

# MSKSEMI 美森科

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## MM3ZXXX-MS

Product specification

**FEATURES**

- Total power dissipation: Max. 200mW.
- Wide zener reverse voltage range 2.0V to 75V.
- Small plastic package suitable for surface mounted design.
- Tolerance approximately±5%

**MECHANICAL DATA**

- Case: SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 5.48mg / 0.00019oz

**Reference News**

PACKAGE OUTLINE	PIN CONFIGURATION
 <p>1. Cathode 2. Anode</p> <p>SOD-323</p>	

**Absolute Maximum Ratings And Characteristics (Ta = 25°C)**

Parameter	Symbol	Value	Unit
Power Dissipation	$P_{tot}$	200	mW
Forward Voltage at $I_F = 10\text{ mA}$	$V_F$	0.9	V
Typical thermal resistance junction to ambient <sup>(1)</sup>	$R_{\theta JA}$	417	°C/W
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 ~ +150	°C

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (54 X 5 cm) copper areas pads.

**Fig.1 Maximum Continuous Power Derating**



**Fig.2 Typical Transient Thermal Impedance**



**Characteristics at Ta = 25°C**

Type	Marking	Zener Voltage Range <sup>(1)</sup>			I <sub>ZT</sub> (mA)	Dynamic Impedance Z <sub>ZT</sub> ( at I <sub>ZT</sub> ) Max (Ω)	Reverse Current	
		V <sub>ZT</sub> ( at I <sub>ZT</sub> )					I <sub>R</sub> Max ( μA )	at V <sub>R</sub> ( V )
		Min ( V )	Nom ( V )	Max ( V )				
MM3Z2V0-MS	B0	1.8	2.0	2.15	5	100	120	0.5
MM3Z2V2-MS	C0	2.08	2.2	2.33	5	100	120	0.7
MM3Z2V4-MS	1C	2.28	2.4	2.56	5	100	120	1
MM3Z2V7-MS	1D	2.5	2.7	2.9	5	110	120	1
MM3Z3V0-MS	1E	2.8	3.0	3.2	5	120	50	1
MM3Z3V3-MS	1F	3.1	3.3	3.5	5	130	20	1
MM3Z3V6-MS	1H	3.4	3.6	3.8	5	130	10	1
MM3Z3V9-MS	1J	3.7	3.9	4.1	5	130	5	1
MM3Z4V3-MS	1K	4	4.3	4.6	5	130	5	1
MM3Z4V7-MS	1M	4.4	4.7	5	5	130	2	1
MM3Z5V1-MS	1N	4.8	5.1	5.4	5	130	2	1.5
MM3Z5V6-MS	1P	5.2	5.6	6	5	80	1	2.5
MM3Z6V2-MS	1R	5.8	6.2	6.6	5	50	1	3
MM3Z6V8-MS	1X	6.4	6.8	7.2	5	30	0.5	3.5
MM3Z7V5-MS	1Y	7	7.5	7.9	5	30	0.5	4
MM3Z8V2-MS	1Z	7.7	8.2	8.7	5	30	0.5	5
MM3Z9V1-MS	2A	8.5	9.1	9.6	5	30	0.5	6
MM3Z10-MS	2B	9.4	10	10.6	5	30	0.1	7
MM3Z11-MS	2C	10.4	11	11.6	5	30	0.1	8
MM3Z12-MS	2D	11.4	12	12.7	5	35	0.1	9
MM3Z13-MS	2E	12.4	13	14.1	5	35	0.1	10
MM3Z15-MS	2F	13.8	15	15.6	5	40	0.1	11
MM3Z16-MS	2H	15.3	16	17.1	5	40	0.1	12
MM3Z18-MS	2J	16.8	18	19.1	5	45	0.1	13
MM3Z20-MS	2K	18.8	20	21.2	5	50	0.1	15
MM3Z22-MS	2M	20.8	22	23.3	5	55	0.1	17
MM3Z24-MS	2N	22.8	24	25.6	5	60	0.1	19
MM3Z27-MS	2P	25.1	27	28.9	2	70	0.1	21
MM3Z30-MS	2R	28	30	32	2	80	0.1	23
MM3Z33-MS	2X	31	33	35	2	80	0.1	25
MM3Z36-MS	2Y	34	36	38	2	90	0.1	27
MM3Z39-MS	2Z	37	39	41	2	100	0.1	30
MM3Z43-MS	3A	40	43	46	2	130	0.1	33
MM3Z47-MS	3B	44	47	50	2	150	0.1	36
MM3Z51-MS	3C	48	51	54	2	180	0.1	39
MM3Z56-MS	3D	52	56	60	2	200	0.1	43
MM3Z62-MS	3E	58	62	66	2	215	0.1	47
MM3Z68-MS	3F	64	68	72	2	240	0.1	52
MM3Z75-MS	3H	70	75	79	2	265	0.1	56

 (1) V<sub>ZT</sub> is tested with pulses (20 ms)

**PACKAGE MECHANICAL DATA**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
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	2.550	2.750	0.100	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**



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
MM3ZXXX-MS	SOD-323	3000

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