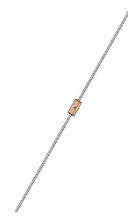


## 500mW, 2.4 - 75V Zener Diodes

### Features

- Low leakage current
- Available in unidirectional
- Glass passivated junction
- Silicon Planar Power Zener Diodes
- Total power dissipation: Max 500mW
- Moisture sensitivity: level 1, per J-STD-020
- BZX79-C series zener voltage tolerance is  $\pm 5\%$
- BZX79-F series zener voltage tolerance is  $\pm 3\%$
- BZX79-B series zener voltage tolerance is  $\pm 2\%$



DO-35(DO-204AH)

### Applications

Protection from high voltage, high energy transients, voltage stabilization.

Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ unless otherwise noted)			
Parameter	Symbol	Ratings	Unit
Zener voltage	$V_Z$	See Next Table	V
Power dissipation at $T_L=75^\circ\text{C}$	$P_{\text{tot}}$	500	mW
Continuous forward current	$I_F$	250	mA
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	0.3	$^\circ\text{C}/\text{mW}$
Maximum junction temperature	$T_J$	175	$^\circ\text{C}$
Storage temperature range	$T_{\text{STG}}$	-65 to +175	$^\circ\text{C}$

Note:

1. Mounted on ceramic substrate 10mm\*10mm\*0.6mm.

Electrical Characteristics (TA = 25 °C unless otherwise noted)												
Part Number	Vz at I <sub>ZT</sub> = 5mA (V)							Maximum zener impedance(Ω)		Test voltage V <sub>R</sub> (V)	Maximum reverse leakage at V <sub>R</sub> (μA)	Maximum Zener Current
	Typ	Y=C		Y=F		Y=B		I <sub>ZT</sub> =5mA f=1KHZ	I <sub>ZT</sub> =1mA f=1KHZ			
		Min	Max	Min	Max	Min	Max					
BZX79-Y2V4	2.4	2.28	2.52	2.33	2.47	2.35	2.45	100	600	1	50000	167
BZX79-Y2V7	2.7	2.57	2.84	2.62	2.78	2.65	2.75	100	600	1	20000	135
BZX79-Y3V0	3.0	2.85	3.15	2.91	3.09	2.94	3.06	95	600	1	10000	125
BZX79-Y3V3	3.3	3.14	3.47	3.20	3.40	3.23	3.37	95	600	1	5000	115
BZX79-Y3V6	3.6	3.42	3.78	3.49	3.71	3.53	3.67	90	600	1	5000	105
BZX79-Y3V9	3.9	3.71	4.10	3.78	4.02	3.82	3.98	90	600	1	3000	95
BZX79-Y4V3	4.3	4.09	4.52	4.17	4.43	4.21	4.39	90	600	1	3000	90
BZX79-Y4V7	4.7	4.47	4.94	4.56	4.84	4.61	4.79	80	500	1	3000	85
BZX79-Y5V1	5.1	4.85	5.36	4.95	5.25	5.00	5.20	60	480	1	2000	80
BZX79-Y5V6	5.6	5.32	5.88	5.43	5.77	5.49	5.71	40	400	1	1000	70
BZX79-Y6V2	6.2	5.89	6.51	6.01	6.39	6.08	6.32	10	150	2	3000	64
BZX79-Y6V8	6.8	6.46	7.14	6.60	7.00	6.66	6.94	15	80	3	2000	58
BZX79-Y7V5	7.5	7.13	7.88	7.28	7.73	7.35	7.65	15	80	5	1000	53
BZX79-Y8V2	8.2	7.79	8.61	7.95	8.45	8.04	8.36	15	80	6	700	47
BZX79-Y9V1	9.1	8.65	9.56	8.83	9.37	8.92	9.28	15	100	7	500	43
BZX79-Y10	10	9.50	10.50	9.70	10.30	9.80	10.20	20	150	7.5	200	40
BZX79-Y11	11	10.45	11.55	10.67	11.33	10.78	11.22	20	150	8.5	100	36
BZX79-Y12	12	11.40	12.60	11.64	12.36	11.76	12.24	25	150	9	100	32
BZX79-Y13	13	12.35	13.65	12.61	13.39	12.74	13.26	30	170	10	100	29
BZX79-Y15	15	14.25	15.75	14.55	15.45	14.70	15.30	30	200	11	50	27
BZX79-Y16	16	15.20	16.80	15.52	16.48	15.68	16.32	40	200	12	50	24
BZX79-Y18	18	17.10	18.90	17.46	18.54	17.64	18.36	45	225	14	50	21
BZX79-Y20	20	19.00	21.00	19.40	20.60	19.60	20.40	55	225	15	50	20
BZX79-Y22	22	20.90	23.10	21.34	22.66	21.56	22.44	55	250	17	50	18
BZX79-Y24	24	22.80	25.20	23.28	24.72	23.52	24.48	70	250	18	50	16
BZX79-Y27	27	25.65	28.35	26.19	27.81	26.46	27.54	80	300	20	50	14
BZX79-Y30	30	28.50	31.50	29.10	30.90	29.40	30.60	80	300	22	50	13
BZX79-Y33	33	31.35	34.65	32.01	33.99	32.34	33.66	80	325	24	50	12
BZX79-Y36	36	34.20	37.80	34.92	37.08	35.28	36.72	90	350	27	50	11
BZX79-Y39	39	37.05	40.95	37.83	40.17	38.22	39.78	130	350	28	50	10
BZX79-Y43	43	40.85	45.15	41.71	44.29	42.14	43.86	150	375	32	50	9.2
BZX79-Y47	47	44.65	49.35	45.59	48.41	46.06	47.94	170	375	35	50	8.5
BZX79-Y51	51	48.45	53.55	49.47	52.53	49.98	52.02	180	400	38	50	7.8
BZX79-Y56	56	53.20	58.80	54.32	57.68	54.88	57.12	200	425	39	50	7.1
BZX79-Y62	62	58.90	65.10	60.14	63.86	60.76	63.24	215	450	43	50	6.4
BZX79-Y68	68	64.60	71.40	65.96	70.04	66.64	69.36	240	475	48	50	5.8

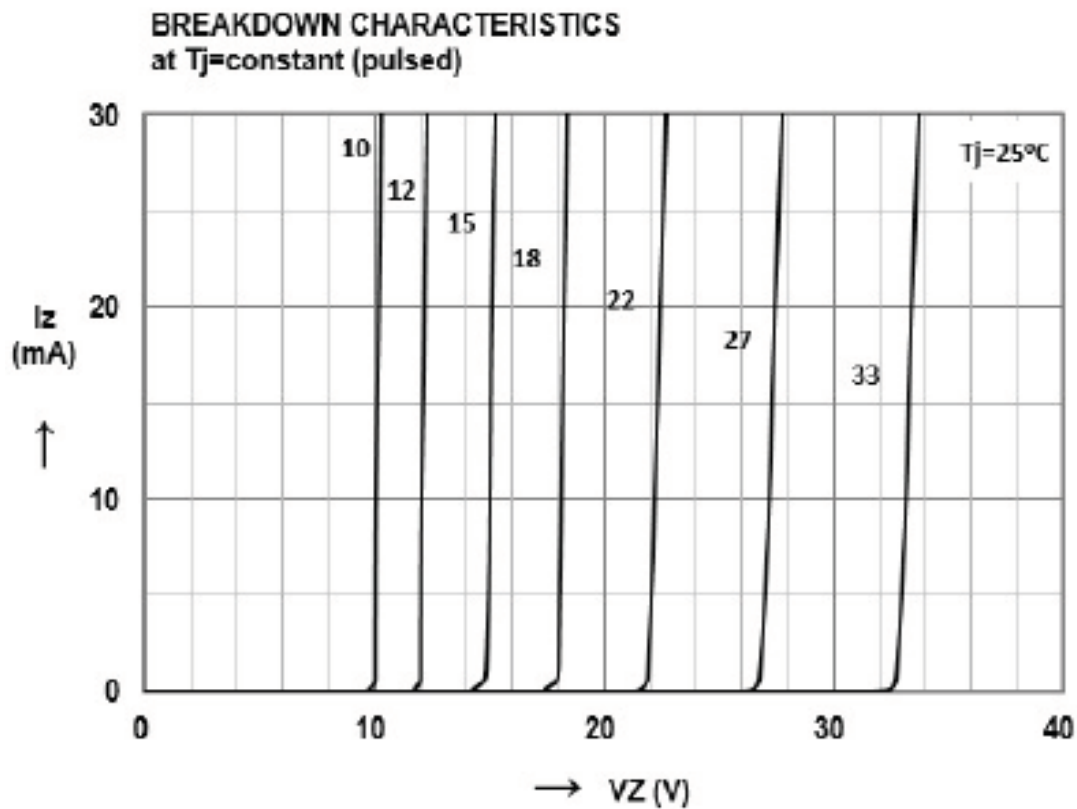
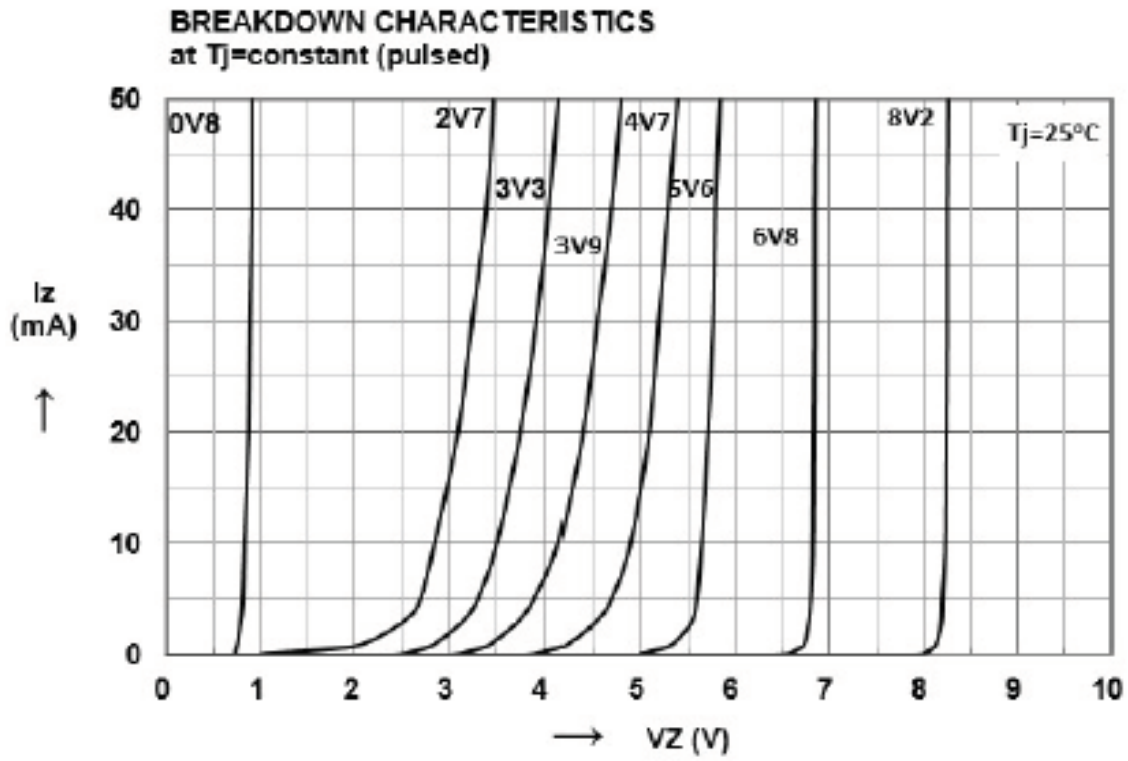
Electrical Characteristics (TA = 25 °C unless otherwise noted)												
Part Number	V <sub>Z</sub> at I <sub>ZT</sub> =5mA (V)							Maximum zener impedance(Ω)		Test voltage V <sub>R</sub> (V)	Maximum reverse leakage at V <sub>R</sub> (μA)	Maximum Zener Current
	Typ	Y=C		Y=F		Y=B		I <sub>ZT</sub> =5mA f=1KHZ	I <sub>ZT</sub> =1mA f=1KHZ			
		Min	Max	Min	Max	Min	Max					
BZX79-Y75	75	71.25	78.75	72.75	77.25	73.50	76.50	255	500	53	50	5.3

Note:

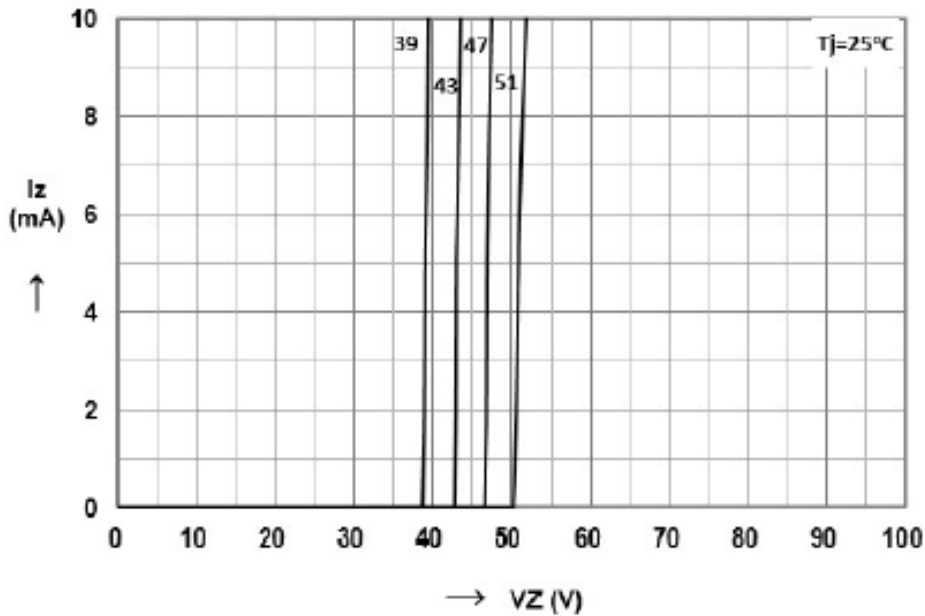
1. BZX79-C series zener voltage tolerance is  $\pm 5\%$
2. BZX79-F series zener voltage tolerance is  $\pm 3\%$
3. BZX79-B series zener voltage tolerance is  $\pm 2\%$

## Ratings and Characteristics Curves

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

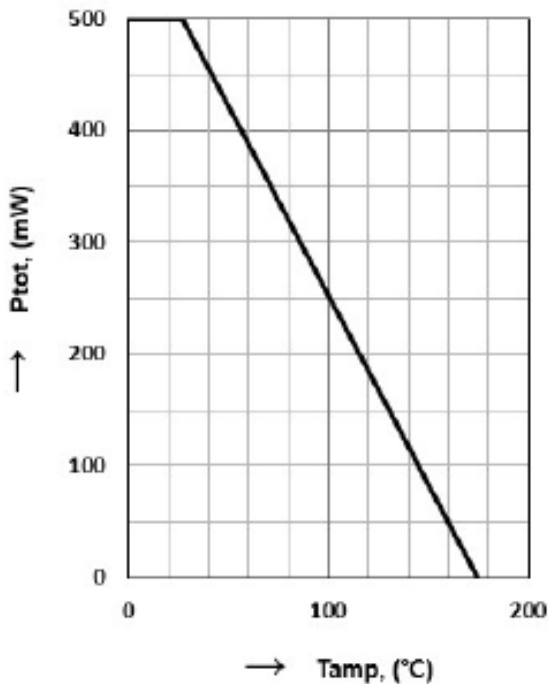


### BREAKDOWN CHARACTERISTICS at $T_j = \text{constant}$ (pulsed)



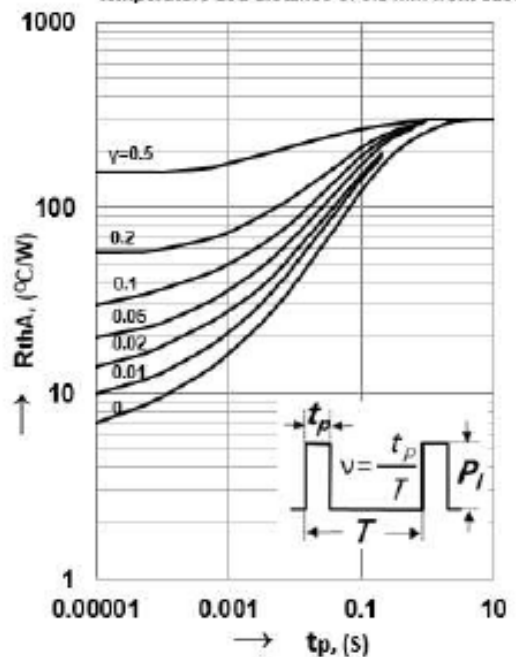
### Admissible power dissipation versus ambient temperature

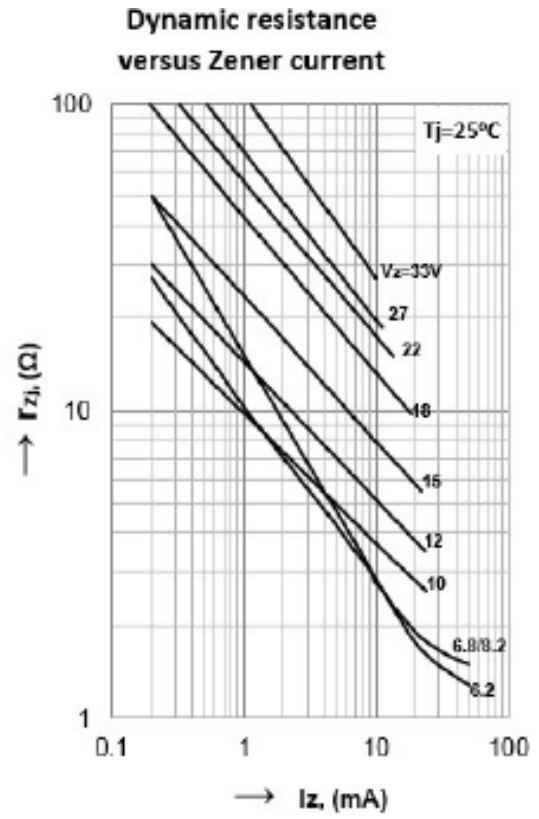
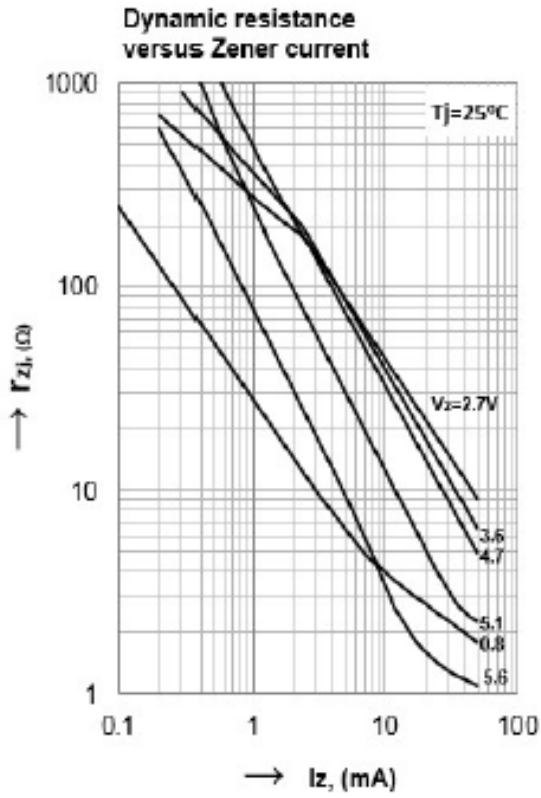
Valid provided that leads are kept at ambient temperature at a distance of 9.5 mm from case



### Pulse thermal resistance versus pulse duration

Valid provided that leads are kept at ambient temperature at a distance of 9.5 mm from case



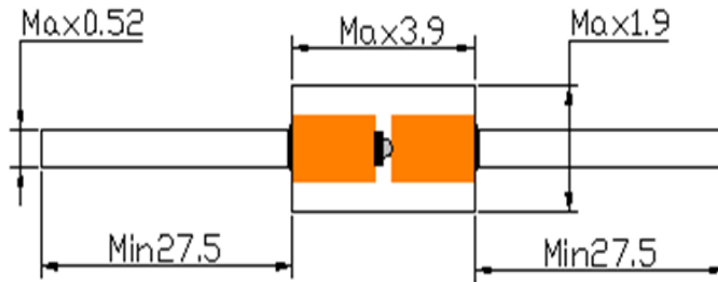


**Package Outline Dimensions**

in inches (millimeters)

**DO-35 (DO-204AH)**

CASE DIMENSION (DO-35 Type, 52mm), Unit: mm



**Revision History**

Document Version	Date of release	Description of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.10.31	Modify document format

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