

MMSZ5221BS~MMSZ5266BS

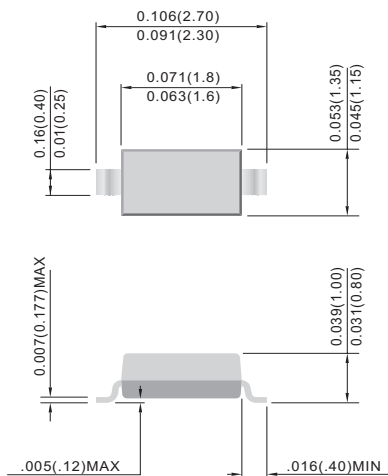
ZENER DIODES

VOLTAGE 2.0 to 75 Volts POWER 200 mWatts



SOD-323

Unit : inch(mm)



FEATURES

- Planar Die construction
- 200mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Lead free in comply with EU RoHS 2011/65/EU directives
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SOD-323, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx Weight : 0.00014 ounces, 0.0041 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (Note 1.) @ TA = 25°C	P _D	200	mW
Derate above 25°C		1.5	mW/°C
Thermal Resistance from Junction to Ambient	R _{θJA}	635	°C/W
Junction and Storage Temperature Range	T _J , T _{stg}	-65 to+150	°C

1. FR-4 Minimum Pad

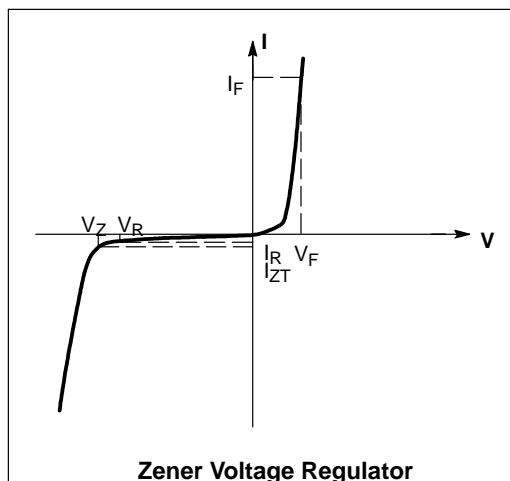
NOTE :

A. Mounted on 5.0mm²(.013mm thick) land areas.

ELECTRICAL CHARACTERISTICS

(T_A = 25°C unless otherwise noted,
V_F = 0.9 V Max. @ I_F = 10 mA for all types)

Symbol	Parameter
V _Z	Reverse Zener Voltage @ I _{ZT}
I _{ZT}	Reverse Current
Z _{ZT}	Maximum Zener Impedance @ I _{ZT}
I _{ZK}	Reverse Current
Z _{ZK}	Maximum Zener Impedance @ I _{ZK}
I _R	Reverse Leakage Current @ V _R
V _R	Reverse Voltage
I _F	Forward Current
V _F	Forward Voltage @ I _F
∅V _Z	Maximum Temperature Coefficient of V _Z
C	Max. Capacitance @ V _R = 0 and f = 1 MHz



Zener Voltage Regulator

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Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).

Device	Marking	Zener Voltage Range			Maximum Zener Impedance				Maximum Reverse Current		Typical Temperature coefficient @ IZTC=mV/°C		Test Current IZTC mA
		Vz@Izt			Izt	Zzt @Izt	Zzk @Izk	Izk	IR	VR	Min	Max	
		Nom(V)	Min(V)	Max(V)	mA	Ω	Ω	mA	uA	V			
MMSZ5220BS	WY	2.0	1.80	2.15	5	150	600	1.0	100	1.0	-3.5	0	5
MMSZ5221BS	WX	2.4	2.2	2.6	5	100	600	1.0	50	1.0	-3.5	0	5
MMSZ5223BS	W1	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0	5
MMSZ5225BS	W2	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0	5
MMSZ5226BS	W3	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0	5
MMSZ5227BS	W4	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0	5
MMSZ5228BS	W5	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0	5
MMSZ5229BS	W6	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0	5
MMSZ5230BS	W7	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2	5
MMSZ5231BS	W8	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2	5
MMSZ5232BS	W9	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5	5
MMSZ5234BS	WA	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7	5
MMSZ5235BS	WB	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5	5
MMSZ5236BS	WC	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3	5
MMSZ5237BS	WD	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5
MMSZ5239BS	WE	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
MMSZ5240BS	WF	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
MMSZ5241BS	WG	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
MMSZ5242BS	WH	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
MMSZ5243BS	WI	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5
MMSZ5245BS	WJ	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	5
MMSZ5246BS	WK	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5
MMSZ5248BS	WL	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5
MMSZ5250BS	WM	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
MMSZ5251BS	WN	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
MMSZ5252BS	WO	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5
MMSZ5254BS	WP	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
MMSZ5256BS	WQ	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
MMSZ5257BS	WR	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
MMSZ5258BS	WS	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2
MMSZ5259BS	WT	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	2
MMSZ5260BS	WU	43	40.0	46.0	2	100	700	1.0	0.1	32.0	10.0	12.0	5
MMSZ5261BS	WV	47	44.0	50.0	2	100	750	1.0	0.1	35.0	10.0	12.0	5
MMSZ5262BS	WW	51	48.0	54.0	2	100	750	1.0	0.1	38.0	10.0	12.0	5
MMSZ5263BS	XW	56	52.0	60.0	2	135	700	1.0	0.1	39.0	10.0	12.0	5
MMSZ5265BS	6E	62	58.0	66.0	2	200	1000	1.0	0.2	47.0	10.0	12.0	5
MMSZ5266BS	6F	68	64.0	72.0	2	250	1000	1.0	0.2	52.0	10.0	12.0	5
MMSZ5267BS	6H	75	70.0	79.0	2	300	1000	1.0	0.2	57	10.0	12.0	5

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Typical Characteristics

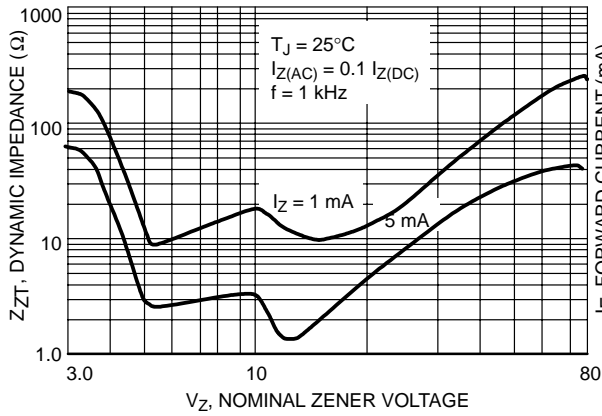


Figure 1. Effect of Zener Voltage on Zener Impedance

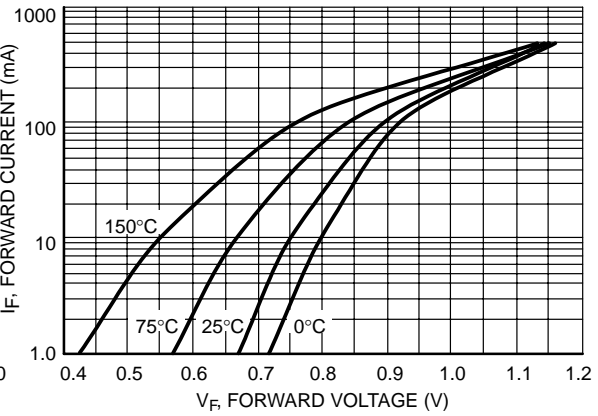


Figure 2. Typical Forward Voltage

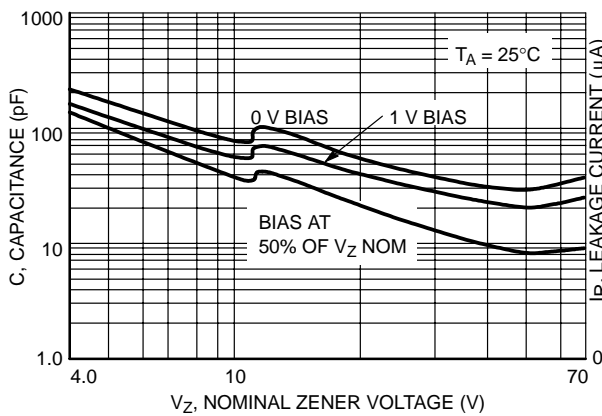


Figure 3. Typical Capacitance

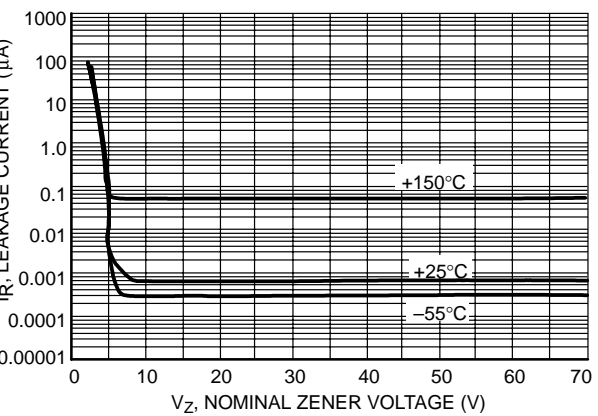


Figure 4. Typical Leakage Current

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Typical Characteristics

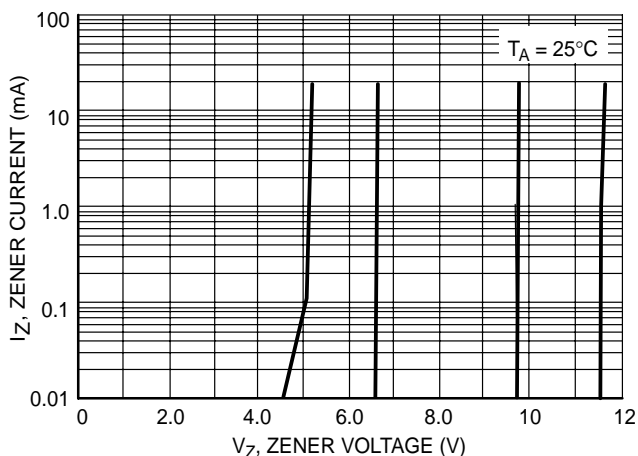


Figure 5. Zener Voltage versus Zener Current (V_Z Up to 12 V)

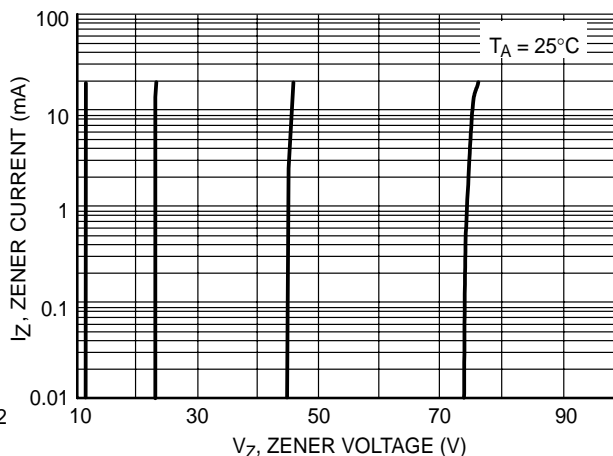


Figure 6. Zener Voltage versus Zener Current (12 V to 75 V)

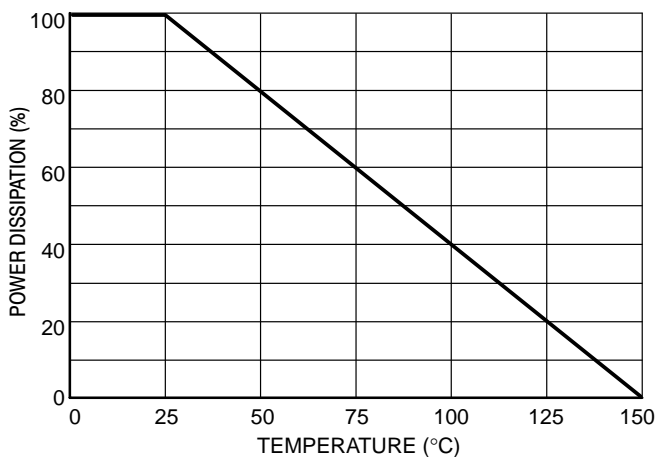


Figure 7. Steady State Power Derating