

# SPECIFICATIONS

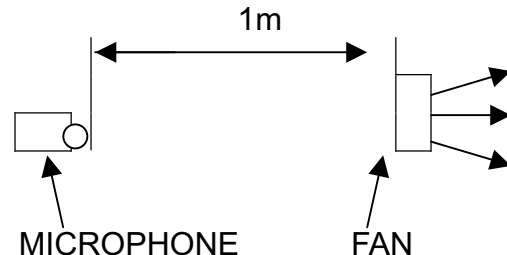
<b>TYPE</b> DC BRUSHLESS FAN	<b>MODEL NO.</b> R127015BU TC	<b>PAGE:</b> 1 OF 4
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THESE SPECIFICATIONS DEFINE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THE DC BRUSHLESS FAN.

**1. MECHANICAL SPECIFICATIONS**

- |                         |                            |
|-------------------------|----------------------------|
| 1-1 EXTERNAL DIMENSIONS | : REFER TO DWG. NO. HT-001 |
| 1-2 HOUSING MATERIAL    | : PLASTIC {UL 94V-0}       |
| IMPELLER MATERIAL       | : PLASTIC {UL 94V-0}       |
| 1-3 BEARING             | : TWO BALL BEARINGS        |
| 1-4 NET WEIGHT          | : 44g                      |

**2. ELECTRICAL SPECIFICATIONS**

NO	ITEMS	STANDARD	REMARKS
2-1	RATED VOLTAGE	12 V DC	
2-2	START VOLTAGE	7 V DC	POWER ON/OFF
2-3	OPERATING RANGE	7 V~13.2 V DC	
2-4	CONSUMING CURRENT	AT20°C 0.06 Amp (MAX. 0.07 Amp) AT55°C 0.40 Amp (MAX. 0.45 Amp)	IN FREE AIR AT RATED VOLTAGE
2-5	CONSUMING POWER	AT20°C 0.72 W (MAX. 0.84 W) AT55°C 4.80 W (MAX. 5.40 W)	IN FREE AIR AT RATED VOLTAGE
2-6	RATED SPEED	AT20°C 1300 rpm±300 AT55°C 6000 rpm±10%	IN FREE AIR AT RATED VOLTAGE
2-7	AIRFLOW	AT20°C MAX. 10.18 CFM MAX. 0.29 m <sup>3</sup> /min AT55°C MAX. 46.98 CFM MAX. 1.33m <sup>3</sup> /min	AT RATED VOLTAGE AT ZERO STATIC PRESSURE
2-8	STATIC PRESSURE	AT20°C MAX. 0.42mmH <sub>2</sub> O AT55°C MAX. 8.94mmH <sub>2</sub> O	AT RATED VOLTAGE AT ZERO AIRFLOW
2-9	SOUND LEVEL	AT20°C 21 dB(A) AT55°C 46.5 dB(A)	IN FREE AIR AT RATED VOLTAGE  

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	<b>LIU CHUN XIANG</b> 2005/03/03	<b>LIANG HAI HU</b> 2005/03/03	<b>HAI YING YANG</b> 2005/03/03

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<b>TYPE</b>	<b>MODEL NO.</b>	<b>PAGE:</b>	
<b>DC BRUSHLESS FAN</b>	<b>R127015BU TC</b>	<b>2 OF 4</b>	
2-10	OPERATING TEMPERATURE	-10°C~70°C (NORMAL HUMIDITY)	
2-11	STORAGE TEMPERATURE	-20°C~75°C (NORMAL HUMIDITY)	
2-12	DIRECTION OF ROTATION	CLOCKWISE FROM LABEL SIDE	
2-13	DIRECTION OF AIRFLOW	LABEL SIDE DISCHARGE	
2-14	INSULATION STRENGTH	10 MEG OHM MIN.	AT 500 VDC (BETWEEN FRAME AND (+) TERMINAL)
2-15	DIELECTRIC STRENGTH	MUST WITHSTAND 500 VAC 1min	MAX 1mA BETWEEN FRAME AND LEADS
2-16	PROTECTION	CURRENT LIMIT	
2-17	DROP TEST	IN MINIMUM PACKAGING CONDITION, FAN WITHSTANDS EACH ONE DROP OF THREE FACES FROM 30cm DISTANCE HEIGHT ON TO 10mm THICKNESS OF WOODEN BOARD.	
2-18	MECHANICAL SHOCK	TEMPERATURE : +25°C. ORIENTATION : X , Y , Z . POWER : NON-OPERATING., ACCELERATION : 20G MIN. PULSE : 11 MS HALF-SINE WAVE. NUMBER OF SHOCKS : 5 SHOCKS FOR EACH DIRECTION.	
NOTE 1. THE ABOVE STANDARD SHOULD BE THE SPECIFIED VALUE AT NORMAL TEMPERATURE (25°C) AND NORMAL HUMIDITY (60~65%) UNLESS OTHERWISE NOTICED.			
<b>EVERFLOW PRECISION ELECTRON CO., LTD</b>		<b>APPROVAL</b>  <b>LIU CHUN XIANG</b> <b>2005/03/03</b>	<b>CHECK</b>  <b>LIANG HAI HU</b> <b>2005/03/03</b>
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**3.LIFE EXPECTANCE(MTBF)**

MORE THAN 90% SHALL KEEP RUNNING AFTER CONTINUOUS OPERATION OF 50,000 HOURS AT RATED VOLTAGE IN 25°C AMBIENT TEMPERATURE AND 65% RELATIVE HUMIDITY CONDITION.  
FAN LIFE SHOULD BE REDEFINED WHEN ABOVE CONDITIONS ARE CHANGED.

**4.LOCKED ROTOR**

NO DAMAGE SHALL BE FOUND FOR CONTINUOUS ONE HOUR AT LOCKED ROTOR.

**5.SPECIAL ITEMS**

**5-1 SPECIFICATION CHANGE**

ANY CHANGES TO THE PARAMETERS SPECIFIED IN THIS DOCUMENT OR WILL BE DETERMINED BY MUTUAL AGREEMENT ON BOTH PARTIES.

**5-2 UNCERTAINTY**

IN THE EVENT THAT ANY QUESTIONS MAY ARISE ABOUT THIS DOCUMENT ANY STATEMENTS NOT SPECIFIED IN THIS DOCUMENT BOTH PARTIES WILL DISCUSS AND DETERMINE A SOLUTION FAITHFULLY.

**5-3 NOTE**

- 1.PLEASE CONSIDER HAVING AN INDEPENDENT PROTECTION SYSTEM IN THE EVENT THAT THE FAN SHOULD STOP OPERATING.
  
- 2.PLEASE MAKE REFERENCE TO ATTACHED IMPORTANT NOTES & GENERAL INSTRUCTIONS AND DWG.No.:HT-001 TOGETHER WITH THIS SPECIFICATION.

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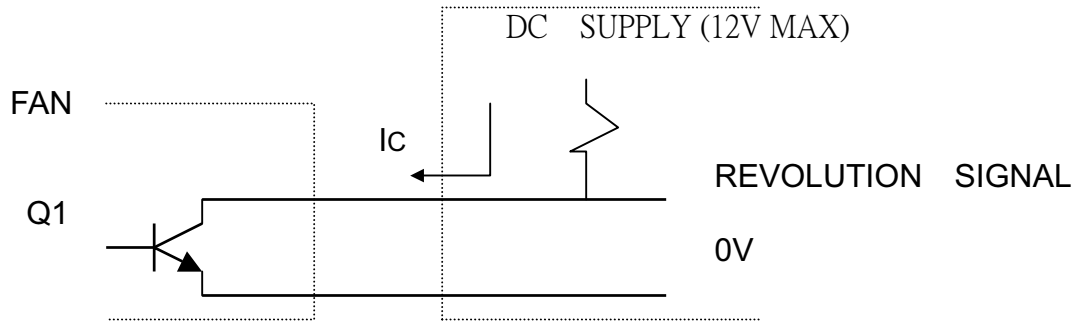
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## 6. PROVISION OF REVOLUTION SIGNAL

### 6-1 OUTPUT OF REVOLUTION SIGNAL

.OUTPUT TYPE  
.ELECTRICAL SPECIFICATION

OPEN COLLECTOR TYPE



TRANSISTOR Q1 AT "ON" POSITION  
COLLECTOR CURRENT  
SATURATION VOLTAGE  
BETWEEN COLLECTOR AND EMITTER  
AT  $I_c = 10\text{mA MAX.}$   
TRANSISTOR Q1 AT "OFF" POSITION  
RELEASE VOLTAGE

$I_c = 10\text{ mA MAX.}$   
 $V_{oL} = 0.5\text{V MAX.}$

$V_{oH} = 12\text{V MAX}$

### 6-2 OUTPUT WAVEFORM

(ACCORDING TO INPUT VOT.)

(AT REVOLUTION)

(AT LOCKED POSITION)



REMARK: AT LOCKED POSITION, OUTPUT BECOMES  $V_{oH}$  OR  $V_{oL}$

$T = T_1 + T_2 + T_3 + T_4 = 60/N$  (SEC)     $N$  : FAN SPEED (r.p.m)

$$\text{DUTY} = \frac{T_1}{T_1 + T_2} = 50 \pm 10\%$$

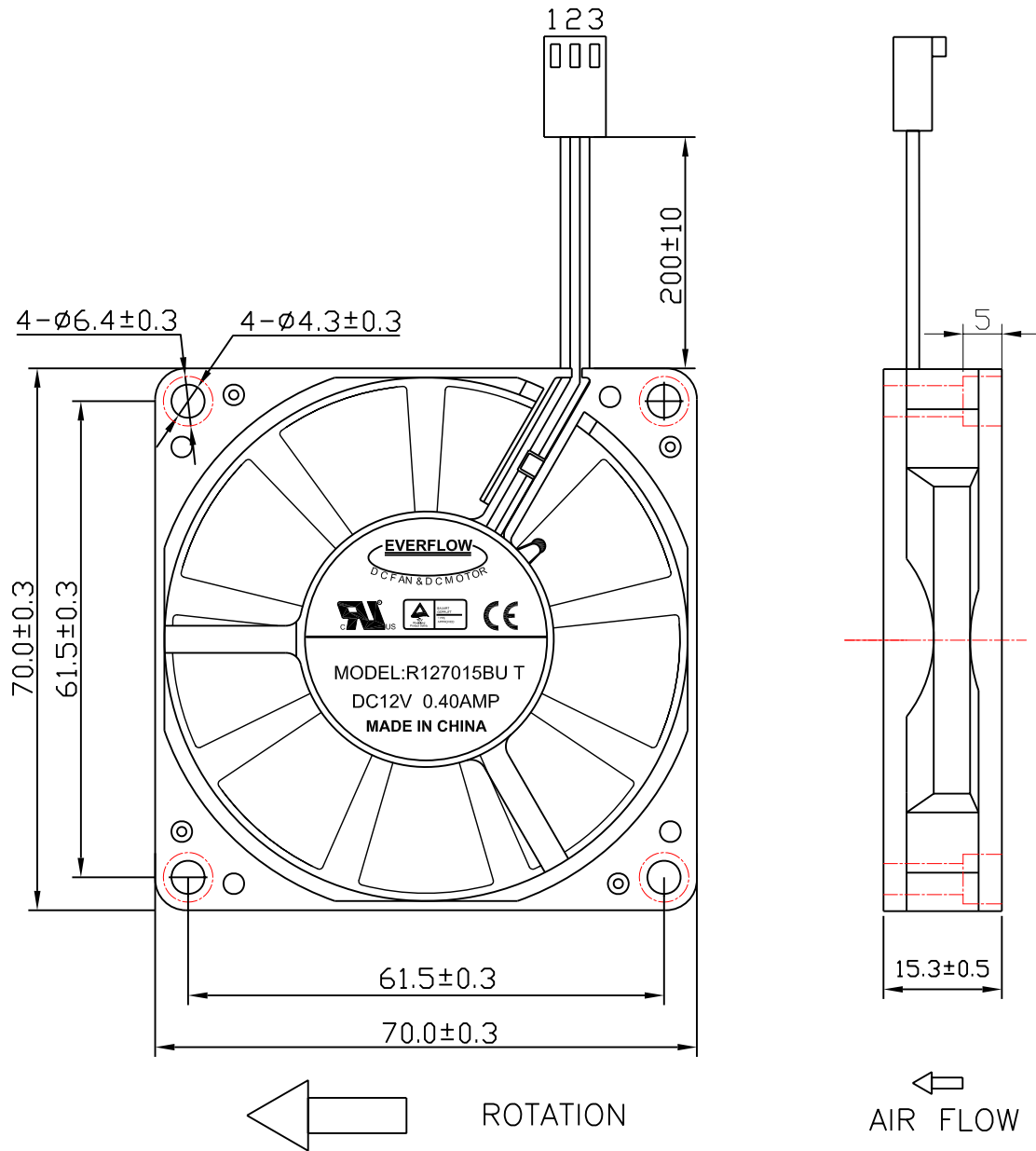
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## IMPORTANT NOTES & GENERAL INSTRUCTIONS

1. Customer shall confirm the matching and reliability of fan on actual set or unit application.  
This include confirmation on set or unit life, electrical noise, mechanical noise, vibration, static electricity, electric power noise, drift, electric resonance between motor and control circuit, mechanical resonance between motor and chassis, irregular movement of set due to motor noise, irregular movement of set in strong electromagnetic field, damaged by lightning surge earthing method etc.
2. Any revisions on the specification shall be done based on mutual discussion and agreement.
3. In order to improve the performance within the scope of specification, parts or material changes are subject to prior notice to customer.
4. Any item which is needed to add into specification shall be determined on customer's prior written request. If no information given, fan will be delivered based on our standard judgment.
5. When any trouble occurs, both parties shall discuss on this specification to solve the matters. In this case, our guarantee is only limited to fans.

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NOTES:

1. LEAD WIRE UL 1007 AWG26 OR EQUIVALENT  
 PIN 1: BLACK WIRE---(-)  
 PIN 2: RED WIRE---(+)  
 PIN 3: YELLOW WIRE---(SIGNAL)
2. HOUSING: 2510-3P OR EQUIVALENT
3. TERMINAL: 2515T OR EQUIVALENT

TRCANGLE METHOD		UNIT: mm		MODEL NO.	R127015BU(TC03206)
APPROVE	LIU CHUN XIANG	2005/03/03	✗	PART NAME	DC FAN
CHECK	LIANG HAI HU	2005/03/03		DRAWING NAME	OUTLINE
DRAWING	HAI YING YANG	2005/03/03			
EVERFLOW PRECISION ELECTRON CO.,LTD.				CODE	HT - 001
					PAGE: 1

# R127015BU T SPEED – TEMPERATURE (PERFORMANCE CURVES)



項目	溫度	20°C	55°C		
電流 (mA)		60	400		
轉速 (RPM)		1300	6000		