

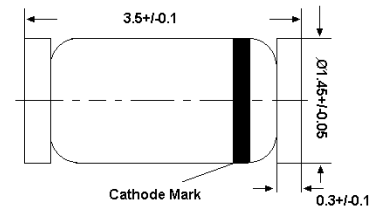


Silicon Epitaxial Planar Zener Diodes

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.

LL-34



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			



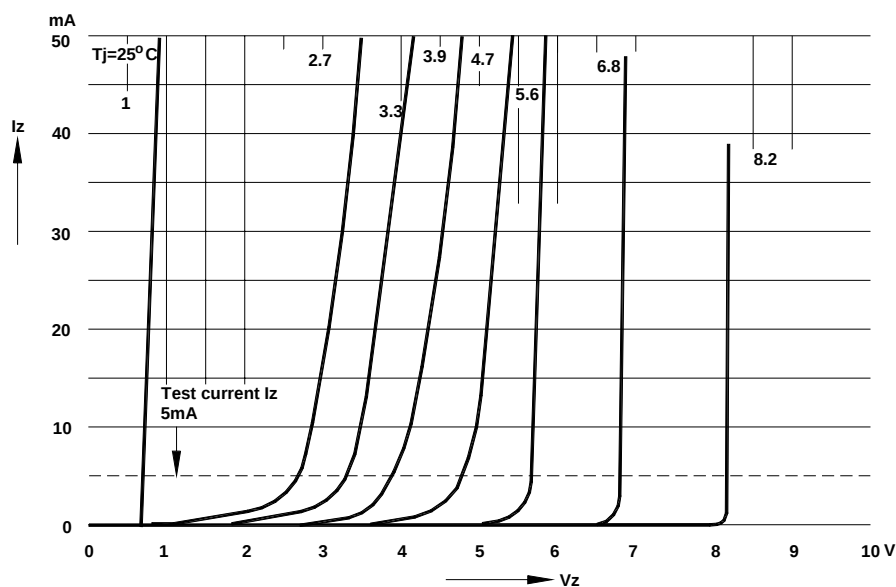
Characteristics at $T_a = 25^\circ\text{C}$

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)	
ZMM5230B	4.7	4.4...5	5	60	600	1	0.5	10	1	-0.05...+0.02

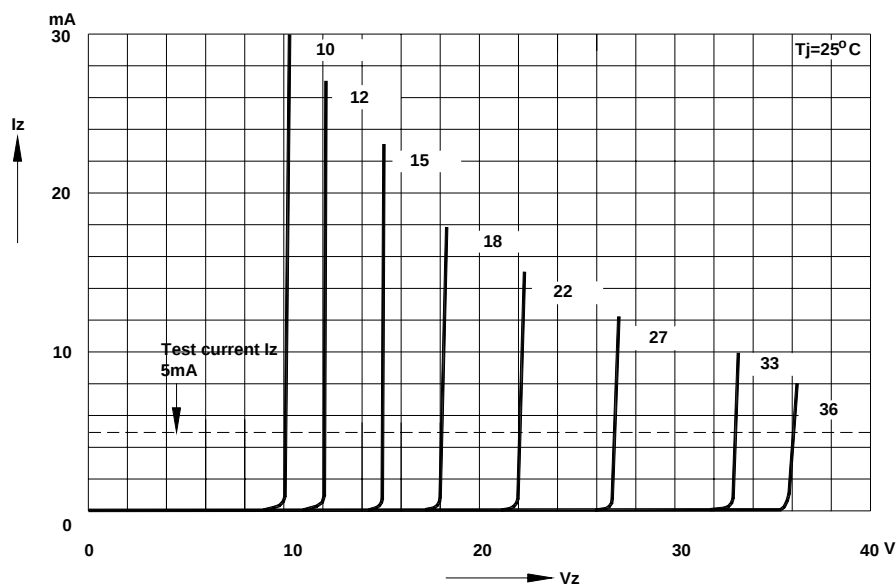
¹⁾ Tested with pulses $t_p = 20\text{ ms}$.

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.

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



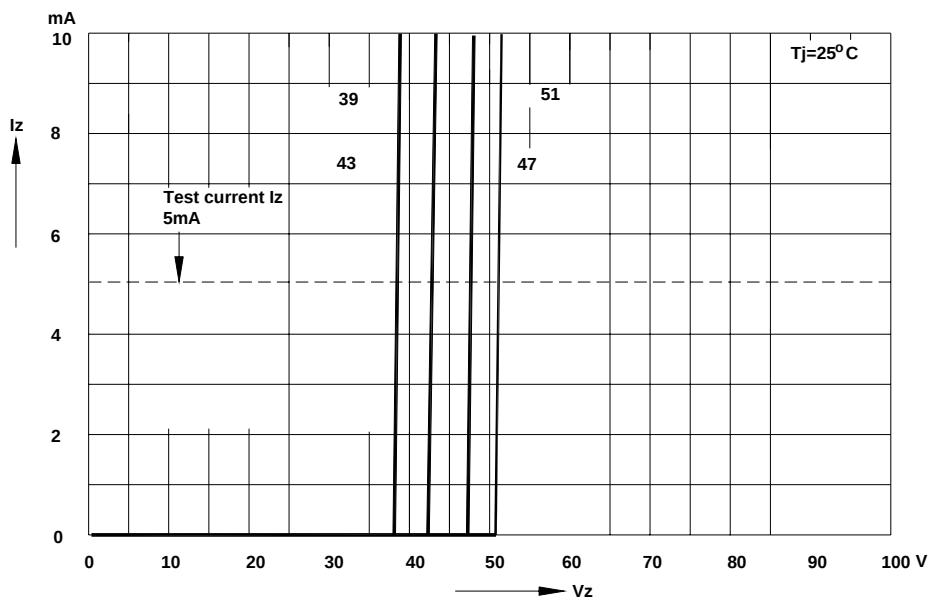
Breakdown characteristics
 $T_j = \text{constant (pulsed)}$



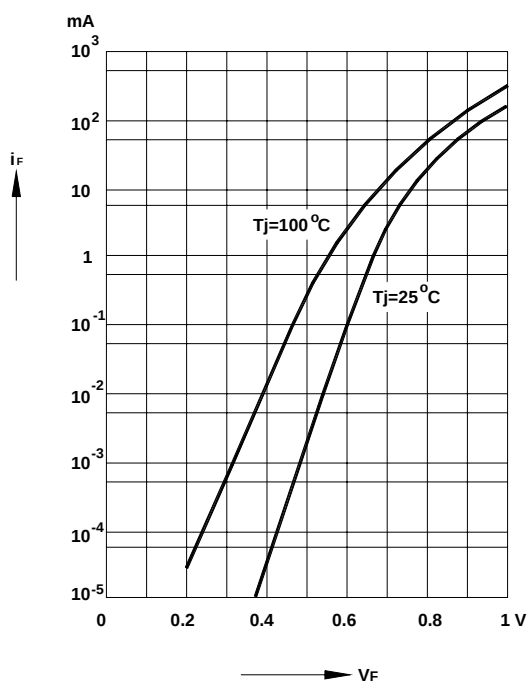


Breakdown characteristics

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

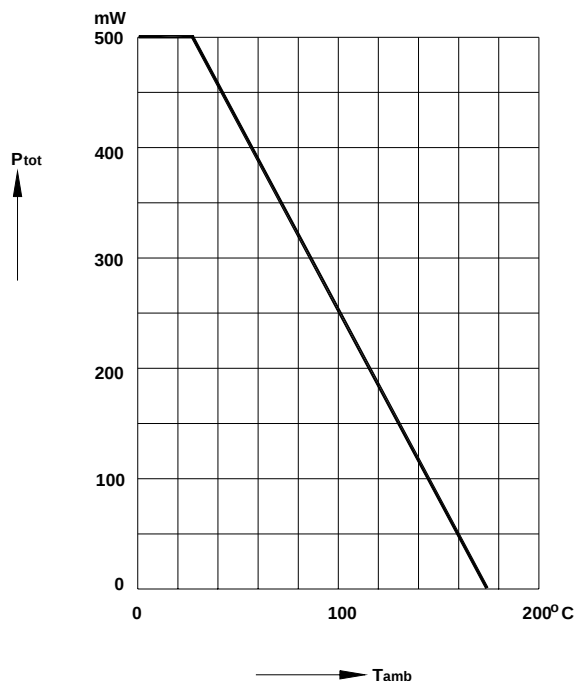


Forward characteristics



Admissible power dissipation versus ambient temperature

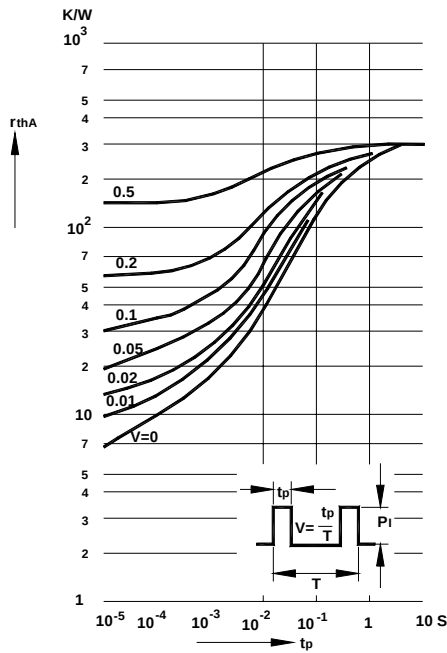
Valid provided that electrodes are kept at ambient temperature.



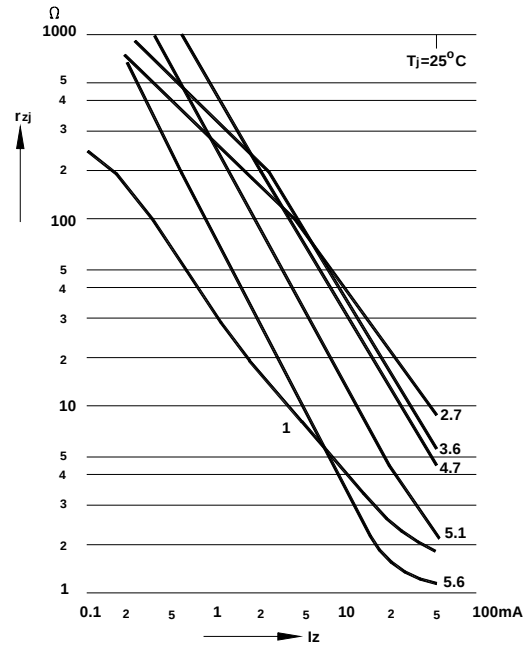


**Pulse thermal resistance
versus pulse duration**

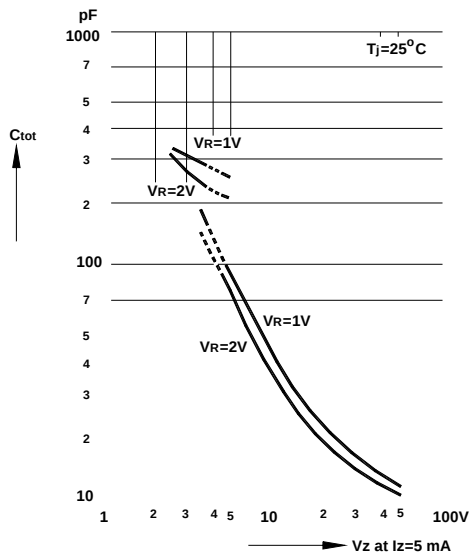
Valid provided that the electrodes are kept
at ambient temperature.



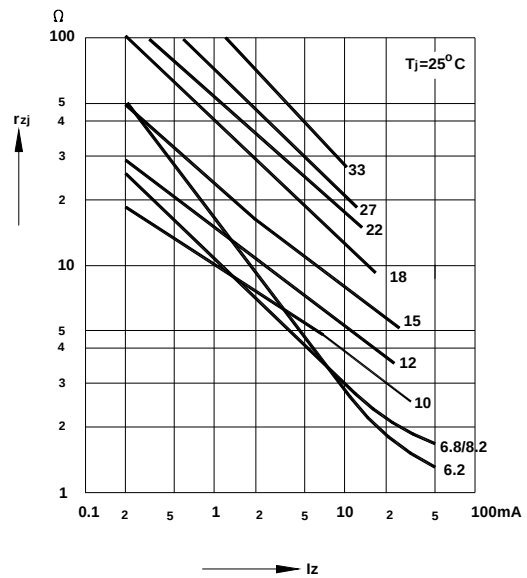
**Dynamic resistance
versus Zener current**



**Capacitance versus
Zener voltage**

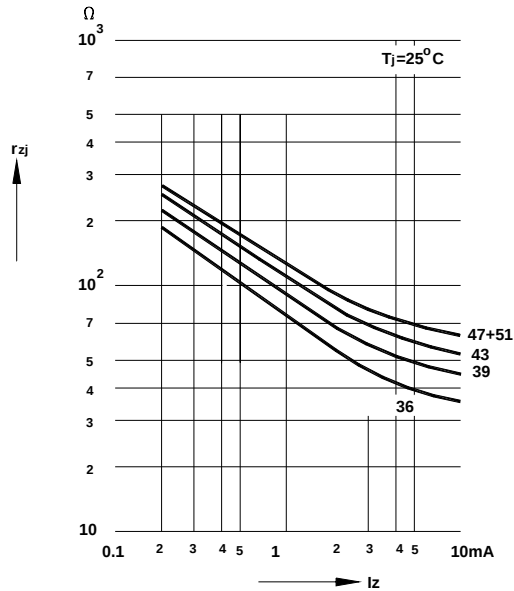


**Dynamic resistance
versus Zener current**



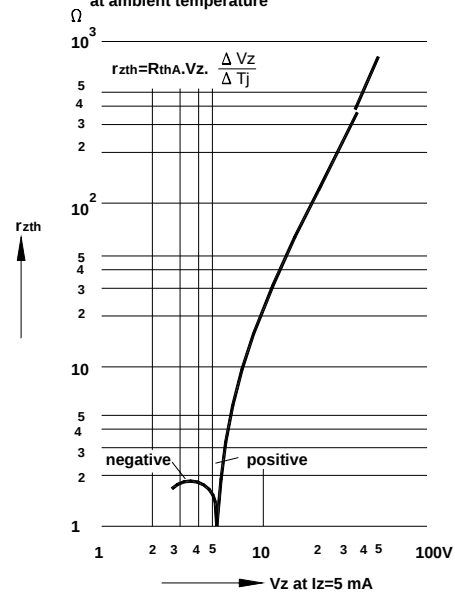


**Dynamic resistance
versus Zener current**

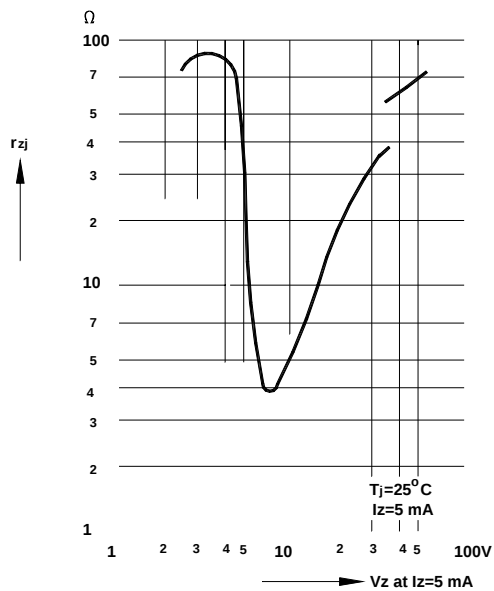


**Thermal differential resistance
versus Zener voltage**

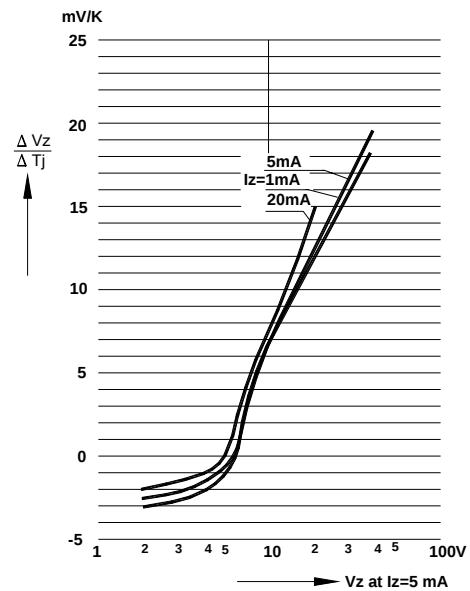
Valid provided that electrodes are kept
at ambient temperature



**Dynamic resistance
versus Zener voltage**

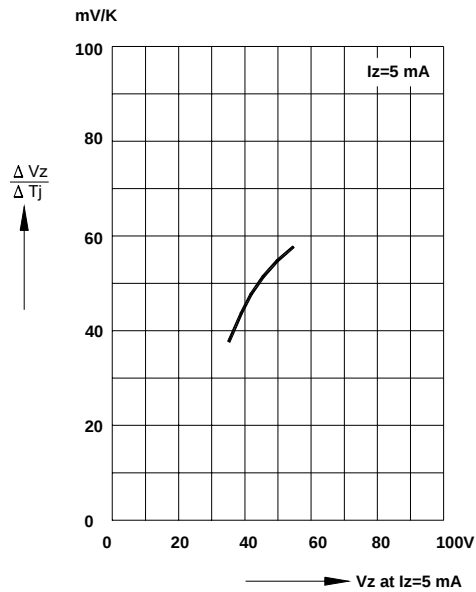


**Temperature dependence of Zener voltage
versus Zener voltage**

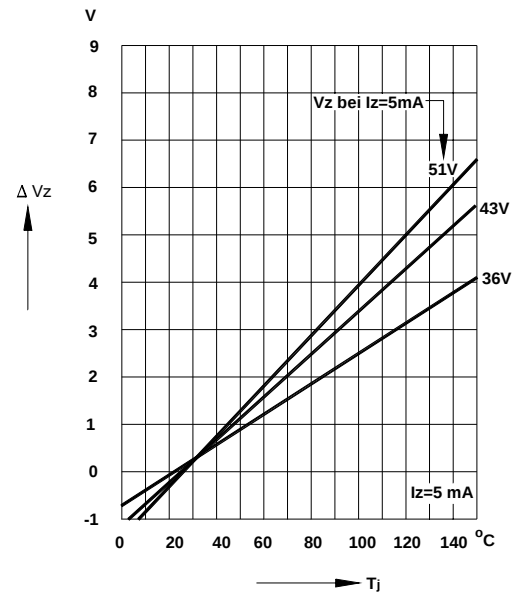




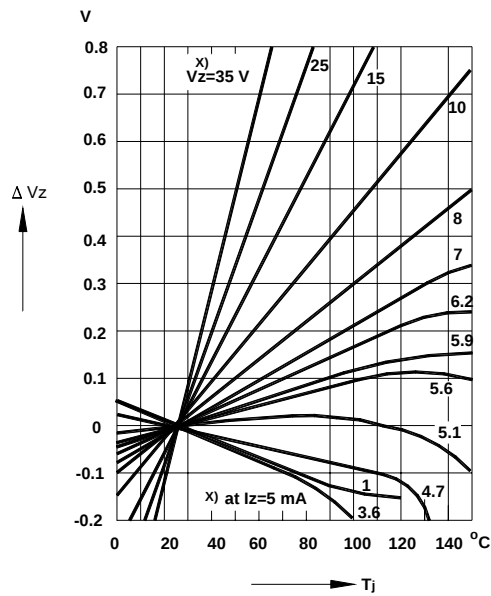
Temperature dependence of Zener voltage
versus Zener voltage



Change of Zener voltage
versus junction temperature



Change of Zener voltage
versus junction temperature



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

