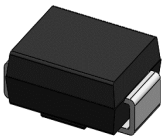
3W,9.1 - 100V Zener Diodes

Features

- Low leakage current
- Available in unidirectional
- Glass passivated junction
- Zener voltage tolerance is ±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

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}	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	℃

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)
A3.0SMBZ9.1A	A924B	8.65	9.1	9.56	41.2	4	500	0.5	2.5	7.0	328
A3.0SMBZ10A	A925B	9.50	10	10.50	37.5	4.5	500	0.25	2.5	8.0	300
A3.0SMBZ11A	A926B	10.45	11	11.55	34.1	5.5	550	0.25	0.5	8.4	272
A3.0SMBZ12A	A927B	11.40	12	12.60	31.2	6.5	550	0.25	0.5	9.1	250
A3.0SMBZ13A	A928B	12.35	13	13.65	28.8	7	550	0.25	0.5	9.9	230
A3.0SMBZ15A	A929B	14.25	15	15.75	25.0	9	600	0.25	0.5	11.4	200
A3.0SMBZ16A	A930B	15.20	16	16.80	23.4	10	600	0.25	0.5	12.2	186
A3.0SMBZ18A	A931B	17.10	18	18.90	20.8	12	650	0.25	0.5	13.7	166
A3.0SMBZ20A	A932B	19.00	20	21.00	18.7	14	650	0.25	0.5	15.2	150
A3.0SMBZ22A	A933B	20.90	22	23.10	17.0	17.5	650	0.25	0.5	16.7	156
A3.0SMBZ24A	A934B	22.80	24	25.20	15.6	19	700	0.25	0.5	18.2	124
A3.0SMBZ27A	A935B	25.65	27	28.35	13.9	23	700	0.25	0.5	20.6	110
A3.0SMBZ30A	A936B	28.50	30	31.50	12.5	26	750	0.25	0.5	22.8	100
A3.0SMBZ33A	A937B	31.35	33	34.65	11.4	33	800	0.25	0.5	25.1	90
A3.0SMBZ36A	A938B	34.20	36	37.80	10.4	38	850	0.25	0.5	27.4	82
A3.0SMBZ39A	A939B	37.05	39	40.95	9.6	45	900	0.25	0.5	29.7	76
A3.0SMBZ43A	A940B	40.85	43	45.15	8.7	53	950	0.25	0.5	32.7	68
A3.0SMBZ47A	A941B	44.65	47	49.35	8.0	67	1000	0.25	0.5	35.8	62
A3.0SMBZ51A	A942B	48.45	51	53.55	7.3	70	1100	0.25	0.5	38.8	58
A3.0SMBZ56A	A943B	53.20	56	58.80	6.7	86	1300	0.25	0.5	42.6	52
A3.0SMBZ62A	A944B	58.90	62	65.10	6.0	100	1500	0.25	0.5	47.1	48
A3.0SMBZ68A	A945B	64.60	68	71.40	5.5	120	1700	0.25	0.5	51.7	44
A3.0SMBZ75A	A946B	71.25	75	78.75	5.0	140	2000	0.25	1	56.0	40
A3.0SMBZ82A	A947B	77.90	82	86.10	4.6	160	2500	0.25	1	62.2	36
A3.0SMBZ91A	A948B	86.45	91	95.55	4.1	200	3000	0.25	1	69.2	32
A3.0SMBZ100A	A949B	95.0	100	105.0	3.7	250	3100	0.25	1	76.0	30

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

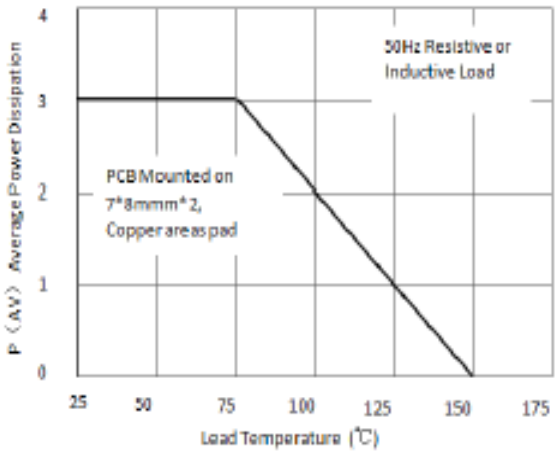


Fig.1 Maximum Continous Power Dissipation

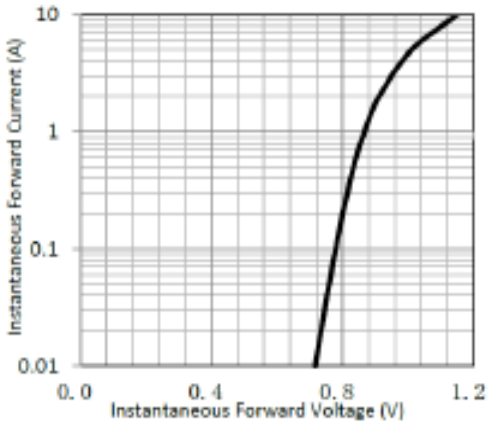


Fig.2 Typical Instantaneous Forward Characteristics

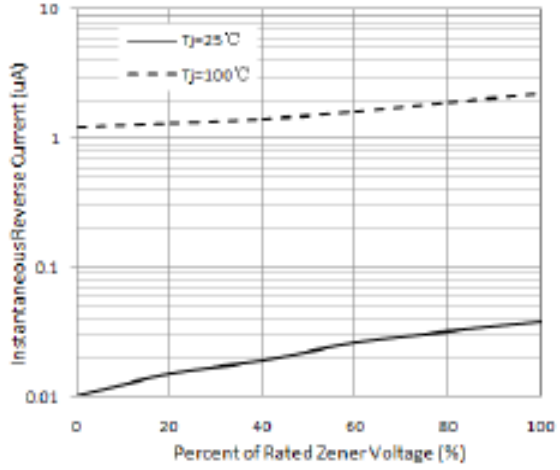


Fig.3 Typical Reverse Characteristics

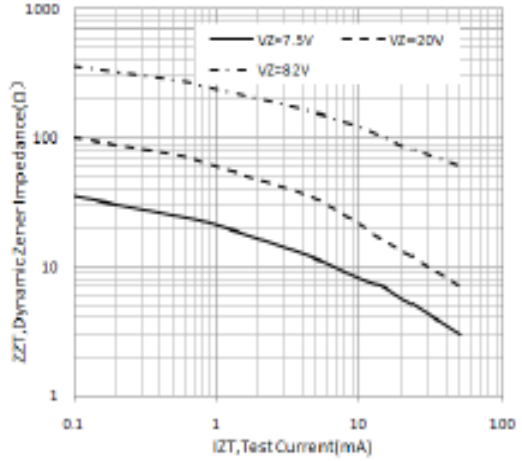


Fig.4 Typical Zener Impedance

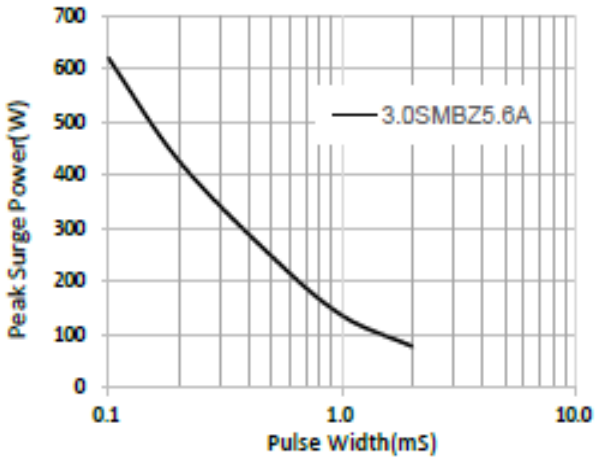


Fig.5 Maximum Non-Repetitive Peak Surge Power

Package Outline Dimensions

in inches (millimeters)

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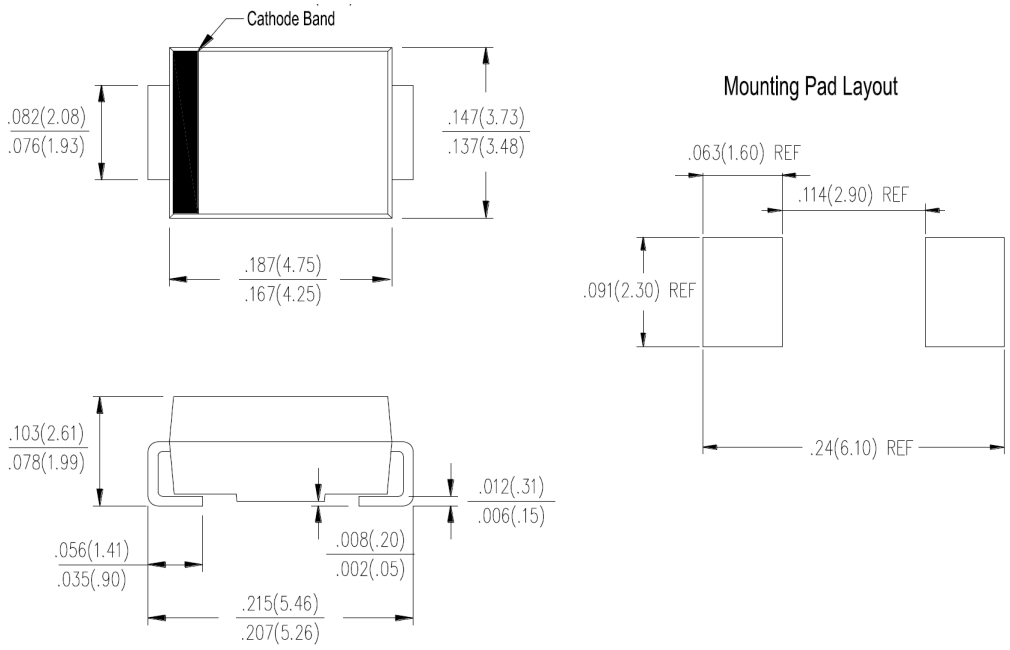

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