

MM3Z2V4B-MM3Z75VB

Zener Diodes

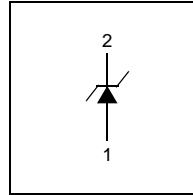
Features

- Wide Zener Voltage Range Selection, 2.4v To 75v
- VZ Tolerance Selection of $\pm 2\%$ (B Series)
- Very Small and Thin SMD package
- Clip Bonding Construction, Good Thermal Capability
- Matte Tin(Sn) Finish with Nickel(Ni) underplate, Pb Free

Connection Diagram



SOD-323F



Absolute Maximum Ratings T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P _D	Power Dissipation	200	mW
T _{STG}	Storage Temperature Range	-65 to +150	°C
T _J	Maximum Junction Temperature	150	°C
I _{ZM}	Maximum Regulator Current	P _D /V _Z	mA

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

Thermal Characteristics

Symbol	Parameter	Value	Unit
R _{θJA}	Thermal Resistance, Junction to Ambient	595	°C/W

* Device mounted on N/A PCB with N/A

Electrical Characteristics T_{amb} = 25°C unless otherwise specified

Symbol	Parameter/ Test condition	Min.	Typ.	Max.	Unit
V _F	Forward Voltage / I _F =10mA	--	--	1.0	V

Package Marking and Ordering Information

Device Marking	Device	Package	Packing	Reel Size	Tape Width	Quantity
Refer to Product table list	Refer to Product table list	SOD-323F	Tape & Reel	7'	12mm	3,000

Electrical Characteristics T_A=25°C unless otherwise noted

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Device Type	Device Marking	V _Z (V) @ I _{ZT}			Z _{ZT} (Ω) @ I _{ZT}	I _{ZT} (mA)	Z _{ZK} (Ω) @ I _{ZK}	I _{ZK} (mA)	I _R (μA) @ V _R	V _R (V)
		Min.	Typ.	Max.	Max.	-	Max.	-	Max	-
MM3Z2V4B	0Z	2.35	2.4	2.45	94	5	564	1	45	1
MM3Z2V7B	1Z	2.65	2.7	2.75	94	5	564	1	18	1
MM3Z3V0B	2Z	2.94	3.0	3.06	89	5	564	1	9	1
MM3Z3V3B	3Z	3.23	3.3	3.37	89	5	564	1	4.5	1
MM3Z3V6B	4Z	3.53	3.6	3.67	84	5	564	1	4.5	1
MM3Z3V9B	5Z	3.82	3.9	3.98	84	5	564	1	2.7	1
MM3Z4V3B	6Z	4.21	4.3	4.39	84	5	564	1	2.7	1
MM3Z4V7B	7Z	4.61	4.7	4.79	75	5	470	1	2.7	2
MM3Z5V1B	8Z	5.00	5.1	5.20	56	5	451	1	1.8	2
MM3Z5V6B	9Z	5.49	5.6	5.71	37	5	376	1	0.9	2
MM3Z6V2B	AZ	6.08	6.2	6.32	9	5	141	1	2.7	4
MM3Z6V8B	BZ	6.66	6.8	6.94	14	5	75	1	1.8	4
MM3Z7V5B	CZ	7.35	7.5	7.65	14	5	75	1	0.9	5
MM3Z8V2B	DZ	8.04	8.2	8.36	14	5	75	1	0.63	5
MM3Z9V1B	EZ	8.92	9.1	9.28	14	5	94	1	0.45	6
MM3Z10VB	FZ	9.80	10	10.20	18	5	141	1	0.18	7
MM3Z11VB	GZ	10.78	11	11.22	18	5	141	1	0.09	8
MM3Z12VB	HZ	11.76	12	12.24	23	5	141	1	0.09	8
MM3Z13VB	JZ	12.74	13	13.26	28	5	160	1	0.09	8
MM3Z15VB	KZ	14.70	15	15.30	28	5	188	1	0.045	10.5
MM3Z16VB	LZ	15.68	16	16.32	37	5	188	1	0.045	11.2
MM3Z18VB	MZ	17.64	18	18.36	42	5	212	1	0.045	12.6
MM3Z20VB	NZ	19.60	20	20.40	51	5	212	1	0.045	14.0
MM3Z22VB	PZ	21.56	22	22.44	51	5	235	1	0.045	15.4
MM3Z24VB	RZ	23.52	24	24.48	65	5	235	1	0.045	16.8
MM3Z27VB	SZ	26.46	27	27.54	75	5	282	0.5	0.045	18.9
MM3Z30VB	TZ	29.40	30	30.60	75	5	282	0.5	0.045	21.0
MM3Z33VB	UZ	32.34	33	33.66	75	5	306	0.5	0.045	23.0
MM3Z36VB	VZ	35.28	36	36.72	84	5	329	0.5	0.045	25.2
MM3Z39VB	WZ	38.22	39	39.78	122	5	329	0.5	0.045	27.3
MM3Z43VB	XZ	42.14	43	43.86	141	5	353	0.5	0.045	30.1
MM3Z47VB	YZ	46.06	47	47.94	160	5	353	0.5	0.045	33.0
MM3Z51VB	-Z	49.98	51	52.02	169	5	376	0.5	0.045	35.7
MM3Z56VB	=Z	54.88	56	57.12	188	5	400	0.5	0.045	39.2
MM3Z62VB	≡Z	60.76	62	63.24	202	5	423	0.5	0.045	43.4
MM3Z68VB	>Z	66.64	68	69.36	226	5	447	0.5	0.045	47.6
MM3Z75VB	<Z	73.5	75	76.50	240	5	470	0.5	0.045	52.5

Notes :

- The Zener Voltage (V_Z) is tested under pulse condition of 10mS.
- The device numbers listed have a standard tolerance on the nominal zener voltage of ±2%.
- 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 (I_{ZT} or I_{ZK}) is superimposed to I_{ZT} or I_{ZK}.

Typical Performance Characteristics

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Figure 1. Zener current vs. Zener Voltage

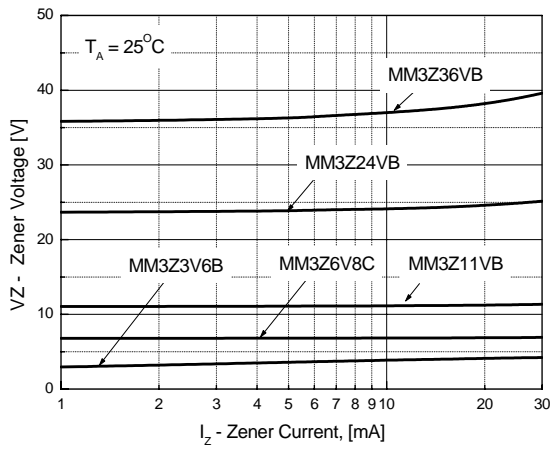
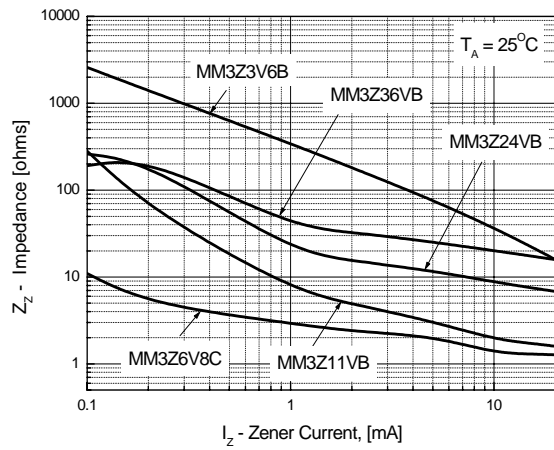
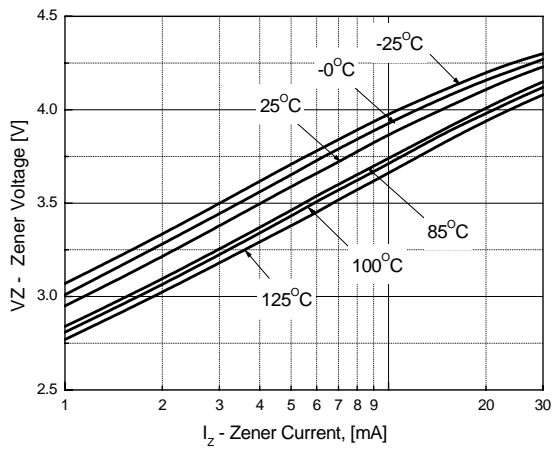


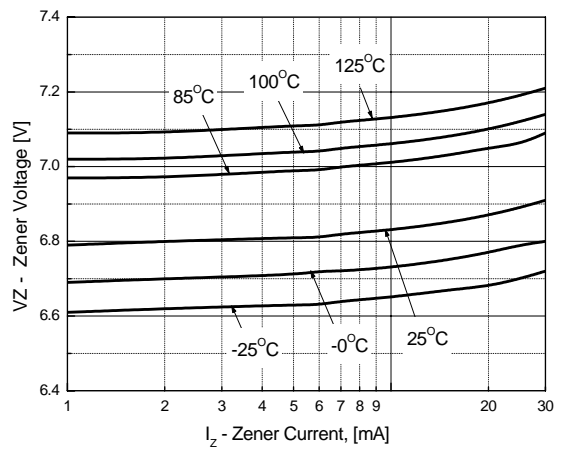
Figure 2. Zener current vs. Zener Impedance



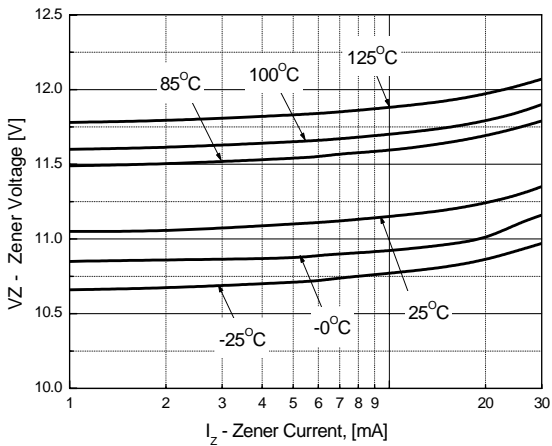
**Figure 3. MM3Z3V6B
Zener current vs. Zener Voltage**



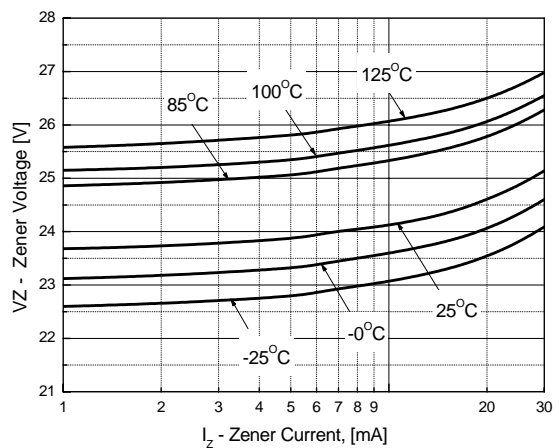
**Figure 4. MM3Z6V8C
Zener current vs. Zener Voltage**



**Figure 5. MM3Z11VB
Zener current vs. Zener Voltage**



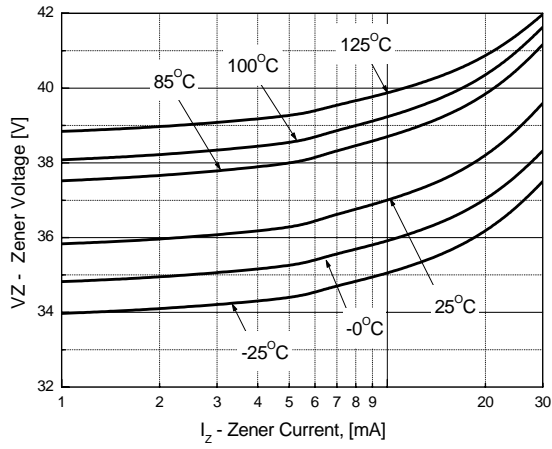
**Figure 6. MM3Z24VB
Zener current vs. Zener Voltage**



Typical Performance Characteristics

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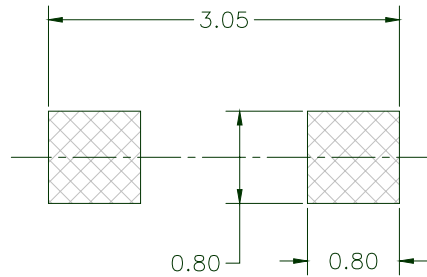
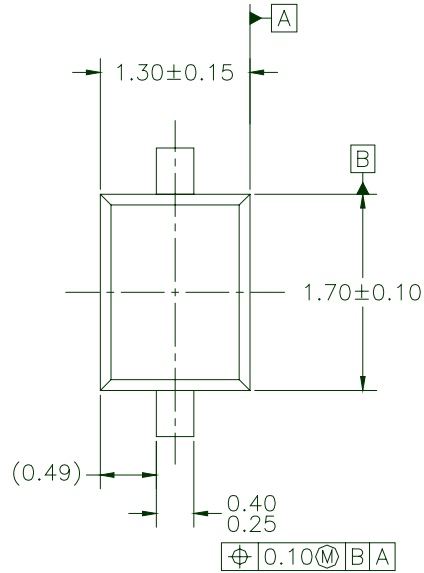
Figure 7. MM3Z36VB
Zener current vs. Zener Voltage



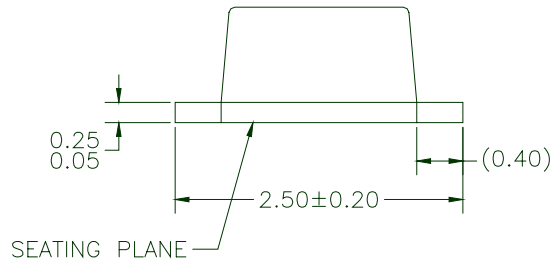
Package Dimensions

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SOD - 323F



LAND PATTERN RECOMMENDATION



NOTES: UNLESS OTHERWISE SPECIFIED

- A) THIS PACKAGE IS COMPLIANT TO JEITA SC90 STANDARD EXCEPT FOR THE OVERALL PACKAGE HEIGHT.
- B) ALL DIMENSIONS ARE IN MILLIMETERS.
- C) DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR EXTRUSIONS.
- D) DIMENSIONING AND TOLERANCING PER ASME Y14.5M - 1994.



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