

## Specification

### DO-34 MTZJ

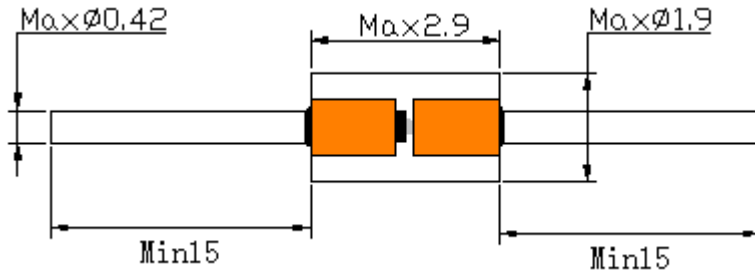
Construction : Small-Signal Diode

Application : Zener Rectifier

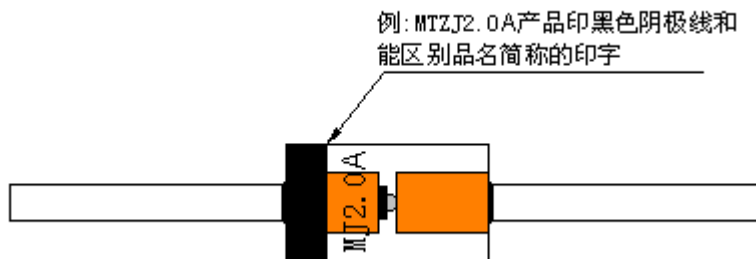
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7. PACKAGING SPECIFICATION

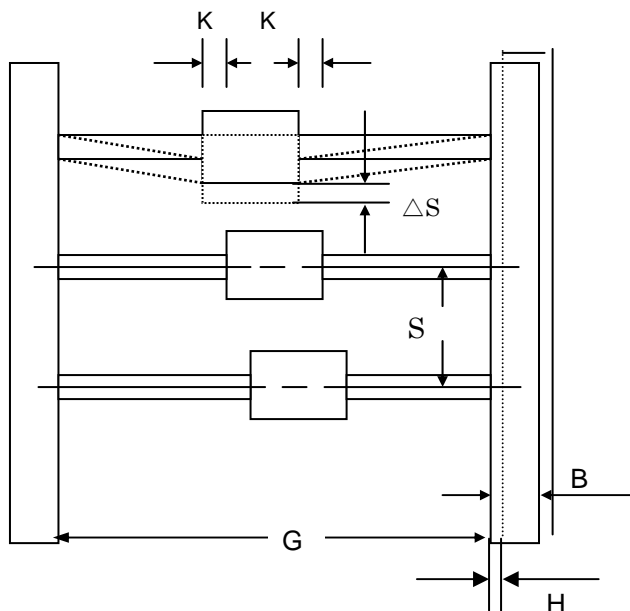
1. CASE DIMENSION (DO-34 Type, 26mm), Unit:mm



2. MARKING



3. TAPING SPECIFICATION



- B:  $6.0 \pm 1.0$ mm
- G:  $26 \pm 1.0$ mm
- H: 0.8mm MAX
- K: 1.0mm MAX
- S:  $5.0 \pm 0.5$ mm
- $\Delta S$ : 1.2mm MAX

**4. ABSOLUTE MAXIMUM RATING (Ta=25°C)**

ITEM	SYMBOL	LIMIT	UNIT
Power Dissipation Tamb=25°C	Ptot	500	mW
Thermal resistance junction to ambient air(1)	R θ JA	300	°C/W
Maximum Junction Temperature	Tj	175	°C
Storage Temperature	Tstg	-55~175	°C

Notes: 1. Valid provided that leads at a distance of 3/8" from case are kept at ambient temperature

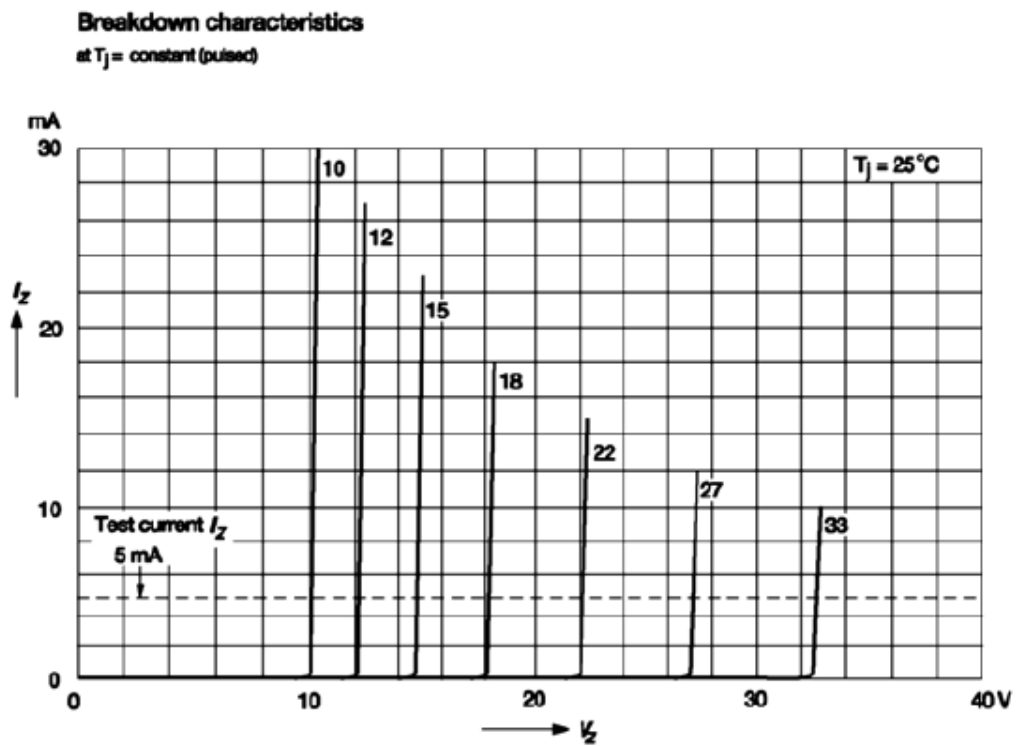
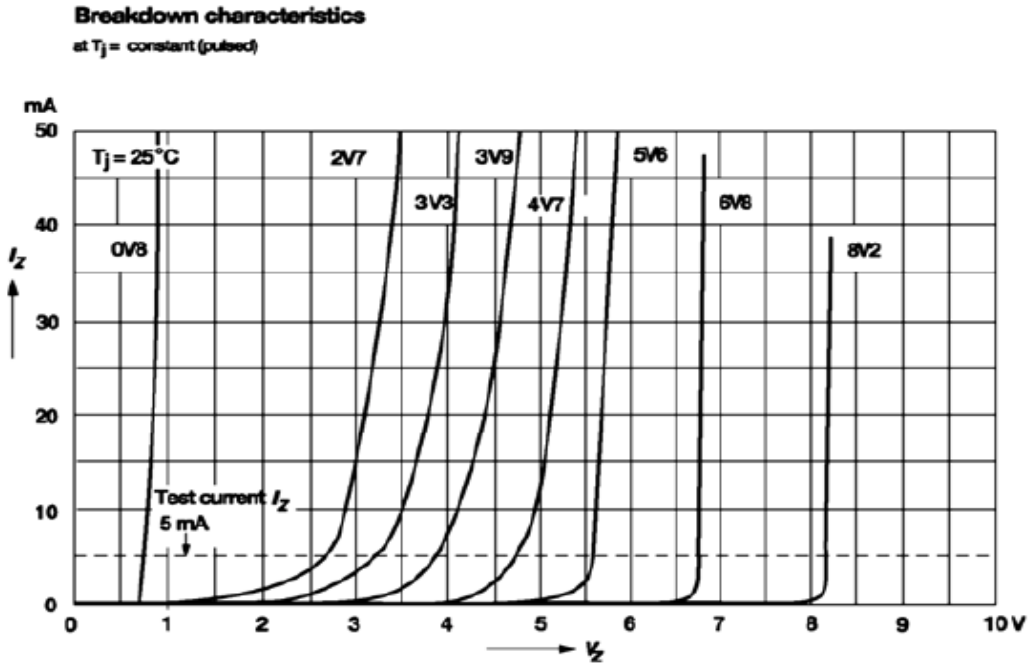
**5. ELECTRICAL CHARACTERISTICS (Ta=25°C)**

No.	Unit PN	Zener voltage			Dynamic resistance				Reverse leakage current		Maximum Forward voltage	
		IZ (mA)	Vz (v)		IzT (mA)	ZzT ohms (Max)	IzK (mA)	ZzK ohms (Max)	VR (V)	IR(uA) Max	IF (mA)	VF(V) Max
			Min	Max								
1	MTZJ2.0A	5	1.88	2.10	5	100	0.5	1000	0.5	120	100	1
2	MTZJ2.0B	5	2.02	2.20	5	100	0.5	1000	0.5	120	100	1
3	MTZJ2.2A	5	2.12	2.30	5	100	0.5	1000	0.7	120	100	1
4	MTZJ2.2B	5	2.22	2.41	5	100	0.5	1000	0.7	120	100	1
5	MTZJ2.4A	5	2.33	2.52	5	100	0.5	1000	1.0	120	100	1
6	MTZJ2.4B	5	2.43	2.63	5	100	0.5	1000	1.0	120	100	1
7	MTZJ2.7A	5	2.54	2.75	5	110	0.5	1000	1.0	100	100	1
8	MTZJ2.7B	5	2.69	2.91	5	110	0.5	1000	1.0	100	100	1
9	MTZJ3.0A	5	2.85	3.07	5	120	0.5	1000	1.0	50	100	1
10	MTZJ3.0B	5	3.01	3.22	5	120	0.5	1000	1.0	50	100	1
11	MTZJ3.3A	5	3.16	3.38	5	120	0.5	1000	1.0	20	100	1
12	MTZJ3.3B	5	3.32	3.53	5	120	0.5	1000	1.0	20	100	1
13	MTZJ3.6A	5	3.46	3.70	5	100	1.0	1000	1.0	10	100	1
14	MTZJ3.6B	5	3.60	3.85	5	100	1.0	1000	1.0	10	100	1
15	MTZJ3.9A	5	3.74	4.01	5	100	1.0	1000	1.0	5	100	1
16	MTZJ3.9B	5	3.89	4.16	5	100	1.0	1000	1.0	5	100	1
17	MTZJ4.3A	5	4.04	4.29	5	100	1.0	1000	1.0	5	100	1
18	MTZJ4.3B	5	4.17	4.43	5	100	1.0	1000	1.0	5	100	1
19	MTZJ4.3C	5	4.30	4.57	5	100	1.0	1000	1.0	5	100	1
20	MTZJ4.7A	5	4.44	4.68	5	80	1.0	900	1.0	5	100	1
21	MTZJ4.7B	5	4.55	4.80	5	80	1.0	900	1.0	5	100	1
22	MTZJ4.7C	5	4.68	4.93	5	80	1.0	900	1.0	5	100	1
23	MTZJ5.1A	5	4.81	5.07	5	80	1.0	800	1.5	5	100	1
24	MTZJ5.1B	5	4.94	5.20	5	80	1.0	800	1.5	5	100	1

25	MTZJ5.1C	5	5.09	5.37	5	80	1.0	800	1.5	5	100	1
26	MTZJ5.6A	5	5.28	5.55	5	60	1	500	2.5	5	100	1
27	MTZJ5.6B	5	5.45	5.73	5	60	1	500	2.5	5	100	1
28	MTZJ5.6C	5	5.61	5.91	5	60	1	500	2.5	5	100	1
29	MTZJ6.2A	5	5.78	6.08	5	60	1	300	3.0	5	100	1
30	MTZJ6.2B	5	5.96	6.27	5	60	1	300	3.0	5	100	1
31	MTZJ6.2C	5	6.12	6.44	5	60	1	300	3.0	5	100	1
32	MTZJ6.8A	5	6.28	6.63	5	20	0.5	150	3.5	2	100	1
33	MTZJ6.8B	5	6.49	6.83	5	20	0.5	150	3.5	2	100	1
34	MTZJ6.8C	5	6.66	7.01	5	20	0.5	150	3.5	2	100	1
35	MTZJ7.5A	5	6.85	7.22	5	20	0.5	120	4.0	0.5	100	1
36	MTZJ7.5B	5	7.07	7.45	5	20	0.5	120	4.0	0.5	100	1
37	MTZJ7.5C	5	7.29	7.67	5	20	0.5	120	4.0	0.5	100	1
38	MTZJ8.2A	5	7.53	7.92	5	20	0.5	120	5.0	0.5	100	1
39	MTZJ8.2B	5	7.78	8.19	5	20	0.5	120	5.0	0.5	100	1
40	MTZJ8.2C	5	8.03	8.45	5	20	0.5	120	5.0	0.5	100	1
41	MTZJ9.1A	5	8.29	8.73	5	25	0.5	120	6.0	0.5	100	1
42	MTZJ9.1B	5	8.57	9.01	5	25	0.5	120	6.0	0.5	100	1
43	MTZJ9.1C	5	8.83	9.30	5	25	0.5	120	6.0	0.5	100	1
44	MTZJ10A	5	9.12	9.59	5	30	0.5	120	7.0	0.2	100	1
45	MTZJ10B	5	9.41	9.90	5	30	0.5	120	7.0	0.2	100	1
46	MTZJ10C	5	9.70	10.20	5	30	0.5	120	7.0	0.2	100	1
47	MTZJ10D	5	9.94	10.44	5	30	0.5	120	7.0	0.2	100	1
48	MTZJ11A	5	10.18	10.71	5	30	0.5	120	8.0	0.2	100	1
49	MTZJ11B	5	10.50	11.05	5	30	0.5	120	8.0	0.2	100	1
50	MTZJ11C	5	10.82	11.38	5	30	0.5	120	8.0	0.2	100	1
51	MTZJ12A	5	11.13	11.71	5	30	0.5	110	9	0.2	100	1
52	MTZJ12B	5	11.44	12.03	5	30	0.5	110	9	0.2	100	1
53	MTZJ12C	5	11.74	12.36	5	30	0.5	110	9	0.2	100	1
54	MTZJ13A	5	12.11	12.75	5	35	0.5	110	10	0.2	100	1
55	MTZJ13B	5	12.55	13.21	5	35	0.5	110	10	0.2	100	1
56	MTZJ13C	5	12.99	13.66	5	35	0.5	110	10	0.2	100	1
57	MTZJ15A	5	13.44	14.13	5	40	0.5	110	11	0.2	100	1
58	MTZJ15B	5	13.89	14.62	5	40	0.5	110	11	0.2	100	1
59	MTZJ15C	5	14.35	15.09	5	40	0.5	110	11	0.2	100	1
60	MTZJ16A	5	14.80	15.57	5	40	0.5	150	12	0.2	100	1
61	MTZJ16B	5	15.25	16.04	5	40	0.5	150	12	0.2	100	1
62	MTZJ16C	5	15.69	16.51	5	40	0.5	150	12	0.2	100	1
63	MTZJ18A	5	16.22	17.06	5	45	0.5	150	13	0.2	100	1
64	MTZJ18B	5	16.82	17.70	5	45	0.5	150	13	0.2	100	1
65	MTZJ18C	5	17.42	18.33	5	45	0.5	150	13	0.2	100	1
66	MTZJ20A	5	18.02	18.96	5	55	0.5	200	15	0.2	100	1

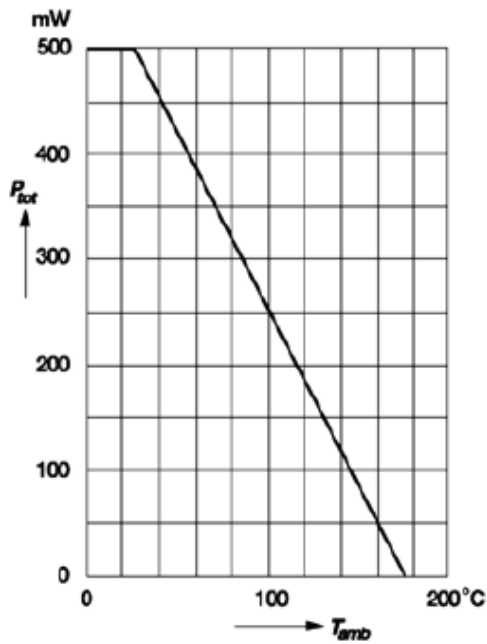
67	MTZJ20B	5	18.63	19.59	5	55	0.5	200	15	0.2	100	1
68	MTZJ20C	5	19.23	20.22	5	55	0.5	200	15	0.2	100	1
69	MTZJ20D	5	19.72	20.72	5	55	0.5	200	15	0.2	100	1
70	MTZJ22A	5	20.15	21.20	5	30	0.5	200	17	0.2	100	1
71	MTZJ22B	5	20.64	21.71	5	30	0.5	200	17	0.2	100	1
72	MTZJ22C	5	21.08	22.17	5	30	0.5	200	17	0.2	100	1
73	MTZJ22D	5	21.52	22.63	5	30	0.5	200	17	0.2	100	1
74	MTZJ24A	5	22.05	23.18	5	35	0.5	200	19	0.2	100	1
75	MTZJ24B	5	22.61	23.77	5	35	0.5	200	19	0.2	100	1
76	MTZJ24C	5	23.12	24.31	5	35	0.5	200	19	0.2	100	1
77	MTZJ24D	5	23.63	24.85	5	35	0.5	200	19	0.2	100	1
78	MTZJ27A	5	24.26	25.52	5	45	0.5	250	21	0.2	100	1
79	MTZJ27B	5	24.97	26.26	5	45	0.5	250	21	0.2	100	1
80	MTZJ27C	5	25.63	26.95	5	45	0.5	250	21	0.2	100	1
81	MTZJ27D	5	26.29	27.64	5	45	0.5	250	21	0.2	100	1
82	MTZJ30A	5	26.99	28.39	5	55	0.5	250	23	0.2	100	1
83	MTZJ30B	5	27.70	29.13	5	55	0.5	250	23	0.2	100	1
84	MTZJ30C	5	28.36	29.82	5	55	0.5	250	23	0.2	100	1
85	MTZJ30D	5	29.02	30.51	5	55	0.5	250	23	0.2	100	1
86	MTZJ33A	5	29.68	31.22	5	65	0.5	250	25	0.2	100	1
87	MTZJ33B	5	30.32	31.88	5	65	0.5	250	25	0.2	100	1
88	MTZJ33C	5	30.90	32.50	5	65	0.5	250	25	0.2	100	1
89	MTZJ33D	5	31.49	33.11	5	65	0.5	250	25	0.2	100	1
90	MTZJ36A	5	32.14	33.79	5	75	0.5	250	27	0.2	100	1
91	MTZJ36B	5	32.79	34.49	5	75	0.5	250	27	0.2	100	1
92	MTZJ36C	5	33.40	35.13	5	75	0.5	250	27	0.2	100	1
93	MTZJ36D	5	34.01	35.77	5	75	0.5	250	27	0.2	100	1
94	MTZJ39A	5	34.68	36.47	5	85	0.5	250	30	0.2	100	1
95	MTZJ39B	5	35.36	37.19	5	85	0.5	250	30	0.2	100	1
96	MTZJ39C	5	36.00	37.85	5	85	0.5	250	30	0.2	100	1
97	MTZJ39D	5	36.63	38.52	5	85	0.5	250	30	0.2	100	1
98	MTZJ39E	5	37.36	39.29	5	85	0.5	250	30	0.2	100	1
99	MTZJ39F	5	38.14	40.11	5	85	0.5	250	30	0.2	100	1
100	MTZJ39G	5	38.94	40.80	5	85	0.5	250	30	0.2	100	1
101	MTZJ43	5	40.00	45.00	5	90	*	*	33	0.2	100	1
102	MTZJ47	5	44.00	49.00	5	90	*	*	36	0.2	100	1
103	MTZJ51	5	48.00	54.00	5	110	*	*	39	0.2	100	1
104	MTZJ56	5	53.00	60.00	5	110	*	*	43	0.2	100	1

6. RATINGS AND CHARACTERISTIC CURVES ( $T_a=25^\circ\text{C}$ )

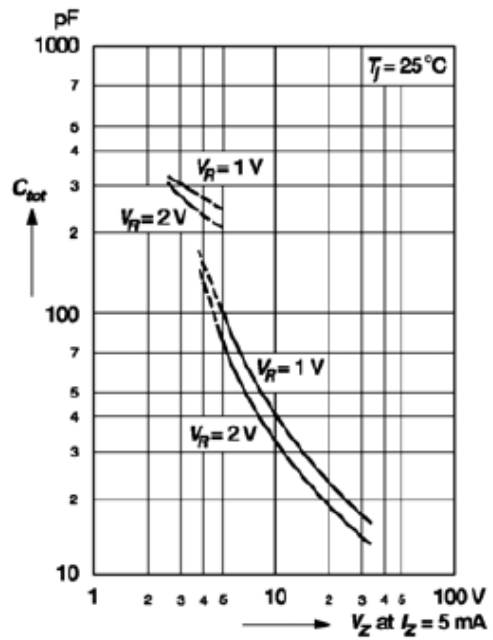


**Admissible power dissipation versus ambient temperature**

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

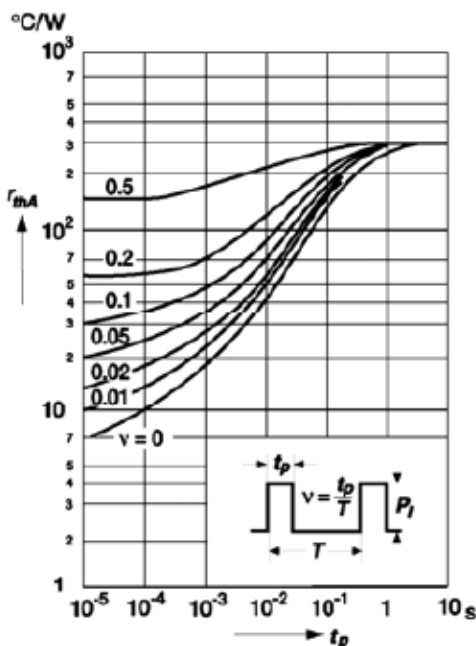


**Capacitance versus Zener voltage**

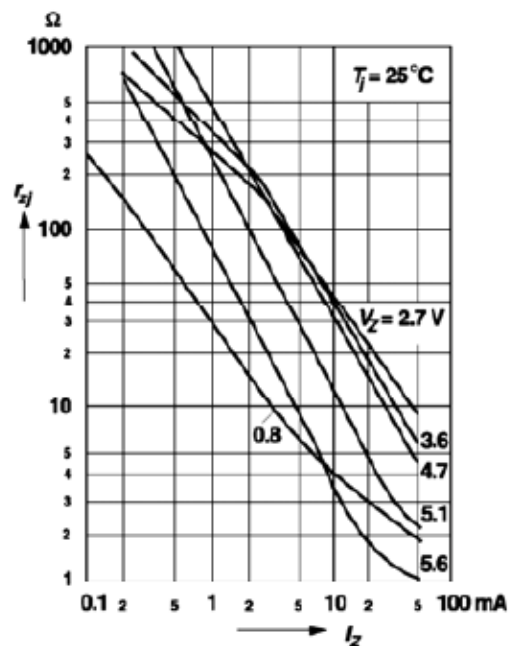


**Pulse thermal resistance versus pulse duration**

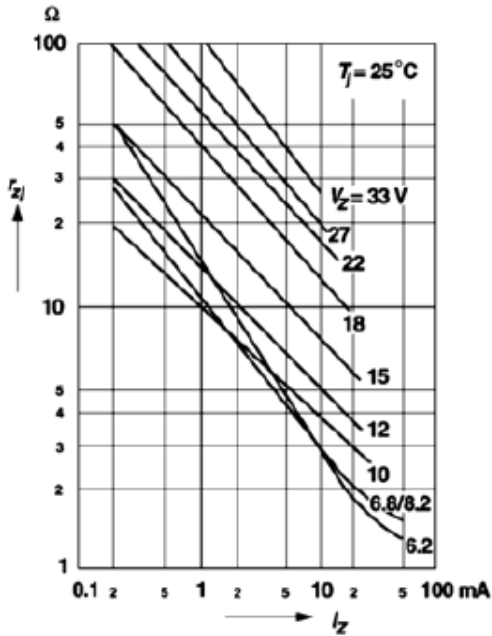
Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.



**Dynamic resistance versus Zener current**

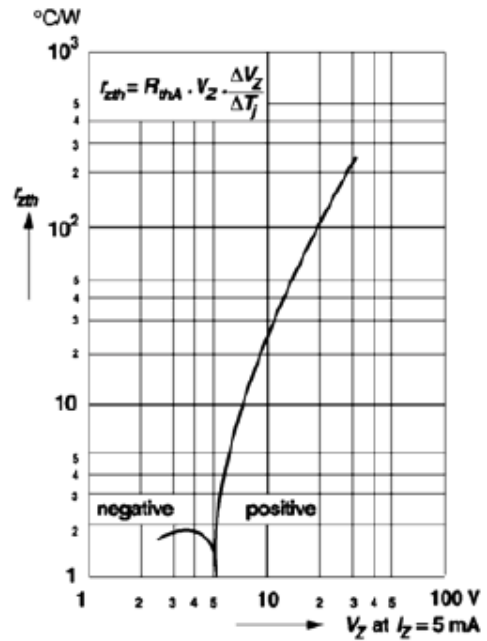


**Dynamic resistance versus Zener current**

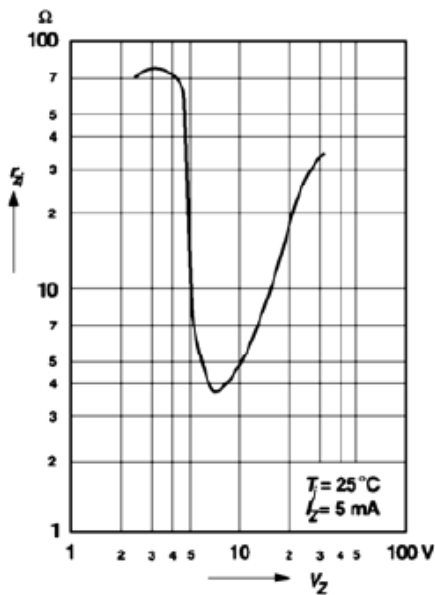


**Thermal differential resistance versus Zener voltage**

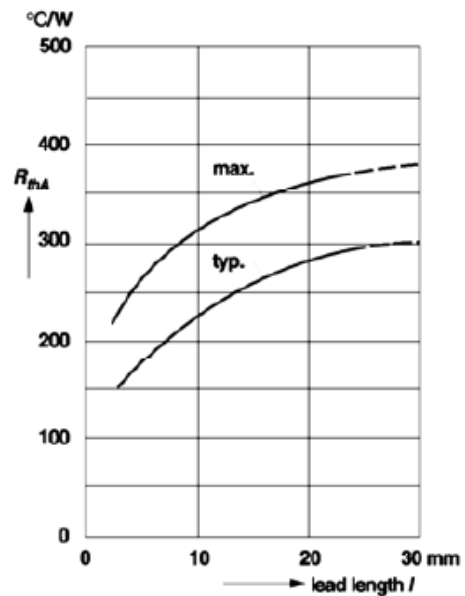
Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.



**Dynamic resistance versus Zener voltage**

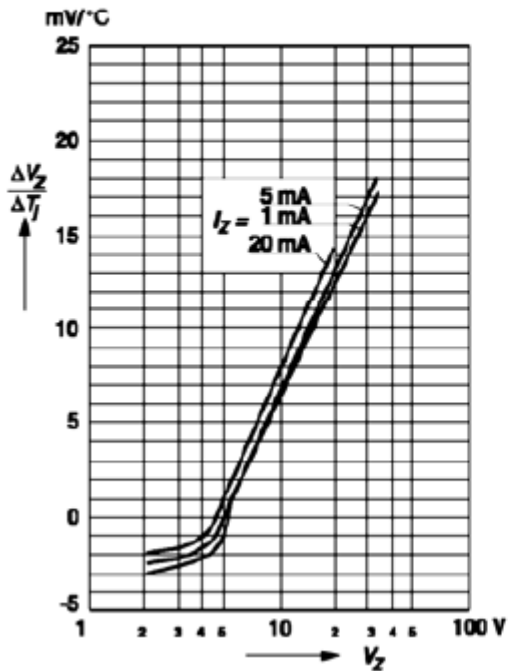


**Thermal resistance versus lead length**

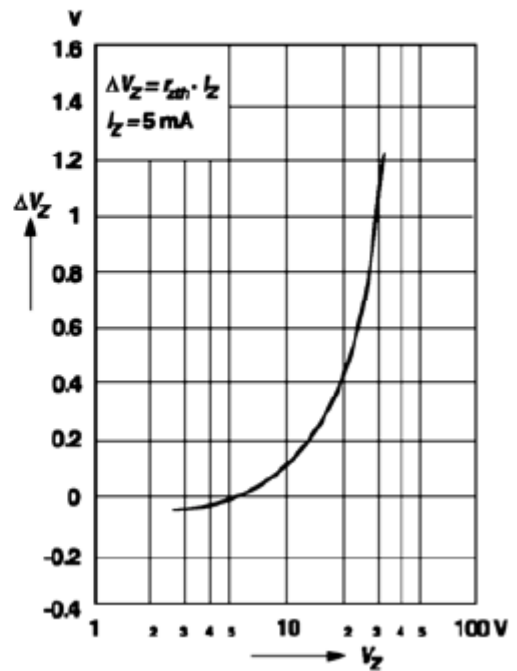




Temperature dependence of Zener voltage versus Zener voltage



Change of Zener voltage from turn-on up to the point of thermal equilibrium versus Zener voltage



Change of Zener voltage versus junction temperature

