

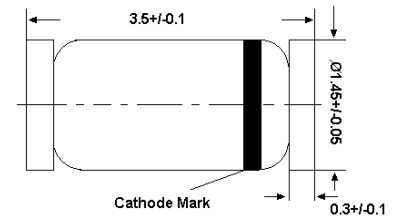
# ZMMxxxPF-M

## Silicon Planar Zener Diodes

### Features

- Lead Free

LL-34



Glass case MiniMELF  
Dimensions in mm

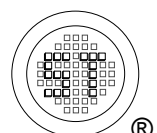
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Power Dissipation <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 leads are kept at ambient temperature at a distance of 8 mm from case.

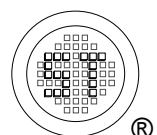


# ZMMxxxPF-M

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

Type	Zener Voltage Range <sup>1)</sup>			Maximum Dynamic Resistance				Maximum Reverse Current	
	$V_{znom}$	$V_{ZT}$	at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$I_R$	at $V_R$
	V	V	mA	$\Omega$	mA	$\Omega$	mA	$\mu\text{A}$	V
ZMM2V0PF	2.0	1.8...2.15	5	85	5	600	1	100	1
ZMM2V2PF	2.2	2.08...2.33	5	85	5	600	1	75	1
ZMM2V4PF	2.4	2.28...2.56	5	85	5	600	1	50	1
ZMM2V7PF	2.7	2.5...2.9	5	85	5	600	1	10	1
ZMM3V0PF	3.0	2.8...3.2	5	85	5	600	1	4	1
ZMM3V3PF	3.3	3.1...3.5	5	85	5	600	1	2	1
ZMM3V6PF	3.6	3.4...3.8	5	85	5	600	1	2	1
ZMM3V9PF	3.9	3.7...4.1	5	85	5	600	1	2	1
ZMM4V3PF	4.3	4...4.6	5	75	5	600	1	1	1
ZMM4V7PF	4.7	4.4...5	5	60	5	600	1	0.5	1
ZMM5V1PF	5.1	4.8...5.4	5	35	5	550	1	0.1	1
ZMM5V6PF	5.6	5.2...6	5	25	5	450	1	0.1	1
ZMM6V2PF	6.2	5.8...6.6	5	10	5	200	1	0.1	2
ZMM6V8PF	6.8	6.4...7.2	5	8	5	150	1	0.1	3
ZMM7V5PF	7.5	7...7.9	5	7	5	50	1	0.1	5
ZMM8V2PF	8.2	7.7...8.7	5	7	5	50	1	0.1	6.2
ZMM9V1PF	9.1	8.5...9.6	5	10	5	50	1	0.1	6.8
ZMM10PF	10	9.4...10.6	5	15	5	70	1	0.1	7.5
ZMM11PF	11	10.4...11.6	5	20	5	70	1	0.1	8.2
ZMM12PF	12	11.4...12.7	5	20	5	90	1	0.1	9.1
ZMM13PF	13	12.4...14.1	5	26	5	110	1	0.1	10
ZMM15PF	15	13.8...15.6	5	30	5	110	1	0.1	11
ZMM16PF	16	15.3...17.1	5	40	5	170	1	0.1	12
ZMM18PF	18	16.8...19.1	5	50	5	170	1	0.1	13
ZMM20PF	20	18.8...21.2	5	55	5	220	1	0.1	15
ZMM22PF	22	20.8...23.3	5	55	5	220	1	0.1	16
ZMM24PF	24	22.8...25.6	5	80	5	220	1	0.1	18
ZMM27PF	27	25.1...28.9	5	80	5	220	1	0.1	20
ZMM30PF	30	28...32	5	80	5	220	1	0.1	22
ZMM33PF	33	31...35	5	80	5	220	1	0.1	24
ZMM36PF	36	34...38	5	80	5	220	1	0.1	27
ZMM39PF	39	37...41	2.5	90	2.5	500	0.5	0.1	30
ZMM43PF	43	40...46	2.5	90	2.5	500	0.5	0.1	33
ZMM47PF	47	44...50	2.5	110	2.5	600	0.5	0.1	36

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



## Electrical Characteristics Curves

Fig 1. Zener Characteristics Curve

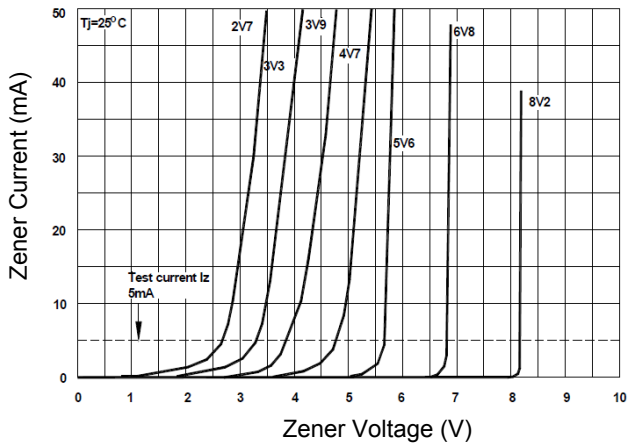


Fig 2. Zener Characteristics Curve

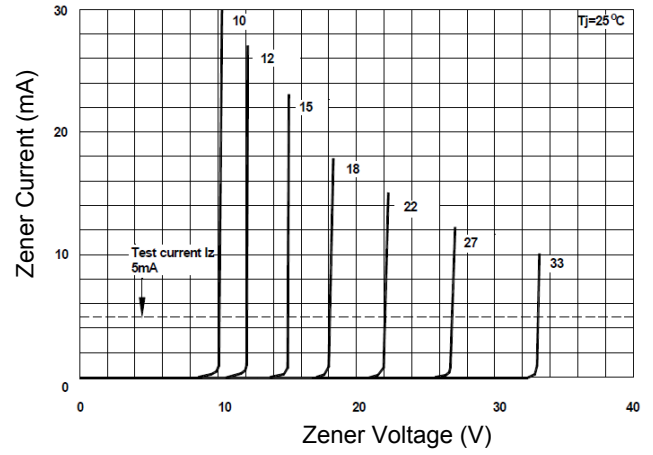


Fig 3. Power Derating Curve

