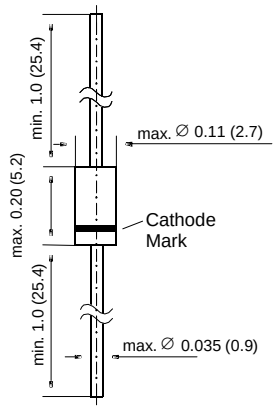
2EZ11D5 THRU 2EZ200D5

ZENER DIODES

DO-41



Dimensions are in inches and (millimeters)

FEATURES

- Silicon Power Zener Diodes
- For use in stabilizing and clipping circuits with high power rating
- The Zener voltages are graded according to the international E 24 standard. Smaller voltage tolerances are available upon request.

MECHANICAL DATA

Case: DO-41 Plastic Case
Weight: approx. 0.34 g

MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOL	*VALUE*	*UNIT*
Zener Current (see Table “Characteristics”)			
Power Dissipation at Tamb = 25°C	P_{tot}	2.0[1)]	Watts
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	– 55 to +150	°C

	SYMBOL	*MIN.*	*TYP.*	*MAX.*	*UNIT*
Thermal Resistance Junction to Ambient Air	R_{thJA}	–	–	60[1)]	°C/W

NOTES:
(1) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

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2EZ11D5 THRU 2EZ200D5

ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Type	Zener voltage[2] at I_{ZT} V_Z (V)	Dynamic resistance at I_{ZT} f = 1 kHz max r_{zj} (Ω)	Temp. coeff. of Zener volt. at I_{ZT} α_{VZ} (10^{-4}/K)	Test current I_{ZT} (mA)	Reverse voltage at I_R= 0.5μA V_R (V)	Admissible Zener current[1] at T_{amb} = 25°C I_Z (mA)
2EZ11D5	0.4 ... 11.6	4 (< 7)	+5 ... +10	50	> 9.2	135
2EZ12D5	11.4 ... 12.7	4 (< 7)	+5 ... +10	50	> 10	120
2EZ13D5	12.4 ... 14.1	5 (< 10)	+5 ... +10	50	> 10.7	110
2EZ15D5	13.8 ... 15.8	5 (< 10)	+5 ... +10	50	> 12	98
2EZ16D5	15.3 ... 17.1	6 (< 15)	+6 ... +11	25	> 13.3	90
2EZ18D5	16.8 ... 19.1	6 (< 15)	+6 ... +11	25	> 14.7	80
2EZ20D5	18.8 ... 21.2	6 (< 15)	+6 ... +11	25	> 16.5	72
2EZ22D5	20.8 ... 23.3	6 (< 15)	+6 ... +11	25	> 18.3	66
2EZ24D5	22.8 ... 25.6	7 (< 15)	+6 ... +11	25	> 20.1	60
2EZ27D5	25.1 ... 28.9	7 (< 15)	+6 ... +11	25	> 22.5	53
2EZ30D5	28 ... 32	8 (< 15)	+6 ... +11	25	> 25.1	48
2EZ33D5	31 ... 35	8 (< 15)	+6 ... +11	25	> 27.8	44
2EZ36D5	34 ... 38	21 (< 40)	+6 ... +11	10	> 30.2	40
2EZ39D5	37 ... 41	21 (< 40)	+6 ... +11	10	> 32.9	37
2EZ43D5	40 ... 46	24 (< 45)	+7 ... +12	10	> 35.6	33
2EZ47D5	44 ... 50	24 (< 45)	+7 ... +12	10	> 39.2	30
2EZ51D5	48 ... 54	25 (< 60)	+7 ... +12	10	> 42.8	27
2EZ56D5	52 ... 60	25 (< 60)	+7 ... +12	10	> 47.3	25
2EZ62D5	58 ... 66	25 (< 80)	+8 ... +13	10	> 51.7	21
2EZ68D5	64 ... 72	25 (< 80)	+8 ... +13	10	> 57.1	20
2EZ75D5	70 ... 79	30 (< 100)	+8 ... +13	10	> 63.2	18
2EZ82D5	77 ... 88	30 (< 100)	+8 ... +13	10	> 68.6	16
2EZ91D5	85 ... 96	60 (< 200)	+9 ... +13	5	> 75.7	15
2EZ100D5	94 ... 106	60 (< 200)	+9 ... +13	5	> 83.7	13
2EZ110D5	104 ...116	80 (< 250)	+9 ... +13	5	> 92.6	12
2EZ120D5	114 ... 127	80 (< 250)	+9 ... +13	5	> 101.6	11
2EZ130D5	124 ... 141	110 (< 300)	+9 ... +13	5	> 110.5	10
2EZ150D5	138 ... 156	110 (< 300)	+9 ... +13	5	> 123	9
2EZ160D5	153 ...171	150 (< 350)	+9 ... +13	5	>136	8.5
2EZ180D5	168 ... 191	150 (< 350)	+9 ... +13	5	> 149	8
2EZ200D5	188 ... 212	150 (< 350)	+9 ... +13	5	> 167	7.5

NOTES:

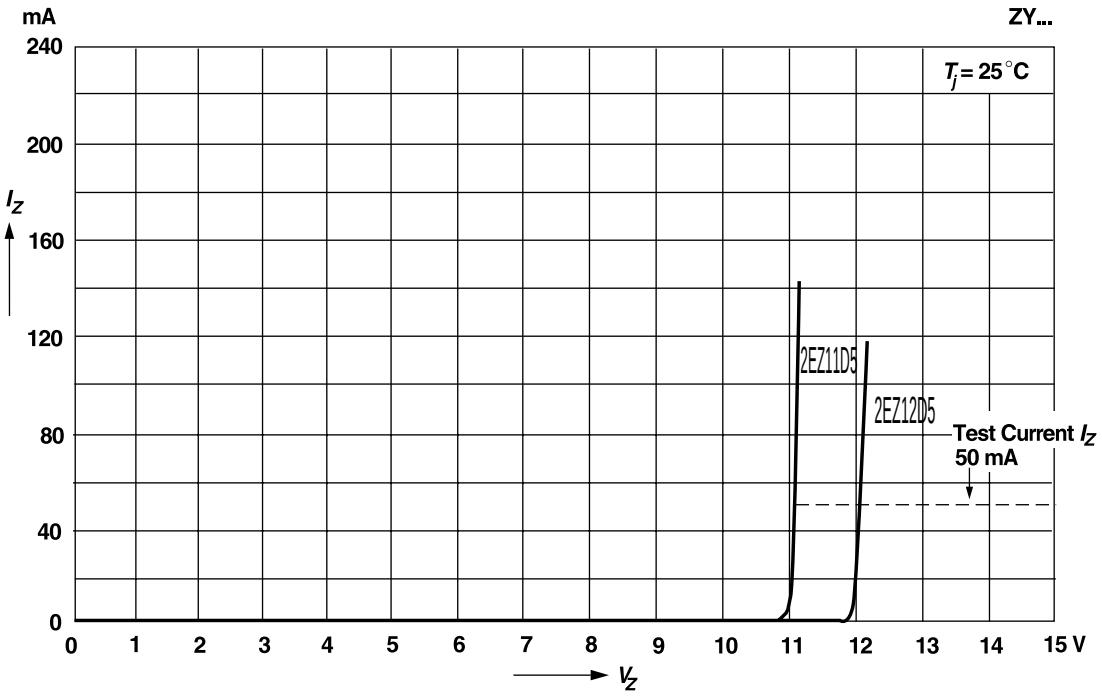
(1) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case

(2) Tested with pulses t_p = 5 ms

(3) The ZY1 is a silicon diode operated in forward direction. Hence, the index of all parameters ratings should be “F” instead of “Z”. Connect the cathode lead to the negative pole

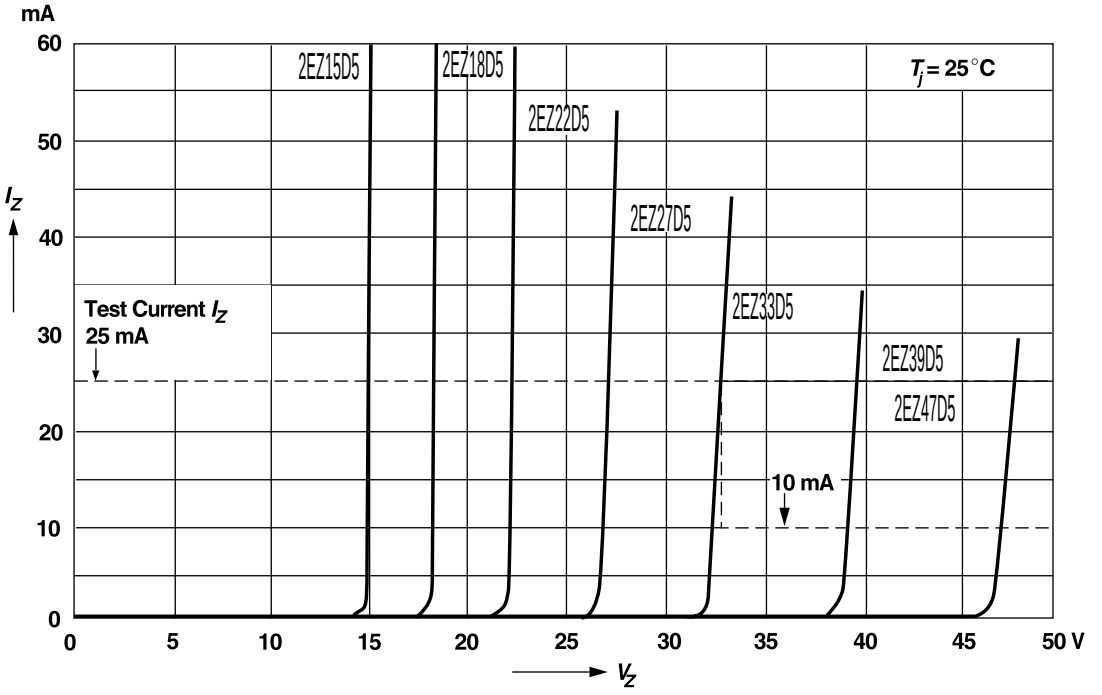
Breakdown characteristics

T_j = constant (pulsed)



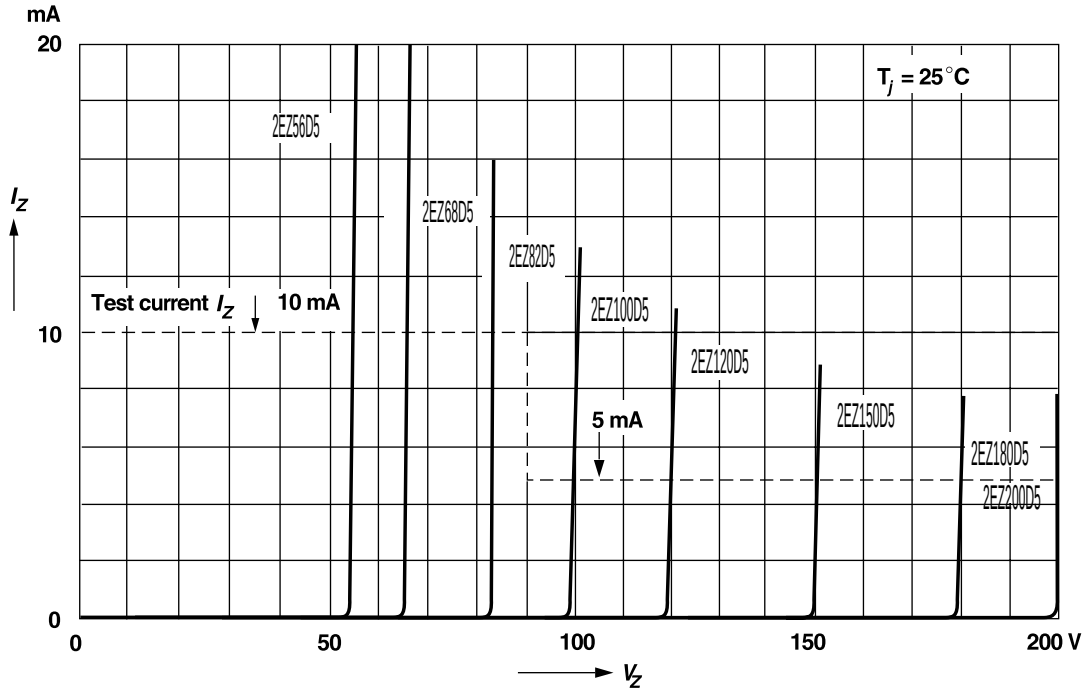
Breakdown characteristics

T_j = constant (pulsed)



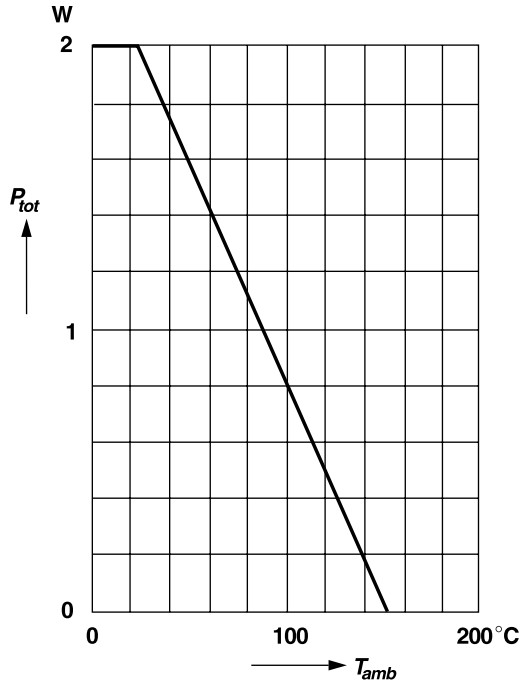
Breakdown characteristics

T_j = constant (pulsed)

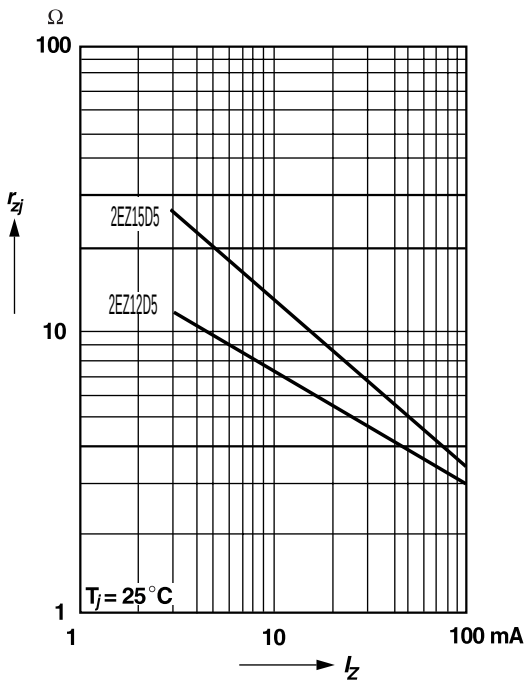


Admissible power dissipation versus ambient temperature

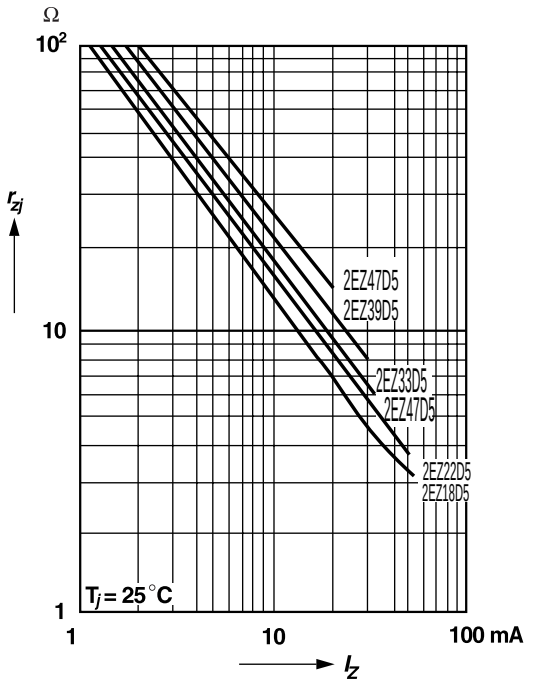
Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case



Dynamic resistance versus Zener current

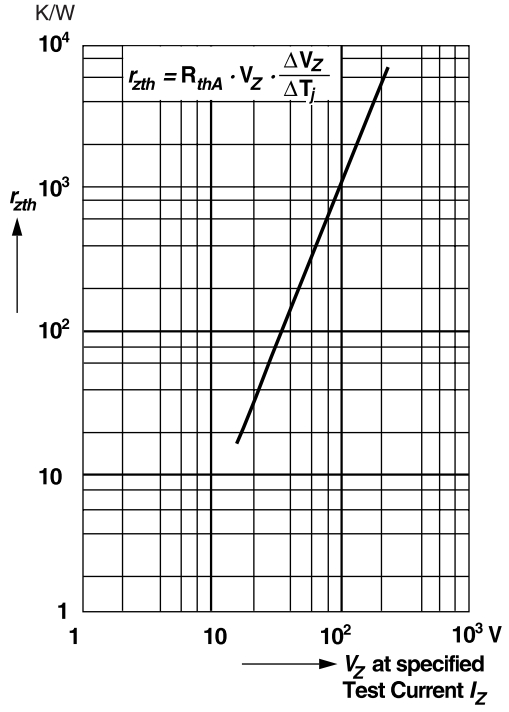


Dynamic resistance versus Zener current

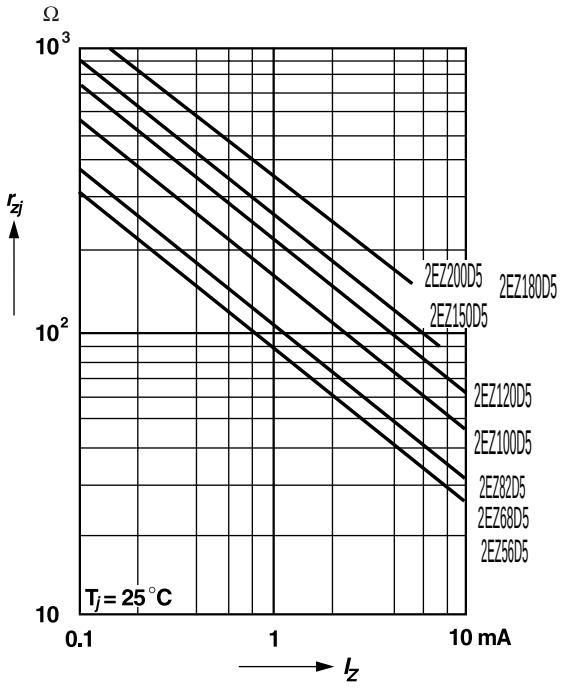


Thermal differential resistance versus Zener voltage

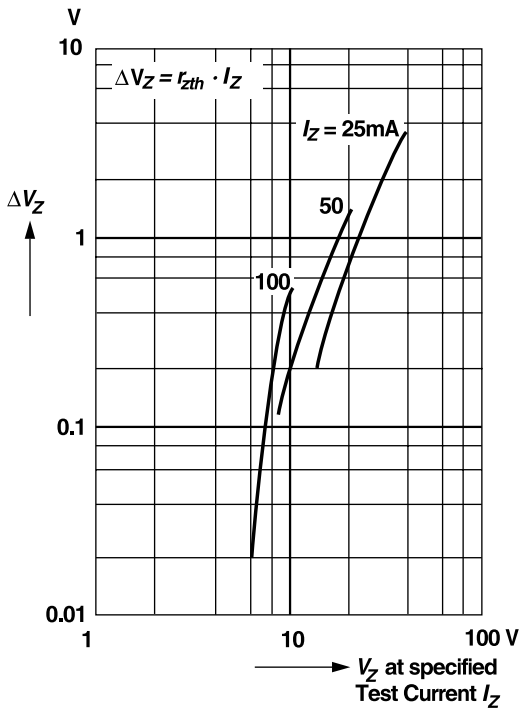
Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case



Dynamic resistance versus Zener current



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



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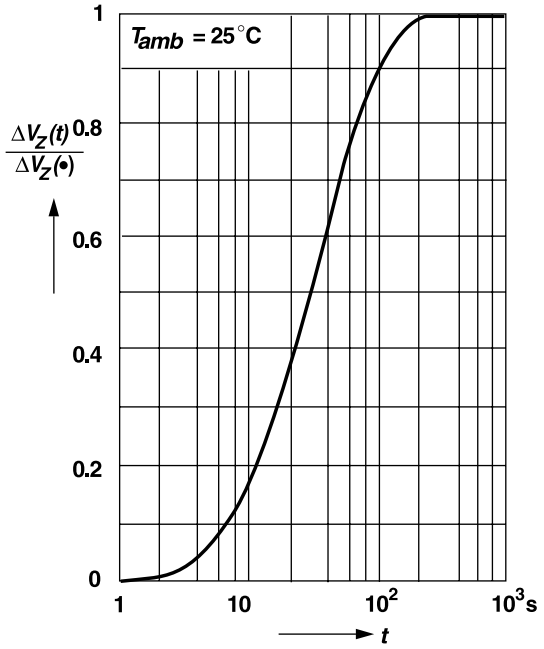
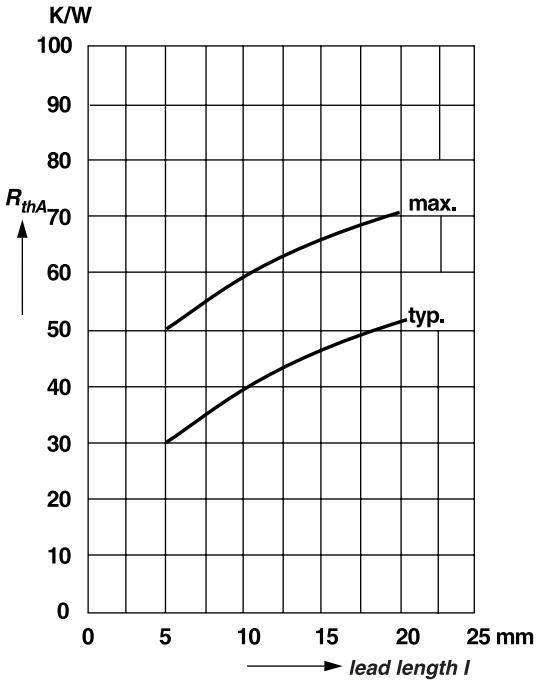
Relative change of Zener voltage versus turn-on time

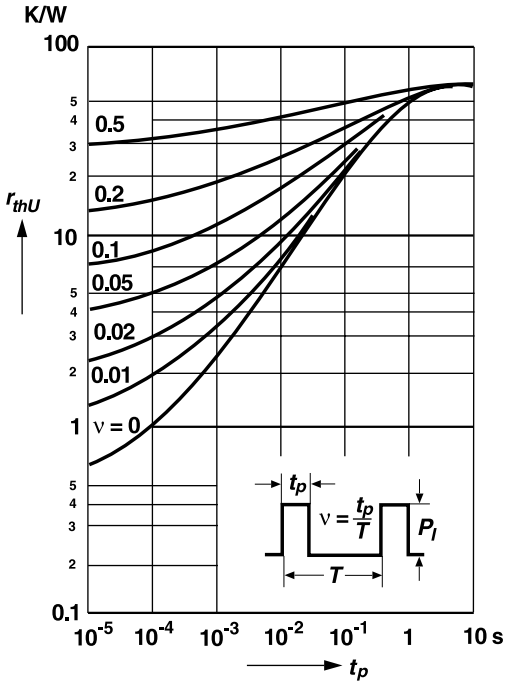


Thermal resistance versus lead length

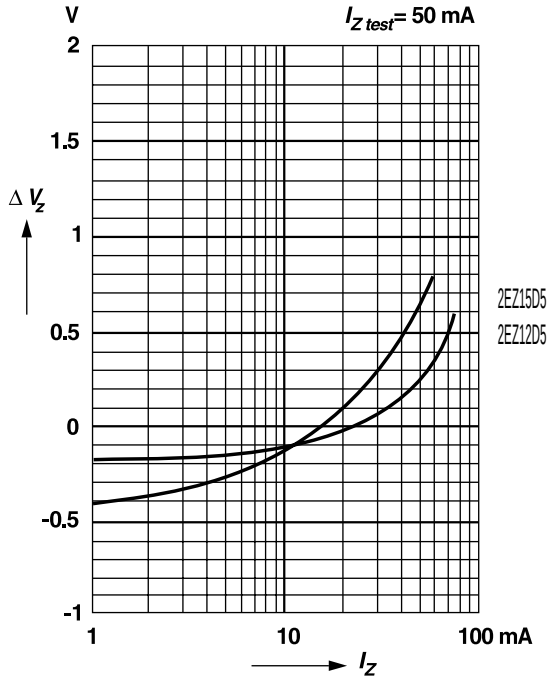


Pulse thermal resistance versus pulse duration

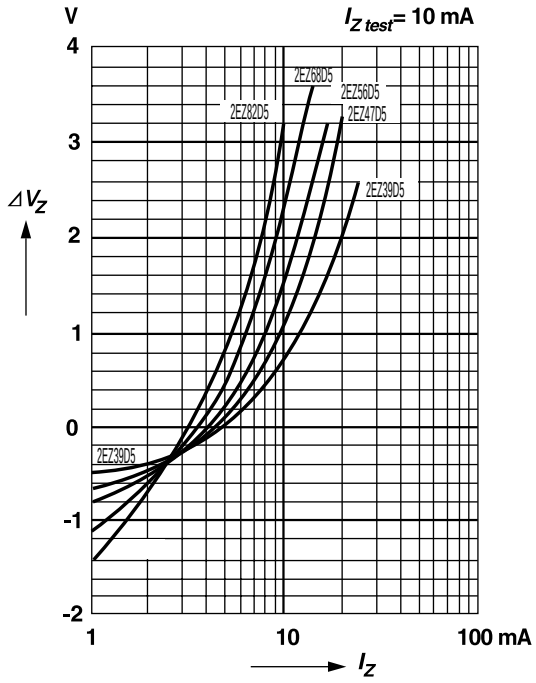
Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case



Difference between Zener voltage at test current pulses less than 1 s duration and Zener voltage at the point of thermal equilibrium versus Zener current



Difference between Zener voltage at test current pulses less than 1 s duration and Zener voltage at the point of thermal equilibrium versus Zener current



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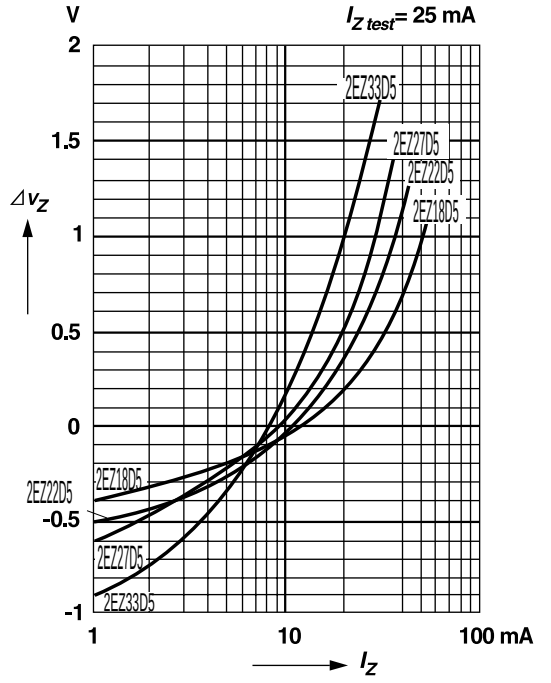

Difference between Zener voltage at test current pulses less than 1 s duration and Zener voltage at the point of thermal equilibrium versus Zener current