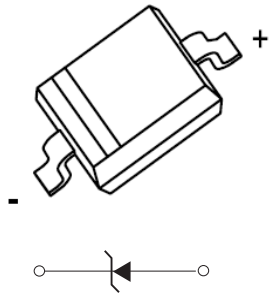


SOD-323 Plastic-Encapsulate Diodes**MMSZ5221CS-MMSZ5259CS**

Zener Diodes

SOD-323

**FEATURES**

- Zener Voltages From 2.4V - 39V
- 200mW Power Dissipation
- Planar Die Construction

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation	P_d	200	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	625	$^{\circ}\text{C/W}$
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	

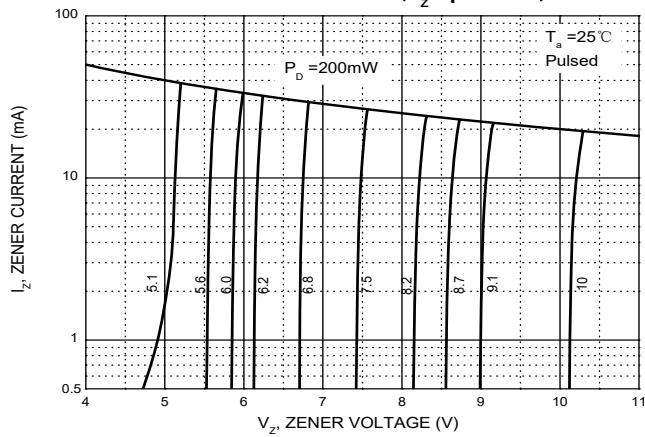
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Type Number	Code	Zener Voltage Range (Note 2)			Test Current	Maximum Zener Impedance		Maximum Reverse Leakage Current	
		V _Z @I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK} = 0.25mA	I _R	@V _R
		Nom(V)	Min(V)	Max(V)	mA	Ω		μA	V
MMSZ5221CS	2C1	2.4	2.35	2.45	20	30	1200	100	1.0
MMSZ5223CS	2C3	2.7	2.65	2.75	20	30	1300	75	1.0
MMSZ5225CS	2C5	3.0	2.94	3.06	20	30	1600	50	1.0
MMSZ5226CS	2G1	3.3	3.23	3.37	20	28	1600	25	1.0
MMSZ5227CS	2G2	3.6	3.53	3.67	20	24	1700	15	1.0
MMSZ5228CS	2G3	3.9	3.82	3.98	20	23	1900	10	1.0
MMSZ5229CS	2G4	4.3	4.21	4.39	20	22	2000	5.0	1.0
MMSZ5230CS	2G5	4.7	4.61	4.79	20	19	1900	5.0	2.0
MMSZ5231CS	2E1	5.1	5.00	5.20	20	17	1600	5.0	2.0
MMSZ5232CS	2E2	5.6	5.49	5.71	20	11	1600	5.0	3.0
MMSZ5233CS	2E3	6.0	5.88	6.12	20	7	1600	5.0	3.5
MMSZ5234CS	2E4	6.2	6.08	6.32	20	7	1000	5.0	4.0
MMSZ5235CS	2E5	6.8	6.66	6.94	20	5	750	3.0	5.0
MMSZ5236CS	2F1	7.5	7.35	7.65	20	6	500	3.0	6.0
MMSZ5237CS	2F2	8.2	8.04	8.36	20	8	500	3.0	6.5
MMSZ5238CS	2F3	8.7	8.53	8.87	20	8	600	3.0	6.5
MMSZ5239CS	2F4	9.1	8.92	9.28	20	10	600	3.0	7.0
MMSZ5240CS	2F5	10	9.80	10.20	20	17	600	3.0	8.0
MMSZ5241CS	2H1	11	10.78	11.22	20	22	600	2.0	8.4
MMSZ5242CS	2H2	12	11.76	12.24	20	30	600	1.0	9.1
MMSZ5243CS	2H3	13	12.74	13.26	9.5	13	600	0.5	9.9
MMSZ5244CS	2H4	14	13.72	14.28	9.0	15	600	0.1	10
MMSZ5245CS	2H5	15	14.70	15.30	8.5	16	600	0.1	11
MMSZ5246CS	2J1	16	15.68	16.32	7.8	17	600	0.1	12
MMSZ5248CS	2J3	18	17.64	18.36	7.0	21	600	0.1	14
MMSZ5250CS	2J5	20	19.60	20.40	6.2	25	600	0.1	15
MMSZ5251CS	2K1	22	21.56	22.44	5.6	29	600	0.1	17
MMSZ5252CS	2K2	24	23.52	24.48	5.2	33	600	0.1	18
MMSZ5253CS	2K3	25	24.50	25.50	5.0	35	600	0.1	19
MMSZ5254CS	2K4	27	26.46	27.54	5.0	41	600	0.1	21
MMSZ5255CS	2K5	28	27.44	28.56	4.5	44	600	0.1	21
MMSZ5256CS	2M1	30	29.40	30.60	4.2	49	600	0.1	23
MMSZ5257CS	2M2	33	32.34	33.66	3.8	58	700	0.1	25
MMSZ5258CS	2M3	36	35.28	36.72	3.4	70	700	0.1	27
MMSZ5259CS	2M4	39	38.22	39.78	3.2	80	800	0.1	30

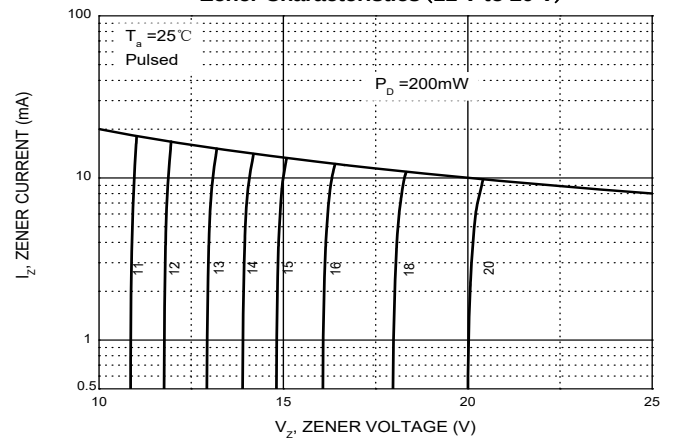
Typical Characteristics

Notes: Our company currently provide 5.1 V - 20 V products only

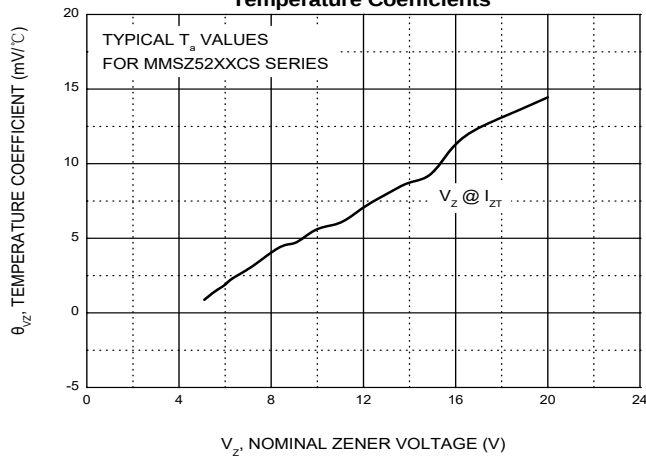
Zener Characteristics (V_Z Up to 10 V)



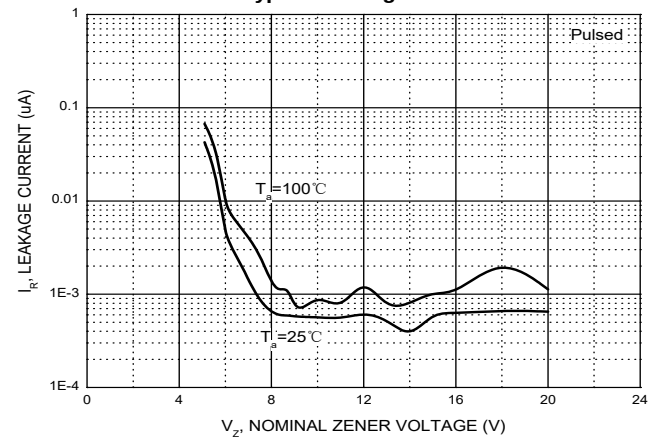
Zener Characteristics (11 V to 20 V)



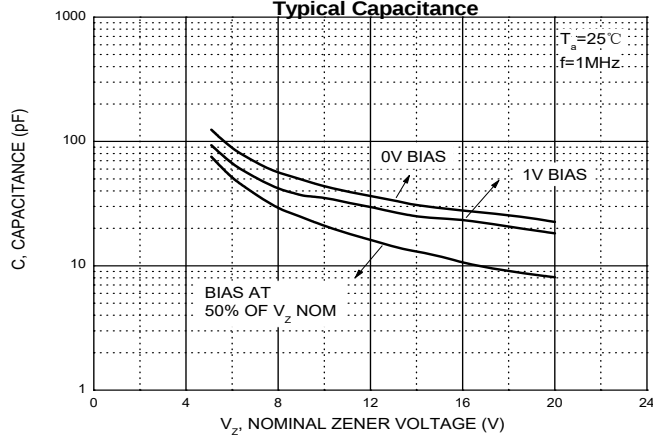
Temperature Coefficients



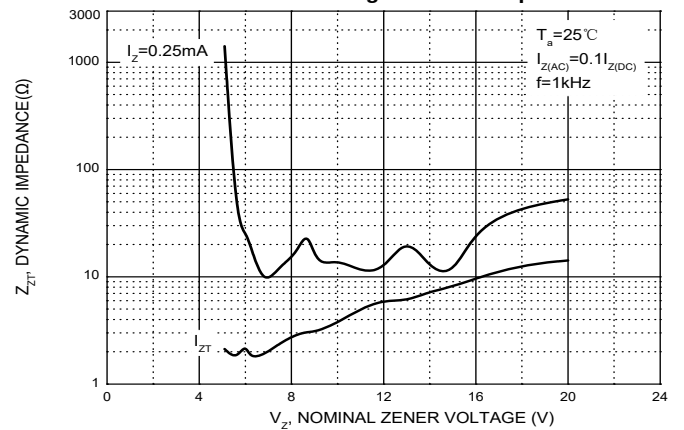
Typical Leakage Current



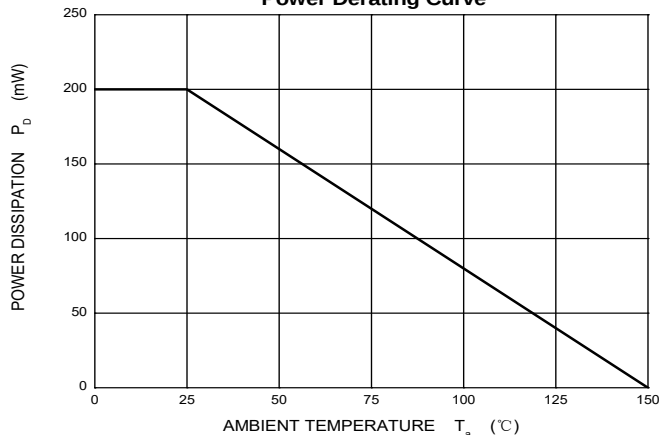
Typical Capacitance



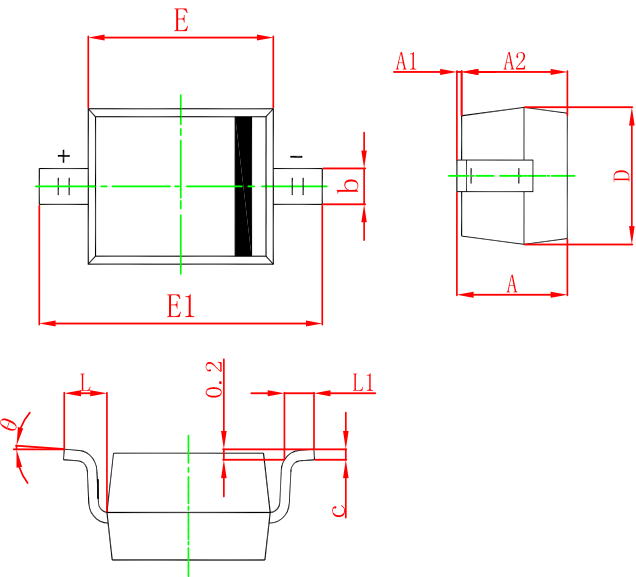
Effect of Zener Voltage on Zener Impedance



Power Derating Curve

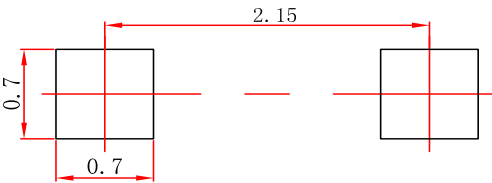


Package Outline Dimensions (SOD-323)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A		1.100		0.043
A1	0.000	0.100	0.000	0.004
A2	0.800	1.000	0.031	0.039
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.750	0.098	0.108
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Suggested Pad Layout (SOD-323)



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