



BUREAU  
VERITAS

Test Report No.: PSU-NQN2405090215RF10



Certificate #6613.01

# TEST REPORT

Applicant:	HMD Global Oy
Address:	Bertel Jungin aukio 9 Espoo 02600 Finland

Manufacturer or Supplier:	HMD Global Oy
Address:	Bertel Jungin aukio 9 Espoo 02600 Finland
Product:	Mobile Phone
Brand Name:	HMD
Model Name:	TA-1606
FCC ID:	2AJOTTA-1606
Date of tests:	May. 14, 2024 ~ Jun. 13, 2024

The submitted sample of the above equipment has been tested for according to the requirements of the following standards:

- FCC Part 15, Subpart C, Section 15.247     ANSI C63.10-2013
- FCC Part 15, Subpart E, Section 15.407
- FCC Part 22     FCC Part 24
- FCC Part 27
- FCC Part 2     ANSI/TIA/EIA-603-D
- ANSI/TIA/EIA-603-E     ANSI C63.26-2015

**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: Jun. 13, 2024

Date: Jun. 13, 2024

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



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Test Report No.: PSU-NQN2405090215RF10

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-NQN2405090215RF10	Original release	Jun. 13, 2024



# 1 GENERAL INFORMATION

## 1.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT*</b>	Mobile Phone	
<b>BRAND NAME*</b>	HMD	
<b>MODEL NAME*</b>	TA-1606	
<b>NOMINAL VOLTAGE*</b>	5.0 or 9.0 or 12.0 Vdc (adapter) 3.87Vdc (battery)	
<b>MODULATION TYPE*</b>	<b>BT_LE</b>	GFSK
	<b>Bluetooth</b>	GFSK, $\pi/4$ -DQPSK, 8DPSK
	<b>FM</b>	FM
	<b>NFC</b>	ASK
	<b>WLAN</b>	DSSS, OFDM
	<b>GPS/GALILEO/G LONASS</b>	BPSK
	<b>GSM/GPRS/EDGE</b>	GMSK /8PSK
	<b>WCDMA</b>	HSDPA/HSUPA/DC-HSDPA/ HSUPA+
	<b>LTE</b>	QPSK /16QAM /64QAM
<b>OPERATING FREQUENCY*</b>	<b>Bluetooth/BT_LE</b>	2402MHz ~ 2480MHz
	<b>FM</b>	87.5MHz ~ 108MHz
	<b>NFC</b>	13.56 MHz
	<b>WLAN</b>	2412 ~ 2462MHz for 11b/g/n(HT20/40) 5180 ~ 5240MHz, 5260 ~ 5320 MHz, 5500 ~ 5720MHz, 5745 ~ 5825 MHz for 11a/ n(HT20)/ n(HT40) / ac(VHT20)/ ac(VHT40) / ac(VHT80)
	<b>GPS/GALILEO/G LONASS</b>	1559MHz ~ 1610MHz
	<b>GSM</b>	824.2MHz ~ 848.8MHz (FOR GSM 850) 1850.2MHz ~ 1909.8MHz (FOR GSM 1900)
	<b>WCDMA</b>	1852.4MHz ~ 1907.6MHz(FOR WCDMA Band 2) 1712.4MHz ~ 1752.6MHz(FOR WCDMA Band 4) 826.4MHz ~ 846.6MHz (FOR WCDMA Band 5)
	<b>LTE</b>	1850.7MHz ~ 1909.3MHz (FOR LTE Band2) 1710.7MHz ~ 1754.3MHz (FOR LTE Band4) 824.7MHz ~ 848.3MHz (FOR LTE Band5) 2502.5MHz ~ 2567.5MHz (FOR LTE Band7) 699.7MHz ~ 715.3MHz (FOR LTE Band12)



		779.5MHz ~ 784.5MHz (FOR LTE Band13) 706.5MHz ~ 713.5MHz (FOR LTE Band17) 1710.7MHz ~ 1779.3MHz (FOR LTE Band66)
<b>HIGHEST FREQUENCY*</b>	5825MHz	
<b>HW VERSION*</b>	V00	
<b>SW VERSION*</b>	V0.019_A01	
<b>I/O PORTS*</b>	Refer to user's manual	
<b>CABLE SUPPLIED*</b>	USB cable1: non-shielded cable, with w/o ferrite core, 1.0 meter USB cable2: non-shielded cable, with w/o ferrite core, 1.0 meter USB cable3: non-shielded cable, with w/o ferrite core, 1.0 meter USB cable4: non-shielded cable, with w/o ferrite core, 1.0 meter	
<b>ACCESSORY DEVICES*</b>	Refer to note as below	

**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. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
4. For the product of TA-1606 (FCC ID: 2AJOTTA-1606), the following components are different between the first and second supply, other parameters are the same.

Key Component List						
No.	Component	Description	First supply		Second supply	
			SUPPLIER	Spec	SUPPLIER	Spec
1	NMOS	PCBA	PRISEMI	PNM3FD20V2	JSCJ	CJBA3134K
2	E-compass		MEMSIC	MMCS603NJ	QST	QMC6308-TR
3	Memory-256GB		FORESEE	FEUDNN256G-C2G07	BIWIN	BWU2ASV46A256G
4	Memory-64GB		FORESEE	FLXC4008G-30	BIWIN	BWMZCX32H2A-64G-X
5	nano-SIM		LCN	CAF99-06033-0305	HRD	S186-1B01F13F
6	T-card		LCN	CAF11-08136-031901	HRD	S186-1B02F13F
7	iron covering		LCN	CAF00-21134-032307	HRD	S186-2B21F13F-1
8	Type C connector		LETCON	15-16815-110	LCN	UAF05-16323-3007
9	headphone socket		LETCON	11-058126A	HRD	PH157-0B12F36M
10	G sensor		slan	2*2 12bit	sensortek	2*2 12bit
11	Proximity light sensor		Liteon	LTR-569ALS-02	sensortek	STK3335-X
12	Backlight driver		AWINIC	dfn2*2-6L	broadchip	dfn2*2-6L
13	Flash driver		AWINIC	2A DCDC	OCS	2A DCDC
14	CKDID baschip		AWINIC	±5V	OCS	±5V
15	overvoltage protection chip		broadchip	6.8V FCQFN12	AWINIC	6.8V FCQFN12
16	CKD BDS/GPS/GAL LNA		SILICONWAVE	LNA 1.5*1.0 6pin	AWINIC	LNA 1.5*1.0 6pin
17	MIC		GETTOP	2.75*1.85*0.9mm	YUTAI	2.75*1.85*0.9mm
18	LCM	LCD	HUAXIAN	incell5.56HD+	DZX	incell5.56HD+
19	Macro cam	camera	CXT	2M CSP	lianhe	2M CSP
20	Finger print	module	SYX	side fingerprint	SHENAO	side fingerprint
21	Battery		GAOYUAN	Rated: 4900mAh Typical: 5000mAh	FENGHUA	Rated: 4900mAh Typical: 5000mAh
22	Receiver		SENNOR	'0809	TUNESS	'0809
23	Vibrator		JX	0830 3.35mm	JD	0830 3.35mm
24	Charger US		BJD	5V 2A	JUWEI	5V 2A
25	Data cable		JUWEI	A-C	FKY	A-C
			JUWEI	C-C	FKY	C-C



**List of Accessory:**

<b>ACCESSORIES</b>	<b>BRAND</b>	<b>MANUFACTURE R</b>	<b>MODEL</b>	<b>SPECIFICATION</b>
Battery 1	HMD	Gaoyuan	HBA5020AA	Power Rating: 3.87 Vdc;18.963 Wh;4900 mAh
Battery 2	HMD	Fenghua	HBA5020AA	Power Rating: 3.87 Vdc;18.963 Wh;4900 mAh
AC Adapter 1	HMD	Shenzhen Baijunda Electronics Co.,Ltd	HAD-020U(US-P D 20W)	I/P: 100-240 V,50~60Hz,0.6A O/P: USB-C Output:5.0V 3.0A or 9.0V 2.22A or 12.0V 1.67A 20.0W Max
AC Adapter 2	HMD	Shenzhen Baijunda Electronics Co.,Ltd	HAD-010U(US)	I/P: 100-240 V,50~60Hz,0.35A O/P: 5V 2A,10W
AC Adapter 3	HMD	Huizhou Juwei Electronics Co., Ltd.	HAD-010U(US)	I/P: 100-240 V,50~60Hz,0.35A O/P: 5V 2A,10W
Earphone	HMD	N/A	JWEP1266-H24H	N/A
USB Cable 1	HMD	JUWEI	JWUB1684-M01H	A to C
USB Cable 2	HMD	JUWEI	JWUB1688-M01H	C to C
USB Cable 3	HMD	FUKANGYUAN	FKY-23-368	A to C
USB Cable 4	HMD	FUKANGYUAN	FKY-23-369	C to C

## 2 SUMMARY OF TEST RESULTS

### 2.1 TEST RESULTS

TEST TYPE	Result	Test lab*
Radiated Emissions	Pass	A

#### \*Test Lab Information Reference

##### Lab A:

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

##### Lab Address:

Tower N, Innovation Center, 88 Zhuyi 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.

### 2.2 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
Radiated emissions & Radiated Power (30MHz~1GMHz)	±4.98dB
Radiated emissions & Radiated Power (1GMHz ~6GMHz)	±4.70dB
Radiated emissions (6GMHz ~18GMHz)	±4.60dB
Radiated emissions (18GMHz ~40GMHz)	±4.12dB

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





## 2.3 TEST INSTRUMENTS

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
Vector Signal Generator	R&S	SMBV100B	102176	Feb.16,24	Feb.15,26
Signal Generator	R&S	SMB100A	182185	Feb.16,24	Feb.15,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-E MC-01 Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-E MC-02 Chamber	Nov.25,22	Nov.24,25
EMI TEST Receiver	R&S	ESR26	101734	Feb.25,24	Feb.24,26
EMI TEST Receiver	R&S	ESW44	101973	Feb.25,24	Feb.24,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.28,24	Feb.27,26
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.22,22	Aug.21,24
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Feb.23,24	Feb.22,26
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Aug.22,22	Aug.21,24
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.23,24	Feb.22,26
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.27,22	Jun.26,24
Test Software	EMC32	EMC32	N/A	N/A	N/A
6DB attenuator	Tonscend Technology Co., Ltd	N/A	23062787	N/A	N/A
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	Oct.01,22	Sep.30,24
DC Source	HYELEC	HY3010B	551016	Aug.31,22	Aug.30,24
Hygrothermograph	DELI	20210528	SZ014	Sep.06,22	Sep.05,24
PC	LENOVO	E14	HRSW0024	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-7.00M	N/A	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-4.00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Apr.26,24	Apr.25,25
CABLE	R&S	W12.14	N/A	Apr.26,24	Apr.25,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.26,24	Apr.25,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.26,24	Apr.25,25
Temperature Chamber	votsch	VT4002	58566078100050	May.31,22	May.30,24



Temperature Chamber	votsch	VT4002	5856607810 0050	May.30,24	May.29,26
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- NOTE:**
- 1.The calibration interval of the above test instruments is 12 months or 24 months or 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 test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
  4. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.

## 2.4 REFERENCED STANDARDS

The following referenced standards are necessary for the report. For undated references in this report, the cited version applies.

No.	Identify	Note
1	FCC Part 15, Subpart C, Section 15.247	For 2.4G WIFI&BT
2	FCC Part 15, Subpart E, Section 15.407	For 5G WIFI
3	FCC PART 22, Subpart H	For WWAN
	FCC PART 24, Subpart E	For WWAN
4	FCC Part 27	For WWAN

**Note:** More informations and test procedures pls refer to 15.247/15.407/Part22/Part24/ Part27 reports.

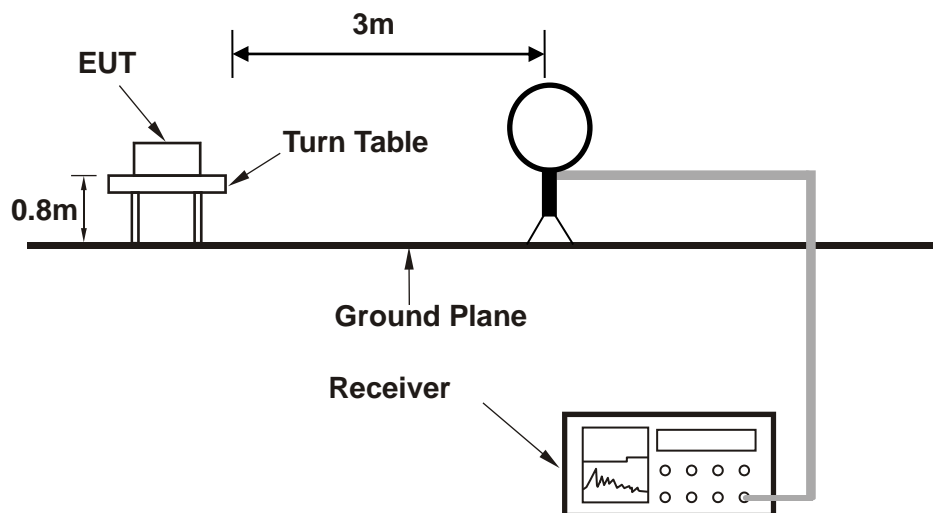
## 2.5 TEST CONFIGURATIONS

Test Configurations	Description
Worst case test Mode	
1	2.4G WIFI 11N20 CH11+WCDMA B5
2	5G WIFI 11N20 CH140+LTE B13 5M
3	BT2.0 1DH5 CH78+EDGE1900

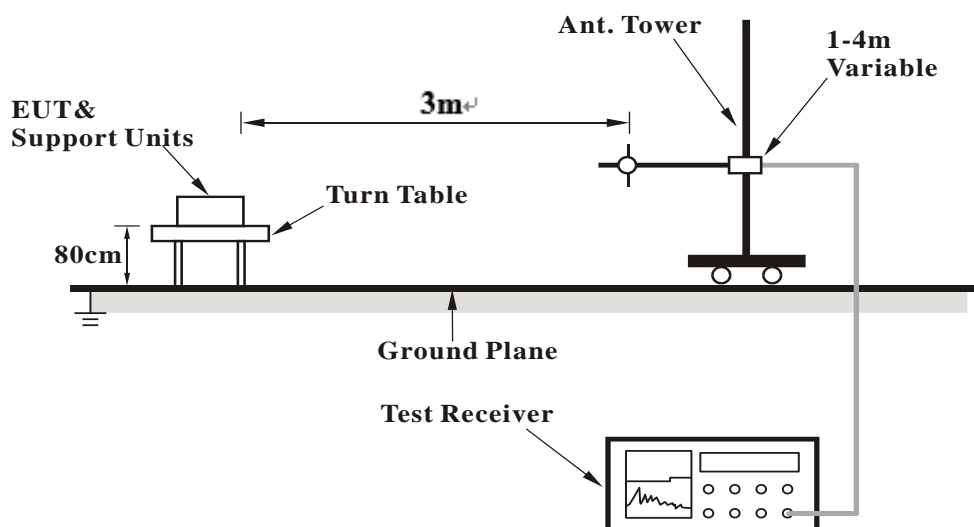
- Note:**
1. Test equipment and site refer to Referenced Standards report
  2. For higher frequency, the emission is 20dB below the limit was not record

## 2.6 TEST DATA

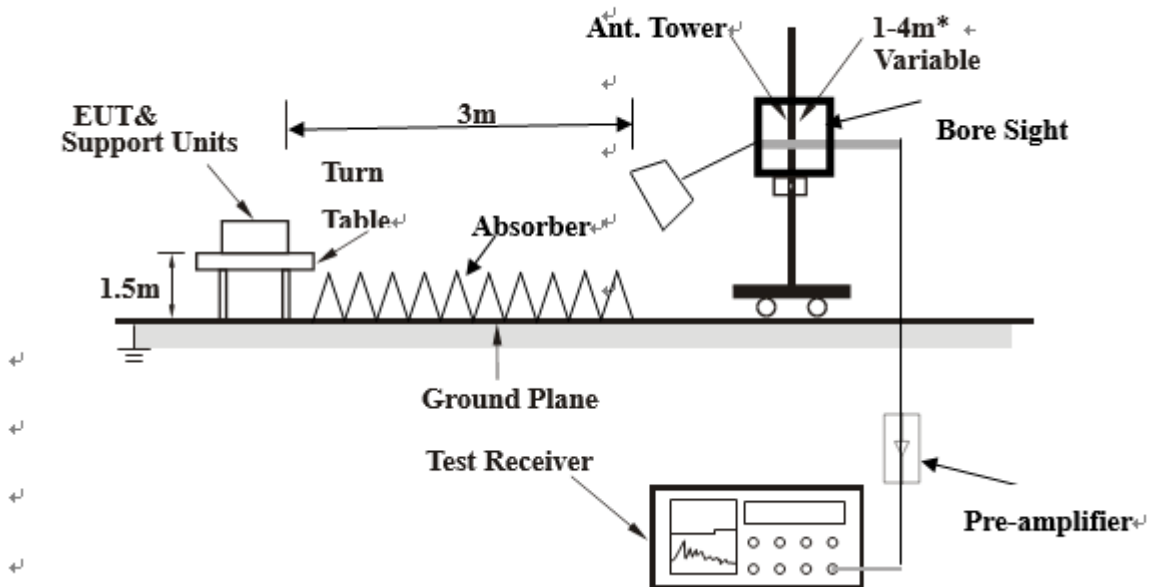
<Frequency Range 9KHz~30MHz >



< 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).

2.6.1 EUT OPERATING CONDITIONS

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

## 2.6.2 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.

### 2.4G WIFI 11N20 CH11+WCDMA B5:

#### BELOW 1GHz WORST-CASE DATA:

#### 30MHz – 1GHz data:

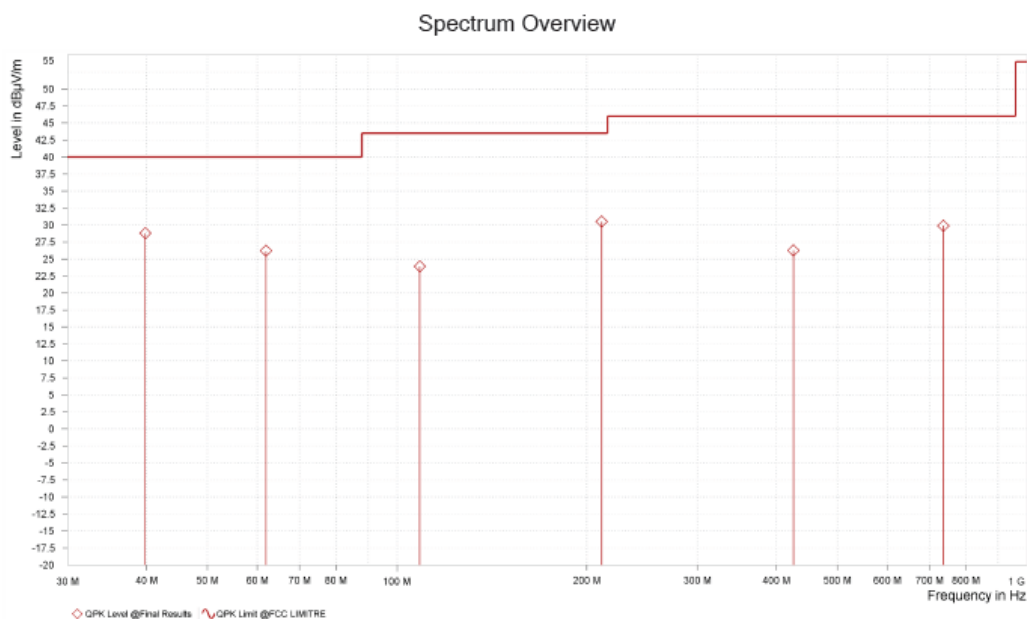
<b>CHANNEL</b>	2.4G WIFI 11N20 CH11+WCDMA B5	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	30MHz ~ 1GHz		

#### 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	39.846	28.77	40.00	11.23	-4.77	H	0.9	2.00	120.000
1	61.913	26.17	40.00	13.83	-5.50	H	5	1.00	120.000
1	108.667	23.91	43.50	19.59	-6.02	H	222	2.00	120.000
1	211.245	30.49	43.50	13.01	-5.18	H	79.8	2.00	120.000
1	426.003	26.25	46.00	19.75	3.29	H	222	2.00	120.000
1	737.130	29.88	46.00	16.12	4.46	H	269.5	1.00	120.000

#### REMARKS:

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Limit value – Emission level.





<b>CHANNEL</b>	2.4G WIFI 11N20 CH11+WCDMA B5	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	30MHz ~ 1GHz		

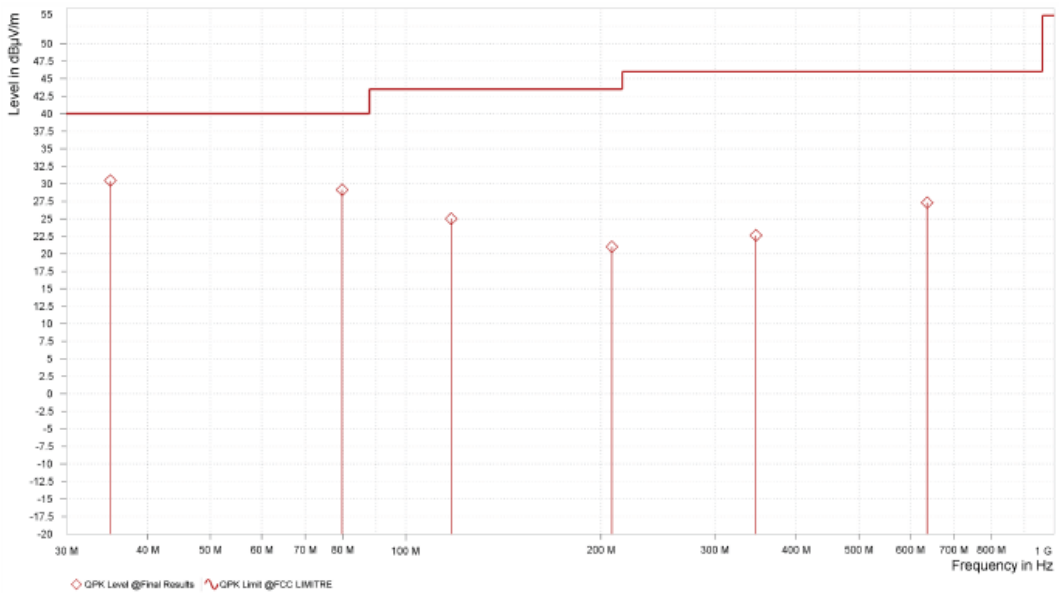
**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

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	35.044	30.44	40.00	9.56	-8.16	V	139.2	1.00	120.000
1	79.810	29.12	40.00	10.88	-10.96	V	359	1.00	120.000
1	117.640	24.98	43.50	18.52	-6.52	V	281.4	1.00	120.000
1	208.141	20.99	43.50	22.51	-5.67	V	281.4	1.00	120.000
1	346.851	22.61	46.00	23.39	0.64	V	355	2.00	120.000
1	637.075	27.30	46.00	18.70	2.80	V	139.2	1.00	120.000

**REMARKS:**

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value =Limit value– Emission level.

Spectrum Overview







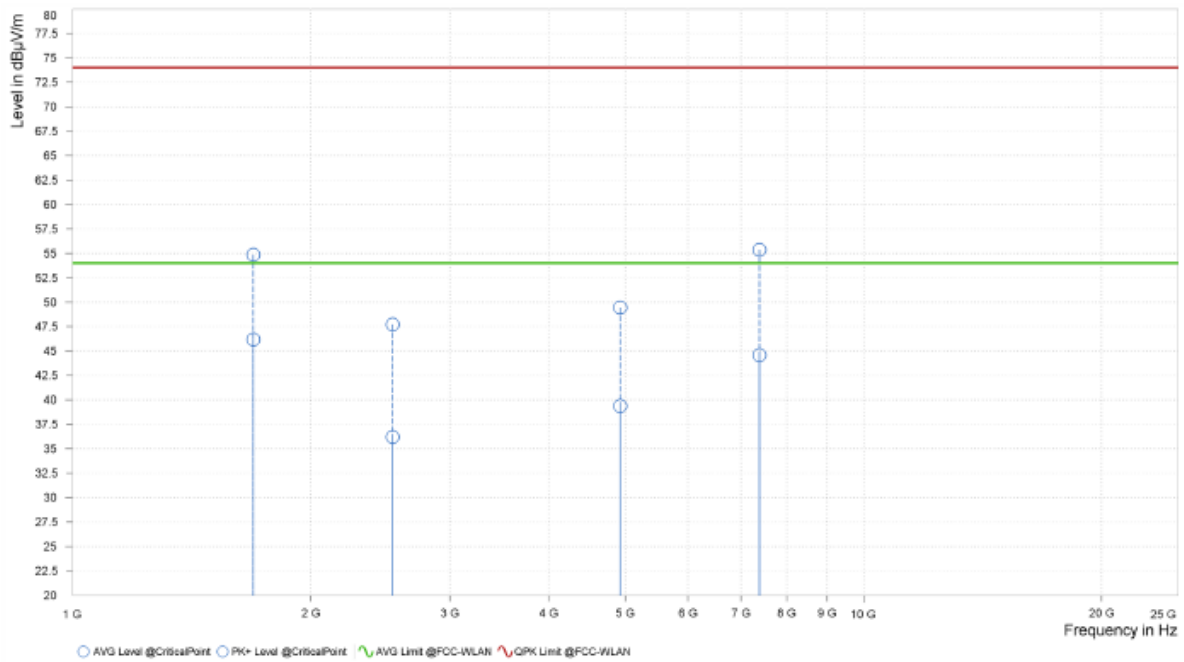
ABOVE 1GHz WORST-CASE DATA:

Note: For higher frequency, the emission is too low to be detected.

CHANNEL	2.4G WIFI 11N20 CH11+WCDMA B5	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 18GHz		

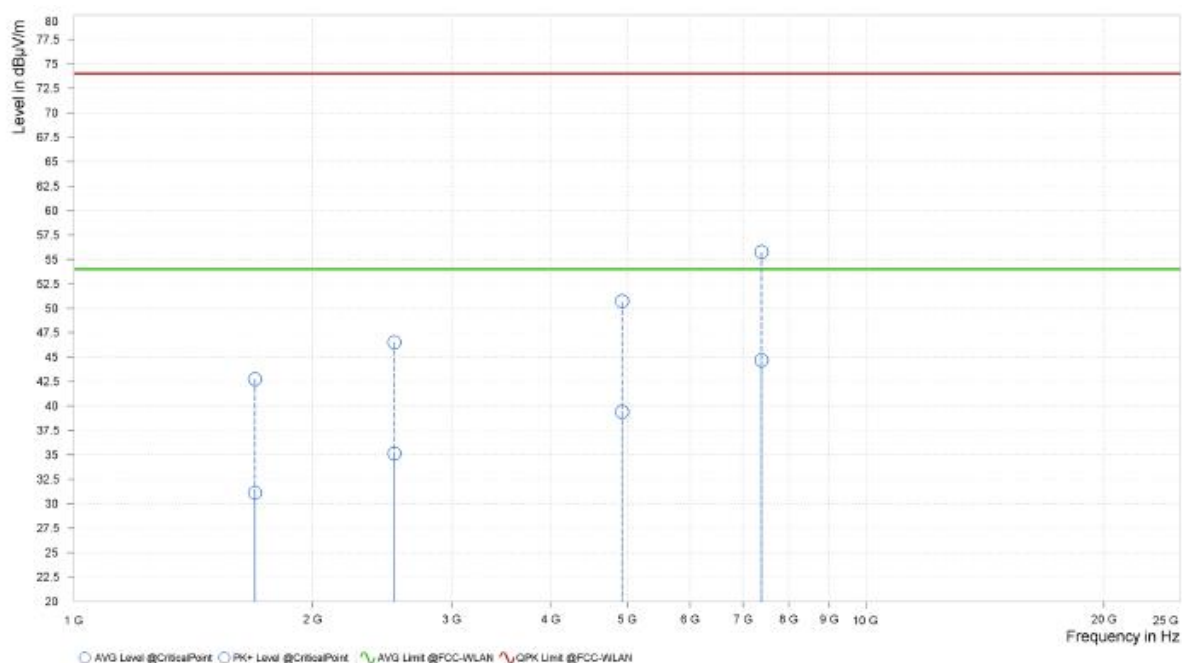
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK 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]
1	1,693.200	54.85	74.00	19.15	46.18	54.00	7.82	-5.13	H	5	1.00
2	2,539.800	47.73	74.00	26.27	36.21	54.00	17.79	1.72	H	1	1.00
3	4,924.000	49.43	74.00	24.57	39.39	54.00	14.61	5.02	H	359	1.00
3	7,386.000	55.36	74.00	18.64	44.58	54.00	9.42	11.05	H	119	2.00



**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK 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]
1	1,693.200	42.74	74.00	31.26	31.12	54.00	22.88	-5.13	V	355.5	2.00
2	2,539.800	46.53	74.00	27.47	35.13	54.00	18.87	1.72	V	180.1	1.00
3	4,924.000	50.71	74.00	23.29	39.42	54.00	14.58	5.02	V	0.9	2.00
3	7,386.000	55.75	74.00	18.25	44.67	54.00	9.33	11.05	V	297.2	1.00



**REMARKS:**

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
 Margin value =Limit value– Emission level.

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

**WLAN-5G-11N20-CH140+LTE-B13-5M:**

**BELOW 1GHz WORST-CASE DATA:**

**30MHz – 1GHz data:**

<b>CHANNEL</b>	WLAN-5G-11N20-CH140+ LTE-B13-5M	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	30MHz ~ 1GHz		

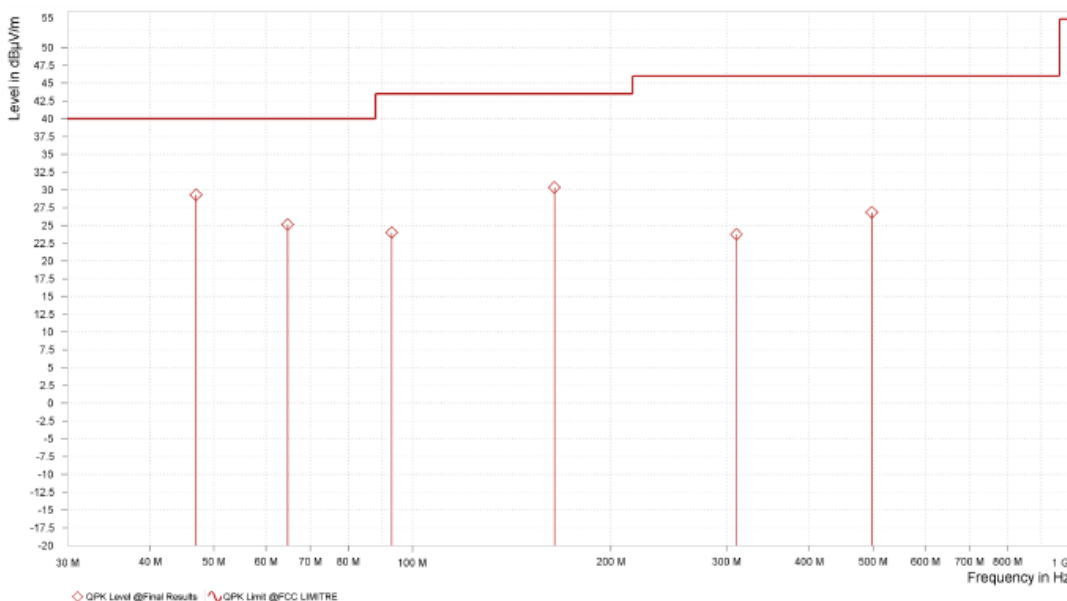
**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

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	46.975	29.28	40.00	10.72	-3.61	H	1	2.00	120.000
1	64.678	25.13	40.00	14.87	-6.20	H	359.1	1.00	120.000
1	93.002	24.00	43.50	19.50	-7.34	H	84.6	2.00	120.000
1	164.248	30.33	43.50	13.17	-8.40	H	136.7	1.00	120.000
1	310.330	23.75	46.00	22.25	-1.15	H	136.7	1.00	120.000
1	497.928	26.80	46.00	19.20	2.27	H	355.1	2.00	120.000

**REMARKS:**

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value =Limit value– Emission level.

Spectrum Overview



<b>CHANNEL</b>	WLAN-5G-11N20-CH14 0+LTE-B13-5M	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	30MHz ~ 1GHz		

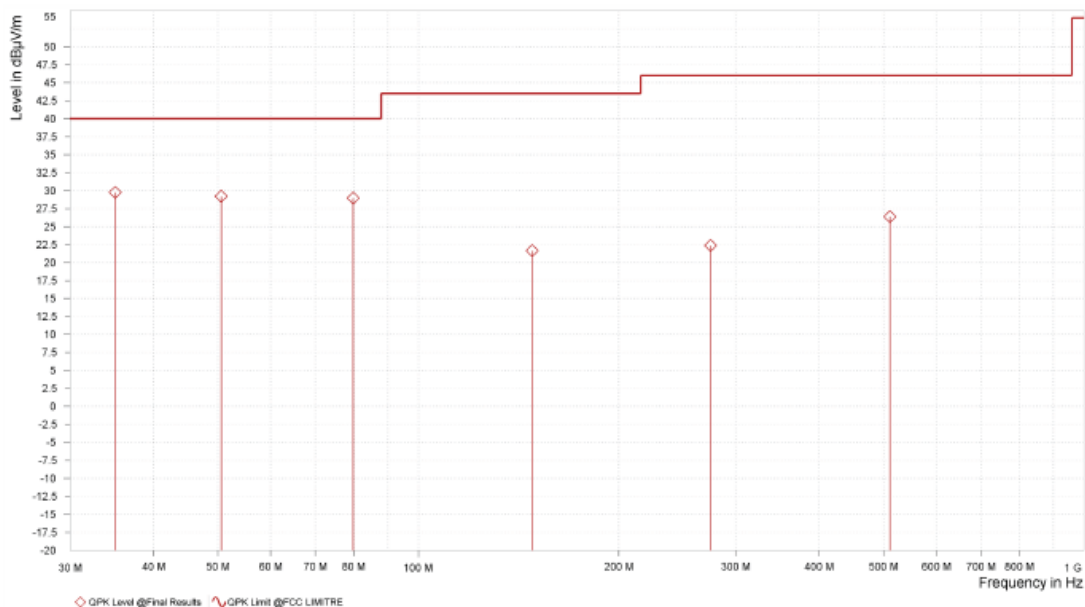
**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

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	35.044	29.74	40.00	10.26	-8.16	V	359.1	1.00	120.000
1	50.564	29.18	40.00	10.82	-4.63	V	91.7	2.00	120.000
1	79.810	28.94	40.00	11.06	-10.96	V	280.2	1.00	120.000
1	148.292	21.64	43.50	21.86	-8.70	V	280.2	1.00	120.000
1	274.780	22.35	46.00	23.65	-2.42	V	0.9	2.00	120.000
1	511.314	26.37	46.00	19.63	1.95	V	91.7	2.00	120.000

**REMARKS:**

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value =Limit value– Emission level.

Spectrum Overview





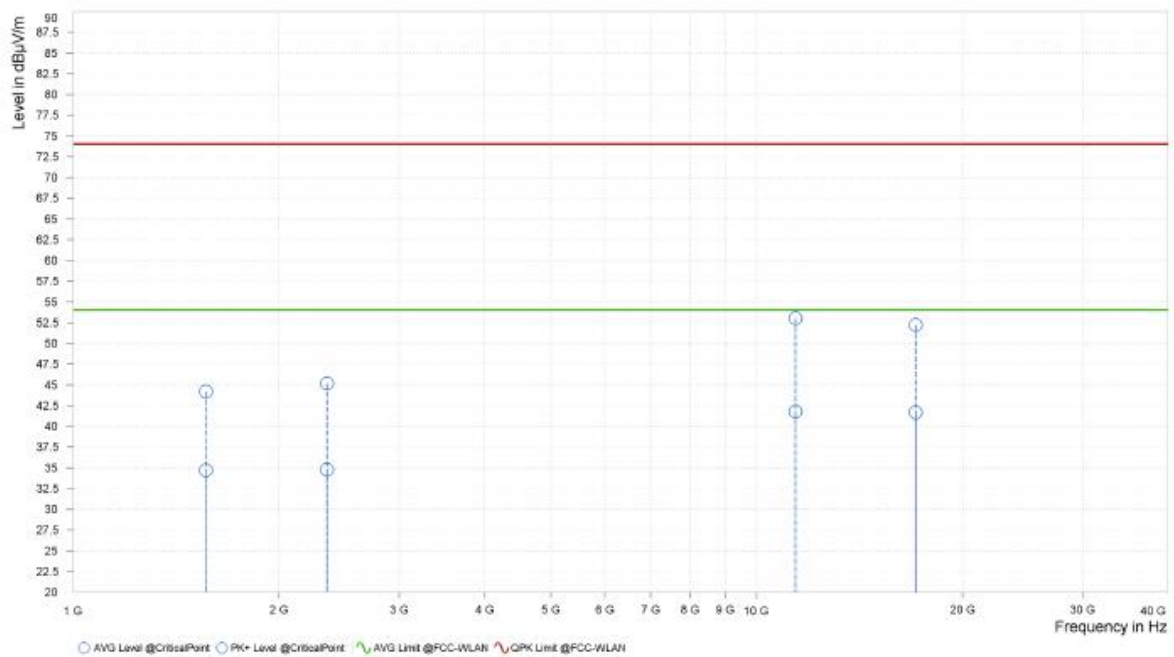
**ABOVE 1GHz WORST-CASE DATA:**

**Note:** For higher frequency, the emission is too low to be detected.

<b>CHANNEL</b>	WLAN-5G-11N20-CH140+ LTE-B13-5M	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

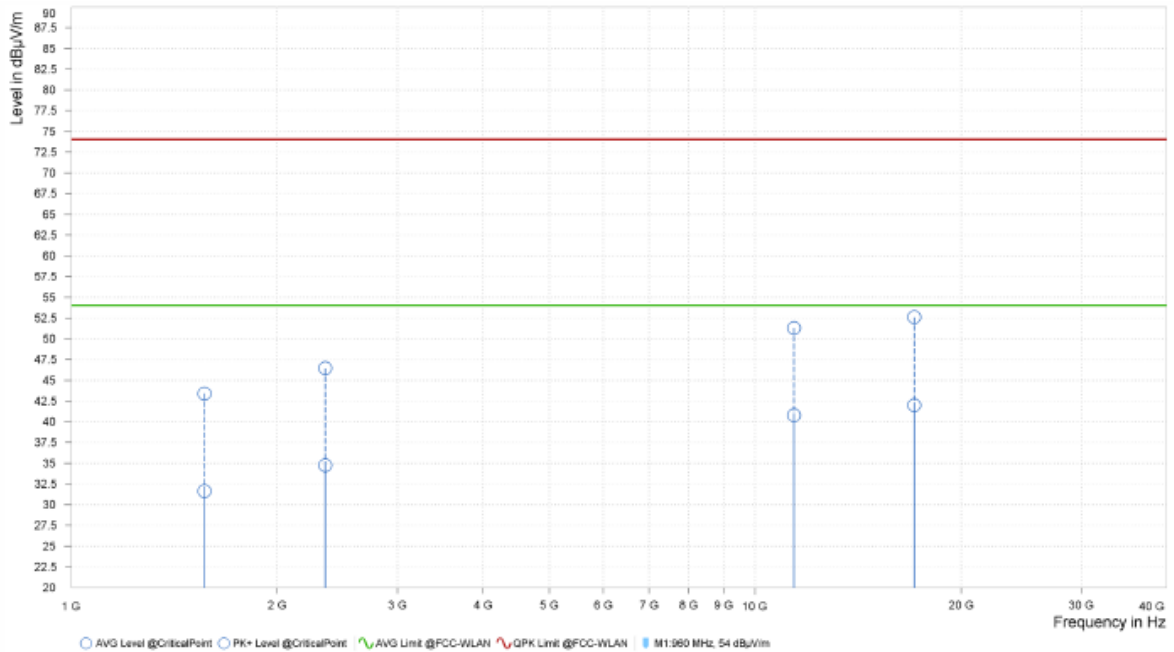
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	1,564.636	44.21	74.00	29.79	34.71	54.00	19.29	-6.70	H	354.3	2.00
1	2,353.500	45.17	74.00	28.83	34.78	54.00	19.22	1.07	H	1	2.00
5	11,400.000	53.02	74.00	20.98	41.81	54.00	12.19	12.41	H	1	1.00
5	17,100.000	52.21	74.00	21.79	41.66	54.00	12.34	22.24	H	1	2.00





**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK 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]
1	1,565.125	43.40	74.00	30.60	31.63	54.00	22.37	-6.70	V	359.1	1.00
1	2,353.500	46.46	74.00	27.54	34.75	54.00	19.25	1.07	V	5.1	1.00
5	11,400.000	51.30	74.00	22.70	40.76	54.00	13.24	12.41	V	1	1.00
5	17,100.000	52.59	74.00	21.41	41.99	54.00	12.01	22.24	V	0.9	2.00



**REMARKS:**

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
 Margin value =Limit value– Emission level.

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

**BT2.0-1DH5-CH78+EDGE 1900:**

**BELOW 1GHz WORST-CASE DATA:**

**30MHz – 1GHz data:**

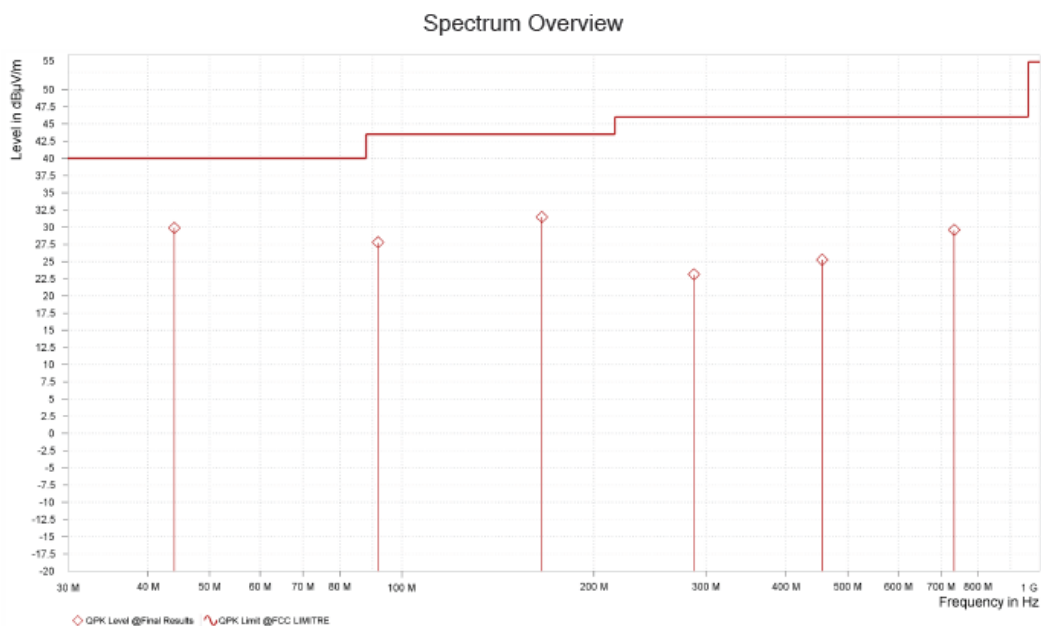
<b>CHANNEL</b>	BT2.0-1DH5-CH78+EDGE 1900	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	30MHz ~ 1GHz		

**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	44.017	29.87	40.00	10.13	-3.86	H	359.1	1.00	120.000
1	91.838	27.76	43.50	15.74	-7.64	H	222.1	2.00	120.000
1	165.897	31.46	43.50	12.04	-8.32	H	136.8	1.00	120.000
1	287.244	23.10	46.00	22.90	-1.41	H	136.8	1.00	120.000
1	456.121	25.24	46.00	20.76	2.83	H	5	1.00	120.000
1	734.657	29.56	46.00	16.44	4.34	H	136.8	1.00	120.000

**REMARKS:**

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value =Limit value– Emission level.



<b>CHANNEL</b>	BT2.0-1DH5-CH78+ED GE 1900	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	30MHz ~ 1GHz		

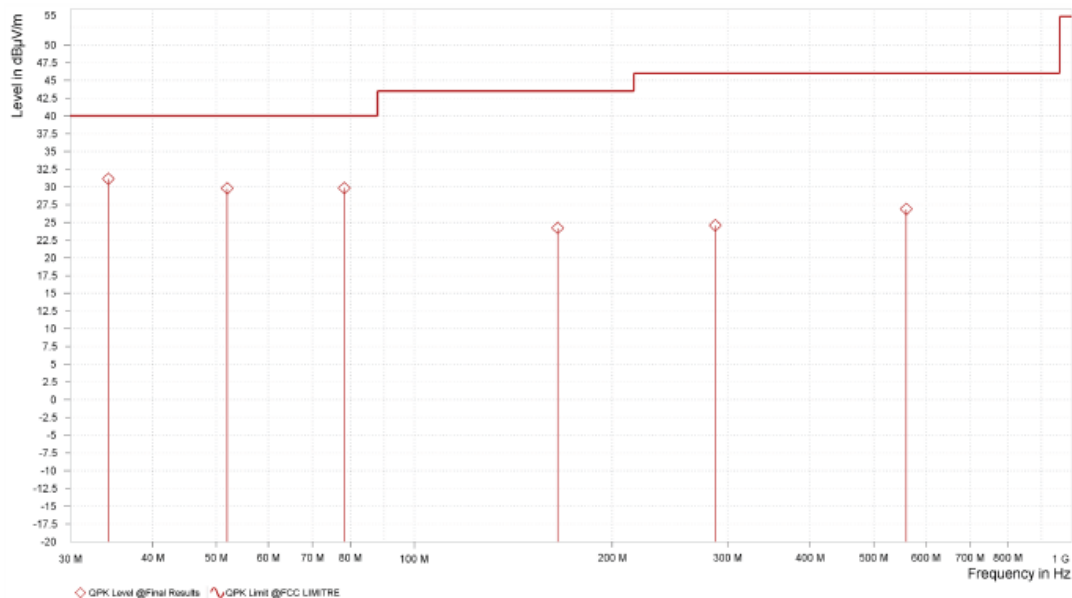
**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

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	34.268	31.12	40.00	8.88	-8.34	V	220.8	2.00	120.000
1	51.922	29.78	40.00	10.22	-4.88	V	137.8	1.00	120.000
1	78.306	29.83	40.00	10.17	-11.34	V	4.8	1.00	120.000
1	165.315	24.20	43.50	19.30	-7.89	V	359	2.00	120.000
1	287.002	24.55	46.00	21.45	-1.74	V	355	2.00	120.000
1	560.299	26.86	46.00	19.14	1.95	V	355	2.00	120.000

**REMARKS:**

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value =Limit value– Emission level.

Spectrum Overview







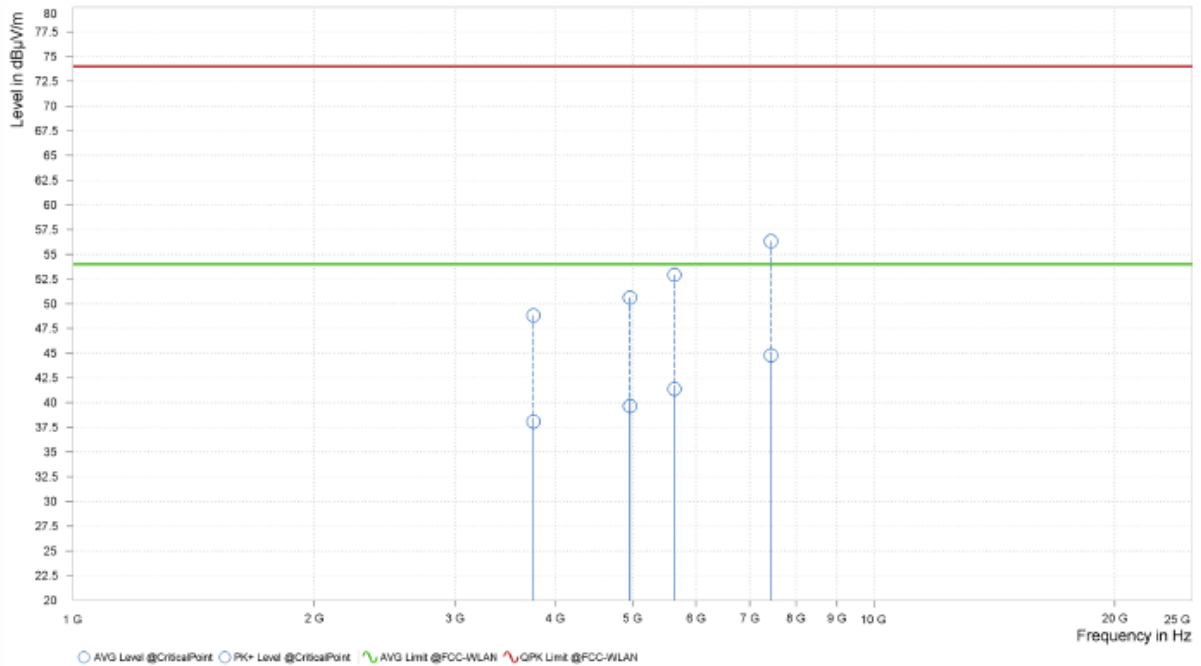
**ABOVE 1GHz WORST-CASE DATA:**

**Note:** For higher frequency, the emission is too low to be detected.

<b>CHANNEL</b>	BT2.0-1DH5-CH78+EDGE 1900	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

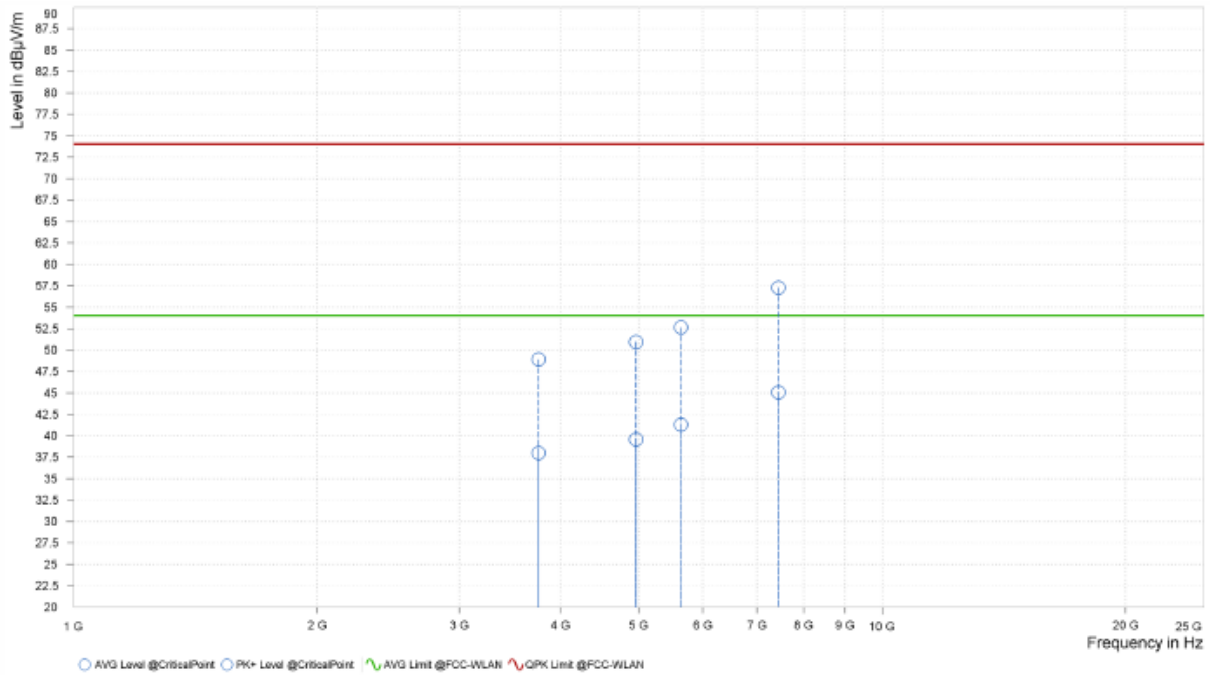
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	3,760.000	48.83	74.00	25.17	38.06	54.00	15.94	3.46	H	115.4	2.00
3	4,960.000	50.63	74.00	23.37	39.65	54.00	14.35	4.83	H	359	2.00
3	5,640.000	52.92	74.00	21.08	41.39	54.00	12.61	6.25	H	115.4	2.00
3	7,440.000	56.33	74.00	17.67	44.79	54.00	9.21	10.81	H	0.9	2.00





**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK 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]
3	3,760.000	48.91	74.00	25.09	37.96	54.00	16.04	3.46	V	359.1	1.00
3	4,960.000	50.95	74.00	23.05	39.57	54.00	14.43	4.83	V	115.4	2.00
3	5,640.000	52.63	74.00	21.37	41.27	54.00	12.73	6.25	V	0.9	2.00
3	7,440.000	57.29	74.00	16.71	45.05	54.00	8.95	10.81	V	115.4	2.00



**REMARKS:**

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value =Limit value– Emission level.

**---END---**