

# SUNON

## SPECIFICATION FOR APPROVAL

**MODEL NO** : SA000-12024  
**DESCRIPTION** : Thermal Module  
**DIMENSIONS** : 37.3X19X10 HF  
**SUNON SPEC. NO.** : C01001170F-01  
**CUSTOMER APPROVAL NO.** :  
**APPROVED BY CUSTOMER** :  
(AUTHORIZED)

<b>DRAWN</b>  JING	<b>CHECKED</b>  Amy	<b>APPROVED</b>  Eric	<b>SPEC. NO</b>	C01001170F-01
			<b>ISSUED DATE</b>	11. 13. 2012
			<b>EDITION</b>	0
			<b>REVISION DATE</b>	

建準電機工業股份有限公司

SUNONWEALTH ELECTRIC MACHINE INDUSTRY CO., LTD.

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# SPECIFICATION FOR APPROVAL

## CHECK LIST

1. SPECIFICATIONS ----- Page 2
2. DIMENSION ----- Page 3~4
3. FAI & CPK TEST ----- Page 5~6
4. NOTES ----- Page 7
5. Declaration of RoHS ----- Page 8

SUNONWEALTH ELECTRIC  
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PAGE	1 OF 8
SPEC. NO.	C01001170F-01
ISSUED DATE	11. 13. 2012
EDITION	0
REVISION DATE	

2012.11.15

發行章

**MODEL : SA000-12024****1.SPECIFICATIONS**

1. Application	N/A
2. Heat Sink Dimension	37.3X19X10 HF
3. Heat Sink Material	AL6063-T5 (洗白)
4. Cooling Method	N/A
5. Thermal Grease / PAD	BP410
6. Fan Dimension	N/A
7. Fan Speed (with Heat Sink)	N/A
8. Fan Airflow ( with Heat Sink )	N/A
9. Fan Rating Voltage	N/A
10. Fan Rating Current ( with Heat Sink )	N/A
11. Fan Power Consumption ( with Heat Sink )	N/A
12. Fan Bearing Type	N/A
13. Fan Connector	N/A
14. Cooling Module Noise	N/A
15. Fan Operating Voltage Range	N/A
16. Operating Temperature	-10 to+70 deg .C
17. Storage Temperature	-40 to+70 deg .C
18. Weight	7.3 g
19. Life Expectance	N/A

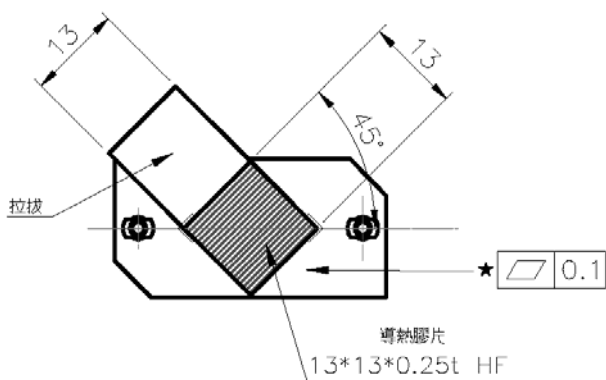
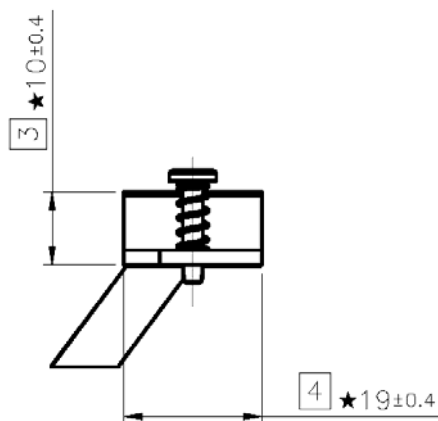
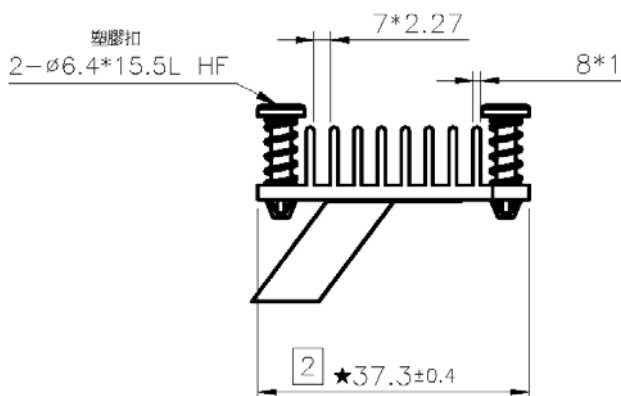
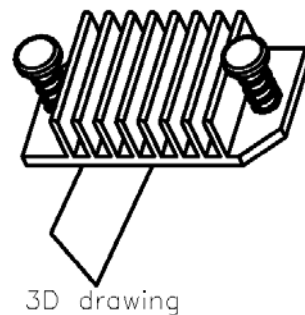
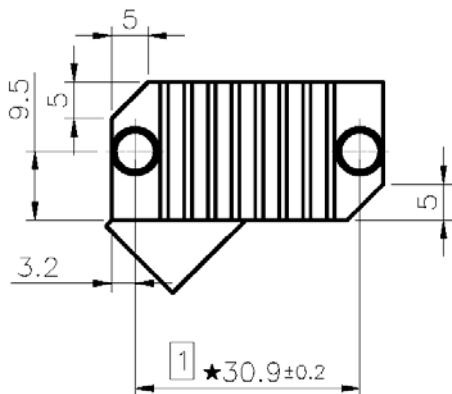
SUNONWEALTH ELECTRIC  
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建準電機工業股份有限公司

PAGE	2 OF 8
SPEC. NO.	C01001170F-01
ISSUED DATE	11. 13. 2012
EDITION	0
REVISION DATE	



2.DIMENSION

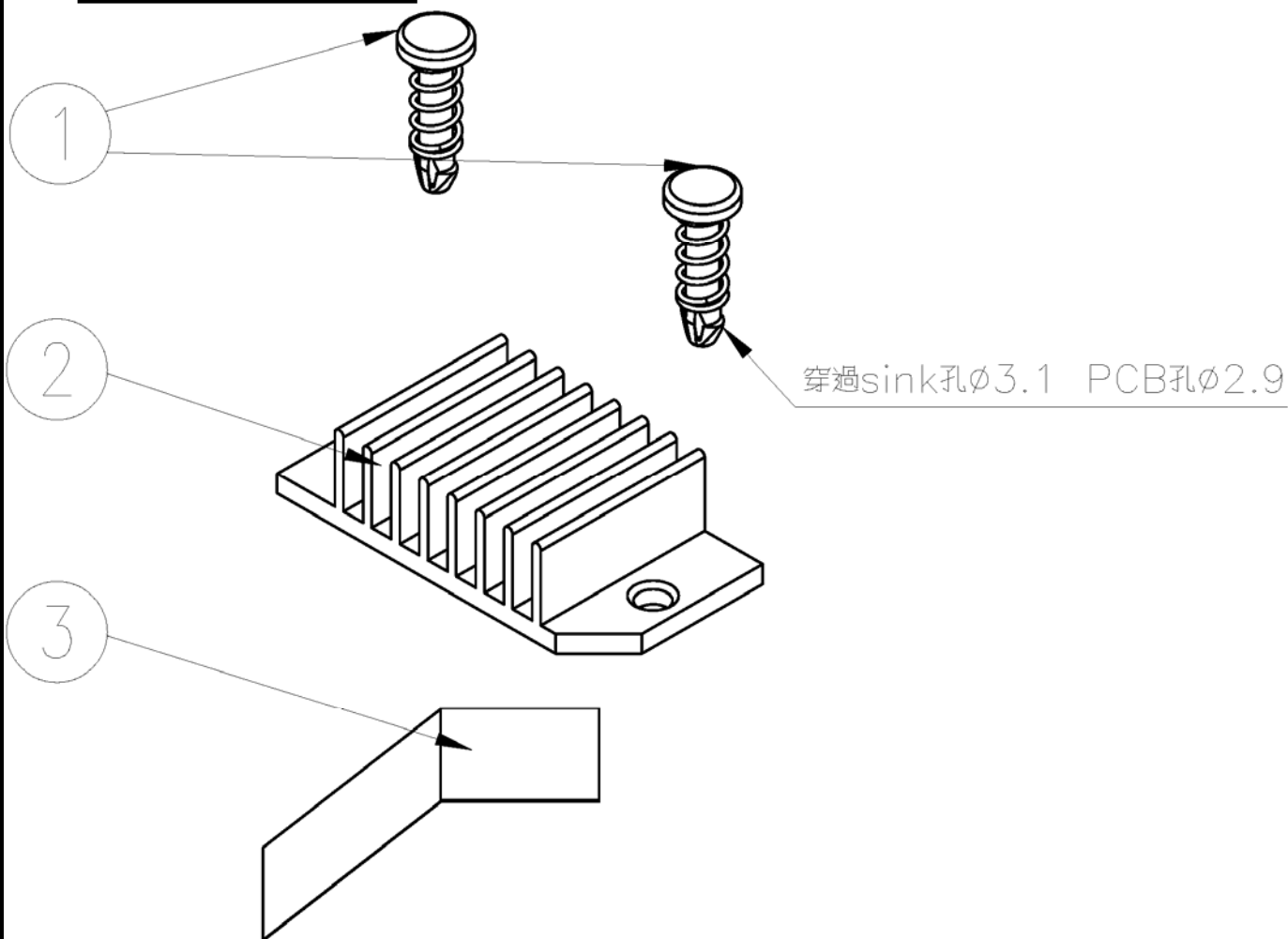


SUNONWEALTH ELECTRIC  
MACHINE INDUSTRY CO., LTD.

PAGE	3 OF 8
SPEC. NO.	C01001170F-01
ISSUED DATE	11. 13. 2012
EDITION	0
REVISION DATE	



2.DIMENSION



3	導熱膠片	A507006460F	13*13*0.25t HF	1
2	散熱片	A212019760F	37.3*19*10 HF	1
1	塑膠扣	A504003410F	$\phi$ 6.4*15.5L HF	2
項次 ITEM	名稱 NAME	料號 PART No.	規格 SPECIFICATION	數量 QTY

SUNONWEALTH ELECTRIC  
MACHINE INDUSTRY CO., LTD.

建準電機工業股份有限公司

PAGE	4 OF 8
SPEC. NO.	C01001170F-01
ISSUED DATE	11. 13. 2012
EDITION	0
REVISION DATE	



# 3.FAI & CPK TEST

## 1.FAI TEST

FAI DATA SHEET

Supplier	SUNON	Date	2012/11/13	New	
Obv Pro V3.19x37x10 射擊機殼殼push	S/R No.	Cavity / Tool #		Revised	
Material Spec	See Drawing	Inspector	何維強	Resubmission	

DRAWING LOCATION	NOMINAL	+TOL	-TOL	Sample Number			Deviation from Nominal			Mean	% Tolerance		Accept/Reject		Inspection Method	Supplier Remarks	Cell Engineering Disposition
				1	2	3	1	2	3		UPPER	LOWER	HIGH	LOW			
1	30.900	0.200	0.200	30.950	31.010	30.810	0.050	0.110	-0.090	30.923	55%	45%	Accept	Accept	CMM		
2	37.300	0.400	0.400	37.150	37.320	37.410	-0.150	0.020	0.110	37.293	27%	37%	Accept	Accept	CMM		
3	10.000	0.400	0.400	9.950	10.050	10.060	-0.050	0.050	0.060	10.020	15%	13%	Accept	Accept	CMM		
4	19.000	0.400	0.400	19.150	19.050	18.950	0.150	0.050	-0.050	19.050	37%	13%	Accept	Accept	CMM		

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建準電機工業股份有限公司

PAGE	5 OF 8
SPEC. NO.	C01001170F-01
ISSUED DATE	11. 13. 2012
EDITION	0
REVISION DATE	



### 3.FAI & CPK TEST

#### 2.CPK TEST

#### 品質總合確認書DATA SHEET

機種名：SA000-12024(Gtw Pro V3-19x37x 10新蓋蓋膠膠push pins) 試產日期：2012/11/3

No	1	2
(項目)	長度	寬度
規格中心值	37.300	19.000
規格上限	37.700	19.400
規格下限	36.900	18.600
UNIT (單位)	mm	mm
ave	37.375	19.064
max	37.606	19.256
min	37.325	19.001
1	37.526	19.038
2	37.348	19.048
3	37.353	19.153
4	37.336	19.036
5	37.406	19.054
6	37.405	19.056
7	37.335	19.035
8	37.355	19.065
9	37.347	19.047
10	37.403	19.057
11	37.326	19.036
12	37.346	19.026
13	37.358	19.146
14	37.404	19.056
15	37.406	19.026
16	37.401	19.001
17	37.403	19.053
18	37.335	19.035
19	37.335	19.025
20	37.408	19.058
21	37.338	19.038
22	37.325	19.059
23	37.402	19.035
24	37.326	19.026
25	37.325	19.045
26	37.336	19.046
27	37.329	19.229
28	37.339	19.029
29	37.359	19.239
30	37.402	19.052
31	37.409	19.009
32	37.606	19.256
33	37.409	19.045
34	37.358	19.028
35	37.329	19.038

SUNONWEALTH ELECTRIC  
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建準電機工業股份有限公司

PAGE	6 OF 8
SPEC. NO.	C01001170F-01
ISSUED DATE	11. 13. 2012
EDITION	0
REVISION DATE	



# Notes

## I. SPECIFICATION MODIFICATION

1. SUNON offers engineering assistance on module installation and cooling system design.
2. All changes, modifications and/or revisions to the specifications, if any, are incorporated in the attached specifications.
3. No changes, modifications and/or revisions to these specifications are effective absent agreement, by both Sunon and the customer, in writing.
4. This module will be shipped in accordance with the attached specification unless SUNON and the customer have agreed otherwise, in writing, as specified in Paragraph 3, above.

## II. OTHER

1. DO NOT operate this module in proximity to hazardous materials such as organic silicon, cyanogens, formalin, phenol, or corrosive gas environments including, but not limited to, H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, or Cl<sub>2</sub>.
2. Unless otherwise noted, all testing of this module is conducted at 25°C ambient temperature and sixty-five percent (65%) relative humidity.
3. DO NOT store this module in an environment with high humidity. This module must be stored in accordance with the attached specifications regarding storage temperature. If this module is stored for more than 6 months, SUNON recommends functional testing before using.
4. SUNON reserves the right to use components from multiple sources at its discretion. The use of components from other sources will not affect the specifications as described herein.

## III. WARRANTY

This module is warranted against all defects which are proved to be fault in our workmanship and material for one year from the date of our delivery. The sole responsibility under the warranty shall be limited to the repair of the module or the replacement thereof, at SUNON's sole discretion. SUNON will not be responsible for the failures of its module due to improper handing, misuse or the failure to follow specifications or instructions for use. In the event of warranty claim, the customer shall immediately notify SUNON for verification. SUNON will not be responsible for any consequential damage to the customer's equipment as a result of any module proven to be defective.

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建準電機工業股份有限公司

PAGE	7 OF 8
SPEC. NO.	C01001170F-01
ISSUED DATE	11. 13. 2012
EDITION	0
REVISION DATE	

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## Declaration of Restricted Materials

### Control declaration of environment- related substances/ materials

1. In accordance with the Restriction of Hazardous Substances (RoHS) Directive and specific market requirements, Sunon Halogen-Free Product have complied with law and discipline not to employ the forbidden substances, and restrict the allowable concentration of some limited substances deliberately in our components.

No	Substance	Criteria
1	CFCs & HCFCs (ozone depleting substances)	Forbidden
2	Chlorinated Organic Solvent	Forbidden
3	Lead and its compounds	Plastic (Frame, Impeller, wire harness, etc.)
		Solder
		Steel alloy
		Aluminium alloy
		Copper alloy
4	Cadmium and its compounds	Solder
		Parts composed of metals containing zinc (e.g. brass, zinc for die casting)
		Plastic
5	PBBs and PBDEs	Forbidden
6	PCB and PCT	Forbidden
7	CP, Short-chain Chlorinated paraffins C10-13, Cl ≥48 wt%	Forbidden
8	Mirex	Forbidden
9	PCN	Forbidden
10	Hexavalent Chromium compounds	<100ppm
11	Mercury and its compounds	Forbidden
12	Asbestos	Forbidden
13	Organic Tin compounds	Forbidden
14	Azo compounds	Forbidden
15	TBBP-A in external case plastic parts of products (PCB is exempted)	<1000ppm
16	Nickel in external case parts, which are likely to result in prolonged skin exposure	<1000ppm
17	Halogen-Free Product: Brominated/chlorinated flame retardants (other than PBBs or PBDEs), applicable item: frame, bobbin, impeller, lear wire, connector, mylar insulator.	Br<900ppm Cl<900ppm Br+Cl<1500ppm
18	PAHs and its 16 compounds in unusual contact material	BaP < 20ppm 16 compounds total content < 200ppm
19	PCB and electroplating material, PFOS content complianced with 2006/122/EC	PFOS <1000ppm; coating material PFOS < 1µg/m <sup>2</sup>

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建準電機工業股份有限公司

PAGE	8 OF 8
SPEC. NO.	C01001170F-01
ISSUED DATE	11. 13. 2012
EDITION	0
REVISION DATE	

