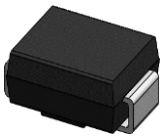
1.5W,9.1 - 100V Zener Diodes

Features

- Low leakage current
- Available in unidirectional
- Glass passivated junction
- Zener voltage tolerance is ±5%
- Total power dissipation: Max 1.5W
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition

Pb
RoHS
COMPLIANT



SMB (DO-214AA)

Applications

Protection from high voltage, high energy transients, voltage stabilization and automotive applications.

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)			
Parameter	**Symbol**	**Ratings**	**Unit**
Zener voltage	V_Z	See Next Table	V
Power dissipation at T_L=75℃	P_{tot}	1.5	W
Maximum instantaneous forward voltage at 200mA	V_F	1.2	V
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	℃

Thermal-Mechanical Specifications (T_A=25℃ unless otherwise noted)			
Parameter	**Symbol**	**Typ**	**Unit**
Thermal Resistance, Junction to Ambient	R_{thJA}	85	°C /W
Thermal Resistance, Junction to Case	R_{thJC}	15	°C /W
Thermal Resistance, Junction to Lead	R_{thJL}	20	°C /W

Note：

1.The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 5×5mm copper pads

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Part Number	Marking	V_Z at I_{ZT} (V)			I_{ZT} (mA)	Maximum zener impedance		I_{ZK} (mA)	Maximum reverse leakage at V_R (μA)	Test voltage V_R (V)	Maximum Zener Current
		Min	Typ	Max		Z_{ZT} at I_{ZT} (Ω)	Z_{ZK} at I_{ZK} (Ω)				IZM (mA)
1.5SMBZ9.1A	9V1A	8.65	9.1	9.56	41.2	4	500	0.5	5	7.0	165
1.5SMBZ10A	10A	9.50	10	10.50	37.5	4.5	500	0.25	5	8.0	150
1.5SMBZ11A	11A	10.45	11	11.55	34.1	5.5	550	0.25	1	8.4	136
1.5SMBZ12A	12A	11.40	12	12.60	31.2	6.5	550	0.25	1	9.1	125
1.5SMBZ13A	13A	12.35	13	13.65	28.8	7	550	0.25	1	9.9	115
1.5SMBZ15A	15A	14.25	15	15.75	25.0	9	600	0.25	1	11.4	100
1.5SMBZ16A	16A	15.20	16	16.80	23.4	10	600	0.25	1	12.2	94
1.5SMBZ18A	18A	17.10	18	18.90	20.8	12	650	0.25	1	13.7	83
1.5SMBZ20A	20A	19.00	20	21.00	18.7	14	650	0.25	1	15.2	75
1.5SMBZ22A	22A	20.90	22	23.10	17.0	17.5	650	0.25	1	16.7	68
1.5SMBZ24A	24A	22.80	24	25.20	15.6	19	700	0.25	1	18.2	63
1.5SMBZ27A	27A	25.65	27	28.35	13.9	23	700	0.25	1	20.6	56
1.5SMBZ30A	30A	28.50	30	31.50	12.5	26	750	0.25	1	22.8	50
1.5SMBZ33A	33A	31.35	33	34.65	11.4	33	800	0.25	1	25.1	45
1.5SMBZ36A	36A	34.20	36	37.80	10.4	38	850	0.25	1	27.4	42
1.5SMBZ39A	39A	37.05	39	40.95	9.6	45	900	0.25	1	29.7	38
1.5SMBZ43A	43A	40.85	43	45.15	8.7	53	950	0.25	1	32.7	35
1.5SMBZ47A	47A	44.65	47	49.35	8.0	67	1000	0.25	1	35.8	32
1.5SMBZ51A	51A	48.45	51	53.55	7.3	70	1100	0.25	1	38.8	29
1.5SMBZ56A	56A	53.20	56	58.80	6.7	86	1300	0.25	1	42.6	27
1.5SMBZ62A	62A	58.90	62	65.10	6.0	100	1500	0.25	1	47.1	24
1.5SMBZ68A	68A	64.60	68	71.40	5.5	120	1700	0.25	1	51.7	22
1.5SMBZ75A	75A	71.25	75	78.75	5.0	140	2000	0.25	1	56.0	20
1.5SMBZ82A	82A	77.90	82	86.10	4.6	160	2500	0.25	1	62.2	28
1.5SMBZ91A	91A	86.45	91	95.55	4.1	200	3000	0.25	1	69.2	16
1.5SMBZ100A	100A	95.0	100	105.0	3.7	250	3100	0.25	1	76.0	15

Ratings and Characteristics Curves (TA = 25℃ unless otherwise note)

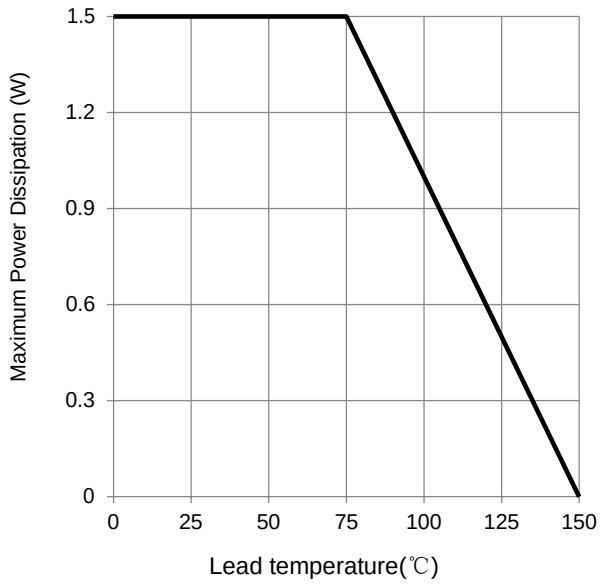


Fig.1 – Power Derating Curve

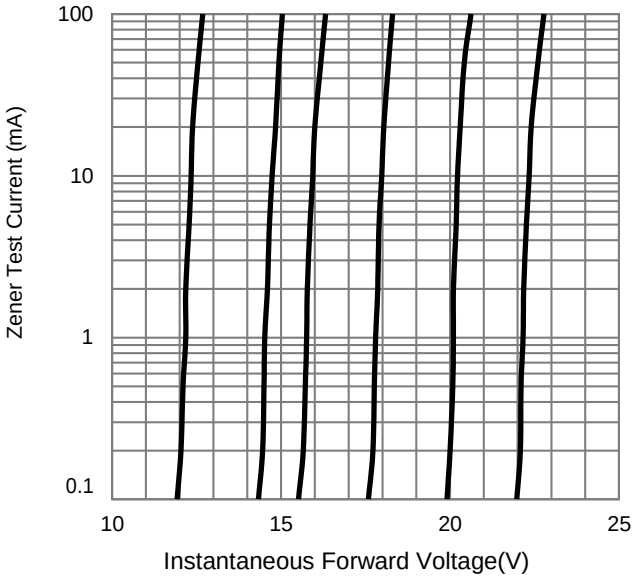


Fig.2 – Typical Zener Voltage

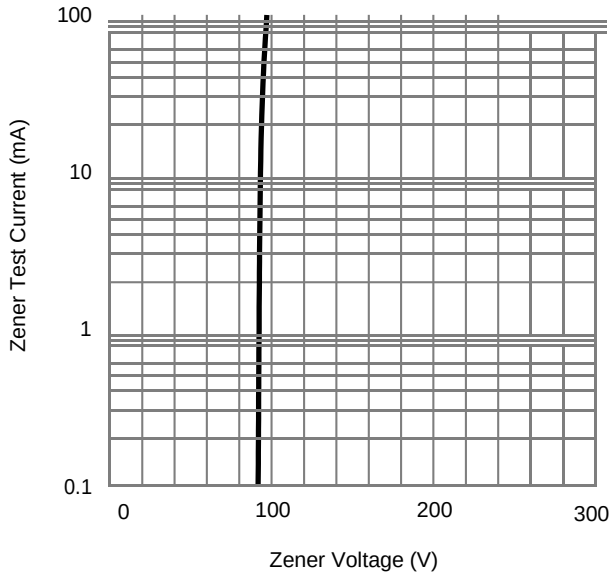
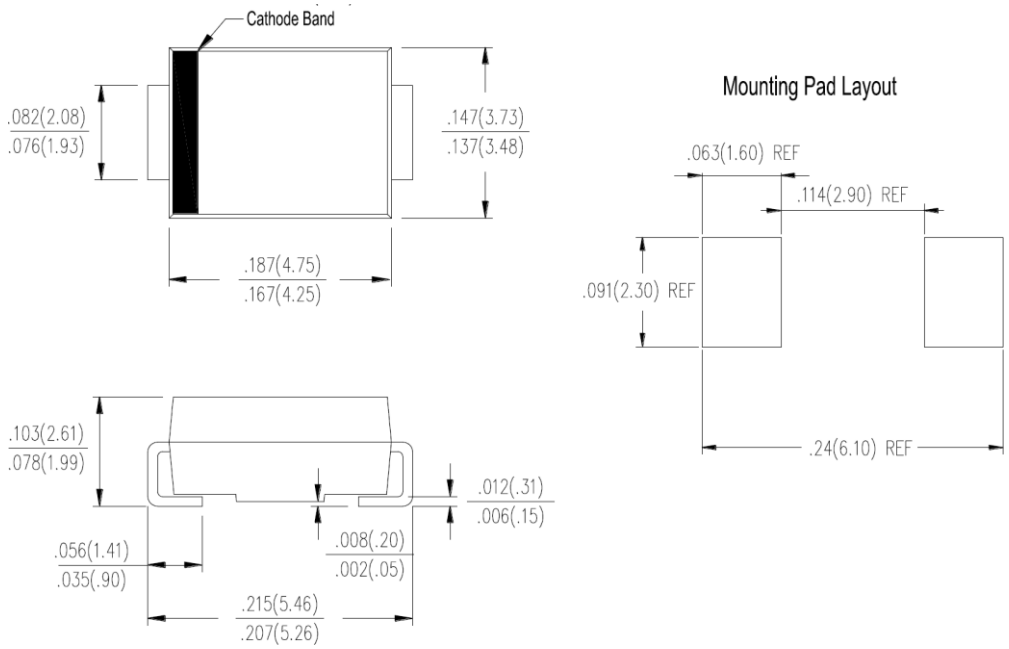


Fig.3 – Typical Zener Voltage

Package Outline Dimensions

in inches (millimeters)

SMB (DO-214AA)



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.10.20	Modify document format

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