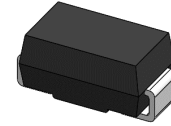


1.5W,9.1 - 200V Zener Diodes

Features

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



SMA(DO-214AC)

Applications

Protection from high voltage, high energy transients, voltage stabilization.

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)			
Parameter	Symbol	Ratings	Unit
Zener voltage	V_Z	See Next Table	V
Power dissipation at $T_L=75^\circ\text{C}$	P_{tot}	1.5	W
Maximum instantaneous forward voltage at 200mA	V_F	1.2	V
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	90	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	20	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	25	$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

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	Vz 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 I _{ZM} (mA)
		Min	Typ	Max		Z _{ZT} at I _{ZT} (Ω)	Z _{ZK} at I _{ZK} (Ω)				
1SMAZ5924	5924	8.65	9.1	9.56	41.2	4	500	0.5	5	7.0	165
1SMAZ5925	5925	9.50	10	10.50	37.5	4.5	500	0.25	5	8.0	150
1SMAZ5926	5926	10.45	11	11.55	34.1	5.5	550	0.25	1	8.4	136
1SMAZ5927	5927	11.40	12	12.60	31.2	6.5	550	0.25	1	9.1	125
1SMAZ5928	5928	12.35	13	13.65	28.8	7	550	0.25	1	9.9	115
1SMAZ5929	5929	14.25	15	15.75	25.0	9	600	0.25	1	11.4	100
1SMAZ5930	5930	15.20	16	16.80	23.4	10	600	0.25	1	12.2	94
1SMAZ5931	5931	17.10	18	18.90	20.8	12	650	0.25	1	13.7	83
1SMAZ5932	5932	19.00	20	21.00	18.7	14	650	0.25	1	15.2	75
1SMAZ5933	5933	20.90	22	23.10	17.0	17.5	650	0.25	1	16.7	68
1SMAZ5934	5934	22.80	24	25.20	15.6	19	700	0.25	1	18.2	63
1SMAZ5935	5935	25.65	27	28.35	13.9	23	700	0.25	1	20.6	56
1SMAZ5936	5936	28.50	30	31.50	12.5	26	750	0.25	1	22.8	50
1SMAZ5937	5937	31.35	33	34.65	11.4	33	800	0.25	1	25.1	45
1SMAZ5938	5938	34.20	36	37.80	10.4	38	850	0.25	1	27.4	42
1SMAZ5939	5939	37.05	39	40.95	9.6	45	900	0.25	1	29.7	38
1SMAZ5940	5940	40.85	43	45.15	8.7	53	950	0.25	1	32.7	35
1SMAZ5941	5941	44.65	47	49.35	8.0	67	1000	0.25	1	35.8	32
1SMAZ5942	5942	48.45	51	53.55	7.3	70	1100	0.25	1	38.8	29
1SMAZ5943	5943	53.20	56	58.80	6.7	86	1300	0.25	1	42.6	27
1SMAZ5944	5944	58.90	62	65.10	6.0	100	1500	0.25	1	47.1	24
1SMAZ5945	5945	64.60	68	71.40	5.5	120	1700	0.25	1	51.7	22
1SMAZ5946	5946	71.25	75	78.75	5.0	140	2000	0.25	1	56.0	20
1SMAZ5947	5947	77.90	82	86.10	4.6	160	2500	0.25	1	62.2	28
1SMAZ5948	5948	86.45	91	95.55	4.1	200	3000	0.25	1	69.2	16
1SMAZ5949	5949	95.0	100	105.0	3.7	250	3100	0.25	1	76.0	15
1SMAZ5950	5950	104.5	110	115.5	3.4	300	4000	0.25	1	83.6	13
1SMAZ5951	5951	114.0	120	126.0	3.1	380	4500	0.25	1	91.2	12
1SMAZ5952	5952	123.5	130	136.5	2.9	450	5000	0.25	1	98.8	11
1SMAZ5953	5953	142.5	150	157.5	2.5	600	6000	0.25	1	114.0	10
1SMAZ5954	5954	152.0	160	168.0	2.3	700	6500	0.25	1	121.6	9
1SMAZ5955	5955	171.0	180	189.0	2.1	900	7000	0.25	1	136.8	8
1SMAZ5956	5956	190.0	200	210.0	1.9	1200	8000	0.25	1	152.0	7

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

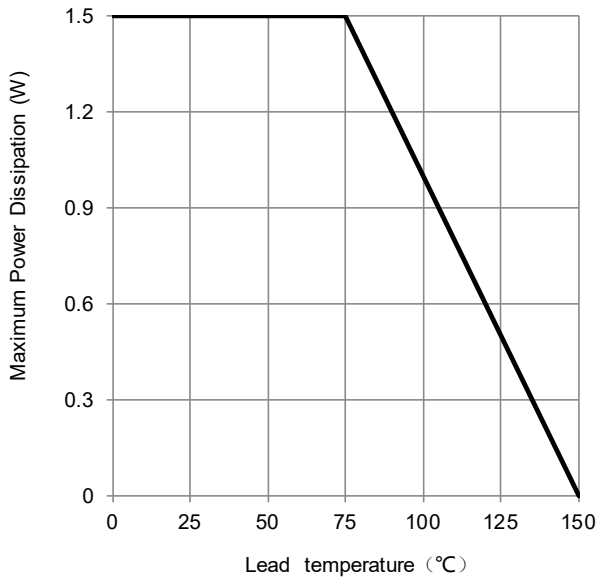


Fig.1 – Power Derating Curve

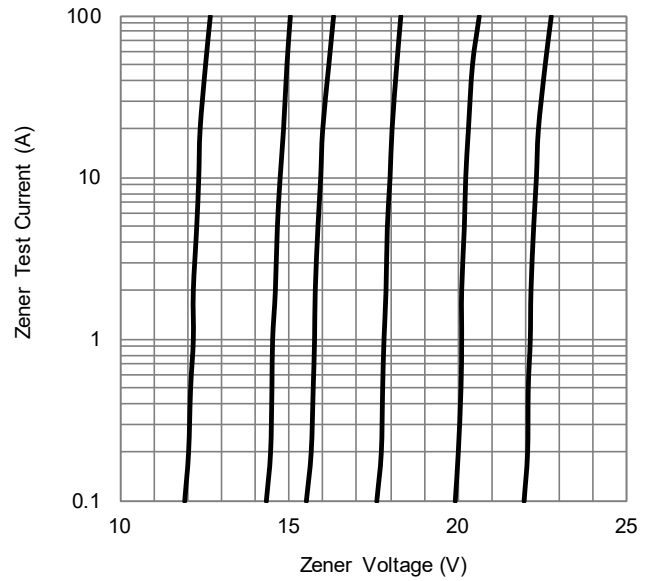


Fig.2 – Typical Zener Voltage

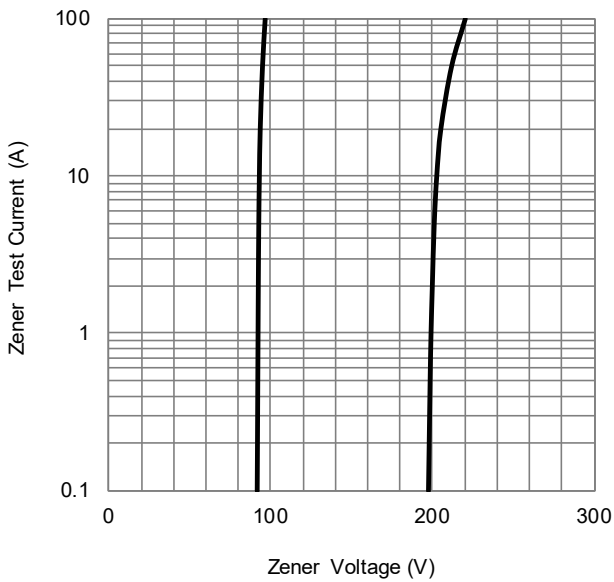
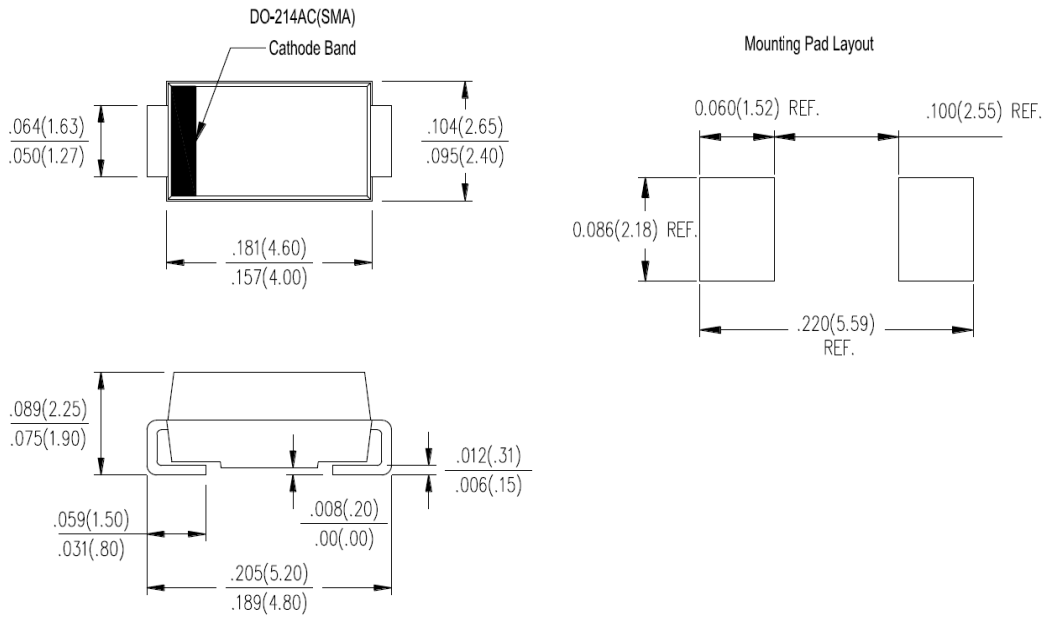


Fig.3 – Typical Zener Voltage

Package Outline Dimensions

in inches (millimeters)

SMA (DO-214AC)



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.10.11	Modify document format
Rev.C	2023.12.18	Update product range

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