



## Features

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.

These diodes are also available in DO-35 case with the type designation BZX55C...



LL-34

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

Parameter	Symbol	Value	Unit
Power Dissipation <sup>1)</sup>	$P_{\text{tot}}$	500	mW
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{stg}}$	- 55 to + 175	$^\circ\text{C}$

## Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient <sup>1)</sup>	$R_{\theta\text{JA}}$	300	$^\circ\text{C/W}$

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.



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

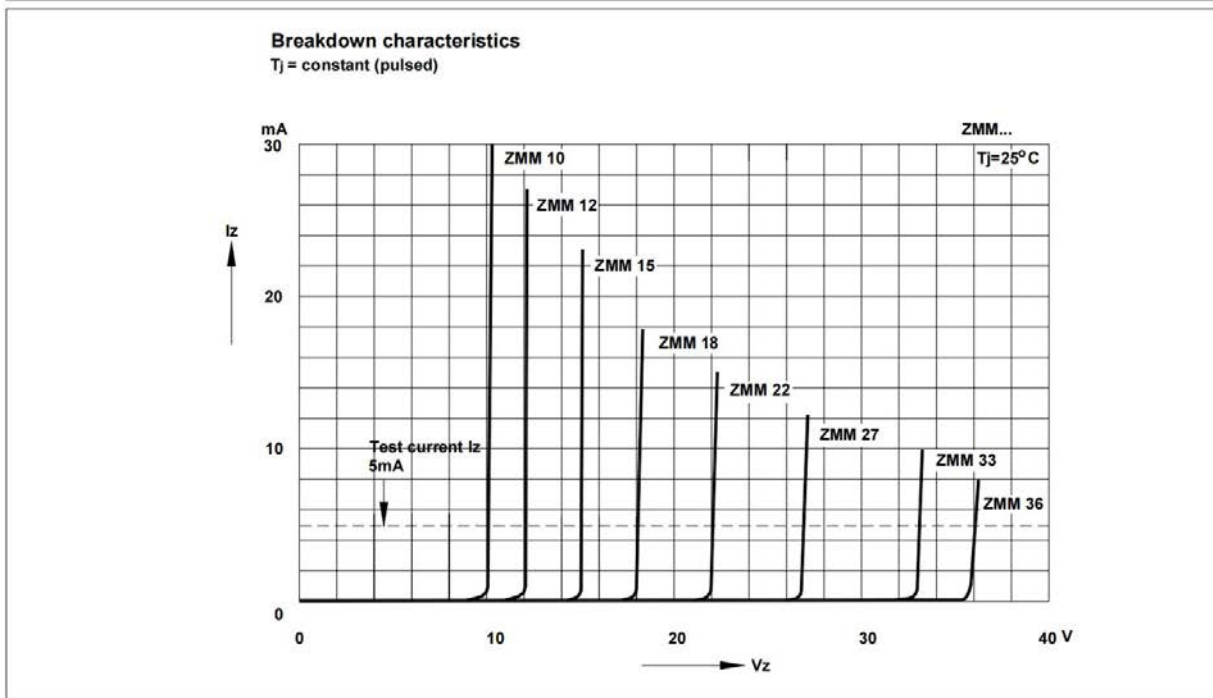
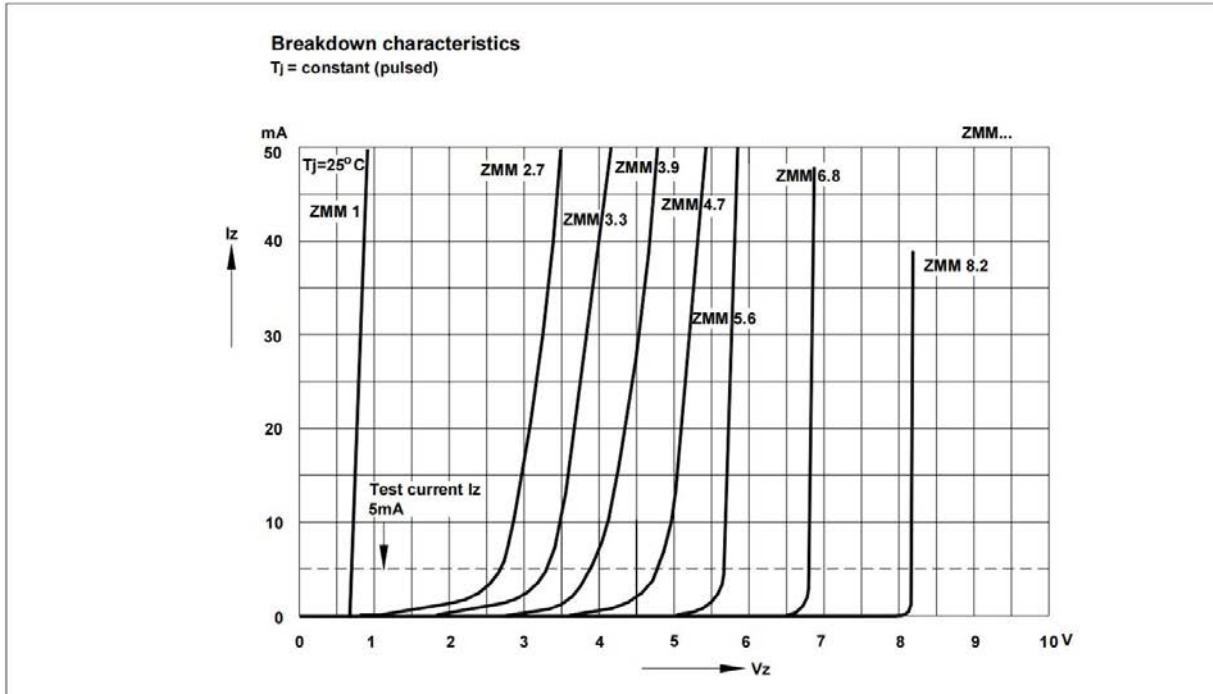
Type	Zener Voltage Range <sup>1)</sup>			Dynamic Resistance			Reverse Leakage Current			Temp. Coefficient of Zener Voltage TKvz (%/K)
	$V_{Znom}$	$V_{ZT}$	at $I_{ZT}$	$Z_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$T_a = 25\text{ }^\circ\text{C}$	$T_a = 125\text{ }^\circ\text{C}$	at $V_R$	
	(V)	(V)	(mA)	Max. ( $\Omega$ )	Max. ( $\Omega$ )	(mA)	Max. ( $\mu\text{A}$ )	Max. ( $\mu\text{A}$ )	(V)	
ZMM1 <sup>2)</sup>	0.75	0.7...0.8	5	8	50	1	-	-	-	-0.26...-0.23
ZMM2V0	2	1.8...2.15	5	85	600	1	100	200	1	-0.09...-0.06
ZMM2V2	2.2	2.08...2.33	5	85	600	1	75	160	1	-0.09...-0.06
ZMM2V4	2.4	2.28...2.56	5	85	600	1	50	100	1	-0.09...-0.06
ZMM2V7	2.7	2.5...2.9	5	85	600	1	10	50	1	-0.09...-0.06
ZMM3V0	3	2.8...3.2	5	85	600	1	4	40	1	-0.08...-0.05
ZMM3V3	3.3	3.1...3.5	5	85	600	1	2	40	1	-0.08...-0.05
ZMM3V6	3.6	3.4...3.8	5	85	600	1	2	40	1	-0.08...-0.05
ZMM3V9	3.9	3.7...4.1	5	85	600	1	2	40	1	-0.08...-0.05
ZMM4V3	4.3	4...4.6	5	75	600	1	1	20	1	-0.06...-0.03
ZMM4V7	4.7	4.4...5	5	60	600	1	0.5	10	1	-0.05...+0.02
ZMM5V1	5.1	4.8...5.4	5	35	550	1	0.1	2	1	-0.02...+0.02
ZMM5V6	5.6	5.2...6	5	25	450	1	0.1	2	1	-0.05...+0.05
ZMM6V2	6.2	5.8...6.6	5	10	200	1	0.1	2	2	0.03...0.06
ZMM6V8	6.8	6.4...7.2	5	8	150	1	0.1	2	3	0.03...0.07
ZMM7V5	7.5	7...7.9	5	7	50	1	0.1	2	5	0.03...0.07
ZMM8V2	8.2	7.7...8.7	5	7	50	1	0.1	2	6.2	0.03...0.08
ZMM9V1	9.1	8.5...9.6	5	10	50	1	0.1	2	6.8	0.03...0.09
ZMM10V	10	9.4...10.6	5	15	70	1	0.1	2	7.5	0.03...0.1
ZMM11V	11	10.4...11.6	5	20	70	1	0.1	2	8.2	0.03...0.11
ZMM12V	12	11.4...12.7	5	20	90	1	0.1	2	9.1	0.03...0.11
ZMM13V	13	12.4...14.1	5	26	110	1	0.1	2	10	0.03...0.11
ZMM15V	15	13.8...15.6	5	30	110	1	0.1	2	11	0.03...0.11
ZMM16V	16	15.3...17.1	5	40	170	1	0.1	2	12	0.03...0.11
ZMM18V	18	16.8...19.1	5	50	170	1	0.1	2	13	0.03...0.11
ZMM20V	20	18.8...21.2	5	55	220	1	0.1	2	15	0.03...0.11
ZMM22V	22	20.8...23.3	5	55	220	1	0.1	2	16	0.04...0.12
ZMM24V	24	22.8...25.6	5	80	220	1	0.1	2	18	0.04...0.12
ZMM27V	27	25.1...28.9	5	80	220	1	0.1	2	20	0.04...0.12
ZMM30V	30	28...32	5	80	220	1	0.1	2	22	0.04...0.12
ZMM33V	33	31...35	5	80	220	1	0.1	2	24	0.04...0.12
ZMM36V	36	34...38	5	80	220	1	0.1	2	27	0.04...0.12
ZMM39V	39	37...41	2.5	90	500	0.5	0.1	5	30	0.04...0.12
ZMM43V	43	40...46	2.5	90	500	0.5	0.1	5	33	0.04...0.12
ZMM47V	47	44...50	2.5	110	600	0.5	0.1	5	36	0.04...0.12
ZMM51V	51	48...54	2.5	125	700	0.5	0.1	10	39	0.04...0.12
ZMM56V	56	52...60	2.5	135	700	0.5	0.1	10	43	0.04...0.12
ZMM62V	62	58...66	2.5	150	1000	0.5	0.1	10	47	0.04...0.12
ZMM68V	68	64...72	2.5	200	1000	0.5	0.1	10	51	0.04...0.12
ZMM75V	75	70...79	2.5	250	1000	0.5	0.1	10	56	0.04...0.12

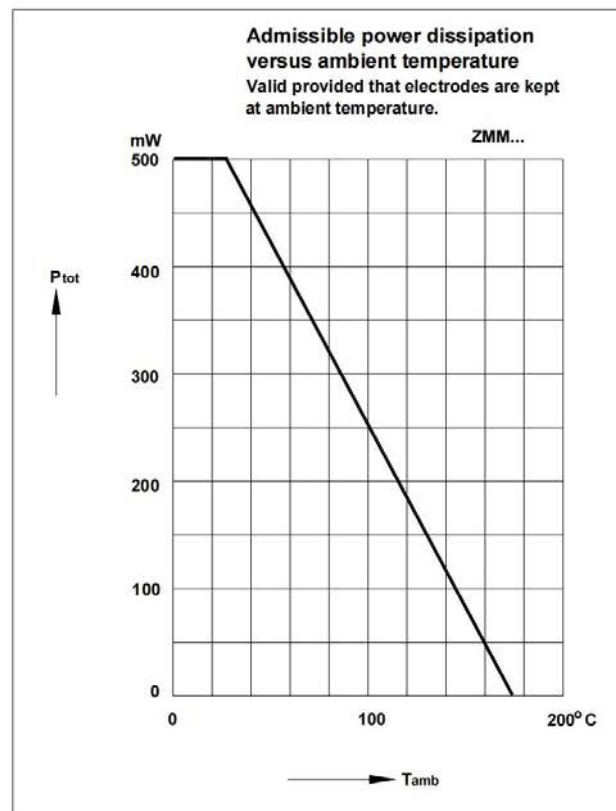
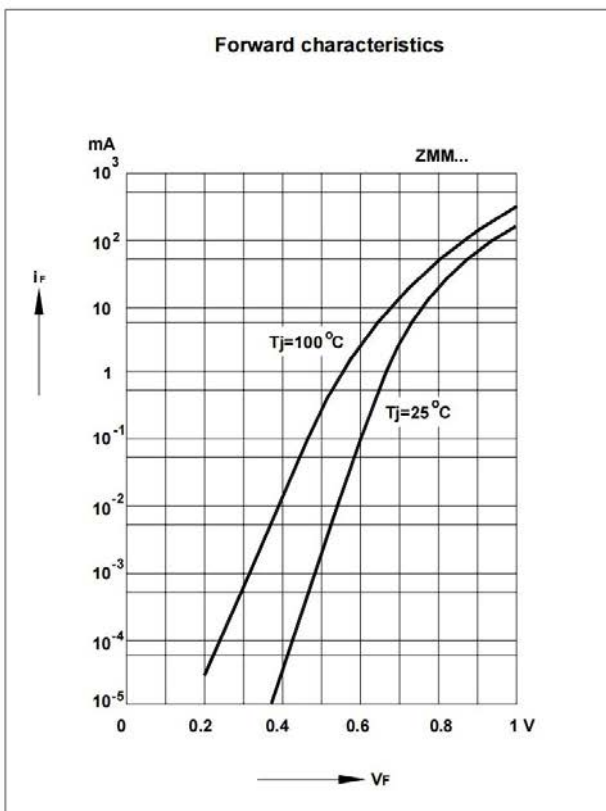
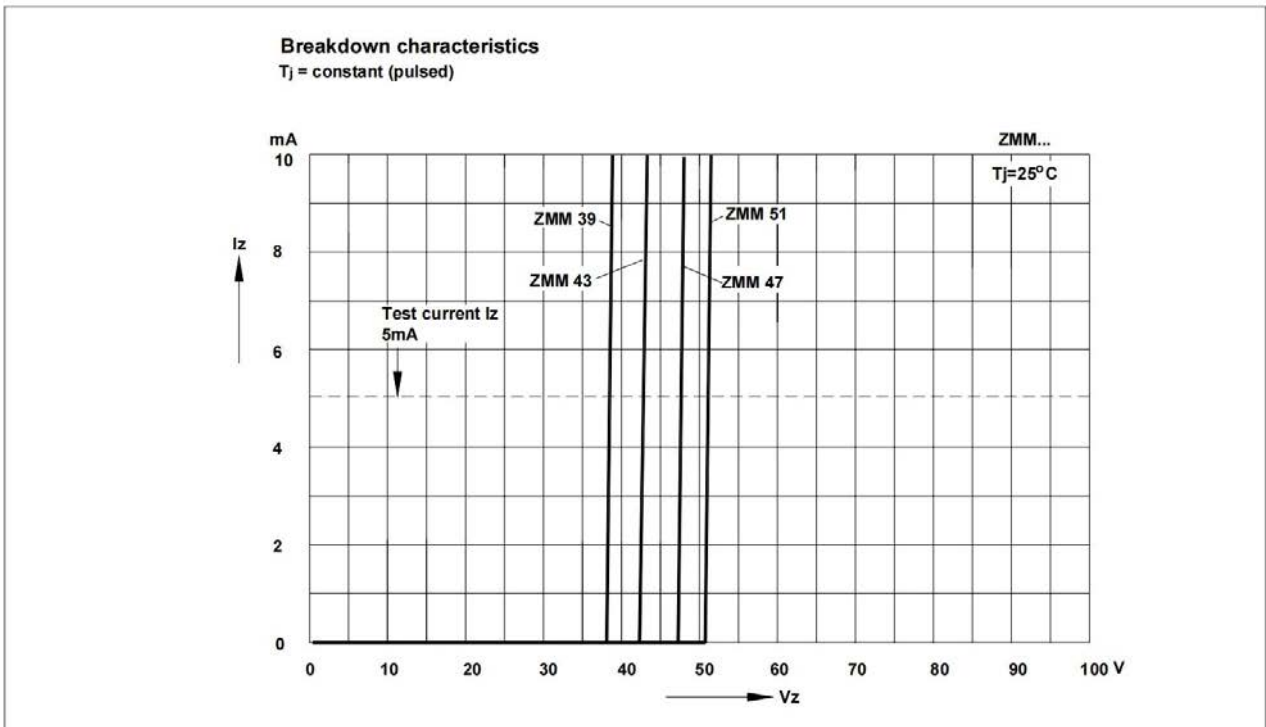
<sup>1)</sup> Tested with pulses  $t_p = 20\text{ ms}$ .

<sup>2)</sup> 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.



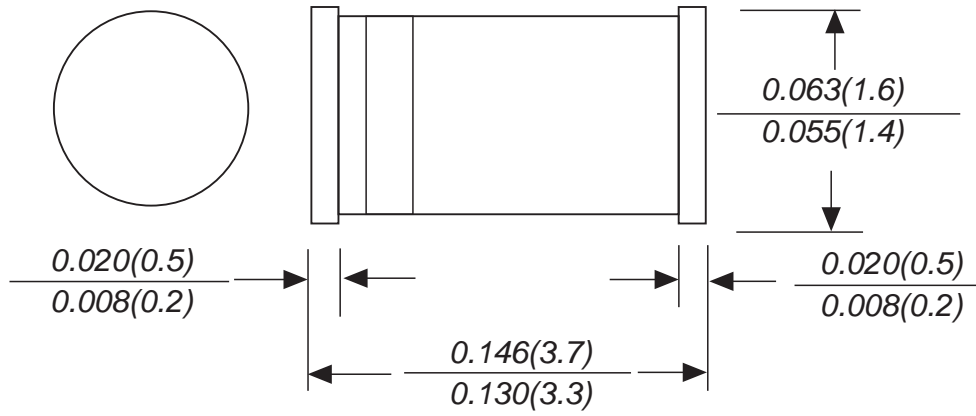
### Typical Characteristics







### LL-34 Package Information



*Dimensions in inches and (millimeters)*



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