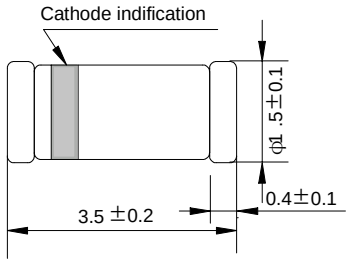
ZMM2V0...ZMM200

FEATURES

Low cost
Smal lsize
Glass sealed



LL-34(SOD-80) Dimensions in millimeters

MECHANICAL DATA

Case: LL34 glass case
Terminals: solderable per MIL - STD - 202, method 208
Polarity:color band denotes cathode
Mounting position:any
Weight:0.05 grams

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	500 [1)]	mW
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_{stg}	- 55 to + 175	°C
[1)] Valid provided that electrodes are kept at ambient temperature			

Characteristics at T_a = 25 °C

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	R_{thA}	0.3 [1)]	K/mW
Forward Voltage at I_F = 100 mA	V_F	1	V
[1)] Valid provided that electrodes are kept at ambient temperature			

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Characteristics at T_a = 25 °C

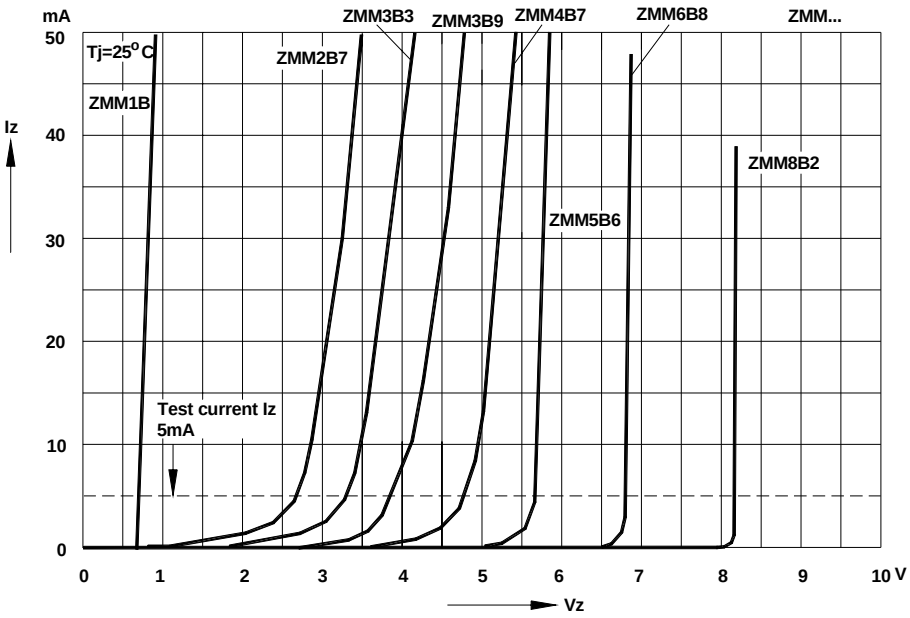
Type	Zener Voltage Range [1]			Dynamic Resistance			Reverse Leakage Current			Temp coefficient of Zener Voltage
	V_{Znom}	V_{ZT}	at I_{ZT}	Z_{ZT}	Z_{ZK}	at I_{ZK}	T_a = 25 °C	T_a = 125 °C	at V_R	
	(V)	(V)	(mA)	Max. (Ω)	Max. (Ω)	(mA)	Max. (μA)	Max. (μA)	(V)	TKvz (%/K)
ZMM2V0	2	1.96…2.04	5	85	600	1	100	200	1	-0.09...-0.06
ZMM2V2	2.2	2.15…2.25	5	85	600	1	75	160	1	-0.09...-0.06
ZMM2V4	2.4	2.35…2.45	5	85	600	1	50	100	1	-0.09...-0.06
ZMM2V7	2.7	2.64…2.75	5	85	600	1	10	50	1	-0.09...-0.06
ZMM3V0	3	2.94…3.06	5	85	600	1	4	40	1	-0.08...-0.05
ZMM3V3	3.3	3.23…3.36	5	85	600	1	2	40	1	-0.08...-0.05
ZMM3V6	3.6	3.52…3.67	5	85	600	1	2	40	1	-0.08...-0.05
ZMM3V9	3.9	3.82…3.98	5	85	600	1	2	40	1	-0.08...-0.05
ZMM4V3	4.3	4.21…4.39	5	75	600	1	1	20	1	-0.06...-0.03
ZMM4V7	4.7	4.6…4.8	5	60	600	1	0.5	10	1	-0.05...+0.02
ZMM5V1	5.1	4.99…5.2	5	35	550	1	0.1	2	1	-0.02...+0.02
ZMM5V6	5.6	5.49…5.71	5	25	450	1	0.1	2	1	-0.05...+0.05
ZMM6V2	6.2	6.07…6.32	5	10	200	1	0.1	2	2	0.03...0.06
ZMM6V8	6.8	6.66…6.94	5	8	150	1	0.1	2	3	0.03...0.07
ZMM7V5	7.5	7.35…7.65	5	7	50	1	0.1	2	5	0.03...0.07
ZMM8V2	8.2	8.04…8.36	5	7	50	1	0.1	2	6.2	0.03...0.08
ZMM9V1	9.1	8.92…9.28	5	10	50	1	0.1	2	6.8	0.03...0.09
ZMM10	10	9.8…10.2	5	15	70	1	0.1	2	7.5	0.03...0.1
ZMM11	11	10.8…11.2	5	20	70	1	0.1	2	8.2	0.03...0.11
ZMM12	12	11.8…12.2	5	20	90	1	0.1	2	9.1	0.03...0.11
ZMM13	13	12.7…13.3	5	26	110	1	0.1	2	10	0.03...0.11
ZMM15	15	14.7…15.3	5	30	110	1	0.1	2	11	0.03...0.11
ZMM16	16	15.7…16.3	5	40	170	1	0.1	2	12	0.03...0.11
ZMM18	18	17.6…18.4	5	50	170	1	0.1	2	13	0.03...0.11
ZMM20	20	19.6…20.4	5	55	220	1	0.1	2	15	0.03...0.11
ZMM22	22	21.6…22.5	5	55	220	1	0.1	2	16	0.04...0.12
ZMM24	24	23.5…24.5	5	80	220	1	0.1	2	18	0.04...0.12
ZMM27	27	26.4…27.6	5	80	220	1	0.1	2	20	0.04...0.12
ZMM30	30	29.4…30.6	5	80	220	1	0.1	2	22	0.04...0.12
ZMM33	33	32.3…33.7	5	80	220	1	0.1	2	24	0.04...0.12
ZMM36	36	35.2…36.8	5	80	220	1	0.1	2	27	0.04...0.12
ZMM39	39	38.2…39.8	2.5	90	500	0.5	0.1	5	30	0.04...0.12
ZMM43	43	42.1…43.9	2.5	90	500	0.5	0.1	5	33	0.04...0.12
ZMM47	47	46…48	2.5	110	600	0.5	0.1	5	36	0.04...0.12
ZMM51	51	49.9…52.1	2.5	125	700	0.5	0.1	10	39	0.04...0.12
ZMM56	56	54.8…57.2	2.5	135	700	0.5	0.1	10	43	0.04...0.12
ZMM62	62	60.7…63.3	2.5	150	1000	0.5	0.1	10	47	0.04...0.12
ZMM68	68	66.6…69.4	2.5	200	1000	0.5	0.1	10	51	0.04...0.12
ZMM75	75	73.5…76.5	2.5	250	1000	0.5	0.1	10	56	0.04...0.12
ZMM82	82	80.3…83.7	2.5	300	1500	0.25	0.1	10	62	0.05...0.12
ZMM91	91	89.1…92.9	1	450	2000	0.1	0.1	10	68	0.05...0.12
ZMM100	100	98…102	1	450	5000	0.1	0.1	10	75	0.05...0.12
ZMM110	110	107.8…112.2	1	600	5000	0.1	0.1	10	82	0.05...0.12
ZMM120	120	117.6…122.4	1	800	5500	0.1	0.1	10	91	0.05...0.12
ZMM130	130	127.4…132.6	1	950	6000	0.1	0.1	10	100	0.05...0.12
ZMM150	150	147…153	1	1250	6500	0.1	0.1	10	110	0.05...0.12
ZMM160	160	156.8…163.2	1	1400	7000	0.1	0.1	10	120	0.05...0.12
ZMM180	180	176.4…183.6	1	1700	8500	0.1	0.1	10	130	0.05...0.12
ZMM200	200	196…204	1	2000	10000	0.1	0.1	10	150	0.05...0.12

[1] Tested with pulses t_p = 20 ms.

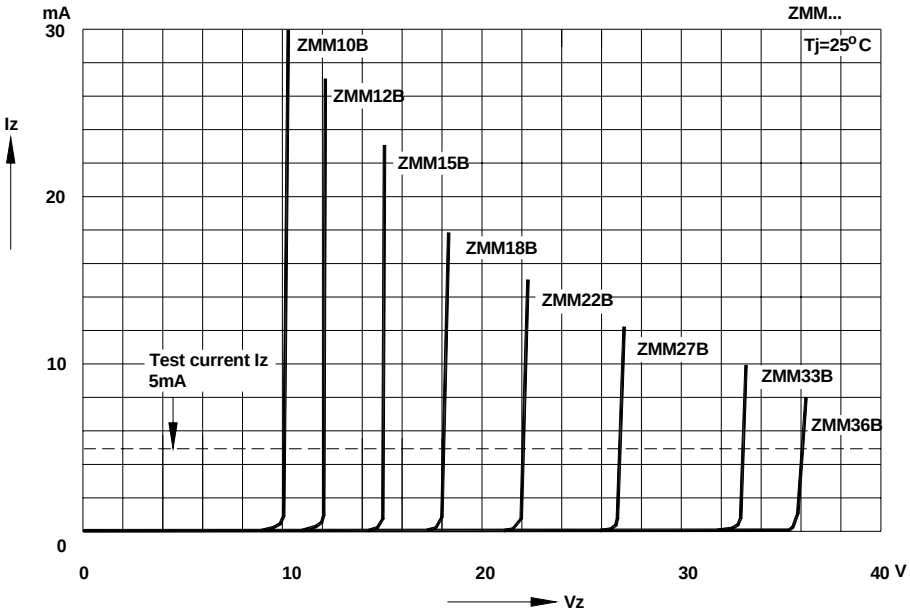
[2] The ZMM1 is a silicon diode with operation in forward direction. Hence, the index of all parameters should be "F" instead of "Z". Connect the cathode electrode to the negative pole.

ZMM2V0...ZMM200

Breakdown characteristics
T_j = constant (pulsed)



Breakdown characteristics
T_j = constant (pulsed)



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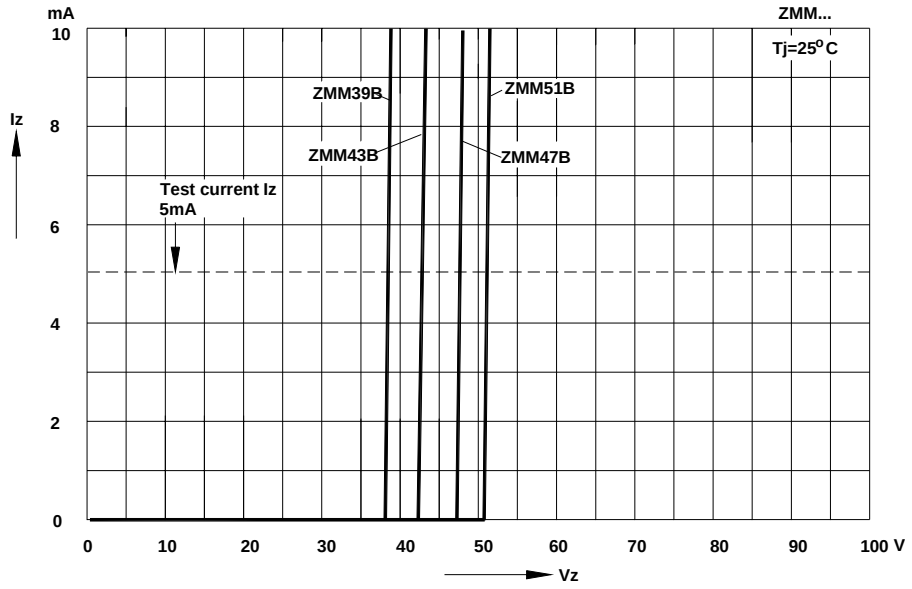
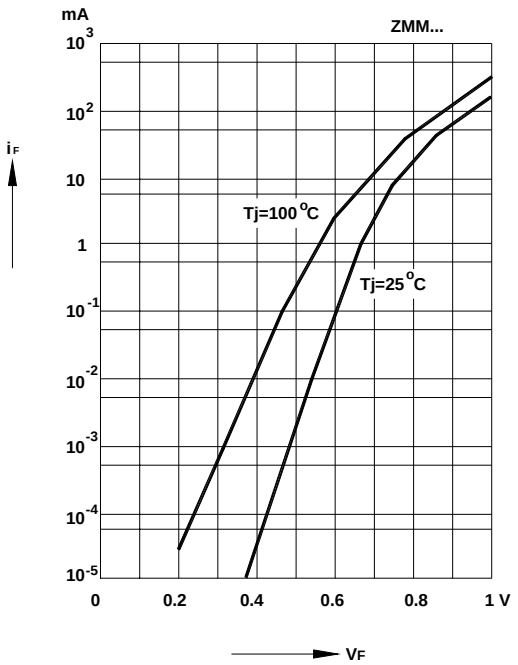
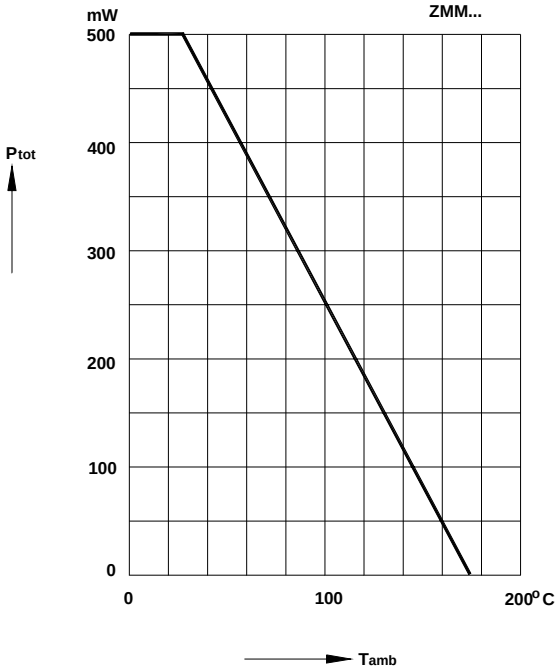
Breakdown characteristics
T_j = constant (pulsed)



Forward characteristics



Admissible power dissipation versus ambient temperature
Valid provided that electrodes are kept at ambient temperature.



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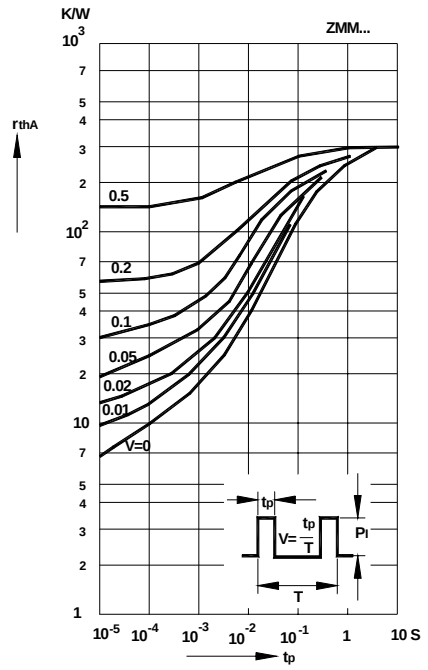
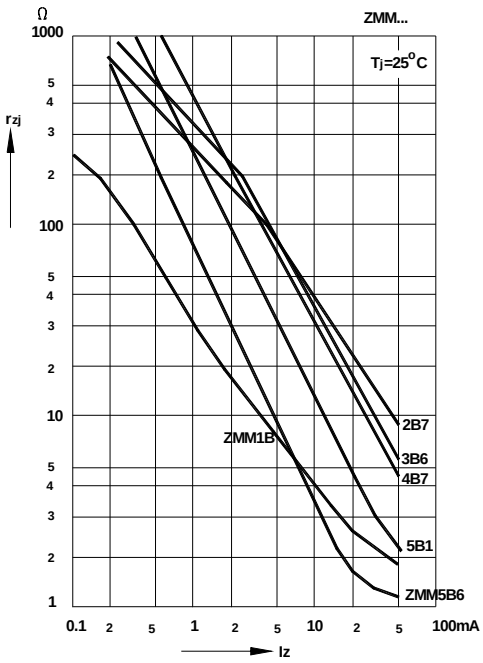
Pulse thermal resistance versus pulse duration

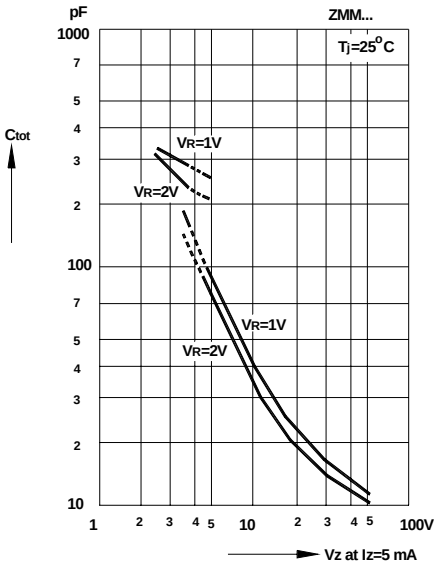
Valid provided that the electrodes are kept at ambient temperature.



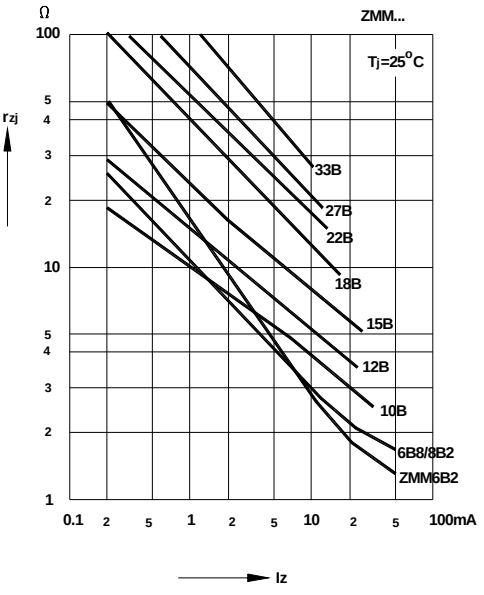
Dynamic resistance versus Zener current



Capacitance versus Zener voltage



Dynamic resistance versus Zener current



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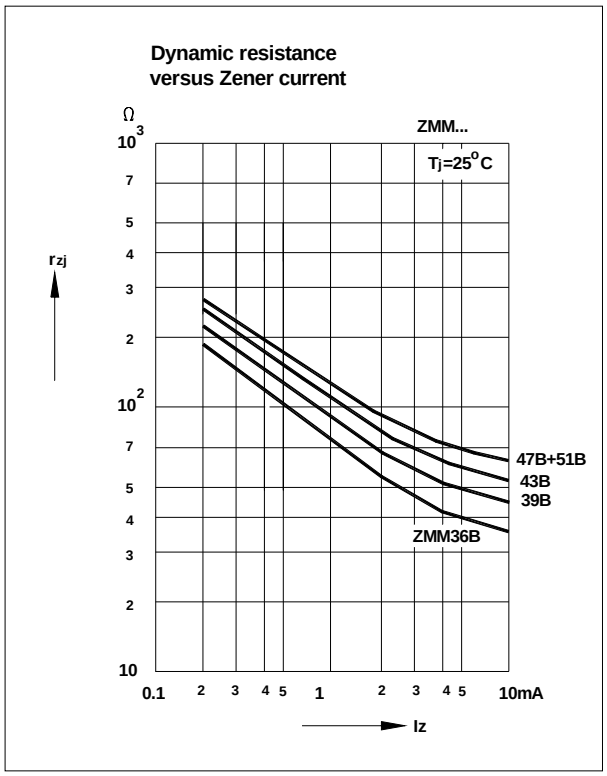

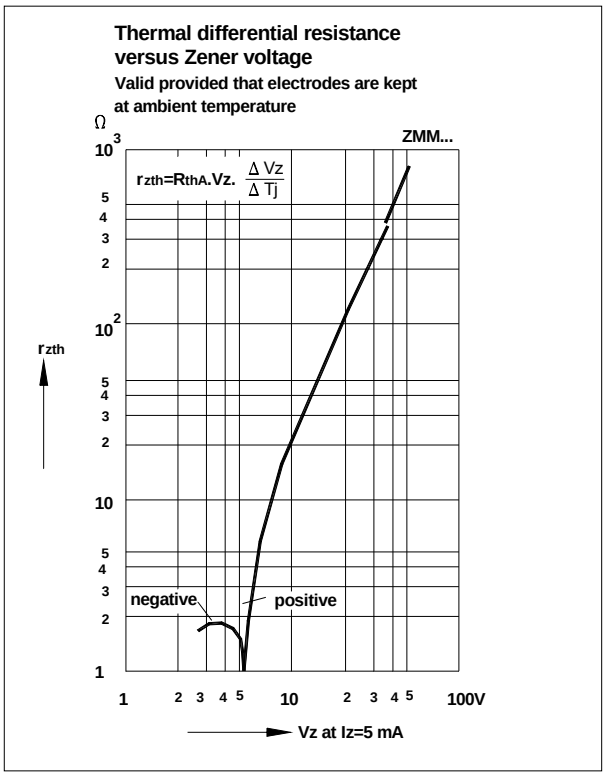

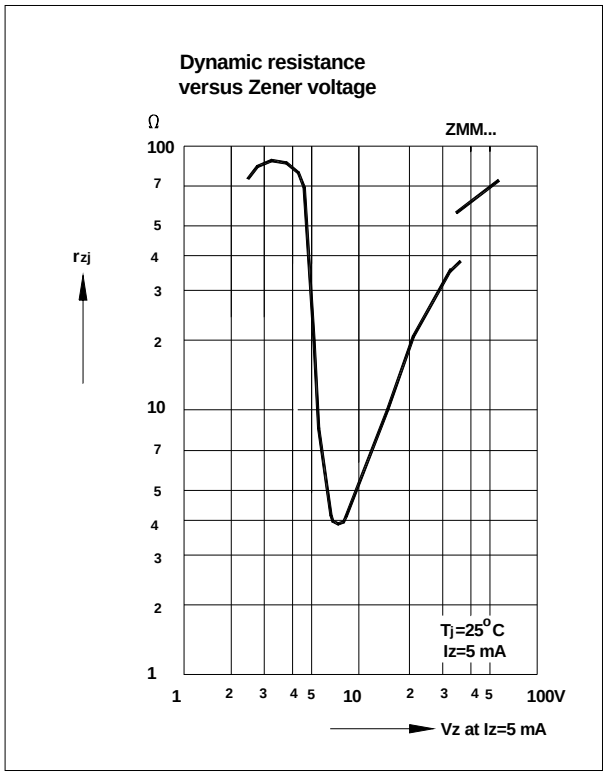

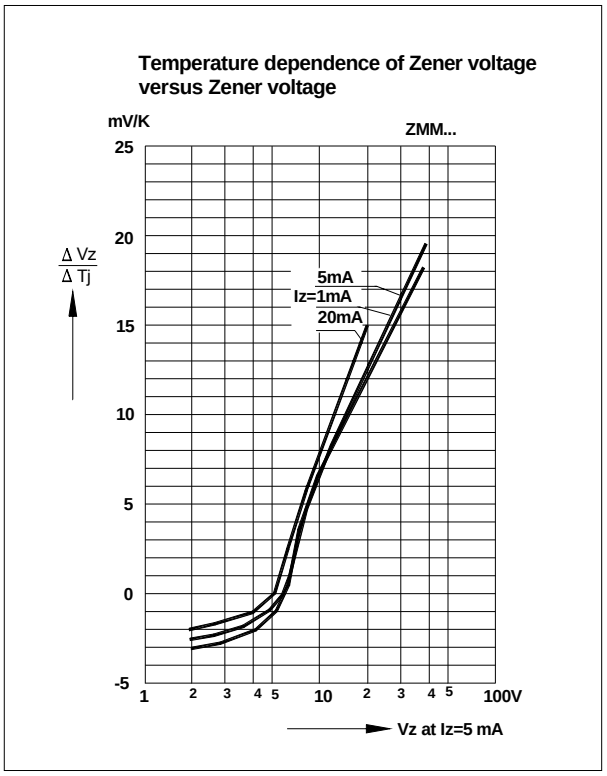

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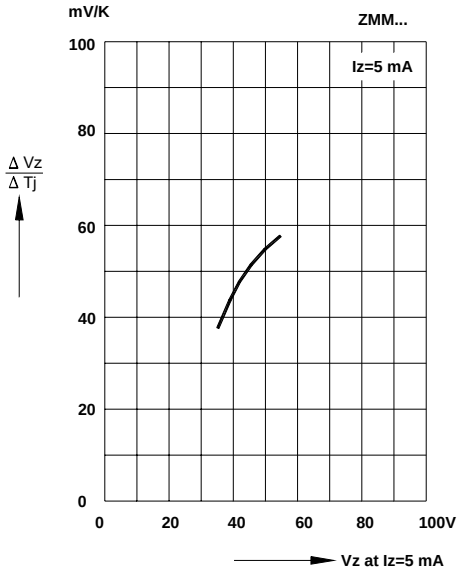
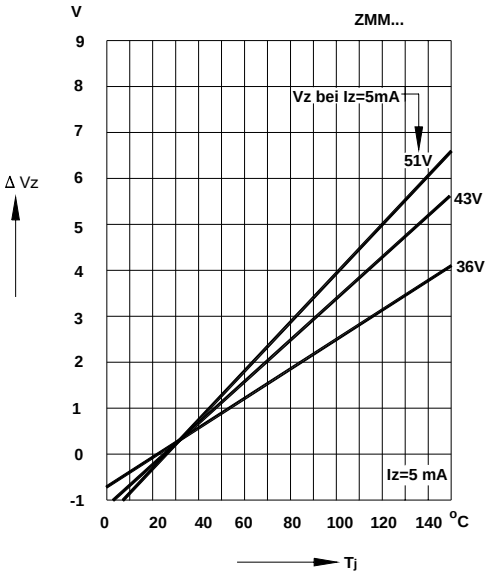
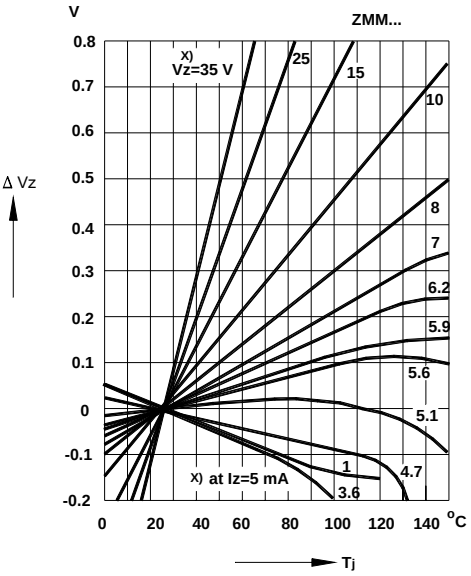
Temperature dependence of Zener voltage versus Zener voltage



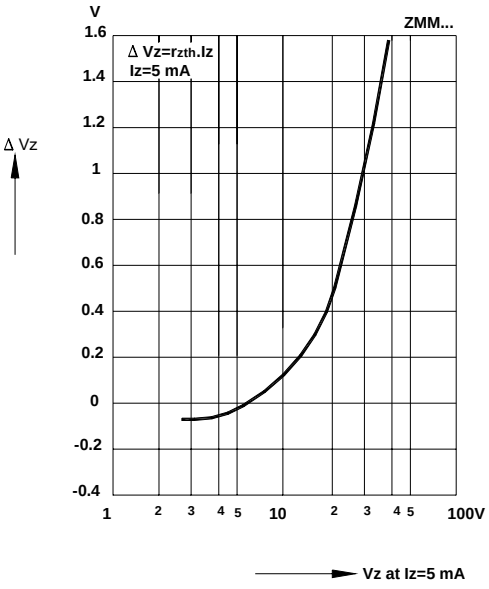
Change of Zener voltage versus junction temperature



Change of Zener voltage versus junction temperature



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



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