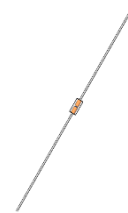


## 500mW,2.4 - 200V Zener Diodes

### Features

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



DO-35(DO-204AH)

### Applications

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

<b>Absolute Maximum Ratings</b> ( $T_A=25^\circ\text{C}$ unless otherwise noted)			
Parameter	Symbol	Ratings	Unit
Zener voltage	$V_Z$	See Next Table	V
Power dissipation at $T_L=75^\circ\text{C}$	$P_{tot}$	500	mW
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	300	$^\circ\text{C/W}$
Maximum junction temperature	$T_J$	175	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-65 to +175	$^\circ\text{C}$

Note:

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

**Electrical Characteristics** (TA = 25 °C unless otherwise noted)

Part Number	V <sub>Z</sub> at I <sub>ZT</sub> (V)			I <sub>ZT</sub> (mA)	Maximum zener impedance		I <sub>ZK</sub> (mA)	Maximum reverse leakage at V <sub>R</sub> (μA)	Test voltage V <sub>R</sub> (V)	Maximum Zener Current I <sub>ZM</sub> (mA)
	Min	Typ	Max		Z <sub>ZT</sub> at I <sub>ZT</sub> (Ω)	Z <sub>ZK</sub> at I <sub>ZK</sub> (Ω)				
1N5221B	2.28	2.4	2.52	20	30	1200	0.25	100	1	-
1N5222B	2.38	2.5	2.63	20	30	1250	0.25	100	1	-
1N5223B	2.57	2.7	2.84	20	30	1300	0.25	75	1	-
1N5224B	2.66	2.8	2.94	20	30	1400	0.25	75	1	-
1N5225B	2.85	3.0	3.15	20	29	1600	0.25	50	1	152
1N5226B	3.14	3.3	3.47	20	28	1600	0.25	25	1	138
1N5227B	3.42	3.6	3.78	20	24	1700	0.25	15	1	126
1N5228B	3.71	3.9	4.10	20	23	1900	0.25	10	1	115
1N5229B	4.09	4.3	4.52	20	22	2000	0.25	5	1	106
1N5230B	4.47	4.7	4.94	20	19	1900	0.25	5	2	97
1N5231B	4.85	5.1	5.36	20	17	1600	0.25	5	2	89
1N5232B	5.32	5.6	5.88	20	11	1600	0.25	5	3	81
1N5233B	5.70	6.0	6.30	20	7	1600	0.25	5	3.5	76
1N5234B	5.89	6.2	6.51	20	7	1000	0.25	5	4	73
1N5235B	6.46	6.8	7.14	20	5	750	0.25	3	5	67
1N5236B	7.13	7.5	7.88	20	6	500	0.25	3	6	61
1N5237B	7.79	8.2	8.61	20	8	500	0.25	3	6.5	55
1N5238B	8.27	8.7	9.14	20	8	600	0.25	3	6.5	52
1N5239B	8.65	9.1	9.56	20	10	600	0.25	3	7	50
1N5240B	9.50	10	10.50	20	17	600	0.25	3	8	45
1N5241B	10.45	11	11.55	20	22	600	0.25	2	8.4	41
1N5242B	11.40	12	12.60	20	30	600	0.25	1	9.1	38
1N5243B	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9	35
1N5244B	13.30	14	14.70	9.0	15	600	0.25	0.1	10	32
1N5245B	14.25	15	15.75	8.5	16	600	0.25	0.1	11	30
1N5246B	15.20	16	16.80	7.8	17	600	0.25	0.1	12	28
1N5247B	16.15	17	17.85	7.4	19	600	0.25	0.1	13	27
1N5248B	17.10	18	18.90	7.0	21	600	0.25	0.1	14	25
1N5249B	18.05	19	19.95	6.6	23	600	0.25	0.1	14	24
1N5250B	19.00	20	21.00	6.2	25	600	0.25	0.1	15	23
1N5251B	20.90	22	23.10	5.6	29	600	0.25	0.1	17	21
1N5252B	22.80	24	25.20	5.2	33	600	0.25	0.1	18	19.1
1N5253B	23.75	25	26.25	5.0	35	600	0.25	0.1	19	18.2
1N5254B	25.65	27	28.35	4.6	41	600	0.25	0.1	21	16.8
1N5255B	26.60	28	29.40	4.5	44	600	0.25	0.1	21	16.2
1N5256B	28.50	30	31.50	4.2	49	600	0.25	0.1	23	15.1
1N5257B	31.35	33	34.65	3.8	58	700	0.25	0.1	25	13.8

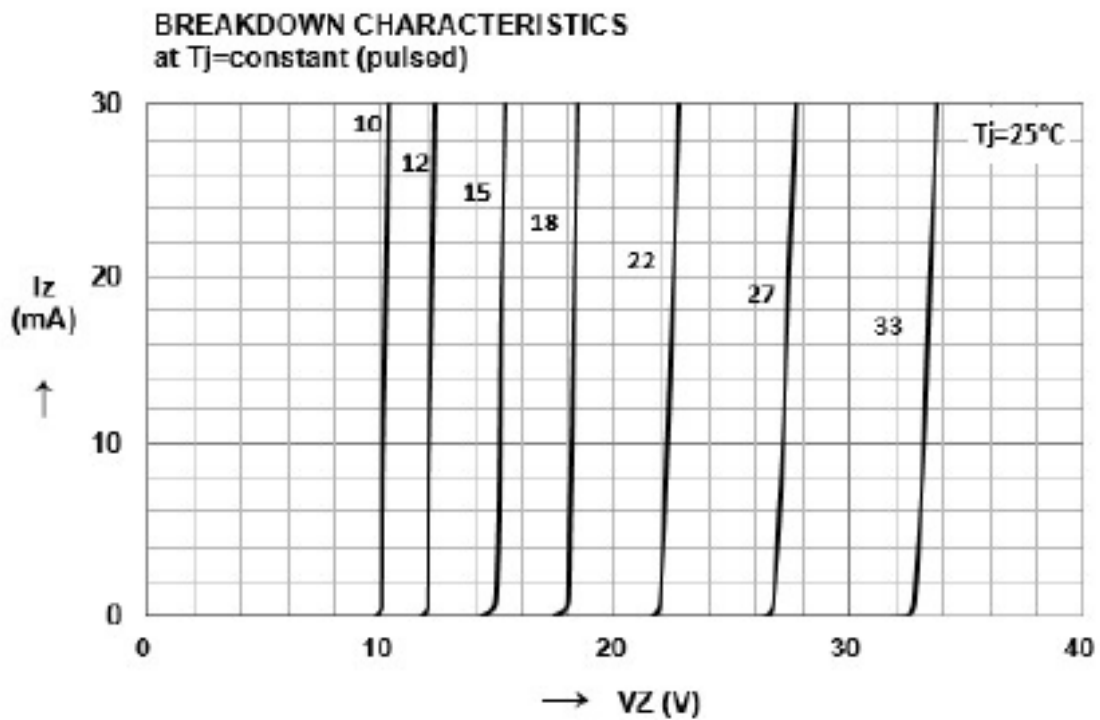
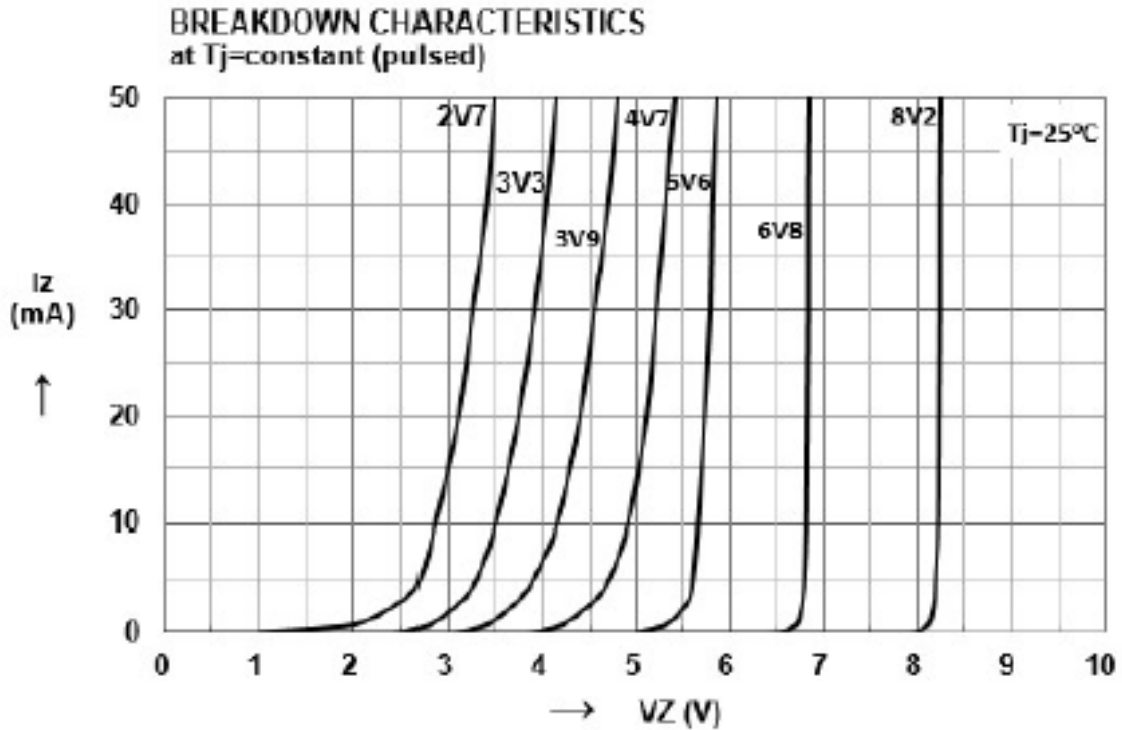


## Electrical Characteristics (TA = 25 °C unless otherwise noted)

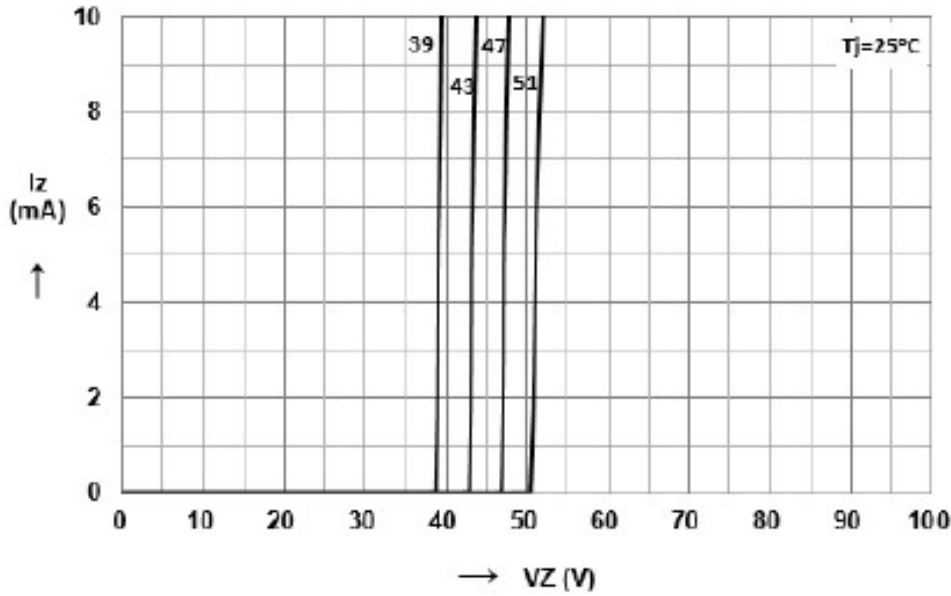
Part Number	V <sub>Z</sub> at I <sub>ZT</sub> (V)			I <sub>ZT</sub> (mA)	Maximum zener impedance		I <sub>ZK</sub> (mA)	Maximum reverse leakage at V <sub>R</sub> (μA)	Test voltage V <sub>R</sub> (V)	Maximum Zener Current I <sub>ZM</sub> (mA)
	Min	Typ	Max		Z <sub>ZT</sub> at I <sub>ZT</sub> (Ω)	Z <sub>ZK</sub> at I <sub>ZK</sub> (Ω)				
1N5258B	34.20	36	37.80	3.4	70	700	0.25	0.1	27	12.6
1N5259B	37.05	39	40.95	3.2	80	800	0.25	0.1	30	11.6
1N5260B	40.85	43	45.15	3.0	93	900	0.25	0.1	33	10.6
1N5261B	44.65	47	49.35	2.7	105	1000	0.25	0.1	36	9.7
1N5262B	48.45	51	53.55	2.5	125	1100	0.25	0.1	39	8.9
1N5263B	53.20	56	58.80	2.2	150	1300	0.25	0.1	43	-
1N5264B	57.00	60	63.00	2.1	170	1400	0.25	0.1	46	-
1N5265B	58.90	62	65.10	2.0	185	1600	0.25	0.1	47	-
1N5266B	64.60	68	71.40	1.8	230	1700	0.25	0.1	52	-
1N5267B	71.25	75	78.75	1.7	270	1700	0.25	0.1	56	-
1N5268B	77.90	82	86.10	1.5	330	2000	0.25	0.1	62	-
1N5269B	82.65	87	91.35	1.4	370	2200	0.25	0.1	68	-
1N5270B	86.45	91	95.55	1.4	400	2300	0.25	0.1	69	-
1N5271B	95.0	100	105.0	1.3	500	-	0.25	0.1	75	-
1N5272B	104.5	110	115.5	1.2	700	-	0.25	0.1	83	-
1N5273B	114.0	120	126.0	1.0	950	-	0.25	0.1	90	-
1N5274B	123.5	130	136.5	0.95	1100	-	0.25	0.1	98	-
1N5275B	133.0	140	147.0	0.90	1300	-	0.25	0.1	105	-
1N5276B	142.5	150	157.5	0.85	1500	-	0.25	0.1	113	-
1N5277B	152.0	160	168.0	0.80	1700	-	0.25	0.1	120	-
1N5278B	161.5	170	178.5	0.74	1900	-	0.25	0.1	127	-
1N5279B	171.0	180	189.0	0.68	2200	-	0.25	0.1	135	-
1N5280B	180.5	190	199.5	0.66	2400	-	0.25	0.1	142	-
1N5281B	190.0	200	210.0	0.65	2500	-	0.25	0.1	150	-

## Ratings and Characteristics Curves

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

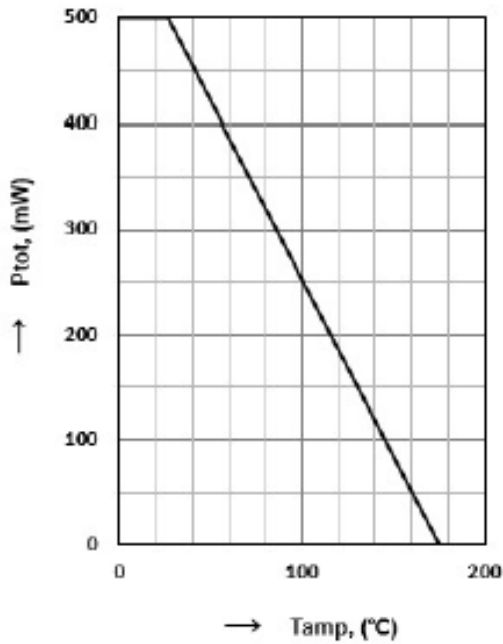


## BREAKDOWN CHARACTERISTICS at $T_j$ -constant (pulsed)



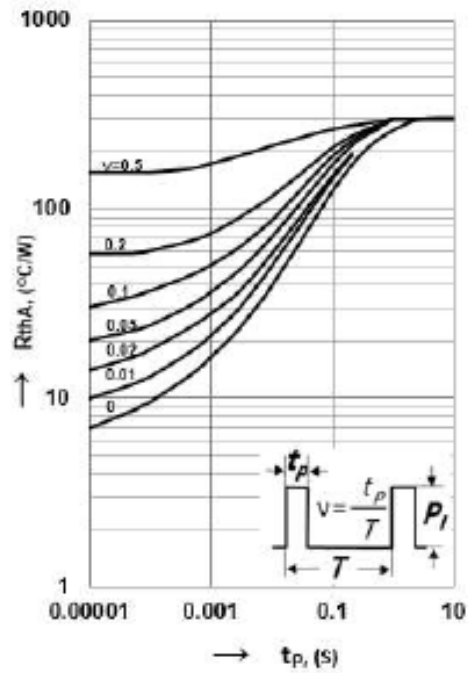
## Admissible power dissipation versus ambient temperature

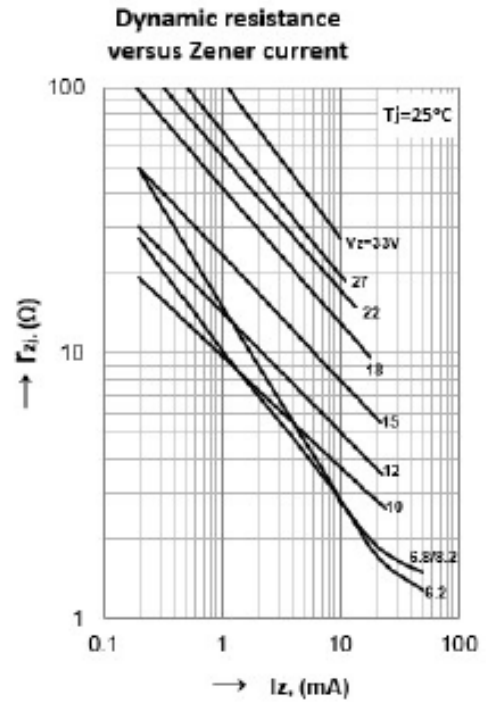
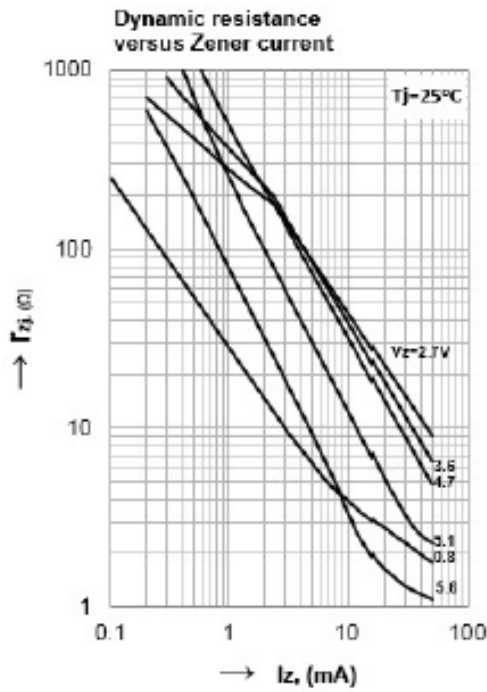
Valid provided that leads are kept ambient temperature at a distance of 8 mm from case



## Pulse thermal resistance versus pulse duration

Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case



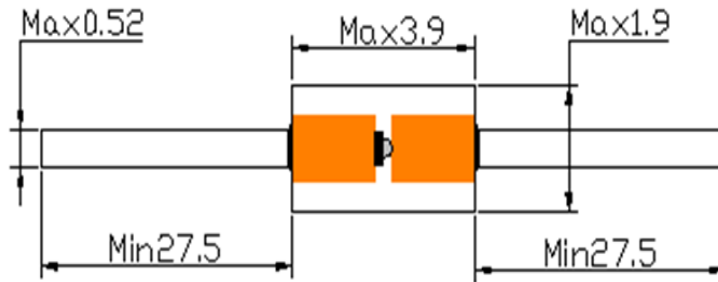


## Package Outline Dimensions

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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