TECH PUBLIC
台舟电子

BZX584C Series
150m Watt Zener Voltage Regulators

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Features

- Low Zener Impedance
- Power Dissipation of 150mW
- High Stability and High Reliability
- Halogen free and RoHS compliant
- SOD523 surface mount package

Applications

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

SOD523

Pin Configuration

Maximum Ratings& Thermal Characteristics

(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward Voltage @ IF=10mA	VF	0.85	V
Power Dissipation	PD	150	mW
Thermal Resistance (Junction-to-Ambient)	RθJA	883	°C/W
Thermal Resistance (Junction-to-Case)	RθJC	623	°C/W
Junction Temperature Range	TJ	150	°C
Storage Temperature Range	TSTG	-55 ~ +150	°C

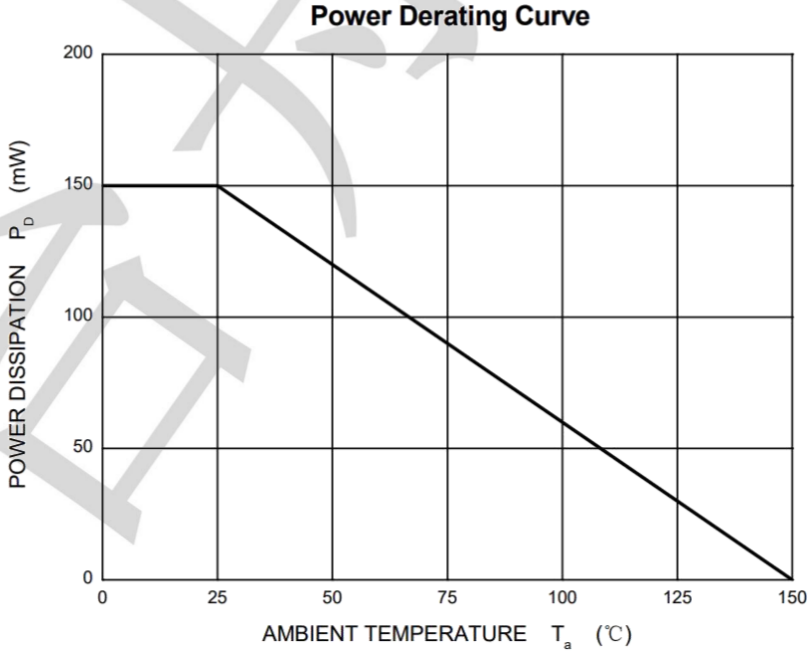
Electrical Characteristics (TA=25°C unless otherwise specified)

DEVICE	VZ(V) @ IZ=5mA			ZZ @ IZ = 1mA	ZZ @ IZ = 5mA	ZZ @ IZ = 20mA	IR@VR	VR	Typical Temperature Coefficient(mV/℃)@ IZ=5mA	
	MIN	NOM	MAX	(Ω)	(Ω)	(Ω)	(uA)	V	Min	Max
BZX584C2V4	2.28	2.4	2.60	600	100	50	50	1	-3.5	0
BZX584C2V7	2.57	2.7	2.90	600	100	50	20	1	-3.5	0
BZX584C3V0	2.85	3	3.15	600	95	50	10	1	-3.5	0
BZX584C3V3	3.14	3.3	3.47	600	95	40	5	1	-3.5	0
BZX584C3V6	3.42	3.6	3.78	600	90	40	5	1	-3.5	0
BZX584C3V9	3.71	3.9	4.09	600	90	30	0.5	1	-3.5	0
BZX584C4V3	4.09	4.3	4.52	600	90	30	0.5	1	-3.5	0
BZX584C4V7	4.47	4.7	4.94	500	80	15	3.0	2	-3.5	0.2
BZX584C5V1	4.85	5.1	5.36	480	60	15	2.0	2	-2.7	1.2
BZX584C5V6	5.32	5.6	5.88	400	40	10	1.0	2	-2	2.5
BZX584C6V2	5.89	6.2	6.51	150	9.5	5.7	2.4	4	0.4	3.7
BZX584C6V8	6.46	6.8	7.14	76	14.2	5.7	1.6	4	1.2	4.5
BZX584C7V5	7.13	7.5	7.88	76	14.2	5.7	0.8	5	2.5	5.3
BZX584C8V2	7.79	8.2	8.61	76	14.2	5.7	0.56	5	3.2	6.2
BZX584C9V1	8.65	9.1	9.56	95	14.2	7.6	0.4	7	3.8	7.0
BZX584C10	9.50	10	10.50	142.5	19	9.5	0.1	8	4.5	8.0
BZX584C11	10.45	11	11.55	142.5	19	9.5	0.1	8	5.4	9.0
BZX584C12	11.4	12	12.60	150	23.7	9.5	0.1	8	6.0	10.0
BZX584C13	12.35	13	13.65	190	28.5	14.2	0.1	8	7.0	11.0
BZX584C15	14.25	15	15.75	190	28.5	19	0.1	11	9.2	13.0
BZX584C16	15.2	16	16.80	190	38	19	0.1	11	10.4	14.0
BZX584C18	17.10	18	18.90	213	42.7	19	0.1	13	12.4	16.0
BZX584C20	19.0	20	21.0	213	52.2	19	0.1	14	14.4	18.0
BZX584C22	20.9	22	23.10	237	52.2	23.7	0.1	15	16.4	20.0
BZX584C24	22.8	24	25.2	250	66.5	23.7	0.1	17	18.4	22.0

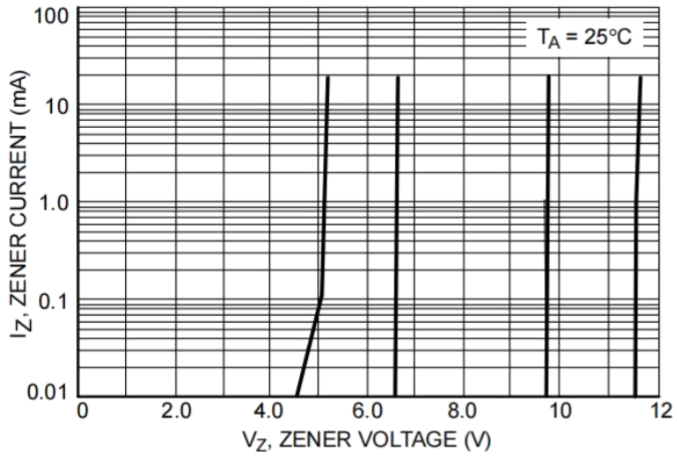
Electrical Characteristics (TA=25°C unless otherwise specified)

DEVICE	VZ(V) @ IZ=5mA			ZZ @ IZ = 1mA	ZZ @ IZ = 5mA	ZZ @ IZ = 20mA	IR@VR	VR	Typical Temperature Coefficient(mV/℃)@ IZ=5mA	
	MIN	NOM	MAX	(Ω)	(Ω)	(Ω)	(uA)	V	Min	Max
BZX584C27	25.65	27	28.35	295	75	43	0.04	19	21.4	25.3
BZX584C30	28.50	30	31.50	295	75	48	0.04	21	24.4	29.4
BZX584C33	31.35	33	34.65	320	75	53	0.04	23	27.4	33.4
BZX584C36	34.20	36	37.80	345	85	58	0.04	25	30.4	37.4
BZX584C39	37.05	39	40.95	345	125	68	0.04	27	33.4	41.2
BZX584C43	40.85	43	45.15	370	145	78	0.04	30	37.6	46.6
BZX584C47	44.65	47	49.35	370	165	88	0.04	33	42.0	51.8
BZX584C51	48.45	51	53.55	395	175	98	0.04	36	46.6	57.2
BZX584C56	52.2	56	58.8	420	195	108	0.04	39	52.2	63.8
BZX584C62	58.9	62	65.1	445	210	118	0.04	43	58.8	71.6
BZX584C68	64.6	68	71.4	470	235	128	0.04	48	65.6	79.8
BZX584C75	71.25	75	78.75	495	250	138	0.04	53	73.4	88.6

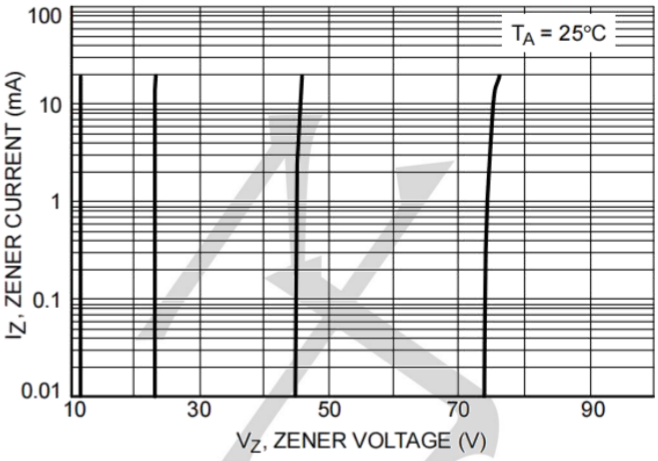
Typical Characteristics Curves



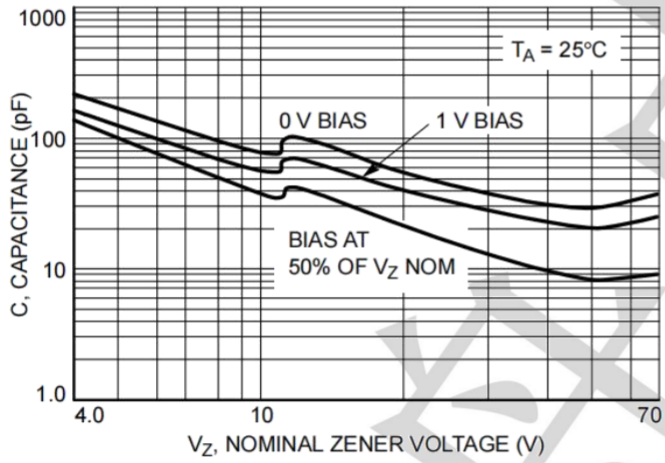
Typical Characteristics Curves



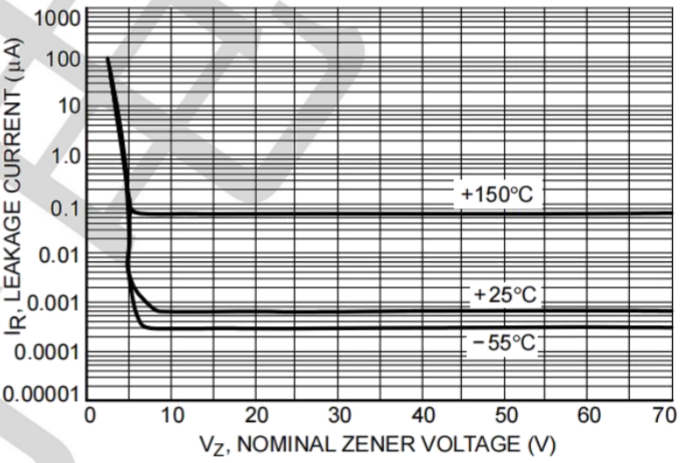
Zener Voltage versus Zener Current (V_Z Up to 12 V)



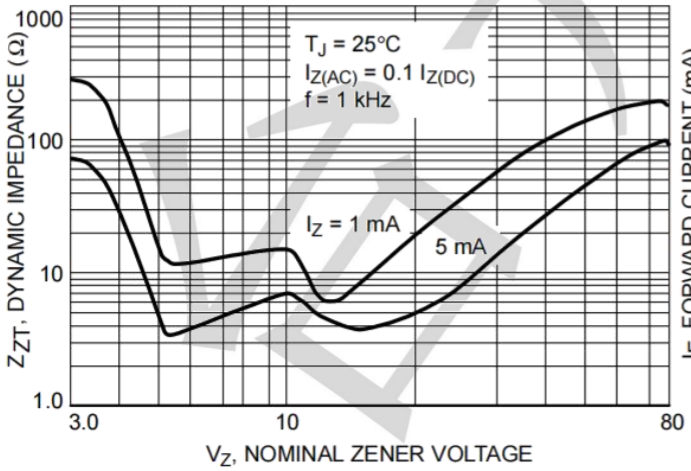
Zener Voltage versus Zener Current (12 V to 75 V)



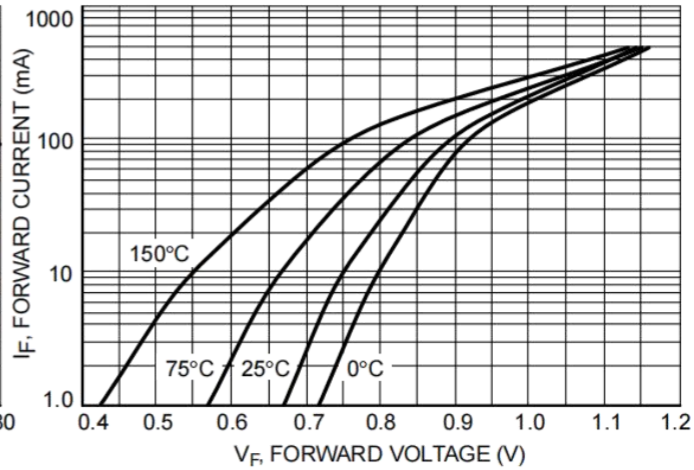
Typical Capacitance



Typical Leakage Current



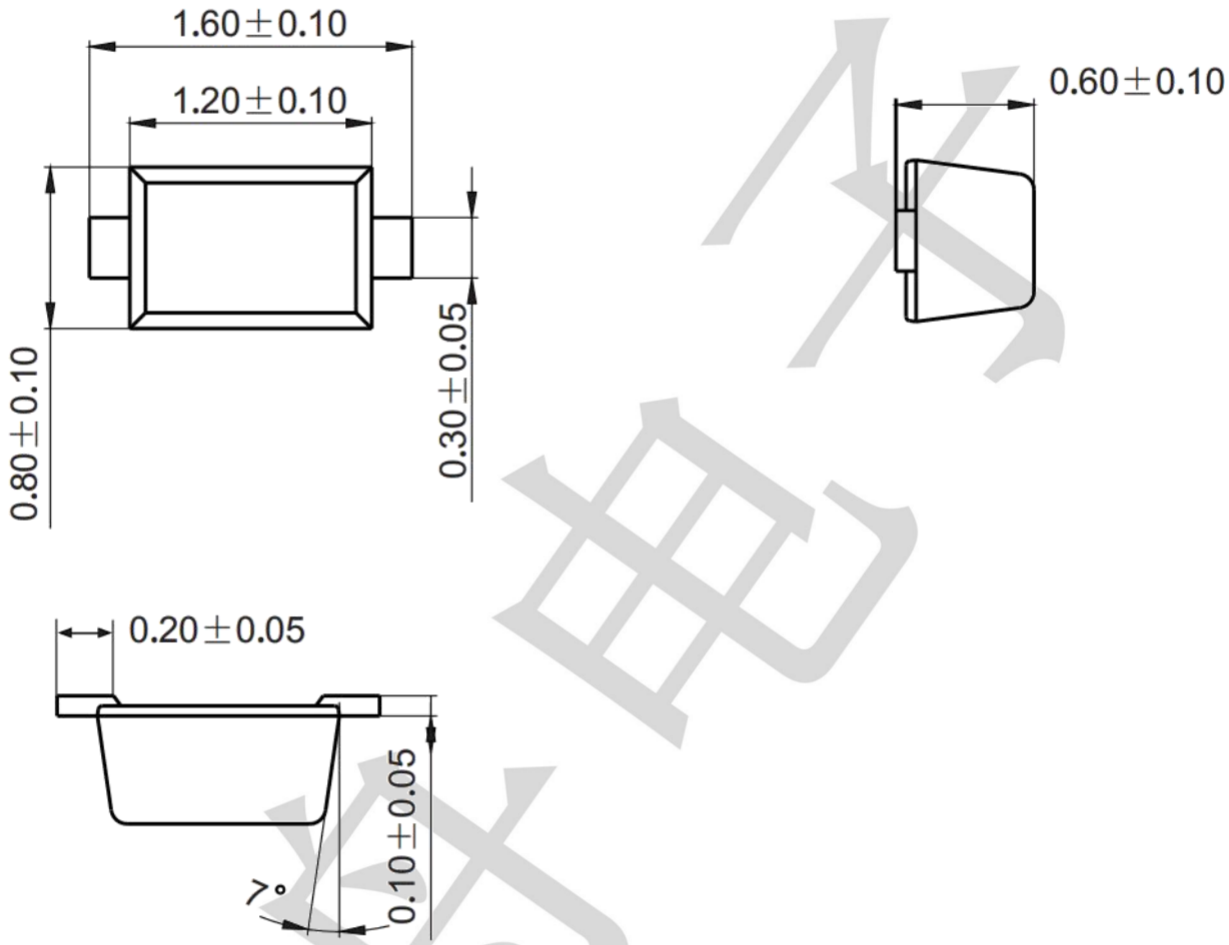
Effect of Zener Voltage on Zener Impedance



Typical Forward Voltage

Package Outline Dimensions (unit: mm)

SOD523



Mounting Pad Layout (unit: mm)