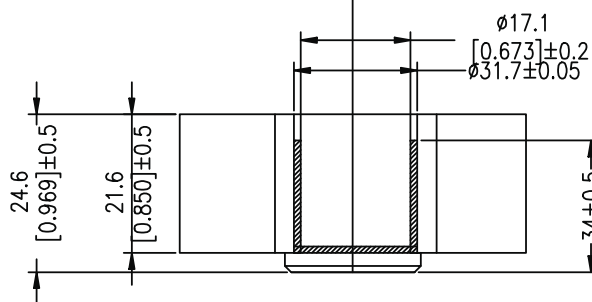
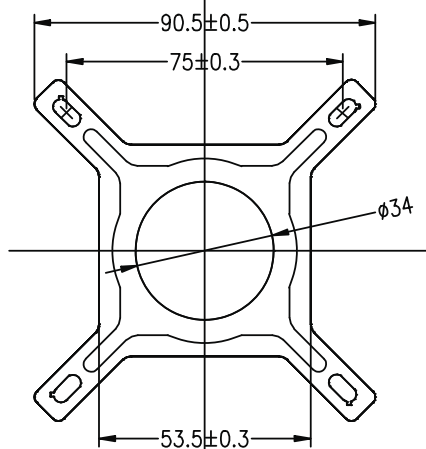
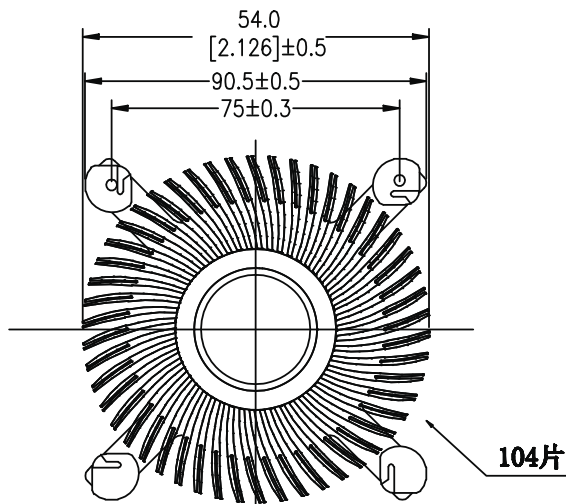


Cofan USA
Sandy Bridge LGA1155
Approval Specification

Customer Name	
Product	Sandy Bridge LGA1155 (all CPU's)
Part No.	Cofan Part # 30-2705 Rev A
Issue Date	2-14-11

CUSTOMER APPROVED	Checked by	Inspected by	Designed by
			Kevin



Overall height from top of fan to bottom of copper slug is 68mm.

UNLESS OTHERWISE SPECIFIED					 THIRD ANGLE PROJECTION	DRAWING NAME		CUSTOMER NAME	
LENGTH						RS-INSTALL PROCESS		PART NO.	
0~6	0.05	0.1	0.2	0.3	FINISH		APVD.	DATE	CUSTOMER PART NO.
6~30	0.1	0.2	0.3	0.4	METHOD:		CHK. BY	DATE	 DRAWING NO.
30~80	0.15	0.3	0.4	0.5	COLOR:		DATE	2011.01.27	
80~180	0.2	0.4	0.5	0.7	MATERIAL:		DSN. BY	DATE	
180~315	0.3	0.5	0.7	0.9	EXTRUSION NO.:		DRN. BY	DATE	
315~800	0.4	0.6	0.8	1.1	ANGLE ±0.5°		SCALE FIT FULL SHEET 1 OF 3		

1. SCOPE (范围):

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

(本承认书定义了轴流式直流无刷风扇的电气特性和机械特性。此风扇马达为两相四极式。)

2. ELECTRICAL (电气特性):

ITEM	DESCRIPTION
RATED VOLTAGE (额定电压)	12 VDC
OPERATION VOLTAGE (允许电压)	6-13.8VDC
START VOLTAGE (启动电压) (ENVIRONMENT TEMPERATURE AT -10°C TO +55°C) (环境温度 -10°C— +55°C)	≧6VDC
RATED CURRENT (额定电流)	0.25A±0.02A
INPUT POWER (输入功率)	3W (3.4W MAX)
SPEED (转速) (IN FREE AIR)	2800RPM.±10%
MAX.AIR FLOW (最大风量) (AT ZERO STATIC PRESSURE)	51.97CFM
MAX.AIR PRESSURE (最大风压) (AT ZERO AIRFLOW)	4.12 mmH ₂ O
ACOUSTICAL NOISE	36.4 (37.64MAX) dB(A)
INSULATION STRENGTH (绝缘强度)	10 MEG OHM MIN. AT 500 VDC (BETWEEN FRAME AND (+) TERMINAL) (在通入 500 伏直流电压条件下, 外框与端子线间阻抗不低于 10 兆欧)
DIELECTRIC STRENGTH (介质强度)	5 mA MAX. AT 500 VAC 60Hz ONE MINUTE. (BETWEEN FRAME AND (+) TERMINAL) (在通入 500 V/60Hz 交流电一分钟条件下, 外框与端子线间电流不超过 5mA)
LIFE EXPECTANCY (预期寿命)	40,000 HOURS CONTINUOUS OPERATION AT 25 °C WITH 15~65 %RH (在环境温度为 25°C, 相对湿度为 15~65 %RH 的条件下 预期能正常工作 40, 000 小时)
ROTATION (转动模式)	CLOCKWISE VIEW FROM NAME PLATE SIDE (从框边视 向为逆时针旋转)
LEAD WIRE (线材)	UL:4PIN 2510 端#26AWG1007 全长 250mm 黑黄绿蓝分线 (-) BLACK (+) YELLOW (FG) GLEEN (PWM) BLUE

3. PWM 占空比:

DUTY CYCLE%	R. P. M (REF)	CURRENT (A)
20%	700±250	0.04~0.07
50%	1600±250	0.13~0.15
100%	2800±400	0.24~0.27

4. MECHANICAL (部件材质):

4-1.DIMENSIONS (尺寸)	SEE DIMENSIONS DRAWING
4-2.FRAME (框)	PLASTIC UL:94V-0 (防火料 94V-0)
4-3.IMPELLER (扇叶)	PLASTIC UL:94V-0 (防火料 94V-0)
4-4.BEARING SYSTEM (轴承类别)	HYDRAULIC BEARING (液压轴承)
4-5.WEIGHT (重量)	95GRAMS (克)

5. ENVIRONMENTAL (参考环境):

5-1.OPERATING TEMPERATURE (运行温度)	-10 TO +70 DEGREE C
5-2.STORAGE TEMPERATURE (储存温度)	-40 TO +75 DEGREE C
5-3.OPERATING HUMIDITY (运行湿度)	5 TO 90% RH
5-4.STORAGE HUMIDITY (储存湿度)	5 TO 95% RH

6.PROTECTION (品质保证):

6-1.DROP TEST (落体试验)

IN MINIMUM PACKAGING CONDITION FAN WITHSTANDS EACH ONE-DROP OF THREE FACES FROM 30 CM DISTANCE HEIGHT ONTO 10 MM THICKNESS OF WOODEN BOARD.

(在正常的包装情况下, 风扇能够经受将整体包装的三个面分别从 30cm 高度跌落至 10cm 厚的木版上, 风扇将安然无恙。)

6-2.LOCKED ROTOR PROTECTION (转子锁定保证)

IMPEDANCE OF MOTOR WINDING PROTECTS MOTOR FROM FIRE IN 72 HOURS OF LOCKED ROTOR CONDITION AT THE RATED VOLTAGE.

(在通入额定电压的情况下, 将转子锁定烧机测试 72 小时, 马达线圈绕组将不会被烧坏。)

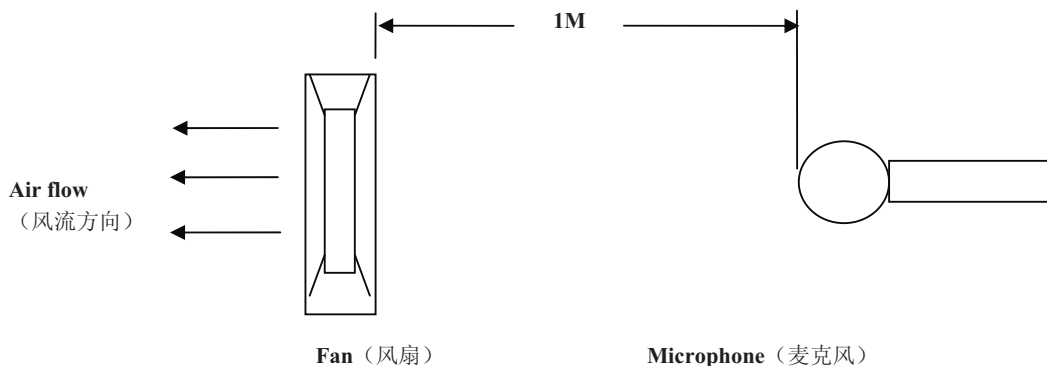
6-3.POLARITY PROTECTION (极性保护)

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

(风扇正负极性接反瞬间不会产生危害。)

7. NOISE IS MEASURED AT RATED VOLTAGE IN ANECHOIC (在无响室额定电压下之噪音测试)

CHAMBER IN FREE AIR AS BELOW (在空气自由流动的测试室):



Noise is measured 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. The background noise is 18dBA max.

(在背景噪音不超过 18dB(A)的无响室内, 将待测风扇通入额定的工作电压, 悬掉入空中, 将麦克风放于风扇同一平面且离待测风扇进风口一米处进行测试其 B&K 值。)

8.RELIABILITY (可靠度测试):

<p>8-1. HUMIDITY EXPOSURE (耐湿测试)</p>	<p>TEMPERATURE (温度) : +25°C ~ +65°C HUMIDITY (湿度) : 90-98% RH @ +65°C FOR 4 HOURS/CYCLE (4 小时为一测试周期) POWER (通电状况) : NON-OPERATING (无通电) TEST TIME (测试时间) : 168 HOURS (小时)</p>										
<p>8-2. VIBRATION (振动测试)</p>	<p>TEMPERATURE (温度) : +25°C ORIENTATION (方向) : X, Y, Z POWER (通电状况) : NON-OPERATING (无通电) VIBRATION LEVEL (振动标准) : OVERALL gRMS=3.2 FREQUENCY(Hz) (频率 Hz) PSD(G²/Hz)</p> <table style="margin-left: 40px; border: none;"> <tr><td>10</td><td>0.040</td></tr> <tr><td>20</td><td>0.100</td></tr> <tr><td>40</td><td>0.100</td></tr> <tr><td>800</td><td>0.002</td></tr> <tr><td>1000</td><td>0.002</td></tr> </table> <p>TEST TIME: 2 HOURS ON EACH ORIENTATION (测试时间:每个方向 2 小时)</p>	10	0.040	20	0.100	40	0.100	800	0.002	1000	0.002
10	0.040										
20	0.100										
40	0.100										
800	0.002										
1000	0.002										
<p>8-3. MECHANICAL SHOCK (机械震动测试)</p>	<p>TEMPERATURE: +20°C (温度: +20°C) ORIENTATION: X, Y, Z (方向: X, Y, Z) POWER: NON-OPERATING (通电状况: 无通电) ACCELERATION: 20 G MIN (加速度: 20 倍重力加速度) PULSE: 11 ms HALF-SINE WAVE (脉冲: 周期为 11 ms 的半波) NUMBER OF SHOCKS: 5 SHOCKS FOR EACH DIRECTION (震动次数:每方向震动 5 次)</p>										
<p>8-4. LIFE (寿命测试)</p>	<p>TEMPERATURE: +80°C (温度: +80°C) POWER: OPERATING (通电状况: 通电) DURATION: 1000 HOURS MIN (为期时间: 最小 1000 小时)</p>										

9. NOTES (注意事项)

9.1 Please do not touch the impeller and never carry the fan the lead wires. The bearings and the lead wires may be damaged.

(请不要碰触扇叶和拉扯线材, 以免损坏轴承及导线。)

9.2 For the purpose of MIS, please specify the Model No. on every order.

(便于订单管理, 请在每一订单上详细注明其型号。)

9.3 Please do not use the fan in the environment of corrosive gas or liquid.

(请不要将风扇置于腐蚀的气体和液体内。)

9.4 Please do not store the fan in the environment of high humidity. Please avoid storage of the fan over 6 months . For long term storage, please connect power to the fan shortly every 6 months even through the fan is stored in room temperature.

(请不要将风扇储存在高湿度的环境中, 请尽量避免将风扇储存期超过 6 个月。如果要长期储存, 请将其在室温的环境下, 且每隔 6 个月须通上电源让风扇短时间运转。)

9.5 While the fan is in operation, please do not lock the fan intentionally for a long period of time to prevent over heating which may cause permanent damage.

(当风扇在正常运转时, 请不要长时间故意地锁定风扇, 那样会使风扇过热从而有可能导致风扇的永久性损坏。)

10.FAN 图：（所有尺寸单位为 mm）

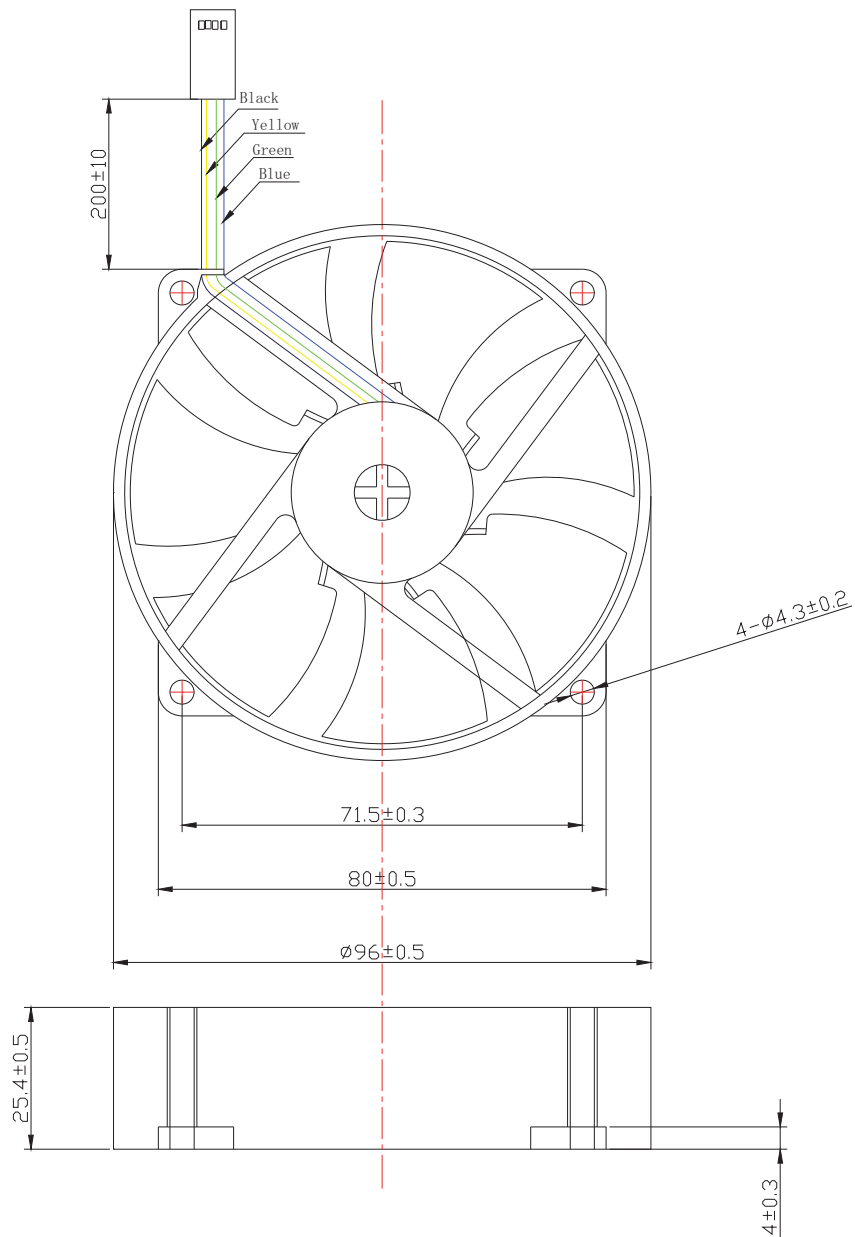


Figure 9-6. Clip Core and Extrusion Assembly

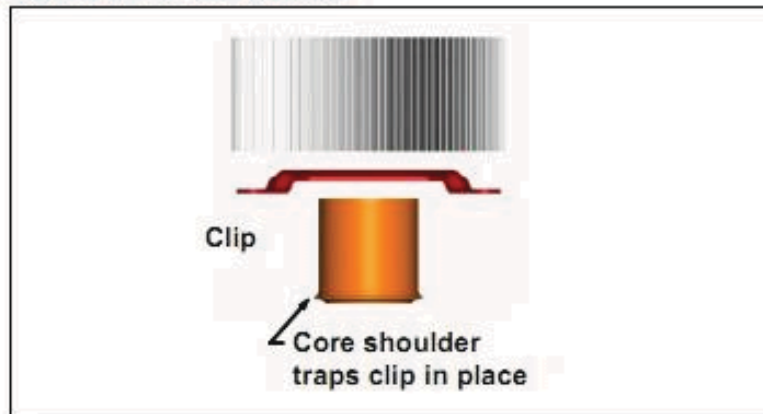


Figure 9-7. Critical Parameters for Interface to the Reference Clip

