勤昇科技股份有限公 司
Extensive Technology
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BZV55 Series

500mW Surface Mount Zener Diodes - 2.4V - 75V

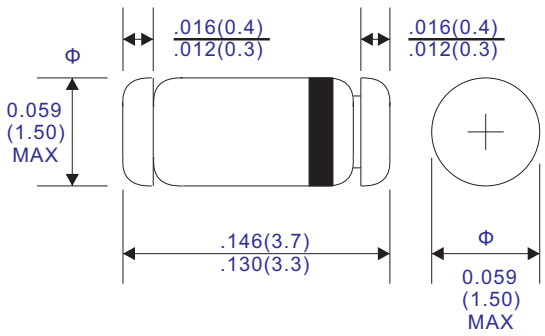
FEATURES

- For use as low voltage stabilizer or voltage reference
- Silicon epitaxial planar chip struction
- High reliability
- ±2% ~ ±5% voltage regulaion tolerance
- Glass sealed envelope
- Small surface mounting type
- Lead-free parts for green partner, meet RoHS environment substance directive request

MECHANICAL DATA

- Case: SOD-80 (Glass Mini-Melf)
- • Terminals: Solderable per MIL-STD-750 Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: approx. 0.03 grams

SOD-80



Unit :inch(mm)

MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

	Symbols	*BZV55 Series*	Units
Power Dissipation, Note 1	P_d	500	mW
Power Dissipation at T_A=50°C	P_{TOT}	400	mW
Peak Reverse Power Dissipation (Non-Repetitive) tp=100μS, Note 1	P_{ZSM}	30	W
Operationg Junction Temperature Range	T_J	-65 ~ +175	°C
Thermal Resistance, junction to ambient, Note 2	$R_{\theta JA}$	0.38	K/mW
Thermal Resistance, junction to lead	$R_{\theta JL}$	0.30	K/mW
Storage Temperature Range	T_{STG}	-65 ~ +175	°C
Continuous Forward Current	I_F	250	mA
Forward Voltage at I_F=100mA	V_F	1.0	Volt

Note 1. T_J=150°C
2. On PC board 10 mmX10 mmX0.6 mme

BZV55 Series

MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

Part No.	Electical Characteristics (Ta=25°C)								Temp. Coefficient at IZT (%/K)	
	Vz(Min) (V)	Vz(Max) (V)	IzT (mA)	ZzT (Ω)	IzK (mA)	ZzK (Ω)	IR(uA) Max.	VR(V)	Min.	Max.
BZV55-C2V4	2.20	2.60	5.0	85	1.0	600	50	1	-0.08	-0.06
BZV55-C2V7	2.50	2.90	5.0	85	1.0	500	20	1	-0.09	-0.04
BZV55-C3V0	2.80	3.20	5.0	85	1.0	500	10	1	-0.09	-0.03
BZV55-C3V3	3.10	3.50	5.0	85	1.0	500	5	1	-0.08	-0.03
BZV55-C3V6	3.40	3.80	5.0	85	1.0	500	3	1	-0.08	-0.03
BZV55-C3V9	3.70	4.10	5.0	85	1.0	500	3	1	-0.07	-0.03
BZV55-C4V3	4.00	4.60	5.0	75	1.0	500	3	1	-0.06	-0.01
BZV55-C4V7	4.40	5.00	5.0	60	1.0	500	2	2	-0.05	+0.02
BZV55-C5V1	4.80	5.40	5.0	35	1.0	480	1	2	-0.03	+0.04
BZV55-C5V6	5.20	6.00	5.0	25	1.0	400	3	2	-0.02	+0.06
BZV55-C6V2	5.80	6.60	5.0	10	1.0	200	2	4	-0.01	+0.07
BZV55-C6V8	6.40	7.20	5.0	8	1.0	150	1	4	+0.02	+0.07
BZV55-C7V5	7.00	7.90	5.0	7	1.0	50	0.7	5	+0.03	+0.07
BZV55-C8V2	7.70	8.70	5.0	7	1.0	50	0.5	5	+0.04	+0.07
BZV55-C9V1	8.50	9.60	5.0	10	1.0	50	0.2	6	+0.05	+0.08
BZV55-C10	9.40	10.60	5.0	15	1.0	70	0.1	7	+0.05	+0.08
BZV55-C11	10.40	11.60	5.0	20	1.0	70	0.1	8	+0.05	+0.09
BZV55-C12	11.40	12.70	5.0	20	1.0	90	0.1	8	+0.06	+0.09
BZV55-C13	12.40	14.10	5.0	26	1.0	110	0.05	8	+0.07	+0.09
BZV55-C15	13.80	15.60	5.0	30	1.0	110	0.05	10	+0.07	+0.09
BZV55-C16	15.30	17.10	5.0	40	1.0	170	0.05	11	+0.08	+0.095
BZV55-C18	16.80	19.10	5.0	50	1.0	170	0.05	13	+0.08	+0.095
BZV55-C20	18.80	21.20	5.0	55	1.0	220	0.05	14	+0.08	+0.1
BZV55-C22	20.80	23.30	5.0	55	1.0	220	0.05	15	+0.08	+0.1
BZV55-C24	22.80	25.60	5.0	80	1.0	220	0.05	17	+0.08	+0.1
BZV52-C27	25.10	28.90	2.5	80	0.5	250	0.05	19	+0.08	+0.1
BZV55-C30	28.00	32.00	2.5	80	0.5	250	0.05	21	+0.08	+0.1
BZV55-C33	31.00	35.00	2.5	80	0.5	250	0.05	23	+0.08	+0.1
BZV55-C36	34.00	38.00	2.5	80	0.5	250	0.05	25	+0.08	+0.1
BZV55-C39	37.00	41.00	2.5	90	0.5	300	0.05	27	+0.1	+0.12
BZV55-C43	40.00	46.00	2.5	90	0.5	700	0.05	30	+0.1	+0.12
BZV55-C47	44.00	50.00	2.5	110	0.5	750	0.05	33	+0.1	+0.12
BZV55-C51	48.00	54.00	2.5	125	0.5	750	0.05	36	+0.1	+0.12
BZV55-C56	52.00	60.00	2.5	135	0.5	1000	0.05	39	+0.1	+0.1
BZV55-C62	58.00	66.00	2.5	150	0.5	1000	0.05	43	+0.1	+0.1
BZV55-C68	64.00	72.00	2.5	200	0.5	1000	0.05	48	+0.1	+0.1
BZV55-C75	70.00	79.00	2.5	250	0.5	1000	0.05	53	+0.1	+0.1

• The type number listed have zener voltages minimum & maximum limits as shown and have a standard tolerance on the nominal zener voltage 5%

BZV55 Series

MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

Part No.	Electical Characteristics (Ta=25°C)								Temp. Coefficient at IZT (%/K)	
	Vz(Min) (V)	Vz(Max) (V)	IzT (mA)	ZzT (Ω)	IzK (mA)	ZzK (Ω)	IR(uA) Max.	VR(V)	Min.	Max.
BZV55-B2V4	2.35	2.45	5.0	85	1.0	600	50	1	-0.08	-0.06
BZV55-B2V7	2.65	2.75	5.0	85	1.0	500	20	1	-0.09	-0.04
BZV55-B3V0	2.94	3.06	5.0	85	1.0	500	10	1	-0.09	-0.03
BZV55-B3V3	3.23	3.37	5.0	85	1.0	500	5	1	-0.08	-0.03
BZV55-B3V6	3.53	3.67	5.0	85	1.0	500	3	1	-0.08	-0.03
BZV55-B3V9	3.82	3.98	5.0	85	1.0	500	3	1	-0.07	-0.03
BZV55-B4V3	4.21	4.39	5.0	75	1.0	500	3	1	-0.06	-0.01
BZV55-B4V7	4.61	4.79	5.0	60	1.0	500	2	2	-0.05	+0.02
BZV55-B5V1	5.00	5.20	5.0	35	1.0	480	1	2	-0.03	+0.04
BZV55-B5V6	5.49	5.71	5.0	25	1.0	400	3	2	-0.02	+0.06
BZV55-B6V2	6.08	6.32	5.0	10	1.0	200	2	4	-0.01	+0.07
BZV55-B6V8	6.66	6.94	5.0	8	1.0	150	1	4	+0.02	+0.07
BZV55-B7V5	7.35	7.65	5.0	7	1.0	50	0.7	5	+0.03	+0.07
BZV55-B8V2	8.04	8.36	5.0	7	1.0	50	0.5	5	+0.04	+0.07
BZV55-B9V1	8.92	9.28	5.0	10	1.0	50	0.2	6	+0.05	+0.08
BZV55-B10	9.80	10.20	5.0	15	1.0	70	0.1	7	+0.05	+0.08
BZV55-B11	10.80	11.20	5.0	20	1.0	70	0.1	8	+0.05	+0.09
BZV55-B12	11.80	12.20	5.0	20	1.0	90	0.1	8	+0.06	+0.09
BZV55-B13	12.70	13.30	5.0	26	1.0	110	0.05	8	+0.07	+0.09
BZV55-B15	14.70	15.30	5.0	30	1.0	110	0.05	10	+0.07	+0.09
BZV55-B16	15.70	16.30	5.0	40	1.0	170	0.05	11	+0.08	+0.095
BZV55-B18	17.60	18.40	5.0	50	1.0	170	0.05	13	+0.08	+0.095
BZV55-B20	19.60	20.40	5.0	55	1.0	220	0.05	14	+0.08	+0.1
BZV55-B22	21.60	22.40	5.0	55	1.0	220	0.05	15	+0.08	+0.1
BZV55-B24	23.50	24.50	5.0	80	1.0	220	0.05	17	+0.08	+0.1
BZV52-B27	26.50	27.50	2.5	80	0.5	250	0.05	19	+0.08	+0.1
BZV55-B30	29.40	30.60	2.5	80	0.5	250	0.05	21	+0.08	+0.1
BZV55-B33	32.30	33.70	2.5	80	0.5	250	0.05	23	+0.08	+0.1
BZV55-B36	35.30	36.70	2.5	80	0.5	250	0.05	25	+0.08	+0.1
BZV55-B39	38.20	39.80	2.5	90	0.5	300	0.05	27	+0.1	+0.12
BZV55-B43	42.10	43.90	2.5	90	0.5	700	0.05	30	+0.1	+0.12
BZV55-B47	46.10	47.90	2.5	110	0.5	750	0.05	33	+0.1	+0.12
BZV55-B51	50.00	52.00	2.5	125	0.5	750	0.05	36	+0.1	+0.12
BZV55-B56	54.90	57.10	2.5	135	0.5	1000	0.05	39	+0.1	+0.1
BZV55-B62	60.80	63.20	2.5	150	0.5	1000	0.05	43	+0.1	+0.1
BZV55-B68	66.60	69.40	2.5	200	0.5	1000	0.05	48	+0.1	+0.1
BZV55-B75	73.50	76.50	2.5	250	0.5	1000	0.05	53	+0.1	+0.1

• The type number listed have zener voltages minimum & maximum limits as shown and have a standard tolerance on the nominal zener voltage 2%

Fig. 1A - Zener Voltage vs Zener Current Curve

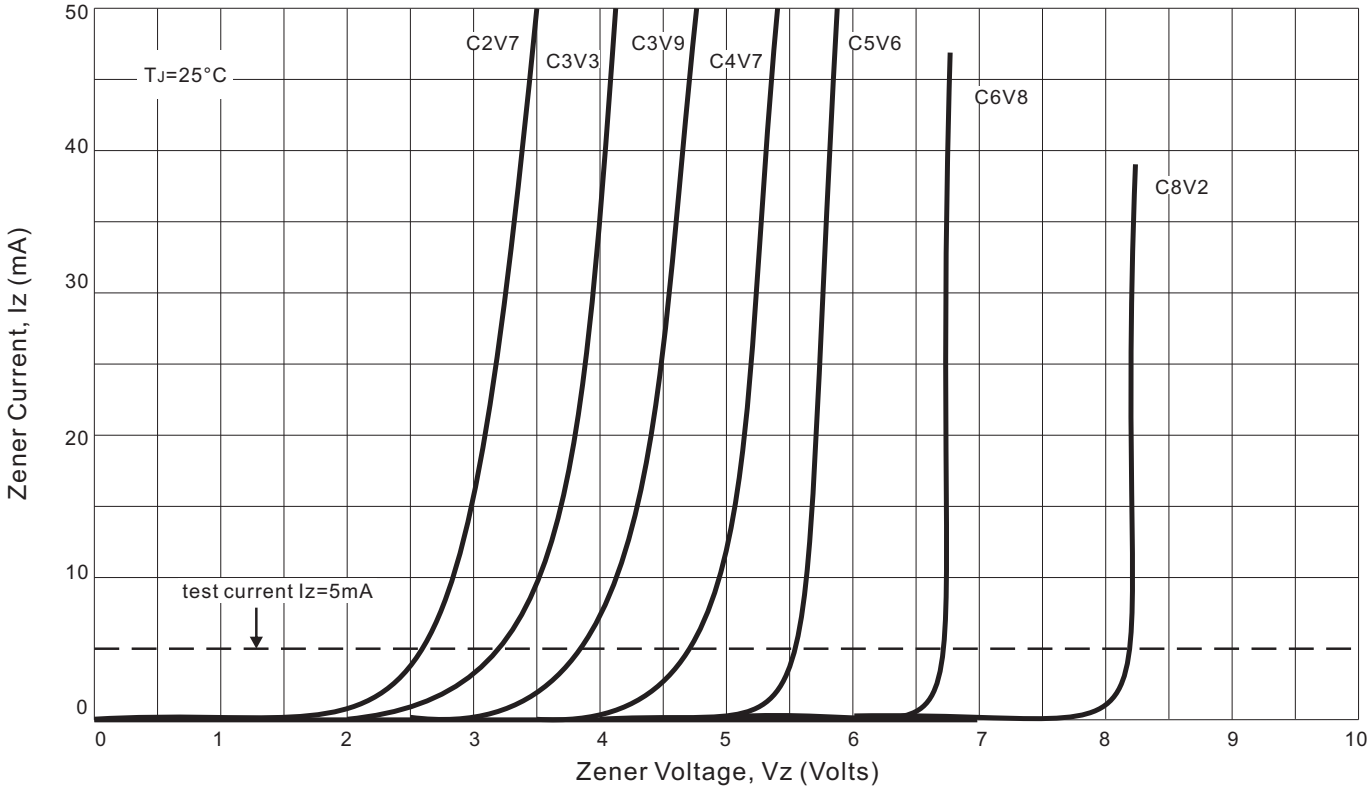


Fig. 1B - Zener Voltage vs Zener Current Curve

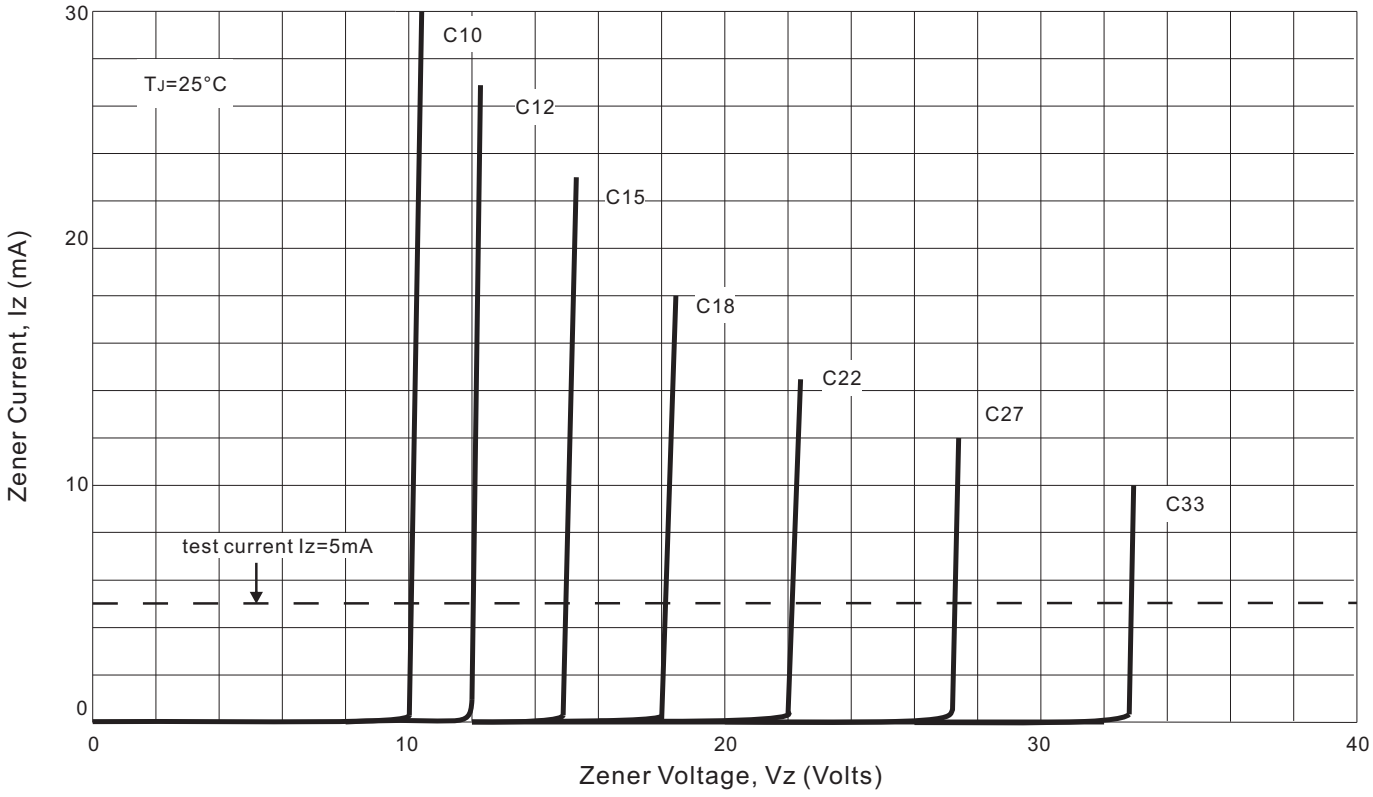


Fig. 2 - Power Dissipation Derating Curve

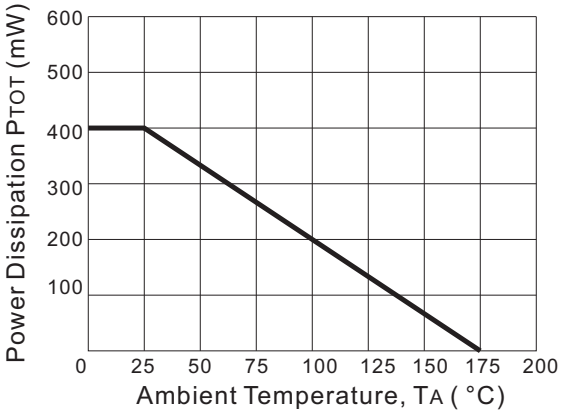


Fig. 3 - Change of Zenner Voltage Curve

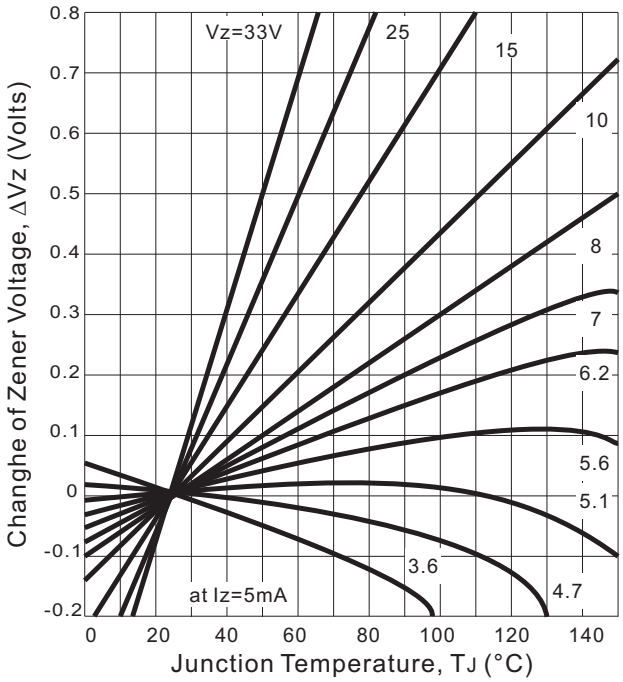


Fig. 4 - Capacitance Curve

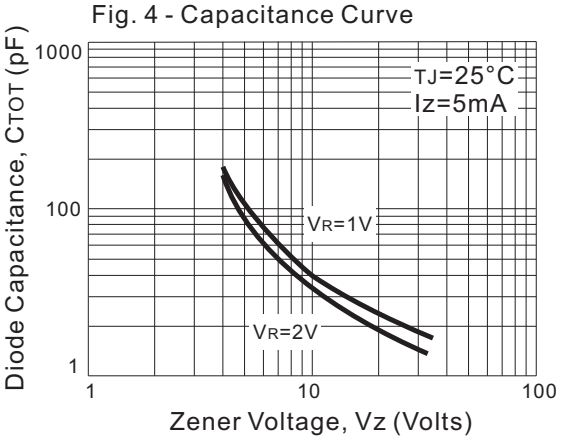


Fig. 5 - Dynamic Resistance Curve

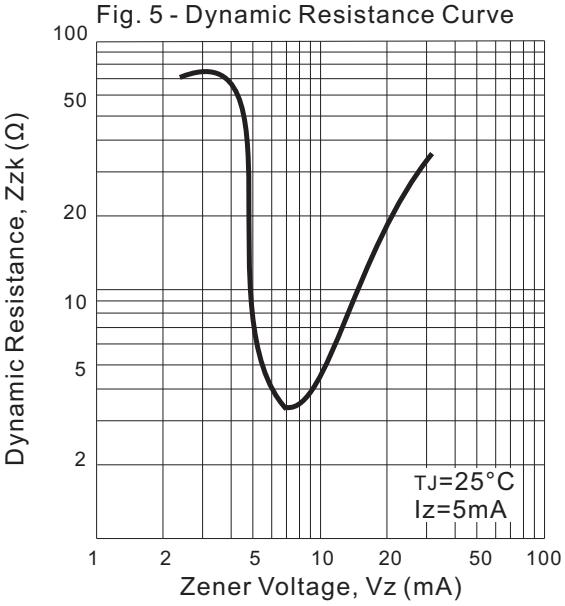


Fig. 6 - Pulse Thermal Resistance curve

Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case