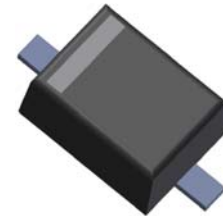


## 200mW SOD-323 SURFACE MOUNT Small Outline Flat Lead Plastic Package Zener Voltage Regulators

### 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	$^\circ\text{C}$
$T_{OPR}$	Operating Temperature Range	-65 to +150	$^\circ\text{C}$

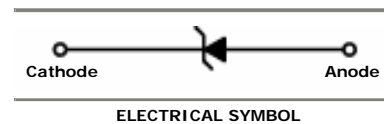
These ratings are limiting values above which the serviceability of the diode may be impaired.



SOD-323 Flat Lead

### Specification Features:

- Wide Zener Voltage Range Selection, 2.0V to 75V
- VZ Tolerance Selection of  $\pm 5\%$  (C Series)
- Flat Lead SOD-323 Small Outline Plastic Package
- Surface Device Type Mounting
- Moisture Sensitivity Level 1
- Clip Bonding Construction, Good Thermal Capability
- RoHS Compliant
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode



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

Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)			$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ ) Max	$I_{ZK}$ (mA)	$Z_{ZK} @ I_{ZK}$ ( $\Omega$ ) Max	$I_R @ V_R$ ( $\mu\text{A}$ ) Max	$V_R$ (Volts)
		Min	Nom	Max						
TCMM3Z2V0C	Z:	1.90	2.0	2.10	5	100	1	600	120	0.5
TCMM3Z2V2C	Z+	2.09	2.2	2.31	5	100	1	600	120	0.7
TCMM3Z2V4C	Z0	2.28	2.4	2.52	5	100	1	564	45	1
TCMM3Z2V7C	Z1	2.57	2.7	2.84	5	100	1	564	18	1
TCMM3Z3V0C	Z2	2.85	3.0	3.15	5	100	1	564	9	1
TCMM3Z3V3C	Z3	3.14	3.3	3.47	5	95	1	564	4.5	1
TCMM3Z3V6C	Z4	3.42	3.6	3.78	5	90	1	564	4.5	1
TCMM3Z3V9C	Z5	3.71	3.9	4.10	5	90	1	564	2.7	1
TCMM3Z4V3C	Z6	4.09	4.3	4.52	5	90	1	564	2.7	1
TCMM3Z4V7C	Z7	4.47	4.7	4.94	5	80	1	470	2.7	2
TCMM3Z5V1C	Z8	4.85	5.1	5.36	5	60	1	451	1.8	2
TCMM3Z5V6C	Z9	5.32	5.6	5.88	5	40	1	376	0.9	2
TCMM3Z6V2C	ZA	5.89	6.2	6.51	5	10	1	141	2.7	4
TCMM3Z6V8C	ZB	6.46	6.8	7.14	5	15	1	75	1.8	4
TCMM3Z7V5C	ZC	7.11	7.5	7.86	5	15	1	75	0.9	5
TCMM3Z8V2C	ZD	7.79	8.2	8.61	5	15	1	75	0.63	5
TCMM3Z9V1C	ZE	8.65	9.1	9.56	5	15	1	94	0.45	6
TCMM3Z10VC	ZF	9.50	10	10.50	5	20	1	141	0.18	7
TCMM3Z11VC	ZG	10.45	11	11.55	5	20	1	141	0.09	8
TCMM3Z12VC	ZH	11.40	12	12.60	5	25	1	141	0.09	8
TCMM3Z13VC	ZJ	12.35	13	13.65	5	30	1	160	0.09	8
TCMM3Z15VC	ZK	14.25	15	15.75	5	30	1	188	0.045	10.5
TCMM3Z16VC	ZL	15.20	16	16.80	5	40	1	188	0.045	11.2

**Electrical Characteristics**  $T_A = 25^\circ\text{C}$  unless otherwise noted

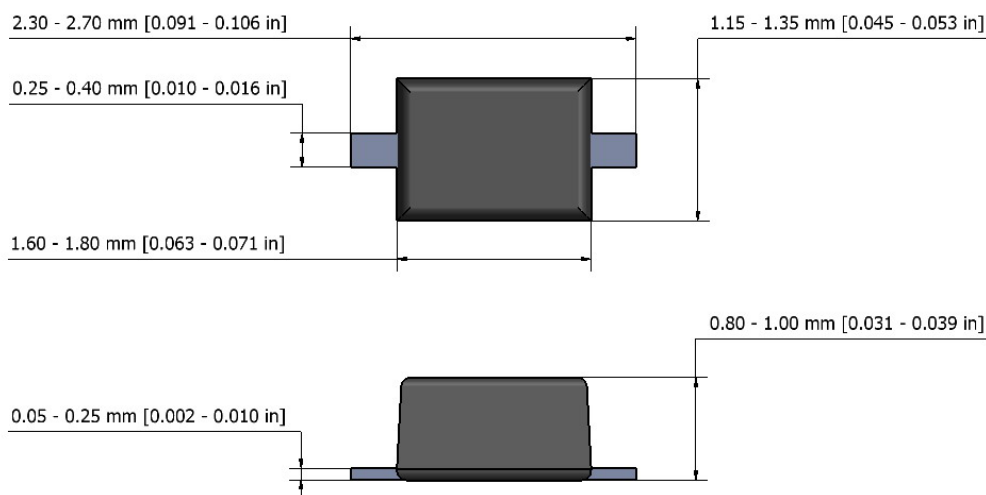
Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)			$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ ) Max	$I_{ZK}$ (mA)	$Z_{ZK} @ I_{ZK}$ ( $\Omega$ ) Max	$I_R @ V_R$ ( $\mu\text{A}$ ) Max	$V_R$ (Volts)
		Min	Nom	Max						
TCMM3Z18VC	ZM	17.10	18	18.90	5	45	1	212	0.045	12.6
TCMM3Z20VC	ZN	19.00	20	21.00	5	55	1	212	0.045	14.0
TCMM3Z22VC	ZP	20.90	22	23.10	5	55	1	235	0.045	15.4
TCMM3Z24VC	ZR	22.80	24	25.20	5	70	1	235	0.045	16.8
TCMM3Z27VC	ZS	25.65	27	28.35	5	80	0.5	282	0.045	18.9
TCMM3Z30VC	ZT	28.50	30	31.50	5	80	0.5	282	0.045	21.0
TCMM3Z33VC	ZU	31.35	33	34.65	5	80	0.5	306	0.045	23.0
TCMM3Z36VC	ZV	34.20	36	37.80	5	90	0.5	329	0.045	25.2
TCMM3Z39VC	ZW	37.05	39	40.95	5	130	0.5	329	0.045	27.3
TCMM3Z43VC	ZX	40.85	43	45.15	5	150	0.5	353	0.045	30.1
TCMM3Z47VC	ZY	44.65	47	49.35	5	170	0.5	353	0.045	33.0
TCMM3Z51VC	Z-	48.45	51	53.55	5	180	0.5	376	0.045	35.7
TCMM3Z56VC	Z=	53.20	56	58.80	5	200	0.5	400	0.045	39.2
TCMM3Z62VC	Z≡	58.90	62	65.10	5	215	0.5	423	0.045	43.4
TCMM3Z68VC	Z>	64.60	68	71.40	5	240	0.5	447	0.045	47.6
TCMM3Z75VC	Z<	71.25	75	78.75	5	255	0.5	470	0.045	52.5

$V_F$  Forward Voltage = 1 V Maximum @  $I_F = 10$  mA for all types

**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. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Tak Cheong Electronics representative.
4. 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  $I_{ZK}$ .

**SOD-323 Package Outline**



NOTE: The above package outline is similar to JEITA SC-90.

This datasheet presents technical data of Tak Cheong's Zener Diodes. Complete specifications for the individual devices are provided in the form of datasheets. A comprehensive Selector Guide is included to simplify the task of choosing the best set of components required for a specific application. For additional information, please visit our website <http://www.takcheong.com>.

Although information in this datasheet has been carefully checked, no responsibility for the inaccuracies can be assumed by Tak Cheong. Please consult your nearest Tak Cheong's sales office for further assistance.

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