



## SSCZXXXHD1 Series

### Zener Voltage Regulator

#### ● Description

The SSCZXXXHD1 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℃
- ✧ Device meets MSL 3 requirements
- ✧ Pure tin plating: 7 ~ 17 um
- ✧ Pin flatness:≤3mil

#### ● Absolute maximum rating @T<sub>A</sub>=25℃

Parameter	Symbol	Value	Unit
Total Device Dissipation FR-5 Board	P <sub>D</sub>	500	mW
Thermal Resistance,Junction-to-Ambient	R <sub>θJA</sub>	340	℃/W
Storage Temperature	T <sub>STG</sub>	-55/+150	℃
Operating Temperature	T <sub>J</sub>	-55/+150	℃



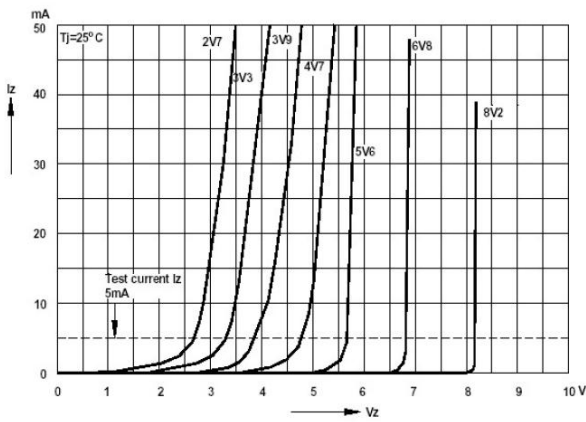
● **Electrical Characteristics @T<sub>A</sub>=25°C**

Device	Marking	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature coefficient @ I <sub>ZTC</sub> =mV/°C		Test Current I <sub>ZTC</sub> mA
		V <sub>Z</sub> @ I <sub>ZT</sub>			I <sub>ZT</sub>	Z <sub>ZT</sub> @I <sub>ZT</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub>	V <sub>R</sub>	Min	Max	
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V	Min	Max	
SSCZ2V4HD1	WX	2.4	2.2	2.6	5	100	600	1.0	50	1.0	-3.5	0	5
SSCZ2V7HD1	W1	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0	5
SSCZ3V0HD1	W2	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0	5
SSCZ3V3HD1	W3	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0	5
SSCZ3V6HD1	W4	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0	5
SSCZ3V9HD1	W5	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0	5
SSCZ4V3HD1	W6	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0	5
SSCZ4V7HD1	W7	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2	5
SSCZ5V1HD1	5V1H	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2	5
SSCZ5V6HD1	W9	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5	5
SSCZ6V2HD1	WA	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7	5
SSCZ6V8HD1	WB	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5	5
SSCZ7V5HD1	WC	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3	5
SSCZ8V2HD1	WD	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5
SSCZ9V1HD1	WE	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
SSCZ10VHD1	WF	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
SSCZ11VHD1	WG	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
SSCZ12VHD1	WH	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
SSCZ13VHD1	WI	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5
SSCZ15VHD1	WJ	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	5
SSCZ16VHD1	WK	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5
SSCZ18VHD1	WL	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5
SSCZ20VHD1	WM	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
SSCZ22VHD1	WN	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
SSCZ24VHD1	WO	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5
SSCZ27VHD1	WP	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
SSCZ30VHD1	WQ	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
SSCZ33VHD1	WR	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
SSCZ36VHD1	WS	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2
SSCZ39VHD1	WT	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	2
SSCZ43VHD1	WU	43	40.0	46.0	2	150	375	0.5	0.1	32.0	10.0	12.0	5
SSCZ47VHD1	WV	47	44.0	50.0	2	170	375	0.5	0.1	35.0	10.0	12.0	5
SSCZ51VHD1	WW	51	48.0	54.0	2	180	400	0.5	0.1	38.0	10.0	12.0	5
SSCZ56VHD1	XW	56	52.0	60.0	2	200	425	0.5	0.1	39.0	10.0	12.0	5
SSCZ62VHD1	6E	62	58.0	66.0	2	215	450	0.5	0.2	47.0	10.0	12.0	5
SSCZ68VHD1	6F	68	64.0	72.0	2	240	475	0.5	0.2	52.0	10.0	12.0	5

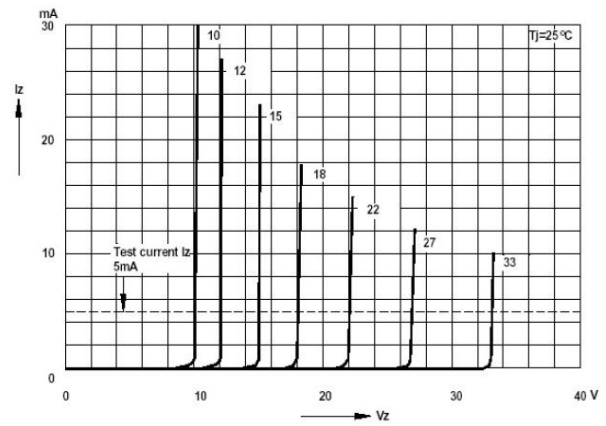


SSCZ75VHD1	6H	75	70.0	79.0	2	255	500	0.5	0.2	57.0	10.0	12.0	5
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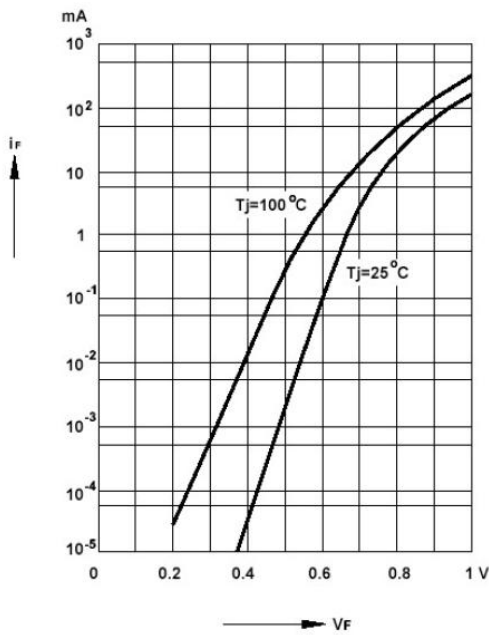
## ● Typical Performance Characteristics



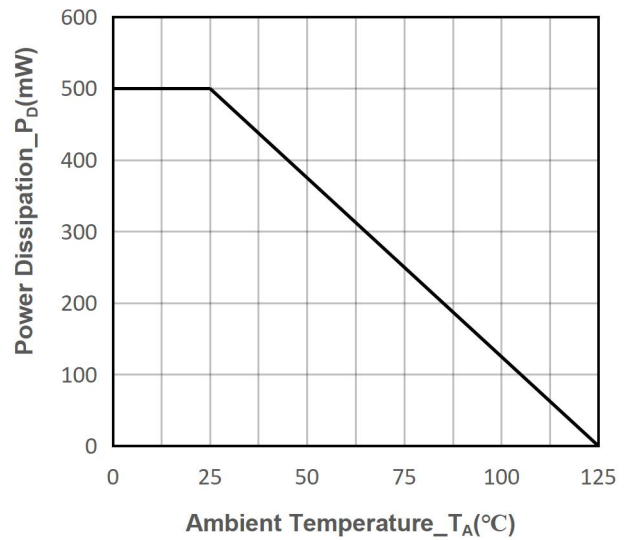
Zener Current vs. Zener Voltage



Zener Current vs. Zener Voltage



Forward Current vs. Forward Voltage



Power Derating vs. Ambient Temperature



## ● Package Information

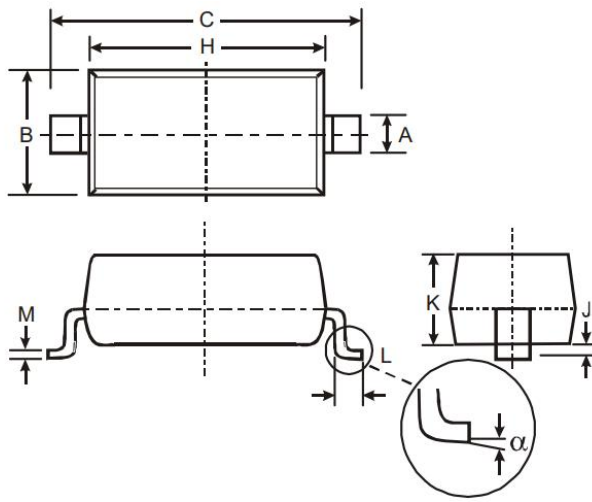
### Ordering Information

Device	Package	Qty per Reel	Reel Size
SSCZXXXHD1	SOD-123	3000	7 Inch

### Mechanical Data

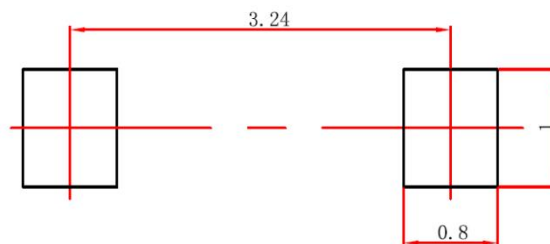
Case:SOD-123

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
$\alpha$	0	8°

### Recommended Pad outline (Unit:mm)





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