



Cooler Master Co., Ltd.

www.coolermaster.com

Product Data Sheets

Customer : 騰網Customer Part No.: ECC-00725-F1-GPProject Name: /CoolerMaster Model No. : ECC-00725-01-GPEdition: AIssued Date: 2023/08/09

Revision History :			
Date of Release	Revision No.	Description	
2023/08/09	A	Nidec 風扇 EOL,改用 Delta 風扇 來取代	
Customer		Cooler Master	
Approved by	Sales	Checked by	Drafted by
	Tiffany	Zhouhh	Tianjun Lan
Date:	Date: 2023/08/09	Date: 2023/08/09	Date: 2023/08/09



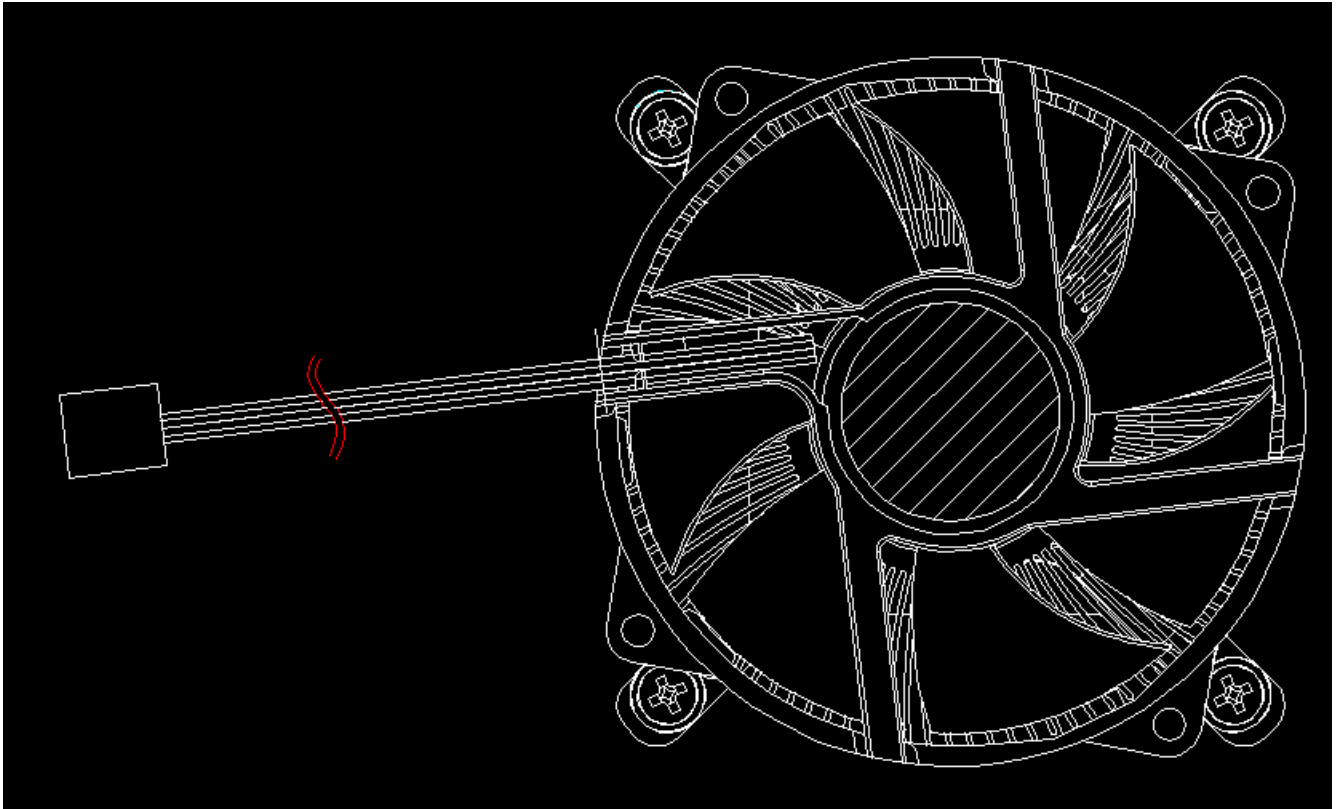
1.Component List

8	731000120-GP2	風扇	PBT94V-0	1	4200R.P.M
7	330007772-GP	背板	SPCC	1	作為附件
6	520000220-GP	導熱膏	7783D	0.25g	ø24
5	300002012-GP	C型扣	SK5	4	鍍鎳
4	500001371-GP	墊片	SPCC	4	鍍藍鋅
3	450005900-GP	彈簧	SWPB	4	鍍鎳
2	150019050-GP	螺絲	AISI1018	4	鍍鎳
1	601007940-GP	散熱片	AL+CU+S50C	1	
序號	料號	名稱	材質	數量	備注



2. Whole Set Dimension

2.1 Product Photo





3.Component Drawing

3.1 COOLER

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CONFIDENTIAL VER:A1

REV	DESCRIPTION	Section	Engineer	Checked	Date

7.背板作為附件

Note:

- 扣合壓力30-45磅
- 生產工藝裝配
- 裝配完成後風扇和腳架不可有鬆動
- 其餘尺寸參照子件圖
- 標注①、②為重點檢驗尺寸
- 滿足RoHS2.0 2015/863/EU 10項要求

6.導熱膏7783D
(厚度0.1-0.2mm)

$\phi 24 \pm 0.5$

Cooler Master Co., Ltd.

正式圖面

DATE: 2009/10/12

序號	料號	名稱	材質	數量	備注
7	330007772-GP	背板	SPCC	1	作為附件
6	520000220-GP	導熱膏	7783D	0.25g	O24
5	300002012-GP	C型扣	SK5	4	鍍鎳
4	500001371-GP	墊片	SPCC	4	鍍藍鋅
3	450005900-GP	彈簧	SWPB	4	鍍鎳
2	150019050-GP	螺絲	AISI1018	4	鍍鎳
1	601007940-GP	散熱片	AL+CU+S50C	1	

DRAWN	楊進林	TOL =	General tolerance:		COOLER MASTER CO., LTD.
DATE	2009.10.12	Range	Don't use the crossed items		
ENGINEER	楊進林	0-10	0.1 0.1 0.15 0.2 0.3		
DATE	2009.10.12	10-30	0.15 0.2 0.25 0.3 0.4		
CHECKED	甘雪暉	30-50	0.2 0.3 0.35 0.4 0.6		
DATE	2009.10.12	50-100	0.25 0.4 0.4 0.6 0.8	Part Name	801014350-GP2
APPROVAL	甘雪暉	100-	0.3 0.5 0.6 0.8 1.0	File Name	9808R052-COOLER-01-A1
DATE	2009.10.12	Angles	1' 2' 3' 3' 5'	Scale	1/1
		Sheet of	Unit	Size	A4
		1/1	mm		



3.2 HS

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REV	DESCRIPTION	Section	Engineer	Checked	Date
△	HS 剖溝處修改結構為卡鉤方式	C-3	黃力君	甘雪暉	2011.1.15

技術要求

- 加工方式 熱塞
- 熱塞后腳架四個腳的高度要求全檢
- 標注 ① - ④ 為重點檢驗尺寸
- 滿足RoHS2.0 2015/863/EU 10項要求

3	280001011-GP	銅柱	C1100	1	抗氧化
2	450006460-GP	腳架	S50C	1	電鍍鍍
1	250015210-GP	散熱片	AL6063 T5	1	洗毛刺

序號	料號	名稱	材質	數量	備註
3	280001011-GP	銅柱	C1100	1	抗氧化
2	450006460-GP	腳架	S50C	1	電鍍鍍
1	250015210-GP	散熱片	AL6063 T5	1	洗毛刺

Cooler Master Co., Ltd
正式圖面
DATE 2009.08.10

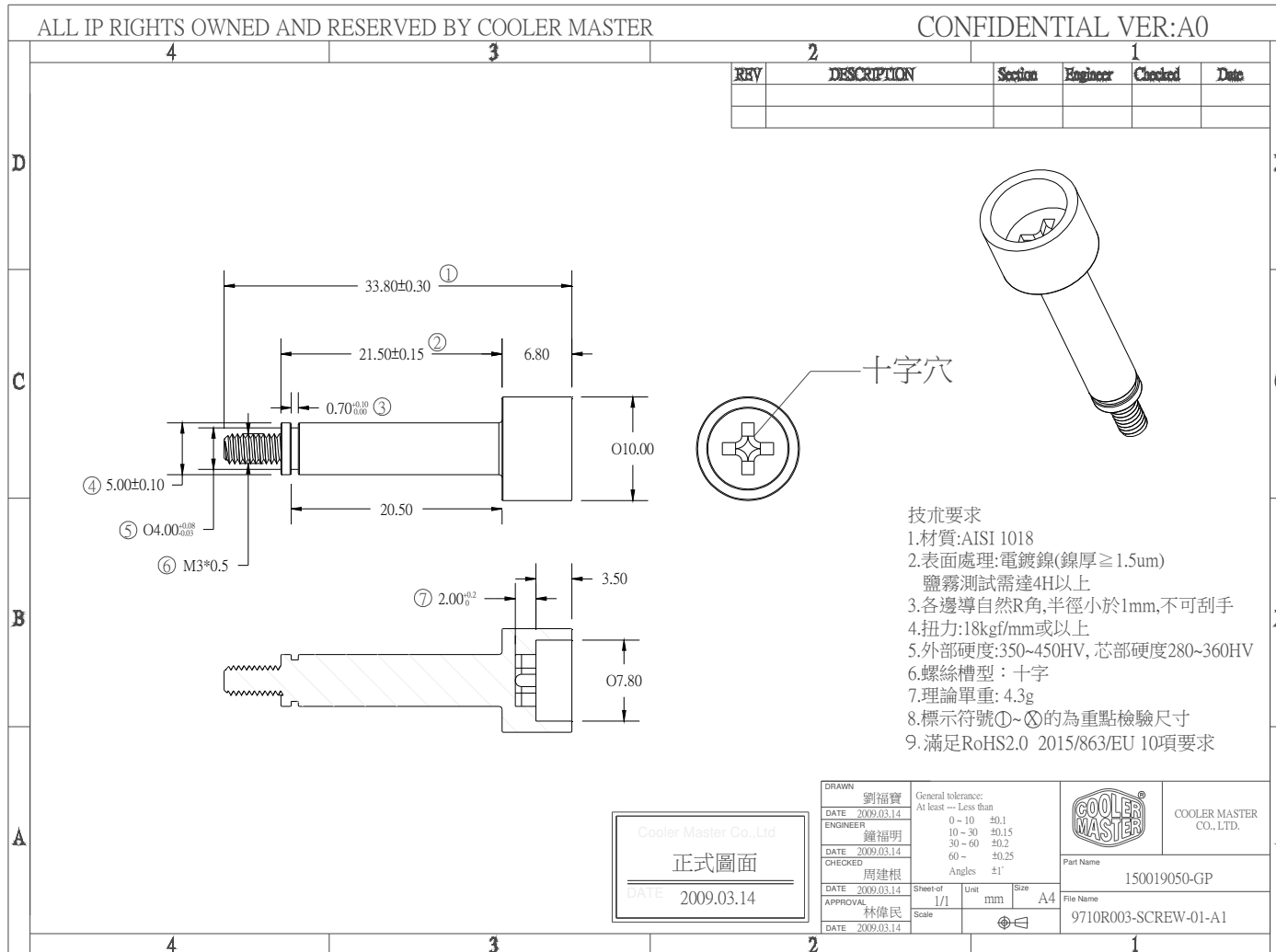
COOLER MASTER
CO., LTD.
Part Name: 601007940-GP
File Name: 9804R021-HS-01-A2

DATE	ENGINEER	CHECKED	APPROVAL	DATE
2009.08.10	鄧方舒	甘雪暉	甘雪暉	2009.08.10

TOL.±	General tolerance: Don't use the crossed items				
Range	0-10	10-30	30-50	50-100	100~
0-10	0.1	0.15	0.2	0.25	0.3
10-30	0.15	0.2	0.25	0.3	0.4
30-50	0.2	0.3	0.35	0.4	0.6
50-100	0.25	0.4	0.4	0.6	0.8
100~	0.3	0.5	0.6	0.8	1.0
Angles	1°	2°	3°	3°	5°
Scale	1:1	1:1	1:1	1:1	1:1

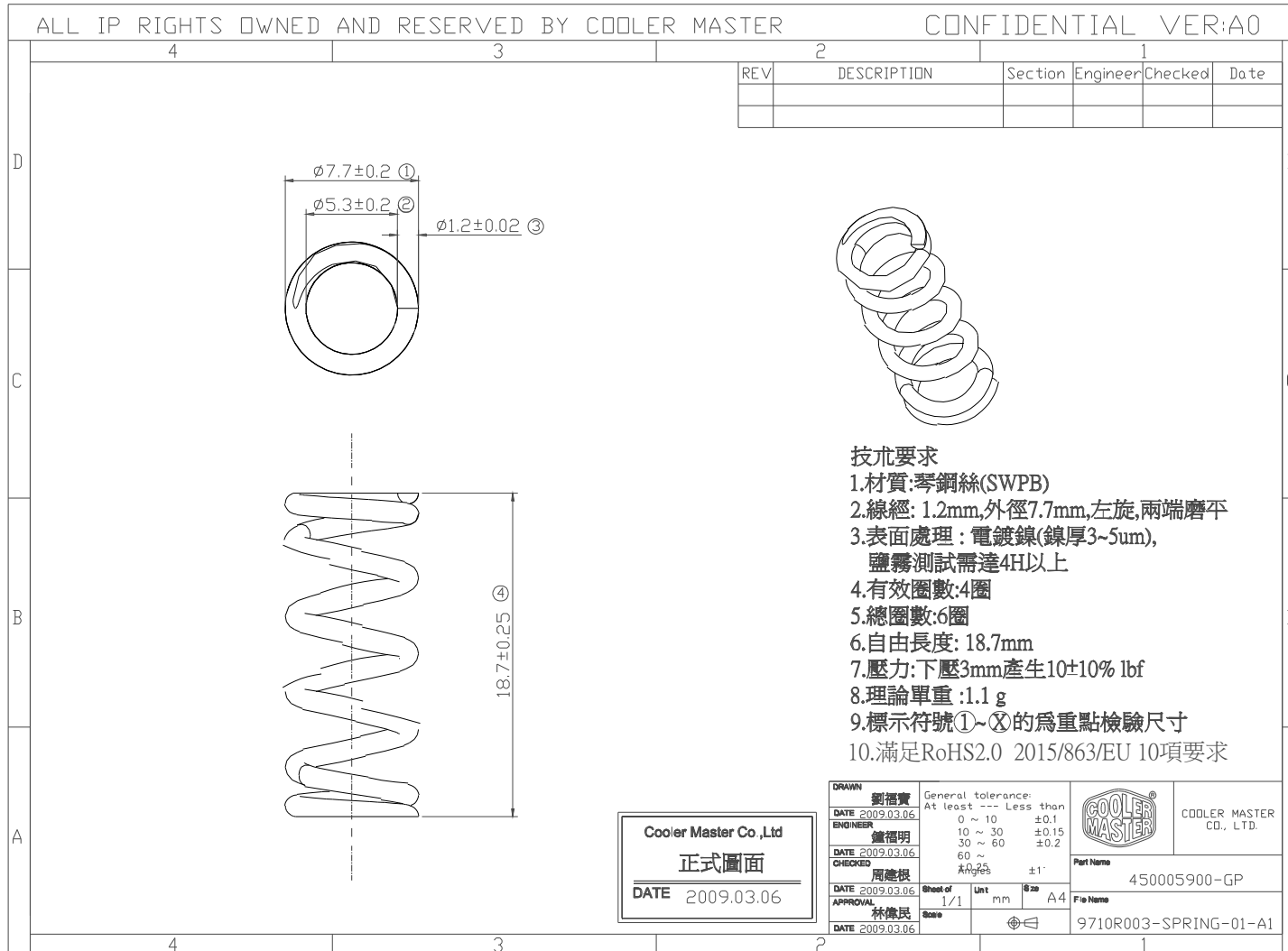


3.4 FIN



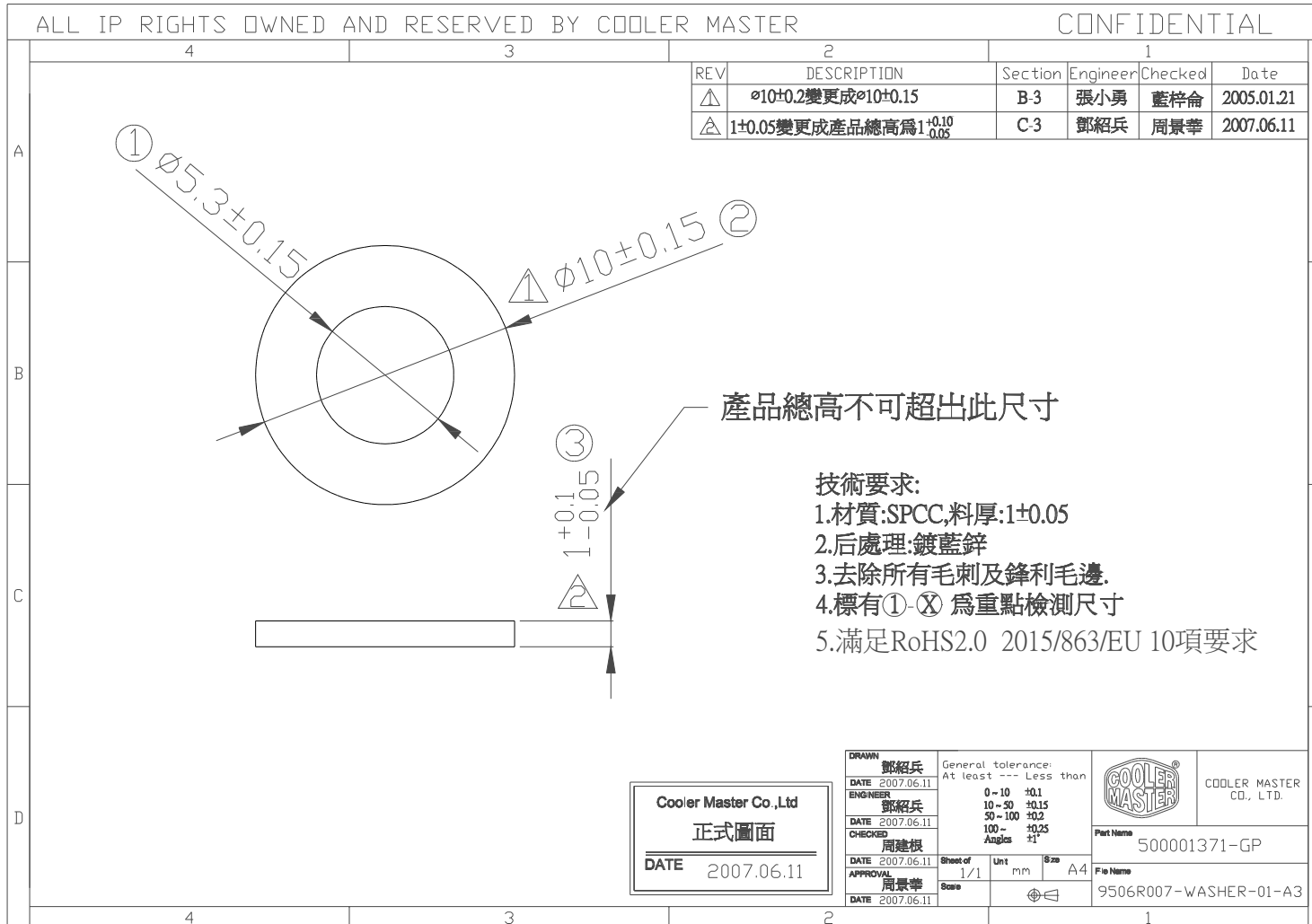


3.5 BASE2



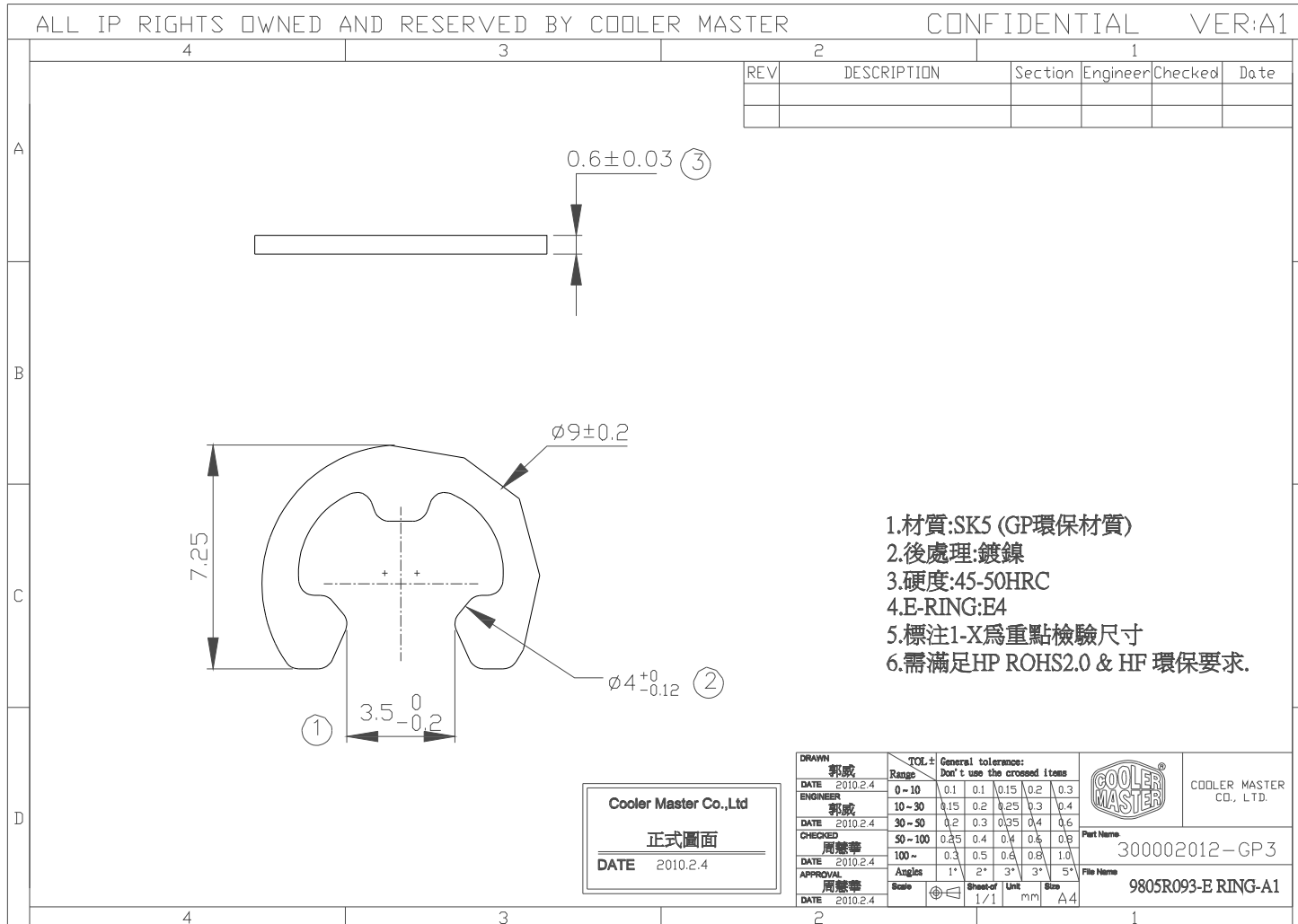


3.6 BASE





3.6 BASE





3.6 BASE

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REV	DESCRIPTION	Section	Engineer	Checked	Date
△	增加絕緣片	B-2	楊進林	甘雪暉	2009/12/04

Note:

- 1.表面不可有油污殘留,不可以有毛邊及刮傷
- 2.標示 ①~② 為重點檢驗尺寸

REV	DESCRIPTION	Material	Quantity	Notes
2	9808R052-Insulator-01-A3	Insulator	PET	1
1	9808R052-Back plate-01-A3	Back plate	SPCC,SAE1215	1 電鍍線

序號 料號 名稱 材質 用量備注

COOLER MASTER CO., LTD.

COOLER MASTER Co., Ltd.

正式圖面

DATE 2010/01/13

DRAWN	楊進林	TOL #	General tolerance: Don't use the crossed items
DATE	2010/01/13	Range	
ENGINEER	楊進林	0 - 10	0.1 0.1 0.15 0.2 0.3
DATE	2010/01/13	10 - 30	0.15 0.2 0.25 0.3 0.4
CHECKED	甘雪暉	30 - 50	0.2 0.3 0.35 0.4 0.6
DATE	2010/01/13	50 - 100	0.25 0.4 0.4 0.6 0.8
APPROVAL	甘雪暉	100 -	0.3 0.5 0.6 0.8 1.0
DATE	2010/01/13	Angles	1' 2' 3' 3' 5'
		Sheet-of	Unst Size
		1:1	2/3 mm A4

Part Name: 330007772-GP

File Name: 9808R052-Back plate asm-01-A3



DELTA ELECTRONICS, INC.
252, SHANG YING ROAD, KUEI SAN
TAOYUAN HSIEN 333, TAIWAN, R. O. C.

TEL : 886-(0)3-3591968
FAX : 886-(0)3-3591991

STATEMENT OF DEVIATION

NONE

DESCRIPTION :



DELTA ELECTRONICS, INC.
 252, SHANG YING ROAD, KUEI SAN TEL : 886-(0)3-3591968
 TAoyUAN HSIEN 333, TAIWAN, R. O. C. FAX : 886-(0)3-3591991

SPECIFICATION FOR APPROVAL

Customer:	COOLER MASTER	
Description:	DC FAN	
Customer P/N:	200007180-GP	REV:
Delta Model NO.:	AFB0912VH-4E91	Delta Safety Model NO.:AFB0912VH
Sample Rev:	07	Issue NO:
Sample Issue Date:	JUN-17-2022	Quantity:

1. SCOPE:

THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THE DC BRUSHLESS AXIAL FLOW FAN. THE FAN MOTOR IS WITH SINGLE PHASE AND FOUR POLES.

2. CHARACTERS:

ITEM	DESCRIPTION
RATED VOLTAGE	12.0 VDC
OPERATION VOLTAGE	7.0 - 12.5 VDC
INPUT CURRENT	0.40 (MAX. 0.60) A (SAFETY CURRENT 0.60A)
INPUT POWER	4.80 (MAX. 7.20) W
SPEED	4500±10% R.P.M.
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	1.634 (MIN. 1.471) M ³ /MIN. 57.70 (MIN. 51.93) CFM
MAX. AIR PRESSURE (AT ZERO AIRFLOW)	8.60 (MIN. 6.97) mmH ₂ O 0.338 (MIN. 0.274) inchH ₂ O
ACOUSTICAL NOISE (AVG.)	47.5 (MAX. 51.5) dB-A
INSULATION TYPE	UL: CLASS A

(continued)

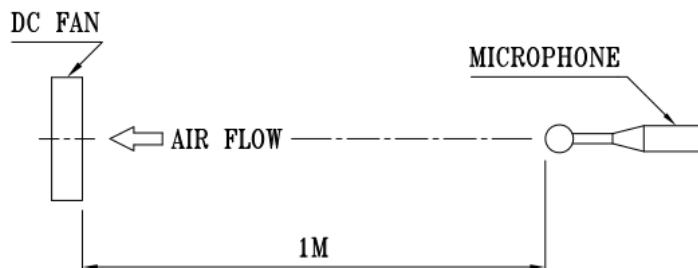


PART NO: 200007180-GP

DELTA MODEL: AFB0912VH-4E91

INSULATION STRENGTH	10 MEG OHM MIN. AT 500 VDC (BETWEEN FRAME AND (+) TERMINAL)
DIELECTRIC STRENGTH	5 mA MAX. AT 500 VAC 50/60 Hz ONE MINUTE, (BETWEEN FRAME AND (+) TERMINAL)
EXTERNAL COVER	OPEN TYPE
LIFE EXPECTANCE	70,000 HOURS CONTINUOUS OPERATION AT 40 °C WITH 15 ~ 65 %RH.
ROTATION	CLOCKWISE VIEW FROM NAME PLATE SIDE
OVER CURRENT SHUT DOWN	THE CURRENT WILL SHUT DOWN WHEN LOCKING ROTOR
LEAD WIRE	UL 1061 -F- AWG #26 BLACK WIRE:NEGATIVE(-) RED WIRE:POSITIVE(+) YELLOW WIRE:TACHOMETER OUTPUT (FOO) BLUE WIRE:SPEED CONTROL (PWM)

- NOTES: 1. ALL READINGS ARE MEASURED AFTER STABLY WARMING UP THROUGH 10 MINUTES.
2. STANDARD AIR PROPERTY IS AIR AT (Td) 25°C TEMPERATURE, (RH) 65% RELATIVE HUMIDITY, AND (Pb) 760 mmHg BAROMETRIC PRESSURE.
3. THE VALUES WRITTEN IN PARENS , (), ARE LIMITED SPEC.
4. ACOUSTICAL NOISE MEASURING CONDITION:



NOISE IS MEASURED AT RATED VOLTAGE IN FREE AIR IN ANECHOIC CHAMBER WITH B & K SOUND LEVEL METER WITH MICROPHONE AT A DISTANCE OF ONE METER FROM THE FAN INTAKE.



PART NO: 200007180-GP

DELTA MODEL: AFB0912VH-4E91

3. MECHANICAL:

- 3-1. DIMENSIONS ----- SEE DIMENSIONS DRAWING
- 3-2. FRAME ----- PLASTIC UL: 94V-0
- 3-3. IMPELLER ----- PLASTIC UL: 94V-0
- 3-4. BEARING SYSTEM ----- TWO BALL BEARINGS
- 3-5. WEIGHT ----- 90 GRAMS

4. ENVIRONMENTAL:

- 4-1. OPERATING TEMPERATURE ----- -10 TO +60 DEGREE C
- 4-2. STORAGE TEMPERATURE ----- -40 TO +70 DEGREE C
- 4-3. OPERATING HUMIDITY ----- 5 TO 90 % RH
- 4-4. STORAGE HUMIDITY ----- 5 TO 95 % RH

5. PROTECTION:

5-1. LOCKED ROTOR PROTECTION

IMPEDANCE OF MOTOR WINDING PROTECTS MOTOR FROM FIRE IN 96 HOURS OF LOCKED ROTOR CONDITION AT THE RATED VOLTAGE.

5-2. POLARITY PROTECTION

BE CAPABLE OF WITHSTANDING IF REVERSE CONNECTION FOR POSITIVE AND NEGATIVE LEADS.

6. RE OZONE DEPLETING SUBSTANCES:

- 6-1. NO CONTAINING PBBs, PBB0s, CFCs, PBBEs, PBDPEs AND HCFCs.

7. PRODUCTION LOCATION

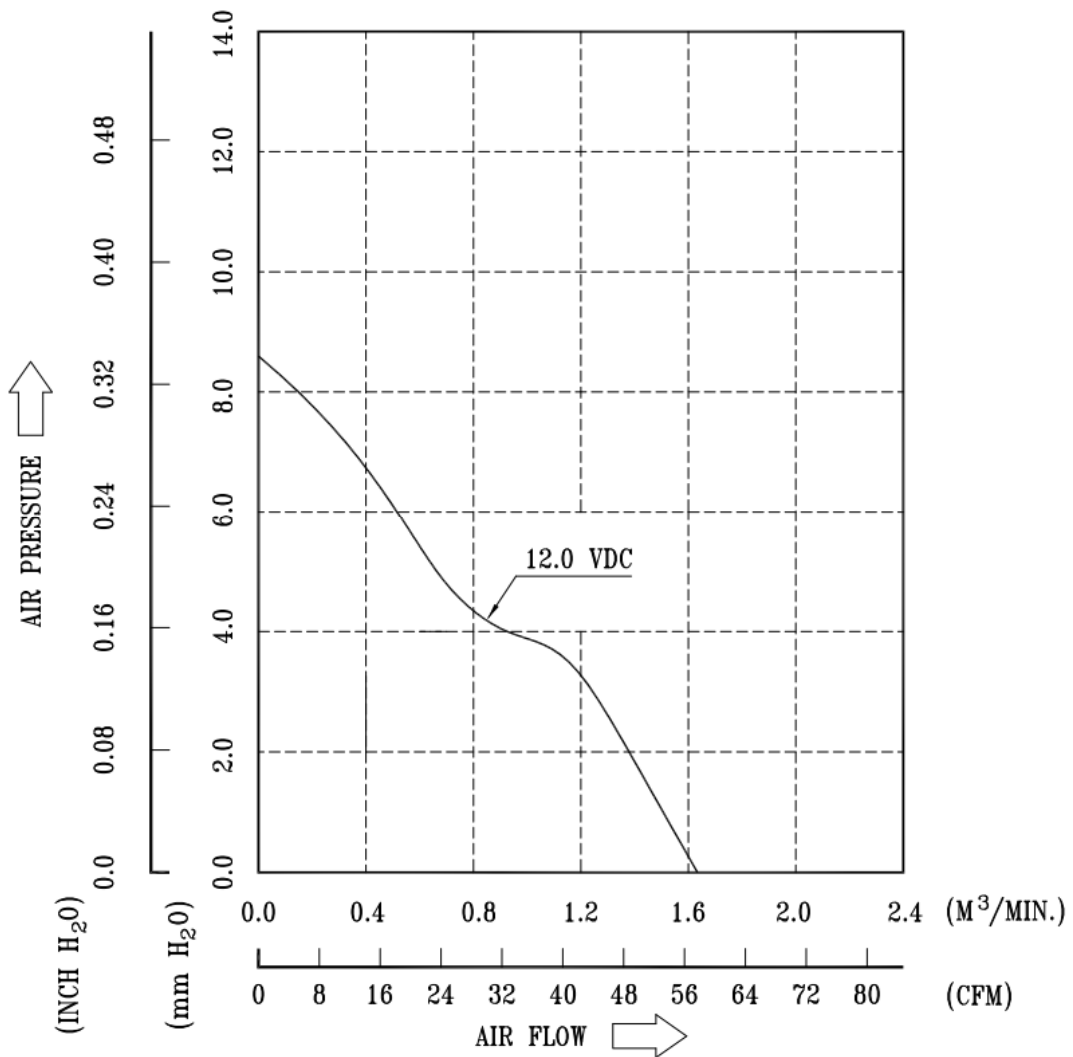
- 7-1. PRODUCTS WILL BE PRODUCED IN CHINA OR THAILAND.



PART NO: 200007180-GP

DELTA MODEL: AFB0912VH-4E91

8. P & Q CURVE:



* TEST CONDITION: INPUT VOLTAGE ----- OPERATION VOLTAGE
TEMPERATURE ----- ROOM TEMPERATURE
HUMIDITY ----- 65%RH

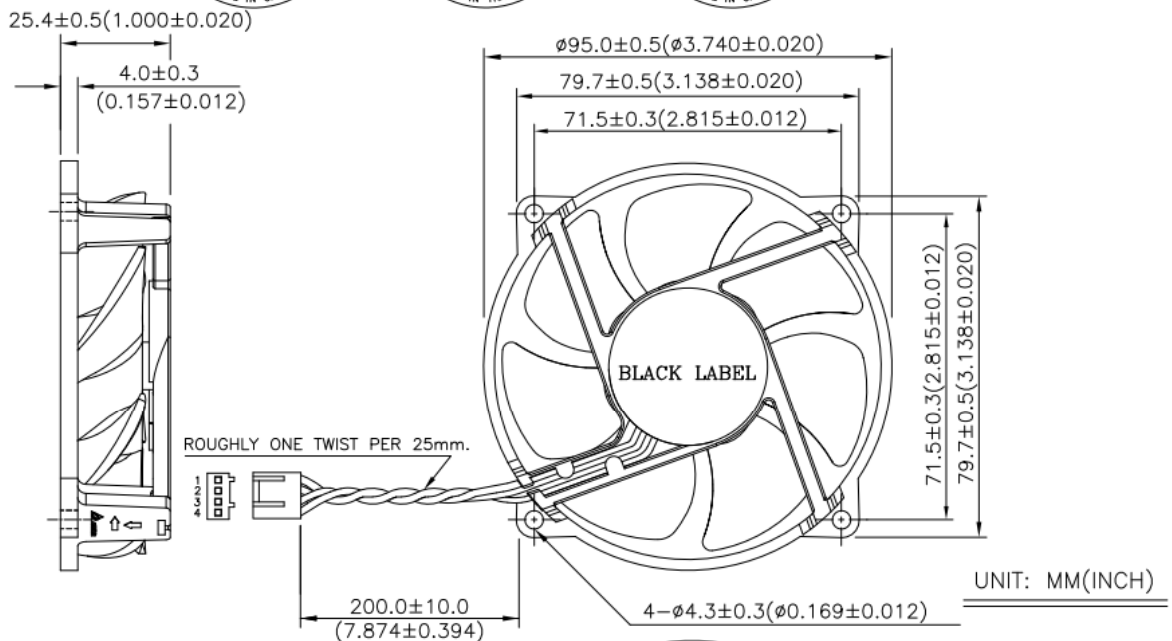


PART NO: 200007180-GP

DELTA MODEL: AFB0912VH-4E91

9. DIMENSION DRAWING:

LABEL:



1. UL 1061 -F- AWG #26
 PIN 1 : BLACK WIRE: NEGATIVE(-)
 PIN 2 : RED WIRE: POSITIVE(+)
 PIN 3 : YELLOW WIRE: TACHOMETER OUTPUT (FOO)
 PIN 4 : BLUE WIRE: SPEED CONTROL (PWM)

2. HOUSING : CKM 25410108-04

3. TERMINAL : CKM 25410301

4. BALANCE MATERIAL : SUS FOIL

5. THIS PRODUCT IS RoHS COMPLIANT

A00

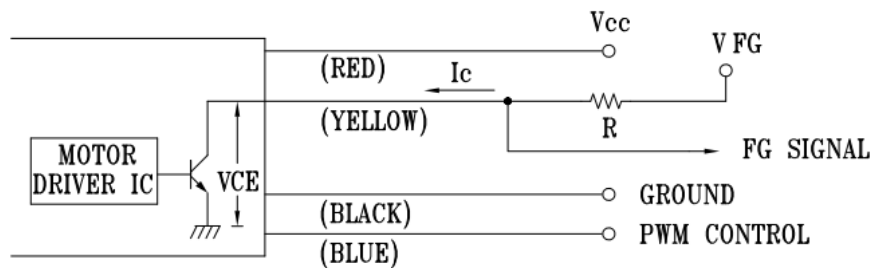


PART NO: 200007180-GP

DELTA MODEL: AFB0912VH-4E91

10. FREQUENCY GENERATOR (FG) SIGNAL:

10-1. OUTPUT CIRCUIT - OPEN COLLECTOR MODE:



CAUTION: THE FG SIGNAL LEAD WIRE MUST BE KEPT AWAY FROM "+" LEAD WIRE & "-" LEAD WIRE.

10-2. SPECIFICATION:

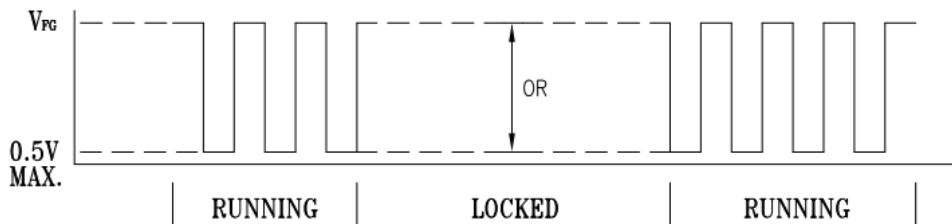
$V_{CE} (sat) = 0.5V \text{ MAX.}$

$V_{FG} = 5.0V \text{ TYP. (} V_{CC} \text{ MAX.)}$

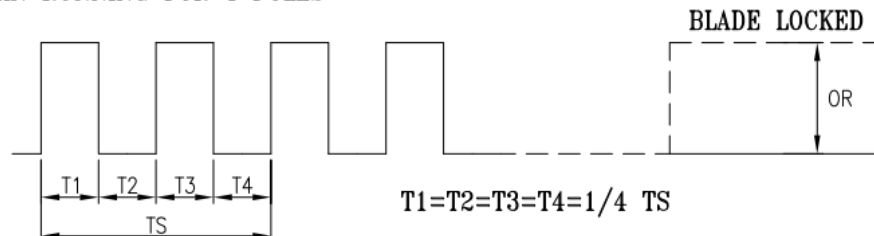
$I_C = 5mA \text{ MAX.}$

$R \geq V_{FG} / I_C$

10-3. FREQUENCY GENERATOR WAVEFORM:



FAN RUNNING FOR 4 POLES



$N = \text{R.P.M}$

$TS = 60 / N (\text{SEC})$

*VOLTAGE LEVEL AFTER BLADE LOCKED

*4 POLES

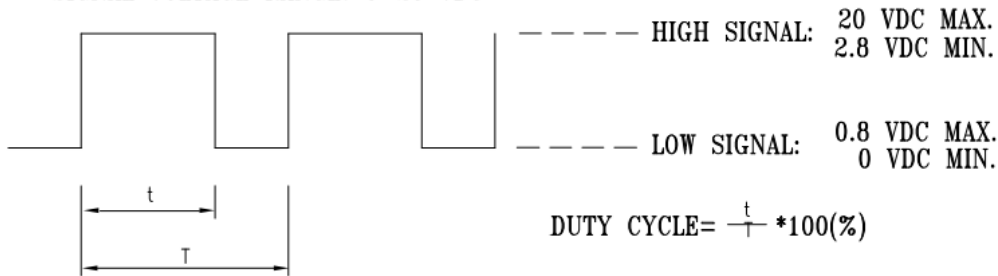


PART NO: 200007180-GP

DELTA MODEL: AFB0912VH-4E91

11. PWM CONTROL SIGNAL:

SIGNAL VOLTAGE RANGE: 0~20 VDC

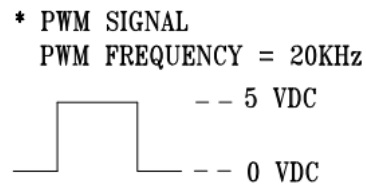


- THE PREFERRED OPERATING POINT FOR THE FAN IS 20K HZ.
- AT 100% DUTY CYCLE,THE ROTOR WILL SPIN AT MAXIMUM SPEED.
- AT 0% DUTY CYCLE,THE ROTOR WILL STOP SPIN.
- WITH CONTROL SIGNAL LEAD DISCONNECTED,THE FAN WILL SPIN AT MAXIMUM SPEED.

12. SPEED VS PWM CONTROL SIGNAL:

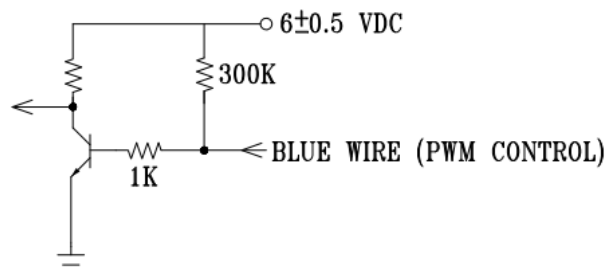
(AT 25°C, RATED VOLTAGE & PWM SIGNAL AS FOLLOW)

DUTY CYCLE (%)	SPEED R.P.M.	CURRENT (A) TYP.
100	4500±10%	0.40
75	3600±10%	0.22
50	2500±10%	0.10
25	1200±250	0.04
0	0	0.01



- MIN. START DUTY CYCLE : 30% (MAX.)
WHEN DUTY CYCLE IS SET FOR MORE THAN 30%, THE FAN WILL BE ABLE TO START FROM A DEAD STOP.

13. PWM CONTROL LEAD WIRE INPUT IMPEDANCE:





Application Notice

1. Delta will not guarantee the performance of the products if the application condition falls outside the parameters set forth in the specification.
2. A written request should be submitted to Delta prior to approval if deviation from this specification is required.
3. Please exercise caution when handling fans. Damage may be caused when pressure is applied to the impeller, if the fans are handled by the lead wires, or if the fan was hard-dropped to the production floor.
4. Except as pertains to some special designs, there is no guarantee that the products will be free from any such safety problems or failures as caused by the introduction of powder, droplets of water or encroachment of insect into the hub.
5. The above-mentioned conditions are representative of some unique examples and viewed as the first point of reference prior to all other information.
6. It is very important to establish the correct polarity before connecting the fan to the power source. Positive (+) and Negative (-). Damage may be caused to the fans if connection is with reverse polarity, if there is no foolproof method to protect against such error specifically mentioned in this spec.
7. Delta fans without special protection are not suitable where any corrosive fluids are introduced to their environment.
8. Please ensure all fans are stored according to the storage temperature limits specified. Do not store fans in a high humidity environment. We highly recommend performance testing is conducted before shipping, if the fans have been stored over 6 months.
9. Not all fans are provided with the Lock Rotor Protection feature. If you impair the rotation of the impeller for the fans that do not have this function, the performance of those fans will lead to failure.
10. Please be cautious when mounting the fan. Incorrect mounting of fans may cause excess resonance, vibration and subsequent noise.
11. It is important to consider safety when testing the fans. A suitable fan guard should be fitted to the fan to guard against any potential for personal injury.
12. Except where specifically stated, all tests are carried out at room (ambient) temperature and relative humidity conditions of 25°C, 65% RH. The test value is only for fan performance itself.
13. Be certain to connect an “ 4.7 μ F or greater” capacitor to the fan externally when the application calls for using multiple fans in parallel, to avoid any unstable power.



Ref No: 1764(1164100-2611-0001) -CE SF140901A

Declaration of Conformity

Manufacturer name: Delta Electronics, Inc.

Address: 252, Shangying Road, Guishan Industrial Zone, Taoyuan County 33341, Taiwan, R.O.C.

Tel: 886-3-359-1968

Fax: 886-3-359-1991

Is herewith confirmed the following equipment

Product: DC Fan

Type Designation:

WFB1224HE, ASB0612H, ASB0612M, ASB0612L, ASB0612HH, ASB0624H, ASB0624M, ASB0624, ASB0624HH, BFB1212HE, AFB0605H, AFB0605M, AFB0605L, AFB0505HA, AFB0505LA, AFB0505MA, AFB0512HA, AFB0512LA, AFB0512MA, BFB0712H, BFB0712L, BFB0712M, BFB0724H, BFB0724L, BFB0724M, AFB0405LA, AFB0405MA, AFB0405HA, AFB0405HHA, AFB0412LA, AFB0412MA, AFB0412HA, AFB0412HHA, ASB0605L, ASB0605M, ASB0605H, DSB0812L, DSB0812M, DSB0812H, AFC0812A, AFC0812B, AFC0912A, AFC0912B, BFC1212A, BFC1212B, BFB1212LL, BFB1212L, BFB1212M, BFB1212H, BFB1212HH, BFB1212VH, BFB1224LL, BFB1224L, BFB1224M, BFB1224H, BFB1224HH, BFB1224VH, AFB0405LD, AFB0405MD, AFB0405HD, AFB0412LD, AFB0412MD, AFB0412HD, AFB0412HHD, AFB0424LD, AFB0424MD, AFB0424HD, AFB0424HHD, AFB0612LA, AFB0612MA, AFB0612HA, ASB0812LL, ASB0812L, ASB0812M, ASB0812H, ASB0812HH, ASB0912L, ASB0912M, ASB0912H, ASB0912HH, ASB0824LL, ASB0824L, ASB0824M, ASB0824H, ASB0824HH, ASB0924L, ASB0924M, ASB0924H, ASB0924HH, AFB0705L, AFB0705M, AFB0705H, AFB0712L, AFB0712M, AFB0712H, AFB0712HH, AFB0712VH, AFB0724L, AFB0724M, AFB0724H, AFB0724HH, AFB0724VH, AFB0812LL, AFB0812L, AFB0812M, AFB0812H, AFB0812HH, AFB0812VH, AFB0812SH, AFB0824LL, AFB0824L, AFB0824M, AFB0824H, AFB0824HH, AFB0824VH, AFB0824SH, AFB0912L, AFB0912M, AFB0912H, AFB0912HH, AFB0912VH, AFB0924L, AFB0924M, AFB0924H, AFB0924HH, AFB0924VH, AFC0612A, AFC0612B, AFB0605LB, AFB0605MB, AFB0605HB, AFB0605HHB, AFB0605LLD, AFB0605LD, AFB0605MD, AFB0605HD, AFB0605HHD, AFB0612LLD, AFB0612LD, AFB0612MD, AFB0612HD, AFB0612HHD, AFB0612VHD, AFB0624LLD, AFB0624LD, AFB0624MD, AFB0624HD, AFB0624HHD, AFB0624VHD, AFC0912A/B-(M/H/HH), AFC0912A/B-F00(M/H/HH), AFC0912A-R00(M/H/HH), AFC0912B-R00(M/H/HH), ASB0912L-V, DSB0612L, DSB0612M, DSB0612H, BFB1012LL(-F00/R00), BFB1012L(-F00/R00), BFB1012M(-F00/R00), BFB1012H(-F00/R00), BFB1012HH(-F00/R00), BFB1024LL(-F00/R00), BFB1024L(-F00/R00), BFB1024M(-F00/R00), BFB1024H(-F00/R00), BFB1024HH(-F00/R00), BFC1012A(-F00/F05/R00), BFC1012B(-F00/F05/R00), BFC1012C(-F00), AFB1212LE(-F00/F05/R00), AFB1212ME(-F00/F05/R00), AFB1212HE(-F00/F05/R00), AFB1212HHE(-F00/F05/R00), AFB1212VHE(-F00/F05/R00), AFB1224LE(-F00/F05/R00), AFB1224ME(-F00/F05/R00), AFB1224HE(-F00/F05/R00), AFB1224HHE(-F00/F05/R00), AFB1224VHE(-F00/F05/R00), BFB1224LE(-F00/R00), BFB1224ME(-F00/R00), BFB1224HHE(-F00/R00), BFB1248LE/ME/HE(-F00/R00), AFB0612L-SB, AFB0612M-SB, AFB0612H-SB, AFB0812L-SB(F00),



Ref No: 1764(1164100-2611-0001) -CE SF140901A

Declaration of Conformity

Comply with the following directives and requirements set out in the Council Directive on the Approximation for the Laws of the Member States

- Low Voltage Directive 2006/95/EC
 - EN 60950-1: 2006+A11+A1+A12+A2 (Report No. 1764)
 - EN 60065: 2002+A11: 2008 (Report No)
 - ErP Directive 2009/125/EC, Commission Regulation (EU) No 327/2011

Person responsible for making this declaration

Name, Surname: Nancy Cheng
Title: Safety Engineer

Signature: *Nancy Cheng*
Date: 2014/09/23



CERTIFICATE OF COMPLIANCE

Certificate Number 20151020-E132003
Report Reference E132003-19971216
Issue Date 2015-OCTOBER-20

Issued to: DELTA ELECTRONICS INC
252 SHANG YING RD
KUEI SHAN
TAOYUAN HSIEN
333 TAIWAN

This is to certify that representative samples of COMPONENT - FANS, ELECTRIC
See addendum page

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: Electric Fans, UL 507
Fans and Ventilators, CSA C22.2 No. 113

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.

Bruce Mahrenholz, Director North American Certification Program
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/about/locations/>





CERTIFICATE OF COMPLIANCE

Certificate Number 20151020-E132003
Report Reference E132003-19971216
Issue Date 2015-OCTOBER-20

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Model Nos.

AFB0305LLA, AFB0305LA, AFB0305MA, AFB0305HA, AFB0405LA, AFB0405MA, AFB0405HA, AFB0405HHD, AFB0505LA, AFB0505MA, AFB0505HA, AFB02505LA, AFB02505MA, AFB02505HA, AFB02505HHA, AFB0705L, AFB0705M, AFB0705H, AFB0405LD, AFB0405MD, AFB0405HD, AFB0605LLD, AFB0605LB, AFB0605MB, AFB0605HB, AFB0605HHB, AFB0605LA, AFB0605MA, AFB0605HA, AFB0505LB, AFB0505MB, AFB03505LA, AFB03505MA, AFB03505HA, AFB0505HB, AFB0512LB, AFB0512MB, AFB0512HB, AFB0512HHB, AFB0412LA, AFB0412MA, AFB0412HA, AFB0412HHA, AFB0512LA, AFB0512MA, AFB0512HA, AFB0712LA, AFB0712MA, AFB0712HA, AFB0712HHA, AFB0712VHA, AFB0812LL, AFB0812L, AFB0812M, AFB0812H, AFB0812HH, AFB0812VH, AFB0812SH, AFB0812LLB, AFB0812LB, AFB0812MB, AFB0812HB, AFB0812HHB, AFB0812VHB, AFB0812SHB, AFC0812D, AFC0812DD(Y), AFB0912L, AFB0912M, AFB0912H, AFB0912HH, AFB0912VH, AFC0912D, AFB0612LA, AFB0612MA, AFB0612HA, AFB02512LA, AFB02512VHB-5B05(Y), AFB02512MA(Y), AFB02512HA(Y), AFB02512HHA(Y), AFB0312LA(Y), AFB0312MA(Y), AFB0312HA(Y), AFB03512LA(Y), AFB03512MA(Y), AFB03512HA(Y), AFB0612LB, AFB0612MB, AFB0612HB, AFB0612HHB, AFB0612LLD, AFB02512MA-A(Y), AFB02512HA-A(Y), AFB02512HHA-A(Y), AFB0312LA-A(Y), AFB0312MA-A(Y), AFB0312HA-A(Y), AFB0612LD, AFB0612MD, AFB0612HD, AFB0612HHD, AFB0612VHD, AFB0612VHB, WFB1212VHE, WFB1212ME, AFB0412LD, AFB0412MD, AFB0412HD, AFB0412HHD, AFB0312LLA, AFB0524LB, AFB0524MB, AFB0524HB, AFB0524HHB, AFB0824LL, AFB0824L, AFB0824M, AFB0824H, AFB0824HH, AFB0824VH, AFB0824SH, AFB0824LLB, AFB0824LB, AFB0824MB, AFB0824HB, AFB0824HHB, AFB0824VHB, AFB0824SHB, AFB0924L, AFB0924M, AFB0924H, AFB0924HH, AFB0924VH, AFB0624LB, AFB0624MB, AFB0624HB, AFB0624HHB, AFB0624LLD, AFB0624LD, AFB0624MD, AFB0624HD, AFB0624HHD, AFB0624VHD, AFB0624VHB, WFB1224VHE, WFB1248HHE, WFB1248VHE, AFB0424LD, AFB0424MD, AFB0424HD, AFB0424HHD, AFB0748L, AFB0748M, AFB0748H, AFB0748HH, AFB0848L, AFB0848M, AFB0848H, AFB0848HH, AFB0948L, AFB0948M, AFB0948H, AFB0948HH, AFB0648L, AFB0648M, AFB0648H, AFB0648HH, AFB0648VH, AFB0648SH, AFB0648EH, AFB04512LB(Y), AFB04512MB(Y), AFB04512HB(Y), AFB0512LB-A(Y), AFB0512MB-A(Y), AFB0512HB-A(Y), GFB1412EHT(Y), GFC1412DT(Y), AFB0748SH-SP(Y), BFB1712EHT(Y), AFB03512LA-A(Y), AFB03512MA-A(Y), AFB03512HA-A(Y)

Note: above (Y) may be xxxxx, where x may be A through Z, 0 through 9, "-" or blank. For Models AFB0812SH(Y), the (Y) excluded -9N07 and -SM26

B. Mahlenz

Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>





CERTIFICATION RECORD

The company named below has been authorized by CSA International to represent the products listed in this record as "CSA Certified" and to affix the CSA Mark to these products according to the terms and conditions of the CSA Service Agreement and applicable CSA program requirements (including additional Markings).

File No: 091949_0_000
Class No: 3812 30 FANS AND BLOWERS Component Fans

SUBMITTOR

4510824 Delta Electronics Inc.
252 Shangying Rd.,
Guishan Industrial Zone,
Taoyuan City, . 33341
Taiwan

FACTORIES

4510824 Delta Electronics Inc.
252 Shangying Rd.,
Guishan Industrial Zone,
Taoyuan City, . 33341
Taiwan

4665119 Delta Electronics (JiangSu) Ltd.
No 1688 Jiangxing East Rd
Wujiang Economic Development Zone
Suzhou City, Jiangsu, 100 215200
China

4678360 Delta Electronics (Thailand) Public
Co., Ltd.
111 Moo 9 Wellgrow Ind Estate
Bangna-Trad Road, Tambon Bangwua
Amphur Bangpakong
Chachoengsao, Chachoengsao 24180
Thailand

4753103 Delta Electronics (Dongguan) Co Ltd
HeTianXia High Tech Industrial Pk
Shijie Town
Dongguan City, Guangdong, 190 523308
China

DELTA ELECTRONICS (CHENZHOUE) CO LTD



AFB0912H	12	300	STD, F00, R00, F05, R05, RR0, and RR05 0 to 9, A to Z, blank or "-"
AFB0912HH	12	400	STD, F00, R00, F05, R05, RR0, and RR05 0 to 9, A to Z, blank or "-"
AFB0912L	12	150	STD, F00, R00, F05, R05, RR0, and RR05 0 to 9, A to Z, blank or "-"
AFB0912M	12	200	STD, F00, R00, F05, R05, RR0, and RR05 0 to 9, A to Z, blank or "-"
AFB0912VH	12	600	STD, F00, R00, F05, R05, RR0, and RR05 0 to 9, A to Z, blank or "-"
AFB0912VH-4J1X	12	600	0 to 9, A to Z, blank or "-"
AFB0912VH-6K44	12	600	0 to 9, A to Z, blank or "-"
AFB0912VH-7A21	12	600	0 to 9, A to Z, blank or "-"
AFB0912VH-7A21	12	600	0 to 9, A to Z, blank or "-"
AFB0924H	24	200	STD, F00, R00, F05, R05, RR0, and RR05 0 to 9, A to Z, blank or "-"
AFB0924HH	24	250	STD, F00, R00, F05, R05, RR0, and RR05 0 to 9, A to Z, blank or "-"
AFB0924L	24	100	STD, F00, R00, F05, R05, RR0, and RR05 0 to 9, A to Z, blank or "-"
AFB0924M	24	150	STD, F00, R00, F05, R05, RR0, and RR05 0 to 9, A to Z, blank or "-"
AFB0924VH	24	400	STD, F00, R00, F05, R05, RR0, and RR05 0 to 9, A to Z, blank or "-"
AFB1212EHE	12	2200	0 to 9, A to Z, blank or "-"
AFB1212GHE	12	3240	0 to 9, A to Z, blank or "-"
AFB1212H	12	350	0 to 9, A to Z, blank or "-"
AFB1212H-DC18	12	350	0 to 9, A to Z, blank or "-"
AFB1212HE	12	480	0 to 9, A to Z, blank or "-"
AFB1212HH	12	500	0 to 9, A to Z, blank or "-"



VDE Prüf- und Zertifizierungsinstitut

GUTACHTEN MIT FERTIGUNGSÜBERWACHUNG CERTIFICATE OF CONFORMITY WITH FACTORY SURVEILLANCE

Delta Electronics Inc.
252 Shangying Road
Guishan Industrial Zone
33341 Taoyuan City
Taiwan

ist berechtigt, für ihr Produkt /
is authorized to use for their product

Einbauventilator für IT-Geräte
Fan for building-in, IT-equipment

die hier abgebildeten markenrechtlich geschützten Zeichen
für die ab Blatt 2 aufgeführten Typen zu benutzen /
the legally protected Marks as shown below for the types referred to on page 2 ff.



REG 1764 oder/or



oder/or VDE-REG 1764

REG 1764

Geprüft und zertifiziert nach /
Tested and certified according to

DIN EN IEC 62368-1 (VDE 0868-1):2021-05; EN IEC 62368-1:2020+A11:2020

Das Produkt erfüllt auch die Anforderungen nach /
The product also fulfills the requirements of

IEC 62368-1:2018



Aktenzeichen: 5000878-2611-0007 / 298442

File ref.:

Ausweis-Nr. 1764

Blatt 1

Certificate No.

Page

Weitere Bedingungen siehe Rückseite und Folgeblätter /
further conditions see overleaf and following pages

Offenbach, 1994-06-08

(letzte Änderung / updated 2022-11-11)

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute
Zertifizierungsstelle / Certification

M. Toschi

VDE Zertifikate sind nur gültig bei Veröffentlichung unter:
VDE certificates are valid only when published on:

<http://www.vde.com/zertifikat>
<http://www.vde.com/certificate>





VDE Prüf- und Zertifizierungsinstitut Gutachten mit Fertigungsüberwachung

Ausweis-Nr. / Blatt /
Certificate No. / Page
1764 3

Name und Sitz des Genehmigungs-Inhabers / Name and registered seat of the Certificate holder

Delta Electronics Inc., 252 Shangying Road, Guishan Industrial Zone, 33341 TAOYUAN CITY, TAIWAN

Aktenzeichen / File ref.

5000878-2611-0007 / 298442 / TL4 / CNGD-SXU

letzte Änderung / updated

2022-11-11

Datum / Date

1994-06-08

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Gutachtens mit Fertigungsüberwachung Nr. 1764.

This supplement is only valid in conjunction with page 1 of the Certificate of Conformity with factory surveillance No. 1764.

Einbauventilator für IT-Geräte Fan for building-in, IT-equipment

Typ(en) / Type(s)

AFB0812LL/L/M/H/HH/VH/SH

AFB0824LL/L/M/H/HH/VH/SH

AFB0912L/M/H/HH/VH

AFB0924L/M/H/HH/VH

AFC0612A

AFC0612B

AFB0605LB/MB/HB/HHB

AFB0605LLD/LD/MD/HD/HHD

AFB0612LLD/LD/MD/HD/HHD/VHD

AFB0624LLD/LD/MD/HD/HHD/VHD

AFC0912A/B-(M/H/HH)

AFC0912A/B-F00(M/H/HH)

AFC0912A/B-R00(M/H/HH)

DSB0612L/M/H

BFB1012LL/L/M/H/HH(-F00/R00)

BFB1024LL/L/M/H/HH(-F00/R00)

BFC1012A/B(-F00/F05/R00)

BFC1012C(-F00)

AFB1212LE/ME/HE/HHE/VHE(-F00/F05/R00)

AFB1224LE/ME/HE/HHE/VHE(-F00/F05/R00)

BFB1224LE/ME/HHE(-F00/R00)

BFB1248LE/ME/HE(-F00/R00)

AFB0612/M-SB/H-SB

AFB0912/M-SB/H-SB(F00)

AFB02505LA/MA/HA

AFB02512LA/MA/HA/HHA

AFC0712A/B

AFB0305LLA/LA/MA/HA

AFB0312LLA/LA/MA/HA

ASB0912/M-SB/H-SB

Fortsetzung siehe Blatt 4 /
continued on page 4





VDE Prüf- und Zertifizierungsinstitut Gutachten mit Fertigungsüberwachung

Ausweis-Nr. / Blatt /
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1764 7

Name und Sitz des Genehmigungs-Inhabers / Name and registered seat of the Certificate holder

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5000878-2611-0007 / 298442 / TL4 / CNGD-SXU

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Einbauventilator für IT-Geräte *Fan for building-in, IT-equipment*

Typ(en) / Type(s)

AUB0624LB/MB/HB/HHB/VHB
FFB0812HHE/VHE/SHE/EHE
FFB0824HHE/VHE/SHE/EHE
FFB0848HHE/VHE/SHE
EFB0612LA/MA/HA/HHA
EFB0812LE/ME/HE/HHE
EFB0824LE/ME/HE/HHE
AUB0812LLB/LB/MB/HB/HHB/VHB/SHB
AUB0824LLB/LB/MB/HB/HHB/VHB/SHB
EFB0505LA/MA/HA
EFB0512LA/MA/HA/HHA

Weitere Angaben siehe Anlage
Further information see appendix

100 vom/dated 2022-11-11

Dieser Zeichengenehmigungsausweis bildet eine Grundlage für die EU-Konformitätserklärung und CE-Kennzeichnung durch den Hersteller oder dessen Bevollmächtigten.

This Marks Approval is a basis for the EU Declaration of Conformity and the CE Marking by the manufacturer or his agent.





VDE Prüf- und Zertifizierungsinstitut Gutachten mit Fertigungsüberwachung

Ausweis-Nr. / Beiblatt /
Certificate No. Supplement
1764

Name und Sitz des Genehmigungs-Inhabers / Name and registered seat of the Certificate holder

Delta Electronics Inc., 252 Shangying Road, Guishan Industrial Zone, 33341 TAOYUAN CITY, TAIWAN

Aktenzeichen / File ref.

5000878-2611-0007 / 298442 / TL4 / CNGD-SXU

letzte Änderung / updated

2022-11-11

Datum / Date

1994-06-08

Dieses Beiblatt ist Bestandteil des Gutachtens mit Fertigungsüberwachung Nr. 1764.

This supplement is part of the Certificate of Conformity with factory surveillance No. 1764.

Einbauventilator für IT-Geräte Fan for building-in, IT-equipment

Fertigungsstätte(n)

Place(s) of manufacture

Referenz/Reference
30009495

Delta Electronics
(Dongguan) Co., Ltd.
Hetianxia village
523300 SHIJIE TOWN, DONGGUAN CITY
Guangdong
CHINA

Referenz/Reference
30011790

Delta Electronics
(Jiang Su) Ltd.
No. 1688 Jiangxing East Road
Wujiang Economy Developm. Zone
215200 WUJIANG CITY, SUZHOU CITY
Jiangsu
CHINA

Referenz/Reference
30013236

Delta Electronics (Thailand)
Public Co., Ltd.
111 Moo.9 Wellgrow Industrial Estate
Bangna-Trad Road, Tambon Bangwa
AMPHUR BANGPAKONG 24180
Chachoengsao
THAILAND

Referenz/Reference
30020541

Delta Electronics (Chenzhou)
Co., Ltd.
Chenzhou Comprehensive Bonded
Area, The West of Lin Yi Road
Bailutang Town, Suxian District
423038 CHENZHOU CITY
Hunan
CHINA





VDE Prüf- und Zertifizierungsinstitut Gutachten mit Fertigungsüberwachung

Ausweis-Nr. / Beiblatt /
Certificate No. Supplement
1764

Name und Sitz des Genehmigungs-Inhabers / Name and registered seat of the Certificate holder

Delta Electronics Inc., 252 Shangying Road, Guishan Industrial Zone, 33341 TAOYUAN CITY, TAIWAN

Aktenzeichen / File ref.

5000878-2611-0007 / 298442 / TL4 / CNGD-SXU

letzte Änderung / updated

2022-11-11

Datum / Date

1994-06-08

Dieses Beiblatt ist Bestandteil des Gutachtens mit Fertigungsüberwachung Nr. 1764.

This supplement is part of the Certificate of Conformity with factory surveillance No. 1764.

Referenz/Reference
30027128

Delta Electronics India Private
Limited-SEZ Unit
Delta SEZ Notified at SY No.
16/1B2B Part & 16/1B2A
Part Plot, No.1, Ind. Park
Kurubarapalli Village,
KRISHNAGIRI DIST
635115 DELTA ELECTRONICS
INDIA



Cooler Master Co;Ltd 立承諾書人（下稱「本公司」；本公司包含其子公司、合作公司及協力廠）茲承諾自立承諾書日起所供應予騰網科技股份有限公司(含其子公司/及協力廠)之任何產品（包含供應之零件、元件、材料, 半成品及成品），完全符合歐盟 REACH 指令(EC)1907/2006 及其修訂法規、包含 SVHCs、附錄 14、與附錄 17 等歐盟相關化學物質管制最新規定。

本公司承諾凡本公司所欲提供予騰網科技股份有限公司之任何產品，皆應先行送至具有公信力與公正的第三方測試機構進行檢測，並如實將檢測結果(報告)免費提供給予騰網科技股份有限公司並本公司針對報告有義務協助定期更新(超過五年時)，並不得隱瞞檢測結果與偽造檢測資料。並接受騰網科技股份有限公司進料時對產品的抽驗，如與相關資料不符合，須全數回收確保產品的品質。若有無法符合的部分，本公司將在歐盟更新後一個月內主動告知騰網科技，未告知者，將視為可符合歐盟之更新。本公司了解任何違反該指令及文件之要求或不實陳述所保證之內容，不論該違反或不實陳述係為過失或善惡意都將會導致騰網科技股份有限公司與相關客戶發生嚴重的損失，本公司亦應賠償騰網科技股份有限公司所請求之產品相關費用。

公司名稱： Cooler Master Co;Ltd

公司章(大小章)：



Authorized on behalf of
COOLER MASTER CO., LTD
Alex Chen
Authorized Signature(s)

公司法定代表人(職稱&姓名)：_

Jane zhong

地 址： 廣東省惠州市仲愷高新技術產業開發區和暢東四路18號

簽 署 日 期： 2023/07/24



AREC PERIPHERALS, INC.

Certificate of Limited Use/No Use of Harmful Substance

2023/9/5

We, Coder Master Co., Ltd, the undersigned company, (hereinafter referred to as the "Company"; the Company include its subsidiaries, joint venture and subcontractors) hereby promise from the mentioned committed date, to supply to AREC PERIPHERALS, INC. (including its subsidiaries / and subcontractors) any product (including the supply of parts, components, materials, semi-finished and finished products), to be in full compliance with European REACH (EC)1907/2006 and its revised regulations, including SVHCs, Annex XIV and Annex XVII etc. related EU chemicals regulatory requirements.

The company guarantees that the products that the Company seek to provide or supply to AREC PERIPHERALS, INC. have been sent to a third-party testing organization that handles a credible and impartial testing, and the test results (report) are to be provided free of charge to AREC PERIPHERALS, INC. The Company has the obligation to assist in the regular updating of reports (for those more than five year), and the test results may not conceal information and have counterfeit information. In the case where AREC PERIPHERALS, INC. finds any non-compliant products based on its random inspection or sample testing, the Company agrees to get back all of the products in order to ensure product quality. If there is any part that cannot be met, the company will inform AREC PERIPHERALS, INC. within one month after the EU update. If it is not notified, it will be deemed to be in line with the EU update. The Company understands that any violation of the requirements of the directive and documents or false statements regarding as to what the Company has guaranteed, whether it be the result of negligence or intentional, that will result to losses of AREC PERIPHERALS, INC. and related customers, the Company should compensate AREC PERIPHERALS, INC. for the demanded product-related costs.

Company Name: CoderMaster Co., Ltd

Company Chop



Legal representative (name & title): Lifei-cheng

Address:

Signature Date: 2023.9.19

Remarks: (For items that do not meet the regulations or are unsuitable, please answer the following question:.)

Supplier does not meet the content : _____

Legal representative (name & title): Lifei-cheng

Date: 2023.9.19



騰網科技股份有限公司.

因應 歐盟新指令RoHS 2.0 (EU) 2015/863 預計於 2019/07/22 生效，騰網科技股份有限公司計畫於 2019/06/01 起啟動新版 RoHS 2.0 (EU) 2015/863指令要求。

新版 RoHS 2.0 (EU) 2015/863 指令要求詳細內容，請參考歐盟官方網址：
https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2015.137.01.0010.01.ENG#ntrl-L_2015137EN.01001001-E0001

騰網科技股份有限公司計畫於 2019/06/01 起，僅接受符合新版 RoHS 2.0 (EU) 2015/863 指令要求之料件/半成品/成品，請各供應商配合執行，如果無法符合上述要求的供應商，請向騰網科技股份有限公司採購提出說明。

For “RoHS Directive 2011/65/EU” purposes, the maximum concentration values of the restricted substances by weight in homogenous materials are:

Item	Chemical Substance	Controlled Value
1	Cadmium (Cd)	RoHS: 100ppm
2	Hexavalent Chromium (Cr6+)	RoHS: 1000ppm
3	Lead (Pb)	RoHS: 1000ppm
4	Mercury (Hg)	RoHS: 1000ppm
5	Poylbrominated Biphenyl (PBBs)	RoHS: 1000ppm
6	Polybrominated diphenylethers (PBDEs)	RoHS: 1000ppm
7	Bis(2-ethylhexyl) phthalate (DEHP)	RoHS: 1000ppm
8	Butyl benzyl phthalate (BBP)	RoHS: 1000ppm
9	Dibutyl phthalate (DBP)	RoHS: 1000ppm
10	Diisobutyl phthalate (DIBP)	RoHS: 1000ppm

Other Substances

Controlled Substance	Controlled Value
PCBs / PCTs / Mirex / TBBP-A-bis / CFCs / PVC / PVC blends / Packing materials :Cadmium, Lead, Chromium(VI), Hg and its compounds<100ppm / Short-chained chlorinated paraffins (C10~C13) / PCNs / Asbestos / Ozone / TBTO(Oxide) / HCFCs / HFCs / Aniline / Triphenyl(TBT/TPT) / Chloride Paraffin(CP) / POPs / Specified amines / Specific Azo compounds / Carcinogenic substances / Radioactive substances/Tributyl Tins & Triphenyl Tins/ Polychloronaphthalenes (Cl \geq 3)/ Short Chain Chlorinated Paraffins/ Azo Colorants	Not Allowed
Ozone Depleting Substances	0.1wt%

The company identified in the title block is compliant with the Restriction of Hazardous Substances Directive noted above and is not using any of the "other substances" noted in the controlled substances section of the list. The individual's signature below is the authorized representative of the company to certify the part(s) and component(s) and assembly(s) and packaging are compliant.

公司名稱：Cooler Master Co., Ltd

代表人： *Jiao - chen*

填寫日期：2022-08-04

可配合騰網科技股份有限公司的規劃。

無法配合騰網科技股份有限公司的規劃。原因：

預計規劃完成日期：

無法配合的料件：