

## ZENER DIODE

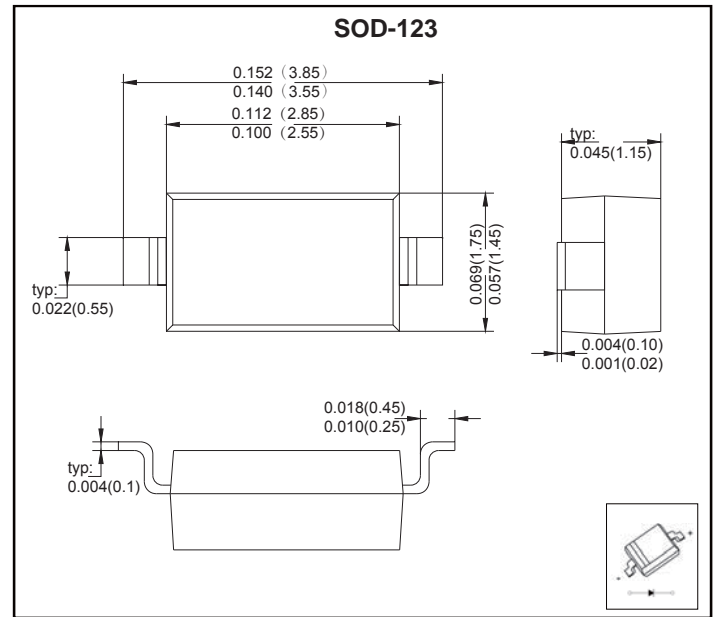
PEAK PULSE POWER:500mW

### Features

- Low Zener Impedance
- Power Dissipation of 500mW
- High Stability and High Reliability

### Mechanical Data

- SOD-123 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any



## MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

Parameters	Symbol	Value	Unit
Power Dissipation	Pd	500 <sup>1)</sup>	mW
Forward Voltage @IF=10mA	Vf	0.9 <sup>2)</sup>	V
Storage temperature range	Ts	-65+150	°C

- 1) Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>
- 2) Short duration test pulse used to minimize self-heating effect
- 3) f=1KHz

Electrical Characteristics (Ratings at 25 °C ambient temperature unless otherwise specified).

Device	Marking	Zener Voltage Range				Maximum Reverse Current	
		Vz@Izt			Izt	IR	VR
		Min(V)	Nom (V)	Max(V)	uA	uA	V
MMSZ4678	CC	1.71	1.8	1.89	50	7.5	1
MMSZ4679	CD	1.90	2.0	2.10	50	5	1
MMSZ4680	CE	2.09	2.2	2.31	50	4	1
MMSZ4681	CF	2.28	2.4	2.52	50	2	1
MMSZ4682	CH	2.57	2.7	2.84	50	1	1
MMSZ4683	CJ	2.85	3.0	3.15	50	0.8	1
MMSZ4684	CK	3.13	3.3	3.47	50	7.5	1.5
MMSZ4685	CM	3.42	3.6	3.78	50	7.5	2
MMSZ4686	CN	3.70	3.9	4.10	50	5	2
MMSZ4687	CP	4.09	4.3	4.52	50	4	2
MMSZ4688	CT	4.47	4.7	4.94	50	10	3
MMSZ4689	CU	4.85	5.1	5.36	50	10	3

Electrical Characteristics (Ratings at 25 °C ambient temperature unless otherwise specified).

Device	Marking	Zener Voltage Range				Maximum Reverse Current	
		Vz@Izt			uA	IR	VR
		Nom(V)	Min(V)	Max(V)		uA	V
MMSZ4690	CV	5.32	5.6	5.88	50	10	4
MMSZ4691	CA	5.89	6.2	6.51	50	10	5
MMSZ4692	CX	6.46	6.8	7.14	50	10	5.1
MMSZ4693	CY	7.13	7.5	7.88	50	10	5.7
MMSZ4694	CZ	7.79	8.2	8.61	50	1	6.2
MMSZ4695	DC	8.27	8.7	9.14	50	1	6.6
MMSZ4696	DD	8.65	9.1	9.56	50	1	6.9
MMSZ4697	DE	9.50	10.0	10.50	50	1	7.6
MMSZ4698	DF	10.45	11.0	11.55	50	0.05	8.4
MMSZ4699	DH	11.40	12.0	12	50	0.05	9.1
MMSZ4700	DJ	12.35	13.0	13.65	50	0.05	9.8
MMSZ4701	DK	13.3	14.0	14.70	50	0.05	10.6
MMSZ4702	DM	14.25	15.0	15.75	50	0.05	11.4
MMSZ4703	DN	15.20	16.0	16.80	50	0.05	12.1
MMSZ4704	DP	16.1	17.0	17.85	50	0.05	12.9
MMSZ4705	DT	17.10	18.0	18.90	50	0.05	13.6
MMSZ4706	DU	18.05	19.0	19.95	50	0.05	14.4
MMSZ4707	DV	19.0	20.0	21.00	50	0.01	15.2
MMSZ4708	DA	20.9	22.0	23.10	50	0.01	16.7
MMSZ4709	DX	22.8	24.0	25.20	50	0.01	18.2
MMSZ4710	DY	23.75	25.0	26.25	50	0.01	19
MMSZ4711	EA	25.65	27.0	28.35	50	0.01	20.4
MMSZ4712	EC	26.6	28.0	29.40	50	0.01	21.2
MMSZ4713	ED	28.5	30.0	31.50	50	0.01	22.8
MMSZ4714	EE	31.35	33.0	34.65	50	0.01	25
MMSZ4715	EF	34.20	36.0	37.80	50	0.01	27.3
MMSZ4716	EH	37.0	39.0	40.95	50	0.01	29.6
MMSZ4717	EJ	40.85	43.0	45.15	50	0.01	32.6

# RATINGS AND CHARACTERISTIC CURVES

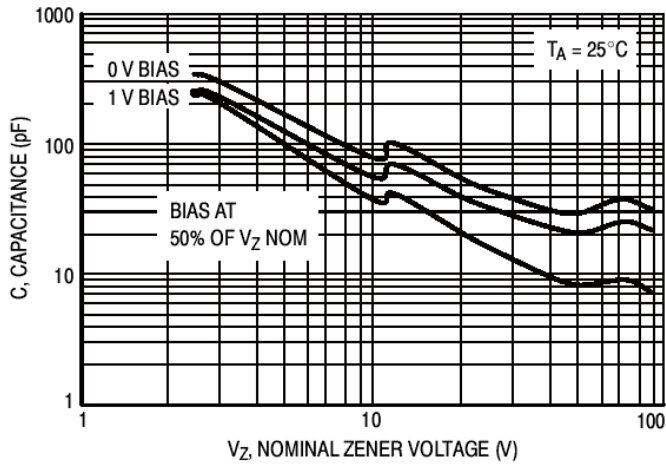


Figure 7. Typical Capacitance

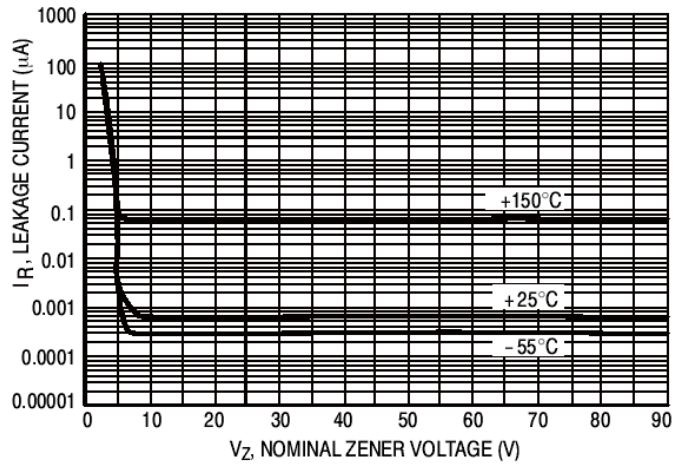


Figure 8. Typical Leakage Current

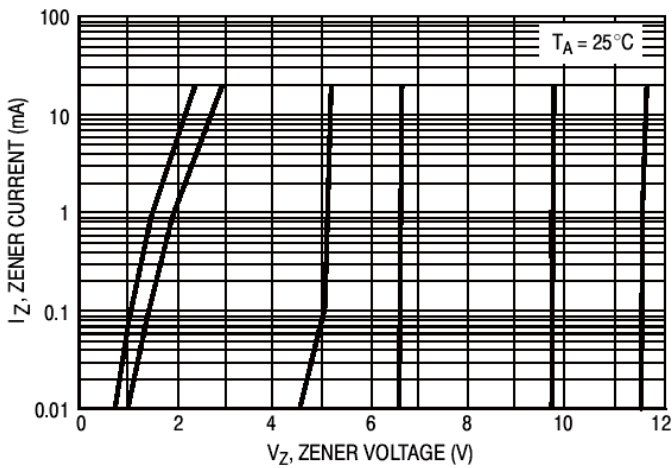


Figure 9. Zener Voltage versus Zener Current  
( $V_Z$  Up to 12 V)

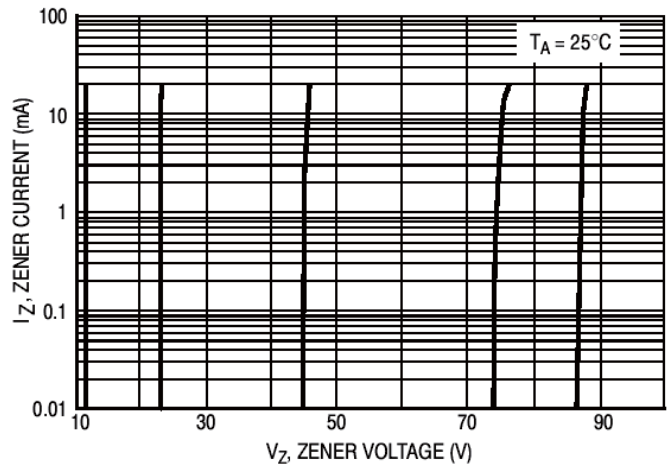


Figure 10. Zener Voltage versus Zener Current  
(12 V to 91 V)

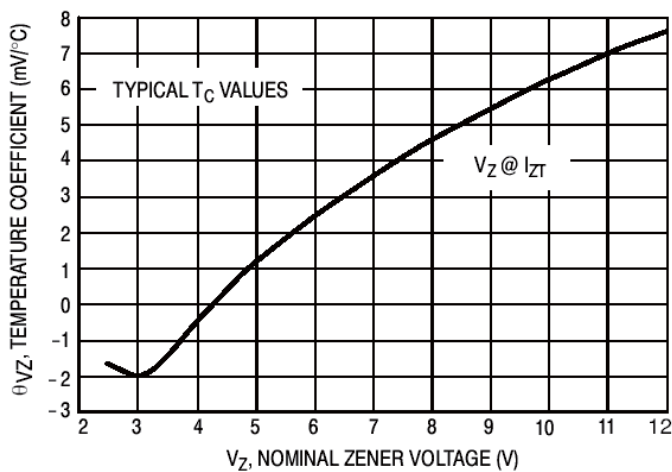


Figure 1. Temperature Coefficients  
(Temperature Range  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$ )

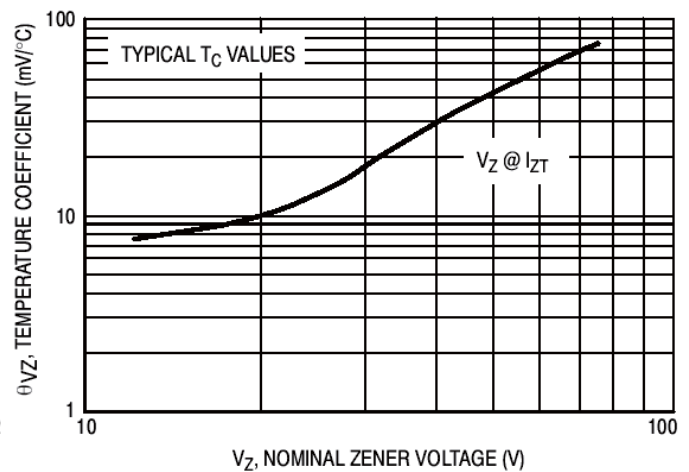


Figure 2. Temperature Coefficients  
(Temperature Range  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$ )

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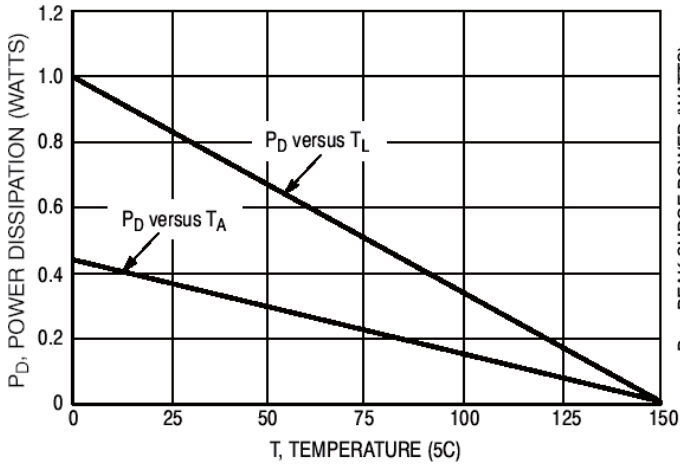


Figure 3. Steady State Power Derating

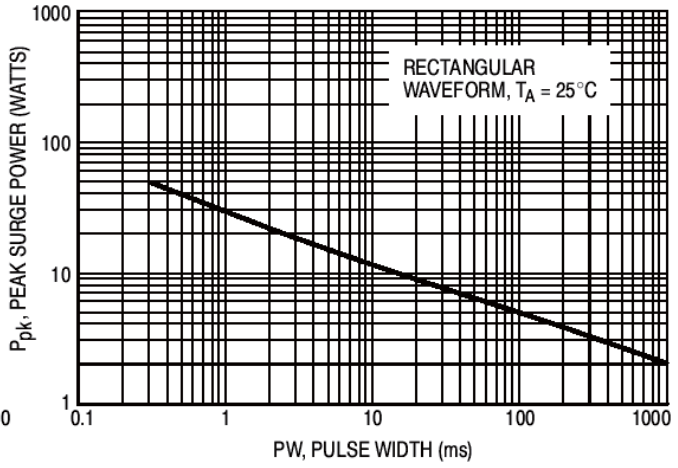


Figure 4. Maximum Nonrepetitive Surge Power

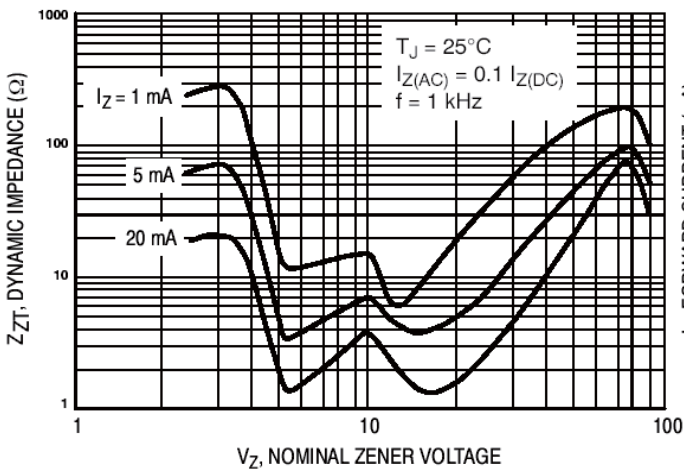


Figure 5. Effect of Zener Voltage on Zener Impedance

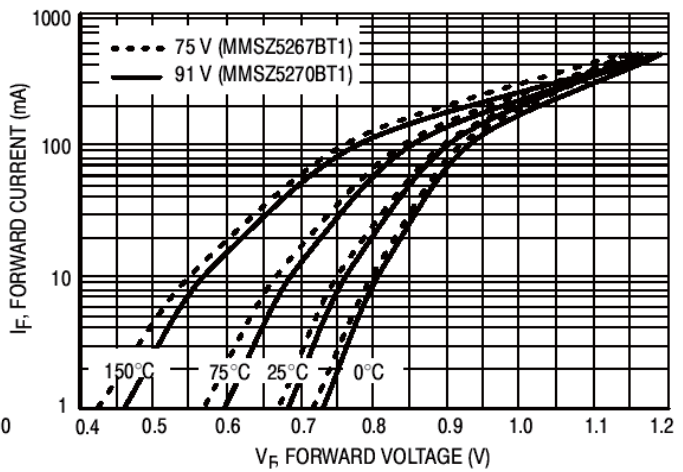


Figure 6. Typical Forward Voltage