



# FCC PART 15.247 TEST REPORT

For

**INGENICO**

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**FCC ID: XKB-L2500CLWIBT**

<b>Report Type:</b> Original Report	<b>Product Name:</b> Link/2500
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<b>Report Number:</b> <u>RXM170217051C</u>	
<b>Report Date:</b> <u>2017-03-10</u>	
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## GENERAL INFORMATION

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### Product Description for Equipment under Test (EUT)

The **INGENICO**'s product, model number: **Link/2500 CL/WiFi/BT (FCC ID: XKB-L2500CLWIBT)** (the "EUT") in this report was a **Link/2500**, which was measured approximately: 129 cm (L) x 70 mm (W) x 17 mm (H), rated input voltage: DC 3.7V from rechargeable Li-ion battery or DC 5V from adapter.

Adapter information:

MODEL: PSAL05R-050QL6

INPUT: 100-240V ~ 0.3A 50-60Hz 11-15VA

OUTPUT: DC 5V, 1.0A MAX.

*\*All measurement and test data in this report was gathered from final production sample, serial number: 170217051 (assigned by the BACL, Chengdu). It may have deviation from any other sample. The EUT supplied by the applicant was received on 2017-02-17, and EUT conformed to test requirement.*

### Objective

This report is prepared on behalf of **INGENICO** in accordance with Part 2, Subpart J, Part 15, Subparts A and C of the Federal Communications Commission's rules

The tests were performed in order to determine the compliance of the EUT with FCC Rules Part 15-Subpart C, section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

### Related Submittal(s)/Grant(s)

FCC Part 15C DXX submissions with FCC ID: XKB-L2500CLWIBT.

FCC Part 15C DSS submissions with FCC ID: XKB-L2500CLWIBT.

FCC Part 15.407 NII submissions with FCC ID: XKB-L2500CLWIBT.

## Test Methodology

All measurements detailed in this Test Report were performed in accordance with ANSI C63.10-2013 "American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices".

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Chengdu). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

The Bay Area Compliance Laboratories Corp. Chengdu's measurement Uncertainties (calculated for a k=2 Coverage Factor corresponding to approximately 95% Coverage) were as follows:

- For all of the AC Line Conducted Emissions Tests reported herein:  $\pm 3.17$  dB.
- For of all of the Direct Antenna Conducted Emissions Tests reported herein:  $\pm 0.56$  dB.

- For of all of the direct Radiated Emissions Tests reported herein are:

- 30 MHz to 200 MHz:  $\pm 4.7$  dB;
- 200 MHz to 1 GHz:  $\pm 6.0$  dB;
- 1 GHz to 6 GHz:  $\pm 5.13$  dB; and,
- 6 GHz to 40 GHz:  $\pm 5.47$  dB.

And the uncertainty will not be taken into consideration for all test data recorded in the report.

## Test Facility

The test site used by BACL to collect test data is located in the No.5040, Huilongwan Plaza, No.1, Shawan Road, Jinniu District, Chengdu, Sichuan, China.

Test site at BACL has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on April 24, 2015. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 560332. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

## SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §15.247 (i) & §1.1310 & §2.1093	RF Exposure	Compliance
§15.203	Antenna Requirement	Compliance
§15.207 (a)	AC Line Conducted Emissions	Compliance
§15.205, §15.209, §15.247(d)	Spurious Emissions	Compliance
§15.247 (a)(2)	6 dB Emission Bandwidth	Compliance*
§15.247(b)(3)	Maximum conducted output power	Compliance*
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliance*
§15.247(e)	Power Spectral Density	Compliance*

**Note:**

Compliance\*: the device is same PCB Layout with Model: LINK/2500 CL/3G/WiFi/BT, FCC ID: XKB-L2500CL3GWIBT, the differences between the original devices is depressing WWAN (2G/3G) function and replacing SIM to SAM function. The test items, please refer to the Model: LINK/2500 CL/3G/WiFi/BT's report: RXM160823052-00D.

## SYSTEM TEST CONFIGURATION

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### Description of Test Configuration

The system was configured for testing in engineering mode, which was provided by manufacturer.

For 2.4GHz band WLAN, 11 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437	/	/

For 802.11b, 802.11g, and 802.11n ht20 modes were tested with channel 1, 6 and 11.  
For 802.11n ht40 modes were tested with channel 3, 6 and 9.

The worst-case data rates are determined to be as follows for each mode based upon investigations by measuring the average power and PSD across all data rates bandwidths, and modulations.

### Equipment Modifications

No modification was made to the EUT tested.

### EUT Exercise Software

The test was setting in engineering mode for test, the duty cycle please refer to the Model: LINK/2500 CL/3G/WiFi/BT's report: RXM160823052-00D.

### External Cable

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
USB Cable	no	no	1.1	Adapter	EUT



## **FCC §15.247 (i) & §1.1310 & §2.1093- RF EXPOSURE**

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### **Applicable Standard**

According to §15.247(i), §1.1310 and §2.1093.

### **Test Result**

Compliant, please refer to the SAR report: RXM170217051-20A.



## **FCC §15.203 - ANTENNA REQUIREMENT**

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### **Applicable Standard**

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

### **Antenna Connector Construction**

The EUT has one integral antenna arrangement for Wi-Fi, which was permanently attached and the antenna gain is 1 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

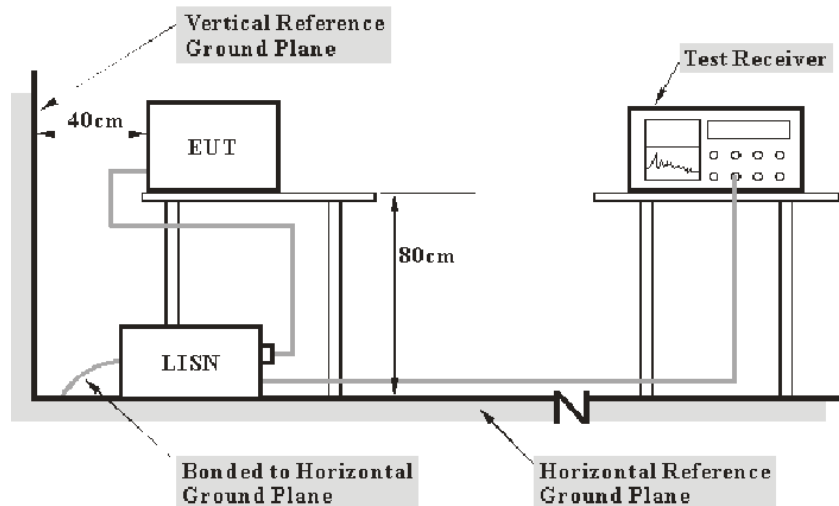
**Result:** Compliance.

## FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

### Applicable Standard

FCC§15.207(a)

### EUT Setup



Note: 1. Support units were connected to second LISN.  
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

The adapter was connected to the Main LISN with AC 120 V/60 Hz power source.

### EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

## Test Procedure

During the conducted emission test, the adapter was connected to the first LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

## Corrected Amplitude & Margin Calculation

The basic equation is as follows:

$$V_C = V_R + A_C + VDF$$

$$C_f = A_C + VDF$$

Herein,

$V_C$  (cord. Reading): corrected voltage amplitude

$V_R$ : reading voltage amplitude

$A_C$ : attenuation caused by cable loss

VDF: voltage division factor of AMN

$C_f$ : Correction Factor

The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the maximum limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS 30	836858/0016	2016-12-02	2017-12-01
Rohde & Schwarz	L.I.S.N.	ENV216	100018	2016-12-02	2017-12-01
Rohde & Schwarz	PULSE LIMITER	ESH3Z2	DE14781	2016-10-31	2017-10-30
Unknown	Conducted Cable	Unknown	NO.5	2016-11-10	2017-11-09
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A

\* **Statement of Traceability:** BACL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B “Implementation of traceability policy in accredited laboratories”.

## Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

## Test Data

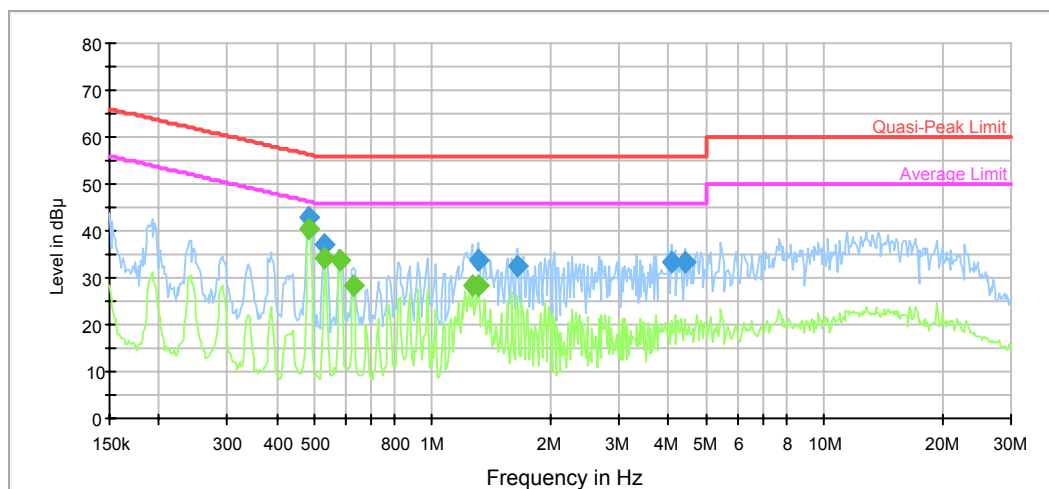
### Environmental Conditions

Temperature:	20.8 °C
Relative Humidity:	31 %
ATM Pressure:	96.2 kPa

The testing was performed by Kevin Hu on 2017-03-02.

Test Mode: Transmitting

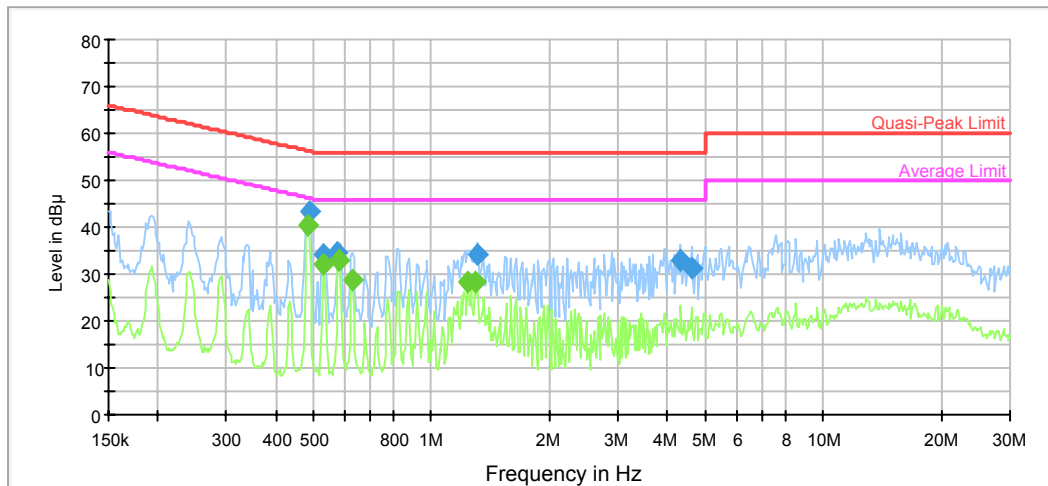
AC120 V, 60 Hz, Line:



Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.483938	42.9	9.000	L1	19.7	13.4	56.3	Compliance
0.532496	36.9	9.000	L1	19.7	19.1	56.0	Compliance
1.310256	33.9	9.000	L1	19.7	22.1	56.0	Compliance
1.650866	32.6	9.000	L1	19.7	23.4	56.0	Compliance
4.062112	33.3	9.000	L1	19.7	22.7	56.0	Compliance
4.399032	33.2	9.000	L1	19.7	22.8	56.0	Compliance

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.483938	40.5	9.000	L1	19.7	5.8	46.3	Compliance
0.532496	34.2	9.000	L1	19.7	11.8	46.0	Compliance
0.581275	33.6	9.000	L1	19.8	12.4	46.0	Compliance
0.629488	28.4	9.000	L1	19.7	17.6	46.0	Compliance
1.259081	28.4	9.000	L1	19.7	17.6	46.0	Compliance
1.310256	28.5	9.000	L1	19.7	17.5	46.0	Compliance

**AC120 V, 60 Hz, Neutral:**



Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.487810	43.2	9.000	N	19.6	13.0	56.2	Compliance
0.528270	34.2	9.000	N	19.6	21.8	56.0	Compliance
0.576662	34.4	9.000	N	19.6	21.6	56.0	Compliance
1.310256	34.3	9.000	N	19.6	21.7	56.0	Compliance
4.329484	33.1	9.000	N	19.7	22.9	56.0	Compliance
4.614454	31.4	9.000	N	19.7	24.6	56.0	Compliance

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.483938	40.6	9.000	N	19.6	5.7	46.3	Compliance
0.532496	32.0	9.000	N	19.6	14.0	46.0	Compliance
0.581275	33.0	9.000	N	19.6	13.0	46.0	Compliance
0.629488	28.9	9.000	N	19.6	17.1	46.0	Compliance
1.239175	28.4	9.000	N	19.6	17.6	46.0	Compliance
1.289541	28.3	9.000	N	19.6	17.7	46.0	Compliance

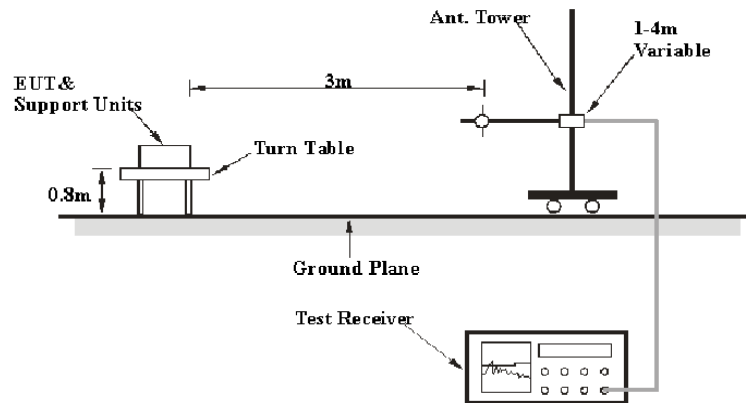
## FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS

### Applicable Standard

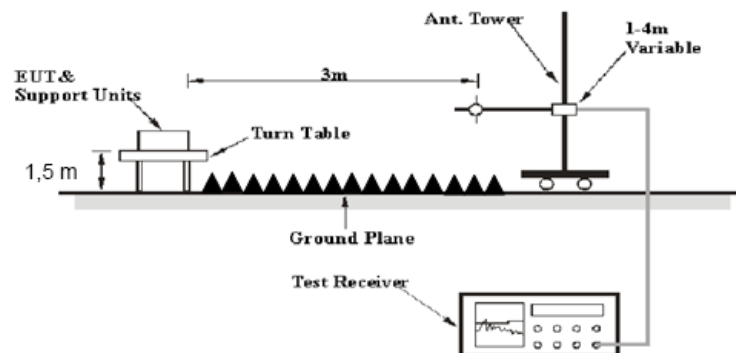
FCC §15.247 (d); §15.209; §15.205;

### EUT Setup

#### Below 1GHz:



#### Above 1GHz:



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

## EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

30MHz-1000MHz:

Detector	RBW	Video B/W	IF B/W
QP	120 kHz	300 kHz	120kHz

1GHz- 25GHz:

Detector	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
Ave.	>98%	1MHz	10 Hz
	<98%	1MHz	1/T

Note: T is minimum transmission duration

## Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1 GHz, peak and Average detection modes for frequencies above 1 GHz.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Amplifier	8447D	2944A10442	2016-12-02	2017-12-01
Rohde & Schwarz	EMI Test Receiver	ESCI	100028	2016-12-02	2017-12-01
Sunol Sciences	Broadband Antenna	JB3	A121808	2016-04-10	2019-04-09
Rohde & Schwarz	Spectrum Analyzer	FSEM30	100018	2016-12-02	2017-12-01
ETS	Horn Antenna	3115	003-6076	2016-12-02	2017-12-01
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-0113024	2014-06-16	2017-06-15
Mini-circuits	Amplifier	ZVA-183-S+	771001215	2016-05-20	2017-05-19
HP	Amplifier	8449B	3008A00277	2016-12-02	2017-12-01
EMCT	Semi-Anechoic Chamber	966	966-1	2015-04-24	2018-04-23
Unknown	RF Cable (below 1GHz)	Unknown	NO.1	2016-11-10	2017-11-09
Unknown	RF Cable (below 1GHz)	Unknown	NO.4	2016-11-10	2017-11-09
Unknown	RF Cable (above 1GHz)	Unknown	NO.2	2016-11-10	2017-11-09

\* **Statement of Traceability:** BACL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B "Implementation of traceability policy in accredited laboratories".

## Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Section 15.205, 15.209 and 15.247.

## Test Data

### Environmental Conditions

Temperature:	21.3 °C
Relative Humidity:	35 %
ATM Pressure:	96.5 kPa

\* The testing was performed by Kevin Hu on 2017-03-03.



Test Mode: Transmitting

30MHz-25GHz:  
802.11b Mode

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)					
Low Channel: 2412 MHz									
2412	71.1	PK	H	23.50	3.00	0.00	97.60	N/A	N/A
2412	68.03	AV	H	23.50	3.00	0.00	94.53	N/A	N/A
2412	68.28	PK	V	23.50	3.00	0.00	94.78	N/A	N/A
2412	64.9	AV	V	23.50	3.00	0.00	91.40	N/A	N/A
2390	28.76	PK	H	23.57	3.00	0.00	55.33	74.00	18.67
2390	16.35	AV	H	23.57	3.00	0.00	42.92	54.00	11.08
4824	37.71	PK	H	30.84	5.11	26.87	46.79	74.00	27.21
4824	28.24	AV	H	30.84	5.11	26.87	37.32	54.00	16.68
7236	34.89	PK	H	34.77	6.18	26.36	49.48	74.00	24.52
7236	25.43	AV	H	34.77	6.18	26.36	40.02	54.00	13.98
3131	36.96	PK	H	24.93	3.63	26.46	39.06	74.00	34.94
3131	26.19	AV	H	24.93	3.63	26.46	28.29	54.00	25.71
95.96	56.41	QP	H	9.59	0.53	28.33	38.20	43.50	5.30
146.4	42.57	QP	H	12.89	0.73	28.09	28.10	43.50	15.40
Middle Channel: 2437 MHz									
2437	70.94	PK	H	23.41	3.00	0.00	97.35	N/A	N/A
2437	68.02	AV	H	23.41	3.00	0.00	94.43	N/A	N/A
2437	68.44	PK	V	23.41	3.00	0.00	94.85	N/A	N/A
2437	65.11	AV	V	23.41	3.00	0.00	91.52	N/A	N/A
4874	39.17	PK	H	31.00	5.09	26.87	48.39	74.00	25.61
4874	29.7	AV	H	31.00	5.09	26.87	38.92	54.00	15.08
7311	36.9	PK	H	34.92	6.21	26.40	51.63	74.00	22.37
7311	26.39	AV	H	34.92	6.21	26.40	41.12	54.00	12.88
1459	35.72	PK	H	23.99	2.61	26.37	35.95	74.00	38.05
1459	24.59	AV	H	23.99	2.61	26.37	24.82	54.00	29.18
2263	36.69	PK	H	24.01	3.02	26.86	36.86	74.00	37.14
2263	26.43	AV	H	24.01	3.02	26.86	26.60	54.00	27.40
95.96	56.25	QP	H	9.59	0.53	28.33	38.04	43.50	5.46
146.4	42.71	QP	H	12.89	0.73	28.09	28.24	43.50	15.26
High Channel: 2462 MHz									
2462	71.93	PK	H	23.33	2.99	0.00	98.25	N/A	N/A
2462	63.9	AV	H	23.33	2.99	0.00	90.22	N/A	N/A
2462	67.29	PK	V	23.33	2.99	0.00	93.61	N/A	N/A
2462	59.82	AV	V	23.33	2.99	0.00	86.14	N/A	N/A
2483.5	40.24	PK	H	23.26	2.99	0.00	66.49	74.00	7.51
2483.5	21.33	AV	H	23.26	2.99	0.00	47.58	54.00	6.42
4924	44.22	PK	H	31.16	5.07	26.88	53.57	74.00	20.43
4924	34.11	AV	H	31.16	5.07	26.88	43.46	54.00	10.54
7386	36.58	PK	H	35.07	6.25	26.43	51.47	74.00	22.53
7386	26.22	AV	H	35.07	6.25	26.43	41.11	54.00	12.89
3131	36.75	PK	H	24.93	3.63	26.46	38.85	74.00	35.15
3131	26.01	AV	H	24.93	3.63	26.46	28.11	54.00	25.89
95.96	56.67	QP	H	9.59	0.53	28.33	38.46	43.50	5.04
146.4	42.31	QP	H	12.89	0.73	28.09	27.84	43.50	15.66

802.11g Mode

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)					
Low Channel: 2412 MHz									
2412	72.37	PK	H	23.50	3.00	0.00	98.87	N/A	N/A
2412	64.59	AV	H	23.50	3.00	0.00	91.09	N/A	N/A
2412	69.01	PK	V	23.50	3.00	0.00	95.51	N/A	N/A
2412	61.28	AV	V	23.50	3.00	0.00	87.78	N/A	N/A
2390	38.28	PK	H	23.57	3.00	0.00	64.85	74.00	9.15
2390	20.58	AV	H	23.57	3.00	0.00	47.15	54.00	6.85
4824	37.81	PK	H	30.84	5.11	26.87	46.89	74.00	27.11
4824	27.91	AV	H	30.84	5.11	26.87	36.99	54.00	17.01
7236	34.96	PK	H	34.77	6.18	26.36	49.55	74.00	24.45
7236	25.19	AV	H	34.77	6.18	26.36	39.78	54.00	14.22
2950	36.69	PK	H	24.10	3.39	26.46	37.72	74.00	36.28
2950	25.34	AV	H	24.10	3.39	26.46	26.37	54.00	27.63
95.96	56.31	QP	H	9.59	0.53	28.33	38.10	43.50	5.40
146.4	42.81	QP	H	12.89	0.73	28.09	28.34	43.50	15.16
Middle Channel: 2437 MHz									
2437	72.41	PK	H	23.41	3.00	0.00	98.82	N/A	N/A
2437	64.64	AV	H	23.41	3.00	0.00	91.05	N/A	N/A
2437	69.11	PK	V	23.41	3.00	0.00	95.52	N/A	N/A
2437	61.4	AV	V	23.41	3.00	0.00	87.81	N/A	N/A
4874	39.6	PK	H	31.00	5.09	26.87	48.82	74.00	25.18
4874	28.81	AV	H	31.00	5.09	26.87	38.03	54.00	15.97
7311	36.05	PK	H	34.92	6.21	26.40	50.78	74.00	23.22
7311	26.43	AV	H	34.92	6.21	26.40	41.16	54.00	12.84
1459	34.98	PK	H	23.99	2.61	26.37	35.21	74.00	38.79
1459	24.16	AV	H	23.99	2.61	26.37	24.39	54.00	29.61
2263	36.16	PK	H	24.01	3.02	26.86	36.33	74.00	37.67
2263	25.93	AV	H	24.01	3.02	26.86	26.10	54.00	27.90
95.96	56.15	QP	H	9.59	0.53	28.33	37.94	43.50	5.56
146.4	42.76	QP	H	12.89	0.73	28.09	28.29	43.50	15.21
High Channel: 2462 MHz									
2462	71.85	PK	H	23.33	2.99	0.00	98.17	N/A	N/A
2462	63.41	AV	H	23.33	2.99	0.00	89.73	N/A	N/A
2462	67.48	PK	V	23.33	2.99	0.00	93.80	N/A	N/A
2462	59.62	AV	V	23.33	2.99	0.00	85.94	N/A	N/A
2483.5	39.69	PK	H	23.26	2.99	0.00	65.94	74.00	8.06
2483.5	21.3	AV	H	23.26	2.99	0.00	47.55	54.00	6.45
4924	43.96	PK	H	31.16	5.07	26.88	53.31	74.00	20.69
4924	34.07	AV	H	31.16	5.07	26.88	43.42	54.00	10.58
7386	36.48	PK	H	35.07	6.25	26.43	51.37	74.00	22.63
7386	26.04	AV	H	35.07	6.25	26.43	40.93	54.00	13.07
2950	36.24	PK	H	24.10	3.39	26.46	37.27	74.00	36.73
2950	25.96	AV	H	24.10	3.39	26.46	26.99	54.00	27.01
95.96	56.45	QP	H	9.59	0.53	28.33	38.24	43.50	5.26
146.4	42.71	QP	H	12.89	0.73	28.09	28.24	43.50	15.26

802.11 n ht20 Mode

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)					
Low Channel: 2412 MHz									
2412	72.44	PK	H	23.50	3.00	0.00	98.94	N/A	N/A
2412	64.23	AV	H	23.50	3.00	0.00	90.73	N/A	N/A
2412	68.7	PK	V	23.50	3.00	0.00	95.20	N/A	N/A
2412	60.31	AV	V	23.50	3.00	0.00	86.81	N/A	N/A
2390	38.02	PK	H	23.57	3.00	0.00	64.59	74.00	9.41
2390	21.27	AV	H	23.57	3.00	0.00	47.84	54.00	6.16
4824	37.43	PK	H	30.84	5.11	26.87	46.51	74.00	27.49
4824	27.82	AV	H	30.84	5.11	26.87	36.90	54.00	17.10
7236	34.81	PK	H	34.77	6.18	26.36	49.40	74.00	24.60
7236	25.3	AV	H	34.77	6.18	26.36	39.89	54.00	14.11
1413	35.47	PK	H	23.87	2.55	26.41	35.48	74.00	38.52
1413	24.91	AV	H	23.87	2.55	26.41	24.92	54.00	29.08
95.96	56.34	QP	H	9.59	0.53	28.33	38.13	43.50	5.37
146.4	42.65	QP	H	12.89	0.73	28.09	28.18	43.50	15.32
Middle Channel: 2437 MHz									
2437	70.9	PK	H	23.41	3.00	0.00	97.31	N/A	N/A
2437	63.1	AV	H	23.41	3.00	0.00	89.51	N/A	N/A
2437	67.53	PK	V	23.41	3.00	0.00	93.94	N/A	N/A
2437	59.73	AV	V	23.41	3.00	0.00	86.14	N/A	N/A
4874	39.5	PK	H	31.00	5.09	26.87	48.72	74.00	25.28
4874	29.12	AV	H	31.00	5.09	26.87	38.34	54.00	15.66
7311	36.58	PK	H	34.92	6.21	26.40	51.31	74.00	22.69
7311	26.06	AV	H	34.92	6.21	26.40	40.79	54.00	13.21
1459	35.12	PK	H	23.99	2.61	26.37	35.35	74.00	38.65
1459	24.98	AV	H	23.99	2.61	26.37	25.21	54.00	28.79
2263	36.09	PK	H	24.01	3.02	26.86	36.26	74.00	37.74
2263	25.87	AV	H	24.01	3.02	26.86	26.04	54.00	27.96
95.96	55.9	QP	H	9.59	0.53	28.33	37.69	43.50	5.81
146.4	42.65	QP	H	12.89	0.73	28.09	28.18	43.50	15.32
High Channel: 2462 MHz									
2462	71.31	PK	H	23.33	2.99	0.00	97.63	N/A	N/A
2462	63.39	AV	H	23.33	2.99	0.00	89.71	N/A	N/A
2462	67.97	PK	V	23.33	2.99	0.00	94.29	N/A	N/A
2462	59.91	AV	V	23.33	2.99	0.00	86.23	N/A	N/A
2483.5	42.68	PK	H	23.26	2.99	0.00	68.93	74.00	5.07
2483.5	20.76	AV	H	23.26	2.99	0.00	47.01	54.00	6.99
4924	43.86	PK	H	31.16	5.07	26.88	53.21	74.00	20.79
4924	33.74	AV	H	31.16	5.07	26.88	43.09	54.00	10.91
7386	36.25	PK	H	35.07	6.25	26.43	51.14	74.00	22.86
7386	26.4	AV	H	35.07	6.25	26.43	41.29	54.00	12.71
1485	34.81	PK	H	24.06	2.65	26.34	35.18	74.00	38.82
1485	24.08	AV	H	24.06	2.65	26.34	24.45	54.00	29.55
95.96	56.06	QP	H	9.59	0.53	28.33	37.85	43.50	5.65
146.4	42.74	QP	H	12.89	0.73	28.09	28.27	43.50	15.23

802.11 n ht40 Mode

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)					
Low Channel: 2422 MHz									
2422	68.31	PK	H	23.47	3.00	0.00	94.78	N/A	N/A
2422	59.58	AV	H	23.47	3.00	0.00	86.05	N/A	N/A
2422	65.22	PK	V	23.47	3.00	0.00	91.69	N/A	N/A
2422	56.69	AV	V	23.47	3.00	0.00	83.16	N/A	N/A
2390	28.1	PK	H	23.57	3.00	0.00	54.67	74.00	19.33
2390	15.95	AV	H	23.57	3.00	0.00	42.52	54.00	11.48
4844	37.76	PK	H	30.90	5.10	26.87	46.89	74.00	27.11
4844	27.7	AV	H	30.90	5.10	26.87	36.83	54.00	17.17
7266	34.84	PK	H	34.83	6.19	26.38	49.48	74.00	24.52
7266	25.07	AV	H	34.83	6.19	26.38	39.71	54.00	14.29
1437	34.86	PK	H	23.94	2.58	26.39	34.99	74.00	39.01
1437	24.38	AV	H	23.94	2.58	26.39	24.51	54.00	29.49
95.96	55.99	QP	H	9.59	0.53	28.33	37.78	43.50	5.72
146.4	42.5	QP	H	12.89	0.73	28.09	28.03	43.50	15.47
Middle Channel: 2437 MHz									
2437	68.8	PK	H	23.41	3.00	0.00	95.21	N/A	N/A
2437	59.67	AV	H	23.41	3.00	0.00	86.08	N/A	N/A
2437	65.14	PK	V	23.41	3.00	0.00	91.55	N/A	N/A
2437	56.56	AV	V	23.41	3.00	0.00	82.97	N/A	N/A
4874	39.34	PK	H	31.00	5.09	26.87	48.56	74.00	25.44
4874	29.71	AV	H	31.00	5.09	26.87	38.93	54.00	15.07
7311	37.13	PK	H	34.92	6.21	26.40	51.86	74.00	22.14
7311	25.82	AV	H	34.92	6.21	26.40	40.55	54.00	13.45
1469	35.23	PK	H	24.02	2.63	26.36	35.52	74.00	38.48
1469	24.46	AV	H	24.02	2.63	26.36	24.75	54.00	29.25
2163	35.17	PK	H	24.35	3.03	26.84	35.71	74.00	38.29
2163	25.58	AV	H	24.35	3.03	26.84	26.12	54.00	27.88
95.96	56.24	QP	H	9.59	0.53	28.33	38.03	43.50	5.47
146.4	42.6	QP	H	12.89	0.73	28.09	28.13	43.50	15.37
High Channel: 2452 MHz									
2452	68.65	PK	H	23.36	3.00	0.00	95.01	N/A	N/A
2452	59.7	AV	H	23.36	3.00	0.00	86.06	N/A	N/A
2452	65.84	PK	V	23.36	3.00	0.00	92.20	N/A	N/A
2452	56.55	AV	V	23.36	3.00	0.00	82.91	N/A	N/A
2483.5	30.1	PK	H	23.26	2.99	0.00	56.35	74.00	17.65
2483.5	17.53	AV	H	23.26	2.99	0.00	43.78	54.00	10.22
4904	44.18	PK	H	31.09	5.08	26.87	53.48	74.00	20.52
4904	34.18	AV	H	31.09	5.08	26.87	43.48	54.00	10.52
7356	36.42	PK	H	35.01	6.23	26.42	51.24	74.00	22.76
7356	25.97	AV	H	35.01	6.23	26.42	40.79	54.00	13.21
1508	34.63	PK	H	24.11	2.68	26.34	35.08	74.00	38.92
1508	24.02	AV	H	24.11	2.68	26.34	24.47	54.00	29.53
95.96	56.15	QP	H	9.59	0.53	28.33	37.94	43.50	5.56
146.4	42.59	QP	H	12.89	0.73	28.09	28.12	43.50	15.38

\*\*\*\*\* END OF REPORT \*\*\*\*\*