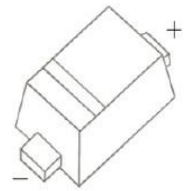
MM5Zxx Series

SOD-523 Plastic-Encapsulate Zener Diode

RoHS COMPLIANT

SOD-523





Features

- Low Zener Impedance
- 300mW; Power Dissipation of 300mW
- High Stability and High Reliability

Mechanical Data

- Package: SOD-523 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Power Dissipation	Pd	300 1)	mW
Forward Voltage @IF=10mA	Vf	0.9 2)	V
Storage temperature range	Ts	-55-+150	℃
Thermal Resistance, Junction to Ambient	R θ JA	390	℃/W

1) Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm²
2) Short duration test pulse used to minimize self-heating effect
3) f=1KHz

Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

Device	Marking	Zener Voltage Range				Maximum Zener Impedance 3)			Maximum Reverse Current		Typical Temperature coefficent @ IZTC=mV/℃		Test Current IZTC
		Vz@Izt			Izt	Zzt @Izt	Zzk @Izk	Izk	IR	VR			
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V	Min	Max	mA
MM5Z 2V4	00	2.4	2.2	2.6	5	100	600	1.0	50	1.0	-3.5	0	5
MM5Z 2V7	01	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0	5
MM5Z 3V0	02	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0	5
MM5Z 3V3	05	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0	5
MM5Z 3V6	06	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0	5
MM5Z 3V9	07	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0	5
MM5Z 4V3	08	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0	5
MM5Z 4V7	09	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2	5
MM5Z 5V1	0A	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2	5
MM5Z 5V6	0C	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5	5
MM5Z 6V2	0E	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7	5
MM5Z 6V8	0F	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5	5
MM5Z 7V5	0G	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3	5
MM5Z 8V2	0H	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5
MM5Z 9V1	0K	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
MM5Z 10	0L	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
MM5Z 11	0M	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
MM5Z 12	0N	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
MM5Z 13	0P	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5

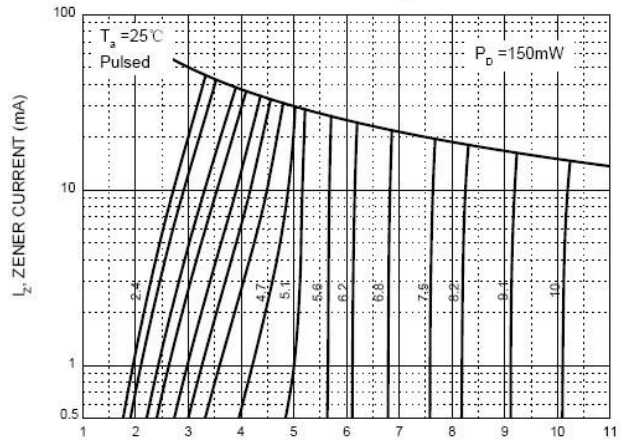
MM5Zxx Series

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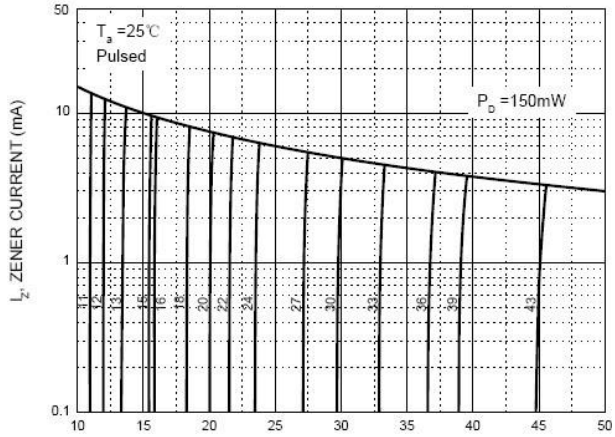
Device	Marking	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature coefficent @ IZTC=mV/℃		Test Current IZTC
		Vz@Izt			Izt	Zzt @Izt	Zzk @Izk	Izk	IR	VR			
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V	Min	Max	mA
MM5Z 15	0T	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	5
MM5Z 16	0U	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5
MM5Z 18	0W	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5
MM5Z 20	0Z	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
MM5Z 22	10	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
MM5Z 24	11	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5
MM5Z 27	12	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
MM5Z 30	14	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
MM5Z 33	18	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
MM5Z 36	19	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2
MM5Z 39	20	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	2
MM5Z 43	21	43	40.0	46.0	2	100	700	1.0	0.1	32.0	10.0	12.0	5

Typical characteristics

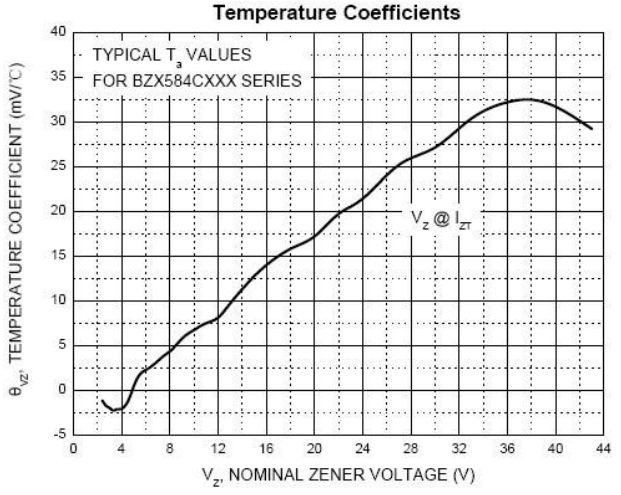
Zener Characteristics (V_z Up to 10 V)



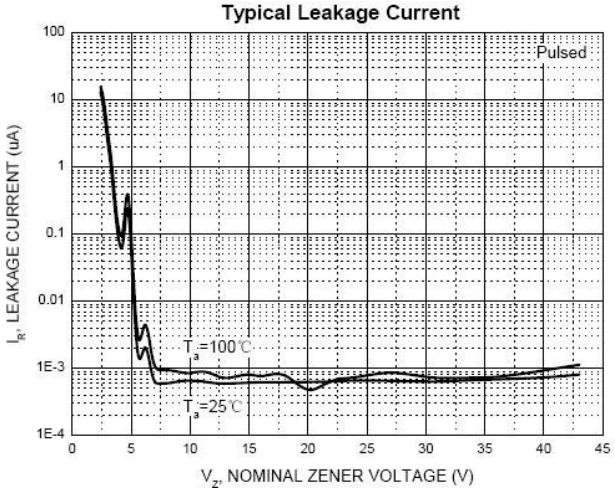
Zener Characteristics (11 V to 43 V)



Temperature Coefficients

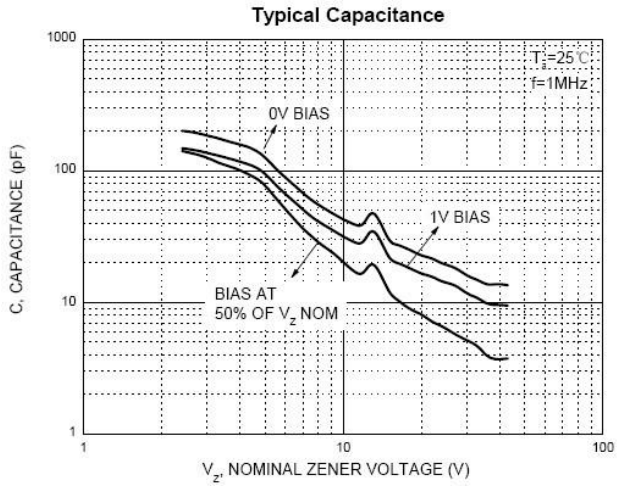


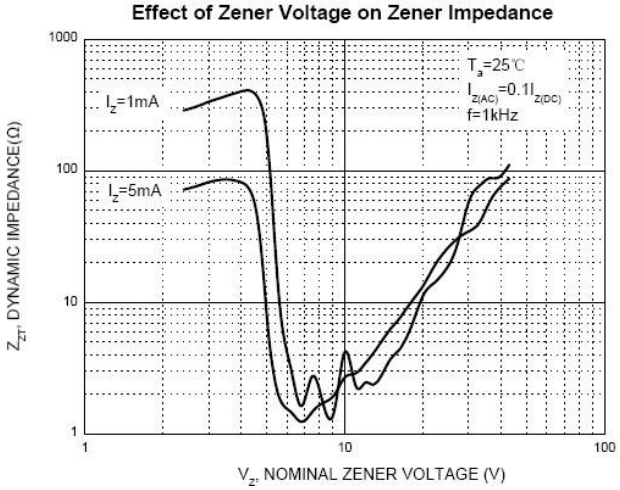
Typical Leakage Current

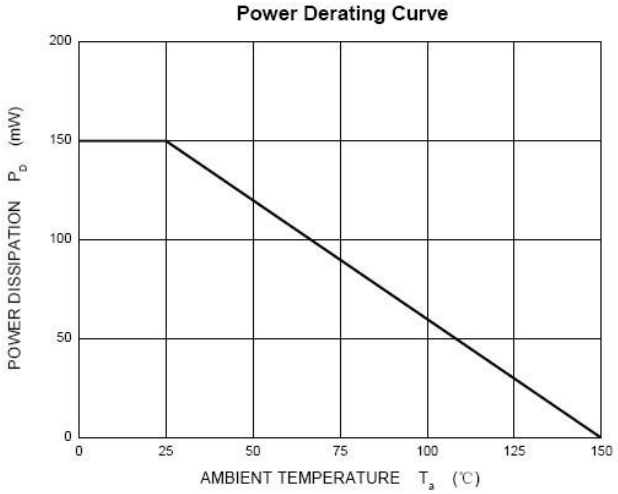


MM5Zxx Series

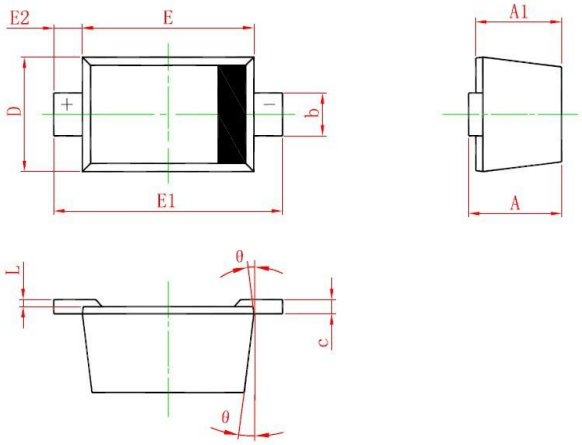
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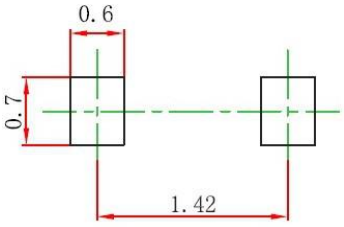


SOD-523 PACKAGE OUTLINE



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

SOD-523 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

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DZL4770 BT136S-600E S3B SM516 1N5339B 1SMB5949B 3SMB5936B BZV55C12 M20 SMBJ5344B BZT52C3V3 2EZ51D5 BZT52C6V8 ES1DB(SMB) MBR2045CD SM4001(DL4001) DO-213AB BZT52C3V9 BZX55C27 1SMA4743A SZ455G 1N4766 1SMA5951B 1SMB5945B 2EZ18D5 BZG03C150 DZL4747 GL34M SMF4L3.3A 1SMB5942B BZT52C36