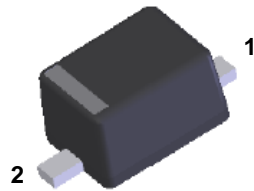


# MM3Z2V4C-MM3Z75VC

## Zener Diodes

### Features

- Wide Zener Voltage Range Selection, 2.4V to 75V
- VZ Tolerance Selection of  $\pm 5\%$  (C Series)
- Very Small and Thin SMD package
- Matte Tin(Sn) finish, Pb Free



\* Band Denotes Cathode **SOD-323F**

### Connection Diagram



### Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	200	mW
$T_{STG}$	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
$T_J$	Maximum Junction Temperature	150	$^\circ\text{C}$
$I_{ZM}$	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
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	595	$^\circ\text{C}/\text{W}$

\* Device mounted on PCB with minimum land pad.

### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter/ Test condition	Min.	Typ.	Max.	Unit
$V_F$	Forward Voltage / $I_F = 10\text{ mA}$	--	--	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**  $T_A=25^\circ\text{C}$  unless otherwise noted

Device Type	Device Marking	$V_Z$ (V) @ $I_{ZT}$			$Z_{ZT}(\Omega)$ @ $I_{ZT}$	$I_{ZT}$ (mA)	$Z_{ZK}(\Omega)$ @ $I_{ZK}$	$I_{ZK}$ (mA)	$I_R(\mu\text{A})$ @ $V_R$	$V_R$ (V)
		Min.	Typ.	Max.	Max.	-	Max.	-	Max	-
MM3Z2V4C	Z0	2.28	2.4	2.52	94	5	564	1	45	1
MM3Z2V7C	Z1	2.57	2.7	2.84	94	5	564	1	18	1
MM3Z3V0C	Z2	2.85	3	3.15	89	5	564	1	9	1
MM3Z3V3C	Z3	3.14	3.3	3.47	89	5	564	1	4.5	1
MM3Z3V6C	Z4	3.42	3.6	3.78	84	5	564	1	4.5	1
MM3Z3V9C	Z5	3.71	3.9	4.1	84	5	564	1	2.7	1
MM3Z4V3C	Z6	4.09	4.3	4.52	84	5	564	1	2.7	1
MM3Z4V7C	Z7	4.47	4.7	4.94	75	5	470	1	2.7	2
MM3Z5V1C	Z8	4.85	5.1	5.36	56	5	451	1	1.8	2
MM3Z5V6C	Z9	5.32	5.6	5.88	37	5	376	1	0.9	2
MM3Z6V2C	ZA	5.89	6.2	6.51	9	5	141	1	2.7	4
MM3Z6V8C	ZB	6.46	6.8	7.14	14	5	75	1	1.8	4
MM3Z7V5C	ZC	7.11	7.5	7.86	14	5	75	1	0.9	5
MM3Z8V2C	ZD	7.79	8.2	8.61	14	5	75	1	0.63	5
MM3Z9V1C	ZE	8.65	9.1	9.56	14	5	94	1	0.45	6
MM3Z10VC	ZF	9.5	10	10.5	18	5	141	1	0.18	7
MM3Z11VC	ZG	10.45	11	11.55	18	5	141	1	0.09	8
MM3Z12VC	ZH	11.4	12	12.6	23	5	141	1	0.09	8
MM3Z13VC	ZJ	12.35	13	13.65	28	5	160	1	0.09	8
MM3Z15VC	ZK	14.25	15	15.75	28	5	188	1	0.045	10.5
MM3Z16VC	ZL	15.2	16	16.8	37	5	188	1	0.045	11.2
MM3Z18VC	ZM	17.1	18	18.9	42	5	212	1	0.045	12.6
MM3Z20VC	ZN	19	20	21	51	5	212	1	0.045	14
MM3Z22VC	ZP	20.9	22	23.1	51	5	235	1	0.045	15.4
MM3Z24VC	ZR	22.8	24	25.2	65	5	235	1	0.045	16.8
MM3Z27VC	ZS	25.65	27	28.35	75	2	282	0.5	0.045	18.9
MM3Z30VC	ZT	28.5	30	31.5	75	2	282	0.5	0.045	21
MM3Z33VC	ZU	31.35	33	34.65	75	2	306	0.5	0.045	23
MM3Z36VC	ZV	34.2	36	37.8	84	2	329	0.5	0.045	25.2
MM3Z39VC	ZW	37.05	39	40.95	122	2	329	0.5	0.045	27.3
MM3Z43VC	ZX	40.85	43	45.15	141	2	353	0.5	0.045	30.1
MM3Z47VC	ZY	44.65	47	49.35	160	2	353	0.5	0.045	33
MM3Z51VC	Z <sub>~</sub>	48.45	51	53.55	169	2	376	0.5	0.045	35.7
MM3Z56VC	Z <sub>==</sub>	53.2	56	58.8	188	2	400	0.5	0.045	39.2
MM3Z62VC	Z <sub>===</sub>	58.9	62	65.1	202	2	423	0.5	0.045	43.4
MM3Z68VC	Z <sub>&gt;</sub>	64.6	68	71.4	226	2	447	0.5	0.045	47.6
MM3Z75VC	Z <sub>&lt;</sub>	71.25	75	78.75	240	2	470	0.5	0.045	52.5

## Notes :

1. The Zener Voltage ( $V_Z$ ) is tested under pulse condition of 10mS.
2. The device numbers listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$ .
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 ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed to  $I_{ZT}$  or  $I_{ZK}$ .

## Typical Performance Characteristics

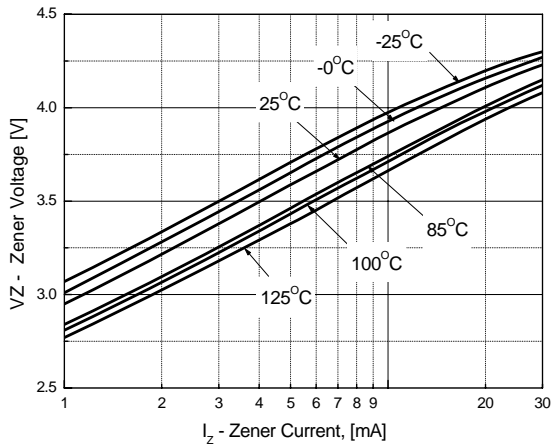
**Figure 1. Zener current vs. Zener Voltage**



**Figure 2. Zener current vs. Zener Impedance**



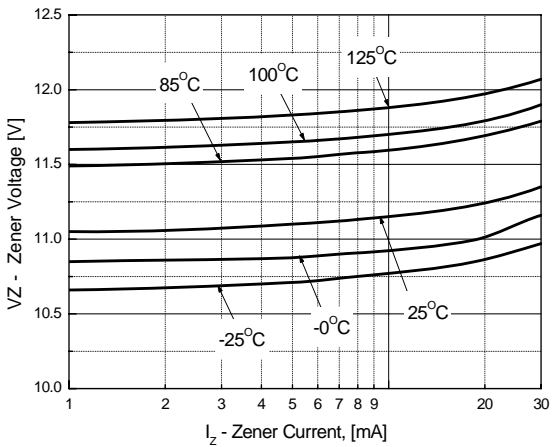
**Figure 3. MM3Z3V6B  
Zener current vs. Zener Voltage**



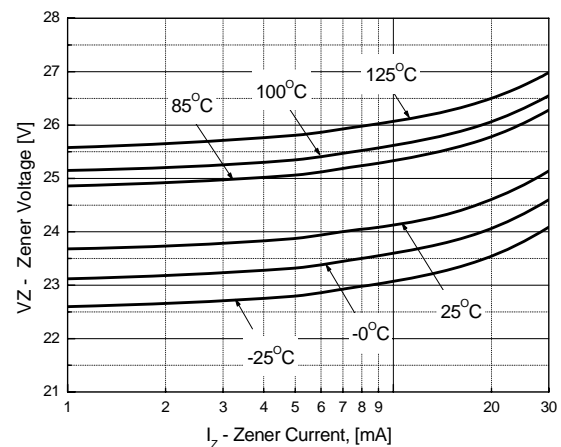
**Figure 4. MM3Z6V8C  
Zener current vs. Zener Voltage**



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

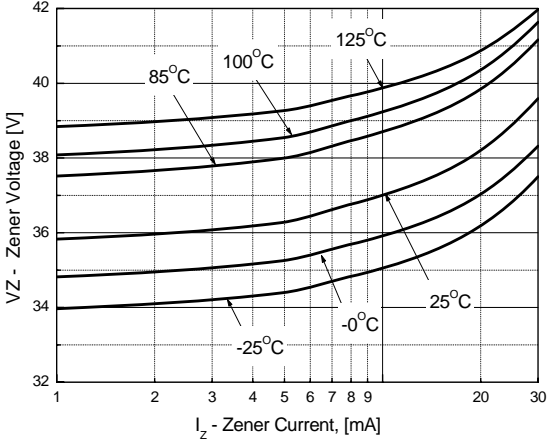


**Figure 6. MM3Z24VB  
Zener current vs. Zener Voltage**



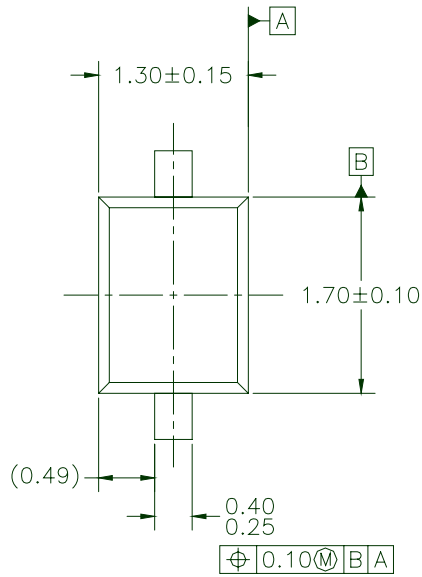
Typical Performance Characteristics (Continued)

Figure 7. MM3Z36VB  
Zener current vs. Zener Voltage



# Package Dimensions

## 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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