MMSZ5221B THRU MMSZ5256B

SOD-123 MMSZ52XXB稳压管系列

Features

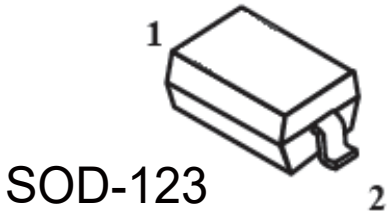
- Total power dissipation: Max. 500mW
- Wide zener reverse voltage range 2V to 30V
- Small plastic package suitable for surface mounted design
- 2% high-precision regulated voltage stability
- High reliability chip and packaging process

SOD-123

Applications

Low-power voltage regulator is mainly used for circuit voltage adjustment of mobile phones, hand-held devices and high-density computer motherboards.

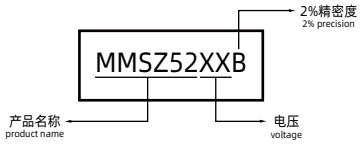
Schematic diagram of package die



Schematic diagram of package die

Parameter	Symbol	Value	Value
Power Dissipation	P_D	500	mW
Forward Voltage at IF = 10 mA	V_F	0.85	V
Typical thermal resistance juncting to ambient (1)	$R_{\theta JA}$	556	°C/W
Operating and Storage Temperature Range	T_J,T_{stg}	-55 ~ +150	°C

Ordering information

Product ID	Pack	Naming rule	voltage	Qty(PCS)
MMSZ52XX	SOD-123		2V-30V	3000

Electrical Characteristics (T_A=25℃, unless otherwise noted)

Type	Marking	Zener Voltage Range (2)				Maximum Zener (3) mpedance			Reverse Current (2)		Typical temperature coefficient @I_{ZTC} mV/°C		Test current I_{ZTC}
		V_{ZT}（at I_{ZT}）			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	I_{ZK}	I_R	@V_R			
		Min（V）	Nom（V）	Max（V）	(mA)	(Ω)		(mA)	μA	V	MIN	MAX	mA
MMSZ5221B	C1	2.4	2.35	2.45	5	100	600	1	50	1.0	-3.5	0	5
MMSZ5223B	C3	2.7	2.65	2.75	5	100	600	1	20	1.0	-3.5	0	5
MMSZ5225B	C5	3.0	2.94	3.06	5	95	600	1	10	1.0	-3.5	0	5
MMSZ5226B	G1	3.3	3.23	3.37	5	95	600	1	5	1.0	-3.5	0	5
MMSZ5227B	G2	3.6	3.53	3.67	5	90	600	1	5	1.0	-3.5	0	5
MMSZ5228B	G3	3.9	3.82	3.98	5	90	600	1	0.5	1.0	-3.5	0	5
MMSZ5229B	G4	4.3	4.21	4.39	5	90	600	1	0.5	1.0	-3.5	0	5
MMSZ5230B	G5	4.7	4.61	4.79	5	80	500	1	3	2.0	-3.5	0.2	5
MMSZ5231B	E1	5.1	5.00	5.20	5	60	480	1	2	2.0	-2.7	1.2	5
MMSZ5232B	E2	5.6	5.49	5.71	5	40	400	1	1	2.0	2.0	2.5	5
MMSZ5234B	E4	6.2	6.08	6.32	5	9.5	150	1	3	4.0	0.4	3.7	5
MMSZ5235B	E5	6.8	6.66	6.94	5	14.2	76	1	2	4.0	1.2	4.5	5
MMSZ5236B	F1	7.5	7.35	7.65	5	14.2	76	1	1	5.0	2.5	5.3	5
MMSZ5237B	F2	8.2	8.04	8.36	5	14.2	76	1	0.7	5.0	3.2	6.2	5
MMSZ5239B	F4	9.1	8.92	9.28	5	14.2	95	1	0.5	7.0	3.8	7.0	5
MMSZ5240B	F5	10	9.80	10.20	5	19	142.5	1	0.2	8.0	4.5	8.0	5
MMSZ5241B	H1	11	10.78	11.22	5	19	142.5	1	0.1	8.0	5.4	9.0	5
MMSZ5242B	H2	12	11.76	12.24	5	23.7	150	1	0.1	8.0	6.0	10.0	5
MMSZ5243B	H3	13	12.74	13.30	5	28.5	190	1	0.1	8.0	7.0	11.0	5
MMSZ5245B	H5	15	14.70	15.30	5	28.5	190	1	0.1	11.0	9.2	13.0	5
MMSZ5246B	J1	16	15.68	16.30	5	38	190	1	0.1	11.0	10.4	14.0	5
MMSZ5248B	J3	18	17.60	18.40	5	42.7	213	1	0.1	13.0	12.4	16.0	5
MMSZ5250B	J5	20	19.60	20.40	5	52.2	213	1	0.1	14.0	14.4	18.0	5
MMSZ5251B	K1	22	21.56	22.44	5	52.2	237	1	0.1	15.0	16.4	20.0	5
MMSZ5252B	K2	24	23.52	24.50	5	66.5	250	1	0.1	17.0	18.4	22.0	5
MMSZ5254B	K4	27	26.46	27.54	2	75	295	0.5	0.1	19.0	21.4	25.3	2
MMSZ5256B	M1	30	29.40	30.60	2	75	295	0.5	0.1	21.0	24.4	29.4	2

Notes:

1. Device mounted on ceramic PCB:7.6mm x 9.4mm x 0.87mm with pad areas 25mm2
2. Short duration test pulse used to minimize self-heating effect
3. f = 1kHz

Typical Characteristics

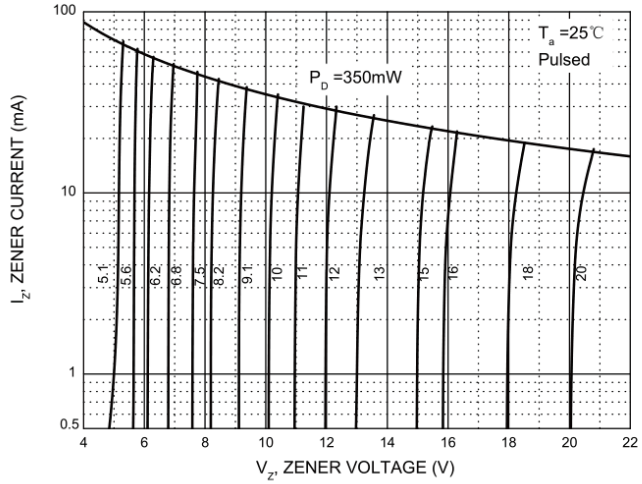


Fig.1 Zener Characteristics(Vz 5.1V to 20 V)

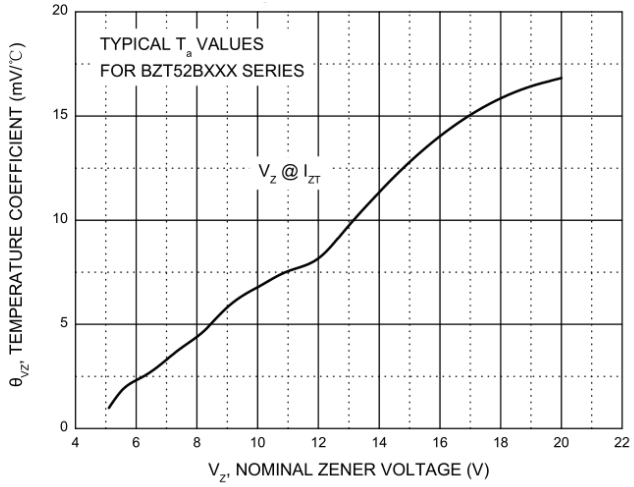


Fig.2 Temperature Coefficients

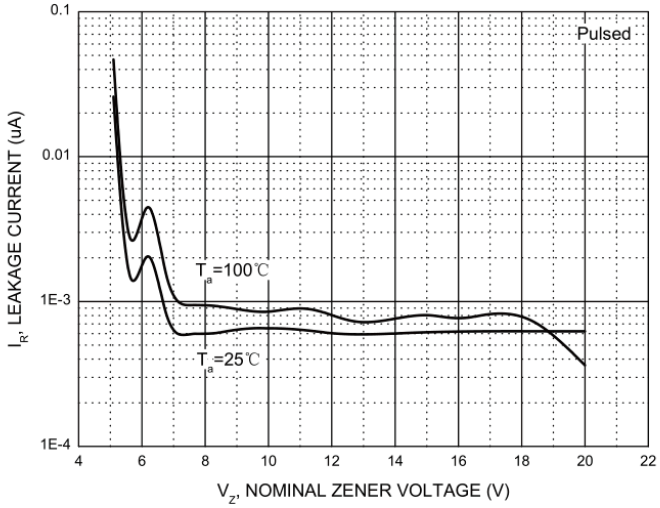


Fig.3 Typical Leakage Current

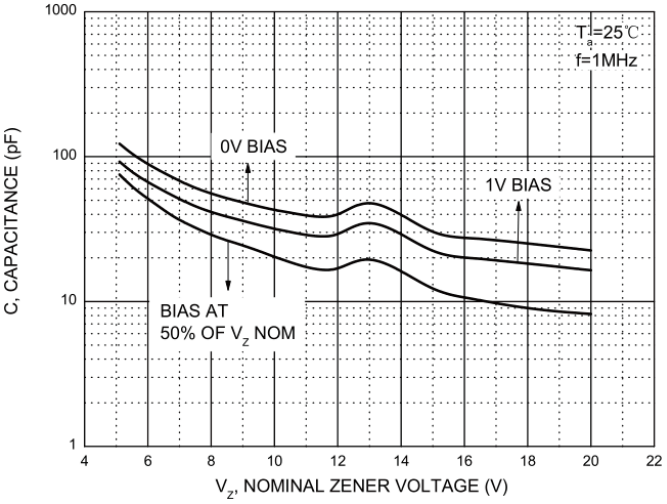


Fig.4 Typical Capacitance

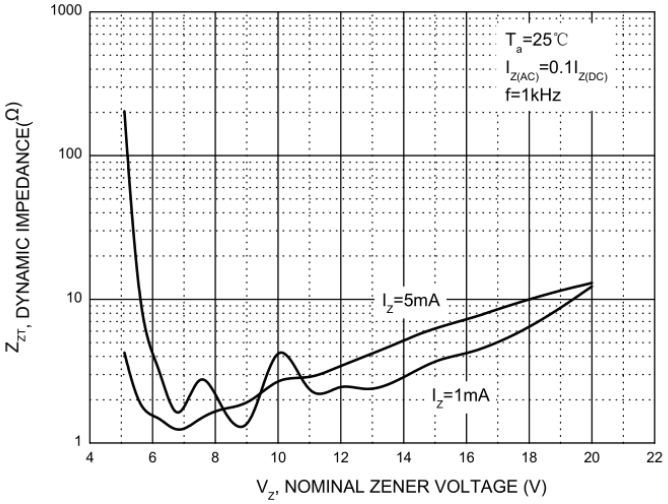


Fig.5 Effect of Zener Voltage on Zener Impedance

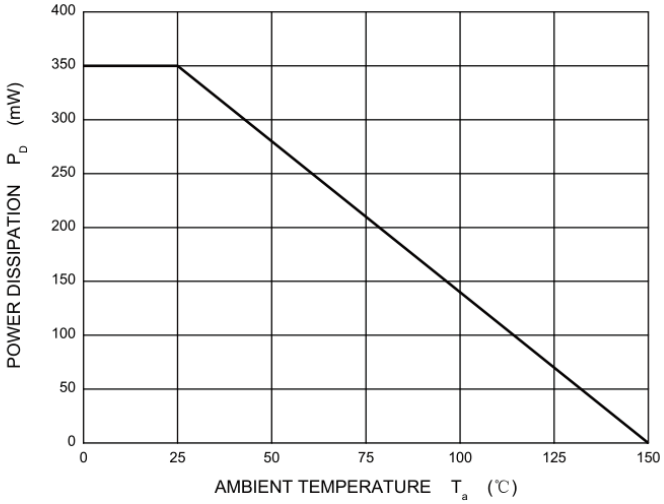
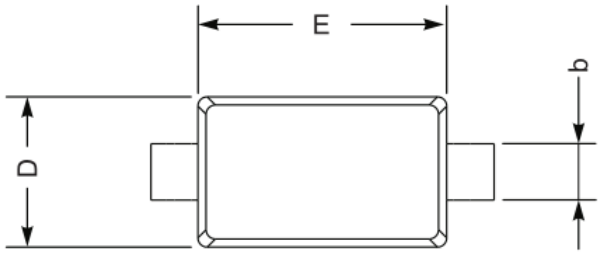
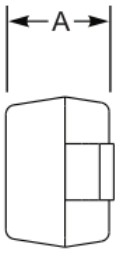
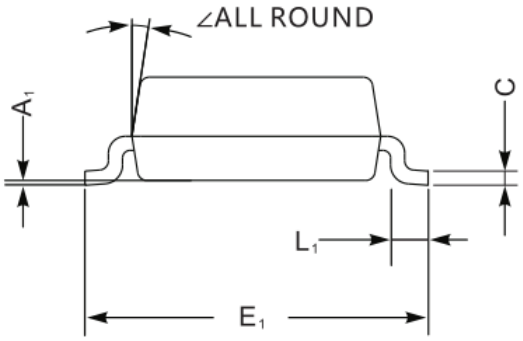


Fig.6 Power Derating Curve

SOD-123 Package Outline Dimensions







Symbol	mm		mil	
	min	max	min	max
A	0.9	1.3	35	51
C	0.09	0.22	3.5	8.7
D	1.5	1.8	59	71
E	2.5	2.8	98	110
E1	3.6	3.9	142	154
L1	0.25	0.45	10	18
b	0.5	0.7	20	28
A1		0.2		8
∠	9°			