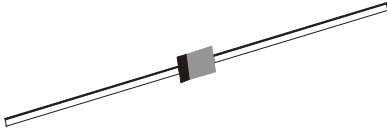


**SILICON PLANAR ZENER DIODES**

**BZX83C  
2V7 to 56V  
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 (T<sub>a</sub>=25°C)**

DESCRIPTION	SYMBOL	VALUE	UNIT
Power Dissipation	P <sub>TA</sub>	500	mW
Junction Temperature	T <sub>j</sub>	175	°C
Storage Temperature	T <sub>stg</sub>	- 55 to +175	°C
Thermal Resistance - Junction to Ambient in free air	R <sub>th(j-a)</sub>	300	°C/W

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

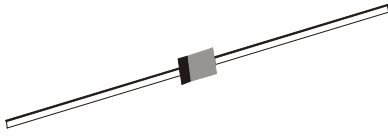
Forward Voltage @ I<sub>F</sub>=200mA                      V<sub>F</sub> < 1.2 V

Device	V <sub>ZT</sub> @ I <sub>ZT</sub> *		r <sub>ZT</sub> @ I <sub>ZT</sub> *	I <sub>ZT</sub>	r <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub>	Temp. Coeff of Zener Voltage typ (%/°C)	I <sub>R</sub> @ T <sub>a</sub> 25°C	V <sub>R</sub>	I <sub>ZM</sub>
	min (V)	max (V)	max (W)	(mA)	max (W)	(mA)		max (mA)		
BZX83C 2V7	2.50	2.90	90	5.0	600	1.0	-0.07	100	1.0	135
BZX83C 3V0	2.80	3.20	90	5.0	600	1.0	-0.07	60	1.0	125
BZX83C 3V3	3.10	3.50	90	5.0	600	1.0	-0.06	30	1.0	115
BZX83C 3V6	3.40	3.80	90	5.0	600	1.0	-0.06	20	1.0	105
BZX83C 3V9	3.70	4.10	90	5.0	600	1.0	-0.05	10	1.0	95
BZX83C 4V3	4.00	4.60	80	5.0	600	1.0	-0.03	5	1.0	90
BZX83C 4V7	4.40	5.00	80	5.0	600	1.0	-0.01	2	1.0	85
BZX83C 5V1	4.80	5.40	60	5.0	550	1.0	+0.01	1	1.0	75
BZX83C 5V6	5.20	6.00	40	5.0	450	1.0	+0.03	1	1.0	70
BZX83C 6V2	5.80	6.60	10	5.0	200	1.0	+0.04	1	2.0	64
BZX83C 6V8	6.40	7.20	8	5.0	150	1.0	+0.05	1	3.0	58
BZX83C 7V5	7.00	7.90	7	5.0	50	1.0	+0.05	1	3.5	53
BZX83C 8V2	7.70	8.70	7	5.0	50	1.0	+0.06	1	4.0	47
BZX83C 9V1	8.50	9.60	10	5.0	50	1.0	+0.06	1	5.0	43
BZX83C 10	9.40	10.60	15	5.0	70	1.0	+0.07	1	6.0	40
BZX83C 11	10.40	11.60	20	5.0	70	1.0	+0.07	1	8.2	36
BZX83C 12	11.40	12.70	20	5.0	90	1.0	+0.07	1	9.1	32
BZX83C 13	12.40	14.10	25	5.0	110	1.0	+0.07	1	10	29
BZX83C 15	13.80	15.60	30	5.0	110	1.0	+0.08	1	11	27
BZX83C 16	15.30	17.10	40	5.0	170	1.0	+0.08	1	12	24
BZX83C 18	16.80	19.10	55	5.0	170	1.0	+0.08	1	13	21
BZX83C 20	18.80	21.20	55	5.0	220	1.0	+0.08	1	15	20
BZX83C 22	20.80	23.30	58	5.0	220	1.0	+0.08	1	16	18
BZX83C 24	22.80	25.60	80	5.0	220	1.0	+0.08	1	18	16
BZX83C 27	25.10	28.90	80	5.0	250	1.0	+0.09	1	20	14

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

# SILICON PLANAR ZENER DIODES

**BZX83C**  
**2V7 to 56V**  
**500mW**



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

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

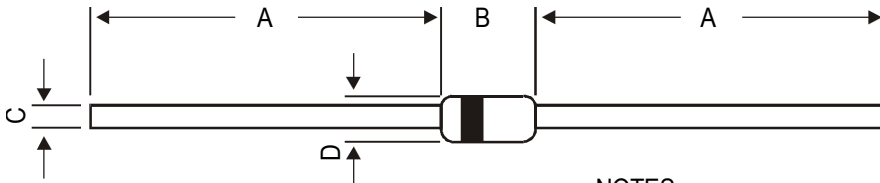
Device	$V_{ZT}$ @ $I_{ZT}^*$		$r_{ZT}$ @ $I_{ZT}^*$	$I_{ZT}$	$r_{ZK}$ @ $I_{ZK}$	$I_{ZK}$	Temp. Coeff of Zener Voltage typ (%/°C)	$I_R$ @ $T_a$ 25°C max	$V_R$ (V)	$I_{ZM}$ max (mA)
	min (V)	max (V)	max ( $\Omega$ )	(mA)	max ( $\Omega$ )	(mA)		max (mA)		
BZX83C 30	28.00	32.00	90	5.0	250	1.0	+0.09	1	22	13
BZX83C 33	31.00	35.00	90	5.0	250	1.0	+0.09	1	24	12
BZX83C 36	34.00	38.00	90	5.0	250	1.0	+0.09	1	27	11
BZX83C 39	37.00	41.00	100	2.5	600	0.5	+0.09	1	30	10
BZX83C 43	40.00	46.00	100	2.5	700	0.5	+0.09	1	33	9.2
BZX83C 47	44.00	50.00	120	2.5	1000	0.5	+0.09	1	36	8.5
BZX83C 51	48.00	54.00	135	2.5	1000	0.5	+0.09	1	39	7.8
BZX83C 56	52.00	60.00	145	2.5	1000	0.5	+0.09	1	43	7.0

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

**BZX83C**  
**2V7 to 56V**  
**500mW**

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

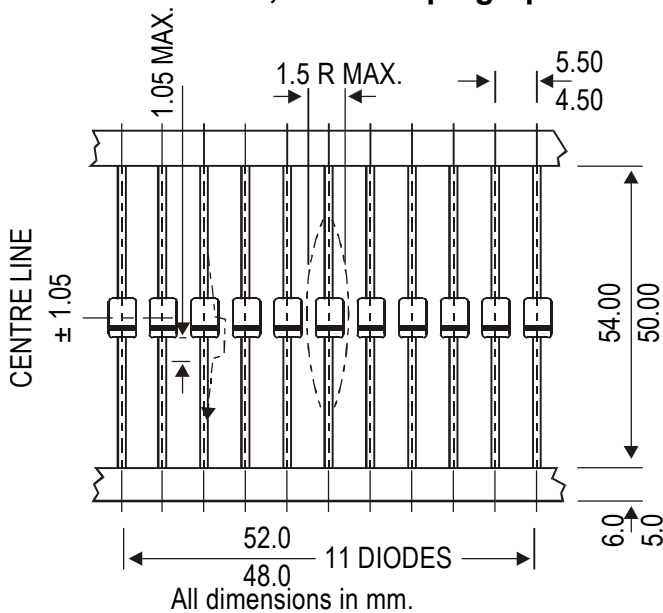
**DO-35 Glass Axial Package**



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

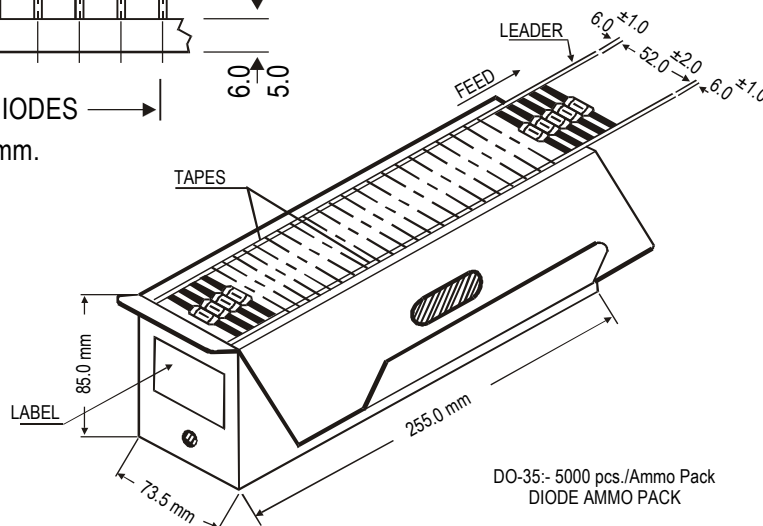
**NOTES**  
 1. Cathode is marked by Band.  
 2. All dimensions are in mm.

**DO-35, 52mm Taping Specification**



**52 mm Taping Specification**

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.



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	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 kgs

### **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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