

## 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 (mA)
	min (V)	max (V)	max (W)	(mA)	max (W)	(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%

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Forward Voltage @ $I_F=200\text{mA}$ (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)	$I_R$ @ $T_{amb}$		$V_R$ (V)	$I_{ZM}$ $T_{amb}$ 50°C max (mA)
	min (V)	max (V)	max (W)	(mA)	max (W)	(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

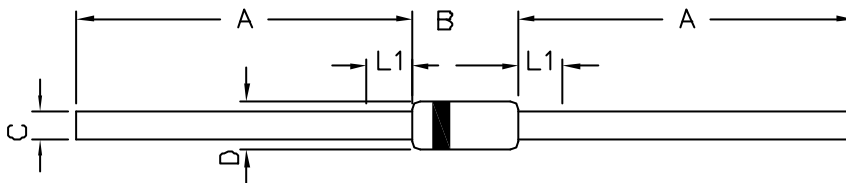
BZX55C2V4\_120V Rev\_3 050604E

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

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**500mW**

**DO-35**  
**Glass Axial Package**

### DO-35 Glass Axial Package

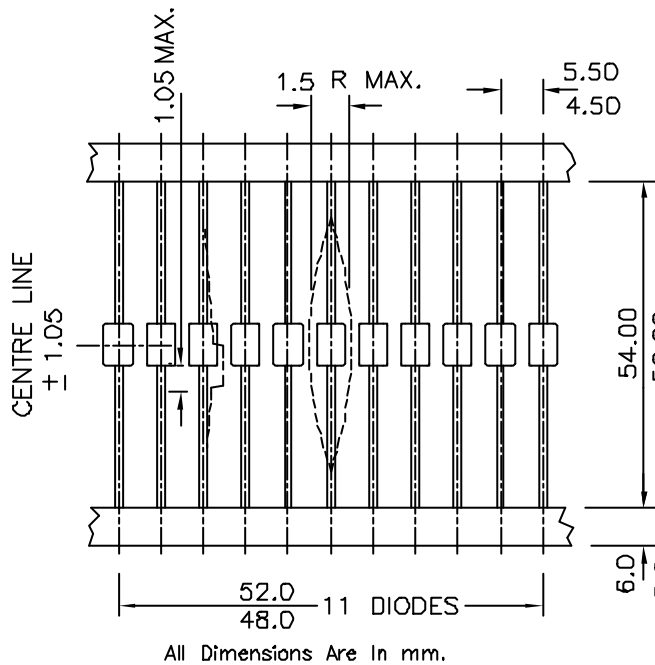


DIM	MIN	MAX
A	25.40	38.10
B	3.05	5.08
C	0.46	0.55
D	1.53	2.28
L1	-	1.27

NOTES:-

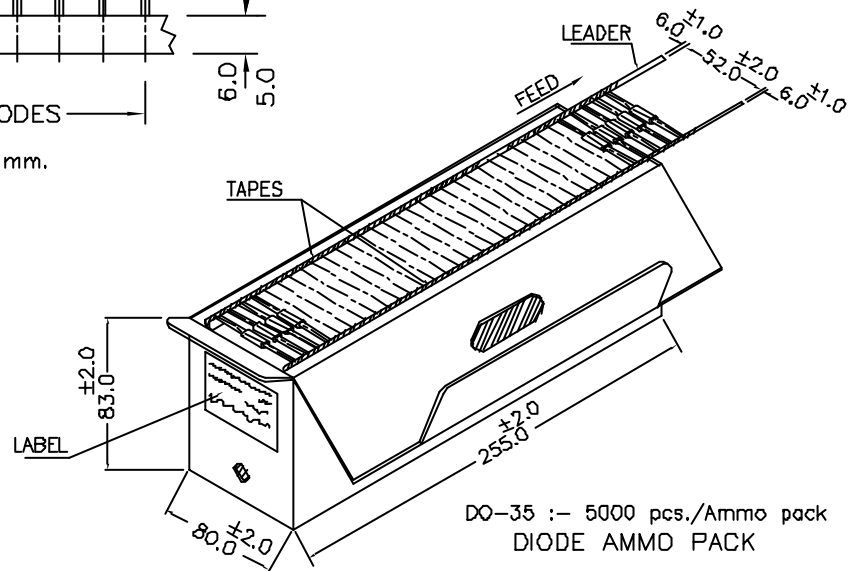
Cathode is marked by Band.  
 All Dimensions Are In mm.

### DO-35, 52mm Taping Specification



### 52mm Taping Specification

1. T & A Indicates Axial Tape & Ammo packing (52 mm Tape Specing)
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.



DO-35 :- 5000 pcs./Ammo pack  
 DIODE AMMO PACK

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	Qty
DO-35 T&A	5K/ammo box	0.88kg/5K pcs	10"X3.5"X3.5"	5.0K	12.7"X12.7"X20"	125.0K	25Kgs

### **Disclaimer**

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