



Features

- Planar Die Construction
- 500mW Power Dissipation on Ceramic PCB
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- Available in Lead Free Version



SOD-123

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
HMMSZ5221-5259BT1G	SOD-123	XX	3000

XX=Device code, see table on page2 the marking code.

The marking bar indicates the cathode.



Absolute Maximum Ratings(Ta=25°C)

Characteristic	Symbol	Value	Unit
Forward voltage @I _F =10mA	V _F	0.85	V
Power Dissipation	P _D	500	mW
Thermal Resistance, Junction to Ambient Air	R _{θJA}	556	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55 ~ +150	°C

Notes: Device mounted on ceramic PCB;5.0mm×7.0mm with pad areas 35 mm²



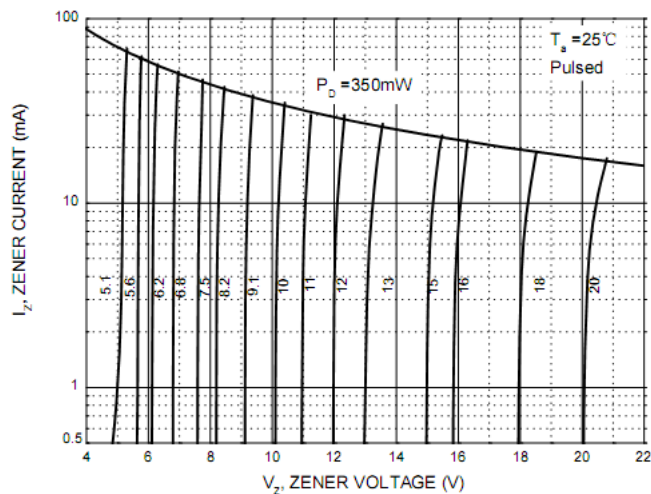
Electrical Characteristics (Ta=25℃ unless otherwise specified)

Type Number	Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 4)			Maximum Reverse Current	
		V _Z @I _{ZT}			I _{ZT}	Z _{VT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	V _R
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V
HMMSZ5221BT1G	C1	2.4	2.28	2.52	20	30	1200	0.25	100	1.0
HMMSZ5223BT1G	C3	2.7	2.57	2.84	20	30	1300	0.25	75	1.0
HMMSZ5225BT1G	C5	3.0	2.85	3.15	20	30	1600	0.25	50	1.0
HMMSZ5226BT1G	G1	3.3	3.14	3.47	20	28	1600	0.25	25	1.0
HMMSZ5227BT1G	G2	3.6	3.42	3.78	20	24	1700	0.25	15	1.0
HMMSZ5228BT1G	G3	3.9	3.71	4.10	20	23	1900	0.25	10	1.0
HMMSZ5229BT1G	G4	4.3	4.09	4.52	20	22	2000	0.25	5	1.0
HMMSZ5230BT1G	G5	4.7	4.47	4.94	20	19	1900	0.25	5	2.0
HMMSZ5231BT1G	E1	5.1	4.85	5.36	20	17	1600	0.25	5	2.0
HMMSZ5232BT1G	E2	5.6	5.32	5.88	20	11	1600	0.25	5	3.0
HMMSZ5233BT1G	E3	6.0	5.70	6.30	20	7	1600	0.25	5	3.5
HMMSZ5234BT1G	E4	6.2	5.89	6.51	20	7	1000	0.25	5	4.0
HMMSZ5235BT1G	E5	6.8	6.46	7.14	20	5	750	0.25	3	5.0
HMMSZ5236BT1G	F1	7.5	7.13	7.88	20	6	500	0.25	3	6.0
HMMSZ5237BT1G	F2	8.2	7.79	8.61	20	8	500	0.25	3	6.5
HMMSZ5238BT1G	F3	8.7	8.27	9.14	20	8	600	0.25	3	6.5
HMMSZ5239BT1G	F4	9.1	8.65	9.56	20	10	600	0.25	3	7.0
HMMSZ5240BT1G	F5	10	9.50	10.50	20	17	600	0.25	3	8.0
HMMSZ5241BT1G	H1	11	10.45	11.55	20	22	600	0.25	2.0	8.4
HMMSZ5242BT1G	H2	12	11.40	12.60	20	30	600	0.25	1.0	9.1
HMMSZ5243BT1G	H3	13	12.35	13.65	9.5	13	600	0.25	0.5	9.9
HMMSZ5244BT1G	H4	14	13.30	14.70	9.0	15	600	0.25	0.1	10
HMMSZ5245BT1G	H5	15	14.25	15.75	8.5	16	600	0.25	0.1	11
HMMSZ5246BT1G	J1	16	15.20	16.80	7.8	17	600	0.25	0.1	12
HMMSZ5247BT1G	J2	17	16.15	17.85	7.4	19	600	0.25	0.1	13
HMMSZ5248BT1G	J3	18	17.10	18.90	7.0	21	600	0.25	0.1	14
HMMSZ5250BT1G	J5	20	19.00	21.00	6.2	25	600	0.25	0.1	15
HMMSZ5251BT1G	K1	22	20.90	23.10	5.6	29	600	0.25	0.1	17
HMMSZ5252BT1G	K2	24	22.80	25.20	5.2	33	600	0.25	0.1	18
HMMSZ5253BT1G	K3	25	23.75	26.25	5.0	35	600	0.25	0.1	19
HMMSZ5254BT1G	K4	27	25.65	28.35	5.0	41	600	0.25	0.1	21
HMMSZ5255BT1G	K5	28	26.60	29.40	4.5	44	600	0.25	0.1	21
HMMSZ5256BT1G	M1	30	28.50	31.50	4.2	49	600	0.25	0.1	23
HMMSZ5257BT1G	M2	33	31.35	34.65	3.8	58	700	0.25	0.1	25
HMMSZ5258BT1G	M3	36	34.20	37.80	3.4	70	700	0.25	0.1	27
HMMSZ5259BT1G	M4	39	37.05	40.95	3.2	80	800	0.25	0.1	30

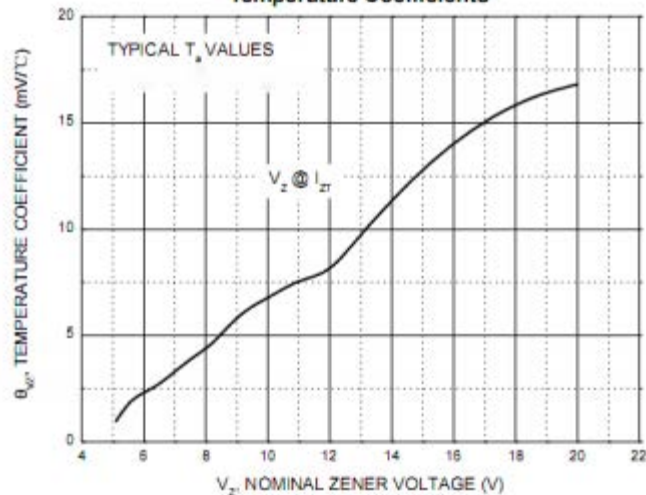


Typical Characteristics

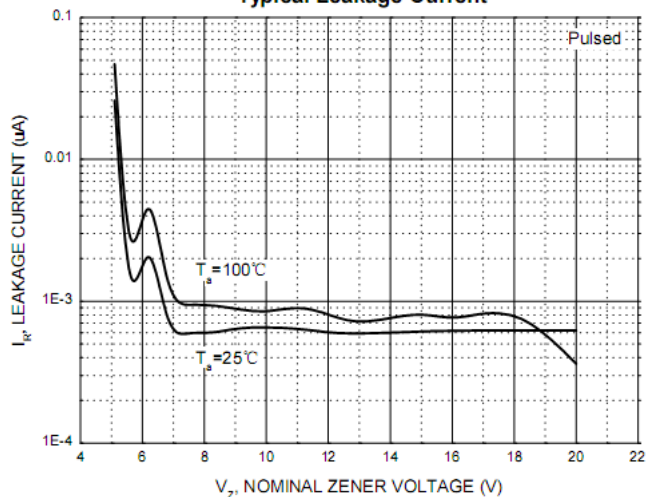
Zener Characteristics (V_z 5.1V to 20 V)



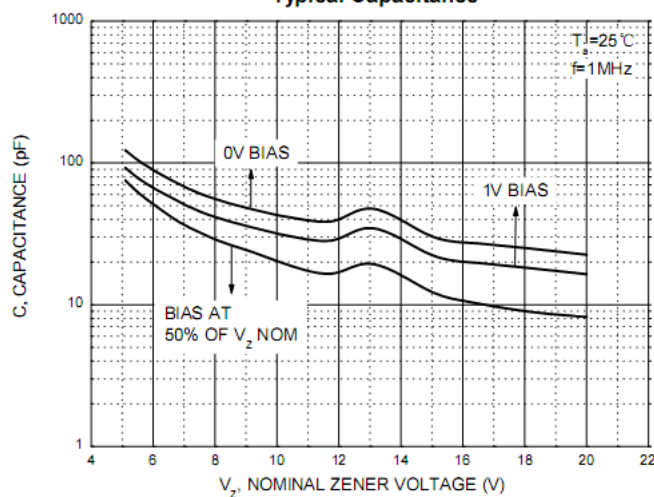
Temperature Coefficients



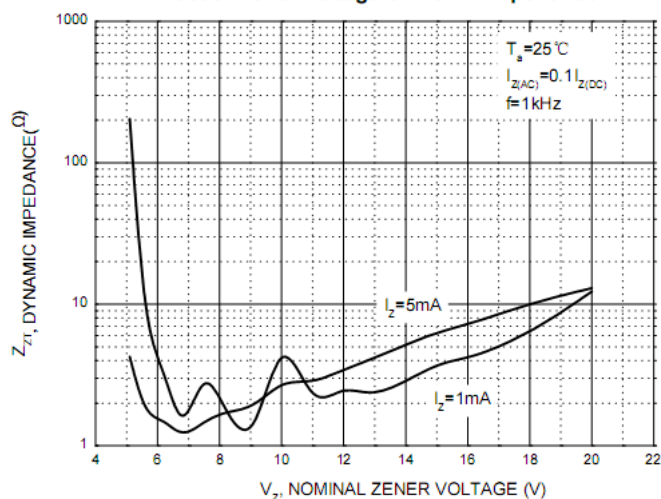
Typical Leakage Current



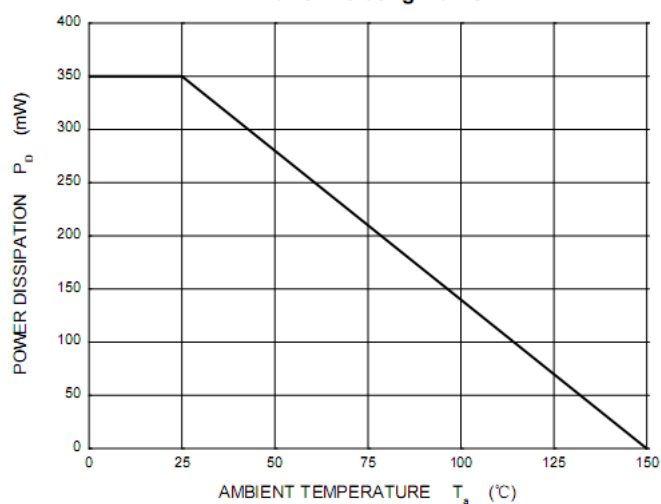
Typical Capacitance



Effect of Zener Voltage on Zener Impedance

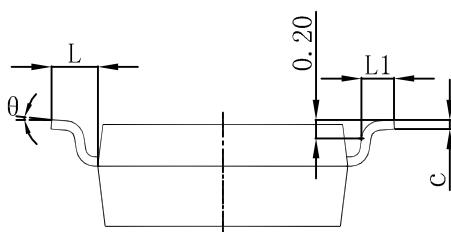
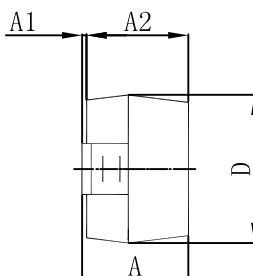
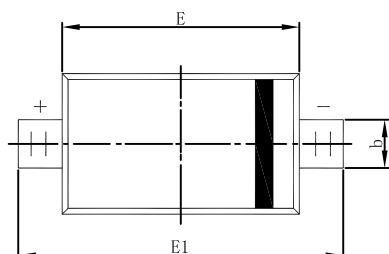


Power Derating Curve

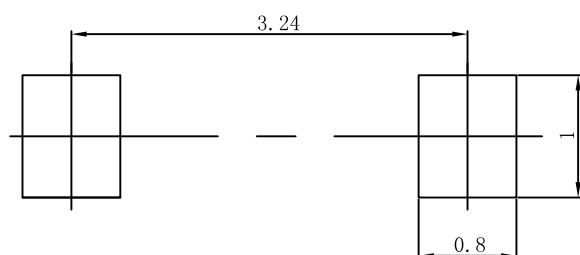




SOD-123 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°



Note:
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



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