Zener Diode Series

ZD52XXBSH

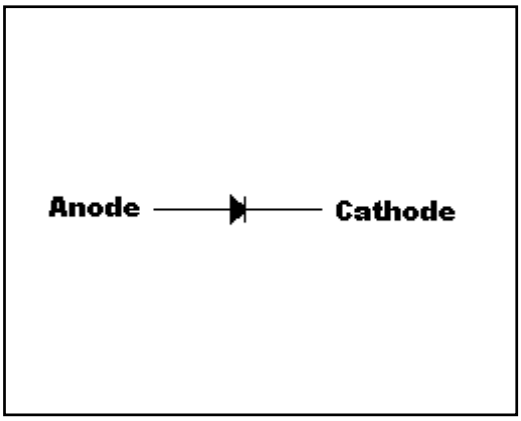
Description

The ZD52XXBSH series covers zener voltage range from 2.4V to 43V, and is encapsulated in SOD-123 package, very suitable for low cost, low power voltage regulation application.

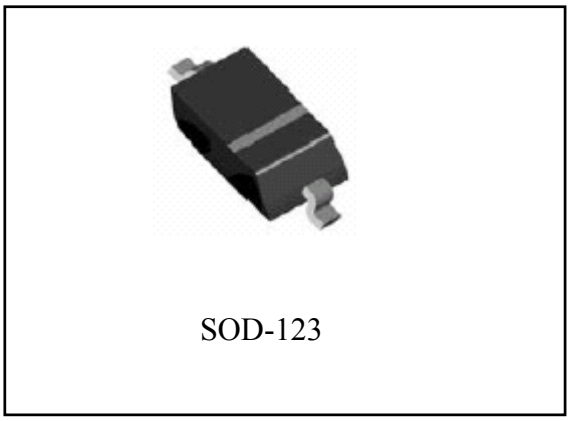
Features

- Small surface mounting type
- High reliability

Symbol



Outline



Absolute Maximum Ratings(Tj=25℃, unless otherwise specified)

- Maximum Temperatures
  Storage Temperature Tstg..... -65~+150 °C
  Junction Temperature Tj ..... +150 °C
- Maximum Power Dissipation
  Total Power Dissipation Ptot ..... 500 mW
- Thermal Resistance, Junction to Ambient Air $R_{\theta JA}$ (Note 1)..... 250℃/W
- Maximum Z-current..... Ptot/Vz mA

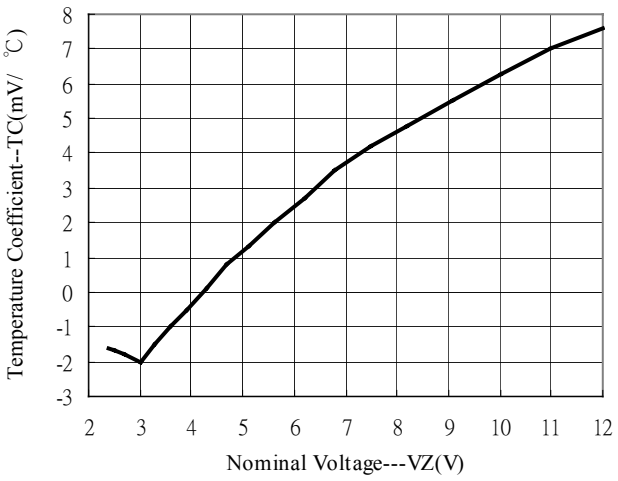
Note : 1.Parts mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87 with pad areas of 25mm².

Electrical Characteristic (V_F=1.5V Max @I_F=200mA for all types.)

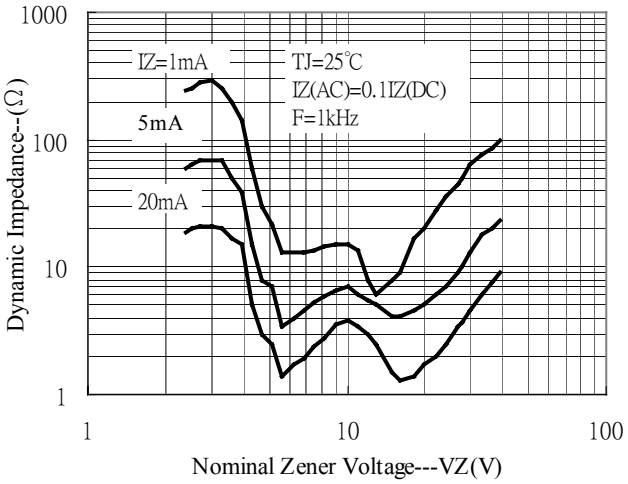
Device	Type Code	Nom. Zener Voltage			Max. Zener Impedance				Max. Zener Current	Max. Reverse Leakage Current	
		V_Z@I_{ZT} (V)			Z_{ZT}	I_{ZT}	Z_{ZK}	I_{ZK}	I_{ZM}@Ta	I_R	V_R
		Nom.	Min.	Max.	(Ω)	(mA)	(Ω)	(mA)	(mA)	(μA)	(V)
ZD5221B	C1	2.4	2.28	2.52	30	20	1200	0.25	188	100	1.0
ZD5223B	C3	2.7	2.57	2.84	30	20	1300	0.25	167	75	1.0
ZD5225B	C5	3.0	2.85	3.15	30	20	1600	0.25	150	50	1.0
ZD5226B	G1	3.3	3.14	3.47	28	20	1600	0.25	138	25	1.0
ZD5227B	G2	3.6	3.42	3.78	24	20	1700	0.25	126	15	1.0
ZD5228B	G3	3.9	3.71	4.10	23	20	1900	0.25	115	10	1.0
ZD5229B	G4	4.3	4.09	4.52	22	20	2000	0.25	106	5.0	1.0
ZD5230B	G5	4.7	4.47	4.94	19	20	1900	0.25	97	5.0	2.0
ZD5231B	E1	5.1	4.85	5.36	17	20	1600	0.25	89	5.0	2.0
ZD5232B	E2	5.6	5.32	5.88	11	20	1600	0.25	81	5.0	3.0
ZD5233B	E3	6.0	5.70	6.30	7.0	20	1600	0.25	76	5.0	3.5
ZD5234B	E4	6.2	5.89	6.51	7.0	20	1000	0.25	73	5.0	4.0
ZD5235B	E5	6.8	6.46	7.14	5.0	20	750	0.25	67	3.0	5.0
ZD5236B	F1	7.5	7.13	7.88	6.0	20	500	0.25	61	3.0	6.0
ZD5237B	F2	8.2	8.27	9.14	8.0	20	500	0.25	55	3.0	6.5
ZD5238B	F3	8.7	7.79	8.61	8.0	20	600	0.25	55	3.0	6.5
ZD5239B	F4	9.1	8.65	9.56	10	20	600	0.25	50	3.0	7.0
ZD5240B	F5	10	9.5	10.5	17	20	600	0.25	45	3.0	8.0
ZD5241B	H1	11	10.45	11.55	22	20	600	0.25	41	2.0	8.4
ZD5242B	H2	12	11.4	12.6	30	20	600	0.25	38	1.0	9.1
ZD5243B	H3	13	12.35	13.65	13	9.5	600	0.25	35	0.5	9.9
ZD5245B	H5	15	14.25	15.75	16	8.5	600	0.25	30	0.1	11
ZD5246B	J1	16	15.2	16.8	17	7.8	600	0.25	28	0.1	12
ZD5248B	J3	18	17.1	18.9	21	7.0	600	0.25	25	0.1	14
ZD5250B	J5	20	19	21	25	6.2	600	0.25	23	0.1	15
ZD5251B	K1	22	20.9	23.1	29	5.6	600	0.25	21	0.1	17
ZD5252B	K2	24	22.8	25.2	33	5.2	600	0.25	19.1	0.1	18
ZD5254B	K4	27	25.65	28.35	41	5.0	600	0.25	16.8	0.1	21
ZD5255B	K5	28	26.6	29.4	44	4.5	600	0.25	16.2	0.1	21
ZD5256B	M1	30	28.5	31.5	49	4.2	600	0.25	15.1	0.1	23
ZD5257B	M2	33	31.35	34.65	58	3.8	700	0.25	13.8	0.1	25
ZD5258B	M3	36	34.2	37.8	70	3.4	700	0.25	12.6	0.1	27
ZD5259B	M4	39	37.05	40.95	80	3.2	800	0.25	11.6	0.1	30
ZD5260B	M5	43	40.85	45.15	93	3	900	0.25	10.6	0.1	33

Characteristic Curves

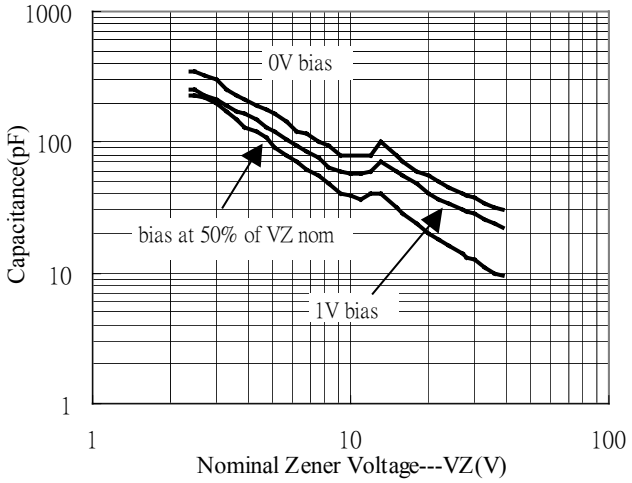
Typical Temperature Coefficient



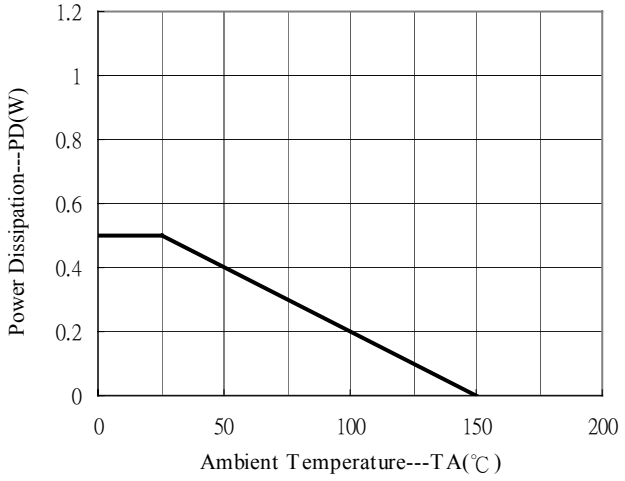
Typical Temperature Coefficient



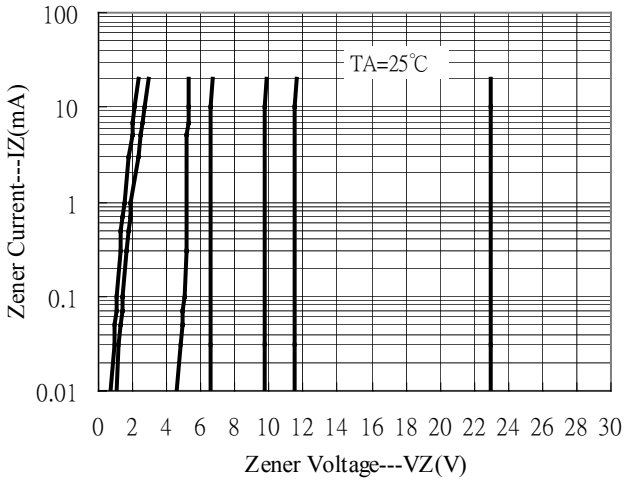
Typical Capacitance



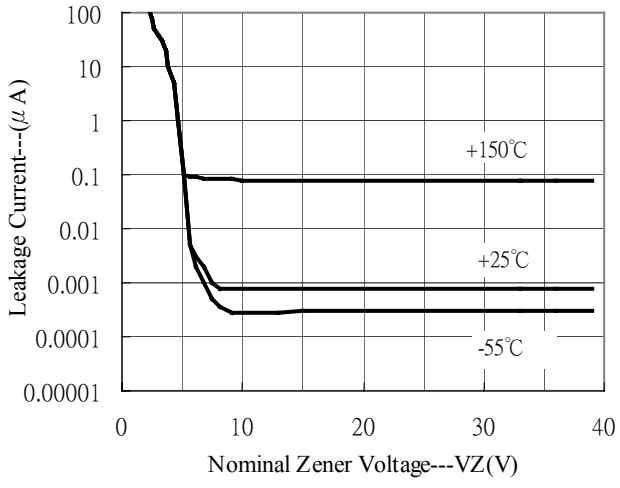
Power Derating Curve



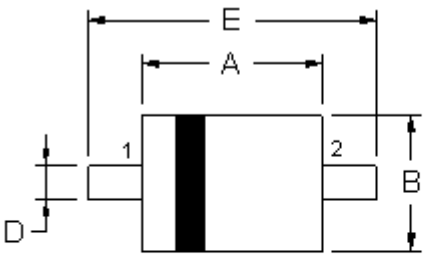
Zener Current vs Zener Voltage



Typical Leakage Current



SOD-123 Dimension





Marking:



Style: Pin 1.Cathode 2.Anode

2-Lead SOD-123 Plastic
Surface Mounted Package
CYStek Package Code: SH

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.102	0.110	2.600	2.800	E	0.140	0.152	3.550	3.850
B	0.059	0.067	1.500	1.700					
C	0.041	0.049	1.050	1.250					
D	0.018	0.026	0.450	0.650					

Notes: 1.Controlling dimension : millimeters.
2.Lead thickness specified per L/F drawing with solder plating.
3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material:

- Lead: 42 Alloy ; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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