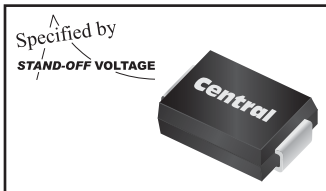
5SMC33A
THRU
5SMC170A

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



SMC CASE

Central Semiconductor Corp.

www.centralsemi.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°C unless otherwise noted)	**SYMBOL**		**UNITS**
Peak Power Dissipation (Note 1)	P_{PK}	5000	W
Peak Forward Surge Current (JEDEC Method)	I_{FSM}	300	A
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C

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

TYPE	REVERSE STAND-OFF VOLTAGE V_{RWM}	BREAKDOWN VOLTAGE V_{BR} @ I_T		TEST CURRENT I_T	MAXIMUM REVERSE LEAKAGE CURRENT I_R @ V_{RWM}	MAXIMUM CLAMPING VOLTAGE V_C @ I_{PP}	PEAK PULSE CURRENT (Note 1) I_{PP}	MARKING CODE
	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 10x1,000µs pulse

R1 (10-September 2013)

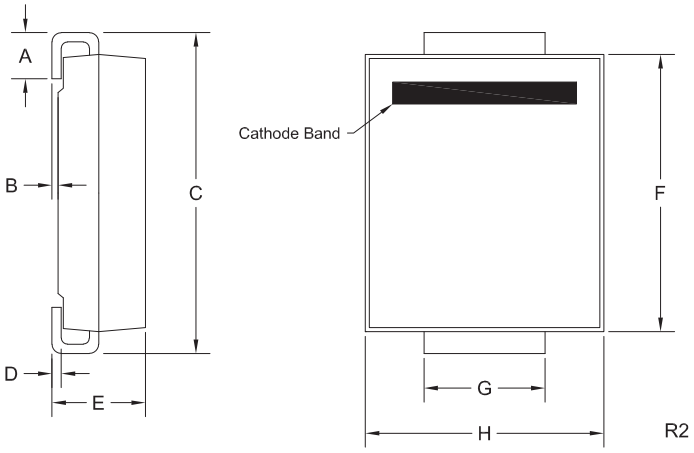
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ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C unless otherwise noted)

TYPE	REVERSE STAND-OFF VOLTAGE V_{RWM}	BREAKDOWN VOLTAGE V_{BR} @ I_T		TEST CURRENT I_T	MAXIMUM REVERSE LEAKAGE CURRENT I_R @ V_{RWM}	MAXIMUM CLAMPING VOLTAGE V_C @ I_{PP}	PEAK PULSE CURRENT (Note 1) I_{PP}	MARKING CODE
	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				
	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

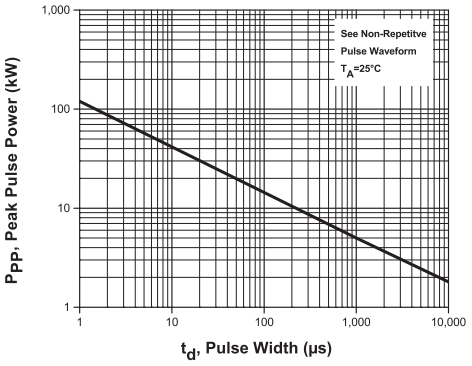
SMC (REV: R2)

5SMC33A
THRU
5SMC170A

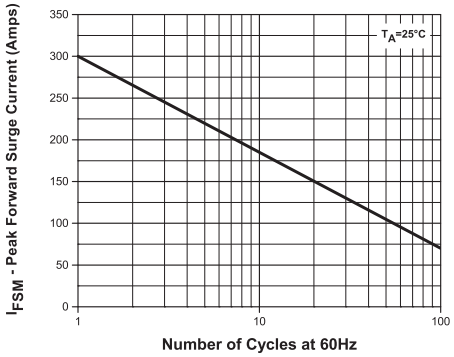
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TYPICAL ELECTRICAL CHARACTERISTICS

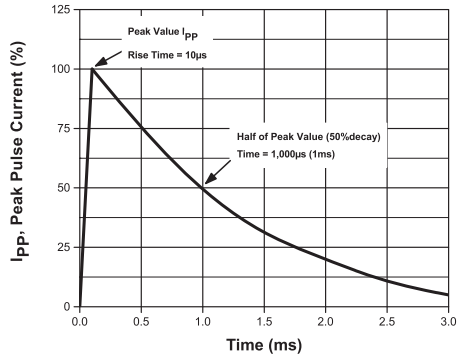
Peak Pulse Power



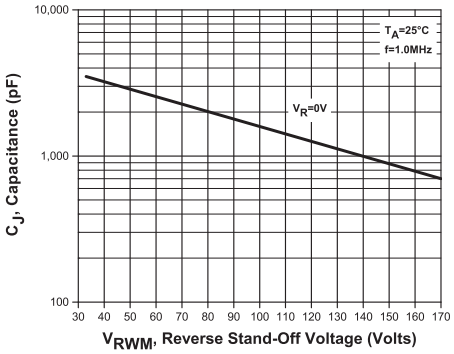
Maximum Non-Repetitive Peak Forward Surge Current



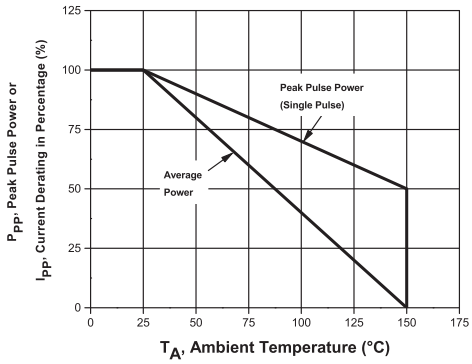
10x1,000µs Surge Current Waveform



Capacitance



Power & Current Derating



R1 (10-September 2013)