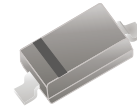


ABZT52B2V4-P2-HF Thru. ABZT52B75-P2-HF

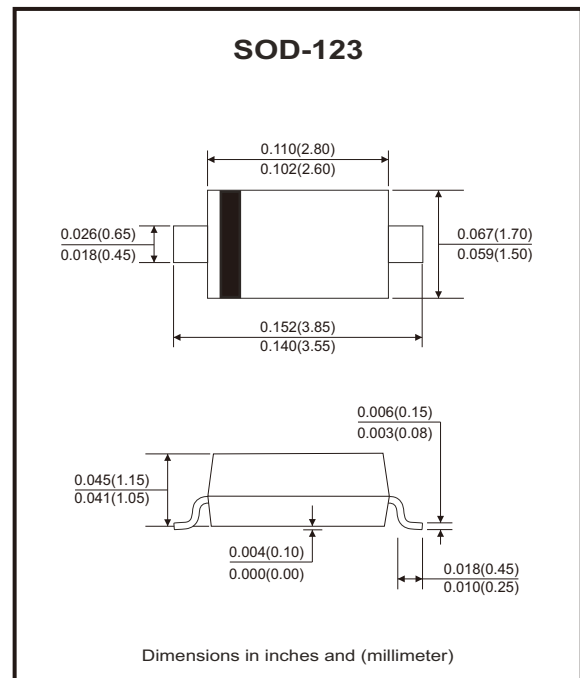
RoHS Device
Halogen Free

**Features**

- Large selection of zener voltages: 2.4V~75V.
- Constant voltage control.
- AEC-Q101 Qualified.

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

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)	
ABZT52B2V4-P2-HF	2.35	2.4	2.45	5.0	100	600	1.0	50	1.0	2WX
ABZT52B2V7-P2-HF	2.65	2.7	2.75	5.0	100	600	1.0	20	1.0	2W1
ABZT52B3V0-P2-HF	2.94	3.0	3.06	5.0	95	600	1.0	10	1.0	2W2
ABZT52B3V3-P2-HF	3.23	3.3	3.37	5.0	95	600	1.0	5.0	1.0	2W3
ABZT52B3V6-P2-HF	3.53	3.6	3.67	5.0	90	600	1.0	5.0	1.0	2W4
ABZT52B3V9-P2-HF	3.82	3.9	3.98	5.0	90	600	1.0	3.0	1.0	2W5
ABZT52B4V3-P2-HF	4.21	4.3	4.39	5.0	90	600	1.0	3.0	1.0	2W6
ABZT52B4V7-P2-HF	4.61	4.7	4.79	5.0	80	500	1.0	3.0	2.0	2W7
ABZT52B5V1-P2-HF	5.00	5.1	5.20	5.0	60	480	1.0	2.0	2.0	2W8
ABZT52B5V6-P2-HF	5.49	5.6	5.71	5.0	40	400	1.0	1.0	2.0	2W9
ABZT52B6V2-P2-HF	6.08	6.2	6.32	5.0	10	150	1.0	3.0	4.0	2WA
ABZT52B6V8-P2-HF	6.66	6.8	6.94	5.0	15	80	1.0	2.0	4.0	2WB
ABZT52B7V5-P2-HF	7.35	7.5	7.65	5.0	15	80	1.0	1.0	5.0	2WC
ABZT52B8V2-P2-HF	8.04	8.2	8.36	5.0	15	80	1.0	0.7	5.0	2WD
ABZT52B9V1-P2-HF	8.92	9.1	9.28	5.0	15	100	1.0	0.5	6.0	2WE
ABZT52B10-P2-HF	9.80	10	10.20	5.0	20	150	1.0	0.2	7.0	2WF
ABZT52B11-P2-HF	10.78	11	11.22	5.0	20	150	1.0	0.1	8.0	2WG
ABZT52B12-P2-HF	11.76	12	12.24	5.0	25	150	1.0	0.1	8.0	2WH
ABZT52B13-P2-HF	12.74	13	13.26	5.0	30	170	1.0	0.1	8.0	2WI
ABZT52B14-P2-HF	13.72	14	14.28	5.0	25	110	1.0	0.1	10.5	2WY
ABZT52B15-P2-HF	14.70	15	15.30	5.0	30	200	1.0	0.1	10.5	2WJ
ABZT52B16-P2-HF	15.68	16	16.32	5.0	40	200	1.0	0.1	11.2	2WK
ABZT52B18-P2-HF	17.64	18	18.36	5.0	45	225	1.0	0.1	12.6	2WL
ABZT52B20-P2-HF	19.60	20	20.40	5.0	55	225	1.0	0.1	14.0	2WM
ABZT52B22-P2-HF	21.56	22	22.44	5.0	55	250	1.0	0.1	15.4	2WN
ABZT52B24-P2-HF	23.52	24	24.48	5.0	70	250	1.0	0.1	16.8	2WO
ABZT52B27-P2-HF	26.46	27	27.54	2.0	80	300	0.5	0.1	18.9	2WP
ABZT52B30-P2-HF	29.40	30	30.60	2.0	80	300	0.5	0.1	21.0	2WQ
ABZT52B33-P2-HF	32.34	33	33.66	2.0	80	325	0.5	0.1	23.1	2WR

Electrical Characteristics (T_A=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)	
ABZT52B36-P2-HF	35.28	36	36.72	2.0	90	350	0.5	0.1	25.2	2WS
ABZT52B39-P2-HF	38.22	39	39.78	2.0	130	350	0.5	0.1	27.3	2WT
ABZT52B43-P2-HF	42.14	43	43.86	2.0	130	350	0.5	0.1	29.4	2WU
ABZT52B47-P2-HF	45.83	47	48.17	2.0	170	1000	0.25	0.1	36	2WV
ABZT52B51-P2-HF	49.73	51	52.27	2.0	180	1300	0.25	0.1	39	2X1
ABZT52B56-P2-HF	54.60	56	57.40	2.0	200	1400	0.25	0.1	43	2X2
ABZT52B62-P2-HF	60.45	62	63.55	2.0	225	1400	0.25	0.1	47	2X3
ABZT52B68-P2-HF	66.30	68	69.70	2.0	240	1600	0.25	0.1	52	2X4
ABZT52B75-P2-HF	73.13	75	76.87	2.0	265	1700	0.25	0.1	56	2X5

Typical Rating and Characteristic Curves (ABZT52Bxxx-P2-HF Series)

Fig.1 - Zener Breakdown Characteristic

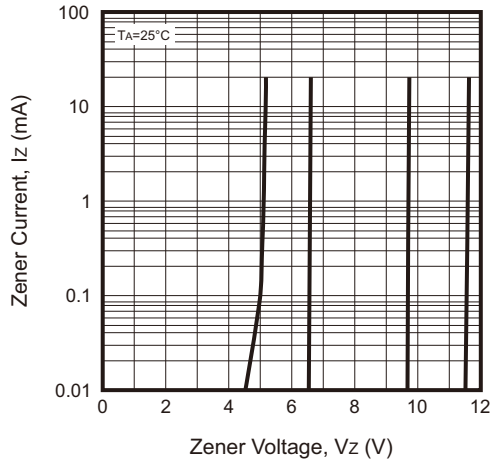


Fig.2 - Zener Breakdown Characteristic

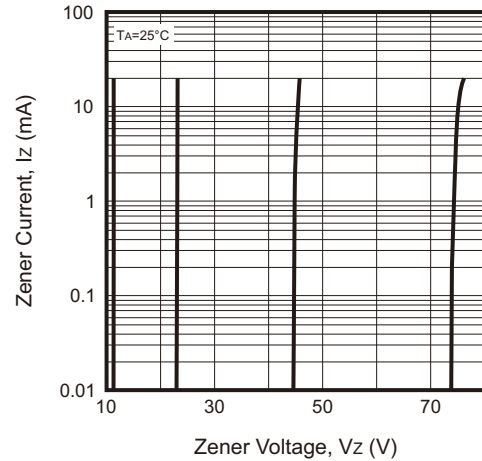


Fig.3 - Typical Forward Voltage

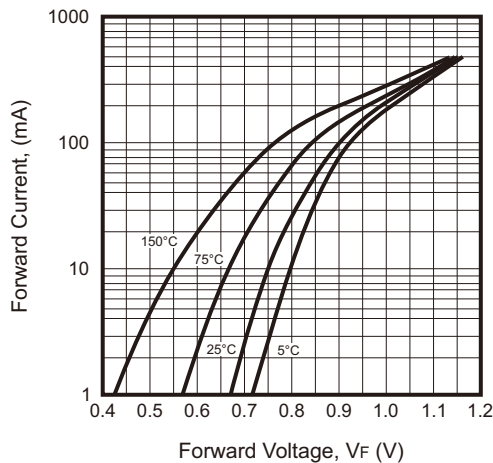


Fig.4 - Effect of Zener Voltage on Zener Impedance

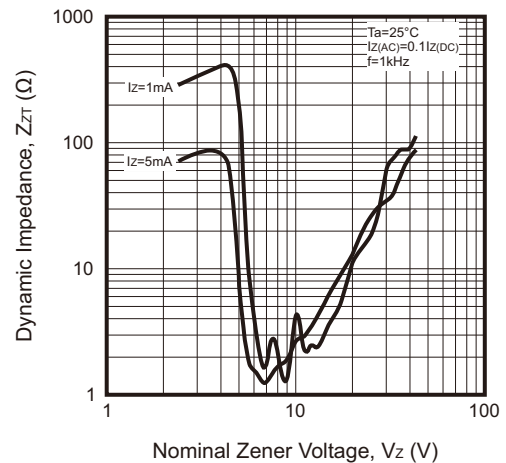


Fig.5 - Typical Capacitance

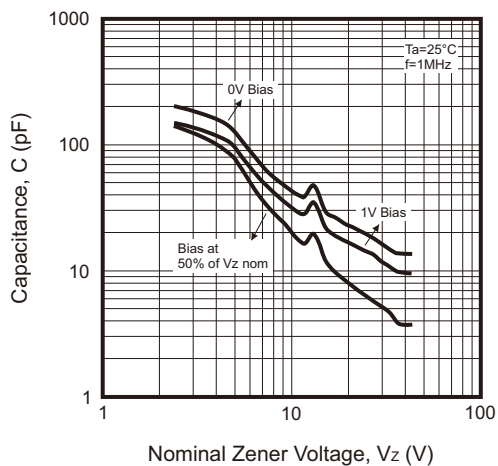
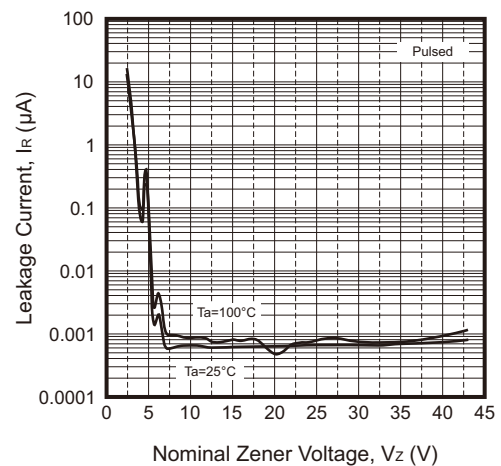
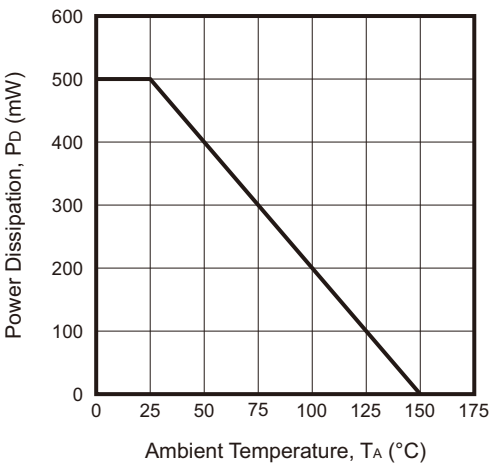


Fig.6 - Typical Leakage Current

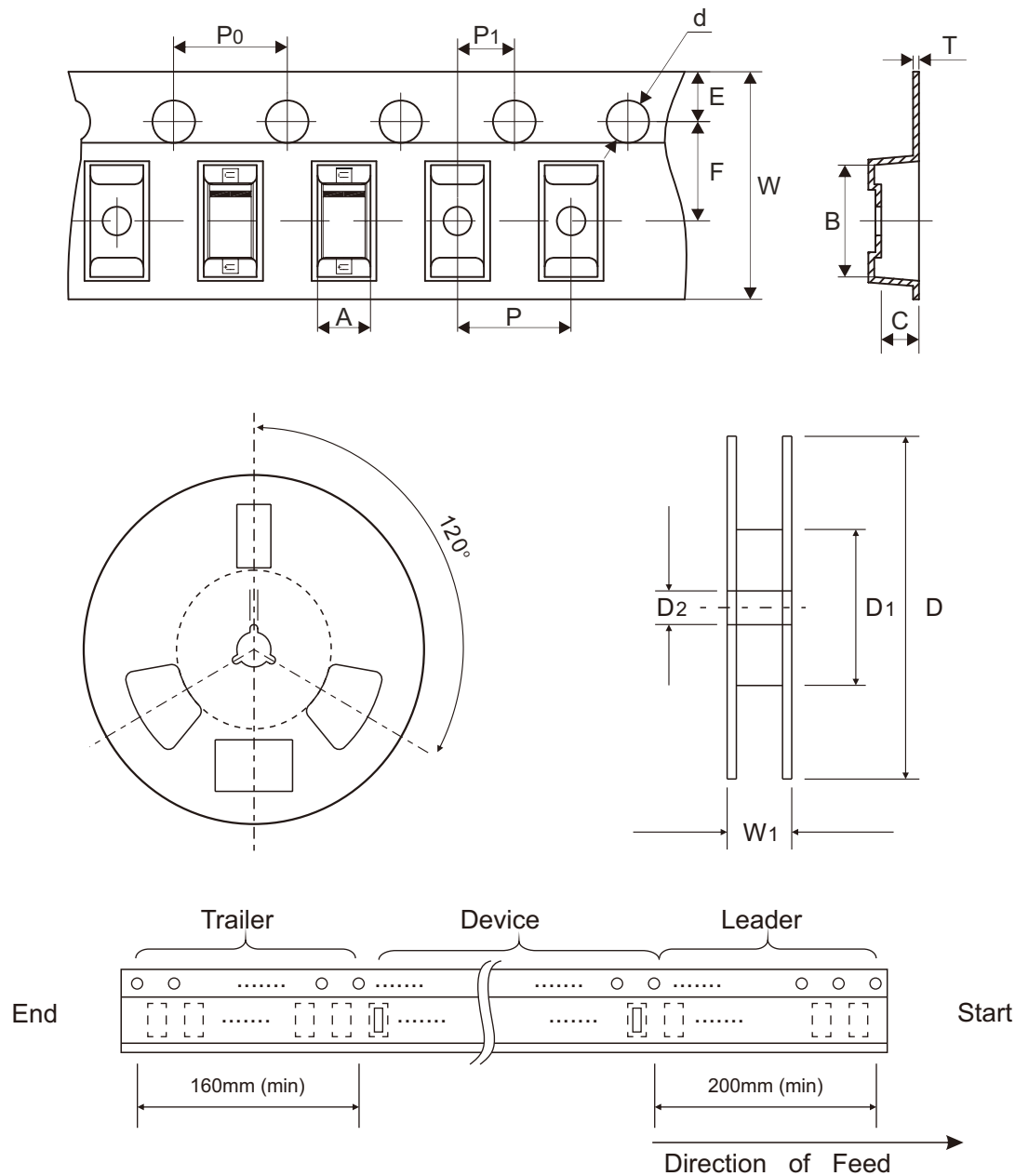


Typical Rating and Characteristic Curves (ABZT52Bxxx-P2-HF Series)

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
ABZT52Bxxx-P2-HF Series	See Page 2~3

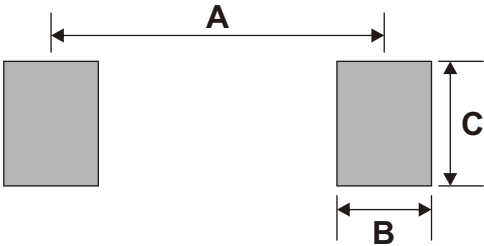


XXX = Product type marking code

 = 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