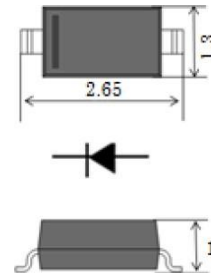




**Features**

- Constant Voltage control
- Wide Voltage Range Selection 2.4V to 75V
- Package : SOD-323
- RoHS compliant/Green EMC
- Matte Tin(Sn) Lead finish
- Cathode Band/Device marking  
Refer to table list
- Complies with the standards of AEC-Q101
- Moisture Sensitivity Level (MSL 1)



**Maximum Ratings (Ta=25°C)**

Symbol	Parameter	Value	Units
P <sub>C</sub>	Collector Power Dissipation <sup>NOTE1</sup>	300	mW
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-65 to +150	°C
I <sub>ZM</sub>	Maximum Regulator Current	P <sub>D</sub> /V <sub>Z</sub>	mA
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	500	°C/W

NOTE: 1、 Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.

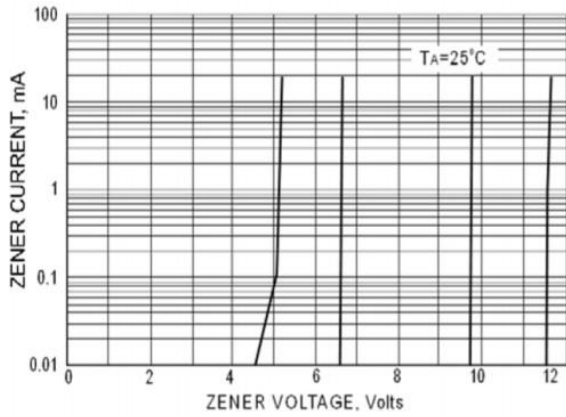
**Electrical Characteristics (T =25°C unless otherwise noted)**

Type Number	Device Marking	Vz (V) (Note 1)			I <sub>ZT</sub> mA	Z <sub>ZT</sub> @I <sub>ZT</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>	I <sub>ZK</sub> (mA)	I <sub>R</sub> ( $\mu$ A)	V <sub>R</sub> (V)
		Nom(V)	Min(V)	Max(V)		$\Omega$				
SZT52B2V4S-AT	2WX	2.4	2.35	2.45	5	100	600	1.0	50	1.0
SZT52B2V7S-AT	2W1	2.7	2.65	2.75	5	100	600	1.0	20	1.0
SZT52B3V0S-AT	2W2	3.0	2.94	3.06	5	95	600	1.0	10	1.0
SZT52B3V3S-AT	2W3	3.3	3.23	3.37	5	95	600	1.0	5	1.0
SZT52B3V6S-AT	2W4	3.6	3.53	3.67	5	90	600	1.0	5	1.0
SZT52B3V9S-AT	2W5	3.9	3.82	3.98	5	90	600	1.0	3	1.0
SZT52B4V3S-AT	2W6	4.3	4.21	4.39	5	90	600	1.0	3	1.0
SZT52B4V7S-AT	2W7	4.7	4.61	4.79	5	80	500	1.0	3	2.0
SZT52B5V1S-AT	2W8	5.1	5.00	5.20	5	60	480	1.0	2	2.0
SZT52B5V6S-AT	2W9	5.6	5.49	5.71	5	40	400	1.0	1	2.0
SZT52B6V2S-AT	2WA	6.2	6.08	6.32	5	10	150	1.0	3	4.0
SZT52B6V8S-AT	2WB	6.8	6.66	6.94	5	15	80	1.0	2	4.0
SZT52B7V5S-AT	2WC	7.5	7.35	7.65	5	15	80	1.0	1	5.0
SZT52B8V2S-AT	2WD	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0
SZT52B9V1S-AT	2WE	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0
SZT52B10S-AT	2WF	10	9.80	10.20	5	20	150	1.0	0.2	7.0
SZT52B11S-AT	2WG	11	10.78	11.22	5	20	150	1.0	0.1	8.0
SZT52B12S-AT	2WH	12	11.76	12.24	5	25	150	1.0	0.1	8.0
SZT52B13S-AT	2WI	13	12.74	13.26	5	30	170	1.0	0.1	8.0
SZT52B14S-AT	2WY	14	13.72	14.28	5	25	110	1.0	0.1	10.5
SZT52B15S-AT	2WJ	15	14.70	15.30	5	30	200	1.0	0.1	10.5
SZT52B16S-AT	2WK	16	15.68	16.32	5	40	200	1.0	0.1	11.2
SZT52B18S-AT	2WL	18	17.64	18.36	5	45	225	1.0	0.1	12.6
SZT52B20S-AT	2WM	20	19.60	20.40	5	55	225	1.0	0.1	14.0
SZT52B22S-AT	2WN	22	21.56	22.44	5	55	250	1.0	0.1	15.4
SZT52B24S-AT	2WO	24	23.52	24.48	5	70	250	1.0	0.1	16.8
SZT52B27S-AT	2WP	27	26.46	27.54	2	80	300	0.5	0.1	18.9
SZT52B30S-AT	2WQ	30	29.40	30.60	2	80	300	0.5	0.1	21.0
SZT52B33S-AT	2WR	33	32.34	33.66	2	80	325	0.5	0.1	23.1
SZT52B36S-AT	2WS	36	35.28	36.72	2	90	350	0.5	0.1	25.2
SZT52B39S-AT	2WT	39	38.22	39.78	2	130	350	0.5	0.1	27.3
SZT52B43S-AT	2WU	43	42.14	43.86	2	130	350	0.5	0.1	29.4
SZT52B47S-AT	2WV	47	45.83	48.17	2	170	1000	0.25	0.1	36
SZT52B51S-AT	2X1	51	49.73	52.27	2	180	1300	0.25	0.1	39
SZT52B56S-AT	2X2	56	54.60	57.40	2	200	1400	0.25	0.1	43
SZT52B62S-AT	2X3	62	60.45	63.55	2	225	1400	0.25	0.1	47
SZT52B68S-AT	2X4	68	66.30	69.70	2	240	1600	0.25	0.1	52
SZT52B75S-AT	2X5	75	73.13	76.87	2	265	1700	0.25	0.1	56

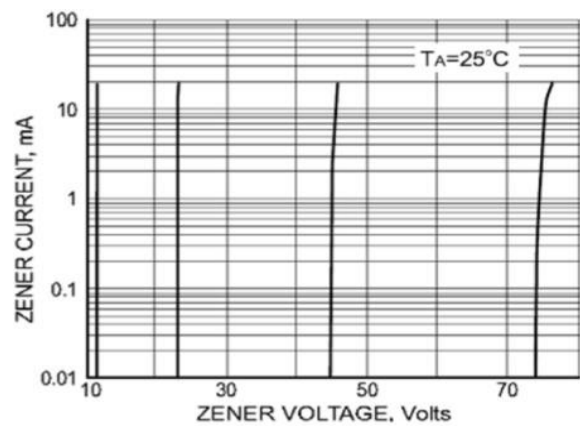
Note1:Pulse Width=10ms



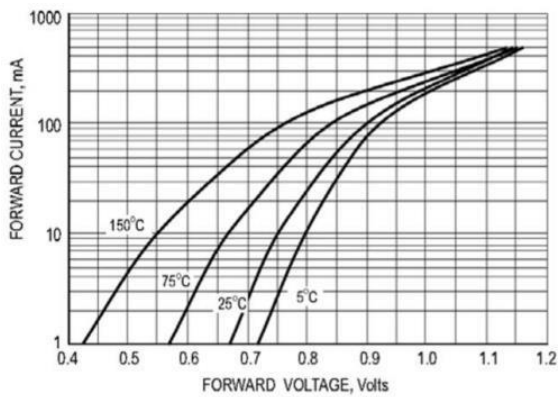
### Typical Characteristics



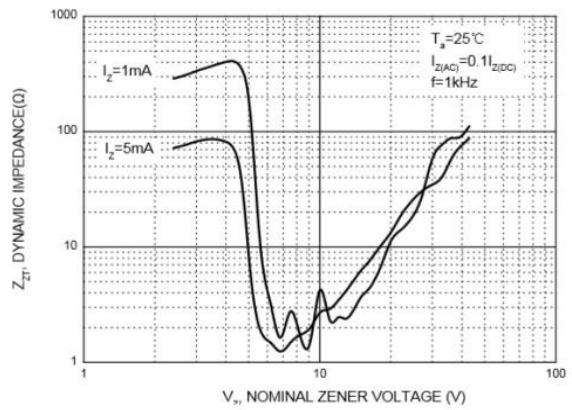
Zener Breakdown Characteristic



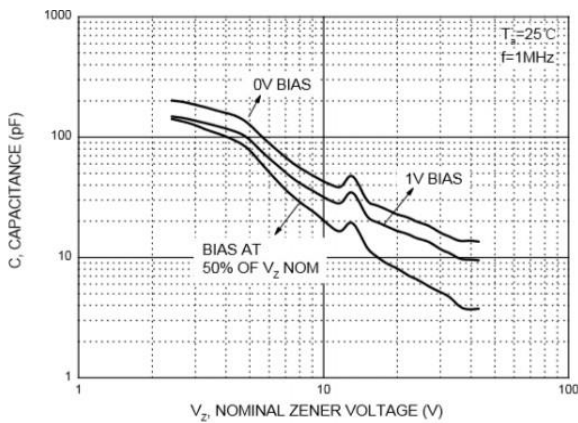
Zener Breakdown Characteristics



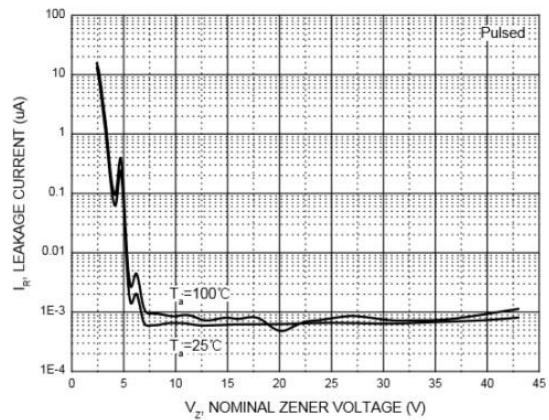
Typical Forward Voltage



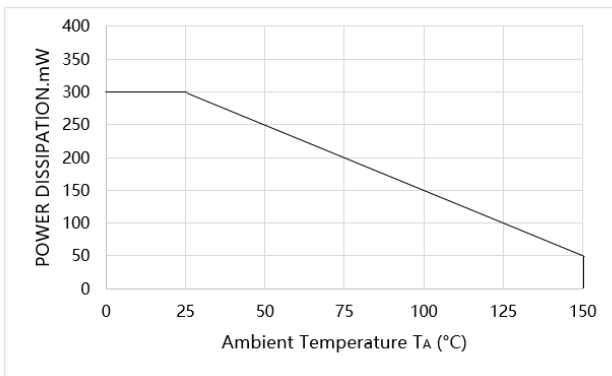
Effect of Zener Voltage on Zener Impedance



Typical Capacitance



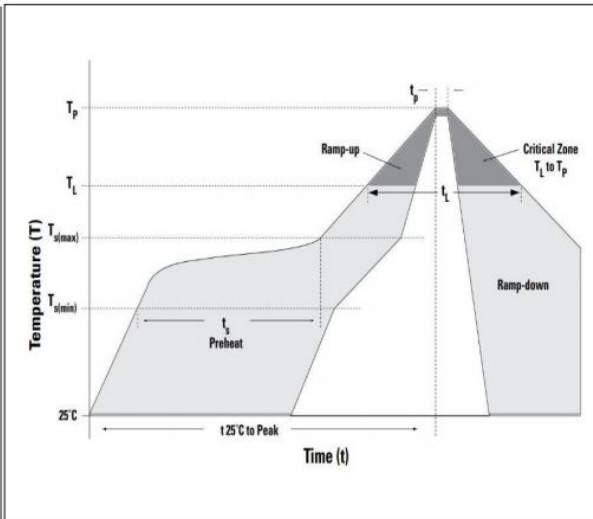
Typical Leakage Current



Power Dissipation Vs Ambient Temp

### Reflow Profile

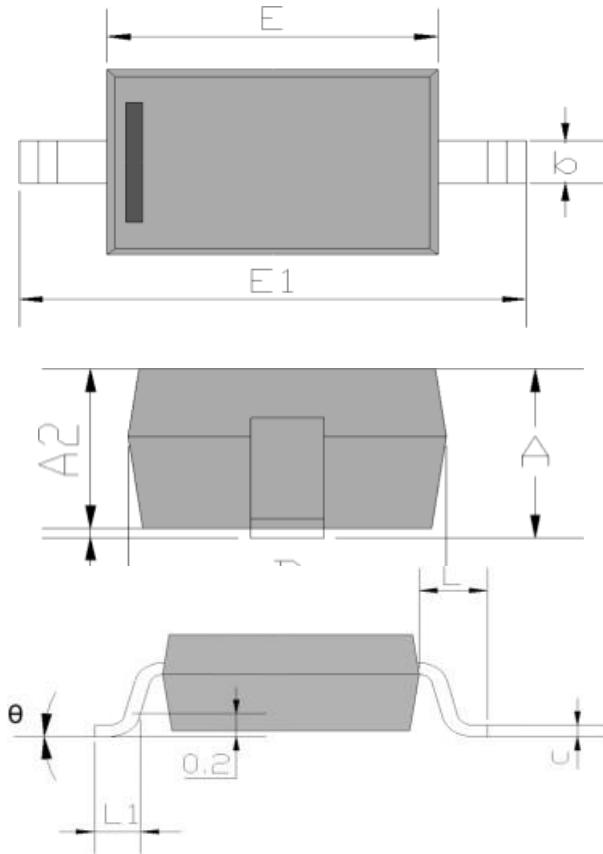
Reflow Condition		Lead-free assembly
Pre Heat	- Temperature Min ( $T_{s(min)}$ )	150°C
	- Temperature Max ( $T_{s(max)}$ )	200°C
	- Time (min to max) ( $t_i$ )	60 – 180 secs
Average ramp up rate (Liquidus Temp ( $T_A$ ) to peak)		3°C/second max
$T_{s(max)}$ to $T_A$ - Ramp-up Rate		3°C/second max
Reflow	- Temperature ( $T_A$ ) (Liquidus)	217°C
	- Time (min to max) ( $t_i$ )	60 – 150 seconds
Peak Temperature ( $T_p$ )		260 <sup>+0/-5</sup> °C
Time within 5°C of actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature ( $T_p$ )		8 minutes Max.
Do not exceed		260°C



### Order Information

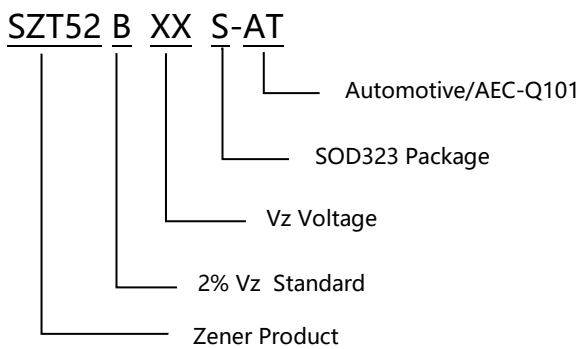
Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
SZT52BXXS-AT Series	SOD323	Tape & Reel 3000pcs /7" Reel	8 mm	4 mm	Conductive	

Package Dimensions



Symbol	Dimensions in mm	
	Min.	Max.
A		1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
L	0.475 REF.	
L1	0.250	0.400
theta	0°	8°

Part Numbering



Revision history of Specification

Version	Change Items	Effective Date
1.0	Initial Release	13-July-2023