

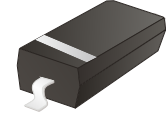
MMSZ4678-HF Thru. MMSZ4717-HF

Voltage: 1.8 to 43 Volts

Power: 500mW

RoHS Device

Halogen Free



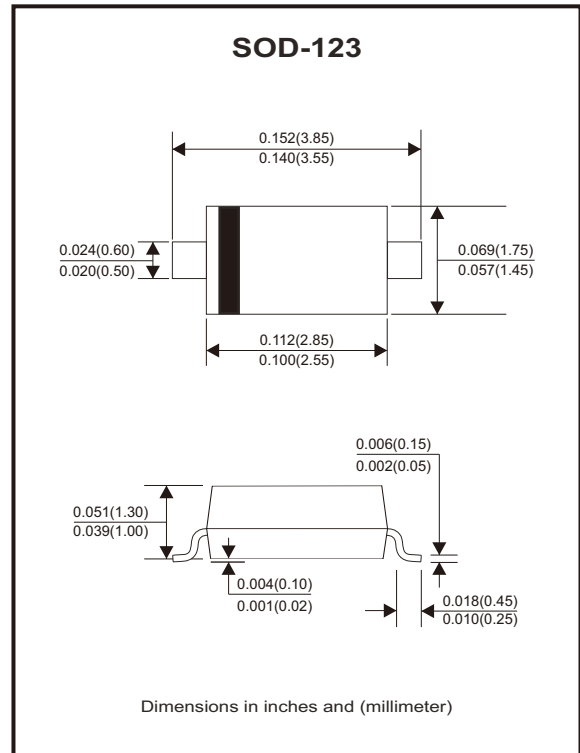
Features

- Large selection of zener voltages: 1.8V~43V.
- Tight voltage tolerance: $\pm 5\%$.
- Ultra low-profile package well suited for automated assembly.

Mechanical data

- Case: SOD-123, molded plastic.

Circuit Diagram



Maximum Rating (at Ta=25 °C unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward voltage @ If=10mA	V _F	0.9	V
Power dissipation	P _D	500	mW
Thermal resistance, junction to ambient	R _{θJA}	250	°C/W
Thermal resistance, junction to case	R _{θJC}	140	°C/W
Junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-65 to +150	°C

Notes: 1. These rating are limiting values above which the serviceability of the diodes may be impaired.

Electrical Characteristics (at Ta=25 °C unless otherwise specified)

Part Number	Zener Voltage			Leakage Current			Marking Code
	Vz(V)			@IzT	I _R @V _R		
	Min	Nom	Max	μA	μA	V	
MMSZ4678-HF	1.71	1.8	1.89	50	7.5	1	CC
MMSZ4679-HF	1.90	2.0	2.10	50	5	1	CD
MMSZ4680-HF	2.09	2.2	2.31	50	4	1	CE
MMSZ4681-HF	2.28	2.4	2.52	50	2	1	CF
MMSZ4682-HF	2.57	2.7	2.84	50	1	1	CH
MMSZ4683-HF	2.85	3.0	3.15	50	0.8	1	CJ
MMSZ4684-HF	3.13	3.3	3.47	50	7.5	1.5	CK
MMSZ4685-HF	3.42	3.6	3.78	50	7.5	2	CM
MMSZ4686-HF	3.70	3.9	4.10	50	5	2	CN
MMSZ4687-HF	4.09	4.3	4.52	50	4	2	CP
MMSZ4688-HF	4.47	4.7	4.94	50	10	3	CT
MMSZ4689-HF	4.85	5.1	5.36	50	10	3	CU
MMSZ4690-HF	5.32	5.6	5.88	50	10	4	CV
MMSZ4691-HF	5.89	6.2	6.51	50	10	5	CA
MMSZ4692-HF	6.46	6.8	7.14	50	10	5.1	CX
MMSZ4693-HF	7.13	7.5	7.88	50	10	5.7	CY
MMSZ4694-HF	7.79	8.2	8.61	50	1	6.2	CZ
MMSZ4695-HF	8.27	8.7	9.14	50	1	6.6	DC
MMSZ4696-HF	8.65	9.1	9.56	50	1	6.9	DD
MMSZ4697-HF	9.50	10	10.50	50	1	7.6	DE
MMSZ4698-HF	10.45	11	11.55	50	0.05	8.4	DF
MMSZ4699-HF	11.40	12	12.60	50	0.05	9.1	DH
MMSZ4700-HF	12.35	13	13.65	50	0.05	9.8	DJ
MMSZ4701-HF	13.30	14	14.70	50	0.05	10.6	DK
MMSZ4702-HF	14.25	15	15.75	50	0.05	11.4	DM
MMSZ4703-HF	15.20	16	16.80	50	0.05	12.1	DN
MMSZ4704-HF	16.15	17	17.85	50	0.05	12.9	DP
MMSZ4705-HF	17.10	18	18.90	50	0.05	13.6	DT
MMSZ4706-HF	18.05	19	19.95	50	0.05	14.4	DU
MMSZ4707-HF	19.00	20	21.00	50	0.01	15.2	DV
MMSZ4708-HF	20.90	22	23.10	50	0.01	16.7	DA
MMSZ4709-HF	22.80	24	25.20	50	0.01	18.2	DX
MMSZ4710-HF	23.75	25	26.25	50	0.01	19.0	DY
MMSZ4711-HF	25.65	27	28.35	50	0.01	20.4	EA
MMSZ4712-HF	26.60	28	29.40	50	0.01	21.2	EC
MMSZ4713-HF	28.50	30	31.50	50	0.01	22.8	ED
MMSZ4714-HF	31.35	33	34.65	50	0.01	25.0	EE
MMSZ4715-HF	34.20	36	37.80	50	0.01	27.3	EF
MMSZ4716-HF	37.05	39	40.95	50	0.01	29.6	EH
MMSZ4717-HF	40.85	43	45.15	50	0.01	32.6	EJ

Rating and Characteristic Curves (MMSZ4678-HF Thru. MMSZ4717-HF)

Fig.1 - Temperature Coefficients
(Temperature Range -55°C to +150°C)

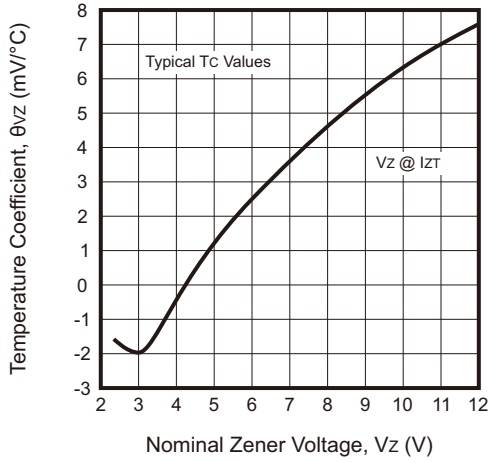


Fig.2 - Temperature Coefficients
(Temperature Range -55°C to +150°C)

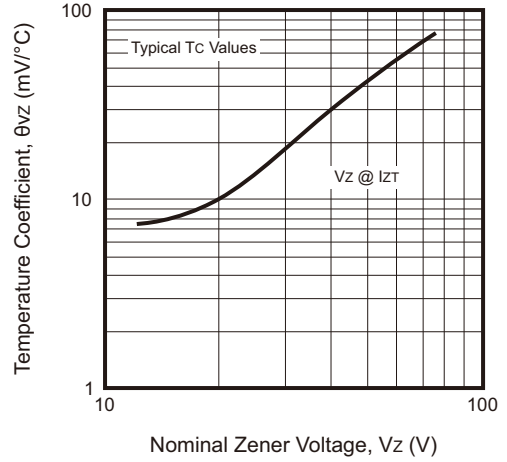


Fig.3 - Steady State Power Derating

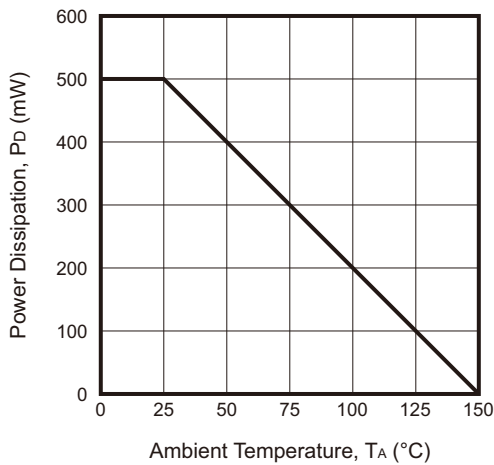


Fig.4 - Max. Non-repetitive Surge Power

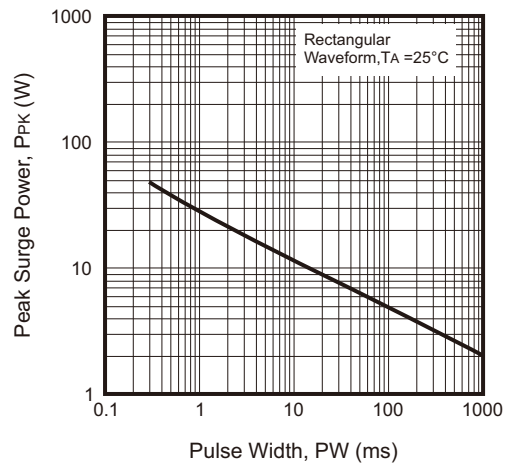


Fig.5 - Zener Voltage vs. Zener Current
(V_z Up to 12V)

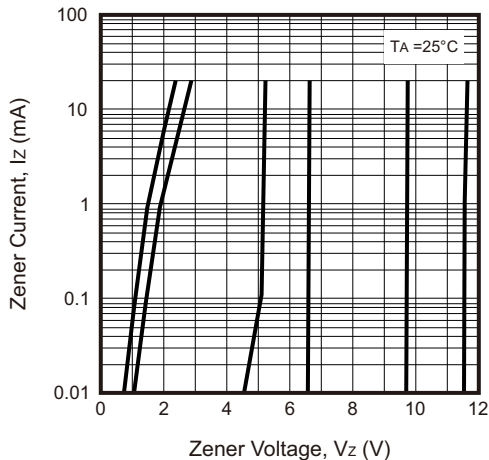
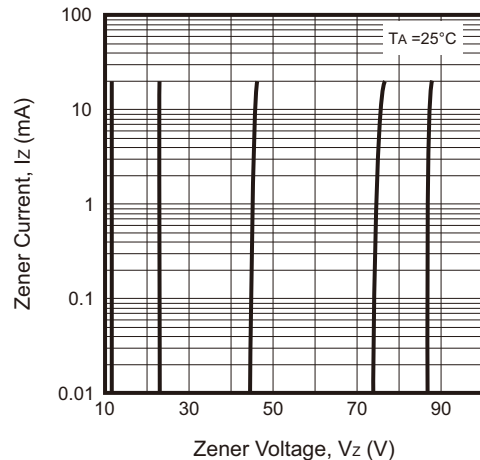
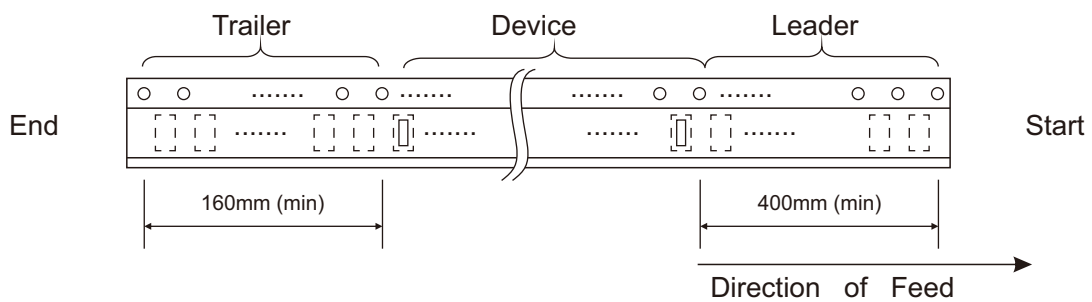
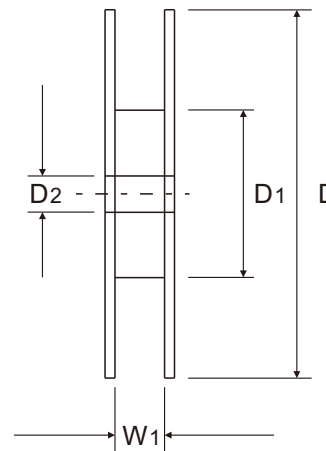
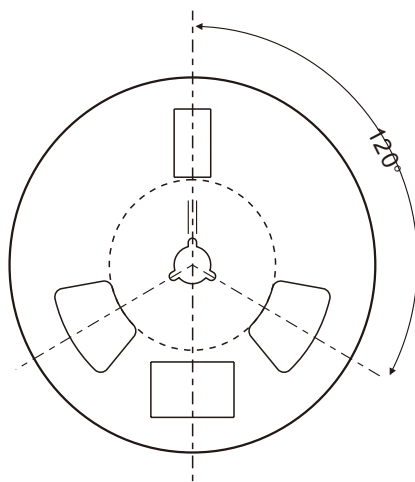
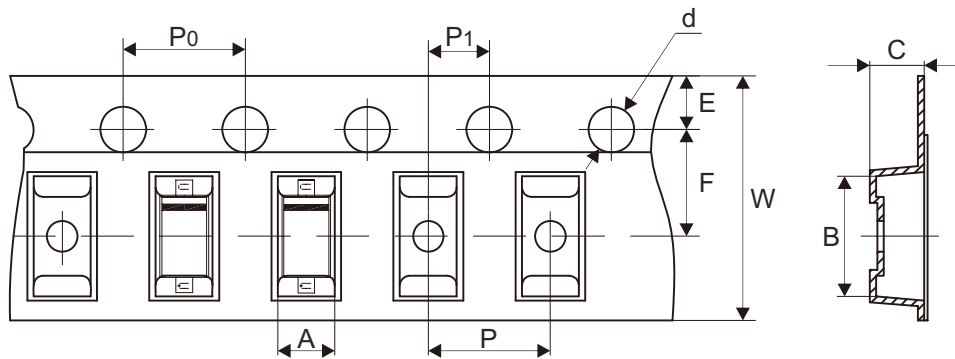


Fig.6 - Zener Voltage vs. Zener Current
(12V to 91V)



Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.85 ± 0.10	3.94 ± 0.10	1.57 ± 0.10	1.55 ± 0.05	178.00 ± 1.00	54.00 ± 0.50	13.00 ± 0.50
	(inch)	0.073 ± 0.004	0.155 ± 0.004	0.062 ± 0.004	0.061 ± 0.002	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

SOD-123	SYMBOL	E	F	P	P1	P0	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	8.00 + 0.30 - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.157 ± 0.004	0.315 + 0.012 - 0.004	0.374 ± 0.039

Marking Code

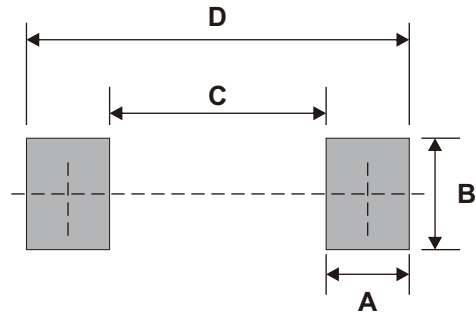
Part Number	Marking Code
MMSZ4768-HF Thru. MMSZ4717-HF Series	XX



1. XX = Marking code (see Page.2)
2. ■ = Cathode band

Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	0.91	0.036
B	1.22	0.048
C	2.36	0.093
D	4.19	0.165



Note: 1.The pad layout is for reference purposes only.

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-123	3,000	7