

# 1N4728A THRU 1N4764A

## SILICON PLANAR ZENER DIODES

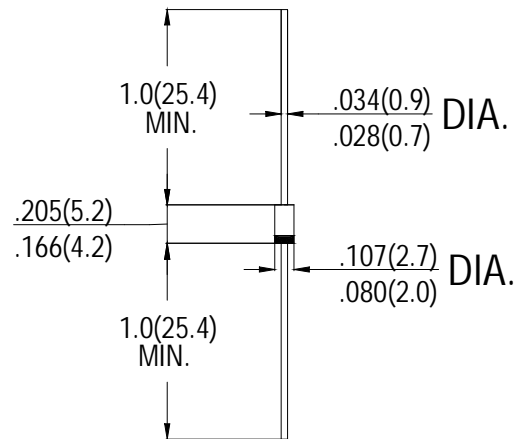
### FEATURES

- Voltage Range: 3.3V to 100V
- Double siugd type construction

### MECHANICAL DATA

- **Case:** Molded plastic
- **Epoxy:** UL94V-0 rate flame retardant
- **Lead:** MIL-STD- 202E, Method 208 guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any
- **Weight:** 0.33 grams

### DO-41



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

### Absolute Maximum Ratings ( $T_a=25^\circ\text{C}$ )

	SYMBOL	VALUE	units
Zener Current see Table "Characterstics"			
Power Dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$	0.5 <sup>1)</sup>	W
Junction Temperature	$T_J$	150	°C

<sup>1)</sup> Valid provided that leads at a distance of 8 mm form case are kept at ambient temperature.

### Characteristics at $T_{amb}=25^\circ\text{C}$

	SYMBOL	Min.	Typ.	Max.	units
Forward Voltage at $I_F=250\text{mA}$	$V_F$	--	--	1.2	V

Valid provided that leads at a distance of 8 mm form case are kept at ambient temperature.

## SILICON PLANAR POWER ZENER DIODES

TYPE	Zener Voltage range <sup>1)</sup>				Dynamic resistance <sup>4)</sup>			Reverse leakage current		Max. Zener Current
	V <sub>znom</sub> <sup>2)</sup>	I <sub>ZT</sub>	for V <sub>ZT</sub> <sup>3)</sup>		r <sub>ZJT</sub>	I <sub>ZM</sub> @ T <sub>A</sub>		I <sub>R</sub> <sup>3)</sup> at V <sub>R</sub>	I <sub>ZM</sub> @ T <sub>A</sub>	
	V	mA	V		mA	Ω	mA	μA	V	mA
1N4728A	3.3	76	2.97	3.63	10	400	1.0	100	1.0	276
1N4729A	3.6	69	3.24	3.96	10	400	1.0	100	1.0	252
1N4730A	3.9	64	3.51	4.29	9.0	400	1.0	50	1.0	234
1N4731A	4.3	58	3.87	4.73	9.0	400	1.0	10	1.0	217
1N4732A	4.7	53	4.23	5.17	8.0	500	1.0	10	1.0	193
1N4733A	5.1	49	4.59	5.61	7.0	550	1.0	10	1.0	178
1N4734A	5.6	45	5.04	6.16	5.0	600	1.0	10	2.0	162
1N4735A	6.2	41	5.58	6.82	2.0	700	1.0	10	3.0	146
1N4736A	6.8	37	6.12	7.48	3.5	700	1.0	10	4.0	133
1N4737A	7.5	34	6.75	8.25	4.0	700	0.5	10	5.0	121
1N4738A	8.2	31	7.38	9.02	4.5	700	0.5	10	6.0	110
1N4739A	9.1	28	8.19	10.01	5.0	700	0.5	10	7.0	100
1N4740A	10	25	9	11	7.0	700	0.25	10	7.6	91
1N4741A	11	23	9.9	12.1	8.0	700	0.25	5.0	8.4	83
1N4742A	12	21	10.8	13.2	9.0	700	0.25	5.0	9.1	76
1N4743A	13	19	11.7	14.3	10	700	0.25	5.0	9.9	69
1N4744A	15	17	13.5	16.5	14	700	0.25	5.0	11.4	61
1N4745A	16	15.5	14.4	17.6	16	700	0.25	5.0	12.2	57
1N4746A	18	14	16.2	19.8	20	750	0.25	5.0	13.7	50
1N4747A	20	12.5	18	22	22	750	0.25	5.0	15.2	45
1N4748A	22	11.5	19.8	24.2	23	750	0.25	5.0	16.7	41
1N4749A	24	10.5	21.6	26.4	25	750	0.25	5.0	18.2	38
1N4750A	27	9.5	24.3	29.7	35	750	0.25	5.0	20.6	34
1N4751A	30	8.5	27	33	40	1000	0.25	5.0	22.8	30
1N4752A	33	7.5	29.7	36.3	45	1000	0.25	5.0	25.1	27
1N4753A	36	7.0	32.4	39.6	50	1000	0.25	5.0	27.4	25
1N4754A	39	6.5	35.1	42.9	60	1000	0.25	5.0	29.7	23
1N4755A	43	6.0	38.7	47.3	70	1500	0.25	5.0	32.7	22
1N4756A	47	5.5	42.3	51.7	80	1500	0.25	5.0	35.8	19
1N4757A	51	5	45.9	56.1	95	1500	0.25	5.0	38.8	18
1N4758A	56	4.5	50.4	61.6	110	2000	0.25	5.0	42.6	16
1N4759A	62	4.0	55.8	68.2	125	2000	0.25	5.0	47.1	14
1N4760A	68	3.7	61.2	74.8	150	2000	0.25	5.0	51.7	13
1N4761A	75	3.3	67.5	82.5	175	2000	0.25	5.0	56	12
1N4762A	82	3.0	73.8	90.2	200	3000	0.25	5.0	62.2	11
1N4763A	91	2.8	81.9	100.1	250	3000	0.25	5.0	69.2	10
1N4764A	100	2.5	90	110	350	3000	0.25	5.0	76.0	9



<sup>1)</sup> Tested with pulses  $t_p=20$  ms.

<sup>2)</sup> **SPECIALS AVAILABLE INCLUDE:** Nominal zener voltages between the voltages shown and tighter voltage tolerances.

For detailed information on price, availability, and delivery, contact your nearest Motorola representative. **ZENER VOLTAGE (VZ) MEASUREMENT:** Motorola guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (TL) at  $30^{\circ}\text{C} \pm 1^{\circ}\text{C}$ , 3/8, from the diode body.

<sup>3)</sup> Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

<sup>4)</sup> The zener impedance is derived from the 60 cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (IZT or IZK) is superimposed on IZT or IZK.