www.r-theta.com

# STANDARD

# Products Catalog

RoHS Compliant

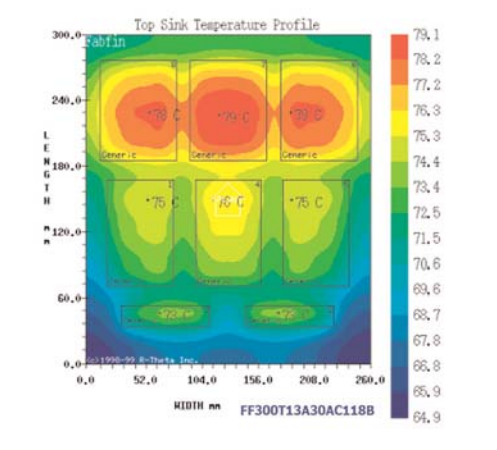
ISO 9001 - 2000 REGISTERED

R-Theta Thermal Solutions Inc.

# R-Theta Thermal Solutions Inc.

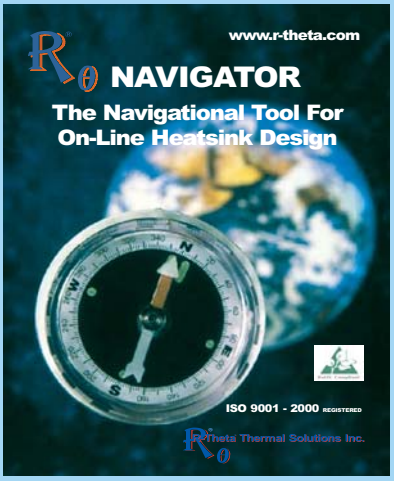
has been a global leader for over 25 years in the design and manufacturing of innovative thermal management solutions serving a broad range of markets. Major markets include telecommunications, computers, industrial controls, power conversion, transportation, medical, alternative energy and aerospace.

R-Theta's powerful software "R-Tools" provides on-line thermal modeling of heat sinks for semiconductors in natural or forced convection for air cooled, as well as, liquid-cooled cold plates. The interface is friendly, with only minimal parameters needed to be specified. Users can register free on-line for R-Tools on the R-Theta web site www.r-theta.com .




Standard products offered in this catalog are Heat Sinks for board level IC's, Surface Mount and Thru-Hole Discrete semiconductor packages, Extruded heat sinks, Fabfin and Aluminum Extrusion profiles. Thermal interface materials include silicone and non-silicone Thermal Compounds, Sil-Pads and Adhesive tapes.

R-theta also offers a complete line of high performance patented, aluminum alloy heat sinks without the use of glue and are available through R-Theta's extensive line. The company has developed leading edge heat sink technology that eliminates volumetric constraints of one-piece extrusions. By mechanically swaging the parts together there is no deterioration in performance compared to a solid block of aluminum. R-Theta heat sinks mean greater thermal design flexibility by offering the same co-efficient of thermal expansion for the entire heat sink. R-Theta heat sinks allow you to maximize heat cooling by pushing the thermal envelope for greater productivity.




Call and ask for your copy of the Navigator 1-800-388-5428 or check us out on the web at www.r-theta.com

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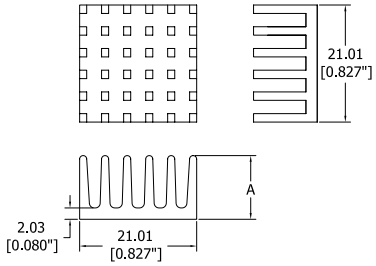
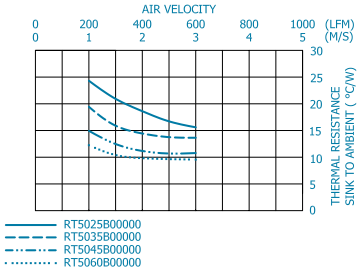
R-theta Thermal Solutions Inc. believes that information provided in this product catalog is accurate as of publication date. Product testing for proper performance in customer applications is recommended for all component designs. The physical properties reported herein are representative of performance values obtained by standard predictive and testing methods. R-Theta is a manufacturer of heat dissipation products and reserves the right to make changes to its products without notice to improve the design of performance characteristics.

Cat#600220

POLAR INTERFACE MATERIALS PGS. 18-21

## Omnidirectional Pin Fin Heat Sink for 21 mm BGAs



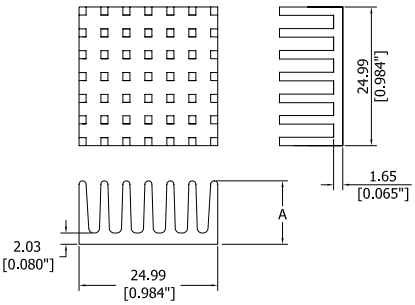



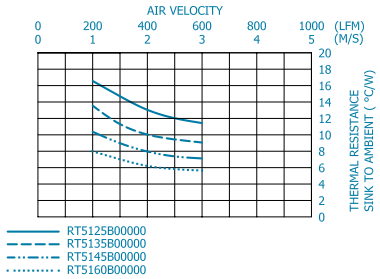

**The omnidirectional pin fin heat sink** is available in four standard heights. Add pressure sensitive adhesive tape for easy and reliable attachment to IC package. See page 21 for adhesive tapes.

**Aluminum, Black Anodized**

| Part Number | Base Dimensions mm ( in.) Sq. | Height "A" mm (In.) |
|---|---|---|
| RT5025B00000 | 21 (.827) | 6.4 (.250) |
| RT5035B00000 | 21 (.827) | 8.9 (.350) |
| RT5045B00000 | 21 (.827) | 11.4 (.450) |
| RT5060B00000 | 21 (.827) | 15.2 (.600) |

## Omnidirectional Pin Fin Heat Sink for 25 mm BGAs



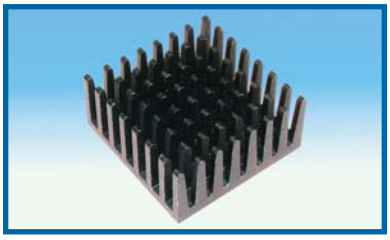



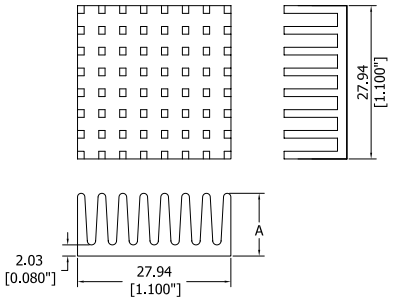

**The omnidirectional pin fin heat sink** is available in four standard heights. Add pressure sensitive adhesive tape for easy and reliable attachment to IC package. See page 21 for adhesive tapes.

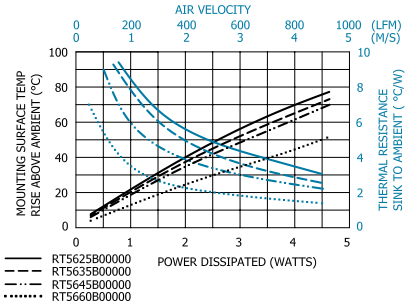
**Aluminum, Black Anodized**

| Part Number | Base Dimensions mm ( in.) Sq. | Height "A" mm (In.) |
|---|---|---|
| RT5125B00000 | 25 (.984) | 6.4 (.250) |
| RT5135B00000 | 25 (.984) | 8.9 (.350) |
| RT5145B00000 | 25 (.984) | 11.4 (.450) |
| RT5160B00000 | 25 (.984) | 15.2 (.600) |

## Omnidirectional Pin Fin Heat Sink for 28 mm BGAs






**The omnidirectional pin fin heat sink** is available in four standard heights. Add pressure sensitive adhesive tape for easy and reliable attachment to IC package. See page 21 for adhesive tapes.

**Aluminum, Black Anodized**

| Part Number | Base Dimensions mm ( in.) Sq. | Height "A" mm (In.) |
|---|---|---|
| RT5625B00000 | 27.9 (1.100) | 6.4 (.250) |
| RT5635B00000 | 27.9 (1.100) | 8.9 (.350) |
| RT5645B00000 | 27.9 (1.100) | 11.4 (.450) |
| RT5660B00000 | 27.9 (1.100) | 15.2 (.600) |

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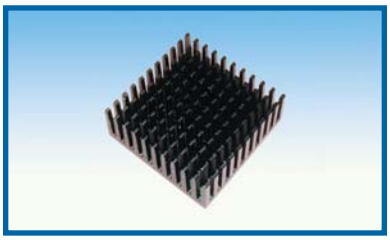
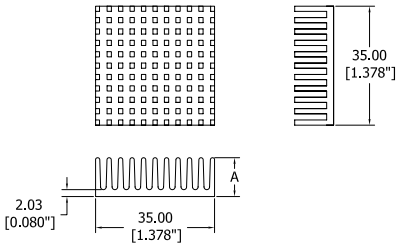
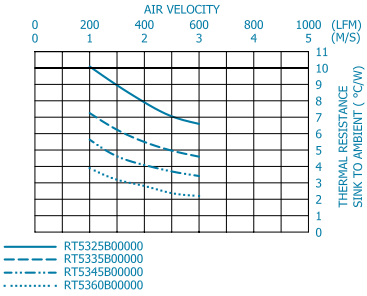
## Omnidirectional Pin Fin Heat Sink for 35 mm BGAs



**The omnidirectional pin fin heat** sink is available in four standard heights. Add pressure sensitive adhesive tape for easy and reliable attachment to IC package. See page 21 for adhesive tapes.

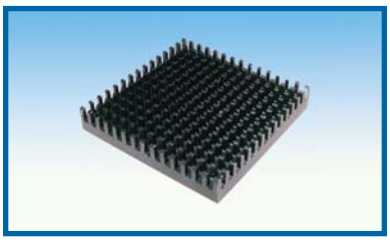



**Aluminum, Black Anodized**

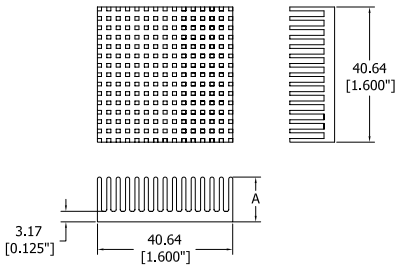



| Part Number | Base Dimensions mm( in. Sq) | Height "A" mm (In.) |
|---|---|---|
| RT5325B00000 | 35 (1.378) | 6.4 (.250) |
| RT5335B00000 | 35 (1.378) | 8.9 (.350) |
| RT5345B00000 | 35 (1.378) | 11.4 (.450) |
| RT5360B00000 | 35 (1.378) | 15.2 (.600) |

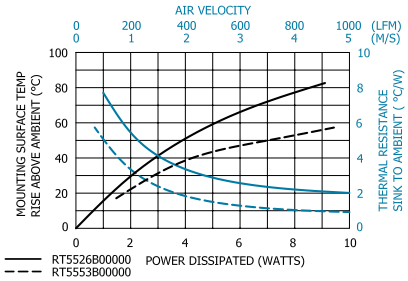
## Omnidirectional Pin Fin Heat Sink for 40 mm BGAs



**The omnidirectional pin fin heat** sink is available in four standard heights. Add pressure sensitive adhesive tape for easy and reliable attachment to IC package. See page 21 for adhesive tapes.

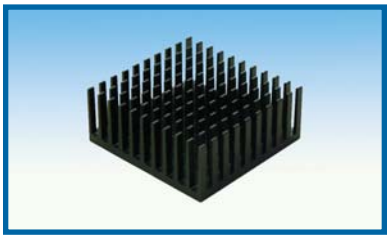



**Aluminum, Black Anodized**

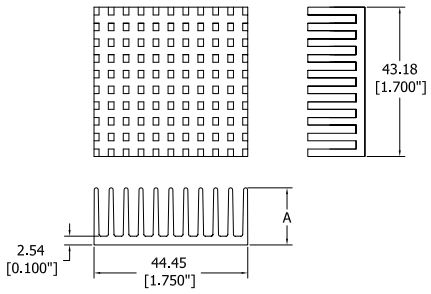



| Part Number | Base Dimensions mm( in. Sq) | Height "A" mm (In.) |
|---|---|---|
| RT5526B00000 | 40.6 (1.600) | 6.6 (.260) |
| RT5553B00000 | 40.6 (1.600) | 13.3 (.525) |

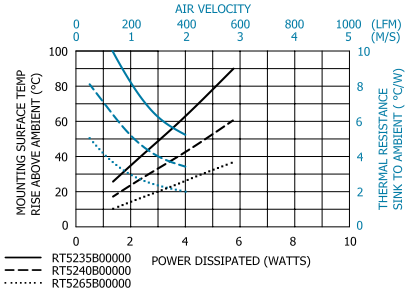
## Omnidirectional Pin Fin Heat Sink for 45 mm BGAs



**The omnidirectional pin fin heat** sink is available in three standard heights. Add pressure sensitive adhesive tape for easy and reliable attachment to IC package. See page 21 for adhesive tapes.




**Aluminum, Black Anodized**




| Part Number | Base Dimensions mm( in. Sq) | Height "A" mm (In.) |
|---|---|---|
| RT5235B00000 | 44.5 (1.750) X 43.2 (1.700) | 8.9 (.350) |
| RT5240B00000 | 44.5 (1.750) X 43.2 (1.700) | 10.2 (.400) |
| RT5265B00000 | 44.5 (1.750) X 43.2 (1.700) | 16.5 (.650) |

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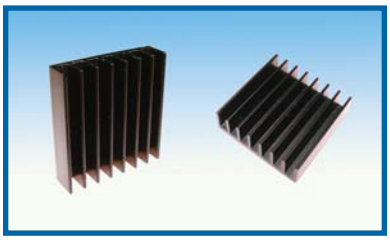
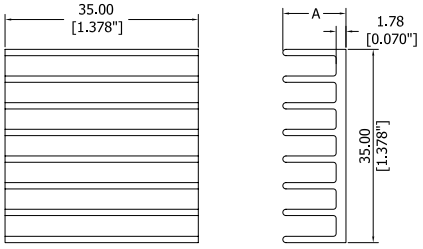
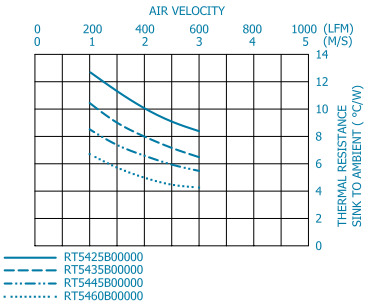
## Unidirectional Fin Heat Sink for 35 mm BGAs



**The omnidirectional pin fin heat** sink is available in four standard heights. Add pressure sensitive adhesive tape for easy and reliable attachment to IC package. See page 21 for adhesive tapes.



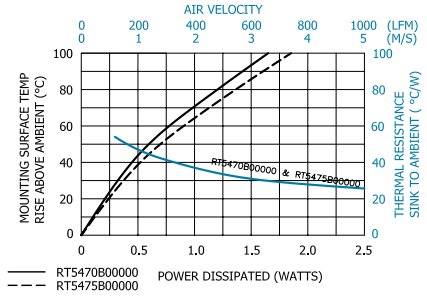

**Aluminum, Black Anodized**




| Part Number | Base Dimensions mm( in. Sq) | Height "A" mm (In.) |
|---|---|---|
| RT5425B00000 | 35 (1.378) | 6.4 (.250) |
| RT5435B00000 | 35 (1.378) | 8.9 (.350) |
| RT5445B00000 | 35 (1.378) | 11.4 (.450) |
| RT5460B00000 | 35 (1.378) | 15.2 (.600) |

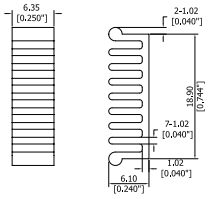
## Unidirectional epoxy attach heat sink for 14 and 16 pin dip packages

**Unidirectional epoxy attach fin to heat sink** attaches to 14 and 16 pin DIP packages quickly and easily. May be added before or after final board assembly, no additional board space is required. Available in two fin directions.

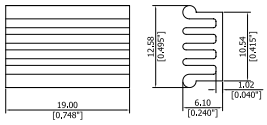



| Part Number |
|---|
| RT5470B00000 |
| RT5475B00000 |

**RT5470B00000**

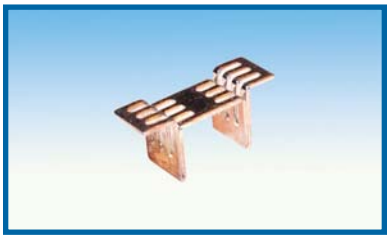



**RT5475B00000**



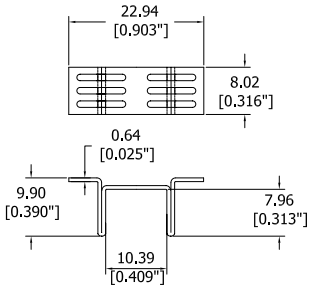

**Aluminum, Black Anodized**

## Surface mount heat sink for D-PAK (TO-252) package semiconductors

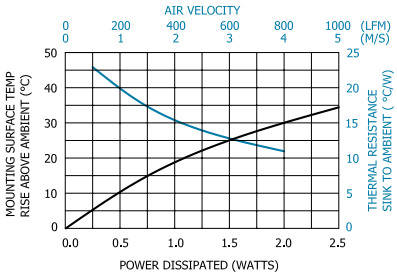


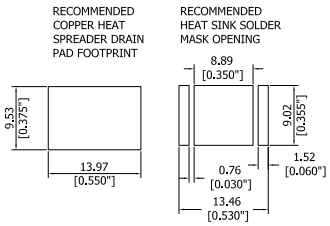
**Surface mount heat sink for D-PAK (TO-252) package semiconductors** remove the heat indirectly without contacting the device like traditional thru hole heat sinks. The device and the heat sink are soldered directly to a modified drain pad creating a thermal transfer path from package tab to the heat sink.

| Part Number |
|---|
| RT1750D00000 |




**0.64 (0.025) Thick Copper, Tin Plated**

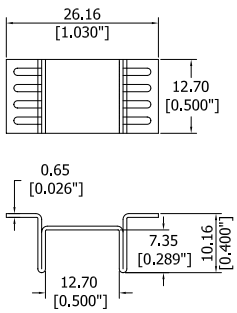


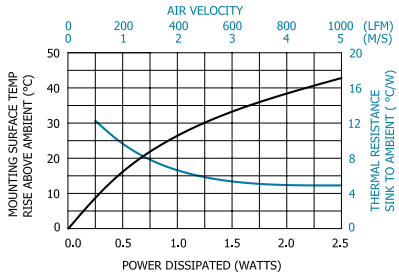

## Surface mount heat sink for D$^2$-PAK (TO-263) package semiconductors

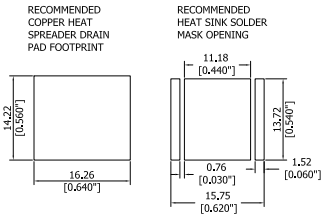
**Surface mount heat sink for D$^2$-PAK (TO-263) package semiconductors** remove the heat indirectly without contacting the device like traditional thru hole heat sinks. The device and the heat sink are soldered directly to a modified drain pad creating a thermal transfer path from package tab to the heat sink.

| Part Number |
|---|
| RT1755D00000 |

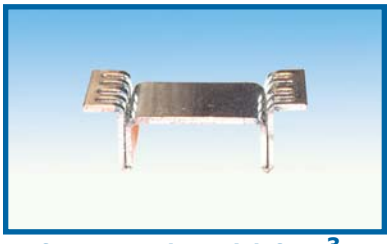



**0.65 (0.026) Thick Copper, Tin Plated**



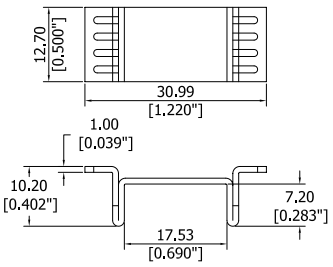




## Surface mount heat sink for D$^3$-PAK (TO-268) package semiconductors

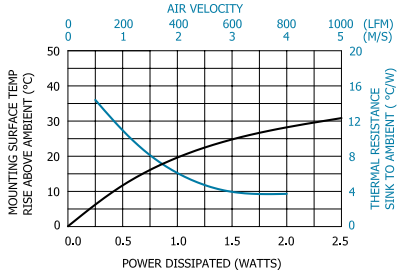


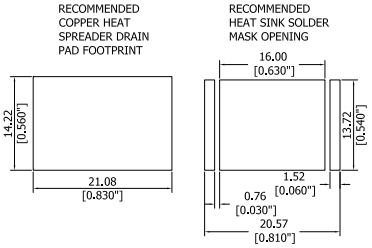
**Surface mount heat sink for D$^3$-PAK (TO-268) package semiconductors** remove the heat indirectly without contacting the device like traditional thru hole heat sinks. The device and the heat sink are soldered directly to a modified drain pad creating a thermal transfer path from package tab to the heat sink.

| Part Number |
|---|
| RT1760D00000 |




**1.00 (0.039) Thick Copper, Tin Plated**



POLAR PGS. 18-21 INTERFACE MATERIALS

## Plug In style heat sink with two self-locking clips for TO-220 & TO-262

**Plug in style heat sink with two self locking clips and mounting hole** to firmly hold the device to the heat sink ensuring maximum metal to metal thermal contact. Available with solderable mounting tabs for both horizontal and vertical mounting to the PC board.

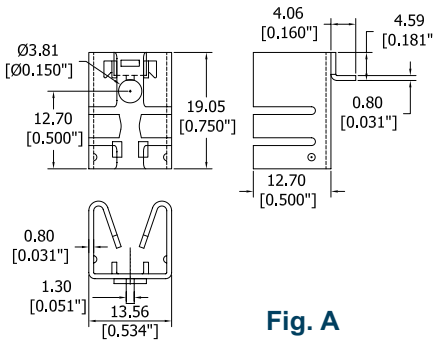



Fig. A

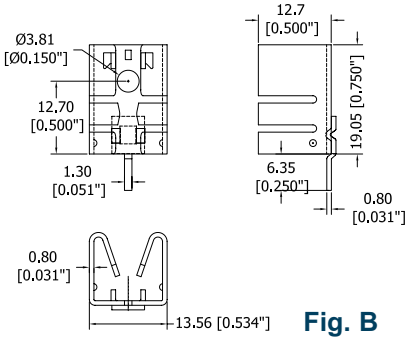
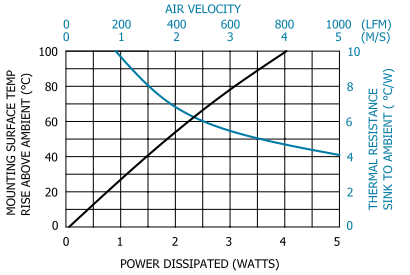



Fig. B

**Aluminum, Black Anodized**

| Part Number | Description | Fig. | Dia. of PCB Plated Thru hole for Tab |
|---|---|---|---|
| RT1000B00000 | Slim plug in heat sink without tab | A | N/A |
| RT1000B03100 | With single tab for horizontal mounting | A | 1.75 (0.069) |
| RT1000B04000 | With single tab for vertical mounting | B | 1.75 (0.069) |




## Plug In style heat sink featuring four self-locking clips for TO-220 and TO-262

**Plug in style heat sink features four self locking clips** to firmly hold the device to the heat sink ensuring maximum metal to metal thermal contact. Available with solderable mounting tabs for both horizontal and vertical mounting to the PC board.

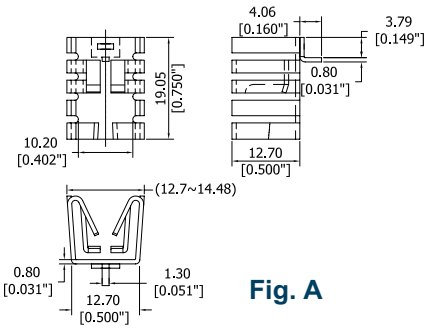



Fig. A

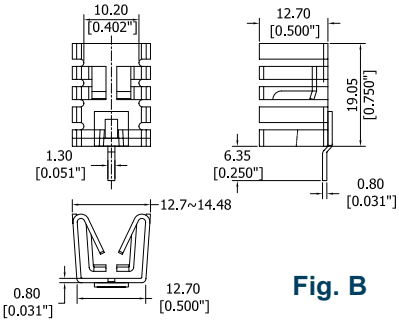
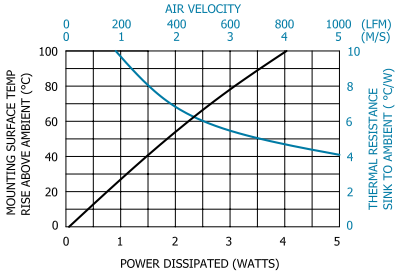



Fig. B

**Aluminum, Black Anodized**

| Part Number | Description | Fig. | Dia. of PCB Plated Thru hole for Tab |
|---|---|---|---|
| RT1002B00000 | Slim plug in heat sink without tab | A | N/A |
| RT1002B03100 | With single tab for horizontal mounting | A | 1.75 (0.069) |
| RT1002B04000 | With single tab for vertical mounting | B | 1.75 (0.069) |



POLAR INTERFACE MATERIALS PGS. 18-21

## Plug In style heat sink featuring two self-locking clips for TO-220 & TO-262

**Plug in style heat sink features two self locking clips** to firmly hold the device to the heat sink ensuring maximum thermal contact. Available with solderable mounting tabs for both horizontal and vertical mounting to the PC board.

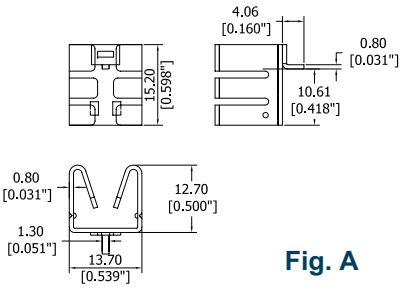



Fig. A

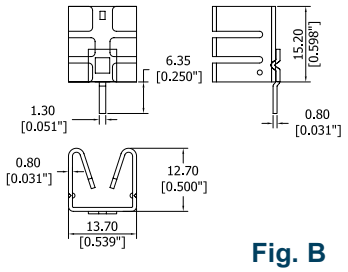
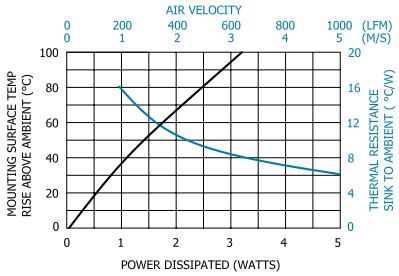



Fig. B

**Aluminum, Black Anodized**

| Part Number | Description | Fig. | Dia. of PCB Plated Thru hole for Tabs |
|---|---|---|---|
| RT1050B00000 | Plug in style heat sink | A | N/A |
| RT1050B03100 | With horizontal mounting tab | A | 1.75 (0.069) |
| RT1050B04000 | With vertical mounting tab | B | 1.75 (0.069) |




## Channel style heat sink featuring twisted fins for TO-220

**Channel style heat sink features twisted fins** for increased air turbulence for better cooling. Includes three device mounting options, hole, slot or clip and wave solderable tin plated tabs for easy attachment to the PC board.

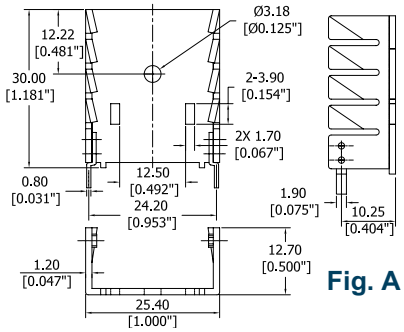



Fig. A

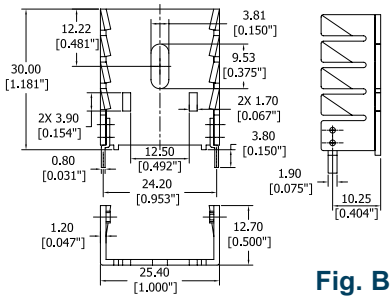
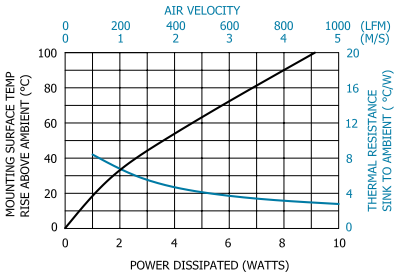



Fig. B

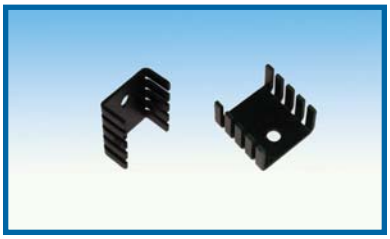
**Aluminum, Black Anodized**

| Part Number | Fig. | Mounting | Dia. of PCB Plated Thru hole for Tabs |
|---|---|---|---|
| RT1100B03400 | A | Hole | 2.36 (0.093) |
| RT1110B03400 | B | Slot | 2.36 (0.093) |

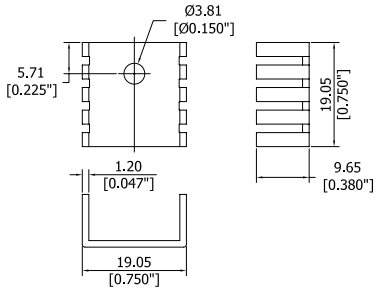



**Popular Option:** Device Mounting Clip **Part Number:** RT1460U00000 (Order Separately)

## Economy, narrow base, low profile channel style heat sink for TO-220

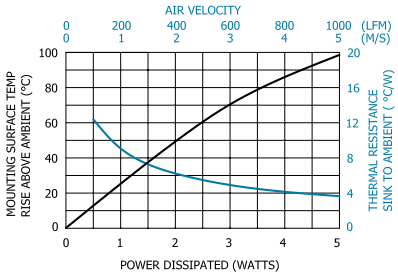


**Economy, narrow base, low profile channel style heat sink** is perfect for use on printed circuit boards with 0.500 inch centering. When mounted horizontally, the total height of the heat sink is just 9.65 (0.380).



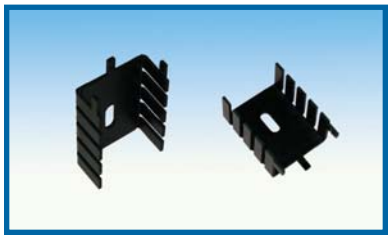

**Aluminum, Black Anodized**

| Part Number |
|---|
| RT1300B00000 |

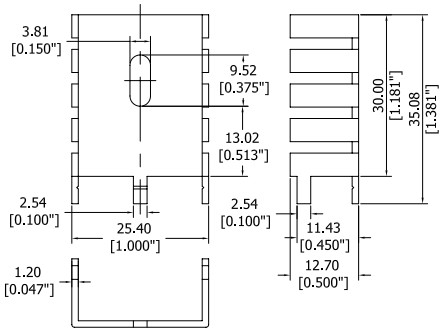


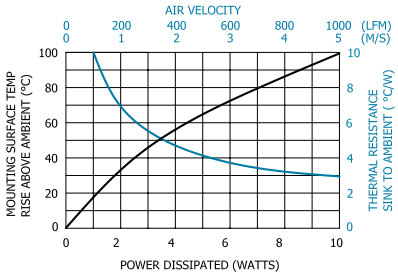
POLAR PGS. 18-21 INTERFACE MATERIALS

## Channel style heat sink with three integrated tabs for a variety of devices



**Channel style heat sink with three integrated tabs** for greater stability and slotted mounting hole to accommodate a variety of device lead lengths. Mounting tabs are designed twisted to mount to PCB.

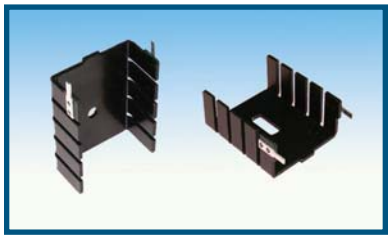



**Aluminum, Black Anodized**

| Part Number |
|---|
| RT1500B00000 |

## Channel style heat sink featuring device mounting hole/slot for a variety of devices



**Channel style heat sink features device mounting hole or slot** to accommodate a variety of device lead lengths. Mounting tabs are Tin Finish for soldering to PCB.

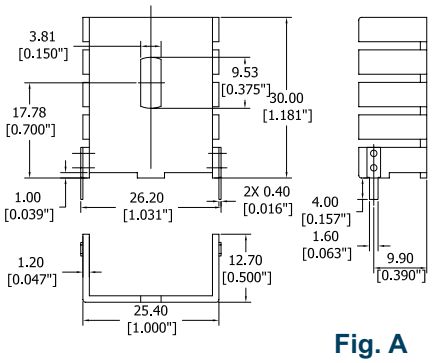



Fig. A

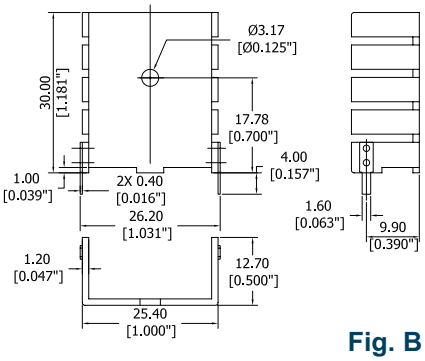
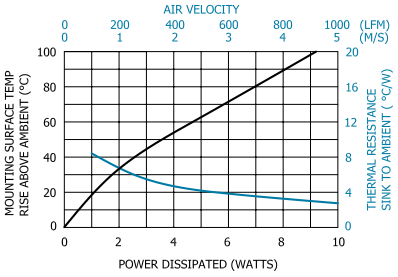



Fig. B

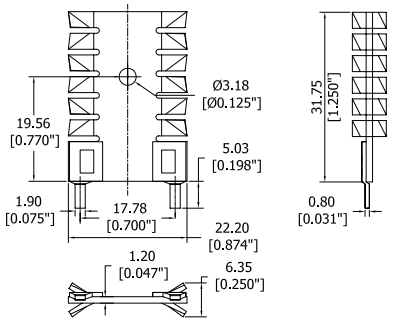
**Aluminum, Black Anodized**

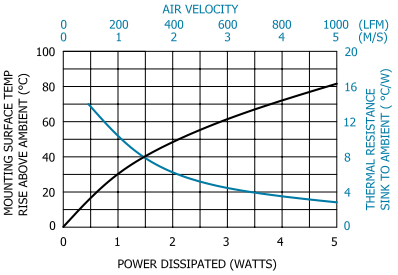
| Part Number | Fig. | Mounting | Dia. of PCB Plated Thru hole for Tabs |
|---|---|---|---|
| RT1550B03400 | A | Slot | 2.05 (0.081) |
| RT1560B03400 | B | Hole | 2.05 (0.081) |




## Thin profile space saving twisted fin heat sink for TO-220

**Thin profile space savings twisted fin heat sink for vertical mounting** TO-220 devices. Features staked on solderable mounting tabs for easy attachment to the PC board.




**Aluminum, Black Anodized**

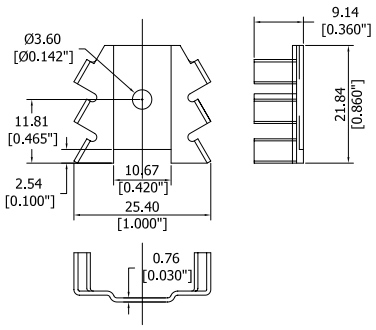
| Part Number | Fig. | Dia. of PCB Plated Thru hole for Tabs |
|---|---|---|
| RT1600B03400 | A | 2.39 (0.094) |

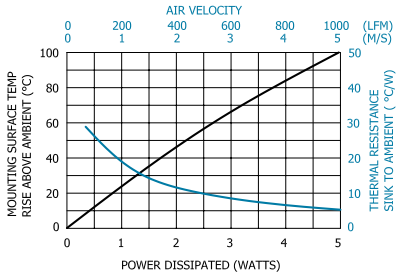
POLAR INTERFACE MATERIALS PGS. 18-21

## Lightweight, channel style heat sink featuring twisted fins for TO-220

**Lightweight, channel style heat sink featuring twisted fins** designed for mounting horizontally or vertically on a PC board.

| Part Number |
|---|
| RT1700B00000 |



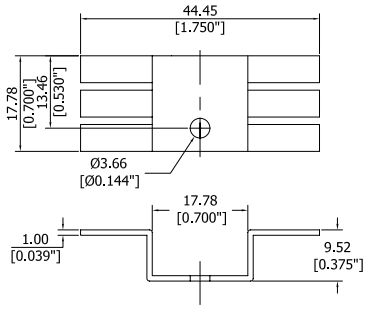




**Aluminum, Black Anodized**

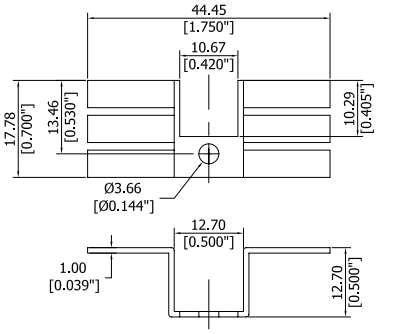
## Hat section style heat sink for TO-220

**Hat section style heat sinks** are low profile and perfect for use on printed circuit cards with 0.500 inch centering between boards. For higher power application the RT1200 hat can be added to the RT1150 or RT1250 for double sided cooling of a TO-220 device.

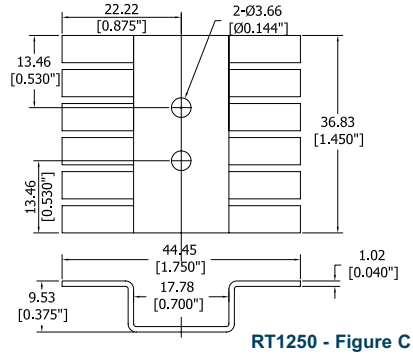
| Part Number | Description | Fig. |
|---|---|---|
| RT1150B00000 | Wide hat section heat sink | A |
| RT1200B00000 | Top mount hat heat sink with cut out | B |
| RT1250B00000 | Dual Device hat section heat sink | C |



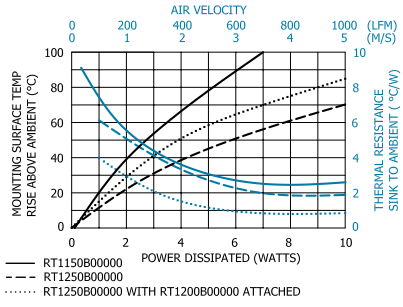

**RT1150 - Figure A**




**RT1200 - Figure B**



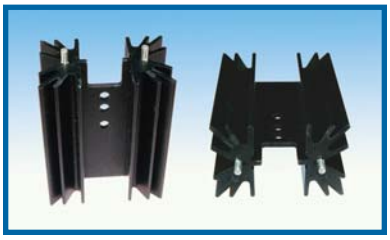

**RT1250 - Figure C**



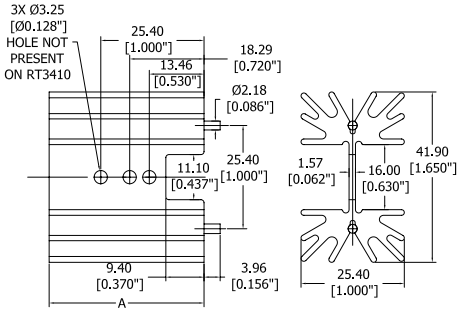

**Aluminum, Black Anodized**

POLAR INTERFACE MATERIALS PGS. 18-21

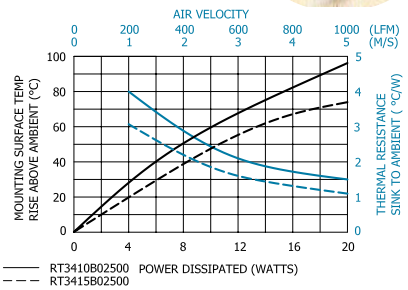
## Extruded heat sink with large radial fins for TO-202 and TO-220

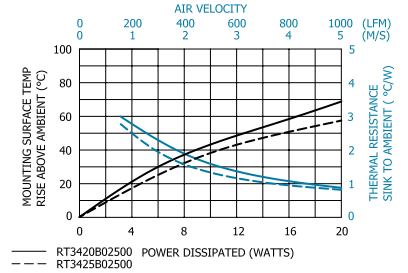


**Extruded heat sink with large radial fins** features equal channel widths on both sides for single or dual device mounting. Includes two solderable mounting pins which permit vertical mounting and eliminate stress on device leads. Available in four heights for TO-202 and TO-220 devices.




**Aluminum, Black Anodized**

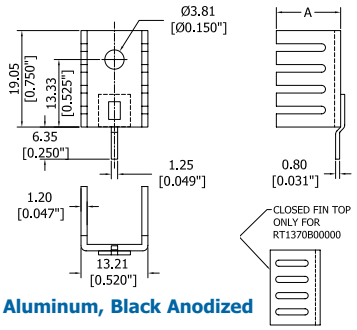


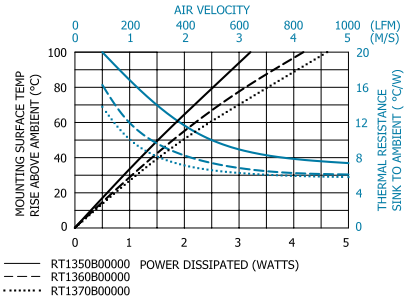

| Part Number | Device | "A" mm (In.) | Dia. of PCB Plated Thru hole for Tabs |
|---|---|---|---|
| RT3410B02500 | TO-202, TO-220 | 24.50 (1.00) | 2.67 (0.105) |
| RT3415B02500 | TO-202, TO-220 | 38.20 (1.50) | 2.67 (0.105) |
| RT3420B02500 | TO-202, TO-220 | 50.80 (2.00) | 2.67 (0.105) |
| RT3425B02500 | TO-202, TO-220 | 63.50 (2.50) | 2.67 (0.105) |

## Compact low cost channel style heat sink for TO-220

**Compact low cost channel style heat sink** is ideal where space and cost are limited. Available in three fin heights with or without solderable mounting tab.



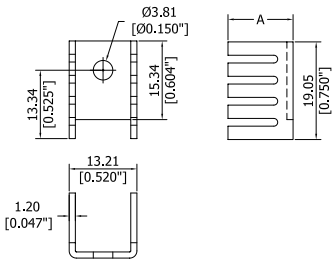

**Aluminum, Black Anodized**



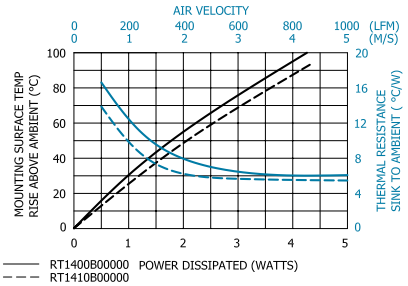

| Part Number | Description | "A" mm (In.) | Dia. of PCB Plated Thru hole for Tab |
|---|---|---|---|
| RT1350B00000 | Slim, low cost channel style heat sink | 6.35 (0.250) | N/A |
| RT1360B00000 | Slim, low cost channel style heat sink | 9.53 (0.375) | N/A |
| RT1360B04000 | With solderable tab | 9.53 (0.375) | 1.73 (0.068) |
| RT1370B00000 | Slim, low cost channel style heat sink | 12.70 (0.500) | N/A |
| RT1370B04000 | With solderable tab | 12.70 (0.500) | 1.73 (0.068) |

## Compact low cost channel style heat sink for TO-202

**Compact low cost channel style heat sink** is notched to accommodate the TO-202 center tab packages. Available in two fin heights.




**Aluminum, Black Anodized**

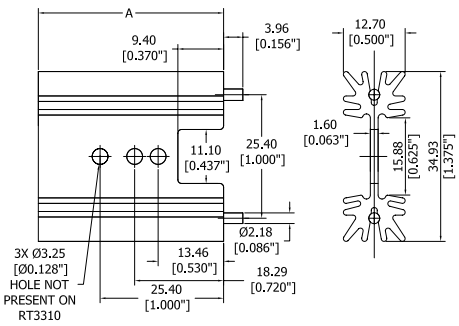


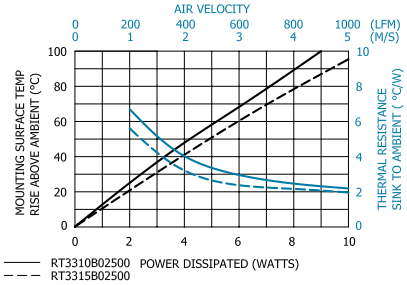

| Part Number | "A" mm (In.) |
|---|---|
| RT1400B00000 | 9.53 (0.375) |
| RT1410B00000 | 12.70 (0.500) |

POLAR INTERFACE MATERIALS PGS. 18-21

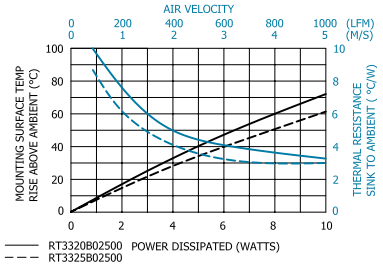
## Extruded heat sink with radial fins and notched base for TO-202 and TO-220

**Extruded heat sink with radial fins and notched base** features equal channel widths on both sides for single or dual device mounting. Includes two solderable mounting pins which permit vertical mounting and eliminate stress on device leads. Available in four heights for TO-202 and TO-220 devices.



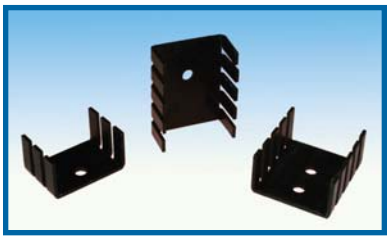




**Aluminum, Black Anodized**




| Part Number | Device | "A" mm (In.) | Dia. of PCB Plated Thru hole for Tabs |
|---|---|---|---|
| RT3310B02500 | TO-202, TO-220 | 24.50 (1.00) | 2.67 (0.105) |
| RT3315B02500 | TO-202, TO-220 | 38.20 (1.50) | 2.67 (0.105) |
| RT3320B02500 | TO-202, TO-220 | 50.80 (2.00) | 2.67 (0.105) |
| RT3325B02500 | TO-202, TO-220 | 63.50 (2.50) | 2.67 (0.105) |

## Channel style heat sink with wide mounting surface for a variety of devices



**Channel style heat sink with wide mounting surface** and selection of lengths to accept a variety of devices. Models accommodate one or two devices.

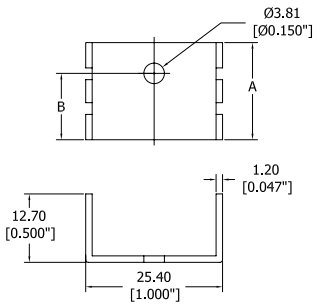



**Fig. A**

RT1650B00000

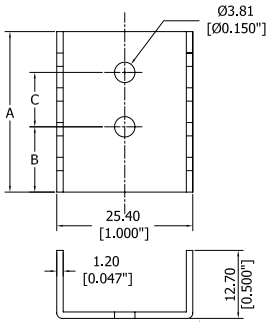
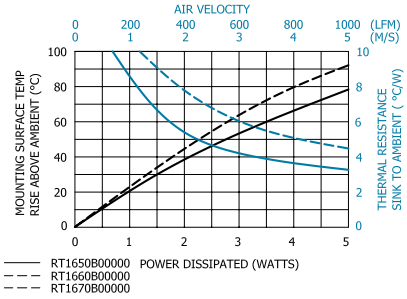



**Fig. B**

RT1660B00000, RT1670B00000

**Aluminum, Black Anodized**

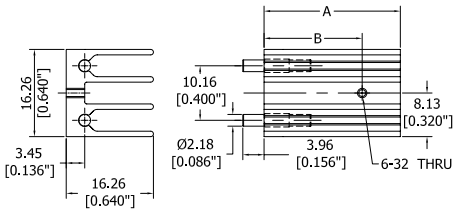
| Part Number | Fig. | "A" Dim mm (In.) | "B" Dim mm (In.) | "C" Dim mm (In.) |
|---|---|---|---|---|
| RT1650B00000 | A | 18.03 (0.710) | 12.32 (0.485) | N/A |
| RT1660B00000 | B | 29.97 (1.180) | 11.68 (0.460) | N/A |
| RT1670B00000 | B | 29.97 (1.180) | 12.19 (0.480) | 10.16 (0.400) |

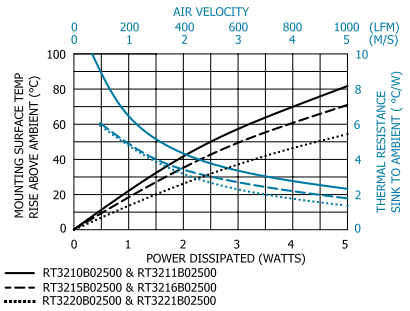


POLAR INTERFACE MATERIALS PGS. 18-21

## Flat back extruded heat sink with solderable pins for TO-220 & TO-218

**Flat back extruded heat sink features solderable pins** which allow vertical mounting without stress on the device leads. Available in three heights for TO-220 and TO-218 devices.

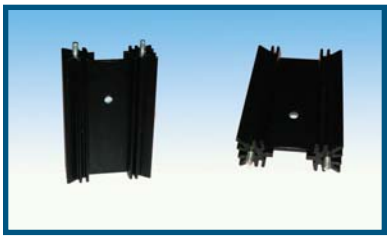


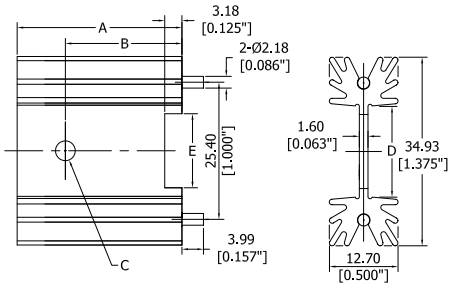

**Aluminum, Black Anodized**

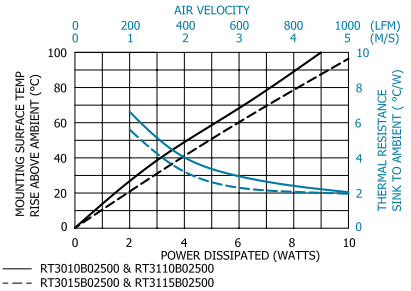
| Part Number | Device | "A" Dim mm (In.) | "B" Dim mm (In.) | Dia. of PCB Plated Thru hole for Tabs |
|---|---|---|---|---|
| RT3210B02500 | TO-220 | 25.40 (1.00) | 18.29 (0.720) | 2.67 (0.105) |
| RT3211B02500 | TO-218 | 25.40 (1.00) | 21.59 (0.850) | 2.67 (0.105) |
| RT3215B02500 | TO-220 | 38.10 (1.50) | 18.29 (0.720) | 2.67 (0.105) |
| RT3216B02500 | TO-218 | 38.10 (1.50) | 21.59 (0.850) | 2.67 (0.105) |
| RT3220B02500 | TO-220 | 50.80 (2.00) | 18.29 (0.720) | 2.67 (0.105) |
| RT3221B02500 | TO-218 | 50.80 (2.00) | 21.59 (0.850) | 2.67 (0.105) |

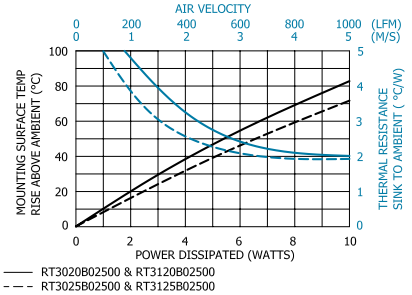
## Extruded heat sink with radial fins for TO-220, TO-218 and TO-247



**Extruded heat sink with radial fins feature equal channel widths** on both sides for single or dual device mounting. Includes two solderable mounting pins which permit vertical mounting to eliminate stress on device leads. Available in four heights for TO-220, TO-218, and TO-247 devices.



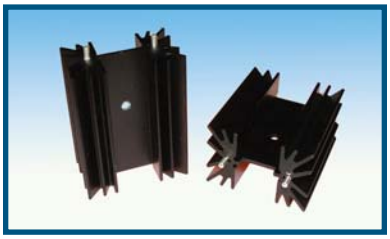




**Aluminum, Black Anodized**

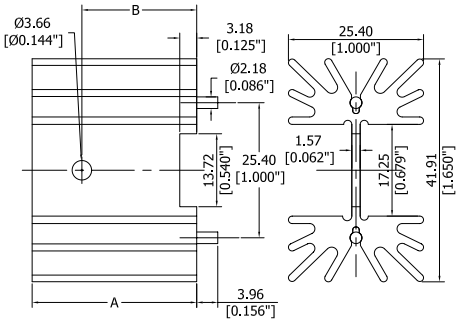
| Part Number | Device | "A" Dim mm (In.) | "B" Dim mm (In.) | "C" Dim mm (In.) | "D" Dim mm (In.) | "E" Dim mm (In.) | Dia. of PCB Plated Thru hole for Tabs |
|---|---|---|---|---|---|---|---|
| RT3010B02500 | TO-218, TO-247 | 25.40 (1.00) | 21.59 (0.850) | 3.66 (0.144) | 17.02 (0.670) | 13.72 (0.540) | 2.67 (0.105) |
| RT3110B02500 | TO-220 | 25.40 (1.00) | 18.29 (0.720) | 3.17 (0.125) | 15.88 (0.625) | 11.10 (0.437) | 2.67 (0.105) |
| RT3015B02500 | TO-218, TO-247 | 38.10 (1.50) | 21.59 (0.850) | 3.66 (0.144) | 17.02 (0.670) | 13.72 (0.540) | 2.67 (0.105) |
| RT3115B02500 | TO-220 | 38.10 (1.50) | 18.29 (0.720) | 3.17 (0.125) | 15.88 (0.625) | 11.10 (0.437) | 2.67 (0.105) |
| RT3020B02500 | TO-218, TO-247 | 50.80 (2.00) | 21.59 (0.850) | 3.66 (0.144) | 17.02 (0.670) | 13.72 (0.540) | 2.67 (0.105) |
| RT3120B02500 | TO-220 | 50.80 (2.00) | 18.29 (0.720) | 3.17 (0.125) | 15.88 (0.625) | 11.10 (0.437) | 2.67 (0.105) |
| RT3025B02500 | TO-218, TO-247 | 63.50 (2.500) | 21.59 (0.850) | 3.66 (0.144) | 17.02 (0.670) | 13.72 (0.540) | 2.67 (0.105) |
| RT3125B02500 | TO-220 | 63.50 (2.500) | 18.29 (0.720) | 3.17 (0.125) | 15.88 (0.625) | 11.10 (0.437) | 2.67 (0.105) |

POLAR INTERFACE MATERIALS PGS. 18-21

## Extruded heat sink with large radial fins for TO-220, TO-218 and TO-247

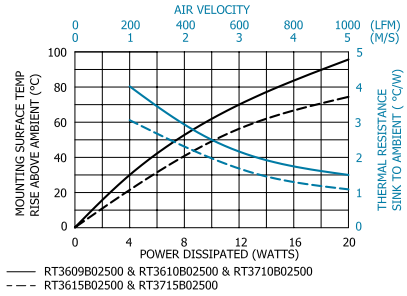


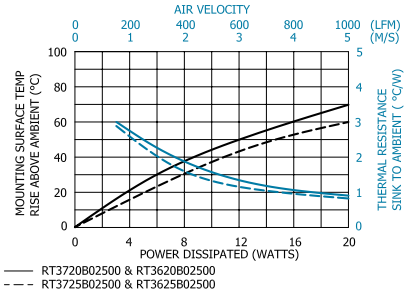
**Extruded heat sink with large radial fins** features equal channel widths on both sides for single or dual device mounting. Includes two solderable mounting pins which permit vertical mounting and eliminates stress on device leads. Available in four heights for TO-220,TO-218 and TO-247 devices.




**Note:** Notch optional see chart below

**Aluminum, Black Anodized**

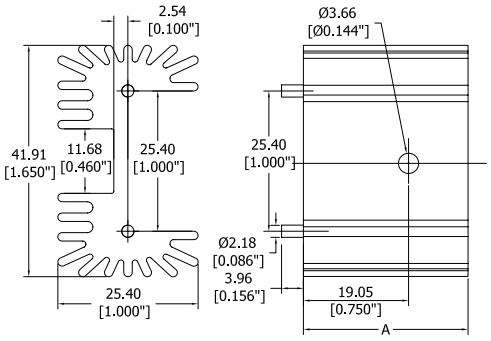


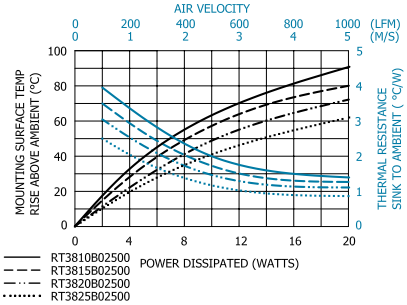

| Part Number | Device | "A" Dim mm (In.) | "B" Dim mm (In.) | Base Notch | Dia. of PCB Plated Thru hole for Tabs |
|---|---|---|---|---|---|
| RT3609B02500 | TO-220 | 25.40 (1.00) | 18.29 (0.720) | No Notch | 2.67 (0.105) |
| RT3610B02500 | TO-218, TO-247 | 25.40 (1.00) | 21.59 (0.850) | No Notch | 2.67 (0.105) |
| RT3710B02500 | TO-218, TO-247 | 25.40 (1.00) | 21.59 (0.850) | Notch | 2.67 (0.105) |
| RT3615B02500 | TO-218, TO-247 | 38.10 (1.50) | 21.59 (0.850) | No Notch | 2.67 (0.105) |
| RT3715B02500 | TO-218, TO-247 | 38.10 (1.50) | 21.59 (0.850) | Notch | 2.67 (0.105) |
| RT3620B02500 | TO-218, TO-247 | 50.80 (2.00) | 21.59 (0.850) | No Notch | 2.67 (0.105) |
| RT3720B02500 | TO-218, TO-247 | 50.80 (2.00) | 21.59 (0.850) | Notch | 2.67 (0.105) |
| RT3625B02500 | TO-218, TO-247 | 63.50 (2.50) | 21.59 (0.850) | No Notch | 2.67 (0.105) |
| RT3725B02500 | TO-218, TO-247 | 63.50 (2.50) | 21.59 (0.850) | Notch | 2.67 (0.105) |

## High power extruded heat sink with large radial fins for TO-220 and Multiwatt

**High power extruded heat sink with large radial fins** and increased fin count for additional cooling capacity. Solderable pins allow vertical mounting without stress on device leads. Available in four heights for TO-220 and multi-watt devices.



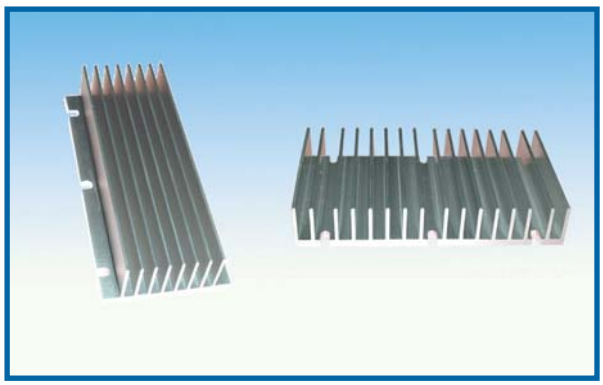

**Aluminum, Black Anodized**




| Part Number | "A" Dim mm (In.) | Dia. of PCB Plated Thru hole for Tabs |
|---|---|---|
| RT3810B02500 | 25.40 (1.00) | 2.67 (0.105) |
| RT3815B02500 | 38.10 (1.50) | 2.67 (0.105) |
| RT3820B02500 | 50.80 (2.00) | 2.67 (0.105) |
| RT3825B02500 | 63.50 (2.50) | 2.67 (0.105) |

# Heat sinks for "Full-Brick" DC/DC Converters

POLAR PGS. 18-21 INTERFACE MATERIALS



## Heat sinks for "Full-Brick" DC/DC Converters

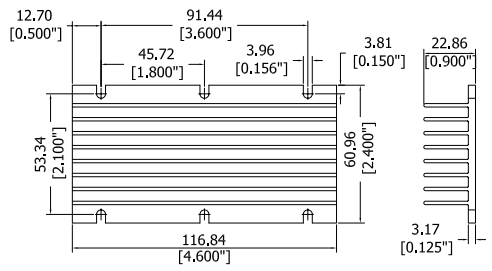
Standard mounting slots mate with Vicor DC/DC converters.

Optimized aluminum extruded fin construction transfers heat efficiently and keeps converter modules cool in both forced and natural convection applications.

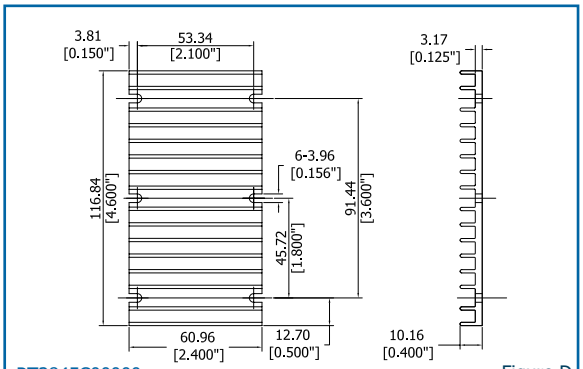
Three fin heights and two flow directions, vertical and horizontal are available.

Aluminum, Clear trivalent chromate finish is standard.

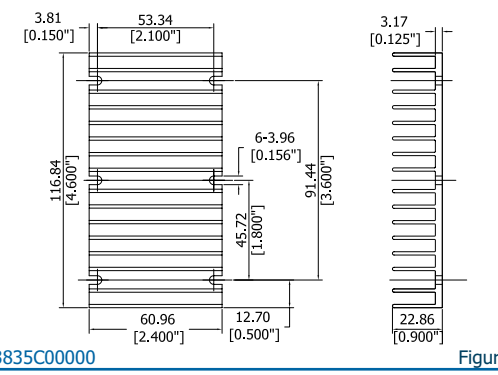
Polar Thermal interface materials are available. Contact the factory to select the material for your application.



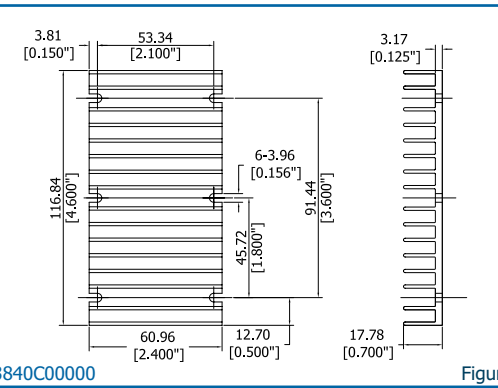

RT3830C00000 Figure A



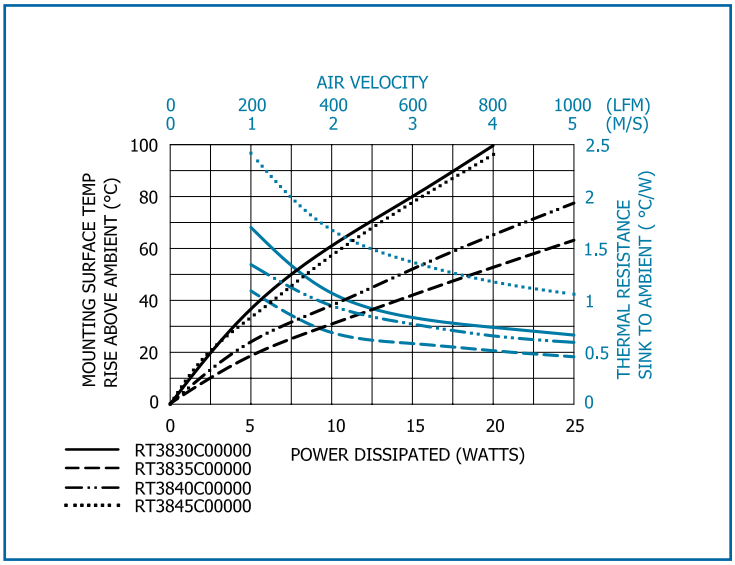

RT3845C00000 Figure D




RT3835C00000 Figure B

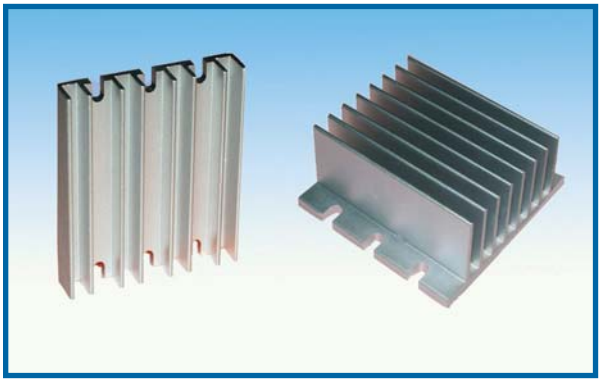



RT3840C00000 Figure C




| Part Number | Fig. | Footprint Dimensions mm (in.) | Height mm (in.) | Fin Orientation | Number of fins |
|---|---|---|---|---|---|
| RT3830C00000 | A | 116.8 (4.60) x 61.0 (2.40) | 22.9 (0.90) | Horizontal | 8 |
| RT3835C00000 | B | 61.0 (2.40) x 116.8 (4.60) | 22.9 (0.90) | Vertical | 16 |
| RT3840C00000 | C | 61.0 (2.40) x 116.8 (4.60) | 17.8 (0.70) | Vertical | 16 |
| RT3845C00000 | D | 61.0 (2.40) x 116.8 (4.60) | 10.2 (0.40) | Vertical | 16 |


# Heat sinks for "Half-Brick" DC/DC Converters



## Heat sinks for "Half-Brick" DC/DC Converters

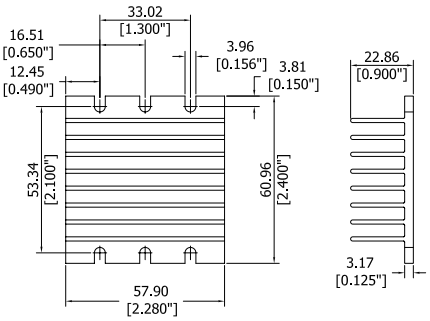
Standard mounting slots mate with Vicor and the majority of "half-brick" DC/DC converters on the market.

Optimized aluminum extruded fin construction transfers heat efficiently and keeps converter modules cool in both forced and natural convection applications.

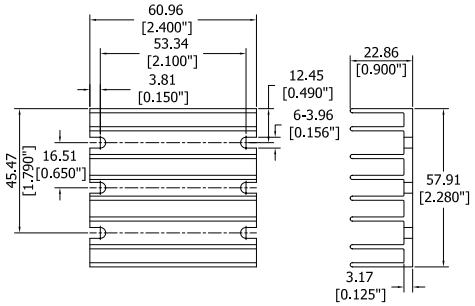
Two fin heights and two flow directions, vertical and horizontal are available.

Aluminum, Clear trivalent chromate finish is standard.

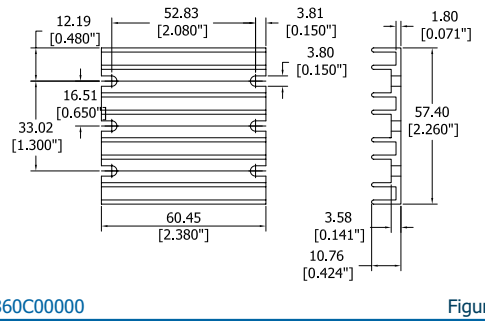
Polar Thermal interface materials available. Contact the factory to select the material for your application.



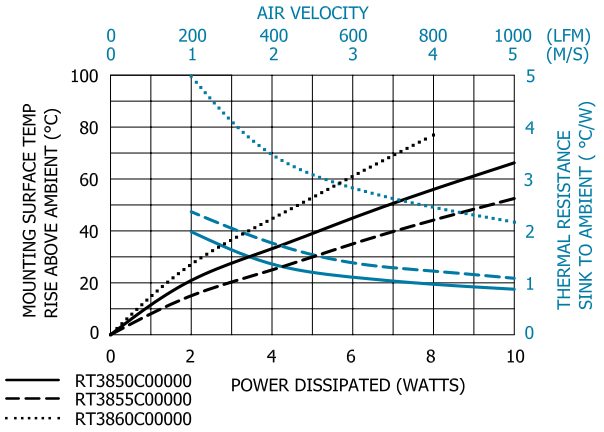

RT3850C00000 Figure A




RT3855C00000 Figure B



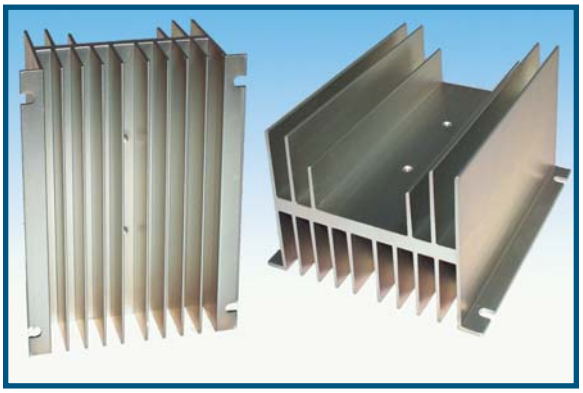

RT3860C00000 Figure C

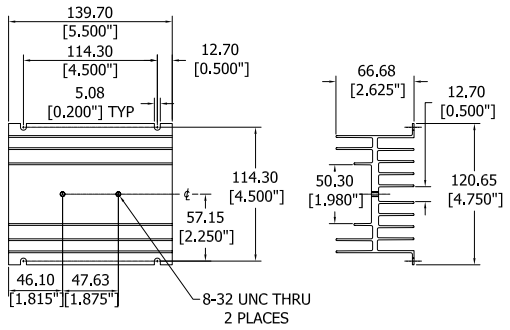



| Part Number | Fig. | Footprint Dimensions mm (in.) | Height mm (in.) | Fin Orientation | Number of fins |
|---|---|---|---|---|---|
| RT3850C00000 | A | 57.9 (2.28) x 61.0 (2.40) | 22.9 (0.90) | Horizontal | 8 |
| RT3855C00000 | B | 61.0 (2.40) x 57.9 (2.28) | 22.9 (0.90) | Vertical | 8 |
| RT3860C00000 | C | 60.5 (2.38) x 57.4 (2.26) | 10.7 (0.42) | Vertical | 8 |

POLAR INTERFACE MATERIALS PGS. 18-21

## Extruded Heat Sink for Solid State Relays






**Extruded Heat Sink for Solid State Relays features**

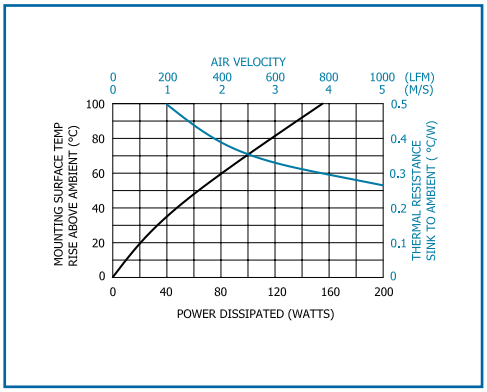
Four standard mounting slots accommodate easy assembly.

Two 8-32 threaded thru holes can accept one solid state relay with 1.875 center distance.

Fins on outerside of mounting channel optimizes heat transfer.

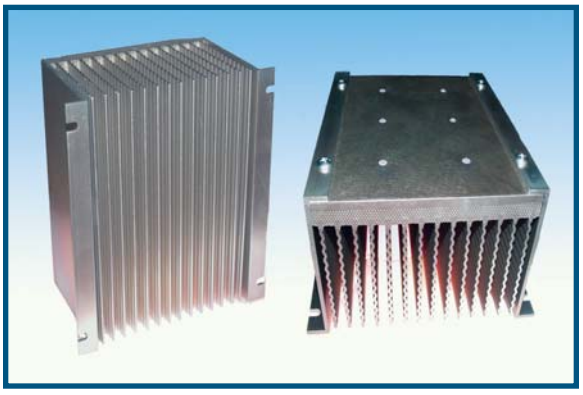
Thermal interface compounds and pad materials available see pages 18-20 or contact the factory to select the correct material for your application.

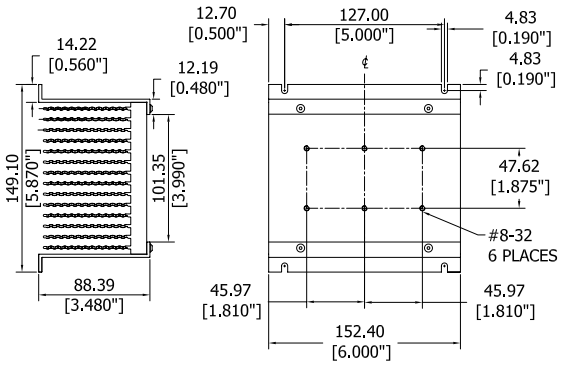
Aluminum, Clear trivalent chromate finish




| Part Number | Footprint Dimensions mm (in.) | Height mm (in.) |
|---|---|---|
| RT3975C00000 | 139.7 (5.500) x 120.65 (4.75) | 66.68(2.625 ) |

## Fabfin High Performance Heat Sink for Solid State Relays






**Fabfin High Performance Heat sink for Solid State Relays features**

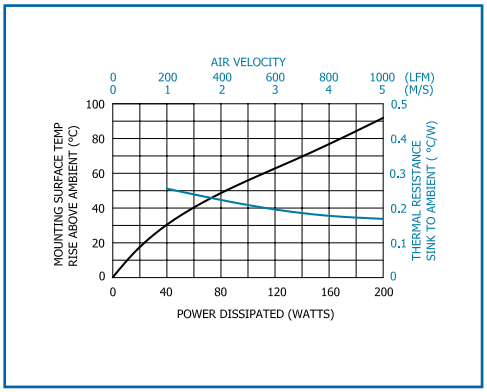
Four standard mounting slots accommodate easy assembly.

Six 8-32 threaded thru holes can accept three solid state relay with 1.875 center distance.

High fin density construction provides excellent heat transfer characteristics.

Thermal interface compounds and pad materials available see pages 18-20 or contact the factory to select the correct material for your application.

Aluminum, Clear trivalent chromate finish




| Part Number | Footprint Dimensions mm (in.) | Height mm (in.) |
|---|---|---|
| RT3980C00000 | 152.40 (6.00) x 149.10 (5.87) | 88.39 (3.480) |

# FABFIN Standards - Various Widths Available in Serrated or Corrugated Fins

POLAR INTERFACE MATERIALS PGS. 18-21

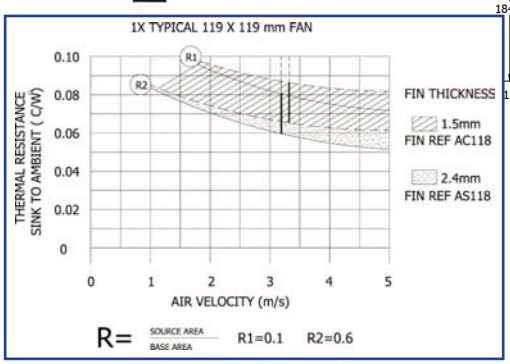
The R-Theta® range of standard Fabfin® forced convection cooled heat sinks (FFC series) was developed to incorporate standard 119mm square axial fans. The fin spacing of 8.51 mm was selected to provide a 20:1 ratio, the practical heat transfer limit for cooling Power Semiconductors in typical ambient conditions. The standard FFC series shown will accept 1, 2, 3 or 4 (not shown) fans. Available in many finishes.

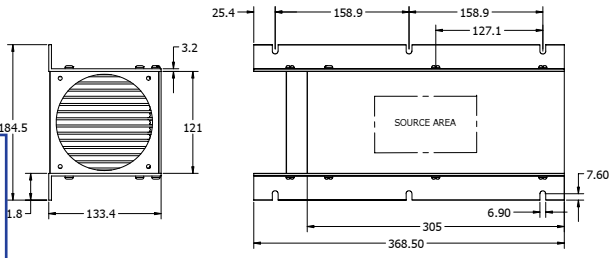
The serrated fin thickness of 2.4mm provides near optimum performance when using industry standard axial fans. If some level of performance de-rating is acceptable (approximately 20%) then we recommend that corrugated fins be used. These have a thickness of 1.5 mm and are designated by ordering the 'AC' part numbers. The use of corrugated fins provides a weight savings of approximately 15% and will increase surface area by 7% compared with a straight fin of the same height.

The push/pull (PP) option is common for applications where fan redundancy is important. We recommend the use of ball bearing fan(s), specifically for the "pull" end, in order to maximize the fan life due to the elevated operating temperatures. The additional weight of the fan can be offset by using the corrugated fins, if applicable.

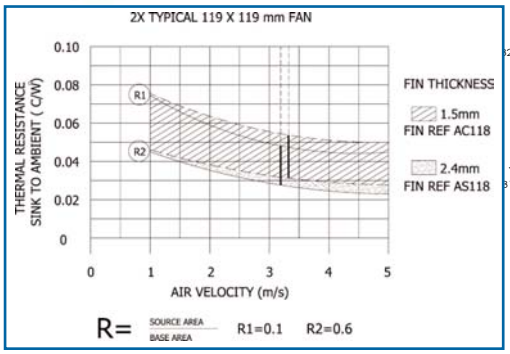
The adjacent graphs provide a performance guide for heat generating devices ranging in size from point source to 60% coverage.

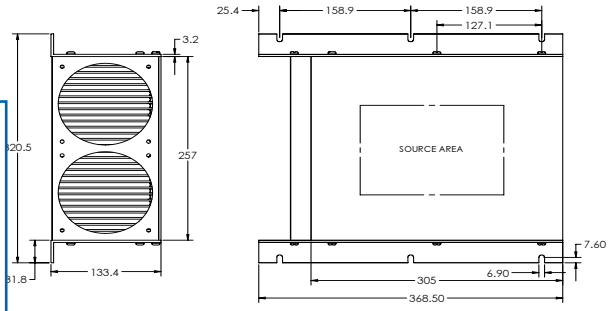
## FFC SERIES WITH SIDE FASTENED LEGS AND FAN BRACKET



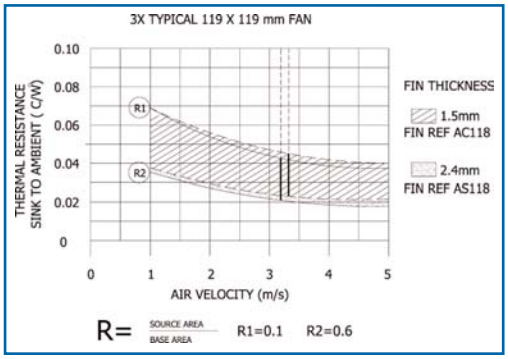



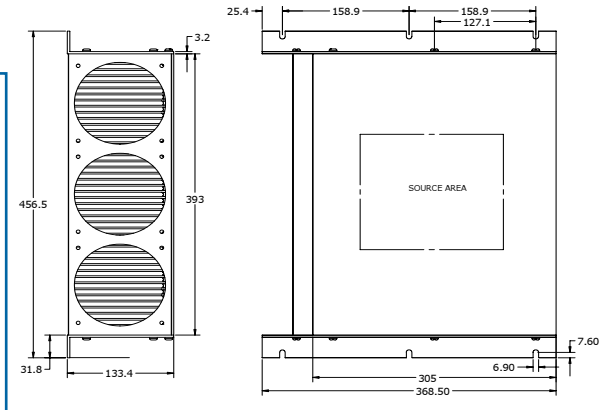

| TECHNICAL DATA | | | | |
|---|---|---|---|---|
| MODAL # | FFC305T13A14AS118B | | FFC305T13A14AC118B | |
| FIN STYLE | SERRATED | | CORRUGATED | |
| WT WITHOUT FAN | 5.4 | kg | 4.7 | kg |
| BASE AREA | 36,774 | $mm^2$ | 36,774 | $mm^2$ |
| TOTAL CSA | 5,091 | $mm^2$ | 4,242 | $mm^2$ |
| TOTAL PERIMETER | 3,683 | mm | 3,749 | mm |




| TECHNICAL DATA | | | | |
|---|---|---|---|---|
| MODAL # | FFC305T13A30AS118B | | FFC305T13A30AC118B | |
| FIN STYLE | SERRATED | | CORRUGATED | |
| WT WITHOUT FAN | 10.4 | kg | 8.8 | kg |
| BASE AREA | 78,387 | $mm^2$ | 78,387 | $mm^2$ |
| TOTAL CSA | 10,889 | $mm^2$ | 8,981 | $mm^2$ |
| TOTAL PERIMETER | 7,800 | mm | 7,929 | mm |




| TECHNICAL DATA | | | | |
|---|---|---|---|---|
| MODAL # | FFC305T13A46AS118B | | FFC305T13A46AC118B | |
| FIN STYLE | SERRATED | | CORRUGATED | |
| WT WITHOUT FAN | 15.5 | kg | 13.2 | kg |
| BASE AREA | 119,865 | $mm^2$ | 119,865 | $mm^2$ |
| TOTAL CSA | 16,574 | $mm^2$ | 13,766 | $mm^2$ |
| TOTAL PERIMETER | 11,991 | mm | 12,578 | mm |

# Polar Silicone Thermal Compound

## Polar Silicone Thermal Compound

**Polar RT7002 - RT7080** is a non-reactive, Silicone, Thermally Conductive Grease with a high thermal conductivity and low thermal resistance with a soft, non-flowable consistency. This product is formulated with specialty binding agents to achieve lowest amount of bleed and evaporation. It is designed for applications where a silicone thermal interface material is required.

### Key Features

Good Thermal Conductivity (0.80 W/m$^{o}$k)
Low Interface Thermal Resistance - (0.05 $^{o}$C-In $^{2}$/W)
Thin Bond lines to < 1 mil.
Low bleed and evaporation

### Benefits

Non-Toxic.
Reworkable/Easy to Remove.
Easy to apply by dispensing or Screen printing/stencil.

### Typical Applications

Applied to the base and mounting studs of transistors, diode and silicon controlled rectifiers.

Can be used as a high-voltage corona suppressant/non-flammable coating, in connections for fly back transformers located in TV sets and similar design applications.

Used in mounting semiconductor devices; thermoelectric modules; power transistors and diodes; coupling entire heat generating assemblies to chassis; mounting power resistors; and for any devices where efficient cooling is required in major industries including, electronic (computer, appliance, wireless, etc.) automotive and electrical.

| Typical Properties | RT7002 - RT7080 |
|---|---|
| Viscosity: | Thixotropic Paste |
| Specific Gravity, @ 25$^{o}$ C | 2.2 |
| Color: | White |
| Evaporation, @ 200$^{o}$C, 24 Hrs., %/Wt. | 0.6 |
| Thermal Conductivity, (ASTM D5470) W/m.$^{o}$K | 0.80 |
| Thermal Resistance ($^{o}$C-in$^{2}$/W) | 0.05 |
| Electrical Properties: Dielectric strength (ASTM D150) 0.05" gap, V/mil | 390 |
| Volume Resistivity (ASTM D257) Ohm-cm. | 2.8 x $10^{14}$ |
| Operating Temperature Range | -55$^{o}$C to 205$^{o}$C |
| Shelf Life | 5 Years |

| Part Number | Description | Package Size & Type |
|---|---|---|
| RT7002U00000 | Silicone Compound | 2 Oz. Jar |
| RT7004U00000 | Silicone Compound | 4 Gram Pack |
| RT7005U00000 | Silicone Compound | 5 Oz. Tube |
| RT7008U00000 | Silicone Compound | 8 Oz. Jar |
| RT7010U00000 | Silicone Compound | 10 CC Syringe |
| RT7080U00000 | Silicone Compound | 5 lb Quart Jar |

# Polar Non-Silicone Thermal Compound

## Polar Non-Silicone Thermal Compound

**Polar RT7102 - RT7180** is grease-like Non-Silicone, non-migrating material heavily impregnated with heat-conductive metal oxides. This formulation provides high thermal conductivity, low bleed and high temperature stability.

**Key Features**

Non-Silicone offers advantages of no creep or migration over wide temperature range.
Low Interface Thermal Resistance - ($0.03^{o}C\text{-}in^2/W$)
High Thermal Conductivity, High dielectric strength.
Exceptionally low bleed and evaporation.
Meets MIL-C-47113 & MIS-19846 specifications.

**Polar RT7203** is grease-like Non-Silicone based reworkable, silver filled thermally and electrically conductive grease. Engineered with specially selected pure silver particles to maximize particle-to-particle contact for most efficient heat transfer and low resistivity.

**Key Features**

Thermally and Electrically Conductive
Low Interface Thermal Resistance - ($0.005^{o}C\text{-}in^2/W$)
High Thermal Conductivity, (7.0 $W/m^{o}K$)
Low Resistivity, (< 0.01 Ohm-cm)
Exceptionally low bleed and evaporation.
Non-Silicone offers advantages of no creep or migration over wide temperature range.

**Polar RT7280** is grease-like Non-Silicone, non-migrating material thickened with heat conductive fillers, low bleed and high temperature stability.

**Key Features**

Formulated with low viscosity for easy dispensing and screen printing/stencil, and automated dispensing.
Thin bond lines of 1-2 mil.
Non-Silicone offers advantages of no creep or migration over wide temperature range.
Low Interface Thermal Resistance - ($0.03^{o}C\text{-}in^2/W$)
High Thermal Conductivity, High dielectric strength.
Exceptionally low bleed and evaporation.
Meets MIL-C-47113 & MIS-19846 specifications.

**Benefits**

Will not harden, dry out or melt.
Will not contaminate solder bath or other devices.
Non-toxic.
Reworkable and easy to apply, remove and dispense.

**Typical Applications**

Used in mounting semiconductor devices; thermoelectric modules; power transistors and diodes; mounting power resistors; and for any devices where efficient cooling is required in major industries including, electronic (computer, appliance, wireless, etc.) automotive and electrical.

| Typical Properties | RT7102-RT7180 | RT7203 | RT7280 |
|---|---|---|---|
| Viscosity: | Thixotropic Paste | Thixotropic Paste | Thixotropic Paste |
| Specific Gravity, @ 25°C | 2.7 | 4.0 | 2.4 |
| Color: | White | Silver/Gray | Blue |
| Evaporation, @ 200°C, 24 Hrs.,%/Wt. | 0.3 | 0.4 | 0.6 |
| Thermal Conductivity, (ASTM D5470) W/m.°K | 1.0 | 7.0 | 0.80 |
| Thermal Resistance ($^{o}C\text{-}in^2/W$) | 0.03 | 0.005 | 0.03 |
| Electrical Properties: Dielectric strength (ASTM D150) 0.05" gap, V/mil | 350 | N/A | 310 |
| Volume Resistivity (ASTM D257) Ohm-cm. | $1.8 \times 10^{14}$ | <0.010 | $1.54 \times 10^{14}$ |
| Operating Temperature Range | -55°C to 200°C | -55°C to 200°C | -55°C to 200°C |
| Shelf Life | 5 Years | 5 Years | 5 Years |

| Part Number | Description | Package Size & Type |
|---|---|---|
| RT7102U00000 | Non-Silicone Compound | 2 Oz. Jar |
| RT7104U00000 | Non-Silicone Compound | 4 Oz. Tube |
| RT7110U00000 | Non-Silicone Compound | 10 CC Syringe |
| RT7180U00000 | Non-Silicone Compound | 5 lb Quart Jar |
| RT7203U00000 | Non-Silicone Compound | 3 CC Syringe |
| RT7280U00000 | Non-Silicone Compound LV | 5 lb Quart Jar |

# Polar Thermally Conductive Sil-Pads

**Polar Sil-Pad** is a composite of silicone rubber and fiberglass. The material is specially formulated for use as a thermally conductive insulator.

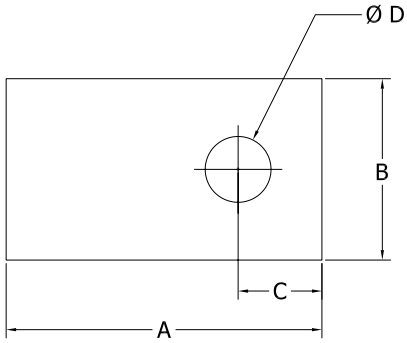
**Key Features** — Surfaces are pliable and allow complete surface contact with excellent heat dissipation. The reinforcing fiberglass provides excellent cut-through resistance.

**Benefits** — Thermal impedance 1.13 $^{o}$C-in$^{2}$/W(@50 psi)
Excellent mechanical and physical characteristics.
Flame retardant

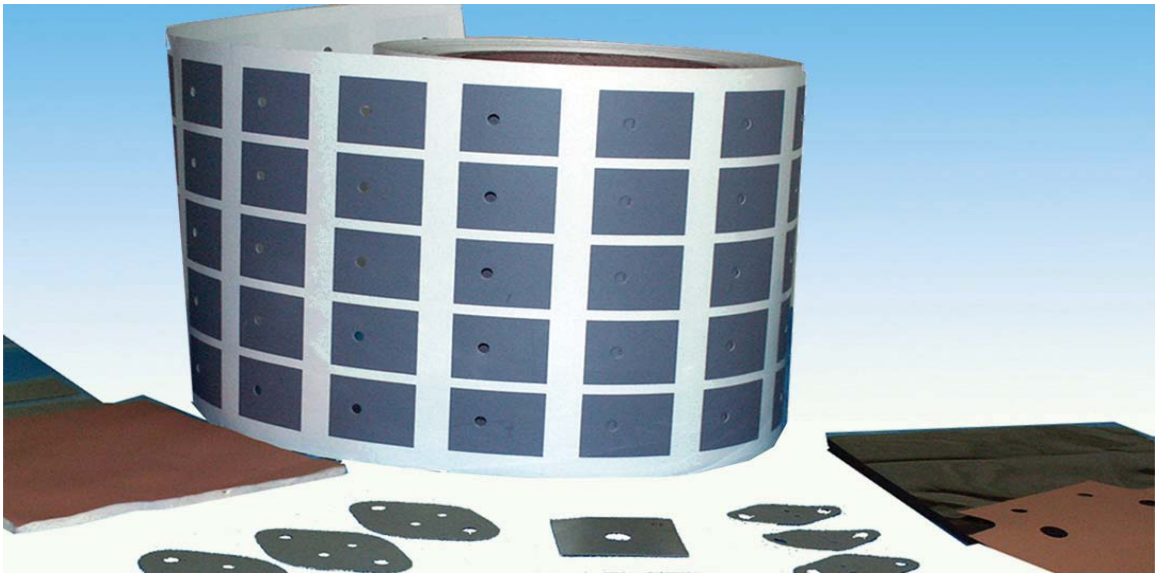
**Typical Applications** — Used in power supplies, power semiconductors, automotive electronics, telecommunications and motor controls.

**Configurations Available** are sheet form, die-cut parts, and roll form; with or without pressure sensitive adhesive.

| Typical Properties | POLAR SIL-PAD |
|---|---|
| Color | Gray |
| Thickness, mm (in.) | .18 + .025 (.007 ± .001) |
| Thermal Performance TO-220 Test @ 50 psi $^{o}$C/W | 5.14 |
| Thermal Impedance ($^{o}$c-in$^{2}$/W) | 1.13 |
| Thermal Conductivity, (W/m-k nominal) | 0.9 |
| Voltage Breakdown, (Vac) | 3500 |
| Continuous Use Temperature ($^{o}$c) | -60 to 180 |
| Construction | Silicone / Fiberglass |




| Part Number | TO Package | "A" Dim mm (In.) | "B" Dim mm (In.) | "C" Dim mm (In.) | "D" Dim mm (In.) | Adhesive on one side |
|---|---|---|---|---|---|---|
| RT7200U10000 | TO-220 (Clip Mount) | 19.1(.750) | 12.7(.500) | | | No |
| RT7210U10000 | TO-220 | 19.1(.750) | 12.7(.500) | 4.8(.187) | 3.7(.147) | No |
| RT7220U10000 | TO-220 | 19.1(.750) | 12.7(.500) | 4.8(.187) | 3.2(.125) | No |
| RT7230U10000 | TO-218 | 21.8(.860) | 18.8(.740) | 5.1(.200) | 4.1(.160) | No |
| RT7240U10000 | TO-247 | 25.4(1.000) | 19.1(.750) | 7.6(.300) | 3.6(.140) | No |
| RT7250U10000 | TO-247 | 29.0(1.140) | 20.6(.810) | 9.0(.355) | 3.7(.147) | No |



**Note:** Contact R-Theta for other configurations and materials

# Polar Thermally Conductive Adhesive Tapes

## Ceramic or metal packages

**T405** thermal tape consists of a high bond strength, pressure-sensitive acrylic adhesive, loaded with aluminum oxide and coated onto a 0.050 mm (0.002 inch) aluminum foil carrier. The aluminum foil provides added thermal conductivity for applications where electrical isolation is not required.

**T412** thermal tape consists of a high bond strength, pressure-sensitive acrylic adhesive, loaded with titanium diboride and applied to an expanded aluminum carrier. The combination of filler, expanded metal and embossed surface enhances both tape conformability and thermal performance.

| Typical Properties | T405 | T412 |
|---|---|---|
| Carrier | Aluminum | Expanded Al |
| Color | White | Grey |
| Thickness, mm (in.) | 0.152 ( 0.006) | 0.229 (0.009) |
| Thermal Impedance @<1 psi, $^oc\text{-}in^2/W$ ($^oc\text{-}cm^2/W$) | 0.5 (3.4) | 0.25 (1.7) |
| Thermal Conductivity, W/m-k | 0.50 | 1.40 |
| Voltage Breakdown, Vac | N/A | N/A |
| Volume Resistivity, ohm-cm | N/A | $1.3 \times 10^{-2}$ |
| Flammability Rating (E140244) | V-O | Not Rated |
| Lap Shear Adhesion, psi (MPa) | 135 (0.931) | 70 (0.483) |
| Die Shear Adhesion, psi (MPa) | | |
| Aluminum 25$^o$c | 125 (0.862) | 135 (0.931) |
| 150$^o$c | 55 (0.379) | 25 (0.172) |
| Aluminum Oxide Substrate 25$^o$c | 145 (1.00) | 125 (0.862) |
| 150$^o$c | 60 (0.414) | 40 (0.276) |
| Creep Adhesion, days | | |
| 25$^o$c, 12 psi (0.083MPa) | >50 | >50 |
| 150$^o$c, 12 psi (0.083MPa) | >50 | >50 |
| Adhesive CTE, ppm/$^o$c, -40 to +150$^o$c | 400 | 400 |

### How to order

| Ordering Code | Tape Option |
|---|---|
| 05 | T405 |
| 10 | T410 |
| 11 | T411 |
| 12 | T412 |

**Example P/N RT5635B000 _ _** (Last two digits tape option)

1. Part Number RT5635B00000
2. Choose a tape option T405 (05), T410 (10), T411 (11) or T412 (12)
3. Then add the ordering code (05,10,11,12) to your part number (by replacing the last two digits.)

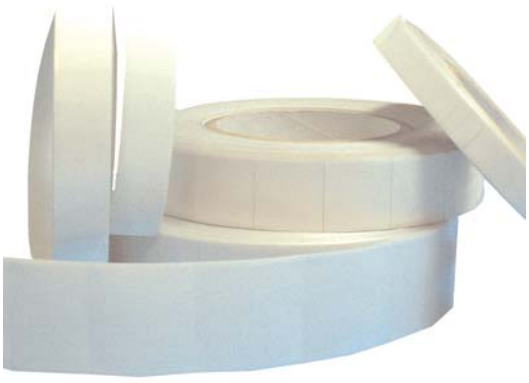
For Example: To order tape option T410 (10) with the part number RT5635B00000 the completed part number to order would be **RT5635B00010.**

## Plastic packages

**T410** tape consists of a high bond strength, pressure sensitive acrylic adhesive loaded with aluminum oxide and coated onto a 0.05 mm (0.002 inch) aluminum foil carrier. The other side of the foil carrier has a silicone pressure sensitive adhesive which provides excellent adhesion to silicone-contaminated plastics and other low energy surfaces.

**T411** tape consists of a high bond strength pressure-sensitive adhesive with an expanded aluminum mesh carrier layer. The mesh carrier allows the tape to conform to curved surfaces of plastic molded IC packages, providing a high adhesive strength attachment for heat sinks. The high performance silicone PSA allows adhesion to silicone-contaminated plastics and other low energy surfaces.

| Typical Properties | T410 | T411 |
|---|---|---|
| Carrier | Aluminum Foil | Aluminum Mesh |
| Adhesive (to heat sink side) | Acrylic | Silicone |
| Color (to heat sink side) | White | Clear (Silver) |
| Adhesive (onto component side) | Silicone | Silicone |
| Color (to component side) | Clear (Silver) | Clear (Silver) |
| Thickness, mm (in.) | 0.18 (0.007) | 0.28 (0.011) |
| Thermal Impedance @<1 psi, $^oc\text{-}in^2/W$ ($^oc\text{-}cm^2/W$) | 1.1 (7.1) | 1.0 (6.5) |
| Operating Temperature Range, $^o$c | - 50 to +150 | - 50 to +150 |
| Voltage Breakdown, Vac | N/A | N/A |
| Volume Resistivity, ohm-cm | N/A | N/A |
| Lap Shear Adhesion, psi (MPa) | 60 (0.414) | 14 (0.094) |
| Die Shear Adhesion, psi (MPa) | | |
| Steel/FR4 25$^o$c | 170 (1.172) | 80 (0.552) |
| 125$^o$c | 40 (0.276) | 20 (0.138) |



# Extruded Aluminum Heat Sink Profiles

## THE MULTI-PURPOSE ALLOY - 6063-T5

6063 is a multi-purpose alloy that is most widely used for heat sinks and architectural hardware because it is extrudable into complex shapes and lends itself to anodized coating. The T5 temper provides sufficient hardness for ease of machinability. 6063-T5 is the aluminum extrusion most commonly used by R-Theta.

After entering the URL listed below, click on a part number to view an image of the Extrusion. Sort the table by clicking on the columns titles. Selected part number is displayed beside the send quote button.

**http://www.r-theta.com/products_aircooled_extrusion_create.asp**

## R-THETA OFFERS A BROAD RANGE OF EXTRUSION PROFILES

If you cannot locate an extrusion profile that meets your requirements, contact the factory or web site for additional profiles that have become available or alternatives. If a custom solution is required R-Theta will assist you to design a new profile that meets your requirements both mechanical and Thermal.

**Six foot ( 72" ) lengths are standard; however, other lengths are available.**

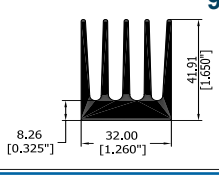
## EXTRUSION CHARACTERISTICS TABLE

| Profile Number | Part Number To Order (72") | Perimeter mm (in) | Weight Kg/m (lb/ft) | Thermal Resistance °C/W/3" |
|---|---|---|---|---|
| 9000 | RT9000U07200 | 927 (36.5) | 4.0 (2.7) | 1.8 |
| 9001 | RT9001U07200 | 1,422 (56) | 5.1 (3.4) | 1.5 |
| 9002 | RT9002U07200 | 2,487 (97.9) | 13.8 (9.3) | 0.7 |
| 9003 | RT9003U07200 | 1,590 (62.6) | 7.1 (4.8) | 1.1 |
| 9004 | RT9004U07200 | 1,854 (73.0) | 10.4 (7.0) | 1.0 |
| 9005 | RT9005U07200 | 2,817 (110.9) | 27.8 (18.7) | 0.7 |
| 9006 | RT9006U07200 | 1,979 (77.9) | 7.6 (5.1) | 0.9 |
| 9007 | RT9007U07200 | 2,543 (100.1) | 10.6 (7.1) | 0.7 |
| 9008 | RT9008U07200 | 1,481 (58.3) | 3.6 (2.4) | 1.2 |
| 9009 | RT9009U07200 | 1,011 (39.8) | 4.0 (2.7) | 1.5 |
| 9010 | RT9010U07200 | 2,339 (92.1) | 24.4 (16.4) | 0.8 |
| 9011 | RT9011U07200 | 990 (39.0) | 4.5 (3.0) | 1.6 |
| 9012 | RT9012U07200 | 2,941 (115.8) | 17.6 (11.8) | 0.5 |
| 9013 | RT9013U07200 | 3,400 (133.8) | 13.1 (8.8) | 0.8 |
| 9014 | RT9014U07200 | 1,278 (50.3) | 6.1 (4.1) | 1.4 |
| 9015 | RT9015U07200 | 2,042 (80.4) | 10.0 (6.7) | 0.9 |
| 9016 | RT9016U07200 | 2,223 (87.5) | 11.0 (7.4) | 0.8 |
| 9017 | RT9017U07200 | 2,954 (116.3) | 11.3 (7.6) | 0.5 |
| 9018 | RT9018U07200 | 2,316 (91.2) | 16.5 (11.1) | 0.8 |
| 9019 | RT9019U07200 | 2,804 (110.4) | 17.6 (11.8) | 0.6 |
| 9020 | RT9020U07200 | 2,286 (90.0) | 16.1 (10.8) | 0.9 |
| 9021 | RT9021U07200 | 1,344 (52.9) | 5.3 (3.6) | 1.4 |
| 9022 | RT9022U07200 | 1,886 (74.3) | 6.1 (4.1) | 0.8 |
| 9023 | RT9023U07200 | 399 (15.7) | 1.7 (1.2) | 4.1 |
| 9024 | RT9024U07200 | 2,736 (107.7) | 8.8 (5.9) | 1.2 |
| 9025 | RT9025U07200 | 1,711 (67.4) | 7.7 (5.2) | 0.8 |
| 9026 | RT9026U07200 | 1,503 (59.2) | 6.6 (4.4) | 0.9 |
| 9027 | RT9027U07200 | 1,094 (43.1) | 6.8 (4.6) | 1.6 |

**Note:** There are many more sizes and styles available. Consult the website for a complete listing.

# Extruded Aluminum Heat Sink Profiles

**9023**

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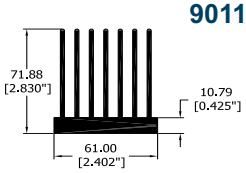


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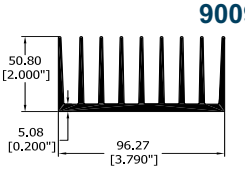


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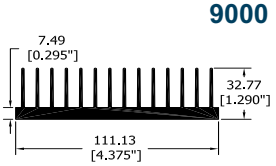


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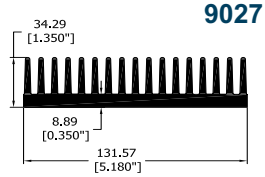


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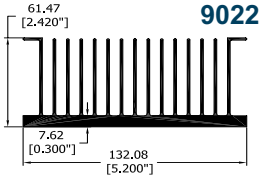


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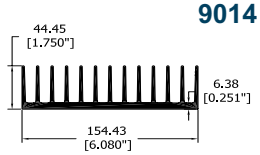


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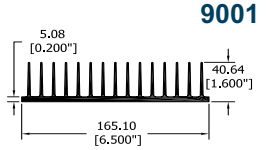


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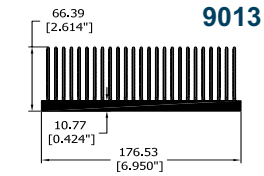


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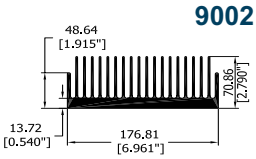


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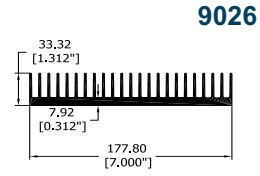


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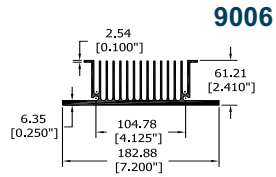


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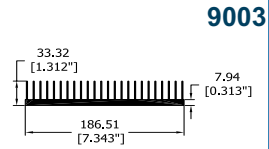


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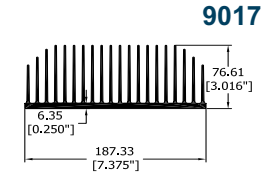


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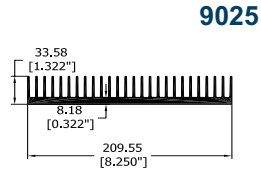


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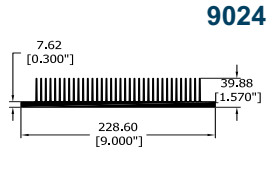


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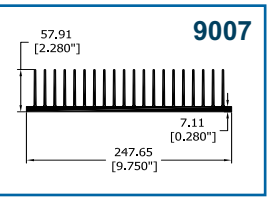


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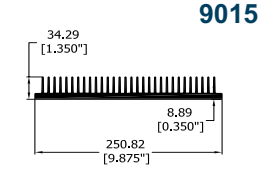


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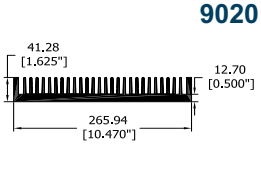


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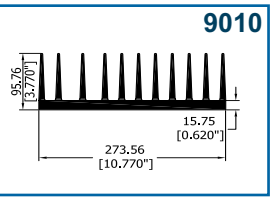


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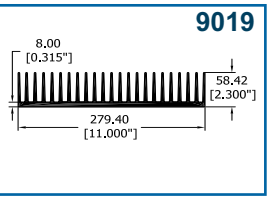


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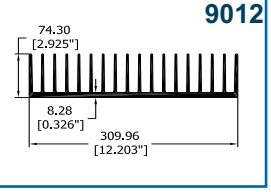
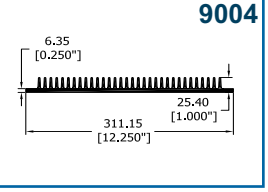



**9004**

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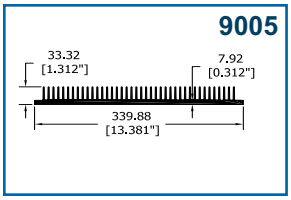
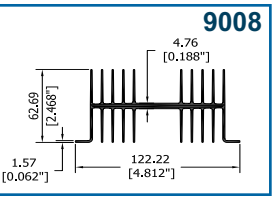
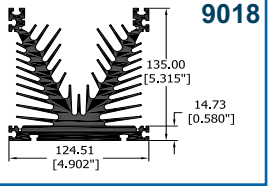


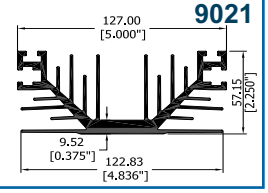

**9008**



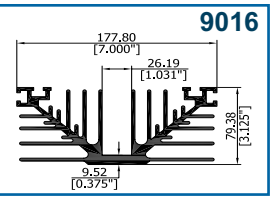

**9018**




**9021**




**9016**




**REFER TO TABLE ON PAGE 22**

## 5 EASY STEPS TO CONFIGURE EXTRUSION

**STEP 1:** LOG ONTO www.r-theta.com
**STEP 2:** SELECT "PRODUCTS" ON MENU BAR
**STEP 3:** SELECT "AIRCOOLED" ON DROP DOWN MENU
**STEP 4:** SELECT "CREATE AN EXTRUSION"
**STEP 5:** SELECT "EXTRUSION CONFIGUATOR"

Select Extrusion to obtain detailed section information

Thermal Modeling of any "comb" Extrusion can be simulated at **http://r-tools.r-theta.com**

# Index by Device Cooled

## DC/DC Converters



## DIPS



## IC Packages, BGAs



## Multiwatt



## SMT



## Solid State Relays



## TO-202



## TO-218



## TO-220



## TO-220 (Continued)



## TO-247



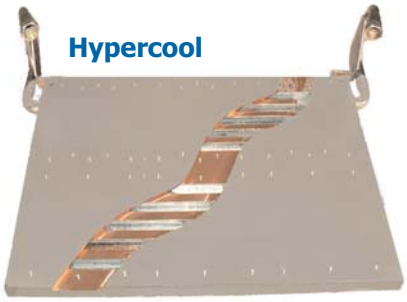
## TO-262

## Index by Part Number

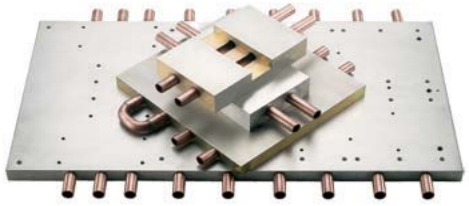


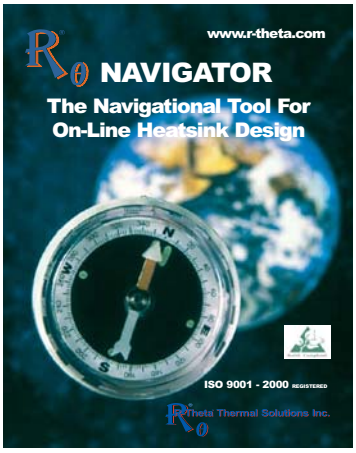
## Other Products Available From R-Theta Thermal Solutions Inc.

**Hypercool**



**Aquasink**



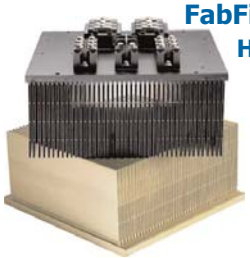



R-theta also offers a complete line of high performance , aluminum and copper alloy heat sinks and AC/DC fans.

**Consult R-theta for more details.**

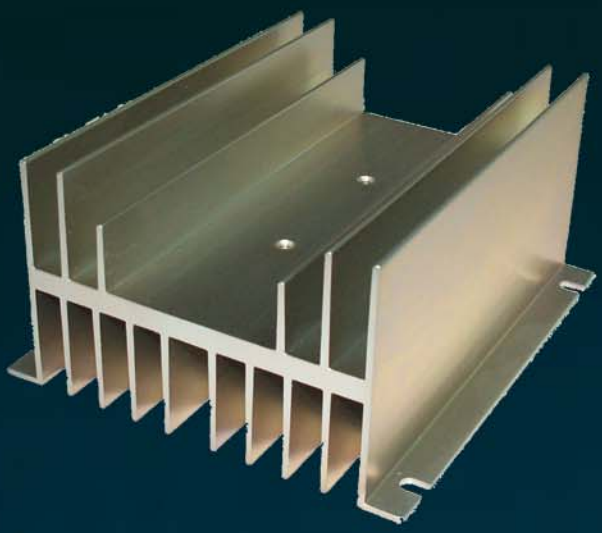
**FabFin**
**Mixed Metals**

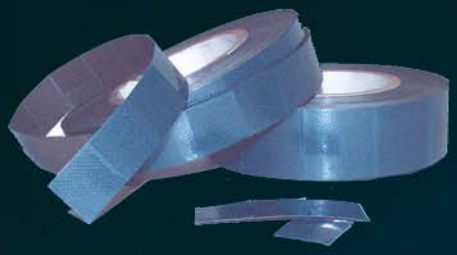
**FabFin**
**Hollowfin**

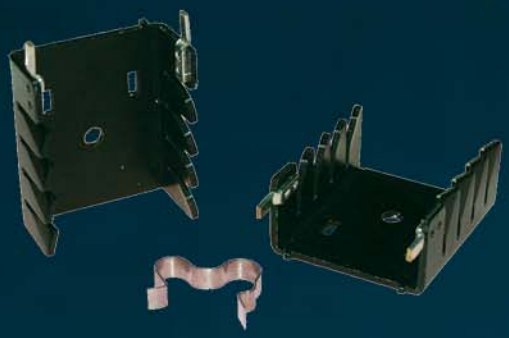


**AC/DC Fans**

R-Theta® Thermal Solutions Inc.








# R-Theta® STANDARD Products Catalog

ISO 9001 - 2000 REGISTERED

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