



FAN HEAT SINK COMBOS

Aavid BGA fan heat sink combinations are optimized, easy to use full thermal solutions for BGA and FPGA applications. These standard, off-the-shelf components are available with a variety of footprints, fans, interface materials and attachment methods. For additional footprints and custom options visit aavid.com.

OPTIONS

Attachment: *Plastic Pins, Brass Pins*

Thermal Interface Materials: *Chomerics Thermflow T66*

Fans: *High and Medium Performance in 5V and 12V (see below for details)*



BENEFITS

- Decreased Assembly Time
- Increased Pressure for Improved Thermal Transfer

BGA FHS4511- COMBINATION PART NUMBERS & OPTIONS

Medium 5V				Medium 12V			
Part Number	Plastic Pins	Brass Pins	Thermflow	Part Number	Plastic Pins	Brass Pins	Thermflow
L4LB010-PAM04010-P0	●			L4LB010-PAM14010-P0	●		
L4LB011-PAM04010-P0	●		●	L4LB011-PAM14010-P0	●		●
L4LB020-PAM04010-P0		●		L4LB020-PAM14010-P0		●	
L4LB021-PAM04010-P0		●	●	L4LB021-PAM14010-P0		●	●
High 5V				High 12V			
Part Number	Plastic Pins	Brass Pins	Thermflow	Part Number	Plastic Pins	Brass Pins	Thermflow
L4LB010-PSH04010-P0	●			L4LB010-PAH14010-P0	●		
L4LB011-PSH04010-P0	●		●	L4LB011-PAH14010-P0	●		●
L4LB020-PSH04010-P0		●		L4LB020-PAH14010-P0		●	
L4LB021-PSH04010-P0		●	●	L4LB021-PAH14010-P0		●	●



BGA HEAT SINK DETAILS

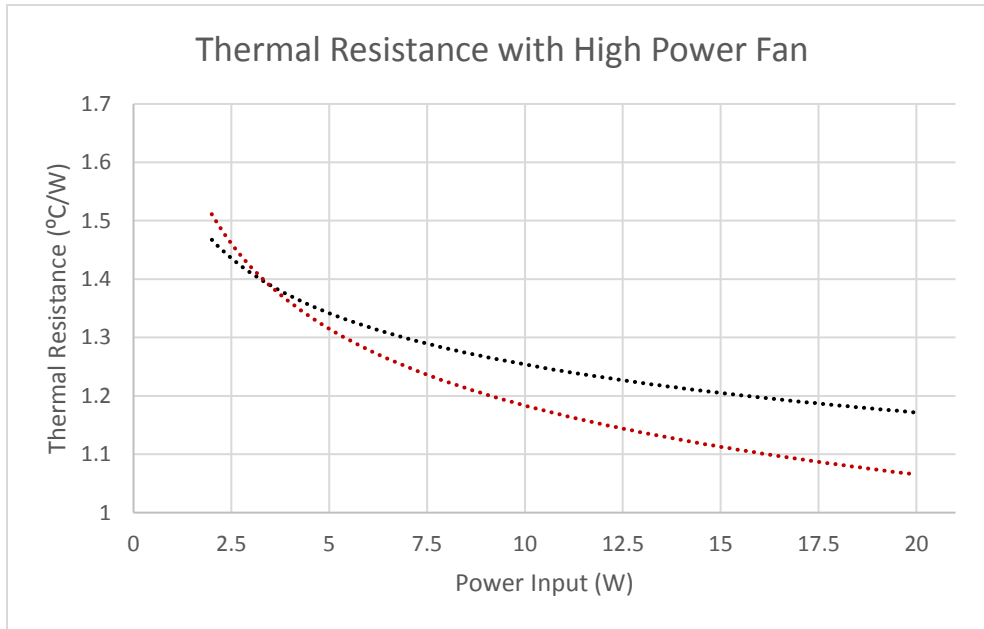
Property	Details	Property	Measurements
Base Part Number (Heat Sink Only)	10-L4LB-11G	Heat Sink Width (mm)	41.4
Fin Type	Pin Fin	Heat Sink Length (mm)	45
Material	Aluminum 6063	Base Thickness (mm)	1.52
Finish	Black Anodize	Total Heat Sink Height (mm)	11.7
Attachment Options	Plastic Pin or brass Pin		
Thermal Interface Material (if not tape attach)	Chomerics Thermflow T66		

FAN DETAILS

Property	Fan 1	Fan 2	Fan 3	Fan 4
Part Number (Fan Only)	PSAD04010BH P000	PAAD04010BM P000	PAAD14010BH P000	PAAD14010BM P000
Fan Type	Axial	Axial	Axial	Axial
Bearing Type	Ball	Ball	Ball	Ball
Material	Black ABS	Black ABS	Black ABS	Black ABS
Fan Width (mm)	40	40	40	40
Fan Length (mm)	40	40	40	40
Fan Depth(mm)	10	10	10	10
Nominal Wire Length (mm)	160	160	160	160
Rated Voltage (V _{DC})	5V	5V	12V	12V
Operating Voltage (V _{DC})	4~5.75	4~5.75	6~13	6~13.8
Rated Current (A)	0.24	0.19	0.18	0.16
Input Current (A)	0.16	0.16	0.12	0.1
Input Power (W)	0.8	0.8	1.44	1.2
Rated Speed (RPM)	8300	6600	7700	6600
Air Flow (CMM)	0.28	0.23	0.26	0.23
Air Flow (CFM)	10	7.97	9.22	7.97
Air Pressure (mmH ₂ O)	7.24	4.41	5.88	4.41
Air Pressure (inH ₂ O)	0.29	0.17	0.23	0.17
Noise (dBA)	35.5	29.5	34	29.5
Max Noise (dBA)	37.1	32.3	36.16	32.3
MTFB (hrs. @ 45 °C)	70 000	70 000	70 000	70 000



PERFORMANCE



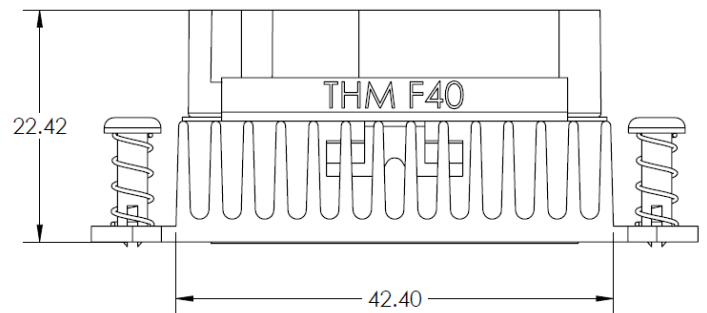
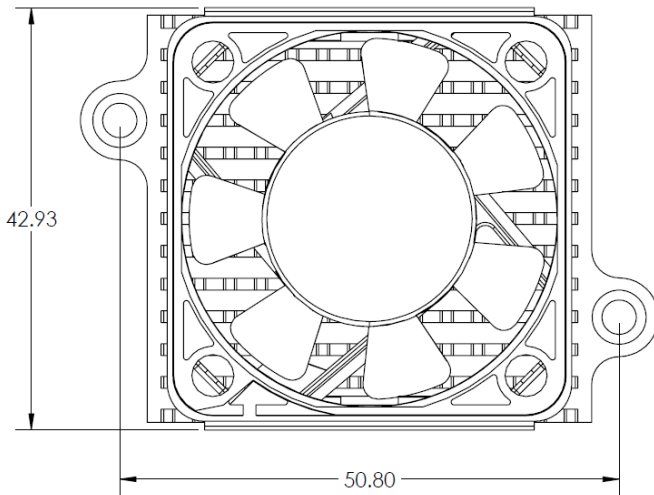
Average Thermal Resistance:

$$\Theta_{TH} = 1.32$$

--- 5V

--- 12V

MECHANICAL



Aavid reserves the right to make changes to the products or information contained herein without notice. For additional information, please contact Aavid directly.