JARO THERMAL

SPECIFICATION FOR APPROVAL

Customer :
Customer Part No. :
Description : Thermal module
JARO Model No. : JSC00124 REV.0
Sample Issue No. :
Sample Issue Date :
☐ **Preliminary Specification**
☑ **Formal Specification**

PREPARED BY :	Caleb Huang	DATE :	07/19/2021
CHECKED BY :	Chris Hsu	DATE :	07/19/2021
APPROVED BY :	Chris Hsu	DATE :	07/19/2021

PLEASE SEND ONE COPY OF THIS SPECIFICATION BACK AFTER YOU SIGNED APPROVAL FOR PRODUCTION PRE-ARRANGEMENT.

By:_____ (printed)

Signature:_____

Date:_____

Jaro Thermal USA office
6600 Park of Commerce Blvd.
Boca Raton, Florida 33487
www.jarothermal.com
Ph: 561-241-6700
Fx: 561-241-3328

Jaro Thermal Taiwan office
Building H, No.119-1, Zhudong Rd., Renwu Dist., Kaohsiung City, Taiwan 81448
www.jarothermal.com
Ph: +886-7-375-2053
Fx: +886-7-374-7403

We keep the world cool™

JARO MODEL NUMBER
JSC00124

Revision of Spec History

Revision	Change Content	Change page	DATE	BY
0	Created SPEC		07/19/2021	Caleb Huang

Notice:

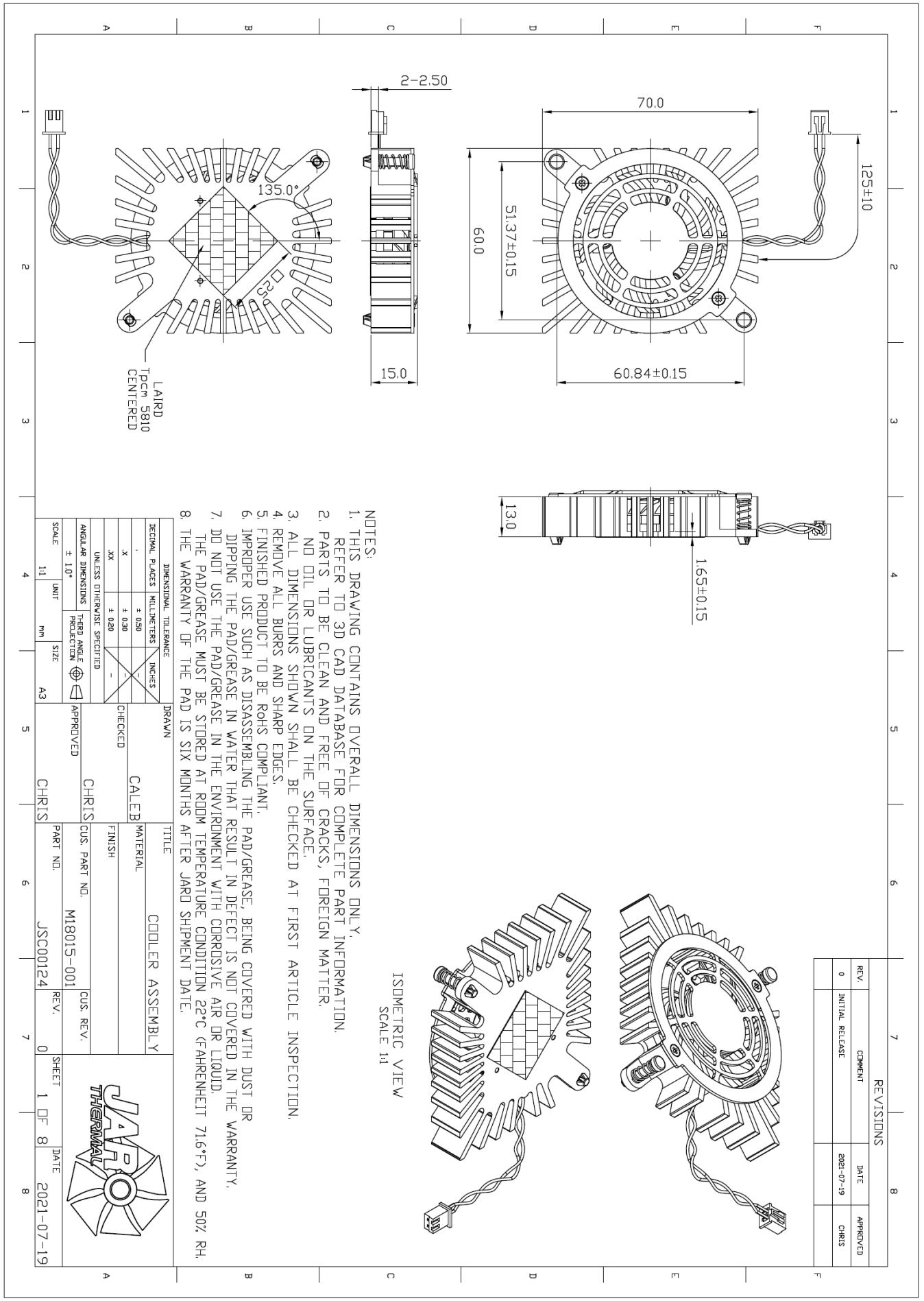
1. This specification will be changed base on Jaro Thermal ‘s notification. Please refer to update revision of spec by contacting Jaro Thermal.

2. This specification clarify all the mechanical & electrical characteristics of DC brushless fans & AC brushless fans & heat sink.

3. The specification of this product is described in detailed document. Please do not use the fan without proper usage. Please contact Jaro Thermal if you have special requirement which is not listed on this specification.

4. Any of change, please contact Jaro Thermal to change the new revision in order to make sure all technical data is up to date. Any ECN change will be followed by sending new update specification.

1. Assembly drawing



ISOMETRIC VIEW
SCALE 1:1

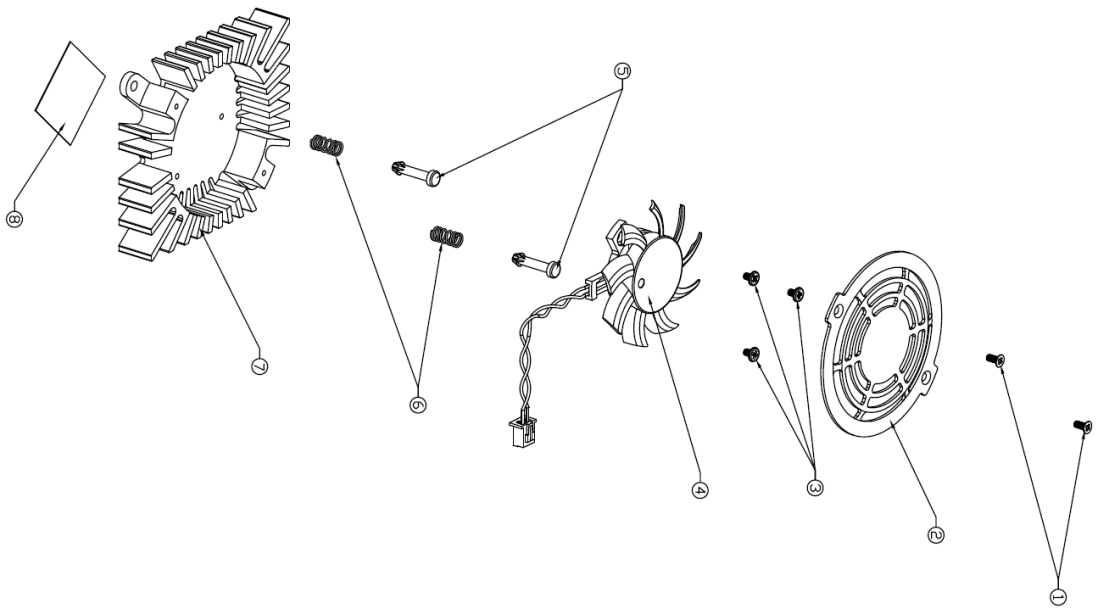
NOTES:
1. THIS DRAWING CONTAINS OVERALL DIMENSIONS ONLY.
   REFER TO 3D CAD DATABASE FOR COMPLETE PART INFORMATION.
2. PARTS TO BE CLEAN AND FREE OF CRACKS, FOREIGN MATTER,
   NO OIL OR LUBRICANTS ON THE SURFACE.
3. ALL DIMENSIONS SHOWN SHALL BE CHECKED AT FIRST ARTICLE INSPECTION.
4. REMOVE ALL BURRS AND SHARP EDGES.
5. FINISHED PRODUCT TO BE RoHS COMPLIANT.
6. IMPROPER USE SUCH AS DISASSEMBLING THE PAD/GREASE, BEING COVERED WITH DUST OR DIPPING THE PAD/GREASE IN WATER THAT RESULT IN DEFECT IS NOT COVERED IN THE WARRANTY.
7. DO NOT USE THE PAD/GREASE IN THE ENVIRONMENT WITH CORROSIVE AIR OR LIQUID.
   THE PAD/GREASE MUST BE STORED AT ROOM TEMPERATURE CONDITION 22°C (FAHRENHEIT 71.6°F), AND 50% RH.
8. THE WARRANTY OF THE PAD IS SIX MONTHS AFTER JARD SHIPMENT DATE.

REVISIONS			
REV.	COMMENT	DATE	APPROVED
0	INITIAL RELEASE	2021-07-19	CHRIS

DIMENSIONAL TOLERANCE		DRAWN	TITLE
DECIMAL PLACES / MILLIMETERS / INCHES		CALEB	COOLER ASSEMBLY
. / ± 0.50 / -		CHECKED	MATERIAL
.X / ± 0.30 / -			
.XX / ± 0.20 / -			FINISH
UNLESS OTHERWISE SPECIFIED		APPROVED	CUS. PART NO.
ANGULAR DIMENSIONS / THIRD ANGLE PROJECTION		CHRIS	M18015-001
± 1.0°			CUS. REV.
SCALE / UNIT / SIZE			PART NO. / REV.
1:1 / mm / A3		CHRIS	JSC00124 / 0
			SHEET / DATE
			1 OF 8 / 2021-07-19

JARD THERMAL

2. Exploded views



REVISIONS			
REV.	COMMENT	DATE	APPROVED
0	INITIAL RELEASE	2021-07-19	CHRIS

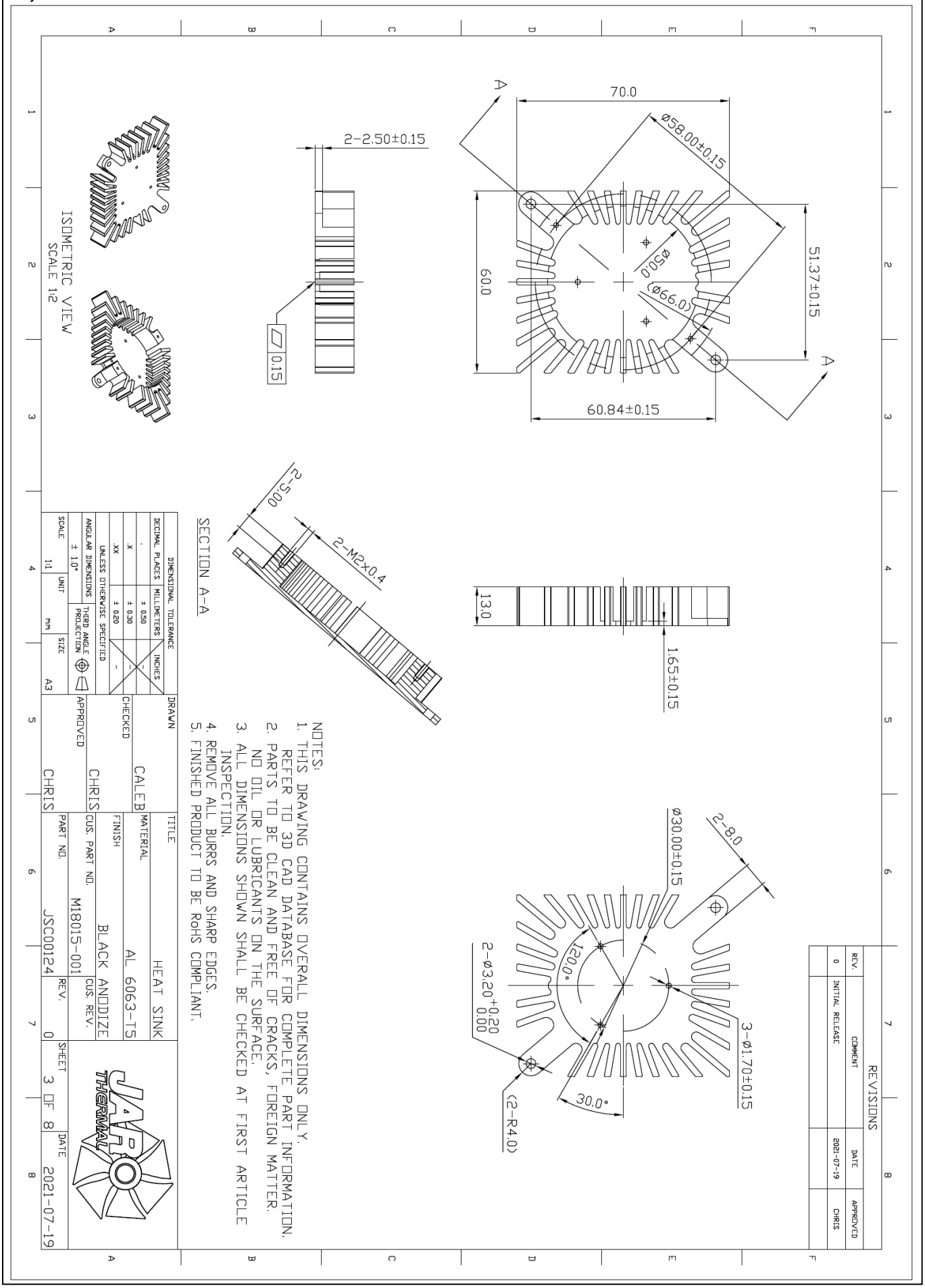
ITEM	QTY.	DESCRIPTION	MATERIAL	REMARK
8	1	THERMAL PAD	LAIRD TpCm 5810	COLOR: GRAY THICKNESS: 0.25
7	1	HEAT SINK	AL 6063-T5	FINISH: BLACK ANODIZE
6	2	SPRING	SUS304 STAINLESS STEEL	FINISH: CLEAN
5	2	PLASTIC PUSH-PIN	NYLON66(UL) 94V-2	COLOR: WHITE
4	1	FAN ASSEMBLY	-	JEY0501012HBIA01 (V24ARD)-K(2061)
3	3	M2×3.0 SCREW	SAE 1018	FINISH: NICKEL PLATING
2	1	FAN GUARD	AL 1100	FINISH: CLEAN
1	2	M2×4.0 SCREW	SAE 1018	FINISH: NICKEL PLATING

DRAWN	CALEB
CHECKED	-
APPROVED	CHRIS
TITLE	EXPLODED VIEWS
MATERIAL	SEE TABLE
FINISH	SEE TABLE
CUS. PART NO.	M18015-001
PART NO.	JSC00124
CUS. REV.	
REV.	0
SHEET	2 OF 8
DATE	2021-07-19

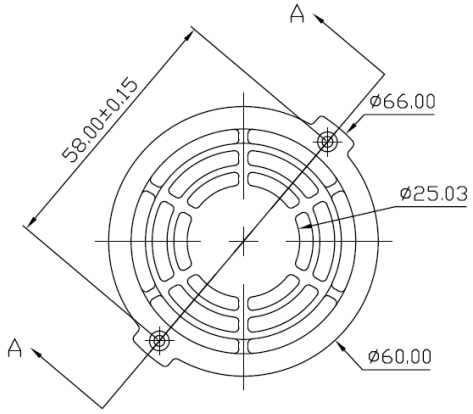
DIMENSIONAL TOLERANCE
DECIMAL PLACES: MILLIMETERS / INCHES
. : ± 0.50 / -
.X : ± 0.30 / -
.XX : ± 0.20 / -
UNLESS OTHERWISE SPECIFIED
ANGULAR DIMENSIONS: ± 1.0°
THIRD ANGLE PROJECTION
SCALE: 1:1
UNIT: mm
SIZE: A2

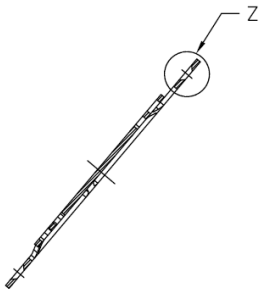
3. Individual component drawing

1) Heat sink

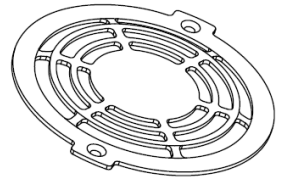


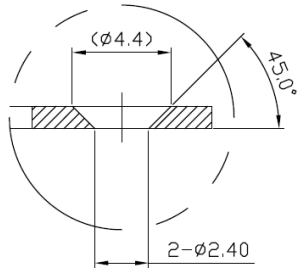
REVISIONS			
REV.	COMMENT	DATE	APPROVED
0	INITIAL RELEASE	2021-07-19	CHRIS



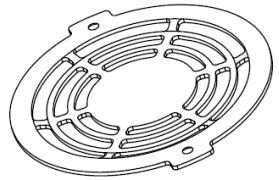


SECTION A-A

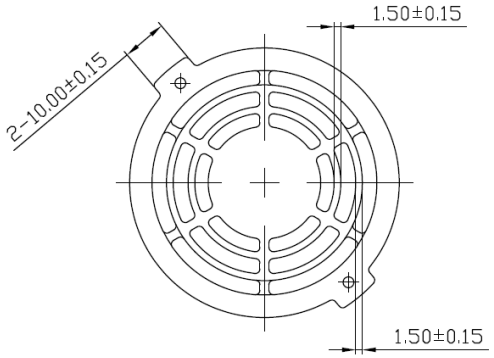




DETAIL Z
SCALE 5:1



ISOMETRIC VIEW
SCALE 1:1

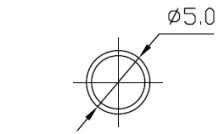


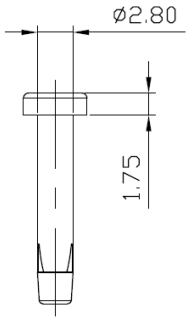
NOTES:
1. THIS DRAWING CONTAINS OVERALL DIMENSIONS ONLY.
   REFER TO 3D CAD DATABASE FOR COMPLETE PART INFORMATION.
2. PARTS TO BE CLEAN AND FREE OF CRACKS, FOREIGN MATTER.
   NO OIL OR LUBRICANTS ON THE SURFACE.
3. ALL DIMENSIONS SHOWN SHALL BE CHECKED AT FIRST ARTICLE INSPECTION.
4. REMOVE ALL BURRS AND SHARP EDGES.
5. FINISHED PRODUCT TO BE RoHS COMPLIANT.

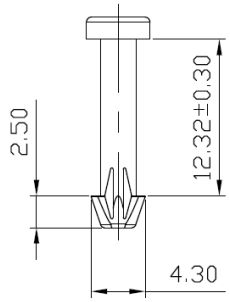
DIMENSIONAL TOLERANCE		
DECIMAL PLACES	MILLIMETERS	INCHES
.	± 0.50	–
.X	± 0.30	–
.XX	± 0.20	–
UNLESS OTHERWISE SPECIFIED		
ANGULAR DIMENSIONS	THIRD ANGLE PROJECTION	
± 1.0°		
SCALE 1:1	UNIT mm	SIZE A3

DRAWN	CALEB
CHECKED	CHRIS
APPROVED	CHRIS
TITLE	FAN GUARD
MATERIAL	AL 1100
FINISH	CLEAN
CUS. PART NO.	M18015-001
CUS. REV.	
PART NO.	JSC00124
REV.	0
SHEET	4 OF 8
DATE	2021-07-19

JAR THERMAL





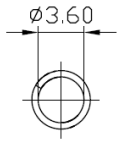


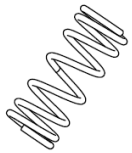
ISOMETRIC VIEW
SCALE 2:1

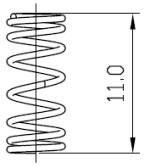
NOTES FOR PLASTIC PUSH-PIN (HSR-30):
1. MATERIAL: NYLON66(UL) 94V-2
2. COLOR: WHITE
3. THIS DRAWING CONTAINS OVERALL DIMENSIONS ONLY. REFER TO 3D CAD DATABASE FOR COMPLETE PART INFORMATION.
4. ALL DIMENSIONS SHOWN SHALL BE CHECKED AT FIRST ARTICLE INSPECTION.
5. REMOVE ALL BURRS AND SHARP EDGES.
6. FINISHED PRODUCT TO BE RoHS COMPLIANT.

SUGGESTION FOR PCB HOLE SIZE:
1) DRILL SIZE: ø3.0mm
2) ANNUAL RING: ø6.0mm

REVISIONS			
REV.	COMMENT	DATE	APPROVED
0	INITIAL RELEASE	2021-07-19	CHRIS







ISOMETRIC VIEW
SCALE 2:1

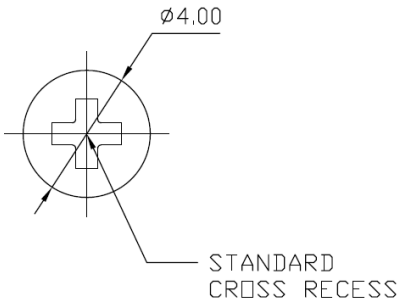
NOTES FOR SPRING:
1. FREE LENGTH: 11.0mm
2. WIRE DIAMETER: 0.50±0.05mm
3. OD: ø4.60mm
4. ACTIVE COILS: 5 ; TOTAL COILS: 7
5. SPRING RATE: 0.1655 kgf/mm ± 10%
6. MATERIAL: SUS304 STAINLESS STEEL
7. FINISH: CLEAN
8. ALL DIMENSIONS SHOWN SHALL BE CHECKED AT FIRST ARTICLE INSPECTION.
9. FINISHED PRODUCT TO BE RoHS COMPLIANT.

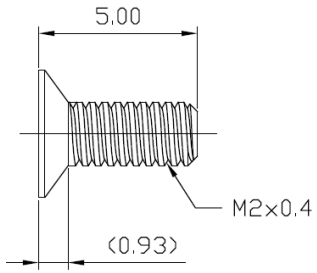
DIMENSIONAL TOLERANCE		
DECIMAL PLACES	MILLIMETERS	INCHES
.	± 0.50	-
.X	± 0.30	-
.XX	± 0.20	-
UNLESS OTHERWISE SPECIFIED		
ANGULAR DIMENSIONS	THIRD ANGLE PROJECTION	
± 1.0°		
SCALE 2:1	UNIT mm	SIZE A4

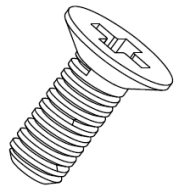
DRAWN	CALEB
CHECKED	CHRIS
APPROVED	CHRIS
TITLE	PLASTIC PUSH-PIN ASSY.
MATERIAL	SEE NOTES
FINISH	SEE NOTES
CUS. PART NO.	M18015-001
CUS. REV.	
PART NO.	JSC00124
REV.	0
SHEET	5 OF 8
DATE	2021-07-19

JAR THERMAL

REVISIONS			
REV.	COMMENT	DATE	APPROVED
0	INITIAL RELEASE	2021-07-19	CHRIS







ISOMETRIC VIEW
SCALE 5:1

NOTES:
1. MATERIAL: SAE 1018 ; FINISH: NICKEL PLATING
2. THIS DRAWING CONTAINS OVERALL DIMENSIONS ONLY.
   REFER TO 3D CAD DATABASE FOR COMPLETE PART INFORMATION.
3. PARTS TO BE CLEAN AND FREE OF CRACKS, FOREIGN MATTER.
   NO OIL OR LUBRICANTS ON THE SURFACE.
4. ALL DIMENSIONS SHOWN SHALL BE CHECKED AT FIRST ARTICLE INSPECTION.
5. REMOVE ALL BURRS AND SHARP EDGES.
6. FINISHED PRODUCT TO BE RoHS COMPLIANT.

DIMENSIONAL TOLERANCE		
DECIMAL PLACES	MILLIMETERS	INCHES
.	± 0.50	-
.X	± 0.30	-
.XX	± 0.20	-
UNLESS OTHERWISE SPECIFIED		
ANGULAR DIMENSIONS	THIRD ANGLE PROJECTION	
± 1.0°		
SCALE 5:1	UNIT mm	SIZE A4

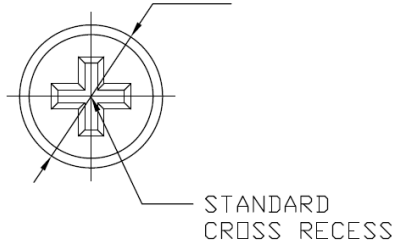
DRAWN: CALEB
CHECKED: CHRIS
APPROVED: CHRIS

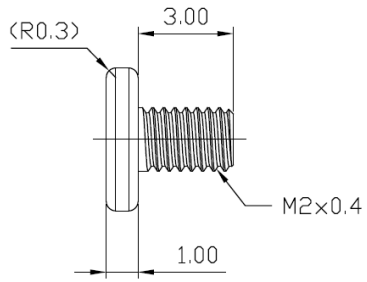
TITLE: M2x4.0 SCREW
MATERIAL: SEE NOTES
FINISH: SEE NOTES
CUS. PART NO.: M18015-001
CUS. REV.:
PART NO.: JSC00124
REV.: 0
SHEET: 6 OF 8
DATE: 2021-07-19

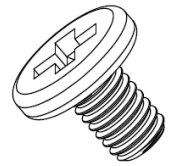
JAR THERMAL

4) M2x4.0 Screw

REVISIONS			
REV.	COMMENT	DATE	APPROVED
0	INITIAL RELEASE	2021-07-19	CHRIS







ISOMETRIC VIEW
SCALE 5:1

NOTES:
1. MATERIAL: SAE 1018 ; FINISH: NICKEL PLATING
2. THIS DRAWING CONTAINS OVERALL DIMENSIONS ONLY.
   REFER TO 3D CAD DATABASE FOR COMPLETE PART INFORMATION.
3. PARTS TO BE CLEAN AND FREE OF CRACKS, FOREIGN MATTER.
   NO OIL OR LUBRICANTS ON THE SURFACE.
4. ALL DIMENSIONS SHOWN SHALL BE CHECKED AT FIRST ARTICLE INSPECTION.
5. REMOVE ALL BURRS AND SHARP EDGES.
6. FINISHED PRODUCT TO BE RoHS COMPLIANT.

DIMENSIONAL TOLERANCE		
DECIMAL PLACES	MILLIMETERS	INCHES
.	± 0.50	-
.X	± 0.30	-
.XX	± 0.20	-
UNLESS OTHERWISE SPECIFIED		
ANGULAR DIMENSIONS	THIRD ANGLE PROJECTION	
± 1.0°		
SCALE 5:1	UNIT mm	SIZE A4

DRAWN: CALEB
CHECKED: CHRIS
APPROVED: CHRIS

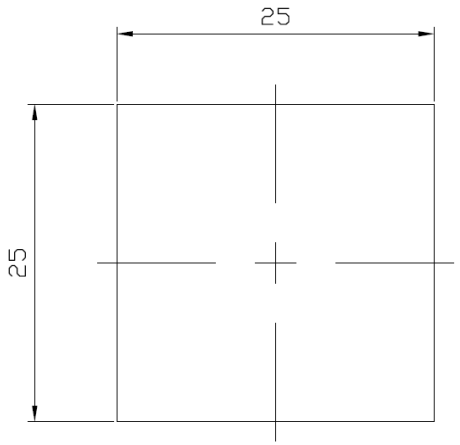
TITLE: M2x3.0 SCREW
MATERIAL: SEE NOTES
FINISH: SEE NOTES
CUS. PART NO.: M18015-001
CUS. REV.:
PART NO.: JSC00124
REV.: 0
SHEET: 7 OF 8
DATE: 2021-07-19

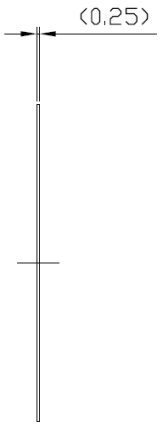
JAR THERMAL

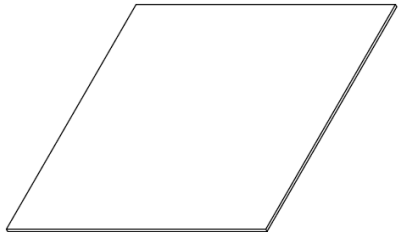
5) M2x3.0 Screw

6) Thermal pad

REVISIONS			
REV.	COMMENT	DATE	APPROVED
0	INITIAL RELEASE	2021-07-19	CHRIS







ISOMETRIC VIEW
SCALE 2:1

NOTES:
1. THIS DRAWING CONTAINS OVERALL DIMENSIONS ONLY.
   REFER TO 3D CAD DATABASE FOR COMPLETE PART INFORMATION.
2. ALL DIMENSIONS SHOWN SHALL BE CHECKED AT FIRST ARTICLE INSPECTION.
3. FINISHED PRODUCT TO BE RoHS COMPLIANT.
4. DO NOT USE THE PAD IN THE ENVIRONMENT WITH CORROSIVE AIR OR LIQUID.
   THE PAD MUST BE STORED AT ROOM TEMPERATURE CONDITION 22°C (FAHRENHEIT 71.6°F), AND 50% RH.

DIMENSIONAL TOLERANCE		
DECIMAL PLACES	MILLIMETERS	INCHES
.	± 0.50	-
.X	± 0.30	-
.XX	± 0.20	-
UNLESS OTHERWISE SPECIFIED		
ANGULAR DIMENSIONS	THIRD ANGLE PROJECTION	
± 1.0°		
SCALE 2:1	UNIT mm	SIZE A4

DRAWN	CALEB
CHECKED	CHRIS
APPROVED	CHRIS

TITLE	THERMAL PAD	
MATERIAL	LAIRD Tpcm 5810	
COLOR	GRAY	
CUS. PART NO.	M18015-001	CUS. REV.
PART NO.	JSC00124	REV. 0
SHEET	8 OF 8	
DATE	2021-07-19	

JAR THERMAL

JARO THERMAL

SPECIFICATION FOR APPROVAL

Customer :
Customer Part No. :
Description : DC FAN
JARO Model No. : JEY0501012HB1A01(V24AR)-X(2061) REV.0
Sample Issue No. :
Sample Issue Date :
☐ **Preliminary Specification**
☑ **Formal Specification**

PREPARED BY :	Caleb Huang	DATE :	08/21/2018
CHECKED BY :	Caleb Huang	DATE :	08/21/2018
APPROVED BY :	Jay Su	DATE :	08/21/2018

PLEASE SEND ONE COPY OF THIS SPECIFICATION BACK AFTER YOU SIGNED APPROVAL FOR PRODUCTION PRE-ARRANGEMENT.

By:_____ (printed)

Signature:_____

Date:_____

Jaro Thermal USA offices
6600 Park of Commerce Blvd.
Boca Raton, Florida 33617
www.jarothermal.com
Ph: 561-241-6700
Fx: 561-241-3328

Jaro Thermal Taiwan office
Building H, No.119-1, Zhudong Rd., Renwu Dist., Kaohsiung City, Taiwan 81461
www.jarothermal.com
Ph: +886-7-375-2053
Fx: +886-7-374-7403

We keep the world cool™

JARO SPEC NUMBER	
SPEC	2061

Revision of Spec History

Revision	Change Content	Change page	DATE	BY
0	Created SPEC		08/21/2018	Caleb Huang

Notice:

1. This specification will be changed base on Jaro Thermal ‘s notification. Please refer to update revision of spec by contacting Jaro Thermal.

2. This specification clarify all the mechanical & electrical characteristics of DC brushless fans & AC brushless fans & heat sink.

3. The specification of this product is described in detailed document. Please do not use the fan without proper usage. Please contact Jaro Thermal if you have special requirement which is not listed on this specification.

4. Any of change, please contact Jaro Thermal to change the new revision in order to make sure all technical data is up to date. Any ECN change will be followed by sending new update specification.

SPECIFICATION

Jaro Model	:	JEY0501012HB1A01(V24AR)-X(2061)
Samples attached	:	pcs
Safety Approval	:	CE

FEATURES

- ☐ FG SIGNAL
- ☐ RD SIGNAL
- ☐ PWM
- ☐ IP-55 RATED
- ☐ HIGH TEMP RATED

DIMENSIONS	:	50 X 50 X 10 mm
BEARING TYPE	:	BALL
MOTOR PROTECTION	:	BY IC
RATED VOLTAGE	:	12.0 VDC
OPERATING VOLTAGE RANGE	:	7.0 ~ 13.2 VDC
START－UP VOLTAGE	:	7.0 VDC , POWER ON/OFF
REAL CURRENT	:	0.10 Amp
REAL POWER	:	1.20 Watt
RATED CURRENT	:	0.25 Amp +10% MAX
RATED POWER	:	3.00 Watt
RATED SPEED	:	5000 RPM ± 10 % (IN FREE AIR AT RATED VOLTAGE)
AIR FLOW	:	10.65 CFM (REF) (IN FREE AIR AT RATED VOLTAGE)
STATIC AIR PRESSURE	:	2.31 mmH2O (REF) (IN FREE AIR AT RATED VOLTAGE)
NOISE LEVEL	:	29.0 dB(A) (MAX.: 33.0 dB(A))
LIFE EXPECTANCY	:	70000 Hours at 40℃ / 65% RH
NET WEIGHT	:	11 Gram

The standard of Jaro Thermal's fan relative humidity is 65%, and the temperature is 25°C for the standard testing. If you have any question, pls refer to environmental condition on 5-0 first. Other special request pls contact Jaro Thermal for spec checking.

SPECIFICATION

JARO MODEL: JEY0501012HB1A01(V24AR)-X(2061)

1-0 MATERIAL

1-1 Frame Material - PBT(BLACK) PLASTIC UL 94-V0

1-2 Fan Blade Material - PBT(BLACK) PLASTIC UL 94-V0

1-3 Other material – See 8.0 Dimension Drawing

1-4 Environmental Standard

[V] RoHS

[V] REACH

[ ] Halogen Free

2-0 FAN VOLTAGE CURRENT, LOCK ROTOR, AIR FLOW, STATIC PRESSURE & NOISE DEFINITION

2-1 Start Voltage - By sudden switching ON fan is start to rotate.

2-2 Input Power - Input Power shall be measured after 3 minutes for continuing rotation by rated voltage.

2-3 Rated Current - Rated Current shall be measured after 3 minutes by continuing rotation by rated voltage.

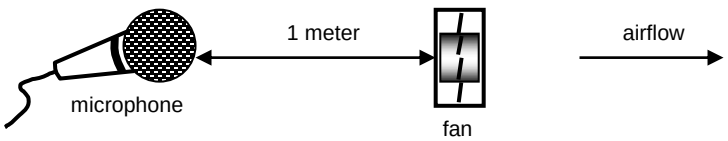
2-4 Rated Speed - Rated Speed shall be measured after 3 minutes for continuing rotation by rated voltage.

2-5 Locked Rotor Current：Locked current shall be measured within one minute of rotor locked, after 3 minutes by continuing rotation at rated voltage in clean air.

2-6 Air Flow & Static Pressure：The air flow data and static pressures should be determined in accordance with AMCA-210 standard or DIN24163 specification in chamber testing and record the test record.

2-7 Noise Level ：The measurement of noise level is carried out with reference to CNS8753 in a semi-anechoic chamber with the microphone positioned 1 meter from the air intake. Testing fan shall be hung in clean air .

Noise Level Measure



SPECIFICATION

JARO MODEL: JEY0501012HB1A01(V24AR)-X(2061)

3-0 FAN FUNCTION DEFINITION

3-1 Rotation Direction - Counterclockwise from impeller side.

3-2 Lock Rotor Condition
No damage for winding or electronic in locked rotor condition. And no damage after 72hrs continuing for lock rotor condition.

3-3 Auto Restart
Fan will automatic restart without any abnormal usage.

3-4 Dead Angle
Switch the fan change from off to on condition. Restart the fan, it will automatic restart by fan power on.

3-5 Polarity
Check the voltage and polarity before turn on the power to the fan.

3-6 Insulation Resistance
Do not use < 10M ohm between housing and positive end of lead wire (red) at 500V DC.

3-7 Dielectric Strength
No damage should be found at 500 VAC for 60 seconds, measured with 1mA trip current between housing and positive end of lead wire.

4-0 FAN PACKAGE TEST

4-1 Free Drop Shock
Base on Jaro Thermal's standard package, the fan package will test and drops on any three faces - Test standard is 30cm height. The base is wood board for 10mm thick.

5-0 FAN ENVIRONMENTAL CONDITION

5-1 Operating Temperature / Humidity
-10℃ to +70℃ at humidity 5% to 90% Relative humidity.

- 5-2 Humidity
After 96 hours, 95% RH, 40+/-2℃ per MIL-STD-202F, method 103B humidity test, the measured data on insulation resistance and dielectric strength shall meet the specification.

5-3 Storage Temperature
All function shall be normal after 500 hours storage at -40℃ to +70 ℃ with a 24 hour recovery
- period at room temperature. Humidity 5% to 95% Relative humidity
- 5-4 Do not store this fan in an environment with high humidity. This fan must be stored in
- accordance with the storage temperature. Do not store the fan for over 6 months; If this fan is
- stored for more than 6 months, JARO THERMAL recommends functional testing before using.

5-5 Improper way to disassembled fan will cause the fan get into dust or dip into water. Which will in defects is not covered in the warranty. Do not use the fan in the environment with corrosive air or liquid.

6-0 MASS PRODUCTION SAMPLE PLAN INSPECTION

All fans shall meet the quality inspection under MIL-STD-105E standard list as follow:

Critical 0.25%

Major 1.00%

Minor 2.50%

7-0 FAN USE WITH CAUTION

7-1 Please do not stick a grease and/or an oil to the fan housing or blade which may have a harmful influence by a chemical reaction at high humidity.

7-2 If the fan is reinstalled, please pay special attention to the noise due to the vibration (or resonance).

7-3 During the testing of the fan, please make sure the finger guard is use for your safety.

- 7-4 While the fan is running, please do not lock the fan intentionally for a long time. This will cause
- overheating by long period locking status. This action will damage the fan.

7-5 Please do not touch and push Fan Blade with fingers or others, fan blade and ball bearings may be damaged and it causes noise defect.

7-6 Do not carry the fan by its lead wires.

7-7 If the fan does not have the polarity protection function, the connection of the colored wires should be red + red, and black + black, or else the fan will be damaged in no time.

7-8 For the models without reverse connection of polarity protection, please do not connect the lead wire in reverse position.

7-9 Please don't install this fan in series with 2x voltage inputs. For example, if a single fan rated at 12V, then don't install two of them in series with 24V input.

7-10 Every specific fan is designed for its certain application (project). Therefore, if you want to use this fan in other application (project), please inform JARO first so that we can confirm whether there is any issue which might be incurred from the reason of this different application (project) or not.

7-11 The "Life Expectancy" of this fan has not been evaluated for use in combination with any end application. Therefore, the Life Expectancy in the Test Reports(L10 and MTTF Report) that relate to this fan is for reference only and shall not construe any kind of warranty of JARO to the life of any specific fan , either expressed or implied.

7-12 The period of product warranty , unless otherwise agreed by JARO in written , shall be 12 months staring from the date of production.

DIMENSION DRAWING

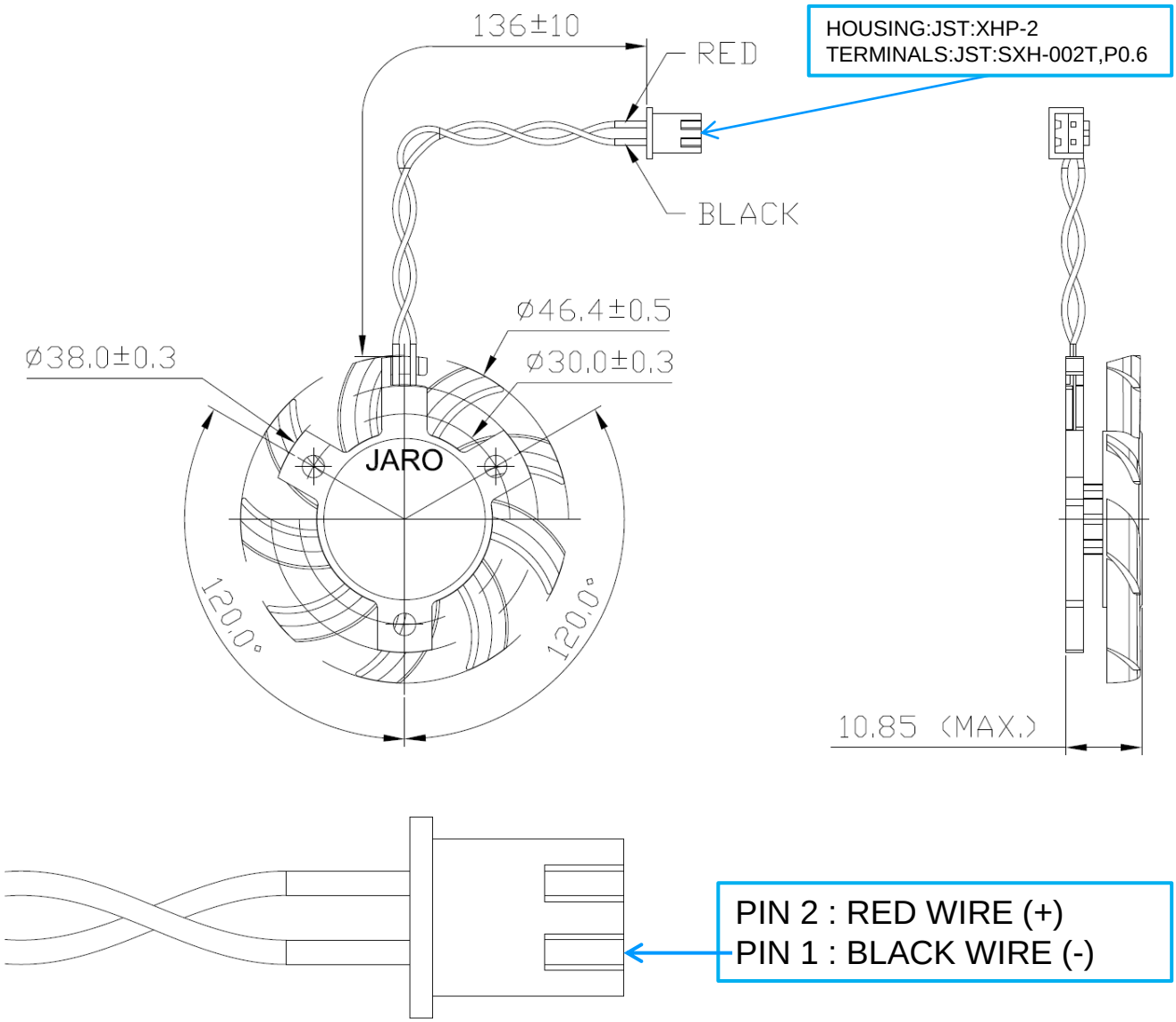
JARO MODEL: JEY0501012HB1A01(V24AR)-X(2061)

8-0 DIMENSIONS

All dimensions, Direction of rotation and air flow were specified as per drawing attached.

Description: DC Fan with:

Lead Wire: UL1571 , AWG#28 , 136± 10 mm lead length



PIN 2 : RED WIRE (+)
PIN 1 : BLACK WIRE (-)

DIAGRAM OF DIMENSIONS: Dimensions in millimeters
NOT TO SCALE. ALL COMPONENTS MUST BE RoHS/REACH COMPLIANT.

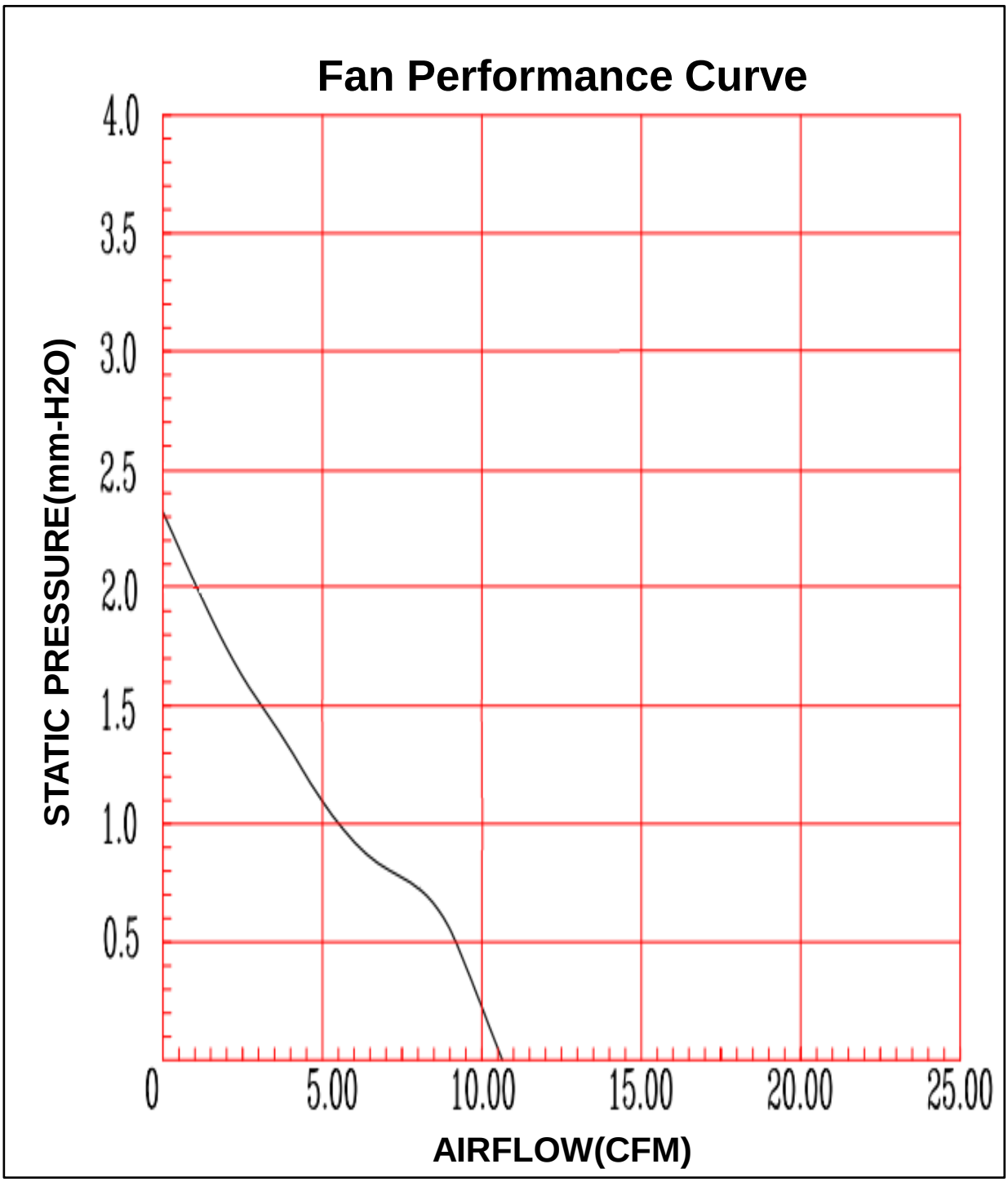
Drawing Note: N/A

Safety :CE

PERFORMANCE CURVE

JARO MODEL: JEY0501012HB1A01(V24AR)-X(2061)

9-0 PERFORMANCE CURVE



LIFE EXPECTANCY

JARO MODEL: JEY0501012HB1A01(V24AR)-X(2061)

10-0 LIFE EXPECTANCY

故障定義 Product Specification & Faiure Definiton	試驗結果：包含故障時間、數據、統計、・・・等 Test Result：Including Time Of Failure、Datum、Statistics、... ect.
1.風扇不轉 (Fan Not Work) 2.轉速超出規格30% (Speed Over 30% Origin) 3.電流超出規格30% (Current Over 30% Origin)	・溫度加速因子 TEMP A.F = $e^{(\Delta H/K) \times (\frac{1}{273+Tl} - \frac{1}{273+Th})}$ ・總試驗時間 Total Test Time = 200000 HRS. ・查表得 (MTTF By GEM Table) MTTF = 86858 HRS.

Description：

1.性能測試時點 The Time Of Check Point
Start： 0Hr, 500Hrs, 1000Hrs And Finshed

$$70℃\ MTTF = \frac{\text{Total test time (T)}}{\text{Total failure (r)}}$$

2.

GEM TABLE

Generalized Exponential Model (for Time-Terminated Test)

r	0	1	2	3	4	5
M	2.3026	3.8897	5.3223	6.6808	7.99364	9.2747
r	6	7	8	9	10	
M	10.5321	11.7709	12.9947	14.2060	15.4066	

・溫度 / TEMP. / MTTF / L10

溫度TEMP.	信賴水準90% CONFIDENCE LEVEL	L10
30 ℃	1559455	164153
40 ℃	706937	74414
50 ℃	336561	35427
60 ℃	167535	17635
70 ℃	86858	9143

3.Herewith, we could assume as right on the basis of above test result. Besides, if the actual test time exceed the required, it comes out that those fans' L_{10} expectancy and MTTF are greater than the warrant.
MTTF: Mean Time To Failures. It should be used in a non-reqairable system setting. Now we show the MTTF in our life report, that's because we will not repair the failed fans during life experiment. MTBF: Mean Time Between Failures. It should be used in a repairable system setting. Basically, MTBF is equal to MTTF, they use same formula to work out a life data.

MTTF & L10 Curve