TECH PUBLIC
台舟电子

TPZxxxCS3 Series
350m Watt Zener Voltage Regulators

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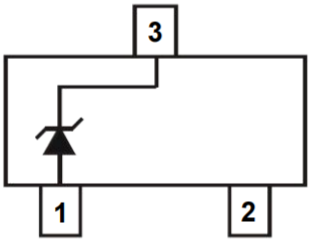
Features

- Low Zener Impedance
- Power Dissipation of 350mW
- High Stability and High Reliability
- Halogen free and RoHS compliant
- SOT23 surface mount package

Applications

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

Pin Configuration



SOT23

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	350	mW
Thermal Resistance (Junction-to-Ambient)	RθJA	417	°C/W
Junction Temperature Range	TJ	-55 ~ +150	°C
Storage Temperature Range	TSTG	-65 ~ +150	°C

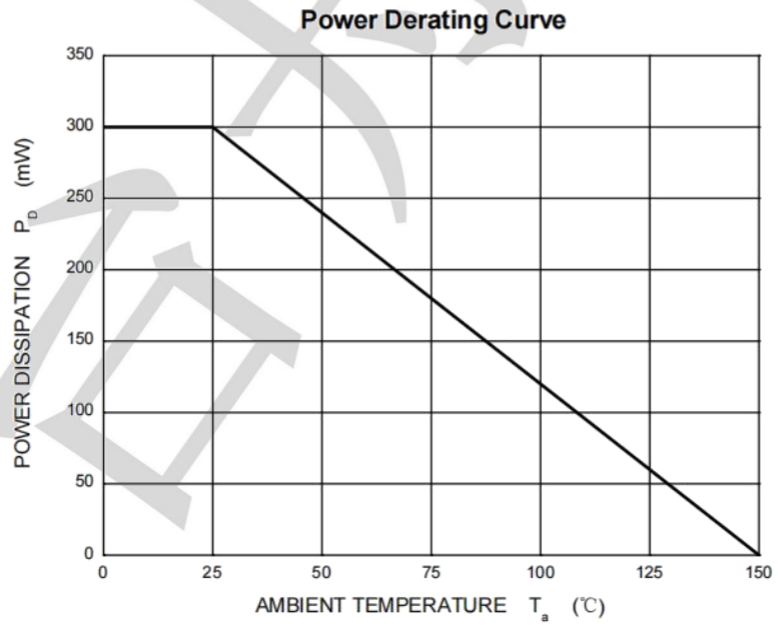
Electrical Characteristics (TA=25°C unless otherwise specified)

Part Number	Zener Voltage			Maximum Zener Impedance				Maximum Reverse Current I_R @ V_R	
	V_Z @ I_{ZT}			I_{ZT}	Z_{ZT} @ I_{ZT}	IZK	Z_{ZK} @ I_{ZK}	I_R	V_R
	Min.(V)	Nom(V)	Max.(V)	mA	Ω	mA	Ω	μA	V
TPZ2V4CS3	2.28	2.40	2.52	5	100	1	600	50	1.0
TPZ2V7CS3	2.50	2.70	2.90	5	100	1	600	20	1.0
TPZ3V0CS3	2.80	3.00	3.20	5	95	1	600	10	1.0
TPZ3V3CS3	3.10	3.30	3.50	5	95	1	600	5	1.0
TPZ3V6CS3	3.40	3.60	3.80	5	90	1	600	5	1.0
TPZ3V9CS3	3.70	3.90	4.10	5	90	1	600	3	1.0
TPZ4V3CS3	4.00	4.30	4.60	5	90	1	600	3	1.0
TPZ4V7CS3	4.40	4.70	5.00	5	80	1	500	3	2.0
TPZ5V1CS3	4.80	5.10	5.40	5	60	1	480	2	2.0
TPZ5V6CS3	5.20	5.60	6.00	5	40	1	400	1	2.0
TPZ6V2CS3	5.80	6.20	6.60	5	10	1	150	3	4.0
TPZ6V8CS3	6.40	6.80	7.20	5	15	1	80	2	4.0
TPZ7V5CS3	7.00	7.50	7.90	5	15	1	80	1	5.0
TPZ8V2CS3	7.70	8.20	8.70	5	15	1	80	0.7	5.0
TPZ9V1CS3	8.50	9.10	9.60	5	15	1	100	0.5	6.0
TPZ10VCS3	9.40	10.00	10.60	5	20	1	150	0.2	7.0
TPZ11VCS3	10.40	11.00	11.60	5	20	1	150	0.1	8.0
TPZ12VCS3	11.40	12.00	12.70	5	25	1	150	0.1	8.0
TPZ13VCS3	12.40	13.00	14.10	5	30	1	170	0.1	8.0
TPZ15VCS3	13.80	15.00	15.60	5	30	1	200	0.1	10.5
TPZ16VCS3	15.30	16.00	17.10	5	40	1	200	0.1	11.2
TPZ18VCS3	16.80	18.00	19.10	5	45	1	225	0.1	12.6
TPZ20VCS3	18.80	20.00	21.20	5	55	1	225	0.1	14.0
TPZ22VCS3	20.80	22.00	23.30	5	55	1	250	0.1	15.4
TPZ24VCS3	22.80	24.00	25.60	5	70	1	250	0.1	16.8
TPZ27VCS3	25.10	27.00	28.90	2	80	0.5	300	0.1	18.9

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

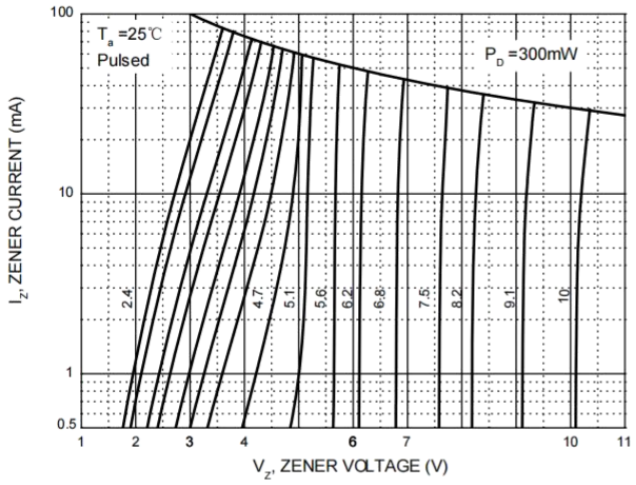
Part Number	Zener Voltage			Maximum Zener Impedance				Maximum Reverse Current I_R @ V_R	
	V_Z @ I_{ZT}			I_{ZT}	Z_{ZT} @ I_{ZT}	IZK	Z_{ZK} @ I_{ZK}	I_R	V_R
	Min.(V)	Nom(V)	Max.(V)	mA	Ω	mA	Ω	μA	V
TPZ30VCS3	28.00	30.00	32.00	2	80	0.5	300	0.1	21.0
TPZ33VCS3	31.00	33.00	35.00	2	80	0.5	325	0.1	23.1
TPZ36VCS3	34.00	36.00	38.00	2	90	0.5	350	0.1	25.2
TPZ39VCS3	37.00	39.00	41.00	2	130	0.5	350	0.1	27.3
TPZ43VCS3	40.85	43.00	45.15	2	150	0.5	375	0.1	30.1
TPZ47VCS3	44.65	47.00	49.35	2	170	0.5	375	0.1	32.9
TPZ51VCS3	48.45	51.00	53.55	2	180	0.5	400	0.1	35.7
TPZ56VCS3	53.20	56.00	58.80	2	200	0.5	425	0.05	39.2
TPZ62VCS3	58.90	62.00	65.10	2	215	0.5	450	0.05	43.4
TPZ68VCS3	64.60	68.00	71.40	2	240	0.5	475	0.05	47.6
TPZ75VCS3	71.25	75.00	78.75	2	255	0.5	500	0.05	52.5

Typical Characteristics Curves

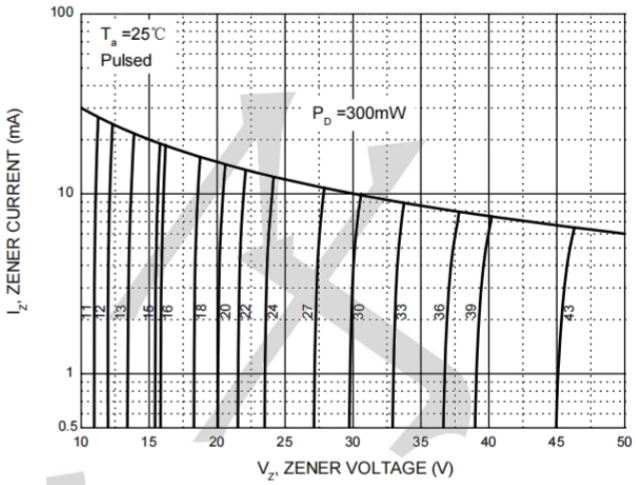


Typical Characteristics Curves

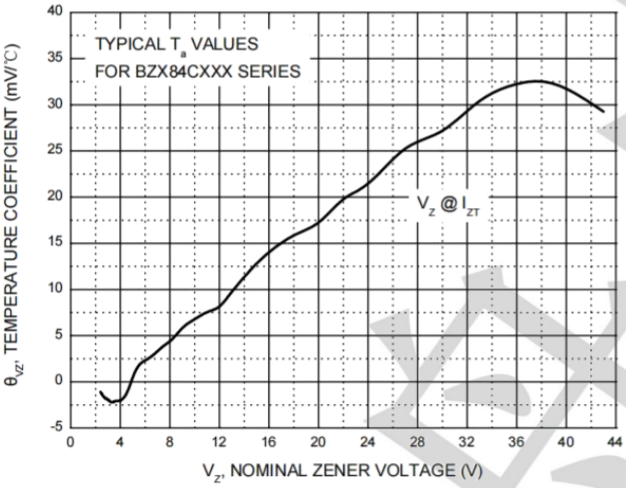
Zener Characteristics (V_Z Up to 10 V)



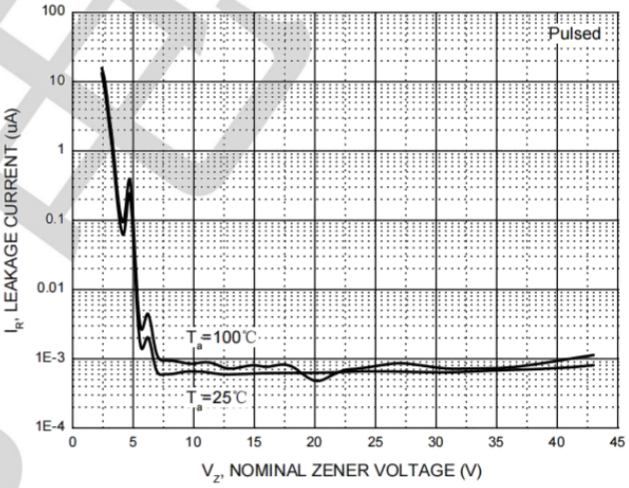
Zener Characteristics (11 V to 43 V)



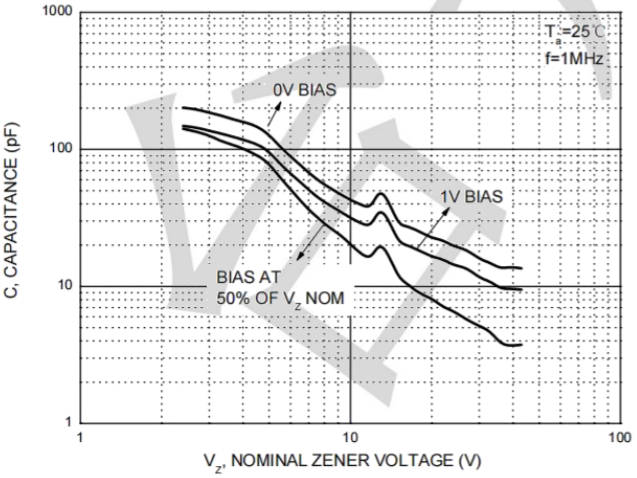
Temperature Coefficients



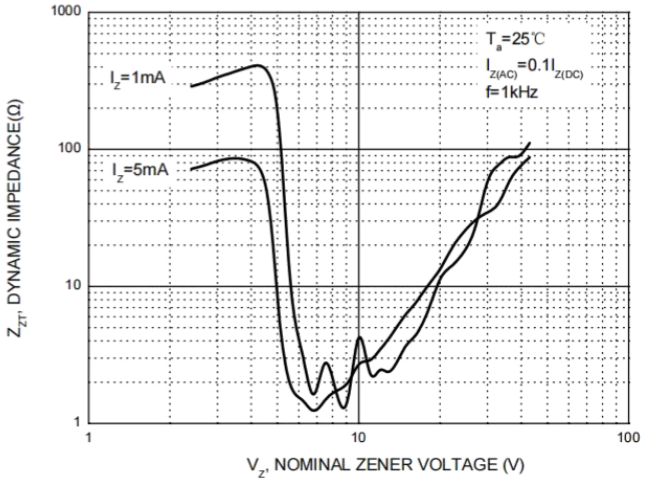
Typical L eakage Current



Typical C apacitance

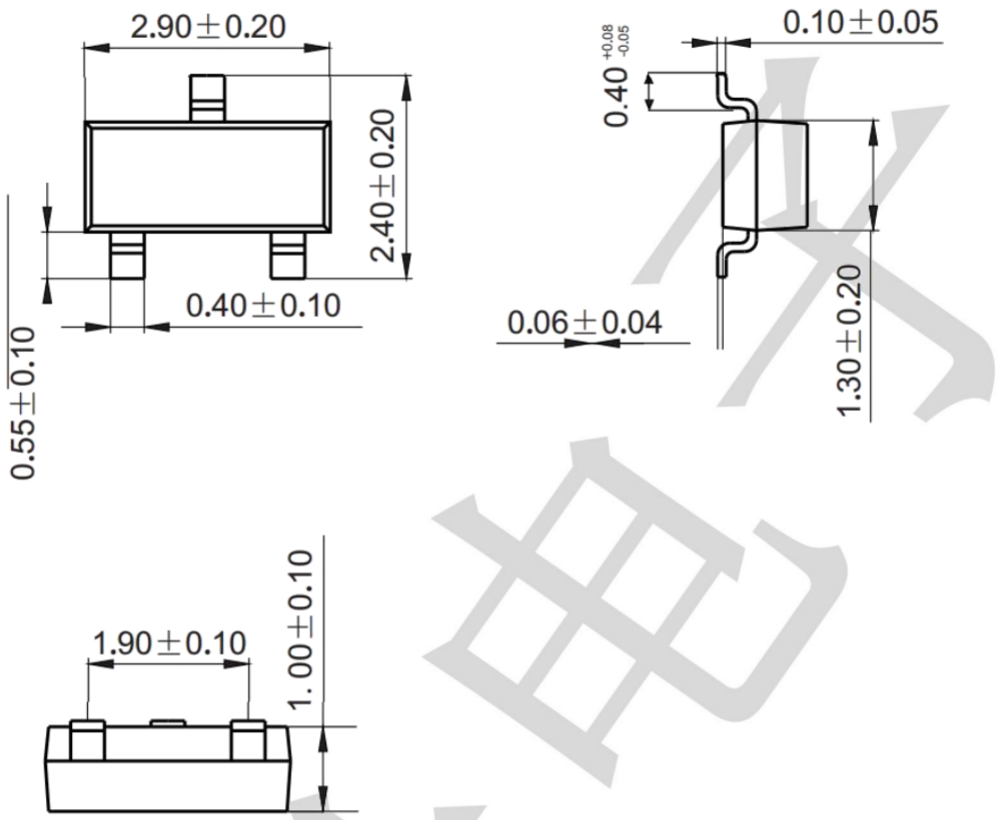


Effect of Zener Voltage on Zener Impedance



Package Outline Dimensions (unit: mm)

SOT23



Mounting Pad Layout (unit: mm)