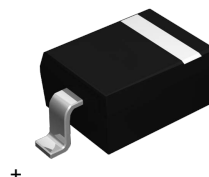


Features

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



SOD-123

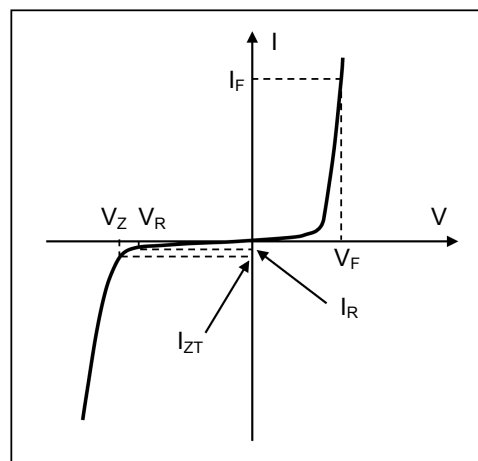
Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

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 Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 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



I-V Curve of Zener Voltage Regulator

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

Ratings and Characteristic Curves

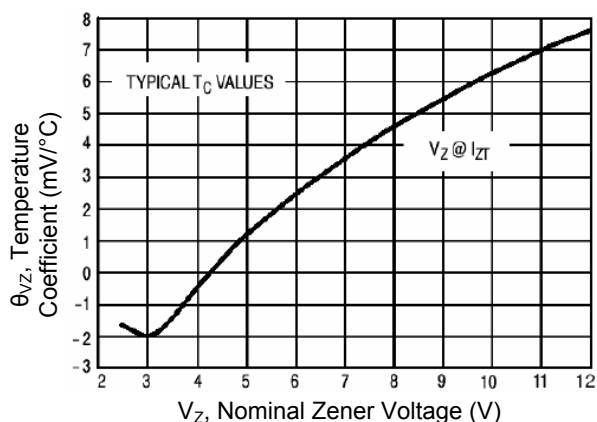


Figure 1. Temperature Coefficients
(Temperature Range -55°C to +150°C)

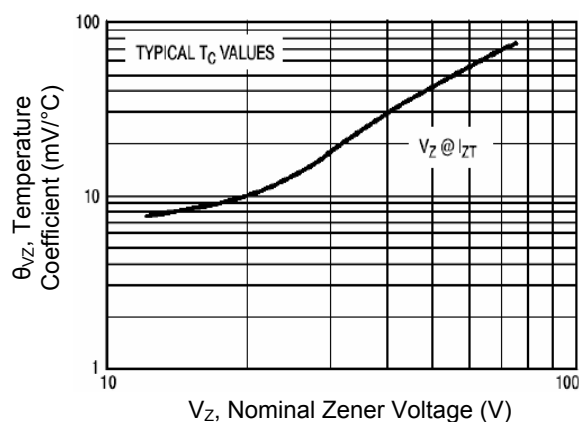


Figure 2. Temperature Coefficients
(Temperature Range -55°C to +150°C)

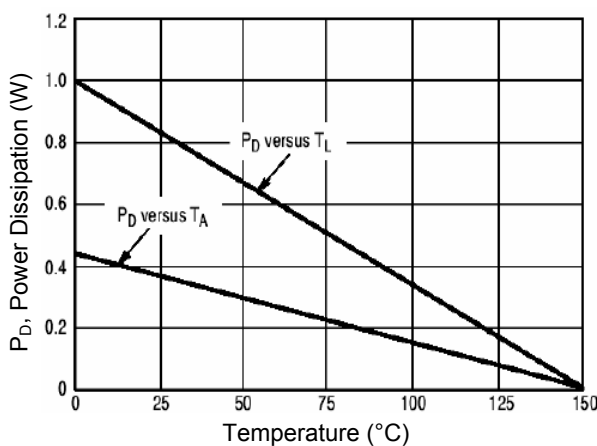


Figure 3. Steady State Power Derating

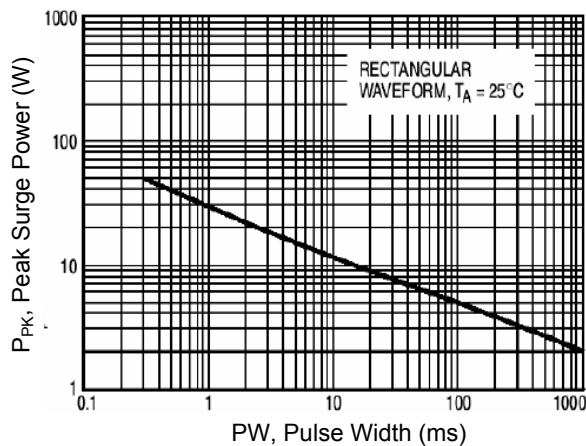


Figure 4. Maximum Nonrepetitive Surge Power

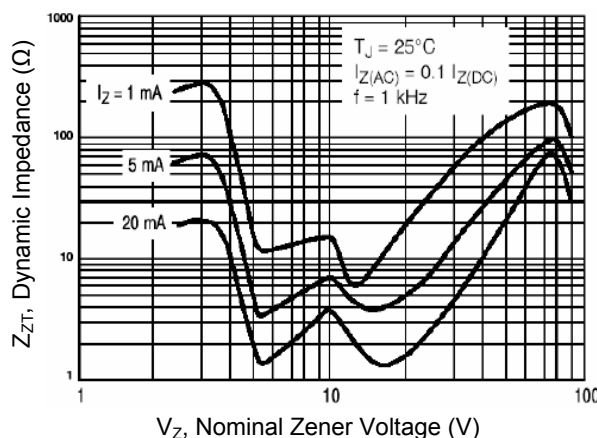


Figure 5. Effect of Zener Voltage on Zener Impedance

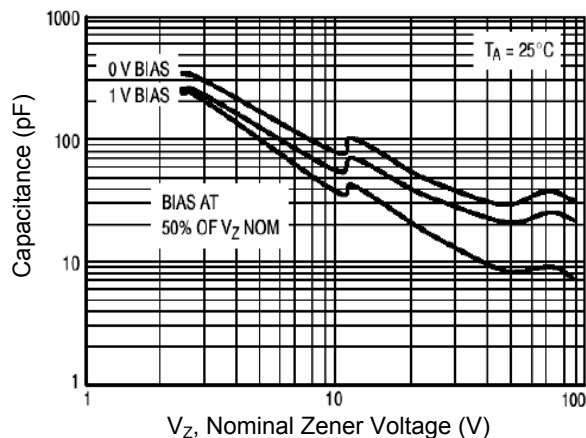


Figure 6. Typical Capacitance

Ratings and Characteristic Curves

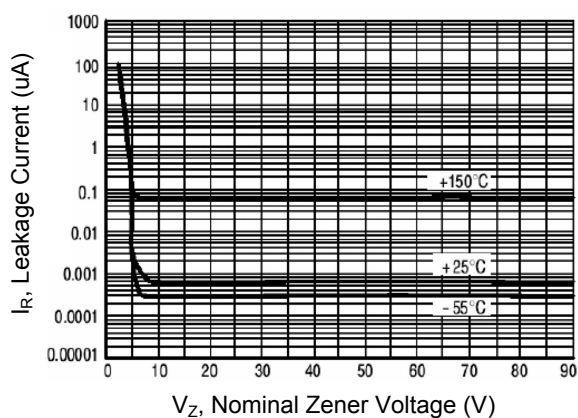
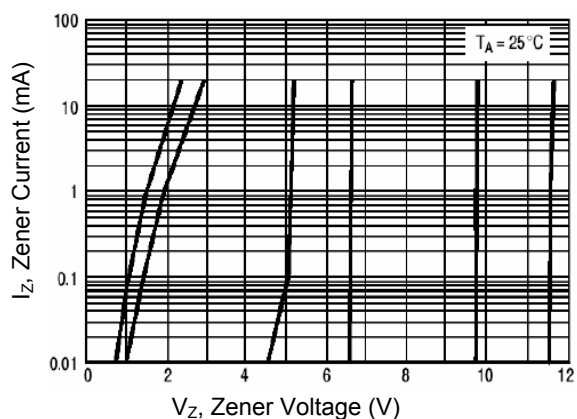
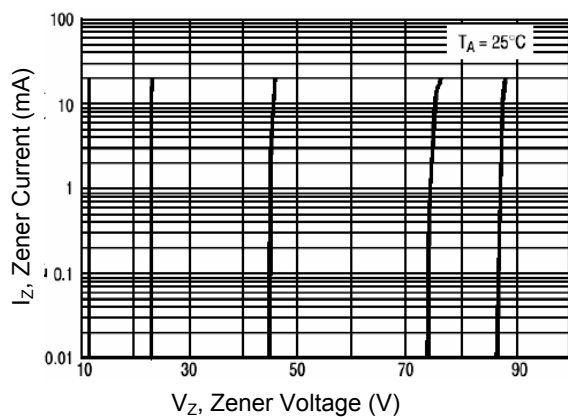


Figure 7. Typical Leakage Current

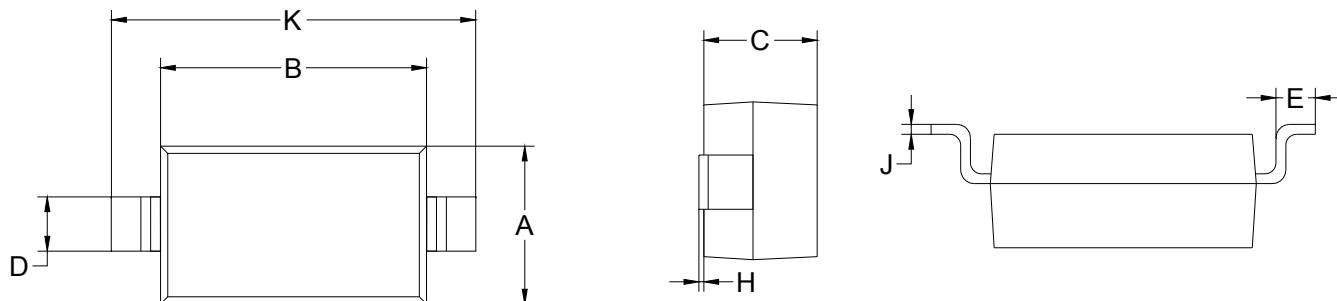


**Figure 8. Zener Voltage vs. Zener Current
(V_Z up to 12V)**



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

Package Outline Dimensions (SOD-123)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.750	0.055	0.069
B	2.500	2.850	0.098	0.112
C	1.150 TYP		0.045 TYP	
D	0.550 TYP		0.022 TYP	
E	0.200	0.450	0.008	0.018
H	0.000	0.100	0.000	0.004
J	0.100 TYP		0.004 TYP	
K	3.500	3.850	0.138	0.152

Recommended Pad Layout

