FCC Test Report

Equipment	:	Digital Satellite Receiver(Headless DVR Server)
Brand Name	:	AT&T DIRECTV
Model No.	:	HS17-500
FCC ID	:	O6ZHS17
Standard	:	47 CFR FCC Part 15.247
Operating Band	:	2400 MHz – 2483.5 MHz
Function	:	☒ Point-to-multipoint; ☐ Point-to-point
Applicant	:	Humax Co., Ltd. HUMAX BLDG., 2, Yeongmunro, Cheoin-gu, Yongin-si, Gyeonggi-do, South Korea, 17040
Manufacturer	:	Humax Co., Ltd. HUMAX BLDG., 2, Yeongmunro, Cheoin-gu, Yongin-si, Gyeonggi-do, South Korea, 17040

The product sample received on Oct. 28, 2016 and completely tested on Dec. 13, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Cliff Chang
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

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Summary of Test Result

Conformance Test Specifications				
Report Clause	**Ref. Std. Clause**	**Description**	**Limit**	**Result**
1.1.2	15.203	Antenna Requirement	FCC 15.203	Complied
3.1	15.247(d)	Emissions in Restricted Frequency Bands	Restricted Bands: FCC 15.209	Complied

Revision History

Report No.	Version	Description	Issued Date
FR6O2615-02AB	Rev. 01	Initial issue of report	Jan. 08, 2018
FR6O2615-02AB	Rev. 02	Revising the Applicant Address and Manufacturer Address.	Jan. 23, 2018

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std.	Ch. Frequency (MHz)	Channel Number
2400-2483.5	802.15.4	2425-2475	15-25 [11]

Band	Mode	BWch (MHz)	Nant
2.4G	Zigbee	5	1

Note:
- 2.4G is the 2.4GHz Band (2.4-2.4835GHz).
- Zigbee uses a O-QPSK (250kbps) modulation for DSSS.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

<2.4GHz and Zigbee Antenna Gain>

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
					2.4GHz	Zigbee
1	Airgain	N24X2H2YN-W98U	PIFA	U.FL	4.6	-
2	Airgain	N24X2H2YW-B95U	PIFA	U.FL	4.6	-
3	-	-	PCB printed IFA	N/A	-	4
4	-	-	PCB printed IFA	N/A	-	4

<5GHz Antenna Gain>

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)			
					5GHz Band 1	5GHz Band 2	5GHz Band 3	5GHz Band 4
5	Airgain	N5X35B2YN-E57U	PIFA	U.FL	2.89	2.43	3.69	4.34
6	Airgain	N5X35B2YN-R137U	PIFA	U.FL	4.38	4.25	4.71	4.53
7	Airgain	N5X35B2YW-G80U	PIFA	U.FL	3.65	3.82	3.05	3.49
8	Airgain	N5X35BYN-A100U	PIFA	U.FL	5.40	5.27	4.31	4.62

<5GHz Directional Gain>

Stream	Directional Gain (dBi)			
	5GHz Band 1	5GHz Band 2	5GHz Band 3	5GHz Band 4
4T1S	7.02	6.41	6.41	7.06
4T2S	4.14	3.52	3.40	4.11

Note: The EUT has eight antennas.

<For 2.4GHz Band>

For IEEE 802.11b/g Mode (1TX/1RX)

The EUT supports the antenna with TX and RX diversity functions.

Both Ant. 1 and Ant. 2 support transmit and receive functions, but only one of them will be used at one time.

The Ant. 2 generated the worst case, so it was selected to test and record in the report.

For IEEE 802.11n Mode (2TX/2RX)

Ant. 1 and Ant. 2 can be used as transmitting/receiving antenna.

Ant. 1 and Ant. 2 could transmit/receive simultaneously.

<For Zigbee Band> (1TX/1RX)

The EUT supports the antenna with TX and RX diversity functions.

Both Ant. 3 and Ant. 4 support transmit and receive functions, but only one of them will be used at one time.

The Ant. 4 generated the worst case, so it was selected to test and record in the report.

<For 5GHz Band >

For IEEE 802.11a/n/ac mode (4TX/4RX):

Ant. 5, Ant. 6, Ant. 7 and Ant. 8 can be used as transmitting/receiving antenna.

Ant. 5, Ant. 6, Ant. 7 and Ant. 8 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	T(s)	VBW(Hz) ≥ 1/T
Zigbee	1	n/a (DC>=0.98)	n/a (DC>=0.98)

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming

Note: The product has beamforming function for 802.11n/ac in 5GHz.

1.1.5 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR6O2615AB

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
1. Adding the shielded can on BBIC. 2. Removing the eSTAT connector port of the EUT. 3. Removing USB shielded can on USB port. 4. Changing the heat sink of the EUT. 5. Changing the USB port to 2.0 from 3.0. 6. Changing Front End (turner) chip to 45308 from 45208 7. Changing 4GB DDR die to 20nm from 25nm. 8. FLASH memory pin to pin in modifications.	1. Emissions in Restricted Frequency Bands below 1GHz. 2. Emissions in Restricted Frequency Bands above 1 GHz. (After evaluating, the worst case is found at Zigbee 2425MHz, and retest this channel only.)

Note:

1. The above test items will be based on original output power to re-test.
2. Since some electrical components and metallic shielding changes, the verification test is performed with the channel which has the highest output power. Both radiated emission above and below 1GHz are checked, and the degradation of RF specification is not found. Considering the modifications above does not affect the RF specification, and the main RF trace has not modified, further verification or normally certification testing is not required.

1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- FCC KDB 558074 D01 v03r05
- FCC KDB 662911 D01 v02r01

1.3 Testing Location Information

Testing Location							
☐	HWA YA	ADD	:	No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.			
		TEL	:	886-3-327-3456	FAX	:	886-3-318-0055
☒	JHUBEI	ADD	:	No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.			
		TEL	:	886-3-656-9065	FAX	:	886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Radiated	03CH01-CB	Justin Lin / Jay Chen Brian Sun	22°C / 54%	Sep. 01, 2017~Dec. 13, 2017

Test site Designation No. TW0006 with FCC.
Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Test Items	Uncertainty	Remark
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
2.4G	Zigbee	5	1	1	2425	L	7

Note:
- Test range channel consist of L (Low Ch.), M (Middle Ch.), H (High Ch.), S (Single Ch.) and C (Straddle Band Ch.).

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX - Zigbee Function
Operating Mode > 1GHz	CTX

Note: The EUT can only be used at Y axis position

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

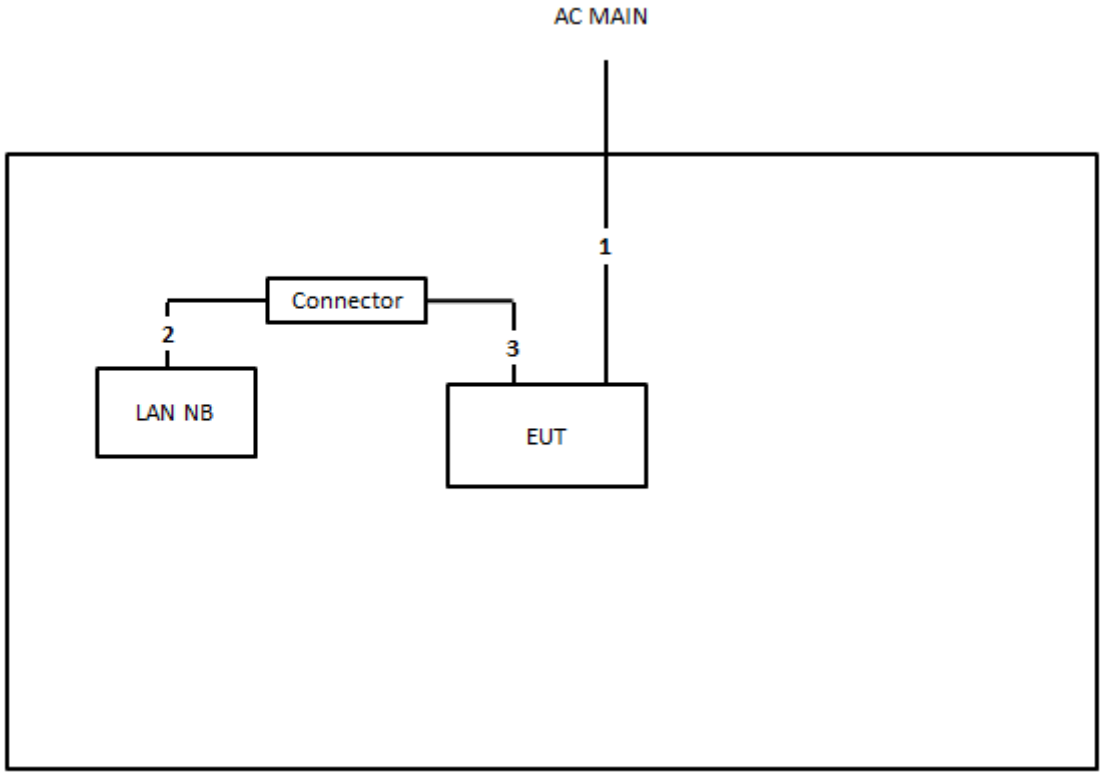
Accessories					
No.	**Equipment Name**	**Brand Name**	**Model Name**	**Rating**	**Remark**
1	AC Adapter	DIRECTV	EPS17R0-36	INPUT: 120V ~ 1.8A 60Hz OUTPUT: 25.2V, 2.86A 72W	AC power cable: Non-Shielded, 1.9m DC power cable: Non-Shielded, 1.3m
Other					
No.	**Equipment Name**	**Brand Name**	**Model Name**	**Rating**	
1	Hard Drive	WD	WD20EURX-25T0FY0	5VDC, 0.60A 12VDC, 0.45A	

2.5 Support Equipment

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	DELL	E4300	DoC

2.6 Test Setup Diagram

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	Power cable	No	3.2m
2	RS-232 cable	No	0.4m
3	Console cable	No	1

3 Transmitter Test Result

3.1 Emissions in Restricted Frequency Bands

3.1.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

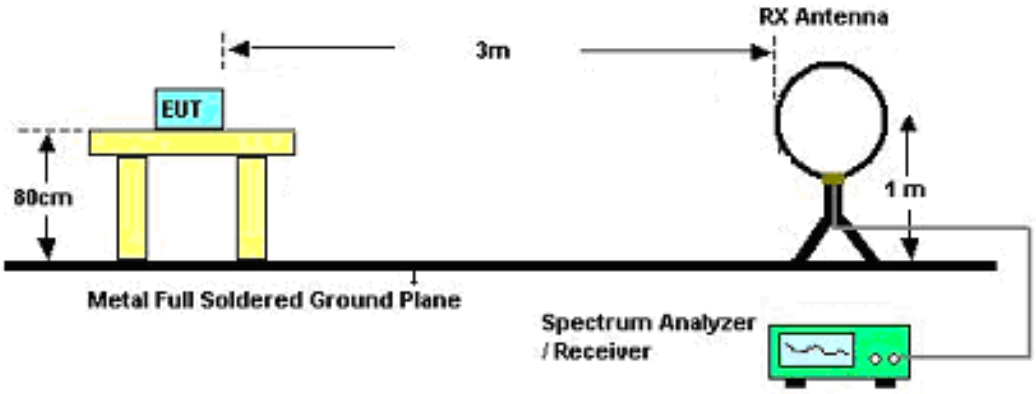
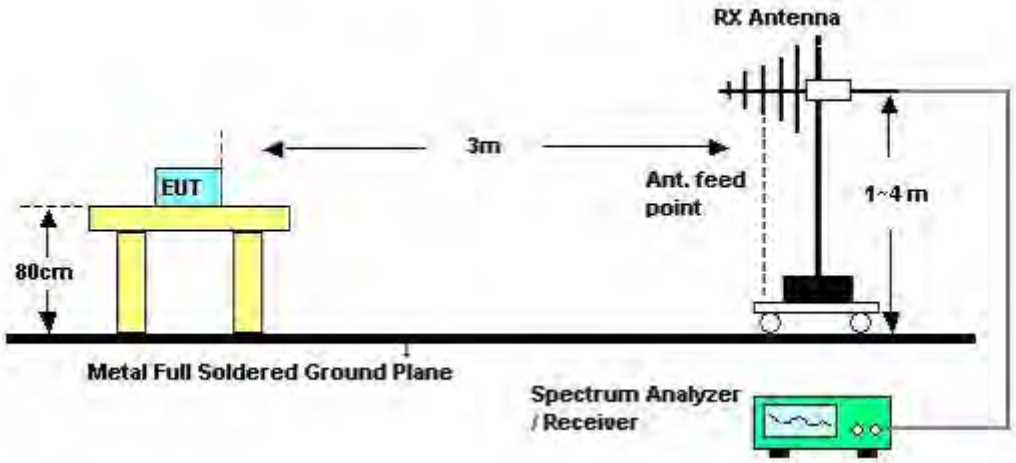
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

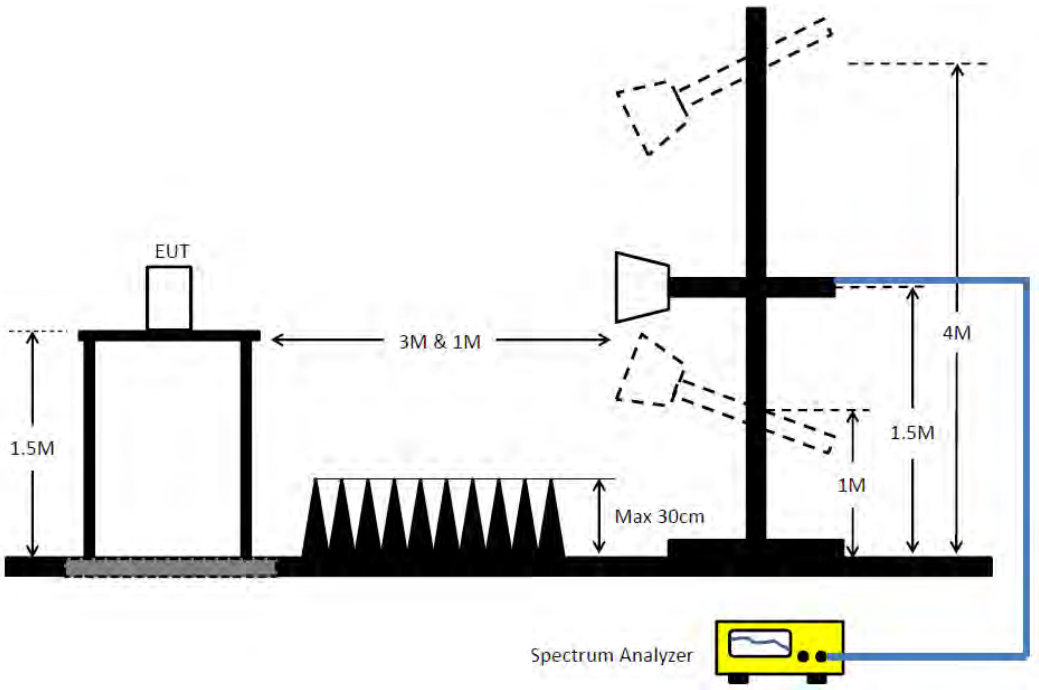
3.1.3 Test Procedures

Test Method
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
▪ Refer as ANSI C63.10, clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
▪ For the transmitter unwanted emissions shall be measured using following options below:
▪ Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.
☐ Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle ≥98%)
☐ Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
☒ Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW≥1/T).
☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
☒ Refer as FCC KDB 558074, clause 12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:
▪ Refer as FCC KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
▪ Refer as FCC KDB 558074, clause 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements.
▪ Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
▪ For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.
▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB
▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.

3.1.4 Test Setup

Transmitter Radiated Emissions
9kHz ~30MHz

30MHz~1GHz


Above 1GHz



3.1.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.1.6 Test Result of Transmitter Radiated Unwanted Emissions

Refer as Appendix A

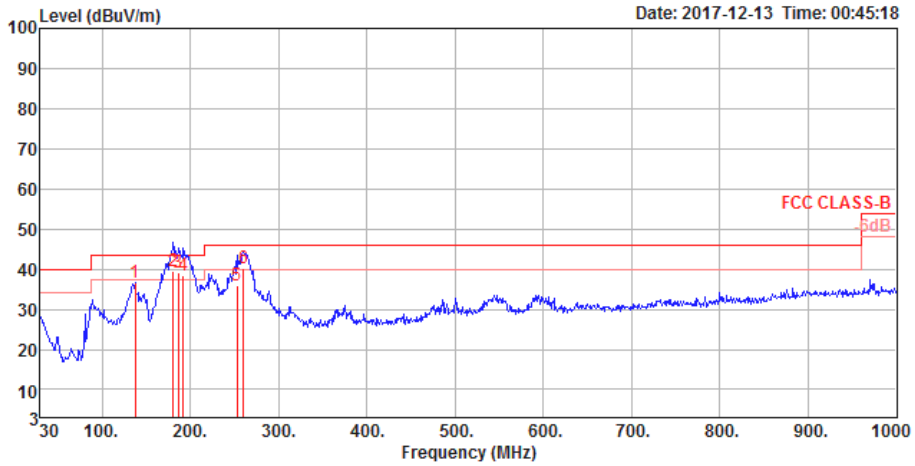
4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Mar. 15, 2018*	Radiation (03CH01-CB
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2017	Aug. 29, 2018	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Nov. 09, 2017	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 05, 2017	Jul. 04, 2018	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	May 01, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Jan. 15, 2018	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Nov. 21, 2017	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	May 05, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	N/A	Radiation (03CH01-CB)

Note: Calibration Interval of instruments listed above is one year.

"*" Calibration Interval of instruments listed above is two years.

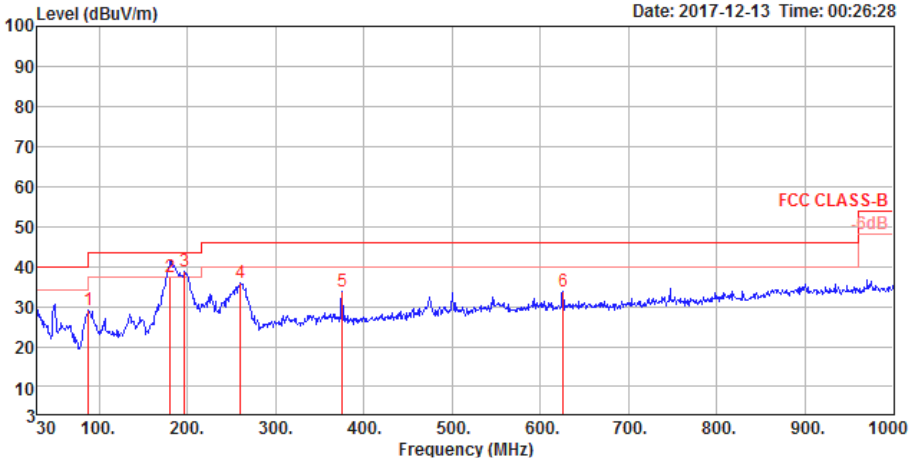
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	CTX		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	137.67	36.82	43.50	-6.68	50.15	1.17	17.85	32.35	200	198	Peak	HORIZONTAL
2	180.35	39.67	43.50	-3.83	54.88	1.51	15.60	32.32	150	248	QP	HORIZONTAL
3	186.17	39.05	43.50	-4.45	54.13	1.64	15.60	32.32	125	226	QP	HORIZONTAL
4	191.99	38.47	43.50	-5.03	53.27	1.77	15.74	32.31	150	238	QP	HORIZONTAL
5	253.10	35.83	46.00	-10.17	46.68	2.39	19.05	32.29	125	320	QP	HORIZONTAL
6	259.89	40.39	46.00	-5.61	50.54	2.43	19.70	32.28	125	320	QP	HORIZONTAL

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	CTX		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	88.20	29.07	43.50	-14.43	45.76	0.77	14.93	32.39	150	269	Peak	VERTICAL
2	180.35	37.24	43.50	-6.26	52.45	1.51	15.60	32.32	100	308	QP	VERTICAL
3	196.84	38.93	43.50	-4.57	53.30	1.87	16.07	32.31	150	280	Peak	VERTICAL
4	259.89	35.97	46.00	-10.03	46.12	2.43	19.70	32.28	150	280	Peak	VERTICAL
5	375.32	33.83	46.00	-12.17	42.12	2.22	21.78	32.29	150	129	Peak	VERTICAL
6	625.58	33.61	46.00	-12.39	38.07	2.76	25.16	32.38	100	140	Peak	VERTICAL

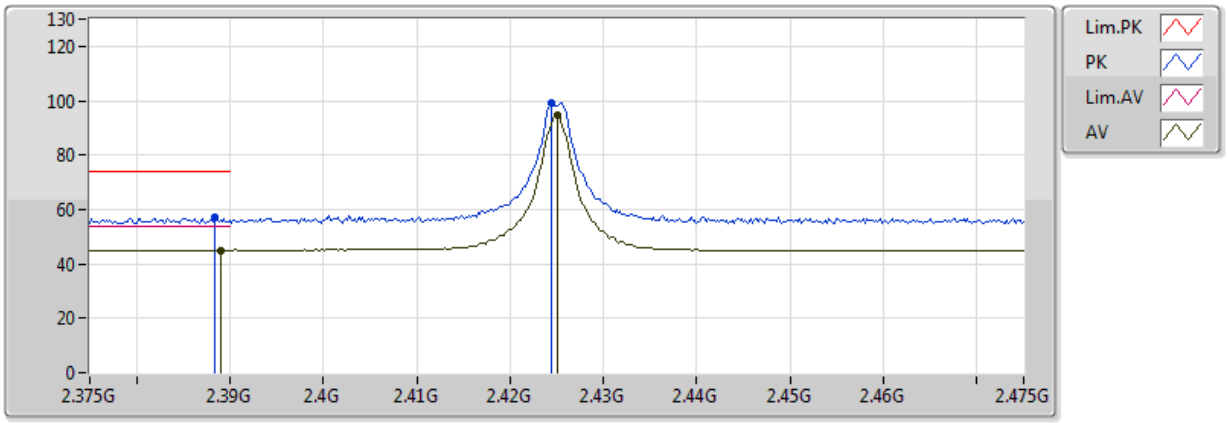
Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
Zigbee	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.389G	45.06	54.00	-8.94	33.15	3	V	345	1.50	-

Zigbee

2425MHz_TX

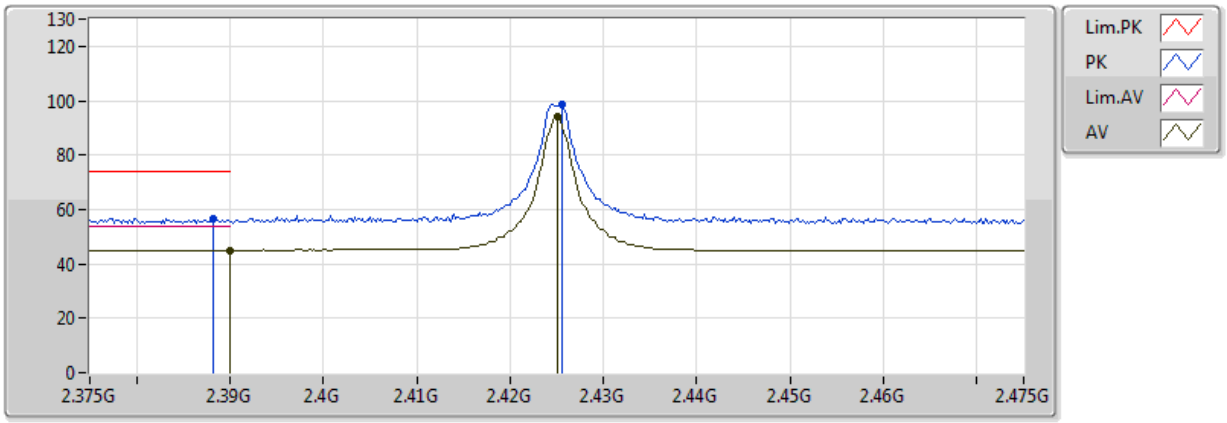


20170901
EUT Y_1TX_ANT1
Setting 7
04-J-4
FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389G	45.06	54.00	-8.94	33.15	3	V	345	1.50	-
AV	2.425G	94.81	Inf	-Inf	33.16	3	V	345	1.50	-
PK	2.3884G	57.12	74.00	-16.88	33.15	3	V	345	1.50	-
PK	2.4244G	99.16	Inf	-Inf	33.15	3	V	345	1.50	-

Zigbee

2425MHz_TX

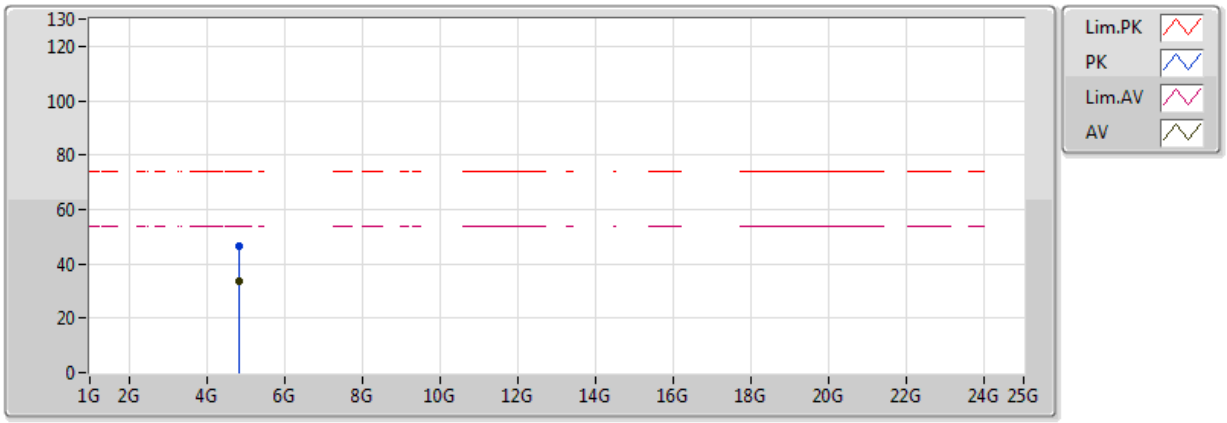


20170901
EUT Y_1TX_ANT1
Setting 7
04-J-4
FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	45.04	54.00	-8.96	33.15	3	H	316	1.65	-
AV	2.425G	94.37	Inf	-Inf	33.16	3	H	316	1.65	-
PK	2.3882G	56.78	74.00	-17.22	33.15	3	H	316	1.65	-
PK	2.4256G	98.77	Inf	-Inf	33.16	3	H	316	1.65	-

Zigbee

2425MHz_TX

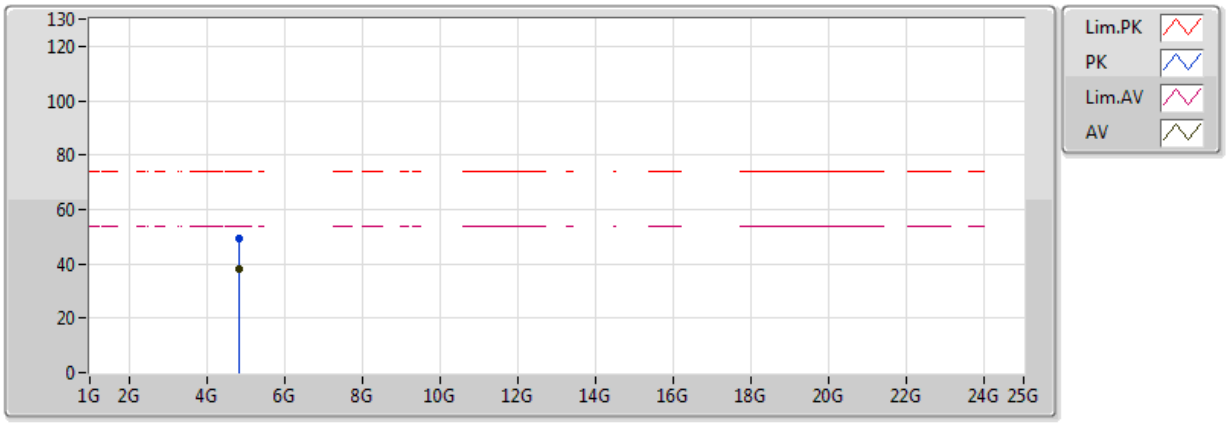


20170901
EUT Y_1TX_ANT1
Setting 7
04-J-4
FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.84898G	33.85	54.00	-20.15	4.26	3	V	64	1.72	-
PK	4.84879G	46.26	74.00	-27.74	4.26	3	V	64	1.72	-

Zigbee

2425MHz_TX

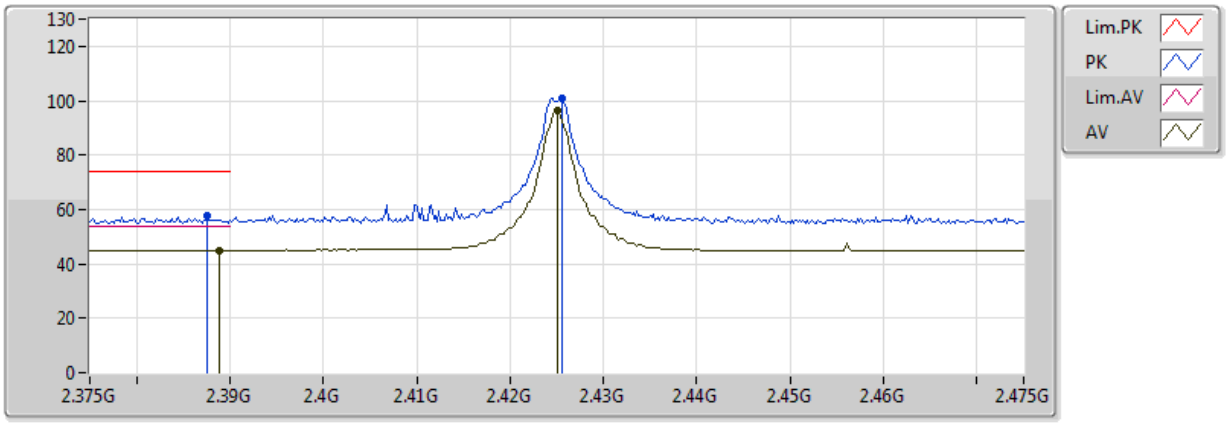


20170901
EUT Y_1TX_ANT1
Setting 7
04-J-4
FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.84898G	38.01	54.00	-15.99	4.26	3	H	307	2.28	-
PK	4.84889G	49.55	74.00	-24.45	4.26	3	H	307	2.28	-

Zigbee

2425MHz_TX

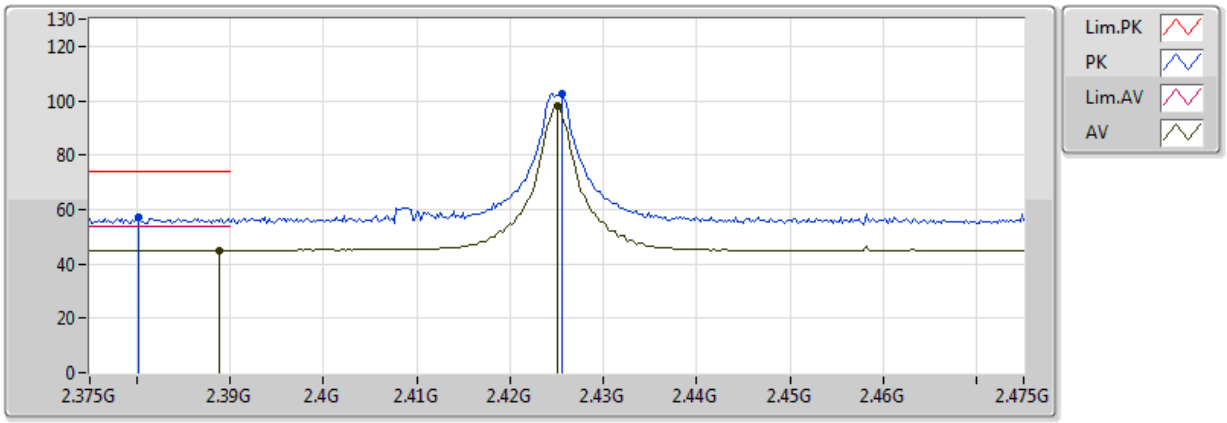


20170901
EUT Y_1TX_ANT2
Setting 7
04-J-4
FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3888G	45.01	54.00	-8.99	33.15	3	V	59	1.00	-
AV	2.425G	96.40	Inf	-Inf	33.16	3	V	59	1.00	-
PK	2.3876G	57.51	74.00	-16.49	33.15	3	V	59	1.00	-
PK	2.4256G	100.79	Inf	-Inf	33.16	3	V	59	1.00	-

Zigbee

2425MHz_TX

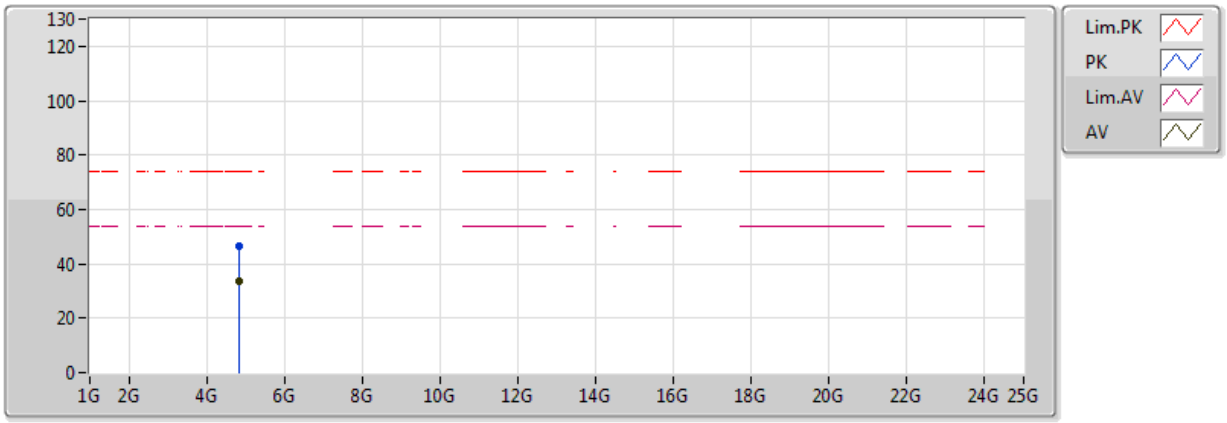


20170901
EUT Y_1TX_ANT2
Setting 7
04-J-4
FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3888G	45.01	54.00	-8.99	33.15	3	H	334	1.49	-
AV	2.425G	98.25	Inf	-Inf	33.16	3	H	334	1.49	-
PK	2.3802G	57.41	74.00	-16.59	33.15	3	H	334	1.49	-
PK	2.4256G	102.64	Inf	-Inf	33.16	3	H	334	1.49	-

Zigbee

2425MHz_TX

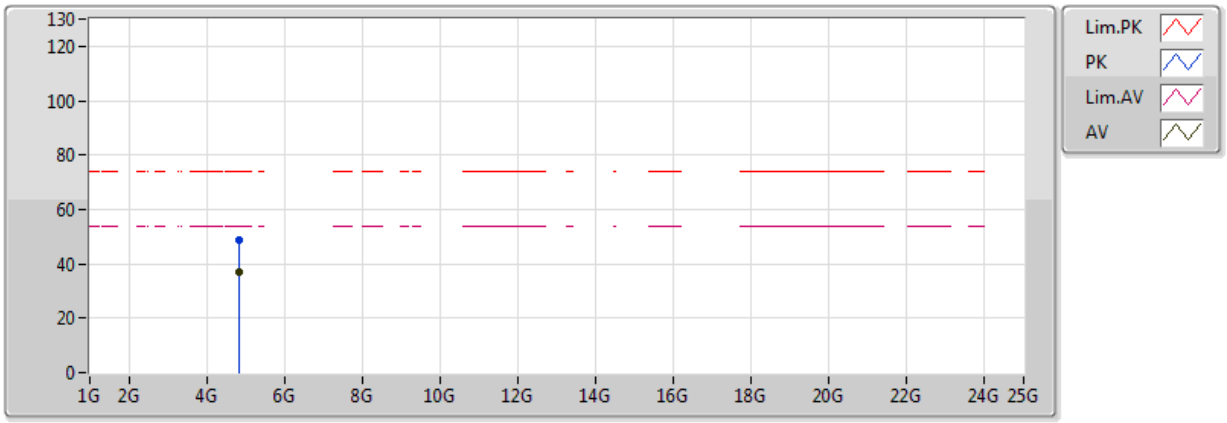


20170901
EUT Y_1TX_ANT2
Setting 7
04-J-4
FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8489G	33.65	54.00	-20.35	4.26	3	V	275	1.47	-
PK	4.84898G	46.53	74.00	-27.47	4.26	3	V	275	1.47	-

Zigbee

2425MHz_TX



20170901
EUT Y_1TX_ANT2
Setting 7
04-J-4
FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.84898G	36.82	54.00	-17.18	4.26	3	H	9	1.51	-
PK	4.85109G	48.80	74.00	-25.20	4.27	3	H	9	1.51	-