

**FEATURES**

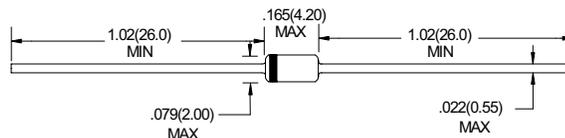
- High Reliability
- Sharp reverse characteristic
- Low reverse current
- Available in 2% and 5% tolerances

**LIMITING VALUES (Absolute Maximum Rating)**

Rating at 25°C ambient temperature unless otherwise specified.

Item	Symbol	Conditions	Max	Unit
Power Dissipation	P <sub>tot</sub>	L=4mm, T <sub>L</sub> =25°C	500	mW
Zener Current	I <sub>z</sub>	P <sub>tot</sub> / V <sub>z</sub>	See Table	mA
Maximum Junction Temperature	T <sub>j</sub>	175	--	°C
Storage Temperature Range	T <sub>stg</sub>	--	-65 to +175	°C

**DO-35 (Glassbody)**



Dimensions in inches and (millimeters)

**ELECTRICAL CHARACTERISTICS**

(T<sub>a</sub> = 25°C unless otherwise specified)

Item	Symbol	Conditions	Max	Unit
Thermal Resistance	R <sub>θJA</sub>	Junction to Ambient Air, L=4mm, T <sub>L</sub> =constant	300	°C / W
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 200mA	1.5	V

**ELECTRICAL CHARACTERISTICS - 5% Tolerance**

(T<sub>a</sub> = 25°C unless otherwise specified)

Part Number	Zener Voltage Range		Dynamic Resistance		Test Current	Temperature Coefficient		Test Current	Reverse Leakage Current		
	(V <sub>z</sub> at I <sub>zT</sub> )		R <sub>ZJT</sub> at I <sub>zT</sub>	R <sub>ZJK</sub> at I <sub>zk</sub>	I <sub>zT</sub>	TKvz I		Z <sub>k</sub>	I <sub>R</sub> at T <sub>AMB</sub> = 25°C	I <sub>R</sub> at T <sub>AMB</sub> = 150°C	at V <sub>R</sub>
	(V)		(Ω)		(mA)	(% / K)		(mA)	(μA)		
	Min.	Max.				Min.	Max.				(V)
BZX55C2V4	2.28	2.56	< 85	< 600	5.0	-0.09	-0.06	1.0	< 50	< 100	1.0
BZX55C2V7	2.5	2.9	< 85	< 600	5.0	-0.09	-0.06	1.0	< 10	< 50	1.0
BZX55C3V0	2.8	3.2	< 85	< 600	5.0	-0.08	-0.05	1.0	< 4	< 40	1.0
BZX55C3V3	3.1	3.5	< 85	< 600	5.0	-0.08	-0.05	1.0	< 2	< 40	1.0
BZX55C3V6	3.4	3.8	< 85	< 600	5.0	-0.08	-0.05	1.0	< 2	< 40	1.0
BZX55C3V9	3.7	4.1	< 85	< 600	5.0	-0.08	-0.05	1.0	< 2	< 40	1.0
BZX55C4V3	4.0	4.6	< 75	< 600	5.0	-0.06	-0.03	1.0	< 1	< 20	1.0
BZX55C4V7	4.4	5.0	< 60	< 600	5.0	-0.05	0.02	1.0	< 0.5	< 10	1.0
BZX55C5V1	4.8	5.4	< 35	< 550	5.0	-0.02	0.02	1.0	< 0.1	< 2	1.0
BZX55C5V6	5.2	6.0	< 25	< 450	5.0	-0.05	0.05	1.0	< 0.1	< 2	1.0
BZX55C6V2	5.8	6.6	< 10	< 200	5.0	0.03	0.06	1.0	< 0.1	< 2	2.0
BZX55C6V8	6.4	7.2	< 8	< 150	5.0	0.03	0.07	1.0	< 0.1	< 2	3.0
BZX55C7V5	7.0	7.9	< 7	< 50	5.0	0.03	0.07	1.0	< 0.1	< 2	5.0
BZX55C8V2	7.7	8.7	< 7	< 50	5.0	0.03	0.08	1.0	< 0.1	< 2	6.2
BZX55C9V1	8.5	9.6	< 10	< 50	5.0	0.03	0.09	1.0	< 0.1	< 2	6.8
BZX55C10	9.4	10.6	< 15	< 70	5.0	0.03	0.10	1.0	< 0.1	< 2	7.5
BZX55C11	10.4	11.6	< 20	< 70	5.0	0.03	0.11	1.0	< 0.1	< 2	8.2
BZX55C12	11.4	12.7	< 20	< 90	5.0	0.03	0.11	1.0	< 0.1	< 2	9.1
BZX55C13	12.4	14.1	< 26	< 110	5.0	0.03	0.11	1.0	< 0.1	< 2	10
BZX55C15	13.8	15.6	< 30	< 110	5.0	0.03	0.11	1.0	< 0.1	< 2	11
BZX55C16	15.3	17.1	< 40	< 170	5.0	0.03	0.11	1.0	< 0.1	< 2	12
BZX55C18	16.8	19.1	< 50	< 170	5.0	0.03	0.11	1.0	< 0.1	< 2	13
BZX55C20	18.8	21.2	< 55	< 220	5.0	0.03	0.11	1.0	< 0.1	< 2	15

### ELECTRICAL CHARACTERISTICS - 5% Tolerance (Cont'd)

(Ta = 25°C unless otherwise specified)

Part Number	Zener Voltage Range		Dynamic Resistance		Test Current	Temperature Coefficient		Test Current	Reverse Leakage Current		
	(Vz at IZT)		RZJT at IZT f = 1 KHz	RZJK at IZK f = 1 KHz	IZT	TKvz I		ZK	IR at TAMB = 25°C	IR at TAMB = 150°C	at VR
	(V)		(Ω)		(mA)	(% / K)		(mA)	(μA)		(V)
	Min.	Max.				Min.	Max.				
BZX55C22	20.8	23.3	< 55	< 220	5.0	0.04	0.12	1.0	< 0.1	< 2	16
BZX55C24	22.8	25.6	< 80	< 220	5.0	0.04	0.12	1.0	< 0.1	< 2	18
BZX55C27	25.1	28.9	< 80	< 220	5.0	0.04	0.12	1.0	< 0.1	< 2	20
BZX55C30	28.0	32.0	< 80	< 220	5.0	0.04	0.12	1.0	< 0.1	< 2	22
BZX55C33	31.0	35.0	< 80	< 220	5.0	0.04	0.12	1.0	< 0.1	< 2	24
BZX55C36	34.0	38.0	< 80	< 220	5.0	0.04	0.12	1.0	< 0.1	< 2	27
BZX55C39	37.0	41.0	< 90	< 500	2.5	0.04	0.12	0.5	< 0.1	< 5	30
BZX55C43	40.0	46.0	< 90	< 600	2.5	0.04	0.12	0.5	< 0.1	< 5	33
BZX55C47	44.0	50.0	< 110	< 700	2.5	0.04	0.12	0.5	< 0.1	< 5	36
BZX55C51	48.0	54.0	< 125	< 700	2.5	0.04	0.12	0.5	< 0.1	< 10	39
BZX55C56	52.0	60.0	< 135	< 1000	2.5	0.04	0.12	0.5	< 0.1	< 10	4
BZX55C62	58.0	66.0	< 150	< 1000	2.5	0.04	0.12	0.5	< 0.1	< 10	4
BZX55C68	64.0	72.0	< 200	< 1000	2.5	0.04	0.12	0.5	< 0.1	< 10	5
BZX55C75	70.0	79.0	< 250	< 1500	2.5	0.04	0.12	0.5	< 0.1	< 10	5

### ELECTRICAL CHARACTERISTICS - 2% Tolerance

(Ta = 25°C unless otherwise specified)

Part Number	Zener Voltage Range		Dynamic Resistance		Test Current	Temperature Coefficient		Test Current	Reverse Lea		
	(Vz at IZT)		RZJT at IZT f = 1 KHz	RZJK at IZK f = 1 KHz	IZT	TKvz I		ZK	IR at TAMB = 25°C	IR at TAMB = 150°C	at VR
	(V)		(Ω)		(mA)	(% / K)		(mA)	(μA)		(V)
	Min.	Max.				Min.	Max.				
BZX55B2V7	2.64	2.76	< 85	< 600	5.0	-0.09	-0.06	1.0	< 10	< 50	1.0
BZX55B3V0	2.94	3.06	< 90	< 600	5.0	-0.08	-0.05	1.0	< 4	< 40	1.0
BZX55B3V3	3.24	3.36	< 90	< 600	5.0	-0.08	-0.05	1.0	< 2	< 40	1.0
BZX55B3V6	3.52	3.68	< 90	< 600	5.0	-0.08	-0.05	1.0	< 2	< 40	1.0
BZX55B3V9	3.82	3.98	< 90	< 600	5.0	-0.08	-0.05	1.0	< 2	< 40	1.0
BZX55B4V3	4.22	4.38	< 90	< 600	5.0	-0.06	-0.03	1.0	< 1	< 20	1.0
BZX55B4V7	4.60	4.80	< 80	< 600	5.0	-0.05	0.02	1.0	< 0.5	< 10	1.0
BZX55B5V1	5.00	5.20	< 60	< 550	5.0	-0.02	0.02	1.0	< 0.1	< 2	1.0
BZX55B5V6	5.48	5.72	< 40	< 450	5.0	-0.05	0.05	1.0	< 0.1	< 2	1.0
BZX55B6V2	6.08	6.32	< 10	< 200	5.0	0.03	0.06	1.0	< 0.1	< 2	2.0
BZX55B6V8	6.66	6.94	< 8	< 150	5.0	0.03	0.07	1.0	< 0.1	< 2	3.0
BZX55B7V5	7.35	7.65	< 7	< 50	5.0	0.03	0.07	1.0	< 0.1	< 2	5.0
BZX55B8V2	8.04	8.36	< 7	< 50	5.0	0.03	0.08	1.0	< 0.1	< 2	6.2
BZX55B9V1	8.92	9.28	< 10	< 50	5.0	0.03	0.09	1.0	< 0.1	< 2	6.8
BZX55B10	9.80	10.20	< 15	< 70	5.0	0.03	0.1	1.0	< 0.1	< 2	7.5
BZX55B11	10.78	11.22	< 20	< 70	5.0	0.03	0.11	1.0	< 0.1	< 2	8.2
BZX55B12	11.76	12.24	< 20	< 90	5.0	0.03	0.11	1.0	< 0.1	< 2	9.1
BZX55B13	12.74	13.26	< 26	< 110	5.0	0.03	0.11	1.0	< 0.1	< 2	10
BZX55B15	14.70	15.30	< 30	< 110	5.0	0.03	0.11	1.0	< 0.1	< 2	11
BZX55B16	15.70	16.30	< 40	< 170	5.0	0.03	0.11	1.0	< 0.1	< 2	12
BZX55B18	17.64	18.36	< 50	< 170	5.0	0.03	0.11	1.0	< 0.1	< 2	13
BZX55B20	19.60	20.40	< 55	< 220	5.0	0.03	0.11	1.0	< 0.1	< 2	15
BZX55B22	21.55	22.45	< 55	< 220	5.0	0.04	0.12	1.0	< 0.1	< 2	16
BZX55B24	23.50	24.50	< 80	< 220	5.0	0.04	0.12	1.0	< 0.1	< 2	18
BZX55B27	26.40	27.60	< 80	< 220	5.0	0.04	0.12	1.0	< 0.1	< 2	20
BZX55B30	29.40	30.60	< 80	< 220	5.0	0.04	0.12	1.0	< 0.1	< 2	22
BZX55B33	32.40	33.60	< 80	< 220	5.0	0.04	0.12	1.0	< 0.1	< 2	24
BZX55B36	35.30	36.70	< 80	< 220	5.0	0.04	0.12	1.0	< 0.1	< 2	27
BZX55B39	38.20	39.80	< 90	< 500	2.5	0.04	0.12	0.5	< 0.1	< 5	30
BZX55B43	42.10	43.90	< 90	< 600	2.5	0.04	0.12	0.5	< 0.1	< 5	33
BZX55B47	46.10	47.90	< 110	< 700	2.5	0.04	0.12	0.5	< 0.1	< 5	36
BZX55B51	50.00	52.00	< 125	< 700	2.5	0.04	0.12	0.5	< 0.1	< 10	39
BZX55B56	54.90	57.10	< 135	< 1000	2.5	0.04	0.12	0.5	< 0.1	< 10	43
BZX55B62	60.80	63.20	< 150	< 1000	2.5	0.04	0.12	0.5	< 0.1	< 10	47
BZX55B68	66.60	69.40	< 200	< 1000	2.5	0.04	0.12	0.5	< 0.1	< 10	51
BZX55B75	73.00	76.50	< 250	< 1500	2.5	0.04	0.12	0.5	< 0.1	< 10	56

■ **CHARACTERISTICS (TYPICAL)**

FIG1: Total Power Dissipation vs. Ambient Temperature

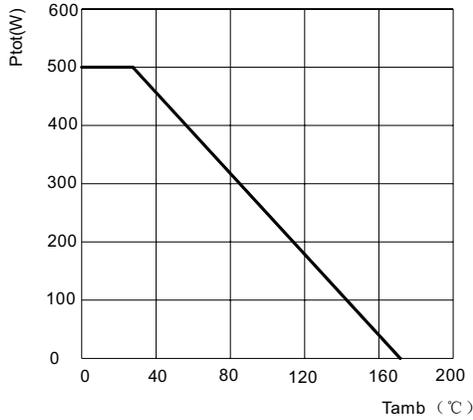


FIG2: Thermal Resistance vs. Lead Length

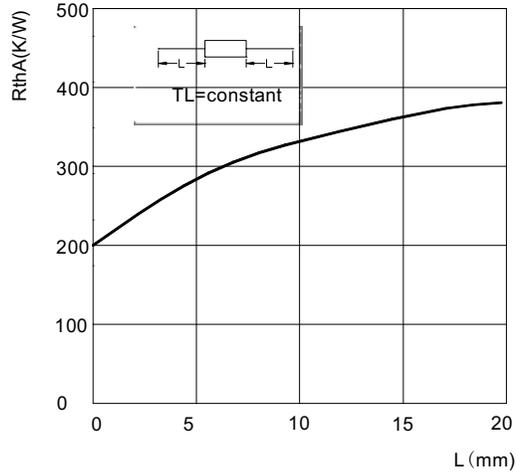


FIG3: Typical Change of Working Voltage under Operating Conditions at Tamb=25 °C

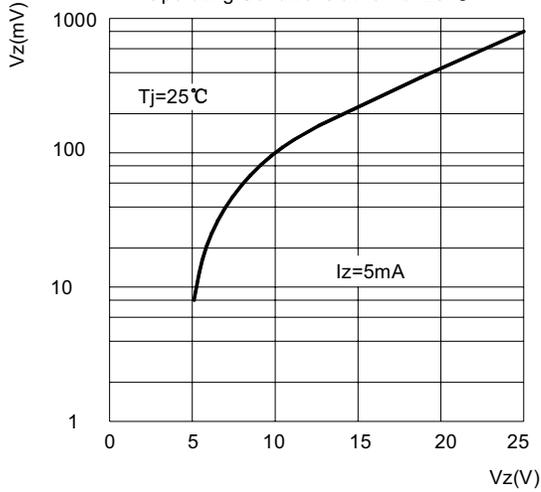


FIG4: Typical Change of Working Voltage vs. Junction Temperature

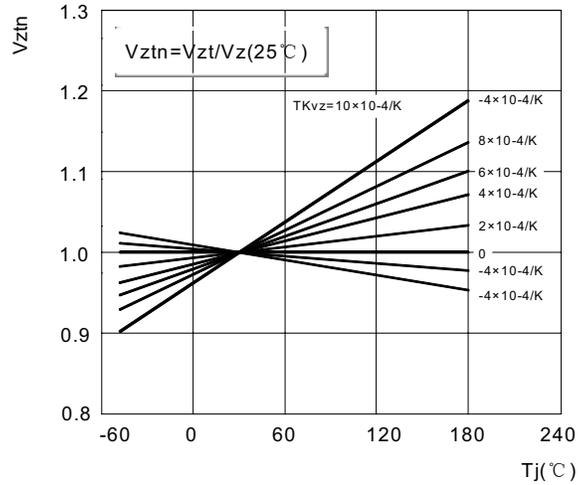


FIG5: Temperature Coefficient of Vz vs. Z-voltage

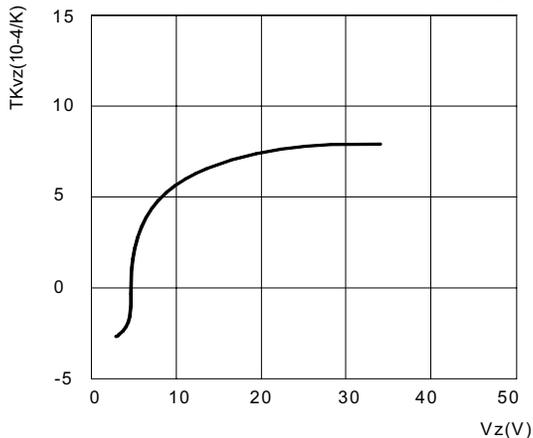
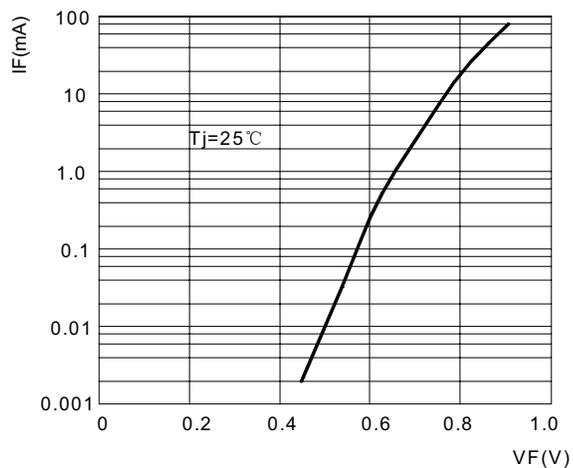


FIG6: Forward Current vs. Forward Voltage



■ **CHARACTERISTICS (TYPICAL)**

