

**MMSZ5221BS THRU MMSZ5259BS**

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON ZENER DIODES**

**FEATURES**

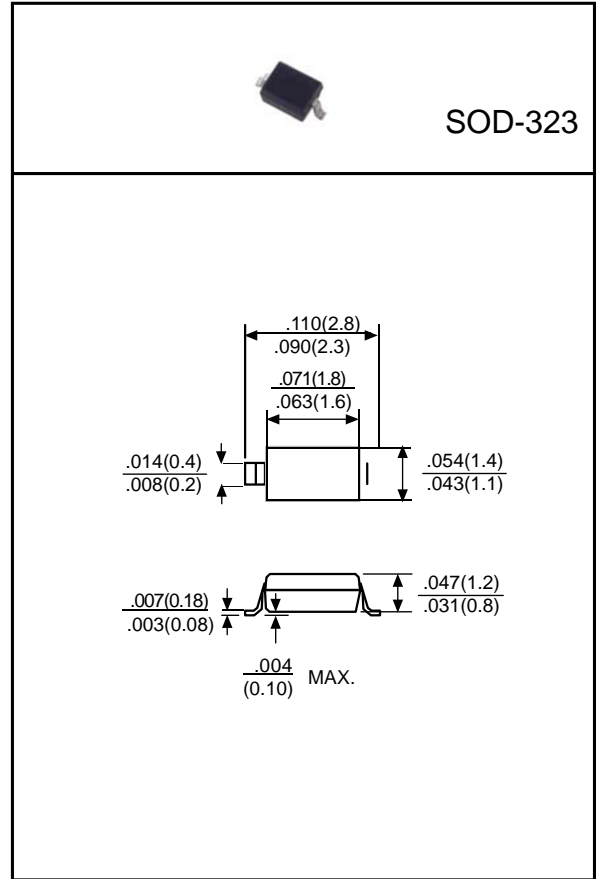
- \* Planar Die construction
- \* Zener Voltages from 2.4V - 39V
- \* 500mW Power Dissipation
- \* Ideally Suited for Automated Assembly Processes

**MECHANICAL DATA**

- \* Case: Molded Plastic
- \* Terminals: Solder plated, solderable per MIL-STD-202, Method 208
- \* Polarity: See Diagram Below
- \* Mounting position: Any
- \* Weight: 0.008 gram Approx.

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.



Dimensions in inches(millimeters)

	SYMBOL	VALUE	UNITS
Zener Current see Table "Characteristics"			
Power Dissipation (Notes 1) at Tamb=25°C	Ptot	500	mW
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) (Notes 2)	IFSM	4.0	Amps
Maximum Forward Voltage at IF=100mA	VF	1.2	Volts
Operating and Storage Temperature	TJ, Tstg	-55 to + 150	°C

Notes: 1. Mounted on 5.0mm<sup>2</sup> (.013mm thick) land areas.  
 2. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

# RATING AND CHARACTERISTIC CURVES (MMSZ5221BS THRU MMSZ5259BS)

TYPE	Nominal Zener Voltage $V_Z@I_{ZT}$	Zener Test Current $I_{ZT}$	Maximum Zener Impedance		$I_{ZK}$	Maximum Reverse Leakage Current		Typical Temperature Coefficient	Max. Zener Current $I_{ZM}@T_A$	Marking Code
			$Z_{ZT}@I_{ZT}$	$Z_{ZT}@I_{ZK}$		$I_R @ V_R$				
	Volts	mA	Ohms	Ohms	mA	$\mu A$	Volts	% / °C	mA	
MMSZ5221BS	2.4	20	30	1200	0.25	100	1.0	-0.070	188	C1
MMSZ5222BS	2.5	20	30	1250	0.25	100	1.0	-0.065	180	C2
MMSZ5223BS	2.7	20	30	1300	0.25	75	1.0	-0.060	167	C3
MMSZ5225BS	3.0	20	30	1600	0.25	50	1.0	-0.055	150	C5
MMSZ5226BS	3.3	20	28	1600	0.25	25	1.0	0.030	136	D1
MMSZ5227BS	3.6	20	24	1700	0.25	15	1.0	0.030	126	D2
MMSZ5228BS	3.9	20	23	1900	0.25	10	1.0	+0.038	115	D3
MMSZ5229BS	4.3	20	22	2000	0.25	5	1.0	+0.038	106	D4
MMSZ5230BS	4.7	20	19	1900	0.25	5	2.0	+0.045	97	D5
MMSZ5231BS	5.1	20	17	1600	0.25	5	2.0	+0.050	89	E1
MMSZ5232BS	5.6	20	11	1600	0.25	5	3.0	+0.058	81	E2
MMSZ5233BS	6.0	20	9	1600	0.25	5	3.5	+0.060	76	E3
MMSZ5234BS	6.2	20	7	1000	0.25	5	4.0	+0.062	73	E4
MMSZ5235BS	6.8	20	5	750	0.25	3	5.0	+0.065	67	E5
MMSZ5236BS	7.5	20	6	500	0.25	3	6.0	+0.068	61	F1
MMSZ5237BS	8.2	20	8	500	0.25	3	6.0	+0.075	55	F2
MMSZ5238BS	8.7	20	9	600	0.25	3	6.5	+0.075	52	F3
MMSZ5239BS	9.1	20	10	600	0.25	3	6.5	+0.076	50	F4
MMSZ5240BS	10	20	17	600	0.25	3	8.0	+0.077	45	F5
MMSZ5241BS	11	20	22	600	0.25	3	8.4	+0.079	41	H1
MMSZ5242BS	12	20	30	600	0.25	2	9.1	+0.082	38	H2
MMSZ5243BS	13	9.5	13	600	0.25	1	9.9	+0.082	35	H3
MMSZ5244BS	14	9.0	14	600	0.25	0.5	10	+0.082	32	H4
MMSZ5245BS	15	8.5	16	600	0.25	0.1	11	+0.083	30	H5
MMSZ5246BS	16	7.8	17	600	0.25	0.1	12	+0.084	28	J1
MMSZ5247BS	17	7.4	19	600	0.25	0.1	13	+0.084	27	J2
MMSZ5248BS	18	7.0	21	600	0.25	0.1	14	+0.085	25	J3
MMSZ5249BS	19	6.6	23	600	0.25	0.1	14	+0.085	24	J4
MMSZ5250BS	20	6.2	25	600	0.25	0.1	15	+0.086	23	J5
MMSZ5251BS	22	5.6	29	600	0.25	0.1	17	+0.086	21	K1
MMSZ5252BS	24	5.2	33	600	0.25	0.1	18	+0.087	19.1	K2
MMSZ5253BS	25	5.0	36	600	0.25	0.1	19	+0.087	18.2	K3
MMSZ5254BS	27	4.6	41	600	0.25	0.1	21	+0.087	16.8	K4
MMSZ5255BS	28	4.5	44	600	0.25	0.1	21	+0.089	16.2	K5
MMSZ5256BS	30	4.2	49	600	0.25	0.1	23	+0.090	15.1	M1
MMSZ5257BS	33	3.8	58	700	0.25	0.1	25	+0.091	13.8	M2
MMSZ5258BS	36	3.4	70	700	0.25	0.1	27	+0.091	12.6	M3
MMSZ5259BS	39	3.2	80	800	0.25	0.1	30	+0.092	11.6	M4

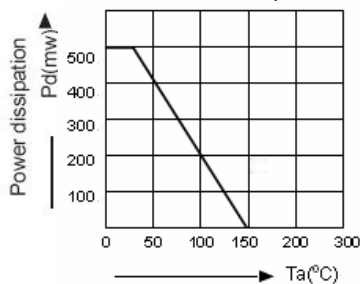
NOTE: Standard Zener Voltage Tolerance  $\pm 5\%$

## Breakdown characteristics

MMSZ52-SERIES

30V

changes in the power dissipation due to the ambient temperature.



Ambient Temperature.

