Product Data Sheets

Customer : _____

Part No. : _____

Cooler Master Model No. : ECC-00589-02-GP

Edition: A1

Issued Date: 2008.07.02

Revision History：		
Date of Release	Revision No.	Description

Customer	Cooler Master		
Approved by	DCC	Checked by	Drafted by
Date:	陳如玉 Date:2008.07.02	徐宗瑞 Date:2008.07.02	陳秀惠 Date:2008.07.02

Cooler Master Co., Ltd.
TEL: +886 (2) 32340050 FAX : +886 (2) 32340051 www.coolermaster.com

Whole Photo

Specification & Dimension

Heat Sink

Material : Aluminum Alloy 6063 T5

Finished: Anti-Oxidant

AL- BASE Global Calibration of Al Base 6063

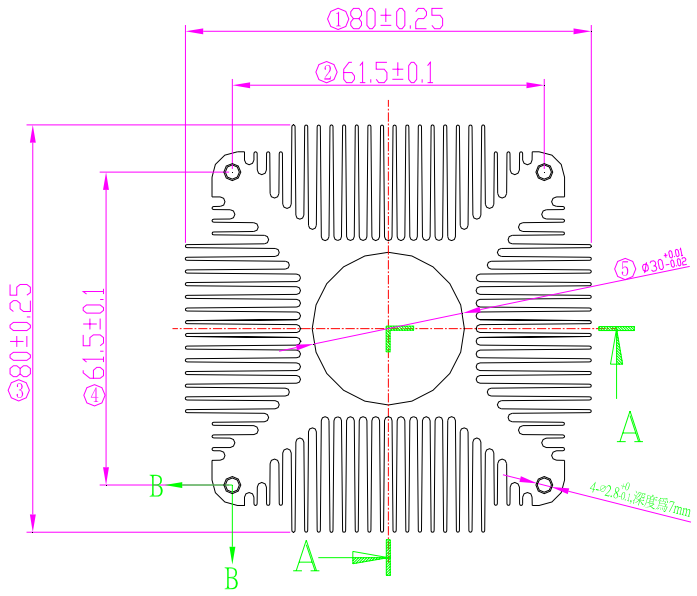
Note：Chemistry Ingredient Criterion CNS 2068 H3021

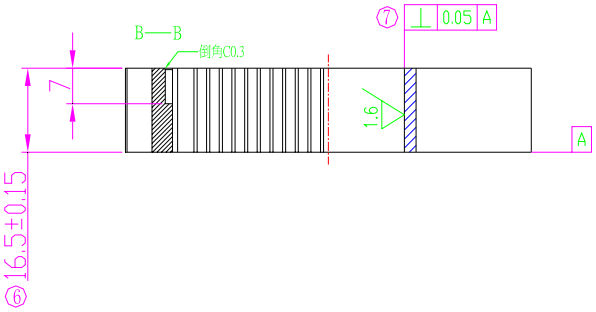
Mechanical Characteristics :

Alloy No.	Designation	Cutting Area Surface	Extension Rate
6063	T5	Over 15 kgf/mm^2	7 %

Chemistry Ingredient & Temper Designation :

Value	Si	Fe	Cu	Mn	Cr	Mg	Zn	Ti	Flatness
SPECIFIED VALUES	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	± 0.2
31	—	60	± 0.3
61	—	100	± 0.4
101	and	Over	± 0.5
Angles			± 2°

Material : Copper Alloy C1100

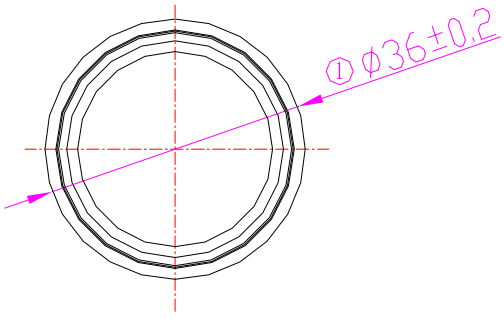
Finish : Anti-Oxidation

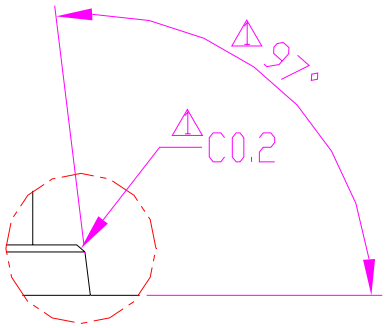
Mechanical Characteristics :

Alloy No.	Tensile Strength ($26\sim32kgf/mm^2$)	Hardness Test (80~100HV)	Elongation (%)
C1100	26.29	88	98

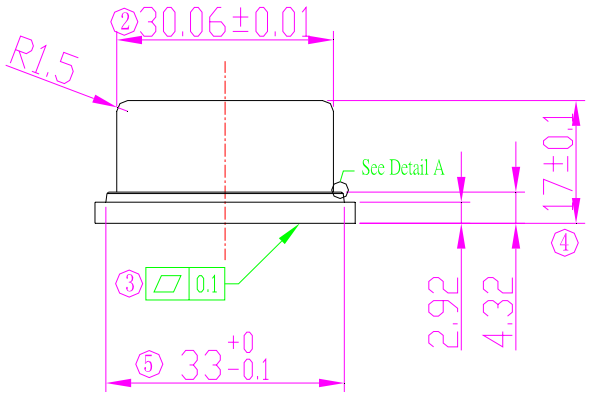
Chemistry Ingredient Characteristics :

Value	Cu	Pd	Fe	Sn	Zn	P
SPECIFIED VALUES	99.90	0	0	0	REN	0





Detail A
Scale 5:1

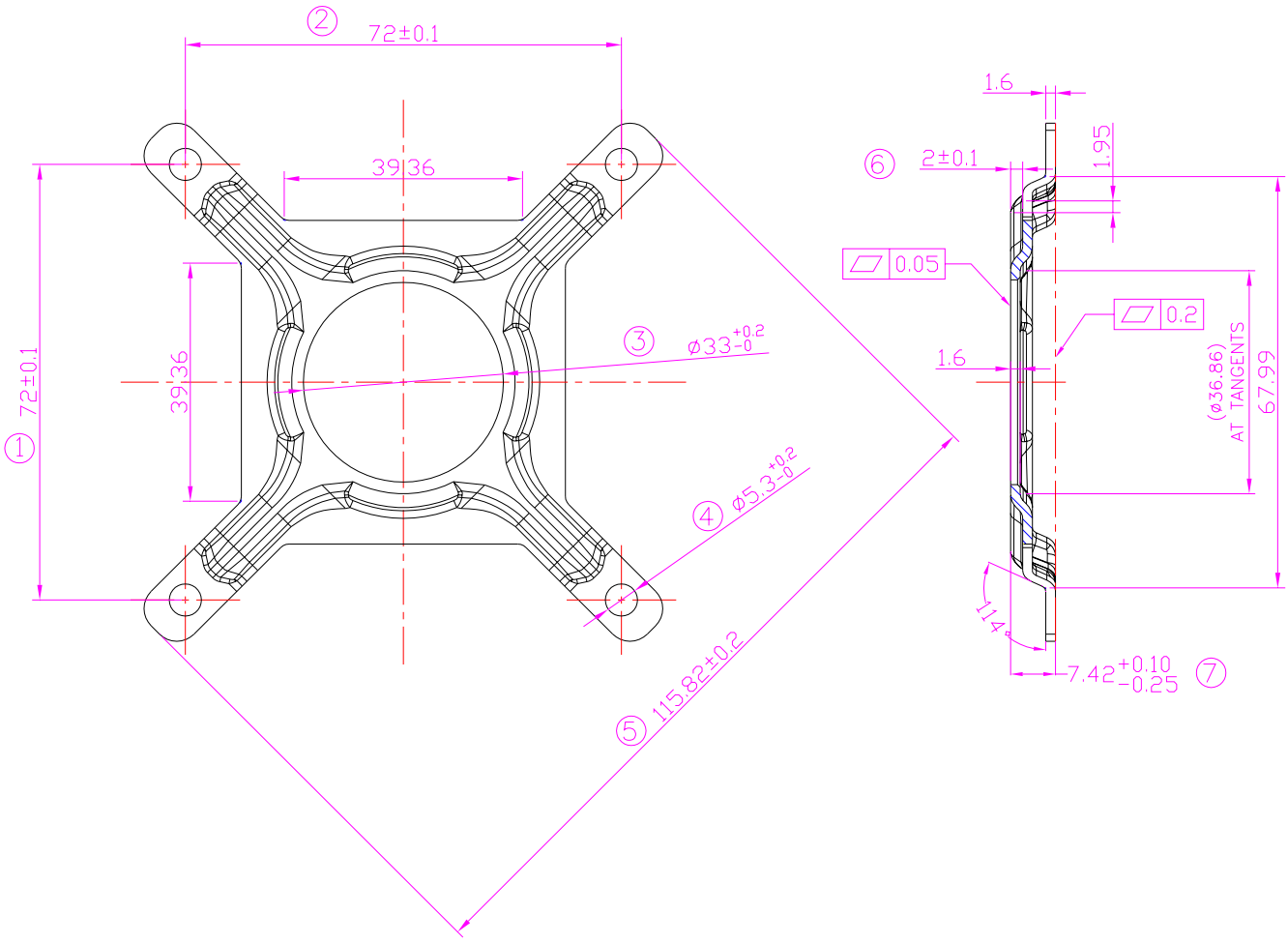


General Dimension Tolerances (Unit : mm)			
0	—	30	± 0.2
31	—	60	± 0.3
61	—	100	± 0.4
101	and	Over	± 0.5
Angles			± 2°

Material : S50C

Finished: Nickel-Plating

Thickness : 1.6mm



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

Screw

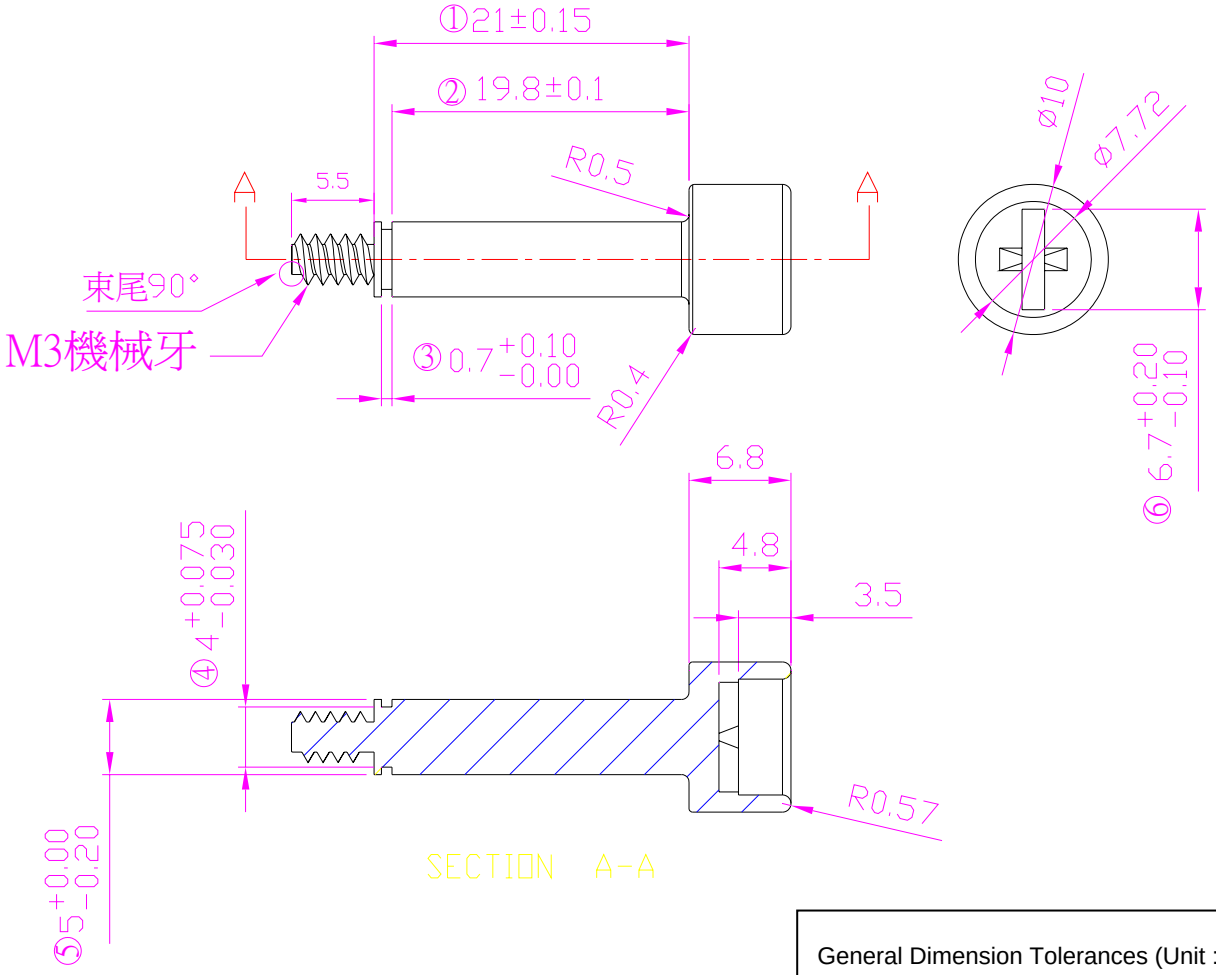
Material : AISI 1018

Physical Characteristics :

product : ROD CARBON STEEL

Chemistry Ingredient Characteristics :(%)

Value	C	KN	P	S	SI
SPECIFIED VALUES	0.16	0.78	0.24	0.8	0.2



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

Spring

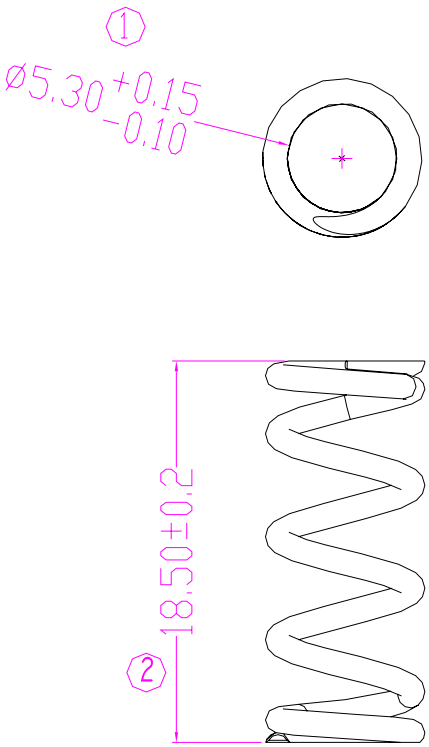
Mechanical Characteristics :

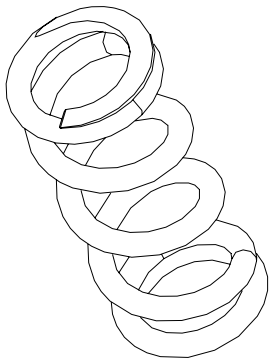
Commodity	Size	Compress
SWP-B	1.2mm	15 mm

Finished: Nickel Plating

Chemistry Ingredient Characteristics :(%)

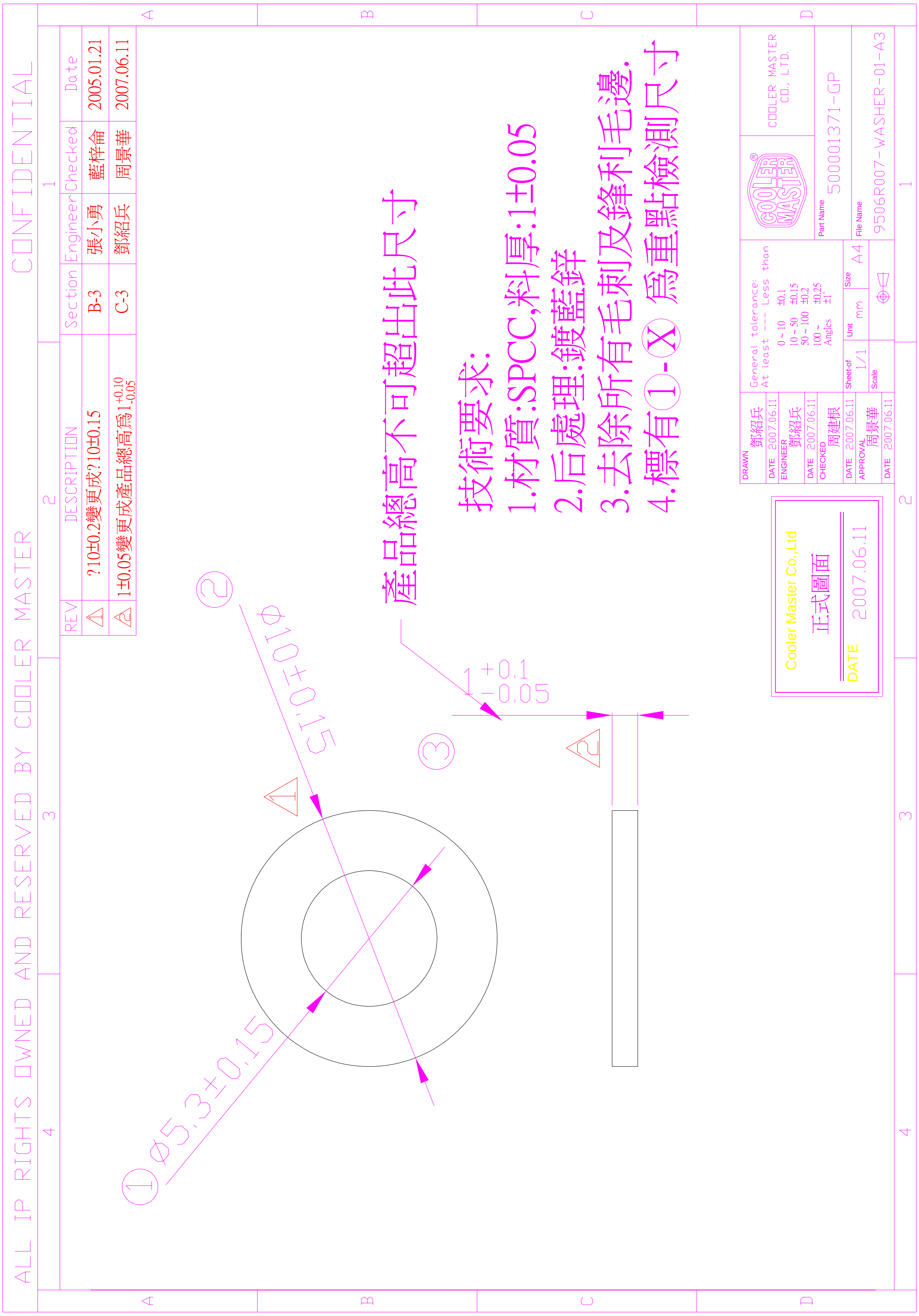
Value	C	Si	Mn	P	S	Cu
SPECIFIED VALUES	0.81	0.18	0.50	0.011	0.004	0.01





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

Washer

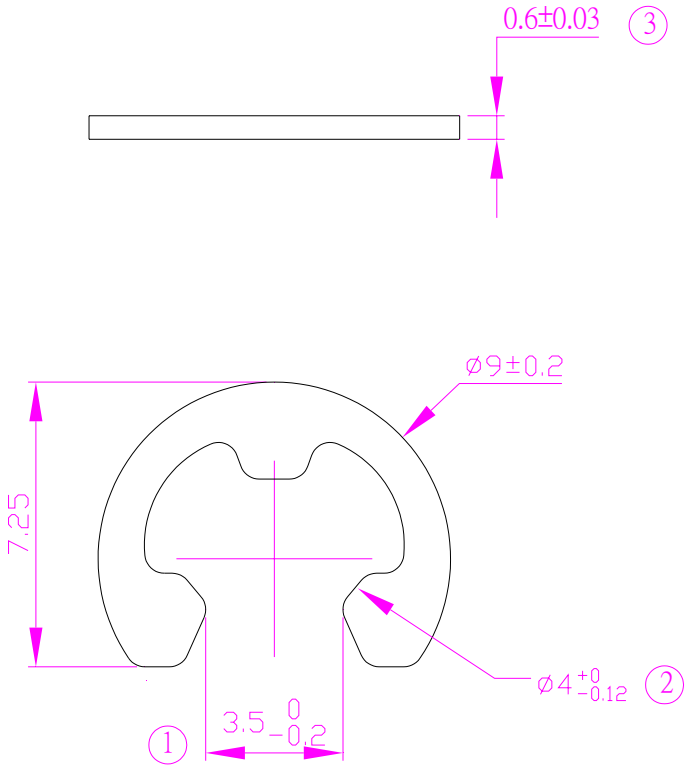

ALL IP RIGHTS OWNED AND RESERVED BY COOLER MASTER CONFIDENTIAL
REV | DESCRIPTION | Section | Engineer | Checked | Date
1 | ?10±0.2變更成?10±0.15 | B-3 | 張小勇 | 藍梓侖 | 2005.01.21
2 | 1±0.05變更成產品總高爲1+0.10/-0.05 | C-3 | 鄧紹兵 | 周景華 | 2007.06.11
產品總高不可超出此尺寸
技術要求:
1.材質:SPCC,料厚:1±0.05
2.后處理:鍍藍鋅
3.去除所有毛刺及鋒利毛邊.
4.標有①-ⓧ 爲重點檢測尺寸
① Ø5.3±0.15
② Ø10±0.15
③ 1 +0.1 -0.05
COOLER MASTER CO., LTD.
Part Name 500001371-GP
File Name 9506R007-WASHER-01-A3
General tolerance: At least --- Less than
0~10 ±0.1
10~50 ±0.15
50~100 ±0.2
100~ ±0.25
Angles ±1°
DRAWN 鄧紹兵 DATE 2007.06.11
ENGINEER 鄧紹兵 DATE 2007.06.11
CHECKED 周建根 DATE 2007.06.11
APPROVAL 周景華 DATE 2007.06.11
Sheet-of 1/1
Unit mm
Size A4
Scale
Cooler Master Co.,Ltd
正式圖面
DATE 2007.06.11

E-Ring

Material : SK5

Hardness:45~50HRC

Finished: Nickel-Plating



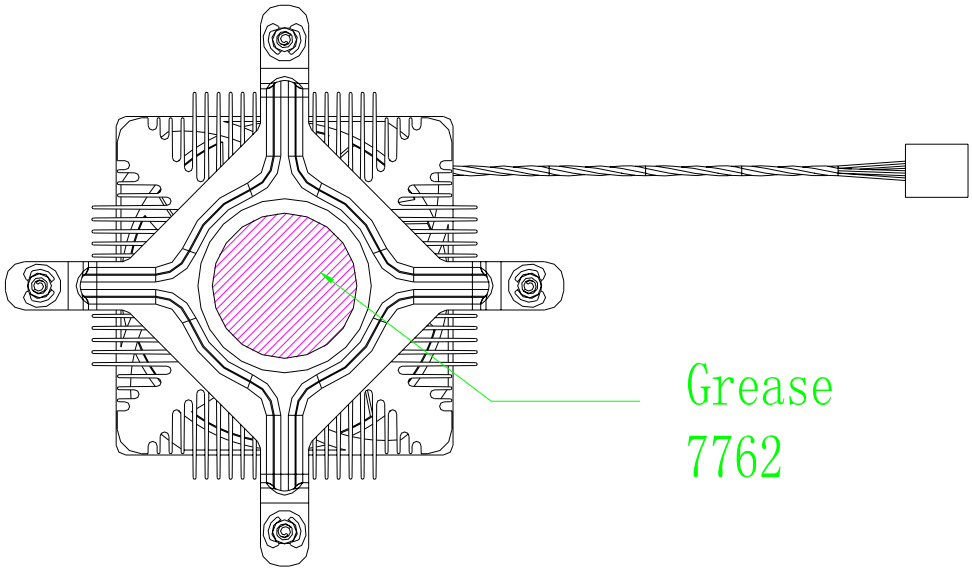
General Dimension Tolerances (Unit : mm)			
0	—	30	± 0.2
31	—	60	± 0.3
61	—	100	± 0.4
101	and	Over	± 0.5
Angles			± 2°

Grease -7762

SIZE mm: ∮30**mm**

Thickness : 0.1 ~ 0.2 mm

Specification	Brand
7762	ShinEtsu



Shin-Etsu

X-23-7762

Thermal Interface Material

Description of Use

Thermal grease (X-23-7762) is a thermal interface material developed by Shin-Etsu Chemical Co., Ltd. to meet the current and future thermal management requirements of high performance microprocessors. It is used to increase heat sink effectiveness by closing the air gap existing between the top of the processor and the fan heat sink. Air is a thermal insulator with a thermal conductivity of 0.027W/mK. The grease is applied to the raised area on top of the processor after the processor is in the socket. The fan heat sink is centered on the processor top, with the raised areas on the bottom of the heat sink and the processor top aligned. The fan heat sink is firmly pressed to evenly distribute the thermal grease until the metal of the heat sink is felt against the metal of the processor top. The excess grease can be removed by wiping with a soft cloth.

Typical Physical Properties

Appearance	Gray
Viscosity (25C)	1700 Poise
Bulk Thermal Conductivity	More than 4 W/mK (with solvent) More than 6 W/mK (w/o solvent, as X-23-7732)
Volatile Content (150C x 24hrs)	2.5%

Handling instruction

1. Suggest to store the material under 10 deg C. Once open the lid, please use it up as soon as possible.
2. Require stirring the material up before using.
3. X-23-7762 contains 2wt% of solvent as a diluted component for application of screen-printing. Therefore, require removing solvent after putting 7762 on substrate. Recommendable curing condition: 60 deg C x 30min

Fan

规格承认书
SPECIFICATION FOR APPROVAL

一. 普通规格(General Specification)

项目(Item)		规格/条件(Specification/Condition)	
1.1	编号(Products NO.)	DF0701512B2HN-GP	
1.2	外形尺寸(Outline)	70*70*15mm	
1.3	额定电压(Rated Voltage)	DC 12V	
1.4	操作电压(Operating Voltage Range)	10.8~13.2V	
1.5	起动电压(Starting Voltage)	DC 7V.MAX(占空比10%)	a. 额定电压(Rated Voltage) b. 25° C,65% RH
1.6	额定电流(Rated Current)	0.24A+10%MAX	
	制动电流(Locked Current)	0.42A+10%MAX	
	安规电流(Safty Current)	0.34A+10%MAX	
1.7	消耗功率(Power Consumption)	2.88W	a.25° C,65%RH b.自由空气(Free Air) c.额定电压(Rated Voltage)
1.8	转速(Speed)	占空比100%时 3800±10%R.P.M	
1.9	PWM频率	25±2KHZ	
1.10	最大风量(Max. Airflow)	27.8CFM(ft^3/min)	a.额定电压(Rated Voltage) b.AMCA标准(Standard) c.额定电流(Rated Current)
1.11	最大静压(Max. Static Pressure)	3.06mm-H_2O	
1.12	噪音水准(Noise Level)	35.8dB(A)	a.额定电压(Rated Voltage) b.无音室测试(Measured in a Non-Echo Chamber) c.CNS 8753 标准(Standard) d.ISO 3744 测试条件(Test Condition)
1.13	寿命(Life)	70,000/hrs 25° C	MTBF(Mean Time to Failure) Conf.Level 90%
1.14	扇叶数(No.of Blade)	11叶(Blades)	
1.15	磁极数(No.of Pole)	4极(Poles)	
1.16	运转方向(Rotating Direction)	逆时针	

二. 电气规格(Electrical Specification)

项目(Item)		规格/条件(Specification/Condition)
2.1	风扇旋转锁定 (Fan leaf spins to lock)	在额定电压下锁住扇叶24小时,当锁定解除后风扇仍能正常运转. (After specified voltage locks fan leaf for 24 hours,will lock to relieve, fan can still operate normally.)
2.2	极性保护 (Polarity Protection)	Vcc与GND反接时,回路不烧毁. (Circuit is protected when Vcc & GND are exchanged)
2.3	绝缘阻抗 (Insulation Resistance)	10MΩ/裸线与外框间测量,500VDC/min. (10MΩ/b/W unshielded wire and frame at 500VDC/min)
2.4	绝缘.耐压 (Dielectric Strength)	0.05mA MAX/ 导线与外框间测量,500VAC/min. (0.05 mA MAX/Measured b/w lead wire (+) and frame at 500VAC/MIN.

Page 2

主要材料/零件规格(Main Materials/parts Specification)

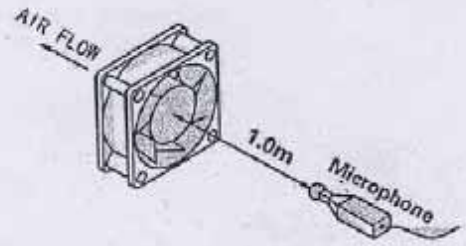
	材料/零件(Materials/Parts)	材质规格(Specification)	安规编号 (File NO)	供应商 (Provider)
3.1	外框(Plastic Material)	a.94-V0 黑色TwoBall方框 b.P.B.T+30%GF Black		宏宝
3.2	扇叶(Blade housing)	a.94-V0 黑色TwoBall 11叶. b.P.B.T+15%GF Black		宏宝
3.3	绝缘架(Bobbin)	a.94-V0 b.P.B.T+30%GF Black		宏宝
3.4	轴芯(stator core)	不锈钢 Stainless steel(SUS420J2)		腾智
3.5	轴承(Bearing)	双滚珠轴承 TwoBall Bearing		华亿
3.6	橡胶磁铁(Rubber magnet)	铁锶粉末化合物 Strontium ferrite(BQB14W)		保磁
3.7	矽钢片(Silicon steel strip)	H23		欣锋
3.8	漆包线(Enamelled copper wires)	MW-2UEW		华荣
3.9	印刷电路板(Printed Circuit Board)	半玻纤单层印刷电路板 94V0 Wiring printed single layer board		鑫华
3.10	电源线(Lead Wire)	UL1015 #22AWG, (+)红色, (-)黑色, (F)黄色, (PWR)蓝色 总长度(Total length):240±10mm, 外露长度(Outside dew length):200±10mm.		金格
3.11	连接器(Connector housing)	2.54-4P 白色端子		金格
3.12	贴纸(Label)	多元脂 Polyester		卷景

4.环境测试(Environmental Specification)

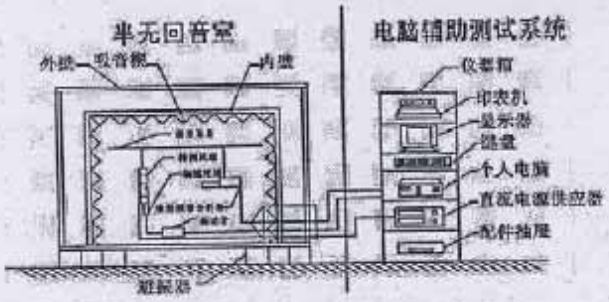
	项目(Item)	规格/条件(Specification/Condition)
4.1	工作温度/湿度范围 (Operation Temp Range)	温度/Temperature:-10° C~+65° C 湿度/Humidity:35%~85%RH
4.2	保存温度/湿度范围 (Storage Temperature)	温度/Temperature:-30° C~+75° C 湿度/Humidity:35%~85%RH
4.3	耐湿性 (Humidity)	试验后,电气规格依据MIL-STD 202F Method 103b,寿命:96小时;湿度:95%;温度:40±2° C (Per MIL-STD 202F Method 103b;Life:96hours; Humidity:95%RH;Temperature:40±2° C)
4.4	热冲击 (Thermal Shock)	试验后,电气规格依据MIL-STD 202F Method 107D (Per MIL-STD 202F Method 107D;Condition D)
4.5	绝缘等级 (Insulation Class)	ULA级 (UL Class A)
4.6	包装耐振动实验 (Packing Vibration Test)	包装后,XYZ三方向施1.1G加速振动30分钟后,无异状. (Packing Condition:X,Y,Z3diredtions,1.1G load vibration test for 30 min)
4.7	包装耐冲击实验 (Packing is impulse withstand to Test)	捆包状态下,高60cm,1棱角3边6面自然落下,无异状. (Bundle bale is 60cm high under state,in 1 edge and 3 sides,6 surfaces fall naturally,is the same as frequently phenomenon occur.)

Page 3

音测试说明 Accoustic sound level test descriptions
定电压在噪音实验室中测试背景噪音为17dB(A). At rated voltage in sound proof room Background proof
om baclground noise:17dB(A).

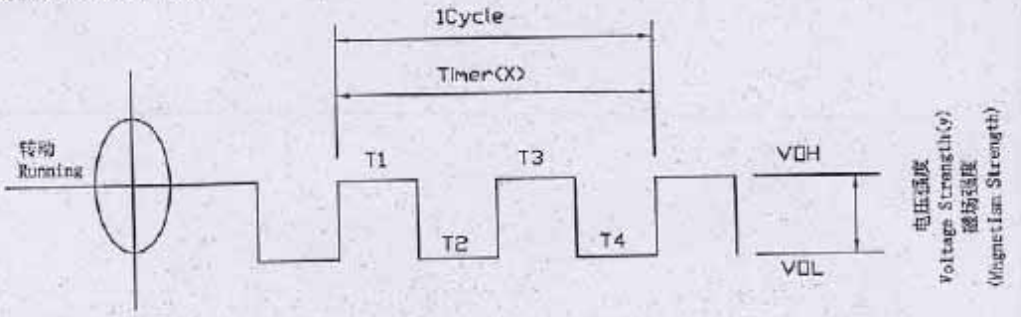


噪音测试方法图示



噪音测试系统图示

6. 转速侦测 RPM detection



T=T1+T2=T3+T4

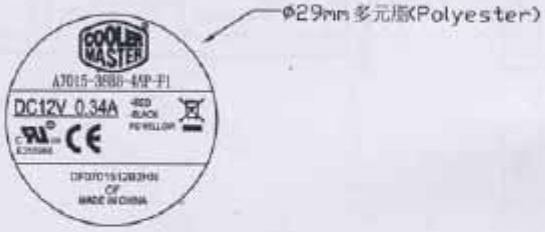
[说明]

1. 输出波形:方波. Output waveform:square wave.
2. 当电压值越高(值),则输出波形越高. When the voltage is higher(voltagY) then output waveform is higher.
3. 当风扇不转动,则输出波形为一水平线. When the fan is shutdown then output.
4. 循环距离越长(值),则转速越慢. The cyclic distance is longer then the RPM is slower.
5. 转速计算公式如下:RPM formula as follows:
RPM=60000/X(ms)

Page 4

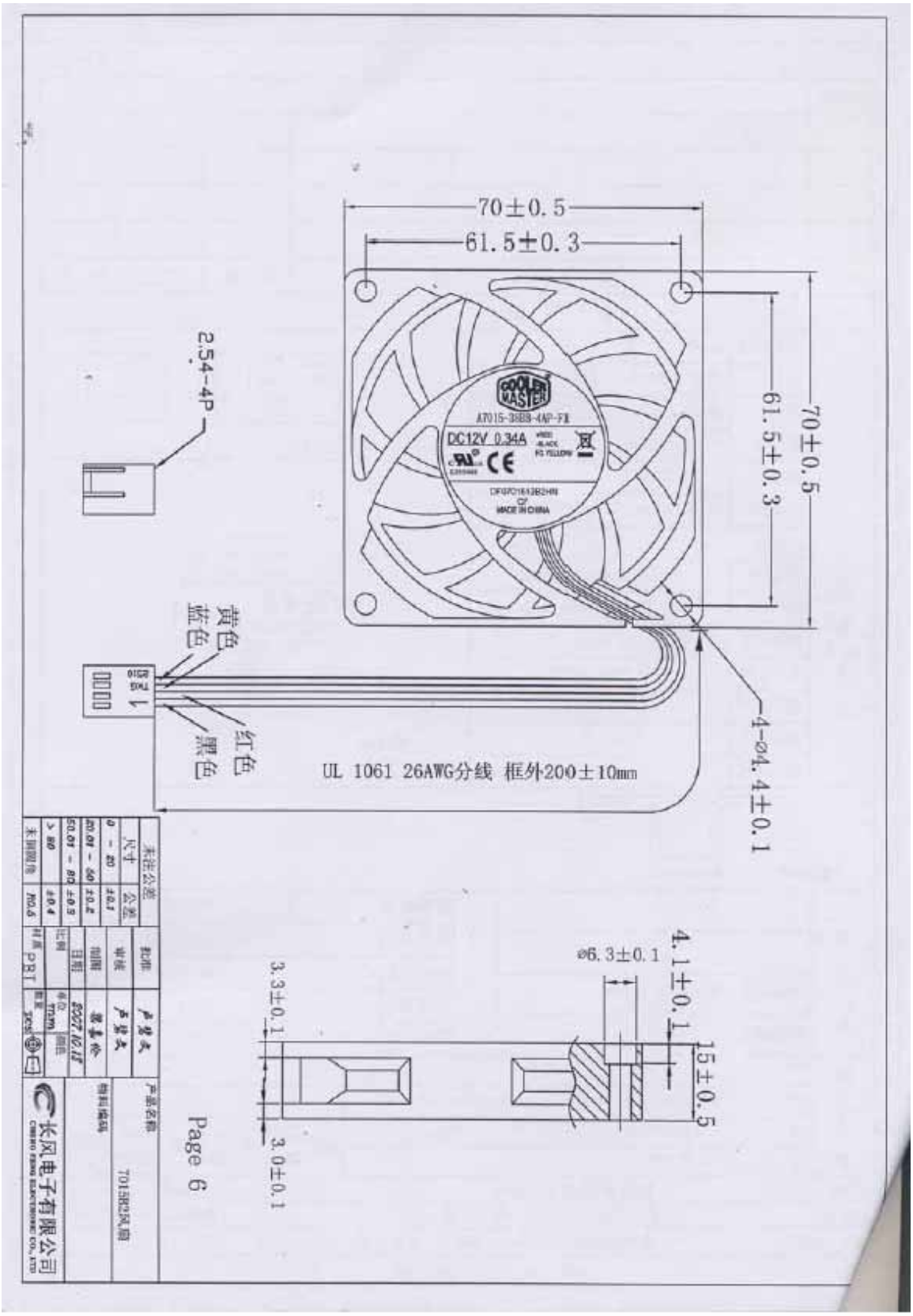
7. 标签(label)

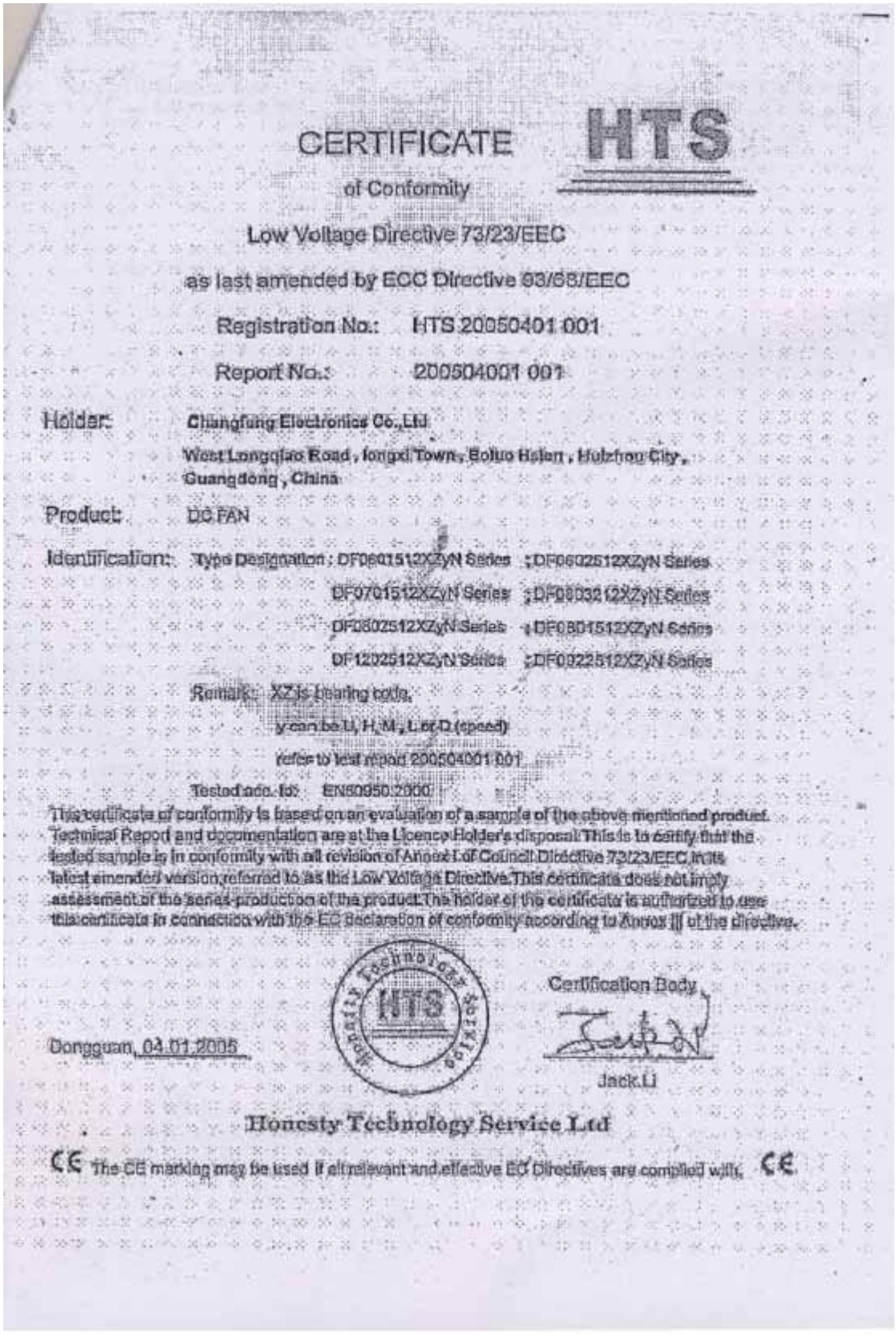
安规认证:
CE file No.:HTS 20050403 001
UL file No.:E255988-CF



8. 包材(Packing)

Page 5


70±0.5
61.5±0.3
2.54-4P
61.5±0.3
70±0.5
黄色
蓝色
红色
黑色
UL 1061 26AWG分线 框外200±10mm
4-ø4.4±0.1
ø6.3±0.1
4.1±0.1
3.3±0.1
15±0.5
3.0±0.1
Page 6



CERTIFICATE HTS

of Conformity

Low Voltage Directive 73/23/EEC

as last amended by ECC Directive 93/68/EEC

Registration No.: HTS 20050401 001

Report No.: 200504001 001

Holder: Chiangfung Electronics Co.,Ltd

West Longqiao Road, longxi Town, Boluo Hsien, Huizhou City, Guangdong, China

Product: DC FAN

Identification: Type Designation : DF0801512XZyN Series ;DF0602512XZyN Series

DF0701512XZyN Series ;DF0803212XZyN Series

DF0802512XZyN Series ;DF0801512XZyN Series

DF1202512XZyN Series ;DF0922512XZyN Series

Remark: XZ is bearing code,

y can be U, H, M, L or D (speed)

refer to test report 200504001 001

Tested acc. to: EN60950:2000

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with all revision of Annex I of Council Directive 73/23/EEC in its latest amended version,referred to as the Low Voltage Directive.This certificate does not imply assessment of the series-production of the product.The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex III of the directive.

Honesty Technology Service Ltd HTS

Certification Body

Dongguan, 04.01.2005

Jack.Li

Honesty Technology Service Ltd

CE The CE marking may be used if all relevant and effective EC Directives are complied with. CE

Underwriters Laboratories Inc.®

Northbrook Division
333 Pfingsten Road
Northbrook, IL 60062-2096 USA
www.ul.com
tel: 1 847 272 8800
fax: 1 847 272 8129
Customer service: 1 877 854 3577

File E254834 Vol 1 Issued: 2005-06-10
Revised:

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

COMPONENT - FANS, ELECTRIC
(QPWV2,QPWV8)

Manufacturer: SEE ADDENDUM FOR MANUFACTURING LOCATIONS

Applicant: (133458-001)
CHANG FENG ELECTRONICS CO LTD
5TH FL
14 LANE 609 CHUNG HSIN RD, SEC 5
SAN CHUNG
TAIWAN

Recognized Company: (133593-001)
CHANG FENG ELECTRONICS CO LTD (E255988)
WEST LONGQIAO RD
LONGMI TOWN
BOLUO HSIEN
HUIZHOU,
GUANGDONG CHINA

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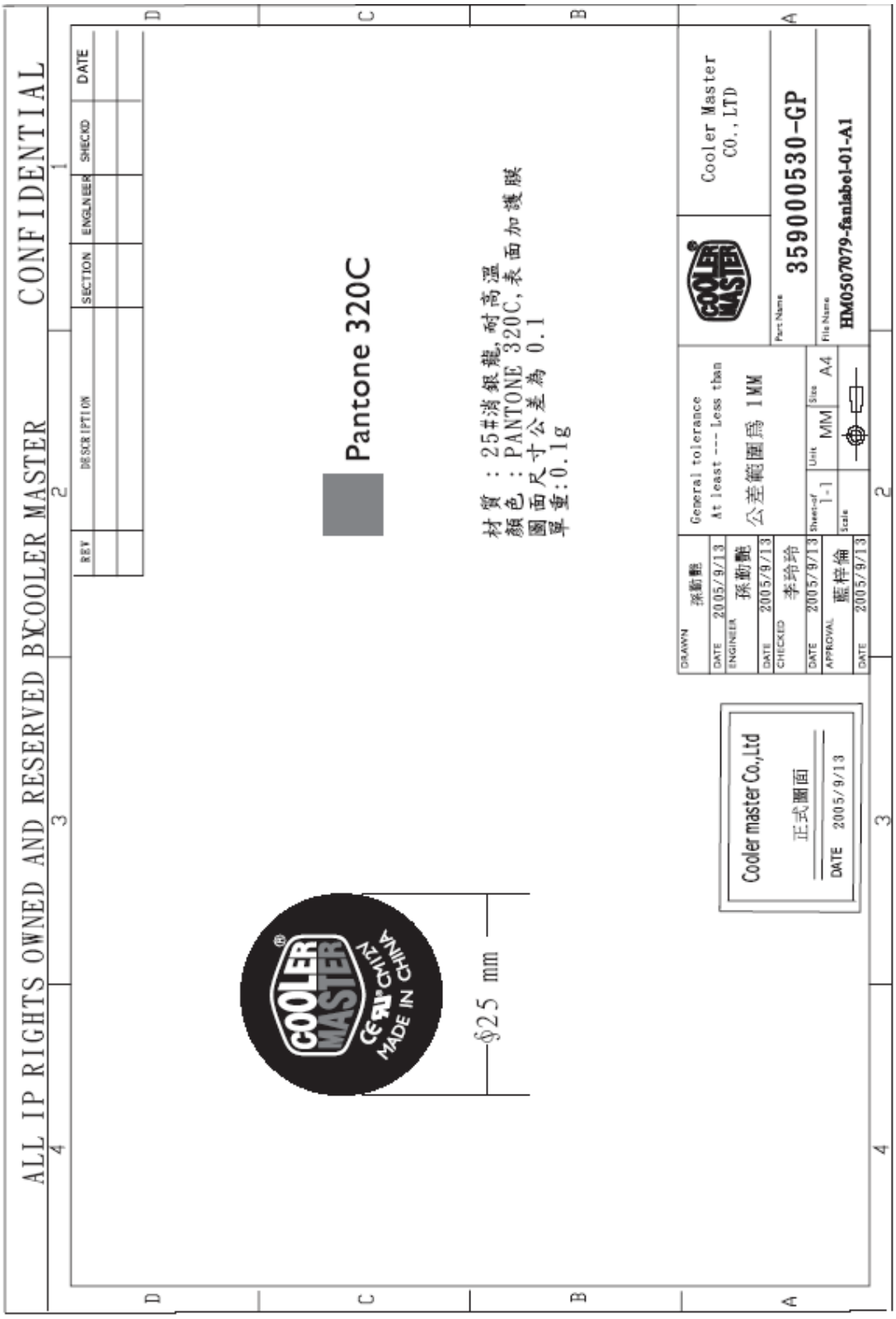
UNDERWRITERS LABORATORIES INC.

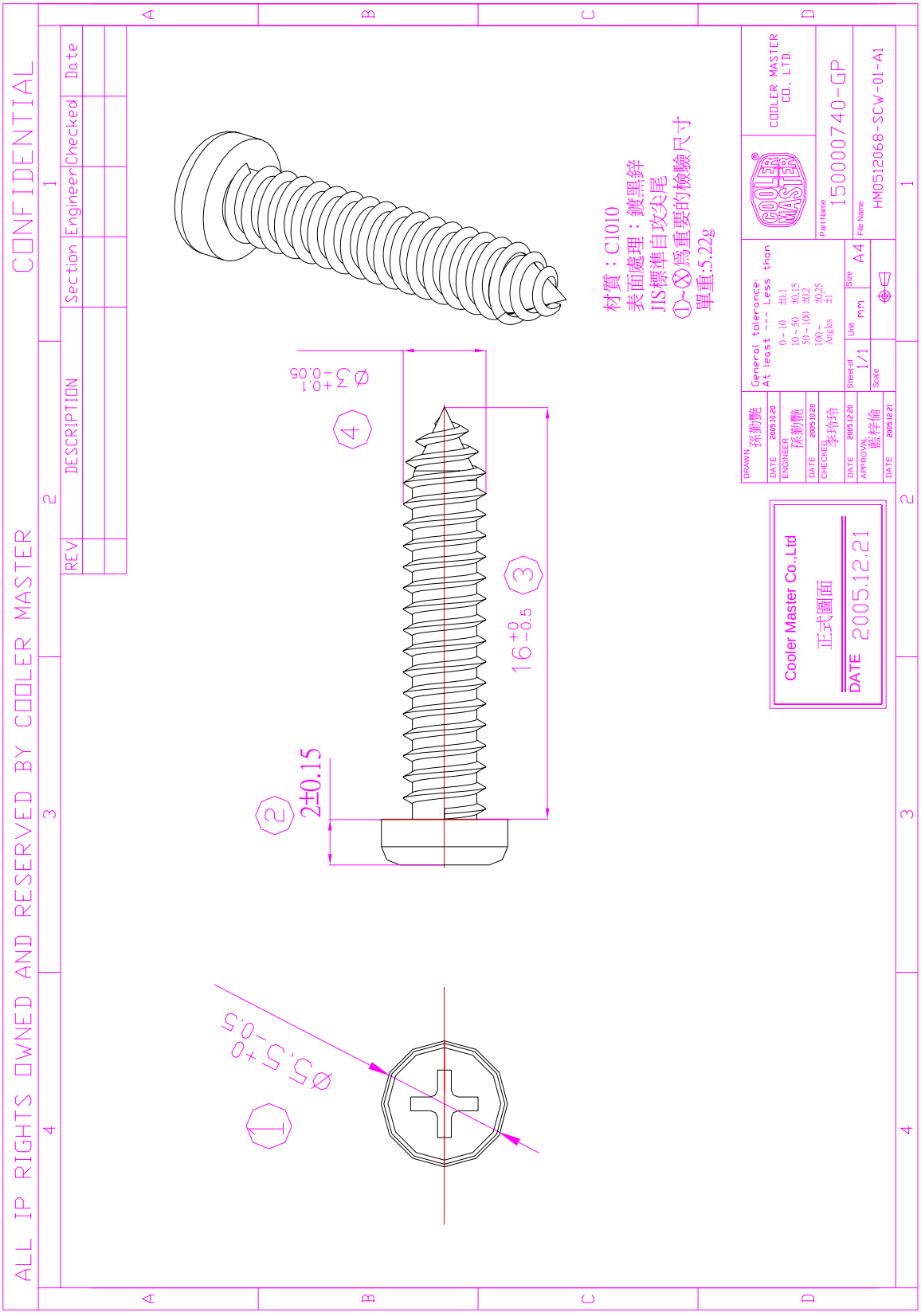
Rajeev Jesudas
Chief Operating Officer

An independent organization working for a safer world with integrity, precision and knowledge

Fan Label


CONFIDENTIAL
ALL IP RIGHTS OWNED AND RESERVED BY COOLER MASTER
REV
DESCRIPTION
SECTION
ENGINEER
CHECKED
DATE
Pantone 320C
材質：25#消銀龍,耐高溫
顏色：PANTONE 320C,表面加護膜
圖面尺寸公差為 0.1
單重:0.1g
φ25 mm
MADE IN CHINA
DRAWN 孫勤龍 2005/9/13
ENGINEER 孫勤龍 2005/9/13
CHECKED 李玲玲 2005/9/13
APPROVAL 藍梓倫 2005/9/13
General tolerance
At least --- Less than
公差範圍爲 1MM
Unit MM
Size A4
Sheet-of 1-1
Scale
Cooler Master CO., LTD
Part Name 35900530-GP
File Name HM0507079-fanlabel-01-A1
Cooler master Co.,Ltd
正式圖面
DATE 2005/9/13

Screw


CONFIDENTIAL
ALL IP RIGHTS OWNED AND RESERVED BY COOLER MASTER
REV
DESCRIPTION
Section
Engineer
Checked
Date
材質：C1010
表面處理：鍍黑鋅
JIS標準自攻尖尾
①~④爲重要的檢驗尺寸
單重:5.22g
COOLER MASTER CO., LTD.
Part Name
150000740-GP
File Name
HM051206B-SCW-01-A1
General tolerance:
At least --- Less than
0 ~ 10 ±0.1
10 ~ 50 ±0.15
50 ~ 100 ±0.2
100 ~ Angles ±0.25 ±1°
Size A4
Unit mm
Sheet of 1/1
Scale
DRAWN 孫鄭艷 2005.10.20
ENGINEER 孫鄭艷 2005.10.20
CHECKED 李玲玲 2005.12.20
APPROVAL 藍梓倫 2005.12.21
Cooler Master Co.,Ltd
正式圖面
DATE 2005.12.21
Ø5.5 +0.5 -0.5
Ø3 +0.1 -0.05
16 +0 -0.5
2±0.15
①
②
③
④

Package

Inside of Carton :
12 pcs in One Layer
24 pcs / Ctn