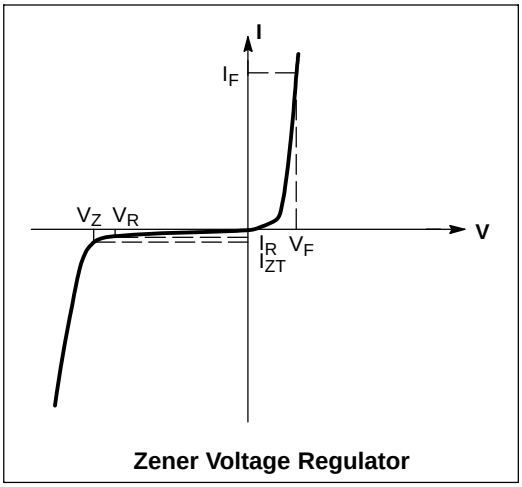
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted, V_F = 0.95 V Max. @ I_F = 10 mA)

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



Zener Voltage Regulator

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted, V_F = 0.9 V Max. @ I_F = 10 mA)

Device*	Device Marking	Zener Voltage (Note 3) V_Z (Volts) Min	Nom	Max	@ I_{ZT} µA	Leakage Current I_R @ V_R µA	Volts
MMSZ4678T1, G	CC	1.71	1.8	1.89	50	7.5	1
MMSZ4679T1, G	CD	1.90	2.0	2.10	50	5	1
MMSZ4680T1, G	***CE***	***2.09***	***2.2***	***2.31***	***50***	***4***	***1***
MMSZ4681T1, G	CF	2.28	2.4	2.52	50	2	1
MMSZ4682T1, G	CH	2.565	2.7	2.835	50	1	1
MMSZ4683T1, G	CJ	2.85	3.0	3.15	50	0.8	1
MMSZ4684T1, G	CK	3.13	3.3	3.47	50	7.5	1.5
MMSZ4685T1, G	***CM***	***3.42***	***3.6***	***3.78***	***50***	***7.5***	***2***
MMSZ4686T1, G	CN	3.70	3.9	4.10	50	5	2
MMSZ4687T1, G	CP	4.09	4.3	4.52	50	4	2
MMSZ4688T1, G	CT	4.47	4.7	4.94	50	10	3
MMSZ4689T1, G	CU	4.85	5.1	5.36	50	10	3
MMSZ4690T1, G	***CV***	***5.32***	***5.6***	***5.88***	***50***	***10***	***4***
MMSZ4691T1, G	CA	5.89	6.2	6.51	50	10	5
MMSZ4692T1, G	CX	6.46	6.8	7.14	50	10	5.1
MMSZ4693T1, G	CY	7.13	7.5	7.88	50	10	5.7
MMSZ4694T1, G	CZ	7.79	8.2	8.61	50	1	6.2
MMSZ4695T1, G	DC	8.27	8.7	9.14	50	1	6.6
MMSZ4696T1, G	DD	8.65	9.1	9.56	50	1	6.9
MMSZ4697T1, G	DE	9.50	10	10.50	50	1	7.6
MMSZ4698T1, G	DF	10.45	11	11.55	50	0.05	8.4
MMSZ4699T1, G	DH	11.40	12	12.60	50	0.05	9.1
MMSZ4700T1, G	DJ	12.35	13	13.65	50	0.05	9.8
MMSZ4701T1, G	DK	13.30	14	14.70	50	0.05	10.6
MMSZ4702T1, G	DM	14.25	15	15.75	50	0.05	11.4
MMSZ4703T1, G †	DN	15.20	16	16.80	50	0.05	12.1
MMSZ4704T1, G	DP	16.15	17	17.85	50	0.05	12.9
MMSZ4705T1, G	DT	17.10	18	18.90	50	0.05	13.6
MMSZ4706T1, G	DU	18.05	19	19.95	50	0.05	14.4
MMSZ4707T1, G	DV	19.00	20	21.00	50	0.01	15.2
MMSZ4708T1, G	DA	20.90	22	23.10	50	0.01	16.7
MMSZ4709T1, G	DX	22.80	24	25.20	50	0.01	18.2
MMSZ4710T1, G	DY	23.75	25	26.25	50	0.01	19.0
MMSZ4711T1, G †	EA	25.65	27	28.35	50	0.01	20.4
MMSZ4712T1	EC	26.60	28	29.40	50	0.01	21.2
MMSZ4713T1, G	ED	28.50	30	31.50	50	0.01	22.8
MMSZ4714T1, G	EE	31.35	33	34.65	50	0.01	25.0
MMSZ4715T1, G	EF	34.20	36	37.80	50	0.01	27.3
MMSZ4716T1, G	EH	37.05	39	40.95	50	0.01	29.6
MMSZ4717T1, G	EJ	40.85	43	45.15	50	0.01	32.6

3. Nominal Zener voltage is measured with the device junction in thermal equilibrium at T_L = 30°C ±1°C.
*The “G’’ suffix indicates Pb−Free package available.
†MMSZ4703 and MMSZ4711 Not Available in 10,000/Tape & Reel

TYPICAL CHARACTERISTICS

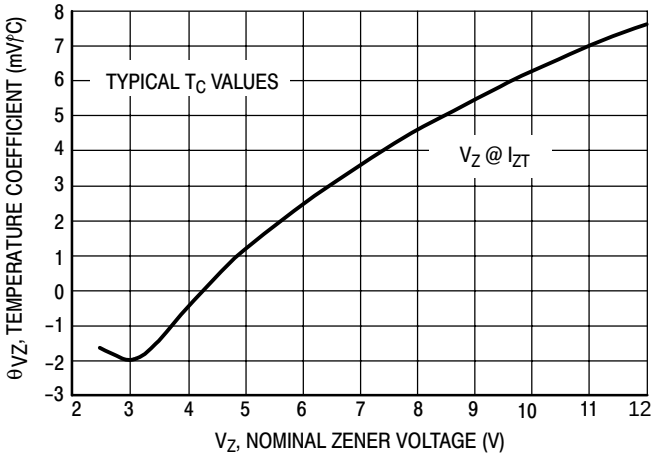


Figure 1. Temperature Coefficients (Temperature Range −55°C to +150°C)

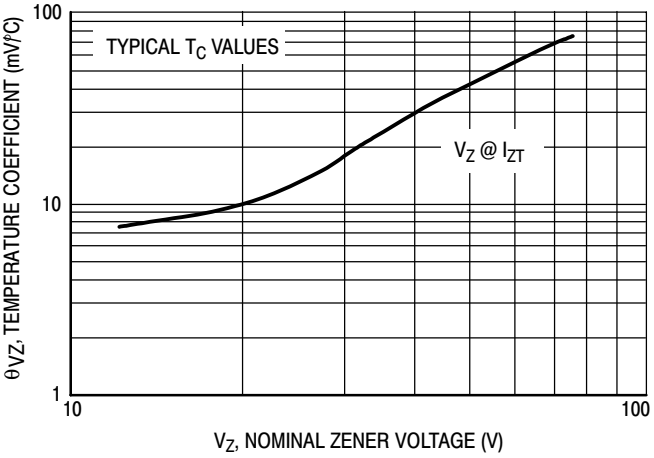


Figure 2. Temperature Coefficients (Temperature Range −55°C to +150°C)

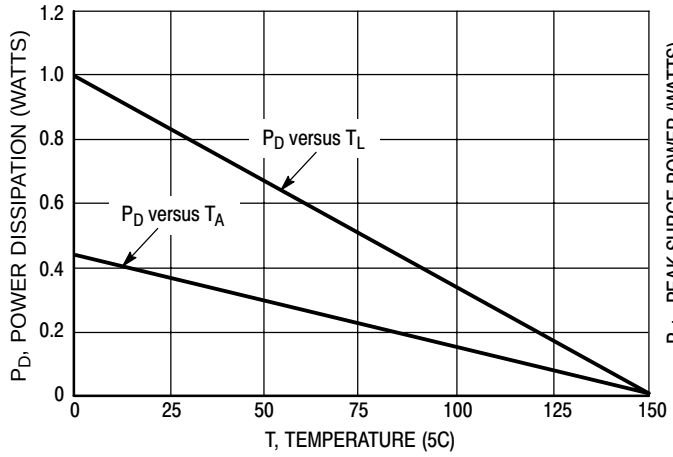


Figure 3. Steady State Power Derating

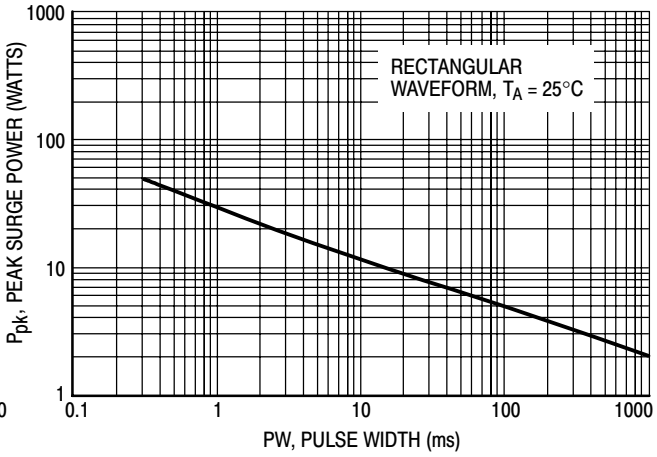


Figure 4. Maximum Nonrepetitive Surge Power

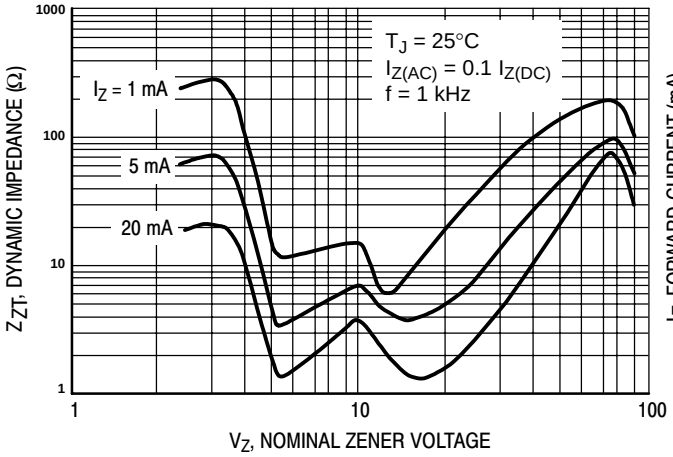


Figure 5. Effect of Zener Voltage on Zener Impedance

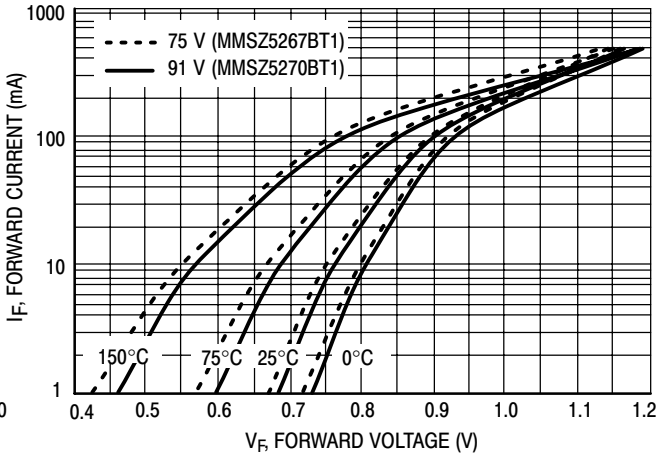


Figure 6. Typical Forward Voltage

TYPICAL CHARACTERISTICS

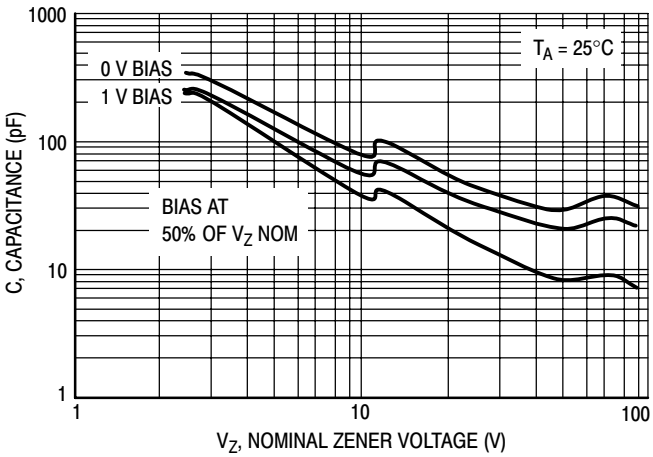


Figure 7. Typical Capacitance

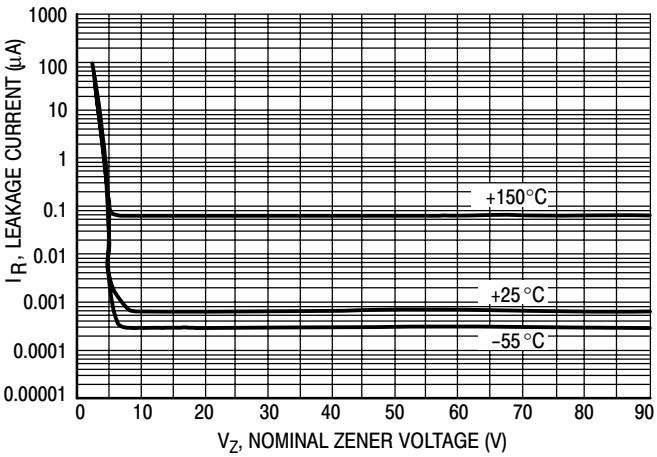


Figure 8. Typical Leakage Current

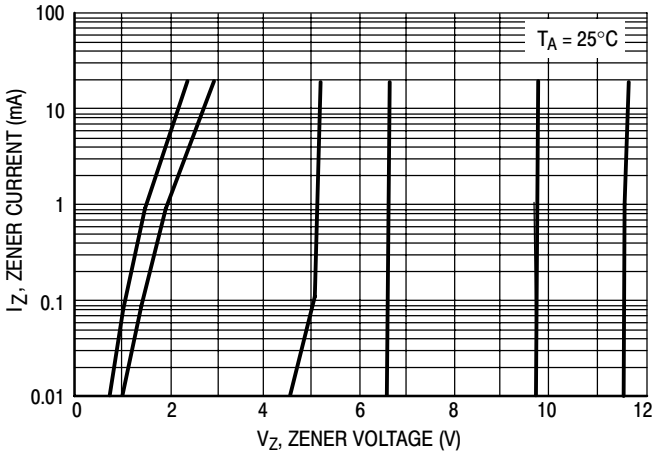


Figure 9. Zener Voltage versus Zener Current (V_Z Up to 12 V)

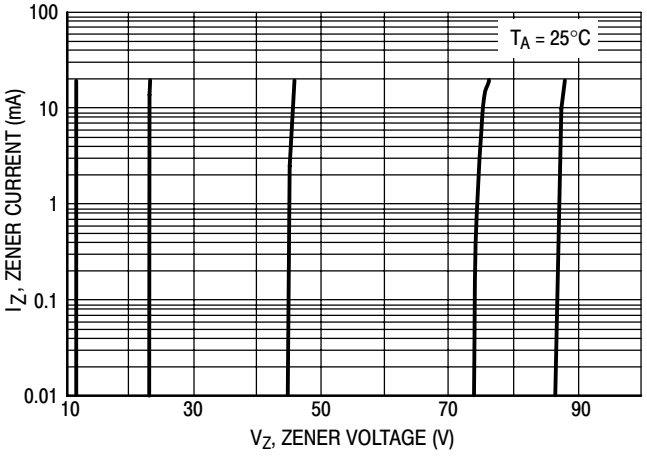
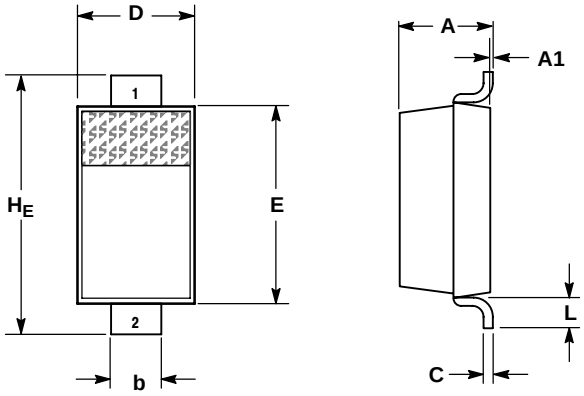


Figure 10. Zener Voltage versus Zener Current (12 V to 91 V)

MMSZ4678T1 Series

PACKAGE DIMENSIONS

SOD−123
CASE 425−04
ISSUE E

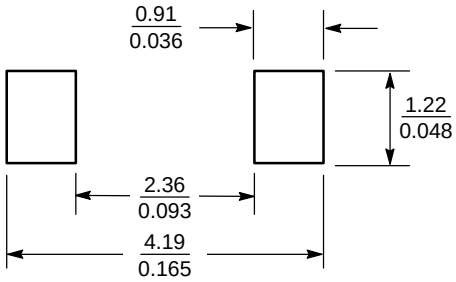


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.94	1.17	1.35	0.037	0.046	0.053
A1	0.00	0.05	0.10	0.000	0.002	0.004
b	0.51	0.61	0.71	0.020	0.024	0.028
c	---	---	0.15	---	---	0.006
D	1.40	1.60	1.80	0.055	0.063	0.071
E	2.54	2.69	2.84	0.100	0.106	0.112
H_E	3.56	3.68	3.86	0.140	0.145	0.152
L	0.25	---	---	0.010	---	---

STYLE 1:
PIN 1. CATHODE
2. ANODE

SOLDERING FOOTPRINT*



SCALE 10:1 $\left(\frac{\text{mm}}{\text{inches}}\right)$

*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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