



Zener Voltage Regulators

200 mW SOD-523 Surface Mount

- We declare that the material of product compliance with RoHS requirements.

ORDERING INFORMATION

Device	Package	Shipping
LM5Z2V0T1G Series	SOD-523	3000/Tape&Reel
LM5Z2V0T5G Series	SOD-523	8000/Tape&Reel

This series of Zener diodes is packaged in a SOD-523 surface mount package. They are designed to provide voltage regulation protection and are especially attractive in situations where space is at a premium. They are well suited for applications such as cellular phones, hand held portables, and high density PC boards.

Specification Features:

- Standard Zener Breakdown Voltage Range – 2.0 V to 75 V
- Steady State Power Rating of 200 mW
- Small Body Outline Dimensions: 0.047" x 0.032"(1.20 mm x 0.80 mm)
- Low Body Height: 0.028" (0.7 mm)
- ESD Rating of Class 3 (>16 kV) per Human Body Model
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

Mechanical Characteristics:

CASE: Void-free, transfer-molded, thermosetting plastic

Epoxy Meets UL 94 V-0

LEAD FINISH: 100% Matte Sn (Tin)

QUALIFIED MAX REFLOW TEMPERATURE: 260°C

Device Meets MSL 1 Requirements

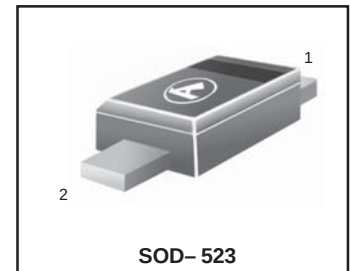
MOUNTING POSITION: Any

MAXIMUM RATINGS

Rating	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, @ $T_A = 25^\circ\text{C}$	P_D	200	mW
Junction and Storage Temperature Range	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

LM5Z2V0T1G Series S-LM5Z2V0T1G Series

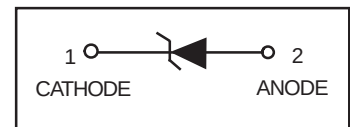


SOD- 523

MARKING DIAGRAM



xx= Specific Device Code
d =Date Code





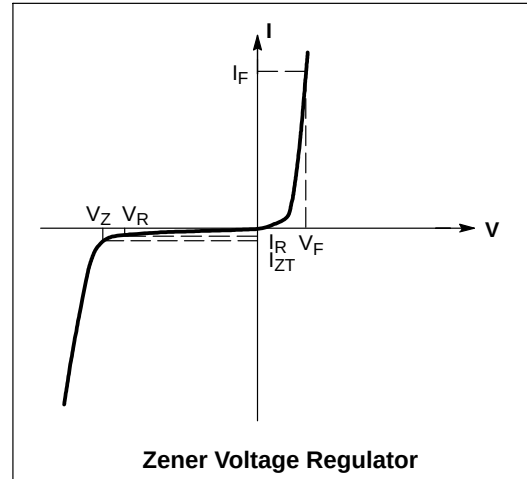
LM5Z2V0T1G Series , S-LM5Z2V0T1G Series SOD-523

ELECTRICAL CHARACTERISTICS

($T_A = 25^\circ\text{C}$ unless otherwise noted,

$V_F = 0.9\text{ V Max. @ } I_F = 10\text{ mA}$ for all types)

Symbol	Parameter
V_Z	Reverse Zener Voltage @ I_{ZT}
I_{ZT}	Reverse Current
Z_{ZT}	Maximum Zener Impedance @ I_{ZT}
I_{ZK}	Reverse Current
Z_{ZK}	Maximum Zener Impedance @ I_{ZK}
I_R	Reverse Leakage Current @ V_R
V_R	Reverse Voltage
I_F	Forward Current
V_F	Forward Voltage @ I_F
ΘV_Z	Maximum Temperature Coefficient of V_Z
C	Max. Capacitance @ $V_R = 0$ and $f = 1\text{ MHz}$





LM522V0T1G Series , S-LM522V0T1G Series SOD-523

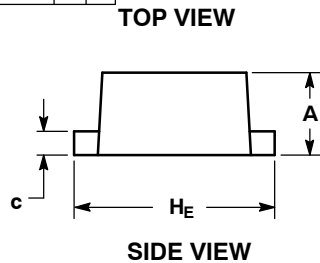
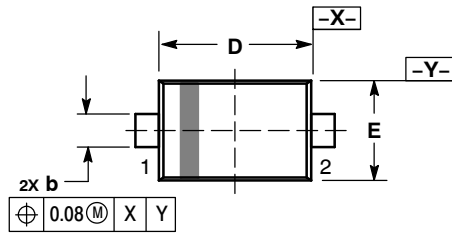
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted, $V_F = 0.9\text{ V}$ Max. @ $I_F = 10\text{ mA}$ for all types)

Device	Device Marking	Zener Voltage (Note 1)				Zener Impedance			Leakage Current		θV _Z (mV/k) @ I _{ZT}		C @ V _R = 0 f = 1 MHz
		V _Z (Volts)			@ I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}		I _R @ V _R				
		Min	Nom	Max	mA	Ω	Ω	mA	μA	Volts	Min	Max	pF
LM522V0T1G	WY	1.91	2.0	2.09	5	100	600	1.0	150	1.0	−3.5	0	450
LM522V4T1G	00	2.2	2.4	2.6	5	100	1000	1.0	50	1.0	−3.5	0	450
LM522V7T1G	01	2.5	2.7	2.9	5	100	1000	1.0	20	1.0	−3.5	0	450
LM523V0T1G	02	2.8	3.0	3.2	5	100	1000	1.0	10	1.0	−3.5	0	450
LM523V3T1G	05	3.1	3.3	3.5	5	95	1000	1.0	5	1.0	−3.5	0	450
LM523V6T1G	06	3.4	3.6	3.8	5	90	1000	1.0	5	1.0	−3.5	0	450
LM523V9T1G	07	3.7	3.9	4.1	5	90	1000	1.0	3	1.0	−3.5	−2.5	450
LM524V3T1G	08	4.0	4.3	4.6	5	90	1000	1.0	3	1.0	−3.5	0	450
LM524V7T1G	09	4.4	4.7	5.0	5	80	800	1.0	3	2.0	−3.5	0.2	260
LM525V1T1G	0A	4.8	5.1	5.4	5	60	500	1.0	2	2.0	−2.7	1.2	225
LM525V6T1G	0C	5.2	5.6	6.0	5	40	400	1.0	1	2.0	−2.0	2.5	200
LM526V2T1G	0E	5.8	6.2	6.6	5	10	100	1.0	3	4.0	0.4	3.7	185
LM526V8T1G	0F	6.4	6.8	7.2	5	15	160	1.0	2	4.0	1.2	4.5	155
LM527V5T1G	0G	7.0	7.5	7.9	5	15	160	1.0	1	5.0	2.5	5.3	140
LM528V2T1G	0H	7.7	8.2	8.7	5	15	160	1.0	0.7	5.0	3.2	6.2	135
LM529V1T1G	0K	8.5	9.1	9.6	5	15	160	1.0	0.2	7.0	3.8	7.0	130
LM5210VT1G	0L	9.4	10	10.6	5	20	160	1.0	0.1	8.0	4.5	8.0	130
LM5211VT1G	0M	10.4	11	11.6	5	20	160	1.0	0.1	8.0	5.4	9.0	130
LM5212VT1G	0N	11.4	12	12.7	5	25	80	1.0	0.1	8.0	6.0	10	130
LM5213VT1G	0P	12.4	13.25	14.1	5	30	80	1.0	0.1	8.0	7.0	11	120
LM5215VT1G	0T	14.3	15	15.8	5	30	200	1.0	0.05	10.5	9.2	13	110
LM5216VT1G	0U	15.3	16.2	17.1	2	40	200	1.0	0.05	11.2	10.4	14	105
LM5218VT1G	0W	16.8	18	19.1	2	45	225	1.0	0.05	12.6	12.4	16	100
LM5220VT1G	0Z	18.8	20	21.2	2	55	225	1.0	0.05	14.0	14.4	18	85
LM5222VT1G	10	20.8	22	23.3	2	55	250	1.0	0.05	15.4	16.4	20	85
LM5224VT1G	11	22.8	24.2	25.6	2	70	120	1.0	0.05	16.8	18.4	22	80
LM5227VT1G	12	25.1	27	28.9	2	80	300	1.0	0.05	18.9	21.4	25.3	70
LM5230VT1G	14	28	30	32	2	80	300	1.0	0.05	21.0	24.4	29.4	70
LM5233VT1G	18	31	33	35	2	80	300	1.0	0.05	23.2	27.4	33.4	70
LM5236VT1G	19	34	36	38	2	90	500	1.0	0.05	25.2	30.4	37.4	70
LM5239VT1G	20	37	39	41	2	130	500	1.0	0.05	27.3	33.4	41.2	45
LM5243VT1G	21	40	43	46	2	150	500	1.0	0.05	30.1	37.6	46.6	40
LM5247VT1G	1A	44	47	50	2	170	500	1.0	0.05	32.9	42.0	51.8	40
LM5251VT1G	1C	48	51	54	2	180	500	1.0	0.05	35.7	46.6	57.2	40
LM5256VT1G	1D	52	56	60	2	200	500	1.0	0.05	39.2	52.2	63.8	40
LM5262VT1G	1E	58	62	66	2	215	500	1.0	0.05	43.4	58.8	71.6	35
LM5268VT1G	1F	64	68	72	2	240	500	1.0	0.05	47.6	65.6	79.8	35
LM5275VT1G	1G	70	75	79	2	255	500	1.0	0.05	52.5	73.4	88.6	35

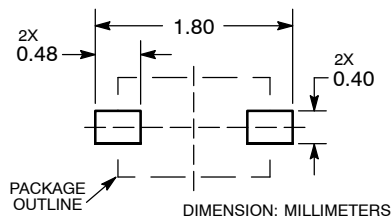
1. Zener voltage is measured with a pulse test current I_Z at an ambient temperature of 25°C .



SC-79/SOD-523



RECOMMENDED SOLDERING FOOTPRINT*



NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

DIM	MILLIMETERS		
	MIN	NOM	MAX
A	0.50	0.60	0.70
b	0.25	0.30	0.35
c	0.07	0.14	0.20
D	1.10	1.20	1.30
E	0.70	0.80	0.90
H _E	1.50	1.60	1.70
L	0.30 REF		
L2	0.15	0.20	0.25