

## FCC Test Report

### (PART 24)

**Report No.:** RF150820E01B

**FCC ID:** 2AD8UFZPFWFG01

**Test Model:** FWFG

**Received Date:** Aug. 20, 2015

**Test Date:** Oct. 12 to Dec. 15, 2015

**Issued Date:** Jan. 15, 2016

**Applicant:** Nokia Solutions and Networks

**Address:** 1455 West Shure Drive, Arlington Heights, IL 60004, USA

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
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A D T

### Release Control Record

Issue No.	Description	Date Issued
RF150820E01B	Original release.	Jan. 15, 2016

## 1 Certificate of Conformity

**Product:** Flexi Zone Indoor Pico BTS

**Brand:** Nokia

**Test Model:** FWFG

**Sample Status:** MASS-PRODUCTION

**Applicant:** Nokia Solutions and Networks

**Test Date:** Oct. 12 to Dec. 15, 2015

**Standards:** FCC Part 24, Subpart E

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :**  , **Date:** Jan. 15, 2016  
Lori Chung / Specialist

**Approved by :**  , **Date:** Jan. 15, 2016  
May Chen / Manager

## 2 Summary of Test Results

Applied Standard: FCC Part 24 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 24.232	Output Power	PASS	Meet the requirement of limit.
2.1046 24.232(d)	Peak To Average Ratio	PASS	Meet the requirement of limit.
2.1055 24.235	Frequency Stability	PASS	Meet the requirement of limit.
2.1049 24.238(b)	Occupied Bandwidth	PASS	Meet the requirement of limit.
24.238(b)	Band Edge Measurements	PASS	Meet the requirement of limit.
2.1051 24.238	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
2.1053 24.238	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -20.98dB at 19324MHz.

### 2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) ( $\pm$ )
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.31 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.72 dB
	6GHz ~ 18GHz	4.00 dB
	18GHz ~ 40GHz	4.11 dB

## 2.2 Test Site and Instruments

For Radiated spurious emissions below 1GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	Aug. 12, 2015	Aug. 11, 2016
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-07	May 08, 2015	May 07, 2016
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	138	Feb. 03, 2015	Feb. 02, 2016
RF Cable	8D	966-3-1 966-3-2 966-3-3	Apr. 03, 2015	Apr. 02, 2016
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA

### Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in 966 Chamber No. 3.
4. The FCC Site Registration No. is 147459
5. The CANADA Site Registration No. is 20331-1
6. Tested Date: Oct. 22 and Dec. 09, 2015

**For WCDMA SC MODE: Radiated spurious emissions above 1GHz test:**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 12, 2014	Dec. 11, 2015
Horn_Antenna AISI	AIH.8018	0000220091110	Feb. 06, 2015	Feb. 05, 2016
Pre-Amplifier Agilent	8449B	3008A01923	Oct. 28, 2014	Oct. 27, 2015
RF Cable	NA	131206 131213 131215 SNMY23685/4	Jan. 16, 2015	Jan. 15, 2016
Spectrum Analyzer R&S	FSV40	100964	June 26, 2015	June 25, 2016
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Dec. 12, 2014	Dec. 11, 2015
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Feb. 05, 2015	Feb. 04, 2016
RF Cable	NA	329751/4 RF104-204	Dec. 11, 2014	Dec. 10, 2015
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA

**Note:**

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. H.
3. The FCC Site Registration No. is 797305.
4. The CANADA Site Registration No. is IC 7450H-3.
5. Tested Date: Oct. 22, 2015



**For WCDMA MC MODE: Radiated spurious emissions above 1GHz test:**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210105	July 24, 2015	July 23, 2016
Horn_Antenna AISI	AIH.8018	0000220091110	Feb. 06, 2015	Feb. 05, 2016
Pre-Amplifier Agilent	8449B	3008A01923	Oct. 27, 2015	Oct. 26, 2016
RF Cable	NA	131206 131213 131215 SNMY23685/4	Jan. 16, 2015	Jan. 15, 2016
Spectrum Analyzer R&S	FSV40	100964	June 26, 2015	June 25, 2016
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Dec. 11, 2015	Dec. 10, 2016
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Feb. 05, 2015	Feb. 04, 2016
RF Cable	NA	329751/4 RF104-204	Dec. 10, 2015	Dec. 09, 2016
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA

**Note:**

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. H.
3. The FCC Site Registration No. is 797305.
4. The CANADA Site Registration No. is IC 7450H-3.
5. Tested Date: Dec. 14 to 15, 2015

**For other test items:**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSP40	100036	Jan. 22, 2015	Jan. 21, 2016
Spectrum Analyzer Agilent	E4446A	MY48250253	Dec. 18, 2014	Dec. 17, 2015
AC Power Source EXTECH Electronics	6502	1140503	NA	NA
Temperature & Humidity Chamber TERCHY	MHU-225AU	911033	Dec. 08, 2014	Dec. 07, 2015
DC Power Supply GOOD WILL INSTRUMENT CO., LTD.	GPC - 3030D	7700087	NA	NA
ESG Vector signal generator Agilent	E4438C	MY47271330 506 602 UNJ	Apr. 28, 2015	Apr. 27, 2016
Power meter Anritsu	ML2495A	0824006	May 25, 2015	May 24, 2016
Power sensor Anritsu	MA2411B	0738172	May 25, 2015	May 24, 2016
Software	ADT_RF Test Software V6.6.5.3	NA	NA	NA

- NOTE:**
1. The test was performed in Oven room 1.
  2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
  3. Tested Date: Oct. 12, 2015

### 3 General Information

#### 3.1 General Description of EUT

Product	Flexi Zone Indoor Pico BTS	
Brand	Nokia	
Test Model	FWFG	
Test Sample S/N	EA151910377	
Hardware Version	473238A.101	
Status of EUT	MASS-PRODUCTION	
Power Supply Rating	12Vdc from power adapter or 55Vdc from POE	
Modulation Type	WCDMA-Single Carrier	QPSK
	WCDMA-Dual Carrier	QPSK, 16QAM
Operating Frequency	Transmitter Frequency Range : 1932.4-1987.6 MHz Receiver Frequency Range : 1852.4-1907.6 MHz	
Max. EIRP Power	Single carrier: 753.36mW (28.77dBm)	
	Multi Carriers: 606.74mW (27.83dBm)	
Emission Designator	Single carrier: 4M18G7D	
	Dual Carriers: 9M06G7D	
Antenna Type	Refer to note as below	
Antenna Connector	Refer to note as below	
Accessory Device	Adapter x1	
Data Cable Supplied	NA	

Note:

- There are BT, WWAN and GPS technology used for the EUT.
- The EUT's spec. as below table:

Model name	WWAN		BT	GPS
	Freq.(MHz)	Band		
FWFG	UL	1932.4~1987.6	✓	✓
	DL	1852.4-1907.6		

- The emission of the simultaneous operation (BT & WWAN) has been evaluated and no non-compliance was found.
- The EUT must be supplied with a POE(option) or power adapter as following table:

Power adapter		
Brand	Model No.	Spec.
DVE	DSA-60PFB-12 1 120500	Input: 100-240V, 2.0A, 50/60Hz AC input cable(1.8m, unshielded) Output: 12V, 5A DC output cable(1.2m, unshielded, with one core)

5. The antennas provided to the EUT, please refer to the following table:

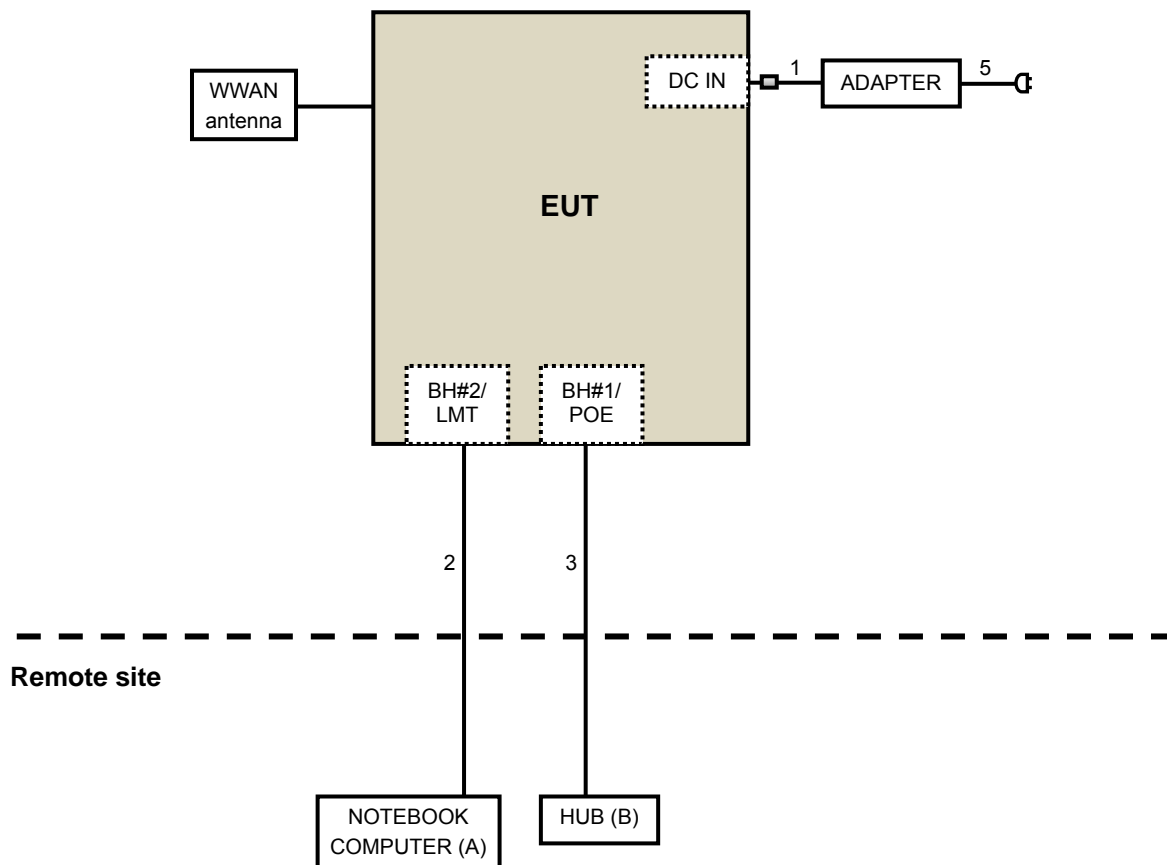
WWAN Antenna Spec.							
Antenna No	Brand	Model	Antenna Type	Antenna Connector	Gain(dBi) <Including cable loss>	Cable Length (mm)	Frequency (MHz)
External WWAN (Main & Aux)	Larsen	DASLTE500NFMI MO	1/4 Wave monopoles on ground plane	N-Female/1/4" low loss, low PIM, plenum rated	2	NA	698~960
					5		1710~2170

6. The EUT support Signle, Multi Carrier from single port configuration, Multi Carrier is intra-band contiguous only.

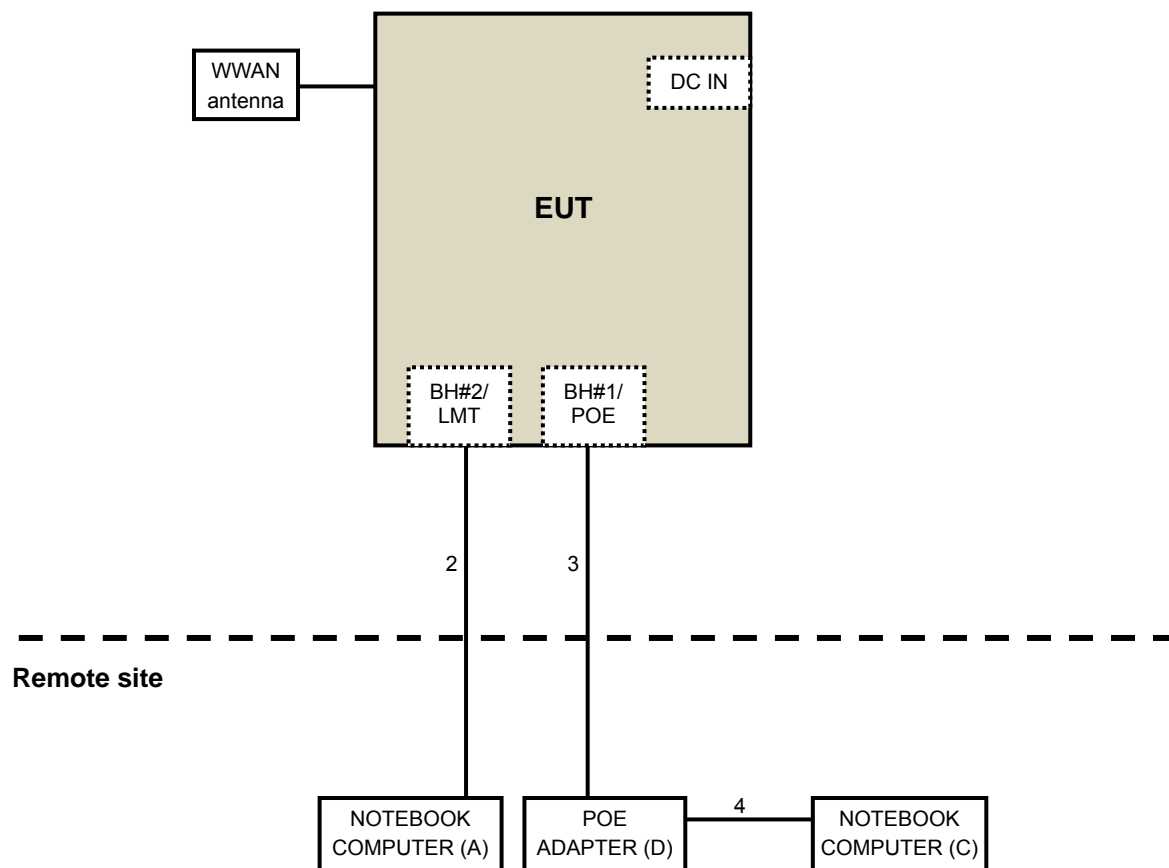
7. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

### 3.2 Configuration of System Under Test

For Adapter mode:



For POE mode:



### 3.2.1 Description of Support Units

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

No.	Product	Brand	Model No.	Serial No.	FCC ID	Remark
A	NOTEBOOK COMPUTER	DELL	E5430	4YV4VY1	FCC DoC	Provided by Lab
B	HUB	ZyXEL	ES-116P	S060H02000215	FCC DoC	Provided by Lab
C	NOTEBOOK COMPUTER	DELL	PP27L	7YLB32S	FCC DoC	Provided by Lab
D	POE ADAPTER	NA	AP-PSBIAS-1P2-AFR	NA	NA	Provided by Lab

**NOTE:**

1. All power cords of the above support units are non-shielded (1.8 m).

No.	Cable	Qty.	Length (m)	Shielded (Yes/ No)	Cores (Number)	Remark
1	DC	1	1.2	No	1	Supplied by Client
2	RJ45	1	10	No	0	Provided by Lab
3	RJ45	1	10	No	0	Provided by Lab
4	RJ45	1	3	No	0	Provided by Lab
5	AC	1	1.8	No	0	Supplied by Client

**NOTE:**

1. The core(s) is(are) originally attached to the cable(s).

### 3.3 Test Mode Applicability and Tested Channel Detail

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

The worst case was found when positioned on X-plane (for below 1GHz) and Y-plane (for above 1GHz).

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

Test results are presented in the report as below.

Test Mode	Test Condition
A	Power from adapter
B	Power from POE

#### WCDMA SC MODE

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Carrier Conf.Descript pton	Ch.BW (MHz)	Modulation
A	EIRP	9662 to 9938	9662, 9800, 9938	1	5	QPSK
A	Frequency Stability	9662 to 9938	9800	1	5	QPSK
A	Occupied Bandwidth	9662 to 9938	9662, 9800, 9938	1	5	QPSK
A, B	Band Edge	9662 to 9938	9662, 9938	1	5	QPSK
A	Peak To Average Ratio	9662 to 9938	9662, 9800, 9938	1	5	QPSK
A, B	Condcudeted Emission	9662 to 9938	9662, 9800, 9938	1	5	QPSK
A, B	Radiated Emission Below 1GHz	9662 to 9938	9662, 9800, 9938	1	5	QPSK
A, B	Radiated Emission Above 1GHz	9662 to 9938	9662, 9800, 9938	1	5	QPSK

#### WCDMA MC MODE

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Carrier Conf. Description	Ch. BW (MHz)	Modulaiton	Test configuration
A	EIRP	9662 to 9938	9662+9687, 9788+9813, 9913+9938	2	5,5	QPSK	UTC1
A	Occupied Bandwidth	9662 to 9938	9662+9687, 9788+9813, 9913+9938	2	5,5	QPSK	UTC1
A, B	Band Edge	9662 to 9938	9662+9687, 9913+9938	2	5,5	QPSK	UTC1
A	Frequency Stability	9662 to 9938	9800	2	5,5	QPSK	SC
A	Peak To Average Ratio	9662 to 9938	9662,9687, 9788,9813, 9913,9938	2	5,5	QPSK	SC
A, B	Condcudeted Emission	9662 to 9938	9662+9687, 9788+9813, 9913+9938	2	5,5	QPSK	UTC1
A, B	Radiated Emission Below 1GHz	9662 to 9938	9662+9687, 9788+9813, 9913+9938	2	5,5	QPSK	UTC1
A, B	Radiated Emission Above 1GHz	9662 to 9938	9662+9687, 9788+9813, 9913+9938	2	5,5	QPSK	UTC1

**This product supports multiple carriers in contiguous spectrum operation, therefore test mode and test configuration follow 3GPP TS25.141 V12.6.0 by PBA process (TN 230386).**



### Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP	25deg. C, 63%RH	120Vac, 60Hz	Allen Chuang
	23deg. C, 66%RH	120Vac, 60Hz	Look Huang
Frequency Stability	25deg. C, 63%RH	120Vac, 60Hz	Allen Chuang
	23deg. C, 66%RH	120Vac, 60Hz	Look Huang
Occupied Bandwidth	25deg. C, 63%RH	120Vac, 60Hz	Allen Chuang
	23deg. C, 66%RH	120Vac, 60Hz	Look Huang
Band Edge	25deg. C, 63%RH	120Vac, 60Hz	Allen Chuang
	23deg. C, 66%RH	120Vac, 60Hz	Look Huang
Peak To Average Ratio	25deg. C, 63%RH	120Vac, 60Hz	Allen Chuang
	23deg. C, 66%RH	120Vac, 60Hz	Look Huang
Conducuted Emission	25deg. C, 63%RH	120Vac, 60Hz	Allen Chuang
	23deg. C, 66%RH	120Vac, 60Hz	Look Huang
Radiated Emission	25deg. C, 63%RH	120Vac, 60Hz	Tim Ho
	23deg. C, 66%RH	120Vac, 60Hz	Gary Cheng

### 3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

### 3.5 General Description of Applied Standards

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

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 24**

**KDB 971168 D01 Power Meas License Digital Systems v02r02**

**ANSI/TIA/EIA-603-C 2004**

**NOTE:** All test items have been performed and recorded as per the above standards.

## 4 Test Types and Results

### 4.1 Output Power Measurement

#### 4.1.1 Limits of Output Power Measurement

Base stations with an emission bandwidth greater than 1 MHz are limited to 1640 watts/MHz equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT.

#### 4.1.2 Test Procedures

##### EIRP Measurement:

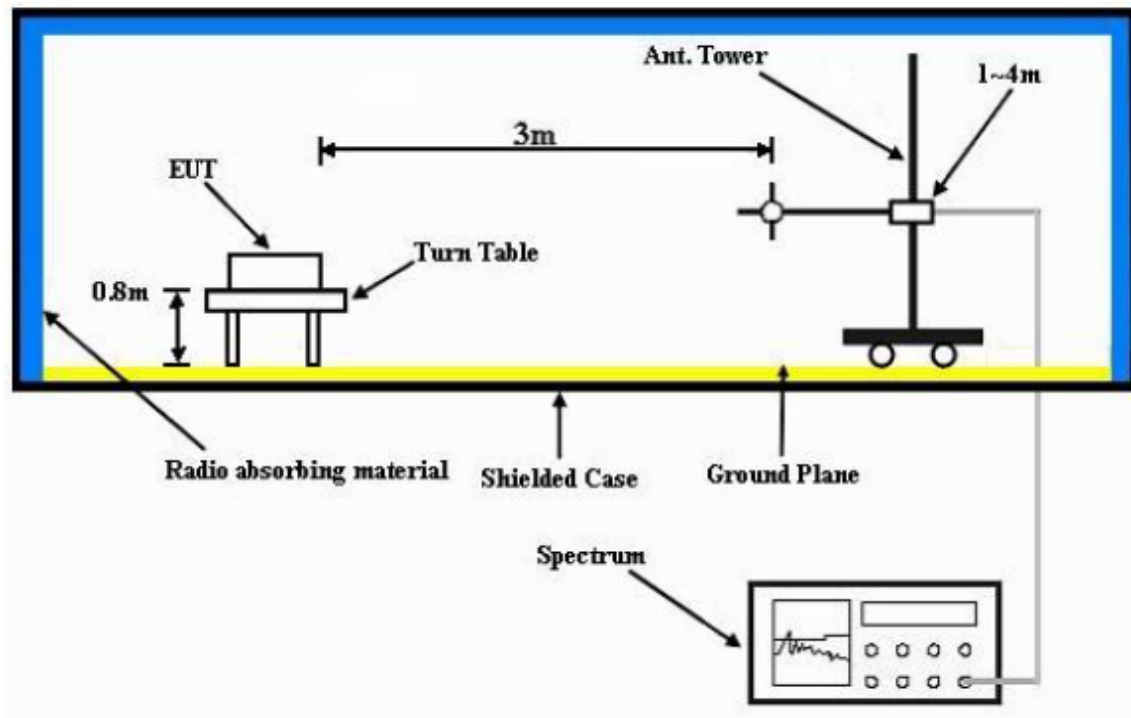
- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 5MHz for WCDMA mode.
- b. Substitution method is used for EIRP measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step b. Record the power level of S.G
- d.  $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$ . ERP power can be calculated form EIRP power by subtracting the gain of dipole,  $ERP \text{ power} = EIRP \text{ power} - 2.15\text{dBi}$ .

##### Conducted Power Measurement:

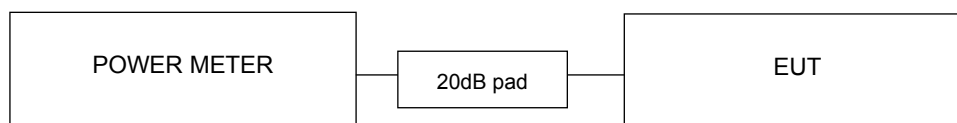
The EUT was set up for the maximum power with WCDMA link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

#### 4.1.3 Test Setup

EIRP MEASUREMENT:



#### CONDUCTED POWER MEASUREMENT:



#### 4.1.4 Test Results

##### WCDMA SC MODE

##### CONDUCTED OUTPUT POWER (dBm)

Band	WCDMA II		
Channel	9662	9800	9938
Frequency (MHz)	1932.4	1960	1987.6
Output power (dBm)	23.18	23.08	22.93

##### EIRP Power (dBm)

Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)
Y	9662	1932.4	22.16	6.6	28.77	753.36
	9800	1960	22.05	6.7	28.73	746.45
	9938	1987.6	21.90	6.7	28.57	719.45

##### WCDMA MC MODE

##### CONDUCTED OUTPUT POWER (dBm)

Carrier Channel Configuration	Carrier Frequency Configuration (MHz)	Transmitter power (dBm)		
		Carrier 1 (dBm)	Carrier 2 (dBm)	Total power {Carrier 1+2} (dBm)
9662+9687	1932.4+1937.4	21.08	21.24	24.17
9788+9813	1957.6+1962.6	21.13	21.18	24.17
9913+9938	1982.6+1987.6	21.06	22.29	24.73

##### EIRP Power (dBm)

Plane	Carrier Channel Configuration	Carrier Frequency Configuration (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)
Y	9662+9687	1932.4+1937.4	20.83	6.6	27.44	554.63
	9788+9813	1957.6+1962.6	20.83	6.7	27.51	563.64
	9913+9938	1982.6+1987.6	21.16	6.7	27.83	606.74

## 4.2 Frequency Stability Measurement

### 4.2.1 Limits of Frequency Stability Measurement

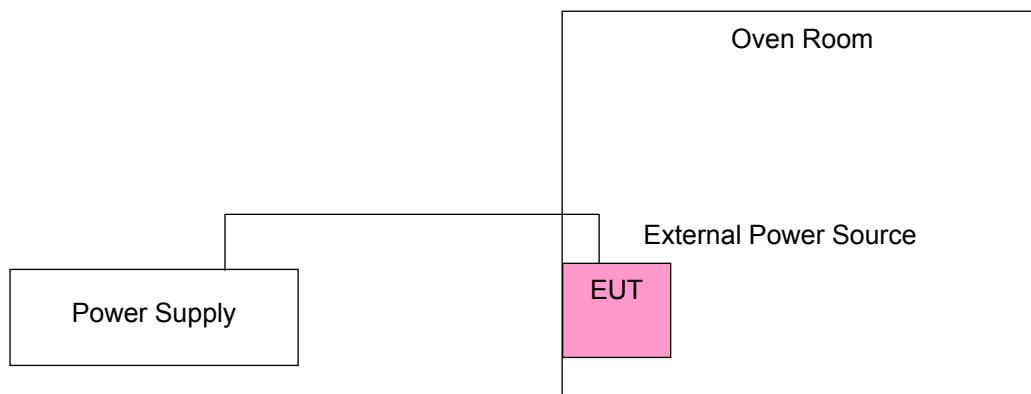
According to the FCC part 2.1055 shall be tested the frequency stability. The rule is defined that "The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block." The test extreme voltage is according to the 2.1055(d)(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment and the extreme temperature rule is comply with specification of EUT  $-30^{\circ}\text{C} \sim 50^{\circ}\text{C}$ .

### 4.2.2 Test Procedure

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the  $\pm 0.5^{\circ}\text{C}$  during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

**NOTE:** The frequency error was recorded frequency error from the communication simulator.

### 4.2.3 Test Setup



#### 4.2.4 Test Results

##### WCDMA SC MODE

##### Frequency Error vs. Voltage

Voltage (Volts)	Frequency Error (ppm)	Result
	WCDMA	
102	0.011	Pass
138	0.009	Pass

##### Frequency Error vs. Temperature.

TEMP. (°C)	Frequency Error (ppm)	Result
	WCDMA	
75	0.015	Pass
70	0.015	Pass
60	0.014	Pass
50	0.013	Pass
40	0.010	Pass
30	0.009	Pass
20	0.010	Pass
10	0.011	Pass
0	0.011	Pass
-10	0.012	Pass
-20	0.013	Pass
-30	0.014	Pass

## WCDMA MC MODE

### Frequency Error vs. Voltage

Voltage (Volts)	Frequency Error (ppm)	Result
	WCDMA	
102	0.020	Pass
138	0.018	Pass

### Frequency Error vs. Temperature.

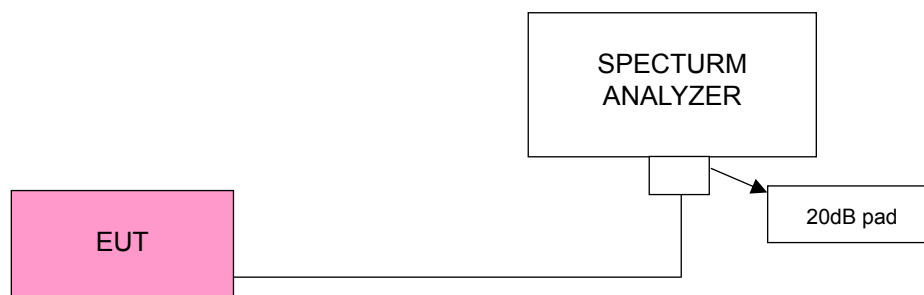
TEMP. (°C)	Frequency Error (ppm)	Result
	WCDMA	
75	0.015	Pass
70	0.017	Pass
60	0.012	Pass
50	0.017	Pass
40	0.019	Pass
30	0.021	Pass
20	0.017	Pass
10	0.014	Pass
0	0.022	Pass
-10	0.021	Pass
-20	0.023	Pass
-30	0.016	Pass

### 4.3 Occupied Bandwidth Measurement

#### 4.3.1 Test Procedure

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

#### 4.3.2 Test Setup

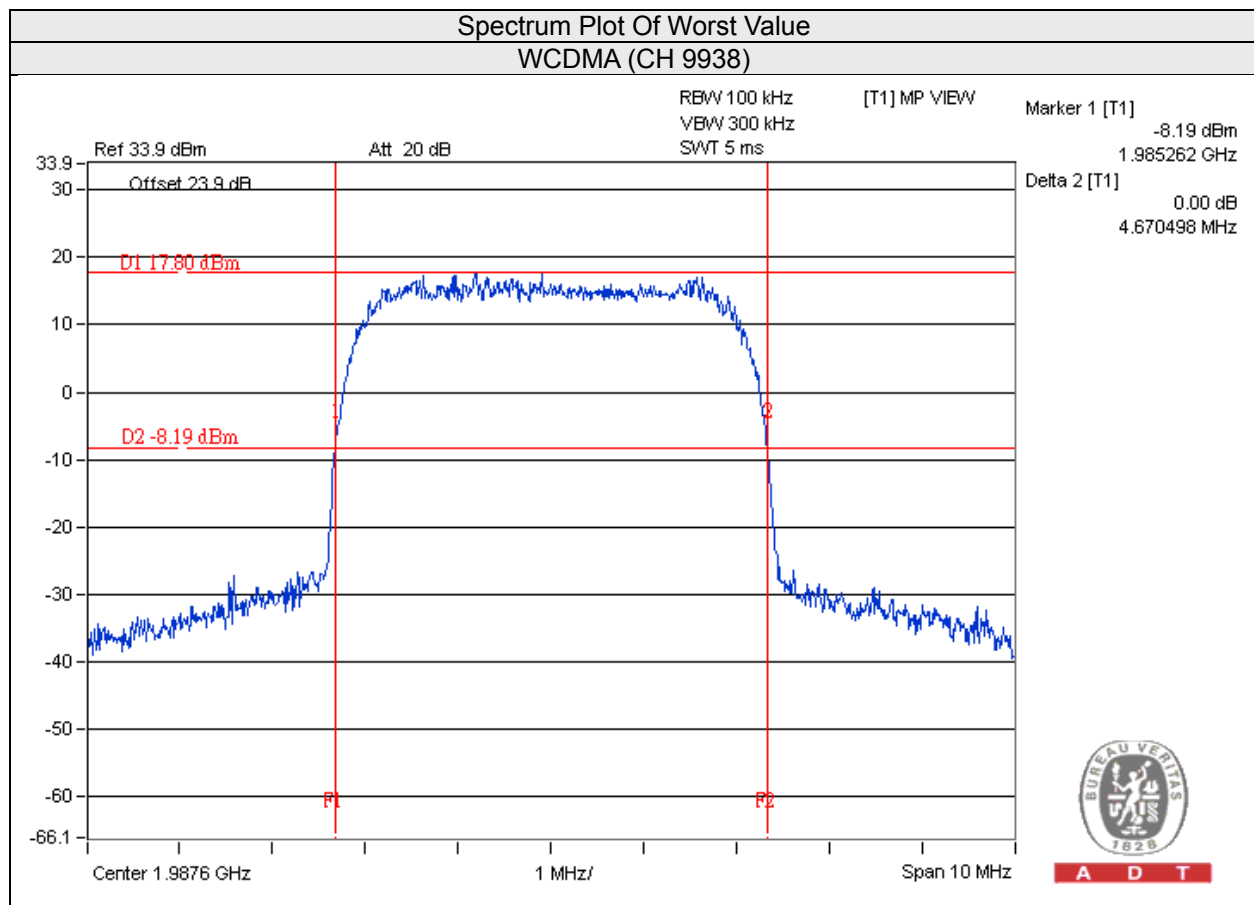




#### 4.3.3 Test Result (-26dBc Bandwidth)

##### WCDMA SC MODE

Channel	FREQ. (MHz)	-26dBc Bandwidth (MHz)
		WCDMA
9662	1932.4	4.65
9800	1960	4.65
9938	1987.6	4.67

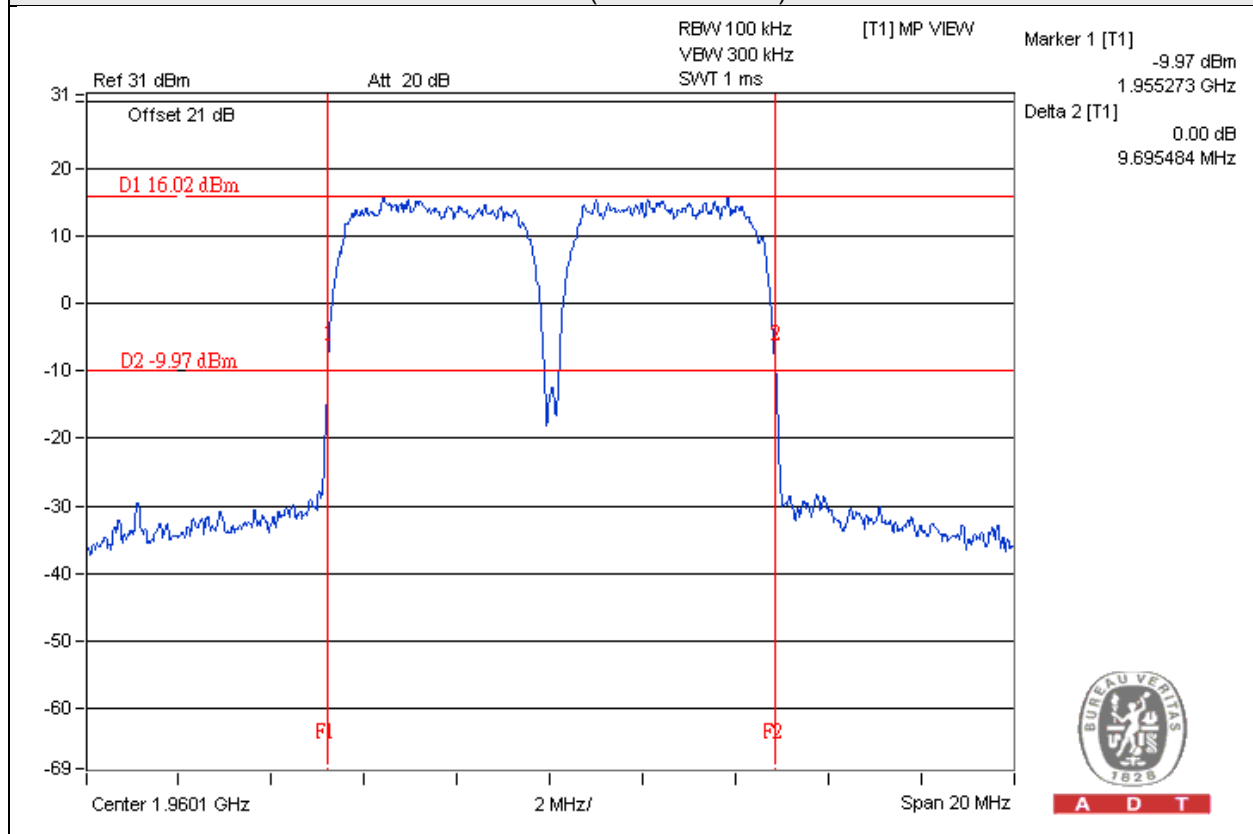


## WCDMA MC MODE

Carrier Channel Configuration	Carrier Frequency Configuration (MHz)	-26dBc Bandwidth (MHz)
		WCDMA
9662+9687	1932.4+1937.4	9.68
9788+9813	1957.6+1962.6	9.70
9913+9938	1982.6+1987.6	9.70

### Spectrum Plot Of Worst Value

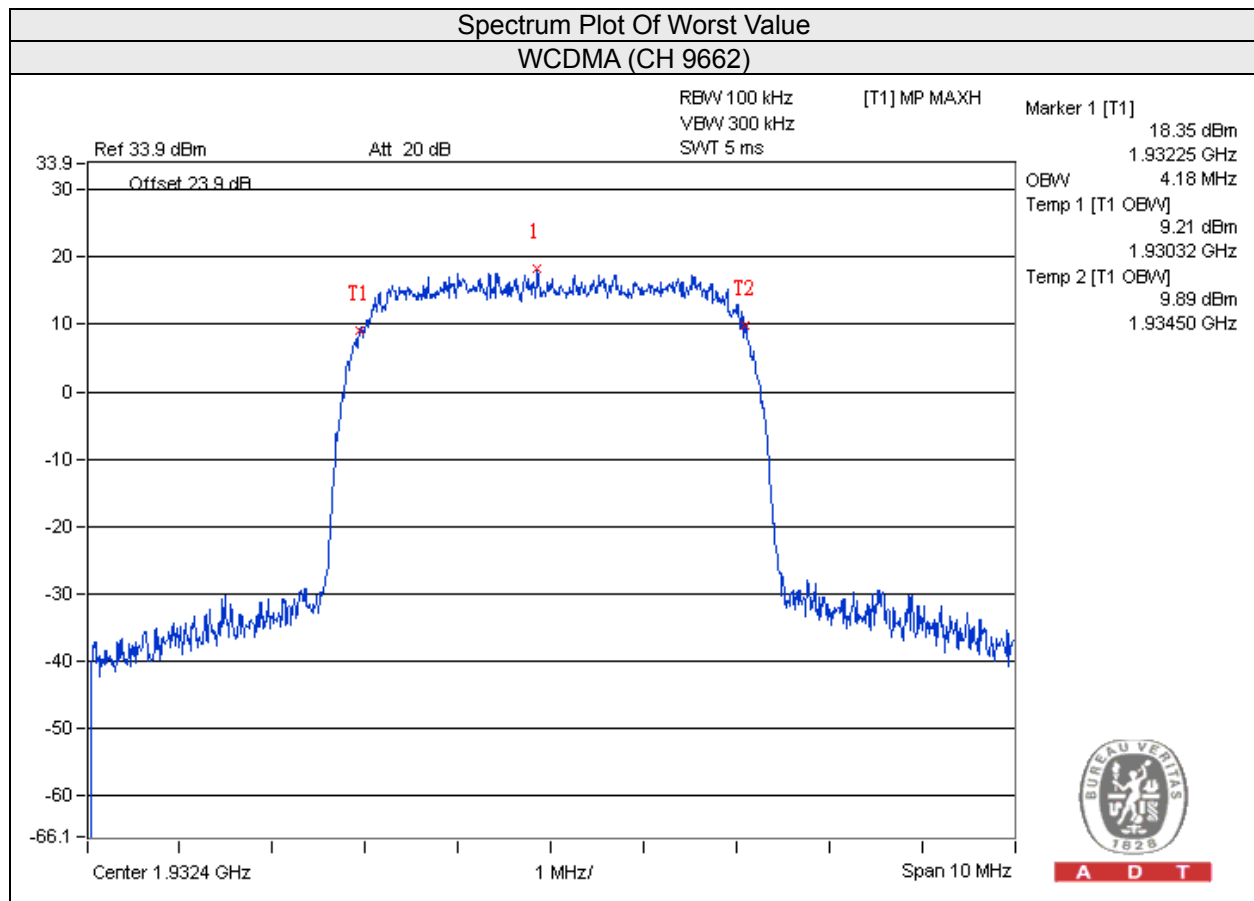
#### WCDMA (CH 9788+9813)



#### 4.3.4 Test Result (Occupied Bandwidth)

##### WCDMA SC MODE

Channel	FREQ. (MHz)	99% Occupied Bandwidth (MHz)
		WCDMA
9662	1932.4	4.18
9800	1960	4.18
9938	1987.6	4.18

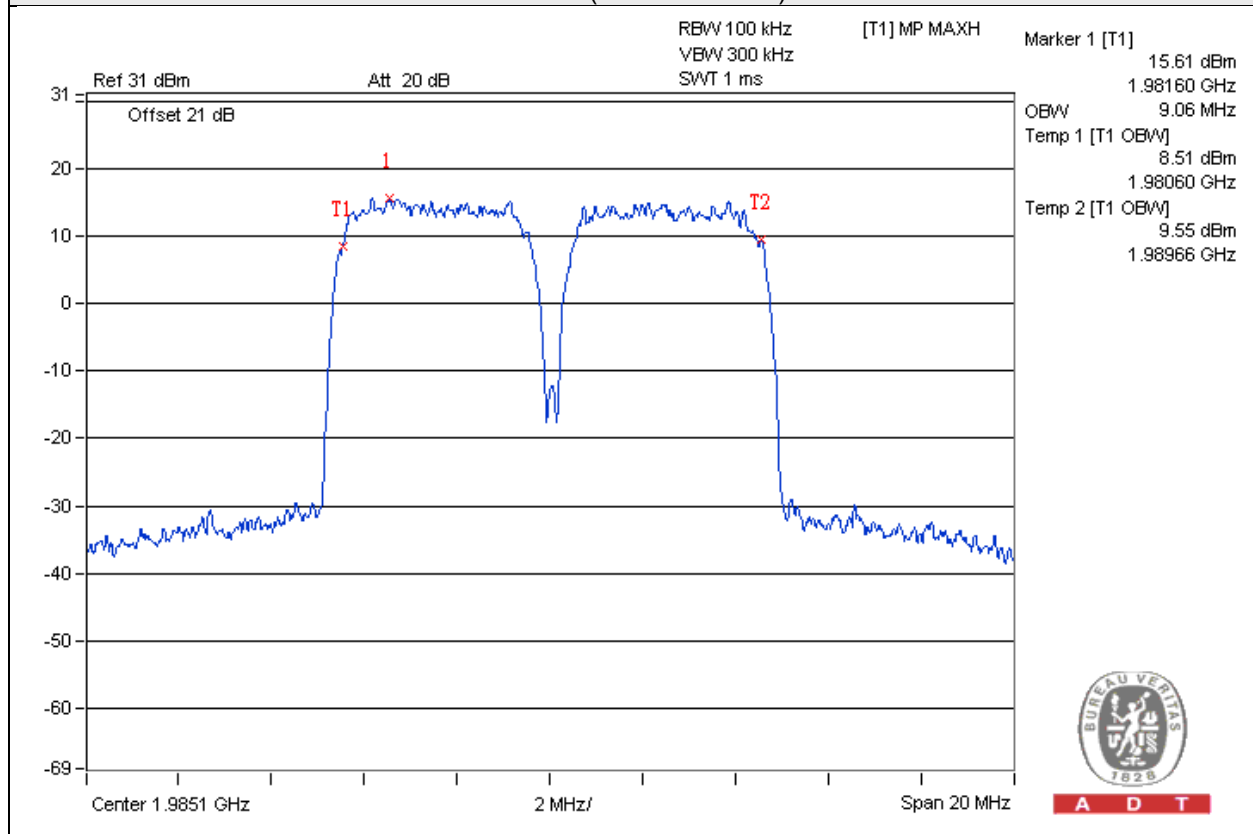


## WCDMA MC MODE

Carrier Channel Configuration	Carrier Frequency Configuration (MHz)	99% Occupied Bandwidth (MHz)
		WCDMA
9662+9687	1932.4+1937.4	9.04
9788+9813	1957.6+1962.6	9.06
9913+9938	1982.6+1987.6	9.06

### Spectrum Plot Of Worst Value

#### WCDMA (CH 9913+9938)

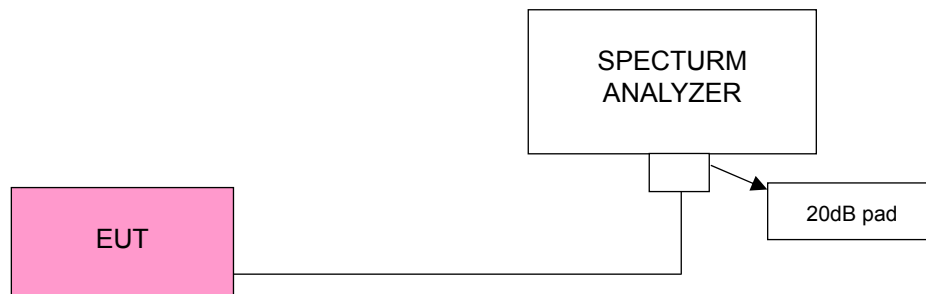


## 4.4 Band Edge Measurement

### 4.4.1 Limits of Band Edge Measurement

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. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

### 4.4.2 Test Setup

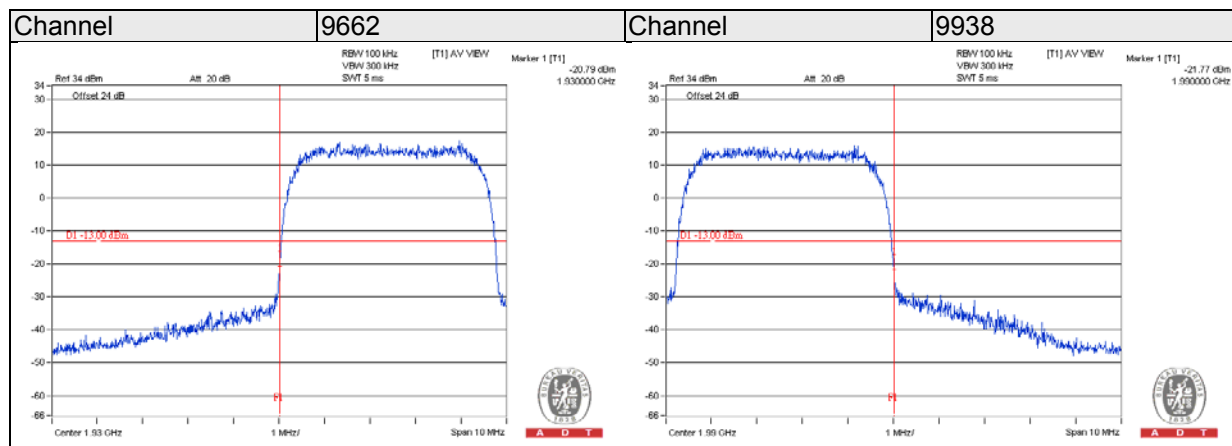


### 4.4.3 Test Procedures

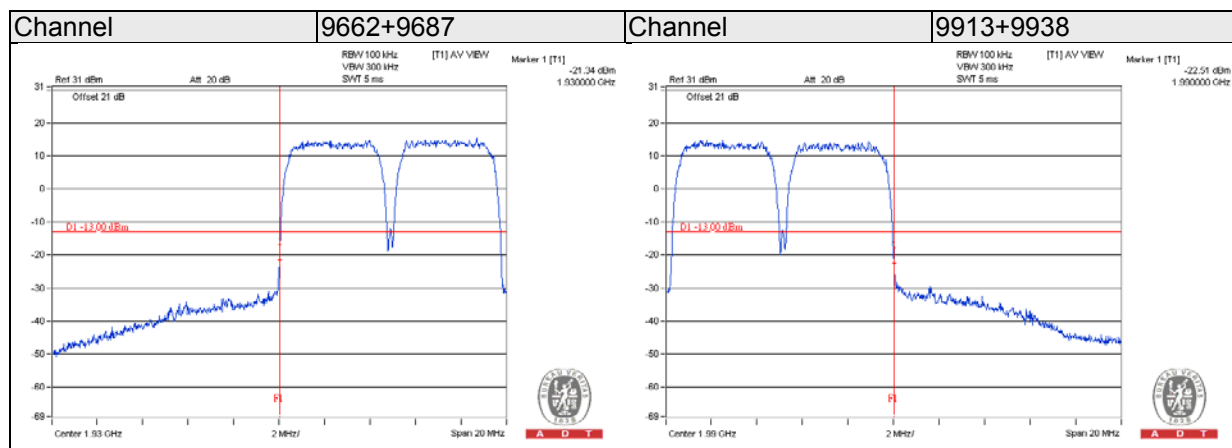
- All measurements were done at low and high operational frequency range.
- The center frequency of spectrum is the band edge frequency and span is 10MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (WCDMA).
- Record the max trace plot into the test report.

#### 4.4.4 Test Results (With Adapter)

##### WCDMA SC MODE

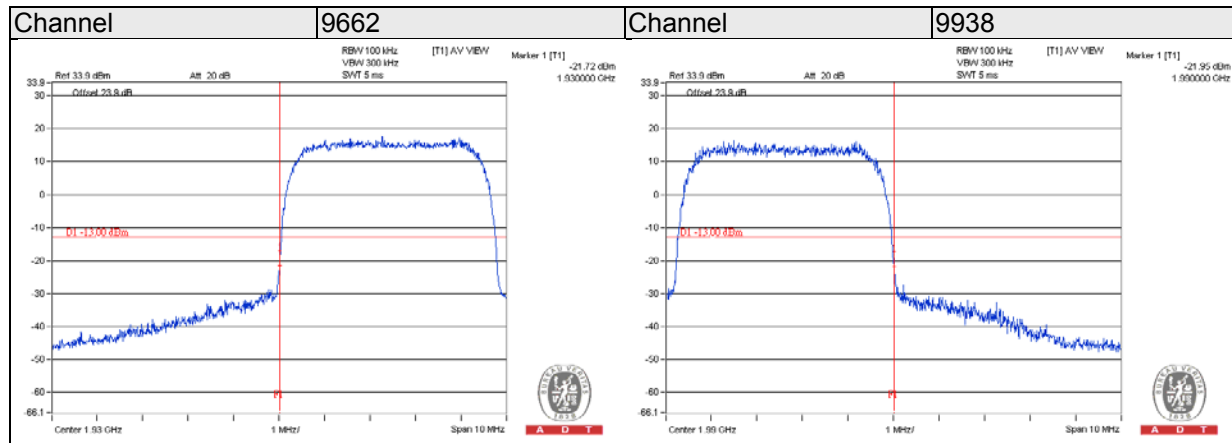


##### WCDMA MC MODE

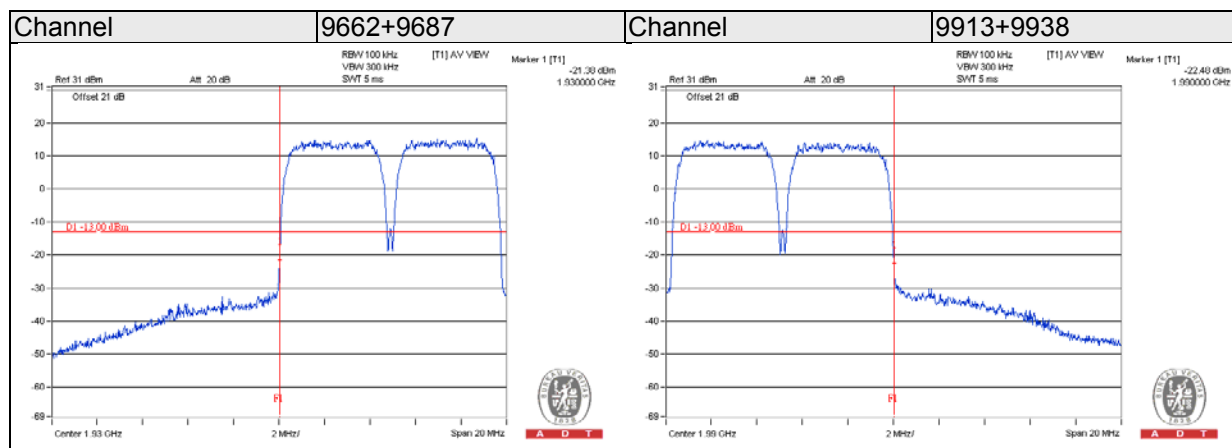


#### 4.4.5 Test Results (With POE)

##### WCDMA SC MODE



##### WCDMA MC MODE

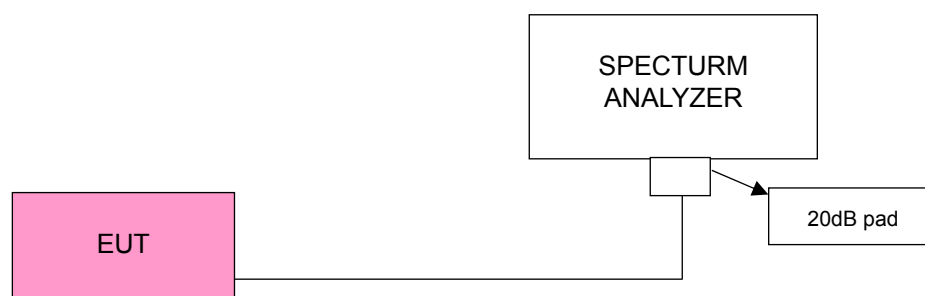


## 4.5 Peak to Average Ratio

### 4.5.1 Limits of Peak to Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

### 4.5.2 Test Setup



### 4.5.3 Test Procedures

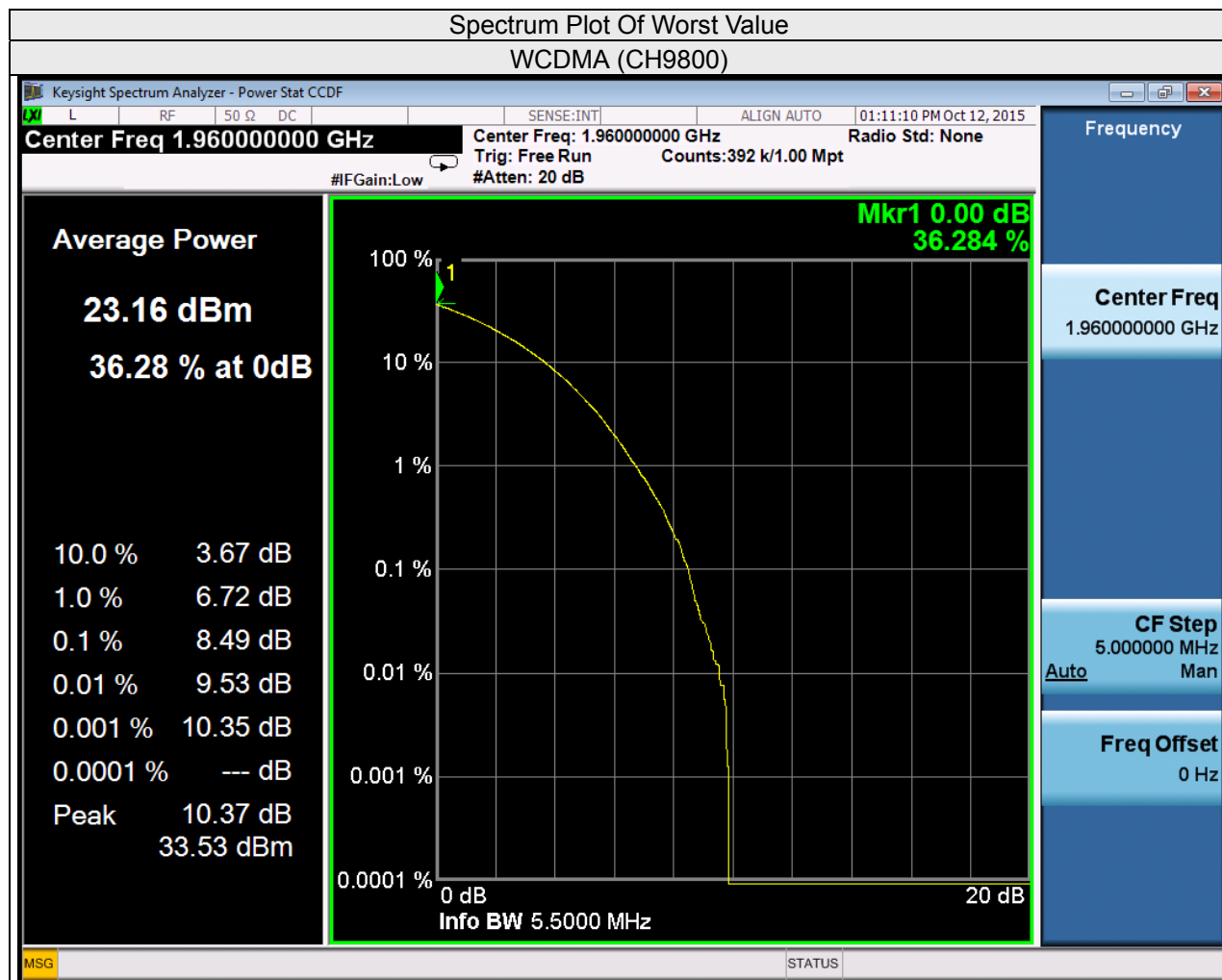
1. Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.



#### 4.5.4 Test Results

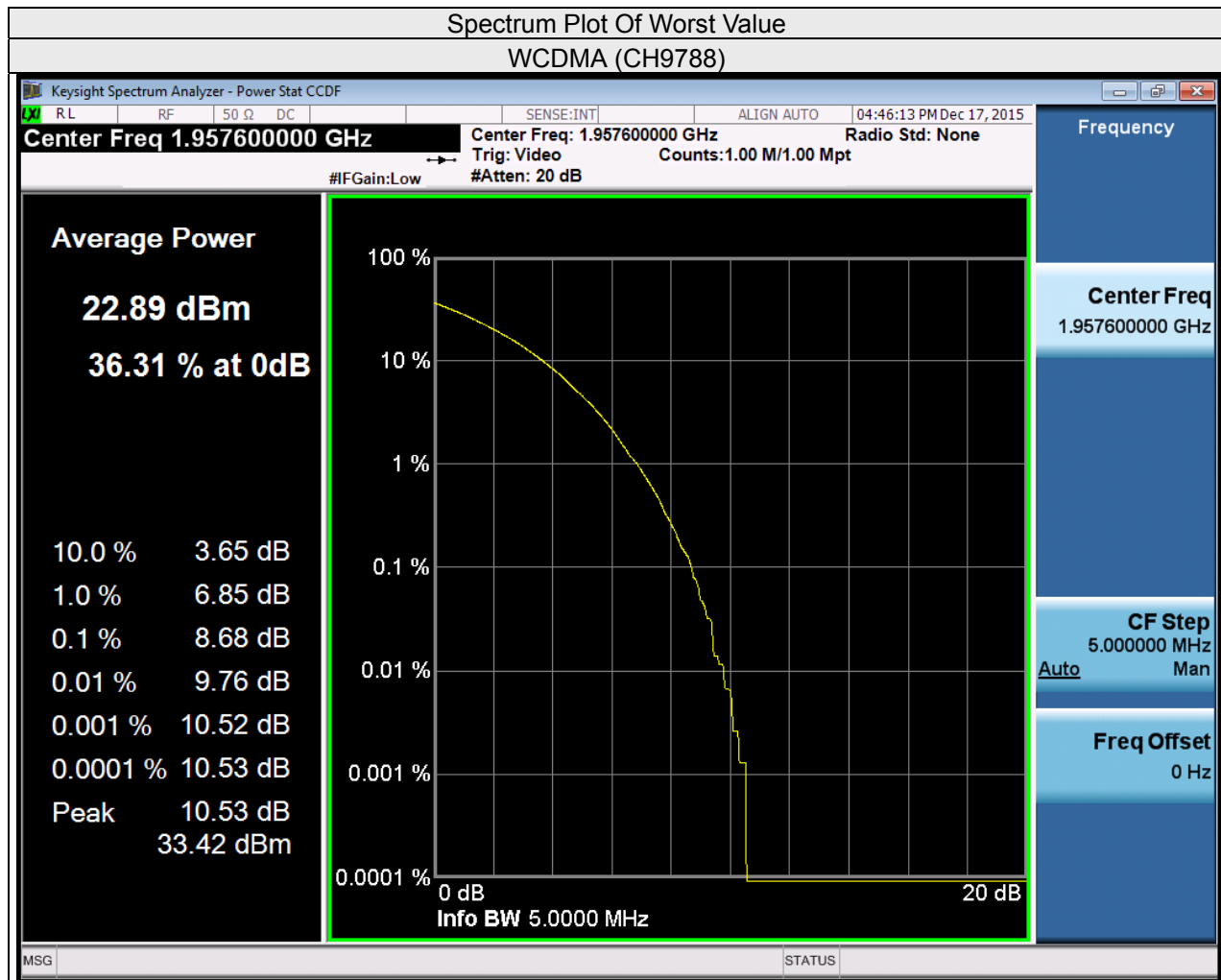
##### WCDMA SC MODE

Channel	Freq. (MHz)	Peak To Average Ratio (dB)
		WCDMA
9662	1932.4	8.45
9800	1960	8.49
9938	1987.6	8.4



## WCDMA MC MODE

Carrier Channel Configuration	Carrier Frequency Configuration (MHz)	Peak To Average Ratio (dB)
		WCDMA
9662	1932.4	8.6
9687	1937.4	8.58
9788	1957.6	8.63
9813	1962.6	8.6
9913	1982.6	8.5
9938	1987.6	8.59

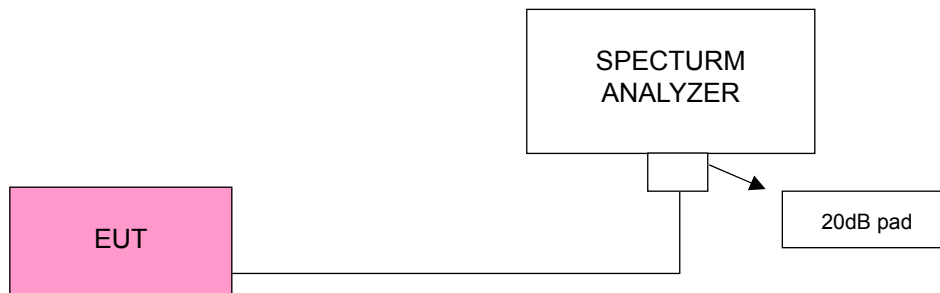


## 4.6 Conducted Spurious Emissions

### 4.6.1 Limits of Conducted Spurious Emissions Measurement

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. The emission limit equal to  $-13\text{dBm}$ .

### 4.6.2 Test Setup



### 4.6.3 Test Procedure

- The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 9 kHz to 20GHz. 20dB attenuation pad is connected with spectrum. Below 1GHz: RBW=100kHz and VBW=300kHz ; Above 1GHz: RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

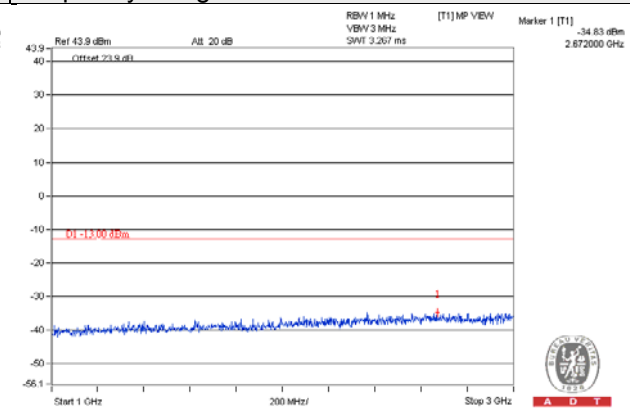
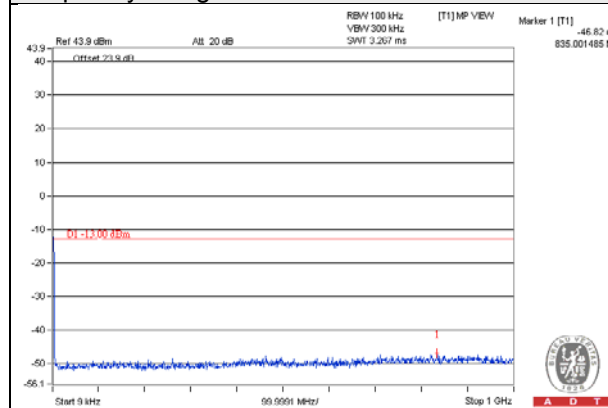
#### 4.6.4 Test Results (With Adapter)

##### WCDMA SC MODE

Channel 9662

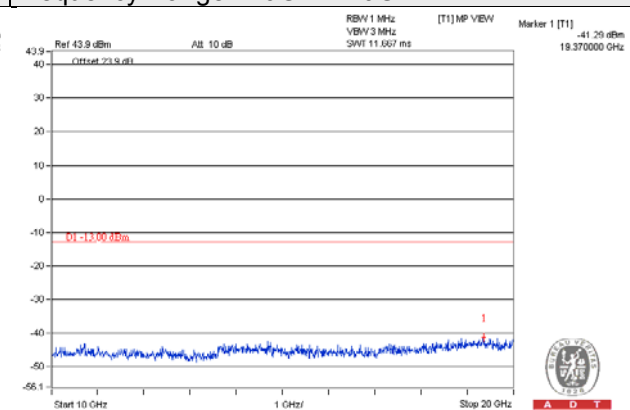
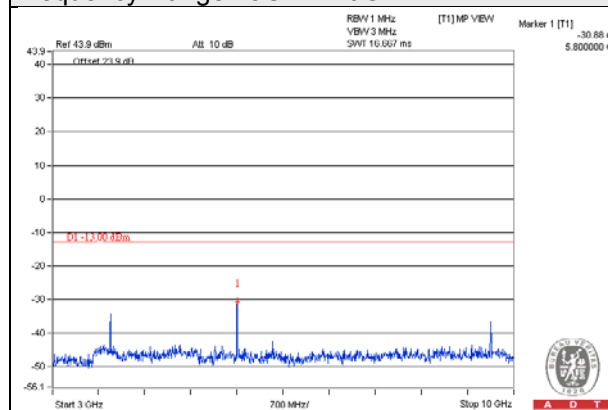
Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~3GHz



Frequency Range : 3GHz~10GHz

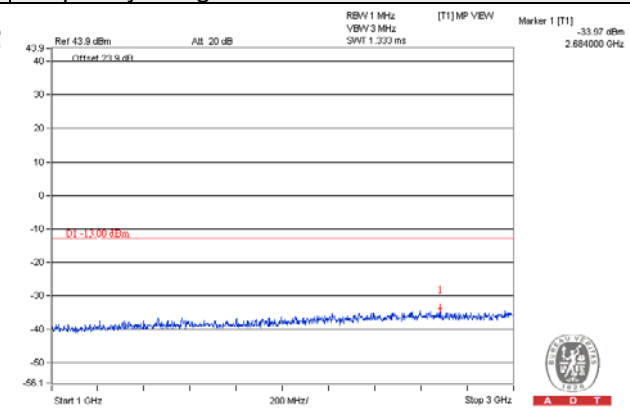
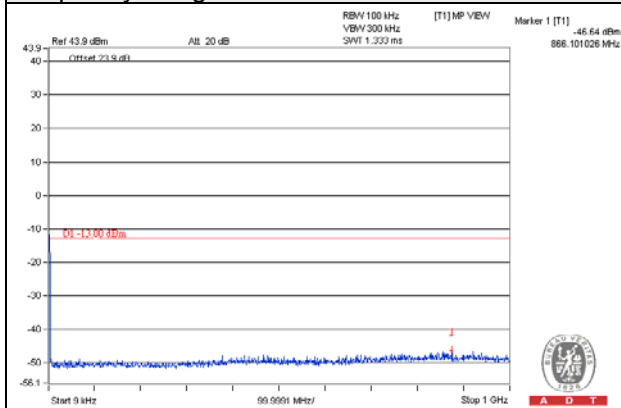
Frequency Range : 10GHz~20GHz



## Channel 9800

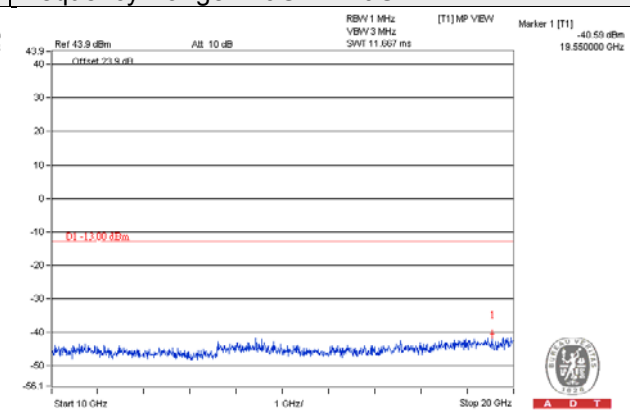
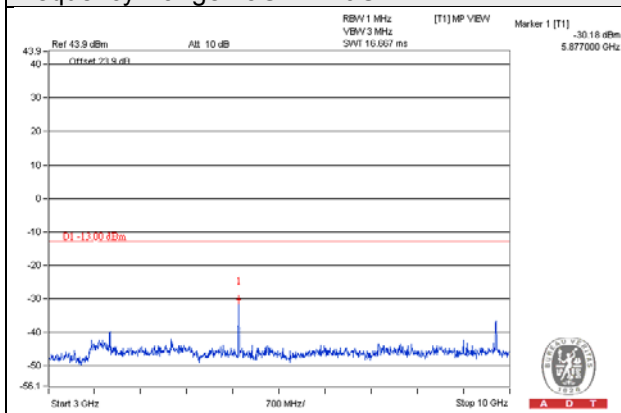
Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~3GHz



Frequency Range : 3GHz~10GHz

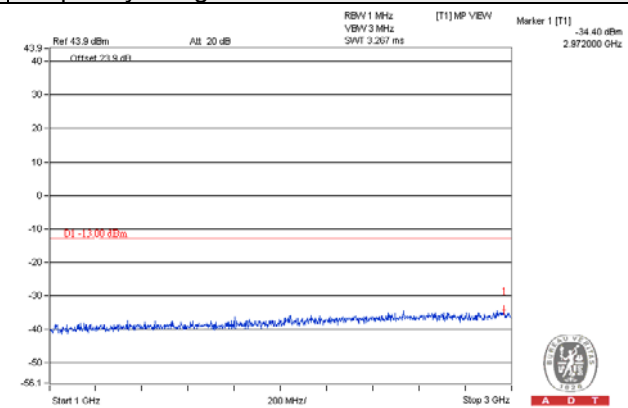
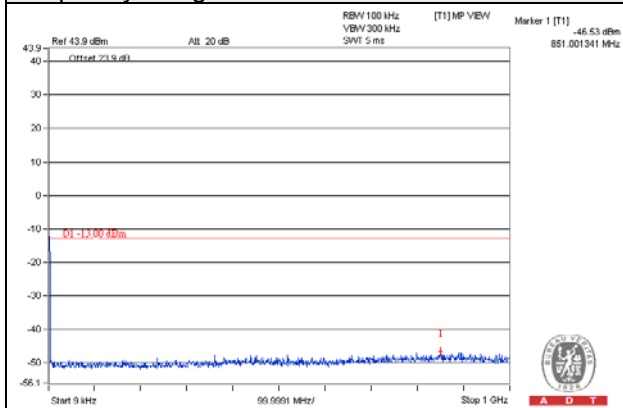
Frequency Range : 10GHz~20GHz



# Channel 9938

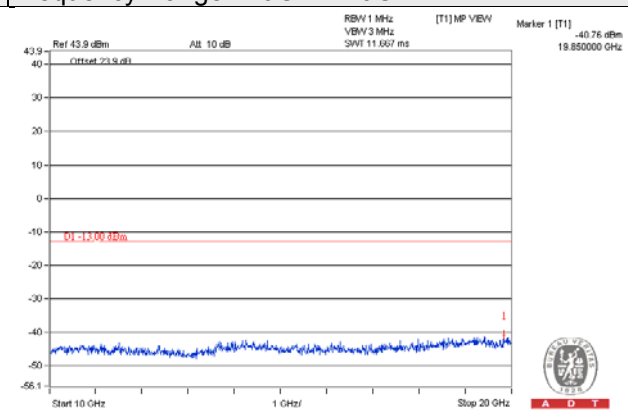
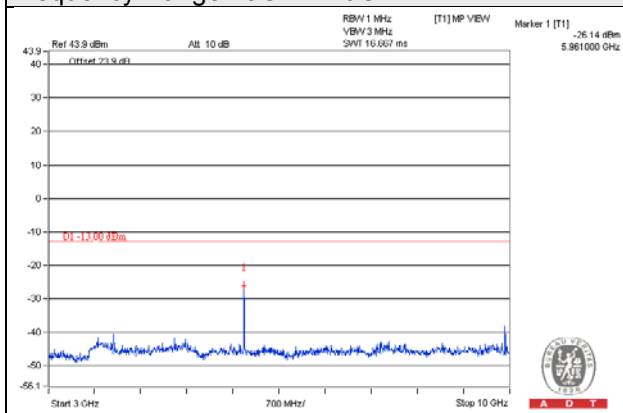
Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~3GHz



Frequency Range : 3GHz~10GHz

Frequency Range : 10GHz~20GHz

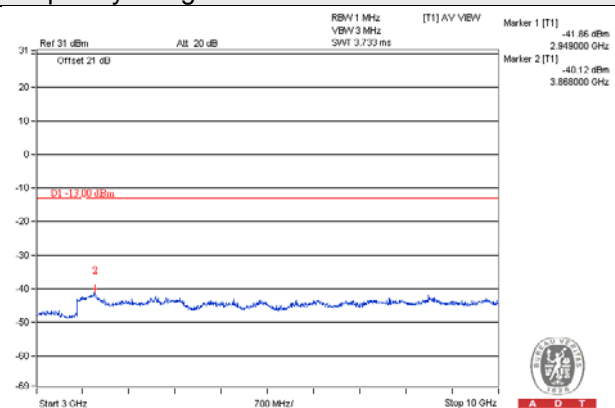
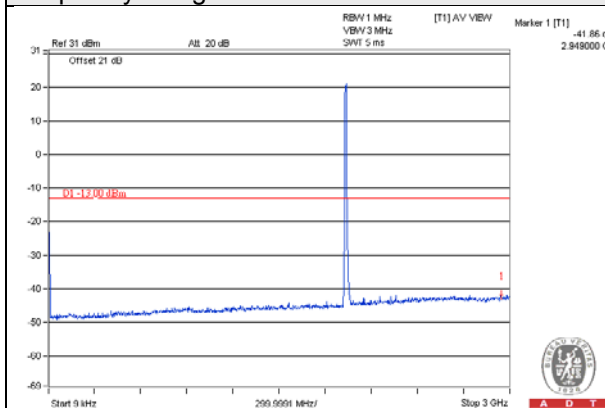


## WCDMA MC MODE

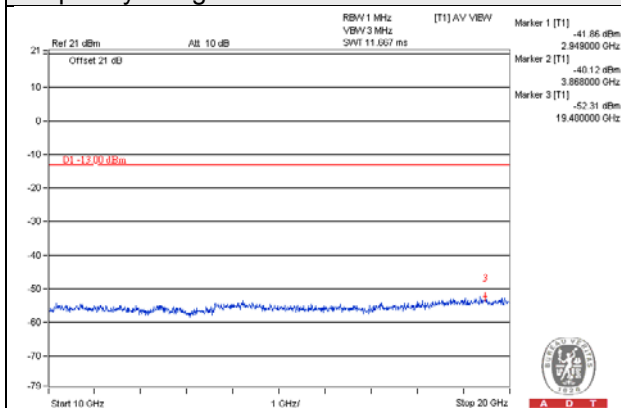
Channel 9662+9687

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz



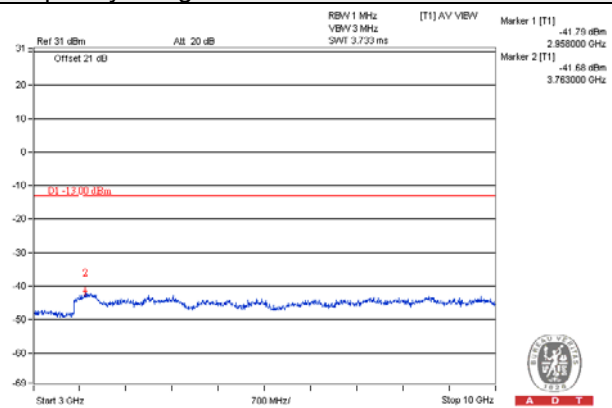
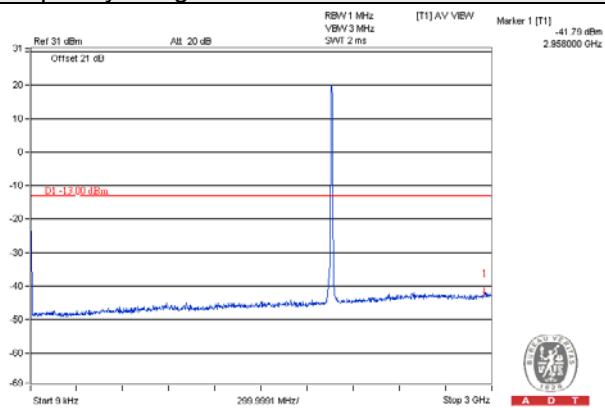
Frequency Range : 10GHz~20GHz



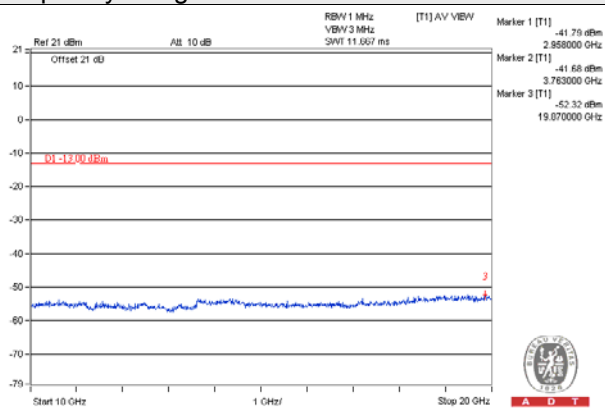
Channel 9788+9813

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz



Frequency Range : 10GHz~20GHz

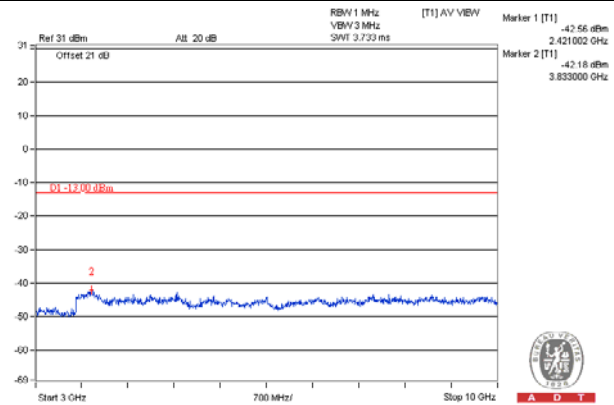
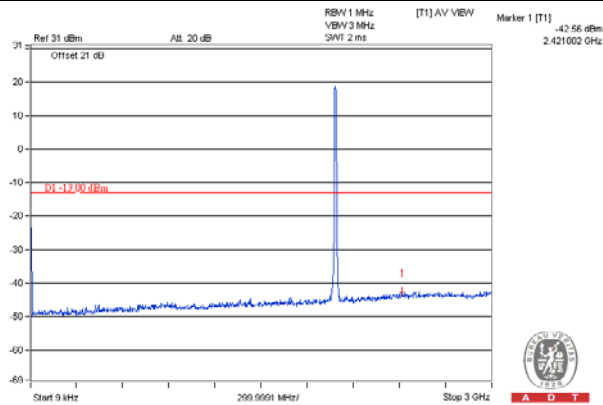




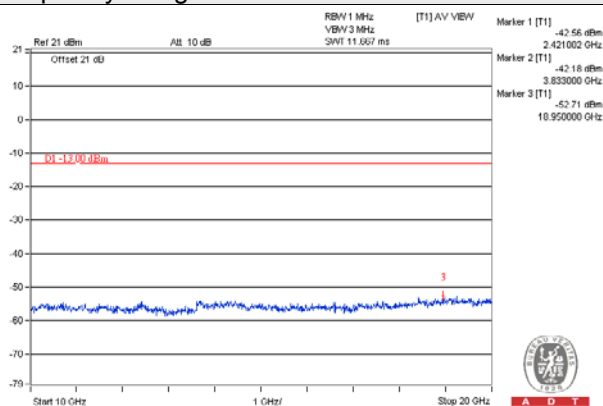
Channel 9913+9938

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

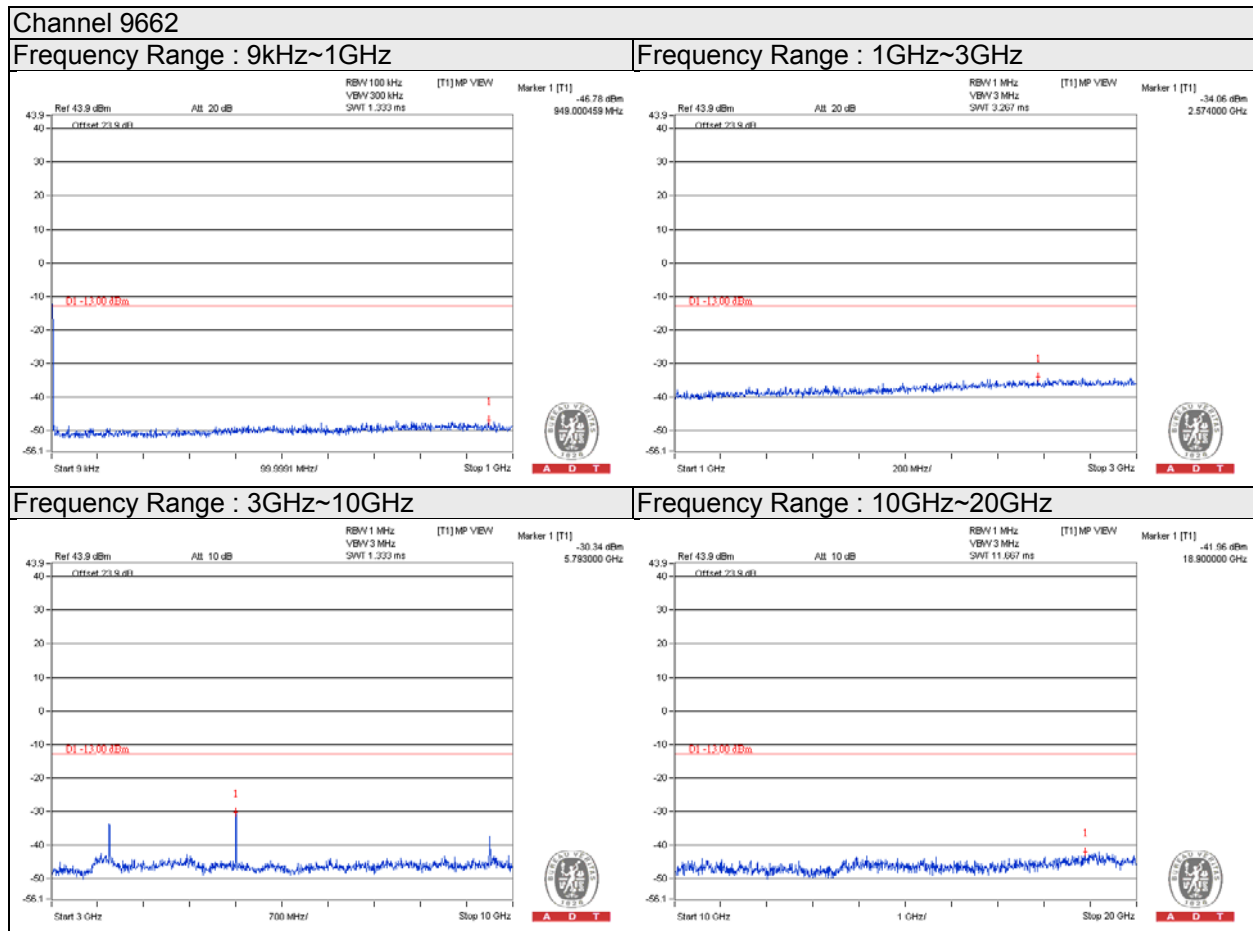


Frequency Range : 10GHz~20GHz



#### 4.6.5 Test Results (With POE)

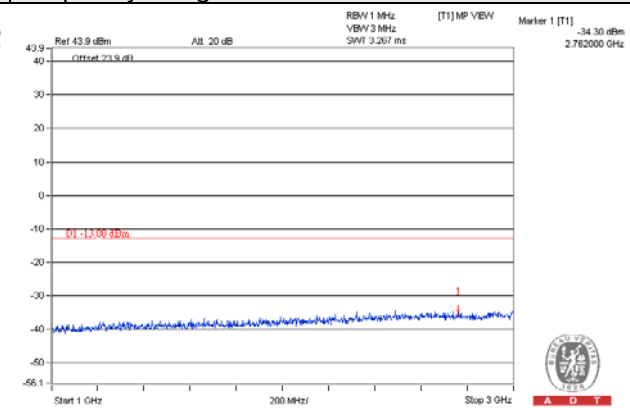
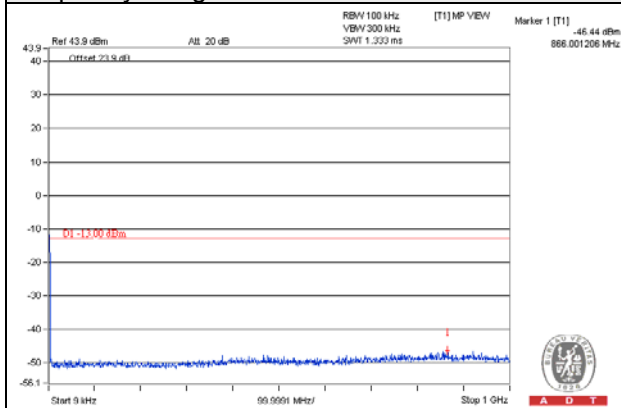
##### WCDMA SC MODE



# Channel 9800

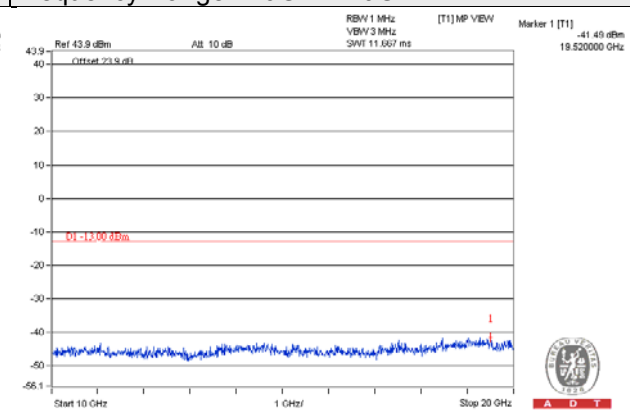
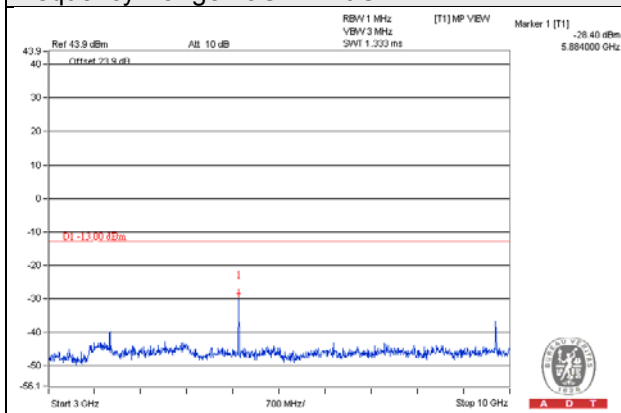
Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~3GHz



Frequency Range : 3GHz~10GHz

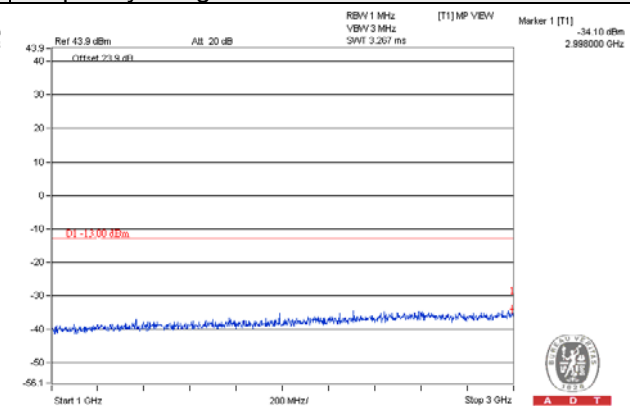
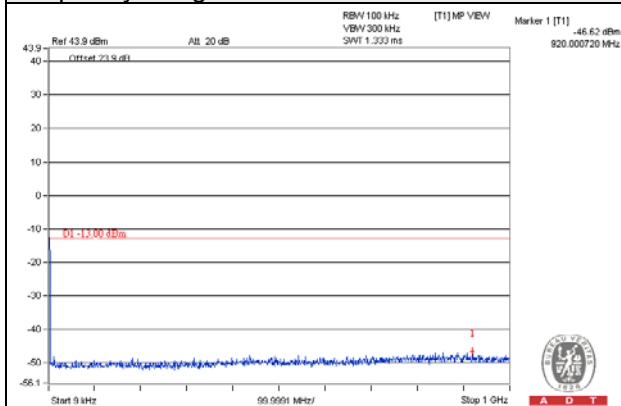
Frequency Range : 10GHz~20GHz



# Channel 9938

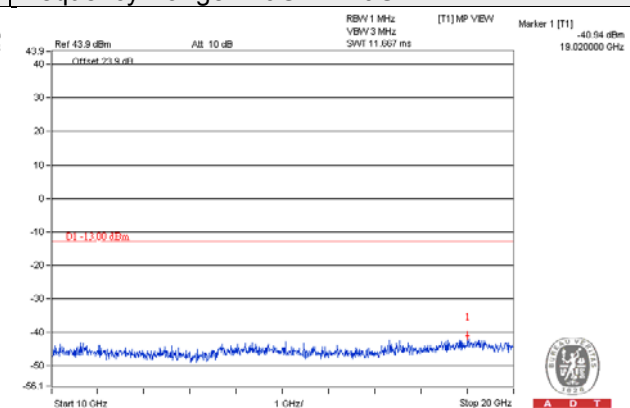
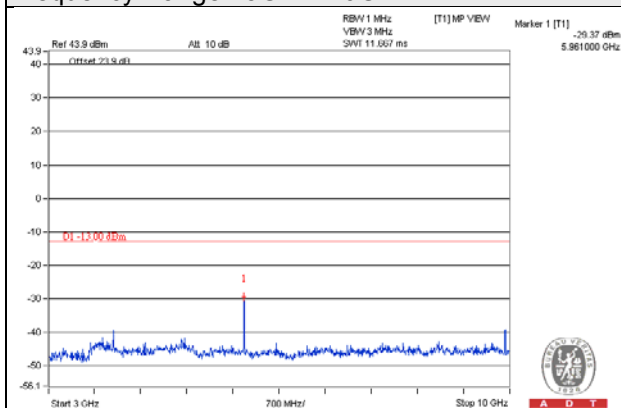
Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~3GHz



Frequency Range : 3GHz~10GHz

Frequency Range : 10GHz~20GHz

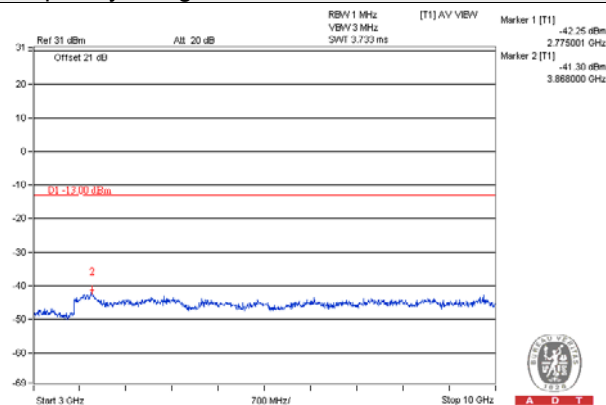
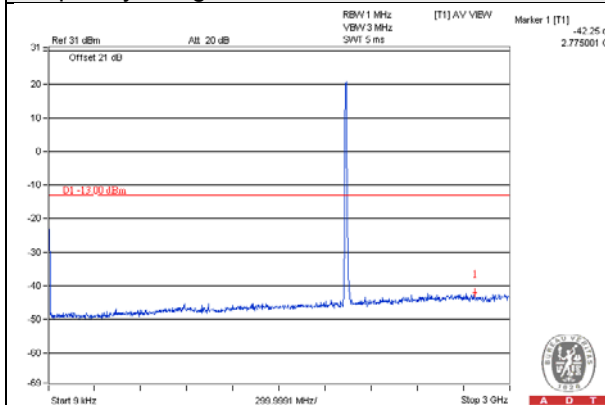


# WCDMA MC MODE

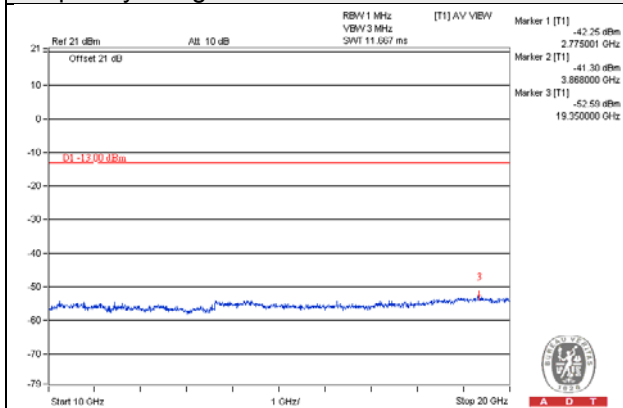
Channel 9662+9687

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz



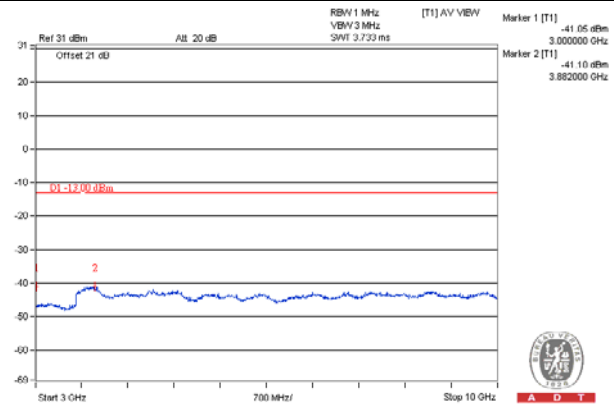
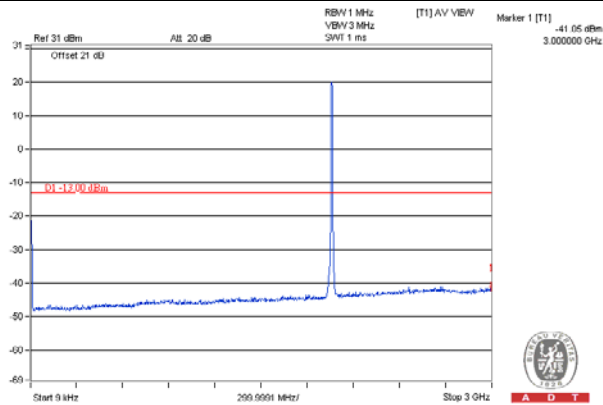
Frequency Range : 10GHz~20GHz



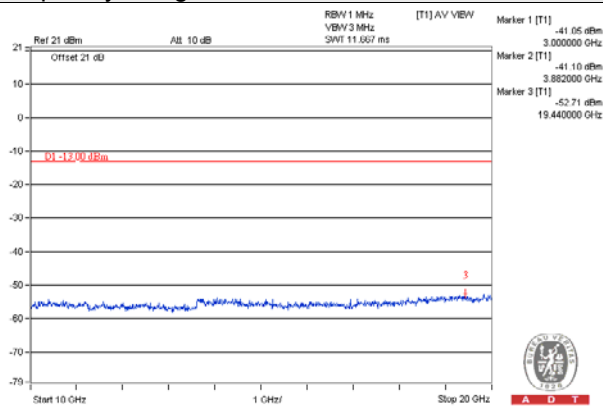
# Channel 9788+9813

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz



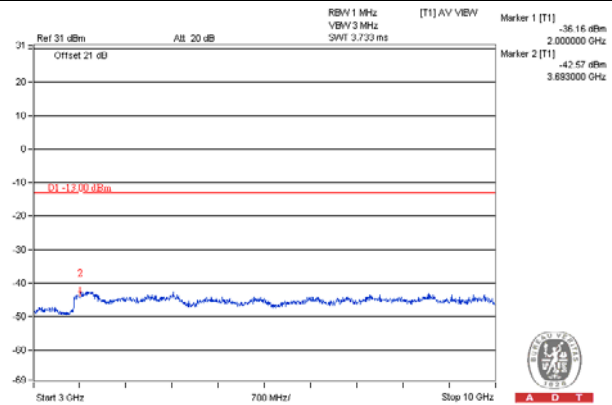
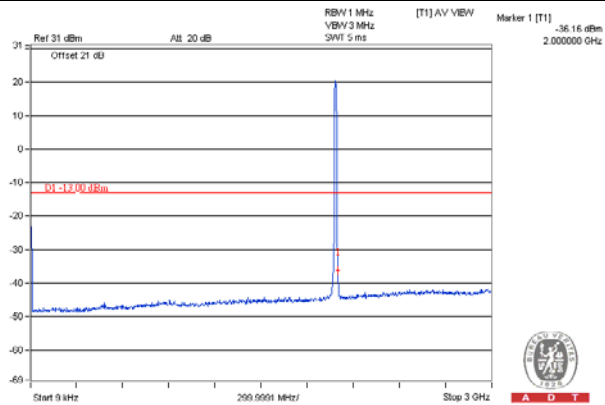
Frequency Range : 10GHz~20GHz



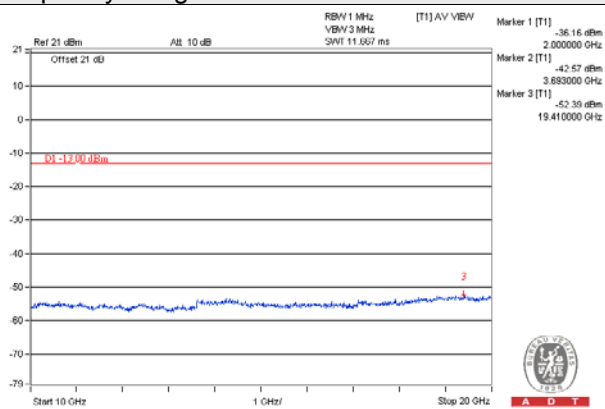
Channel 9913+9938

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz



Frequency Range : 10GHz~20GHz



## 4.7 Radiated Emission Measurement

### 4.7.1 Limits of Radiated Emission Measurement

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. The emission limit equal to  $-13\text{dBm}$ .

### 4.7.2 Test Procedure

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step a. Record the power level of S.G
- c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.

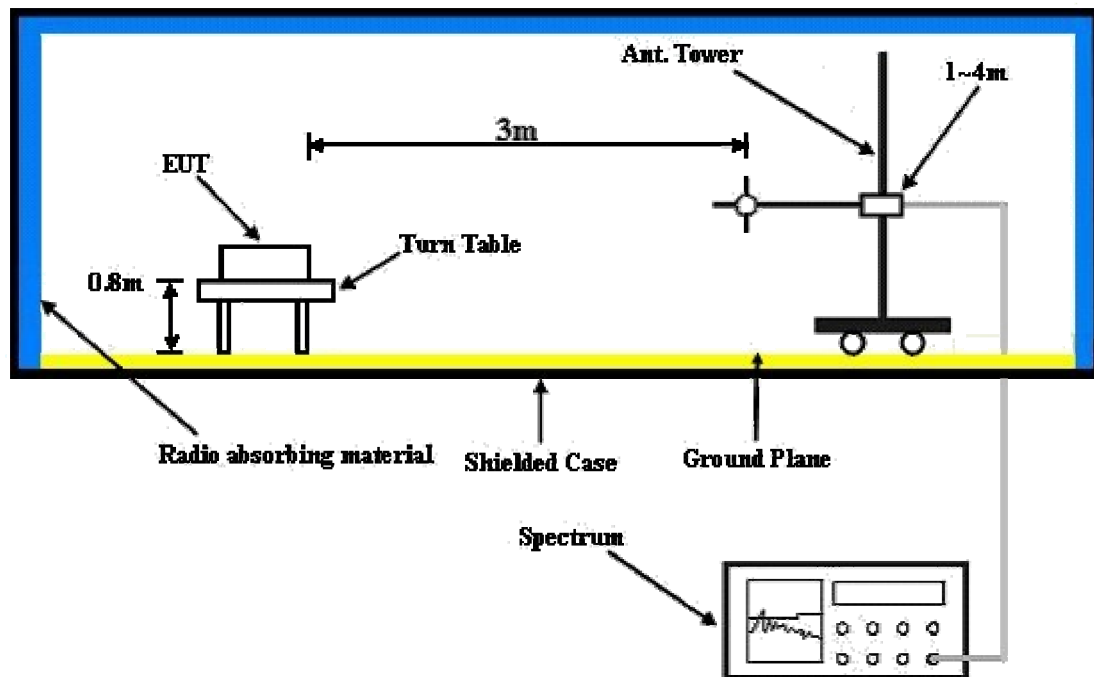
**NOTE:** The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 100 kHz/ 300kHz (Below 1GHz) and 1MHz/3MHz (Above 1GHz).

### 4.7.3 Deviation from Test Standard

No deviation.



#### 4.7.4 Test Setup



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

#### 4.7.5 Test Results (With Adapter)

##### WCDMA SC MODE

##### Below 1GHz

Mode	TX channel 9662	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	64	29.89	-54.63	-6.42	-61.05	-13	-48.05
2	232.39	37.28	-58.10	3.92	-54.19	-13	-41.19
3	298.74	36.87	-58.87	3.72	-55.15	-13	-42.15
4	697.02	34.73	-61.53	1.63	-59.90	-13	-46.90
5	921.62	40.92	-57.57	0.43	-57.14	-13	-44.14
6	959.99	37.30	-60.53	0.39	-60.14	-13	-47.14
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	165.73	33.84	-56.04	0.17	-55.87	-13	-42.87
2	298.43	33.86	-61.88	3.72	-58.16	-13	-45.16
3	313.66	32.21	-64.15	3.68	-60.47	-13	-47.47
4	698.12	34.29	-62.00	1.62	-60.38	-13	-47.38
5	797.93	33.49	-65.15	1.53	-63.62	-13	-50.62
6	921.36	44.05	-54.44	0.43	-54.01	-13	-41.01

##### Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9800	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	63.59	29.49	-54.85	-6.51	-61.36	-13	-48.36
2	232.59	37.59	-57.79	3.91	-53.88	-13	-40.88
3	298.39	36.59	-59.15	3.72	-55.43	-13	-42.43
4	697.09	35.09	-61.17	1.63	-59.54	-13	-46.54
5	921.79	41.29	-56.54	0.39	-56.15	-13	-43.15
6	960.59	37.69	-60.14	0.39	-59.75	-13	-46.75
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	165.59	33.79	-56.01	0.12	-55.88	-13	-42.88
2	298.79	34.19	-61.56	3.72	-57.84	-13	-44.84
3	313.89	32.39	-63.98	3.68	-60.30	-13	-47.30
4	698.19	34.09	-62.20	1.62	-60.58	-13	-47.58
5	798.39	33.59	-65.06	1.53	-63.53	-13	-50.53
6	921.19	43.89	-54.60	0.43	-54.17	-13	-41.17

Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9938	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	63.59	29.79	-54.55	-6.51	-61.06	-13	-48.06
2	232.59	36.79	-58.59	3.91	-54.68	-13	-41.68
3	298.39	37.09	-58.65	3.72	-54.92	-13	-41.92
4	696.79	34.29	-61.97	1.63	-60.34	-13	-47.34
5	921.19	40.49	-58.00	0.43	-57.57	-13	-44.57
6	960.09	37.19	-60.64	0.39	-60.25	-13	-47.25
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	165.89	33.79	-56.09	0.17	-55.92	-13	-42.92
2	298.59	33.69	-62.05	3.72	-58.33	-13	-45.33
3	313.99	32.39	-63.98	3.68	-60.30	-13	-47.30
4	697.89	34.09	-62.19	1.62	-60.57	-13	-47.57
5	798.49	33.79	-64.87	1.53	-63.33	-13	-50.33
6	921.39	43.69	-54.80	0.43	-54.37	-13	-41.37

Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

## Above 1GHz

Mode	TX channel 9662	Frequency Range	Above 1000MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3864.8	46.16	-58.38	7.61	-50.76	-13	-37.76
2	5797.2	55.83	-48.65	6.91	-41.74	-13	-28.74
3	7729.6	54.09	-48.53	4.35	-44.18	-13	-31.18
4	9662	46.58	-55.02	4.14	-50.88	-13	-37.88
5	11594.4	47.12	-54.33	3.90	-50.42	-13	-37.42
6	13526.8	49.77	-50.32	3.19	-47.13	-13	-34.13
7	15459.2	49.97	-47.38	3.70	-43.68	-13	-30.68
8	17391.6	56.72	-40.63	3.70	-36.93	-13	-23.93
9	19324	60.79	-38.22	3.77	-34.45	-13	-21.45
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3864.8	51.69	-52.85	7.61	-45.23	-13	-32.23
2	5797.2	51.38	-53.10	6.91	-46.19	-13	-33.19
3	7729.6	47.57	-55.05	4.35	-50.70	-13	-37.70
4	9662	45.65	-55.95	4.14	-51.81	-13	-38.81
5	11594.4	46.84	-54.61	3.90	-50.70	-13	-37.70
6	13526.8	49.32	-50.77	3.19	-47.58	-13	-34.58
7	15459.2	50.53	-46.82	3.70	-43.12	-13	-30.12
8	17391.6	56.34	-41.01	3.70	-37.31	-13	-24.31
9	19324	61.12	-37.89	3.77	-34.12	-13	-21.12

### Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9800	Frequency Range	Above 1000MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3920	46.34	-58.40	7.57	-50.82	-13	-37.82
2	5880	56.45	-47.89	6.85	-41.04	-13	-28.04
3	7840	54.57	-48.05	4.25	-43.80	-13	-30.80
4	9800	46.46	-55.12	4.10	-51.03	-13	-38.03
5	11760	48.07	-53.37	4.11	-49.27	-13	-36.27
6	13720	49.54	-50.30	2.77	-47.53	-13	-34.53
7	15680	50.96	-46.39	3.70	-42.69	-13	-29.69
8	17640	56.52	-40.83	3.70	-37.13	-13	-24.13
9	19600	60.66	-39.76	3.82	-35.94	-13	-22.94
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3920	51.38	-53.36	7.57	-45.78	-13	-32.78
2	5880	51.93	-52.41	6.85	-45.56	-13	-32.56
3	7840	47.72	-54.90	4.25	-50.65	-13	-37.65
4	9800	46.44	-55.14	4.10	-51.05	-13	-38.05
5	11760	47.78	-53.66	4.11	-49.56	-13	-36.56
6	13720	49.46	-50.38	2.77	-47.61	-13	-34.61
7	15680	50.23	-47.12	3.70	-43.42	-13	-30.42
8	17640	56.87	-40.48	3.70	-36.78	-13	-23.78
9	19600	61.32	-39.10	3.82	-35.28	-13	-22.28

#### Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9938	Frequency Range	Above 1000MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3975.2	46.26	-58.68	7.54	-51.14	-13	-38.14
2	5962.8	56.14	-48.06	6.80	-41.27	-13	-28.27
3	7950.4	54.82	-47.80	4.16	-43.64	-13	-30.64
4	9938	47.28	-54.29	4.06	-50.23	-13	-37.23
5	11925.6	47.77	-53.67	4.31	-49.37	-13	-36.37
6	13913.2	49.86	-49.72	2.35	-47.38	-13	-34.38
7	15900.8	50.13	-47.22	3.70	-43.52	-13	-30.52
8	17888.4	57.54	-39.81	3.70	-36.11	-13	-23.11
9	19876	61.27	-40.57	3.87	-36.69	-13	-23.69
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3975.2	51.63	-53.31	7.54	-45.77	-13	-32.77
2	5962.8	52.27	-51.93	6.80	-45.14	-13	-32.14
3	7950.4	47.16	-55.46	4.16	-51.30	-13	-38.30
4	9938	45.94	-55.63	4.06	-51.57	-13	-38.57
5	11925.6	47.82	-53.62	4.31	-49.32	-13	-36.32
6	13913.2	49.69	-49.89	2.35	-47.55	-13	-34.55
7	15900.8	50.58	-46.77	3.70	-43.07	-13	-30.07
8	17888.4	57.32	-40.03	3.70	-36.33	-13	-23.33
9	19876	61.34	-40.50	3.87	-36.62	-13	-23.62

#### Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

# WCDMA MC MODE

## Below 1GHz

Mode	TX channel 9662+9687	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	52.822	29.79	-48.03	-9.66	-57.69	-13	-44.69
2	124.63	27.13	-63.47	-1.21	-64.68	-13	-51.68
3	250.15	32.52	-62.44	3.90	-58.54	-13	-45.54
4	368.62	37.40	-60.46	3.50	-56.96	-13	-43.96
5	921.474	37.30	-63.19	0.26	-62.92	-13	-49.92
6	960.874	37.88	-67.53	0.53	-67.00	-13	-54.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	164.65	31.34	-58.16	-0.03	-58.19	-13	-45.19
2	300.15	31.11	-64.68	3.71	-60.97	-13	-47.97
3	315.57	30.50	-67.38	3.78	-63.60	-13	-50.60
4	698.36	32.66	-63.68	1.64	-62.03	-13	-49.03
5	797.4	32.52	-66.41	1.58	-64.83	-13	-51.83
6	920.74	40.45	-60.56	0.50	-60.05	-13	-47.05

### Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



Mode	TX channel 9788+9813	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	53.082	29.40	-48.57	-9.58	-58.16	-13	-45.16
2	124.91	25.78	-64.88	-1.21	-66.10	-13	-53.10
3	249.5	31.78	-63.20	3.89	-59.31	-13	-46.31
4	368.65	36.81	-61.05	3.50	-57.55	-13	-44.55
5	920.884	36.51	-63.93	0.27	-63.66	-13	-50.66
6	960.064	37.43	-67.89	0.53	-67.37	-13	-54.37
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	164.04	30.56	-58.77	-0.11	-58.89	-13	-45.89
2	299.37	29.85	-65.91	3.71	-62.19	-13	-49.19
3	315.32	29.39	-68.49	3.78	-64.71	-13	-51.71
4	697.8	32.65	-63.69	1.65	-62.03	-13	-49.03
5	797.54	32.19	-66.73	1.58	-65.15	-13	-52.15
6	920.88	39.08	-61.94	0.50	-61.44	-13	-48.44

Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9913+9938	Frequency Range	Below 1000 MHz
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## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	52.962	29.06	-48.84	-9.62	-58.46	-13	-45.46
2	124.4	26.59	-63.96	-1.21	-65.17	-13	-52.17
3	249.93	32.22	-62.75	3.89	-58.85	-13	-45.85
4	367.97	36.13	-61.73	3.50	-58.23	-13	-45.23
5	922.194	36.56	-63.98	0.25	-63.73	-13	-50.73
6	960.594	37.46	-67.92	0.53	-67.39	-13	-54.39

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	164.76	30.57	-58.96	-0.01	-58.97	-13	-45.97
2	299.4	30.94	-64.82	3.71	-61.10	-13	-48.10
3	315.97	29.29	-68.59	3.77	-64.82	-13	-51.82
4	699.09	32.11	-64.23	1.63	-62.59	-13	-49.59
5	797.2	32.38	-66.57	1.58	-64.99	-13	-51.99
6	921.3	39.17	-61.90	0.50	-61.40	-13	-48.40

## Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

# Above 1GHz

Mode	TX channel 9662+9687	Frequency Range	Above 1000MHz
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Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3869.8	41.14	-64.02	7.58	-56.44	-13	-43.44
2	5804.7	51.34	-53.13	6.91	-46.22	-13	-33.22
3	7739.6	52.36	-50.26	4.07	-46.19	-13	-33.19
4	9674.5	53.05	-48.55	4.14	-44.41	-13	-31.41
5	11609.4	46.07	-55.38	3.92	-51.45	-13	-38.45
6	13544.3	50.36	-49.71	3.15	-46.56	-13	-33.56
7	15479.2	50.53	-46.82	3.70	-43.12	-13	-30.12
8	17414.1	58.14	-39.21	3.70	-35.51	-13	-22.51
9	19349	60.36	-38.78	3.77	-35.01	-13	-22.01
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3869.8	40.01	-65.15	7.58	-57.57	-13	-44.57
2	5804.7	46.56	-57.91	6.91	-51.00	-13	-38.00
3	7739.6	51.01	-51.61	4.07	-47.54	-13	-34.54
4	9674.5	51.72	-49.88	4.14	-45.74	-13	-32.74
5	11609.4	46.2	-55.25	3.92	-51.32	-13	-38.32
6	13544.3	48.91	-51.16	3.15	-48.01	-13	-35.01
7	15479.2	50.37	-46.98	3.70	-43.28	-13	-30.28
8	17414.1	55.97	-41.38	3.70	-37.68	-13	-24.68
9	19349	60.43	-38.71	3.77	-34.94	-13	-21.94

## Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9788+9813	Frequency Range	Above 1000MHz
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## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3920.2	40.53	-64.58	7.56	-57.02	-13	-44.02
2	5880.3	51.94	-52.20	6.97	-45.23	-13	-32.23
3	7840.4	52.57	-50.05	4.09	-45.96	-13	-32.96
4	9800.5	52.75	-48.59	4.22	-44.36	-13	-31.36
5	11760.6	45.23	-56.21	4.11	-52.11	-13	-39.11
6	13720.7	50.44	-49.40	2.77	-46.63	-13	-33.63
7	15680.8	49.75	-47.60	3.70	-43.90	-13	-30.90
8	17640.9	58.14	-39.21	3.70	-35.51	-13	-22.51
9	19601	60.79	-39.64	3.82	-35.82	-13	-22.82

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3920.2	39.02	-66.09	7.56	-58.53	-13	-45.53
2	5880.3	46.57	-57.57	6.97	-50.60	-13	-37.60
3	7840.4	50.76	-51.86	4.09	-47.77	-13	-34.77
4	9800.5	50.87	-50.47	4.22	-46.24	-13	-33.24
5	11760.6	45.66	-55.78	4.11	-51.68	-13	-38.68
6	13720.7	48.29	-51.55	2.77	-48.78	-13	-35.78
7	15680.8	50.81	-46.54	3.70	-42.84	-13	-29.84
8	17640.9	56.23	-41.12	3.70	-37.42	-13	-24.42
9	19601	61.13	-39.30	3.82	-35.48	-13	-22.48

## Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9913+9938	Frequency Range	Above 1000MHz
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## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3970.2	41.50	-63.56	7.54	-56.03	-13	-43.03
2	5955.3	52.14	-52.00	6.85	-45.15	-13	-32.15
3	7940.4	52.95	-49.67	4.11	-45.56	-13	-32.56
4	9925.5	53.49	-47.99	4.11	-43.88	-13	-30.88
5	11910.6	46.00	-55.41	4.41	-51.00	-13	-38.00
6	13895.7	50.95	-48.80	1.99	-46.81	-13	-33.81
7	15880.8	50.35	-47.00	3.70	-43.30	-13	-30.30
8	17865.9	58.13	-39.22	3.70	-35.52	-13	-22.52
9	19851	60.30	-41.41	3.87	-37.54	-13	-24.54

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3970.2	39.3	-65.76	7.54	-58.23	-13	-45.23
2	5955.3	46.71	-57.43	6.85	-50.58	-13	-37.58
3	7940.4	51.73	-50.89	4.11	-46.78	-13	-33.78
4	9925.5	51.97	-49.51	4.11	-45.40	-13	-32.40
5	11910.6	46.07	-55.34	4.41	-50.93	-13	-37.93
6	13895.7	47.94	-51.81	1.99	-49.82	-13	-36.82
7	15880.8	49.63	-47.72	3.70	-44.02	-13	-31.02
8	17865.9	55.07	-42.28	3.70	-38.58	-13	-25.58
9	19851	61.14	-40.57	3.87	-36.70	-13	-23.70

## Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

#### 4.7.6 Test Results (With POE)

##### WCDMA SC MODE

##### Below 1GHz

Mode	TX channel 9662	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	66.36	30.40	-55.60	-5.70	-61.30	-13	-48.30
2	231.89	35.12	-60.26	3.92	-56.34	-13	-43.34
3	299.21	37.50	-58.26	3.72	-54.55	-13	-41.55
4	697.78	35.70	-60.58	1.62	-58.96	-13	-45.96
5	921.49	44.37	-54.12	0.43	-53.69	-13	-40.69
6	959.88	38.38	-59.45	0.39	-59.06	-13	-46.06
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	31.78	31.03	-40.91	-14.44	-55.35	-13	-42.35
2	68.69	31.04	-56.36	-5.03	-61.38	-13	-48.38
3	165.88	35.11	-54.77	0.17	-54.60	-13	-41.60
4	696.91	35.59	-60.67	1.63	-59.04	-13	-46.04
5	921.51	41.60	-56.89	0.43	-56.46	-13	-43.46
6	959.88	38.22	-59.61	0.39	-59.22	-13	-46.22

##### Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9800	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	66.39	30.29	-55.73	-5.69	-61.42	-13	-48.42
2	232.29	35.29	-60.09	3.92	-56.18	-13	-43.18
3	298.89	37.49	-56.48	4.10	-52.38	-13	-39.38
4	697.69	35.39	-60.87	1.63	-59.24	-13	-46.24
5	921.29	44.19	-53.64	0.39	-53.25	-13	-40.25
6	959.49	38.09	-59.74	0.39	-59.35	-13	-46.35
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	32.09	31.39	-41.50	-13.80	-55.30	-13	-42.30
2	68.19	30.69	-47.03	-9.71	-56.74	-13	-43.74
3	166.39	35.49	-54.53	0.24	-54.29	-13	-41.29
4	697.19	35.99	-60.28	1.62	-58.65	-13	-45.65
5	921.79	41.99	-56.50	0.43	-56.07	-13	-43.07
6	959.79	37.99	-60.50	0.43	-60.07	-13	-47.07

Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9938	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	66.19	30.29	-55.61	-5.75	-61.36	-13	-48.36
2	231.89	35.29	-60.09	3.92	-56.17	-13	-43.17
3	298.49	36.99	-57.10	4.08	-53.02	-13	-40.02
4	698.09	35.79	-60.47	1.63	-58.84	-13	-45.84
5	921.09	44.09	-53.74	0.39	-53.35	-13	-40.35
6	959.89	38.29	-59.54	0.39	-59.15	-13	-46.15
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	31.79	30.99	-41.82	-13.86	-55.67	-13	-42.67
2	68.69	31.29	-51.34	-7.33	-58.67	-13	-45.67
3	165.29	34.69	-55.02	0.08	-54.94	-13	-41.94
4	696.59	35.29	-60.97	1.63	-59.34	-13	-46.34
5	921.49	41.79	-56.70	0.43	-56.27	-13	-43.27
6	960.09	38.59	-59.24	0.39	-58.85	-13	-45.85

Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



# Above 1GHz

Mode	TX channel 9662	Frequency Range	Above 1000MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3864.8	46.33	-58.21	7.61	-50.59	-13	-37.59
2	5797.2	55.77	-48.71	6.91	-41.80	-13	-28.80
3	7729.6	54.86	-47.76	4.35	-43.41	-13	-30.41
4	9662	46.54	-55.06	4.14	-50.92	-13	-37.92
5	11594.4	47.33	-54.12	3.90	-50.21	-13	-37.21
6	13526.8	49.36	-50.73	3.19	-47.54	-13	-34.54
7	15459.2	50.19	-47.16	3.70	-43.46	-13	-30.46
8	17391.6	56.66	-40.69	3.70	-36.99	-13	-23.99
9	19324	60.98	-38.03	3.77	-34.26	-13	-21.26
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3864.8	51.87	-52.67	7.61	-45.05	-13	-32.05
2	5797.2	51.93	-52.55	6.91	-45.64	-13	-32.64
3	7729.6	47.54	-55.08	4.35	-50.73	-13	-37.73
4	9662	46.19	-55.41	4.14	-51.27	-13	-38.27
5	11594.4	47.45	-54.00	3.90	-50.09	-13	-37.09
6	13526.8	49.72	-50.37	3.19	-47.18	-13	-34.18
7	15459.2	50.77	-46.58	3.70	-42.88	-13	-29.88
8	17391.6	56.83	-40.52	3.70	-36.82	-13	-23.82
9	19324	61.26	-37.75	3.77	-33.98	-13	-20.98

## Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9800	Frequency Range	Above 1000MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3920	46.77	-57.97	7.57	-50.39	-13	-37.39
2	5880	55.46	-48.88	6.85	-42.03	-13	-29.03
3	7840	54.38	-48.24	4.25	-43.99	-13	-30.99
4	9800	46.29	-55.29	4.10	-51.20	-13	-38.20
5	11760	47.37	-54.07	4.11	-49.97	-13	-36.97
6	13720	49.48	-50.36	2.77	-47.59	-13	-34.59
7	15680	49.97	-47.38	3.70	-43.68	-13	-30.68
8	17640	56.36	-40.99	3.70	-37.29	-13	-24.29
9	19600	61.35	-39.07	3.82	-35.25	-13	-22.25
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3920	52.29	-52.45	7.57	-44.87	-13	-31.87
2	5880	52.13	-52.21	6.85	-45.36	-13	-32.36
3	7840	47.86	-54.76	4.25	-50.51	-13	-37.51
4	9800	45.87	-55.71	4.10	-51.62	-13	-38.62
5	11760	47.62	-53.82	4.11	-49.72	-13	-36.72
6	13720	49.91	-49.93	2.77	-47.16	-13	-34.16
7	15680	50.36	-46.99	3.70	-43.29	-13	-30.29
8	17640	56.64	-40.71	3.70	-37.01	-13	-24.01
9	19600	61.23	-39.19	3.82	-35.37	-13	-22.37

Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9938	Frequency Range	Above 1000MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3975.2	46.64	-58.30	7.54	-50.76	-13	-37.76
2	5962.8	55.32	-48.88	6.80	-42.09	-13	-29.09
3	7950.4	54.26	-48.36	4.16	-44.20	-13	-31.20
4	9938	46.18	-55.39	4.06	-51.33	-13	-38.33
5	11925.6	47.24	-54.20	4.31	-49.90	-13	-36.90
6	13913.2	49.36	-50.22	2.35	-47.88	-13	-34.88
7	15900.8	49.84	-47.51	3.70	-43.81	-13	-30.81
8	17888.4	56.22	-41.13	3.70	-37.43	-13	-24.43
9	19876	61.20	-40.64	3.87	-36.76	-13	-23.76
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3975.2	52.16	-52.78	7.54	-45.24	-13	-32.24
2	5962.8	51.99	-52.21	6.80	-45.42	-13	-32.42
3	7950.4	47.74	-54.88	4.16	-50.72	-13	-37.72
4	9938	45.76	-55.81	4.06	-51.75	-13	-38.75
5	11925.6	47.49	-53.95	4.31	-49.65	-13	-36.65
6	13913.2	49.79	-49.79	2.35	-47.45	-13	-34.45
7	15900.8	50.23	-47.12	3.70	-43.42	-13	-30.42
8	17888.4	56.5	-40.85	3.70	-37.15	-13	-24.15
9	19876	61.08	-40.76	3.87	-36.88	-13	-23.88

Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

# WCDMA MC MODE

## Below 1GHz

Mode	TX channel 9662+9687	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	52.422	29.03	-48.55	-9.78	-58.32	-13	-45.32
2	123.69	26.46	-63.94	-1.21	-65.14	-13	-52.14
3	251.01	31.23	-63.70	3.90	-59.79	-13	-46.79
4	369.26	36.09	-61.77	3.49	-58.27	-13	-45.27
5	923.354	36.34	-64.30	0.24	-64.06	-13	-51.06
6	960.204	37.43	-67.91	0.53	-67.38	-13	-54.38
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	33.27	30.92	-41.52	-14.10	-55.63	-13	-42.63
2	69.86	30.21	-57.82	-4.72	-62.54	-13	-49.54
3	167.07	29.76	-60.42	0.32	-60.10	-13	-47.10
4	695.65	31.81	-64.52	1.69	-62.84	-13	-49.84
5	920.83	32.38	-68.05	0.27	-67.78	-13	-54.78
6	962.11	39.28	-66.27	0.53	-65.74	-13	-52.74

### Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9788+9813	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	51.652	29.25	-47.87	-10.00	-57.87	-13	-44.87
2	123.82	26.17	-64.26	-1.21	-65.46	-13	-52.46
3	250.34	32.28	-62.67	3.90	-58.77	-13	-45.77
4	368.47	36.93	-60.93	3.50	-57.43	-13	-44.43
5	923.114	36.13	-64.49	0.24	-64.25	-13	-51.25
6	961.124	36.41	-69.03	0.53	-68.50	-13	-55.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	34.98	29.86	-43.20	-13.68	-56.89	-13	-43.89
2	68.62	30.32	-56.97	-5.08	-62.05	-13	-49.05
3	166.61	29.28	-60.77	0.26	-60.52	-13	-47.52
4	695.78	32.39	-63.94	1.69	-62.26	-13	-49.26
5	921.35	31.30	-69.18	0.26	-68.91	-13	-55.91
6	962.13	40.45	-65.10	0.53	-64.57	-13	-51.57

Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9913+9938	Frequency Range	Below 1000 MHz
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#### Antenna Polarity & Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	51.432	29.18	-47.80	-10.06	-57.87	-13	-44.87
2	124.26	26.24	-64.28	-1.21	-65.49	-13	-52.49
3	250.35	32.40	-62.55	3.90	-58.65	-13	-45.65
4	368.67	36.37	-61.49	3.50	-57.99	-13	-44.99
5	923.154	36.69	-63.93	0.24	-63.69	-13	-50.69
6	961.794	36.87	-68.64	0.53	-68.11	-13	-55.11

#### Antenna Polarity & Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	33.99	30.43	-42.28	-13.93	-56.20	-13	-43.20
2	69.28	30.11	-57.57	-4.89	-62.46	-13	-49.46
3	166.69	29.99	-60.08	0.27	-59.82	-13	-46.82
4	696.16	31.78	-64.56	1.68	-62.88	-13	-49.88
5	921.04	31.73	-68.72	0.27	-68.45	-13	-55.45
6	961.48	40.01	-65.47	0.53	-64.94	-13	-51.94

#### Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

# Above 1GHz

Mode	TX channel 9662+9687	Frequency Range	Above 1000MHz
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Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3869.8	40.26	-64.90	7.58	-57.32	-13	-44.32
2	5804.7	51.33	-53.14	6.91	-46.23	-13	-33.23
3	7739.6	51.85	-50.77	4.07	-46.70	-13	-33.70
4	9674.5	52.90	-48.70	4.14	-44.56	-13	-31.56
5	11609.4	46.48	-54.97	3.92	-51.04	-13	-38.04
6	13544.3	50.63	-49.44	3.15	-46.29	-13	-33.29
7	15479.2	51.33	-46.02	3.70	-42.32	-13	-29.32
8	17414.1	58.97	-38.38	3.70	-34.68	-13	-21.68
9	19349	59.67	-39.47	3.77	-35.70	-13	-22.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3869.8	37.89	-67.27	7.58	-59.69	-13	-46.69
2	5804.7	48.05	-56.42	6.91	-49.51	-13	-36.51
3	7739.6	52.78	-49.84	4.07	-45.77	-13	-32.77
4	9674.5	50.14	-51.46	4.14	-47.32	-13	-34.32
5	11609.4	45.85	-55.60	3.92	-51.67	-13	-38.67
6	13544.3	49.17	-50.90	3.15	-47.75	-13	-34.75
7	15479.2	48.9	-48.45	3.70	-44.75	-13	-31.75
8	17414.1	53.52	-43.83	3.70	-40.13	-13	-27.13
9	19349	60.64	-38.50	3.77	-34.73	-13	-21.73

## Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9788+9813	Frequency Range	Above 1000MHz
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## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3920.2	39.52	-65.59	7.56	-58.03	-13	-45.03
2	5880.3	51.70	-52.44	6.97	-45.47	-13	-32.47
3	7840.4	52.65	-49.97	4.09	-45.88	-13	-32.88
4	9800.5	52.29	-49.05	4.22	-44.82	-13	-31.82
5	11760.6	46.93	-54.51	4.11	-50.41	-13	-37.41
6	13720.7	51.5	-48.34	2.77	-45.57	-13	-32.57
7	15680.8	50.91	-46.44	3.70	-42.74	-13	-29.74
8	17640.9	59.33	-38.02	3.70	-34.32	-13	-21.32
9	19601	60.38	-40.05	3.82	-36.23	-13	-23.23

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3920.2	39.12	-65.99	7.56	-58.43	-13	-45.43
2	5880.3	48.29	-55.85	6.97	-48.88	-13	-35.88
3	7840.4	53.38	-49.24	4.09	-45.15	-13	-32.15
4	9800.5	51.71	-49.63	4.22	-45.40	-13	-32.40
5	11760.6	45.68	-55.76	4.11	-51.66	-13	-38.66
6	13720.7	49.66	-50.18	2.77	-47.41	-13	-34.41
7	15680.8	49.49	-47.86	3.70	-44.16	-13	-31.16
8	17640.9	53.3	-44.05	3.70	-40.35	-13	-27.35
9	19601	62.01	-38.42	3.82	-34.60	-13	-21.60

## Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



Mode	TX channel 9913+9938	Frequency Range	Above 1000MHz
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## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3970.2	40.98	-64.08	7.54	-56.55	-13	-43.55
2	5955.3	50.36	-53.78	6.85	-46.93	-13	-33.93
3	7940.4	52.55	-50.07	4.11	-45.96	-13	-32.96
4	9925.5	52.01	-49.47	4.11	-45.36	-13	-32.36
5	11910.6	46.26	-55.15	4.41	-50.74	-13	-37.74
6	13895.7	51.49	-48.26	1.99	-46.27	-13	-33.27
7	15880.8	51.40	-45.95	3.70	-42.25	-13	-29.25
8	17865.9	58.56	-38.79	3.70	-35.09	-13	-22.09
9	19851	59.10	-42.61	3.87	-38.74	-13	-25.74

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3970.2	38.45	-66.61	7.54	-59.08	-13	-46.08
2	5955.3	47.62	-56.52	6.85	-49.67	-13	-36.67
3	7940.4	52.55	-50.07	4.11	-45.96	-13	-32.96
4	9925.5	51.08	-50.40	4.11	-46.29	-13	-33.29
5	11910.6	46.17	-55.24	4.41	-50.83	-13	-37.83
6	13895.7	48.92	-50.83	1.99	-48.84	-13	-35.84
7	15880.8	49.52	-47.83	3.70	-44.13	-13	-31.13
8	17865.9	54.25	-43.10	3.70	-39.40	-13	-26.40
9	19851	61.29	-40.42	3.87	-36.55	-13	-23.55

## Remarks:

1. EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

## 5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

## Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

**Linko EMC/RF Lab**

Tel: 886-2-26052180

Fax: 886-2-26051924

**Hsin Chu EMC/RF/Telecom Lab**

Tel: 886-3-6668565

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**Hwa Ya EMC/RF/Safety Lab**

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**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

The address and road map of all our labs can be found in our web site also.

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