



0.5W, 250µA I_{ZT} , Bare Die Zener Diode

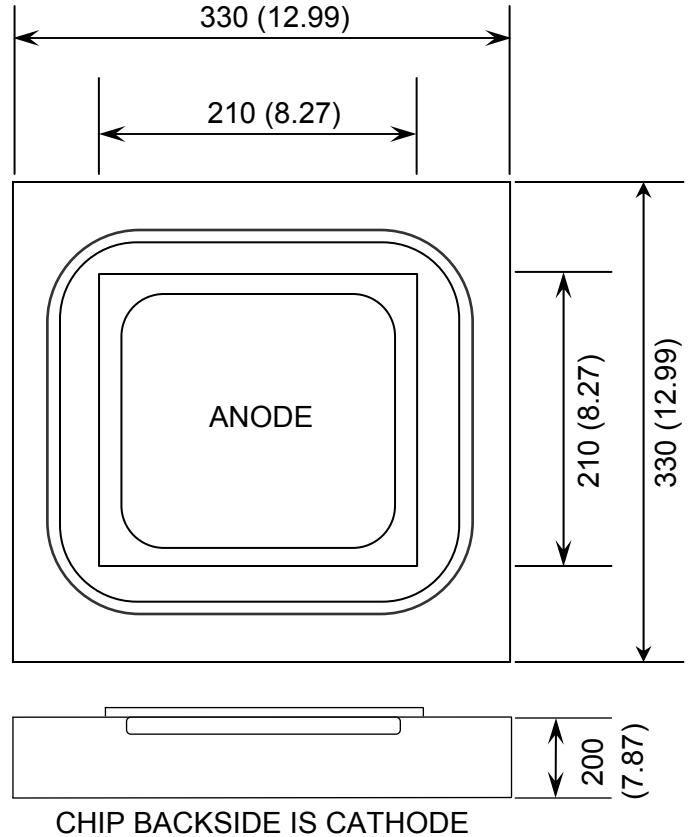
Rev 1.0
07/07/17

Silicon Planar Zener diode in bare die form – 5% tolerance

Features:

- Sharp Reverse Characteristics
- Low Reverse Current Levels
- High Reliability Gold Back Metal
- High Reliability tested grades.

Die Dimensions in µm (mils)



Ordering Information

The following part suffixes apply:

- No suffix - MIL-STD-750 /2073 Visual Inspection
- “H” - MIL-STD-750 /2073 Visual Inspection
+ MIL-PRF-38534 Class H LAT
- “K” - MIL-STD-750 /2073 Visual Inspection
+ MIL-PRF-38534 Class K LAT

LAT = Lot Acceptance Test.

For further information on LAT process flows see below.

www.siliconsupplies.com/quality/bare-die-lot-qualification

Supply Formats:

- Default – Die in Waffle Pack (400 per tray capacity)
- Sawn Wafer on Tape – By specific request
- Unsawn Wafer – By specific request
- Tighter V_Z tolerances:
2% - B grade, 1% - A grade – Specific request

Mechanical Specification

Die Size (Unsawn)	330 x 330 12.99 x 12.99	µm mils
Anode Pad Size	210 x 210 8.27 x 8.27	µm mils
Die Thickness	200 7.87	µm mils
Top Metal Composition	Al	
Back Metal Composition	Au	





0.5W, 250 μ A I_{ZT} , Bare Die Zener Diode

Rev 1.0
07/07/17

Absolute Maximum Ratings¹ $T_A = 25^\circ\text{C}$ unless otherwise stated

PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation ²	P_{TOT}	500	mW
Junction Temperature	T_J	175	$^\circ\text{C}$
Storage Temperature Range	T_S	-65 to +200	$^\circ\text{C}$
Forward Voltage @ $I_F = 200\text{mA}$	V_F	1.5	V

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise stated

DEVICE	ZENER VOLTAGE RANGE			TEST CURRENT	REVERSE LEAKAGE CURRENT			DYNAMIC RESISTANCE ³	MAXIMUM DC ZENER CURRENT
	$V_Z @ I_{ZT}$			I_{ZT}	$I_R @ V_R$			$Z_Z @ I_{ZT}$	I_{ZM}
	V			μA	μA	V	Ω	mA	
	Min.	Nom.	Max.						
1N4617	2.28	2.4	2.56	250	2	1	1400	95	
1N4618	2.5	2.7	2.9	250	1	1	1500	90	
1N4619	2.8	3.0	3.2	250	0.8	1	1600	87	
1N4620	3.1	3.3	3.5	250	7.5	1.5	1650	85	
1N4621	3.4	3.6	3.8	250	7.5	2	1700	83	
1N4622	3.7	3.9	4.1	250	5	2	1650	80	
1N4623	4.0	4.3	4.6	250	4	2	1600	77	
1N4624	4.4	4.7	5.0	250	10	3	1550	75	
1N4625	4.8	5.1	5.4	250	10	3	1550	70	
1N4626	5.2	5.6	6.0	250	10	4	1400	65	
1N4627	5.8	6.2	6.6	250	10	5	1200	61	

1. Operation above the absolute maximum rating may cause device failure. Operation at the absolute maximum ratings, for extended periods, may reduce device reliability.

2. Assembled in DO-35 package. Performance in die form subject to assembly heat sinking and die attach methods.

3. Zener impedance is derived by superimposing on I_{ZT} a 60Hz rms AC current equal to 10% of I_{ZT} .

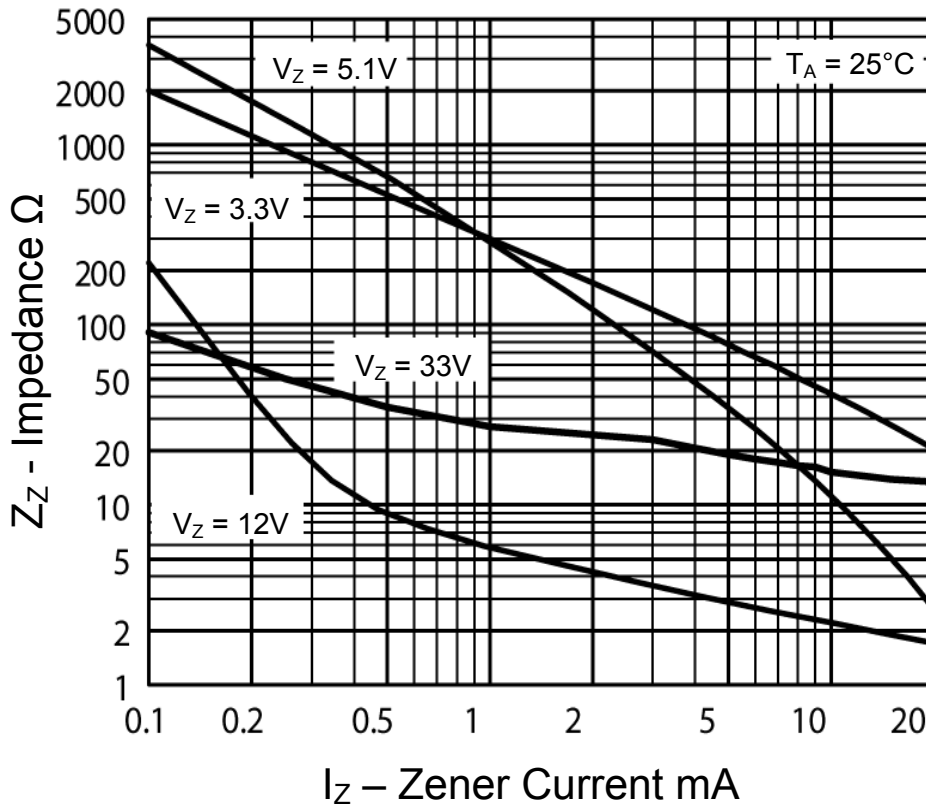




0.5W, 250 μ A I_{ZT} , Bare Die Zener Diode

Rev 1.0
07/07/17

Typical Electrical Characteristics



Zener Impedance Versus Operating Current - Z_Z Versus I_Z

DISCLAIMER: The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Silicon Supplies Ltd hereby disclaims any and all warranties and liabilities of any kind.

LIFE SUPPORT POLICY: Silicon Supplies Ltd components may be used in life support devices or systems only with the express written approval of Silicon Supplies Ltd, if a failure of such components can reasonably be expected to cause the failure of that life support device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

