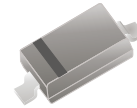


BZT52C2V4-P2-HF Thru. BZT52C75-P2-HF

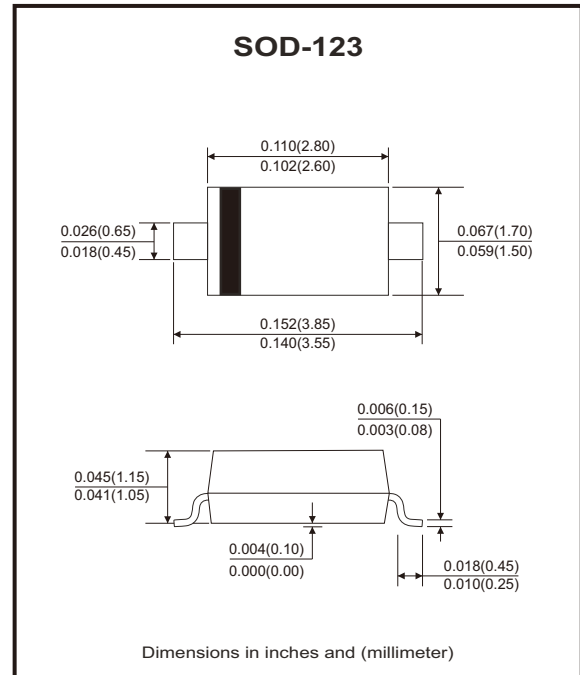
RoHS Device
Halogen Free

**Features**

- Large selection of zener voltages: 2.4V~75V.
- Tight voltage tolerance: $\pm 5\%$.
- Constant voltage control.

Mechanical data

- Case: SOD-123, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any.

**Circuit Diagram****Maximum Ratings** ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Power dissipation (Diode on ceramic substrate 0.7mm, 2.5mm ² pad areas)	P_D	410	mW
Power dissipation (Diode on ceramic substrate 0.7mm, 5mm ² pad areas)	P_D	500	mW
Junction temperature	T_J	150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$
Maximum regulator current	I_{ZM}	P_D/V_Z	mA
Forward voltage @ $I_F=10\text{mA}$	V_F	0.9	V

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

Part Number	Zener Voltage (Pulse width =10ms)				Maximum Zener Impedance			Maximum Reverse Current		Marking Code
	V _z @ I _{zT}			I _{zT}	Z _{zT} @I _{zT}	Z _{zK} @I _{zK}	I _{zK}	I _R @ V _R		
	Min(V)	Typ(V)	Max(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	
BZT52C2V4-P2-HF	2.28	2.4	2.52	5.0	100	600	1.0	50	1.0	WX
BZT52C2V7-P2-HF	2.57	2.7	2.84	5.0	100	600	1.0	20	1.0	W1
BZT52C3V0-P2-HF	2.85	3.0	3.15	5.0	95	600	1.0	10	1.0	W2
BZT52C3V3-P2-HF	3.14	3.3	3.47	5.0	95	600	1.0	5.0	1.0	W3
BZT52C3V6-P2-HF	3.42	3.6	3.78	5.0	90	600	1.0	5.0	1.0	W4
BZT52C3V9-P2-HF	3.71	3.9	4.10	5.0	90	600	1.0	3.0	1.0	W5
BZT52C4V3-P2-HF	4.09	4.3	4.52	5.0	90	600	1.0	3.0	1.0	W6
BZT52C4V7-P2-HF	4.47	4.7	4.94	5.0	80	500	1.0	3.0	2.0	W7
BZT52C5V1-P2-HF	4.85	5.1	5.36	5.0	60	480	1.0	2.0	2.0	W8
BZT52C5V6-P2-HF	5.32	5.6	5.88	5.0	40	400	1.0	1.0	2.0	W9
BZT52C6V2-P2-HF	5.89	6.2	6.51	5.0	10	150	1.0	3.0	4.0	WA
BZT52C6V8-P2-HF	6.46	6.8	7.14	5.0	15	80	1.0	2.0	4.0	WB
BZT52C7V5-P2-HF	7.13	7.5	7.88	5.0	15	80	1.0	1.0	5.0	WC
BZT52C8V2-P2-HF	7.79	8.2	8.61	5.0	15	80	1.0	0.7	5.0	WD
BZT52C9V1-P2-HF	8.65	9.1	9.56	5.0	15	100	1.0	0.5	6.0	WE
BZT52C10-P2-HF	9.50	10	10.50	5.0	20	150	1.0	0.2	7.0	WF
BZT52C11-P2-HF	10.45	11	11.55	5.0	20	150	1.0	0.1	8.0	WG
BZT52C12-P2-HF	11.40	12	12.60	5.0	25	150	1.0	0.1	8.0	WH
BZT52C13-P2-HF	12.35	13	13.65	5.0	30	170	1.0	0.1	8.0	WI
BZT52C14-P2-HF	13.30	14	14.70	5.0	25	110	1.0	0.1	10.5	WY
BZT52C15-P2-HF	14.25	15	15.75	5.0	30	200	1.0	0.1	10.5	WJ
BZT52C16-P2-HF	15.20	16	16.80	5.0	40	200	1.0	0.1	11.2	WK
BZT52C18-P2-HF	17.10	18	18.90	5.0	45	225	1.0	0.1	12.6	WL
BZT52C20-P2-HF	19.00	20	21.00	5.0	55	225	1.0	0.1	14.0	WM
BZT52C22-P2-HF	20.90	22	23.10	5.0	55	250	1.0	0.1	15.4	WN
BZT52C24-P2-HF	22.80	24	25.20	5.0	70	250	1.0	0.1	16.8	WO
BZT52C27-P2-HF	25.65	27	28.35	2.0	80	300	0.5	0.1	18.9	WP
BZT52C30-P2-HF	28.50	30	31.50	2.0	80	300	0.5	0.1	21.0	WQ
BZT52C33-P2-HF	31.35	33	34.65	2.0	80	325	0.5	0.1	23.1	WR

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

Part Number	Zener Voltage (Pulse width =10ms)				Maximum Zener Impedance			Maximum Reverse Current		Marking Code
	V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R @ V _R		
	Min(V)	Typ(V)	Max(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	
BZT52C36-P2-HF	34.20	36	37.80	2.0	90	350	0.5	0.1	25.2	WS
BZT52C39-P2-HF	37.05	39	40.95	2.0	130	350	0.5	0.1	27.3	WT
BZT52C43-P2-HF	40.85	43	45.15	2.0	150	375	0.5	0.05	30.1	WU
BZT52C47-P2-HF	44.65	47	49.35	2.0	170	1000	0.25	0.1	36	WV
BZT52C51-P2-HF	48.45	51	53.55	2.0	180	1300	0.25	0.1	39	X1
BZT52C56-P2-HF	53.20	56	58.80	2.0	200	1400	0.25	0.1	43	X2
BZT52C62-P2-HF	58.90	62	65.10	2.0	225	1400	0.25	0.1	47	X3
BZT52C68-P2-HF	64.60	68	71.40	2.0	240	1600	0.25	0.1	52	X4
BZT52C75-P2-HF	71.25	75	78.75	2.0	265	1700	0.25	0.1	56	X5

Typical Rating and Characteristic Curves (BZT52Cxxx-P2-HF Series)

Fig.1 - Zener Breakdown Characteristic

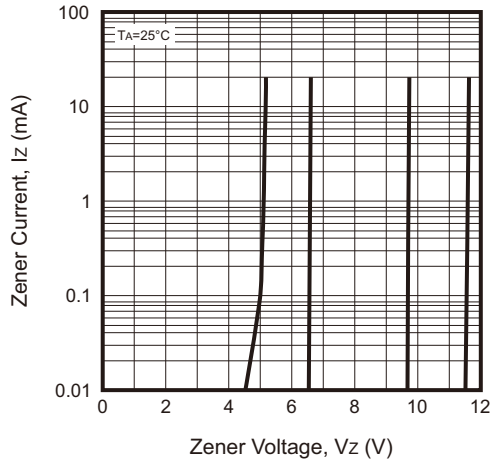


Fig.2 - Zener Breakdown Characteristic

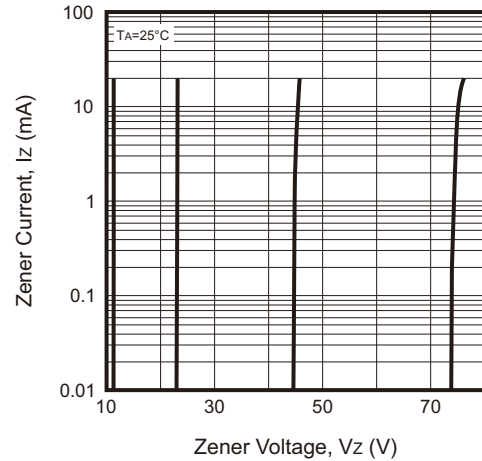


Fig.3 - Typical Forward Voltage

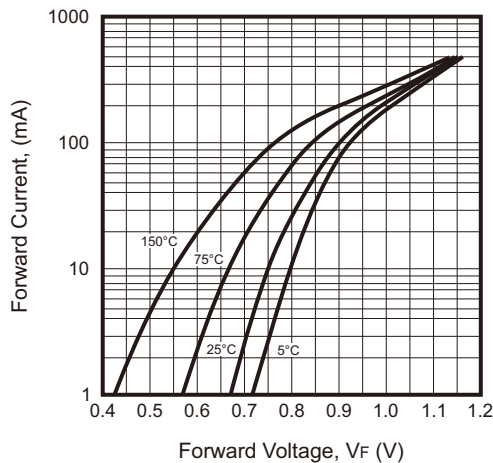


Fig.4 - Effect of Zener Voltage on Zener Impedance

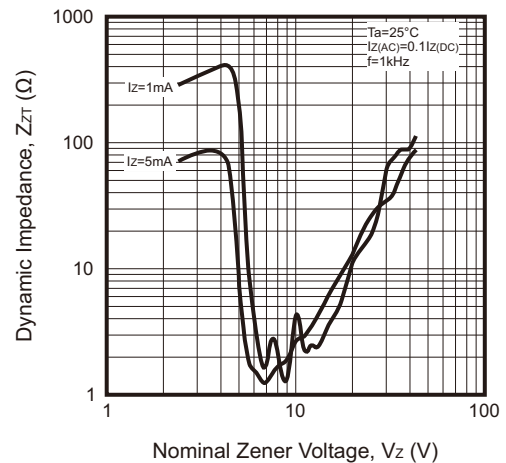


Fig.5 - Typical Capacitance

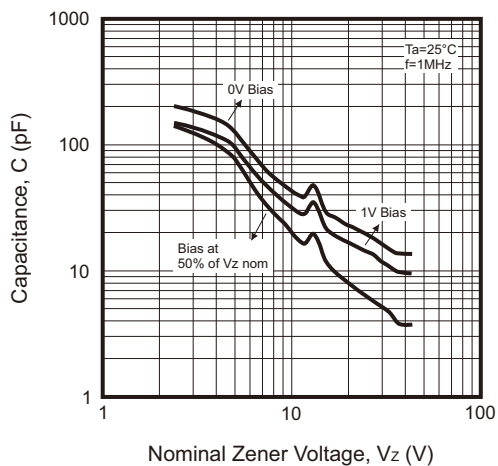
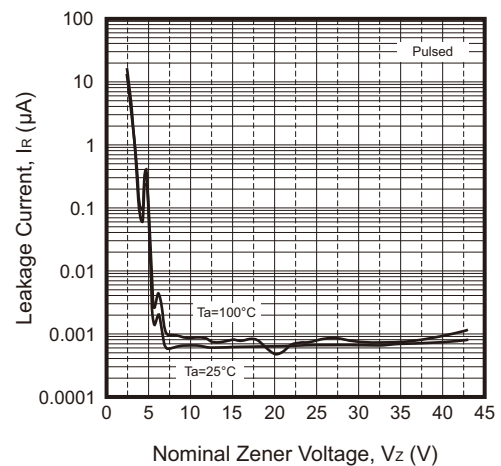
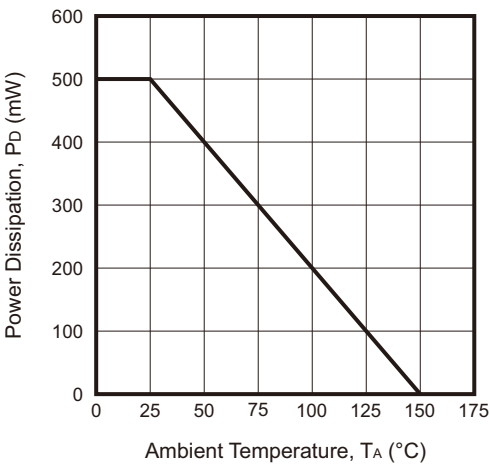


Fig.6 - Typical Leakage Current

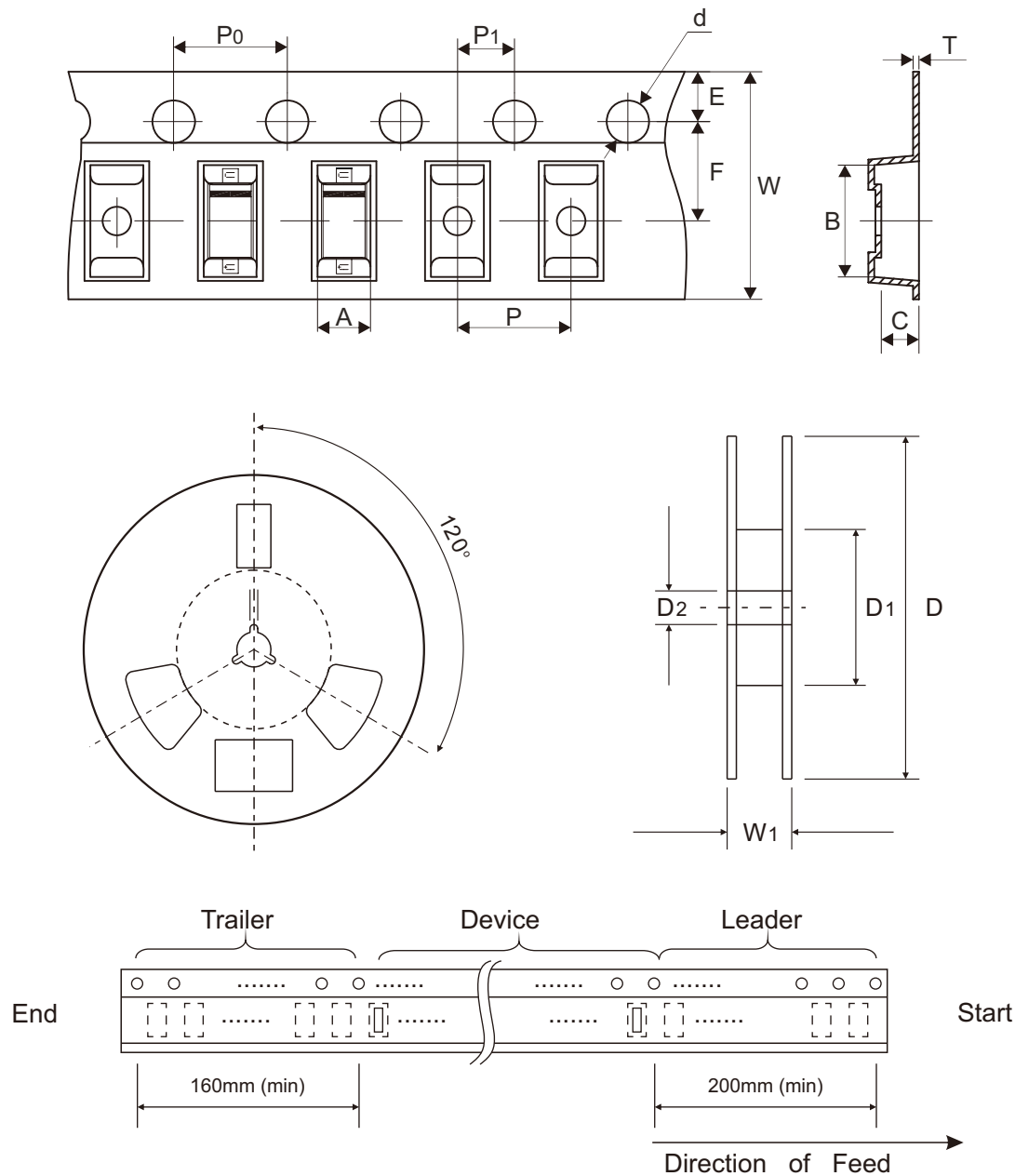


Typical Rating and Characteristic Curves (BZT52Cxxx-P2-HF Series)

Fig.7 - Power Dissipation vs Ambient Temperature



Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.85 ± 0.10	3.94 ± 0.10	1.57 ± 0.10	1.55 ± 0.05	178.00 ± 2.00	50.00 ± 0.50	13.00 ± 0.25
	(inch)	0.073 ± 0.004	0.155 ± 0.004	0.062 ± 0.004	0.061 ± 0.002	7.008 ± 0.079	1.969 ± 0.020	0.512 ± 0.010

SOD-123	SYMBOL	E	F	P	P1	P0	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	0.20 ± 0.02	8.00 + 0.30 - 0.10	11.50 ± 1.50
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.157 ± 0.004	0.008 ± 0.001	0.315 + 0.012 - 0.004	0.453 ± 0.059

Marking Code

Part Number	Marking Code
BZT52Cxxx-P2-HF Series	See Page 2~3

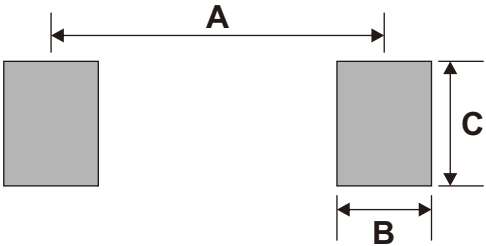


XX = Product type marking code

 = Cathode band

Suggested P.C.B. PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	3.24	0.128
B	0.80	0.031
C	1.00	0.039



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-123	3,000	7