

**CFR 47 FCC PART 22 H
CFR 47 FCC PART 24 E
CFR 47 FCC PART 27
RSS-132, RSS-133, RSS-139**

TEST REPORT

For

WisePOS Pro, 7MD

**FCC ID: 2AB7X-WSP7V1
IC: 28493-WSP7V1**

MODEL NUMBER: WSP74, WSP75, WSP76

REPORT NUMBER: 4791364876-1-RF-2

ISSUE DATE: August 15, 2024

Prepared for

**BBPOS Limited
15/F, Tower 2, Nina Tower, 8 Yeung Uk Road, Tsuen Wan, NT, HK China**

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	Aug 30, 2024	Initial Issue	\

Note:

1. This test report is only published to and used by the applicant, and it is not for evidence purpose in China.

2. The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 22 H >< CFR 47 FCC PART 24 E>< CFR 47 FCC PART 27>< RSS-132, RSS-133, RSS-139 >when < Simple Acceptance > decision rule is applied.

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: BBPOS Limited
Address: 15/F, Tower 2, Nina Tower, 8 Yeung Uk Road, Tsuen Wan, NT, HK China

Manufacturer Information

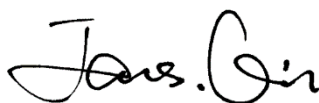
Company Name: BBPOS Limited
Address: 15/F, Tower 2, Nina Tower, 8 Yeung Uk Road, Tsuen Wan, NT, HK China

EUT Information

EUT Name: WisePOS Pro, 7MD
Model: WSP74
Brand: 7-Eleven
Sample Received Date: June 21, 2024
Sample Status: Normal
Sample ID: 7342890
Date of Tested: July 5, 2024 ~ July 9, 2024

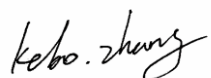
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 FCC PART 22 H	PASS
CFR 47 FCC PART 24 E	PASS
CFR 47 FCC PART 27	PASS
RSS-132, RSS-133, RSS-139	PASS

Prepared By:



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Approved By:



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Operations Manager

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.26-2015, 971168 D01 Power Meas License Digital Systems v03r01, 971168 D02 Misc Rev Approv License Devices v02r01, 412172 D01 v01r01 Determining ERP and EIRP, CFR 47 FCC Part 2, Part 22 H, Part 24 E, Part 27, RSS-132, RSS-133, RSS-139.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p>A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p>FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules</p> <p>ISED (Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046.</p> <p>VCCI (Registration No.: G-20192, C-20153, T-20155 and R-20202) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20192 and R-20202. Shielding Room B, the VCCI registration No. is C-20153 and T-20155.</p>
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Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30 MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30 MHz had been correlated to measurements performed on an OFS.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognize national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Conduction emission	3.62 dB
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB
Radiated Emission (Included Fundamental Emission) (1 GHz to 40 GHz)	5.78 dB (1 GHz-18 GHz)
	5.23dB (18 GHz-26 GHz)
	5.64 dB (26 GHz-40 GHz)
Bandwidth	1.1 %
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name:	WisePOS Pro, 7MD
Model:	WSP74
Series Model:	WSP75, WSP76
Model Difference:	WSP74 is the product without accessory, WSP75 is the product with hand strap, WSP76 is the product with pistol grip

5.2. TEST CHANNEL CONFIGURATION

Band	Mode	Low	Middle	High
WCDMA Band 2	HSDPA/HSUPA	9262	9400	9538
		1852.4 MHz	1880.0 MHz	1907.6 MHz
WCDMA Band 4	HSDPA/HSUPA	1312	1413	1513
		1712.4 MHz	1732.6 MHz	1752.6 MHz
WCDMA Band 5	HSDPA/HSUPA	4132	4182	4233
		826.4 MHz	836.4 MHz	846.6 MHz

5.3. MAXIMUM ERP/EIRP POWER AND EMISSION DESIGNATOR

WCDMA Band2

Part 24, RSS-133					
EIRP Limit(W)	2.0				
Antenna Gain (dBi)	2.2				
Mode	Frequency Range (MHz)	Conducted Average power (dBm)	EIRP (W)	99% OBW (MHz)	Emission Designator
REL99	1852.4 ~ 1907.6	14.54	0.047	4.168	4M14F9W
HSDPA		13.68	0.039	4.218	4M15F9W
HSUPA		13.66	0.039	4.214	4M15F9W

WCDMA Band4

Part 27, RSS-139					
EIRP Limit(W)	1.0				
Antenna Gain (dBi)	2.2				
Mode	Frequency Range (MHz)	Conducted Average power (dBm)	EIRP (W)	99% OBW (MHz)	Emission Designator
REL99	1712.4 ~ 1752.6	14.02	0.042	4.163	4M16F9W
HSDPA		13.14	0.034	4.185	4M19F9W
HSUPA		13.14	0.034	4.180	4M18F9W

WCDMA Band5

Part 22, RSS-133					
ERP Limit(W)	7.0				
Antenna Gain (dBi)	1.5				
Mode	Frequency Range (MHz)	Conducted Average power (dBm)	ERP (W)	99% OBW (MHz)	Emission Designator
REL99	826.4 ~ 846.6	21.79	0.130	4.167	4M17F9W
HSDPA		20.95	0.107	4.184	4M18F9W
HSUPA		20.93	0.107	4.175	4M18F9W

5.4. WORST-CASE CONFIGURATION AND MODE

The radiated spurious emissions measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT was investigated in three orthogonal orientations X, Y and Z. It was determined that X orientation was the worst-case orientation.

Radiated spurious emissions were investigated below 30 MHz, 30 MHz - 1 GHz and above 1 GHz. There were no emissions found on below 1GHz and above 18 GHz, the emissions between 1 GHz – 18 GHz were tested at the low, mid, high channel and the worst configuration. Only the worst result is reported.

5.5. DESCRIPTION OF AVAILABLE ANTENNAS

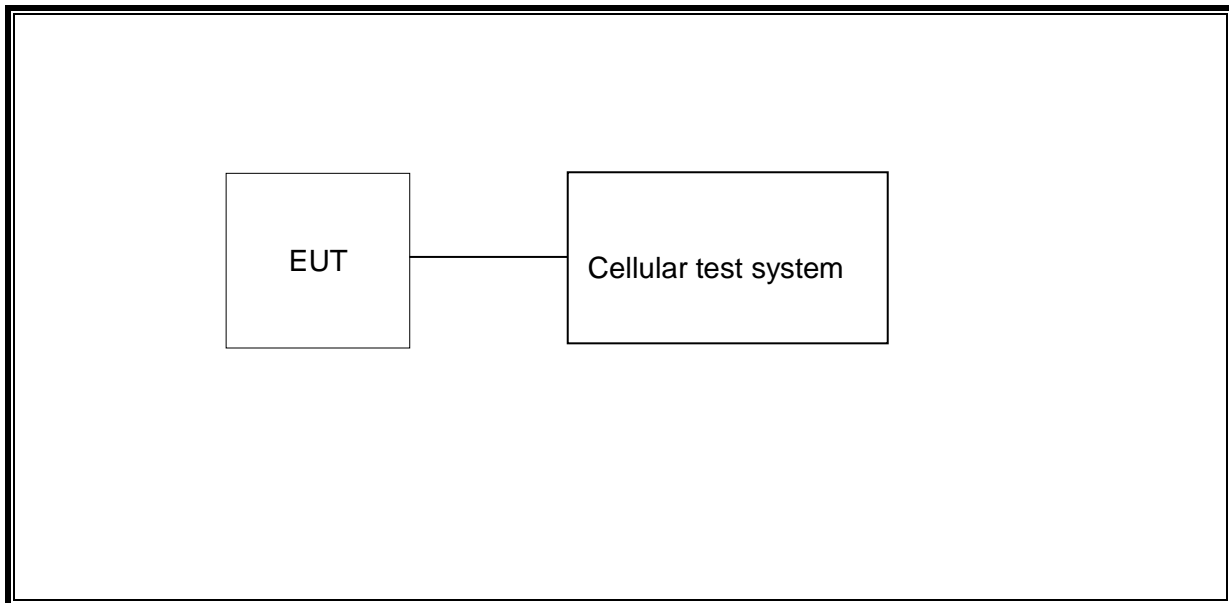
Antenna	Band	Antenna Type	MAX Antenna Gain (dBi)
Ant0	WCDMA Band 2	FPC	2.2
Ant0	WCDMA Band 4	FPC	2.2
Ant0	WCDMA Band 5	FPC	1.5

Band	Transmit and Receive Mode	Description
WCDMA Band 2	<input checked="" type="checkbox"/> 1TX, 2RX	Ant0 antenna can be used as transmitting/receiving antenna, DIV antenna can be used as receiving antenna
WCDMA Band 4	<input checked="" type="checkbox"/> 1TX, 2RX	Ant0 antenna can be used as transmitting/receiving antenna, DIV antenna can be used as receiving antenna
WCDMA Band 5	<input checked="" type="checkbox"/> 1TX, 2RX	Ant0 antenna can be used as transmitting/receiving antenna, DIV antenna can be used as receiving antenna

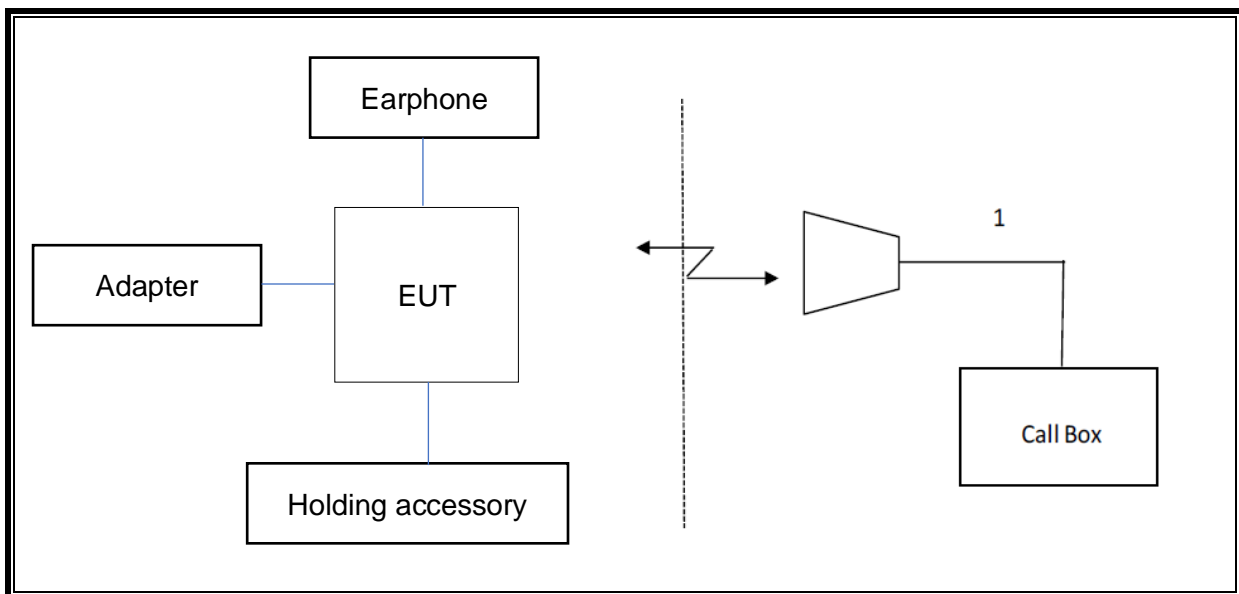
Note: The value of the antenna gain was declared by customer.

5.1. DESCRIPTION OF TEST SETUP

Conducted



Radiated



6. MEASURING INSTRUMENT AND SOFTWARE USED

Antenna Terminal Test						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
<input checked="" type="checkbox"/>	Spectrum Analyzer	R&S	FSV40	S422060001	Oct.12, 2023	Oct.11, 2024
<input checked="" type="checkbox"/>	Wideband Radio Communication Tester	R&S	CMW500	155523	Oct.12, 2023	Oct.11, 2024
Software						
Used	Description		Manufacturer	Name		Version
<input checked="" type="checkbox"/>	Tonsend Cellular Test System		Tonsend	JS1120 RF Auto Test System		3.1.46
Radiated Test						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
<input checked="" type="checkbox"/>	MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Oct.12, 2023	Oct.11, 2024
<input checked="" type="checkbox"/>	Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Jun. 28, 2024	Jun. 27, 2027
<input checked="" type="checkbox"/>	Preamplifier	HP	8447D	2944A09099	Oct.12, 2023	Oct.11, 2024
<input checked="" type="checkbox"/>	EMI Measurement Receiver	R&S	ESR26	101377	Oct.12, 2023	Oct.11, 2024
<input checked="" type="checkbox"/>	Horn Antenna	TDK	HRN-0118	130939	April 29, 2022	April 30, 2025
<input checked="" type="checkbox"/>	Horn Antenna	Schwarzbeck	BBHA9170	856	Feb 28, 2022	Feb 28, 2025
<input checked="" type="checkbox"/>	Preamplifier	TDK	PA-02-0118	TRS-305-00067	Oct.12, 2023	Oct.11, 2024
<input checked="" type="checkbox"/>	Preamplifier	TDK	PA-02-2	TRS-307-00003	Oct.12, 2023	Oct.11, 2024
<input checked="" type="checkbox"/>	Loop antenna	Schwarzbeck	1519B	00008	Dec.14, 2021	Dec.13, 2024
<input checked="" type="checkbox"/>	High Pass Filter	Wi	WHKX10-2700-3000-18000-40SS	23	Oct.12, 2023	Oct.11, 2024
Software						
Used	Description		Manufacturer	Name		Version
<input checked="" type="checkbox"/>	Test Software for Radiated disturbance		Farad	EZ-EMC		Ver. UL-3A1

7. ANTENNA TERMINAL TEST RESULTS

7.1. EFFECTIVE (ISOTROPIC) RADIATED POWER OF TRANSMITTER

RULE PART(S)

FCC: §2.1046, §22.913, §24.232, §27.50
RSS-132, RSS-133, RSS-139

LIMITS

22.913(a) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(c) Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

27.50(c) Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

27.50(d) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watts EIRP.

27.50(h) Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

TEST PROCEDURE

Refer to ANSI C63.26:2015 and KDB 971168 D01 Section 5.6

$ERP/EIRP = P_{Meas} + GT - LC$

where:

ERP or EIRP = effective or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas} , typically dBW or dBm);

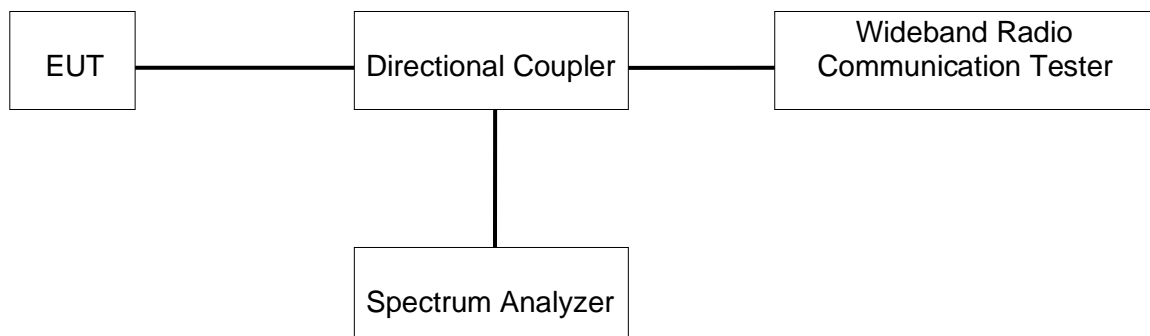
P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB

The transmitter has a maximum output powers as follows and maximum ERP/EIRP is tabulated in section 5.3.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.4°C	Relative Humidity	59.9%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.8 V

RESULTS

Band 2		Average Power (dBm)		
		9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	14.52	14.54	14.44
HSDPA	Subtest 1	13.65	13.68	13.64
	Subtest 2	13.41	13.44	13.44
	Subtest 3	13.02	13.05	13.01
	Subtest 4	13.01	13.04	12.98
HSUPA	Subtest 1	12.90	12.93	12.88
	Subtest 2	13.59	13.64	13.59
	Subtest 3	12.54	12.56	12.53
	Subtest 4	13.64	13.66	13.60
	Subtest 5	12.52	12.56	12.52

Band 4		Average Power (dBm)		
		1312CH	1413CH	1513CH
WCDMA	12.2kbps RMC	14.01	14.02	13.99
HSDPA	Subtest 1	13.10	13.11	13.14
	Subtest 2	12.88	12.89	12.94
	Subtest 3	12.49	12.48	12.54
	Subtest 4	12.46	12.45	12.53
HSUPA	Subtest 1	12.41	12.38	12.47
	Subtest 2	13.03	13.06	13.11
	Subtest 3	11.99	12.01	12.13
	Subtest 4	13.09	13.11	13.14
	Subtest 5	11.99	12.00	12.10

Band 5		Average Power (dBm)		
		4132CH	4182CH	4233CH
WCDMA	12.2kbps RMC	21.63	21.71	21.79
HSDPA	Subtest 1	20.80	20.87	20.95
	Subtest 2	20.59	20.68	20.74
	Subtest 3	20.21	20.29	20.37
	Subtest 4	20.19	20.28	20.36
HSUPA	Subtest 1	20.10	20.19	20.26
	Subtest 2	20.75	20.81	20.91
	Subtest 3	19.72	19.80	19.88
	Subtest 4	20.79	20.85	20.93
	Subtest 5	19.71	19.78	19.86

7.2. PEAK TO AVERAGE RADIO

LIMITS

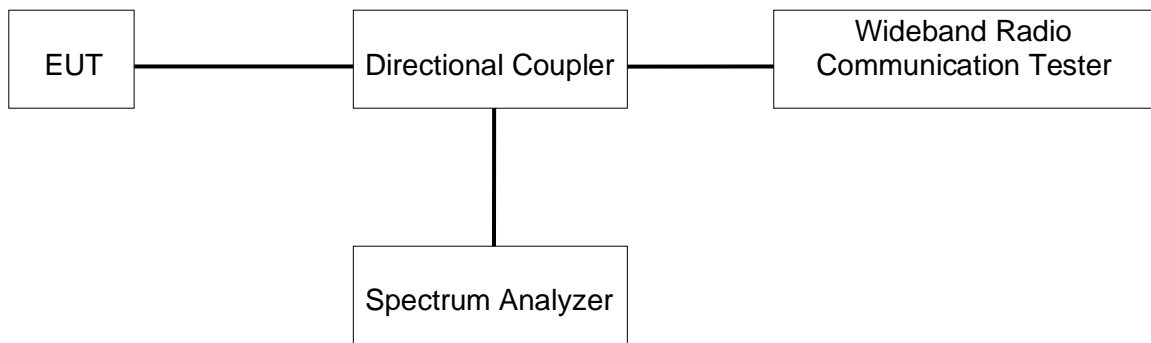
In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

TEST PROCEDURE

Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01;

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The PAR was measured on the Spectrum Analyzer.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.4°C	Relative Humidity	59.9%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.8 V

RESULTS

Middle was used to measure as the worst case. The results from all CCDF plots are passed with 13dB peak-to-average power ratio criteria.

Please refer to Appendix WCDMA.

7.3. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

RSS-132, RSS-133, RSS-139

LIMITS

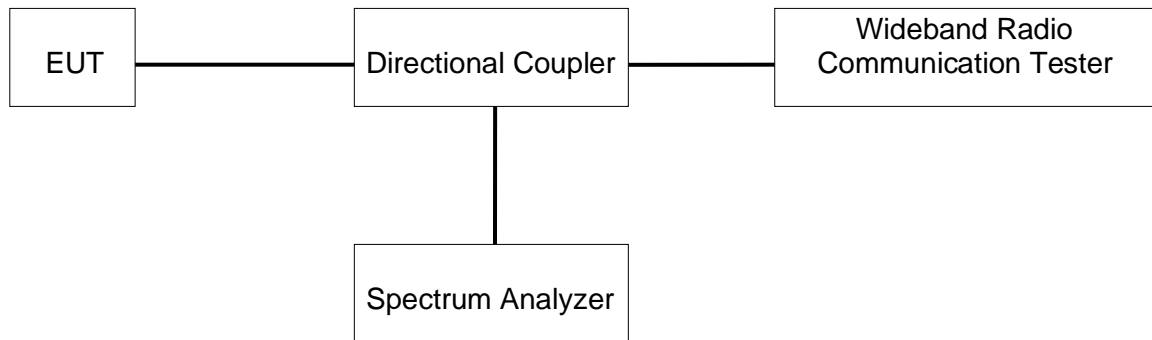
For reporting purposes only.

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The -26dB bandwidth was also measured and recorded.

(Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01)

TEST SETUP



TEST ENVIRONMENT

Temperature	23.4°C	Relative Humidity	59.9%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.8 V

RESULTS

There is no limit required and power is the same for low, middle and high channel, therefore, only middle channel was tested.

Please refer to Appendix WCDMA.

7.4. BAND EDGE EMISSIONS

RULE PART(S)

FCC §2.1051, §22.917, §24.238, §27.53
RSS-132, RSS-133, RSS-139

LIMITS

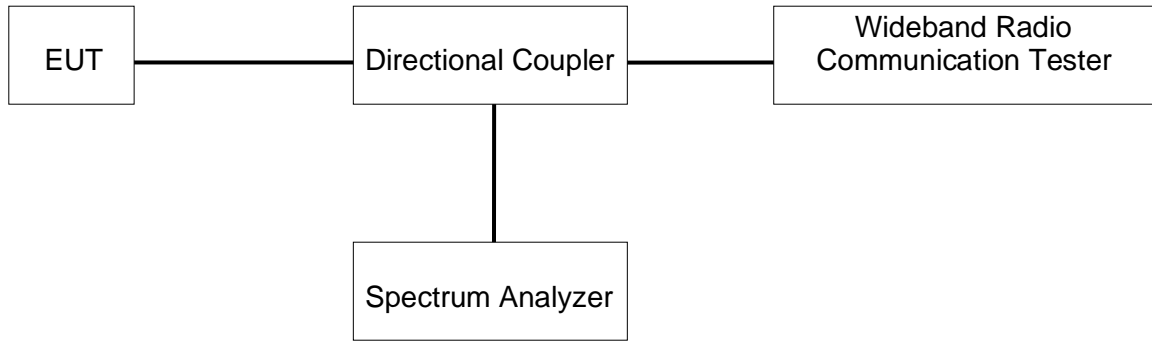
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

TEST PROCEDURE

Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

- a) Set the RBW = 1 ~ 5 % of OBW (Typically limited to a minimum RBW of 1% of the OBW)
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = Auto;
- e) Detector = RMS;
- f) Ensure that the number of measurement points $\geq 2 \times \text{Span} / \text{RBW}$;
- g) Trace mode = Average (100);

TEST SETUP**TEST ENVIRONMENT**

Temperature	23.4°C	Relative Humidity	59.9%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.8 V

RESULTS

Please refer to Appendix WCDMA.

7.5. SPURIOUS EMISSION AT ANTENNA TERMINAL

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238, §27.53
RSS-132, RSS-133, RSS-139

LIMITS

FCC: §22.901, §22.917, §24.238

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

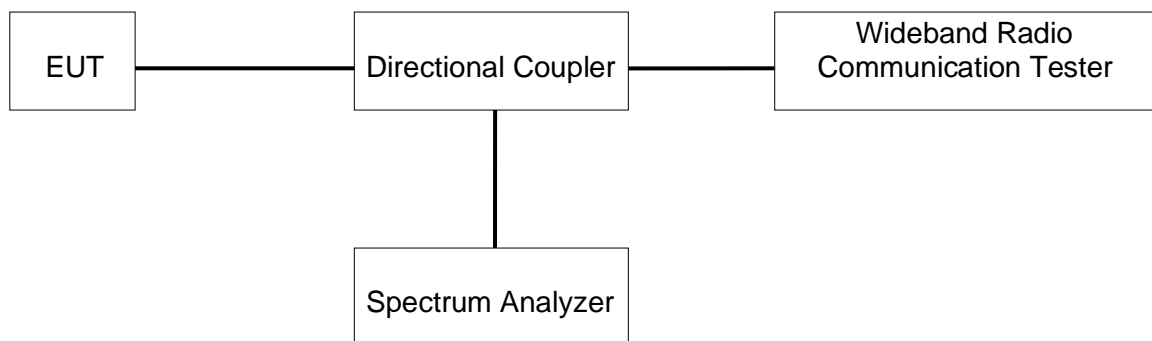
TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v03r01

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

- a) Set the RBW = 100 kHz for emission below 1GHz and 1MHz for emissions above 1GHz (Tests were performed 1 MHz [Worst case], to sweep 1 time for all frequency range)
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = auto couple;
- e) Detector = rms;
- f) Ensure that the number of measurement points = Max (40001);
- g) Trace mode = trace average for continuous emissions, max hold for pulse emissions;

TEST SETUP



TEST ENVIRONMENT

Temperature	23.4°C	Relative Humidity	59.9%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.8 V

RESULTS

Please refer to Appendix WCDMA.

7.6. FREQUENCY STABILITY

Rule Part:

FCC: §2.1055, §22.355, §24.235, §27.54

RSS-132, RSS-133, RSS-139

LIMITS

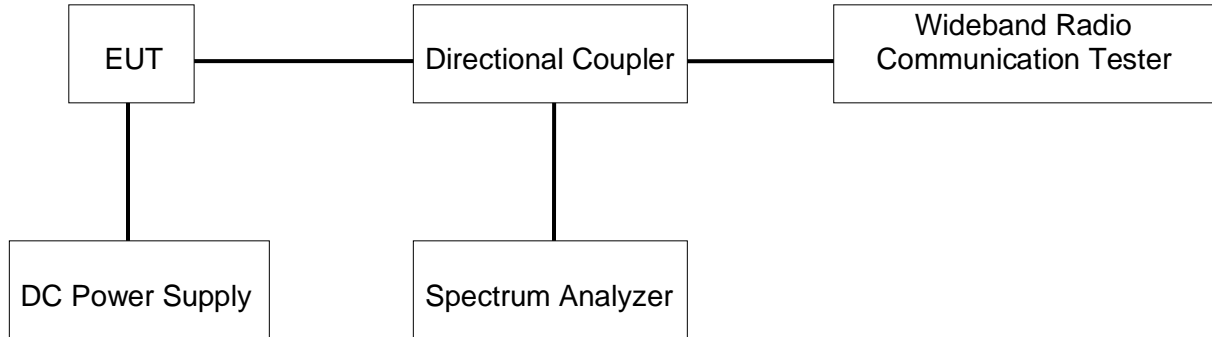
§22.355 - The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

§24.235 and §27.54 - The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

TEST PROCEDURE

Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01.

	Normal Test Conditions	Extreme Test Conditions
Relative Humidity	45 % - 75 %	/
Atmospheric Pressure	100 kPa ~102 kPa	/
Temperature	T_N (Normal Temperature): 24.7 °C	T_L (Low Temperature): -30 °C
		T_H (High Temperature): 50 °C
Supply Voltage	V_N (Normal Voltage): DC 3.8 V	V_L (Low Voltage): DC 3.2V
		V_H (High Voltage): DC 4.4 V

TEST SETUP**TEST ENVIRONMENT**

Temperature	23.4°C	Relative Humidity	59.9%
Atmosphere Pressure	101kPa	Test Voltage	/

RESULTS

The peak frequency error is recorded (worst-case).

Please refer to Appendix WCDMA.

8. RADIATED SPURIOUS EMISSIONS

LIMIT

FCC: §24.238(a), RSS-133 (WCDMA Band 2)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

FCC: §22.917(a), RSS-132 (WCDMA Band 5)

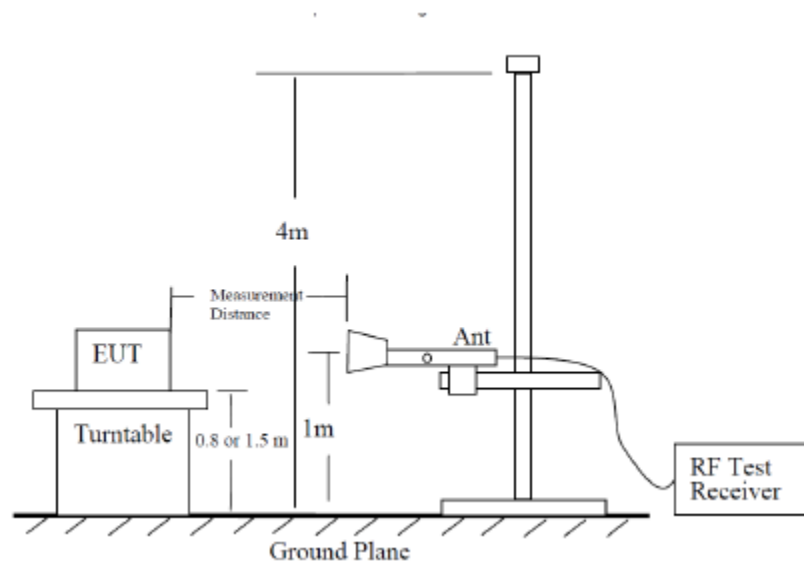
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

FCC: §27.53(h), RSS-139 (WCDMA Band 4)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

TEST PROCEDURE

Following the test configuration shown below, radiated emissions measured directly from the EUT and convert the measured field strength or received power to ERP or EIRP, as required, for comparison to the applicable limits. As stated in section 5.5.1 of ANSI C63.26-2015. The field strength measurement method by using a test site validated to the requirement of ANSI C63.4 is an alternative method to the substitution measurement.



Radiated Power Measurement Calculation According to ANSI C63.26-2015

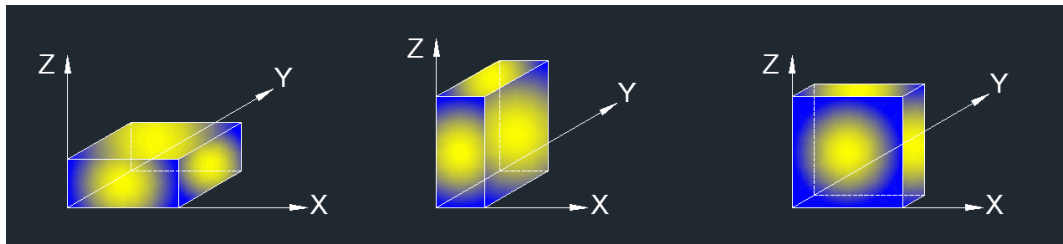
- a) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$.
- b) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$.
- c) $E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20\log(D) + 104.8$, where D is the measurement distance (in the far field region) in m.
- d) $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8$, where D is the measurement distance (in the far field region) in m.

So, from d)

The measuring distance is at 3m, then $20 \cdot \log(3) = 9.5424$

Then, $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 9.5424 - 104.8 = E \text{ (dB}\mu\text{V/m)} - 95.2576$

X axis, Y axis, Z axis positions:



Note: The EUT was investigated in three orthogonal orientations X/Y/Z on ANT0 to determine the worst-case orientation. X orientation is finally determined the worst.

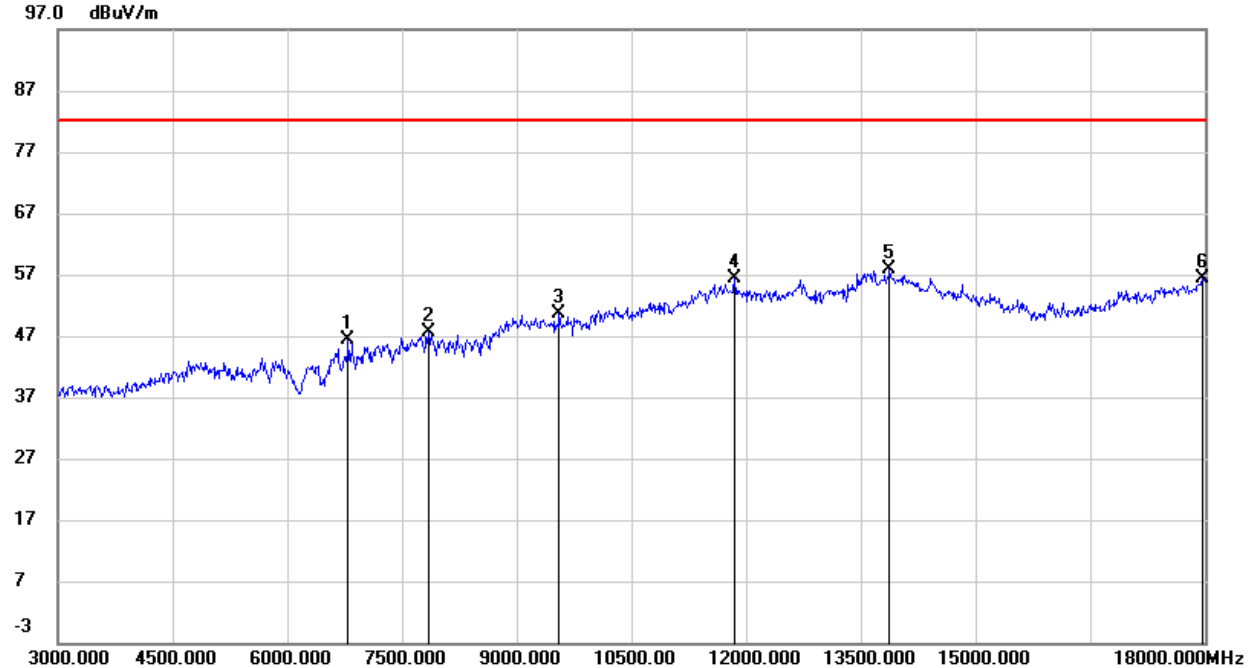
TEST ENVIRONMENT

Temperature	24.8°C	Relative Humidity	63%
Atmosphere Pressure	101kPa	Test Voltage	/

RESULTS

WCDMA Band 2

REL99- Low Channel- Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6795.000	40.68	5.68	46.36	82.25	-35.89	peak
2	7845.000	41.26	6.32	47.58	82.25	-34.67	peak
3	9555.000	39.67	10.85	50.52	82.25	-31.73	peak
4	11850.000	38.87	17.56	56.43	82.25	-25.82	peak
5	13875.000	36.19	21.70	57.89	82.25	-24.36	peak
6	17970.000	30.86	25.51	56.37	82.25	-25.88	peak

REL99- Low Channel- Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4995.000	43.21	0.43	43.64	82.25	-38.61	peak
2	7845.000	39.47	6.32	45.79	82.25	-36.46	peak
3	8985.000	39.47	10.37	49.84	82.25	-32.41	peak
4	11535.000	38.64	16.70	55.34	82.25	-26.91	peak
5	13635.000	35.46	21.19	56.65	82.25	-25.60	peak
6	17940.000	30.79	25.34	56.13	82.25	-26.12	peak

REL99- Mid Channel- Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7170.000	38.65	6.56	45.21	82.25	-37.04	peak
2	7890.000	40.65	6.31	46.96	82.25	-35.29	peak
3	9135.000	38.98	10.55	49.53	82.25	-32.72	peak

4	12045.000	36.25	17.93	54.18	82.25	-28.07	peak
5	13530.000	35.32	20.96	56.28	82.25	-25.97	peak
6	17940.000	30.62	25.34	55.96	82.25	-26.29	peak

REL99- Mid Channel- Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5865.000	41.32	1.88	43.20	82.25	-39.05	peak
2	7635.000	39.92	6.33	46.25	82.25	-36.00	peak
3	9105.000	38.39	10.53	48.92	82.25	-33.33	peak
4	11865.000	36.68	17.59	54.27	82.25	-27.98	peak
5	13590.000	35.73	21.09	56.82	82.25	-25.43	peak
6	17910.000	30.45	25.16	55.61	82.25	-26.64	peak

REL99- High Channel- Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4665.000	43.23	-0.83	42.40	82.25	-39.85	peak
2	7185.000	37.85	6.55	44.40	82.25	-37.85	peak
3	8985.000	39.58	10.37	49.95	82.25	-32.30	peak
4	11805.000	37.13	17.43	54.56	82.25	-27.69	peak
5	13890.000	35.11	21.72	56.83	82.25	-25.42	peak
6	17970.000	30.29	25.51	55.80	82.25	-26.45	peak

REL99- High Channel- Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4995.000	41.95	0.43	42.38	82.25	-39.87	peak
2	7770.000	39.97	6.31	46.28	82.25	-35.97	peak
3	9180.000	38.29	10.56	48.85	82.25	-33.40	peak
4	11520.000	37.80	16.65	54.45	82.25	-27.80	peak
5	13950.000	35.22	21.86	57.08	82.25	-25.17	peak
6	17985.000	31.70	25.60	57.30	82.25	-24.95	peak

WCDMA Band 4

REL99- Low Channel- Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4635.000	43.67	-0.95	42.72	82.25	-39.53	peak
2	7500.000	40.17	6.33	46.50	82.25	-35.75	peak
3	9135.000	38.67	10.55	49.22	82.25	-33.03	peak
4	11910.000	36.44	17.72	54.16	82.25	-28.09	peak
5	13635.000	35.00	21.19	56.19	82.25	-26.06	peak
6	18000.000	29.71	25.69	55.40	82.25	-26.85	peak

REL99- Low Channel- Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7035.000	38.66	6.67	45.33	82.25	-36.92	peak
2	7875.000	39.36	6.31	45.67	82.25	-36.58	peak
3	9240.000	39.01	10.58	49.59	82.25	-32.66	peak
4	11790.000	37.07	17.38	54.45	82.25	-27.80	peak
5	13470.000	35.10	20.77	55.87	82.25	-26.38	peak
6	17985.000	30.42	25.60	56.02	82.25	-26.23	peak

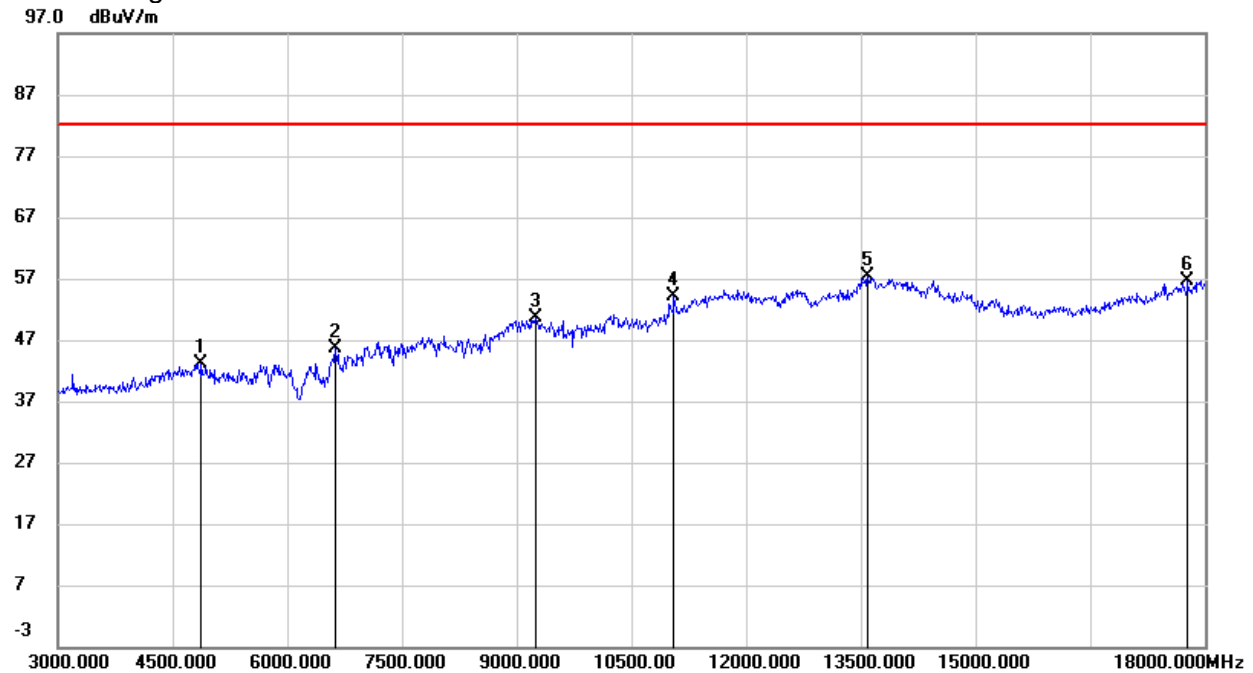
REL99- Mid Channel- Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	41.53	1.82	43.35	82.25	-38.90	peak
2	7890.000	42.34	6.31	48.65	82.25	-33.60	peak
3	9075.000	39.84	10.52	50.36	82.25	-31.89	peak
4	11730.000	37.26	17.22	54.48	82.25	-27.77	peak
5	13980.000	34.69	21.92	56.61	82.25	-25.64	peak
6	17985.000	30.73	25.60	56.33	82.25	-25.92	peak

REL99- Mid Channel- Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4995.000	43.35	0.43	43.78	82.25	-38.47	peak
2	7755.000	40.98	6.31	47.29	82.25	-34.96	peak
3	9240.000	39.70	10.58	50.28	82.25	-31.97	peak
4	12120.000	36.68	17.87	54.55	82.25	-27.70	peak
5	13815.000	35.11	21.56	56.67	82.25	-25.58	peak
6	17985.000	30.16	25.60	55.76	82.25	-26.49	peak

REL99- High Channel- Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	43.19	-0.03	43.16	82.25	-39.09	peak
2	6630.000	40.73	4.86	45.59	82.25	-36.66	peak
3	9240.000	40.13	10.58	50.71	82.25	-31.54	peak
4	11055.000	39.19	14.96	54.15	82.25	-28.10	peak
5	13590.000	36.26	21.09	57.35	82.25	-24.90	peak
6	17775.000	32.37	24.36	56.73	82.25	-25.52	peak

REL99- High Channel- Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5925.000	41.14	2.04	43.18	82.25	-39.07	peak
2	7725.000	39.71	6.32	46.03	82.25	-36.22	peak
3	9075.000	38.85	10.52	49.37	82.25	-32.88	peak
4	11745.000	37.29	17.27	54.56	82.25	-27.69	peak
5	13920.000	35.03	21.79	56.82	82.25	-25.43	peak
6	18000.000	31.64	25.69	57.33	82.25	-24.92	peak

WCDMA Band 5

REL99- Low Channel- Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1648.000	49.85	-12.22	37.63	82.25	-44.62	peak
2	4519.000	43.70	-2.06	41.64	82.25	-40.61	peak
3	5662.000	42.26	0.88	43.14	82.25	-39.11	peak
4	7012.000	38.75	6.18	44.93	82.25	-37.32	peak
5	7903.000	39.96	5.66	45.62	82.25	-36.63	peak
6	8938.000	38.85	9.31	48.16	82.25	-34.09	peak

REL99- Low Channel- Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1495.000	49.56	-12.74	36.82	82.25	-45.43	peak
2	3502.000	45.23	-5.85	39.38	82.25	-42.87	peak
3	4996.000	44.23	-0.17	44.06	82.25	-38.19	peak
4	6787.000	39.58	5.14	44.72	82.25	-37.53	peak
5	7039.000	39.55	6.17	45.72	82.25	-36.53	peak
6	9226.000	39.32	9.83	49.15	82.25	-33.10	peak

REL99- Mid Channel- Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1666.000	47.88	-12.16	35.72	82.25	-46.53	peak
2	2692.000	45.43	-7.91	37.52	82.25	-44.73	peak
3	3736.000	45.91	-5.21	40.70	82.25	-41.55	peak
4	5671.000	41.43	0.91	42.34	82.25	-39.91	peak
5	6670.000	38.82	4.57	43.39	82.25	-38.86	peak
6	9199.000	38.31	9.82	48.13	82.25	-34.12	peak

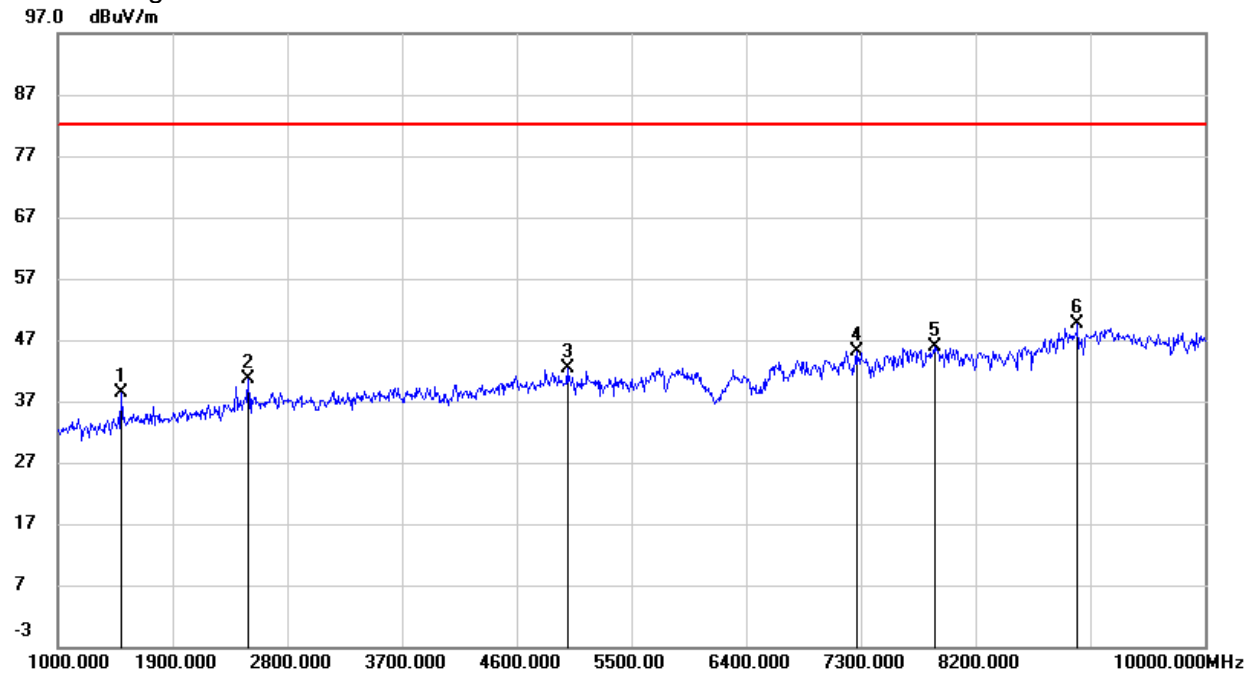
REL99- Mid Channel- Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1495.000	49.01	-12.74	36.27	82.25	-45.98	peak
2	2494.000	49.19	-8.52	40.67	82.25	-41.58	peak
3	4996.000	42.63	-0.17	42.46	82.25	-39.79	peak
4	7039.000	37.82	6.17	43.99	82.25	-38.26	peak
5	7642.000	40.96	5.69	46.65	82.25	-35.60	peak
6	9307.000	39.46	9.86	49.32	82.25	-32.93	peak

REL99- High Channel- Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1684.000	50.16	-12.10	38.06	82.25	-44.19	peak
2	3556.000	45.79	-5.70	40.09	82.25	-42.16	peak
3	4807.000	44.10	-0.92	43.18	82.25	-39.07	peak
4	7183.000	39.42	6.01	45.43	82.25	-36.82	peak
5	7714.000	40.70	5.68	46.38	82.25	-35.87	peak
6	9244.000	39.63	9.83	49.46	82.25	-32.79	peak

REL99- High Channel- Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1495.000	51.02	-12.74	38.28	82.25	-43.97	peak
2	2494.000	49.13	-8.52	40.61	82.25	-41.64	peak
3	4996.000	42.55	-0.17	42.38	82.25	-39.87	peak
4	7264.000	39.26	5.93	45.19	82.25	-37.06	peak
5	7876.000	40.18	5.66	45.84	82.25	-36.41	peak
6	9001.000	39.81	9.74	49.55	82.25	-32.70	peak

Remark: All the modulation have been tested at low, middle, high channels, only the worst modulation show in the test report.

END OF REPORT