

0.5W, $250\mu A~I_{ZT}$, Bare Die Zener Diode

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

Rev 1.0 07/07/17

Features:

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

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.

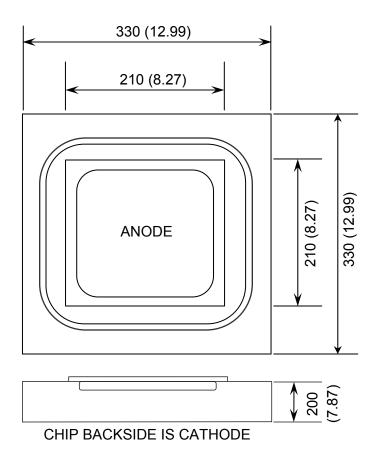
www.siliconsupplies.com\quality\bare-die-lot-qualification

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

Die Dimensions in µm (mils)



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		





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Absolute Maximum Ratings¹ T_A = 25°C unless otherwise stated

PARAMETER	SYMBOL	VALUE	UNIT	
Power Dissipation ²	P _{TOT}	500	mW	
Junction Temperature	TJ	175	°C	
Storage Temperature Range	Ts	-65 to +200	°C	
Forward Voltage @ I _F = 200mA	V_{F}	1.5	V	

Electrical Characteristics T_A = 25°C unless otherwise stated

	ZENER VOLTAGE RANGE		TEST CURRENT	REVERSE LEAKAGE CURRENT		DYNAMIC RESISTANCE ³	MAXIMUM DC ZENER CURRENT	
DEVICE	V _Z @ I _{ZT}		I _{ZT}	I _R @ V _R		Z _Z @ I _{ZT}	I _{ZM}	
	V		μА	μА	V	Ω	mA	
	Min.	Nom.	Max.			4		0.5
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.

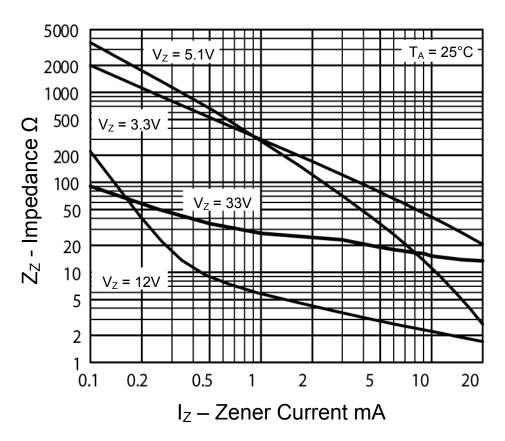
^{3.} Zener impedance is derived by superimposing on I_{ZT} a 60Hz rms AC current equal to 10% of I_{ZT} .



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Typical Electrical Characteristics



Zener Impedance Versus Operating Current - Zz Versus Iz

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