



SSCZ52BXXXD1 Series

Zener Voltage Regulator

● Description

The SSCZ52BXXXD1 is packaged in a SOD-123 surface mount package that has a power dissipation of 500mW. They are designed to provide voltage regulation protection and are especially attractive in situations where space is at a premium. It is applicable to mobile phones, hand-held portable devices, high-density PC boards.

● Feature

- ✧ Low profile package
- ✧ Ideal for automated placement
- ✧ Low Zener Impedance
- ✧ Steady state power rating of 500mW
- ✧ RoHS compliant transient

● Applications

- ✧ Hand held portables
- ✧ Cellular phones
- ✧ High density PC boards

● PIN configuration



SOD-123



Circuit diagram

● Mechanical data

- ✧ Package: SOD-123
- ✧ Lead finish:100% matte Sn(Tin)
- ✧ Mounting position: Any
- ✧ Qualified max reflow temperature:260°C
- ✧ Device meets MSL 3 requirements
- ✧ Pure tin plating: 7 ~ 17 um
- ✧ Pin flatness:≤3mil

● Absolute maximum rating @T_A=25°C

Parameter	Symbol	Value	Unit
Total Device Dissipation FR-5 Board	P _D	500	mW
Forward Voltage @ I _F = 10mA	V _F	0.9	V
Thermal Resistance, Junction-to-Ambient	R _{θJA}	357	°C/W
Storage Temperature	T _{STG}	-55/+150	°C
Operating Temperature	T _J	-55/+150	°C



● **Electrical Characteristics @T_A=25°C**

Device	Marking	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature coefficient @ I _{ZTC} =mV/°C		Test Current I _{ZTC}
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	V _R	Min	Max	
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V			
SSCZ52B2V4D1	2WX	2.4	2.35	2.45	5	100	600	1.0	50	1.0	-3.5	0	5
SSCZ52B2V7D1	2W1	2.7	2.65	2.75	5	100	600	1.0	20	1.0	-3.5	0	5
SSCZ52B3V0D1	2W2	3.0	2.94	3.06	5	95	600	1.0	10	1.0	-3.5	0	5
SSCZ52B3V3D1	2W3	3.3	3.23	3.37	5	95	600	1.0	5	1.0	-3.5	0	5
SSCZ52B3V6D1	2W4	3.6	3.53	3.67	5	90	600	1.0	5	1.0	-3.5	0	5
SSCZ52B3V9D1	2W5	3.9	3.82	3.98	5	90	600	1.0	3	1.0	-3.5	0	5
SSCZ52B4V3D1	2W6	4.3	4.21	4.39	5	90	600	1.0	3	1.0	-3.5	0	5
SSCZ52B4V7D1	2W7	4.7	4.61	4.79	5	80	500	1.0	3	2.0	-3.5	0.2	5
SSCZ52B5V1D1	2W8	5.1	5.00	5.20	5	60	480	1.0	2	2.0	-2.7	1.2	5
SSCZ52B5V6D1	2W9	5.6	5.49	5.71	5	40	400	1.0	1	2.0	-2.0	2.5	5
SSCZ52B6V2D1	2WA	6.2	6.08	6.32	5	10	150	1.0	3	4.0	0.4	3.7	5
SSCZ52B6V8D1	2WB	6.8	6.66	6.94	5	15	80	1.0	2	4.0	1.2	4.5	5
SSCZ52B7V5D1	2WC	7.5	7.35	7.65	5	15	80	1.0	1	5.0	2.5	5.3	5
SSCZ52B8V2D1	2WD	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0	3.2	6.2	5
SSCZ52B9V1D1	2WE	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0	3.8	7.0	5
SSCZ52B10VD1	2WF	10	9.80	10.20	5	20	150	1.0	0.2	7.0	4.5	8.0	5
SSCZ52B11VD1	2WG	11	10.78	11.22	5	20	150	1.0	0.1	8.0	5.4	9.0	5
SSCZ52B12VD1	2WH	12	11.76	12.24	5	25	150	1.0	0.1	8.0	6.0	10.0	5
SSCZ52B13VD1	2WI	13	12.74	13.26	5	30	170	1.0	0.1	8.0	7.0	11.0	5
SSCZ52B15VD1	2WJ	15	14.70	15.30	5	30	200	1.0	0.1	10.5	9.2	13.0	5
SSCZ52B16VD1	2WK	16	15.68	16.32	5	40	200	1.0	0.1	11.2	10.4	14.0	5
SSCZ52B18VD1	2WL	18	17.64	18.36	5	45	225	1.0	0.1	12.6	12.4	16.0	5
SSCZ52B20VD1	2WM	20	19.60	20.40	5	55	225	1.0	0.1	14.0	14.4	18.0	5
SSCZ52B22VD1	2WN	22	21.56	22.44	5	55	250	1.0	0.1	15.4	16.4	20.0	5
SSCZ52B24VD1	2WO	24	23.52	24.48	5	70	250	1.0	0.1	16.8	18.4	22.0	5
SSCZ52B27VD1	2WP	27	26.46	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3	2
SSCZ52B30VD1	2WQ	30	29.40	30.60	2	80	300	0.5	0.1	21.0	24.4	29.4	2
SSCZ52B33VD1	2WR	33	32.34	33.66	2	80	325	0.5	0.1	23.1	27.4	33.4	2
SSCZ52B36VD1	2WS	36	35.28	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4	2
SSCZ52B39VD1	2WT	39	38.22	39.78	2	130	350	0.5	0.1	27.3	33.4	41.2	2
SSCZ52B43VD1	2WU	43	41.16	43.84	2	150	375	0.5	0.1	32.0	10.0	12.0	5
SSCZ52B47VD1	2WV	47	46.06	47.94	2	170	375	0.5	0.1	35.0	10.0	12.0	5
SSCZ52B51VD1	2WW	51	49.98	52.02	2	180	400	0.5	0.1	38.0	10.0	12.0	5



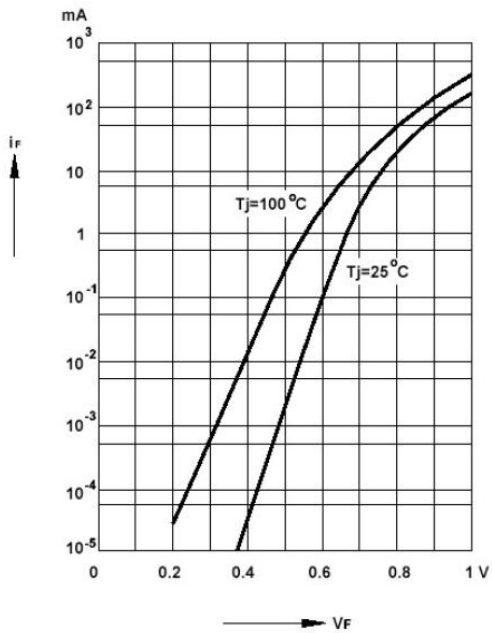
● Typical Performance Characteristics



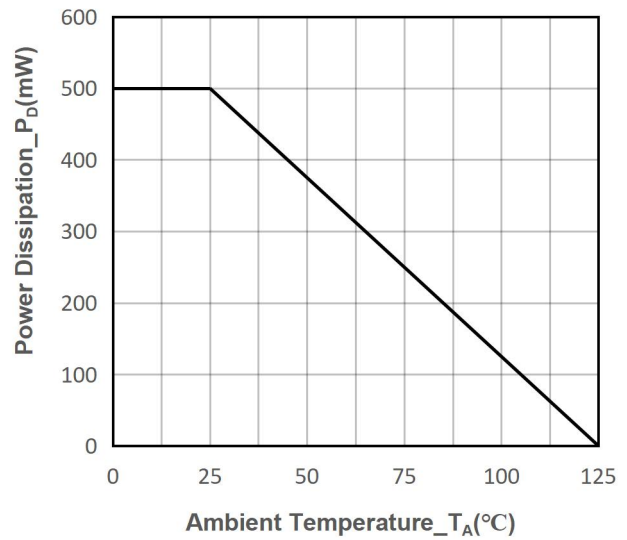
Zener Current vs. Zener Voltage



Zener Current vs. Zener Voltage



Forward Current vs. Forward Voltage



Power Derating vs. Ambient Temperature



● Package Information

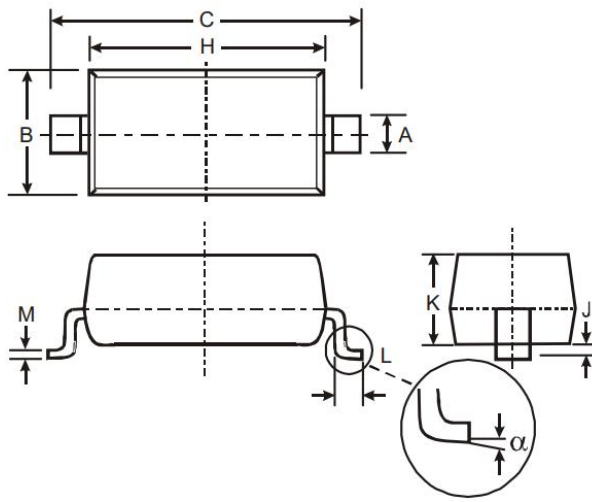
Ordering Information

Device	Package	Qty per Reel	Reel Size
SSCZ52BXXD1	SOD-123	3000	7 Inch

Mechanical Data

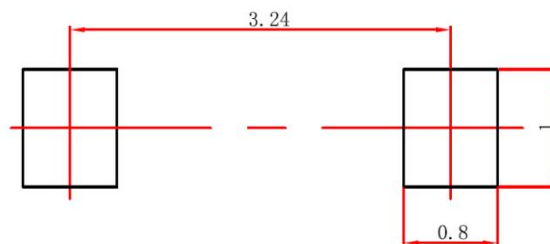
Case:SOD-123

Case Material: Molded Plastic. UL Flammability



DIM	Millimeters	
	Min	Max
A	0.45	0.65
B	1.50	1.70
C	3.55	3.85
H	2.6	2.8
J	0.00	0.10
K	1.05	1.15
L	0.25	0.45
M	0.08	0.15
α	0	8°

Recommended Pad outline (Unit:mm)





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