TECH PUBLIC
台舟电子

MMSZ52xxBT1G-TP Series
500m Watt Zener Voltage Regulators

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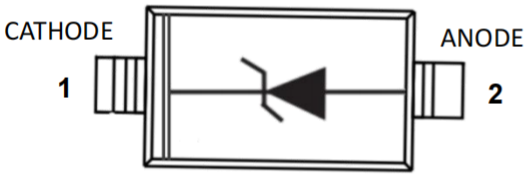
Features

- Low Zener Impedance
- Power Dissipation of 500mW
- High Stability and High Reliability
- Halogen free and RoHS compliant
- SOD123 surface mount package

Applications

- General voltage regulation
- Mobile & handheld systems
- Household Electric Appliances
- Industrial automation
- communication field

Pin Configuration



SOD123

Maximum Ratings& Thermal Characteristics

(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward Voltage @ IF=10mA	VF	0.9	V
Power Dissipation	PD	500	mW
Thermal Resistance (Junction-to-Ambient)	RθJA	340	°C/W
Junction Temperature Range	TJ	-55 ~ +150	°C
Storage Temperature Range	TSTG	-55 ~ +150	°C

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Electrical Characteristics (T_A = 25 Cunless otherwise noted, V_F = 0.9 V Max. @ I_F = 10 mA)

Device	Zener Voltage				Zener Impedance			Leakage Current	
	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
MMSZ5221BT1G-TP	2.28	2.4	2.52	20	30	1200	0.25	100	1
MMSZ5222BT1G-TP	2.38	2.5	2.63	20	30	1250	0.25	100	1
MMSZ5223BT1G-TP	2.57	2.7	2.84	20	30	1300	0.25	75	1
MMSZ5224BT1G-TP	2.66	2.8	2.94	20	30	1400	0.25	75	1
MMSZ5225BT1G-TP	2.85	3.0	3.15	20	29	1600	0.25	50	1
MMSZ5226BT1G-TP	3.14	3.3	3.47	20	28	1600	0.25	25	1
MMSZ5227BT1G-TP	3.42	3.6	3.78	20	24	1700	0.25	15	1
MMSZ5228BT1G-TP	3.71	3.9	4.10	20	23	1900	0.25	10	1
MMSZ5229BT1G-TP	4.09	4.3	4.52	20	22	2000	0.25	5	1
MMSZ5230BT1G-TP	4.47	4.7	4.94	20	19	1900	0.25	5	2
MMSZ5231BT1G-TP	4.85	5.1	5.36	20	17	1600	0.25	5	2
MMSZ5232BT1G-TP	5.32	5.6	5.88	20	11	1600	0.25	5	3
MMSZ5233BT1G-TP	5.70	6.0	6.30	20	7	1600	0.25	5	3.5
MMSZ5234BT1G-TP	5.89	6.2	6.51	20	7	1000	0.25	5	4
MMSZ5235BT1G-TP	6.46	6.8	7.14	20	5	750	0.25	3	5
MMSZ5236BT1G-TP	7.13	7.5	7.88	20	6	500	0.25	3	6
MMSZ5237BT1G-TP	7.79	8.2	8.61	20	8	500	0.25	3	6.5
MMSZ5238BT1G-TP	8.27	8.7	9.14	20	8	600	0.25	3	6.5
MMSZ5239BT1G-TP	8.65	9.1	9.56	20	10	600	0.25	3	7
MMSZ5240BT1G-TP	9.50	10	10.50	20	17	600	0.25	3	8
MMSZ5241BT1G-TP	10.45	11	11.55	20	22	600	0.25	2	8.4
MMSZ5242BT1G-TP	11.40	12	12.60	20	30	600	0.25	1	9.1
MMSZ5243BT1G-TP	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9
MMSZ5244BT1G-TP	13.30	14	14.70	9.0	15	600	0.25	0.1	10
MMSZ5245BT1G-TP	14.25	15	15.75	8.5	16	600	0.25	0.1	11
MMSZ5246BT1G-TP	15.20	16	16.80	7.8	17	600	0.25	0.1	12
MMSZ5247BT1G-TP	16.15	17	17.85	7.4	19	600	0.25	0.1	13

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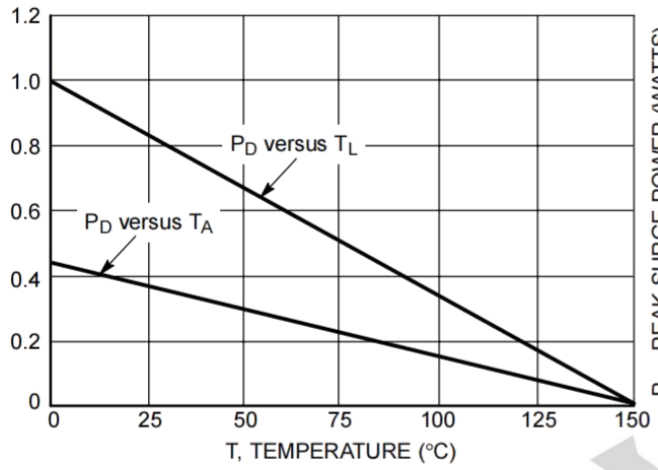
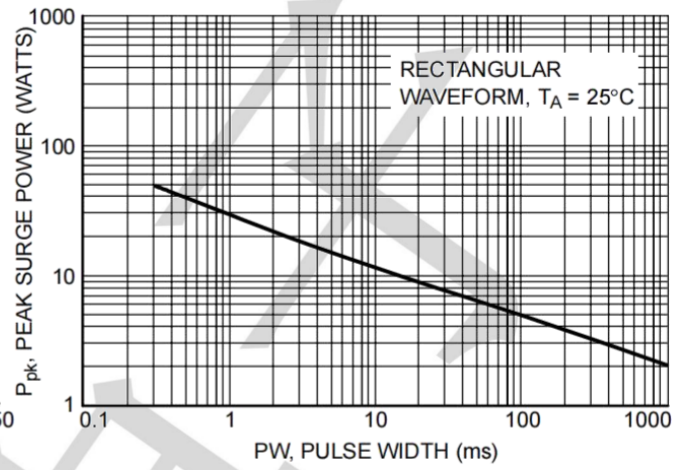
Device	Zener Voltage				Zener Impedance			Leakage Current	
	V_Z (Volts)			@ I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}		I_R @ V_R	
	Min	Nom	Max	mA	Ω	Ω	mA	μA	Volts
MMSZ5248BT1G-TP	17.10	18	18.90	7.0	21	600	0.25	0.1	14
MMSZ5250BT1G-TP	19.00	20	21.00	6.2	25	600	0.25	0.1	15
MMSZ5251BT1G-TP	20.90	22	23.10	5.6	29	600	0.25	0.1	17
MMSZ5252BT1G-TP	22.80	24	25.20	5.2	33	600	0.25	0.1	18
MMSZ5253BT1G-TP	23.75	25	26.25	5.0	35	600	0.25	0.1	19
MMSZ5254BT1G-TP	25.65	27	28.35	4.6	41	600	0.25	0.1	21
MMSZ5255BT1G-TP	26.60	28	29.40	4.5	44	600	0.25	0.1	21
MMSZ5256BT1G-TP	28.50	30	31.50	4.2	49	600	0.25	0.1	23
MMSZ5257BT1G-TP	31.35	33	34.65	3.8	58	700	0.25	0.1	25
MMSZ5258BT1G-TP	34.20	36	37.80	3.4	70	700	0.25	0.1	27
MMSZ5259BT1G-TP	37.05	39	40.95	3.2	80	800	0.25	0.1	30
MMSZ5260BT1G-TP	40.85	43	45.15	3.0	93	900	0.25	0.1	33
MMSZ5261BT1G-TP	44.65	47	49.35	2.7	105	1000	0.25	0.1	36
MMSZ5262BT1G-TP	48.45	51	53.55	2.5	125	1100	0.25	0.1	39
MMSZ5263BT1G-TP	53.20	56	58.80	2.2	150	1300	0.25	0.1	43
MMSZ5264BT1G-TP	57.00	60	63.00	2.1	170	1400	0.25	0.1	46
MMSZ5265BT1G-TP	58.90	62	65.10	2.0	185	1400	0.25	0.1	47
MMSZ5266BT1G-TP	64.60	68	71.40	1.8	230	1600	0.25	0.1	52
MMSZ5267BT1G-TP	71.25	75	78.75	1.7	270	1700	0.25	0.1	56
MMSZ5268BT1G-TP	77.90	82	86.10	1.5	330	2000	0.25	0.1	62
MMSZ5269BT1G-TP	82.65	87	91.35	1.4	370	2200	0.25	0.1	68
MMSZ5270BT1G-TP	86.45	91	95.55	1.4	400	2300	0.25	0.1	69
MMSZ5272BT1G-TP	104.5	110	115.5	1.1	750	3000	0.25	0.1	84

1.The type numbers shown have a standard tolerance of 5% on the nominal Zener voltage.
2.Nominal Zener voltage is measured with the device junction in thermal equilibrium at TL = 30℃ ±1℃.
3.ZZT and ZZK are measured by dividing the AC voltage drop across the device by the ac current applied

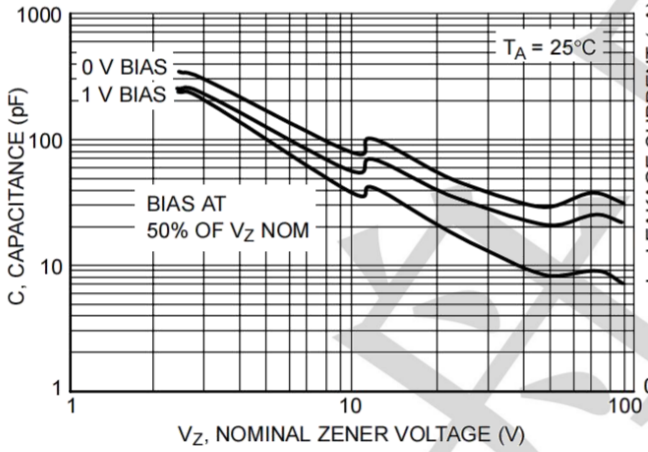
Typical Characteristics Curves



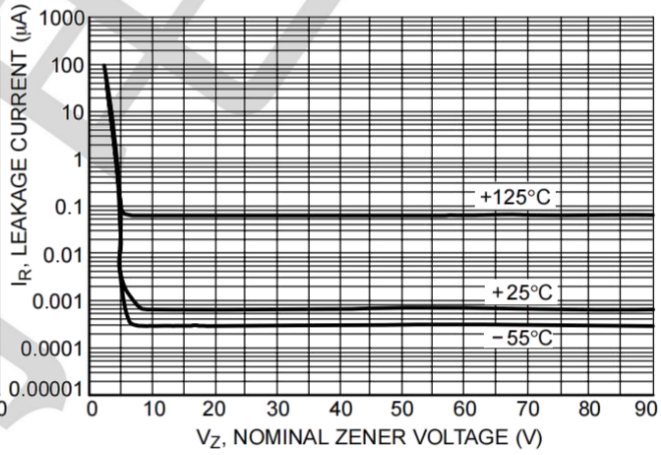
Steady State Power Derating



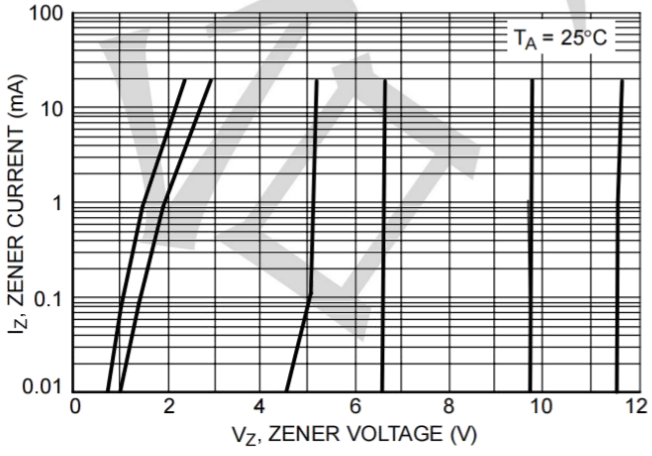
Maximum Nonrepetitive Surge Power



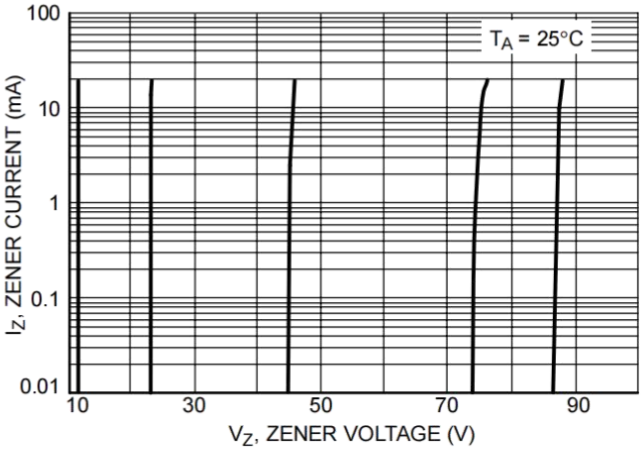
Typical Capacitance



Typical Leakage Current



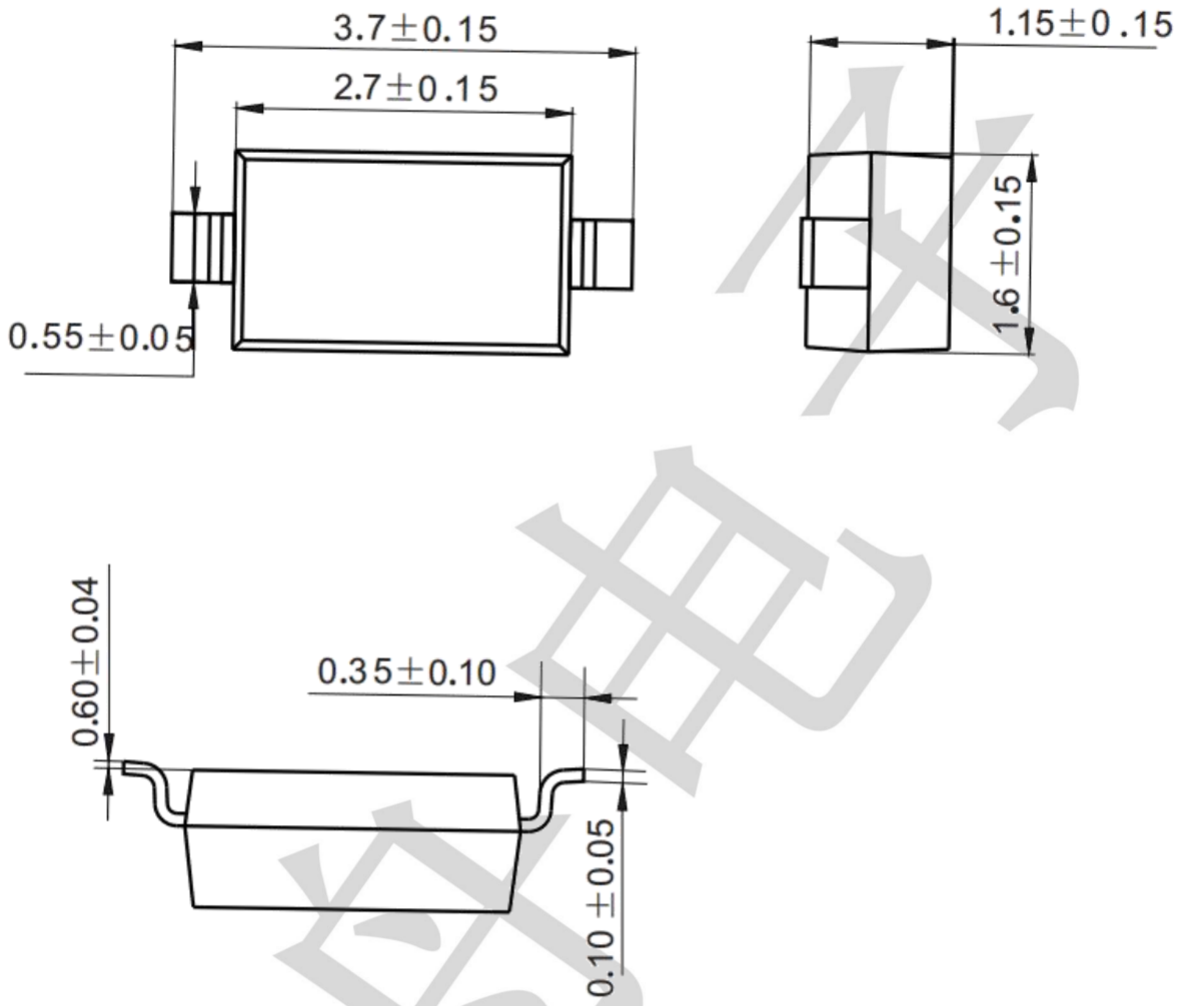
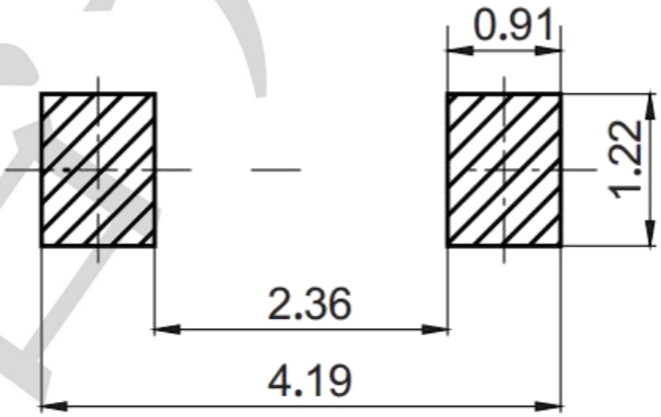
Zener Voltage versus Zener Current (V_Z Up to 12 V)



Zener Voltage versus Zener Current (12 V to 91 V)

Package Outline Dimensions (unit: mm)

SOD123



Mounting Pad Layout (unit: mm)