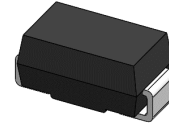


## 1W,9.1 - 100V Zener Diodes

### Features

- Low leakage current
- Available in unidirectional
- Glass passivated junction
- Zener voltage tolerance is  $\pm 5\%$
- Total power dissipation: Max 1W
- 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.

<b>Absolute Maximum Ratings</b> ( $T_A=25^\circ\text{C}$ unless otherwise noted)			
Parameter	Symbol	Ratings	Unit
Zener voltage	$V_Z$	See Next Table	V
Power dissipation at $T_L=75^\circ\text{C}$	$P_{\text{tot}}$	1	W
Maximum instantaneous forward voltage at 200mA	$V_F$	0.9	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	$T_J, T_{\text{STG}}$	-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 IZT (V)			IZT (mA)	Maximum zener impedance		IZK (mA)	Maximum reverse leakage at VR (μA)	Test voltage VR (V)	Maximum Zener Current
		Min	Typ	Max		ZZT at IZT (Ω)	ZZK at IZK (Ω)				IZM (mA)
1SMA4739A	4739A	8.65	9.1	9.56	28	5	700	0.5	10	7	110
1SMA4740A	4740A	9.50	10	10.50	25	7	700	0.25	10	7.6	100
1SMA4741A	4741A	10.45	11	11.55	23	8	700	0.25	5	8.4	83
1SMA4742A	4742A	11.40	12	12.60	21	9	700	0.25	5	9.1	76
1SMA4743A	4743A	12.35	13	13.65	19	10	700	0.25	5	9.9	69
1SMA4744A	4744A	14.25	15	15.75	17	14	700	0.25	5	11.4	61
1SMA4745A	4745A	15.20	16	16.80	15.5	16	700	0.25	5	12.2	57
1SMA4746A	4746A	17.10	18	18.90	14	20	750	0.25	5	13.7	50
1SMA4747A	4747A	19.00	20	21.00	12.5	22	750	0.25	5	15.2	45
1SMA4748A	4748A	20.90	22	23.10	11.5	23	750	0.25	5	16.7	41
1SMA4749A	4749A	22.80	24	25.20	10.5	25	750	0.25	5	18.2	38
1SMA4750A	4750A	25.65	27	28.35	9.5	35	750	0.25	5	20.6	34
1SMA4751A	4751A	28.50	30	31.50	8.5	40	1000	0.25	5	22.8	30
1SMA4752A	4752A	31.35	33	34.65	7.5	45	1000	0.25	5	25.1	27
1SMA4753A	4753A	34.20	36	37.80	7	50	1000	0.25	5	27.4	25
1SMA4754A	4754A	37.05	39	40.95	6.5	60	1000	0.25	5	29.7	23
1SMA4755A	4755A	40.85	43	45.15	6	70	1500	0.25	5	32.7	22
1SMA4756A	4756A	44.65	47	49.35	5.5	80	1500	0.25	5	35.8	19
1SMA4757A	4757A	48.45	51	53.55	5	95	1500	0.25	5	38.8	18
1SMA4758A	4758A	53.20	56	58.80	4.5	110	2000	0.25	5	42.6	16
1SMA4759A	4759A	58.90	62	65.10	4	125	2000	0.25	5	47.1	14
1SMA4760A	4760A	64.60	68	71.40	3.7	150	2000	0.25	5	51.7	13
1SMA4761A	4761A	71.25	75	78.75	3.3	175	2000	0.25	5	56	12
1SMA4762A	4762A	77.90	82	86.10	3	200	3000	0.25	5	62.2	11
1SMA4763A	4763A	86.45	91	95.55	2.8	250	3000	0.25	5	69.2	10
1SMA4764A	4764A	95.0	100	105.0	2.5	350	3000	0.25	5	76	9

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

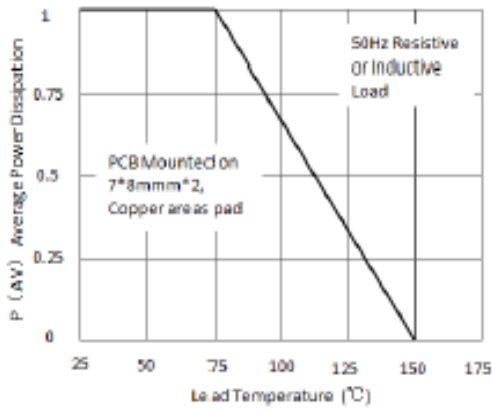


Fig.1 Maximum Continuous Power Dissipation

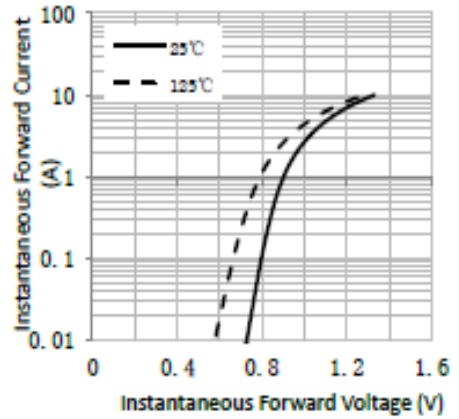


Fig.2 Typical Instantaneous Forward Characteristics

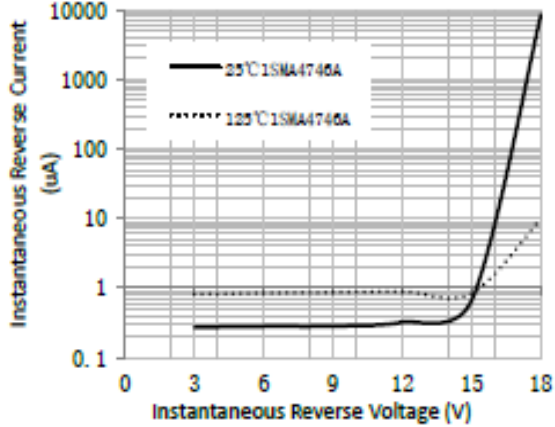


Fig.3 Typical Reverse Characteristics

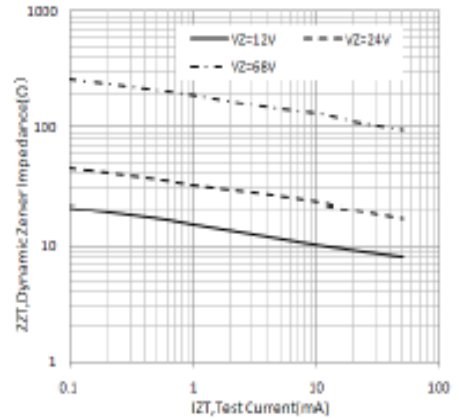


Fig.4 Typical Zener Impedance

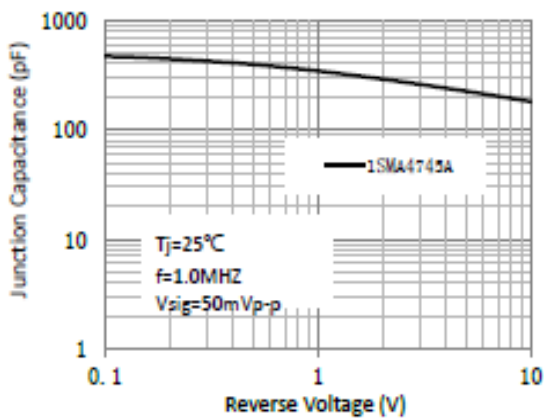


Figure 5. Typical Junction Capacitance

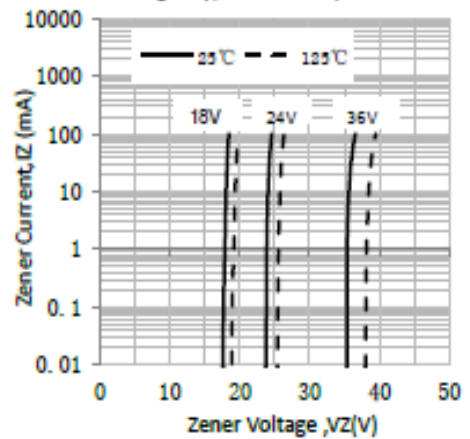
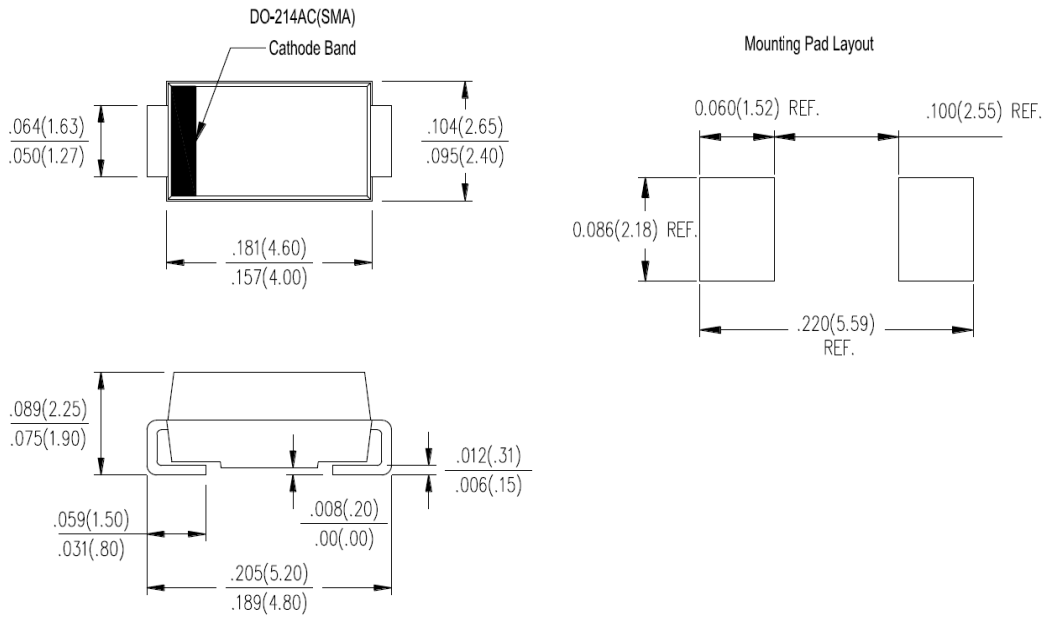


Figure 6. Typical Zener Voltage(V)

## 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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