

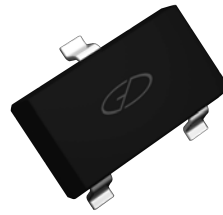
MMBZ4678 thru MMBZ4716

Zener Diodes

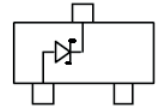
Vz Range: 1.8V to 39V Power Dissipation:350mW

Features

- Constant voltage control
- Wide voltage range selection 1.8V to 39V
- RoHS compliant / Green EMC
- Matte tin (Sn) lead finish
- Cathode band / device marking
Refer to table list



SOT-23



Schematic Diagram

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Units
Power Dissipation	P _D	350 ¹	mW
		200 ²	
Junction Temperature	T _J	150	°C
Maximum Regulator Current	I _{ZM}	P _D /V _Z	mA
Storage Temperature	T _{STG}	-55 to +125	°C

Note:

1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².
2. Device mounted on ceramic PCB: 0.7mm with pad areas 5mm².

Electrical Characteristics (T_A=25°C unless otherwise specified)

Device	Marking	Zener Voltage			I _{ZT}	Leakage Current	
		V _Z @ I _{ZT} (V)				I _R @ V _R	V _R
		Min	Nom	Max	uA	uA	V
MMBZ4678	CC	1.71	1.8	1.89	50	7.5	1
MMBZ4679	CD	1.9	2	2.1	50	5	1
MMBZ4680	CE	2.09	2.2	2.31	50	4	1
MMBZ4681	CF	2.28	2.4	2.52	50	2	1
MMBZ4682	CH	2.565	2.7	2.835	50	1	1
MMBZ4683	CJ	2.85	3	3.15	50	0.8	1
MMBZ4684	CK	3.135	3.3	3.465	50	7.5	1.5
MMBZ4685	CM	3.42	3.6	3.78	50	7.5	2
MMBZ4686	CN	3.705	3.9	4.095	50	5	2
MMBZ4687	CP	4.085	4.3	4.515	50	4	2
MMBZ4688	CT	4.465	4.7	4.935	50	10	3
MMBZ4689	CU	4.845	5.1	5.355	50	10	3
MMBZ4690	CV	5.32	5.6	5.88	50	10	4
MMBZ4691	CA	5.89	6.2	6.51	50	10	5

MMBZ4678 thru MMBZ4716

Zener Diodes

Vz Range: 1.8V to 39V Power Dissipation:350mW

Electrical Characteristics (T_A=25°C unless otherwise specified)

Device	Marking	Zener Voltage			I _{ZT}	Leakage Current	
		V _Z @ I _{ZT} (V)				I _R @ V _R	V _R
		Min	Nom	Max	uA	uA	V
MMBZ4692	CX	6.46	6.8	7.14	50	10	5.1
MMBZ4693	CY	7.125	7.5	7.875	50	10	5.7
MMBZ4694	CZ	7.79	8.2	8.61	50	1	6.2
MMBZ4695	DC	8.265	8.7	9.135	50	1	6.6
MMBZ4696	DD	8.645	9.1	9.555	50	1	6.9
MMBZ4697	DE	9.5	10	10.5	50	1	7.6
MMBZ4698	DF	10.45	11	11.55	50	0.05	8.4
MMBZ4699	DH	11.4	12	12.6	50	0.05	9.1
MMBZ4700	DJ	12.35	13	13.65	50	0.05	9.8
MMBZ4701	DK	13.3	14	14.7	50	0.05	10.6
MMBZ4702	DM	14.25	15	15.75	50	0.05	11.4
MMBZ4703	DN	15.2	16	16.8	50	0.05	12.1
MMBZ4704	DP	16.15	17	17.85	50	0.05	12.9
MMBZ4705	DT	17.1	18	18.9	50	0.05	13.6
MMBZ4706	DU	18.05	19	19.95	50	0.05	14.4
MMBZ4707	DV	19	20	21	50	0.01	15.2
MMBZ4708	DA	20.9	22	23.1	50	0.01	16.7
MMBZ4709	DX	22.8	24	25.2	50	0.01	18.2
MMBZ4710	DY	23.75	25	26.25	50	0.01	19
MMBZ4711	EA	25.65	27	28.35	50	0.01	20.4
MMBZ4712	EC	26.6	28	29.4	50	0.01	21.2
MMBZ4713	ED	28.5	30	31.5	50	0.01	22.8
MMBZ4714	EE	31.35	33	34.65	50	0.01	25
MMBZ4715	EF	34.2	36	37.8	50	0.01	27.3
MMBZ4716	EH	37.05	39	40.95	50	0.01	29.6

Note:

1. Pulse width=10ms.

Electrical Characteristic Curve

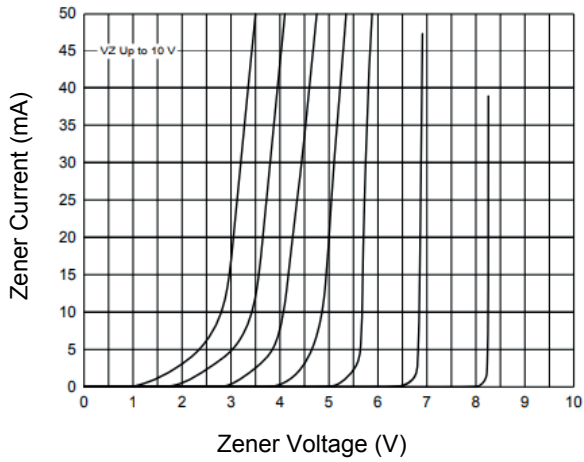


Figure 1. Typical Zener Voltage

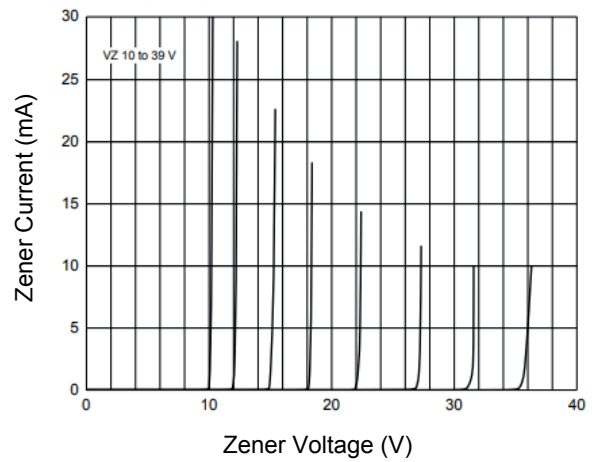
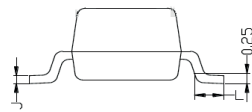
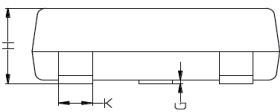
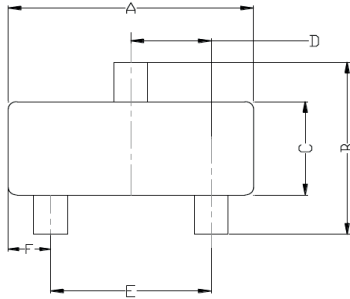


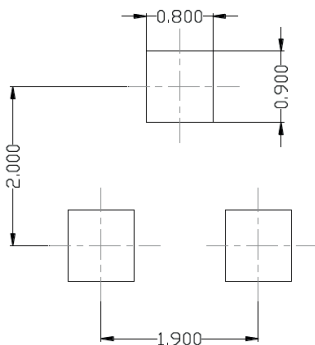
Figure 2. Typical Zener Voltage

Package Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.800	3.040	0.110	0.120
B	2.100	2.640	0.083	0.104
C	1.200	1.400	0.047	0.055
D	0.890	1.030	0.035	0.041
E	1.780	2.050	0.070	0.081
F	0.450	0.600	0.018	0.024
G	0.013	0.100	0.001	0.004
H	0.900	1.110	0.035	0.044
J	0.085	0.180	0.003	0.007
K	0.370	0.510	0.015	0.020
L	0.300	0.500	0.012	0.020

Recommended Pad Layout



Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

Order Information

Device	Package	Marking	Quantity	HSF Status
MMBZ4xxx	SOT-23	See Table	3,000pcs / Reel	RoHS Compliant