

## Zener Diode Chip Series

Rev. V1

### Features

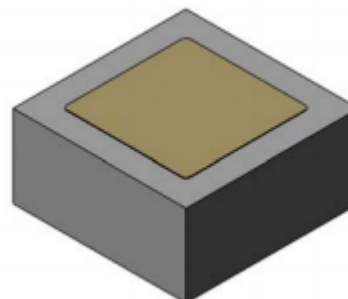
- 0.5 W Capability with Proper Heat Sinking
- Electrically Equivalent to 1N4614 - 1N4627

### Die

### Description

These 0.5 W zener diodes are electrically equivalent to the 1N4614 - 1N4627 series diodes. They are compatible with all wire bonding and die attach techniques with the exception of solder reflow.

These diodes are available in JANHC and JANKC per MIL-PRF-19500/127.



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

Part #	Zener Voltage <sup>1</sup> $V_Z @ 250 \mu\text{A}$	Zener Impedance <sup>2</sup> $Z_{ZT} @ 500 \mu\text{A}$	Reverse Voltage $I_R @ V_R$	
	Nominal	Maximum	Maximum	
	V	$\Omega$	$\mu\text{A}$	V
CD4614	1.8	1200	7.5	1.0
CD4615	2.0	1250	5.0	1.0
CD4616	2.2	1300	4.0	1.0
CD4617	2.4	1400	2.0	1.0
CD4618	2.7	1500	1.0	1.0
CD4619	3.0	1600	0.8	1.0
CD4620	3.3	1650	7.5	1.5
CD4621	3.6	1700	7.5	2.0
CD4622	3.9	1650	5.0	2.0
CD4623	4.3	1600	4.0	2.0
CD4624	4.7	1550	10.0	3.0
CD4625	5.1	1500	10.0	3.0
CD4626	5.6	1400	10.0	4.0
CD4627	6.2	1200	10.0	5.0

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  $I_{ZT}$ .

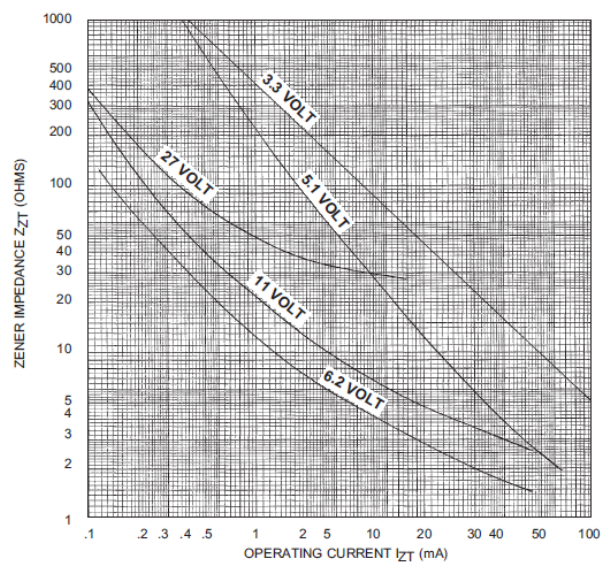
\* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

### Absolute Maximum Ratings<sup>3,4</sup>

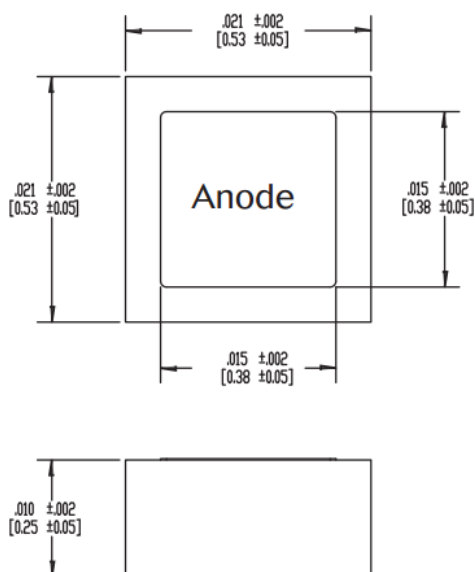
Parameter	Absolute Maximum
Forward Voltage	1.5 V @ 200 mA
Operating Temperature	-65°C to +175°C
Storage Temperature	-65°C to +175°C

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

### Zener Impedance vs. Operating Current



### Die



Metallization: Top: (anode) AL  
Back: (cathode) Au

AL Thickness: 25,000 Å Minimum

Gold Thickness: 4,000 Å Minimum

Chip Thickness: 10 mils

Circuit Layout Data: For Zener operation, cathode must be operated positive with respect to anode.

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