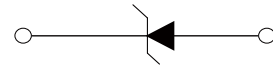


FEATURES

- | Planar Die Construction
- | General Purpose, Medium Current
- | Ideally Suited for Automated Assembly Processes
- | Polarity: Color band denotes cathode end
- | Mounting Position: Any
- | Epoxy UL:94V-0
- | Meet AEC-Q101 Requirements



SOD-123



Schematic Symbol

APPROVALS

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

MAXIMUM RATINGS (T_A=25°C)

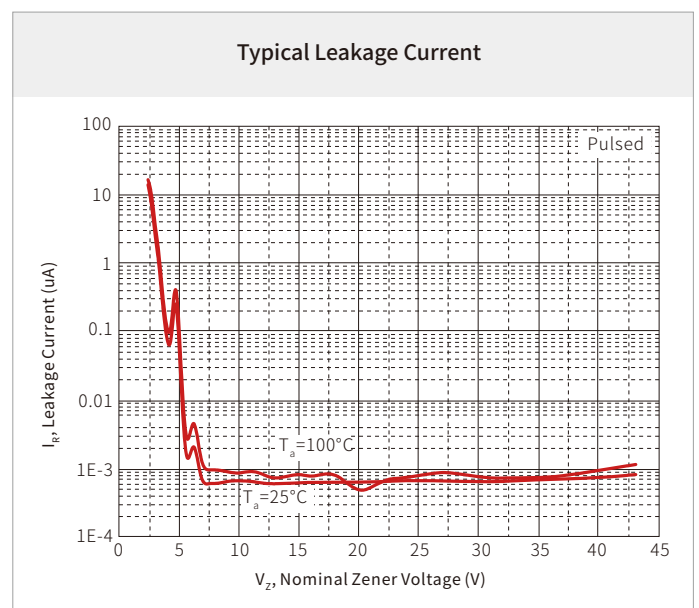
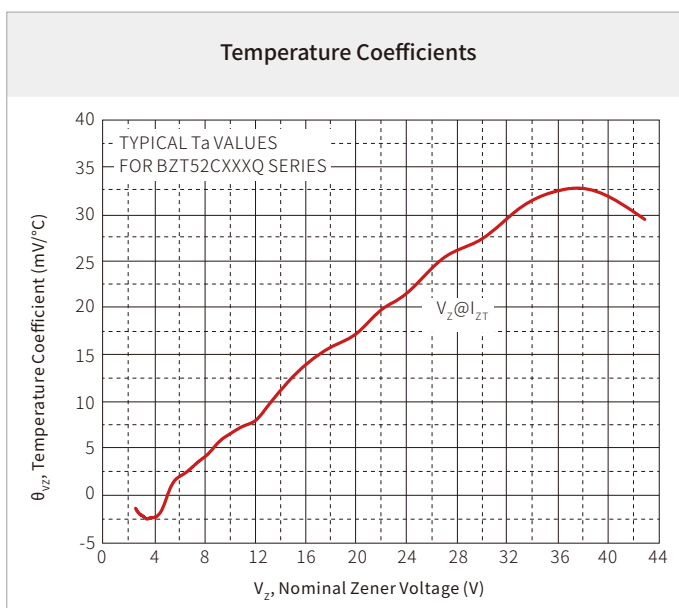
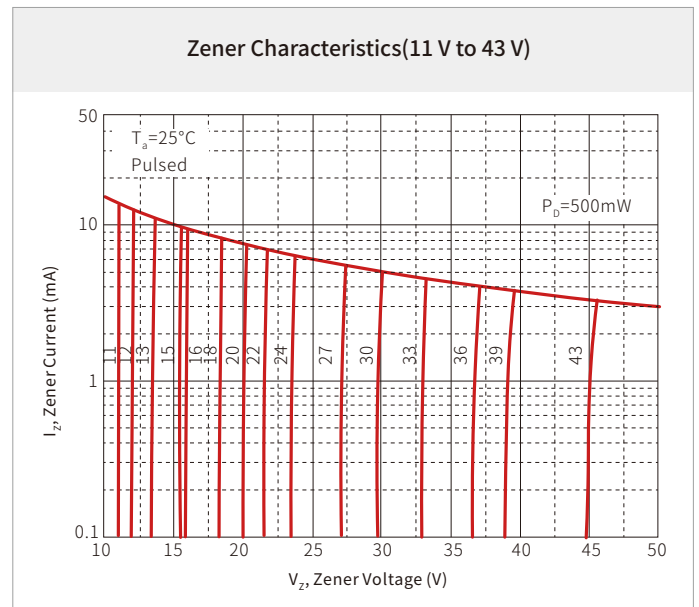
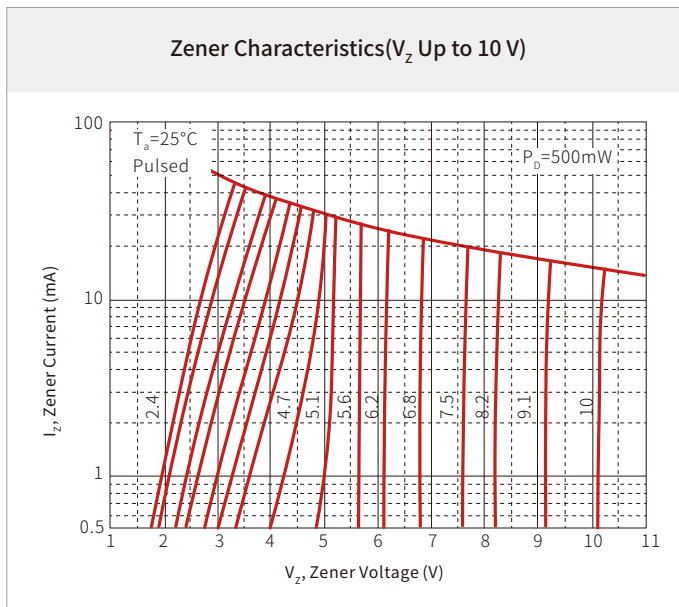
Parameter	Symbo	Value	Unit
Power Dissipation	P _D	410 (Diode on Ceramic Substrate 0.7mm, 2.5mm ² Pad Areas)	mW
		500 (Diode on Ceramic Substrate 0.7mm, 5mm ² Pad Areas)	
Maximum Forward Voltage @I _F =10mA	V _F	0.9	V
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55 to +150	°C
Maximum Regulator Current	I _{ZM}	P _D /V _Z	mA

ELECTRICAL CHARACTERISTICS

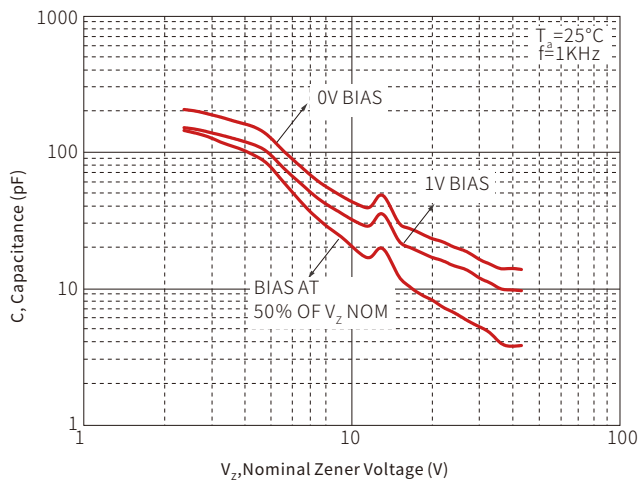
Part Number	Device Marking Code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current	
		$V_Z@I_{ZT}$			I_{ZT} (mA)	$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	I_{ZK} (mA)	I_R	V_R
		Nom.(V)	Min.(V)	Max.(V)	mA	Ω	Ω	mA	μA	V
BZT52C2V4Q	QWX	2.4	2.28	2.45	5	100	600	1.0	50	1.0
BZT52C2V7Q	QW1	2.7	2.57	2.75	5	100	600	1.0	20	1.0
BZT52C3V0Q	QW2	3.0	2.85	3.06	5	95	600	1.0	10	1.0
BZT52C3V3Q	QW3	3.3	3.14	3.37	5	95	600	1.0	5	1.0
BZT52C3V6Q	QW4	3.6	3.42	3.67	5	90	600	1.0	5	1.0
BZT52C3V9Q	QW5	3.9	3.71	3.98	5	90	600	1.0	3	1.0
BZT52C4V3Q	QW6	4.3	4.09	4.39	5	90	600	1.0	3	1.0
BZT52C4V7Q	QW7	4.7	4.47	4.79	5	80	500	1.0	3	2.0
BZT52C5V1Q	QW8	5.1	4.85	5.20	5	60	480	1.0	2	2.0
BZT52C5V6Q	QW9	5.6	5.32	5.71	5	40	400	1.0	1	2.0
BZT52C6V2Q	QWA	6.2	5.89	6.32	5	10	150	1.0	3	4.0
BZT52C6V8Q	QWB	6.8	6.46	7.14	5	15	80	1.0	2	4.0
BZT52C7V5Q	QWC	7.5	7.13	7.88	5	15	80	1.0	1	5.0
BZT52C8V2Q	QWD	8.2	7.79	8.61	5	15	80	1.0	0.7	5.0
BZT52C9V1Q	QWE	9.1	8.65	9.56	5	15	100	1.0	0.5	6.0
BZT52C10Q	QWF	10	9.50	10.50	5	20	150	1.0	0.2	7.0
BZT52C11Q	QWG	11	10.45	11.55	5	20	150	1.0	0.1	8.0
BZT52C12Q	QWH	12	11.40	12.60	5	25	150	1.0	0.1	8.0
BZT52C13Q	QWI	13	12.35	13.65	5	30	170	1.0	0.1	8.0
BZT52C15Q	QWJ	15	14.25	15.75	5	30	200	1.0	0.1	10.5
BZT52C16Q	QWK	16	15.20	16.80	5	40	200	1.0	0.1	11.2
BZT52C18Q	QWL	18	17.10	18.90	5	45	225	1.0	0.1	12.6
BZT52C20Q	QWM	20	19.00	21.00	5	55	225	1.0	0.1	14.0
BZT52C22Q	QWN	22	20.90	23.10	5	55	250	1.0	0.1	15.4
BZT52C24Q	QWO	24	22.80	25.20	5	70	250	1.0	0.1	16.8
BZT52C27Q	QWP	27	25.65	28.35	2	80	300	0.5	0.1	18.9
BZT52C30Q	QWQ	30	28.50	31.50	2	80	300	0.5	0.1	21.0
BZT52C33Q	QWR	33	31.35	34.65	2	80	325	0.5	0.1	23.1
BZT52C36Q	QWS	36	34.20	37.80	2	90	350	0.5	0.1	25.2
BZT52C39Q	QWT	39	37.05	40.95	2	130	350	0.5	0.1	27.3
BZT52C43Q	QWU	43	40.85	45.15	2	150	375	0.5	0.05	30.1
BZT52C47Q	QWV	47	44.65	49.35	2	170	1000	0.25	0.1	36
BZT52C51Q	QWW	51	48.45	53.55	2	180	1300	0.25	0.1	39

Part Number	Device Marking Code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current	
		$V_z@I_{ZT}$			I_{ZT} (mA)	$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	I_{ZK} (mA)	I_R	V_R
		Nom.(V)	Min.(V)	Max.(V)						
BZT52C56Q	QWY	56	53.20	58.80	2	200	1400	0.25	0.1	43
BZT52C62Q	QWZ	62	58.90	65.10	2	225	1400	0.25	0.1	47
BZT52C68Q	QX1	68	64.60	71.40	2	240	1600	0.25	0.1	52
BZT52C75Q	QX2	75	71.25	78.75	2	265	1700	0.25	0.1	56

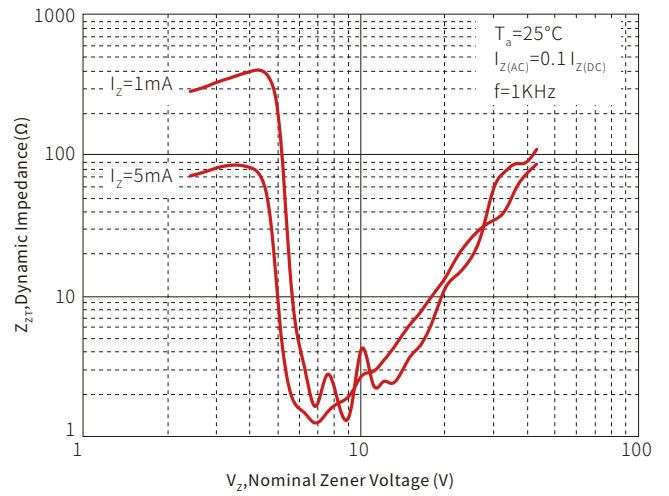
CHARACTERISTIC CURVES



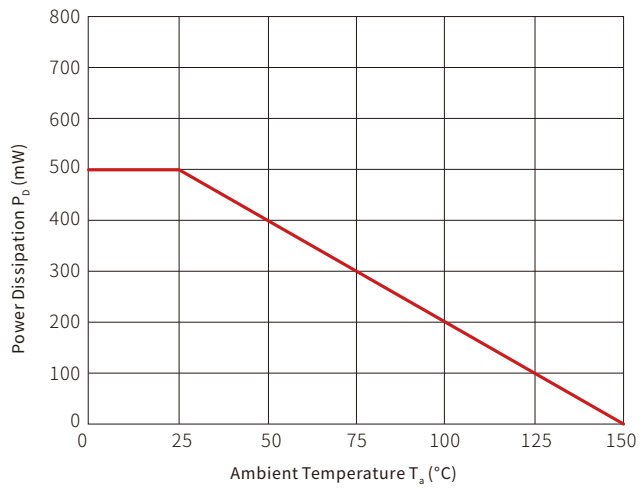
Typical Capacitance



Effect of Zener Voltage on Zener Impedance

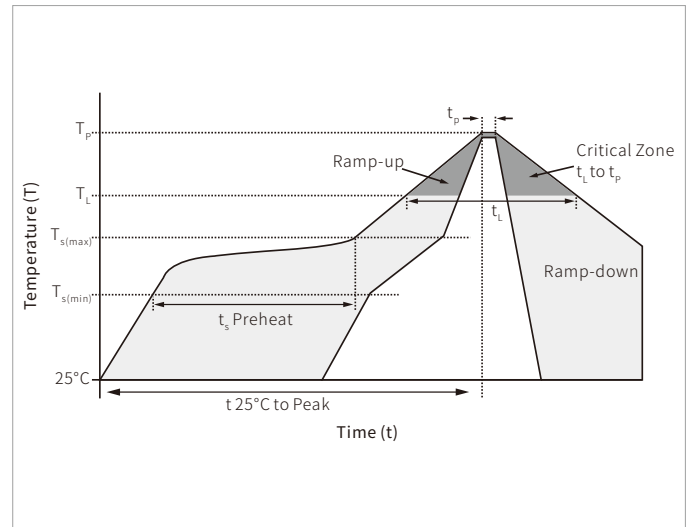


Power Derating Curve

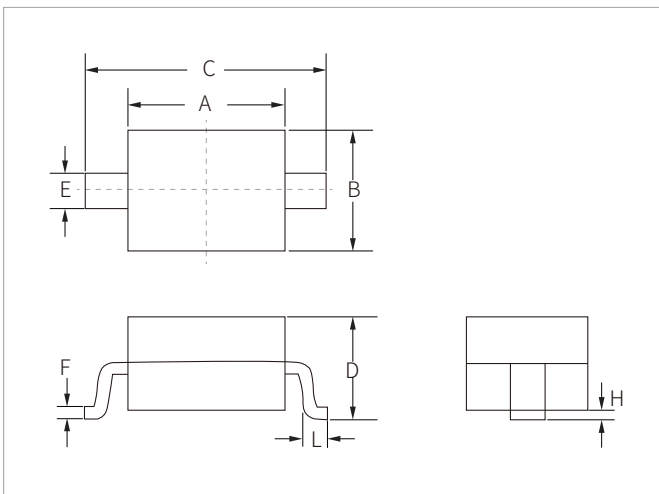


SOLDERING PARAMETERS

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

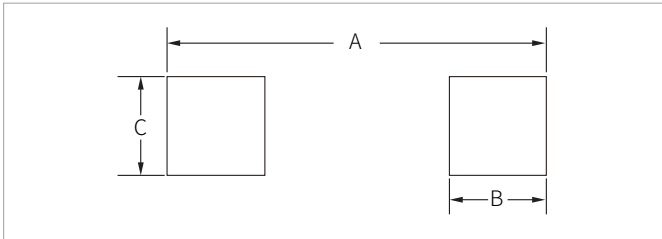


SOD-123 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	2.80	0.102	0.110
B	1.50	1.70	0.059	0.067
C	3.55	3.85	0.140	0.152
D	1.05	1.25	0.041	0.049
E	0.45	0.65	0.018	0.026
F	0.08	0.15	0.003	0.006
H	0.00	0.10	0.000	0.004
L	0.25	0.45	0.010	0.018

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.00	4.30	0.157	0.169
B	0.75	0.85	0.030	0.033
C	0.95	1.05	0.037	0.041

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
BZT52C2V4Q-BZT52C75Q	SOD-123	3000PCS	7"

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