



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

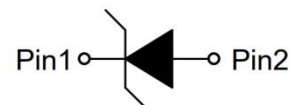
● Applications

- ✧ 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

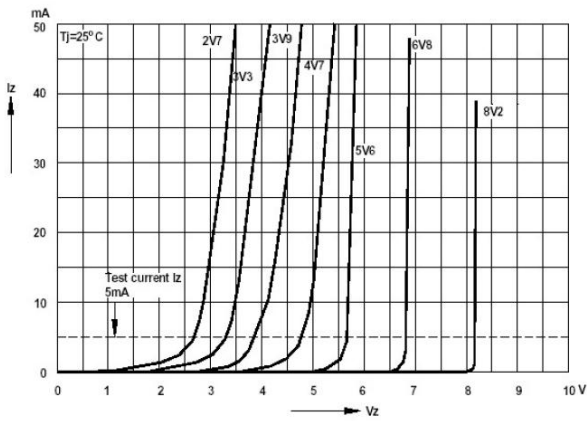


● Electrical Characteristics @T_A=25°C

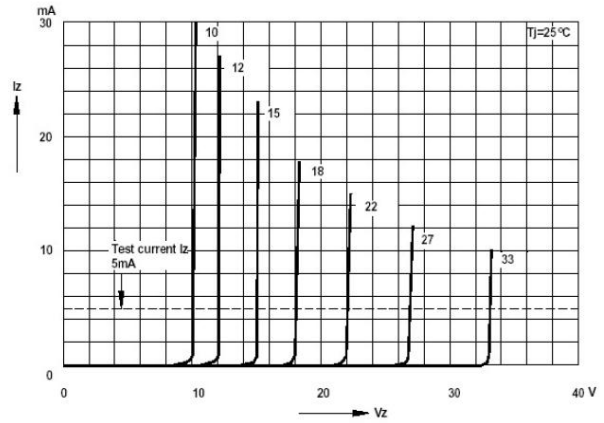
Device	Marking	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature coefficient @ I _{ZTC} =mV/°C		Test Current I _{ZTC}
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	V _R	Min	Max	
		Nom(V)	Min(V)	Max(V)	mA	Ω	mA	μA	V	Min	Max	mA	
SSCZ52B2V4D1	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



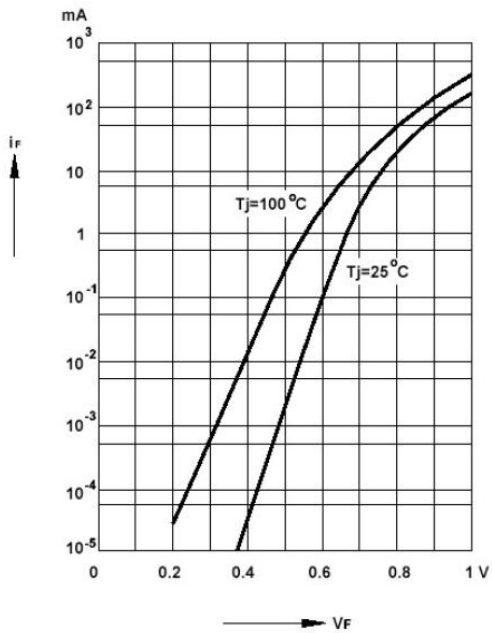
● Typical Performance Characteristics



Zener Current vs. Zener Voltage



Zener Current vs. Zener Voltage



Forward Current vs. Forward Voltage



Power Derating vs. Ambient Temperature



● Package Information

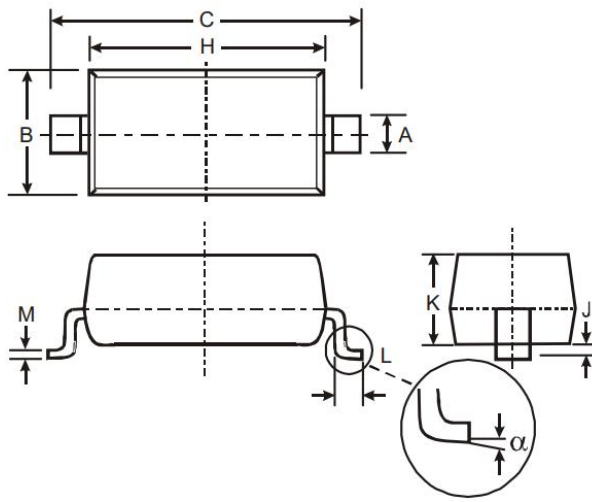
Ordering Information

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

Mechanical Data

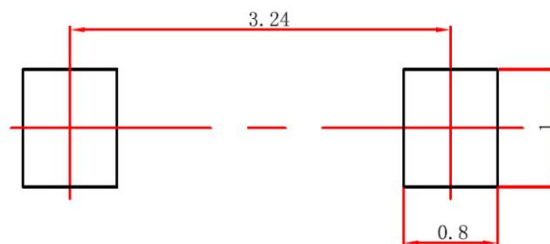
Case:SOD-123

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)





DISCLAIMER

SSCSEMI RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. SSCSEMI DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICIENCE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

THE GRAPHS PROVIDED IN THIS DOCUMENT ARE STATISTICAL SUMMARIES BASED ON A LIMITED NUMBER OF SAMPLES AND ARE PROVIDED FOR INFORMATIONAL PURPOSE ONLY. THE PERFORMANCE CHARACTERISTICS LISTED IN THEM ARE NOT TESTED OR GUARANTEED. IN SOME GRAPHS, THE DATA PRESENTED MAY BE OUTSIDE THE SPECIFIED OPERATING RANGE (E.G., OUTSIDE SPECIFIED POWER SUPPLY RANGE) AND THEREFORE OUTSIDE THE WARRANTED RANGE.

OUR PRODUCT SPECIFICATIONS ARE ONLY VALID IF OBTAINED THROUGH THE COMPANY'S OFFICIAL WEBSITE, CRM SYSTEM, OR OUR SALES PERSONNEL CHANNELS. IF CHANGES OR SPECIAL VERSIONS ARE INVOLVED, THEY MUST BE STAMPED WITH A QUALITY SEAL AND MARKED WITH A SPECIAL VERSION NUMBER TO BE VALID.