PIN FIN HEAT SINK

904 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.

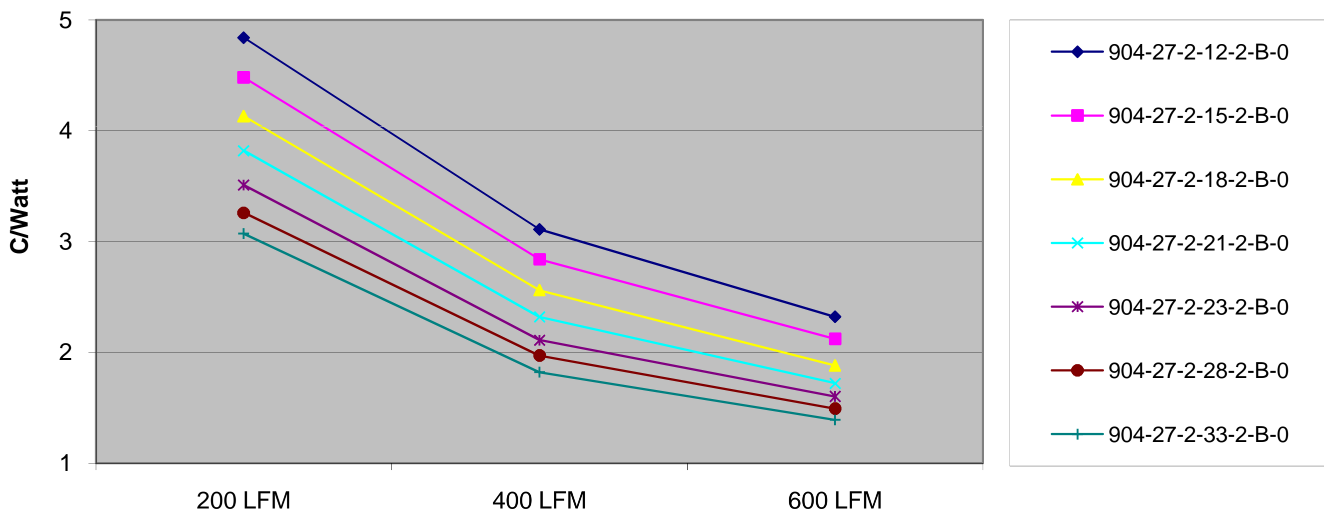
These heat sinks are designed for air flow applications in the Telecom, Data Center, Networking, Cloud Computing, and many more Industries.

Material: AL 6063

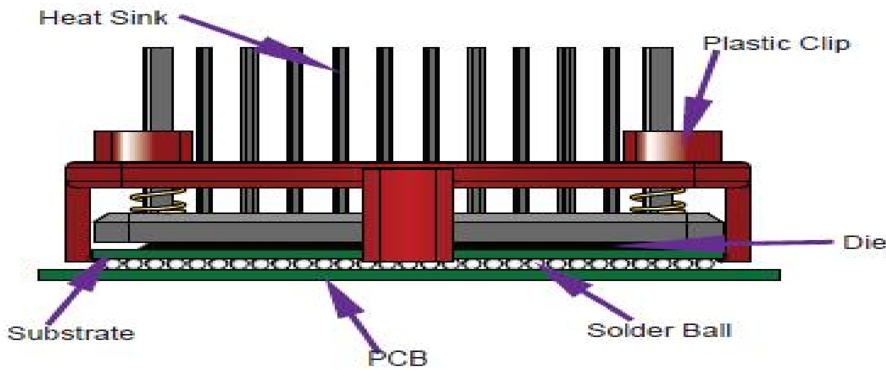
Finish: Black Anodize

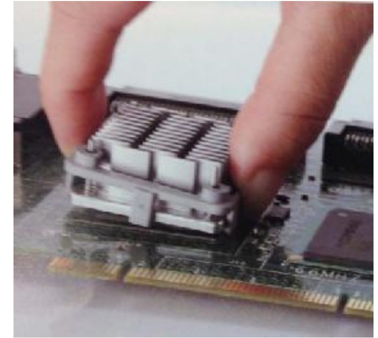
PART #	HEIGHT (mm)	CHIP SIZE (mm)	NATURAL CONVECTION	FORCED CONVECTION (C/W)		
				200 LFM	400 LFM	600 LFM
904-27-2-12-2-B-0	12	27	11.38 C/W	4.84 C/W	3.11 C/W	2.32 C/W
904-27-2-15-2-B-0	15	27	10.78 C/W	4.48 C/W	2.84 C/W	2.12 C/W
904-27-2-18-2-B-0	18	27	10.17 C/W	4.13 C/W	2.56 C/W	1.88 C/W
904-27-2-21-2-B-0	21	27	9.56 C/W	3.82 C/W	2.32 C/W	1.72 C/W
904-27-2-23-2-B-0	23	27	9.44 C/W	3.51 C/W	2.11 C/W	1.6 C/W
904-27-2-28-2-B-0	28	27	9.13 C/W	3.26 C/W	1.97 C/W	1.49 C/W
904-27-2-33-2-B-0	33	27	8.82 C/W	3.07 C/W	1.82 C/W	1.39 C/W

THERMAL PERFORMANCE:



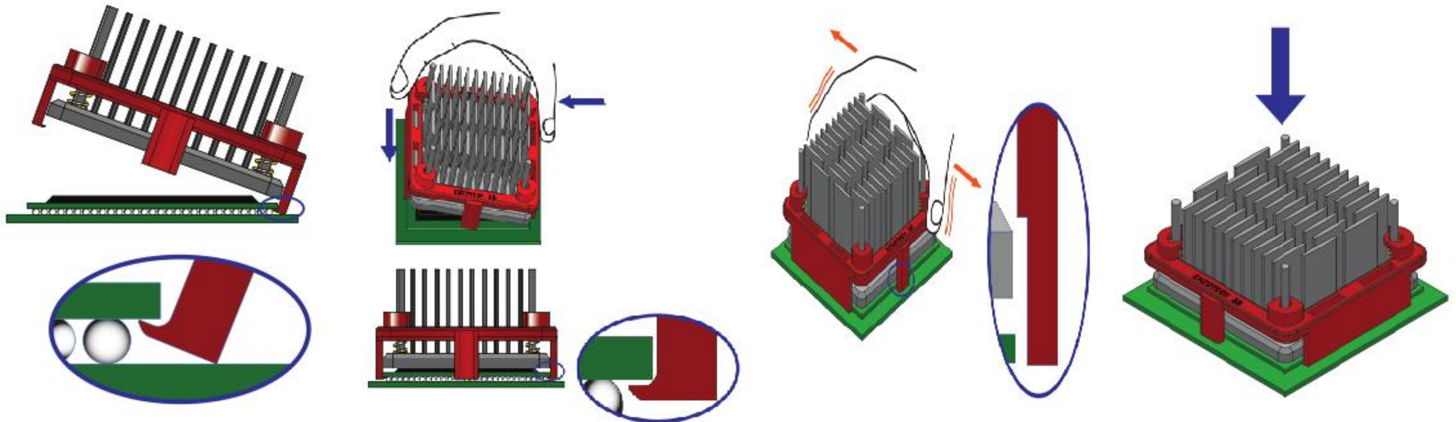
Series	Chip Size	Construction	Height	Chip Height	Finish	Interface
	19-	**2-**	**12-**	**1-**	**B-**	**1**
	19		12 = 11.6	1 = .9-2.1		0 = None
	21		15 = 14.6	2 = 2.2-3.4		1 = T725
	23		18 = 17.6			
	27		21 = 20.6			
904-	29	**2= Pin Fin**	23 = 22.6		B = BLK ANO	
	31		28 = 27.6			
	33		33 = 32.6			
	35					
	37.5					
	40					





Wakefield-Vette's heat sink assembles 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 sop rods are clearing from edges of BGA chip set.

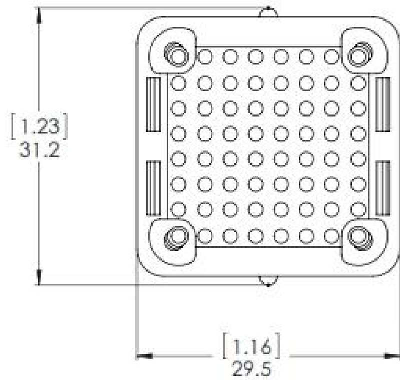
Step 4: Press firmly down to make sure clips fully engage edges of chip set. Heat Sink should not move around easily.

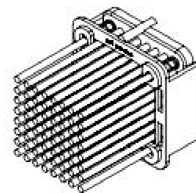
Random Vibration Test

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

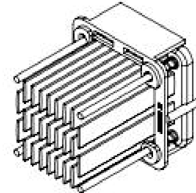
SHOCK TEST SPECIFICATION :

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

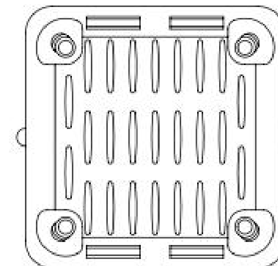




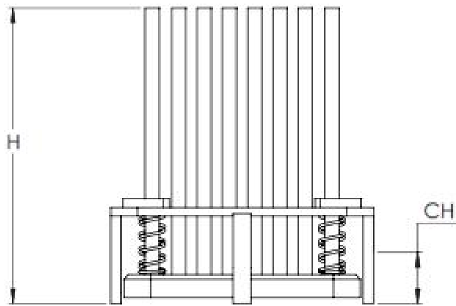
CONSTRUCTION CODE- 2
PIN FINS
8 X 8 PIN ARRAY =
64 FINS, 1.6 mm DIA.



CONSTRUCTION CODE- 1
ELIPTICAL FINS
25 FINS, 6 Lg X 0.8 W mm
4 CORNER PIN FINS

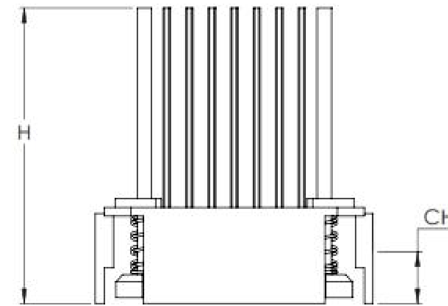


SHOWN ROTATED 90 DEG



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



904 SERIES FOR 27mm CHIPS

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MATERIAL: 6063-T5 AL ALLOY

FINISH: BLACK ANODIZE

THIRD ANGLE PROJECTION

APPROVALS	DATE:
DRAWN:	10/22/2014
CHK:	
DSGN ENG:	10/22/2014
MFG ENG:	
QA:	

TOLERANCES
ALL DIMS IN MM(IN)
.xx ± 0.5 (0.020")
.xxx ± 0.25(0.010")
Angles ± 3°

DRAWING NOT TOSCALE

REVISION:

SCALE: 2:1

wakefield-vette
33 BRIDGE ST. PELHAM, NH 03076 (603)635-2800

TITLE: 904 SERIES

DESCRIPTION: CHIPSET HEAT SINKS

DWG. NO. 904 Series 1 OF 1

SH_SIZE: B

MODEL_INFO:
MBA27052-no lip