Zener Voltage Regulators

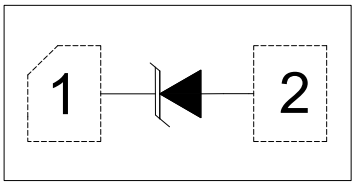
Parameter	Value	Unit
V_Z	2.0~75	V
P_D	200	mW



DFN1006-2L(Bottom view)

Features

- High Speed Switching
- Small Surface Mounting Type(DFN1006-2L)
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode
- Weight: approx. 0.001g



Pin Configuration(Top view)

Applications

- Surge protection
- Voltage stabilization
- Polarity Protection

Absolute Maximum Ratings (Ta=25℃, unless otherwise noted)

Parameter	Symbol	Value	Units
Power Dissipation	P_D	200	mW
Storage Temperature Range	T_{STG}	-55 to +150	℃
Operating Junction Temperature	T_J	+150	℃

These ratings are limiting values above which the serviceability of the diode may be impaired.

Electrical Characteristics (Ta=25℃)

Device Type	Device Marking	VZ @ IZT (V)			IZT (mA)	ZZT @ IZT Max	IZK (mA)	ZZK @ IZK Ω Max	IR @ VR (μA) Max	VR (V)
		Min	Nom	Max						
MM8Z2V0B	±8	1.95	2.0	2.05	5	100	1	564	120	0.5
MM8Z2V2B	⊥8	2.14	2.2	2.26	5	100	1	564	120	0.7
MM8Z2V4B	08	2.35	2.4	2.45	5	100	1	564	45	1
MM8Z2V7B	18	2.65	2.7	2.75	5	100	1	564	18	1
MM8Z3V0B	28	2.94	3.0	3.06	5	100	1	564	9	1
MM8Z3V3B	38	3.23	3.3	3.37	5	95	1	564	4.5	1
MM8Z3V6B	48	3.53	3.6	3.67	5	90	1	564	4.5	1
MM8Z3V9B	+8	3.82	3.9	3.98	5	90	1	564	2.7	1
MM8Z4V3B	68	4.21	4.3	4.39	5	90	1	564	2.7	1
MM8Z4V7B	78	4.61	4.7	4.79	5	80	1	470	2.7	2
MM8Z5V1B	88	5.00	5.1	5.20	5	60	1	451	1.8	2
MM8Z5V6B	98	5.49	5.6	5.71	5	40	1	376	0.9	2
MM8Z6V2B	A8	6.08	6.2	6.32	5	10	1	141	2.7	4
MM8Z6V8B	B8	6.66	6.8	6.94	5	15	1	75	1.8	4
MM8Z7V5B	C8	7.35	7.5	7.65	5	15	1	75	0.9	5
MM8Z8V2B	D8	8.04	8.2	8.36	5	15	1	75	0.63	5
MM8Z9V1B	E8	8.92	9.1	9.28	5	15	1	94	0.45	6
MM8Z10VB	F8	9.80	10	10.20	5	20	1	141	0.18	7
MM8Z11VB	G8	10.78	11	11.22	5	20	1	141	0.09	8
MM8Z12VB	H8	11.76	12	12.24	5	25	1	141	0.09	8
MM8Z13VB	J8	12.74	13	13.26	5	30	1	160	0.09	8
MM8Z15VB	K8	14.70	15	15.30	5	30	1	188	0.045	10.5
MM8Z16VB	L8	15.68	16	16.32	5	40	1	188	0.045	11.2
MM8Z18VB	M8	17.64	18	18.36	5	45	1	212	0.045	12.6
MM8Z20VB	N8	19.60	20	20.40	5	55	1	212	0.045	14.0
MM8Z22VB	P8	21.56	22	22.44	5	55	1	235	0.045	15.4
MM8Z24VB	R8	23.52	24	24.48	5	70	1	235	0.045	16.8
MM8Z27VB	S8	26.46	27	27.54	2	80	0.5	282	0.045	18.9
MM8Z30VB	T8	29.40	30	30.60	2	80	0.5	282	0.045	21.0
MM8Z33VB	U8	32.34	33	33.66	2	80	0.5	306	0.045	23.0
MM8Z36VB	V8	35.28	36	36.72	2	90	0.5	329	0.045	25.2

Electrical Characteristics (Ta=25℃)

Device Type	Device Marking	VZ @ IZT (V)			IZT (mA)	ZZT @ IZT Max	IZK (mA)	ZZK @ IZK Ω Max	IR @ VR (μA) Max	VR (V)
		Min	Nom	Max						
MM8Z39VB	X8	38.22	39	39.78	2	130	0.5	329	0.045	27.3
MM8Z43VB	Y8	42.14	43	43.86	2	150	0.5	353	0.045	30.1
MM8Z47VB	Z8	46.06	47	47.94	2	170	0.5	353	0.045	33.0
MM8Z51VB	−8	49.98	51	52.02	2	180	0.5	376	0.045	35.7
MM8Z56VB	=8	54.88	56	57.12	2	200	0.5	400	0.045	39.2
MM8Z62VB	≡8	60.76	62	63.24	2	215	0.5	423	0.045	43.4
MM8Z68VB	>8	66.64	68	69.36	2	240	0.5	447	0.045	47.6
MM8Z75VB	<8	73.50	75	76.50	2	255	0.5	470	0.045	52.5

VF Forward Voltage=1V Maximum @ IF=10mA for all types

Notes:

1. The Zener Voltage (VZ) is tested under pulse condition of 10mS.
2. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest JESTEK representative.
3. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (IZT or IZK) is superimposed to IZT or IZK.

Typical Characteristics

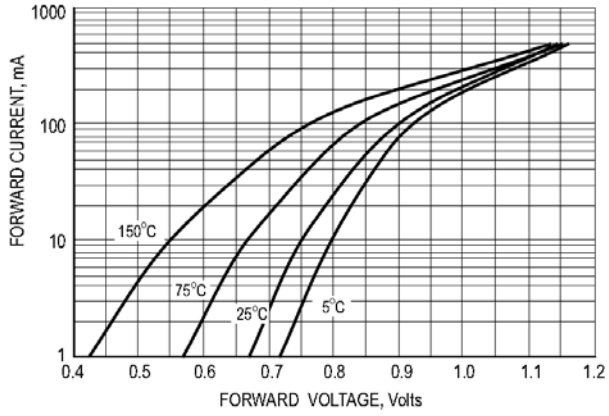


Fig.1 TYPICAL FORWARD VOLTAGE

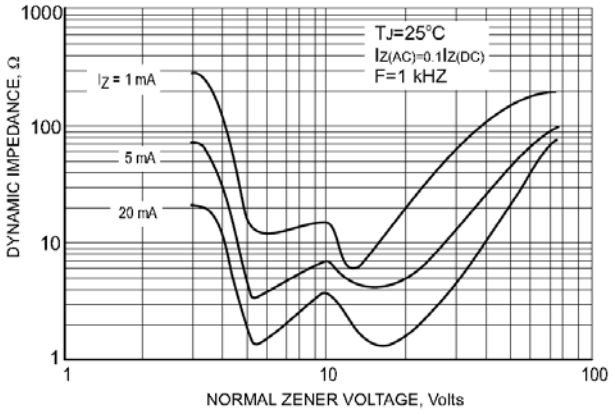


Fig.2 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

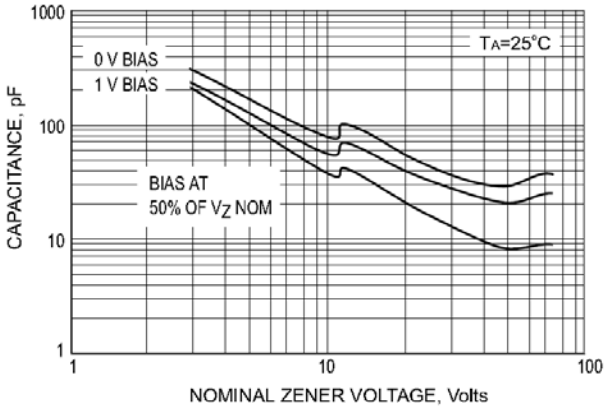


Fig.4 TYPICAL CAPACITANCE

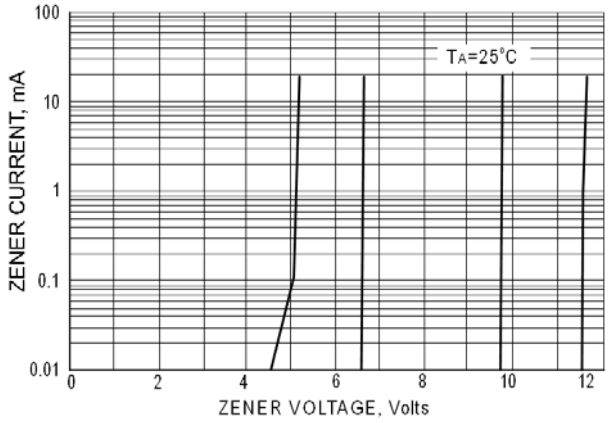


Fig.5 ZENER BREAKDOWN CHARACTERISTICS

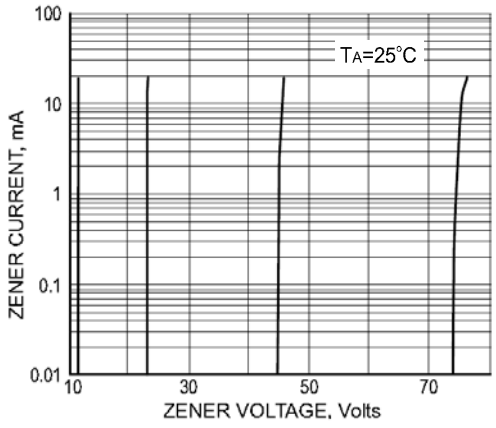


Fig.6 ZENER BREAKDOWN CHARACTERISTICS

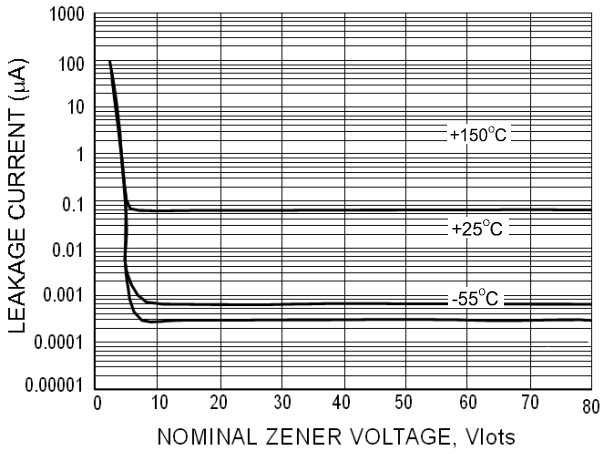
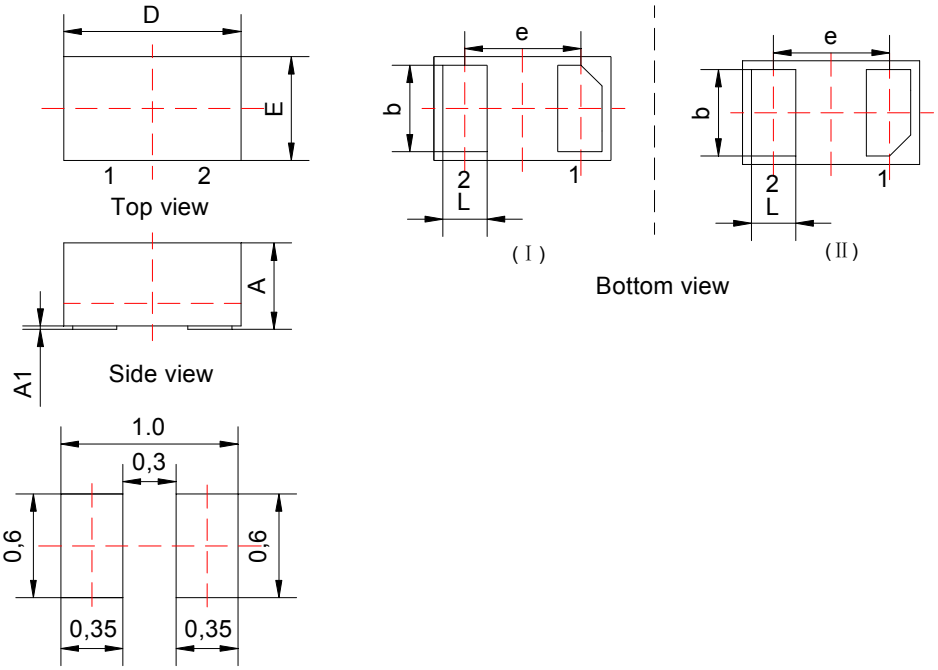


Fig.7 TYPICAL LEAKGE CURRENT

Package Outline

DFN1006-2L



Recommended soldering footprint(mm)

Symbol	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.40	0.50	0.55	0.016	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.45	0.50	0.55	0.018	0.020	0.022
D	0.95	1.00	1.05	0.037	0.039	0.041
e	0.65BSC			0.026BSC		
E	0.55	0.60	0.65	0.022	0.024	0.026
L	0.20	0.25	0.30	0.008	0.010	0.012

***Important Usage Information and Disclaimer**

The specifications of Zhuhai Hypersemi Co., Ltd. products are not guarantees of product characteristics. They reflect typical performance expected in standard applications, which may vary with specific uses. Users must conduct prior testing for their applications and make necessary adjustments.

Users are responsible for the safety of applications utilizing our products and must implement adequate safety measures to prevent physical injury, fire, or other risks in case of product failure. It is the user's duty to ensure that application designs comply with all applicable laws and standards. Our products must not be used in any applications where a product failure could reasonably result in personal injury, unless specifically authorized in a signed document by Zhuhai Hypersemi Co., Ltd.

No representations or warranties are made regarding the accuracy or completeness of this information, including any claims of non-infringement of third-party intellectual property rights. Zhuhai Hypersemi Co., Ltd. assumes no liability for any applications or uses of its products and does not grant any licenses to its intellectual property rights or those of others. We also make no claims regarding non-infringement of third-party intellectual property rights that may arise from applications.

Due to technical requirements, our products may contain hazardous substances. For details, please contact your nearest sales office. This document replaces all previous information and may be updated. We reserve the right to make changes.