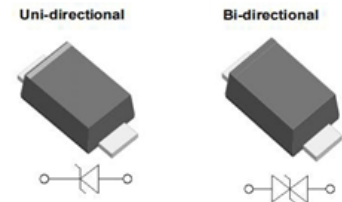


Transient Voltage Suppressors

FEATURES :

- For surface mounted applications
- 400W peak pulse power capability at 10/1000 μ s waveform, repetition rate (duty cycle): 0.01%
- Excellent clamping capability
- Typical failure mode is a short circuit condition for current events exceeding component rating
- Lead-frame maximum peak of 260°C
- RoHS compliant.



SOD-123FL (SMF)



MECHANICAL DATA :

- Case : Molded plastic body
- Polarity : Polarity symbol marking on body

MAXIMUM RATINGS (Ratings at 25 °C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at $T_A=25^\circ\text{C}$ by 10x1000 μ s waveform	P_{PPM}	400	W
Power Dissipation on infinite heat sink at $T_A=50^\circ\text{C}$	P_D	1	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note 1)	I_{FSM}	30	A
Maximum Instantaneous Forward Voltage at 50A for Unidirectional Only	V_F	3.5	V
Typical Thermal Resistance Junction to Lead	$R_{Uj\ell}$	100	$^\circ\text{C/W}$
Typical Thermal Resistance Junction to Ambient	R_{UJA}	220	$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^\circ\text{C}$

Note 1 :

Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only, duty cycle=4 per minute maximum.

P4SMFJxxA/CA Series

Electrical Characteristics

P/N		Marking		VR (V)	VBR @ IT (V)		IT (mA)	IR@ VR (μA)		Ipp (A)	VC@ Ipp (V)
Uni	Bi	Uni	Bi		MIN	MAX		Uni	Bi		
P4SMFJ3.3A	--	3T	-	3.3	5.20	6.00	10	400	400	50.0	8.0
--	P4SMFJ3.3CA	-	3T	3.3	5.20	6.50	10	400	400	50.0	8.0
P4SMFJ5.0A	P4SMFJ5.0CA	05	05	5.0	6.40	7.00	10	800	800	40.1	9.2
P4SMFJ6.0A	P4SMFJ6.0CA	06	06	6.0	6.67	7.37	10	800	800	35.9	10.3
P4SMFJ6.5A	P4SMFJ6.5CA	6F	6F	6.5	7.22	7.98	10	500	500	33.1	11.2
P4SMFJ7.0A	P4SMFJ7.0CA	07	07	7.0	7.78	8.60	10	200	200	30.9	12.0
P4SMFJ7.5A	P4SMFJ7.5CA	7F	7F	7.5	8.33	9.21	1	100	100	28.7	12.9
P4SMFJ8.0A	P4SMFJ8.0CA	08	08	8.0	8.89	9.83	1	50	50	27.2	13.6
P4SMFJ8.5A	P4SMFJ8.5CA	8F	8F	8.5	9.44	10.40	1	20	20	25.7	14.4
P4SMFJ9.0A	P4SMFJ9.0CA	09	09	9.0	10.00	11.10	1	5	5	26.4	15.4
P4SMFJ10A	P4SMFJ10CA	10	10	10.0	11.10	12.30	1	5	5	23.5	17.0
P4SMFJ11A	P4SMFJ11CA	11	11	11.0	12.20	13.50	1	1	1	22.0	18.2
P4SMFJ12A	P4SMFJ12CA	12	12	12.0	13.30	14.70	1	1	1	20.1	19.9
P4SMFJ13A	P4SMFJ13CA	13	13	13.0	14.40	15.90	1	1	1	18.6	21.5
P4SMFJ14A	P4SMFJ14CA	14	14	14.0	15.60	17.20	1	1	1	17.2	23.2
P4SMFJ15A	P4SMFJ15CA	15	15	15.0	16.70	18.50	1	1	1	16.4	24.4
P4SMFJ16A	P4SMFJ16CA	16	16	16.0	17.80	19.70	1	1	1	15.4	26.0
P4SMFJ17A	P4SMFJ17CA	17	17	17.0	18.90	20.90	1	1	1	14.5	27.6
P4SMFJ18A	P4SMFJ18CA	18	18	18.0	20.00	22.10	1	1	1	13.7	29.2
P4SMFJ20A	P4SMFJ20CA	20	20	20.0	22.20	24.50	1	1	1	12.3	32.4
P4SMFJ22A	P4SMFJ22CA	22	22	22.0	24.40	26.90	1	1	1	11.3	35.5
P4SMFJ24A	P4SMFJ24CA	24	24	24.0	26.70	29.50	1	1	1	10.3	38.9
P4SMFJ26A	P4SMFJ26CA	26	26	26.0	28.90	31.90	1	1	1	9.5	42.1
P4SMFJ28A	P4SMFJ28CA	28	28	28.0	31.10	34.40	1	1	1	8.8	45.4
P4SMFJ30A	P4SMFJ30CA	30	30	30.0	33.30	36.80	1	1	1	8.3	48.4
P4SMFJ33A	P4SMFJ33CA	33	33	33.0	36.70	40.60	1	1	1	7.5	53.3
P4SMFJ36A	P4SMFJ36CA	36	36	36.0	40.00	44.20	1	1	1	6.9	58.1
P4SMFJ40A	P4SMFJ40CA	40	40	40.0	44.40	49.10	1	1	1	6.2	64.5
P4SMFJ43A	P4SMFJ43CA	43	43	43.0	47.80	52.80	1	1	1	5.8	69.4
P4SMFJ45A	P4SMFJ45CA	45	45	45.0	50.00	55.30	1	1	1	5.5	72.7
P4SMFJ48A	P4SMFJ48CA	48	48	48.0	53.30	58.90	1	1	1	5.2	77.4
P4SMFJ51A	P4SMFJ51CA	51	51	51.0	56.70	62.70	1	1	1	4.9	82.4
P4SMFJ54A	P4SMFJ54CA	54	54	54.0	60.00	66.30	1	1	1	4.6	87.1
P4SMFJ58A	P4SMFJ58CA	58	58	58.0	64.40	71.20	1	1	1	4.3	93.6
P4SMFJ60A	P4SMFJ60CA	60	60	60.0	66.70	73.70	1	1	1	4.1	96.8
P4SMFJ64A	P4SMFJ64CA	64	64	64.0	71.10	78.60	1	1	1	3.9	103.0
P4SMFJ70A	P4SMFJ70CA	70	70	70.0	77.80	86.00	1	1	1	3.5	113.0
P4SMFJ75A	P4SMFJ75CA	75	75	75.0	83.30	92.10	1	1	1	3.3	121.0
P4SMFJ78A	P4SMFJ78CA	78	78	78.0	86.70	95.80	1	1	1	3.2	126.0
P4SMFJ85A	P4SMFJ85CA	85	85	85.0	94.40	104.0	1	1	1	2.9	137.0

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

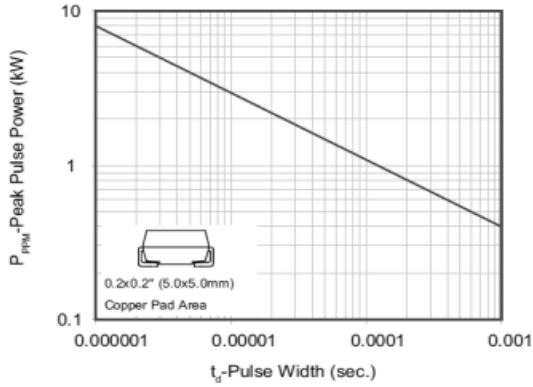


Figure 1. Peak Pulse Power Rating Curve

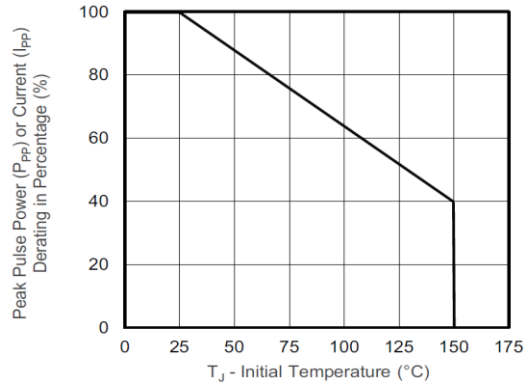


Figure 2. Pulse Derating Curve

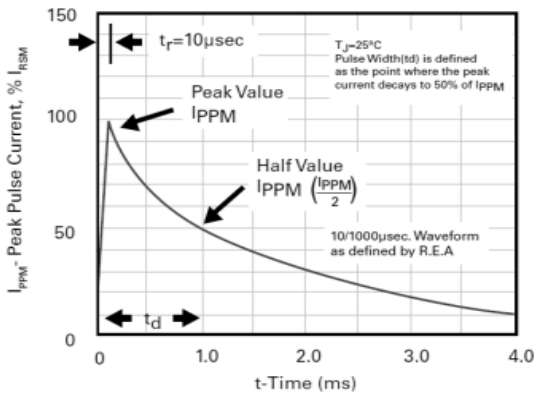


Figure 3. Pulse Waveform

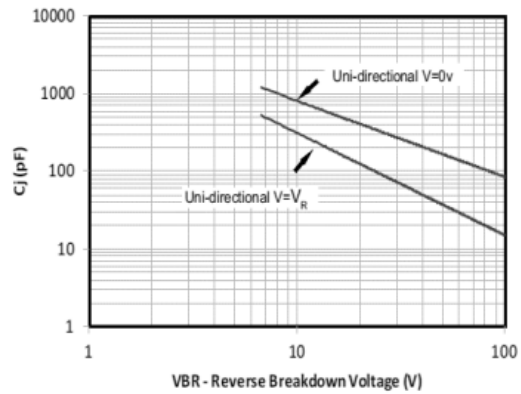


Figure 4. Typical Junction Capacitance

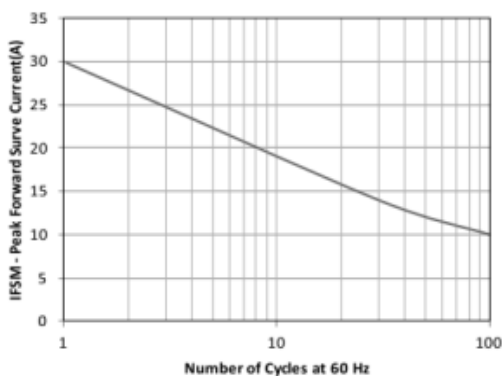
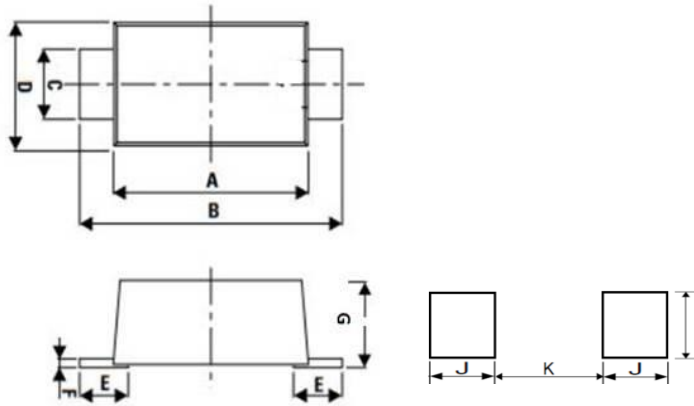


Figure 5. Maximum Non-Repetitive Surge Current

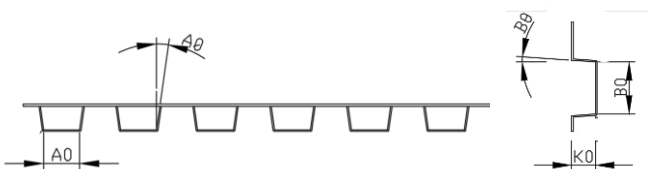
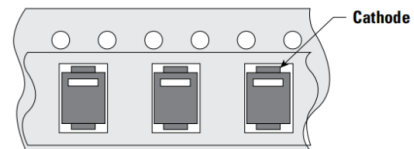
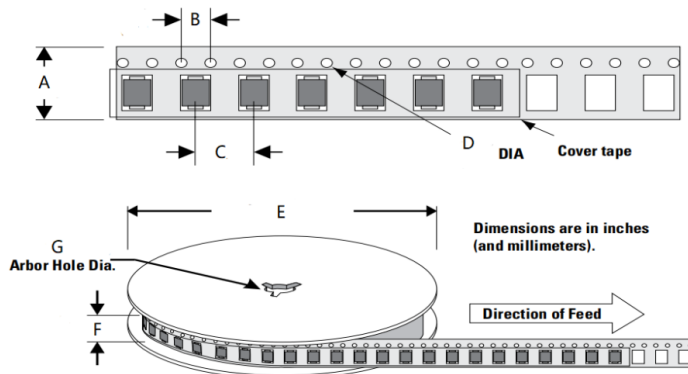
P4SMFJxxA/CA Series

- SOD-123FL Package outlines : Dimensions in millimeters



Dimensions	Millimeters	
	Min	Max
A	2.50	3.10
B	3.40	4.00
C	0.70	1.20
D	1.50	2.00
E	0.35	0.90
F	0.05	0.26
G	0.95	1.30
I	1.35	
J	1.20	
K		1.90

- Tape & Reel Information



Dimensions	Millimeters	
	Min	Max
A	8.00	8.10
B	3.90	4.10
C	3.90	4.10
D	1.50	1.60
E	177.5	178.5
F	9.00	10.00
G	13.10	13.50
A0	1.75	1.95
B0	3.84	4.04
K0	1.48	1.68
Aθ	--	8°
Bθ	--	5°

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