



# FCC RADIO TEST REPORT

FCC ID : 2ARF9CSM64  
Equipment : Cloud Services Modem  
Brand Name : Versa Networks



Model Name : CSM64  
Marketing Name : Cloud Services Modem  
Applicant : Versa Networks  
2550 GREAT AMERICA WAY SUITE 350 SANTA CLARA,  
CA 95054  
Manufacturer : Versa Networks  
2550 GREAT AMERICA WAY SUITE 350 SANTA CLARA,  
CA 95054  
Standard : FCC 47 CFR Part 2, 22(H), 24(E), 27(L)

The product was received on Sep. 27, 2024 and testing was performed from Sep. 27, 2024 to Feb. 21, 2025. 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 partial 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.)



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## History of this test report

Report No.	Version	Description	Issue Date
FG461443-01A	01	Initial issue of report	Mar. 12, 2025

## Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Pass	-
	§22.913 (a)(5)	Effective Radiated Power (WCDMA Band V)		
	§24.232 (c)	Equivalent Isotropic Radiated Power (WCDMA Band II)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (WCDMA Band IV)		
-	§24.232 (d)	Peak-to-Average Ratio	Pass	See Note
-	§2.1049 §22.917 (b) §24.238 (b) §27.53 (g)	Occupied Bandwidth (WCDMA Band V) (WCDMA Band II) (WCDMA Band IV)	Pass	See Note
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g)	Band Edge Measurement (WCDMA Band V) (WCDMA Band II) (WCDMA Band IV)	Pass	See Note
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g)	Conducted Emission (WCDMA Band V) (WCDMA Band II) (WCDMA Band IV)	Pass	See Note
-	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	Pass	See Note
4.4	§2.1053 §22.917 (a) §24.238 (a) §27.53 (h)	Field Strength of Spurious Radiation (WCDMA Band V) (WCDMA Band II) (WCDMA Band IV)	Pass	-

**Remark:**

- For host device, Field Strength of Spurious Radiation, Effective Radiated Power and Equivalent Isotropic Radiated Power are verified and comply with the limit in this test report.
- For host device, the Conducted Output Power is no difference after compared to module (Model: FN990A28).
- This report is by changing EUT appearance, FCC ID, equipment name, brand name, model name, marketing name, applicant and manufacturer information. After assessing, since the test result is not affected by the changes, the FG461443-01A report reuses test data from the FG461443A report.

**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/manufacturee 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: Keven Cheng**

**Report Producer: Michelle Chen**



# 1 General Description

## 1.1 Product Feature of Equipment Under Test

Product Feature	
<b>General Specs</b> WCDMA/LTE/5G NR, and GNSS	
<b>Antenna Type</b> WWAN: <Taoglas Antenna>: Fixed External Antenna <Airgain Antenna>: Fixed External Antenna	
<b>Antenna Gain</b>	<Taoglas Antenna>: PCS Band: 2.88 dBi AWS Band: 3.34 dBi Cellular Band: 2.28 dBi  <Airgain Antenna>: PCS Band: 3.08 dBi AWS Band: 3.02 dBi Cellular Band: 0.70 dBi

**Remark:** The above EUT's information was 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

<b>Test Site</b>	Sporton International Inc. EMC & Wireless Communications Laboratory
<b>Test Site Location</b>	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
<b>Test Site No.</b>	<b>Sporton Site No.</b> TH03-HY
<b>Test Engineer</b>	Diego Huang
<b>Temperature (°C)</b>	22.2~23.6
<b>Relative Humidity (%)</b>	50.2~55.5

<b>Test Site</b>	Sporton International Inc. Wensan Laboratory
<b>Test Site Location</b>	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
<b>Test Site No.</b>	<b>Sporton Site No.</b> 03CH15-HY (TAF Code: 3786)
<b>Test Engineer</b>	Sam Pan, Quentin Liu and Bigshow Wang
<b>Temperature (°C)</b>	22.0~23.5
<b>Relative Humidity (%)</b>	50~59
<b>Remark</b>	The Radiated Spurious Emission test item subcontracted to Sporton International Inc. Wensan Laboratory.

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

FCC Designation No.: TW1190 and TW3786

### 1.4 Applicable Standards

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

- ♦ ANSI C63.26-2015
- ♦ FCC 47 CFR Part 2, 22(H), 24(E), 27(L)
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01

**Remark:**

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. 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 were performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in two degree (Degree 0 and Degree 90), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and only the worst case emissions were reported in this report..

Radiated emissions were investigated as following frequency range:

1. 30 MHz to 9000 MHz for WCDMA Band V
2. 30 MHz to 18000 MHz for WCDMA Band IV
3. 30 MHz to 19100 MHz for WCDMA Band II

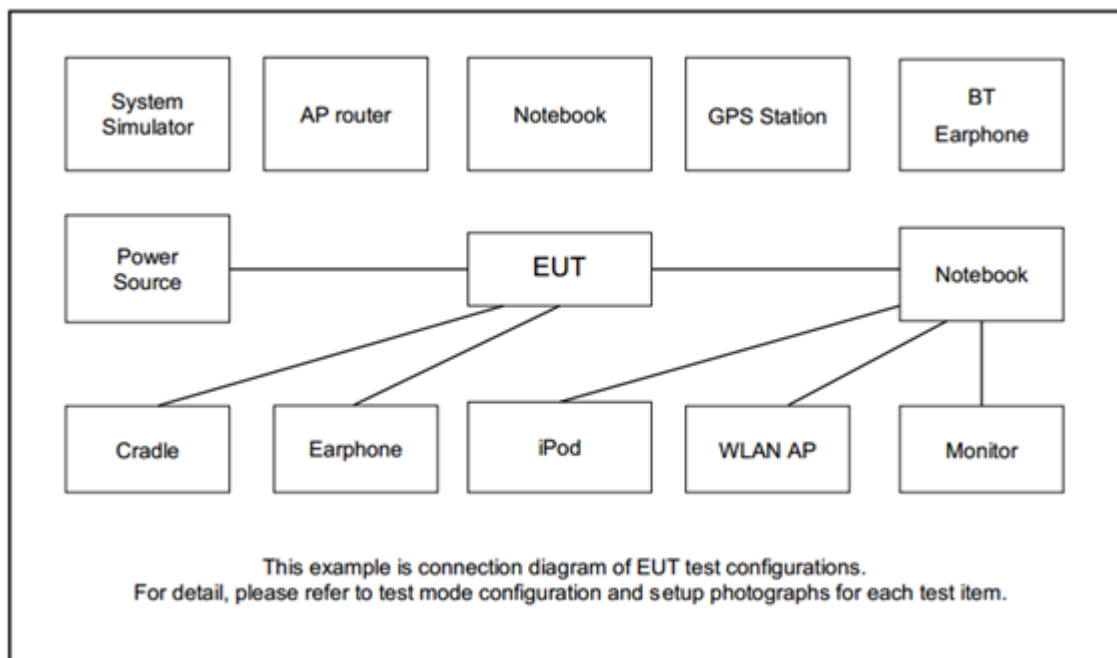
All modes, data rates and positions were investigated.

Test modes are chosen to be reported as the worst case configuration below:

<b>Test Modes</b>		
<b>Band</b>	<b>Radiated TCs</b>	<b>Conducted TCs</b>
<b>WCDMA Band V</b>	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
<b>WCDMA Band II</b>	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
<b>WCDMA Band IV</b>	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link



## 2.2 Connection Diagram of Test System



## 2.3 Support Unit used in test configuration

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.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

## 2.4 Frequency List of Low/Middle/High Channels

Frequency List				
Band	Channel/Frequency(MHz)	Lowest	Middle	Highest
WCDMA Band V	Channel	4132	4182	4233
	Frequency	826.4	836.4	846.6
WCDMA Band II	Channel	9262	9400	9538
	Frequency	1852.4	1880.0	1907.6
WCDMA Band IV	Channel	1312	1413	1513
	Frequency	1712.4	1732.6	1752.6

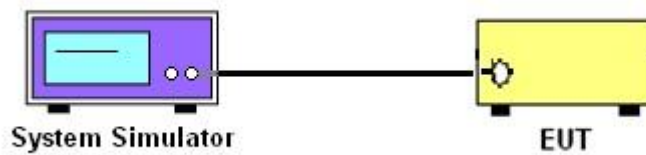
### 3 Conducted Test Result

#### 3.1 Measuring Instruments

Please refer to the measuring equipment list in this test report.

##### 3.1.1 Test Setup

##### 3.1.2 Conducted Output Power



##### 3.1.3 Test Result of Conducted Test

Please refer to Appendix A.

## 3.2 Conducted Output Power and ERP/EIRP

### 3.2.1 Description of the Conducted Output Power and ERP/EIRP

A system simulator was used to establish communication with the EUT. Its parameters were set to enforce EUT transmitting at the maximum power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for WCDMA Band V

The EIRP of mobile transmitters must not exceed 2 Watts for WCDMA Band II

The EIRP of mobile transmitters must not exceed 1 Watts for WCDMA Band IV

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$ ,  $ERP = EIRP - 2.15$ , where

$P_T$  = transmitter output power in dBm

$G_T$  = gain of the transmitting antenna in dBi

$L_C$  = signal attenuation in the connecting cable between the transmitter and antenna in dB

### 3.2.2 Test Procedures

1. The transmitter output port is connected to the system simulator.
2. Set EUT at maximum power through system simulator.
3. Select the lowest, middle, and the highest channels for each band and different modulation.
4. Measure the maximum burst average power for GSM and maximum average power for other modulation signal.

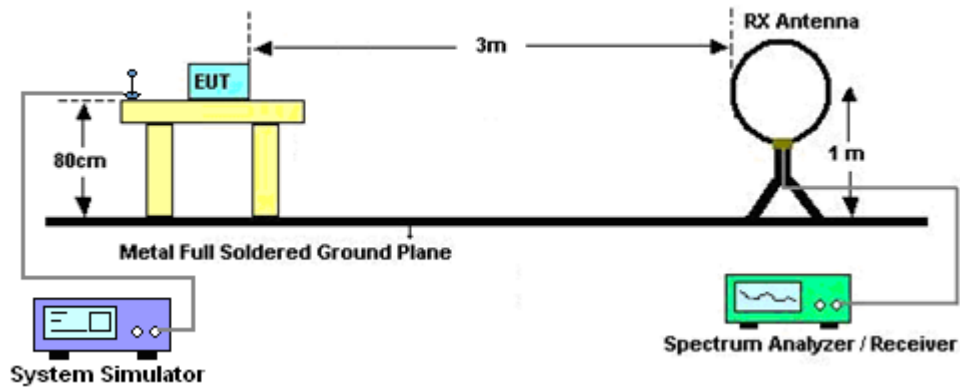
## 4 Radiated Test Items

### 4.1 Measuring Instruments

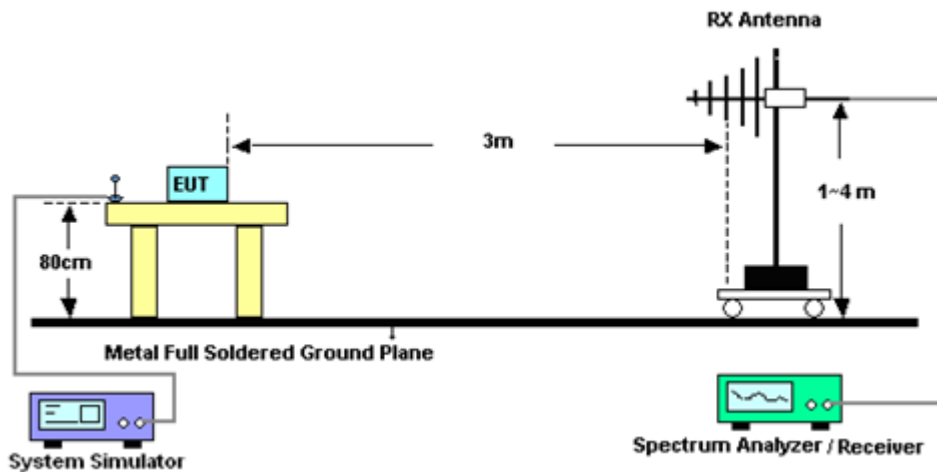
Please refer to the measuring equipment list in this test report.

### 4.2 Test Setup

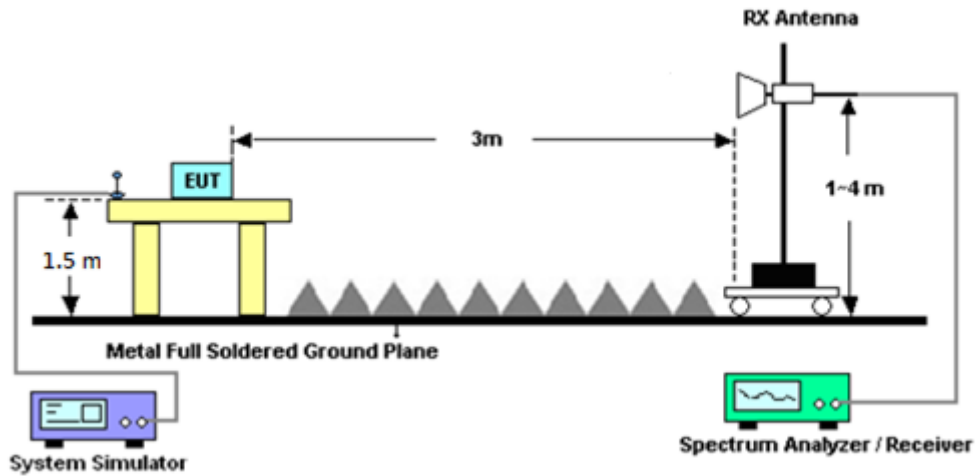
For radiated test below 30MHz



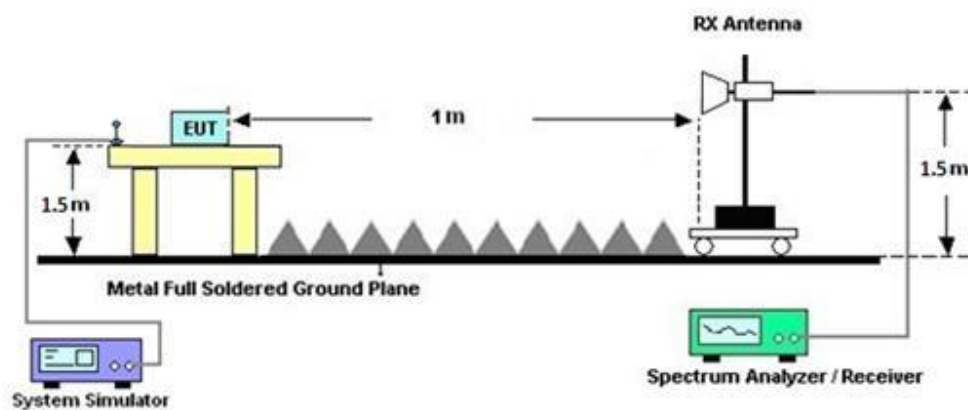
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



### 4.3 Test Result of Radiated Test

Please refer to Appendix B.

**Note:**

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is 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.

## 4.4 Field Strength of Spurious Radiation Measurement

### 4.4.1 Description of Field Strength of Spurious Radiated Measurement

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.

### 4.4.2 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 is placed on a rotatable wooden table 0.8 meters for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz above the ground.
2. The EUT is set 3 meters away from the receiving antenna, which is mounted on the antenna tower.
3. The table is 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 for the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1 MHz, VBW = 3 MHz, taking 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. Field Strength Level (dBm) = Spectrum Reading (dBm) + Antenna Factor + Cable Loss + Read Level - Preamp Factor.
8. ERP (dBm) = EIRP (dBm) - 2.15
9. The RF fundamental frequency shall be excluded against the limit line in the operating frequency band.
10. The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)



## 5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Radio Communication Analyzer	Anritsu	MT8821C	6262025353	LTE FDD/TDD LTE-2CC DLCA/ULCA	Oct. 03, 2023	Sep. 27, 2024~ Oct. 01, 2024	Oct. 02, 2024	Conducted (TH03-HY)
Radio Communication Analyzer	Anritsu	MT8821C	6262025353	LTE FDD/TDD LTE-2CC DLCA/ULCA	Oct. 01, 2024	Oct. 02, 2024~ Nov. 01, 2024	Sep. 01, 2025	Conducted (TH03-HY)
Coupler+10dB+ RFCable	Warison + WoKen + E-Instument	20dB 25W SMA Directional Coupler+ 10dB 18GHz_5W+S FL405 1.5M	#A+#1+#1+# 7	1-18GHz	Jan. 02, 2024	Sep. 27, 2024~ Nov. 01, 2024	Jan. 01, 2025	Conducted (TH03-HY)
Power divider	Anritsu	K241C	2143398	9KHz~40GHz	Jun. 13, 2024	Sep. 27, 2024~ Nov. 01, 2024	Jun. 12, 2025	Conducted (TH03-HY)
Software	Sporton	LTE Conducted Test Tools	N/A	Conducted Test Item	N/A	Sep. 27, 2024~ Nov. 01, 2024	N/A	Conducted (TH03-HY)
Hygrometer	TECPEL	DTM-303B	TP210073	-10 ~ 50°C / 20 ~ 95%RH	Jun. 05, 2024	Sep. 27, 2024~ Nov. 01, 2024	Jun. 04, 2025	Conducted (TH03-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Aug. 29, 2024	Feb. 15, 2025~ Feb. 21, 2025	Aug. 28, 2025	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	37059 & 01	30MHz~1GHz	Nov. 27, 2024	Feb. 15, 2025~ Feb. 21, 2025	Nov. 26, 2025	Radiation (03CH15-HY)
Horn Antenna	SCHWARZB ECK	BBHA 9120 D	9120D-02294	1GHz~18GHz	Jun. 20, 2024	Feb. 15, 2025~ Feb. 21, 2025	Jun. 19, 2025	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZB ECK	BBHA 9170	1224	18GHz~40GHz	Jun. 24, 2024	Feb. 15, 2025~ Feb. 21, 2025	Jun. 23, 2025	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 24, 2024	Feb. 15, 2025~ Feb. 21, 2025	Dec. 23, 2025	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-3 03	1710001800 055007	1GHz~18GHz	Jun. 13, 2024	Feb. 15, 2025~ Feb. 21, 2025	Jun. 12, 2025	Radiation (03CH15-HY)
Preamplifier	EM Electronics	EM01G18G	060802	1GHz~18GHz	Feb. 14, 2025	Feb. 15, 2025~ Feb. 21, 2025	Feb. 13, 2026	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	May 27, 2024	Feb. 15, 2025~ Feb. 21, 2025	May 26, 2025	Radiation (03CH15-HY)
Spectrum Analyzer	Keysight	N9010B	MY60241058	10Hz~44Gz	Jul. 11, 2024	Feb. 15, 2025~ Feb. 21, 2025	Jul. 10, 2025	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Oct. 16, 2024	Feb. 15, 2025~ Feb. 21, 2025	Oct. 15, 2025	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Feb. 15, 2025~ Feb. 21, 2025	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Feb. 15, 2025~ Feb. 21, 2025	N/A	Radiation (03CH15-HY)
Software	Audix	E3_V9_23062 1	RK-002394	N/A	N/A	Feb. 15, 2025~ Feb. 21, 2025	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY582185/4, 519228/2,80 3950/2	N/A	Jun. 11, 2024	Feb. 15, 2025~ Feb. 21, 2025	Jun. 10, 2025	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804011/2,804 012/2	18-40G	Dec. 31, 2024	Feb. 15, 2025~ Feb. 21, 2025	Dec. 30, 2025	Radiation (03CH15-HY)
Filter	Wainwright	WLJ4-1000-15 30-6000-40ST	SN4	1.53GHz Low Pass Filter	Jun. 05, 2024	Feb. 15, 2025~ Feb. 21, 2025	Jun. 04, 2025	Radiation (03CH15-HY)
Hygrometer	TECPEL	DTM-302	SN4	N/A	Aug. 29, 2024	Feb. 15, 2025~ Feb. 21, 2025	Aug. 28, 2025	Radiation (03CH15-HY)

## 6 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	6.3 dB
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 6 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.4 dB
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### Uncertainty of Radiated Emission Measurement (6 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.4dB
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### Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.2 dB
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## Appendix A. Test Results of Conducted Test

## Conducted Output Power(Average power) &amp; ERP / EIRP

WCDMA Band V Maximum Average Power [dBm] (GT - LC = 2.28 dB)					
Channel	4132	4182	4233	ERP (dBm)	ERP (W)
Frequency	826.4	836.4	846.6		
RMC 12.2K	23.01	23.02	22.85	20.87	0.1222
HSDPA Subtest-1	22.16	21.98	21.61		
HSDPA Subtest-2	22.12	22.01	21.63		
HSDPA Subtest-3	21.63	21.47	21.11		
HSDPA Subtest-4	21.60	21.47	21.12		
HSUPA Subtest-1	22.13	21.98	21.61		
HSUPA Subtest-2	20.09	19.96	19.59		
HSUPA Subtest-3	21.12	20.96	20.61		
HSUPA Subtest-4	20.10	19.99	19.59		
HSUPA Subtest-5	22.20	22.00	21.60		
Limit	ERP < 7W			Result	Pass

WCDMA Band II Maximum Average Power [dBm] (GT - LC = 3.08 dB)					
Channel	9262	9400	9538	EIRP (dBm)	EIRP (W)
Frequency	1852.4	1880	1907.6		
RMC 12.2K	23.02	23.04	23.00	23.04	0.2014
HSDPA Subtest-1	22.36	22.06	22.03		
HSDPA Subtest-2	22.34	22.04	22.05		
HSDPA Subtest-3	21.83	21.57	21.52		
HSDPA Subtest-4	21.84	21.55	21.51		
HSUPA Subtest-1	22.37	22.10	22.03		
HSUPA Subtest-2	20.34	20.04	20.05		
HSUPA Subtest-3	21.30	21.06	21.05		
HSUPA Subtest-4	20.34	20.10	20.05		
HSUPA Subtest-5	22.40	22.10	22.00		
Limit	EIRP < 2W			Result	Pass

WCDMA Band IV Maximum Average Power [dBm] (GT - LC = 3.34 dB)					
Channel	1312	1413	1513	EIRP (dBm)	EIRP (W)
Frequency	1712.4	1732.6	1752.6		
RMC 12.2K	23.02	23.02	22.96	23.02	0.2004
HSDPA Subtest-1	22.05	21.96	21.98		
HSDPA Subtest-2	21.77	21.92	21.94		
HSDPA Subtest-3	21.56	21.46	21.42		
HSDPA Subtest-4	21.52	21.50	21.48		
HSUPA Subtest-1	22.06	21.99	22.00		
HSUPA Subtest-2	19.99	20.02	19.96		
HSUPA Subtest-3	21.03	20.99	20.92		
HSUPA Subtest-4	20.03	19.99	19.97		
HSUPA Subtest-5	22.10	22.00	22.00		
Limit	EIRP < 1W			Result	Pass



## Appendix B. Test Results of Radiated Test

### B1. 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	WCDMA B2	L	7409	-52.14	RMS	36.38	-26.69	0.26	-95.23	33.14	-13.00	-39.14	H	Airgain Antenna 0
1	Part 22H	WCDMA B5	L	3305	-60.72	RMS	29.60	-30.20	0.25	-95.23	34.86	-13.00	-47.72	V	Taoglas Antenna 0
1	Part 27L	WCDMA B4	H	7010	-53.46	RMS	35.94	-27.06	0.15	-95.23	32.74	-13.00	-40.46	V	Taoglas Antenna 0

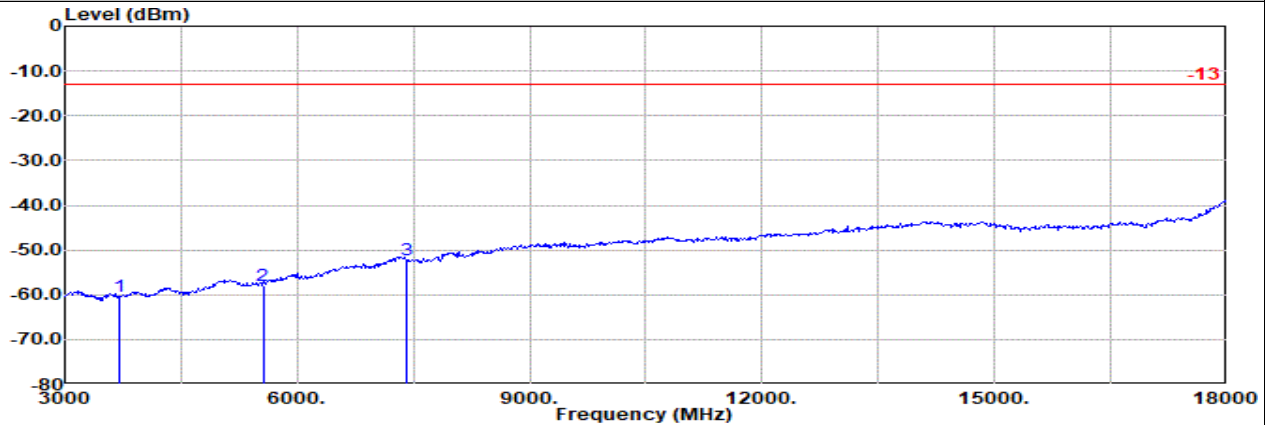


## Airgain Antenna 0

Part 24E Mode 1

WCDMA B2 Ch9262

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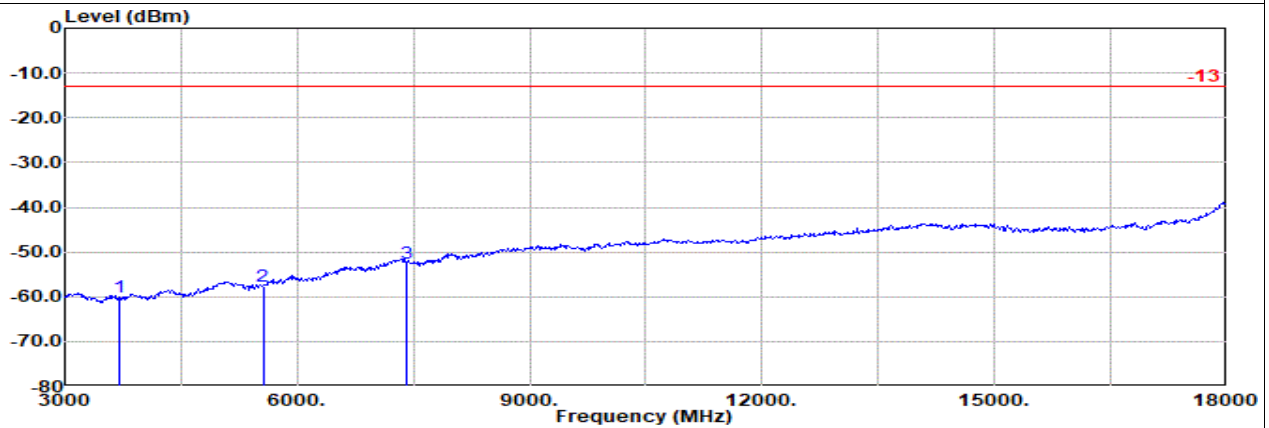


Site : 03CH15-HY

Condition: -13 3m BBHA 9120 D\_9120D-02294 Horizontal

: WCDMA B2 Ch9262

	Freq MHz	Level dBm	Detector	Ant Amp\Cb Filter		EIRPCF	Readin g	Limit	Margin Pol	
				Factor	1					
1	3704.00	-60.27	RMS	29.83	-29.92	0.80	-95.23	34.25	-13.00	-47.27 Horizontal
2	5557.00	-57.88	RMS	33.00	-28.19	0.35	-95.23	32.19	-13.00	-44.88 Horizontal
3	7409.00	-52.14	RMS	36.38	-26.69	0.26	-95.23	33.14	-13.00	-39.14 Horizontal



Site : 03CH15-HY

Condition: -13 3m BBHA 9120 D\_9120D-02294 Vertical

: WCDMA B2 Ch9262

	Freq MHz	Level dBm	Detector	Ant Amp\Cb Filter		EIRPCF	Readin g	Limit	Margin Pol	
				Factor	1					
1	3704.00	-60.13	RMS	29.83	-29.92	0.80	-95.23	34.39	-13.00	-47.13 Vertical
2	5557.00	-57.71	RMS	33.00	-28.19	0.35	-95.23	32.36	-13.00	-44.71 Vertical
3	7409.00	-52.42	RMS	36.38	-26.69	0.26	-95.23	32.86	-13.00	-39.42 Vertical

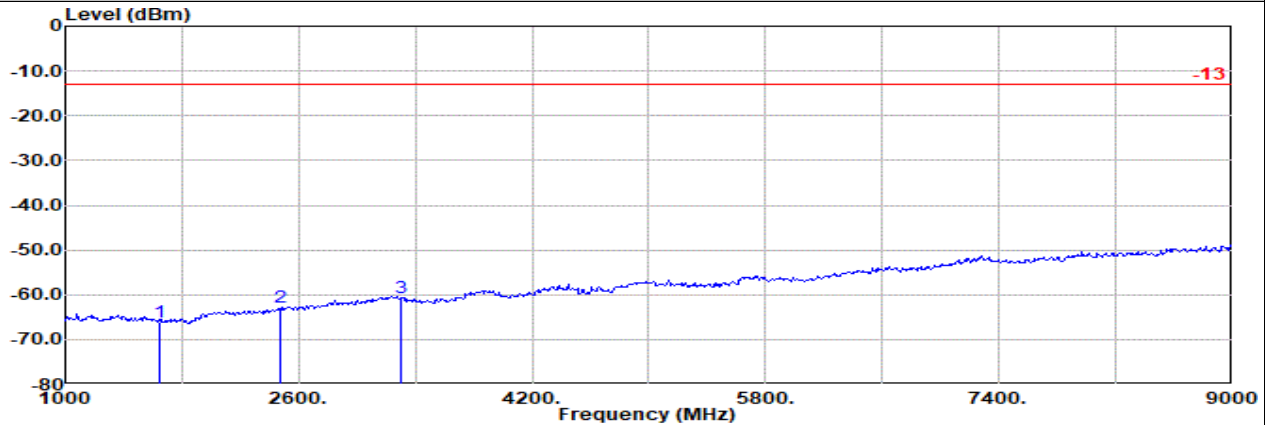


## Taoglas Antenna 0

Part 22H Mode 1

WCDMA B5 Ch4132

L

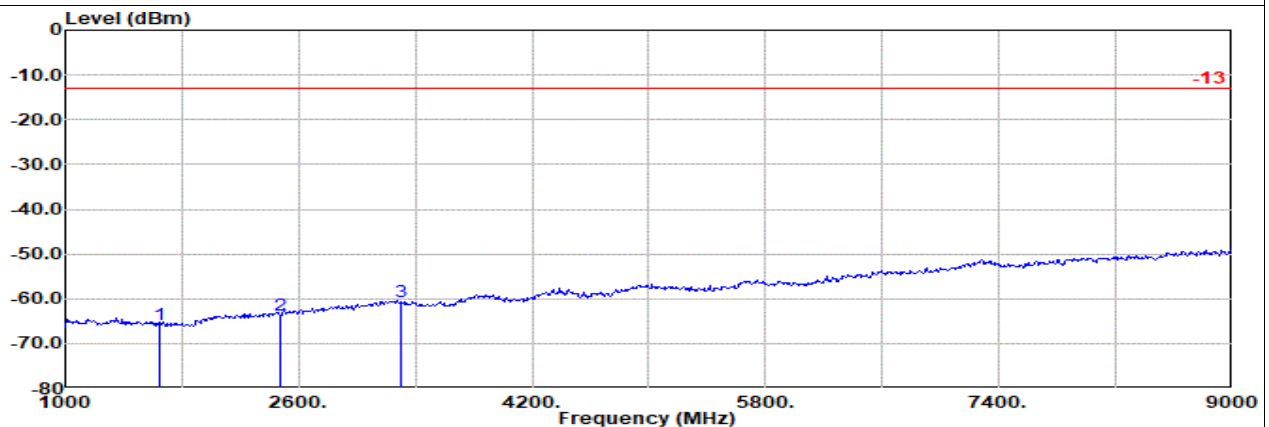


Site : 03CH15-HY

Condition: -13 3m BBHA 9120 D\_9120D-02294 Horizontal

: WCDMA Band V Ch4132

	Freq MHz	Level dBm	Detector	Ant Amp\Cb Filter		EIRPCF	Readin g	Limit	Margin	Pol
				Factor	1					
1	1652.00	-66.15	RMS	25.30	-32.33	0.35	-95.23	35.76	-13.00	-53.15 Horizontal
2	2479.00	-62.81	RMS	27.77	-31.10	0.22	-95.23	35.53	-13.00	-49.81 Horizontal
3	3305.00	-60.74	RMS	29.60	-30.20	0.25	-95.23	34.84	-13.00	-47.74 Horizontal



Site : 03CH15-HY

Condition: -13 3m BBHA 9120 D\_9120D-02294 Vertical

: WCDMA Band V Ch4132

	Freq MHz	Level dBm	Detector	Ant Amp\Cb Filter		EIRPCF	Readin g	Limit	Margin	Pol
				Factor	1					
1	1652.00	-65.94	RMS	25.30	-32.33	0.35	-95.23	35.97	-13.00	-52.94 Vertical
2	2479.00	-63.69	RMS	27.77	-31.10	0.22	-95.23	34.65	-13.00	-50.69 Vertical
3	3305.00	-60.72	RMS	29.60	-30.20	0.25	-95.23	34.86	-13.00	-47.72 Vertical

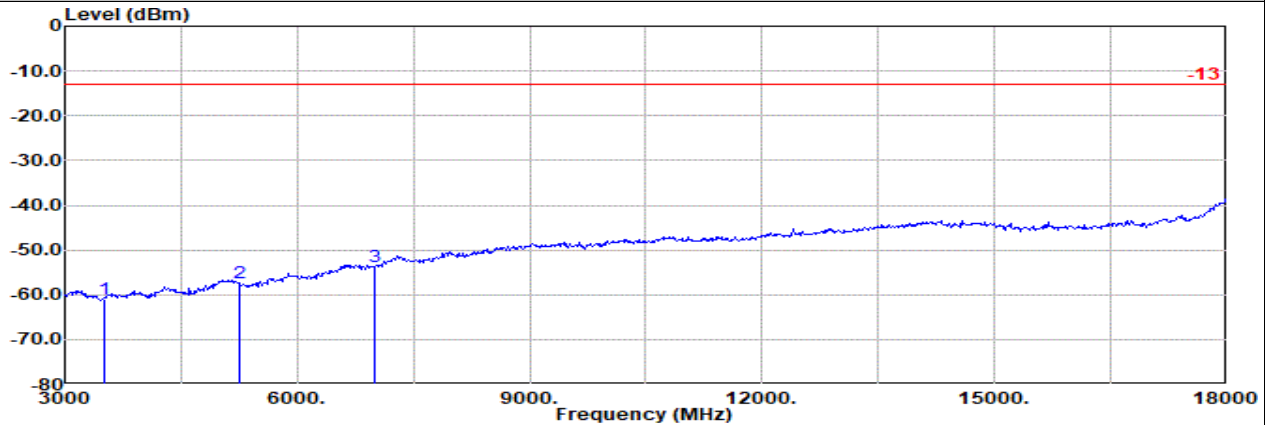


## Taoglas Antenna 0

Part 27L Mode 1

WCDMA B4 Ch1513

H

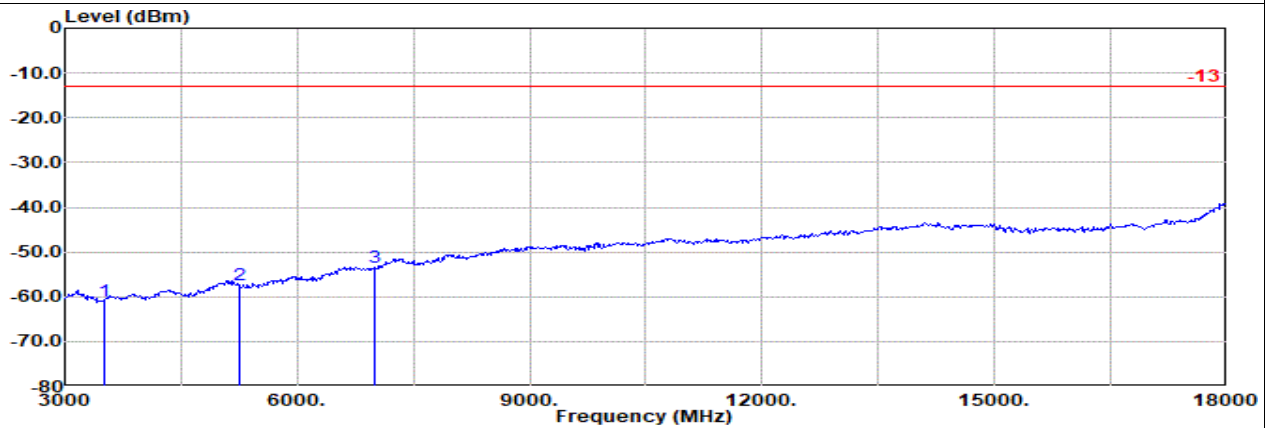


Site : 03CH15-HY

Condition: -13 3m BBHA 9120 D\_9120D-02294 Horizontal

: WCDMA Band 4 Ch1513

	Freq	Level	Detector	Ant Factor	Amp\Cb	Filter	EIRPCF	Readin	Limit	Margin	Pol
	MHz	dBm			dB	dB	dB	dBuV	dBm	dB	
1	3505.00	-60.84	RMS	29.51	-30.02	1.00	-95.23	0.00	-13.00	-47.84	Horizontal
2	5257.00	-57.25	RMS	32.99	-28.34	0.47	-95.23	32.86	-13.00	-44.25	Horizontal
3	7010.00	-53.80	RMS	35.94	-27.06	0.15	-95.23	32.40	-13.00	-40.80	Horizontal



Site : 03CH15-HY

Condition: -13 3m BBHA 9120 D\_9120D-02294 Vertical

: WCDMA Band 4 Ch1513

	Freq	Level	Detector	Ant Factor	Amp\Cb	Filter	EIRPCF	Readin	Limit	Margin	Pol
	MHz	dBm			dB	dB	dB	dBuV	dBm	dB	
1	3505.00	-60.98	RMS	29.51	-30.02	1.00	-95.23	33.76	-13.00	-47.98	Vertical
2	5257.00	-57.30	RMS	32.99	-28.34	0.47	-95.23	32.81	-13.00	-44.30	Vertical
3	7010.00	-53.46	RMS	35.94	-27.06	0.15	-95.23	32.74	-13.00	-40.46	Vertical

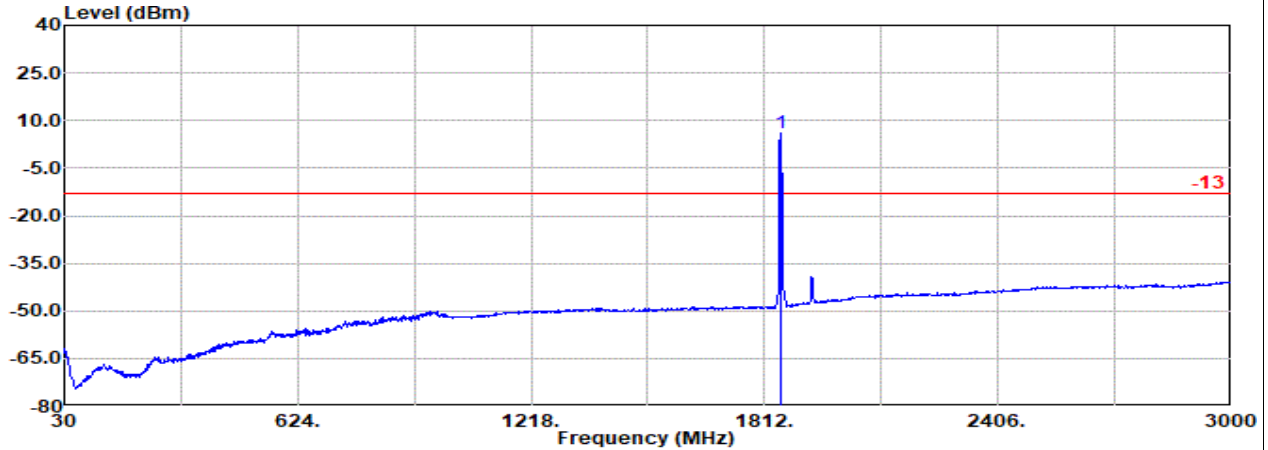


## Airgain Antenna 0

Part 24E Mode 1

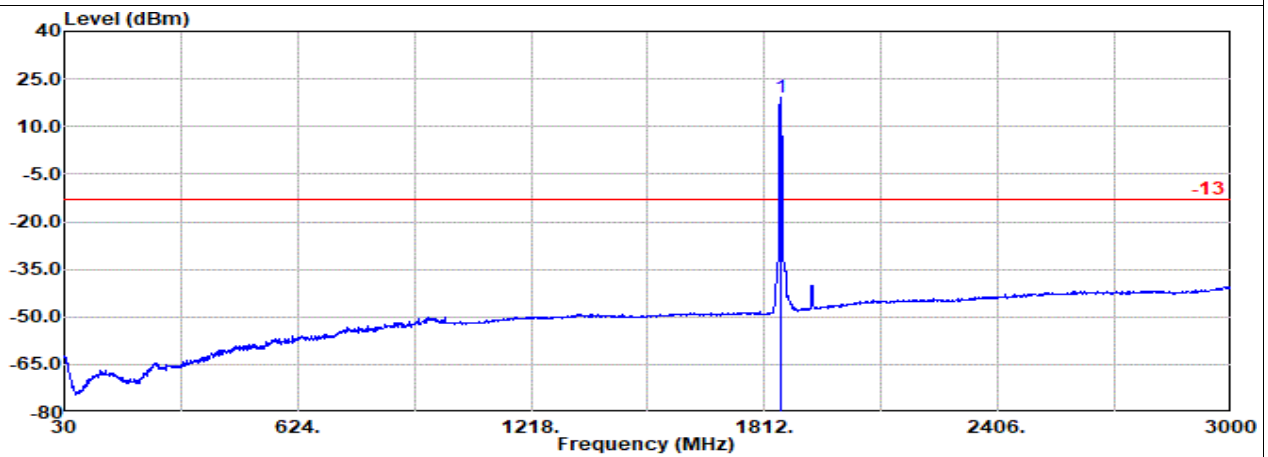
WCDMA B2 Ch9262

L



Site : 03CH15-HY  
Condition: -13 3m BBHA 9120 D\_9120D-02294 Horizontal  
: WCDMA B2 Ch9262

	Freq	Level	Detector	Ant Factor	Amp\Cb	Filter	EIRPCF	Readin	Limit	Margin	Pol
	MHz	dBm						g	dBm	dB	
1	1854.00	6.26	RMS	25.34	4.97	0.00	-95.23	0.00	-13.00	19.26	Horizontal



Site : 03CH15-HY  
Condition: -13 3m BBHA 9120 D\_9120D-02294 Vertical  
: WCDMA B2 Ch9262

	Freq	Level	Detector	Ant Factor	Amp\Cb	Filter	EIRPCF	Readin	Limit	Margin	Pol
	MHz	dBm						g	dBm	dB	
1	1854.00	19.21	RMS	25.34	4.97	0.00	-95.23	84.13	-13.00	32.21	Vertical

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