

500 mW DO-35 Hermetically Sealed Glass Zener Voltage Regulators



Maximum Ratings (Note 1)

Rating	Symbol	Value	Units
Maximum Steady State Power Dissipation @TL≤75°C, Lead Length = 3/8"	P _D	500	mW
Derate Above 75°C		4.0	mW/°C
Operating and Storage Temperature Range	T _J , T _{stg}	-65 to +200	°C

Note 1: Some part number series have lower JEDEC registered ratings.

Specification Features:

- Zener Voltage Range = 2.4V to 200V
- ESD Rating of Class 3 (>6 KV) per Human Body Model
- DO-35 Package (DO-204AH)
- Double Slug Type Construction
- Metallurgical Bonded Construction
- RoHS Compliant
- Solder Hot Dip Tin (Sn) Lead Finish

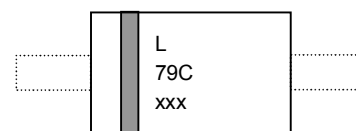
Specification Features:

Case : Double slug type, hermetically sealed glass

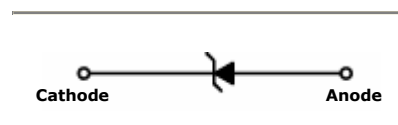
Finish : All external surfaces are corrosion resistant and leads are readily solderable

Polarity : Cathode indicated by polarity band

Mounting: Any



L = Logo
79Cxxx = BZX79CxxxDevice Code



ELECTRICAL CHARACTERIZATION ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Device (Note 2.)	Device Marking	Zener Voltage (Note 3.)			Zener Impedance (Note 4.)	Leakage Current		θV _{BR}		C V _Z = 0, F = 1.0MHz
		V _Z (Volts)		@I _{ZT}	Z _{ZT} @I _{ZT}	I _R @ V _R		(mV/°C)		
		Min	Max	(mA)	(Ω)	(uA Max)	(Volts)	Min	Max	(pF)
BZX79C2V4	79C2V4	2.2	2.6	5	100	100	1	-3.5	0	255
BZX79C2V7	79C2V7	2.5	2.9	5	100	75	1	-3.5	0	230
BZX79C3V0	79C3V0	2.8	3.2	5	95	50	1	-3.5	0	215
BZX79C3V3	79C3V3	3.1	3.5	5	95	25	1	-3.5	0	200
BZX79C3V6	79C3V6	3.4	3.8	5	90	15	1	-3.5	0	185
BZX79C3V9	79C3V9	3.7	4.1	5	90	10	1	-3.5	0.3	175
BZX79C4V3	79C4V3	4.0	4.6	5	90	5	1	-3.5	1.0	160
BZX79C4V7	79C4V7	4.4	5.0	5	80	3	2	-3.5	0.2	130
BZX79C5V1	79C5V1	4.8	5.4	5	60	2	2	-2.7	1.2	110
BZX79C5V6	79C5V6	5.2	6.0	5	40	1	2	-2.0	2.5	95
BZX79C6V2	79C6V2	5.8	6.6	5	10	3	4	0.4	3.7	90
BZX79C6V8	79C6V8	6.4	7.2	5	15	2	4	1.2	4.5	85
BZX79C7V5	79C7V5	7.0	7.9	5	15	1	5	2.5	5.3	80
BZX79C8V2	79C8V2	7.7	8.7	5	15	0.7	5	3.2	6.2	75
BZX79C9V1	79C9V1	8.5	9.6	5	15	0.5	6	3.8	7.0	70
BZX79C10	79C10	9.4	10.6	5	20	0.2	7	4.5	8	70
BZX79C11	79C11	10.4	11.6	5	20	0.1	8	5.4	9	65
BZX79C12	79C12	11.4	12.7	5	25	0.1	8	6	10	65
BZX79C13	79C13	12.4	14.1	5	30	0.1	8	7	11	60
BZX79C15	79C15	13.8	15.6	5	30	0.05	10.5	9.2	13	55
BZX79C16	79C16	15.3	17.1	5	40	0.05	11.2	10.4	14	52
BZX79C18	79C18	16.8	19.1	5	45	0.05	12.6	12.9	16	47
BZX79C20	79C20	18.8	21.2	5	55	0.05	14	14.4	18	36
BZX79C22	79C22	20.8	23.3	5	55	0.05	15.4	16.4	20	34
BZX79C24	79C24	22.8	25.6	5	70	0.05	16.8	18.4	22	33
BZX79C27	79C27	25.1	28.9	2	80	0.05	18.9		23.5	30
BZX79C30	79C30	28	32	2	80	0.05	21		26	27
BZX79C33	79C33	31	35	2	80	0.05	23.1		29	25
BZX79C36	79C36	34	38	2	90	0.05	25.2		31	23
BZX79C39	79C39	37	41	2	130	0.05	27.3		34	21
BZX79C43	79C43	40	46	2	150	0.05	30.1		37	21
BZX79C47	79C47	44	50	2	170	0.05	32.9		40	19
BZX79C51	79C51	48	54	2	180	0.05	35.7		44	19
BZX79C56	79C56	52	60	2	200	0.05	39.2		47	18
BZX79C62	79C62	58	66	2	215	0.05	43.4		51	17
BZX79C68	79C68	64	72	2	240	0.05	47.6		56	17
BZX79C75	79C75	70	79	2	255	0.05	52.5		60	16.5
BZX79C82	79C82	77	87	2	280	0.1	62	46	95	29
BZX79C91	79C91	85	96	2	300	0.1	69	51	107	28
BZX79C100	79C100	94	106	1	500	0.1	76	57	119	27

VF Forward Voltage = 1.5V max @ $I_F = 100\text{mA}$ for all types

ELECTRICAL CHARACTERIZATION ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Device (Note 2.)	Device Marking	Zener Voltage (Note 3.)		Zener Impedance (Note 4.)	Leakage Current		θV _{BR}		C V _Z = 0, F = 1.0MHz	
		V _Z (Volts)		@I _{ZT}	Z _{ZT} @I _{ZT}	I _R @ V _R		(mV/°C)		
		Min	Max	(mA)	(Ω)	(uA Max)	(Volts)	Min		Max
BZX79C110	79C110	104	116	1	650	0.1	84	63	131	26
BZX79C120	79C120	114	127	1	800	0.1	91	69	144	24
BZX79C130	79C130	124	141	1	950	0.1	99	75	158	23
BZX79C150	79C150	138	156	1	1250	0.1	114	87	185	21
BZX79C160	79C160	153	171	1	1400	0.1	122	93	200	20
BZX79C180	79C180	168	191	1	1700	0.1	137	105	228	18
BZX79C200	79C200	188	212	1	2000	0.1	152	120	255	17

V_F Forward Voltage = 1.5V max @ $I_F = 100\text{mA}$ for all types

2. TOLERANCE AND VOLTAGE DESIGNATION

The type numbers listed have zener voltage min/max limits as shown.

3. REVERSE ZENER VOLTAGE (V_Z)

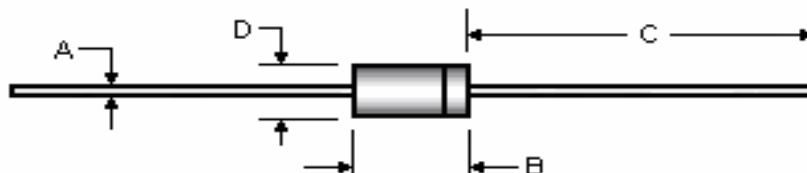
Reverse zener voltage is measured under pulse conditions such that T_J is no more than 2°C above T_A .

4. ZENER IMPEDANCE (Z_Z) DERIVATION

Z_{ZT} is measured by dividing the AC voltage drop across the device by the AC current applied. The specified limits are for $I_{Z(AC)} = 0.1 I_{Z(DC)}$ with AC frequency = 60Hz.

Package Outline

Case Outline



DIM	DO-35			
	Millimeters		Inches	
	Min	Max	Min	Max
A	0.46	0.56	0.018	0.022
B	3.05	5.08	0.120	0.200
C	25.40	38.10	1.000	1.500
D	1.52	2.29	0.060	0.090

Note: all dimensions are within JEDEC standard.

This datasheet presents technical data of Tak Cheong's Zener Diodes. Complete specifications for the individual devices are provided in the form of datasheets. A comprehensive Selector Guide is included to simplify the task of choosing the best set of components required for a specific application. For additional information, please visit our website <http://www.takcheong.com>.

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