TEST REPORT

No. I14Z45961-GTE02

for

TCT Mobile Limited

CDMA 1X BC0/BC1/BC10 mobile phone

Model Name : B3G 1X

Marketing Name : 2017B/2017P

FCC ID : RAD506

with

Hardware Version : Revison 1.1

Software Version : 2017BVB2

Issued Date : 2014-06-26

Test Laboratory:

DAR accreditation (DIN EN ISO/IEC 17025): No. D-PL-12123-01-01

FCC 2.948 Listed: No.733176

IC O.A.T.S listed: No.6629B

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

3/F Shou Xiang Technology Building, No.51 Xueyuan Road, Hai Dian 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:	3/F Shou Xiang Technology Building, No.51 Xueyuan Road, Hai Dian District, Beijing, P. R. China
Postal Code:	100191
Telephone:	00861062304633
Fax:	00861062304793

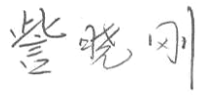
1.2. Testing Environment

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

1.3. Project data

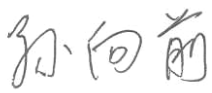
Testing Start Date:	2014-05-21
Testing End Date:	2014-06-09

1.4. Signature



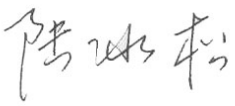
Zi Xiaogang

(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:	TCT Mobile Limited
Address /Post:	5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203
Contact Person:	Gong Zhizhou
Contact Email	Zhizhou.gong@tcl.com
Telephone:	0086-21-61460890
Fax:	0086-21-61460602

2.2. Manufacturer Information

Company Name:	TCT Mobile Limited
Address /Post:	5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203
Contact Person:	Gong Zhizhou
Contact Email	Zhizhou.gong@tcl.com
Telephone:	0086-21-61460890
Fax:	0086-21-61460602

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

3.1. About EUT

Description	CDMA 1X BC0/BC1/BC10 mobile phone
Model Name	B3G 1X
Marketing Name	2017B
FCC ID	RAD506
Antenna	Integrated
Output power	23.71dBm maximum ERP measured for CDMA BC10
Extreme vol. Limits	3.6VDC 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*	IMEI	HW Version	SW Version
UT05a	270113183512242650	Revison 1.1	2017BVB2
UT06a	270113183512242651	Revison 1.1	2017BVB2

*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
AE1	Battery
AE2	Charger

AE1

Model	CAB3120000C1
Manufacturer	BYD
Capacitance	850mAh
Nominal Voltage	3.7V

AE2

Model	CBA3002AG0C2
Manufacturer	Tenpao

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

3.4. Normal Accessory setting

Fully charged battery was used during the test.

3.5. General Description

The Equipment Under Test (EUT) is a model of CDMA 1X BC0/BC1/BC10 with integrated antenna.

It consists of normal options: lithium battery, charger. Manual and specifications of the EUT were provided to fulfil the test.

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 90	PRIVATE LAND MOBILE RADIO SERVICES	10-1-13 Edition
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
KDB971168 D01	Procedures for Compliance Measurement of the Fundamental Emission Power of Licensed Wideband (> 1 MHz) Digital Transmission Systems	v02r01, 2013

5. LABORATORY ENVIRONMENT

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

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. =20 %, Max. = 80 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 0.5 Ω

Fully-anechoic chamber 2 (8.6 meters×6.1 meters×3.85 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 30 ℃
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 1 Ω
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 4000 MHz

Semi-anechoic chamber 2 / Fully-anechoic chamber 3 (10 meters×6.7 meters×6.15 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 30 ℃
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 0.5 Ω
Normalised site attenuation (NSA)	< ±3.5 dB, 3 m distance
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

6. SUMMARY OF TEST RESULTS

Items	List	Clause in FCC rules	Verdict
1	Output Power	90.635	P
2	Emission Limit	2.1053/90.691	P
3	Conducted Emission	15.107/15.207	P
4	Frequency Stability	2.1055/90.213	P
5	Occupied Bandwidth	2.1049	P
6	Emission Bandwidth	2.1049	P
7	Conducted Spurious Emission	2.1051/90.691	P

7. Test Equipments Utilized

NO.	Description	TYPE	series number	MANUFACTURE	CAL DUE DATE	CALIBRATION INTERVAL
1	Test Receiver	ESCI	100344	R&S	2015-03-03	1 year
2	Test Receiver	ESU26	100376	R&S	2014-11-05	1 year
3	EMI Antenna	VULB 9163	514	Schwarzbeck	2014-11-10	3years
4	EMI Antenna	3117	00139065	ETS-Lindgren	2014-07-31	3years
5	LISN	NV216	101200	R&S	2014-07-11	1 year
6	Universal Radio Communication Tester	CMU200	102228	R&S	2014-06-23	1 year
7	Universal Radio Communication Tester	E5515C	MY48361083	Agilent	2015-02-27	1 year
8	Spectrum Analyzer	E4440A	MY48250642	Agilent	2015-02-27	1 year
9	EMI Antenna	9117	177	Schwarzbeck	2014-06-29	3years
10	EMI Antenna	VULB 9163	9163 175	Schwarzbeck	2014-07-13	3years
11	EMI Antenna	3117	00119024	ETS-Lindgren	2016-01-20	3years
12	Signal Generator	N5183A	MY49060052	Agilent	2015-03-02	1 year
13	Climate chamber	SH-241	92007454	ESPEC	2015-12-14	2 year
14	Loop Antenna	HFH2-Z2	829324/007	R&S	2014-12-12	3years

ANNEX A: MEASUREMENT RESULTS

A.1 OUTPUT POWER

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.
These measurements were done at 2 frequencies of CDMA BC10 (bottom and top of operational frequency range).

CDMA BC10

Measurement result

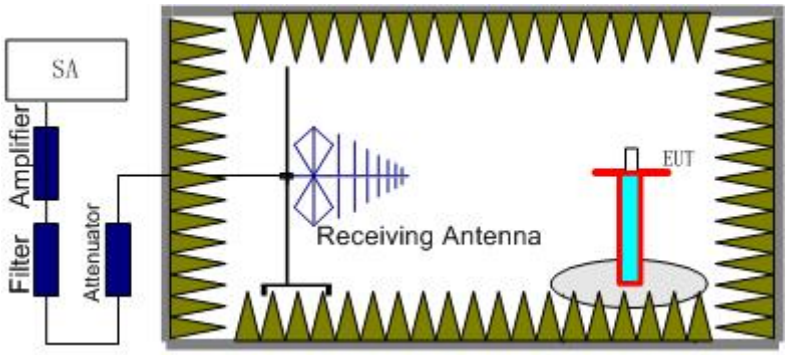
Channel	Frequency(MHz)	Channel power(dBm)
476	817.9	24.13
684	823.1	24.07

A.1.3 Radiated

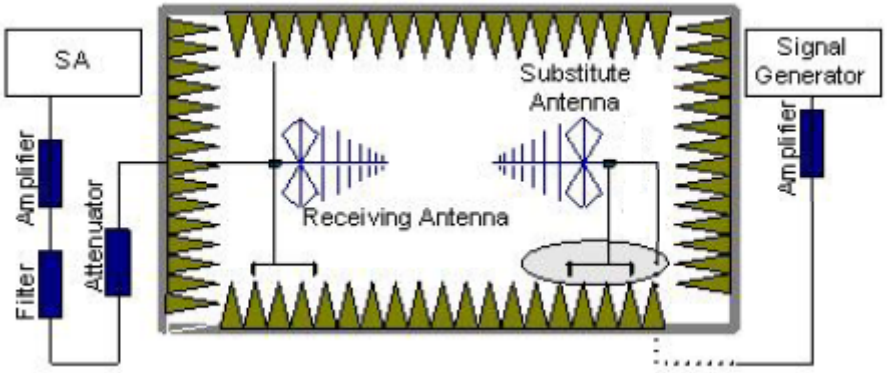
Method of Measurement

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

1. 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 EUT 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 EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in high and low channels were measured with peak detector.



2. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).
3. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.



In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

4. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna.
   The cable loss (P_{cl}) ,the Substitution Antenna Gain (G_a) and the Amplifier Gain (P_{Ag}) should be

recorded after test.

The measurement results are obtained as described below:

Power(EIRP)=P_{Mea} - P_{Ag} - P_{cl} - G_a

5. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
6. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi.

CDMA BC10 -ERP

Limits

	Burst Peak ERP (dBm)
CDMA BC10	≤50dBm (100W)

Measurement result

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)	P_{Ag}(dB)	G_a Antenna Gain(dB)	Correction (dB)	ERP(dBm)	Limit(dBm)	Margin(dB)	Polarization
817.50	-24.26	2.07	-53.00	0.81	2.15	**23.71**	38.45	14.74	V
823.50	-24.31	2.07	-53.00	0.84	2.15	23.63	38.45	14.82	V

Frequency: 817.50MHz

Peak ERP(dBm)= P_{Mea}(-24.26dBm)- P_{cl}(2.07dB)-P_{Ag}(-53.00dB)-G_a (0.81dB)-2.15dB=23.71dBm

ANALYZER SETTINGS: RBW = VBW = 3MHz

A.2 EMISSION LIMIT

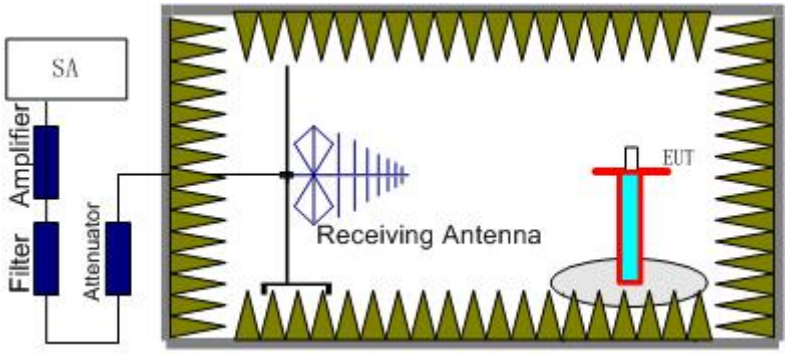
A.2.1 Measurement Method

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

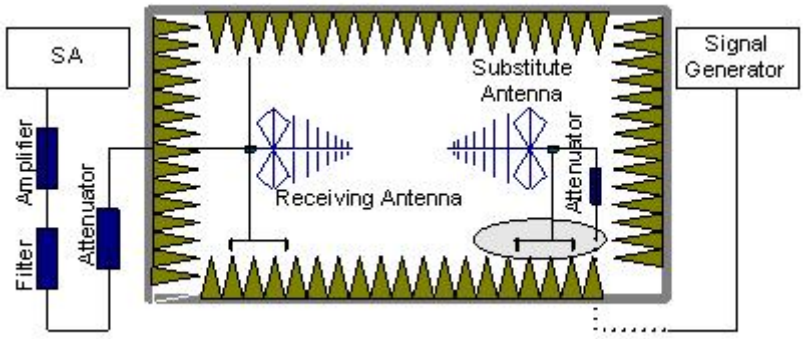
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment. The spectrum is scanned with the mobile station transmitting at carrier frequencies that pertain to low and high channels of CDMA BC10.

The procedure of radiated spurious emissions is as follows:

1. 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 EUT 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 EUT through 360° 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.



2. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).
3. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.



In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the

receiver reach the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

4. The Path loss (P_{pl}) between the Signal Source with the Substitution Antenna and the Substitution Antenna Gain (G_a) should be recorded after test.
   A amplifier should be connected in for the test.
   The Path loss (P_{pl}) is the summation of the cable loss and the gain of the amplifier.
   The measurement results are obtained as described below:
   Power(EIRP)=P_{Mea} - P_{pl} - G_a
5. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
6. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi.

A.2.2 Measurement Limit

Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

For any frequency removed from the EA licensee’s frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116\text{Log}_{10}(f/6.1)$ decibels or $50 + 10\ \text{Log}_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

For any frequency removed from the EA licensee’s frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10\text{Log}_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

A.2.3 Measurement Results

Radiated emissions measurements were made only at the upper and lower carrier frequencies of CDMA BC10. It was decided that measurements at these 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 CDMA BC10 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.

A.2.4 Measurement Results Table

Frequency	Channel	Frequency Range	Result
CDMA BC10	Low	30MHz-10GHz	Pass
	High	30MHz-10GHz	Pass

A.2.5 Sweep Table

Working Frequency	Subrange (GHz)	RBW	VBW	Sweep time (s)
CDMA BC10	0.03~1	100KHz	300KHz	10
	1-2	1 MHz	3 MHz	2
	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	8~10	1 MHz	3 MHz	3

CDMA BC10 Channel 476/817.9MHz

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain	Correction (dB)	Peak ERP(dBm)	Limit （dBm）	Margin(dB)	Polarization
1678.79	-57.69	2.97	-5.31	2.15	-57.50	-13.00	44.50	H
3355.44	-57.06	4.24	-7.55	2.15	-55.90	-13.00	42.90	V
4577.91	-59.19	4.97	-8.94	2.15	-57.37	-13.00	44.37	H
5304.10	-59.30	5.38	-9.88	2.15	-56.95	-13.00	43.95	V
6740.45	-60.57	6.12	-10.84	2.15	-58.00	-13.00	45.00	H
7597.04	-57.37	6.90	-11.50	2.15	-54.92	-13.00	41.92	H

CDMA BC10 Channel 684/823.1MHz

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain	Correction (dB)	Peak ERP(dBm)	Limit （dBm）	Margin(dB)	Polarization
4577.91	-59.53	4.97	-8.94	2.15	-57.71	-13.00	44.71	H
4668.23	-59.54	4.93	-9.10	2.15	-57.52	-13.00	44.52	V
6740.45	-59.95	6.12	-10.84	2.15	-57.38	-13.00	44.38	H
6912.49	-59.41	6.11	-11.01	2.15	-56.66	-13.00	43.66	V
7597.04	-57.67	6.90	-11.50	2.15	-55.22	-13.00	42.22	H
8638.31	-55.75	7.41	-12.31	2.15	-53.00	-13.00	40.00	V

A.3 CONDUCTED EMISSION

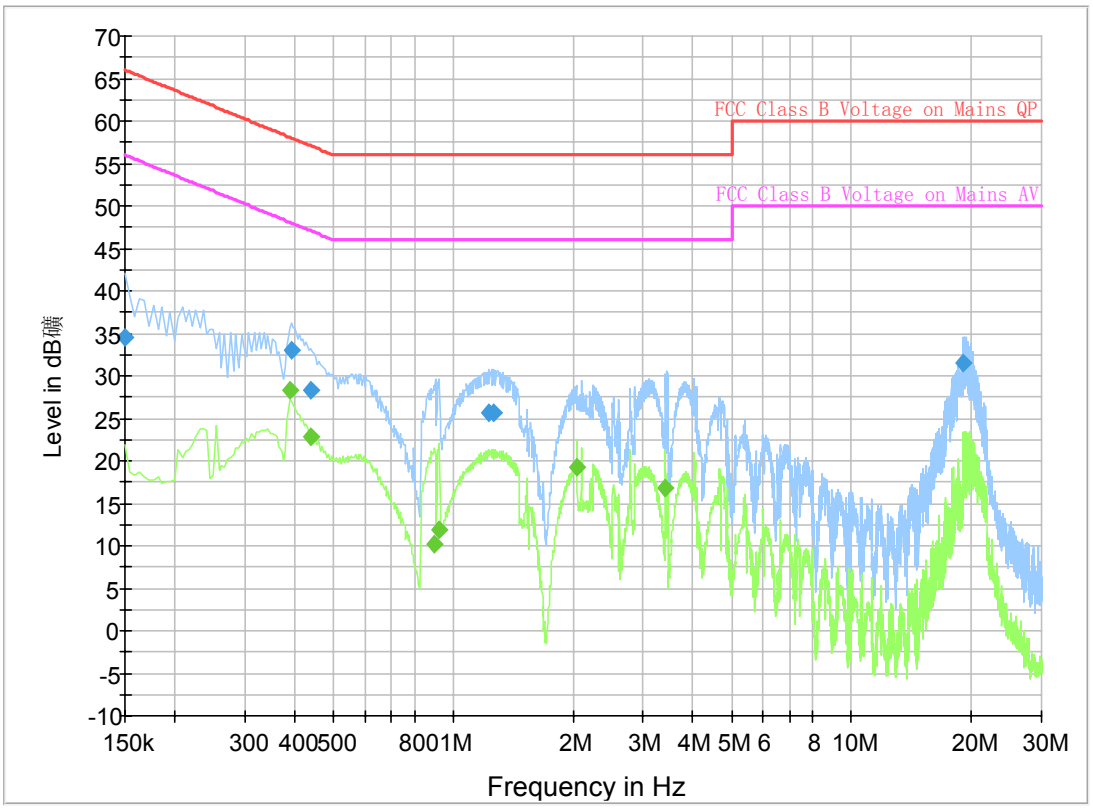
The measurement procedure in ANSI C63.4-1003 is used. Conducted Emission is measured with travel charger.

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		

A.3.2 Measurement result

CDMA BC10



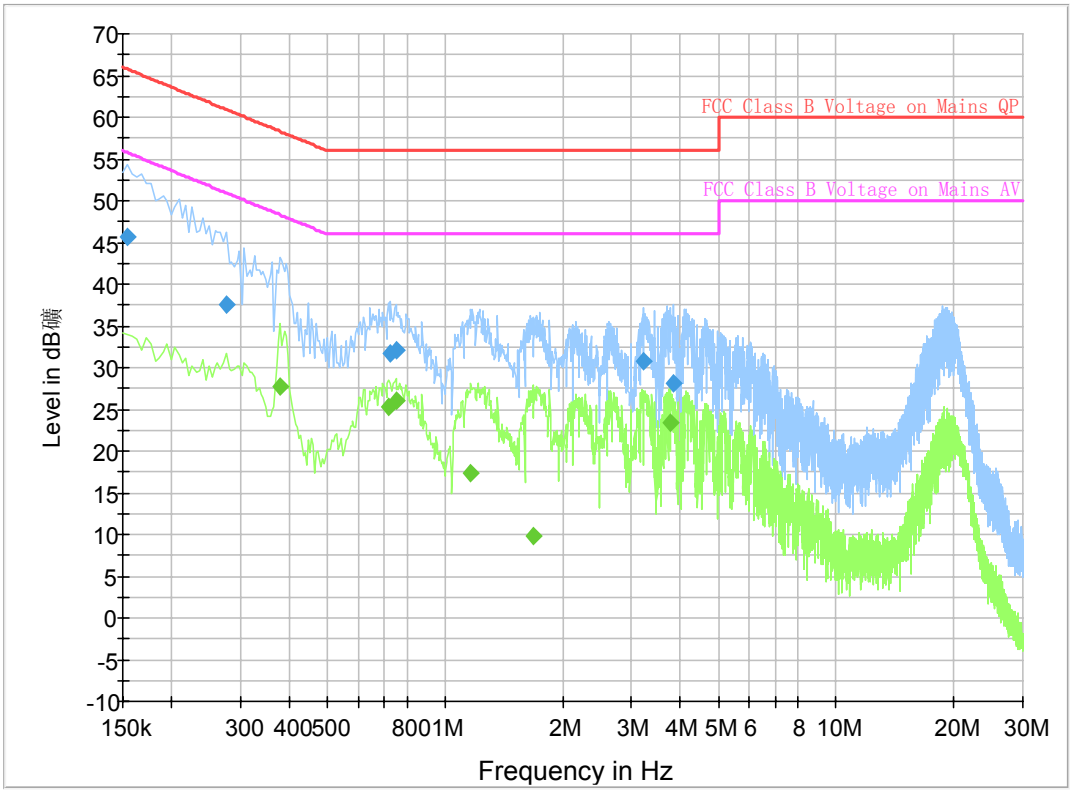
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	34.5	GND	N	9.8	31.5	66.0
0.393000	33.0	GND	L1	9.8	25.0	58.0
0.438000	28.3	GND	L1	9.8	28.8	57.1
1.225500	25.6	GND	L1	9.7	30.4	56.0
1.266000	25.6	GND	L1	9.7	30.4	56.0
19.095000	31.5	GND	L1	9.4	28.5	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.388500	28.4	GND	L1	9.8	19.7	48.1
0.438000	22.7	GND	L1	9.8	24.4	47.1
0.897000	10.2	GND	L1	9.7	35.8	46.0
0.924000	11.8	GND	L1	9.7	34.2	46.0
2.049000	19.3	GND	L1	9.7	26.7	46.0
3.399000	16.8	GND	L1	9.7	29.2	46.0

MP3



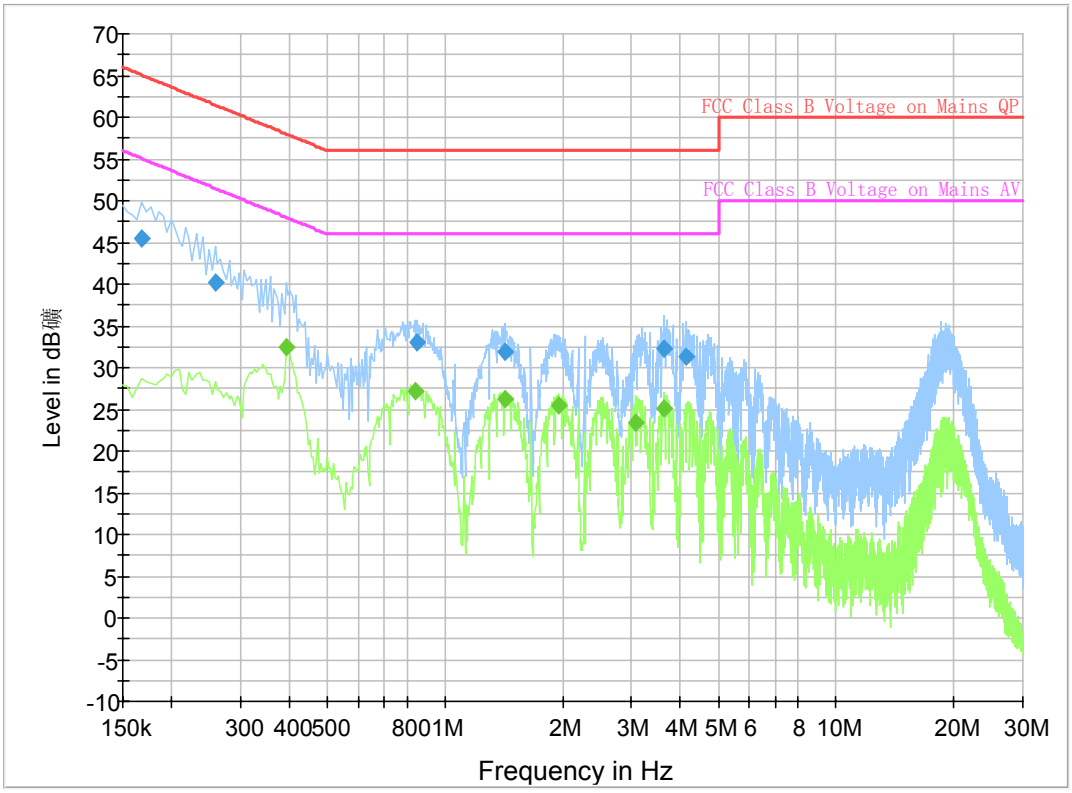
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154500	45.7	GND	L1	9.8	20.0	65.8
0.276000	37.6	GND	L1	9.8	23.3	60.9
0.726000	31.7	GND	L1	9.8	24.3	56.0
0.748500	32.0	GND	L1	9.8	24.0	56.0
3.214500	30.8	GND	L1	9.7	25.2	56.0
3.835500	28.1	GND	L1	9.7	27.9	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.379500	27.8	GND	L1	9.8	20.5	48.3
0.717000	25.4	GND	L1	9.8	20.6	46.0
0.748500	26.0	GND	L1	9.8	20.0	46.0
1.167000	17.3	GND	L1	9.7	28.7	46.0
1.675500	9.7	GND	L1	9.7	36.3	46.0
3.777000	23.4	GND	L1	9.7	22.6	46.0

CAMERA



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.168000	45.5	GND	N	9.8	19.6	65.1
0.258000	40.2	GND	N	9.8	21.3	61.5
0.847500	33.1	GND	L1	9.8	22.9	56.0
1.419000	31.8	GND	L1	9.7	24.2	56.0
3.646500	32.3	GND	L1	9.7	23.7	56.0
4.141500	31.3	GND	L1	9.7	24.7	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.393000	32.4	GND	L1	9.8	15.6	48.0
0.838500	27.2	GND	L1	9.8	18.8	46.0
1.419000	26.2	GND	L1	9.7	19.8	46.0
1.950000	25.4	GND	L1	9.7	20.6	46.0
3.079500	23.5	GND	L1	9.7	22.5	46.0
3.642000	25.1	GND	L1	9.7	20.9	46.0

A.4 FREQUENCY STABILITY

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 mid channel of CDMA BC10, 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

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. 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 3.6VDC 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

For Part 90.213, the frequency stability of the transmitter shall be maintained within ±2.5ppm of the center frequency. 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

CDMA BC 10

Frequency Error vs Voltage

Voltage(V)	Frequency error(Hz)	Frequency error(ppm)
3.6	3	0.004
3.7	-2	-0.002
4.2	5	0.006

Frequency Error vs Temperature

temperature(℃)	Frequency error(Hz)	Frequency error(ppm)
-30	4	0.005
-20	1	0.001
-10	-2	-0.002
0	1	0.001
10	4	0.005
20	3	0.004
30	0	0.000
40	3	0.004
50	2	0.002

A.5 OCCUPIED BANDWIDTH

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 CDMA frequency band. The table below lists the measured 99% BW. Spectrum analyzer plots are included on the following pages.

Test Condition

RBW	VBW	Span	Sweeptime	Detector	Trace Mode
20KHz	50KHz	5MHz	40ms	Peak	Max Hold

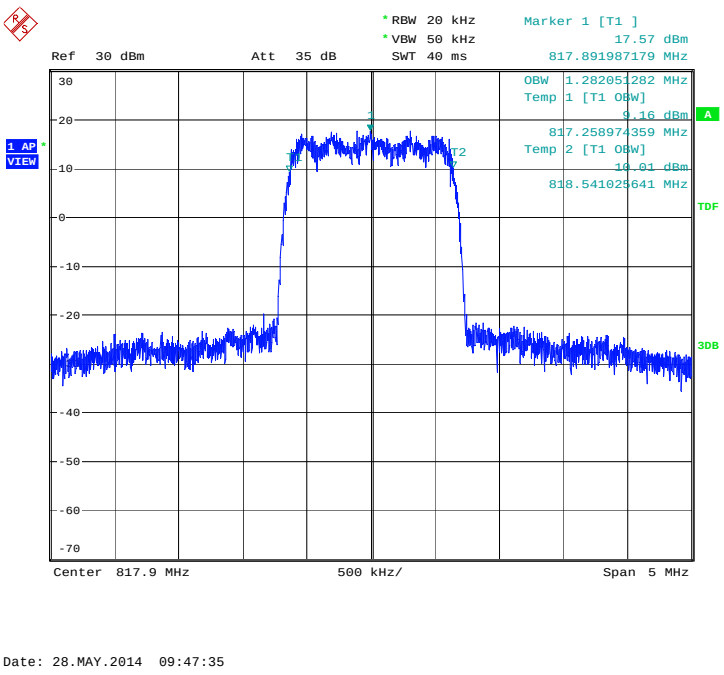
The EUT was set up for the max output power with pseudo random data modulation. Use the Occupied Bandwidth function of SA to measure the 99% bandwidth.

CDMA BC10 (99% BW)

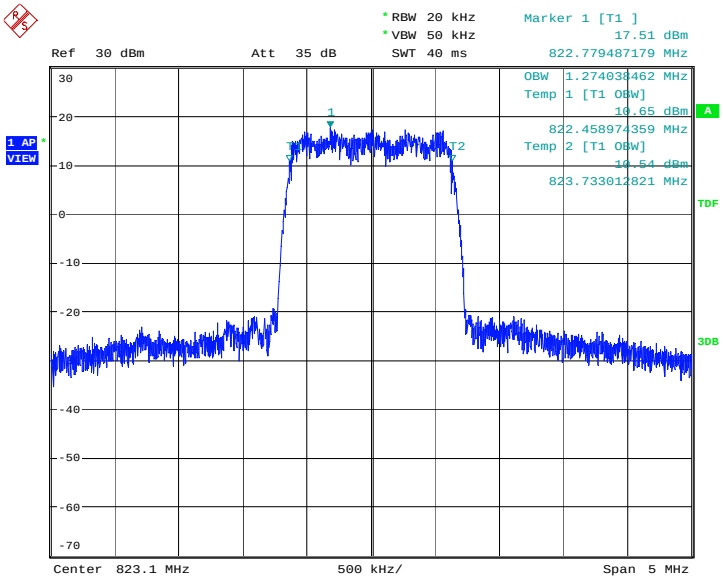
Channel	Occupied Bandwidth (99% BW)(MHz)
476	1.282
684	1.274

CDMA BC10

Channel 476-Occupied Bandwidth (99% BW)



Channel 684-Occupied Bandwidth (99% BW)



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A.6 EMISSION BANDWIDTH

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 CDMA frequency band. Table below lists the measured 100% BW. Spectrum analyzer plots are included on the following pages.

Test Condition

RBW	VBW	Span	Sweeptime	Detector	Trace Mode
20KHz	50KHz	5MHz	40ms	Peak	Max Hold

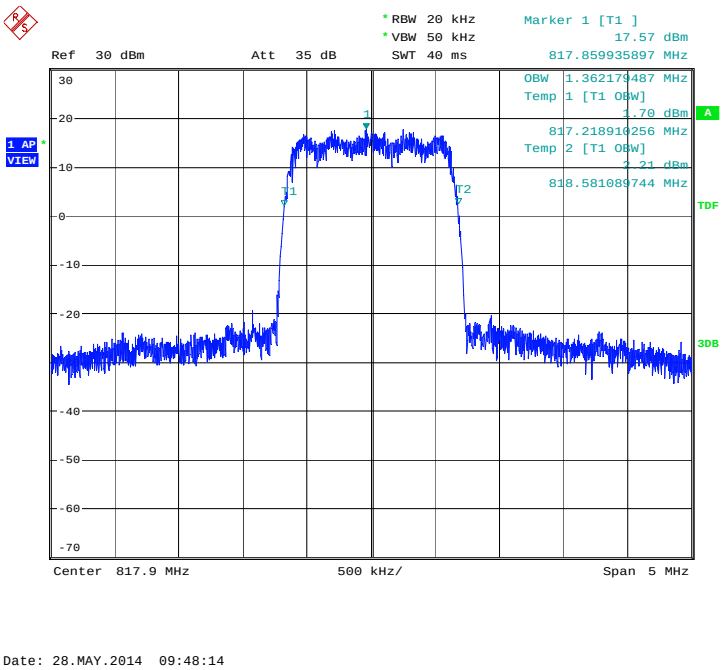
The EUT was set up for the max output power with pseudo random data modulation. Use the Occupied Bandwidth function of SA to measure the 100% bandwidth.

CDMA BC10 (100% BW)

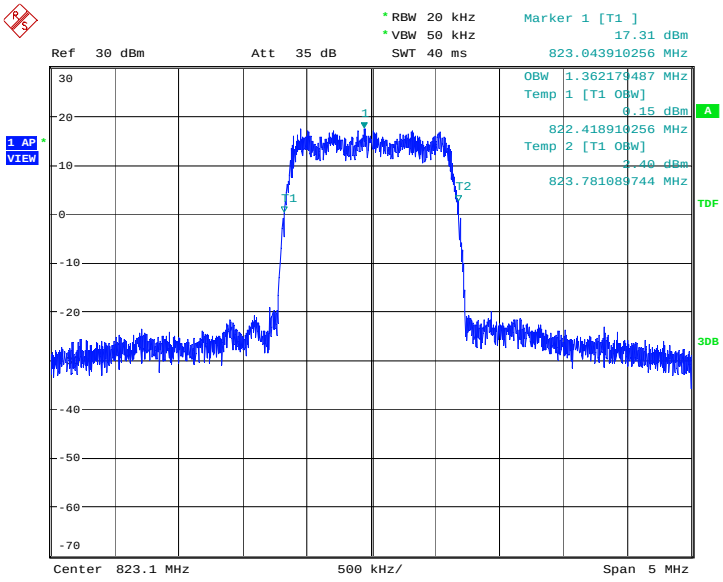
Channel	Emission Bandwidth (100% BW) (MHz)
476	1.362
684	1.362

CDMA BC10

Channel 476- Emission Bandwidth (100% BW)



Channel 684- Emission Bandwidth (100% BW)



A.7 CONDUCTED SPURIOUS EMISSION

A.7.1 Measurement Method

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. For CDMA BC10, data taken from 30 MHz to 10GHz.

Out-of-band emission requirement shall apply only to the ‘‘outer’’ channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

For any frequency removed from the EA licensee’s frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116\text{Log}_{10}(f/6.1)$ decibels or $50 + 10\ \text{Log}_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

For any frequency removed from the EA licensee’s frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10\text{Log}_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

CDMA BC10 Transmitter

Channel	Frequency (MHz)
476	817.9
684	823.1

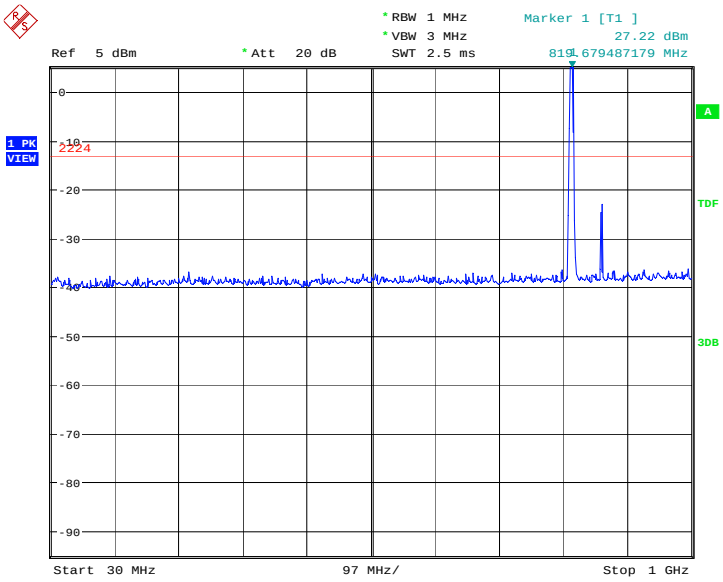
A.7.2 Measurement result

CDMA BC10

A. 7.2.1 Channel 476: 30MHz –1GHz

Spurious emission limit –13dBm.

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



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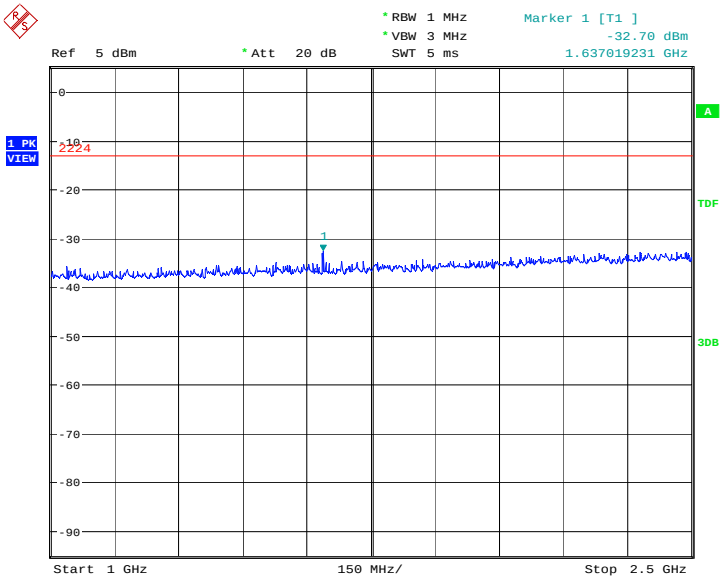
A.7.2.2 Channel 476: 1GHz –2.5GHz

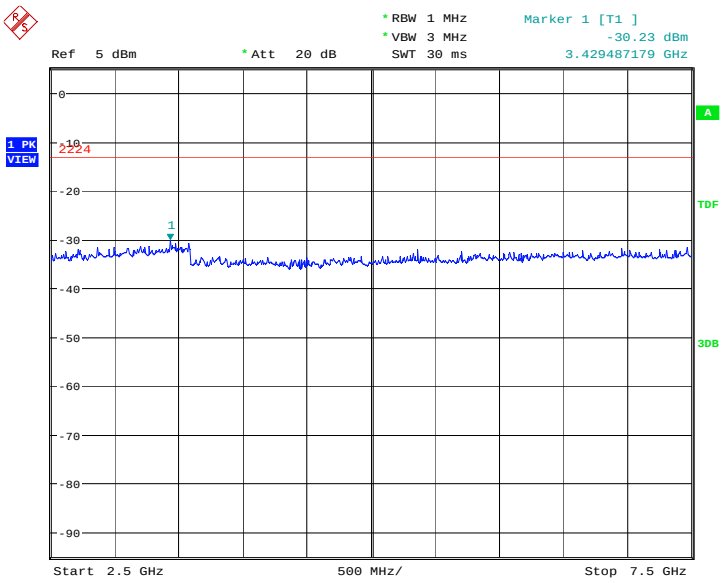
Spurious emission limit –13dBm.



Date: 28.MAY.2014 14:38:05

A.7.2.3 Channel 476: 2.5GHz –7.5GHz

Spurious emission limit –13dBm.



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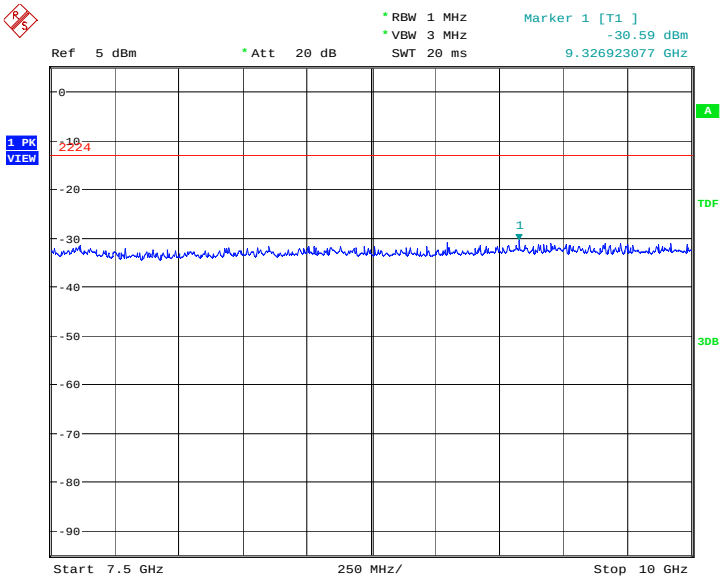
A.7.2.4 Channel 476: 7.5GHz –10GHz

Spurious emission limit –13dBm.



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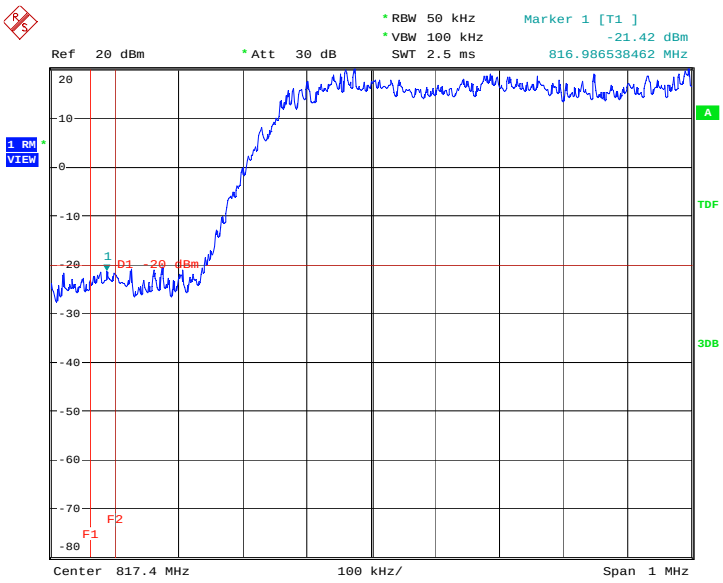
A.7.2.5 Channel 476: Band Edge

Spurious emission limit –20dBm.



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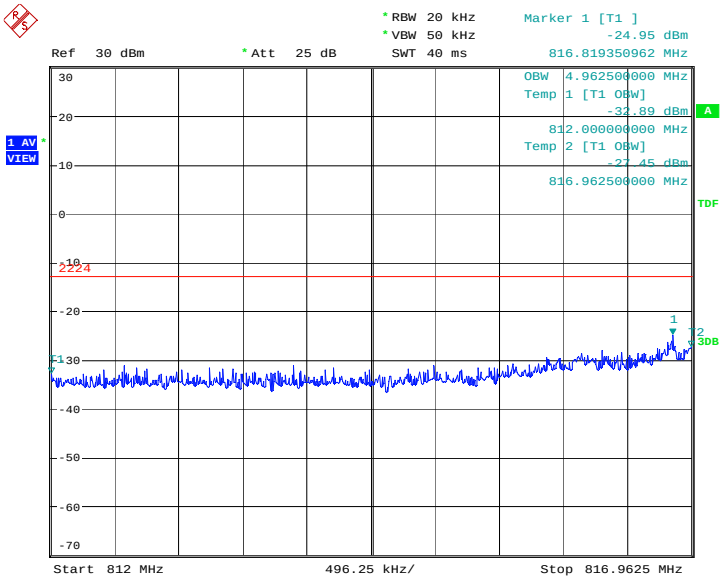
A.7.2.6 Channel 476: Outer Extended Band Edge

Spurious emission limit –13dBm.



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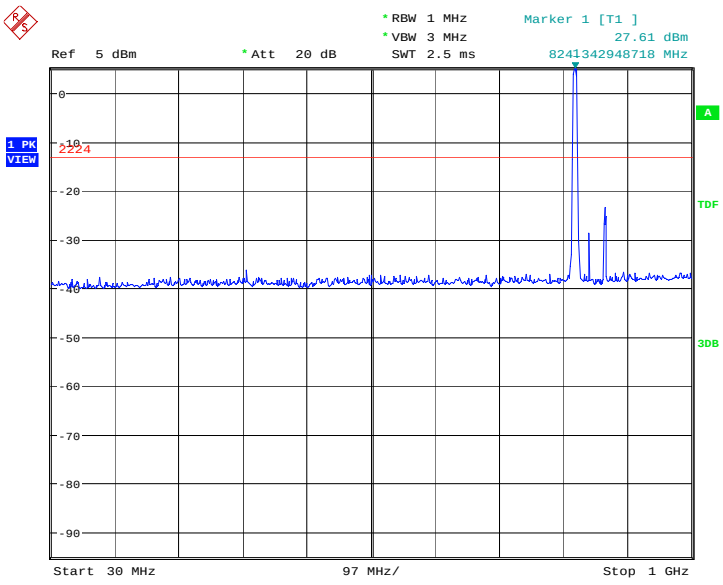
A. 7.2.7 Channel 684: 30MHz –1GHz

Spurious emission limit –13dBm.

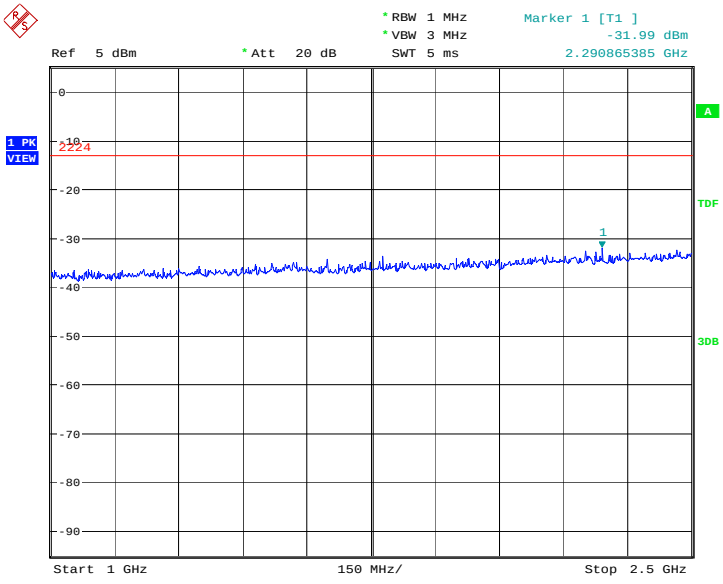


Date: 28.MAY.2014 14:39:52

A.7.2.8 Channel 684: 1GHz –2.5GHz

Spurious emission limit –13dBm.

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



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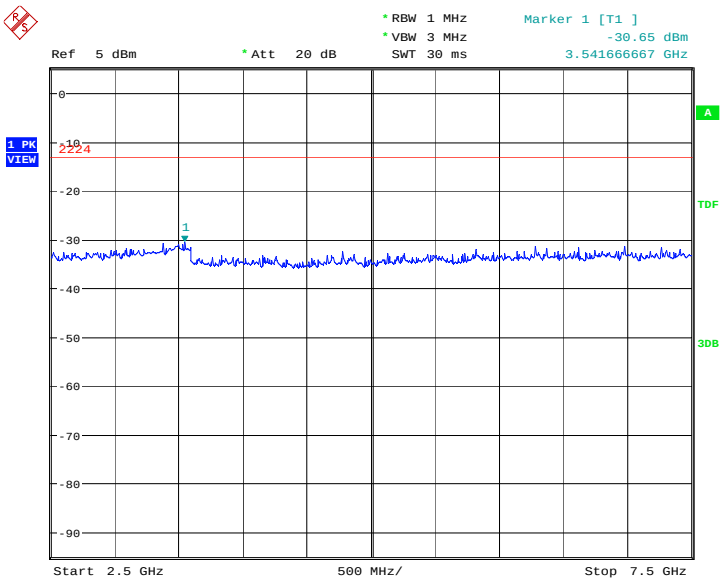
A.7.2.9 Channel 684: 2.5GHz –7.5GHz

Spurious emission limit –13dBm.



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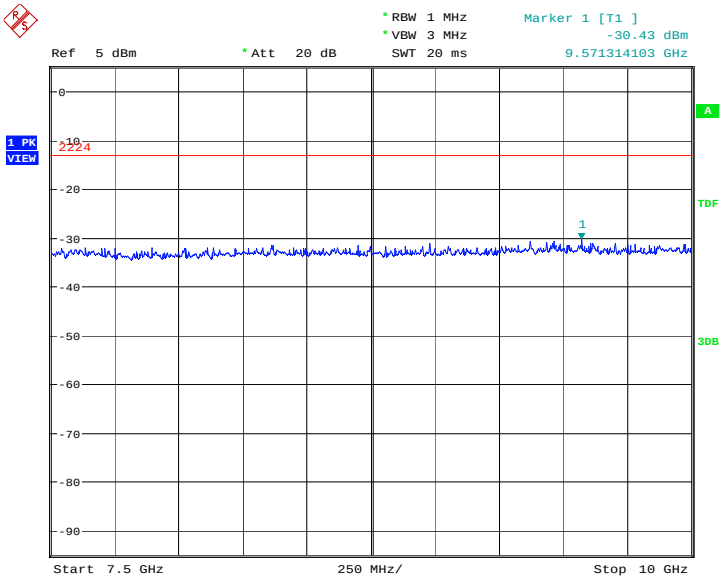
A.7.2.10 Channel 684: 7.5GHz –10GHz

Spurious emission limit –13dBm.



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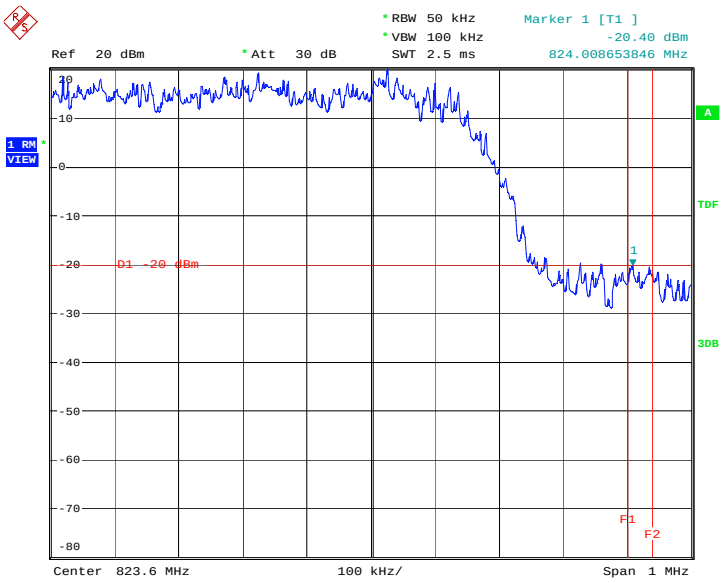
A.7.2.11 Channel 684: Band Edge

Spurious emission limit –20dBm.



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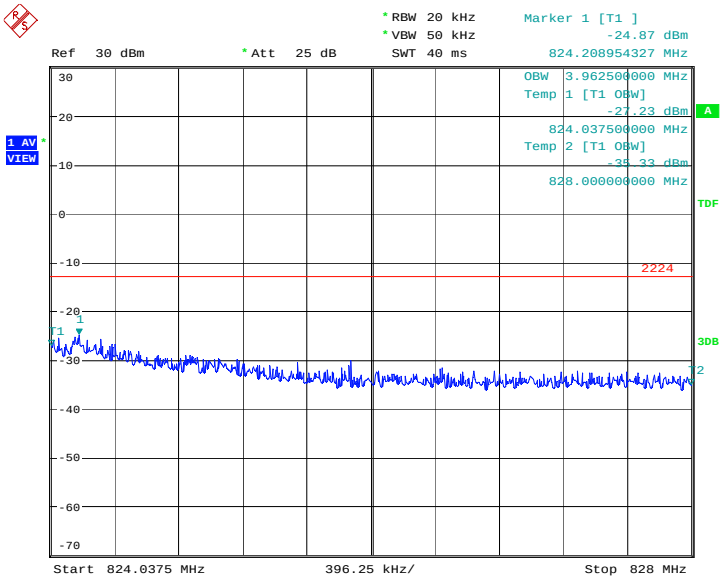
A.7.2.12 Channel 684: Outer Extended Band Edge

Spurious emission limit –13dBm.



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