



# BZX55 ...

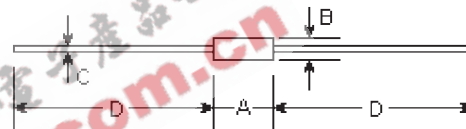
## SILICON PLANAR ZENER DIODES

### 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 <sup>(1)</sup>	mW
Junction temperature	$T_j$	175	$^\circ\text{C}$
Storage temperature range	$T_s$	-55 to +175	$^\circ\text{C}$

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 <sup>(1)</sup>	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 <sub>Znom</sub>	I <sub>ZT</sub> for V <sub>ZT</sub> <sup>2)</sup>		r <sub>ZT</sub> and r <sub>ZK</sub> at I <sub>ZK</sub>			I <sub>R</sub> and I <sub>R</sub> <sup>2)</sup> at V <sub>R</sub>			TK <sub>VZ</sub> %/K
		V	mA	V	Ω	Ω	mA	uA	uA	
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 tp=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

