## wakefield-vette

#### 960 Series

Wakefield-Vette's **960 Series Push Pin Heat Sinks** have plastic push pins that engage with a hole in one application's PCB design. The compression spring presses the heatsink to the device in which is being cooled. Wakefield-Vette offers a wide range of plastic push pin sizes and footprints to ensure the integrity of the PCB contact PCB with optimal cooling options.

The 960 Series Push Pin Heat Sink utilizes the plastic push pin offering for any air flow conditions as it is design in a cross-cut format. This heat sink is ideal for many industries including but not limited to telecommunications, medical, and military.

Wakefield-Vette's 960 Series can be modified to a customer's specification in addition to off the shelf standard.



#### Features & Benefits:

- Lightweight, Black Anodized, Cross Cut Aluminum 6063
- Easy and Quick Attachment, Pre
   Assembled Plastic Push Pin that have
   flexible barb to engage precisely with the
   PCB holes
- Compression Springs allow for a confident grip to the PCB
- Heat Sink Design allows for all airflow applications

#### **Part Number Configurator:**

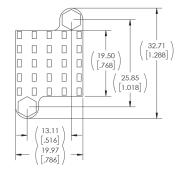
Series	Footprint	Height	Pin Location	Anodize	Interface Material
	19	12	F (Front)	AB (Black)	0 (No)
	21	15	S (Side)	A (No Anodize)	1 (Yes)
960	23	18	D (Diagonal)		
	27	21			
	29	23			
	31	28			
		33			

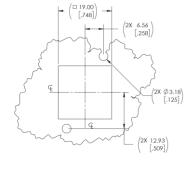


Wakefield Part Number	Description	Size (mm)	Height (mm)	Anodize	Attachment Method	Pin Location
960-19-12-F-AB-0	HEATSINK 19X12MM FRONT PLASTIC PUSH PIN	19	12	Black	Push Pin	Front
960-19-12-S-AB-0	HEATSINK 19X12MM SIDE PLASTIC PUSH PIN	19	12	Black	Push Pin	Sides
960-19-12-D-AB-0	HEATSINK 19X12MM DIAGONAL PLASTIC PUSH PIN	19	12	Black	Push Pin	Diagonal
960-19-15-F-AB-0	HEATSINK 19X15MM FRONT PLASTIC PUSH PIN	19	15	Black	Push Pin	Front
960-19-15-S-AB-0	HEATSINK 19X15MM SIDE PLASTIC PUSH PIN	19	15	Black	Push Pin	Sides
960-19-15-D-AB-0	HEATSINK 19X15MM DIAGONAL PLASTIC PUSH PIN	19	15	Black	Push Pin	Diagonal
960-19-18-F-AB-0	HEATSINK 19X18MM FRONT PLASTIC PUSH PIN	19	18	Black	Push Pin	Front
960-19-18-S-AB-0	HEATSINK 19X18MM SIDE PLASTIC PUSH PIN	19	18	Black	Push Pin	Sides
960-19-18-D-AB-0	HEATSINK 19X18MM DIAGONAL PLASTIC PUSH PIN	19	18	Black	Push Pin	Diagonal
960-19-21-F-AB-0	HEATSINK 19X21MM FRONT PLASTIC PUSH PIN	19	21	Black	Push Pin	Front
960-19-21-S-AB-0	HEATSINK 19X21MM SIDE PLASTIC PUSH PIN	19	21	Black	Push Pin	Sides
960-19-21-D-AB-0	HEATSINK 19X21MM DIAGONAL PLASTIC PUSH PIN	19	21	Black	Push Pin	Diagonal
960-19-23-F-AB-0	HEATSINK 19X23MM FRONT PLASTIC PUSH PIN	19	23	Black	Push Pin	Front
960-19-23-S-AB-0	HEATSINK 19X23MM SIDE PLASTIC PUSH PIN	19	23	Black	Push Pin	Sides
960-19-23-D-AB-0	HEATSINK 19X23MM DIAGONAL PLASTIC PUSH PIN	19	23	Black	Push Pin	Diagonal
960-19-28-F-AB-0	HEATSINK 19X28MM FRONT PLASTIC PUSH PIN	19	28	Black	Push Pin	Front
960-19-28-S-AB-0	HEATSINK 19X28MM SIDE PLASTIC PUSH PIN	19	28	Black	Push Pin	Sides
960-19-28-D-AB-0	HEATSINK 19X28MM DIAGONAL PLASTIC PUSH PIN	19	28	Black	Push Pin	Diagonal
960-19-33-F-AB-0	HEATSINK 19X33MM FRONT PLASTIC PUSH PIN	19	33	Black	Push Pin	Front
960-19-33-S-AB-0	HEATSINK 19X33MM SIDE PLASTIC PUSH PIN	19	33	Black	Push Pin	Sides
960-19-33-D-AB-0	HEATSINK 19X33MM DIAGONAL PLASTIC PUSH PIN	19	33	Black	Push Pin	Diagonal



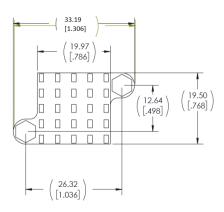
#### **Front Pins**

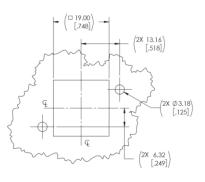






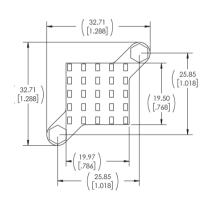
**Side Pins** 

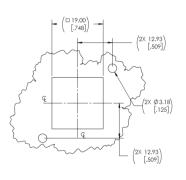




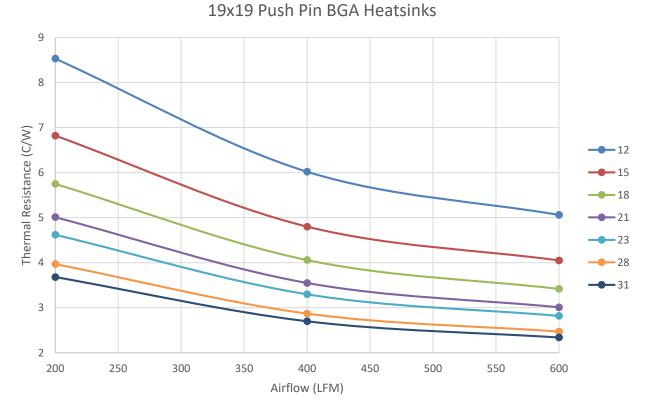


**Diagonal Pins** 









## wakefield-vette

Wakefield Part Number	Description	Size (mm)	Height (mm)	Anodize	Attachment Method	Pin Location
960-21-12-F-AB-0	HEATSINK 21X12MM FRONT PLASTIC PUSH PIN	21	12	Black	Push Pin	Front
960-21-12-S-AB-0	HEATSINK 21X12MM SIDE PLASTIC PUSH PIN	21	12	Black	Push Pin	Sides
960-21-12-D-AB-0	HEATSINK 21X12MM DIAGONAL PLASTIC PUSH PIN	21	12	Black	Push Pin	Diagonal
960-21-15-F-AB-0	HEATSINK 21X15MM FRONT PLASTIC PUSH PIN	21	15	Black	Push Pin	Front
960-21-15-S-AB-0	HEATSINK 21X15MM SIDE PLASTIC PUSH PIN	21	15	Black	Push Pin	Sides
960-21-15-D-AB-0	HEATSINK 21X15MM DIAGONAL PLASTIC PUSH PIN	21	15	Black	Push Pin	Diagonal
960-21-18-F-AB-0	HEATSINK 21X18MM FRONT PLASTIC PUSH PIN	21	18	Black	Push Pin	Front
960-21-18-S-AB-0	HEATSINK 21X18MM SIDE PLASTIC PUSH PIN	21	18	Black	Push Pin	Sides
960-21-18-D-AB-0	HEATSINK 21X18MM DIAGONAL PLASTIC PUSH PIN	21	18	Black	Push Pin	Diagonal
960-21-21-F-AB-0	HEATSINK 21X21MM FRONT PLASTIC PUSH PIN	21	21	Black	Push Pin	Front
960-21-21-S-AB-0	HEATSINK 21X21MM SIDE PLASTIC PUSH PIN	21	21	Black	Push Pin	Sides
960-21-21-D-AB-0	HEATSINK 21X21MM DIAGONAL PLASTIC PUSH PIN	21	21	Black	Push Pin	Diagonal
960-21-23-F-AB-0	HEATSINK 21X23MM FRONT PLASTIC PUSH PIN	21	23	Black	Push Pin	Front
960-21-23-S-AB-0	HEATSINK 21X23MM SIDE PLASTIC PUSH PIN	21	23	Black	Push Pin	Sides
960-21-23-D-AB-0	HEATSINK 21X23MM DIAGONAL PLASTIC PUSH PIN	21	23	Black	Push Pin	Diagonal
960-21-28-F-AB-0	HEATSINK 21X28MM FRONT PLASTIC PUSH PIN	21	28	Black	Push Pin	Front
960-21-28-S-AB-0	HEATSINK 21X28MM SIDE PLASTIC PUSH PIN	21	28	Black	Push Pin	Sides
960-21-28-D-AB-0	HEATSINK 21X28MM DIAGONAL PLASTIC PUSH PIN	21	28	Black	Push Pin	Diagonal
960-21-33-F-AB-0	HEATSINK 21X33MM FRONT PLASTIC PUSH PIN	21	33	Black	Push Pin	Front
960-21-33-S-AB-0	HEATSINK 21X33MM SIDE PLASTIC PUSH PIN	21	33	Black	Push Pin	Sides
960-21-33-D-AB-0	HEATSINK 21X33MM DIAGONAL PLASTIC PUSH PIN	21	33	Black	Push Pin	Diagonal

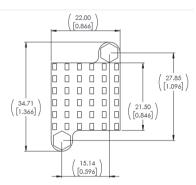


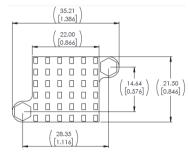
**Front Pins** 

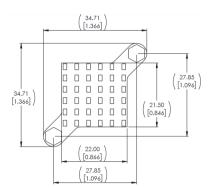


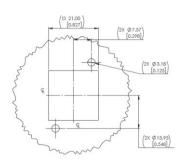
**Side Pins** 

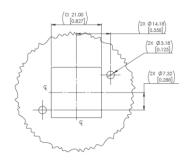


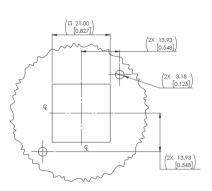














## **Thermal Performance Based on Height**

Airflow (LFM)



		Size (mm)	Height (mm)	Anodize	Attachment Method	Pin Location
960-23-12-F-AB-0	HEATSINK 23X12MM FRONT PLASTIC PUSH PIN	23	12	Black	Push Pin	Front
960-23-12-S-AB-0	HEATSINK 23X12MM SIDE PLASTIC PUSH PIN	23	12	Black	Push Pin	Sides
960-23-12-D-AB-0	HEATSINK 23X12MM DIAGONAL PLASTIC PUSH PIN	23	12	Black	Push Pin	Diagonal
960-23-15-F-AB-0	HEATSINK 23X15MM FRONT PLASTIC PUSH PIN	23	15	Black	Push Pin	Front
960-23-15-S-AB-0	HEATSINK 23X15MM SIDE PLASTIC PUSH PIN	23	15	Black	Push Pin	Sides
960-23-15-D-AB-0	HEATSINK 23X15MM DIAGONAL PLASTIC PUSH PIN	23	15	Black	Push Pin	Diagonal
960-23-18-F-AB-0	HEATSINK 23X18MM FRONT PLASTIC PUSH PIN	23	18	Black	Push Pin	Front
960-23-18-S-AB-0	HEATSINK 23X18MM SIDE PLASTIC PUSH PIN	23	18	Black	Push Pin	Sides
960-23-18-D-AB-0	HEATSINK 23X18MM DIAGONAL PLASTIC PUSH PIN	23	18	Black	Push Pin	Diagonal
960-23-21-F-AB-0	HEATSINK 23X21MM FRONT PLASTIC PUSH PIN	23	21	Black	Push Pin	Front
960-23-21-S-AB-0	HEATSINK 23X21MM SIDE PLASTIC PUSH PIN	23	21	Black	Push Pin	Sides
960-23-21-D-AB-0	HEATSINK 23X21MM DIAGONAL PLASTIC PUSH PIN	23	21	Black	Push Pin	Diagonal
960-23-23-F-AB-0	HEATSINK 23X23MM FRONT PLASTIC PUSH PIN	23	23	Black	Push Pin	Front
960-23-23-S-AB-0	HEATSINK 23X23MM SIDE PLASTIC PUSH PIN	23	23	Black	Push Pin	Sides
960-23-23-D-AB-0	HEATSINK 23X23MM DIAGONAL PLASTIC PUSH PIN	23	23	Black	Push Pin	Diagonal
960-23-28-F-AB-0	HEATSINK 23X28MM FRONT PLASTIC PUSH PIN	23	28	Black	Push Pin	Front
960-23-28-S-AB-0	HEATSINK 23X28MM SIDE PLASTIC PUSH PIN	23	28	Black	Push Pin	Sides
960-23-28-D-AB-0	HEATSINK 23X28MM DIAGONAL PLASTIC PUSH PIN	23	28	Black	Push Pin	Diagonal
960-23-33-F-AB-0	HEATSINK 23X33MM FRONT PLASTIC PUSH PIN	23	33	Black	Push Pin	Front
960-23-33-S-AB-0	HEATSINK 23X33MM SIDE PLASTIC PUSH PIN	23	33	Black	Push Pin	Sides
960-23-33-D-AB-0	HEATSINK 23X33MM DIAGONAL PLASTIC PUSH PIN	23	33	Black	Push Pin	Diagonal



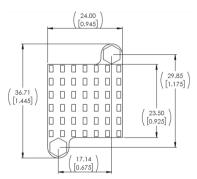
**Front Pins** 

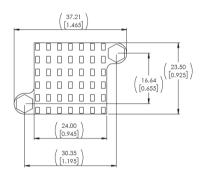


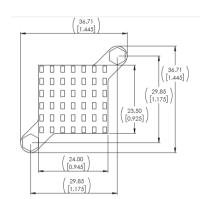
**Side Pins** 

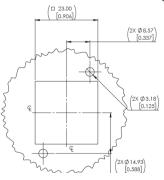


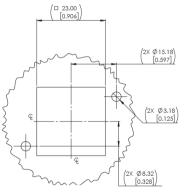
**Diagonal Pins** 

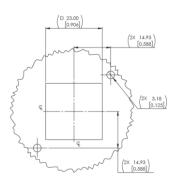














#### **Thermal Performance Based on Height**

Airflow (LFM)



Wakefield Part Number	Description	Size (mm)	Height (mm)	Anodize	Attachment Method	Pin Location
960-27-12-F-AB-0	HEATSINK 27X12MM FRONT PLASTIC PUSH PIN	27	12	Black	Push Pin	Front
960-27-12-S-AB-0	HEATSINK 27X12MM SIDE PLASTIC PUSH PIN	27	12	Black	Push Pin	Sides
960-27-12-D-AB-0	HEATSINK 27X12MM DIAGONAL PLASTIC PUSH PIN	27	12	Black	Push Pin	Diagonal
960-27-15-F-AB-0	HEATSINK 27X15MM FRONT PLASTIC PUSH PIN	27	15	Black	Push Pin	Front
960-27-15-S-AB-0	HEATSINK 27X15MM SIDE PLASTIC PUSH PIN	27	15	Black	Push Pin	Sides
960-27-15-D-AB-0	HEATSINK 27X15MM DIAGONAL PLASTIC PUSH PIN	27	15	Black	Push Pin	Diagonal
960-27-18-F-AB-0	HEATSINK 27X18MM FRONT PLASTIC PUSH PIN	27	18	Black	Push Pin	Front
960-27-18-S-AB-0	HEATSINK 27X18MM SIDE PLASTIC PUSH PIN	27	18	Black	Push Pin	Sides
960-27-18-D-AB-0	HEATSINK 27X18MM DIAGONAL PLASTIC PUSH PIN	27	18	Black	Push Pin	Diagonal
960-27-21-F-AB-0	HEATSINK 27X21MM FRONT PLASTIC PUSH PIN	27	21	Black	Push Pin	Front
960-27-21-S-AB-0	HEATSINK 27X21MM SIDE PLASTIC PUSH PIN	27	21	Black	Push Pin	Sides
960-27-21-D-AB-0	HEATSINK 27X21MM DIAGONAL PLASTIC PUSH PIN	27	21	Black	Push Pin	Diagonal
960-27-23-F-AB-0	HEATSINK 27X23MM FRONT PLASTIC PUSH PIN	27	23	Black	Push Pin	Front
960-27-23-S-AB-0	HEATSINK 27X23MM SIDE PLASTIC PUSH PIN	27	23	Black	Push Pin	Sides
960-27-23-D-AB-0	HEATSINK 27X23MM DIAGONAL PLASTIC PUSH PIN	27	23	Black	Push Pin	Diagonal
960-27-28-F-AB-0	HEATSINK 27X28MM FRONT PLASTIC PUSH PIN	27	28	Black	Push Pin	Front
960-27-28-S-AB-0	HEATSINK 27X28MM SIDE PLASTIC PUSH PIN	27	28	Black	Push Pin	Sides
960-27-28-D-AB-0	HEATSINK 27X28MM DIAGONAL PLASTIC PUSH PIN	27	28	Black	Push Pin	Diagonal
960-27-33-F-AB-0	HEATSINK 27X33MM FRONT PLASTIC PUSH PIN	27	33	Black	Push Pin	Front
960-27-33-S-AB-0	HEATSINK 27X33MM SIDE PLASTIC PUSH PIN	27	33	Black	Push Pin	Sides
960-27-33-D-AB-0	HEATSINK 27X33MM DIAGONAL PLASTIC PUSH PIN	27	33	Black	Push Pin	Diagonal



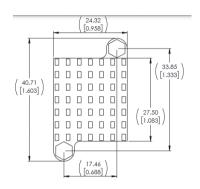
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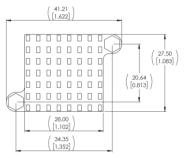


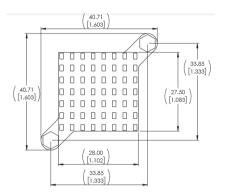
**Side Pins** 

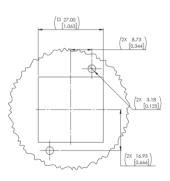


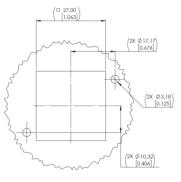
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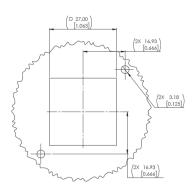




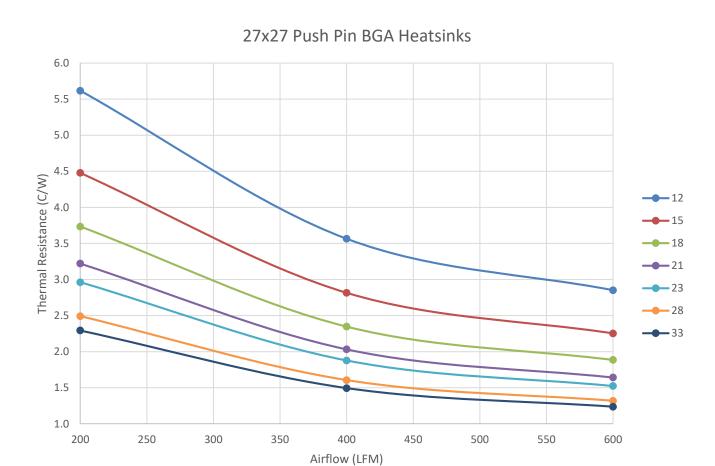












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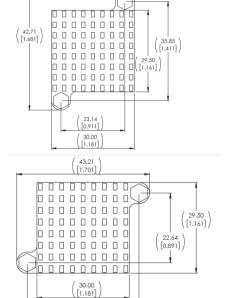
Wakefield Part Number	Description	Size (mm)	Height (mm)	Anodize	Attachment Method	Pin Location
960-29-12-F-AB-0	HEATSINK 29X12MM FRONT PLASTIC PUSH PIN	29	12	Black	Push Pin	Front
960-29-12-S-AB-0	HEATSINK 29X12MM SIDE PLASTIC PUSH PIN	29	12	Black	Push Pin	Sides
960-29-12-D-AB-0	HEATSINK 29X12MM DIAGONAL PLASTIC PUSH PIN	29	12	Black	Push Pin	Diagonal
960-29-15-F-AB-0	HEATSINK 29X15MM FRONT PLASTIC PUSH PIN	29	15	Black	Push Pin	Front
960-29-15-S-AB-0	HEATSINK 29X15MM SIDE PLASTIC PUSH PIN	29	15	Black	Push Pin	Sides
960-29-15-D-AB-0	HEATSINK 29X15MM DIAGONAL PLASTIC PUSH PIN	29	15	Black	Push Pin	Diagonal
960-29-18-F-AB-0	HEATSINK 29X18MM FRONT PLASTIC PUSH PIN	29	18	Black	Push Pin	Front
960-29-18-S-AB-0	HEATSINK 29X18MM SIDE PLASTIC PUSH PIN	29	18	Black	Push Pin	Sides
960-29-18-D-AB-0	HEATSINK 29X18MM DIAGONAL PLASTIC PUSH PIN	29	18	Black	Push Pin	Diagonal
960-29-21-F-AB-0	HEATSINK 29X21MM FRONT PLASTIC PUSH PIN	29	21	Black	Push Pin	Front
960-29-21-S-AB-0	HEATSINK 29X21MM SIDE PLASTIC PUSH PIN	29	21	Black	Push Pin	Sides
960-29-21-D-AB-0	HEATSINK 29X21MM DIAGONAL PLASTIC PUSH PIN	29	21	Black	Push Pin	Diagonal
960-29-23-F-AB-0	HEATSINK 29X23MM FRONT PLASTIC PUSH PIN	29	23	Black	Push Pin	Front
960-29-23-S-AB-0	HEATSINK 29X23MM SIDE PLASTIC PUSH PIN	29	23	Black	Push Pin	Sides
960-29-23-D-AB-0	HEATSINK 29X23MM DIAGONAL PLASTIC PUSH PIN	29	23	Black	Push Pin	Diagonal
960-29-28-F-AB-0	HEATSINK 29X28MM FRONT PLASTIC PUSH PIN	29	28	Black	Push Pin	Front
960-29-28-S-AB-0	HEATSINK 29X28MM SIDE PLASTIC PUSH PIN	29	28	Black	Push Pin	Sides
960-29-28-D-AB-0	HEATSINK 29x28MM DIAGONAL PLASTIC PUSH PIN	29	28	Black	Push Pin	Diagonal
960-29-33-F-AB-0	HEATSINK 29X33MM FRONT PLASTIC PUSH PIN	29	33	Black	Push Pin	Front
960-29-33-S-AB-0	HEATSINK 29X33MM SIDE PLASTIC PUSH PIN	29	33	Black	Push Pin	Sides
960-29-33-D-AB-0	HEATSINK 29X33MM DIAGONAL PLASTIC PUSH PIN	29	33	Black	Push Pin	Diagonal
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**Front Pins** 

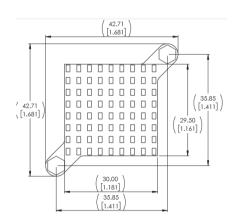


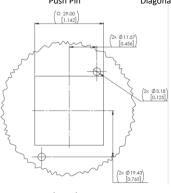
**Side Pins** 

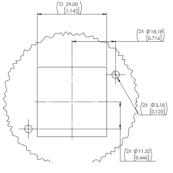


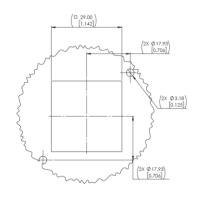


**Diagonal Pins** 















Wakefield Part Number	Description	Size (mm)	Height (mm)	Anodize	Attachment Method	Pin Location
960-31-12-F-AB-0	HEATSINK 31X12MM FRONT PLASTIC PUSH PIN	31	12	Black	Push Pin	Front
960-31-12-S-AB-0	HEATSINK 31X12MM SIDE PLASTIC PUSH PIN		12	Black	Push Pin	Sides
960-31-12-D-AB-0	HEATSINK 31X12MM DIAGONAL PLASTIC PUSH PIN	31	12	Black	Push Pin	Diagonal
960-31-15-F-AB-0	HEATSINK 31X15MM FRONT PLASTIC PUSH PIN	31	15	Black	Push Pin	Front
960-31-15-S-AB-0	HEATSINK 31X15MM SIDE PLASTIC PUSH PIN	31	15	Black	Push Pin	Sides
960-31-15-D-AB-0	HEATSINK 31X15MM DIAGONAL PLASTIC PUSH PIN	31	15	Black	Push Pin	Diagonal
960-31-18-F-AB-0	HEATSINK 31X18MM FRONT PLASTIC PUSH PIN	31	18	Black	Push Pin	Front
960-31-18-S-AB-0	HEATSINK 31X18MM SIDE PLASTIC PUSH PIN	31	18	Black	Push Pin	Sides
960-31-18-D-AB-0	HEATSINK 31X18MM DIAGONAL PLASTIC PUSH PIN	31	18	Black	Push Pin	Diagonal
960-31-21-F-AB-0	HEATSINK 31X21MM FRONT PLASTIC PUSH PIN	31	21	Black	Push Pin	Front
960-31-21-S-AB-0	HEATSINK 31X21MM SIDE PLASTIC PUSH PIN	31	21	Black	Push Pin	Sides
960-31-21-D-AB-0	HEATSINK 31X21MM DIAGONAL PLASTIC PUSH PIN	31	21	Black	Push Pin	Diagonal
960-31-23-F-AB-0	HEATSINK 31X23MM FRONT PLASTIC PUSH PIN	31	23	Black	Push Pin	Front
960-31-23-S-AB-0	HEATSINK 31X23MM SIDE PLASTIC PUSH PIN	31	23	Black	Push Pin	Sides
960-31-23-D-AB-0	HEATSINK 31X23MM DIAGONAL PLASTIC PUSH PIN	31	23	Black	Push Pin	Diagonal
960-31-28-F-AB-0	HEATSINK 31X28MM FRONT PLASTIC PUSH PIN	31	28	Black	Push Pin	Front
960-31-28-S-AB-0	HEATSINK 31X28MM SIDE PLASTIC PUSH PIN	31	28	Black	Push Pin	Sides
960-31-28-D-AB-0	HEATSINK 31X28MM DIAGONAL PLASTIC PUSH PIN	31	28	Black	Push Pin	Diagonal
960-31-33-F-AB-0	HEATSINK 31X33MM FRONT PLASTIC PUSH PIN	31	33	Black	Push Pin	Front
960-31-33-S-AB-0	HEATSINK 31X33MM SIDE PLASTIC PUSH PIN	31	33	Black	Push Pin	Sides
960-31-33-D-AB-0	HEATSINK 31X33MM DIAGONAL PLASTIC PUSH PIN	31	33	Black	Push Pin	Diagonal

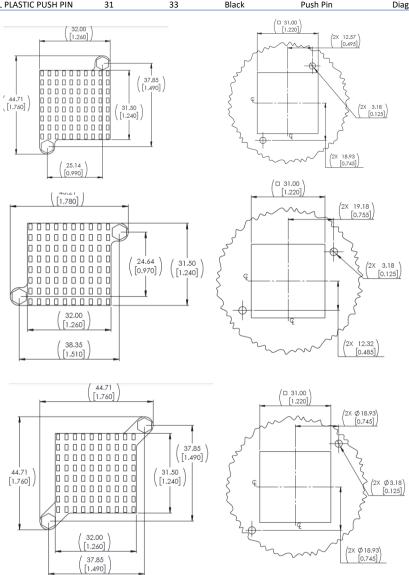


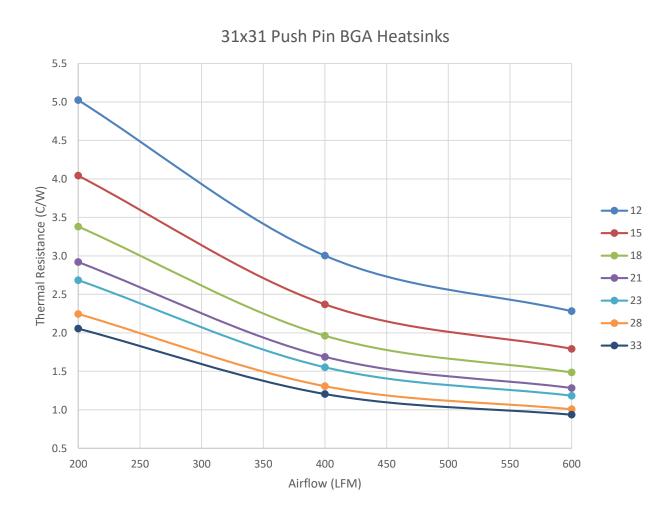
**Front Pins** 



**Side Pins** 







## **Mouser Electronics**

**Authorized Distributor** 

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

#### Wakefield-Vette:

960-23-18-S-AB-0	 0_960-19-18-S-AB-0	960-23-12-S-AB-	960-23-23-F-AB-0	960-29-15-D-AB-0	960-29-21-F-AB-0
960-23-33-D-AB-0	960-27-18-D-AB-0	960-27-18-S-AB-0	960-27-28-S-AB-0	960-29-33-F-AB-0	960-31-15-S-AB-0
960-19-28-D-AB-0	960-19-28-S-AB-0	960-19-12-F-AB-0	960-21-12-D-AB-0	960-21-23-S-AB-0	960-23-15-F-AB-0
960-21-23-F-AB-0	960-23-18-D-AB-0	960-27-12-F-AB-0	960-27-12-S-AB-0	960-29-28-F-AB-0	960-19-23-S-AB-0
960-29-33-S-AB-0	960-31-18-D-AB-0	960-31-28-S-AB-0	960-31-18-S-AB-0	960-31-28-D-AB-0	960-21-23-D-AB-0
960-31-33-S-AB-0	960-23-15-D-AB-0	960-27-12-D-AB-0	960-27-15-S-AB-0	960-27-23-S-AB-0	960-29-23-F-AB-0
960-21-33-S-AB-0	960-23-12-D-AB-0	960-23-28-F-AB-0	960-27-21-S-AB-0	960-29-18-F-AB-0	960-31-33-F-AB-0
960-31-23-F-AB-0	960-19-21-S-AB-0	960-21-18-D-AB-0	960-19-21-D-AB-0	960-21-12-F-AB-0	960-21-15-F-AB-0
960-23-23-D-AB-0	960-23-33-F-AB-0	960-27-18-F-AB-0	960-27-28-F-AB-0	960-29-15-F-AB-0	960-29-21-D-AB-0
960-31-12-F-AB-0	960-31-12-S-AB-0	960-31-15-F-AB-0	960-19-33-D-AB-0	960-19-33-S-AB-0	960-21-28-D-AB-0
960-21-33-F-AB-0	960-23-23-S-AB-0	960-23-28-D-AB-0	960-27-23-D-AB-0	960-27-23-F-AB-0	960-29-18-D-AB-0
960-29-12-F-AB-0	960-31-12-D-AB-0	960-31-18-F-AB-0	960-31-28-F-AB-0	960-21-15-D-AB-0	960-21-15-S-AB-0
960-19-33-F-AB-0	960-21-18-F-AB-0	960-21-28-F-AB-0	960-23-21-S-AB-0	960-23-33-S-AB-0	960-27-28-D-AB-0
960-29-23-S-AB-0	960-29-28-D-AB-0	960-29-28-S-AB-0	960-31-21-D-AB-0	960-31-21-S-AB-0	960-19-23-D-AB-0
960-21-21-F-AB-0	960-21-21-S-AB-0	960-23-18-F-AB-0	960-27-15-D-AB-0	960-27-33-F-AB-0	960-29-12-D-AB-0
960-29-15-S-AB-0	960-29-18-S-AB-0	960-31-15-D-AB-0	960-31-33-D-AB-0	960-19-12-D-AB-0	960-19-28-F-AB-0
960-19-18-D-AB-0	960-19-18-F-AB-0	960-21-12-S-AB-0	960-21-33-D-AB-0		