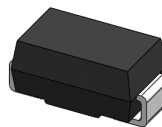


3W,9.1 - 100V Zener Diodes

Features

- Low leakage current
- Available in unidirectional
- Glass passivated junction
- Zener voltage tolerance is $\pm 5\%$
- Total power dissipation: Max 3W
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- AEC-Q101 qualified



SMA(DO-214AC)

Applications

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

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}	3	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	$^\circ\text{C}$

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

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R_{thJA}	90	$^\circ\text{C}/\text{W}$
Thermal Resistance, Junction to Case	R_{thJC}	20	$^\circ\text{C}/\text{W}$
Thermal Resistance, Junction to Lead	R_{thJL}	25	$^\circ\text{C}/\text{W}$

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)				I _{ZM} (mA)
A3.0SMAZ9.1A	A924A	8.65	9.1	9.56	41.2	4	500	0.50	2.5	7.0	328
A3.0SMAZ10A	A925A	9.50	10	10.50	37.5	4.5	500	0.25	2.5	8.0	300
A3.0SMAZ11A	A926A	10.45	11	11.55	34.1	5.5	550	0.25	0.5	8.4	272
A3.0SMAZ12A	A927A	11.40	12	12.60	31.2	6.5	550	0.25	0.5	9.1	250
A3.0SMAZ13A	A928A	12.35	13	13.65	28.8	7	550	0.25	0.5	9.9	230
A3.0SMAZ15A	A929A	14.25	15	15.75	25.0	9	600	0.25	0.5	11.4	200
A3.0SMAZ16A	A930A	15.20	16	16.80	23.4	10	600	0.25	0.5	12.2	186
A3.0SMAZ18A	A931A	17.10	18	18.90	20.8	12	650	0.25	0.5	13.7	166
A3.0SMAZ20A	A932A	19.00	20	21.00	18.7	14	650	0.25	0.5	15.2	150
A3.0SMAZ22A	A933A	20.90	22	23.10	17.0	17.5	650	0.25	0.5	16.7	156
A3.0SMAZ24A	A934A	22.80	24	25.20	15.6	19	700	0.25	0.5	18.2	124
A3.0SMAZ27A	A935A	25.65	27	28.35	13.9	23	700	0.25	0.5	20.6	110
A3.0SMAZ30A	A936A	28.50	30	31.50	12.5	26	750	0.25	0.5	22.8	100
A3.0SMAZ33A	A937A	31.35	33	34.65	11.4	33	800	0.25	0.5	25.1	90
A3.0SMAZ36A	A938A	34.20	36	37.80	10.4	38	850	0.25	0.5	27.4	82
A3.0SMAZ39A	A939A	37.05	39	40.95	9.6	45	900	0.25	0.5	29.7	76
A3.0SMAZ43A	A940A	40.85	43	45.15	8.7	53	950	0.25	0.5	32.7	68
A3.0SMAZ47A	A941A	44.65	47	49.35	8.0	67	1000	0.25	0.5	35.8	62
A3.0SMAZ51A	A942A	48.45	51	53.55	7.3	70	1100	0.25	0.5	38.8	58
A3.0SMAZ56A	A943A	53.20	56	58.80	6.7	86	1300	0.25	0.5	42.6	52
A3.0SMAZ62A	A944A	58.90	62	65.10	6.0	100	1500	0.25	0.5	47.1	48
A3.0SMAZ68A	A945A	64.60	68	71.40	5.5	120	1700	0.25	0.5	51.7	44
A3.0SMAZ75A	A946A	71.25	75	78.75	5.0	140	2000	0.25	1	56.0	40
A3.0SMAZ82A	A947A	77.90	82	86.10	4.6	160	2500	0.25	1	62.2	36
A3.0SMAZ91A	A948A	86.45	91	95.55	4.1	200	3000	0.25	1	69.2	32
A3.0SMAZ100A	A949A	95.0	100	105.0	3.7	250	3100	0.25	1	76.0	30

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise note)

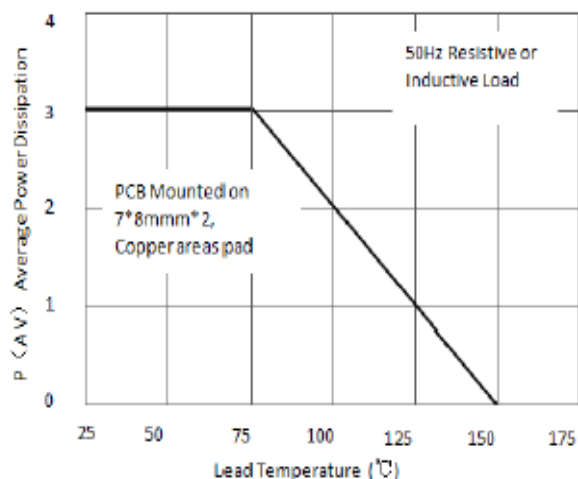


Fig.1 Maximum Continuous Power Dissipation

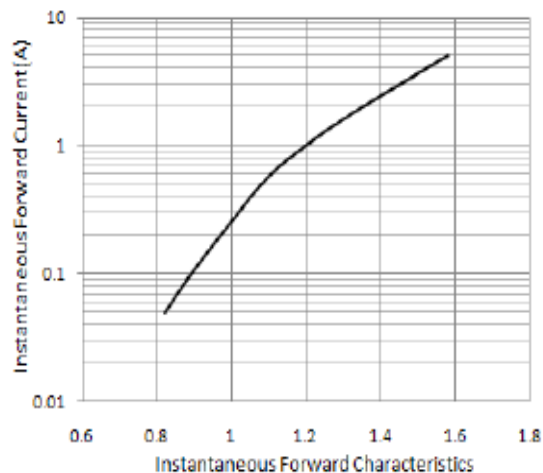


Fig.2 Typical Instantaneous Forward Characteristics

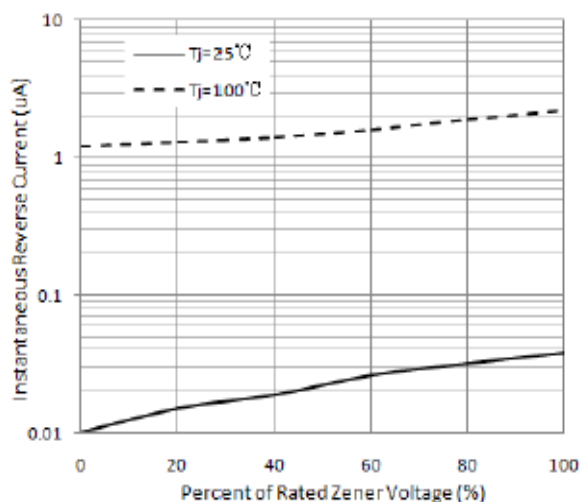


Fig.3 Typical Reverse Characteristics

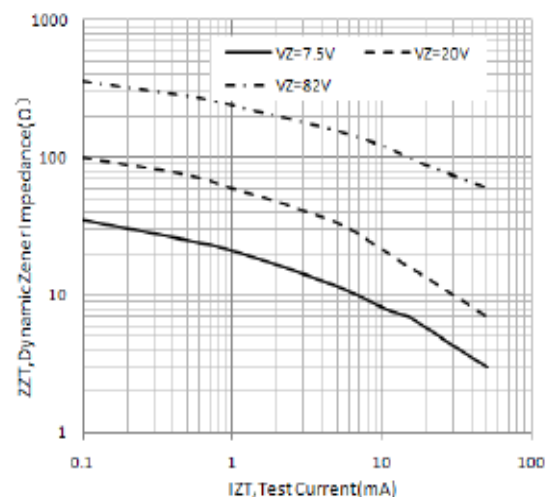
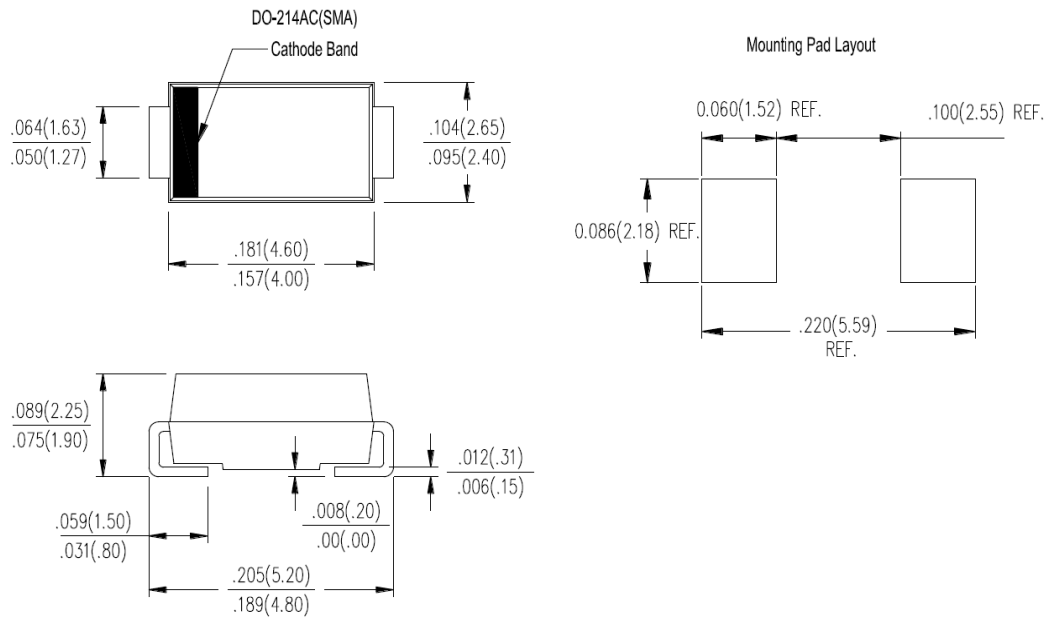


Fig.4 Typical Zener Impedance

Package Outline Dimensions

in inches (millimeters)

SMA (DO-214AC)



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