

DC AXIAL FAN

size 40 x 40 x 28mm

High Performance

General Specifications

- Motor: 4 pole brushless DC motor
- Frame: Thermoplastic PBT+30%GF(94V-0).
- Impeller : Thermoplastic PBT+15%GF(94V-0).
- Bearing: Precision ball bearing/sleeve bearing.
- Operating temperature : -10°C to +70°C.



Major Characteristic Parameters

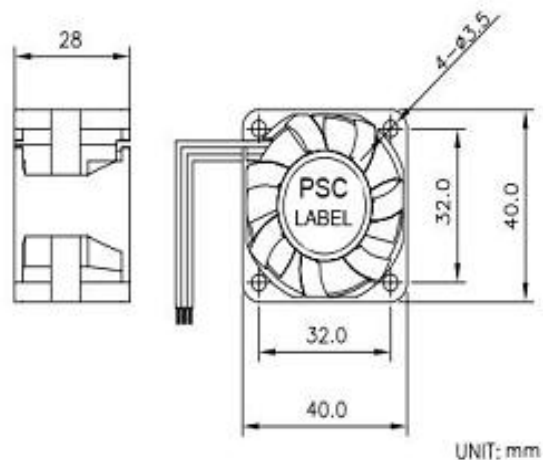
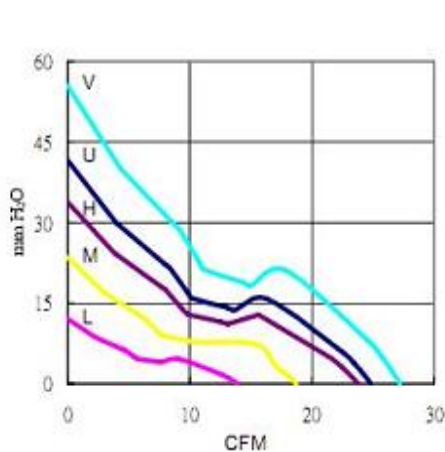
Model	Bearing System	Rated Voltage	Operating Voltage Range	Rated Current	Rated Speed	Maximum Air Flow	Maximum Static Pressure	Sound Level	Weight
Part NO.	B / S / F	V	V	A	RPM	CFM	mm-H ₂ O	dBA	g
AGE04028_12V	B S E	12	7.0~13.8	0.64	18,000	24.82	41.61	54.0	40
AGE04028_12U	B S E	12	7.0~13.8	0.55	15,000	23.78	33.65	55.0	40
AGE04028_24H	B S E	24	14.0~26.4	0.28	13,000	23.78	33.65	54.0	40
AGE04028_12H	B S E	12	7.0~13.8	0.27	11,000	18.73	23.38	54.0	40
AGE04028_24H	B S E	24	14.0~26.4	0.18	11,000	18.73	23.38	48.0	40
AGE04028_12M	B S E	12	14.0~27.6	0.2	9,500	15.85	17.57	42.0	40
AGE04028_24M	B S E	24	14.0~26.4	0.12	9,500	15.85	17.57	42.0	40
AGE04028_12L	B S E	12	7.0~13.8	0.14	8,000	13.86	11.6	40.0	40

*Function type is optional.

*All reading are typical values at rated voltage

*Specifications are subject to change without notice

* Bearing system B: Two Ball Bearing F: Fluid Bearing S: Sleeve Bearing



PSC Thermal Solutions



PSC Motor & Fan, Inc.

DC FAN LIFE TEST REPORT

Model Name: AGE04028B12U

Available for these models with lower speed and same physical structure. This test report applies to **40 x 40 x 28** series as the following models

TEST MODEL: AGE04028B12U			
AGE04028B12S	AGE04028B12U	AGE04028B12H	AGE04028B12M
AGE04028B12L			

© L_{10} Expectancy: **70,000** hours minimum @ fan rated voltage and the temperature of 40°C
 According to the equation for Weibull distribution, $MTTF \cong 7 \times L_{10} = 490,000$ hours
 And we rely on a zero failure Weibull test strategy and accelerated testing technique, to determine the total test time (t) for verifying the above life estimation by the equations,

$$t = 1.036 \times MTTF \times [(B_{r,c}) + n]^{0.91} + A_F, \text{ and } A_F = 2^{(T_s - T_u)/10}$$

Issued Date : **25-Mar-08**

Test Site : **TPE FAN LAB**

File NO. : **LS4028-4**

Approved By :	Reviewed By :	Tested By :
<i>Sulcia</i>	<i>吳永昌</i>	<i>Jerry</i>

DC FAN FUNCTION TEST RECORD FOR LIFE EXPERIMENT

Representative Test Model : AGE04028B12U

Available for these models with lower speed and same physical structure. All model may be followed by Rxx or Fxx series suffixes. This test report applies to 40 x 40 x 28 mm series as the below table

AGE04028B12V	AGE04028B12U	AGE04028B12H	AGE04028B12M	AGE04028B12L				

Instruments used:

Date for Test Beginning	Date for Test Termination	Current Total Test Time (hrs)	Required Test Time (hrs)
2007/9/15 2:00 PM	2008/2/8 5:29 AM	4430.0	3,316
Current Test Status	<input type="checkbox"/> In process (exceed requested)	<input checked="" type="checkbox"/> Termination	Stress/Elevated Temperature Ts (°C)
In process	In process (exceed requested)	Termination	70
Sample Size (pcs):		Failure (pcs):	
59		0	

Test Data Between Initial Test and Final Test

Test Item NO.	Current			Speed			Noise		
	Initial Test	Final Test	Deviation (%)	Initial Test	Final Test	Deviation (%)	Initial Test	Final Test	Deviation
	Max (A)			16500~13500rpm	Max (dBA)				
	0.83	(A)		15000	±10%		57.0	(dBA)	
1	0.69	0.69	-0.1	14772	15069	2.0	54.2	53.9	-0.4
2	0.69	0.69	-1.1	15057	15185	0.8	54.1	54.1	0.0
3	0.69	0.69	0.0	15198	14937	-1.7	53.9	54.0	0.1
4	0.68	0.69	1.4	15190	14999	-1.3	54.0	54.1	0.1
5	0.68	0.69	1.5	15200	14946	-1.7	53.7	54.2	0.5
6	0.69	0.70	0.6	14958	14955	0.0	53.9	53.9	0.0
7	0.69	0.68	-1.0	15133	14870	-1.7	54.1	54.0	-0.2
8	0.69	0.68	-1.4	15275	15279	0.0	54.1	53.8	-0.2
9	0.70	0.69	-1.0	14920	15139	1.5	53.8	54.1	0.4
10	0.69	0.68	-1.1	14758	15162	2.7	54.1	54.0	0.0
11	0.69	0.69	-1.2	14897	14642	-1.7	53.9	53.9	0.0
12	0.70	0.69	-0.7	14668	15033	2.5	54.2	53.9	-0.2
13	0.69	0.70	0.4	14795	14835	0.3	53.9	53.8	0.0
14	0.69	0.69	-0.3	15329	14991	-2.2	54.2	53.9	-0.3
15	0.69	0.69	-0.8	15014	15296	1.9	53.9	54.2	0.2
16	0.70	0.70	-0.1	15091	14939	-1.0	54.1	54.1	0.0
17	0.69	0.69	-0.2	14652	14905	1.7	53.9	54.3	0.4
18	0.69	0.69	0.1	15154	14711	-2.9	54.2	53.8	-0.4
19	0.69	0.69	-0.4	15320	14798	-3.4	54.1	54.0	-0.1
20	0.69	0.69	-0.4	15288	15209	-0.5	53.7	54.1	0.4
21	0.69	0.69	-0.2	15171	15330	1.0	53.9	54.0	0.1
22	0.69	0.69	0.9	14781	14891	0.7	54.2	53.8	-0.4
23	0.69	0.69	1.0	15147	14857	-1.9	53.9	54.1	0.2
24	0.69	0.70	0.7	15248	15041	-1.4	53.9	53.8	-0.1
25	0.69	0.69	-1.2	14656	15104	3.1	53.7	54.0	0.3
26	0.69	0.70	2.0	14708	14693	-0.1	54.0	54.0	0.0
27	0.69	0.69	0.7	15237	14640	-3.9	54.0	54.1	0.1
28	0.69	0.68	-1.1	15176	15385	1.4	53.9	54.0	0.1
29	0.69	0.69	-0.1	14821	14770	-0.3	53.8	54.1	0.3
30	0.69	0.70	0.7	14730	14732	0.0	54.2	54.0	-0.2
31	0.69	0.69	0.9	14935	14962	0.2	53.9	54.0	0.1
32	0.70	0.68	-2.0	14875	15361	3.3	53.8	53.7	-0.1
33	0.69	0.69	-0.5	14896	14832	-0.4	53.9	53.8	-0.1
34	0.69	0.69	-0.5	14981	15114	0.9	54.3	54.0	-0.2
35	0.69	0.69	0.6	14885	15244	2.4	54.0	54.2	0.1
36	0.69	0.69	0.1	14667	15032	2.5	53.9	53.8	-0.1
37	0.69	0.69	0.3	15079	15418	2.3	53.9	54.2	0.3
38	0.69	0.69	-0.7	15054	14873	-1.2	54.0	54.2	0.2
39	0.69	0.69	0.4	15146	15172	0.2	54.2	54.1	-0.1
40	0.70	0.69	-1.7	14823	14992	1.1	54.0	54.0	0.0

DC FAN FUNCTION TEST RECORD

FOR LIFE EXPERIMENT

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Date for Test Beginning	Date for Test Termination	Current Total Test Time (hrs)	Required Test Time (hrs)
2007/9/15 2:00 PM	2008/2/8 5:29 AM	4430.0	3,316
Current Test Status	<input type="checkbox"/> In process	<input type="checkbox"/> In process (exceed requested)	<input checked="" type="checkbox"/> Termination
			Stress/Elevated Temperature Ts (°C) 70
Sample Size (pcs):		Failure (pcs):	
59		0	

Test Data Between Initial Test and Final Test

Test Item	Current			Speed			Noise		
	Initial Test	Final Test	Deviation (%)	Initial Test	Final Test	Deviation (%)	Initial Test	Final Test	Deviation
	Spec	Max		16500~13500rpm			Max		
NO.	0.83	(A)		15000	±10%		57.0	(dBA)	
41	0.68	0.69	1.0	14882	15236	2.4	54.0	54.1	0.0
42	0.68	0.70	1.8	15214	14990	-1.5	54.2	54.1	-0.2
43	0.69	0.69	0.4	14841	15190	2.4	53.9	54.0	0.1
44	0.69	0.69	-0.7	14988	14869	-0.8	53.9	54.1	0.3
45	0.69	0.69	0.3	15075	14752	-2.1	54.0	53.7	-0.3
46	0.69	0.69	0.7	15073	15155	0.5	54.1	54.2	0.0
47	0.70	0.69	-1.4	14890	15242	2.4	54.0	54.0	0.0
48	0.69	0.69	-0.1	15106	15109	0.0	53.8	53.9	0.1
49	0.69	0.69	-0.1	15061	15320	1.7	53.9	53.9	0.1
50	0.70	0.69	-1.2	15259	14858	-2.6	54.0	53.9	-0.1
51	0.68	0.69	0.7	15201	15037	-1.1	54.0	53.8	-0.2
52	0.69	0.69	0.7	15030	15027	0.0	53.8	53.9	0.1
53	0.69	0.69	-0.6	14821	15007	1.3	54.1	54.2	0.1
54	0.68	0.69	1.3	15263	15029	-1.5	54.1	53.8	-0.3
55	0.69	0.70	1.1	14985	14875	-0.7	54.0	53.9	0.0
56	0.68	0.69	1.3	15165	15223	0.4	54.2	54.1	0.0
57	0.69	0.69	0.4	14937	15271	2.2	54.0	54.1	0.1
58	0.69	0.70	1.5	15207	15188	-0.1	53.9	54.0	0.1
59	0.68	0.69	1.4	14940	14907	-0.2	54.2	53.9	-0.3
X-Bar	0.45	0.45	-	7769.336	7771.686	-	44.723	44.721	-
σ	0.17	0.17	-	5061.382	5072.797	-	6.462	6.447	-

QL File No.	Time-out for function test or others (hrs)	Issued Date	Approved By	Reported By
LS4028-4	179	2008/3/25 3:00 PM	Sulcia	吳永富