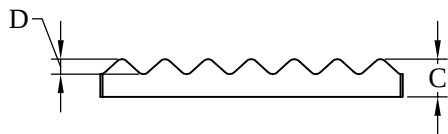
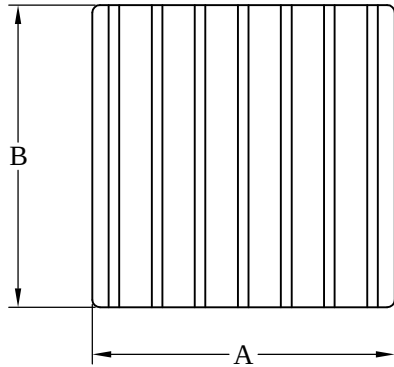


# SPECIFICATION FOR APPROVAL

REF. :

|               |                   |               |                  |      |   |
|---------------|-------------------|---------------|------------------|------|---|
| PROD.<br>NAME | Ceramic Heat Sink | ABC'S DWG NO. | MPW□□□□□□BAF-□□□ |      |   |
|               |                   | REV.          | 20221212-C       | PAGE | 1 |

## I . Configuration :



Wave number : N



\* Products comply with RoHS' requirements

# SPECIFICATION FOR APPROVAL

REF. :

|       |                   |               |                  |      |   |  |
|-------|-------------------|---------------|------------------|------|---|--|
| PROD. | Ceramic Heat Sink | ABC'S DWG NO. | MPW□□□□□□BAF-□□□ |      |   |  |
| NAME  |                   | REV.          | 20221212-C       | PAGE | 2 |  |

## II . dimensions and data sheet :

| DWG. No.         | Ceramic heat sink<br>(Length, width, thickness & wave height) |          |         |         | Wave<br>number | Unit : g<br>Weight<br>(ref.) |
|------------------|---------------------------------------------------------------|----------|---------|---------|----------------|------------------------------|
|                  | A                                                             | B        | C       | D       | N              |                              |
| MPW151550BAF-□□□ | 15.0±0.3                                                      | 15.0±0.3 | 5.0±0.2 | 2.0±0.2 | 3              | 1.55                         |
| MPW151570BAF-□□□ | 15.0±0.3                                                      | 15.0±0.3 | 7.0±0.2 | 2.0±0.2 | 3              | 2.40                         |
| MPW202050BAF-□□□ | 20.0±0.5                                                      | 20.0±0.5 | 5.0±0.2 | 2.0±0.2 | 4              | 2.80                         |
| MPW252550BAF-□□□ | 25.0±0.5                                                      | 25.0±0.5 | 5.0±0.2 | 2.0±0.2 | 5              | 4.35                         |
| MPW303050BAF-□□□ | 30.0±0.5                                                      | 30.0±0.5 | 5.0±0.2 | 2.0±0.2 | 6              | 6.30                         |
| MPW352250BAF-□□□ | 35.0±0.5                                                      | 22.0±0.5 | 5.0±0.2 | 2.0±0.2 | 6              | 5.60                         |
| MPW352270BAF-□□□ | 35.0±0.5                                                      | 22.0±0.5 | 7.0±0.2 | 2.0±0.2 | 6              | 8.10                         |
| MPW403550BAF-□□□ | 40.0±0.5                                                      | 35.0±0.5 | 5.0±0.2 | 2.0±0.2 | 7              | 9.10                         |
| MPW404050BAF-□□□ | 40.0±0.5                                                      | 40.0±0.5 | 5.0±0.2 | 2.0±0.2 | 7              | 10.30                        |

# SPECIFICATION FOR APPROVAL

REF. :

|       |                   |               |                  |      |   |
|-------|-------------------|---------------|------------------|------|---|
| PROD. | Ceramic Heat Sink | ABC'S DWG NO. | MPW□□□□□□BAF-□□□ |      |   |
| NAME  |                   | REV.          | 20221212-C       | PAGE | 3 |

## III . Ceramic Heat Sink Technical data sheet :

| Main features         |                                      | Item                                            | Unit                | Value                          | Method         |
|-----------------------|--------------------------------------|-------------------------------------------------|---------------------|--------------------------------|----------------|
| Product               |                                      | Ceramic Heat Sink<br>with Micro-Pores Structure |                     |                                |                |
| Product code          |                                      |                                                 |                     | MP-SIC                         |                |
| Color                 |                                      |                                                 |                     | Gray                           |                |
| Specific gravity      |                                      |                                                 | g/cm <sup>3</sup>   | 2.7                            | CNS619         |
| Porosity              |                                      |                                                 | %                   | 30                             | CNS619         |
| Water absorption      |                                      |                                                 | %                   | 15.77                          | CNS619         |
| Mechanical properties | Mohs' hardness                       |                                                 | N/mm <sup>2</sup>   | 5~6                            | DIN EN101-1992 |
|                       | Flexural strength                    |                                                 | kgf/cm <sup>2</sup> | 47.5                           | CNS12701(1990) |
|                       | Bulk density                         |                                                 | g/cm <sup>3</sup>   | 1.6~2.0                        | CNS2893(1969)  |
|                       | Resistance insulation                |                                                 | Ω                   | 20*10 <sup>6</sup>             | ASTM D257      |
|                       |                                      |                                                 |                     |                                |                |
|                       | Thermal conductivity                 |                                                 | W/m-k               | 5~6                            |                |
|                       | Maximum operating temperature        |                                                 | °C                  | <500                           |                |
|                       | Linear thermal expansion coefficient |                                                 | 10 <sup>-6</sup>    | 4.13                           | RT~300°C       |
| Chemical composition  | Main composition                     |                                                 |                     | SiC                            | 80%↑           |
|                       | Composition                          |                                                 |                     | Al <sub>2</sub> O <sub>3</sub> | 10%↑           |
|                       | Composition                          |                                                 |                     | SiO <sub>2</sub>               | 4%↑            |
|                       | Composition                          |                                                 |                     | Binding agents                 | 5%↑            |

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# SPECIFICATION FOR APPROVAL

REF. :

|       |                   |               |            |                  |   |  |
|-------|-------------------|---------------|------------|------------------|---|--|
| PROD. | Ceramic Heat Sink | ABC'S DWG NO. |            | MPW□□□□□□BAF-□□□ |   |  |
| NAME  |                   | REV.          | 20221212-C | PAGE             | 4 |  |

## IV . Packaging information :



## Q'TY & G.W.Per Packaging

| DWG NO.      | Inner : Tary |         | Outer : Carton |          |                |
|--------------|--------------|---------|----------------|----------|----------------|
|              | Q'TY(pcs)    | G.W.(g) | Q'TY(pcs)      | G.W.(kg) | Size (cm)      |
| MPW151550BAF | 432          | 800     | 2,160          | 5.50     | 52.0x32.0x14.0 |
| MPW151570BAF | 324          | 800     | 1,620          | 5.50     | 52.0x32.0x14.0 |
| MPW202050BAF | 432          | 1,350   | 2,160          | 8.20     | 52.0x32.0x14.0 |
| MPW252550BAF | 160          | 800     | 1,920          | 10.50    | 52.5x31.0x23.5 |
| MPW303050BAF | 160          | 1,150   | 1,920          | 14.50    | 52.5x31.0x23.5 |
| MPW352250BAF | 100          | 660     | 1,000          | 7.60     | 52.5x31.0x23.5 |
| MPW352270BAF | 60           | 500     | 600            | 6.00     | 52.5x31.0x23.5 |
| MPW403550BAF | 100          | 1,050   | 1,000          | 11.50    | 52.5x31.0x23.5 |
| MPW404050BAF | 100          | 1,200   | 1,000          | 12.50    | 52.5x31.0x23.5 |

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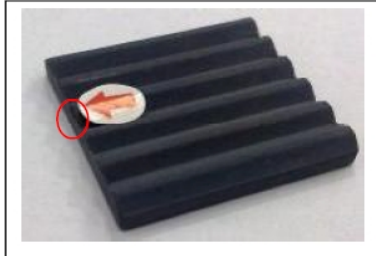
# SPECIFICATION FOR APPROVAL

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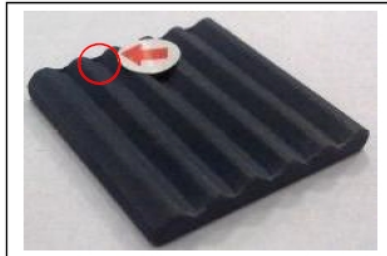
|       |                   |               |            |                  |   |  |
|-------|-------------------|---------------|------------|------------------|---|--|
| PROD. | Ceramic Heat Sink | ABC'S DWG NO. |            | MPW□□□□□□BAF-□□□ |   |  |
| NAME  |                   | REV.          | 20221212-C | PAGE             | 5 |  |

## V . Criteria of product inspection ( Tary ) :

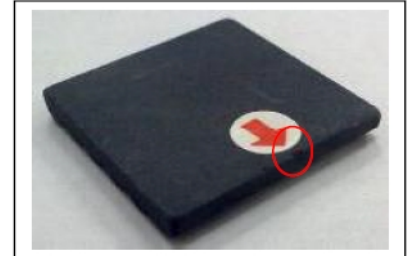
### ( 1 ) Accepted Product



Appearance Description : Crack  
Limitation : Less than 2 mm



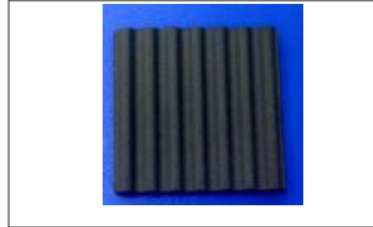
Appearance Description : Burr  
Limitation : Less than 2 mm



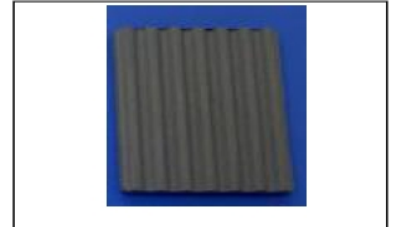
Appearance Description : Hole  
Limitation : Less than 2 mm



Appearance Description : Deep Gray

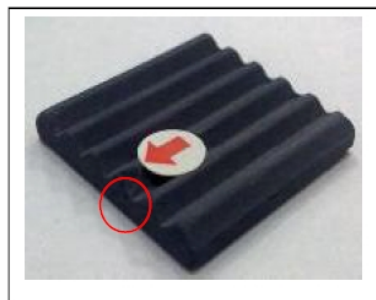


Appearance Description : Gray

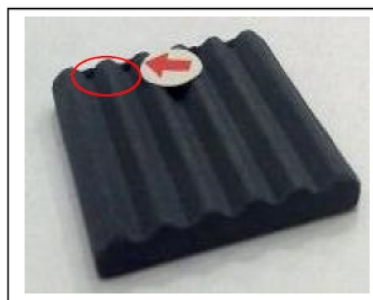


Appearance Description : Light Gray

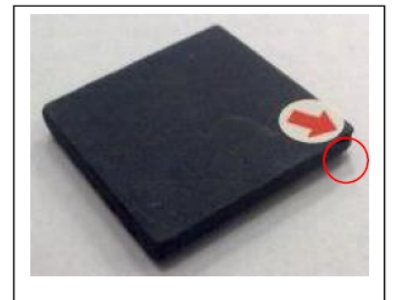
### ( 2 ) Rejected Product



Appearance Description : Crack  
Failure : More than 2 mm



Appearance Description : Burr  
Failure : More than 2 mm



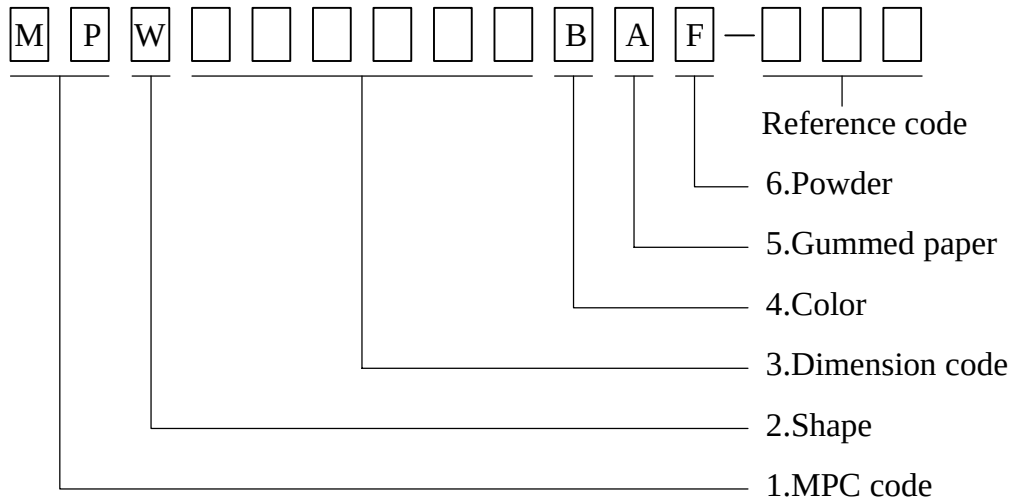
Appearance Description : Hole  
Failure : more than 2 mm

# SPECIFICATION FOR APPROVAL

REF. :

|       |                   |               |                  |      |   |
|-------|-------------------|---------------|------------------|------|---|
| PROD. | Ceramic Heat Sink | ABC'S DWG NO. | MPW□□□□□□BAF-□□□ |      |   |
| NAME  |                   | REV.          | 20221212-C       | PAGE | 6 |

VI . Drawing number expression :



- \* 1- MP : Heat sink
- \* 2- S : flat 、 W : wave 、 F : fin 、 R : reel
- \* 3- Long, wide, thick
- \* 4- B : black 、 G : green
- \* 5- A : no thermal tape 、 T : Thermal tape with fiberglass 、 N : Thermal tape with non fiberglass  
C : circle and L type thermal tape 、 S : customer specified 、 2~9 : special case
- \* 6- A : Outsourcing SiC product 、 F : SiC spray granulation 、 G : graphene composite