

JANHCC1N4099 - JANHCC1N4135

JANKCC1N4099 - JANKCC1N4135



Zener Diode Chip Series

Rev. V2

Features

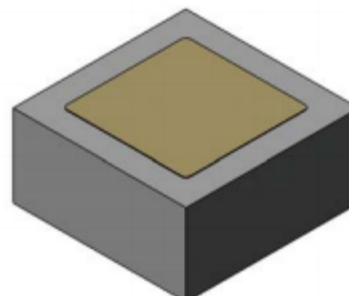
- 0.5 W Capability with Proper Heat Sinking
- Electrically Equivalent to 1N4099 - 1N4135

Die

Description

These 0.5 W zener diode chips are electrically equivalent to the 1N4099 - 1N4135 series diodes. They are compatible with all wire bonding and die attach techniques with the exception of solder reflow.

These chips are also available in commercial versions using prefix CD.



Electrical Specifications: Zener Test Current = 250 μ A, $T_A = +25^\circ\text{C}$

Part #	Zener Voltage ¹ $V_Z @ 250 \mu\text{A}$	Zener Impedance ² $Z_{ZT} @ 250 \mu\text{A}$	Reverse Voltage $I_R @ V_R$	
	Nominal	Maximum	Maximum	
	V	Ω	μA	V
4099	6.8	200	1	5.2
4100	7.5	200	1	5.7
4101	8.2	200	0.5	6.3
4102	8.7	200	0.5	6.7
4103	9.1	200	0.5	7.0
4104	10	200	0.5	7.6
4105	11	200	0.05	8.5
4106	12	200	0.05	9.2
4107	13	200	0.05	9.9
4108	14	200	0.05	10.7
4109	15	100	0.05	11.4
4110	16	100	0.05	12.2
4111	17	100	0.05	13.0
4112	18	100	0.05	13.7
4113	19	150	0.05	14.5
4114	20	150	0.01	15.2
4115	22	150	0.01	16.8
4116	24	150	0.01	18.3
4117	25	150	0.01	19.0
4118	27	150	0.01	20.5
4119	28	200	0.01	21.3

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* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

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Part #	Zener Voltage ¹ V_Z @ 250 μ A	Zener Impedance ² Z_{ZT} @ 250 μ A	Reverse Voltage I_R @ V_R	
	Nominal	Maximum	Maximum	
	V	Ω	μ A	V
4120 4121	30 33	200 200	0.01 0.01	22.8 25.1
4122 4123	36 39	200 200	0.01 0.01	27.4 29.7
4124 4125	43 47	250 250	0.01 0.01	32.7 35.8
4126 4127	51 56	300 300	0.01 0.01	38.8 42.6
4128 4129	60 20	400 500	0.01 0.01	45.6 47.1
4130 4131	68 75	700 700	0.01 0.01	51.7 57.0
4132 4133	82 87	800 1000	0.01 0.01	62.4 66.2
4134 4135	91 100	1200 1500	0.01 0.01	69.2 76.0

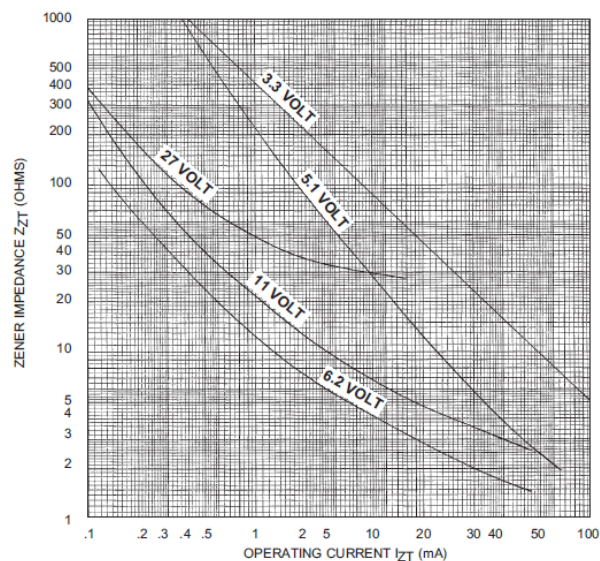
1. Zener voltage range equals nominal voltage $\pm 5\%$ for "A" suffix. No suffix denotes $\pm 10\%$, "C" suffix = $\pm 2\%$ and "D" suffix = $\pm 1\%$.
2. Zener impedance is derived by superimposing on I_{ZT} at 60 HZ RMS AC current equal to 10% of I_{ZT} .

Absolute Maximum Ratings^{3,4}

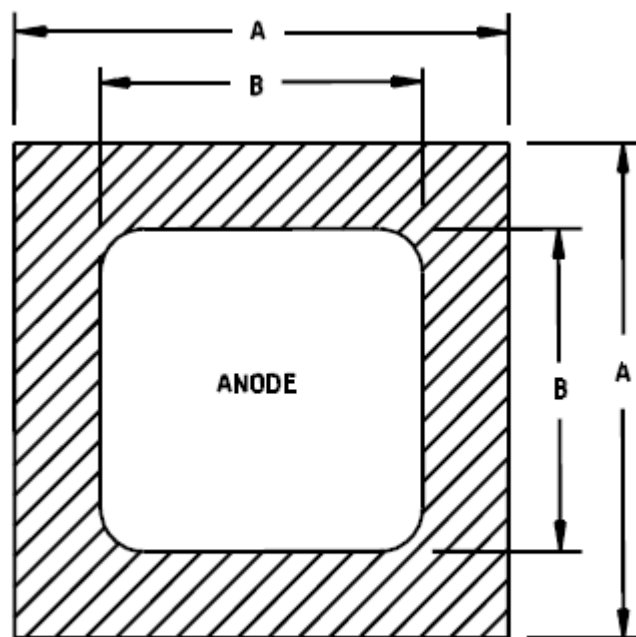
Parameter	Absolute Maximum
Forward Voltage	1.5 V @ 200 mA
Operating Temperature	-65°C to +175°C
Storage Temperature	-65°C to +175°C

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- VPT Components does not recommend sustained operation near these survivability limits.

Zener Impedance vs. Operating Current



Outline Drawing (Die)



BACKSIDE IS CATHODE

JANHCC and JANKCC				
Ltr	Inches		Millimeters	
	Min	Max	Min	Max
A	.019	.023	0.48	0.58
B	.013	.017	0.33	0.43

NOTES:

1. Dimensions are in inches.
2. Millimeter equivalents are given for general information only.
5. The JANHCC and JANKCC die thickness is .010 (0.25 mm) \pm .002 inches (\pm 0.05 mm).
Anode metallization: Al, thickness = 25,000 Å minimum;
cathode metallization: Au, thickness = 4,000 Å minimum.
6. Circuit layout data: For zener operation, cathode must be operated positive with respect to anode.
7. In accordance with ASME Y14.5M, diameters are equivalent to Φ x symbology.

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