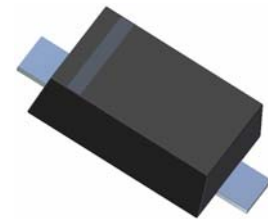


500mW SOD-123 SURFACE MOUNT Flat Lead Surface Mount Plastic Package Zener Voltage Regulators

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

Symbol	Parameter	Value	Units
P_D	Power Dissipation	500	mW
T_{STG}	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
T_{OPR}	Operating Temperature Range	-65 to +150	$^\circ\text{C}$

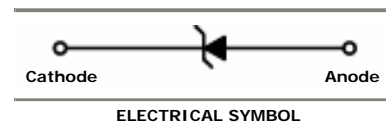
These ratings are limiting values above which the serviceability of the diode may be impaired.



SOD-123 Flat Lead

Specification Features:

- Wide Zener Voltage Range Selection, 2.4V to 75V
- VZ Tolerance Selection of $\pm 5\%$ (C Series)
- Flat Lead SOD-123 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)	$Z_{ZT} @ I_{ZT}$ (Ω) Max	I_{ZK} (mA)	$Z_{ZK} @ I_{ZK}$ (Ω) Max	$I_R @ V_R$ (μA) Max	V_R (Volts)
		Min	Nom	Max						
TCMMSZ2V0	2V0Z	1.90	2.0	2.10	5	100	1	600	120	0.5
TCMMSZ2V2	2V2Z	2.09	2.2	2.31	5	100	1	600	120	0.7
TCMMSZ2V4	2V4Z	2.28	2.4	2.52	5	100	1	564	45	1
TCMMSZ2V7	2V7Z	2.57	2.7	2.84	5	100	1	564	18	1
TCMMSZ3V0	3V0Z	2.85	3.0	3.15	5	100	1	564	9	1
TCMMSZ3V3	3V3Z	3.14	3.3	3.47	5	95	1	564	4.5	1
TCMMSZ3V6	3V6Z	3.42	3.6	3.78	5	90	1	564	4.5	1
TCMMSZ3V9	3V9Z	3.71	3.9	4.10	5	90	1	564	2.7	1
TCMMSZ4V3	4V3Z	4.09	4.3	4.52	5	90	1	564	2.7	1
TCMMSZ4V7	4V7Z	4.47	4.7	4.94	5	80	1	470	2.7	2
TCMMSZ5V1	5V1Z	4.85	5.1	5.36	5	60	1	451	1.8	2
TCMMSZ5V6	5V6Z	5.32	5.6	5.88	5	40	1	376	0.9	2
TCMMSZ6V2	6V2Z	5.89	6.2	6.51	5	10	1	141	2.7	4
TCMMSZ6V8	6V8Z	6.46	6.8	7.14	5	15	1	75	1.8	4
TCMMSZ7V5	7V5Z	7.11	7.5	7.86	5	15	1	75	0.9	5
TCMMSZ8V2	8V2Z	7.79	8.2	8.61	5	15	1	75	0.63	5
TCMMSZ9V1	9V1Z	8.65	9.1	9.56	5	15	1	94	0.45	6
TCMMSZ10V	10VZ	9.50	10	10.50	5	20	1	141	0.18	7
TCMMSZ11V	11VZ	10.45	11	11.55	5	20	1	141	0.09	8
TCMMSZ12V	12VZ	11.40	12	12.60	5	25	1	141	0.09	8
TCMMSZ13V	13VZ	12.35	13	13.65	5	30	1	160	0.09	8
TCMMSZ15V	15VZ	14.25	15	15.75	5	30	1	188	0.045	10.5
TCMMSZ16V	16VZ	15.20	16	16.80	5	40	1	188	0.045	11.2

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

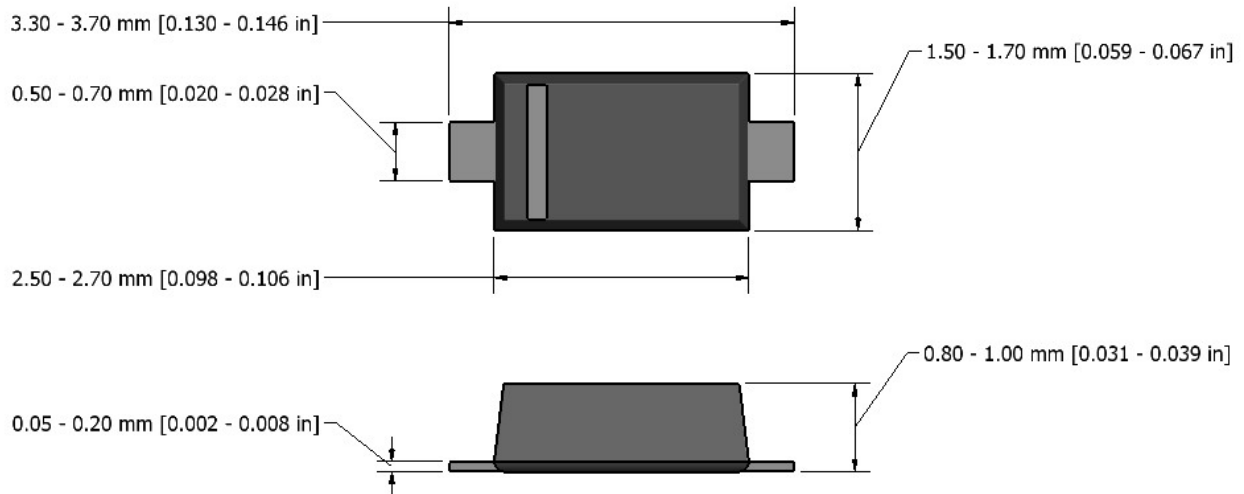
Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)			I_{ZT} (mA)	$Z_{ZT} @ I_{ZT}$ (Ω) Max	I_{ZK} (mA)	$Z_{ZK} @ I_{ZK}$ (Ω) Max	$I_R @ V_R$ (μA) Max	V_R (Volts)
		Min	Nom	Max						
TCMMSZ18V	18VZ	17.10	18	18.90	5	45	1	212	0.045	12.6
TCMMSZ20V	20VZ	19.00	20	21.00	5	55	1	212	0.045	14.0
TCMMSZ22V	22VZ	20.90	22	23.10	5	55	1	235	0.045	15.4
TCMMSZ24V	24VZ	22.80	24	25.20	5	70	1	235	0.045	16.8
TCMMSZ27V	27VZ	25.65	27	28.35	5	80	0.5	282	0.045	18.9
TCMMSZ30V	30VZ	28.50	30	31.50	5	80	0.5	282	0.045	21.0
TCMMSZ33V	33VZ	31.35	33	34.65	5	80	0.5	306	0.045	23.0
TCMMSZ36V	36VZ	34.20	36	37.80	5	90	0.5	329	0.045	25.2
TCMMSZ39V	39VZ	37.05	39	40.95	5	130	0.5	329	0.045	27.3
TCMMSZ43V	43VZ	40.85	43	45.15	5	150	0.5	353	0.045	30.1
TCMMSZ47V	47VZ	44.65	47	49.35	5	170	0.5	353	0.045	33.0
TCMMSZ51V	51VZ	48.45	51	53.55	5	180	0.5	376	0.045	35.7
TCMMSZ56V	56VZ	53.20	56	58.80	5	200	0.5	400	0.045	39.2
TCMMSZ62V	62VZ	58.90	62	65.10	5	215	0.5	423	0.045	43.4
TCMMSZ68V	68VZ	64.60	68	71.40	5	240	0.5	447	0.045	47.6
TCMMSZ75V	75VZ	71.25	75	78.75	5	255	0.5	470	0.045	52.5

V_F Forward Voltage = 900mV 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} .


Flat Lead SOD-123 Package Outline



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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