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SPECIFICATION FOR APPROVAL

Rev 01

1. SCOPE:

This specification defines the electrical and mechanical characteristics of the following DC brushless axial flow fan:

Item De		scription	
1-1	Part Number	F-4010M12BII	
1-2	Outline Dimensions	40 x 40 x 10 mm (see dimensions drawing #7)	
1-3	Bearing System	2 Ball Bearing	
1-4	Rated Voltage	12 VDC	
1-5	Operating Voltage	6 ~ 13.8 VDC	
1-6	Input Current	0.16A (.09A in running conditions)	
1-7	Input Power	1.92 W	
1-8	Speed	5000 RPM +/- 10%	a. 25°C, 65% RH, b. Free Air c. Rated Voltage
1-9	Max. Air Flow (At zero static pressure)	7.21 CFM	a. Rated Voltage b. AMCA Standard
1-10	Max. Air Pressure (At zero airflow)	0.083 InH ₂ O	c. Rated Current
1-11	Acoustical Noise (Avg)	23.8 dBA	a. Rated Voltage b. Measured in a Non-Echo Chamber c. CNS 8753 Standard d. ISO 3744 Test Condition
1-12	Life Expectance	125,000 hours	a. Continuous operation @ 25C
1-13	Insulation Type	UL: Class A	
1-14	Weight	11 Grams	
1-15	Rotation	Clockwise from label side	

2. Major Material

Materials / Parts	Specification	Remarks
Plastic Material	Frame: PBT70%: + FIBER30%	UL: 94V-0
	Impeller: PBT85% + FIBER15%	UL: 94V-0
Lead Wire	(+) Red; (-) Black; (Signal) Yellow; AWG#24(2 Pin), #28(3Pin) Standard wire length is 12", custom lengths are available at no extra charge.	UL: 1007-F
Connector	See Drawing	

3. Electrical Characteristics & Test Environmental:

Item	Specification / Condition
3-1	Operation Temperature -10°C ~ +70°C
3-2	Storage Temperature -40°C ~ +75°C
3-3	Operating Humidity 5 to 90% RH
3-4	Storage Humidity 5 to 95% RH
3-5	Locked Rotor Protection <ul style="list-style-type: none"> a. The current will shut down when rotation is locked b. Automatic restart after a continuous 72 hours rotation lock at rated voltage. c. Impedance of motor winding protects motor from fire after 72 hours of locked rotor condition at the rated voltage. d. Signal Alarm- Optional
3-6	Insulation Strength 10Meg Ohm min at 500VDC Between Frame and (+) terminal
3-7	Dielectric Strength Withstand 5 mA Max 500 VAC 60 Hz for one minute, (between frame and (+) terminal)
3-8	Vibration Test Vibration test in rest status, scan frequency : 5~55Hz 1OCT/Min. in the 3 directions(X.Y.Z), take 16 rotating scan for each axis.
3-9	Shock Test Test of acceleration 30G is applied in the 3 directions (X.Y.Z) and 6 faces, take 11± 1ms(Half Chord Wave), 3 times for each face.
3-10	Noise Level Measured in a semi-anechoic chamber. The fan is running in free air with Microphone at a distance of one meter from the fan intake.
3-11	Tolerance ±10% on rated power and current.
3-12	Polarity Protection Capable of withstanding reverse polarity connection

4. Safety Approvals

Safety Approvals	File No.
UL	E195760
CUL	E195760
TUV	B 04 03 52557 002
CE	EN5008-1

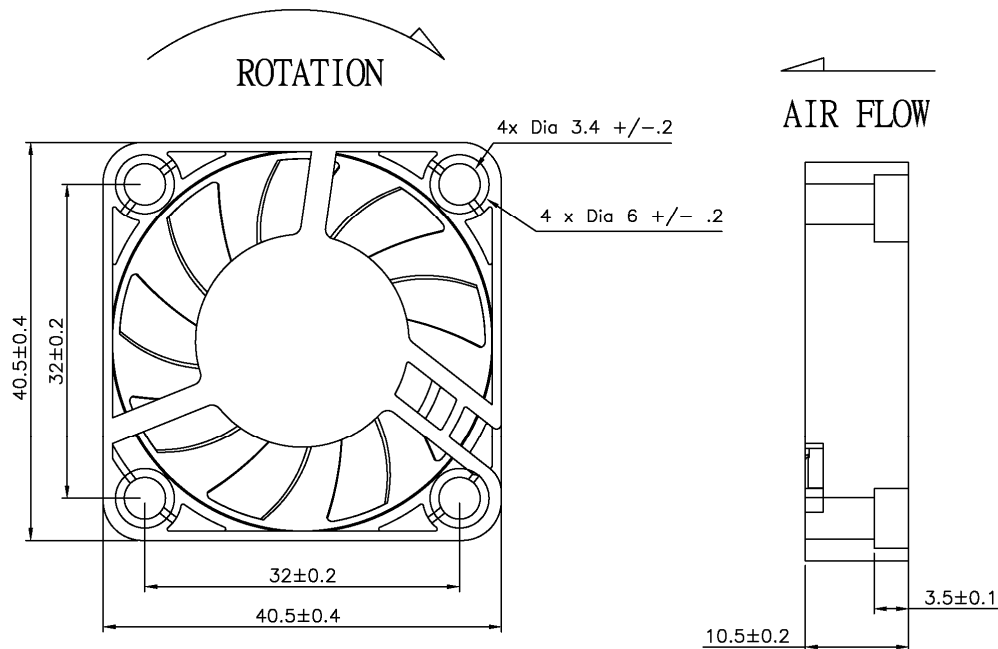
5. Ozone Depleting Substances

5-1. None of our products or manufacturing processes contain or require the use of ozone-depleting chemicals such as PBB's, PBBO's, CFC's, PBBE's, PBDPE's or HCFC's.

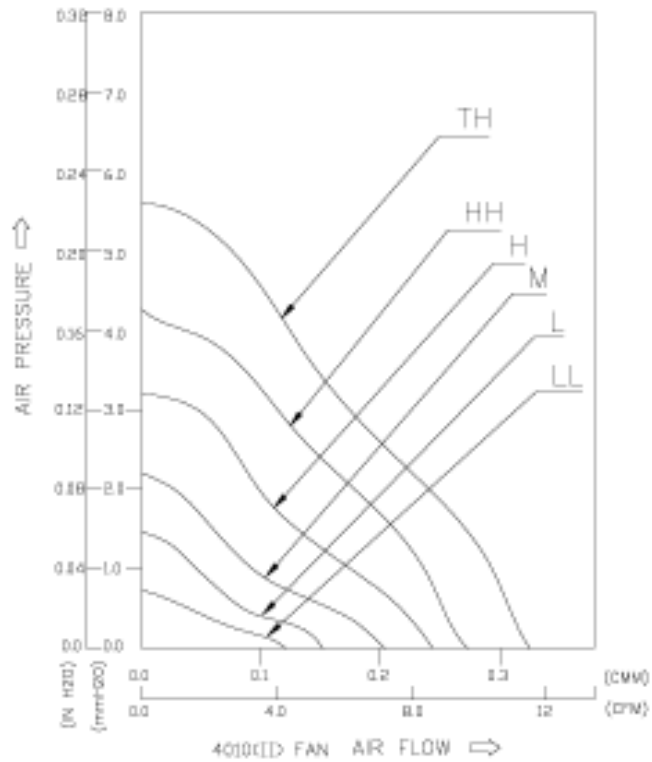
6. Production Location

6-1. Products will be produced in China and Taiwan

7. Dimensional Drawing

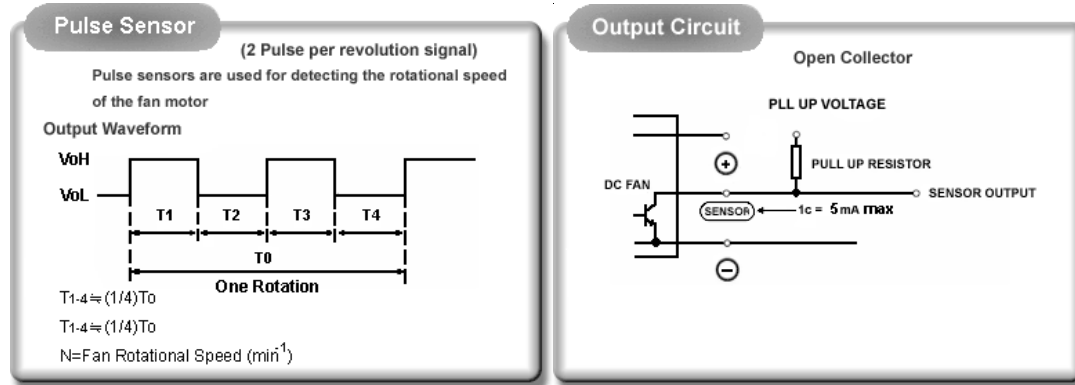


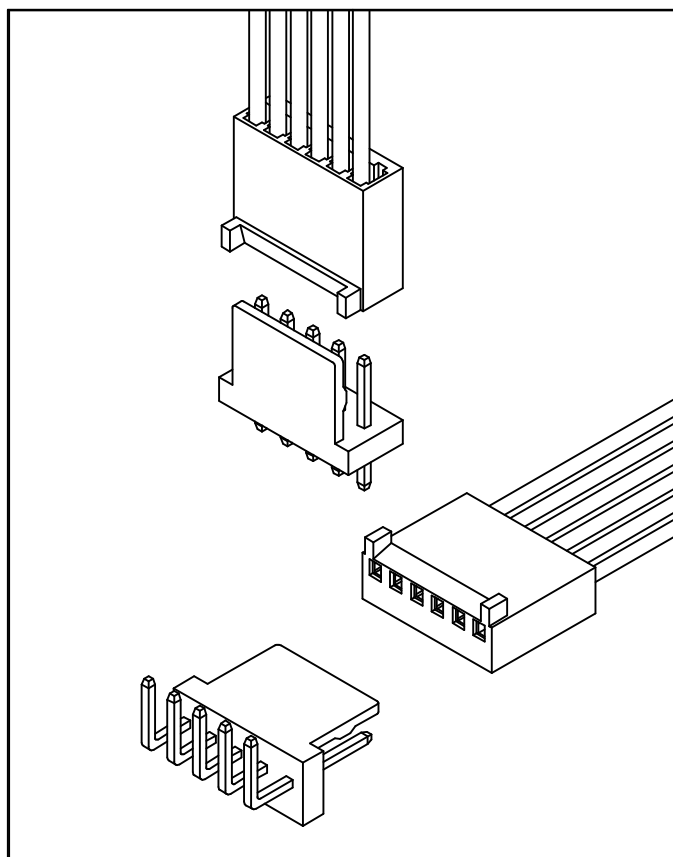
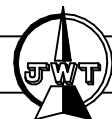
8. Performance Curve



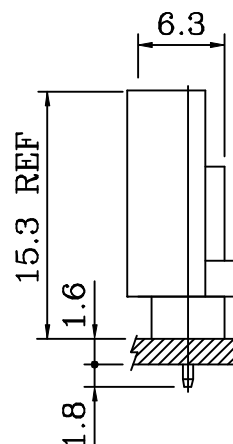
9. Sensor Description

A. Tachometer Pulse Sensor (2 Pulses Per Revolution)

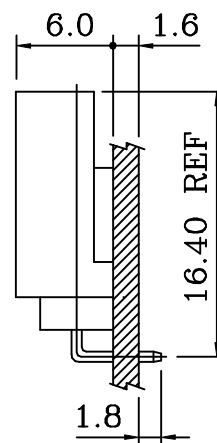




Assembly Layout
Straight Angle (V-Type)



Right Angle (R-Type)



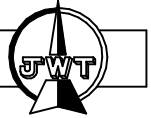
Specifications:

Poles	2~20 Poles
Pitch between poles	2.54mm
Rated Voltage	250V AC,DC
Rated Current	3A
Withstand Voltage	1000V AC/minute
Contact Resistance	20mΩ (MAX.)
Insulation Resistance	1,000MΩ (MIN.)
Temperature Range	-25°~ +85°C
Applicable P.C.B. Thickness	1.6mm
Applicable P.C.B. Hole dia.	ø1.00±0.05
Applicable Wire Range	AWG #22~#28

UL:Recognized No. E144544

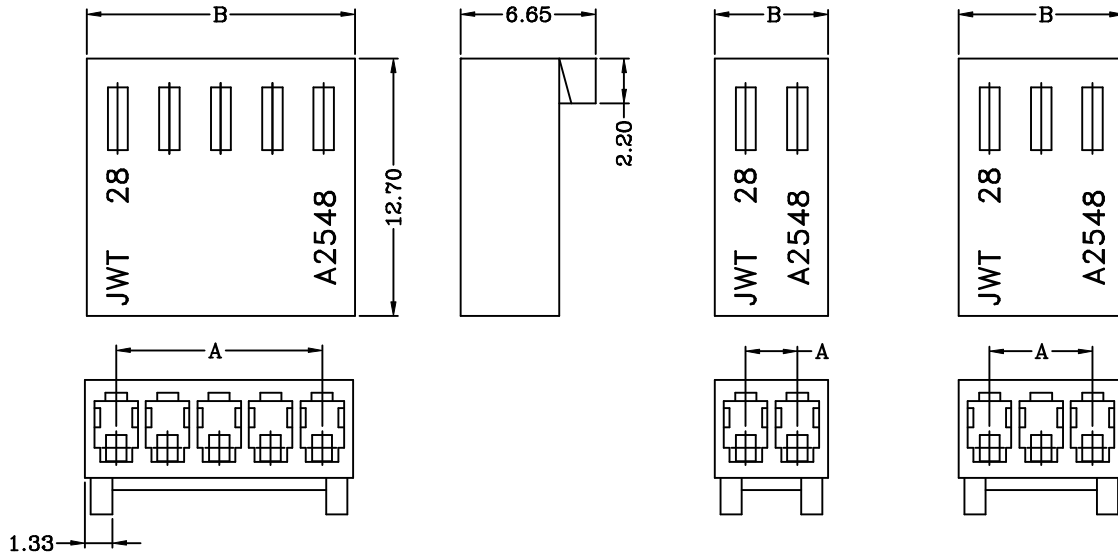
CSA: Certified No. LR78619

A2548 Series 2.54mm pitch crimp terminal socket



Features:

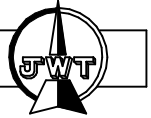
- * Available in 2 through 20 circuits
- * Material: Nylon 66 UL 94V-0. Dark Brown Color
- * Suitable for JWT A2543 series terminal
- * Mates with JWT A2543 series wafer



Dimensional & Ordering Information:

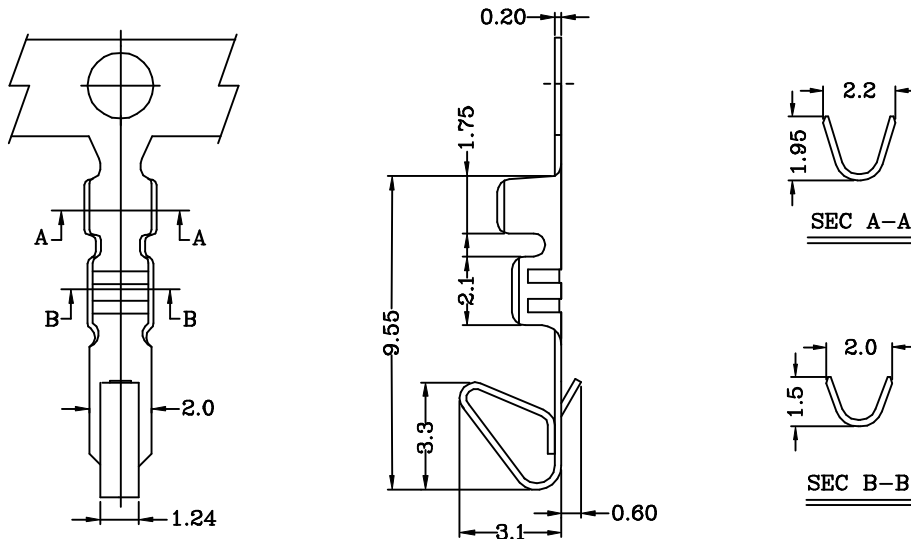
Circuits	Part No	Dimensions		PCS/BAG
		A	B	
2	A2548H00-2P	2.54	5.60	1000
3	A2548H00-3P	5.08	8.14	1000
4	A2548H00-4P	7.62	10.68	1000
5	A2548H00-5P	10.16	13.22	1000
6	A2548H00-6P	12.70	15.76	1000
7	A2548H00-7P	15.24	18.30	1000
8	A2548H00-8P	17.78	20.84	1000
9	A2548H00-9P	20.32	23.38	1000
10	A2548H00-10P	22.86	25.72	1000
11	A2548H00-11 P	25.40	28.46	1000
12	A2548H00-12P	27.59	31.00	1000
13	A2548H00-13P	30.48	33.54	1000
14	A2548H00-14P	33.02	36.08	1000
15	A2548H00-15P	35.56	38.62	1000
16	A2548H00-16P	38.10	41.16	1000
17	A2548H00-17P	40.64	43.70	1000
18	A2548H00-18P	43.18	46.24	1000
19	A2548H00-19P	45.72	48.78	1000
20	A2548H00-20P	48.26	51.32	1000

A2543 Series 2.54mm pitch crimp terminal



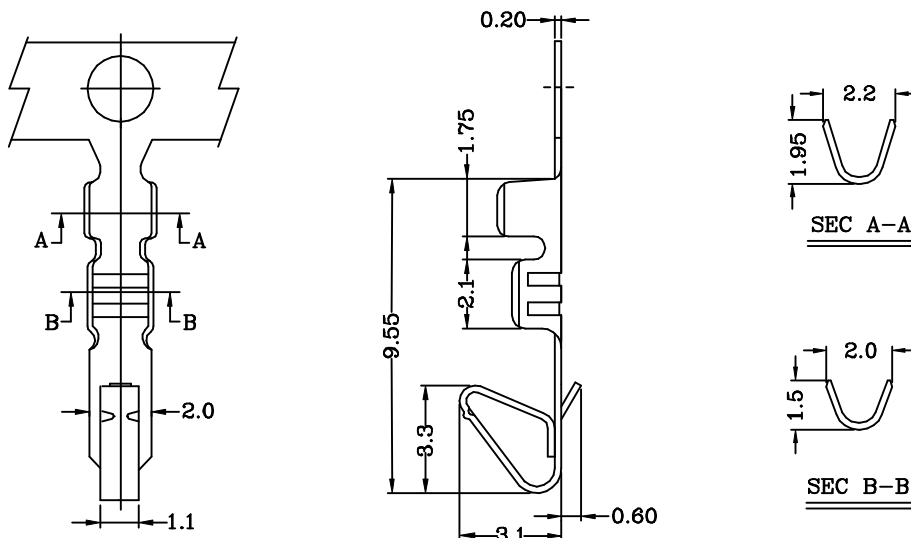
Features:

- * Single contact point
- * Used in JWT A2543 series socket



Specification & Ordering Information:

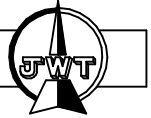
Part No	Wire Range	Insulation O.D.	Material	Finish	Qty/reel	Note
A2543TOP-2	AWG #22~#28	1.50mm(max)	Phosphor bronze	Tin-plated	10,000 PCS	00 -- Au Flash 0A -- 3μAu plated 0B -- 4μAu plated
A2543TOB-2	AWG #22~#28	1.50mm(max)	Brass	Tin-plated	10,000 PCS	0C -- 5μAu plated 0D -- 15μAu plated 0E -- 30μAu plated
A2543TOB-0*	AWG #22~#28	1.50mm(max)	Brass	Gold-plated	10,000 PCS	0F -- 50μAu plated 0G -- 10μAu plated



Specification & Ordering Information:

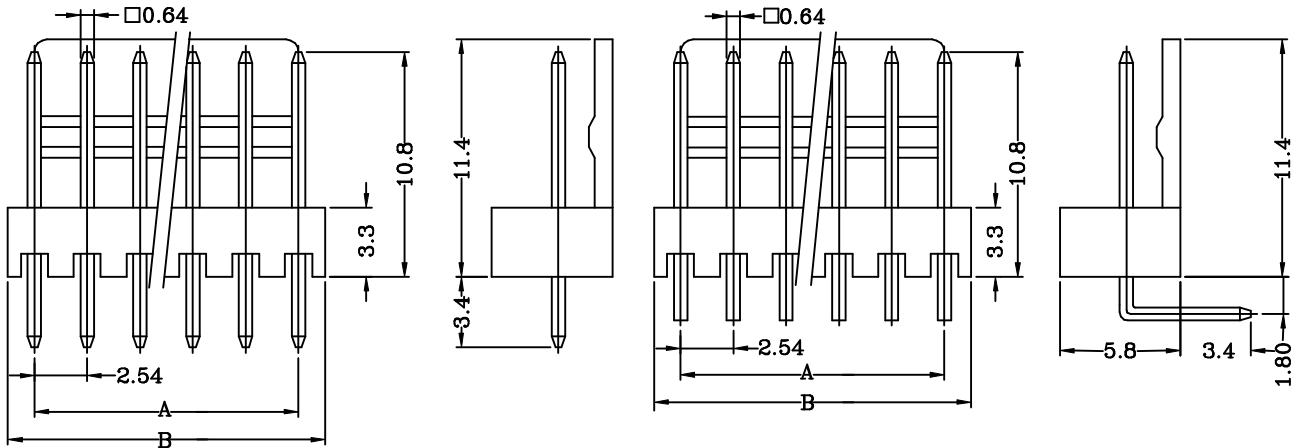
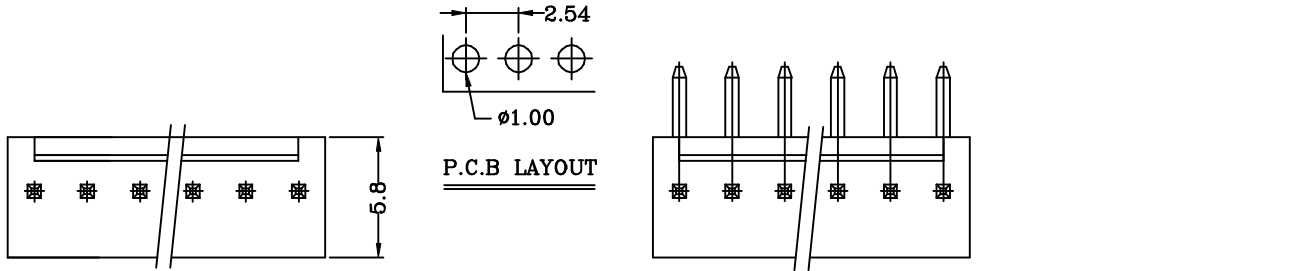
Part No	Wire Range	Insulation O.D.	Material	Finish	Qty/reel	Note
A2543TOP-A2	AWG #22~#28	1.50mm(max)	Phosphor bronze	Tin-plated	10,000 PCS	00 -- Au Flash 0A -- 3μAu plated 0B -- 4μAu plated
A2543TOB-A2	AWG #22~#28	1.50mm(max)	Brass	Tin-plated	10,000 PCS	0C -- 5μAu plated 0D -- 15μAu plated 0E -- 30μAu plated
A2543TOB-A0*	AWG #22~#28	1.50mm(max)	Brass	Gold-plated	10,000 PCS	0F -- 50μAu plated 0G -- 10μAu plated

A2543 Series 2.54mm pitch wafer



Features:

- * Available in 2 through 20 circuits
- * Material: Insulator: Nylon 66 UL 94V-0 or UL 94V-2
Contact: 0.64mm(.025") square pin, brass, tin plated
- * Mates with A2543 series socket



Straight Angle

Right Angle

Dimensional & Ordering Information:

Circuits	Part No		Dimensions		PCS/BAG
	Straight Angle	Right Angle	A	B	
2	A2543WV*-2P	A2543WR*-2P	2.54	5.08	1000
3	A2543WV*-3P	A2543WR*-3P	5.08	7.62	1000
4	A2543WV*-4P	A2543WR*-4P	7.62	10.16	1000
5	A2543WV*-5P	A2543WR*-5P	10.16	12.70	1000
6	A2543WV*-6P	A2543WR*-6P	12.70	15.24	1000
7	A2543WV*-7P	A2543WR*-7P	15.24	17.78	500
8	A2543WV*-8P	A2543WR*-8P	17.78	20.32	500
9	A2543WV*-9P	A2543WR*-9P	20.32	22.86	500
10	A2543WV*-10P	A2543WR*-10P	22.86	25.40	500
11	A2543WV*-11P	A2543WR*-11P	25.40	27.94	500
12	A2543WV*-12P	A2543WR*-12P	27.94	30.48	500
13	A2543WV*-13P	A2543WR*-13P	30.48	33.02	500
14	A2543WV*-14P	A2543WR*-14P	33.02	35.56	500
15	A2543WV*-15P	A2543WR*-15P	35.56	38.10	500
16	A2543WV*-16P	A2543WR*-16P	38.10	40.64	500
17	A2543WV*-17P	A2543WR*-17P	40.64	43.18	250
18	A2543WV*-18P	A2543WR*-18P	43.18	45.72	250
19	A2543WV*-19P	A2543WR*-19P	45.72	48.26	250
20	A2543WV*-20P	A2543WR*-20P	48.26	50.80	250

NOTE:
A2543WV*-NP OR
A2543WR*-NP
Material: Replace * with
0=NYLON 66 UL 94V-0
2=NYLON 66 UL 94V-2



GPWV2.E195760 Fans, Electric - Component

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COFAN USA

E195760

46177 WARM SPRINGS BLVD
FREMONT, CA 94539 USA

DC fans, Models F-410(A)05(E) (F), -410(A)12(E), -620(D)(B)(C), -825(D)(B)(C), -925M(B)(C), FP-825H12(C), -825M(B)(C), -925M(B)(C). (A)May be H, L or M, (B)May be 12 or 24, (C)May be B or S, (D)May be H, HH, M or TH, (E)May be B, C or S, (F)May be 1 or 2.

Models F-310X05Y, -310X12Y, -410X24Y, -510X12Y, -610X12Y, -925X12Y, -2510X05Y, -2510X12Y, -5210X12Y, where X may be B, C or S, where X may be H, L or M, Y may be B, C or S; Model F-825HH12X, where X may be B, C or S.

Model F-410HH12X, where X may be B, C or S; Models F-410, F-2510, F-310 Series followed by H, M or L, followed by 03, followed by B or C; Models F-510, -520, -610, -5210 Series; Models F-625(A)12(B), F-820(A)12(B), F-825(A)12(B)II Series, where (A) may be H, L or M, (B) may be B, C, F or S.

Models F-407X1X2X3X4, F-408X1X2Y12, where X1 may be H, L or M denoting fan speed, X2 may be 05 or 12 denoting input voltage, X3 may be B, C or S, denoting bearing type, X4 may be blank, 1 or 2 denoting frame type, Y1 may be C or S denoting bearing type; Model F-408VXYZ, where V may be H, M or L, X may be 05 or 12, Y may be B, C or S, Z may be 1 or 2; Model F-410X12YZ, where X may be H, M or L, Y may be S, B or C, Z may be 1, 2 or 3; Model F-520H12XY, where X may be S, B or C, Y may be 1 or 2; Model F-620ABC, where A may be H, M, L or LL, B may be 05 or 12, C may be B or S.

Models FP625TH12B, FP625TH12S, FP625HH12B, FP625HH12S, FP820TH12B, FP820TH12S, FP820HH12B, FP820HH12S, FP825TH12BII, FP825TH12SII, FP825HH12BII, FP825HH12SII.

Models FP420(X1)(X3)(X4), F-420(X2)(X3)(X4), FP625FH12(X5), where (X1) may be HH, TH or FH, (X2) may be L, M or H, (X3) may be 05, 12 or 24, (X4) may be B, C or S, (X5) may be B or C; Models F-515(X1)(X2)(X4), F-615(X1)(X3)(X4), where (X1) may be L, M or H, (X2) may be 05, 12 or 24, (X3) may be 05 or 12, (X4) may be B, C or S; Models FP-1238(X1)(X2)(X3), FP-1225(X4)(X2)

(X5), F-1225L(X2)(X3), where (X1) may be L, M, H or HH, (X2) may be 12 or 24, (X3) may be B or S, (X4) may be L, M or H, (X5) may be B, S or F; Models FP515HH(X1)(X2), FP615HH(X1)(X2), F-615(X3)24(X2), where (X1)=12 or 24, (X2)=B, C or S, (X3)=L, M or H; Models FP1238(X1)48(X2), FP1225(X3)48(X2), F-1225L48(X2), where (X1)=12 or 24, (X2)=B, C or S, (X3)=L, M or H.

Models FP925HH12(Y), FP925HH24(Y), FP925TH24, FP925H12(Y), FP925H24(Y), FP925M12(Y), FP925M24(Y), FP925L12(Y), FP925L24(Y); Models F-610(O)05(Y)II, F-610(Z)12(Y)II, F-610(Z)24(Y)II, F-710(O)12(Y), F-710(O)24(Y), where (O) may be L, M or H, (Z) may be L, M, H or HH, (Y) may be B, C, F or S; Models F-4510H05xy, F-4510M05xy, F-4510L05xy, F-4510H12xy, F-4510M12xy, F-4510L12xy, F-4510H24xy, F-4510M24xy, F-4510L24xy, where the x may be B, C, S or F, y may be 1 or 2.

Models FP710HH12x, FP710TH12x, FP710HH24x, FP710TH24x, FP710FH24x, where the x may be B, C, S or F; Models FP725HH12x, FP725TH12x, FP725FH12x, FP725HH24x, FP725TH24x, FP725FH24x, F-715L12x, F-715M12x, F-715H12x, F-715HH12x, F-715L24x, F-715M24x, F-715H24x, F-715HH24x, where the x may be B, C, S or F.

Models F-410H05(E), F-410H05B1, F-410H05B2, F-410H05C1, F-410H05C2, F-410H12(E), F-410L05(E), F-410L12(E), F-410M05(E), F-410M12(E), F-620H12(C), F-620H24(C), F-620M12(C), F-620M24(C), F-620T12(C), F-620T24(C), F-825H12(C), F-825H24(C), F-825HH12(C), F-825L12(C), F-825L24(C), F-825M12(C), F-825M24(C), F-825T12(C), F-825T24(C), F-925M12(C), F-925M24(C), FP-620H12(C), FP-620H24(C), FP-825H12(C), FP-825M12(C), FP-825M24(C), FP-925M12(C), FP-925M24(C), where (C) may be B or S and (E) may be B, C or S.

Models F-310H05Y, F-310L05Y, F-310M05Y, F-2510H05Y, F-2510L05Y, F-2510M05Y, where Y may be B, C or S.

Models F-310H12Y, F-310L12Y, F-310M12Y, F-2510H12Y, F-2510L12Y, F-2510M12Y, where Y may be B, C or S.

Models F-410H24Y, F-410L24Y, F-410M24Y, where Y may be B, C or S.

Models F-510H12Y, F-510L12Y, F-510M12Y, F-610H126, F-610L126, F-610M126, F-5210H12Y, F-5210L12Y, F-5210M12Y, where Y may be B, C or S.

Models F-925H12Y, F-925L12Y, F-925M12Y, where Y may be B, C or S.

Model F-410HH12X, where X may be B, C or S.

Model F-825HH12X, where X may be B, C or S.

Models F-310H03B, F-310H03C, F-310L03B, F-310L03C, F-310M03B, F-310M03C, F-410H03B, F-410H03C, F-410L03B, F-410L03C, F-410M03B, F-410M03C, F-2510H03B, F-2510H03C, F-2510L03B, F-2510L03C, F-2510M03B, F-2510M03C.

Models F-625H12B, F-625H12S, F-625L12B, F-625L12S, F-625M12B, F-625M12S, F-820H12B, F-820H12S, F-820L12B, F-820L12S, F-820M12B, F-820M12S, F-825H12BII, F-825H12SII, F-825L12BII, F-825L12SII, F-825M12BII, F-825M12SII.

Models F-407H05(X3)(X4), F-407H12(X3)(X4), F-407L05(X3)(X4), F-407L12(X3)(X4), F-407M05

(X3)(X4), F-407M12(X3)(X4), F-408H05(Y1)2, F-408H12(Y1)2, F-408L05(Y1)2, F-408L12(Y1)2, F-408M05(Y1)2, F-408M12(Y1)2, where X3 may be B, C or S denoting bearing type, X4 may be blank, 1 or 2 denoting frame type and Y1 may be C or S denoting bearing type.

Models F-725L12x, F-725M12x, F-725H12x, F-725L24x, F-725M24x, F-725H24x. Where the x may be B, C, S or F.

Models F-8025HH12(D)-YYYY, F-8025(B)12(D)-YYYY, F-8025T12(D)-YYYY, F-8025(B)24(D)-YYYY, F-8025T24(D)-YYYY, F-8020(B)12(D)-YYYY, F-8025(A)12(D)-YYYY, F-8025H12(D)-YYYY, F-8025M12(D)-YYYY, F-8025(B)24(D)-YYYY, F-8025(A)24(D)-YYYY, F-8025FH24(D)-YYYY, F-8020(A)12(D)-YYYY, F-8020H48(c)-YYYY, F-8020HH48(c)-YYYY, F-8020TH48(c)-YYYY, F-8015HH12(D)-YYYY, F-8015TH12(D)-YYYY, F-8015FH12(D)-YYYY, F-8015L12(D)-YYYY, F-8015M12(D)-YYYY, F-8015H12(D)-YYYY, F-8015L12(D)-YYYY, F-8015M12(D)-YYYY, F-8015H12(D)-YYYY, F-8015HH24(D)-YYYY, F-8015TH24(D)-YYYY, F-8015FH24(D)-YYYY, F-8015L24(D)-YYYY, F-8015M24(D)-YYYY, F-8015H24(D)-YYYY, F-8015L24(D)-YYYY, F-8015M24(D)-YYYY, F-8015H24(D)-YYYY, F-8038(B)12B-YYYY, F-8038HH12B-YYYY, F-8038L24B-YYYY, F-8038M24B-YYYY, F-8038H24B-YYYY, F-8038HH24B-YYYY, F-8025HH12(D)II, F-8025HH12(D), F-8025H12(D)II, F-8025H12(D), F-8025T12(D), F-8025M12(D), F-8025M12(D)II, F-8025L12(D)II, F-8025TH12(D)II, F-8025H24(D), F-8025H24(D)II, F-8025T24(D), F-8025M24(D), F-8025M24(D)II, F-8025L24(D), F-8025L24(D)II, F-8025HH24(D)II, F-8025TH24(D)II, F-8025FH24(D)II, F-8020H12(D), F-8020M12(D), F-8020L12(D), F-8020TH12(D), F-8020HH12(D). Where (A) may be HH or TH; (B) may H, M or L; (c) may be S, C or B; (D) may be S,C,F,B; YYYY may be 000 through 999, aaaa through zzzz, AAAA through ZZZZ or blank.

Models F-6025(C)12(D)-YYYY, F-6025(B)12(D)YYYY, F-6010HH12(D)YYYY, F-6010(B)H12(D)YYYY, F-6010(B)05(D)YYYY, F-6010HH24(D)YYYY, F-6010(B)24(D)YYYY, F-6015(B)05(D)YYYY, F-6015(B)12(D)YYYY, F-6015HH12(D)-YYYY, F-6015HH24(D)-YYYY, F-6015(B)24(D)YYYY, F-6020H12(D)-YYYY, F-6020(B)12(D)YYYY, F-6020T12(D)YYYY, F-6020LL12(D)YYYY, F-6020H24(D)-YYYY, F-6020H24(D)YYYY, F-6020T24(D)YYYY, F-6020M24(D)YYYY, F-6020(B)05(D)YYYY, F-6025LL12(D)YYYY, F-6025TL12(D)YYYY, F-6025LL12(D)-YYYY, F-6025TL12(D)-YYYY, F-6038L12B-YYYY, F-6038M12B-YYYY, F-6038H12B-YYYY, F-6038HH12B-YYYY, F-6038L24B-YYYY, F-6038M24B-YYYY, F-6038H24B-YYYY, F-6038HH24B-YYYY. Where (B) may H, M or L; (C) may be TH, FH or HH; (D) may be S, B, C or F; YYYY may be 0000 through 9999, aaaa through zzzz AAAA thru. ZZZZ or blank.

Models F-7025(B)12(D)-YYYY, F-7025(B)24(D)-YYYY, F-7025(C)HH12(D)-YYYY, F-7025(C)24(D)-YYYY, F-7025(B)12(D)-YYYY, F-7025(B)24(D)-YYYY, F-7015(B)12(D)-YYYY, F-7015HH12(D)-YYYY, F-7015(B)24(D)-YYYY, F-7015HH24(D)-YYYY, F-7010(B)12(D)-YYYY, F-7010(B)24(D)-YYYY, F-7010HH12(D)-YYYY, F-7010(B)24(D)-YYYY, F-7010TH12(D)-YYYY, F-7010(C)24(D)-YYYY, F-7038(B)12B-YYYY, F-7038(C)12B-YYYY, F-7038(B)24B-YYYY, F-7038(C)24B-YYYY. Where (B) may H, M or L; (C) may be TH, FH or HH; (D) may be S, B, C or F; YYYY may be 0000 through 9999, aaaa through zzz, AAAA through ZZZZ or blank.

Models F-4007(B)05(D)-YYYY, F-4007(B)12(D)-YYYY, F-4008(B)05(D)-YYYY, F-4008(B)12(D)-YYYY, F-4010(B)03(D)-YYYY, **F-4010(B)12(D)-YYYY**, F-4010HH12(D)-YYYY, F-4010(B)05(D)-YYYY, F-4010(B)24(D)-YYYY, F-4020(B)05(D)-YYYY, F-4020(B)12(D)-YYYY, F-4020(B)24(D)-YYYY, F-4020(C)05(D)-YYYY, F-4020(C)HH12(D)-YYYY, F-4020(C)24(D)-YYYY, F-4028FH12B-YYYY, F-4028TH12B-YYYY, F-4028HH12B-YYYY, F-4028(B)12B-YYYY. Where (B) may H, M or L; (C) may be TH, FH or HH; (D) may be S, B, C or F; YYYY may be 0000 through 9999, aaaa through zzzz, AAAA though ZZZZ or blank.

Models F-5010H05(D)-YYYY, F-5010M05(D)-YYYY, F-5010L05(D)-YYYY, F-5010H12(D)-YYYY, F-5010M12(D)-YYYY, F-5010L12(D)-YYYY, F-5010H24(D)-YYYY, F-5010M24(D)-YYYY, F-5010L24(D)-YYYY, F-5015H05(D)-YYYY, F-5015M05(D)-YYYY, F-5015L05(D)-YYYY, F-5015H12(D)-YYYY, F-5015M12(D)-YYYY, F-5015L12(D)-YYYY, F-5015HH12(D)-YYYY, F-5015H24(D)-YYYY, F-5015M24(D)-YYYY, F-5015L24(D)-YYYY, F-5015HH24(D)-YYYY, F-5025(B)12(D)-YYYY, F-5025HH12(D)-YYYY, F-5025LL12(D)-YYYY, F-5025(B)24(D)-YYYY, F-5025HH24(D)-YYYY, F-5025(B)12(D)-YYYY, F-5025LL12(D)-YYYY, F-5025(B)24(D)-YYYY, Where (B) may H, M or L; (D) may be S, B, C or F; YYYY may be 0000 through 9999, aaaa through zzzz, AAAA through ZZZZ or blank.

Models F-1238(B)12(D)-YYYY, F-1238HH12(D)-YYYY, F-1238(B)24(D)-YYYY, F-1238HH24(D)-YYYY, F-1238(B)48(D)-YYYY, F-1238HH48(D)-YYYY, F-1225L12(D)-YYYY, F-1225(B)12(D)-YYYY, F-1225(B)24(D)-YYYY, F-1225L24(D)-YYYY, F-1225L48(D)-YYYY, F-1225(B)48(D)-YYYY. Where (B) may H, M or L; (D) may be S, B, C or F; YYYY may be 0000 through 9999, aaaa through zzzz, AAAA through ZZZZ or blank.

Models F-3010(B)05(D)-YYYY, F-3010(B)12(D)-YYYY, F-3010(B)03(D)-YYYY. Where (B) may be H, M or L; (D) may be S, B, C or F; YYYY may be 0000 through 9999, aaaa through zzzz, AAAA through ZZZZ or blank.

Models F-5210(B)05(D)-YYYY, F-5210(B)24(D)-YYYY, F-5210(B)12(D)-YYYY. Where (B) may be H, M or L; (D) may be S, B, C or F; YYYY may be 0000 through 9999, aaaa through zzzz, AAAA through ZZZZ or blank.

Models F-2510(B)03(D)-YYYY, F-2510(B)05(D)-YYYY, F-2510(B)12(D)-YYYY. Where (B) may be H, M or L; (D) may be S, B, C or F; YYYY may be 0000 through 9999, aaaa through zzzz, AAAA through ZZZZ or blank.

Models F-4510(B)05(D)-YYYY, F-4510(B)12(D)-YYYY, F-4510(B)24(D)-YYYY. Where (B) may be H, M or L; (D) may be S, B, C or F; YYYY may be 0000 through 9999, aaaa through zzzz, AAAA through ZZZZ or blank.

Models F-9225TH48(D)-YYYY, F-9225HH48(D)-YYYY, F-9225(B)48(D)-YYYY, F-9225FH12(D)-YYYY, F-9225TH12(D)-YYYY, F-9225HH12(D)-YYYY, F-9225(B)12(D)-YYYY, F-9225(B)12(D)-YYYY, F-9225HH24(D)-YYYY, F-9225TH24(D)-YYYY, F-9225(B)24(D)-YYYY, F-9225M24(D)-YYYY, F-9238(B)12B-YYYY, F-9238HH12B-YYYY, F-9238TH12B-YYYY, F-9238(B)24B-YYYY, F-9238HH24B-YYYY, F-9238TH24B-YYYY. Where (B) may be H, M or L; (D) may be S, B, C or F; YYYY may be 0000 through 9999, aaaa through zzzz, AAAA through ZZZZ or blank.

Models F-6025HH05(D)-YYYY, F-6025H05(D)-YYYY, F-6025M05(D)-YYYY, F-6025L05(D)-YYYY, F-6025LL05(D)-YYYY, F-6025TL05(D)-YYYY, F-1225HH12(D)-YYYY, F-1225LL12(D)-YYYY, F-1225TL12(D)-YYYY. Where (D) may be S, B, C or F; YYYY may be 0000 through 9999, aaaa through zzzz, AAAA through ZZZZ or blank.

Marking: Company name or tradename and model designation.

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CERTIFICATE

No. B 04 03 52557 004

Holder of Certificate: Cofan USA

1400 Fulton Place
Unit A Fremont, CA 94539
USA

Certification Mark:



Product: Component 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. See also notes overleaf.

Test report no.: 61210440501

Date, 2004-04-01

Bill



Page 1 of 3

CERTIFICATE
No. B 04 03 52557 004



Model(s): F-25 Series, F-30 Series, F-40 Series
F-25 10 L 03 S - YYY
A B C D E F G
A - Frame dimension
"25" : 25 x 25 mm, "30" : 30 x 30 mm
"40" : 40 x 40 mm
B - Frame thickness
"07" : 07 mm, "10" : 10 mm
"20" : 20 mm, "28" : 28 mm
C - Fan speed
"L" : Low speed, "M" : Medium speed
"H" : High speed, "HH" : Super high speed
"TH" : Tripe high speed, "FH" : Fourfold high speed
D - Input voltage
"03" : 3.3 Vdc, "05" : 5 Vdc
"12" : 12 Vdc, "24" : 24 Vdc
E - Bearing type
"B" : Ball bearing, "S" : Sleeve bearing
"C" : Ball bearing / Sleeve bearing
F - Protect type
"-": With locked rotor protected circuit
Blank : without locked rotor protected circuit
G - Customer ID
"Y" - Can be 0-9, A-Z or blank circuit

Parameters:

Rated input voltage:	3.3, 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.
See attachment(s) for model designation and ratings

**Tested
according to:** EN 60950/A11:1997

**Production
Facility(ies):** 48954

Bill V. -

Main-Certificate No: B 03 01 28804 032

Page 2 of 3



Attachment to the Certificate

No. B 04 03 52557 004

The output rating description of the models are as below:

Model-#	DC Ratings	Model-#	DC Ratings	Difference:
F-2510L03EYYY	3.3 V/0.18 A	F-4010L03EYYY	3.3 V/0.22 A	F-25 10 L 03 S : YYY A B C D E F G A - Frame dimension "25": 25 x 25 mm "30": 30 x 30 mm "40": 40 x 40 mm B - Frame thickness "07": 07 mm "10": 10 mm "20": 20 mm "28": 28 mm C - Fan speed "L": Low speed "M": Medium speed "H": High speed "HH": Super high speed "TH": Triple high speed "FH": Fourfold high speed D - Input voltage "03": 3.3 Vdc "05": 5 Vdc "12": 12 Vdc "24": 24 Vdc E - Bearing type "B": Ball bearing "S": Sleeve bearing "C": Ball bearing / Sleeve bearing F - Protect type "-": With locked rotor protected circuit Blank : without locked rotor protected circuit G - Customer ID "Y" - Can be 0-9,A-Z or blank circuit
F-2510M03EYYY	3.3 V/0.24 A	F-4010M03EYYY	3.3 V/0.28 A	
F-2510H03EYYY	3.3 V/0.3 A	F-4010H03EYYY	3.3 V/0.34 A	
F-2510L05EYYY	5 V/0.14 A	F-4010L05EYYY	5 V/0.16 A	
F-2510M05EYYY	5 V/0.17 A	F-4010M05EYYY	5 V/0.19 A	
F-2510H05EYYY	5 V/0.2 A	F-4010H05EYYY	5 V/0.22 A	
F-2510L12EYYY	12 V/0.08 A	F-4010L12EYYY	12 V/0.1 A	
F-2510M12EYYY	12 V/0.11 A	F-4010M12EYYY	12 V/0.13 A	
F-2510H12EYYY	12 V/0.14 A	F-4010H12EYYY	12 V/0.16 A	
F-3010L03EYYY	3.3 V/0.18 A	F-4010L24EYYY	24 V/0.08 A	
F-3010M03EYYY	3.3 V/0.24 A	F-4010M24EYYY	24 V/0.09 A	
F-3010H03EYYY	3.3 V/0.3 A	F-4010H24EYYY	24 V/0.1 A	
F-3010L05EYYY	5 V/0.14 A	F-4020L05EYYY	5 V/0.26 A	
F-3010M05EYYY	5 V/0.17 A	F-4020M05EYYY	5 V/0.32 A	
F-3010H05EYYY	5 V/0.2 A	F-4020H05EYYY	5 V/0.38 A	
F-3010L12EYYY	12 V/0.08 A	F-4020HH05E-YYY	5 V/0.44 A	
F-3010M12EYYY	12 V/0.11 A	F-4020TH05E-YYY	5 V/0.5 A	
F-3010H12EYYY	12 V/0.14 A	F-4020FH05E-YYY	5 V/0.56 A	
F-4007L05EYYY	5 V/0.14 A	F-4020L12EYYY	12 V/0.12 A	
F-4007M05EYYY	5 V/0.2 A	F-4020M12EYYY	12 V/0.16 A	
F-4007H05EYYY	5 V/0.26 A	F-4020H12EYYY	12 V/0.2 A	
F-4007L12EYYY	12 V/0.08 A	F-4020HH12E-YYY	12 V/0.24 A	
F-4007M12EYYY	12 V/0.12 A	F-4020TH12E-YYY	12 V/0.28 A	
F-4007H12EYYY	12 V/0.16 A	F-4020FH12E-YYY	12 V/0.32 A	
F-4008L05EYYY	5 V/0.2 A	F-4020L24EYYY	24 V/0.07 A	
F-4008M05EYYY	5 V/0.24 A	F-4020M24EYYY	24 V/0.09 A	
F-4008H05EYYY	5 V/0.28 A	F-4020H24EYYY	24 V/0.11 A	
F-4008L12EYYY	12 V/0.1 A	F-4020HH24E-YYY	24 V/0.13 A	
F-4008M12EYYY	12 V/0.14 A	F-4020TH24E-YYY	24 V/0.15 A	
F-4008H12EYYY	12 V/0.18 A	F-4020FH24E-YYY	24 V/0.17 A	
		F-4028L12B-YYY	12 V/0.12 A	
		F-4028M12B-YYY	12 V/0.22 A	
		F-4028H12B-YYY	12 V/0.28 A	
		F-4028HH12B-YYY	12 V/0.42 A	
		F-4028TH12B-YYY	12 V/0.58 A	
		F-4028FH12B-YYY	12 V/0.66 A	

Date: 2004-04-01



Testing Laboratory

Bill Lin
Bill Lin



Cofan USA

1400 Fulton Place
Unit A Fremont, CA 94539
USA

TPEITE/Bljl

2004-04-01

Certificate

Mr. Sam Kim,

We are pleased to attach your certificate no.:

B 04 03 52557 004 which entitles you to label your certified product(s) with the respective certification mark. Let us give you some additional information which we consider to be important for you:

- The product has to be accompanied by a user manual in the language of the country where it supposed to be sold.
- To ensure that the validity of the certificate is not put at risk please inform us about any change in your production or of the product itself.
- The certification will allow you to sell your products easier and without less risks. The annual licence fee will be **4.0** units for maintaining these advantages.

Further information for the use of our marks is contained in our testing and certification regulations. We look forward to our co-operation and will assist you at any time.

Yours sincerely

TÜV Product Service Taiwan Ltd.