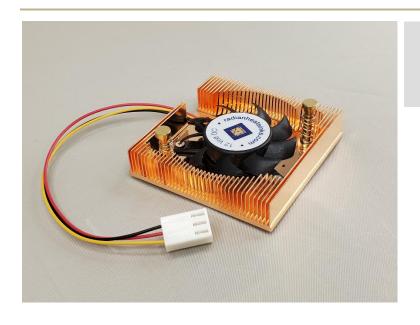
Radian Thermal Products has been committed to helping our customers with full-service mechanical and thermal solutions since 1974. Radian offers a range of standard PCIe active and passive cooling solutions as well as custom designs to meet customer requirements.



### **Description:**

 Sub-Zero PCle Fansink, 50 x 50 x 10.5mm, 12V

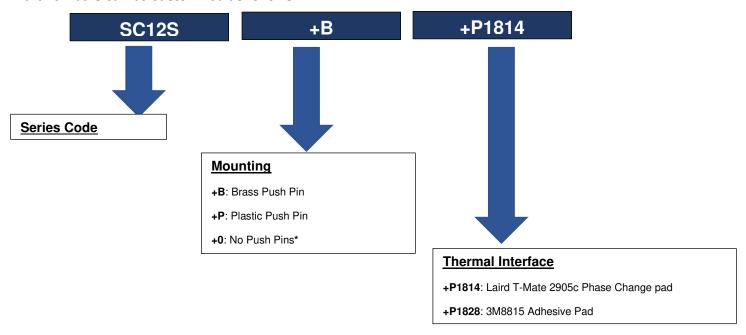
## Buy Online at:

Radianheatsinks.com

PART	SC12S
MOUNTING	Push Pin
MATERIAL	Copper
LENGTH (mm)	50.0
WIDTH (mm)	50.0
HEIGHT (mm)	10.5
VOLTAGE (V DC)	12.0

### **Model Numbering System**

Part numbers can be customized as follows:



\*Must be combined with 3M8815 Adhesive Pad.



## **Fansink Specifications**

Thermal Data		
Θ <sub>SA</sub> <sup>1</sup> (°c/w)	1.5	
TIM Options	3M 8815 Adhesive Pad	
	LAIRD T-MATE 2905c	
	Contact Radian for other options	

Mechanical Data	
Assembly Dimensions	See Figure 1
Heatsink Material	Copper
Surface Finish	Radian Blue Anodized
Force per Push Pin (lb <sub>f</sub> )	Brass: 1.6 ±15% Maximum
	Plastic: 1.6 ±15% Maximum
Push Pin Effective Length (mm) (See Figure 2)	Brass: 13.72 ±0.127
	Plastic: 12.29 ±0.127
Maximum Combined Thickness (mm) <sup>2</sup>	Brass: 11
	Plastic: 9.5
Push Pin Extension Length under PCB (mm) (See Figure 2)	Brass: 2.16 ±0.127
	Plastic: 3.2 ±0.127
Recommended PCB Hole Diameter for Push Pin (mm)	Brass: 3.0
	Plastic: 3.2
Connector	Molex 22-01-3037
Connector Receptacle	Mates KK 254 PCB Headers
Mass (g)	57
Noise (dB (A))	34 (Max 37)

Electrical Data		
Operating Voltage (V <sub>DC</sub> )	12	
	13.8 Max	
Connector Pins	08-50-0114 OR EQUIVALENT	
Starting Voltage (VDC)	9 (ON/OFF)	
Input Current (A)	0.1 (Max 0.12)	
Wire Description	See Figure 1	
Signal Circuit	See Figure 3	
Fan Speed (RPM)	7,500 ±15%	

Environmental Data		
Operating Temperature (°C)	-10 to +70	
Storage Temperature (°C)	-40 to +75	
Operating Humidity (%RH)	35 to 85	
Storage Humidity (%RH)	35 to 85	
Average Life Expectancy	70,000 hours operation at rated voltage in 40°C with 15~65%RH	

<sup>&</sup>lt;sup>1</sup> Typical value, actual performance may vary depending on application environment. <sup>2</sup> Combined thickness is the sum of the PCB, chip, thermal pad and heatsink base thicknesses.



# **Fansink Assembly Drawings**

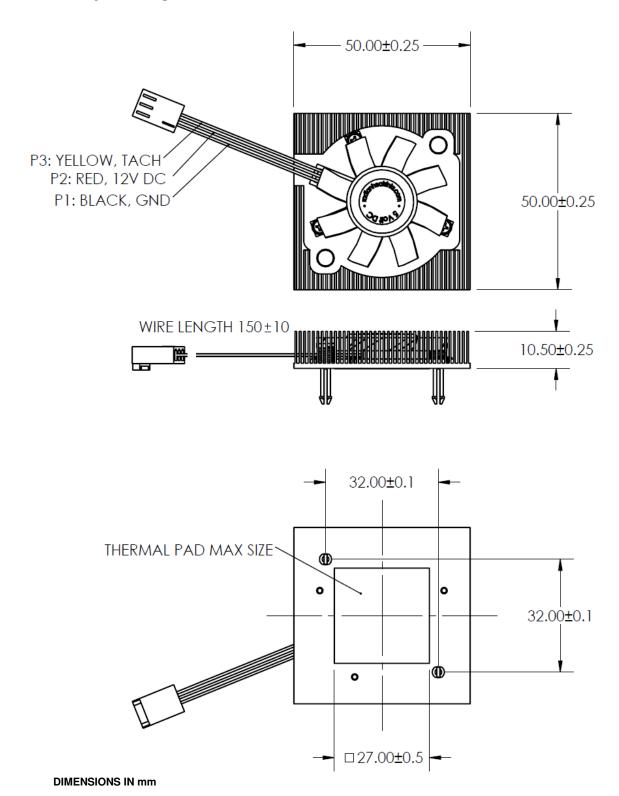


Figure 1: SC12S Mechanical Drawings



#### **Push Pin Illustration**

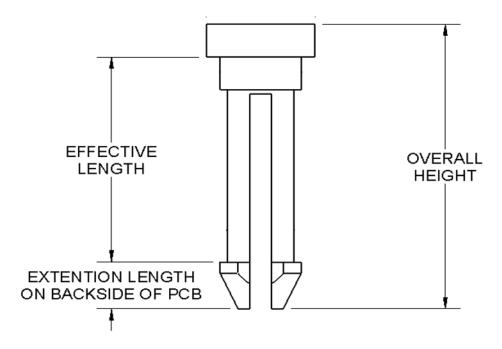
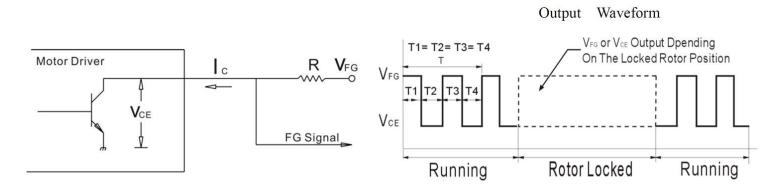


Figure 2: Push Pin Illustration

#### **Fan Circuit Schematic**



Output Type: Open Collect

N=R.P.M; T=60/N (Sec.); FG=1/T\*2 (Hz); N=FG\*30

 $V_{CE}(sat)=0.5V(Max.)$ 

V<sub>FG</sub>=Maxi mum operation voltage

Ic=5mA (Max.)

 $R \geqslant V_{FG} / Ic$ 

Figure 3: SC12S Signal Circuit Schematic