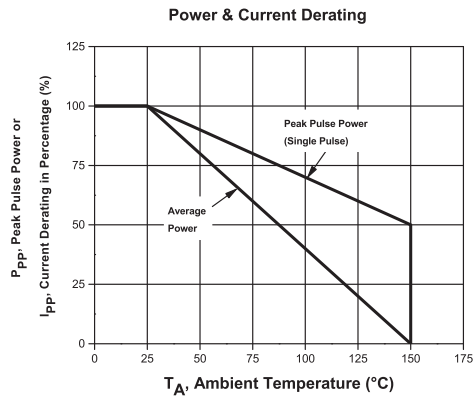
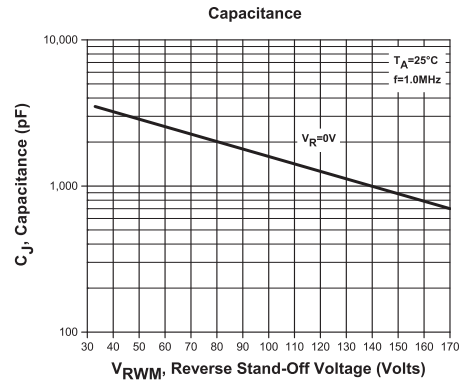
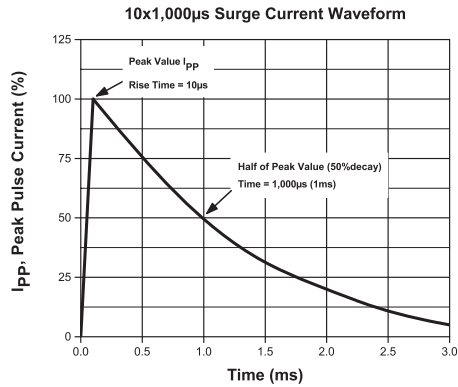
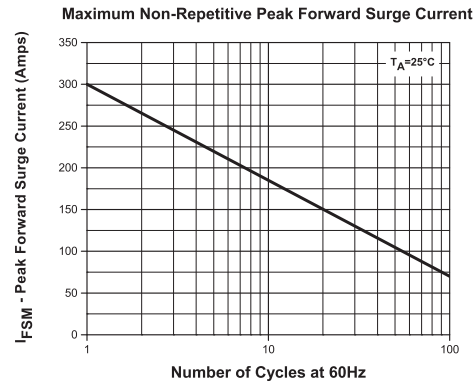
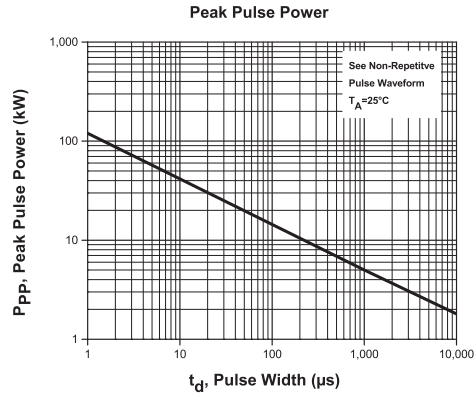
R1 (10-September 2013)

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TYPICAL ELECTRICAL CHARACTERISTICS



R1 (10-September 2013)

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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For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centrasemi.com/terms



<https://www.centalsemi.com>

Product End of Life Notification

PDN ID:	PDN01268
Notification Date:	12/01/23
Last Buy Date:	6/01/24
Last Shipment Date	12/01/24

Summary: The 5SMC33A Series Transient Voltage Suppressors are discontinued and now classified as End Life (EOL).

Although Central Semiconductor makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Portfolio Management. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

*** All Plating types (PBFREE, TIN/LEAD) for each item listed are included in this notice.**

Central Part Number	Suggested Replacement
5SMC100A BK	N/A
5SMC100A TR13	N/A
5SMC110A TR13	N/A
5SMC120A TR13	N/A
5SMC130A TR13	N/A
5SMC150A TR13	N/A
5SMC160A TR13	N/A
5SMC170A TR13	N/A
5SMC33A BK	N/A
5SMC33A TR13	N/A
5SMC36A BK	N/A
5SMC36A TR13	N/A
5SMC40A TR13	N/A
5SMC43A TR13	N/A
5SMC45A TR13	N/A
5SMC48A TR13	N/A
5SMC51A TR13	N/A
5SMC54A TR13	N/A
5SMC58A TR13	N/A
5SMC60A TR13	N/A
5SMC64A TR13	N/A
5SMC70A TR13	N/A
5SMC75A BK	N/A
5SMC75A TR13	N/A
5SMC78A TR13	N/A
5SMC85A TR13	N/A
5SMC90A TR13	N/A

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. If you would like assistance, please visit <https://my.centalsemi.com/submit-inquiry?type=ER> to submit an online inquiry.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.