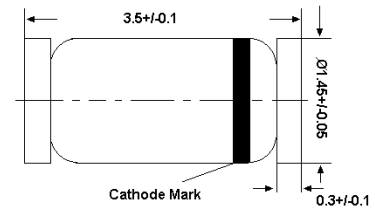


ZMM55-C Series

Silicon Epitaxial Planar Zener Diodes

in MiniMELF case especially for automatic insertion.
 The Zener voltages are graded according to the international E24 standard. Smaller voltage tolerances and higher Zener voltages are upon request.

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Glass case MiniMELF
 Dimensions in mm

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

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

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

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

ZMM55-C Series

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

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}	$T_a = 25^\circ\text{C}$	$T_a = 125^\circ\text{C}$	at V_R	
	(V)	(V)	(mA)	Max. (Ω)	Max. (Ω)	(mA)	Max. (μA)	Max. (μA)	(V)	
ZMM55-C1V0	0.75	0.7...0.8	5	8	50	1	-	-	-	-0.26...-0.23
ZMM55-C2V0	2	1.8...2.15	5	85	600	1	100	200	1	-0.09...-0.06
ZMM55-C2V2	2.2	2.08...2.33	5	85	600	1	75	160	1	-0.09...-0.06
ZMM55-C2V4	2.4	2.28...2.56	5	85	600	1	50	100	1	-0.09...-0.06
ZMM55-C2V7	2.7	2.5...2.9	5	85	600	1	10	50	1	-0.09...-0.06
ZMM55-C3V0	3	2.8...3.2	5	85	600	1	4	40	1	-0.08...-0.05
ZMM55-C3V3	3.3	3.1...3.5	5	85	600	1	2	40	1	-0.08...-0.05
ZMM55-C3V6	3.6	3.4...3.8	5	85	600	1	2	40	1	-0.08...-0.05
ZMM55-C3V9	3.9	3.7...4.1	5	85	600	1	2	40	1	-0.08...-0.05
ZMM55-C4V3	4.3	4...4.6	5	75	600	1	1	20	1	-0.06...-0.03
ZMM55-C4V7	4.7	4.4...5	5	60	600	1	0.5	10	1	-0.05...+0.02
ZMM55-C5V1	5.1	4.8...5.4	5	35	550	1	0.1	2	1	-0.02...+0.02
ZMM55-C5V6	5.6	5.2...6	5	25	450	1	0.1	2	1	-0.05...+0.05
ZMM55-C6V2	6.2	5.8...6.6	5	10	200	1	0.1	2	2	0.03...0.06
ZMM55-C6V8	6.8	6.4...7.2	5	8	150	1	0.1	2	3	0.03...0.07
ZMM55-C7V5	7.5	7...7.9	5	7	50	1	0.1	2	5	0.03...0.07
ZMM55-C8V2	8.2	7.7...8.7	5	7	50	1	0.1	2	6.2	0.03...0.08
ZMM55-C9V1	9.1	8.5...9.6	5	10	50	1	0.1	2	6.8	0.03...0.09
ZMM55-C10	10	9.4...10.6	5	15	70	1	0.1	2	7.5	0.03...0.1
ZMM55-C11	11	10.4...11.6	5	20	70	1	0.1	2	8.2	0.03...0.11
ZMM55-C12	12	11.4...12.7	5	20	90	1	0.1	2	9.1	0.03...0.11
ZMM55-C13	13	12.4...14.1	5	26	110	1	0.1	2	10	0.03...0.11
ZMM55-C15	15	13.8...15.6	5	30	110	1	0.1	2	11	0.03...0.11
ZMM55-C16	16	15.3...17.1	5	40	170	1	0.1	2	12	0.03...0.11
ZMM55-C18	18	16.8...19.1	5	50	170	1	0.1	2	13	0.03...0.11
ZMM55-C20	20	18.8...21.2	5	55	220	1	0.1	2	15	0.03...0.11
ZMM55-C22	22	20.8...23.3	5	55	220	1	0.1	2	16	0.04...0.12
ZMM55-C24	24	22.8...25.6	5	80	220	1	0.1	2	18	0.04...0.12
ZMM55-C27	27	25.1...28.9	5	80	220	1	0.1	2	20	0.04...0.12
ZMM55-C30	30	28...32	5	80	220	1	0.1	2	22	0.04...0.12
ZMM55-C33	33	31...35	5	80	220	1	0.1	2	24	0.04...0.12
ZMM55-C36	36	34...38	5	80	220	1	0.1	2	27	0.04...0.12
ZMM55-C39	39	37...41	2.5	90	500	0.5	0.1	5	30	0.04...0.12
ZMM55-C43	43	40...46	2.5	90	500	0.5	0.1	5	33	0.04...0.12
ZMM55-C47	47	44...50	2.5	110	600	0.5	0.1	5	36	0.04...0.12
ZMM55-C51	51	48...54	2.5	125	700	0.5	0.1	10	39	0.04...0.12
ZMM55-C56	56	52...60	2.5	135	700	0.5	0.1	10	43	0.04...0.12
ZMM55-C62	62	58...66	2.5	150	1000	0.5	0.1	10	47	0.04...0.12
ZMM55-C68	68	64...72	2.5	200	1000	0.5	0.1	10	51	0.04...0.12
ZMM55-C75	75	70...79	2.5	250	1000	0.5	0.1	10	56	0.04...0.12

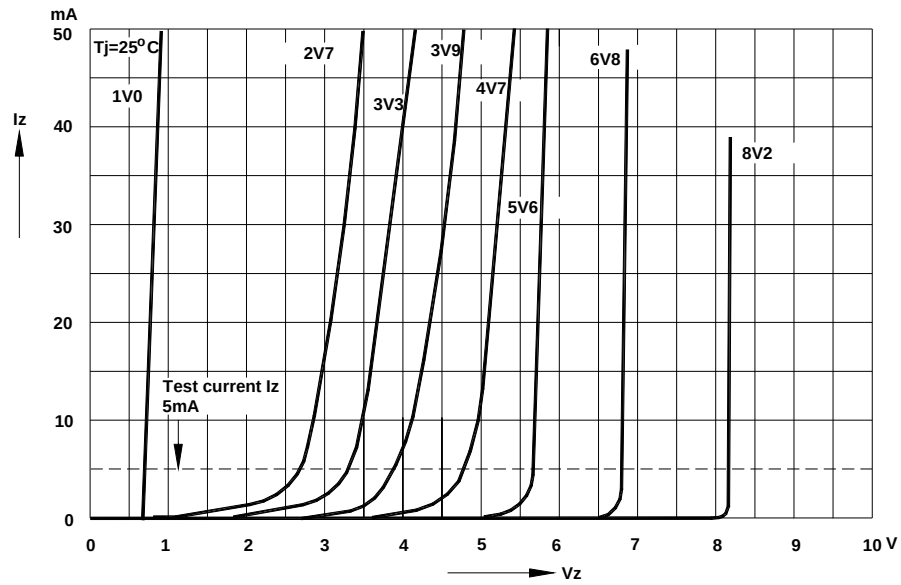
¹⁾ Tested with pulses $t_p = 20\text{ ms}$.

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.

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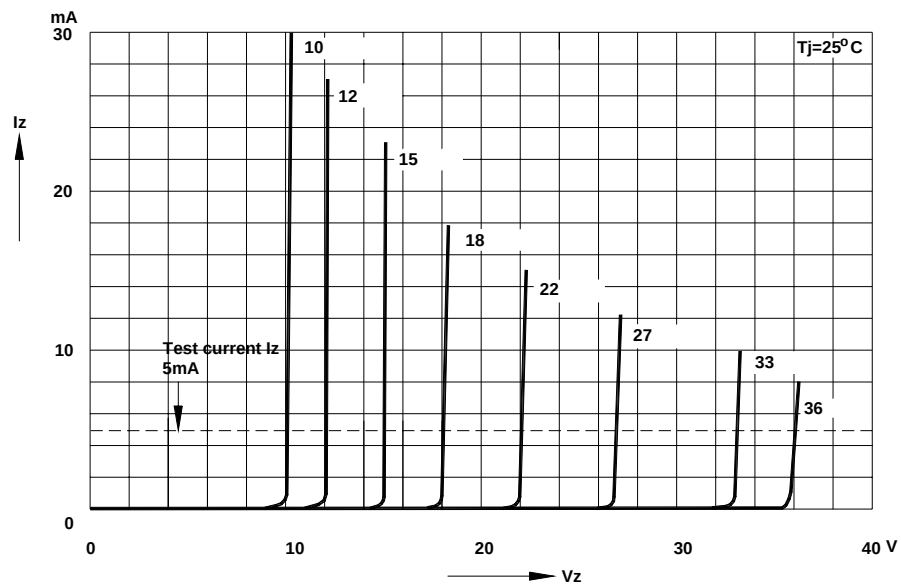
Breakdown characteristics

$T_j = \text{constant (pulsed)}$



Breakdown characteristics

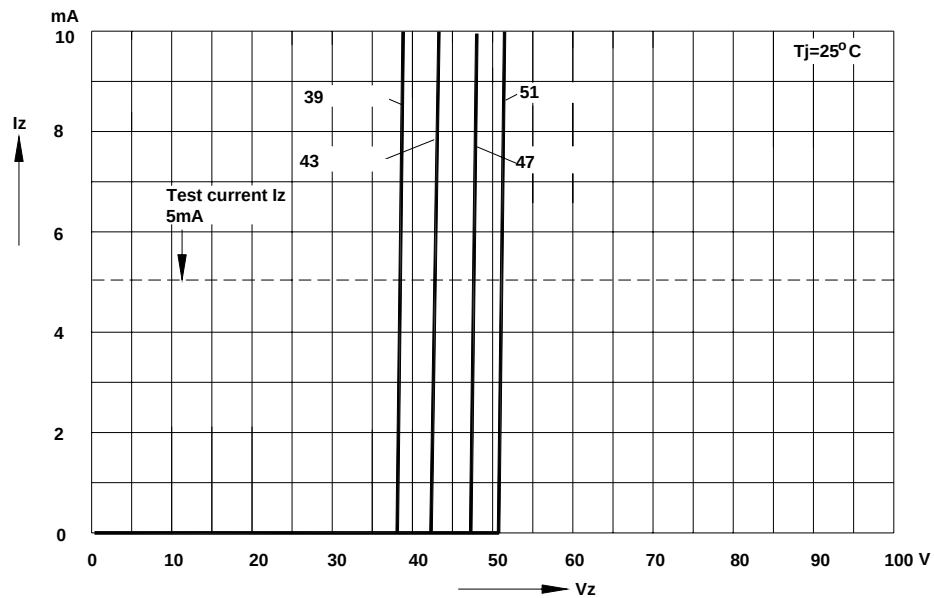
$T_j = \text{constant (pulsed)}$



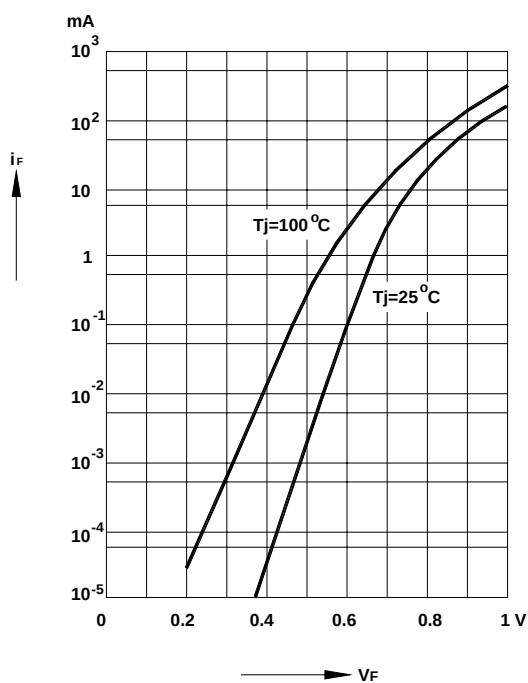
ZMM55-C Series

Breakdown characteristics

$T_J = \text{constant (pulsed)}$

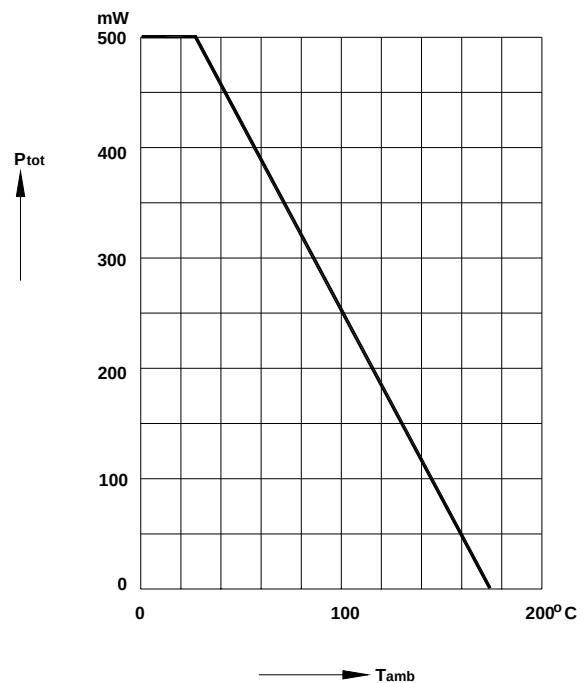


Forward characteristics



Admissible power dissipation versus ambient temperature

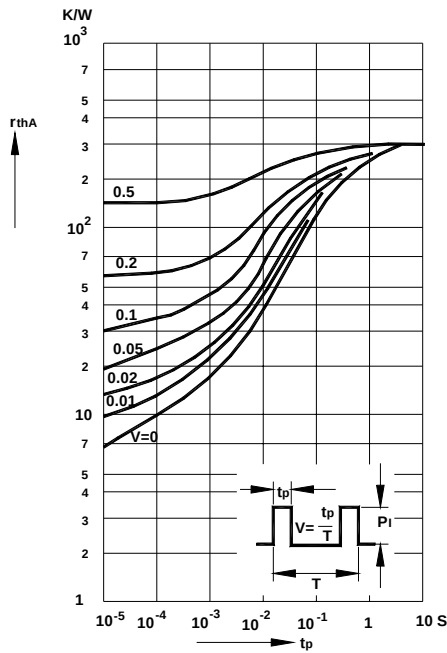
Valid provided that electrodes are kept at ambient temperature.



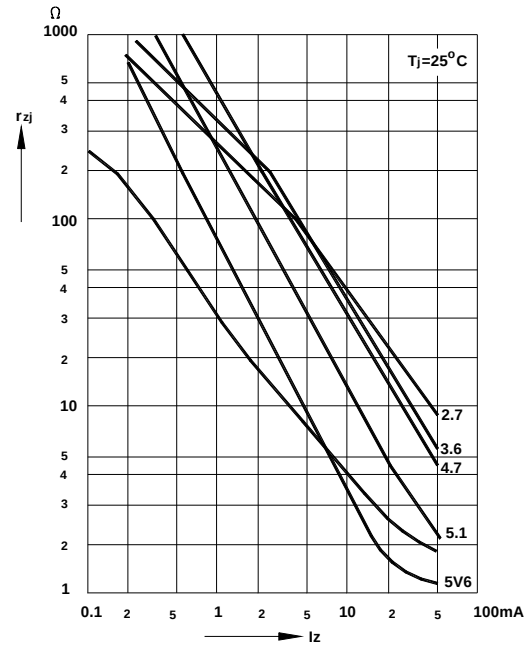
ZMM55-C Series

**Pulse thermal resistance
versus pulse duration**

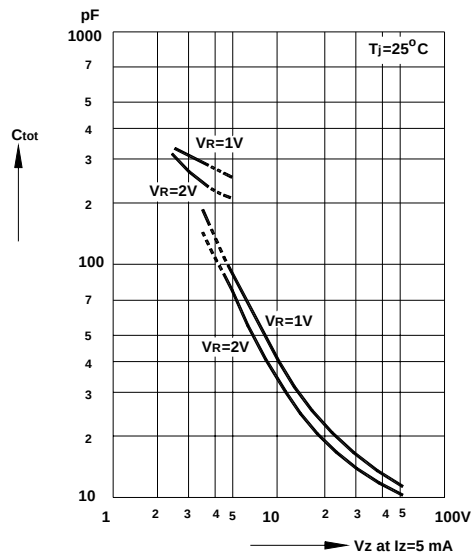
Valid provided that the electrodes are kept
at ambient temperature.



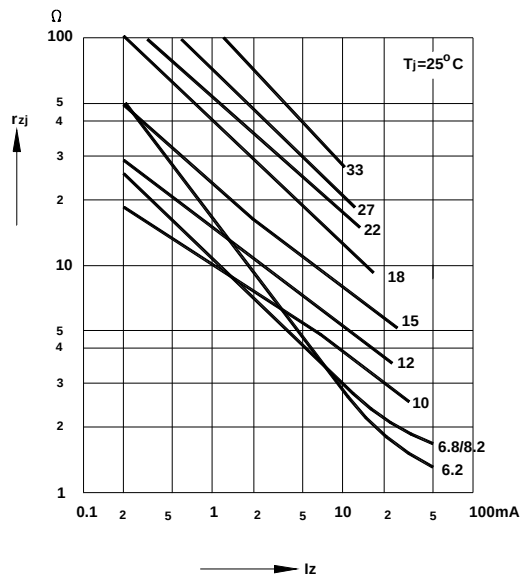
**Dynamic resistance
versus Zener current**



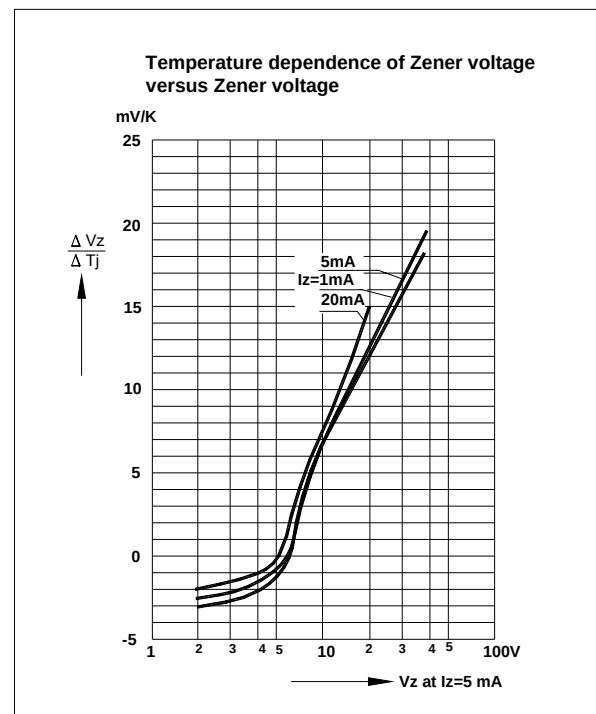
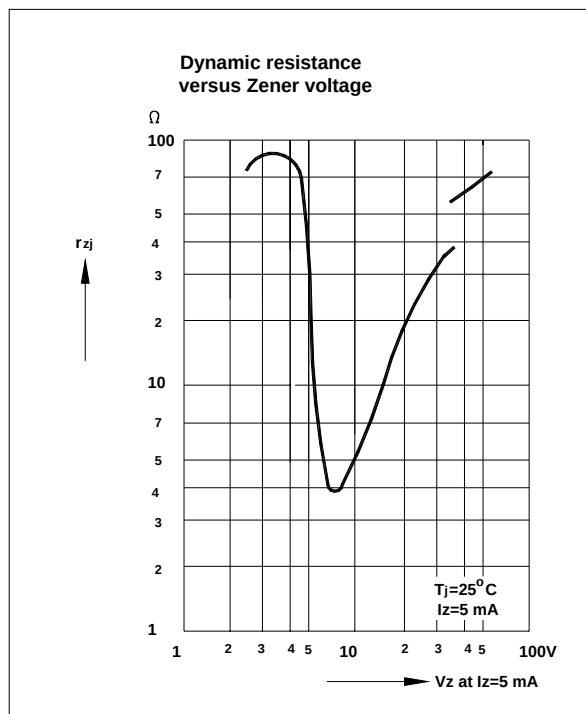
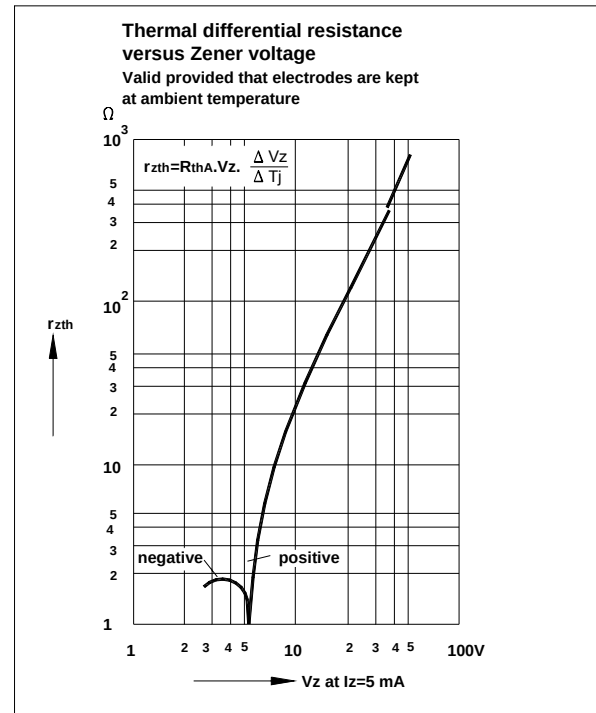
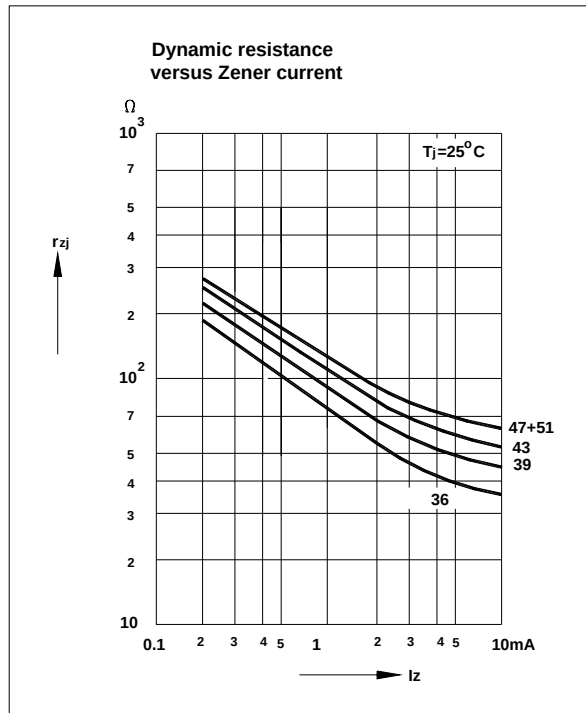
**Capacitance versus
Zener voltage**



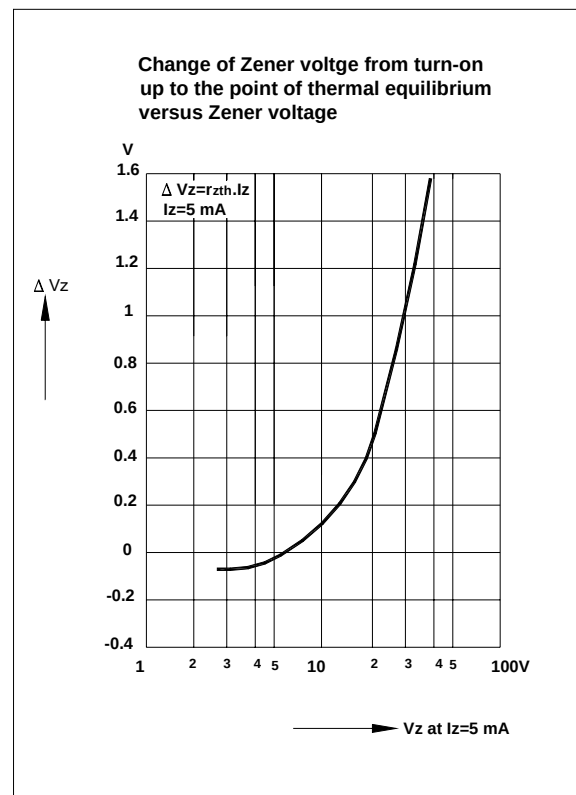
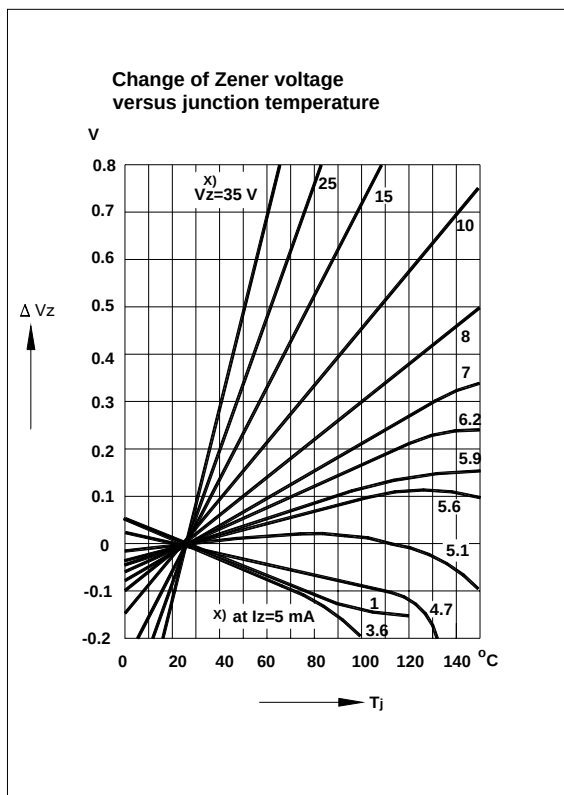
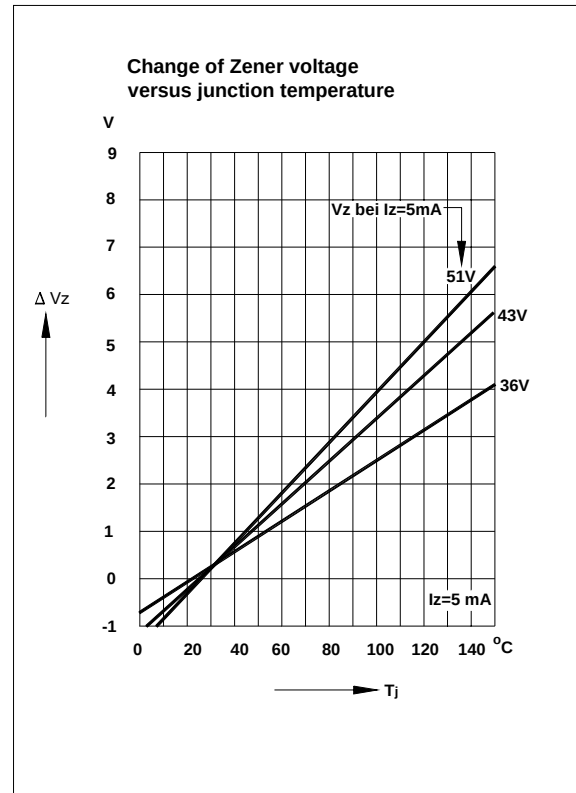
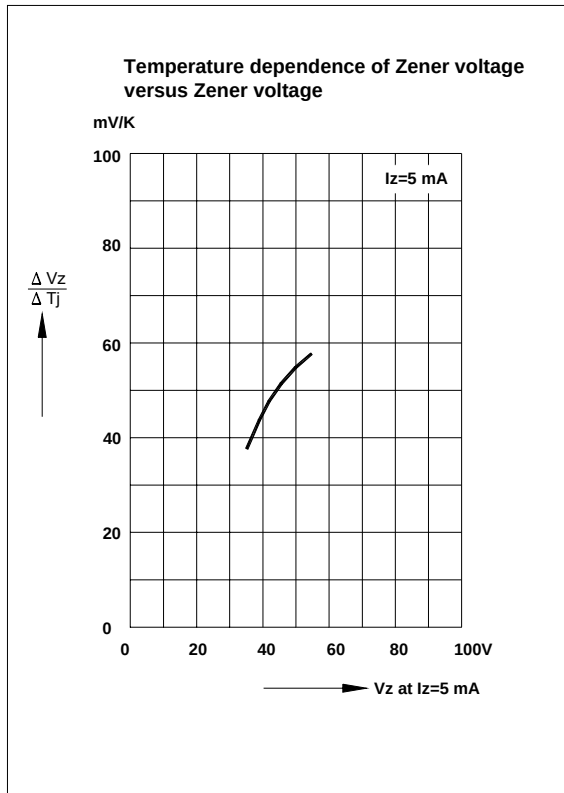
**Dynamic resistance
versus Zener current**



ZMM55-C Series



ZMM55-C Series



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