

SILICON PLANAR ZENER DIODES

BZX55C
2.4V to 120V
500mW



DO- 35
Glass Axial Package

Best suited for Industrial, Military and Space Applications. The glass passivated diode chip in the hermetically sealed glass package with double studs provides excellent stability and reliability.

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

DESCRIPTION	SYMBOL	VALUE	UNIT
Power Dissipation (1)	P_{TA}	500	mW
Surge Power Dissipation Pulse Width=10 ms	P_S	5.0	W
Junction Temperature	T_j	175	°C
Storage Temperature	T_{stg}	- 65 to +175	°C
Thermal Resistance Junction to Ambient (1)	$R_{th(j-a)}$	0.3	°C/mW

(1) On infinite heatsink with 4mm lead length.

Forward Voltage @ $I_F=200mA$ (BZX55C 2.4V - 27V)	V_F	1.2	V
Forward Voltage @ $I_F=200mA$ (BZX55C 30V - 120V)	V_F	1.5	V

ELECTRICAL CHARACTERISTICS (Ta=25°C unless specified otherwise)

Device	V_{ZT} @ I_{ZT}^*		r_{ZT} @ I_{ZT}^*		I_{ZT}		r_{ZK} @ I_{ZK}	I_{ZK}	Temp. Coeff of Zener Voltage typ (%/°C)	I_R @ T_{amb}		V_R	I_{ZM} T_{amb} 50°C max
	min (V)	max (V)	max (W)	max (mA)	max (W)	max (mA)				25°C max (mA)	150°C max (mA)		
BZX55C 2V4	2.28	2.56	85	5.0	600	1.0			-0.07	50	100	1.0	155
BZX55C 2V7	2.50	2.90	85	5.0	600	1.0			-0.07	10	50	1.0	135
BZX55C 3V0	2.80	3.20	85	5.0	600	1.0			-0.07	4.0	40	1.0	125
BZX55C 3V3	3.10	3.50	85	5.0	600	1.0			-0.06	2.0	40	1.0	115
BZX55C 3V6	3.40	3.80	85	5.0	600	1.0			-0.06	2.0	40	1.0	105
BZX55C 3V9	3.70	4.10	85	5.0	600	1.0			-0.05	2.0	40	1.0	95
BZX55C 4V3	4.00	4.60	75	5.0	600	1.0			-0.03	1.0	20	1.0	90
BZX55C 4V7	4.40	5.00	60	5.0	600	1.0			-0.01	0.5	10	1.0	85
BZX55C 5V1	4.80	5.40	35	5.0	550	1.0			+0.01	0.1	2.0	1.0	80
BZX55C 5V6	5.20	6.00	25	5.0	450	1.0			+0.03	0.1	2.0	1.0	70
BZX55C 6V2	5.80	6.60	10	5.0	200	1.0			+0.04	0.1	2.0	2.0	64
BZX55C 6V8	6.40	7.20	8	5.0	150	1.0			+0.05	0.1	2.0	3.0	58
BZX55C 7V5	7.00	7.90	7	5.0	50	1.0			+0.05	0.1	2.0	5.0	53
BZX55C 8V2	7.70	8.70	7	5.0	50	1.0			+0.06	0.1	2.0	6.2	47
BZX55C 9V1	8.50	9.60	10	5.0	50	1.0			+0.06	0.1	2.0	6.8	43
BZX55C 10	9.40	10.60	15	5.0	70	1.0			+0.07	0.1	2.0	7.5	40
BZX55C 11	10.40	11.60	20	5.0	70	1.0			+0.07	0.1	2.0	8.2	36
BZX55C 12	11.40	12.70	20	5.0	90	1.0			+0.07	0.1	2.0	9.1	32
BZX55C 13	12.40	14.10	26	5.0	110	1.0			+0.07	0.1	2.0	10	29

BZX55C2V4_120V Rev_3 050604E

*Pulse Condition : 20ms ≤ tp ≤ 50ms . Duty Cycle <2%



Forward Voltage @ $I_F=200\text{mA}$ (BZX55C 2.4V - 27V)	V_F	1.2	V
Forward Voltage @ $I_F=200\text{mA}$ (BZX55C 30V - 120V)	V_F	1.5	V

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise)

Device	V_{ZT} @ I_{ZT}^*		r_{ZT} @ I_{ZT}^*		r_{ZK} @ I_{ZK}		Temp. Coeff of Zener Voltage typ (%/°C)	I_R @ T_{amb}		V_R (V)	I_{ZM} T_{amb} 50°C max (mA)
	min (V)	max (V)	max (W)	I_{ZT} (mA)	max (W)	I_{ZK} (mA)		25°C max (mA)	150°C max (mA)		
BZX55C 15	13.80	15.60	30	5.0	110	1.0	+0.08	0.1	2.0	11	27
BZX55C 16	15.30	17.10	40	5.0	170	1.0	+0.08	0.1	2.0	12	24
BZX55C 18	16.80	19.10	50	5.0	170	1.0	+0.08	0.1	2.0	13	21
BZX55C 20	18.80	21.20	55	5.0	220	1.0	+0.08	0.1	2.0	15	20
BZX55C 22	20.80	23.30	55	5.0	220	1.0	+0.08	0.1	2.0	16	18
BZX55C 24	22.80	25.60	80	5.0	220	1.0	+0.08	0.1	2.0	18	16
BZX55C 27	25.10	28.90	80	5.0	220	1.0	+0.09	0.1	2.0	20	14
BZX55C 30	28.00	32.00	80	5.0	220	1.0	+0.09	0.1	2.0	22	13
BZX55C 33	31.00	35.00	80	5.0	220	1.0	+0.09	0.1	2.0	24	12
BZX55C 36	34.00	38.00	80	5.0	220	1.0	+0.09	0.1	2.0	27	11
BZX55C 39	37.00	41.00	90	2.5	500	0.5	+0.09	0.1	5.0	30	10
BZX55C 43	40.00	46.00	90	2.5	600	0.5	+0.09	0.1	5.0	33	9.2
BZX55C 47	44.00	50.00	110	2.5	700	0.5	+0.09	0.1	5.0	36	8.5
BZX55C 51	48.00	54.00	125	2.5	700	0.5	+0.09	0.1	10	39	7.8
BZX55C 56	52.00	60.00	135	2.5	1000	0.5	+0.09	0.1	10	43	7.0
BZX55C 62	58.00	66.00	150	2.5	1000	0.5	+0.09	0.1	10	47	6.4
BZX55C 68	64.00	72.00	200	2.5	1000	0.5	+0.09	0.1	10	51	5.9
BZX55C 75	70.00	80.00	250	2.5	1500	0.5	+0.09	0.1	10	56	5.3
BZX55C 82	77.00	87.00	300	2.5	2000	0.5	+0.09	0.1	10	62	4.8
BZX55C 91	85.00	96.00	450	1.0	5000	0.1	+0.09	0.1	10	68	4.4
BZX55C 100	94.00	106	450	1.0	5000	0.1	+0.09	0.1	10	75	4.0
BZX55C 110	104	116	600	1.0	5000	0.1	+0.09	0.1	10	82	3.6
BZX55C 120	114	127	800	1.0	5000	0.1	+0.09	0.1	10	91	3.3

BZX55C2V4_120V Rev_3 050604E

*Pulse Condition : $20\text{ms} \leq t_p \leq 50\text{ms}$. Duty Cycle <2%

DO- 35
Glass Axial Package

The diagram shows a horizontal beam with a central support. The beam is divided into two segments, A and B, by a vertical line. Segment A is on the left, and segment B is on the right. The beam is supported by a central support, which is a vertical line with a semi-circular base. The beam is labeled with 'A' and 'B' above the segments. The beam is also labeled with 'C' and 'D' below the segments. The beam is shown with a cross-section at the support, indicating it is a fixed support. The beam is shown with a cross-section at the support, indicating it is a fixed support.

DIM	MIN	MAX
A	25.40	—
B	3.03	4.44
C	0.46	0.56
D	1.52	2.29

NOTES

1. Cathode is marked by Band.
2. All dimensions are in mm.

Centre line
± 1.05

1.05 MAX.

1.5 R MAX.

5.50
4.50

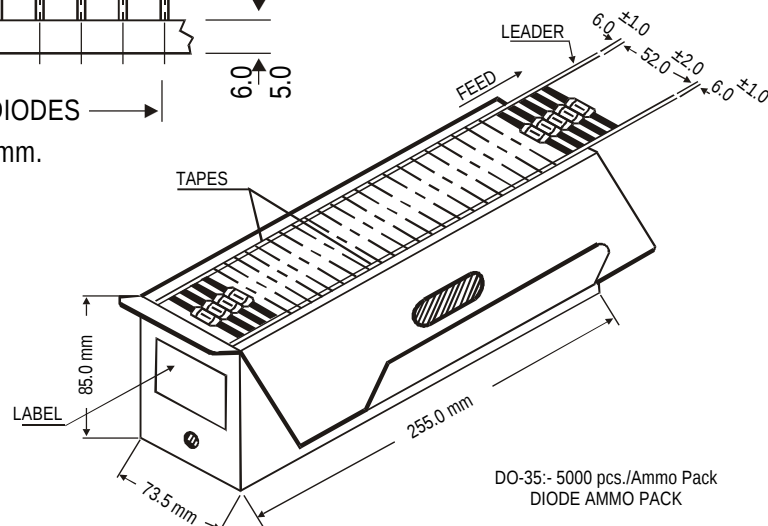
52.0
48.0

11 DIODES

54.00
6.00
5.00

All dimensions in mm.

1. T & A indicates Axial Tape & Ammo packing (52 mm Tape Spacing).
2. 300 mm (min) leader tape on every spool.
3. No. of empty places allowed 0.25% without consecutive empty places.
4. Ends of leads shall preferably not protrude beyond the tapes.
5. Components shall be held sufficiently in the tape or tapes so that they can not come free in normal handling.



On request also available in 26 mm Tape and Ammo Pack

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight /Qty	Size	Qty	Size	Qty	Gr Wt
DO-35 T&A	5K/ ammo box	0.88 kg/5K pcs	10" x 3.5" x 3.5"	5.0K	12.7" x 12.7" x 20"	125.0K	25 kos

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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