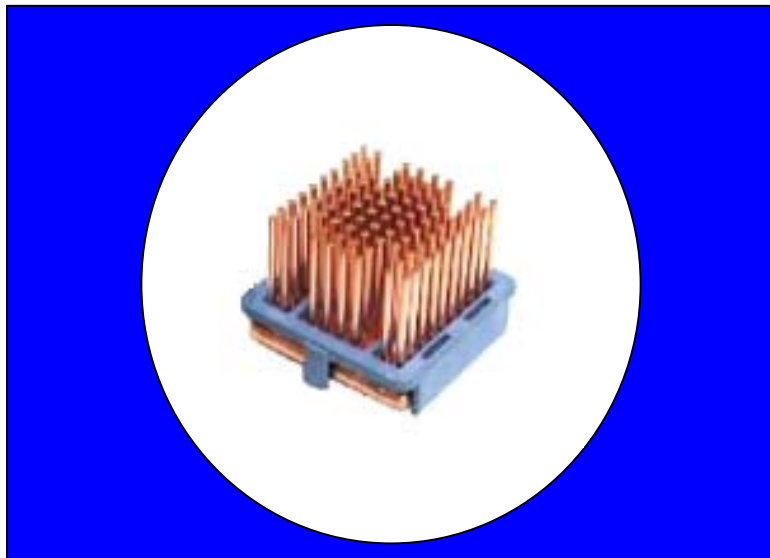


### Features

- Precision forging technology for high power applications
- Omni-directional pins
- Designed for BGA and other surface mount packages
- Various mounting methods available
- Select from multiple fin heights

### Product Benefits

- No special tools needed for assembly
- No additional holes required on the PCB
- Special clip easily snaps on and self-aligns



| Series CPR Forged Copper Heat Sinks with Pin Fins |                                |                                 |                                            |                                    |
|---------------------------------------------------|--------------------------------|---------------------------------|--------------------------------------------|------------------------------------|
| Part Number                                       | Fin Matrix<br>(Rows x Columns) | Length x Width x<br>Height (mm) | Thermal Resistance<br>(°C/Watt @ 200 LFPM) | Pressure Drop<br>(inches of water) |
| CPR19-19-12U                                      | 5 x 5                          | 18.6 x 18.6 x 11.6              | 6.4                                        | 0.016                              |
| CPR19-19-15U                                      | 5 x 5                          | 18.6 x 18.6 x 14.6              | 6.0                                        | 0.016                              |
| CPR19-19-20U                                      | 5 x 5                          | 18.6 x 18.6 x 19.6              | 4.1                                        | 0.016                              |
| CPR19-19-25U                                      | 5 x 5                          | 18.6 x 18.6 x 24.6              | 3.9                                        | 0.016                              |
|                                                   |                                |                                 |                                            |                                    |
| CPR27-27-12U                                      | 8 x 8                          | 26.6 x 26.6 x 11.6              | 4.6                                        | 0.016                              |
| CPR27-27-15U                                      | 8 x 8                          | 26.6 x 26.6 x 14.6              | 4.0                                        | 0.016                              |
| CPR27-27-20U                                      | 8 x 8                          | 26.6 x 26.6 x 19.6              | 2.9                                        | 0.016                              |
| CPR27-27-25U                                      | 8 x 8                          | 26.6 x 26.6 x 24.6              | 2.5                                        | 0.016                              |
|                                                   |                                |                                 |                                            |                                    |
| CPR29-29-12U                                      | 8 x 8                          | 28.6 x 28.6 x 11.6              | 4.1                                        | 0.017                              |
| CPR29-29-15U                                      | 8 x 8                          | 28.6 x 28.6 x 14.6              | 3.6                                        | 0.017                              |
| CPR29-29-20U                                      | 8 x 8                          | 28.6 x 28.6 x 19.6              | 2.5                                        | 0.017                              |
| CPR29-29-25U                                      | 8 x 8                          | 28.6 x 28.6 x 24.6              | 2.4                                        | 0.017                              |
|                                                   |                                |                                 |                                            |                                    |
| CPR33-33-12U                                      | 9 x 9                          | 32.6 x 32.6 x 11.6              | 3.0                                        | 0.016                              |
| CPR33-33-15U                                      | 9 x 9                          | 32.6 x 32.6 x 14.6              | 2.5                                        | 0.016                              |
| CPR33-33-20U                                      | 9 x 9                          | 32.6 x 32.6 x 19.6              | 1.8                                        | 0.016                              |
| CPR33-33-25U                                      | 9 x 9                          | 32.6 x 32.6 x 24.6              | 1.6                                        | 0.016                              |
|                                                   |                                |                                 |                                            |                                    |
| CPR35-35-12U                                      | 10 x 10                        | 34.7 x 34.7 x 11.6              | 3.0                                        | 0.018                              |
| CPR35-35-15U                                      | 10 x 10                        | 34.7 x 34.7 x 14.6              | 2.6                                        | 0.018                              |
| CPR35-35-20U                                      | 10 x 10                        | 34.7 x 34.7 x 19.6              | 1.8                                        | 0.018                              |
| CPR35-35-25U                                      | 10 x 10                        | 34.7 x 34.7 x 24.6              | 1.7                                        | 0.018                              |
|                                                   |                                |                                 |                                            |                                    |
| Material: Copper, CU1100                          |                                |                                 |                                            |                                    |

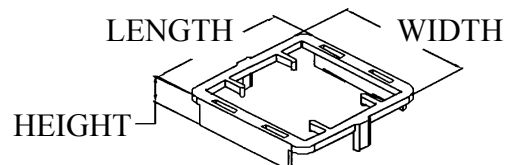
| Series CPR Forged Copper Heat Sinks with Pin Fins |                                |                                 |                                            |                                    |
|---------------------------------------------------|--------------------------------|---------------------------------|--------------------------------------------|------------------------------------|
| Part Number                                       | Fin Matrix<br>(Rows x Columns) | Length x Width x<br>Height (mm) | Thermal Resistance<br>(°C/Watt @ 200 LFPM) | Pressure Drop<br>(inches of water) |
| CPR38-38-12U                                      | 11 x 11                        | 37.1 x 37.1 x 11.6              | 2.7                                        | 0.013                              |
| CPR38-38-15U                                      | 11 x 11                        | 37.1 x 37.1 x 14.6              | 2.4                                        | 0.013                              |
| CPR38-38-20U                                      | 11 x 11                        | 37.1 x 37.1 x 19.6              | 1.8                                        | 0.013                              |
| CPR38-38-25U                                      | 11 x 11                        | 37.1 x 37.1 x 24.6              | 1.7                                        | 0.013                              |
| CPR40-40-12U                                      | 11 x 11                        | 39.6 x 39.6 x 11.6              | 2.4                                        | 0.018                              |
| CPR40-40-15U                                      | 11 x 11                        | 39.6 x 39.6 x 14.6              | 2.0                                        | 0.018                              |
| CPR40-40-20U                                      | 11 x 11                        | 39.6 x 39.6 x 19.6              | 1.6                                        | 0.018                              |
| CPR40-40-25U                                      | 11 x 11                        | 39.6 x 39.6 x 24.6              | 1.5                                        | 0.018                              |
| CPR43-43-12U                                      | 12 x 12                        | 42.1 x 42.1 x 11.6              | 2.1                                        | 0.019                              |
| CPR43-43-15U                                      | 12 x 12                        | 42.1 x 42.1 x 14.6              | 1.9                                        | 0.019                              |
| CPR43-43-20U                                      | 12 x 12                        | 42.1 x 42.1 x 19.6              | 1.3                                        | 0.019                              |
| CPR43-43-25U                                      | 12 x 12                        | 42.1 x 42.1 x 24.6              | 1.2                                        | 0.019                              |
| Material: Copper, CU1100                          |                                |                                 |                                            |                                    |

### CLIP STYLES

Material: Nylon Plastic per UL94-V0



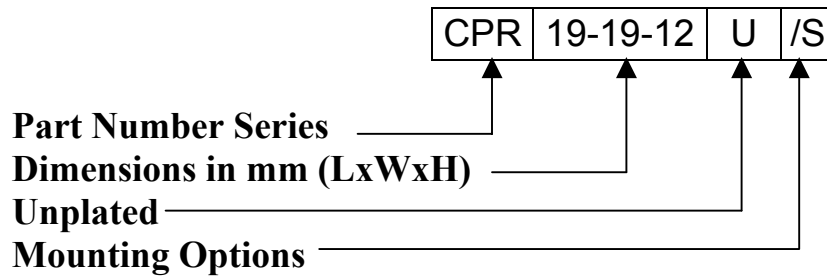
| Nominal<br>Length x Width<br>(mm) | 0.9 mm +/- 0.3 mm<br>Short Height<br>Color: Orange | 1.7 mm +/- 0.3 mm<br>Medium Height<br>Color: Blue | 3.3 mm +/- 0.3 mm<br>Tall Height<br>Color: Yellow | Actual<br>Length x Width x<br>Height (mm) |
|-----------------------------------|----------------------------------------------------|---------------------------------------------------|---------------------------------------------------|-------------------------------------------|
| 19 x 19                           | C1919S                                             | C1919M                                            | C1919T                                            | 21.2 x 21.2 x 9.1                         |
| 21 x 21                           | C2121S                                             | C2121M                                            | C2121T                                            | 23.2 x 23.7 x 9.1                         |
| 23 x 23                           | C2323S                                             | C2323M                                            | C2323T                                            | 25.2 x 25.7 x 9.1                         |
| 25 x 25                           | C2525S                                             | C2525M                                            | C2525T                                            | 27.2 x 27.7 x 9.1                         |
| 27 x 27                           | C2727S                                             | C2727M                                            | C2727T                                            | 29.2 x 29.7 x 9.1                         |
| 29 x 29                           | C2929S                                             | C2929M                                            | C2929T                                            | 31.2 x 31.2 x 9.1                         |
| 31 x 31                           | C3131S                                             | C3131M                                            | C3131T                                            | 33.2 x 33.7 x 9.1                         |
| 33 x 33                           | C3333S                                             | C3333M                                            | C3333T                                            | 35.2 x 35.2 x 9.1                         |
| 35 x 35                           | C3535S                                             | C3535M                                            | C3535T                                            | 37.2 x 37.7 x 9.1                         |
| 37.5 x 37.5                       | C3838S                                             | C3838M                                            | C3838T                                            | 39.7 x 40.2 x 9.1                         |
| 40 x 40                           | C4040S                                             | C4040M                                            | C4040T                                            | 42.2 x 42.7 x 9.1                         |
| 42.5 x 42.5                       | C4343S                                             | C4343M                                            | C4343T                                            | 44.7 x 45.1 x 9.1                         |
| 45 x 45                           | C4545S                                             | C4545M                                            | C4545T                                            | 42.7 x 47.7 x 9.1                         |



## TAPE STYLES

| Thermal Tape | Supplier  | Thickness (mm) | Thermal Impedance (°C-in²/W) | Dielectric Strength (V/mil) | Description                                                                                |
|--------------|-----------|----------------|------------------------------|-----------------------------|--------------------------------------------------------------------------------------------|
| A01          | IERC      | 0.13           | 0.82                         | 4,000                       | Double-sided acrylic adhesive on a Kapton MT carrier.                                      |
| T410         | Chomerics | 0.18           | 1.10                         | N/A                         | Double-sided acrylic adhesive loaded w/aluminum oxide on an aluminum foil carrier.         |
| T411         | Chomerics | 0.28           | 1.00                         | N/A                         | Double-sided silicone adhesive with expanded aluminum mesh carrier.                        |
| T412         | Chomerics | 0.23           | 0.25                         | N/A                         | Double-sided acrylic adhesive loaded w/ titanium diboride on an expanded aluminum carrier. |
| 8815         | 3M        | 0.38           | 1.20                         | 668                         | Double-sided acrylic adhesive loaded with ceramic particles.                               |

## HOW TO ORDER?



|             |                                              |
|-------------|----------------------------------------------|
| <u>Clip</u> | <u>Adhesive</u>                              |
| Short “/S”  | Double-sided Kapton® “/A01”                  |
| Medium “/M” | Chomerics Thermattach® “T410, T411, or T412” |
| Tall “/T”   | 3M™ “8815”                                   |