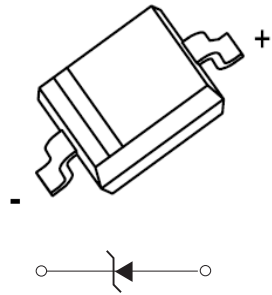


SOD-323 Plastic-Encapsulate Diodes**MMSZ5221CS-MMSZ5259CS**

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)

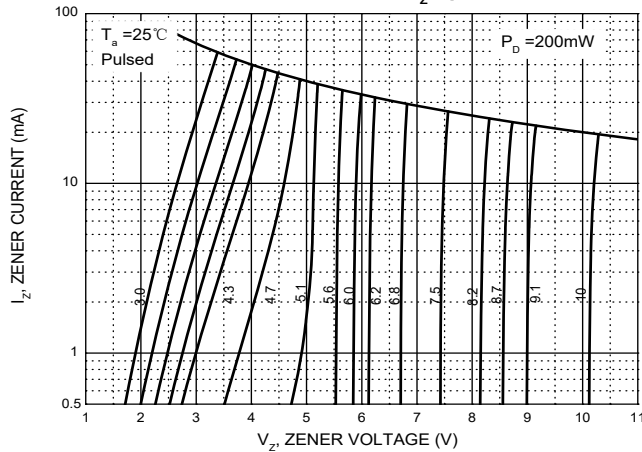
Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation	P_D	200	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	625	$^{\circ}\text{C/W}$
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	

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

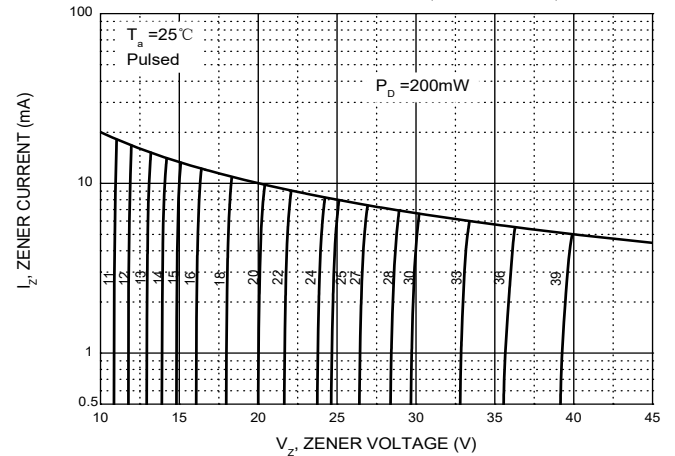
Type Number	Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 4)			Maximum Reverse Current	
		$V_Z @ I_{ZT}$			I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	I_R	V_R
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V
MMSZ5221BS	C1	2.4	2.28	2.52	20	30	1200	0.25	100	1.0
MMSZ5223BS	C3	2.7	2.57	2.84	20	30	1300	0.25	75	1.0
MMSZ5225BS	C5	3.0	2.85	3.15	20	30	1600	0.25	50	1.0
MMSZ5226BS	G1	3.3	3.14	3.47	20	28	1600	0.25	25	1.0
MMSZ5227BS	G2	3.6	3.42	3.78	20	24	1700	0.25	15	1.0
MMSZ5228BS	G3	3.9	3.71	4.10	20	23	1900	0.25	10	1.0
MMSZ5229BS	G4	4.3	4.09	4.52	20	22	2000	0.25	5	1.0
MMSZ5230BS	G5	4.7	4.47	4.94	20	19	1900	0.25	5	2.0
MMSZ5231BS	E1	5.1	4.85	5.36	20	17	1600	0.25	5	2.0
MMSZ5232BS	E2	5.6	5.32	5.88	20	11	1600	0.25	5	3.0
MMSZ5233BS	E3	6.0	5.70	6.30	20	7	1600	0.25	5	3.5
MMSZ5234BS	E4	6.2	5.89	6.51	20	7	1000	0.25	5	4.0
MMSZ5235BS	E5	6.8	6.46	7.14	20	5	750	0.25	3	5.0
MMSZ5236BS	F1	7.5	7.13	7.88	20	6	500	0.25	3	6.0
MMSZ5237BS	F2	8.2	7.79	8.61	20	8	500	0.25	3	6.5
MMSZ5238BS	F3	8.7	8.27	9.14	20	8	600	0.25	3	6.5
MMSZ5239BS	F4	9.1	8.65	9.56	20	10	600	0.25	3	7.0
MMSZ5240BS	F5	10	9.50	10.50	20	17	600	0.25	3	8.0
MMSZ5241BS	H1	11	10.45	11.55	20	22	600	0.25	2.0	8.4
MMSZ5242BS	H2	12	11.40	12.60	20	30	600	0.25	1.0	9.1
MMSZ5243BS	H3	13	12.35	13.65	9.5	13	600	0.25	0.5	9.9
MMSZ5244BS	H4	14	13.30	14.70	9.0	15	600	0.25	0.1	10
MMSZ5245BS	H5	15	14.25	15.75	8.5	16	600	0.25	0.1	11
MMSZ5246BS	J1	16	15.20	16.80	7.8	17	600	0.25	0.1	12
MMSZ5248BS	J3	18	17.10	18.90	7.0	21	600	0.25	0.1	14
MMSZ5250BS	J5	20	19.00	21.00	6.2	25	600	0.25	0.1	15
MMSZ5251BS	K1	22	20.90	23.10	5.6	29	600	0.25	0.1	17
MMSZ5252BS	K2	24	22.80	25.20	5.2	33	600	0.25	0.1	18
MMSZ5253BS	K3	25	23.75	26.25	5.0	35	600	0.25	0.1	19
MMSZ5254BS	K4	27	25.65	28.35	5.0	41	600	0.25	0.1	21
MMSZ5255BS	K5	28	26.60	29.40	4.5	44	600	0.25	0.1	21
MMSZ5256BS	M1	30	28.50	31.50	4.2	49	600	0.25	0.1	23
MMSZ5257BS	M2	33	31.35	34.65	3.8	58	700	0.25	0.1	25
MMSZ5258BS	M3	36	34.20	37.80	3.4	70	700	0.25	0.1	27
MMSZ5259BS	M4	39	37.05	40.95	3.2	80	800	0.25	0.1	30

Typical Characteristics

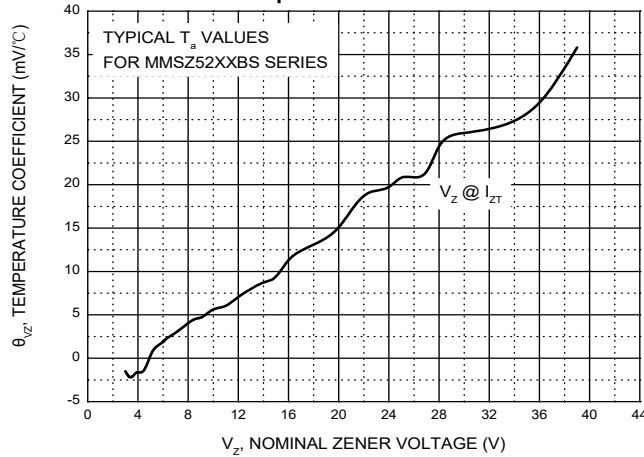
Zener Characteristics (V_z Up to 10 V)



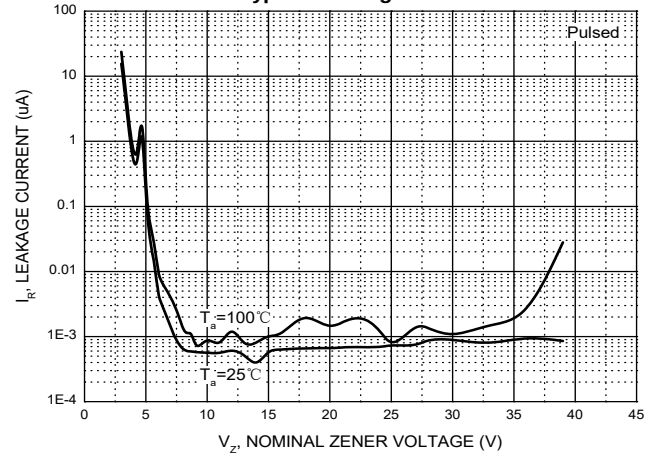
Zener Characteristics (11 V to 39 V)



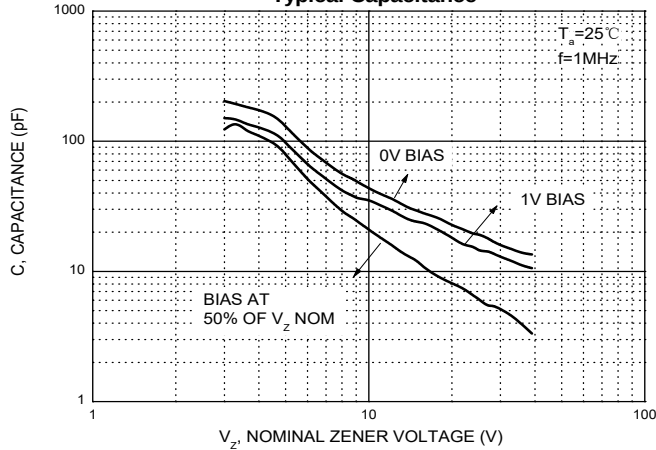
Temperature Coefficients



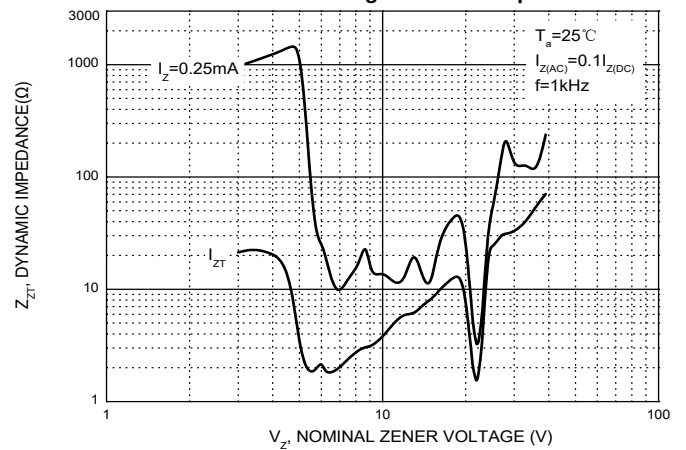
Typical Leakage Current



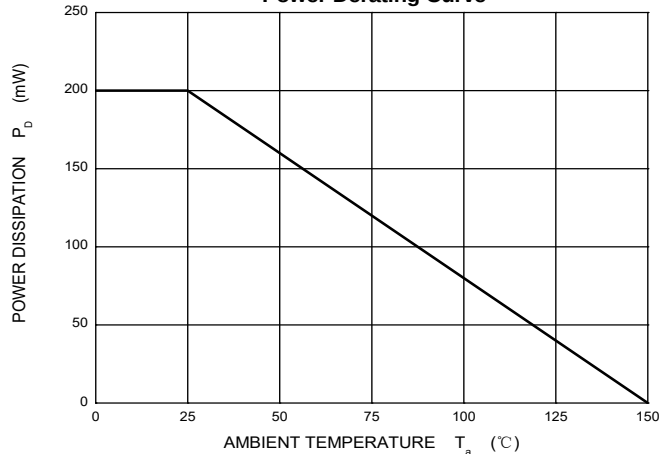
Typical Capacitance



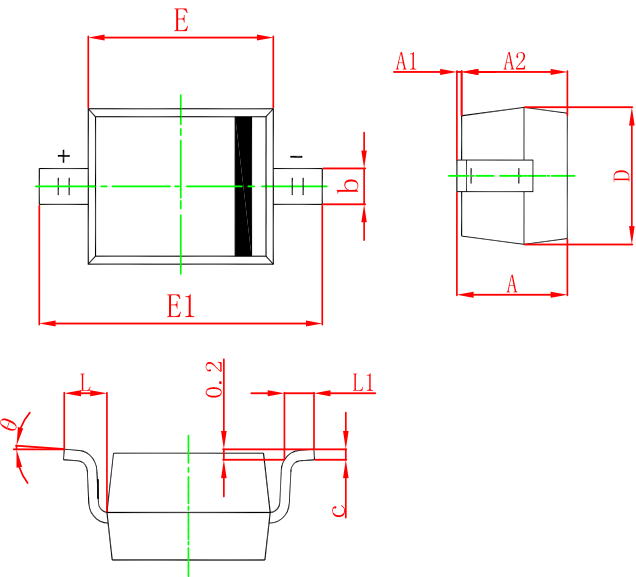
Effect of Zener Voltage on Zener Impedance



Power Derating Curve

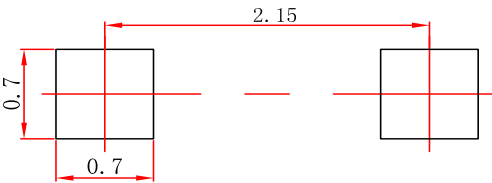


Package Outline Dimensions (SOD-323)



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.