



BZX55 ...

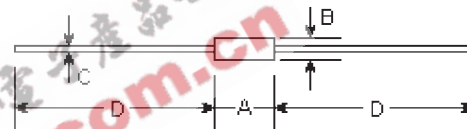
SILICON PLANAR ZENER DIODES

Features

Silicon Planar Zener Diodes

The Zener voltages are graded according to the international E 24 standard. Other voltage tolerances and higher Zener voltages on request.

DO-35



DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	-	0.154	-	3.9	
B	-	0.075	-	1.9	φ
C	-	0.020	-	0.52	φ
D	1.083	-	27.50	-	

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

	Symbols	Values	Units
Zener current see Table "Characteristics"			
Power dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	500 ⁽¹⁾	mW
Junction temperature	T_j	175	°C
Storage temperature range	T_s	-55 to +175	°C

Note:

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

Characteristics at $T_{amb}=25^\circ\text{C}$

	Symbols	Min.	Typ.	Max.	Units
Thermal resistance junction to ambient Air	R_{thA}	-	-	0.3 ⁽¹⁾	K/mW
Forward voltage at $I_F=100\text{mA}$	V_F	-	-	1.0	V

Note:

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

Type	Zener voltage range 1)			Dynamic resistance			Reverse leakage current			Temp. coefficient of Zener voltage
	V_{znom}		I_{zT} for $V_{zT}^{2)}$	r_{zT} and r_{zK} at I_{zK}			I_R and $I_{R}^{2)}$ at V_R			TK_{Vz}
	V	mA	V	Ω	Ω	mA	μA	μA	V	%/K
BZX55/C 0V8	0.8	5	0.73 ... 0.83	<8	<50	1	-	-	-	-0.26 ... -0.23
BZX55/C 2V0	2.0	5	1.9 ... 2.1	<85	<600	1	<100	<200	1	-0.09 ... -0.06
BZX55/C 2V4	2.4	5	2.28 ... 2.56	<85	<600	1	<50	<100	1	-0.09 ... -0.06
BZX55/C 2V7	2.7	5	2.5 ... 2.9	<85	<600	1	<10	<50	1	-0.09 ... -0.06
BZX55/C 3V0	3.0	5	2.8 ... 3.2	<85	<600	1	<4	<40	1	-0.08 ... -0.05
BZX55/C 3V3	3.3	5	3.1 ... 3.5	<85	<600	1	<2	<40	1	-0.08 ... -0.05
BZX55/C 3V6	3.6	5	3.4 ... 3.8	<85	<600	1	<2	<40	1	-0.08 ... -0.05
BZX55/C 3V9	3.9	5	3.7 ... 4.1	<85	<600	1	<2	<40	1	-0.08 ... -0.05
BZX55/C 4V3	4.3	5	4.0 ... 4.6	<75	<600	1	<1	<20	1	-0.06 ... -0.03
BZX55/C 4V7	4.7	5	4.4 ... 5.0	<60	<600	1	<0.5	<10	1	-0.05 ... +0.02
BZX55/C 5V1	5.1	5	4.8 ... 5.4	<35	<550	1	<0.1	<2	1	-0.02 ... +0.02
BZX55/C 5V6	5.6	5	5.2 ... 6.0	<25	<450	1	<0.1	<2	1	-0.05 ... +0.05
BZX55/C 6V2	6.2	5	5.8 ... 6.6	<10	<200	1	<0.1	<2	2	0.03 ... 0.06
BZX55/C 6V8	6.8	5	6.4 ... 7.2	<8	<150	1	<0.1	<2	3	0.03 ... 0.07
BZX55/C 7V5	7.5	5	7.0 ... 7.9	<7	<50	1	<0.1	<2	5	0.03 ... 0.07
BZX55/C 8V2	8.2	5	7.7 ... 8.7	<7	<50	1	<0.1	<2	6.2	0.03 ... 0.08
BZX55/C 9V1	9.1	5	8.5 ... 9.6	<10	<50	1	<0.1	<2	6.8	0.03 ... 0.09
BZX55/C 10	10	5	9.4 ... 10.6	<15	<70	1	<0.1	<2	7.5	0.03 ... 0.1
BZX55/C 11	11	5	10.4 ... 11.6	<20	<70	1	<0.1	<2	8.2	0.03 ... 0.11
BZX55/C 12	12	5	11.4 ... 12.7	<20	<90	1	<0.1	<2	9.1	0.03 ... 0.11
BZX55/C 13	13	5	12.4 ... 14.1	<26	<110	1	<0.1	<2	10	0.03 ... 0.11
BZX55/C 15	15	5	13.8 ... 15.6	<30	<110	1	<0.1	<2	11	0.03 ... 0.11
BZX55/C 16	16	5	15.3 ... 17.1	<40	<170	1	<0.1	<2	12	0.03 ... 0.11
BZX55/C 18	18	5	16.8 ... 19.1	<50	<170	1	<0.1	<2	13	0.03 ... 0.11
BZX55/C 20	20	5	18.8 ... 21.2	<55	<220	1	<0.1	<2	15	0.03 ... 0.11
BZX55/C 22	22	5	20.8 ... 23.3	<55	<220	1	<0.1	<2	16	0.04 ... 0.12
BZX55/C 24	24	5	22.8 ... 25.6	<80	<220	1	<0.1	<2	18	0.04 ... 0.12
BZX55/C 27	27	5	25.1 ... 28.9	<80	<220	1	<0.1	<2	20	0.04 ... 0.12
BZX55/C 30	30	5	28 ... 32	<80	<220	1	<0.1	<2	22	0.04 ... 0.12
BZX55/C 33	33	5	31 ... 35	<80	<220	1	<0.1	<2	24	0.04 ... 0.12
BZX55/C 36	36	5	34 ... 38	<80	<220	1	<0.1	<2	27	0.04 ... 0.12
BZX55/C 39	39	2.5	37 ... 41	<90	<500	0.5	<0.1	<5	30	0.04 ... 0.12
BZX55/C 43	43	2.5	40 ... 46	<90	<500	0.5	<0.1	<5	33	0.04 ... 0.12
BZX55/C 47	47	2.5	44 ... 50	<110	<600	0.5	<0.1	<5	36	0.04 ... 0.12
BZX55/C 51	51	2.5	48 ... 54	<125	<700	0.5	<0.1	<10	39	0.04 ... 0.12
BZX55/C 56	56	2.5	52 ... 60	<135	<700	0.5	<0.1	<10	43	0.04 ... 0.12
BZX55/C 62	62	2.5	58 ... 66	<150	<1000	0.5	<0.1	<10	47	0.04 ... 0.12
BZX55/C 68	68	2.5	64 ... 72	<200	<1000	0.5	<0.1	<10	51	0.04 ... 0.12
BZX55/C 75	75	2.5	70 ... 79	<250	<1000	0.5	<0.1	<10	56	0.04 ... 0.12
BZX55/C 82	82	2.5	77 ... 87	<300	<1500	0.25	<0.1	<10	62	0.05 ... 0.12
BZX55/C 91	91	1	85 ... 96	<450	<2000	0.1	<0.1	<10	68	0.05 ... 0.12
BZX55/C 100	100	1	94 ... 106	<450	<5000	0.1	<0.1	<10	75	0.05 ... 0.12
BZX55/C 110	110	1	104 ... 116	<600	<5000	0.1	<0.1	<10	82	0.05 ... 0.12
BZX55/C 120	120	1	114 ... 127	<800	<5500	0.1	<0.1	<10	91	0.05 ... 0.12
BZX55/C 130	130	1	124 ... 141	<950	<6000	0.1	<0.1	<10	100	0.05 ... 0.12
BZX55/C 150	150	1	138 ... 156	<1250	<6500	0.1	<0.1	<10	110	0.05 ... 0.12
BZX55/C 160	160	1	153 ... 171	<1400	<7000	0.1	<0.1	<10	120	0.05 ... 0.12
BZX55/C 180	180	1	168 ... 191	<1700	<8500	0.1	<0.1	<10	130	0.05 ... 0.12
BZX55/C 200	200	1	188 ... 212	<2000	<10000	0.1	<0.1	<10	150	0.05 ... 0.12

Notes:

- (1) Tested with pulses $t_p=20ms$.
- (2) Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.
- (3) The BZX55-C0V8 is a silicon diode with operation in forward direction. Hence, the index of all parameters should be "F" instead of "Z". Connect the cathode lead to the negative pole.

RATINGS AND CHARACTERISTIC CURVES

