



# MMSZ5221G THRU MMSZ5267G

Surface Mount Zener Diode

## Features

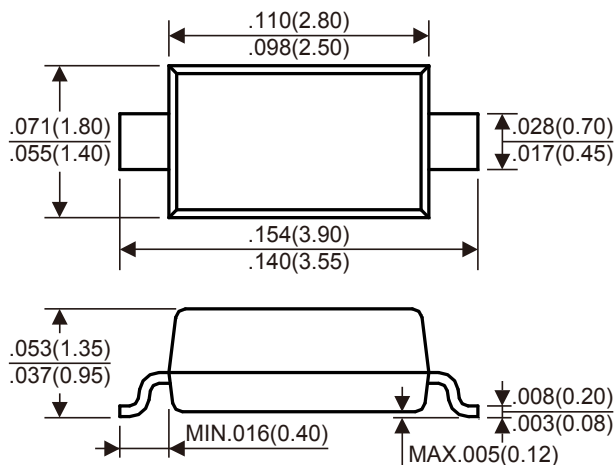
- ★ Ideally Suited for Automated Assembly Processes
- ★ High reliability
- ★ Zener voltage tolerance is  $\pm 5\%$

## Mechanical Data

- ★ Case: Molded plastic SOD-123
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-750 method 2026
- ★ Polarity: Color band denotes cathode end
- ★ Mounting position: Any

**Zener Voltage 2.4 to 75 V**  
**Power Dissipation 500 mW**

### SOD-123



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	$P_D$	500	mW
Maximum Instantaneous Forward Voltage @ $I_F=10\text{mA}$	$V_F$	0.9	V
Operating Junction Temperature Range	$T_J$	-65 to +150	°C
Storage Temperature Range	$T_{STG}$	-65 to +150	°C

## ORDERING INFORMATION

Part Number	Package	Weight	Quantity	Delivery Mode
MMSZ52xxG	SOD-123	9.4 mg	3,000	7" diameter plastic tape and reel

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Electrical Characteristics( $T_A=25^\circ\text{C}$  unless otherwise noted)

Part Number	Device Marking Code	Zener Voltage $V_Z@I_{ZT}$				Maximum Zener Impedance			Maximum Reverse Leakage Current $I_R@V_R$	
		Min (V)	Nom (V)	Max (V)	$I_{ZT}$ (mA)	$Z_{ZT}@I_{ZT}$ ( $\Omega$ )	$Z_{ZK}@I_{ZK}$ ( $\Omega$ )	$I_{ZK}$ (mA)	$I_R$ ( $\mu\text{A}$ )	$V_R$ (V)
MMSZ5221G	C1	2.28	2.4	2.52	20	30	1200	0.25	100	1
MMSZ5222G	C2	2.38	2.5	2.63	20	30	1250	0.25	100	1
MMSZ5223G	C3	2.57	2.7	2.84	20	30	1300	0.25	75	1
MMSZ5224G	C4	2.66	2.8	2.94	20	30	1400	0.25	75	1
MMSZ5225G	C5	2.85	3	3.15	20	30	1600	0.25	50	1
MMSZ5226G	G1	3.14	3.3	3.47	20	28	1600	0.25	25	1
MMSZ5227G	G2	3.42	3.6	3.78	20	24	1700	0.25	15	1
MMSZ5228G	G3	3.71	3.9	4.1	20	23	1900	0.25	10	1
MMSZ5229G	G4	4.09	4.3	4.52	20	22	2000	0.25	5	1
MMSZ5230G	G5	4.47	4.7	4.94	20	19	1900	0.25	5	2
MMSZ5231G	E1	4.85	5.1	5.36	20	17	1600	0.25	5	2
MMSZ5232G	E2	5.32	5.6	5.88	20	11	1600	0.25	5	3
MMSZ5233G	E3	5.7	6	6.3	20	7	1600	0.25	5	3.5
MMSZ5234G	E4	5.89	6.2	6.51	20	7	1000	0.25	5	4
MMSZ5235G	E5	6.46	6.8	7.14	20	5	750	0.25	3	5
MMSZ5236G	F1	7.13	7.5	7.88	20	6	500	0.25	3	6
MMSZ5237G	F2	7.79	8.2	8.61	20	8	500	0.25	3	6.5
MMSZ5238G	F3	8.27	8.7	9.14	20	8	600	0.25	3	6.5
MMSZ5239G	F4	8.65	9.1	9.56	20	10	600	0.25	3	7
MMSZ5240G	F5	9.5	10	10.5	20	17	600	0.25	3	8
MMSZ5241G	H1	10.45	11	11.55	20	22	600	0.25	2	8.4
MMSZ5242G	H2	11.4	12	12.6	20	30	600	0.25	1	9.1
MMSZ5243G	H3	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9
MMSZ5244G	H4	13.3	14	14.7	9	15	600	0.25	0.1	10
MMSZ5245G	H5	14.25	15	15.75	8.5	16	600	0.25	0.1	11
MMSZ5246G	J1	15.2	16	16.8	7.8	17	600	0.25	0.1	12
MMSZ5247G	J2	16.15	17	17.85	7.5	19	600	0.25	0.1	13
MMSZ5248G	J3	17.1	18	18.9	7	21	600	0.25	0.1	14
MMSZ5249G	J4	18.05	19	19.95	6.6	23	600	0.25	0.1	14
MMSZ5250G	J5	19	20	21	6.2	25	600	0.25	0.1	15
MMSZ5251G	K1	20.9	22	23.1	5.6	29	600	0.25	0.1	17
MMSZ5252G	K2	22.8	24	25.2	5.2	33	600	0.25	0.1	18
MMSZ5253G	K3	23.75	25	26.25	5	35	600	0.25	0.1	19
MMSZ5254G	K4	25.65	27	28.35	5	41	600	0.25	0.1	21
MMSZ5255G	K5	26.6	28	29.4	4.5	44	600	0.25	0.1	21
MMSZ5256G	M1	28.5	30	31.5	4.2	49	600	0.25	0.1	23
MMSZ5257G	M2	31.35	33	34.65	3.8	58	700	0.25	0.1	25
MMSZ5258G	M3	34.2	36	37.8	3.4	70	700	0.25	0.1	27
MMSZ5259G	M4	37.05	39	40.95	3.2	80	800	0.25	0.1	30
MMSZ5260G	M5	40.85	43	45.15	3	93	900	0.25	0.1	33
MMSZ5261G	N1	44.65	47	49.35	2.7	105	1000	0.25	0.1	36
MMSZ5262G	N2	48.45	51	53.55	2.5	125	1100	0.25	0.1	39
MMSZ5263G	N3	53.2	56	58.8	2.2	150	1300	0.25	0.1	43
MMSZ5264G	N4	57	60	63	2.1	170	1400	0.25	0.1	46
MMSZ5265G	N5	58.9	62	65.1	2	185	1400	0.25	0.1	47
MMSZ5266G	P1	64.6	68	71.4	1.8	230	1600	0.25	0.1	52
MMSZ5267G	P2	71.25	75	78.75	1.7	270	1700	0.25	0.1	56

NOTES: (1)The Zener Voltage ( $V_Z$ ) is tested under pulse condition of 30mS.

(2)The device numbers listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$ .

(3)The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed to  $I_{ZT}$  or  $I_{ZK}$ .

# RATINGS AND CHARACTERISTICS CURVES MMSZ5221G THRU MMSZ5267G

FIG.1 - POWER DERATING CURVE

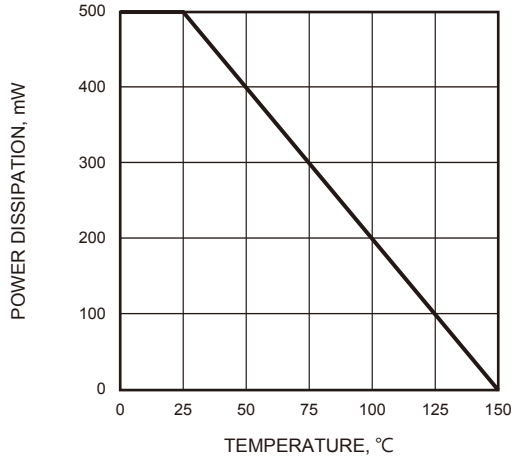


FIG.2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

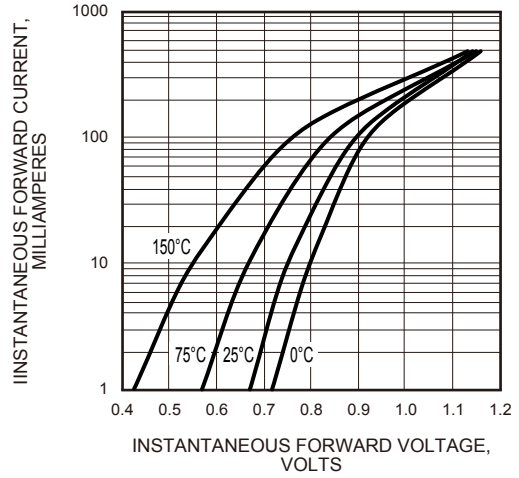


FIG.3 - EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

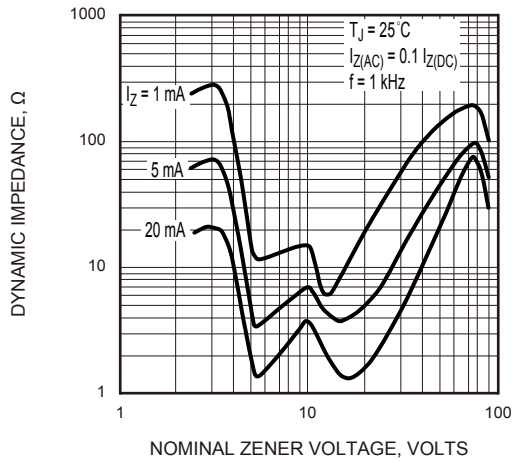


FIG.4 - TYPICAL CAPACITANCE

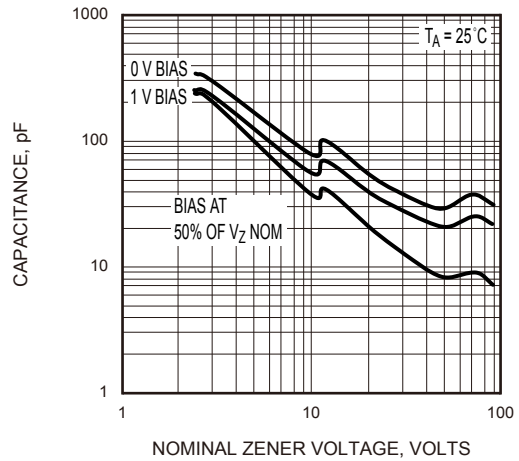


FIG.5 - TYPICAL LEAKAGE CURRENT

