

Plastic-Encapsulate Diodes

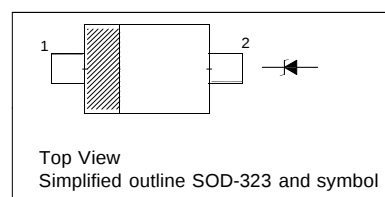
ZENER DIODE

FEATURE

- Planar Die Construction
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- Available in Lead Free Version

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Maximum Ratings(Ta=25°C unless otherwise specified)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ I _F = 10mA	V _F	0.9	V
Power Dissipation(Note 1)	P _d	200	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	625	/W
Junction Temperature	T _j	150	
Storage Temperature Range	T _{stg}	-55 ~ +150	

ELECTRICAL CHARACTERISTICS

$T_a = 25^\circ\text{C}$ unless otherwise specified

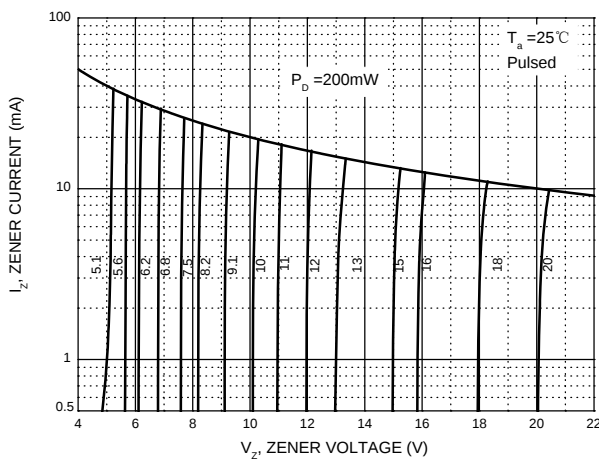
Type Number	Type Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current		Typical Temperature Coefficient @ I_{ZTC} mV/ $^\circ\text{C}$		Test Current I_{ZTC}
		$V_Z @ I_{ZT}$			I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	I_R	V_R			
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V	Min	Max	mA
BZT52B2V4S	2WX	2.4	2.35	2.45	5	100	600	1.0	50	1.0	-3.5	0	5
BZT52B2V7S	2W1	2.7	2.65	2.75	5	100	600	1.0	20	1.0	-3.5	0	5
BZT52B3V0S	2W2	3.0	2.94	3.06	5	95	600	1.0	10	1.0	-3.5	0	5
BZT52B3V3S	2W3	3.3	3.23	3.37	5	95	600	1.0	5	1.0	-3.5	0	5
BZT52B3V6S	2W4	3.6	3.53	3.67	5	90	600	1.0	5	1.0	-3.5	0	5
BZT52B3V9S	2W5	3.9	3.82	3.98	5	90	600	1.0	3	1.0	-3.5	0	5
BZT52B4V3S	2W6	4.3	4.21	4.39	5	90	600	1.0	3	1.0	-3.5	0	5
BZT52B4V7S	2W7	4.7	4.61	4.79	5	80	500	1.0	3	2.0	-3.5	0.2	5
BZT52B5V1S	2W8	5.1	5.00	5.20	5	60	480	1.0	2	2.0	-2.7	1.2	5
BZT52B5V6S	2W9	5.6	5.49	5.71	5	40	400	1.0	1	2.0	-2.0	2.5	5
BZT52B6V2S	2WA	6.2	6.08	6.32	5	10	150	1.0	3	4.0	0.4	3.7	5
BZT52B6V8S	2WB	6.8	6.66	6.94	5	15	80	1.0	2	4.0	1.2	4.5	5
BZT52B7V5S	2WC	7.5	7.35	7.65	5	15	80	1.0	1	5.0	2.5	5.3	5
BZT52B8V2S	2WD	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0	3.2	6.2	5
BZT52B9V1S	2WE	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0	3.8	7.0	5
BZT52B10S	2WF	10	9.80	10.20	5	20	150	1.0	0.2	7.0	4.5	8.0	5
BZT52B11S	2WG	11	10.78	11.22	5	20	150	1.0	0.1	8.0	5.4	9.0	5
BZT52B12S	2WH	12	11.76	12.24	5	25	150	1.0	0.1	8.0	6.0	10.0	5
BZT52B13S	2WI	13	12.74	13.26	5	30	170	1.0	0.1	8.0	7.0	11.0	5
BZT52B15S	2WJ	15	14.70	15.30	5	30	200	1.0	0.1	10.5	9.2	13.0	5
BZT52B16S	2WK	16	15.68	16.32	5	40	200	1.0	0.1	11.2	10.4	14.0	5
BZT52B18S	2WL	18	17.64	18.36	5	45	225	1.0	0.1	12.6	12.4	16.0	5
BZT52B20S	2WM	20	19.60	20.40	5	55	225	1.0	0.1	14.0	14.4	18.0	5
BZT52B22S	2WN	22	21.56	22.44	5	55	250	1.0	0.1	15.4	16.4	20.0	5
BZT52B24S	2WO	24	23.52	24.48	5	70	250	1.0	0.1	16.8	18.4	22.0	5
BZT52B27S	2WP	27	26.46	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3	2
BZT52B30S	2WQ	30	29.40	30.60	2	80	300	0.5	0.1	21.0	24.4	29.4	2
BZT52B33S	2WR	33	32.34	33.66	2	80	325	0.5	0.1	23.1	27.4	33.4	2
BZT52B36S	2WS	36	35.28	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4	2
BZT52B39S	2WT	39	38.22	39.78	2	130	350	0.5	0.1	27.3	33.4	41.2	2

- Notes: 1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².
 2. Short duration test pulse used to minimize self-heating effect.
 3. $f = 1\text{kHz}$.

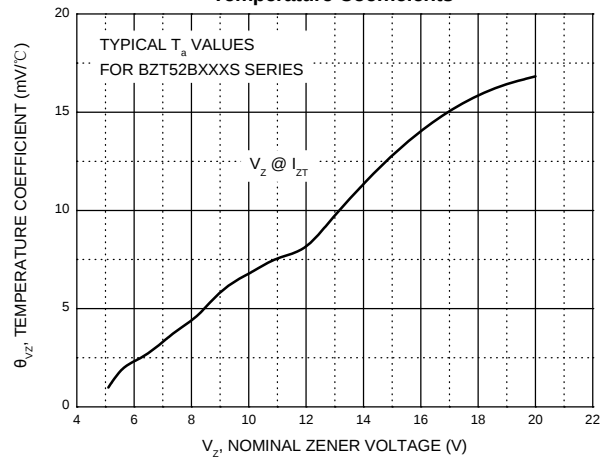
Typical Characteristics

Notes: Our company currently provide 5.1 V - 20 V products only

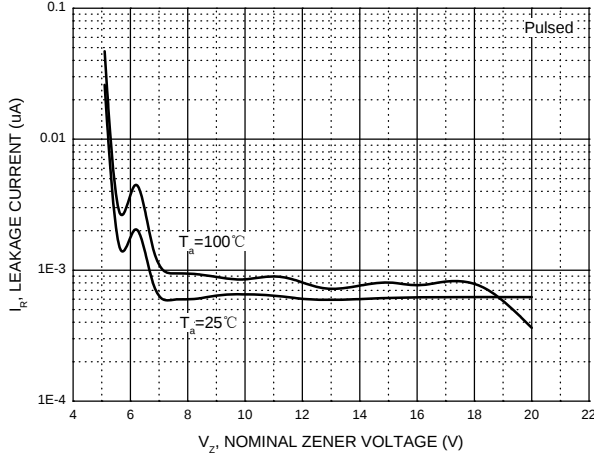
Zener Characteristics (V_z 5.1V to 20 V)



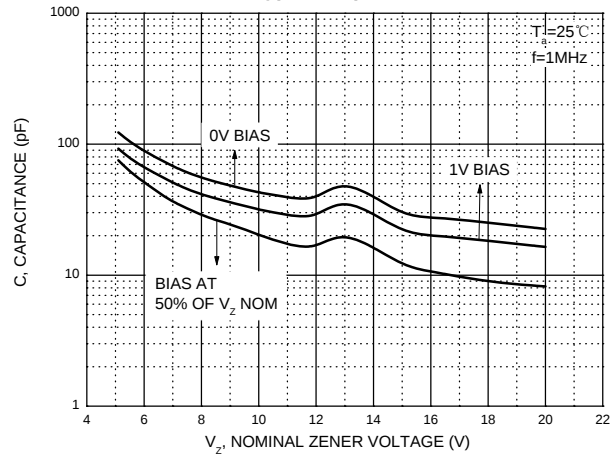
Temperature Coefficients



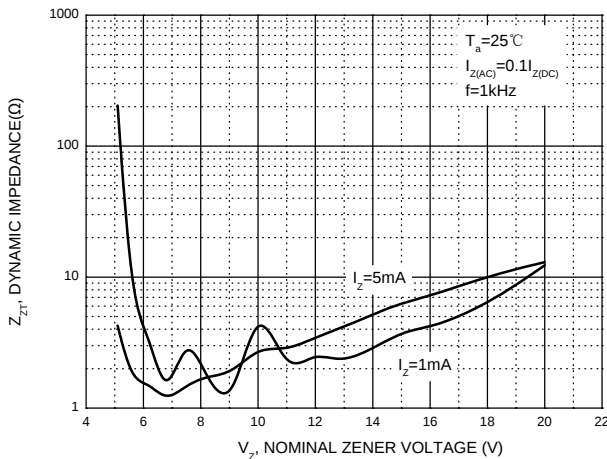
Typical Leakage Current



Typical Capacitance



Effect of Zener Voltage on Zener Impedance



Power Derating Curve

