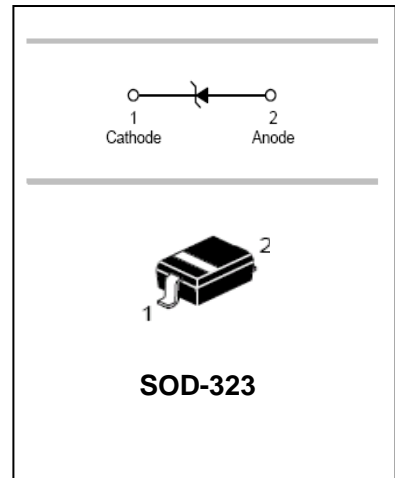


## 200mW Surface Mount Zener Diode

**MM3Z2V4-MM3Z75**
**FEATURES**

- Standard zener breakdown voltage range 2.4V-75V
- Steady state power rating of 200mW


**APPLICATIONS**

- Zener diode
- Ultra-small surface mount package

**ORDERING INFORMATION**

Type No.	Marking	Package Code
MM3Z2V4-MM3Z75	See table 2	SOD-323

**MAXIMUM RATING @ Ta=25°C unless otherwise specified**

Characteristic	Symbol	Value	Unit
Forward Voltage @ I <sub>F</sub> =10mA	V <sub>F</sub>	0.9	V
Power Dissipation	P <sub>d</sub>	200	mW
Thermal resistance, junction to ambient air	R <sub>θJA</sub>	635	°C/W
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-65 to +150	°C



## 200mW Surface Mount Zener Diode

## MM3Z2V4-MM3Z75

## ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Type Number	Marking Code	Zener Voltage				Zener Impedance			Leakage Current		@V <sub>Z</sub> (Mv/k) @I <sub>ZT</sub>		C @V <sub>R</sub> =0, f=1MHz pF
		V <sub>Z</sub> (Volts)			@I <sub>ZT</sub>	Z <sub>ZT</sub> @I <sub>ZT</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>		I <sub>R</sub>	@V <sub>R</sub>	Min	Max	
		Min	Nom	Max	mA	Ω	Ω	mA	μA	V			
MM3Z2V4	00	2.2	2.4	2.6	5	100	1000	0.5	50	1.0	-3.5	0	450
MM3Z2V7	01	2.5	2.7	2.9	5	100	1000	0.5	20	1.0	-3.5	0	450
MM3Z3V0	02	2.8	3.0	3.2	5	100	1000	0.5	10	1.0	-3.5	0	450
MM3Z3V3	05	3.1	3.3	3.5	5	95	1000	0.5	5	1.0	-3.5	0	450
MM3Z3V6	06	3.4	3.6	3.8	5	90	1000	0.5	5	1.0	-3.5	0	450
MM3Z3V9	07	3.7	3.9	4.1	5	90	1000	0.5	3	1.0	-3.5	-2.5	450
MM3Z4V3	08	4.0	4.3	4.6	5	90	1000	0.5	3	1.0	-3.5	0	450
MM3Z4V7	09	4.4	4.7	5.0	5	80	800	0.5	3	2.0	-3.5	0.2	260
MM3Z5V1	0A	4.8	5.1	5.4	5	60	500	0.5	2	2.0	-2.7	1.2	225
MM3Z5V6	0C	5.2	5.6	6.0	5	40	200	0.5	1	2.0	-2.0	2.5	200
MM3Z6V2	0E	5.8	6.2	6.6	5	10	100	0.5	3	4.0	0.4	3.7	185
MM3Z6V8	0F	6.4	6.8	7.2	5	15	160	0.5	2	4.0	1.2	4.5	155
MM3Z7V5	0G	7.0	7.5	7.9	5	15	160	0.5	1	5.0	2.5	5.3	140
MM3Z8V2	0H	7.7	8.2	8.7	5	15	160	0.5	0.7	5.0	3.2	6.2	135
MM3Z9V1	0K	8.5	9.1	9.6	5	15	160	0.5	0.2	7.0	3.8	7.0	130
MM3Z10	0L	9.4	10	10.6	5	20	160	0.5	0.1	8.0	4.5	8.0	130
MM3Z11	0M	10.4	11	11.6	5	20	160	0.5	0.1	8.0	5.4	9.0	130
MM3Z12	0N	11.4	12	12.7	5	25	80	0.5	0.1	8.0	6.0	10	130
MM3Z13	0P	12.35	13	13.65	5	30	80	0.5	0.1	8.0	7.0	11	120
MM3Z15	0T	14.25	15	15.75	5	30	80	0.5	0.05	10.5	9.2	13	110
MM3Z16	0U	15.2	16	16.8	5	40	80	0.5	0.05	11.2	10.4	14	105
MM3Z18	0W	17.1	18	18.9	5	45	80	0.5	0.05	12.6	12.4	16	100
MM3Z20	0Z	18.8	20	21.2	5	55	100	0.5	0.05	14.0	14.4	18	85
MM3Z22	10	20.9	22	23.1	5	55	100	0.5	0.05	15.4	16.4	20	85
MM3Z24	11	22.8	24	25.2	5	70	120	0.5	0.05	16.8	18.4	22	80
MM3Z27	12	25.1	27	28.9	2	80	300	0.5	0.05	18.9	21.4	25.3	70
MM3Z30	14	28	30	32	2	80	300	0.5	0.05	21.0	24.4	29.4	70
MM3Z33	18	31	33	35	2	80	300	0.5	0.05	23.2	27.4	33.4	70
MM3Z36	19	34	36	38	2	90	500	0.5	0.05	25.2	30.4	37.4	70
MM3Z39	20	37	39	41	2	130	500	0.5	0.05	27.3	33.4	41.2	45
MM3Z43	21	40	43	46	2	150	500	0.5	0.05	30.1	37.6	46.6	40
MM3Z47	1A	44	47	50	2	170	500	0.5	0.05	32.9	42.0	51.8	40
MM3Z51	1C	48	51	54	2	180	500	0.5	0.05	35.7	46.6	57.2	40
MM3Z56	1D	52	56	60	2	200	500	0.5	0.05	39.2	52.2	63.8	40
MM3Z62	1E	58	62	66	2	215	500	0.5	0.05	43.4	58.8	71.6	35



200mW Surface Mount Zener Diode

MM3Z2V4-MM3Z75

Type Number	Marking Code	Zener Voltage				Zener Impedance			Leakage Current		@V <sub>Z</sub> (Mv/k) @I <sub>ZT</sub>		C @V <sub>R</sub> =0, f=1MHz pF
		V <sub>Z</sub> (Volts)			@I <sub>ZT</sub>	Z <sub>ZT</sub> @I <sub>ZT</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>	I <sub>R</sub>	@V <sub>R</sub>	Min	Max		
		Nom	Min	Max	mA	Ω	Ω	mA	μA	V	Min	Max	
MM3Z68	1F	64	68	72	2	240	500	0.5	0.05	47.6	65.6	79.8	35
MM3Z75	1G	70	75	79	2	255	500	0.5	0.05	52.5	73.4	88.6	35

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

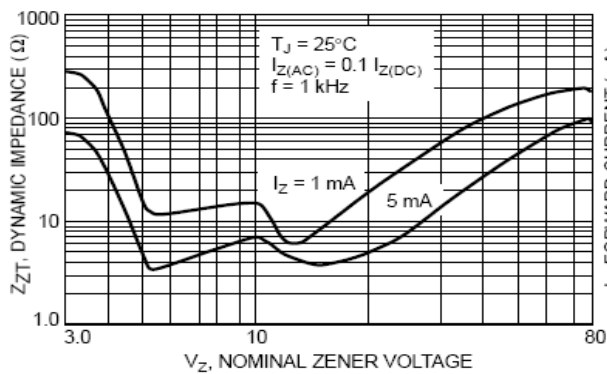


Figure 1. Effect of Zener Voltage on Zener Impedance

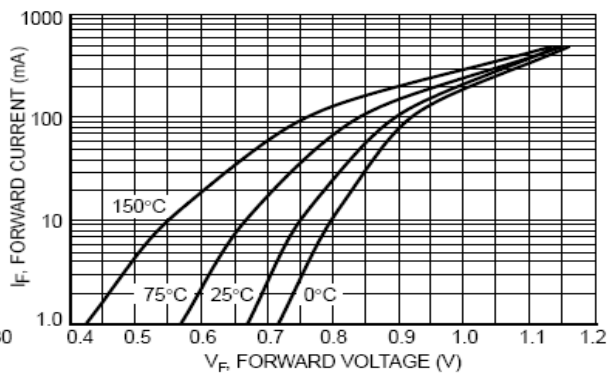


Figure 2. Typical Forward Voltage

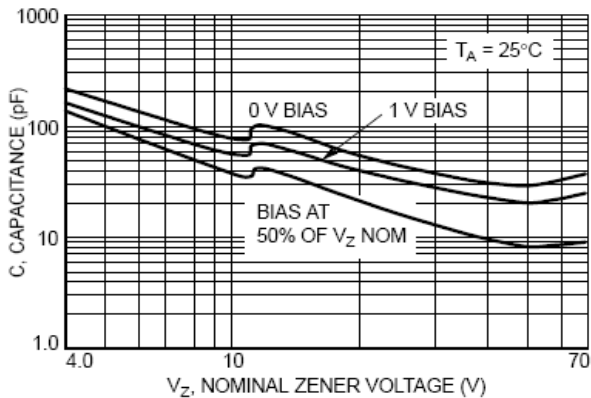


Figure 3. Typical Capacitance

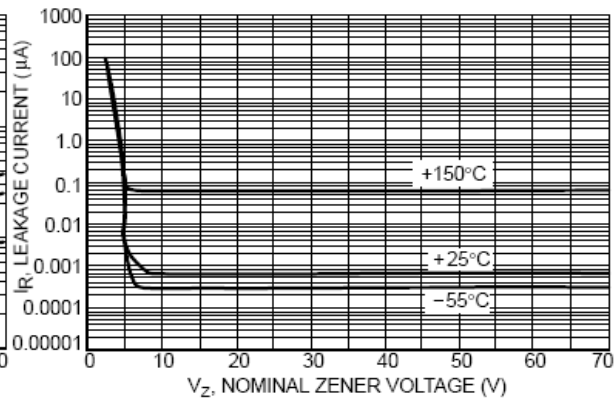


Figure 4. Typical Leakage Current

## 200mW Surface Mount Zener Diode

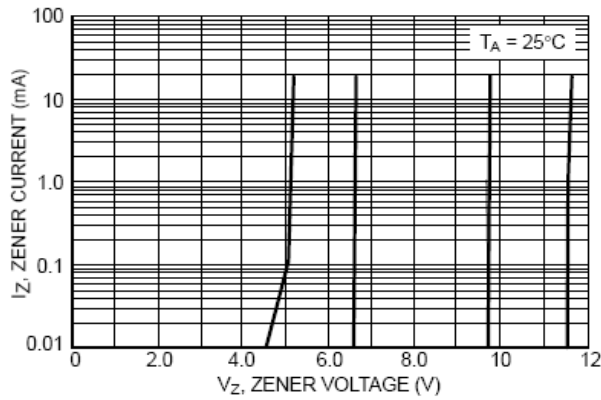
**MM3Z2V4-MM3Z75**


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

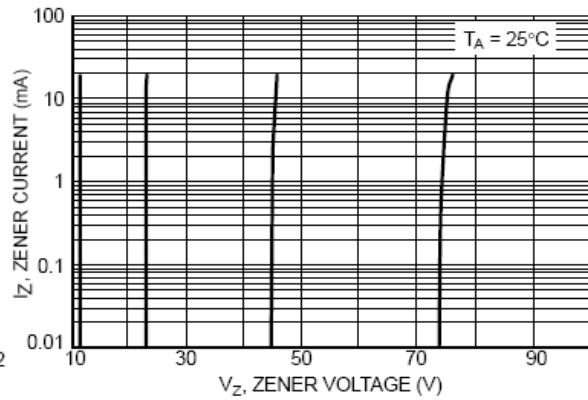
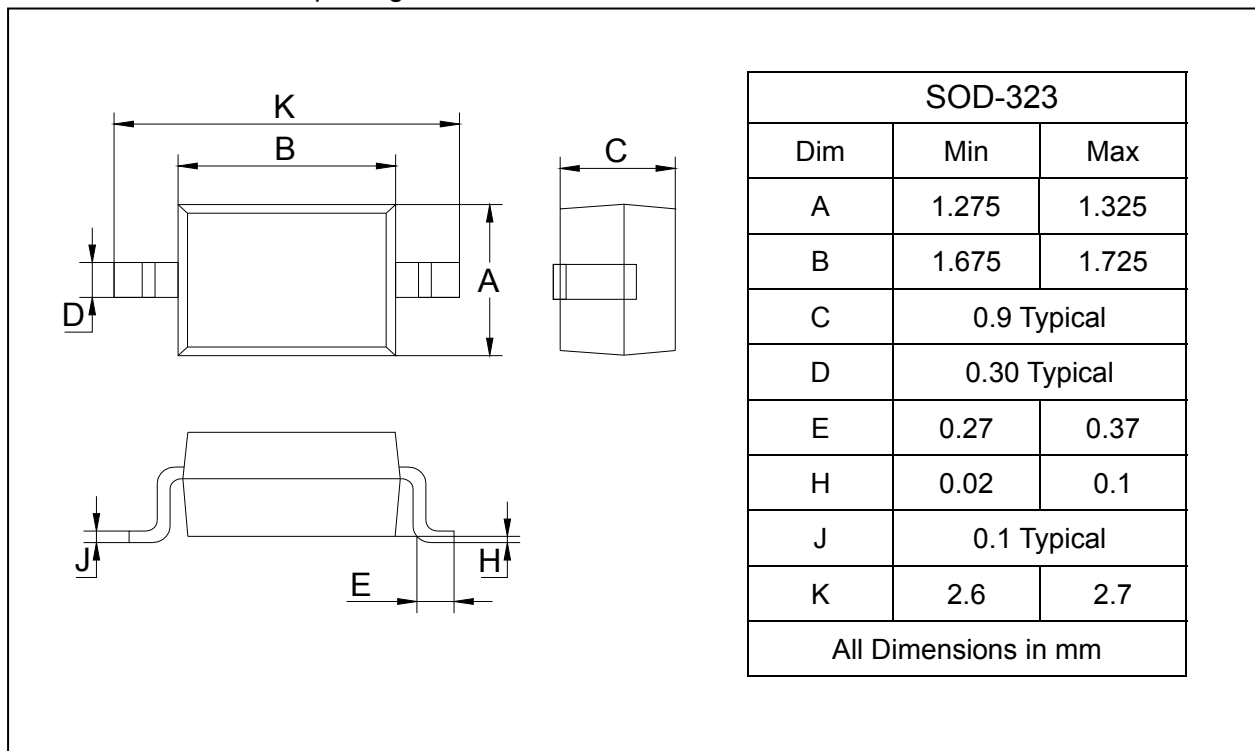


Figure 6. Zener Voltage versus Zener Current  
(12 V to 75 V)

**PACKAGE OUTLINE**

Plastic surface mounted package

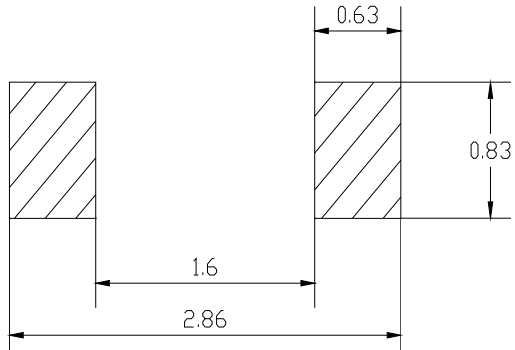
SOD-323



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**200mW Surface Mount Zener Diode****MM3Z2V4-MM3Z75**

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**SOLDERING FOOTPRINT**

Unit : mm

**PACKAGE INFORMATION**

Device	Package	Shipping
MM3Z2V4-MM3Z75	SOD-323	3000/Tape&Reel