

机种名称 MODEL	F5010AN-12SBV
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I C F A N

1.适用范围 Scope of application

此规格产品主要是用于办公自动化设备和仪器以及与这些设备的部分部件的冷却风扇。

These specifications are for cooling fans manufactured as parts of office automation equipment and apparatus and parts of devices related to these.

2.构造规格 Mechanical Specification

1	外观尺寸 Dimensions	见外观图 See Appearance Drawing
2	机壳 Frame	PBT
3	叶轮 Impeller	PBT
4	轴受构造 Bearing	1 Ball Bearing & 1 Sleeve Bearing
5	重量 Mass	约 22g About

3.性能规格 Properties specifications

	项目 Item	规格值 Specified Values	条件 Conditions
1	额定电压 Rated Voltage	DC12V	
2	使用电压范围 Operating Voltage	9.0 ~16V	在使用温度范围内 Operating Temp.
3	额定电流 Rated current	0.17A以下 less than	额定电压、在空气没有任何障碍的情况下 With the rated voltage and in the atmosphere without disturbing airflow.
4	额定功率 Rated Input	2.04W以下 less than	额定电压、在空气没有任何障碍的情况下 With the rated voltage and in the atmosphere without disturbing airflow.
5	最大风量 Air Volume	0.35min ³ /min	额定电压、静压=0 Rated Voltage, at zero flow.
6	最大静压 Static Pressure	42Pa	额定电压、风量=0 Rated Voltage, at zero air volume.
7	使用温度 Operating Temp.	-40°C ~ +100°C (常湿) Room Humidity	实际用途没有缺陷 No defect for practical uses
8	保存温度 Storage Temp.	-40°C ~ +100°C (常湿) Room Humidity	

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9	回转方向 Direction of Rotation	标签面顺时针方向 Clock-wise seen from label side	
10	出风方向 Air-Flow	标签面 Label Side	
11	绝缘电阻 Insulation Resistance	10MΩ以上 Not less than	DC500V 机壳和电源正极之间 DC500V between frame and lead wire.
12	耐电压 Withstanding Voltage	AC500V1分間又はAC600V1秒間 AC500V 1 minute or AC600V 1 second	机壳和电源正极之间 Between frame and lead wire.
13	A特性音压 Noise level (A-weighted)	36dB以下 less than	测定位置距离轴流风扇侧面1m Measured at a distance of 1m in the plane of frame.
<p>注: 试验条件: 正常的环境温度及湿度。 Remarks: Tests shall be performed under the normal atmospheric conditions at room temperature and room humidity.</p>			
4. 可靠性试验 Reliability testing			
1	振動試験 Vibration Test	<p>单体风扇放置在X、Y、Z 3个方向, 通过以下条件进行振动试验 Vibration is applied to mutually perpendicular 3 axes with conditions shown below.</p> <p>振动频率 : 5~200Hz Frequency : 5~200Hz 振动幅度 : 5~13Hz的范围内, 振幅10mm不变 13~200Hz范围内, 30m/s²不变 Amplitude : Double Amplitude of 10mm at 5 to 13Hz. and 30m/s² at 13 to 200Hz. 振动时间 : 每10周期2小时, X, Y, Z方向 Vibration time : It is 10 cycles in three directions, and is 2 hours each.</p>	
2	期待寿命 Life Expectancy	<p>预期寿命: 在额定电压下连续运行50000小时 (正常温度和湿度) 风扇的寿命结束时回转速度与初始回转速度相比降低30%。 50,000 hours continuous operation with rated voltage applied in normal atmospheric conditions at room temperature and room humidity. The end of the fan's life is determined when the rotation speed decreases 30% from initial speed initial speed.</p>	
3	耐湿性 Moisture resistance	<p>温度60℃ 相对湿度90~95%环境中放置1000小时、常温放置1~2个小时后再测定数据 其他符合JIS C0022 The D.C.fan shall be stored at a temperature of 60℃ and a relative humidity of 95% for 1,000h. The D.C.fan shall be maintained at standard atmospheric conditions for 1 to 2 hour, after which measurement shall be made. For other procedures, refer to Other JIS compliant C0022</p>	

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4	耐热性 Dry heat	<p>温度$100\pm 2^{\circ}\text{C}$中放置1000小时、常温放置1~2个小时后再测定数据 其他符合JIS C0022</p> <p>The D.C.fan shall be stored at a temperature of $100\pm 2^{\circ}\text{C}$ for 1,000 hours. The D.C.fan shall be maintained at standard atmospheric conditions for 1 to 2 hour, after which measurement shall be made. Other JIS compliant C0022</p>
5	耐寒性 Cold	<p>温度$-40\pm 3^{\circ}\text{C}$中的环境中放置1000小时、常温放置1~2个小时后再测定数据 其他符合JIS C0022</p> <p>The D.C.fan shall be stored at a temperature of $-40\pm 3^{\circ}\text{C}$ for 1,000 hours. The D.C.fan shall be maintained at standard atmospheric conditions for 1 to 2 hour, after which measurement shall be made. Other JIS compliant C0022</p>
6	热冲击 Heat shock	<p>下记温度重复1000个循环、常温放置1~2个小时后再测定数据。 Write temperature was repeated for 1000 cycles, at normal temperature for 1 or 2 hours after the determination.</p> <p>温度($^{\circ}\text{C}$) temperatuer</p> <p>100$^{\circ}\text{C}$ 25$^{\circ}\text{C}$ -40</p> <p>0.5 0.5 时间Time(h)</p> <p>--</p>
7	耐冲击性 Shock	<p>X, Y, Z方向各10次(計30回) 其他符合 JIS C0041</p> <p>Ten successive shock shall be applied in both directions of mutually perpendicular axis(a total of 30 shocks). Other JIS compliant C0041</p> <p>加速度:980m/s² 作用時間:6ms 正弦半波 Peak acceleration Duration of pulse Half-sino</p>
8	低温動作试验 Low temperature operation test	<p>风马达放置在-40°C的试验箱内, 额定电压12V,连续工作2000H.常温放置1-2H后测定数据。 The FAN motor is placed in the test chamber -40°C, rated voltage 12V, continuous working 2000H, Data measured at room temperature after 1-2H placement.</p>
9	高温動作耐久 High temperature operation durability	<p>风马达放置在$+85^{\circ}\text{C}$的试验箱内, 额定电压12V,连续工作2000H.常温放置1-2H后测定数据。 The FAN motor is placed in the test chamber $+85^{\circ}\text{C}$, rated voltage 12V, continuous working 2000H, Data measured at room temperature after 1-2H placement.</p>

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10	ON/OFF试验	<p>风马达放置在设定的试验环境中，额定电压12V，通电工作30秒，停止30秒。重复规定的周期，试验结束后，常温放置1-2H后测定数据</p> <p>The wind motor is placed in the test environment set, rated voltage 12V, power 30 seconds. stop 30 seconds, The cycle is repeated provisions, after the test, measurement data at room temperature after 1-2H placement</p> <p>试验条件;1.60℃的环境中，试验2000个循环 2.-10℃的环境中，试验2000个循环 3.常温情况下，试验2000个循环</p> <p>Testing conditions: 1.60 °C environment, test of 2000 cycles 2.-10 °C environment, test of 2000 cycles 3.Normal cases, 2000 cycle test</p>
<p>规格(No.3~10): 试验前后目视检查了风马达外观，并测试了电流、转速、A特性音压数据</p> <p>Specifications (No.3 ~ 10): test before and after visual inspection of the wind motor appearance, and testing the current, speed, the characteristics of A sound pressure data</p> <p>规格(No.3~10): 电气和机械性能满足产品规格要求</p> <p>Specifications (No.3 ~ 10): Electrical and mechanical characteristics shall be satisfied.</p> <p>以上各种试验结果：性能和特性满足产品规格</p> <p>The test pieces must satisfy spec when after each test.</p>		
5. 其他规格书 Other Specifications		
1	过热保护 Protection from Over-heating	<p>额定电压、拘束72小时，风扇在不会因过热而损坏。</p> <p>The fan shall not be damaged by over-heating when rotation is locked for 72 hours with rated voltage applied.</p>
2	内置瞬间起动电路 (IC内部) Starting circuit is equiped in I.C.	<p>转子部分受到外力阻止而停止时，不会出现电气方面的损坏。</p> <p>外力去除时风扇会重新回转。</p> <p>If rotation is locked by foreign objects,no electrical damage shall occur and the fan shall operate when removed.</p>
3	正负极逆接保护 Protection from Reversed Connection	<p>额定电压下，正负极逆接，风马达无异常。</p> <p>Rated voltage, polarity reverse connection, the Fan motor without exception.</p>
6. 特记事项 Precaution		
<p>(1) 保管：避免放在有腐蚀性及高温、高湿的场所 保存期限不要超过6个月。</p> <p>Storage：No high temperature,high humidity and corrosive atmosphere. Storage over 6 months is not recommended.</p> <p>(2) 不要让石油化工原料（油、油脂等）接触风扇树脂部分。</p> <p>Avoid the contamination with petrochemical materials such as oil,grease and etc. with the fan's plastic parts.</p> <p>(3) 螺丝安装最大扭矩应为0.49N·m以下。</p> <p>Maximum torque for screw mount shall be 0.49N·m.</p> <p>(4) 本规格书的变更，由双方协商后进行。</p> <p>The charge of the specification put in practice with a conference of both companies.</p> <p>(5) 在满足产品规格书的范围内的改进，有可能会变更一些零件。</p> <p>It will be able to happened sometimes that the change of specification for improving performance with in the part sphere satification.</p> <p>(6) 本产品满足Rohs要求</p> <p>This product is satisfied Rohs standard.</p>		
7. 包装 Packing		
<p>运输的产品和贮存过程中，这样的包装方式不会混入灰尘和潮湿的空气，可以使导线得到有效的保护。</p> <p>The products shall be packed in such a manner not to be contaminated by dust and humid air,and lead wire shall be protected against damages,during transportation and storage of the products.</p>		
8. 原产地 The Country of Origin		
中国 上海 Shanghai of China		

MATERIAL LIST

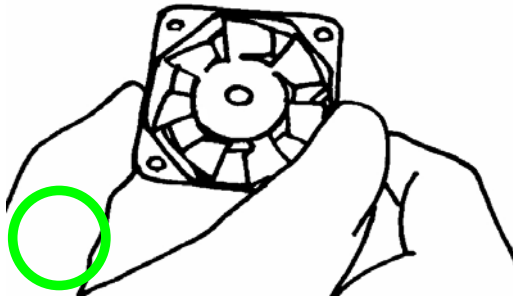
MODEL F5010AN						
No.	Components	Material	Type	Grade	Manufacturer	File No.
1	Impeller	Polycarbonate	EGN2020R2	94V-0	Mitsubishi Engineering-Plastics Corp.	E41179
		PBT	BT1230	94V-0	Foshan Nanhai Polma Engineering Plastics Co.,Ltd.	E241821
		PBT	CN7030	94V-0	WinTech Polymer Ltd.	E213445
		PBT	G2830	94V-0	Mitsubishi Rayon Co.,Ltd.	E54695
		PBT	230FR	94V-0	BeiJing Bes-q Sci.& Tech.Ltd.	E225440
2	Frame	Polyethylene Terephthalate	FR-530	94V-0	E I Dupont De Nemours & Co.,Inc.	E41938
			5300SE	94V-0	Kaneka Corp	E48854(M)
		PBT	BT1230	94V-0	Foshan Nanhai Polma Engineering Plastics Co.,Ltd.	E241821
		PBT	CN7030	94V-0	WinTech Polymer Ltd.	E213445
		PBT	G2830	94V-0	Mitsubishi Rayon Co.,Ltd.	E54695
	PBT	230FR	94V-0	BeiJing Bes-q Sci.& Tech.Ltd.	E225440	
3	Shaft	Stainless Steel	SUS420J2 4Cr13		Nanling county electronic precision Part Co.,Ltd.	
4	Printed Circuit Board	Glass-Epoxy	FR-4	94V-0	Suzhou City Suzhou Yilihua Electron Co., Ltd.	E214229
				94V-0	常盛电子有限公司	E248474
5	Lead Wire	Heat-resistant Vinyl	3302			
6	Magnet	Ferrite			嘉興市思誠電子有限公司 浙江中科磁業有限公司	
7	Double-Sided Tape	Acrylic	T4000 G9000		Sony Chemicals Corp.	MH15431(M)
8	Ball Bearing	Bearing Steel			Minebea Co.,Ltd.	

<风扇马达的拿取方法> Fan motor handling explanation

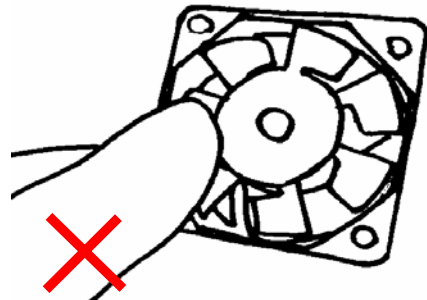
* 此说明全系列产品通用，实际收到的产品及包装可能会与下记图片有不同之处。
* This description is common to all models, but the actual products and the package will be different from the picture.

1. 风扇从包装箱取出时注意事项

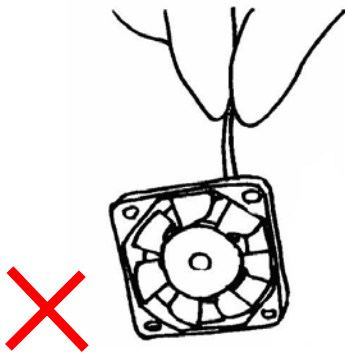
Attention when catch a product and take out a product from package.



正确的拿取方法：
请握住机壳侧面，取出时手指避免碰触到扇叶。
Method OK which catches a product :
Please do not touch it with a feather.
Please get the side of a case.

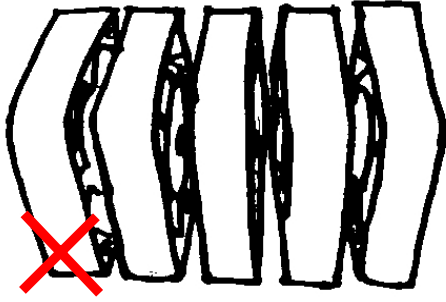


错误的拿取方法：
禁止手指碰触扇叶，否则叶片变形，将引起启动不良。
Method NG which catches a product :
Please do not touch it with a feather.
Feather transformation, poor movement occur.

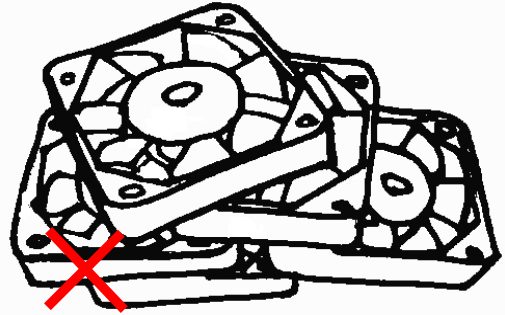


错误的拿取方法
请不要握住导线来回晃动，避免施加过度压力。
Method NG which catches a product :
Please do not add a stress that brandishes,
and is excessive with the electric wire.

2. 关于风扇的放置方法 How to set products.

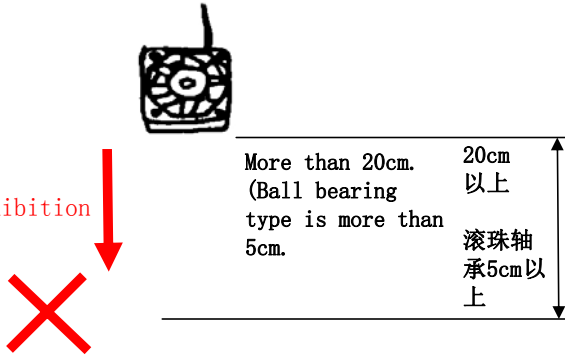


错误的放置方法：
直立放置容易倾斜向一旁倒塌。
Wrong placement method :
There is danger of falling when putting it on length

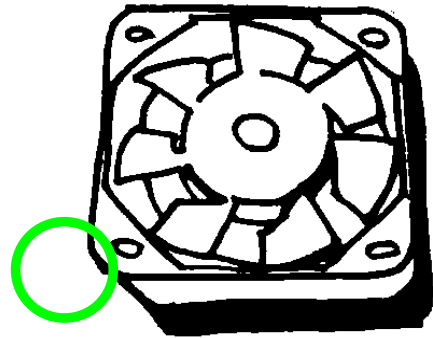


错误的放置方法：
这样的方式堆积产品，使扇叶受到直接冲击、增加压力，引起叶片变形，起动不良。
Wrong placement method :
I prohibit you from I put a product, and displaying it.
Feather transformation and poor movement outbreak

严禁掉落
Fall strict prohibition



严禁产品掉落。
从20cm以上的高度掉落，产品容易发生破损。
(滚珠轴承型号的5cm以上)
Please do not drop a product below :
It is likely to damage it when dropping it from the height of 20cm or more.
. (But ball-bearing type fan does not drop of over 5cm.)



正确的放置方法：：
请不要将产品重叠放置。
Method OK to set a product :
Please do not put a product on the top.