

### 400W Transient Voltage Suppressors

TVS Diodes - 400W > P4SMFT Series



#### Description

The P4SMFT series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

#### Features

- For surface mounted applications in order to optimize board space
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-0
- Typical IR less than 1uA above 10V
- Fast response time: typically less than 1.0ps from 0 Volts to VBR min
- Glass passivated junction
- Low inductance



Package: SMF / SOD-123FL

#### Applications

- I/O interface
- AC/DC power supply
- Low frequency signal transmission line (RS232, RS485, etc.)

#### Electrical Characteristics

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at TA=25°C by 10x1000µs waveform (Fig.1)(Note 1), (Note 2)	PPPM	400	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note 3)	IFSM	40	A
Operating Junction and Storage Temperature Range	TJ, TSTG	-55 to 150	°C
Typical Thermal Resistance Junction to Lead	RθJL	20	°C/W
Typical Thermal Resistance Junction to Ambient	RθJA	100	°C/W

#### Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above TA=25°C per Fig. 2.
2. Mounted on 5.0x5.0mm copper pad to each terminal.
3. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only.

Electrical Characteristics (TA=25°C)

Part Number		Reverse Stand-Off Voltage	Breakdown Voltage V <sub>BR</sub> (Volts)@I <sub>T</sub>		Test Current	Maximum Clamping Voltage@I <sub>PP</sub>	Peak Pulse Current	Reverse Leakage @V <sub>RWM</sub>	Delivery Time
Uni-Polar	Bi-polar	V <sub>RWM</sub> (V)	Min	Max	I <sub>T</sub> (mA)	V <sub>C</sub> (V)	I <sub>PP</sub> (A)	I <sub>R</sub> (μA)	days
P4SMFT3.3A	---	3.3	4.10	4.75	10	7.3	54.7	400	12days
P4SMFT5.0A	P4SMFT5.0CA	5.0	6.4	7.00	10	9.2	43.5	400	12days
P4SMFT6.0A	P4SMFT6.0CA	6.0	6.67	7.37	10	10.3	38.8	400	12days
P4SMFT6.5A	P4SMFT6.5CA	6.5	7.22	7.98	10	11.2	35.7	250	12days
P4SMFT7.0A	P4SMFT7.0CA	7.0	7.78	8.60	10	12.0	33.3	100	12days
P4SMFT7.5A	P4SMFT7.5CA	7.5	8.33	9.21	10	12.9	31.0	50	12days
P4SMFT8.0A	P4SMFT8.0CA	8.0	8.89	9.83	1	13.6	29.4	25	12days
P4SMFT8.5A	P4SMFT8.5CA	8.5	9.44	10.40	1	14.4	27.8	10	12days
P4SMFT9.0A	P4SMFT9.0CA	9.0	10.00	11.10	1	15.4	26.0	5	12days
P4SMFT10A	P4SMFT10CA	10.0	11.10	12.30	1	17.0	23.5	2.5	12days
P4SMFT11A	P4SMFT11CA	11.0	12.20	13.50	1	18.2	22.0	2.5	12days
P4SMFT12A	P4SMFT12CA	12.0	13.30	14.70	1	19.9	20.1	2.5	12days
P4SMFT13A	P4SMFT13CA	13.0	14.40	15.90	1	21.5	18.6	1	12days
P4SMFT14A	P4SMFT14CA	14.0	15.60	17.20	1	23.2	17.2	1	12days
P4SMFT15A	P4SMFT15CA	15.0	16.70	18.50	1	24.4	16.4	1	12days
P4SMFT16A	P4SMFT16CA	16.0	17.80	19.70	1	26.0	15.4	1	12days
P4SMFT17A	P4SMFT17CA	17.0	18.90	20.90	1	27.6	14.5	1	12days
P4SMFT18A	P4SMFT18CA	18.0	20.00	22.10	1	29.2	13.7	1	12days
P4SMFT20A	P4SMFT20CA	20.0	22.20	24.50	1	32.4	12.3	1	12days
P4SMFT22A	P4SMFT22CA	22.0	24.40	26.90	1	35.5	11.3	1	12days
P4SMFT24A	P4SMFT24CA	24.0	26.70	29.50	1	38.9	10.3	1	12days
P4SMFT26A	P4SMFT26CA	26.0	28.90	31.90	1	42.1	9.5	1	12days
P4SMFT28A	P4SMFT28CA	28.0	31.10	34.40	1	45.4	8.8	1	12days
P4SMFT30A	P4SMFT30CA	30.0	33.30	36.80	1	48.4	8.3	1	12days

**Electrical Characteristics (TA=25°C)**

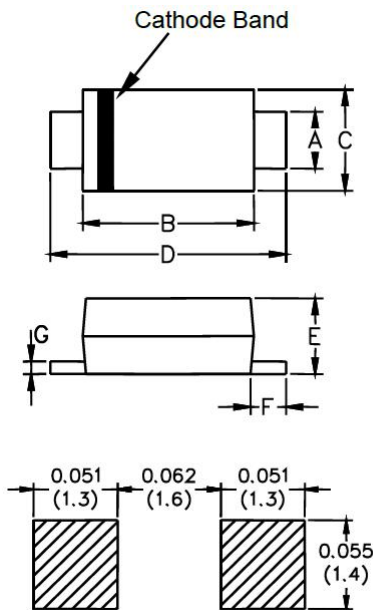
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Part Number		Reverse Stand-Off Voltage	Breakdown Voltage		Test Current	Maximum Clamping Voltage@IPP	Peak Pulse Current	Reverse Leakage @VRWM	Delivery Time
Uni-Polar	Bi-polar	VRWM(V)	Min	Max	IT(mA)	VC(V)	IPP(A)	IR(μA)	days
P4SMFT33A	P4SMFT33CA	33.0	36.7	40.6	1	53.3	7.5	1	12days
P4SMFT36A	P4SMFT36CA	36.0	40.0	44.2	1	58.1	6.9	1	12days
P4SMFT40A	P4SMFT40CA	40.0	44.4	49.1	1	64.5	6.2	1	12days
P4SMFT43A	P4SMFT43CA	43.0	47.8	52.8	1	69.4	5.8	1	12days
P4SMFT45A	P4SMFT45CA	45.0	50.0	55.3	1	72.7	5.5	1	12days
P4SMFT48A	P4SMFT48CA	48.0	53.3	58.9	1	77.4	5.2	1	12days
P4SMFT51A	P4SMFT51CA	51.0	56.7	62.7	1	82.4	4.9	1	12days
P4SMFT54A	P4SMFT54CA	54.0	60.0	66.3	1	87.1	4.6	1	12days
P4SMFT58A	P4SMFT58CA	58.0	64.4	71.2	1	93.6	4.3	1	12days

**Packing Options**

Package Type	Packaging Option	Packing Quantity	Industry Standard
SOD-123FL	Tape & Reel -12mm/7"tape	3000PCS	EIA STD RS-481

**Dimensions - SOD-123FL**



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.031	0.044	0.77	1.09
B	0.1	0.112	2.51	2.81
C	0.055	0.071	1.38	1.78
D	0.140	0.152	3.51	3.82
E	0.037	0.053	0.93	1.33
F	0.01	-	0.25	-
G	-	0.008	-	0.20