



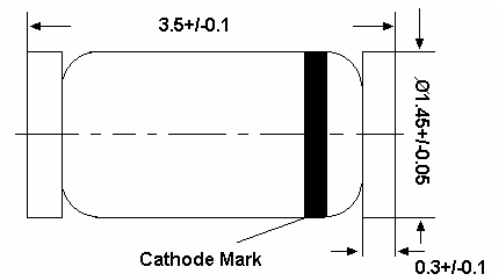
ZMM1B...ZMM200B

SILICON PLANAR ZENER DIODES

in MiniMELF case especially for automatic insertion. The Zener voltages are graded according to the international E 24 standard. Smaller voltage tolerances and higher Zener voltages are upon request.

These diodes are also available in DO-35 case with the type designation BZX55B

LL-34



Glass case MiniMELF
Dimensions in mm

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

	Symbol	Value	Unit
Power Dissipation	P_{tot}	500 ¹⁾	mW
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +175	$^\circ\text{C}$
¹⁾ Valid provided that electrodes are kept at ambient temperature			

Characteristics at $T_{\text{amb}} = 25^\circ\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
Thermal Resistance Junction to Ambient Air	R_{thA}	-	-	0.3 ¹⁾	K/mW
¹⁾ Valid provided that electrodes are kept at ambient temperature					



ZMM1B...ZMM200B

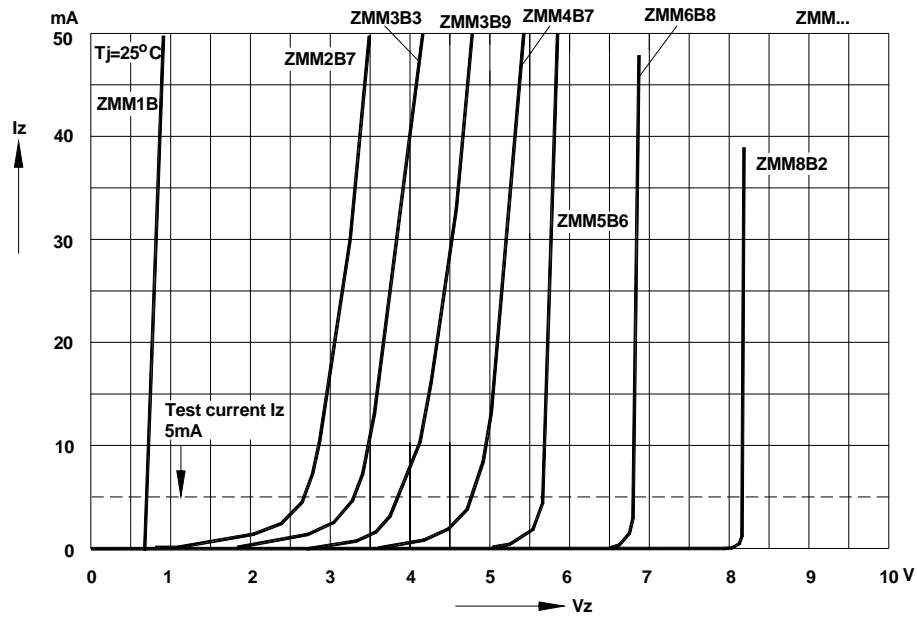
Type	Zener Voltage Range ¹⁾			Dynamic Resistance			Reverse Leakage Current			Temp coefficient of Zener Voltage
	V _{znom} V	I _{ZT} for mA	V _{ZT} ²⁾ V	r _{ZJT} Ω	r _{ZJK} at Ω	I _{ZK} mA	T _a =25°C μA	T _a =125°C μA	I _R at V _R V	TKvz %/K
ZMM 1B ³⁾	0.75	5	0.73...0.77	<8	<50	1	--	--	--	-0.26...-0.23
ZMM 2B0	2.0	5	1.96...2.04	<85	<600	1	<100	<200	1	-0.09...-0.06
ZMM 2B2	2.2	5	2.15...2.25	<85	<600	1	<75	<160	1	-0.09...-0.06
ZMM 2B4	2.4	5	2.35...2.45	<85	<600	1	<50	<100	1	-0.09...-0.06
ZMM 2B7	2.7	5	2.64...2.75	<85	<600	1	<10	<50	1	-0.09...-0.06
ZMM 3B0	3.0	5	2.94...3.06	<85	<600	1	<4	<40	1	-0.08...-0.05
ZMM 3B3	3.3	5	3.23...3.36	<85	<600	1	<2	<40	1	-0.08...-0.05
ZMM 3B6	3.6	5	3.52...3.67	<85	<600	1	<2	<40	1	-0.08...-0.05
ZMM 3B9	3.9	5	3.82...3.98	<85	<600	1	<2	<40	1	-0.08...-0.05
ZMM 4B3	4.3	5	4.21...4.39	<75	<600	1	<1	<20	1	-0.06...-0.03
ZMM 4B7	4.7	5	4.60...4.80	<60	<600	1	<0.5	<10	1	-0.05...+0.02
ZMM 5B1	5.1	5	4.99...5.20	<35	<550	1	<0.1	<2	1	-0.02...+0.02
ZMM 5B6	5.6	5	5.49...5.71	<25	<450	1	<0.1	<2	1	-0.05...+0.05
ZMM 6B2	6.2	5	6.07...6.32	<10	<200	1	<0.1	<2	2	0.03...0.06
ZMM 6B8	6.8	5	6.66...6.94	<8	<150	1	<0.1	<2	3	0.03...0.07
ZMM 7B5	7.5	5	7.35...7.65	<7	<50	1	<0.1	<2	5	0.03...0.07
ZMM 8B2	8.2	5	8.04...8.36	<7	<50	1	<0.1	<2	6.2	0.03...0.08
ZMM 9B1	9.1	5	8.92...9.28	<10	<50	1	<0.1	<2	6.8	0.03...0.09
ZMM 10B	10	5	9.8...10.2	<15	<70	1	<0.1	<2	7.5	0.03...0.1
ZMM 11B	11	5	10.8...11.2	<20	<70	1	<0.1	<2	8.2	0.03...0.11
ZMM 12B	12	5	11.8...12.2	<20	<90	1	<0.1	<2	9.1	0.03...0.11
ZMM 13B	13	5	12.7...13.3	<26	<110	1	<0.1	<2	10	0.03...0.11
ZMM 15B	15	5	14.7...15.3	<30	<110	1	<0.1	<2	11	0.03...0.11
ZMM 16B	16	5	15.7...16.3	<40	<170	1	<0.1	<2	12	0.03...0.11
ZMM 18B	18	5	17.6...18.4	<50	<170	1	<0.1	<2	13	0.03...0.11
ZMM 20B	20	5	19.6...20.4	<55	<220	1	<0.1	<2	15	0.03...0.11
ZMM 22B	22	5	21.6...22.5	<55	<220	1	<0.1	<2	16	0.04...0.12
ZMM 24B	24	5	23.5...24.5	<80	<220	1	<0.1	<2	18	0.04...0.12
ZMM 27B	27	5	26.4...27.6	<80	<220	1	<0.1	<2	20	0.04...0.12
ZMM 30B	30	5	29.4...30.6	<80	<220	1	<0.1	<2	22	0.04...0.12
ZMM 33B	33	5	32.3...33.7	<80	<220	1	<0.1	<2	24	0.04...0.12
ZMM 36B	36	5	35.2...36.8	<80	<220	1	<0.1	<2	27	0.04...0.12
ZMM 39B	39	2.5	38.2...39.8	<90	<500	0.5	<0.1	<5	30	0.04...0.12
ZMM 43B	43	2.5	42.1...43.9	<90	<500	0.5	<0.1	<5	33	0.04...0.12
ZMM 47B	47	2.5	46.0...48.0	<110	<600	0.5	<0.1	<5	36	0.04...0.12
ZMM 51B	51	2.5	49.9...52.1	<125	<700	0.5	<0.1	<10	39	0.04...0.12
ZMM 56B	56	2.5	54.8...57.2	<135	<700	0.5	<0.1	<10	43	0.04...0.12
ZMM 62B	62	2.5	60.7...63.3	<150	<1000	0.5	<0.1	<10	47	0.04...0.12
ZMM 68B	68	2.5	66.6...69.4	<200	<1000	0.5	<0.1	<10	51	0.04...0.12
ZMM 75B	75	2.5	73.5...76.5	<250	<1000	0.5	<0.1	<10	56	0.04...0.12
ZMM 82B	82	2.5	80.3...83.7	<300	<1500	0.25	<0.1	<10	62	0.05...0.12
ZMM 91B	91	1	89.1...92.9	<450	<2000	0.1	<0.1	<10	68	0.05...0.12
ZMM 100B	100	1	98.0...102.0	<450	<5000	0.1	<0.1	<10	75	0.05...0.12
ZMM 110B	110	1	107.8...112.2	<600	<5000	0.1	<0.1	<10	82	0.05...0.12
ZMM 120B	120	1	117.6...122.4	<800	<5500	0.1	<0.1	<10	91	0.05...0.12
ZMM 130B	130	1	127.4...132.6	<950	<6000	0.1	<0.1	<10	100	0.05...0.12
ZMM 150B	150	1	147.0...153.0	<1250	<6500	0.1	<0.1	<10	110	0.05...0.12
ZMM 160B	160	1	156.8...163.2	<1400	<7000	0.1	<0.1	<10	120	0.05...0.12
ZMM 180B	180	1	176.4...183.6	<1700	<8500	0.1	<0.1	<10	130	0.05...0.12
ZMM 200B	200	1	196.0...204.0	<2000	<10000	0.1	<0.1	<10	150	0.05...0.12

1) Tested with pulses t_p = 20 ms.

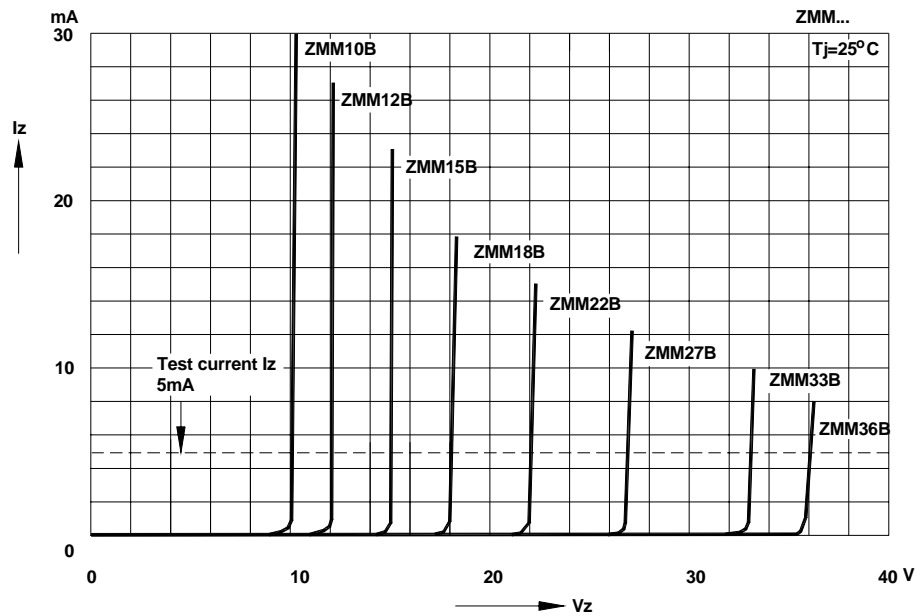
1) Valid provided that electrodes are kept at ambient temperature

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.

Breakdown characteristics
T_j = constant (pulsed)

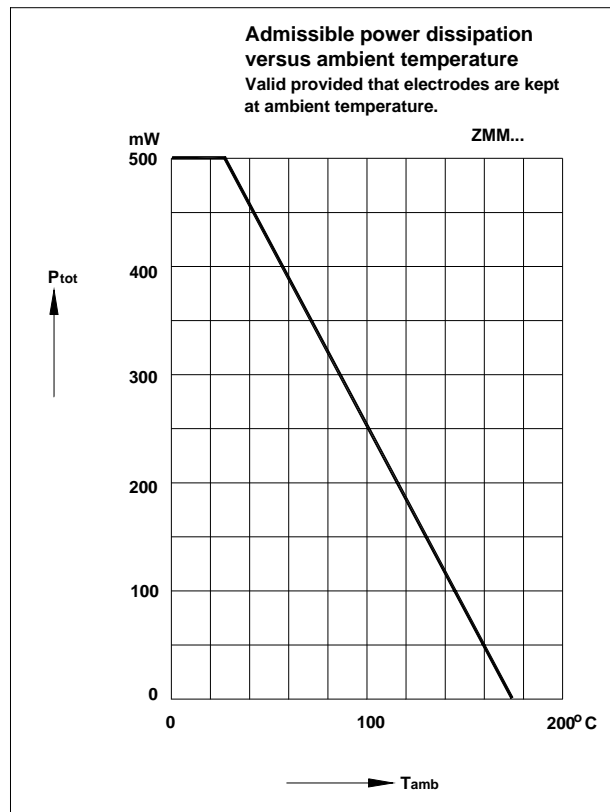
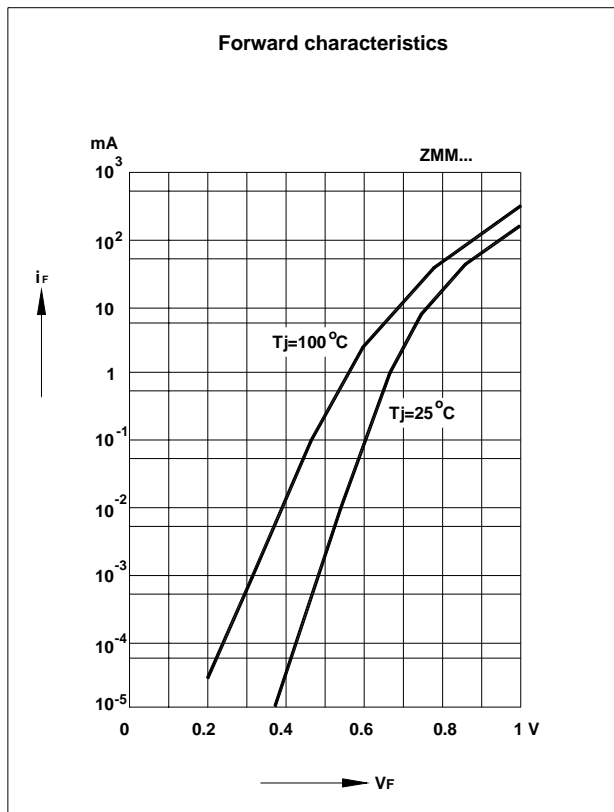
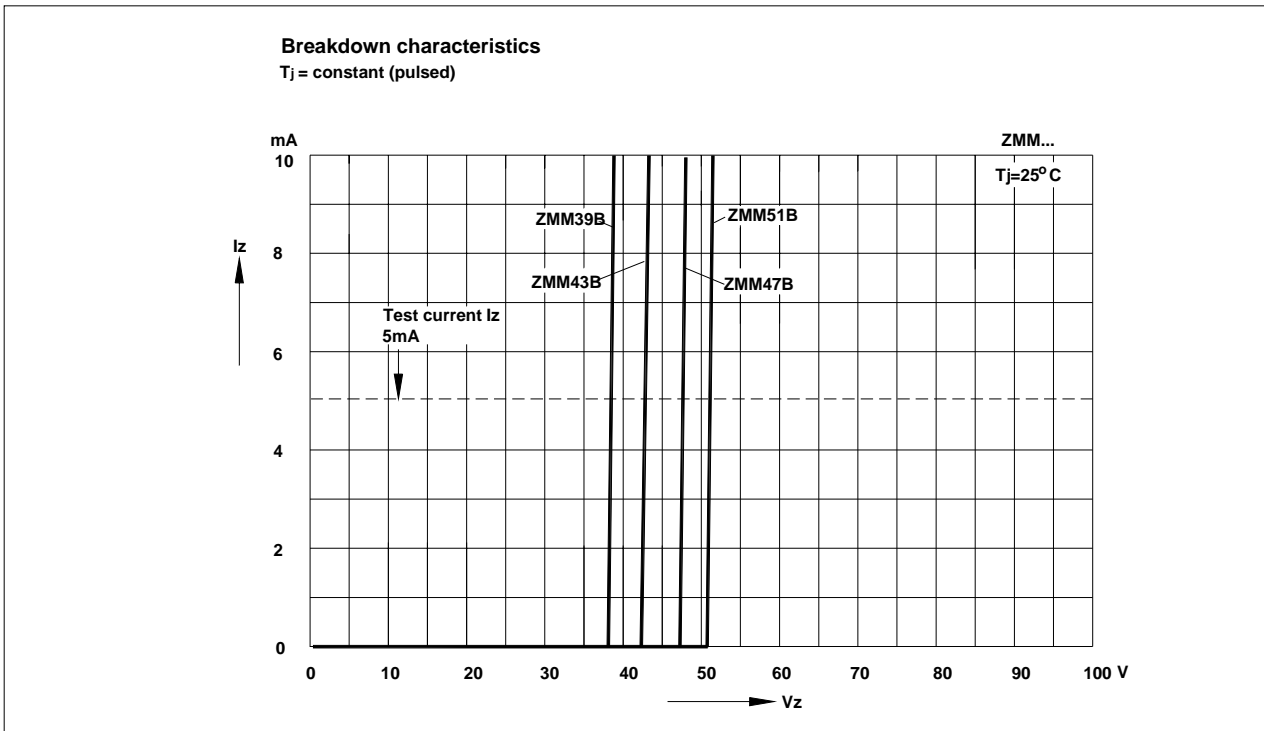


Breakdown characteristics
T_j = constant (pulsed)



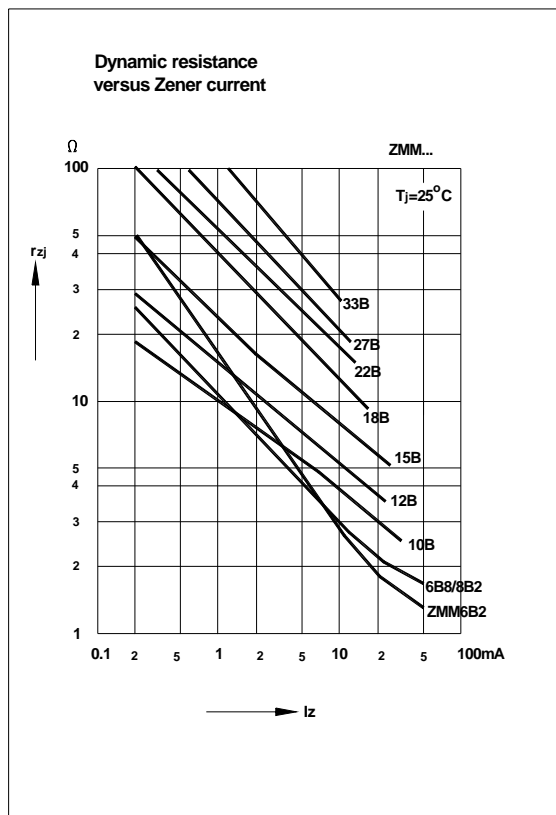
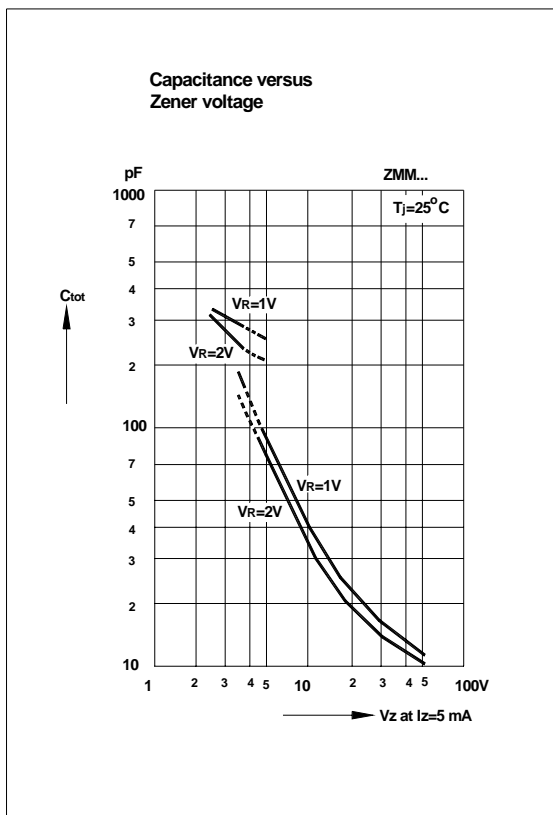
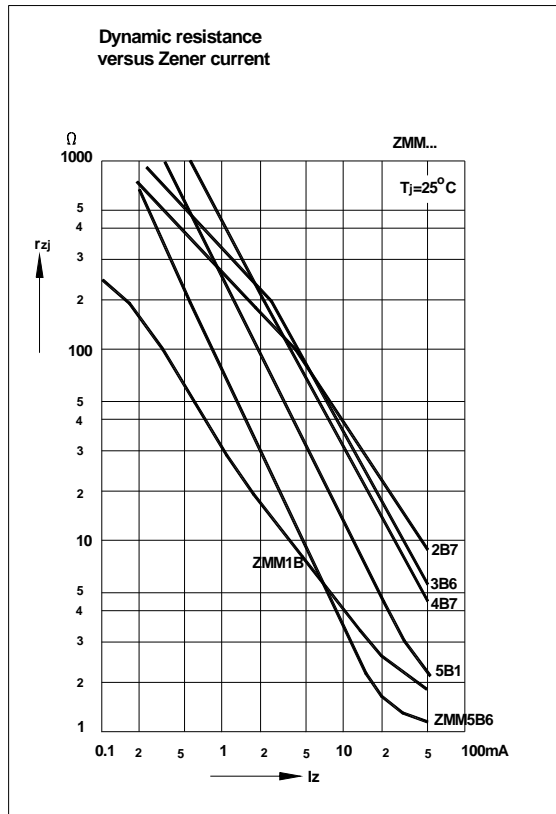
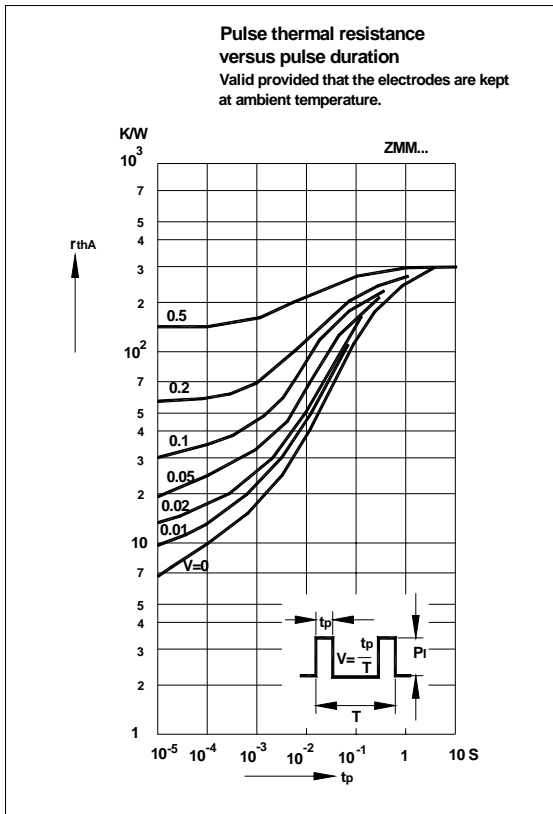


ZMM1B...ZMM200B



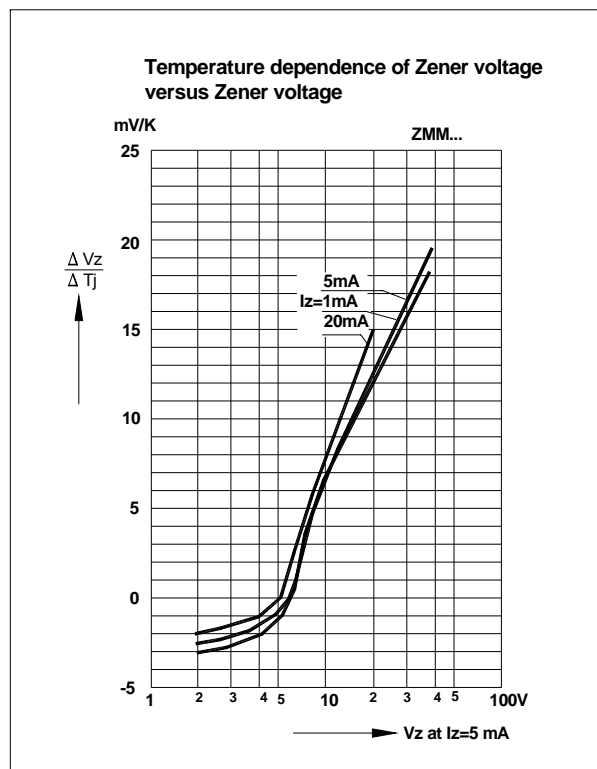
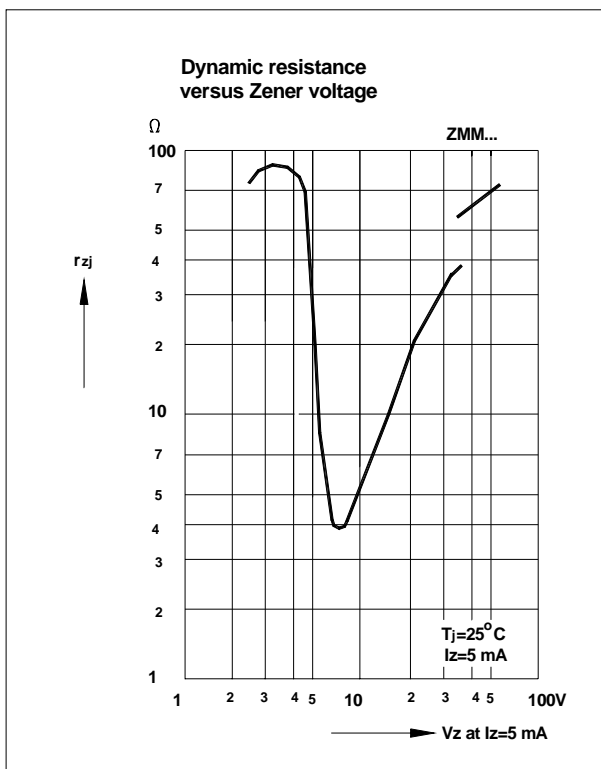
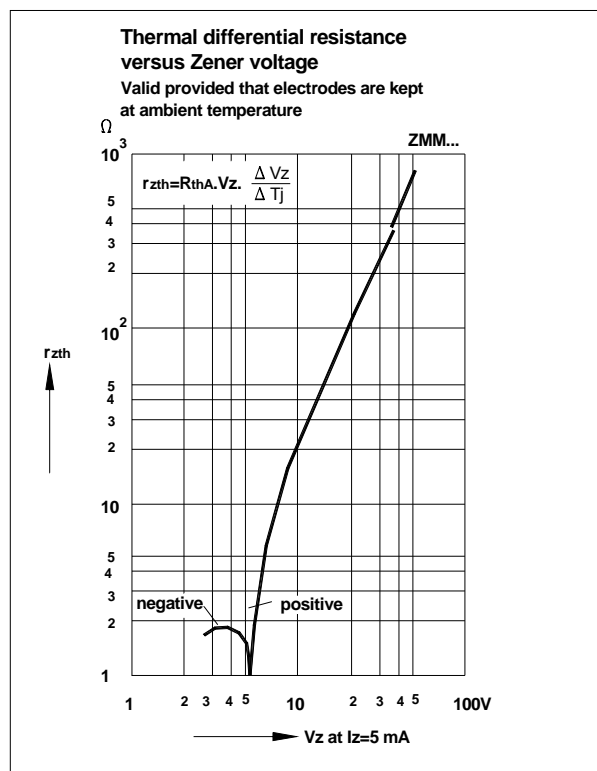
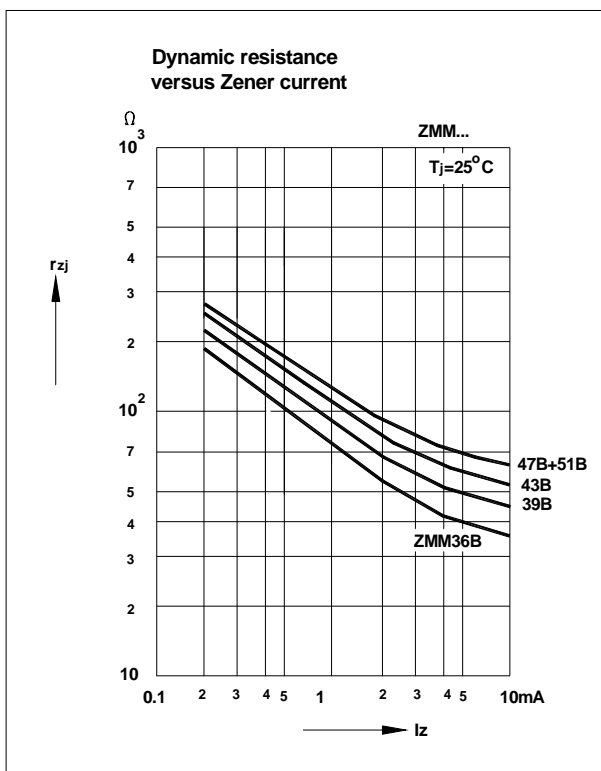


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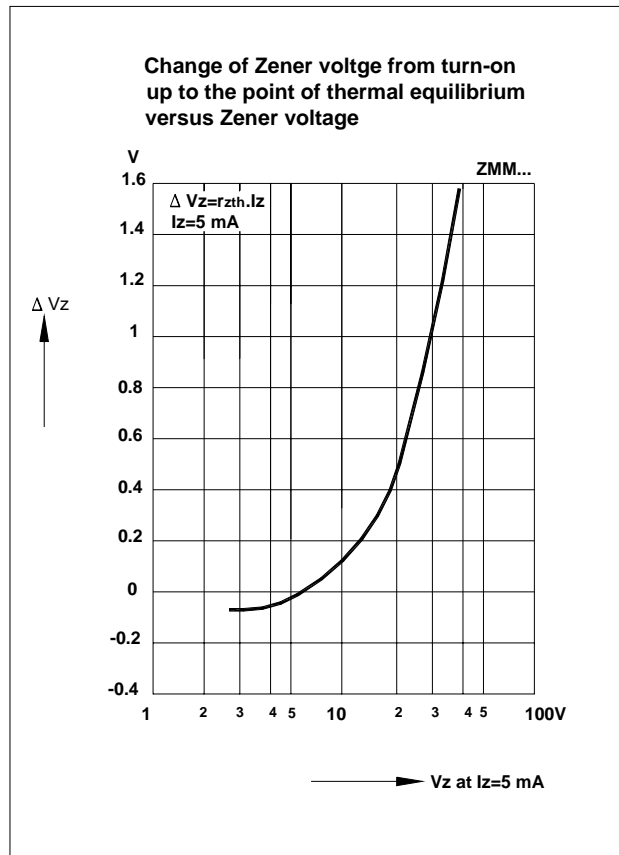
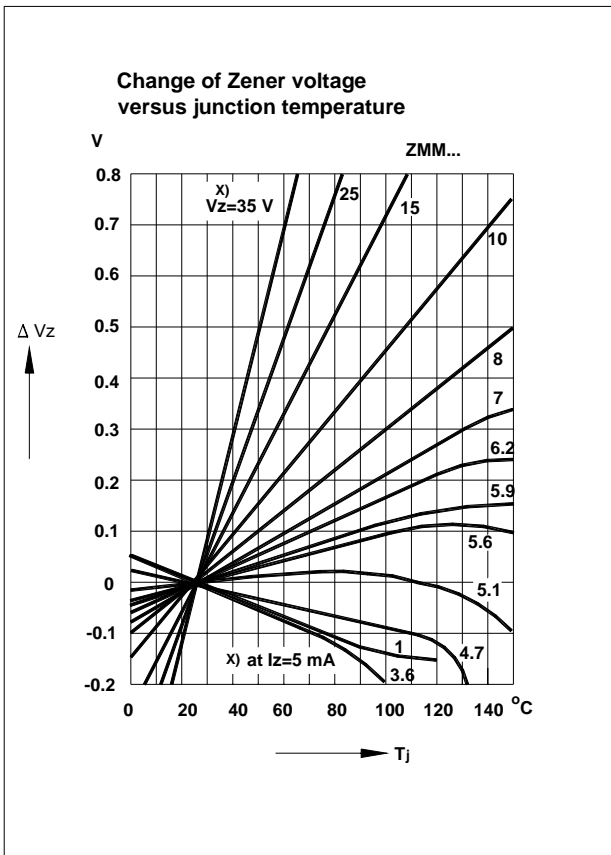
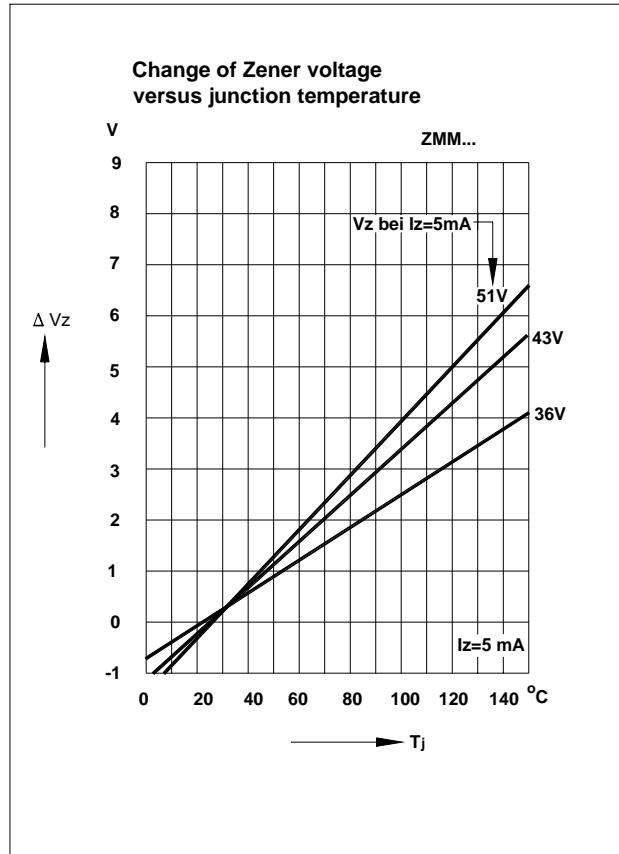
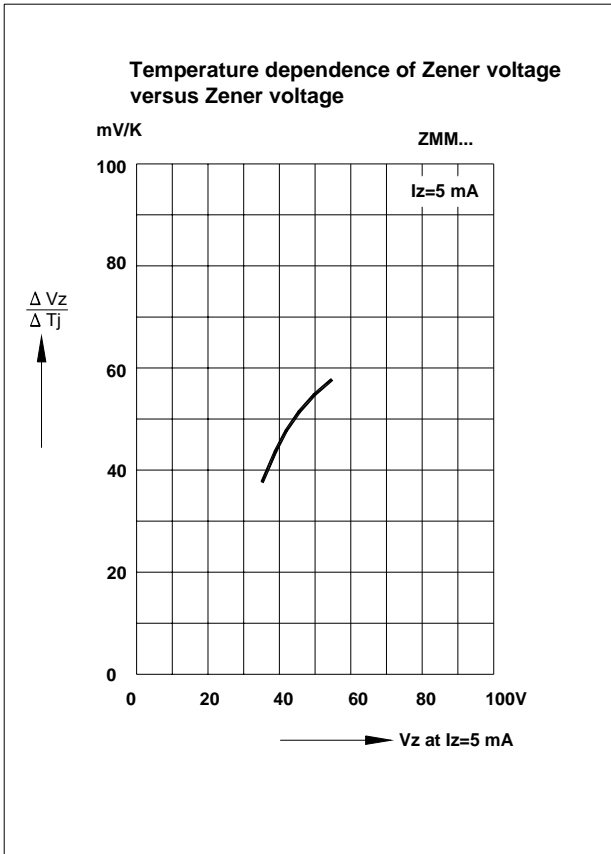


ZMM1B...ZMM200B





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

