TECH PUBLIC
台舟电子

BZT52Cxxx Series
500m Watt Zener Voltage Regulators

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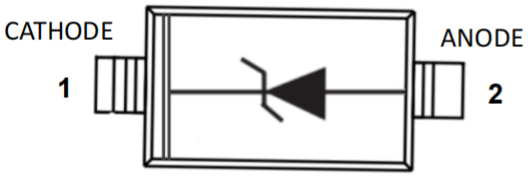
Features

- Low Zener Impedance
- Power Dissipation of 500mW
- High Stability and High Reliability
- Halogen free and RoHS compliant
- SOD123 surface mount package

Applications

- General voltage regulation
- Mobile & handheld systems
- Household Electric Appliances
- Industrial automation
- communication field

Pin Configuration



SOD123

Maximum Ratings& Thermal Characteristics

(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward Voltage @ IF=10mA	VF	0.9	V
Power Dissipation	PD	500	mW
Thermal Resistance (Junction-to-Ambient)	RθJA	340	°C/W
Junction Temperature Range	TJ	-55 ~ +150	°C
Storage Temperature Range	TSTG	-55 ~ +150	°C

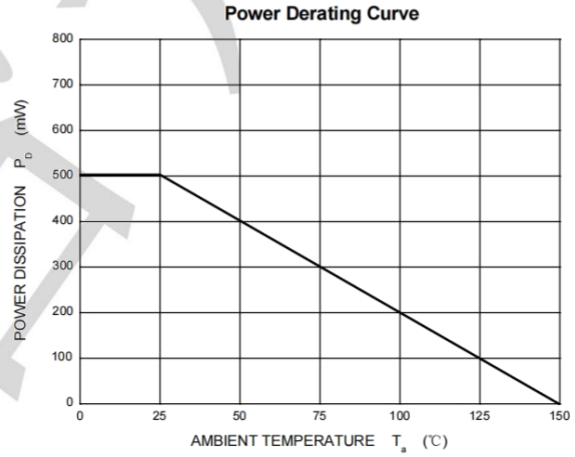
Electrical Characteristics (TA=25°C unless otherwise specified)

Part Number	Zener Voltage Range			Dynamic Impedance				Reverse Leakage Current	
	V_{znom}	V_{ZT}	at I_{ZT}	Z_{ZT}	at I_{ZT}	Z_{ZK}	at I_{ZK}	I_R	at V_R
	V	V	mA	Max. (Ω)	mA	Max. (Ω)	mA	Max. (μA)	V
BZT52C2V4	2.4	2.2~2.6	5	100	5	600	1	50	1
BZT52C2V7	2.7	2.5~2.9	5	100	5	600	1	20	1
BZT52C3V0	3.0	2.8~3.2	5	95	5	600	1	10	1
BZT52C3V3	3.3	3.1~3.5	5	95	5	600	1	5	1
BZT52C3V6	3.6	3.4~3.8	5	90	5	600	1	5	1
BZT52C3V9	3.9	3.7~4.1	5	90	5	600	1	3	1
BZT52C4V3	4.3	4.0~4.6	5	90	5	600	1	3	1
BZT52C4V7	4.7	4.4~5.0	5	80	5	500	1	3	2
BZT52C5V1	5.1	4.8~5.4	5	60	5	480	1	2	2
BZT52C5V6	5.6	5.2~6.0	5	40	5	400	1	1	2
BZT52C6V2	6.2	5.8~6.6	5	10	5	150	1	3	4
BZT52C6V8	6.8	6.4~7.2	5	15	5	80	1	2	4
BZT52C7V5	7.5	7.0~7.9	5	15	5	80	1	1	5
BZT52C8V2	8.2	7.7~8.7	5	15	5	80	1	0.7	5
BZT52C9V1	9.1	8.5~9.6	5	15	5	100	1	0.5	6
BZT52C10	10	9.4~10.6	5	20	5	150	1	0.2	7
BZT52C11	11	10.4~11.6	5	20	5	150	1	0.1	8
BZT52C12	12	11.4~12.7	5	25	5	150	1	0.1	8
BZT52C13	13	12.4~14.1	5	30	5	170	1	0.1	8
BZT52C15	15	13.8~15.6	5	30	5	200	1	0.1	10.5
BZT52C16	16	15.3~17.1	5	40	5	200	1	0.1	11.2
BZT52C18	18	16.8~19.1	5	45	5	225	1	0.1	12.6

Electrical Characteristics (TA=25°C unless otherwise specified)

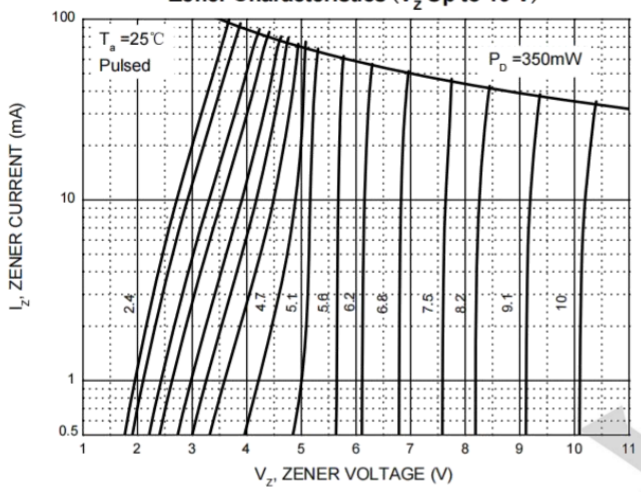
Part Number	Zener Voltage Range			Dynamic Impedance				Reverse Leakage Current	
	V_{znom}	V_{ZT}	at I_{ZT}	Z_{ZT}	at I_{ZT}	Z_{ZK}	at I_{ZK}	I_R	at V_R
	V	V	mA	Max. (Ω)	mA	Max. (Ω)	mA	Max. (μA)	V
BZT52C20	20	18.8~21.2	5	55	5	225	1	0.1	14
BZT52C22	22	20.8~23.3	5	55	5	250	1	0.1	15.4
BZT52C24	24	22.8~25.6	5	70	5	250	1	0.1	16.8
BZT52C27	27	25.1~28.9	2	80	2	300	0.5	0.1	18.9
BZT52C30	30	28~32	2	80	2	300	0.5	0.1	21
BZT52C33	33	31~35	2	80	2	325	0.5	0.1	23.1
BZT52C36	36	34~38	2	90	2	350	0.5	0.1	25.2
BZT52C39	39	37~41	2	130	2	350	0.5	0.1	27.3
BZT52C43	43	40~46	2	130	2	500	1	2	33
BZT52C47	47	44~50	2	150	2	500	1	2	36
BZT52C51	51	48~54	2	180	2	500	1	1	37
BZT52C56	56	52~60	2	180	2	500	1	1	43
BZT52C62	62	58~66	2	200	2	500	1	0.2	47
BZT52C68	68	64~72	2	250	2	500	1	0.2	52
BZT52C75	75	70~79	2	300	2	500	1	0.2	57

Typical Characteristics Curves

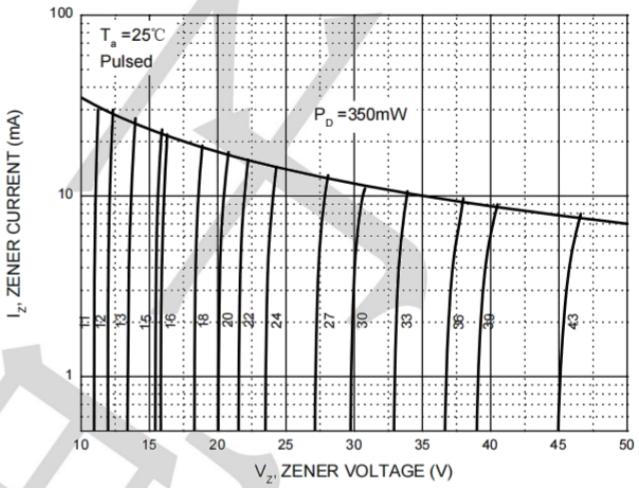


Typical Characteristics Curves

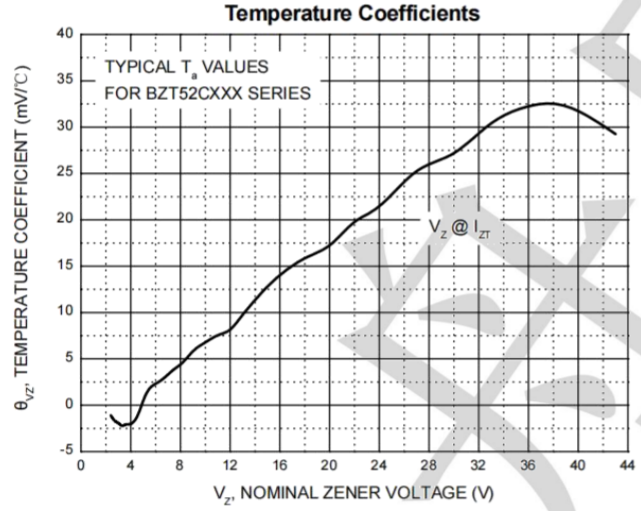
Zener Characteristics (V_Z Up to 10 V)



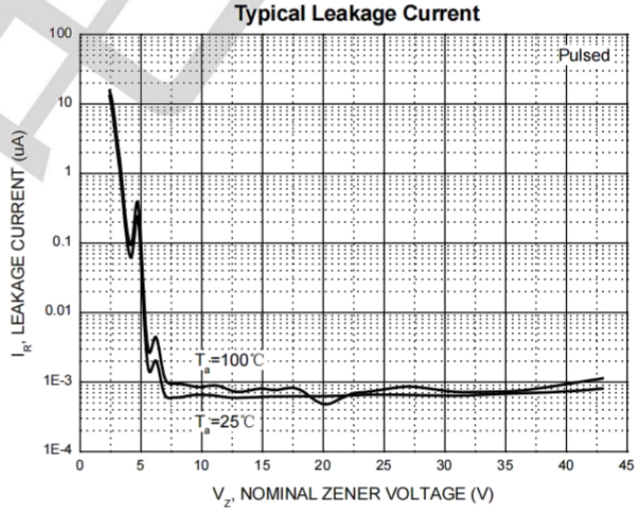
Zener Characteristics (11 V to 43 V)



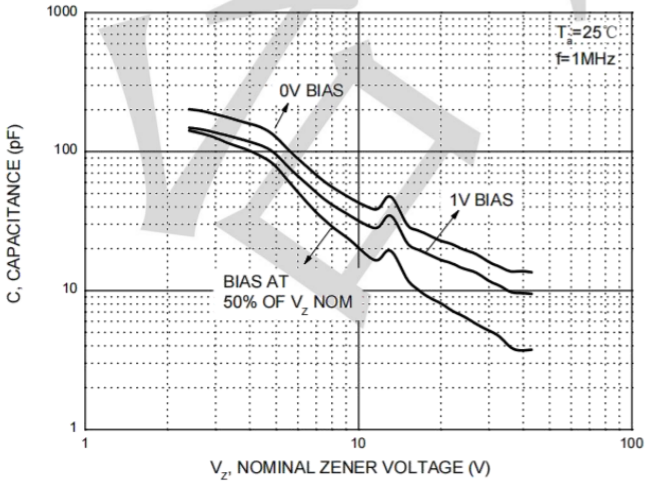
Temperature Coefficients



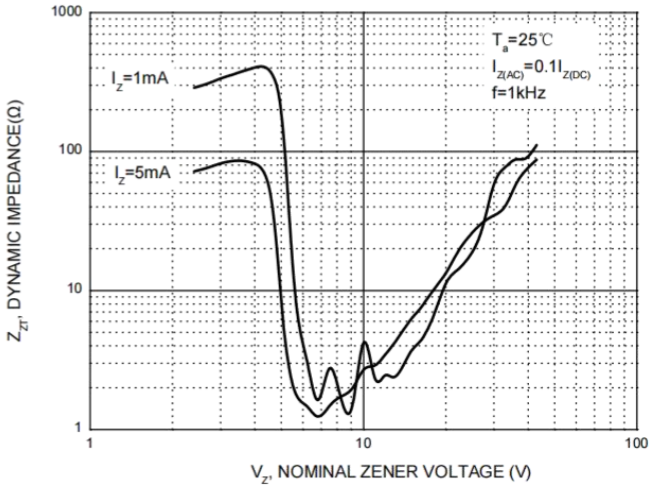
Typical Leakage Current



Typical Capacitance

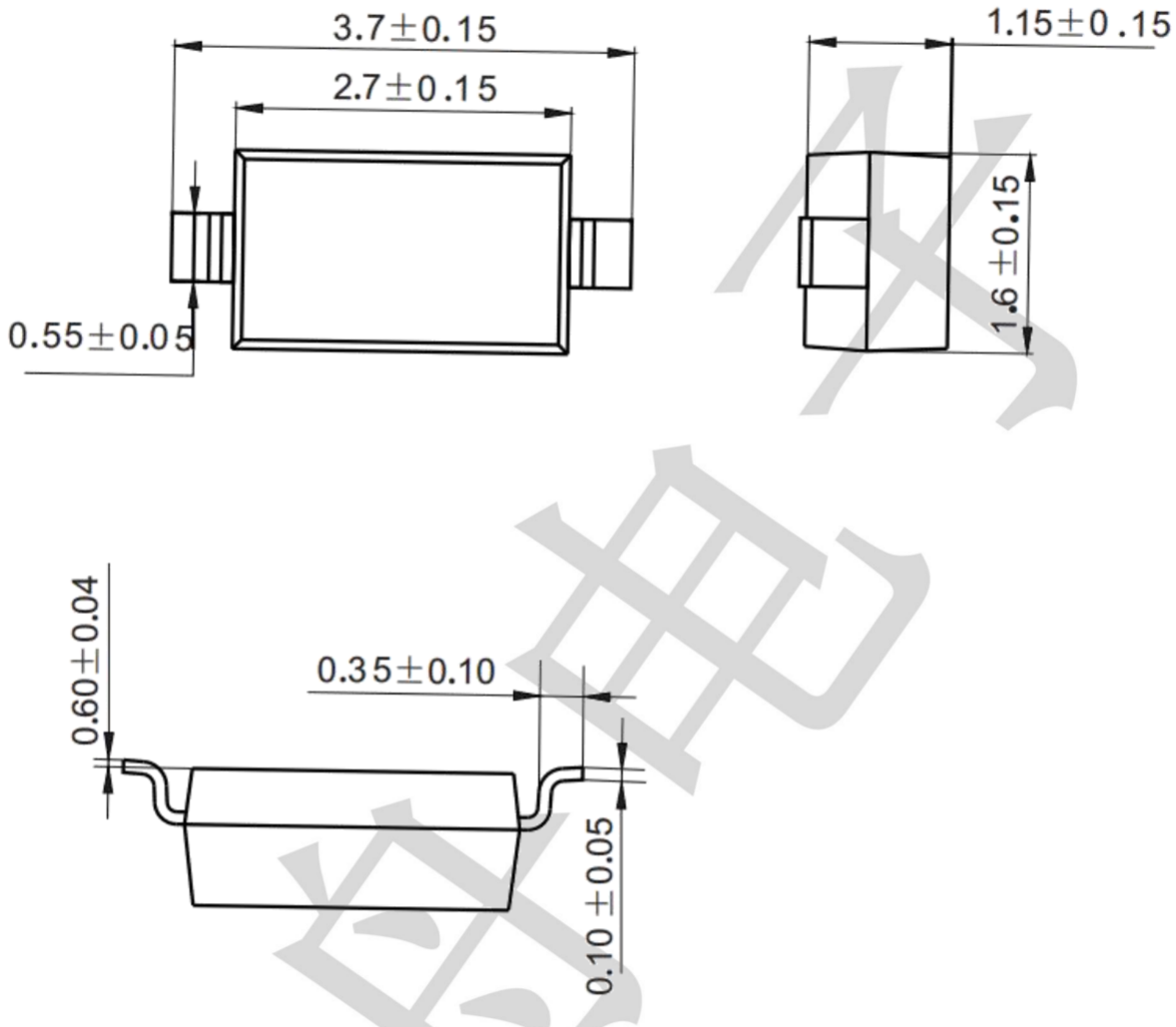


Effect of Zener Voltage on Zener Impedance



Package Outline Dimensions (unit: mm)

SOD123



Mounting Pad Layout (unit: mm)