

C4SMAFL8.5A
THRU
C4SMAFL170A



SURFACE MOUNT SILICON
UNI-DIRECTIONAL
GLASS PASSIVATED JUNCTION
TRANSIENT VOLTAGE SUPPRESSORS
400 WATTS, 8.5 THRU 170 VOLTS



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR C4SMAFL8.5A series devices are a low profile alternative to standard SMA Transient Voltage Suppressor devices. The space saving SMAFL fits on existing industry standard SMA mounting pad layouts.

MARKING CODE: SEE ELECTRICAL CHARACTERISTICS TABLE

Specified by
STAND-OFF VOLTAGE



SMAFL CASE

APPLICATIONS:

- Voltage rail transient protection
- User interface transient protection
- Telephony line protection
- Voltage clamping

FEATURES:

- Low profile SMAFL surface mount package
- Glass passivated junction
- Low inductance
- Flammability classification UL 94V-0

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

Peak Power Dissipation (Note 1)

Peak Forward Surge Current (JEDEC method)

Operating and Storage Junction Temperature

Typical Thermal Resistance

SYMBOL

P_{PK}

I_{FSM}

T_J, T_{stg}

Θ_{JA}

400

40

-55 to +150

150

UNITS

W

A

$^\circ\text{C}$

$^\circ\text{C/W}$

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

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	
C4SMAFL8.5A	8.5	9.44	10.82	1.0	10	14.4	27.7	C48A
C4SMAFL9.0A	9.0	10.0	11.5	1.0	5.0	15.4	26.0	C49A
C4SMAFL10A	10	11.1	12.8	1.0	5.0	17.0	23.5	C410A
C4SMAFL11A	11	12.2	14.0	1.0	1.0	18.2	22.0	C411A
C4SMAFL12A	12	13.3	15.3	1.0	1.0	19.9	20.1	C412A
C4SMAFL13A	13	14.4	16.5	1.0	1.0	21.5	18.6	C413A
C4SMAFL14A	14	15.6	17.9	1.0	1.0	23.2	17.2	C414A
C4SMAFL15A	15	16.7	19.2	1.0	1.0	24.4	16.4	C415A
C4SMAFL16A	16	17.8	20.5	1.0	1.0	26.0	15.3	C416A
C4SMAFL17A	17	18.9	21.7	1.0	1.0	27.6	14.5	C417A
C4SMAFL18A	18	20.0	23.3	1.0	1.0	29.2	13.7	C418A
C4SMAFL20A	20	22.2	25.5	1.0	1.0	32.4	12.3	C420A
C4SMAFL22A	22	24.4	28.0	1.0	1.0	35.5	11.2	C422A
C4SMAFL24A	24	26.7	30.7	1.0	1.0	38.9	10.3	C424A
C4SMAFL26A	26	28.9	33.2	1.0	1.0	42.1	9.5	C426A
C4SMAFL28A	28	31.1	35.8	1.0	1.0	45.4	8.8	C428A
C4SMAFL30A	30	33.3	38.3	1.0	1.0	48.4	8.3	C430A

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

R3 (28-June 2021)

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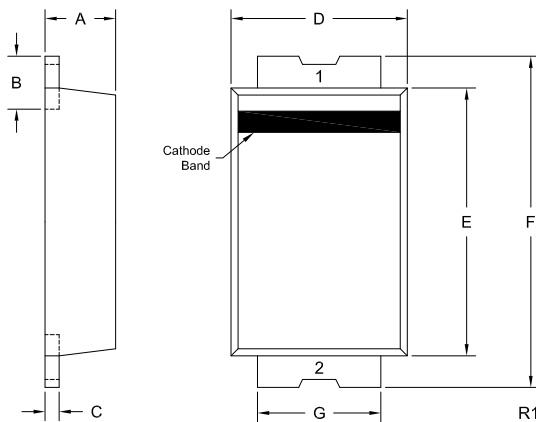
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$)

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	
C4SMAFL33A	33	36.7	42.2	1.0	1.0	53.3	7.5	C433A
C4SMAFL36A	36	40.0	46.0	1.0	1.0	58.1	6.9	C436A
C4SMAFL40A	40	44.4	51.1	1.0	1.0	64.5	6.2	C440A
C4SMAFL43A	43	47.8	54.9	1.0	1.0	69.4	5.7	C443A
C4SMAFL45A	45	50.0	57.5	1.0	1.0	72.7	5.5	C445A
C4SMAFL48A	48	53.3	61.3	1.0	1.0	77.4	5.2	C448A
C4SMAFL51A	51	56.7	65.2	1.0	1.0	82.4	4.9	C451A
C4SMAFL54A	54	60.0	69.0	1.0	1.0	87.1	4.6	C454A
C4SMAFL58A	58	64.4	74.1	1.0	1.0	93.6	4.3	C458A
C4SMAFL60A	60	66.7	76.7	1.0	1.0	96.8	4.1	C460A
C4SMAFL64A	64	71.1	81.8	1.0	1.0	103	3.9	C464A
C4SMAFL70A	70	77.8	89.5	1.0	1.0	113	3.5	C470A
C4SMAFL75A	75	83.3	95.8	1.0	1.0	121	3.3	C475A
C4SMAFL78A	78	86.7	99.7	1.0	1.0	126	3.2	C478A
C4SMAFL85A	85	94.4	108.2	1.0	1.0	137	2.9	C485A
C4SMAFL90A	90	100	115.5	1.0	1.0	146	2.7	C490A
C4SMAFL100A	100	111	128	1.0	1.0	162	2.5	C4100A
C4SMAFL110A	110	122	140.5	1.0	1.0	177	2.3	C4110A
C4SMAFL120A	120	133	153	1.0	1.0	193	2.0	C4120A
C4SMAFL130A	130	144	165.5	1.0	1.0	209	1.9	C4130A
C4SMAFL150A	150	167	192.5	1.0	1.0	243	1.6	C4150A
C4SMAFL160A	160	178	205	1.0	1.0	259	1.5	C4160A
C4SMAFL170A	170	189	217.5	1.0	1.0	275	1.4	C4170A

SMAFL CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.035	0.044	0.90	1.10
B	0.021	0.038	0.55	0.95
C	0.006	0.010	0.15	0.25
D	0.094	0.103	2.40	2.60
E	0.145	0.154	3.70	3.90
F	0.177	0.193	4.50	4.90
G	0.065	0.073	1.65	1.85

SMAFL (REV: R1)

LEAD CODE:

- 1) Cathode
- 2) Anode

R3 (28-June 2021)

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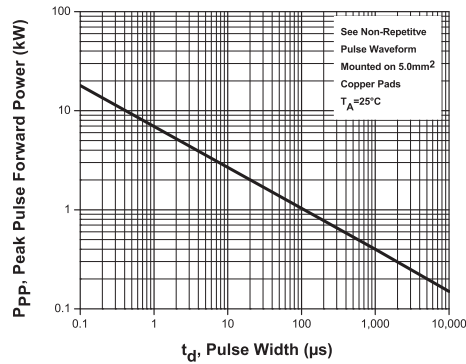


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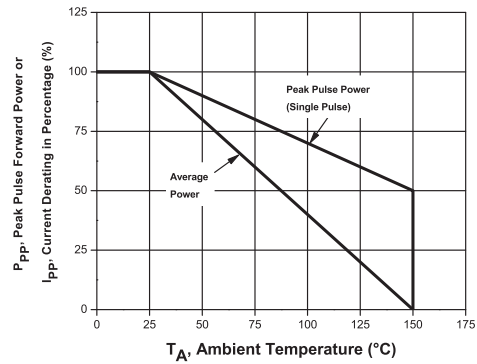


TYPICAL ELECTRICAL CHARACTERISTICS

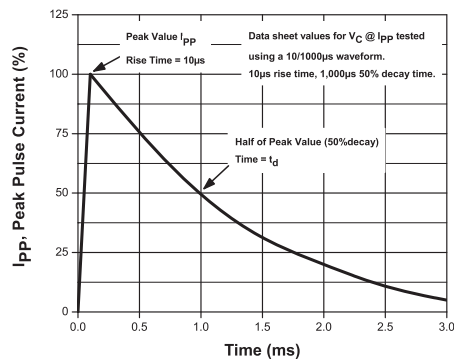
Peak Pulse Forward Power



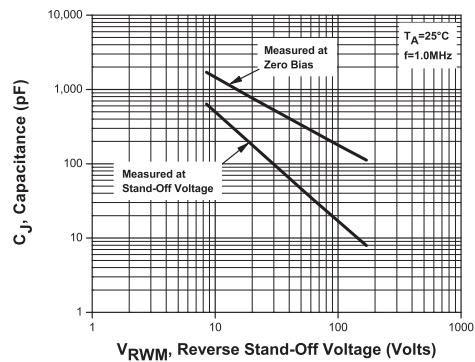
Power & Current Derating



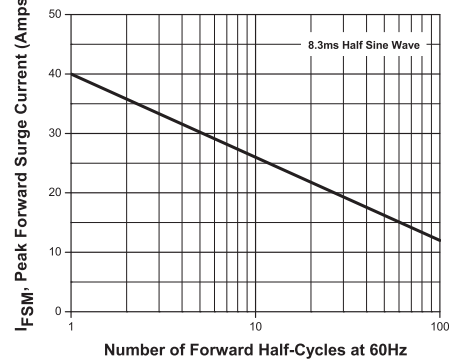
Non-Repetitive Pulse Waveform



Typical Capacitance



Peak Forward Surge Current



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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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