

SMF5.0(C)A THRU SMF170(C)A

**200WATTS TRANSIENT
VOLTAGE SUPPRESSOR
5.0 TO 170 VOLTS**

Features

- Halogen free available upon request by adding suffix "-HF"
- Stand-off Voltage 5-170 Volts
- Uni and bi-directional type available (suffix "C" means bi-directional)
- Surface Mount
- Low Clamping Voltage
- 200 Watt Peak Power Dissipation
- Small, High Thermal Efficiency
- Marking Code: See Electrical Characteristics Table
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (NOTE 1) ("P" Suffix designates RoHS Compliant. See ordering information)

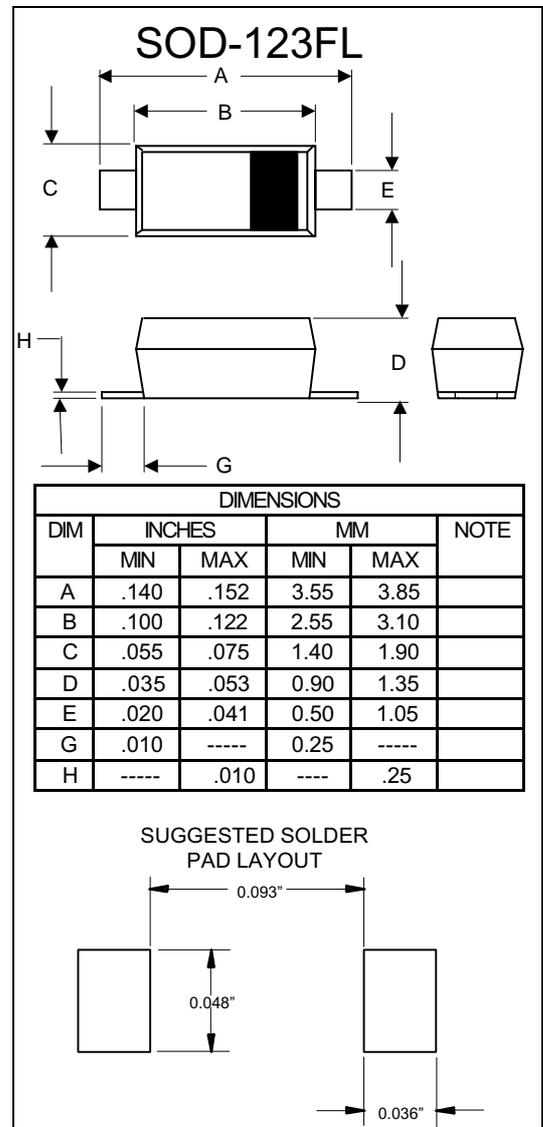
Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Peak Pulse Power (10/1000us Waveform)	P _{PP}	200W
ESD Voltage(HBM)	V _{ESD}	>16KV

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7



SMF5.0A THRU SMF170A

ELECTRICAL CHARACTERISTICS @25°C

MCC PART NUMBER Uni-Polar	Marking Code	Breakdown Voltage $V_{BR} @ I_T$ (Volt)		TEST CURRENT I_T mADC	RATED STANDOFF VOLTAGE V_{WM} V	MAXIMUM REVERSE LEAKAGE $I_b @ V_{WM}$ (μ A)	MAXIMUM CLAMPING VOLTAGE $V_C @ I_{PP}$ V	MAXIMUM PEAK PULSE CURRENT I_{PP} A
		MIN	MAX					
SMF5.0A	5.0A / KE	6.4	7.0	10	5.0	400	9.2	21.7
SMF6.0A	6.0A / KG	6.67	7.37	10	6.0	400	10.3	19.4
SMF6.5A	6.5A / KK	7.22	7.98	10	6.5	250	11.2	17.9
SMF7.0A	7.0A / KM	7.78	8.6	10	7.0	100	12	16.7
SMF7.5A	7.5A / KP	8.33	9.21	1.0	7.5	50	12.9	15.5
SMF8.0A	8.0A / KR	8.89	9.83	1.0	8.0	25	13.6	14.7
SMF8.5A	8.5A / KT	9.44	10.4	1.0	8.5	10	14.4	13.9
SMF9.0A	9.0A / KV	10	11.1	1.0	9.0	5.0	15.4	13
SMF10A	10A / KX	11.1	12.3	1.0	10	2.5	17	11.8
SMF11A	11A / KZ	12.2	13.5	1.0	11	2.5	18.2	11
SMF12A	12A / LE	13.3	14.7	1.0	12	2.5	19.9	10.1
SMF13A	13A / LG	14.4	15.9	1.0	13	1.0	21.5	9.3
SMF14A	14A / LK	15.6	17.2	1.0	14	1.0	23.2	8.6
SMF15A	15A / LM	16.7	18.5	1.0	15	1.0	24.4	8.2
SMF16A	16A / LP	17.8	19.7	1.0	16	1.0	26	7.7
SMF17A	17A / LR	18.9	20.9	1.0	17	1.0	27.6	7.2
SMF18A	18A / LT	20	22.1	1.0	18	1.0	29.2	6.8
SMF20A	20A / LV	22.2	24.5	1.0	20	1.0	32.4	6.2
SMF22A	22A / LX	24.4	26.9	1.0	22	1.0	35.5	5.6
SMF24A	24A / LZ	26.7	29.5	1.0	24	1.0	38.9	5.1
SMF26A	26A / ME	28.9	31.9	1.0	26	1.0	42.1	4.8
SMF28A	28A / MG	31.1	34.4	1.0	28	1.0	45.4	4.4
SMF30A	30A / MK	33.3	36.8	1.0	30	1.0	48.4	4.1
SMF33A	33A / MM	36.7	40.6	1.0	33	1.0	53.3	3.8
SMF36A	36A / MP	40	44.2	1.0	36	1.0	58.1	3.4
SMF40A	40A / MR	44.4	49.1	1.0	40	1.0	64.5	3.1
SMF43A	43A / MT	47.8	52.8	1.0	43	1.0	69.4	2.9
SMF45A	45A / MV	50	55.3	1.0	45	1.0	72.7	2.8
SMF48A	48A / MX	53.3	58.9	1.0	48	1.0	77.4	2.6
SMF51A	51A / MZ	56.7	62.7	1.0	51	1.0	82.4	2.4
SMF54A	54A / NE	60	66.3	1.0	54	1.0	87.1	2.3
SMF58A	58A / NG	64.4	71.2	1.0	58	1.0	93.6	2.1
SMF60A	60A / NK	66.7	73.7	1.0	60	1.0	96.8	1.8
SMF64A	64A / NM	71.1	78.6	1.0	64	1.0	103	1.7
SMF70A	70A / NP	77.8	86	1.0	70	1.0	113	1.5
SMF75A	75A / NR	83.3	92.1	1.0	75	1.0	121	1.4
SMF78A	78A / NT	86.7	95.8	1.0	78	1.0	126	1.4
SMF85A	85A / NV	94.4	104	1.0	85	1.0	137	1.3
SMF90A	90A / NX	100	111	1.0	90	1.0	146	1.2
SMF100A	100 / NZ	111	123	1.0	100	1.0	162	1.1
SMF110A	110 / PE	122	135	1.0	110	1.0	177	1.0
SMF120A	120 / PG	133	147	1.0	120	1.0	193	0.9
SMF130A	130 / PK	144	159	1.0	130	1.0	209	0.8
SMF150A	150 / PM	167	185	1.0	150	1.0	243	0.7
SMF160A	160 / PP	178	197	1.0	160	1.0	259	0.7
SMF170A	170 / PR	189	209	1.0	170	1.0	275	0.6

SMF5.0CA THRU SMF170CA

ELECTRICAL CHARACTERISTICS @25°C

MCC PART NUMBER Bi-Polar	Marking Code	Breakdown Voltage $V_{BR} @ I_T$ (Volt)		TEST CURRENT I_T mADC	RATED STANDOFF VOLTAGE V_{WM} V	MAXIMUM REVERSE LEAKAGE $I_b @ V_{WM}$ (μ A)	MAXIMUM CLAMPING VOLTAGE $V_C @ I_{PP}$ V	MAXIMUM PEAK PULSE CURRENT I_{PP} A
		MIN	MAX					
SMF5.0CA	5.0CA / AE	6.4	7.0	10	5.0	400	9.2	21.7
SMF6.0CA	6.0CA / AG	6.67	7.37	10	6.0	400	10.3	19.4
SMF6.5CA	6.5CA / AK	7.22	7.98	10	6.5	250	11.2	17.9
SMF7.0CA	7.0CA / AM	7.78	8.6	10	7.0	100	12	16.7
SMF7.5CA	7.5CA / AP	8.33	9.21	1.0	7.5	50	12.9	15.5
SMF8.0CA	8.0CA / AR	8.89	9.83	1.0	8.0	25	13.6	14.7
SMF8.5CA	8.5CA / AT	9.44	10.4	1.0	8.5	10	14.4	13.9
SMF9.0CA	9.0CA / AV	10	11.1	1.0	9.0	5.0	15.4	13
SMF10CA	10CA / AX	11.1	12.3	1.0	10	2.5	17	11.8
SMF11CA	11CA / AZ	12.2	13.5	1.0	11	2.5	18.2	11
SMF12CA	12CA / BE	13.3	14.7	1.0	12	2.5	19.9	10.1
SMF13CA	13CA / BG	14.4	15.9	1.0	13	1.0	21.5	9.3
SMF14CA	14CA / BK	15.6	17.2	1.0	14	1.0	23.2	8.6
SMF15CA	15CA / BM	16.7	18.5	1.0	15	1.0	24.4	8.2
SMF16CA	16CA / BP	17.8	19.7	1.0	16	1.0	26	7.7
SMF17CA	17CA / BR	18.9	20.9	1.0	17	1.0	27.6	7.2
SMF18CA	18CA / BT	20	22.1	1.0	18	1.0	29.2	6.8
SMF20CA	20CA / BV	22.2	24.5	1.0	20	1.0	32.4	6.2
SMF22CA	22CA / BX	24.4	26.9	1.0	22	1.0	35.5	5.6
SMF24CA	24CA / BZ	26.7	29.5	1.0	24	1.0	38.9	5.1
SMF26CA	26CA / CE	28.9	31.9	1.0	26	1.0	42.1	4.8
SMF28CA	28CA / CG	31.1	34.4	1.0	28	1.0	45.4	4.4
SMF30CA	30CA / CK	33.3	36.8	1.0	30	1.0	48.4	4.1
SMF33CA	33CA / CM	36.7	40.6	1.0	33	1.0	53.3	3.8
SMF36CA	36CA / CP	40	44.2	1.0	36	1.0	58.1	3.4
SMF40CA	40CA / CR	44.4	49.1	1.0	40	1.0	64.5	3.1
SMF43CA	43CA / CT	47.8	52.8	1.0	43	1.0	69.4	2.9
SMF45CA	45CA / CV	50	55.3	1.0	45	1.0	72.7	2.8
SMF48CA	48CA / CX	53.3	58.9	1.0	48	1.0	77.4	2.6
SMF51CA	51CA / CZ	56.7	62.7	1.0	51	1.0	82.4	2.4
SMF54CA	54CA / DE	60	66.3	1.0	54	1.0	87.1	2.3
SMF58CA	58CA / DG	64.4	71.2	1.0	58	1.0	93.6	2.1
SMF60CA	60CA / DK	66.7	73.7	1.0	60	1.0	96.8	1.8
SMF64CA	64CA / DM	71.1	78.6	1.0	64	1.0	103	1.7
SMF70CA	70CA / DP	77.8	86	1.0	70	1.0	113	1.5
SMF75CA	75CA / DR	83.3	92.1	1.0	75	1.0	121	1.4
SMF78CA	78CA / DT	86.7	95.8	1.0	78	1.0	126	1.4
SMF85CA	85CA / DV	94.4	104	1.0	85	1.0	137	1.3
SMF90CA	90CA / DX	100	111	1.0	90	1.0	146	1.2
SMF100CA	100C / DZ	111	123	1.0	100	1.0	162	1.1
SMF110CA	110C / EE	122	135	1.0	110	1.0	177	1.0
SMF120CA	120C / EG	133	147	1.0	120	1.0	193	0.9
SMF130CA	130C / EK	144	159	1.0	130	1.0	209	0.8
SMF150CA	150C / EM	167	185	1.0	150	1.0	243	0.7
SMF160CA	160C / EP	178	197	1.0	160	1.0	259	0.7
SMF170CA	170C / ER	189	209	1.0	170	1.0	275	0.6

SMF5.0CA THRU SMF170CA

Electrical Characteristics

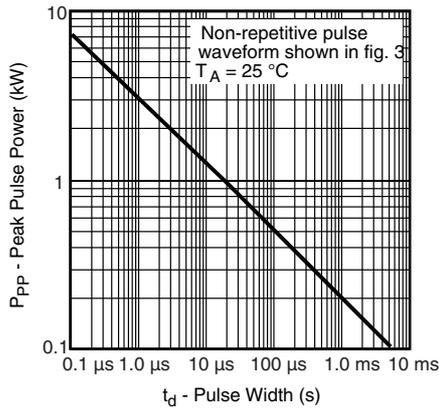


Fig. 1 - Peak Pulse Power Rating

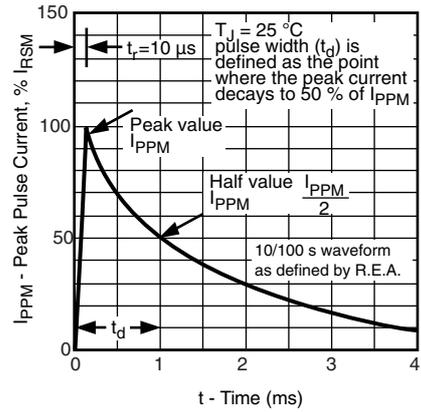


Fig. 3 - Pulse Waveform

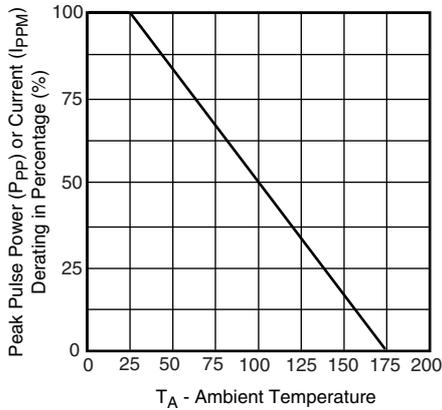


Fig. 2 - Pulse Derating Curve



TM

Micro Commercial Components

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

IMPORTANT NOTICE

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

CUSTOMER AWARENESS

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

www.mccsemi.com

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Micro Commercial Components \(MCC\):](#)

[SMF5.0A-TP](#) [SMF13A-TP](#) [SMF26A-TP](#) [SMF43A-TP](#) [SMF51A-TP](#) [SMF160A-TP](#) [SMF33A-TP](#) [SMF28CA-TP](#)
[SMF30CA-TP](#) [SMF33CA-TP](#) [SMF16A-TP](#) [SMF8.0A-TP](#) [SMF58A-TP](#) [SMF12A-TP](#) [SMF6.0A-TP](#) [SMF22A-TP](#)