

FCC TEST REPORT

(Part 15, Subpart C)

Applicant:	BARTEC GmbH
Address:	Max-Eyth-Str.16 , 97980 Bad Mergentheim, Germany

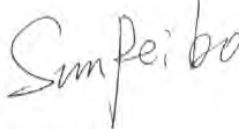
Manufacturer or Supplier:	BARTEC GmbH
Address:	Max-Eyth-Str.16 , 97980 Bad Mergentheim, Germany
Product:	Smartscanner / Smartphone
Brand Name:	BARTEC
Model Name:	SP9EX1/SC9EX1/SP9EX2/SC9EX2
FCC ID:	TBUSX9EX
Date of tests:	Jan. 02, 2024~ Jul. 26, 2024

The tests have been carried out according to the requirements of the following standard:

☒ **FCC Part 15, Subpart C, Section 15.247**

☒ **ANSI C63.10-2020**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Hanwen Xu Engineer / Mobile Department	Approved by Peibo Sun Manager / Mobile Department
	
Date: Jul. 26, 2024	Date: Jul. 26, 2024

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Test Report No.: PSU-QSU2312140113RF10

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-QSU2312140113RF10	Original release	Jul. 26, 2024



1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	TEST LAB
15.207	AC Power Conducted Emission	Compliance	A
15.205 15.209	Radiated Emissions	Compliance	A
15.247(d)	Out of band Emission Measurement	Compliance	A/B
15.247(a)(2)	6dB bandwidth	Compliance	A/B
15.247(b)	Conducted Output power	Compliance	A/B
15.247(e)	Power Spectral Density	Compliance	A/B
15.203	Antenna Requirement	Compliance	A/B

NOTE:

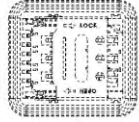
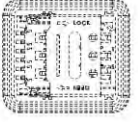
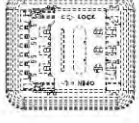
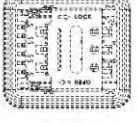
1. Except RSE, other data please refer to Appendix C.
2. WLAN(normal mode& RU-OFDMA)2.4G supports SISO&MIMO mode , the whole testing have assessed the MIMO mode by referring to their maximum conducted power.
3. For WIFI-2.4G, RSE had been tested on SISO&MIMO mode of EUT. The worst case was found on MIMO mode, only the worst case data had been reported in the report.
4. In this report, the test EUT version is EVT, after the test is completed, the customer optimizes the product to DVT, and the final customer's shipment is PVT. For differences between EVT and DVT and PVT, please refer to the documentation provided by the customer (SC9EX1_SP9EX1 PCBA HW Release Note rev 2_0).
5. There are no differences on the PCBA between the Model SC9EX1 (FCC ID: TBUSX9EX) and the variants SP9EX1 (FCC ID: TBUSX9EX). All mounted components are the same. No functionality related to any radio interface is affected. The only difference is the presence of the barcode scanner module and the "bump" on the back cover that incorporates the barcode scanner module. Testing has been run on parent product SC9EX1 and the worst cases of power and RSE have been verified also on SP9EX1 variant. Only the worst-case data (SC9EX1) have been reported.



BUREAU
VERITAS

Test Report No.: PSU-QSU2312140113RF10

6. The devices BARTEC SP9EX1 Smartphone and BARTEC SP9EX2 Smartphone share the same hardware and software. The same applies for the devices BARTEC SC9EX1 Smartscanner and BARTEC SC9EX2 Smartscanner. The only difference are the hazardous area marking of the devices, see table for clarification.

BARTEC SP9EX1 Smartphone	BARTEC SP9EX2 Smartphone
BARTEC SP9EX1 Type: 17-S19P-****/***** Mfr: BARTEC GmbH Max-Eyth-Strasse 16 97980 Bad Mergentheim, DE www.bartec.com   UL 24 ATEX 3153X II 1G Ex ia IIC T4 Gc II 2D Ex ia IIC T135°C Db IP64 IECEx UL 24.0004X Class I, Div 1, Groups A, B, C and D; Class II, Div 1, Groups E, F and G; Class III, T4 Zone 0, AEx ia IIC T4 Gc Zone 21, AEx ia IIC T135°C Db Zone 0, Ex ia IIC T4 Gc Zone 21, Ex ia IIC T135°C Db -20° < Ta < +55°C QR-code S/N: TTTTYYSSSSS MFD: MONTHY reserved for logos of country approvals USB port: USB-PD compatible – 5-20 Vdc / max 3 A DC-In port: 12 Vdc / max 1.5 A USB Um = 20 V / DCin Um = 12 V WARNING/ATTENTION: Use only replaceable battery pack BARTEC GmbH type: 17-S120-0020/**** Utiliser uniquement la batterie BARTEC GmbH type: 17-S120-0020/**** INTRINSICALLY SAFE/SECURITE INTRINSEQUE Warning - Substitution of components may impair intrinsic safety. Avertissement - La substitution des composants peut nuire à la sécurité intrinsèque.	BARTEC SP9EX2 Type: B7-S29P-****/***** Mfr: BARTEC GmbH Max-Eyth-Strasse 16 97980 Bad Mergentheim, DE www.bartec.com   UL 24 ATEX xxxxxx II 3G Ex ic IIC T4 Gc II 3D Ex ic IIC T135°C Dc IP64 IECEx UL 24.xxxxxx Class I, Div 2, Groups A, B, C and D; Class II, Div 2, Groups E, F and G; Class III, T4 Zone 2, AEx ic IIC T4 Gc Zone 22, AEx ic IIC T135°C Dc Zone 2, Ex ic IIC T4 Gc Zone 22, Ex ic IIC T135°C Dc -20° < Ta < +55°C QR-code S/N: TTTTYYSSSSS MFD: MONTHY reserved for logos of country approvals USB port: USB-PD compatible – 5-20 Vdc / max 3 A DC-In port: 12 Vdc / max 1.5 A USB Um = 20 V / DCin Um = 12 V WARNING/ATTENTION: Use only replaceable battery pack BARTEC GmbH type: B7-A220-0098/**** Utiliser uniquement la batterie BARTEC GmbH type: B7-A220-0098/**** INTRINSICALLY SAFE/SECURITE INTRINSEQUE Warning - Substitution of components may impair intrinsic safety. Avertissement - La substitution des composants peut nuire à la sécurité intrinsèque.
BARTEC SC9EX1 Smartscanner	BARTEC SC9EX2 Smartscanner
BARTEC SC9EX1 Type: 17-S19C-****/***** Mfr: BARTEC GmbH Max-Eyth-Strasse 16 97980 Bad Mergentheim, DE www.bartec.com   UL 24 ATEX 3153X II 1G Ex ia op is IIC T4 Gc II 2D Ex ia op is IIC T135°C Db IP64 IECEx UL 24.0004X Class I, Div 1, Groups A, B, C and D; Class II, Div 1, Groups E, F and G; Class III, T4 Zone 0, AEx ia op is IIC T4 Gc Zone 21, AEx ia op is IIC T135°C Db Zone 0, Ex ia op is IIC T4 Gc Zone 21, Ex ia op is IIC T135°C Db -20° < Ta < +55°C QR-code S/N: TTTTYYSSSSS MFD: MONTHY reserved for logos of country approvals USB port: USB-PD compatible – 5-20 Vdc / max 3 A DC-In port: 12 Vdc / max 1.5 A USB Um = 20 V / DCin Um = 12 V WARNING/ATTENTION: Use only replaceable battery pack BARTEC GmbH type: 17-S120-0020/**** Utiliser uniquement la batterie BARTEC GmbH type: 17-S120-0020/**** INTRINSICALLY SAFE/SECURITE INTRINSEQUE Warning - Substitution of components may impair intrinsic safety. Avertissement - La substitution des composants peut nuire à la sécurité intrinsèque.	BARTEC SC9EX2 Type: B7-S29C-****/***** Mfr: BARTEC GmbH Max-Eyth-Strasse 16 97980 Bad Mergentheim, DE www.bartec.com   UL 24 ATEX xxxxxx II 3G Ex ic op is IIC T4 Gc II 3D Ex ic op is IIC T135°C Dc IP64 IECEx UL 24.xxxxxx Class I, Div 2, Groups A, B, C and D; Class II, Div 2, Groups E, F and G; Class III, T4 Zone 2, AEx ic op is IIC T4 Gc Zone 22, AEx ic op is IIC T135°C Dc Zone 2, Ex ic op is IIC T4 Gc Zone 22, Ex ic op is IIC T135°C Dc -20° < Ta < +55°C QR-code S/N: TTTTYYSSSSS MFD: MONTHY reserved for logos of country approvals USB port: USB-PD compatible – 5-20 Vdc / max 3 A DC-In port: 12 Vdc / max 1.5 A USB Um = 20 V / DCin Um = 12 V WARNING/ATTENTION: Use only replaceable battery pack BARTEC GmbH type: B7-A220-0098/**** Utiliser uniquement la batterie BARTEC GmbH type: B7-A220-0098/**** INTRINSICALLY SAFE/SECURITE INTRINSEQUE Warning - Substitution of components may impair intrinsic safety. Avertissement - La substitution des composants peut nuire à la sécurité intrinsèque.



Test Report No.: PSU-QSU2312140113RF10

***Test Lab Information Reference**

Lab A:

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

Lab Address:

Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province

Accredited Test Lab Cert 6613.01

The FCC Site Registration No. is 434559; The Designation No. is CN1325.

Lab B:

BV 7Layers Communications Technology (Shenzhen) Co. Ltd

Lab Address:

Room B37, Warehouse A5, No.3 Chiwan 4th Road, Zhaoshang Street, Nanshan District
Shenzhen, Guangdong, People's Republic of China

Accredited Test Lab Cert 3939.01

The FCC Site Registration No. is 525120; The Designation No. is CN1171.

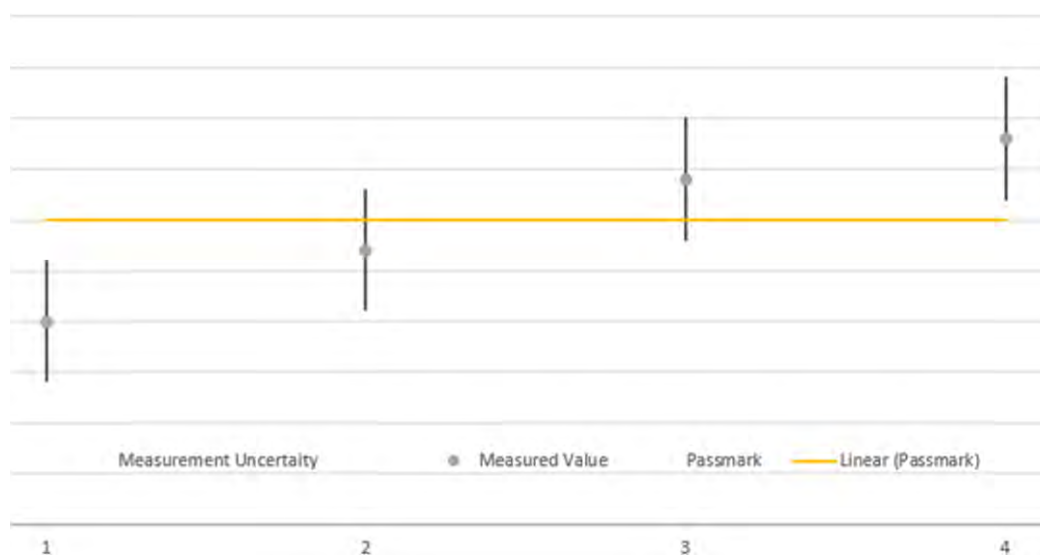


1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
AC Power Conducted emissions	$\pm 2.70\text{dB}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Conducted Output power	$\pm 2.06\text{dB}$
Power Spectral Density	$\pm 0.85\text{ dB}$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT*	Smartscanner / Smartphone
BRAND NAME*	BARTEC
MODEL NAME*	SP9EX1/SC9EX1/SP9EX2/SC9EX2
NOMINAL VOLTAGE*	5.0V/9.0V/12.0Vdc (adapter) 3.2V/3.8V/4.2V/dc (battery)
MODULATION *	DSSS, OFDM, GFSK, OFDMA
TRANSMISSION RATE	802.11b: 11/ 5.5/ 2.0 / 1.0 Mbps 802.11g: 54/ 48/ 36 / 24 / 18 / 9/ 6 Mbps 802.11n(HT20): up to 144.4 Mbps 802.11n(HT40): up to 300 Mbps 802.11(VHT20): up to 173.3 Mbps 802.11(VHT40): up to 400 Mbps 802.11ax(HE20)/ (RU26/52/106/242): up to 286.8 Mbps 802.11ax(HE40)/ (RU484): up to 573.5 Mbps
OPERATING FREQUENCY	2412-2462MHz for 11b/g/n(HT20/40) /ax(HE20/40) 2402-2480MHz for BT-LE(GFSK) 2412-2462MHz for ax(20M RU26/52/106/242)/ax (40M RU484)
MAX. OUTPUT POWER	WLAN: 618.98mW (Maximum) BT-LE: 15.08mW (Maximum) RU WLAN: 435.06mW (Maximum)
ANTENNA TYPE*	ANT 5: Monopole Antenna with -1.4dBi gain for BT/WIFI ANT 6: Monopole Antenna with -1.4dBi gain for WIFI
HW VERSION*	E
SW VERSION*	TWG1.240820.261
I/O PORTS*	Refer to user's manual
CABLE SUPPLIED*	USB cable: non-shielded cable, with w/o ferrite core, 0.8 meter

**NOTE:**

1. *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.
2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
3. The EUT incorporates a MIMO function. Physically, the EUT provides two transmitters and two receivers.

MODULATION MODE	TX/RX FUNCTION
802.11b	2TX /2RX
802.11g	2TX /2RX
802.11n(HT20)/ac(VHT20)/ax(HE20)	2TX /2RX
802.11n(HT40)/ac(VHT40)ax(HE40)	2TX /2RX
802.11ax(HE20)/ (RU26/52/106/242)	2TX /2RX
802.11ax(HE40)/ (RU484)	2TX /2RX
BT_LE(1MHz)	1TX /1RX
BT_LE(2MHz)	1TX /1RX
BT_LE(S2)	1TX /1RX
BT_LE(S8)	1TX /1RX

4. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

5. List of Accessory:

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
Display(AMOLED)	Xiao Xin	N/A	XX611OLED-A002.1	N/A
Back cover	IV Techmould	N/A	N/A	N/A
Bezel	IV Techmould	N/A	N/A	N/A
Photo/Video Camera 1	Sunny Optical	N/A	F48N03A (Auto focus)	N/A
Photo/Video Camera 2	TrulyOpto	N/A	CSF208-B8BF-E(Fix focus)	N/A
CPU	Qualcomm	N/A	QCM6490	N/A
UFS	Kioxia	N/A	THGJFAT0T44BAIL	N/A
BT/WLAN Module	Murata	N/A	LBEE5QG2CX-830	N/A
NFC chipset	NXP	N/A	SN110TUK1	N/A
Battery	BARTEC	N/A	17-S1Z0-0020/****	4300 mAh, 3.68V
USB-C Cable	BARTEC	N/A	G7-A0Z0-0010	Length: 0.8m



2.2 DESCRIPTION OF TEST MODES

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

7 channels are provided for 802.11n (HT40):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
3	2422 MHz	7	2442 MHz
4	2427 MHz	8	2447 MHz
5	2432 MHz	9	2452 MHz
6	2437 MHz		

40 channels are provided for BT-LE (GFSK):

CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480



2.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Please see section 5 photographs of the test configuration for reference.

2.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.

The worst case was found when positioned on Y axis for radiated emission. Following test modes were selected for the final test, and the final worst case is marked in boldface and recorded in the report:

EUT CONFIGURE MODE	APPLICABLE TO				MODE
	RE<1G	RE≥1G	PLC	APCM	
-	√	√	√	√	-

Where **RE<1G**: Radiated Emission below 1GHz

RE≥1G: Radiated Emission above 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

NOTE: No need to concern of Conducted Emission due to the EUT is powered by battery.

RADIATED EMISSION TEST (BELOW 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11ax 20	3 to 9	6	OFDM	MCS0
BT-LE	0 to 39	19	GFSK	0.5

**RADIATED EMISSION TEST (ABOVE 1GHz):**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0
802.11g	1 to 11	1, 6, 11	OFDM	6.0
802.11n HT20	1 to 11	1, 6, 11	OFDM	MCS0
802.11ac VHT20	1 to 11	1, 6, 11	OFDM	MCS0
802.11ax HE20	1 to 11	1, 6, 11	OFDM	MCS0
802.11n HT40	3 to 9	3,6,9	OFDM	MCS0
802.11ac VHT40	3 to 9	3,6,9	OFDM	MCS0
802.11ax HE40	3 to 9	3,6,9	OFDM	MCS0
802.11ax 20 (RU 26/52/106/242)	1 to 11	1, 11	OFDMA	MCS0
802.11ax 40 (RU 484)	3 to 9	3, 9	OFDMA	MCS0
BT-LE	0 to 39	0,19, 39	GFSK	0.125&0.5&1.0
BT-LE	1 to 38	1,19, 38	GFSK	2.0

POWER LINE CONDUCTED EMISSION TEST

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11ax 20	3 to 9	6	OFDM	MCS0



BANDEDGE MEASUREMENT:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0
802.11g	1 to 11	1, 6, 11	OFDM	6.0
802.11n HT20	1 to 11	1, 6, 11	OFDM	MCS0
802.11ax HE20	1 to 11	1, 6, 11	OFDM	MCS0
802.11n HT40	3 to 9	3,6,9	OFDM	MCS0
802.11ax HE40	3 to 9	3,6,9	OFDM	MCS0
802.11ax 20 (RU 26/52/106/242)	1 to 11	1, 11	OFDMA	MCS0
802.11ax 40 (RU 484)	3 to 9	3, 9	OFDMA	MCS0
BT-LE	0 to 39	0,19, 39	GFSK	0.125&0.5&1.0
BT-LE	1 to 38	1,19, 38	GFSK	2.0

**ANTENNA PORT CONDUCTED MEASUREMENT:**

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0
802.11g	1 to 11	1, 6, 11	OFDM	6.0
802.11n HT20	1 to 11	1, 6, 11	OFDM	MCS0
802.11ax HE20	1 to 11	1, 6, 11	OFDM	MCS0
802.11n HT40	3 to 9	3, 6, 9	OFDM	MCS0
802.11ax HE40	3 to 9	3, 6, 9	OFDM	MCS0
802.11ax 20 (RU 26/52/106/242)	1 to 11	1, 11	OFDMA	MCS0
802.11ax 40 (RU 484)	3 to 9	3, 9	OFDMA	MCS0
BT-LE	0 to 39	0, 19, 39	GFSK	0.125&0.5&1.0
BT-LE	1 to 38	1, 19, 38	GFSK	2.0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE	TESTED BY
RE<1G	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu
RE≥1G	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu
PLC	25deg. C, 52%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu
APCM	25deg. C, 60%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu



2.3 DUTY CYCLE OF TEST SIGNAL

Please Refer to Appendix C Of this test report.



2.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C, Section 15.247

KDB 558074 D01 DTS Meas Guidance v05r02

ANSI C63.10-2020

Note :

1. All test items have been performed and recorded as per the above standards.
2. The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (Certification). The test report has been issued separately.

2.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Adapter	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	USB Line: Shielded, Detachable 0.8m;



3 TEST TYPES AND RESULTS

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE: 1.The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.



3.1.1 TEST INSTRUMENTS

Lab A:

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR3	102749	Feb.25,22	Feb.24,24
EMI Test Receiver	Rohde&Schwarz	ESR3	102749	Feb.24,24	Feb.23,26
ELEKTRA test software	Rohde&Schwarz	ELEKTRA	NA	N/A	N/A
LISN network	Rohde&Schwarz	ENV216	102640	Feb.17,22	Feb.16,24
LISN network	Rohde&Schwarz	ENV216	102640	Feb.16,24	Feb.15,26
CABLE	Rohde&Schwarz	W61.01	N/A	Apr.28,23	Apr.27,24
CABLE	Rohde&Schwarz	W61.01	N/A	Apr.27,24	Apr.26,25
CABLE	Rohde&Schwarz	W601	N/A	Apr.28,23	Apr.27,24
CABLE	Rohde&Schwarz	W601	N/A	Apr.27,24	Apr.26,25

- NOTE:**
1. The test was performed in CE shielded room.
 2. The calibration interval of the above test instruments is 12 /24 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 3. The FCC Site Registration No. is 434559; The Designation No. is CN1325.



3.1.2 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

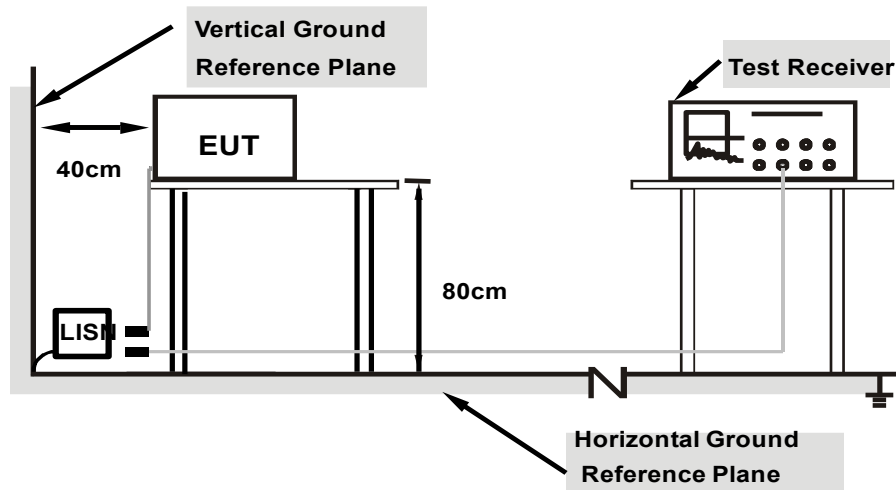
NOTE: All modes of operation were investigated and the worst-case emissions are reported.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation.



3.1.4 TEST SETUP



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

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.1.5 EUT OPERATING CONDITIONS

- Turned on the power and connected of all equipment.
- EUT was operated according to the type used was description in manufacturer's specifications or the User's Manual.



3.1.6 TEST RESULTS

CONDUCTED WORST-CASE DATA:

Frequency Range	150KHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	26deg. C, 51%RH
Tested By	Hanwen Xu		

Rg	Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	CAV Level [dBμV]	CAV: AVG Limit [dBμV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.519	40.53	56.00	15.47	31.53	46.00	14.47	11.75	L1	9.000
1	1.077	27.56	56.00	28.44	18.68	46.00	27.32	11.75	L1	9.000
1	2.589	22.40	56.00	33.60	15.31	46.00	30.69	11.77	L1	9.000
1	8.732	37.36	60.00	22.64	26.68	50.00	23.32	11.82	L1	9.000
1	11.355	35.06	60.00	24.94	22.53	50.00	27.47	11.83	L1	9.000
1	17.799	34.37	60.00	25.63	26.41	50.00	23.59	11.86	L1	9.000

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.

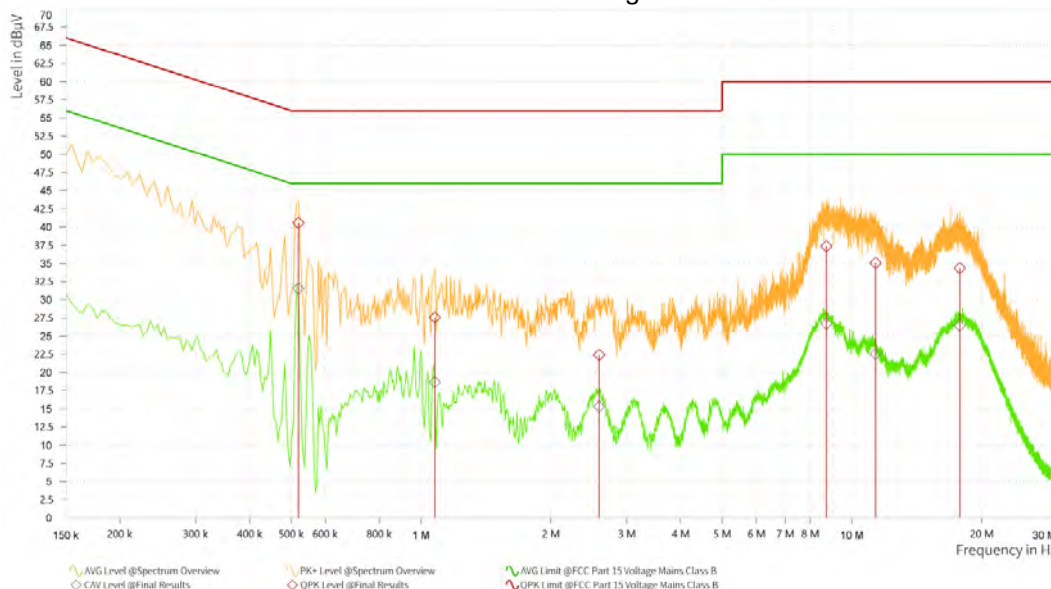
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.

3. The emission levels of other frequencies were very low against the limit.

4. Margin value = Limit value - Emission level

5. Correction factor = Insertion loss + Cable loss

6. Emission Level = Correction Factor + Reading Value.

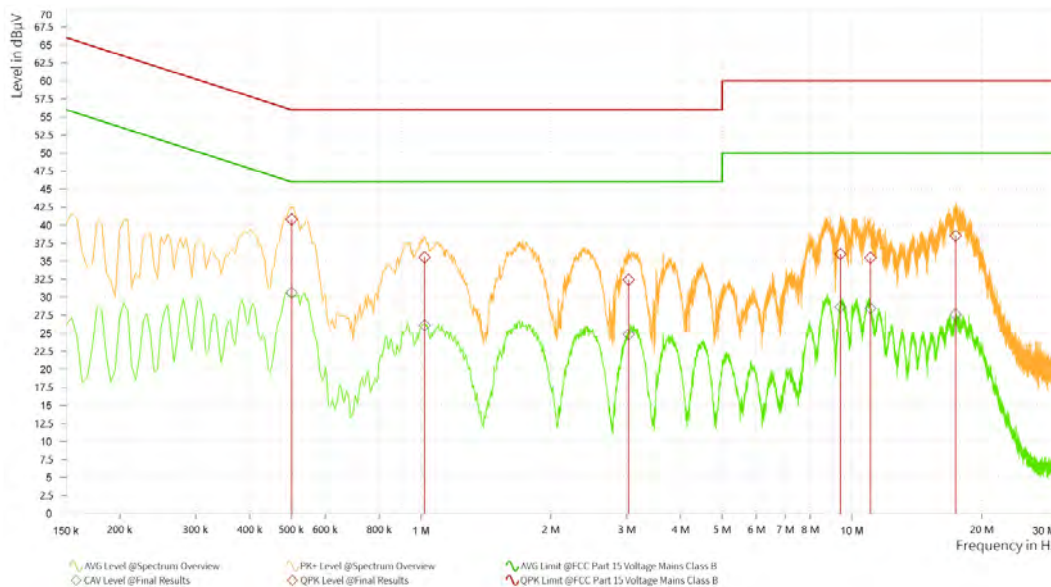




Frequency Range	150KHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	26deg. C, 51%RH
Tested By	Hanwen Xu		

Rg	Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	CAV Level [dBμV]	CAV: AVG Limit [dBμV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.501	40.77	56.00	15.23	30.61	46.00	15.39	12.78	N	9.000
1	1.019	35.54	56.00	20.46	26.10	46.00	19.90	12.73	N	9.000
1	3.035	32.41	56.00	23.59	24.83	46.00	21.17	12.75	N	9.000
1	9.402	35.98	60.00	24.02	28.64	50.00	21.36	12.79	N	9.000
1	11.040	35.47	60.00	24.53	28.47	50.00	21.53	12.80	N	9.000
1	17.408	38.51	60.00	21.49	27.59	50.00	22.41	12.84	N	9.000

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Limit value -Emission level
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.





3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



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3.2.2 TEST INSTRUMENTS

Lab A:

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.30,22	Aug.29,24
Pre-Amplifier	R&S	SCU08F1	101028	Sep.16,22	Sep.15,24
Signal Generator	R&S	SMB100A	182185	Feb.16,22	Feb.15,24
Signal Generator	R&S	SMB100A	182185	Feb.15,24	Feb.14,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Nov.25,22	Nov.24,25
EMI TEST Receiver	R&S	ESW44	101973	Feb.25,22	Feb.24,24
EMI TEST Receiver	R&S	ESW44	101973	Feb.24,24	Feb.23,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.28,22	Feb.27,24
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.27,24	Feb.26,26
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.22,22	Aug.21,24
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Feb.23,22	Feb.22,24
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Feb.22,24	Feb.21,26
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Aug.22,22	Aug.21,24
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.23,22	Feb.22,24
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.22,24	Feb.21,26
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.27,22	Jun.26,24
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	N/A	N/A
DC Source	HYELEC	HY3010B	551016	Aug.31,22	Aug.30,24
Hygrothermograph	DELI	20210528	SZ014	Sep.06,22	Sep.05,24
6DB attenuator	Tonscend Technology Co., Ltd	N/A	23062787	N/A	N/A
PC	LENOVO	E14	HRSW0024	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-7.00M	N/A	N/A	N/A

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TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-4.00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Apr.28,23	Apr.27,24
CABLE	R&S	W13.02	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	W12.14	N/A	Apr.28,23	Apr.27,24
CABLE	R&S	W12.14	N/A	Apr.27,24	Apr.26,25

- NOTE:**
1. The calibration interval of the above test instruments is 12/ 24/ 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 2. The test was performed in 3m Chamber.
 3. The FCC Site Registration No. is 434559; The Designation No. is CN1325.

3.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using fresh batteries. The turntable was rotated to maximize the emission level.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

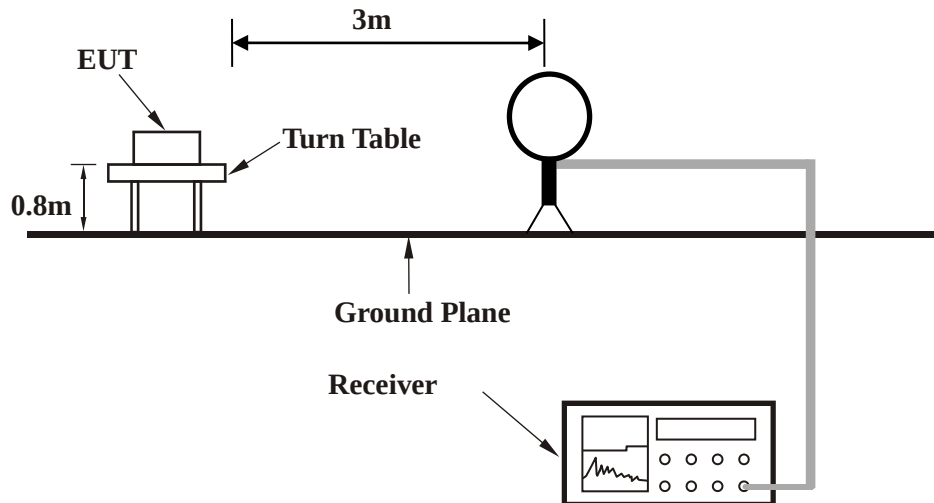
3.2.4 DEVIATION FROM TEST STANDARD

No deviation

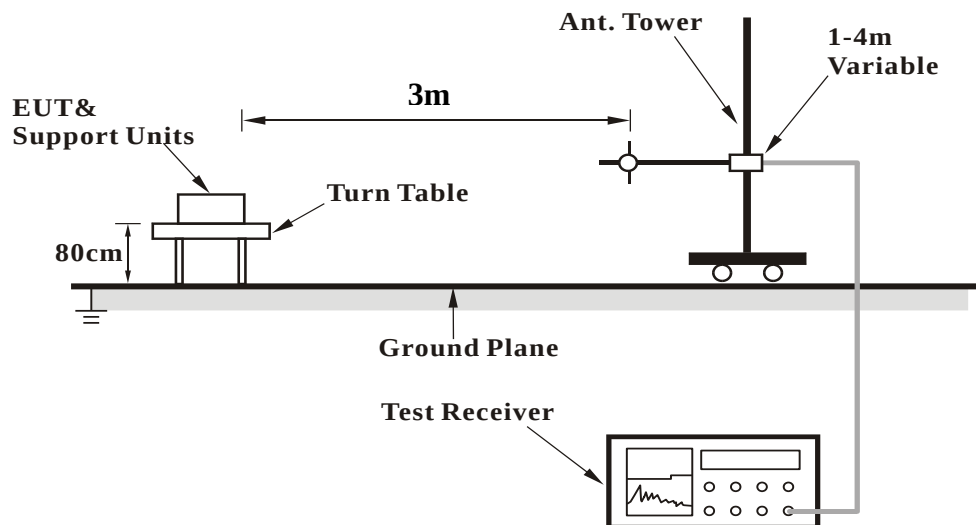


3.2.5 TEST SETUP

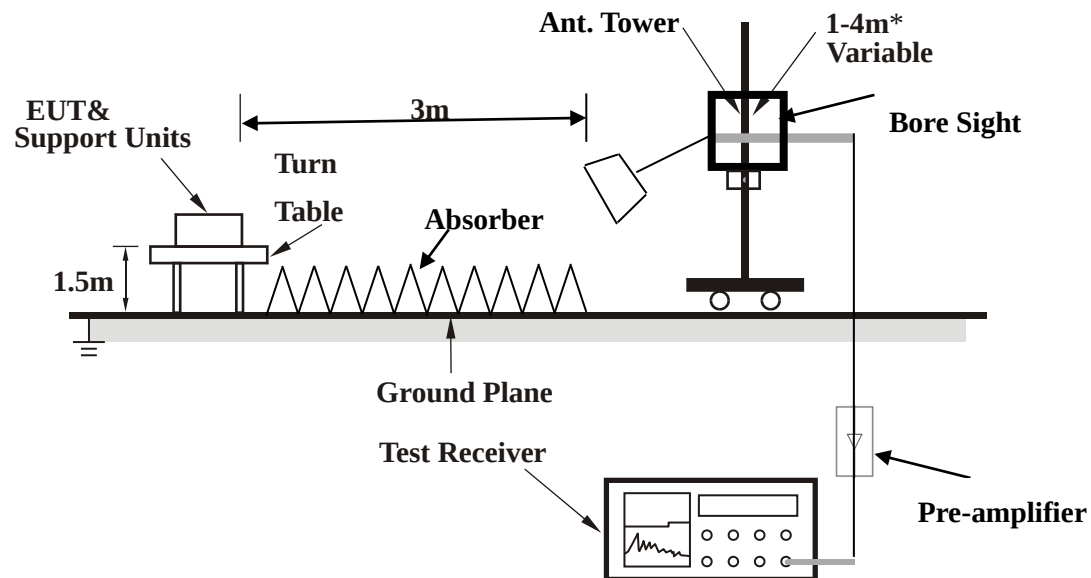
<Frequency Range 9KHz~30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.2.6 EUT OPERATING CONDITIONS

- Set the EUT under full load condition and placed them on a testing table.
- Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
- The necessary accessories enable the EUT in full functions.



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Test Report No.: PSU-QSU2312140113RF10

3.2.7 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

BELOW 1GHz WORST-CASE DATA:

30 MHz – 1GHz data:

802.11ax (20MHz):

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

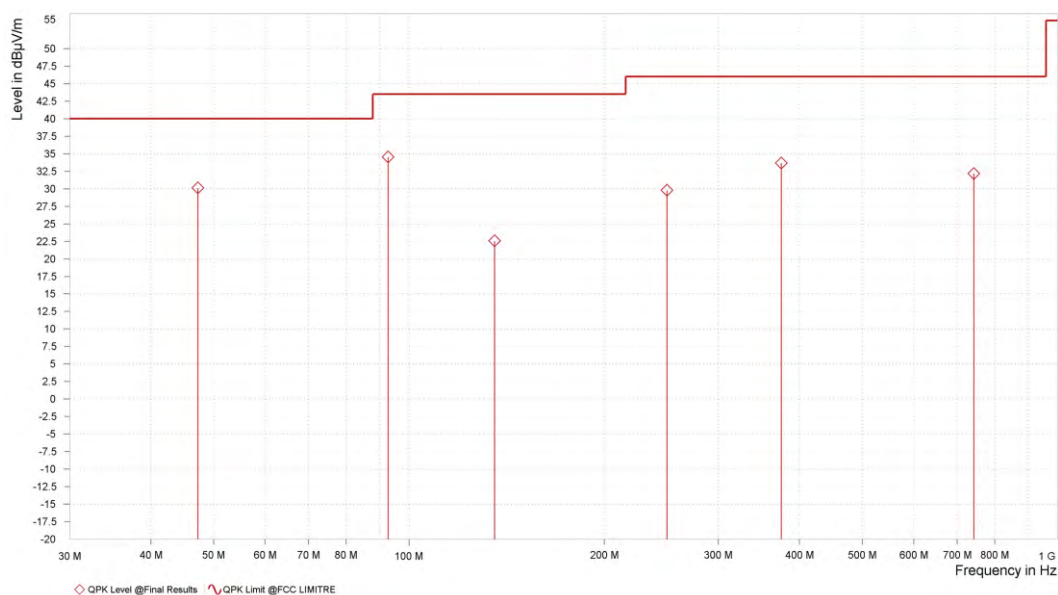
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	47.266	30.10	40.00	9.90	-3.60	H	31.9	2.00	120.000
1	92.856	34.51	43.50	8.99	-7.37	H	195.7	2.00	120.000
1	135.439	22.56	43.50	20.94	-9.11	H	355	2.00	120.000
1	249.996	29.77	46.00	16.23	-2.49	H	355	2.00	120.000
1	375.029	33.66	46.00	12.34	1.72	H	328.1	1.00	120.000
1	742.514	32.16	46.00	13.84	4.72	H	164.2	1.00	120.000

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Limit value- Emission level.





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CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

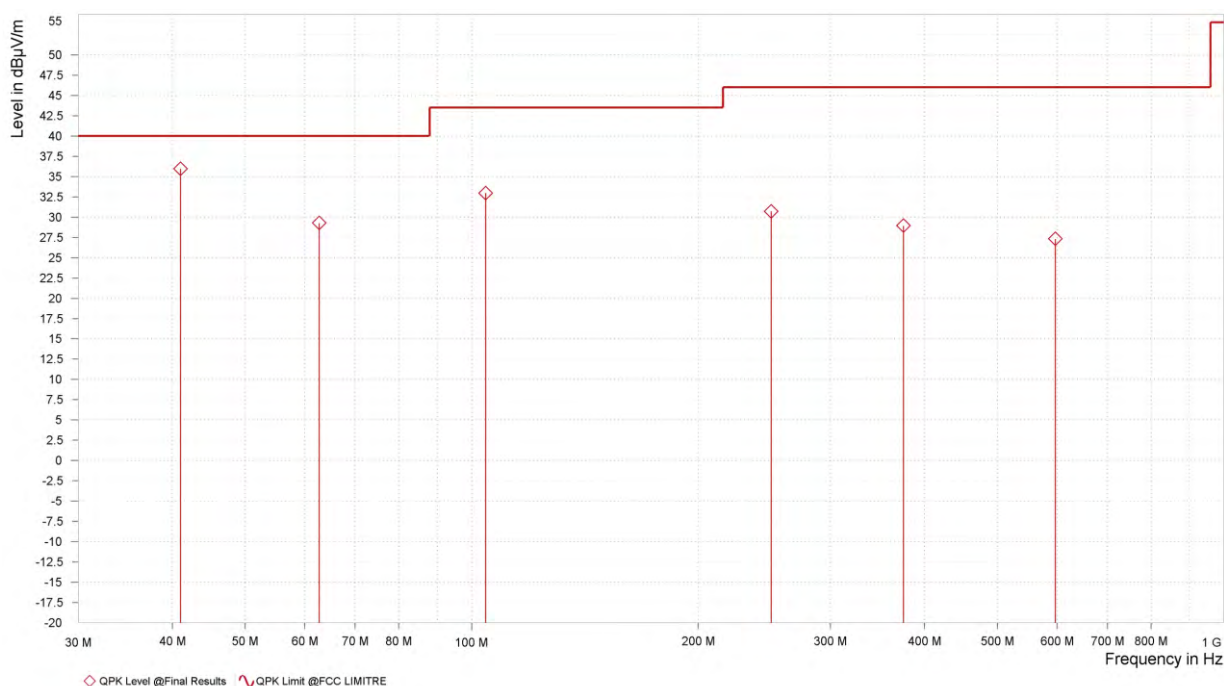
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	41.010	35.96	40.00	4.04	-6.15	V	197	2.00	120.000
1	62.738	29.26	40.00	10.74	-8.01	V	165.4	1.00	120.000
1	104.399	32.96	43.50	10.54	-5.80	V	330.4	1.00	120.000
1	250.045	30.70	46.00	15.30	-3.49	V	4.9	1.00	120.000
1	374.981	28.92	46.00	17.08	1.40	V	359	2.00	120.000
1	597.305	27.31	46.00	18.70	2.44	V	197	2.00	120.000

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Limit value- Emission level.





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Test Report No.: PSU-QSU2312140113RF10

ABOVE 1GHz WORST-CASE DATA:

Note: 1. For radiated emissions testing , the full testing range of different modes have been scanned , only the worst case harmonic data is reported in the sheet.

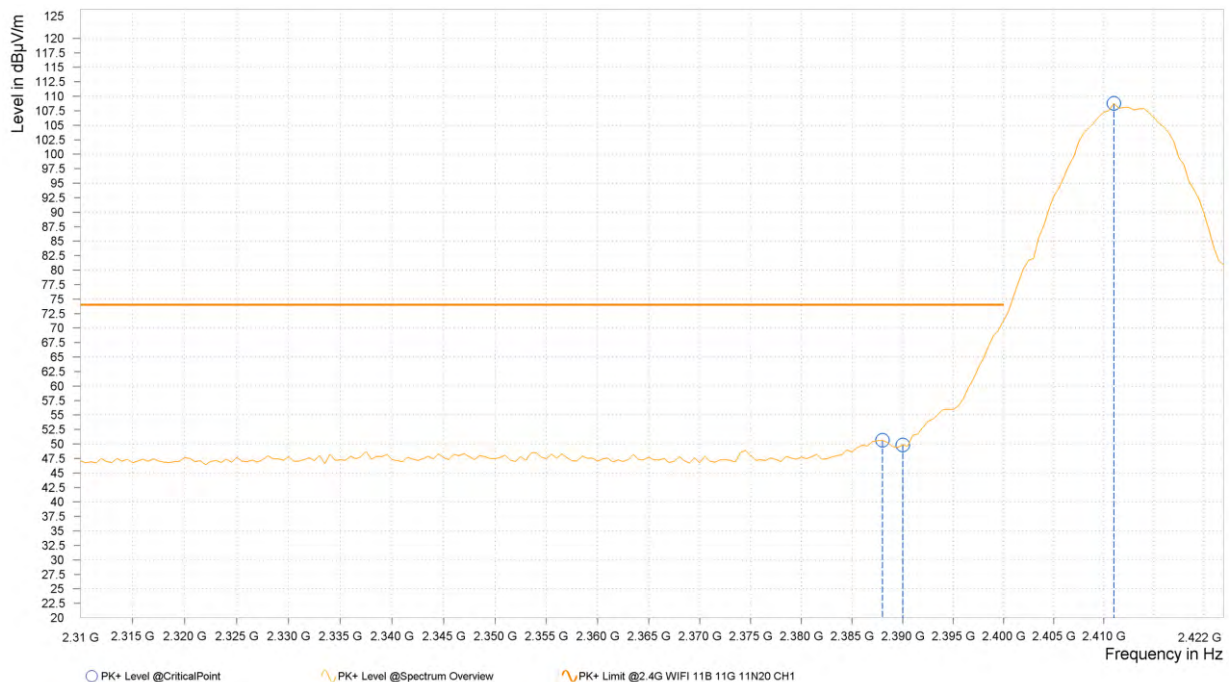
2. All other emissions were greater than 20dB below the limit was not recorded

802.11b:

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,388.000	50.63	74.00	23.37	5.76	H	348.6	1.00
1	2,390.000	49.83	74.00	24.17	5.77	H	359.1	1.00
1	2,411.000	108.79			5.91	H	1	1.00

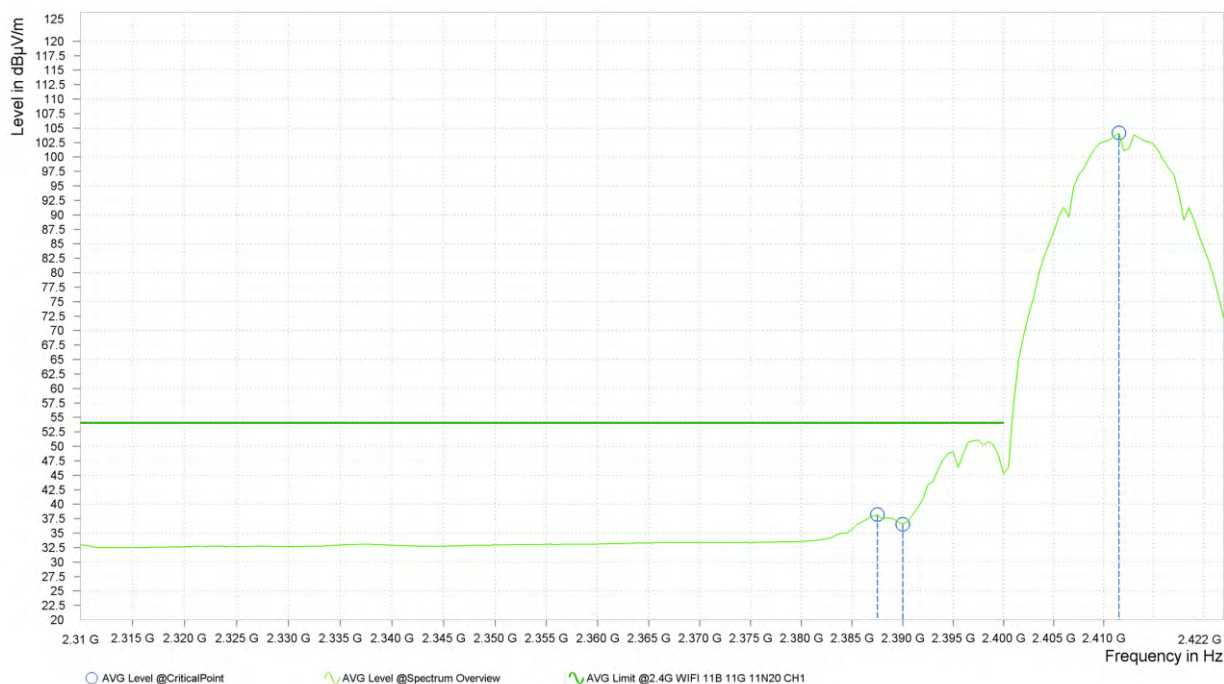




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Test Report No.: PSU-QSU2312140113RF10

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,387.500	38.19	54.00	15.81	5.75	H	1	1.00
1	2,390.000	36.55	54.00	17.45	5.77	H	1	1.00
1	2,411.500	104.14			5.92	H	1	1.00





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Test Report No.: PSU-QSU2312140113RF10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,387.500	34.63	54.00	19.37	5.75	V	1	1.00
1	2,390.000	34.04	54.00	19.96	5.77	V	1	1.00
1	2,413.000	99.33			5.93	V	359.1	1.00

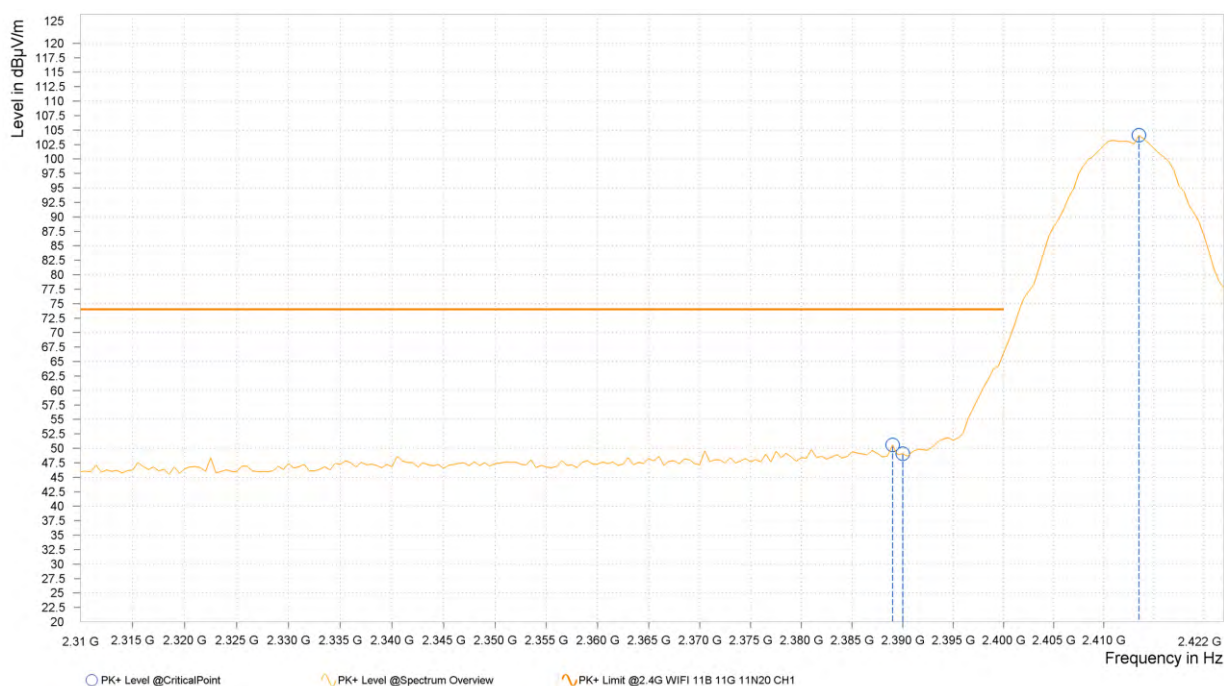




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Test Report No.: PSU-QSU2312140113RF10

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.000	50.57	74.00	23.43	5.76	V	212.2	1.00
1	2,390.000	49.08	74.00	24.92	5.77	V	212.2	1.00
1	2,413.500	104.08			5.93	V	1	1.00



REMARKS:

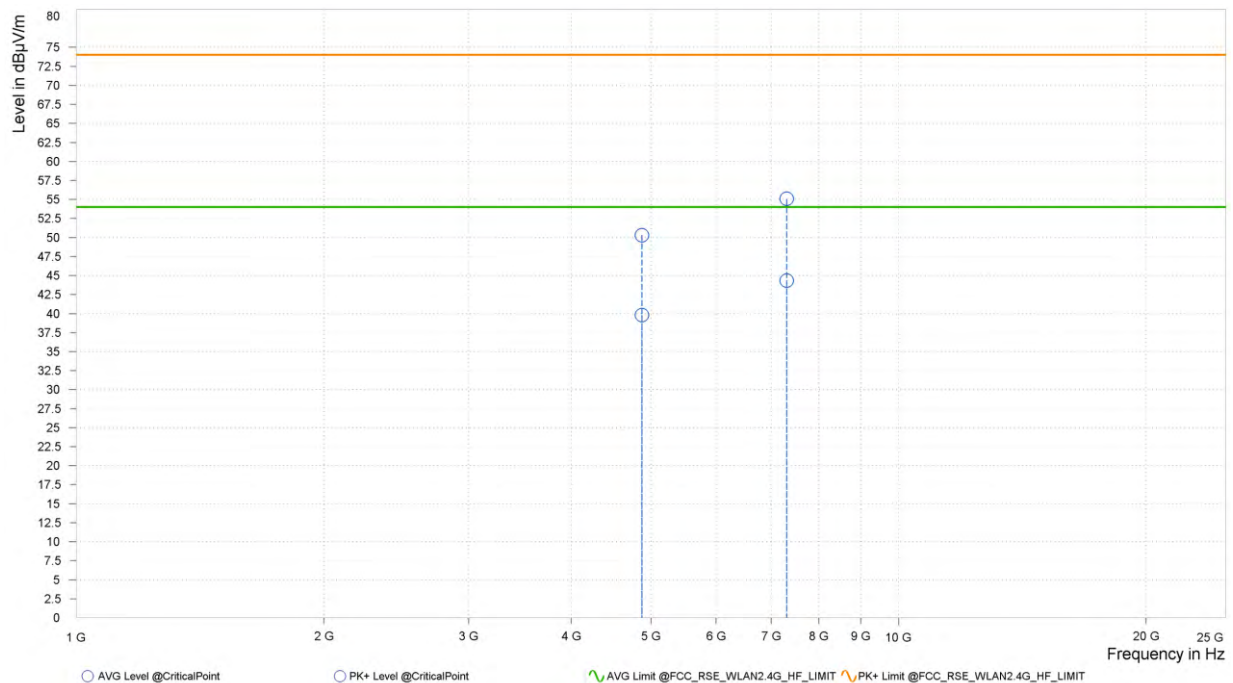
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value- Emission level.
- 2412MHz: Fundamental frequency.



CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	4,874.000	50.30	74.00	23.70	39.81	54.00	14.19	13.53	H	359	2.00
2	7,311.000	55.08	74.00	18.92	44.33	54.00	9.67	18.89	H	0.9	2.00



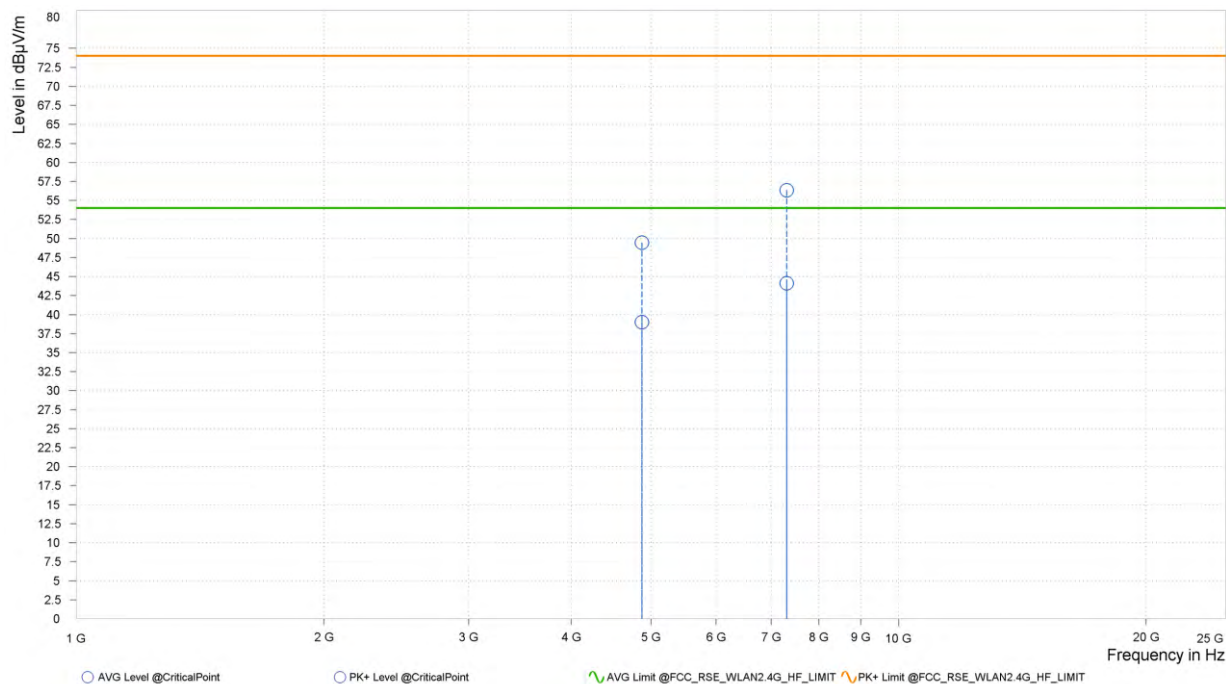


**BUREAU
VERITAS**

Test Report No.: PSU-QSU2312140113RF10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	4,874.000	49.47	74.00	24.53	39.01	54.00	14.99	13.53	V	0.9	2.00
2	7,311.000	56.35	74.00	17.65	44.13	54.00	9.87	18.89	V	27.1	2.00



REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value- Emission level.
- 2437MHz: Fundamental frequency.



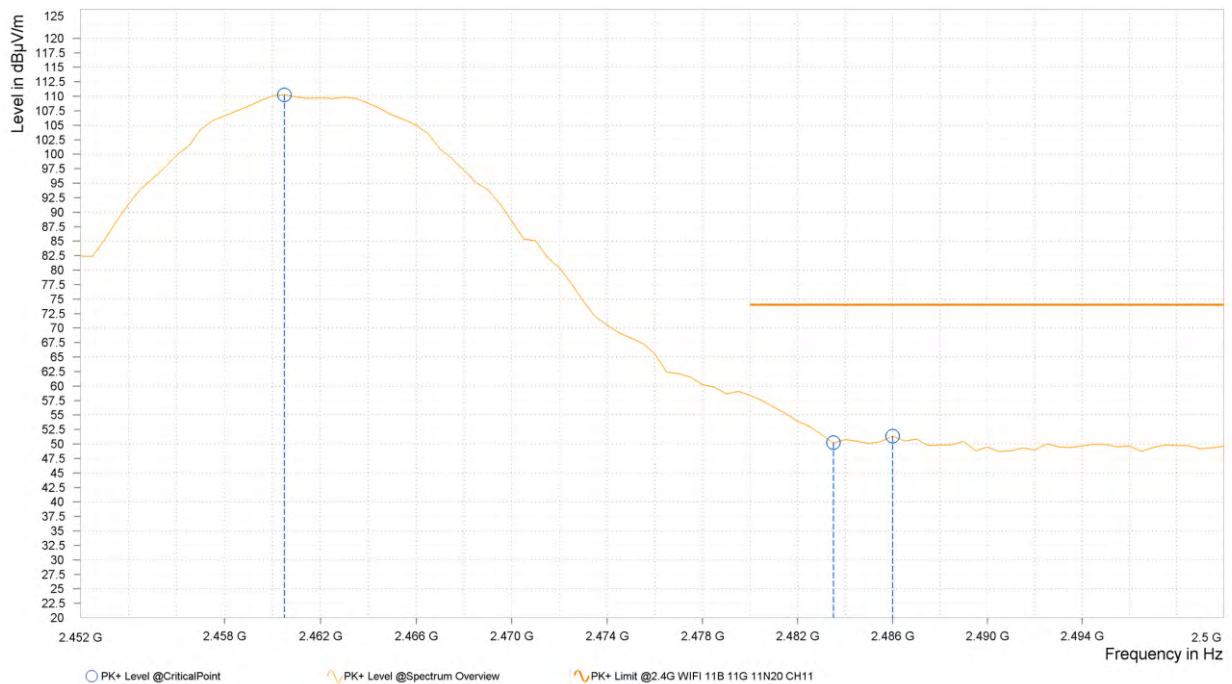
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VERITAS

Test Report No.: PSU-QSU2312140113RF10

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dB μ V/m]	PK+ Limit [dB μ V/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,460.500	110.26			5.83	H	0.8	2.00
2	2,483.500	50.24	74.00	23.76	5.91	H	0.8	2.00
2	2,486.000	51.35	74.00	22.65	5.93	H	4.9	1.00

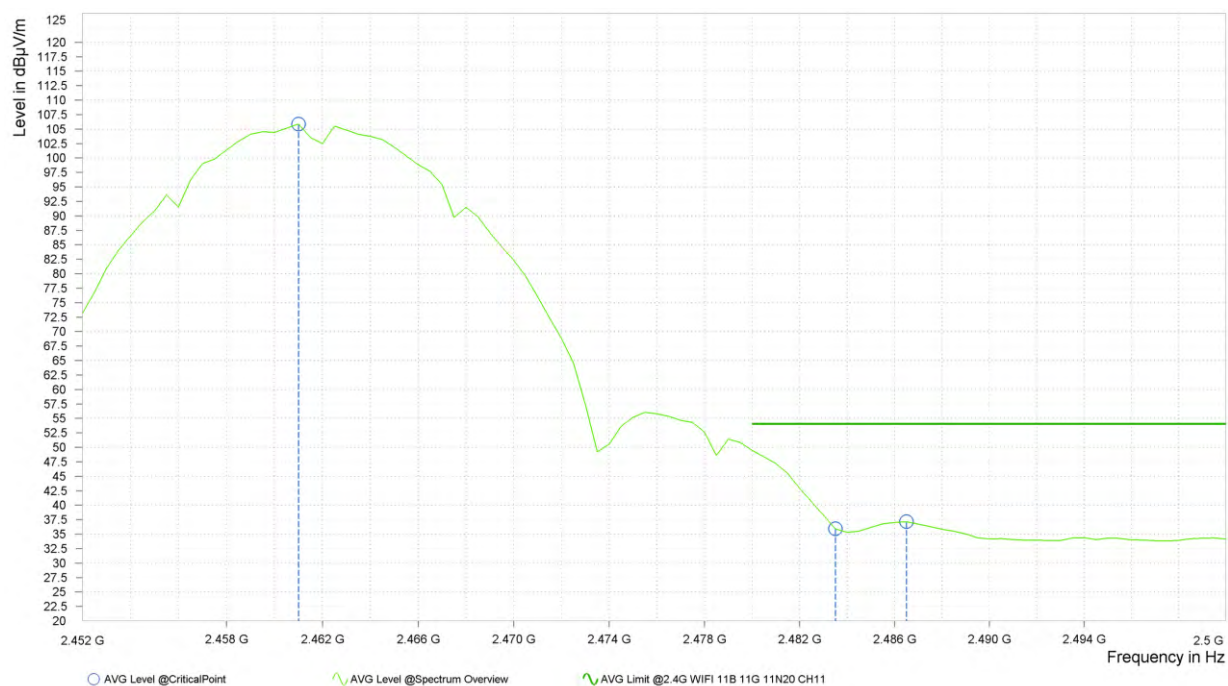




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Test Report No.: PSU-QSU2312140113RF10

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,461.000	105.87			5.83	H	359	2.00
2	2,483.500	35.91	54.00	18.09	5.91	H	1	2.00
2	2,486.500	37.13	54.00	16.87	5.93	H	1	2.00



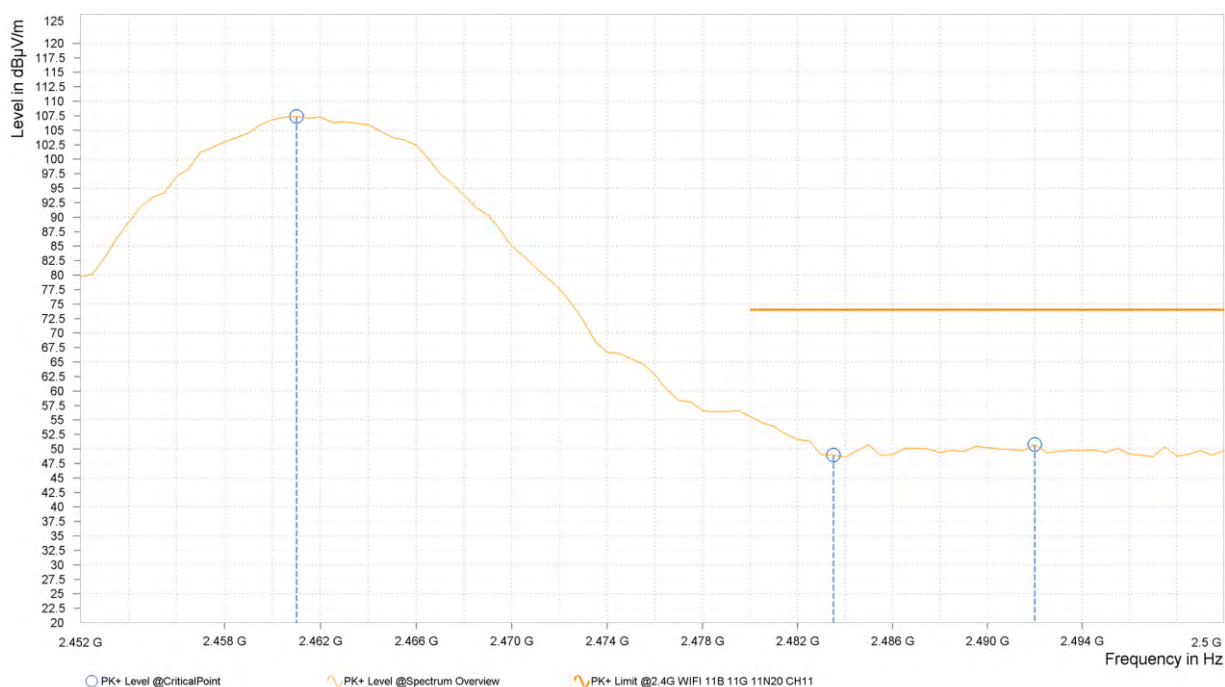


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Test Report No.: PSU-QSU2312140113RF10

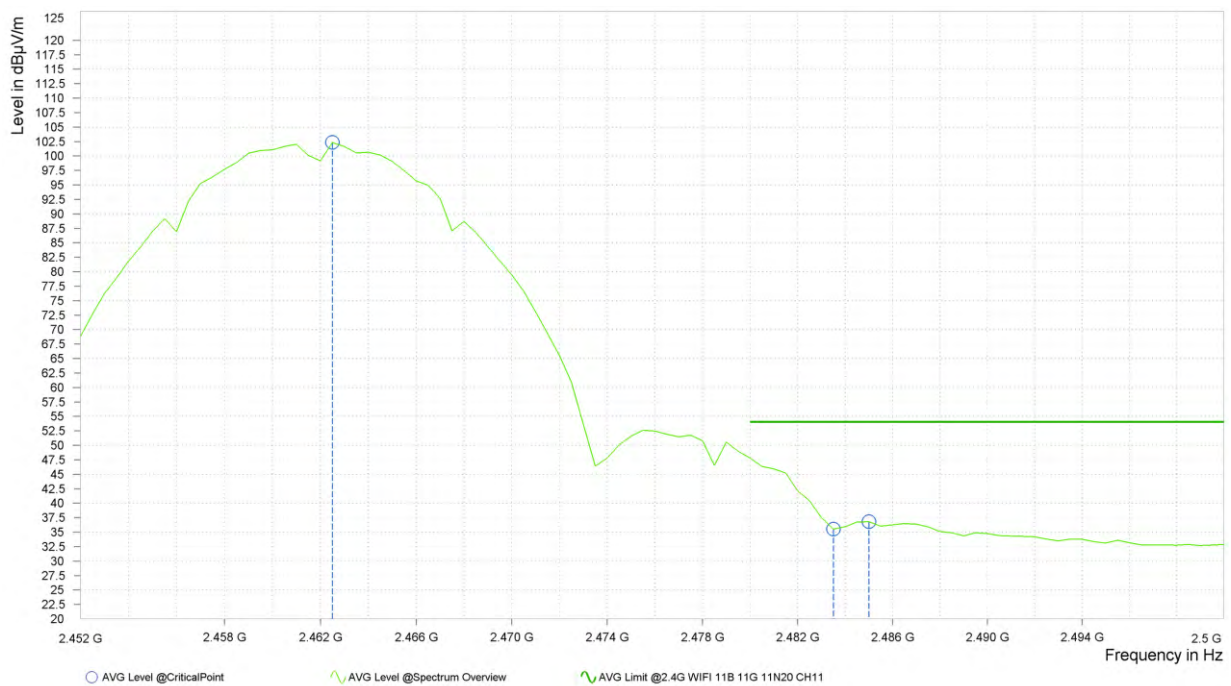
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,461.000	107.38			5.83	V	359	1.00
2	2,483.500	48.95	74.00	25.05	5.91	V	220.8	2.00
2	2,492.000	50.77	74.00	23.23	5.97	V	220.8	2.00





Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,462.500	102.33			5.82	V	359.1	1.00
2	2,483.500	35.52	54.00	18.48	5.91	V	5	1.00
2	2,485.000	36.80	54.00	17.20	5.92	V	5	1.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value- Emission level.
2. 2462MHz: Fundamental frequency.



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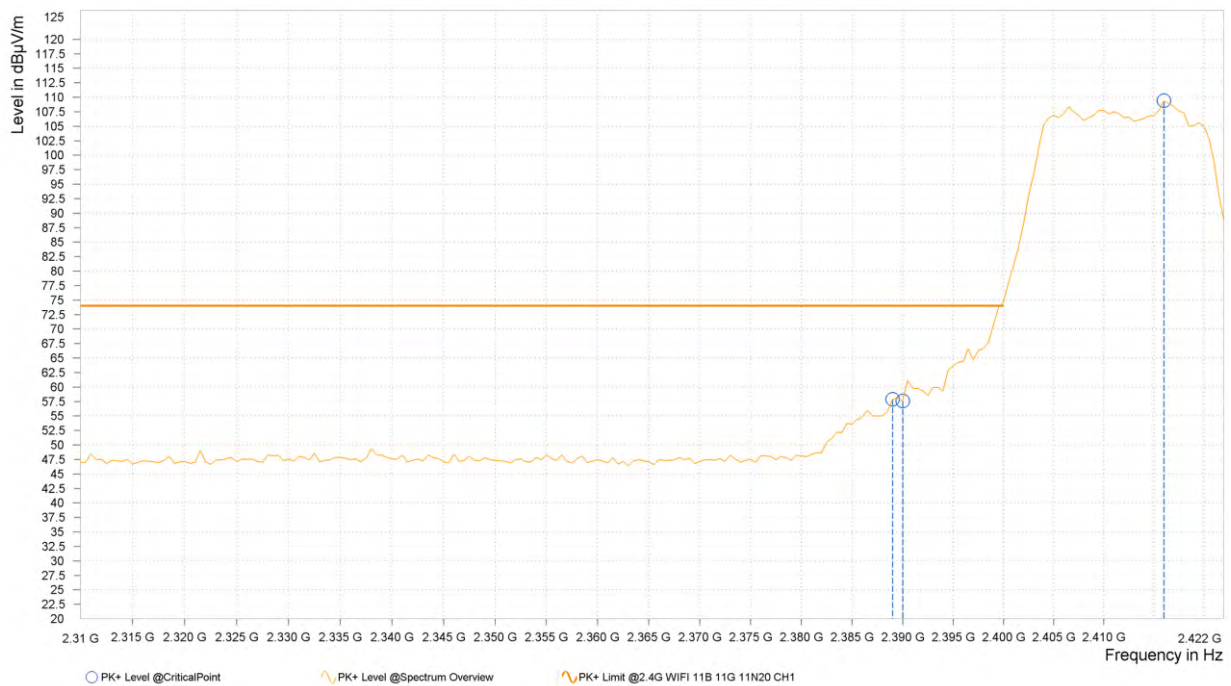
Test Report No.: PSU-QSU2312140113RF10

802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.000	57.89	74.00	16.11	5.76	H	67.4	1.00
1	2,390.000	57.59	74.00	16.41	5.77	H	359.1	1.00
1	2,416.000	109.40			5.95	H	72.6	2.00





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Test Report No.: PSU-QSU2312140113RF10

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.500	40.23	54.00	13.77	5.77	H	5.6	1.00
1	2,390.000	41.87	54.00	12.13	5.77	H	359.1	1.00
1	2,416.500	97.62			5.95	H	359.1	1.00



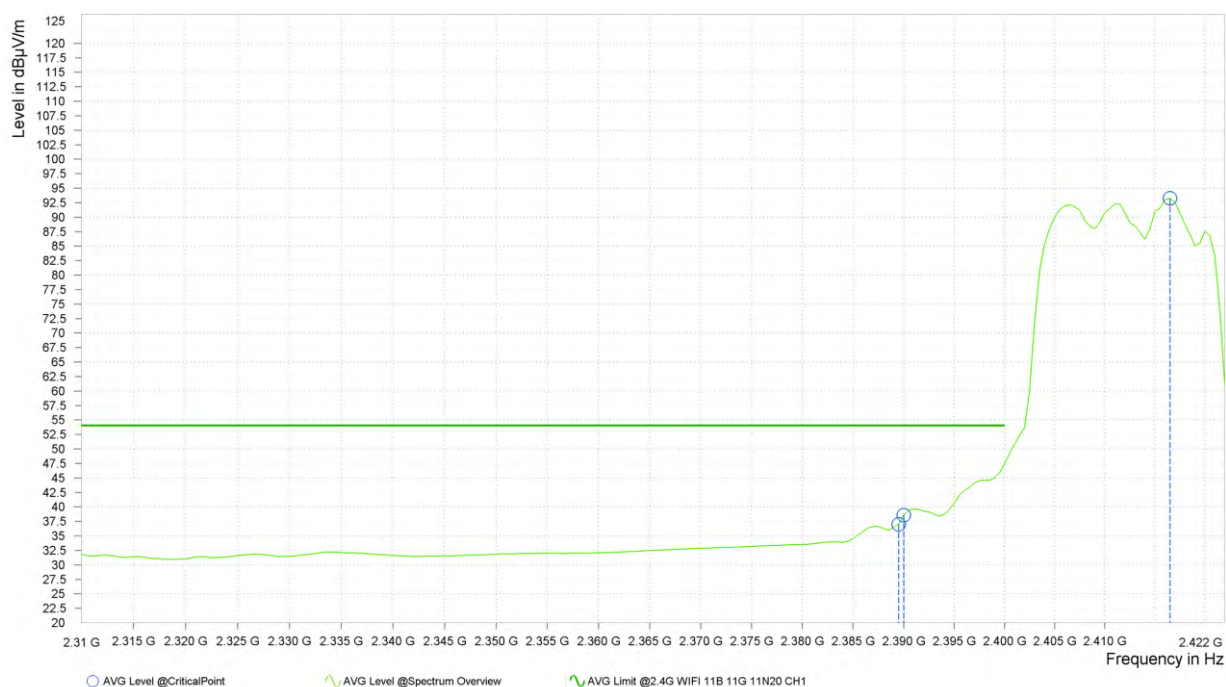


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Test Report No.: PSU-QSU2312140113RF10

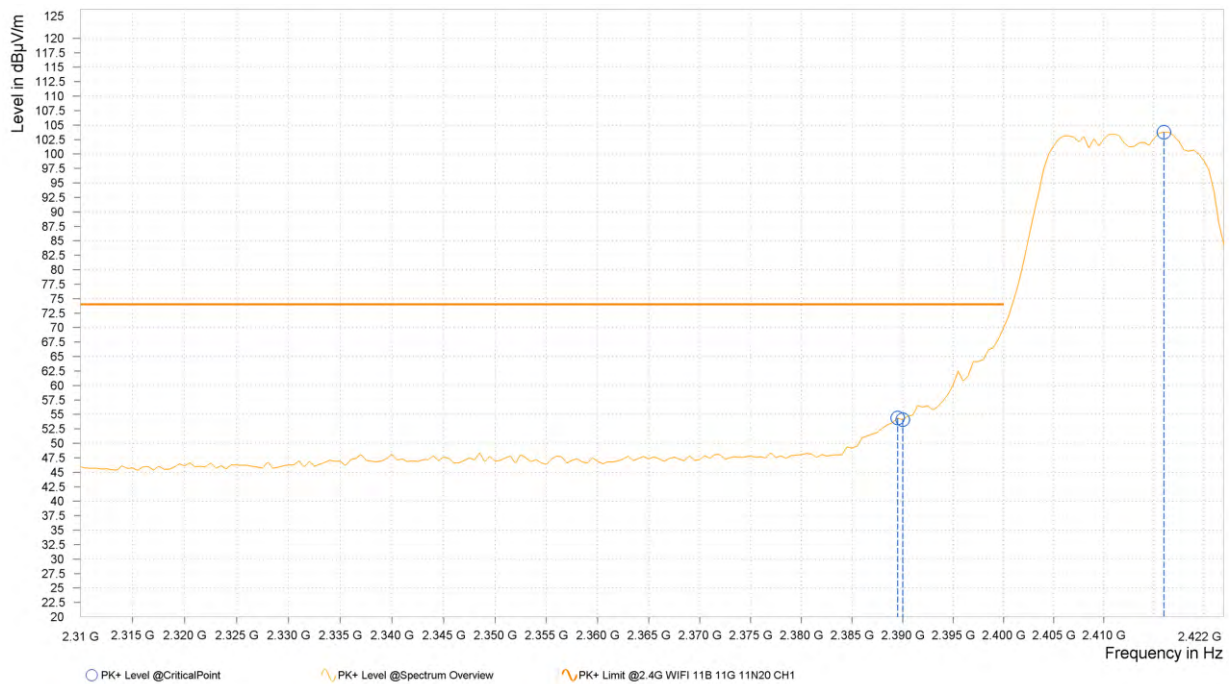
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.500	37.01	54.00	16.99	5.77	V	4.9	1.00
1	2,390.000	38.57	54.00	15.43	5.77	V	359.1	1.00
1	2,416.500	93.25			5.95	V	4.9	1.00





Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.500	54.36	74.00	19.64	5.77	V	351.2	1.00
1	2,390.000	54.11	74.00	19.89	5.77	V	351.2	1.00
1	2,416.000	103.78			5.95	V	285	1.00

**REMARKS:**

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value- Emission level.
- 2412MHz: Fundamental frequency.



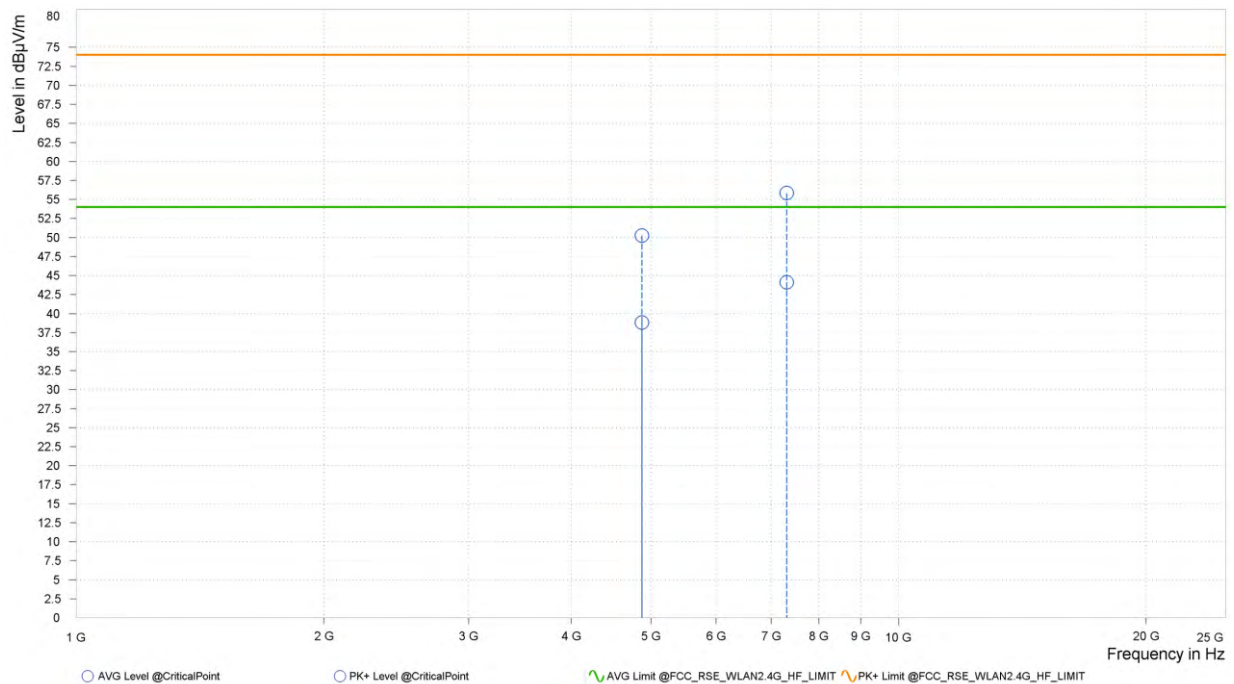
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Test Report No.: PSU-QSU2312140113RF10

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	4,874.000	50.26	74.00	23.74	38.84	54.00	15.16	13.53	H	27.2	2.00
2	7,311.000	55.84	74.00	18.16	44.12	54.00	9.88	18.89	H	27.2	2.00



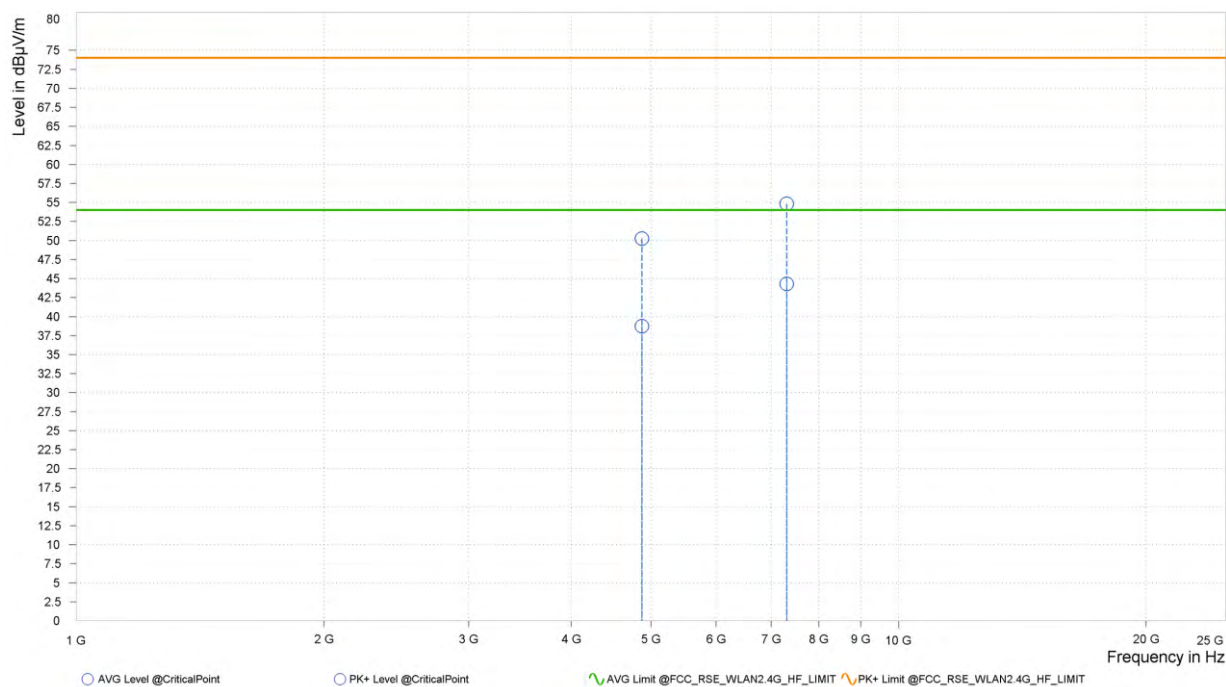


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Test Report No.: PSU-QSU2312140113RF10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	4,874.000	50.25	74.00	23.75	38.73	54.00	15.27	13.53	V	269.8	2.00
2	7,311.000	54.81	74.00	19.19	44.30	54.00	9.70	18.89	V	269.8	2.00



REMARKS:

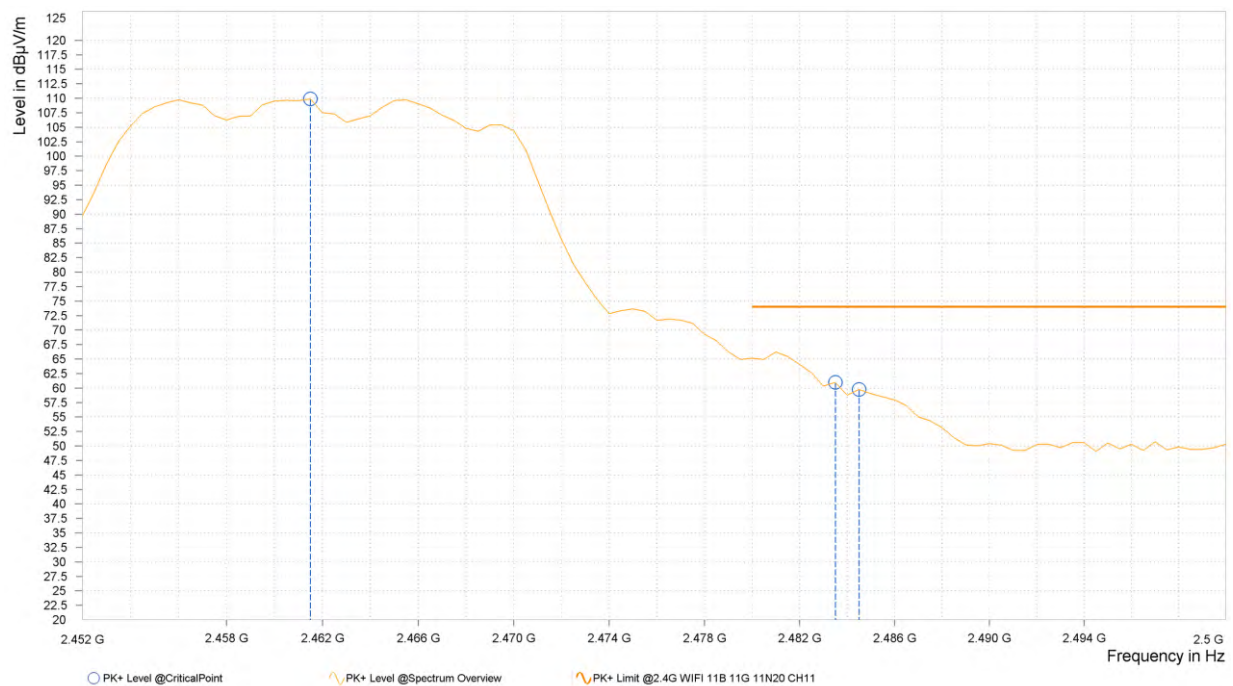
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value- Emission level.
- 2437MHz: Fundamental frequency.



CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dB μ V/m]	PK+ Limit [dB μ V/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,461.500	109.88			5.82	H	1	2.00
2	2,483.500	60.97	74.00	13.03	5.91	H	4.3	1.00
2	2,484.500	59.73	74.00	14.27	5.92	H	355.1	2.00

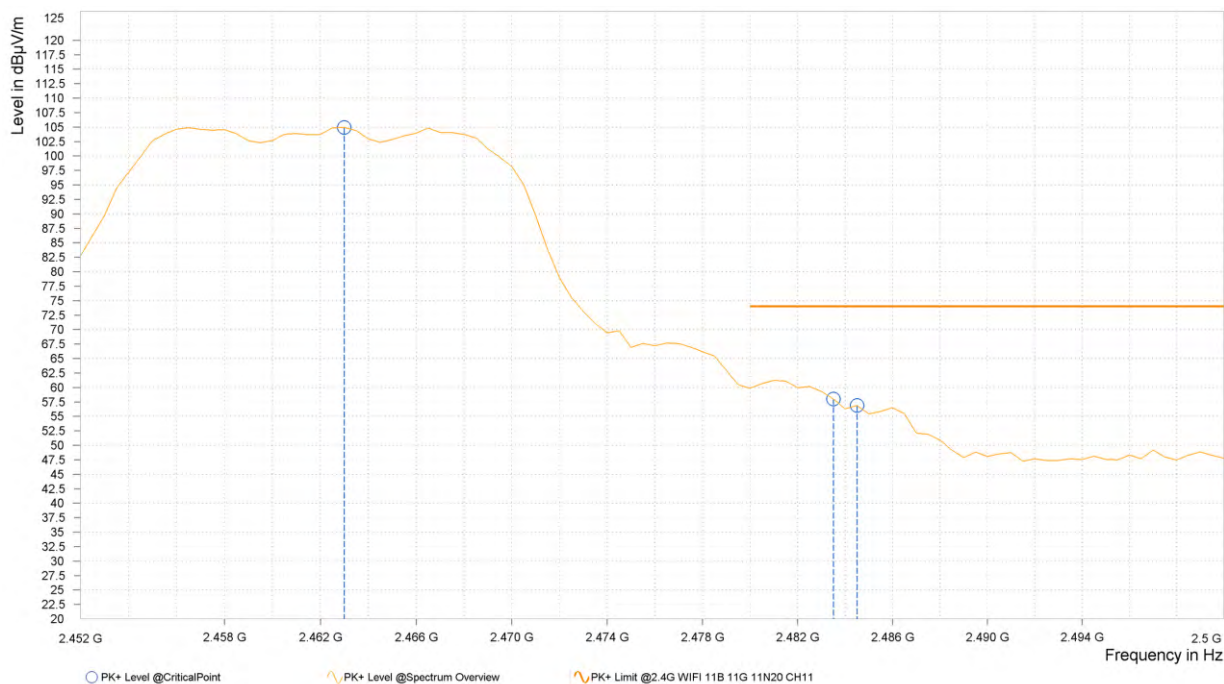




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Test Report No.: PSU-QSU2312140113RF10

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,463.000	104.92			5.82	V	5	1.00
2	2,483.500	58.01	74.00	15.99	5.91	V	5	1.00
2	2,484.500	56.87	74.00	17.13	5.92	V	359.1	1.00





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Test Report No.: PSU-QSU2312140113RF10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,461.000	99.12			5.83	H	359	2.00
2	2,483.500	39.74	54.00	14.26	5.91	H	359	2.00
2	2,485.500	40.91	54.00	13.09	5.93	H	1	1.00





Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,457.000	93.93			5.85	V	1	1.00
2	2,483.500	40.45	54.00	13.55	5.91	V	359	1.00
2	2,484.000	39.16	54.00	14.84	5.92	V	1	1.00

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value- Emission level.
2. 2462MHz: Fundamental frequency.



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Test Report No.: PSU-QSU2312140113RF10

802.11n (20MHz)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.500	60.27	74.00	13.73	5.77	H	359	1.00
1	2,390.000	60.74	74.00	13.26	5.77	H	1	1.00
1	2,420.000	107.93			5.95	H	0.9	2.00

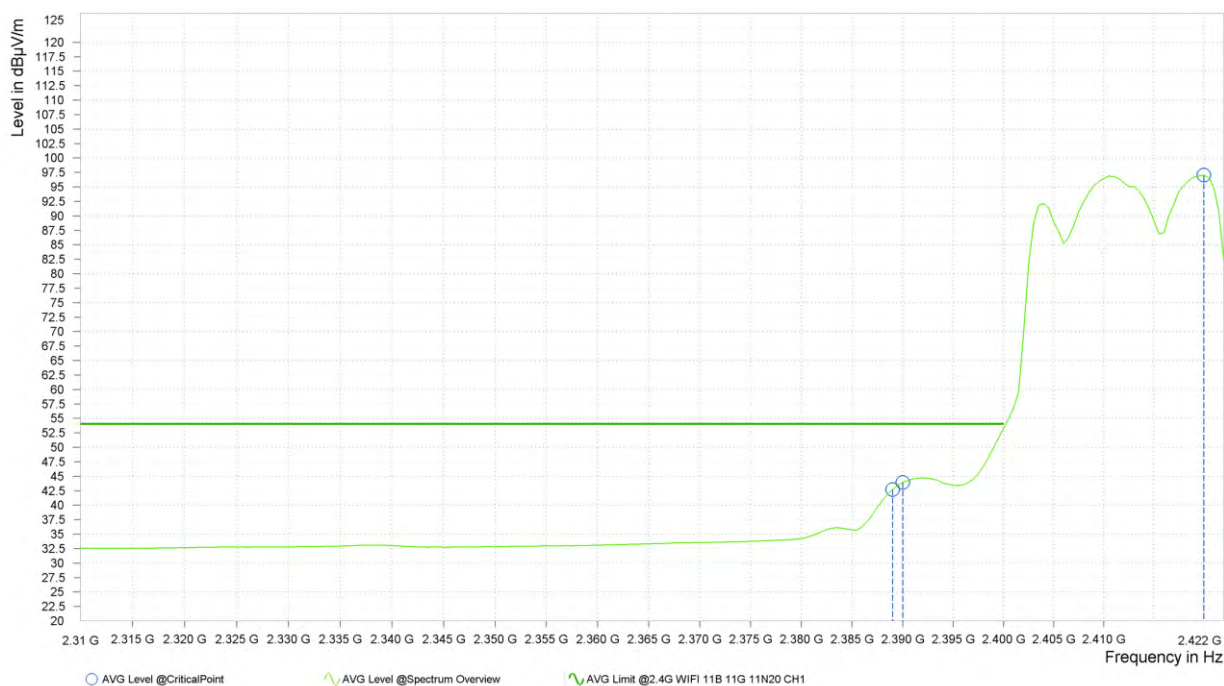




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VERITAS

Test Report No.: PSU-QSU2312140113RF10

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.000	42.73	54.00	11.27	5.76	H	359.1	1.00
1	2,390.000	43.95	54.00	10.05	5.77	H	359.1	1.00
1	2,420.000	97.02			5.95	H	0.9	2.00



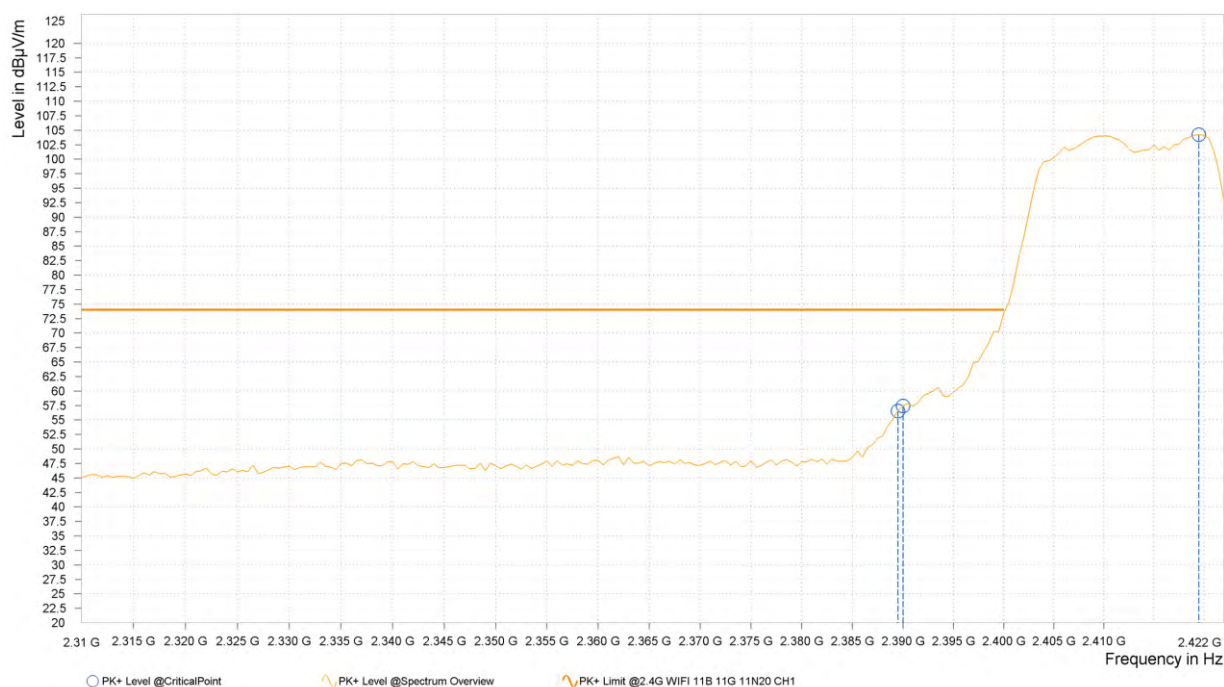


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Test Report No.: PSU-QSU2312140113RF10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.500	56.56	74.00	17.44	5.77	V	1	1.00
1	2,390.000	57.40	74.00	16.60	5.77	V	292.1	1.00
1	2,419.500	104.22			5.96	V	292.1	1.00





Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.567	39.36	54.00	14.64	5.77	V	359.1	1.00
1	2,390.000	39.92	54.00	14.08	5.77	V	359.1	1.00
1	2,410.467	94.35			5.91	V	359.1	1.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value- Emission level.
2. 2412MHz: Fundamental frequency.



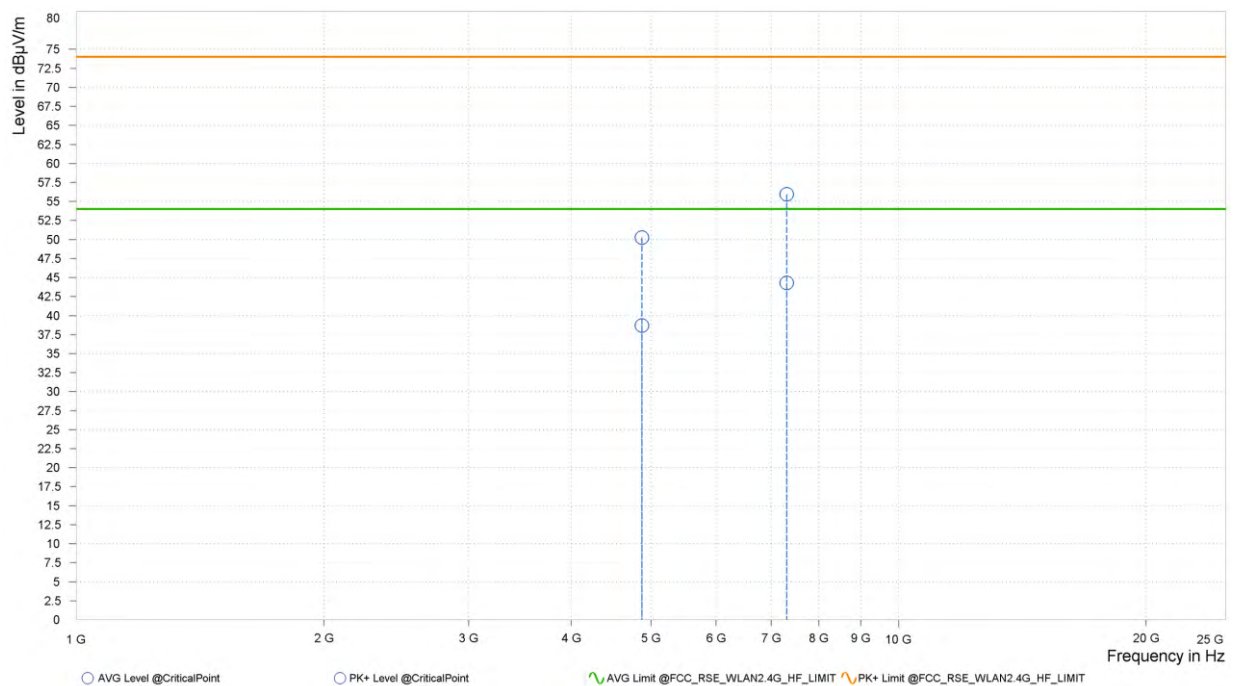
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Test Report No.: PSU-QSU2312140113RF10

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	4,874.000	50.26	74.00	23.74	38.70	54.00	15.30	13.53	H	0.9	2.00
2	7,311.000	55.93	74.00	18.07	44.27	54.00	9.73	18.89	H	90.2	1.00



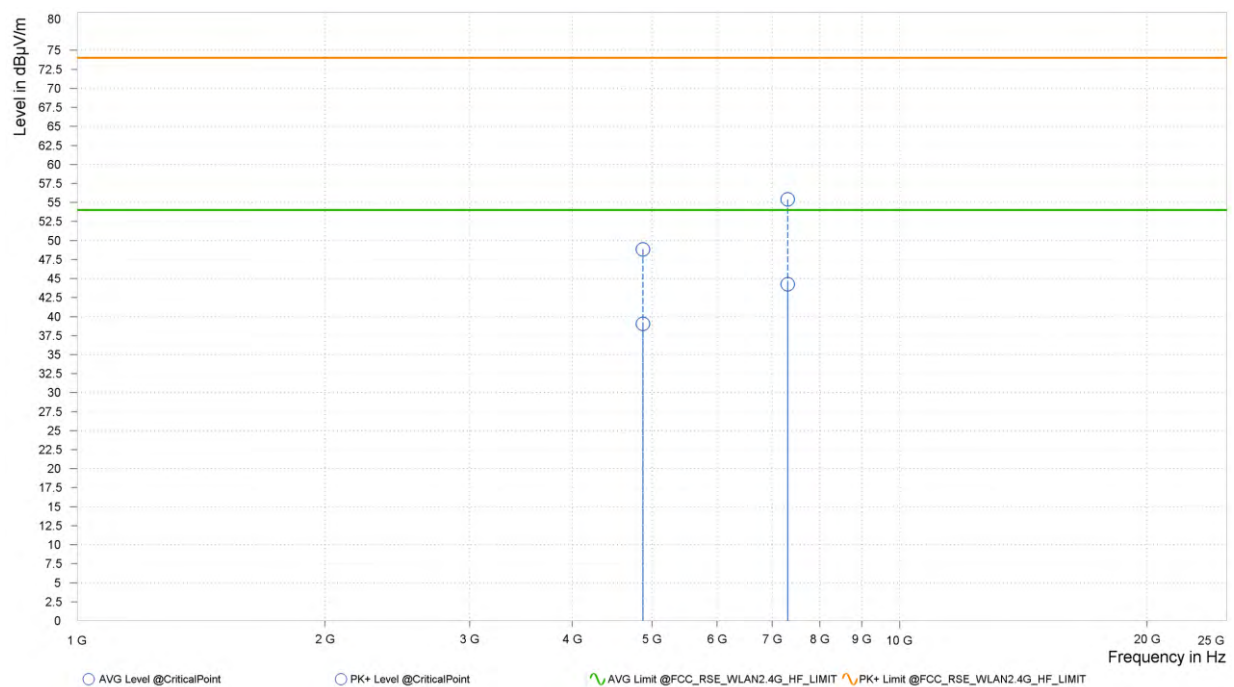


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VERITAS

Test Report No.: PSU-QSU2312140113RF10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	4,874.000	48.84	74.00	25.16	39.02	54.00	14.98	13.53	V	335.2	1.00
2	7,311.000	55.41	74.00	18.59	44.24	54.00	9.76	18.89	V	1	2.00



REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value–Emission level.
- 2437MHz: Fundamental frequency.



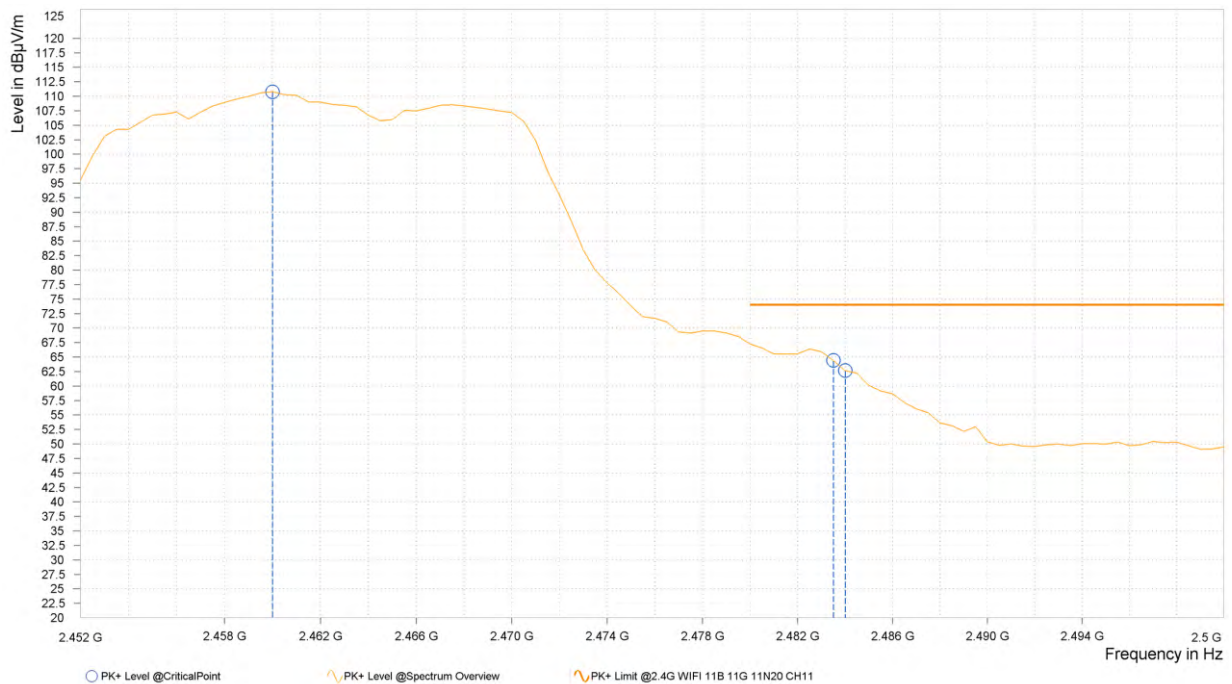
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Test Report No.: PSU-QSU2312140113RF10

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dB μ V/m]	PK+ Limit [dB μ V/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,460.000	110.78			5.83	H	7.4	2.00
2	2,483.500	64.39	74.00	9.61	5.91	H	7	1.00
2	2,484.000	62.64	74.00	11.36	5.92	H	72.2	1.00

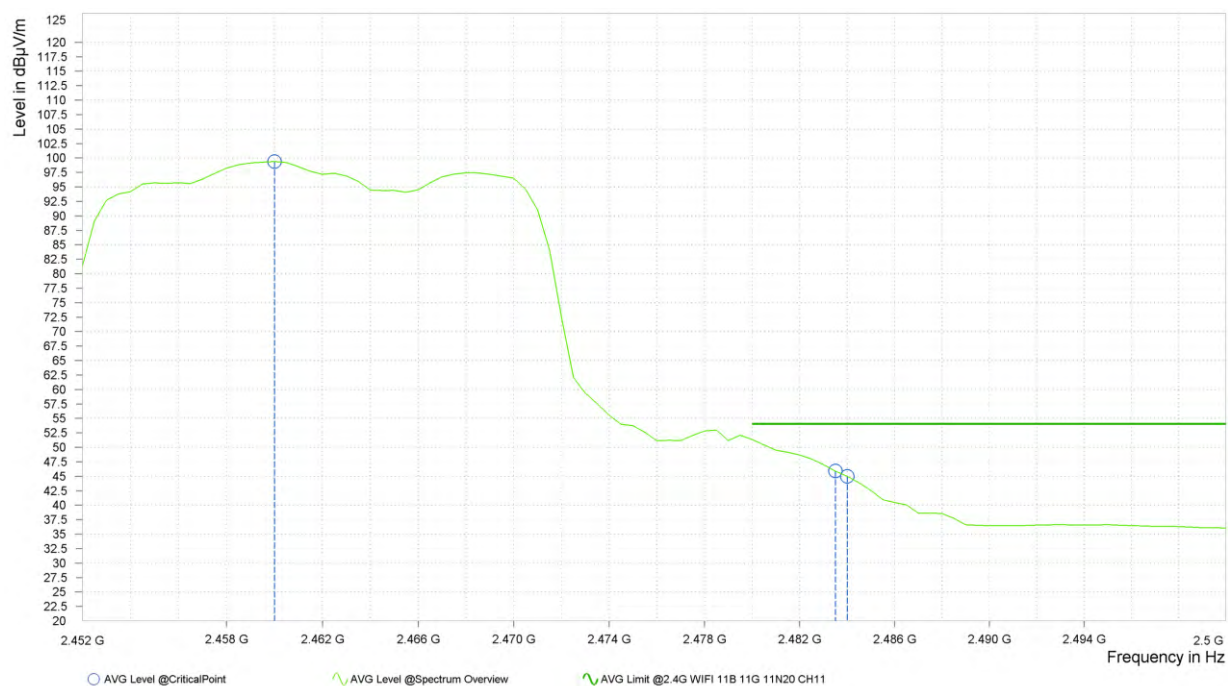




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Test Report No.: PSU-QSU2312140113RF10

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,460.000	99.38			5.83	H	359	2.00
2	2,483.500	45.89	54.00	8.11	5.91	H	5.6	1.00
2	2,484.000	45.00	54.00	9.00	5.92	H	69.8	1.00



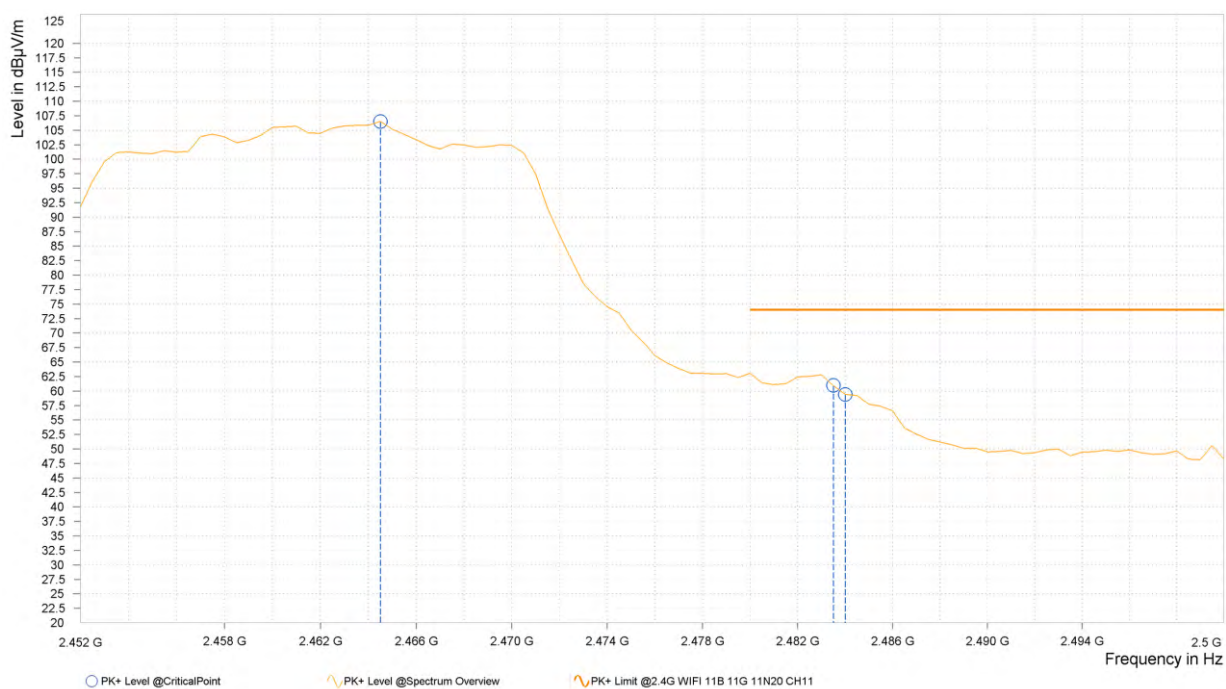


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Test Report No.: PSU-QSU2312140113RF10

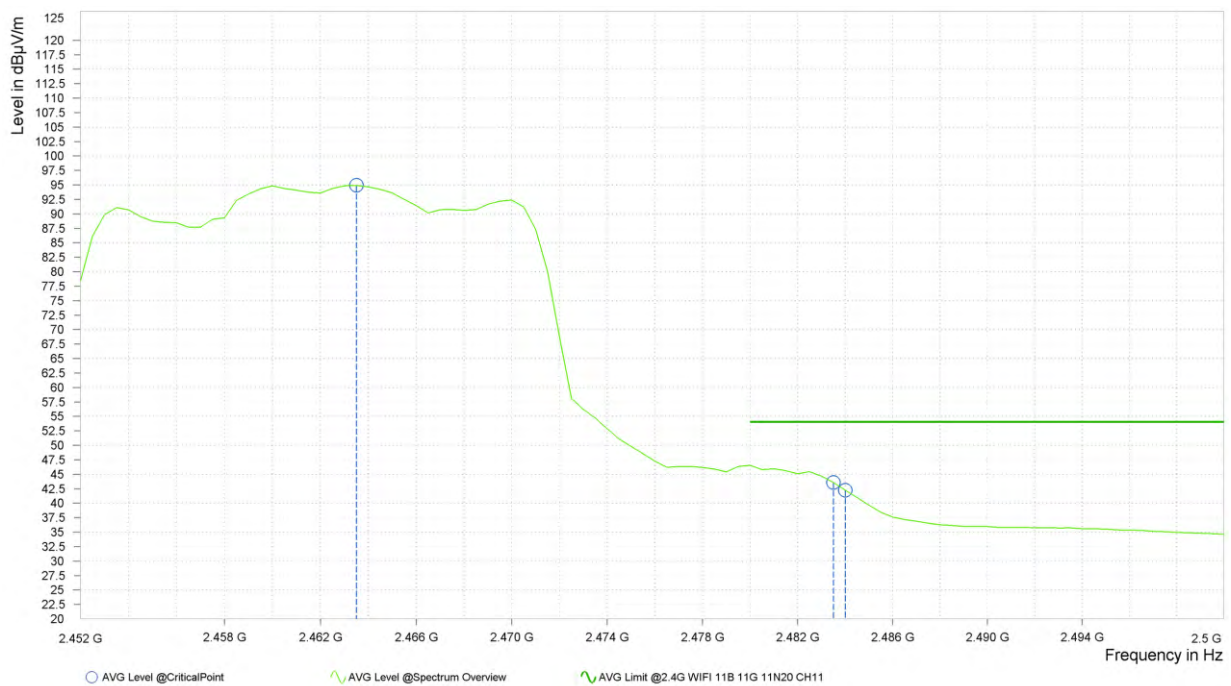
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,464.500	106.52			5.81	V	5	1.00
2	2,483.500	60.95	74.00	13.05	5.91	V	1	1.00
2	2,484.000	59.42	74.00	14.58	5.92	V	5	1.00





Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,463.500	94.91			5.81	V	5	1.00
2	2,483.500	43.59	54.00	10.41	5.91	V	359.1	1.00
2	2,484.000	42.26	54.00	11.74	5.92	V	359.1	1.00



REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value–Emission level .
- 2462MHz: Fundamental frequency.



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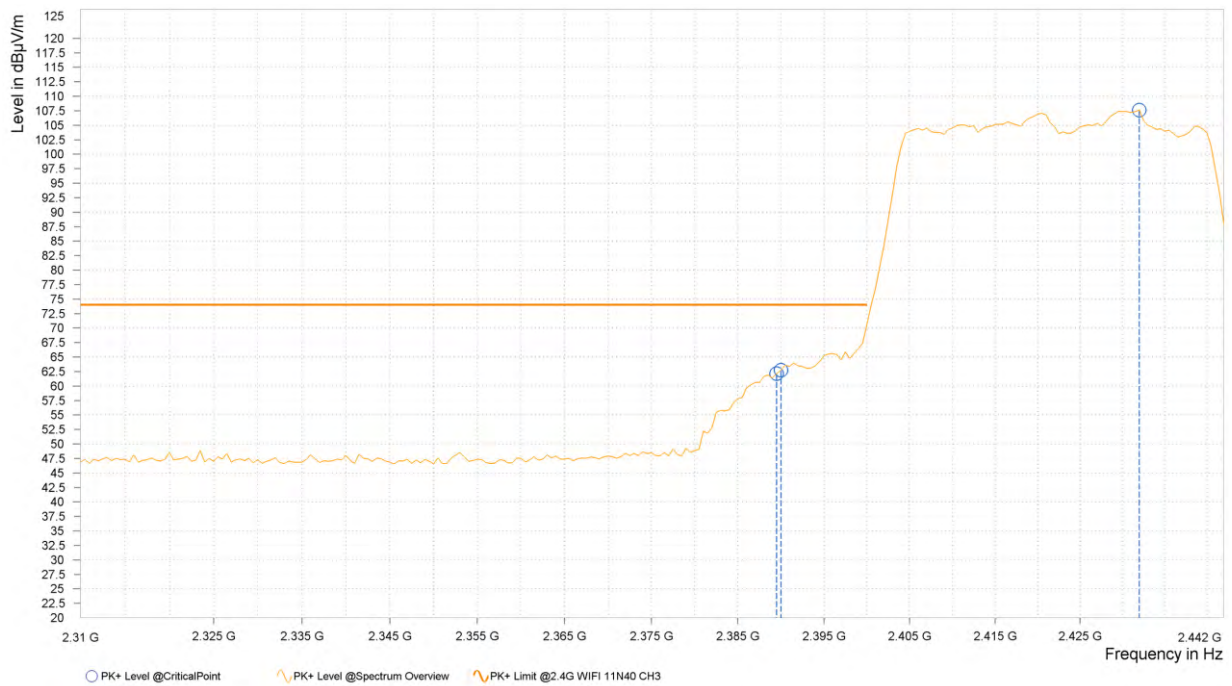
Test Report No.: PSU-QSU2312140113RF10

802.11n (40MHz)

CHANNEL	TX Channel 3	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

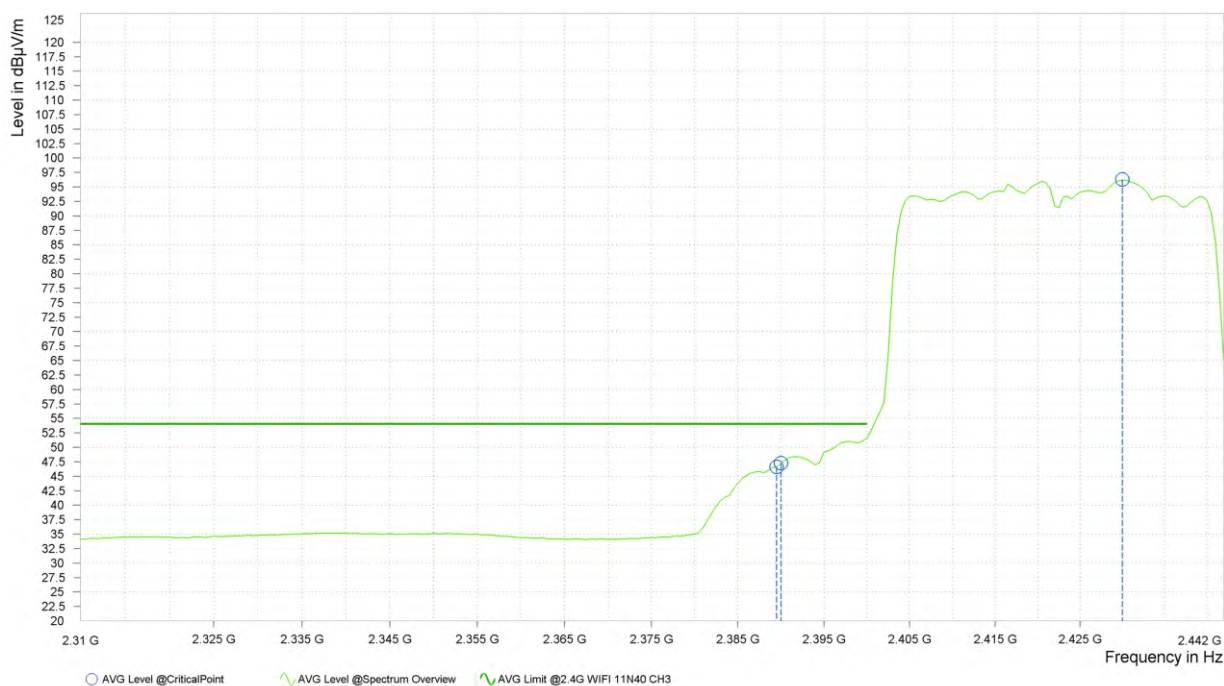
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	2,389.500	62.12	74.00	11.88	5.77	H	353.8	1.00
3	2,390.000	62.72	74.00	11.28	5.77	H	1	1.00
3	2,432.000	107.63			5.93	H	63.1	2.00





Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	2,389.500	46.62	54.00	7.38	5.77	H	68.7	1.00
3	2,390.000	47.24	54.00	6.76	5.77	H	359.1	1.00
3	2,430.000	96.28			5.93	H	1	2.00



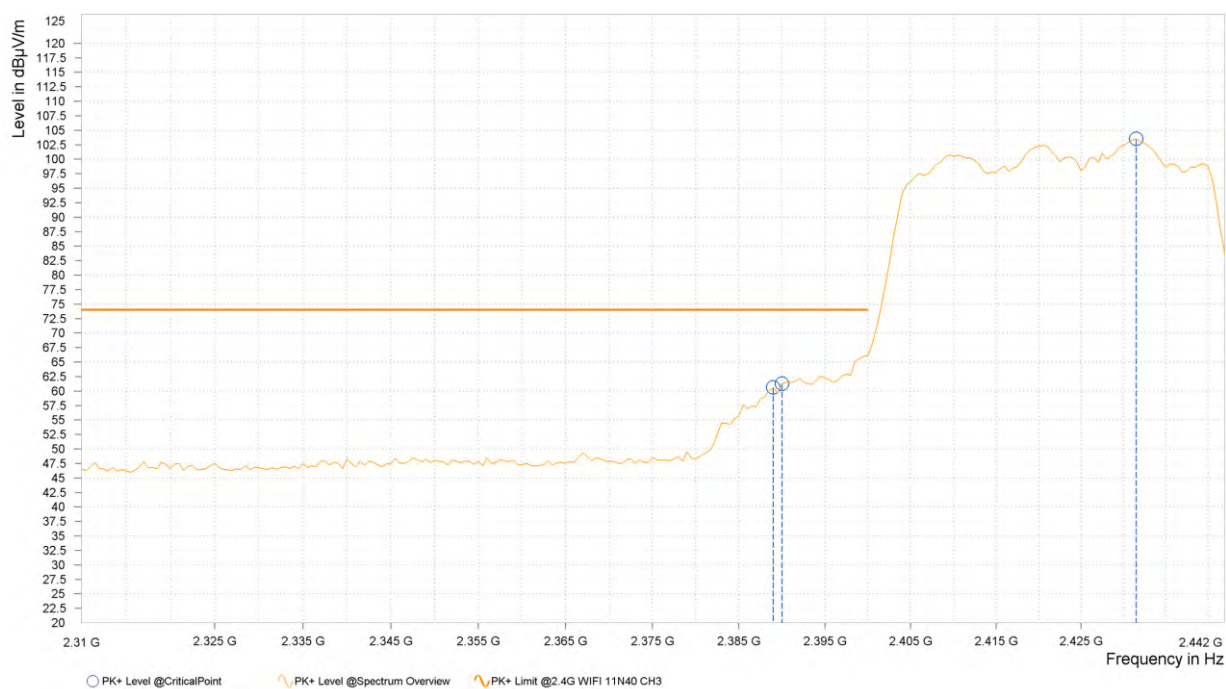


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VERITAS

Test Report No.: PSU-QSU2312140113RF10

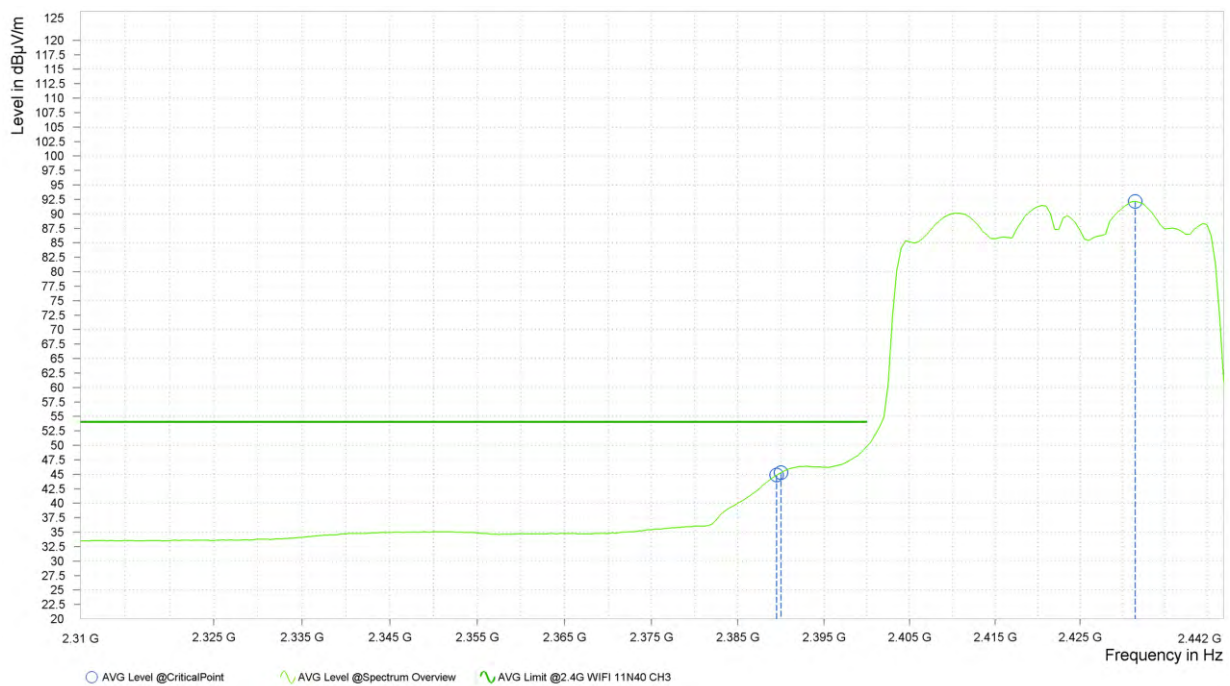
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	2,389.000	60.60	74.00	13.40	5.76	V	353.8	1.00
3	2,390.000	61.26	74.00	12.74	5.77	V	353.8	1.00
3	2,431.500	103.51			5.93	V	1	1.00





Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	2,389.500	44.86	54.00	9.14	5.77	V	299.4	1.00
3	2,390.000	45.26	54.00	8.74	5.77	V	299.4	1.00
3	2,431.500	92.16			5.93	V	1	1.00

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value–Emission level.
2. 2422MHz: Fundamental frequency.



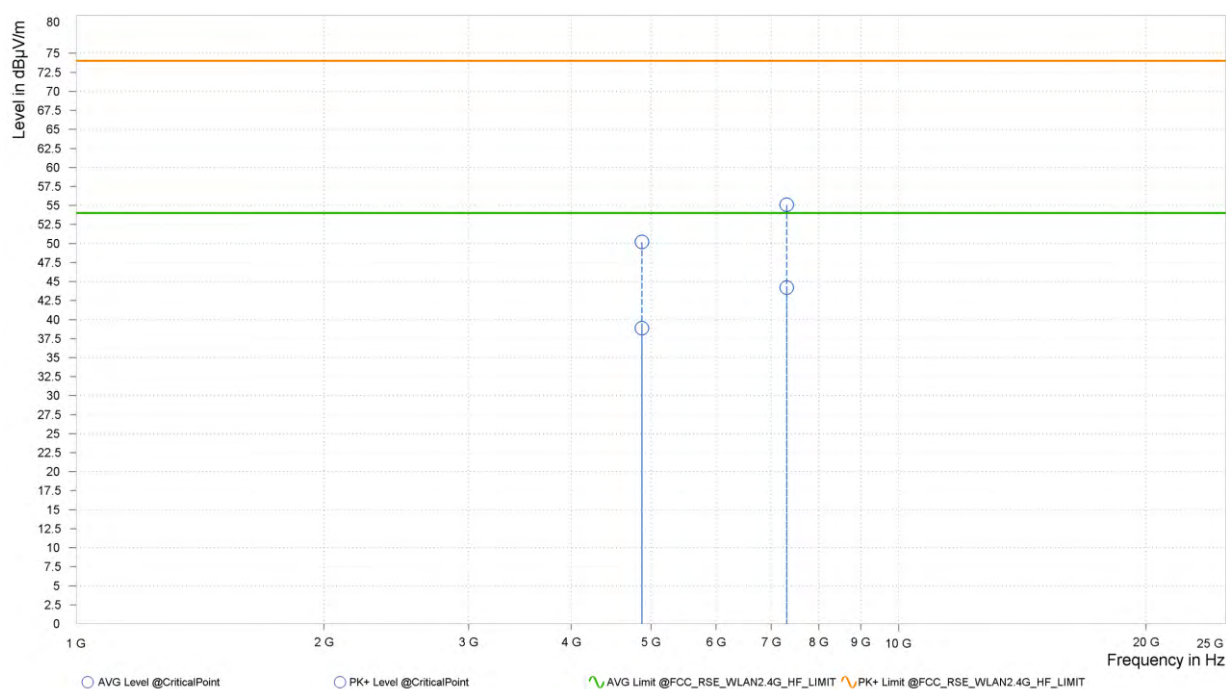
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Test Report No.: PSU-QSU2312140113RF10

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	4,874.000	50.20	74.00	23.80	38.86	54.00	15.14	13.53	H	0.9	2.00
2	7,311.000	55.10	74.00	18.90	44.21	54.00	9.79	18.89	H	271	2.00



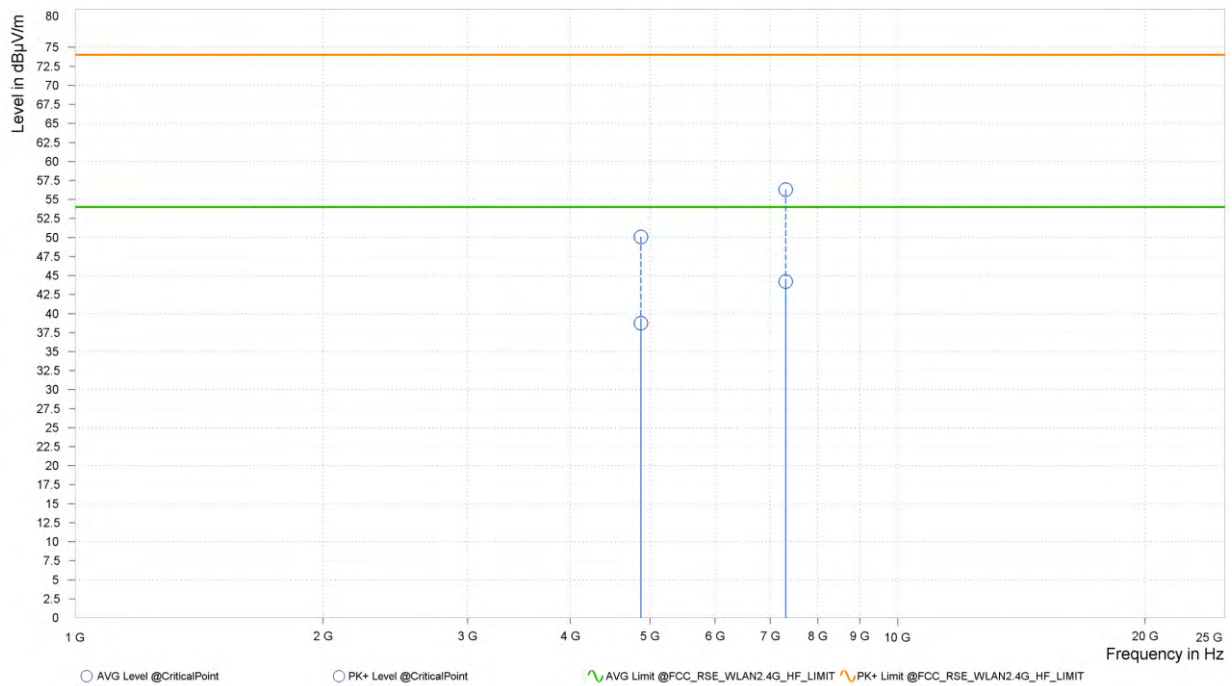


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Test Report No.: PSU-QSU2312140113RF10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	4,874.000	50.08	74.00	23.92	38.71	54.00	15.29	13.53	V	269.8	2.00
2	7,311.000	56.32	74.00	17.68	44.19	54.00	9.81	18.89	V	24.8	2.00



REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value–Emission level.
- 2437MHz: Fundamental frequency.



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Test Report No.: PSU-QSU2312140113RF10

CHANNEL	TX Channel 9	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	2,461.000	107.58			5.83	H	5.8	2.00
4	2,483.500	63.76	74.00	10.24	5.91	H	4.9	1.00
4	2,484.000	65.46	74.00	8.54	5.92	H	4.9	1.00





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Test Report No.: PSU-QSU2312140113RF10

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	2,460.500	96.44			5.83	H	0.9	2.00
4	2,483.500	50.13	54.00	3.87	5.91	H	4.9	1.00
4	2,484.000	49.75	54.00	4.25	5.92	H	4.9	1.00



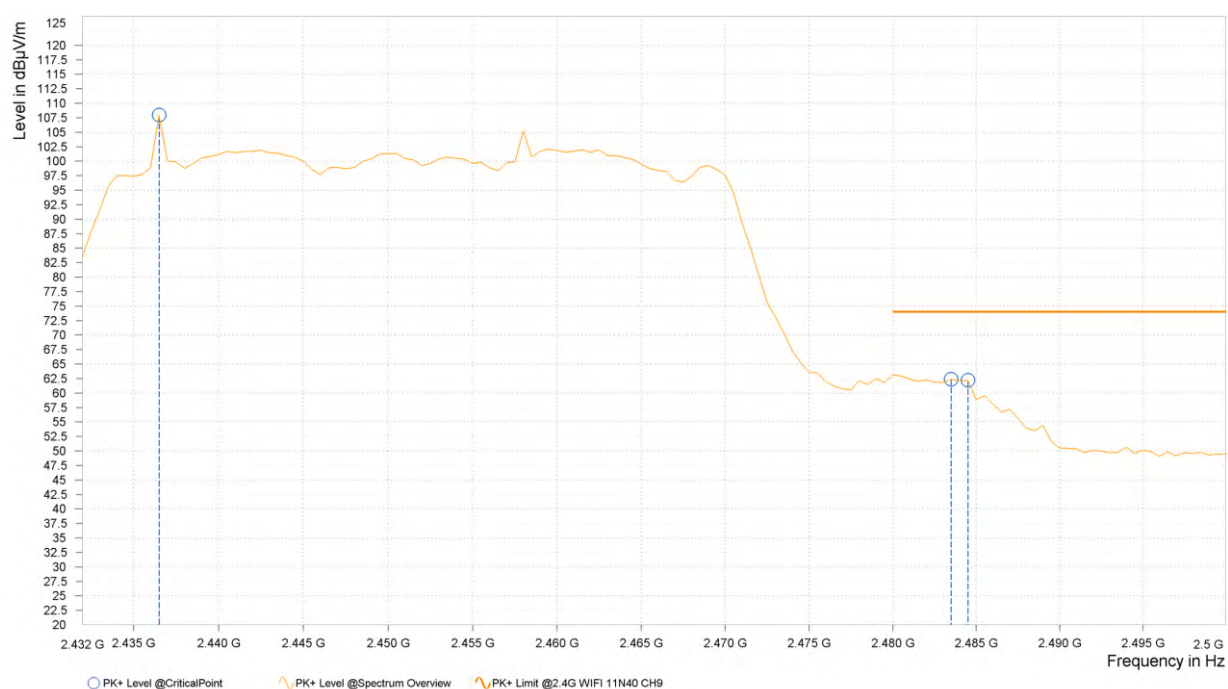


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Test Report No.: PSU-QSU2312140113RF10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	2,436.500	107.93			5.92	V	206.5	2.00
4	2,483.500	62.38	74.00	11.62	5.91	V	359.1	1.00
4	2,484.500	62.19	74.00	11.81	5.92	V	354.6	1.00





Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	2,440.000	91.23			5.91	V	1	1.00
4	2,483.500	45.00	54.00	9.00	5.91	V	312.4	1.00
4	2,484.000	44.44	54.00	9.56	5.92	V	312.4	1.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value–Emission level.
2. 2452MHz: Fundamental frequency.



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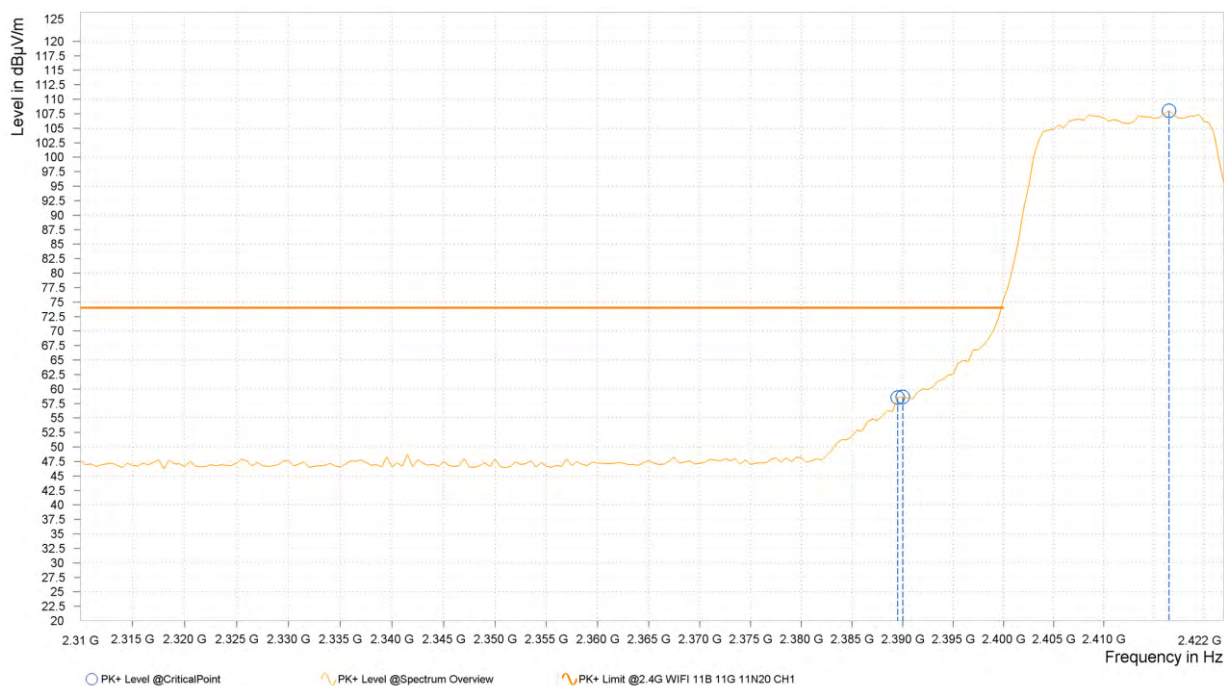
Test Report No.: PSU-QSU2312140113RF10

802.11ac (20MHz)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.500	58.51	74.00	15.49	5.77	H	356.1	1.00
1	2,390.000	58.66	74.00	15.34	5.77	H	359	1.00
1	2,416.500	108.03			5.95	H	64.2	2.00

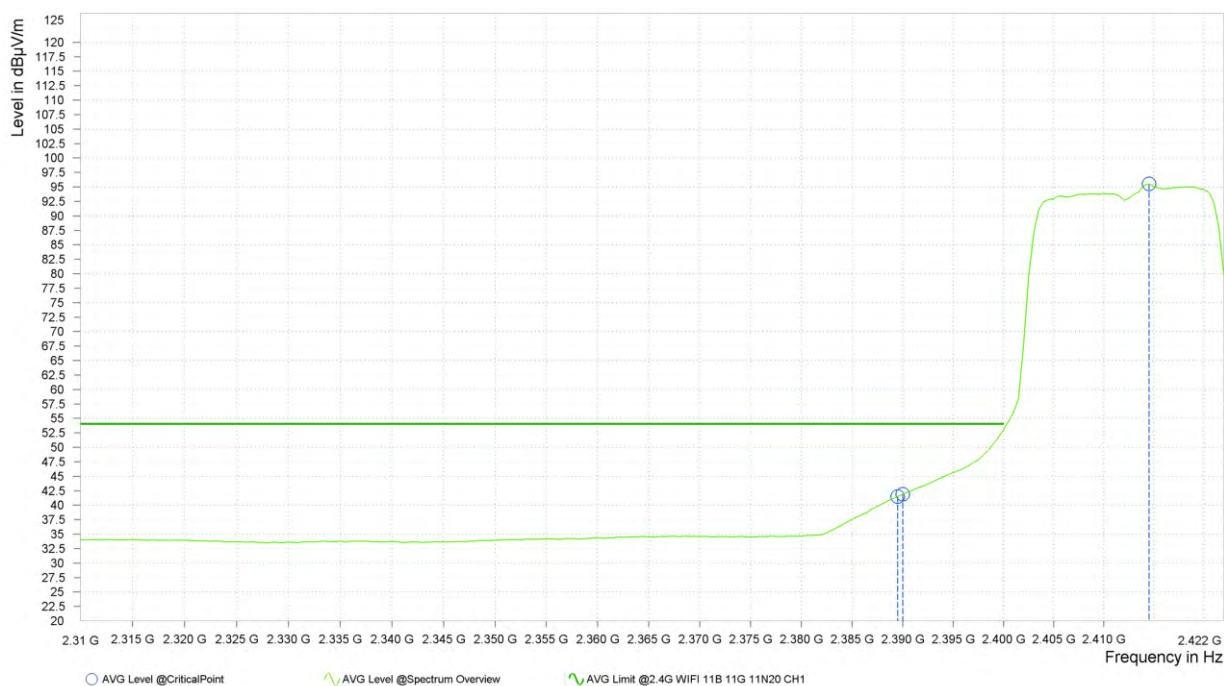




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Test Report No.: PSU-QSU2312140113RF10

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.500	41.50	54.00	12.50	5.77	H	359.1	1.00
1	2,390.000	41.88	54.00	12.12	5.77	H	359.1	1.00
1	2,414.500	95.53			5.94	H	64.2	2.00



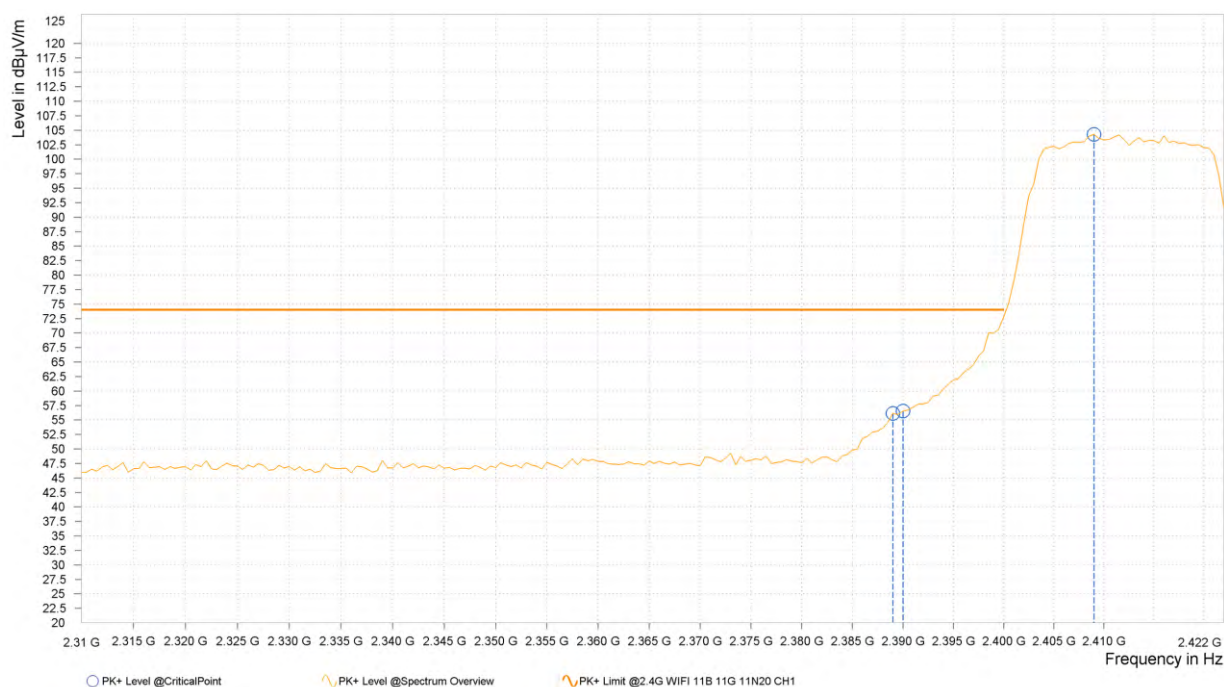


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Test Report No.: PSU-QSU2312140113RF10

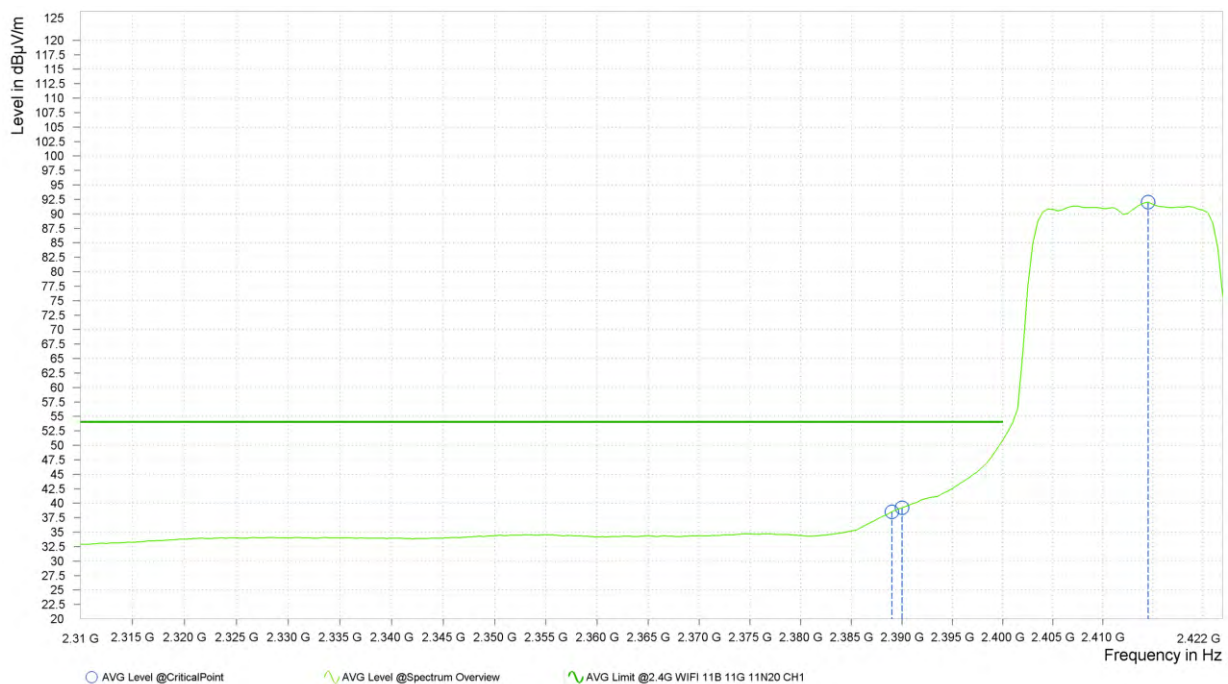
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.000	56.14	74.00	17.86	5.76	V	359	1.00
1	2,390.000	56.52	74.00	17.48	5.77	V	357.8	1.00
1	2,409.000	104.28			5.90	V	357.8	1.00





Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,389.000	38.51	54.00	15.49	5.76	V	359.1	1.00
1	2,390.000	39.20	54.00	14.80	5.77	V	359.1	1.00
1	2,414.500	92.04			5.94	V	352.2	1.00

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value- Emission level.
2. 2412MHz: Fundamental frequency.



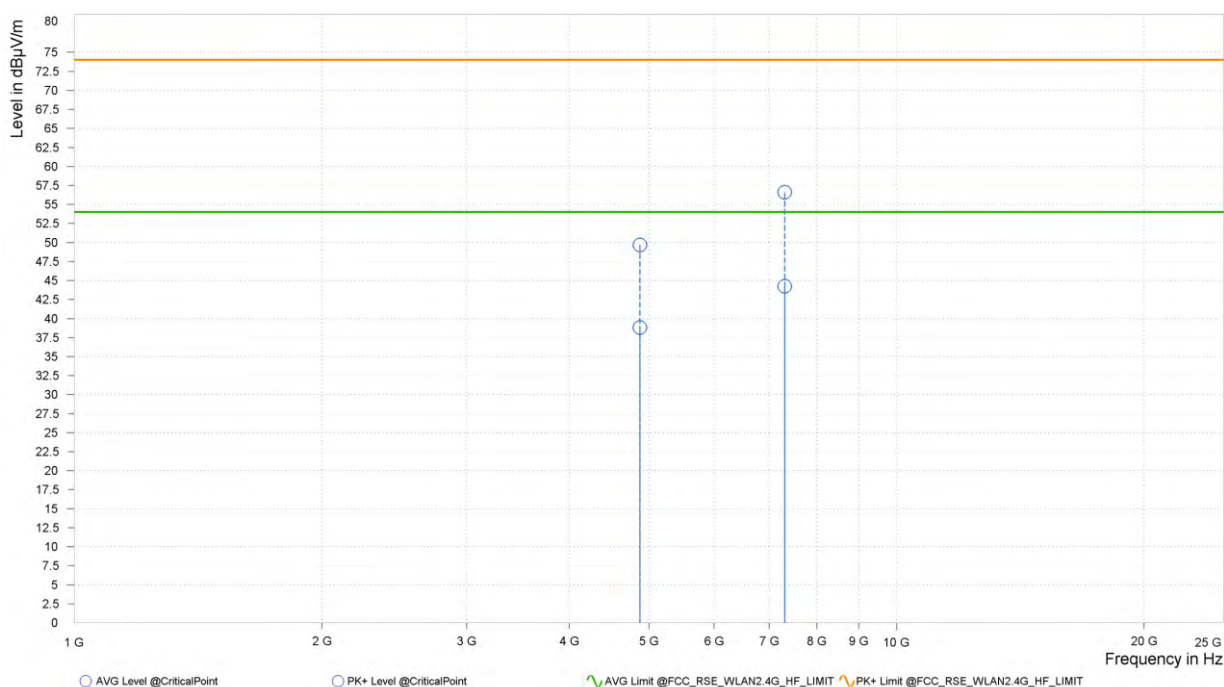
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Test Report No.: PSU-QSU2312140113RF10

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	4,874.000	49.69	74.00	24.31	38.82	54.00	15.18	13.53	H	359	2.00
2	7,311.000	56.61	74.00	17.39	44.23	54.00	9.77	18.89	H	337.4	1.00



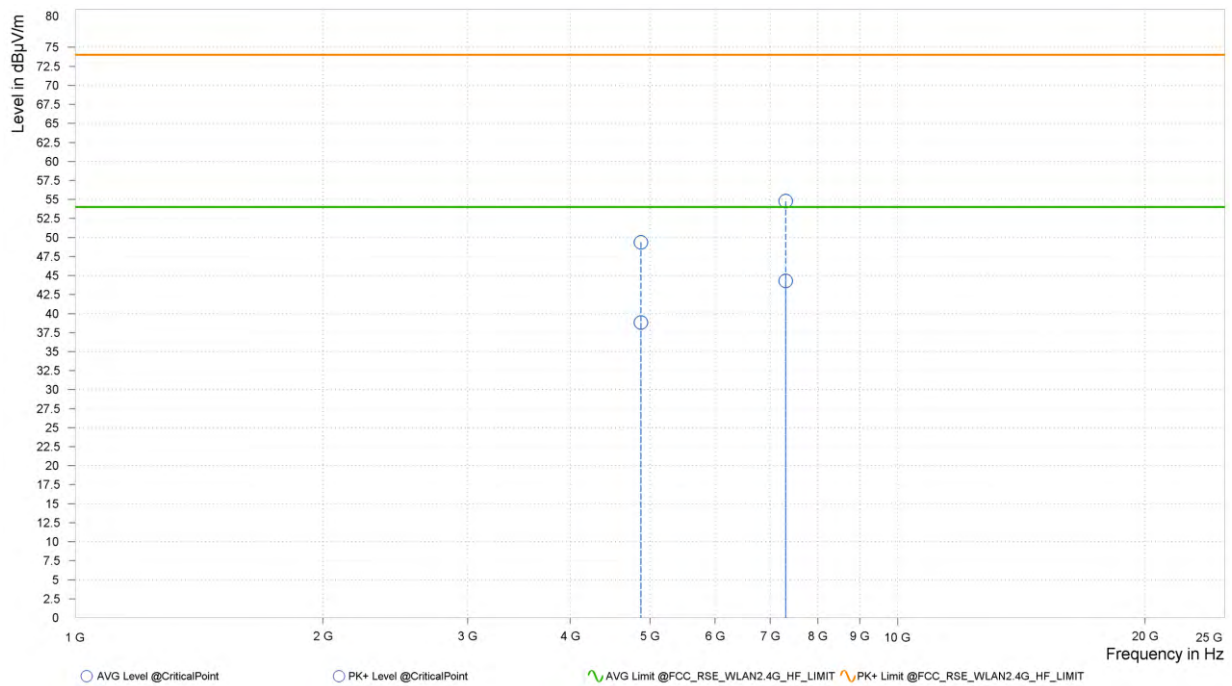


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Test Report No.: PSU-QSU2312140113RF10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	4,874.000	49.37	74.00	24.63	38.80	54.00	15.20	13.53	V	359	2.00
2	7,311.000	54.77	74.00	19.23	44.31	54.00	9.69	18.89	V	359	2.00



REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value–Emission level.
- 2437MHz: Fundamental frequency.



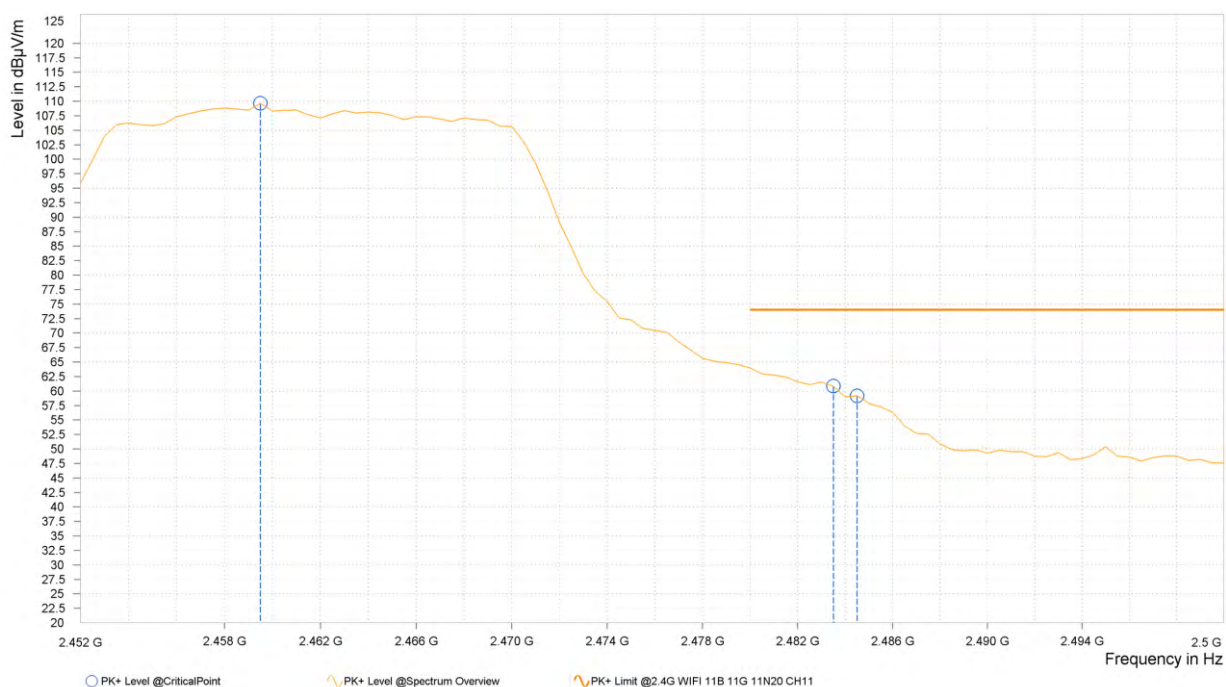
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Test Report No.: PSU-QSU2312140113RF10

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,459.500	109.62			5.84	H	359	2.00
2	2,483.500	60.84	74.00	13.16	5.91	H	355	2.00
2	2,484.500	59.18	74.00	14.82	5.92	H	5	1.00

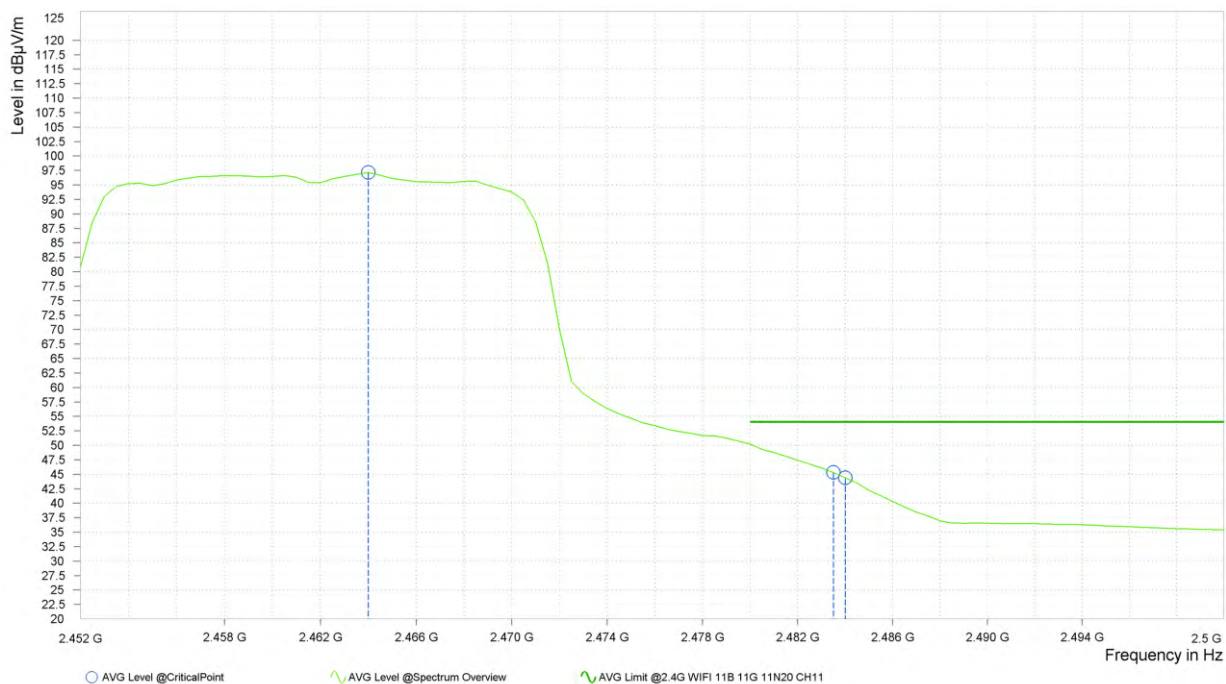




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Test Report No.: PSU-QSU2312140113RF10

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,464.000	97.15			5.81	H	359	2.00
2	2,483.500	45.32	54.00	8.68	5.91	H	355.1	2.00
2	2,484.000	44.38	54.00	9.62	5.92	H	355.1	2.00



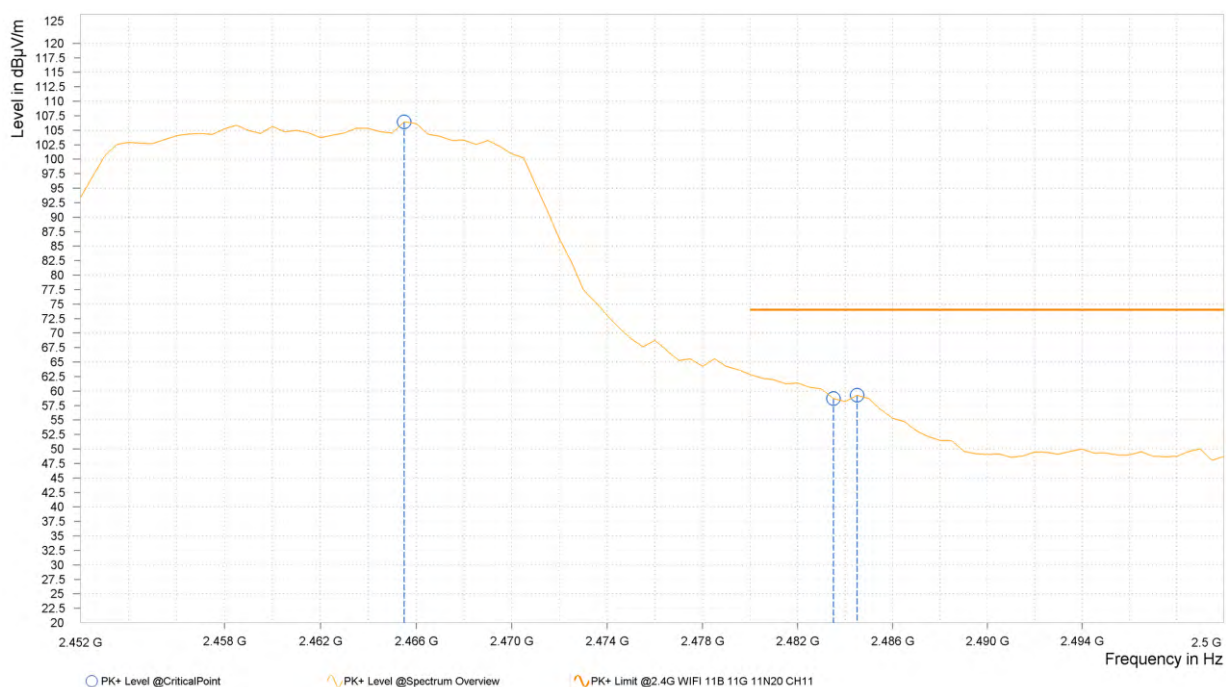


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Test Report No.: PSU-QSU2312140113RF10

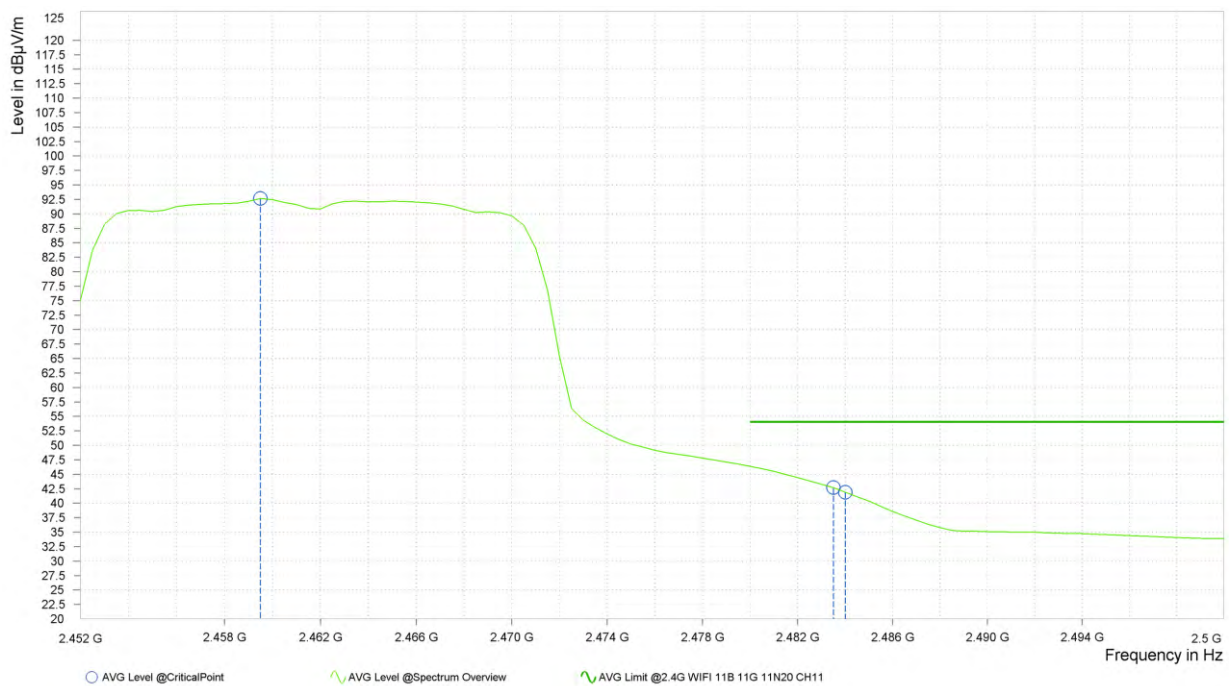
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,465.500	106.46			5.80	V	359	1.00
2	2,483.500	58.72	74.00	15.28	5.91	V	359	1.00
2	2,484.500	59.26	74.00	14.74	5.92	V	1	1.00





Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,459.500	92.65			5.84	V	4.2	1.00
2	2,483.500	42.68	54.00	11.32	5.91	V	359	1.00
2	2,484.000	41.91	54.00	12.09	5.92	V	359	1.00



REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value–Emission level .
- 2462MHz: Fundamental frequency.



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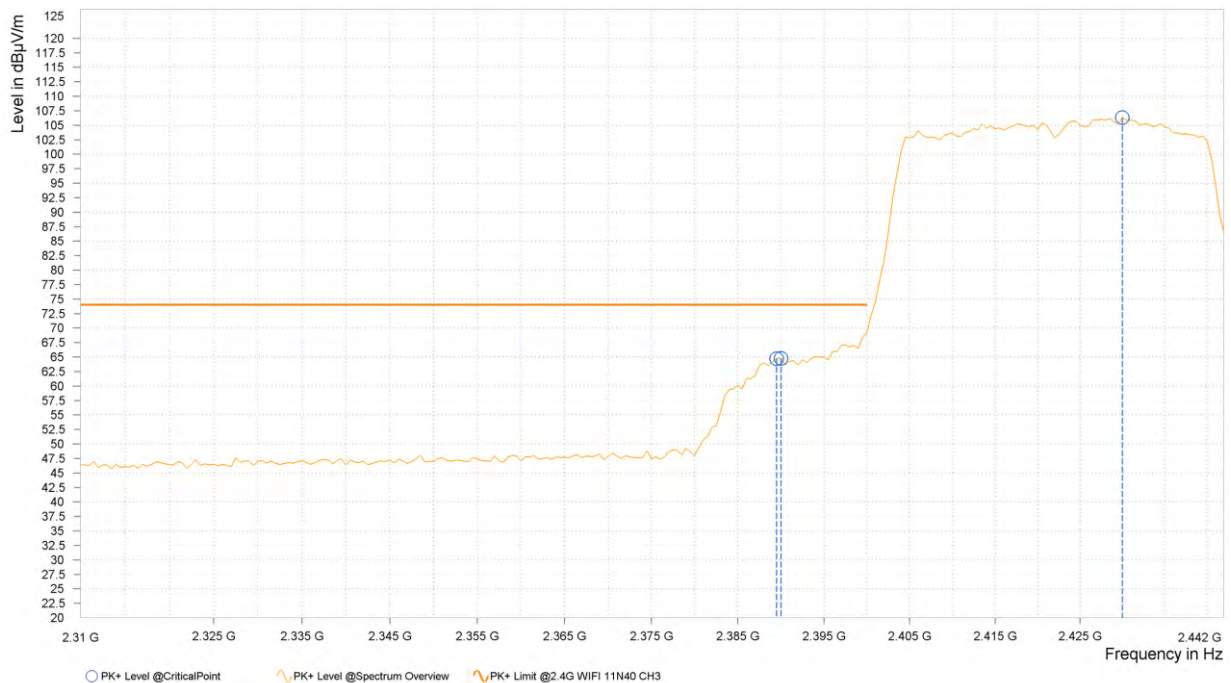
Test Report No.: PSU-QSU2312140113RF10

802.11ac(40MHz)

CHANNEL	TX Channel 3	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	2,389.500	64.73	74.00	9.27	5.77	H	72.2	1.00
3	2,390.000	64.76	74.00	9.24	5.77	H	72.2	1.00
3	2,430.000	106.34			5.93	H	1	2.00

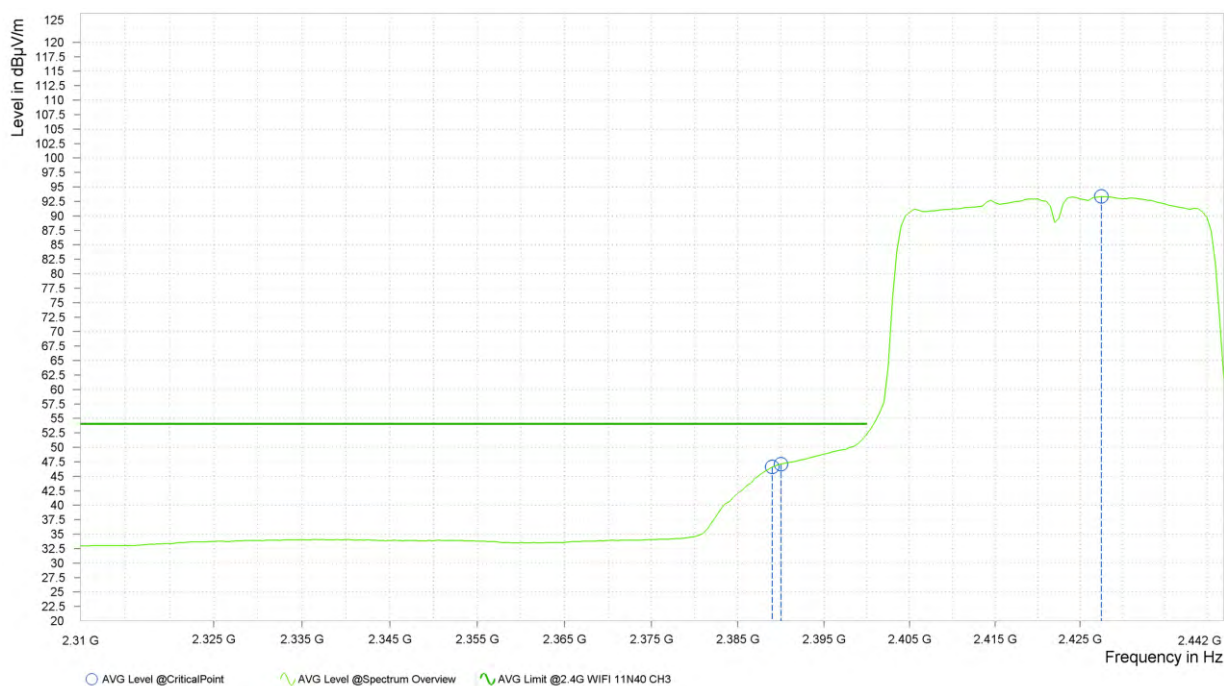




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Test Report No.: PSU-QSU2312140113RF10

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	2,389.000	46.60	54.00	7.40	5.76	H	72.2	1.00
3	2,390.000	47.10	54.00	6.90	5.77	H	72.2	1.00
3	2,427.500	93.34			5.94	H	1	2.00





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Test Report No.: PSU-QSU2312140113RF10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	2,388.500	63.20	74.00	10.80	5.76	V	359.1	1.00
3	2,390.000	62.65	74.00	11.35	5.77	V	359.1	1.00
3	2,424.000	103.14			5.95	V	1	1.00

