



FCC CO-LOCATION RADIO TEST REPORT

FCC ID : B94HNI61PAR
Equipment : Notebook Computer
Brand Name : HP
Model Name : HSN-I61C
Applicant : HP Inc.
1501 Page Mill Road, Palo Alto CA 94304 USA
Standard : FCC 47 CFR Part 2, 24(E)

The product was received on Sep. 09, 2024 and testing was performed from Sep. 28, 2024 to Oct. 30, 2024. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)



Table of Contents

History of this test report	3
Summary of Test Result	4
1 General Description	5
1.1 Product Feature of Equipment Under Test	5
1.2 Modification of EUT	5
1.3 Testing Location	6
1.4 Applicable Standards	6
2 Test Configuration of Equipment Under Test	7
2.1 Test Mode	7
2.2 Connection Diagram of Test System	7
2.3 Support Unit used in test configuration and system	8
2.4 Frequency List of Low/Middle/High Channels	8
3 Radiated Test Items	9
3.1 Measuring Instruments	9
3.2 Radiated Spurious Emission Measurement	11
4 List of Measuring Equipment	12
5 Measurement Uncertainty	13
Appendix A. Test Results of Radiated Test	
Appendix B. Test Setup Photographs	



History of this test report

Report No.	Version	Description	Issue Date
FG490505C	01	Initial issue of report	Nov. 20, 2024
FG490505C	02	Revise appendix A This report is an updated version, replacing the report issued on Nov. 20, 2024.	Nov. 28, 2024
FG490505C	03	Revise Section 2.1 This report is an updated version, replacing the report issued on Nov. 28, 2024.	Nov. 29, 2024



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1053 §24.238 (a)	Radiated Spurious Emission (Band 2)	Pass	19.89 dB under the limit at 9636.00 MHz

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sheng Kuo

Report Producer: Lucy Wu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
General Specs	GSM/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ax/be, Wi-Fi 5GHz 802.11a/n/ac/ax/be, Wi-Fi 6GHz 802.11ax/be, NFC, and GNSS.
Sample 1	EUT with Vendor 2 Antenna
Sample 2	EUT with Vendor 1 Antenna
Integrated WWAN Module	Brand Name: Rolling Wireless Model Name: TX520-GL FCC ID: 2BF7TTX520GL
Integrated WLAN Module	Brand Name: Intel Model Name: BE201NGW FCC ID: PD9BE201NG
Integrated NFC Module	Brand Name: WNC Model Name: XRAV-1 FCC ID: NKR-XRAV1
Antenna Type	WWAN: PIFA Antenna WLAN: <Main>: PIFA Antenna <Aux.>: PIFA Antenna Bluetooth: PIFA Antenna GPS/Glonass/BDS/Galileo: PIFA Antenna NFC: Loop Antenna

WWAN Antenna Information for Notebook Mode				
Antenna 5	Manufacturer	Vendor 2	Peak gain (dBi)	LTE Band 2 : 0.43
	Part number	6036B0361301 (81ELBF15.G04)	Type	PIFA
	Manufacturer	Vendor 1	Peak gain (dBi)	LTE Band 2 : -0.50
	Part number	6036B0361401 (00-350270155N)	Type	PIFA

WWAN Antenna Information for Tablet Mode				
Antenna 5	Manufacturer	Vendor 2	Peak gain (dBi)	LTE Band 2 : -1.32
	Part number	6036B0361301 (81ELBF15.G04)	Type	PIFA
	Manufacturer	Vendor 1	Peak gain (dBi)	LTE Band 2 : -1.68
	Part number	6036B0361401 (00-350270155N)	Type	PIFA

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. 03CH07-HY
Test Engineer	Jesse Wang, Stan Hsieh and Ken Wu
Temperature (°C)	22.1~26.3
Relative Humidity (%)	53.4~65.8

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190

1.4 Applicable Standards

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

- ♦ ANSI C63.26-2015
- ♦ FCC 47 CFR Part 2, 24(E)
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05r02
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v01r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.

2 Test Configuration of Equipment Under Test

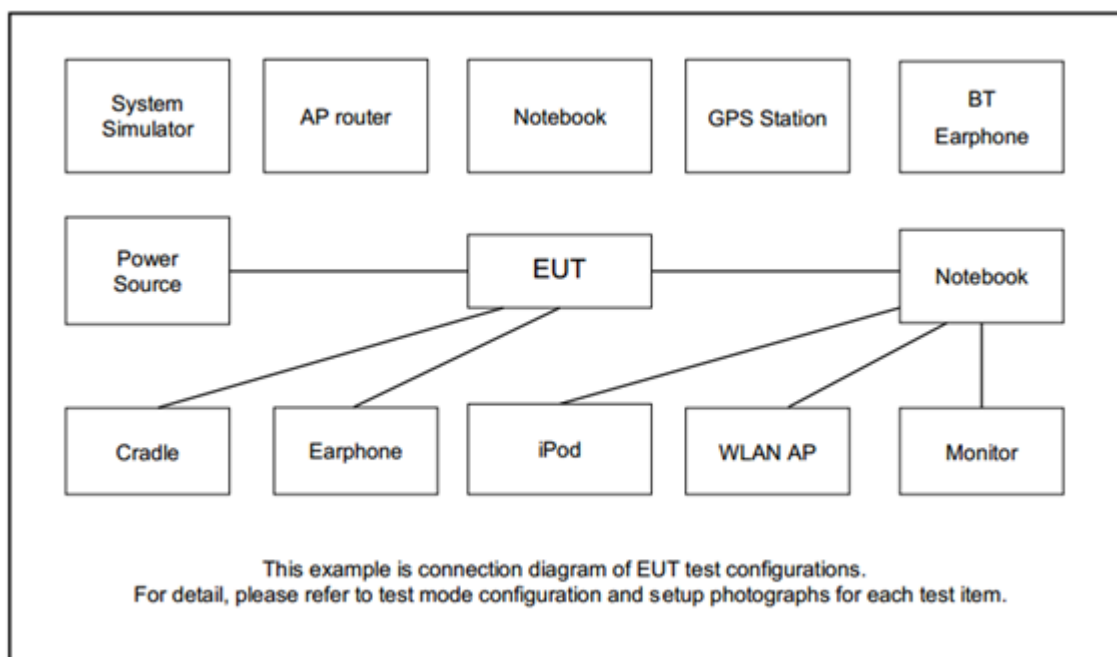
2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

Modulation Type	Modulation
A	QPSK
B	16QAM

Test Item	Modulation Type	Bandwidth	RB Size	Channel
RSE	A	20 MHz	Inner_1RB	L, M, H
Remark: 1. Evaluated all the transmitter signal and reporting worst-case configuration among all modulation types. 2. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst-case emissions are reported. 3. During the RSE preliminary test, the standalone mode and charging modes were verified. It is determined that the charging modes is the worst case for the official test. 4. All the radiated test cases were performed with Sample 1. 5. For Co-location test item, the test plan are list below: ● LTE Cat M1 Band 2 + WLAN (2.4GHz)_802.11be EHT20_Ch07 ● LTE Cat M1 Band 2 + WLAN (5GHz)_802.11n HT20_Ch149 ● LTE Cat M1 Band 2 + WLAN (6GHz)_802.11be EHT40_Ch91				

2.2 Connection Diagram of Test System





2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
2.	iPod Earphone	Apple	N/A	Verification	Shielded, 1.2 m	N/A

2.4 Frequency List of Low/Middle/High Channels

LTE Band 2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	18700	18900	19100
	Frequency	1860	1880	1900

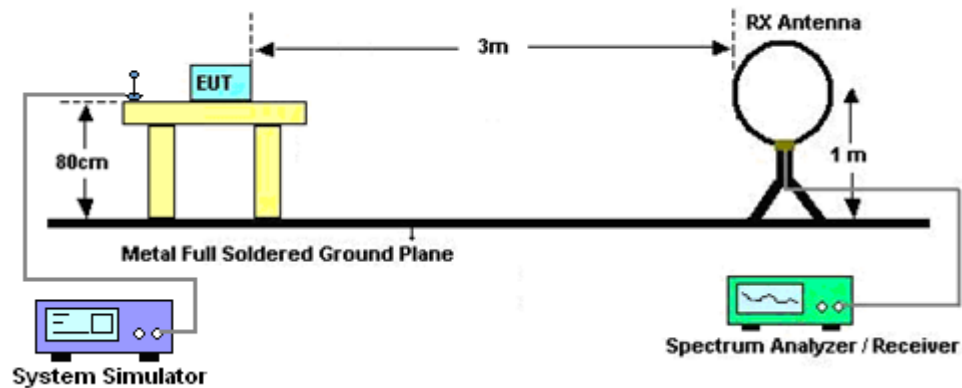
3 Radiated Test Items

3.1 Measuring Instruments

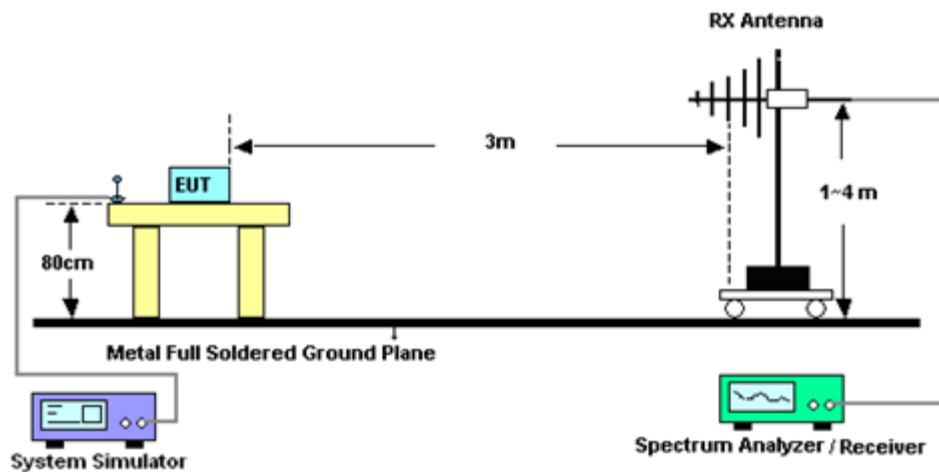
See list of measuring instruments of this test report.

3.1.1 Test Setup

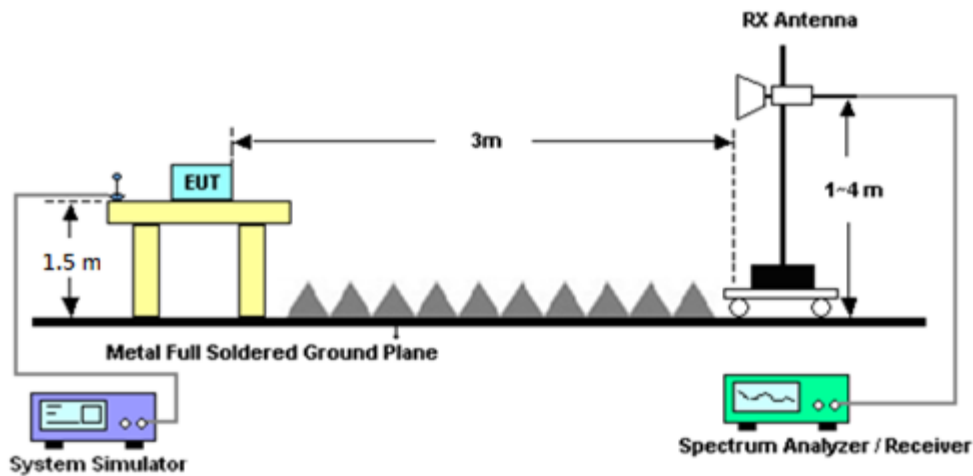
For radiated test below 30MHz



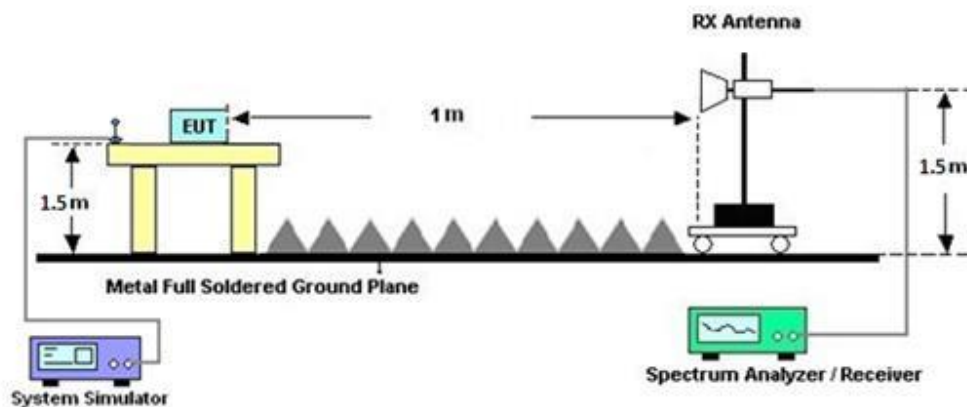
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



3.1.2 Test Result of Radiated Test

Please refer to Appendix B.

Note:

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.



3.2 Radiated Spurious Emission Measurement

3.2.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI C63.26-2015. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI C63.26-2015 section 5.5.4 Radiated measurement using the field strength method.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. To convert spectrum reading E(dBuV/m) to EIRP(dBm)
$$\text{EIRP(dBm)} = \text{Level (dBuV/m)} + 20\log(d) - 104.77,$$
where d is the distance at which field strength limit is specified in the rules
7.
$$\text{Field Strength Level (dBm)} = \text{Spectrum Reading (dBm)} + \text{Antenna Factor} + \text{Cable Loss} + \text{Read Level} - \text{Preamp Factor}.$$
8.
$$\text{ERP (dBm)} = \text{EIRP (dBm)} - 2.15$$
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	35419 & 03	30MHz~1GHz	Apr. 22, 2024	Sep. 28, 2024~ Oct. 30, 2024	Apr. 21, 2025	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00075962	1GHz ~ 18GHz	Nov. 27, 2023	Sep. 28, 2024~ Oct. 30, 2024	Nov. 26, 2024	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Feb. 23, 2024	Sep. 28, 2024~ Oct. 30, 2024	Feb. 22, 2025	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590075	1GHz~18GHz	Apr. 19, 2024	Sep. 28, 2024~ Oct. 30, 2024	Apr. 18, 2025	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Mar. 23, 2024	Sep. 28, 2024~ Oct. 30, 2024	Mar. 22, 2025	Radiation (03CH07-HY)
Preamplifier	EMEC	EM18G40G	0600789	18-40GHz	Aug. 05, 2024	Sep. 28, 2024~ Oct. 30, 2024	Aug. 04, 2025	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9030A	MY52350276	3Hz~44GHz	Mar. 26, 2024	Sep. 28, 2024~ Oct. 30, 2024	Mar. 25, 2025	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4 MY24971/4 MY15682/4	30MHz to 18GHz	Feb. 21, 2024	Sep. 28, 2024~ Oct. 30, 2024	Feb. 20, 2025	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4 MY24971/4	9kHz to 30MHz	Feb. 21, 2024	Sep. 28, 2024~ Oct. 30, 2024	Feb. 20, 2025	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126	532078/126E	30MHz~18GHz	Sep. 14, 2024	Sep. 28, 2024~ Oct. 30, 2024	Sep. 13, 2025	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2	18GHz~40GHz	Feb. 21, 2024	Sep. 28, 2024~ Oct. 30, 2024	Feb. 20, 2025	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	801606/2	9KHz ~ 40GHz	Apr. 22, 2024	Sep. 28, 2024~ Oct. 30, 2024	Apr. 21, 2025	Radiation (03CH07-HY)
Controller	EMEC	EM1000	N/A	Control Ant Mast	N/A	Sep. 28, 2024~ Oct. 30, 2024	N/A	Radiation (03CH07-HY)
Controller	MF	MF-7802	N/A	Control Turn table	N/A	Sep. 28, 2024~ Oct. 30, 2024	N/A	Radiation (03CH07-HY)
Antenna Mast	EMEC	AM-BS-4500E	N/A	Boresight mast 1M~4M	N/A	Sep. 28, 2024~ Oct. 30, 2024	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Sep. 28, 2024~ Oct. 30, 2024	N/A	Radiation (03CH07-HY)
Software	Audix	E3	N/A	N/A	N/A	Sep. 28, 2024~ Oct. 30, 2024	N/A	Radiation (03CH07-HY)
USB Data Logger	TECEPIL	TR-32	HE17XB2495	N/A	Mar. 01, 2024	Sep. 28, 2024~ Oct. 30, 2024	Feb. 28, 2025	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Nov. 24, 2023	Sep. 28, 2024~ Oct. 30, 2024	Nov. 23, 2024	Radiation (03CH07-HY)



5 Measurement Uncertainty

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.291 dB
---	----------

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.076 dB
---	----------

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.083 dB
---	----------



Appendix A. Test Results of Radiated Test

A1. Summary of each worse mode

Mode	Part	Band	Ch	Freq (MHz)	Level (dBm)	Det	Ant Factor (dB)	Amp\Cbl (dB)	Filter (dB)	EIRPCF (dB)	Reading (dBuV)	Limit (dBm)	Margin (dB)	Pol	Ant
1	Part 24E	LTE CAT M1 B2	M	3750	-34.52	RMS	33.20	-48.96	0.67	-95.23	75.80	-13.00	-21.52	H	Ant 5
2	Part 24E	LTE CAT M1 B2	L	9636	-32.89	RMS	36.60	-42.82	0.54	-95.23	68.02	-13.00	-19.89	H	Ant 5
3	Part 24E	LTE CAT M1 B2	L	3707	-34.40	RMS	33.11	-49.00	0.67	-95.23	76.05	-13.00	-21.40	H	Ant 5



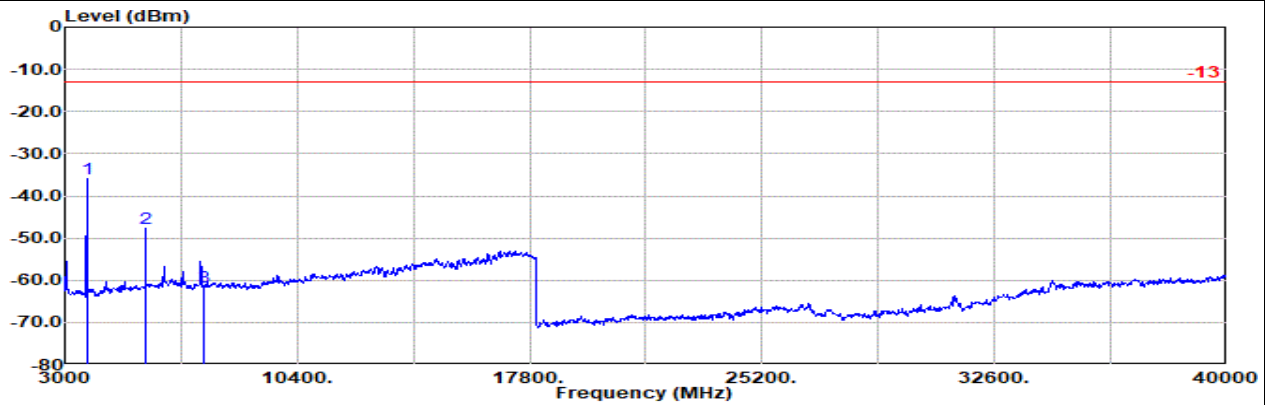
Ant 5

Worst plane :NB With Accessory

Part 24E Mode 1

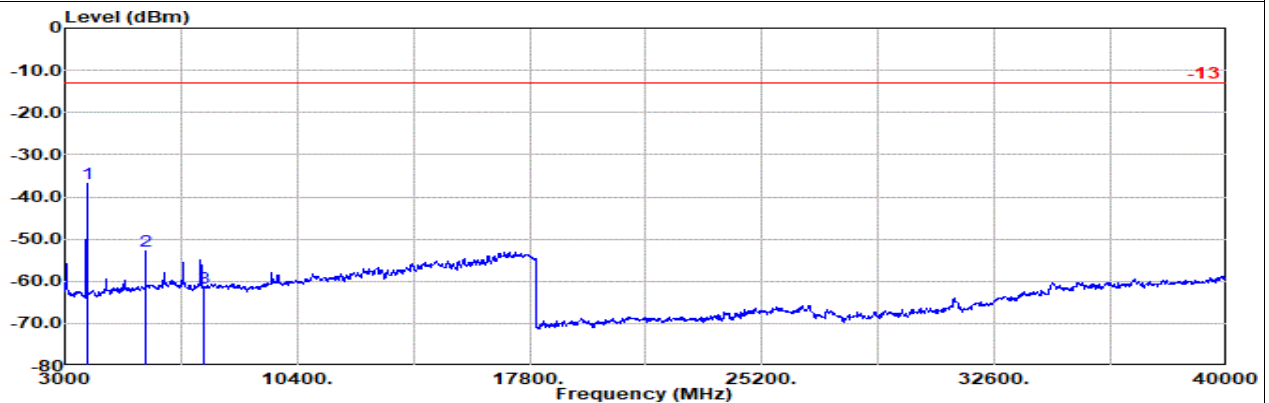
LTE CAT M1 B2 20M Ch18700 1RB0 QPSK + WLAN 2.4G_11be20_Ch07

L



Site : 03CH07-HY
Condition: -13 1m SHF-EHF_9170251 Horizontal
Mode : Cat M1 Band 2 20M CH18700 1RB0 QPSK
: WLAN 2.4G 11be EHT20 Ch07 MIMO(Setting20)

	Freq Level		Detector	Ant Factor	Amp\Cb		Filter	EIRPCF	Readin g	Limit		Margin	Pol
	MHz	dBm			dB/m	dB	dB	dB	dBuV	dBm	dB		
1	3705.00	-35.89	RMS		33.11	-49.00	0.67	-95.23	0.00	-13.00	-22.89	Horizontal	
2	5565.00	-47.56	RMS		34.70	-44.06	0.51	-95.23	56.52	-13.00	-34.56	Horizontal	
3	7410.00	-61.49	RMS		35.68	-42.98	0.31	-95.23	40.73	-13.00	-48.49	Horizontal	



Site : 03CH07-HY
Condition: -13 1m SHF-EHF_9170251 Vertical
Mode : Cat M1 Band 2 20M CH18700 1RB0 QPSK
: WLAN 2.4G 11be EHT20 Ch07 MIMO(Setting20)

	Freq Level		Detector	Ant Factor	Amp\Cb		Filter	EIRPCF	Readin g	Limit		Margin	Pol
	MHz	dBm			dB/m	dB	dB	dB	dBuV	dBm	dB		
1	3705.00	-36.87	RMS		33.11	-49.00	0.67	-95.23	73.58	-13.00	-23.87	Vertical	
2	5565.00	-52.71	RMS		34.70	-44.06	0.51	-95.23	51.37	-13.00	-39.71	Vertical	
3	7410.00	-61.72	RMS		35.68	-42.98	0.31	-95.23	40.50	-13.00	-48.72	Vertical	



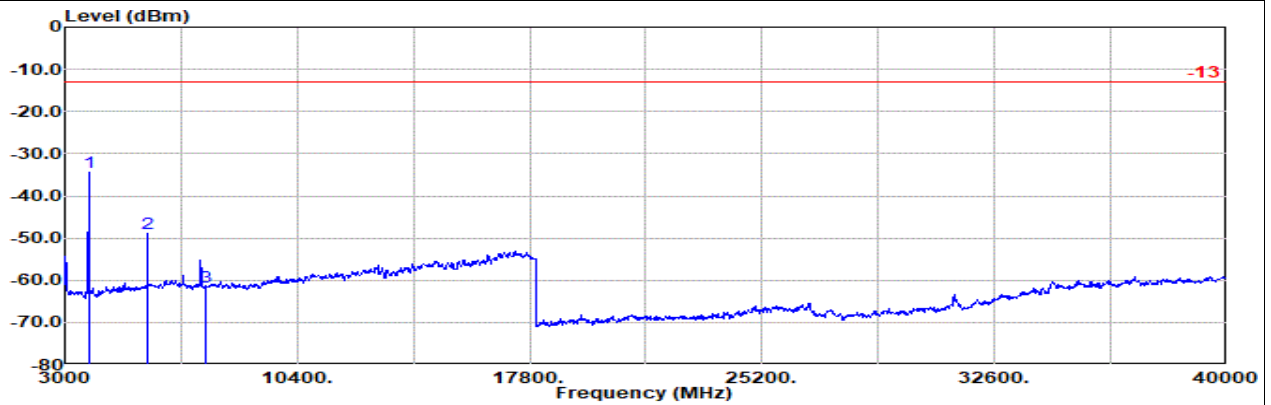
Ant 5

Worst plane :NB With Accessory

Part 24E Mode 1

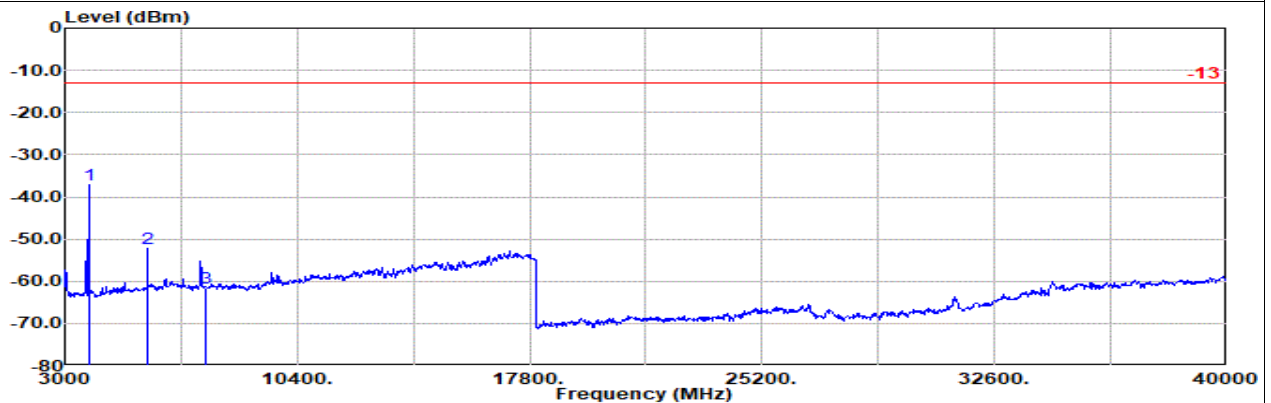
LTE CAT M1 B2 20M Ch18900 1RB0 QPSK + WLAN 2.4G_11be20_Ch07

M



Site : 03CH07-HY
Condition: -13 1m SHF-EHF_9170251 Horizontal
Mode : Cat M1 Band 2 20M CH18900 1RB0 QPSK
: WLAN 2.4G 11be EHT20 Ch07 MIMO(Setting20)

	Freq	Level	Detector	Ant Amp\Cb Filter		EIRPCF	Readin	Limit	Margin Pol	
				Factor	1					
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB
1	3750.00	-34.52	RMS	33.20	-48.96	0.67	-95.23	75.80	-13.00	-21.52 Horizontal
2	5625.00	-49.00	RMS	34.85	-43.90	0.50	-95.23	54.78	-13.00	-36.00 Horizontal
3	7485.00	-61.51	RMS	35.53	-43.03	0.33	-95.23	40.89	-13.00	-48.51 Horizontal



Site : 03CH07-HY
Condition: -13 1m SHF-EHF_9170251 Vertical
Mode : Cat M1 Band 2 20M CH18900 1RB0 QPSK
: WLAN 2.4G 11be EHT20 Ch07 MIMO(Setting20)

	Freq	Level	Detector	Ant Amp\Cb Filter		EIRPCF	Readin	Limit	Margin Pol	
				Factor	1					
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB
1	3750.00	-37.27	RMS	33.20	-48.96	0.67	-95.23	73.05	-13.00	-24.27 Vertical
2	5625.00	-52.36	RMS	34.85	-43.90	0.50	-95.23	51.42	-13.00	-39.36 Vertical
3	7485.00	-61.57	RMS	35.53	-43.03	0.33	-95.23	40.83	-13.00	-48.57 Vertical



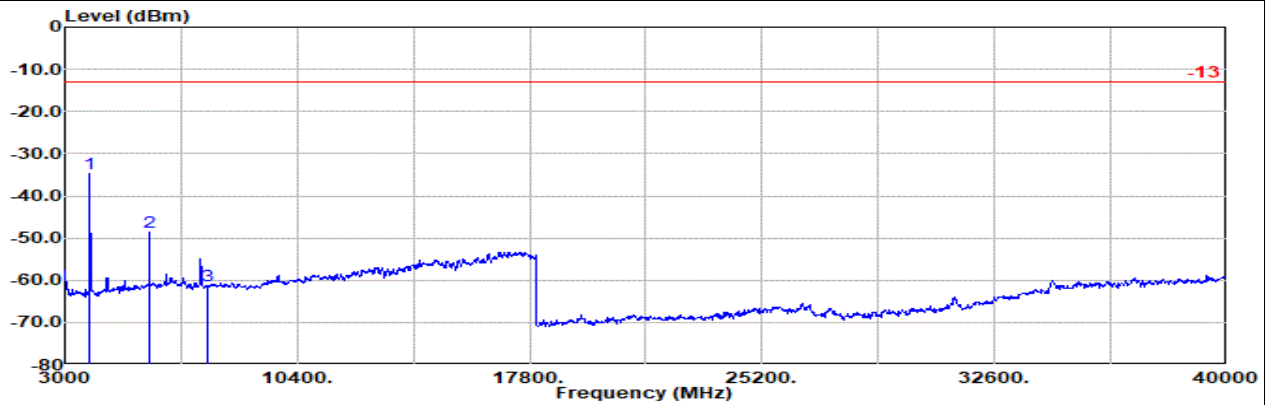
Ant 5

Worst plane :NB With Accessory

Part 24E Mode 1

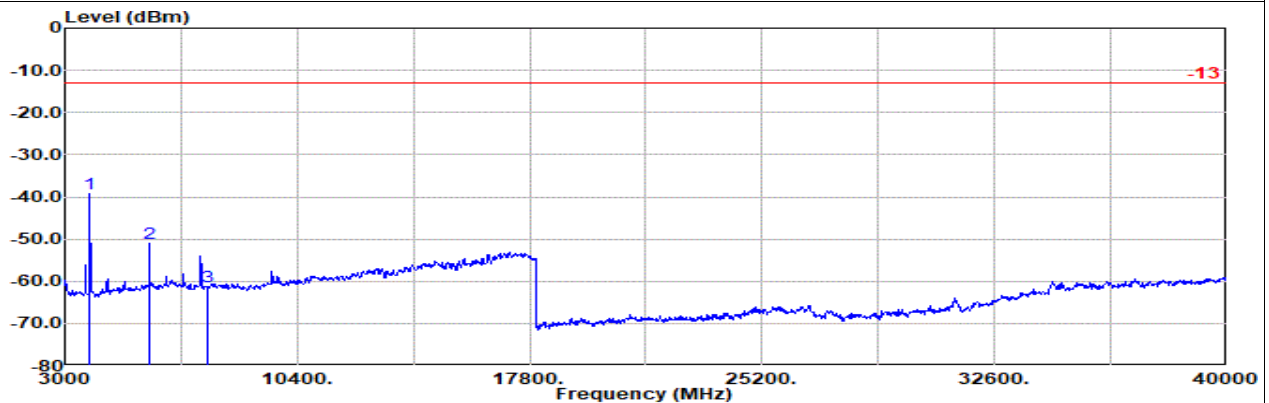
LTE CAT M1 B2 20M Ch19100 1RB0 QPSK + WLAN 2.4G_11be20_Ch07

H



Site : 03CH07-HY
Condition: -13 1m SHF-EHF_9170251 Horizontal
Mode : Cat M1 Band 2 20M CH19100 1RB0 QPSK
: WLAN 2.4G 11be EHT20 Ch07 MIMO(Setting20)

	Freq	Level	Detector	Ant Amp\Cb		Filter	EIRPCF		Readin	Limit	Margin Pol	
				Factor	1				g			
	MHz	dBm			dB/m	dB	dB	dB	dBuV	dBm	dB	
1	3795.00	-34.65	RMS		33.38	-48.91	0.68	-95.23	75.43	-13.00	-21.65	Horizontal
2	5685.00	-48.68	RMS		35.14	-43.73	0.41	-95.23	54.73	-13.00	-35.68	Horizontal
3	7560.00	-61.26	RMS		35.74	-42.98	0.34	-95.23	40.87	-13.00	-48.26	Horizontal



Site : 03CH07-HY
Condition: -13 1m SHF-EHF_9170251 Vertical
Mode : Cat M1 Band 2 20M CH19100 1RB0 QPSK
: WLAN 2.4G 11be EHT20 Ch07 MIMO(Setting20)

	Freq	Level	Detector	Ant Amp\Cb		Filter	EIRPCF		Readin	Limit	Margin Pol	
				Factor	1				g			
	MHz	dBm			dB/m	dB	dB	dB	dBuV	dBm	dB	
1	3795.00	-39.22	RMS		33.38	-48.91	0.68	-95.23	70.86	-13.00	-26.22	Vertical
2	5685.00	-50.99	RMS		35.14	-43.73	0.41	-95.23	52.42	-13.00	-37.99	Vertical
3	7560.00	-61.33	RMS		35.74	-42.98	0.34	-95.23	40.80	-13.00	-48.33	Vertical

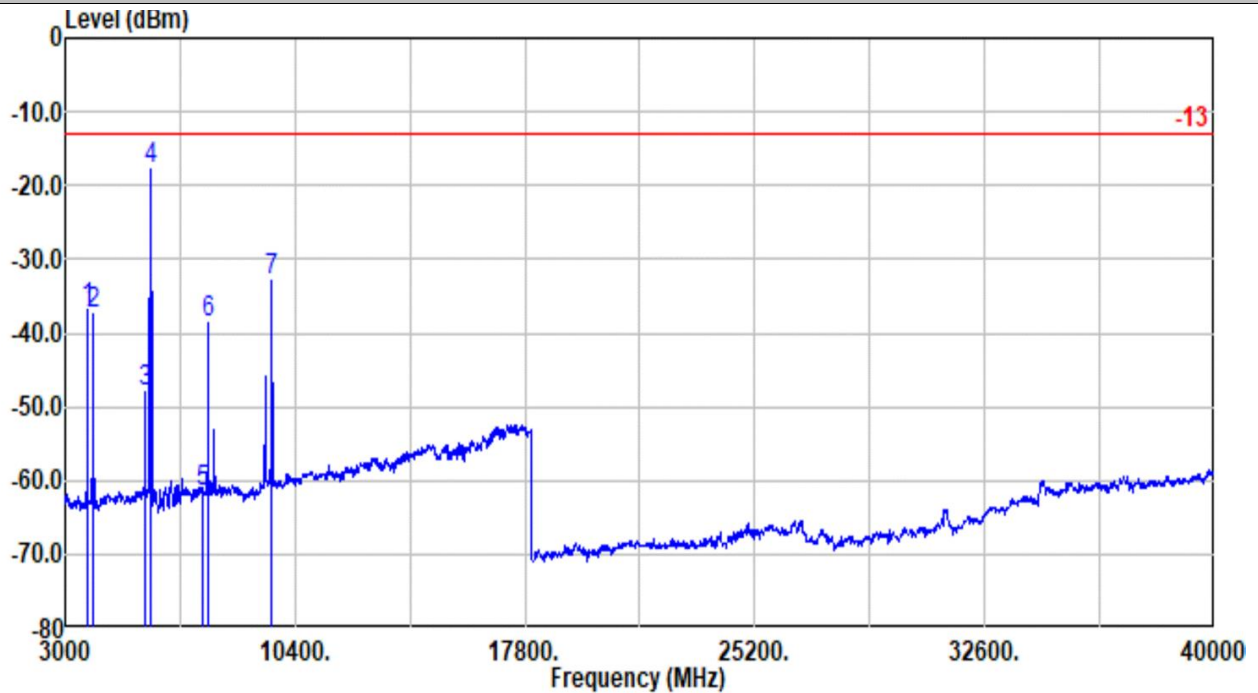
Ant 5

Worst plane :NB With Accessory

Part 24E Mode 2

LTE CAT M1 B2 20M Ch18700 1RB0 QPSK + WLAN 5G_11n20_Ch149

L



Site : 03CH07-HY

Condition: -13 1m SHF-EHF_9170251 Horizontal

Mode : Cat M1 Band 2 20M CH18700 1RB0 QPSK

: WLAN 5G 11be EHT20 Ch149 MIMO(Setting23)

	Freq Level		Detector	Ant Amp\Cb Filter		Readin Limit		Margin Pol	
	MHz	dBm		Factor	1	EIRPCF	g	dBm	dB
1	3707.00	-36.92	RMS	33.11	-49.00	0.67	-95.23	73.53	-13.00
2	3896.00	-37.36	RMS	33.41	-48.87	0.59	-95.23	72.74	-13.00
3	5555.00	-47.96	RMS	34.70	-44.09	0.51	-95.23	56.15	-13.00
4	5745.00	-17.67	RMS	35.20	-43.56	0.33	-95.23	85.59	-13.00
5	7403.00	-61.48	RMS	35.69	-42.98	0.31	-95.23	40.73	-13.00
6	7599.00	-38.63	RMS	35.90	-42.94	0.35	-95.23	63.29	-13.00
7	9636.00	-32.89	RMS	36.60	-42.82	0.54	-95.23	68.02	-13.00

Remark: #4 is WLAN signal which can be ignored.

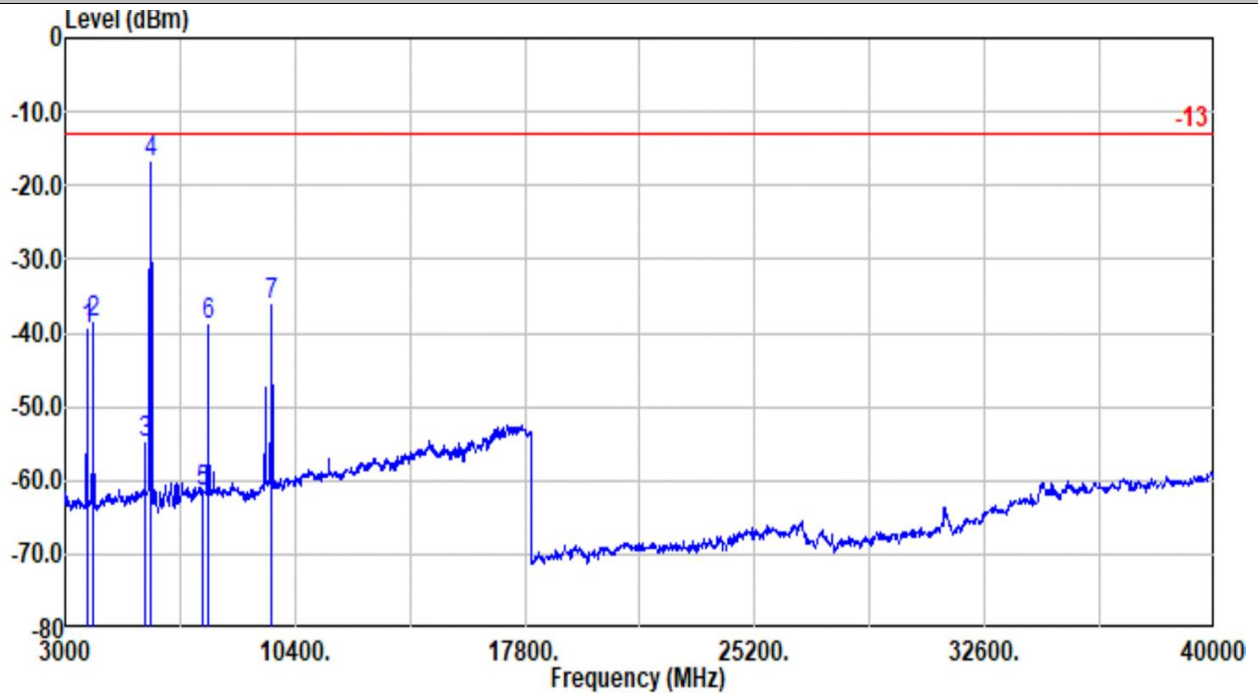
Ant 5

Worst plane :NB With Accessory

Part 24E Mode 2

LTE CAT M1 B2 20M Ch18700 1RB0 QPSK + WLAN 5G_11n20_Ch149

L



Site : 03CH07-HY

Condition: -13 1m SHF-EHF_9170251 Vertical

Mode : Cat M1 Band 2 20M CH18700 1RB0 QPSK

: WLAN 5G 11be EHT20 Ch149 MIMO(Setting23)

			Ant Amp\Cb Filter		Readin Limit				
Freq	Level	Detector	Factor	1	EIRPCF	g	Margin	Pol	
MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB
3707.00	-39.62	RMS	33.11	-49.00	0.67	-95.23	70.83	-13.00	-26.62 Vertical
3896.00	-38.70	RMS	33.41	-48.87	0.59	-95.23	71.40	-13.00	-25.70 Vertical
5555.00	-54.91	RMS	34.70	-44.09	0.51	-95.23	49.20	-13.00	-41.91 Vertical
5745.00	-16.98	RMS	35.20	-43.56	0.33	-95.23	86.28	-13.00	-3.98 Vertical
7403.00	-61.55	RMS	35.69	-42.98	0.31	-95.23	40.66	-13.00	-48.55 Vertical
7599.00	-38.84	RMS	35.90	-42.94	0.35	-95.23	63.08	-13.00	-25.84 Vertical
9643.00	-36.12	RMS	36.60	-42.81	0.53	-95.23	64.79	-13.00	-23.12 Vertical

Remark: #4 is WLAN signal which can be ignored.

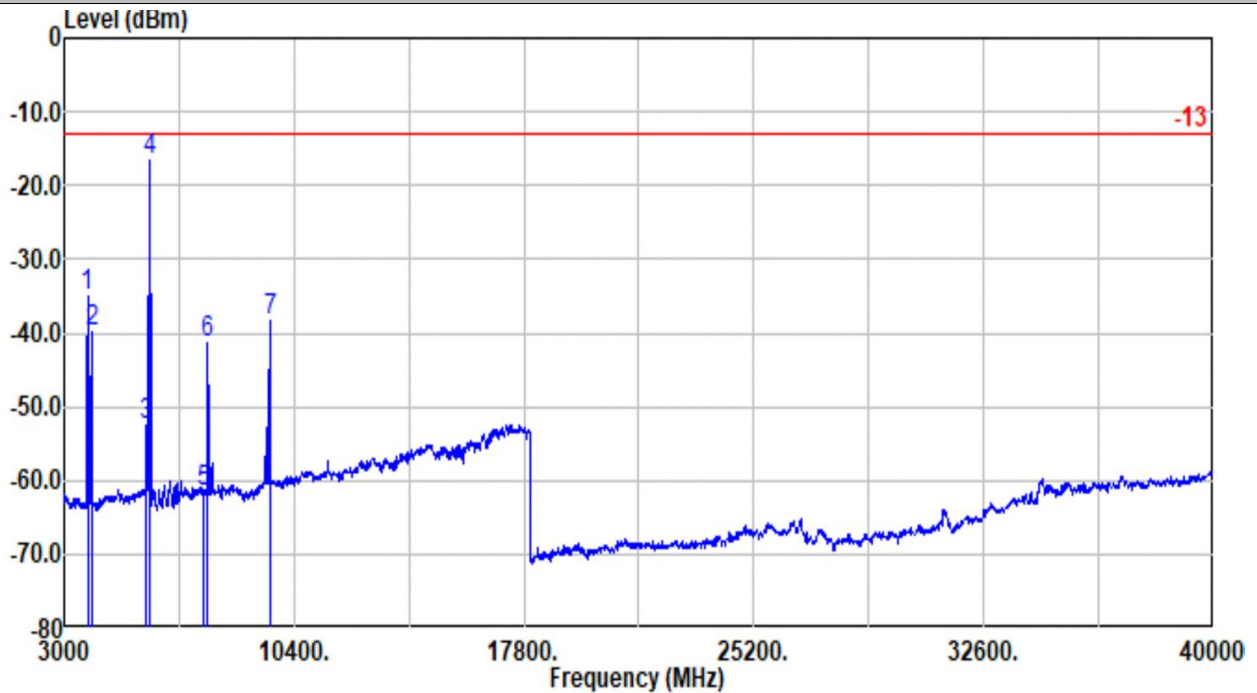
Ant 5

Worst plane :NB With Accessory

Part 24E Mode 2

LTE CAT M1 B2 20M Ch18900 1RB0 QPSK + WLAN 5G_11n20_Ch149

M



Site : 03CH07-HY

Condition: -13 1m SHF-EHF_9170251 Horizontal

Mode : Cat M1 Band 2 20M CH18900 1RB0 QPSK

: WLAN 5G 11be EHT20 Ch149 MIMO(Setting23)

	Freq Level		Detector	Ant Amp\Cb Filter		EIRPCF		Readin Limit		Margin	Pol
	MHz	dBm		Factor	1			g			
				dB/m	dB	dB	dB	dBuV	dBm	dB	
1	3749.00	-35.07	RMS	33.20	-48.96	0.67	-95.23	75.25	-13.00	-22.07	Horizontal
2	3875.00	-39.99	RMS	33.45	-48.88	0.61	-95.23	70.06	-13.00	-26.99	Horizontal
3	5618.00	-52.46	RMS	34.81	-43.92	0.50	-95.23	51.38	-13.00	-39.46	Horizontal
4	5745.00	-16.65	RMS	35.20	-43.56	0.33	-95.23	86.61	-13.00	-3.65	Horizontal
5	7487.00	-61.55	RMS	35.53	-43.03	0.33	-95.23	40.85	-13.00	-48.55	Horizontal
6	7620.00	-41.25	RMS	35.90	-42.91	0.35	-95.23	60.64	-13.00	-28.25	Horizontal
7	9622.00	-38.45	RMS	36.60	-42.84	0.55	-95.23	62.47	-13.00	-25.45	Horizontal

Remark: #4 is WLAN signal which can be ignored.

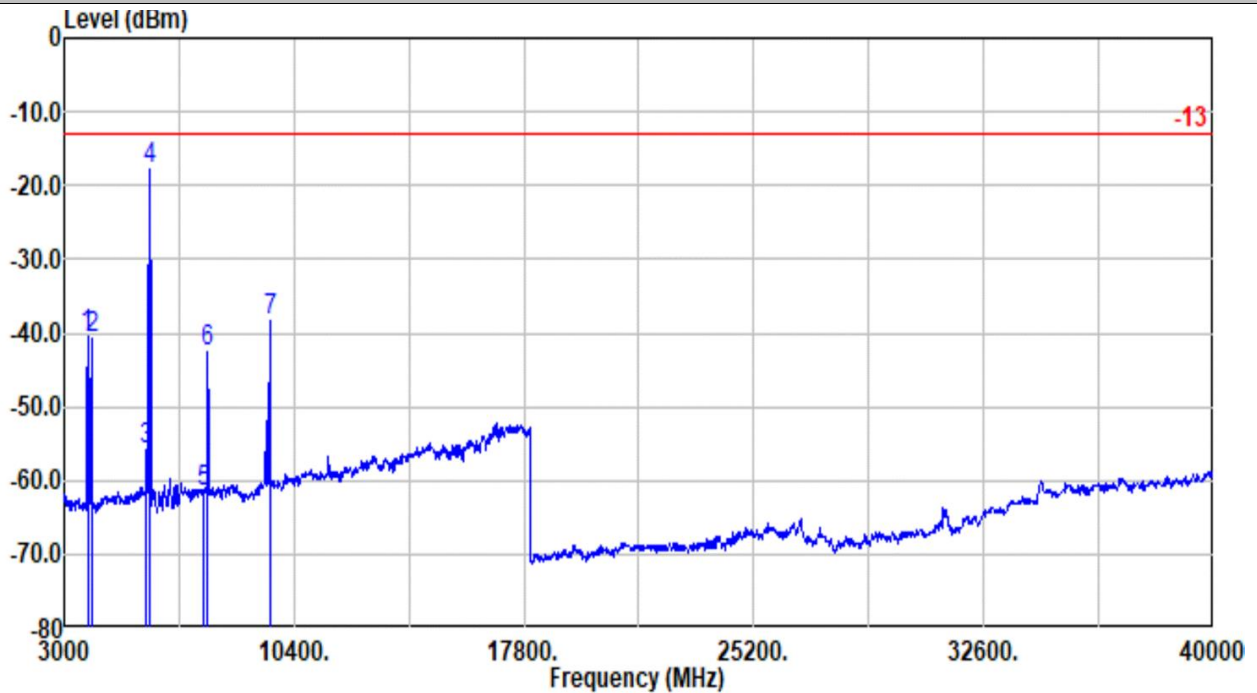
Ant 5

Worst plane :NB With Accessory

Part 24E Mode 2

LTE CAT M1 B2 20M Ch18900 1RB0 QPSK + WLAN 5G_11n20_Ch149

M



Site : 03CH07-HY

Condition: -13 1m SHF-EHF_9170251 Vertical

Mode : Cat M1 Band 2 20M CH18900 1RB0 QPSK

: WLAN 5G 11be EHT20 Ch149 MIMO(Setting23)

	Freq Level		Detector	Ant Amp\Cb Filter		Readin Limit		Margin Pol			
	MHz	dBm		Factor	1	EIRPCF	g	dBm	dB		
1	3749.00	-40.40	RMS	33.20	-48.96	0.67	-95.23	69.92	-13.00	-27.40	Vertical
2	3875.00	-40.84	RMS	33.45	-48.88	0.61	-95.23	69.21	-13.00	-27.84	Vertical
3	5618.00	-55.94	RMS	34.81	-43.92	0.50	-95.23	47.90	-13.00	-42.94	Vertical
4	5745.00	-17.71	RMS	35.20	-43.56	0.33	-95.23	85.55	-13.00	-4.71	Vertical
5	7487.00	-61.68	RMS	35.53	-43.03	0.33	-95.23	40.72	-13.00	-48.68	Vertical
6	7620.00	-42.56	RMS	35.90	-42.91	0.35	-95.23	59.33	-13.00	-29.56	Vertical
7	9615.00	-38.23	RMS	36.60	-42.84	0.56	-95.23	62.68	-13.00	-25.23	Vertical

Remark: #4 is WLAN signal which can be ignored.

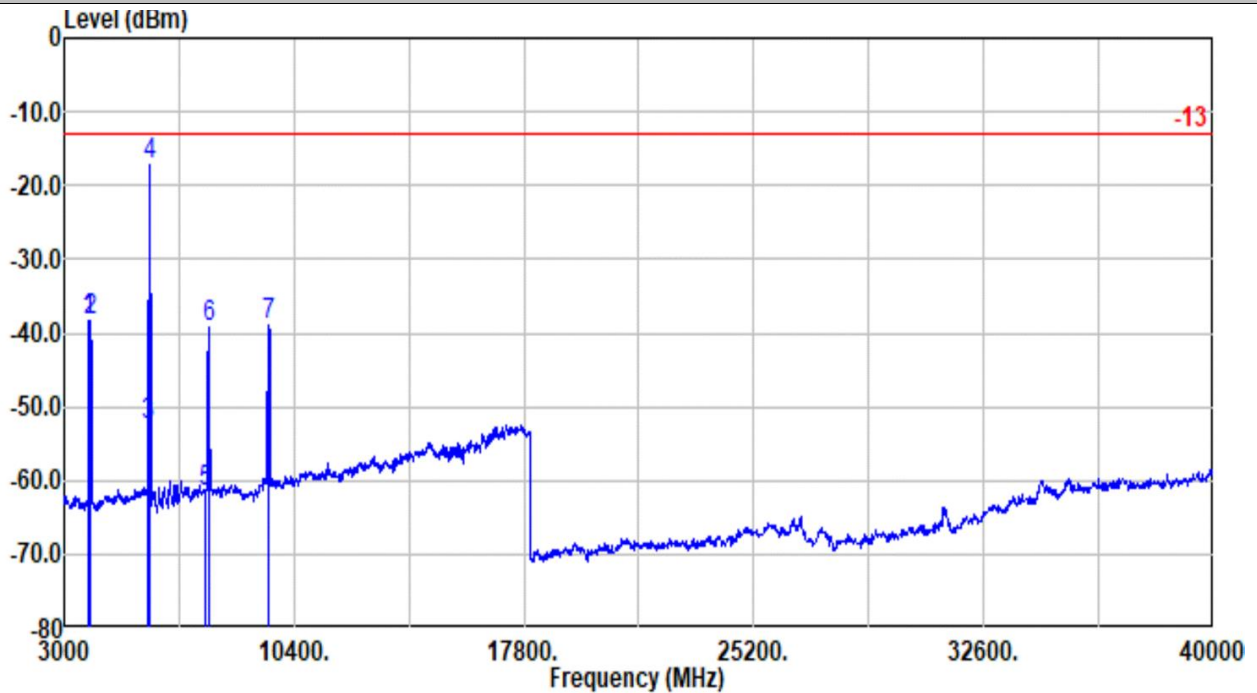
Ant 5

Worst plane :NB With Accessory

Part 24E Mode 2

LTE CAT M1 B2 20M Ch19100 1RB0 QPSK + WLAN 5G_11n20_Ch149

H



Site : 03CH07-HY

Condition: -13 1m SHF-EHF_9170251 Horizontal

Mode : Cat M1 Band 2 20M CH19100 1RB0 QPSK

: WLAN 5G 11be EHT20 Ch149 MIMO(Setting23)

	Freq Level		Detector	Ant Amp\Cb Filter		Readin Limit		Margin Pol			
	MHz	dBm		Factor	1	EIRPCF	g	dBm	dB		
1	3784.00	-38.22	RMS	33.34	-48.93	0.68	-95.23	71.92	-13.00	-25.22	Horizontal
2	3861.00	-38.29	RMS	33.48	-48.89	0.62	-95.23	71.73	-13.00	-25.29	Horizontal
3	5681.00	-52.63	RMS	35.12	-43.74	0.42	-95.23	50.80	-13.00	-39.63	Horizontal
4	5745.00	-17.28	RMS	35.20	-43.56	0.33	-95.23	85.98	-13.00	-4.28	Horizontal
5	7557.00	-61.60	RMS	35.73	-42.98	0.34	-95.23	40.54	-13.00	-48.60	Horizontal
6	7641.00	-39.32	RMS	35.90	-42.88	0.35	-95.23	62.54	-13.00	-26.32	Horizontal
7	9594.00	-38.80	RMS	36.59	-42.88	0.58	-95.23	62.14	-13.00	-25.80	Horizontal

Remark: #4 is WLAN signal which can be ignored.

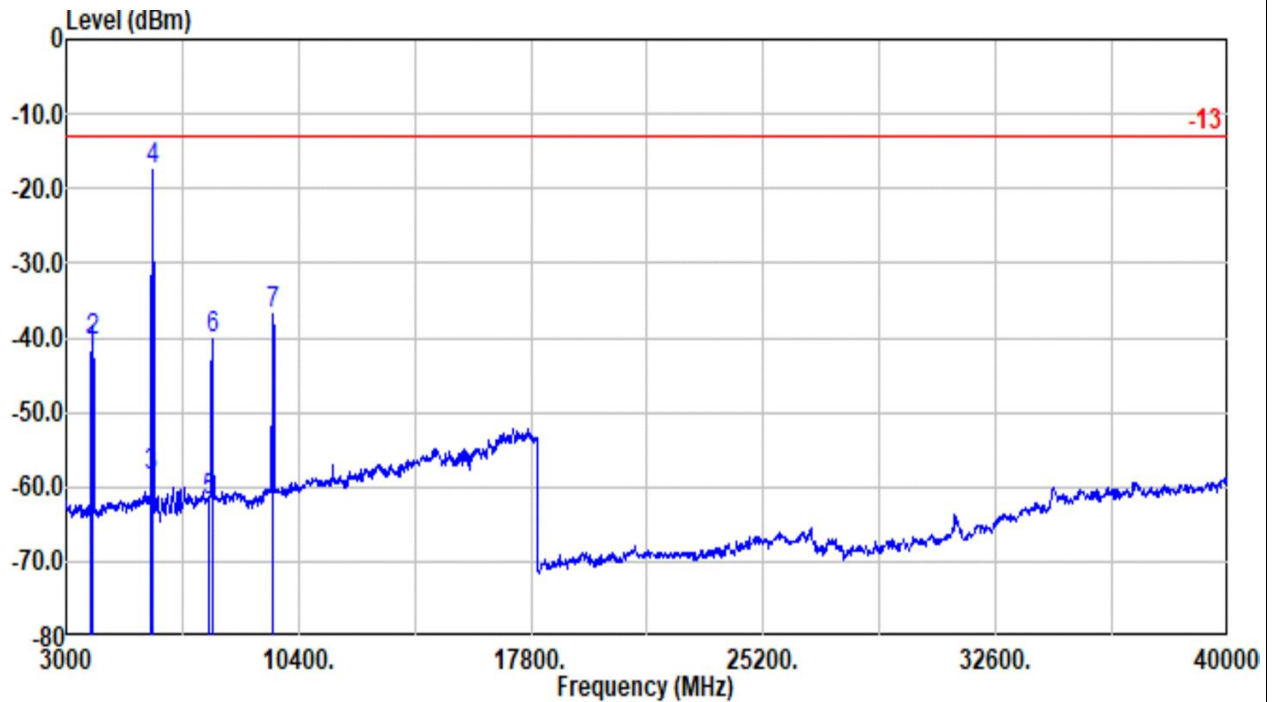
Ant 5

Worst plane :NB With Accessory

Part 24E Mode 2

LTE CAT M1 B2 20M Ch19100 1RB0 QPSK + WLAN 5G_11n20_Ch149

H



Site : 03CH07-HY

Condition: -13 1m SHF-EHF_9170251 Vertical

Mode : Cat M1 Band 2 20M CH19100 1RB0 QPSK

: WLAN 5G 11be EHT20 Ch149 MIMO(Setting23)

	Freq Level		Detector	Ant Amp\Cb Filter		Readin Limit		Margin Pol	
	MHz	dBm		Factor	1	EIRPCF	g		
1	3784.00	-41.82	RMS	33.34	-48.93	0.68	-95.23	68.32	-13.00 -28.82 Vertical
2	3861.00	-40.49	RMS	33.48	-48.89	0.62	-95.23	69.53	-13.00 -27.49 Vertical
3	5681.00	-58.70	RMS	35.12	-43.74	0.42	-95.23	44.73	-13.00 -45.70 Vertical
4	5745.00	-17.37	RMS	35.20	-43.56	0.33	-95.23	85.89	-13.00 -4.37 Vertical
5	7557.00	-61.83	RMS	35.73	-42.98	0.34	-95.23	40.31	-13.00 -48.83 Vertical
6	7641.00	-40.27	RMS	35.90	-42.88	0.35	-95.23	61.59	-13.00 -27.27 Vertical
7	9601.00	-36.87	RMS	36.60	-42.86	0.57	-95.23	64.05	-13.00 -23.87 Vertical

Remark: #4 is WLAN signal which can be ignored.



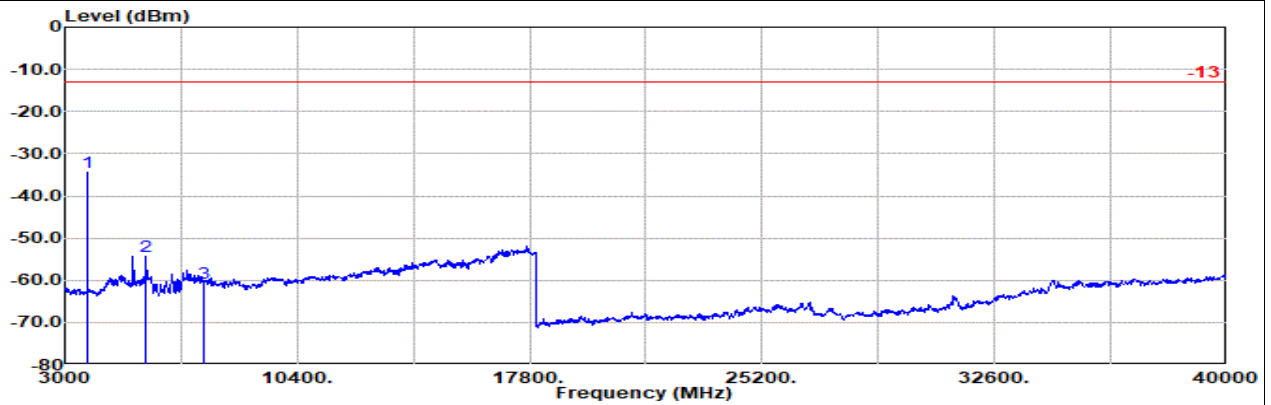
Ant 5

Worst plane :NB With Accessory

Part 24E Mode 3

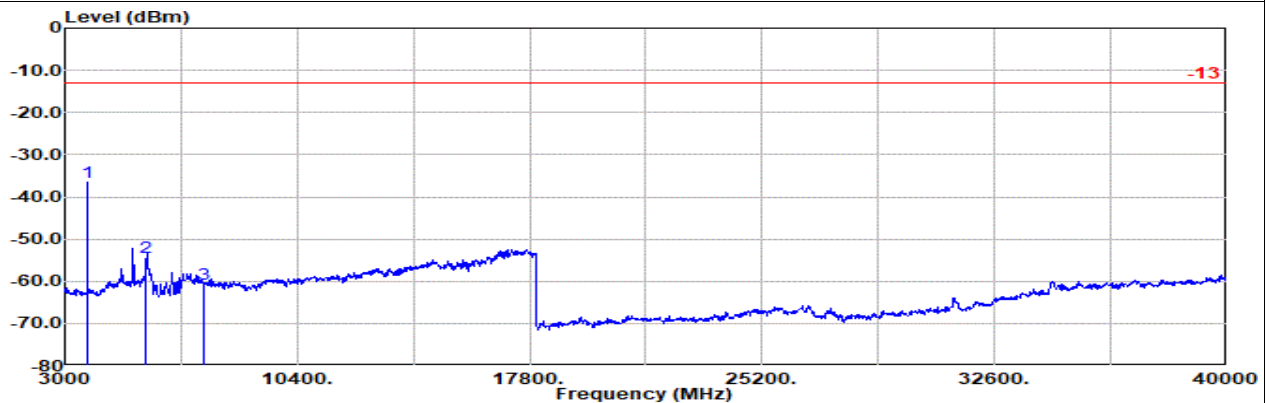
LTE CAT M1 B2 20M Ch18700 1RB0 QPSK + WLAN 6G_11be40_Ch91

L



Site : 03CH07-HY
Condition: -13 1m SHF-EHF_9170251 Horizontal
Mode : Cat M1 Band 2 20M CH18700 1RB0 QPSK
: WLAN 6G 11be EHT40 Ch91 MIMO(Setting21)

	Freq Level		Detector	Ant Factor	Amp\Cb		Filter 1	EIRPCF	Readin g	Limit g	Margin Pol	
	MHz	dBm			dB/m	dB	dB	dB	dBuV	dBm	dB	
1	3707.00	-34.40	RMS	33.11	-49.00	0.67	-95.23	76.05	-13.00	-21.40	Horizontal	
2	5555.00	-54.44	RMS	34.70	-44.09	0.51	-95.23	49.67	-13.00	-41.44	Horizontal	
3	7403.00	-60.79	RMS	35.69	-42.98	0.31	-95.23	41.42	-13.00	-47.79	Horizontal	



Site : 03CH07-HY
Condition: -13 1m SHF-EHF_9170251 Vertical
Mode : Cat M1 Band 2 20M CH18700 1RB0 QPSK
: WLAN 6G 11be EHT40 Ch91 MIMO(Setting21)

	Freq Level		Detector	Ant Factor	Amp\Cb		Filter 1	EIRPCF	Readin g	Limit g	Margin Pol	
	MHz	dBm			dB/m	dB	dB	dB	dBuV	dBm	dB	
1	3707.00	-36.60	RMS	33.11	-49.00	0.67	-95.23	73.85	-13.00	-23.60	Vertical	
2	5555.00	-54.49	RMS	34.70	-44.09	0.51	-95.23	49.62	-13.00	-41.49	Vertical	
3	7400.00	-60.53	RMS	35.70	-42.98	0.31	-95.23	41.67	-13.00	-47.53	Vertical	



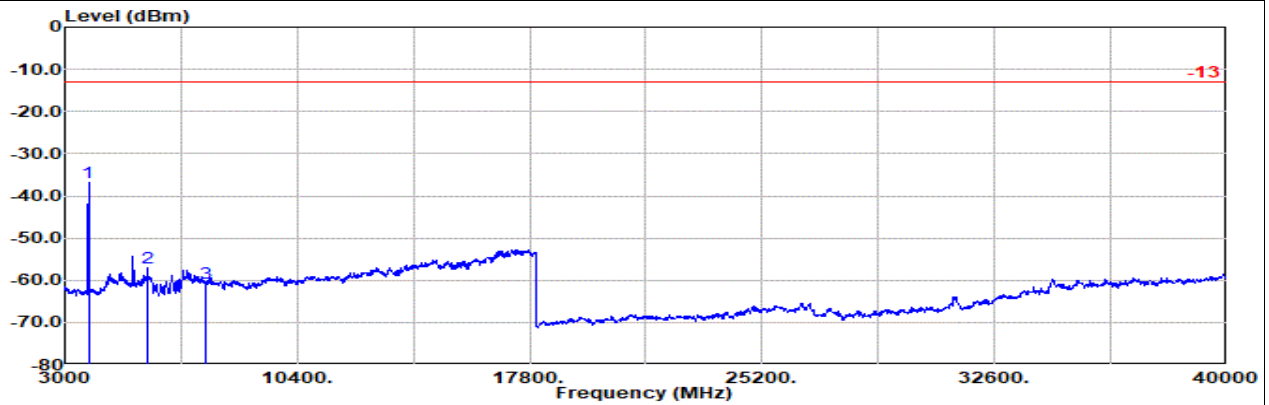
Ant 5

Worst plane :NB With Accessory

Part 24E Mode 3

LTE CAT M1 B2 20M Ch18900 1RB0 QPSK + WLAN 6G_11be40_Ch91

M



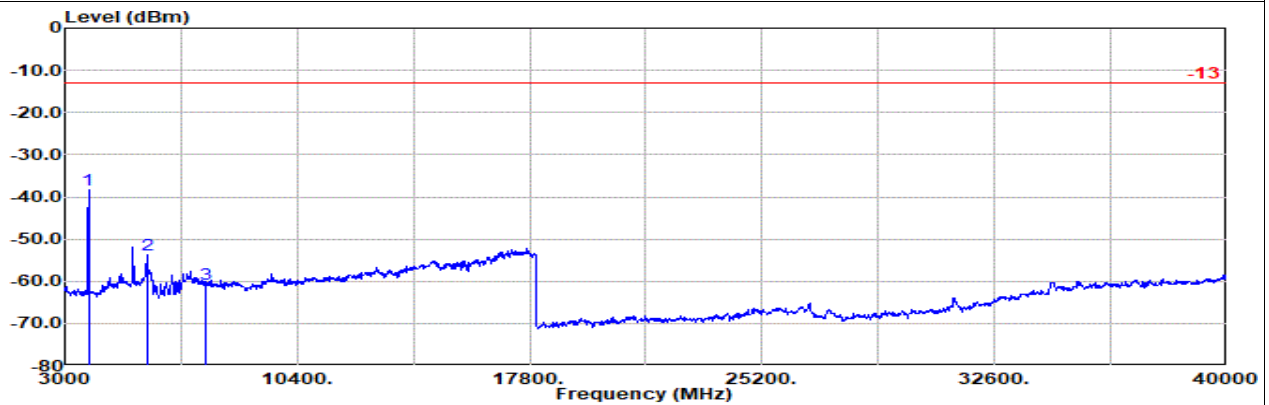
Site : 03CH07-HY

Condition: -13 1m SHF-EHF_9170251 Horizontal

Mode : Cat M1 Band 2 20M CH18900 1RB0 QPSK

: WLAN 6G 11be EHT40 Ch91 MIMO(Setting21)

	Freq	Level	Detector	Ant Amp\Cb Filter		EIRPCF	Readin	Limit	Margin Pol	
				Factor	1		g			
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB
1	3749.00	-36.69	RMS	33.20	-48.96	0.67	-95.23	73.63	-13.00	-23.69
2	5625.00	-57.12	RMS	34.85	-43.90	0.50	-95.23	46.66	-13.00	-44.12
3	7480.00	-60.58	RMS	35.54	-43.03	0.33	-95.23	41.81	-13.00	-47.58



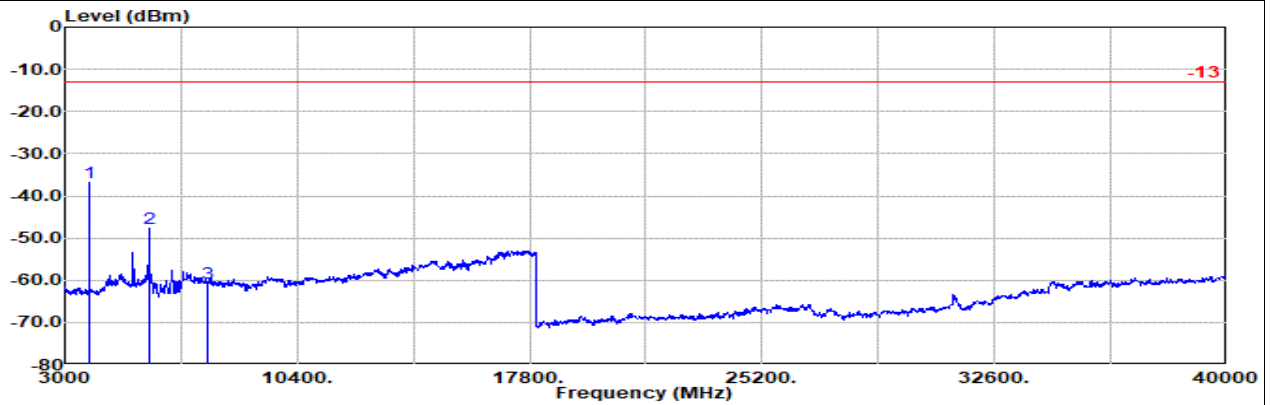
Site : 03CH07-HY

Condition: -13 1m SHF-EHF_9170251 Vertical

Mode : Cat M1 Band 2 20M CH18900 1RB0 QPSK

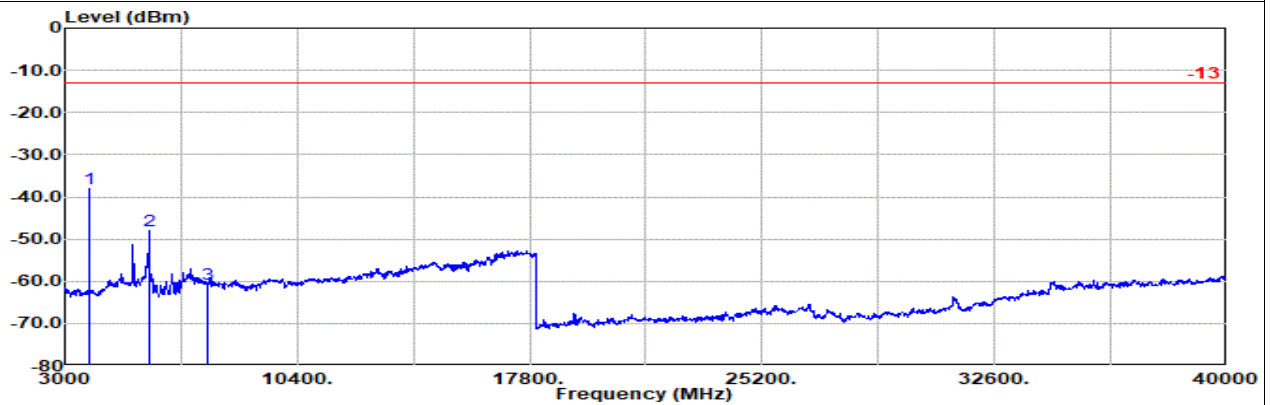
: WLAN 6G 11be EHT40 Ch91 MIMO(Setting21)

	Freq	Level	Detector	Ant Amp\Cb Filter		EIRPCF	Readin	Limit	Margin Pol	
				Factor	1		g			
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB
1	3749.00	-38.24	RMS	33.20	-48.96	0.67	-95.23	72.08	-13.00	-25.24
2	5625.00	-53.62	RMS	34.85	-43.90	0.50	-95.23	50.16	-13.00	-40.62
3	7480.00	-60.83	RMS	35.54	-43.03	0.33	-95.23	41.56	-13.00	-47.83

Ant 5
Worst plane :NB With Accessory
Part 24E Mode 3
LTE CAT M1 B2 20M Ch19100 1RB0 QPSK + WLAN 6G_11be40_Ch91
H


Site : 03CH07-HY
 Condition: -13 1m SHF-EHF_9170251 Horizontal
 Mode : Cat M1 Band 2 20M CH19100 1RB0 QPSK
 : WLAN 6G 11be EHT40 Ch91 MIMO(Setting21)

	Freq Level		Detector	Ant Amp\Cb Filter		EIRPCF	Readin g	Limit		Margin	Pol
	MHz	dBm		Factor	1			dBuV	dBm		
1	3784.00	-36.90	RMS	33.34	-48.93	0.68	-95.23	73.24	-13.00	-23.90	Horizontal
2	5674.00	-47.75	RMS	35.10	-43.76	0.43	-95.23	55.71	-13.00	-34.75	Horizontal
3	5660.00	-60.74	RMS	35.74	-42.98	0.34	-95.23	41.39	-13.00	-47.74	Horizontal

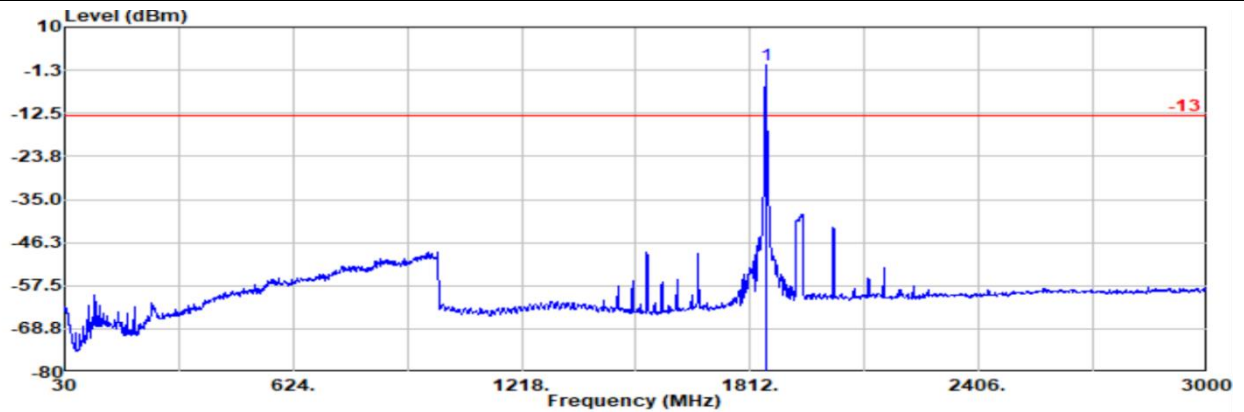


Site : 03CH07-HY
 Condition: -13 1m SHF-EHF_9170251 Vertical
 Mode : Cat M1 Band 2 20M CH19100 1RB0 QPSK
 : WLAN 6G 11be EHT40 Ch91 MIMO(Setting21)

	Freq Level		Detector	Ant Amp\Cb Filter		EIRPCF	Readin g	Limit		Margin	Pol
	MHz	dBm		Factor	1			dBuV	dBm		
1	3784.00	-38.02	RMS	33.34	-48.93	0.68	-95.23	72.12	-13.00	-25.02	Vertical
2	5674.00	-48.03	RMS	35.10	-43.76	0.43	-95.23	55.43	-13.00	-35.03	Vertical
3	7560.00	-60.77	RMS	35.74	-42.98	0.34	-95.23	41.36	-13.00	-47.77	Vertical

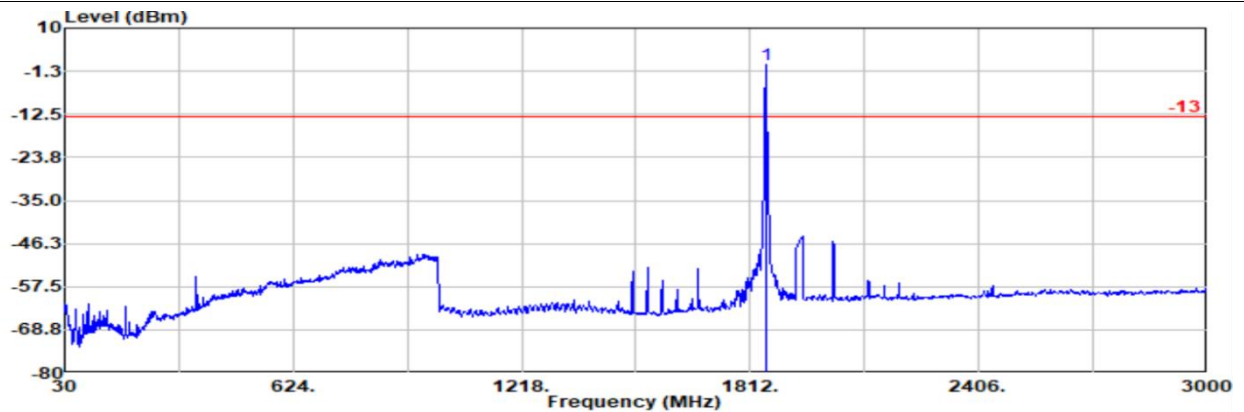
Ant 5

Worst plane :NB With Accessory

Part 24E Mode 3
LTE CAT M1 B2 20M Ch18700 1RB0 QPSK + WLAN 6G_11be40_Ch91
L


Site : 03CH07-HY
Condition: -13 3m HF_ANT_00075962 Horizontal
Mode : Cat M1 Band 2 20M CH18700 1RB0 QPSK
: WLAN 6G 11be EHT40 Ch91 MIMO(Setting21)
: #1 is fundamental signal which can be ignored.

	Freq	Level	Detector	Ant Factor	Amp\Cb 1	Filter	EIRPCF	Readin g	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1852.00	0.13	RMS	30.72	-26.99	0.00	-95.23	91.63	-13.00	13.13	Horizontal



Site : 03CH07-HY
Condition: -13 3m HF_ANT_00075962 Vertical
Mode : Cat M1 Band 2 20M CH18700 1RB0 QPSK
: WLAN 6G 11be EHT40 Ch91 MIMO(Setting21)
: #1 is fundamental signal which can be ignored.

	Freq	Level	Detector	Ant Factor	Amp\Cb 1	Filter	EIRPCF	Readin g	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1852.00	0.38	RMS	30.72	-26.99	0.00	-95.23	91.88	-13.00	13.38	Vertical

Remark: #1 is fundamental signal which can be ignored.