

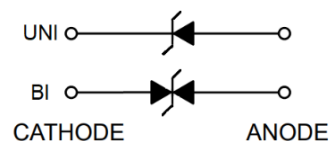
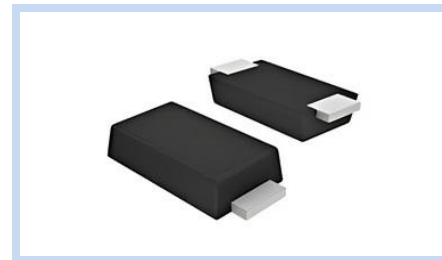
Transient Voltage Suppressors 400W SOD-123

S4MF-A Series

MERITEK

FEATURE

- IEC 61000-4-2 ESD: $\pm 15\text{KV}$ (Air), $\pm 8\text{KV}$ (Contact)
- 5.0V to 170V Reverse Voltage
- Low Profile Package
- Protects one I/O Line
- Application: PDA, Cellular Handsets & Accessories, Portable Devices, Handhelds and Notebooks, Digital Cameras



MECHANICAL DATA

- Case: SOD-123, Molded Epoxy Meets UL94V-0
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color Band Denotes Cathode End Except Bipolar

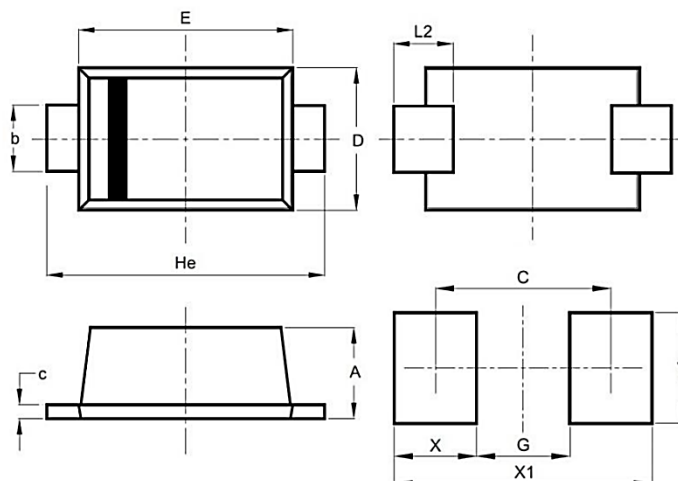


MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Peak Power Dissipation on 10/1000 μs Waveform		P_{PPM}	400	W
Peak Pulse Current on 10/1000 μs Waveform		I_{PPM}	see table	A
ESD Discharge (IEC61000-4-2)	Air	V_{ESD}	± 15	KV
	Contact		± 8	
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$

DIMENSIONS

Items	Min (mm)	Max (mm)
A	0.85	1.35
b	0.80	1.20
c	0.10	0.30
D	1.60	2.00
E	2.50	2.90
He	3.50	3.90
L2	0.35	0.85
G	2.00	
C	3.00	
X	1.00	
X1	4.00	
Y	1.10	



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ELECTRICAL CHARACTERISTICS

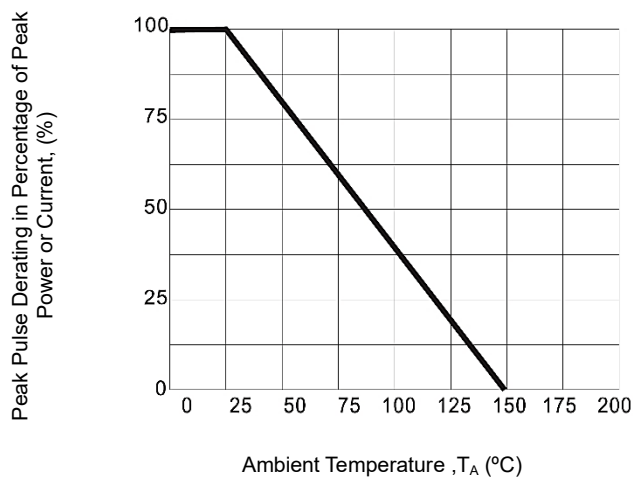
Part Number		Working Reverse Voltage	Breakdown Voltage		Test Current	Max Reverse Leakage Current	Max Clamping Voltage	Reverse Surge Current
Uni-Polar	Bi-Polar	V _{RWM} (V)	V _{BR} (V) Min	V _{BR} (V)Max	I _T (mA)	I _R (μA) @ V _{RWM}	V _C (V) @ I _{PP}	I _{PP} (A) Max
S4MF5.0A	S4MF5.0CA	5.0	6.40	7.25	10	40	9.2	43.5
S4MF6.0A	S4MF6.0CA	6.0	6.67	7.37	10	40	10.3	38.0
S4MF6.5A	S4MF6.5CA	6.5	7.22	7.98	10	30	11.2	35.7
S4MF7.0A	S4MF7.0CA	7.0	7.78	8.60	10	30	12.0	33.3
S4MF7.5A	S4MF7.5CA	7.5	8.33	9.21	1	30	12.9	31.0
S4MF8.0A	S4MF8.0CA	8.0	8.89	9.83	1	20	13.6	29.4
S4MF8.5A	S4MF8.5CA	8.5	9.44	10.40	1	10	14.4	27.7
S4MF9.0A	S4MF9.0CA	9.0	10.00	11.10	1	5	15.4	26.0
S4MF10A	S4MF10CA	10.0	11.10	12.30	1	2	17.0	23.5
S4MF11A	S4MF11CA	11.0	12.20	13.50	1	1	18.2	22.0
S4MF12A	S4MF12CA	12.0	13.30	14.70	1	1	19.9	20.1
S4MF13A	S4MF13CA	13.0	14.40	15.90	1	1	21.5	18.6
S4MF14A	S4MF14CA	14.0	15.60	17.20	1	1	23.2	17.2
S4MF15A	S4MF15CA	15.0	16.70	18.50	1	1	24.4	16.4
S4MF16A	S4MF16CA	16.0	17.80	19.70	1	1	26.0	15.4
S4MF17A	S4MF17CA	17.0	18.90	20.90	1	1	27.6	14.5
S4MF18A	S4MF18CA	18.0	20.00	22.10	1	1	29.2	13.7
S4MF20A	S4MF20CA	20.0	22.20	24.50	1	1	32.4	12.3
S4MF22A	S4MF22CA	22.0	24.40	26.90	1	1	35.5	11.2
S4MF24A	S4MF24CA	24.0	26.70	29.50	1	1	38.9	10.3
S4MF26A	S4MF26CA	26.0	28.90	31.90	1	1	42.1	9.5
S4MF28A	S4MF28CA	28.0	31.10	34.40	1	1	45.4	8.8
S4MF30A	S4MF30CA	30.0	33.30	36.80	1	1	48.4	8.3
S4MF33A	S4MF33CA	33.0	36.70	40.60	1	1	53.3	7.5
S4MF36A	S4MF36CA	36.0	40.00	44.20	1	1	58.1	6.9
S4MF40A	S4MF40CA	40.0	44.40	49.10	1	1	64.5	6.2
S4MF43A	S4MF43CA	43.0	47.80	52.80	1	1	69.4	5.8
S4MF45A	S4MF45CA	45.0	50.00	55.30	1	1	72.7	5.5
S4MF48A	S4MF48CA	48.0	53.30	58.90	1	1	77.4	5.2
S4MF51A	S4MF51CA	51.0	56.70	62.70	1	1	82.4	4.9
S4MF54A	S4MF54CA	54.0	60.00	66.30	1	1	87.1	4.6
S4MF58A	S4MF58CA	58.0	64.40	71.20	1	1	93.6	4.3
S4MF60A	S4MF60CA	60.0	66.70	73.70	1	1	96.8	4.1
S4MF64A	S4MF64CA	64.0	71.10	78.60	1	1	103.0	3.9
S4MF70A	S4MF70CA	70.0	77.80	86.00	1	1	113.0	3.5
S4MF75A	S4MF75CA	75.0	83.30	92.10	1	1	121.0	3.3
S4MF78A	S4MF78CA	78.0	86.70	95.80	1	1	126.0	3.2
S4MF85A	S4MF85CA	85.0	94.40	104.00	1	1	137.0	2.9
S4MF90A	S4MF90CA	90.0	100.00	111.00	1	1	146.0	2.7
S4MF100A	S4MF100CA	100.0	111.00	123.00	1	1	162.0	2.5
S4MF110A	S4MF110CA	110.0	122.00	135.00	1	1	177.0	2.3
S4MF120A	S4MF120CA	120.0	133.00	147.00	1	1	193.0	2.1
S4MF130A	S4MF130CA	130.0	144.00	159.00	1	1	209.0	1.9
S4MF150A	S4MF150CA	150.0	167.00	185.00	1	1	243.0	1.6
S4MF160A	S4MF160CA	160.0	178.00	197.00	1	1	259.0	1.5
S4MF170A	S4MF170CA	170.0	189.00	209.00	1	1	275.0	1.5

Note:

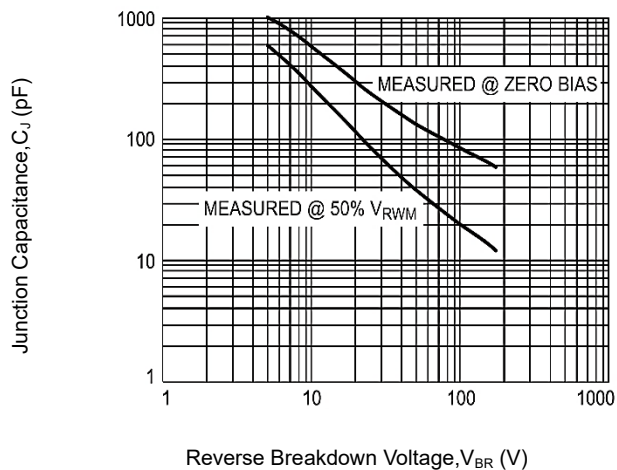
1. T_A = 25°C ambient temperature unless otherwise specified.
2. V_{BR} is measured with I_T current pulse=300μs
3. Add suffix ' CA ' after part number to specify Bi-directional devices.
4. For Bi-Directional devices having V_R of 10 volts and under, the I_R limit is double.

CHARACTERISTIC CURVES

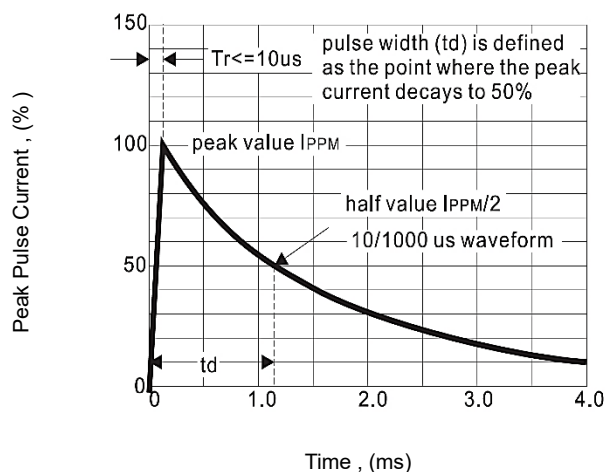
Pulse Derating Curve



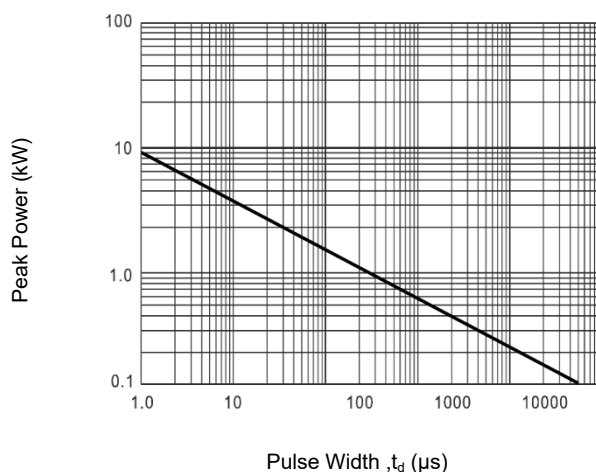
Typical Junction Capacitance



Pulse Waveform (10/1000 μ s)



Peak Pulse Power Rating Curve



Pulse Waveform (8/20 μ s)

