

# MMSZ5221BS--- MMSZ5259BS

## ZENER DIODE

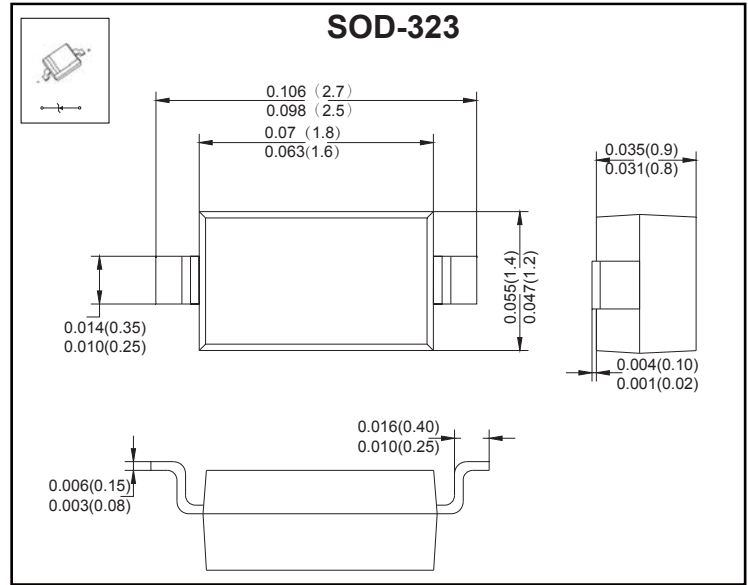
ZENER VOLTAGE RANGE: 2.4 --- 39V  
PEAK PULSE POWER:200mW

### FEATURE

- Low Zener Impedance
- Power Dissipation of 200mW
- High Stability and High Reliability

### MECHANICAL DATA

- Case: SOD-323 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any



## MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 10\text{mA}$	$V_F$	0.9	V
Power Dissipation	$P_d$	200	mW
Storage Temperature Range	$T_{stg}$	-65 ~ +150	°C

## Electrical Specification (@ $T_A=25^\circ\text{C}$ unless otherwise specified)

Type Number	Type Code	$V_{z1}(@I_{zt})$		$I_{zt}$ mA	$Z_{zt}@I_{zt}$ Max $\Omega$	$Z_{zk}$		IR	
		Min (V)	Max (V)			Max $\Omega$	$I_{zk}$ mA	Max uA	VR V
MMSZ5221BS	C1	2.28	2.52	20	30	1200	0.25	100	1.0
MMSZ5223BS	C3	2.57	2.84	20	30	1300	0.25	75	1.0
MMSZ5225BS	C5	2.85	3.15	20	30	1600	0.25	50	1.0
MMSZ5226BS	G1	3.14	3.47	20	28	1600	0.25	25	1.0
MMSZ5227BS	G2	3.42	3.78	20	24	1700	0.25	15	1.0
MMSZ5228BS	G3	3.71	4.10	20	23	1900	0.25	10	1.0
MMSZ5229BS	G4	4.09	4.52	20	22	2000	0.25	5.0	1.0
MMSZ5230BS	G5	4.47	4.94	20	19	1900	0.25	5.0	2.0
MMSZ5231BS	E1	4.85	5.36	20	17	1600	0.25	5.0	2.0
MMSZ5232BS	E2	5.32	5.88	20	11	1600	0.25	5.0	3.0
MMSZ5233BS	E3	5.70	6.30	20	7	1600	0.25	5.0	3.5
MMSZ5234BS	E4	5.89	6.51	20	7	1000	0.25	5.0	4.0
MMSZ5235BS	E5	6.46	7.14	20	5	750	0.25	3	5.0
MMSZ5236BS	F1	7.13	7.88	20	6	500	0.25	3	6.0
MMSZ5237BS	F2	7.79	8.61	20	8	500	0.25	3	6.5
MMSZ5238BS	F3	8.27	9.14	20	8	600	0.25	3	6.5
MMSZ5239BS	F4	8.65	9.56	20	10	600	0.25	3	7.0

- Notes: 1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>.  
2. Short duration test pulse used to minimize self-heating effect.  
3. f = 1kHz.

# Electrical Specification (@ $T_A=25^{\circ}\text{C}$ unless otherwise specified)

Type Number	Type Code	$V_{z1}(@I_{zt})$			$Z_{zt}@I_{zt}$	$Z_{zk}$		IR	
		Min (V)	Max (V)	$I_{zt}$ mA	Max $\Omega$	Max $\Omega$	$I_{zk}$ mA	Max $\mu\text{A}$	VR V
MMSZ5241BS	H1	10.45	11.55	20	22	600	0.25	2.0	8.4
MMSZ5242BS	H2	11.40	12.60	20	30	600	0.25	1.0	9.1
MMSZ5243BS	H3	12.35	13.65	9.5	13	600	0.25	0.5	9.9
MMSZ5244BS	H4	13.30	14.70	9.0	15	600	0.25	0.1	10
MMSZ5245BS	H5	14.25	15.75	8.5	16	600	0.25	0.1	11
MMSZ5246BS	J1	15.20	16.80	7.8	17	600	0.25	0.1	12
MMSZ5248BS	J3	17.10	18.90	7.0	21	600	0.25	0.1	14
MMSZ5250BS	J5	19.00	21.00	6.2	25	600	0.25	0.1	15
MMSZ5251BS	K1	20.90	23.10	5.6	29	600	0.25	0.1	17
MMSZ5252BS	K2	22.80	25.20	5.2	33	600	0.25	0.1	18
MMSZ5253BS	K3	23.75	26.25	5.0	35	600	0.25	0.1	19
MMSZ5254BS	K4	25.65	28.35	5.0	41	600	0.25	0.1	21
MMSZ5255BS	K5	26.60	29.40	4.5	44	600	0.25	0.1	21
MMSZ5256BS	M1	28.50	31.50	4.2	49	600	0.25	0.1	23
MMSZ5257BS	M2	31.35	34.65	3.8	58	700	0.25	0.1	25
MMSZ5258BS	M3	34.20	37.80	3.4	70	700	0.25	0.1	27
MMSZ5259BS	M4	37.05	40.95	3.2	80	800	0.25	0.1	30

$V_F \leq 0.9\text{V} @ I_F = 10\text{mA}$

