Chunghwa Telecom CO., Ltd
Telecommunication Laboratories
Testing & Certification Center

TEL：+886 3 4244445 FAX：+886 3 4202444
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NO.99, Dianyan Rd., Yang-Mei city, Taoyuan, Taiwan
R.O.C

Issued Date：Nov.22, 2013

Testing Laboratory
0263

FCC Part 22 , Part 24
Test Report
For
Rugged Tablet PC

Applicant	：	Handheld Group AB
Address	：	Kinnegatan 17, 53133, Lidköping, Sweden
Equipment	：	Rugged Tablet PC
Model No.	：	ALGIZ 7X, CS25 plus, CS25 LRBT plus, CS25 GNSS plus, CC61 plus, CC60 plus
Trade Name	：	Handheld

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CERTIFICATE

Applicant	Handheld Group AB
Address	Kinnegatan 17, 53133, Lidköping, Sweden
Equipment	Rugged Tablet PC
Model No.	ALGIZ 7X, CS25 plus, CS25 LRBT plus, CS25 GNSS plus, CC61 plus, CC60 plus
Trade Name	Handheld
Manufacturer	WINMATE Communication INC.
Address of Manufacturer	9F, No.111-6, Shing-De Rd., San-Chung District,New Taipei City, 241 Taiwan

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **FCC 47 CFR Part 22 Subpart H & Part 24 Subpart E**，

The device described above was tested by EMC & Radio Equipment Testing Lab, Chungwha Telecom Co. Ltd. The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the procedures given in TIA/EIA 603-C.The energy emitted by EUT is tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rule Part 22 Subpart H & Part 24 Subpart E

Date of Issue : Nov. 20 , 2013

Date of Test : Nov. 10 , 2013

Tester by : Chi-Min Tzou Chi-Min Tzou

Approved by : Ming-Hong Ko Ko Ming Hong

Technical Manager

Test results given in this report apply only to the specific sample(s) tested under stated test conditions.
This report shall not be reproduced in part without written approval of EMC & Radio Equipment Testing Lab, Chungwha Telecom Co. Ltd.

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1. GENERAL INFORMATION

1.1 Applicant description

Applicant	Handheld Group AB
Address:	Kinnegatan 17, 53133, Lidköping, Sweden

1.2 EUT description

Applicant	Handheld Group AB
Product	Rugged Tablet PC
Trade Name	Handheld
Model No	ALGIZ 7X, CS25 plus, CS25 LRBT plus, CS25 GNSS plus, CC61 plus, CC60 plus
FCC ID	YY3-0112070926724
Frequency Range	WCDMA/HSDPA/HSUPA Band Ⅱ：1852.4~1907.6MHz WCDMA/HSDPA/HSUPA Band Ⅴ：826.4~846.6MHz CDMA2000 BC0：824.7~848.31MHz CDMA2000 BC1：1851.25~1908.75MHz
Max. Output Power:	WCDMA Band Ⅱ：24.7dBm WCDMA/HSDPA Band Ⅱ：24.93dBm WCDMA/HSUPA Band Ⅱ：24.77dBm WCDMA Band Ⅴ：24.83dBm WCDMA/HSDPA Band Ⅴ：24.72dBm WCDMA/HSUPA Band Ⅴ：24.5dBm CDMA2000/1X BC0：23.71dBm CDMA2000 /1X BC1：23.84dBm CDMA2000/EVDO BC0：23.59dBm CDMA2000/EVDO BC1：23.72dBm
Antenna Type:	Patch Antenna
Power supply	12Vdc from AC/DC Adapter
Manufacture	WINMATE Communication INC.

1.3 Operating Condition of EUT

Test mode ：Normal Operation

1.4 Test Conditions

Temperature：25 ±2℃
Humidity：52 ±3 % R.H.

2. Summary of Test Results

Section in FCC CFR 47 Part 22 & PART 24	Name of test	Section	Result
§2.1046，§22.913(a) FCC 24.232 (b)	RF output power	4.1	PASS
§2.1049	Occupied Bandwidth	4.2	PASS
§2.1051	Out of Band Emissions Band Edge Measurement	4.3	PASS
§2.1053	Field Strength of Spurious Radiation	4.4	PASS
§2.1055，§22.355，§24.235	Frequency Stability (Temperature Variation)	4.5	PASS
§2.1055，§22.355，§24.235	Frequency Stability (Voltage Variation)	4.6	PASS

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3. Instrument Calibration

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

3.1 Equipment Used during Test

Manufacturer	Description	Model	Calibration Date	Calibration Due Date
EMI Receiver	R&S	ESIB 40	2013.05.17	1 year
Preamplifier	EMC	051845	2013.05.23	1 year
Communication Test Set	Agilent	8960	2013.05.11	1 year
Spectrum Analyzer	Agilent	E4407B	2013.05.21	1 year
BiLog Antenna	SUNOL	JB3	2013.05.29	1 year
Horn Antenna	EMCO	3115	2013.06.17	1 year
Horn Antenna	EMCO	3116	2013.05.22	1 year
Broadband Antenna	EMCO	3142B	2013.05.27	1 year
Power meter	HP	437B	2013.05.21	1 year
Temperature chamber	WEISS	WK1-340/40	2013.07.02	1 year
Splitter	HP	11636A	2013.05.23	1 year

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4 Measurements

4.1. Conducted RF output power

4.1.1. Required and Limits

FCC 2.1046 Measurements required: RF power output

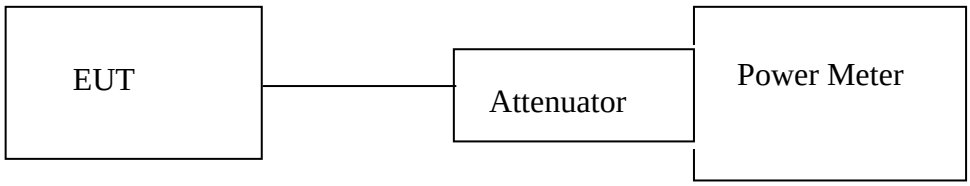
FCC 22.913 (a) Effective radiated power limits.

The effective radiated power (ERP) of mobile transmitters must not exceed 7 Watts

FCC 24.232 (b) Power limits.

Mobile/portable stations are limited to 2 Watts effective isotropic radiated power (EIRP).

4.1.2. Conducted Test Configuration and Procedure



1. Connect the equipment as shown in the above diagram.
2. Adjust the settings of the Tester to set the EUT to its maximum power at the required channel.
3. Record the output power level measured by the Tester.
4. Correct the measured level for all losses in the RF path.
5. Measurements are to be performed with the EUT set to the low, middle and high channel of each frequency band.

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4.1.3. Test Results

Test Mode	CH	Frequency (MHz)	Output Power (dBm)	Output Power (W)
WCDMA (Band Ⅱ)	9262	1852.40	24.07	0.255
	9400	1880.00	24.70	0.295
	9538	1907.60	24.40	0.275
WCDMA (BandⅤ)	4132	826.40	24.83	0.304
	4182	836.40	24.74	0.298
	4233	846.60	24.52	0.283
WCDMA/ HSDPA (Band Ⅱ)	9262	1852.40	24.03	0.253
	9400	1880.00	24.93	0,311
	9538	1907.60	24.45	0,279
WCDMA/ HSDPA (BandⅤ)	4132	826.40	24.56	0.286
	4182	836.40	24.72	0.296
	4233	846.60	24.40	0.275
WCDMA/ HSUPA (Band Ⅱ)	9262	1852.40	24.13	0.259
	9400	1880.00	24.77	0.3
	9538	1907.60	24.49	0.281
WCDMA/ HSUPA (BandⅤ)	4132	826.40	24.43	0.277
	4182	836.40	24.23	0.265
	4233	846.60	24.50	0.282

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Test Mode	CH	Frequency (MHz)	Output Power (dBm)	Output Power (W)
CDMA2000/1X BC0	1013	824.7	23.32	0.215
	384	836.52	23.48	0.223
	777	848.31	23.71	0.235
CDMA2000/1X BC1	25	1851.25	23.64	0.231
	600	1880	23.84	0.242
	1175	1908.75	23.52	0.225
CDMA2000/EVDO BC0	1013	824.7	23.50	0.224
	384	836.52	23.49	0.223
	777	848.31	23.59	0.229
CDMA2000/EVDO BC1	25	1851.25	23.58	0.228
	600	1880	23.72	0.236
	1175	1908.75	23.50	0.224

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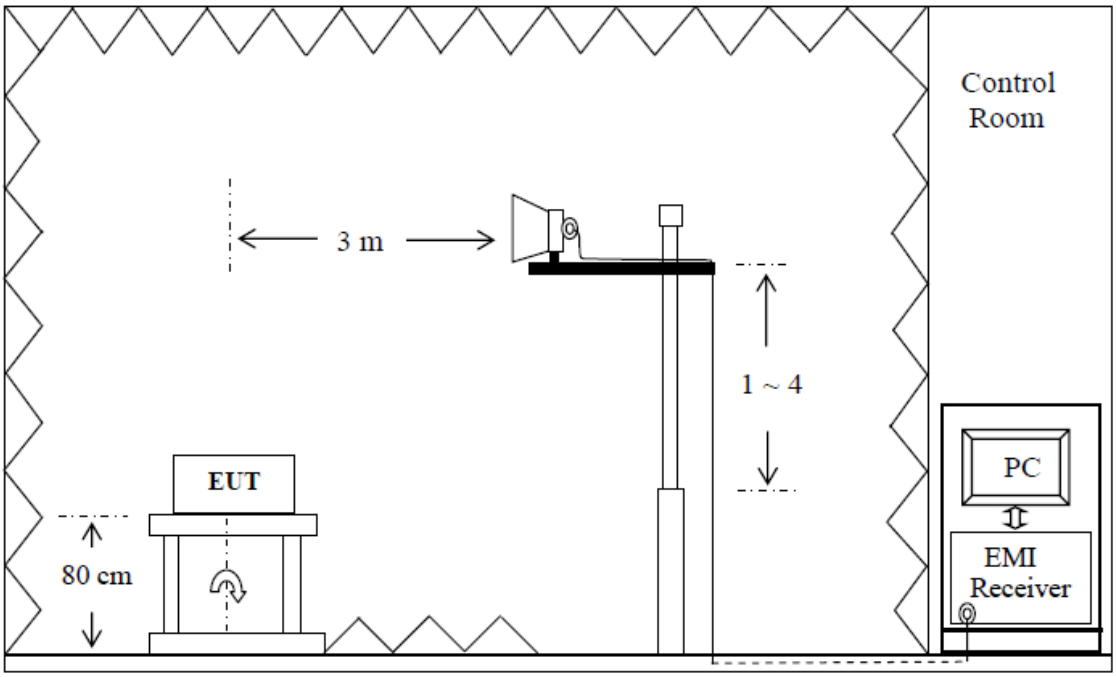
4.1.4. ERP & EIRP Test Configuration and Procedure



The EUT was placed on a turntable just above ground. The turntable rotates 360 degrees to determine the position of the maximum emission level. EUT was set 3 meters away from the receiving antenna, which were mounted on an antenna tower. The antenna can move up and down between 1 meter and 4 meter to find out the maximum emission level. Broadband antenna was used as receiving antenna. Both horizontal and vertical polarization of the antenna was set on measurement.

$$E = \frac{\sqrt{30 \times P \times G}}{D} \qquad PG(EIRP) = \frac{(E \times D)^2}{30}$$

E：Field Strength (V/m) PG：Equivalent Isotropic Radiated Power (W)

G：Antenna Gain D：distance (3m)

ERP= EIRP -2.15

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4.1.5. Test Results

WCDMA Test Data (Band Ⅱ)

Channel	Frequency (MHZ)	Antenna Polarity (H/V)	Reading Value (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)
9262	1852.4	V	76.4	31.4	107.8	12.6	33
	1852.4	H	73.2	31.4	104.6	9.4	33
9400	1880.0	V	78.5	31.6	110.1	14.9	33
	1880.0	H	72.9	31.6	104.5	9.3	33
9538	1907.6	V	78.3	31.7	110.1	14.8	33
	1907.6	H	72.5	31.7	104.2	9.0	33

WCDMA Test Data (Band Ⅴ)

Channel	Frequency (MHZ)	Antenna Polarity (H/V)	Reading Value (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	ERP (dBm)	Limit (dBm)
4132	826.4	V	74.5	24.7	99.2	1.9	38.45
	826.4	H	77.3	24.7	102.0	4.7	38.45
4182	836.4	V	75.2	24.8	100.0	2.6	38.45
	836.4	H	75.9	24.8	100.7	3.3	38.45
4233	846.6	V	74.1	25.0	99.1	1.8	38.45
	846.6	H	73.9	25.0	98.9	1.5	38.45

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss
2. Emission Level = Reading Value + Calibration Factor

WCDMA Test Data (Band Ⅱ)

WCDMA/ HSDPA Test Data (Band Ⅱ)Channel	Frequency (MHZ)	Antenna Polarity (H/V)	Reading Value (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)
9262	1852.4	V	77.0	31.4	108.4	13.2	33
	1852.4	H	73.6	31.4	105.0	9.8	33
9400	1880.0	V	72.7	31.6	104.3	9.1	33
	1880.0	H	72.6	31.6	104.2	9.0	33
9538	1907.6	V	76.8	31.7	108.5	13.3	33
	1907.6	H	71.9	31.7	103.6	8.4	33

WCDMA/HSDPA Test Data (Band Ⅴ)

Channel	Frequency (MHZ)	Antenna Polarity (H/V)	Reading Value (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	ERP (dBm)	Limit (dBm)
4132	826.4	V	75.3	24.7	100.0	2.6	38.45
	826.4	H	77.2	24.7	101.9	4.5	38.45
4182	836.4	V	75.8	24.8	100.6	3.2	38.45
	836.4	H	75.8	24.8	100.6	3.3	38.45
4233	846.6	V	74.2	25.0	99.2	1.8	38.45
	846.6	H	73.9	25.0	98.9	1.5	38.45

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss
2. Emission Level = Reading Value + Calibration Factor

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WCDMA/HSUPA Test Data (Band Ⅱ)

Channel	Frequency (MHZ)	Antenna Polarity (H/V)	Reading Value (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)
9262	1852.4	V	76.3	31.4	107.7	12.5	33
	1852.4	H	72.8	31.4	104.2	9.0	33
9400	1880.0	V	78.3	31.6	109.9	14.7	33
	1880.0	H	72.6	31.6	104.2	9.0	33
9538	1907.6	V	77.6	31.7	109.3	14.1	33
	1907.6	H	71.9	31.7	103.6	8.4	33

WCDMA/HSUPA Test Data (Band Ⅴ)

Channel	Frequency (MHZ)	Antenna Polarity (H/V)	Reading Value (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	ERP (dBm)	Limit (dBm)
4132	826.4	V	75.2	24.7	99.9	2.5	38.45
	826.4	H	74.2	24.7	98.9	1.5	38.45
4182	836.4	V	75.2	24.8	100.0	1.7	38.45
	836.4	H	75.7	24.8	100.5	3.2	38.45
4233	846.6	V	74.2	25.0	99.2	1.8	38.45
	846.6	H	73.9	25.0	98.9	1.5	38.45

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss
2. Emission Level = Reading Value + Calibration Factor

CDMA2000/1X Test Data (BC0)

Channel	Frequency (MHZ)	Antenna Polarity (H/V)	Reading Value (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	ERP (dBm)	Limit (dBm)
1013	824.7	V	91.1	24.7	115.8	18.5	38.45
	824.7	H	87.3	24.7	112.0	14.6	38.45
384	836.52	V	90.1	24.8	114.9	17.6	38.45
	836.52	H	90.2	24.8	115.0	17.7	38.45
777	848.31	V	92.3	25.0	117.3	20.0	38.45
	848.31	H	92.3	25.0	117.3	19.9	38.45

CDMA2000/1X Test Data (BC1)

Channel	Frequency (MHZ)	Antenna Polarity (H/V)	Reading Value (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)
25	1851.25	V	92.0	31.4	123.4	28.2	33
	1851.25	H	91.7	31.4	123.1	27.9	33
600	1880	V	89.2	31.6	120.8	25.6	33
	1880	H	89.2	31.6	120.8	25.6	33
1175	1908.75	V	87.5	31.7	119.2	24.0	33
	1908.75	H	87.6	31.7	119.3	24.1	33

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss
2. Emission Level = Reading Value + Calibration Factor

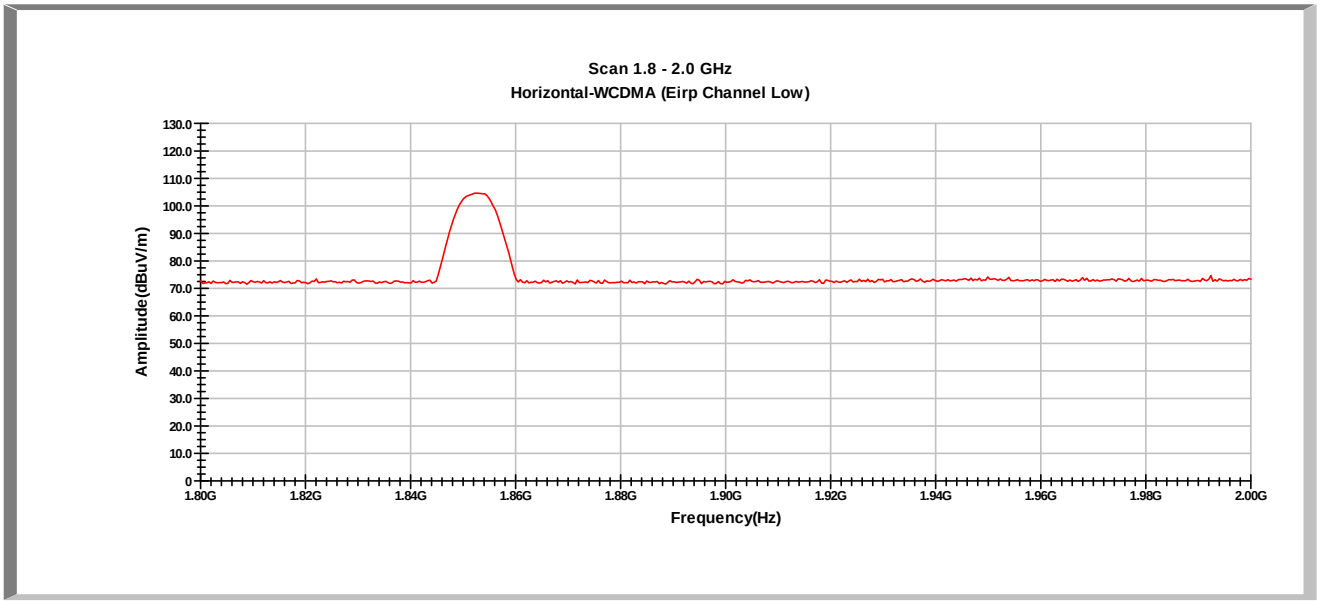
CDMA2000/EVDO Test Data (BC0)

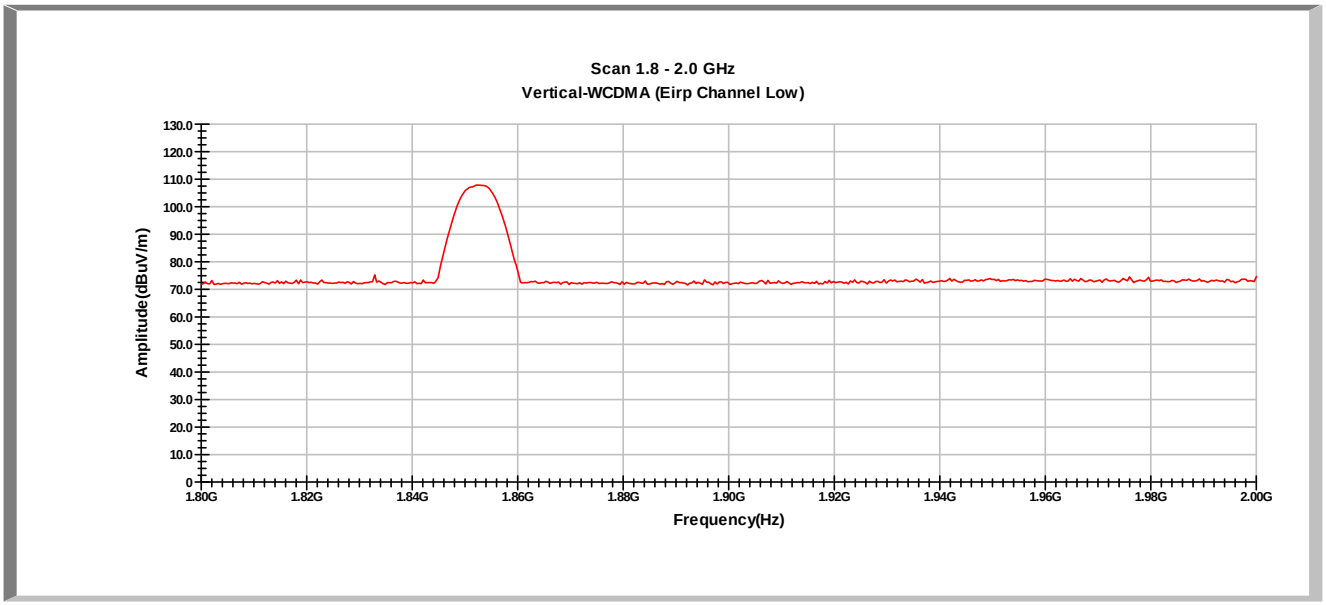
Channel	Frequency (MHZ)	Antenna Polarity (H/V)	Reading Value (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	ERP (dBm)	Limit (dBm)
1013	824.7	V	91.7	24.7	116.4	19.1	38.45
	824.7	H	87.3	24.7	112.0	14.6	38.45
384	836.52	V	90.2	24.8	115.0	17.6	38.45
	836.52	H	90.2	24.8	115.0	17.6	38.45
777	848.31	V	92.2	25.0	117.2	19.9	38.45
	848.31	H	92.2	25.0	117.2	19.9	38.45

CDMA2000/EVDO Test Data (BC1)

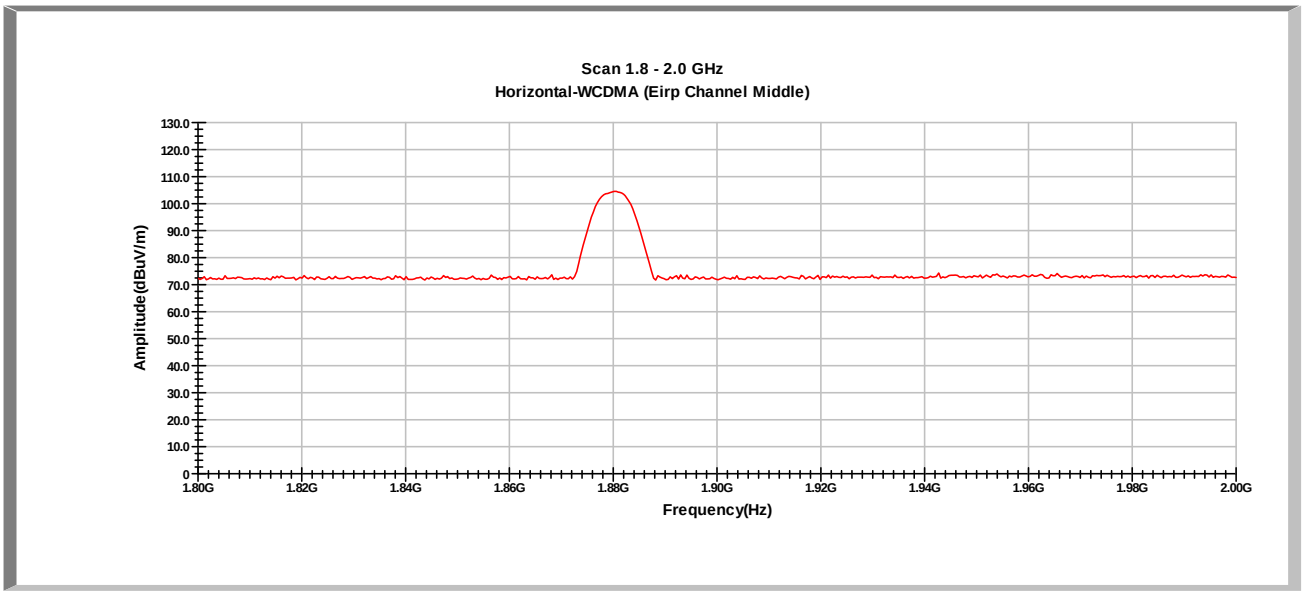
Channel	Frequency (MHZ)	Antenna Polarity (H/V)	Reading Value (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)
25	1851.25	V	91.6	31.4	123.0	27.8	33
	1851.25	H	87.8	31.4	119.2	24.0	33
600	1880	V	89.4	31.6	121.0	25.8	33
	1880	H	89.4	31.6	121.0	25.8	33
1175	1908.75	V	87.5	31.7	119.2	24.0	33
	1908.75	H	87.7	31.7	119.4	24.0	33

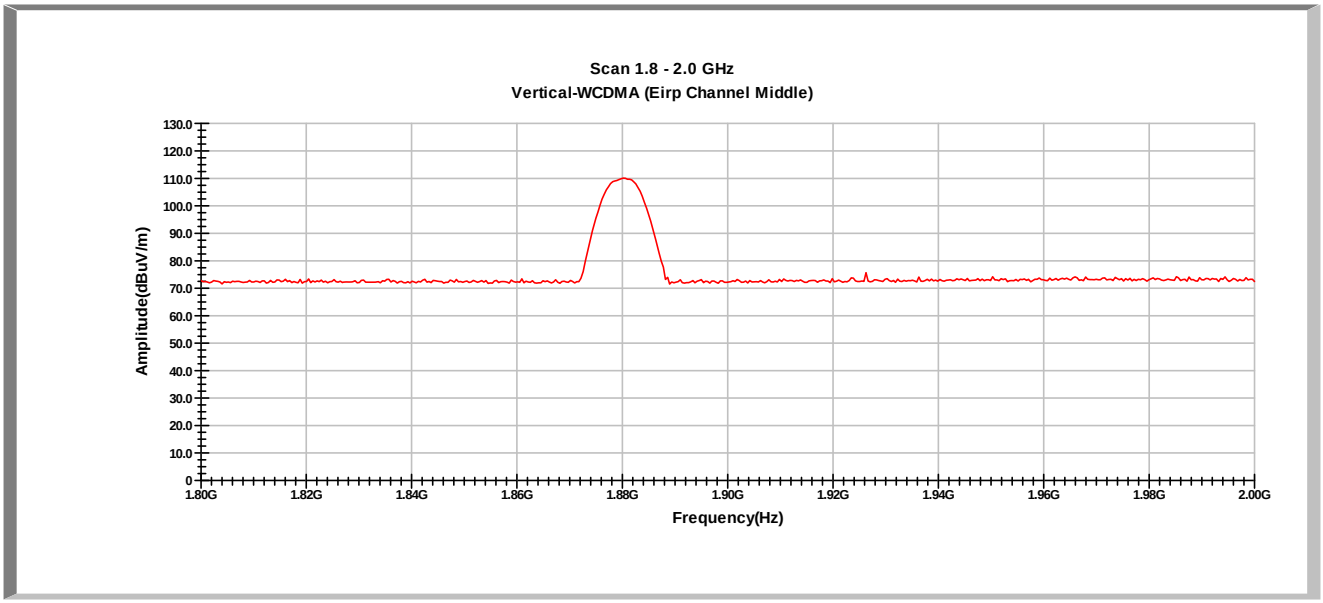
Remark: 1. Calibration Factor = Antenna Factor + Cable Loss
2. Emission Level = Reading Value + Calibration Factor





WCDMA Test Data (Band Ⅱ) CH Low





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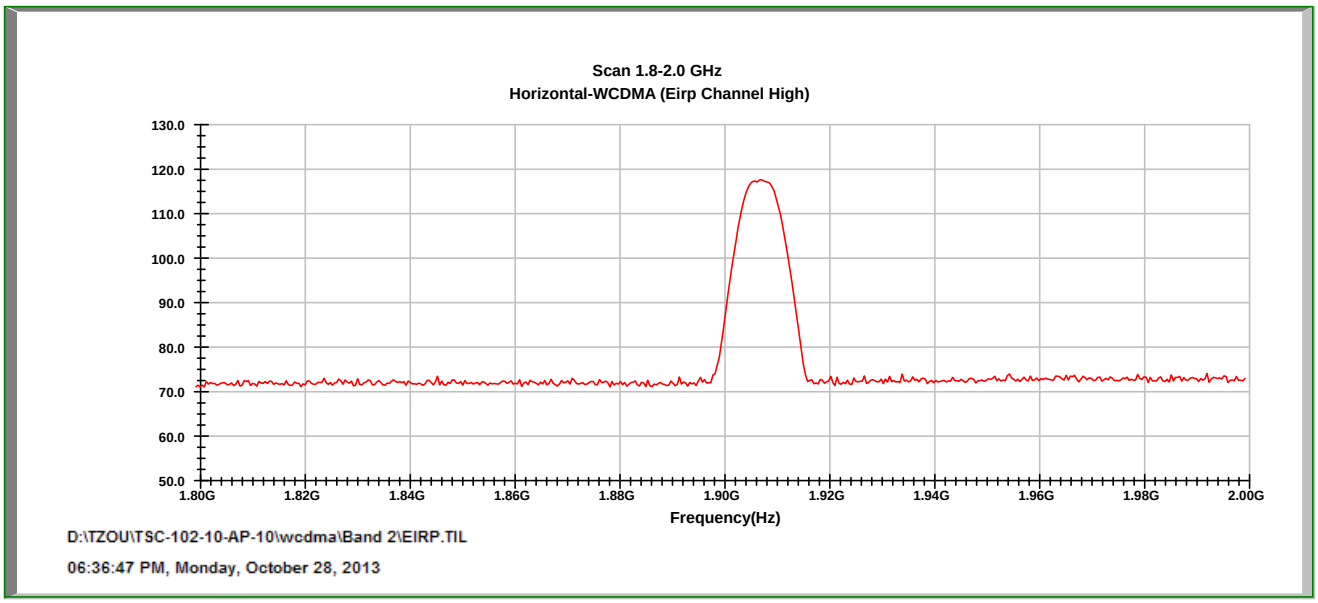

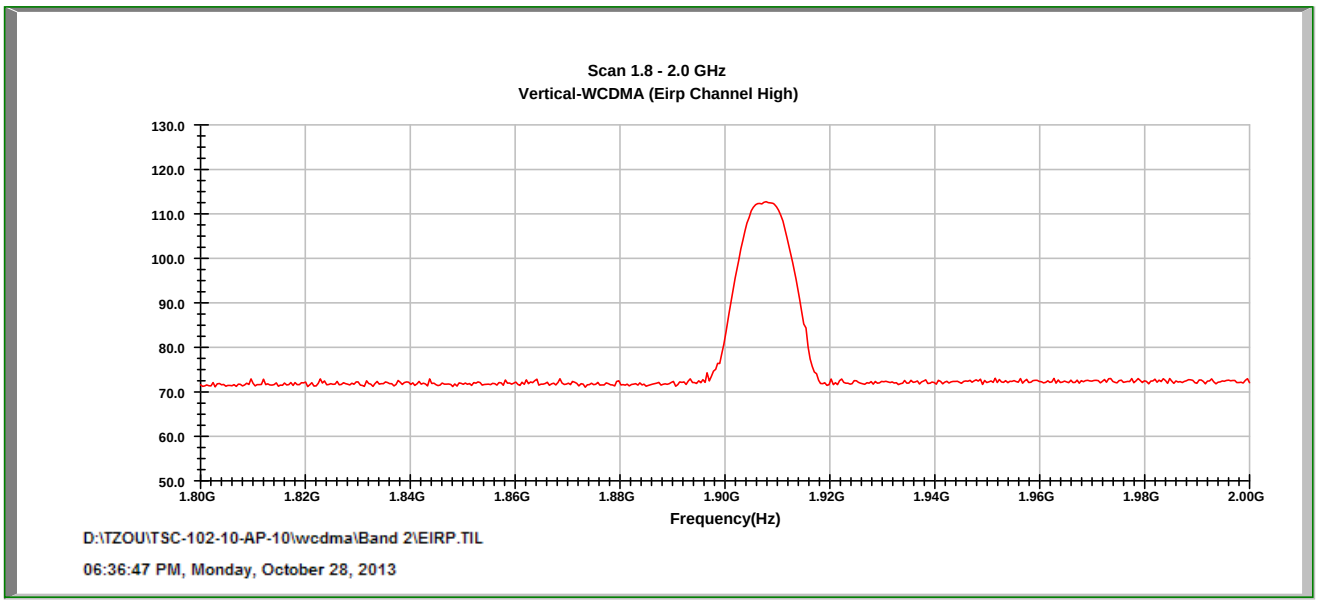

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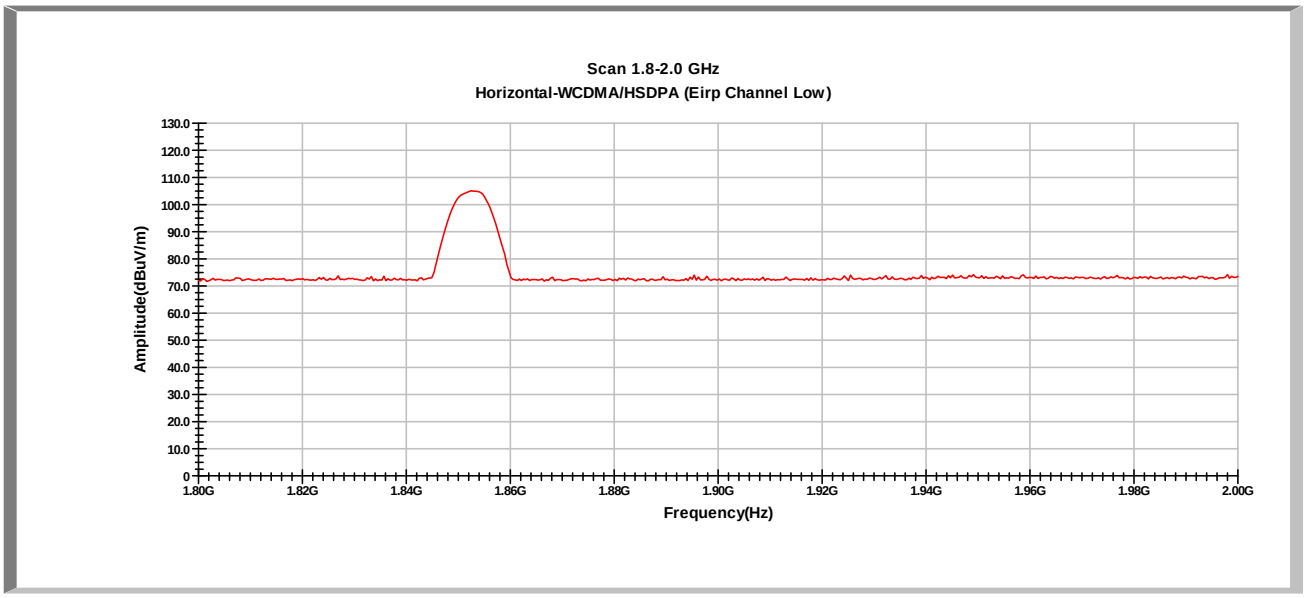
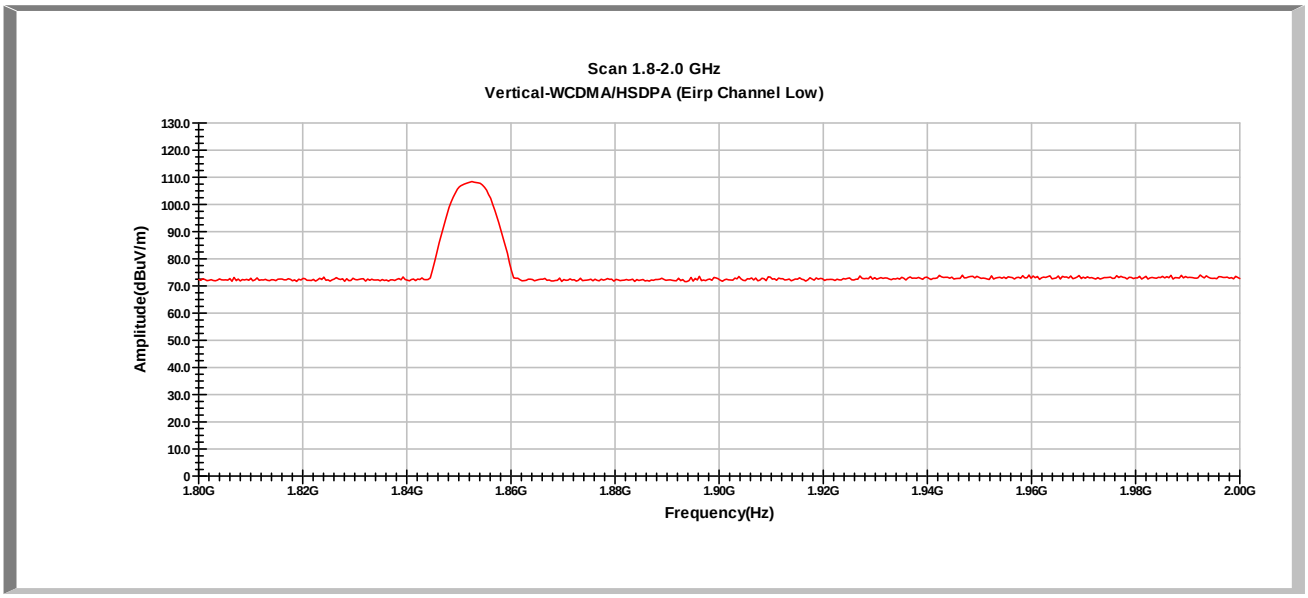
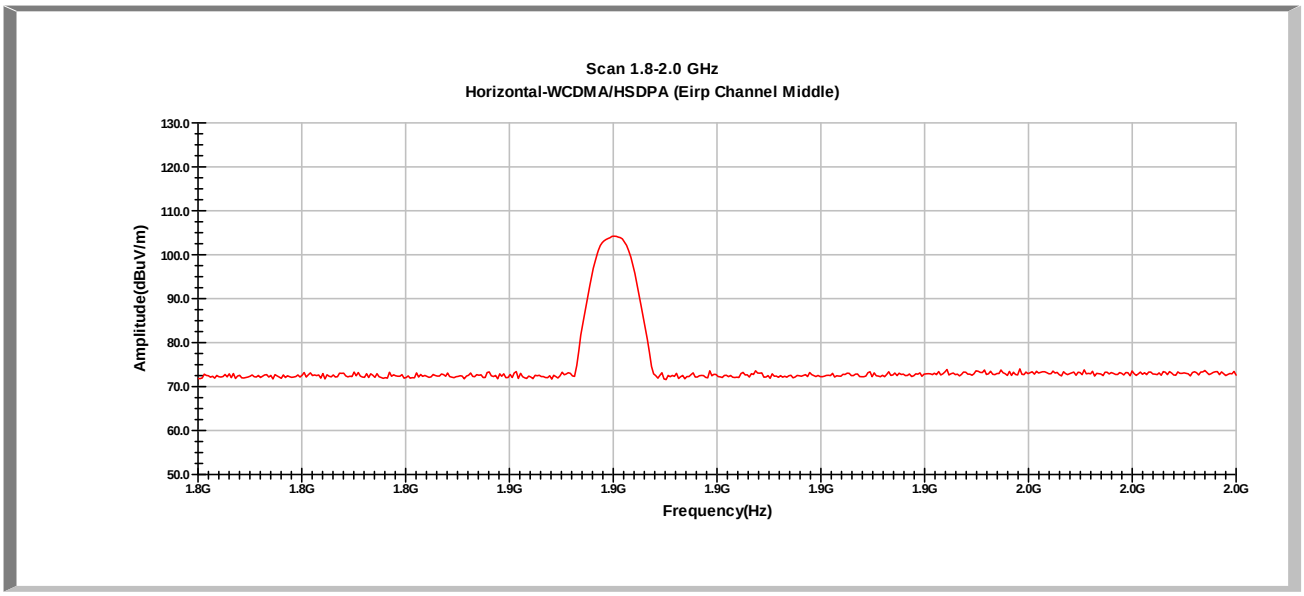
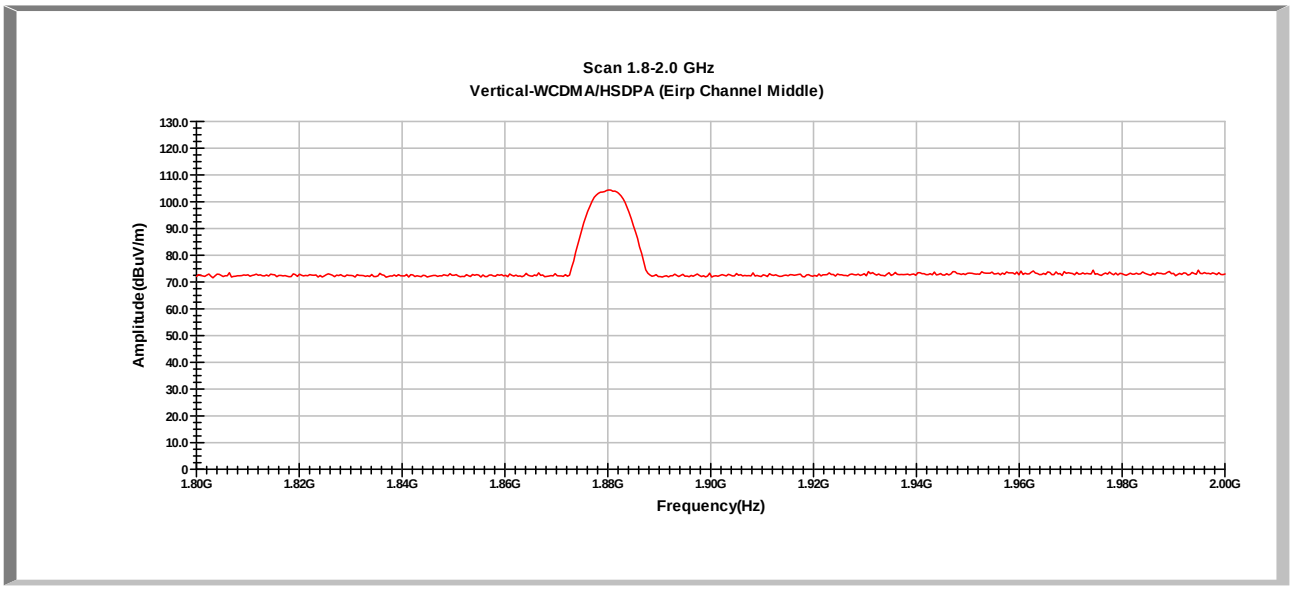


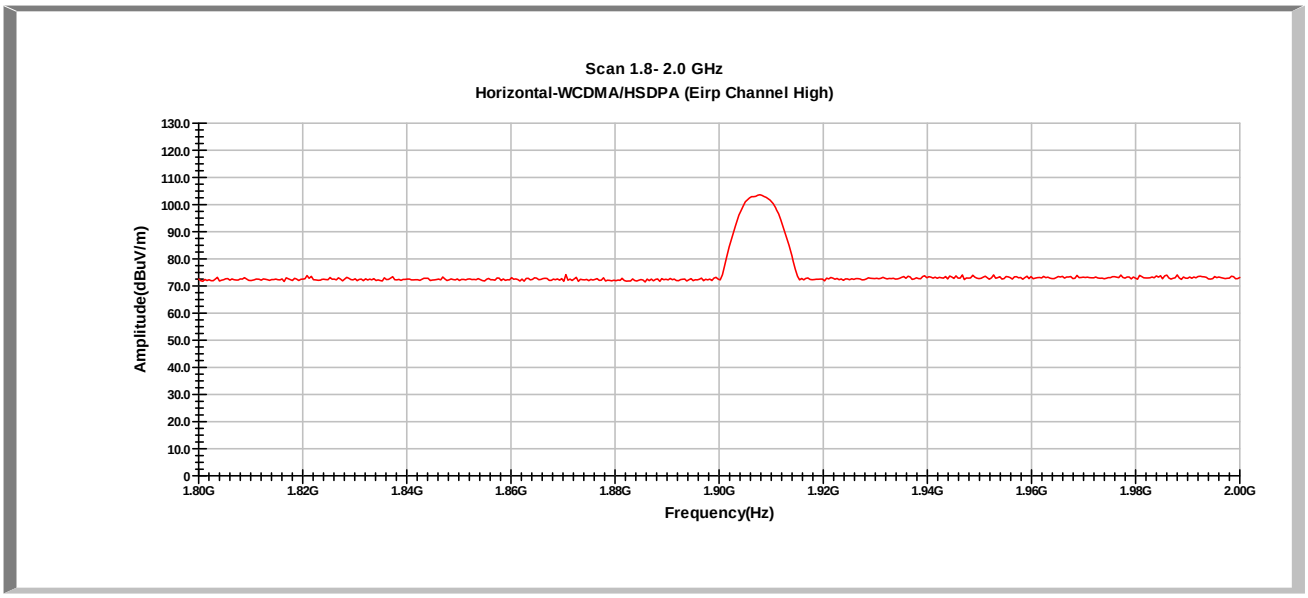


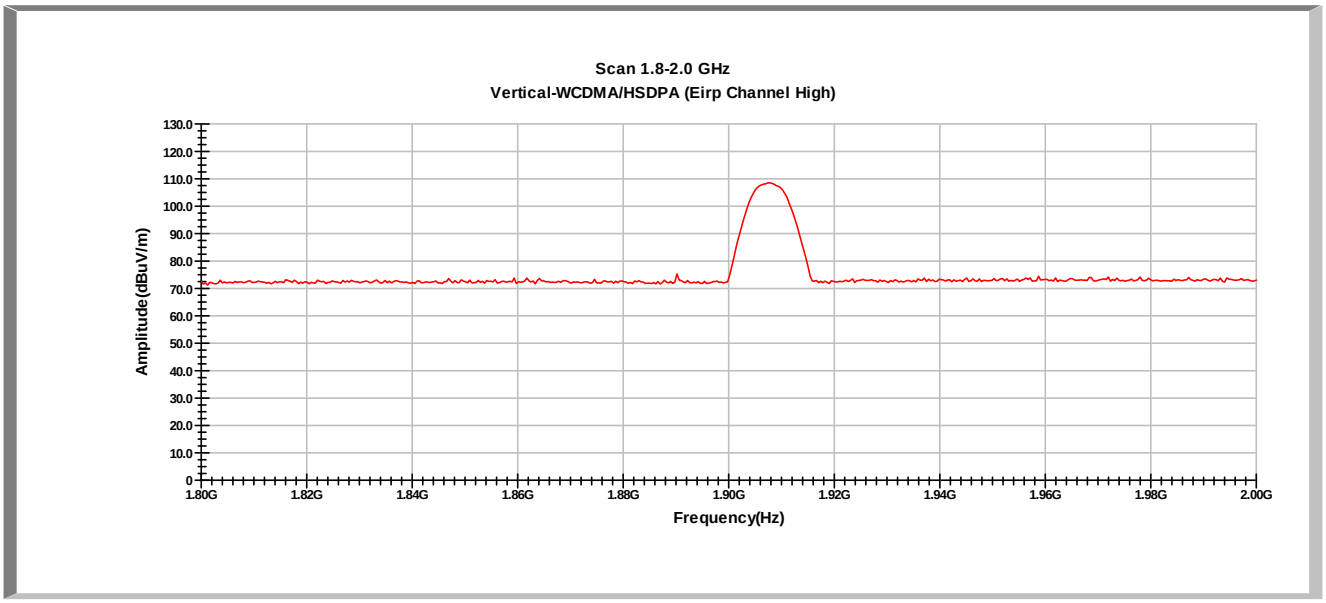
WCDMA/HSDPA Test Data (Band Ⅱ) CH Low



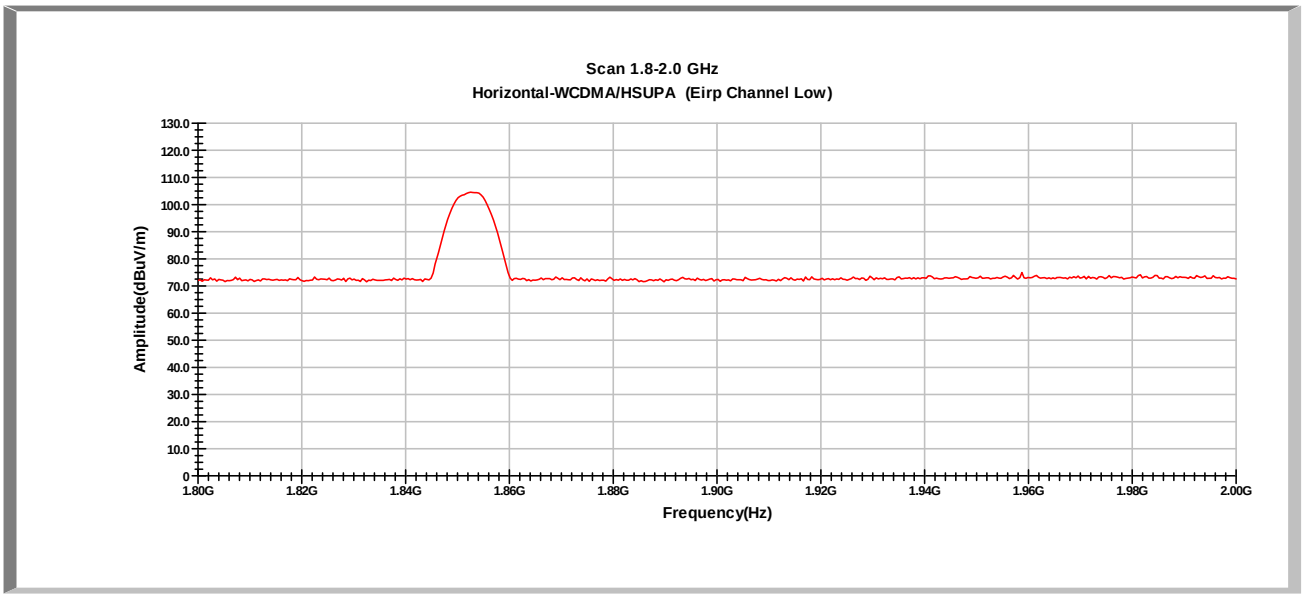


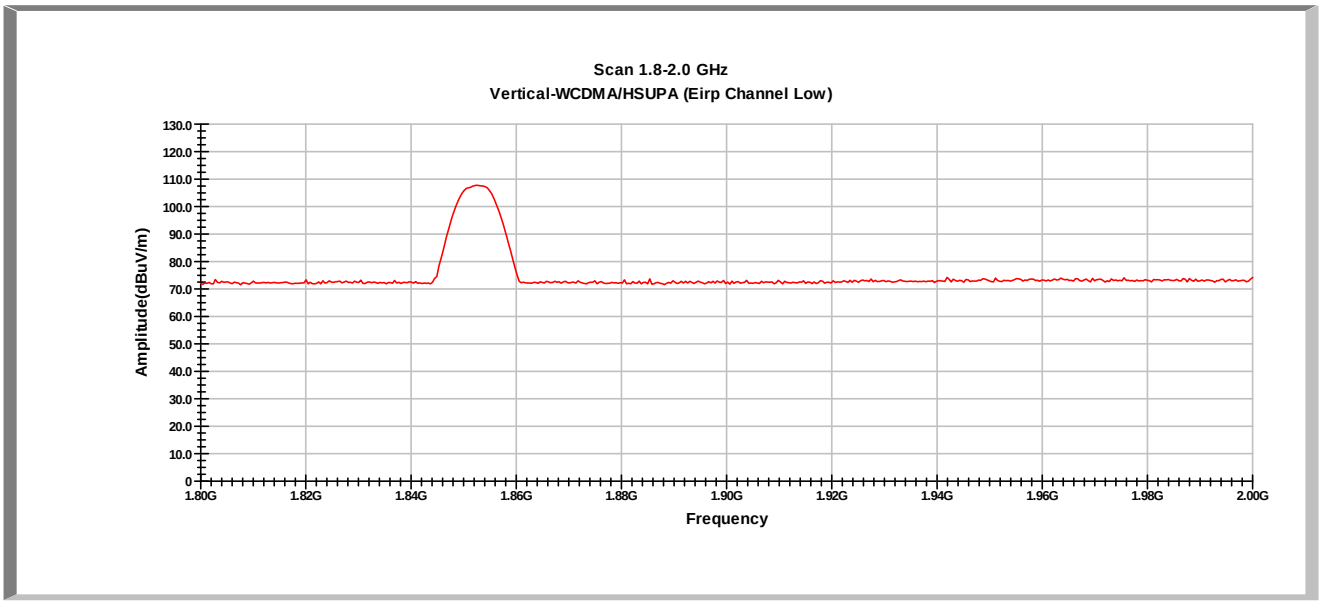
WCDMA/HSDPA Test Data(Band Ⅱ) CH Mid



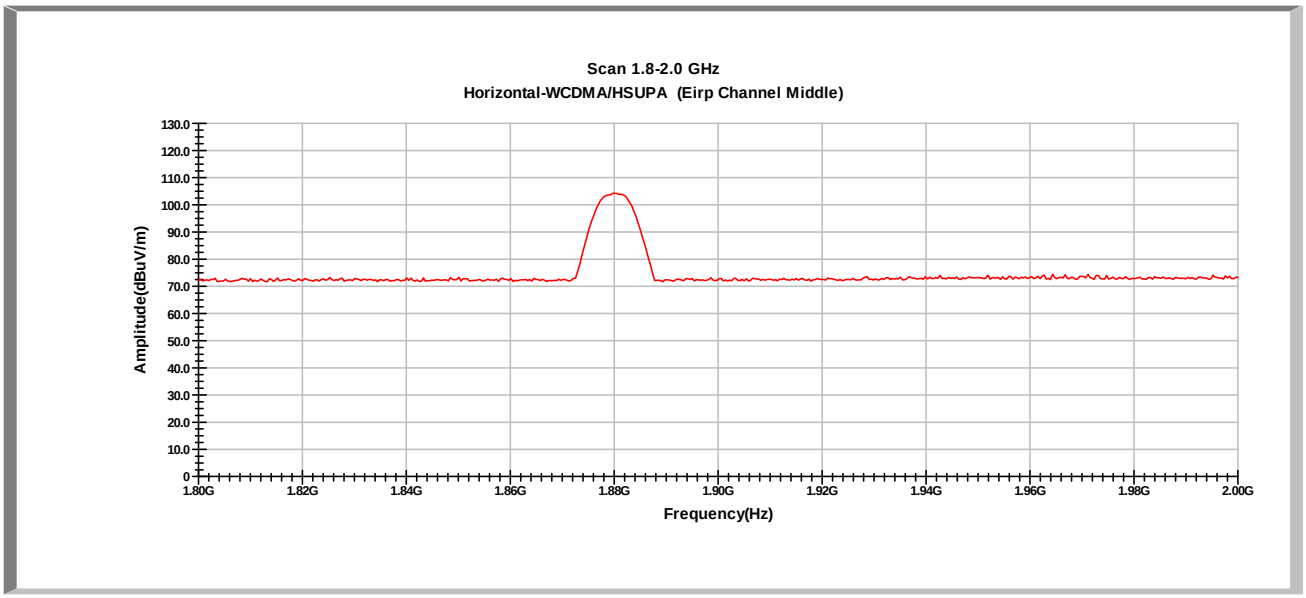


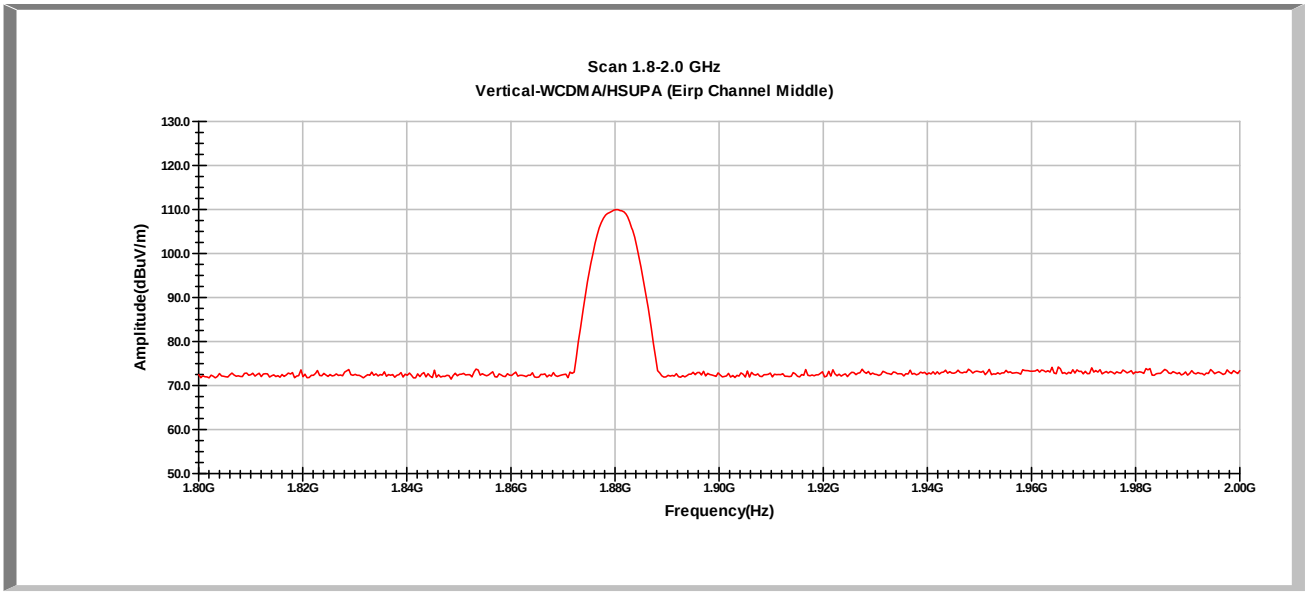
WCDMA/HSDPA Test Data(Band Ⅱ) CH High



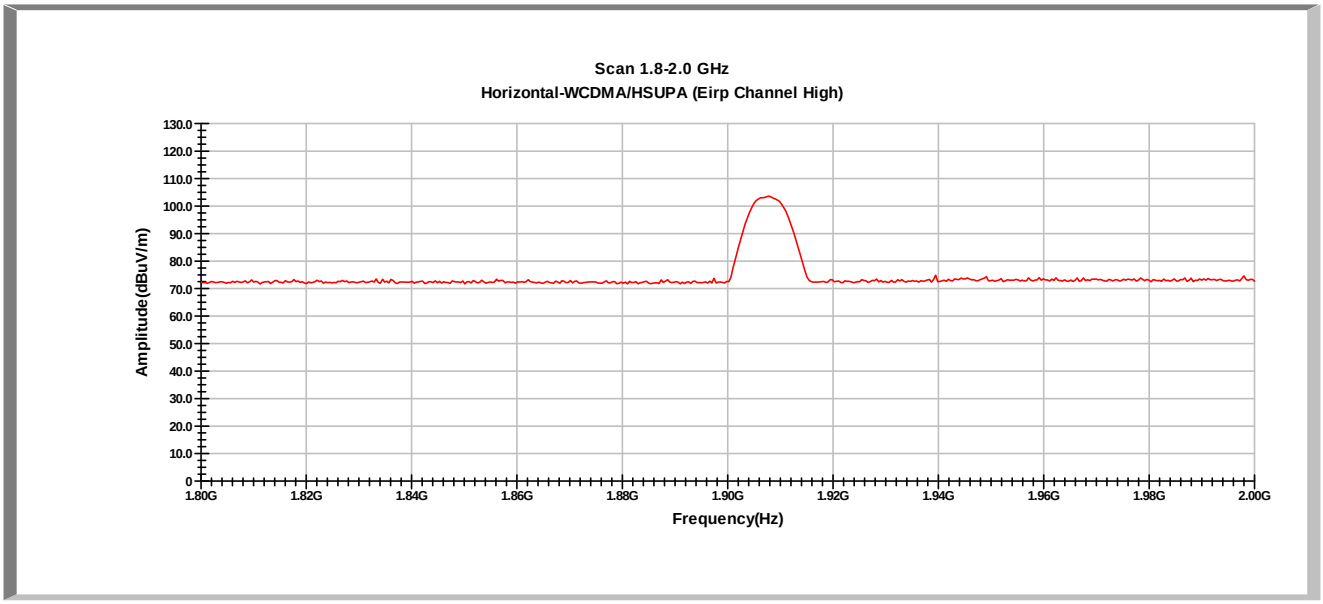


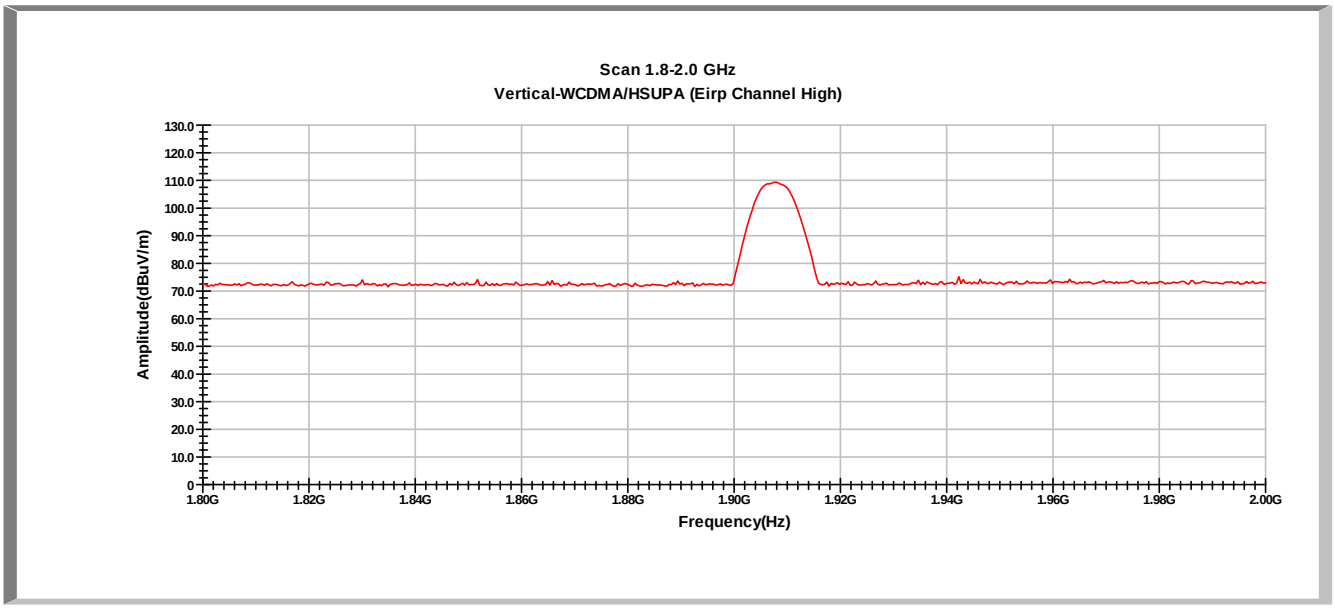
WCDMA/HSUPA Test Data(Band Ⅱ) CH Low



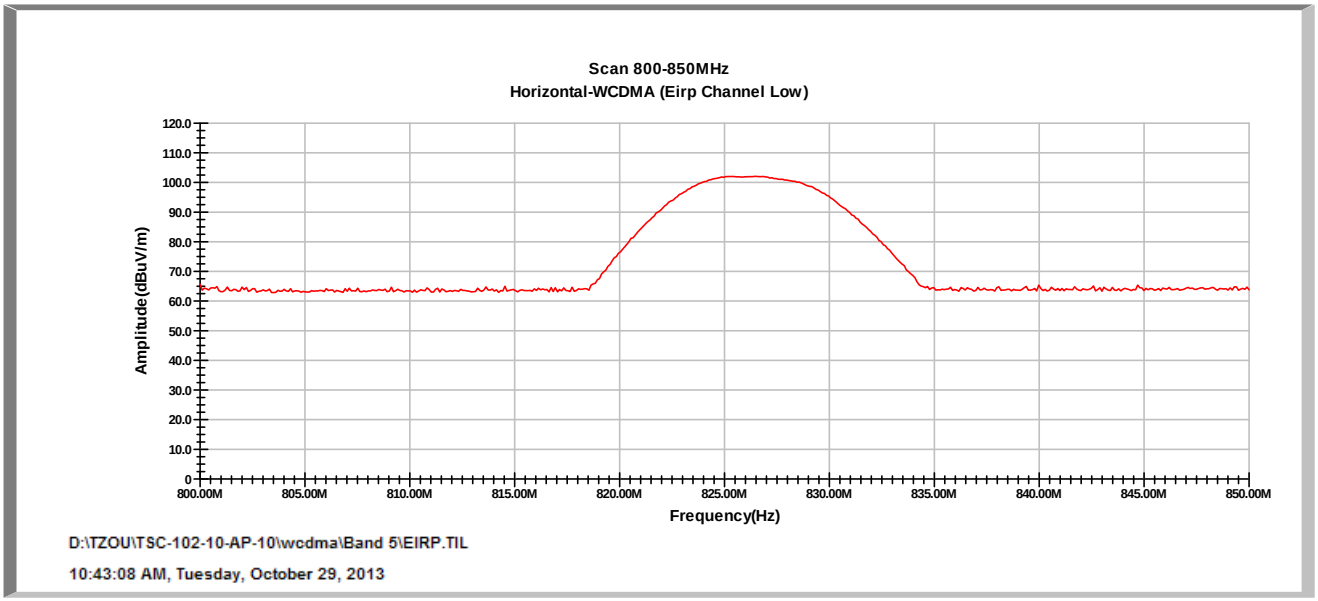


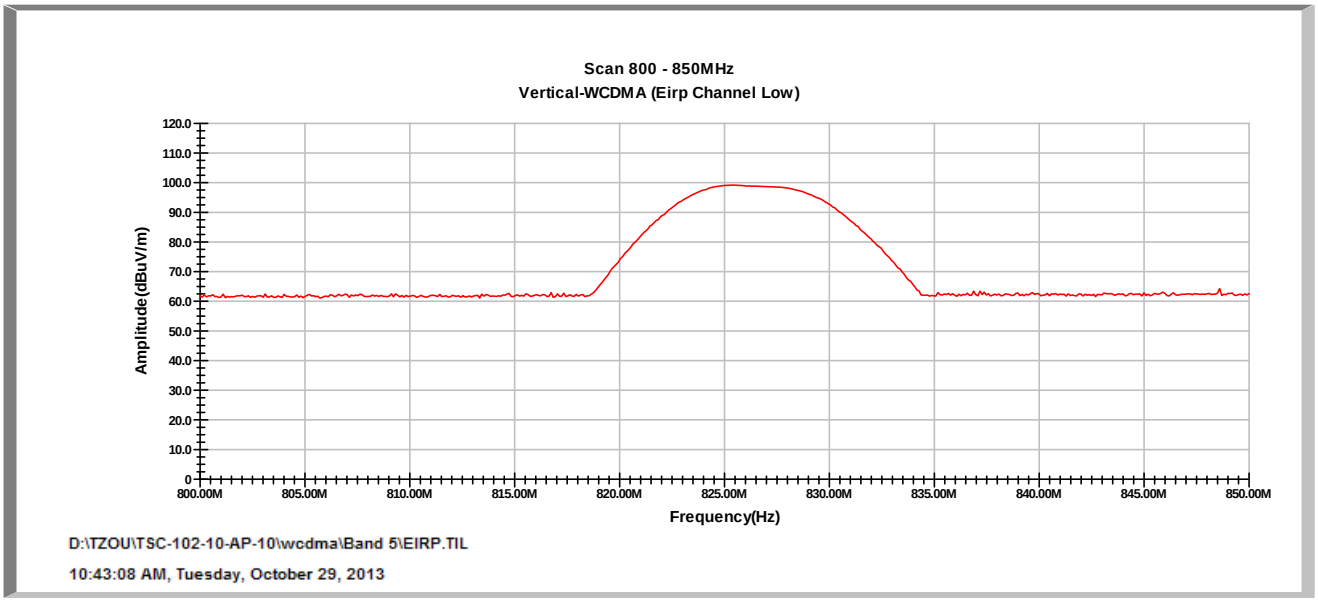
WCDMA/HSUPA Test Data(Band Ⅱ) CH Mid



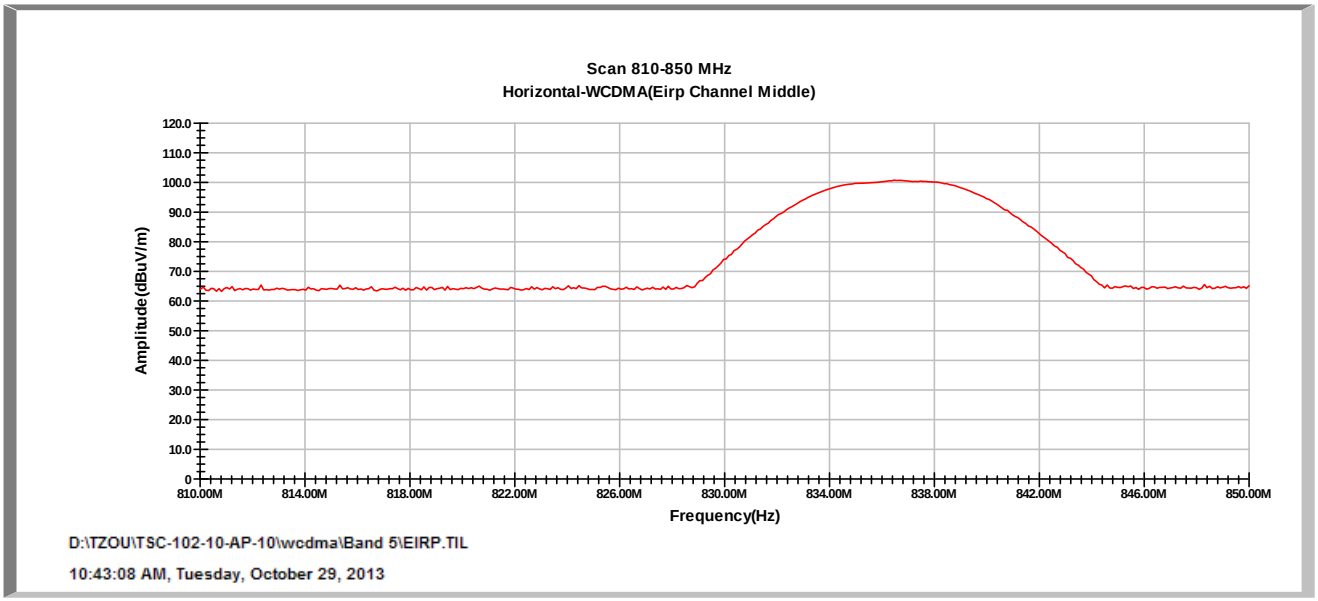


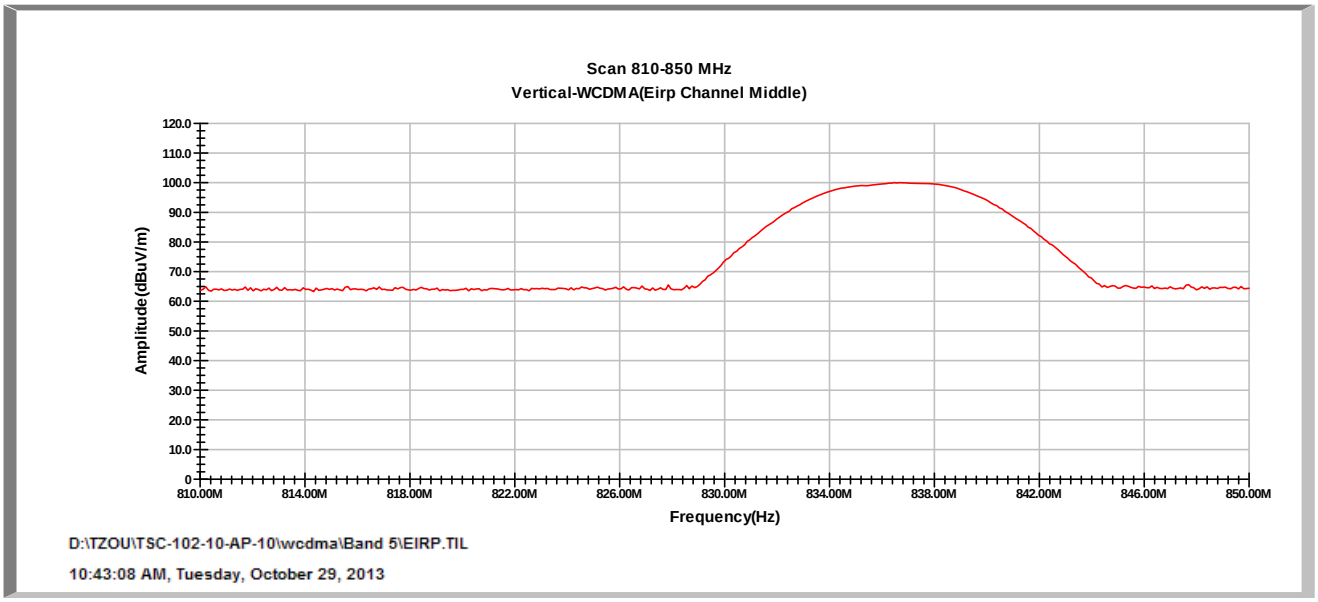
WCDMA/HSUPA Test Data(Band Ⅱ) CH High



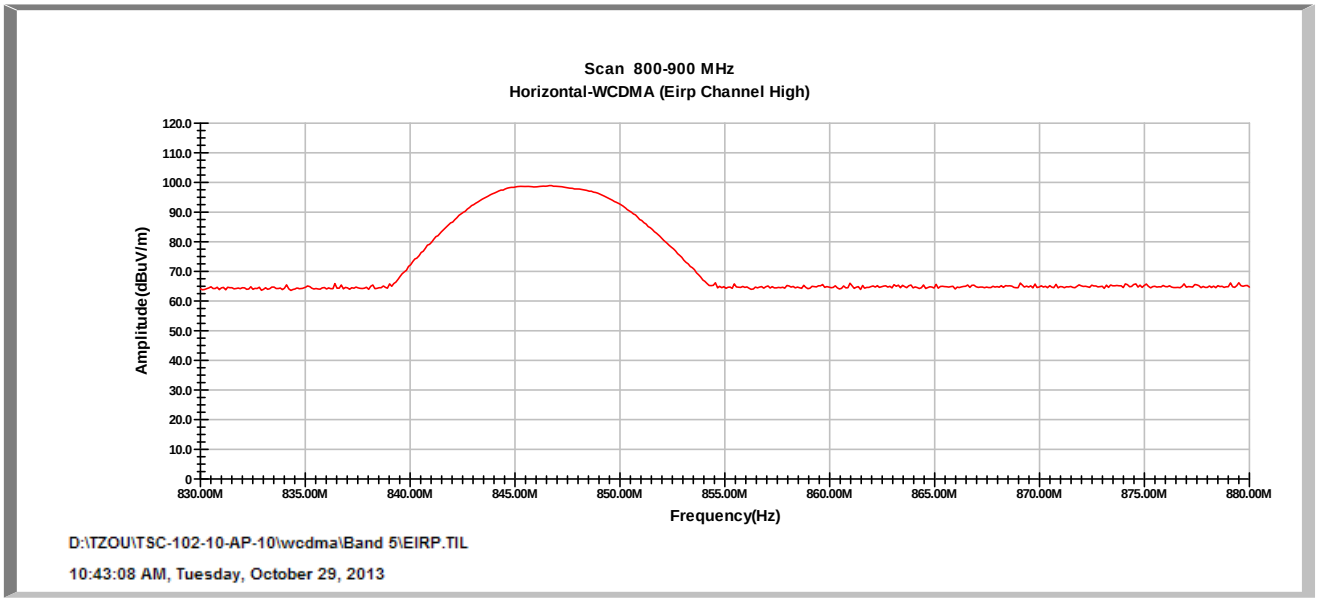


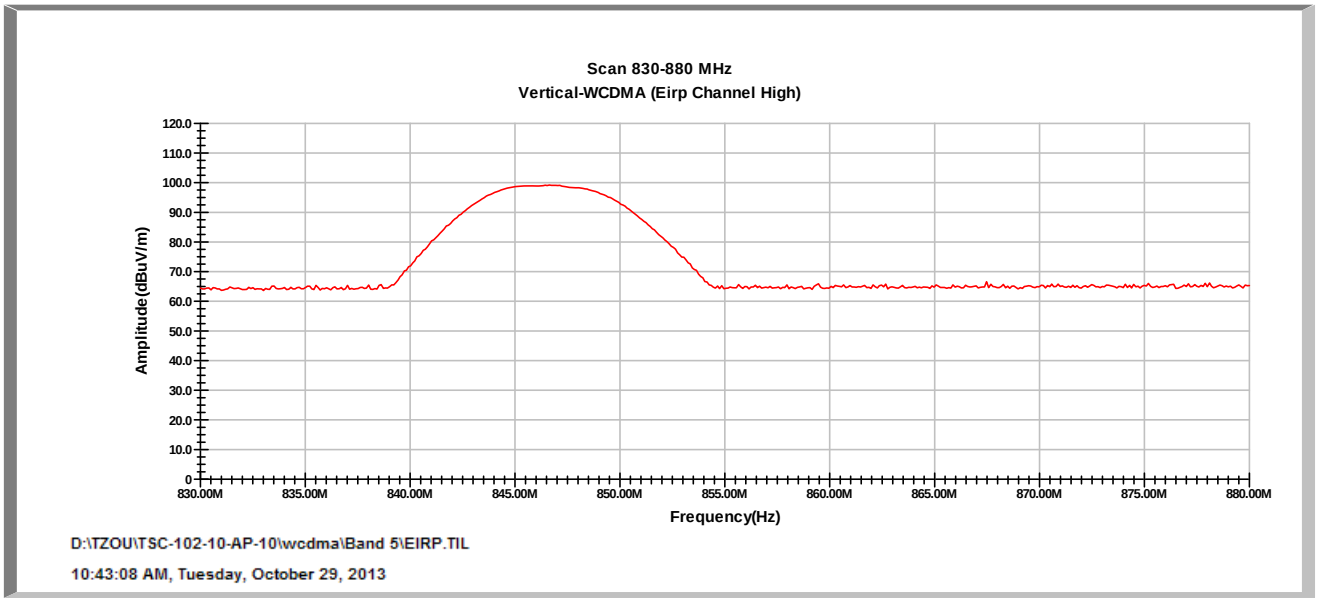
WCDMA Test Data(Band Ⅴ) CH Low



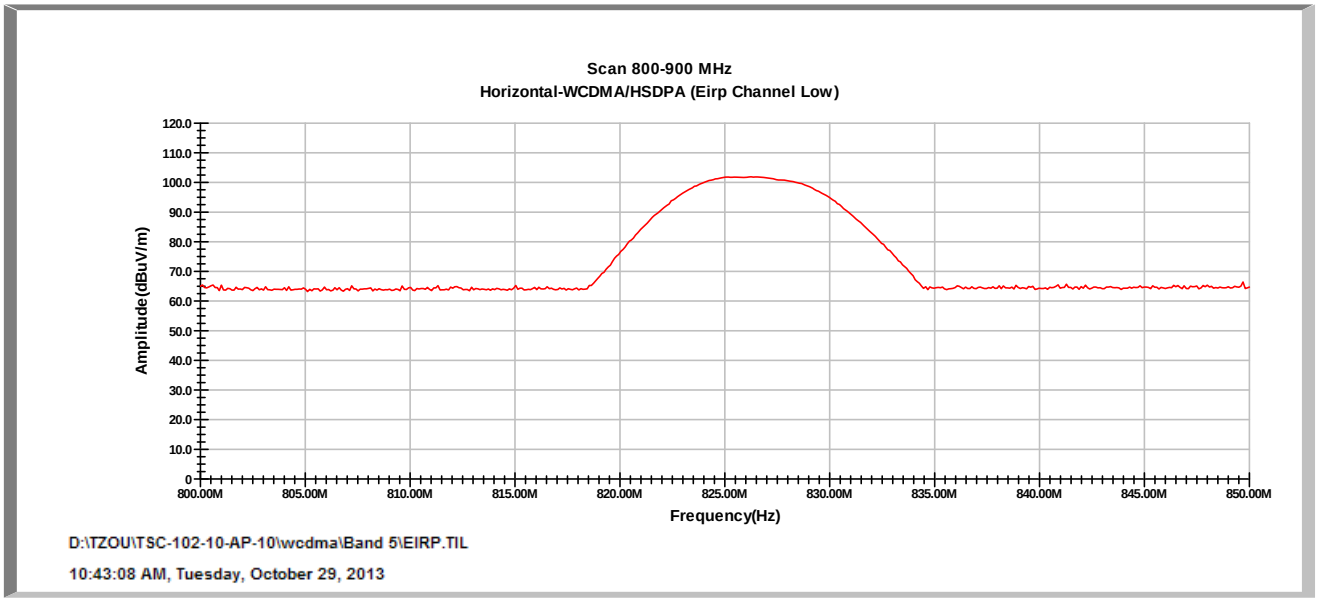


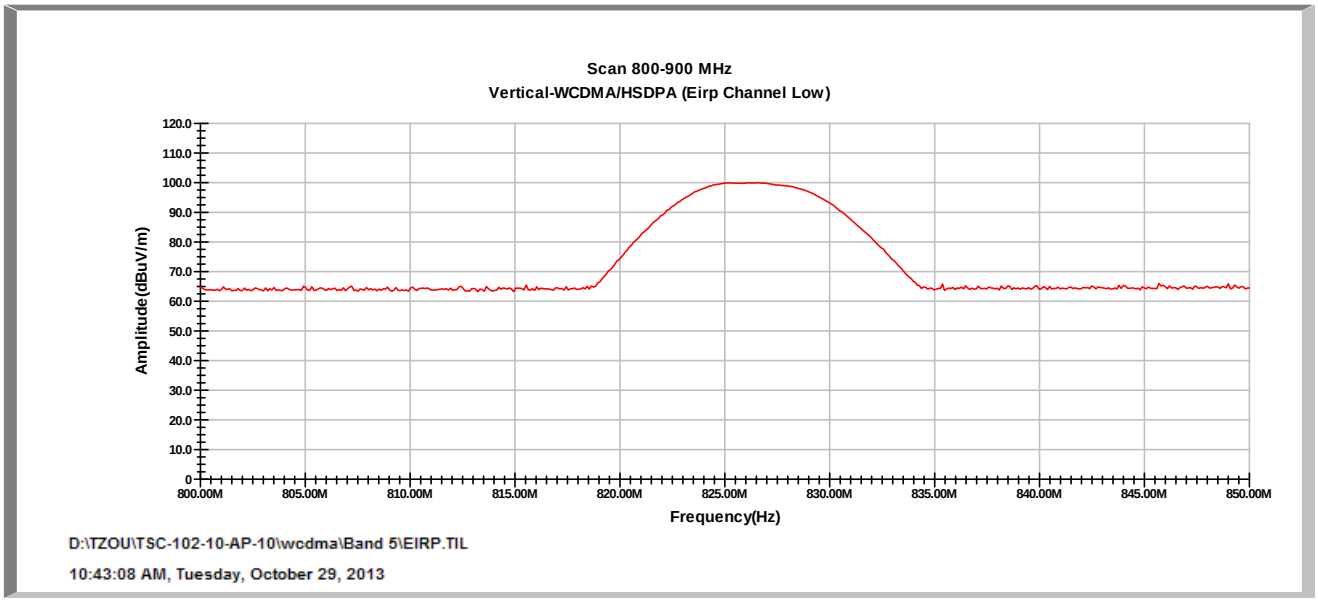
WCDMA Test Data(Band Ⅴ) CH Mid



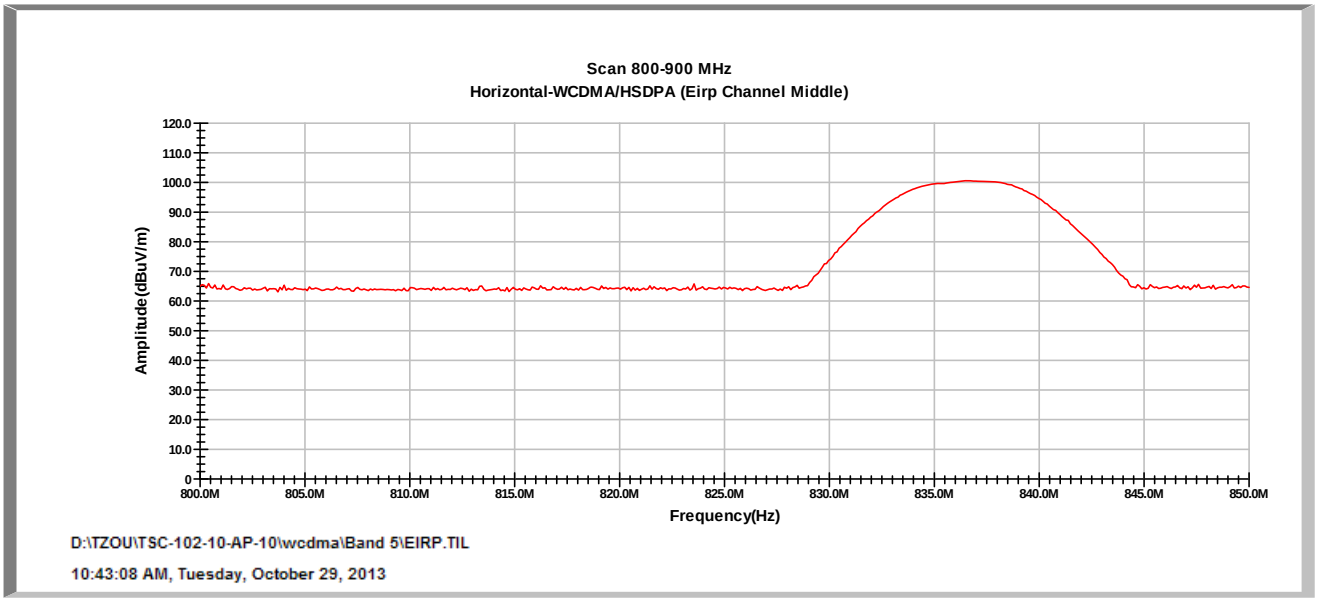


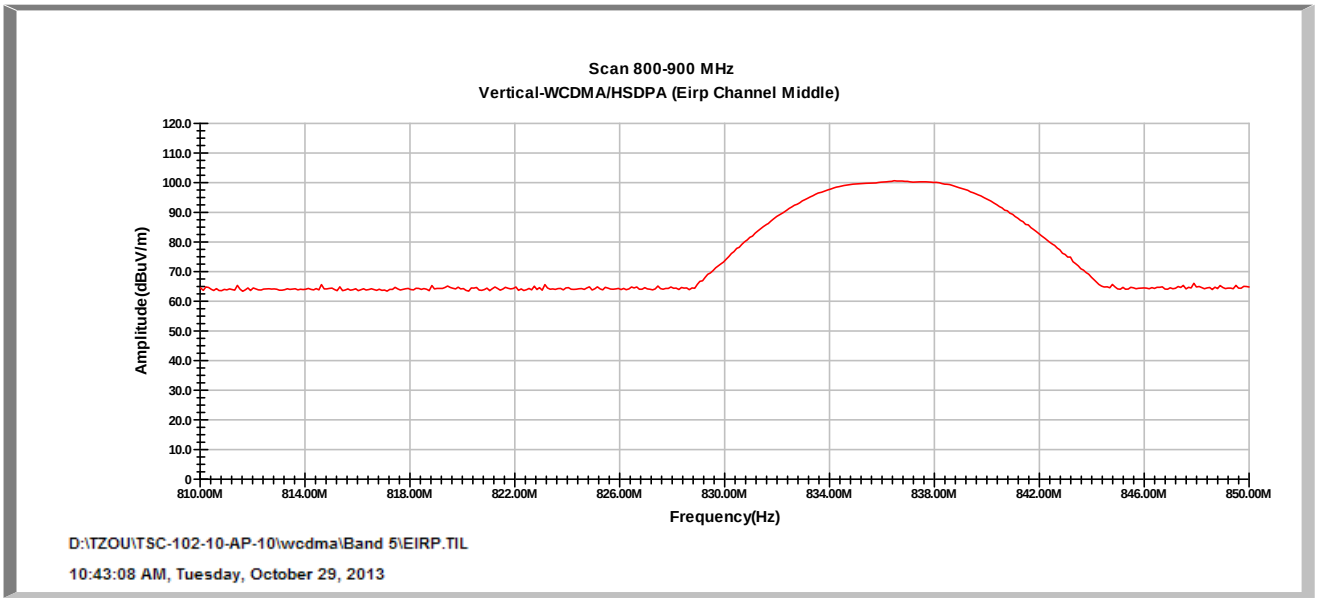
WCDMA Test Data(Band Ⅴ) CH High



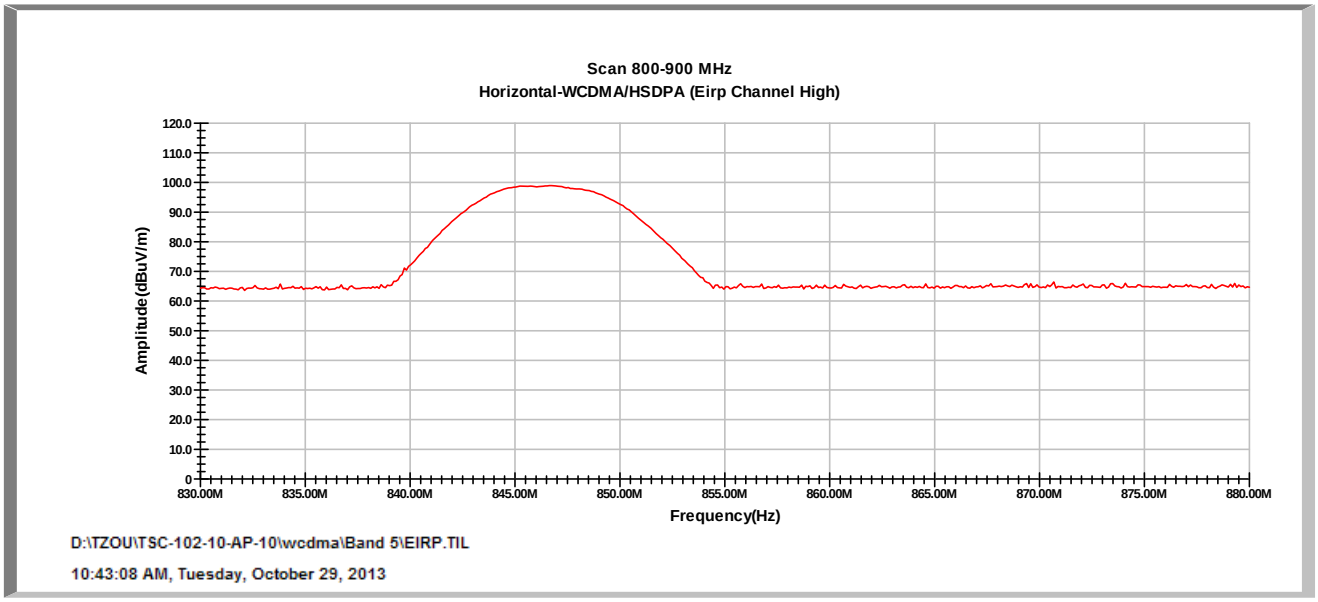


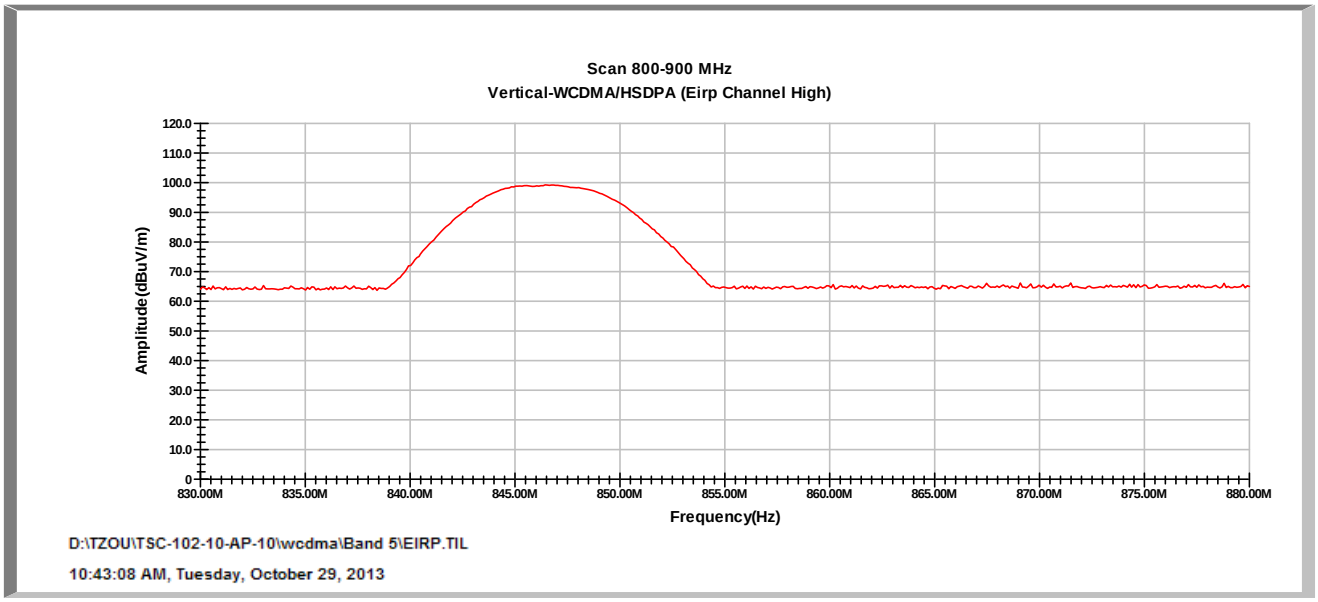
WCDMA/HSDPA Test Data(Band Ⅴ) CH Low



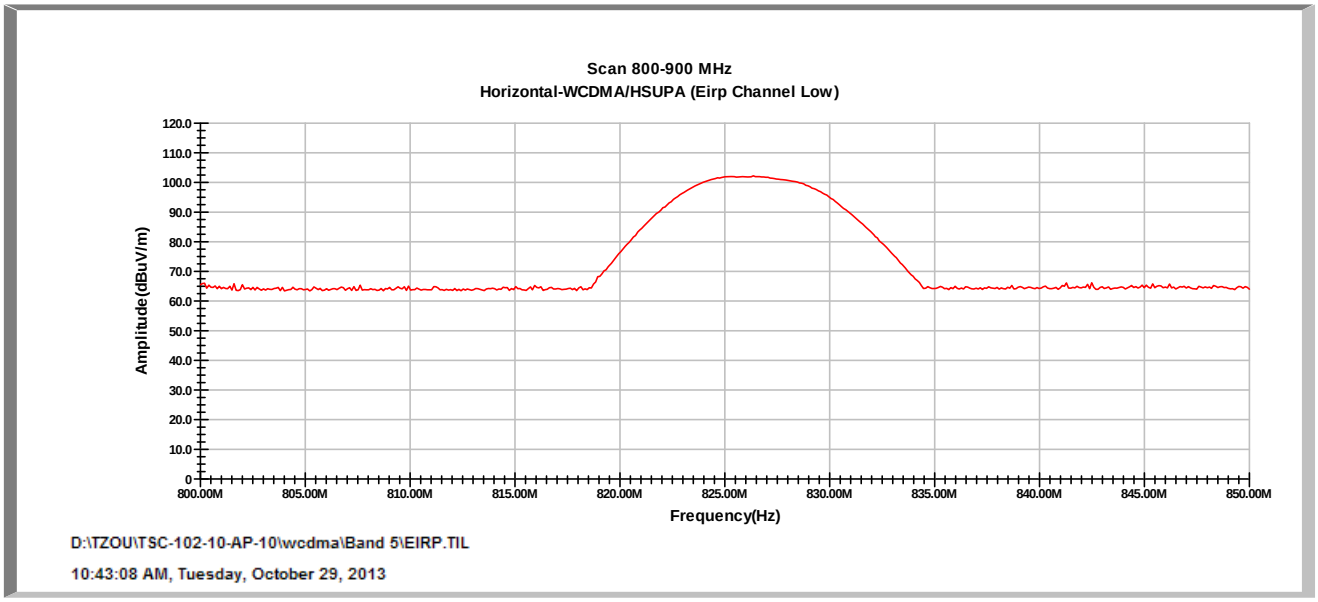


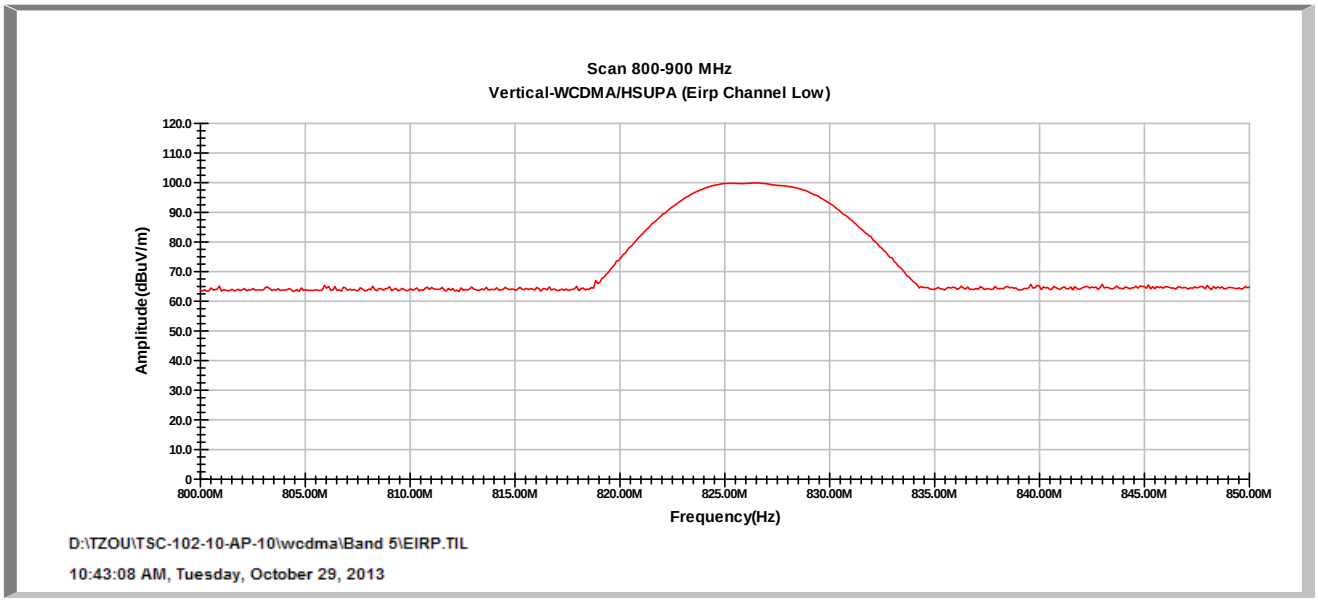
WCDMA/HSDPA Test Data(Band Ⅴ) CH Mid



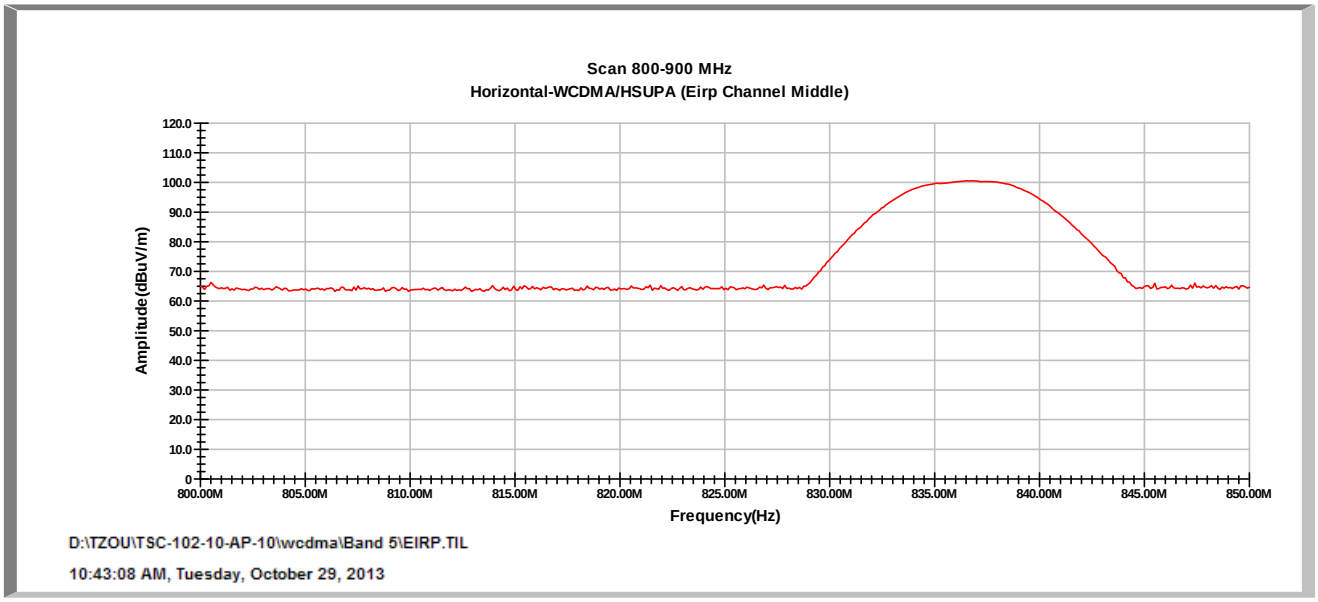


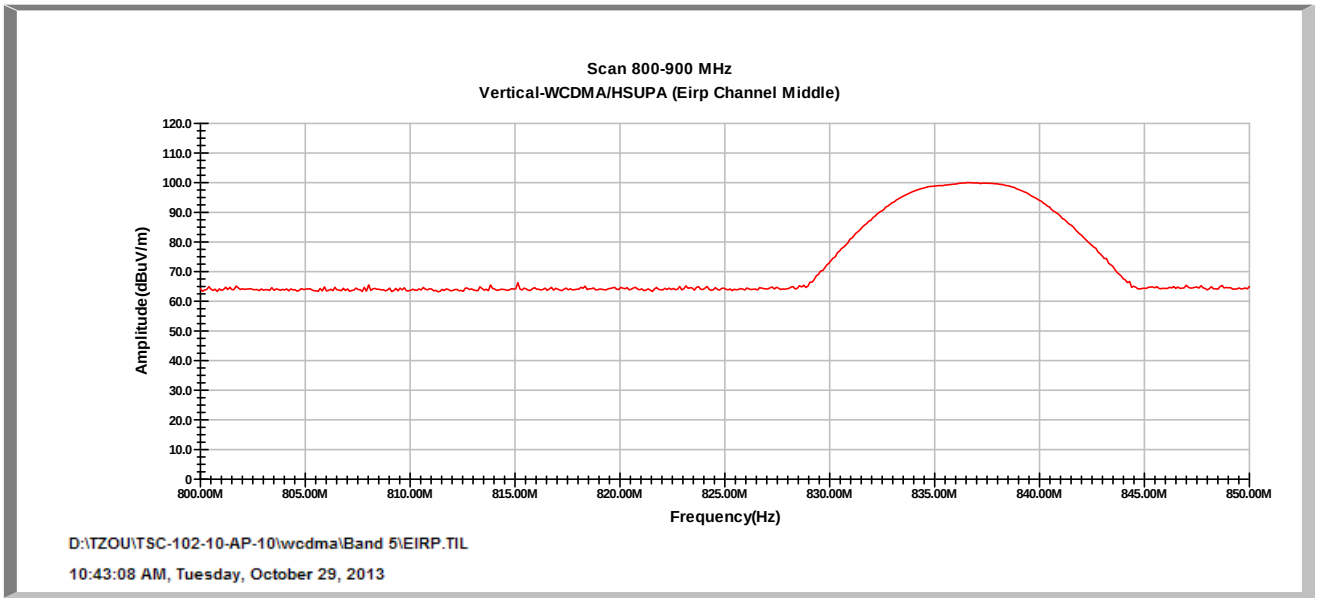
WCDMA/HSDPA Test Data(Band Ⅴ) CH High



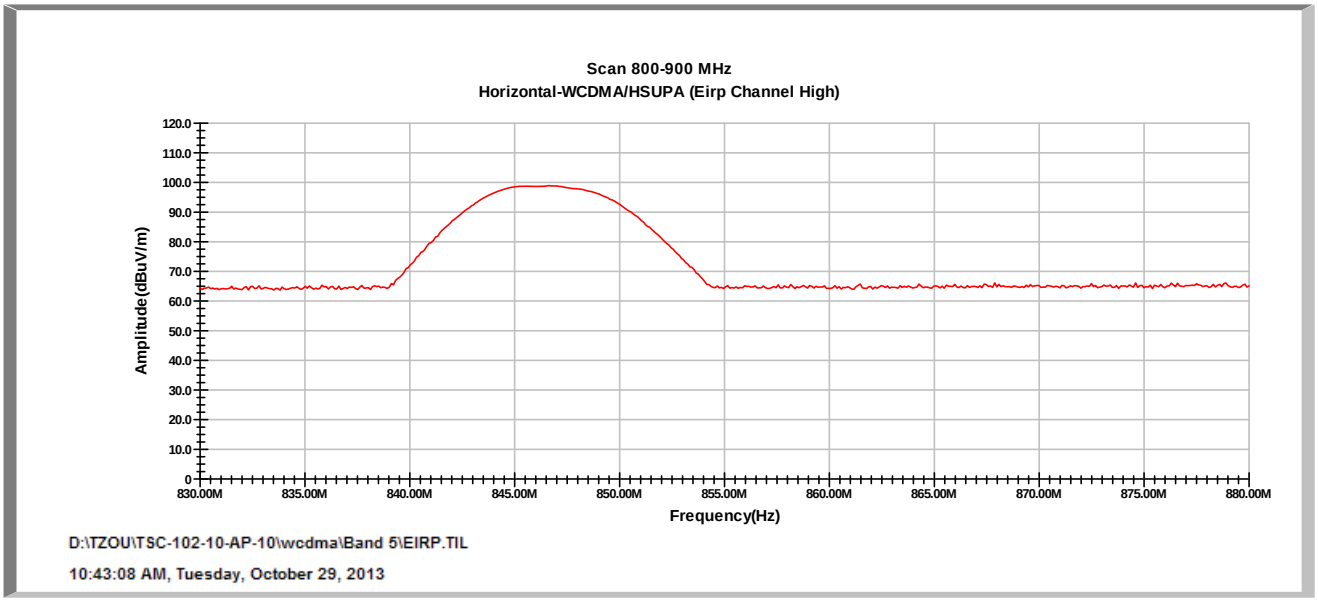


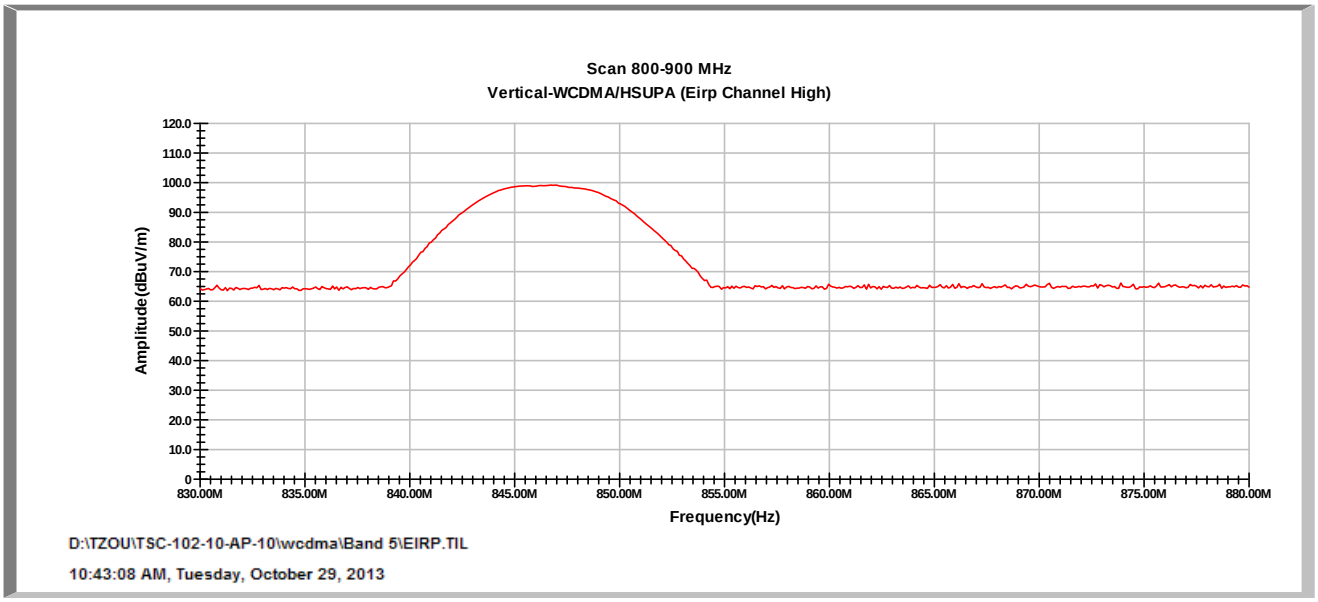
WCDMA/HSUPA Test Data(Band Ⅴ) CH Low



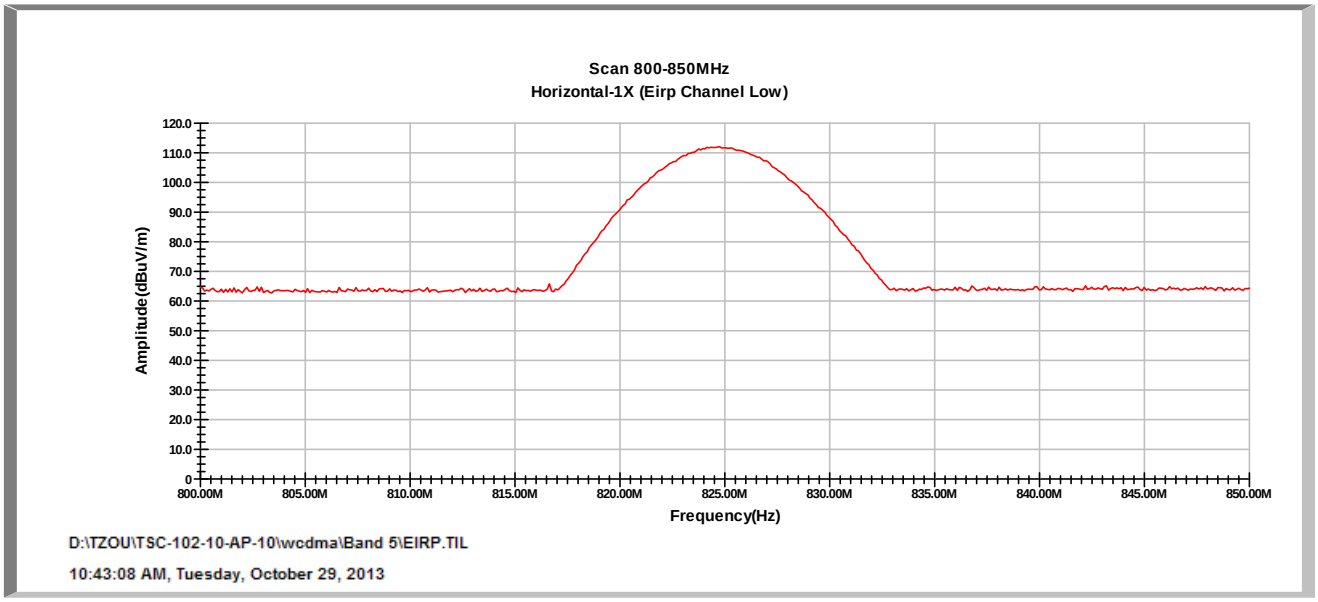


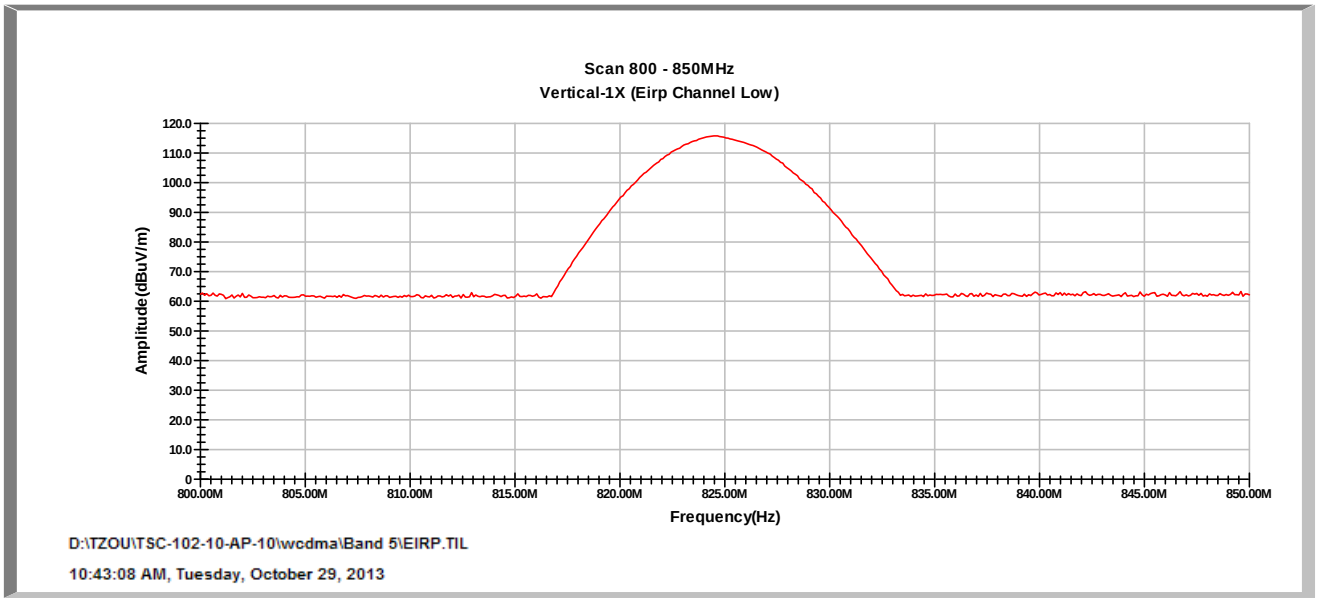
WCDMA/HSUPA Test Data(Band Ⅴ) CH Mid



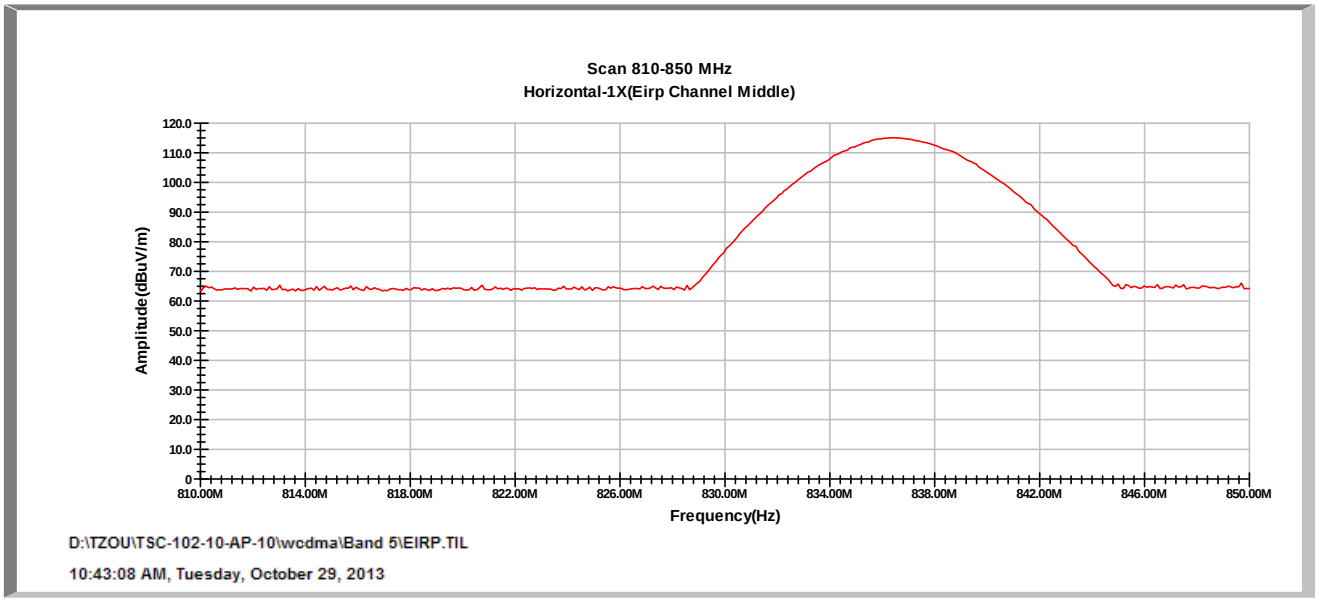


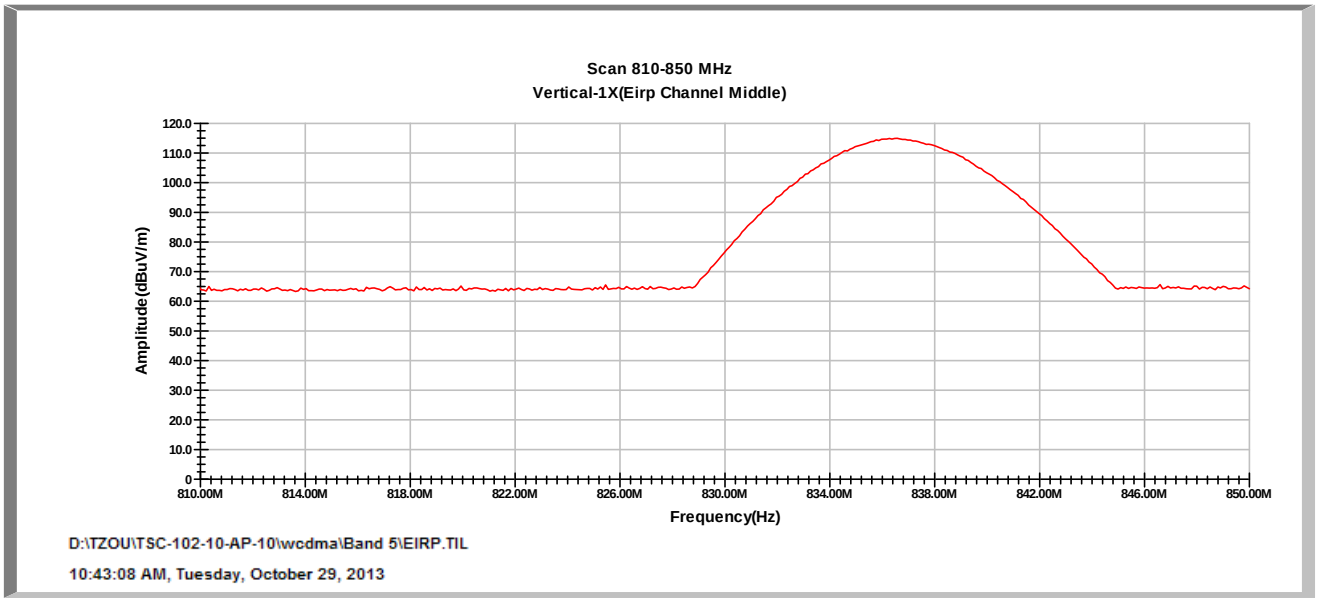
WCDMA/HSUPA Test Data(Band Ⅴ) CH High



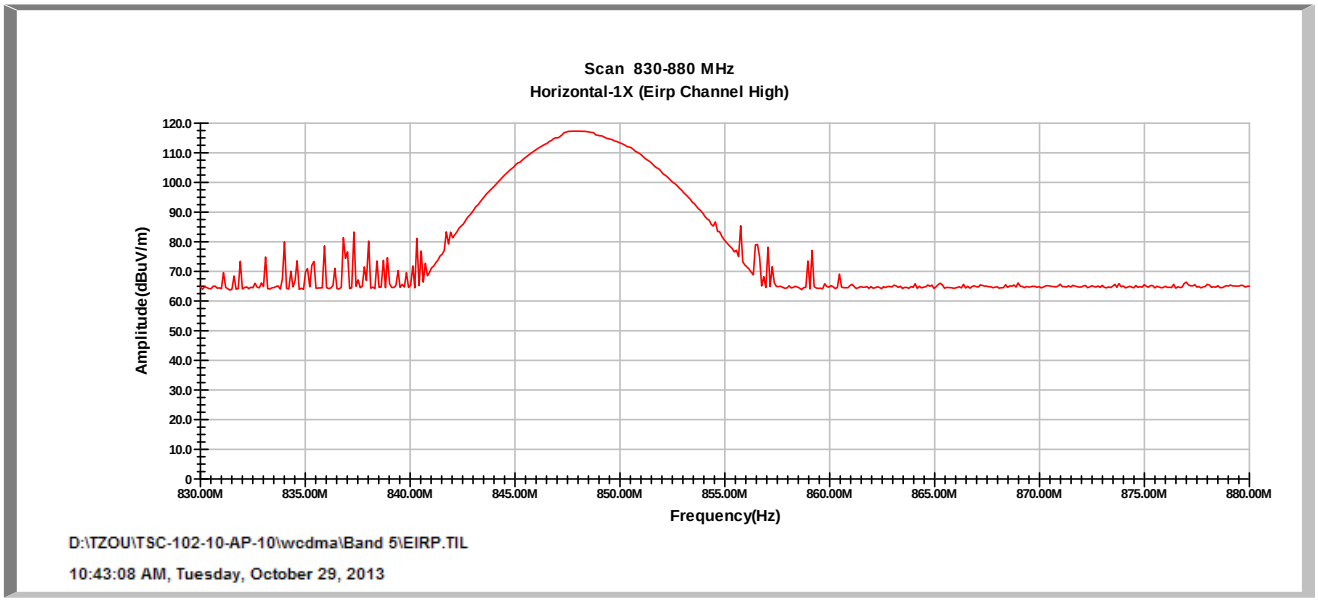


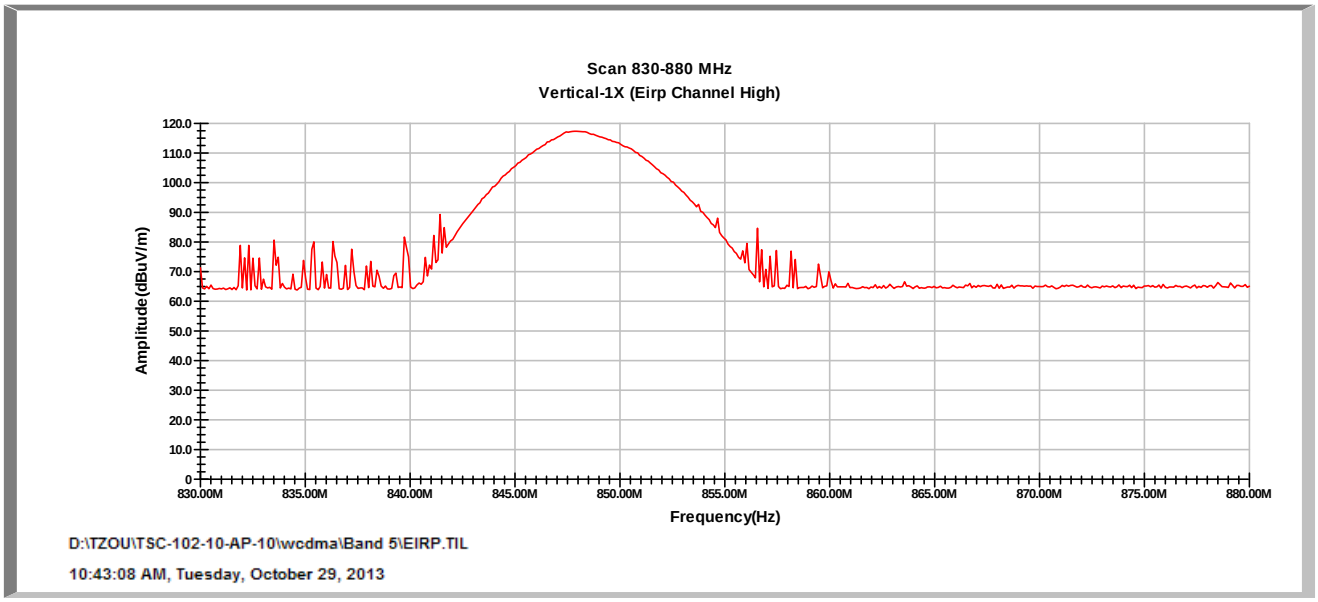
CDMA2000/1X Test Data (BC0) CH Low



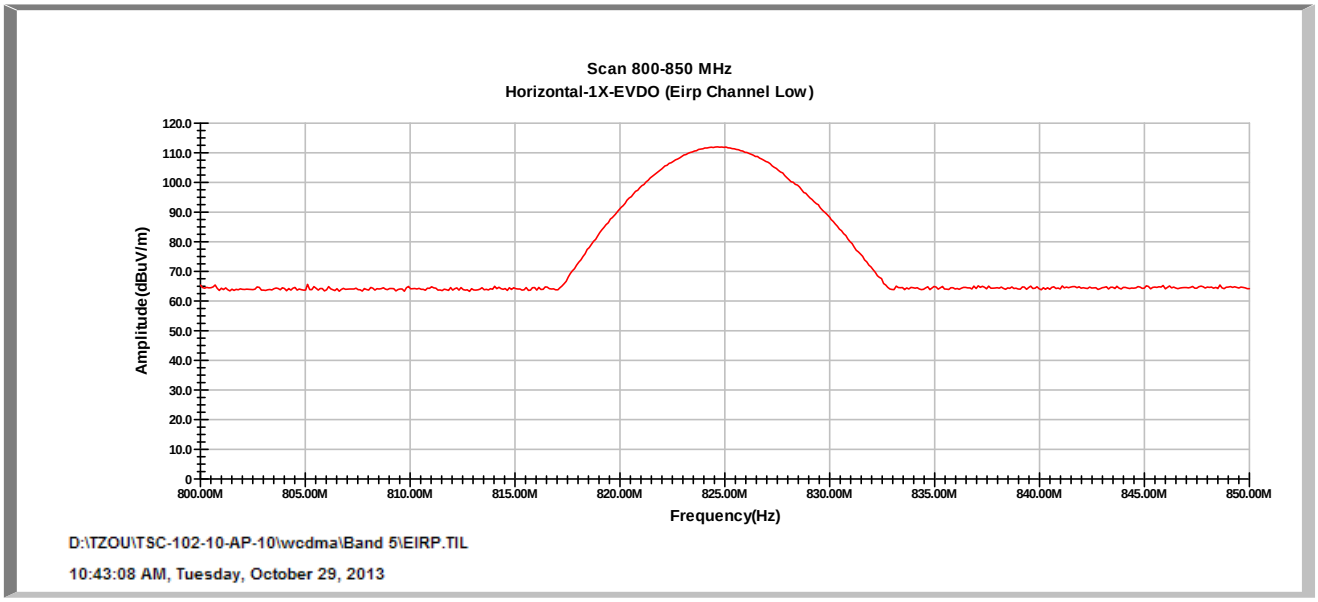


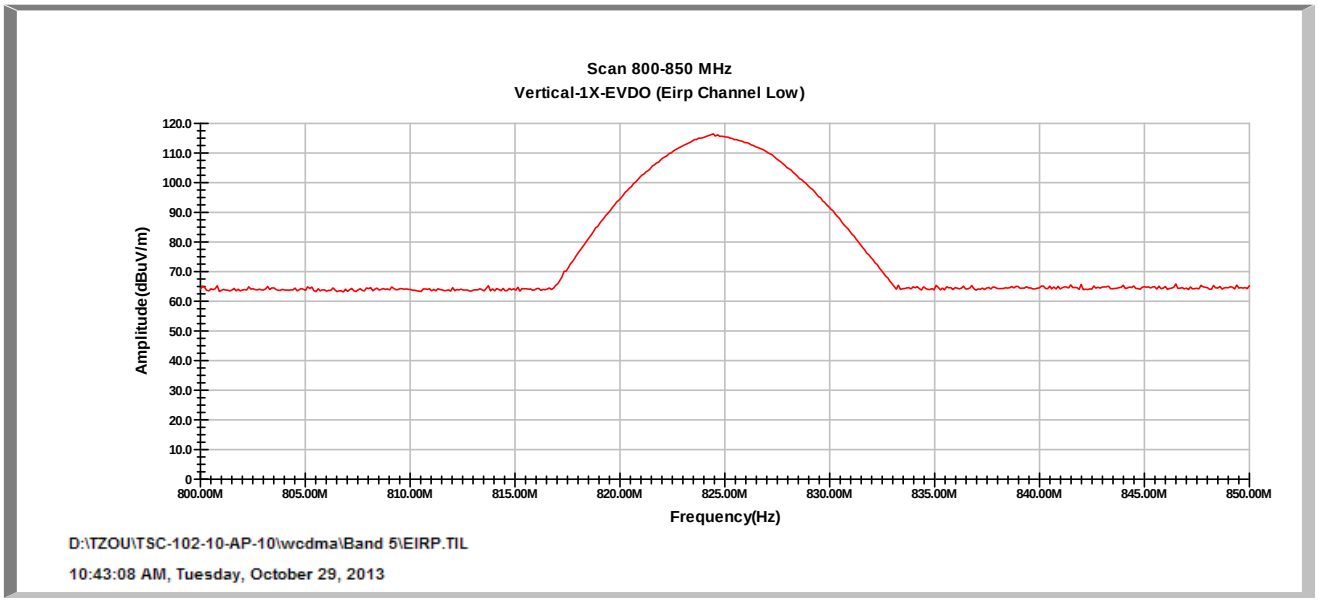
CDMA2000/1X Test Data(BC0) CH Mid



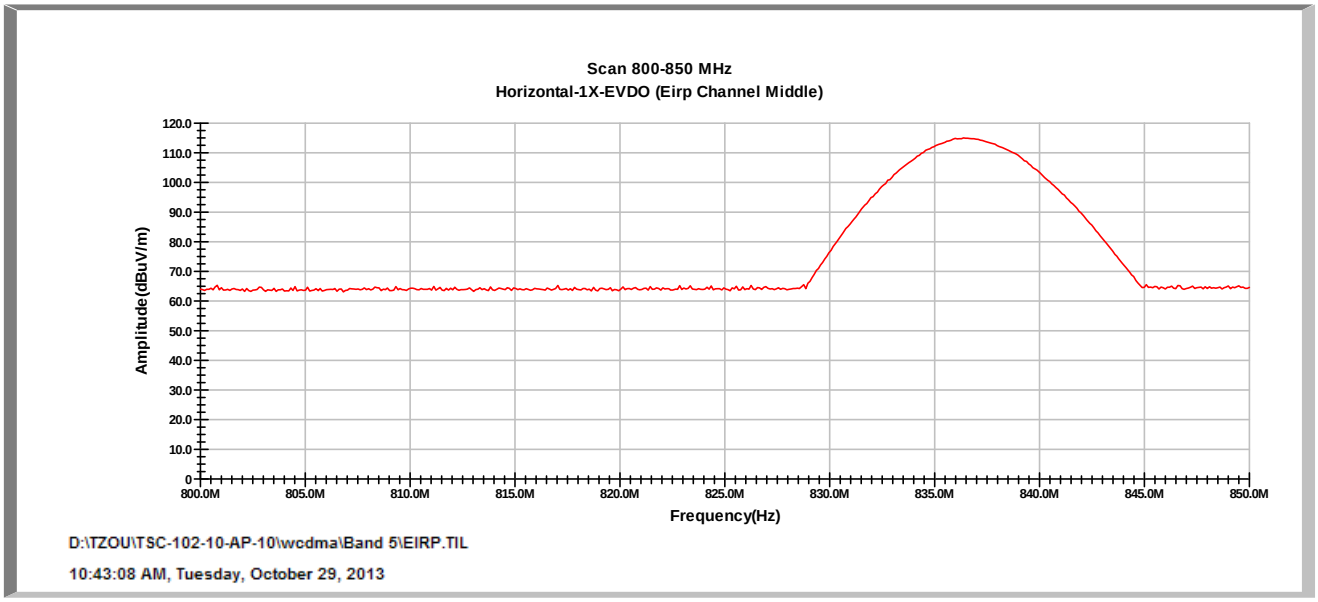


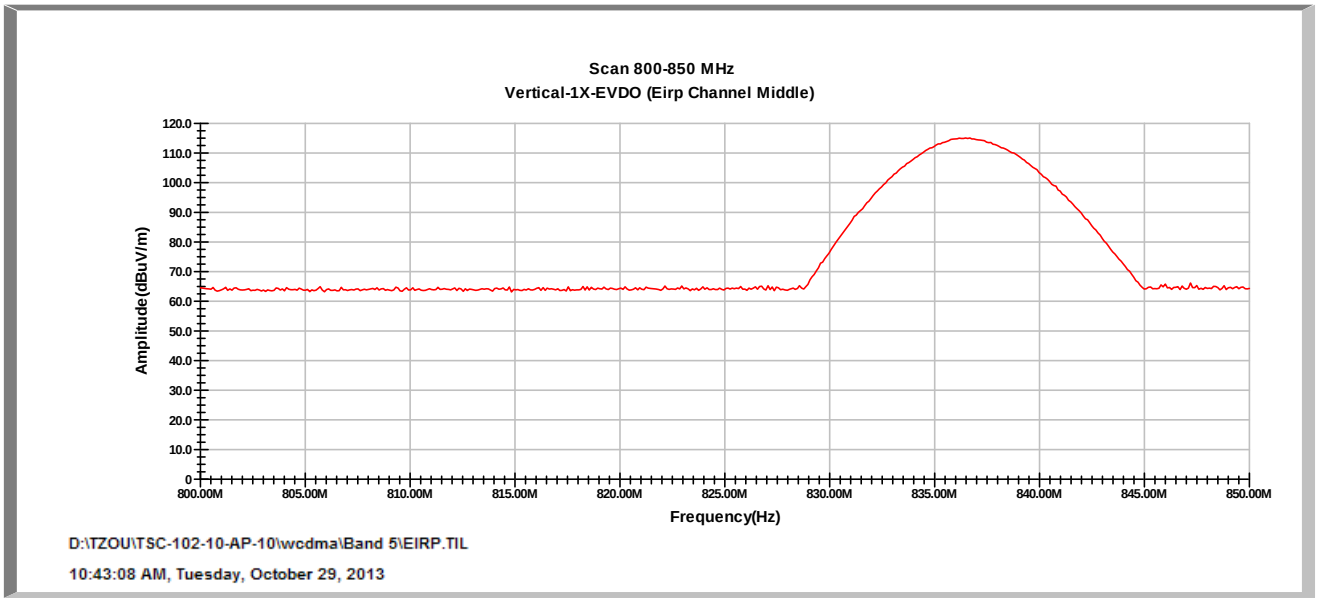
CDMA2000/1X Test Data(BC0) CH High



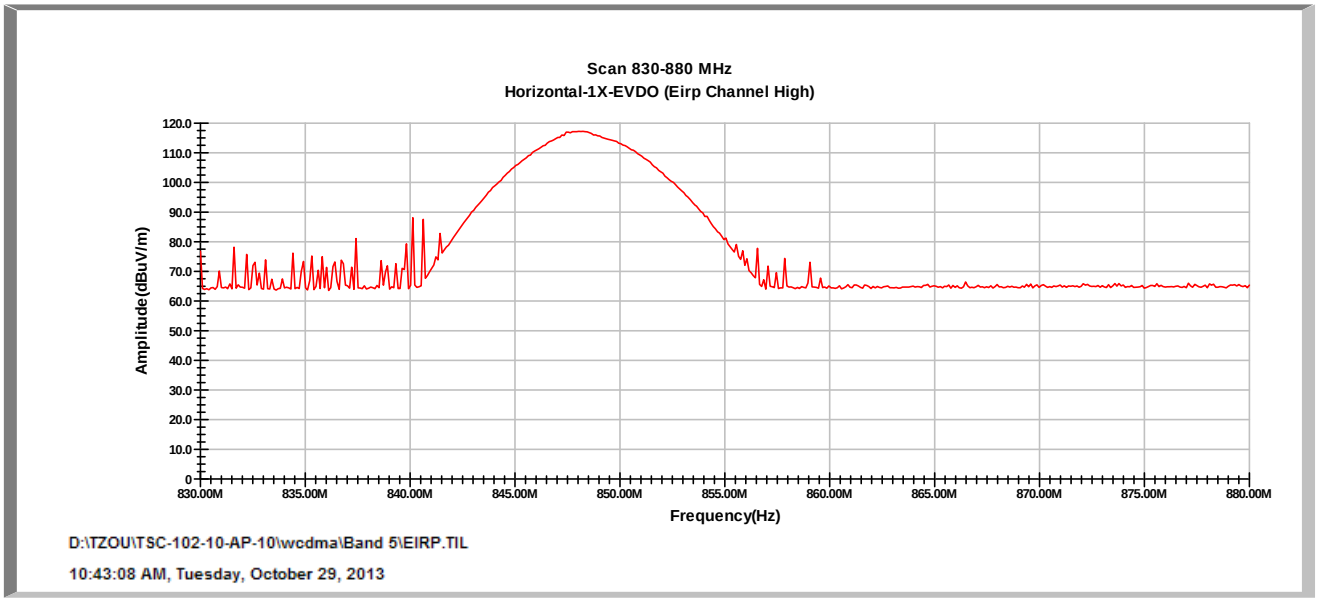


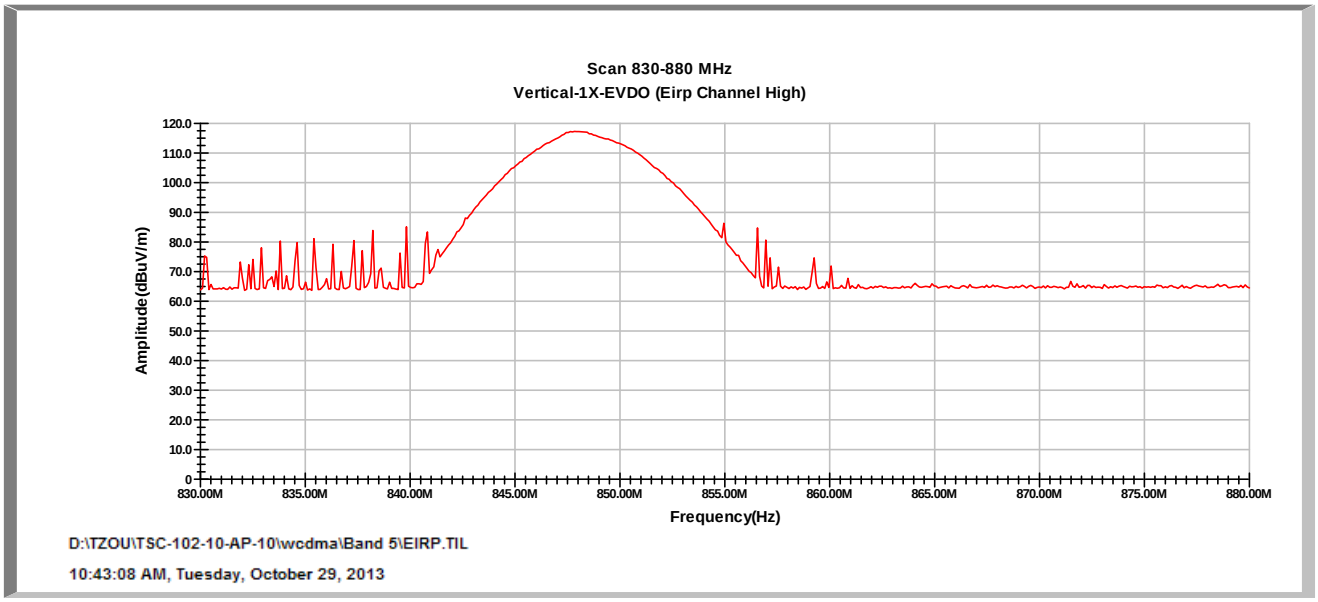
CDMA2000/EVDO Test Data(BC0) CH Low



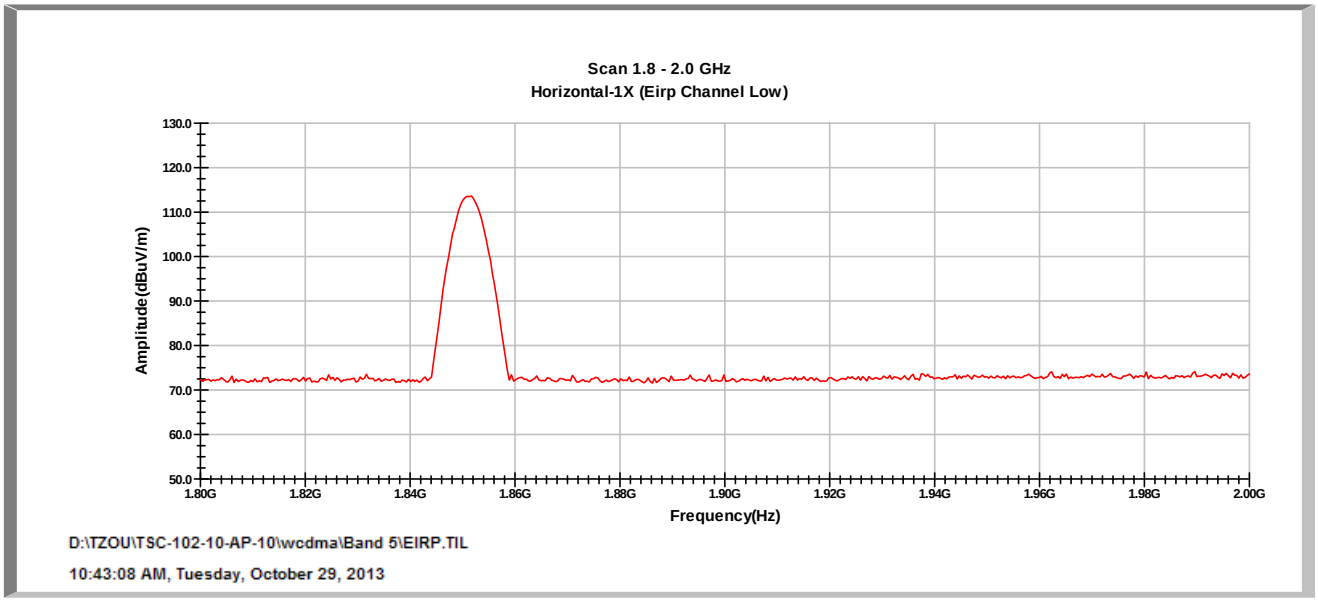


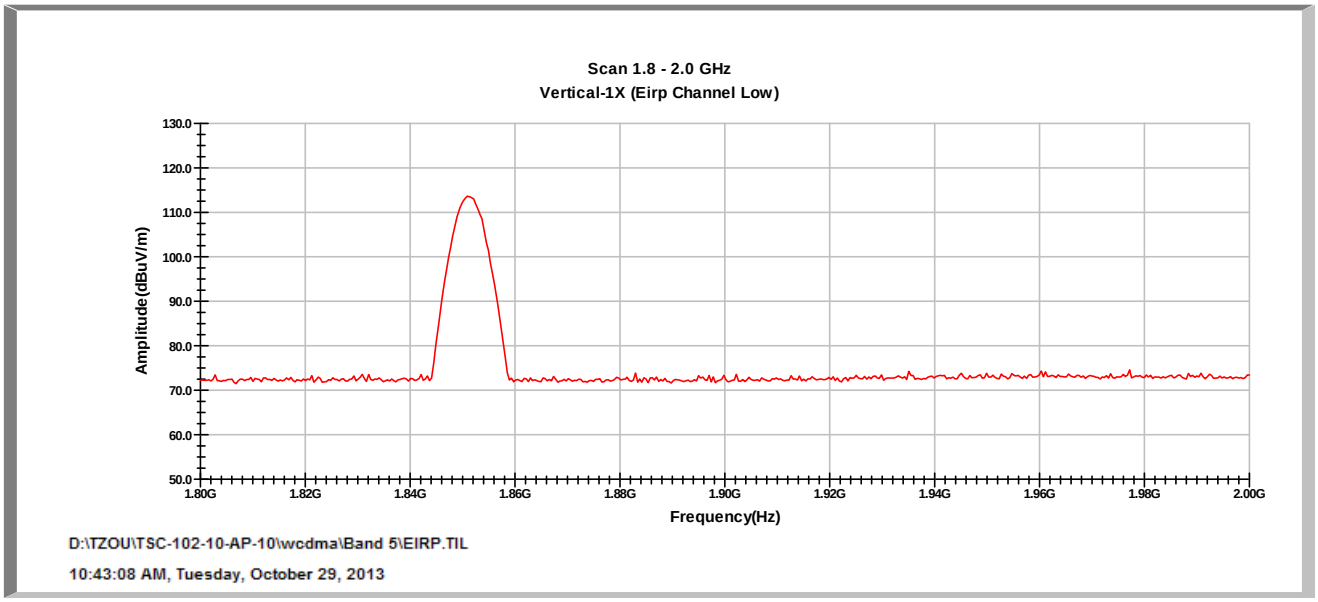
CDMA2000/EVDO Test Data(BC0) CH Mid



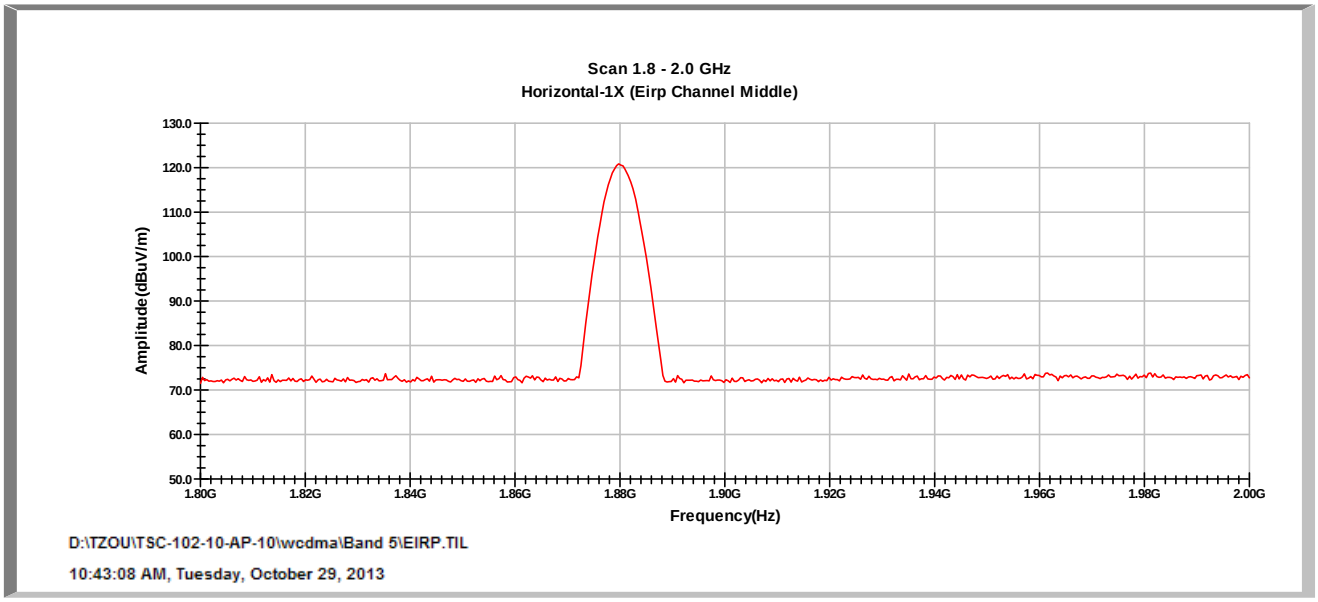


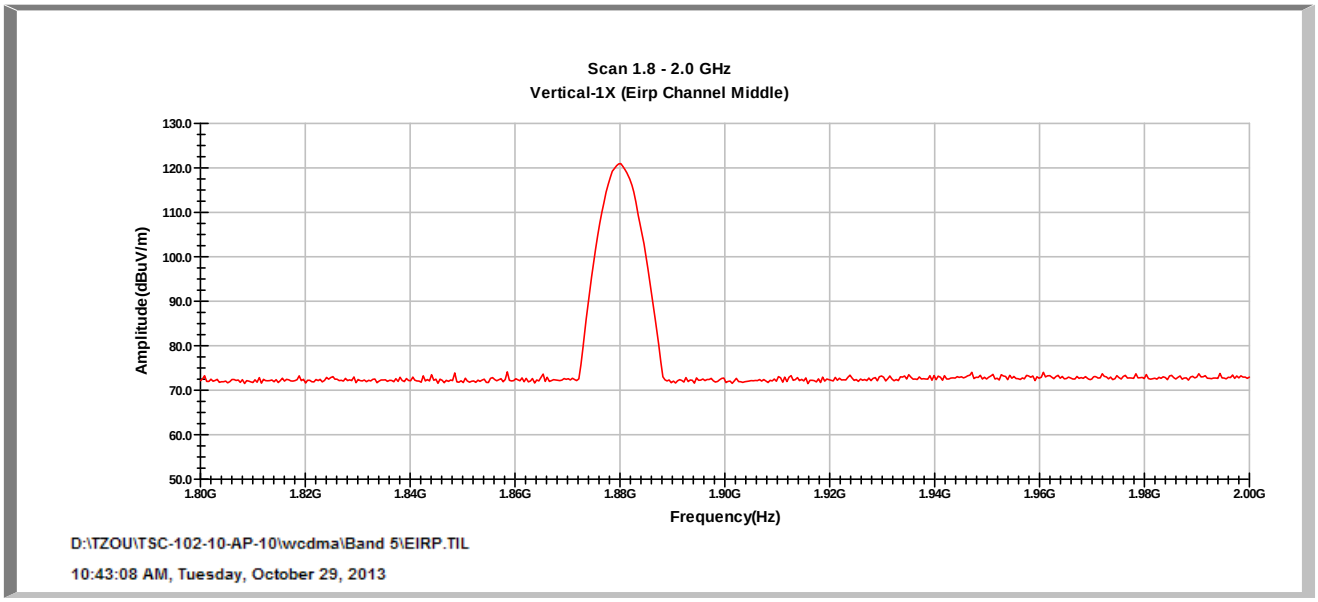
CDMA2000/EVDO Test Data(BC0) CH High



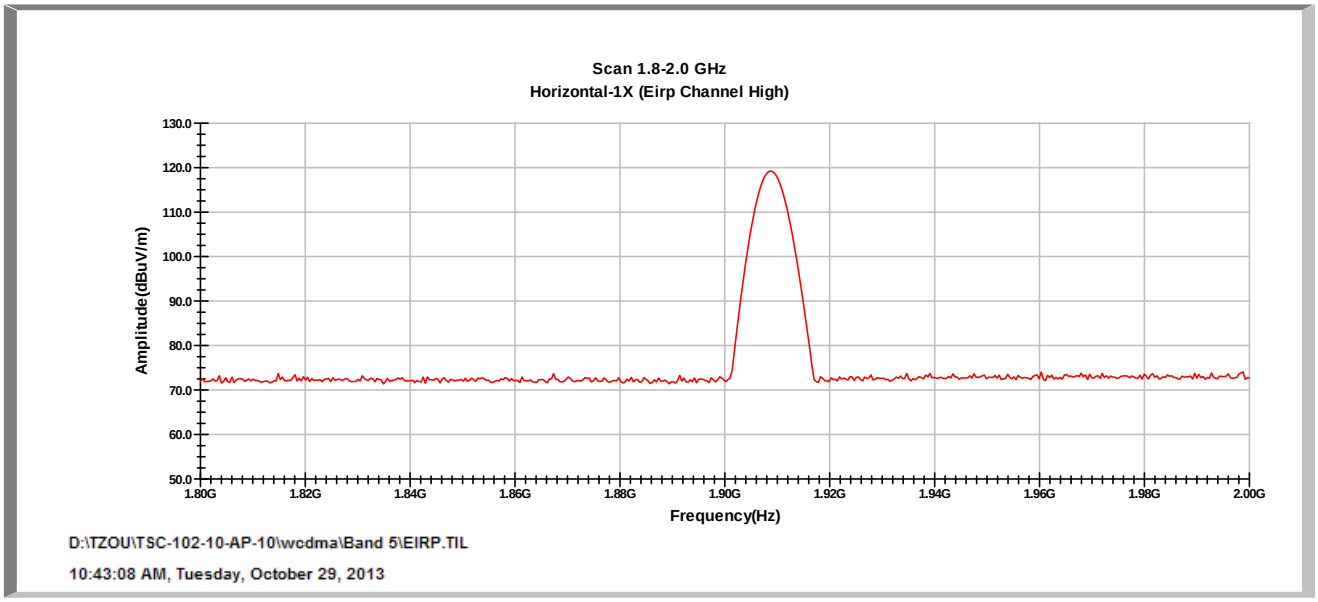


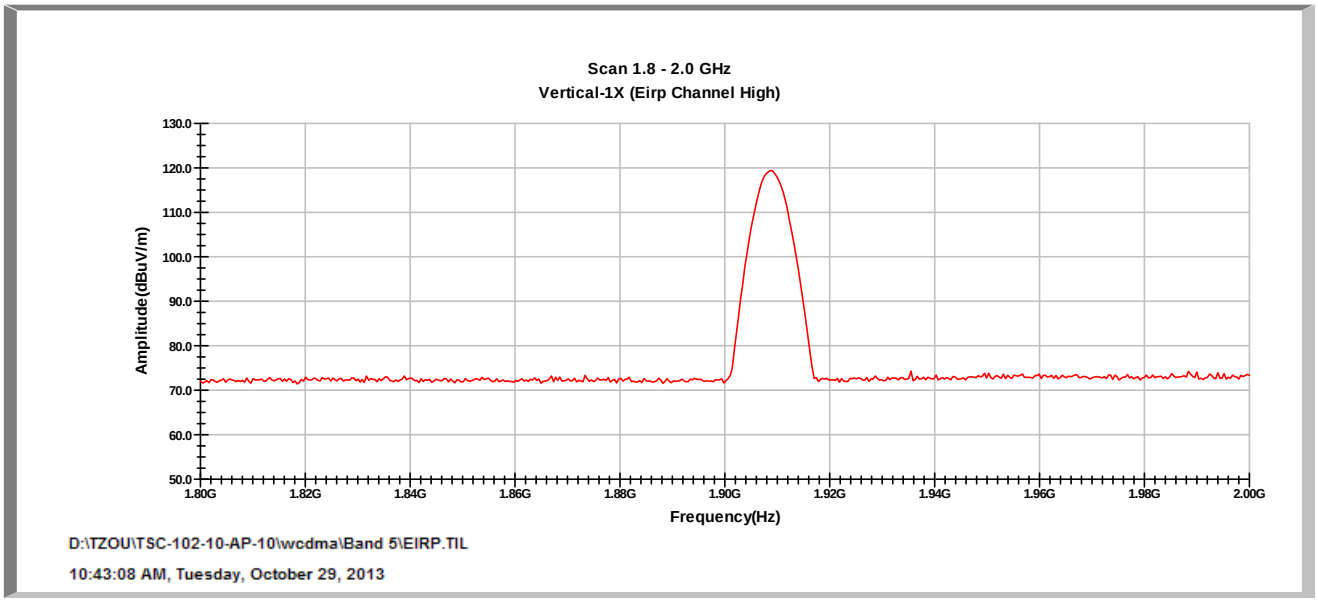
CDMA2000/1X Test Data(BC1) CH Low



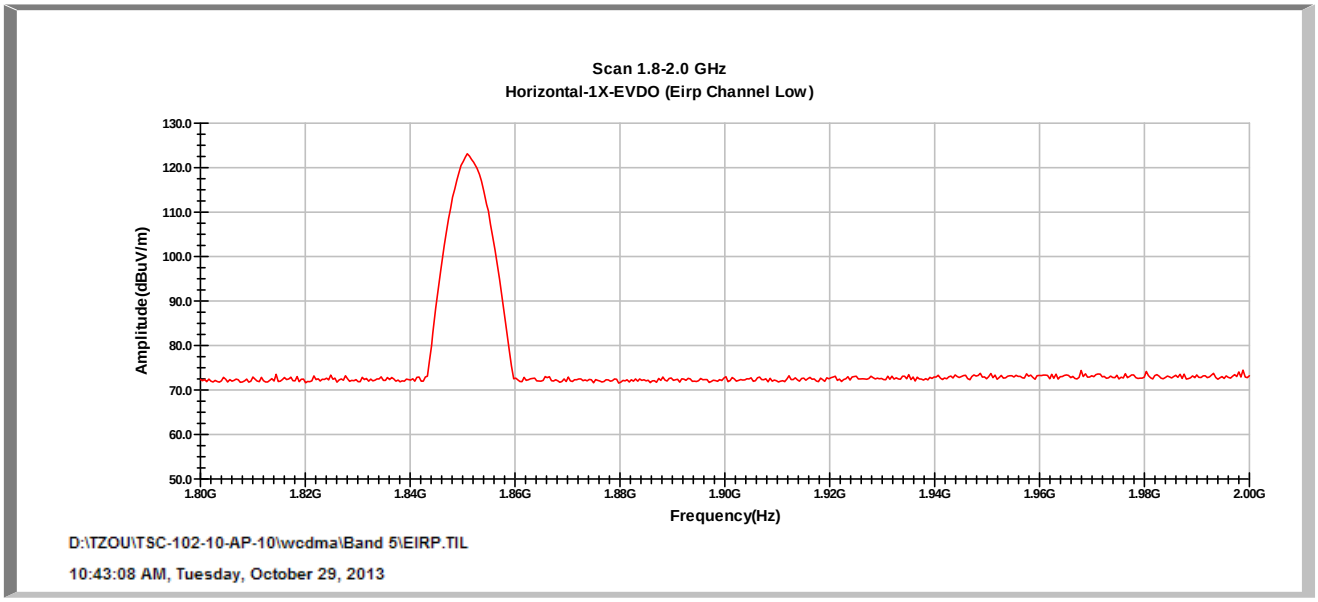


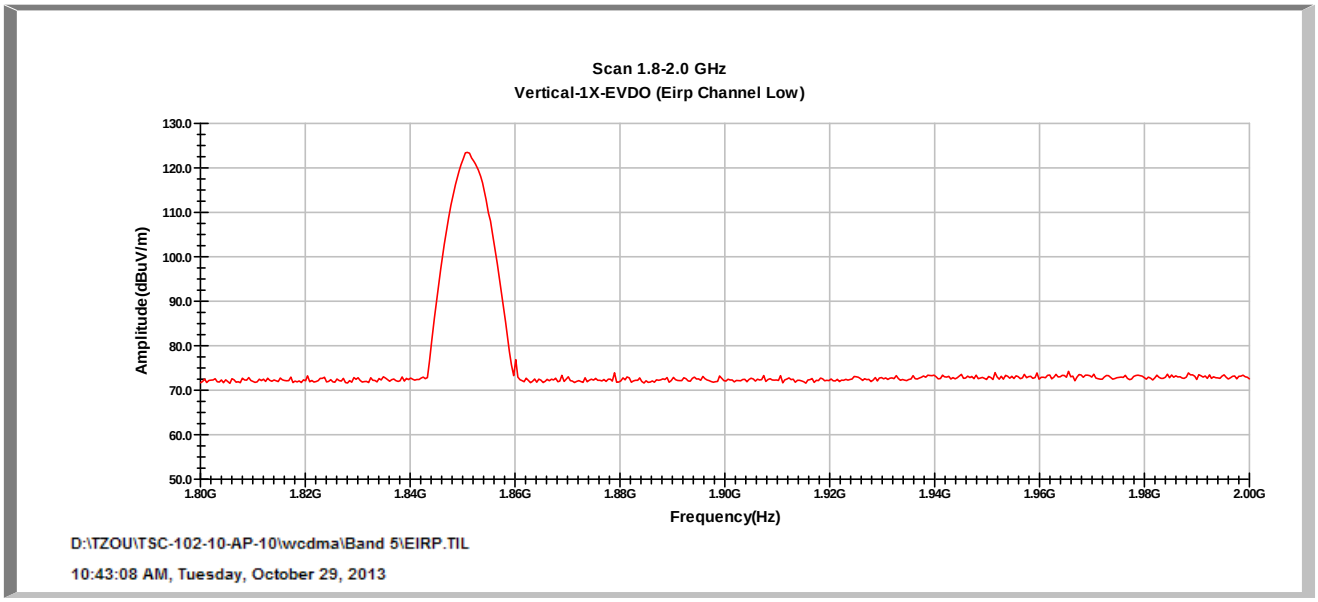
CDMA2000/1X Test Data(BC1) CH Mid



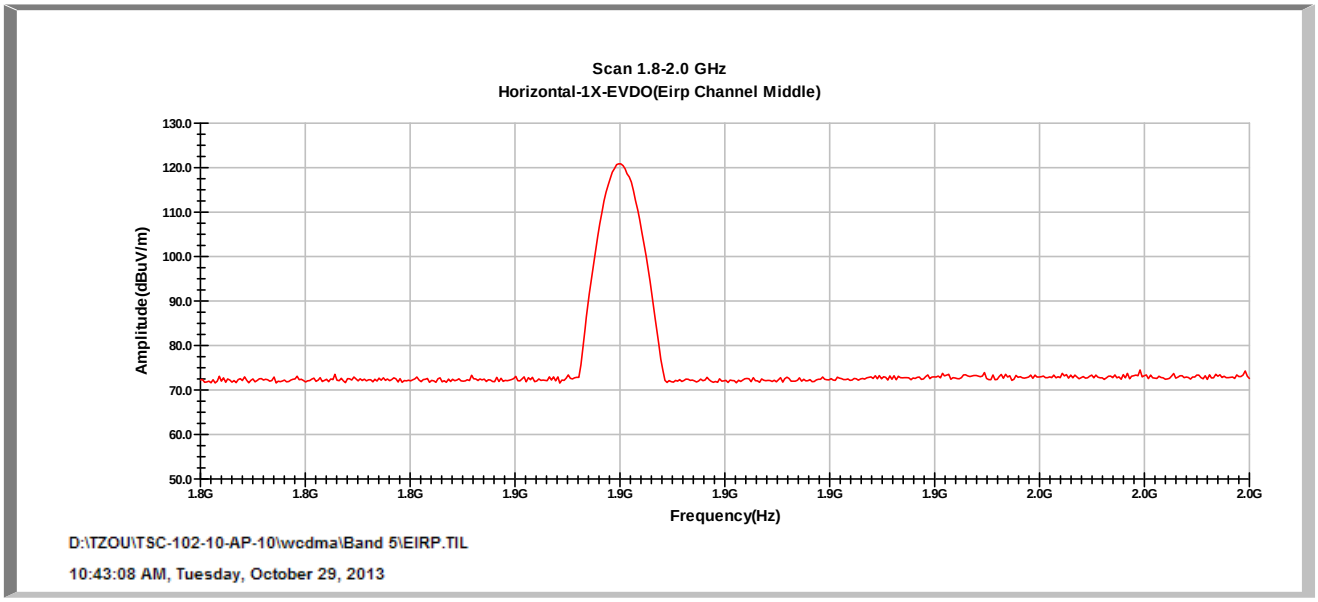


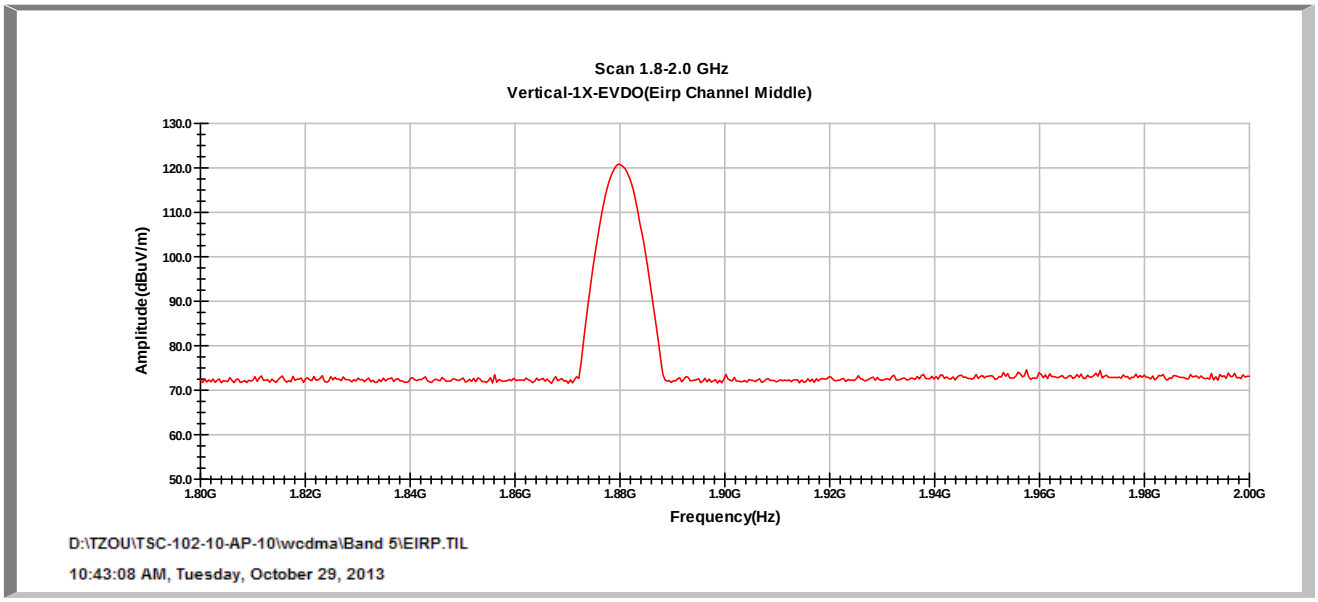
CDMA2000/1X Test Data(BC1) CH High



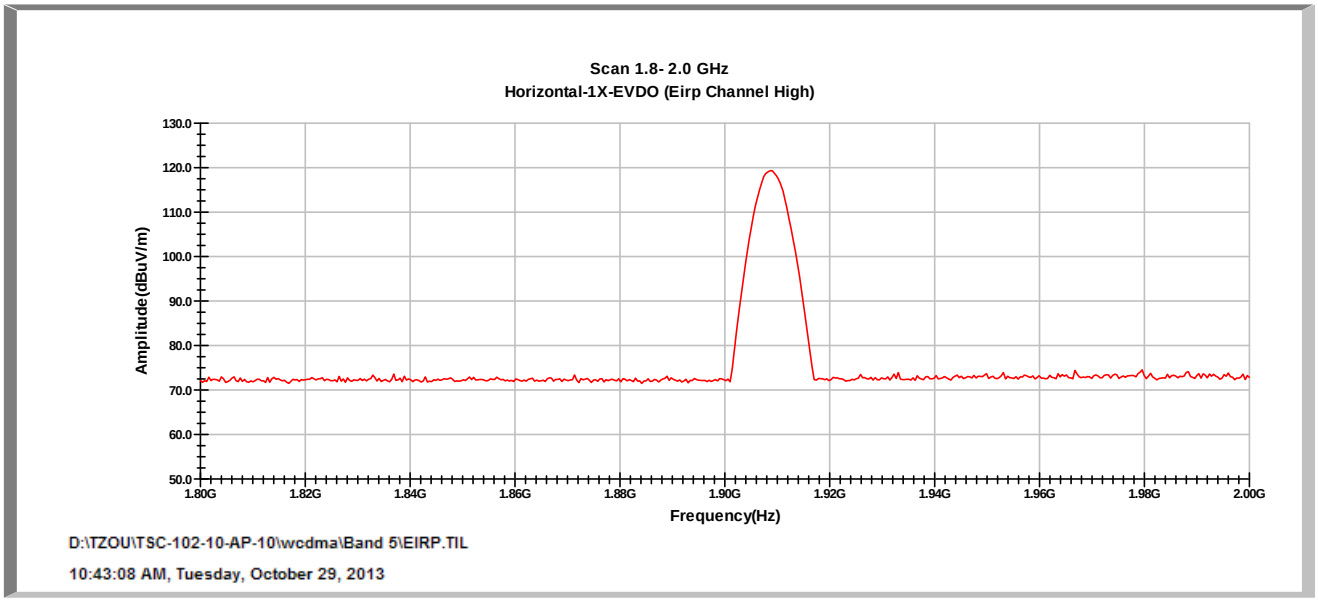


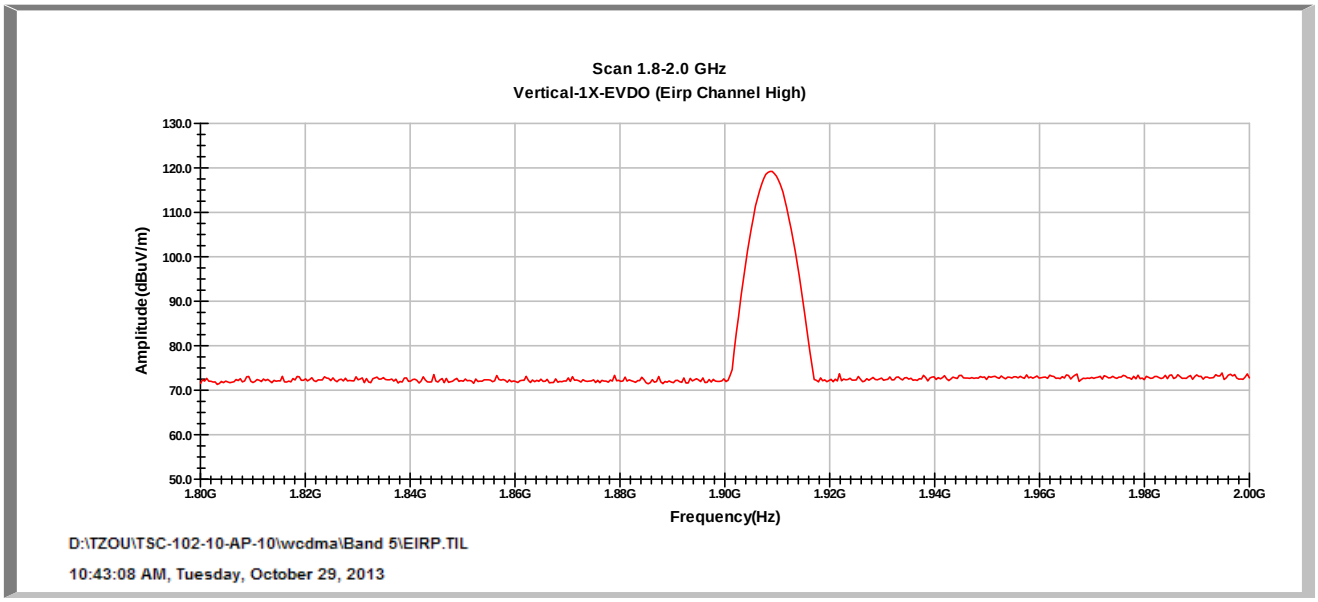
CDMA2000/EVDO Test Data(BC1) CH Low





CDMA2000/EVDO Test Data(BC1) CH Mid





CDMA2000/EVDO Test Data(BC1) CH High

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4.2. Occupied Bandwidth

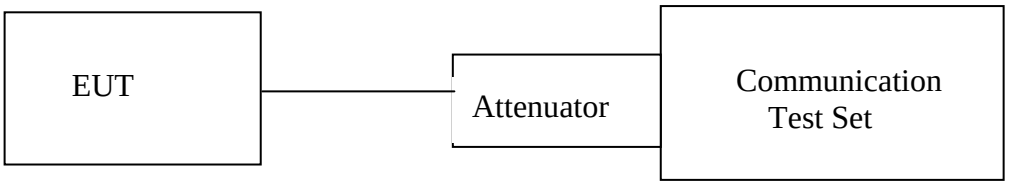
4.2.1 Required and Limits

FCC 2.1049 Measurements required: Occupied bandwidth

The occupied bandwidth, that is the frequency bandwidth such that below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured under the following conditions as applicable.

(h) Transmitters employing digital modulation techniques-when modulated by an input signal such that its amplitude and symbol rate represent the maximum rated conditions under which the equipment will be operated.

4.2.2 Test Configuration and Procedure



1. The EUT was connected to Communication Test Set.
2. The 99% occupied bandwidth of low channel、middle channel、high channel were measured.

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4.2.3 Test Results

Test Mode	Frequency (MHz)	99%Bandwidth (MHz)	Ref. Fig
WCDMA (Band Ⅱ)	1852.40	4.146	Fig 4.3-1
	1880.00	4.157	Fig 4.3-2
	1907.60	4.163	Fig 4.3-3
WCDMA (Band Ⅴ)	826.40	4.156	Fig 4.3-4
	836.40	4.151	Fig 4.3-5
	846.60	4.155	Fig 4.3-6
WCDMA/HSDPA (Band Ⅱ)	1852.40	4.144	Fig 4.3-7
	1880.00	4.159	Fig 4.3-8
	1907.60	4.160	Fig 4.3-9
WCDMA/HSDPA (Band Ⅴ)	826.40	4.155	Fig 4.3-10
	836.40	4.152	Fig 4.3-11
	846.60	4.153	Fig 4.3-12
WCDMA/HSUPA (Band Ⅱ)	1852.40	4.140	Fig 4.3-13
	1880.00	4.162	Fig 4.3-14
	1907.60	4.162	Fig 4.3-15
WCDMA/HSUPA (Band Ⅱ)	826.40	4.156	Fig 4.3-16
	836.40	4.150	Fig 4.3-17
	846.60	4.158	Fig 4.3-18

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Test Mode	Frequency (MHz)	99%Bandwidth (MHz)	Ref. Fig
CDMA2000/1X (BC0)	824.7	1.274	Fig 4.3-19
	836.52	1.274	Fig 4.3-20
	848.31	1.262	Fig 4.3-21
CDMA2000/EVDO (BC0)	824.7	1.277	Fig 4.3-22
	836.52	1.260	Fig 4.3-23
	848.31	1.270	Fig 4.3-24
CDMA2000/1X (BC1)	1851.25	1.277	Fig 4.3-25
	1880.00	1.274	Fig 4.3-26
	1908.75	1.266	Fig 4.3-27
CDMA2000/EVDO (BC1)	1851.25	1.277	Fig 4.3-28
	1880.00	1.262	Fig 4.3-29
	1908.75	1.272	Fig 4.3-30

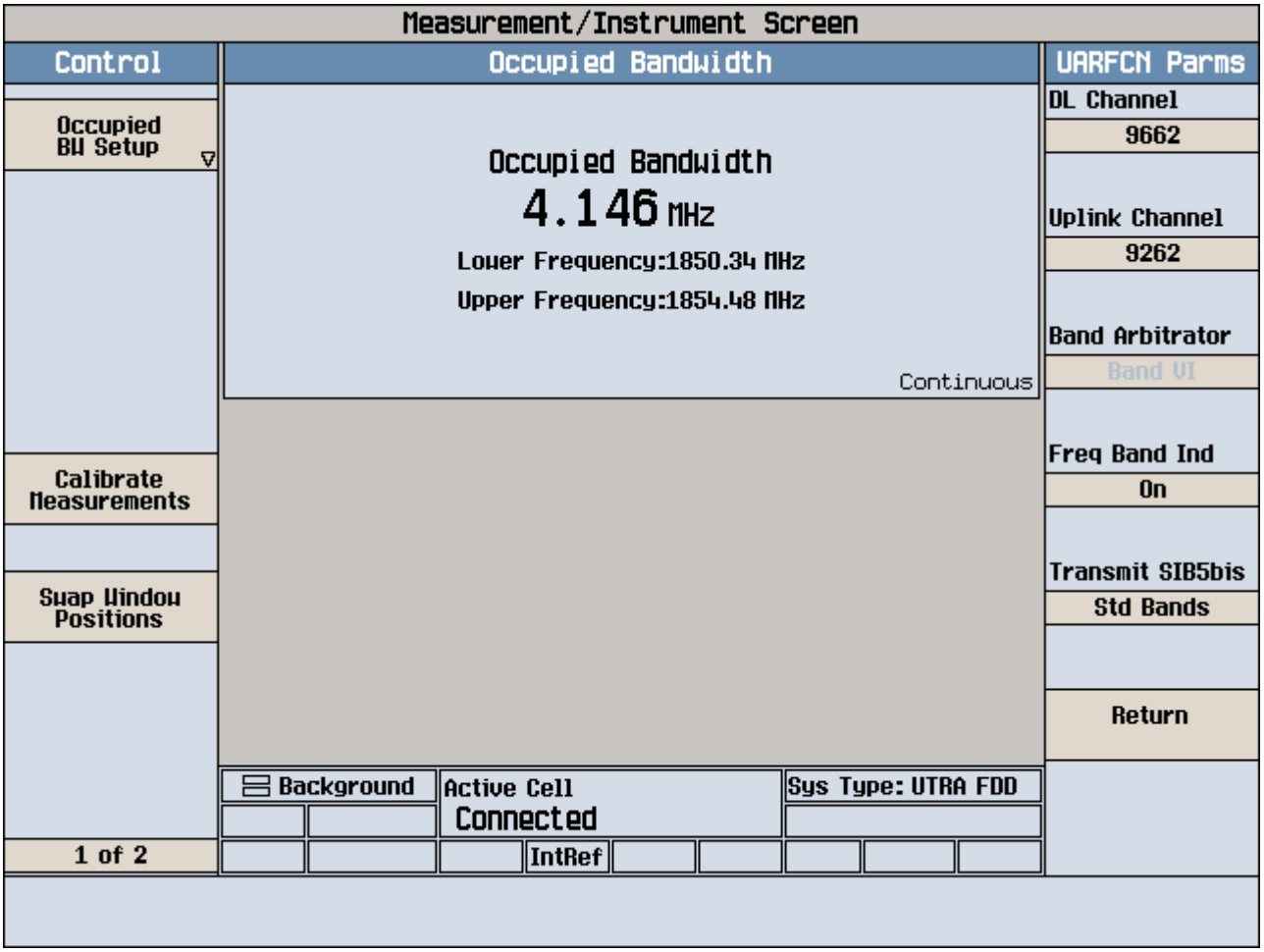
Measurement/Instrument Screen
Control
Occupied Bandwidth
UARFCN Parms
Occupied BW Setup
Occupied Bandwidth
4.146 MHz
Lower Frequency:1850.34 MHz
Upper Frequency:1854.48 MHz
Continuous
DL Channel
9662
Uplink Channel
9262
Band Arbitrator
Band UI
Freq Band Ind
On
Calibrate Measurements
Transmit SIB5bis
Std Bands
Swap Window Positions
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
1 of 2
IntRef

Fig 4.3-1

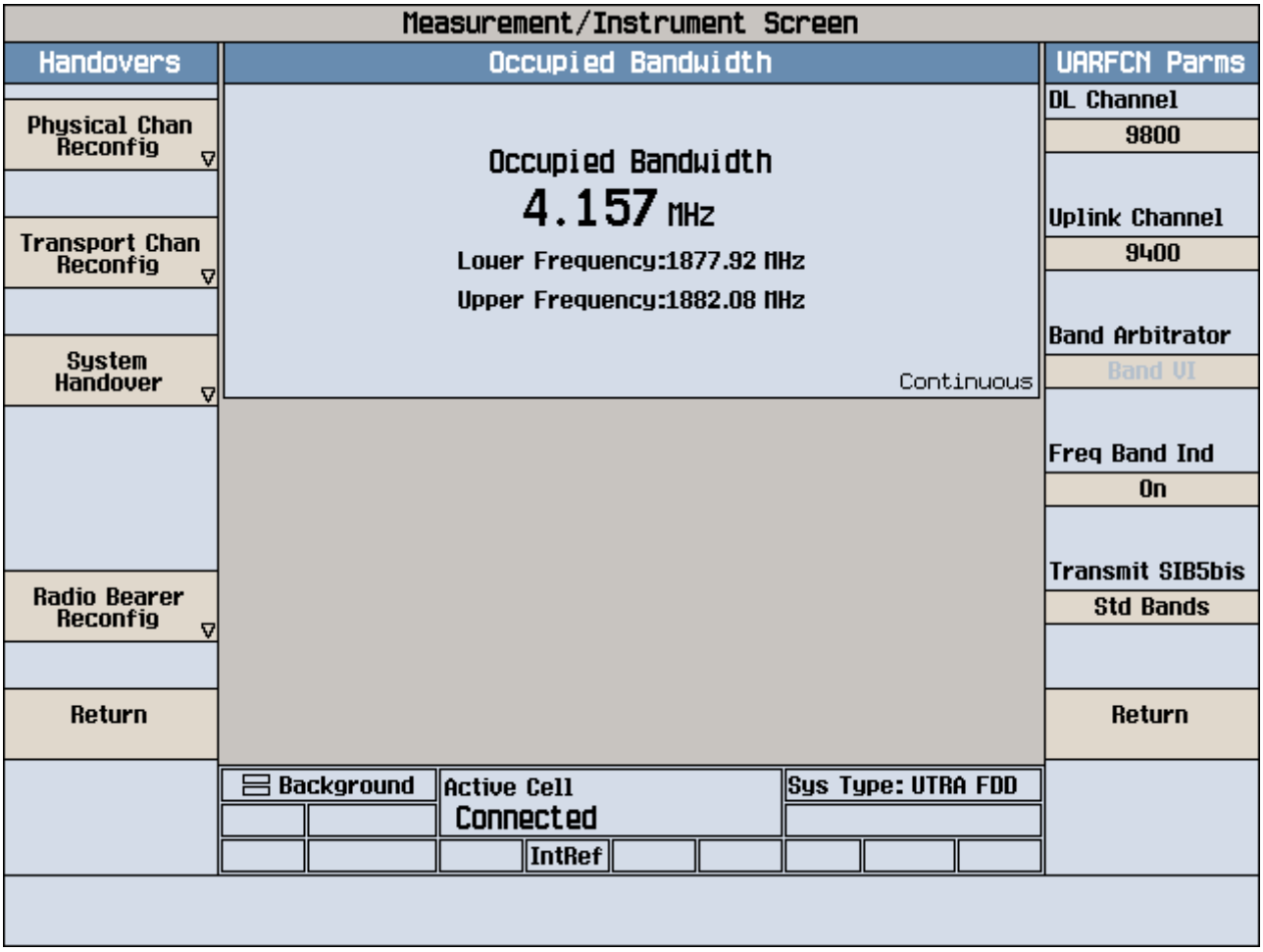
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Transport Chan Reconfig
System Handover
Radio Bearer Reconfig
Return
Occupied Bandwidth
4.157 MHz
Lower Frequency:1877.92 MHz
Upper Frequency:1882.08 MHz
Continuous
DL Channel
9800
Uplink Channel
9400
Band Arbitrator
Band VI
Freq Band Ind
On
Transmit SIB5bis
Std Bands
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-2

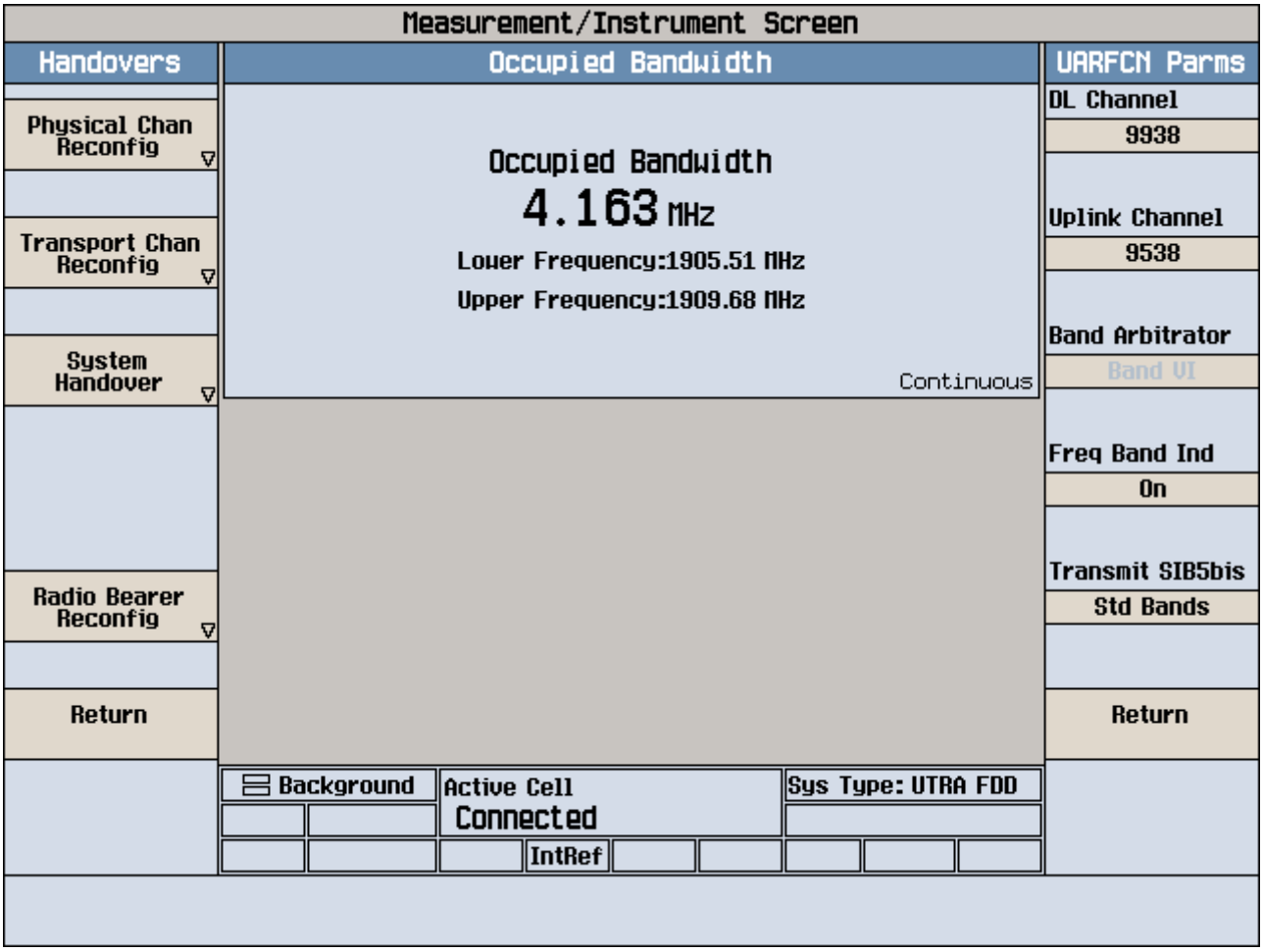
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Occupied Bandwidth
4.163 MHz
Lower Frequency:1905.51 MHz
Upper Frequency:1909.68 MHz
Continuous
DL Channel
9938
Uplink Channel
9538
Transport Chan Reconfig
Band Arbitrator
System Handover
Band VI
Freq Band Ind
On
Transmit SIB5bis
Radio Bearer Reconfig
Std Bands
Return
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-3

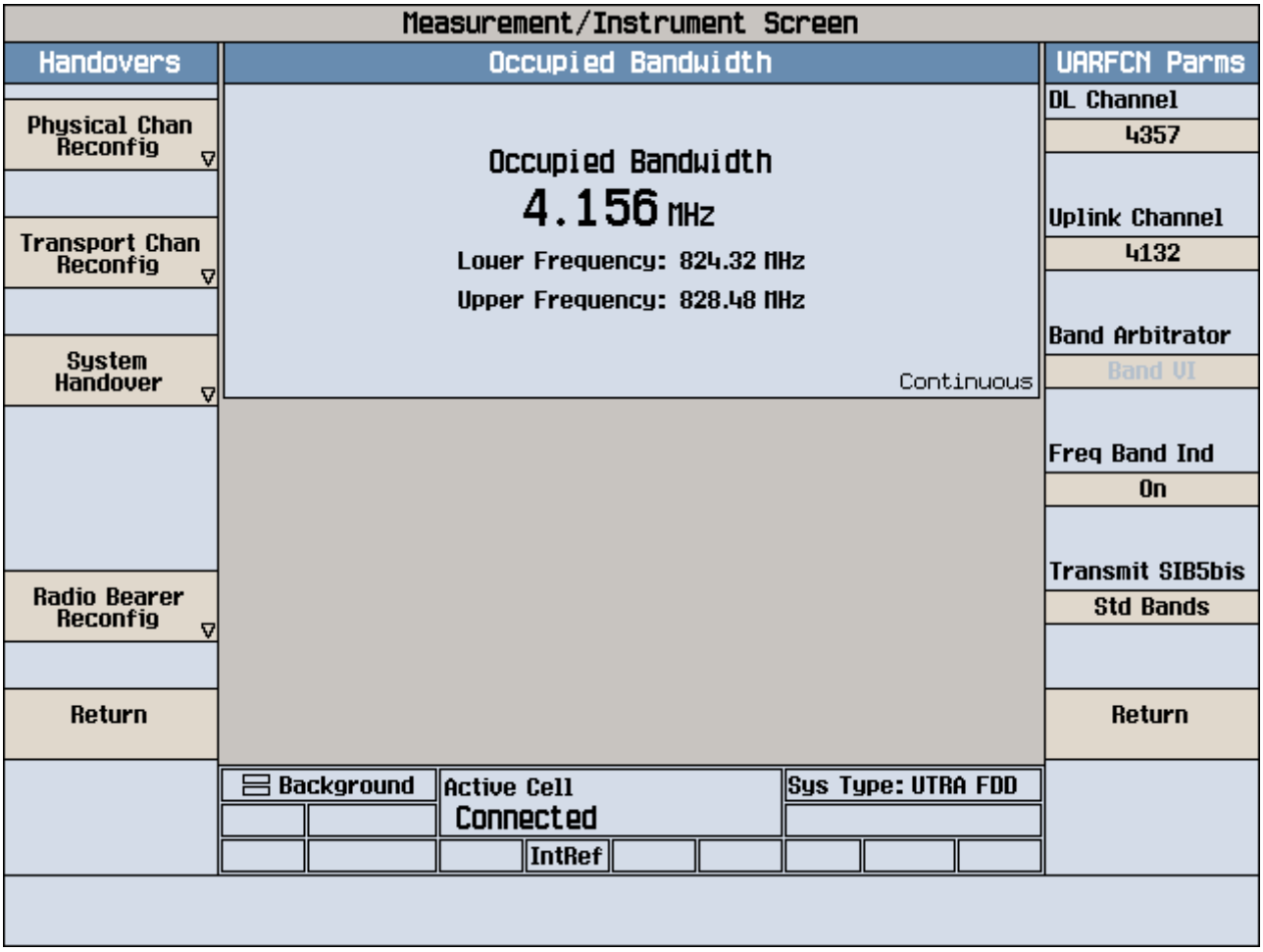
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Occupied Bandwidth
4.156 MHz
Lower Frequency: 824.32 MHz
Upper Frequency: 828.48 MHz
Continuous
DL Channel
4357
Uplink Channel
4132
Transport Chan Reconfig
Band Arbitrator
System Handover
Band VI
Freq Band Ind
On
Transmit SIB5bis
Radio Bearer Reconfig
Std Bands
Return
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-4

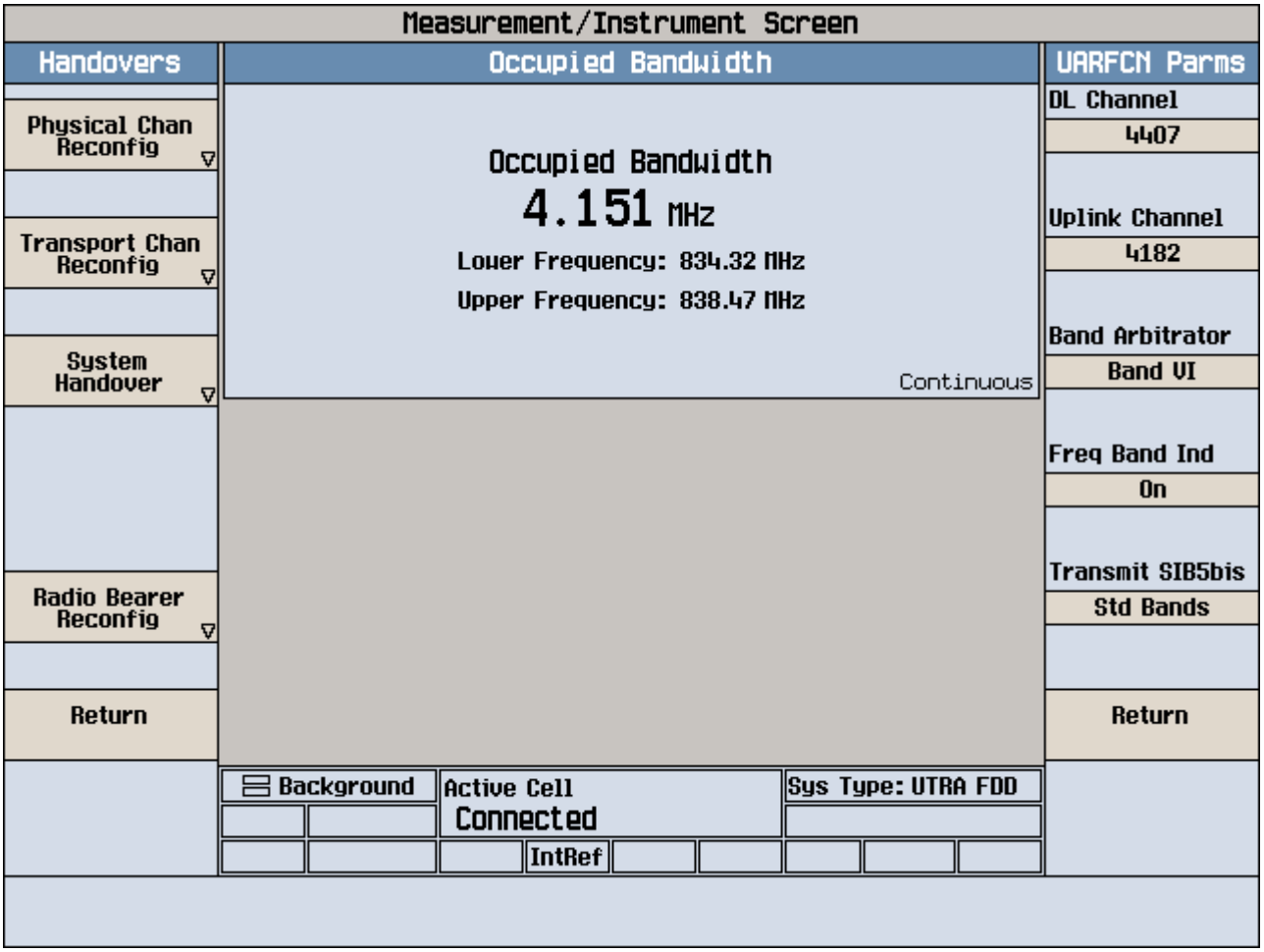
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Occupied Bandwidth
4.151 MHz
Lower Frequency: 834.32 MHz
Upper Frequency: 838.47 MHz
Continuous
DL Channel
4407
Transport Chan Reconfig
Uplink Channel
4182
System Handover
Band Arbitrator
Band VI
Freq Band Ind
On
Radio Bearer Reconfig
Transmit SIB5bis
Std Bands
Return
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-5

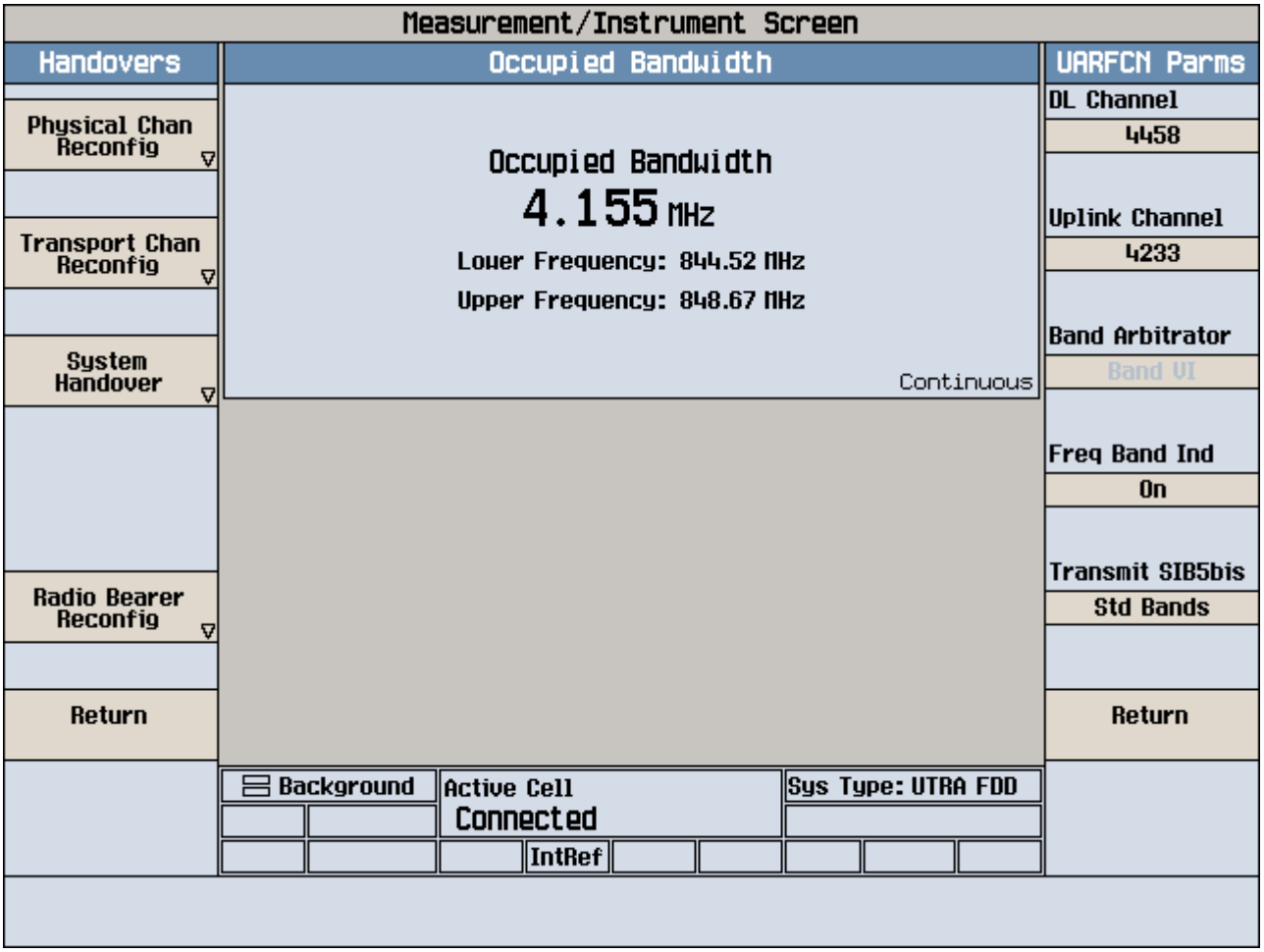
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Occupied Bandwidth
4.155 MHz
Lower Frequency: 844.52 MHz
Upper Frequency: 848.67 MHz
Continuous
DL Channel
4458
Uplink Channel
4233
Transport Chan Reconfig
Band Arbitrator
System Handover
Band UI
Freq Band Ind
On
Transmit SIB5bis
Radio Bearer Reconfig
Std Bands
Return
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-6

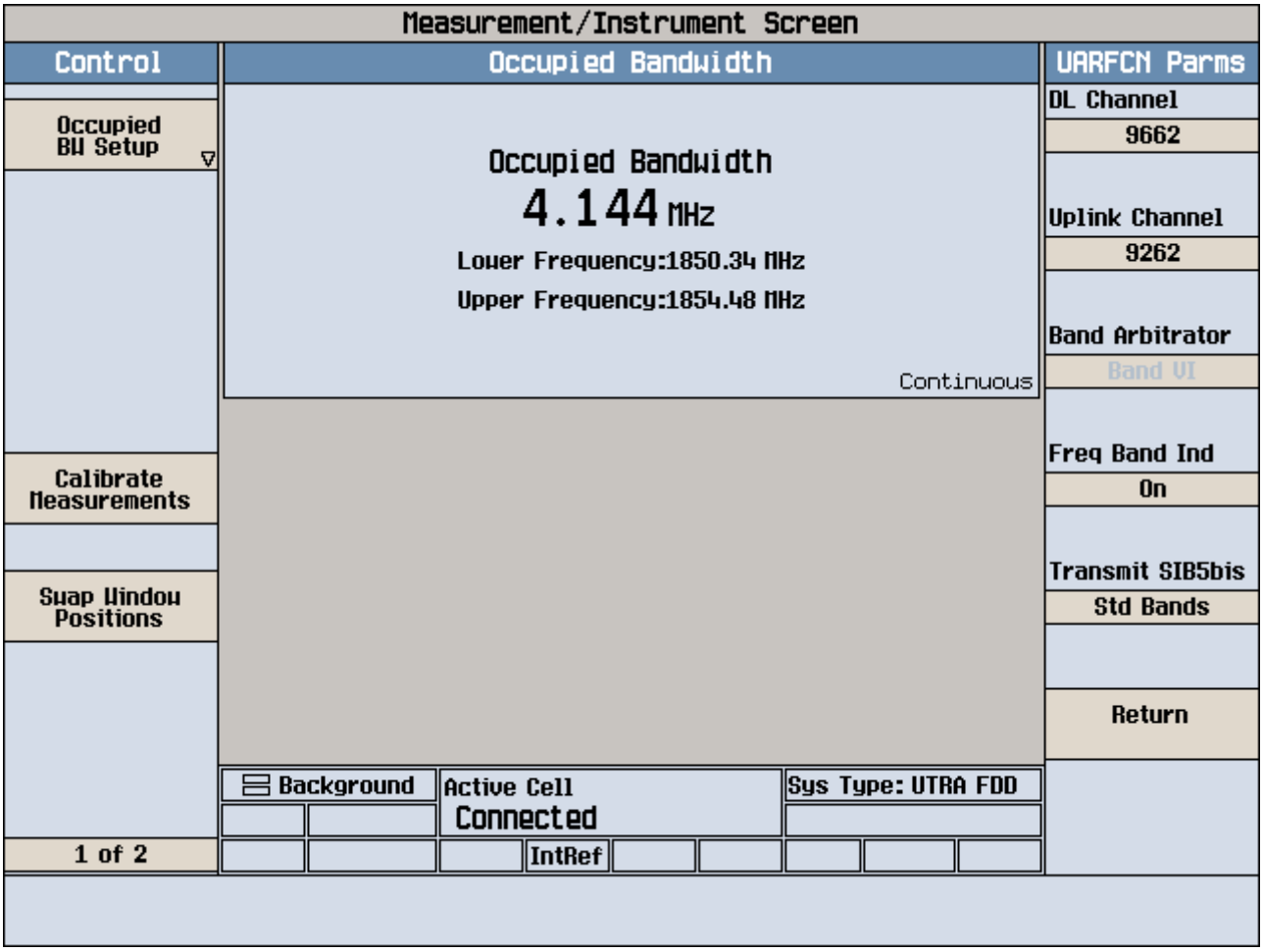
Measurement/Instrument Screen
Control
Occupied Bandwidth
UARFCN Parms
Occupied BW Setup
Occupied Bandwidth
4.144 MHz
Lower Frequency:1850.34 MHz
Upper Frequency:1854.48 MHz
Continuous
DL Channel
9662
Uplink Channel
9262
Band Arbitrator
Band VI
Freq Band Ind
On
Transmit SIB5bis
Std Bands
Return
Calibrate Measurements
Swap Window Positions
Background
Active Cell
Connected
Sys Type: UTRA FDD
1 of 2
IntRef

Fig 4.3-7

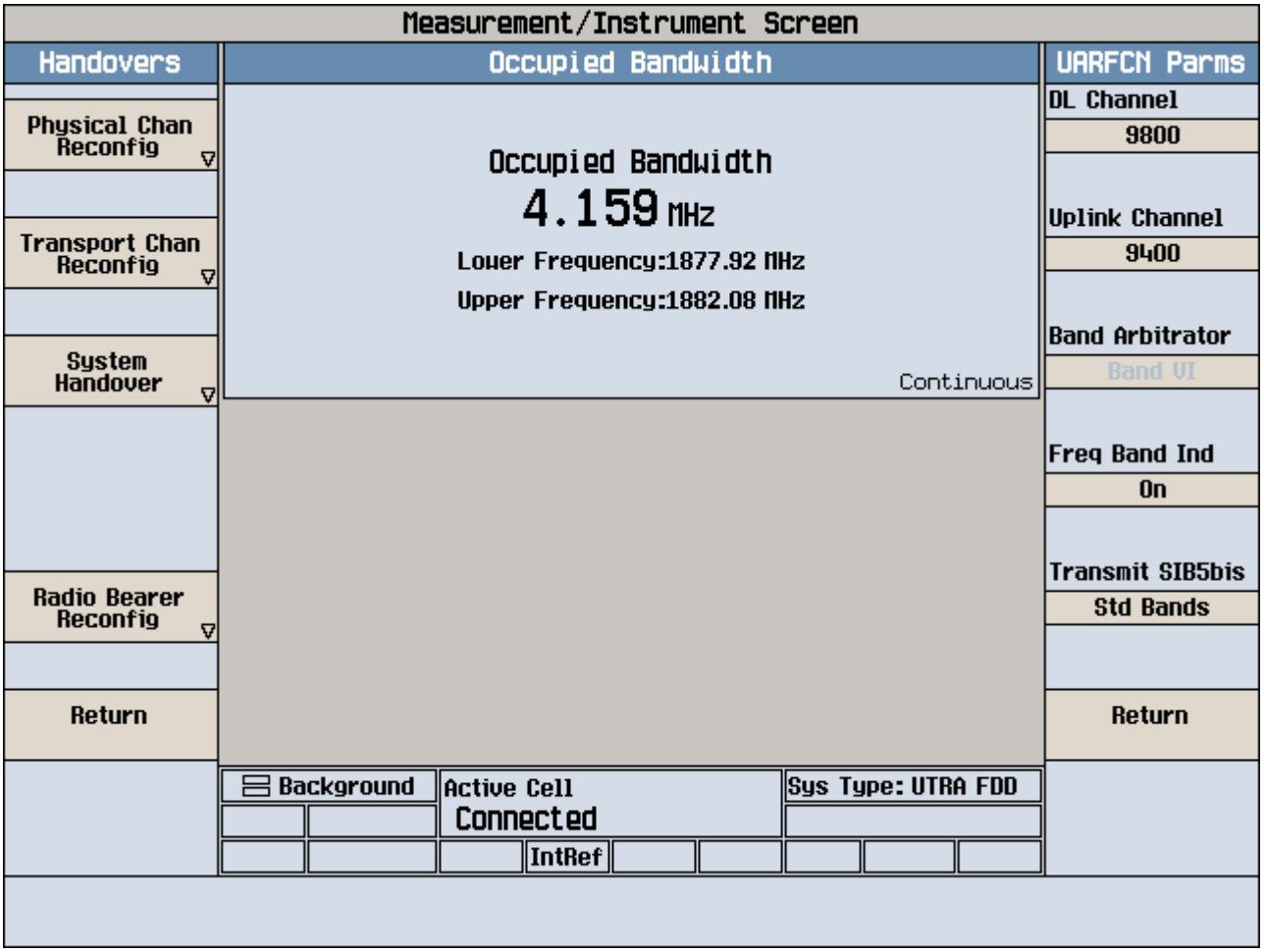
Measurement/Instrument Screen
Handovers
Physical Chan Reconfig
Transport Chan Reconfig
System Handover
Radio Bearer Reconfig
Return
Occupied Bandwidth
Occupied Bandwidth
4.159 MHz
Lower Frequency:1877.92 MHz
Upper Frequency:1882.08 MHz
Continuous
Background
Active Cell
Connected
IntRef
Sys Type: UTRA FDD
UARFCN Parms
DL Channel
9800
Uplink Channel
9400
Band Arbitrator
Band VI
Freq Band Ind
On
Transmit SIB5bis
Std Bands
Return

Fig 4.3-8

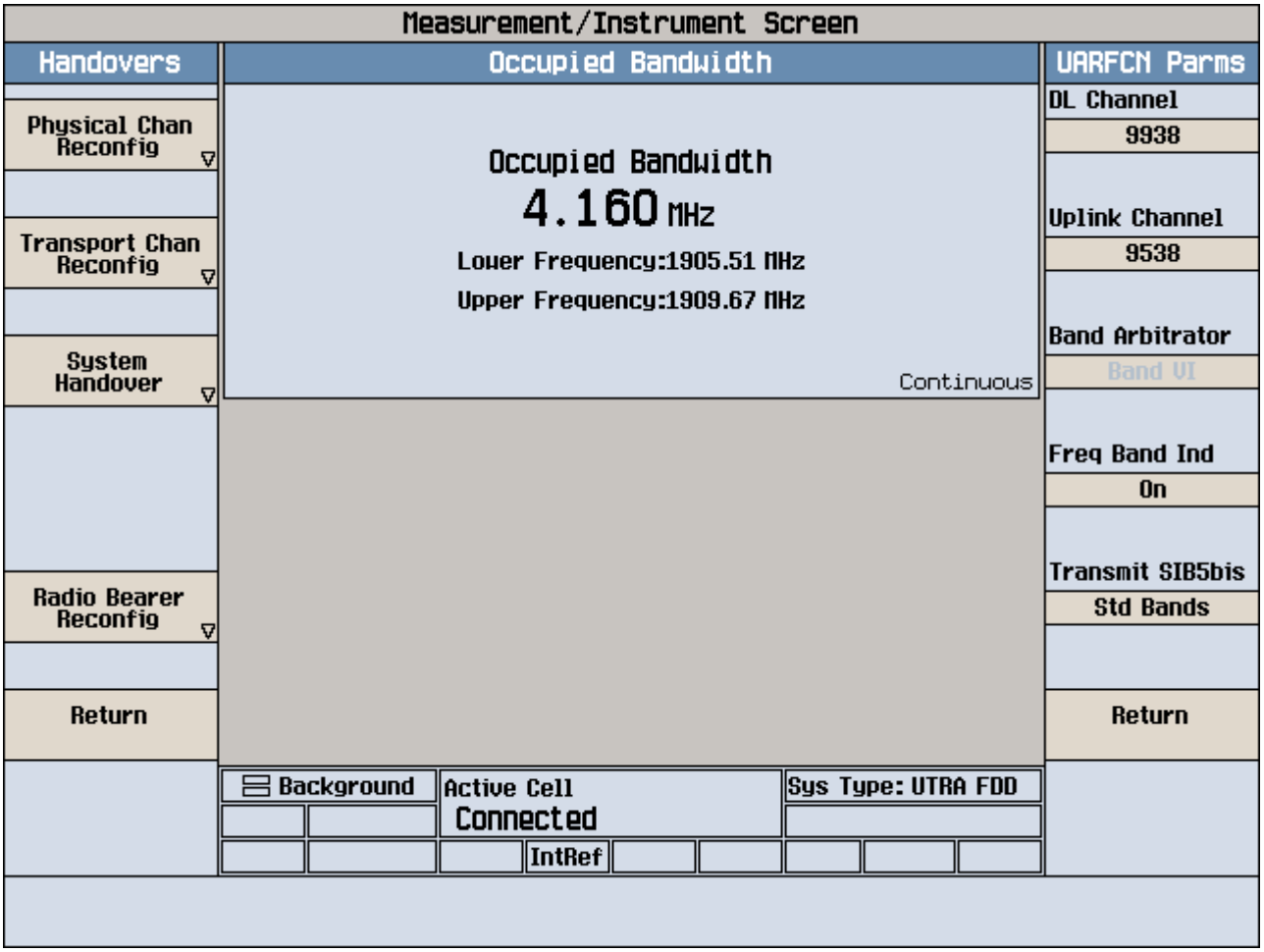
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Transport Chan Reconfig
System Handover
Radio Bearer Reconfig
Return
Occupied Bandwidth
4.160 MHz
Lower Frequency:1905.51 MHz
Upper Frequency:1909.67 MHz
Continuous
DL Channel
9938
Uplink Channel
9538
Band Arbitrator
Band UI
Freq Band Ind
On
Transmit SIB5bis
Std Bands
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-9

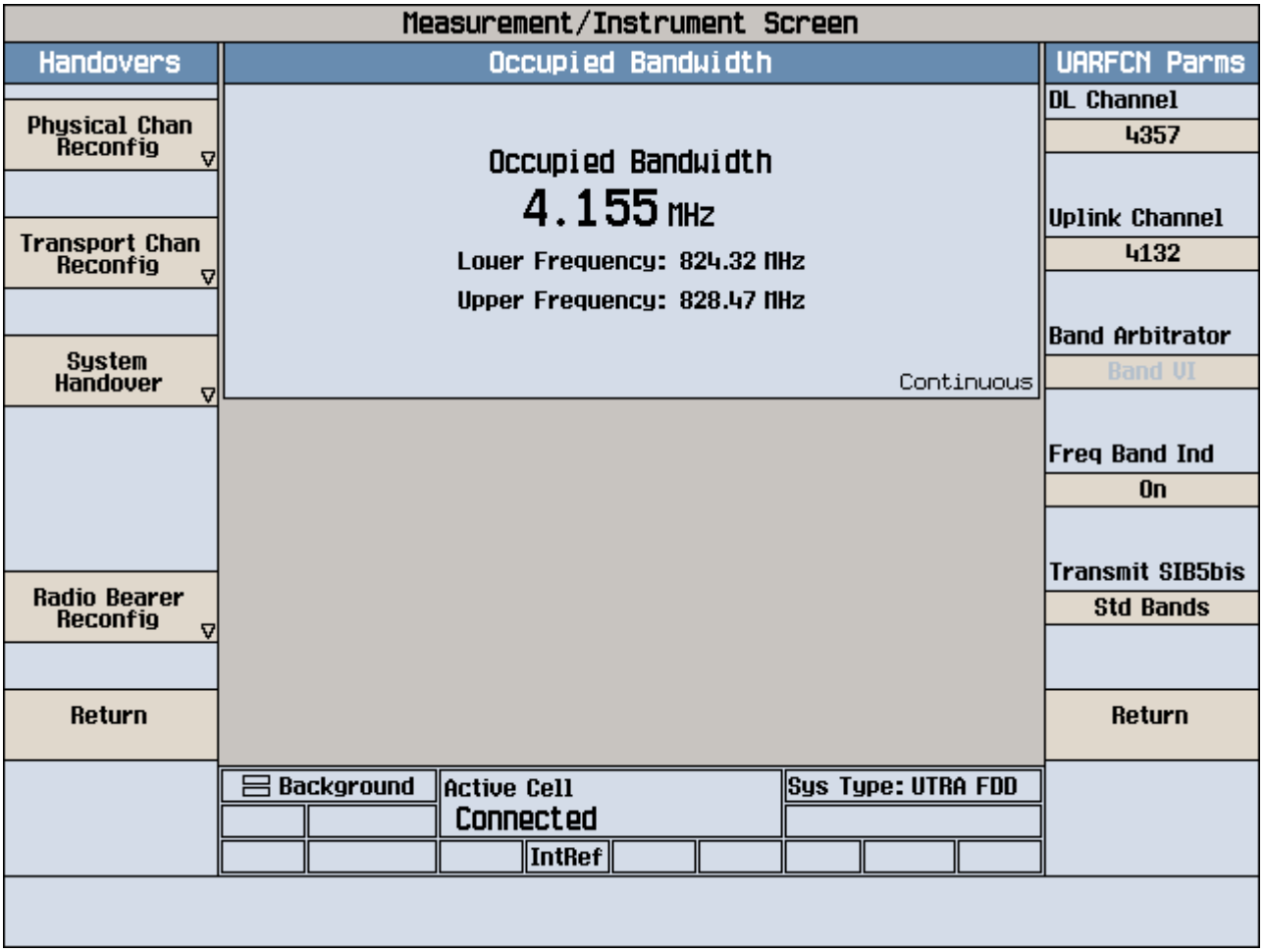
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Transport Chan Reconfig
System Handover
Radio Bearer Reconfig
Return
Occupied Bandwidth
4.155 MHz
Lower Frequency: 824.32 MHz
Upper Frequency: 828.47 MHz
Continuous
DL Channel
4357
Uplink Channel
4132
Band Arbitrator
Band UI
Freq Band Ind
On
Transmit SIB5bis
Std Bands
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-10

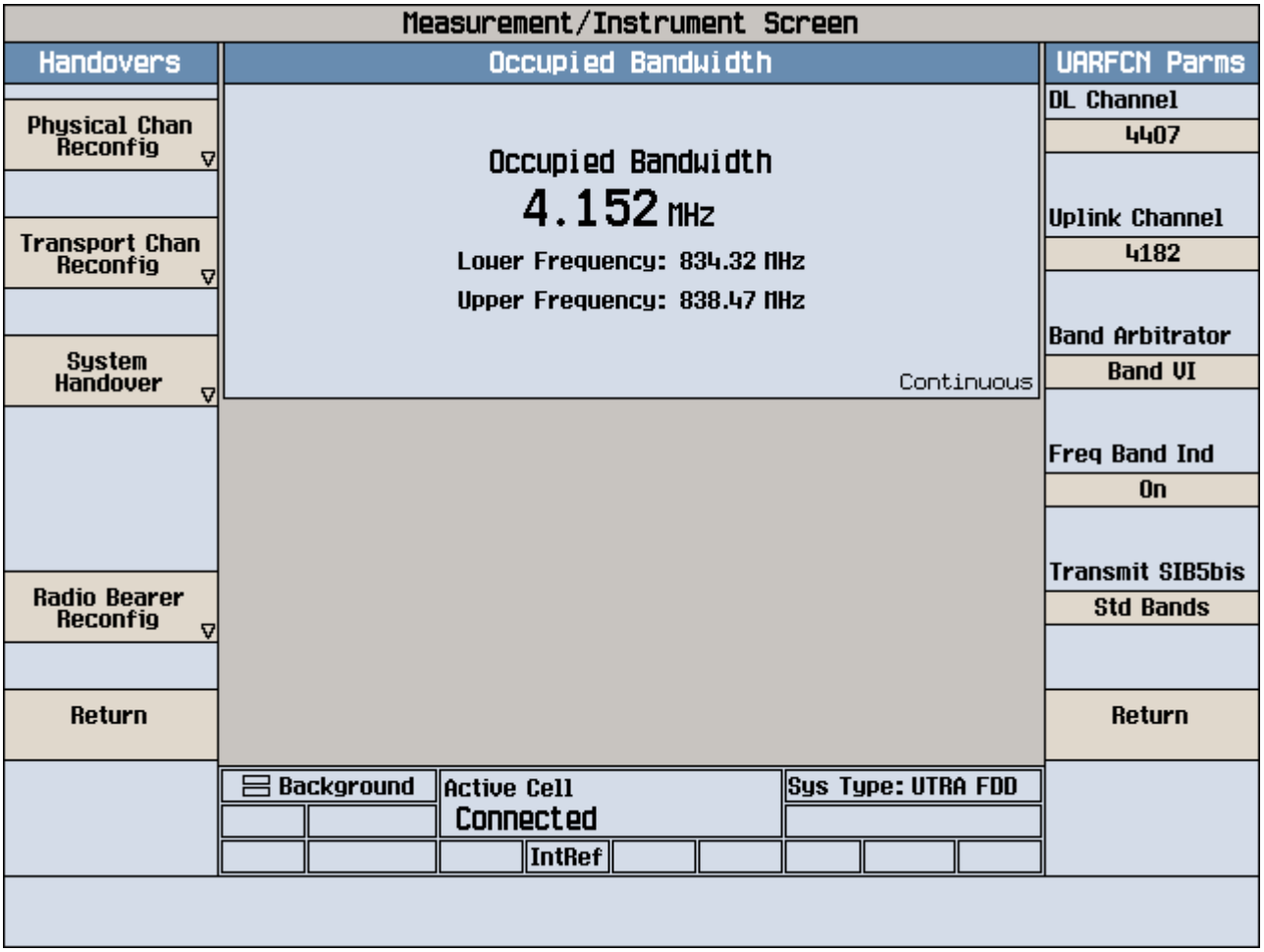
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Occupied Bandwidth
4.152 MHz
Lower Frequency: 834.32 MHz
Upper Frequency: 838.47 MHz
Continuous
DL Channel
4407
Uplink Channel
4182
Transport Chan Reconfig
Band Arbitrator
Band VI
System Handover
Freq Band Ind
On
Transmit SIB5bis
Std Bands
Radio Bearer Reconfig
Return
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-11

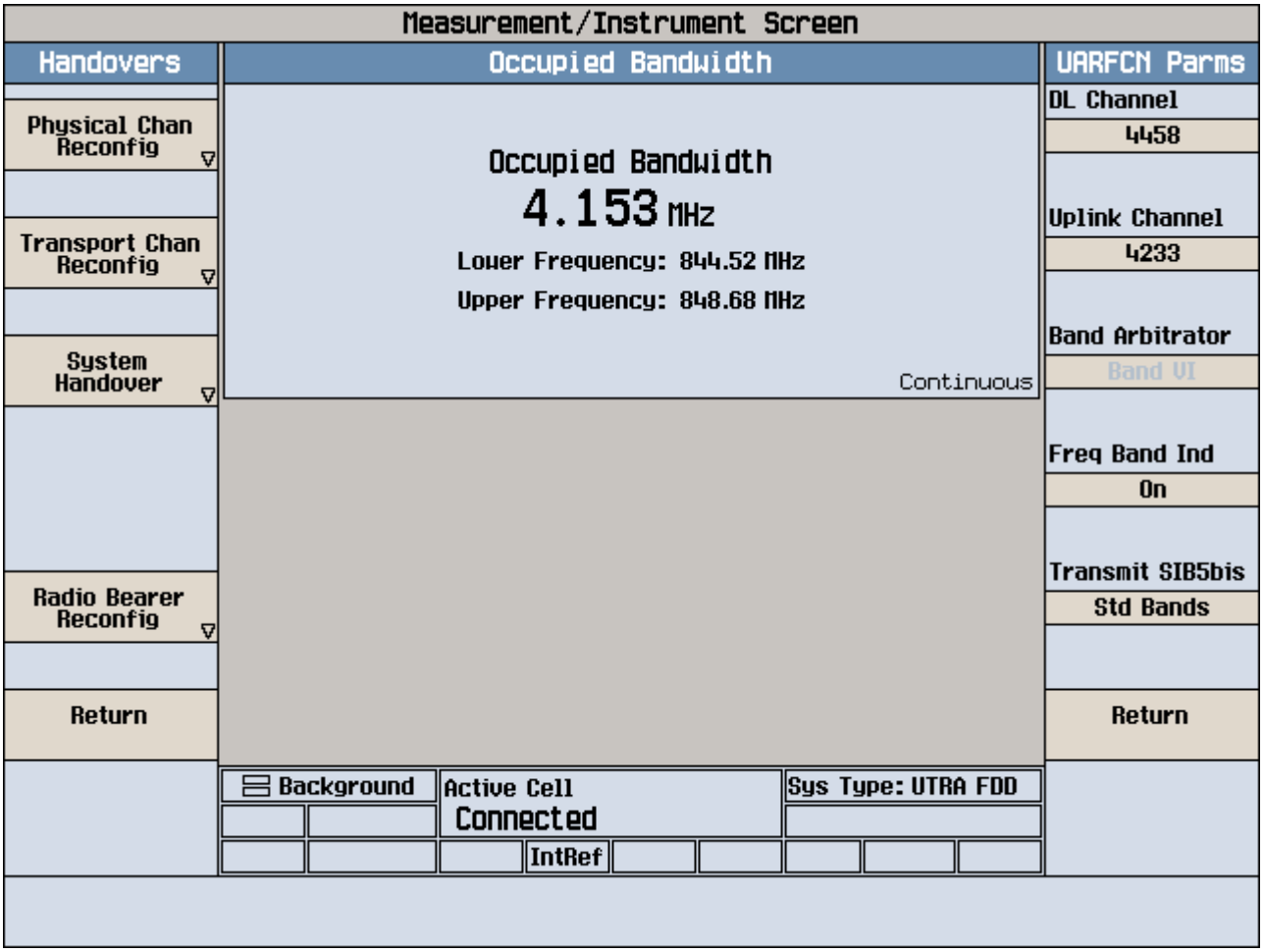
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Occupied Bandwidth
4.153 MHz
Lower Frequency: 844.52 MHz
Upper Frequency: 848.68 MHz
Continuous
DL Channel
4458
Uplink Channel
4233
Transport Chan Reconfig
Band Arbitrator
System Handover
Band UI
Freq Band Ind
On
Transmit SIB5bis
Radio Bearer Reconfig
Std Bands
Return
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-12

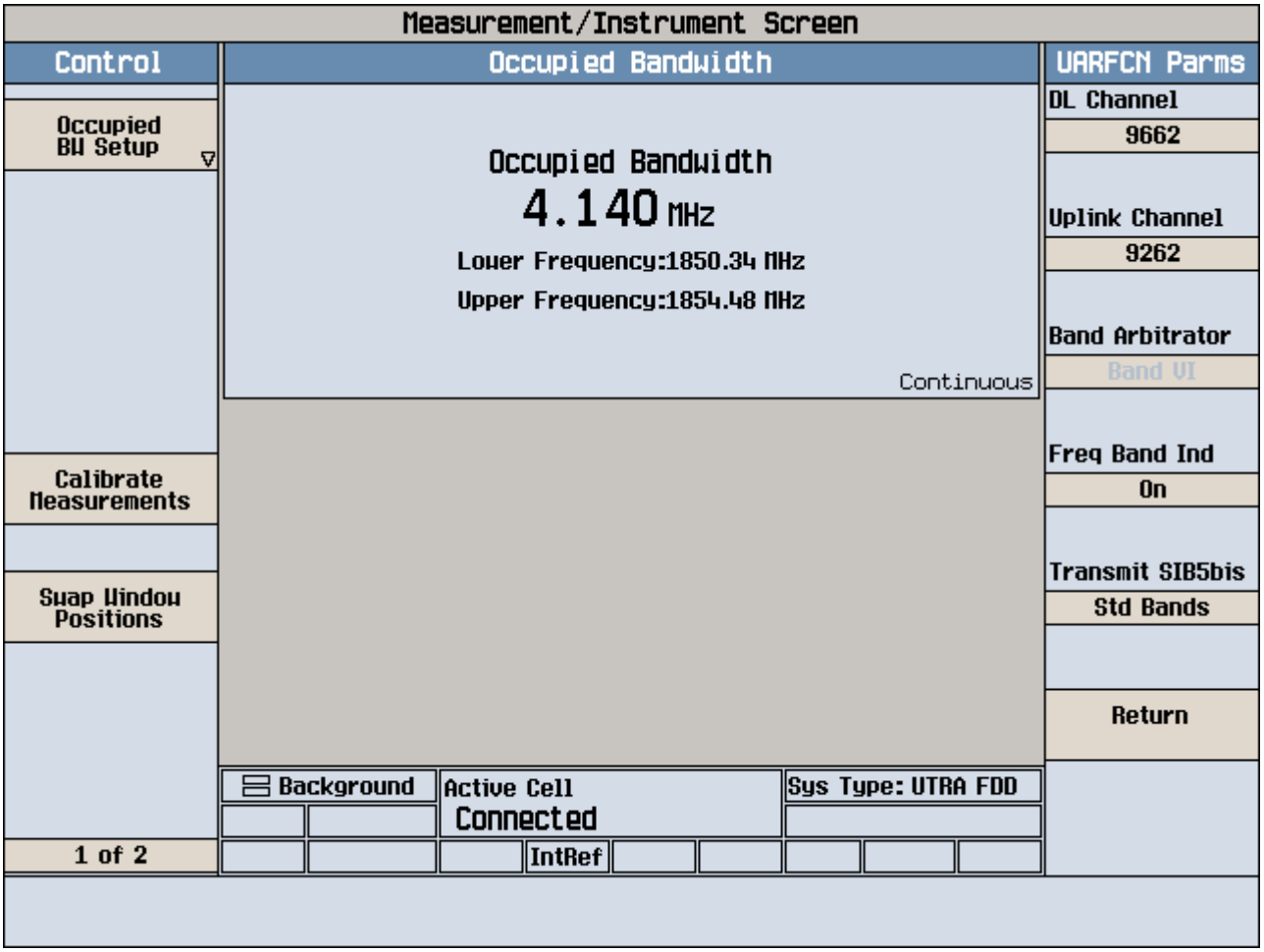
Measurement/Instrument Screen
Control
Occupied Bandwidth
UARFCN Parms
Occupied BW Setup
Occupied Bandwidth
4.140 MHz
Lower Frequency:1850.34 MHz
Upper Frequency:1854.48 MHz
Continuous
DL Channel
9662
Uplink Channel
9262
Band Arbitrator
Band UI
Freq Band Ind
On
Calibrate Measurements
Transmit SIB5bis
Std Bands
Swap Window Positions
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
1 of 2
IntRef

Fig 4.3-13

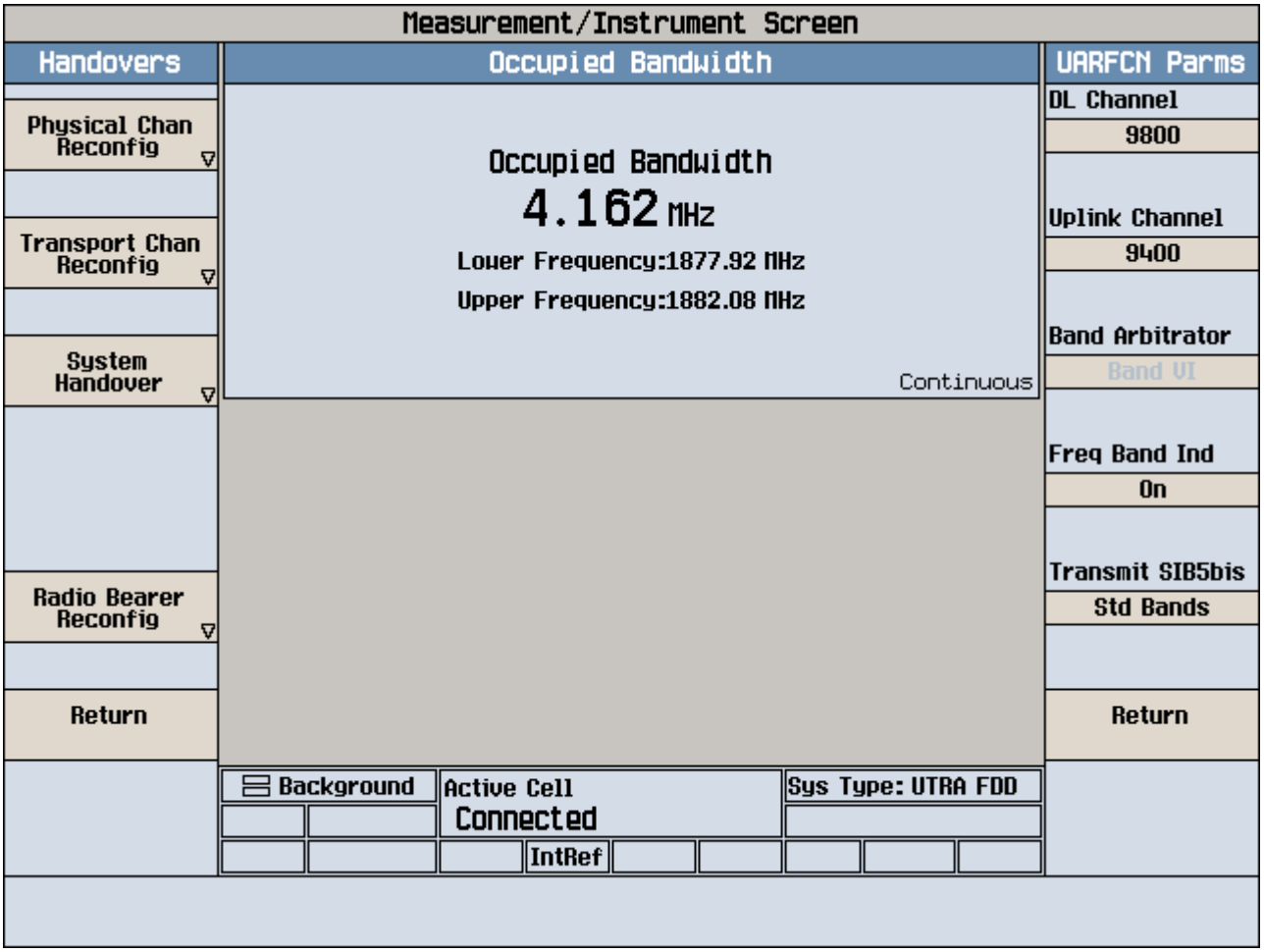
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Transport Chan Reconfig
System Handover
Radio Bearer Reconfig
Return
Occupied Bandwidth
4.162 MHz
Lower Frequency:1877.92 MHz
Upper Frequency:1882.08 MHz
Continuous
DL Channel
9800
Uplink Channel
9400
Band Arbitrator
Band UI
Freq Band Ind
On
Transmit SIB5bis
Std Bands
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-14

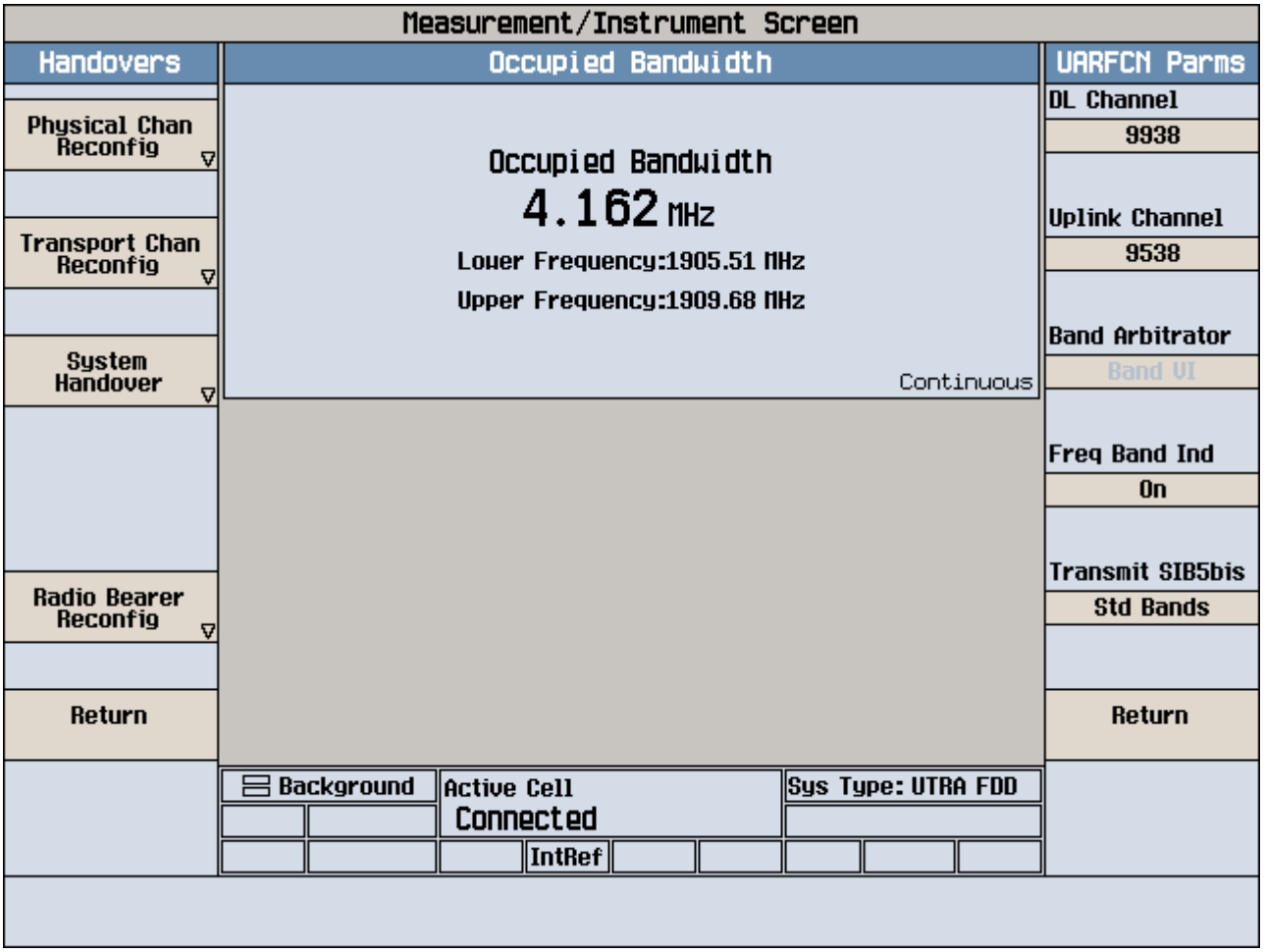
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Transport Chan Reconfig
System Handover
Radio Bearer Reconfig
Return
Occupied Bandwidth
4.162 MHz
Lower Frequency:1905.51 MHz
Upper Frequency:1909.68 MHz
Continuous
DL Channel
9938
Uplink Channel
9538
Band Arbitrator
Band UI
Freq Band Ind
On
Transmit SIB5bis
Std Bands
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-15

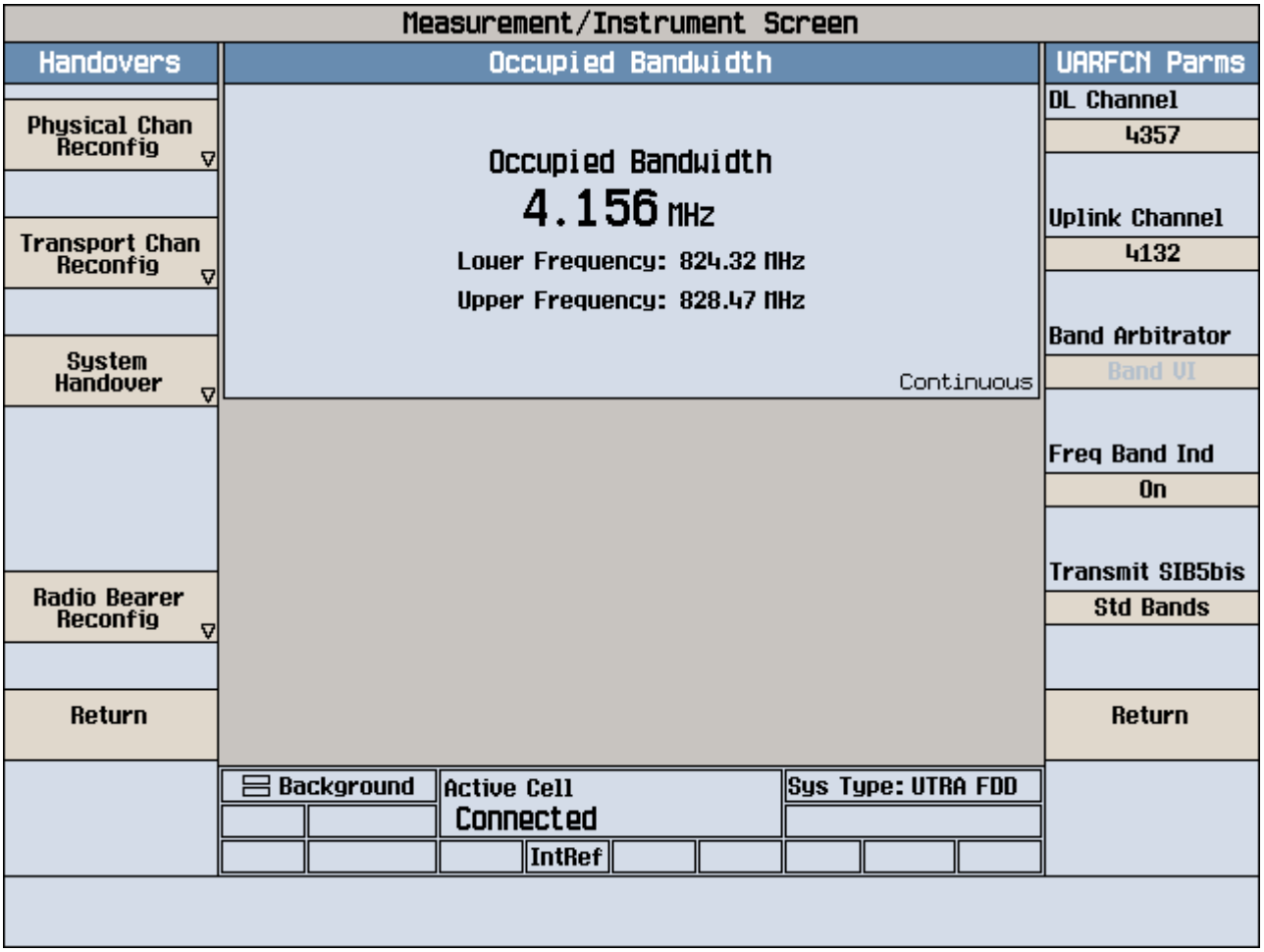
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Transport Chan Reconfig
System Handover
Radio Bearer Reconfig
Return
Occupied Bandwidth
4.156 MHz
Lower Frequency: 824.32 MHz
Upper Frequency: 828.47 MHz
Continuous
DL Channel
4357
Uplink Channel
4132
Band Arbitrator
Band UI
Freq Band Ind
On
Transmit SIB5bis
Std Bands
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-16

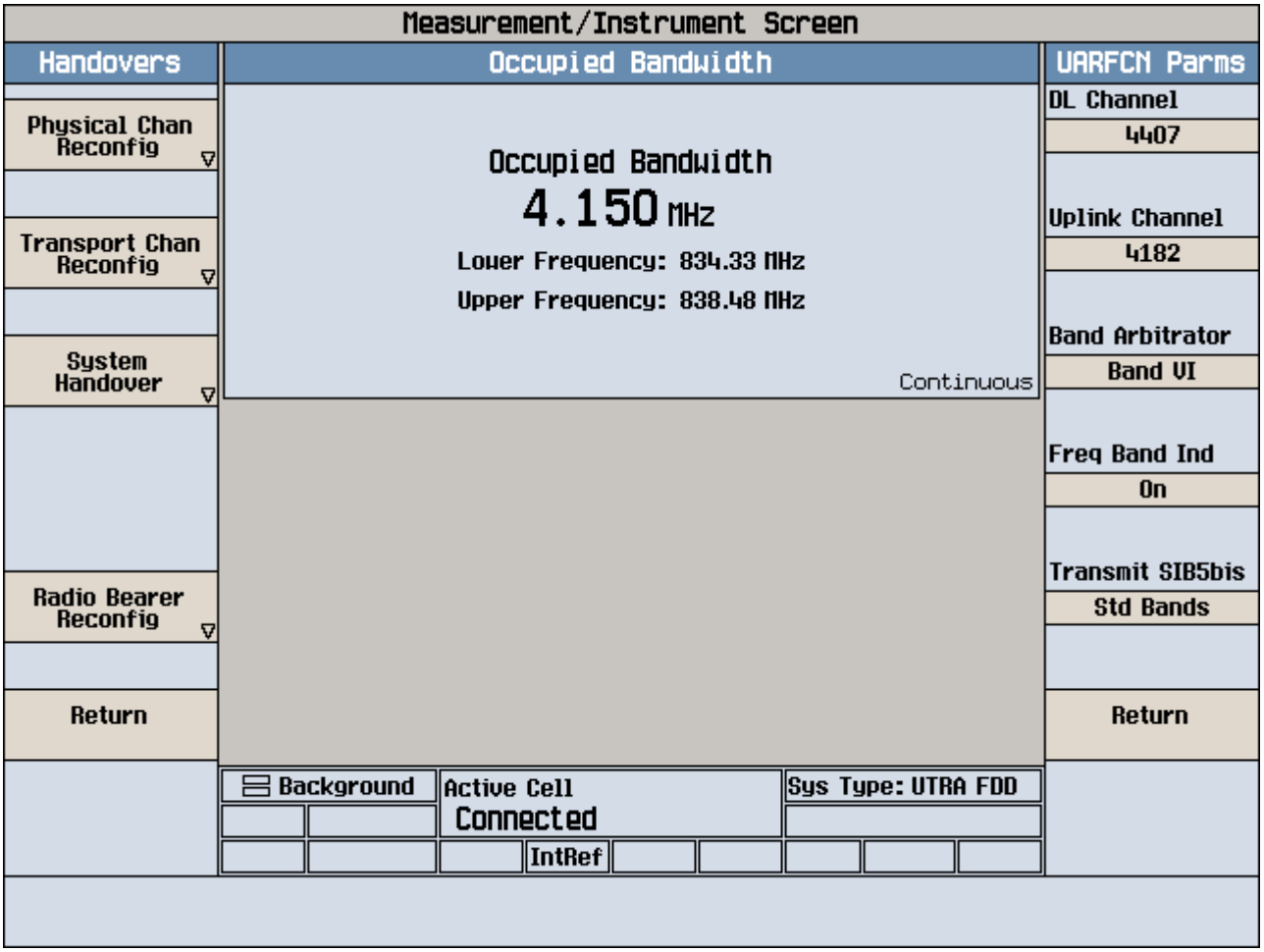
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Transport Chan Reconfig
System Handover
Radio Bearer Reconfig
Return
Occupied Bandwidth
4.150 MHz
Lower Frequency: 834.33 MHz
Upper Frequency: 838.48 MHz
Continuous
DL Channel
4407
Uplink Channel
4182
Band Arbitrator
Band VI
Freq Band Ind
On
Transmit SIB5bis
Std Bands
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-17

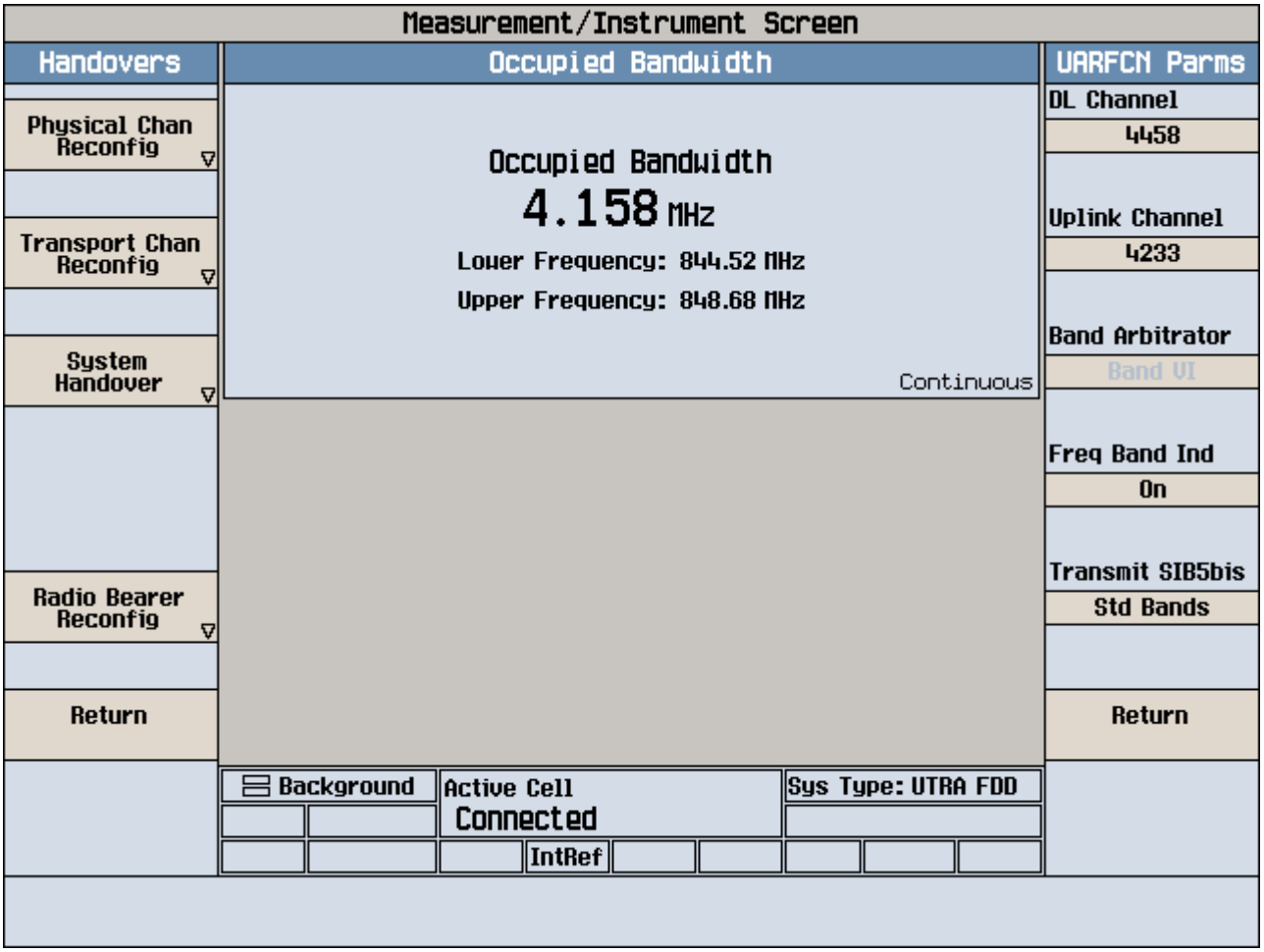
Measurement/Instrument Screen
Handovers
Occupied Bandwidth
UARFCN Parms
Physical Chan Reconfig
Transport Chan Reconfig
System Handover
Radio Bearer Reconfig
Return
Occupied Bandwidth
4.158 MHz
Lower Frequency: 844.52 MHz
Upper Frequency: 848.68 MHz
Continuous
DL Channel
4458
Uplink Channel
4233
Band Arbitrator
Band UI
Freq Band Ind
On
Transmit SIB5bis
Std Bands
Return
Background
Active Cell
Connected
Sys Type: UTRA FDD
IntRef

Fig 4.3-18

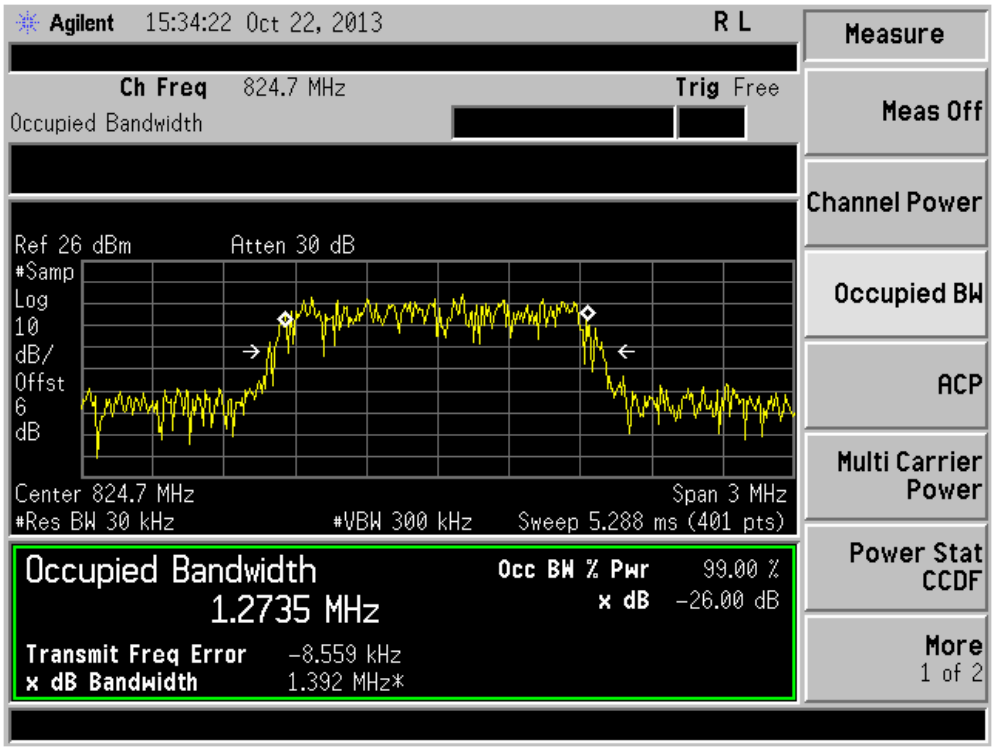

Fig 4.3-19

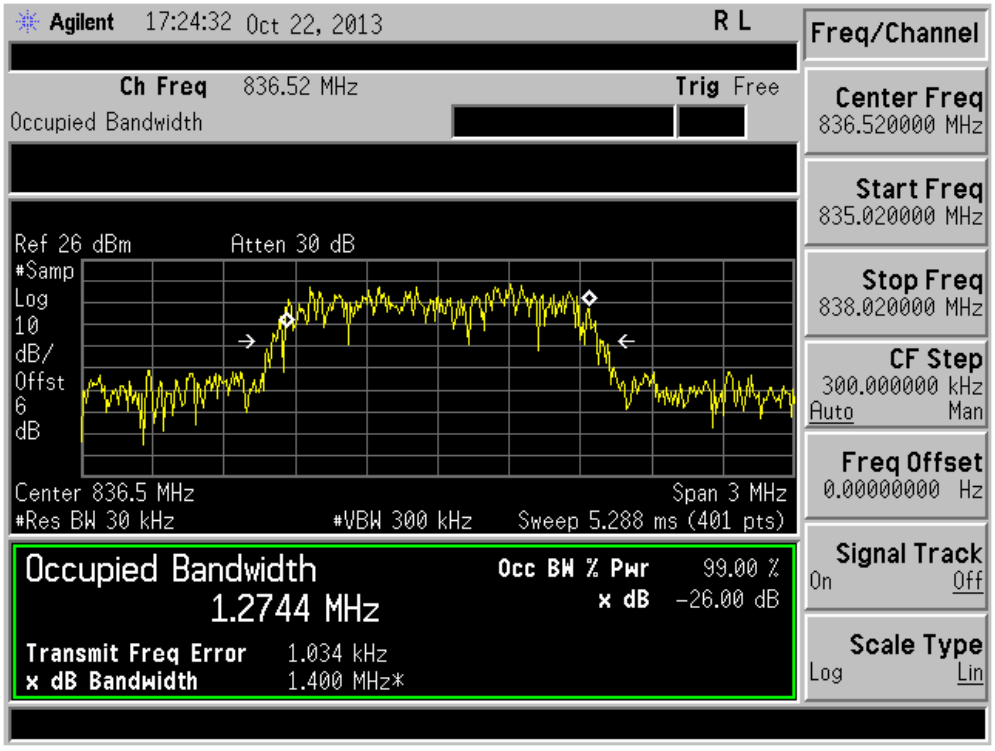

Fig 4.3-20

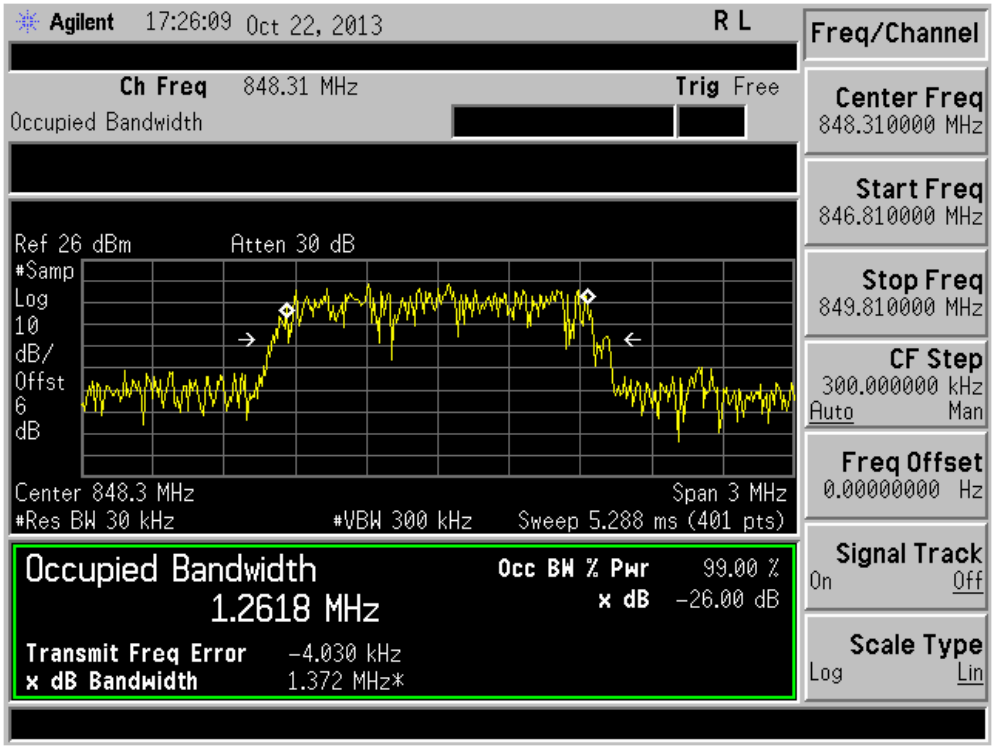

Fig 4.3-21

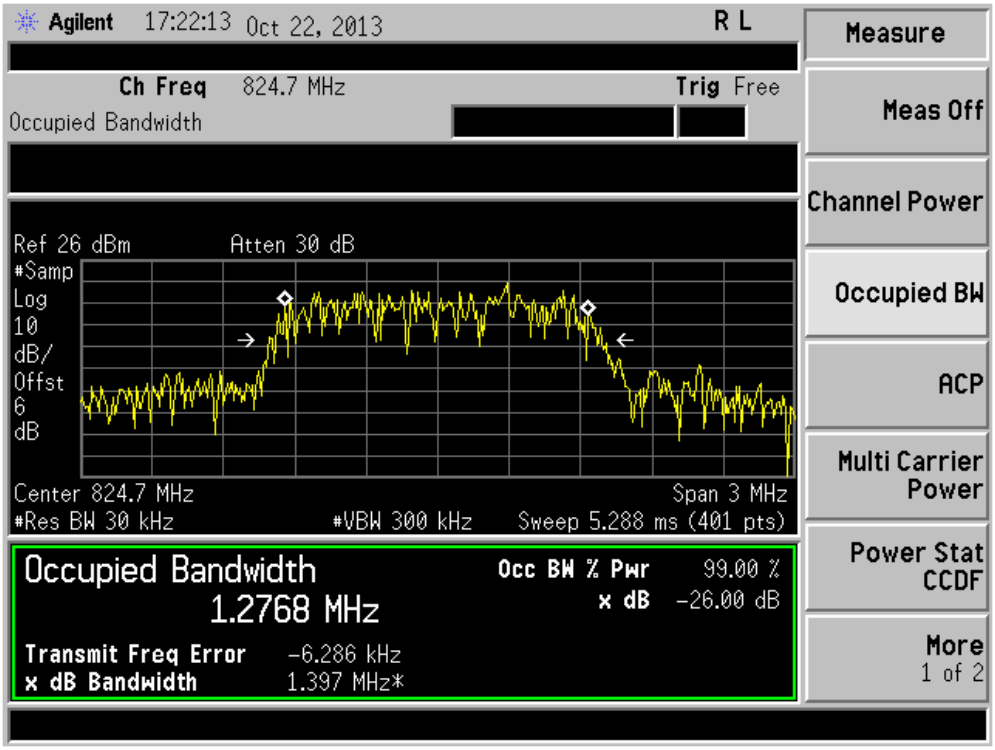

Fig 4.3-22

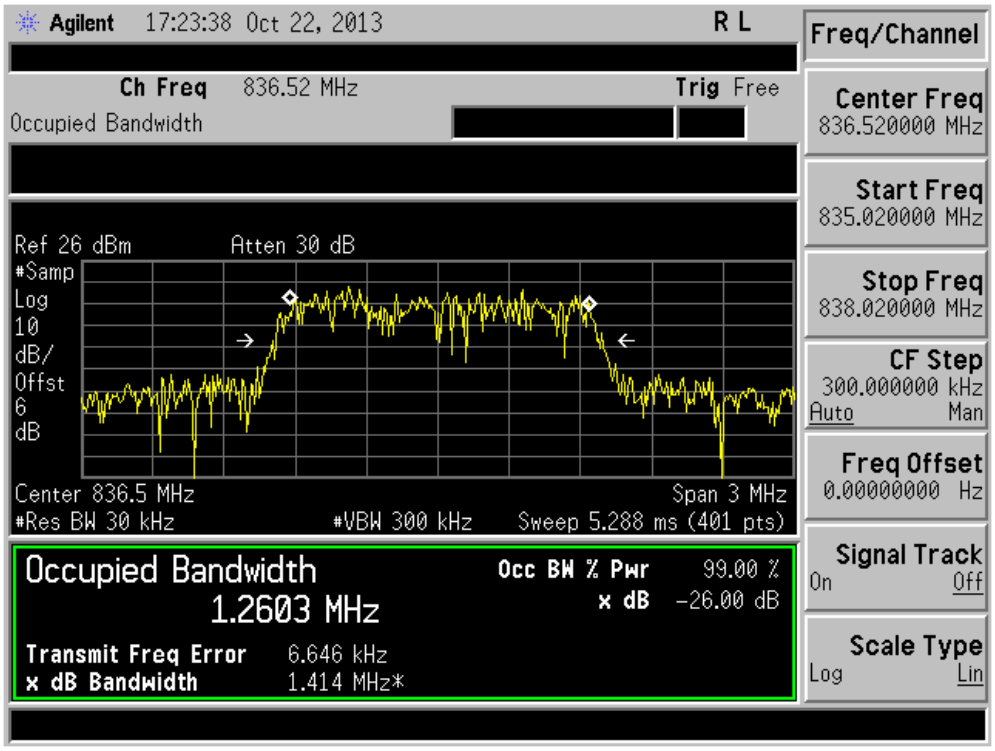

Fig 4.3-23

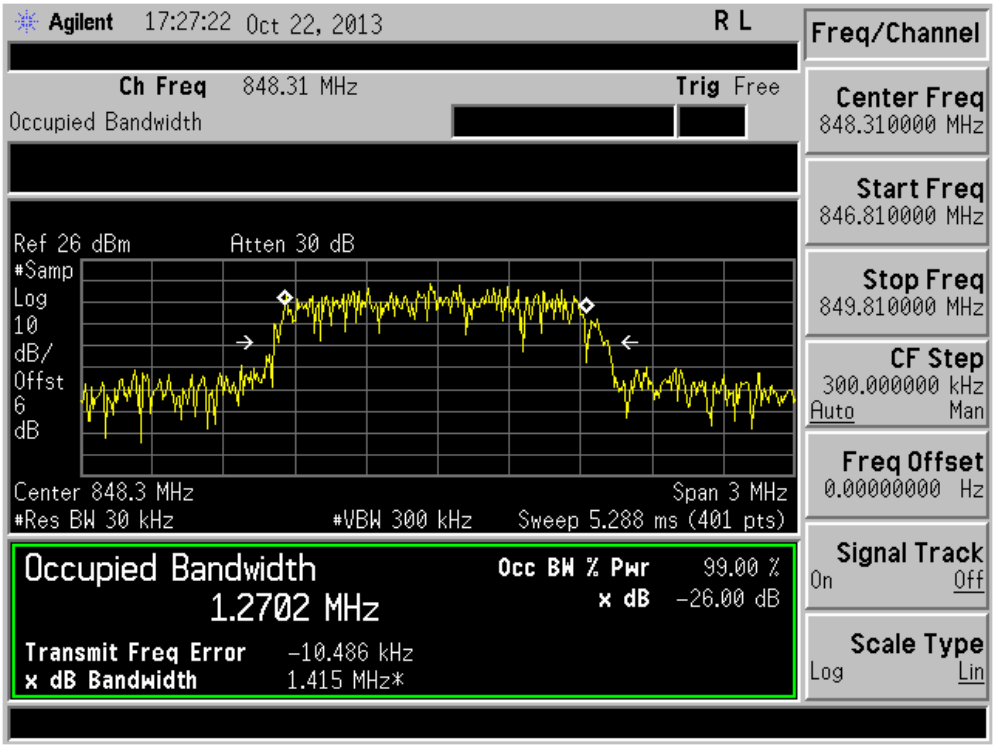

Fig 4.3-24

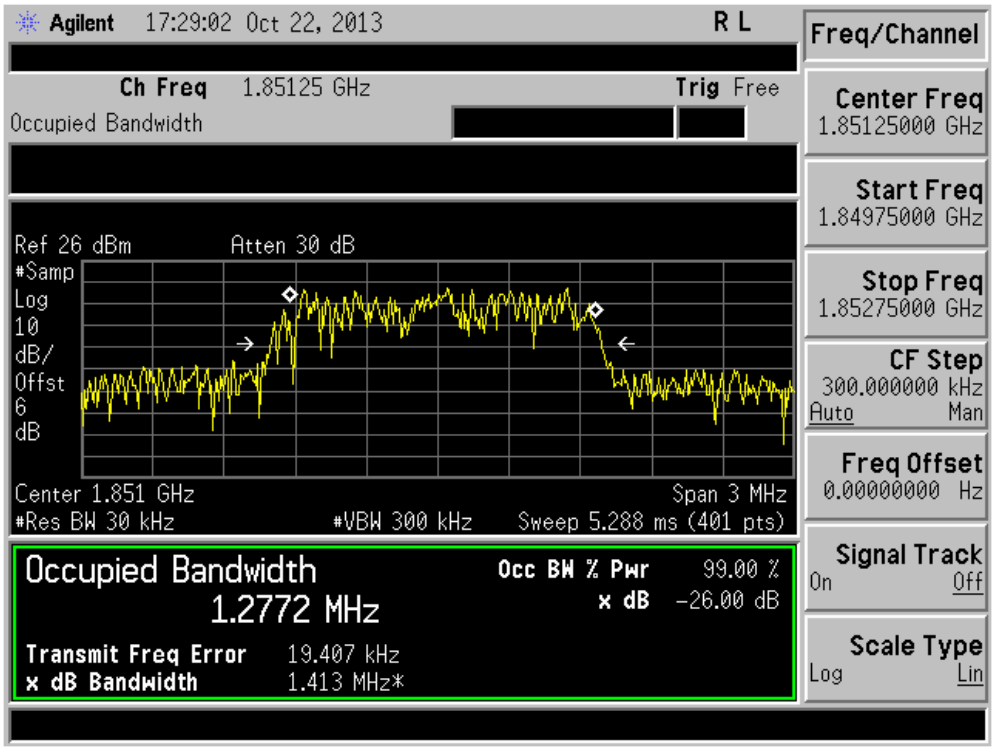

Fig 4.3-25

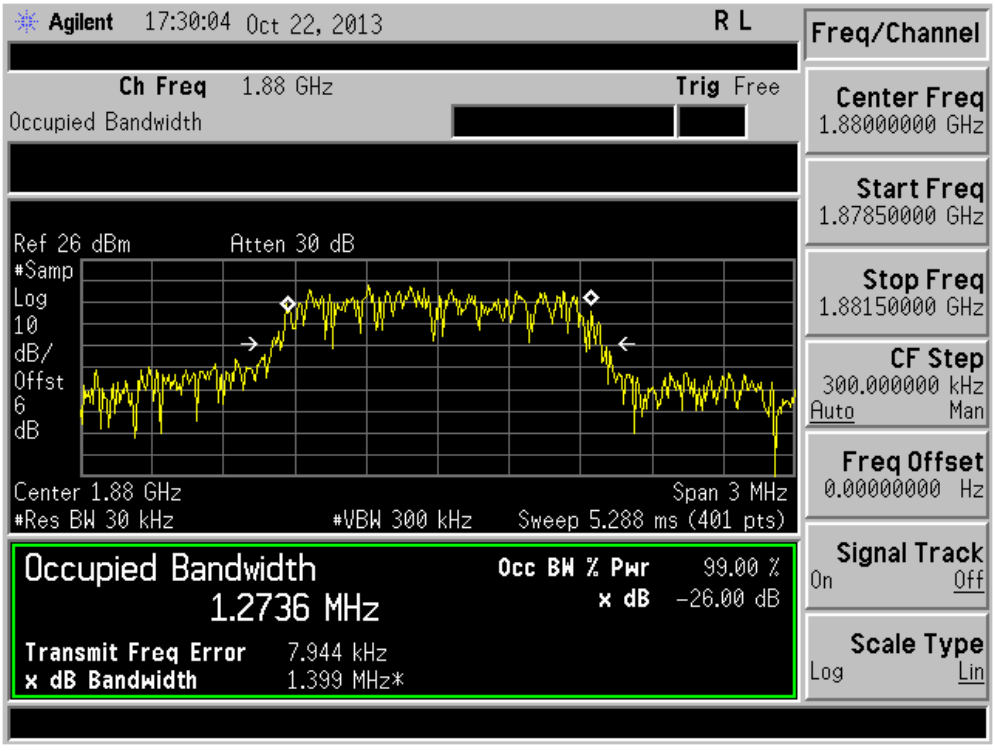

Fig 4.3-26

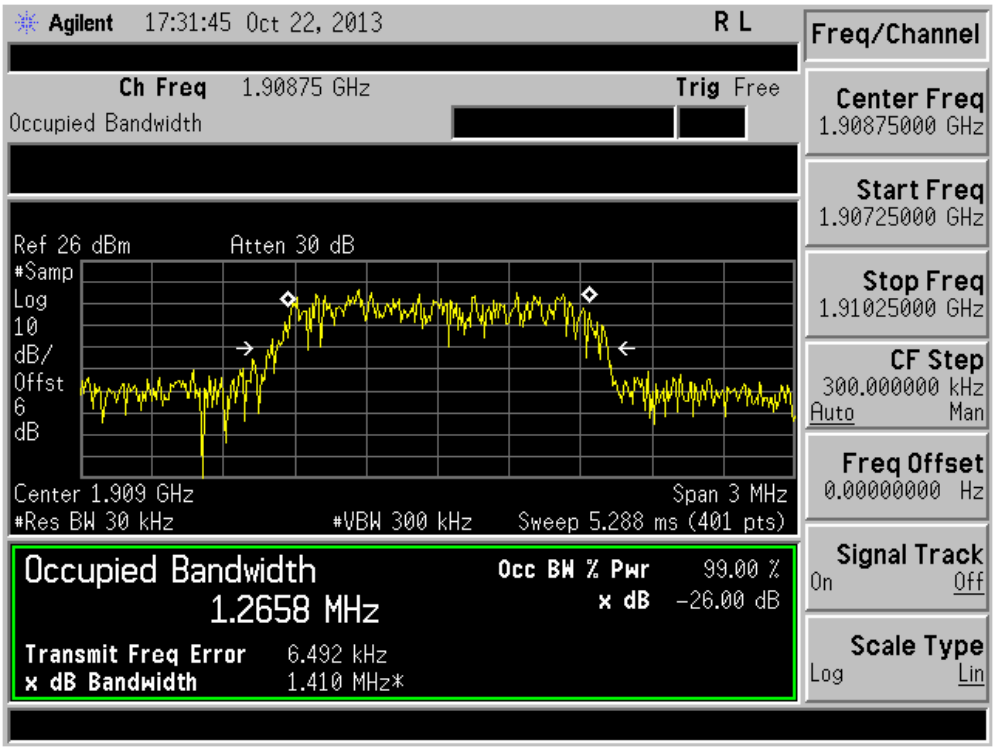

Fig 4.3-27

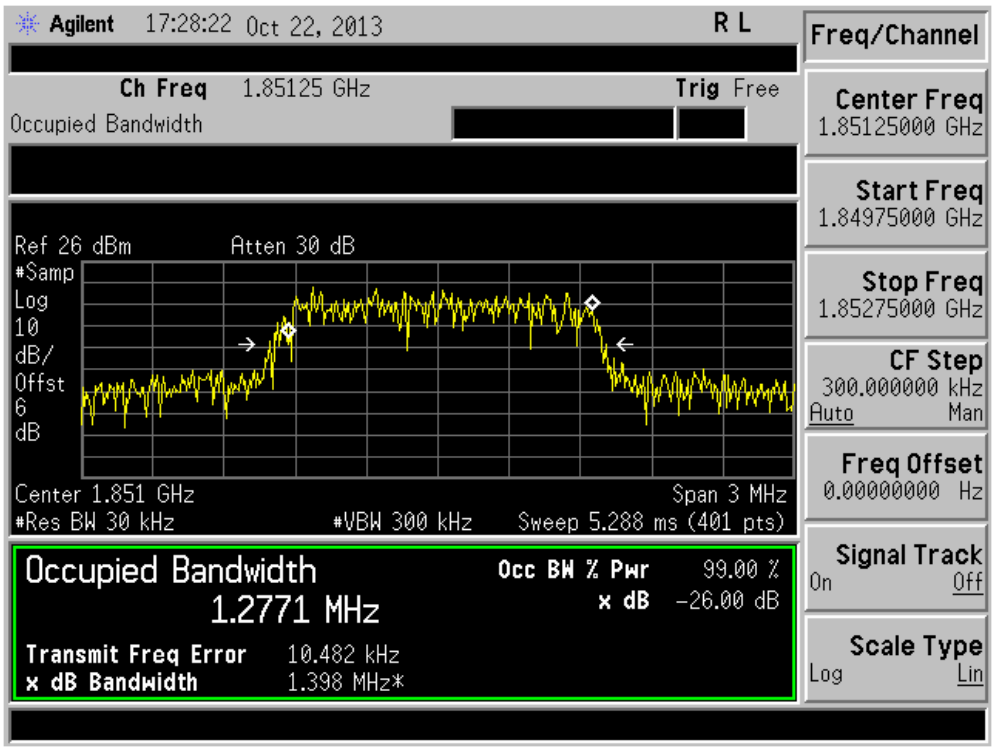

Fig 4.3-28

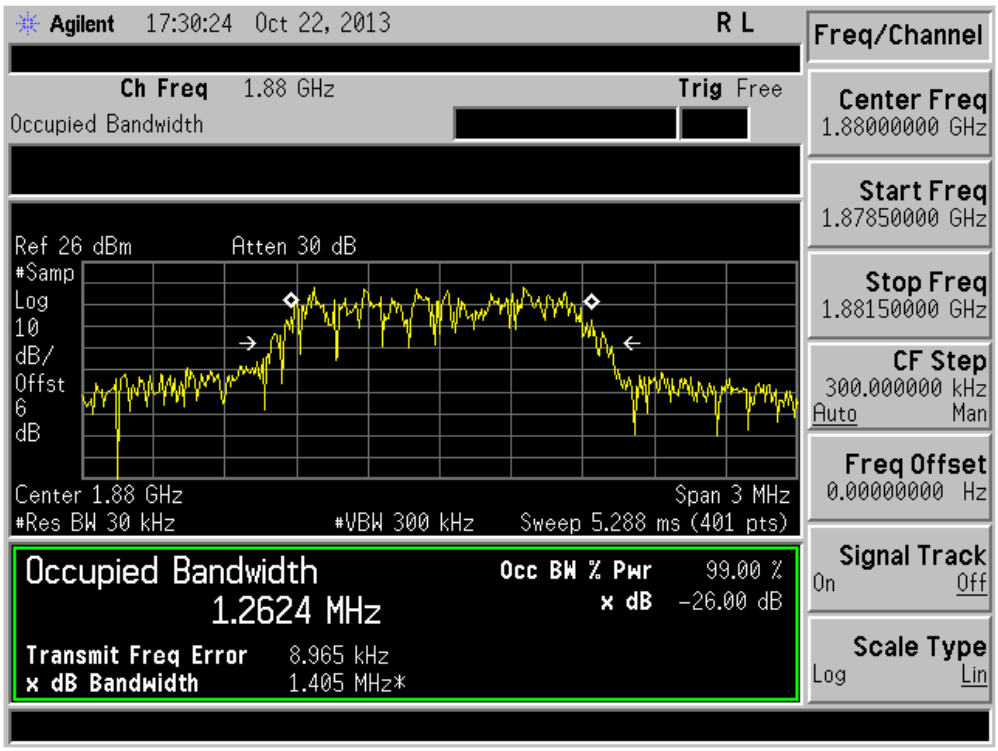

Fig 4.3-29

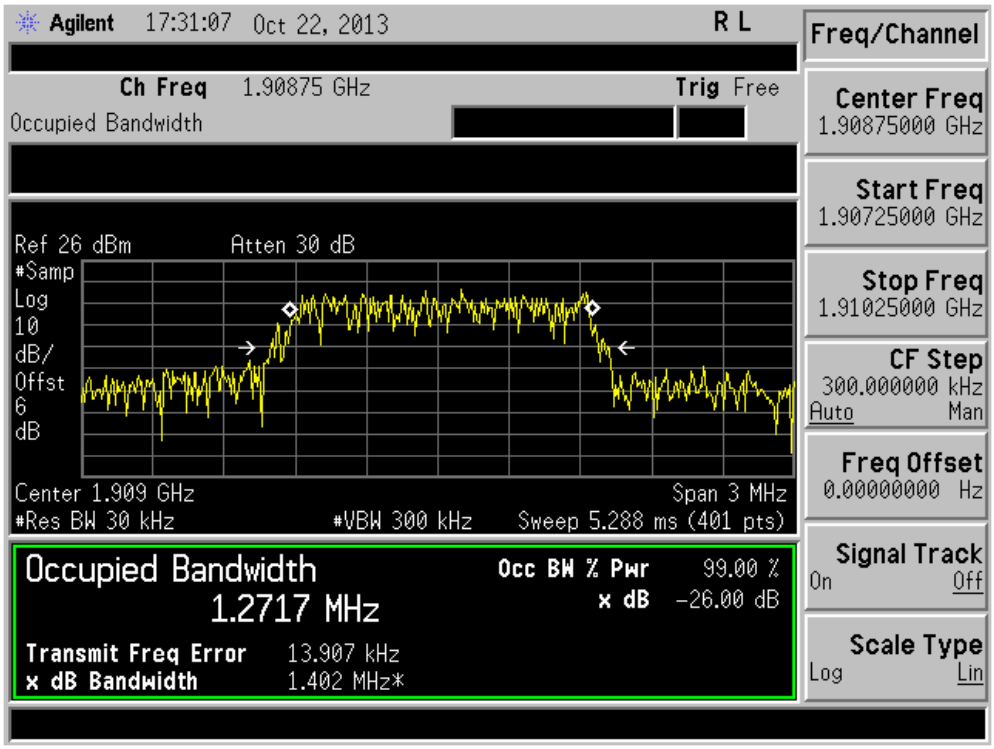

Fig 4.3-30

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R.O.C

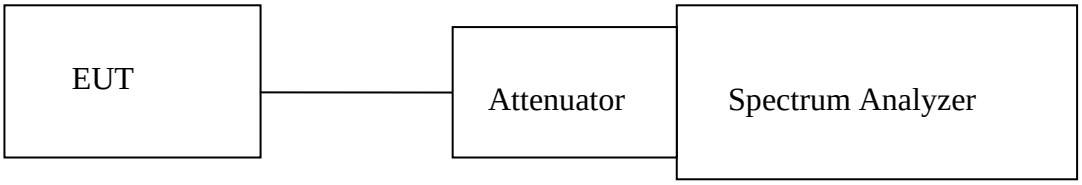
4.3 Out of Band Emissions

4.3.1. Required and Limits:

According to FCC 22.917(a).

The mean power of emission must be attenuated below the mean power of the non-modulated Carrier (P) on any frequency twice or more than twice the fundamental frequency by at least 43 + 10 log (P) dB.

4.3.2. Test Configuration and Procedure



1. The RF output of transceiver was connected to a spectrum analyzer through appropriate attenuation.
2. The resolution bandwidth of spectrum analyzer was set at 1 MHz sufficient scans were taken to show the out of band emissions if any up to 10th harmonic.

For the out of band：Set the RBW，VBW=1MHz，Start=30MHz，Stop=10th harmonic.

Limit=-13dBm.

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R.O.C

4.3.3. Test Results

Mode	Channel	Description	Ref . Fig
WCDMA Band II	9262	Out of Band Emissions	Fig 4.3-1
	9400	Out of Band Emissions	Fig 4.3-2
	9538	Out of Band Emissions	Fig 4.3-3
WCDMA Band V	4132	Out of Band Emissions	Fig 4.3-4
	4182	Out of Band Emissions	Fig 4.3-5
	4233	Out of Band Emissions	Fig 4.4-6
WCDMA /HSDPA Band II	9262	Out of Band Emissions	Fig 4.3-7
	9400	Out of Band Emissions	Fig 4.3-8
	9538	Out of Band Emissions	Fig 4.3-9
WCDMA /HSDPA Band V	4132	Out of Band Emissions	Fig 4.4-10
	4182	Out of Band Emissions	Fig 4.4-11
	4233	Out of Band Emissions	Fig 4.4-12
WCDMA /HSUPA Band II	9262	Out of Band Emissions	Fig 4.3-13
	9400	Out of Band Emissions	Fig 4.3-14
	9538	Out of Band Emissions	Fig 4.3-15
WCDMA /HSUPA Band V	4132	Out of Band Emissions	Fig 4.3-16
	4182	Out of Band Emissions	Fig 4.3-17
	4233	Out of Band Emissions	Fig 4.3-18

Mode	Channel	Description	Ref . Fig
WCDMA Band II	9262	Band Edge Emissions	Fig 4.3-19
	9538	Band Edge Emissions	Fig 4.3-20
WCDMA Band V	4132	Band Edge Emissions	Fig 4.3-21
	4233	Band Edge Emissions	Fig 4.3-22
WCDMA /HSDPA Band II	9262	Band Edge Emissions	Fig 4.3-23
	9538	Band Edge Emissions	Fig 4.3-24
WCDMA /HSDPA Band V	4132	Band Edge Emissions	Fig 4.3-25
	4233	Band Edge Emissions	Fig 4.3-26
WCDMA /HSUPA Band II	9262	Band Edge Emissions	Fig 4.3-27
	9538	Band Edge Emissions	Fig 4.3-28
WCDMA /HSUPA Band V	4132	Band Edge Emissions	Fig 4.3-29
	4233	Band Edge Emissions	Fig 4.3-30

Mode	Channel	Description	Ref . Fig
CDMA2000/1X BC0	1013	Out of Band Emissions	Fig 4.3-31, Fig 4.3-32
	384	Out of Band Emissions	Fig 4.3-33, Fig 4.3-34
	777	Out of Band Emissions	Fig 4.3-35, Fig 4.3-36
CDMA2000/EVDO BC0	1013	Out of Band Emissions	Fig 4.3-37, Fig 4.3-38
	384	Out of Band Emissions	Fig 4.3-39, Fig 4.3-40
	777	Out of Band Emissions	Fig 4.3-41, Fig 4.3-42
CDMA2000/1X BC1	1013	Out of Band Emissions	Fig 4.3-43, Fig 4.3-44
	384	Out of Band Emissions	Fig 4.3-45, Fig 4.3-46
	777	Out of Band Emissions	Fig 4.3-47, Fig 4.3-48
CDMA2000/EVDO BC1	1013	Out of Band Emissions	Fig 4.3-49, Fig 4.3-50
	384	Out of Band Emissions	Fig 4.3-51, Fig 4.3-52
	777	Out of Band Emissions	Fig 4.3-53, Fig 4.3-54

Mode	Channel	Description	Ref . Fig
CDMA2000/1X BC0	1013	Band Edge Emissions	Fig 4.3-55
	777	Band Edge Emissions	Fig 4.3-56
CDMA2000/EVDO BC0	25	Band Edge Emissions	Fig 4.3-57
	1175	Band Edge Emissions	Fig 4.3-58
CDMA2000/1X BC1	1013	Band Edge Emissions	Fig 4.3-59
	777	Band Edge Emissions	Fig 4.3-60
CDMA2000/EVDO BC1	25	Band Edge Emissions	Fig 4.3-61
	1175	Band Edge Emissions	Fig 4.3-62

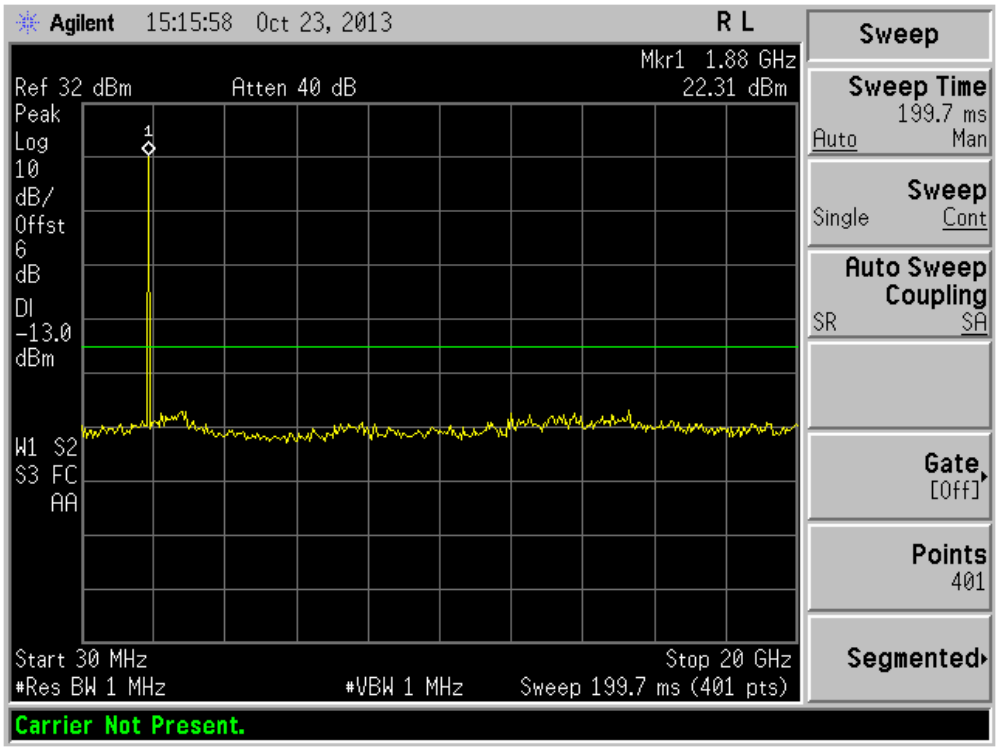

Fig 4.3-1

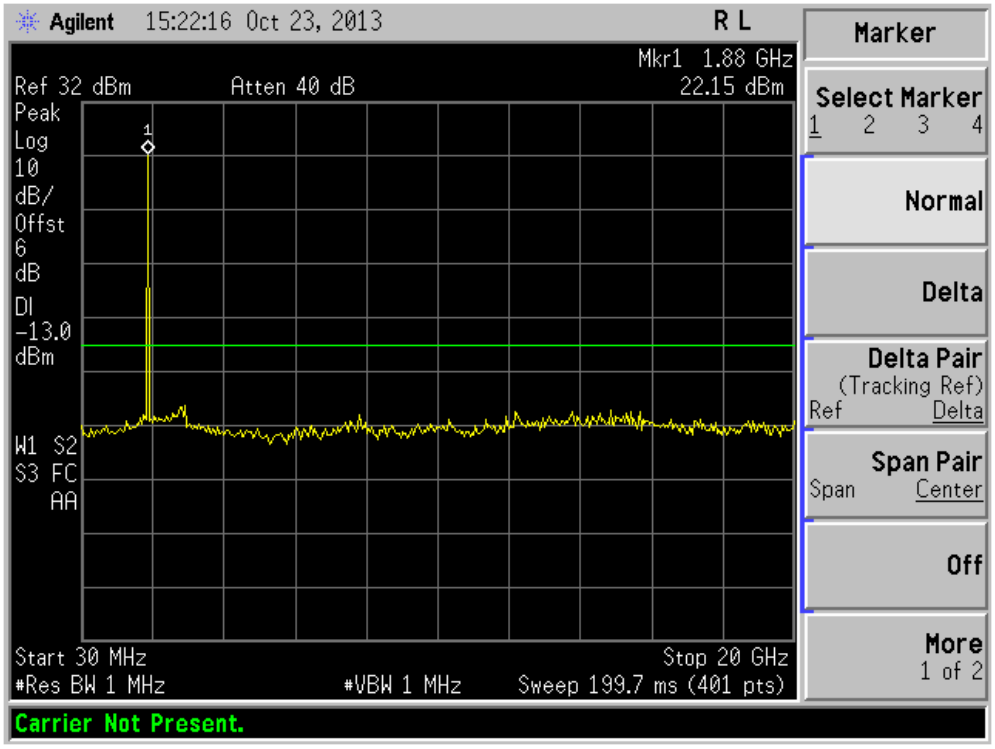

Fig 4.3-2

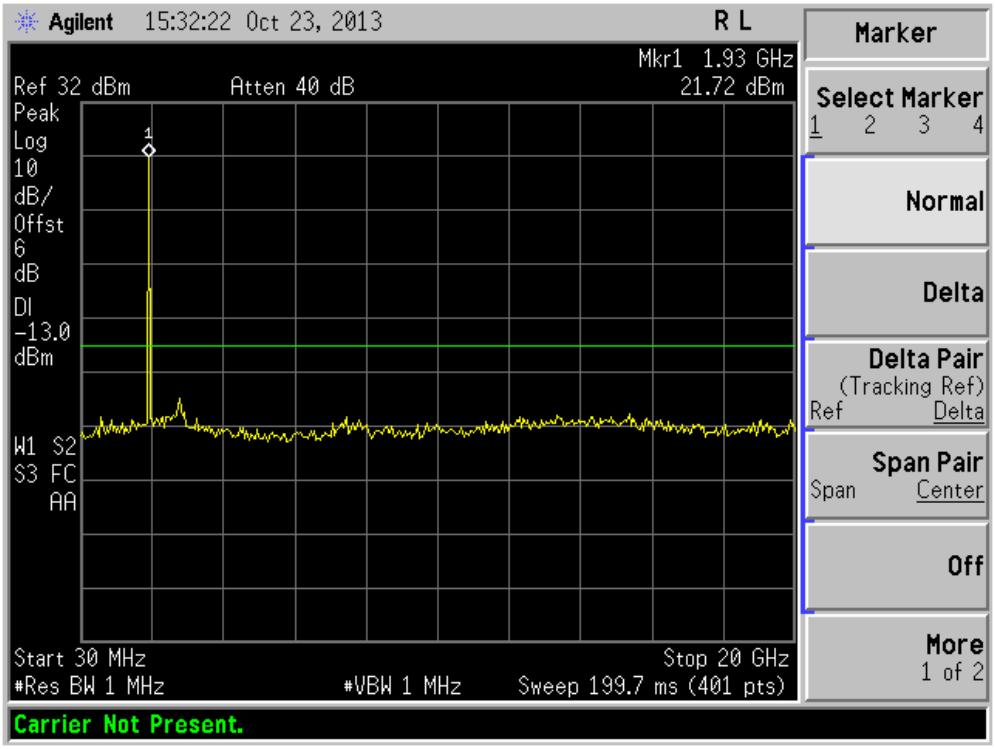

Fig 4.3-3

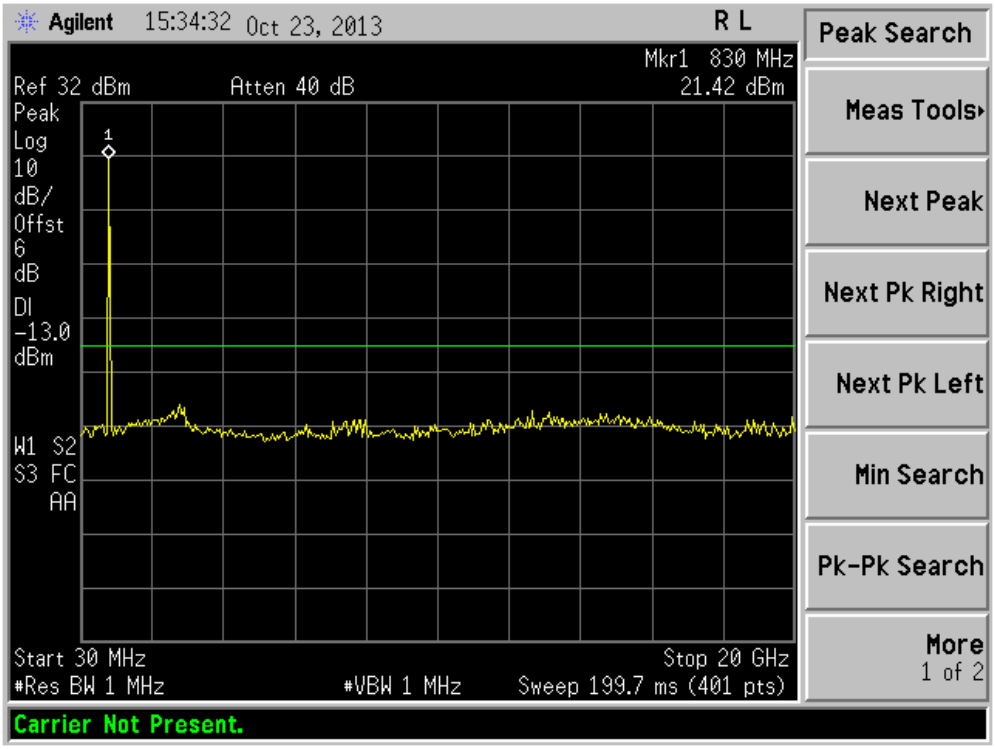

Fig 4.3-4

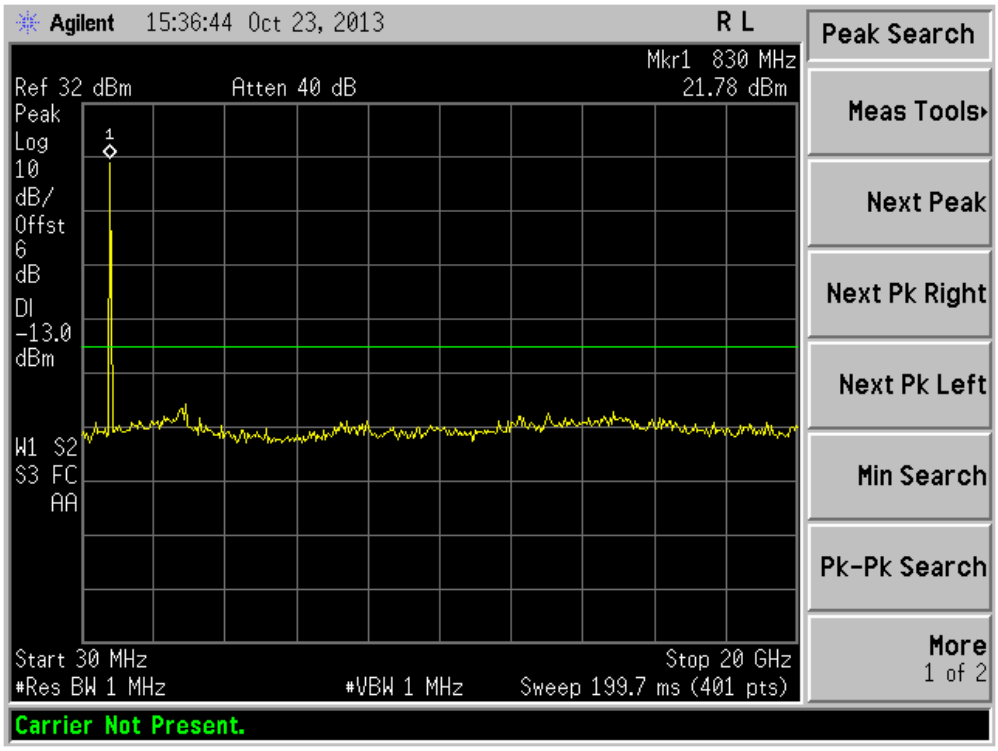

Fig 4.3-5

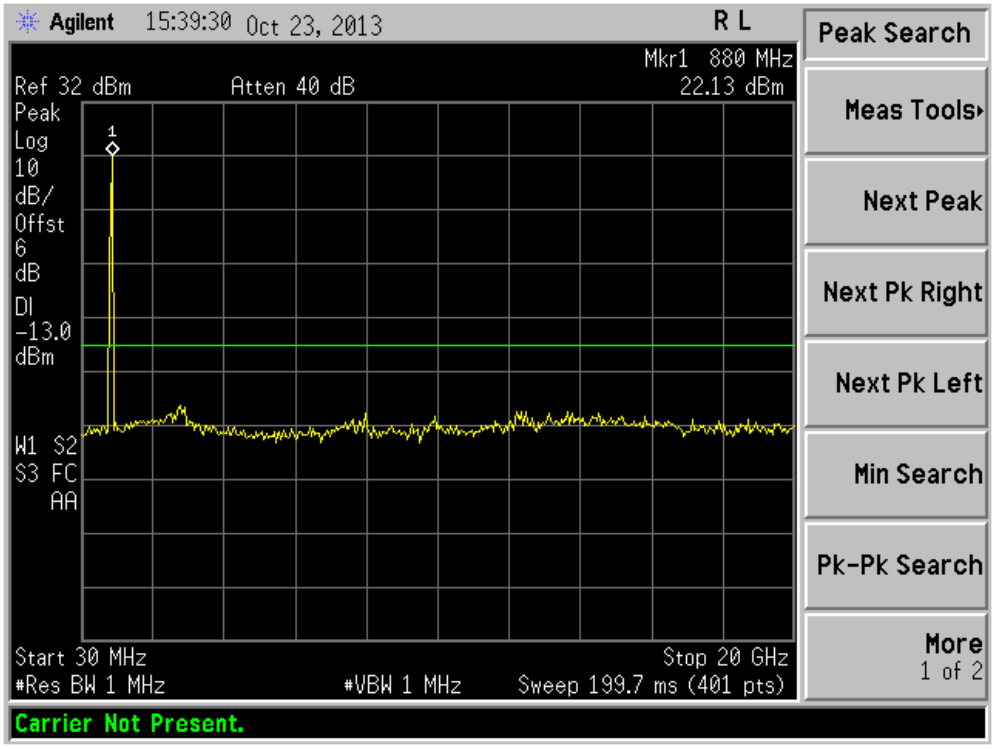

Fig 4.3-6

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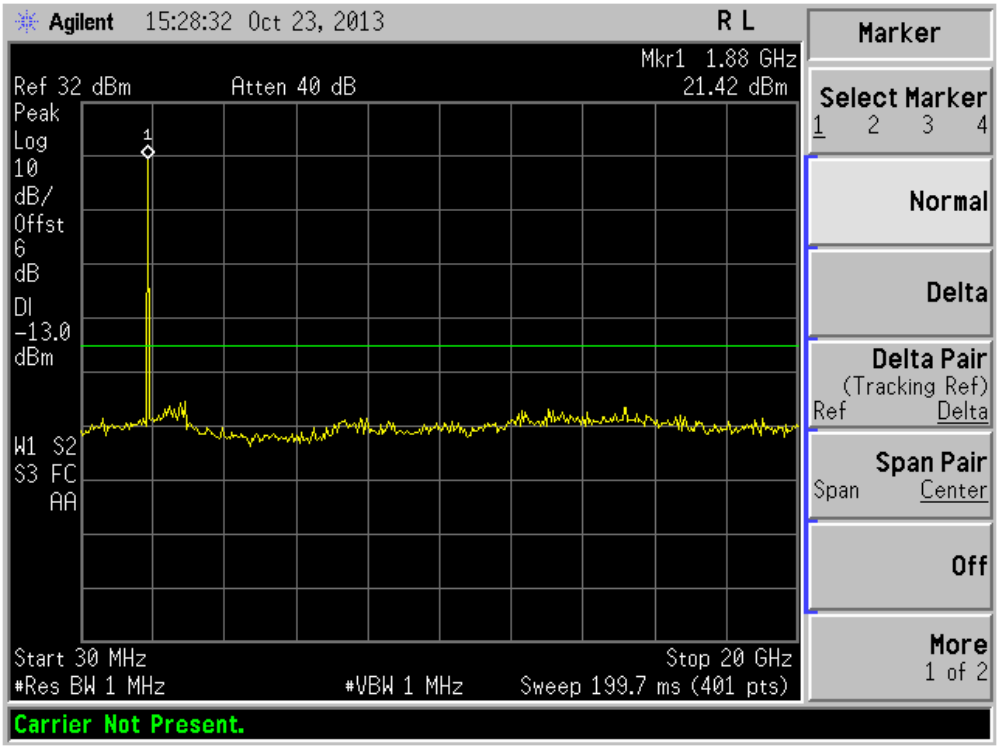

Fig 4.3-7

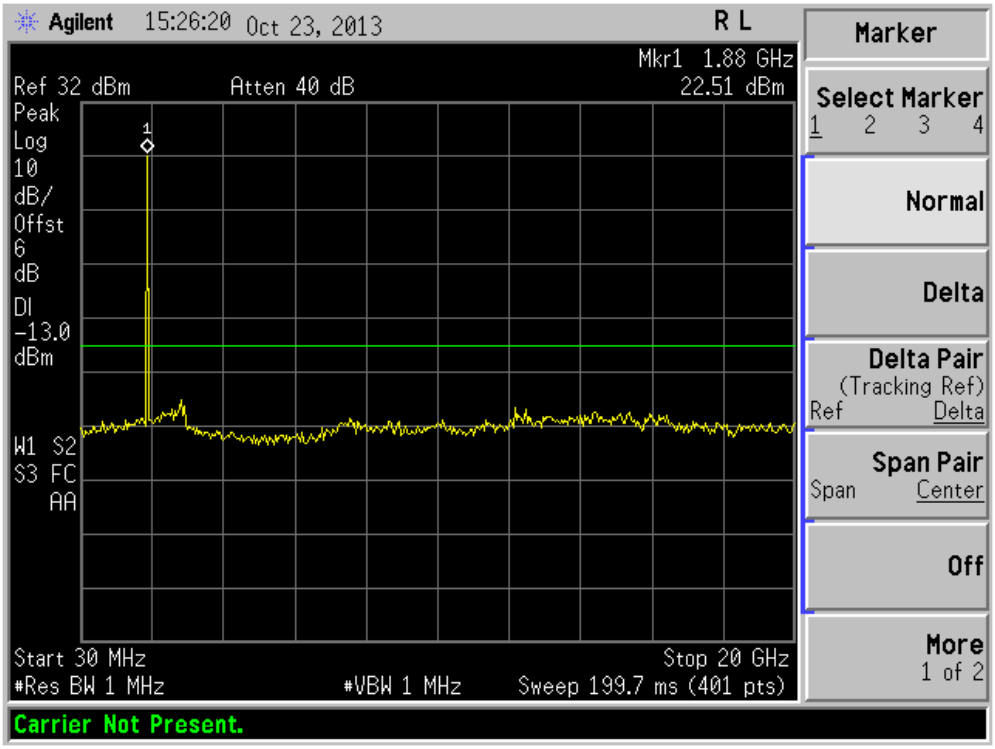

Fig 4.3-8

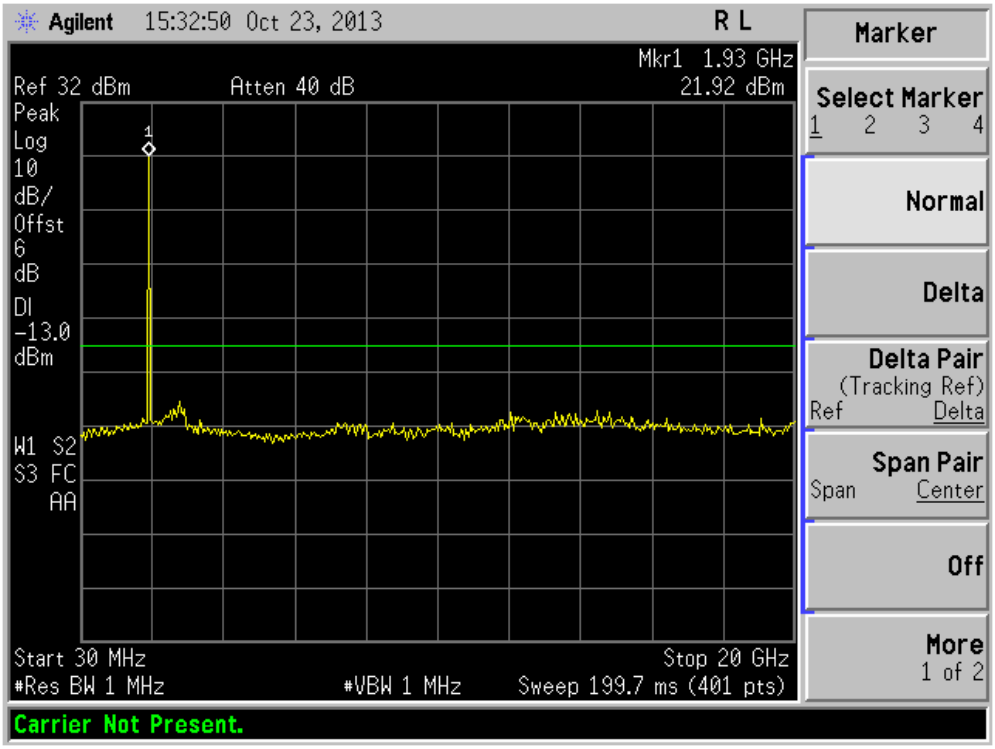

Fig 4.3-9

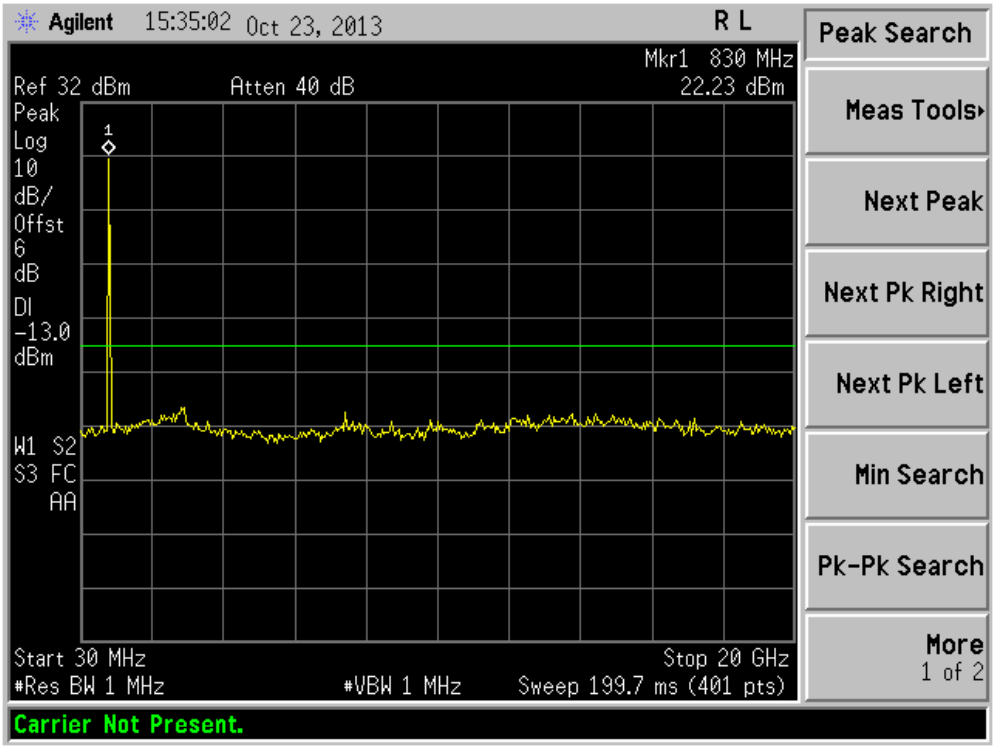

Fig 4.3-10

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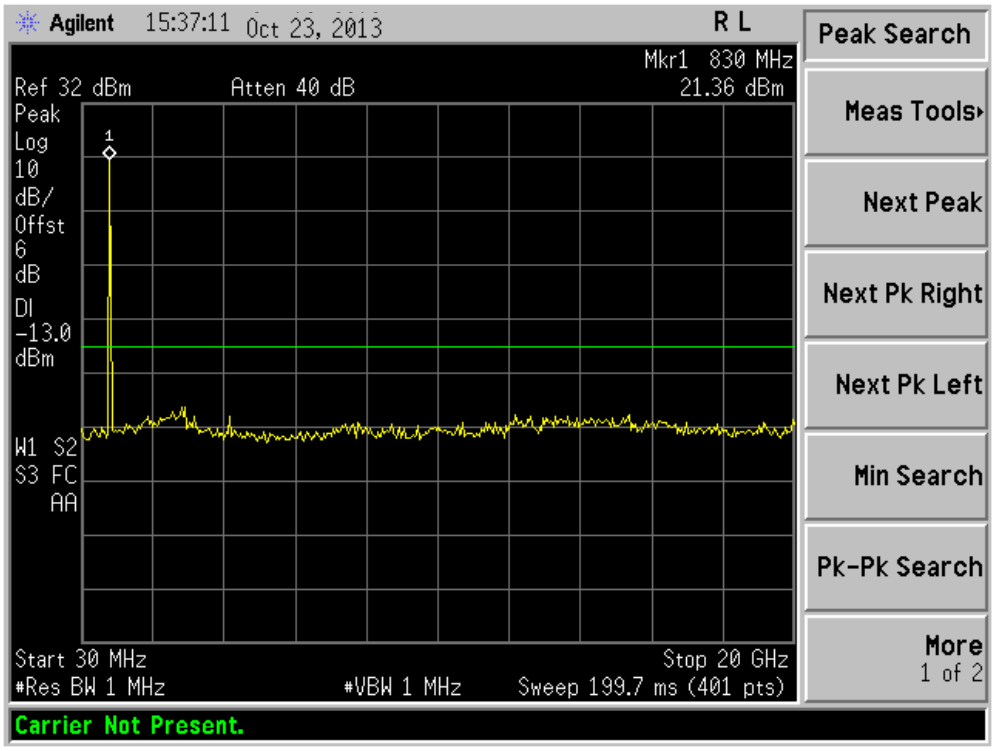


Fig 4.3-11

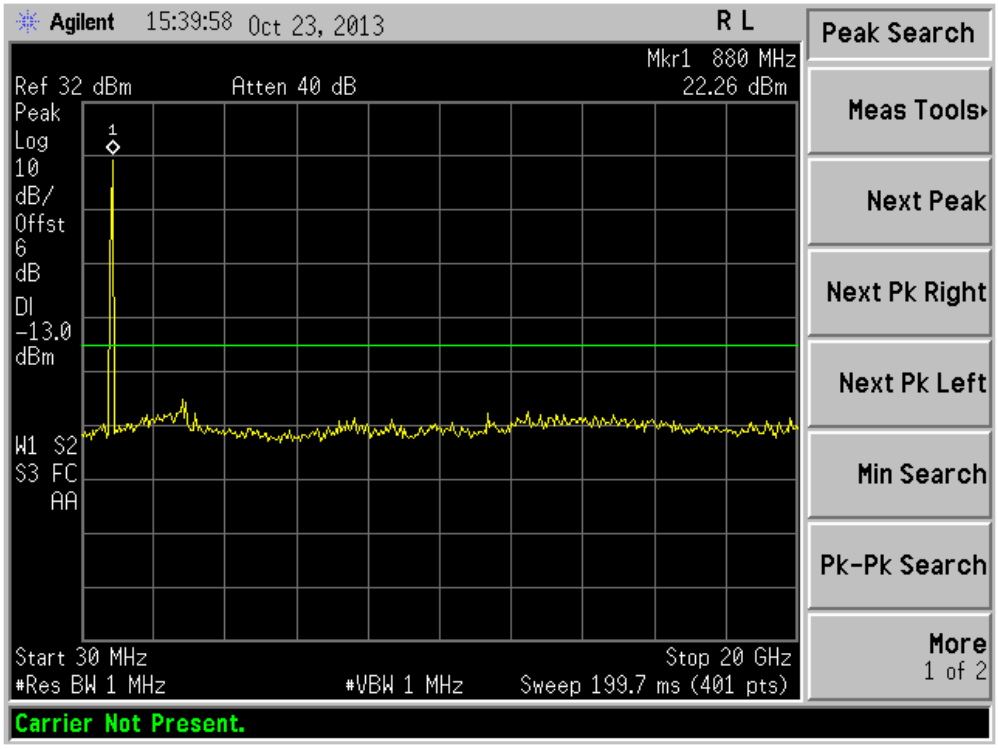


Fig 4.3-12

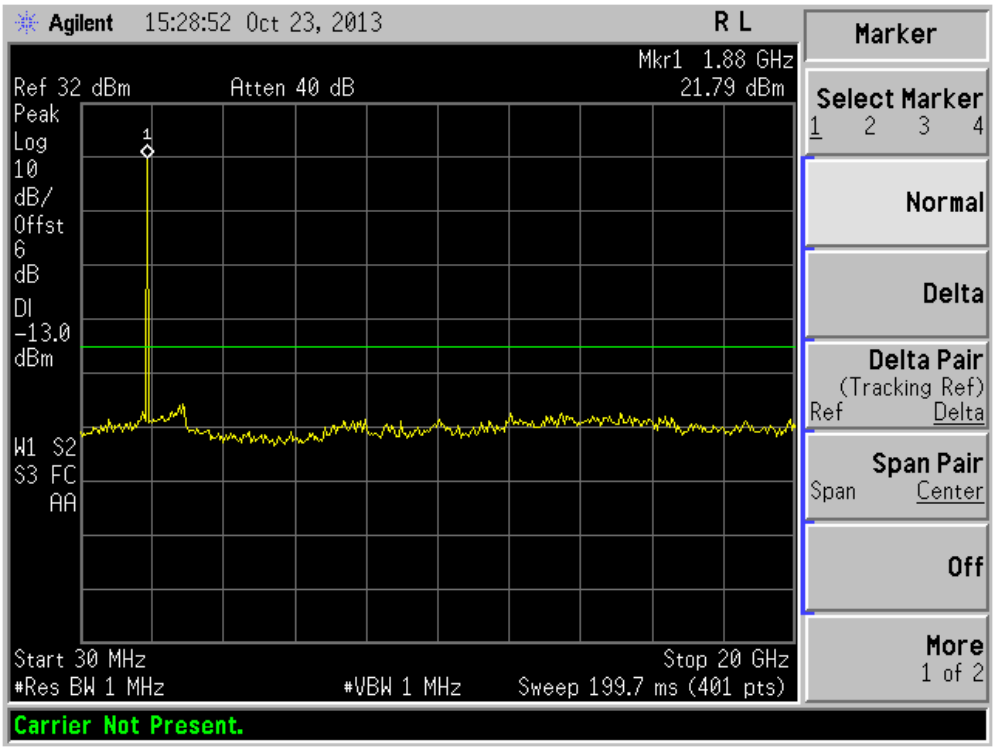


Fig 4.3-13

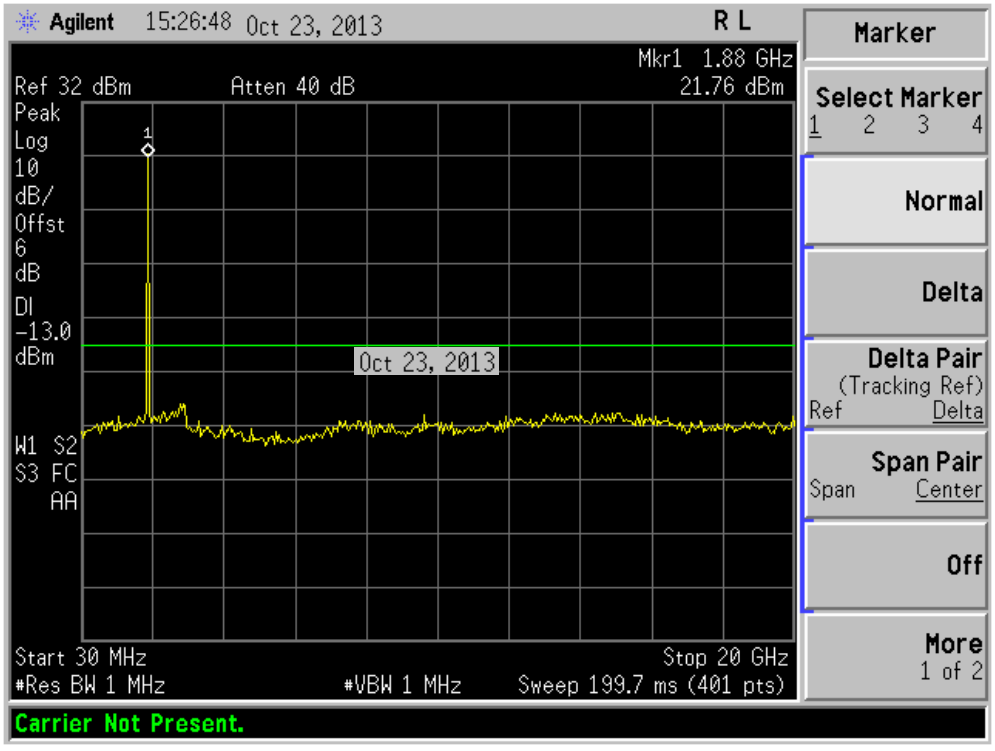


Fig 4.3-14

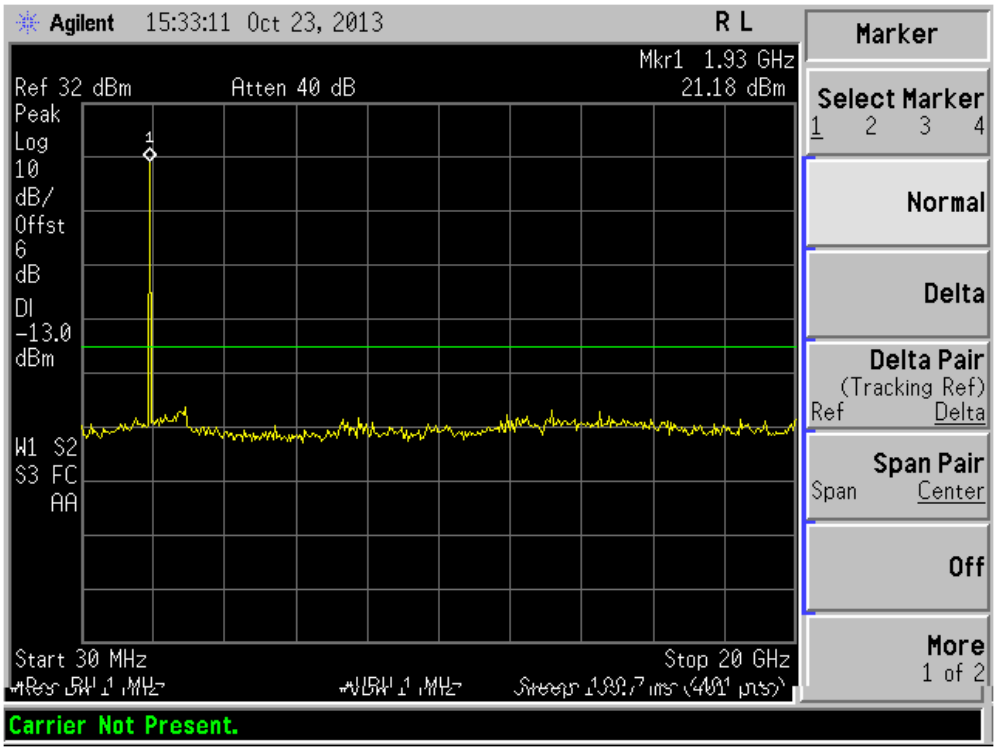


Fig 4.3-15

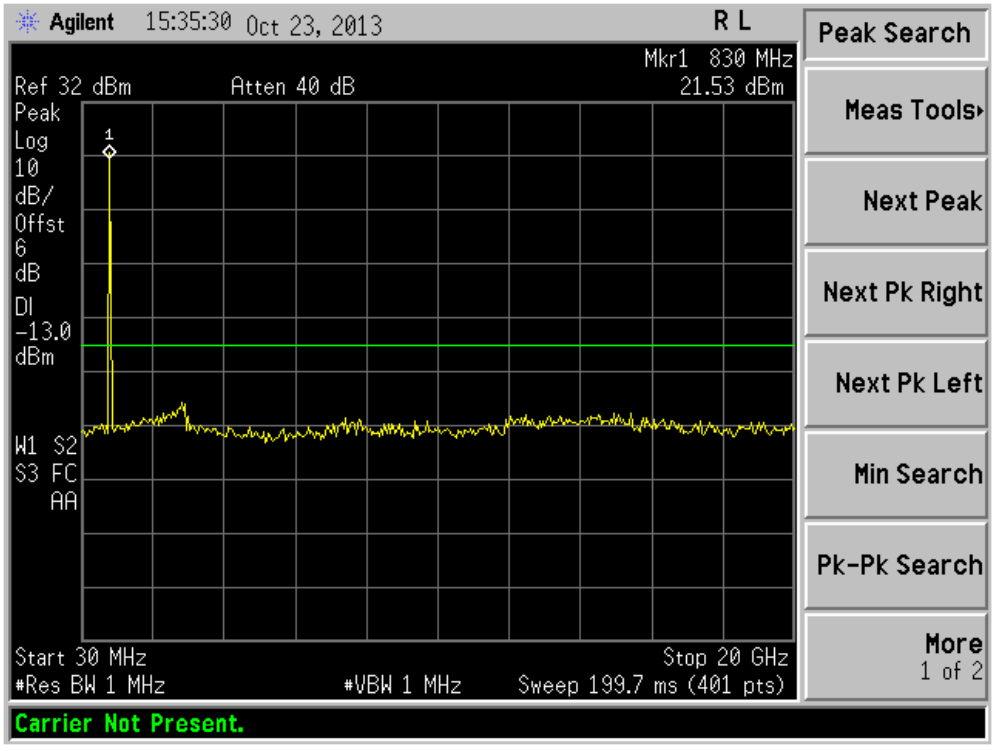


Fig 4.3-16

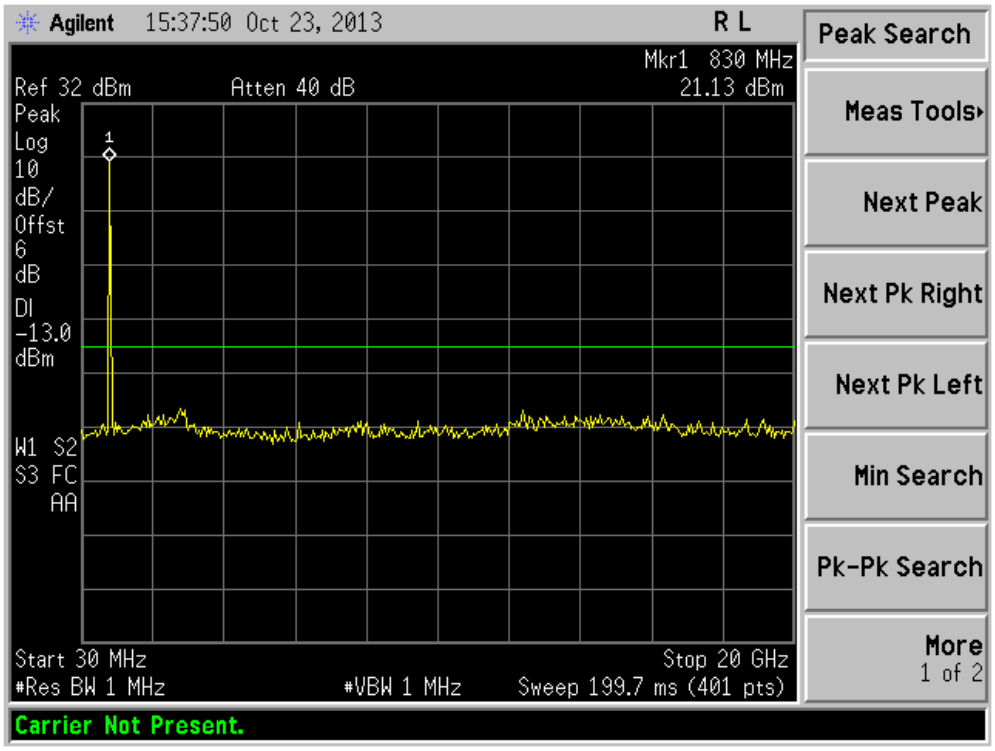


Fig 4.3-17

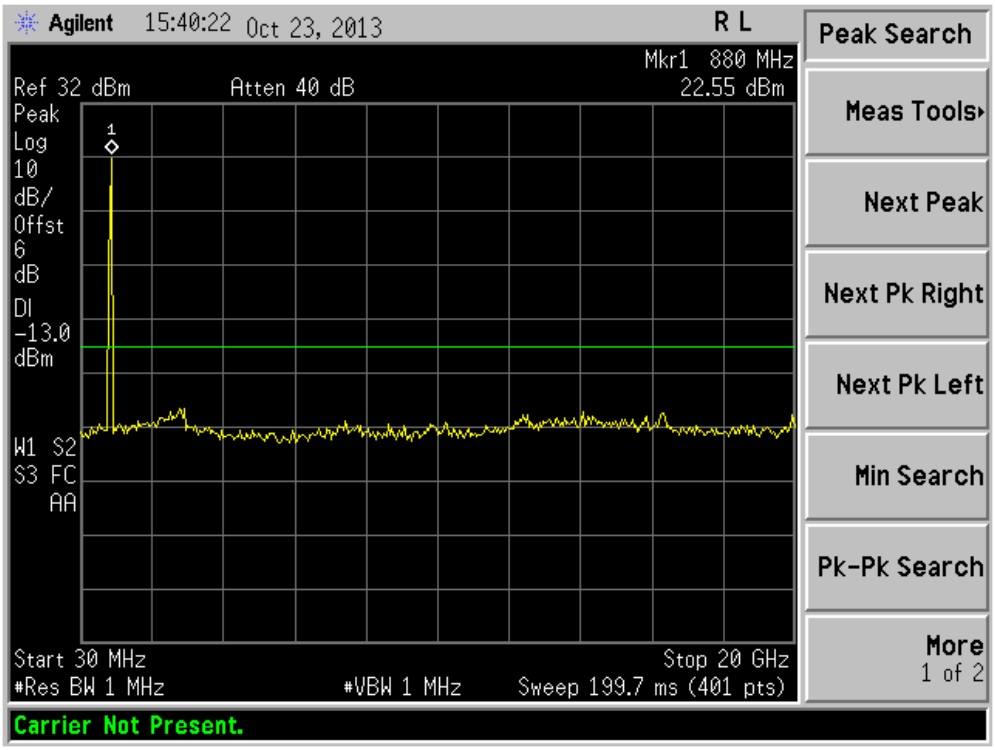


Fig 4.3-18

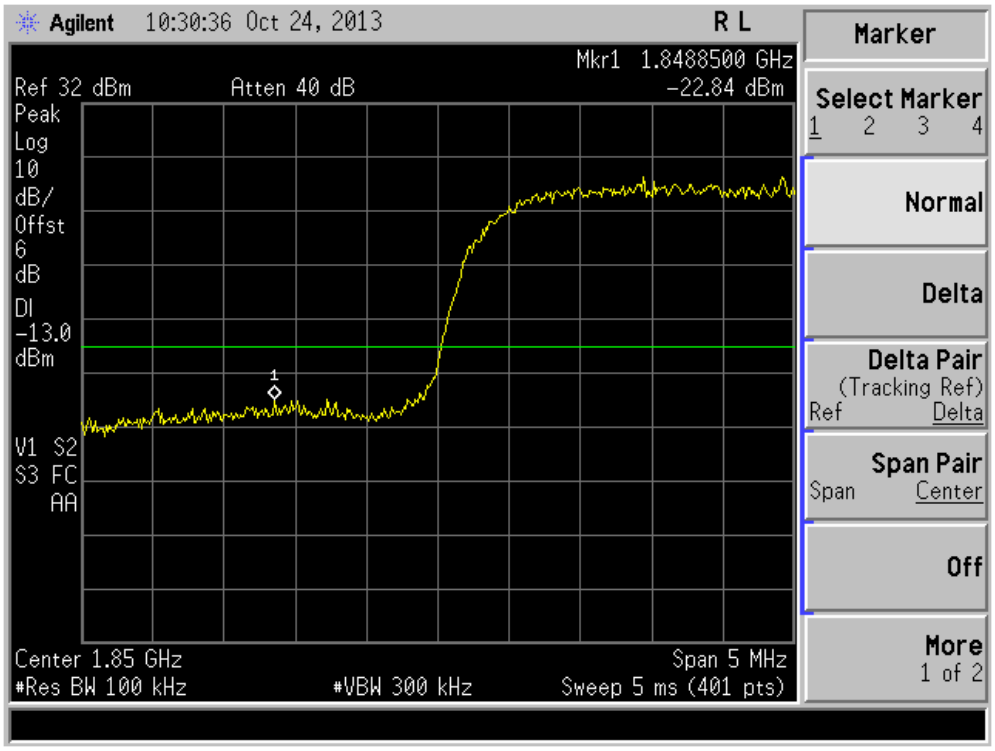


Fig 4.3-19

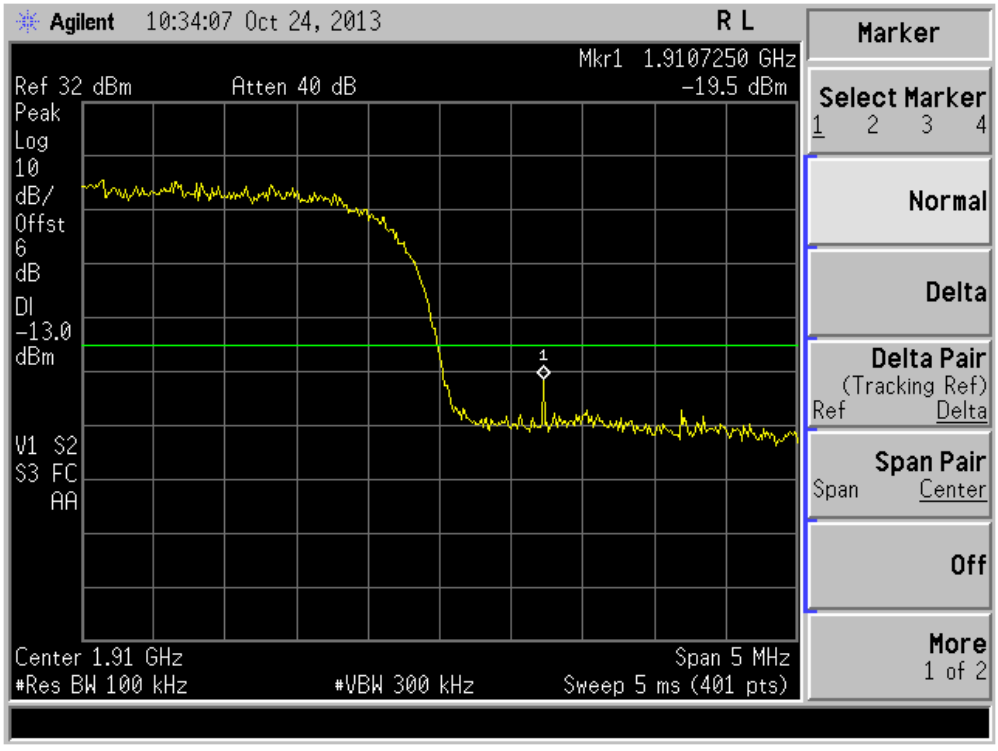


Fig 4.3-20

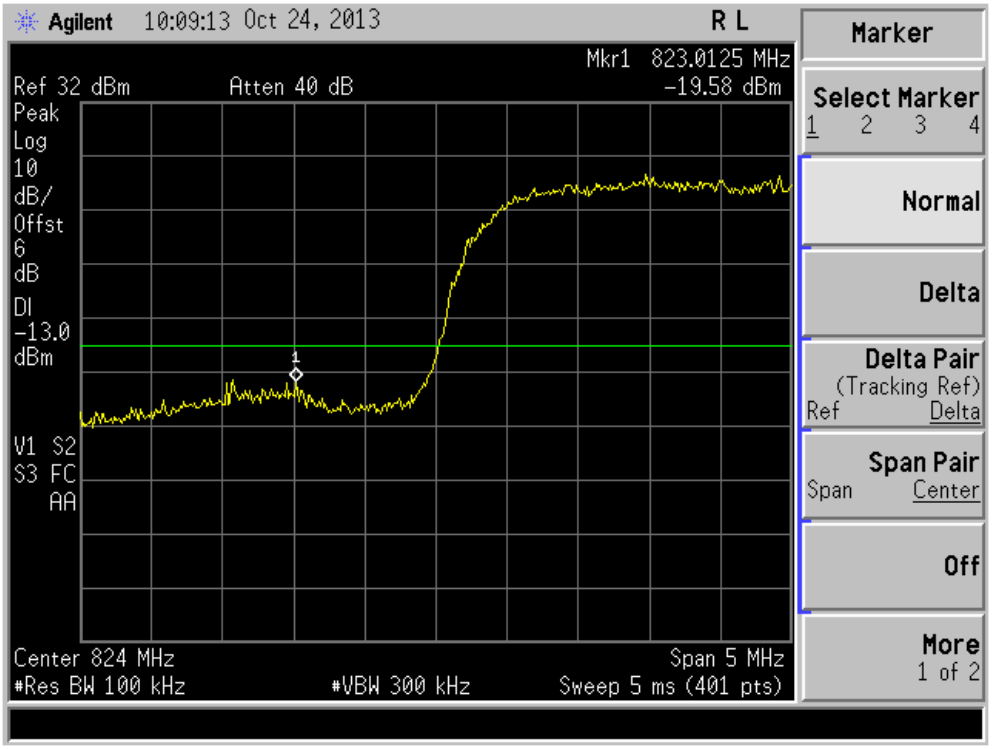


Fig 4.3-21

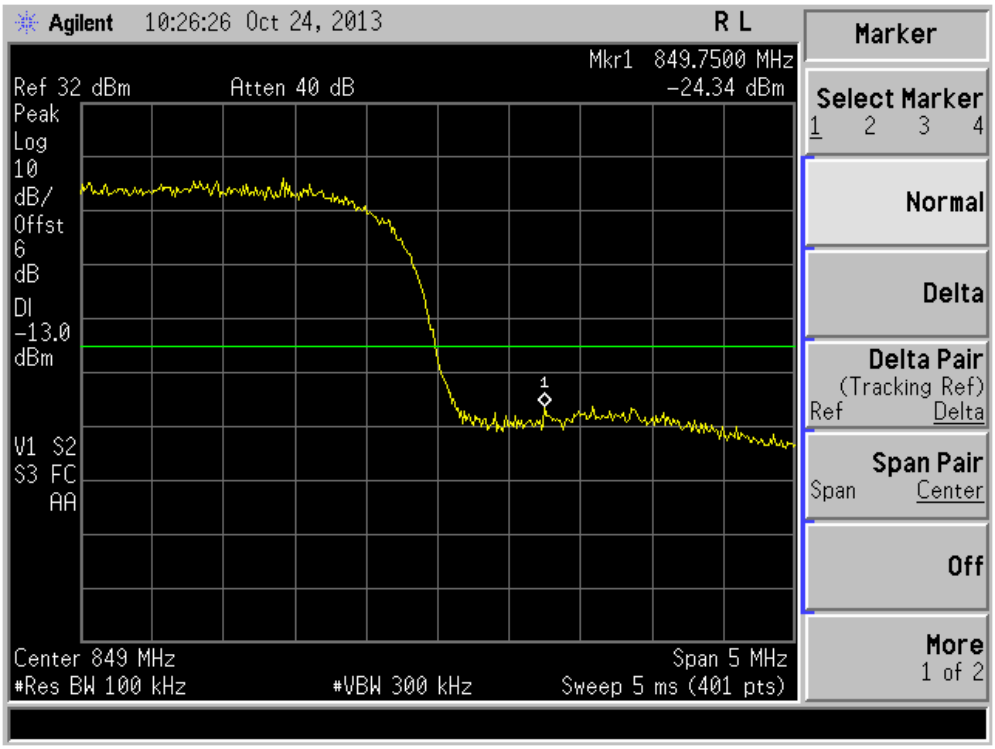
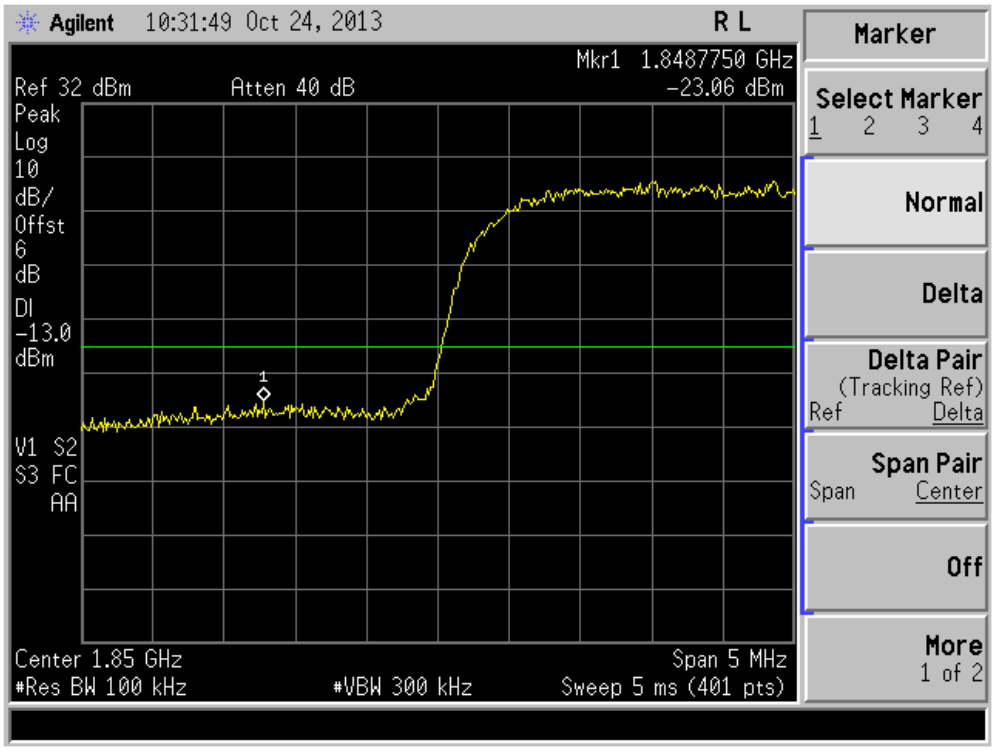


Fig 4.3-22



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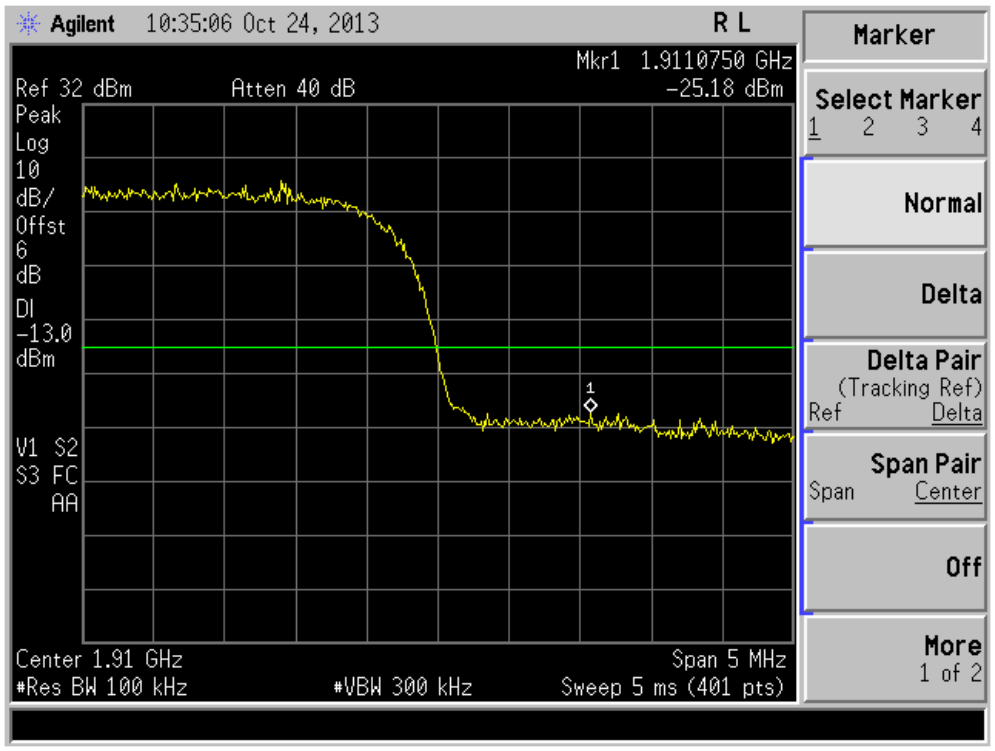

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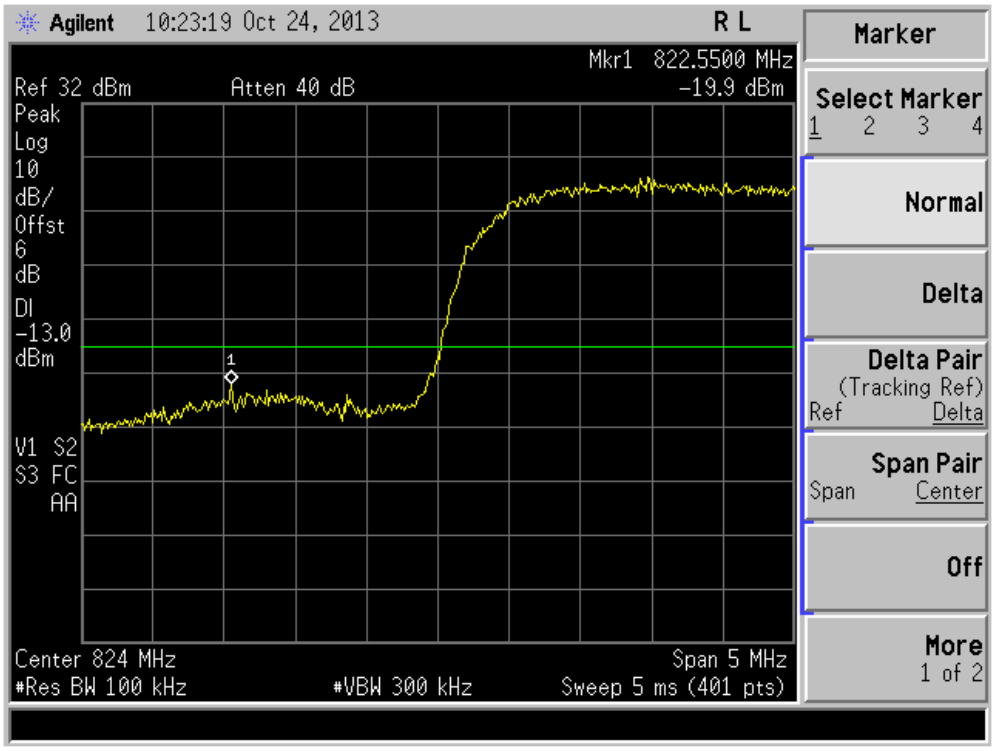

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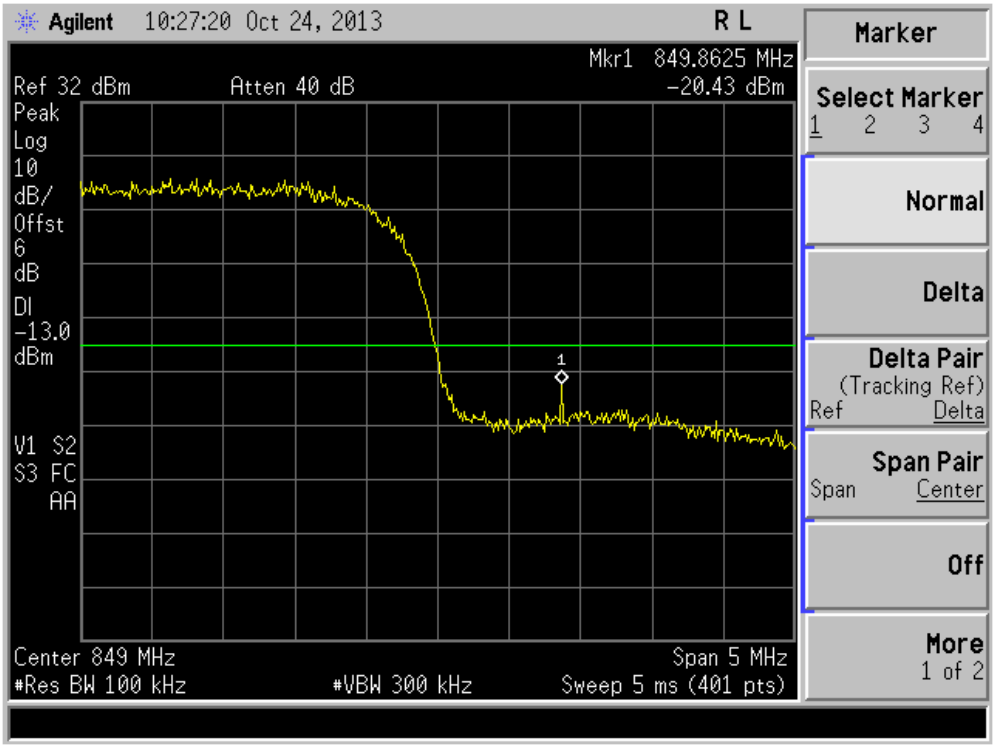

Fig 4.3-26

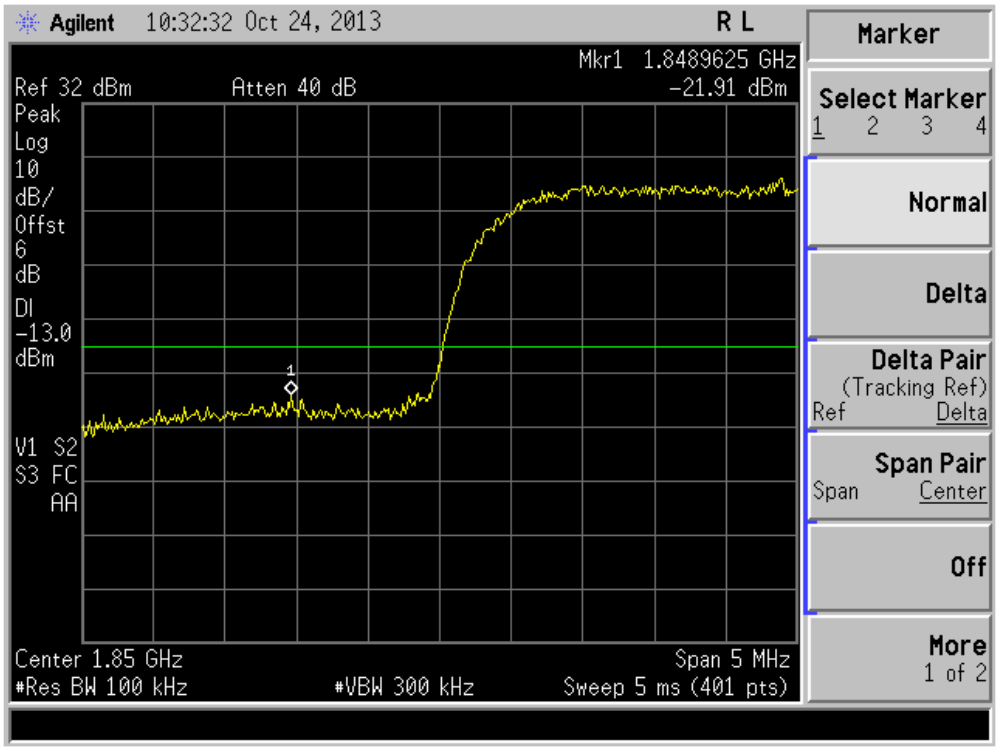

Fig 4.3-27

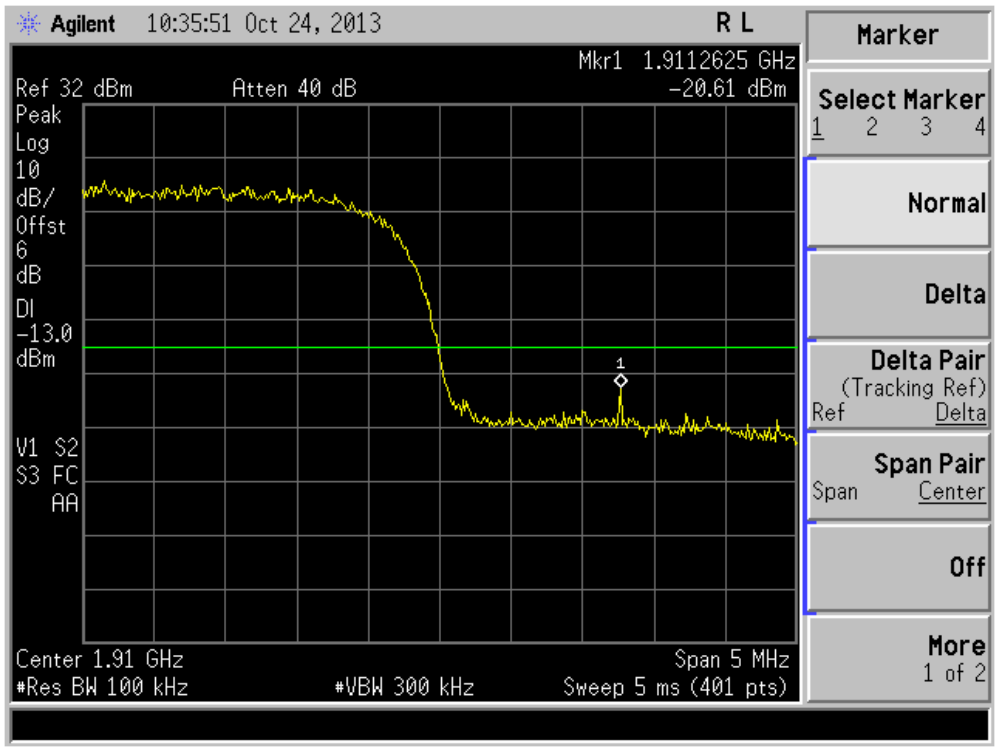

Fig 4.3-28

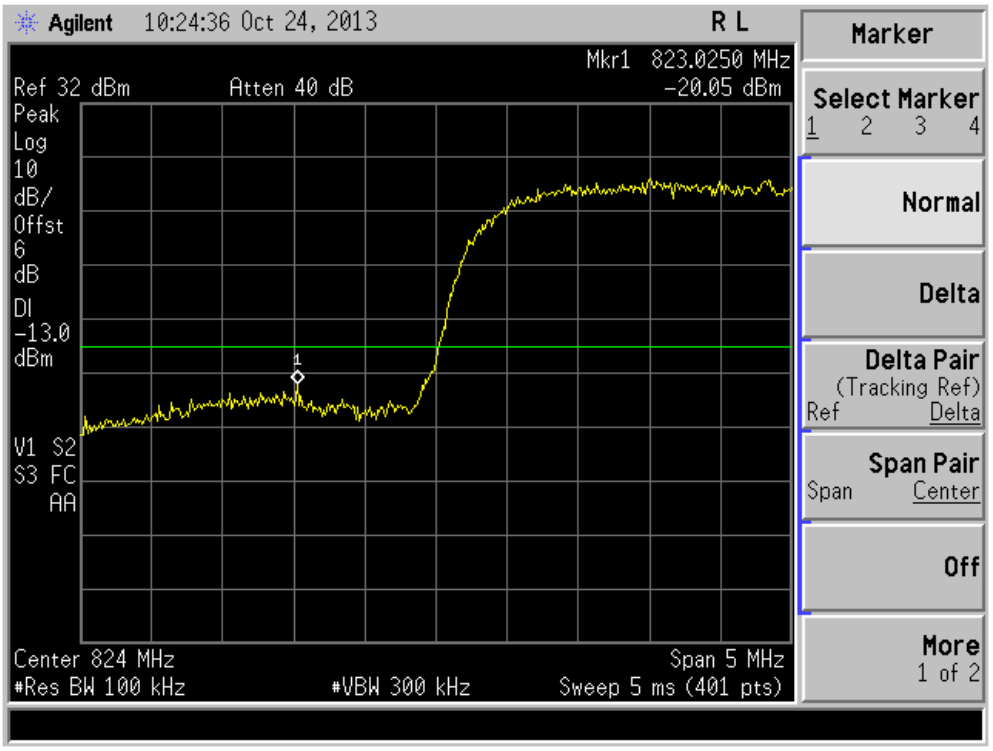

Fig 4.3-29

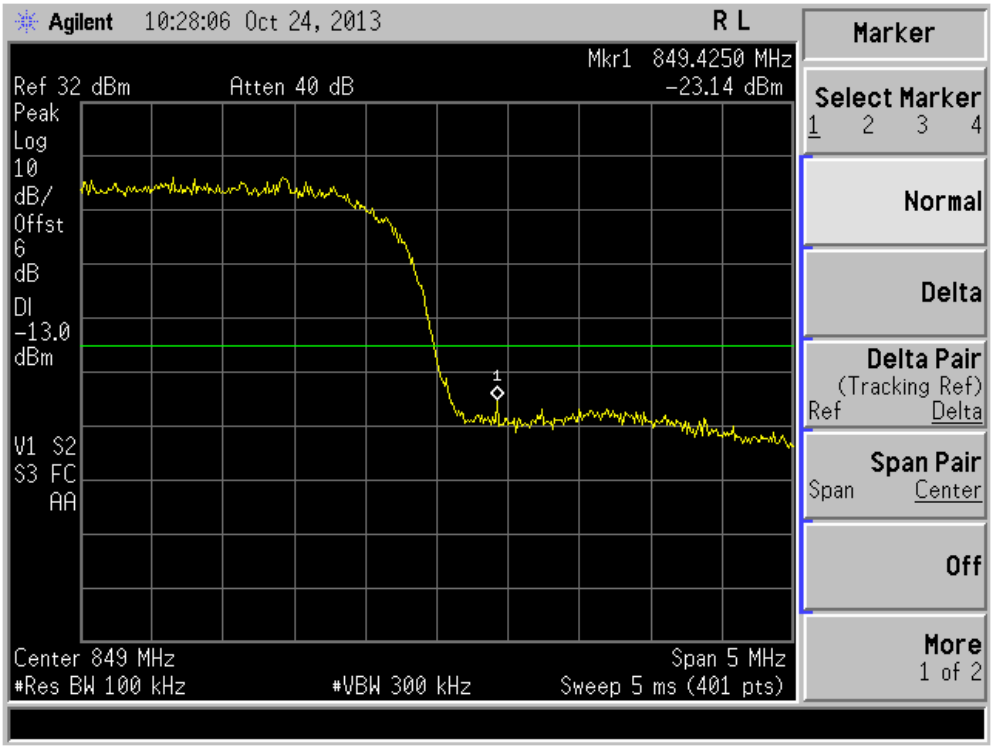

Fig 4.3-30

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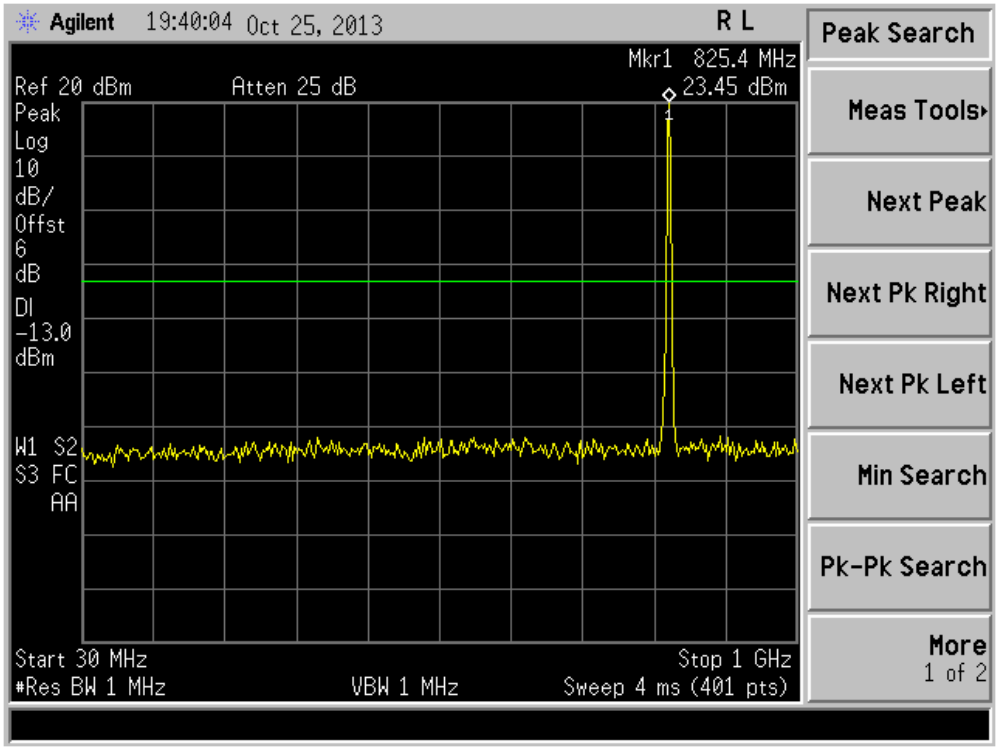

Fig 4.3-31

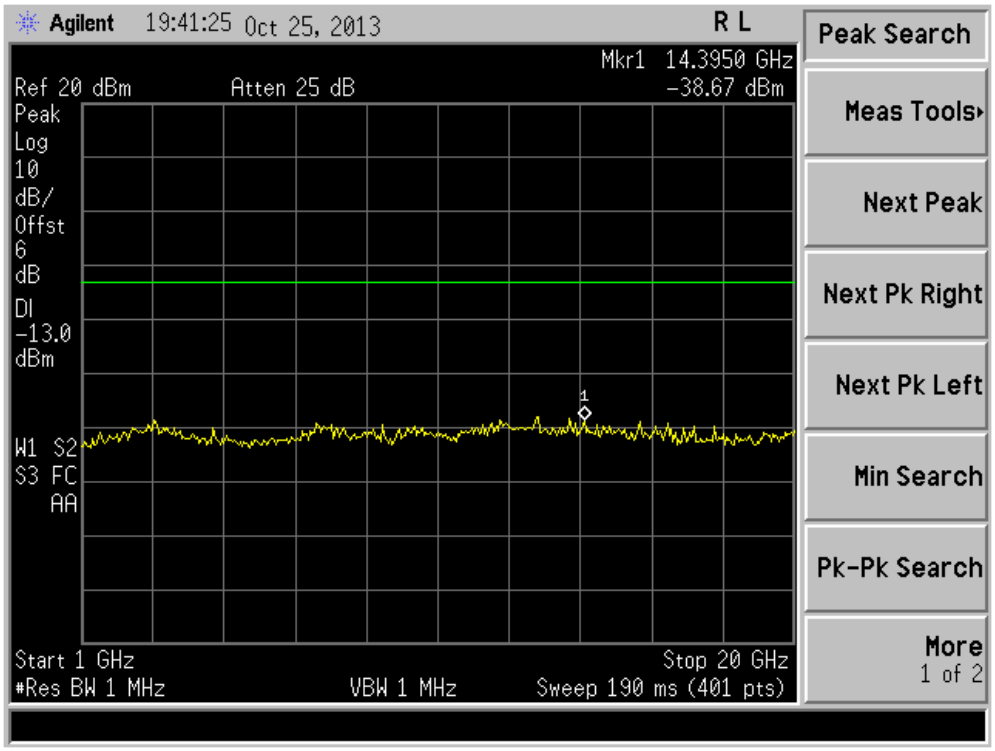

Fig 4.3-32

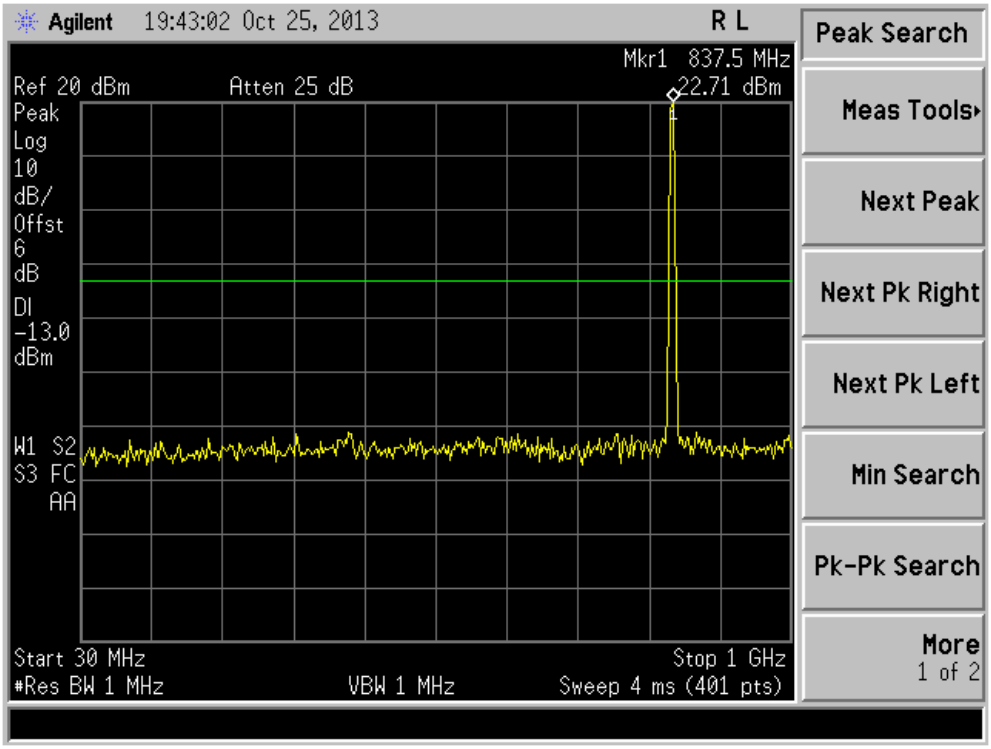

Fig 4.3-33

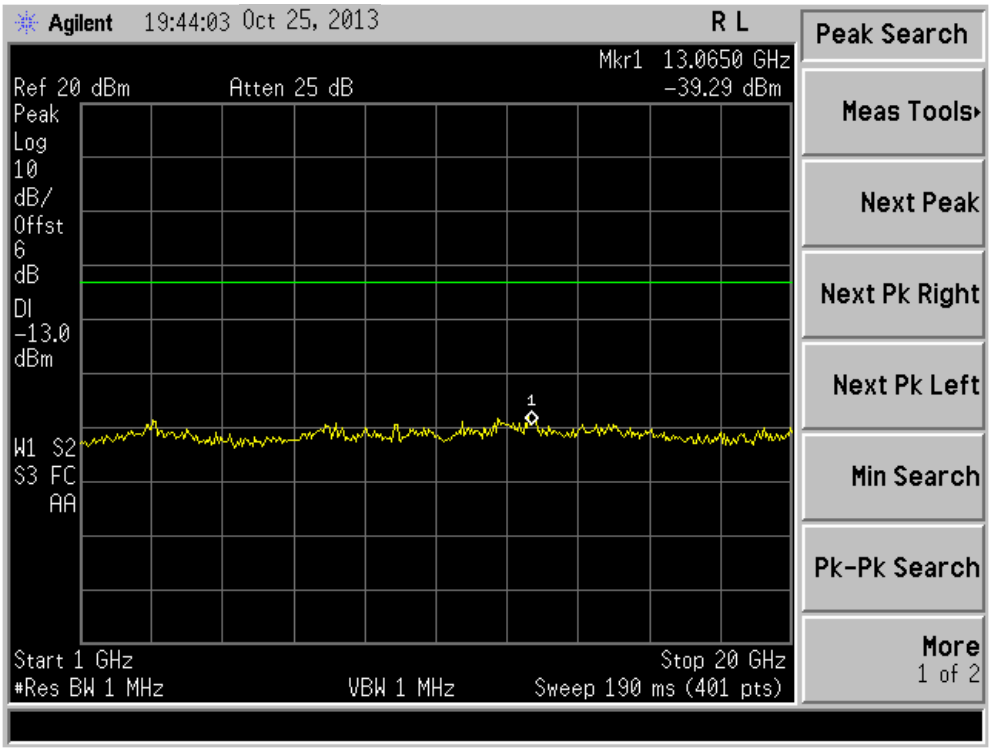

Fig 4.3-34

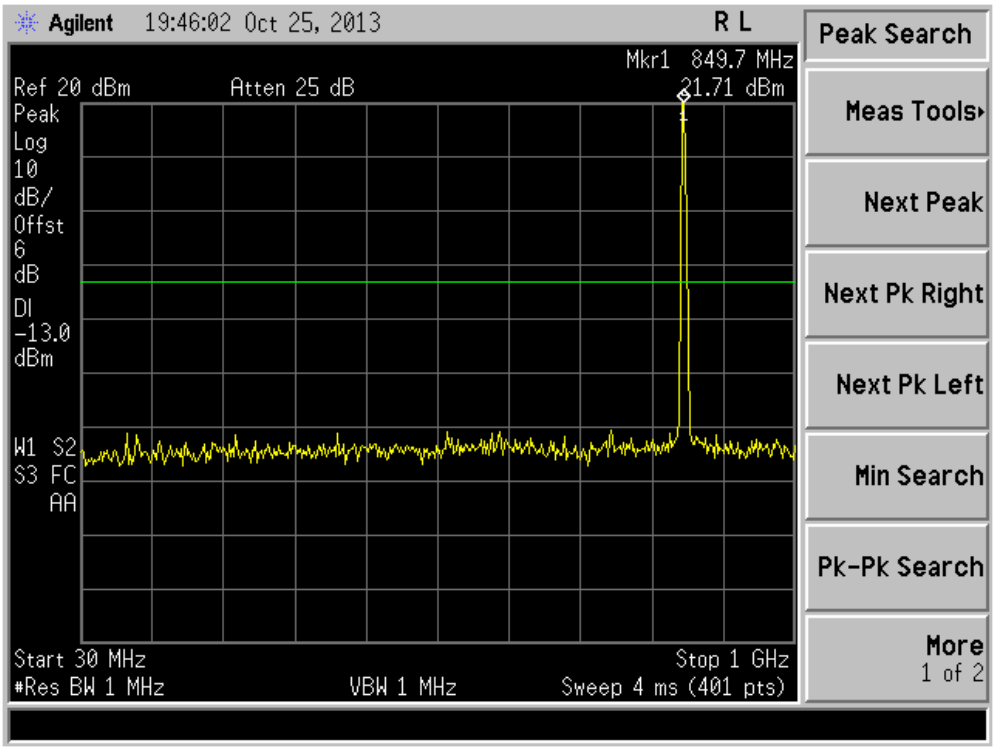

Fig 4.3-35

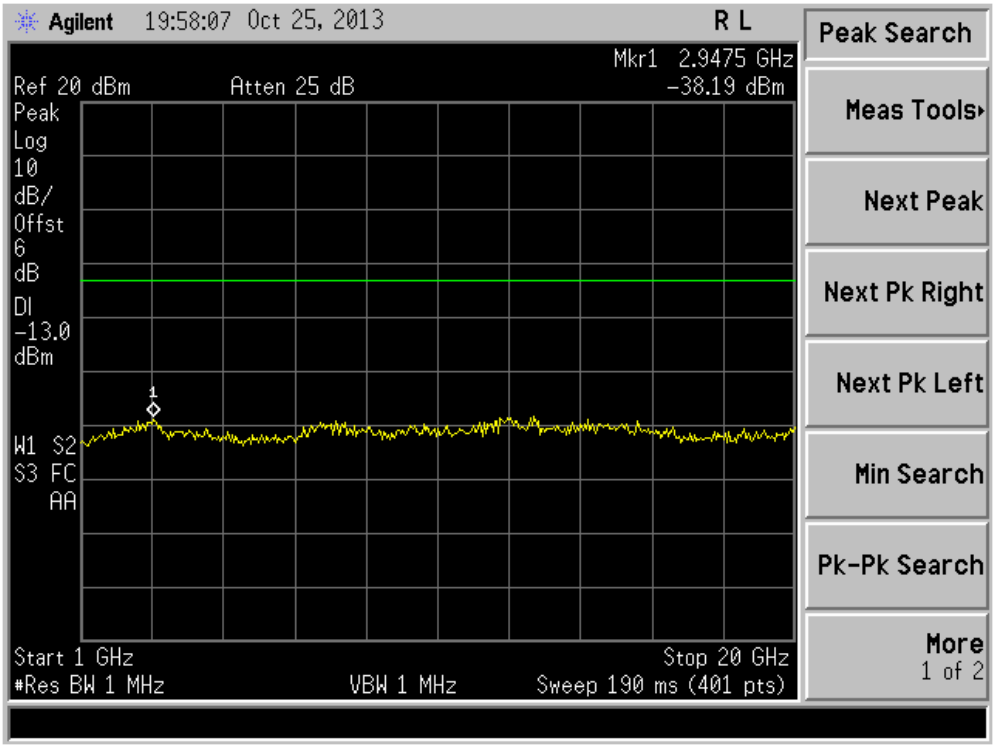

Fig 4.3-36

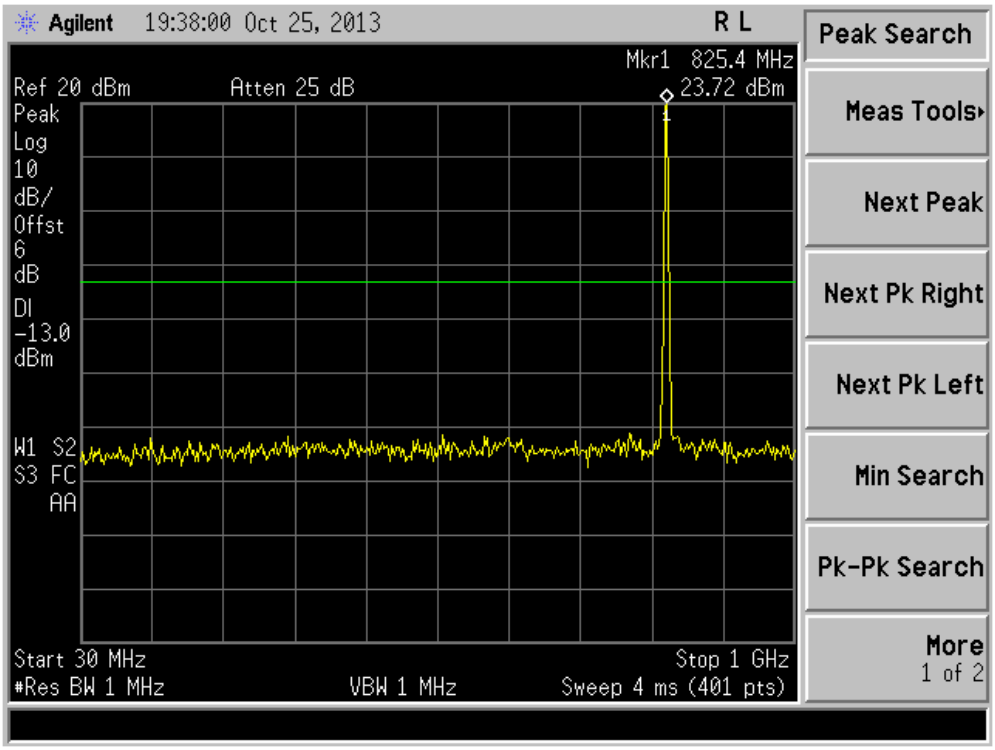

Fig 4.3-37

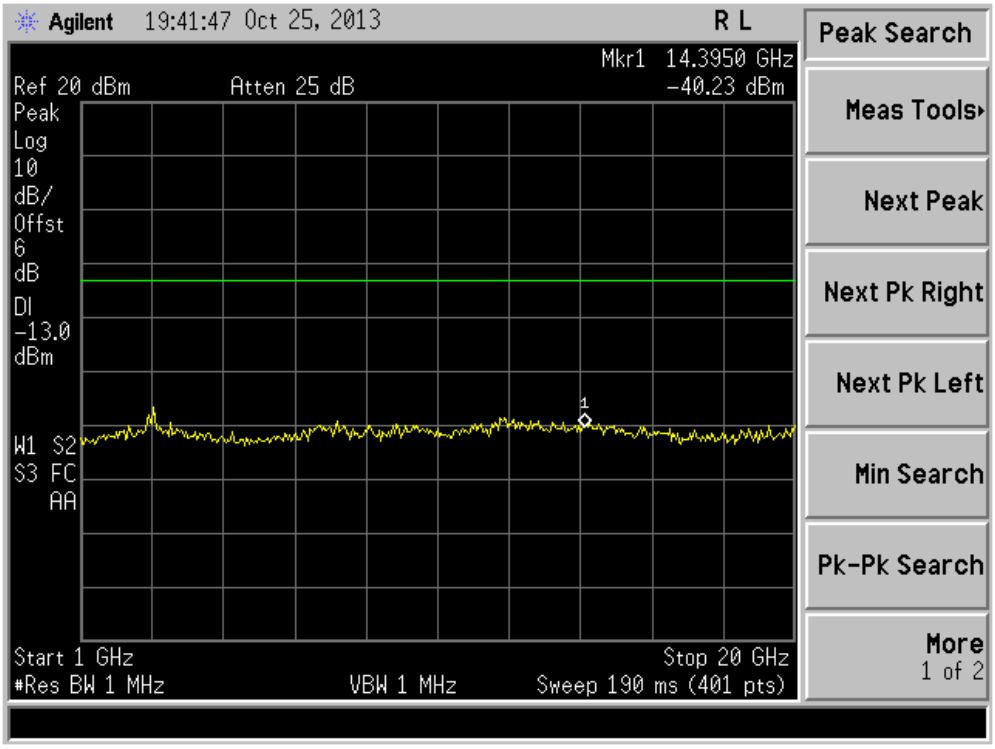

Fig 4.3-38

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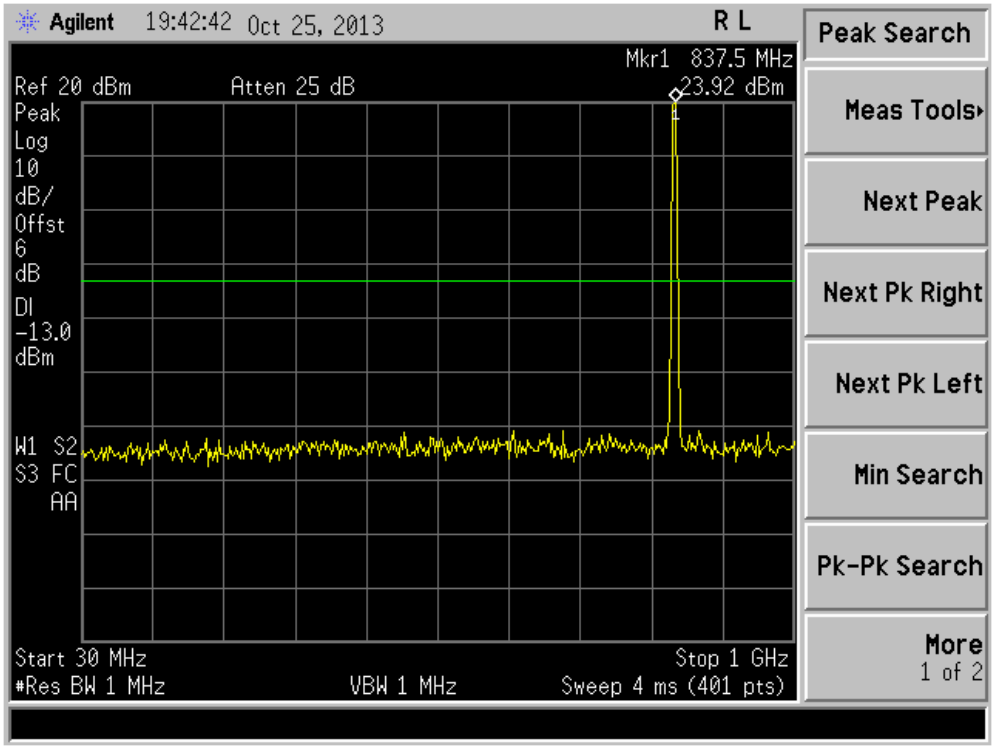

Fig 4.3-39

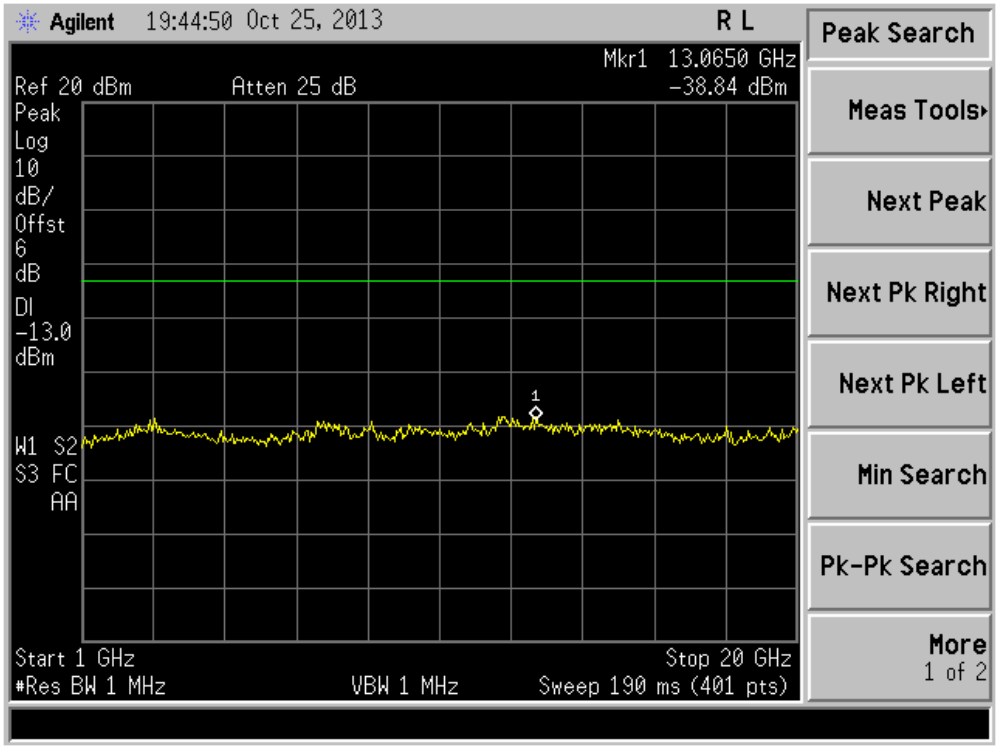

Fig 4.3-40

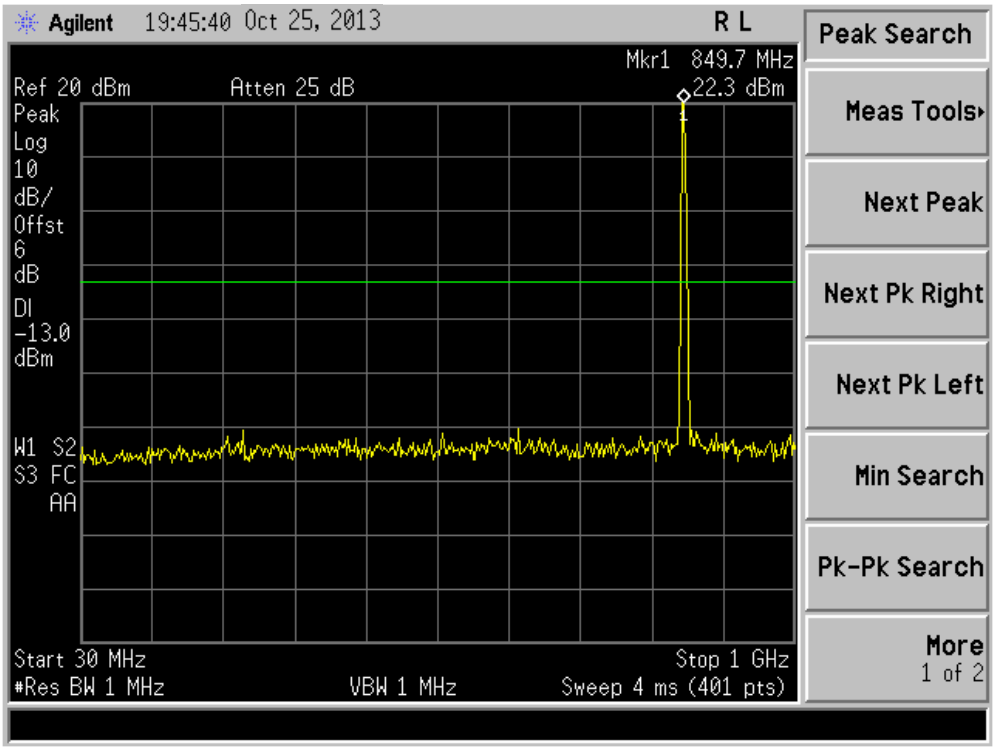

Fig 4.3-41

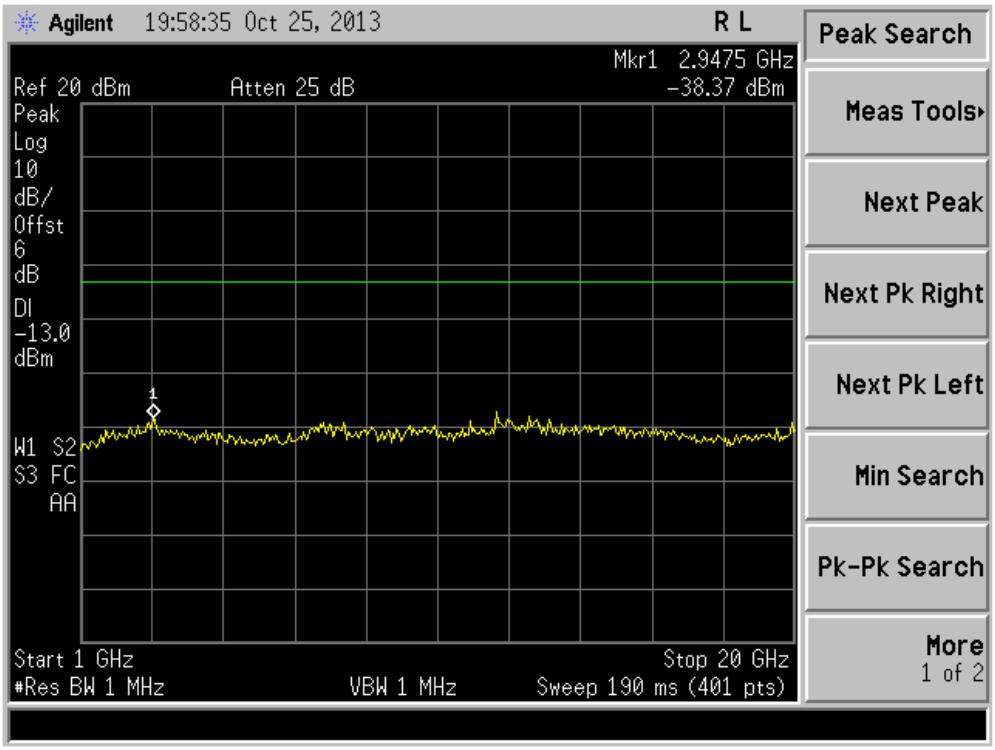

Fig 4.3-42

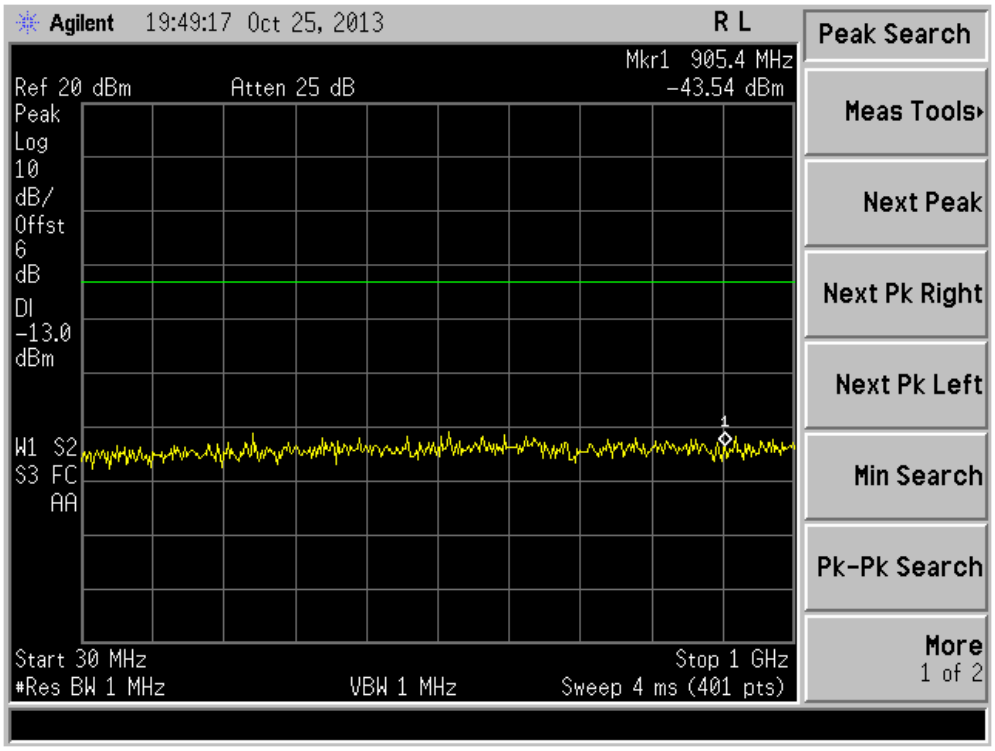

Fig 4.3-43

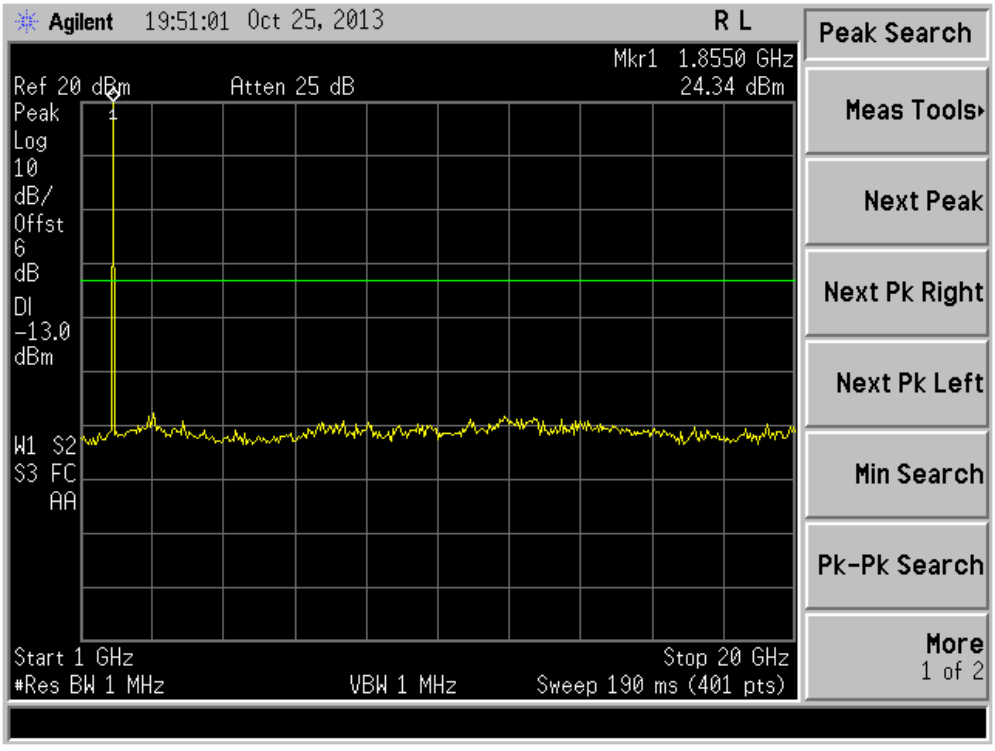

Fig 4.3-44

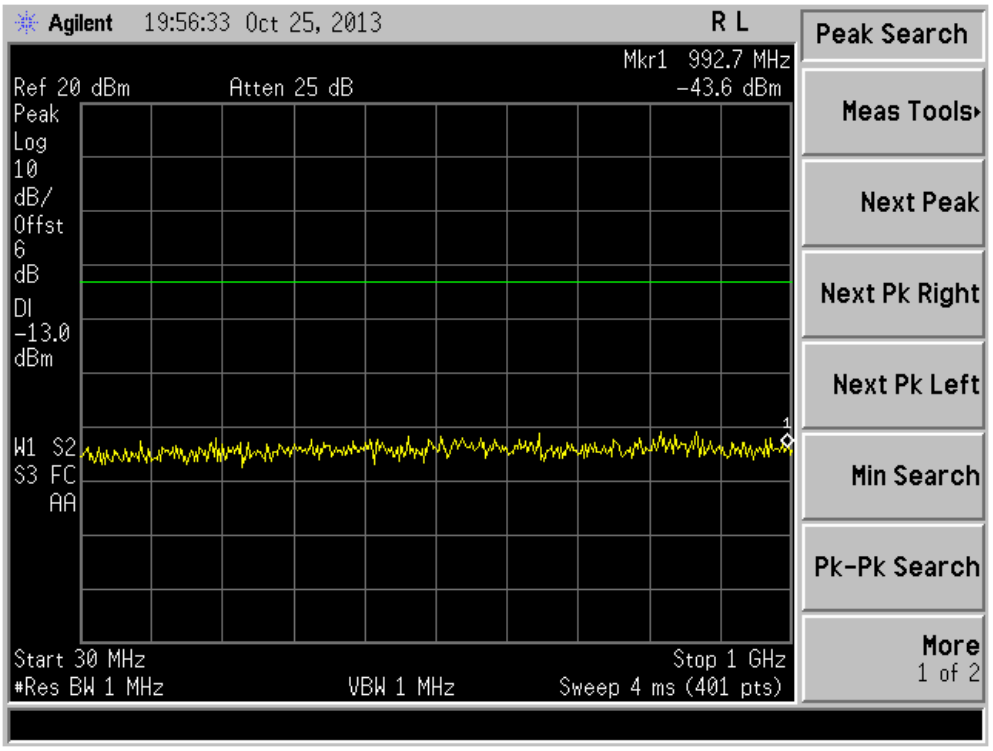

Fig 4.3-45

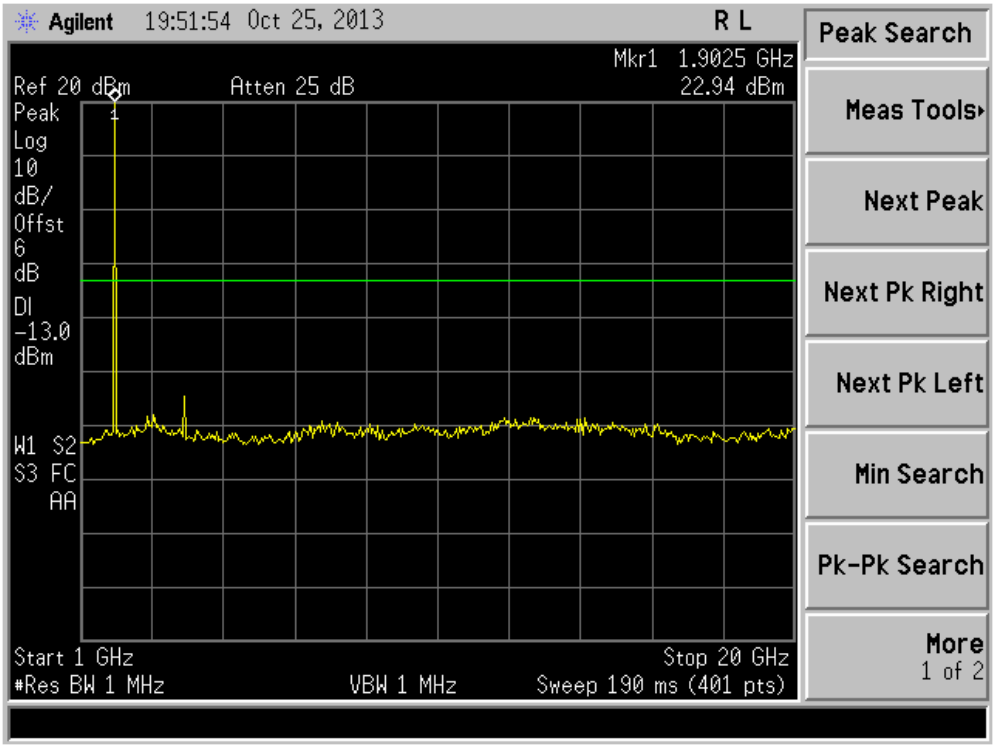

Fig 4.3-46

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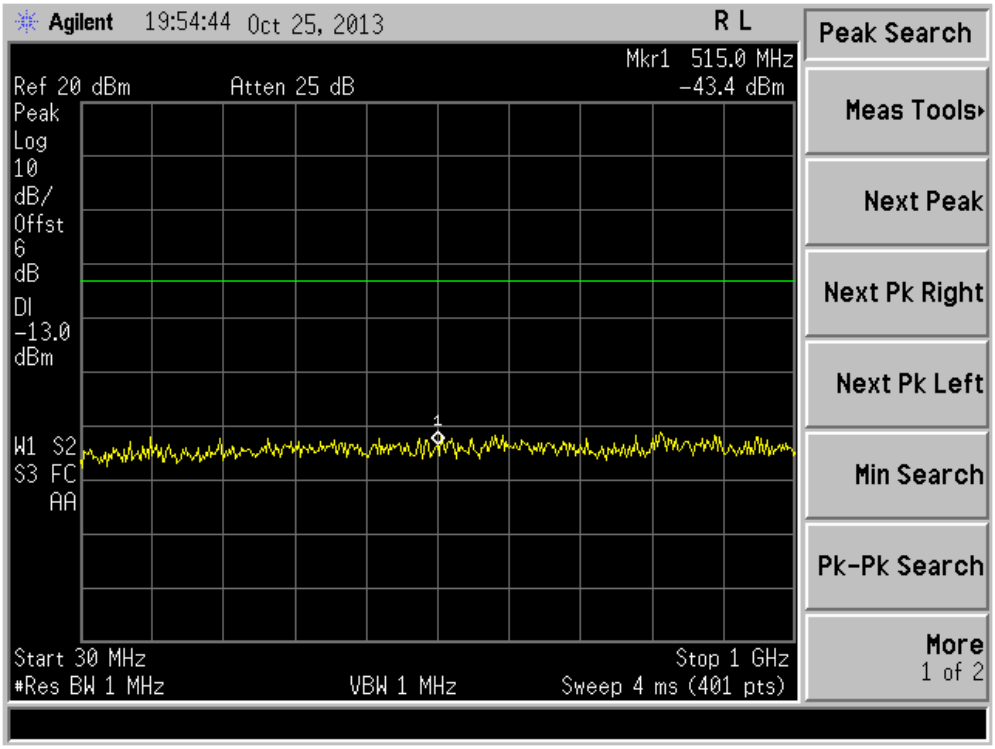

Fig 4.3-47

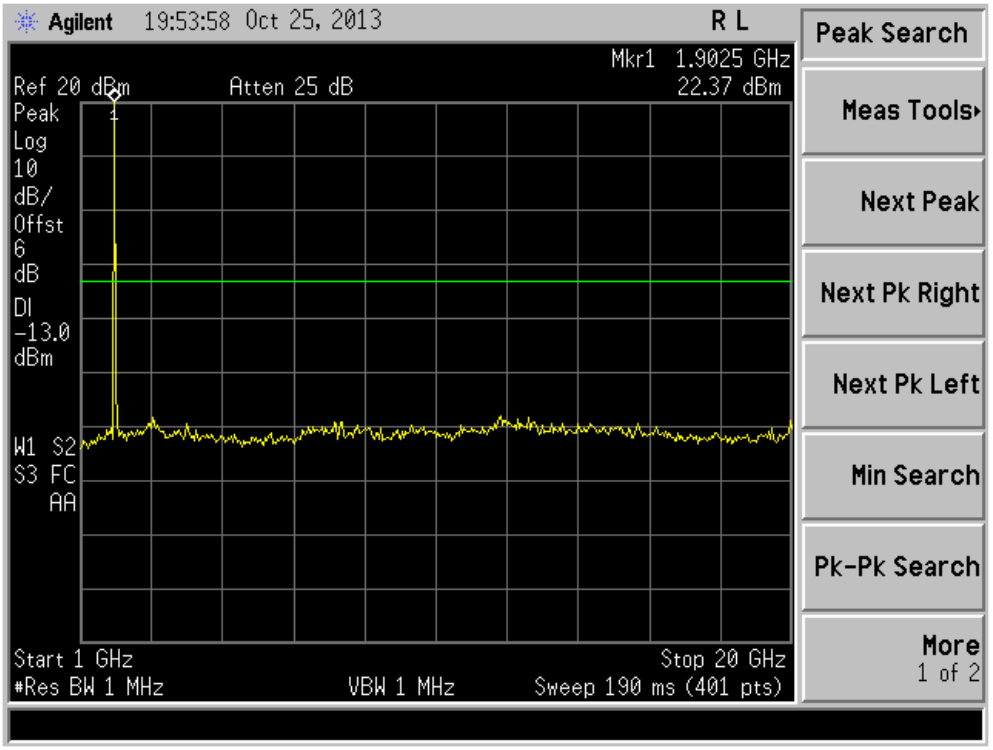

Fig 4.3-48

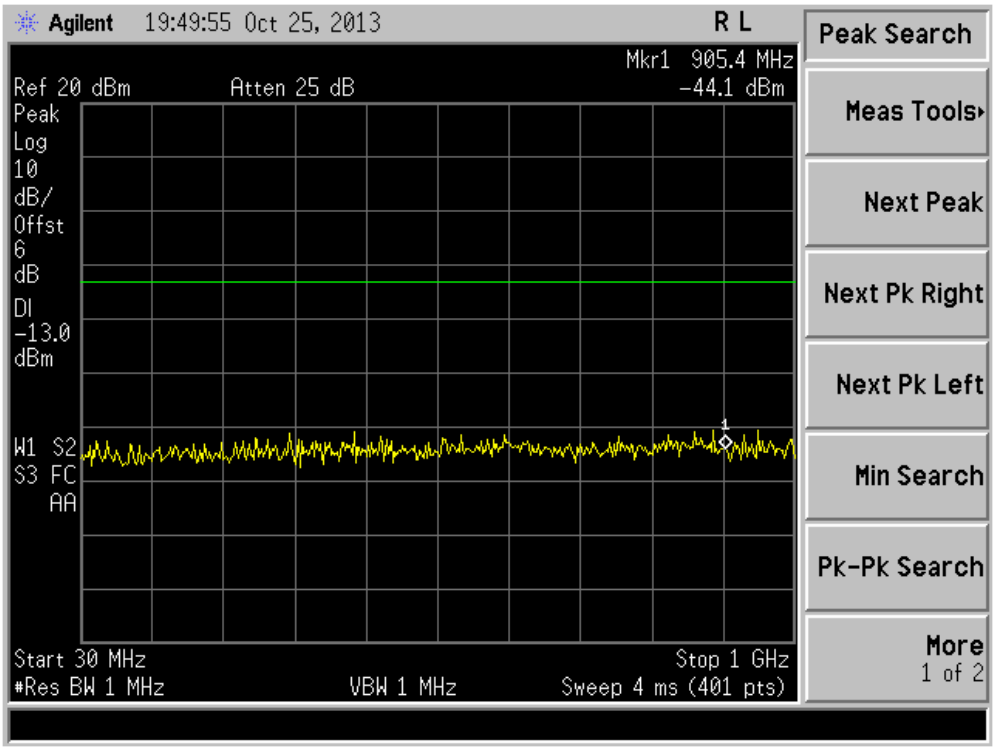

Fig 4.3-49

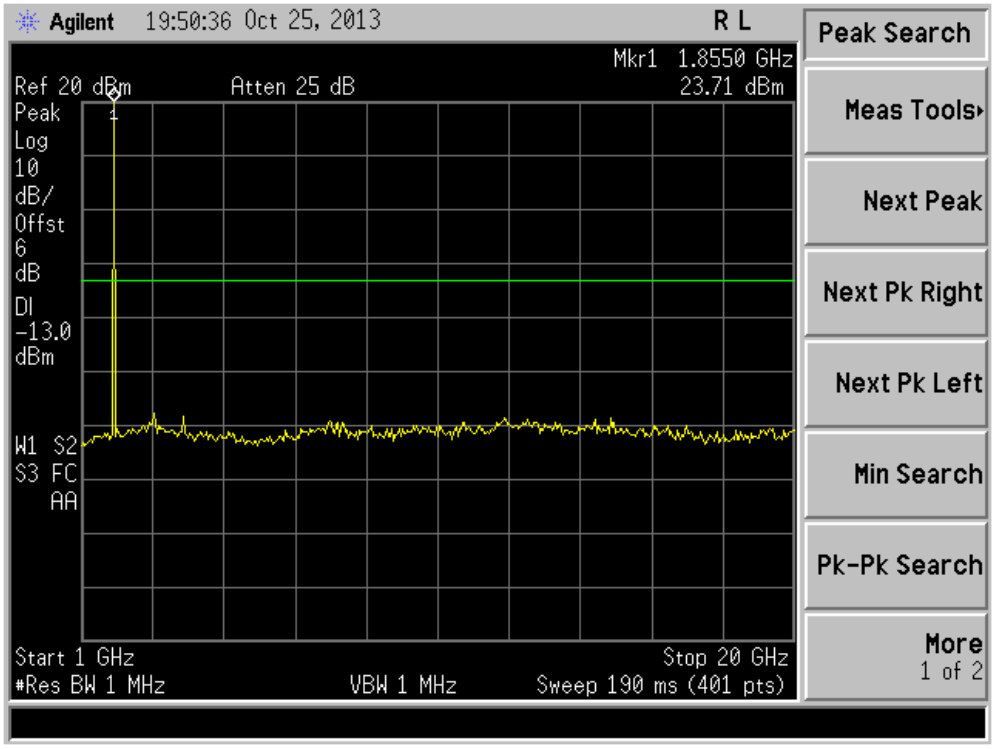

Fig 4.3-50

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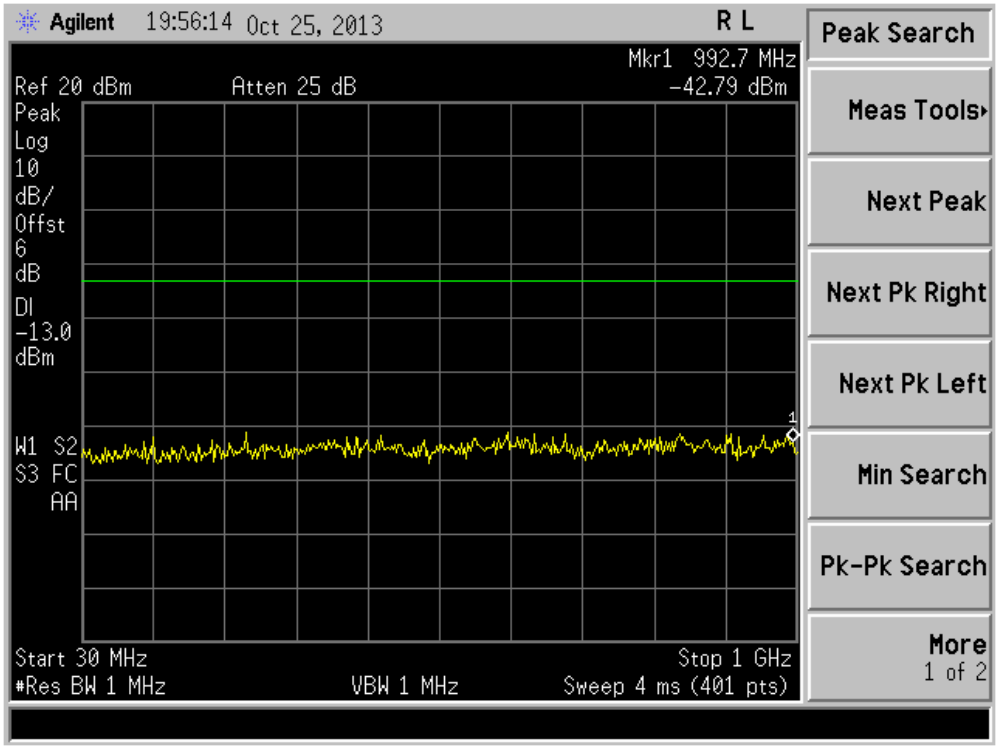

Fig 4.3-51

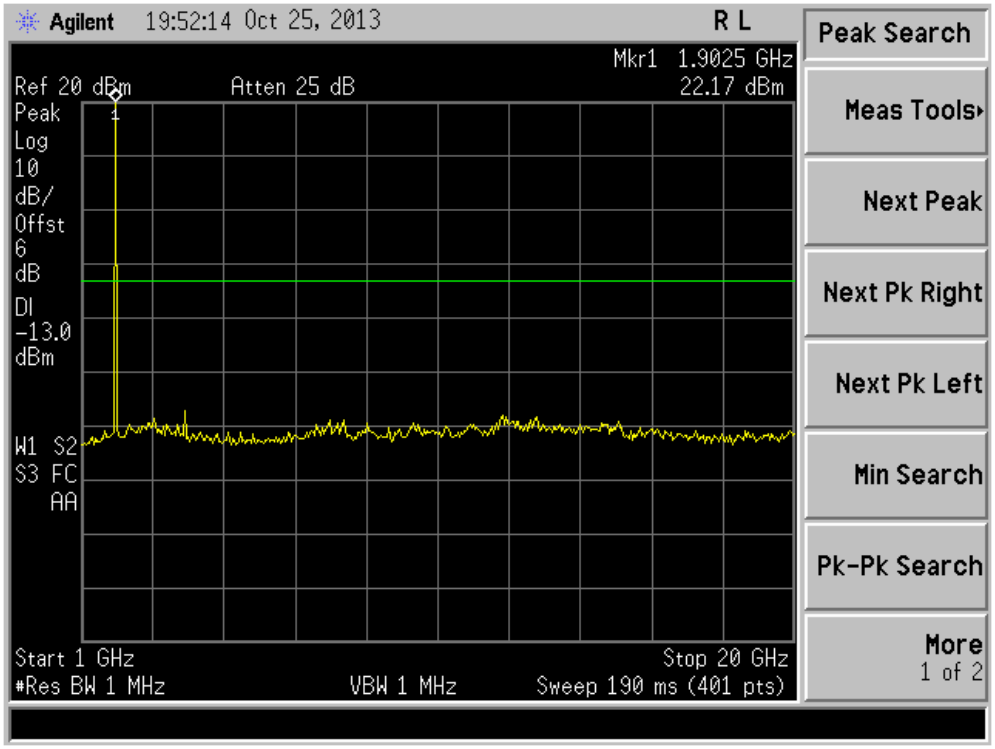

Fig 4.3-52

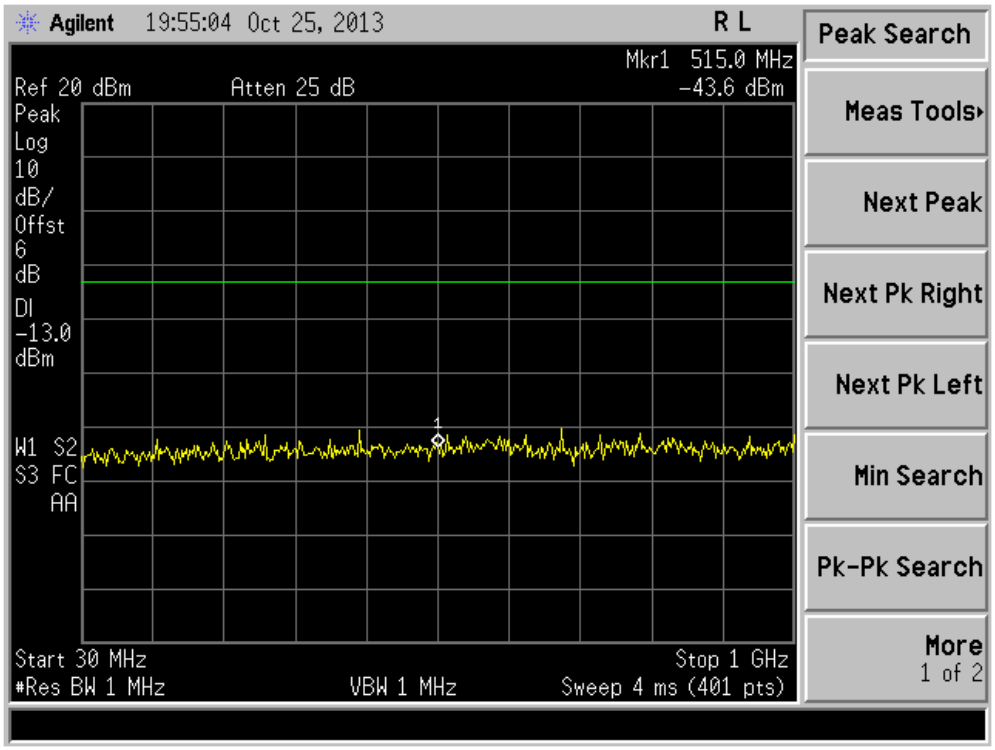

Fig 4.3-53

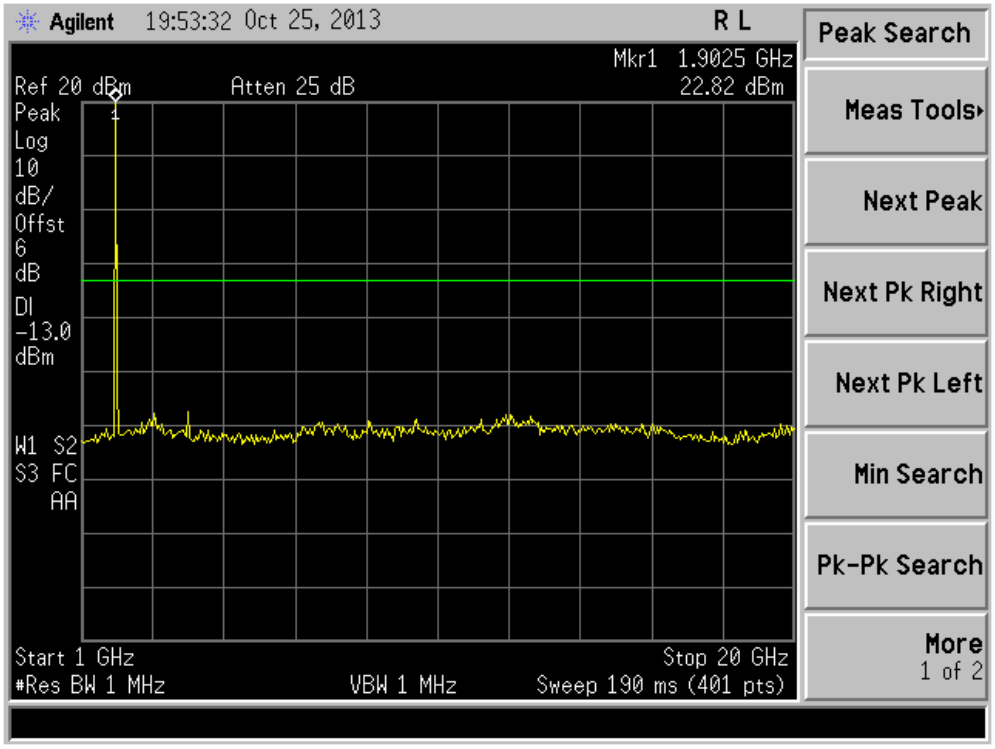

Fig 4.3-54

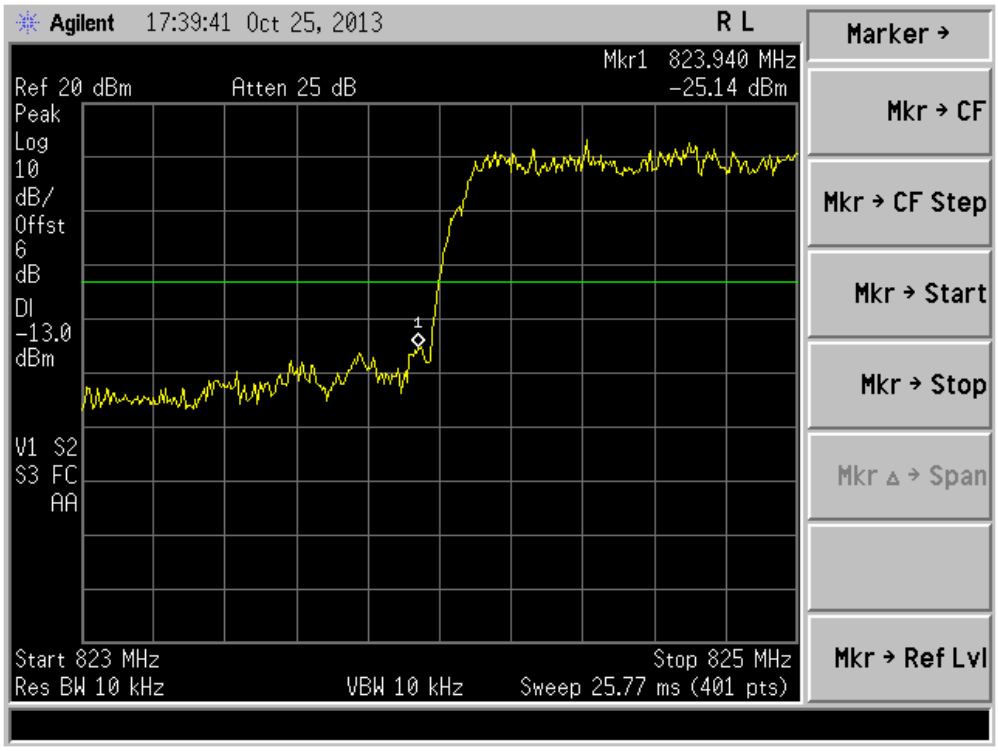

Fig 4.3-55

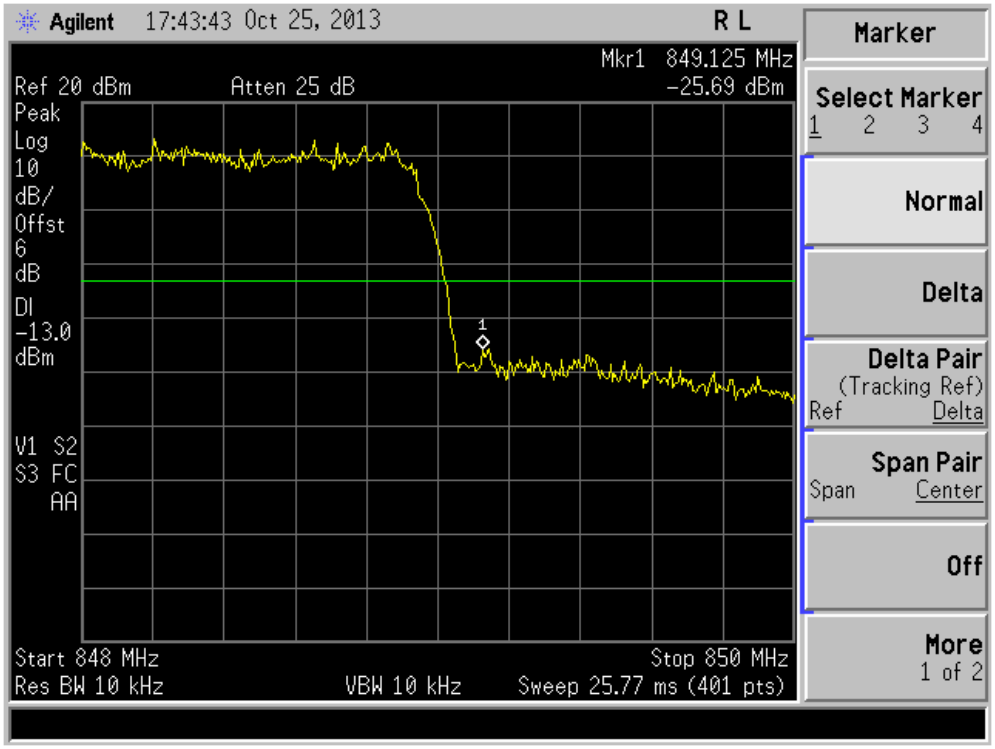

Fig 4.3-56

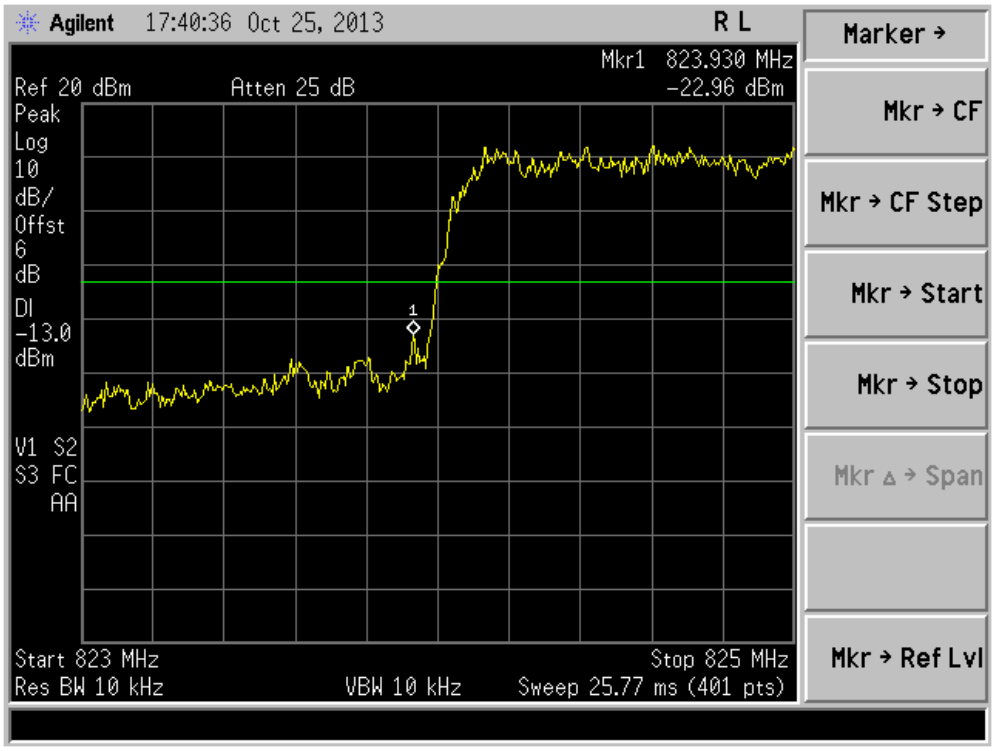

Fig 4.3-57

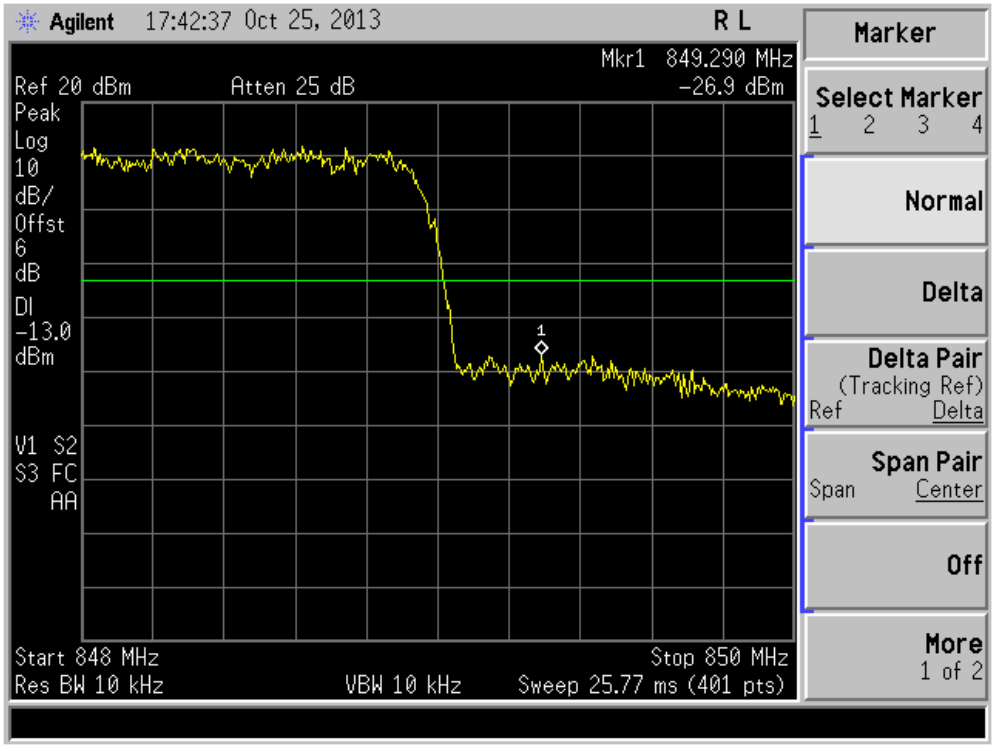

Fig 4.3-58

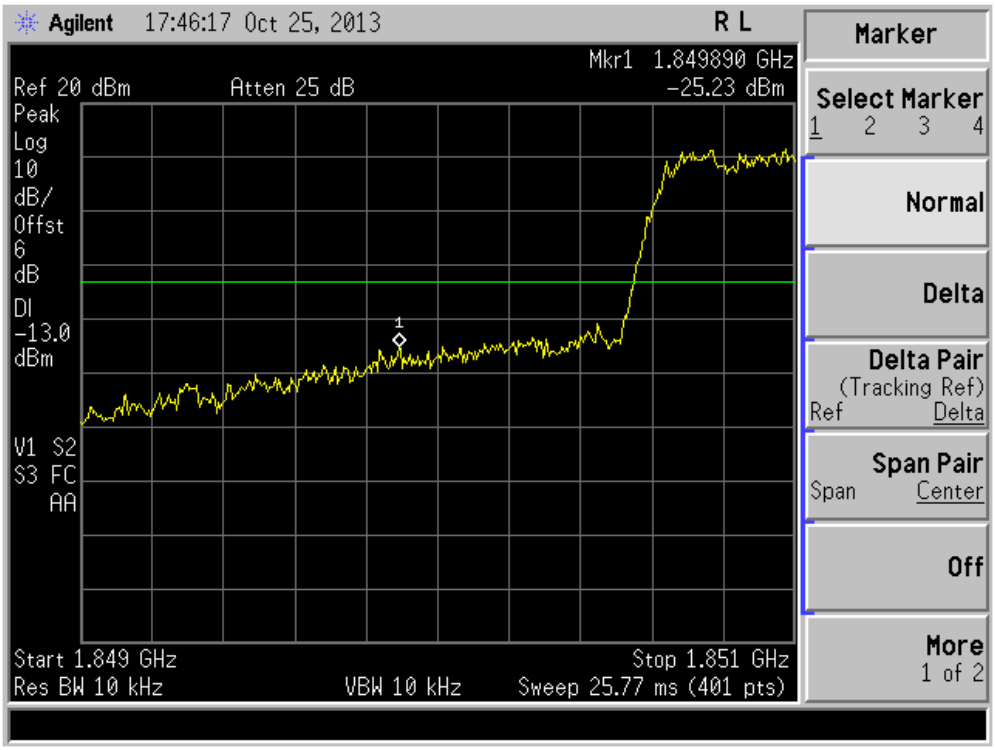

Fig 4.3-59

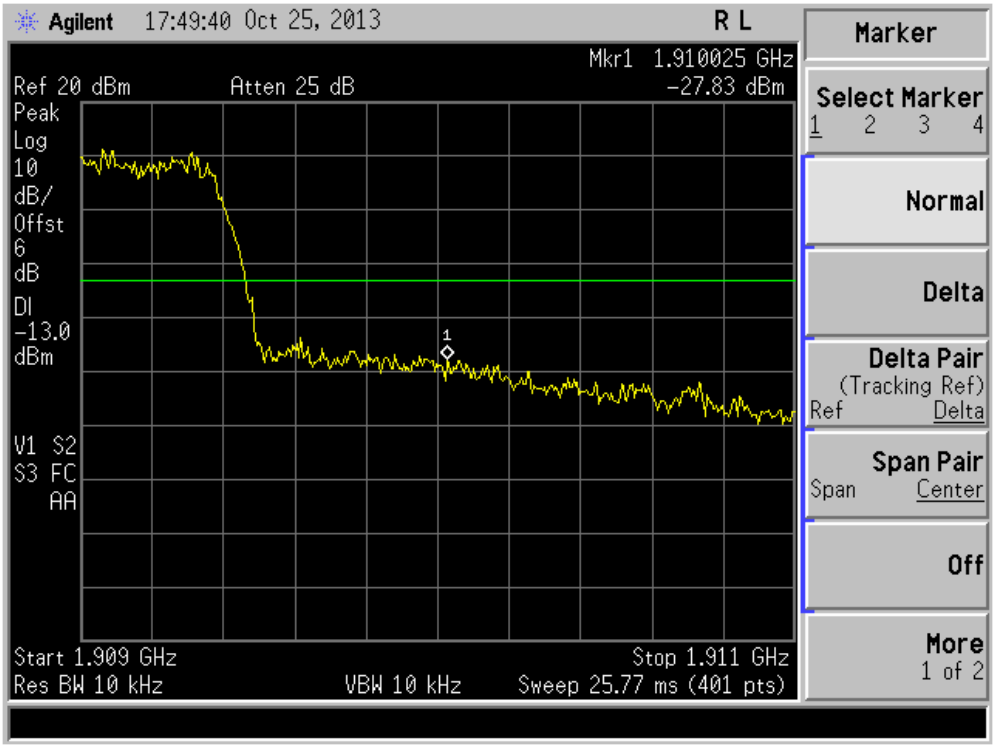

Fig 4.3-60

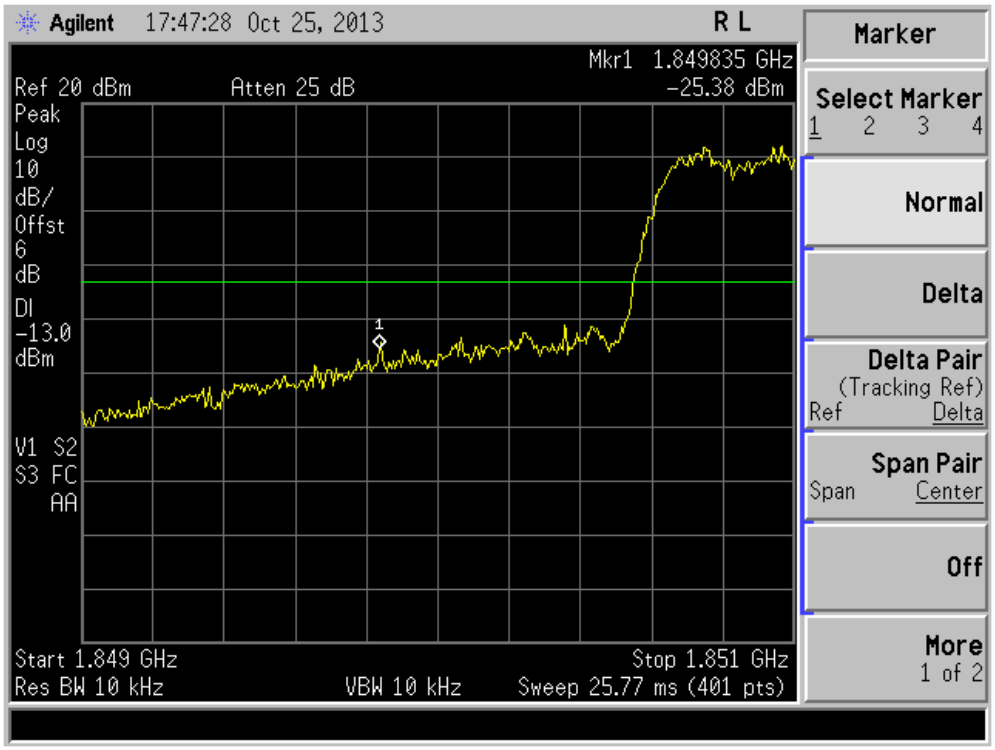

Fig 4.3-61

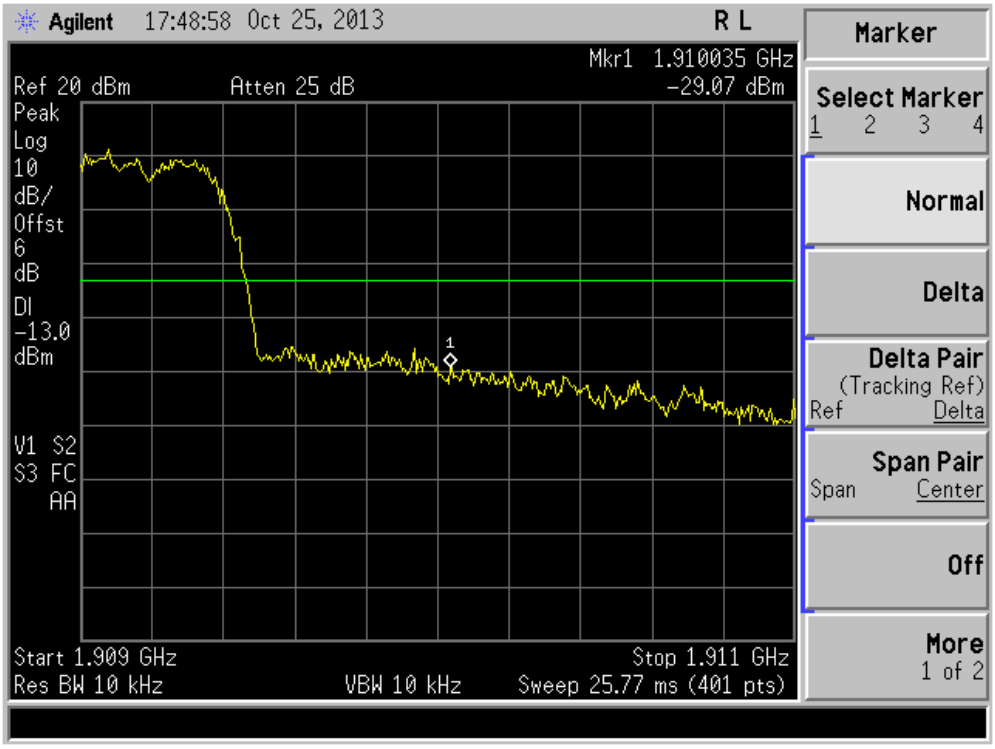

Fig 4.3-62

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4.4. Field Strength of Spurious Radiation

4.4.1. Required and Limits

FCC 2.1053 Measurements required: Field strength of spurious radiation.

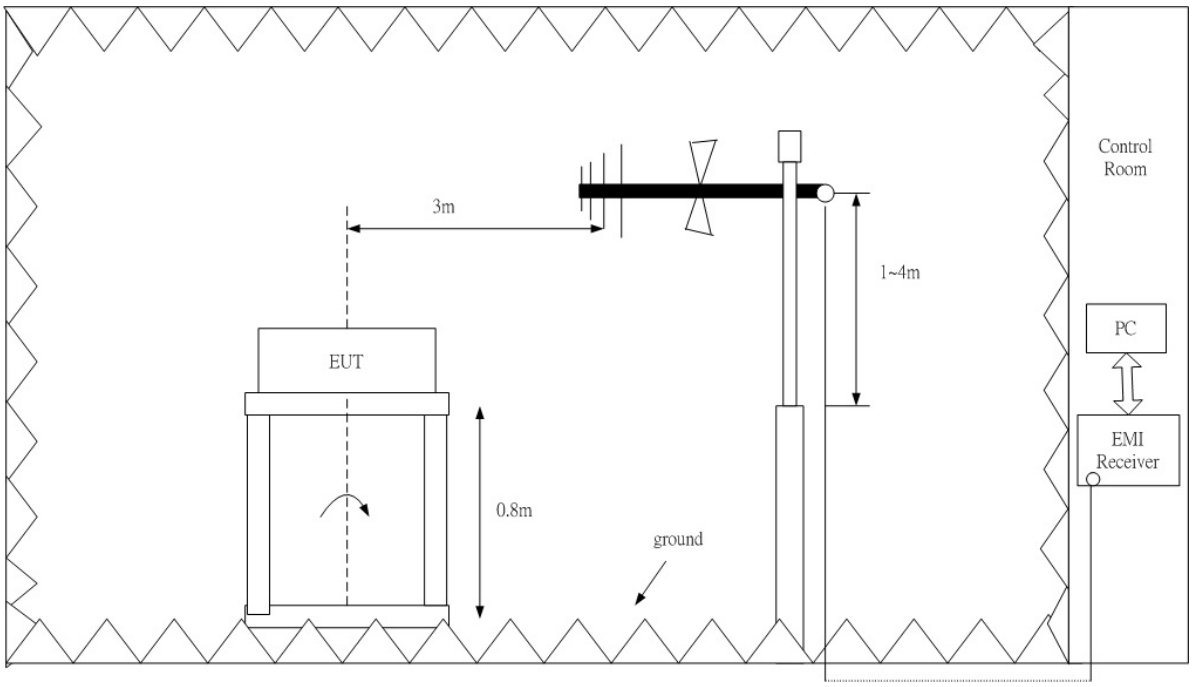
Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission.

FCC 22.917 Emission limitations for cellular equipment.

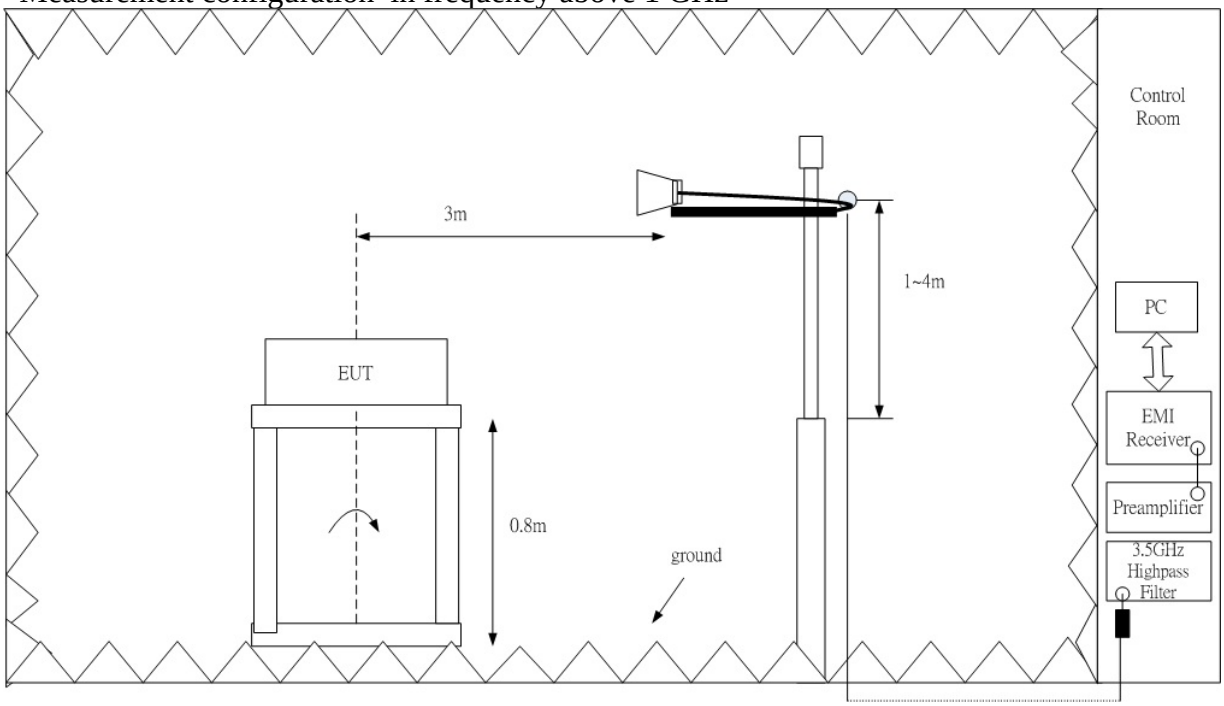
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

4.4.2. Test Configuration and Procedure

Measurement configuration in frequency 30-1000MHz



Measurement configuration in frequency above 1 GHz



The EUT was placed on a turntable just above ground. The turntable rotates 360 degrees to determine the position of the maximum emission level. EUT was set 3 meters away from the receiving antenna, which were mounted on an antenna tower. The antenna can move up and down between 1 meter and 4 meter to find out the maximum emission level. Broadband antenna was used as receiving antenna. Both horizontal and vertical polarization of the antenna was set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to TIA-603-C-2004 on radiated measurement.

The frequency range from 30MHz to 20GHz was checked.

$$E = \frac{\sqrt{30 \times P \times G}}{D} \qquad PG(EIRP) = \frac{(E \times D)^2}{30}$$

E：Field Strength (V/m) PG：Equivalent Isotropic Radiated Power (W)

G：Antenna Gain D：distance (3m)

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4.4.3. Test Results

WCDMA Band Ⅱ CH Low

Polarity : Horizontal

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
249.7	23.6	13.8	37.4	-57.8	-13	-44.8
286.6	32.9	14.7	47.6	-47.6	-13	-34.6
399.3	22.0	18.2	40.2	-55	-13	-42
665.7	16.3	23.2	39.5	-55.7	-13	-42.7
797.8	17.8	24.3	42.1	-53.1	-13	-40.1
982.5	14.9	26.3	41.2	-54.0	-13	-41.0
1726.5	23.7	30.7	54.4	-40.8	-13	-27.8
2202.4	23.8	32.8	56.6	-38.6	-13	-25.6
2863.7	24.4	35.2	59.6	-35.6	-13	-22.6
3364.7	24.6	35.5	60.1	-35.1	-13	-22.1
Measurement uncertainty：± 4.3dB						

Polarity : Vertical

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
30.0	32.9	20.9	53.8	-41.4	-13	-28.4
284.6	46.9	14.6	61.5	-33.7	-13	-20.7
401.3	40	18.2	58.2	-37.0	-13	-24.0
663.7	38.7	23.2	61.9	-33.3	-13	-20.3
797.8	43	24.3	67.3	-27.9	-13	-14.9
990.3	41.7	26.3	68.0	-27.2	-13	-14.2
1596.1	24.8	30.0	54.8	-40.4	-13	-27.4
2242.4	23.4	33.0	56.4	-38.8	-13	-25.8
3039.0	24.8	35.0	59.8	-35.4	-13	-22.4
18000	52.9	9.6	62.5	-32.7	-13	-19.7
Measurement uncertainty：± 4.3dB						

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss (below 3.5GHz)
2. Calibration Factor = Antenna Factor + Cable Loss – Preamplifier Gain (above 3.5GHz)
3. Emission Level = Reading Value + Calibration Factor

4. Margin = EIRP – Limit

WCDMA Band Ⅱ CH Mid

Polarity : Horizontal

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
286.6	32.3	14.7	47	-48.2	-13	-35.2
399.3	24.6	18.2	42.8	-52.4	-13	-39.4
663.7	16.6	23.2	39.8	-55.4	-13	-42.4
799.8	19.1	24.3	43.4	-51.8	-13	-38.8
821.2	15.7	24.6	40.3	-54.9	-13	-41.9
963.1	32.3	26.2	41.4	-53.8	-13	-40.8
1936.9	24.3	31.9	56.2	-39.0	-13	-26.0
2743.5	24.2	34.7	58.9	-36.3	-13	-23.3
2763.5	24.3	34.8	59.1	-36.1	-13	-23.1
3269.5	25.0	35.0	60.0	-35.2	-13	-22.2
Measurement uncertainty：± 4.3dB						

Polarity : Vertical

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
282.7	32.8	14.6	47.4	-47.8	-13	-34.8
399.3	25.9	18.2	44.1	-51.1	-13	-38.1
624.8	15.1	22.7	37.8	-57.4	-13	-44.4
665.7	16.2	23.2	39.4	-55.8	-13	-42.8
797.8	19.0	24.3	43.3	-51.9	-13	-38.9
933.9	17.2	26.0	43.2	-52.0	-13	-39.0
1596.2	23.6	30.0	53.6	-41.6	-13	-28.6
2202.4	24.0	32.8	56.8	-38.4	-13	-25.4
3289.5	25.1	35.0	60.1	-35.1	-13	-22.1
Measurement uncertainty：± 4.3dB						

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss (below 3.5GHz)
2. Calibration Factor = Antenna Factor + Cable Loss – Preamplifier Gain (above 3.5GHz)
3. Emission Level = Reading Value + Calibration Factor
4. Margin = EIRP – Limit

WCDMA Band Ⅱ CH High

Polarity : Horizontal

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
286.6	32.5	14.7	47.2	-48.0	-13.0	-35.0
335.2	18.9	16.1	35.0	-60.2	-13	-47.2
399.3	22.8	18.2	41.0	-54.2	-13	-41.2
665.7	16.4	23.2	39.6	-55.6	-13	-42.6
799.8	18.3	24.3	42.6	-52.6	-13	-39.6
990.3	15.6	26.3	41.9	-53.3	-13	-40.3
1460.9	26.2	29.3	55.5	-39.7	-13	-26.7
1536.1	23.1	29.7	52.8	-42.4	-13	-29.4
1596.2	27.1	30.0	57.1	-38.1	-13	-25.1
2292.6	24.1	33.1	57.2	-38.0	-13	-26.0
2377.8	24.1	33.4	57.5	-37.7	-13	-26.7
Measurement uncertainty：± 4.3dB						

Polarity : Vertical

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
249.7	23.4	13.8	37.2	-58.0	-13	-45.0
286.6	31.9	14.7	46.6	-48.6	-13	-35.6
401.3	20.5	18.2	38.7	-56.5	-13	-43.5
665.7	16.3	23.2	39.5	-55.7	-13	-42.7
799.8	18.8	24.3	43.1	-52.1	-13	-39.1
963.1	15.1	26.2	41.3	-53.9	-13	-40.9
1851.7	23.8	31.4	55.2	-40.0	-13	-27.0
1987.0	24.0	32.1	56.1	-39.1	-13	-26.1
2638.3	25.1	34.3	59.4	-35.8	-13	-22.8
2813.6	25.1	35.0	60.1	-35.1	-13	-23.1
Measurement uncertainty：± 4.3dB						

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss (below 3.5GHz)
2. Calibration Factor = Antenna Factor + Cable Loss – Preamplifier Gain (above 3.5GHz)
3. Emission Level = Reading Value + Calibration Factor
4. Margin = EIRP – Limit

WCDMA Band Ⅴ CH Low

Polarity : Horizontal

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
284.6	27.8	14.6	42.4	-52.8	-13	-39.8
663.7	17.4	23.2	40.6	-54.6	-13	-41.6
801.7	20.6	24.3	44.9	-50.3	-13	-37.3
828.9	19.6	24.7	44.3	-50.9	-13	-37.9
933.9	15.9	26.0	41.9	-53.3	-13	-40.3
Measurement uncertainty：± 4.3dB						

Polarity : Vertical

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
288.5	10.8	32.3	43.1	-52.1	-13	-39.1
663.7	18	23.8	41.8	-53.4	-13	-40.4
799.8	20.5	22.7	43.2	-52	-13	-39
873.6	21.5	21.6	43.1	-52.1	-13	-39.1
978.6	12.5	28.7	41.2	-54	-13	-41
Measurement uncertainty：± 4.3dB						

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss (below 3.5GHz)
2. Calibration Factor = Antenna Factor + Cable Loss – Preamplifier Gain (above 3.5GHz)
3. Emission Level = Reading Value + Calibration Factor
4. Margin = EIRP – Limit

WCDMA Band V CH Mid

Polarity : Horizontal

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
288.5	28.5	14.7	43.2	-52	-13	-39
401.3	22.4	18.2	40.6	-54.6	-13	-41.6
799.8	20.1	24.3	44.4	-50.8	-13	-37.8
883.4	21.6	25.5	47.1	-48.1	-13	-35.1
932.0	15.9	26.0	41.9	-53.3	-13	-40.3
Measurement uncertainty：± 4.3dB						

Polarity : Vertical

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
284.6	28.2	14.6	42.9	-52.3	-13	-39.3
399.3	23.9	18.2	42.1	-53.1	-13	-40.1
797.8	20.5	24.3	44.8	-50.4	-13	-37.4
883.4	18.0	25.5	43.5	-51.7	-13	-38.7
924.2	16.1	25.9	42.1	-53.1	-13	-40.1
Measurement uncertainty：± 4.3dB						

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss (below 3.5GHz)
2. Calibration Factor = Antenna Factor + Cable Loss – Preamplifier Gain (above 3.5GHz)
3. Emission Level = Reading Value + Calibration Factor
4. Margin = EIRP – Limit

WCDMA Band Ⅴ CH High

Polarity : Horizontal

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
286.6	28.4	14.7	43.1	-52.1	-13	-39.1
799.8	20.5	24.3	44.8	-50.4	-13	-37.4
891.1	18.1	25.7	43.8	-51.4	-13	-38.4
928.1	16.1	26	42.1	-53.1	-13	-40.1
986.4	15.3	26.3	41.6	-53.6	-13	-40.6
Measurement uncertainty：± 4.3dB						

Polarity : Vertical

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
284.6	28.4	14.6	43	-52.2	-13	-39.2
665.7	17.5	23.2	40.7	-54.5	-13	-41.5
797.8	15.2	24.3	39.5	-55.7	-13	-42.7
893.1	17.7	25.7	43.4	-51.8	-13	-38.8
933.9	15.5	26	41.5	-53.7	-13	-40.7
Measurement uncertainty：± 4.3dB						

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss (below 3.5GHz)
2. Calibration Factor = Antenna Factor + Cable Loss – Preamplifier Gain (above 3.5GHz)
3. Emission Level = Reading Value + Calibration Factor
4. Margin = EIRP – Limit

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CDMA2000 BC0 CH Low

Polarity : Horizontal

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
797.8	16.0	24.3	40.3	-54.9	-13	-41.9
869.8	16.1	25.3	41.4	-53.8	-13	-40.8
910.6	16.1	25.9	42.0	-53.2	-13	-40.2
933.9	20.5	26.0	46.5	-48.7	-13	-35.7
947.5	16.2	26.1	42.3	-52.9	-13	-39.9
Measurement uncertainty：± 4.3dB						

Polarity : Vertical

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
399.3	24.0	18.2	42.2	-53.0	-13	-40.0
533.5	19.1	20.9	40.0	-55.2	-13	-42.2
799.8	16.7	24.3	41.0	-54.2	-13	-41.2
922.2	17.4	25.9	43.3	-51.9	-13	-38.9
932.0	19.8	26.0	45.8	-49.4	-13	-36.4
Measurement uncertainty：± 4.3dB						

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss (below 3.5GHz)
2. Calibration Factor = Antenna Factor + Cable Loss – Preamplifier Gain (above 3.5GHz)
3. Emission Level = Reading Value + Calibration Factor
4. Margin = EIRP – Limit

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CDMA2000 BC0 CH Mid

Polarity : Horizontal

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
282.7	29.3	14.6	43.9	-51.3	-13	-38.3
399.3	19.7	18.2	37.9	-57.3	-13	-44.3
665.7	16.0	23.2	39.2	-56.0	-13	-43.0
801.7	17.0	24.3	41.3	-53.9	-13	-40.9
970.8	14.5	26.2	40.7	-54.5	-13	-41.5
Measurement uncertainty：± 4.3dB						

Polarity : Vertical

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
282.7	30.8	14.6	45.4	-49.8	-13	-36.8
399.3	19.4	18.2	37.6	-57.6	-13	-44.6
665.7	15.2	23.2	38.4	-56.8	-13	-43.8
797.8	17.0	24.3	41.3	-53.9	-13	-40.9
994.2	14.9	26.4	41.3	-53.9	-13	-40.9
Measurement uncertainty：± 4.3dB						

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss (below 3.5GHz)
2. Calibration Factor = Antenna Factor + Cable Loss – Preamplifier Gain (above 3.5GHz)
3. Emission Level = Reading Value + Calibration Factor
4. Margin = EIRP – Limit

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CDMA2000 BC0 CH High

Polarity : Horizontal

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
284.6	30.2	14.6	44.8	-50.4	-13	-37.4
399.3	20.6	18.2	38.8	-56.4	-13	-43.4
665.7	14.9	23.2	38.1	-57.1	-13	-44.1
799.8	17.0	24.3	41.3	-53.9	-13	-40.9
974.7	15.0	26.2	41.2	-54.0	-13	-41.0
Measurement uncertainty：± 4.3dB						

Polarity : Vertical

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
286.6	29.9	14.7	44.6	-50.6	-13	-37.6
399.3	20.9	18.2	39.1	-56.1	-13	-43.1
533.5	16.3	20.9	37.2	-58.0	-13	-45.0
801.7	15.7	24.3	40	-55.2	-13	-42.2
955.3	15.3	26.1	41.4	-53.8	-13	-40.8
Measurement uncertainty：± 4.3dB						

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss (below 3.5GHz)
2. Calibration Factor = Antenna Factor + Cable Loss – Preamplifier Gain (above 3.5GHz)
3. Emission Level = Reading Value + Calibration Factor
4. Margin = EIRP – Limit

CDMA2000 BC1 CH Low

Polarity : Horizontal

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
514.0	20.1	20.4	40.5	-54.7	-13	-41.7
531.5	21.5	20.8	42.3	-52.9	-13	-39.9
799.8	16.0	24.3	40.3	-54.9	-13	-41.9
910.6	16.6	25.9	42.5	-52.7	-13	-39.7
928.1	20.2	26.0	46.2	-49.0	-13	-36.0
996.1	15.3	26.4	41.7	-53.5	-13	-40.5
1160.3	23.5	27.4	50.9	-44.3	-13	-31.3
1300.6	22.8	28.3	51.1	-44.1	-13	-31.1
Measurement uncertainty：± 4.3dB						

Polarity : Vertical

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
514.0	20.3	20.4	40.7	-54.5	-13	-41.5
533.5	19.9	20.9	40.8	-54.4	-13	-41.4
902.8	16.8	25.8	42.6	-52.6	-13	-39.6
916.4	19.0	25.9	44.9	-50.3	-13	-37.3
932.0	20.0	26.0	46.0	-49.2	-13	-36.2
943.6	17.5	26.1	43.6	-51.6	-13	-38.6
1596.9	27.5	30.0	57.5	-37.7	-13	-24.7
Measurement uncertainty：± 4.3dB						

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss (below 3.5GHz)
2. Calibration Factor = Antenna Factor + Cable Loss – Preamplifier Gain (above 3.5GHz)
3. Emission Level = Reading Value + Calibration Factor
4. Margin = EIRP – Limit

TEL：+886 3 4244445 FAX：+886 3 4202444
E-mail:mhko@cht.com.tw http://www.chttl.com.tw
NO.99, Dianyan Rd., Yang-Mei city, Taoyuan, Taiwan
R.O.C

CDMA2000 BC1 CH Mid

Polarity : Horizontal

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
214.7	26.2	12.3	38.5	-56.7	-13	-43.7
284.6	31.1	14.6	45.7	-49.5	-13	-36.5
531.5	17.7	20.8	38.5	-56.7	-13	-43.7
690.9	15.6	23.6	39.2	-56.0	-13	-43.0
702.6	14.6	23.7	38.3	-56.9	-13	-43.9
933.9	15.7	26.0	41.7	-53.5	-13	-40.5
1250.5	23.7	27.9	51.6	-43.6	-13	-30.6
Measurement uncertainty：± 4.3dB						

Polarity : Vertical

Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
218.6	26.2	12.5	38.7	-56.5	-13	-43.5
282.7	30.9	14.6	45.5	-49.7	-13	-36.7
399.3	21.0	18.2	39.2	-56.0	-13	-43.0
665.7	16.0	23.2	39.2	-56.0	-13	-43.0
801.7	17.1	24.3	41.4	-53.8	-13	-40.8
932.0	16.0	26.0	42	-53.2	-13	-40.2
1460.9	23.0	29.3	52.3	-42.9	-13	-29.9
Measurement uncertainty：± 4.3dB						

Remark: 1. Calibration Factor = Antenna Factor + Cable Loss (below 3.5GHz)
2. Calibration Factor = Antenna Factor + Cable Loss – Preamplifier Gain (above 3.5GHz)
3. Emission Level = Reading Value + Calibration Factor
4. Margin = EIRP – Limit

CDMA2000 BC1 CH High

Polarity : Horizontal

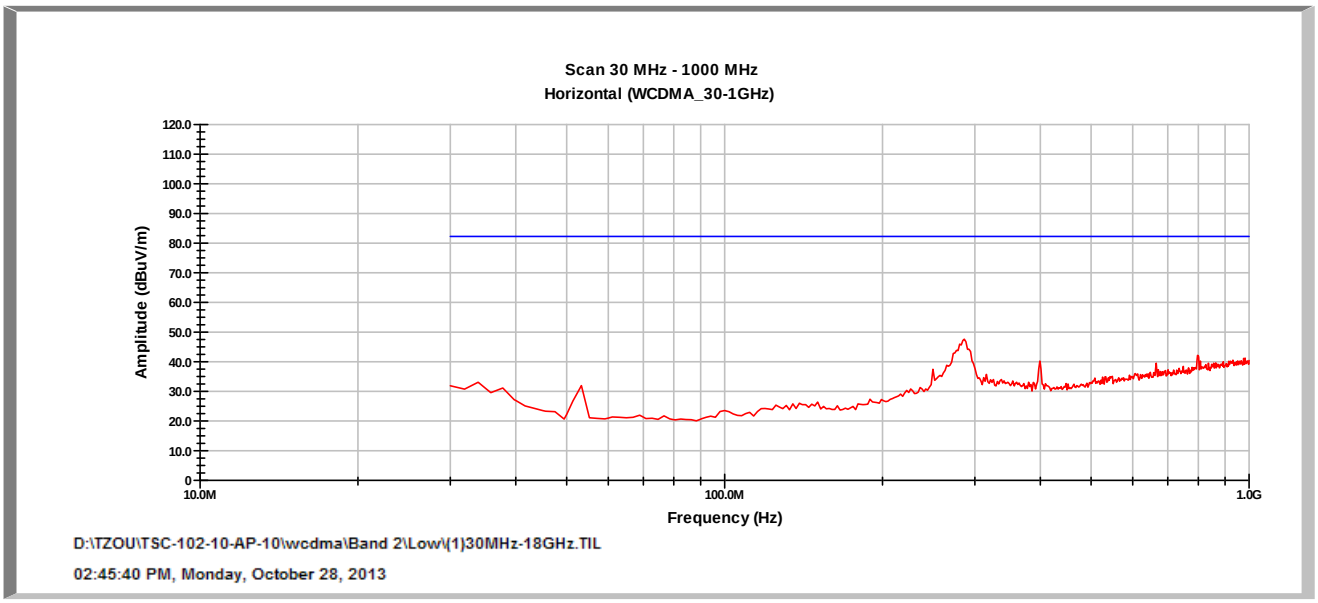
Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
212.7	19.8	12.2	32.0	-63.2	-13	-50.2
288.5	31.4	14.7	46.1	-49.1	-13	-36.1
399.3	20.5	18.2	38.7	-56.5	-13	-43.5
665.7	15.0	23.2	38.2	-57.0	-13	-44.0
799.8	17.2	24.3	41.5	-53.7	-13	-40.7
965.0	15.4	26.2	41.6	-53.6	-13	-40.6
1596.2	25.6	30.0	55.6	-39.6	-13	-26.6
1861.7	25.4	31.4	56.8	-38.4	-13	-25.4
Measurement uncertainty：± 4.3dB						

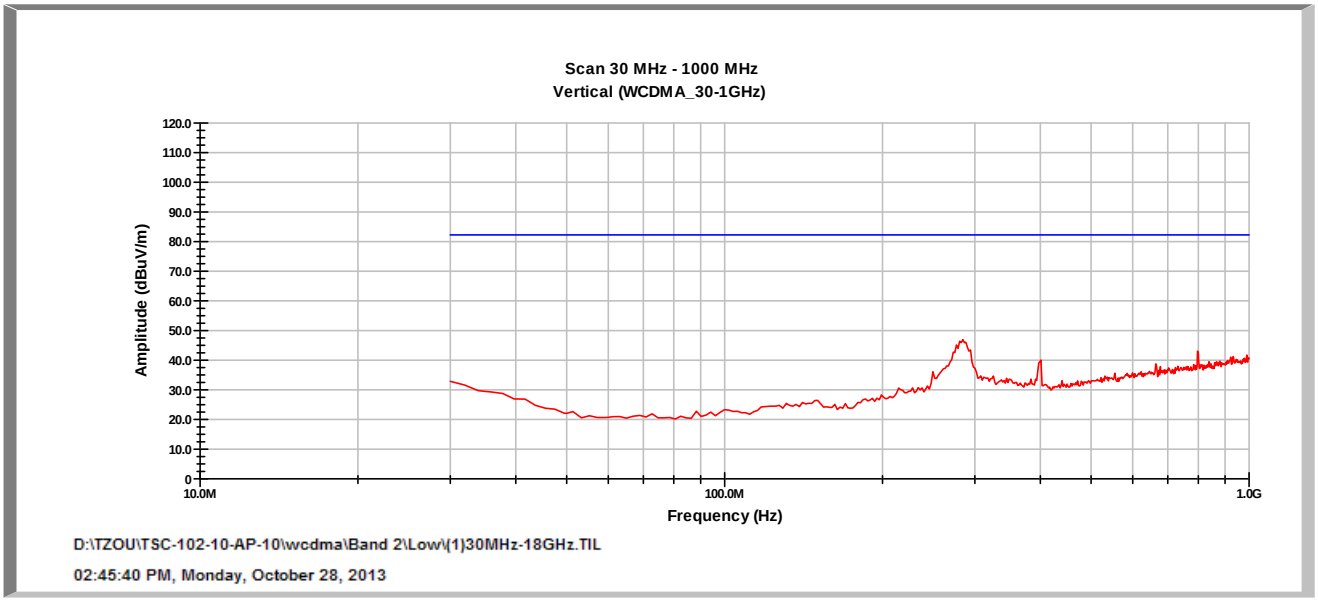
Polarity : Vertical

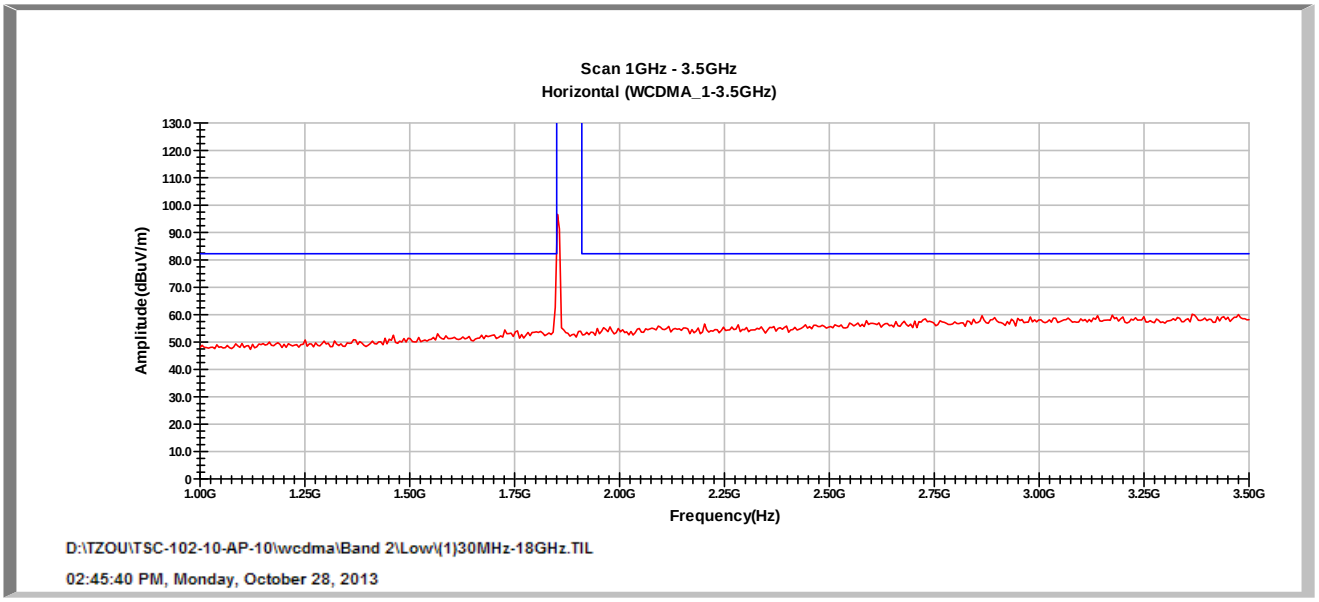
Frequency (MHz)	Reading Vaule (dBμV)	Calibration Factor (dB)	Emission Level (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
533.5	19.7	20.9	40.6	-54.6	-13	-41.6
780.3	15.3	24.2	39.5	-55.7	-13	-42.7
799.8	16.7	24.3	41.0	-54.2	-13	-41.2
852.3	15.5	25.1	40.6	-54.6	-13	-41.6
918.4	17.7	25.9	43.6	-51.6	-13	-38.6
933.9	19.8	26.0	45.8	-49.4	-13	-36.4
1460.9	28.5	29.3	57.8	-37.4	-13	-24.4
2533.1	24.1	33.9	58.0	-37.2	-13	-24.2
Measurement uncertainty：± 4.3dB						

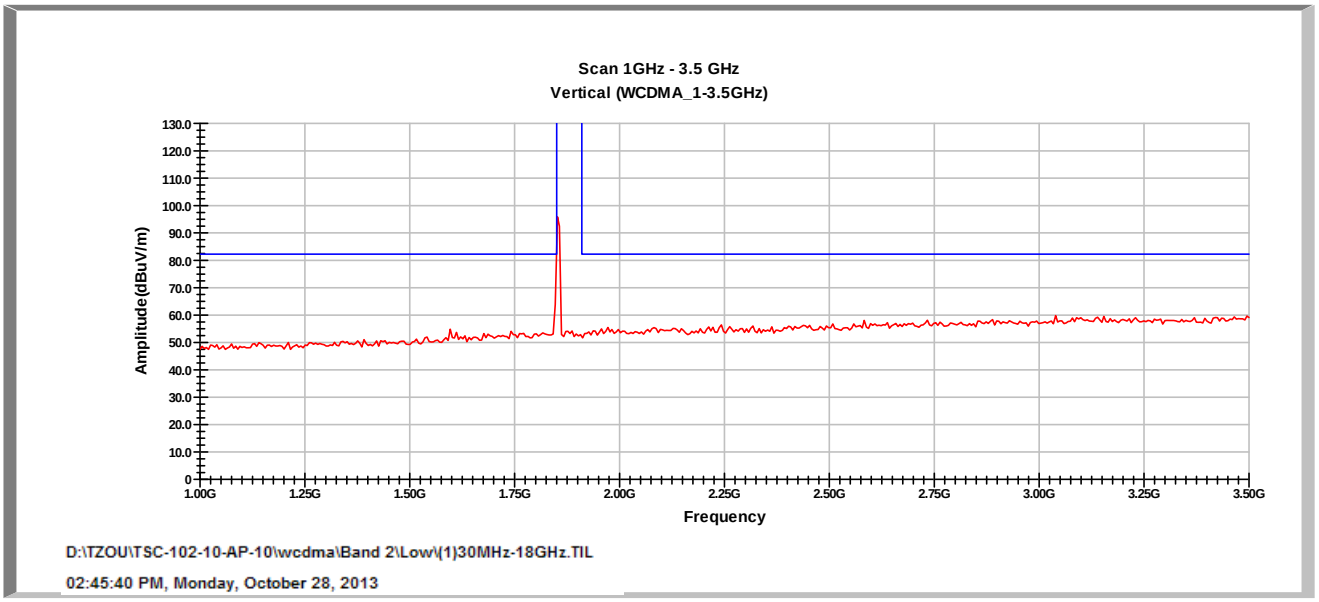
Remark: 1. Calibration Factor = Antenna Factor + Cable Loss (below 3.5GHz)
2. Calibration Factor = Antenna Factor + Cable Loss – Preamplifier Gain (above 3.5GHz)
3. Emission Level = Reading Value + Calibration Factor
4. Margin = EIRP – Limit

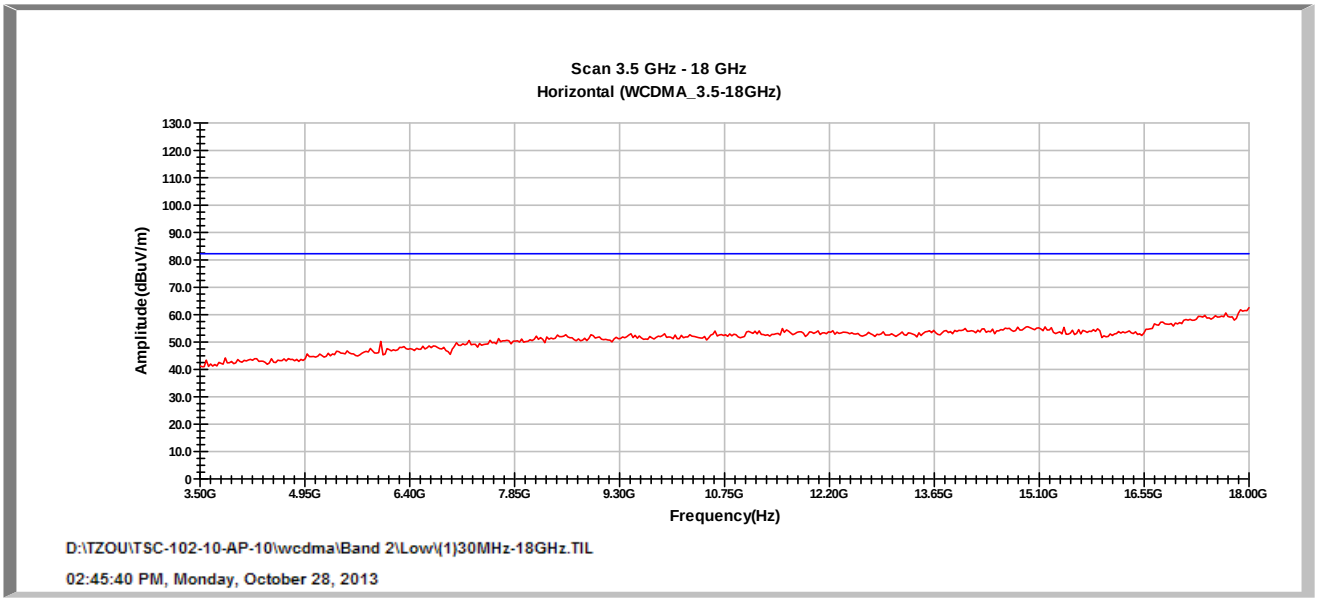
WCDMA Band Ⅱ CH Low

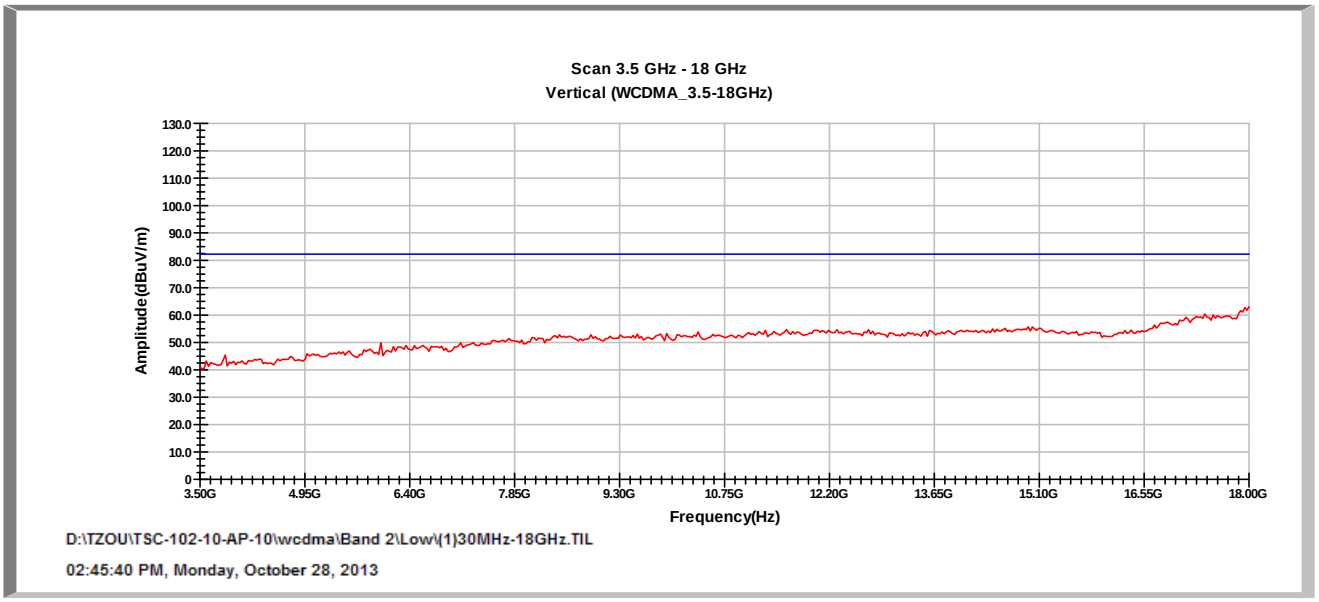


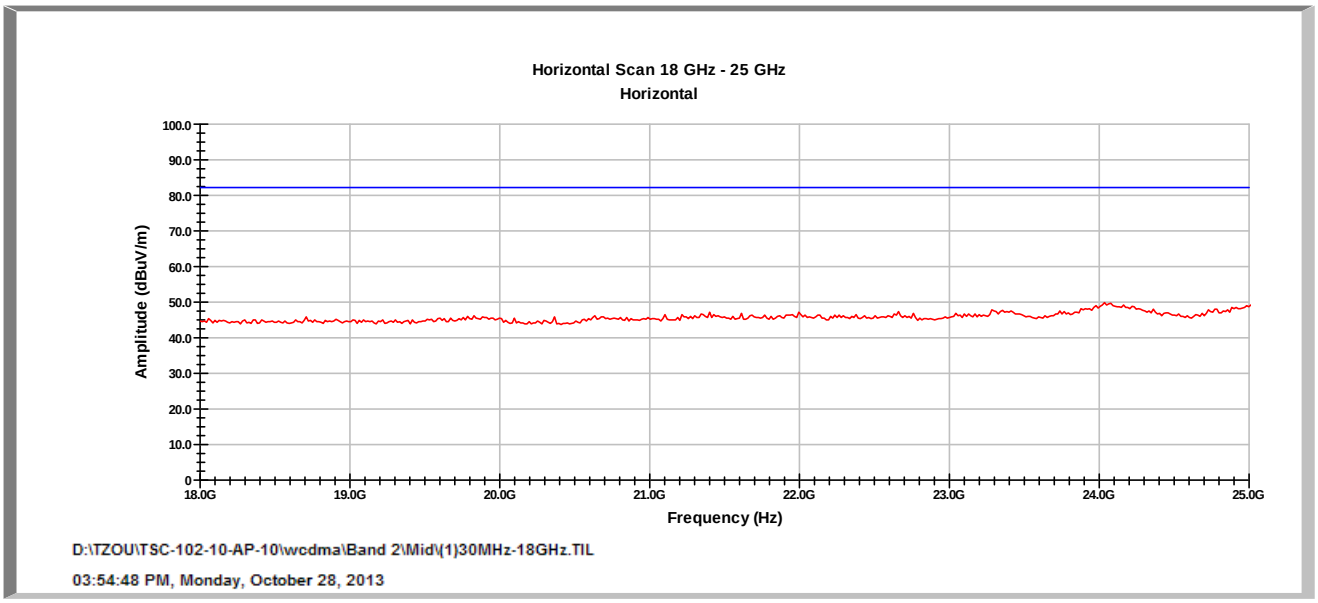


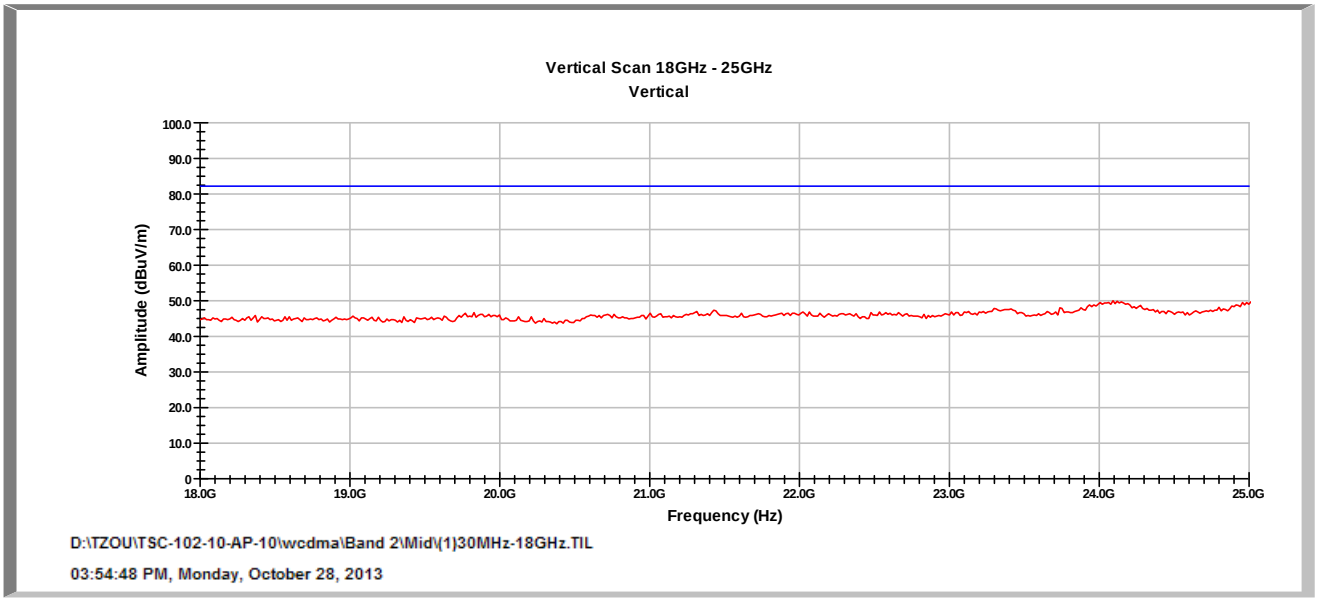

Scan 1GHz - 3.5GHz
Horizontal (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\Low\(1)30MHz-18GHz.TIL
02:45:40 PM, Monday, October 28, 2013


Scan 1GHz - 3.5 GHz
Vertical (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\Low\(1)30MHz-18GHz.TIL
02:45:40 PM, Monday, October 28, 2013

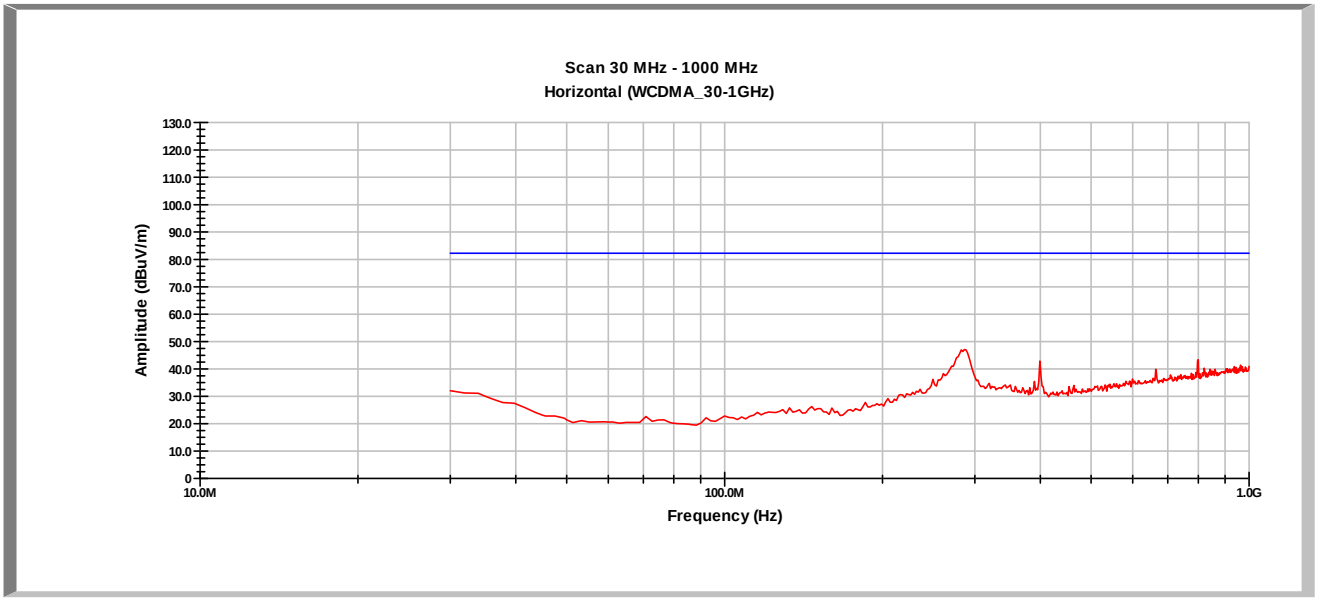

Scan 3.5 GHz - 18 GHz
Horizontal (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\Low\(1)30MHz-18GHz.TIL
02:45:40 PM, Monday, October 28, 2013

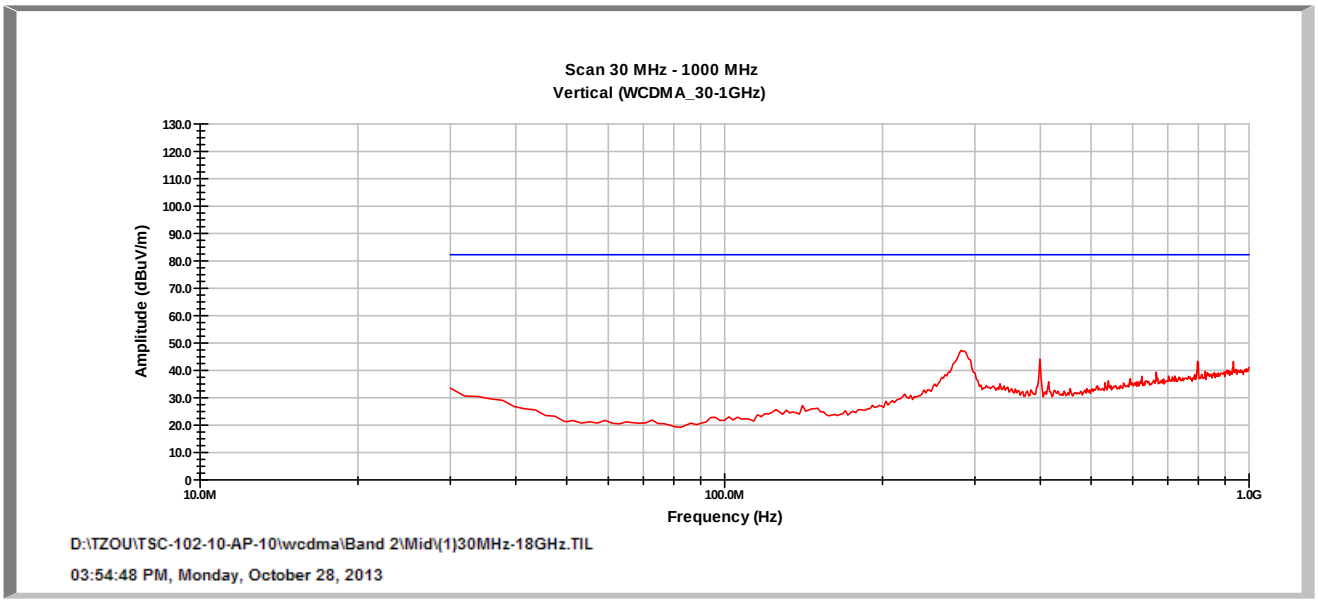

Scan 3.5 GHz - 18 GHz
Vertical (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\Low\(1)30MHz-18GHz.TIL
02:45:40 PM, Monday, October 28, 2013

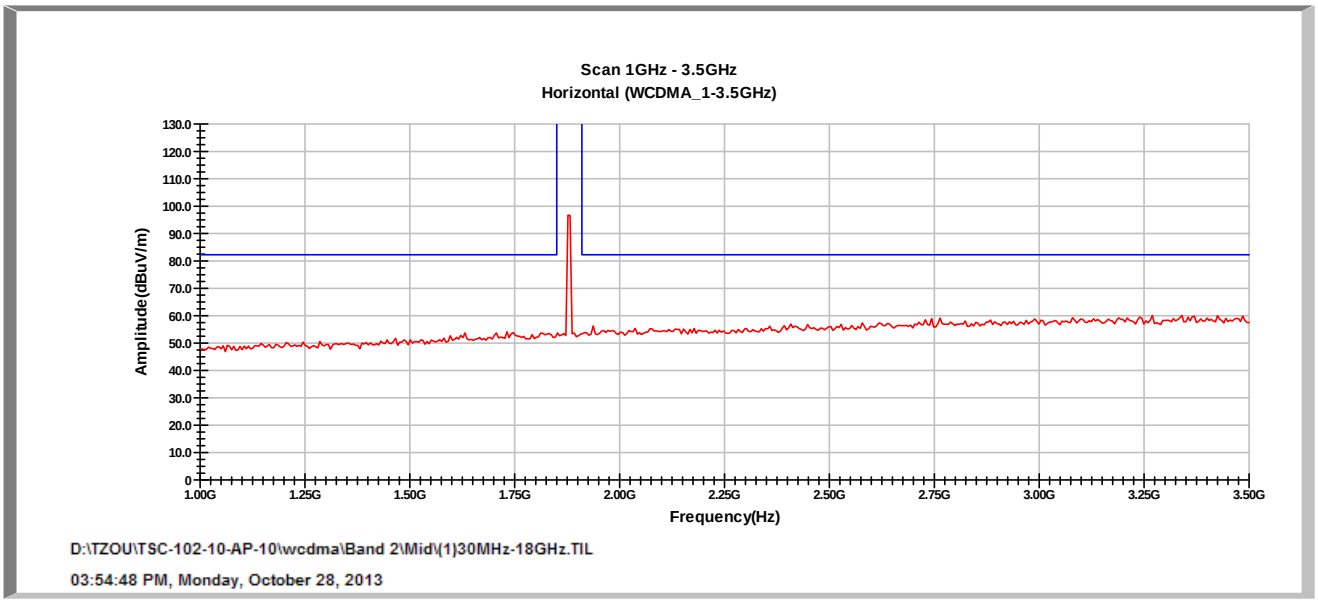

Horizontal Scan 18 GHz - 25 GHz
Horizontal
Amplitude (dBuV/m)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
18.0G
19.0G
20.0G
21.0G
22.0G
23.0G
24.0G
25.0G
Frequency (Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\Mid\(1)30MHz-18GHz.TIL
03:54:48 PM, Monday, October 28, 2013

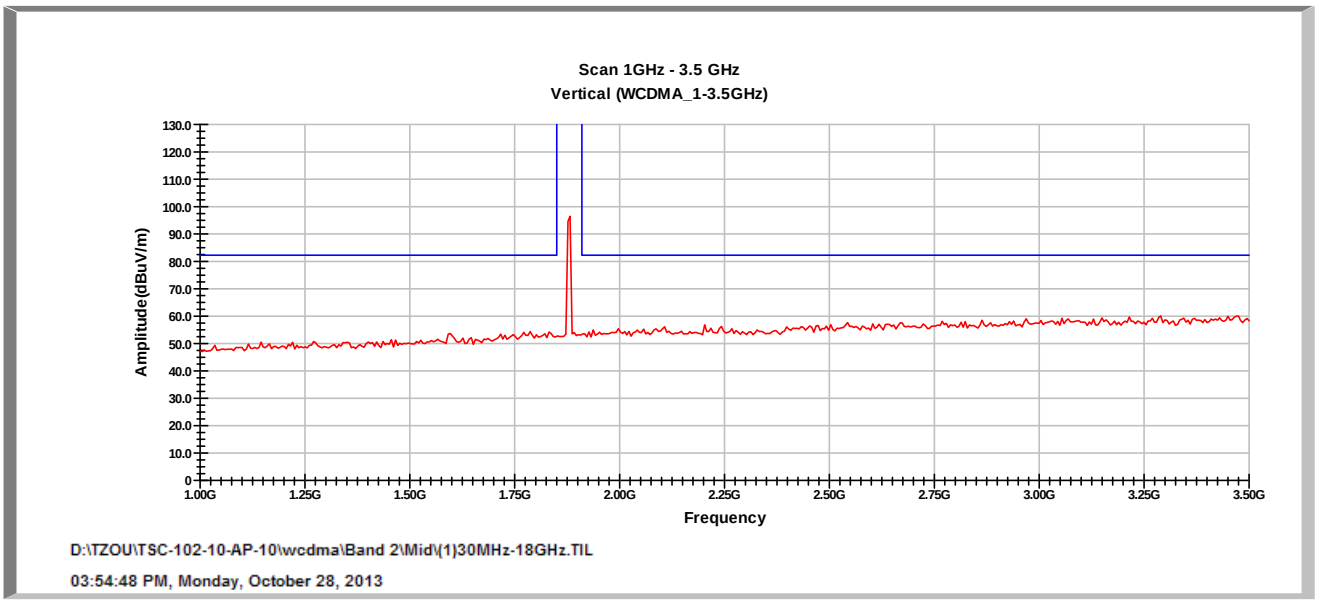

Vertical Scan 18GHz - 25GHz
Vertical
Amplitude (dBuV/m)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
18.0G
19.0G
20.0G
21.0G
22.0G
23.0G
24.0G
25.0G
Frequency (Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\Mid\(1)30MHz-18GHz.TIL
03:54:48 PM, Monday, October 28, 2013

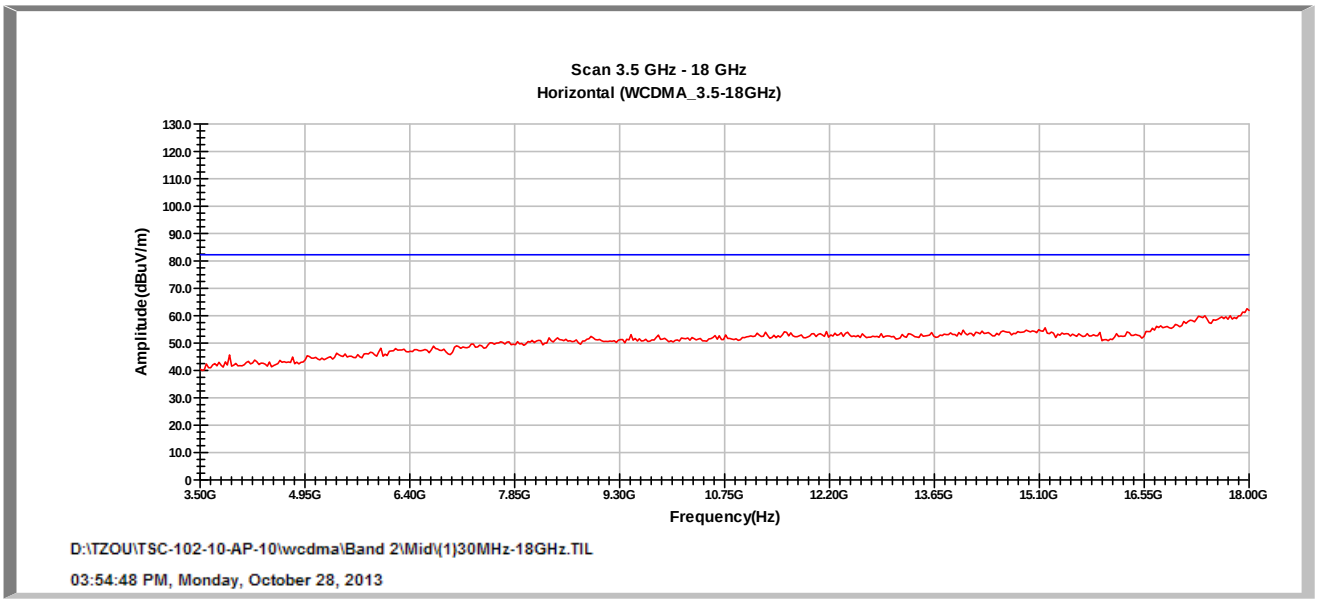
WCDMA Band Ⅱ CH Mid

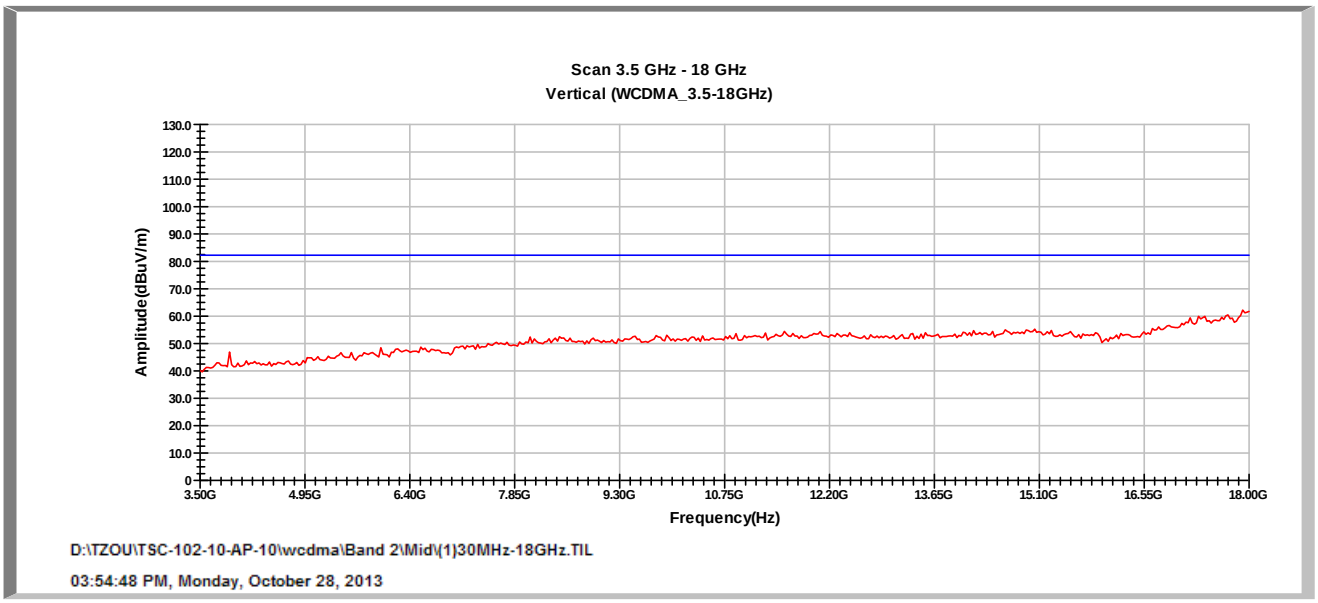


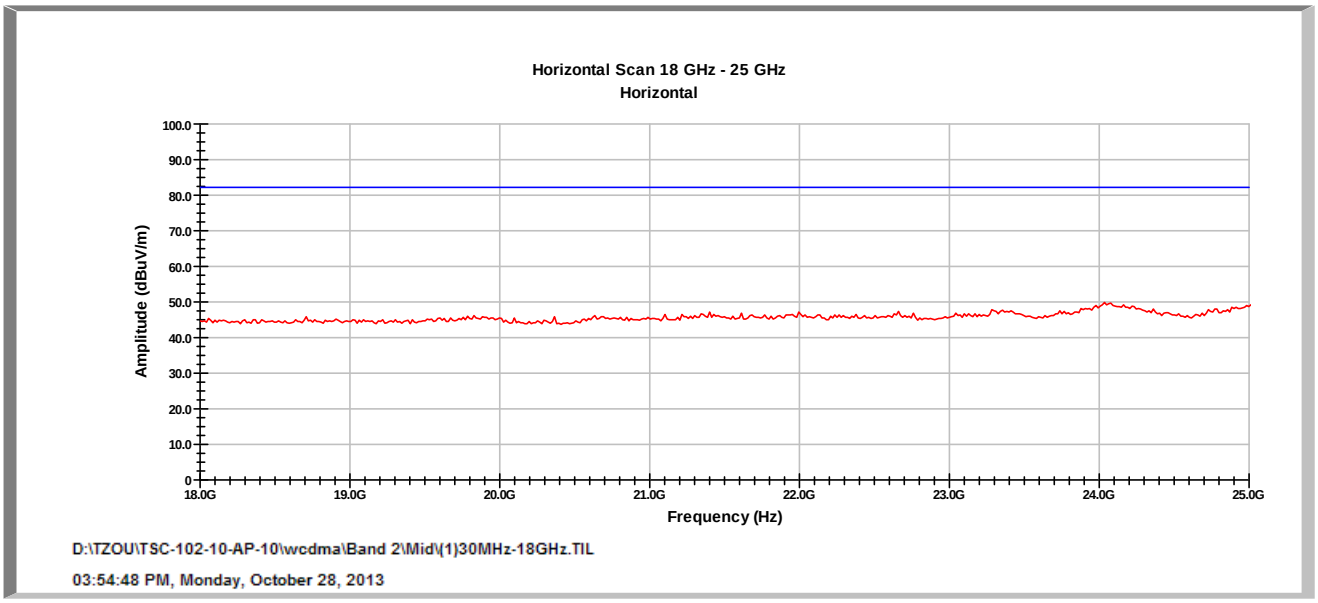


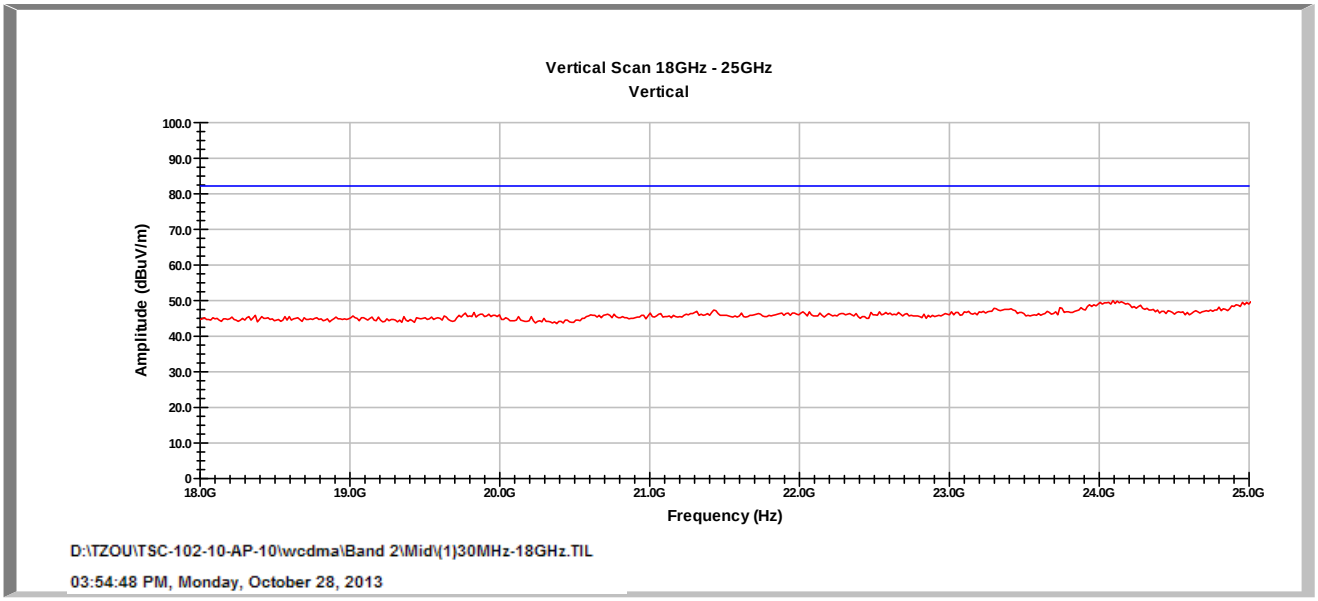

Scan 1GHz - 3.5GHz
Horizontal (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\Mid\(1)30MHz-18GHz.TIL
03:54:48 PM, Monday, October 28, 2013


Scan 1GHz - 3.5 GHz
Vertical (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\Mid\(1)30MHz-18GHz.TIL
03:54:48 PM, Monday, October 28, 2013

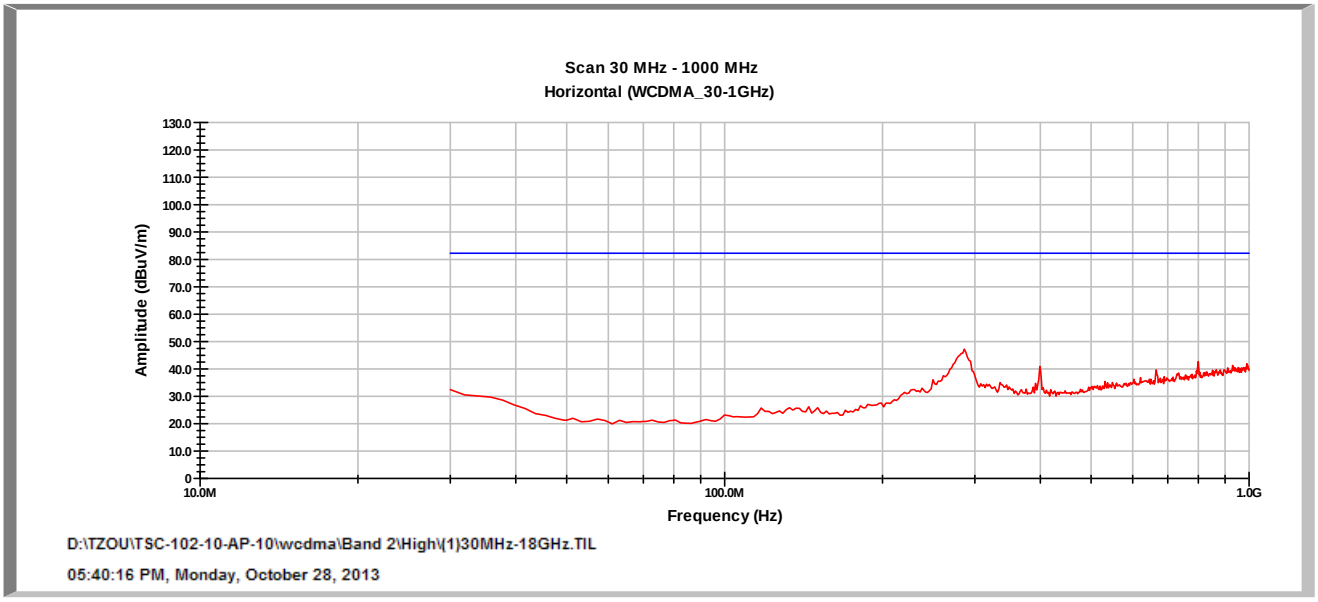

Scan 3.5 GHz - 18 GHz
Horizontal (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\Mid\(1)30MHz-18GHz.TIL
03:54:48 PM, Monday, October 28, 2013

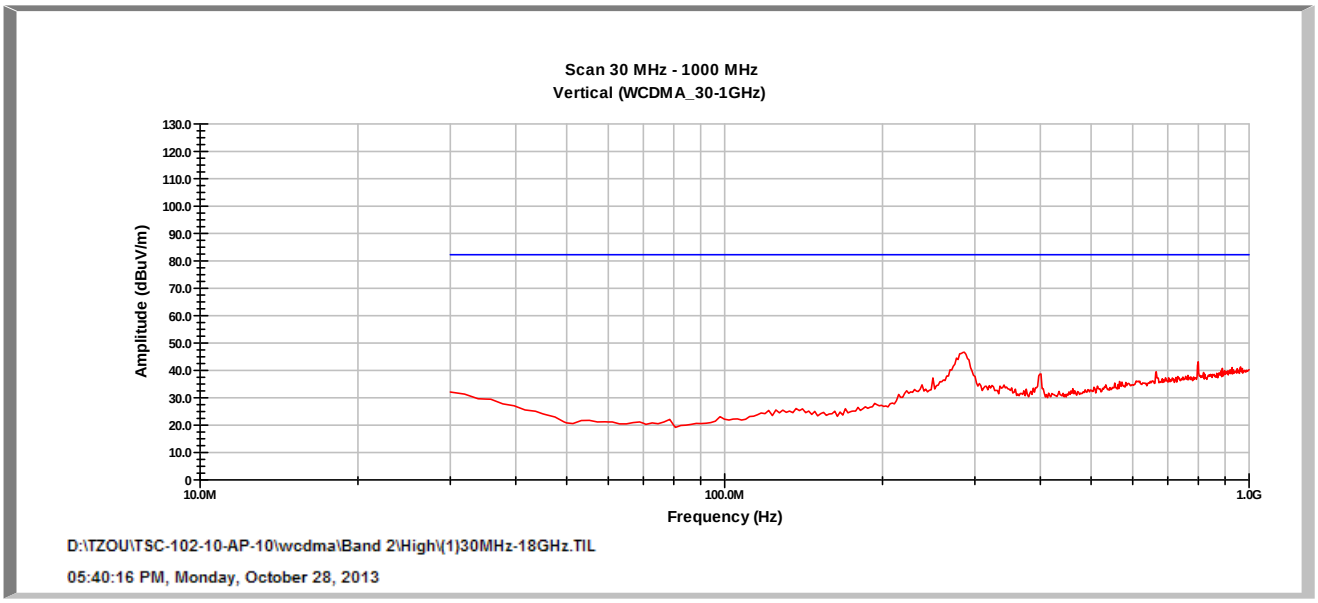

Scan 3.5 GHz - 18 GHz
Vertical (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\Mid\(1)30MHz-18GHz.TIL
03:54:48 PM, Monday, October 28, 2013

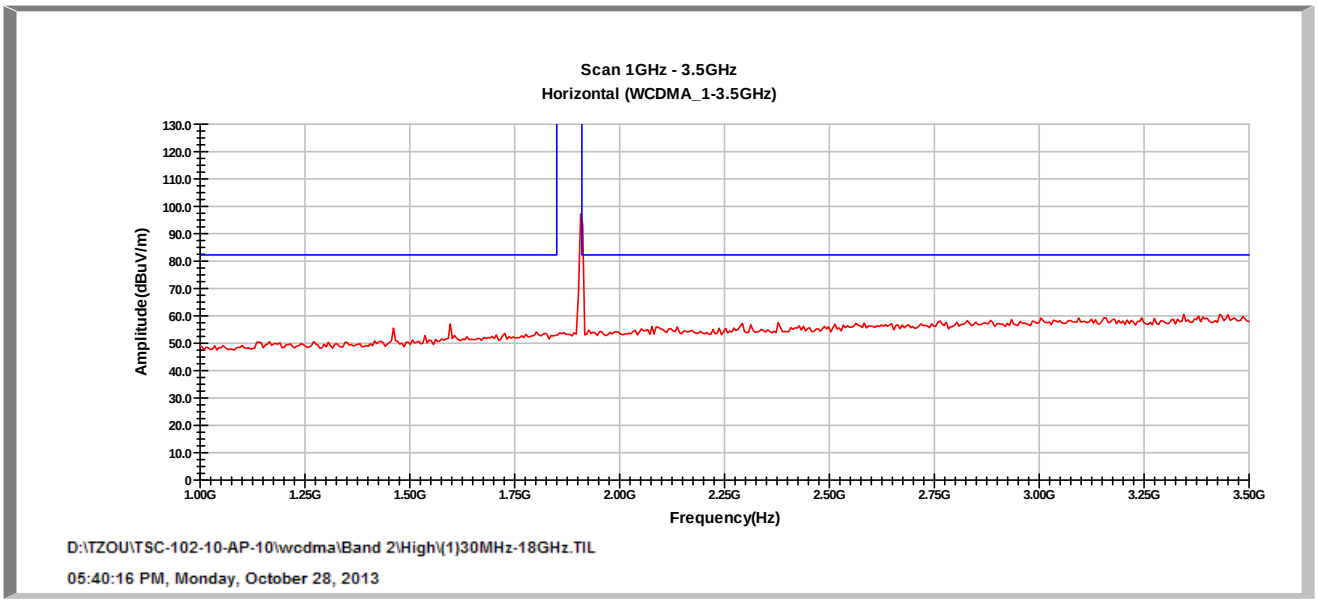

Horizontal Scan 18 GHz - 25 GHz
Horizontal
Amplitude (dBuV/m)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
18.0G
19.0G
20.0G
21.0G
22.0G
23.0G
24.0G
25.0G
Frequency (Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\Mid\(1)30MHz-18GHz.TIL
03:54:48 PM, Monday, October 28, 2013

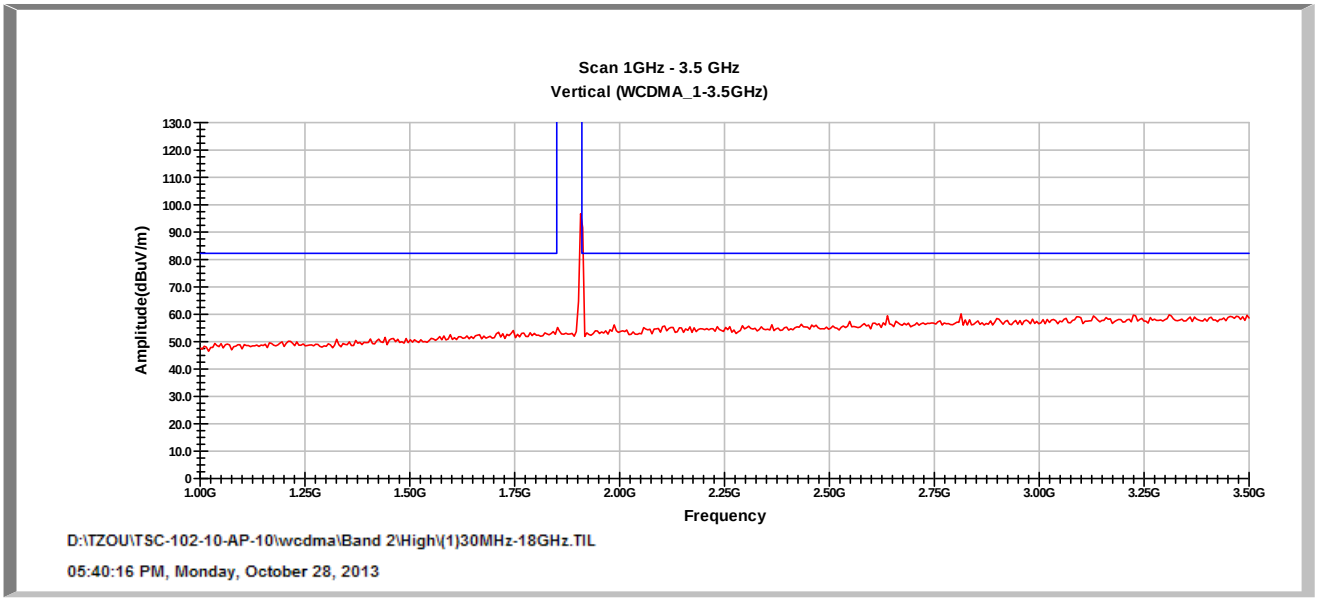

Vertical Scan 18GHz - 25GHz
Vertical
Amplitude (dBuV/m)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
18.0G
19.0G
20.0G
21.0G
22.0G
23.0G
24.0G
25.0G
Frequency (Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\Mid\(1)30MHz-18GHz.TIL
03:54:48 PM, Monday, October 28, 2013

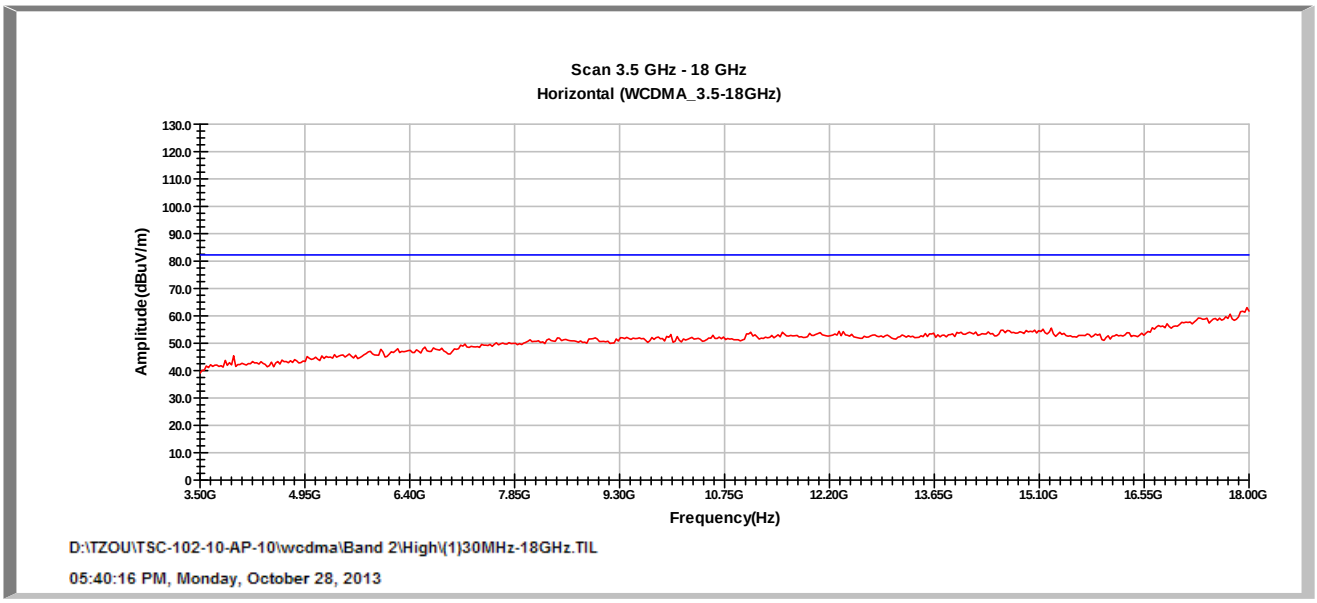
WCDMA Band Ⅱ CH High

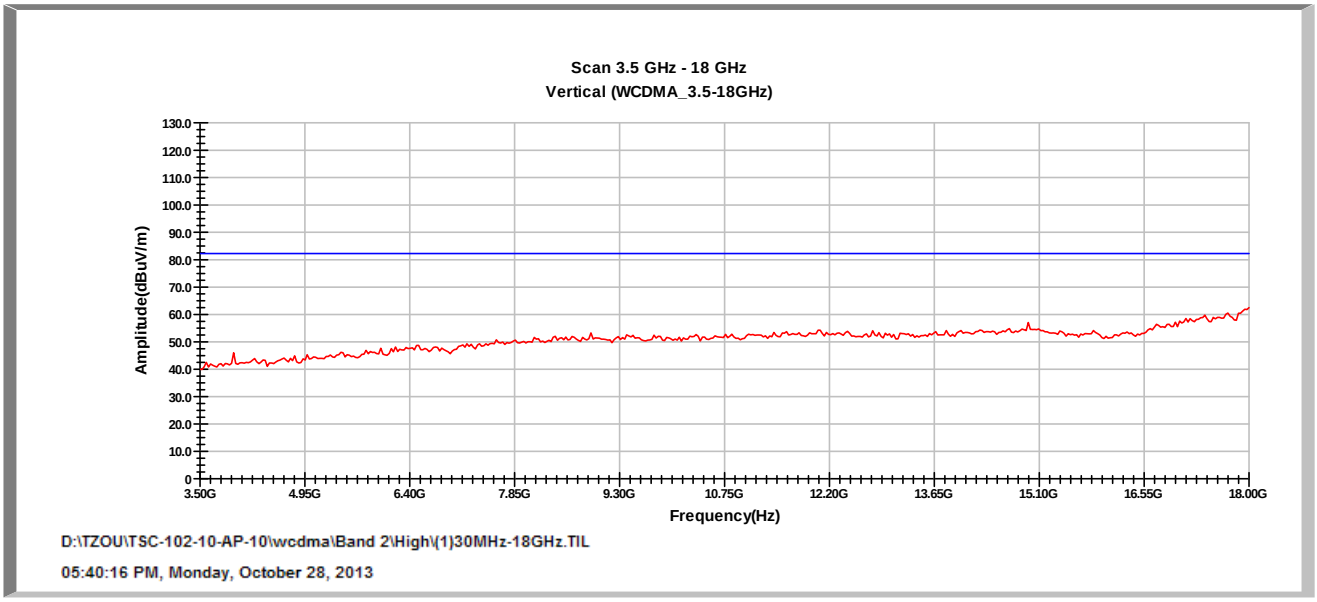


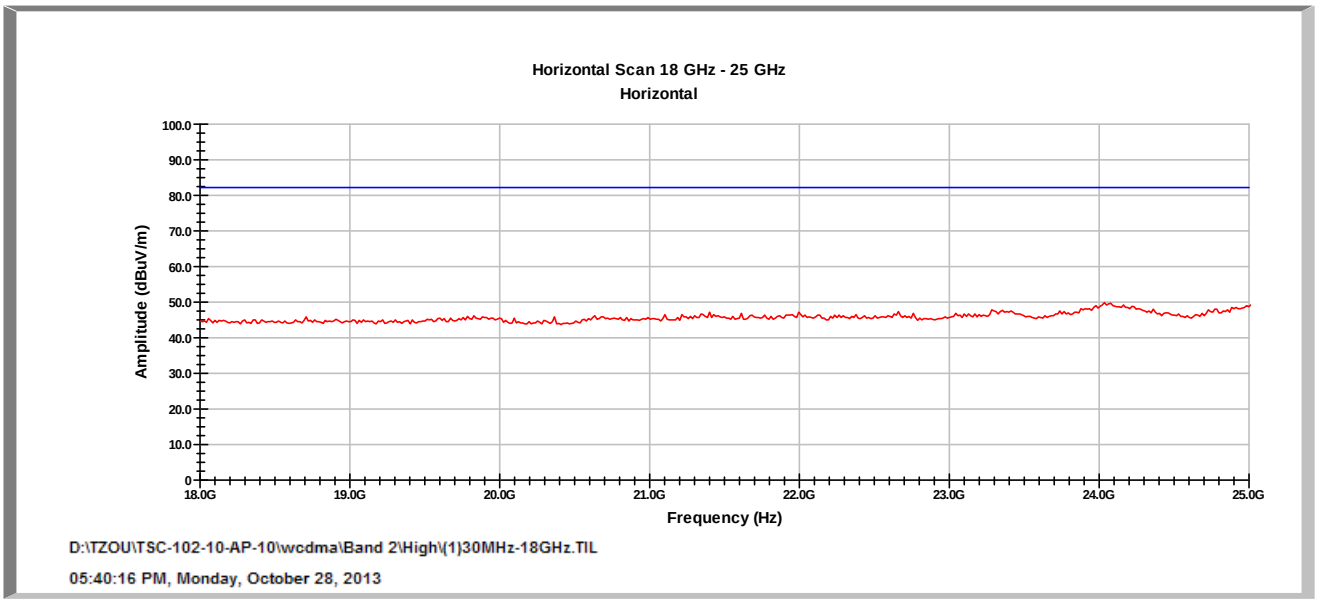


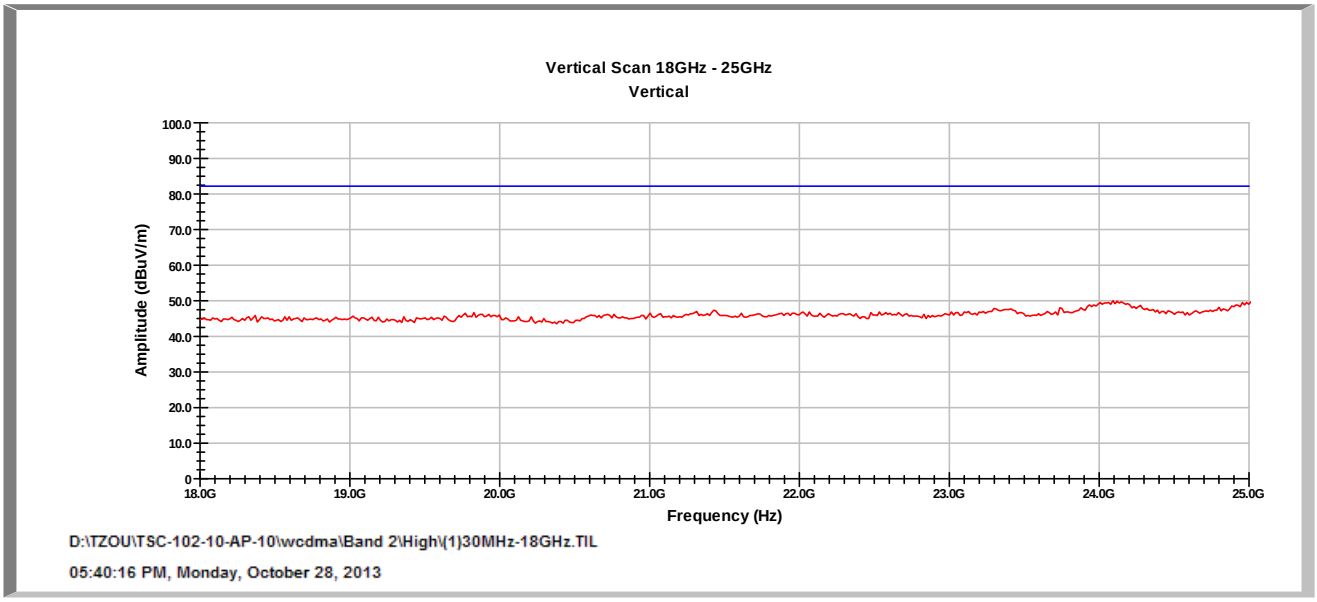

Scan 1GHz - 3.5GHz
Horizontal (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\High\(1)30MHz-18GHz.TIL
05:40:16 PM, Monday, October 28, 2013


Scan 1GHz - 3.5 GHz
Vertical (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\High\(1)30MHz-18GHz.TIL
05:40:16 PM, Monday, October 28, 2013

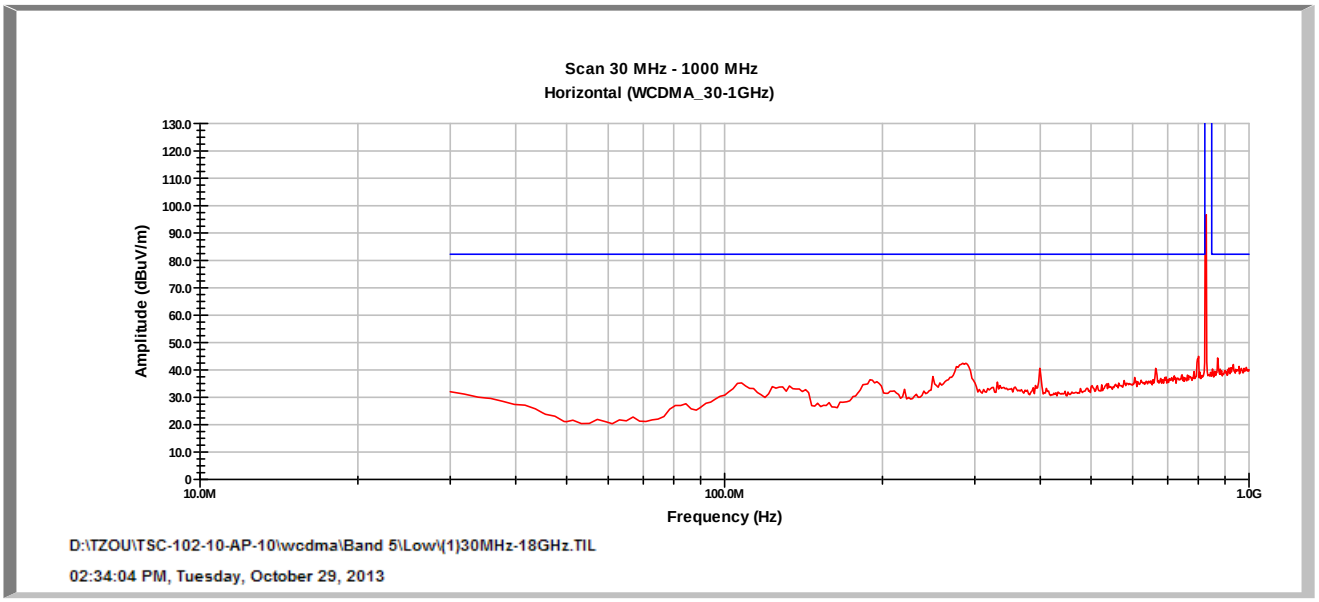

Scan 3.5 GHz - 18 GHz
Horizontal (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\High\(1)30MHz-18GHz.TIL
05:40:16 PM, Monday, October 28, 2013

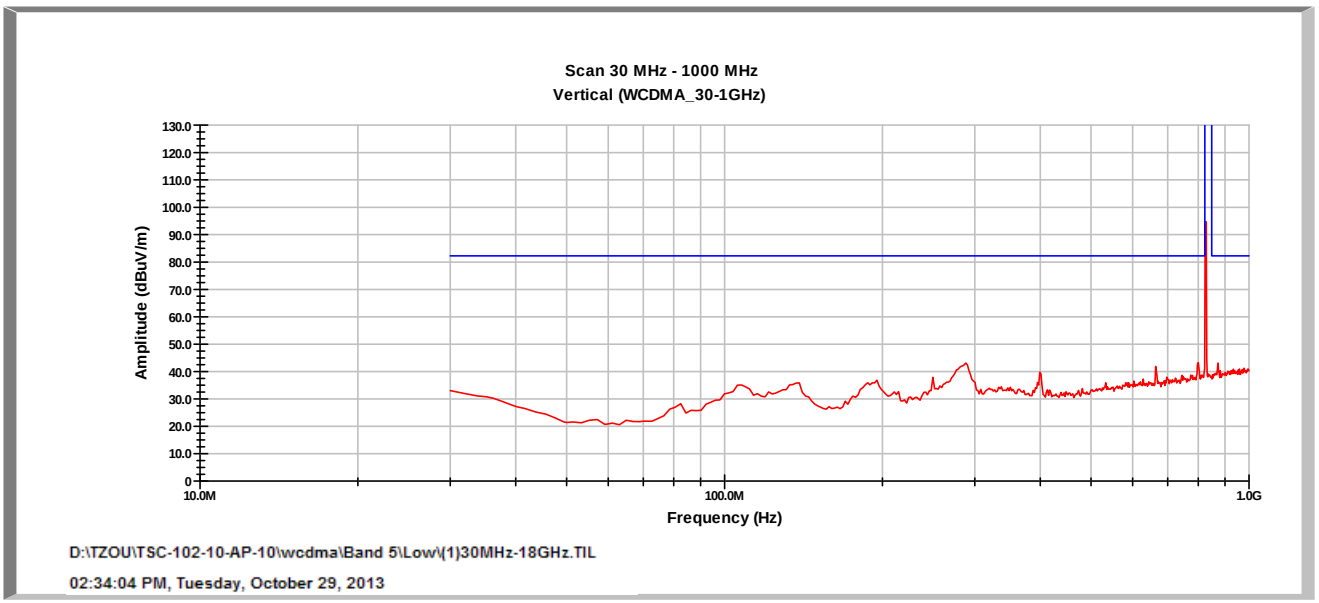

Scan 3.5 GHz - 18 GHz
Vertical (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\High\(1)30MHz-18GHz.TIL
05:40:16 PM, Monday, October 28, 2013

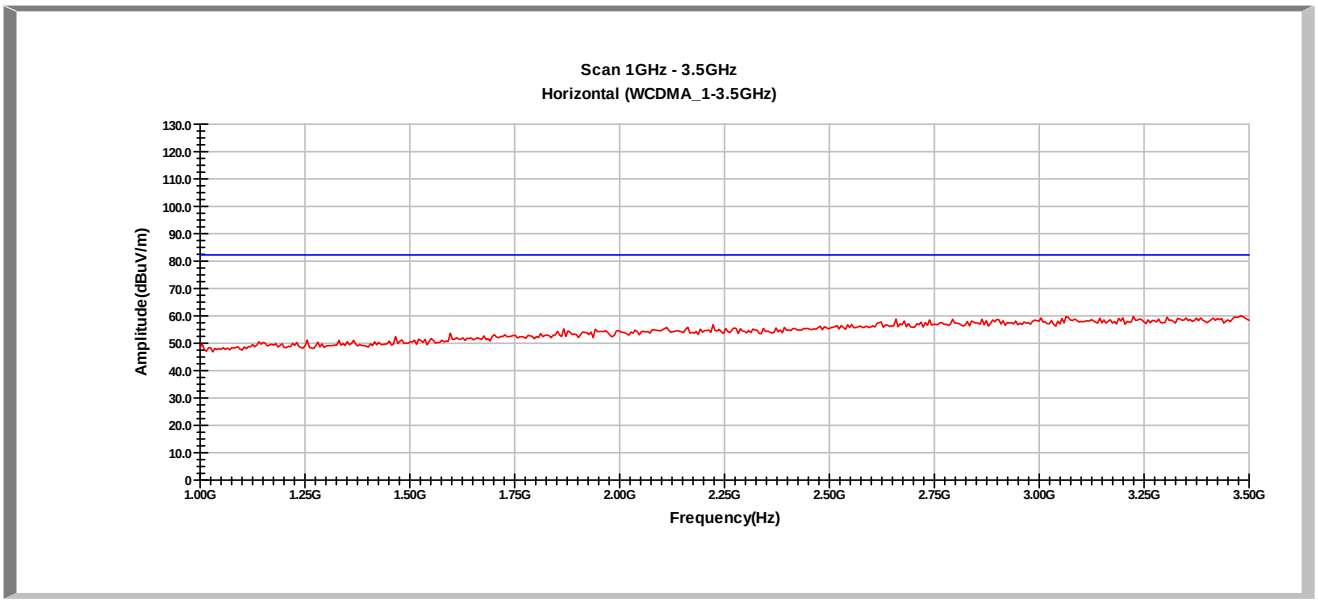

Horizontal Scan 18 GHz - 25 GHz
Horizontal
Amplitude (dBuV/m)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
18.0G
19.0G
20.0G
21.0G
22.0G
23.0G
24.0G
25.0G
Frequency (Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\High\(1)30MHz-18GHz.TIL
05:40:16 PM, Monday, October 28, 2013

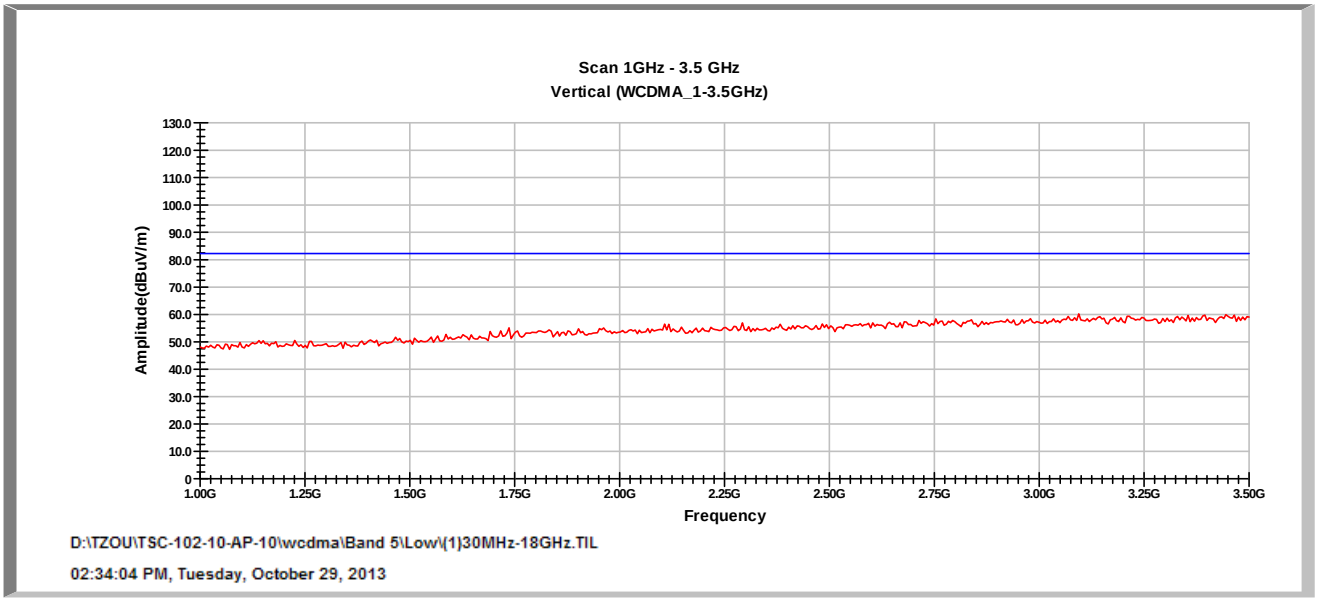

Vertical Scan 18GHz - 25GHz
Vertical
Amplitude (dBuV/m)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
18.0G
19.0G
20.0G
21.0G
22.0G
23.0G
24.0G
25.0G
Frequency (Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 2\High\(1)30MHz-18GHz.TIL
05:40:16 PM, Monday, October 28, 2013

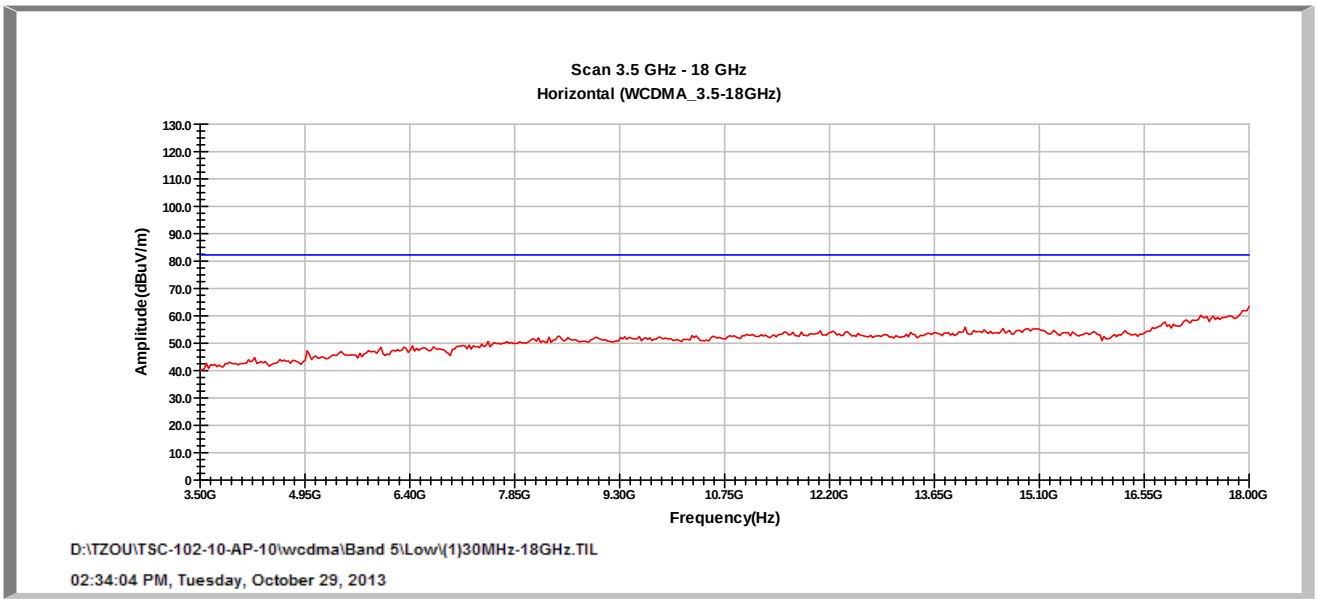
WCDMA Band V CH Low

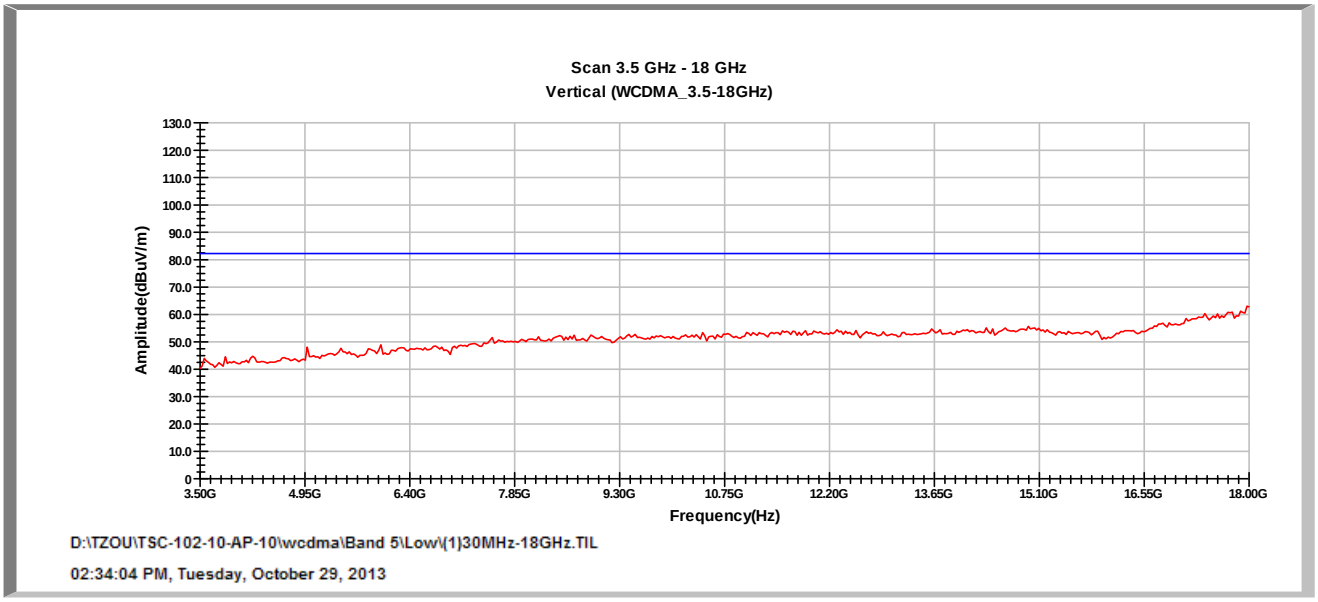




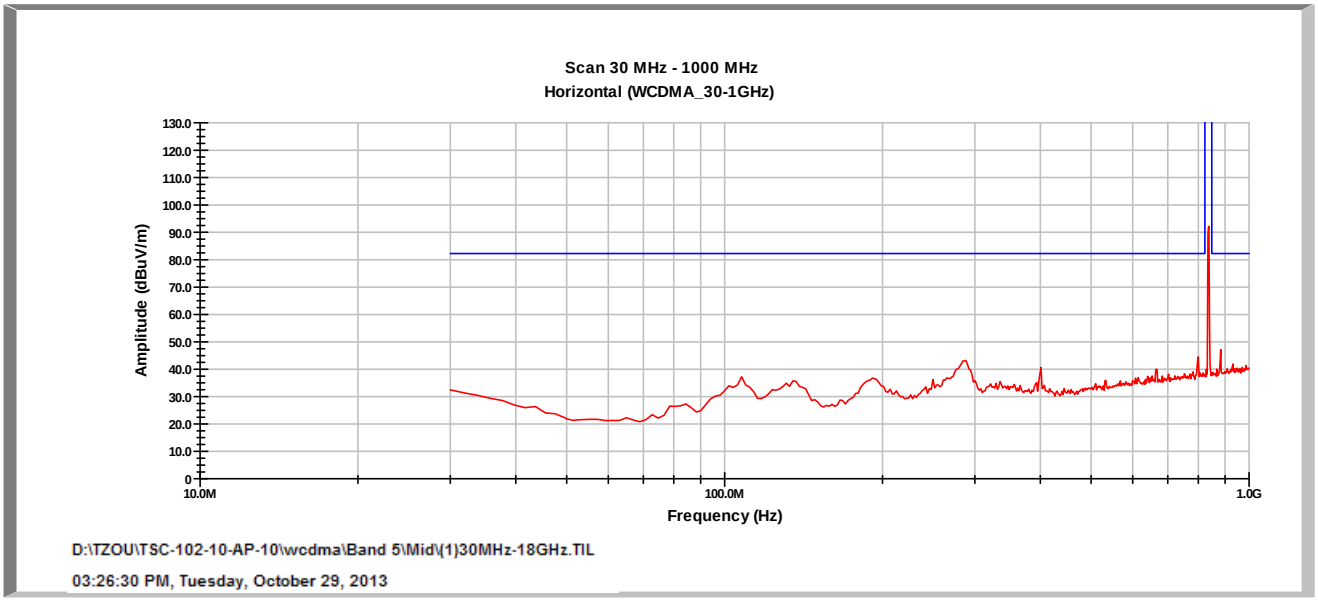

Scan 1GHz - 3.5GHz
Horizontal (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency(Hz)

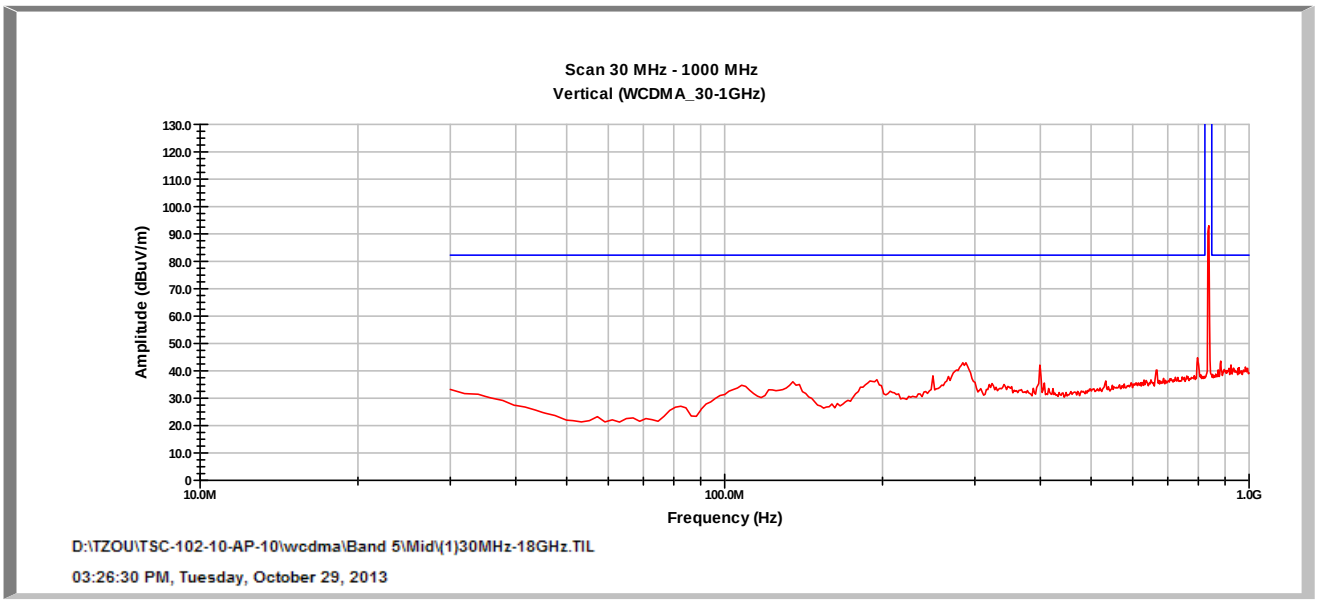

Scan 1GHz - 3.5 GHz
Vertical (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 5\Low\(1)30MHz-18GHz.TIL
02:34:04 PM, Tuesday, October 29, 2013

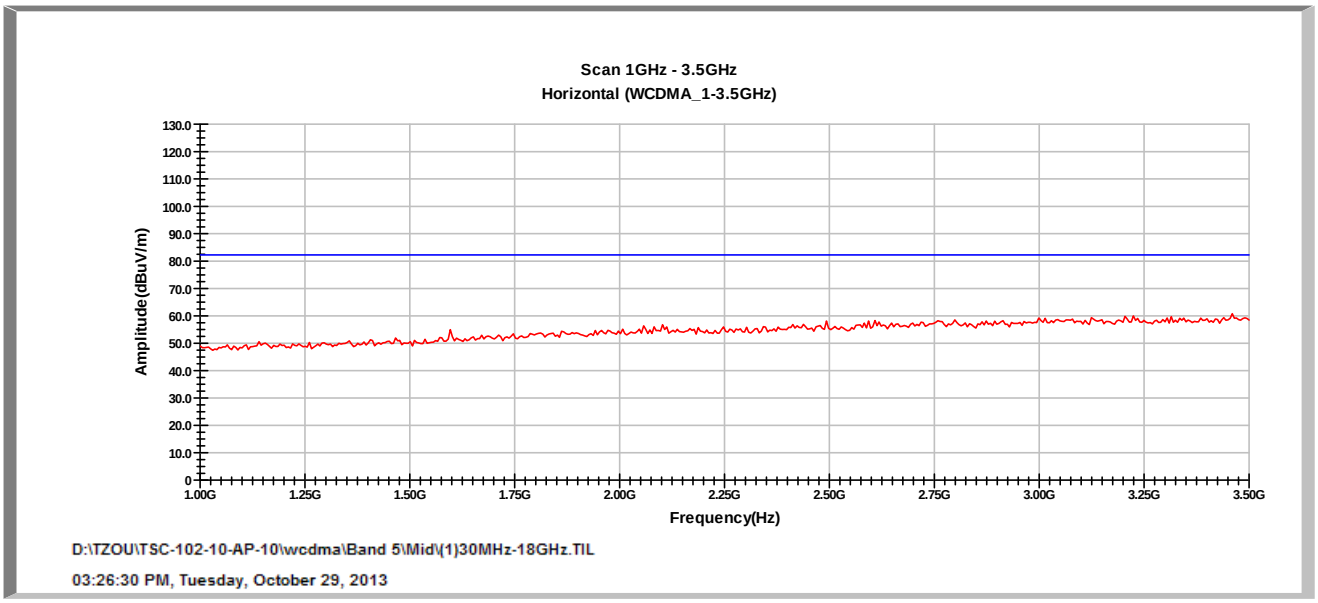

Scan 3.5 GHz - 18 GHz
Horizontal (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 5\Low\(1)30MHz-18GHz.TIL
02:34:04 PM, Tuesday, October 29, 2013

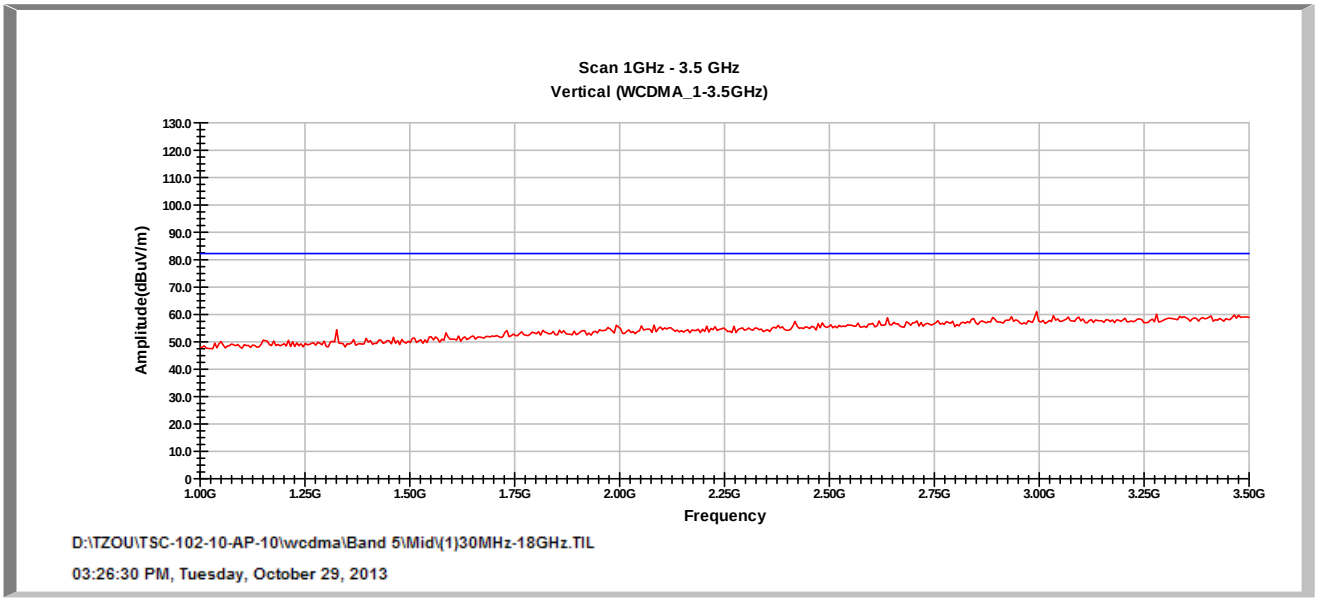

Scan 3.5 GHz - 18 GHz
Vertical (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 5\Low\(1)30MHz-18GHz.TIL
02:34:04 PM, Tuesday, October 29, 2013

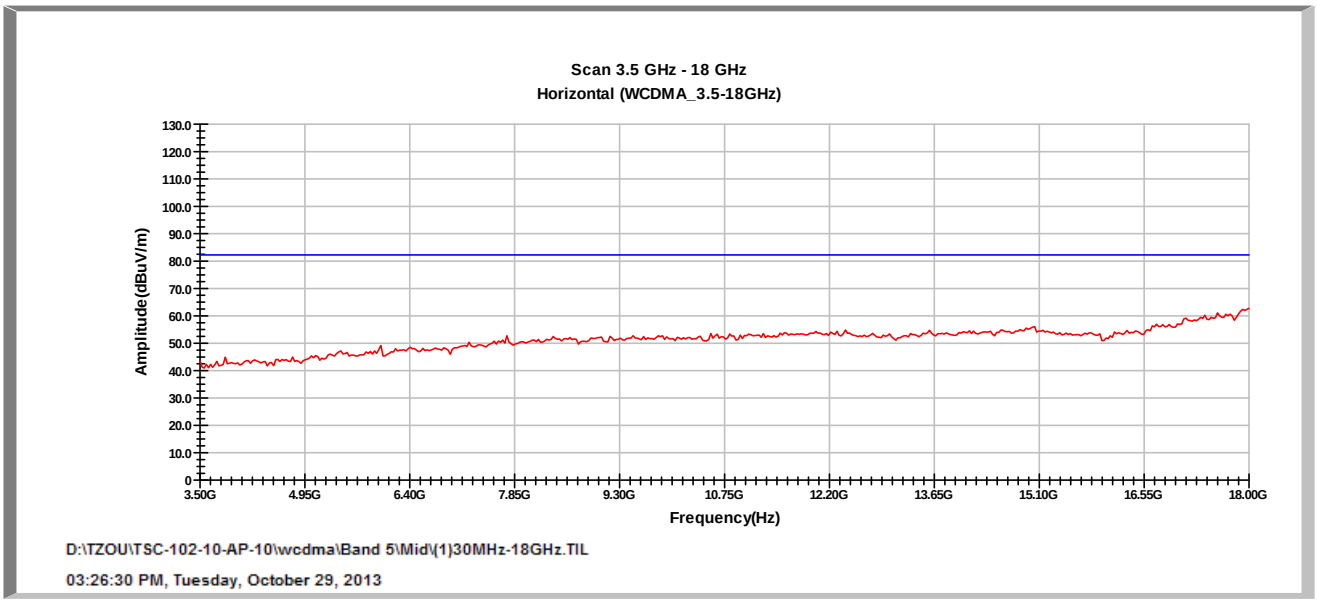
WCDMA Band V CH Mid

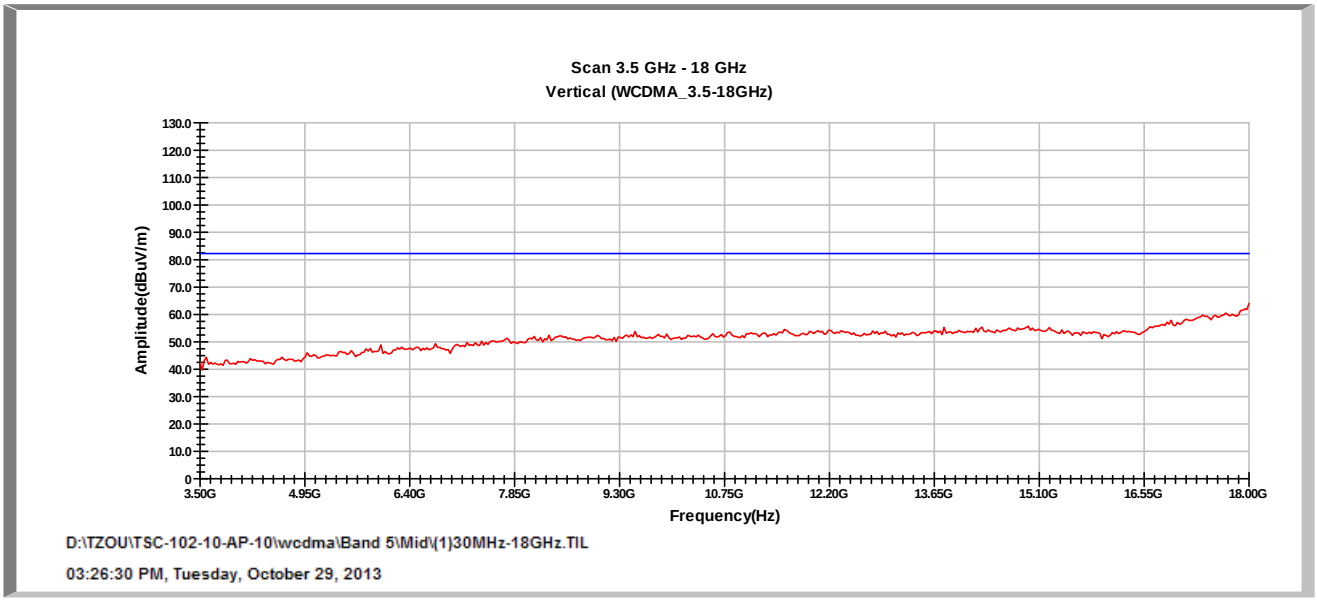




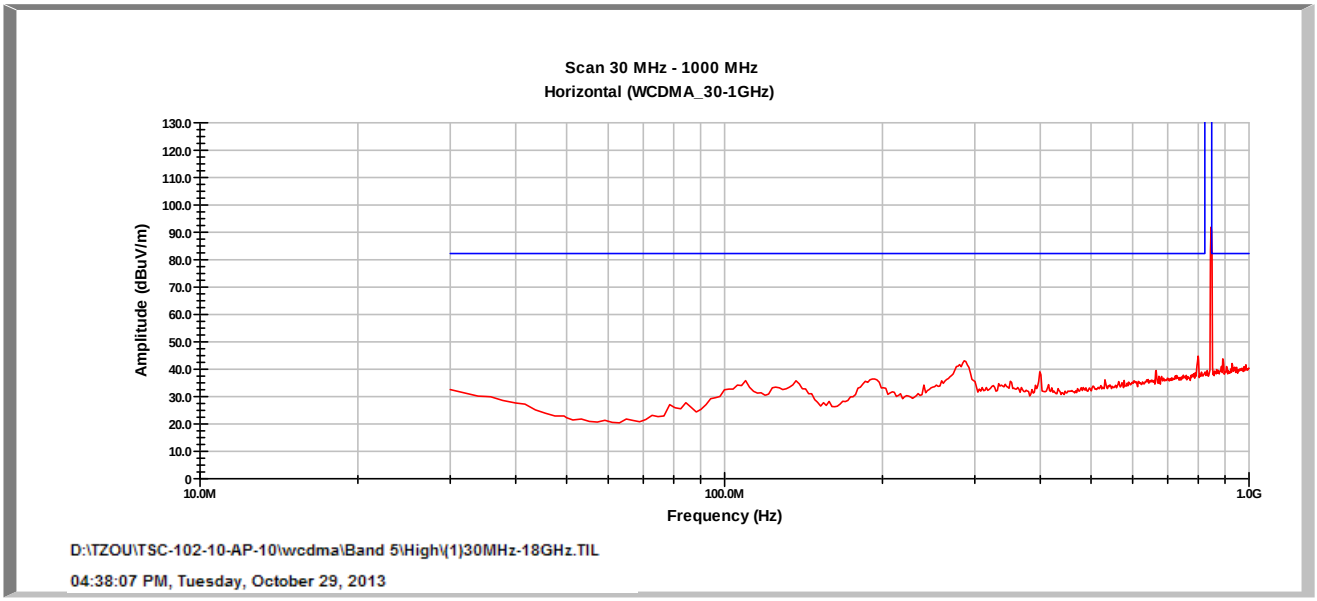

Scan 1GHz - 3.5GHz
Horizontal (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 5\Mid\(1)30MHz-18GHz.TIL
03:26:30 PM, Tuesday, October 29, 2013

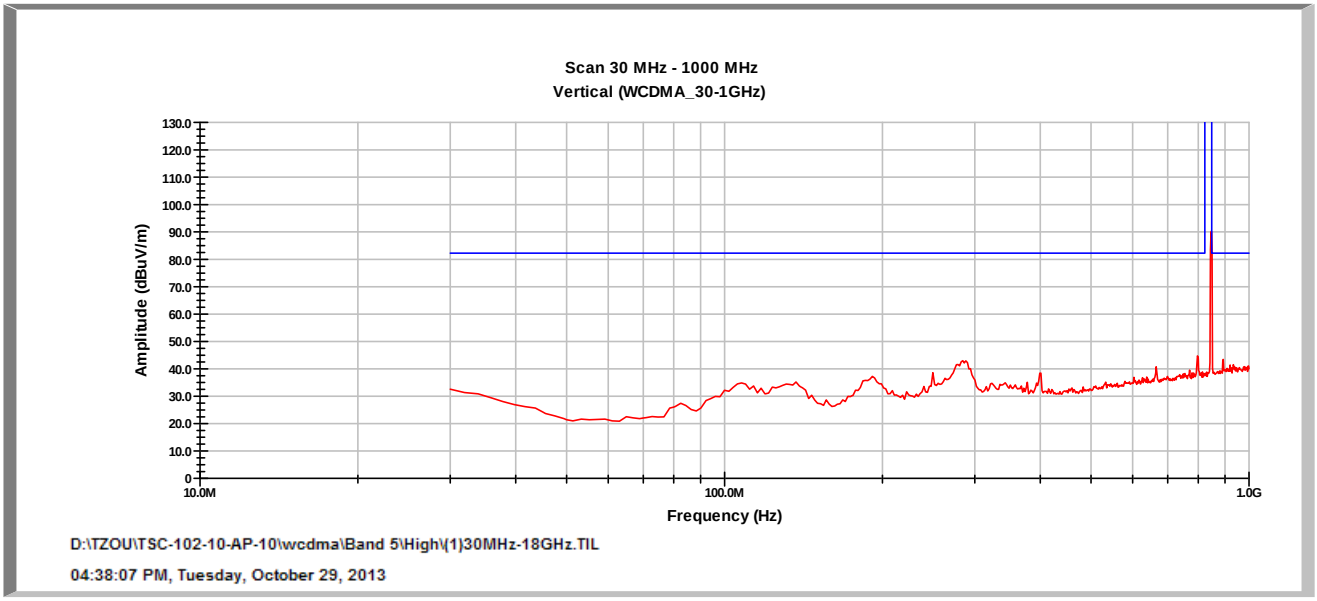

Scan 1GHz - 3.5 GHz
Vertical (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 5\Mid\(1)30MHz-18GHz.TIL
03:26:30 PM, Tuesday, October 29, 2013

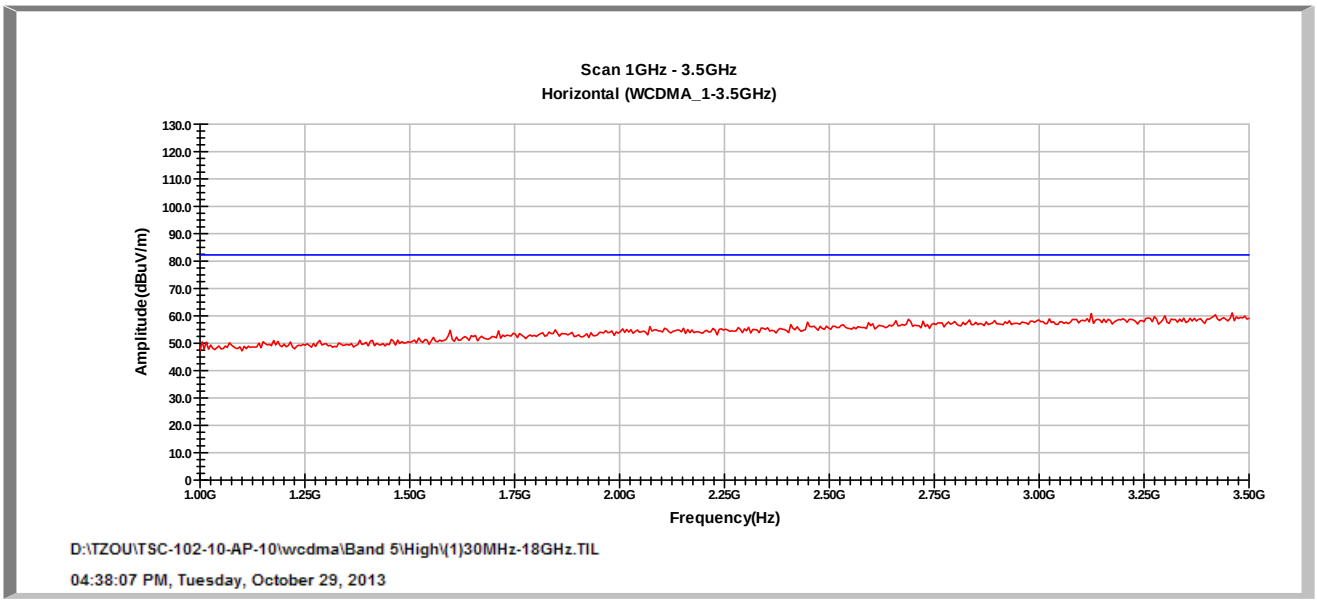

Scan 3.5 GHz - 18 GHz
Horizontal (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 5\Mid\(1)30MHz-18GHz.TIL
03:26:30 PM, Tuesday, October 29, 2013

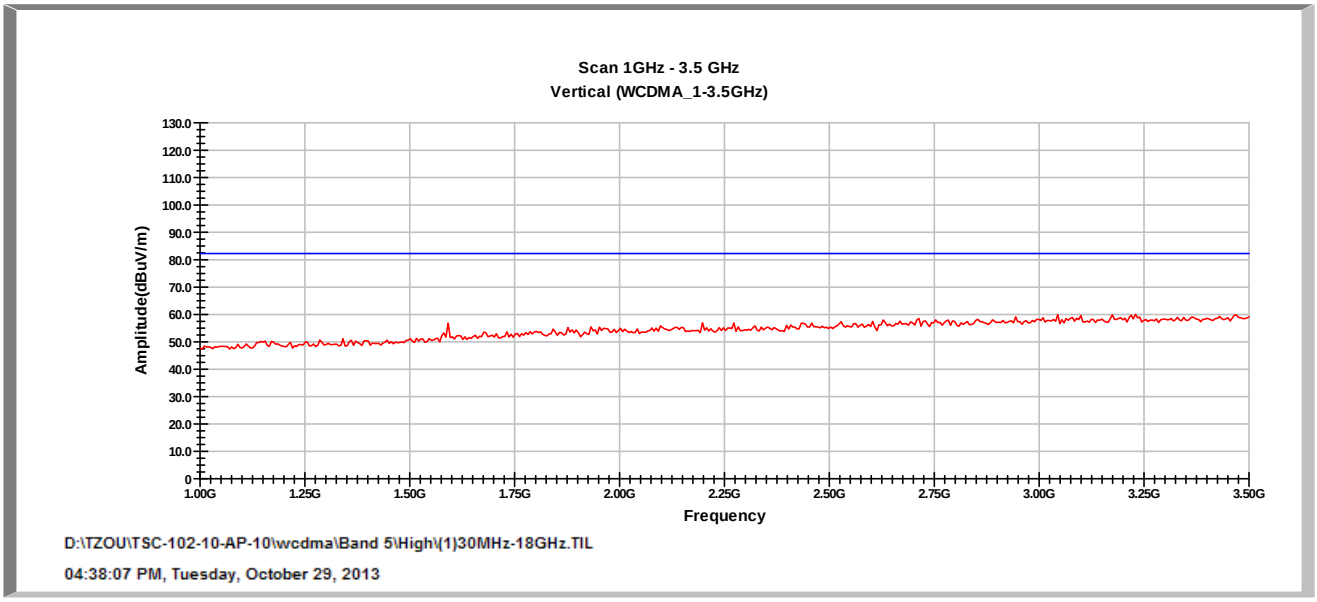

Scan 3.5 GHz - 18 GHz
Vertical (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 5\Mid\(1)30MHz-18GHz.TIL
03:26:30 PM, Tuesday, October 29, 2013

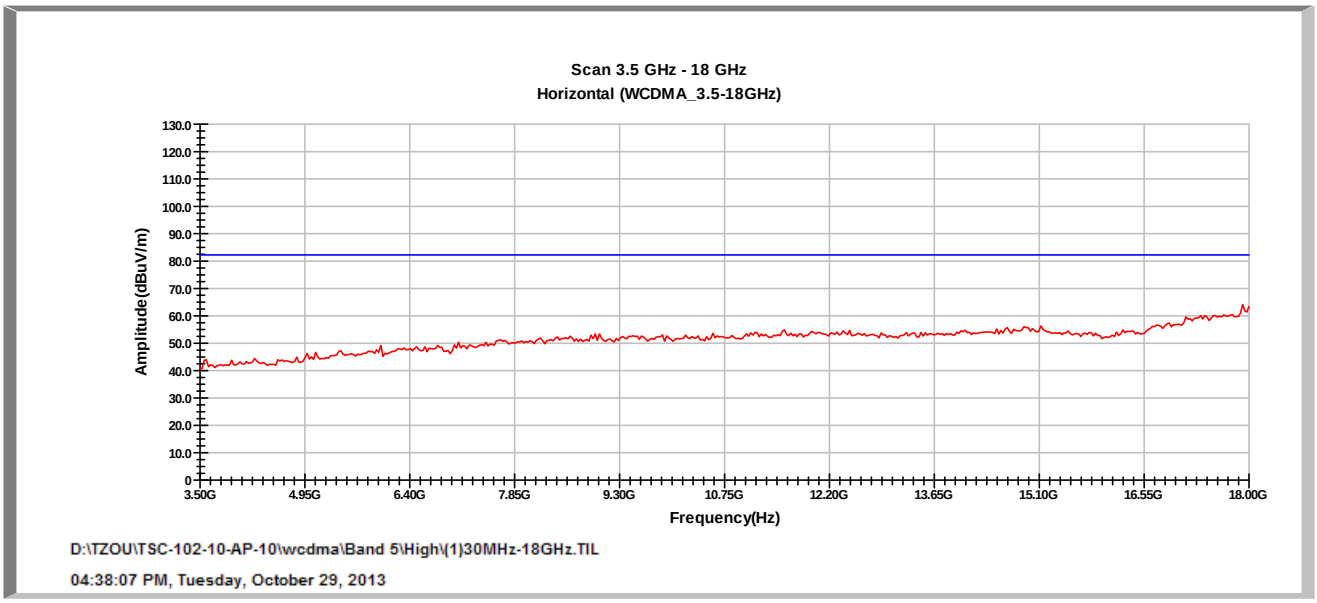
WCDMA Band V CH High






Scan 1GHz - 3.5GHz
Horizontal (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 5\High\(1)30MHz-18GHz.TIL
04:38:07 PM, Tuesday, October 29, 2013


Scan 1GHz - 3.5 GHz
Vertical (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 5\High\(1)30MHz-18GHz.TIL
04:38:07 PM, Tuesday, October 29, 2013


Scan 3.5 GHz - 18 GHz
Horizontal (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
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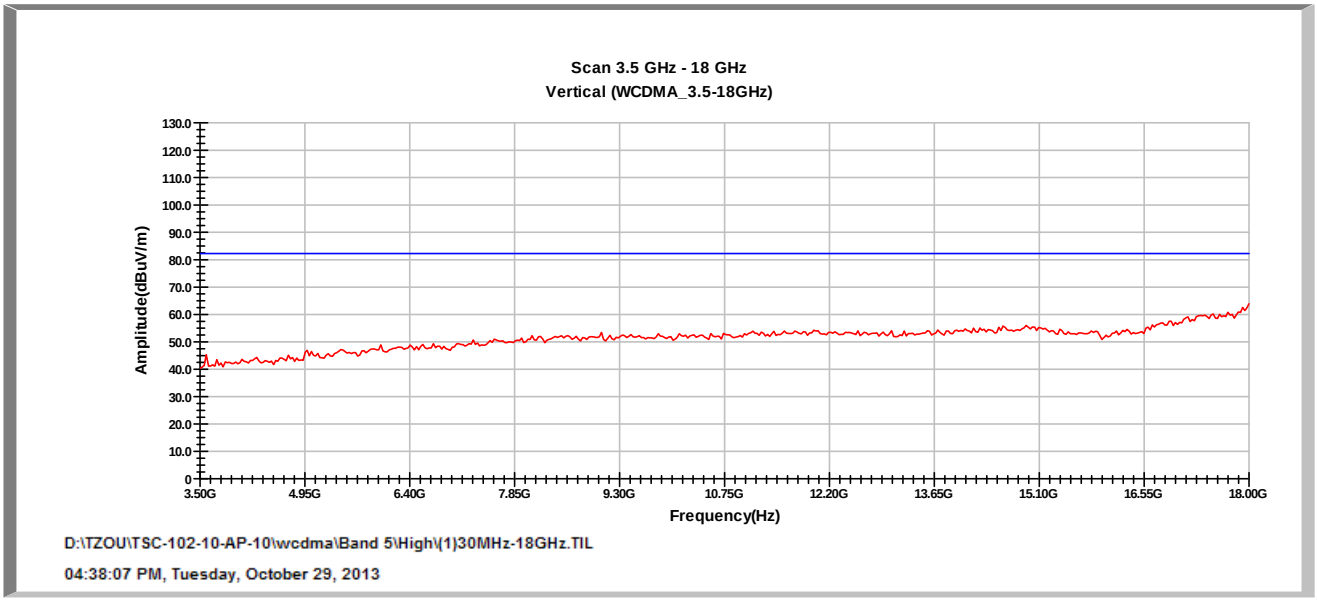
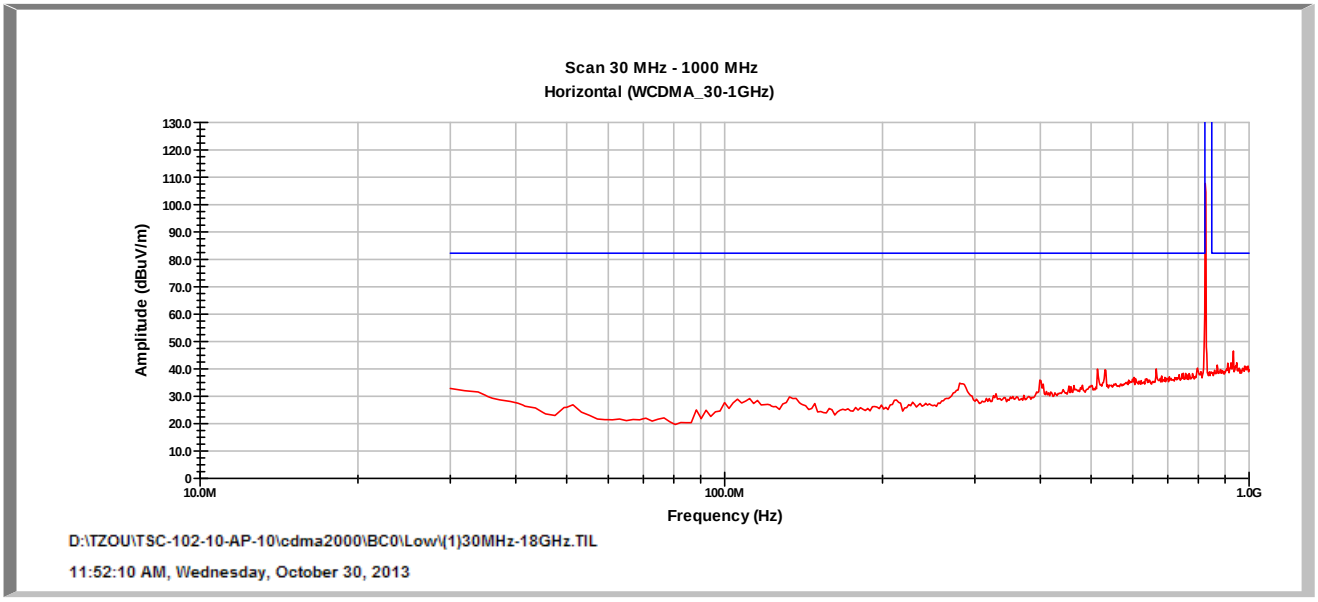
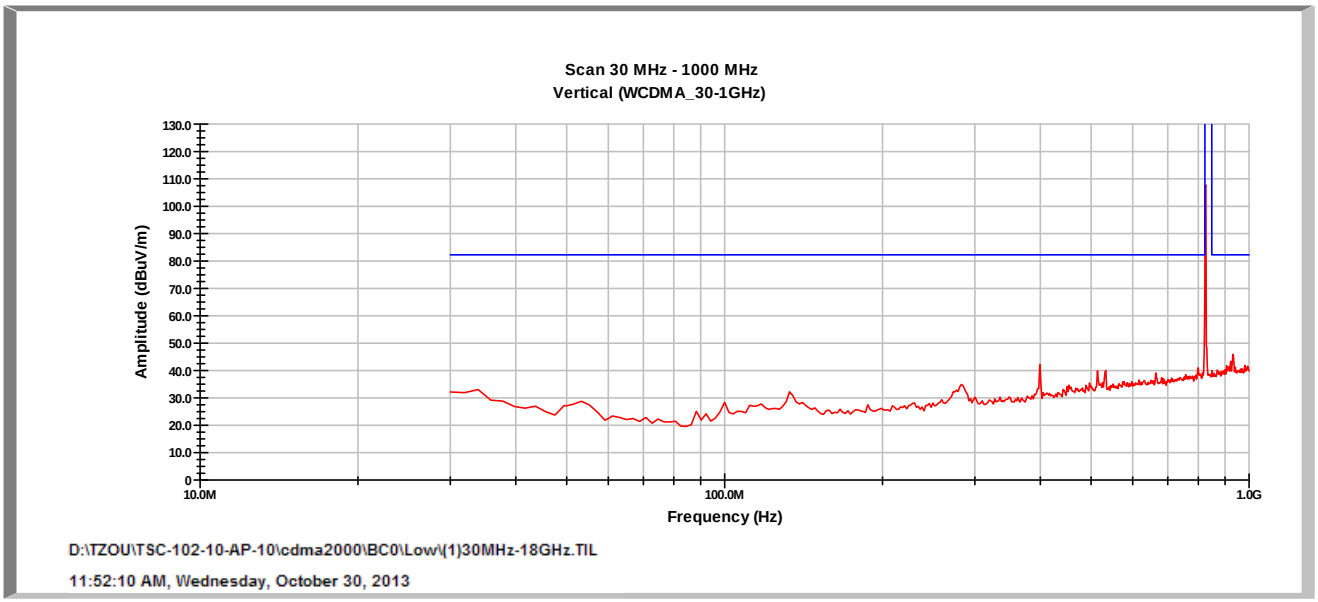
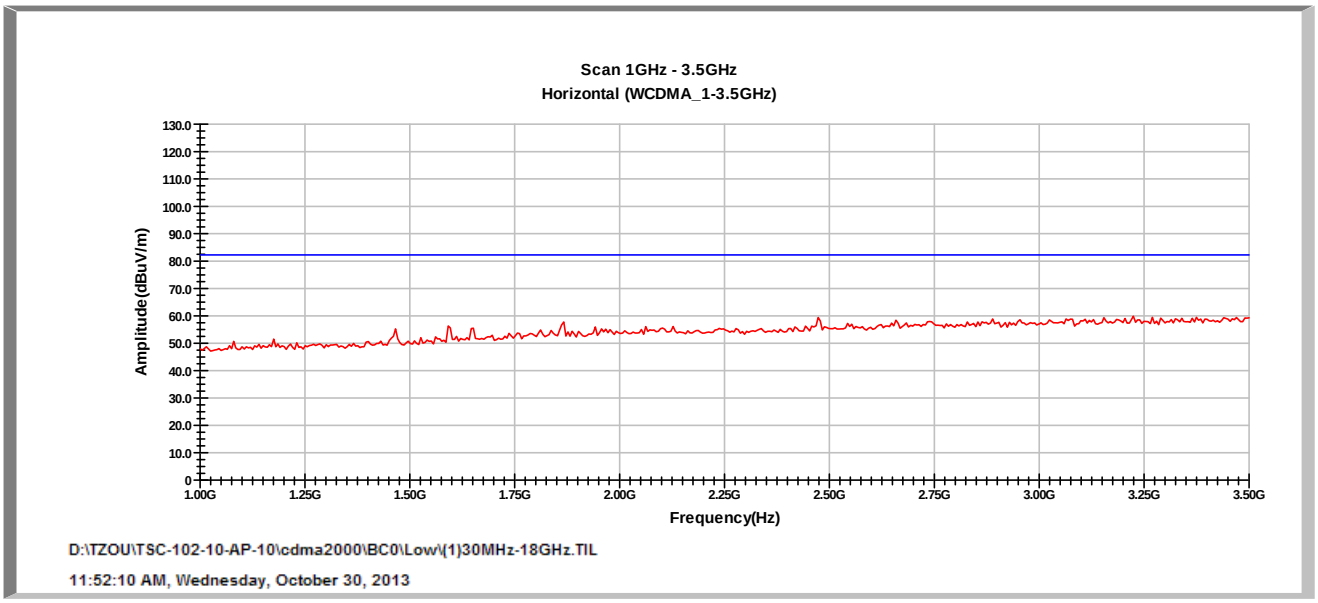
04:38:07 PM, Tuesday, October 29, 2013

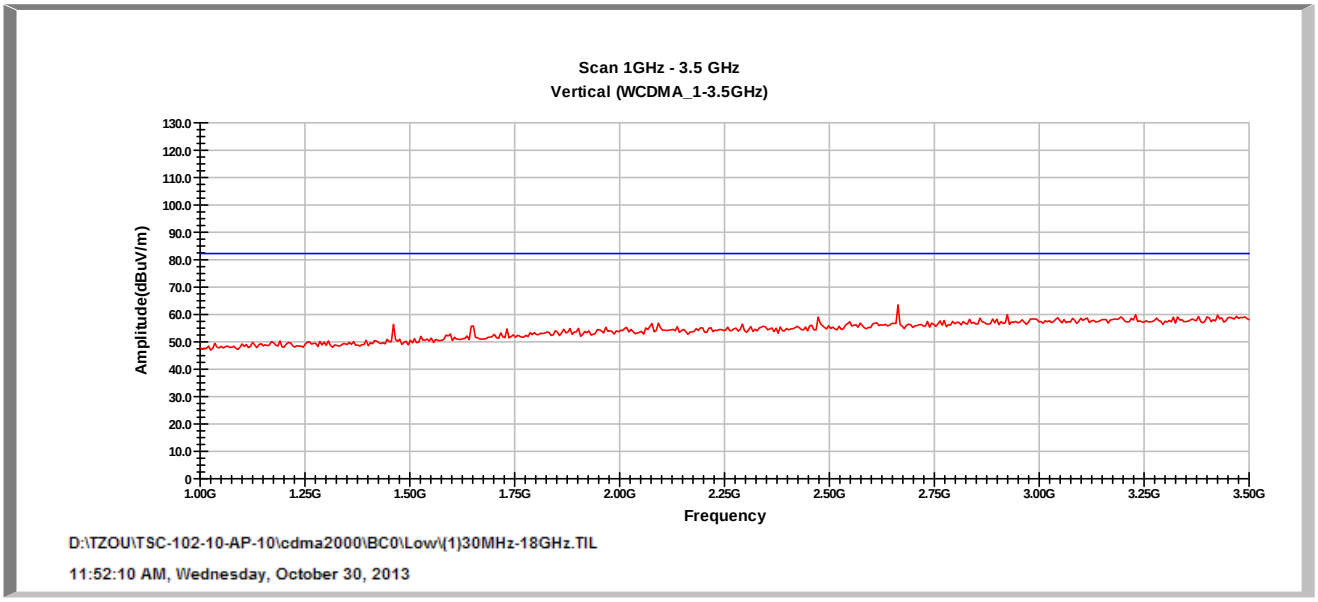

Scan 3.5 GHz - 18 GHz
Vertical (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\wcdma\Band 5\High\(1)30MHz-18GHz.TIL
04:38:07 PM, Tuesday, October 29, 2013

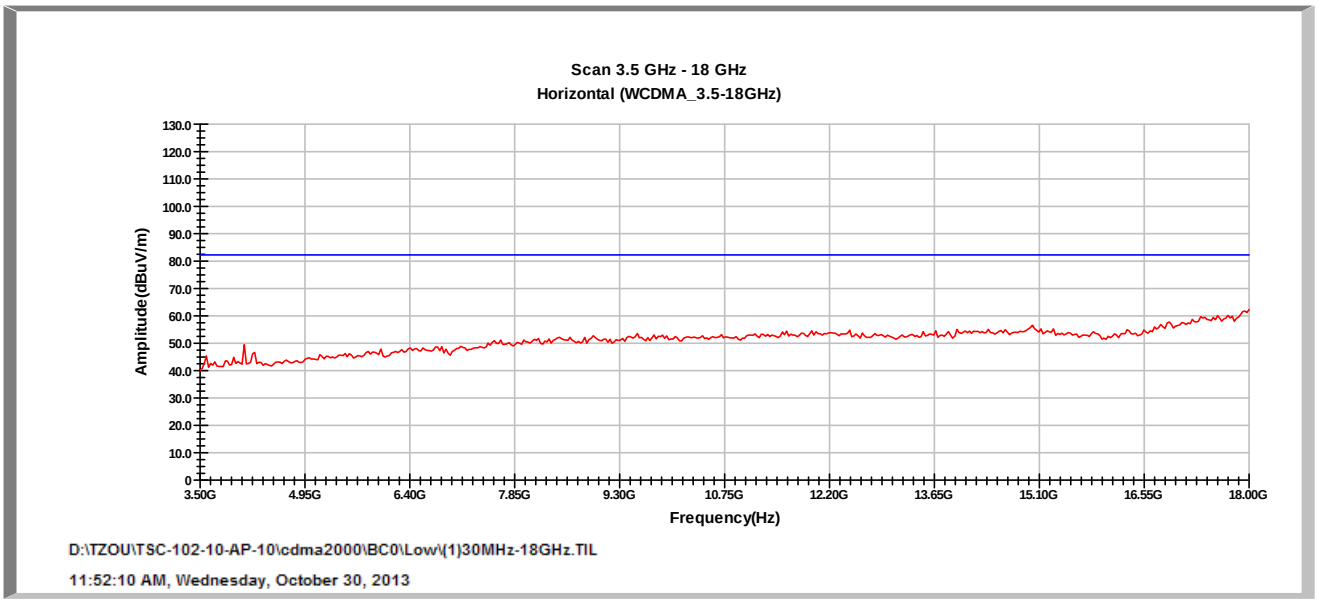
CDMA2000 BC0 CH Low

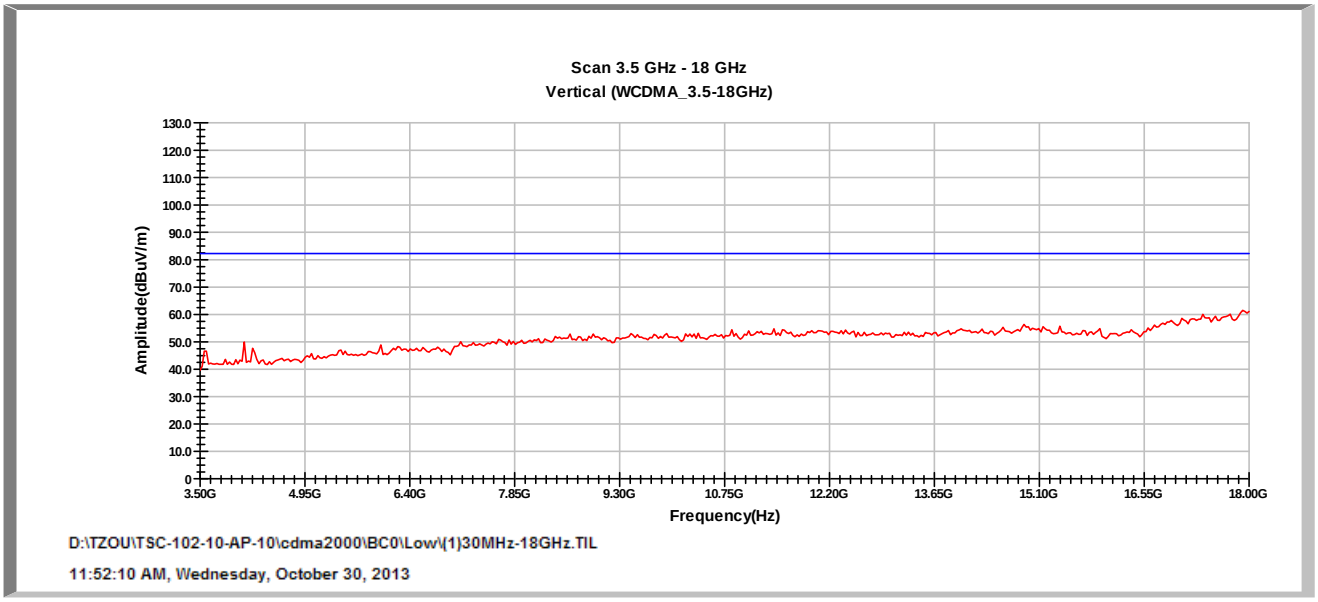




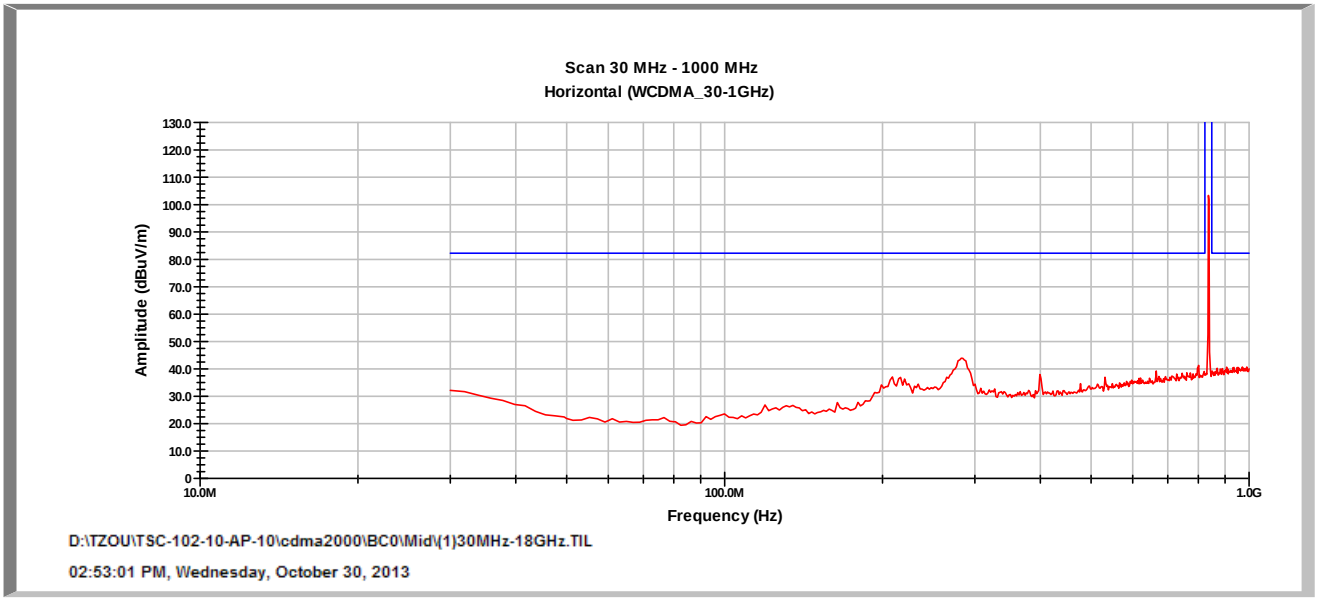

Scan 1GHz - 3.5GHz
Horizontal (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC0\Low\(1)30MHz-18GHz.TIL
11:52:10 AM, Wednesday, October 30, 2013

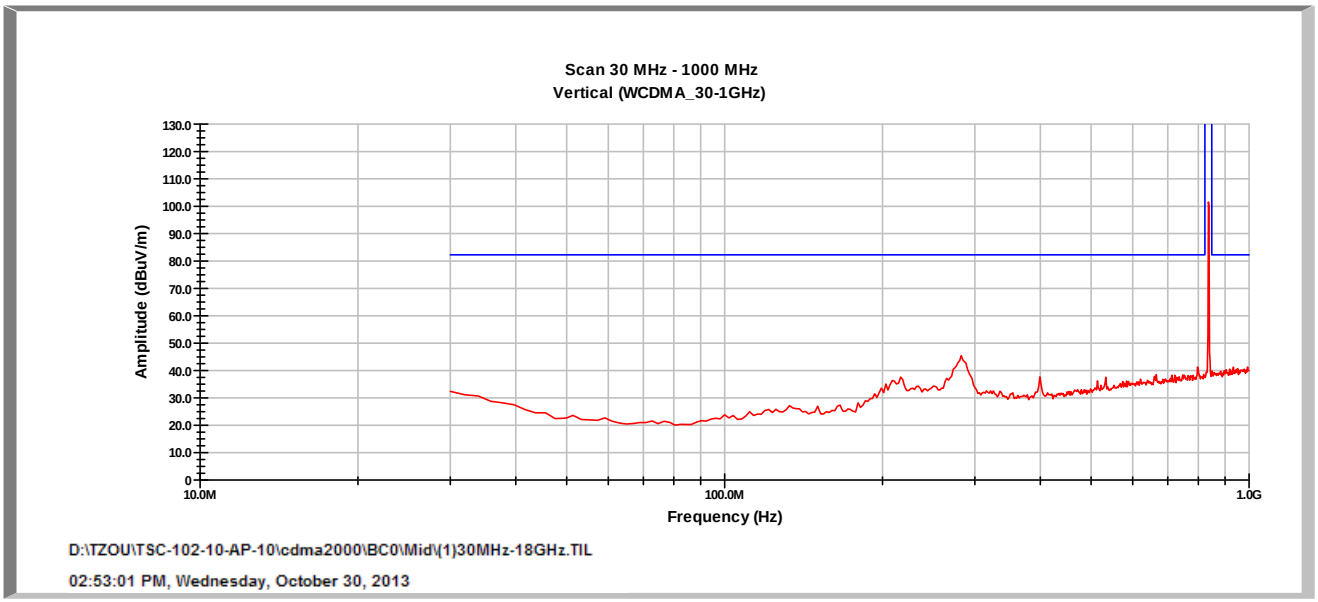

Scan 1GHz - 3.5 GHz
Vertical (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC0\Low\(1)30MHz-18GHz.TIL
11:52:10 AM, Wednesday, October 30, 2013

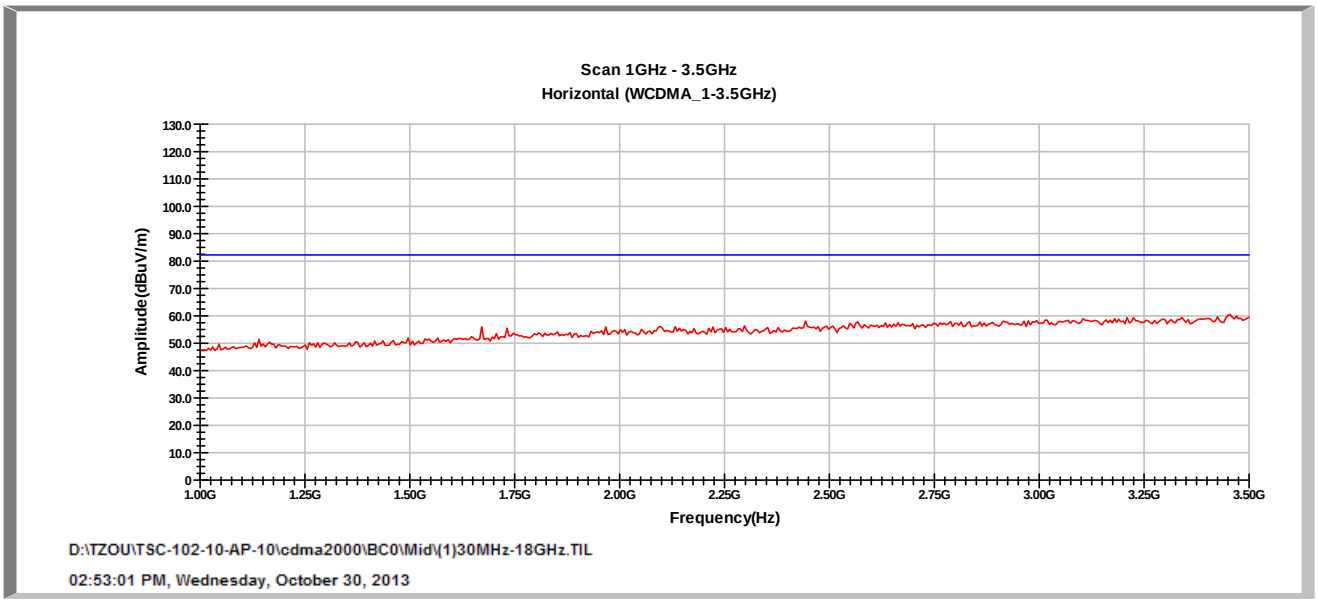

Scan 3.5 GHz - 18 GHz
Horizontal (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC0\Low\(1)30MHz-18GHz.TIL
11:52:10 AM, Wednesday, October 30, 2013

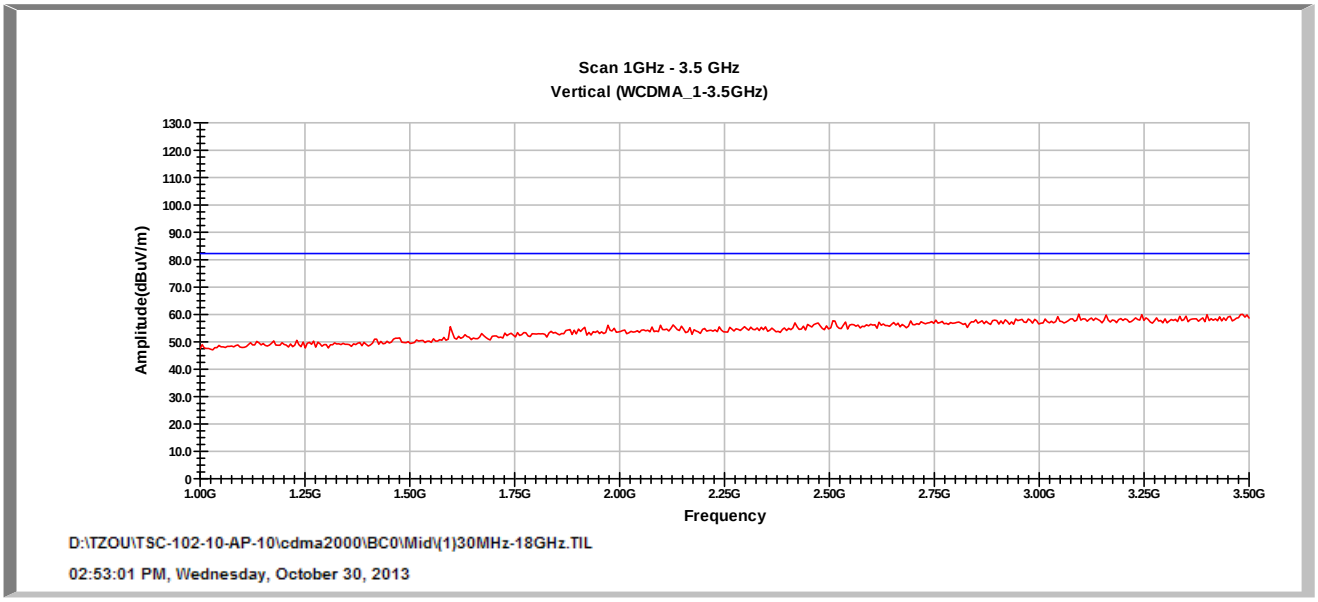

Scan 3.5 GHz - 18 GHz
Vertical (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC0\Low\(1)30MHz-18GHz.TIL
11:52:10 AM, Wednesday, October 30, 2013

CDMA2000 BC0 CH Mid






Scan 1GHz - 3.5GHz
Horizontal (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC0\Mid\(1)30MHz-18GHz.TIL
02:53:01 PM, Wednesday, October 30, 2013


Scan 1GHz - 3.5 GHz
Vertical (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency
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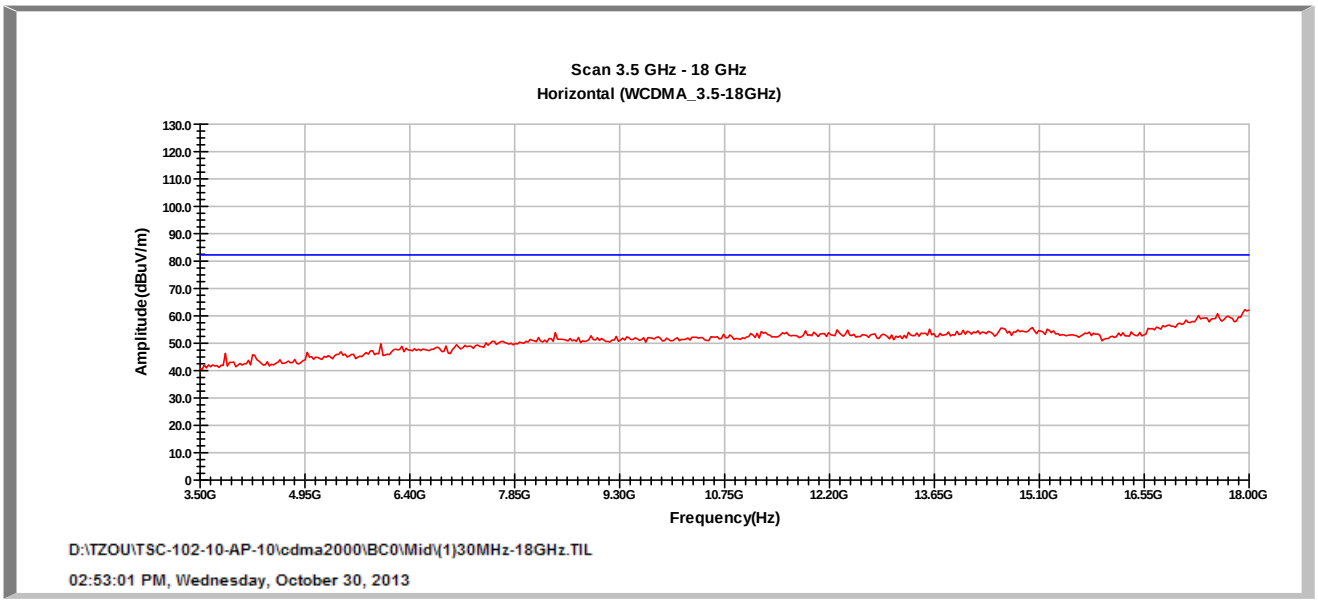
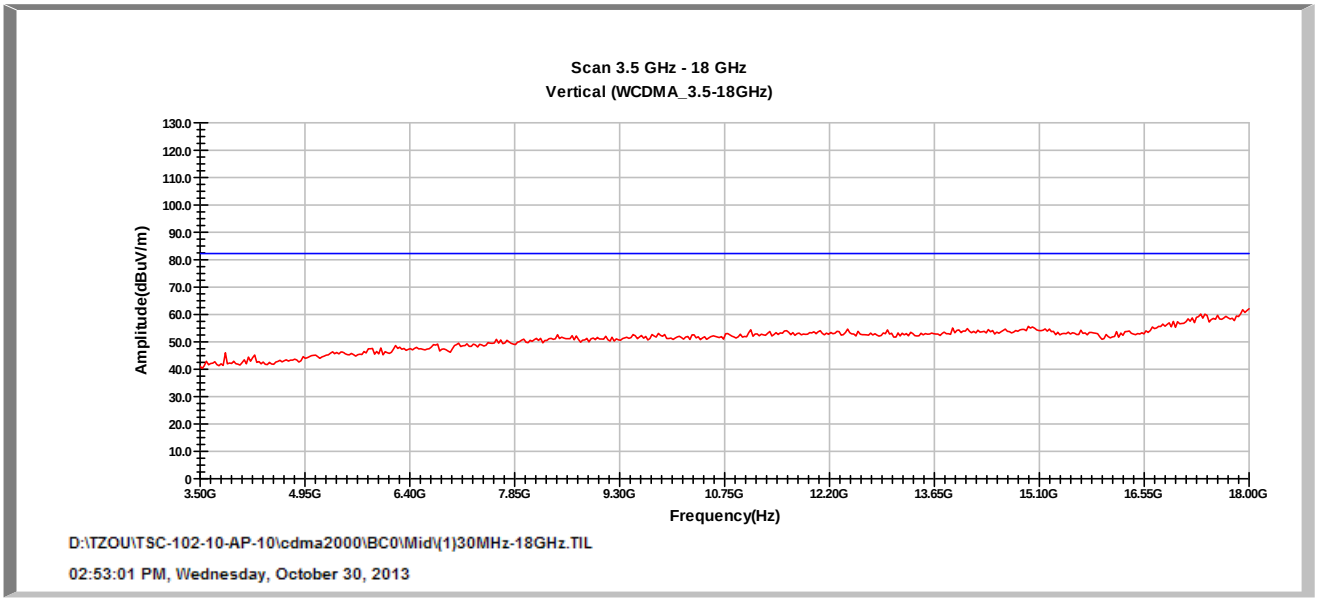
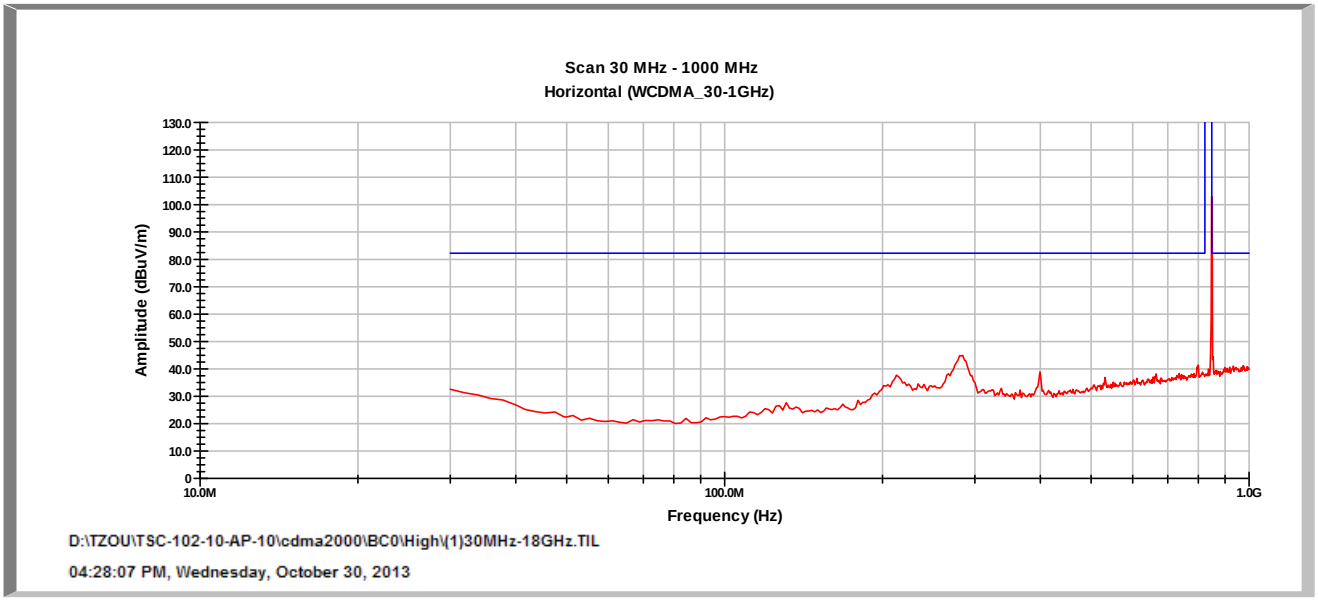
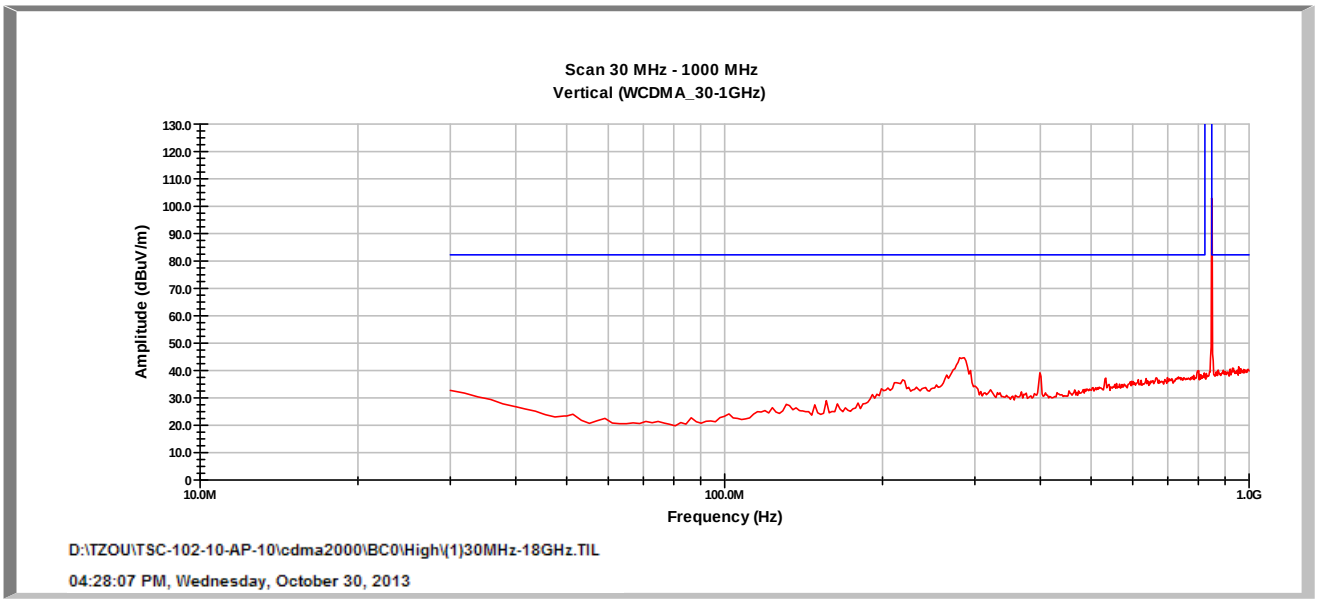
02:53:01 PM, Wednesday, October 30, 2013

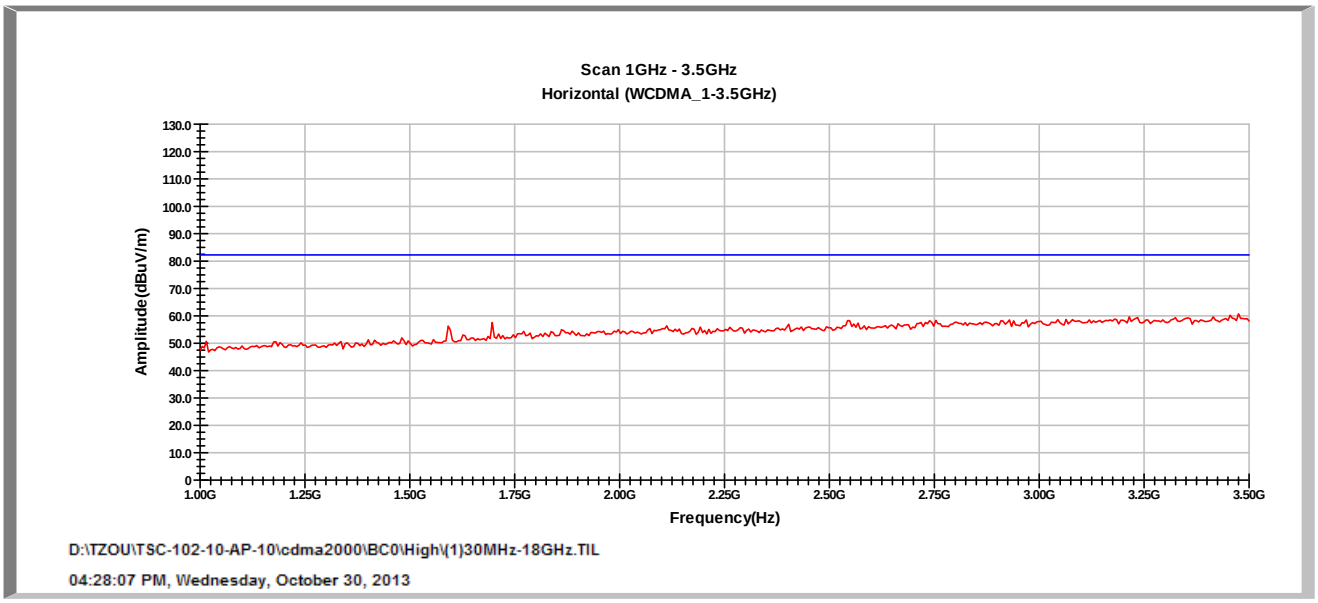

Scan 3.5 GHz - 18 GHz
Horizontal (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC0\Mid\(1)30MHz-18GHz.TIL
02:53:01 PM, Wednesday, October 30, 2013

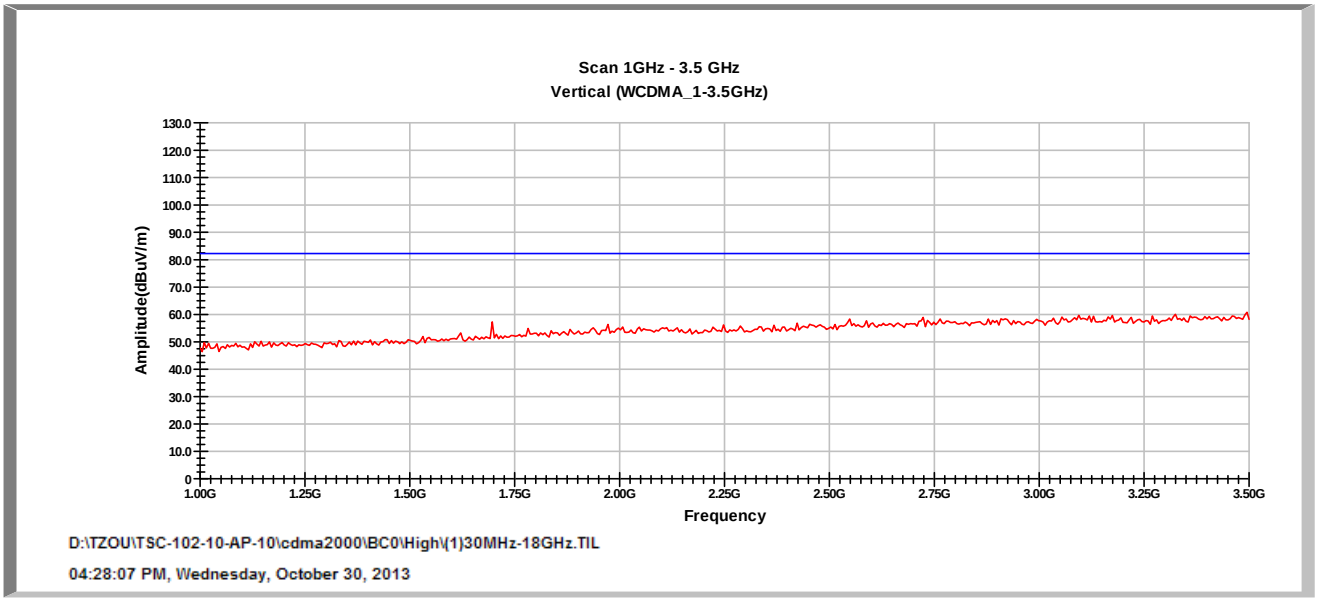

Scan 3.5 GHz - 18 GHz
Vertical (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC0\Mid\(1)30MHz-18GHz.TIL
02:53:01 PM, Wednesday, October 30, 2013

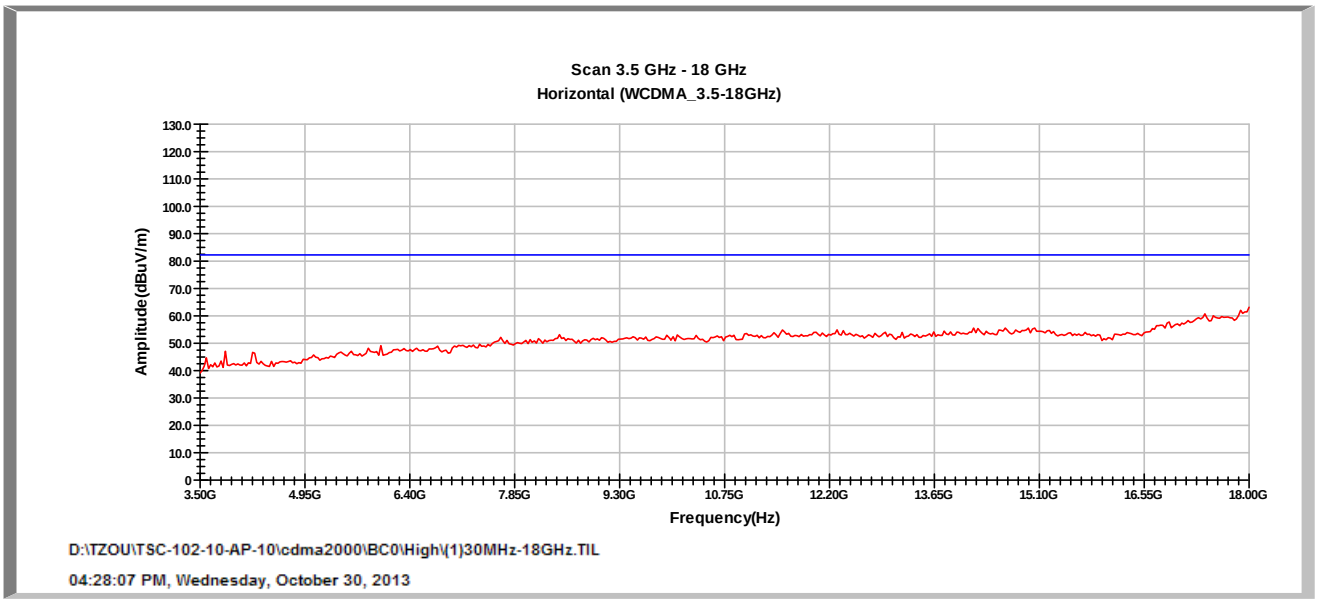
CDMA2000 BC0 CH High

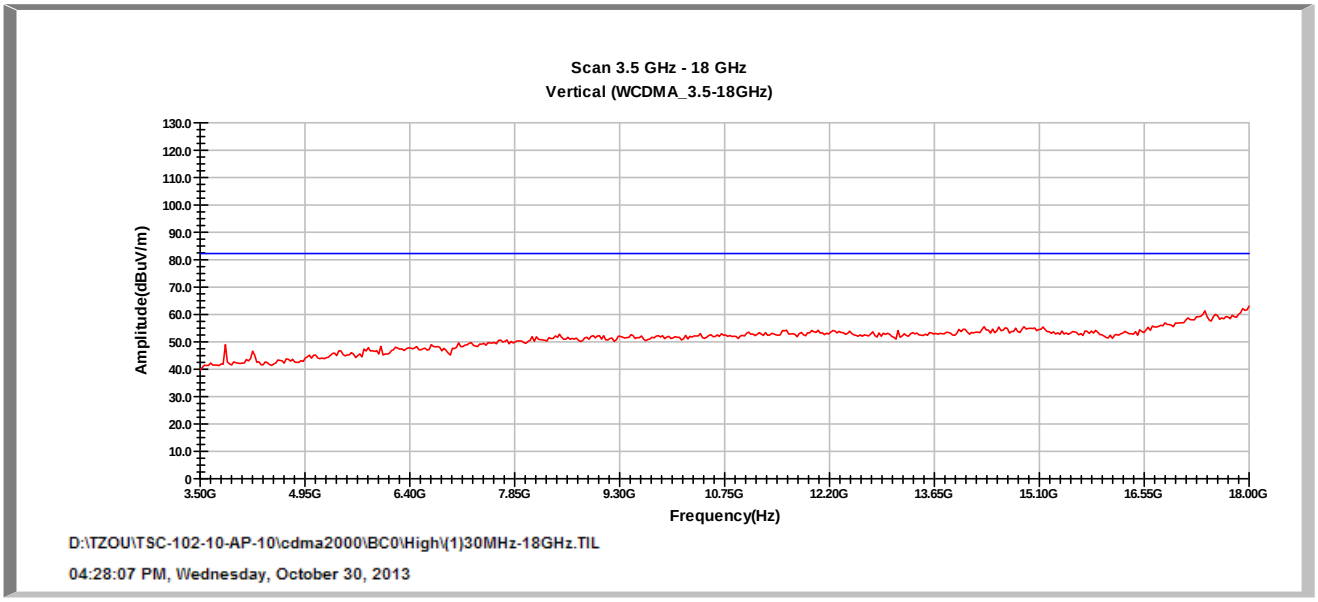





Scan 1GHz - 3.5GHz
Horizontal (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC0\High\(1)30MHz-18GHz.TIL
04:28:07 PM, Wednesday, October 30, 2013


Scan 1GHz - 3.5 GHz
Vertical (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC0\High\(1)30MHz-18GHz.TIL
04:28:07 PM, Wednesday, October 30, 2013


Scan 3.5 GHz - 18 GHz
Horizontal (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC0\High\(1)30MHz-18GHz.TIL
04:28:07 PM, Wednesday, October 30, 2013


Scan 3.5 GHz - 18 GHz
Vertical (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC0\High\(1)30MHz-18GHz.TIL
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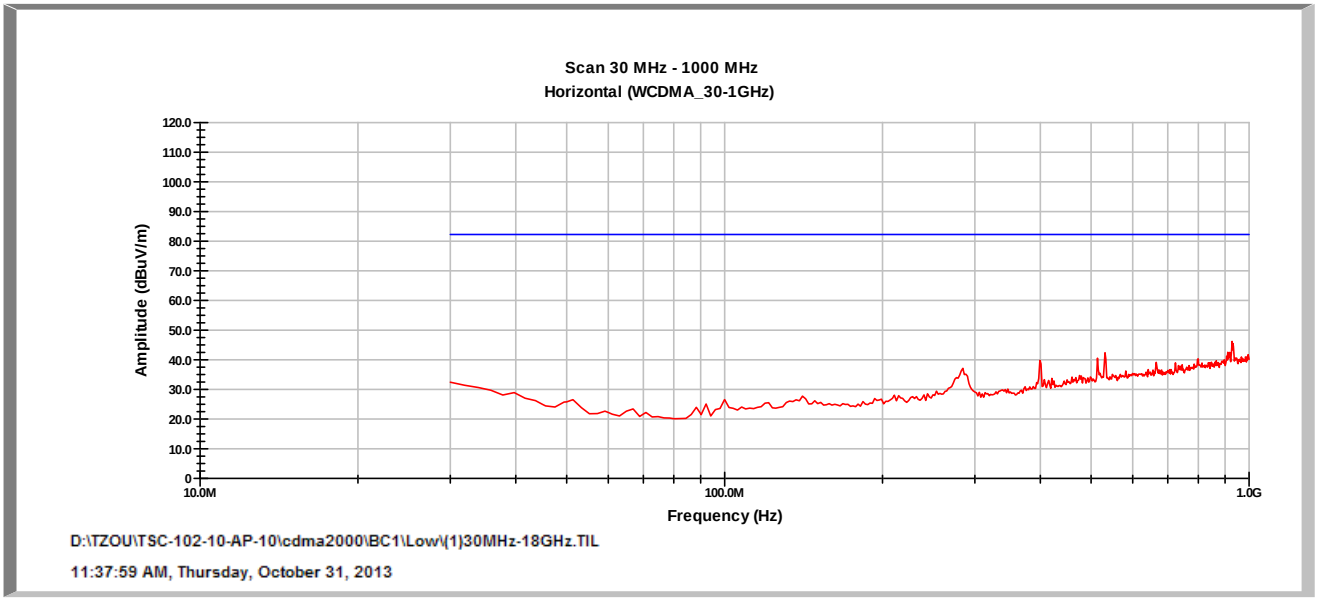
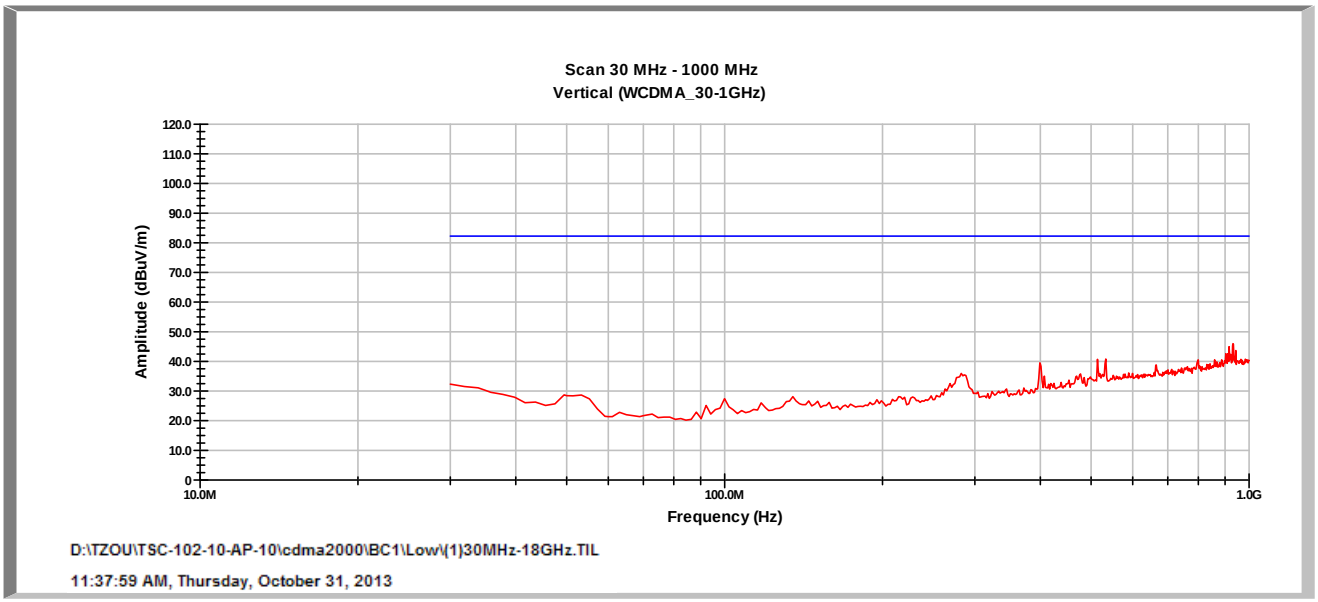
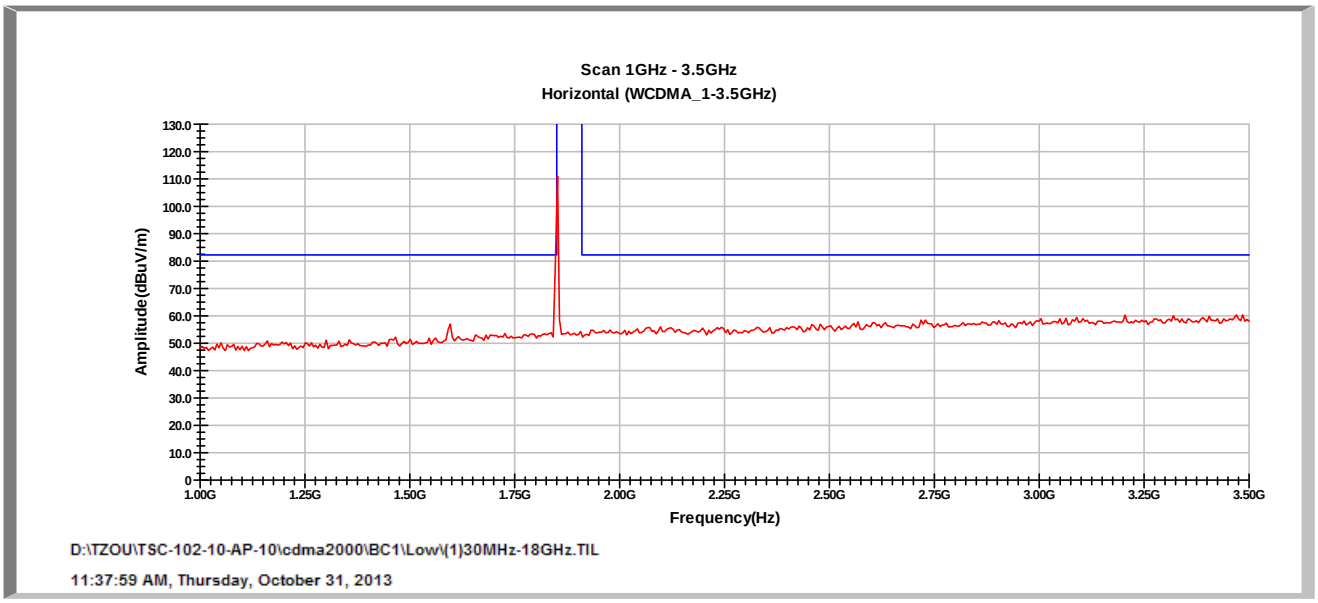
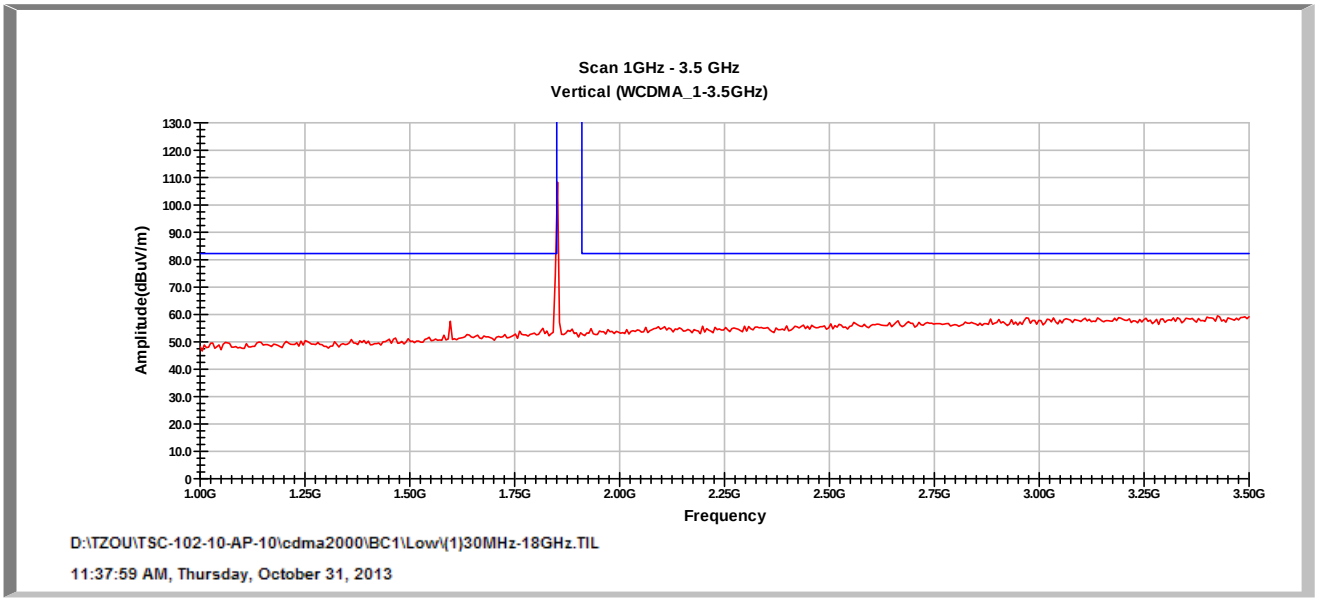
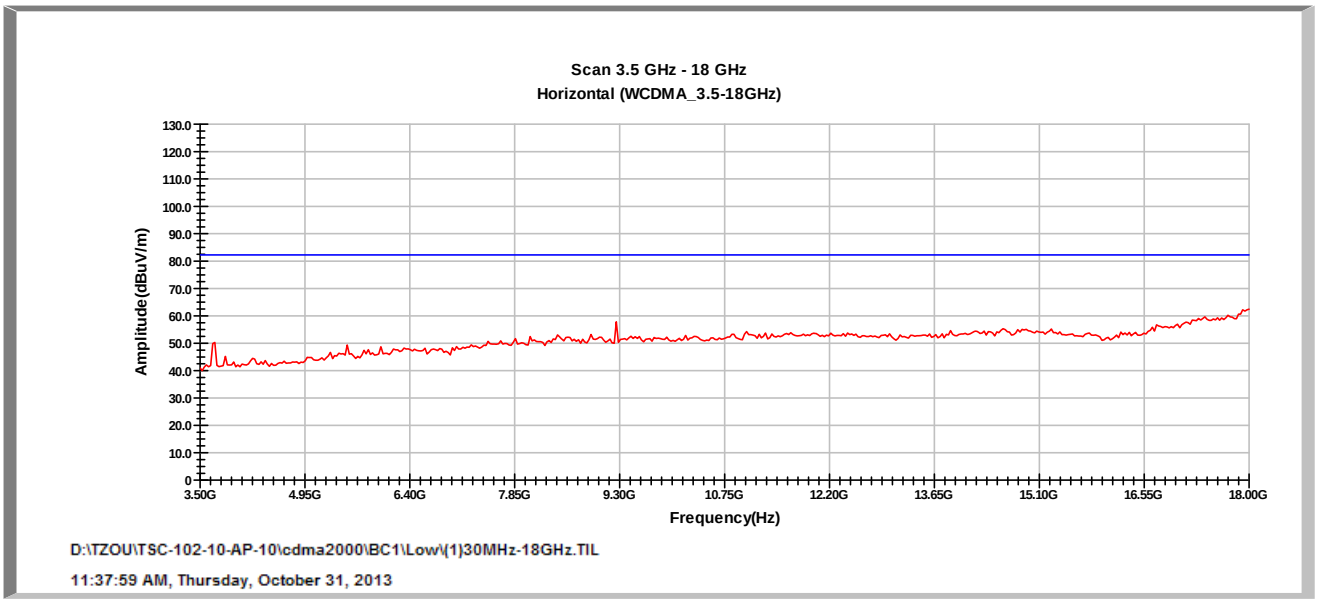
CDMA2000 BC1 CH Low






Scan 1GHz - 3.5GHz
Horizontal (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\Low\(1)30MHz-18GHz.TIL
11:37:59 AM, Thursday, October 31, 2013


Scan 1GHz - 3.5 GHz
Vertical (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\Low\(1)30MHz-18GHz.TIL
11:37:59 AM, Thursday, October 31, 2013


Scan 3.5 GHz - 18 GHz
Horizontal (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\Low\(1)30MHz-18GHz.TIL
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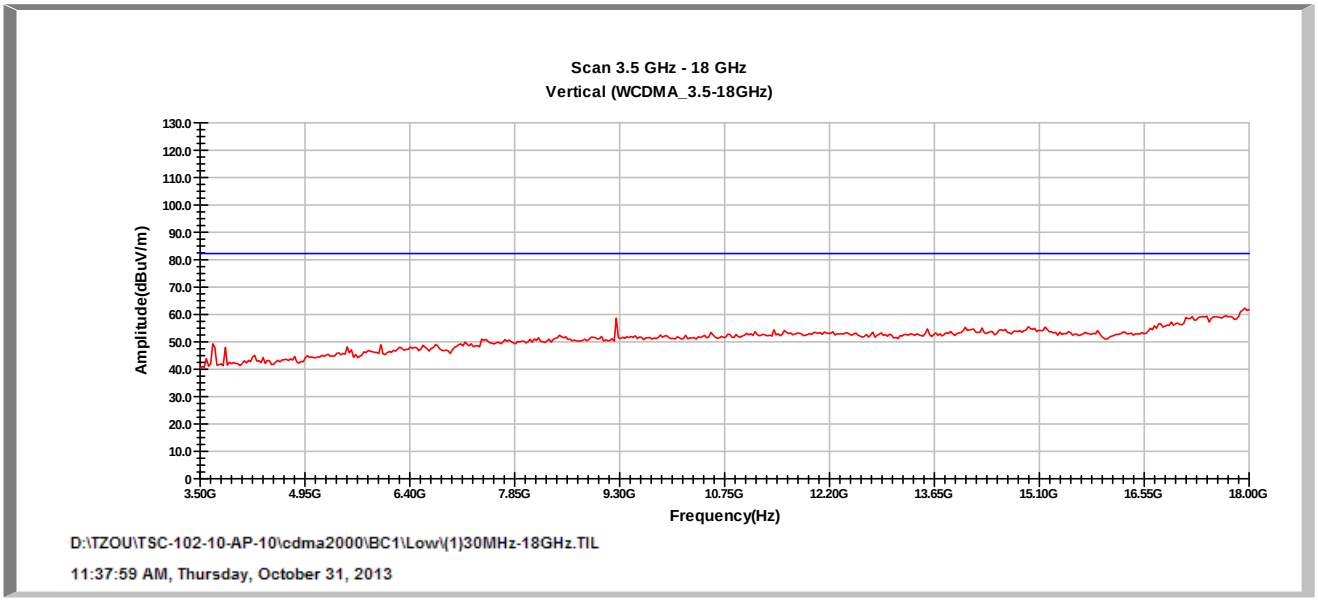
Scan 3.5 GHz - 18 GHz
Vertical (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
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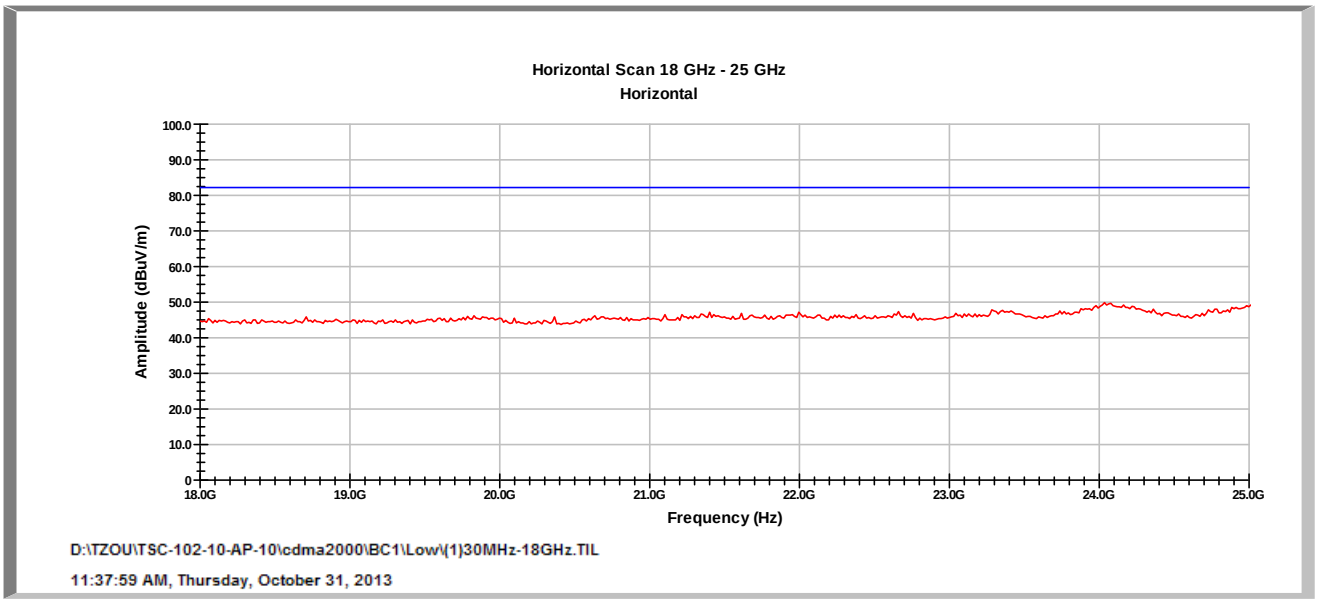
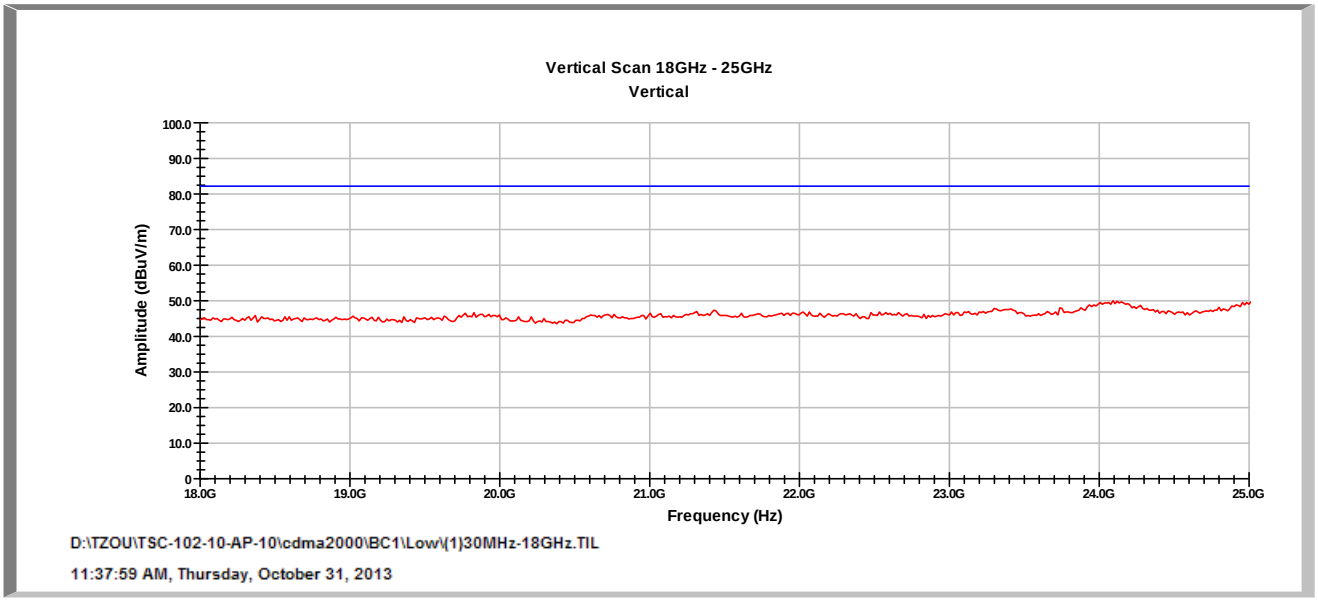
11:37:59 AM, Thursday, October 31, 2013


Horizontal Scan 18 GHz - 25 GHz
Horizontal
Amplitude (dBuV/m)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
18.0G
19.0G
20.0G
21.0G
22.0G
23.0G
24.0G
25.0G
Frequency (Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\Low\(1)30MHz-18GHz.TIL
11:37:59 AM, Thursday, October 31, 2013


Vertical Scan 18GHz - 25GHz
Vertical
Amplitude (dBuV/m)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
18.0G
19.0G
20.0G
21.0G
22.0G
23.0G
24.0G
25.0G
Frequency (Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\Low\(1)30MHz-18GHz.TIL
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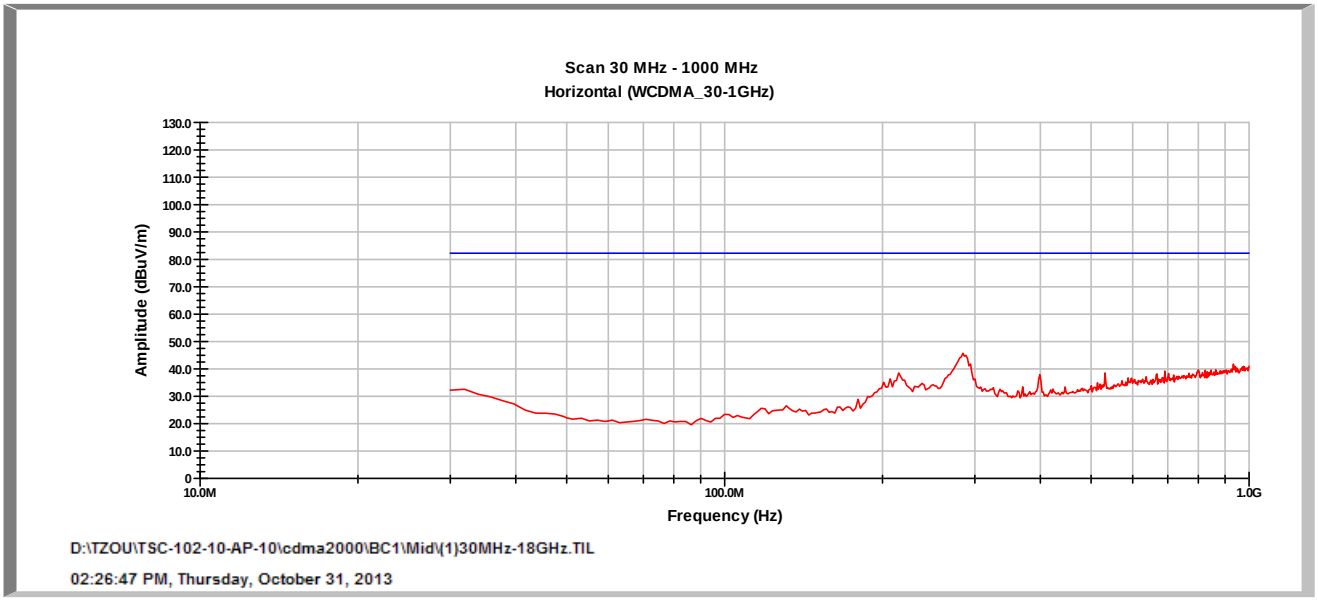
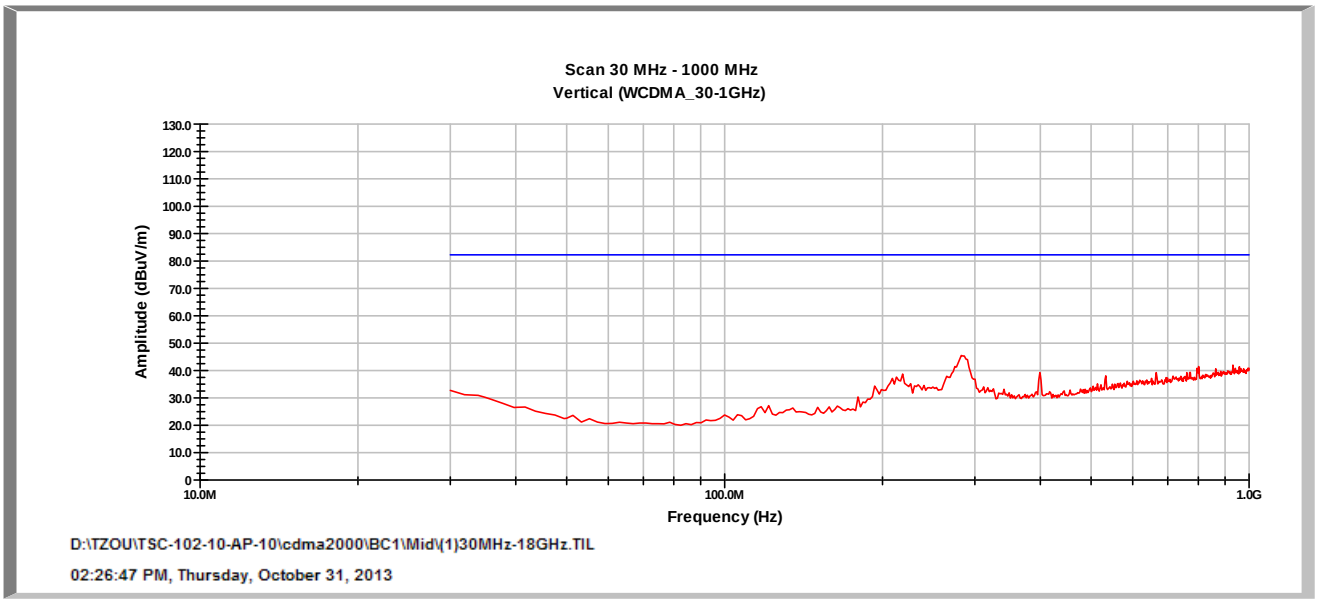
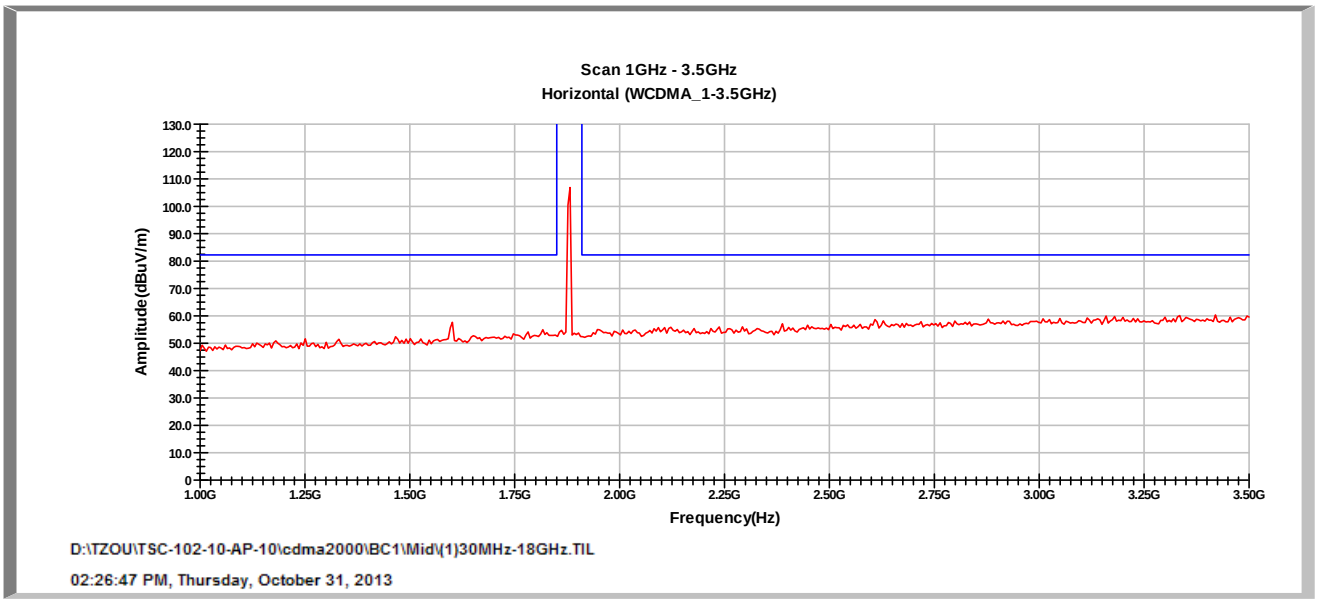
CDMA2000 BC1 CH Mid






Scan 1GHz - 3.5GHz
Horizontal (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency(Hz)
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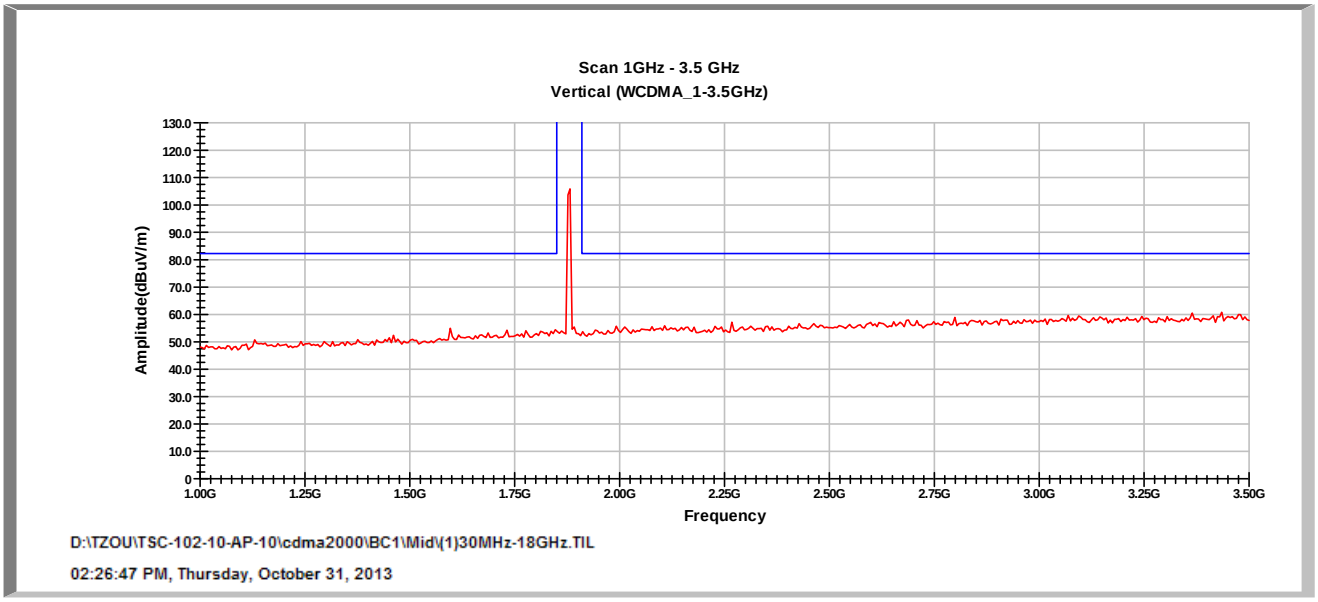
02:26:47 PM, Thursday, October 31, 2013


Scan 1GHz - 3.5 GHz
Vertical (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency
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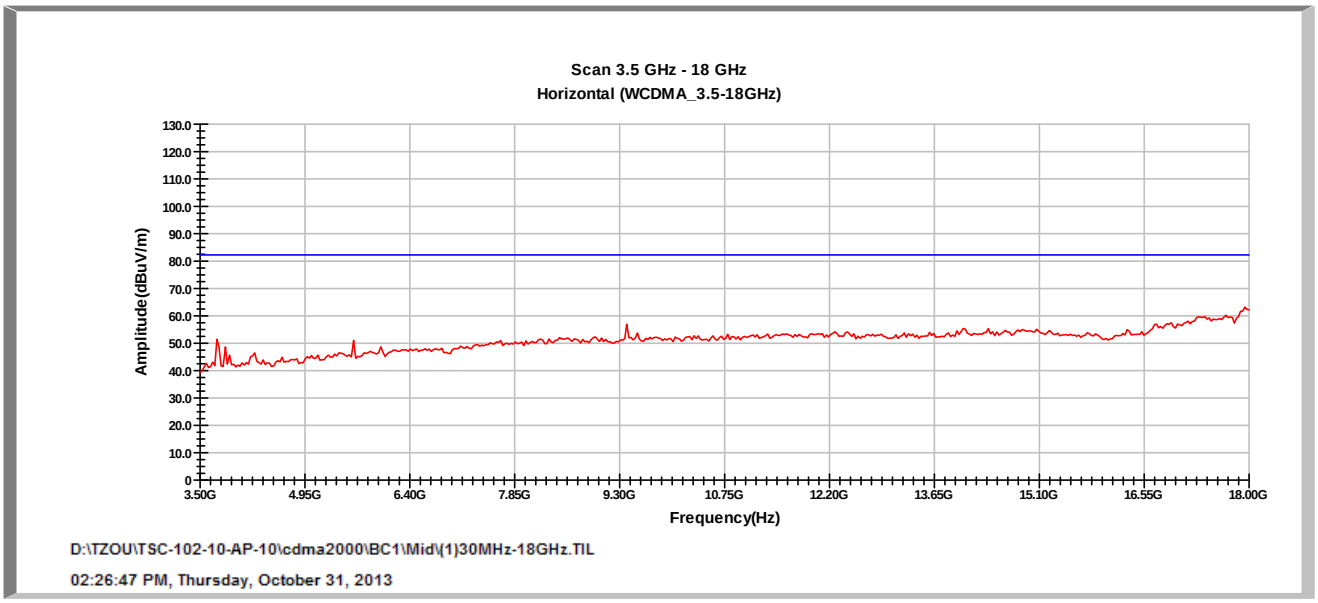
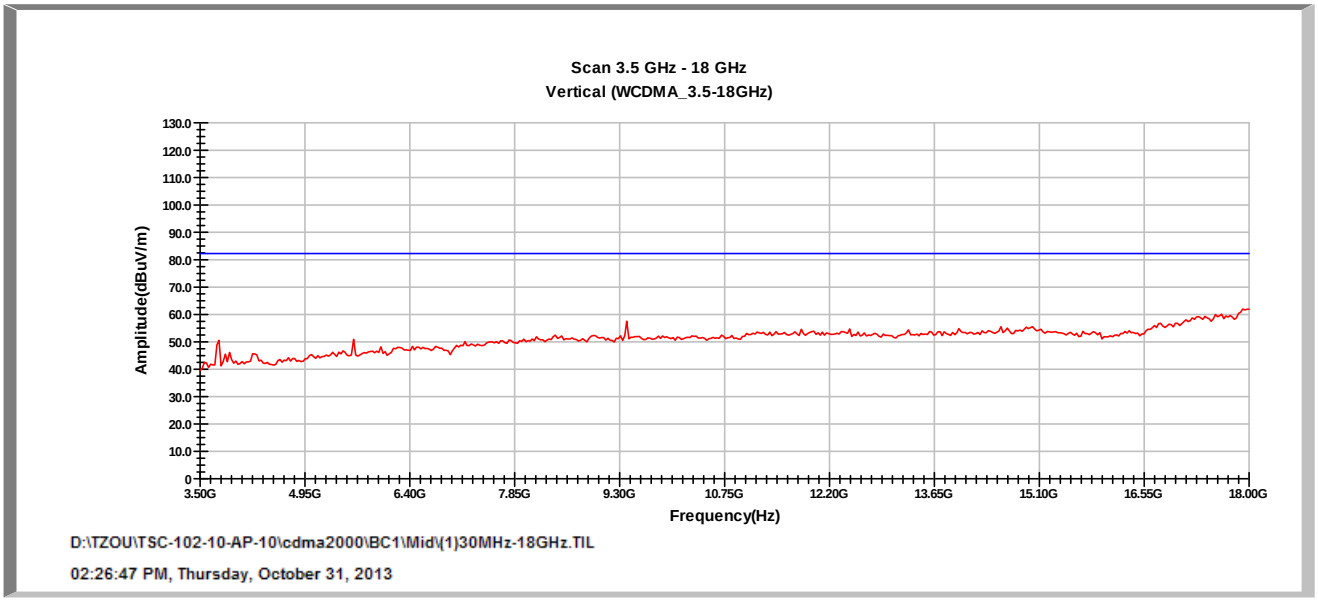

Scan 3.5 GHz - 18 GHz
Horizontal (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\Mid\(1)30MHz-18GHz.TIL
02:26:47 PM, Thursday, October 31, 2013


Scan 3.5 GHz - 18 GHz
Vertical (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\Mid\(1)30MHz-18GHz.TIL
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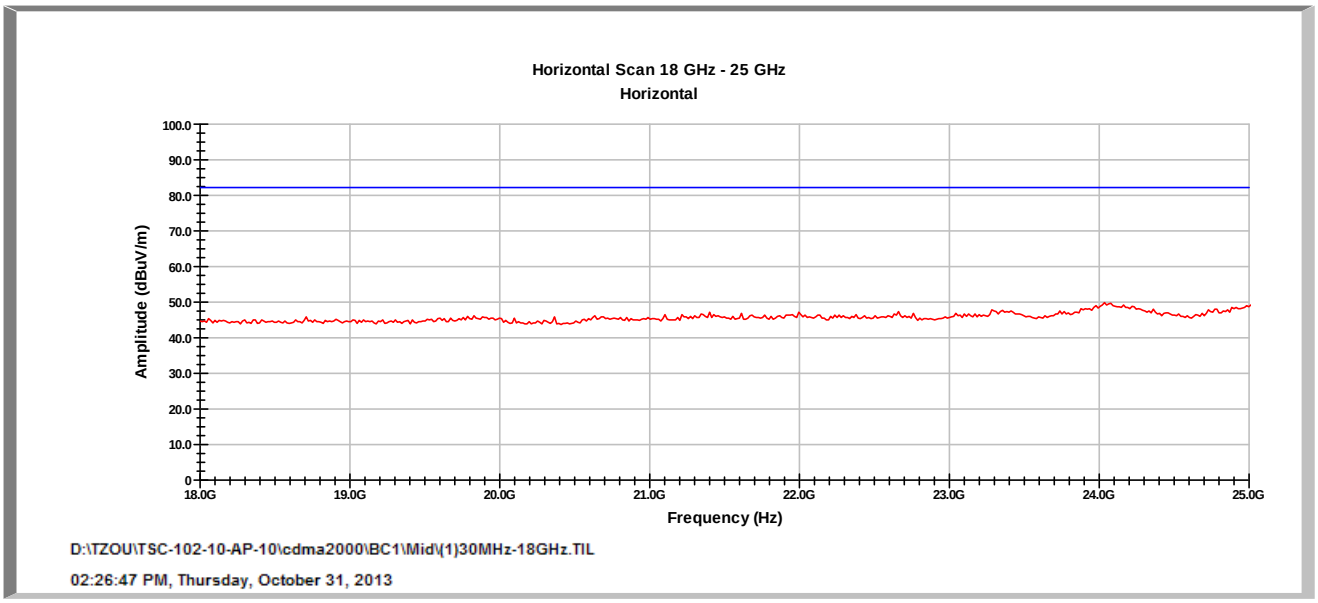
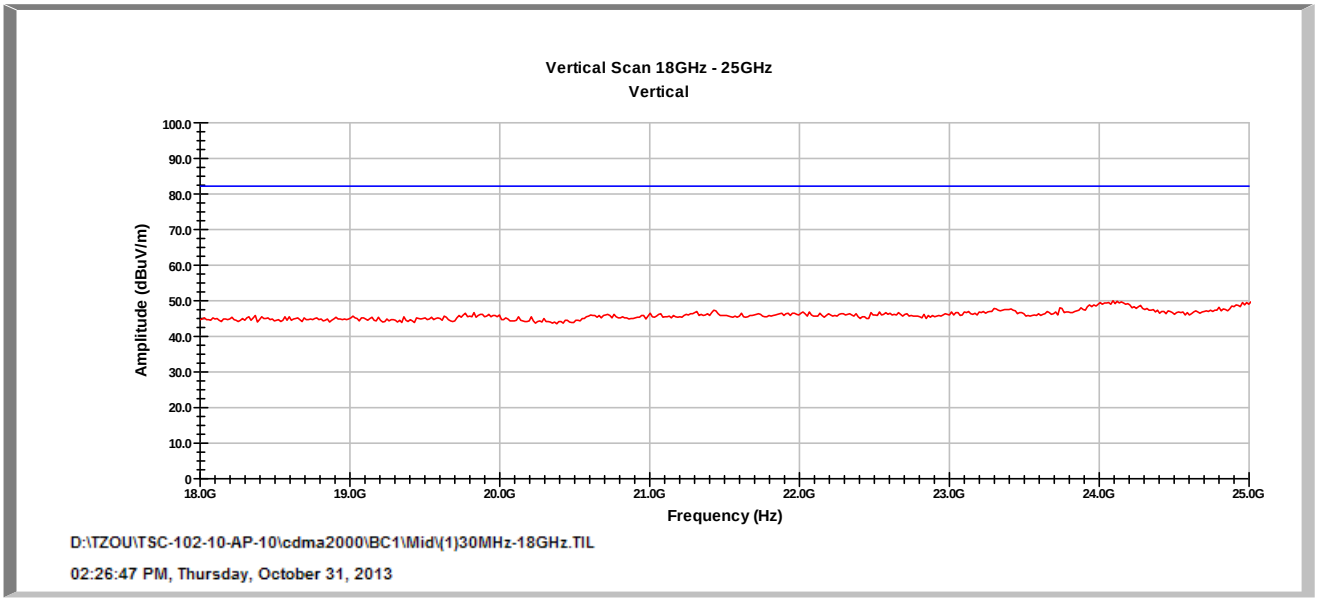
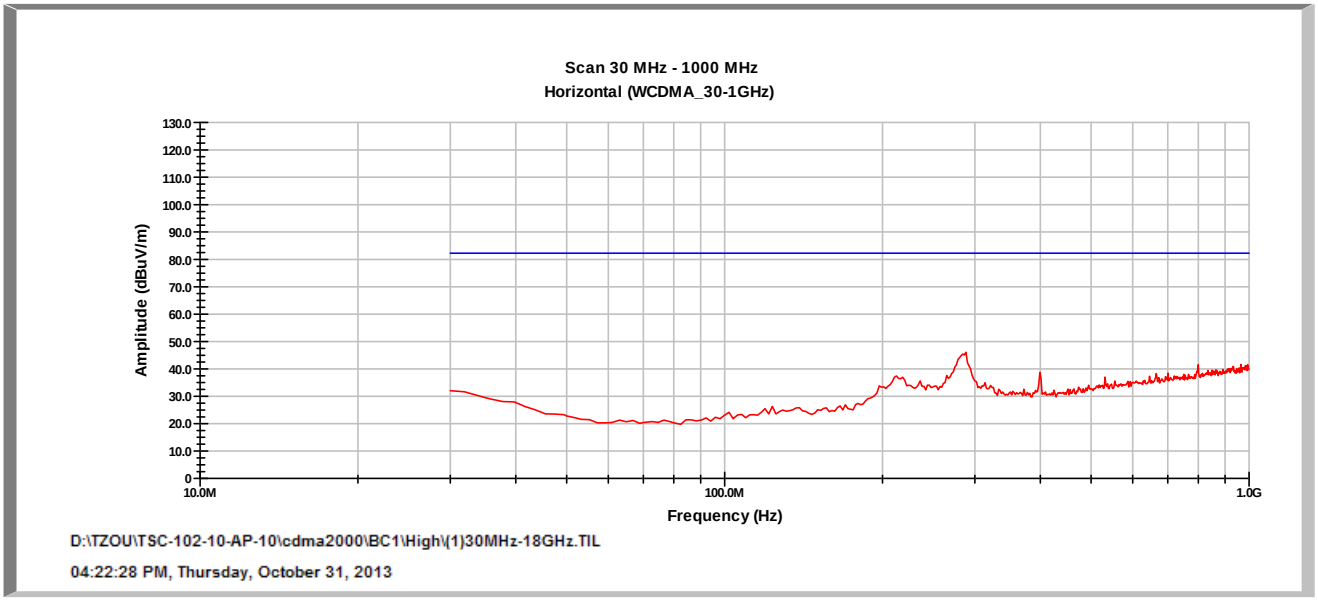
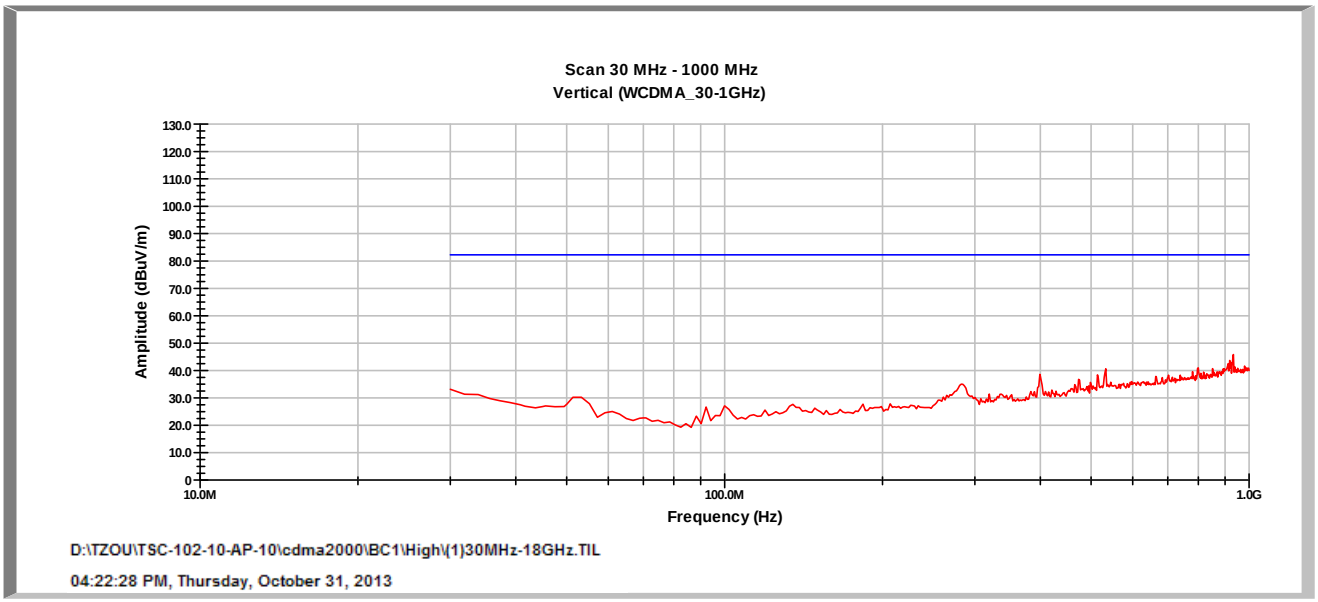
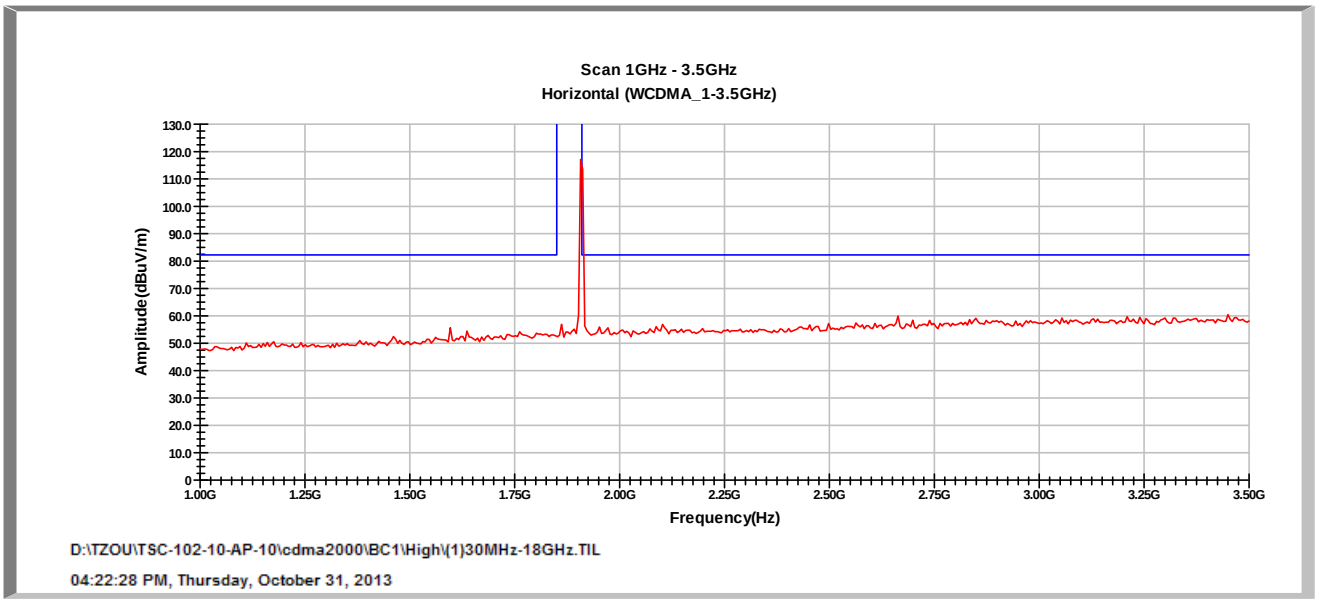

Horizontal Scan 18 GHz - 25 GHz
Horizontal
Amplitude (dBuV/m)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
18.0G
19.0G
20.0G
21.0G
22.0G
23.0G
24.0G
25.0G
Frequency (Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\Mid\(1)30MHz-18GHz.TIL
02:26:47 PM, Thursday, October 31, 2013

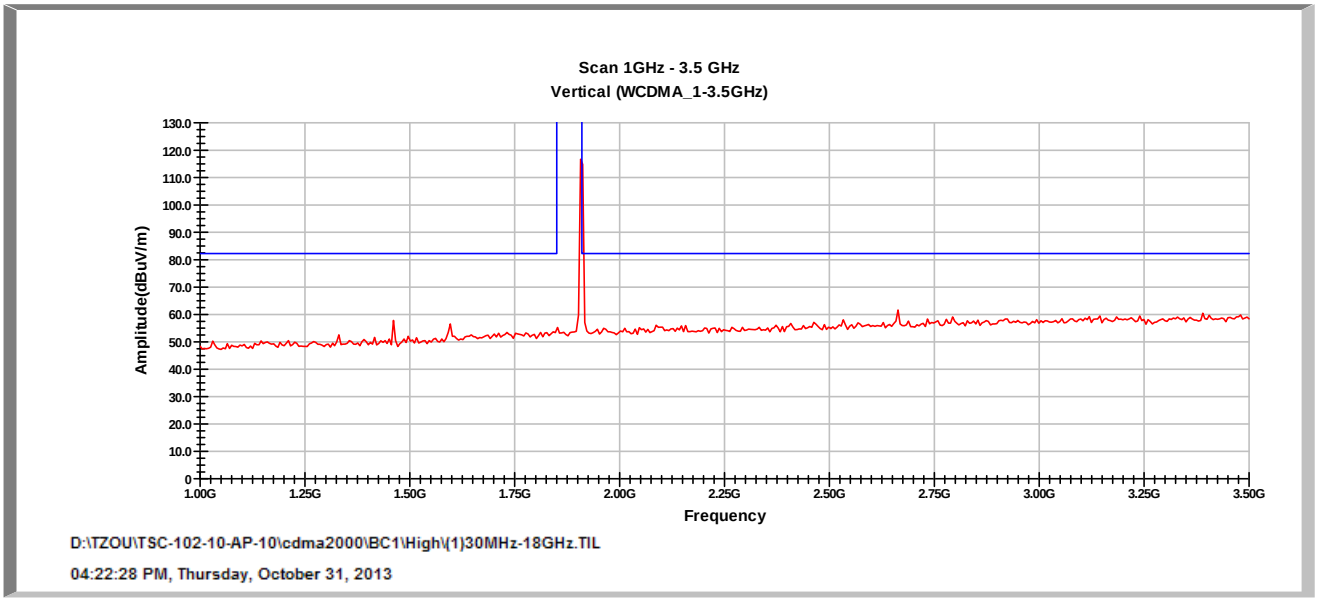

Vertical Scan 18GHz - 25GHz
Vertical
Amplitude (dBuV/m)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
18.0G
19.0G
20.0G
21.0G
22.0G
23.0G
24.0G
25.0G
Frequency (Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\Mid\(1)30MHz-18GHz.TIL
02:26:47 PM, Thursday, October 31, 2013

CDMA2000 BC1 CH High






Scan 1GHz - 3.5GHz
Horizontal (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\High\(1)30MHz-18GHz.TIL
04:22:28 PM, Thursday, October 31, 2013


Scan 1GHz - 3.5 GHz
Vertical (WCDMA_1-3.5GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
1.00G
1.25G
1.50G
1.75G
2.00G
2.25G
2.50G
2.75G
3.00G
3.25G
3.50G
Frequency
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\High\(1)30MHz-18GHz.TIL
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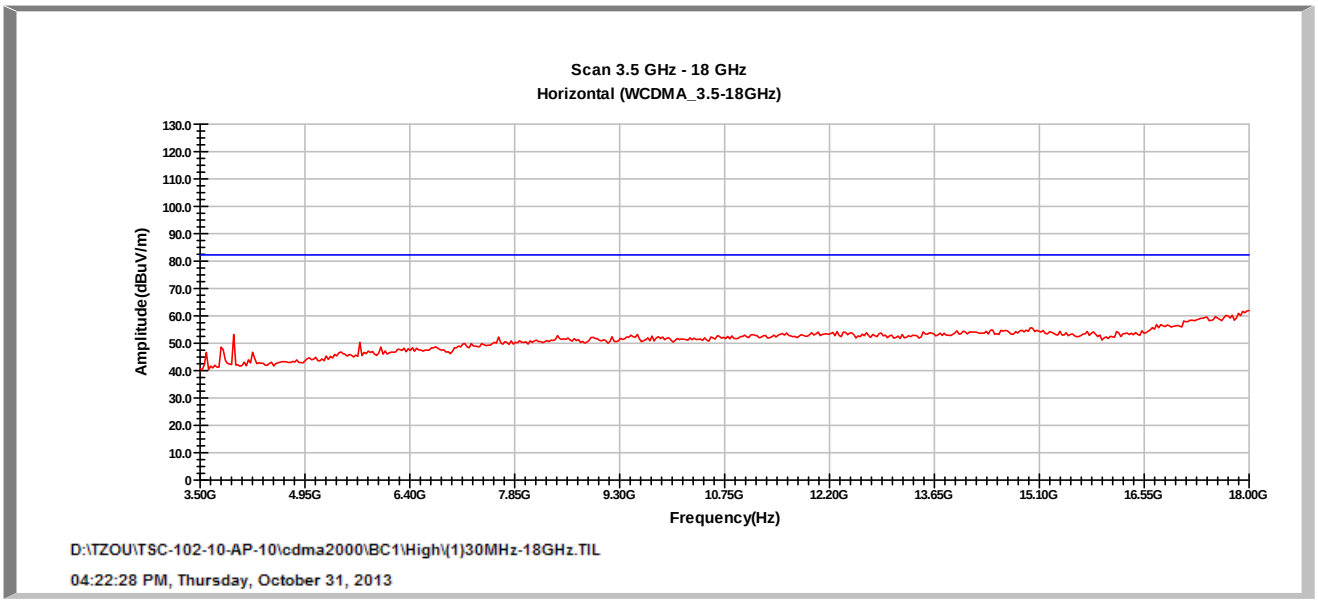
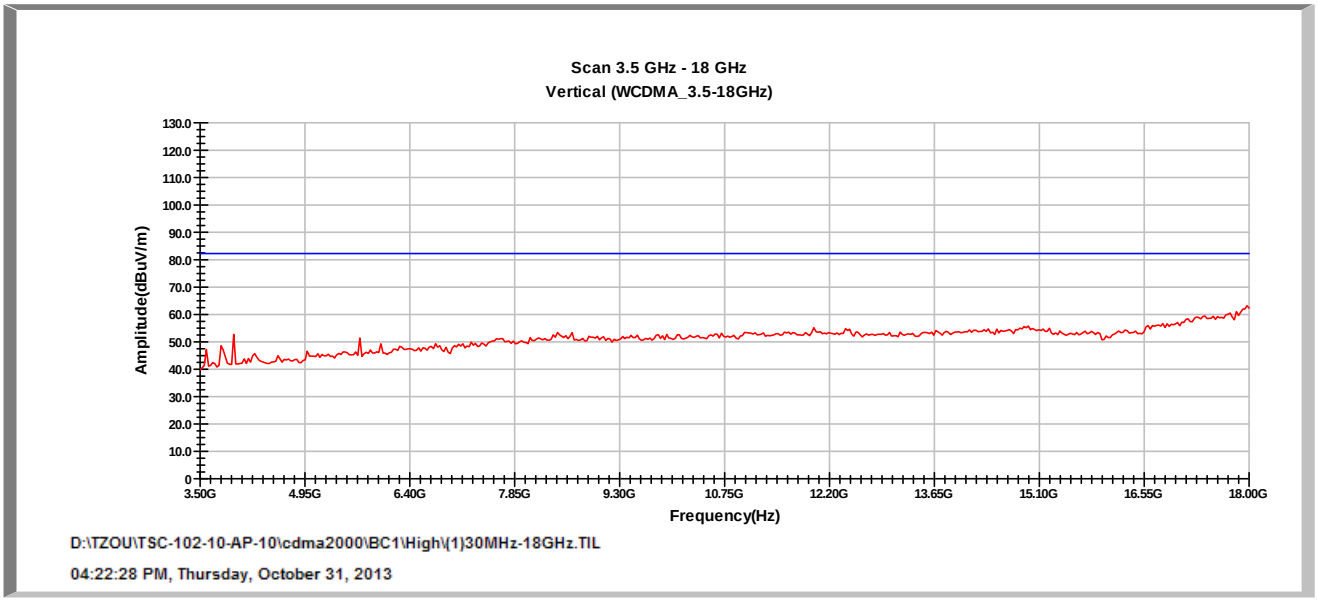
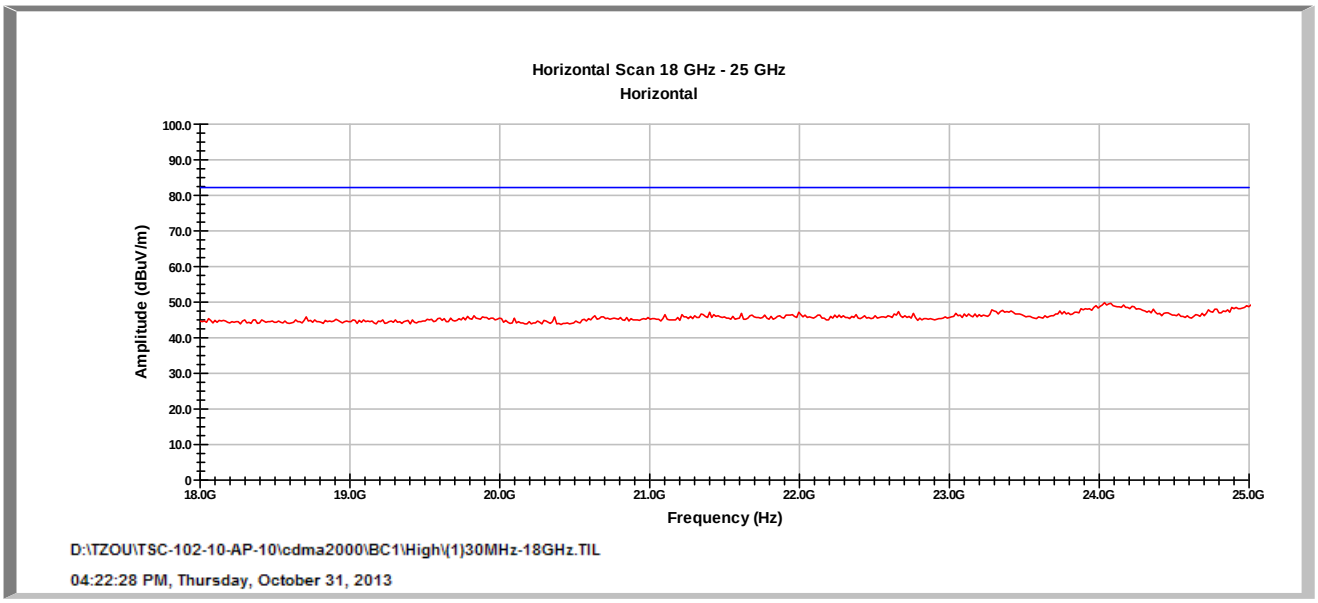

Scan 3.5 GHz - 18 GHz
Horizontal (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\High\(1)30MHz-18GHz.TIL
04:22:28 PM, Thursday, October 31, 2013


Scan 3.5 GHz - 18 GHz
Vertical (WCDMA_3.5-18GHz)
Amplitude(dBuV/m)
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
3.50G
4.95G
6.40G
7.85G
9.30G
10.75G
12.20G
13.65G
15.10G
16.55G
18.00G
Frequency(Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\High\(1)30MHz-18GHz.TIL
04:22:28 PM, Thursday, October 31, 2013


Horizontal Scan 18 GHz - 25 GHz
Horizontal
Amplitude (dBuV/m)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
18.0G
19.0G
20.0G
21.0G
22.0G
23.0G
24.0G
25.0G
Frequency (Hz)
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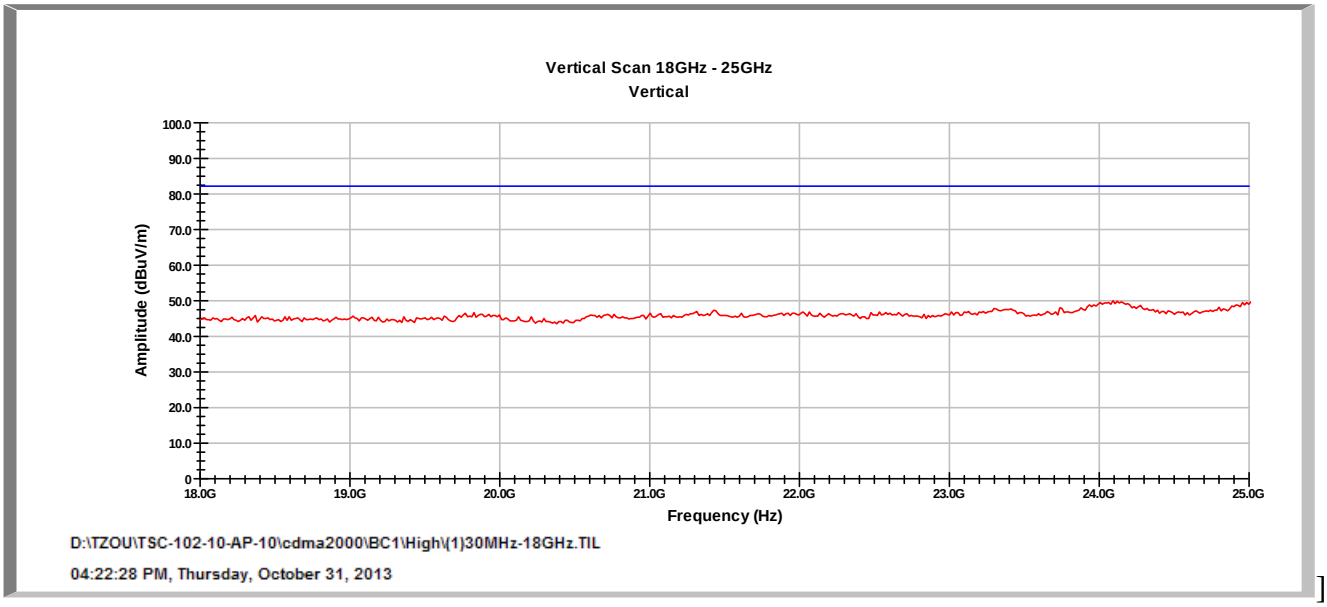
Vertical Scan 18GHz - 25GHz
Vertical
Amplitude (dBuV/m)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
18.0G
19.0G
20.0G
21.0G
22.0G
23.0G
24.0G
25.0G
Frequency (Hz)
D:\TZOU\TSC-102-10-AP-10\cdma2000\BC1\High\(1)30MHz-18GHz.TIL
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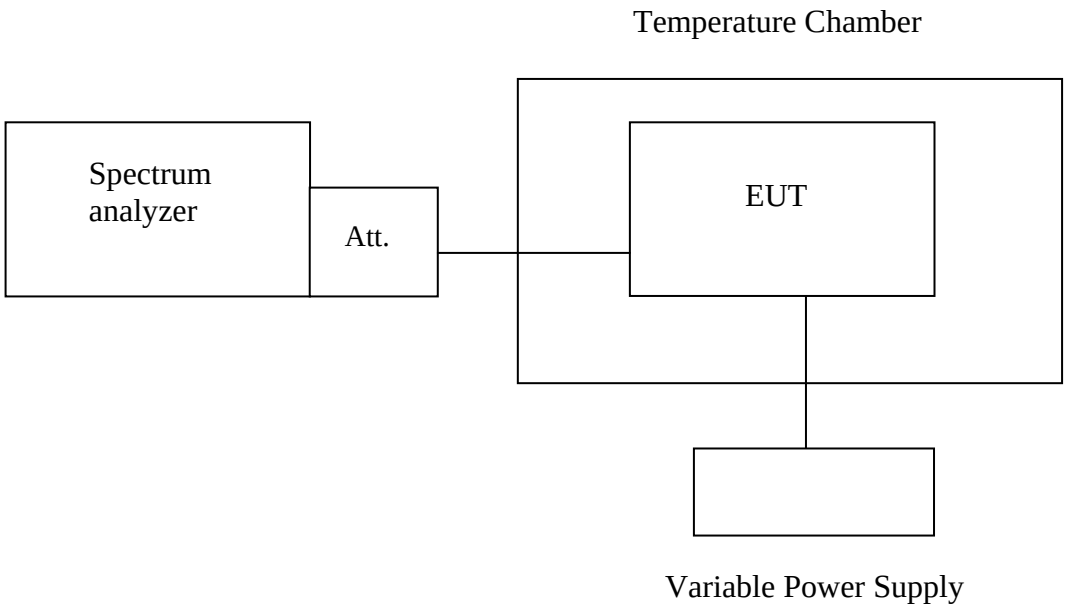
4.5. Frequency Stability (Temperature Variation)

4.5.1. Required and Limits

According to FCC §2.1055，FCC §22.355，FCC §24.235.

Frequency Tolerance：±2.5ppm

4.5.2. Test Configuration and Procedure



The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

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4.5.3. Test Results

WCDMA Band Ⅱ Mid Channel 1880MHz @ 20°C (Limit：2.5ppm=4700Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
3.7	50	1880017067	-2	4700
	40	1880017061	-8	
	30	1880017066	-3	
	20	1880017069	0	
	10	1880017063	-6	
	0	1880017062	-7	
	-10	1880017064	-5	
	-20	1880017066	-3	
	-30	1880017062	-7	

WCDMA Band Ⅴ Mid Channel 836.4MHz @ 20°C (Limit：2.5ppm=2090Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
3.7	50	836416676	4	2090
	40	836416675	3	
	30	836416671	-1	
	20	836416672	0	
	10	836416669	-3	
	0	836416674	2	
	-10	836416675	3	
	-20	836416676	4	
	-30	836416677	5	

WCDMA/HSDPA Band Ⅱ Mid Channel 1880MHz @ 20°C (Limit：2.5ppm=4700Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
3.7	50	1880016853	-6	4700
	40	1880016849	-10	
	30	1880016851	-8	
	20	1880016859	0	
	10	1880016861	2	
	0	1880016862	3	
	-10	1880016854	-5	
	-20	1880016856	-3	
	-30	1880016852	-7	

WCDMA/HSDPA Band Ⅴ Mid Channel 836.4MHz @ 20°C (Limit：2.5ppm=2090Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
3.7	50	836417636	4	2090
	40	836417635	3	
	30	836417633	1	
	20	836417632	0	
	10	836417632	0	
	0	836417634	2	
	-10	836417635	3	
	-20	836417636	4	
	-30	836417634	2	

WCDMA/HSUPA Band Ⅱ Mid Channel 1880MHz @ 20°C (Limit：2.5ppm=4700Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
3.7	50	1880017432	-6	4700
	40	1880017433	-5	
	30	1880017430	-8	
	20	1880017438	0	
	10	1880017432	-6	
	0	1880017427	-11	
	-10	1880017424	-14	
	-20	1880017430	-8	
	-30	1880017431	-7	

WCDMA/HSUPA Band Ⅴ Mid Channel 836.4MHz @ 20°C (Limit：2.5ppm=2090Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
3.7	50	836417677	5	2090
	40	836417675	3	
	30	836417674	2	
	20	836417672	0	
	10	836417672	0	
	0	836417671	-1	
	-10	836417674	2	
	-20	836417669	-3	
	-30	836417670	-2	

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CDMA2000/1X BC0 Mid Channel 836.52MHz @ 20°C (Limit：2.5ppm=2091Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
3.7	50	836517677	+5	2091
	40	836517675	+3	
	30	836517674	+2	
	20	836517672	0	
	10	836517672	0	
	0	836517671	-1	
	-10	836517674	-2	
	-20	836517669	-3	
	-30	836517670	-2	

CDMA2000/EVDO BC0 Mid Channel 836.52MHz @ 20°C (Limit：2.5ppm=2091Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
3.7	50	836516690	-9	2091
	40	836516696	-3	
	30	836516695	-4	
	20	836516699	0	
	10	836516692	-7	
	0	836516691	-8	
	-10	836516693	-6	
	-20	836516690	-9	
	-30	836516698	-1	

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CDMA2000/1X BC1 Mid Channel1880MHz @ 20°C (Limit：2.5ppm=4700Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
3.7	50	1880016853	-5	4700
	40	1880016859	+1	
	30	1880016851	-7	
	20	1880016858	0	
	10	1880016861	+3	
	0	1880016862	+4	
	-10	1880016854	-4	
	-20	1880016856	-2	
	-30	1880016852	-6	

CDMA2000/EVDO BC1 Mid Channel1880MHz @ 20°C (Limit：2.5ppm=4700Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
3.7	50	1880016833	+1	4700
	40	1880016839	+7	
	30	1880016831	-1	
	20	1880016832	0	
	10	1880016831	-1	
	0	1880016832	0	
	-10	1880016834	+2	
	-20	1880016836	+4	
	-30	1880016832	0	

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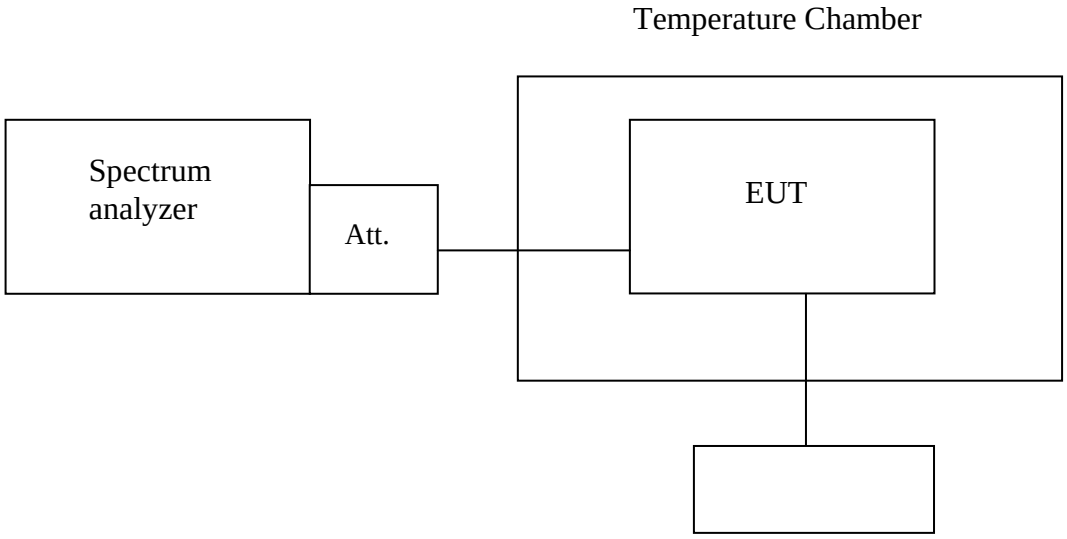
4.6. Frequency Stability (Voltage Variation)

4.6.1. Required and Limits

According to FCC §2.1055，FCC §22.355，FCC §24.235.

4.6.2. Test Configuration and Procedure



Set chamber temperature to 20 °C. Use a variable AC power supply/DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (±15%) and endpoint. Record the maximum frequency change.

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4.6.3. Test Results

WCDMA Band Ⅱ Mid Channel 1880MHz @ 20°C (Limit：2.5ppm=4700Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
4	20	1880017498	-2	4700
3.7		1880017500	0	
3.3		1880017501	1	
3.1		1880017520	20	

WCDMA Band Ⅴ Mid Channel 836.4MHz @ 20°C (Limit：2.5ppm=2090Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
4	20	836417091	-6	2090
3.7		836417097	0	
3.3		836417094	-3	
3.1		836417109	12	

WCDMA/HSDPA Band Ⅱ Mid Channel 1880MHz @ 20°C (Limit：2.5ppm=4700Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
4	20	1880017026	-6	4700
3.7		1880017032	0	
3.3		1880017035	3	
3.1		1880017063	31	

WCDMA/HSDPA Band Ⅴ Mid Channel 836.4MHz @ 20°C (Limit：2.5ppm=2090Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
4	20	836417085	-3	2090
3.7		836417088	0	
3.3		836417093	5	
3.1		836417113	25	

WCDMA/HSUPA Band Ⅱ Mid Channel 1880MHz @ 20°C (Limit：2.5ppm=4700Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
4	20	1880017094	-8	4700
3.7		1880017102	0	
3.3		1880017105	+3	
3.1		1880017142	+40	

WCDMA/HSUPA Band Ⅴ Mid Channel 836.4MHz @ 20°C (Limit：2.5ppm=2090Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
4	20	836416996	-3	2090
3.7		836416999	0	
3.3		836417005	+6	
3.1		836417046	+47	

CDMA2000/1X BC0 Mid Channel 836.52MHz @ 20°C (Limit：2.5ppm=2091Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
4	20	836516983	-8	2091
3.7		836516989	0	
3.3		836517005	-16	
3.1		836517034	+45	

CDMA2000/EVDO BC0 Mid Channel 836.52MHz @ 20°C (Limit：2.5ppm=2091Hz)				
Power supply Vdc	Temperature (°C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
4	20	836516993	-9	2091
3.7		836517002	0	
3.3		836517005	+3	
3.1		836517036	+34	

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CDMA2000/1X BC1 Mid Channel 1880MHz @ 20°C (Limit：2.5ppm=4700Hz)				
Power supply Vdc	Temperature (^{o}C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
4	20	1880017098	-12	4700
3.7		1880017110	0	
3.3		1880017106	-4	
3.1		1880017142	+32	

CDMA2000/EVDO BC1 Mid Channel 1880MHz @ 20°C (Limit：2.5ppm=4700Hz)				
Power supply Vdc	Temperature (^{o}C)	Frequency(Hz)	Delta(Hz)	Limit(Hz)
4	20	1880017063	-3	4700
3.7		1880017066	0	
3.3		1880017073	+7	
3.1		1880017106	+40	

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5.PHOTOGRAPHS

5.1 Photos of Radiated Measurement