

ETS Dr.GenZ Taiwan PS Co., Ltd.

FCC Registration No.: 930600

Industry Canada filed test laboratory Reg. No. IC 5679

Accredited Testing Laboratory

A2LA Cert.No.: 2300.01

PTCRB Accredited Type Certification Test House

FCC

TEST - REPORT

FCC RULES PART 15 / SUBPART C

FCC ID : TMZ9210

Test report no.:

W6M20509-6155-P-15

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1 General Information**1.1 Notes**

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has Passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems.

The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.

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Reproduction or publication of extracts from the report requires the prior written approval of the ETS DR. GENZ TAIWAN PS CO., LTD.

Tester:

28.09.2005

Jay Chaing



Date

ETS-Lab.

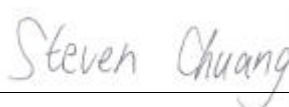
Name

Signature

Technical responsibility for area of testing:

28.09.2005

Steven Chuang



Date

ETS

Name

Signature

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1.2 Testing laboratory

1.2.1 Location

OATS
No.5-1, Shuang Sing Village,
LiShuei Rd., Wanli Township,
Taipei County 207, Taiwan (R.O.C.)

Company
ETS Dr.Genx Taiwan PS Co., Ltd.
6F, NO. 58, LANE 188, RUEY-KUANG RD.
NEIHU, TAIPEI 114, TAIWAN R.O.C.
Tel : 886-2-66068877
Fax : 886-2-66068879

1.2.2 Details of accreditation status

Accredited testing laboratory

A2LA-registration number: 2300.01

FCC filed test laboratory Reg. No. 930600

Industry Canada filed test laboratory Reg. No. IC 5679

PTCRB Accredited Type Certification Test House

1.3 Details of approval holder

Name:	Pongee Industries Co.,Ltd.
Street:	5F., NO.738, CHUNG-CHENG ROAD
Town:	CHUNG-HO CITY, TAIPEI HSIEN,
Country:	Taiwan, R.O.C.
Telephone:	+886-2-82280198
Fax:	+886-2-82280191

Contact	Mr. George Chang
Telephone:	+886-2-82280198

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1.4 Application details

Date of receipt of application: 02.09.2005
Date of receipt of test item: 08.09.2005
Date of test: 08.09.2005 to 28.09.2005

1.5 General information of Test item

Type of test item : Long Range Auto Identification Reader

Model Number : PFH-9210

Brand name : Pegasus

Serial number : without

Photos : see Annex

Technical data

Transmitting frequency : 125 kHz

Operation modes : duplex

Antenna type : loop antenna

Power supply : 120 VAC (AC/DC Adapter)



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Manufacturer:
(if applicable)

Name : ./.
Street : ./.
Town : ./.
Country : ./.

Additional information : --

1.6 Test standards

Technical standard : FCC RULES PART 15 / SUBPART C § 15.209

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2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.



or

The deviations as specified in 2.5 were ascertained in the course of the tests performed.



2.2 Test environment

Temperature	: 23 °C
Relative humidity content	: 20 ... 75 %
Air pressure	: 86 ... 103 kPa
Details of power supply	: 120 VAC (AC/DC Adapter)
Extreme conditions parameters	: Not required

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2.3 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2005/11/8
ETSTW-CE 002	PREREULATOR MODE DC POWER SUPPLY				
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2006/11/8
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2006/11/3
ETSTW-CE 006	IMPULS-BEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2006/11/10
ETSTW-CE 007	SPECTRUM ANALYZER 5GHz	FSB	849670/001	R&S	
ETSTW-CE 008	ABSORBING CLAMP	MDS 21	3469	ABSORPTIONS- MESSWANDLER- ZANGE	2006/11/4
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2005/5/10
ETSTW-CE 010	Comb Generator-conducted			ETS	
ETSTW-CE 011	Power Line Conducted Emission Only			ETS	
ETSTW-CE 012	Dual-Phase-V-Network	NNB-2/16Z	03/10201	Telemeter	2006/4/11
ETSTW-CS 001	SIGNAL GENERATOR	SMX	849254/003	R&S	2005/10/31
ETSTW-CS 002	COUPLING AND DECOUPLING NETWORK	CDN S751	19263	SCHAFFNER	2006/11/3
ETSTW-CS 003	COUPLING AND DECOUPLING NETWORK	CDN T400	19820	SCHAFFNER	2006/11/3
ETSTW-CS 004	COUPLING AND DECOUPLING NETWORK	CDN M016	20053	SCHAFFNER	2006/11/3
ETSTW-CS 005	RF Power Amplifier	100A250A	306547	AR	2005/11/3
ETSTW-CS 006	Terminal 500 Load	50T-116 M		JFW	
ETSTW-CS 007	Terminal 500 Load	50T-116 F		JFW	
ETSTW-CS 008	6 dB Attenuator	HFP-5100-3/06 N M/F	2010876106		
ETSTW-RE 001	Controller	CD 1000	C01000/154/867 /004/L	Heinrich Deisel	
ETSTW-RE 002	Function Generator	33220A	MY43004982	Agilent	2005/11/3
ETSTW-RE 003	EMI TEST RECEIVER	ESI	831438/001	R&S	2005/11/16
ETSTW-RE 004	EMI TEST RECEIVER	ESI	831459/012	R&S	2005/11/9
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2005/11/1
ETSTW-RE 008	Controller	HD100	C0100-L/047/ 6670703/L	Heinrich Deisel	
ETSTW-RE 009	Controller	HD100	100/341	Heinrich Deisel	
ETSTW-RE 010	PROGRAMMABLE LINEAR POWER SUPPLY	LPS-305	30503070181	MOTECH	
ETSTW-RE 011	PROGRAMMABLE LINEAR POWER SUPPLY	LPS-305	30503070165	MOTECH	
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0036	397	K&L	
ETSTW-RE 014	DUAL TRACKING WITH 5V FIXED	GPC-3030D		GW	
ETSTW-RE 015	ANTENNA	HK116	841489/003	R&S	
ETSTW-RE 016	ANTENNA	HL223	848953/006	R&S	
ETSTW-RE 017	ANTENNA	HL025	352886/001	R&S	
ETSTW-RE 018	ANTENNA	AT4560	27212	AR	2006/11/7
ETSTW-RE 019	ANTENNA , HORN	22240-25	121074	FM	

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ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2005/11/10
ETSTW-RE 022	AMPLIFIER	8447D	2944A09837	Agilent	2005/11/1
ETSTW-RE 023	Shielded room	SR 1		Frankonia	
ETSTW-RE 024	Anechoic Chamber	CHC 1		Frankonia	
ETSTW-RE 025	Anechoic Chamber	CHC 2		Frankonia	
ETSTW-RE 026	Open Area Test Site	10m		ETS	
ETSTW-RE 027	Passive Loop Antenna	6512	34563	EMCO	2006/6/29
ETSTW-RE 028	Log-Periodic DipoleArray Antenna	3148	34429	EMCO	2006/6/14
ETSTW-RE 029	Biconical Antenna	3109	33524	EMCO	2006/6/16
ETSTW-RE 030	Double-Ridged Waveguide Horn Antenna	3117	35224	EMCO	2006/5/4
ETSTW-RE 031	Comb Generator-radiated			ETS	
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2005/11/17
ETSTW-RE 033	4CH 1GHz 5GS/s DSO	WAVERUNNER 6100A	LCRY0604P14508	LeCory	
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2005/11/17
ETSTW-RE 035	1.5GHz Active Voltage Probe	HFP1500	2332	LeCory	
ETSTW-RE 036	100MHz High Voltage Diff Probe	ADP305	3305	LeCory	
ETSTW-RE 037	Log-Periodic DipoleArray Antenna	3148	00034546	EMCO	2006/11/17
ETSTW-RE 038	Log-Periodic DipoleArray Antenna	3148	00034547	EMCO	2006/11/17
ETSTW-RE 039	Biconical Antenna	3110B	41760	EMCO	2006/11/17
ETSTW-RE 040	Biconical Antenna	3110B	41761	EMCO	2006/11/17
ETSTW-RE 041	Anechoic Chamber	CHC 3		Frankonia	
ETSTW-RE 042	ANTENNA	HK116	100172	R&S	2007/1/13
ETSTW-RE 043	ANTENNA	HL223	100166	R&S	2006/4/15
ETSTW-RE 044	ANTENNA	HL050	100094	R&S	
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2006/3/21
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2007/5/18
ETSTW-EMI 001	HARMONICS 1000	HAR1000-1P	93	EMC-PARTNER	2005/11/17
ETSTW-EMS 001	Clamp BASELSTRASSE 160 CH-4242 LAUFEN	CN-EFT1000	354	EMC-PARTNER	2005/11/1
ETSTW-EMS 002	Frequency Converter	YF-6020	0308014		
ETSTW-EMS 003	EMC Immunity Test System	TRA2000IN6	579	EMC-PARTNER	2005/11/1
ETSTW-EMS 004	ESD generator minizap	ESD2000	016	EMC-PARTNER	2005/11/1
ETSTW-EMS 005	Attenautor (500)	VERI50	051	EMC-PARTNER	2006/8/30
ETSTW-EMS 006	Attenautor (1 KO)	VERI1K	019	EMC-PARTNER	2006/10/20
ETSTW-EMS 007	20GO Divider	ESD-VERI-V	021	EMC-PARTNER	2006/3/16
ETSTW-RS 001	14" COLOR VIDEO MONITOR	TP-1480HR	P009799	TOPICA	
ETSTW-RS 002	14" COLOR VIDEO MONITOR	TP-1480HR	P009814	TOPICA	
ETSTW-RS 003	RF Power Amplifier	30S1G3	306933	AR	
ETSTW-RS 004	RF Power Amplifier	150W1000	307009	AR	2005/11/18
ETSTW-RS 005	Electric Field Probe Type 8.3	EMR-20	BN 2244/20	GW	2005/9/3
ETSTW-RS 006	SIGNAL GENERATOR	SML03	101551	R&S	2005/11/15
ETSTW-RS 007	AUDIO ANALYZER	UPA3	843458/029	R&S	2005/11/15

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ETSTW-EMS 008	Safety Test Solutions	ELT-400	E-0039	Narda	2006/1/3
ETSTW-EMS 009	Magnetic Field Antenna	MF1000-1	104	EMC-PARTNER	2006/12/2
ETSTW-GSM 01	SIM Simulator	IT3	B2004-50106	ORGA	
ETSTW-GSM 02	Universal Radio Communication Tester	CMU 200	103489	R&S	
ETSTW-GSM 03	Agilent 8960 Test Set 1	E5515C	GB44052675	Agilent	2006/7/13
ETSTW-GSM 04	Agilent 8960 Test Set 2	E5515C	GB44052665	Agilent	2006/7/13
ETSTW-GSM 05	Agilent 8960 Test Set 3	E5515C	GB44052652	Agilent	2006/7/16
ETSTW-GSM 06	Agilent 8960 Test Set 4	E5515C	GB44052684	Agilent	2006/7/15
ETSTW-GSM 07	Agilent 8960 Test Set 5	E5515C	GB44052658	Agilent	2006/7/13
ETSTW-GSM 08	Agilent 8960 Test Set 6	E5515C	GB44052666	Agilent	2006/7/15
ETSTW-GSM 09	Controler PC	Dell GX 270	700F61J	Dell	
ETSTW-GSM 10	Combiner Wessex / Anite	B4605/100	053	Wessex / Anite	2006/7/13
ETSTW-GSM 11	GSM 850,900,1800,1900 Test system	TS8950G		R&S	2005/10/31
ETSTW-GSM 12	Acoustical Calibrator	4231	2463874	Brüel&Kjær	2005/11/17
ETSTW-GSM 13	Conditioning Amplifier	2690--0S2	2437856	Brüel&Kjær	
ETSTW-GSM 14	Telephone Test Head	4602B	2465324	Brüel&Kjær	
ETSTW-GSM 15	Mouth Simulator	4227	2462516	Brüel&Kjær	
ETSTW-GSM 16	TEMP.&HUMIDITY CHAMBER	GTH-120-40-1P-U	MAA0501002	GIANT FORCE	2005/12/29
ETSTW-GSM 17	ANTENNT COPLER	CMU-Z10	100988	R&S	
ETSTW-GSM 18	AUDIO ANALYZER	UPL16	100173	R&S	2005/9/23
ETSTW-GSM 19	Band Reject Filter	WRCTF824/ 849-822/851-40 /12+9SS	3	WI	
ETSTW-GSM 20	Band Reject Filter	WRCD1747/1748- 1743/1752-32/5SS	1	WI	
ETSTW-GSM 21	Band Reject Filter	WRCD1879.5/ 1880.5- 1875.5/ 1884.5-32/5SS	3	WI	
ETSTW-GSM 22	Band Reject Filter	WRCT901.9/903.1 - 904.25-50/8SS	1	WI	

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2.4 General Test Procedure

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-2000 using a 50 μ H LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

RADIATION INTERFERENCE: The test procedure used was according to ANSI STANDARD C63.4-2000 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the UUT was 23°C with a humidity of 40 %.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dB μ V) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

Freq (MHz)	METER READING + ACF + CABLE LOSS (to the receiver) = FS
33	20 dB μ V + 10.36 dB + 6 dB = 36.36 dB μ V/m @3m

ANSI STANDARD C63.4-2000 10.1.7 MEASUREMENT PROCEDURES: The UUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table). The UUT was placed in the center of the table. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to 10th harmonic of the fundamental.

Peak readings were taken in three (3) orthogonal planes and the highest readings.

Measurements were made by ETS Dr. Genx GmbH at the registered open field test site located at No.5-1, Shuang Sing Village, LiShuei Rd., Wanli Township, Taipei County 207, Taiwan (R.O.C.)
The Registration Number: 930600.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

ANTENNA & GROUND:

This unit uses loop antenna (see photo).



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3 Test results (enclosure)

TEST CASE	Required	Test passed	Test failed
Peak Output Power 15.209	☒	☒	☐
Spurious Emissions radiated – Transmitter operating 15.209	☒	☒	☐
Radiated Emission from receiver 15.109	☒	☒	☐
Power Line Conducted Emission 15.207	☒	☒	☐

The follows is intended to leave blank.

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3.1 Peak Output Power (transmitter)

FCC Rule: 15.209

The power was measured with modulation (declared by the applicant).

Test conditions		Transmitter field strength of fundamental	Transmitter field strength of harmonics
		[dB μ V/m]	
T _{nom} = 23 ° C	V _{nom} = 120 V	53.61	--
Measurement uncertainty		< 3 dB	

Test equipment used: ETSTW-RE 003, ETSTW-RE 015, ETSTW-RE 017, ETSTW-RE 024

Remarks: The diagrams for the field strength measurements are included in appendix A.

3.2 Out of Band Radiated Emissions

The field strength of any emissions appearing outside of the specific band shall not exceed the general radiated emission limits in § 15.209.

3.2.1 Specified limit

Frequency of Emission (MHz)	Limit	Measurement distance
0.009 – 0.490	2400 / f (KHz)	300
0.49 – 1.705	24000 / f (KHz)	30
1.705 – 30	30	30
30 – 88	100	3
88 – 216	150	3
216 – 960	200	3
Above 960	500	3

3.2.2 Extrapolation (distance correction) factor

The test was performed in the anechoic chamber at 3 meter test distance, i.e. the distance between measuring antenna and EUT boundary. The results were extrapolated by using the square of an inverse linear distance factor DF:

$$DF = 40 \log (D_1/D_2) = 80 \text{ dB, where}$$

D_1 is the 300 meter specified measurement distance

D_2 is the 3 meter test measurement distance.

The DF = 80 dB was applied for limit calculation at 3 m test distance measurements.

For 125 kHz frequency the calculated limit is:

$$\text{Limit}_{3m} = \text{Limit}_{300m} + DF = 25.6 \text{ dB}(\mu\text{V/m}) + 80 \text{ dB} = 105.6 \text{ dB}((\mu\text{V/m}).$$

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Summary table with radiated data of the test plots

Frequency Marker [MHz]	corrections Factor	Corrected Reading [dBuV/m]	Compliance Limit [dBuV/m]	Detec- tor	BW [MHz]	Margin
0.129	80	54.78	105.39	PK	0.1	50.61
0.64	80	66.33	111.35	PK	0.1	45.02
0.77	80	56.69	109.87	PK	0.1	53.18

The above field strength limits are specified at a distance of 3 meters.

Test equipment used: ETSTW-RE 003 , ETSTW-RE 012 , ETSTW-RE 015 , ETSTW-RE 016 ,
ETSTW-RE 017 , ETSTW-RE 024

Remark: see attached appendix B.

3.3 Radiated Emissions from Receiver Section of Transceiver

FCC Rule: 15.109

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Field Strength (dBmicrovolts/meter)
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

Test equipment used: ETSTW-RE 015, ETSTW-RE 016, ETSTW-RE 017, ETSTW-CS 001,
ETSTW-RE 026, ETSTW-RE 003, ETSTW-RE 025

Summary table with radiated data of the test plots

Freq	Used Ch	Frequency Marker [MHz]	Polar- ization	corrections dB	Corrected Reading [dBuV/m]	Compliance Limit [dBuV/m]	Detec- tor	BW [MHz]	Margin
1		104.609	H		34.71	43.5	PK	0.1	8.79
1		116.873	H		35.88	43.5	PK	0.1	7.62
2		244.889	H		30.1	46	PK	0.1	15.9
2		313.827	H		29.27	46	PK	0.1	16.73
1		104.609	V		40.82	43.5	PK	0.1	2.68
1		116.873	V		40.79	43.5	PK	0.1	2.71
2		244.889	V		23.75	46	PK	0.1	22.25
2		313.827	V		31.24	46	PK	0.1	14.76

Comment: see attached appendix C.

3.4 Power Line Conducted Emission

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.

Frequency	Level (dB μ V)	
	quasi-peak	average
150 kHz	lower limit line	Lower limit line

Measurement Result: “_ Fin AV”

Frequency Marker [MHz]	Type	Corrected Reading [dBuV]	Compliance AVLimit [dBuV]	BW [MHz]	Margin(AV)
14.875	N	46.4	50	0.01	3.60
15.125	N	46.5	50	0.01	3.50
15.375	N	46.5	50	0.01	3.50
15.625	N	46.5	50	0.01	3.50
15.875	N	46.4	50	0.01	3.60
16.125	N	46.2	50	0.01	3.80

Frequency Marker [MHz]	Type	Corrected Reading [dBuV]	Compliance AVLimit [dBuV]	BW [MHz]	Margin(AV)
14.625	L1	46.1	50	0.01	3.90
14.875	L1	46.3	50	0.01	3.70
15.125	L1	46.4	50	0.01	3.60
15.375	L1	46.4	50	0.01	3.60
15.625	L1	46.3	50	0.01	3.70
15.875	L1	46.2	50	0.01	3.80

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Measurement Result: “_Fin QP”

Frequency Marker [MHz]	Type	Corrected Reading [dBuV]	Compliance QPLimit [dBuV]	BW [MHz]	Margin(QP)
14.875	N	47.6	60	0.01	12.40
15.125	N	47.9	60	0.01	12.10
15.375	N	48	60	0.01	12.00
15.625	N	47.3	60	0.01	12.70
15.875	N	47.5	60	0.01	12.50
16.125	N	47.5	60	0.01	12.50

Frequency Marker [MHz]	Type	Corrected Reading [dBuV]	Compliance QPLimit [dBuV]	BW [MHz]	Margin(QP)
14.625	L1	47.3	60	0.01	12.70
14.875	L1	47.7	60	0.01	12.30
15.125	L1	47.5	60	0.01	12.50
15.375	L1	47.7	60	0.01	12.30
15.625	L1	47.4	60	0.01	12.60
15.875	L1	47.5	60	0.01	12.50

Limits:

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Test equipment used: ETSTW-CE 004, ETSTW-CE 001, ETSTW-RE 023

Comment: See attached appendix D.



Appendix

- A Fundamental Field Strength
- B Spurious Emissions radiated – Transmitter operating
- C Radiated Emission – Receiver operating
- D Power Line Conducted Emission
- E Pictures



Appendix A

Fundamental Field Strength



*RBW 1 kHz

Marker 1 [T1]

*VBW 1 kHz

53.61 dBμV/m

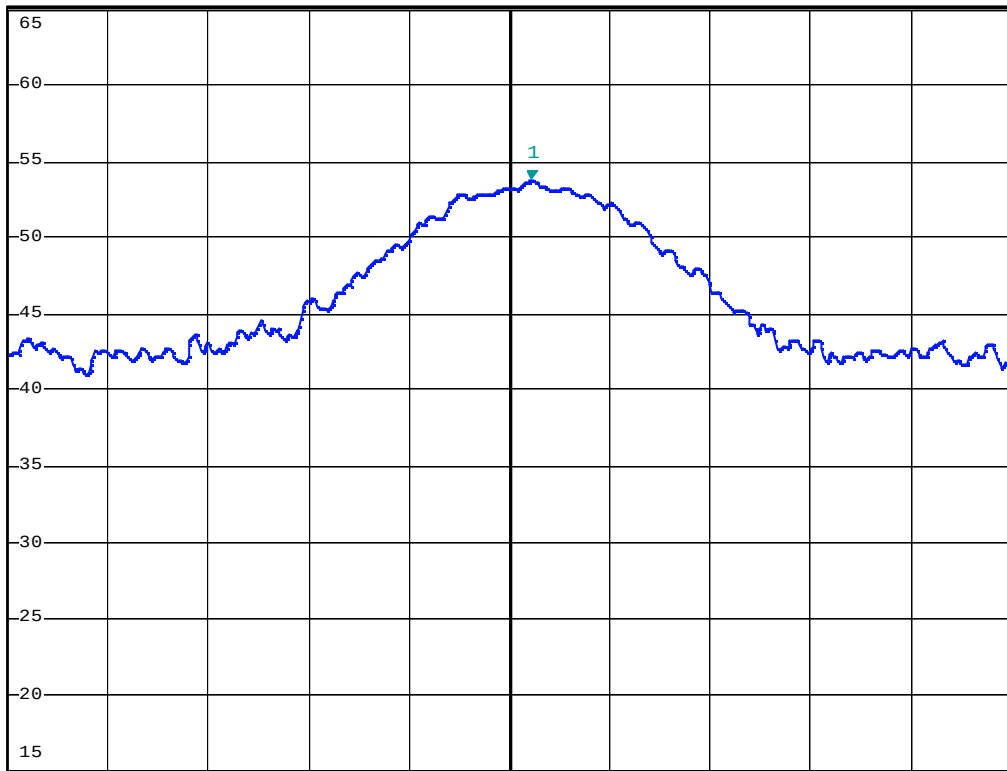
Ref 65 dBμV/m

*Att 40 dB

SWT 20 ms

125.913461538 kHz

1 PK
MAXH



Date: 28.SEP.2005 10:56:49



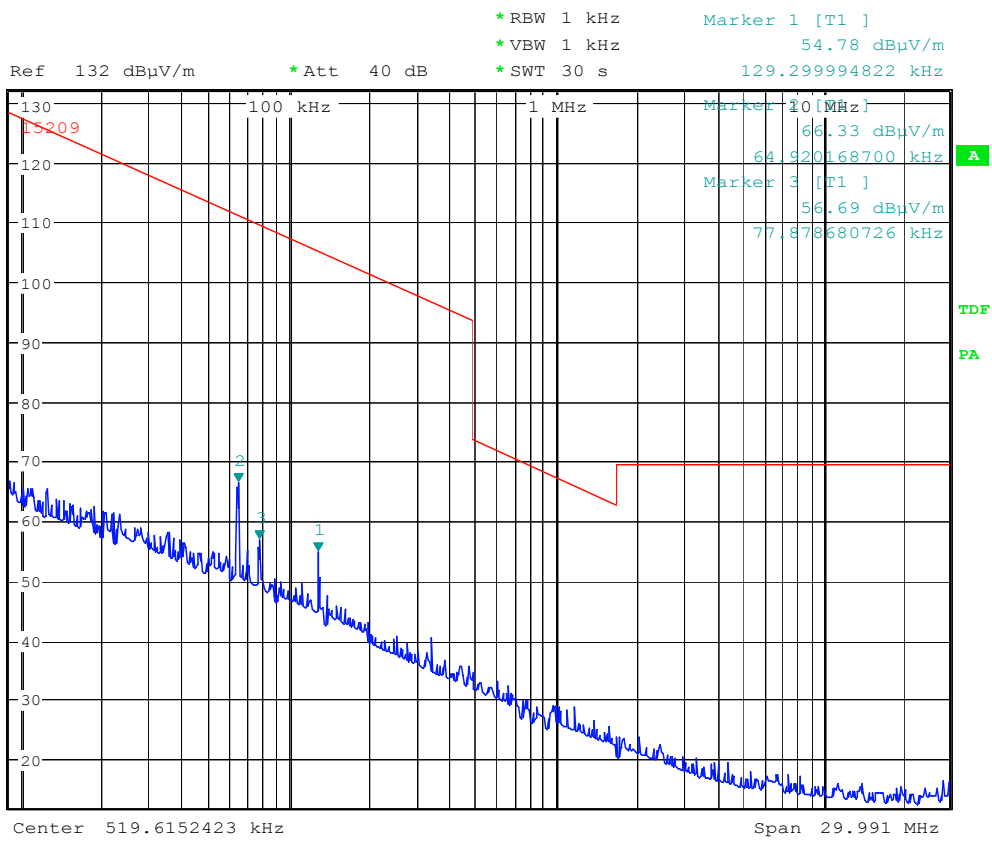
Appendix B

Spurious Emissions radiated – Transmitter operating

(The measurement diagrams are wideband pre-scan results; only for reference)



1 PK
MAXH



Date: 28.SEP.2005 10:48:40

Appendix C

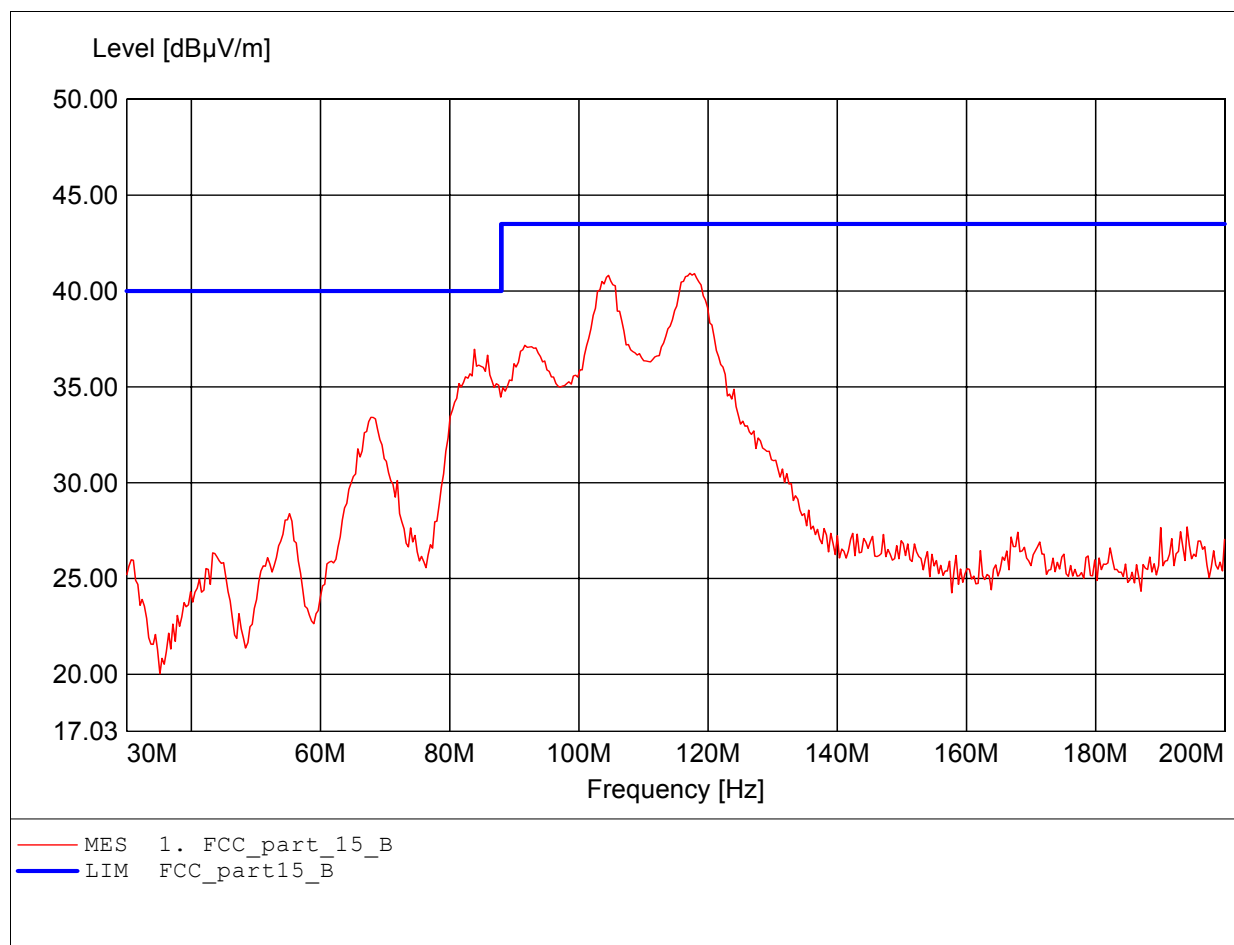
Radiated Emission – Receiver operating

(The measurement diagrams are wideband pre-scan results; only for reference)

Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

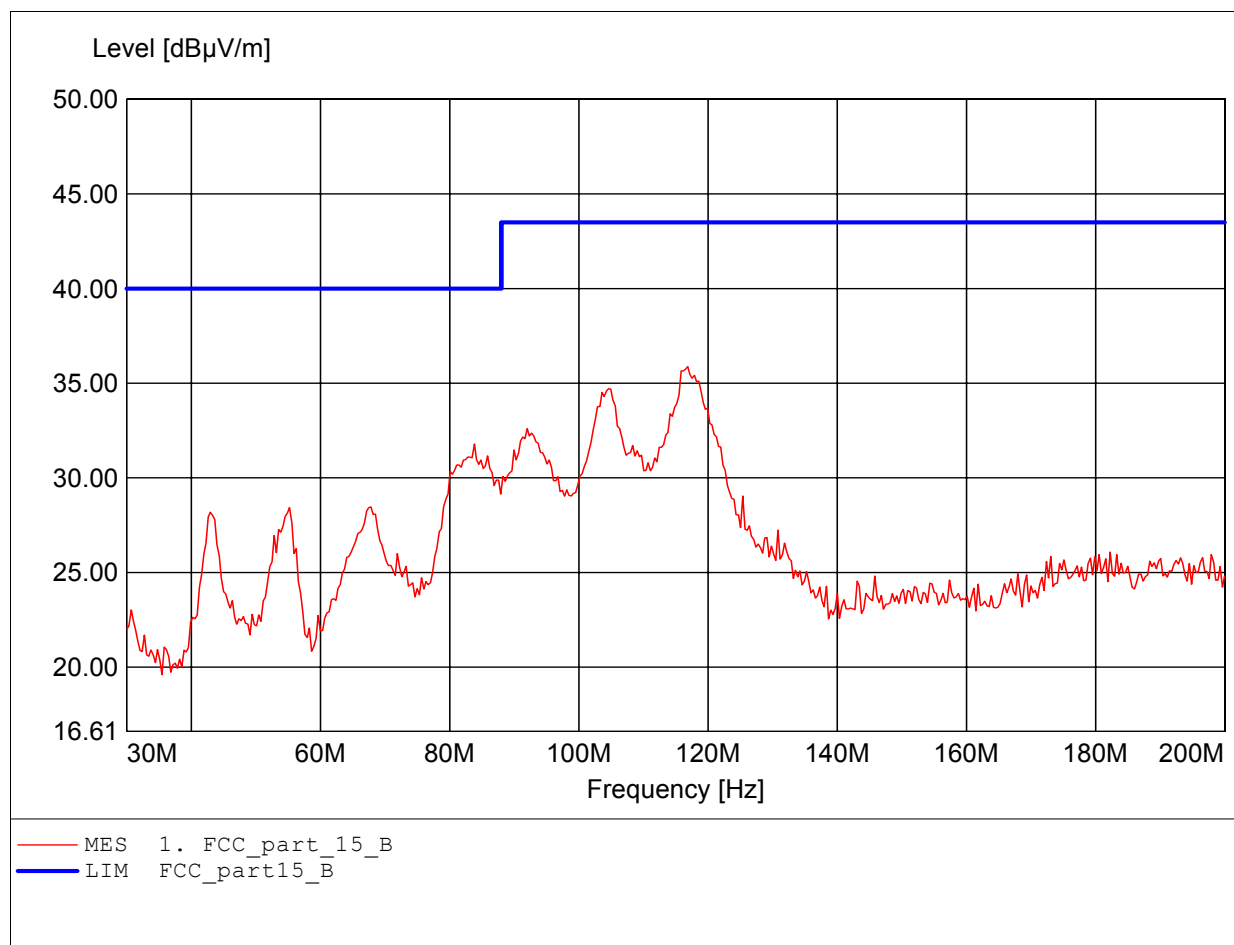
EUT: Long Range Auto Identification reader
MODEL NO.: PFH-9210
Approval Holder: Pongee Industries Co.,Ltd.
Test Site / Operator: ETS / Eric
Temperature/Voltage: Temp.: 23°C/ Unom.: 120 VAC (AC / DC ADAPTOR)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:117.214MHz Emax:40.92dBμV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

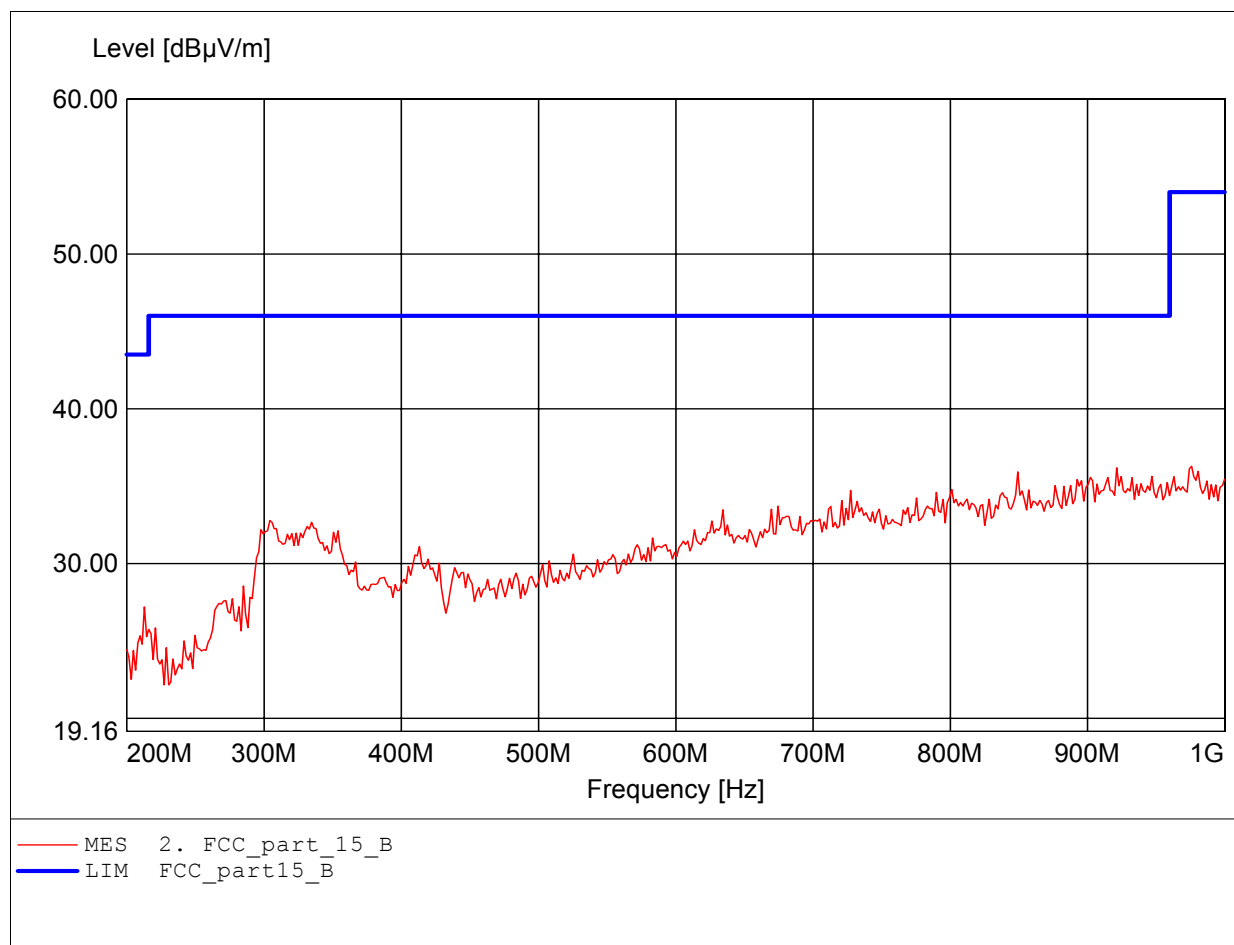
EUT: Long Range Auto Identification reader
MODEL NO.: PFH-9210
Approval Holder: Pongee Industries Co.,Ltd.
Test Site / Operator: ETS / Eric
Temperature/Voltage: Temp.: 23°C/ Unom.: 120 VAC (AC / DC ADAPTOR)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:116.874MHz Emax:35.88dBμV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

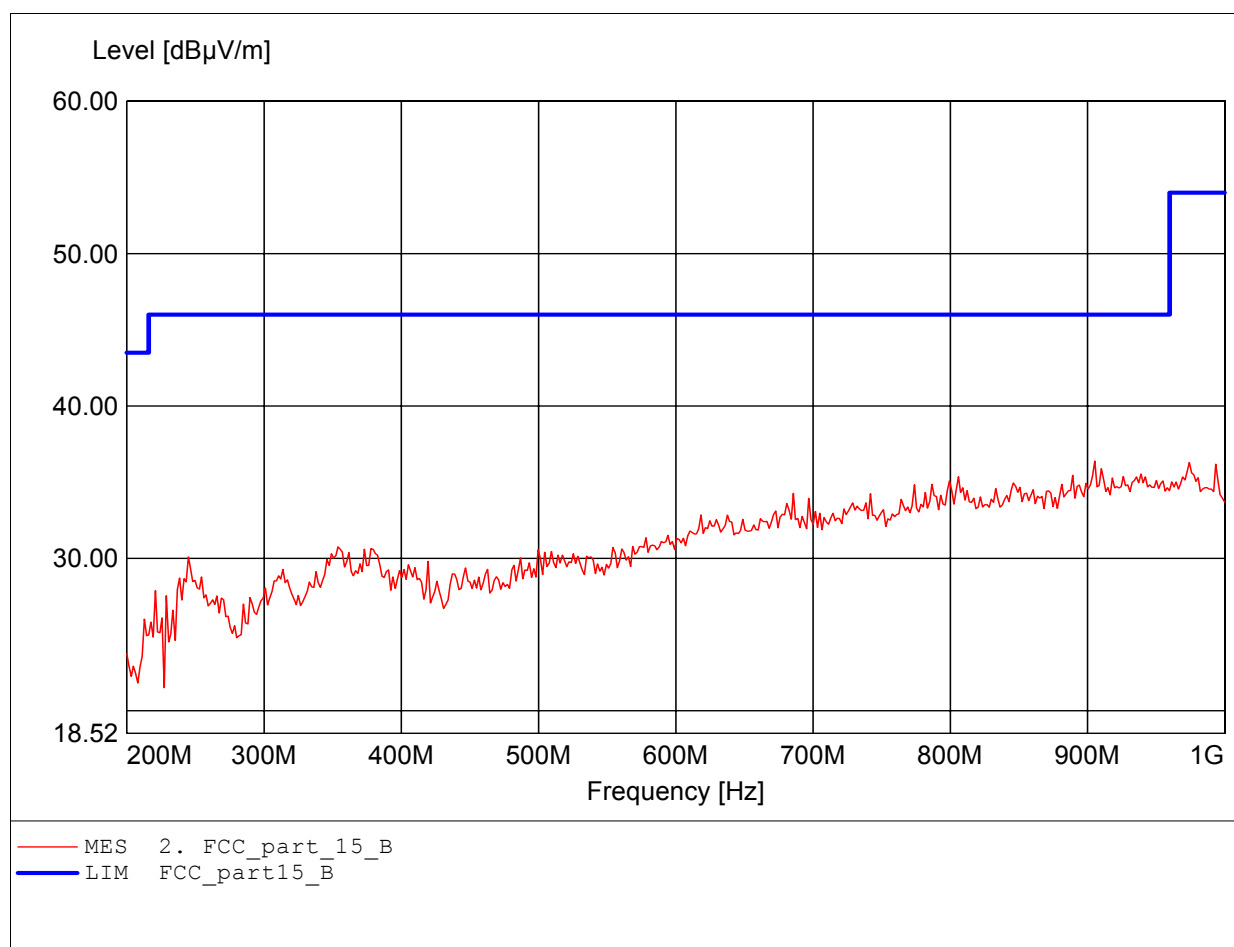
EUT: Long Range Auto Identification reader
MODEL NO.: PFH-9210
Approval Holder: Pongee Industries Co.,Ltd.
Test Site / Operator: ETS / Eric
Temperature/Voltage: Temp.: 23°C/ Unom.: 120 VAC (AC / DC ADAPTOR)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:975.952MHz Emax:36.29dBμV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

EUT: Long Range Auto Identification reader
MODEL NO.: PFH-9210
Approval Holder: Pongee Industries Co.,Ltd.
Test Site / Operator: ETS / Eric
Temperature/Voltage: Temp.: 23°C/ Unom.: 120 VAC (AC / DC ADAPTOR)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:905.411MHz Emax:36.39dBμV/m RBW: 100 kHz



Appendix D

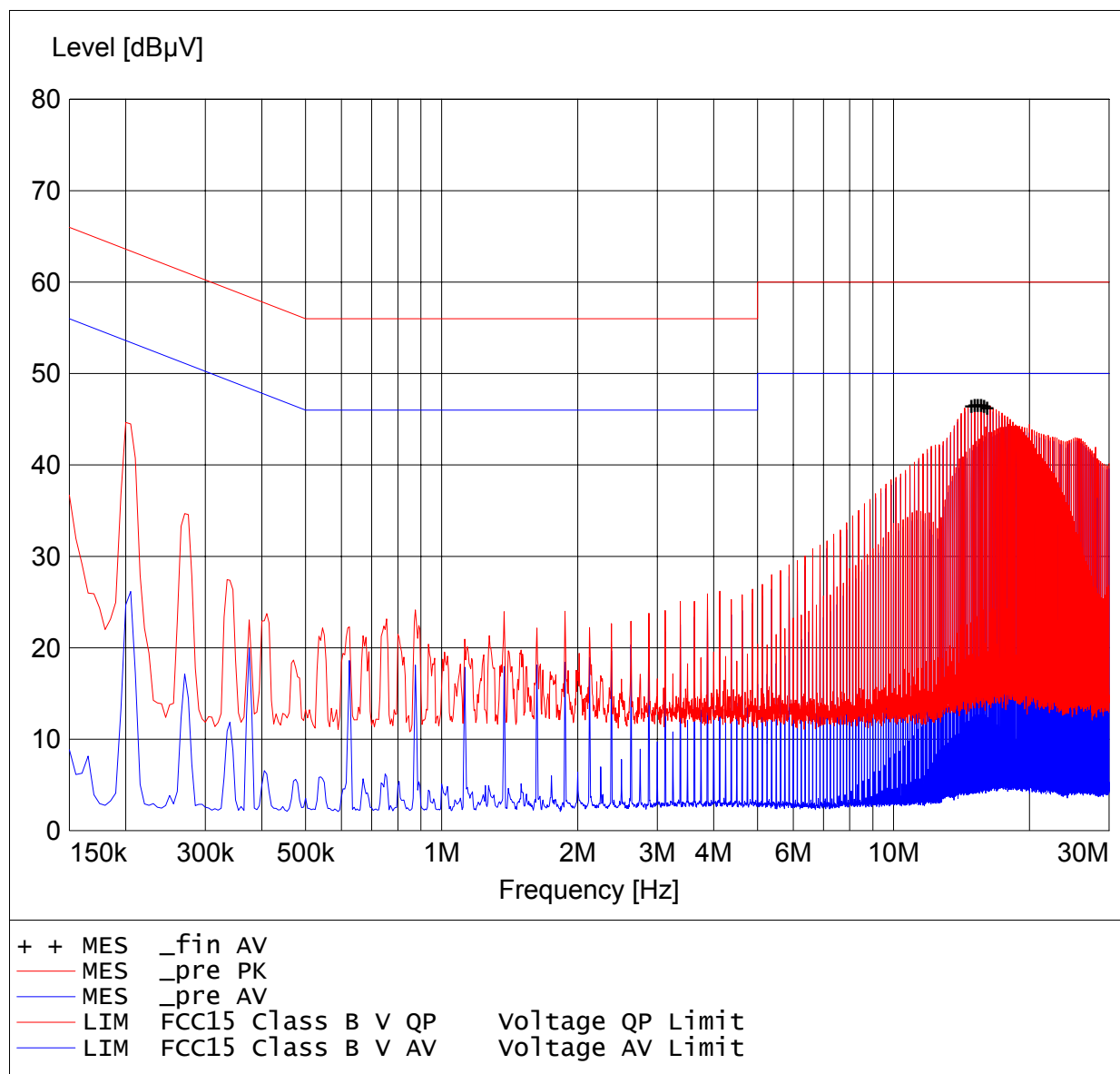
Power Line Conducted Emission

(The measurement diagrams are wideband pre-scan results; only for reference)

EMI voltage test in the ac-mains according to FCC Part 15

Class B

EUT: Long Range Auto Identification Reader
Approval Holder: Pongee Industries Co., Ltd.
Operating Condition: Unom : 120 VAC (AC / DC Adaptor) , Tnom : 23 °C
Test Site: ETS
Operator: Patrick
Test Specification: V-network: ESH3-Z5 N
Comment: model: PFH-9210 mode: active



EMI voltage test in the ac-mains according to FCC Part 15

Class B

EUT: Long Range Auto Identification Reader
Approval Holder: Pongee Industries Co., Ltd.
Operating Condition: Unom : 120 VAC (AC / DC Adaptor) , Tnom : 23 °C
Test Site: ETS
Operator: Patrick
Test Specification: V-network: ESH3-Z5 N
Comment: model: PFH-9210 mode: active

MEASUREMENT RESULT: "_fin AV"

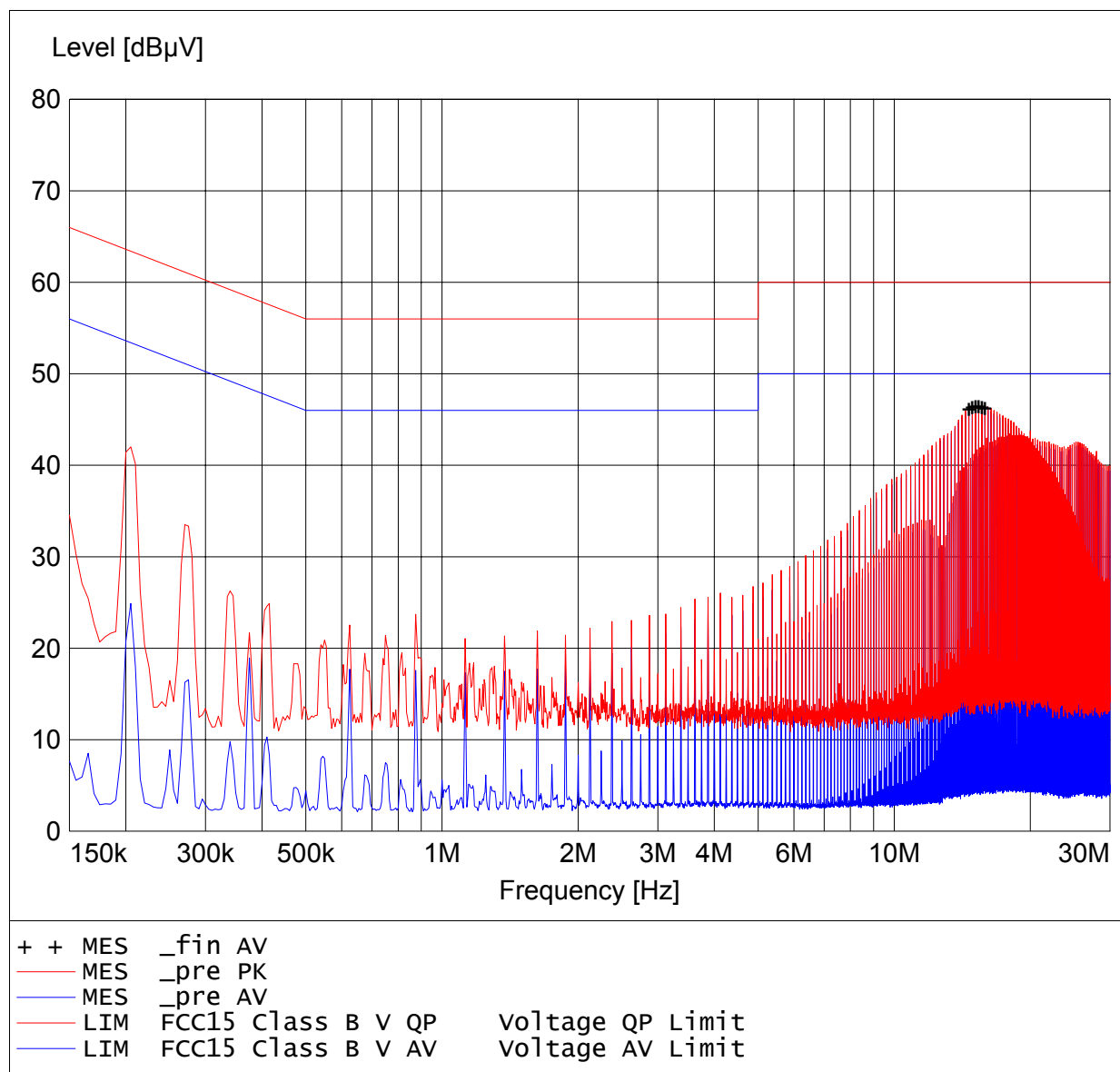
9/28/05 9:33AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
14.875000	46.40	10.1	50	3.6	---	---
15.125000	46.50	10.1	50	3.5	---	---
15.375000	46.50	10.1	50	3.5	---	---
15.625000	46.50	10.1	50	3.5	---	---
15.875000	46.40	10.1	50	3.6	---	---
16.125000	46.20	10.1	50	3.8	---	---

EMI voltage test in the ac-mains according to FCC Part 15

Class B

EUT: Long Range Auto Identification Reader
Approval Holder: Pongee Industries Co., Ltd.
Operating Condition: Unom : 120 VAC (AC / DC Adaptor) , Tnom : 23 °C
Test Site: ETS
Operator: Patrick
Test Specification: V-network: ESH3-Z5 L1
Comment: model: PFH-9210 mode: active



EMI voltage test in the ac-mains according to FCC Part 15

Class B

EUT: Long Range Auto Identification Reader
Approval Holder: Pongee Industries Co., Ltd.
Operating Condition: Unom : 120 VAC (AC / DC Adaptor) , Tnom : 23 °C
Test Site: ETS
Operator: Patrick
Test Specification: V-network: ESH3-Z5 L1
Comment: model: PFH-9210 mode: active

MEASUREMENT RESULT: "_fin AV"

9/28/05 9:56AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
14.625000	46.10	10.1	50	3.9	---	---
14.875000	46.30	10.1	50	3.7	---	---
15.125000	46.40	10.1	50	3.6	---	---
15.375000	46.40	10.1	50	3.6	---	---
15.625000	46.30	10.1	50	3.7	---	---
15.875000	46.20	10.1	50	3.8	---	---



Registration number: W6M20509-6155-P-15
FCC ID: TMZ9210

Appendix E

Pictures