LABCODE: 500069-0

FCC PART 15.247

TEST REPORT

For

Chengdu Vantron Technology, Ltd.

No. 5 GaoPeng Road, Hi-Tech Zone, Chengdu, Sichuan 610045, China

FCC ID: 2AAGEVTM2M-TCVM

Report Type:	**Product Type:**
Original Report	M2M Gateway

Test Engineer:	Ares Liu
Report Number:	R2SC131023050-00C
Report Date:	2014-02-11
Reviewed By:	Jerry Zhang EMC Manager
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Chengdu Vantron Technology, Ltd.*'s product, model number: *VT-M2M-TC VM (FCC ID: 2AAGEVTM2M-TCVM)* (the "EUT") in this report was a *M2M Gateway,* which was measured approximately: 19.1cm (L) x 10.1 cm (W) x 5.2 cm (H), rated input voltage: DC 12V

** All measurement and test data in this report was gathered from production sample serial number: 131023050 (Assigned by BACL.Dongguan). The EUT was received on 2013-10-29.*

Objective

This report is prepared on behalf of *Chengdu Vantron Technology, Ltd.* in accordance with Part 2, Subpart J, Part 15, Subparts A, B and C of the Federal Communications Commission rules

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

Related Submittal(s)/Grant(s)

FCC Part 22H&24E PCB submissions with FCC ID: *2AAGEVTM2M-TCVM*.
FCC Part 15C DTS submissions with FCC ID: *2AAGEVTM2M-TCVM*.
FCC Part 15E NII submissions with FCC ID: *2AAGEVTM2M-TCVM.*
FCC Part 15B JBC submissions with FCC ID: *2AAGEVTM2M-TCVM.*

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

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

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China

Test site at Bay Area Compliance Laboratories Corp. (Dongguan) has been fully described in reports submitted to the Federal Communications 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 February 02, 2012. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 273710. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Dongguan) is an ISO/IEC 17025 accredited laboratory, and is accredited by National Voluntary Laboratory Accredited Program (Lab Code 500069-0).

The current scope of accreditations can be found at http://ts.nist.gov/standards/scopes/5000690.htm

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in an engineering mode, which was provided by manufacturer. The engineering mode was controlled by the Bluetooth Tester.

EUT Exercise Software

The software "BT Test Tool" was used for testing, which was provided by manufacturer. The worst condition (maximum power) was setting by the software as following table:

Test Software Version	BT Test Tool		
Test Frequency	2402MHz	2441MHz	2480MHz
GFSK	50	50	50
π 4-DQPSK	95	95	95
8-DPSK	95	95	95

Equipment Modifications

No modification was made to the EUT.

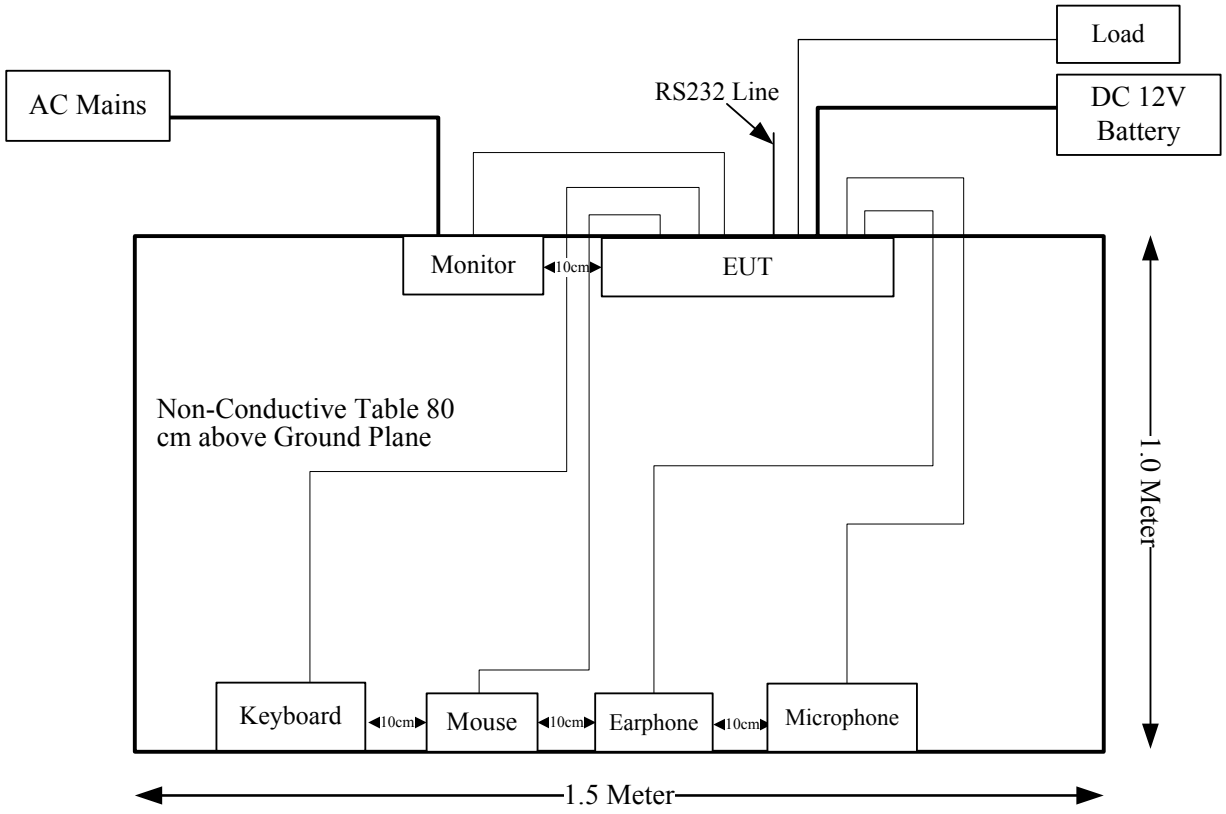
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Dell	Monitor	U3011t	CN-OPH5NY-74445-16T-290L
Keenion	Microphone	KM-206	N/A
Keenion	Earphone	KDM-911	N/A
DELL	Keyboard	SK-8115	CN-0J4628-71616-52H-0RT6
DELL	Mouse	MO56UOA	F0Y02P7Y

External Cable

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
RJ45 Cable	NO	NO	10m	EUT RJ45 Port	Internet
DC Power Cable	NO	NO	5m	EUT	Battery
Antenna	NO	NO	5.1m	EUT	Antenna
VGA Cable	YES	YES	1.8m	EUT VGA Port	Monitor
Audio Cable	NO	NO	1.5m	EUT Earphone Port	Earphone
Audio Cable	NO	NO	1.5m	EUT Microphone Port	Microphone
Keyboard Line	Yes	No	2.0	EUT	Keyboard
Mouse Line	Yes	No	1.8	EUT	Mouse

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §15.247 (i) & §1.1310 & §2.1091	RF Exposure	Compliace
§15.203	Antenna Requirement	Compliance
§15.207 (a)	Conducted Emissions	Not Applicable*
§15.205, §15.209, §15.247(d)	Radiated Emissions	Compliance
§15.247 (a)(1)	20 dB Bandwidth	Not Applicable**
§15.247(a)(1)	Channel Separation Test	Not Applicable**
§15.247(a)(1)(iii)	Time of Occupancy (Dwell Time)	Not Applicable**
§15.247(a)(1)(iii)	Quantity of hopping channel Test	Not Applicable**
§15.247(b)(1)	Peak Output Power Measurement	Not Applicable**
§15.247(d)	Band Edges	Not Applicable**

Note:
* EUT is used in vehicle and not connected to public ac mains.
** Please refer to the certified Bluetooth module with FCC ID: T9J-RN42.

FCC §15.247 (i) & §1.1310 & §2.1091- RF EXPOSURE

Applicable Standard

According to subpart 15.247(i)and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f²)	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

Per 447498 D01 General 25 RF Exposure Guidance v05r01, simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0.

Calculated Formulary:

Predication of MPE limit at a given distance
$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm^2);
P = power input to the antenna (in appropriate units, e.g., mW);
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

Calculated Data:

RF module	Frequency band	Antenna Gain		Conducted Power	Duty cycle	Evaluation	Power Density	MPE Limit	MPE Ratios
	(MHz)	(dBi)	(numeric)	(mW)	(%)	(cm)	(mW/cm^2)	(mW/cm^2)	(%)
WIFI*	2412-2462	2.1	1.62	117	100	20	0.038	1	3.77
	2422-2452	2.1	1.62	32	100	20	0.010	1	1.03
	5475-5825	2.1	1.62	36	100	20	0.012	1	1.16
	5755-5795	2.8	1.91	120	100	20	0.046	1	**4.56**
	5190-5230	3.8	2.40	30	100	20	0.014	1	1.43
	5180-5240	3.8	2.40	32	100	20	0.015	1	1.53
BT	2402-2480	2.5	1.78	4	100	20	0.001	1	**0.13**
CDMA**	824.7-848.31	2.1	1.62	298	100	20	0.096	0.55	**17.48**
	1851.25-1908.75	3.0	2.00	274	100	20	0.109	1	10.86
Total sum of MPE ratios (%)									22.17

Note:
* For WIFI module, 2.4GHz and 5GHz band can't transmit simultaneously, the worst case for MPE was chosen to be added up.
* For CDMA module, the worst case for MPE was chosen to be added up.

Result: 22.17 %< 1, the device meet FCC MPE at 20 cm distance.

FCC §15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to FCC § 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 use of a standard antenna jack or electrical connector is prohibited.

Antenna Connector Construction

The EUT has two external antennas for transceiver, which are used unique type of connectors to attach to the EUT, and complied with 15.203, please refer to the internal photos and following table:

RF Module	Ant manufacturer	Ant Model Name	Ant Connector Type	Max. Antenna Gain
WIFI	Taoglas	MA600*	SMA(Female)**	2400-2500MHz: 2.1dBi 5150-5250MHz: 3.8dBi 5725-5850MHz: 2.8dBi
3G			SMA(Female)**	CDMA800 : 2.1dBi
				CDMA1900 : 3.0dBi
BT	Norminson	NW001	SMA(Male)	2402-2480MHz: 2.5dBi

Note：
* MA600 is an external antenna cover frequency band of 2.4 G, 5G WIFI, CDMA800 and CDMA1900.
** WIFI&3G antenna connector type is SMA (Femal), it must to be professionally installed, please refer to user manual.

Result: Compliance.

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

Applicable Standard

FCC §15.247 (d); §15.209; §15.205;

Measurement Uncertainty

Compliance or non- compliance with a disturbance limit shall be determined in the following manner：

If U_{lab} is less than or equal to U_{cispr} of Table 1, then:
- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non - compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{lab} is greater than U_{cispr} of Table 1, then:
- compliance is deemed to occur if no measured disturbance level, increased by ($U_{lab} - U_{cispr}$), exceeds the disturbance limit;
- non - compliance is deemed to occur if any measured disturbance level, increased by ($U_{lab} - U_{cispr}$), exceeds the disturbance limit.

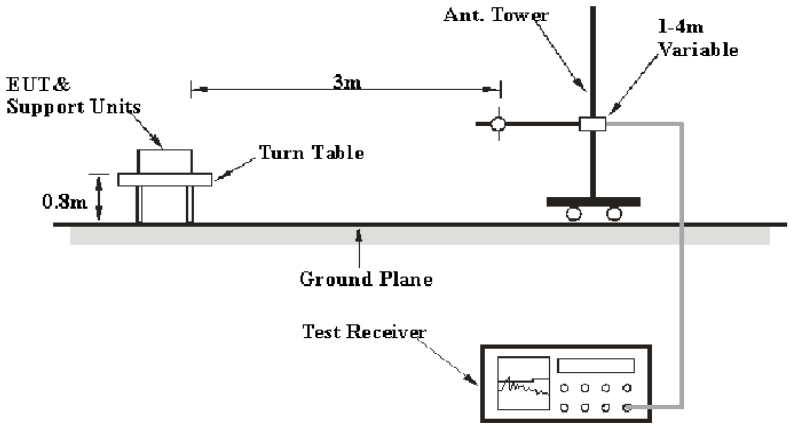
Based on CISPR 16-4-2: 2011, measurement uncertainty of radiated emission at a distance of 3m at Bay Area Compliance Laboratories Corp. (Dongguan) is:
30M~200MHz: 5.0 dB
200M~1GHz: 6.2 dB
1G~6GHz: 4.45 dB
6G~18GHz: 5.23 dB

Table 1 – Values of U_{cispr}

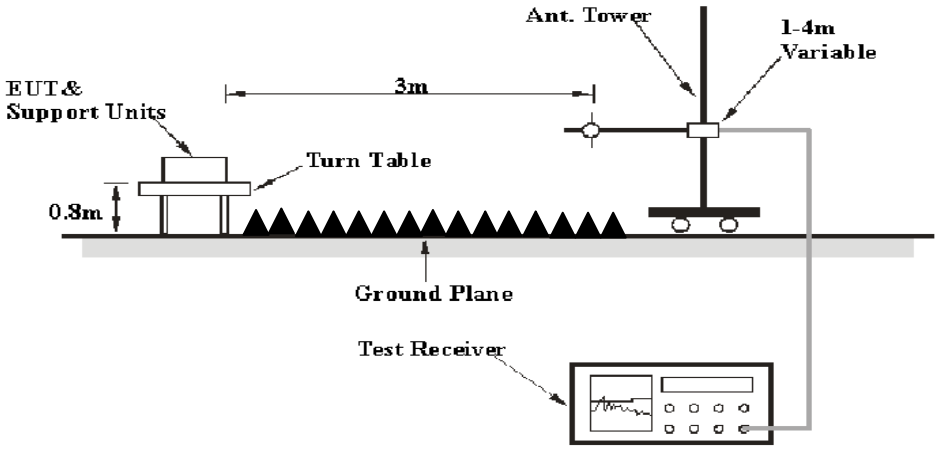
Measurement	U_{cispr}
Radiated disturbance (electric field strength at an OATS or in a SAC) (30 MHz to 1000 MHz)	6.3 dB
Radiated disturbance (electric field strength in a FAR) (1 GHz to 6 GHz)	5.2 dB
Radiated disturbance (electric field strength in a FAR) (6 GHz to 18 GHz)	5.5 dB

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.4-2003. 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.

The EUT was connected to a DC12 V battery.

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:

Frequency Range	RBW	Video B/W	IF B/W	Detector
30MHz – 1000 MHz	120 kHz	300 kHz	120kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	Ave.

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.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI TEST RECEIVER	ESCI	100224	2013-5-6	2014-5-5
Sunol Sciences	Antenna	JB3	A060611-1	2011-9-6	2014-9-5
HP	HP AMPLIFIER	8447E	2434A02181	N/A	N/A
R&S	Spectrum analyzer	FSEM	DE31388	2013-5-7	2014-5-6
ETS LINDGREN	horn antenna	3115	000 527 35	2012-9-6	2015-9-5
Mini-Circuit	Amplifier	ZVA-213-S+	054201245	N/A	N/A
R&S	Spectrum Analyzer	FSP 38	100478	2013-6-16	2014-6-15
Ducommun Technolagies	horn antenna	ARH-4223-02	1007726-01 1304	2013-6-16	2014-6-15
Quinstar	Amplifier	QLW-18405536-JO	15964001001	N/A	N/A

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to National Primary Standards and International System of Units (SI).

Corrected Amplitude & Margin Calculation

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

Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - 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:

Margin = Limit – Corrected Amplitude

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, and section 15.205, 15.209 and 15.247, with the worst margin reading of:

2.95 dB at **724.5 MHz** in the **Vertical** polarization of EDR Mode (8-DPSK)

Test Data

Environmental Conditions

Temperature:	22.9°C
Relative Humidity:	31 %
ATM Pressure:	102.1 kPa

The testing was performed by Ares Liu on 2013-11-29.

Mode: Transmitting

BDR Mode (GFSK):

Frequency	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	FCC 15.247	
(MHz)	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)				Limit (dBμV/m)	Margin (dB)
Low Channel: 2402 MHz									
2402	85.68	PK	H	25.65	3.90	27.13	88.10	N/A	N/A
2402	44.32	AV	H	25.65	3.90	27.13	46.74	N/A	N/A
2402	91.38	PK	V	25.65	3.90	27.13	93.80	N/A	N/A
2402	49.25	AV	V	25.65	3.90	27.13	51.67	N/A	N/A
2390	34.32	PK	V	25.61	3.84	27.13	36.64	74.00	37.36
2390	19.52	AV	V	25.61	3.84	27.13	21.84	54.00	32.16
4804	53.08	PK	V	30.59	4.67	27.26	61.08	74.00	12.92
4804	28.66	AV	V	30.59	4.67	27.26	36.66	54.00	17.34
7206	33.18	PK	V	34.09	6.50	26.30	47.47	74.00	26.53
7206	19.18	AV	V	34.09	6.50	26.30	33.47	54.00	20.53
9608	32.68	PK	V	35.96	8.75	26.22	51.17	74.00	22.83
9608	18.32	AV	V	35.96	8.75	26.22	36.81	54.00	17.19
3002.28	42.52	PK	V	27.21	7.42	27.48	49.67	74.00	24.33
3002.28	39.67	AV	V	27.21	7.42	27.48	46.82	54.00	7.18
563.5	42.6	QP	V	18.93	2.88	22.18	42.23	46.00	3.77
724.3	40.8	QP	V	20.99	3.27	22.32	42.74	46.00	3.26
Middle Channel: 2441 MHz									
2441	85.55	PK	H	25.75	3.99	27.18	88.11	N/A	N/A
2441	44.17	AV	H	25.75	3.99	27.18	46.73	N/A	N/A
2441	91.89	PK	V	25.75	3.99	27.18	94.45	N/A	N/A
2441	50.49	AV	V	25.75	3.99	27.18	53.05	N/A	N/A
4882	48.44	PK	V	30.79	4.75	27.26	56.72	74.00	17.28
4882	26.62	AV	V	30.79	4.75	27.26	34.90	54.00	19.10
7323	33.26	PK	V	34.38	6.72	26.53	47.83	74.00	26.17
7323	18.55	AV	V	34.38	6.72	26.53	33.12	54.00	20.88
9764	32.58	PK	V	36.33	8.58	25.62	51.87	74.00	22.13
9764	17.52	AV	V	36.33	8.58	25.62	36.81	54.00	17.19
1426.32	33.69	PK	V	23.41	2.84	27.10	32.84	74.00	41.16
1426.32	18.36	AV	V	23.41	2.84	27.10	17.51	54.00	36.49
3002.28	42.58	PK	V	27.21	7.42	27.48	49.73	74.00	24.27
3002.28	39.47	AV	V	27.21	7.42	27.48	46.62	54.00	7.38
565	42.3	QP	V	19.01	2.88	22.18	42.01	46.00	3.99
724.6	40.7	QP	V	21.00	3.27	22.32	42.65	46.00	3.35

High Channel: 2480 MHz									
2480	84.32	PK	H	25.85	3.82	27.22	86.77	N/A	N/A
2480	42.68	AV	H	25.85	3.82	27.22	45.13	N/A	N/A
2480	90.23	PK	V	25.85	3.82	27.22	92.68	N/A	N/A
2480	48.59	AV	V	25.85	3.82	27.22	51.04	N/A	N/A
2483.5	48.8	PK	V	25.86	3.80	27.23	51.23	74.00	22.77
2483.5	25.67	AV	V	25.86	3.80	27.23	28.10	54.00	25.90
4960	40.62	PK	V	31.00	4.70	27.27	49.05	74.00	24.95
4960	24.32	AV	V	31.00	4.70	27.27	32.75	54.00	21.25
7440	33.42	PK	V	34.66	6.95	26.56	48.47	74.00	25.53
7440	18.62	AV	V	34.66	6.95	26.56	33.67	54.00	20.33
9920	32.51	PK	V	36.71	8.41	25.50	52.13	74.00	21.87
9920	17.85	AV	V	36.71	8.41	25.50	37.47	54.00	16.53
3002.28	42.96	PK	V	27.21	7.42	27.48	50.11	74.00	23.89
3002.28	39.89	AV	V	27.21	7.42	27.48	47.04	54.00	6.96
564.2	41.9	QP	V	18.97	2.88	22.18	41.57	46.00	4.43 *
725.3	40.5	QP	V	21.02	3.27	22.32	42.47	46.00	3.53 *

*Within measurement uncertainty!

EDR Mode (π/4-DQPSK):

Frequency	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	FCC 15.247	
(MHz)	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)				Limit (dBμV/m)	Margin (dB)
Low Channel: 2402 MHz									
2402	86.25	PK	H	25.65	3.90	27.13	88.67	N/A	N/A
2402	45.32	AV	H	25.65	3.90	27.13	47.74	N/A	N/A
2402	92.35	PK	V	25.65	3.90	27.13	94.77	N/A	N/A
2402	50.24	AV	V	25.65	3.90	27.13	52.66	N/A	N/A
2390	34.86	PK	V	25.61	3.84	27.13	37.18	74.00	36.82
2390	20.14	AV	V	25.61	3.84	27.13	22.46	54.00	31.54
4804	54.32	PK	V	30.59	4.67	27.26	62.32	74.00	11.68
4804	29.12	AV	V	30.59	4.67	27.26	37.12	54.00	16.88
7206	33.48	PK	V	34.09	6.50	26.30	47.77	74.00	26.23
7206	18.86	AV	V	34.09	6.50	26.30	33.15	54.00	20.85
9608	32.52	PK	V	35.96	8.75	26.22	51.01	74.00	22.99
9608	18.23	AV	V	35.96	8.75	26.22	36.72	54.00	17.28
3002.28	42.65	PK	V	27.21	7.42	27.48	49.80	74.00	24.20
3002.28	40.06	AV	V	27.21	7.42	27.48	47.21	54.00	6.79
565	42.5	QP	V	19.01	2.88	22.18	42.21	46.00	3.79 *
724.7	41	QP	V	21.00	3.27	22.32	42.95	46.00	3.05*
Middle Channel: 2441 MHz									
2441	85.96	PK	H	25.75	3.99	27.18	88.52	N/A	N/A
2441	44.56	AV	H	25.75	3.99	27.18	47.12	N/A	N/A
2441	92.05	PK	V	25.75	3.99	27.18	94.61	N/A	N/A
2441	50.87	AV	V	25.75	3.99	27.18	53.43	N/A	N/A
4882	48.86	PK	V	30.79	4.75	27.26	57.14	74.00	16.86
4882	26.91	AV	V	30.79	4.75	27.26	35.19	54.00	18.81
7323	33.54	PK	V	34.38	6.72	26.53	48.11	74.00	25.89
7323	18.62	AV	V	34.38	6.72	26.53	33.19	54.00	20.81
9764	32.58	PK	V	36.33	8.58	25.62	51.87	74.00	22.13
9764	17.68	AV	V	36.33	8.58	25.62	36.97	54.00	17.03
1526.32	33.68	PK	V	23.65	3.04	26.98	33.39	74.00	40.61
1526.32	18.43	AV	V	23.65	3.04	26.98	18.14	54.00	35.86
3002.28	42.62	PK	V	27.21	7.42	27.48	49.77	74.00	24.23
3002.28	40.03	AV	V	27.21	7.42	27.48	47.18	54.00	6.82
564.2	42.4	QP	V	18.97	2.88	22.18	42.07	46.00	3.93 *
725.1	40.8	QP	V	21.01	3.27	22.32	42.76	46.00	3.24 *

High Channel: 2480 MHz									
2480	84.63	PK	H	25.85	3.82	27.22	87.08	N/A	N/A
2480	42.76	AV	H	25.85	3.82	27.22	45.21	N/A	N/A
2480	90.45	PK	V	25.85	3.82	27.22	92.90	N/A	N/A
2480	48.93	AV	V	25.85	3.82	27.22	51.38	N/A	N/A
2483.5	48.93	PK	V	25.86	3.80	27.23	51.36	74.00	22.64
2483.5	26.02	AV	V	25.86	3.80	27.23	28.45	54.00	25.55
4960	41.32	PK	V	31.00	4.70	27.27	49.75	74.00	24.25
4960	25.37	AV	V	31.00	4.70	27.27	33.80	54.00	20.20
7440	33.62	PK	V	34.66	6.95	26.56	48.67	74.00	25.33
7440	18.87	AV	V	34.66	6.95	26.56	33.92	54.00	20.08
9920	32.82	PK	V	36.71	8.41	25.50	52.44	74.00	21.56
9920	17.76	AV	V	36.71	8.41	25.50	37.38	54.00	16.62
3002.28	42.86	PK	V	27.21	7.42	27.48	50.01	74.00	23.99
3002.28	39.52	AV	V	27.21	7.42	27.48	46.67	54.00	7.33
564.5	42.6	QP	V	18.98	2.88	22.18	42.28	46.00	3.72 *
725.2	40.8	QP	V	21.02	3.27	22.32	42.77	46.00	3.23*

*Within measurement uncertainty!

EDR Mode (8-DPSK):

Frequency	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	FCC 15.247	
(MHz)	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)				Limit (dBμV/m)	Margin (dB)
Low Channel: 2402 MHz									
2402	87.36	PK	H	25.65	3.90	27.13	89.78	N/A	N/A
2402	45.76	AV	H	25.65	3.90	27.13	48.18	N/A	N/A
2402	92.76	PK	V	25.65	3.90	27.13	95.18	N/A	N/A
2402	50.57	AV	V	25.65	3.90	27.13	52.99	N/A	N/A
2390	34.86	PK	V	25.61	3.84	27.13	37.18	74.00	36.82
2390	20.57	AV	V	25.61	3.84	27.13	22.89	54.00	31.11
4804	55.02	PK	V	30.59	4.67	27.26	63.02	74.00	10.98
4804	30.12	AV	V	30.59	4.67	27.26	38.12	54.00	15.88
7206	33.67	PK	V	34.09	6.50	26.30	47.96	74.00	26.04
7206	18.67	AV	V	34.09	6.50	26.30	32.96	54.00	21.04
9608	33.62	PK	V	35.96	8.75	26.22	52.11	74.00	21.89
9608	18.45	AV	V	35.96	8.75	26.22	36.94	54.00	17.06
3002.28	43.25	PK	V	27.21	7.42	27.48	50.40	74.00	23.60
3002.28	40.06	AV	V	27.21	7.42	27.48	47.21	54.00	6.79
564.6	42.5	QP	V	18.99	2.88	22.18	42.19	46.00	3.81*
725.3	40.8	QP	V	21.02	3.27	22.32	42.77	46.00	3.23 *
Middle Channel: 2441 MHz									
2441	85.63	PK	H	25.75	3.99	27.18	88.19	N/A	N/A
2441	44.36	AV	H	25.75	3.99	27.18	46.92	N/A	N/A
2441	92.56	PK	V	25.75	3.99	27.18	95.12	N/A	N/A
2441	50.81	AV	V	25.75	3.99	27.18	53.37	N/A	N/A
4882	48.52	PK	V	30.79	4.75	27.26	56.80	74.00	17.20
4882	26.43	AV	V	30.79	4.75	27.26	34.71	54.00	19.29
7323	33.84	PK	V	34.38	6.72	26.53	48.41	74.00	25.59
7323	18.56	AV	V	34.38	6.72	26.53	33.13	54.00	20.87
9764	32.74	PK	V	36.33	8.58	25.62	52.03	74.00	21.97
9764	17.81	AV	V	36.33	8.58	25.62	37.10	54.00	16.90
1532.25	33.52	PK	V	23.66	3.04	26.98	33.24	74.00	40.76
1532.25	18.26	AV	V	23.66	3.04	26.98	17.98	54.00	36.02
3002.28	42.26	PK	V	27.21	7.42	27.48	49.41	74.00	24.59
3002.28	39.51	AV	V	27.21	7.42	27.48	46.66	54.00	7.34
564	42.4	QP	V	18.96	2.88	22.18	42.06	46.00	3.94*
724.5	41.1	QP	V	21.00	3.27	22.32	43.05	46.00	2.95 *

High Channel: 2480 MHz									
2480	84.82	PK	H	25.85	3.82	27.22	87.27	N/A	N/A
2480	42.83	AV	H	25.85	3.82	27.22	45.28	N/A	N/A
2480	90.85	PK	V	25.85	3.82	27.22	93.30	N/A	N/A
2480	49.03	AV	V	25.85	3.82	27.22	51.48	N/A	N/A
2483.5	49.32	PK	V	25.86	3.80	27.23	51.75	74.00	22.25
2483.5	26.54	AV	V	25.86	3.80	27.23	28.97	54.00	25.03
4960	41.68	PK	V	31.00	4.70	27.27	50.11	74.00	23.89
4960	25.68	AV	V	31.00	4.70	27.27	34.11	54.00	19.89
7440	33.63	PK	V	34.66	6.95	26.56	48.68	74.00	25.32
7440	18.47	AV	V	34.66	6.95	26.56	33.52	54.00	20.48
9920	32.48	PK	V	36.71	8.41	25.50	52.10	74.00	21.90
9920	18.59	AV	V	36.71	8.41	25.50	38.21	54.00	15.79
3002.28	42.68	PK	V	27.21	7.42	27.48	49.83	74.00	24.17
3002.28	39.42	AV	V	27.21	7.42	27.48	46.57	54.00	7.43
564.3	42.3	QP	V	18.97	2.88	22.18	41.97	46.00	4.03 *
725.6	40.9	QP	V	21.03	3.27	22.32	42.88	46.00	3.12 *

*Within measurement uncertainty!

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