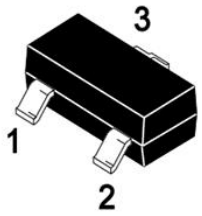
SSCZXXXBS6 Series

Zener Voltage Regulator

Description

The SSCZXXXBS6 is packaged in a SOT-23 surface mount package that has a power dissipation of 300mW. 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.

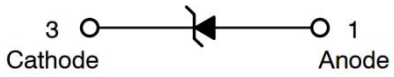
PIN configuration



SOT-23

Feature

- Low profile package
- Ideal for automated placement
- Low Zener Impedance
- Steady state power rating of 300mW
- RoHS compliant transient



Circuit Diagram

Applications

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

Mechanical data

- Package: SOT-23
- 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_A=25℃

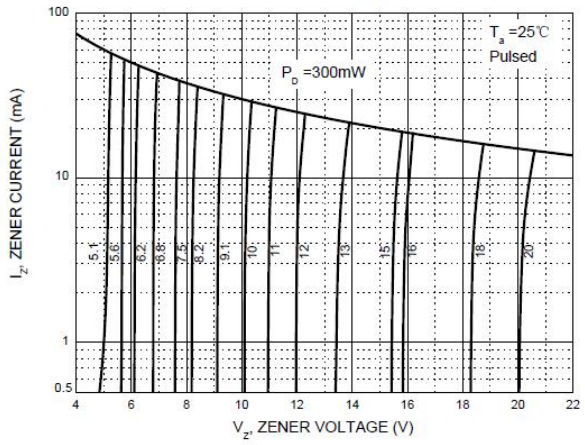
Parameter	Symbol	Value	Unit
Total Device Dissipation FR-5 Board	P_D	300	mW
Forward Voltage @ I_F = 10mA	V_F	0.9	V
Storage Temperature	T_{STG}	-55/+150	℃
Operating Temperature	T_J	-55/+150	℃

● Electrical Characteristics (T_A=25℃ unless otherwise noted)

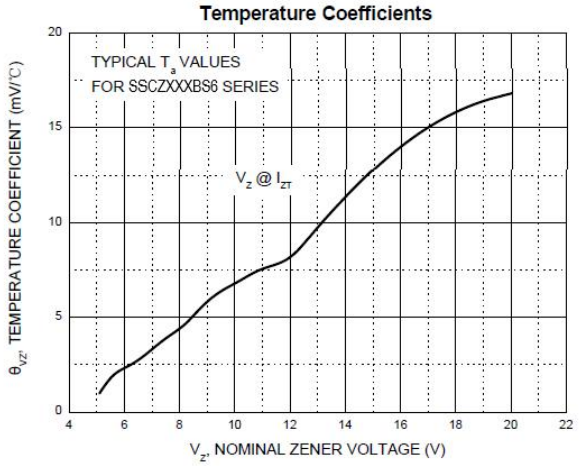
Device	Marking	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature coefficent @		Test Current
		V_Z@ I_{ZT}			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	I_{ZK}	I_R	V_R	I_{ZTC}=mV/℃		I_{ZTC}
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V	Min	Max	mA
SSCZ2V4BS6	2Z11	2.4	2.35	2.45	5	100	600	1.0	50	1.0	-3.5	0	5
SSCZ2V7BS6	2Z12	2.7	2.65	2.75	5	100	600	1.0	20	1.0	-3.5	0	5
SSCZ3V0BS6	2Z13	3.0	2.94	3.06	5	95	600	1.0	10	1.0	-3.5	0	5
SSCZ3V3BS6	2Z14	3.3	3.23	3.37	5	95	600	1.0	5	1.0	-3.5	0	5
SSCZ3V6BS6	2Z15	3.6	3.53	3.67	5	90	600	1.0	5	1.0	-3.5	0	5
SSCZ3V9BS6	2Z16	3.9	3.82	3.98	5	90	600	1.0	3	1.0	-3.5	0	5
SSCZ4V3BS6	2Z17	4.3	4.21	4.39	5	90	600	1.0	3	1.0	-3.5	0	5
SSCZ4V7BS6	2Z1	4.7	4.61	4.79	5	80	500	1.0	3	2.0	-3.5	0.2	5
SSCZ5V1BS6	2Z2	5.1	5.00	5.20	5	60	480	1.0	2	2.0	-2.7	1.2	5
SSCZ5V6BS6	2Z3	5.6	5.49	5.71	5	40	400	1.0	1	2.0	-2.0	2.5	5
SSCZ6V2BS6	2Z4	6.2	6.08	6.32	5	10	150	1.0	3	4.0	0.4	3.7	5
SSCZ6V8BS6	2Z5	6.8	6.66	6.94	5	15	80	1.0	2	4.0	1.2	4.5	5
SSCZ7V5BS6	2Z6	7.5	7.35	7.65	5	15	80	1.0	1	5.0	2.5	5.3	5
SSCZ8V2BS6	2Z7	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0	3.2	6.2	5
SSCZ9V1BS6	2Z8	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0	3.8	7.0	5
SSCZ10VBS6	2Z9	10	9.80	10.20	5	20	150	1.0	0.2	7.0	4.5	8.0	5
SSCZ11VBS6	2Y1	11	10.78	11.22	5	20	150	1.0	0.1	8.0	5.4	9.0	5
SSCZ12VBS6	2Y2	12	11.76	12.24	5	25	150	1.0	0.1	8.0	6.0	10.0	5
SSCZ13VBS6	2Y3	13	12.74	13.26	5	30	170	1.0	0.1	8.0	7.0	11.0	5
SSCZ15VBS6	2Y4	15	14.70	15.30	5	30	200	1.0	0.1	10.5	9.2	13.0	5
SSCZ16VBS6	2Y5	16	15.68	16.32	5	40	200	1.0	0.1	11.2	10.4	14.0	5
SSCZ18VBS6	2Y6	18	17.64	18.36	5	45	225	1.0	0.1	12.6	12.4	16.0	5
SSCZ20VBS6	2Y7	20	19.60	20.40	5	55	225	1.0	0.1	14.0	14.4	18.0	5
SSCZ22VBS6	2Y8	22	21.56	22.44	5	55	250	1.0	0.1	15.4	16.4	20.0	5
SSCZ24VBS6	2Y9	24	23.52	24.48	5	70	250	1.0	0.1	16.8	18.4	22.0	5
SSCZ27VBS6	2Y10	27	26.46	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3	2
SSCZ30VBS6	2Y11	30	29.40	30.60	2	80	300	0.5	0.1	21.0	24.4	29.4	2
SSCZ33VBS6	2Y12	33	32.34	33.66	2	80	325	0.5	0.1	23.1	27.4	33.4	2
SSCZ36VBS6	2Y13	36	35.28	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4	2
SSCZ39VBS6	2Y14	39	38.22	39.78	2	130	350	0.5	0.1	27.3	33.4	41.2	2

● Typical Performance Characteristics (T_A=25℃ unless otherwise noted)

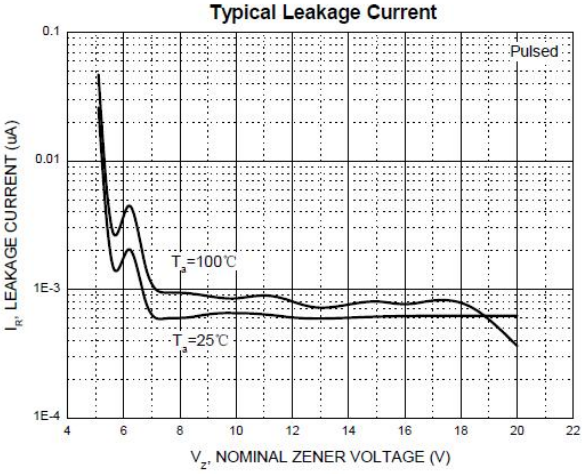
Zener Characteristics (V_Z 5.1V to 20 V)



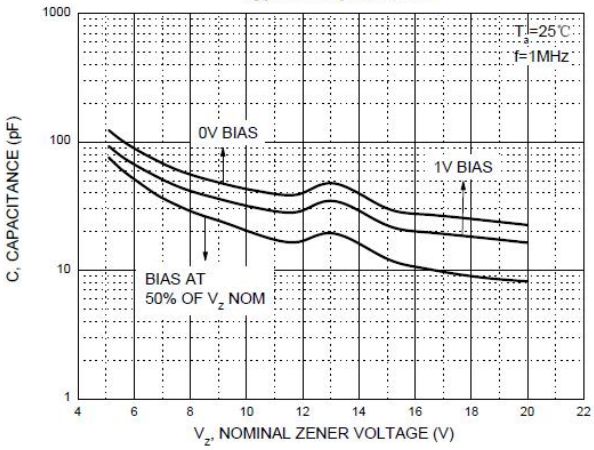
Temperature Coefficients



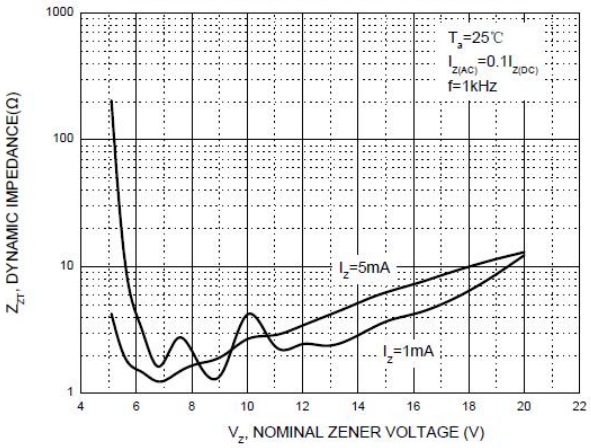
Typical Leakage Current



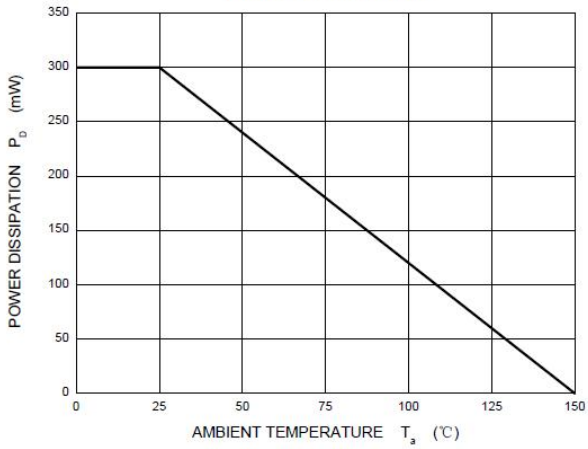
Typical Capacitance



Effect of Zener Voltage on Zener Impedance



Power Derating Curve



● Package Information

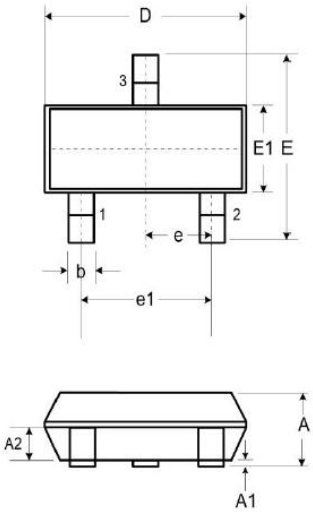
Ordering Information

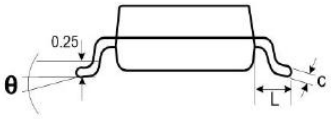
Device	Package	Qty per Reel	Reel Size
SSCZXXXBS6	SOT-23	3000	7 Inch

Mechanical Data

Case: SOT-23

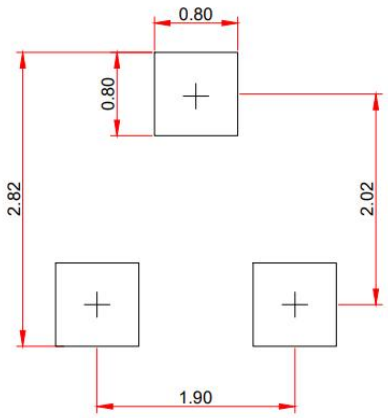
Case Material: Molded Plastic. UL Flammability





DIM	Millimeters		
	Min.	Typ.	Max.
A	0.89	-	1.12
A1	0.01	-	0.10
A2	0.88	0.95	1.02
b	0.30	-	0.51
c	0.08	-	0.18
D	2.80	2.90	3.04
E	2.10	2.37	2.64
E1	1.20	1.30	1.40
e	0.95		
e1	1.90		
L	0.40	0.50	0.60
L1	0.55		
N	3		
θ	0°	-	8°

Recommended Pad outline（Unit: mm）



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