

Features

- Low zener impedance
- Power dissipation of 500mW
- High stability and reliability
- ESD capability according to AEC-Q101: Human body model > 8kV
Machine model > 800V



Package: SOD-123



RoHS
COMPLIANT

Absolute Maximum Ratings

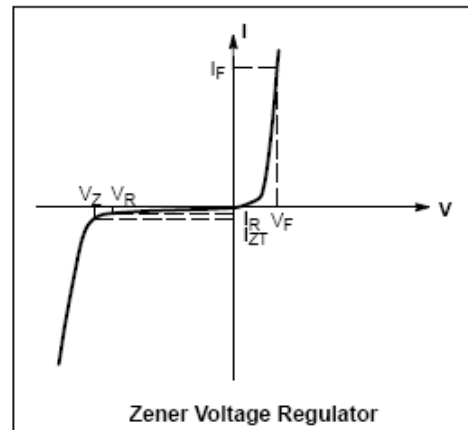
(T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward Voltage ¹ @ I _F =10mA	V _F	0.9	V
Power Dissipation ²	P _D	500	mW
Thermal Resistance, Junction to Ambient Air	R _{θJA}	340	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Notes:

- (1) Short duration test pulse used to minimize self-heating effect.
- (2) Device mounted on ceramic PCB: 7.6mmx9.4mmx0.87 with pad areas of 25mm²

symbol	Parameter
V _Z	Reverse zener voltage @ I _{ZT}
I _{ZT}	Reverse current
I _R	Reverse leakage current @ V _R
V _R	Reverse voltage
I _F	Forward current
V _F	Forward voltage @ I _F



Electrical Characteristics (T_A=25°C unless otherwise specified)

MPN	Marking Code	Zener Voltage			Leakage Current		
		V _Z (V)			@ I _{ZT}	I _R @ V _R	
		Min	Nom	Max	μA	μA	V
SMSZ4678	CC	1.71	1.8	1.89	50	7.5	1
SMSZ4679	CD	1.90	2.0	2.10	50	5	1
SMSZ4680	CE	2.09	2.2	2.31	50	4	1
SMSZ4681	CF	2.28	2.4	2.52	50	2	1
SMSZ4682	CH	2.57	2.7	2.84	50	1	1
SMSZ4683	CJ	2.85	3.0	3.15	50	0.8	1
SMSZ4684	CK	3.13	3.3	3.47	50	7.5	1.5
SMSZ4685	CM	3.42	3.6	3.78	50	7.5	2
SMSZ4686	CN	3.70	3.9	4.10	50	5	2
SMSZ4687	CP	4.09	4.3	4.52	50	4	2
SMSZ4688	CT	4.47	4.7	4.94	50	10	3
SMSZ4689	CU	4.85	5.1	5.36	50	10	3
SMSZ4690	CV	5.32	5.6	5.88	50	10	4
SMSZ4691	CA	5.89	6.2	6.51	50	10	5
SMSZ4692	CX	6.46	6.8	7.14	50	10	5.1
SMSZ4693	CY	7.13	7.5	7.88	50	10	5.7
SMSZ4694	CZ	7.79	8.2	8.61	50	1	6.2
SMSZ4695	DC	8.27	8.7	9.14	50	1	6.6
SMSZ4696	DD	8.65	9.1	9.56	50	1	6.9
SMSZ4697	DE	9.50	10	10.50	50	1	7.6
SMSZ4698	DF	10.45	11	11.55	50	0.05	8.4
SMSZ4699	DH	11.40	12	12.60	50	0.05	9.1
SMSZ4700	DJ	12.35	13	13.65	50	0.05	9.8
SMSZ4701	DK	13.30	14	14.70	50	0.05	10.6
SMSZ4702	DM	14.25	15	15.75	50	0.05	11.4
SMSZ4703	DN	15.20	16	16.80	50	0.05	12.1
SMSZ4704	DP	16.15	17	17.85	50	0.05	12.9
SMSZ4705	DT	17.10	18	18.90	50	0.05	13.6
SMSZ4706	DU	18.05	19	19.95	50	0.05	14.4
SMSZ4707	DV	19.00	20	21.00	50	0.01	15.2
SMSZ4708	DA	20.90	22	23.10	50	0.01	16.7
SMSZ4709	DX	22.80	24	25.20	50	0.01	18.2
SMSZ4710	DY	23.75	25	26.25	50	0.01	19.0
SMSZ4711	EA	25.65	27	28.35	50	0.01	20.4
SMSZ4712	EC	26.60	28	29.40	50	0.01	21.2
SMSZ4713	ED	28.50	30	31.50	50	0.01	22.8
SMSZ4714	EE	31.35	33	34.65	50	0.01	25.0
SMSZ4715	EF	34.20	36	37.80	50	0.01	27.3
SMSZ4716	EH	37.05	39	40.95	50	0.01	29.6
SMSZ4717	EJ	40.85	43	45.15	50	0.01	32.6

Typical Electrical Characteristic Curves

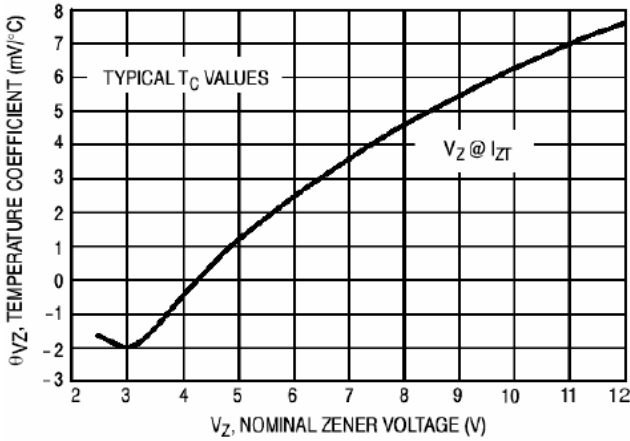


Fig 1. Temperature Coefficients
 (Temperature Range -55°C to +150°C)

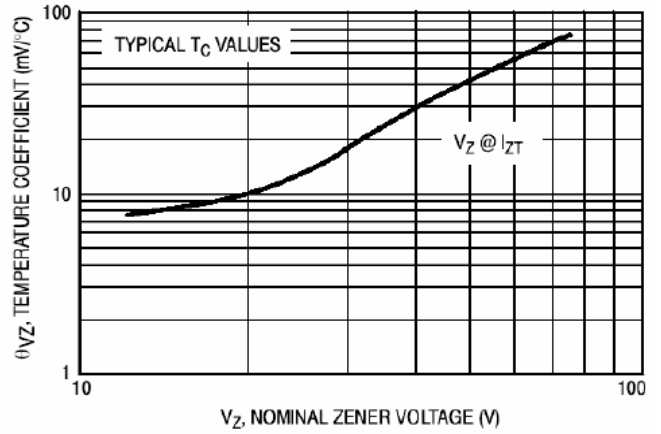


Fig 2. Temperature Coefficients
 (Temperature Range -55°C to +150°C)

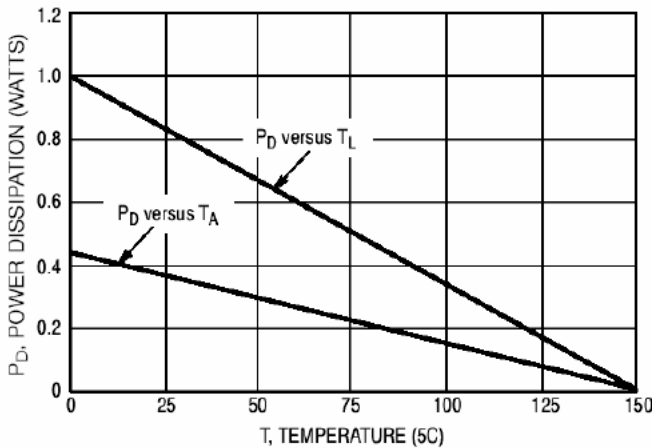


Fig 3. Steady State Power Derating

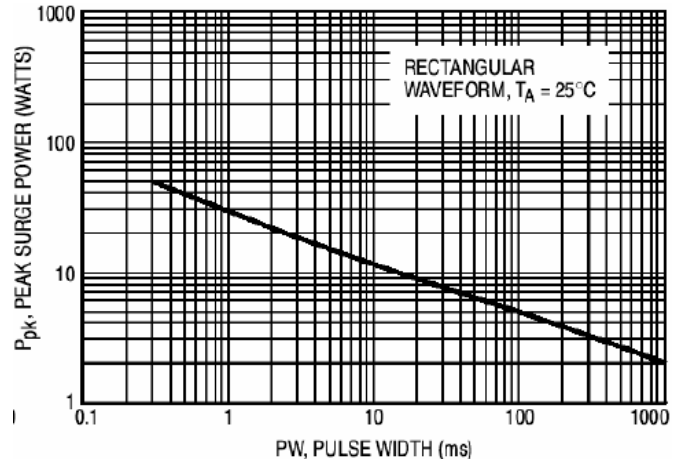


Fig 4. Maximum Nonrepetitive Surge Power

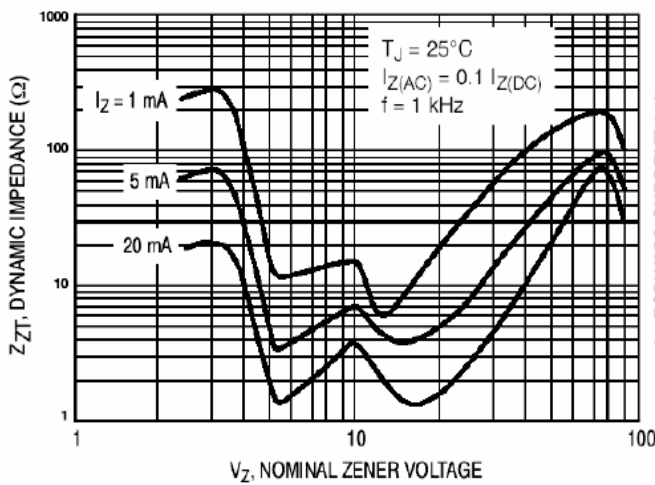


Fig 5. Effect of Zener Voltage on Zener Impedance

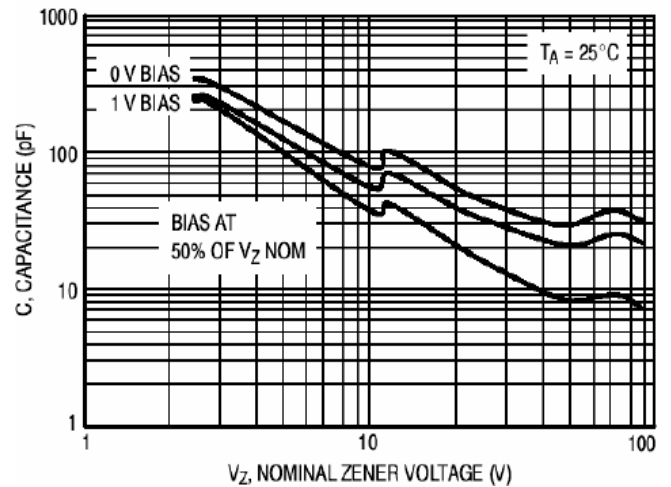


Fig 6. Typical Capacitance

Typical Electrical Characteristic Curves

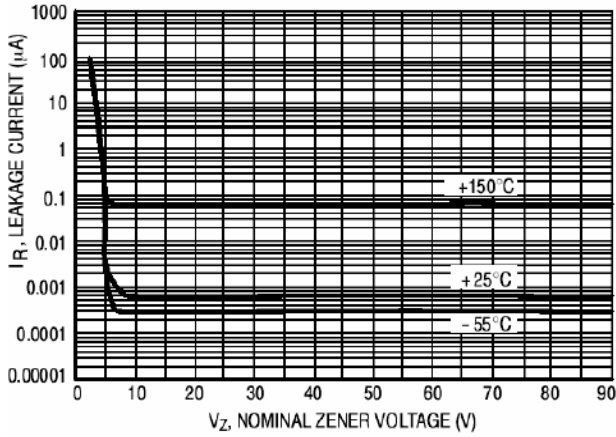


Fig 7. Typical Leakage Current

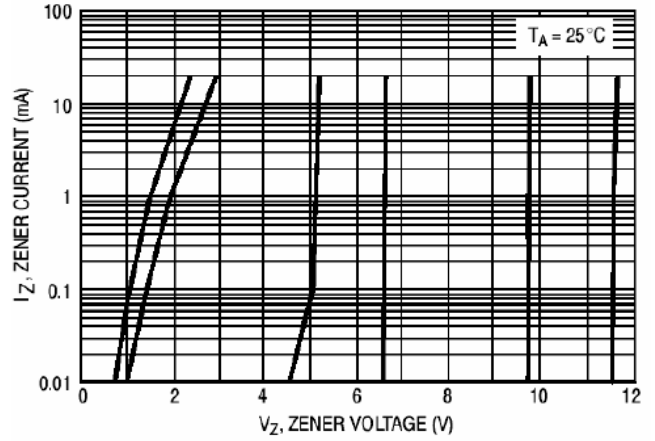


Fig 8. Zener Voltage vs. Zener Current (V_Z up to 12V)

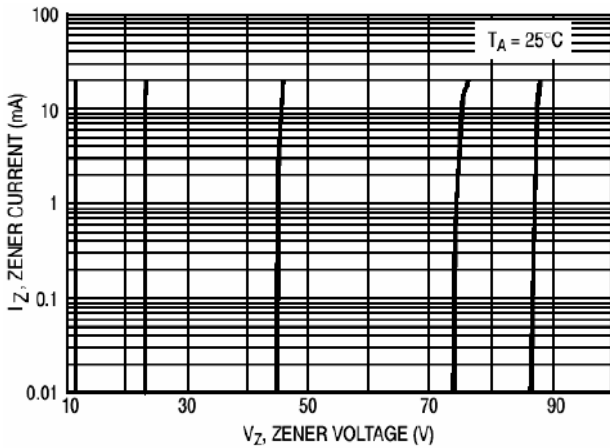


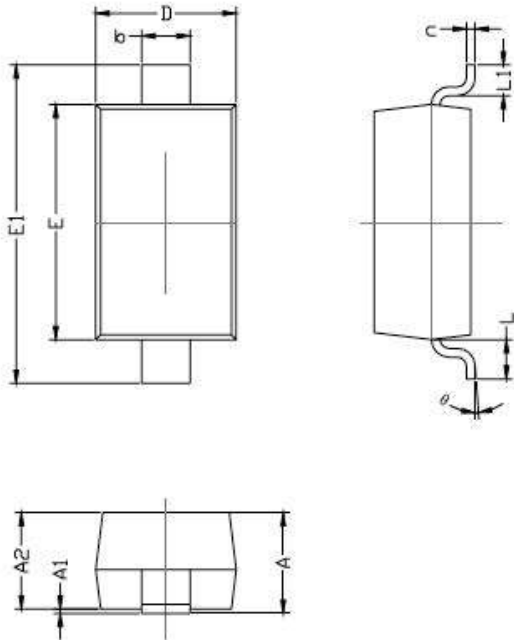
Fig 9. Zener Voltage vs. Zener Current (12V to 43V)

SMSZ4xxx Series

Surface Mount Zener Diodes

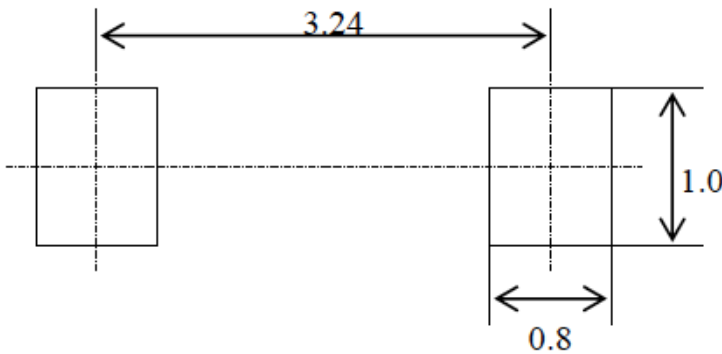
Vz Range: 1.8 to 43V Power Dissipation: 500mW

Package Outline Dimensions SOD-123



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.450	0.650
c	0.080	0.150
D	1.500	1.700
E	2.600	2.800
E1	3.550	3.850
L	0.500REF	
L1	0.250	0.450
θ	0°	8°

Recommended Pad Layout



Unit: mm