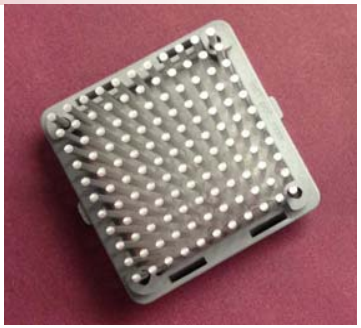
901-910 SERIES CHIPSET HEAT SINKS



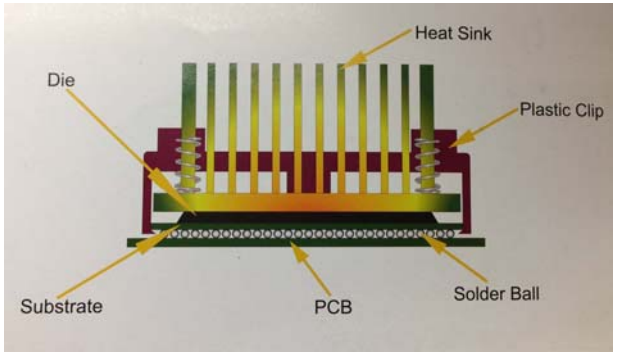
PIN FIN &
ELLIPTICAL

HEAT SINKS



wakefield-vette

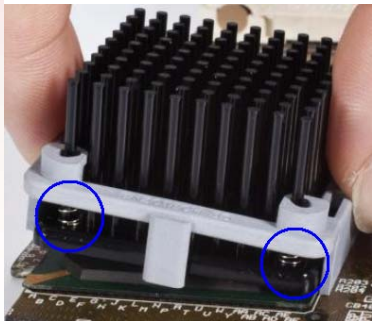
New Chip Set Heat Sinks



Wakefield-Vette's 901-910 Series Heat Sinks for Chipset can match up to devices from Intel, Broadcom, Xilinx. TI, Motorola and many more! These heat sinks are designed for air flow applications. Enclosed pages have thermal performance data for natural forced convection values.

Wakefield-Vette 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.

4 Springs at each corner





RoHS

Thermal Cooling Solutions from SMART to FINISH

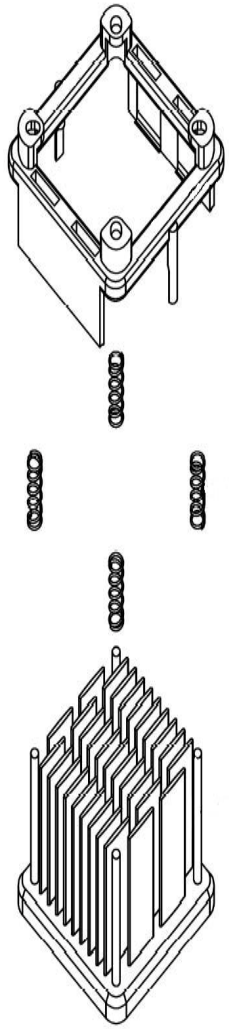
901-910 SERIES CHIPSET HEAT SINKS



Material: AL 6063

Finish: Black Anodize

All dimensions in millimeters (mm)



Part Numbering System

Series	Chip Size	Construction	Height	Spring Type *	Finish	Interface
901-	**19-**	**1-**	**12-**	**1-**	**B-**	**1**
XXX	XX	X	XX	X	X	X

901	19	1= Eliptical Fin	12 = 11.6	1 = .9-2.1 CST	B = BLK ANO	0 = None
902	21	2= Pin Fin	15 = 14.6	2 = 2.2-3.4 CST		1 = T725
903	23		18 = 17.6			
904	27		21 = 20.6			
905	29		23 = 22.6			
906	31		28 = 27.6			
907	33		33 = 32.6			
908	35					
909	37.5					
910	40					

*Note: When selecting part number chip set thickness (CST) relates to spring selection!

RoHS

Thermal Cooling Solutions from SMART to FINISH

901-910 SERIES CHIPSET HEAT SINKS



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RoHS

THERMAL PERFORMANCE

			PIN FIN					ELLIPTICAL FIN			
	HT	CHIP SIZE	NATURAL CONVECTION	FORCED CONVECTION (C/W) 200 LFM	400 LFM	600 LFM		NATURAL CONVECTION	FORCED CONVECTION (C/W) 200 LFM	400 LFM	600 LFM
901	12	19mm	12.74 C/W	6.6 C/W	4.79 C/W	4.16 C/W		14.77 C/W	6.63 C/W	5.09 C/W	4.38 C/W
	15	19mm	12.05 C/W	6.3 C/W	4.51 C/W	3.86 C/W		14 C/W	6.12 C/W	4.63 C/W	3.95 C/W
	18	19mm	11.35 C/W	5.97 C/W	4.16 C/W	3.47 C/W		13.23 C/W	5.67 C/W	4.17 C/W	3.58 /CW
	21	19mm	10.66 C/W	5.66 C/W	3.89 C/W	3.21 C/W		12.46 C/W	5.28 C/W	3.87 C/W	3.24 C/W
	23	19mm	10.55 C/W	5.36 C/W	3.64 C/W	2.99 C/W		11.98 C/W	4.89 C/W	3.58 C/W	3.06 C/W
	28	19mm	10.27 C/W	4.91 C/W	3.36 C/W	2.71 C/W		11.5 C/W	4.38 C/W	3.26 C/W	2.80 C/W
	33	19mm	9.99 C/W	4.52 C/W	3.07 C/W	2.49 C/W		9.57 C/W	4.04 C/W	2.98 C/W	2.62 C/W
902	12	21mm	12.4 C/W	6.61 C/W	4.37 C/W	3.7 C/W		14.31 C/W	5.81 C/W	3.86 C/W	3.16 C/W
	15	21mm	11.73 C/W	5.84 C/W	4.09 C/W	3.42 C/W		13.57 C/W	5.3 C/W	3.5 C/W	2.89 C/W
	18	21mm	11.06 C/W	5.51 C/W	3.76 C/W	3.07 C/W		12.83 C/W	4.95 C/W	3.35 C/W	2.66 C/W
	21	21mm	10.38 C/W	5.20 C/W	3.49 C/W	2.84 C/W		12.09 C/W	4.61 C/W	3.111 C/W	2.47 C/W
	23	21mm	10.27 C/W	4.9 C/W	3.26 C/W	2.62 C/W		11.63 C/W	4.32 C/W	2.91 C/W	2.32 C/W
	28	21mm	9.98 C/W	4.55 C/W	2.98 C/W	2.42 C/W		10.47 C/W	3.89 C/W	2.61 C/W	2.09 C/W
	33	21mm	9.7 C/W	4.18 C/W	2.73 C/W	2.21 C/W		9.3 C/W	3.57 C/W	2.37 C/W	1.95 C/W
903	12	23mm	12.06 C/W	5.72 C/W	3.95 C/W	3.24 C/W		13.85 C/W	4.75 C/W	3.31 C/W	2.79 C/W
	15	23mm	11.41 C/W	5.39 C/W	3.67 C/W	2.99 C/W		13.14 C/W	4.38 C/W	3.05 C/W	2.53 C/W
	18	23mm	10.76 C/W	5.05 C/W	3.35 C/W	2.67 C/W		12.44 C/W	4.07 C/W	2.81 C/W	2.32 C/W
	21	23mm	10.11 C/W	4.74 C/W	3.1 C/W	2.46 C/W		11.73 C/W	3.84 C/W	2.57 C/W	2.11 C/W
	23	23mm	9.99 C/W	4.44 C/W	2.87 C/W	2.31 C/W		11.28 C/W	3.59 C/W	2.4 C/W	1.97 C/W
	28	23mm	9.70 C/W	4.09 C/W	2.62 C/W	2.12 C/W		10.16 C/W	3.22 C/W	2.17 C/W	1.8 C/W
	33	23mm	9.41 C/W	3.83 C/W	2.43 C/W	1.96 C/W		9.04 C/W	2.93 C/W	1.95 C/W	1.64 C/W
904	12	27mm	11.38 C/W	4.84 C/W	3.11 C/W	2.32 C/W		12.93 C/W	4.34 C/W	3 C/W	2.53 C/W
	15	27mm	10.78 C/W	4.48 C/W	2.84 C/W	2.12 C/W		12.29 C/W	4.05 C/W	2.76 C/W	2.29 C/W
	18	27mm	10.17 C/W	4.13 C/W	2.56 C/W	1.88 C/W		11.64 C/W	3.73 C/W	2.5 C/W	2.07 C/W
	21	27mm	9.56 C/W	3.82 C/W	2.32 C/W	1.72 C/W		11 C/W	3.43 C/W	2.31 C/W	1.9 C/W
	23	27mm	9.44 C/W	3.51 C/W	2.11 C/W	1.6 C/W		10.58 C/W	3.21 C/W	2.11 C/W	1.71 C/W
	28	27mm	9.13 C/W	3.26 C/W	1.97 C/W	1.49 C/W		9.54 C/W	2.89 C/W	1.84 C/W	1.51 C/W
	33	27mm	8.82 C/W	3.07 C/W	1.82 C/W	1.39 C/W		8.51 C/W	2.62 C/W	1.66 C/W	1.35 C/W
905	12	29mm	11.04 C/W	4.08 C/W	2.55 C/W	1.98 C/W		12.47 C/W	4.09 C/W	2.74 C/W	2.25 C/W
	15	29mm	10.46 C/W	3.82 C/W	2.32 C/W	1.78 C/W		11.86 C/W	3.81 C/W	2.52 C/W	2.02 C/W
	18	29mm	9.87 C/W	3.58 C/W	2.14 C/W	1.58 C/W		11.25 C/W	3.56 C/W	2.31 C/W	1.84 C/W
	21	29mm	9.28 C/W	3.33 C/W	1.96 C/W	1.44 C/W		10.63 C/W	3.3 C/W	2.12 C/W	1.65 C/W
	23	29mm	9.16 C/W	3.13 C/W	1.82 C/W	1.34 C/W		10.23 C/W	3.06 C/W	1.91 C/W	1.49 C/W
	28	29mm	8.84 C/W	2.82 C/W	1.64 C/W	1.2 C/W		9.24 C/W	2.72 C/W	1.69 C/W	1.33 C/W
	33	29mm	8.53 C/W	2.59 C/W	1.47 C/W	1.07 C/W		8.24 C/W	2.47 C/W	1.49 C/W	1.18 C/W

901-910 SERIES CHIPSET HEAT SINKS



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RoHS

THERMAL PERFORMANCE

			PIN FIN				ELLIPTICAL FIN			
	HT	CHIP SIZE	NATURAL CONVECTION	FORCED CONVECTION (C/W) 200 LFM	400 LFM	600 LFM	NATURAL CONVECTION	FORCED CONVECTION (C/W) 200 LFM	400 LFM	600 LFM
906	12	31mm	10.71 C/W	3.49 C/W	2.28 C/W	1.69 C/W	12.02 C/W	3.37 C/W	2.25 C/W	1.87 C/W
	15	31mm	10.14 C/W	3.18 C/W	2.03 C/W	1.5 C/W	11.43 C/W	3.13 C/W	2.02 C/W	1.66 C/W
	18	31mm	9.57 C/W	2.93 C/W	1.86 C/W	1.33 C/W	10.85 C/W	2.85 C/W	1.79 C/W	1.45 C/W
	21	31mm	9.01 C/W	2.72 C/W	1.69 C/W	1.2 C/W	10.27 C/W	2.63 C/W	1.63 C/W	1.31 C/W
	23	31mm	8.88 C/W	2.5 C/W	1.54 C/W	1.07 C/W	9.88 C/W	2.44 C/W	1.5 C/W	1.19 C/W
	28	31mm	8.56 C/W	2.26 C/W	1.38 C/W	.96 C/W	8.93 C/W	2.21 C/W	1.36 C/W	1.05 C/W
	33	31mm	8.24 C/W	2.09 C/W	1.27 C/W	.88 C/W	7.98 C/W	2.02 C/W	1.19 C/W	.93 C/W
907	12	33mm	10.37 C/W	3.32 C/W	2.18 C/W	1.62 C/W	11.56 C/W	3.23 C/W	2.09 C/W	1.73 C/W
	15	33mm	9.82 C/W	3.14 C/W	1.99 C/W	1.45 C/W	11 C/W	2.97 C/W	1.88 C/W	1.54 C/W
	18	33mm	9.28 C/W	2.89 C/W	1.78 C/W	1.3 C/W	10.45 C/W	2.69 C/W	1.7 C/W	1.37 C/W
	21	33mm	8.73 C/W	2.67 C/W	1.60 C/W	1.13 C/W	9.9 C/W	2.5 C/W	1.52 C/W	1.22 C/W
	23	33mm	8.60 C/W	2.45 C/W	1.43 C/W	.99 C/W	9.54 C/W	2.3 C/W	1.37 C/W	1.08 C/W
	28	33mm	8.27 C/W	2.24 C/W	1.28 C/W	.87 C/W	8.62 C/W	2.08 C/W	1.23 C/W	.98 C/W
	33	33mm	7.94 C/W	2.03 C/W	1.15 C/W	.77 C/W	7.71 C/W	1.89 C/W	1.08 C/W	.86 C/W
908	12	35mm	10.03 C/W	3.06 C/W	1.97 C/W	1.49 C/W	11.1 C/W	3.07 C/W	2.07 C/W	1.64 C/W
	15	35mm	9.5 C/W	2.85 C/W	1.81 C/W	1.34 C/W	10.58 C/W	2.79 C/W	1.87 C/W	1.46 C/W
	18	35mm	8.98 C/W	2.6 C/W	1.64 C/W	1.19 C/W	10.06 C/W	2.54 C/W	1.69 C/W	1.27 C/W
	21	35mm	8.46 C/W	2.4 C/W	1.5 C/W	1.07 C/W	9.53 C/W	2.35 C/W	1.52 C/W	1.15 C/W
	23	35mm	8.32 C/W	2.19 C/W	1.34 C/W	.97 C/W	8.75 C/W	2.13 C/W	1.35 C/W	1.01 C/W
	28	35mm	7.99 C/W	1.97 C/W	1.19 C/W	.83 C/W	7.93 C/W	1.94 C/W	1.19 C/W	.86 C/W
	33	35mm	7.65 C/W	1.82 C/W	1.06 C/W	.7 C/W	7.11 C/W	1.69 C/W	1.02 C/W	.72 C/W
909	12	37.5mm	9.60 C/W	2.93 C/W	1.90 C/W	1.36 C/W	10.52 C/W	3.11 C/W	2.01 C/W	1.61 C/W
	15	37.5mm	9.11 C/W	2.71 C/W	1.72 C/W	1.19 C/W	10.04 C/W	2.82 C/W	1.79 C/W	1.41 C/W
	18	37.5mm	8.61 C/W	2.52 C/W	1.53 C/W	1.05 C/W	9.56 C/W	2.59 C/W	1.59 C/W	1.22 C/W
	21	37.5mm	8.11 C/W	2.25 C/W	1.36 C/W	.88 C/W	9.08 C/W	2.38 C/W	1.41 C/W	1.06 C/W
	23	37.5mm	7.98 C/W	2.04 C/W	1.2 C/W	.75 C/W	8.75 C/W	2.15 /CW	1.24 C/W	.94 C/W
	28	37.5mm	7.63 C/W	1.82 C/W	1.01 C/W	.63 C/W	7.93 C/W	1.88 C/W	1.08 C/W	.8 C/W
	33	37.5mm	7.29 C/W	1.6 C/W	.87 C/W	.52 C/W	7.11 C/W	1.64 C/W	.93 C/W	.68 C/W
910	12	40mm	9.18 C/W	2.84 C/W	1.86 C/W	1.36 C/W	9.95 C/W	3.09 C/W	1.93 C/W	1.56 C/W
	15	40mm	8.71 C/W	2.64 C/W	1.65 C/W	1.18 C/W	9.51 C/W	2.77 C/W	1.73 C/W	1.37 C/W
	18	40mm	8.24 C/W	2.4 C/W	1.44 C/W	.98 C/W	9.06 C/W	2.74 C/W	1.52 C/W	1.17 C/W
	21	40mm	7.77 C/W	2.21 C/W	1.27 C/W	.86 C/W	8.62 C/W	2.22 C/W	1.35 C/W	.99 C/W
	23	40mm	7.63 C/W	2 C/W	1.15 C/W	.73 C/W	8.3 C/W	2.01C/W	1.19 C/W	.87 C/W
	28	40mm	7.27 C/W	1.77 C/W	.99 C/W	.62 C/W	7.55 C/W	1.8 C/W	1.04 C/W	.75 C/W
	33	40mm	6.92 C/W	1.58 C/W	.85 C/W	.51 C/W	6.78 C/W	1.61 C/W	.88 C/W	.64 C/W

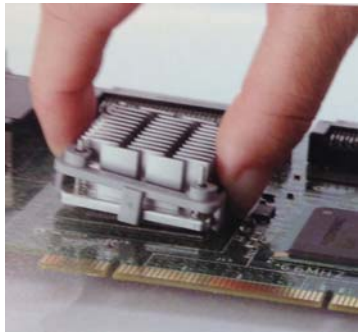
901-910 SERIES CHIPSET HEAT SINKS

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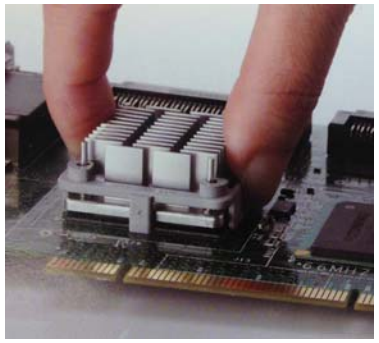


SHOCK TEST SPECIFICATION :
Wave Form : Half sine wave
Acceleration : 50 g
Duration Time : 11 ms
No. of Shock : Each axis 3 times
Shock Direction : ±X, ±Y, ±Z axis
Reliability & Communication Testing Instruments

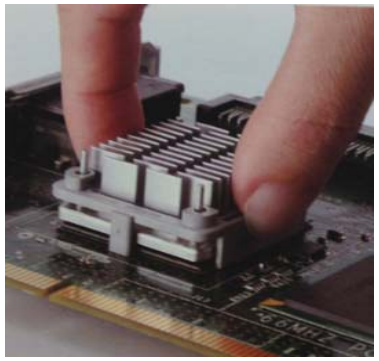
Random Vibration test
Frequency : 5 Hz to 500 Hz
Acceleration : 3.13 grms
P.S.D : 0.01 g2/HZ (5 Hz)
0.02 g2/HZ (20 Hz to 500 Hz)
Test Axis : X, Y, Z axis
Test Time : 10 mins (Each axis)
Total Test Time : 30 mins



STEP 1: Center heat Sink onto BGA. Tilt and hook one side of the clip under the BGA chip.



STEP 2: Press down the other side of clip to snap it onto the BGA chip.



STEP :3 Make sure the stop pin is not on top of the chip set. Installation Done!

RoHS

Thermal Cooling Solutions from SMART to FINISH



Contact Us / Corporate Location Information

Wakefield-Vette is Global. Global presence means our engineering, design, sales and support are close to our customers, in the Americas, Europe, Middle East and Asia. It mean multi-national manufacturing and delivery. And it means a global Wakefield-Vette supply chain that can deliver, and provide support quickly, anywhere, with the highest quality solutions.

Contact sales for a list of Distributors that carry stock.

East Coast Operations

New Hampshire

33 Bridge Street

Pelham.NH 03076

Phone: 603-635-2800

Fax: 603-635-1900

Info@wakefield-vette.com

(Wakefield-Vette Headquarters)

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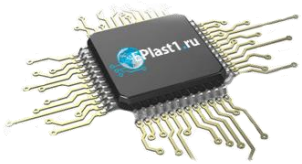
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.