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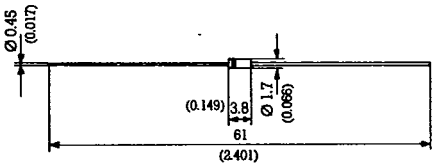
ZPD2,7 ..... ZPD33

T-11-11

0,5 W Zener Diodes

Dimensions in mm. (inches) DO-35 (Glass)



Mounting instructions

1. Min. distance from body to soldering point, 2 mm.
2. Max. solder temperature, 300°C.
3. Max. soldering time, 3 sec.
4. Do not bend lead at a point closer than 1,5 mm. to the body.

Voltage
2.7 to 33 V.

Power
0.5 W

Standard Voltage Tolerance is ± 5 %

- Low cost
- DO-35 Glass case
- Terminals: Axial Leads
- Polarity: Color band denotes cathode

Maximum Ratings, according to IEC publication No. 134

P_{tot}	Power dissipation at Tamb = 25°C	500 mW
P_{ZSM}	Non repetitive peak zener dissipation (T_j = 25°C, t = 1 ms)	12 W
T_j	Max. operating temperature	175°C
T_{stg}	Storage temperature range	− 50°C to + 175°C

Electrical Characteristics at Tamb = 25°C

V_F	Max. forward voltage drop at I_F = 200 mA	1,2 V
$R_{thj\text{-}a}$	Max. thermal resistance at: 8 mm. lead length	0,30°C/mW

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ZPD

Type	Zener Voltage Range V_z	at I_{ZT}	Maximum Zener Impedance Z_{ZT}	at I_{ZT}	Z_{ZK}	at I_{ZK}	Typical Temperature Coefficient	Min Reverse Voltage at $I_R = 0.1\mu A$ V_R	Maximum Regulator Current I_{ZM}
	(V)	(mA)	(Ω)	(mA)	(Ω)	(mA)	(%/°C)	(V)	(mA)
ZPD 2,7	2.5-2.9	5	83	5	500	1	−0.065	–	160
ZPD 3	2.8-3.2	5	90	5	500	1	−0.060	–	140
ZPD 3,3	3.1-3.5	5	90	5	500	1	−0.055	–	130
ZPD 3,6	3.4-3.8	5	90	5	500	1	−0.055	–	120
ZPD 3,9	3.7-4.1	5	90	5	500	1	−0.050	–	110
ZPD 4,3	4.0-4.6	5	90	5	500	1	−0.035	–	100
ZPD 4,7	4.4-5.0	5	78	5	500	1	−0.015	–	90
ZPD 5,1	4.8-5.4	5	60	5	480	1	+0.005	0.8	80
ZPD 5,6	5.2-6.0	5	40	5	400	1	+0.020	1.0	70
ZPD 6,2	5.8-6.6	5	10	5	200	1	+0.030	2.0	64
ZPD 6,8	6.4-7.2	5	8	5	150	1	+0.045	3.0	58
ZPD 7,5	7.0-7.9	5	7	5	50	1	+0.050	5.0	53
ZPD 8,2	7.7-8.7	5	7	5	50	1	+0.055	6.0	47
ZPD 9,1	8.5-9.6	5	10	5	50	1	+0.065	7.0	43
ZPD 10	9.4-10.6	5	15	5	70	1	+0.065	7.5	40
ZPD 11	10.4-11.6	5	20	5	70	1	+0.070	8.5	36
ZPD 12	11.4-12.7	5	20	5	90	1	+0.075	9.0	32
ZPD 13	12.4-14.1	5	25	5	110	1	+0.080	10	29
ZPD 15	13.8-15.6	5	30	5	110	1	+0.080	11	27
ZPD 16	15.3-17.1	5	40	5	170	1	+0.090	12	24
ZPD 18	16.8-19.1	5	50	5	170	1	+0.090	14	21
ZPD 20	18.8-21.2	5	50	5	220	1	+0.090	15	20
ZPD 22	20.8-23.3	5	55	5	220	1	+0.090	17	18
ZPD 24	22.8-25.6	5	80	5	220	1	+0.090	18	16
ZPD 27	25.1-28.9	5	80	5	250	1	+0.090	20	14
ZPD 30	28-32	5	80	5	250	1	+0.090	22.5	13
ZPD 33	31-35	5	80	5	250	1	+0.090	25	12

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Characteristic Curves

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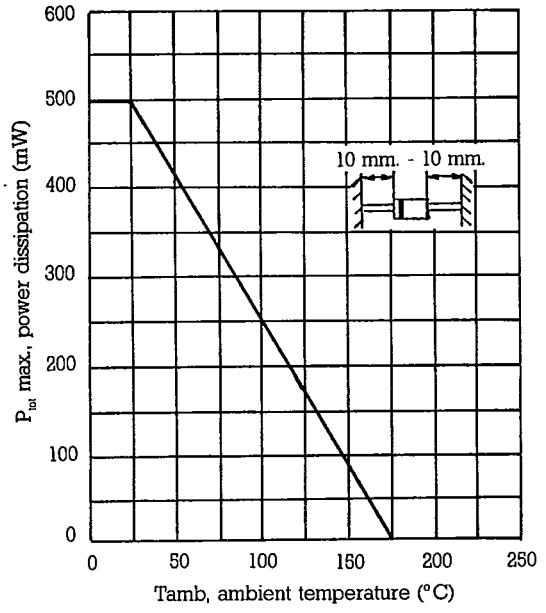

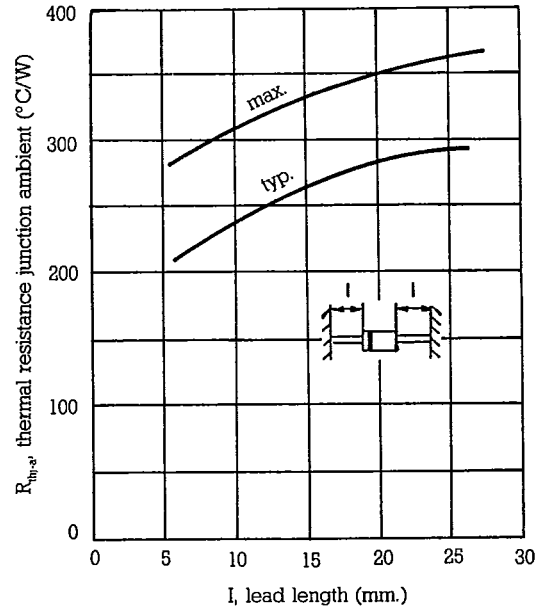

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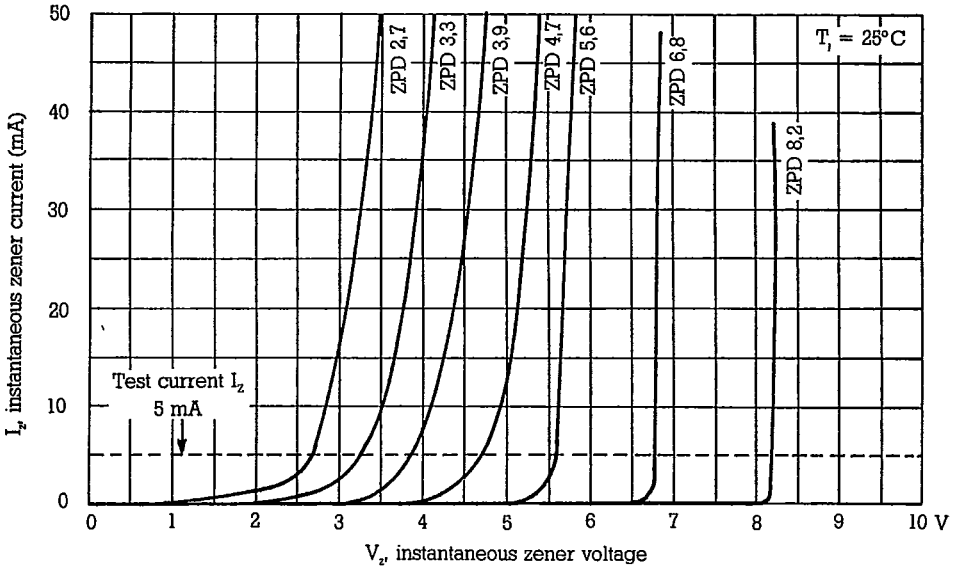
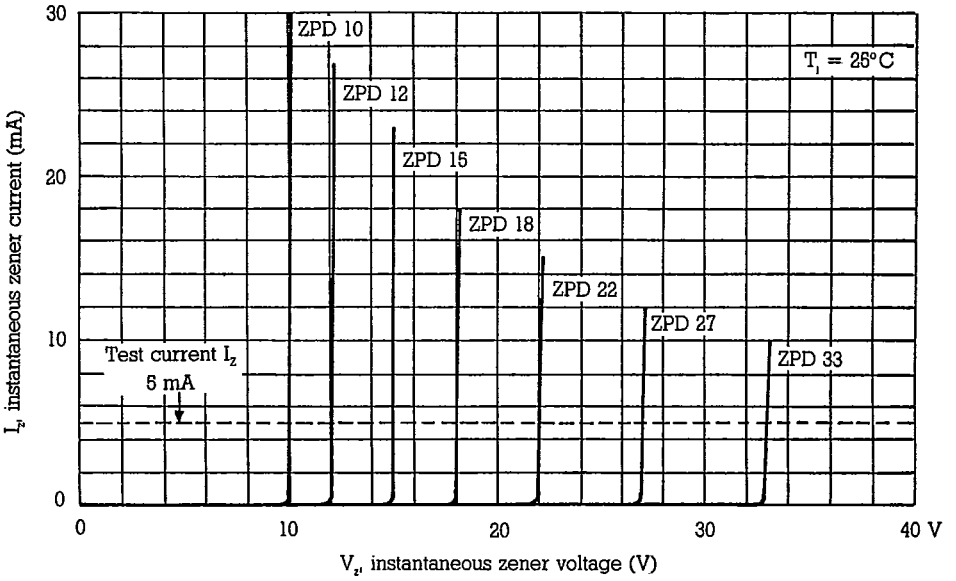
Breakdown characteristics T_j = constant (pulsed)





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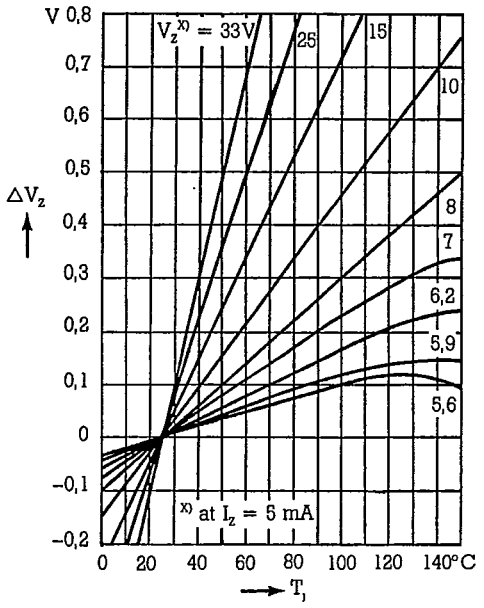
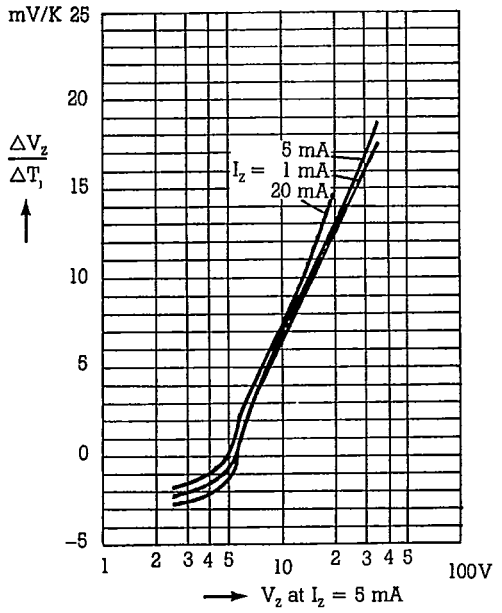


Change of zener voltage versus junction temperature



Temperature dependence of zener voltage versus zener voltage

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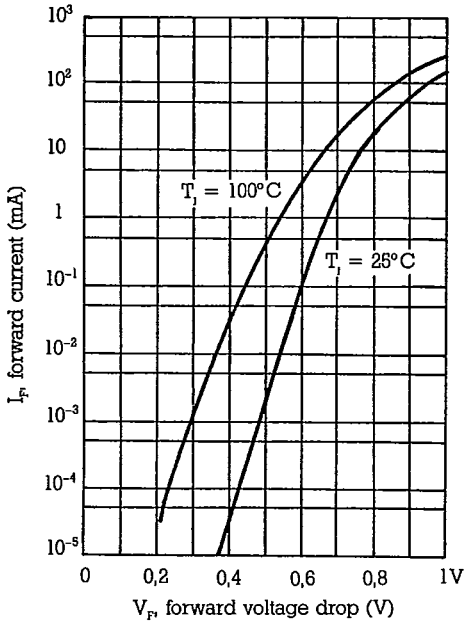
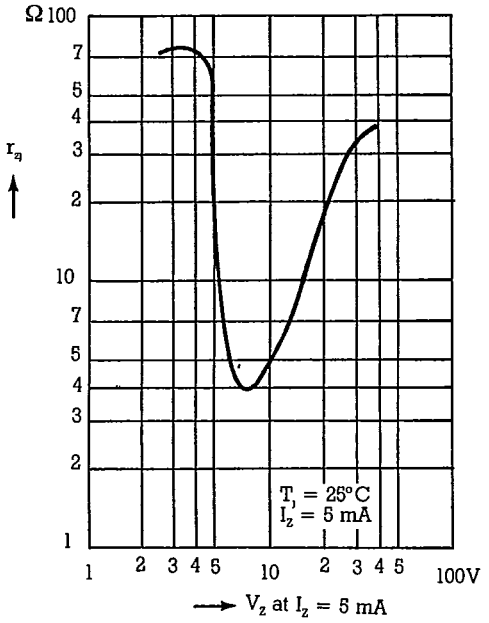


Forward characteristics



Dynamic resistance versus zener voltage

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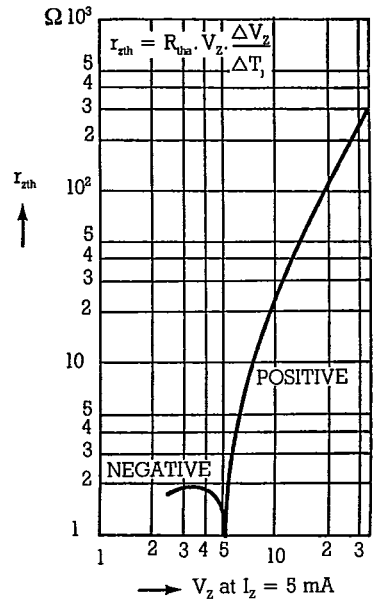
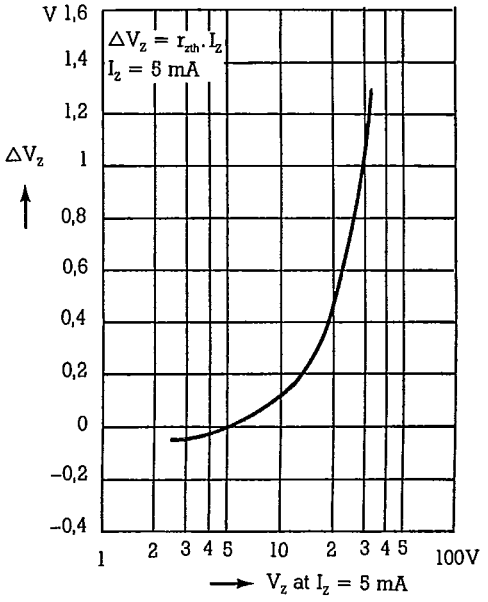


Thermal differential resistance versus Zener voltage. Valid provided that leads are kept at ambient temperature at a distance of 8 mm. from case.



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

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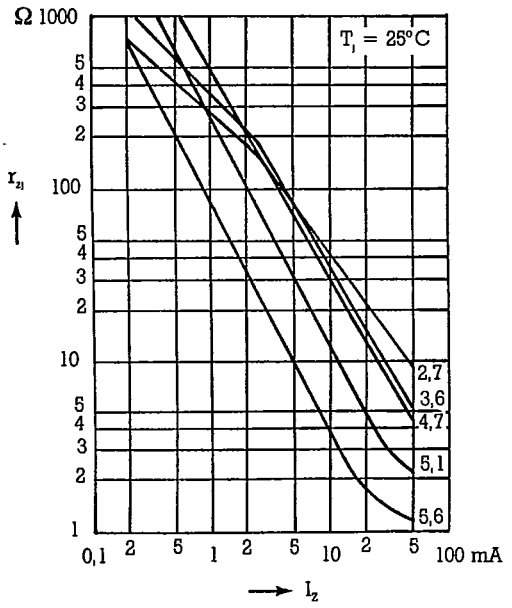
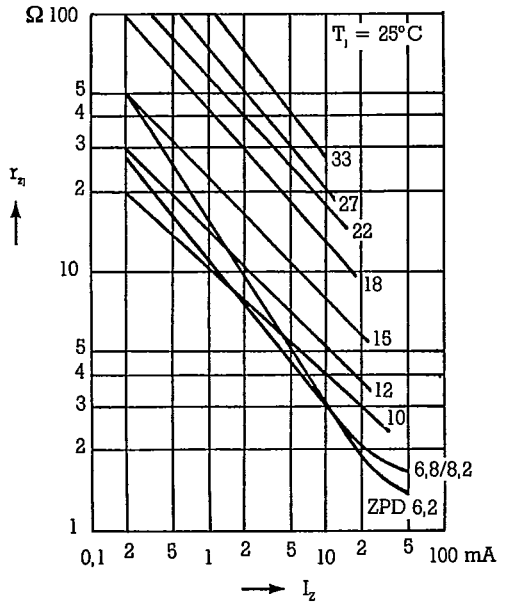


Dynamic resistance versus Zener current.



Dynamic resistance versus Zener current.

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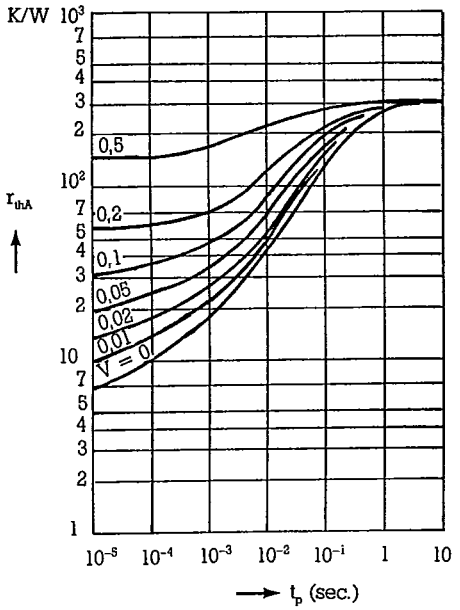
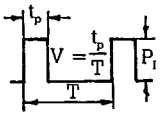
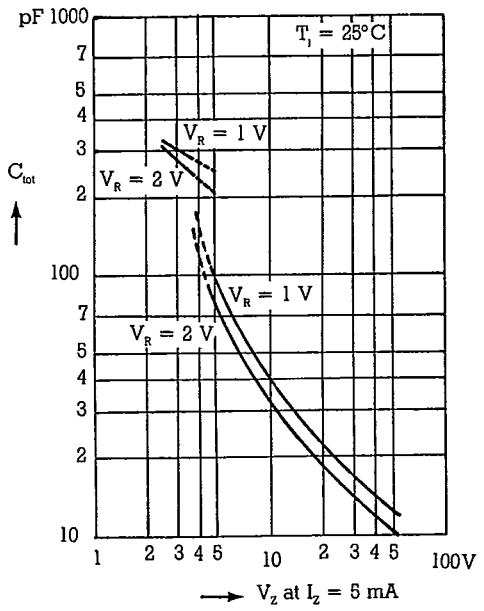


Pulse thermal resistance versus pulse duration. Valid provided that leads are kept at ambient temperature at a distance of 8 mm. from case.





Capacitance versus Zener voltage.