1. MECHANICAL:

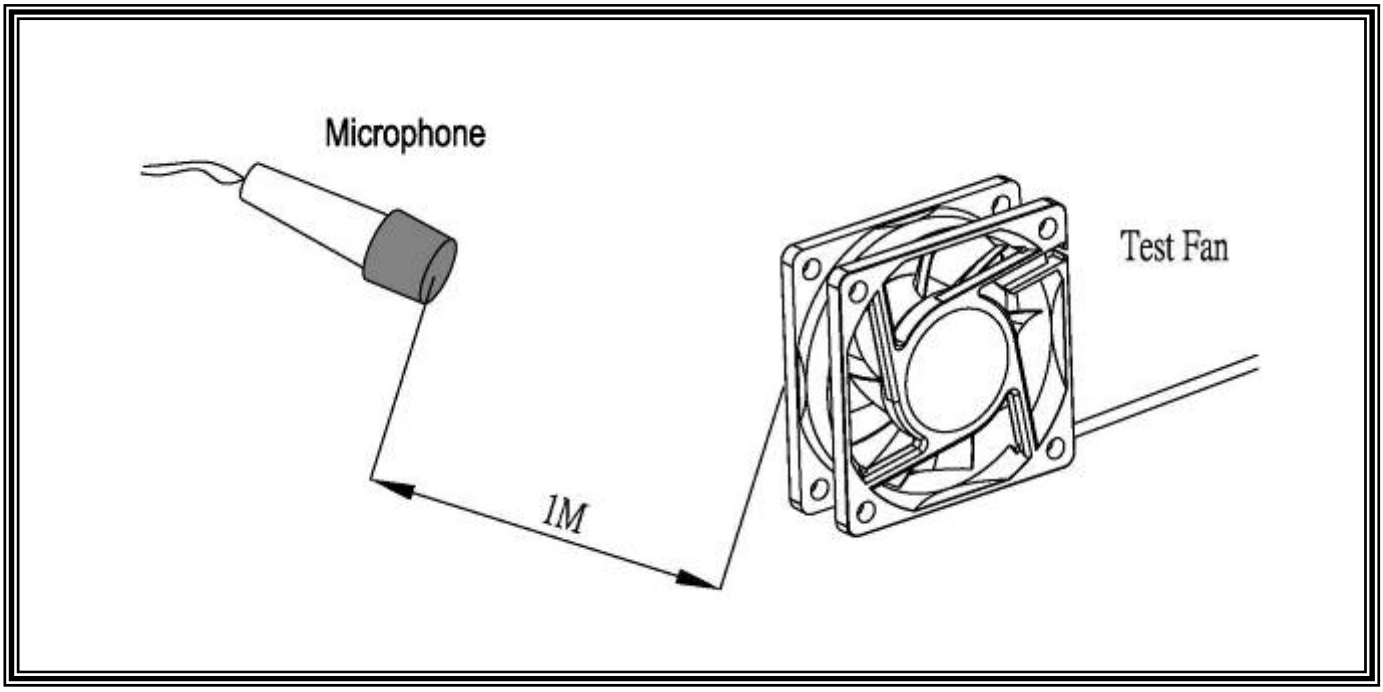
1-01	**Dimension**	**Dimension of fan shall be shown in the outline styling drawing attached.**
1-02	**Motor**	**Four-pole motor.**
1-03	**Frame**	**Plastic material UL 94V-0 (P.B.T).**
1-04	**Impeller**	**Plastic material UL 94V-0 (P.B.T).**
1-05	**Free drop shock**	**In minute package condition, the fan should withstand each one drop of three faces from 30cm distance height onto 10 mm thickness of wooden board.**

2.ELECTRICAL:

2-01	**Rated current**	**Rated current shall be measured after 30 minutes continuous rotation at rated voltage.**
2-02	**Start voltage**	**The voltage that enable to start the fan by sudden switch on.**
2-03	**Rated Speed**	**Rated speed shall be measured after 30 minutes continuous rotation at rated voltage.**
2-04	**Input Power**	**Input power shall be measured after 30 minutes continuous rotation at rated voltage.**
2-05	**Lock Current**	**Locked current shall be measured Within one minute at rotor locked, after 30 minutes continuous rotation at rated voltage in clear air.**
2-06	**Insulation resistance**	**More than 10M ohm at 500 V.D.C between lead and housing.**
2-07	**Dielectric strength**	**Measured 5 mA(max) trip current at 700 V.A.C for 3 sec. between lead and housing.**
2-08	**Locked motor protection**	**Designed to meet UL, CUL and TUV.**

3.CHARACTERISTICS:

3-01	**Air Flow & Static Pressure**	**The air flow data and static pressures should be determined in accordance with AMCA standard or DIM 24163 specification in a double- chamber testing with intake-side measurement.**
3-02	**Noise level**	**The measurement of noise level is carried out with reference to DIM 45635 in an echoic chamber with the microphone positioned 1 M from the air intake. Testing fan shall be hung in clean air.**



4.ENVIRONMENTAL:

4-01	**Operating temperature**	**-10℃ to 70℃ (ordinary humidity)**
4-02	**Storage Temperature**	**-40℃ to 70℃ (ordinary humidity)**
4-03	**Humidity**	**After 96 hrs, 95% RH 40±2℃per MIL-STD-202F method 103B, Humidity test , The measured data of insulation resistance & dielectric strength should meet the specification listed in attach.**
4-04	**Thermal Shock**	**After thermal shock test per MIL-STD-202F method 107D, Condition D, The measured data of insulation resistance & dielectric strength should the specification**

5.DATA-SHEET:

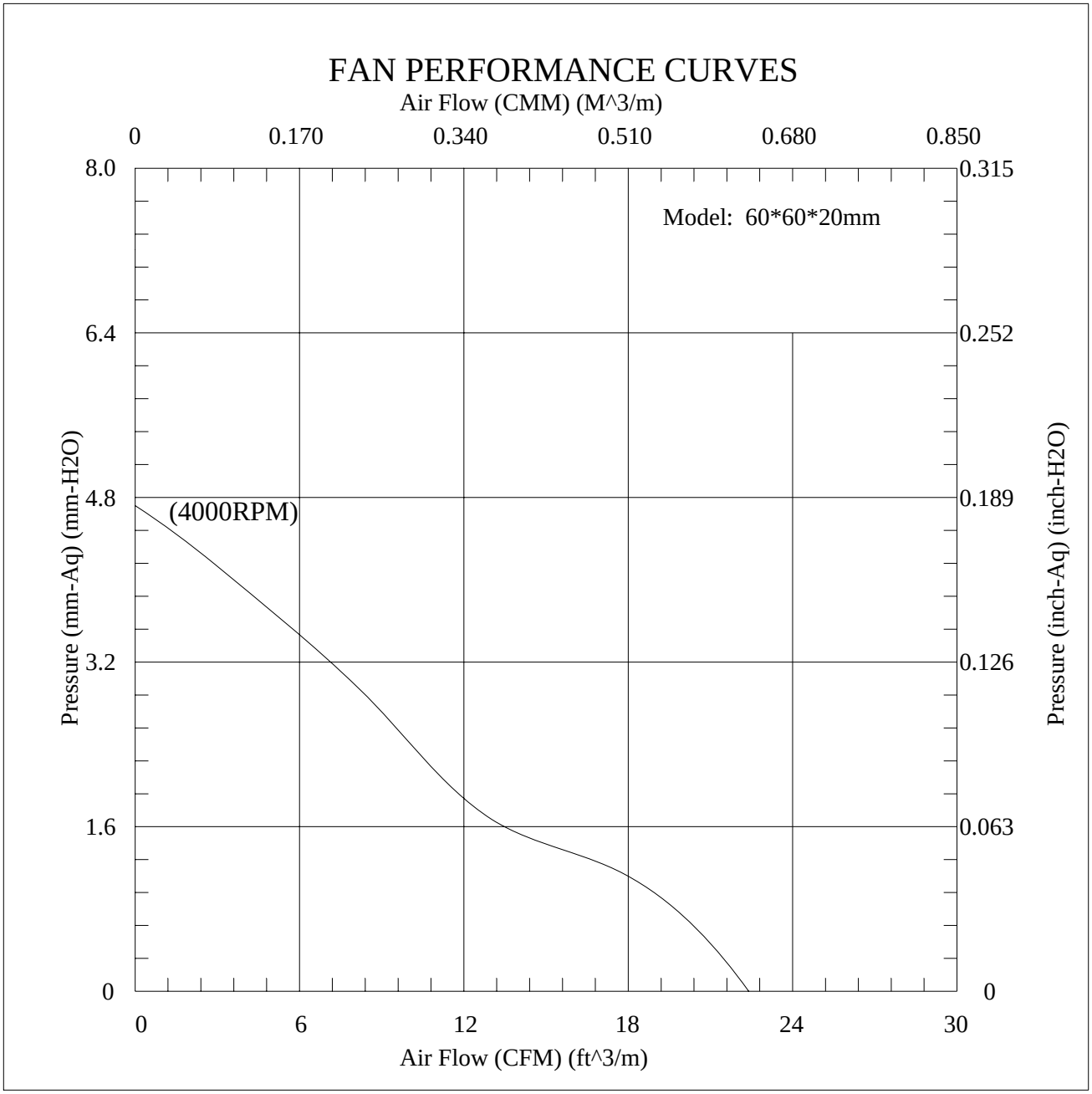
MODEL:

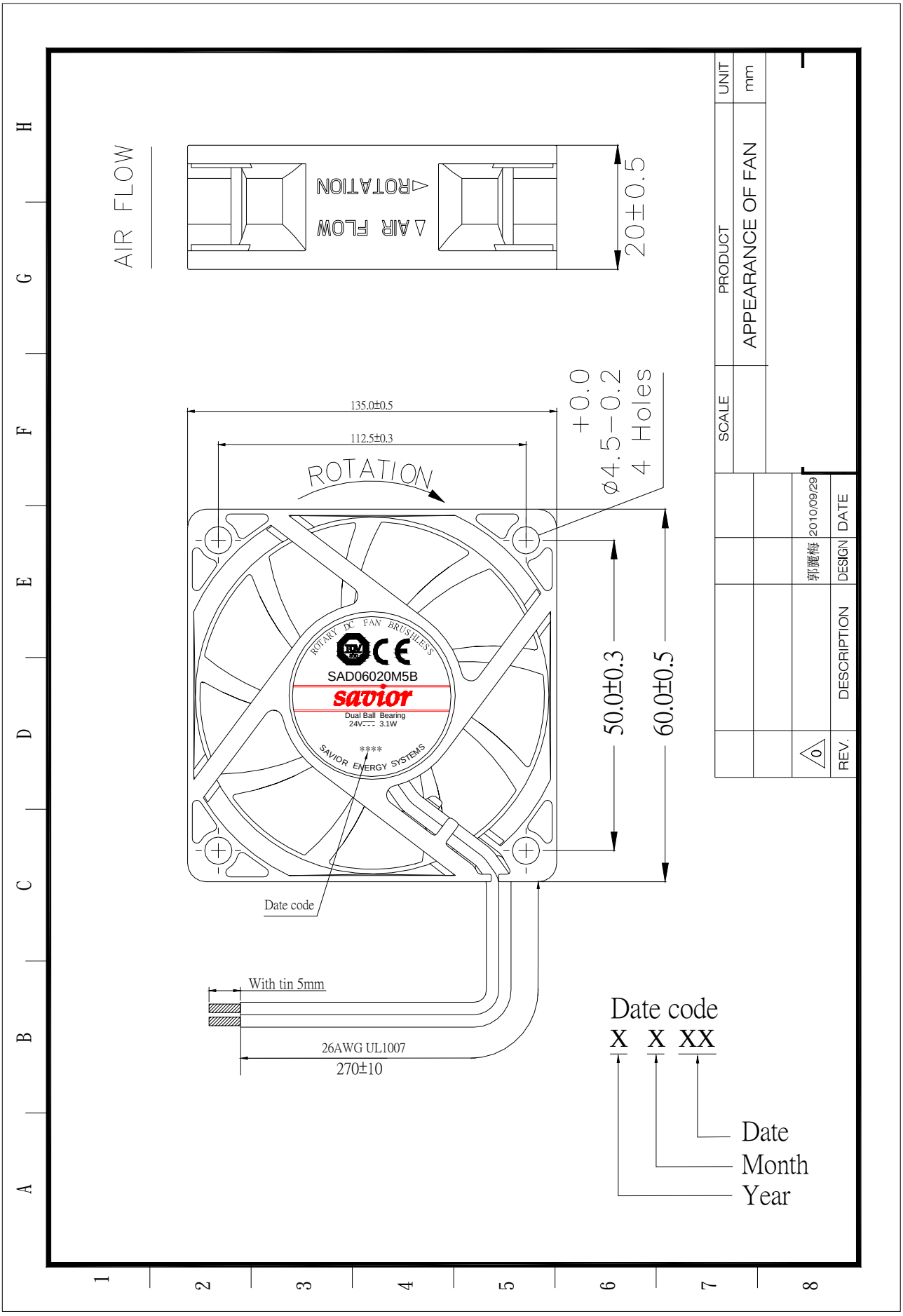
5-1. SPECIFICATION:

NO.	ITEM	SPECIFICATION	UNIT	CONDITION
5-1-01	Dimension	60*60*20	mm	----------
5-1-02	Bearing	Dual Ball	---------	----------
5-1-03	Rated Voltage	24	VDC	----------
5-1-04	Operating Voltage	12.0 ~ 27.6	VDC	----------
5-1-05	Start Voltage	12	VDC	On/off test
5-1-06	Speed	4000	R.P.M	±10%,At rated Voltage
5-1-07	Input Current	0.12	Amp	At rated Voltage
5-1-08	Input Power	2.88	Watt	At rated Voltage
5-1-09	Nominal Power	3.1	Watt	At rated Voltage
5-1-10	Air Flow	22.40	CFM	At 0 Static pressure of rated speed
5-1-11	Static Pressure	0.186	inchH_2O	At 0 air flow of rated speed
5-1-12	Noise	32.4	dBA	At rated speed
5-1-14	Life Expectancy(L10)	80,000	Hours	At 40℃
5-1-15	Motor protection	Impedance protected		
5-1-16	Polarity protection	It will not damage the fan while reverse input.		
5-1-17	Auto Restart	NO	--------	----------
5-1-18	Speed Signal output	NO	--------	----------
5-1-19	Alarm Signal output	NO	--------	----------
5-1-20	Rotation direction	From the label side	--------	Clockwise
5-1-21	Weight	42	Gram	Per each piece
5-1-22	Safety Certificate	TUV, CE	--------	----------

5-2. LEAD WIRE:

NO.	ITEM	SPECIFICATION			
5-2-01	AWG NO. &Authorize	26AWG, UL1007(The end of wire with tin as drawing)			
5-2-02	Color	═	╪		
		Black	Red		
5-2-03	Line Length	270±10mm			
5-2-04	Connector	Notes as: Not available			
5-2-05	Tube	NO			


FAN PERFORMANCE CURVES
Air Flow (CMM) (M^3/m)
0
0.170
0.340
0.510
0.680
0.850
Model: 60*60*20mm
(4000RPM)
Pressure (mm-Aq) (mm-H2O)
8.0
6.4
4.8
3.2
1.6
0
Pressure (inch-Aq) (inch-H2O)
0.315
0.252
0.189
0.126
0.063
0
0
6
12
18
24
30
Air Flow (CFM) (ft^3/m)


AIR FLOW
ROTATION
AIR FLOW
20±0.5
135.0±0.5
112.5±0.3
ROTATION
+0.0
ø4.5−0.2
4 Holes
ROTARY DC FAN BRUSHLESS
SAD06020M5B
savior
Dual Ball Bearing
24V 3.1W
SAVIOR ENERGY SYSTEMS
50.0±0.3
60.0±0.5
Date code
With tin 5mm
26AWG UL1007
270±10
Date code
X X XX
Date
Month
Year
UNIT
mm
PRODUCT
APPEARANCE OF FAN
SCALE
REV.
DESCRIPTION
DESIGN
郭麗梅
DATE
2010/09/29
0

.

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Product Service

CERTIFICATE

No. B 10 07 74476 001

Holder of Certificate: **SAVIOR ELEKTRONIK SANAYIVE TIC.LTD.STI**
DES SANAYI SITESI. 104. SOK. A07 BLOK,
NO2. Y.DUDULLU
34776 ISTANBUL
TURKEY

Certification Mark:

Product: **Component fan (Component DC Fan)**

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 612101078601

Bill Lin

Date, 2010-07-20 (Bill Lin)

TÜV SÜD Product Service GmbH · Zertifizierstelle · Ridlerstraße 65 · 80339 München · Germany

TÜV®

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ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Product Service

CERTIFICATE
No. B 10 07 74476 001

Model(s):

SAD04020 Series, SAD06010 Series, SAD06020 Series
Difference
SAD x1 x2 x3 x4 x5
A B C D E F
A - Series Number
"SAD" : Series Name
B - Frame Dimension
"x1" can be 060 or 040
"060" = 60 mm
"040" = 40 mm
C - Frame Thickness
"x2" can be 10 or 20
"10" = 10 mm
"20" = 20 mm
D - Fan Speed
"x3" can be H, S, L, M, E or V
"H" = High Speed
"S" = Slow Speed
"L" = Low Speed
"M" = Middle Speed
"E" = Extra Low Speed
"V" = Very Low Speed
E - Input Voltage
"x4" can be 3, 4 or 5
"3" = 5 Vdc
"4" = 12 Vdc
"5" = 24 Vdc
F - Bearing Type
"x5" can be S or B
"S" = Sleeve Bearing
"B" = Ball Bearing

Parameters:

Rated input voltage:	5, 12 or 24 Vdc
Rated input current:	See attachment
Protection class:	III
Max. ambient temperature:	40 °C
Degree of protection against ingress of liquids:	Ordinary

Remark: When installing, all requirements of below mentioned test standards must be fulfilled.

Tested according to: EN 60950-1/A11:2009

Production Facility(ies): 48576

Main-Certificate no.: B 10 06 38493 021

Bill Li

Attachment to the Certificate No. B 10 07 74476 001

Taiwan

The following models of the Component DC Fan "SAD04020 Series, SAD06010 Series, SAD06020 Series" will be covered by above certificate:

Model-#	DC Ratings	Model-#	DC Ratings
SAD04020L4B	12Vdc, 0.8W	SAD06020S4B	12Vdc, 4.8W
SAD04020M4B	12Vdc, 1.3W	SAD06020H4B	12Vdc, 3.2W
SAD04020H4B	12Vdc, 1.6W	SAD06020M4B	12Vdc, 2.5W
		SAD06020L4B	12Vdc, 1.7W
SAD04020L4S	12Vdc, 0.8W	SAD06020E4B	12Vdc, 1.3W
SAD04020M4S	12Vdc, 1.3W	SAD06020V4B	12Vdc, 0.9W
SAD04020H4S	12Vdc, 1.6W		
		SAD06020S4S	12Vdc, 4.8W
SAD04020L3B	5Vdc, 0.6W	SAD06020H4S	12Vdc, 3.2W
SAD04020M3B	5Vdc, 0.8W	SAD06020M4S	12Vdc, 2.5W
SAD04020H3B	5Vdc, 1.3W	SAD06020L4S	12Vdc, 1.7W
		SAD06020E4S	12Vdc, 1.3W
SAD04020L3S	5Vdc, 0.6W	SAD06020V4S	12Vdc, 0.9W
SAD04020M3S	5Vdc, 0.8W		
SAD04020H3S	5Vdc, 1.3W	SAD06020S5B	24Vdc, 5.1W
		SAD06020H5B	24Vdc, 3.5W
SAD06010H4B	12Vdc, 2.8W	SAD06020M5B	24Vdc, 3.1W
SAD06010M4B	12Vdc, 2.0W	SAD06020L5B	24Vdc, 2.5W
SAD06010L4B	12Vdc, 1.6W	SAD06020E5B	24Vdc, 1.7W
		SAD06020V5B	24Vdc, 1.2W
SAD06010H4S	12Vdc, 2.8W		
SAD06010M4S	12Vdc, 2.0W	SAD06020S5S	24Vdc, 5.1W
SAD06010L4S	12Vdc, 1.6W	SAD06020H5S	24Vdc, 3.5W
		SAD06020M5S	24Vdc, 3.1W
SAD06010M3B	5Vdc, 2.1W	SAD06020L5S	24Vdc, 2.5W
SAD06010L3B	5Vdc, 1.3W	SAD06020E5S	24Vdc, 1.7W
SAD06010E3B	5Vdc, 1.0W	SAD06020V5S	24Vdc, 1.2W
SAD06010V3B	5Vdc, 0.8W		
SAD06010M3S	5Vdc, 2.1W		
SAD06010L3S	5Vdc, 1.3W		
SAD06010E3S	5Vdc, 1.0W		
SAD06010V3S	5Vdc, 0.8W		

Model Difference

SAD	x1	x2	x3	x4	x5
A	B	C	D	E	F

A – Series Number
"SAD" : Series Name

B – Frame Dimension
"x1" can be 060 or 040
"060" = 60 mm
"040" = 40 mm

C – Frame Thickness
"x2" can be 10 or 20
"10" = 10 mm
"20" = 20 mm

D – Fan Speed
"x3" can be H, S, L, M, E or V
"H" = High Speed
"S" = Slow Speed
"L" = Low Speed
"M" = Middle Speed
"E" = Extra Low Speed
"V" = Very Low Speed

E – Input Voltage
"x4" can be 3, 4 or 5
"3" = 5 Vdc
"4" = 12 Vdc
"5" = 24 Vdc

F – Bearing Type
"x5" can be S or B
S = Sleeve Bearing
B = Ball Bearing

Date: 2010-07-20

TÜV SUD ASIA LTD. TÜV SÜD TAIWAN

Testing Laboratory

Bill Lin

Bill Lin

CE

SPORTON LAB.

Certificate No.: EC2D2008-04

CERTIFICATE

- EQUIPMENT: DC FAN
  MODEL NO. : SADx1x2x3x4x5
  (For more model numbers please refer to rear side of this certificate.)
  APPLICANT : SAVIOR ELEKTRONIK SANAYI VE TIC.LTD.STI
  Des Sanayi Sitesi. 104. Sok. A07 Blok, No:2
  Y.Dudullu, Istanbul – TURKEY

SPORTON LAB.

I HEREBY CERTIFY THAT:

THE MEASUREMENTS SHOWN IN THIS TEST REPORT WERE MADE IN ACCORDANCE WITH THE PROCEDURES GIVEN IN **EUROPEAN COUNCIL DIRECTIVE 2004/108/EC.** THE EQUIPMENT WAS **PASSED** THE TEST PERFORMED ACCORDING TO **European Standard EN 55022:2006 Class B, EN 61000-3-2:2006, EN 61000-3-3:1995/A1:2001/A2:2005 and EN 55024:1998/A1:2001/A2:2003 (IEC 61000-4-2:1995/A2:2000, IEC 61000-4-3:2006, IEC 61000-4-4:2004,IEC 61000-4-5:2005, IEC 61000-4-6:2006, IEC 61000-4-8:1993/A1:2000, IEC 61000-4-11:2004).** THE TEST WAS CARRIED OUT ON **May 28, 2008** AT **SPORTON INTERNATIONAL INC. LAB.**

Castries Huang 7/04, 2010

Castries Huang
Supervisor

More detail information of Model No.:

x1 (Diameter / Width (mm))

025= 25x25mm
030= 30x30mm
040= 40x40mm
050= 50x50mm
060= 60x60mm
070= 70x70mm
080= 80x80mm
092= 92x92mm
020= 20x20mm
035= 35x35mm
045= 45x45mm
120= 120x120mm
172= Ø172 or 172x150mm

x2 (Thicknes (mm))

06 = 6mm
07 = 7mm
09 = 9mm
10 = 10mm
12 = 12mm
15 = 15mm
20 = 20mm
25 = 25 or 25.4mm
32 = 32mm
38 = 38mm
51 = 51mm

x3 (Speed)

H = High Speed
N = Normal Speed
S = Slow Speed
U = Ultra Fan

x4 (Voltage)

3 = 5V
4 = 12V
5 = 24V
6 = 48V

x5 (Bearing)

S = Sleeve Bearing
B = Ball Bearing