

905 Series

Wakefield-Vette's 900 Series Heat Sinks for Chipset can match up to devices from

Intel, Broadcom, Xilinx, TI, Motorola, ATI, AMD, Nvidia, Vishay, Powerex, Infineon, Microsemi, and many more.

These heat sinks are designed for air flow applications in the Telecom, Data Center, Networking, Cloud Computing, and many more Industries.

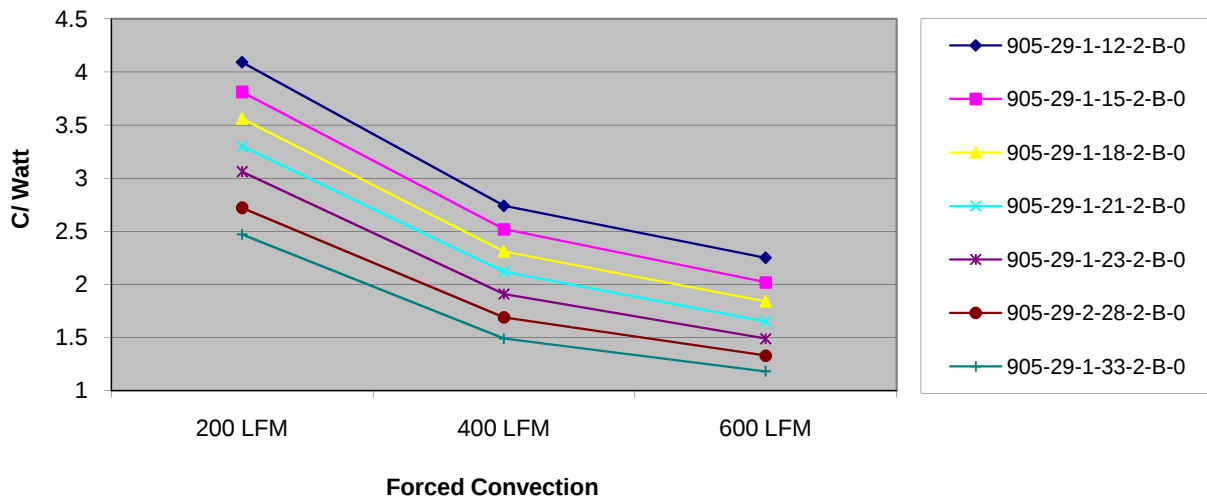
Material: AL 6063

Finish: Black Anodize

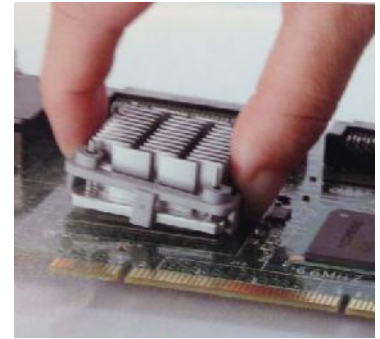
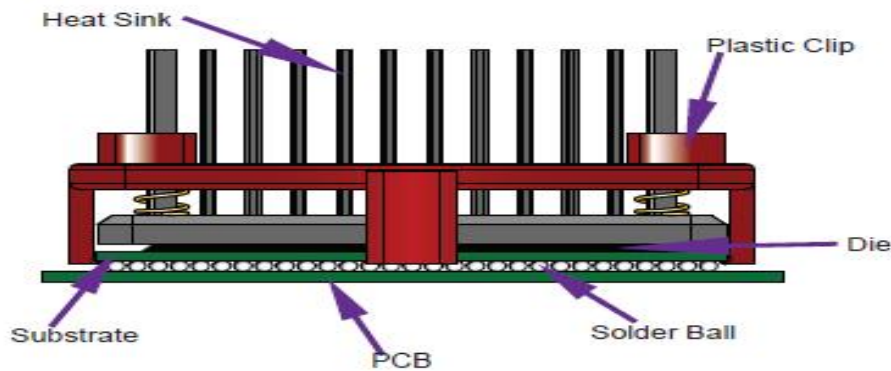


PART #	HEIGHT (mm)	CHIP SIZE (mm)	NATURAL CONVECTION	FORCED CONVECTION (C/W)		
				200 LFM	400 LFM	600 LFM
905-29-1-12-2-B-0	12	29	12.47 C/W	4.09 C/W	2.74 C/W	2.25 C/W
905-29-1-15-2-B-0	15	29	11.86 C/W	3.81 C/W	2.52 C/W	2.02 C/W
905-29-1-18-2-B-0	18	29	11.25 C/W	3.56 C/W	2.31 C/W	1.84 C/W
905-29-1-21-2-B-0	21	29	10.63 C/W	3.3 C/W	2.12 C/W	1.65 C/W
905-29-1-23-2-B-0	23	29	10.23 C/W	3.06 C/W	1.91 C/W	1.49 C/W
905-29-2-28-2-B-0	28	29	9.24 C/W	2.72 C/W	1.69 C/W	1.33 C/W
905-29-1-33-2-B-0	33	29	8.24 C/W	2.47 C/W	1.49 C/W	1.18 C/W

THERMAL PERFORMANCE:

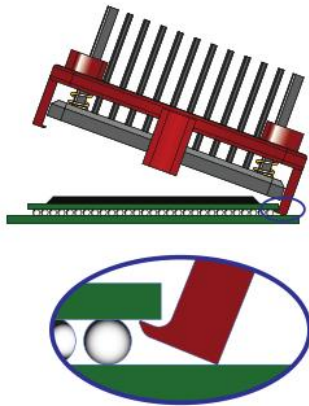


Series	Chip Size	Construction	Height	Chip Height	Finish	Interface
905-	19-	1-	12-	1-	B-	1
	19	1= Elliptical Fin	12 = 11.6	1 = .9-2.1	B = BLK ANO	0 = None
	21		15 = 14.6	2 = 2.2-3.4		1 = T725
	23		18 = 17.6			
	27		21 = 20.6			
	29		23 = 22.6			
	31		28 = 27.6			
	33		33 = 32.6			
	35					
	37.5					
	40					

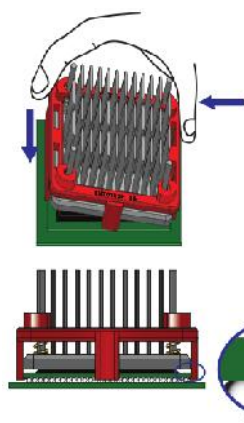


Wakefield-Vette's heat sink assemblies onto chip set using the space that is between the PCB and the substrate of the solder balls. The solder balls provide a minimal gap of .5mm to .7mm. Attachment feature is below a .4mm thickness. The clipping system will not interfere or damage chip. Contact area is the edge of chip.

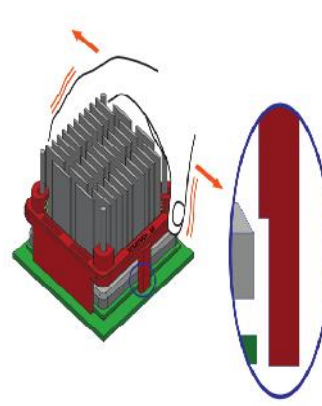
ASSEMBLY INSTRUCTION:



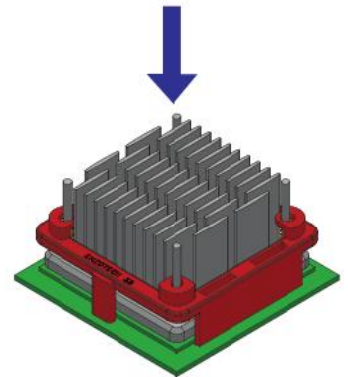
Step 1: Hook the clip under one side of the BGA chip set.



Step 2: Rotate assembly down until opposite side clip engages substrate edge of BGA chip set.



Step 3: Make sure the solder rods are clearing from edges of BGA chip set.



Step 4: Press firmly down to make sure clips fully engage edges of chip set. Heat Sink should not move around easily.

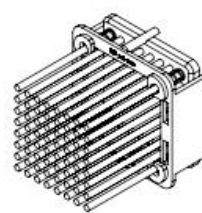
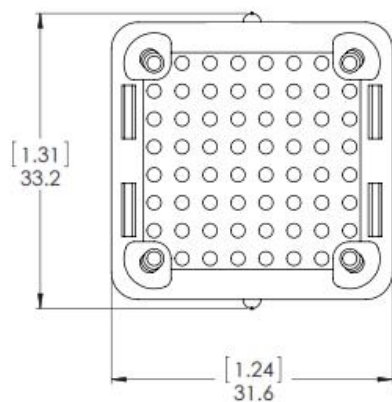
Random Vibration Test

Frequency : 5 Hz to 500 Hz
Acceleration : 3.13 grms
P.S.D : 0.01 g²/HZ (5 Hz)
0.02 g²/HZ (20 Hz to 500 Hz)
Test Axis : X, Y, Z axis
Test Time : 10 mins (Each axis)
Total Test Time : 30 mins

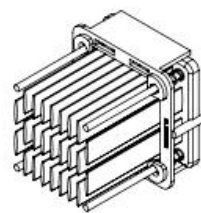
SHOCK TEST SPECIFICATION :

Wave Form : Half sine wave
Acceleration : 50 g
Duration Time : 11 ms
No. of Shock : Each axis 3 times
Shock Direction : $\pm X$, $\pm Y$, $\pm Z$ axis
Reliability & Communication
Testing Instruments

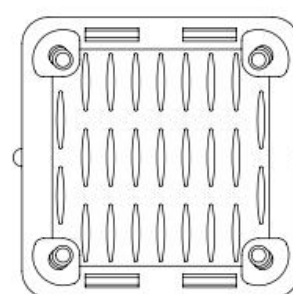
8 7 6 5 4 3 2 1



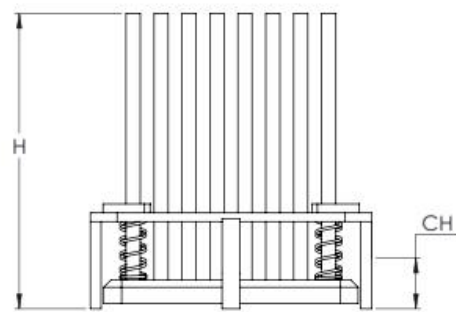
CONSTRUCTION CODE- 2
PIN FINS
8 X 8 PIN ARRAY =
64 FINS, 1.6 mm DIA.



CONSTRUCTION CODE- 1
ELLIPTICAL FINS
25 FINS, 6.5 Lg X 0.84 W mm
4 CORNER PIN FINS

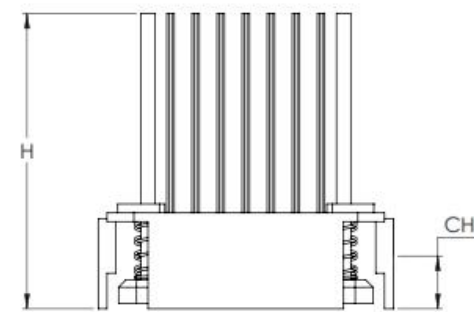


SHOWN ROTATED 90 DEG



HEIGHT (H) CODE	ACTUAL mm
12-	11.6
15-	14.6
18-	17.6
21-	20.6
23-	22.6
28-	27.6
33-	32.6

CHIP HEIGHT (CH) CODE	ACTUAL RANGE mm
1-	0.9 to 2.1
2-	2.2 to 3.4



905 SERIES FOR 29mm CHIPS

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MATERIAL: 6063-T5 AL ALLOY	APPROVALS: _____ DATE: 10/23/2014	DRAWN: _____ CHK: _____ DSGN ENG: 10/23/2014 MFG ENG: _____ QA: _____	DRAWING NOT TO SCALE REVISION: _____ SCALE: 2:1	TITLE: 905 SERIES DWG. NO. 905 Series 1 OF 1
FINISH: BLACK ANODIZE		MODEL INFO: MBA29052-no lp		

SH_SIZE: B 8 7 6 5 4 3 2 1