

SUNON

SPECIFICATION FOR APPROVAL

MODEL NO : SA000-12009
DESCRIPTION : Thermal Module
DIMENSIONS : 35X35X20 mm
SUNON SPEC. NO. : C01000880F-02
CUSTOMER :
APPROVAL NO. :
APPROVED BY :
CUSTOMER :
(AUTHORIZED)

DRAWN Fang	CHECKED Amy	APPROVED Eric	SPEC. NO	C01000880F-02
			ISSUED DATE	04. 05. 2012
			EDITION	4
			REVISION DATE	12. 09. 2013

建準電機工業股份有限公司

SUNONWEALTH ELECTRIC MACHINE INDUSTRY CO., LTD.

No. 30, LN. 296, XINYA RD., QIANZHEN DIST TEL:886-7-8135888

KAOHSIUNG CITY 80673, TAIWAN(R. O. C) FAX:886-7-8230505/8230606/8231010

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SPECIFICATION FOR APPROVAL

CHECK LIST

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MODEL : SA000-12009**1.SPECIFICATIONS**

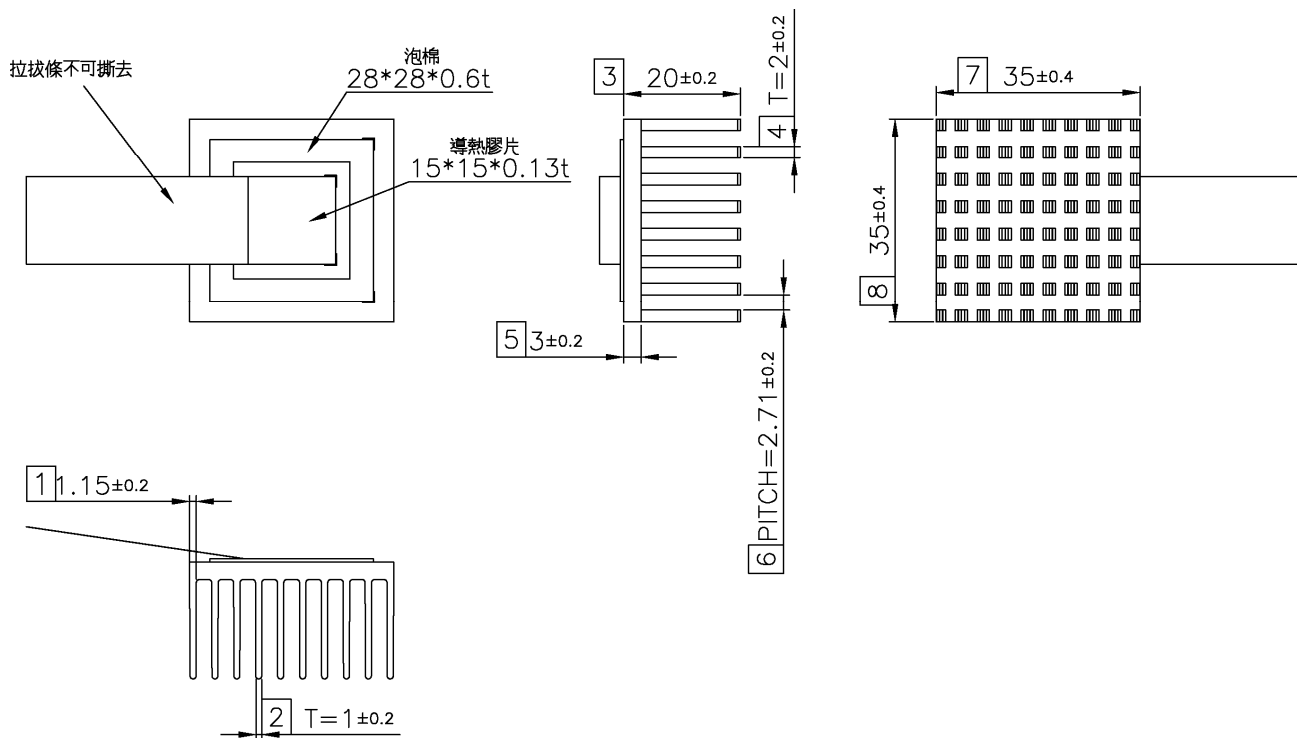
1. Application	N/A
2. Heat Sink Dimension	35X35X20 mm
3. Heat Sink Material	AL6063-T5 (陽極黑色)
4. Cooling Method	N/A
5. Thermal Grease / PAD	T725
6. Fan Dimension	N/A
7. Fan Speed (with Heat Sink)	N/A
8. Fan Airflow (with Heat Sink)	N/A
9. Fan Rating Voltage	N/A
10. Fan Rating Current (with Heat Sink)	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	17 g
19. Life Expectance	N/A

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2.DIMENSION

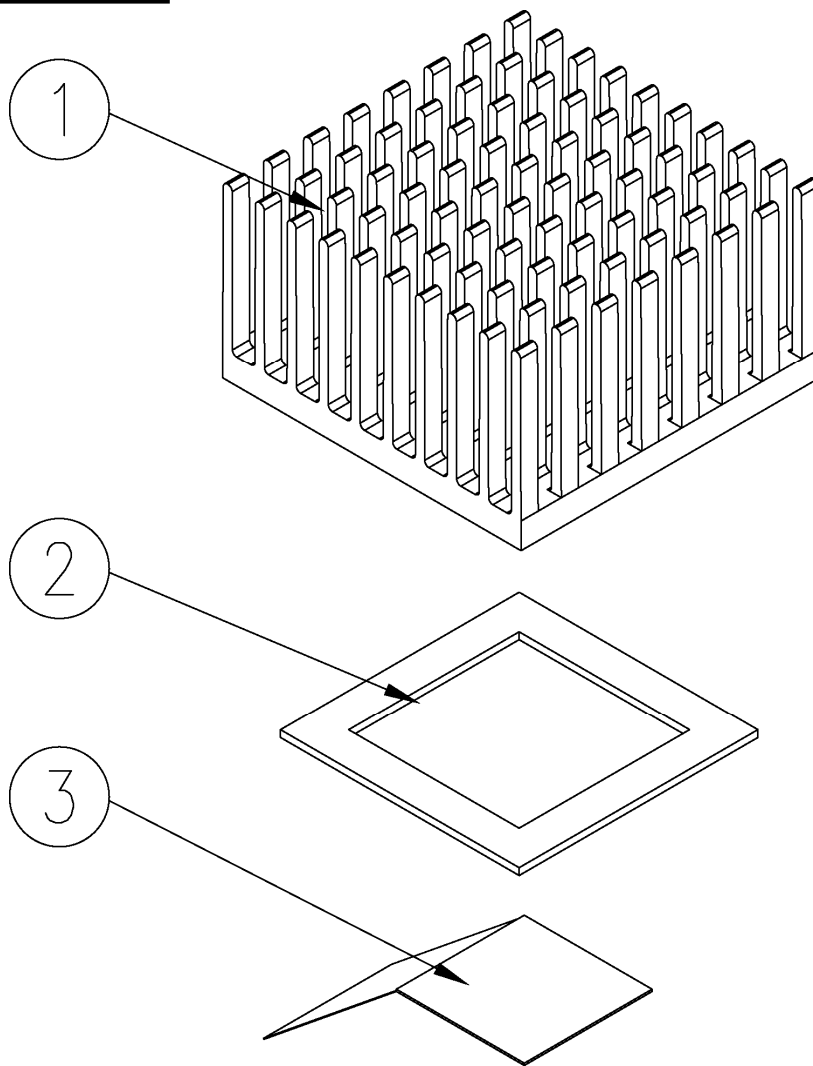


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2.DIMENSION



3	導熱膠片	A507007490F	15*15*0.13t HF	1
2	泡棉	A501024110F	28*28*0.6t HF	1
1	散熱片	A212018550F	35*35*20 HF	1
項次 ITEM	名稱 NAME	料號 PART No.	規格 SPECIFICATION	數量 QTY
零件表 PART DETAIL LIST				

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3.FAI & CPK TEST

1.FAI TEST

FAI DATA SHEET

Part Number :		Supplier :	SUNON	Date :		New :	
Part Description :	Sagem NBFT 35x35x20 Sink	ISR No :		Cavity / Tool # :		Revised :	
Revision :		Material Spec :	See drawing	Inspector :	Dai Xianhong	Resubmission :	

MOI-Method of inspection abbreviation: HG = Height gauge, MIC = Micrometer, DC = Dial Caliper, P = Protractor, OC = Optical Comparator, CG = Checking Gauge, CMM = Coordinate Measuring Machine.

OMM = Optical Coordinate Measuring Machine, HT = Hardness Tester, TG = Thickness Gauge, VIS = Visual, PG = Plug Gauge.

OTHER:

ITEM	DRAWING LOCATION	NOMINAL	+TOL	-TOL	Sample Number			Deviation from Nominal			Mean	% Tolerance		Accept/Reject		Inspection Method	Supplier Remarks	Defect Engineering Disposition
					1	2	3	1	2	3		UPPER	LOWER	HIGH	LOW			
1		1.150	0.200	0.200	1.092	1.163	1.111	-0.058	0.013	-0.039	1.122	7%	29%	Accept	Accept	CMM		
2		1.000	0.200	0.200	1.080	1.010	1.120	0.080	0.010	0.120	1.070	60%	0%	Accept	Accept	CMM		
3		20.000	0.200	0.200	20.122	20.083	20.075	0.122	0.083	0.075	20.093	61%	0%	Accept	Accept	CMM		
4		2.000	0.200	0.200	2.066	2.089	2.072	0.066	0.089	0.072	2.076	45%	0%	Accept	Accept	CMM		
5		3.000	0.200	0.200	3.058	3.089	3.097	0.058	0.089	0.097	3.081	49%	0%	Accept	Accept	CMM		
6		2.710	0.200	0.200	2.799	2.811	2.789	0.089	0.101	0.079	2.800	51%	0%	Accept	Accept	CMM		
7		35.000	0.400	0.400	35.233	35.213	35.255	0.233	0.213	0.255	35.234	64%	0%	Accept	Accept	CMM		
8		35.000	0.400	0.400	35.138	35.235	35.237	0.138	0.235	0.237	35.203	59%	0%	Accept	Accept	CMM		

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3.FAI & CPK TEST

2.CPK TEST

機種名：SA000-12009(Sagem NBFT 35x35x20 Sink)

試產日期：2012/3/30

No	1	2
(項目)	長度	厚度
規格中心值	35.000	20.000
規格上限	35.400	20.200
規格下限	34.600	19.800
UNIT (單位)	mm	mm
ave	35.174	20.129
max	35.236	20.155
min	35.145	20.096
1	35.168	20.145
2	35.168	20.112
3	35.153	20.128
4	35.236	20.139
5	35.154	20.098
6	35.156	20.135
7	35.235	20.145
8	35.165	20.134
9	35.147	20.154
10	35.157	20.129
11	35.156	20.125
12	35.146	20.126
13	35.146	20.115
14	35.156	20.145
15	35.226	20.135
16	35.201	20.155
17	35.153	20.139
18	35.235	20.145
19	35.165	20.096
20	35.158	20.098
21	35.158	20.145
22	35.179	20.139
23	35.235	20.135
24	35.156	20.101
25	35.145	20.105
26	35.176	20.132
27	35.229	20.106
28	35.179	20.105
29	35.159	20.125
30	35.152	20.141
31	35.209	20.153
32	35.156	20.126
33	35.145	20.115
34	35.168	20.139
35	35.168	20.135

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3.FAI & CPK TEST

品質總合確認書DATA SHEET

試作品.量試品.量產品

機種名：SA000-12009(Sagem NBFT 35×35×20 Sink)

NO	項目	規格	平均值 avg	標準偏 差 σ	最大 值max	最小 值 min	試料數	工程能力		備考
								cp	cpk	
1	長度	34.600~35.400mm	35.174	0.030	35.236	35.145	35	4.385	2.476	
2	厚度	19.800~20.200mm	20.129	0.017	20.155	20.096	35	3.872	1.383	

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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, H₂S, SO₂, NO₂, or Cl₂.
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)公司
D.C.C.
2013.12.10
發行章

Declaration of Restricted Materials

Control declaration of environment- related substances/ materials

1. In accordance with the Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU 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.)	<100ppm
		Solder	<1000ppm
		Steel alloy	<3500ppm
		Aluminium alloy	<4000ppm
		Copper alloy	<4wt%
4	Cadmium and its compounds	Solder	<20ppm
		Parts composed of metals containing zinc (e.g. brass, zinc for die casting)	<100ppm
		Plastic	<5ppm
5	PBBs and PBDEs	Forbidden	
6	PCB and PCT	Forbidden	
7	CP, Short-chain Chlorinated paraffins C10-13, Cl \geq 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	Hexabromocyclododecane (HBCDD)	<1000ppm	
18	Di-butyl Phthalate (DBP)	<1000ppm	
19	Benzyl butyl Phthalate (BBP)	<1000ppm	
20	Di-ethylhexyl Phthalate (DEHP)	<1000ppm	
21	Di-isobutyl Phthalate (DIBP)	<1000ppm	
22	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	
23	PAHs and its 16 compounds in unusual contact material	BaP < 20ppm Total <200ppm	
24	PCB and electroplating material, PFOS content complied with 2006/122/EC	PFOS \leq 1000ppm; coating material PFOS \leq 1 μ g/m ²	

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