

903 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.

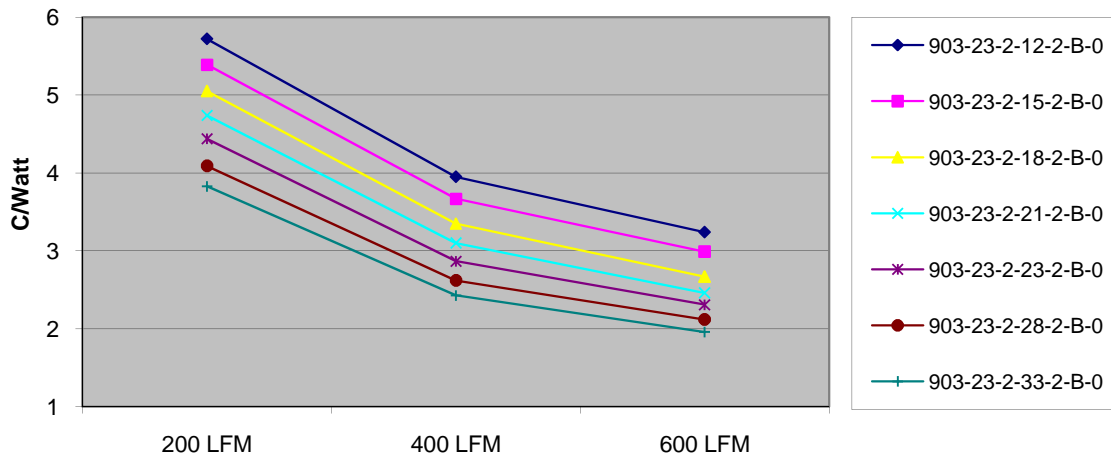
Material: AL 6063

Finish: Black Anodize



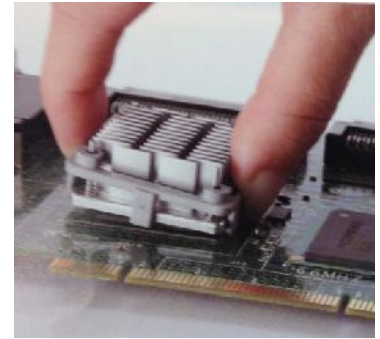
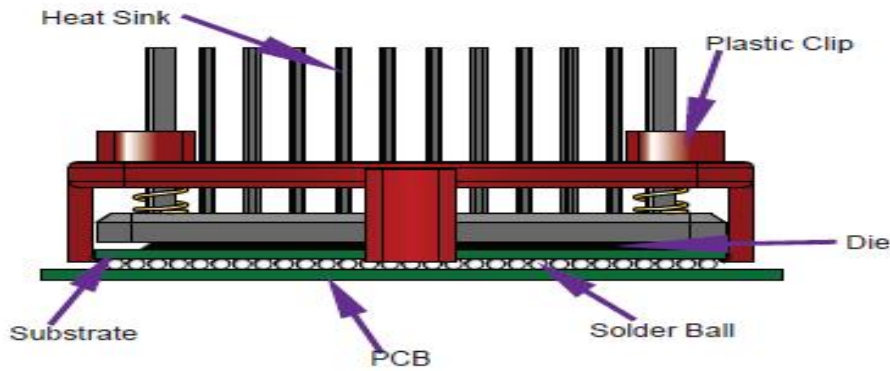
PART #	HEIGHT (mm)	CHIP SIZE (mm)	NATURAL CONVECTION	FORCED CONVECTION (C/W)		
				200 LFM	400 LFM	600 LFM
903-23-2-12-2-B-0	12	23	12.06 C/W	5.72 C/W	3.95 C/W	3.24 C/W
903-23-2-15-2-B-0	15	23	11.41 C/W	5.39 C/W	3.67 C/W	2.99 C/W
903-23-2-18-2-B-0	18	23	10.76 C/W	5.05 C/W	3.35 C/W	2.67 C/W
903-23-2-21-2-B-0	21	23	10.11 C/W	4.74 C/W	3.1 C/W	2.46 C/W
903-23-2-23-2-B-0	23	23	9.99 C/W	4.44 C/W	2.87 C/W	2.31 C/W
903-23-2-28-2-B-0	28	23	9.70 C/W	4.09 C/W	2.62 C/W	2.12 C/W
903-23-2-33-2-B-0	33	23	9.41 C/W	3.83 C/W	2.43 C/W	1.96 C/W

THERMAL PERFORMANCE:



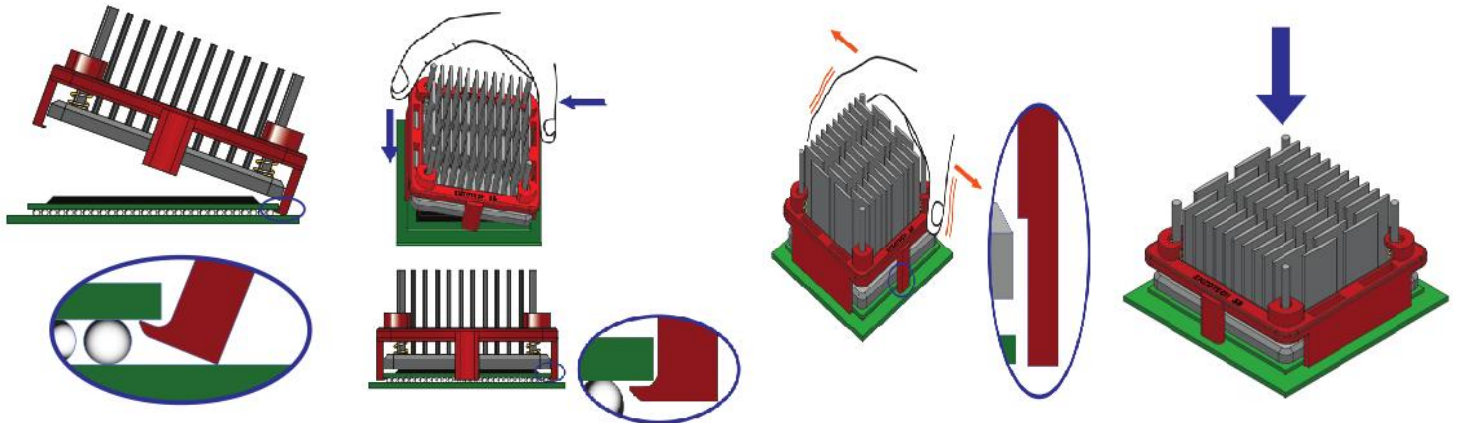
Forced Convection

Series	Chip Size	Construction	Height	Chip Height	Finish	Interface
903-	19-	2- Pin Fin	12-	1-	B- BLK ANO	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			
	29		23 = 22.6			
	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 solder rods are clearing from edges of BGA chip set.

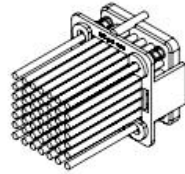
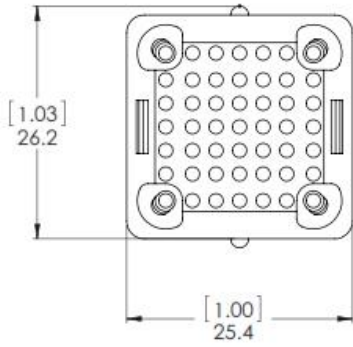
Step 4: Press firmly down to make sure clips fully engage edges of chip set. Heat Sink should not move around easily.

Random Vibration Test

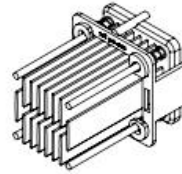
Frequency : 5 Hz to 500 Hz
 Acceleration : 3.13 grms
 P.S.D : 0.01 g²/HZ (5 Hz)
 0.02 g²/HZ (20 Hz to 500 Hz)
 Test Axis : X, Y, Z axis
 Test Time : 10 mins (Each axis)
 Total Test Time : 30 mins

SHOCK TEST SPECIFICATION :

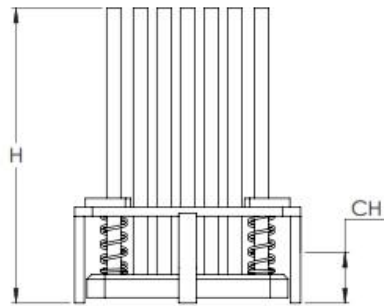
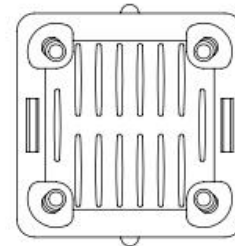
Wave Form : Half sine wave
 Acceleration : 50 g
 Duration Time : 11 ms
 No. of Shock : Each axis 3 times
 Shock Direction : ±X, ±Y, ±Z axis
 Reliability & Communication
 Testing Instruments



CONSTRUCTION CODE- 2
PIN FINS
7 X 7 PIN ARRAY =
49 FINS, 1.6 mm DIA.

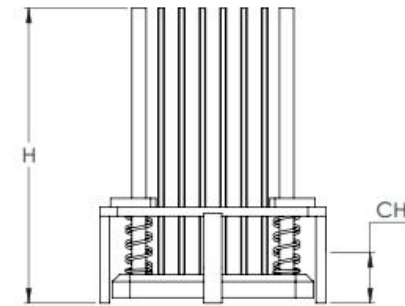


CONSTRUCTION CODE- 1
ELLIPTICAL FINS
14 FINS, 8.2 Lg X 0.7 W mm
4 CORNER PIN FINS



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



903 SERIES FOR 23mm CHIPS

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MATERIAL: 6063-T5 AL ALLOY		APPROVALS: _____ DATE: 10/22/2014 DRAWN: _____		DRAWING NOT TOSCALE		DESCRIPTION: CHIPSET HEAT SINKS	
FINISH: BLACK ANODIZE		CHK: _____ DSGN ENG: 10/22/2014 MFG ENG: _____ QA: _____		REVISION: _____ SCALE: 2:1		DWG. NO. 903 Series 1 OF 1	
SH_SIZE: B		MODEL INFO: MBA23052-no lp					