

R17

3U Active Air Cooler

PRODUCT SPECIFICATIONS

Table of Contents

1. PRODUCT DESCRIPTION	2
2. THERMAL PERFORMANCE CURVE.....	4
3. DM DRAWING	5
4. EP DRAWING	6
5. FAN SPEC.....	7
6.UL CERTIFICATE	17
7. RoHS CERTIFICATE.....	21

Model Number: R17

- Intel® Core™ X-series Processors, Socket FCLGA2066 ; products formerly Cascade Lake; Intel® Xeon® Processor E7 v4 Family, Socket FCLGA 2011; products formerly Broadwell; Intel® Xeon® Processor E5 v4 Family, Socket FCLGA 2011; products formerly Haswell
- Active side-blow cooler for 3U Server and Workstation
- For Square ILM only

Overall Specification

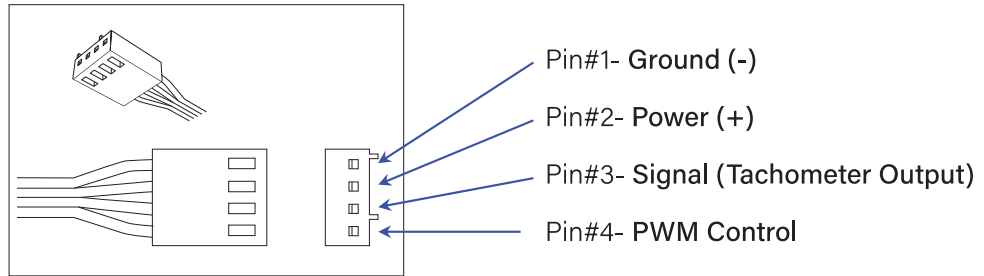
Dimension	91.0 x 91.0 x 110.0mm (L x W x H)
Weight	530g ± 5 g
Material	Aluminum fin + (4x) heat pipes directly contact CPU
Fan	92CM Plastic Quiet Fan with 4-Pin PWM Connector
Mounting Method	EPDM pull-pin set, pre-installed for cooling fan mounting Easy cooler installation with captive mounting screws
Heat Pipes	Smart Heat Pipes Orientation Where Against Gravity
Backing Plate	Not Included
Thermal Grease	Shin-Etsu 7762 pre-printed
TDP	Support CPU Power up to 165 Watts Heat Dissipation

Fan Specification

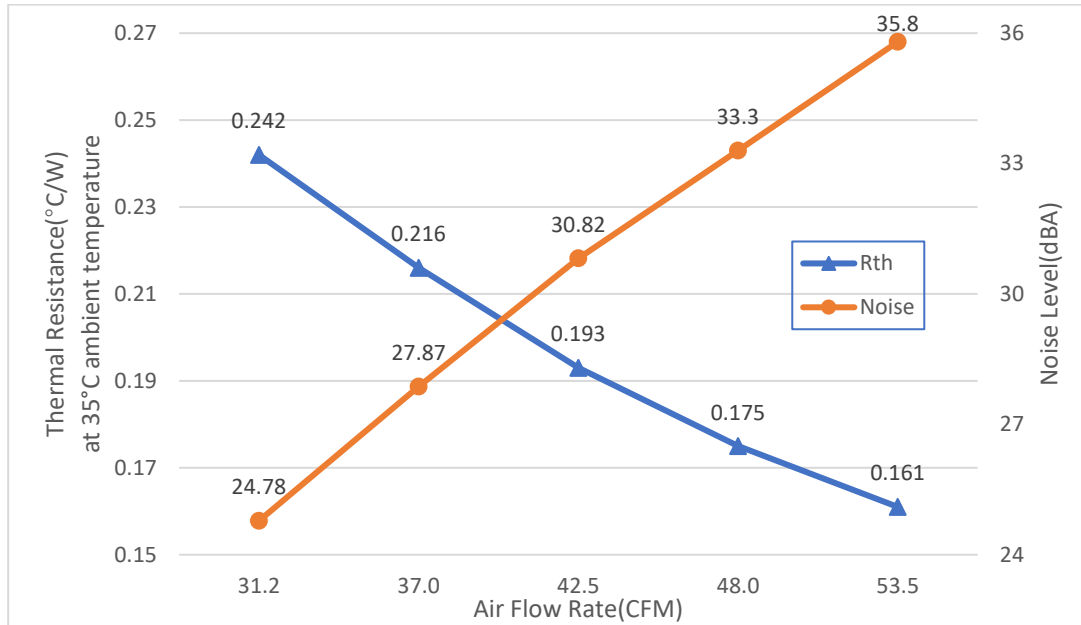
Model Number	DF129225BM-PWMG
Dimension	Ø92 x 25mm
Bearing	Double Ball
Rated Voltage	12V
Rated Speed	At Duty Cycle 0~20%: 1000 ± 200 RPM At Duty Cycle 50%: 1800 ± 10% RPM At Duty Cycle 100%: 2500 ± 10% RPM
Input Power	At Duty Cycle 0~20%: 0.96 W At Duty Cycle 50%: 1.44 W At Duty Cycle 100%: 3.0 W
Maximum Airflow	At Duty Cycle 0~20%: 17.34 CFM At Duty Cycle 50%: 31.21 CFM At Duty Cycle 100%: 43.36 CFM
Rated Static Pressure	At Duty Cycle 0~20%: 0.48 mm-H2O At Duty Cycle 50%: 1.55 mm-H2O At Duty Cycle 100%: 3.0 mm-H2O
Acoustical Noise	At Duty Cycle 0~20%: 17.0 dBA At Duty Cycle 50%: 24.78 dBA

R17 | Socket LGA 2066/2011/Square

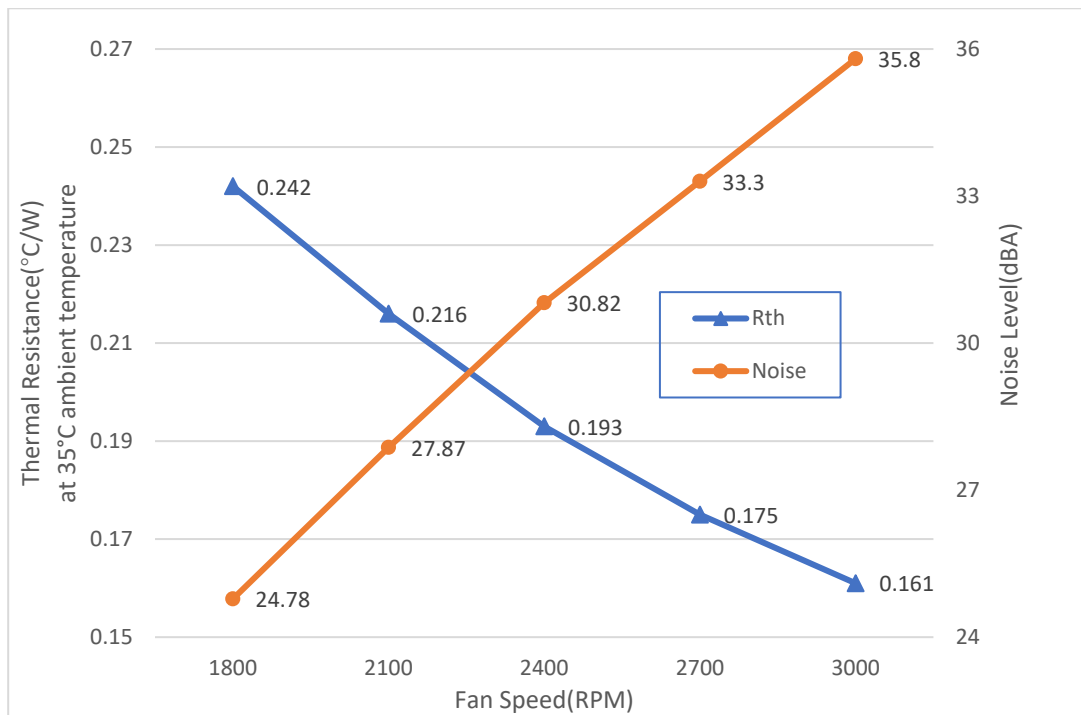
Pin#2- Yellow(+)
Pin#3- Green(Tachometer/ Signal Output)
Pin#4- Blue (PWM)
Lead Wire Pin Out Diagram :



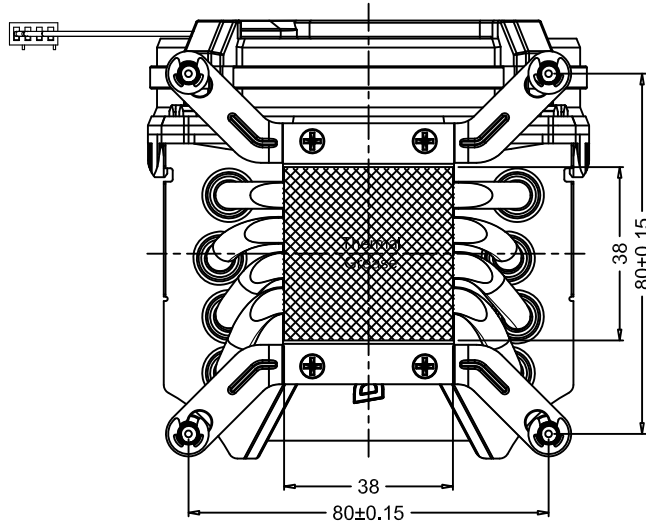
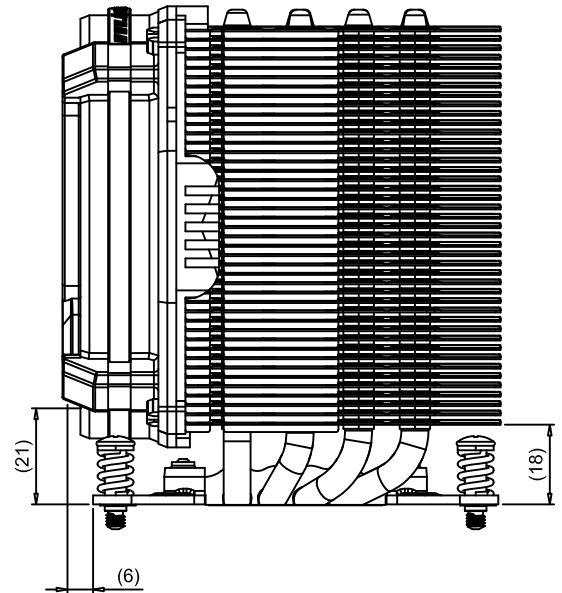
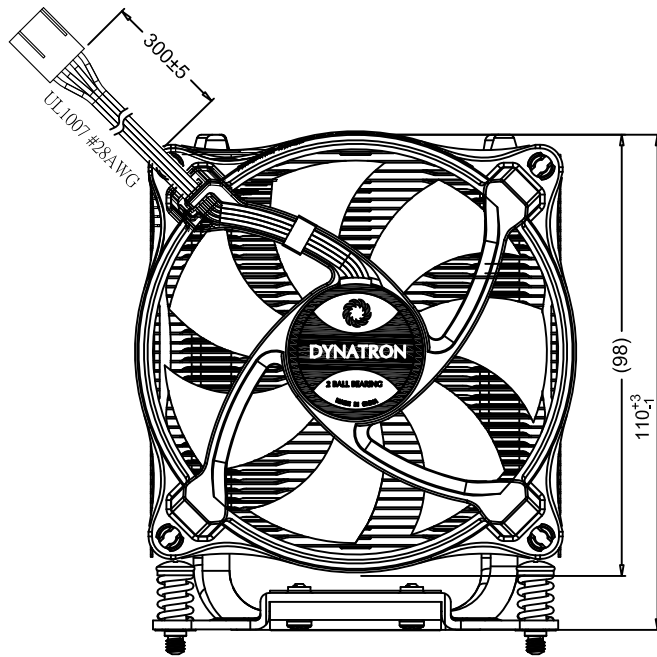
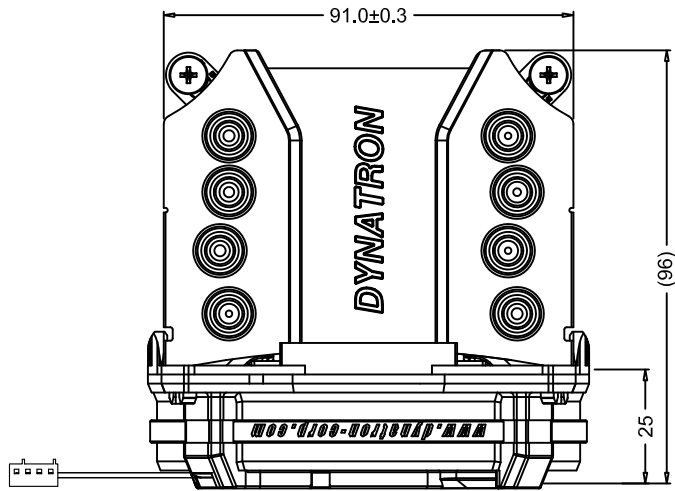
Performance Chart: Active Cooler R17 Thermal Resistance Cooling Performance vs. Airflow



Cooling Performance vs. Fan Speed



REV#	DESCRIPTION	CHECKER	DATE
0.0	Initial Release	LANG	01/25/11
1.0	Change Heatsink Screw Adjust Fan Model Number	LANG	03/15/11
2.0	Design Update	LANG	06/27/11
3.0	Change Fan Mounting Type	LANG	12/16/13
4.0	Change Logo Label	LANG	12/22/15



	NAME	DATE
DRAWN BY	ENGR	12/22/2015
CHECKED BY	LANG	12/22/2015
ENG. APPROVED		
MFG. APPROVED	-	-
Q.A.	-	-



TOP MOTOR

DYNATRON CORPORATION

TITLE: **3U Active Cooler R17**
Overall Dimension Drawing

CONFIDENTIAL DOCUMENT
THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO DYNATRON CORPORATION AND DYNAEON INDUSTRIAL CO., LTD. ANY REPRODUCTION, DISCLOSURE, OR USE OF THIS DRAWING IS EXPRESSLY PROHIBITED EXCEPT AS DYNATRON CORPORATION AND DYNAEON INDUSTRIAL CO., LTD. MAY OTHERWISE AGREE TO IN WRITING.

VIEW	
UNITS	MM

DWG. No:

DYN-DM-R17

REV.
4.0

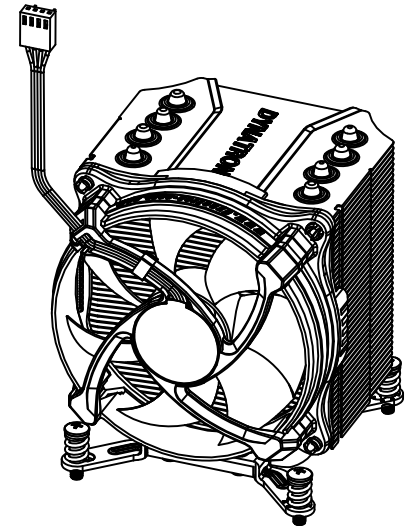
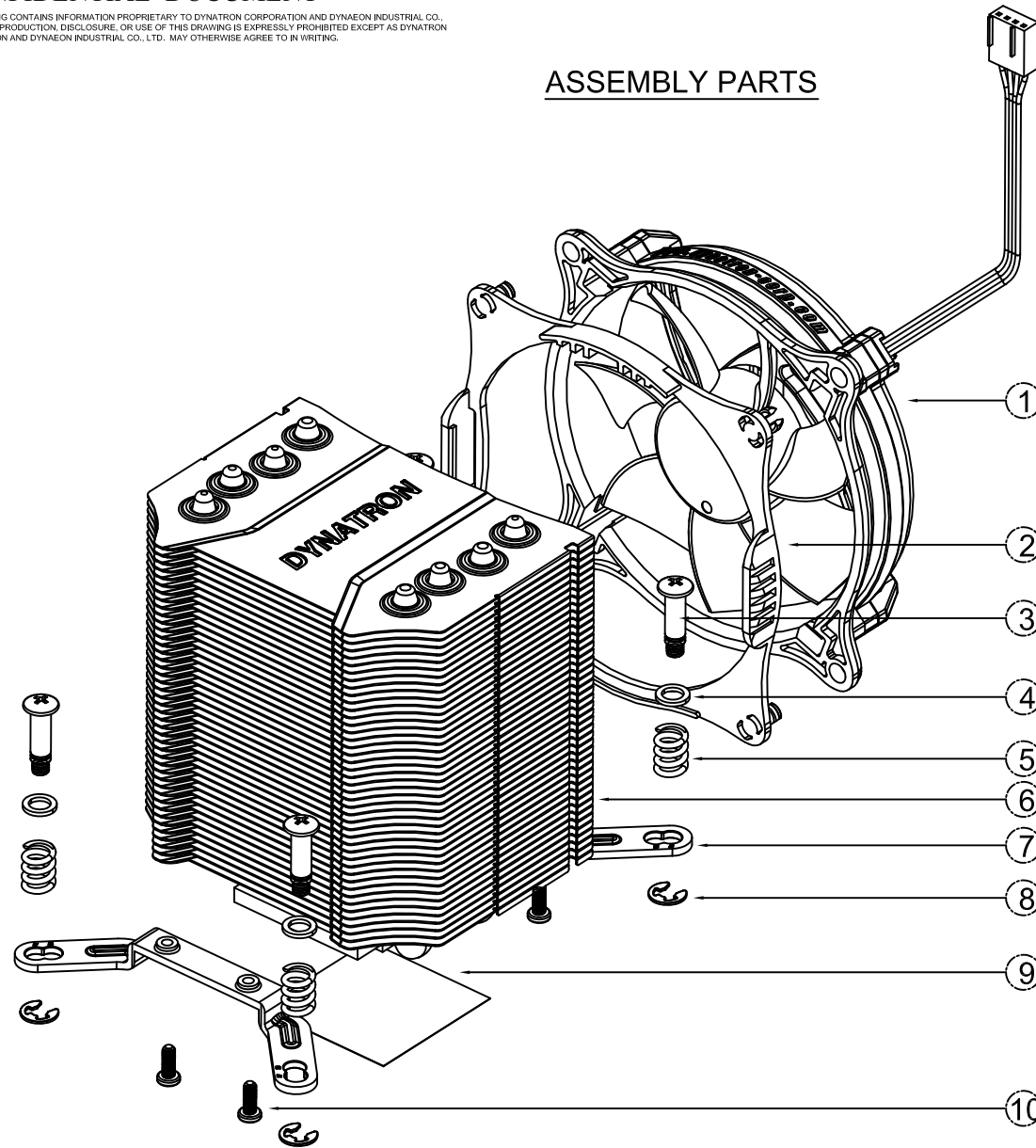
CONFIDENTIAL DOCUMENT

THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO DYNATRON CORPORATION AND DYNAEON INDUSTRIAL CO., LTD. ANY REPRODUCTION, DISCLOSURE, OR USE OF THIS DRAWING IS EXPRESSLY PROHIBITED EXCEPT AS DYNATRON CORPORATION AND DYNAEON INDUSTRIAL CO., LTD. MAY OTHERWISE AGREE TO IN WRITING.

ITEM#	DESCRIPTION	CHECKER	DATE
1	Initial Release	LANG	01/25/11
2	Change Heatsink Screw Adjust Fan Model Number	LANG	03/15/11
3	Design Update	LANG	06/27/11
4	Change Fan Mounting Type	LANG	12/16/13

ASSEMBLY PARTS

WHOLE SET OF COOLER



11	Wire Clip	Steel	1
10	Screw, Bracket	Steel	4
9	Thermal Grease, Pre-printed	Shin-Etsu G751	1
8	C-Ring	Steel	4
7	Heatsink Bracket	SK-7	2
6	Heat Sink	AL.Fin + Heatpipes	1
5	Spring	SWP (940G)	4
4	Washer	Steel	4
3	Screw, Heatsink Mounting	Steel (890G)	4
2	Fan Bracket	PC	1
1	Fan, DF129225BM-PWMG, 2500RPM	Plastic	1

ITEM#	DESCRIPTION	MATERIAL	QTY.
	DATE	NAME	
	DYNATRON CORPORATION		
DRAWN	12/16/13	ENGR	TITLE: 3U Active Cooler R17 BOM & Exploded Assembly Drawing
CHECKED	12/16/13	LANG	
ENG. APPR.			
MFG. APPR.			
Q.A.			
COMMENTS:		DWG. No:	REV
		DYN-EP-R17	03

Notes:

1. The Figure is For Reference Only, and Not For Scale
2. Overall Dimension: 91.0 x 91.0 x 110.0mm
3. Overall Weight : 530g



DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

Specification for Approval

Customer:		
Model Number:	DF129225BM(92*92*25mm)	
Part Number:		
Issued Date:	Friday June 24 ,2011	
Customer Approval		
Approval:	Check:	
<p>Corporate Headquarters Dynatron Corporation 42307 Osgood Road, #F, Fremont, California 94539, U.S.A. Tel: 510-498-8888 Fax: 510-498-8488</p>	<p>Manufactory TOP MOTOR TECHNOLOGY(HUI ZHOU)CO,LTD Baishi Village,QiuchangTown, Huiyang Dist,HuizhouCity,Guangdong Province,P.R.China Tel: 86-752-353-5555 (Rep.) Fax: 86-752-353-5592</p>	
<p>Los Angeles Office (U.S.A.) 337 Paseo Sonrisa, Walnut, California 91789 U.S.A. Tel: 909-598-2222 Fax: 909-598-8158</p>	<p>Taipei Office (Taiwan, R.O.C.) 8F, No. 35,Lane:221, Gang Cian Road, Taipei, Taiwan, R.O.C. Tel: 886-2-2799-5799(Rep.) Fax: 886-2-2799-9577</p>	
Approval:	Check:	Handler:
Simon Wang		Li Hong



DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

	CONTENTS	Page
1.	SCOPE	3
2.	ELECTRICAL CHARACTERISTICS	3
3.	MECHANICAL CHARACTERISTICS	4
4.	ENVIRONMENTAL	4
5.	PROTECTION	5
6.	ATTACHMENTS	5
	6.1. Product Dimension	6
	6.2. Frequency Generator Output	7
	6.3. TUV Certificate	8
	6.4. UL Certificate	9-12
	6.5. Electrical specifications for PWM production	13-14



TOP MOTOR

DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

1. SCOPE

This specification defines the electrical and mechanical characteristics of the AC/ DC Brush less (Liquid State/ 1-Ball Bearing / 2-Balls Bearing) axial flow fan, which is carefully designed and manufactured for your special needs by Dynatron Corporation.

2. ELECTRICAL CHARACTERISTICS

Items		Description		
1.	Rated Voltage	DC 12 V		
2.	Operating Voltage	10.8V~13.2V		
3.	PWM Frequency 25KHz	Duty Cycle D=0%-20%	Duty Cycle D=50%	Duty Cycle D=100%
	Start Voltage	7V		
4.	Air Flow – At rated voltage zero static pressure (minimal value)	0.491 m³ / min (17.34 CFM)	0.884 m³ / min (31.21CFM)	1.228 m³ / min (43.36CFM)
5.	Static Pressure – At rated voltage At zero air flow	0.48 mm -H₂O (0.018 inch-H₂O)	1.55mm -H₂O (0.061 inch-H₂O)	3.00 mm-H₂O (0.118 inch-H₂O)
6.	Input Current (Max.)	0.08A	0.12A	0.25A
7.	Speed	1000RPM±200	1800RPM±10%	2500RPM±10%
8.	Acoustical Noise	17.00d BA	24.78d BA	31.92 d BA
9.	Input Power	0.96W	1.44 W	3.00W
10.	Insulation Resistance – Between Frame and Terminal	10 M ohm at DC 500 V		
11.	Dielectric Strength – Between Frame and Terminal	5 MA (Max.) @ AC 500 V 60 Hz 1 min.		
12.	Life – Continuous operating under normal temperature (40°C or 104 °F)	70,000 hours		
13.	Rotation	Clockwise Air Discharged		
14.	Auto restart Time	3-5sec		
15.	Lead Wires	UL 1061,AWG 26 or Equivalent “-”: Black; “+”: Black;”S”: Black. ”PWM”: Black.		



TOP MOTOR

DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

3. MECHANICAL CHARACTERISTICS

Items		Description
1.	Dimension	Display as Drawing
2.	Frame	PC UL94V-2 (Black GP)
3.	Impeller	PC UL94V-2 (Black GP)
4.	Bearing System	2-Balls Bearing
5.	Weight	75±5 grams

4. ENVIRONMENTAL

Items		Description
1.	Operating Temperature	- 10 °C ~ + 65 °C (65 %RH)
2.	Storage Temperature	- 30 °C ~ + 70 °C (65 %RH)
3.	Vibration Test	Displacement Amplitude: 0.75mm(Equivalent 10G) Frequency Range: 10Hz<->55Hz/30SEC. Linear Scanning 120 Cycle Endurance Timer Per Axis: 30Min. Orientation:X,Y,Z.
4.	Drop Test	Motor withstands one free body drop from 30 cm in high onto 10 mm thickness of wooden board for each of the three faces in minimum packing condition.
5.	Acoustic Noise	17.00/24.78/31.92 d BA(Max17.5/25.28/32.42 d BA) Measuring Condition – Under rated voltage in semi-anechoic chamber equipment sound level meter. (Figure A.)

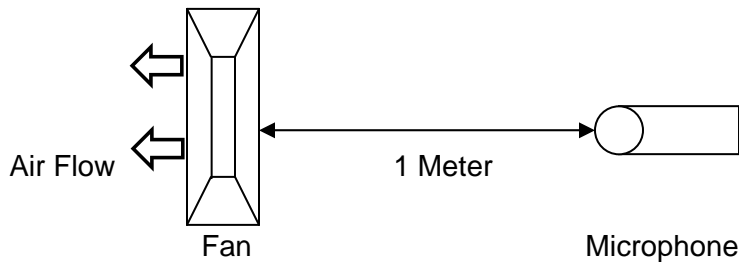


Figure A – Noise Level is measure at rated voltage in anechoic chamber in free air as above.



TOP MOTOR

DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

5. PROTECTION

Items		Description
1.	Polarity Protection	For polarity error connection to power, the circuit withstands reversed connection between positive and negative leads.
2.	Locked Rotor Protection	Motor winding protects the motor from damage in 72 hours of locked rotor condition at rated voltage.

6. ATTACHMENTS

- 6.1. Product Dimension
- 6.2. Frequency Generator Output
- 6.3. TUV Certificate
- 6.4. UL Certificate
- 6.5. Electrical specifications for PWM production

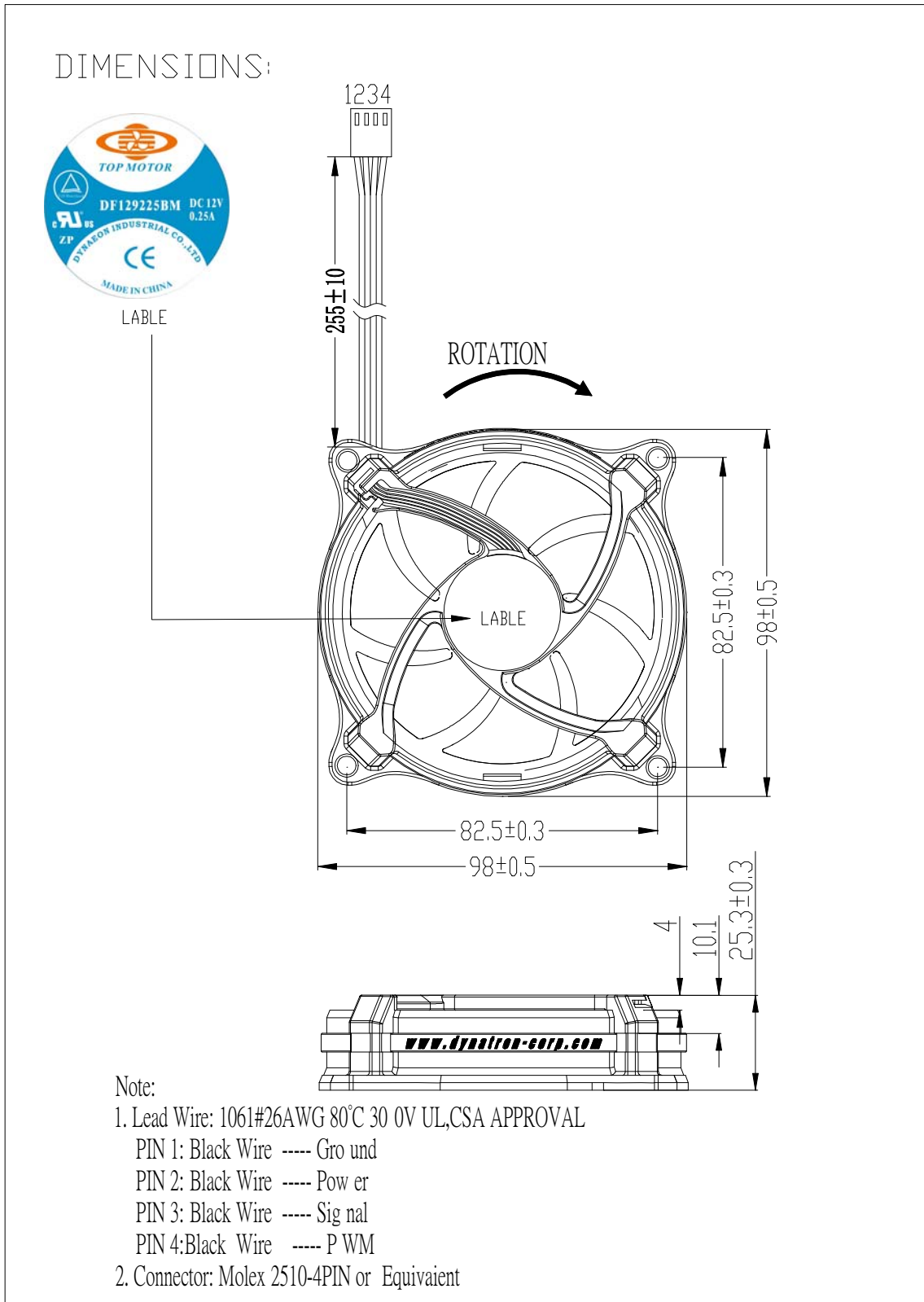


TOP MOTOR

DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

6.1. Product Dimension





DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

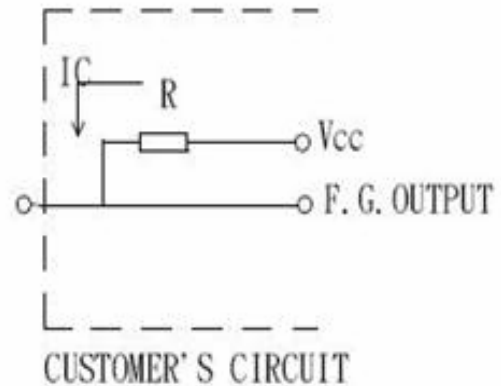
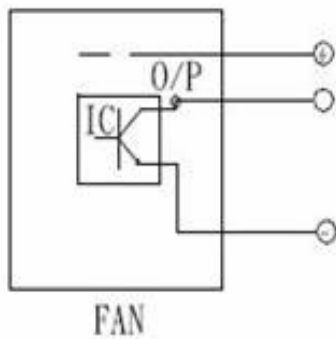
6.2. Frequency Generator Output

FREQUENCY GENERATOR OUTPUT(Tach Out)

3rd Wire Square Wave Signal is Amplified by a transistor (open collector type)

Frequency generator function is activated by an internal IC for customer's application.

Electrical schematic:



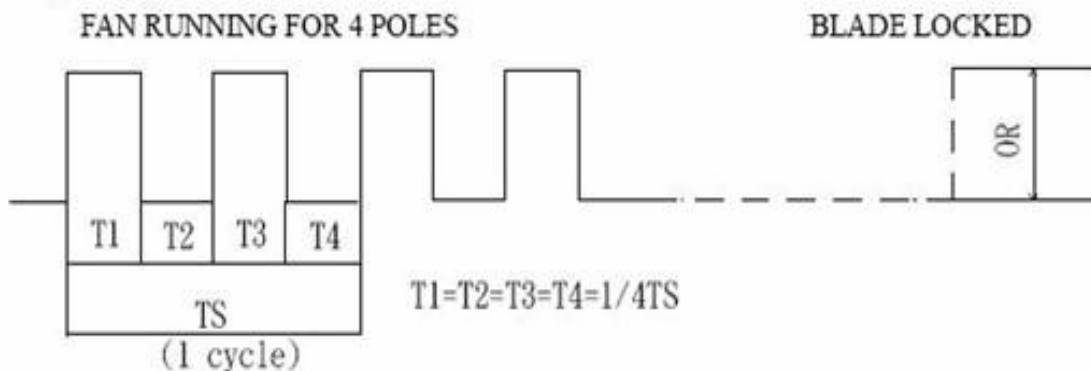
CUSTOMER'S CIRCUIT

Vcc=From+5 To+28 VDC(Generally using+12or+24 VDC)

Ic=2mA max.

$R=V/I$ (OUTPUT "R" value calculation)

Frequency generator waveform:



$TS=60/N(\text{sec})$

N=R.P.M. (Rotation speed will be different by various model L/M/H)



TOP MOTOR

DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

6.3 TUV Certificate

Zertifikat		Certificate			
Zertifikat Nr. <i>Certificate No.</i> R 50064443		Blatt <i>Page</i> 0002			
Ihr Zeichen <i>Client Reference</i> PC/DTI		Unser Zeichen <i>Our Reference</i> ZTW1-TCC- 10013649 002		Ausstellungsdatum <i>Date of Issue</i> 11.11.2005 <small>(day/mo/yr)</small>	
Genehmigungsinhaber <i>License Holder</i> Dynaeon Industrial Co., Ltd. 1st Fl., No. 362, Tanan Rd. Taipei 111 Taiwan, R.O.C.			Fertigungsstätte <i>Manufacturing Plant</i> Dynaeon Ind. Co., Ltd. Ta-Li Management Zone Ching-Hsi, Dongguan P.R. China		
Prüfzeichen <i>Test Mark</i>		Geprüft nach <i>Tested acc. to</i> EN 60950-1:2001+A11			
Zertifiziertes Produkt <i>(Geräteidentifikation)</i> Certified Product <i>(Product Identification)</i>		Lizenzentgelte - Einheit <i>License Fee - Unit</i>			
Ventilator (DC Fan)					
wie Blatt (as page) 01					
Ergänzung (Addition)					
Bezeichnung : DF(X1)(X2)(X3)(X4)(X5)ZZZZZ-(X6) (Type Designation)					
(X1) steht für (stands for) : 05, 12, 24					
(X2) steht für (stands for) : 40, 50, 60, 70, 80					
(X3) steht für (stands for) : 10, 15, 20					
(X4) steht für (stands for) : S, B, P, Q					
(X5) steht für (stands for) : U, H, M, L, E					
Z steht für (stands for) : A-Z, 0-9 oder freibleibend (or blank)					
(X6) steht für (stands for) : A, B					
Nennspannung : DC 5V (X1 = 05); DC 12V (X1 = 12) (Rated Voltage) DC 24V (X1 = 24)					
Nennstrom : siehe Aufbau-Übersicht (Rated Current) (see constructional dataform)					
ANLAGE (Appendix): 1.1					
<small>Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde. Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht. This certificate is based on our Testing and Certification Regulation. The product fulfills above-mentioned-requirements, the production is subject to surveillance.</small>					
TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln				Zertifizierungsstelle	
Tel.:(+49/221)8 06 - 13 71 Fax:(+49/221)8 06 - 39 35 e-mail: Althoff@de.tuv.com					
				Dipl.-Ing. F. Stoezel	



TOP MOTOR

DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

6.4. UL Certificate



ONLINE CERTIFICATIONS DIRECTORY

GPWV2.E157868 Fans, Electric - Component

[Page Bottom](#)

Fans, Electric - Component

[See General Information for Fans, Electric - Component](#)

DYNAEON INDUSTRIAL CO LTD
8TH FL 35 LANE 221 GANGCIAN RD
NEIHU DIST
TAIPEI, 114 TAIWAN

E157868

DC fans, Models D(F)1206(Z)(Y1)(X1), D(F)1207(Z)(Y1)(X1), where (F) may be F or C, (Z) may be SH, BH, BA, SM, BM, BB, SL, BL, BC, SD, BE, BF, SG, BI, BJ, SK, BN, BO, SP, BQ, BR, SS, BT, BU, SV, BW, BX, SY, BY or BZ, (Y1) may be "-", 0 through 9 or A through Z, (X1) may be 0 through 9 or A through Z.

Models DF248015(S)(X)(Y)(Z)(W), DF488015(S)(X)(Y)(Z)(W), where (S) may be S, B or P, (X) may be U, H, M or L, (Y) and (Z) may be any alphanumeric character, blank, "-" or any symbol, (W) may be seven any alphanumeric character, blank, "-" or any symbol.

Models DF121225(A)(B)(C), DF121225(A)E(C), DF241225(A)(B)(C), DF128015(A)U(C), DF128015(A)(B)(C), DF128025(A)U(C), DF128025(A)(B)(C), DF128025(A)E(C), DF248025(A)U(C), DF248025(A)(B)(C), DF129225(A)(B)(C), DF129225(A)E(C), DF249225(A)U(C), DF249225(A)(B)(C), DF126010(A)(B)(C), DF246025(A)U(C), DF246025(A)(B)(C), DF126025(A)U(C), DF126025(A)(B)(C), DF126025(A)E(C), DB126015BU(C), DB126015B(B)(C), DF123010(A)(B)(C), DF053010(A)(B)(C), DF127015(A)U(C), DF127015(A)(B)(C), DF245010(A)(B)(C), where (A) may be S, B, P or Q, (B) may be H, M or L, (C) may be xxxxxxxx, where x may be A through Z, 0 through 9, "-" or blank.

Models DF122510(X)(Y2)(Z)-(M), DF124020(X)(Y2)(Z)-(M), DF244020(X)(Y1)(Z)-(M), DF126025(X)(Y3)(Z)-(M), DF246025(X)(Y3)(Z)-(M), DF121225(X)(Y1)(Z)-(M), DF124028(X)(Y3)(Z)-(M), where (X) may be S, B, P, Q, (Y1) may be H, M or L, (Y2) may be U, H, M or L, (Y3) may be U, H, M, L or E, (Z) is alphanumeric combination of five digits and/or alphabets, may be A through Z, 0 through 9 or blank, (M) may be A or B.

Models DF054010(X)(Y2)(Z1)(Z2)-A, DF054010(X)L(Z1)(Z2)-B, DF124010(X)(Y2)(Z1)(Z2)-A, DF124010(X)L(Z1)(Z2)-B, DF244010(X)(Y2)(Z1)(Z2)-A, DF125015(X)(Y1)(Z1)(Z2)-A, DF125020(X)(Y3)(Z1)(Z2)-A, DF126015(X)(Y1)(Z1)(Z2)-A, DF246015(X)M(Z1)(Z2)-A, DF246015(X)L(Z1)(Z2)-A, DF128020(X)(Y1)(Z1)(Z2)-A, DF128020(X)L(Z1)(Z2)-B, DB127015(X)(Y2)(Z)-A series, where (X) may be S, B, P, Q, (Y1) may be H, M or L, (Y2) may be U, H, M or L, (Y3) may be H, M, L or E, (Z1) may be blank or 3, (Z2) is alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank, (Z) is alphanumeric combination of five digits and/or alphabets, may be A through Z, 0 through 9 or blank.

Models DF125010(X)(Y)(Z)-A, DF126020(X)(Y)(Z)-A, DF246020(X)(Y)(Z)-A, DF121525(X)(Y1)(Z)-A, DF121525(X)(Y2)(Z)-B series, Where (X) may be S, B, P or Q, (Y) may be H, M or L, (Y1) may be U, H or M, (Y2) may be L or E, (Z) is alphanumeric combination of five digits and/or alphabets, may be A through Z, 0 through 9 or blank.

Models DF128025(X)(a)(Y)-A, DF121225(X)(b)(Y)-C, DF121225(X)E(Y)-C, DF127720(X)(a)(Y)-A, DF121425(X)(c)(Y)-A, DF126010(X)E(Y)-A series, where (X) may be S, B, P, Q, (a) may be H, M, L or E, (b) may be M or L, (c) may be U, H, M, L or E, (Y) is alphanumeric combination of five digits and/or alphabets, may be A through Z, 0 through 9 or blank.

Models DF054010(X)(Y1)(Z1)(Z2)-C, DF124010(X)(Y2)(Z1)(Z2)-C, DF244010(X)(Y2)(Z1)(Z2)-C, DF124020BU(Z1)(Z2)-C, DF124020(X)(Y1)(Z1)(Z2)-C, DF124028BU(Z1)(Z2)-C, DF124028(X)(Y1)(Z1)(Z2)-C, DF126025BU(Z1)(Z2)-C, DF126025(X)(Y1)(Z1)(Z2)-C, DF127015BU(Z1)(Z2)-A, DF127015(X)(Y1)(Z1)(Z2)-A, DF128025BU(Z1)(Z2)-B, DF128025(X)(Y1)(Z1)(Z2)-B, DF129225BU(Z1)(Z2)-A, DF129225(X)(Y1)(Z1)(Z2)-A, DF121225BU(Z1)(Z2)-D, DF121225(X)(Y1)(Z1)(Z2)-D, DF121425(X)(Y1)(Z1)(Z2)-B, DB127015BU(Z1)(Z2)-B, DB127015(X)(Y1)(Z1)(Z2)-B, DB058015(X)(Y3)(Z1)(Z2)-A, where (X) may be S, B, P or Q, where (Y1) may be H, M, L or E, where (Y2) may be U, H, M, L or E, where (Y3) may be M or L, where (Z1) may be blank or 3, where (Z2) may be is alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.

Models DB128015(X)(Y1)-(Z)-A, DF128038(X)(Y1)-(Z)-A, DB121225(X)(Y2)-(Z)-A, DF054010(X)(Y2)-(Z)-D, DF124010(X)(Y3)-(Z)-D, DF244010(X)(Y4)-(Z)-D, DF125010(X)(Y2)-(Z)-B, DF126010(X)(Y5)-(Z)-B series, where (X) may be S, B, P, Q, (Y1) may be U, H, M, L or E, (Y2) may be H, M or L, (Y3) may be U, M, L or E, (Y4) may be U, H, M or L, (Y5) may be H, M, L or E, (Z) is alphanumeric combination of five digits and/or alphabets, may be A through Z, 0 through 9 or blank.

Electric fans, Models DC0504, -1204, -1205, -1206 , DF1204, -1208, -2408, -0504, -0505, -1205, -2406 followed by "S" or



DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

"B", followed by two alphanumeric characters.

Low voltage fans, Models DB1206, DF1209, -1212, -2409, DH1204 followed by B or S, followed by two alphanumeric characters.



Marking: Company name or trademark **TOP MOTOR** and model designation.

Last Updated on 2008-02-18

[Questions?](#)

[Notice of Disclaimer](#)

[Page Top](#)

Copyright © 2009 Underwriters Laboratories Inc.®

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Listed and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Designs and/or Listings (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from Underwriters Laboratories Inc." must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "Copyright © 2009 Underwriters Laboratories Inc.®"

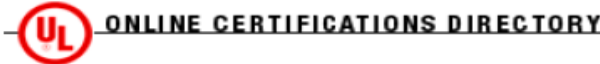
An independent organization working for a safer world with integrity, precision and knowledge.





DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD



GPWV8.E157868

Fans, Electric Certified for Canada - Component

[Page Bottom](#)

Fans, Electric Certified for Canada - Component

[See General Information for Fans, Electric Certified for Canada - Component](#)

DYNAEON INDUSTRIAL CO LTD
8TH FL 35 LANE 221 GANGCIAN RD
NEIHU DIST
TAIPEI, 114 TAIWAN

E157868

DC fans, Models D(F)1206(Z)(Y1)(X1), D(F)1207(Z)(Y1)(X1), where (F) may be F or C, (Z) may be SH, BH, BA, SM, BM, BB, SL, BL, BC, SD, BE, BF, SG, BI, BJ, SK, BN, BO, SP, BQ, BR, SS, BT, BU, SV, BW, BX, SY, BY or BZ, (Y1) may be "-", 0 through 9 or A through Z, (X1) may be 0 through 9 or A through Z.

Models DF248015(S)(X)(Y)(Z)(W), DF488015(S)(X)(Y)(Z)(W), where (S) may be S, B or P, (X) may be U, H, M or L, (Y) and (Z) may be any alphanumeric character, blank, "-" or any symbol, (W) may be seven any alphanumeric character, blank, "-" or any symbol.

Models DF121225(A)(B)(C), DF121225(A)E(C), DF241225(A)(B)(C), DF128015(A)U(C), DF128015(A)(B)(C), DF128025(A)U(C), DF128025(A)(B)(C), DF128025(A)E(C), DF248025(A)U(C), DF248025(A)(B)(C), DF129225(A)(B)(C), DF129225(A)E(C), DF249225(A)U(C), DF249225(A)(B)(C), DF126010(A)(B)(C), DF246025(A)U(C), DF246025(A)(B)(C), DF126025(A)U(C), DF126025(A)(B)(C), DF126025(A)E(C), DB126015BU(C), DB126015B(B)(C), DF123010(A)(B)(C), DF053010(A)(B)(C), DF127015(A)U(C), DF127015(A)(B)(C), DF245010(A)(B)(C), where (A) may be S, B, P or Q, (B) may be H, M or L, (C) may be xxxxxxxx, where x may be A through Z, 0 through 9, "-" or blank.

Models DF122510(X)(Y2)(Z)-(M), DF124020(X)(Y2)(Z)-(M), DF244020(X)(Y1)(Z)-(M), DF126025(X)(Y3)(Z)-(M), DF246025(X)(Y3)(Z)-(M), DF121225(X)(Y1)(Z)-(M), DF124028(X)(Y3)(Z)-(M), where (X) may be S, B, P, Q, (Y1) may be H, M or L, (Y2) may be U, H, M or L, (Y3) may be U, H, M, L or E, (Z) is alphanumeric combination of five digits and/or alphabets, may be A through Z, 0 through 9 or blank, (M) may be A or B.

Models DF054010(X)(Y2)(Z1)(Z2)-A, DF054010(X)L(Z1)(Z2)-B, DF124010(X)(Y2)(Z1)(Z2)-A, DF124010(X)L(Z1)(Z2)-B, DF244010(X)(Y2)(Z1)(Z2)-A, DF125015(X)(Y1)(Z1)(Z2)-A, DF125020(X)(Y3)(Z1)(Z2)-A, DF126015(X)(Y1)(Z1)(Z2)-A, DF246015(X)M(Z1)(Z2)-A, DF246015(X)L(Z1)(Z2)-A, DF128020(X)(Y1)(Z1)(Z2)-A, DF128020(X)L(Z1)(Z2)-B, DB127015(X)(Y2)(Z)-A series, where (X) may be S, B, P, Q, (Y1) may be H, M or L, (Y2) may be U, H, M or L, (Y3) may be H, M, L or E, (Z1) may be blank or 3, (Z2) is alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank, (Z) is alphanumeric combination of five digits and/or alphabets, may be A through Z, 0 through 9 or blank.

Models DF125010(X)(Y)(Z)-A, DF126020(X)(Y)(Z)-A, DF246020(X)(Y)(Z)-A, DF121525(X)(Y1)(Z)-A, DF121525(X)(Y2)(Z)-B series, Where (X) may be S, B, P or Q, (Y) may be H, M or L, (Y1) may be U, H or M, (Y2) may be L or E, (Z) is alphanumeric combination of five digits and/or alphabets, may be A through Z, 0 through 9 or blank.

Models DF128025(X)(a)(Y)-A, DF121225(X)(b)(Y)-C, DF121225(X)E(Y)-C, DF127720(X)(a)(Y)-A, DF121425(X)(c)(Y)-A, DF126010(X)E(Y)-A series, where (X) may be S, B, P, Q, (a) may be H, M, L or E, (b) may be M or L, (c) may be U, H, M, L or E, (Y) is alphanumeric combination of five digits and/or alphabets, may be A through Z, 0 through 9 or blank.

Models DF054010(X)(Y1)(Z1)(Z2)-C, DF124010(X)(Y2)(Z1)(Z2)-C, DF244010(X)(Y2)(Z1)(Z2)-C, DF124020BU(Z1)(Z2)-C, DF124020(X)(Y1)(Z1)(Z2)-C, DF124028BU(Z1)(Z2)-C, DF124028(X)(Y1)(Z1)(Z2)-C, DF126025BU(Z1)(Z2)-C, DF126025(X)(Y1)(Z1)(Z2)-C, DF127015BU(Z1)(Z2)-A, DF127015(X)(Y1)(Z1)(Z2)-A, DF128025BU(Z1)(Z2)-B, DF128025(X)(Y1)(Z1)(Z2)-B, DF129225BU(Z1)(Z2)-A, DF129225(X)(Y1)(Z1)(Z2)-A, DF121225BU(Z1)(Z2)-D, DF121225(X)(Y1)(Z1)(Z2)-D, DF121425(X)(Y1)(Z1)(Z2)-B, DB127015BU(Z1)(Z2)-B, DB127015(X)(Y1)(Z1)(Z2)-B, DB058015(X)(Y3)(Z1)(Z2)-A, where (X) may be S, B, P or Q, where (Y1) may be H, M, L or E, where (Y2) may be U, H, M, L or E, where (Y3) may be M or L, where (Z1) may be blank or 3, where (Z2) may be is alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.

Models DB128015(X)(Y1)-(Z)-A, DF128038(X)(Y1)-(Z)-A, DB121225(X)(Y2)-(Z)-A, DF054010(X)(Y2)-(Z)-D, DF124010(X)(Y3)-(Z)-D, DF244010(X)(Y4)-(Z)-D, DF125010(X)(Y2)-(Z)-B, DF126010(X)(Y5)-(Z)-B series, where (X) may be S, B, P, Q, (Y1) may be U, H, M, L or E, (Y2) may be H, M or L, (Y3) may be U, M, L or E, (Y4) may be U, H, M or L, (Y5) may be H, M, L or E, (Z) is alphanumeric combination of five digits and/or alphabets, may be A through Z, 0 through 9 or blank.

Electric fans, Models DC0504, -1204, -1205, -1206, DF0504, -0505, -1204, -1205, -1208, -2406, -2408 followed by "S" or



DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

"B", followed by two alphanumeric characters.

Low voltage fans, Models DB1206, DF1209, -1212, -2409, DH1204 followed by B or S, followed by two alphanumeric characters.



Marking: Company name or trademark **TOP MOTOR**, model designation and Recognized Component Mark for Canada,



Last Updated on 2008-02-18

[Questions?](#)

[Notice of Disclaimer](#)

[Page Top](#)

[Copyright © 2009 Underwriters Laboratories Inc.®](#)

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Listed and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Designs and/or Listings (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from Underwriters Laboratories Inc." must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "Copyright © 2009 Underwriters Laboratories Inc.®"

An independent organization working for a safer world with integrity, precision and knowledge.





DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

6.5 Electrical specifications for PWM production

USA Dynatron Corp.

Electrical Specifications for PWM production

Voltage

Fan operating voltage shall be within the range 12V \pm 1.2V.

Current

Peak fan current draw during start-up operation (with 13.2V applied, with fan operating in the free stream condition) shall not exceed 2.0 A.

Fan current spike during start-up operation (with 13.2V applied with fan operating in the free stream condition) shall be allowed to exceed 1.0 A for a duration of no greater than 1.0 sec.

Tachometer Output Signal

Fan shall provide tachometer output signal with the following characteristics:

- * Two pulses per revolution
- * Open-collector or open-drain type output
- * Motherboard will have a pull up to 12V, maximum 13.2V

PWM Control Input Signal

The following requirements are measured at the PWM(control) pin of the fan cable

connector: PWM Frequency: Target frequency 25kHz,

acceptable operational range 21 kHz to 28 KHz

Maximum voltage for logic low: $V_{IL}=0.8V$

Absolute maximum current sourced: $I_{max}=5mA$ (short circuit current)

Absolute maximum voltage level: $V_{max}=5.25V$ (open circuit voltage)

Fan Speed Control

1.1 Maximum Fan Speed Requirements

The maximum fan speed shall be specified for the fan model by the vendor and correspond to 100% duty cycle PWM signal input.

1.2 Minimum Fan Speed Requirements

The vendor shall specify the minimum RPM and the corresponding PWM duty cycle. This specified minimum RPM shall be 30% of maximum RPM or less. The fan shall be able to start and run at this RPM. To allow a lower specified minimum RPM, it is acceptable to provide a higher PWM duty cycle to the fan motor for a short period of time for startup conditions. This pulse should not exceed 30% maximum RPM and should last no longer than 2 seconds.



DYNATRON CORPORATION

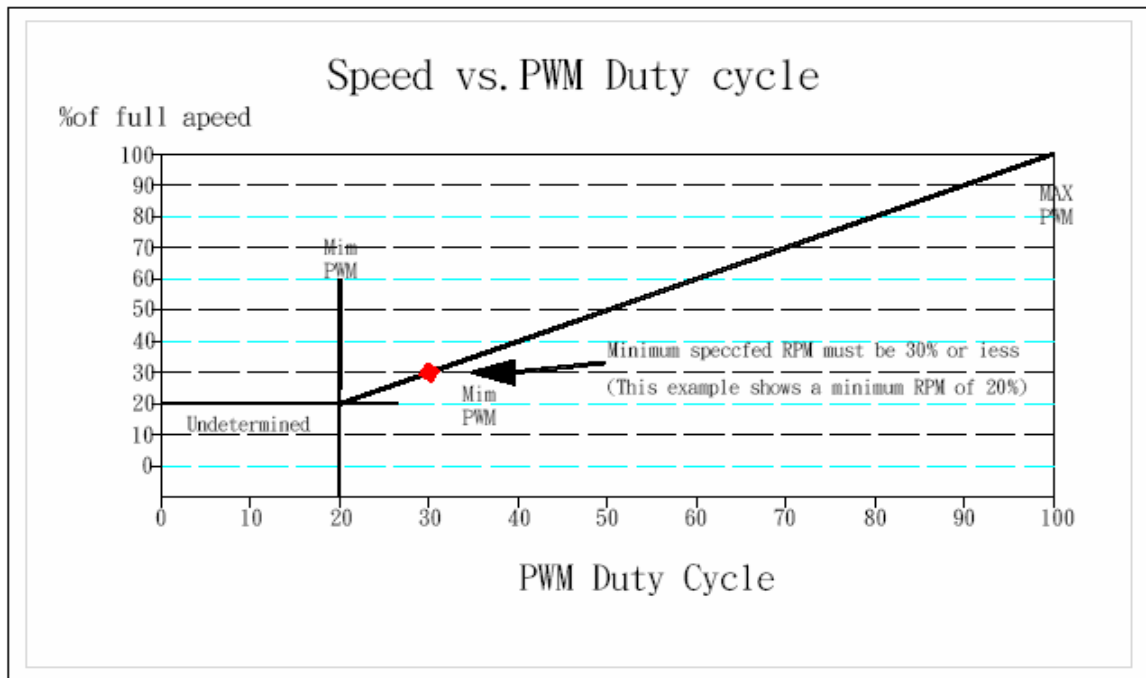
TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

USA Dynatron Corp.

1.3 Fan Speed Response PWM Control Input Signal

The PWM input shall be delivered to the fan through the control signal on Pin4. Fan speed response to this signal shall be a continuous and monotonic of the duty cycle of the signal, from 100% to the minimum specified RPM. The fan RPM (as a percentage of maximum RPM) should match the PWM duty cycle within $\pm 10\%$. If no control signal is present the fan shall operate at maximum RPM.

Figure 1 Fan speed Response to PWM Control input Signal



1.4 Operation Below Minimum RPM

For all duty cycles less than the minimum duty cycle, the RPM shall not be greater than the minimum RPM. The following graphs and definitions show three recommended solutions to handle PWM duty cycles that are less than the minimum operational PRM, as a percentage of maximum.

Reference resource by Intel's 4-wire PWM Fan controlled specification.



Certificate of Environment Protection

環保證明書

Document Number: RH-R17-R0

Customer: 客戶名稱:	Company: _____ Address: _____ Phone Number: ____ - ____ - _____
Issue Date:	12/22/2015
Product Model Number:	R17
<p> Dynatron Corporation hereby declares and certifies that all components manufactured are RoHS compliant according to the definitions and restrictions given by the European Union's Restriction (Directive 2002/95/EC) (Decision2011/65/EU)RoHS 2, on the restriction of the use of certain Hazardous Substances in the electrical and electronic equipment. Also, compliance to the most recent list of substances on the REACH candidate list. </p> <p> Number of substances on the Candidate List: 168 (last updated: 17/12/2015) </p> <p> No exemptions are claimed in order for the part to be compliant with the RoHS directive. </p> <p> Dynatron Corporation / 政久興業股份有限公司證明所有產品,零件 (包括附屬品, 包裝類) 之環境管理物質完全符合 RoHS, WEEE, 及該環保標準之規定, 並承諾遵循以上之證明. </p> <div style="text-align: right; margin-top: 20px;"> Dynatron Corporation. 33200 Western Ave, Union City, CA 94587 www.Dynatron-corp.com </div> <p style="margin-top: 20px;"> Title (職務): _____ ASSISTANT-MANAGER </p> <p style="margin-top: 10px;"> Signature (簽字): _____ <i>Van Lee</i> </p> <p style="text-align: right; margin-top: 10px;"> Date: 12 / 22 / 2015 </p>	

