



# **Assembly Drawings for CompactPCI Form Factor Reference Design**

**Product Data Sheet Model DEL-00025-N2-GP**

---

***August 2015***



You may not use or facilitate the use of this document in connection with any infringement or other legal analysis concerning Intel products described herein. You agree to grant Intel a non-exclusive, royalty-free license to any patent claim thereafter drafted which includes subject matter disclosed herein

No license (express or implied, by estoppel or otherwise) to any intellectual property rights is granted by this document.

All information provided here is subject to change without notice. Contact your Intel representative to obtain the latest Intel product specifications and roadmaps.

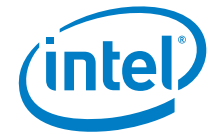
The products described may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Copies of documents which have an order number and are referenced in this document may be obtained by calling 1-800-548-4725 or by visiting: <http://www.intel.com/design/literature.htm>

Intel and the Intel logo are trademarks of Intel Corporation in the U.S. and/or other countries.

\*Other names and brands may be claimed as the property of others.

Copyright © 2015, Intel Corporation. All rights reserved.



## ***Revision History***

---

| <b>Date</b> | <b>Revision</b> | <b>Description</b> |
|-------------|-----------------|--------------------|
| August 2015 | 1.0             | Initial release,   |

# Product Data Sheets

Customer: INTEL

Part No. : \_\_\_\_\_

CoolerMaster Model No. : DEL-00025-N2-GP

Edition: T1

Issued Date: 2013/12/24

| Revision History : |              |                 |  |
|--------------------|--------------|-----------------|--|
| Date of Release    | Revision No. | Description     |  |
|                    |              |                 |  |
|                    |              |                 |  |
|                    |              |                 |  |
| Customer           |              | Cooler Master   |  |
| Approved by        |              | Sales           | Checked by      Drafted by             |
|                    |              | Simon           | kenneth      guowei                    |
| Date:              |              | Date:2013/12/24 | Date: 2013/12/24      Date: 2013/12/24 |



**Cooler Master Co., Ltd.**

TEL: +886 (2) 32340050 FAX : +886 (2) 32340051

www.coolermaster.com



## 1. Contents

|  |           |
|--|-----------|
| <b>1. Contents</b>                       | <b>2</b>  |
| <b>2. Product BOM</b>                    | <b>3</b>  |
| <b>3. Explosion and Assembly Drawing</b> | <b>4</b>  |
| <b>4. Specification &amp; Dimension</b>  | <b>6</b>  |
| ● Heat Sink Assembly                     | 6         |
| ● Heat Sink                              | 7         |
| ● Cover                                  | 8         |
| ● Back Plate                             | 9         |
| ● Mylar                                  | 10        |
| ● Fan Screw                              | 11        |
| ● Spring                                 | 12        |
| ● Screw                                  | 13        |
| ● E-ring                                 | 14        |
| ● PAD                                    | 15        |
| ● Fan label                              | 16        |
| ● FAN                                    | 17        |
| ● GRILL                                  | 21        |
| ● Gift Box                               | 22        |
| ● Tray                                   | 23        |
| ● Carton                                 | 24        |
| <b>5. Package</b>                        | <b>26</b> |

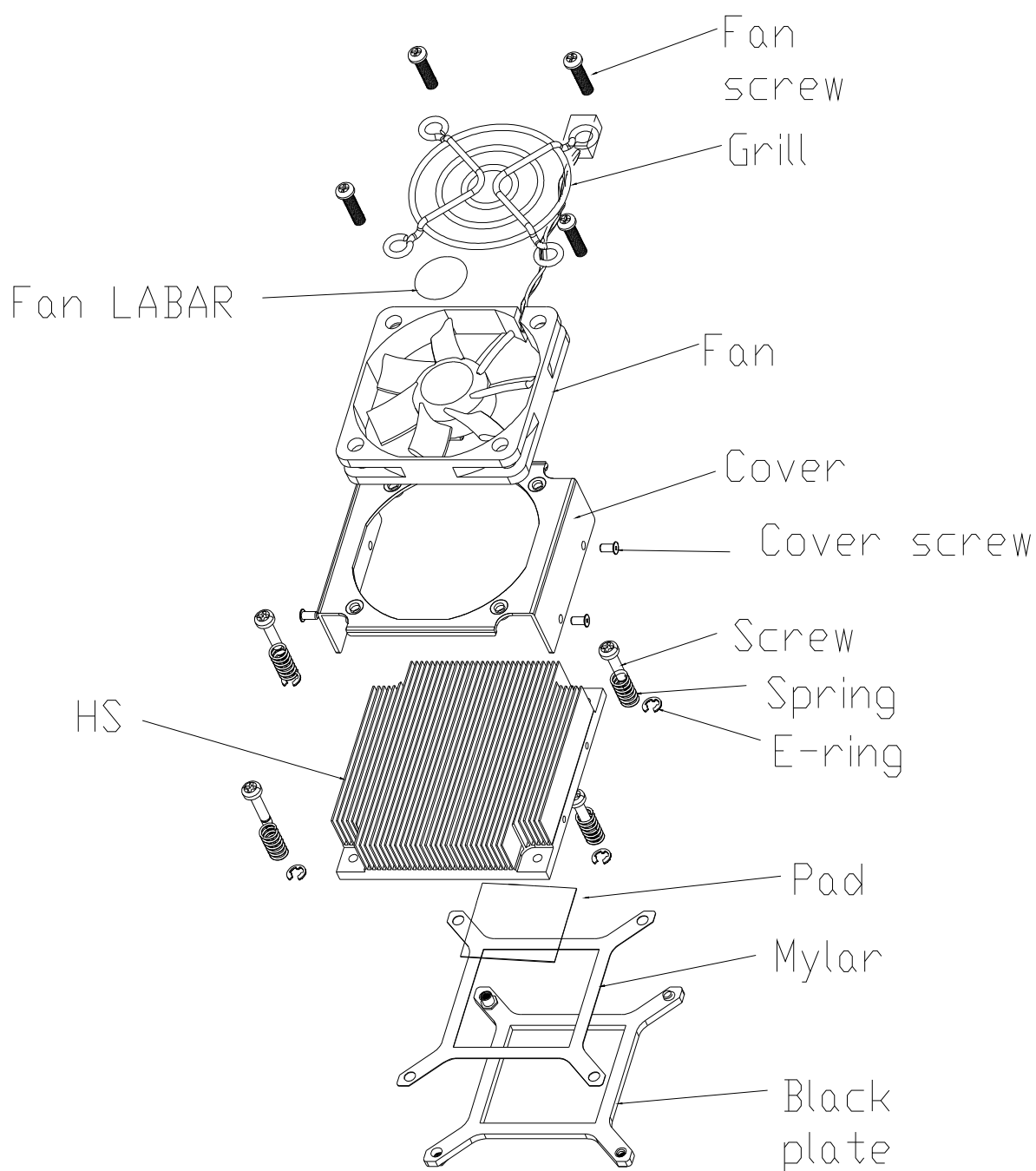


## 2. Product BOM

| NO | P/N                    | Name        | Material      | Unit | QTY  |
|----|------------------------|-------------|---------------|------|------|
| 1  | 600023420-GP           | HS Assembly | Al<br>+C1018  | PCS  | 1    |
| 2  | 600021990-GP           | Back Plate  | SPCC          | PCS  | 1    |
| 3  | MGT5005XB-W10          | FAN         |               | PCS  | 1    |
| 4  | 150032740-GP           | SCREW       | AISI<br>1018  | PCS  | 4    |
| 5  | 359000500-GP           | Fan Label   | Paper         | PCS  | 1    |
| 6  | 150032730-GP           | SCREW       | AISI<br>1018  | PCS  | 4    |
| 7  | 10212R057-SPRING-01-T1 | SPRING      | SWP           | PCS  | 4    |
| 8  | 10212R057-PAD-01-T1    | PAD         | PCM45         | PCS  | 1    |
| 9  | 300008170-GP           | C-RING      | SK7           | PCS  | 4    |
| 10 | 104021930-GP           | TRAY        | PET           | PCS  | 1    |
| 11 | 102002770-GP           | GB BOX      | 250P<br>Paper | PCS  | 1    |
| 12 | 111002010-GP           | CARTON      | BC<br>K=K     | PCS  | 1/90 |
| 13 | 112001680-GP           | PARTITION   | B A3A         | PCS  | 1/90 |
| 14 | 500037000-GP           | GRILL       | C1008         | PCS  | 1    |
| 15 | 358038630-GP           | Label       | 銅版紙           | PCS  | 1    |

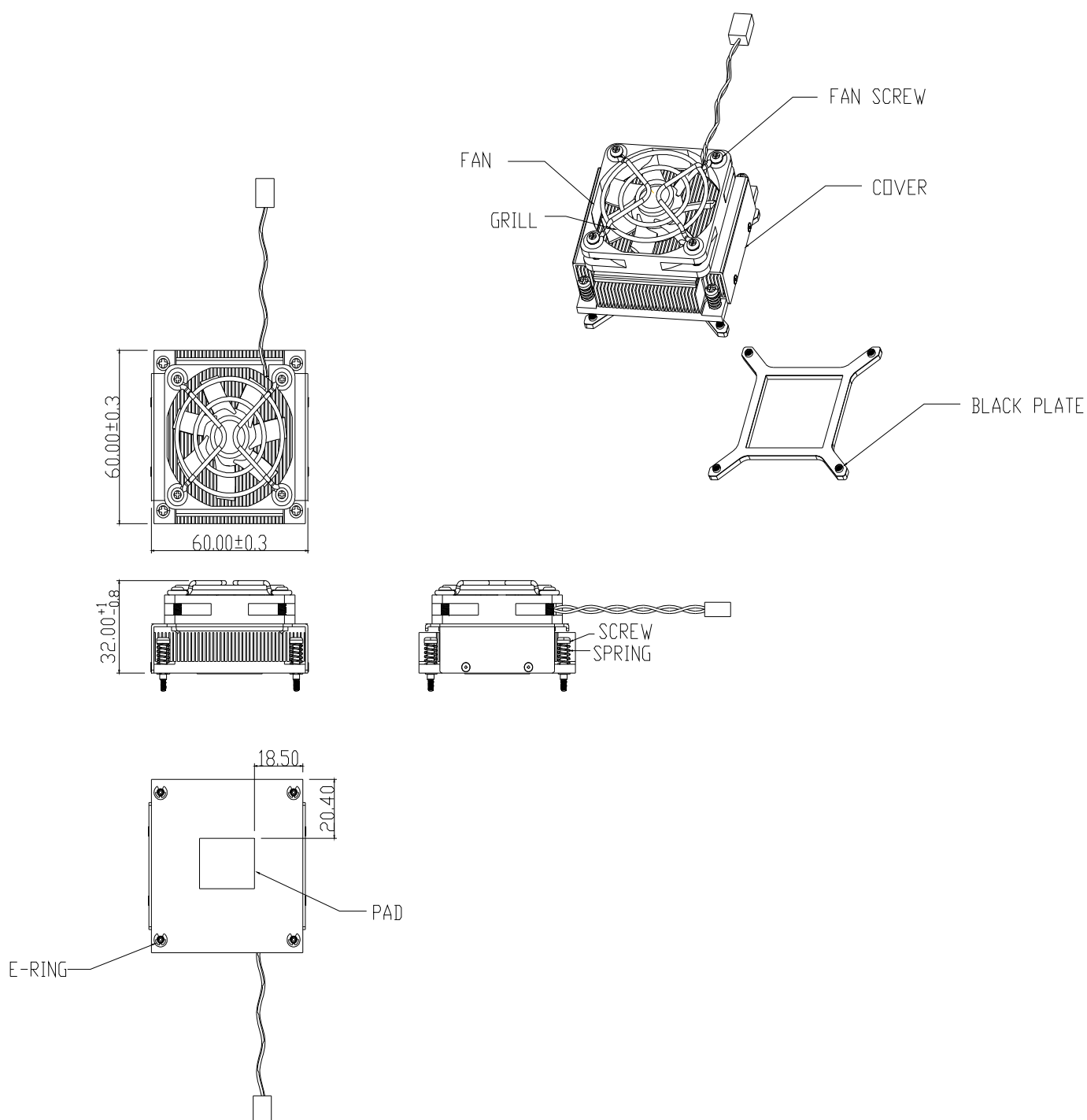


### 3. Explosion Drawing





## Assembly Drawing

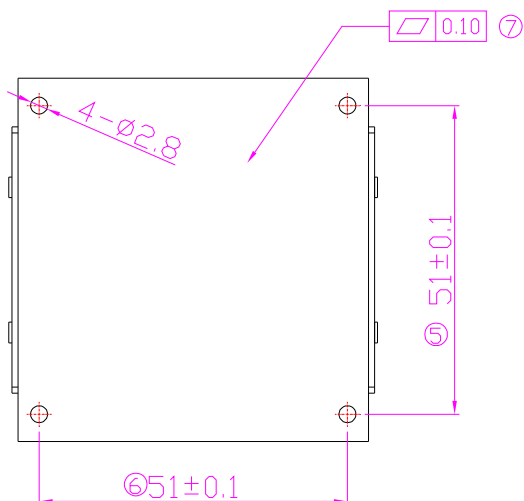
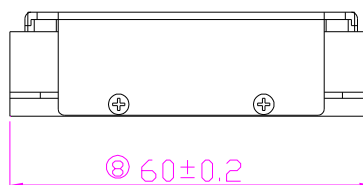
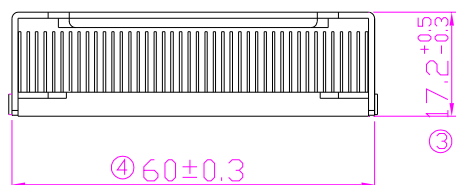
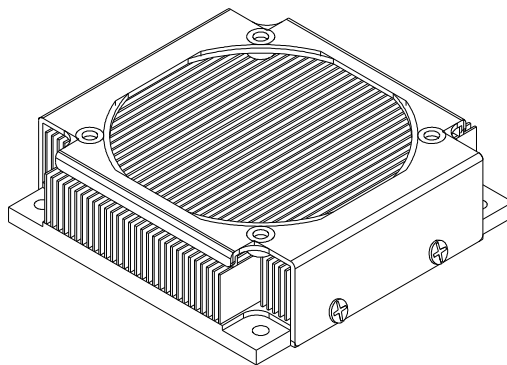
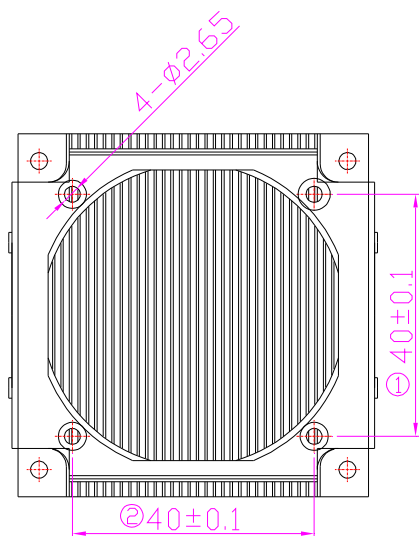






## 4. Specification & Drawing

### Heat Sink Assembly



| General Dimension Tolerances (Unit : mm ) |     |      |       |
|---|-----|------|-------|
| 0   | —   | 30   | ± 0.2 |
| 31  | —   | 60   | ± 0.3 |
| 61  | —   | 100  | ± 0.4 |
| 101                                       | and | Over | ± 0.5 |
| Angles                                    |     |      | ± 2°  |



## Heat sink

Material : Aluminum Alloy 6063 T5

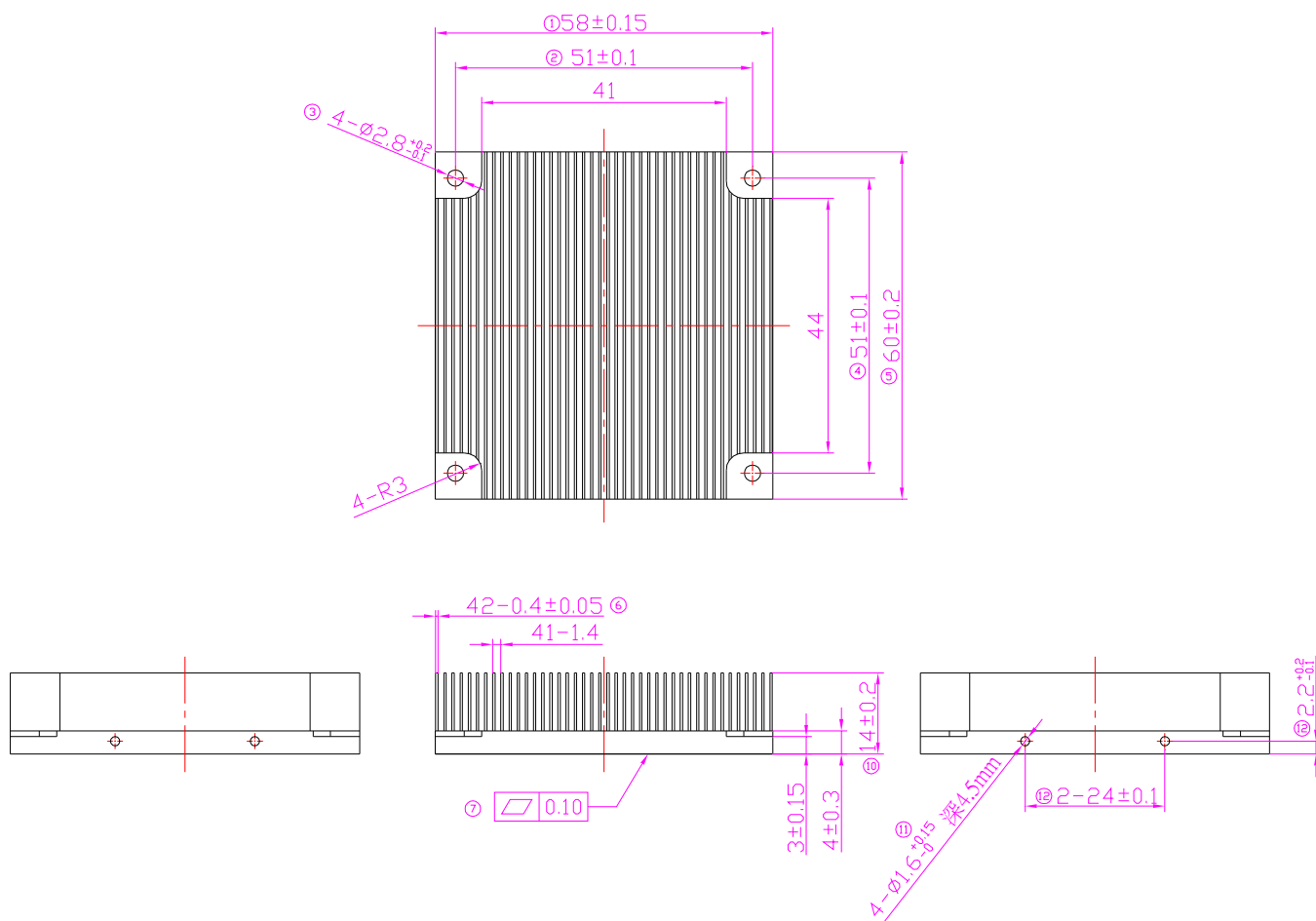
Finished: Black Anodize

Mechanical Characteristics :

| Alloy No. | Designation | Cutting Area Surface        | Extension Rate |
|-----------|-------------|-----------------------------|----------------|
| 6063      | T5          | Over 15 kgf/mm <sup>2</sup> | 7 %            |

Chemistry Ingredient & Temper Designation :

| Value                       | Si     | Fe     | Cu     | Mn     | Cr     | Mg     | Zn     | Ti      | Flatness |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|---------|----------|
| <b>SPECIFIED<br/>VALUES</b> | 0.4258 | 0.2037 | 0.0032 | 0.0059 | 0.0028 | 0.5147 | 0.0000 | 0.00263 | 0.1mm ↓  |



### General Dimension Tolerances (Unit : mm )

|        |     |      |               |
|--------|-----|------|---------------|
| 0      | —   | 30   | $\pm 0.2$     |
| 31     | —   | 60   | $\pm 0.3$     |
| 61     | —   | 100  | $\pm 0.4$     |
| 101    | and | Over | $\pm 0.5$     |
| Angles |     |      | $\pm 2^\circ$ |



## COVER

Material : Aluminum Alloy 1050

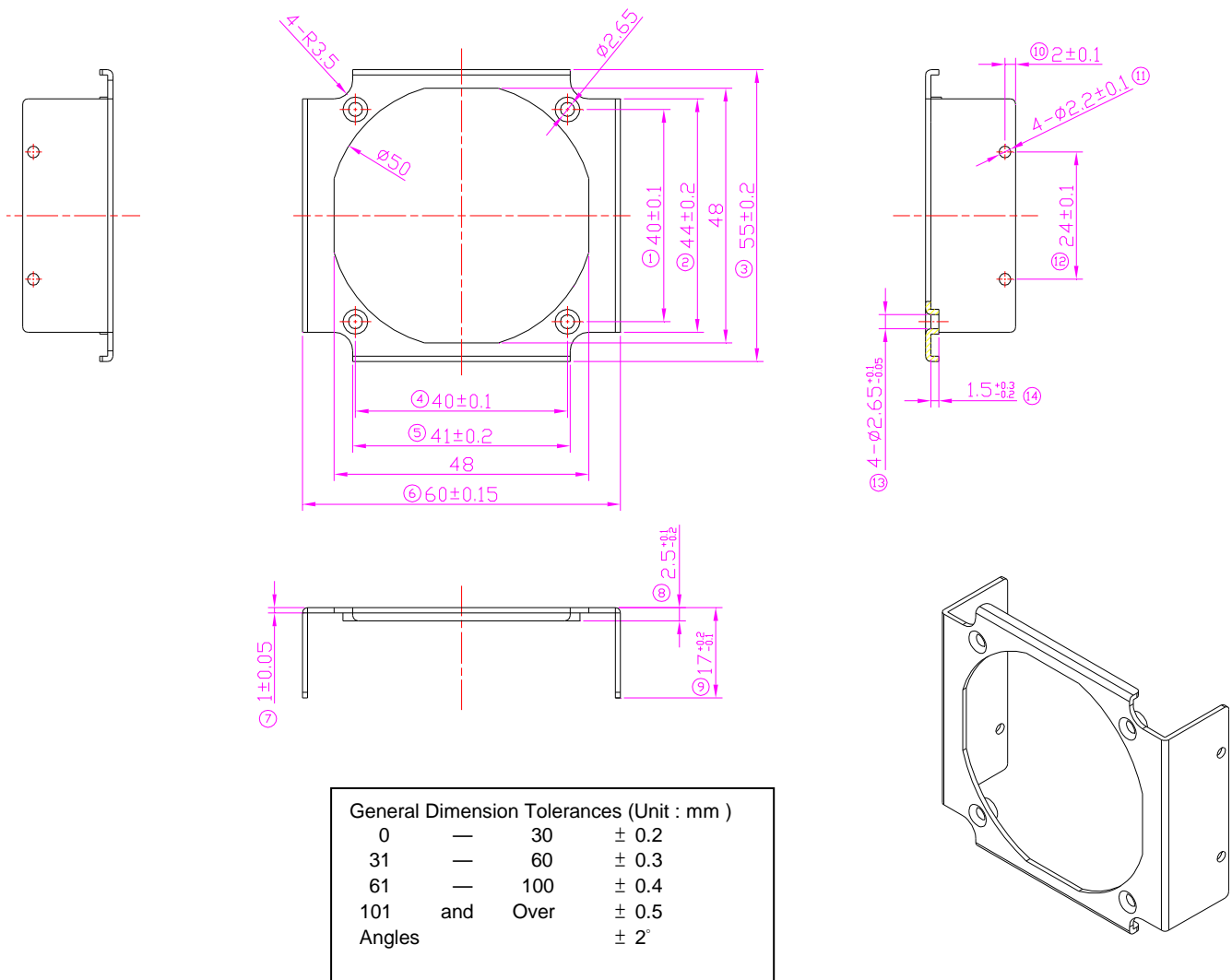
Finished: CLEAR CHROMATE

Mechanical Characteristics :

| Alloy No. | Cutting Area Surface           | Extension Rate |
|-----------|--------------------------------|----------------|
| 1050      | Over 10.65 kgf/mm <sup>2</sup> | 7 %            |

Chemistry Ingredient & Temper Designation :

| Value               | Si   | Fe  | Cu   | Mn   | Cr | Mg   | Zn   | Ti   | AL   |
|---------------------|------|-----|------|------|----|------|------|------|------|
| SPECIFIED<br>VALUES | 0.25 | 0.4 | 0.05 | 0.05 |    | 0.05 | 0.05 | 0.03 | 99.5 |





## Back Plate

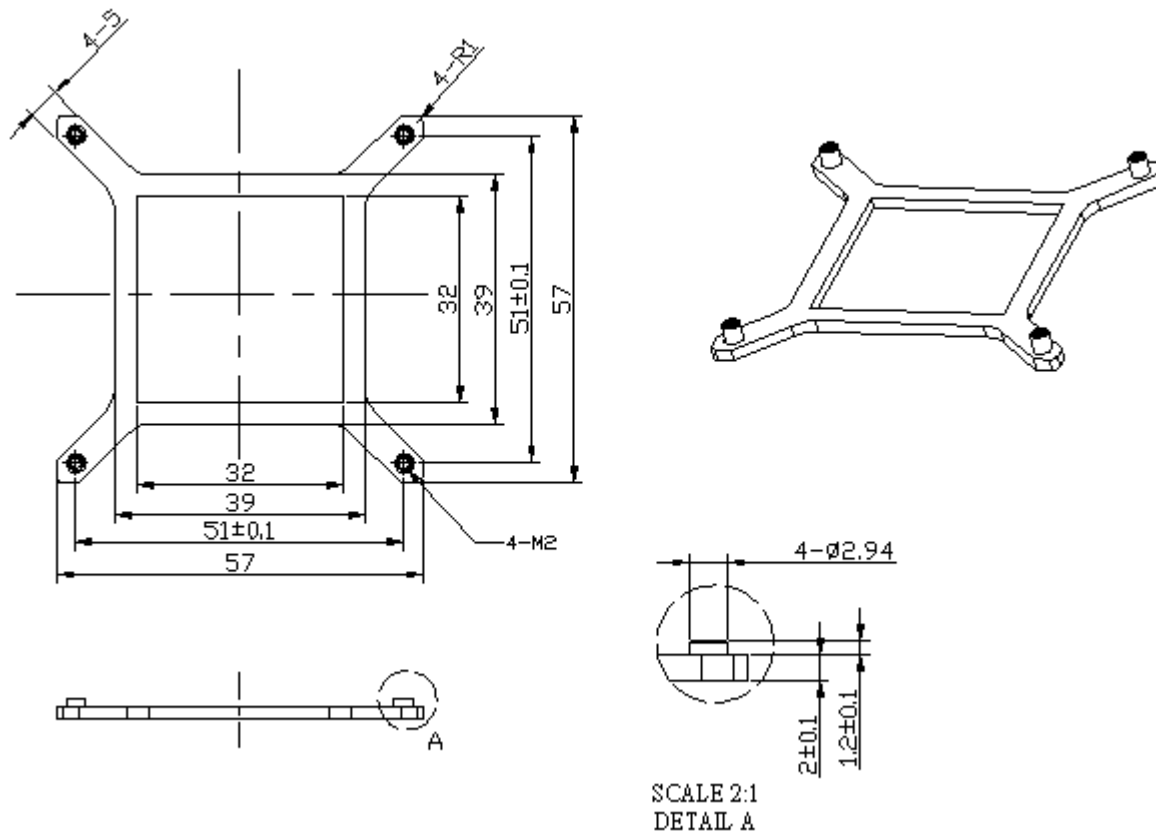
Material : SPCC

Nut Material: SUS302

Finished: Nickel-Plating

Hardness Test: 380~450HV

Thickness : 2mm



### General Dimension Tolerances (Unit : mm )

|        |     |      |           |
|--------|-----|------|-----------|
| 0      | —   | 30   | $\pm$ 0.2 |
| 31     | —   | 60   | $\pm$ 0.3 |
| 61     | —   | 100  | $\pm$ 0.4 |
| 101    | and | Over | $\pm$ 0.5 |
| Angles |     |      | $\pm$ 2°  |



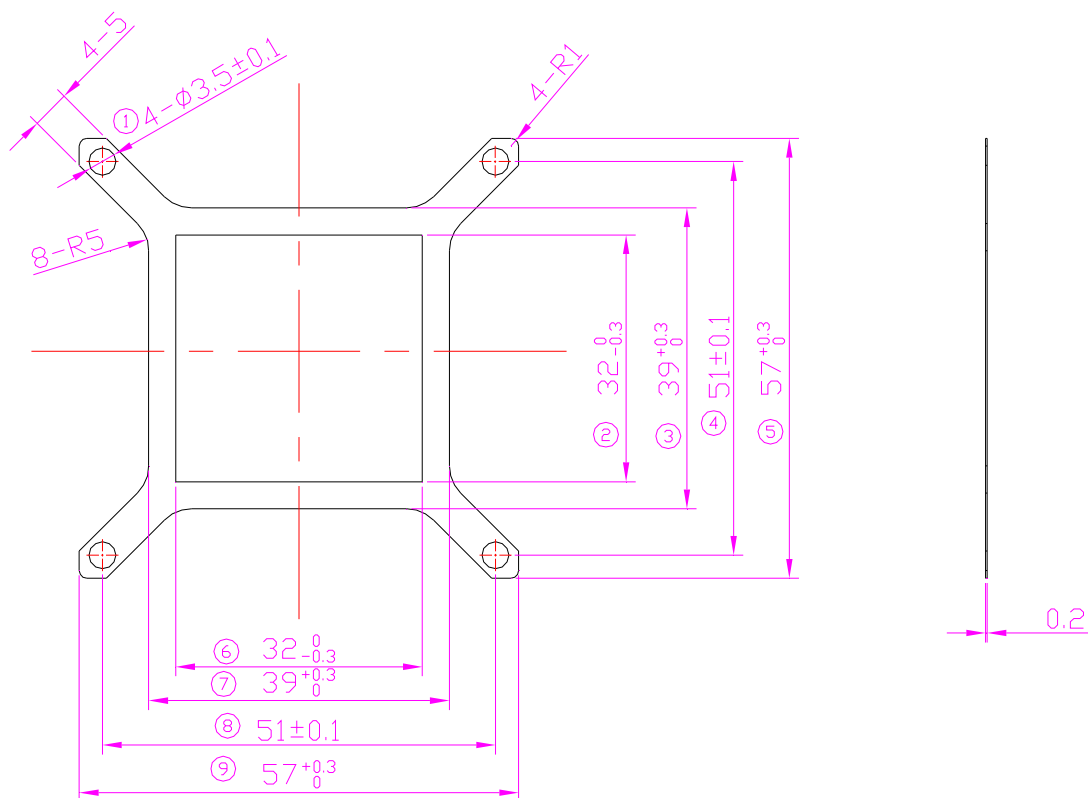
## Mylar

Material : PET Mylar (Thickness: 0.18mm)

Color : DARK GREEN

Adhesive : 3M 468 (one side : 0.13mm, Total: 0.26mm)

Total thickness : 0.2 mm



### General Dimension Tolerances (Unit : mm )

|        |     |      |               |
|--------|-----|------|---------------|
| 0      | —   | 30   | $\pm 0.2$     |
| 31     | —   | 60   | $\pm 0.3$     |
| 61     | —   | 100  | $\pm 0.4$     |
| 101    | and | Over | $\pm 0.5$     |
| Angles |     |      | $\pm 2^\circ$ |



## Fan Screw

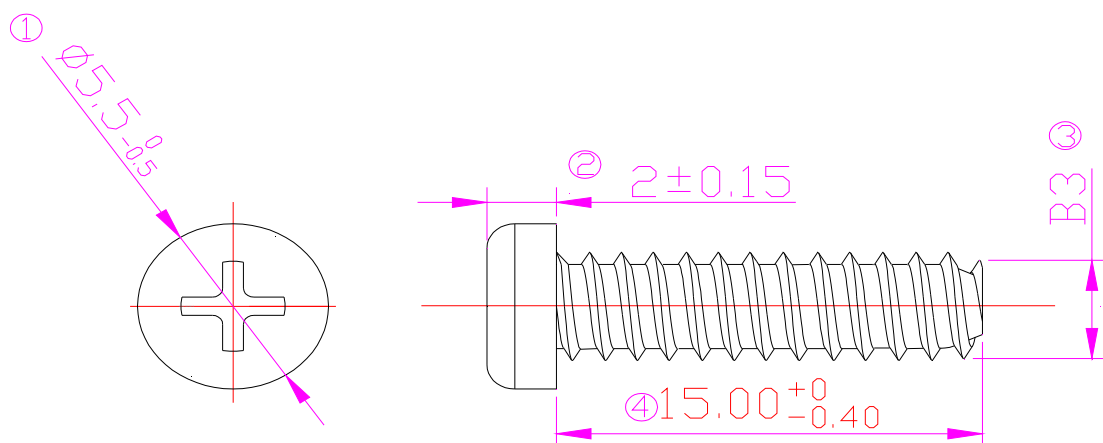
Material : AISI 1018

Finished: Zinc Black Plating

Product : ROD CARBON STEEL

Chemistry Ingredient Characteristics : (%)

| Value                       | C    | KN   | P    | S   | SI  | Mg     |
|-----------------------------|------|------|------|-----|-----|--------|
| <b>SPECIFIED<br/>VALUES</b> | 0.16 | 0.78 | 0.24 | 0.8 | 0.2 | 0.5147 |





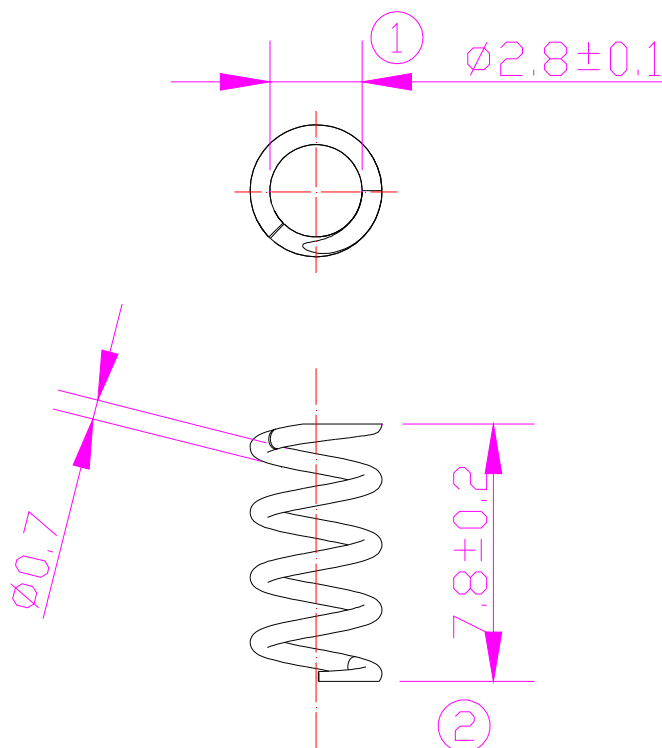
## Spring

**Material: SWP-B**

**Finished : Nickel-Plated**

**Mechanical Characteristics :**

| Value               | C    | Si   | Mn   | P     | S     | Cu   |
|---------------------|------|------|------|-------|-------|------|
| SPECIFIED<br>VALUES | 0.81 | 0.18 | 0.50 | 0.011 | 0.004 | 0.01 |



Notes:

- 1.Material:(SWP-B)
- 2.Dia wire:  $\varnothing 0.7\text{mm}$
- 3.Finish : nickel
- 4.effective coil:3.5
- 5.total coil:5.5
- 6.K=1.6kgf/mm



## Screw

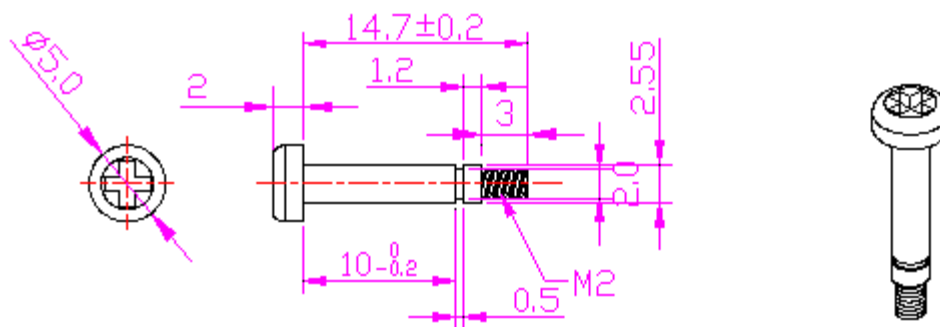
**Material : AISI 1018**

**Finished: Nickel Plating**

**Product : ROD CARBON STEEL**

**Chemistry Ingredient Characteristics : (%)**

| Value                       | C    | KN   | P    | S   | SI  | Mg     |
|-----------------------------|------|------|------|-----|-----|--------|
| <b>SPECIFIED<br/>VALUES</b> | 0.16 | 0.78 | 0.24 | 0.8 | 0.2 | 0.5147 |



General Dimension Tolerances (Unit : mm )

|        |     |      |       |
|--------|-----|------|-------|
| 0      | —   | 30   | ± 0.2 |
| 31     | —   | 60   | ± 0.3 |
| 61     | —   | 100  | ± 0.4 |
| 101    | and | Over | ± 0.5 |
| Angles |     |      | ± 2°  |

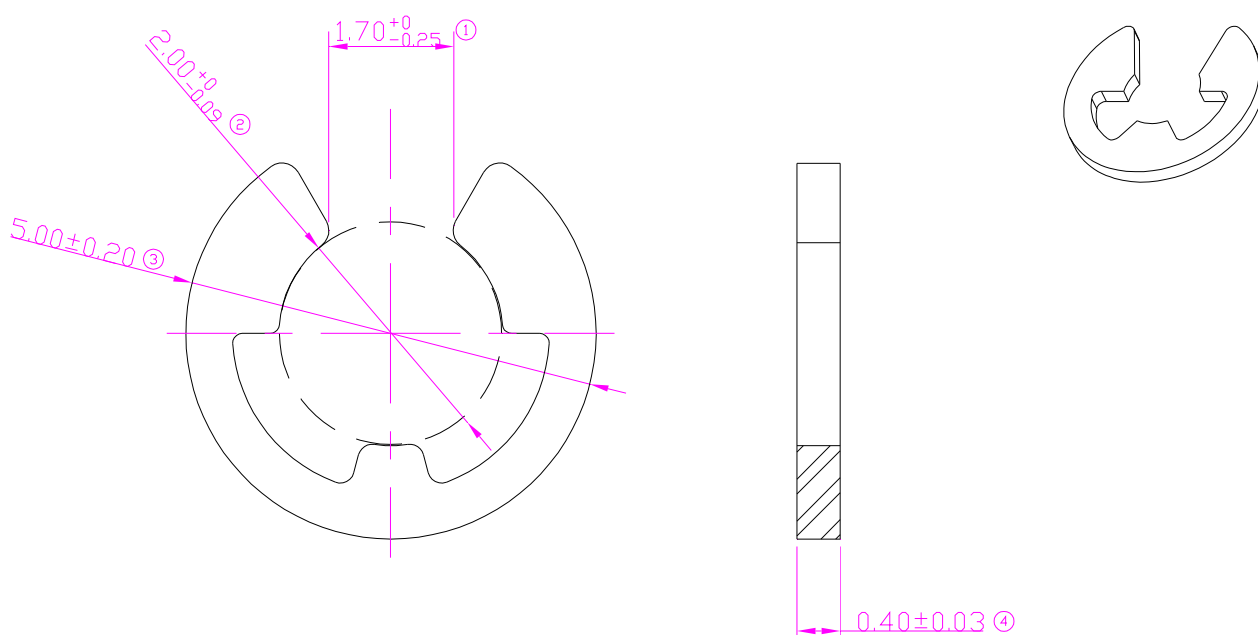




## E-ring

Material : SK7

Surface treatment: Nickel plating



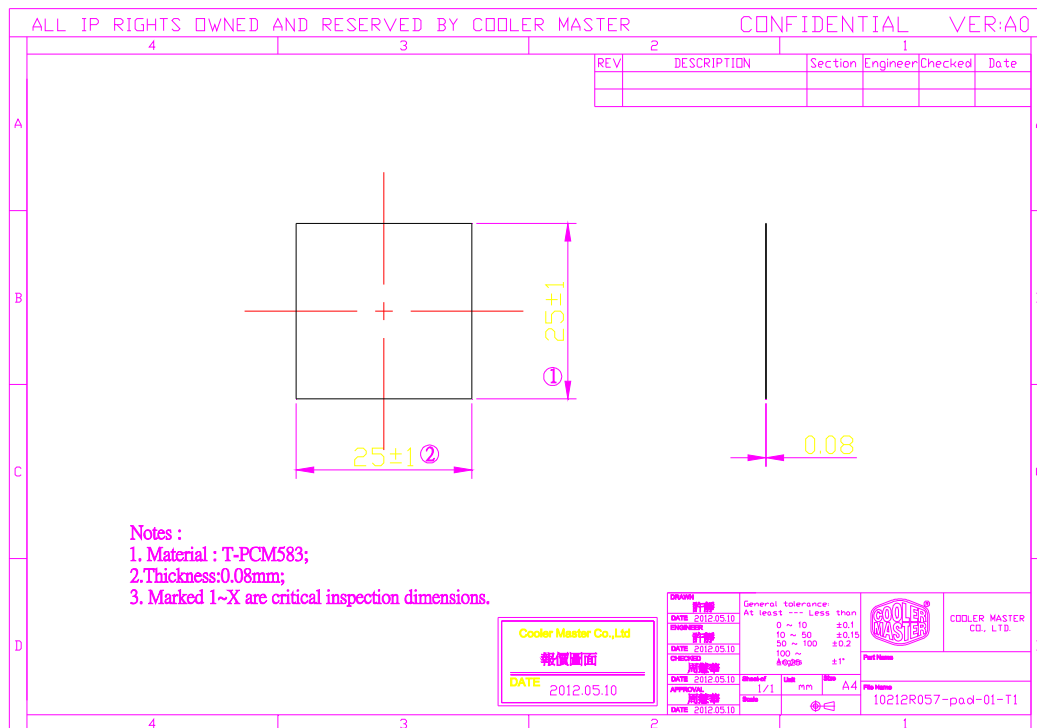


## PAD

Material :PCM583

Color : GRAY

Thickness: 0.08mm





## Fan label

Material: Paper

20 mm





## Fan

Serial NO. 16356



DONGGUAN PROTECHNIC ELECTRIC CO., LTD.

### SPECIFICATION FOR APPROVAL

CUSTOMER: 訊強  
MODEL: MGT5005XB-W10  
Series: A  
P/N:  
Rev: 00  
Date: Oct.17.2013

CUSTOMER APPROVAL  
APPROVED / DATE



| Rev | Description |
|-----|-------------|
|     |             |
|     |             |
|     |             |

#### Notice:

This offer is made according to your current inquiry. Unless otherwise revised, this specification will be final for all future production of orders from your company.

Kindly study in detail and send back to us the specification sheets with your confirmation signature in order to make an arrangement for production.

| Approved by        | Checked by            | Authorized by         |
|--------------------|-----------------------|-----------------------|
| 成旭平<br>Oct.17.2013 | 梁峰/馬孝菊<br>Oct.17.2013 | 齊吉/劉化爲<br>Oct.17.2013 |

No.28, Datang Road, Xinjiuwei, Liaobu Town, Dongguan City, Guangdong, P.R.O. China

Postcode: 523410

E-mail: protech@rotechnic.com

Tel: +86 (0) 769 83306898, 83306415, 83306416 Fax: +86 (0) 769 83306889

R-RD-046R1.5-1/4



Serial NO. 16356



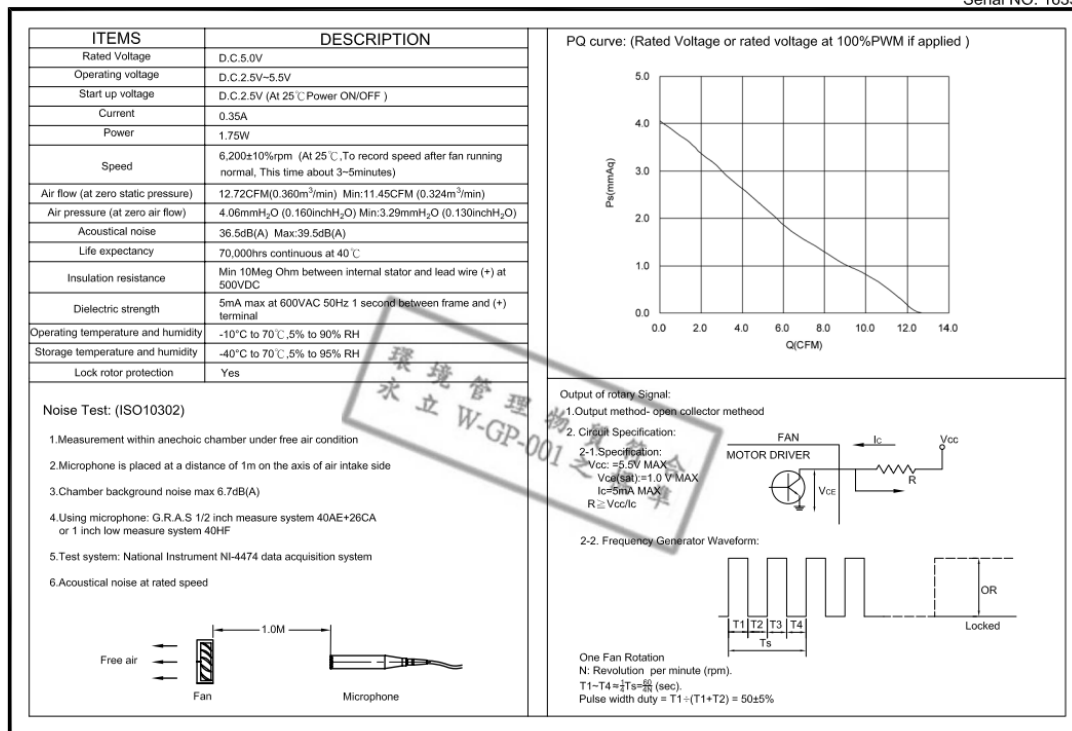
## PRODUCT SAFETY

1. Protechnic will not guarantee this product if it is used in conditions other than the parameters outlined in this specifications.
2. Please contact Protechnic to confirm any customer requirements not specified in the specification.
3. Please handle fans carefully. Damage may result from pressure to the impeller, carrying by the lead wires, or dropping fans on a hard surface.
4. The introduction of power, dust water insects or other erosion elements into the hub will result in safety problems or product failure, except in products designed for special environments.
5. Items 1-4, mentioned above, are generally pertinent to our products, and should be a first point of reference.
6. It is very important to establish the correct polarity before connecting the fan to the power source, Positive (+) and Negative (-). Damage may be cause by connecting with reverse polarity.
7. Avoid operating Protechnic products in environments where poisonous or corrosive elements are present (organic, silicon, cyanogens, formal in phenol, H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, Cl<sub>2</sub>, etc)
8. Please ensure that fans are stored according to the storage temperature specified. Do not store in a high humidity environment. If fans are stored for more than 6 months, Protechnic recommends testing of fans before using.
9. Not all series fans are provided with the lock rotor protection feature. Damage or failure will result from operating fans without this feature, if the impeller for the fan is in any way hindered or impaired.
10. Install fans carefully. Incorrect mounting or installation may result in excessive resonance, vibration and subsequent noise.
11. Safety is a top priority. Please utilize guard accessories to prevent injury to personnel.
12. Unless otherwise noted, all tests are conducted at 25°C ambient temperature, and 65% relative humidity.
13. When using multiple fans in parallel, connect an 'over 4.7μF 'capacitor externally to the fan to prevent abnormity resulting from unstable power.
14. Any change to the parameters specified in this specification will be determined by mutual agreement between both parties. Parameters not specified will be identical to the final sample approved by your company.

R-RD-046R1.5-2/4

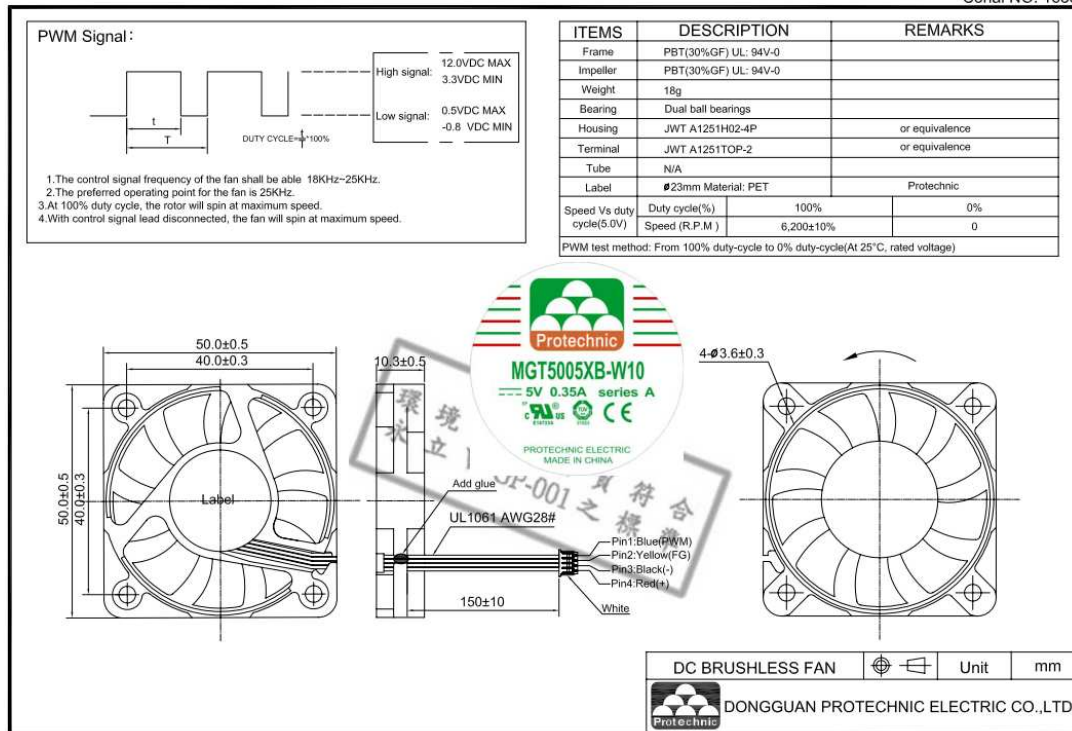


Serial NO. 16356



R-RD-046R1.5-3/4

Serial NO. 16356

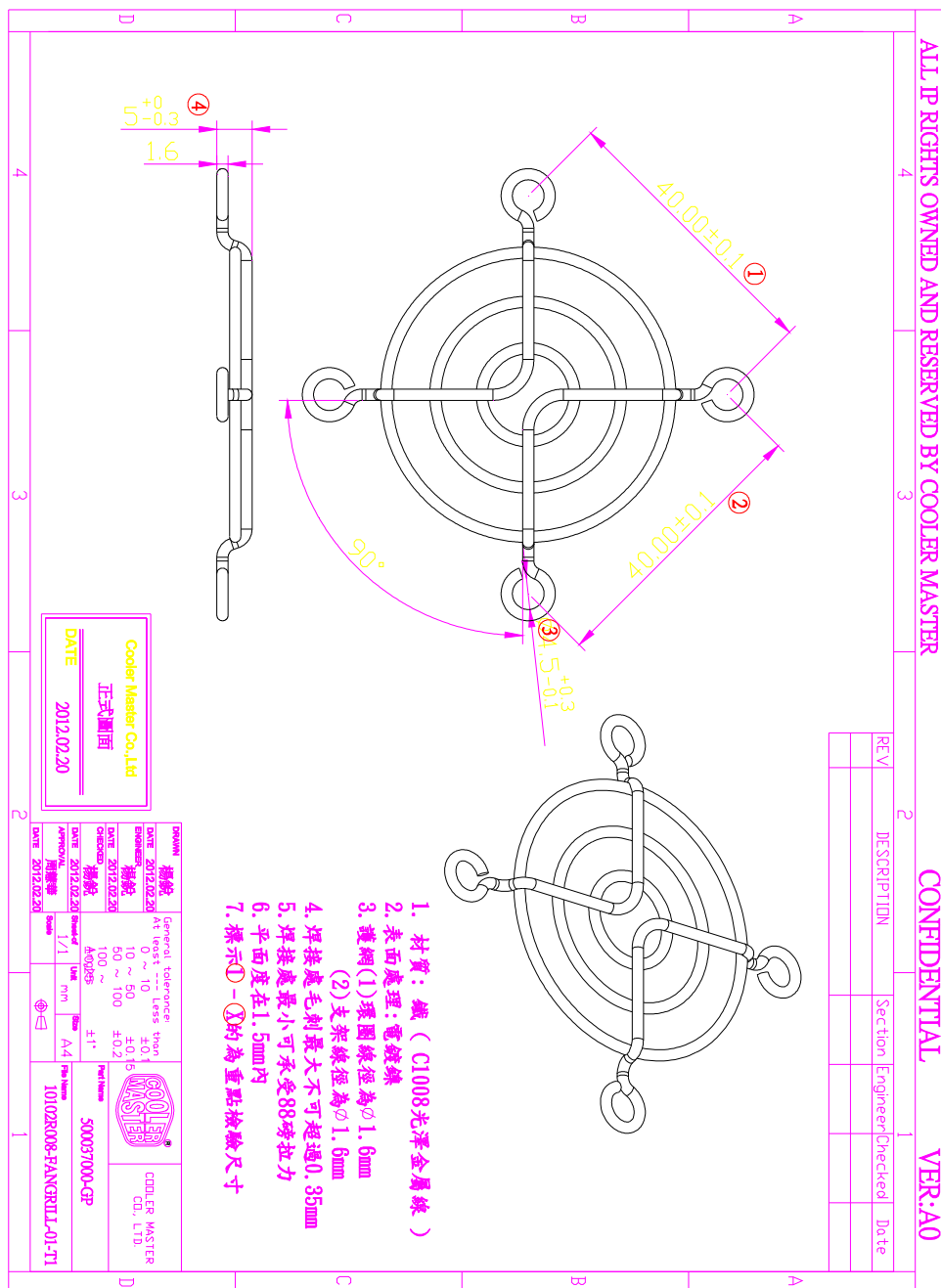


R-RD-046R1.5-4/4



## Grill

Material: c1008





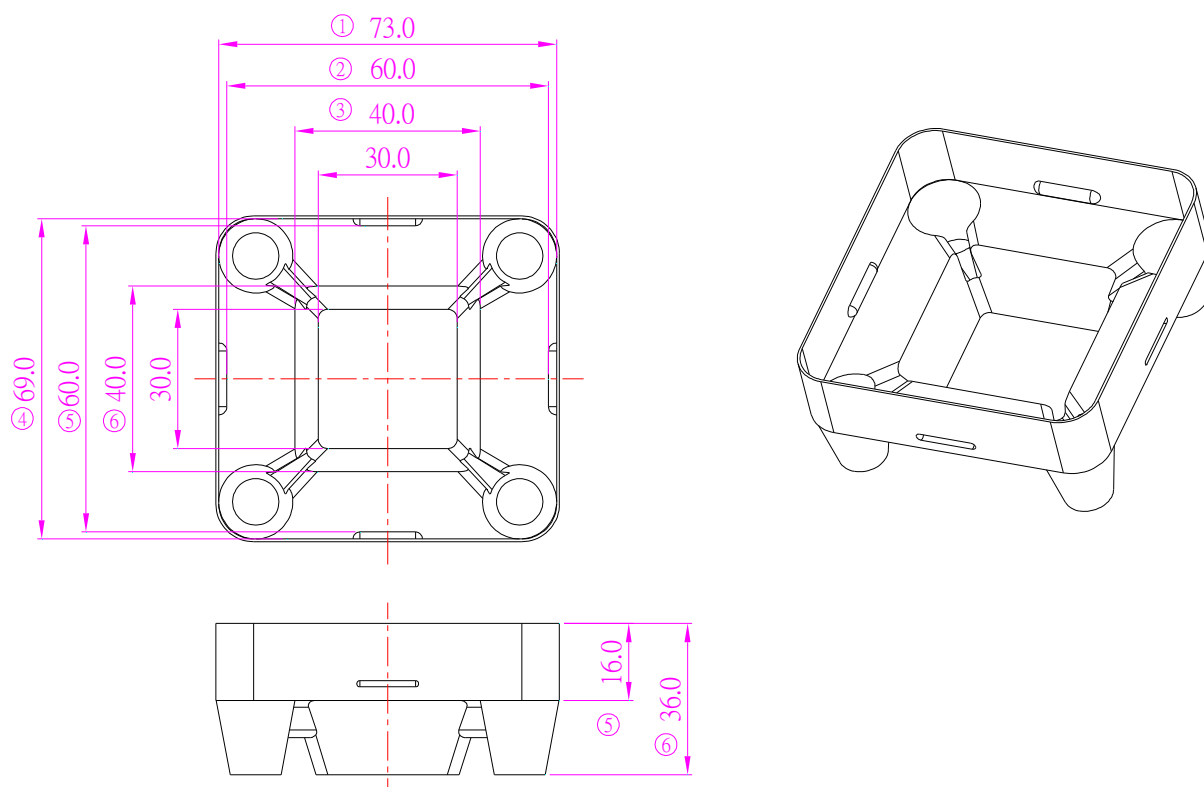




## Tray

**Material: PET (Thickness: 0.6 mm)**

**Mechanical Characteristics:**



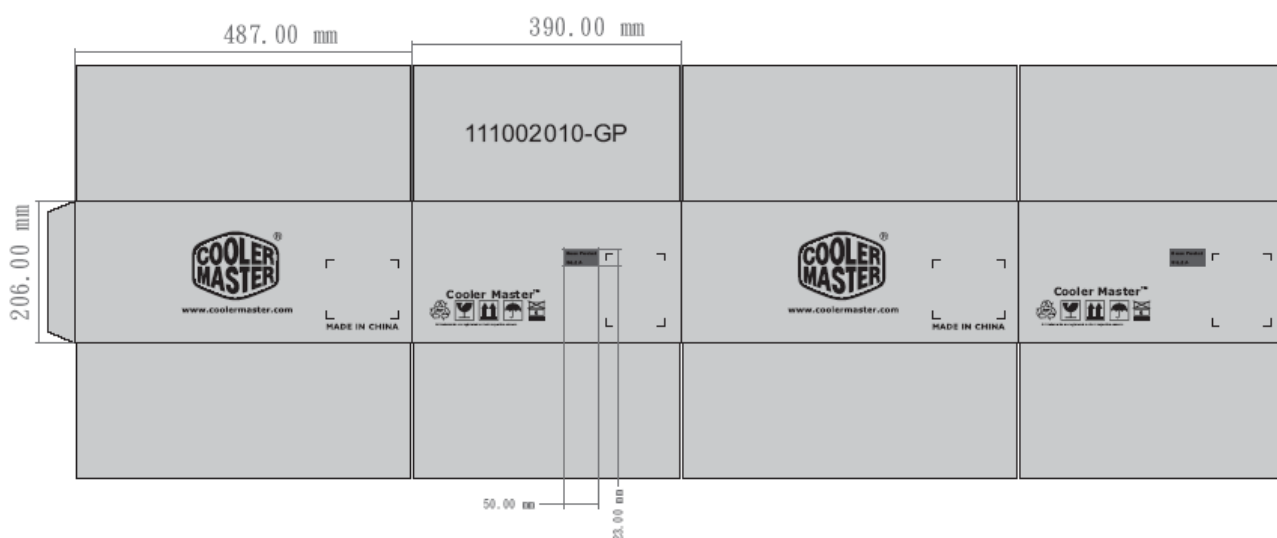


## Carton

**Material:** BC (Thickness: 6~7 mm)

**Size:** 455\*330\*159mm

**Mechanical Characteristics:**





## 5. Package



**Gift box in carton**  
**30pcs in one layer**  
**Total 3 layers in one carton**



**Carton size : 455\*330\*159**  
**Gross weight : 10.8Kg**