TEST REPORT

No. 2010TAR256

for

ZTE CORPORATION

WCDMA/GSM（GPRS）Dual-Mode Digital Mobile

Model Name: ZTE-U X850

FCC ID : Q78-ZTE-UX850

with

Hardware Version: p3zB

Software Version: CR_P726NV1.0.0B01

Issued Date: 2010-06-30

Note:

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of TMC Beijing.

Test Laboratory:

DAR accreditation (DIN EN ISO/IEC 17025): No. DGA-PL-114/01-02

FCC 2.948 Listed: No.733176

IC O.A.T.S listed: No.6629A-1

TMC Beijing, Telecommunication Metrology Center of Ministry of Industry and Information Technology

Shouxiang Science Building, No 51, Xueyuan Road, Haidian District, Beijing, P.R.China 100191

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1. Test Laboratory

1.1. Testing Location

Company Name:	TMC Beijing, Telecommunication Metrology Center of MIIT
Address:	Shouxiang Science Building, No 51, Xueyuan Road, Haidian District, Beijing, P.R.China
Postal Code:	100191
Telephone:	00861062304633
Fax:	00861062304793

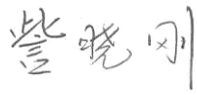
1.2. Testing Environment

Normal Temperature:	15-35℃
Relative Humidity:	20-75%

1.3. Project data

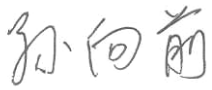
Testing Start Date:	2010-06-22
Testing End Date:	2010-06-30

1.4. Signature



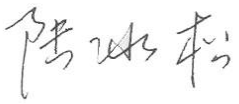
Zi Xiaogang

(Prepared this test report)



Sun Xiangqian

(Reviewed this test report)



Lu Bingsong

Deputy Director of the laboratory

(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name:	ZTE CORPORATION
Address /Post:	ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China
City:	Shenzhen
Postal Code:	518057
Country:	China
Telephone:	0086 21 68895196
Fax:	0086 21 61460600

2.2. Manufacturer Information

Company Name:	ZTE CORPORATION
Address /Post:	ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China
City:	Shenzhen
Postal Code:	518057
Country:	China
Telephone:	0086 21 68895196
Fax:	0086 21 61460600

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	WCDMA/GSM（GPRS）Dual-Mode Digital Mobile
Model Name	ZTE-U X850
FCC ID	Q78-ZTE-UX850
Frequency	GSM 850MHz; PCS 1900MHz; EGSM900; DCS1800; WCDMA Band V
Antenna	Internal
Power supply	Battery or Charger(AC Adaptor)
Output power	18.42dBm maximum ERP measured for WCDMA Band V
Extreme vol. Limits	3.5VDC to 4.2VDC (nominal: 3.7VDC)
Extreme temp. Tolerance	-30°C to +50°C

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Telecommunication Metrology Center of MIIT of People's Republic of China.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
N01	000039485642710	p3zB	CR_P726NV1.0.0B01
N02	000039485642710	p3zB	CR_P726NV1.0.0B01

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN
AE1	Battery	/
AE2	Travel Adapter	/

AE1

Model	Li3710T42P3h553457
Manufacturer	ZTE CORPORATION
Capacitance	1000mAh
Nominal Voltage	3.7V

AE2

Model	STC-A22O50I700M5-C
Manufacturer	RUIDE
Length of DC line	180cm

*AE ID: is used to identify the test sample in the lab internally.

3.4. General Description

The Equipment Under Test (EUT) is WCDMA/GSM（GPRS）Dual-Mode Digital Mobile with integrated antenna. It consists of Hand Telephone Set and normal options: lithium battery, charger. Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the Client.

4. Reference Documents

4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	V 10.1.09
FCC Part 22	PUBLIC MOBILE SERVICES	V 10.1.09
ANSI/TIA-603-C	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards	2004
ANSI C63.4	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2003

5. LABORATORY ENVIRONMENT

Control room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. =30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

Conducted chamber did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 30 ℃
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

Fully-anechoic chamber (6.8 meters×3.08 meters×3.53 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 30 ℃
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80 to 2000 MHz

6. SUMMARY OF TEST RESULTS

Items	List	Clause in FCC rules	Verdict
1	Output Power	22.913(a)/24.232(b)	P
2	Emission Limit	2.1051/22.917/24.238	P
3	Conducted Emission	15.107/207	P
4	Frequency Stability	2.1055/24.235	P
5	Occupied Bandwidth	2.1049(h)(i)	P
6	Emission Bandwidth	22.917(b)/24.238(b)	P
7	Band Edge Compliance	22.917(b)/24.238(b)	P
8	Conducted Spurious Emission	2.1057/22.917/24.238	P

7. Test Equipments Utilized

NO.	NAME	TYPE	SERIES NUMBER	PRODUCER	CAL DUE DATE
1	Test Receiver	ESS	847151/015	R&S	2010-10-30
2	Test Receiver	ESI40	831564/002	R&S	2011-2-10
3	BiLog Antenna	3142B	9908-1403	EMCO	2011-1-15
4	BiLog Antenna	3142B	9908-1405	EMCO	2010-9-19
5	Signal Generator	SMT06	831285/005	R&S	2010-12-25
6	Signal Generator	SMP04	100070	R&S	2011-4-19
7	LISN	ESH2-Z5	829991/012	R&S	2010-8
8	Spectrum Analyzer	FSU26	200030	R&S	2011-6-17
9	Universal Radio Communication Tester	CMU200	100680	R&S	2010-8-23
10	Dual-Ridge Waveguide Horn Antenna	3115	9906-5827	EMCO	2011-3
11	Dual-Ridge Waveguide Horn Antenna	3115	9906-5831	EMCO	2011-3
12	Dual-Ridge Waveguide Horn Antenna	3116	2663	EMCO	2011-3
13	Dual-Ridge Waveguide Horn Antenna	3116	2661	EMCO	2011-3
14	Climatic chamber	PL-2G	343074	ESPEC	2011-5-14

ANNEX A: MEASUREMENT RESULTS

A.1 OUTPUT POWER (§22.913(a)/§24.232(b))

A.1.1 Summary

During the process of testing, the EUT was controlled via Rhode & Schwarz Digital Radio Communication tester (CMU-200) to ensure max power transmission and proper modulation.
This result contains peak output power and EIRP measurements for the EUT.
In all cases, output power is within the specified limits.

A.1.2 Conducted

A.1.2.1 Method of Measurements

The EUT was set up for the max output power with pseudo random data modulation.
The power was measured with Rhode & Schwarz Spectrum Analyzer FSU (peak)
These measurements were done at 3 frequencies, 1852.4 MHz, 1880.0MHz and 1907.6MHz for WCDMA Band II;826.4MHz, 836.6MHz and 846.6MHz for WCDMA Band V. (bottom, middle and top of operational frequency range).

Limit

According to FCC§2.1046.

WCDMA Band V

Measurement result

	CH	Frequency(MHz)	Peak output power(dBm)	Target (dB)
WCDMA (Band V)	4132	826.4	**22.64**	23±1
	4183	836.6	22.47	23±1
	4233	846.6	22.39	23±1

A.1.3 Radiated

A.1.3.1 Description

This is the test for the maximum radiated power from the EUT.

Rule Part 24.232(b) specifies, "Mobile/portable stations are limited to 2 watts e.i.r.p. Peak power" and 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage."

Rule Part 22.913(a) specifies ”Maximum ERP. The effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 500 Watts. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.”

A.1.3.2 Method of Measurement

The measurements procedures in TIA-603C-2004 are used.

1. In an anechoic antenna test chamber, a half-wave dipole antenna for the frequency band of interest is placed at the reference centre of the chamber. An RF Signal source for the frequency band of interest is connected to the dipole with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A known (measured) power (P_{in}) is applied to the input of the dipole, and the power received ($P_{r)}$ at the chamber's probe antenna is recorded.
2. The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established as A_{Rpl}=Pin - Pr. The A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the cable loss and the air loss.
   The measurement results are obtained as described below:
   Power(EIRP)=P_{Mea}+A_{Rpl}
3. The EUT is substituted for the dipole at the reference centre of the chamber and a scan is performed to obtain the radiation pattern.
4. From the radiation pattern, the co-ordinates where the maximum antenna gain occurs are identified.
5. The EUT is then put into continuously transmitting mode at its maximum power level.
6. Power mode measurements are performed with the receiving antenna placed at the coordinates determined in Step 3 to determine the output power as defined in Rule 24.232 (b) and (c). The "reference path loss" from Step1 is added to this result.
7. This value is EIRP since the measurement is calibrated using a half-wave dipole antenna of known gain (2.15 dBi) and known input power (Pin).
8. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi.
9. The test system should be checked before test by a standard comb signal source. The signal source put on the position, instead of the EUT. The test result should be compared with the test result before. If the test result is similar with the initial one, then the test system can work stably.

WCDMA Band V-ERP

Limits

	Burst Peak EIRP (dBm)
WCDMA Band V	38.45dBm (7W)

Measurement result

WCDMA Band V

Frequency(MHz)	Peak ERP(dBm)	A_{Rpl} (dBm)	Correction (dBm)	P_{Mea}(dBm)	Polarization
826.4	17.57	45.95	2.15	-26.23	Horizontal
836.6	18.42	45.98	2.15	-25.41	Horizontal
846.6	18.41	45.82	2.15	-25.26	Horizontal

Frequency**:** 836.6MHz

Peak ERP(dBm)= P_{Mea}(-25.41dBm)+ A_{Rpl} (45.98dBm)-2.15dBm= 18.42 dBm

ANALYZER SETTINGS: RBW = VBW = 3MHz

A.2 EMISSION LIMT (§2.1051/§24.238)

A.2.1 Measurement Method

The measurements procedures in TIA-603C-2004 are used.

The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier that can be as high as 1910 MHz. The resolution bandwidth is set 1MHz as outlined in Part 24.238. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of the WCDMA Band Ⅱ,WCDMA Band Ⅴ.

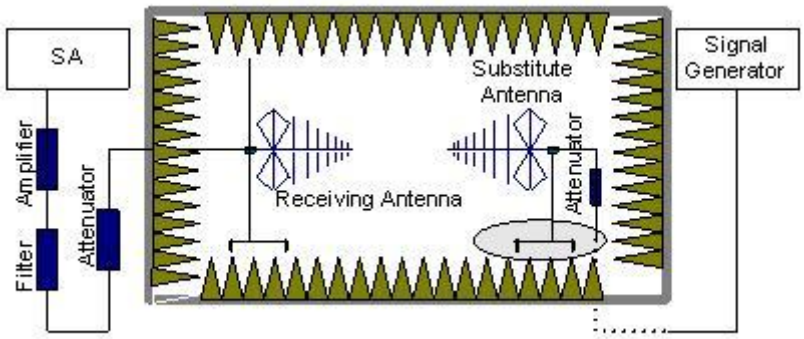
The procedure of radiated spurious emissions is as follows:

a) Pre-calibration

With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as,

RSE=Rx（dBuV）+CL（dB）+SA（dB）+Gain（dBi）-107（dBuV to dBm）

The SA is calibrated using following setup.

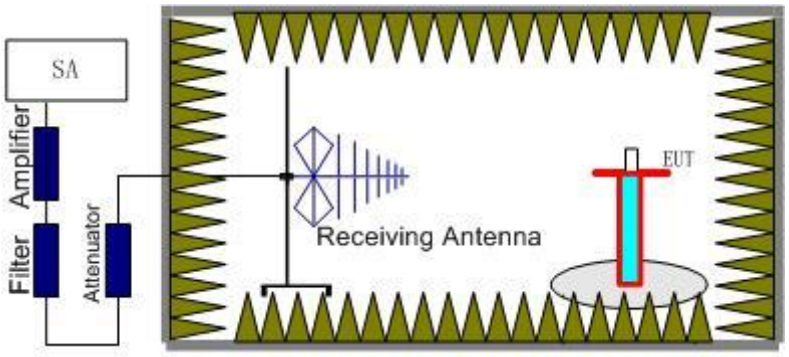


b) System check

The test system should be checked before test by a standard comb signal source. The signal source put on the position, instead of the EUT. The test result should be compared with the test result before. If the test result is similar with the initial one, then the test system can work stably.

c) EUT test

EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the test item for emission measurements. The height of receiving antenna is 1.5m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector and 1MHz bandwidth.



A.2.2 Measurement Limit

Sec. 24.238 Emission Limits.

(a) On any frequency outside a licensee's frequency block (e.g. A, D, B, etc.) within the USPCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least 43+10Log(P) dB. The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

A.2.3 Measurement Results

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of the WCDMA Band Ⅱ (1852.4 MHz, 1880.0MHz and 1907.6MHz) , WCDMA Band Ⅴ (826.4MHz, 836.6MHz and 846.6MHz) . It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of the WCDMA Band Ⅱ , WCDMA Band Ⅴ into any of the other blocks. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this.

The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss.

The measurement results are obtained as described below:

Power=P_{Mea}+A_{Rpl}

WCDMA BAND V Mode Channel 4132/826.4MHz

Frequency(MHz)	Power(dBm)	A_{Rpl} (dBm)	P_{Mea}(dBm)	Limit （dBm）	Polarity
1000.35	-58.52362122	-3.65	-54.87362122	-13	Horizontal
1275.2	-58.32225142	-3.55	-54.77225142	-13	Horizontal
1650.45	-55.85572389	-2.95	-52.90572389	-13	Horizontal
2481.75	-51.99190658	0.65	-52.64190658	-13	Vertical
8042.2	-48.24259348	7.25	-55.49259348	-13	Horizontal
9778.6	-45.66413497	10.05	-55.71413497	-13	Vertical

WCDMA BAND V Mode Channel 4183/836.6MHz

Frequency(MHz)	Power(dBm)	A_{Rpl} (dBm)	P_{Mea}(dBm)	Limit （dBm）	Polarity
1000.05	-59.05753478	-3.65	-55.40753478	-13	Horizontal
1293.2	-57.92184576	-3.65	-54.27184576	-13	Horizontal
1676.25	-55.93036045	-2.85	-53.08036045	-13	Horizontal
8039.8	-47.97828372	7.25	-55.22828372	-13	Horizontal
9943	-45.81950929	10.25	-56.06950929	-13	Vertical

WCDMA BAND V Mode Channel 4233/846.6MHz

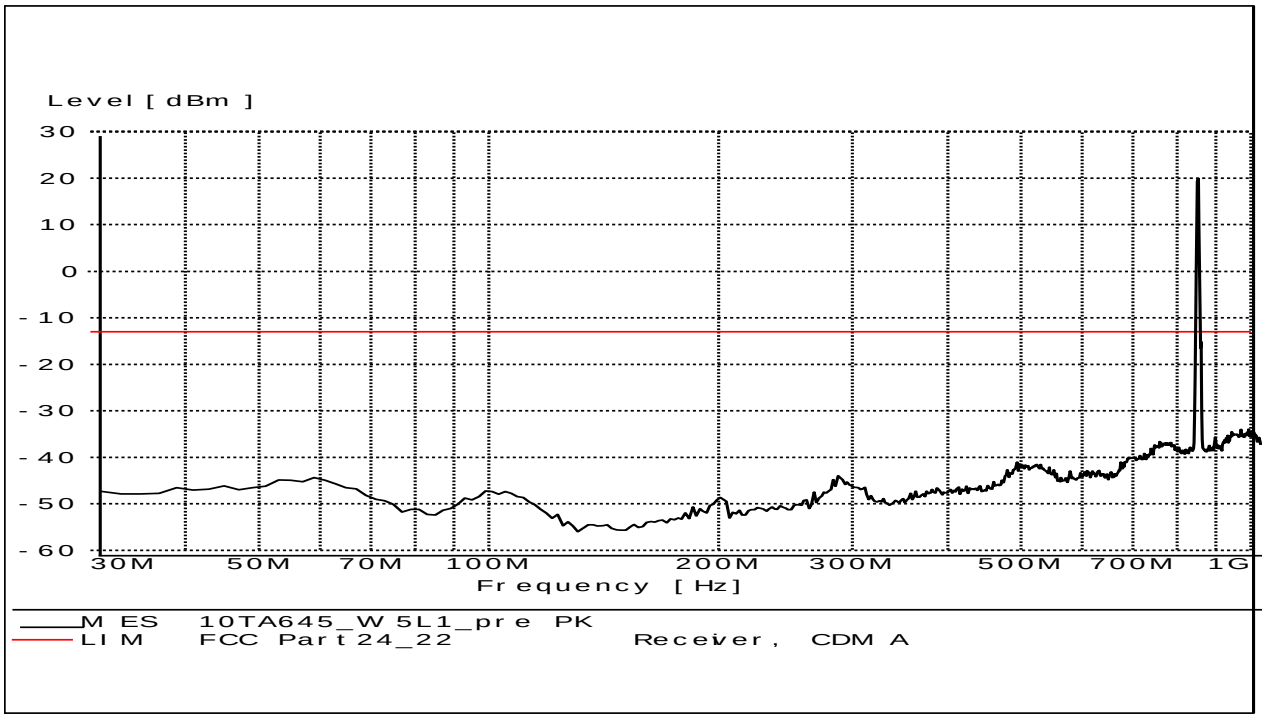
Frequency(MHz)	Power(dBm)	A_{Rpl} (dBm)	P_{Mea}(dBm)	Limit （dBm）	Polarity
1000.15	-59.6152879	-3.65	-55.9652879	-13	Horizontal
1313.65	-58.21876059	-3.45	-54.76876059	-13	Vertical
2537.25	-52.82723558	-0.05	-52.77723558	-13	Horizontal
7864	-47.93773637	7.65	-55.58773637	-13	Horizontal
9918.1	-44.89670877	10.45	-55.34670877	-13	Vertical

WCDMA Band Ⅴ

A.2.3.1 RADIATED SPURIOUS EMISSIONS-Channel 4132: 30MHz – 1GHz

Radiated spurious emission limit :-13dBm.

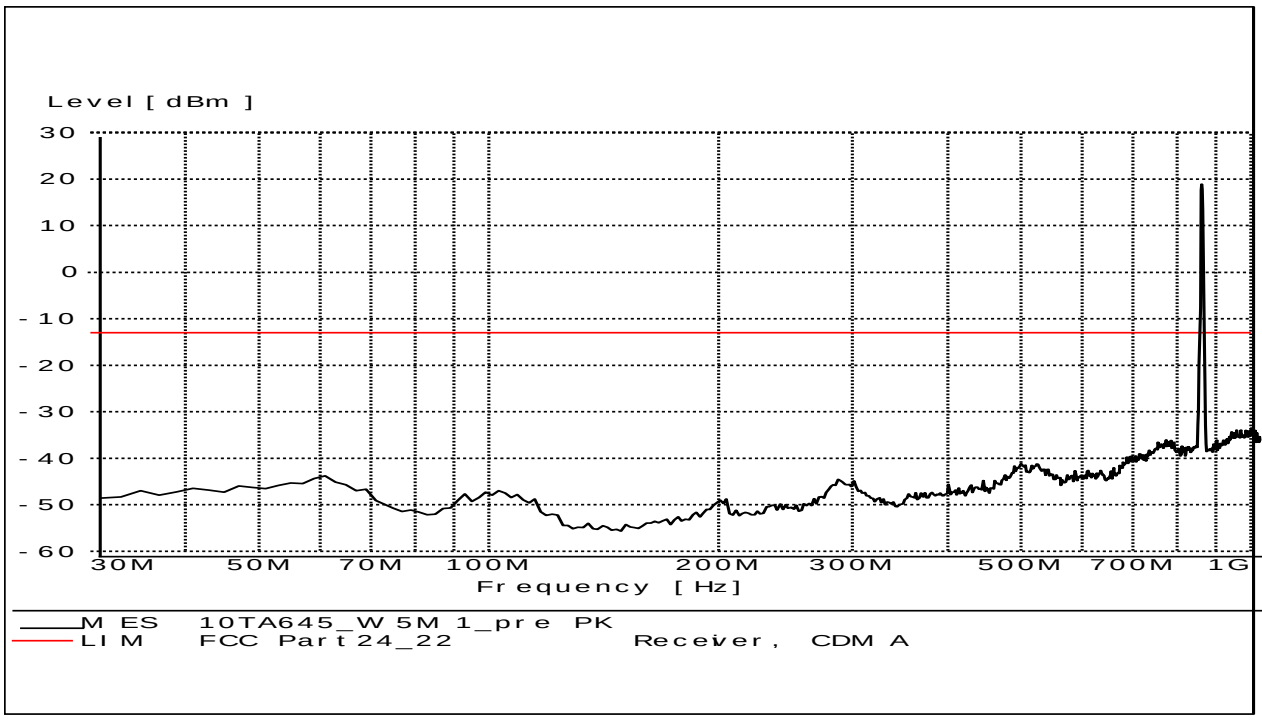
NOTE: peak above the limit line is the Carrier frequency @ ch-4132



A.2.3.2 RADIATED SPURIOUS EMISSIONS-Channel 4183: 30MHz – 1GHz

Radiated spurious emission limit :-13dBm.

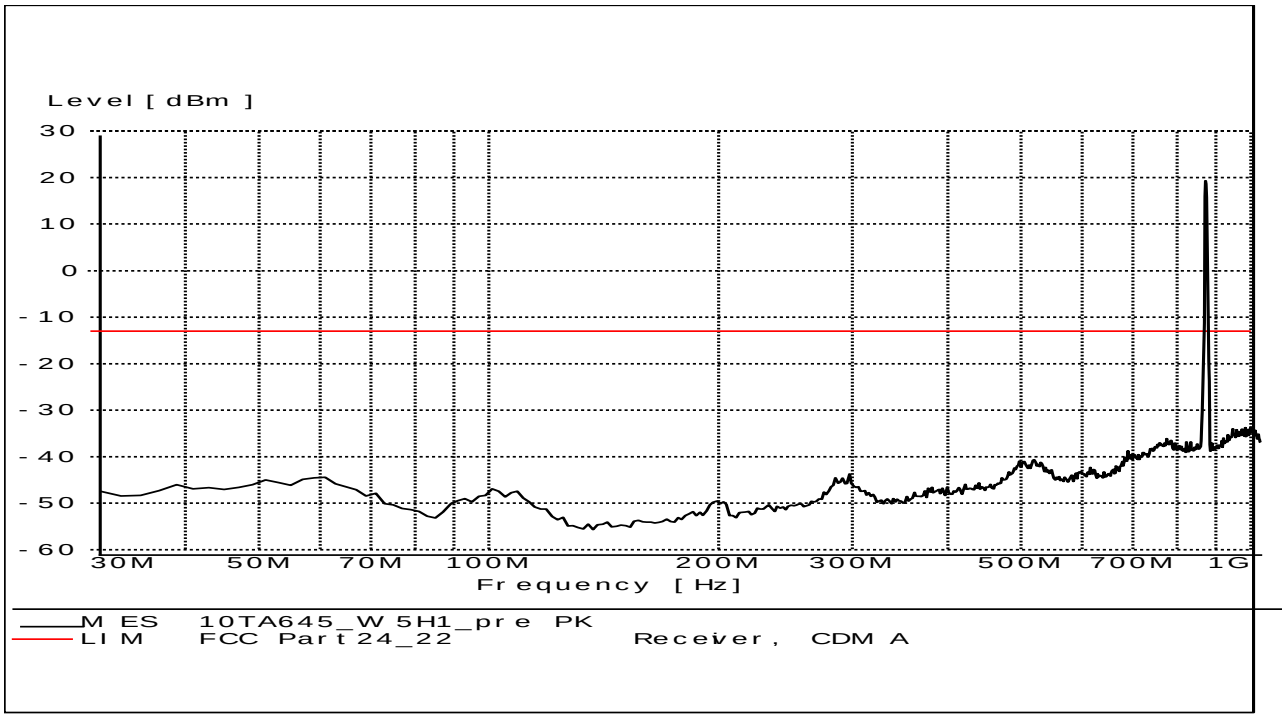
NOTE: peak above the limit line is the Carrier frequency @ ch-4183



A.2.3.3 RADIATED SPURIOUS EMISSIONS-Channel 4233: 30MHz – 1GHz

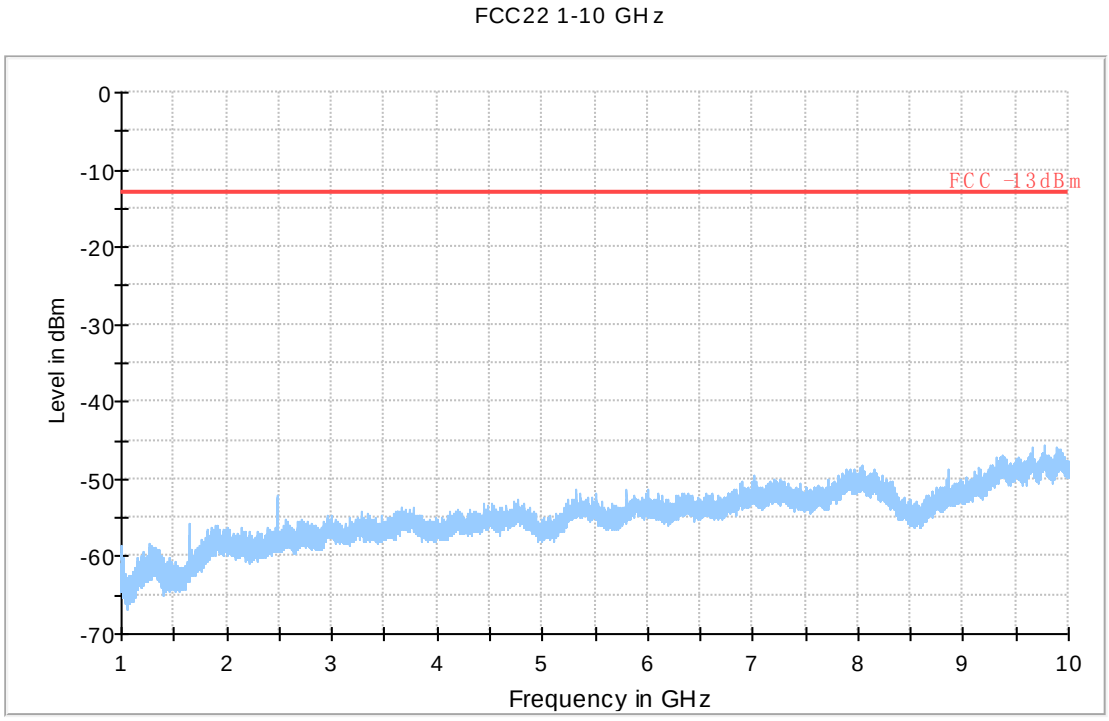
Radiated spurious emission limit :-13dBm.

NOTE: peak above the limit line is the Carrier frequency @ ch-4233



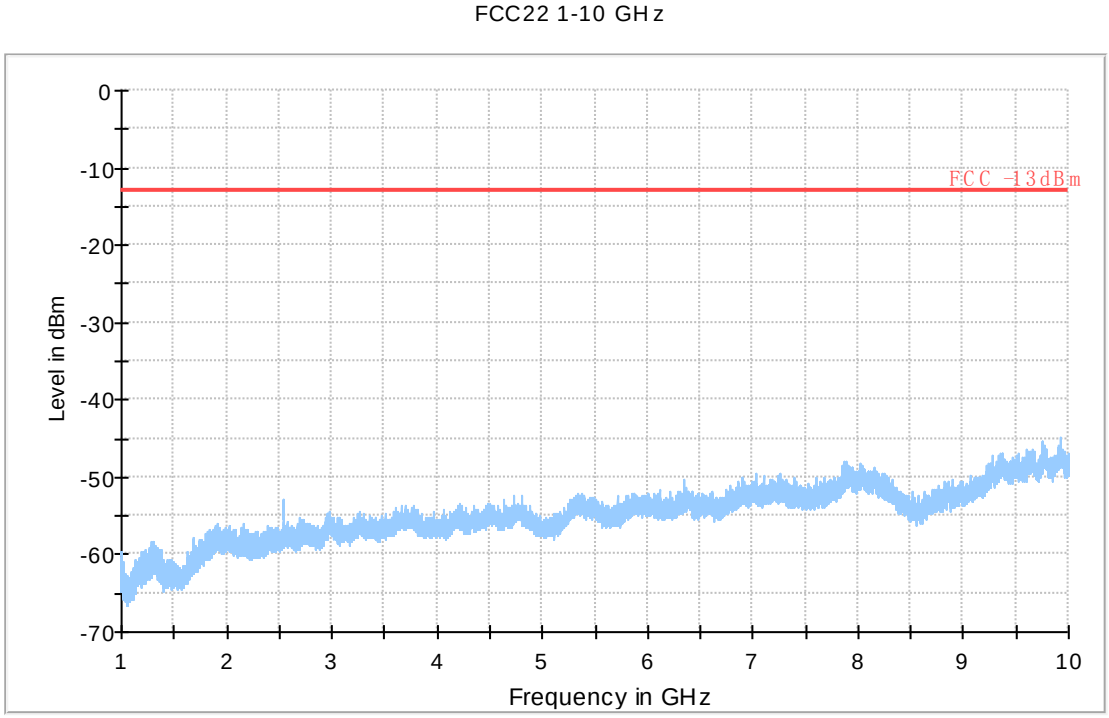
A.2.3.4 RADIATED SPURIOUS EMISSIONS-Channel 4132: 1GHz – 10GHz

Radiated spurious emission limit :-13dBm.



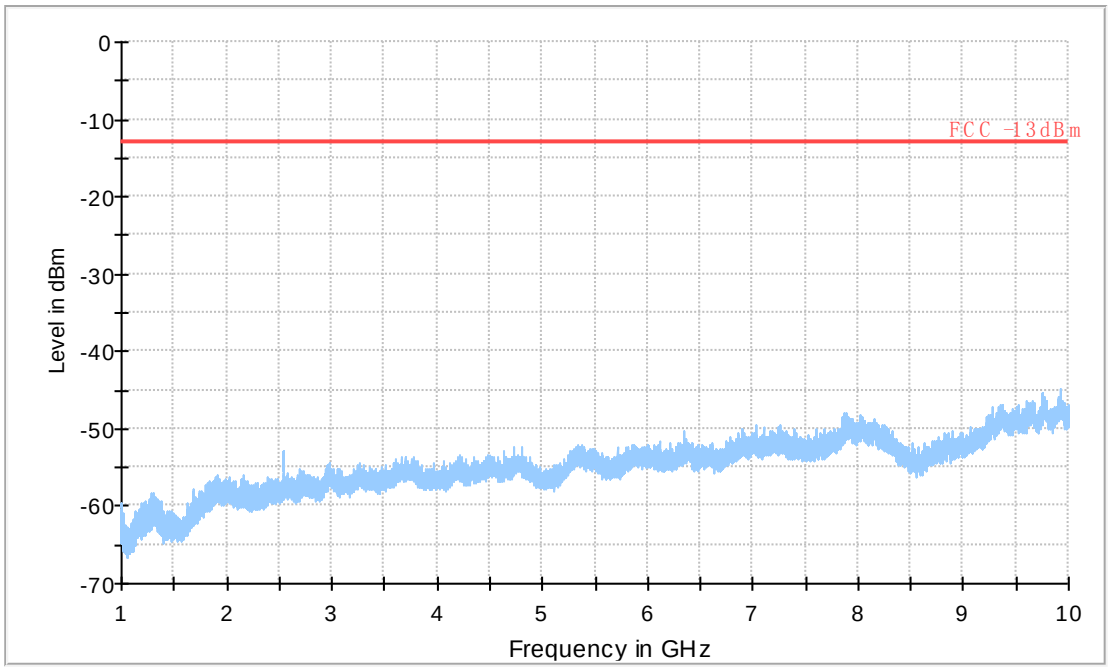
A.2.3.5 RADIATED SPURIOUS EMISSIONS-Channel 4183: 1GHz – 10GHz

Radiated spurious emission limit :-13dBm.



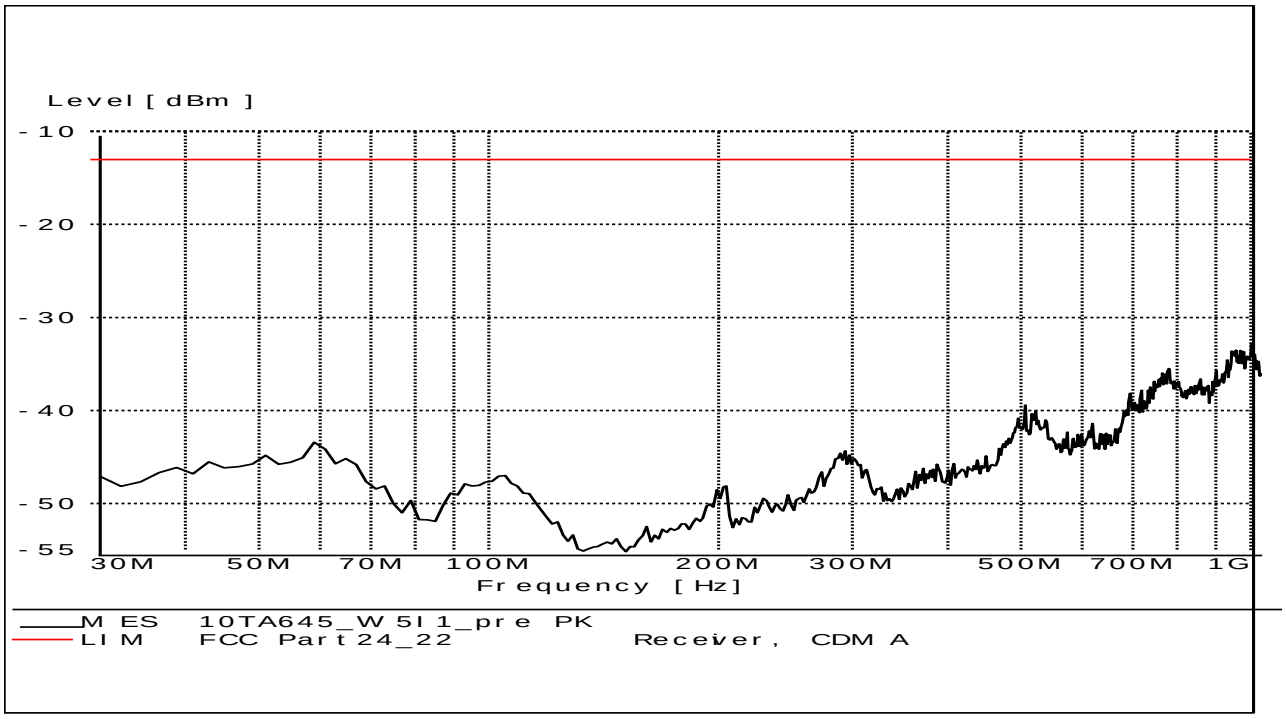
A.2.3.6 RADIATED SPURIOUS EMISSIONS-Channel 4233: 1GHz – 10GHz

Radiated spurious emission limit :-13dBm.



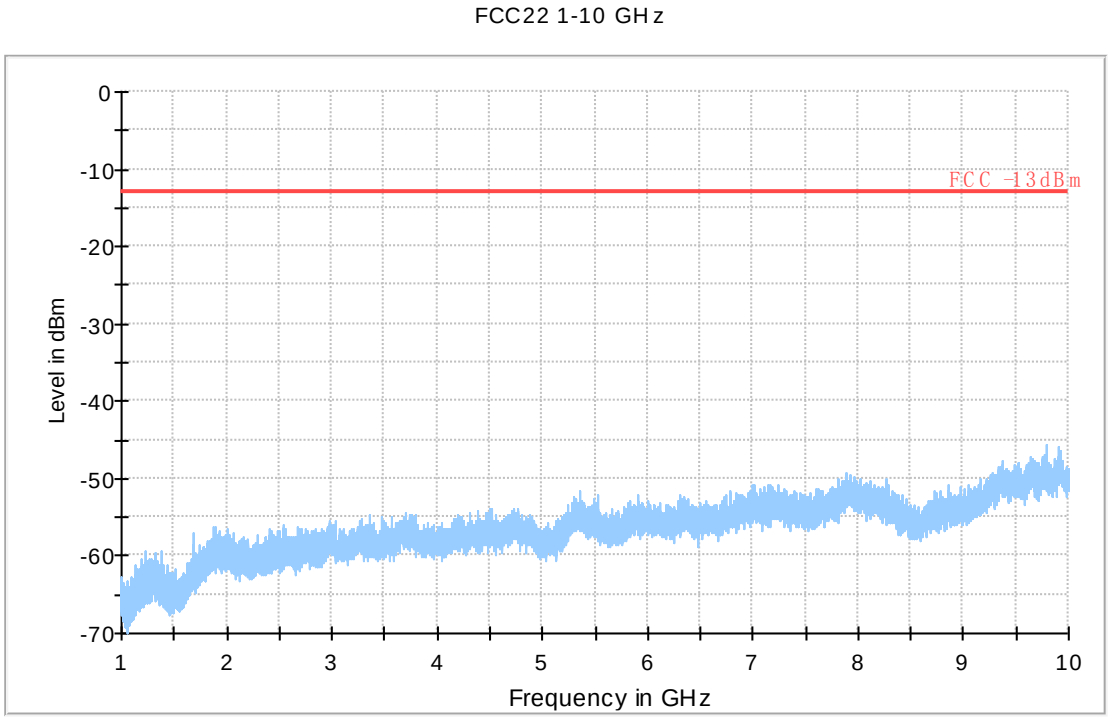
A.2.3.7 RADIATED SPURIOUS EMISSIONS-EUT in Idle Mode: 30MHz – 1GHz

Radiated spurious emission limit :-13dBm.



A.2.3.8 RADIATED SPURIOUS EMISSIONS-EUT in Idle Mode: 1GHz – 10GHz

Radiated spurious emission limit :-13dBm.



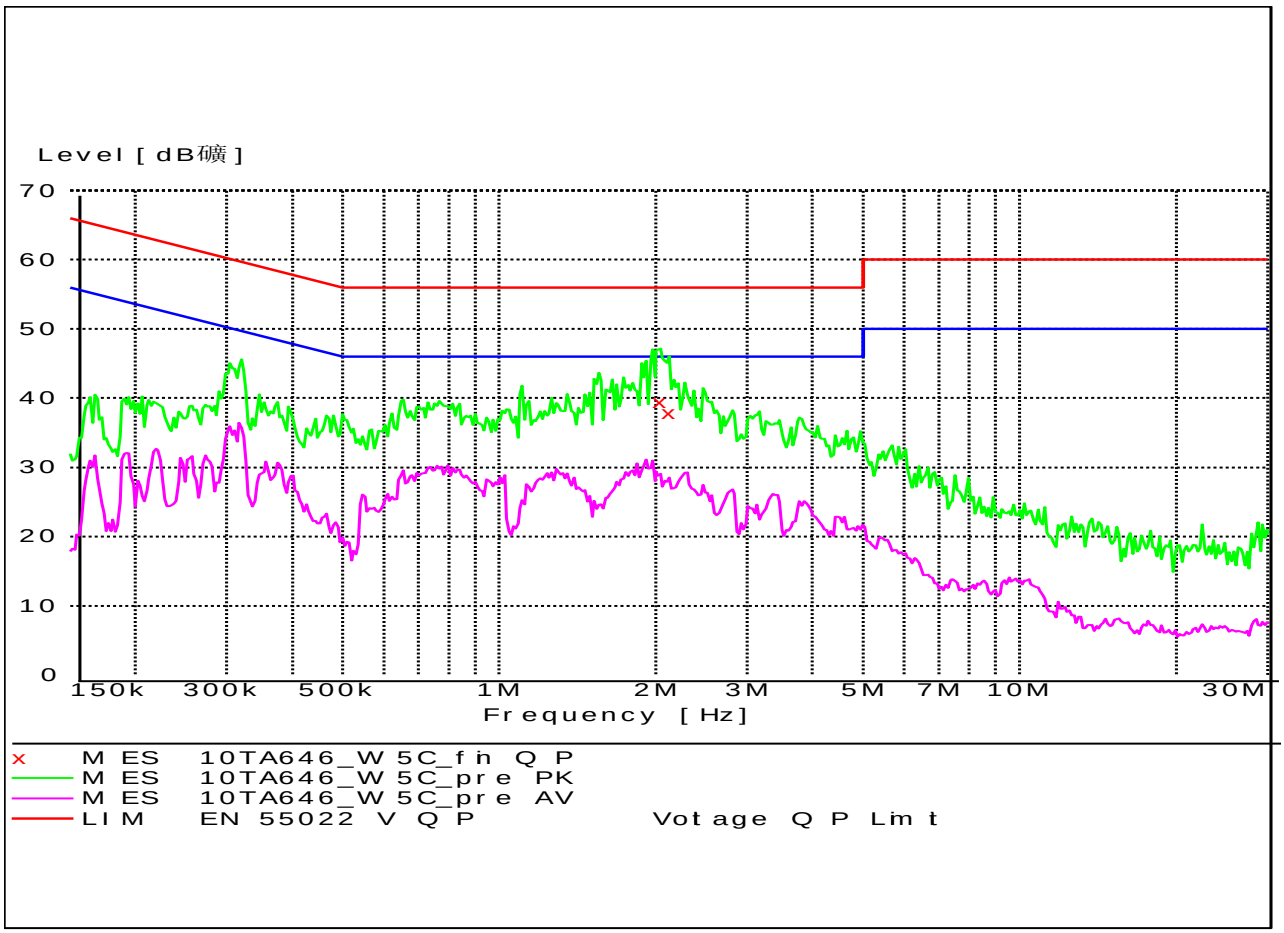
A.3 CONDUCTED EMISSION (§15.107§15.207)

The measurement procedure in ANSI C63.4-1003 is used. Conducted Emission is measured with travel charger.

A.3.1 Limit

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi -Peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30	60	50
* Decreases with logarithm of the frequency		

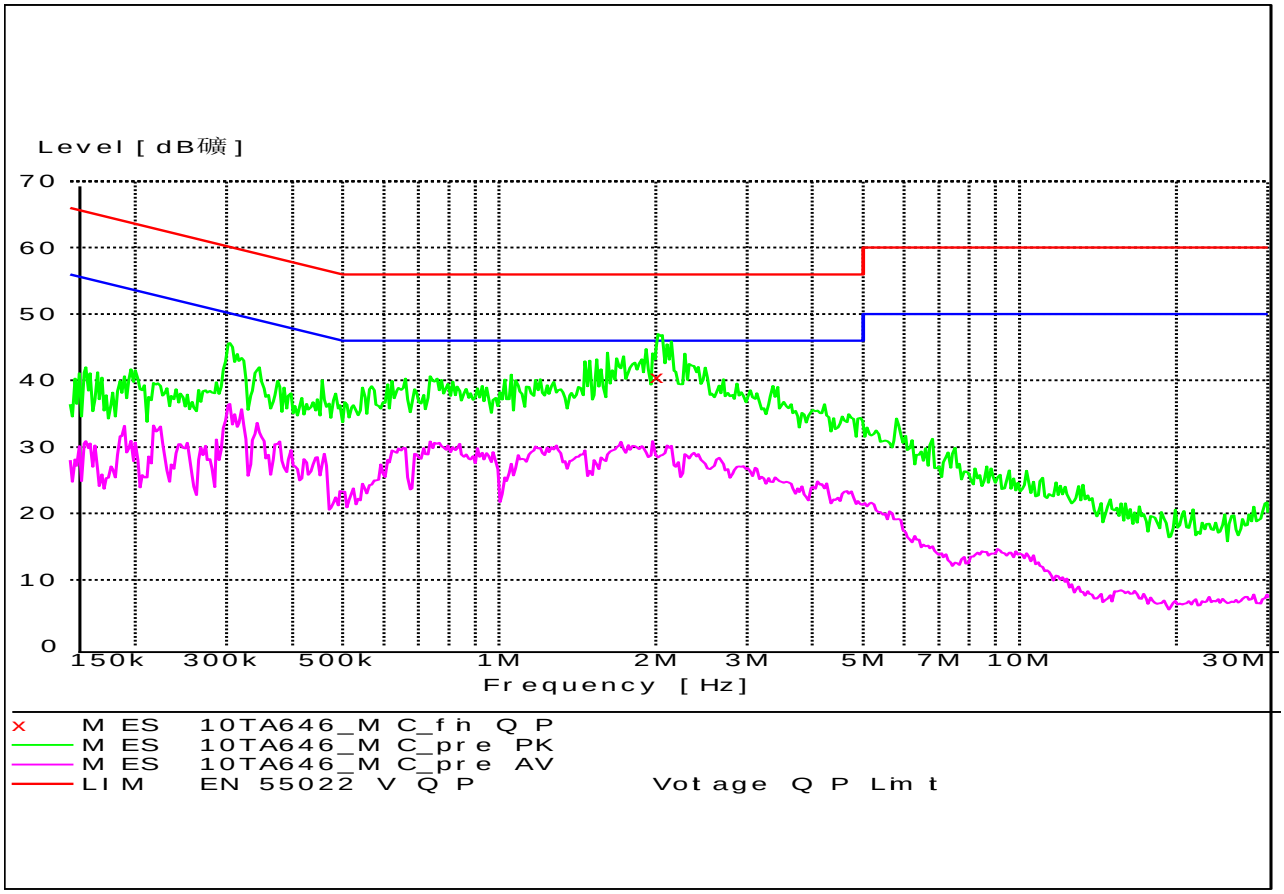
WCDMA Band V



MEASUREMENT RESULT: "10TA646_W5C_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
2.040200	39.50	10.1	56	16.5	L1	FLO
2.123040	37.90	10.1	56	18.1	L1	GND

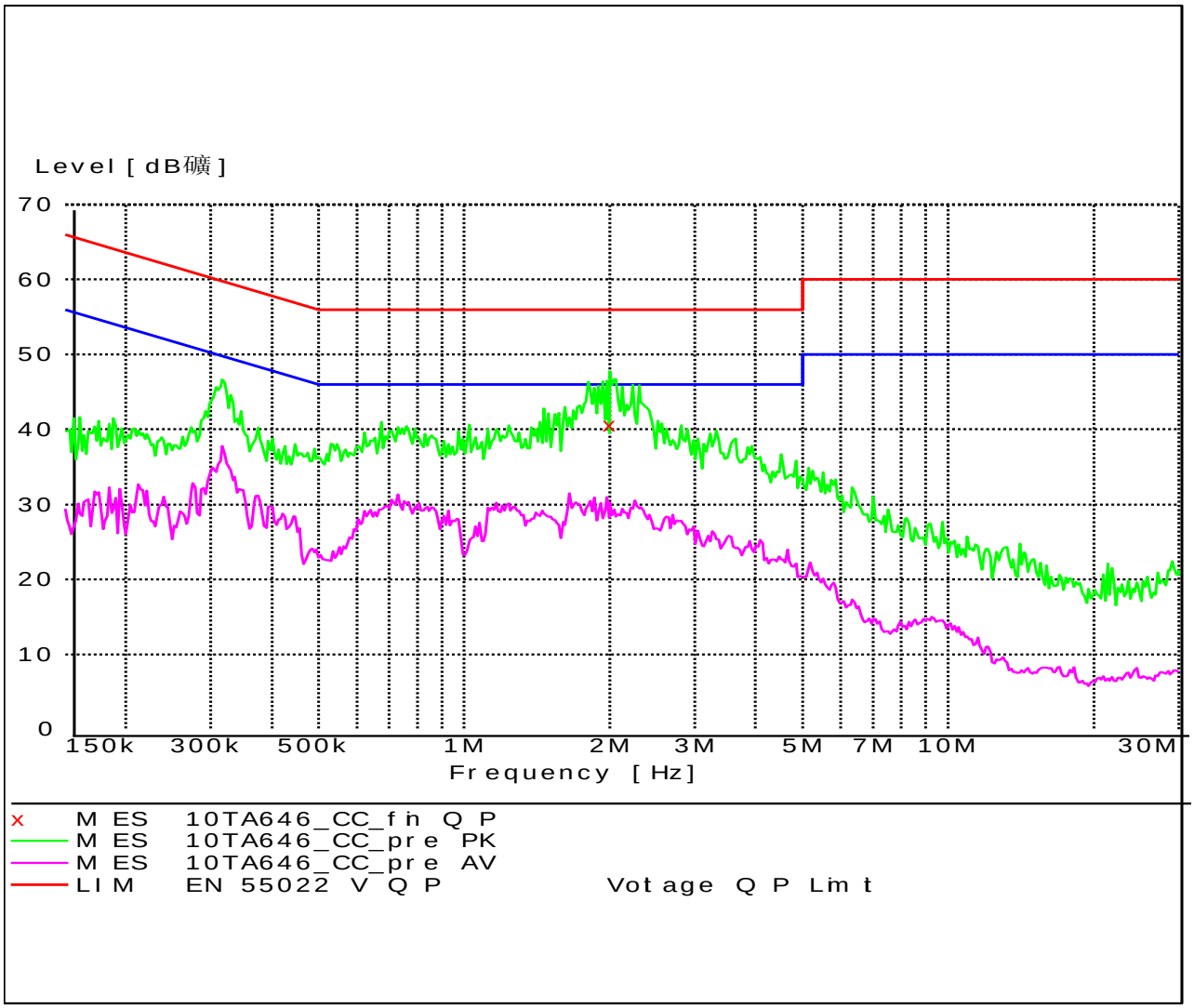
MP3



MEASUREMENT RESULT: "10TA646_MC_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
2.020000	40.50	10.1	56	15.5	L1	GND

Camera



MEASUREMENT RESULT: "10TA646_CC_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
2.000000	40.60	10.1	56	15.4	L1	GND

A.4 FREQUENCY STABILITY (§2.1055/§24.235)

A.4.1 Method of Measurement

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a “call mode”. This is accomplished with the use of R&S CMU200 DIGITAL RADIO COMMUNICATION TESTER.

1. Measure the carrier frequency at room temperature.
2. Subject the EUT to overnight soak at -30℃.
3. With the EUT, powered via nominal voltage, connected to the CMU200 and in a simulated call on channel 9400 for WCDMA Band Ⅱ, channel 4183 for WCDMA Band Ⅴ measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
4. Repeat the above measurements at 10℃ increments from -30℃ to +50℃. Allow at least 1 1/2 hours at each temperature, unpowered, before making measurements.
5. Remeasure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments remeasuring carrier frequency at each voltage. Pause at nominal voltage for 1 1/2 hours unpowered, to allow any self-heating to stabilize, before continuing.
6. Subject the EUT to overnight soak at +50℃.
7. With the EUT, powered via nominal voltage, connected to the CMU200 and in a simulated call on the centre channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
8. Repeat the above measurements at 10 C increments from +50℃ to -30℃. Allow at least 1 1/2 hours at each temperature, unpowered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5℃ during the measurement procedure.

A.4.2 Measurement Limit

A.4.2.1 For Hand carried battery powered equipment

According to the JTC standard the frequency stability of the carrier shall be accurate to within 0.1 ppm of the received frequency from the base station. This accuracy is sufficient to meet Sec. 24.235, Frequency Stability. The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. As this transceiver is considered "Hand carried, battery powered equipment" Section 2.1055(d)(2) applies. This requires that the lower voltage for frequency stability testing be specified by the manufacturer. This transceiver is specified to operate with an input voltage of between 3.5VDC and 4.2VDC, with a nominal voltage of 3.7VDC. Operation above or below these voltage limits is prohibited by transceiver software in order to prevent improper operation as well as to protect components from overstress. These voltages represent a tolerance of -10 % and +12.5 %. For the purposes of measuring frequency stability these voltage limits are to be used.

A.4.2.2 For equipment powered by primary supply voltage

According to the JTC standard the frequency stability of the carrier shall be accurate to within 0.1 ppm of the received frequency from the base station. This accuracy is sufficient to meet Sec. 24.235, Frequency Stability. The frequency stability shall be sufficient to ensure that the

fundamental emission stays within the authorized frequency block. For this EUT section 2.1055(d)(1) applies. This requires varying primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

A.4.3 Measurement results

WCDMA Band Ⅴ

Frequency Error vs Voltage

Voltage(V)	Frequency error(Hz)	Frequency error(ppm)
3.5	41	0.049
3.7	38	0.045
4.2	38	0.045

Frequency Error vs Temperature

temperature(℃)	Frequency error(Hz)	Frequency error(ppm)
-30	44	0.053
-20	42	0.050
-10	42	0.050
0	39	0.047
10	38	0.045
20	41	0.049
30	40	0.048
40	42	0.050
50	42	0.050

A.5 OCCUPIED BANDWIDTH (§2.1049(h)(i))

A.5.1 Occupied Bandwidth Results

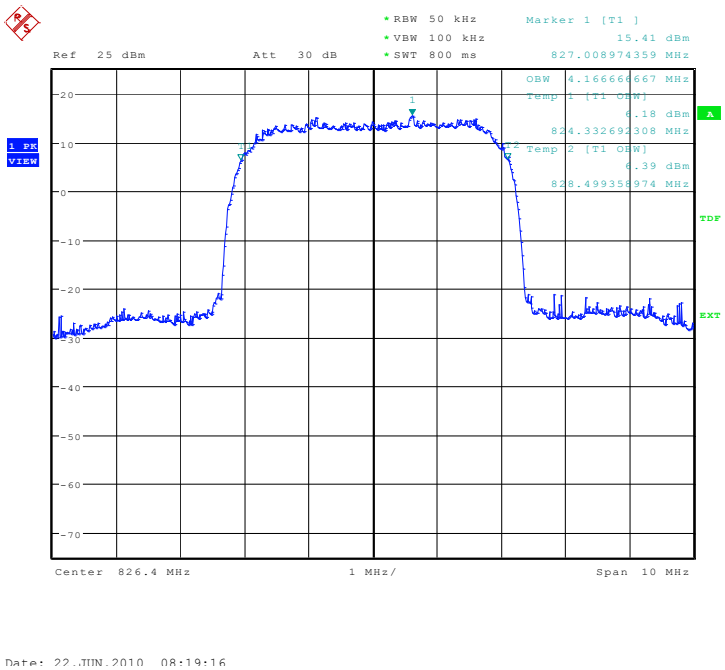
Similar to conducted emissions; occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequencies of the USPCS frequency band. The table below lists the measured -20dBc BW (99%). Spectrum analyzer plots are included on the following pages.

WCDMA Band V

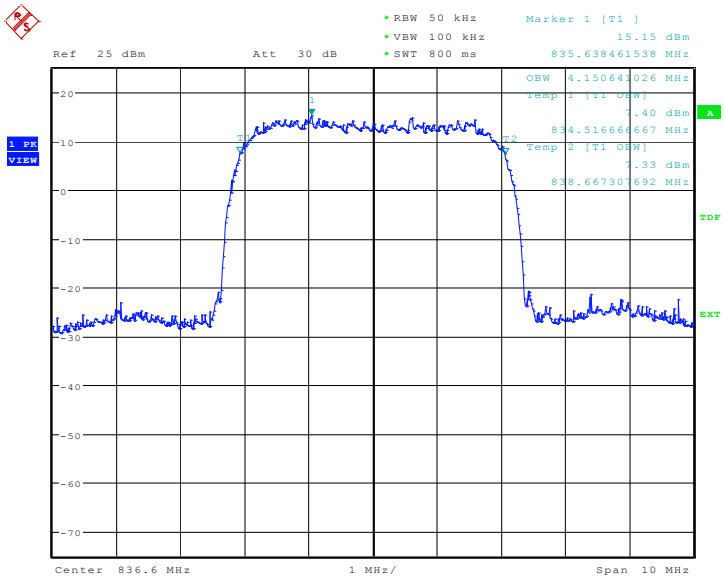
Frequency(MHz)	Occupied Bandwidth (99%)(MHz)
826.4	4.167
836.6	4.151
846.6	4.167

WCDMA Band Ⅴ

Channel 4132-Occupied Bandwidth (99%)

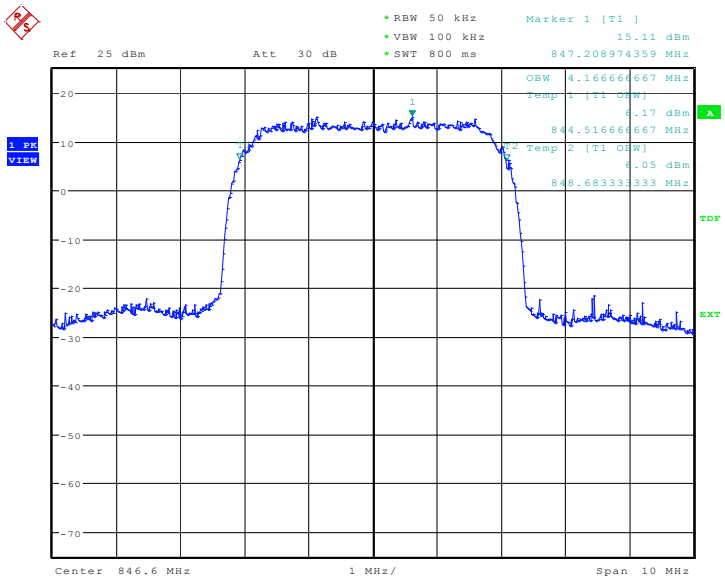


Channel 4183-Occupied Bandwidth (99%)



Date: 22.JUN.2010 08:19:45

Channel 4233-Occupied Bandwidth (99%)



Date: 22.JUN.2010 08:20:15

A.6 EMISSION BANDWIDTH (§22.917(b)/§24.238(b))

A.6.1Emission Bandwidth Results

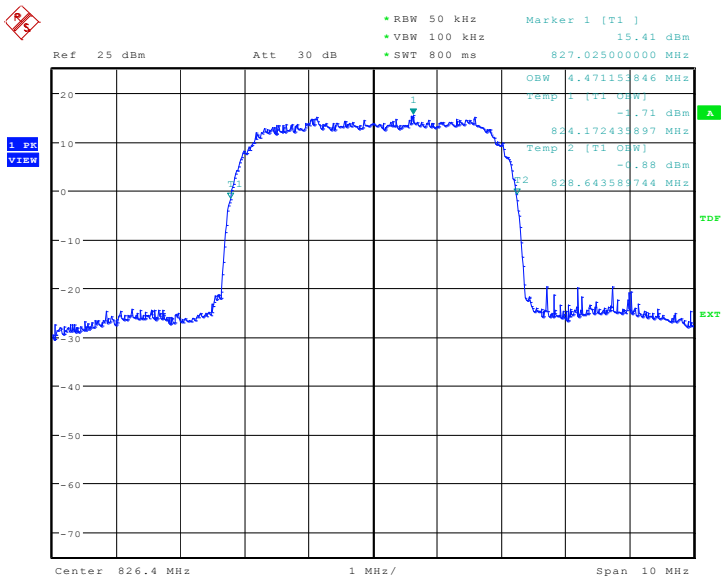
Similar to conducted emissions; Emission bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequencies of the WCDMA Band Ⅱ and WCDMA Band Ⅴ. Table below lists the measured -26dBc BW. Spectrum analyzer plots are included on the following pages.

WCDMA Band Ⅴ

Frequency(MHz)	Occupied Bandwidth (–26dBc BW)(MHz)
826.40	4.471
836.60	4.471
846.60	4.471

WCDMA Band Ⅴ

Channel 4132-Occupied Bandwidth (-26dBc BW)



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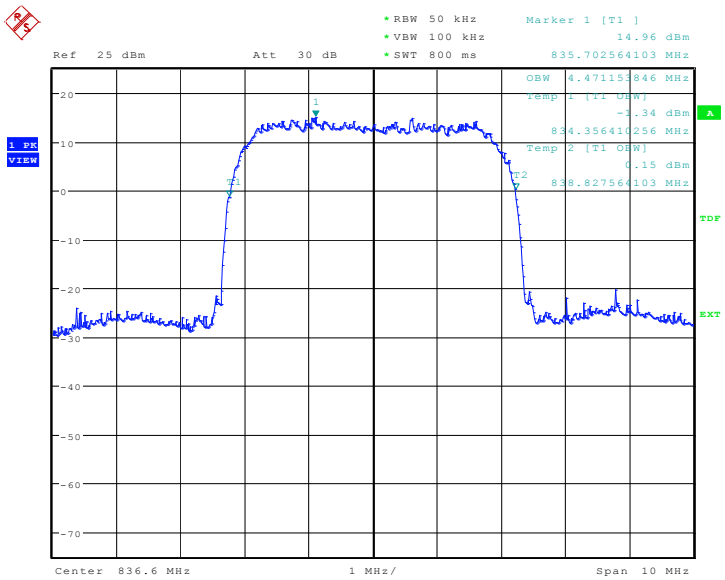
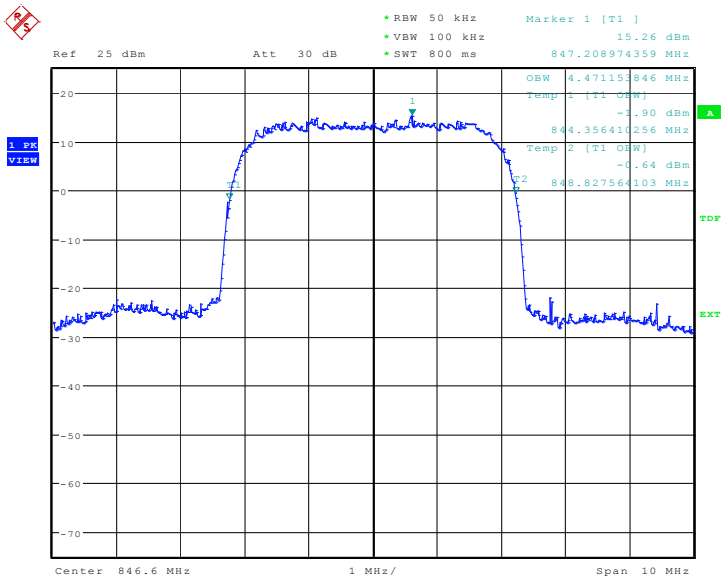
Channel 4183-Occupied Bandwidth (-26dBc BW)



Date: 22.JUN.2010 08:21:15

Channel 4233-Occupied Bandwidth (-26dBc BW)

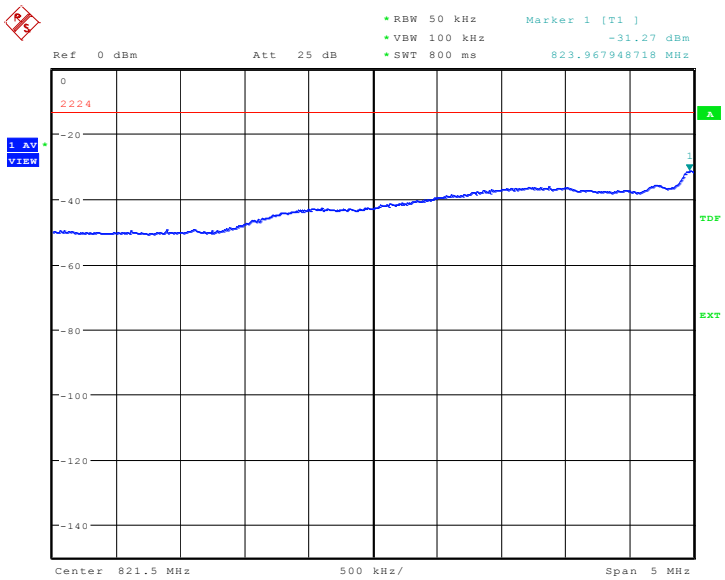


Date: 22.JUN.2010 08:21:44

A.7 BAND EDGE COMPLIANCE (§22.917(b)/§24.238(b))

WCDMA Band Ⅴ

LOW BAND EDGE BLOCK-A (WCDMA Band Ⅴ)-Channel 4132



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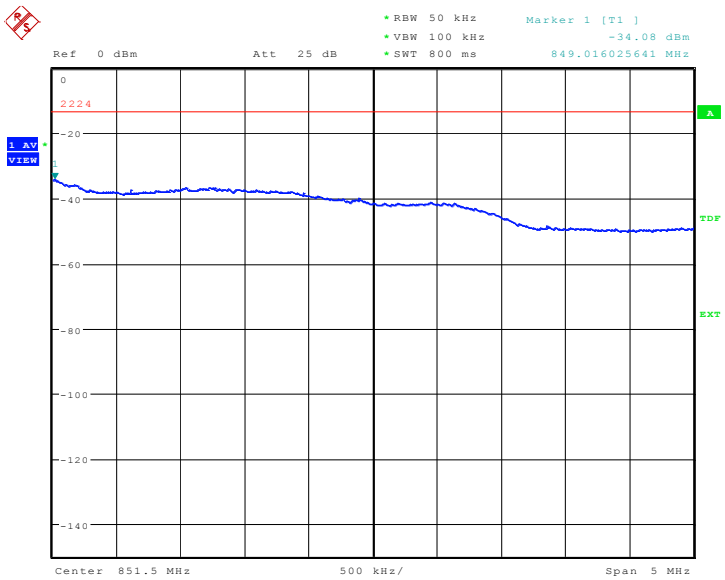
HIGH BAND EDGE BLOCK-C (WCDMA Band Ⅴ) –Channel 4233



Date: 22.JUN.2010 08:39:53

A.8 CONDUCTED SPURIOUS EMISSION (§2.1057/§22.917/§24.238)

A.8.1 Measurement Method

The following steps outline the procedure used to measure the conducted emissions from the EUT.

1. Determine frequency range for measurements: From CFR 2.1057 the spectrum should be investigated from the lowest radio frequency generated in the equipment up to at least the 10th harmonic of the carrier frequency.
2. Determine EUT transmit frequencies: below outlines the band edge frequencies pertinent to conducted emissions testing.

WCDMA Band Ⅱ Transmitter

Channel	Frequency (MHz)
9262	1852.40
9400	1880.00
9538	1907.60

WCDMA Band Ⅴ Transmitter

Channel	Frequency (MHz)
4132	826.40
4183	836.60
4233	846.60

A. 8.2 Measurement Limit

Sec. 24.238 Emission Limits.

(a) On any frequency outside frequency band of the USPCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least 43+10Log(P) dB. For all power levels +30 dBm to 0 dBm, this becomes a constant specification limit of -13 dBm.

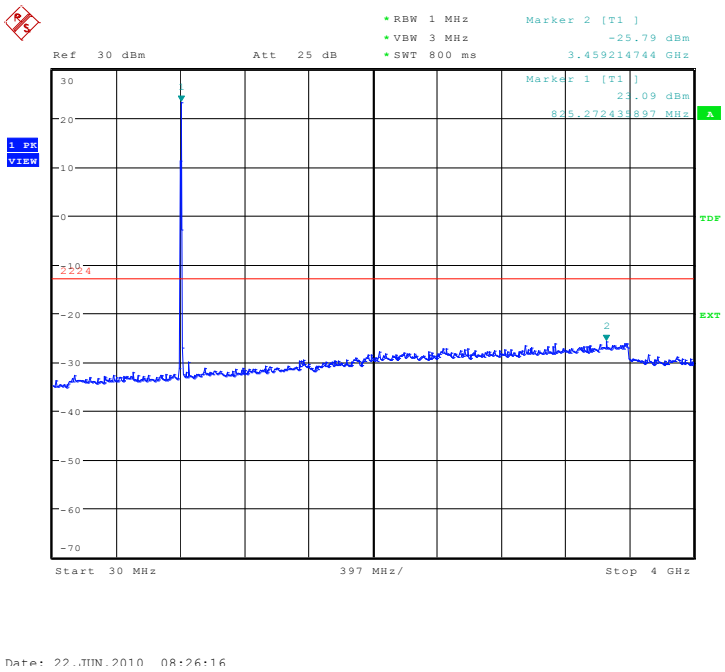
A.8.3 Measurement result

WCDMA Band Ⅴ

A. 8.3.1 Channel 4132: 30MHz – 4GHz

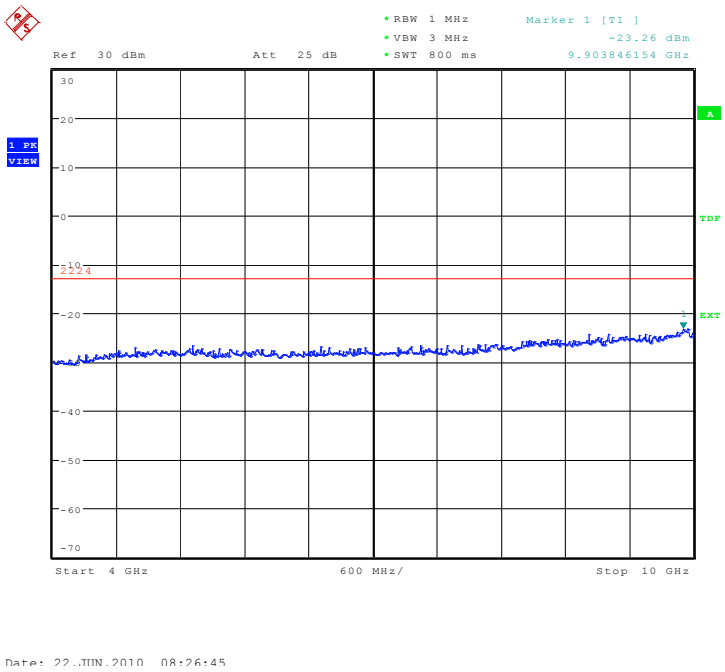
Spurious emission limit –13dBm.

NOTE: peak above the limit line is the carrier frequency.



A. 8.3.2 Channel 4132: 4GHz – 10GHz

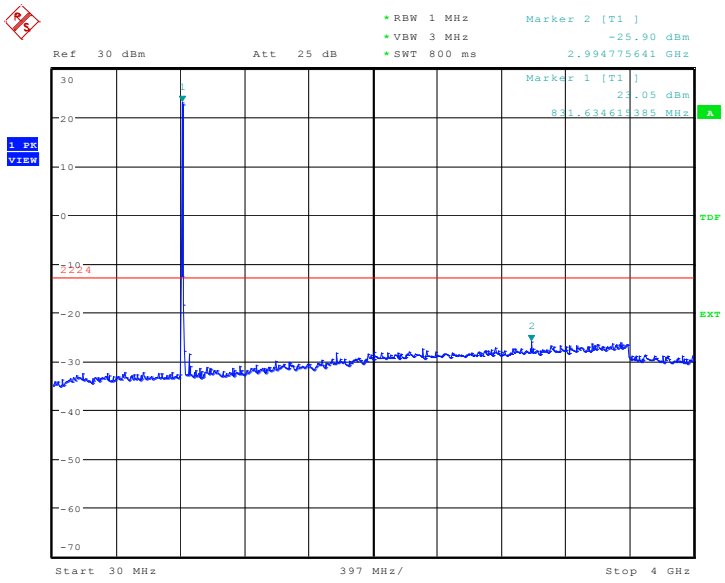
Spurious emission limit –13dBm.



A.8.3.3 Channel 4183: 30MHz – 4GHz

Spurious emission limit –13dBm.

NOTE: peak above the limit line is the carrier frequency.



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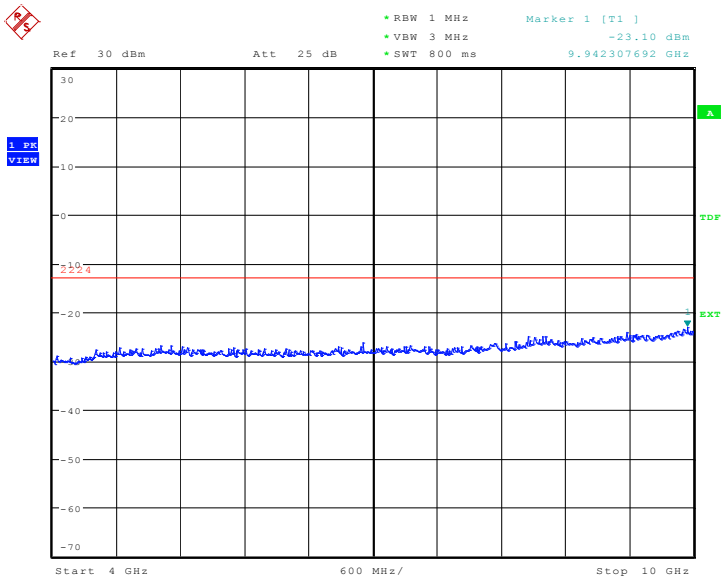
A. 8.3.4 Channel 4183:4GHz – 10GHz

Spurious emission limit –13dBm.



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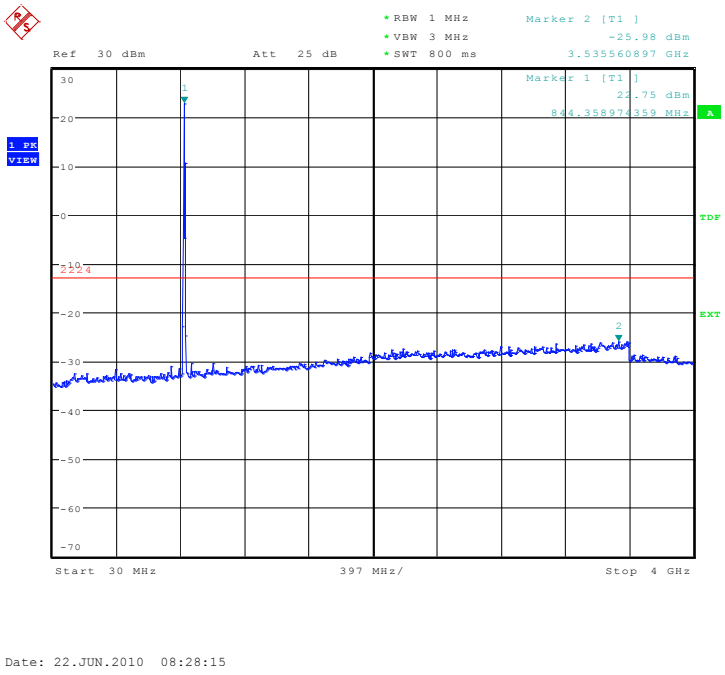
A.8.3.5 Channel 4233: 30MHz – 4GHz

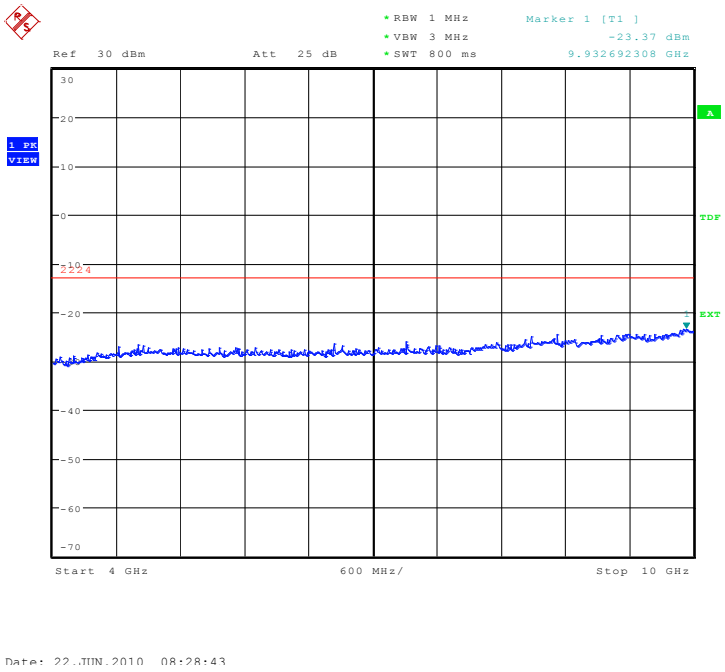
Spurious emission limit –13dBm.

NOTE: peak above the limit line is the carrier frequency.



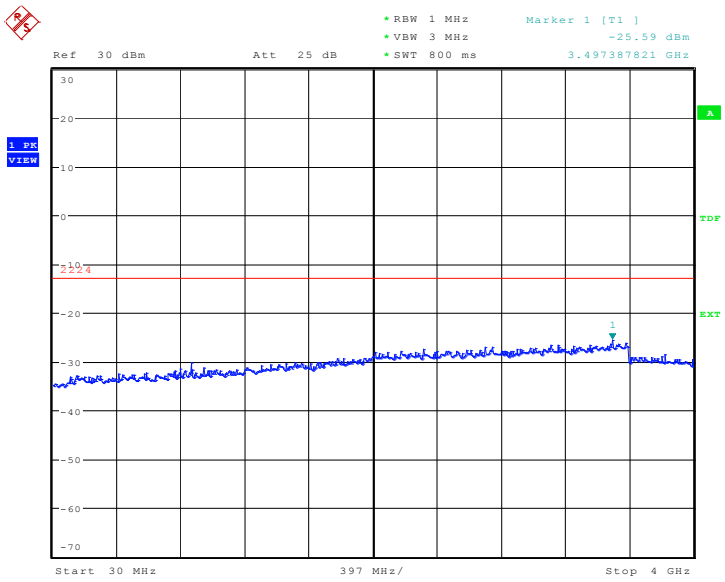
A. 8.3.6 Channel 4233: 4GHz – 10GHz

Spurious emission limit –13dBm.



A. 8.3.7 Idle mode: 30MHz – 4GHz

Spurious emission limit -13dBm.



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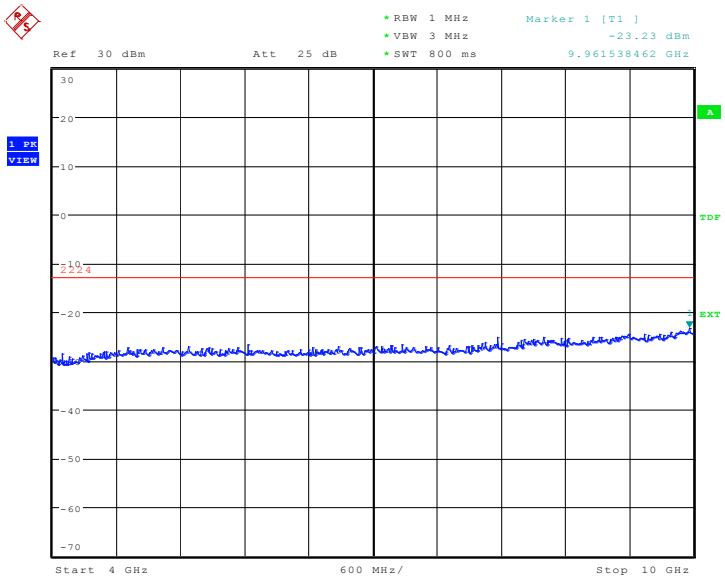
A.8.3.8 Idle mode: 4GHz – 10GHz

Spurious emission limit -13dBm.



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