

Features

- Low Zener Impedance
- Power Dissipation of 200mW
- High Stability and High Reliability

Mechanical Data

- SOD-323 Small Outline Plastic Package
- Color band denotes cathode end
- Mounting Position: Any

Maximum Ratings & Thermal Characteristics

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

Parameters	Symbol	Value	Unit
Power Dissipation	Pd	200 ₁₎	mW
Forward Voltage @IF=10mA	V _F	0.9 ₂₎	V
Storage temperature range	Ts	-65 - +150	° C

- 1) Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm²
 2) Short duration test pulse used to minimize self-heating effect

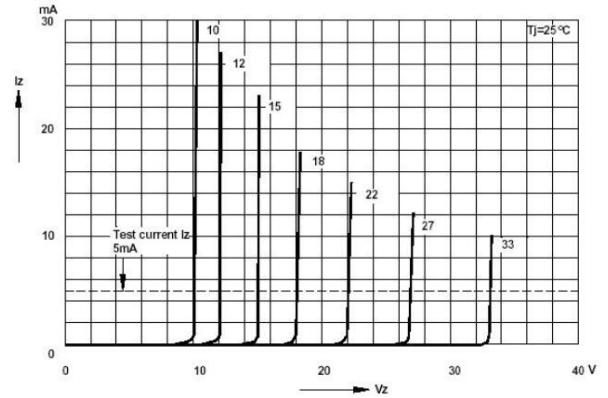
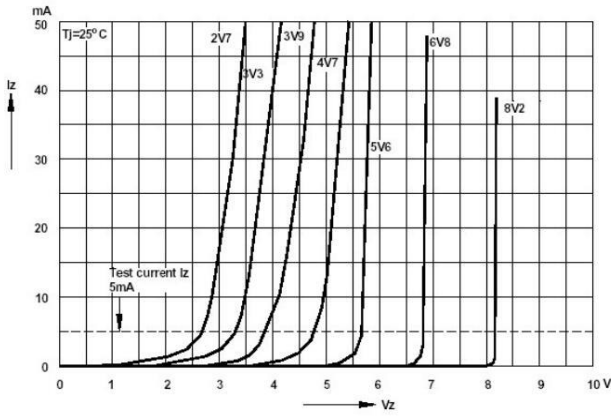
Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified)

Device	Zener Voltage Range				Maximum Zener			Maximum		Typical Temperature		Test Current
	V _Z @I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	IR	VR	Min	Max	
	Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V			
MM3Z2V0CW	2.0	1.80	2.15	5	150	600	1.0	100	1.0	-3.5	0	5
MM3Z2V4CW	2.4	2.2	2.6	5	100	600	1.0	50	1.0	-3.5	0	5
MM3Z2V7CW	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0	5
MM3Z3V0CW	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0	5
MM3Z3V3CW	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0	5
MM3Z3V6CW	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0	5
MM3Z3V9CW	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0	5
MM3Z4V3CW	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0	5
MM3Z4V7CW	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2	5
MM3Z5V1CW	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2	5
MM3Z5V6CW	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5	5
MM3Z6V2CW	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7	5
MM3Z6V8CW	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5	5

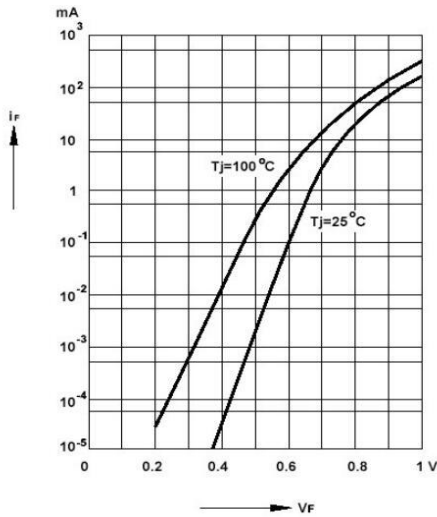
Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified)

Device	Zener Voltage Range				Maximum Zener			Maximum		Typical Temperature		Test Current
	V _Z @I _{Zt}			I _{Zt}	Z _{Zt} @I _{Zt}	Z _{Zk} @I _{Zk}	I _{Zk}	IR	VR	Min	Max	
	Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V			mA
MM3Z7V5CW	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3	5
MM3Z8V2CW	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5
MM3Z9V1CW	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
MM3Z10VCW	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
MM3Z11VCW	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
MM3Z12CW	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
MM3Z15CW	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	5
MM3Z16CW	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5
MM3Z18CW	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5
MM3Z20CW	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
MM3Z22CW	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
MM3Z24CW	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5
MM3Z27CW	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
MM3Z30CW	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
MM3Z33CW	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
MM3Z36CW	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2
MM3Z39CW	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	2
MM3Z43CW	43	40.0	46.0	2	100	700	1.0	0.1	32.0	10.0	12.0	5
MM3Z47CW	47	44.0	50.0	2	100	750	1.0	0.1	35.0	10.0	12.0	5
MM3Z51CW	51	48.0	54.0	2	100	750	1.0	0.1	38.0	10.0	12.0	5
MM3Z56CW	56	52.0	60.0	2	135	700	1.0	0.1	39.0	10.0	12.0	5
MM3Z62CW	62	58.0	66.0	2	200	1000	1.0	0.2	47.0	10.0	12.0	5
MM3Z68CW	68	64.0	72.0	2	250	1000	1.0	0.2	52.0	10.0	12.0	5
MM3Z75CW	75	70.0	79.0	2	300	1000	1.0	0.2	57	10.0	12.0	5

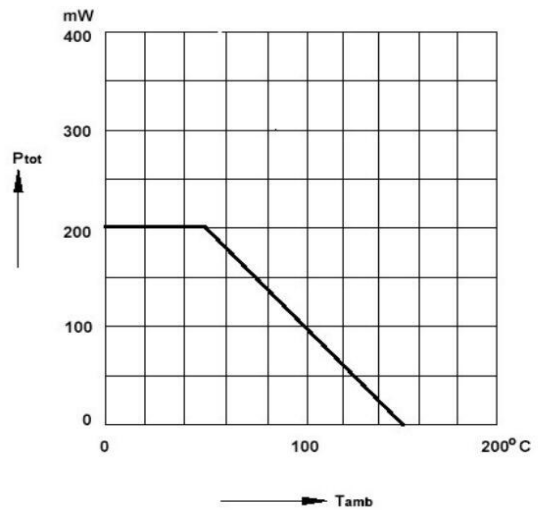
Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)



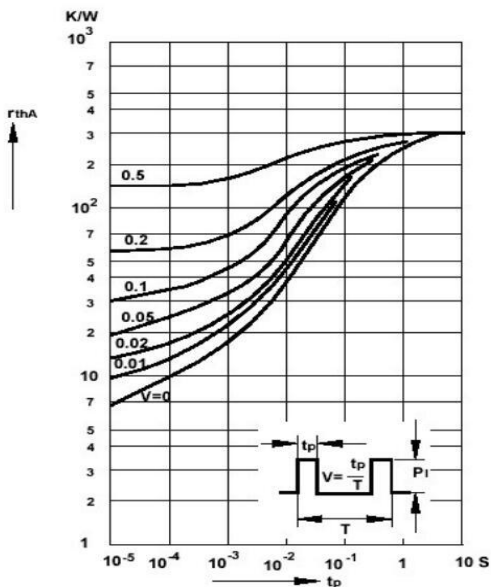
Forward characteristics



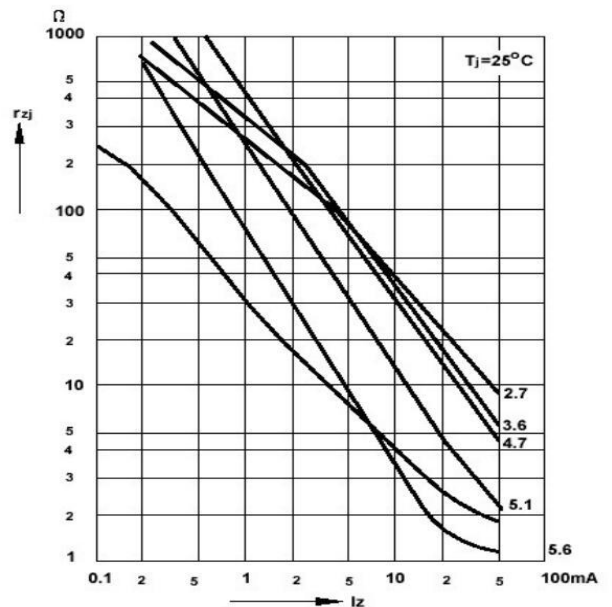
Admissible power dissipation versus ambient temperature



Pulse thermal resistance versus pulse duration

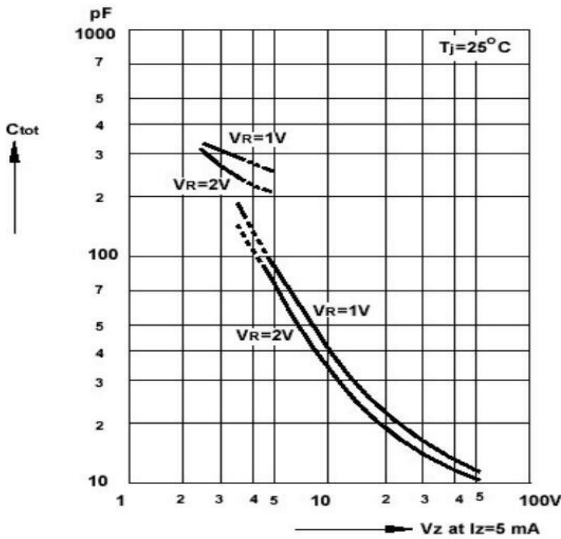


Dynamic resistance versus Zener current

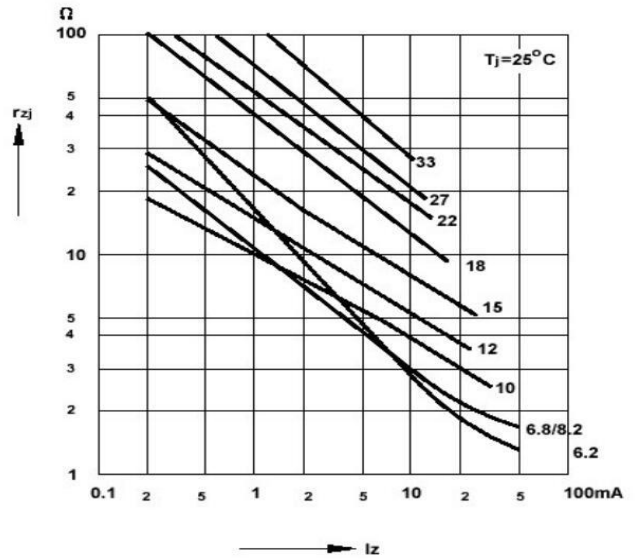


Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

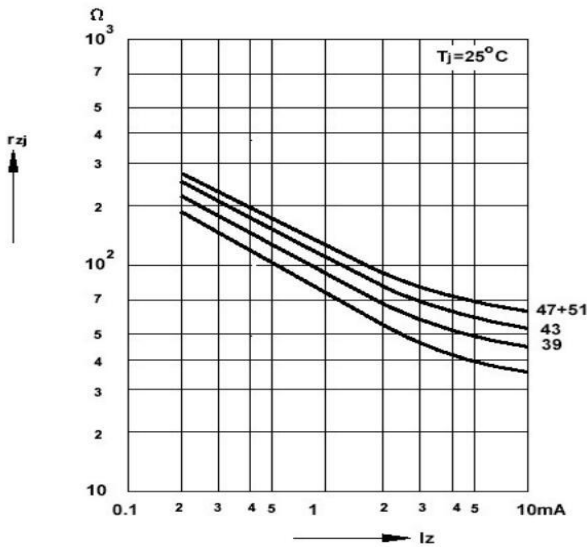
Capacitance versus Zener voltage



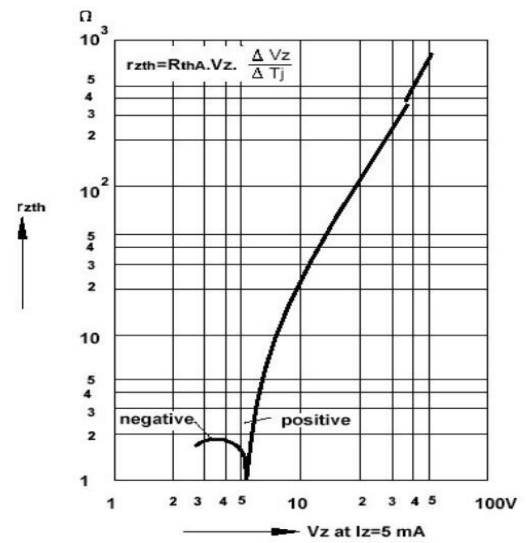
Dynamic resistance versus Zener current



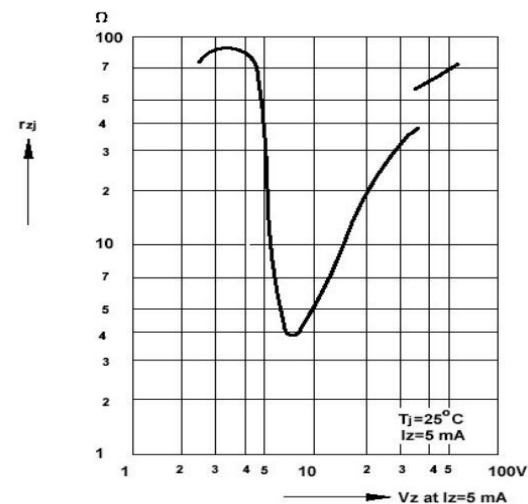
Dynamic resistance versus Zener current



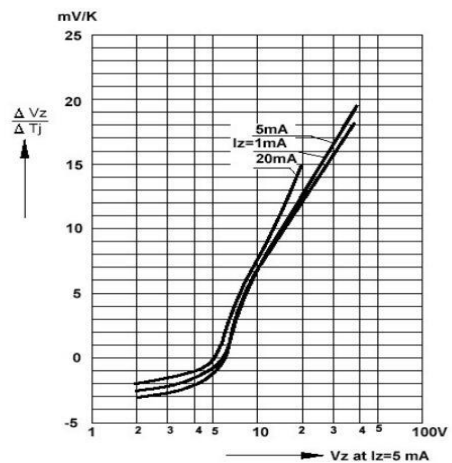
Thermal differential resistance versus Zener voltage



Dynamic resistance versus Zener voltage

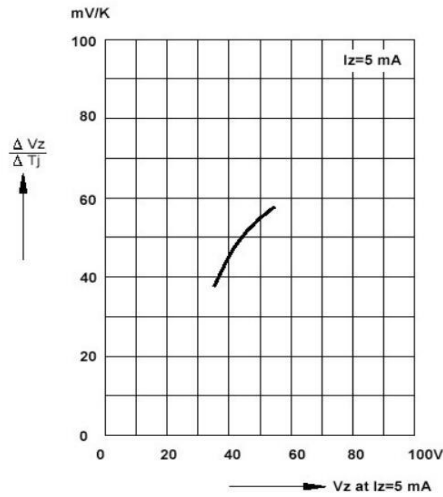


Temperature dependence of Zener voltage versus Zener voltage

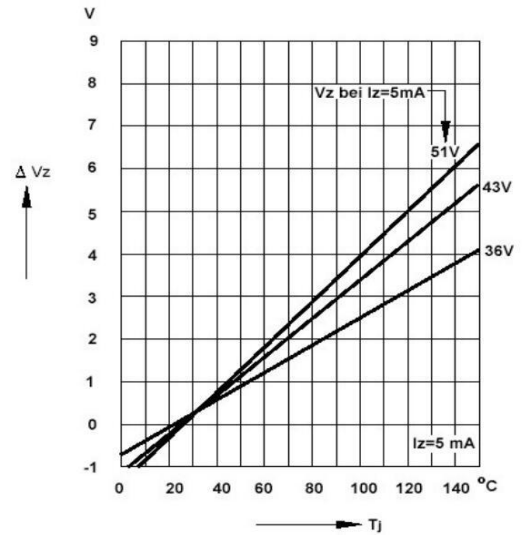


Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

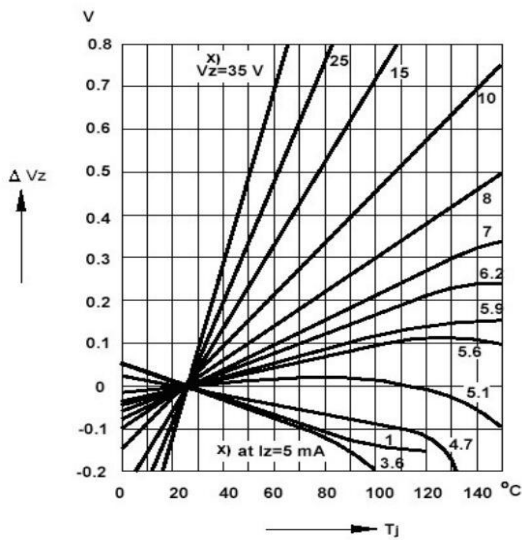
Temperature dependence of Zener voltage versus Zener voltage



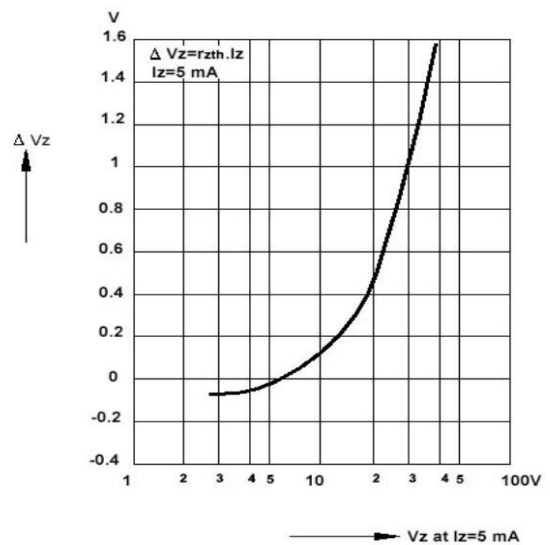
Change of Zener voltage versus junction temperature



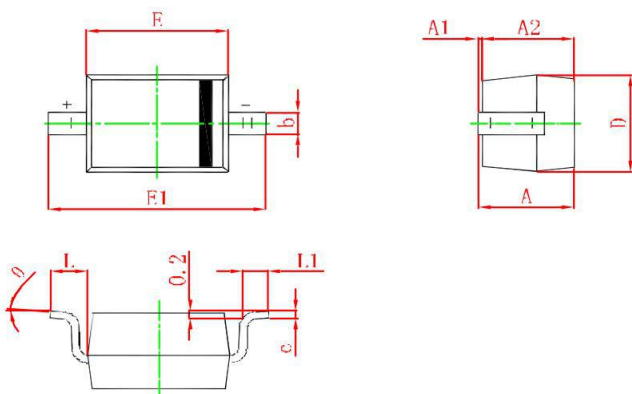
Change of Zener voltage versus junction temperature



Change of Zener voltage from turn-on up to the point of thermal equilibrium versus Zener voltage



Package Mechanical Data(mm)



Symbol	Min	Max
A		1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
L	0.475REF	



Leading Circuit Protection
Products and Solutions

MM3ZXXCW Series

SOD-323 Plastic-Encapsulate Zener Diode

Contact Information

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