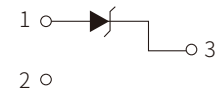


FEATURES

- | Low Zener Impedance
- | Power Dissipation of 300mW
- | High Stability and High Reliability
- | Meet AEC-Q101 Requirements



Schematic Symbol

MECHANICAL DATA

- | SOT-23 Small Outline Plastic Package
- | Epoxy UL: 94V-0
- | Mounting Position: Any

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS (T_A=25°C)

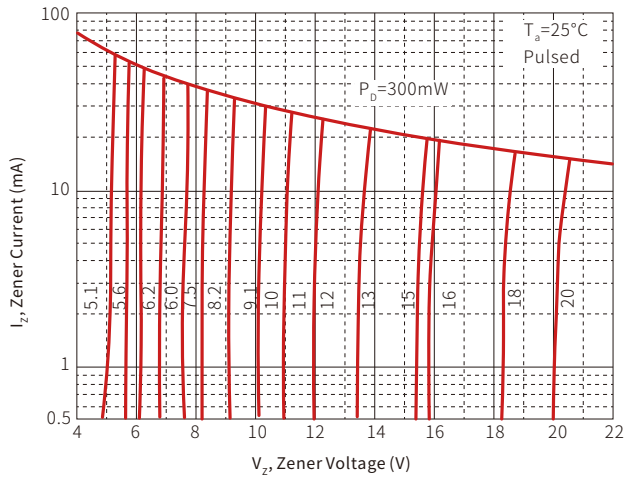
Parameter	Symbol	Value	Unit
Power Dissipation	P _D	300	mW
Maximum forward voltage at I _F =10mA	V _F	0.9	V
Storage temperature range	T _S	-65 to +150	°C
Thermal resistance junction to ambient air Warmewider stand Sperrschicht –umgebende Luft	R _{θJA}	417	°C/W

ELECTRICAL CHARACTERISTICS

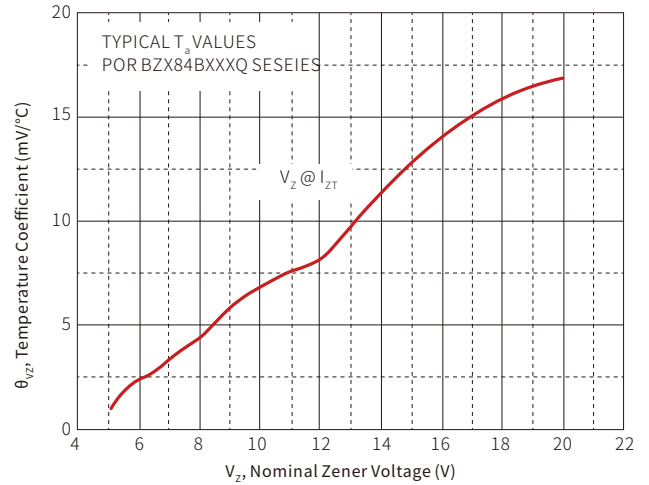
Part Number	Device Marking Code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current	
		$V_Z@I_{ZT}$			I_{ZT}	$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$		I_R	V_R
		Nom(V)	Min(V)	Max(V)	(mA)	(Ω)	(mA)	(μ A)	(V)	
BZX84B2V4Q	Z11	2.4	2.35	2.45	5	100	600	1.0	50	1.0
BZX84B2V7Q	Z12	2.7	2.65	2.75	5	100	600	1.0	20	1.0
BZX84B3V0Q	Z13	3.0	2.94	3.06	5	95	600	1.0	10	1.0
BZX84B3V3Q	Z14	3.3	3.23	3.37	5	95	600	1.0	5	1.0
BZX84B3V6Q	Z15	3.6	3.53	3.67	5	90	600	1.0	5	1.0
BZX84B3V9Q	Z16	3.9	3.82	3.98	5	90	600	1.0	3	1.0
BZX84B4V3Q	Z17	4.3	4.21	4.39	5	90	600	1.0	3	1.0
BZX84B4V7Q	Z1	4.7	4.61	4.79	5	80	500	1.0	3	2.0
BZX84B5V1Q	Z2	5.1	5.00	5.20	5	60	480	1.0	2	2.0
BZX84B5V6Q	Z3	5.6	5.49	5.71	5	40	400	1.0	1	2.0
BZX84B6V2Q	Z4	6.2	6.08	6.32	5	10	150	1.0	3	4.0
BZX84B6V8Q	Z5	6.8	6.66	6.94	5	15	80	1.0	2	4.0
BZX84B7V5Q	Z6	7.5	7.35	7.65	5	15	80	1.0	1	5.0
BZX84B8V2Q	Z7	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0
BZX84B9V1Q	Z8	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0
BZX84B10Q	Z9	10	9.80	10.20	5	20	150	1.0	0.2	7.0
BZX84B11Q	Y1.	11	10.78	11.22	5	20	150	1.0	0.1	8.0
BZX84B12Q	Y2.	12	11.76	12.24	5	25	150	1.0	0.1	8.0
BZX84B13Q	Y3	13	12.74	13.26	5	30	170	1.0	0.1	8.0
BZX84B15Q	Y4	15	14.70	15.30	5	30	200	1.0	0.1	10.5
BZX84B16Q	Y5	16	15.68	16.32	5	40	200	1.0	0.1	11.2
BZX84B18Q	Y6.	18	17.64	18.36	5	45	225	1.0	0.1	12.6
BZX84B20Q	Y7	20	19.60	20.40	5	55	225	1.0	0.1	14.0
BZX84B22Q	Y8	22	21.56	22.44	5	55	250	1.0	0.1	15.4
BZX84B24Q	Y9	24	23.52	24.48	5	70	250	1.0	0.1	16.8
BZX84B27Q	Y10	27	26.46	27.54	5	80	300	0.5	0.1	18.9
BZX84B30Q	Y11.	30	29.40	30.60	5	80	300	0.5	0.1	21.0
BZX84B33Q	Y12	33	32.34	33.66	5	80	325	0.5	0.1	23.1
BZX84B36Q	Y13	36	35.28	36.72	5	90	350	0.5	0.1	25.2
BZX84B39Q	Y14	39	38.22	39.78	5	130	350	0.5	0.1	27.3

CHARACTERISTIC CURVES

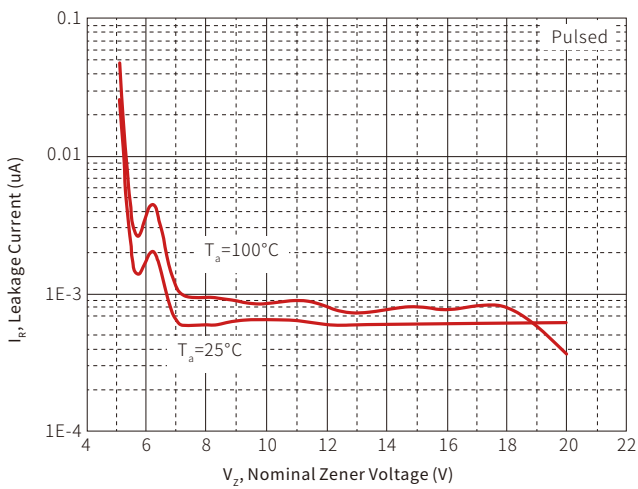
Zener Characteristics (V_z 5.1V to 20 V)



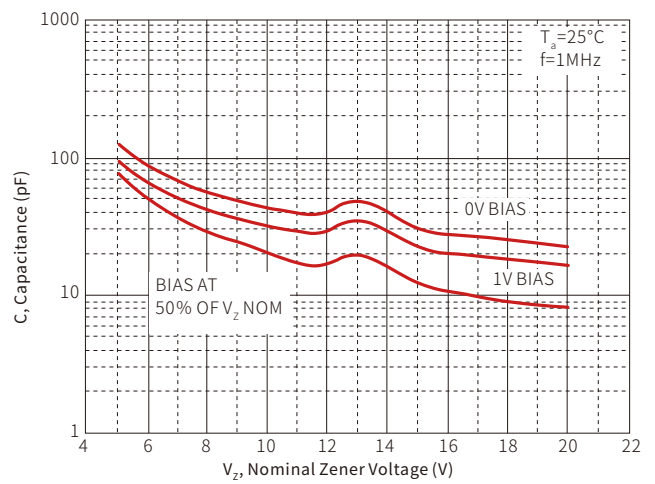
Temperature Coefficients

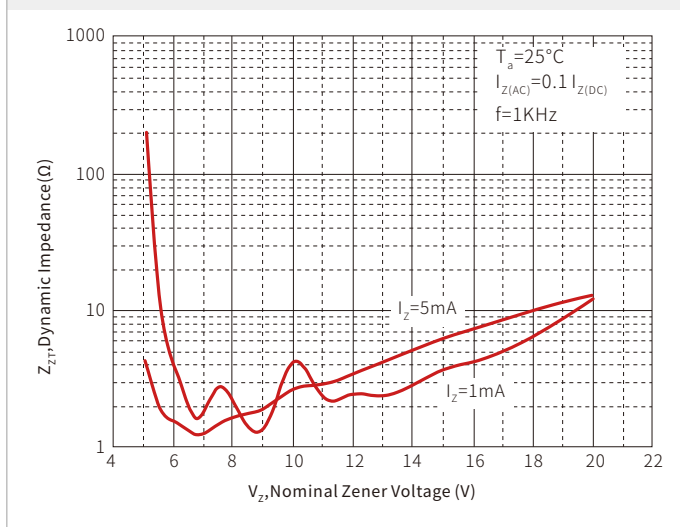
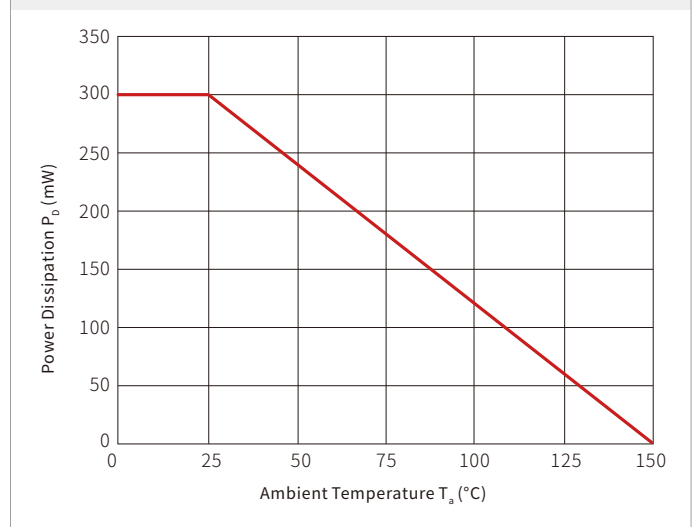


Typical Leakage Current



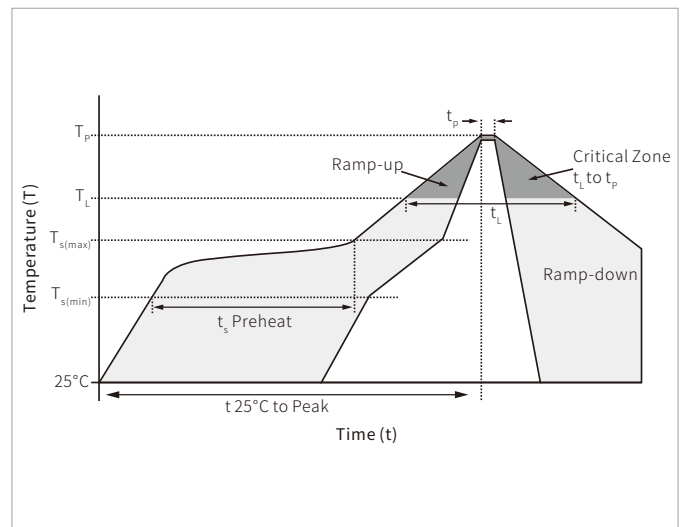
Typical Capacitance



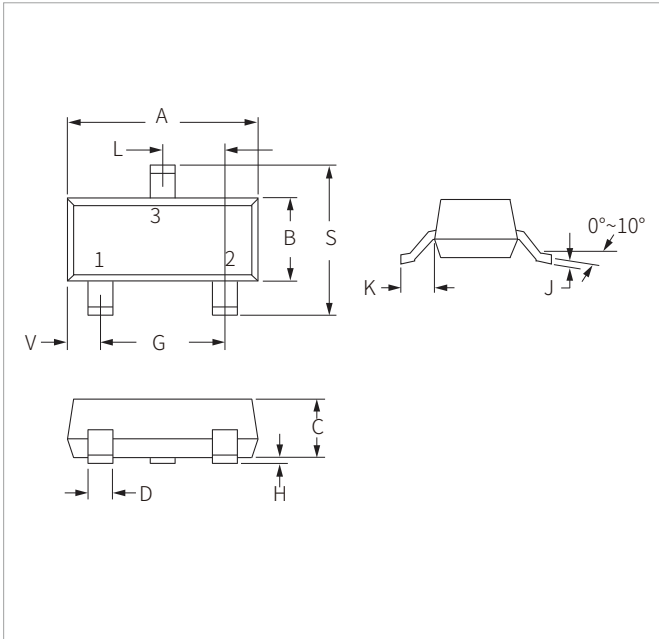
Effect of Zener Voltage on Zener Impedance

Power Derating Curve


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°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

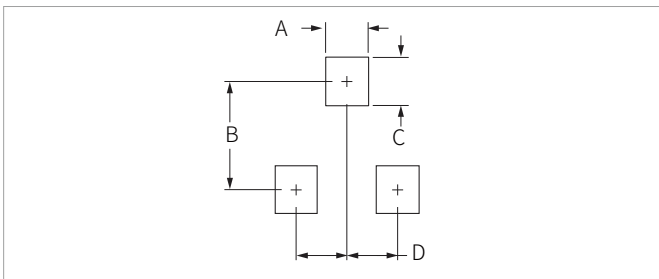


SOT-23 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.05	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.90	1.15	0.035	0.045
D	0.37	0.50	0.015	0.020
G	1.75	2.05	0.069	0.081
H	0.01	0.100	0.001	0.004
J	0.085	0.180	0.003	0.007
K	0.35	0.69	0.014	0.029
L	0.89	1.02	0.035	0.040
S	2.10	2.65	0.083	0.104
V	0.45	0.60	0.018	0.024

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
BZX84B2V4Q-BZX84B39Q	SOT-23	3000PCS	7"

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