

### Features

- Uni and Bi-directional Type Available (Suffix "C" means Bi-directional)
- Low Leakage
- Very Fast Response Time
- Excellent Clamping Capability
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

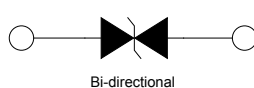
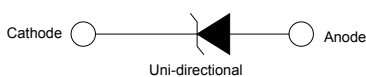
### Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

Peak Pulse Power Dissipation with a 10/1000µs Waveform	$P_{PP}$	400W	
Power Dissipation On Infinite Heatsink	$P_D$	1.0W	$T_L=75^\circ\text{C}$
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only	$I_{FSM}$	40A	Note 3
Maximum instantaneous forward voltage at 25A for unidirectional only	$V_F$	3.5V	
IEC61000-4-2(ESD)	Air Contact	$\pm 30\text{KV}$ $\pm 30\text{KV}$	

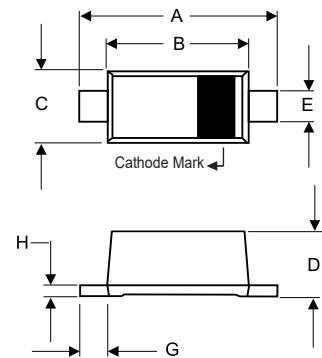
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.  
 2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.  
 3. Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

Pin Configuration:



**400 Watt TVS**  
**5.0 to 100 VOLTS**

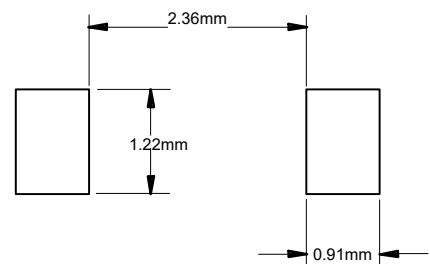
### SOD-123FL



#### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.130	0.152	3.30	3.85	
B	0.100	0.122	2.55	3.10	
C	0.055	0.075	1.40	1.90	
D	0.035	0.053	0.90	1.35	
E	0.020	0.041	0.50	1.05	
G	0.010	----	0.25	----	
H	----	0.010	----	0.25	

#### SUGGESTED SOLDER PAD LAYOUT



**Electrical Characteristics @ 25°C Unless Otherwise Specified**

MCC Part Number		Working Peak Reverse Voltage	Breakdown Voltage $V_{BR}(V)$		Test Current	Maximum Clamping Voltage @ $I_{PP}$	Maximum Reverse Surge Current	Maximum Reverse Leakage @ $V_{RWM}$	Device Marking Code	
Uni	Bi	$V_{RWM}(V)$	Min(V)	Max(V)	$I_T(mA)$	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$	Uni	Bi
SM4F5.0A		5	6.4	7	10	9.2	43.5	400	F5.0	
SM4F6.0A		6	6.67	7.37	10	10.3	38.8	400	F6.0	
SM4F6.5A		6.5	7.22	7.98	10	11.2	35.7	400	F6.5	
SM4F7.0A		7	7.78	8.6	10	12	33.3	200	F7.0	
SM4F7.5A		7.5	8.33	9.21	1	12.9	31	100	F7.5	
SM4F8.0A		8	8.89	9.83	1	13.6	29.4	50	F8.0	
SM4F8.5A		8.5	9.44	10.4	1	14.4	27.7	20	F8.5	
SM4F9.0A		9	10	11.1	1	15.4	26	10	F9.0	
SM4F10A		10	11.1	12.3	1	17	23.5	5	F10	
SM4F11A	SM4F11CA	11	12.2	13.5	1	18.2	21.98	1	F11	F11C
SM4F12A	SM4F12CA	12	13.3	14.7	1	19.9	20.1	1	F12	F12C
SM4F13A	SM4F13CA	13	14.4	15.9	1	21.5	18.6	1	F13	F13C
SM4F14A	SM4F14CA	14	15.6	17.2	1	23.2	17.24	1	F14	F14C
SM4F15A	SM4F15CA	15	16.7	18.5	1	24.4	16.39	1	F15	F15C
SM4F16A	SM4F16CA	16	17.8	19.7	1	26	15.38	1	F16	F16C
SM4F17A	SM4F17CA	17	18.9	20.9	1	27.6	14.49	1	F17	F17C
SM4F18A	SM4F18CA	18	20	22.1	1	29.2	13.7	1	F18	F18C
SM4F19A	SM4F19CA	19	21.1	23.3	1	30.8	13	1	F19	F19C
SM4F20A	SM4F20CA	20	22.2	24.5	1	32.4	12.35	1	F20	F20C
SM4F22A	SM4F22CA	22	24.4	26.9	1	35.5	11.27	1	F22	F22C
SM4F24A	SM4F24CA	24	26.7	29.5	1	38.9	10.28	1	F24	F24C
SM4F26A	SM4F26CA	26	28.9	31.9	1	42.1	9.5	1	F26	F26C
SM4F28A	SM4F28CA	28	31.1	34.4	1	45.4	8.81	1	F28	F28C
SM4F30A	SM4F30CA	30	33.3	36.8	1	48.4	8.26	1	F30	F30C
SM4F33A	SM4F33CA	33	36.7	40.6	1	53.3	7.5	1	F33	F33C
SM4F36A	SM4F36CA	36	40	44.2	1	58.1	6.88	1	F36	F36C
SM4F40A	SM4F40CA	40	44.4	49.1	1	64.5	6.2	1	F40	F40C
SM4F43A	SM4F43CA	43	47.8	52.8	1	69.4	5.7	1	F43	F43C
SM4F45A	SM4F45CA	45	50	55.3	1	72.7	5.5	1	F45	F45C
SM4F48A		48	53.3	58.9	1	77.4	5.2	1	F48	
SM4F51A		51	56.7	62.7	1	82.4	4.9	1	F51	
SM4F54A		54	60	66.3	1	87.1	4.6	1	F54	
SM4F58A		58	64.4	71.2	1	93.6	4.3	1	F58	
SM4F60A		60	66.7	73.7	1	96.8	4.1	1	F60	
SM4F64A		64	71.1	78.6	1	103	3.9	1	F64	
SM4F70A		70	77.8	86	1	113	3.5	1	F70	
SM4F75A		75	83.3	92.1	1	121	3.3	1	F75	
SM4F78A		78	86.7	95.8	1	126	2.2	1	F78	
SM4F85A		85	94.4	104	1	137	2.9	1	F85	
SM4F90A		90	100	111	1	146	2.74	1	F90	
SM4F100A		100	111	123	1	162	2.46	1	F100	

**Curve Characteristics**

Fig. 1 - Peak Pulse Power Rating Curve

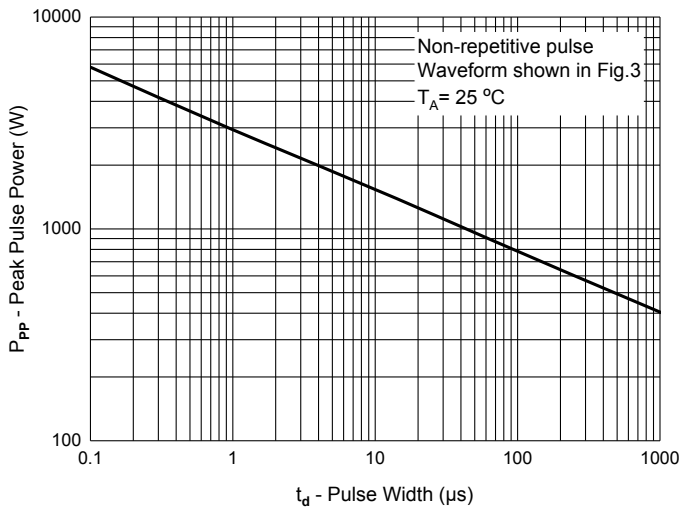


Fig. 2 - Typical Junction Capacitance

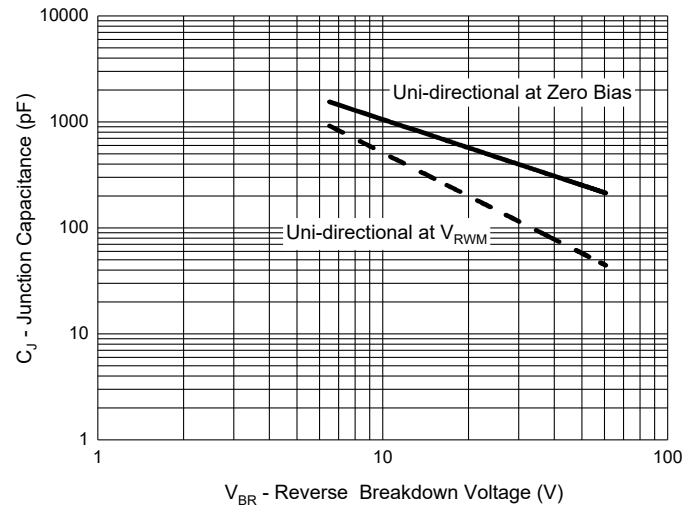


Fig. 3 - Pulse Waveform

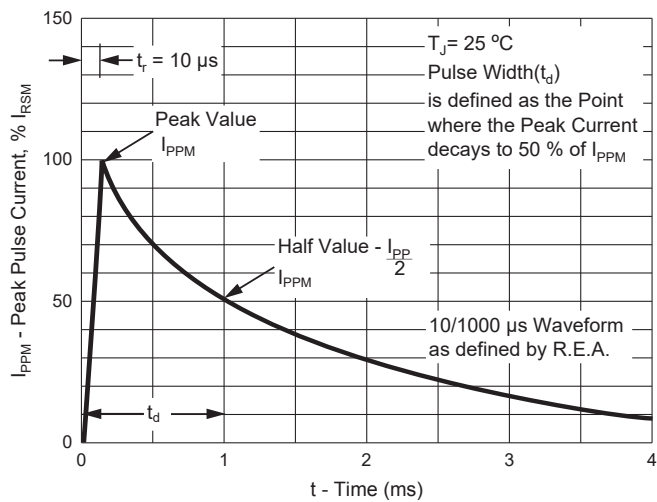
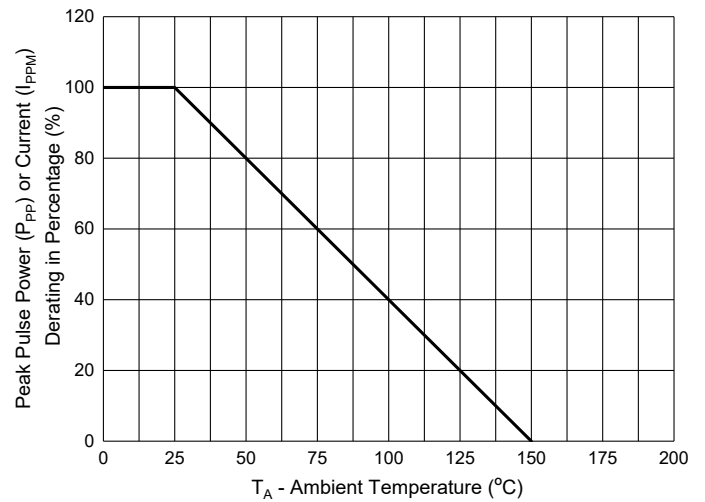


Fig. 4 - Pulse Derating Curve



## Ordering Information

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

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