

ZMM1BPF...ZMM75BPF

Silicon Epitaxial Planar Zener Diodes

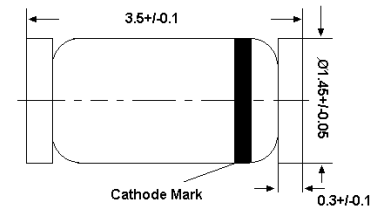
MiniMELF case especially for automatic insertion.

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

Features

- Lead Free

LL-34



Glass case MiniMELF
Dimensions in mm

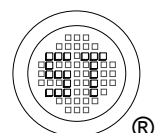
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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

Thermal Characteristics

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

¹⁾ Valid provided that electrodes are kept at ambient temperature.



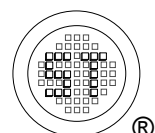
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Characteristics at $T_a = 25^\circ\text{C}$ (V_F max : 1 V at $I_F = 100$ mA)

Type	Zener Voltage Range ¹⁾			Dynamic Resistance			Reverse Leakage Current			Temp coefficient of Zener Voltage TKvz (%/K)
	V_{Znom}	V_{ZT}	at I_{ZT}	Z_{ZT} at I_{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)	
ZMM1BPF ²⁾	0.75	0.73...0.77	5	8	50	1	-	-	-	-0.26...-0.23
ZMM2B0PF	2	1.96...2.04	5	85	600	1	100	200	1	-0.09...-0.06
ZMM2B2PF	2.2	2.16...2.24	5	85	600	1	75	160	1	-0.09...-0.06
ZMM2B4PF	2.4	2.35...2.45	5	85	600	1	50	100	1	-0.09...-0.06
ZMM2B7PF	2.7	2.65...2.75	5	85	600	1	10	50	1	-0.09...-0.06
ZMM3B0PF	3	2.94...3.06	5	85	600	1	4	40	1	-0.08...-0.05
ZMM3B3PF	3.3	3.23...3.37	5	85	600	1	2	40	1	-0.08...-0.05
ZMM3B6PF	3.6	3.53...3.67	5	85	600	1	2	40	1	-0.08...-0.05
ZMM3B9PF	3.9	3.82...3.98	5	85	600	1	2	40	1	-0.08...-0.05
ZMM4B3PF	4.3	4.21...4.39	5	75	600	1	1	20	1	-0.06...-0.03
ZMM4B7PF	4.7	4.61...4.79	5	60	600	1	0.5	10	1	-0.05...+0.02
ZMM5B1PF	5.1	5.00...5.20	5	35	550	1	0.1	2	1	-0.02...+0.02
ZMM5B6PF	5.6	5.49...5.71	5	25	450	1	0.1	2	1	-0.05...+0.05
ZMM6B2PF	6.2	6.08...6.32	5	10	200	1	0.1	2	2	0.03...0.06
ZMM6B8PF	6.8	6.66...6.94	5	8	150	1	0.1	2	3	0.03...0.07
ZMM7B5PF	7.5	7.35...7.65	5	7	50	1	0.1	2	5	0.03...0.07
ZMM8B2PF	8.2	8.04...8.36	5	7	50	1	0.1	2	6.2	0.03...0.08
ZMM9B1PF	9.1	8.92...9.28	5	10	50	1	0.1	2	6.8	0.03...0.09
ZMM10BPF	10	9.80...10.20	5	15	70	1	0.1	2	7.5	0.03...0.1
ZMM11BPF	11	10.78...11.22	5	20	70	1	0.1	2	8.2	0.03...0.11
ZMM12BPF	12	11.76...12.24	5	20	90	1	0.1	2	9.1	0.03...0.11
ZMM13BPF	13	12.74...13.26	5	26	110	1	0.1	2	10	0.03...0.11
ZMM15BPF	15	14.70...15.30	5	30	110	1	0.1	2	11	0.03...0.11
ZMM16BPF	16	15.68...16.32	5	40	170	1	0.1	2	12	0.03...0.11
ZMM18BPF	18	17.64...18.36	5	50	170	1	0.1	2	13	0.03...0.11
ZMM20BPF	20	19.60...20.40	5	55	220	1	0.1	2	15	0.03...0.11
ZMM22BPF	22	21.56...22.44	5	55	220	1	0.1	2	16	0.04...0.12
ZMM24BPF	24	23.52...24.48	5	80	220	1	0.1	2	18	0.04...0.12
ZMM27BPF	27	26.46...27.54	5	80	220	1	0.1	2	20	0.04...0.12
ZMM30BPF	30	29.40...30.60	5	80	220	1	0.1	2	22	0.04...0.12
ZMM33BPF	33	32.34...33.66	5	80	220	1	0.1	2	24	0.04...0.12
ZMM36BPF	36	35.28...36.72	5	80	220	1	0.1	2	27	0.04...0.12
ZMM39BPF	39	38.22...39.78	2.5	90	500	0.5	0.1	5	30	0.04...0.12
ZMM43BPF	43	42.14...43.86	2.5	90	500	0.5	0.1	5	33	0.04...0.12
ZMM47BPF	47	46.06...47.94	2.5	110	600	0.5	0.1	5	36	0.04...0.12
ZMM51BPF	51	49.98...52.02	2.5	125	700	0.5	0.1	10	39	0.04...0.12
ZMM56BPF	56	54.88...57.12	2.5	135	700	0.5	0.1	10	43	0.04...0.12
ZMM62BPF	62	60.76...63.24	2.5	150	1000	0.5	0.1	10	47	0.04...0.12
ZMM68BPF	68	66.64...69.36	2.5	200	1000	0.5	0.1	10	51	0.04...0.12
ZMM75BPF	75	73.50...76.50	2.5	250	1000	0.5	0.1	10	56	0.04...0.12

¹⁾ Tested with pulses $t_p = 20$ ms.

²⁾ The ZMM1B 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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Electrical Characteristics Curves

Fig 1. Zener Characteristics Curve

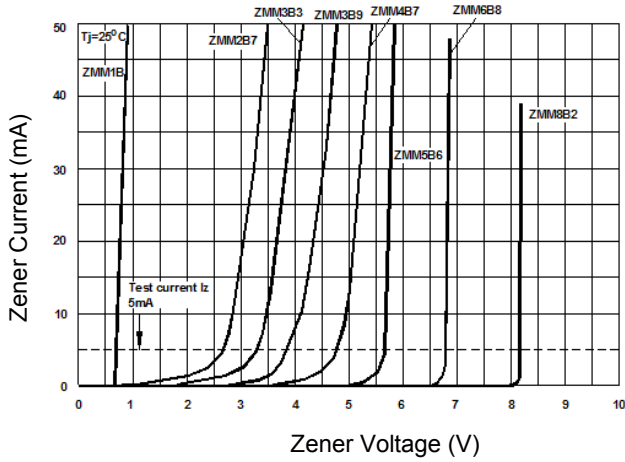


Fig 2. Zener Characteristics Curve

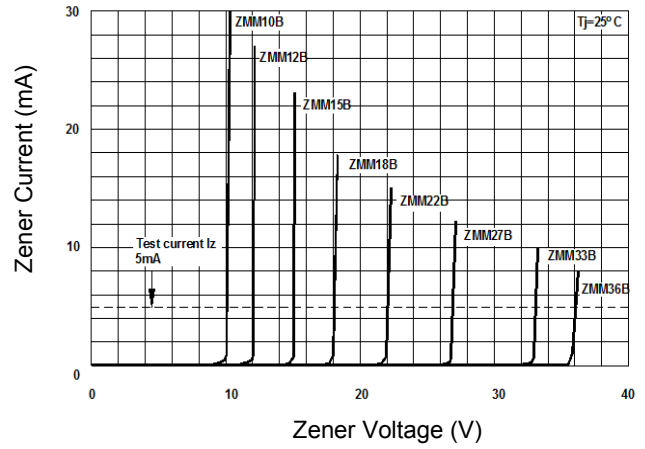


Fig 3. Zener Characteristics Curve

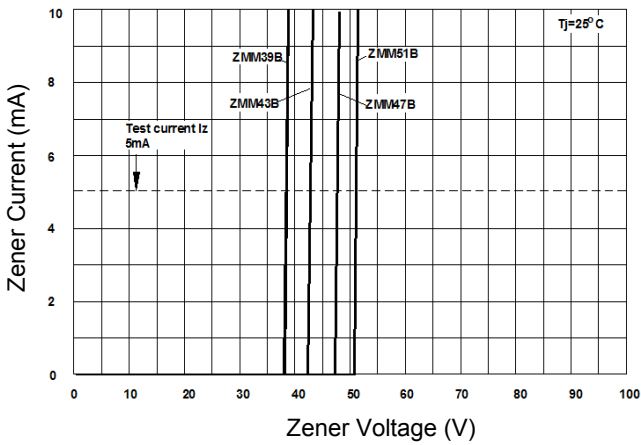


Fig 4. Forward Characteristics Curve

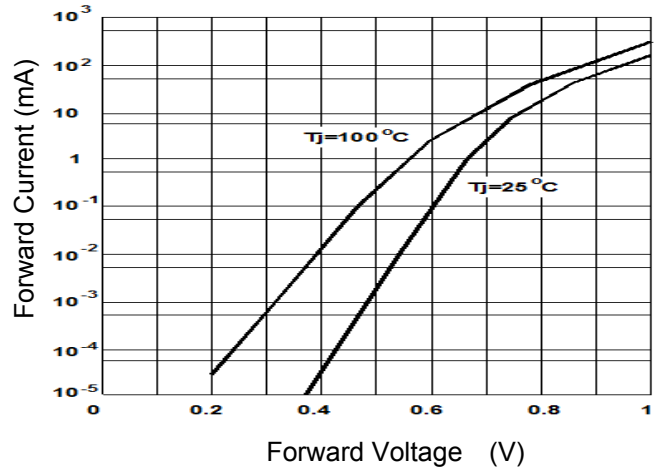


Fig 5. Power Derating Curve

