TECH PUBLIC
台舟电子

BZT52Cxxx Series
200m Watt Zener Voltage Regulators

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Features

- Low Zener Impedance
- Power Dissipation of 200mW
- High Stability and High Reliability
- Halogen free and RoHS compliant
- SOD323 surface mount package

Applications

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

SOD323

Pin Configuration

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	200	mW
Thermal Resistance (Junction-to-Ambient)	RθJA	556	°C/W
Thermal Resistance (Junction-to-Case)	RθJC	417	°C/W
Junction Temperature Range	TJ	150	°C
Storage Temperature Range	TSTG	-55 ~ +150	°C

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

Type Number	Nominal Zener Voltage				Zener Impedance			Leakage Current		Typical Temperature coefficent@ IZTC(mV/℃)		Admissible Zener Current
	V_Z(V)			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	I_{ZK}	I_R@V_R				
	Min.	Nom.	Max.	(mA)	(Ω)		(mA)	I_R(μA)	V_R(V)	Min.	Max.	I_{ZM} (mA)
BZT52C2V0S	1.80	2.0	2.15	5	150	600	1.0	100	1.0	-3.5	0	5
BZT52C2V4S	2.2	2.4	2.6	5	100	600	1.0	50	1.0	-3.5	0	5
BZT52C2V7S	2.5	2.7	2.9	5	100	600	1.0	20	1.0	-3.5	0	5
BZT52C3V0S	2.8	3.0	3.2	5	95	600	1.0	10	1.0	-3.5	0	5
BZT52C3V3S	3.1	3.3	3.5	5	95	600	1.0	5	1.0	-3.5	0	5
BZT52C3V6S	3.4	3.6	3.8	5	90	600	1.0	5	1.0	-3.5	0	5
BZT52C3V9S	3.7	3.9	4.1	5	90	600	1.0	3	1.0	-3.5	0	5
BZT52C4V3S	4.0	4.3	4.6	5	90	600	1.0	3	1.0	-3.5	0	5
BZT52C4V7S	4.4	4.7	5.0	5	80	500	1.0	3	2.0	-3.5	0.2	5
BZT52C5V1S	4.8	5.1	5.4	5	60	480	1.0	2	2.0	-2.7	1.2	5
BZT52C5V6S	5.2	5.6	6.0	5	40	400	1.0	1	2.0	-2.0	2.5	5
BZT52C6V2S	5.8	6.2	6.6	5	10	150	1.0	3	4.0	0.4	3.7	5
BZT52C6V8S	6.4	6.8	7.2	5	15	80	1.0	2	4.0	1.2	4.5	5
BZT52C7V5S	7.0	7.5	7.9	5	15	80	1.0	1	5.0	2.5	5.3	5
BZT52C8V2S	7.7	8.2	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5
BZT52C9V1S	8.5	9.1	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
BZT52C10S	9.4	10	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
BZT52C11S	10.4	11	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
BZT52C12S	11.4	12	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
BZT52C13S	12.4	13	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5
BZT52C15S	13.8	15	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	5
BZT52C16S	15.3	16	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5
BZT52C18S	16.8	18	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5
BZT52C20S	18.8	20	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
BZT52C22S	20.8	22	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
BZT52C24S	22.8	24	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5

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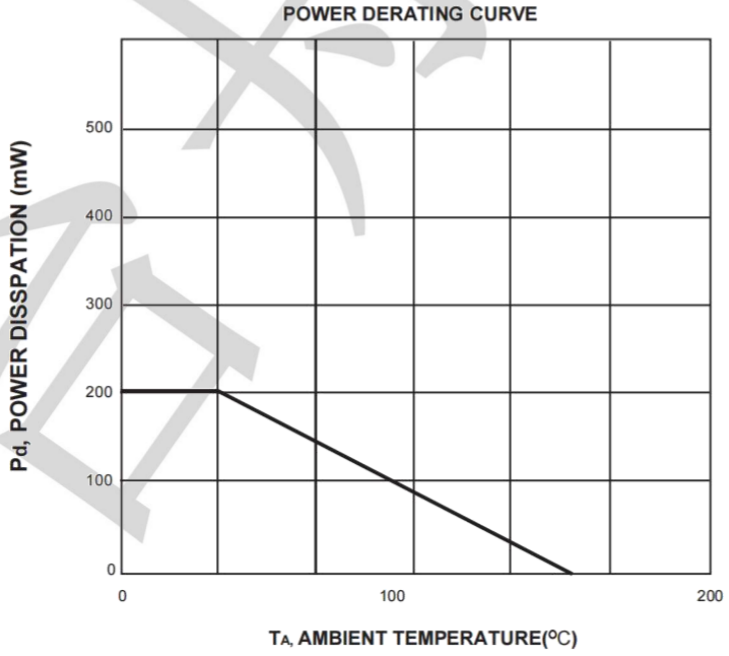
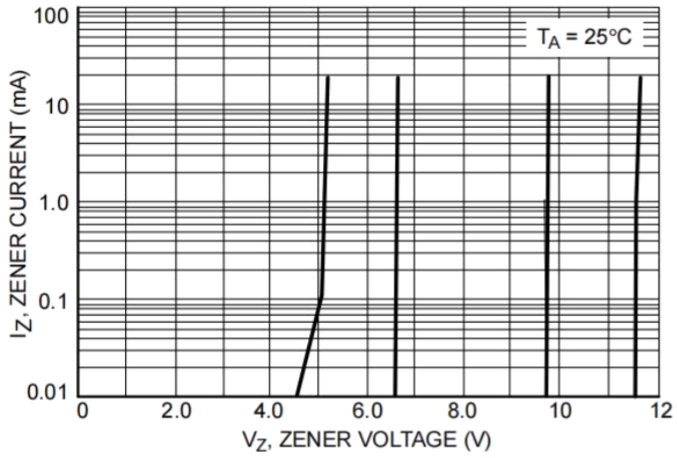
	V_Z(V)			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	I_{ZK}	I_R@V_R				
	Min.	Nom.	Max.	(mA)	(Ω)		(mA)	I_R(μA)	V_R(V)	Min.	Max.	I_{ZM} (mA)
BZT52C27S	25.1	27	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
BZT52C30S	28.0	30	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
BZT52C33S	31.0	33	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
BZT52C36S	34.0	36	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2
BZT52C39S	37.0	39	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	2
BZT52C43S	40.0	43	46.0	5	100	700	1.0	0.1	32.0	10.0	12.0	5
BZT52C47S	44.0	47	50.0	5	100	750	1.0	0.1	35.0	10.0	12.0	5
BZT52C51S	48.0	51	54.0	5	100	750	1.0	0.1	38.0	10.0	12.0	5
BZT52C56S	52.0	56	60.0	5	135	700	1.0	0.1	39.0	10.0	12.0	5
BZT52C62S	58.0	62	66.0	5	200	1000	1.0	0.2	47.0	10.0	12.0	5
BZT52C68S	64.0	68	72.0	5	250	1000	1.0	0.2	52.0	10.0	12.0	5
BZT52C75S	70.0	75	79.0	5	300	1000	1.0	0.2	57	10.0	12.0	5

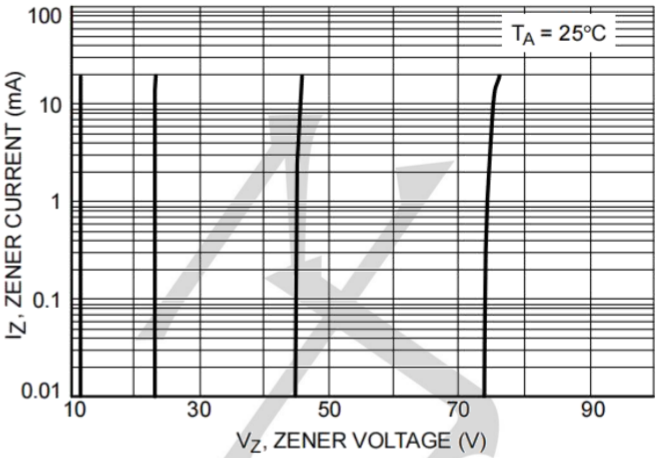
Typical Characteristics Curves



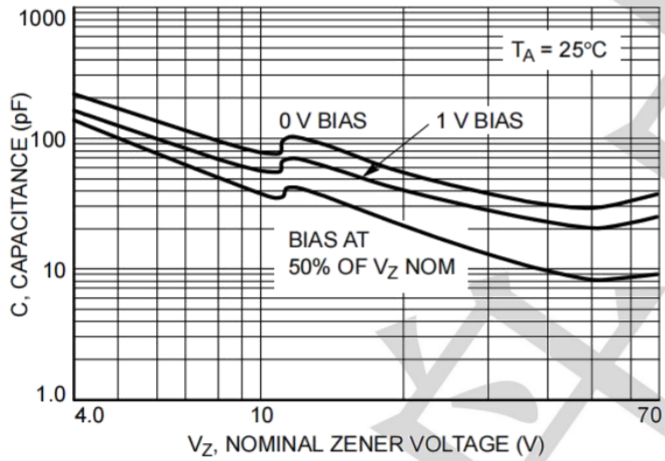
Typical Characteristics Curves



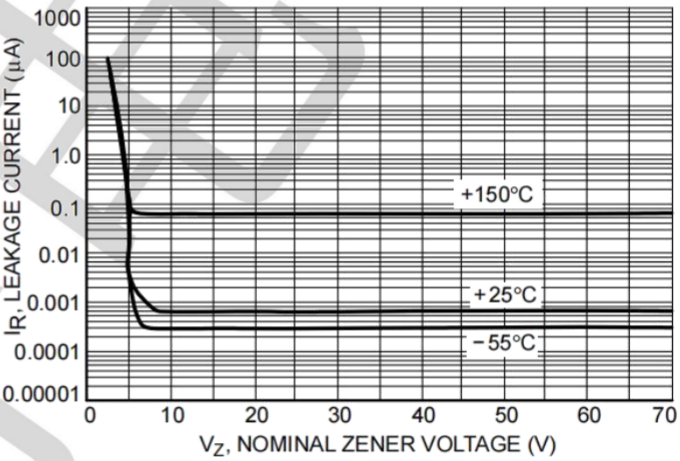
Zener Voltage versus Zener Current (V_Z Up to 12 V)



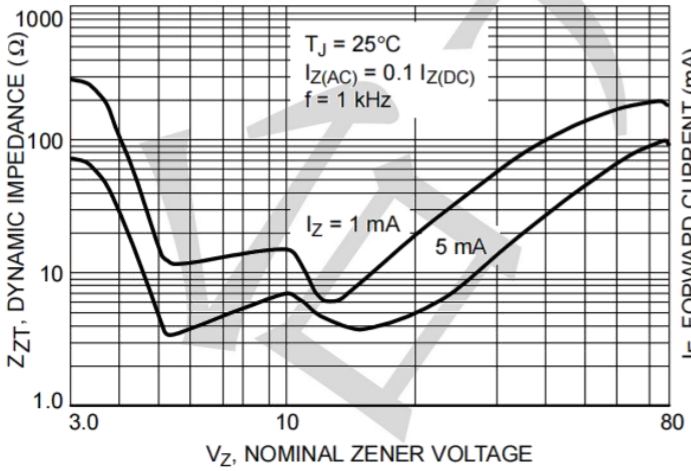
Zener Voltage versus Zener Current (12 V to 75 V)



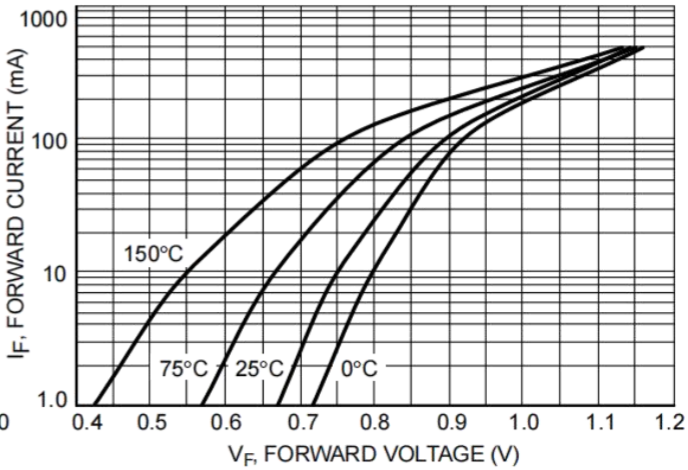
Typical Capacitance



Typical Leakage Current



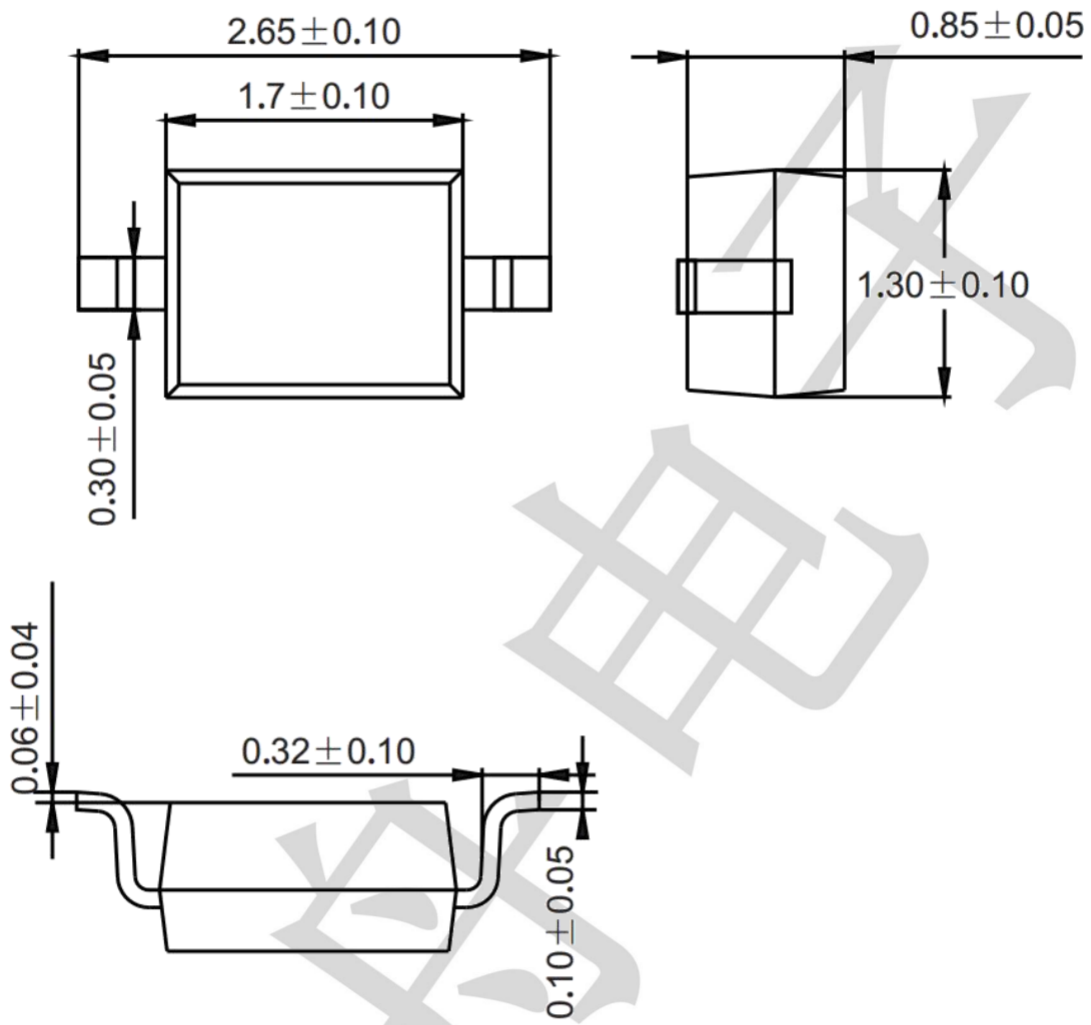
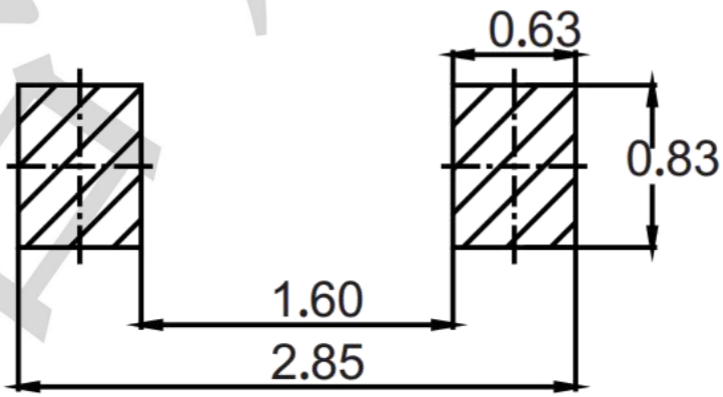
Effect of Zener Voltage on Zener Impedance



Typical Forward Voltage

Package Outline Dimensions (unit: mm)

SOD323



Mounting Pad Layout (unit: mm)