

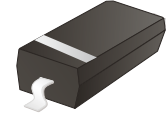
# AMMSZ4678-HF Thru. AMMSZ4717-HF

Voltage: 1.8 to 43 Volts

Power: 500mW

RoHS Device

Halogen Free



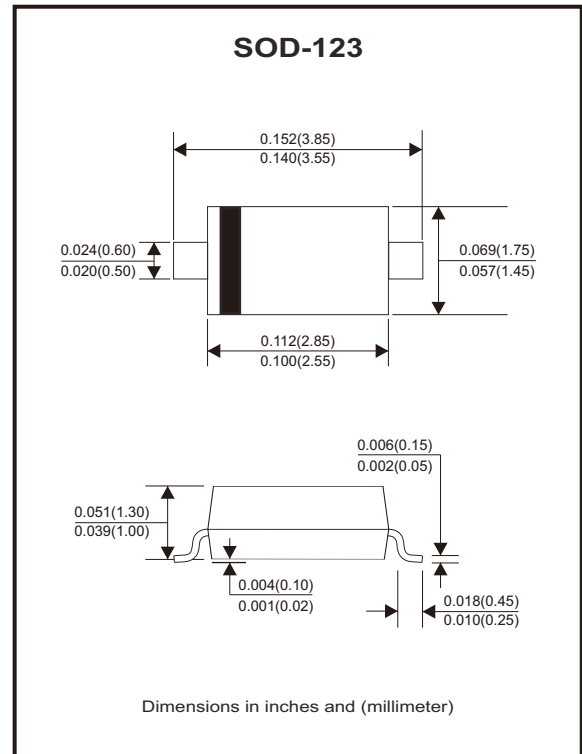
## Features

- Large selection of zener voltages: 1.8V~43V.
- Tight voltage tolerance:  $\pm 5\%$ .
- Ultra low-profile package well suited for automated assembly.
- AEC-Q101 Qualified.

## Mechanical data

- Case: SOD-123, molded plastic.
- Polarity: Indicated by cathode band.
- Mounting position: Any.

## Circuit Diagram



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

Parameter	Symbol	Value	Unit
Forward voltage @ I <sub>F</sub> =10mA	V <sub>F</sub>	0.9	V
Power dissipation (collector)	P <sub>C</sub>	500	mW
Thermal resistance, junction to ambient	R <sub>θJA</sub>	250	°C/W
Thermal resistance, junction to case	R <sub>θJC</sub>	140	°C/W
Junction temperature range	T <sub>J</sub>	-55 to +150	°C
Storage temperature range	T <sub>STG</sub>	-65 to +150	°C

Notes: 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 Vz(V)			@IzT	Maximum Reverse Current	@VR	Marking Code
	Min	Nom	Max	( $\mu$ A)	I <sub>R</sub> ( $\mu$ A)	(V)	
AMMSZ4678-HF	1.71	1.8	1.89	50	7.5	1	CC
AMMSZ4679-HF	1.90	2.0	2.10	50	5	1	CD
AMMSZ4680-HF	2.09	2.2	2.31	50	4	1	CE
AMMSZ4681-HF	2.28	2.4	2.52	50	2	1	CF
AMMSZ4682-HF	2.57	2.7	2.84	50	1	1	CH
AMMSZ4683-HF	2.85	3.0	3.15	50	0.8	1	CJ
AMMSZ4684-HF	3.14	3.3	3.47	50	7.5	1.5	CK
AMMSZ4685-HF	3.42	3.6	3.78	50	7.5	2	CM
AMMSZ4686-HF	3.71	3.9	4.10	50	5	2	CN
AMMSZ4687-HF	4.09	4.3	4.52	50	4	2	CP
AMMSZ4688-HF	4.47	4.7	4.94	50	10	3	CT
AMMSZ4689-HF	4.85	5.1	5.36	50	10	3	CU
AMMSZ4690-HF	5.32	5.6	5.88	50	10	4	CV
AMMSZ4691-HF	5.89	6.2	6.51	50	10	5	CA
AMMSZ4692-HF	6.46	6.8	7.14	50	10	5.1	CX
AMMSZ4693-HF	7.13	7.5	7.88	50	10	5.7	CY
AMMSZ4694-HF	7.79	8.2	8.61	50	1	6.2	CZ
AMMSZ4695-HF	8.27	8.7	9.14	50	1	6.6	DC
AMMSZ4696-HF	8.65	9.1	9.56	50	1	6.9	DD
AMMSZ4697-HF	9.50	10	10.50	50	1	7.6	DE
AMMSZ4698-HF	10.45	11	11.55	50	0.05	8.4	DF
AMMSZ4699-HF	11.40	12	12.60	50	0.05	9.1	DH
AMMSZ4700-HF	12.35	13	13.65	50	0.05	9.8	DJ
AMMSZ4701-HF	13.30	14	14.70	50	0.05	10.6	DK
AMMSZ4702-HF	14.25	15	15.75	50	0.05	11.4	DM
AMMSZ4703-HF	15.20	16	16.80	50	0.05	12.1	DN
AMMSZ4704-HF	16.15	17	17.85	50	0.05	12.9	DP
AMMSZ4705-HF	17.10	18	18.90	50	0.05	13.6	DT
AMMSZ4706-HF	18.05	19	19.95	50	0.05	14.4	DU
AMMSZ4707-HF	19.00	20	21.00	50	0.01	15.2	DV
AMMSZ4708-HF	20.90	22	23.10	50	0.01	16.7	DA
AMMSZ4709-HF	22.80	24	25.20	50	0.01	18.2	DX
AMMSZ4710-HF	23.75	25	26.25	50	0.01	19.0	DY
AMMSZ4711-HF	25.65	27	28.35	50	0.01	20.4	EA
AMMSZ4712-HF	26.60	28	29.40	50	0.01	21.2	EC
AMMSZ4713-HF	28.50	30	31.50	50	0.01	22.8	ED
AMMSZ4714-HF	31.35	33	34.65	50	0.01	25.0	EE
AMMSZ4715-HF	34.20	36	37.80	50	0.01	27.3	EF
AMMSZ4716-HF	37.05	39	40.95	50	0.01	29.6	EH
AMMSZ4717-HF	40.85	43	45.15	50	0.01	32.6	EJ

## Typical Rating and Characteristic Curves (AMMSZ4678-HF Thru. AMMSZ4717-HF)

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

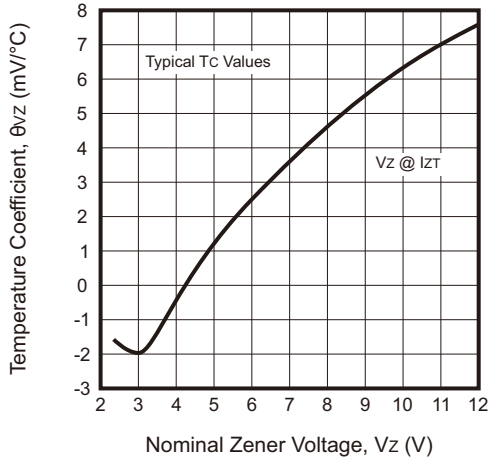


Fig.2 - Temperature Coefficients  
(Temperature Range -55°C to +150°C)

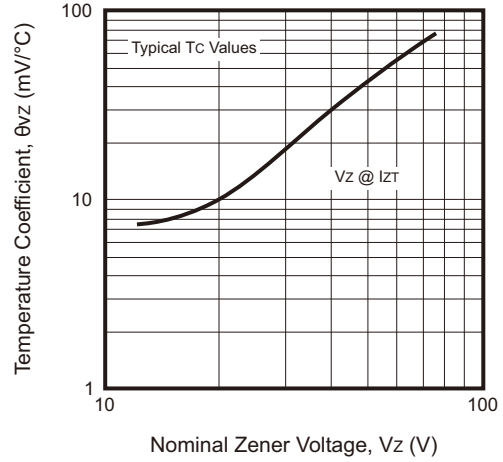


Fig.3 - Steady State Power Derating

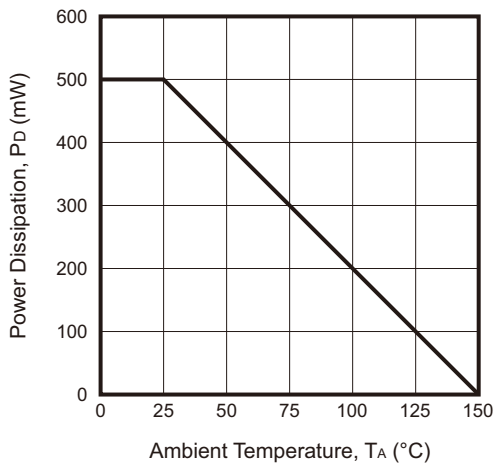


Fig.4 - Max. Non-Repetitive Surge Power

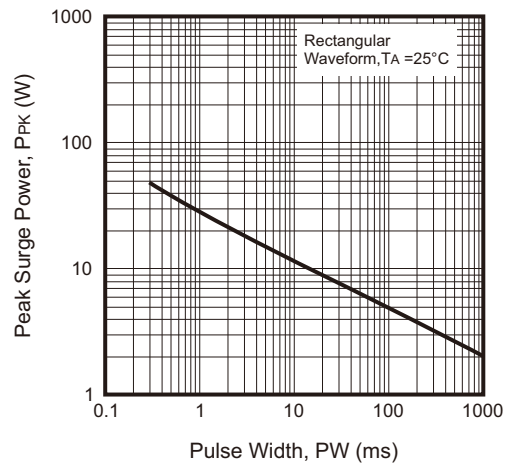


Fig.5 - Zener Voltage vs. Zener Current  
(V<sub>Z</sub> Up to 12V)

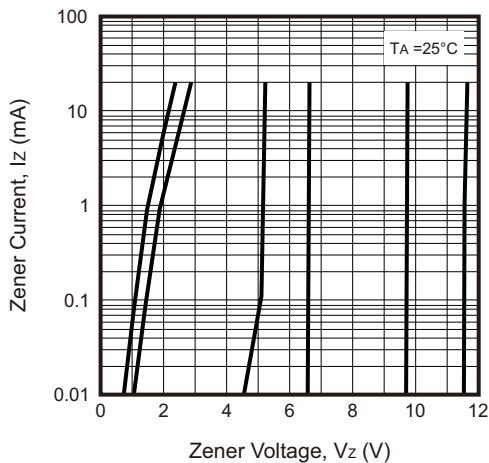
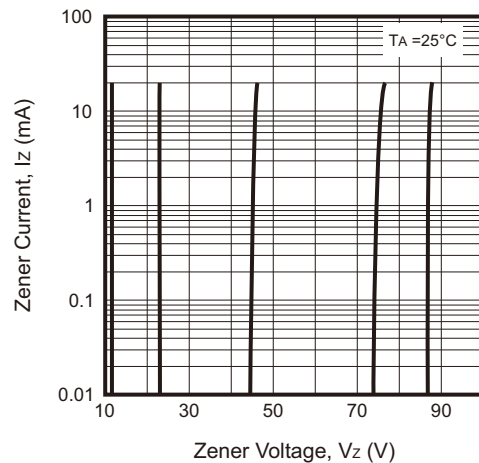
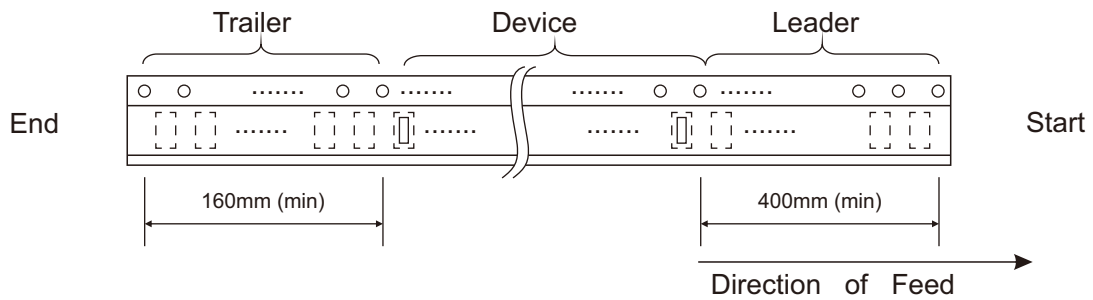
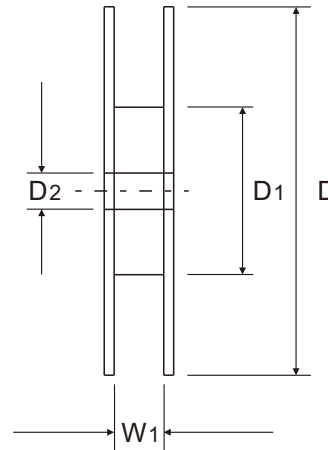
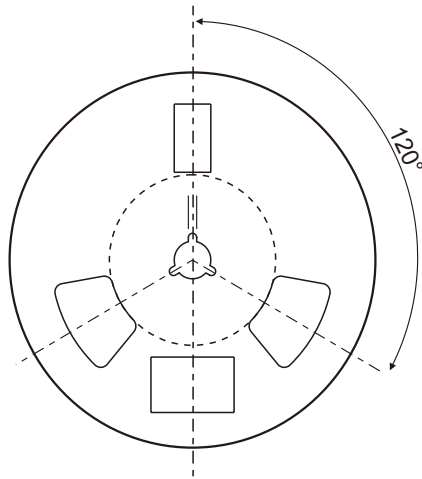
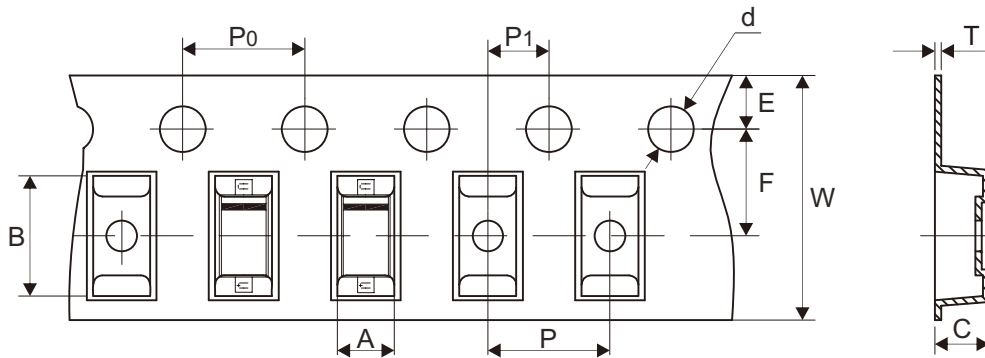


Fig.6 - Zener Voltage vs. Zener Current  
(12V to 91V)



## 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	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.203 ± 0.013	8.00 + 0.30 - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.001	0.315 + 0.012 - 0.004	0.374 ± 0.039

## Marking Code

Part Number	Marking Code
AMMSZ4678-HF Thru. AMMSZ4717-HF	See Page 2

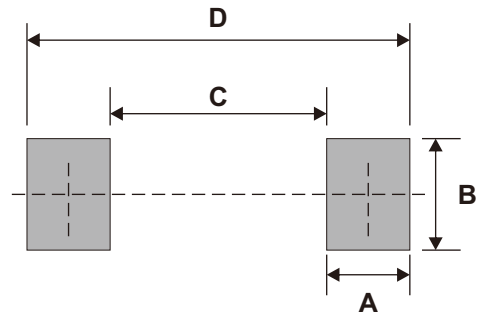


XX = Product type marking code

█ = Cathode band

## Suggested P.C.B. 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



## Standard Packaging

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