

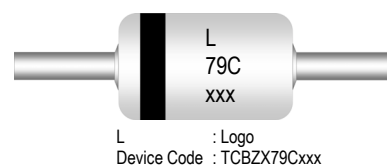
500 mW DO-35 Hermetically Sealed Glass Zener Voltage Regulators


 AXIAL LEAD
DO35

Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter	Value	Units
Power Dissipation	500	mW
Storage Temperature Range	-65 to +200	$^\circ\text{C}$
Operating Junction Temperature	+200	$^\circ\text{C}$
Lead Temperature (1/16" from case for 10 seconds)	+230	$^\circ\text{C}$

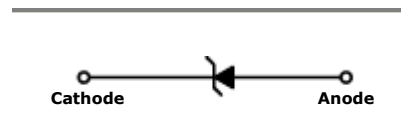
DEVICE MARKING DIAGRAM



These ratings are limiting values above which the serviceability of the diode may be impaired.

Specification Features:

- Zener Voltage Range 3.3 to 56 Volts
- DO-35 Package (JEDEC)
- Through-Hole Device Type Mounting
- Hermetically Sealed Glass
- Compression Bonded Construction
- All external surfaces are corrosion resistant and leads are readily solderable
- Cathode indicated by polarity band



ELECTRICAL SYMBOL

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Device Type	$V_Z @ I_{ZT}$ (Volts)		I_{ZT} (mA)	$Z_{ZT} @ I_{ZT}$ (Ω) Max	I_{ZK} (mA)	$Z_{ZK} @ I_{ZK}$ (Ω) Max	$I_R @ V_R$ (μA) Max	V_R (Volts)
	V_Z Min	V_Z Max						
TCBZX79C 3V3	3.1	3.5	5	95	1	600	25	1
TCBZX79C 3V6	3.4	3.8	5	90	1	600	15	1
TCBZX79C 3V9	3.7	4.1	5	90	1	600	10	1
TCBZX79C 4V3	4	4.6	5	90	1	600	5	1
TCBZX79C 4V7	4.4	5	5	80	1	500	3	2
TCBZX79C 5V1	4.8	5.4	5	60	1	480	2	2
TCBZX79C 5V6	5.2	6	5	40	1	400	1	2
TCBZX79C 6V2	5.8	6.6	5	10	1	150	3	4
TCBZX79C 6V8	6.4	7.2	5	15	1	80	2	4
TCBZX79C 7V5	7	7.9	5	15	1	80	1	5
TCBZX79C 8V2	7.7	8.7	5	15	1	80	0.7	5
TCBZX79C 9V1	8.5	9.6	5	15	1	100	0.5	6
TCBZX79C 10	9.4	10.6	5	20	1	150	0.2	7
TCBZX79C 11	10.4	11.6	5	20	1	150	0.1	8
TCBZX79C 12	11.4	12.7	5	25	1	150	0.1	8
TCBZX79C 13	12.4	14.1	5	30	1	170	0.1	8
TCBZX79C 15	13.8	15.6	5	30	1	200	0.05	10.5
TCBZX79C 16	15.3	17.1	5	40	1	200	0.05	11.2
TCBZX79C 18	16.8	19.1	5	45	1	225	0.05	12.6
TCBZX79C 20	18.8	21.2	5	55	1	225	0.05	14
TCBZX79C 22	20.8	23.3	5	55	1	250	0.05	15.4

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Device Type	$V_Z @ I_{ZT}$ (Volts)		I_{ZT} (mA)	$Z_{ZT} @ I_{ZT}$ (Ω) Max	I_{ZK} (mA)	$Z_{ZK} @ I_{ZK}$ (Ω) Max	$I_R @ V_R$ (μA) Max	V_R (Volts)
	V_Z Min	V_Z Max						
TCBZX79C 24	22.8	25.6	5	70	1	250	0.05	16.8
TCBZX79C 27	25.1	28.9	5	80	0.5	300	0.05	18.9
TCBZX79C 30	28	32	5	80	0.5	300	0.05	21
TCBZX79C 33	31	35	5	80	0.5	325	0.05	23.1
TCBZX79C 36	34	38	5	90	0.5	350	0.05	25.2
TCBZX79C 39	37	41	5	130	0.5	350	0.05	27.3
TCBZX79C 43	40	46	2	150	0.5	375	0.05	30.1
TCBZX79C 47	44	50	2	170	0.5	375	0.05	32.9
TCBZX79C 51	48	54	2	180	0.5	400	0.05	35.7
TCBZX79C 56	52	60	2	200	0.5	425	0.05	39.2

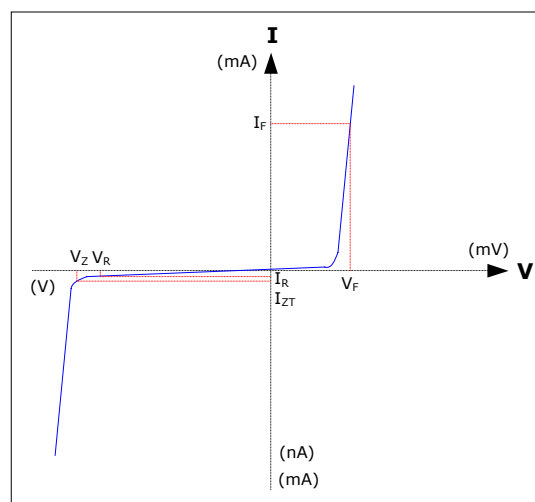
 V_F Forward Voltage = 1.5 V Maximum @ $I_F = 100$ mA for all types

Notes:

- The type numbers listed have zener voltage min/max limits as shown.
- For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Tak Cheong Electronics representative.
- The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed to I_{ZT} or I_{ZK} .

Electrical Symbol Definition

Symbol	Parameter
V_Z	Reverse Zener Voltage @ I_{ZT}
I_{ZT}	Reverse Current
Z_{ZT}	Maximum Zener Impedance @ I_{ZT}
I_{ZK}	Reverse Current
Z_{ZK}	Maximum Zener Impedance @ I_{ZK}
I_R	Reverse Leakage Current @ V_R
V_R	Breakdown Voltage
I_F	Forward Current
V_F	Forward Voltage @ I_F

Typical Characteristics

Ordering Information

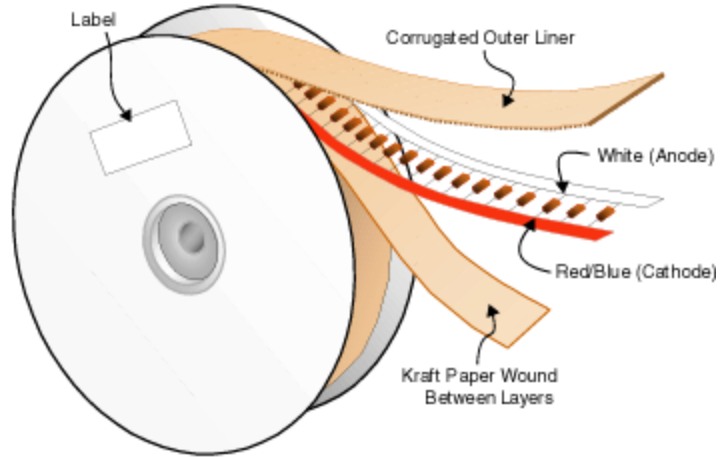
Device	Package	Quantity
TCBZX79Cxxx	Bulk	10,000
TCBZX79Cxxx.TB	Tape and Ammo	5,000
TCBZX79Cxxx.TR	Tape and Reel	10,000
TCBZX79Cxxx	Others (...contact Tak Cheong sales representatives)	

Axial-Lead Tape Packaging Standards

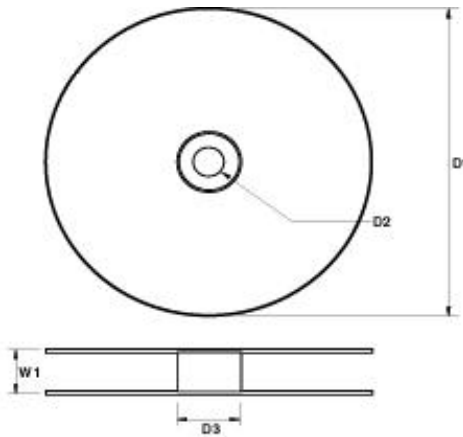
This axial-lead component's packaging requirements use in automatic testing and assembly equipment. And this standard practices for lead-tape packaging of axial-lead components meets the requirements of EIA Standard RS-296-D "Lead-taping of Components on Axial Lead Configuration for Automatic Insertion".

Tape & Reel Packaging Information

Tape & Reel Outline



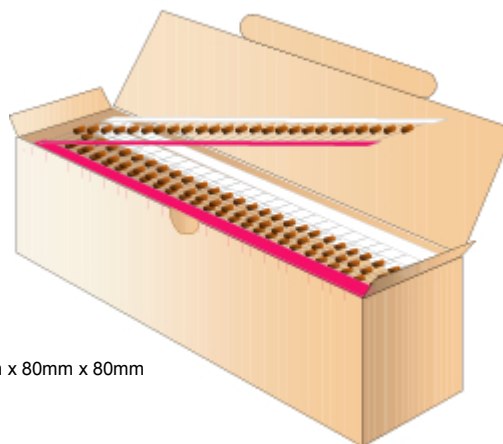
Reel Dimensions



DIM	Millimeters
D1	356
D2	30
D3	84
W1	77.5

Quantity Per Reel

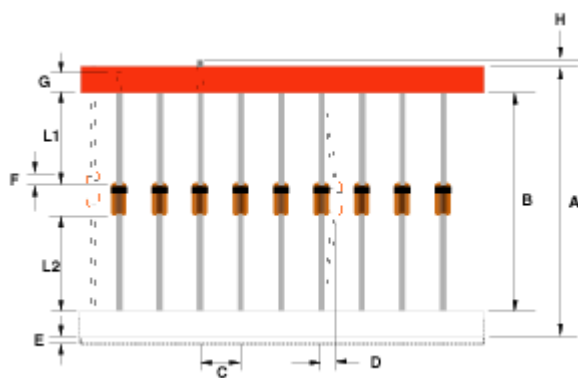
PKG Type	Quantity Per Reel
DO-35	10,000

Tape & Ammo Packaging Information
Tape & Ammo Outline


250mm x 80mm x 80mm

Quantity Per Ammo Box

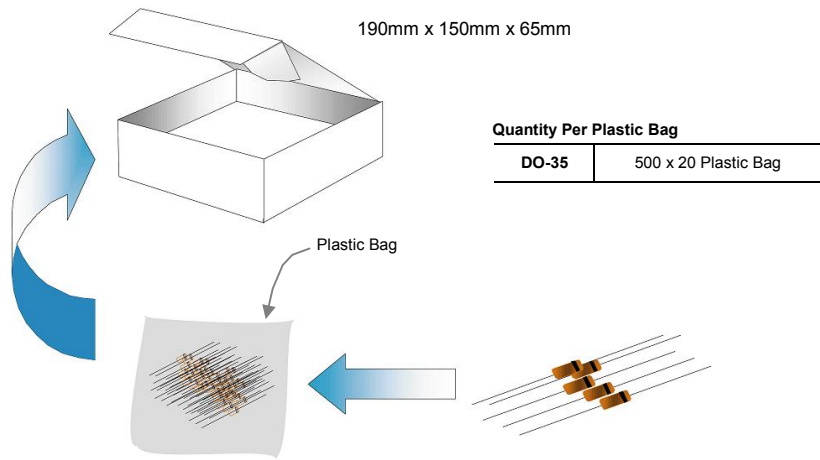
PKG Type	Quantity Per Box
DO-35	5,000

Taping Dimensions


Description	Millimeters	
	52	26
Standard Width	52	26
Tape Spacing (B)	52 ± 0.69	26 +0.5 / -0
Component Pitch (C)	5.08 ± 0.4	5.08 ± 0.4
Untaped Lead (L1 – L2)	± 0.69	± 0.69
Glass Offset (F)	± 0.69	± 0.69
Bent (D)	1.2 Max	1.2 Max
Tape Width (G)	6.138 ± 0.576	6.138 ± 0.576
Tape Mismatch (E)	0.55 Max	0.55 Max
Taped Lead (G)	3.2 Min	3.2 Min
Lead Beyond Tape (H)	0	0

Bulk Packaging Information

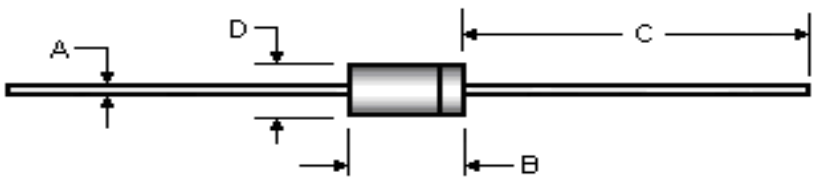
Bulk Outline



Quantity Per Box

PKG Type	Quantity Per Box
DO-35	10,000

Package Outline

Package	Case Outline				
DO-35					
	DO-35				
	DIM	Millimeters		Inches	
		Min	Max	Min	Max
	A	0.46	0.55	0.018	0.022
	B	3.05	5.08	0.120	0.200
C	25.40	38.10	1.000	1.500	
D	1.53	2.28	0.060	0.090	

Notes:

1. All dimensions are within JEDEC standard.
2. DO35 polarity denoted by cathode band.