



FUKUCOM COMPANY LTD.

福靈有限公司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

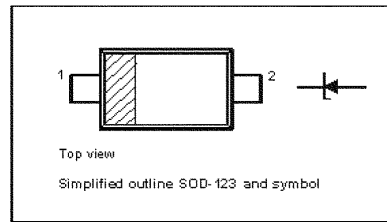
MM1Z4678~MM1Z4717

Zener Voltage Regulators

500 mW SOD-123 Surface Mount

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

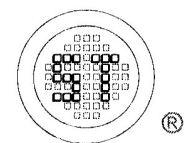


Absolute Maximum Ratings (T_j = 25°C)

Parameter	Symbol	Value	Unit
Total Power Dissipation FR-5 Board at T _L =75°C Derated Above 75°C	P _D	500 6.7	mW mW/°C
Thermal Resistance Junction to Ambient	R _{θJA}	340	°C/W
Thermal Resistance Junction to Lead	R _{θJL}	150	°C/W
Storage Temperature Range	T _s	-55 to +150	°C
Junction Temperature Range	T _j	-55 to +150	°C

Characteristics at T_{amb} = 25°C

	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at I _F = 10mA	V _F	-	-	0.9	V



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Dated : 06/05/2005



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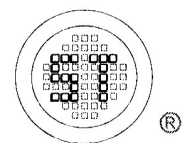
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Type	Marking Code	Zener Voltage (Note 1, Note 2)				Leakage Current	
		V_{ZT} (V)			$@I_{ZT}$	I_R	$@V_R$
		Min	Nom.	Max	μA	μA	V
MM1Z4678	BC	1.71	1.8	1.89	50	7.5	1
MM1Z4679	BD	1.90	2.0	2.10	50	5	1
MM1Z4680	BE	2.09	2.2	2.31	50	4	1
MM1Z4681	BF	2.28	2.4	2.52	50	2	1
MM1Z4682	BH	2.565	2.7	2.835	50	1	1
MM1Z4683	BJ	2.85	3.0	3.15	50	0.8	1
MM1Z4684	BK	3.13	3.3	3.47	50	7.5	1.5
MM1Z4685	BM	3.42	3.6	3.78	50	7.5	2
MM1Z4686	BN	3.70	3.9	4.10	50	5	2
MM1Z4687	BP	4.09	4.3	4.52	50	4	2
MM1Z4688	BR	4.47	4.7	4.94	50	10	3
MM1Z4689	BX	4.85	5.1	5.36	50	10	3
MM1Z4690	BY	5.32	5.6	5.88	50	10	4
MM1Z4691	BZ	5.89	6.2	6.51	50	10	5
MM1Z4692	CA	6.46	6.8	7.14	50	10	5.1
MM1Z4693	CB	7.13	7.5	7.88	50	10	5.7
MM1Z4694	CC	7.79	8.2	8.61	50	1	6.2
MM1Z4695	CD	8.27	8.7	9.14	50	1	6.6
MM1Z4696	CE	8.65	9.1	9.56	50	1	6.9
MM1Z4697	CF	9.50	10	10.50	50	1	7.6
MM1Z4698	CH	10.45	11	11.55	50	0.05	8.4
MM1Z4699	CJ	11.40	12	12.60	50	0.05	9.1
MM1Z4700	CK	12.35	13	13.65	50	0.05	9.8
MM1Z4701	CM	13.30	14	14.70	50	0.05	10.6
MM1Z4702	CN	14.25	15	15.75	50	0.05	11.4
MM1Z4703	CP	15.20	16	16.80	50	0.05	12.1
MM1Z4704	CR	16.15	17	17.85	50	0.05	12.9
MM1Z4705	CX	17.10	18	18.90	50	0.05	13.6
MM1Z4706	CY	18.05	19	19.95	50	0.05	14.4
MM1Z4707	CZ	19.00	20	21.00	50	0.01	15.2
MM1Z4708	DA	20.90	22	23.10	50	0.01	16.7
MM1Z4709	DB	22.80	24	25.20	50	0.01	18.2
MM1Z4710	DC	23.75	25	26.25	50	0.01	19.0
MM1Z4711	DD	25.65	27	28.35	50	0.01	20.4
MM1Z4712	DE	26.60	28	29.40	50	0.01	21.2
MM1Z4713	DF	28.50	30	31.50	50	0.01	22.8
MM1Z4714	DH	31.35	33	34.65	50	0.01	25.0
MM1Z4715	DJ	34.20	36	37.80	50	0.01	27.3
MM1Z4716	DK	37.05	39	40.95	50	0.01	29.6
MM1Z4717	DM	40.85	43	45.15	50	0.01	32.6

1) Tested with pulses $t_p = 20$ ms.

2) Nominal Zener voltage is measured with the device junction in thermal equilibrium at $T_L = 30^\circ C \pm 1^\circ C$



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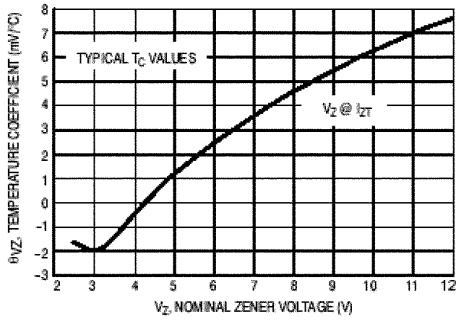


Figure 1. Temperature Coefficients
(Temperature Range -55°C to +150°C)

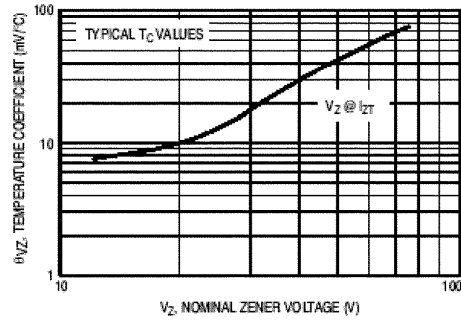


Figure 2. Temperature Coefficients
(Temperature Range -55°C to +150°C)

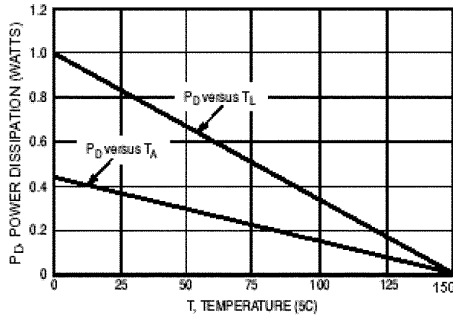


Figure 3. Steady State Power Derating

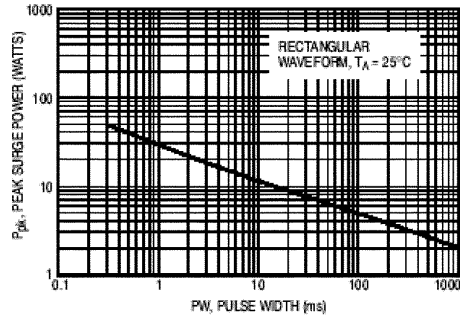


Figure 4. Maximum Nonrepetitive Surge Power

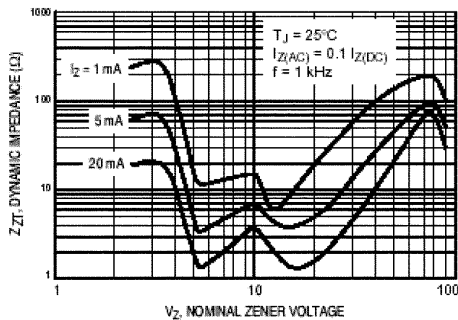


Figure 5. Effect of Zener Voltage on
Zener Impedance

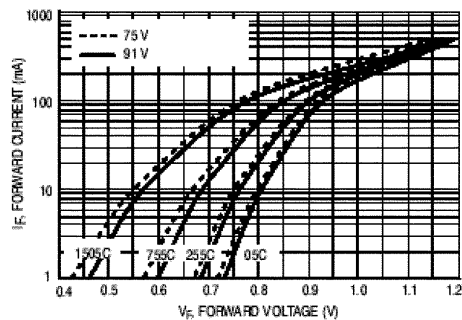
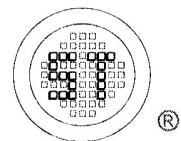


Figure 6. Typical Forward Voltage



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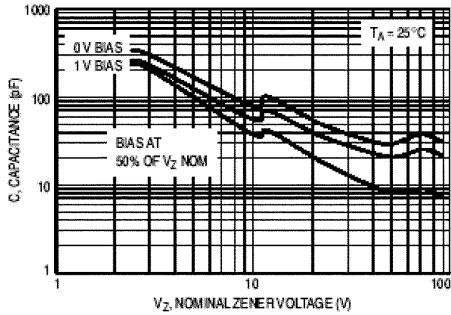


Figure 7. Typical Capacitance

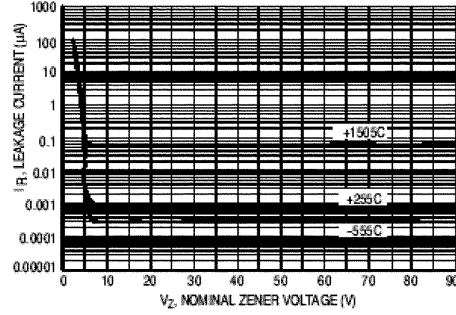


Figure 8. Typical Leakage Current

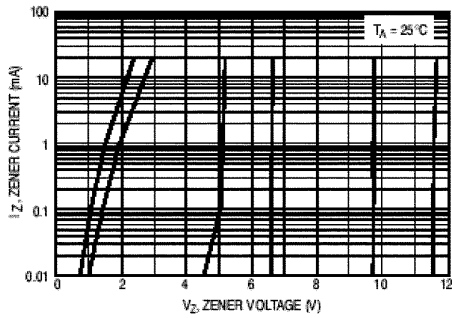


Figure 9. Zener Voltage versus Zener Current
(V_Z Up to 12 V)

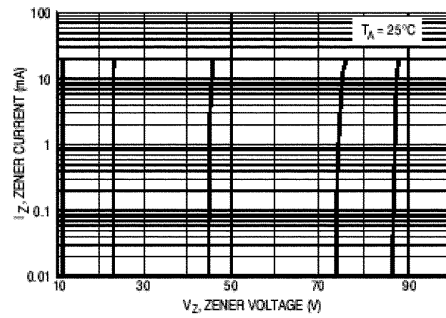
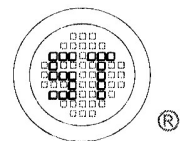


Figure 10. Zener Voltage versus Zener Current
(12 V to 91 V)



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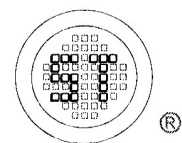
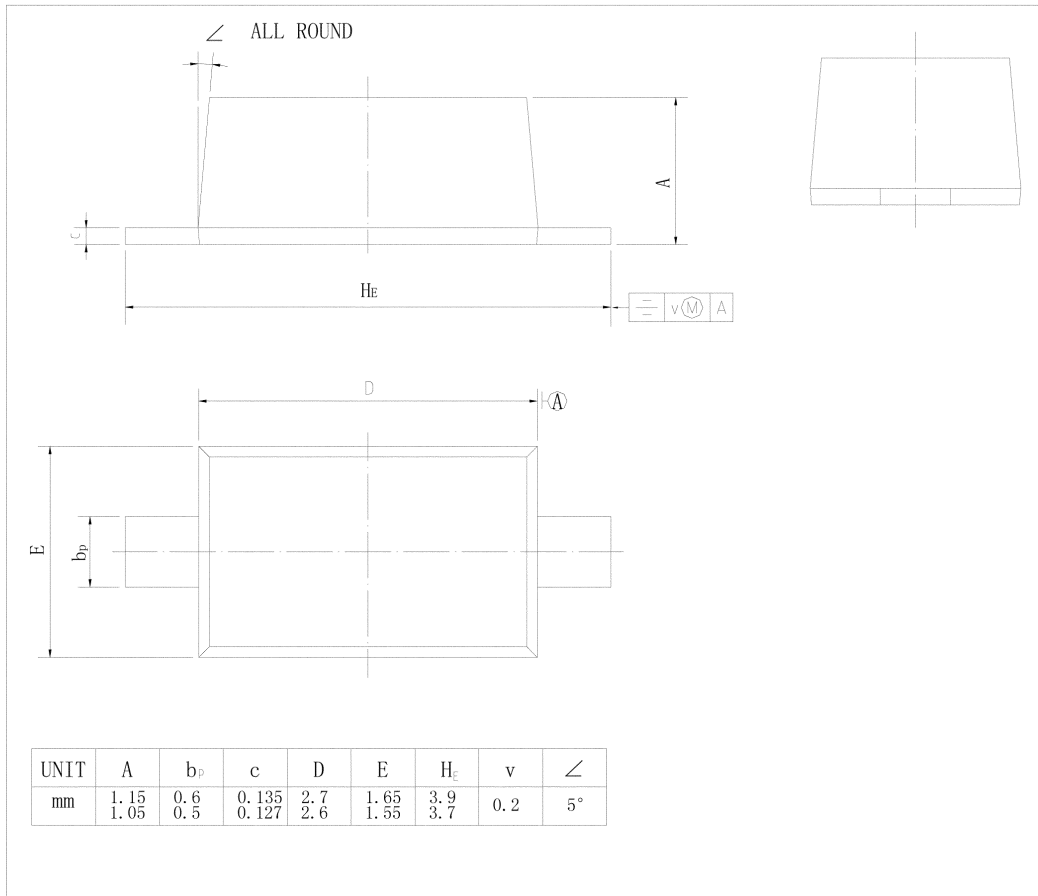
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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



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