FCC PART 27

MEASUREMENT AND TEST REPORT

For

ZTE Corporation

ZTE Plaza, Keji Road South, Hi-Tech Park, Nanshan District,

Shenzhen, Guangdong, China 518057

FCC ID: Q78ZXSDRR8860C206

Report Type:	**Product Type:**
Original Report	CDMA Remote Radio Unit

Test Engineer:	Ma Tianfei
Report No.:	ZTE08112000
Test Date:	Nov.12, 2008 ~ Dec. 13, 2008
Reviewed By:	Hu Qinghua
Prepared By:	ZTE Corporation Reliability Testing Center ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong 518057, P.R. of China Tel: +86-755-26770000 Fax: +86-755-26771999

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The ZTE Corporation's product, FCC ID: Q78ZXSDRR8860C206, model number: ZXSDR R8860 C206 or the "EUT" as referred to in this report is a ZXSDR R8860 Remote Radio Unit (2X4). The EUT is measured approximately 500 mm × 320 mm ×1172 mm (H×W×D), weigh 22 Kg, input voltage: -48V.

** The test data gathered are from production sample, serial number: 08101201 provided by the manufacturer.*

Technical Specification

1) Frequency Range:

Band	Block Designator	N	Transmit/Receive	Frequency Range (MHz)	Formula of Configuring Frequency (MHz)
Band Class 15	A	0-199	Transmit	2110~2119.95	2110+0.05*N
			Receive	1710~1719.95	1710+0.05*N
Band Class 15	C	400-499	Transmit	2130~2134.95	2110+0.05*N
			Receive	1730~1734.95	1710+0.05*N
Band Class 15	D	500-599	Transmit	2135~2139.95	2110+0.05*N
			Receive	1735~1739.95	1710+0.05*N

2) Power Rating: 47.8 dBm

3) Modulation/Type of Emission: CDMA

4) DC Power: - 48 V

EUT Photo

Objective

This type approval report is prepared on behalf of *ZTE Corporation* in accordance with Part 2, Subpart J, and Part 27 Subpart C and L of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules for RF output power, modulation characteristic, occupied bandwidth, spurious emission at antenna terminal, field strength of spurious radiation, frequency stability, band edge, and conducted and radiated margin.

Related Submittal(s)/Grant(s)

None

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

Part 27 – Miscellaneous Wireless Communications Services

Applicable Standards: TIA-98-E, TIA603-C, ANSI C63.4-2003.

All radiated and conducted emissions measurement was performed at ZTE Corporation Reliability Testing Center. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

ZTE Corporation Reliability Testing Center

ZTE Plaza,Keji Road South,Hi-Tech Industrial Park, Nanshan District, Shenzhen， Guangdong，518057，P.R. of China

Tel: +86-755-26771609
Fax: +86-755-26770347

Test site at ZTE Corporation has been fully described in reports submitted to the Federal Communication Commission (FCC).

The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on December 25, 2005. ZTE Corporation Lab's FCC Registration Number is 373926.

SYSTEM TEST CONFIGURATION

Justification

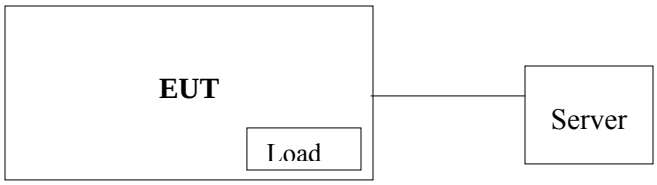
The EUT was configured for testing according to TIA/EIA-603 C.

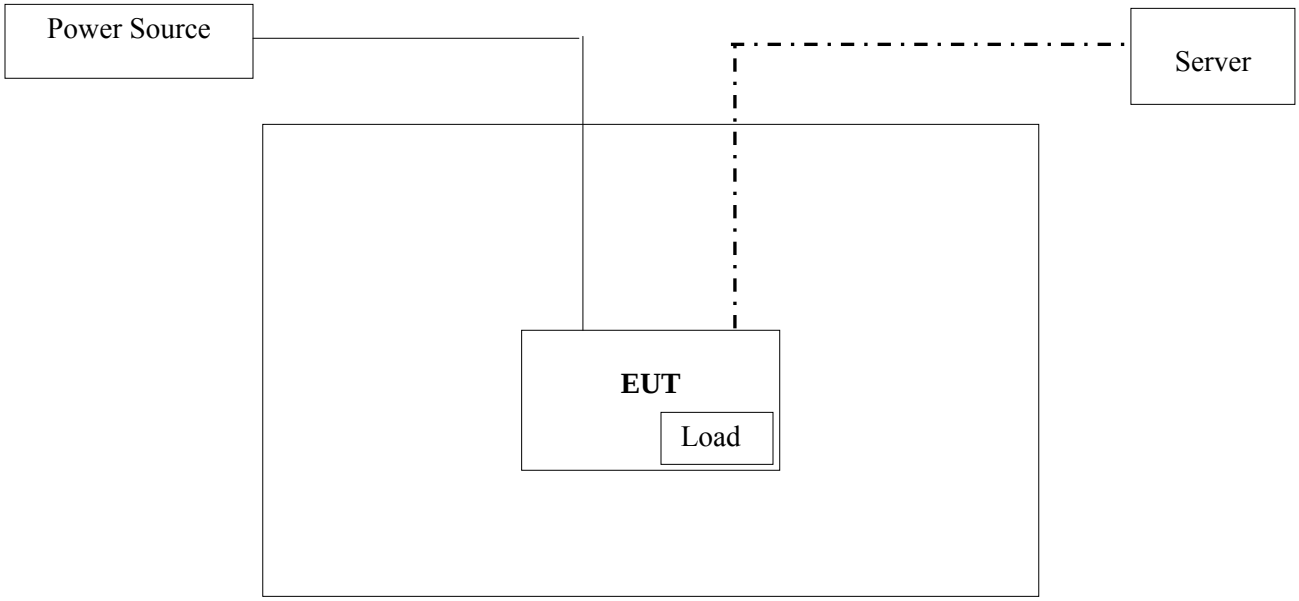
The final qualification test was performed with the EUT operating at normal mode.

Equipment Modifications

No modifications were made to the EUT.

Test Setup Block Diagram





SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§2.1046, § 27.50	RF Output Power	Compliant
§2.1091, §27.52	RF Exposure (MPE)	Compliant
§2.1047	Modulation Characteristic	Compliant
§2.1053, §27.53	Spurious Radiated Emissions	Compliant
§2.1051, §27.53	Spurious Emissions at Antenna Terminals	Compliant
§2.1049	Occupied Bandwidth	Compliant
§27.53	Band Edge	Compliant
§ 2.1055, § 27.54	Frequency stability	Compliant

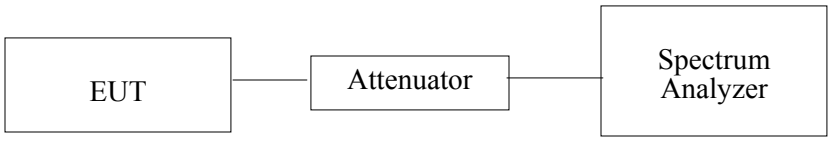
§2.1046, §27.50 – RF OUTPUT POWER

Applicable Standard

According to FCC Part 2.1046 & Part 27.50(d), the power of each fixed or base station transmitting in the 2110–2155 MHz band from any other location is limited to a peak EIRP of 1640 watts.

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation. External attenuation Loss is 40dB, Cable Loss is about 3dB.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	PSA Series Spectrum Analyzer	E4445A	MY44300451	2008-5-2	2009-5-2
DTS	DTS100 40dB Attenuator	DTS100-40dB-N	N/A	N/A	N/A
Hewlett Packard	Hewlett Packard RF Cable	8120-6192	01428251	N/A	N/A

*** Statement of Traceability: ZTE Corporation Reliability Testing Center** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

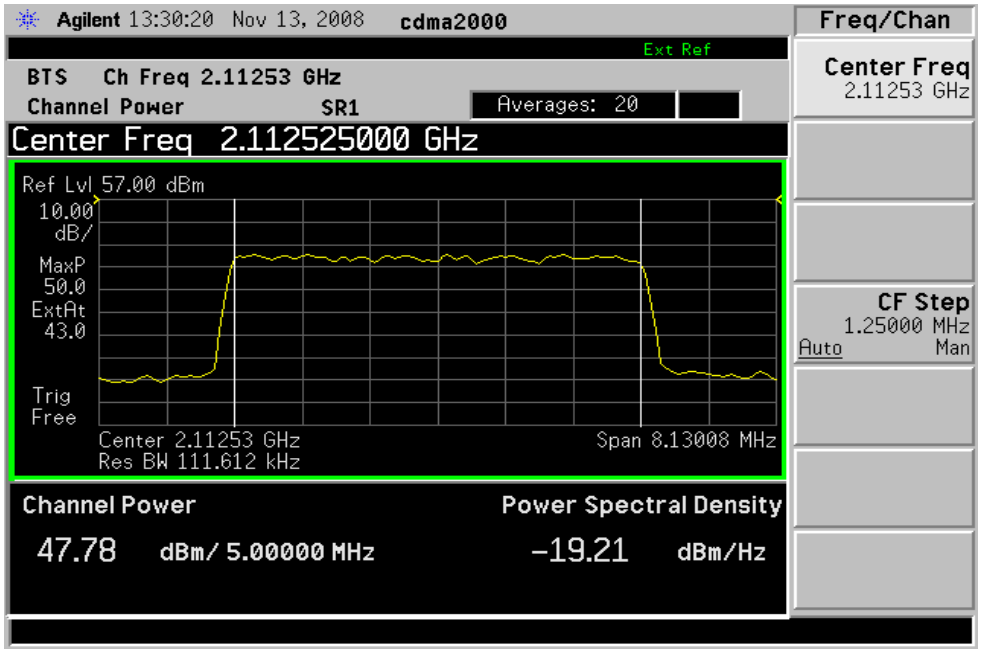
Temperature:	20 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

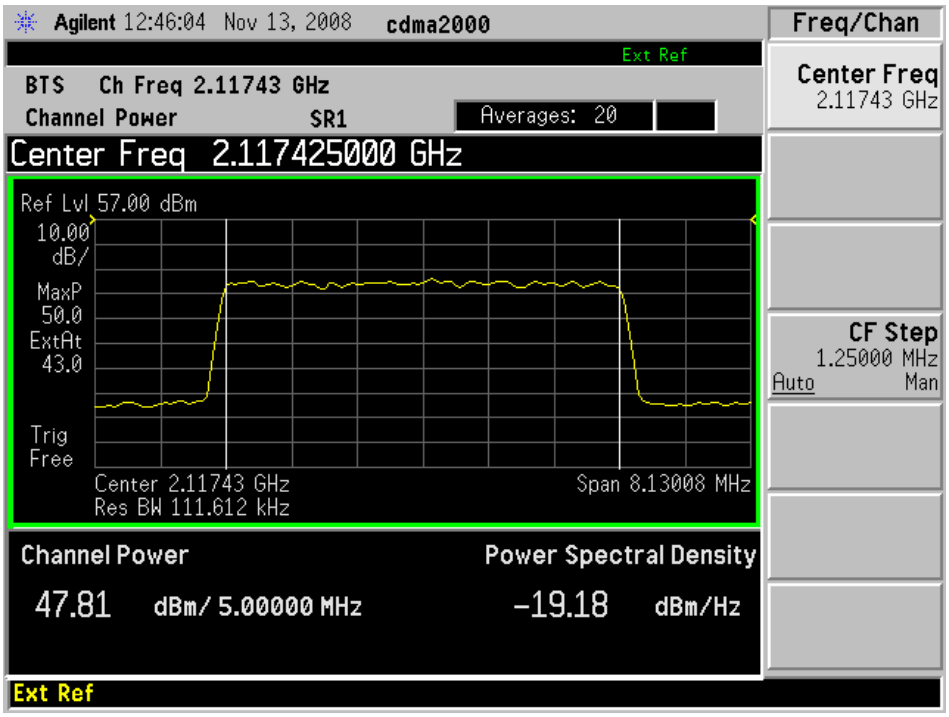
** The testing was performed by Ma Tianfei on Nov 12-Dec 8, 2008*

Test Mode: CDMA2000 1X

(1) Four Carriers

Center Frequency (MHz)	Frequency (MHz)	Channel	Total Power (dBm)	Total Power (Watt)	Limit (Watt)
2112.525	2110.65/2111.9/2113.15/2114.4	13/38/63/88	47.78	59.98	1640
2117.425	2115.55/2116.8/2118.05/2119.3	111/136/161/186	47.81	60.39	1640
2132.525	2130.65/2131.9/2133.15/2134.4	413/438/463/488	47.89	61.52	1640
2137.425	2135.55/2136.8/2138.05/2139.3	511/536/561/586	47.78	59.98	1640

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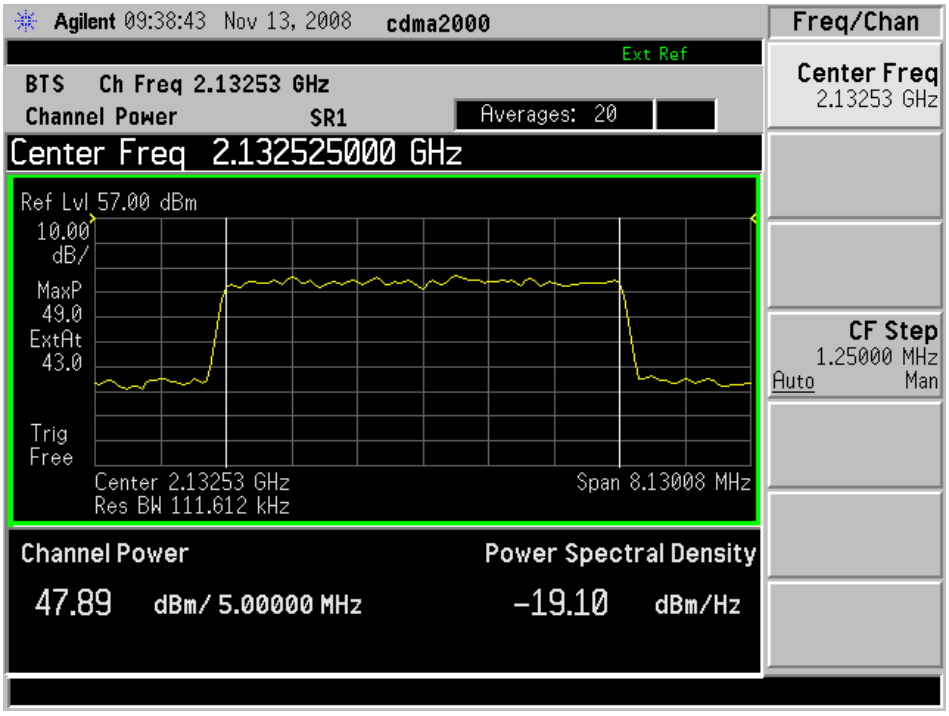
cdma2000
Ext Ref
BTS Ch Freq 2.11743 GHz
Channel Power SR1
Averages: 20
Center Freq 2.117425000 GHz
Ref Lvl 57.00 dBm
10.00 dB/
MaxP 50.0
ExtAt 43.0
Trig Free
Center 2.11743 GHz
Res BW 111.612 kHz
Span 8.13008 MHz
Channel Power
47.81 dBm/ 5.00000 MHz
Power Spectral Density
-19.18 dBm/Hz
Ext Ref
Freq/Chan
Center Freq 2.11743 GHz
CF Step 1.25000 MHz
Auto Man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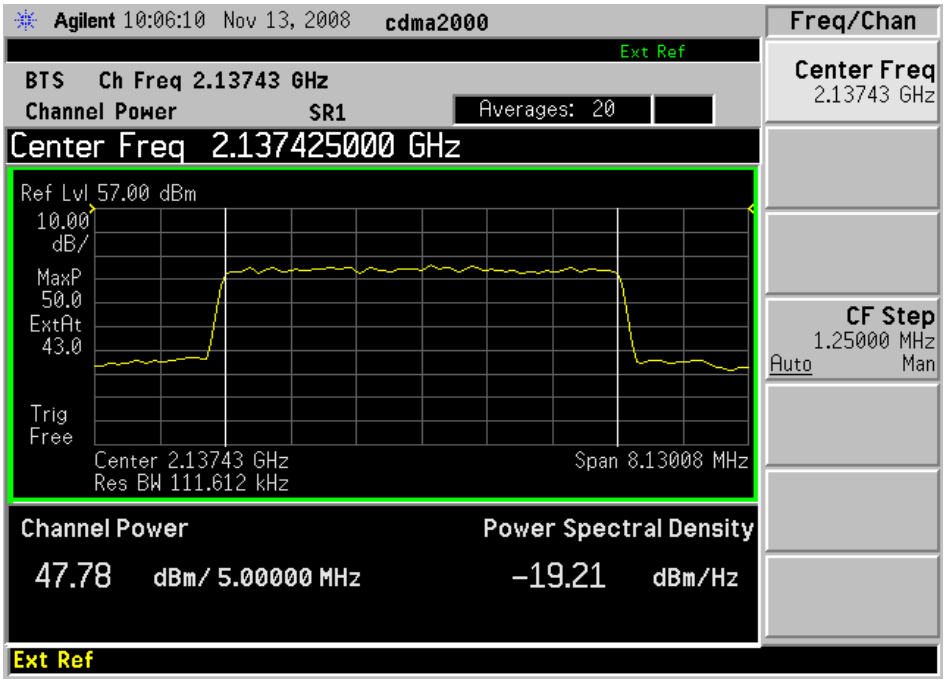
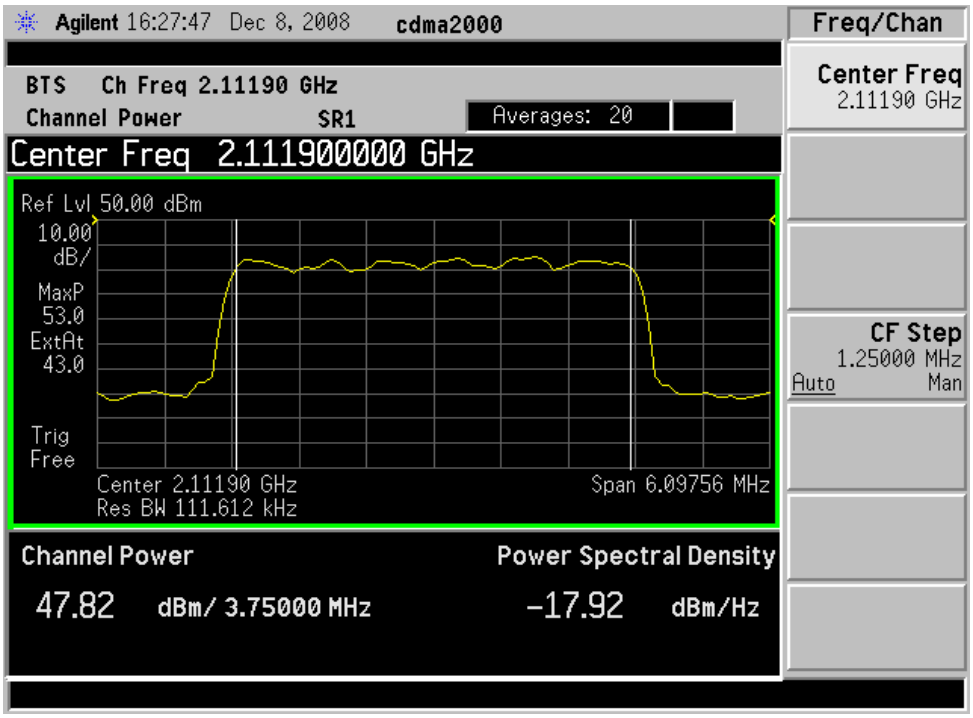
Ext Ref
BTS Ch Freq 2.13253 GHz
Channel Power SR1
Averages: 20
Center Freq 2.132525000 GHz
Ref Lvl 57.00 dBm
10.00 dB/
MaxP 49.0
ExtAt 43.0
Trig Free
Center 2.13253 GHz
Res BW 111.612 kHz
Span 8.13008 MHz
Channel Power
47.89 dBm/ 5.00000 MHz
Power Spectral Density
-19.10 dBm/Hz
Freq/Chan
Center Freq 2.13253 GHz
CF Step 1.25000 MHz
Auto Man



(2) Three Carriers

Center Frequency (MHz)	Frequency (MHz)	Channel	Total Power (dBm)	Total Power (Watt)	Limit (Watt)
2111.9	2110.65/2111.9/2113.15	13/38/63	47.82	60.53	1640
2115	2113.75/2115/2116.25	75/100/125	47.81	60.39	1640
2118.05	2116.8/2118.05/2119.3	136/161/186	47.84	60.81	1640
2131.9	2130.65/2131.9/2133.15	413/438/463	47.83	60.67	1640
2135	2133.75/2135/2136.25	475/500/525	47.86	61.09	1640
2138.05	2136.8/2138.05/2139.3	536/561/586	47.86	61.09	1640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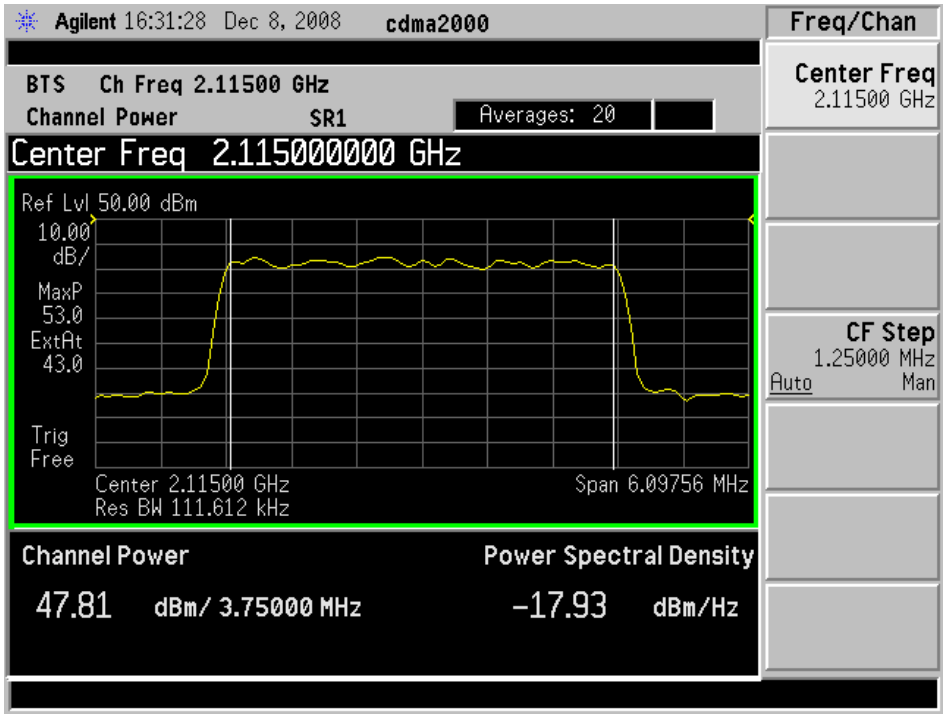
Freq/Chan
BTS Ch Freq 2.11190 GHz
Channel Power SR1
Averages: 20
Center Freq 2.11190 GHz
Center Freq 2.111900000 GHz
Ref Lvl 50.00 dBm
10.00 dB/
MaxP 53.0
ExtAt 43.0
Trig Free
Center 2.11190 GHz
Res BW 111.612 kHz
Span 6.09756 MHz
CF Step 1.25000 MHz
Auto Man
Channel Power
47.82 dBm/ 3.75000 MHz
Power Spectral Density
-17.92 dBm/Hz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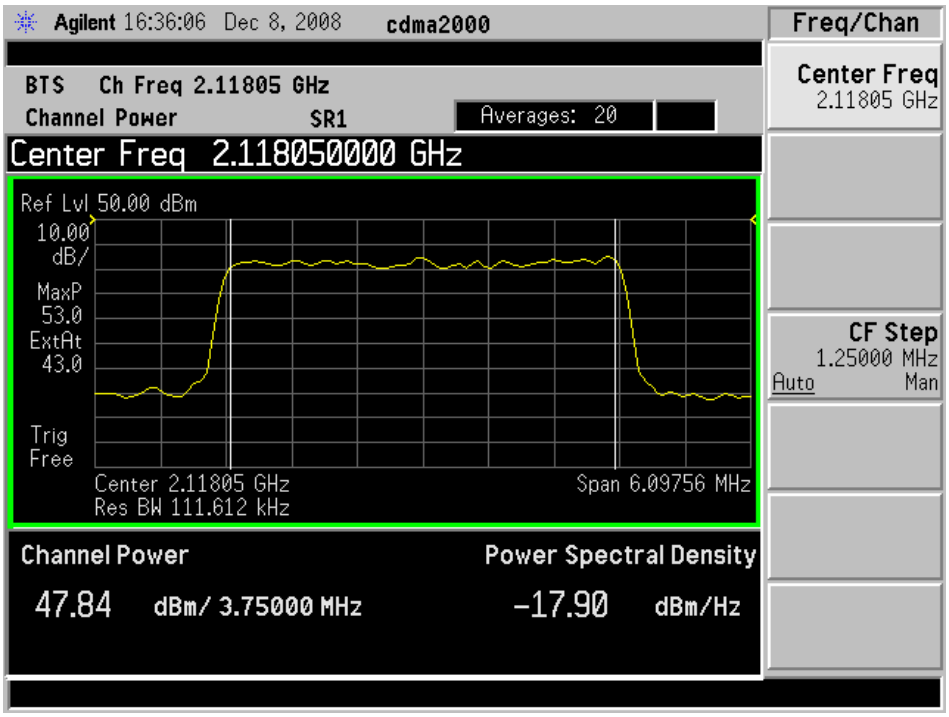
Freq/Chan
BTS Ch Freq 2.11500 GHz
Channel Power SR1
Averages: 20
Center Freq 2.11500 GHz
Center Freq 2.115000000 GHz
Ref Lvl 50.00 dBm
10.00 dB/
MaxP 53.0
ExtAt 43.0
Trig Free
Center 2.11500 GHz
Res BW 111.612 kHz
Span 6.09756 MHz
CF Step 1.25000 MHz
Auto Man
Channel Power
47.81 dBm/ 3.75000 MHz
Power Spectral Density
-17.93 dBm/Hz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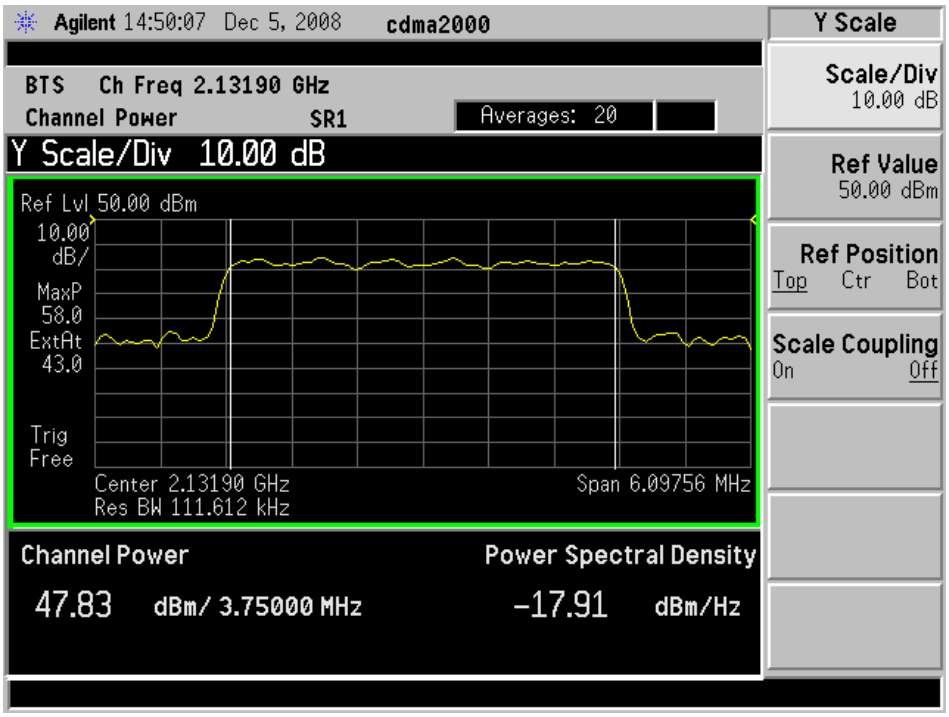
BTS Ch Freq 2.11805 GHz
Channel Power SR1
Averages: 20
Center Freq 2.118050000 GHz
Ref Lvl 50.00 dBm
10.00 dB/
MaxP 53.0
ExtAt 43.0
Trig Free
Center 2.11805 GHz
Res BW 111.612 kHz
Span 6.09756 MHz
Channel Power
47.84 dBm/ 3.75000 MHz
Power Spectral Density
-17.90 dBm/Hz
Freq/Chan
Center Freq
2.11805 GHz
CF Step
1.25000 MHz
Auto Man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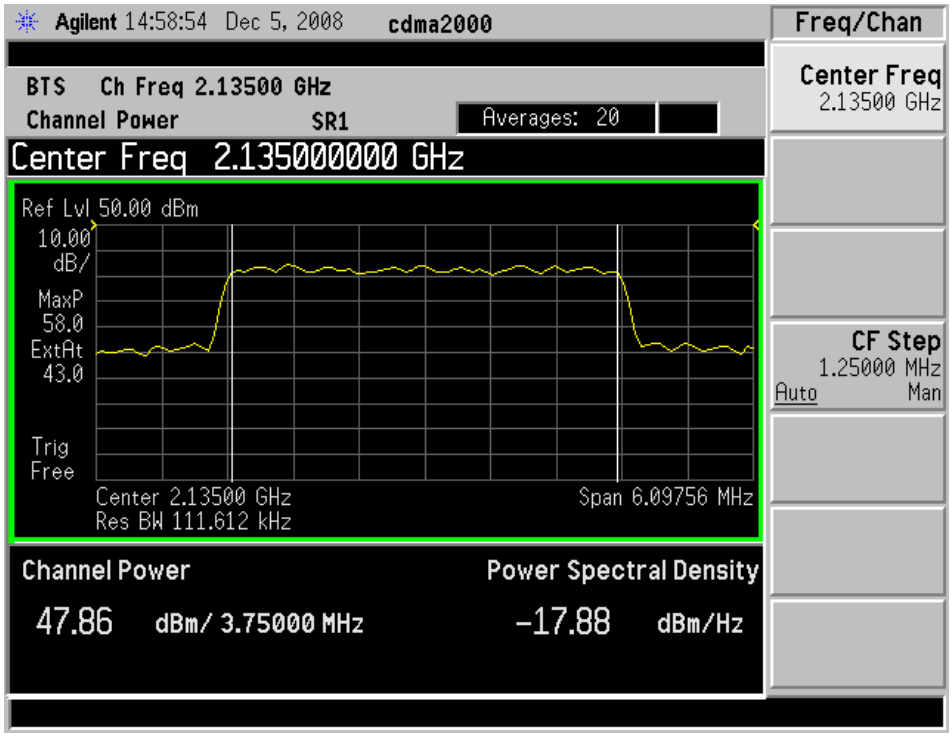
cdma2000
BTS Ch Freq 2.13190 GHz
Channel Power SR1
Averages: 20
Y Scale/Div 10.00 dB
Ref Lvl 50.00 dBm
10.00 dB/
MaxP 58.0
ExtAt 43.0
Trig Free
Center 2.13190 GHz
Res BW 111.612 kHz
Span 6.09756 MHz
Channel Power
47.83 dBm/ 3.75000 MHz
Power Spectral Density
-17.91 dBm/Hz
Y Scale
Scale/Div
10.00 dB
Ref Value
50.00 dBm
Ref Position
Top Ctr Bot
Scale Coupling
On Off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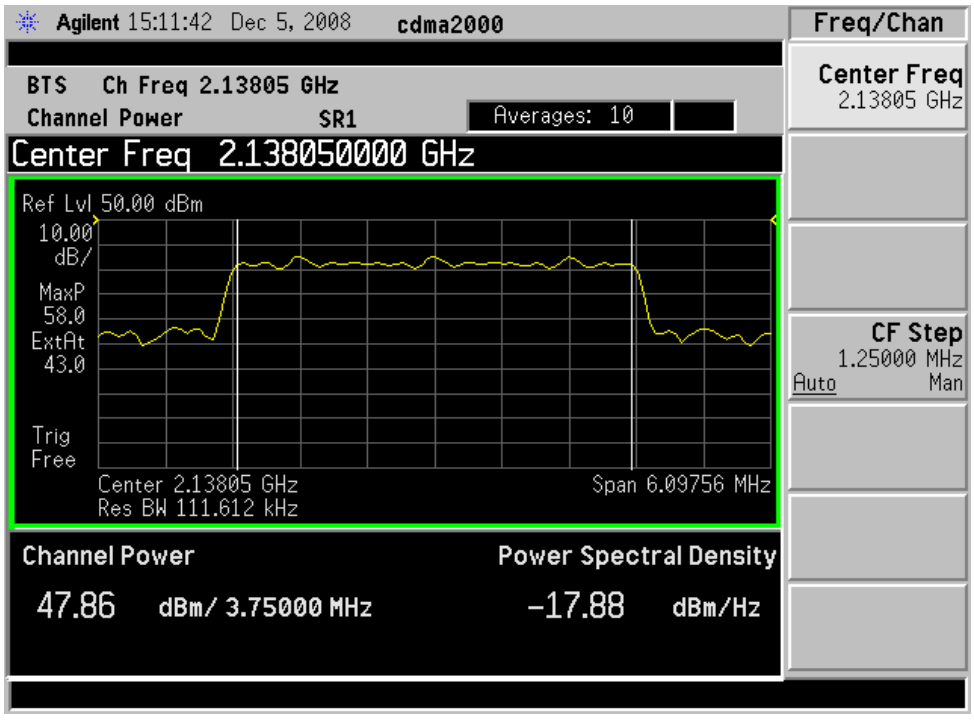
Freq/Chan
BTS Ch Freq 2.13500 GHz
Channel Power SR1
Averages: 20
Center Freq 2.135000000 GHz
Center Freq
2.13500 GHz
Ref Lvl 50.00 dBm
10.00
dB/
MaxP
58.0
ExtAt
43.0
Trig
Free
Center 2.13500 GHz
Res BW 111.612 kHz
Span 6.09756 MHz
CF Step
1.25000 MHz
Auto Man
Channel Power
47.86 dBm/ 3.75000 MHz
Power Spectral Density
-17.88 dBm/Hz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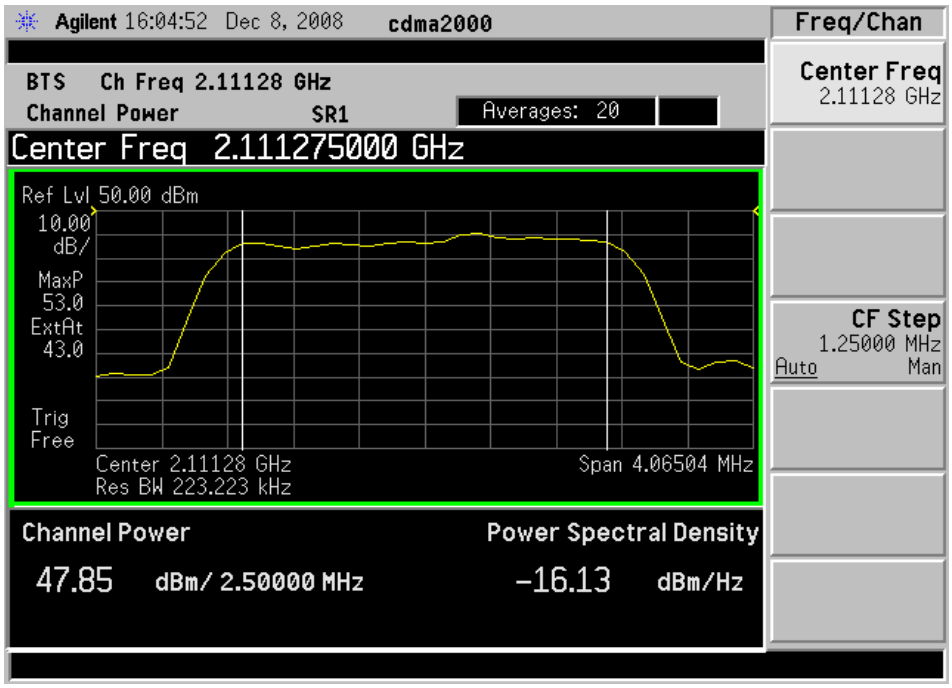
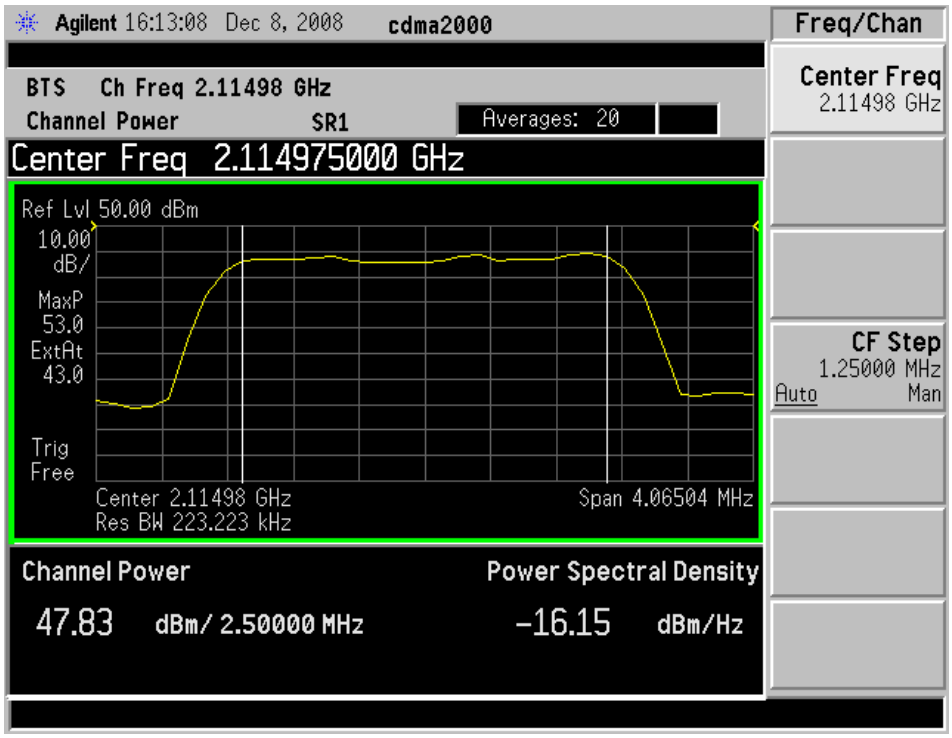
Freq/Chan
BTS Ch Freq 2.13805 GHz
Channel Power SR1
Averages: 10
Center Freq 2.138050000 GHz
Center Freq
2.13805 GHz
Ref Lvl 50.00 dBm
10.00
dB/
MaxP
58.0
ExtAt
43.0
Trig
Free
Center 2.13805 GHz
Res BW 111.612 kHz
Span 6.09756 MHz
CF Step
1.25000 MHz
Auto Man
Channel Power
47.86 dBm/ 3.75000 MHz
Power Spectral Density
-17.88 dBm/Hz

(3) Two Carriers

Center Frequency (MHz)	Frequency (MHz)	Channel	Total Power (dBm)	Total Power (Watt)	Limit (Watt)
2111.275	2110.65/2111.9	13/38	47.85	60.95	1640
2114.975	2114.35/2115.6	87/112	47.83	60.67	1640
2118.675	2118.05/2119.3	161/186	47.81	60.39	1640
2131.275	2130.65/2131.9	413/438	47.78	59.98	1640
2134.975	2134.35/2135.6	487/512	47.72	59.16	1640
2138.675	2138.05/2139.3	561/586	47.87	61.24	1640

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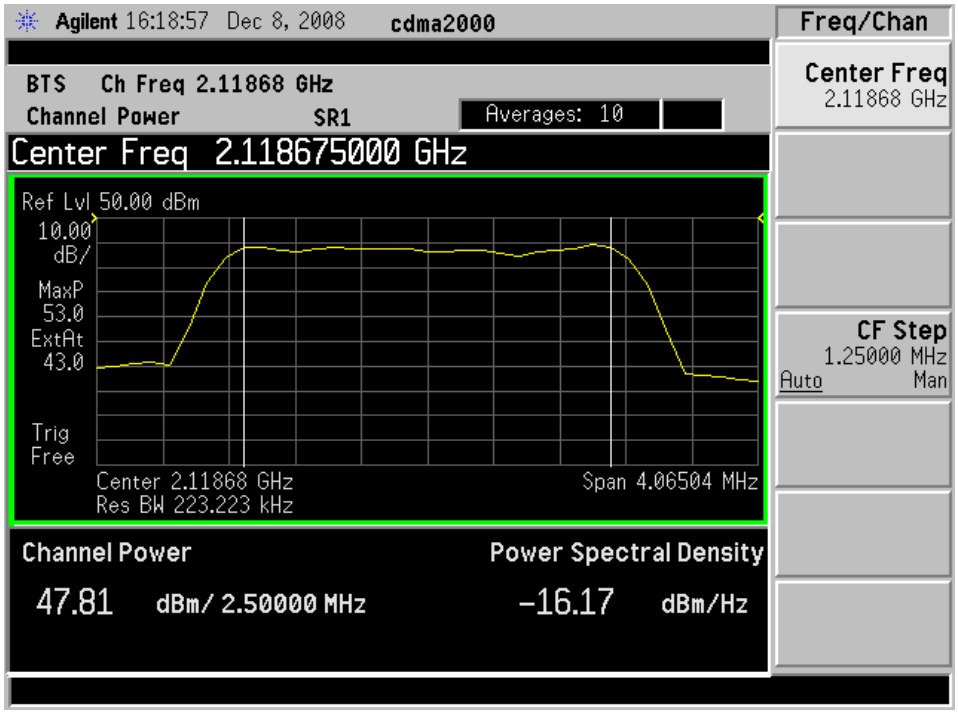
cdma2000
Freq/Chan
BTS Ch Freq 2.11498 GHz
Channel Power SR1
Averages: 20
Center Freq 2.114975000 GHz
Ref Lvl 50.00 dBm
10.00 dB/
MaxP 53.0
ExtAt 43.0
Trig Free
Center 2.11498 GHz
Res BW 223.223 kHz
Span 4.06504 MHz
Center Freq 2.11498 GHz
CF Step 1.25000 MHz
Auto Man
Channel Power
47.83 dBm/ 2.50000 MHz
Power Spectral Density
-16.15 dBm/Hz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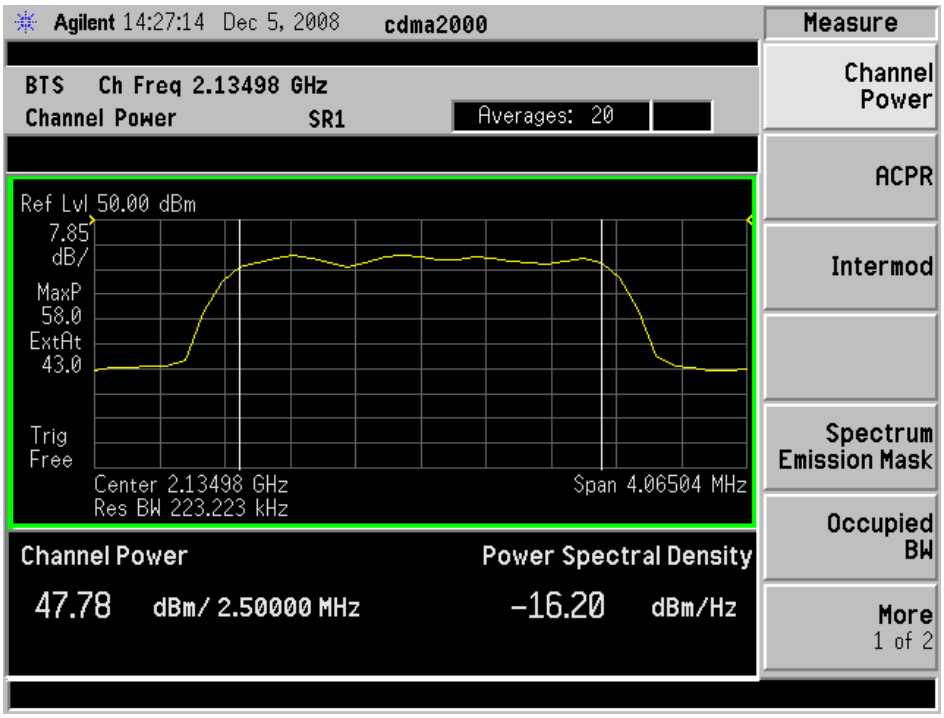
cdma2000
Freq/Chan
BTS Ch Freq 2.11868 GHz
Channel Power SR1
Averages: 10
Center Freq 2.118675000 GHz
Ref Lvl 50.00 dBm
10.00 dB/
MaxP 53.0
ExtAt 43.0
Trig Free
Center 2.11868 GHz
Res BW 223.223 kHz
Span 4.06504 MHz
Center Freq 2.11868 GHz
CF Step 1.25000 MHz
Auto Man
Channel Power
47.81 dBm/ 2.50000 MHz
Power Spectral Density
-16.17 dBm/Hz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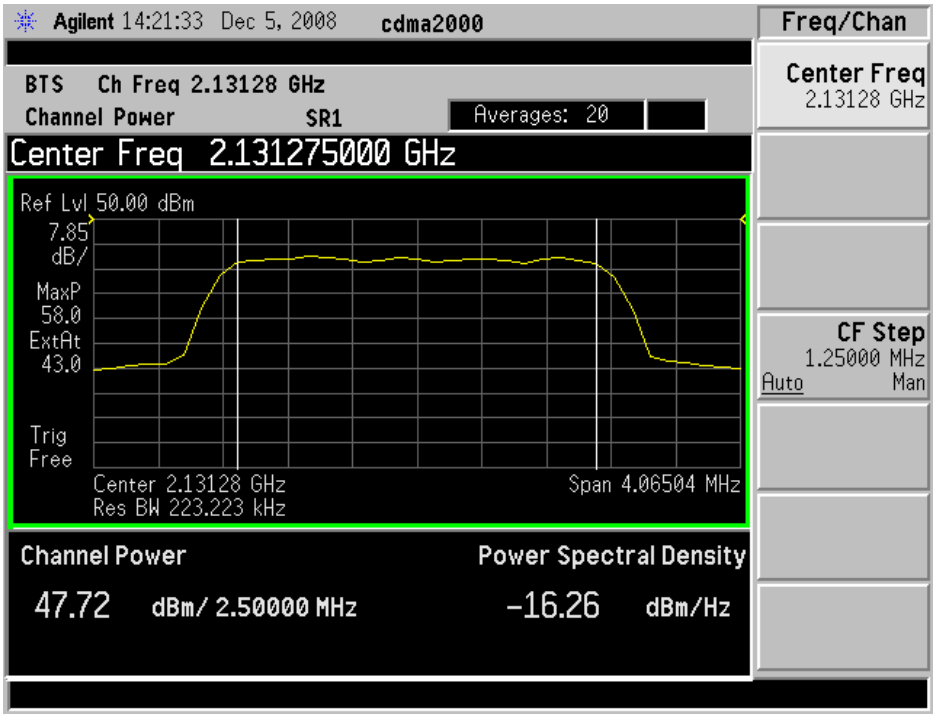
BTS Ch Freq 2.13498 GHz
Channel Power SR1
Averages: 20
Ref Lvl 50.00 dBm
7.85 dB/
MaxP 58.0
ExtAt 43.0
Trig Free
Center 2.13498 GHz
Res BW 223.223 kHz
Span 4.06504 MHz
Channel Power
47.78 dBm/ 2.50000 MHz
Power Spectral Density
-16.20 dBm/Hz
Measure
Channel Power
ACPR
Intermod
Spectrum Emission Mask
Occupied BW
More 1 of 2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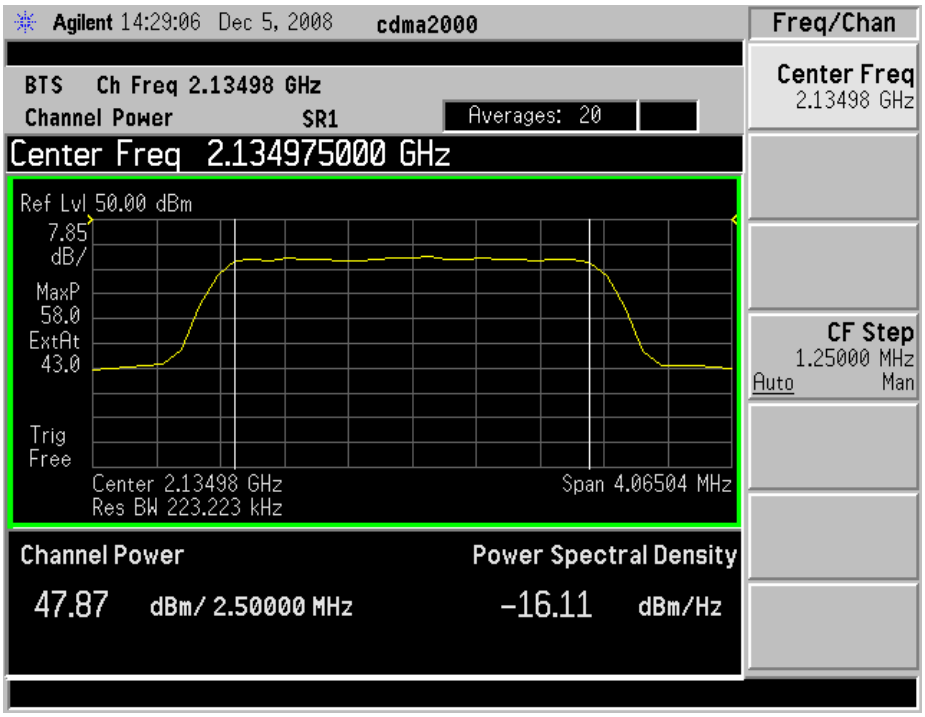
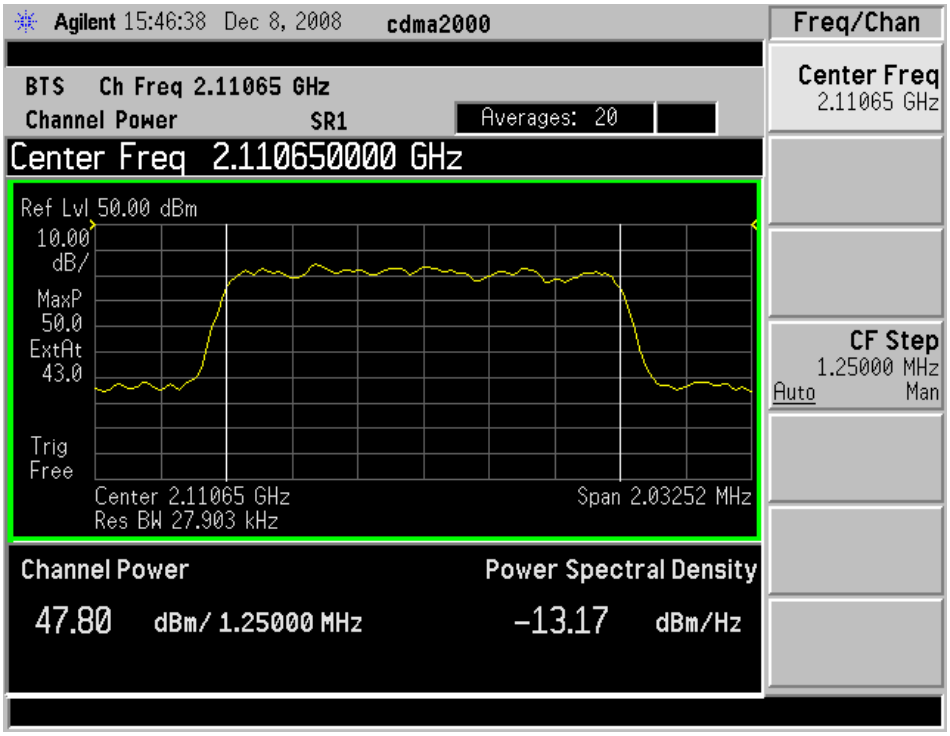
cdma2000
BTS Ch Freq 2.13128 GHz
Channel Power SR1
Averages: 20
Center Freq 2.131275000 GHz
Ref Lvl 50.00 dBm
7.85 dB/
MaxP 58.0
ExtAt 43.0
Trig Free
Center 2.13128 GHz
Res BW 223.223 kHz
Span 4.06504 MHz
Channel Power
47.72 dBm/ 2.50000 MHz
Power Spectral Density
-16.26 dBm/Hz
Freq/Chan
Center Freq 2.13128 GHz
CF Step 1.25000 MHz
Auto Man



(4) One Carrier

Center Frequency (MHz)	Frequency (MHz)	Channel	Total Power (dBm)	Total Power (Watt)	Limit (Watt)
2110.65	2110.65	13	47.80	60.26	1640
2115	2115	100	47.79	60.12	1640
2119.3	2119.3	186	47.80	60.26	1640
2130.65	2130.65	413	47.72	59.16	1640
2135	2135	500	47.84	60.81	1640
2139.3	2139.3	586	47.79	60.12	1640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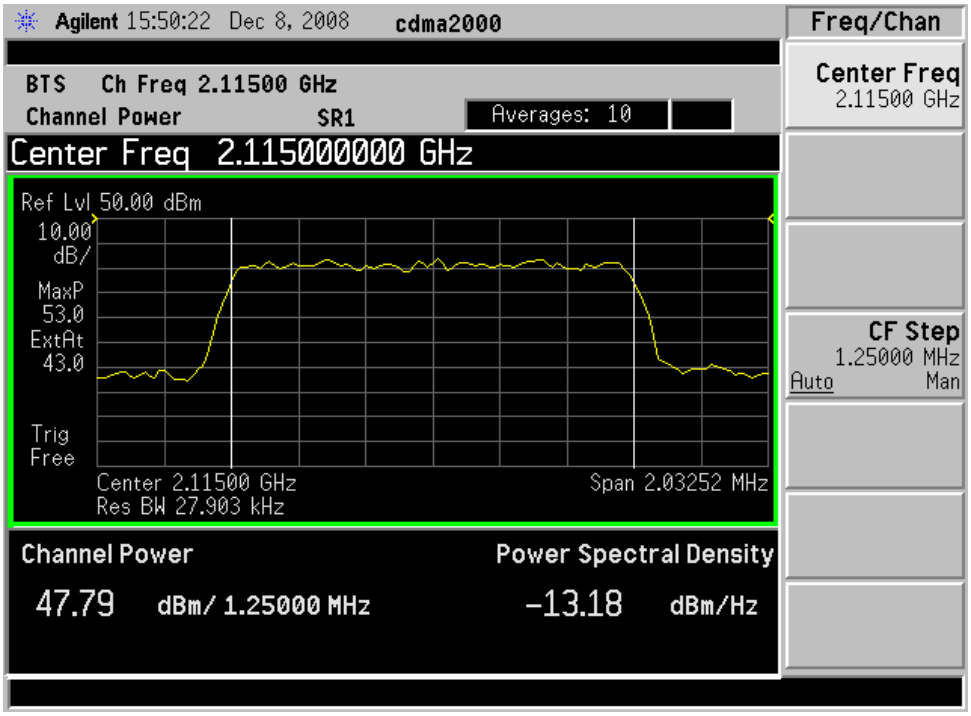
cdma2000
Freq/Chan
BTS Ch Freq 2.11065 GHz
Channel Power SR1
Averages: 20
Center Freq 2.110650000 GHz
Center Freq
2.11065 GHz
Ref Lvl 50.00 dBm
10.00
dB/
MaxP
50.0
ExtAt
43.0
Trig
Free
Center 2.11065 GHz
Res BW 27.903 kHz
Span 2.03252 MHz
CF Step
1.25000 MHz
Auto Man
Channel Power
47.80 dBm/ 1.25000 MHz
Power Spectral Density
-13.17 dBm/Hz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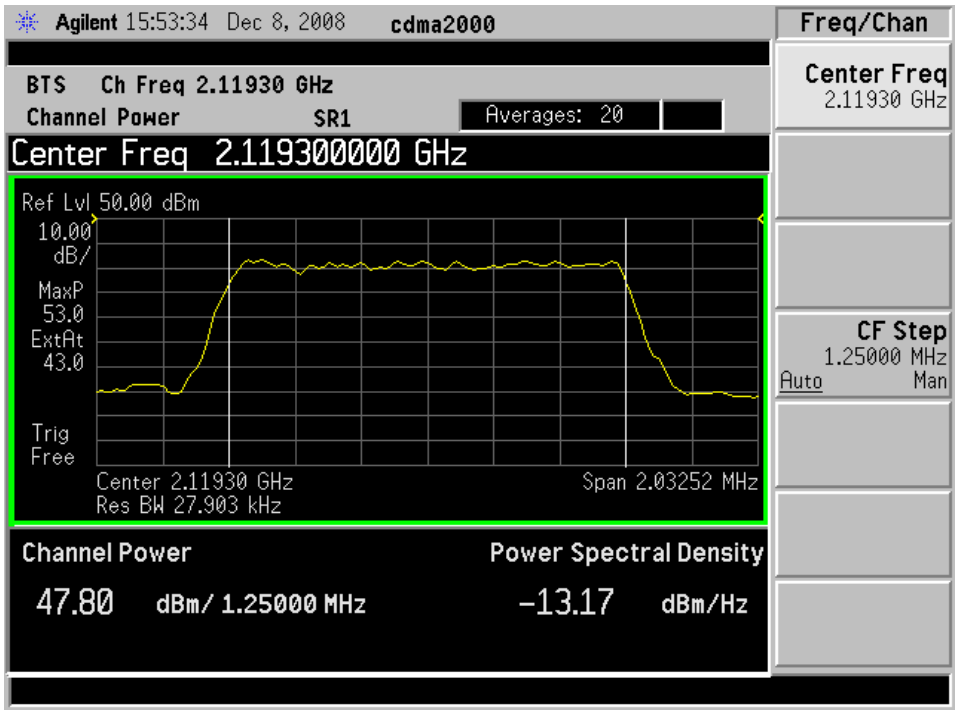
Freq/Chan
BTS Ch Freq 2.11500 GHz
Channel Power SR1
Averages: 10
Center Freq 2.115000000 GHz
Center Freq
2.11500 GHz
Ref Lvl 50.00 dBm
10.00
dB/
MaxP
53.0
ExtAt
43.0
Trig
Free
Center 2.11500 GHz
Res BW 27.903 kHz
Span 2.03252 MHz
CF Step
1.25000 MHz
Auto Man
Channel Power
47.79 dBm/ 1.25000 MHz
Power Spectral Density
-13.18 dBm/Hz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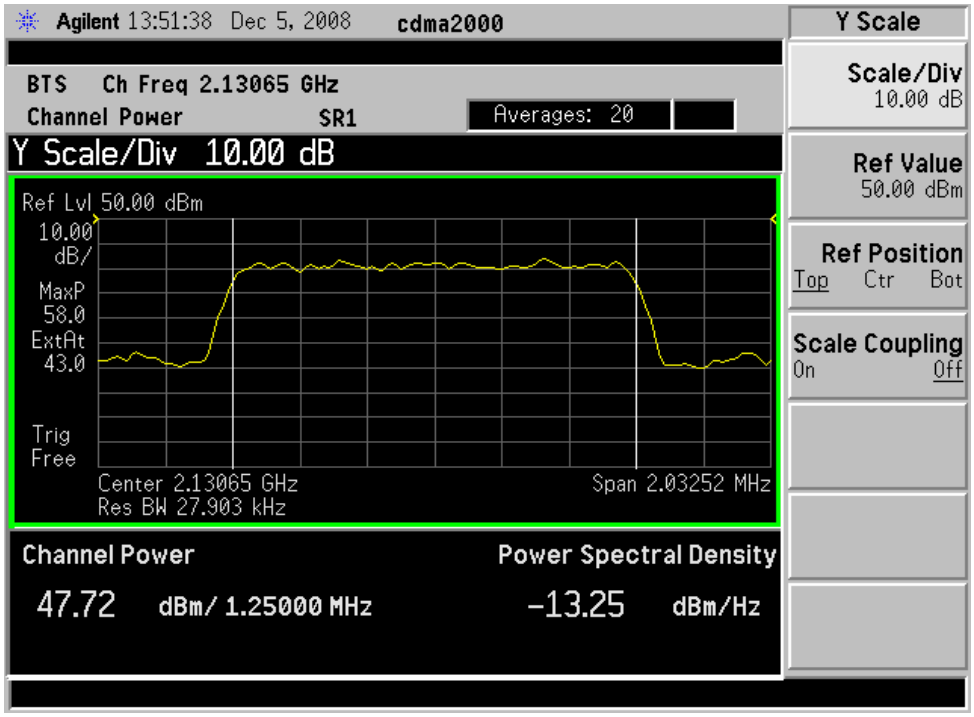
BTS Ch Freq 2.11930 GHz
Channel Power SR1
Averages: 20
Center Freq 2.119300000 GHz
Ref Lvl 50.00 dBm
10.00 dB/
MaxP 53.0
ExtAt 43.0
Trig Free
Center 2.11930 GHz
Res BW 27.903 kHz
Span 2.03252 MHz
Channel Power
47.80 dBm/ 1.25000 MHz
Power Spectral Density
-13.17 dBm/Hz
Freq/Chan
Center Freq
2.11930 GHz
CF Step
1.25000 MHz
Auto Man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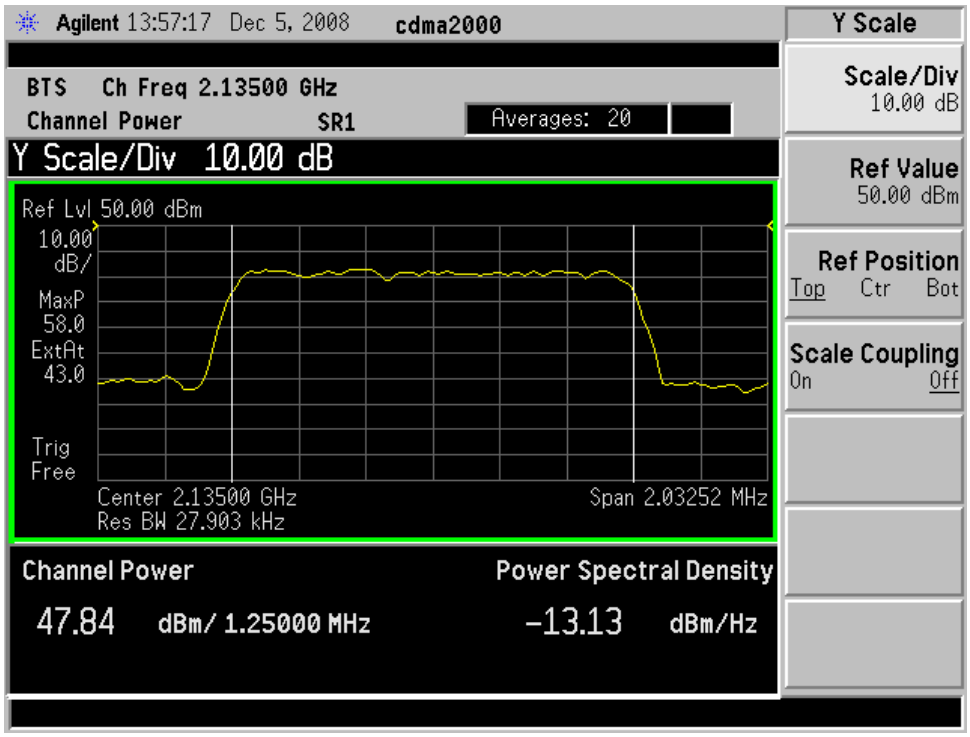
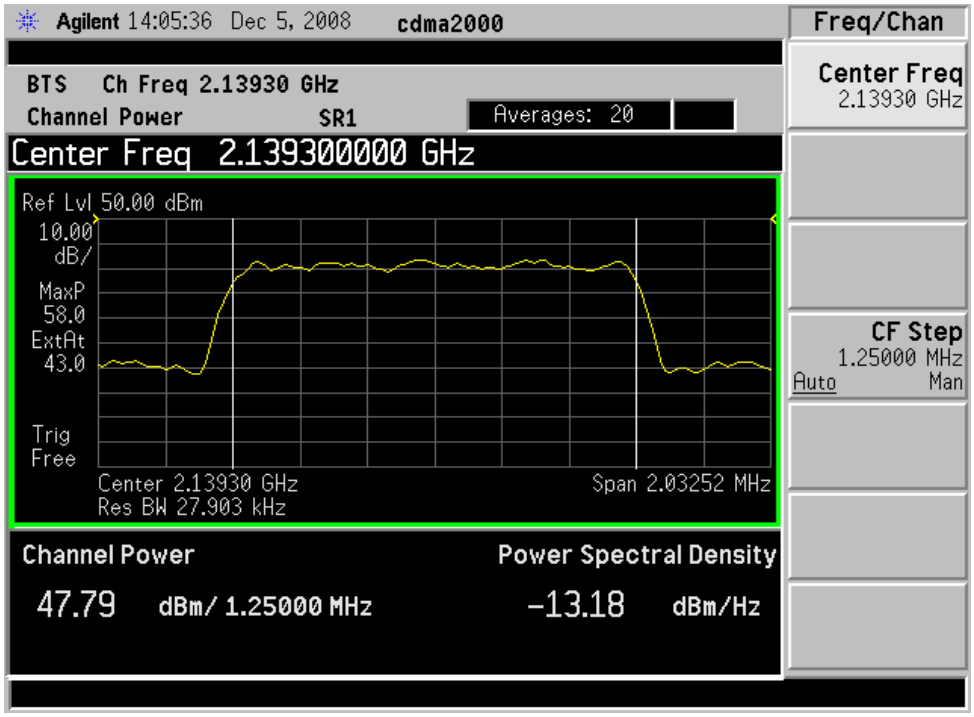
BTS Ch Freq 2.13065 GHz
Channel Power SR1
Averages: 20
Y Scale/Div 10.00 dB
Ref Lvl 50.00 dBm
10.00 dB/
MaxP 58.0
ExtAt 43.0
Trig Free
Center 2.13065 GHz
Res BW 27.903 kHz
Span 2.03252 MHz
Channel Power
47.72 dBm/ 1.25000 MHz
Power Spectral Density
-13.25 dBm/Hz
Y Scale
Scale/Div
10.00 dB
Ref Value
50.00 dBm
Ref Position
Top Ctr Bot
Scale Coupling
On Off


Agilent 13:57:17 Dec 5, 2008
cdma2000
BTS Ch Freq 2.13500 GHz
Channel Power SR1
Averages: 20
Y Scale/Div 10.00 dB
Ref Lvl 50.00 dBm
10.00 dB/
MaxP 58.0
ExtAt 43.0
Trig Free
Center 2.13500 GHz
Res BW 27.903 kHz
Span 2.03252 MHz
Channel Power
47.84 dBm/ 1.25000 MHz
Power Spectral Density
-13.13 dBm/Hz
Y Scale
Scale/Div 10.00 dB
Ref Value 50.00 dBm
Ref Position Top Ctr Bot
Scale Coupling On Off


Agilent 14:05:36 Dec 5, 2008
cdma2000
BTS Ch Freq 2.13930 GHz
Channel Power SR1
Averages: 20
Center Freq 2.139300000 GHz
Ref Lvl 50.00 dBm
10.00 dB/
MaxP 58.0
ExtAt 43.0
Trig Free
Center 2.13930 GHz
Res BW 27.903 kHz
Span 2.03252 MHz
Channel Power
47.79 dBm/ 1.25000 MHz
Power Spectral Density
-13.18 dBm/Hz
Freq/Chan
Center Freq 2.13930 GHz
CF Step 1.25000 MHz
Auto Man

§2.1091, §1.1307 and §27.52 – MAXIMUN PERMISSIBLE EXPOSURE

Applicable Standard

The Federal Communications Commission (FCC), are imposing MPE (maximum permissible exposure) limits. FCC CFR part 1, subpart I, section 1.1307 requires operator to perform an Environmental Assessment (EA). Equipment listed in the table 1 of before mentioned part is subjected to routine environmental evaluation.

The objective of the Environmental Evaluation is to ensure that human exposure to RF energy does not go beyond the maximum permissible levels stated in the standard. Therefore certain sites do not require an evaluation by nature of its design. It could be that the antennas are placed high enough thereby resulting in extremely low RF fields by the time it reaches areas that would be accessible to people.

According to 47CFR Part 27.52 (RF safety), Licensees and manufacturers are subject to the radio frequency radiation exposure requirements specified in sections 1.1307(b), 2.1091, and 2.1093 of 47CFR, as appropriate. Applications for equipment authorization of mobile or portable devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for this statement must be submitted to the Commission upon request.

Limits for Maximum Permissible Exposure (MPE)

Limits for Occupational/Controlled Exposure			
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mw/cm^2)**
0.3 ~ 3.0	614	16.3/f	(100)*
3.0 ~ 30	1842/f	16.3/f	$(900/f^2)$*
30 ~ 300	61.4	0.163	1.0
300 ~ 1500	/	/	f/300
15,000 ~ 100,000	/	/	5

Limits for General Population/Uncontrolled Exposure			
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mw/cm^2)**
0.3 ~ 3.0	614	1.63	(100)*
3.0 ~ 30	842/f	2.19/f	$(180/f^2)$*
30 ~ 300	27.5	0.073	0.2
300 ~ 1500	/	/	f/1500
15,000 ~ 100,000	/	/	1.0

Prediction of the Exposure to Electromagnetic Fields

Calculations can be made on a site by site basis to ensure the power density is below the limits given above, or guidelines can be done beforehand to ensure the minimum distances from the antenna is maintained through the site planning. The calculations are based on FCC OET 65 Appendix B.

$S = PG/ 4\pi R^2$

Where: S = power density
P = power input to antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

Conclusion

Maximum peak output power at antenna input terminal: 47.89 (dBm)
Maximum peak output power at antenna input terminals: 61.5(W)
Prediction distance: 400 (cm)
Predication frequency: 2132.525 (MHz)
Antenna Gain (typical): 13 (dBi)
Power density at predication frequency at 400 cm: 0.61 (mW/cm2)
MPE limit for uncontrolled exposure at prediction frequency: 1.0 (mW/cm2)

The device complies with 400 cm distance.

§2.1047 – MODULATION CHARACTERISTICS

Applicable Standard

Requirements: CFR 47, § 2.1047.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	PSA Series Spectrum Analyzer	E4445A	MY44300451	2008-5-2	2009-5-2
DTS	DTS100 40dB Attenuator	DTS100-40dB-N	N/A	N/A	N/A
Hewlett Packard	Hewlett Packard RF Cable	8120-6192	01428251	N/A	N/A

*** Statement of Traceability: ZTE Corporation Reliability Testing Center** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

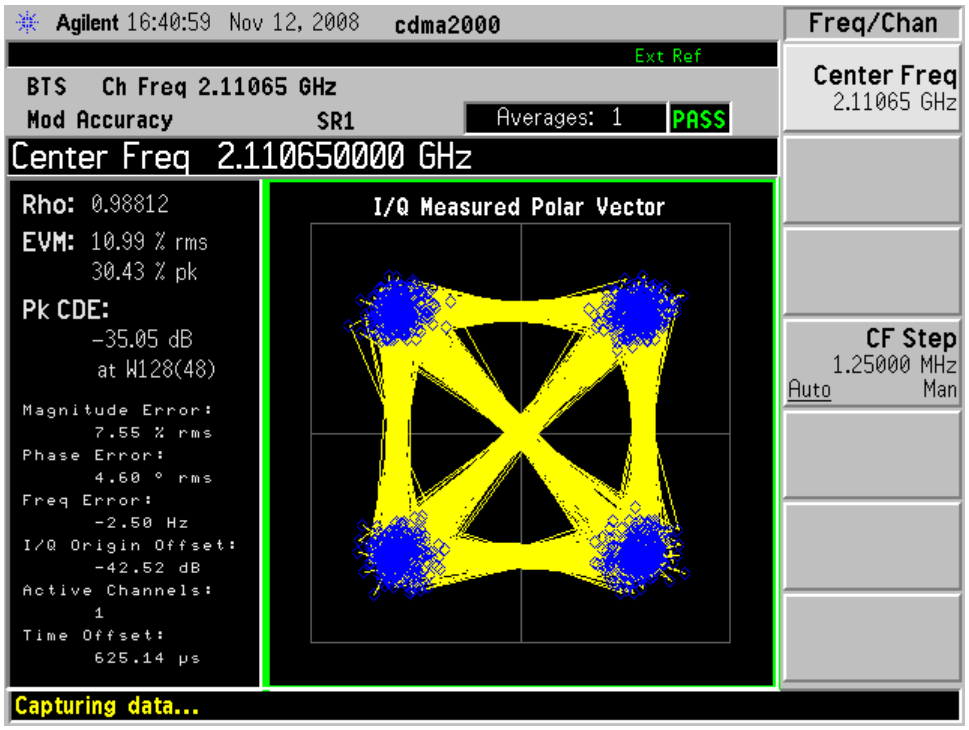
Temperature:	20 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

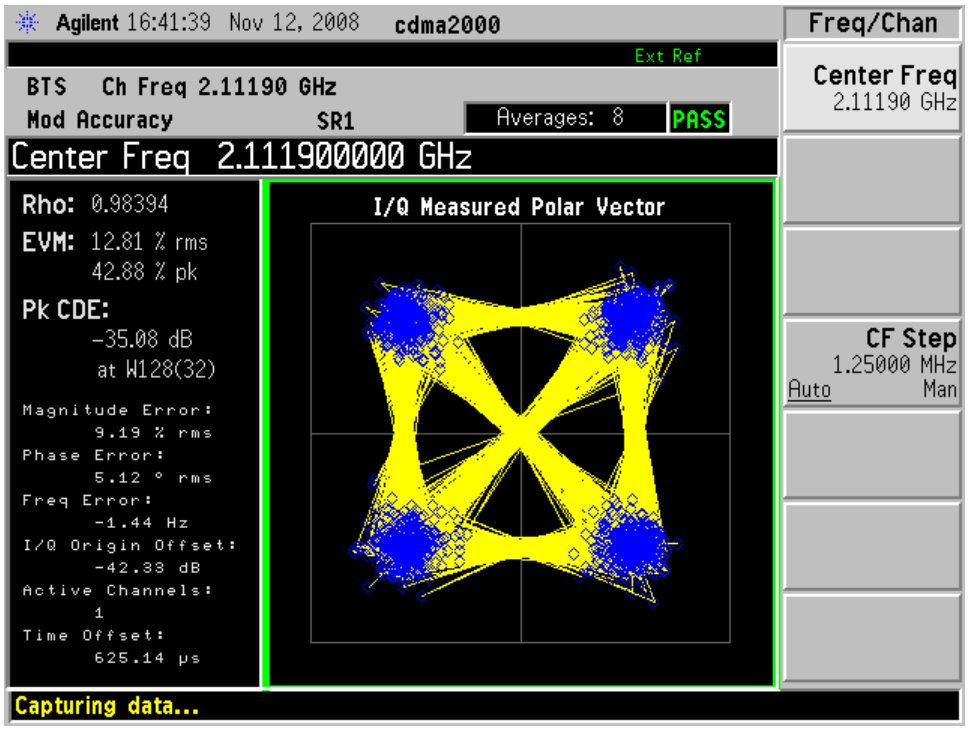
** The testing was performed by Ma Tianfei on Nov 12-13, 2008*

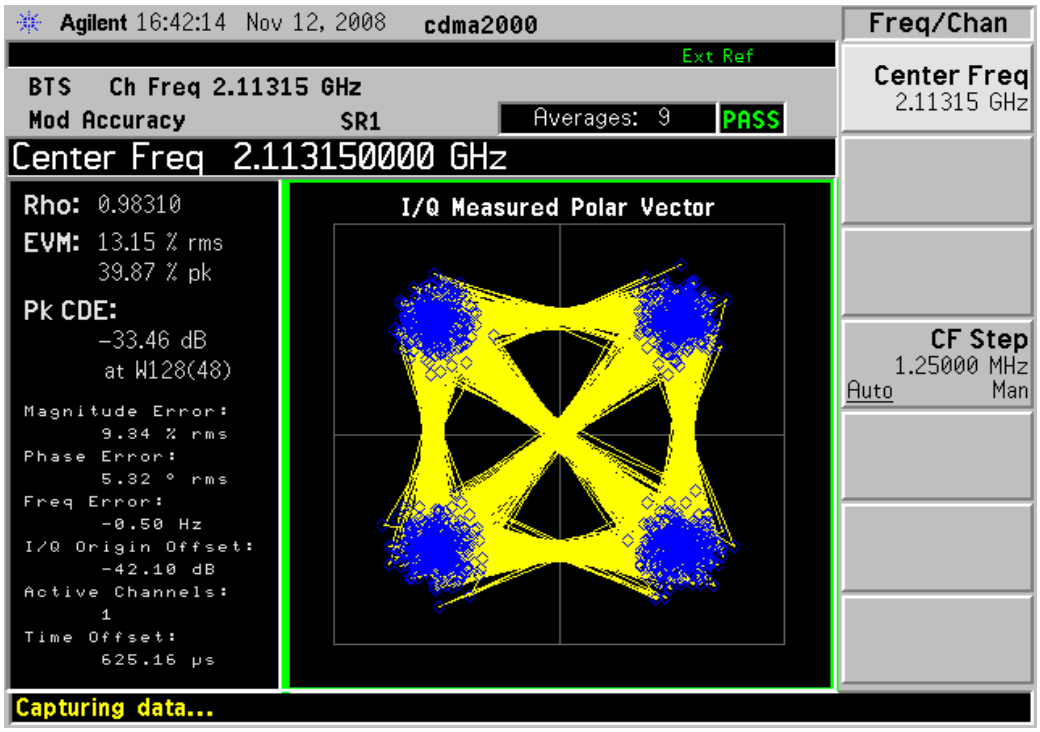
Test Mode: CDMA2000 1X

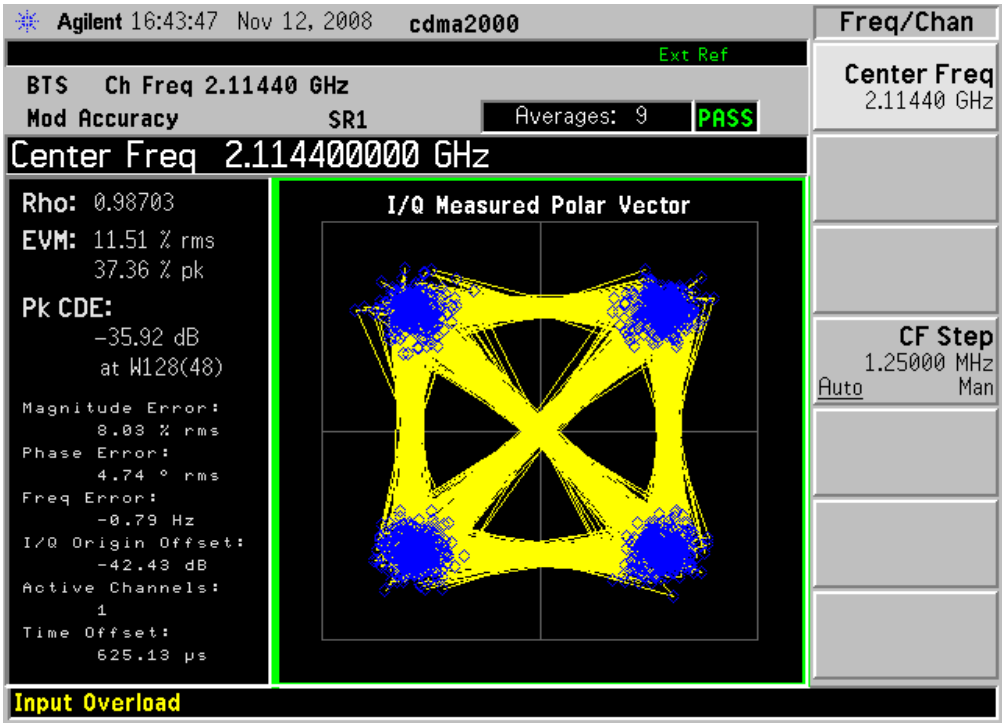
Four Carriers

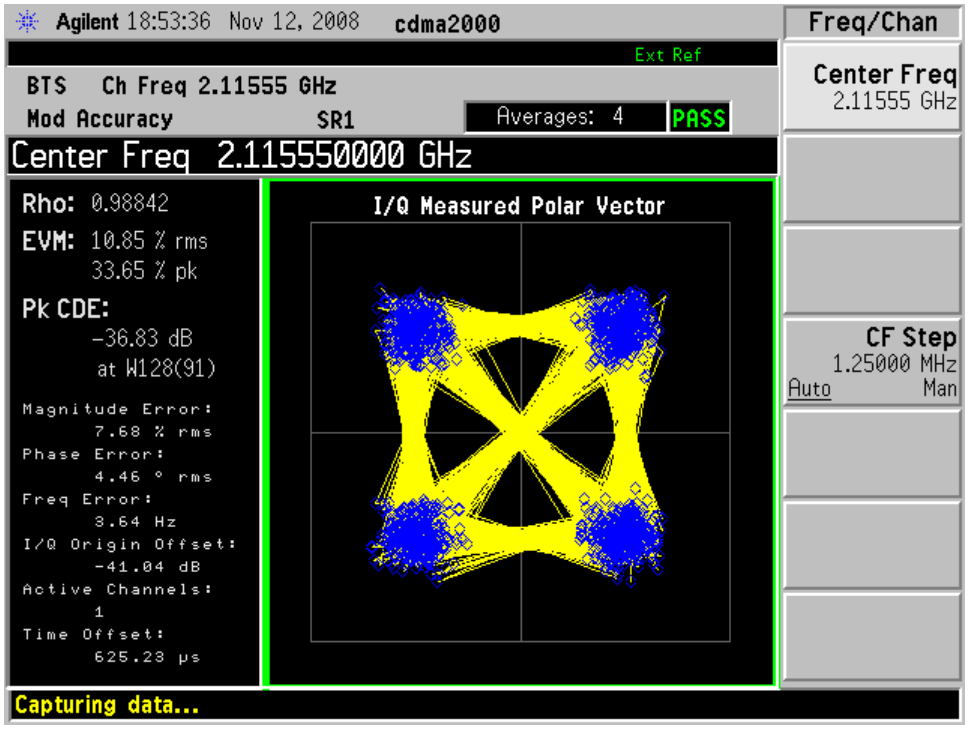
Frequency (MHz)	Channel	Rho
2110.65/2111.9/2113.15/2114.4	13/38/63/88	0.98812/0.98394/0.98310/0.98703
2115.55/2116.8/2118.05/2119.3	111/136/161/186	0.98842/0.98343/0.98462/0.98888
2130.65/2131.9/2133.15/2134.4	413/438/463/488	0.98842/0.98349/0.98321/0.98686
2135.55/2136.8/2138.05/2139.3	511/536/561/586	0.98723/0.98265/0.98463/0.98872

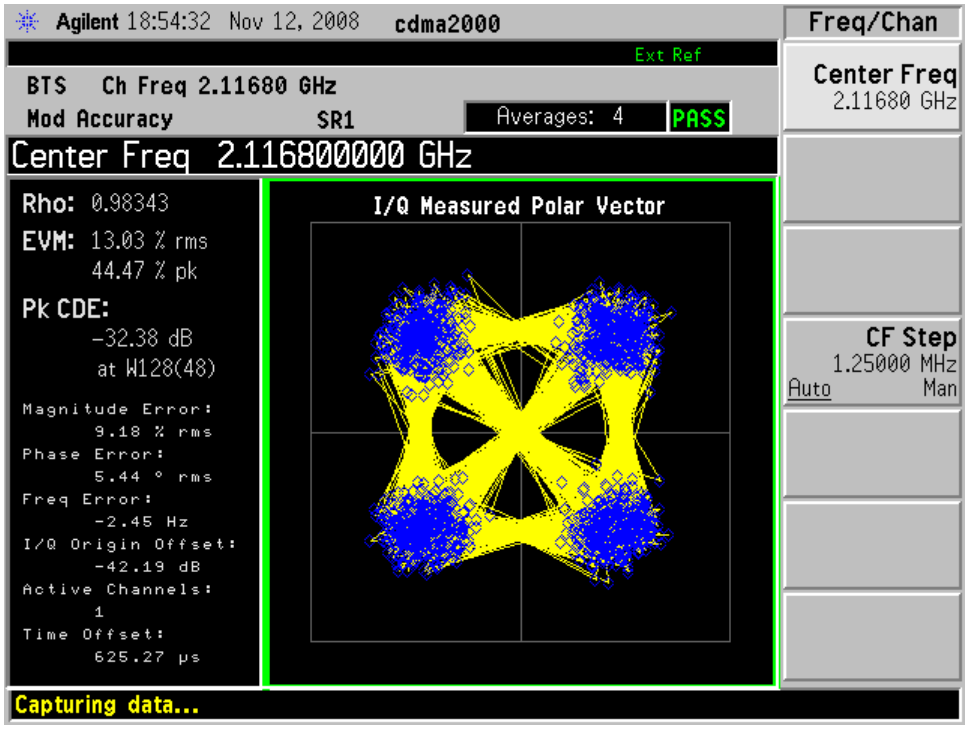

Agilent 16:40:59 Nov 12, 2008 cdma2000
Ext Ref
BTS Ch Freq 2.11065 GHz
Mod Accuracy SR1
Averages: 1
PASS
Center Freq 2.110650000 GHz
Rho: 0.98812
EVM: 10.99 % rms
30.43 % pk
Pk CDE:
-35.05 dB
at W128(48)
Magnitude Error:
7.55 % rms
Phase Error:
4.60 ° rms
Freq Error:
-2.50 Hz
I/Q Origin Offset:
-42.52 dB
Active Channels:
1
Time Offset:
625.14 µs
I/Q Measured Polar Vector
Capturing data...
Freq/Chan
Center Freq
2.11065 GHz
CF Step
1.25000 MHz
Auto
Man

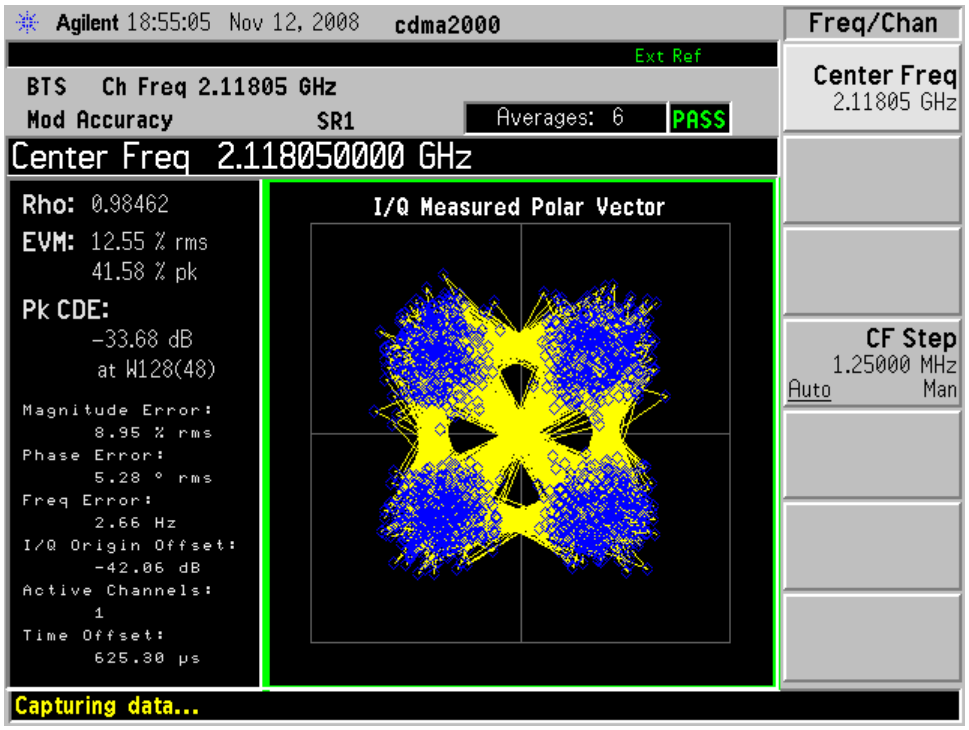

Agilent 16:41:39 Nov 12, 2008 cdma2000
Ext Ref
BTS Ch Freq 2.11190 GHz
Mod Accuracy SR1
Averages: 8
PASS
Center Freq 2.111900000 GHz
Rho: 0.98394
EVM: 12.81 % rms
42.88 % pk
Pk CDE:
-35.08 dB
at W128(32)
Magnitude Error:
9.19 % rms
Phase Error:
5.12 ° rms
Freq Error:
-1.44 Hz
I/Q Origin Offset:
-42.33 dB
Active Channels:
1
Time Offset:
625.14 µs
I/Q Measured Polar Vector
Capturing data...
Freq/Chan
Center Freq
2.11190 GHz
CF Step
1.25000 MHz
Auto
Man

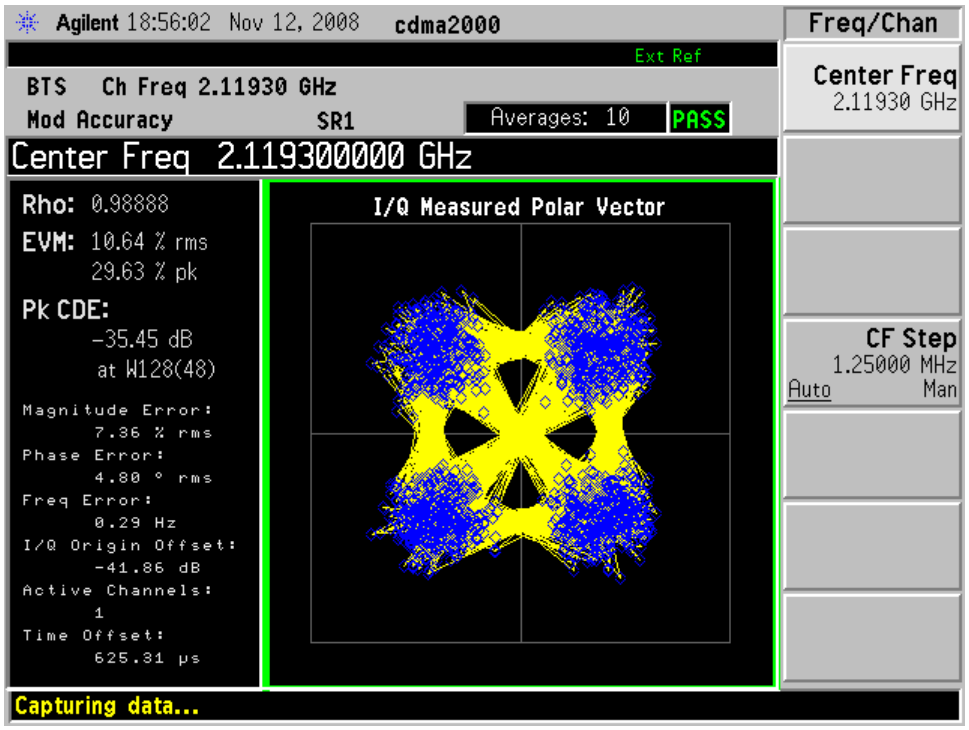

Agilent 16:42:14 Nov 12, 2008
cdma2000
Freq/Chan
Ext Ref
BTS Ch Freq 2.11315 GHz
Mod Accuracy SR1
Averages: 9
PASS
Center Freq 2.113150000 GHz
Rho: 0.98310
EVM: 13.15 % rms
39.87 % pk
Pk CDE:
-33.46 dB
at W128(48)
Magnitude Error:
9.34 % rms
Phase Error:
5.32 ° rms
Freq Error:
-0.50 Hz
I/Q Origin Offset:
-42.10 dB
Active Channels:
1
Time Offset:
625.16 ps
I/Q Measured Polar Vector
Center Freq
2.11315 GHz
CF Step
1.25000 MHz
Auto
Man
Capturing data...

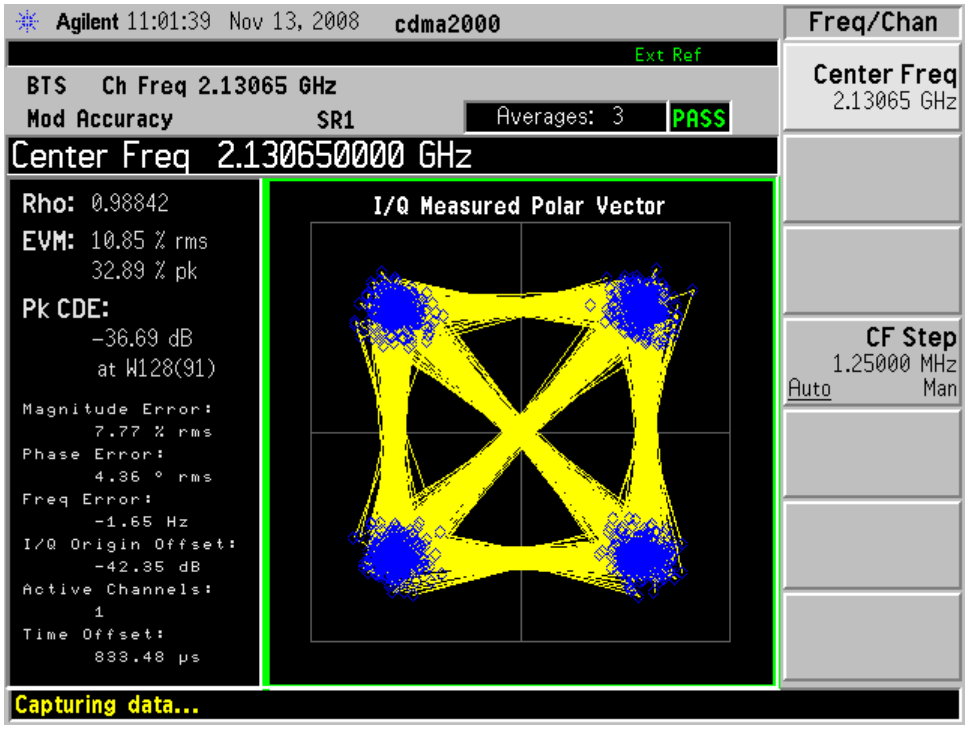

Agilent 16:43:47 Nov 12, 2008
cdma2000
Freq/Chan
Ext Ref
BTS Ch Freq 2.11440 GHz
Mod Accuracy SR1
Averages: 9
PASS
Center Freq 2.114400000 GHz
Rho: 0.98703
EVM: 11.51 % rms
37.36 % pk
Pk CDE:
-35.92 dB
at W128(48)
Magnitude Error:
8.03 % rms
Phase Error:
4.74 ° rms
Freq Error:
-0.79 Hz
I/Q Origin Offset:
-42.43 dB
Active Channels:
1
Time Offset:
625.13 ps
I/Q Measured Polar Vector
Center Freq
2.11440 GHz
CF Step
1.25000 MHz
Auto
Man
Input Overload

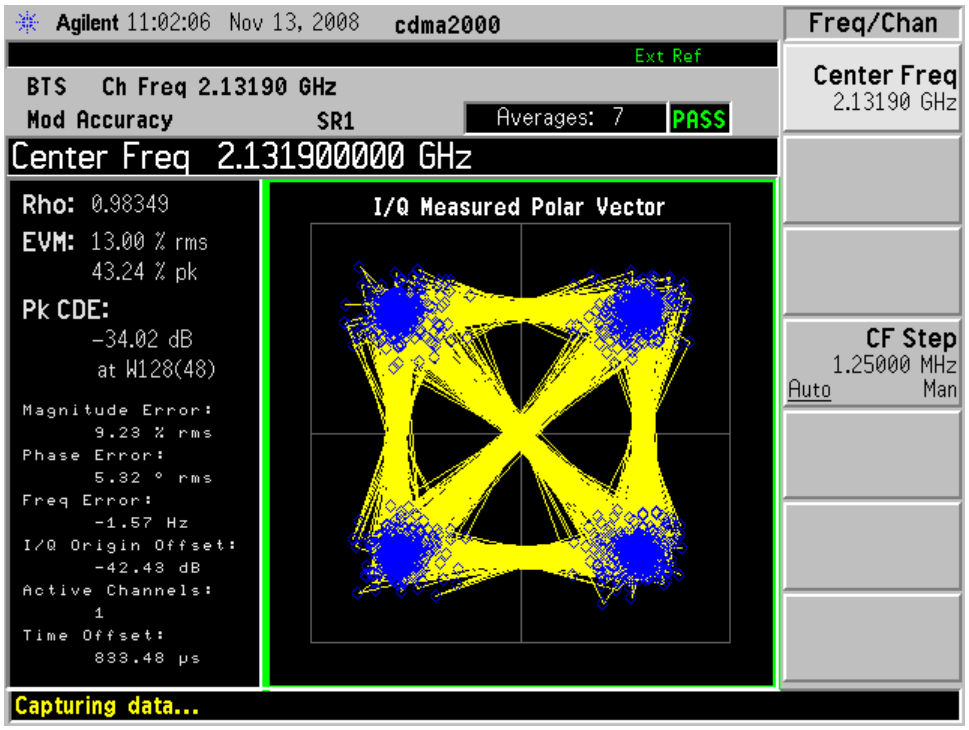

Agilent 18:53:36 Nov 12, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.11555 GHz
Mod Accuracy SR1
Averages: 4
PASS
Center Freq 2.115550000 GHz
Rho: 0.98842
EVM: 10.85 % rms
33.65 % pk
Pk CDE:
-36.83 dB
at W128(91)
Magnitude Error:
7.68 % rms
Phase Error:
4.46 ° rms
Freq Error:
3.64 Hz
I/Q Origin Offset:
-41.04 dB
Active Channels:
1
Time Offset:
625.23 µs
I/Q Measured Polar Vector
Capturing data...
Freq/Chan
Center Freq
2.11555 GHz
CF Step
1.25000 MHz
Auto
Man

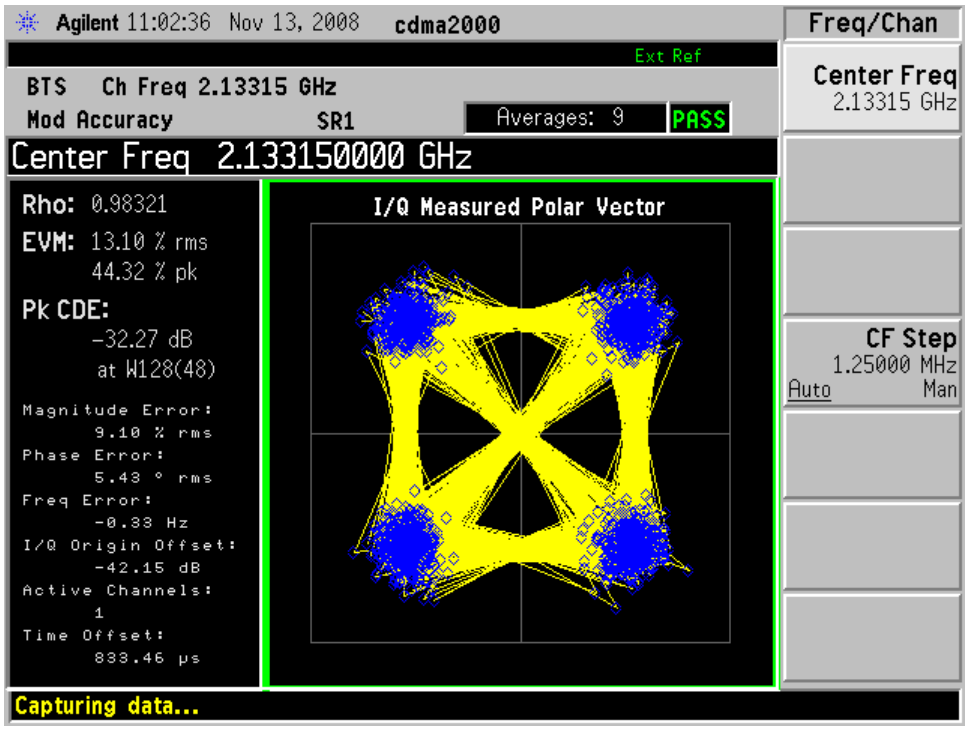

Agilent 18:54:32 Nov 12, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.11680 GHz
Mod Accuracy SR1
Averages: 4
PASS
Center Freq 2.116800000 GHz
Rho: 0.98343
EVM: 13.03 % rms
44.47 % pk
Pk CDE:
-32.38 dB
at W128(48)
Magnitude Error:
9.18 % rms
Phase Error:
5.44 ° rms
Freq Error:
-2.45 Hz
I/Q Origin Offset:
-42.19 dB
Active Channels:
1
Time Offset:
625.27 µs
I/Q Measured Polar Vector
Capturing data...
Freq/Chan
Center Freq
2.11680 GHz
CF Step
1.25000 MHz
Auto
Man

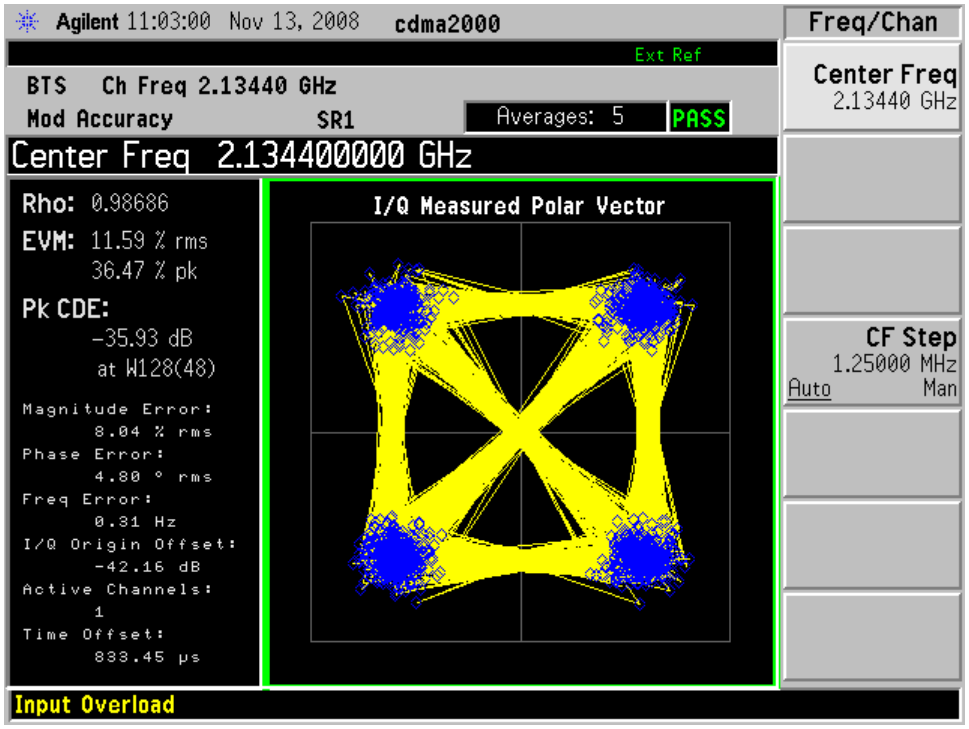

Agilent 18:55:05 Nov 12, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.11805 GHz
Mod Accuracy SR1
Averages: 6
PASS
Center Freq 2.118050000 GHz
Rho: 0.98462
EVM: 12.55 % rms
41.58 % pk
Pk CDE:
-33.68 dB
at W128(48)
Magnitude Error:
8.95 % rms
Phase Error:
5.28 ° rms
Freq Error:
2.66 Hz
I/Q Origin Offset:
-42.06 dB
Active Channels:
1
Time Offset:
625.30 µs
I/Q Measured Polar Vector
Capturing data...
Freq/Chan
Center Freq
2.11805 GHz
CF Step
1.25000 MHz
Auto
Man

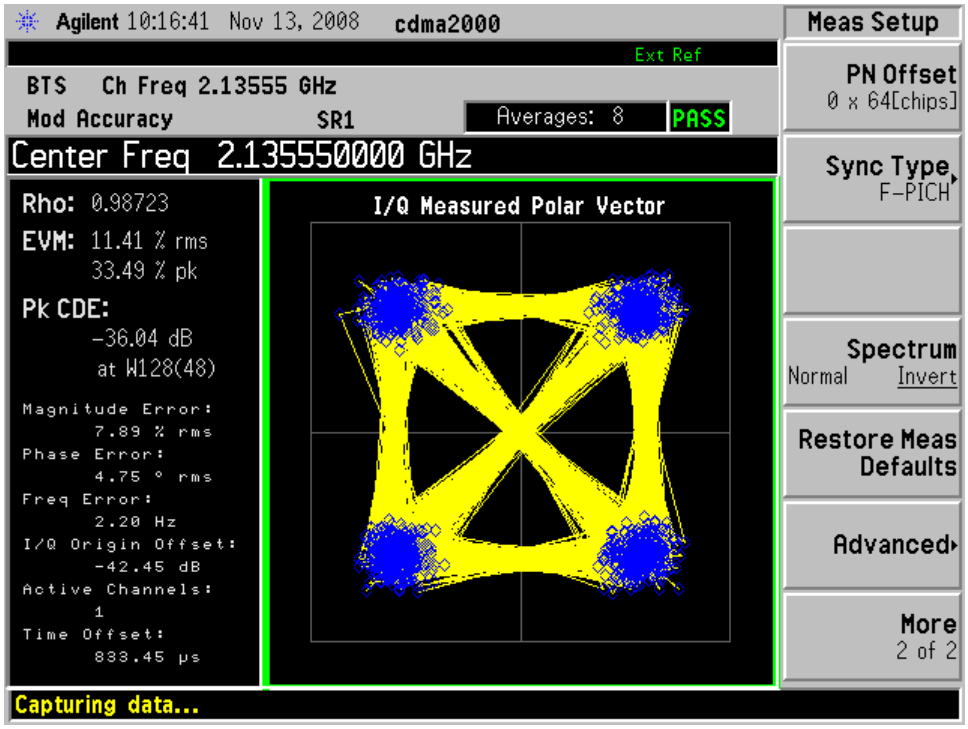

Agilent 18:56:02 Nov 12, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.11930 GHz
Mod Accuracy SR1
Averages: 10
PASS
Center Freq 2.119300000 GHz
Rho: 0.98888
EVM: 10.64 % rms
29.63 % pk
Pk CDE:
-35.45 dB
at W128(48)
Magnitude Error:
7.36 % rms
Phase Error:
4.80 ° rms
Freq Error:
0.29 Hz
I/Q Origin Offset:
-41.86 dB
Active Channels:
1
Time Offset:
625.31 µs
I/Q Measured Polar Vector
Capturing data...
Freq/Chan
Center Freq
2.11930 GHz
CF Step
1.25000 MHz
Auto
Man

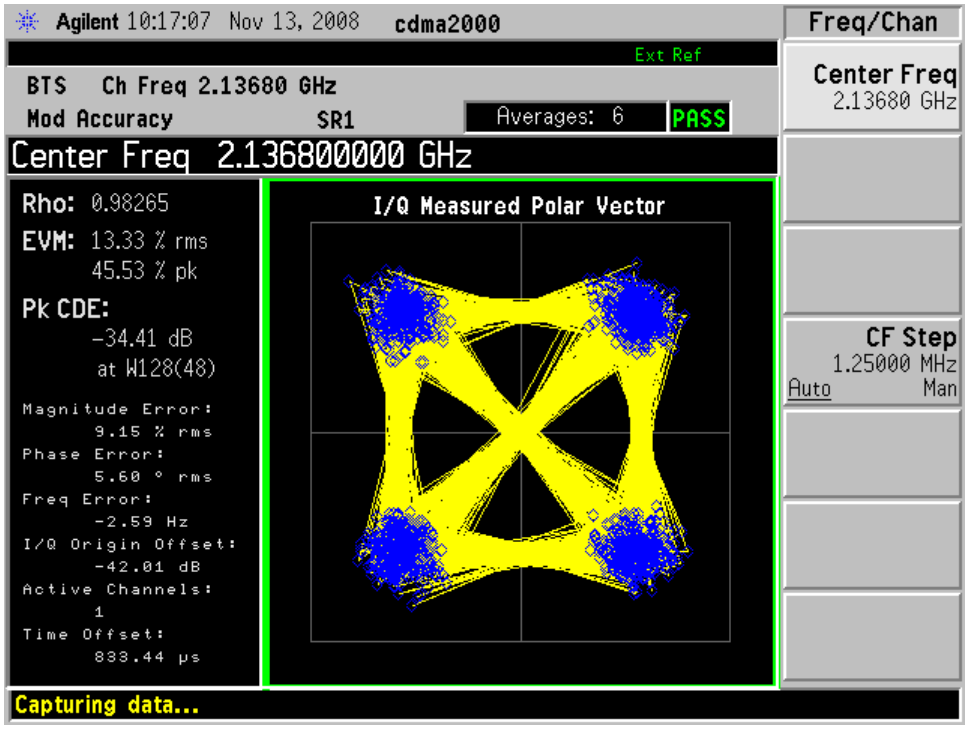

Agilent 11:01:39 Nov 13, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.13065 GHz
Mod Accuracy SR1
Averages: 3
PASS
Center Freq 2.130650000 GHz
Rho: 0.98842
EVM: 10.85 % rms
32.89 % pk
Pk CDE:
-36.69 dB
at W128(91)
Magnitude Error:
7.77 % rms
Phase Error:
4.36 ° rms
Freq Error:
-1.65 Hz
I/Q Origin Offset:
-42.35 dB
Active Channels:
1
Time Offset:
833.48 µs
I/Q Measured Polar Vector
Capturing data...
Freq/Chan
Center Freq
2.13065 GHz
CF Step
1.25000 MHz
Auto
Man

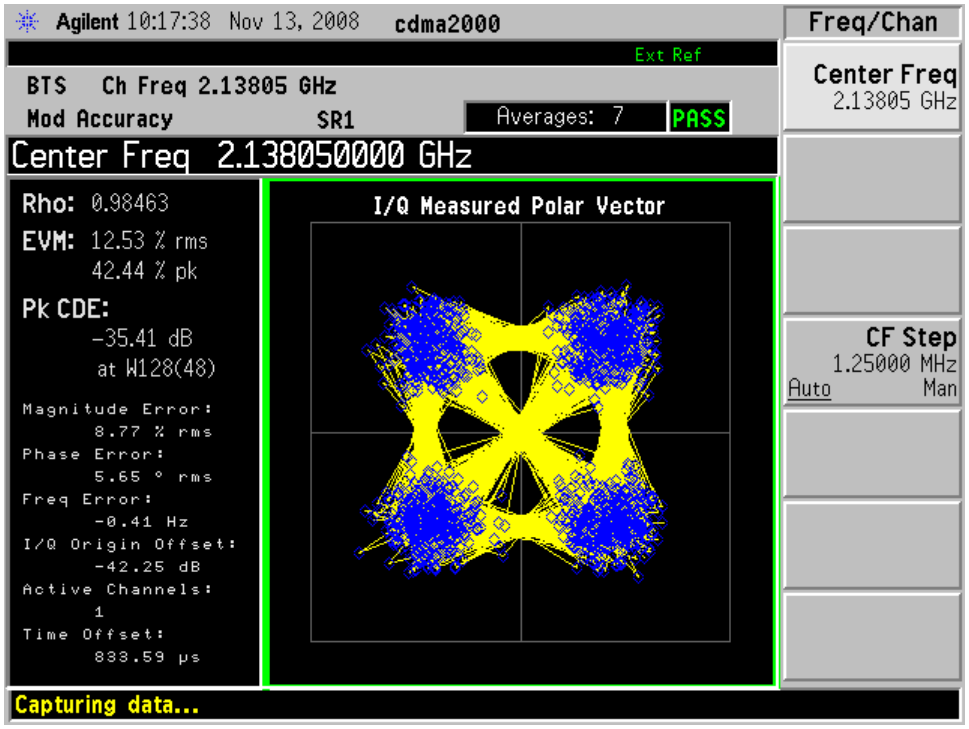

Agilent 11:02:06 Nov 13, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.13190 GHz
Mod Accuracy SR1
Averages: 7
PASS
Center Freq 2.131900000 GHz
Rho: 0.98349
EVM: 13.00 % rms
43.24 % pk
Pk CDE:
-34.02 dB
at W128(48)
Magnitude Error:
9.23 % rms
Phase Error:
5.32 ° rms
Freq Error:
-1.57 Hz
I/Q Origin Offset:
-42.43 dB
Active Channels:
1
Time Offset:
833.48 µs
I/Q Measured Polar Vector
Capturing data...
Freq/Chan
Center Freq
2.13190 GHz
CF Step
1.25000 MHz
Auto
Man

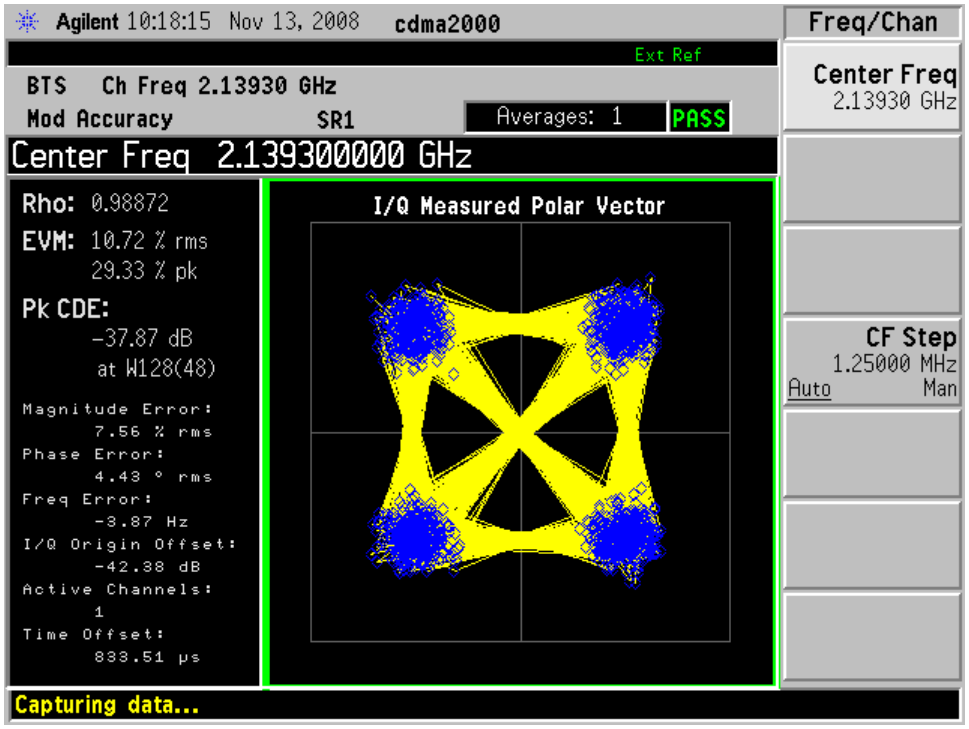

Agilent 11:02:36 Nov 13, 2008
cdma2000
Freq/Chan
Ext Ref
BTS Ch Freq 2.13315 GHz
Mod Accuracy SR1
Averages: 9
PASS
Center Freq 2.133150000 GHz
Rho: 0.98321
EVM: 13.10 % rms
44.32 % pk
Pk CDE:
-32.27 dB
at W128(48)
Magnitude Error:
9.10 % rms
Phase Error:
5.43 ° rms
Freq Error:
-0.33 Hz
I/Q Origin Offset:
-42.15 dB
Active Channels:
1
Time Offset:
883.46 µs
I/Q Measured Polar Vector
Center Freq
2.13315 GHz
CF Step
1.25000 MHz
Auto
Man
Capturing data...


Agilent 11:03:00 Nov 13, 2008
cdma2000
Freq/Chan
Ext Ref
BTS Ch Freq 2.13440 GHz
Mod Accuracy SR1
Averages: 5
PASS
Center Freq 2.134400000 GHz
Rho: 0.98686
EVM: 11.59 % rms
36.47 % pk
Pk CDE:
-35.93 dB
at W128(48)
Magnitude Error:
8.04 % rms
Phase Error:
4.80 ° rms
Freq Error:
0.31 Hz
I/Q Origin Offset:
-42.16 dB
Active Channels:
1
Time Offset:
883.45 µs
I/Q Measured Polar Vector
Center Freq
2.13440 GHz
CF Step
1.25000 MHz
Auto
Man
Input Overload


Agilent 10:16:41 Nov 13, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.13555 GHz
Mod Accuracy SR1
Averages: 8
PASS
Center Freq 2.135550000 GHz
Rho: 0.98723
EVM: 11.41 % rms
33.49 % pk
Pk CDE:
-36.04 dB
at W128(48)
Magnitude Error:
7.89 % rms
Phase Error:
4.75 ° rms
Freq Error:
2.20 Hz
I/Q Origin Offset:
-42.45 dB
Active Channels:
1
Time Offset:
833.45 µs
I/Q Measured Polar Vector
Capturing data...
Meas Setup
PN Offset
0 x 64[chips]
Sync Type
F-PICH
Spectrum
Normal Invert
Restore Meas Defaults
Advanced
More
2 of 2


Agilent 10:17:07 Nov 13, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.13680 GHz
Mod Accuracy SR1
Averages: 6
PASS
Center Freq 2.136800000 GHz
Rho: 0.98265
EVM: 13.33 % rms
45.53 % pk
Pk CDE:
-34.41 dB
at W128(48)
Magnitude Error:
9.15 % rms
Phase Error:
5.60 ° rms
Freq Error:
-2.59 Hz
I/Q Origin Offset:
-42.01 dB
Active Channels:
1
Time Offset:
833.44 µs
I/Q Measured Polar Vector
Capturing data...
Freq/Chan
Center Freq
2.13680 GHz
CF Step
1.25000 MHz
Auto Man


Agilent 10:17:38 Nov 13, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.13805 GHz
Mod Accuracy SR1
Averages: 7
PASS
Center Freq 2.138050000 GHz
Rho: 0.98463
EVM: 12.53 % rms
42.44 % pk
Pk CDE:
-35.41 dB
at W128(48)
Magnitude Error:
8.77 % rms
Phase Error:
5.65 ° rms
Freq Error:
-0.41 Hz
I/Q Origin Offset:
-42.25 dB
Active Channels:
1
Time Offset:
833.59 µs
I/Q Measured Polar Vector
Capturing data...
Freq/Chan
Center Freq
2.13805 GHz
CF Step
1.25000 MHz
Auto
Man

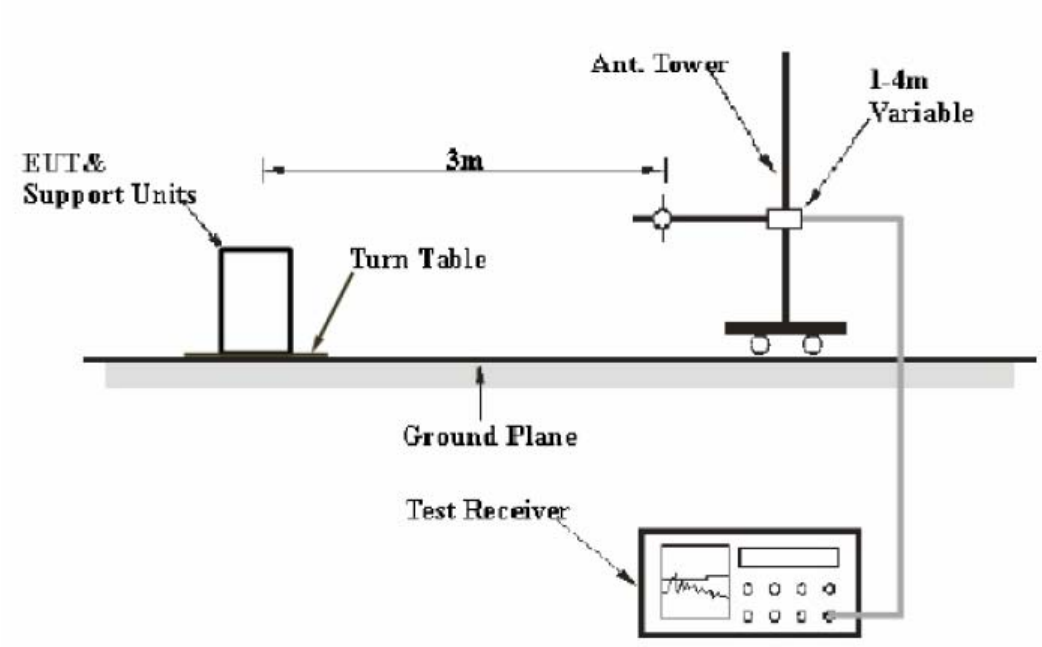

Agilent 10:18:15 Nov 13, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.13930 GHz
Mod Accuracy SR1
Averages: 1
PASS
Center Freq 2.139300000 GHz
Rho: 0.98872
EVM: 10.72 % rms
29.33 % pk
Pk CDE:
-37.87 dB
at W128(48)
Magnitude Error:
7.56 % rms
Phase Error:
4.43 ° rms
Freq Error:
-3.87 Hz
I/Q Origin Offset:
-42.38 dB
Active Channels:
1
Time Offset:
833.51 µs
I/Q Measured Polar Vector
Capturing data...
Freq/Chan
Center Freq
2.13930 GHz
CF Step
1.25000 MHz
Auto
Man

§2.1053, §27.53 - SPURIOUS RADIATED EMISSIONS

Applicable Standard

Requirements: CFR 47, § 2.1053 and §27.53(g).

Test Setup



Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a 50 ohms load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB = 10 log (TXpwr in Watts/0.001) – the absolute level

Spurious attenuation limit in dB = 43 + 10 Log_{10} (power out in Watts)

Measurement bandwidth (RBW) for 30MHz to 1000 MHz: 100 kHz
Measurement bandwidth (RBW) for 1000 MHz to 12750 MHz: 1MHz

Test Equipment List and Details

Manufacturers	Description	Model	Serial Number	Cal. Dates	Cal. Interval
R & S	EMI Test Receiver	ESI26	100058	2008-10-16	1 Year
R & S	EMI Test Receiver	T-E023	100062	2008-8-28	1 Year
R & S	Ultra Broadband Antenna	HL562	100022	2006-3-6	3 Years
R & S	Ultra Broadband Antenna	T-H002	100028	2008-8-28	3 Years
R & S	Double-Ridged Waveguide Horn Antenna	HF906	100032	2007-10-10	3 Years
R & S	Double-Ridged Waveguide Horn Antenna	T-E052	100034	2008-5-17	3 Years
R & S	Double-Ridged Waveguide Horn Antenna	T-E180	100035	2008-8-28	3 Years
Albatross	Anechoic Chamber	3m Site	N/A	2007-7-15	3 Year
R & S	Cable Set	RE Cable	N/A	2008-8-17	1Year
R & S	Cable set II	Substitution Tx Cable	N/A	2008-8-17	1Year
R & S	Cable set III	Hi-freq RX Antenna Cable	N/A	2008-8-17	1Year
R & S	Software	ES-K1	N/A	N/A	N/A
R & S	Double-Ridged Waveguide Horn Antenna	HF906	100013	2007-1-31	3 Years
SCHWARZBECK	VHF-UHF Broad band Antenna	VUBA 9117	SB3174	2007-11-17	3 Years
R & S	Signal Generator	SMR20	100098	2008-10-17	1Year
R & S	Signal Generator	SMU200	2624A00116	2008-11-7	1Year
R & S	Signal Amplifier	T-E019	100042	2008-8-28	1Year
R & S	Signal Amplifier	T-E191	100046	2008-5-17	1Year

*** Statement of Traceability: ZTE Corporation Reliability Testing Center** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

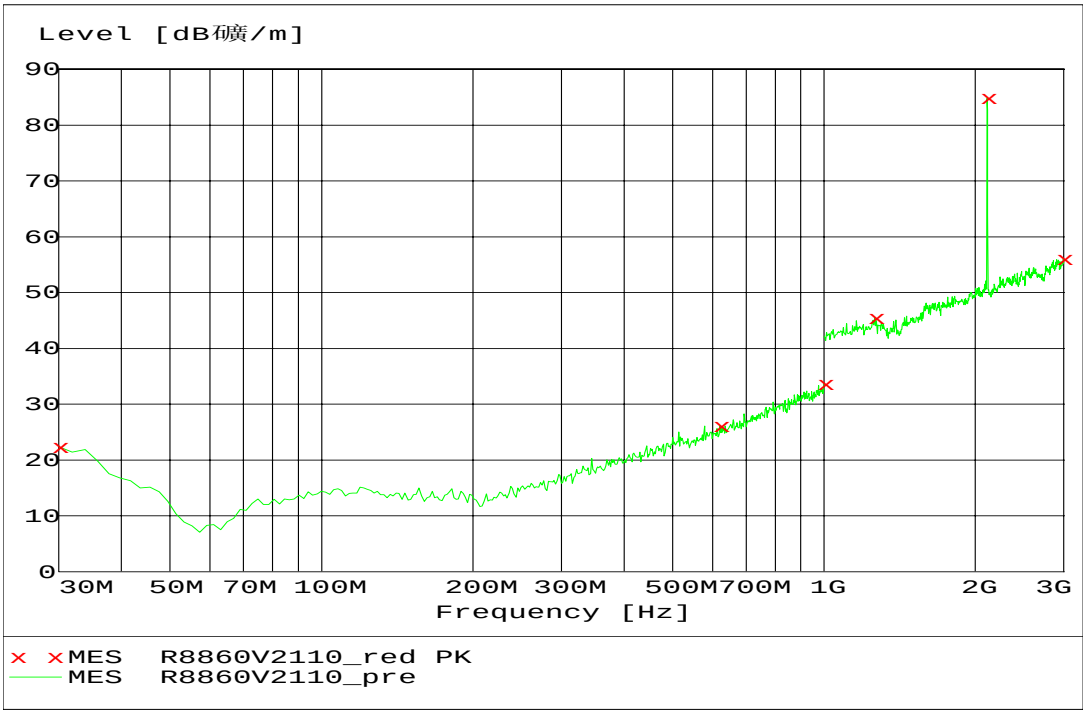
Temperature:	20~26 °C
Relative Humidity:	55~60 %
ATM Pressure:	1009~1010mbar

** The testing was performed by Guan Bin on Nov 12-17, 2008 and Huang Yangqing on Dec 19, 2008*

(1) Four Carriers

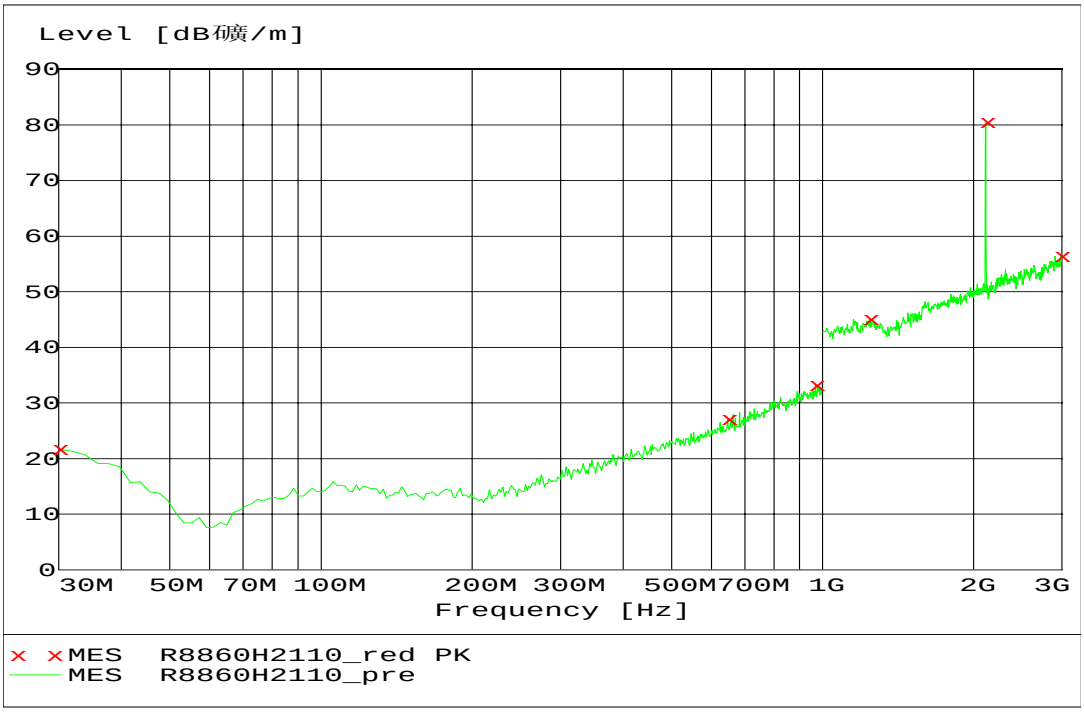
At Center Freq. 2112.525MHz (Frequency 2110.65/2111.9/2113.15/2114.4 MHz, Channel 13/38/63/88）

30 MHz~3 GHz for Vertical



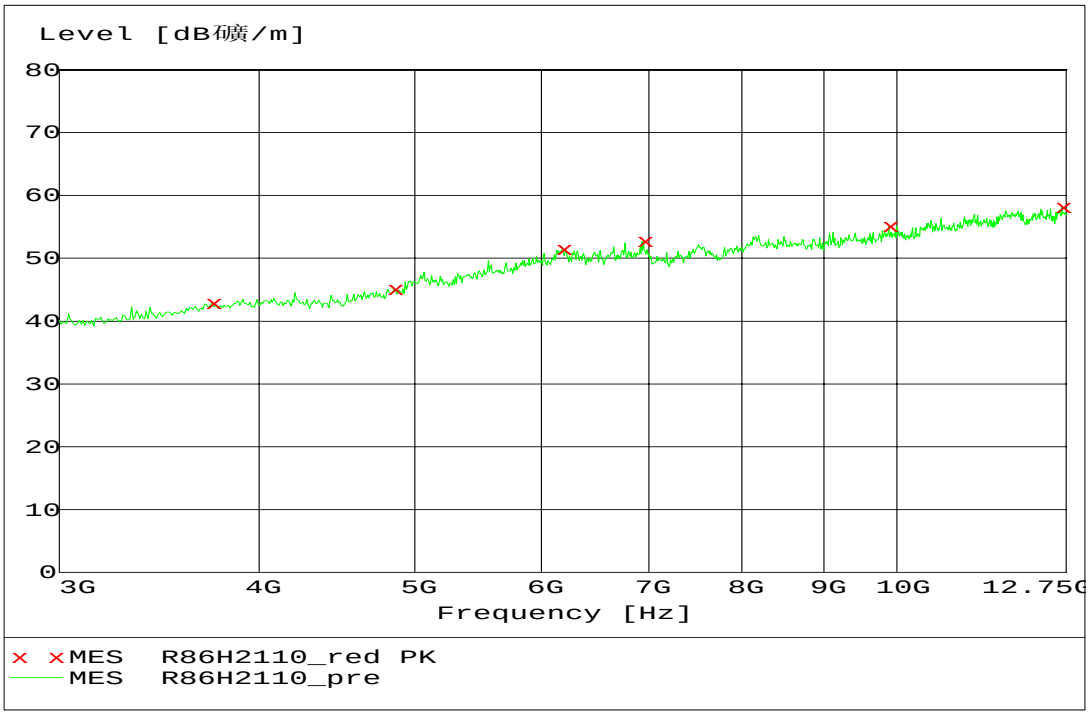
Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
620.94188	26.11	-70	2.1	-1.39	-75.64	-13	62.64
1000	33.68	-70.11	2.7	4.25	-70.71	-13	57.71
1260.521	45.48	-62.04	3	4.25	-62.94	-13	49.94
2995.992	55.96	-55.01	4.6	7.95	-53.81	-13	40.81

30 MHz~3 GHz for Horizontal



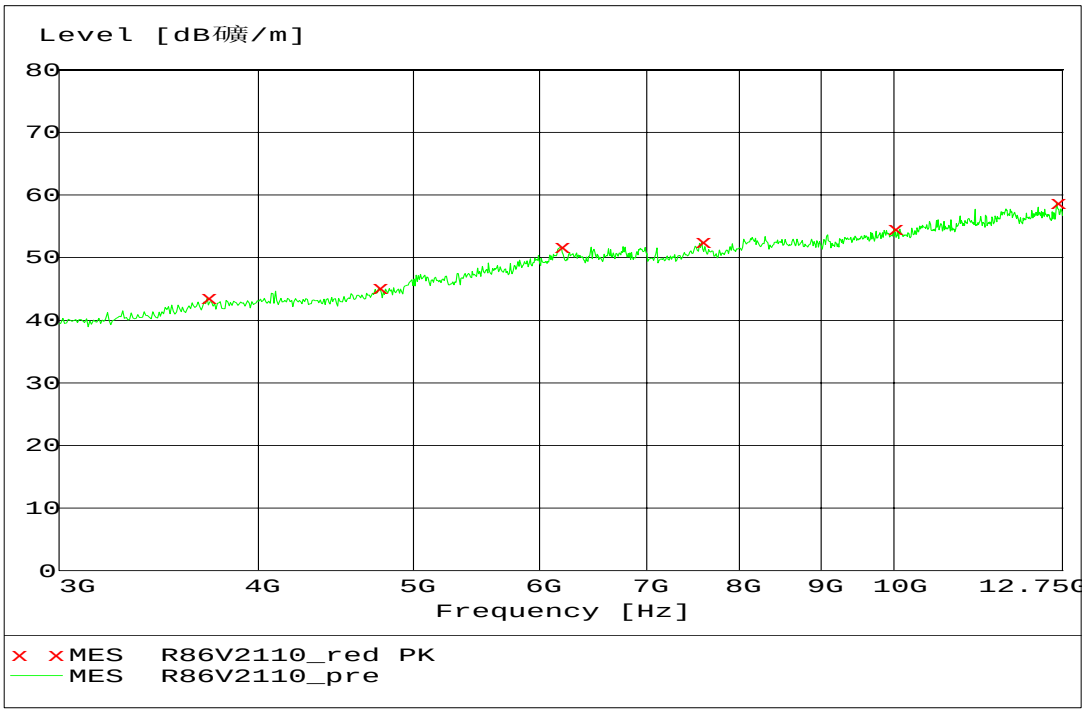
Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
646.21243	27.05	-73.85	2.1	-1.09	-79.19	-13	66.19
968.8978	33.3	-70.09	2.6	-2.82	-77.66	-13	64.66
1240.481	45.08	-60.34	3	4.25	-61.24	-13	48.24
2983.9679	56.34	-58.64	4.6	7.95	-57.44	-13	44.44

3 GHz ~ 12.75 GHz for Horizontal



Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
3753.507	43.44	-60.16	5.1	7.75	-59.66	-13	46.66
4843.6874	45.09	-55.81	5.9	9.15	-54.71	-13	41.71
6174.3487	52.21	-51.18	6.9	9.05	-51.18	-13	38.18
7622.2445	52.38	-53.04	7.8	9.25	-53.74	-13	40.74
9880.7615	55.04	-53.9	8.8	9.95	-54.9	-13	41.9
11597.695	58.16	-56.82	9.5	11.85	-56.62	-13	43.62

3 GHz ~ 12.75 GHz for Vertical



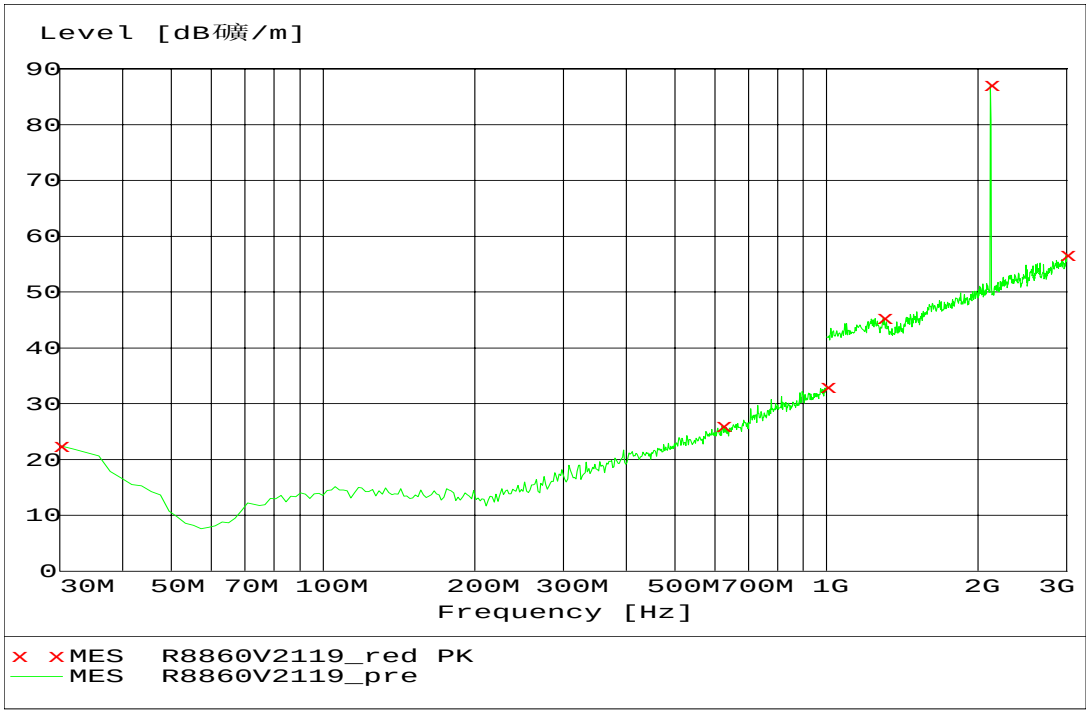
Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
3713.4269	43.55	-52.56	5.1	7.75	-52.06	-13	39.06
4755.511	45.09	-51.02	5.9	9.15	-49.92	-13	36.92
6182.3647	51.69	-52.1	6.9	9.05	-52.1	-13	39.1
7576.1523	52.5	-55.02	7.8	9.25	-55.72	-13	42.72
9995.992	54.52	-47.22	8.8	9.95	-48.22	-13	35.22
12646.293	58.73	-52.24	9.9	12.15	-52.14	-13	39.14

12.75 GHz ~21.5 GHz for Vertical and Horizontal

Indicated		Table Angle Degree	Test Antenna		Substituted			Antenna Gain Correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	FCC Part 27	
Frequency (MHz)	Amp. (dBuV/m)		Height (m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Polar (H/V)				Limit (dBm)	Margin
16979.4	44.77	260	1.5	H	16979.4	-41.53	H	8.5	5.20	-38.23	-13	25.23
16979.4	43.80	180	1.3	V	16979.4	-42.67	V	8.5	5.20	-39.37	-13	26.37
18736.0	43.40	276	1.6	H	18736.0	-42.75	H	9.6	6.00	-39.15	-13	26.15
19012.5	42.89	12	1.2	V	19012.5	-42.86	V	9.8	6.47	-39.53	-13	26.53

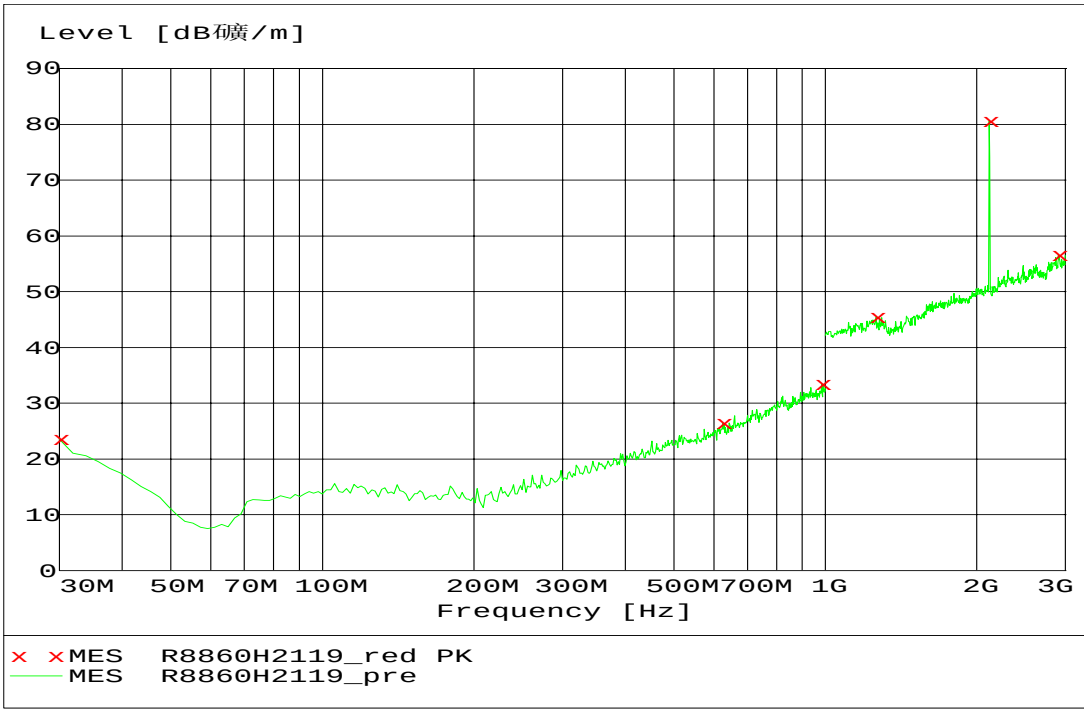
At Center Frequency: 2117.425MHz
(Frequency 2115.55/2116.8/2118.05/2119.3 MHz, Channel 111/136/161/186）

30 MHz ~ 3 GHz for Vertical



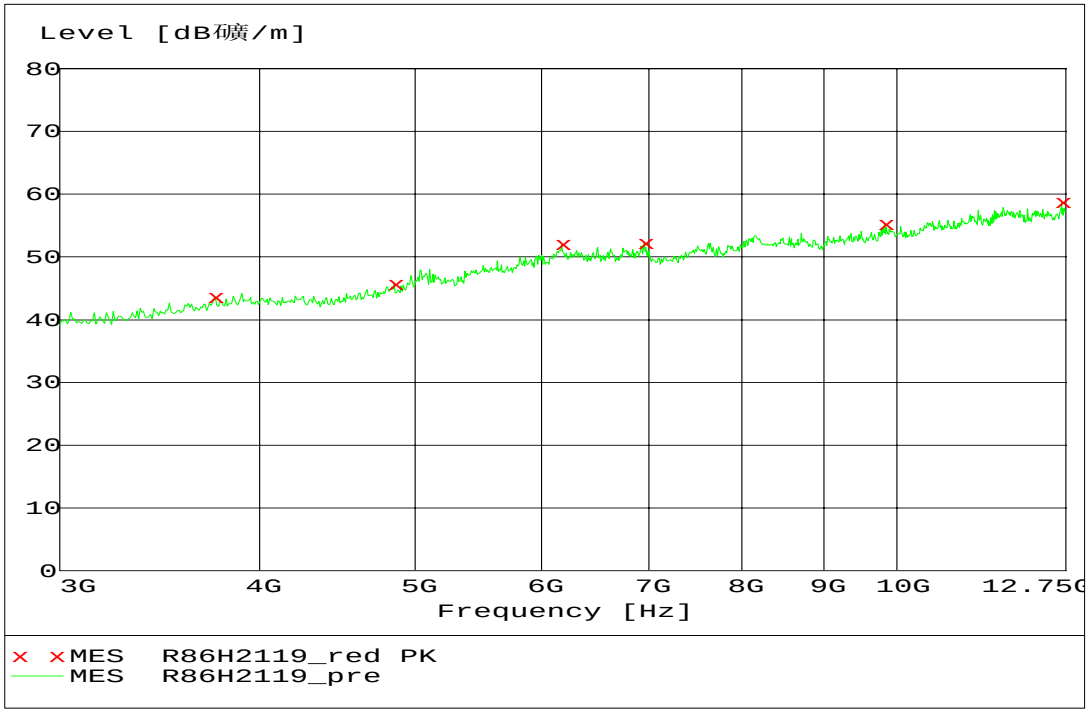
Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
620.94188	26.04	-70.07	2.1	-1.39	-75.71	-13	62.71
1000	33.02	-70.77	2.7	4.25	-71.37	-13	68.37
1296.5932	45.36	-62.16	3	4.25	-63.06	-13	59.06
2991.984	56.56	-54.41	4.6	7.95	-53.21	-13	40.21

30 MHz ~ 3 GHz for Horizontal



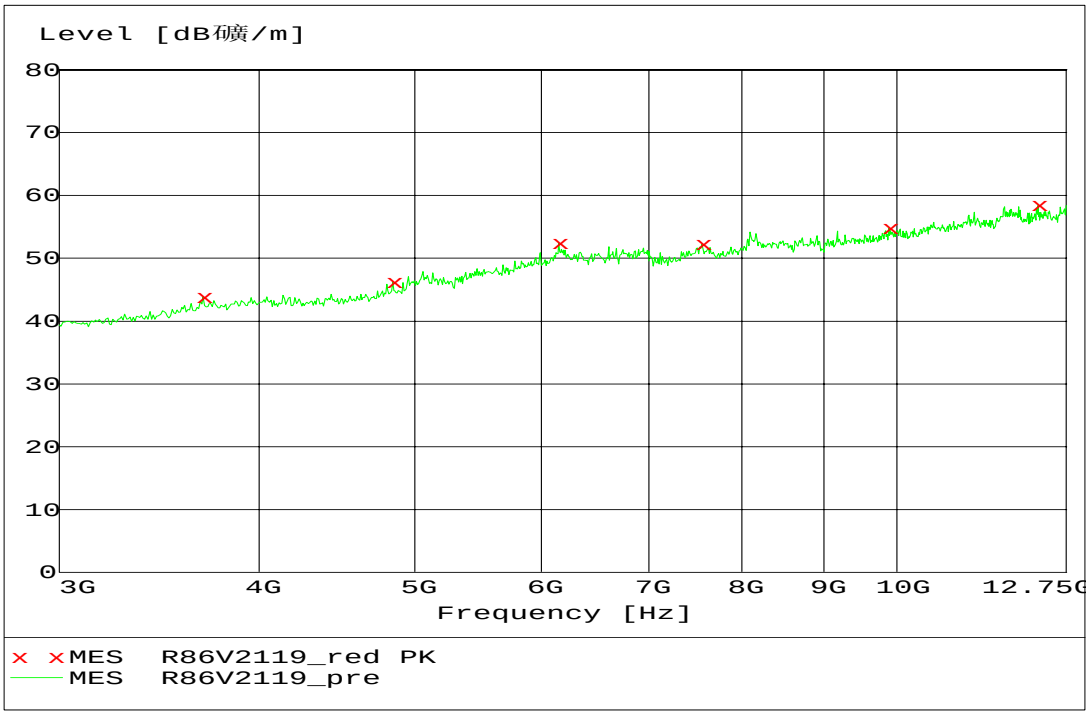
Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
624.82966	26.51	-74.39	2.1	-1.39	-80.03	-13	67.03
982.50501	33.44	-69.95	2.6	-4.1	-78.8	-13	65.8
1260.521	45.46	-59.96	3	4.25	-60.86	-13	47.86
2907.8156	56.49	-58.49	4.5	7.95	-57.19	-13	44.19

3 GHz ~ 12.75 GHz for Horizontal



Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
3745.491	43.59	-60.01	5.1	7.75	-59.51	-13	46.51
4851.7034	45.76	-55.14	5.9	9.15	-54.04	-13	41.04
6174.3487	52.08	-51.31	6.9	9.05	-51.31	-13	38.31
6951.9038	52.21	-53.21	7.3	9.25	-53.41	-13	40.41
9823.1463	55.19	-53.75	8.9	9.95	-54.85	-13	41.85
12669.339	58.82	-56.16	9.9	12.15	-56.06	-13	43.06

3 GHz ~ 12.75 GHz for Vertical



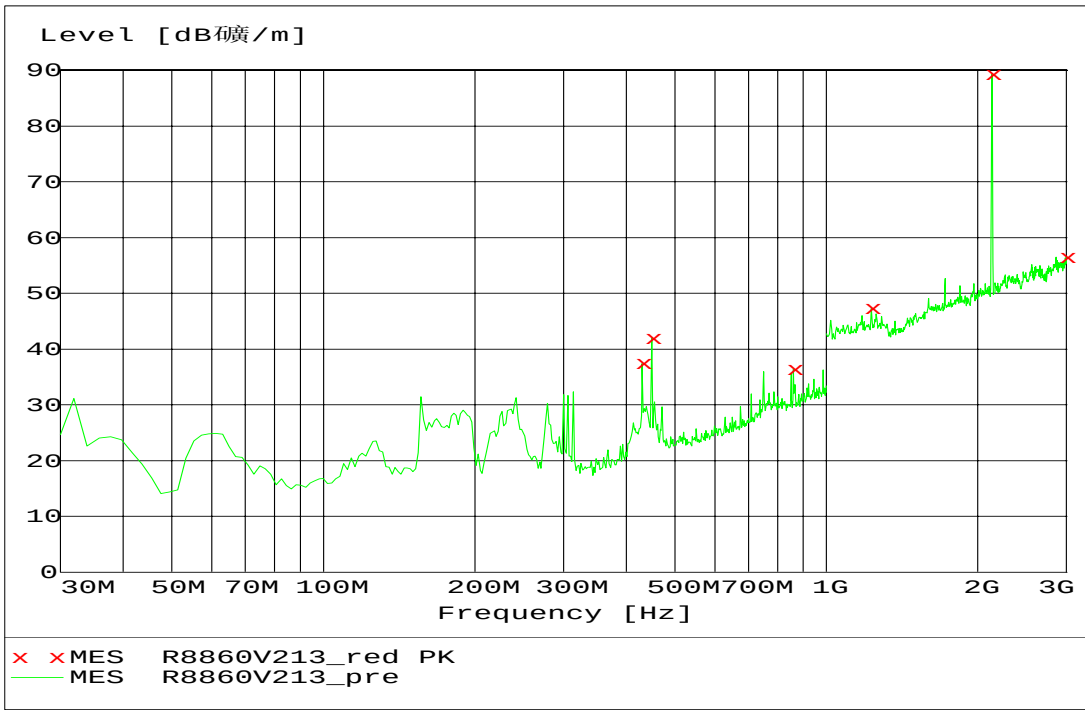
Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
3689.3788	43.88	-52.23	5.1	7.75	-51.73	-13	38.73
4843.6874	46.28	-49.83	5.9	9.15	-48.73	-13	35.73
6150.3006	52.4	-51.39	6.9	9.05	-51.39	-13	38.39
7553.1062	52.25	-55.27	7.8	9.25	-55.97	-13	42.97
9880.7615	54.76	-46.98	8.8	9.95	-47.98	-13	34.98
12242.986	58.41	-52.56	9.8	12.05	-52.46	-13	39.46

12.75 GHz ~21.5 GHz for Vertical and Horizontal

Indicated		Table Angle Degree	Test Antenna		Substituted			Antenna Gain Correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	FCC Part 27	
Frequency (MHz)	Amp. (dBuV/m)		Height (m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Polar (H/V)				Limit (dBm)	Margin
16929.8	44.13	360	1.2	V	16929.8	-42.51	V	8.5	5.20	-39.21	-13	26.21
16929.8	44.59	10	1.4	H	16929.8	-41.16	H	8.5	5.20	-37.86	-13	24.86
18133.1	42.63	178	1.5	V	18133.1	-42.94	V	9.5	4.41	-37.85	-13	24.85
18084.0	42.73	360	1.2	H	18084.0	-42.89	H	9.5	4.41	-37.80	-13	24.80

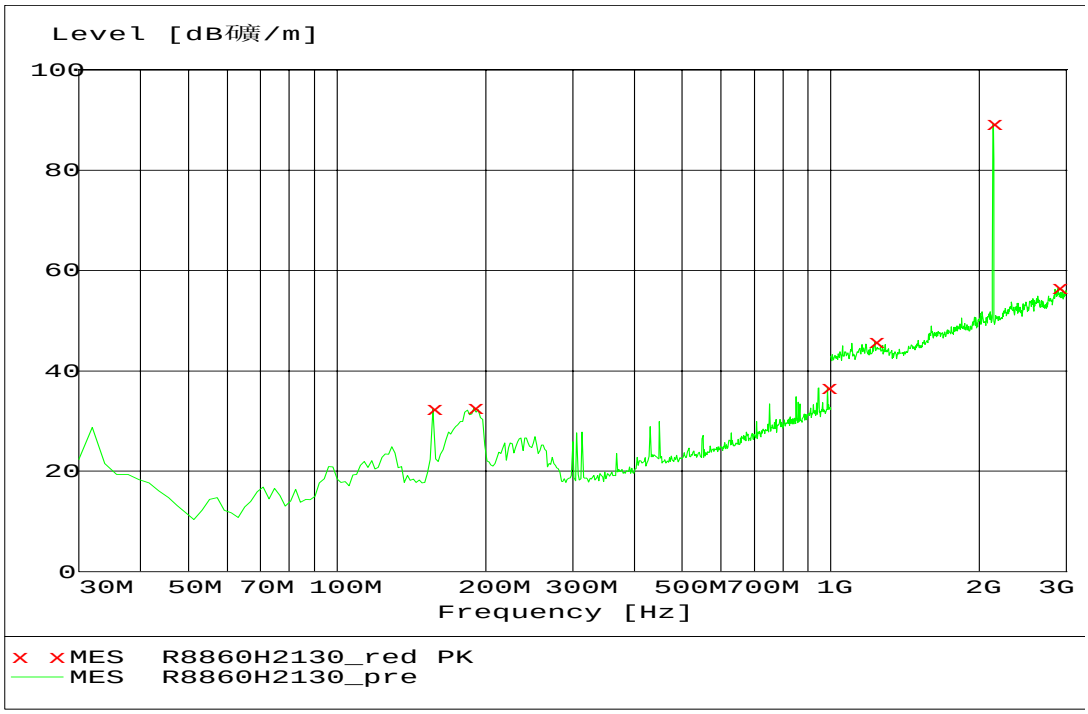
At Center Frequency: 2132.525MHz
(Frequency 2130.65/2131.9/2133.15/2134.4 MHz, Channel 413/438/463/488）

30 MHz ~ 3 GHz for Vertical



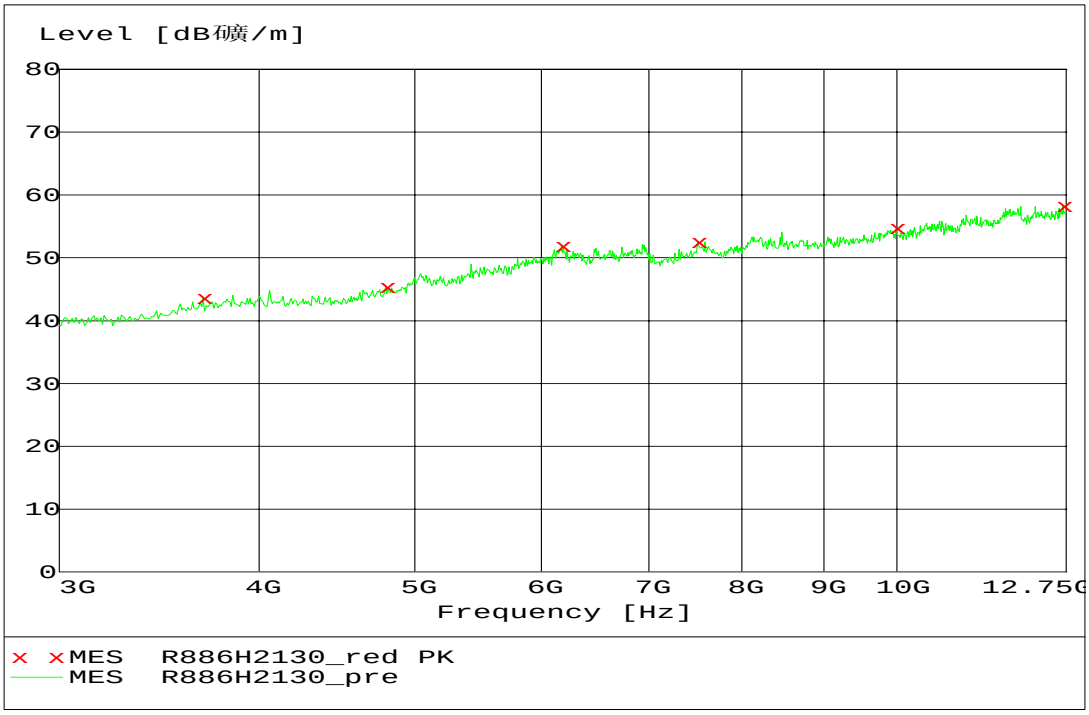
Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
430.44088	37.44	-58.67	1.7	-1.17	-63.69	-13	50.69
449.87976	42	-54.11	1.8	-1.2	-59.26	-13	46.26
860.04008	36.41	-67.38	2.5	-1.06	-73.09	-13	60.09
1228.4569	47.28	-60.24	2.9	4.25	-61.04	-13	48.04
3000	56.54	-54.43	4.6	7.75	-53.43	-13	40.43

30 MHz ~ 3 GHz for Horizontal



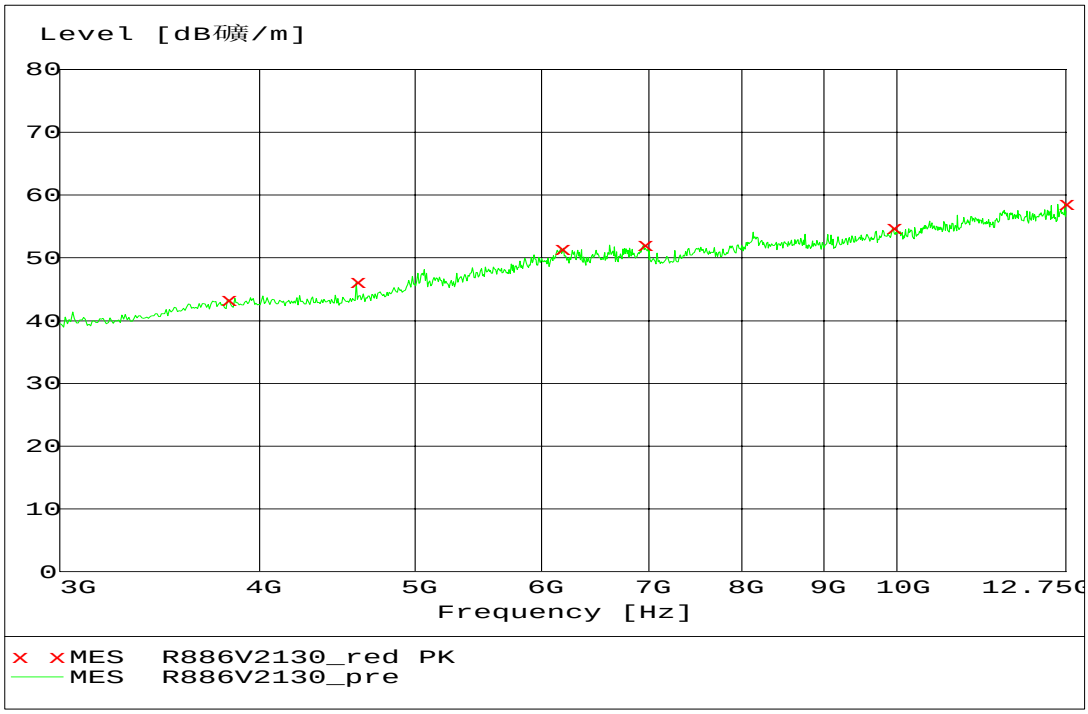
Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
156.35271	32.37	-71.23	1.0	-4.87	-79.25	-13	66.25
189.3988	32.64	-68.26	1.1	-0.27	-71.78	-13	58.78
984.4489	36.66	-66.73	2.6	-4.1	-75.58	-13	62.58
1228.4569	45.81	-59.61	2.9	4.25	-60.41	-13	53.41
2887.7756	56.62	-58.36	4.5	7.95	-57.06	-13	50.06

3 GHz ~ 12.75 GHz for Horizontal



Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
3689.3788	43.49	-60.11	5.1	7.75	-59.61	-13	46.61
4795.5912	45.41	-55.49	5.9	9.15	-54.39	-13	41.39
6174.3487	51.85	-51.54	6.9	9.05	-51.54	-13	38.54
7507.014	52.56	-52.86	7.7	9.25	-53.46	-13	40.46
9984.4689	54.65	-54.29	8.8	9.95	-55.29	-13	42.29
12692.385	58.29	-56.69	9.9	12.15	-56.59	-13	43.59

3 GHz ~ 12.75 GHz for Vertical



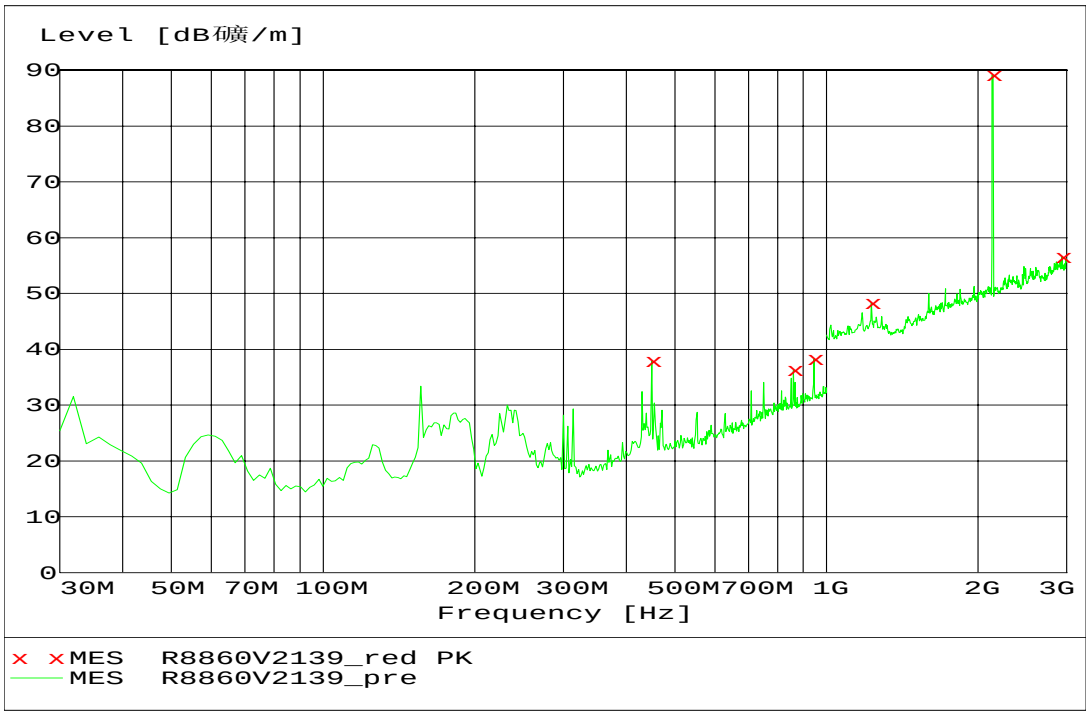
Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
3817.6353	43.34	-52.77	5.2	7.75	-52.37	-13	39.37
4595.1904	46.07	-50.04	5.8	9.15	-48.84	-13	35.84
6166.3327	51.4	-52.39	6.9	9.05	-52.39	-13	39.39
6943.8878	52.1	-55.42	7.3	9.25	-55.62	-13	42.62
9938.3768	54.81	-46.93	8.7	9.95	-47.83	-13	34.83
12726.954	58.56	-52.41	9.9	12.15	-52.31	-13	39.31

12.75 GHz ~21.5 GHz for Vertical and Horizontal

Indicated		Table Angle Degree	Test Antenna		Substituted			Antenna Gain Correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	FCC Part 27	
Frequency (MHz)	Amp. (dBuV/m)		Height (m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Polar (H/V)				Limit (dBm)	Margin
16874.2	42.74	360	1.1	V	16874.2	-44.12	V	9.8	5.20	-39.52	-13	26.52
16886.7	42.73	270	1.5	H	16886.7	-43.32	H	9.8	5.20	-38.72	-13	25.72
18126.2	42.61	180	1.0	V	18126.2	-42.95	V	9.5	4.41	-37.86	-13	24.86
18830.0	42.76	0	1.2	H	18830.0	-42.75	H	9.5	4.41	-37.66	-13	24.66

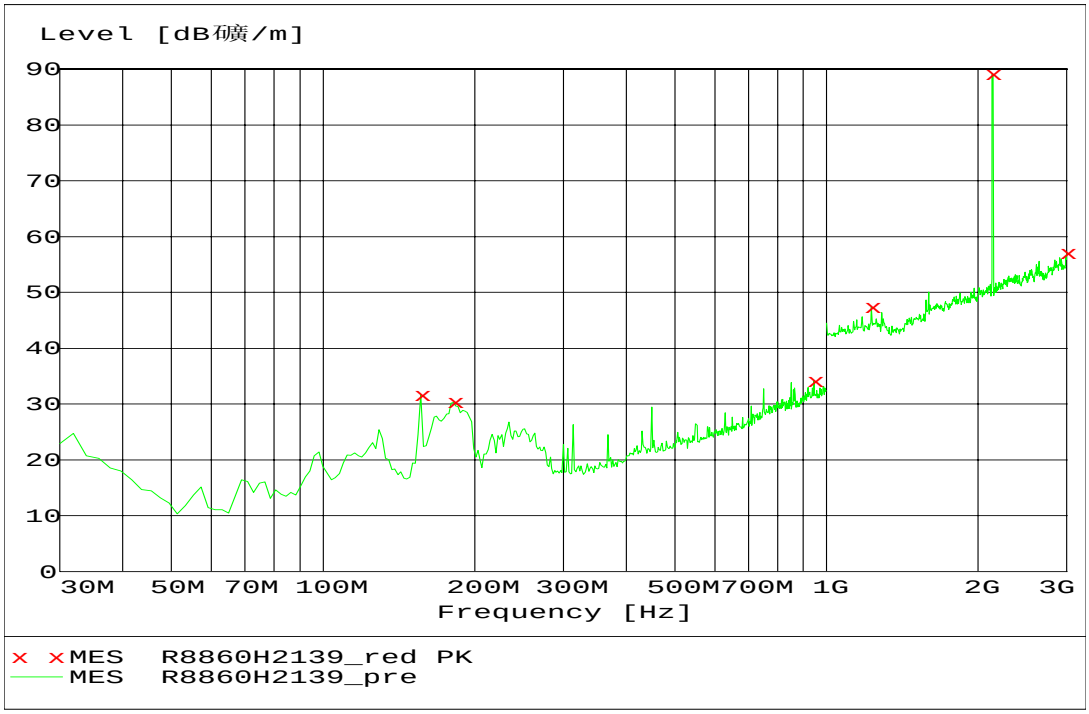
At Center Frequency: 2137.425MHz
(Frequency 2135.55/2136.8/2138.05/2139.3 MHz, Channel 511/536/561/586）

30 MHz ~ 3 GHz for Vertical



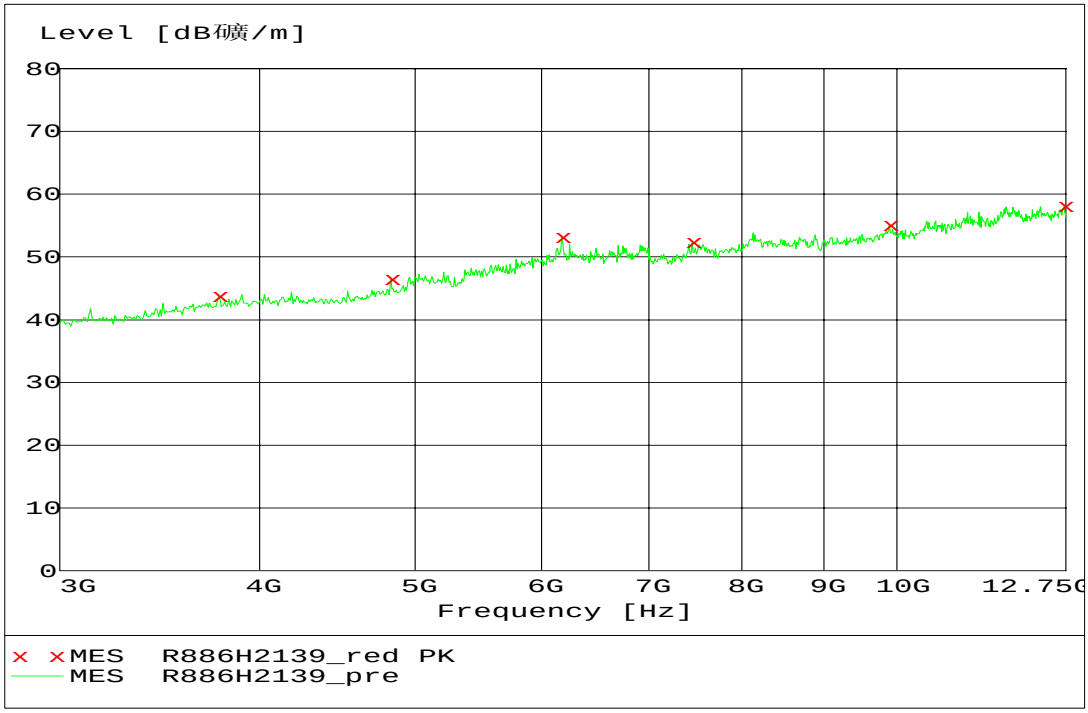
Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
449.87976	37.84	-58.27	1.8	-1.2	-63.42	-13	50.42
860.04008	36.18	-59.93	2.5	-1.06	-65.64	-13	52.64
943.62726	38.22	-65.57	2.6	-2.2	-72.52	-13	59.52
1228.4569	48.35	-59.17	2.9	4.25	-59.97	-13	46.97
2935.8717	56.61	-54.36	4.6	7.95	-53.16	-13	40.16

30 MHz ~ 3 GHz for Horizontal



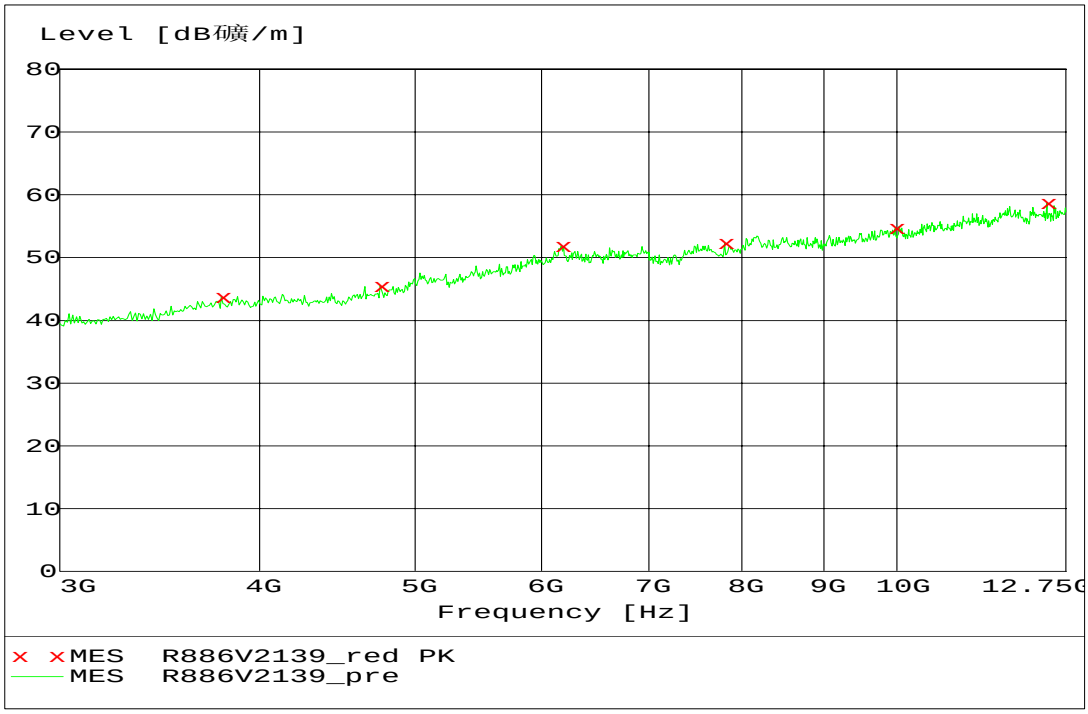
Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
156.35271	31.69	-71.91	1	-4.87	-79.93	-13	66.93
181.62325	30.32	-70.58	1.1	-0.97	-74.8	-13	61.8
943.62726	34.16	-69.23	2.6	-2.2	-76.18	-13	63.18
1228.4569	47.35	-58.07	2.9	4.25	-58.87	-13	45.87
3000	56.98	-58	4.6	7.75	-57	-13	44

3 GHz ~ 12.75 GHz for Horizontal



Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
3769.5391	43.78	-59.82	5.2	7.75	-59.42	-13	46.42
4827.6553	46.51	-54.39	5.9	9.15	-53.29	-13	40.29
6174.3487	53.24	-50.15	6.9	9.05	-50.15	-13	37.15
7449.3988	52.33	-53.09	7.6	9.15	-53.69	-13	40.69
9892.2846	55.04	-53.9	8.8	9.95	-54.9	-13	41.9
12715.431	58.09	-56.89	9.9	12.15	-56.79	-13	43.79

3 GHz ~ 12.75 GHz for Vertical



Frequency (MHz)	Field Strength (dBmV/m)	Output Power S.G. (dBm)	Cable Loss (dB)	Gain of Substitution Antenna (dBi)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
3521.0421	43.46	-52.65	5	7.75	-52.05	-13	39.05
4819.6393	45.19	-50.92	5.9	9.15	-49.82	-13	36.82
6182.3647	52.35	-51.44	6.9	9.05	-51.44	-13	38.44
6318.6373	52.39	-55.13	6.9	9.05	-55.13	-13	42.13
8889.7796	54.46	-47.28	8.4	9.65	-48.18	-13	35.18
11724.449	58.06	-52.91	9.6	11.85	-52.81	-13	39.81

12.75 GHz ~21.5 GHz for Vertical and Horizontal

Indicated		Table Angle Degree	Test Antenna		Substituted			Antenna Gain Correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	FCC Part 27	
Frequency (MHz)	Amp. (dBuV/m)		Height (m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Polar (H/V)				Limit (dBm)	Margin
14966.0	44.23	180	1.3	H	14966.0	-42.13	H	11.2	4.88	-35.81	-13	22.81
14966.0	43.64	180	1.2	V	14966.0	-43.01	V	11.2	4.88	-36.69	-13	23.69
16863.7	43.22	270	1.5	H	16863.7	-42.56	H	9.8	5.20	-37.96	-13	24.96
18021.0	42.14	360	1.3	V	18021.0	-43.17	V	9.5	4.41	-38.08	-13	25.08

§2.1051, §27.53 - SPURIOUS EMISSIONS AT ANTENNA TERMINAL

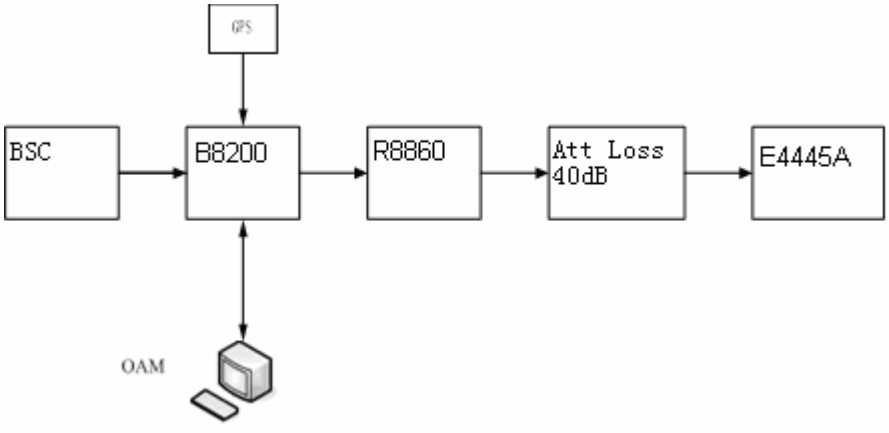
Applicable Standard

Requirements: CFR 47, §2.1051 and §27.53(g). Based on the use of measurement instrumentation employing resolution bandwidth of 1 MHz or greater, the power of any emission outside the frequency block shall be below the transmitter power (P) by at least 43 + 10 log10 (P) dB.

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1057.

Test Procedure

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



Note: Attenuator loss (dB) =40dB, Cable Loss (dB) =3dB.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Dates
Agilent	PSA Series Spectrum Analyzer	E4445A	MY44300451	2008-5-2
Agilent	PSA Series Spectrum Analyzer	E4440A	MY57100147	2008-8-11
DST	DST100 40dB Attenuator	DTS100-40dB-N	N/A	N/A
Hewlett Packard	Hewlett Packard RF Cable	8120-6192	01428251	N/A

*** Statement of Traceability: ZTE Corporation Reliability Testing Center** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

Temperature:	20° C
Relative Humidity:	55%
ATM Pressure:	1009mbar

** The testing was performed by Ma Tianfei on Nov. 12 ~Dec12, 2008*

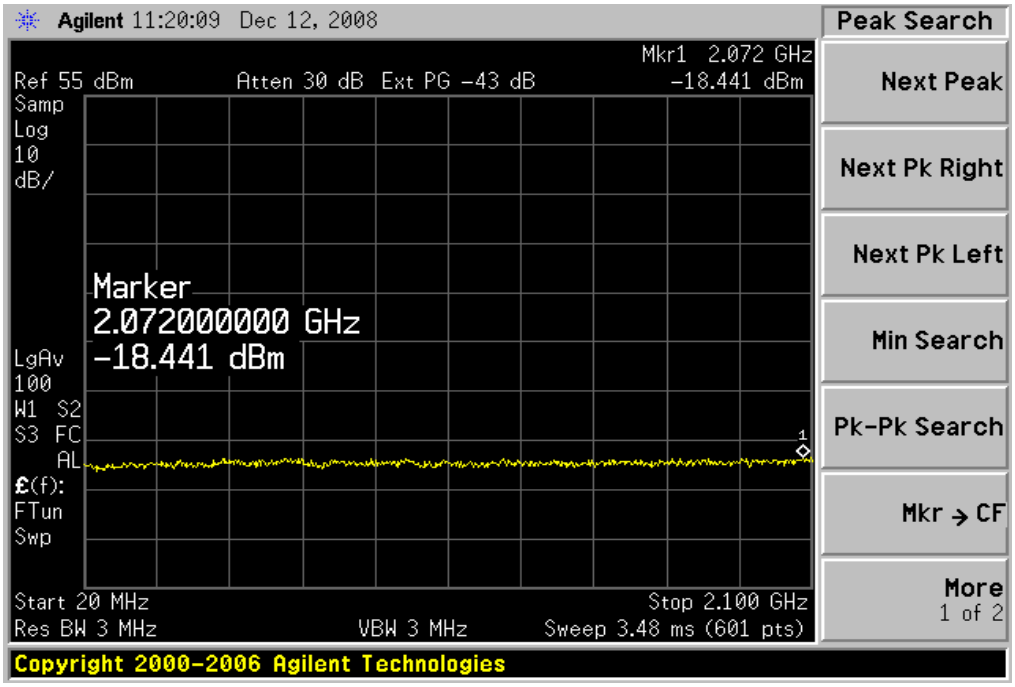
Test Mode: CDMA2000 1X

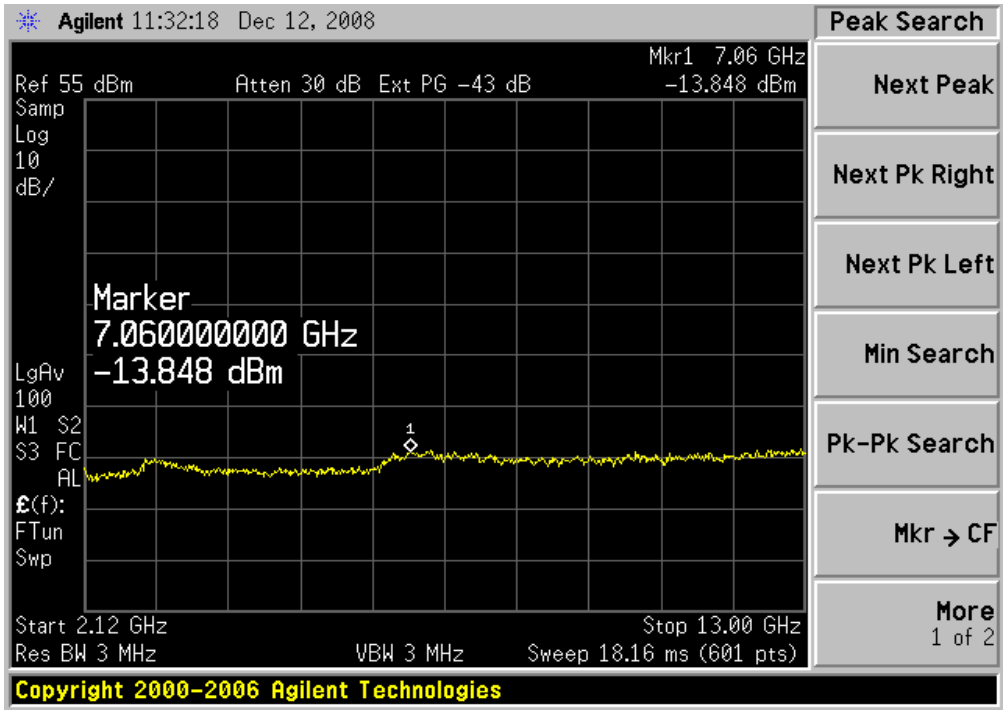
Please refer to the following table and plots.

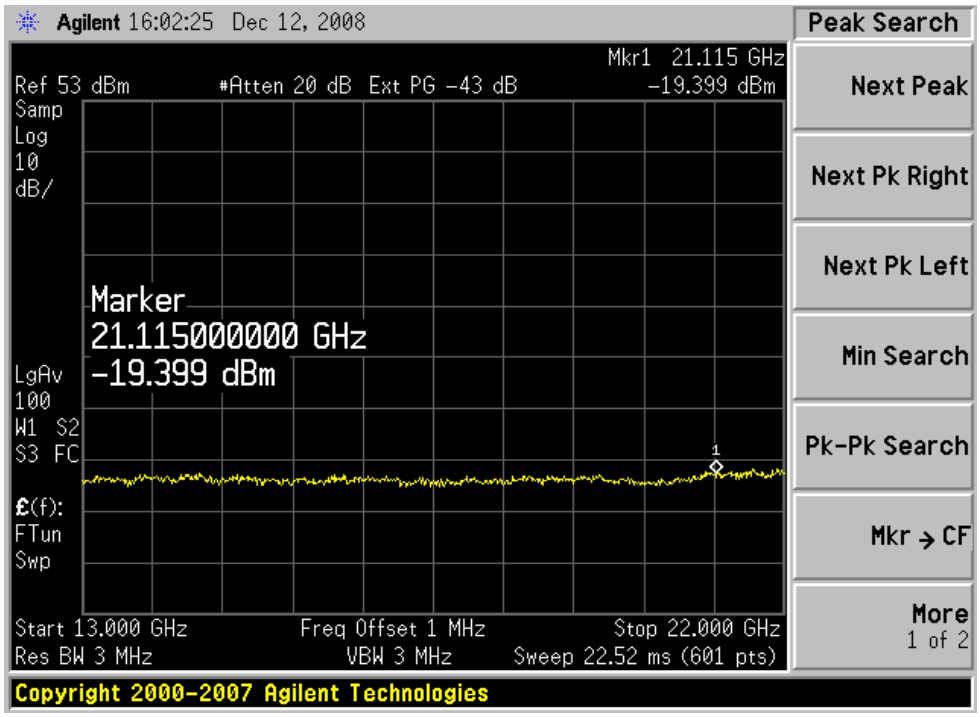
Four Carries:

Scanning Range	Frequency (MHz)	Channel	Center Frequency (MHz)	Measured Value (dBm)	Limit (dBm)	Margin (dB)
20~2100 MHz	2110.65/2111.9/2113.15 /2114.4	13/38/63/88	2112.525	-18.441	-13	5.441
2120 MHz ~13 GHz	2110.65/2111.9/2113.15 /2114.4	13/38/63/88	2112.525	-13.848	-13	0.848
13 GHz~22 GHz	2110.65/2111.9/2113.15 /2114.4	13/38/63/88	2112.525	-19.399	-13	6.399
20 ~ 2105 MHz	2115.55/2116.8/2118.05 /2119.3	111/136/161/186	2117.425	-17.854	-13	4. 854
2120 MHz ~13 GHz	2115.55/2116.8/2118.05 /2119.3	111/136/161/186	2117.425	-13.643	-13	0.643
13 GHz~22 GHz	2115.55/2116.8/2118.05 /2119.3	111/136/161/186	2117.425	-19.374	-13	6.374
20~2120 MHz	2130.65/2131.9/2133.15 /2134.4	413/438/463/488	2132.525	-18.459	-13	5.459
2140 MHz~13 GHz	2130.65/2131.9/2133.15 /2134.4	413/438/463/488	2132.525	-13.398	-13	0.398
13 GHz~22 GHz	2130.65/2131.9/2133.15 /2134.4	413/438/463/488	2132.525	-19.468	-13	6.468
20~2125 MHz	2135.55/2136.8/2138.05 /2139.3	511/536/561/586	2137.425	-18.331	-13	5.331
2140 MHz~13 GHz	2135.55/2136.8/2138.05 /2139.3	511/536/561/586	2137.425	-13.269	-13	0.269
13 GHz~22 GHz	2135.55/2136.8/2138.05 /2139.3	511/536/561/586	2137.425	-19.057	-13	6.057

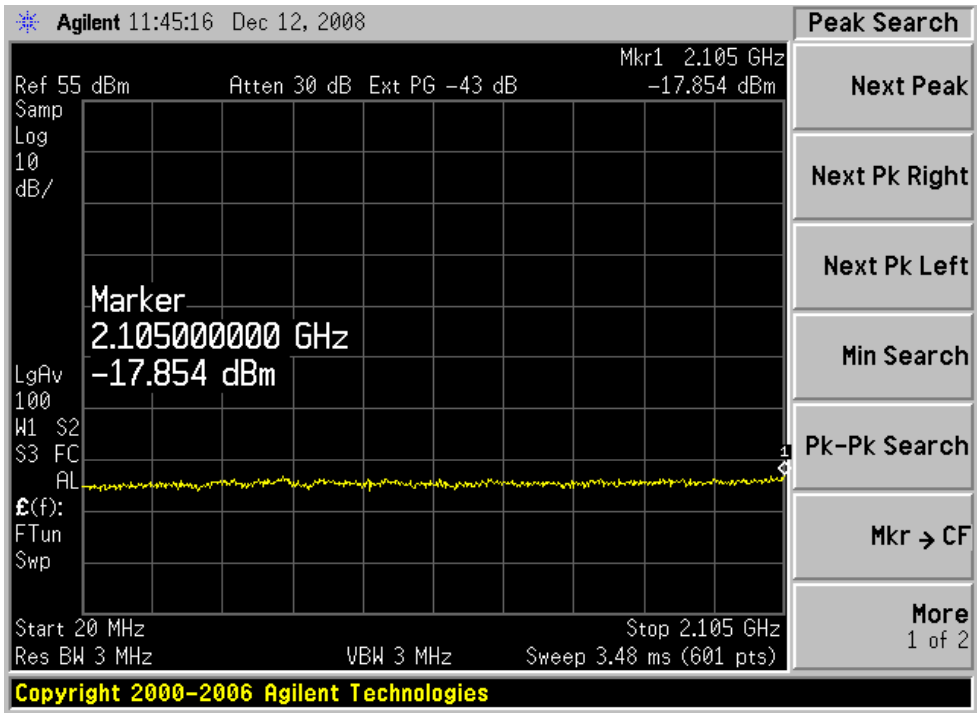
CH: 13 / 38 / 63 / 88

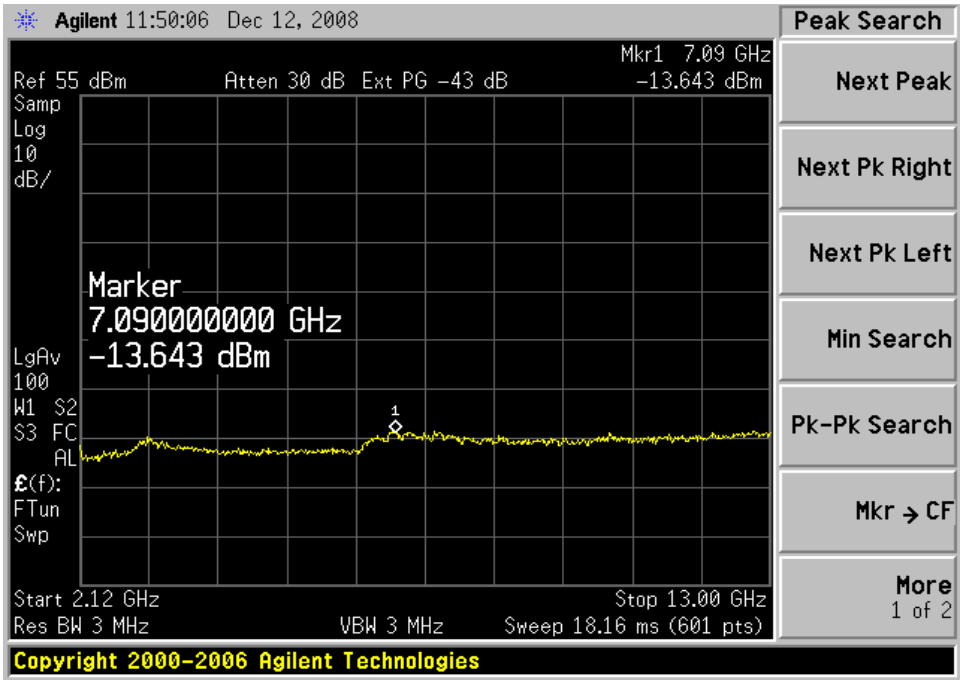

Agilent 11:20:09 Dec 12, 2008
Peak Search
Mkr1 2.072 GHz
Ref 55 dBm
Atten 30 dB Ext PG -43 dB
-18.441 dBm
Samp
Log
10
dB/
Marker
2.072000000 GHz
-18.441 dBm
LgAv
100
W1 S2
S3 FC
AL
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 20 MHz
Res BW 3 MHz
VBW 3 MHz
Stop 2.100 GHz
Sweep 3.48 ms (601 pts)
Copyright 2000-2006 Agilent Technologies

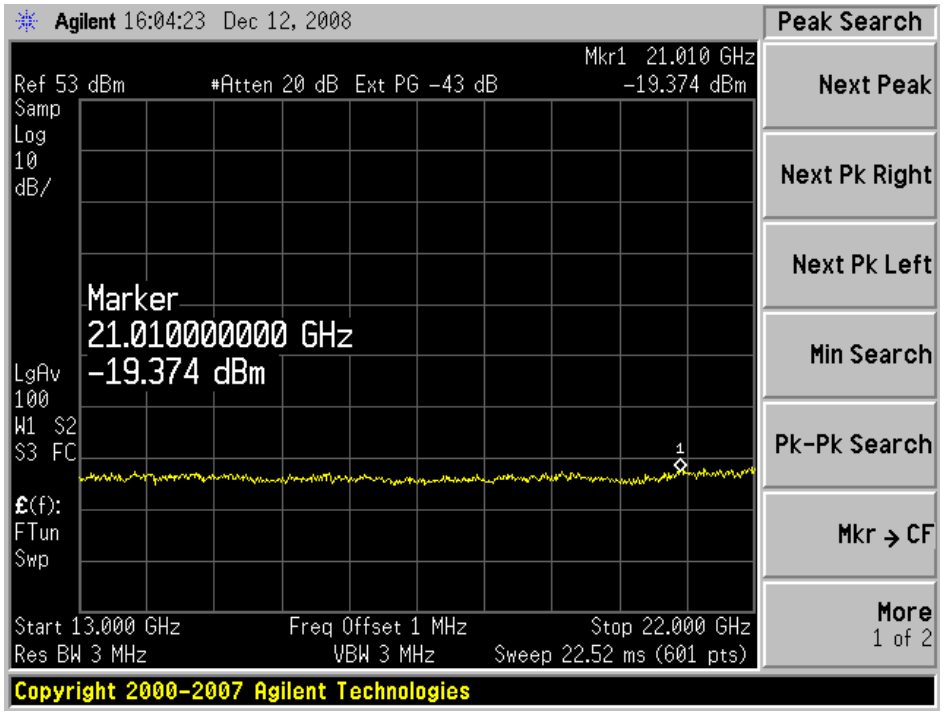

Agilent 11:32:18 Dec 12, 2008
Peak Search
Mkr1 7.06 GHz
Ref 55 dBm
Atten 30 dB Ext PG -43 dB
-13.848 dBm
Samp
Log
10
dB/
Marker
7.060000000 GHz
-13.848 dBm
LgAv
100
W1 S2
S3 FC
AL
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 2.12 GHz
Res BW 3 MHz
VBW 3 MHz
Stop 13.00 GHz
Sweep 18.16 ms (601 pts)
Copyright 2000-2006 Agilent Technologies



CH: 111 / 136 / 161 / 186




Agilent 11:50:06 Dec 12, 2008
Peak Search
Mkr1 7.09 GHz
Ref 55 dBm
Atten 30 dB Ext PG -43 dB
-13.643 dBm
Samp
Log
10
dB/
Marker
7.090000000 GHz
-13.643 dBm
LgAv
100
W1 S2
S3 FC
AL
£(f):
FTun
Swp
Start 2.12 GHz
Res BW 3 MHz
VBW 3 MHz
Stop 13.00 GHz
Sweep 18.16 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Copyright 2000-2006 Agilent Technologies


Agilent 16:04:23 Dec 12, 2008
Peak Search
Mkr1 21.010 GHz
Ref 53 dBm
#Atten 20 dB Ext PG -43 dB
-19.374 dBm
Samp
Log
10
dB/
Marker
21.010000000 GHz
-19.374 dBm
LgAv
100
W1 S2
S3 FC
£(f):
FTun
Swp
Start 13.000 GHz
Res BW 3 MHz
Freq Offset 1 MHz
VBW 3 MHz
Stop 22.000 GHz
Sweep 22.52 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
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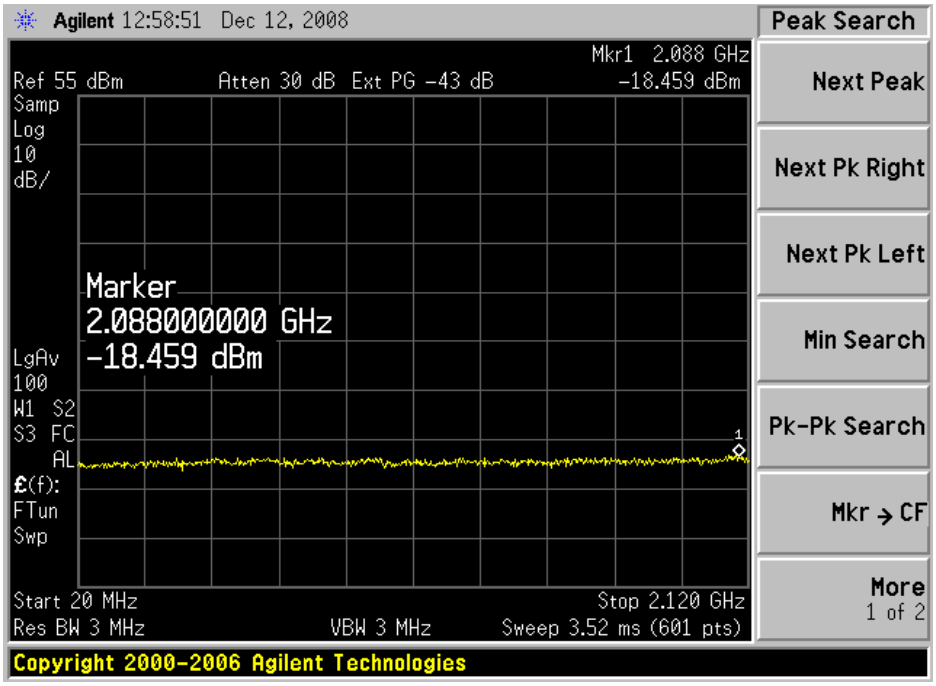
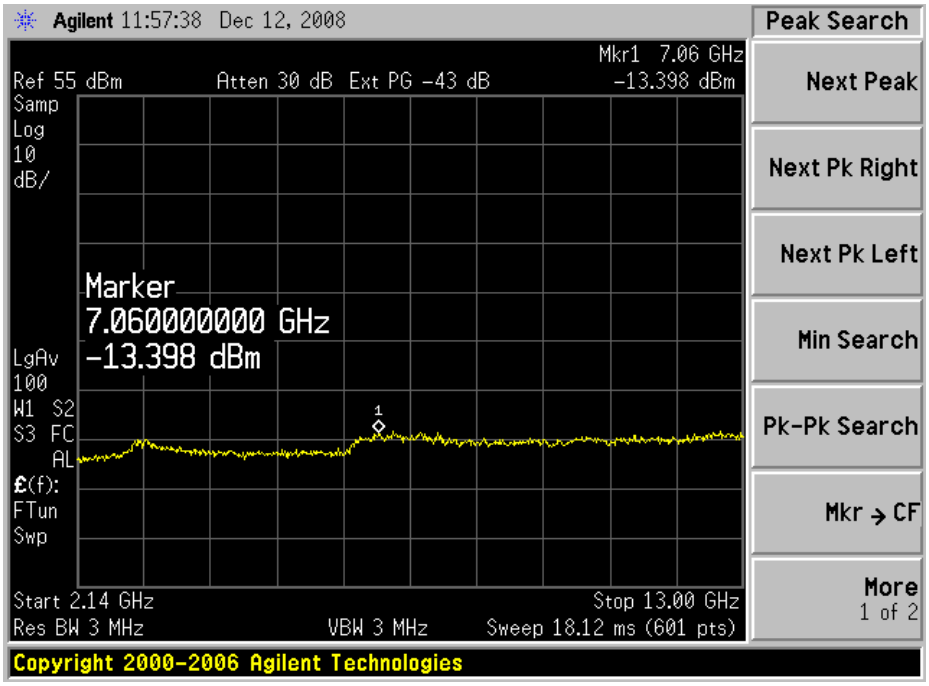
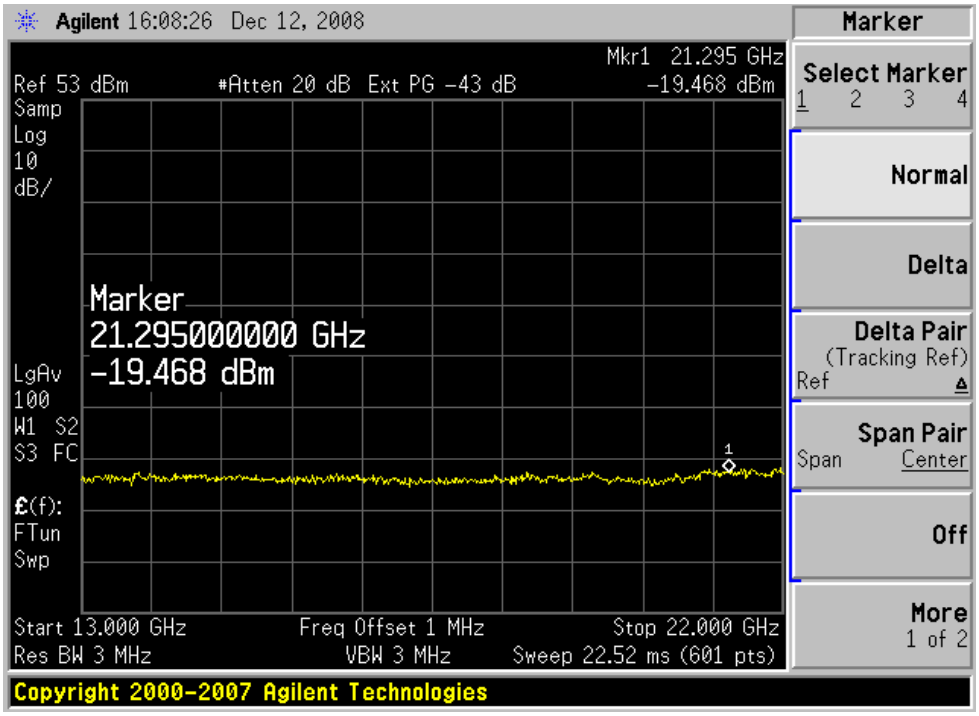
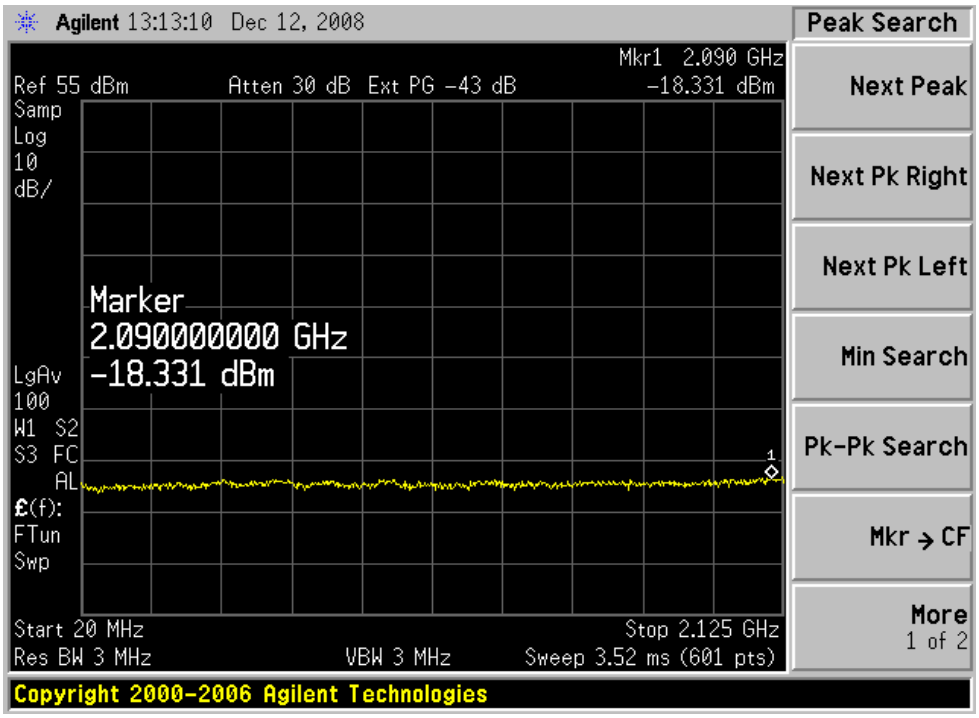
CH: 413 / 438 / 463 / 488

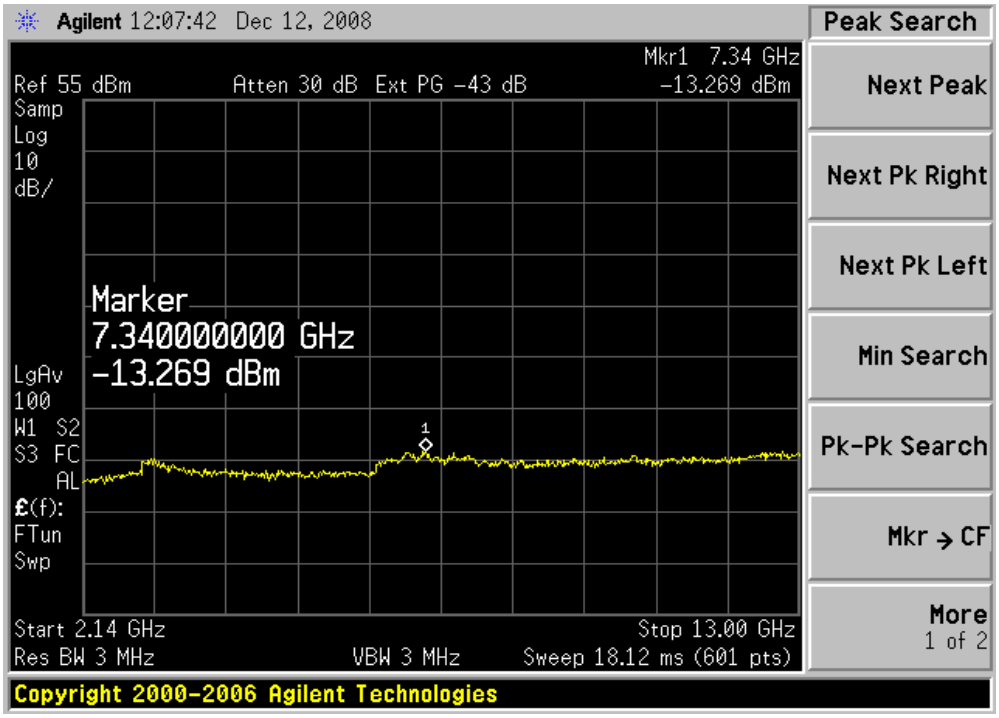






CH: 511 / 536 / 561 / 586




Agilent 12:07:42 Dec 12, 2008
Peak Search
Mkr1 7.34 GHz
Ref 55 dBm
Atten 30 dB Ext PG -43 dB
-13.269 dBm
Samp
Log
10
dB/
Marker
7.340000000 GHz
-13.269 dBm
LgAv
100
W1 S2
S3 FC
AL
£(f):
FTun
Swp
Start 2.14 GHz
Res BW 3 MHz
VBW 3 MHz
Stop 13.00 GHz
Sweep 18.12 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
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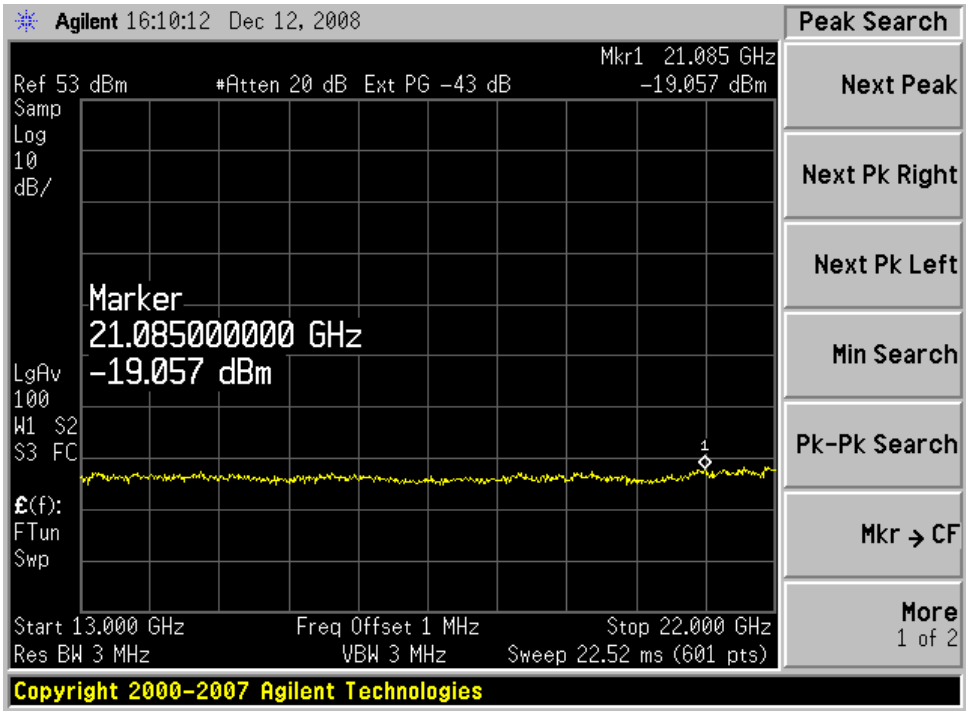
Agilent 16:10:12 Dec 12, 2008
Peak Search
Mkr1 21.085 GHz
Ref 53 dBm
#Atten 20 dB Ext PG -43 dB
-19.057 dBm
Samp
Log
10
dB/
Marker
21.085000000 GHz
-19.057 dBm
LgAv
100
W1 S2
S3 FC
£(f):
FTun
Swp
Start 13.000 GHz
Res BW 3 MHz
Freq Offset 1 MHz
VBW 3 MHz
Stop 22.000 GHz
Sweep 22.52 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
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§2.1049 - OCCUPIED BANDWIDTH

Applicable Standard

Requirements: CFR 47, Section 2.1049.

Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 30 kHz and the 26 dB & 99% bandwidth was recorded.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Dates
Agilent	PSA Series Spectrum Analyzer	E4445A	MY44300451	2008-5-2
DST	DST100 40dB Attenuator	DTS100-40dB-N	N/A	N/A
Hewlett Packard	Hewlett Packard RF Cable	8120-6192	01428251	N/A

*** Statement of Traceability: ZTE Corporation Reliability Testing Center** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

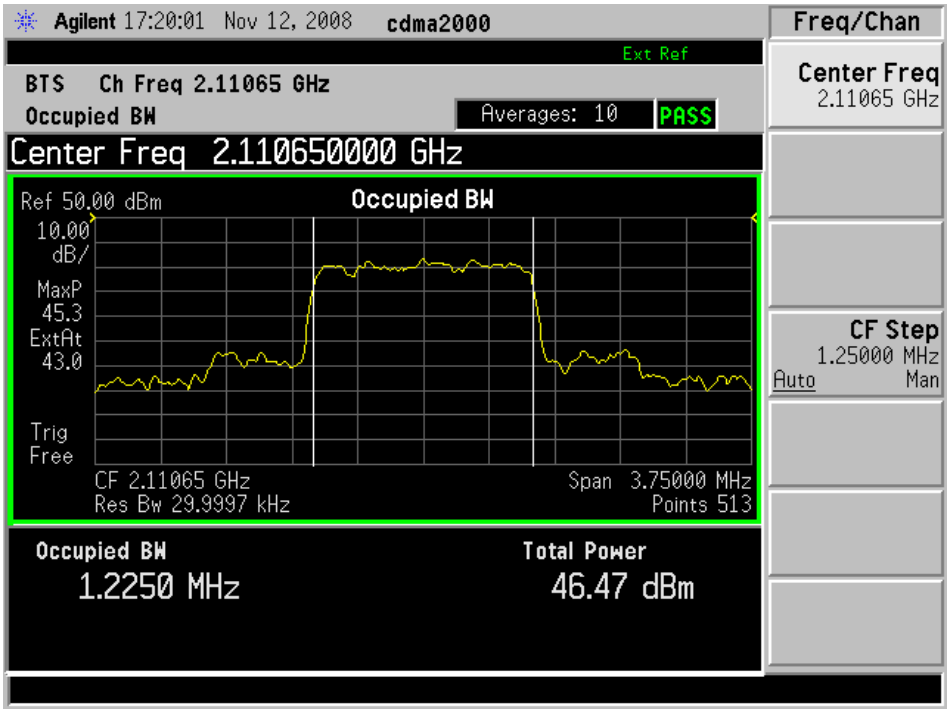
Temperature:	20° C
Relative Humidity:	55%
ATM Pressure:	1009mbar

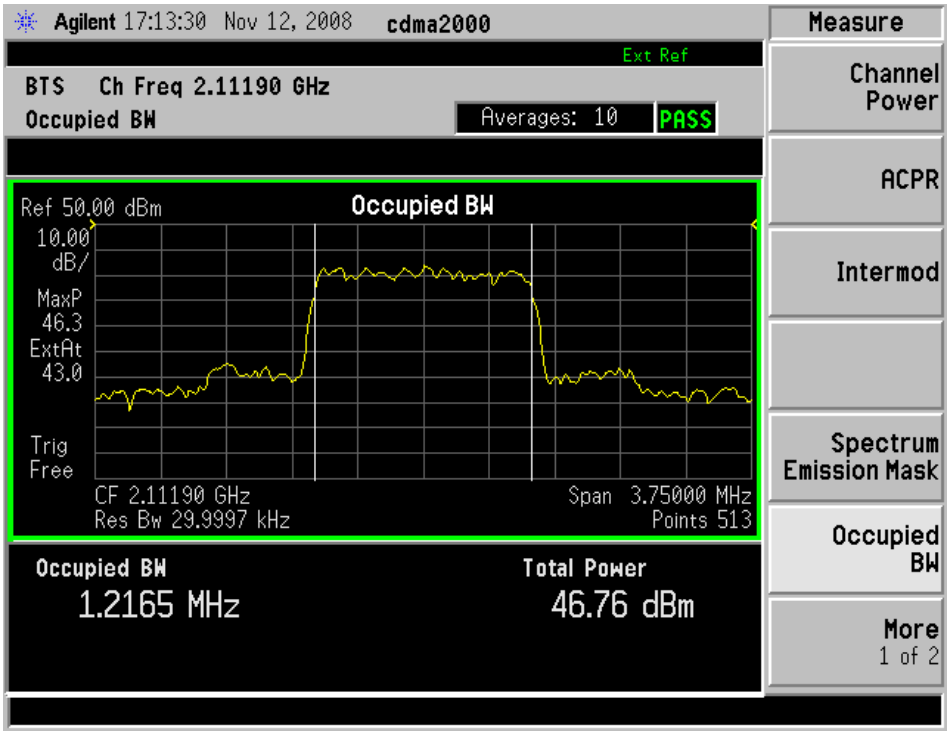
** The testing was performed by Ma Tianfei on Dec12-13, 2008*

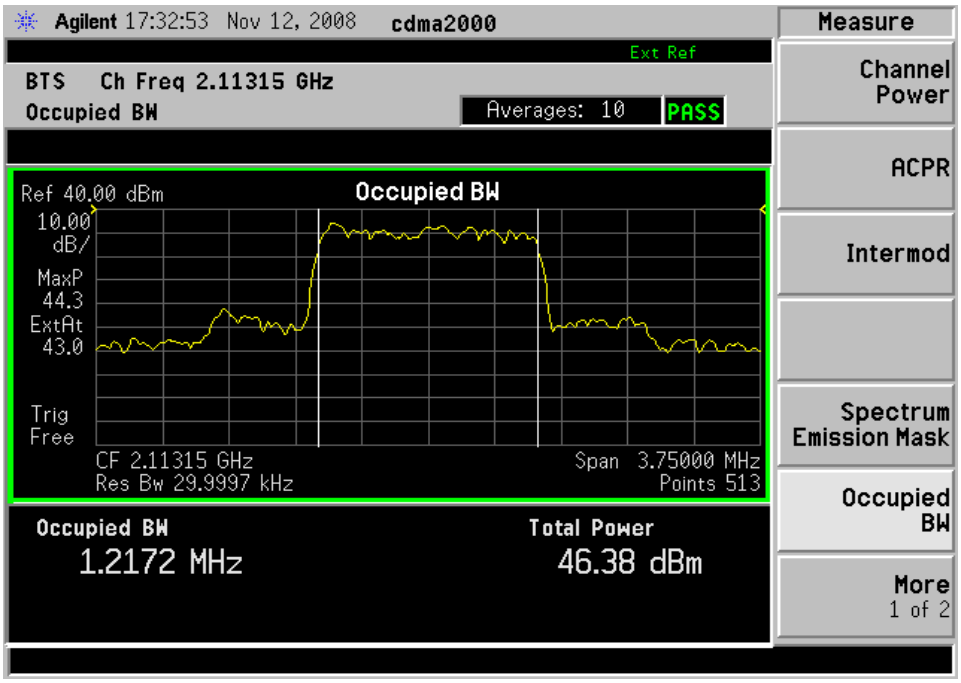
Test Mode: CDMA2000 1X

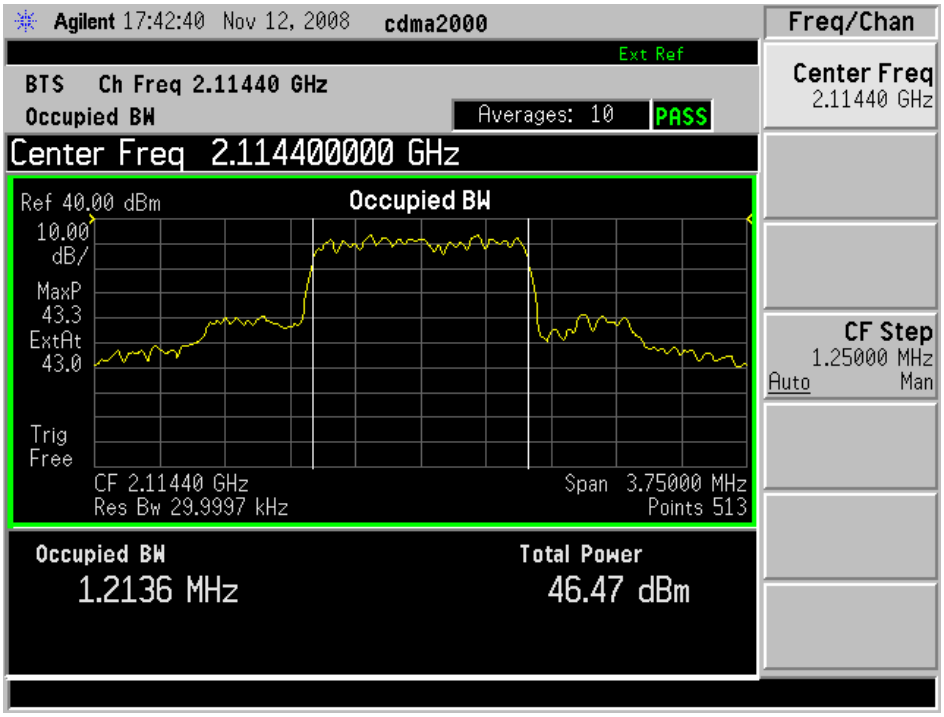
Please refer to the following table and plots.

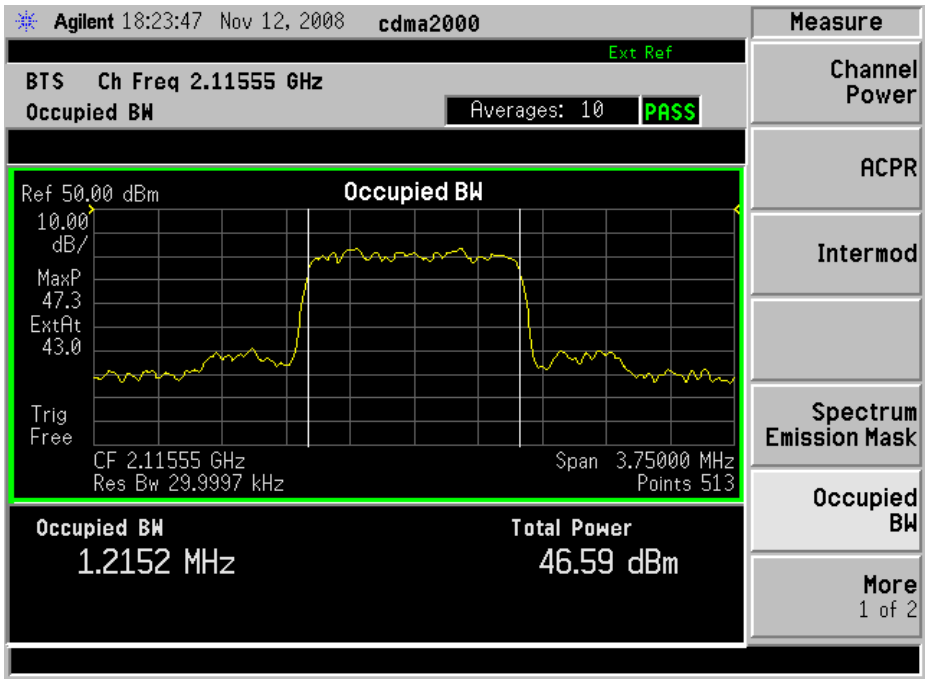
Frequency (MHz)	Channel	99% Power Bandwidth (MHz)	Limit (MHz)
2110.65/2111.9/2113.15/2114.4	13/38/63/88	1.2250/1.2165/1.2172/1.2136	< 1.23
2115.55/2116.8/2118.05/2119.3	111/136/161/186	1.2152/1.2196/1.2194/1.2098	< 1.23
2130.65/2131.9/2133.15/2134.4	413/438/463/488	1.2110/1.1981/1.2071/1.2053	< 1.23
2135.55/2136.8/2138.05/2139.3	511/536/561/586	1.2093/1.2104/1.2215/1.2251	< 1.23

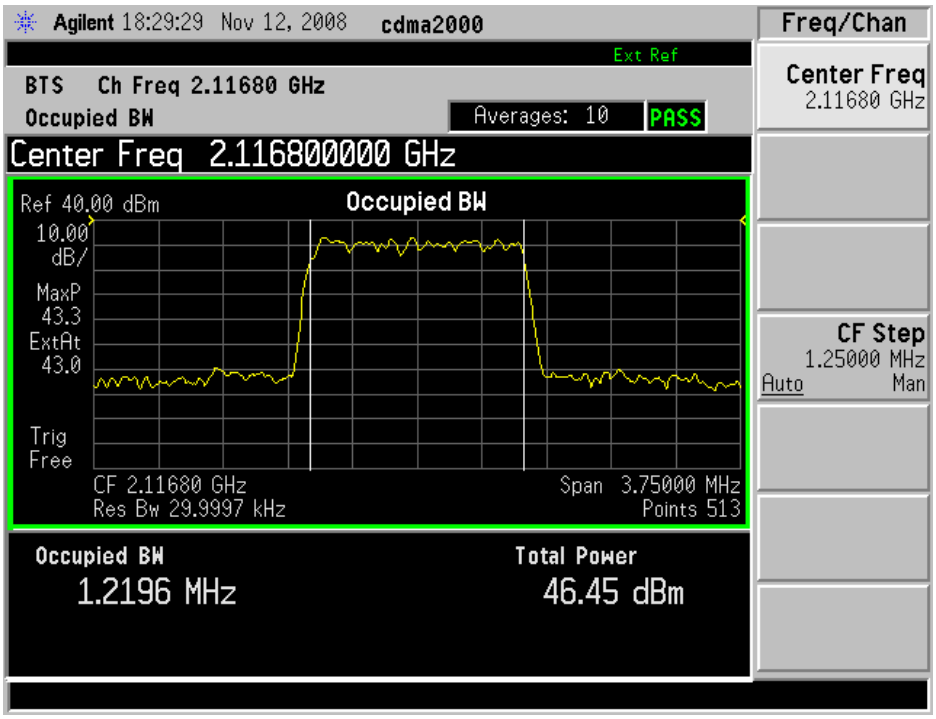

Agilent 17:20:01 Nov 12, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.11065 GHz
Occupied BW
Averages: 10
PASS
Center Freq 2.110650000 GHz
Ref 50.00 dBm
Occupied BW
10.00 dB/
MaxP 45.3
ExtAt 43.0
Trig Free
CF 2.11065 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2250 MHz
Total Power
46.47 dBm
Freq/Chan
Center Freq
2.11065 GHz
CF Step
1.25000 MHz
Auto
Man

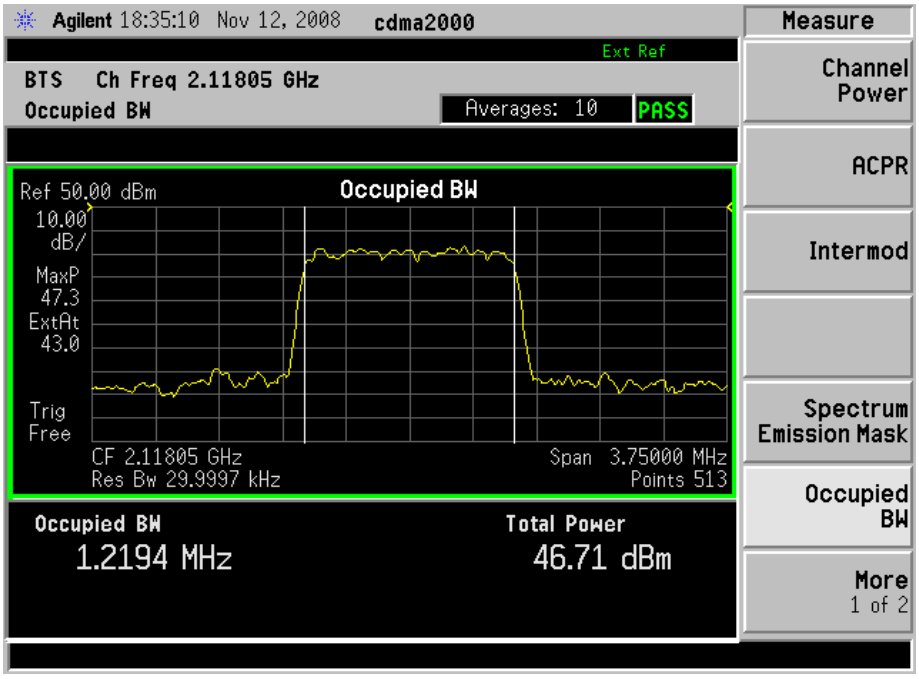

Agilent 17:13:30 Nov 12, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.11190 GHz
Occupied BW
Averages: 10
PASS
Ref 50.00 dBm
Occupied BW
10.00 dB/
MaxP 46.3
ExtAt 43.0
Trig Free
CF 2.11190 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2165 MHz
Total Power
46.76 dBm
Measure
Channel Power
ACPR
Intermod
Spectrum Emission Mask
Occupied BW
More
1 of 2

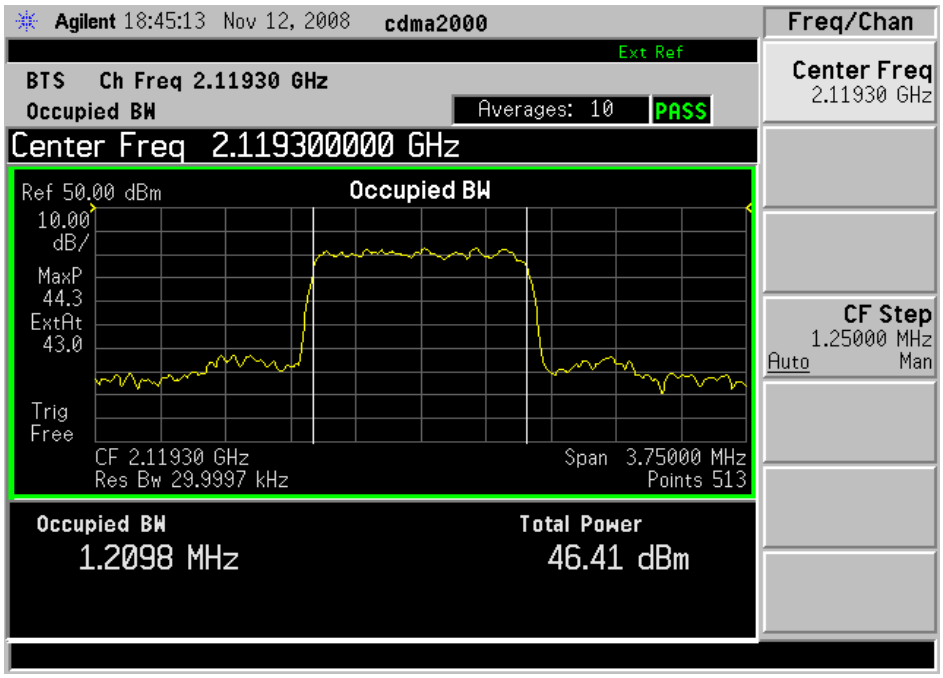

Agilent 17:32:53 Nov 12, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.11315 GHz
Occupied BW
Averages: 10
PASS
Ref 40.00 dBm
Occupied BW
10.00
dB/
MaxP
44.3
ExtAt
43.0
Trig
Free
CF 2.11315 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2172 MHz
Total Power
46.38 dBm
Measure
Channel Power
ACPR
Intermod
Spectrum Emission Mask
Occupied BW
More
1 of 2

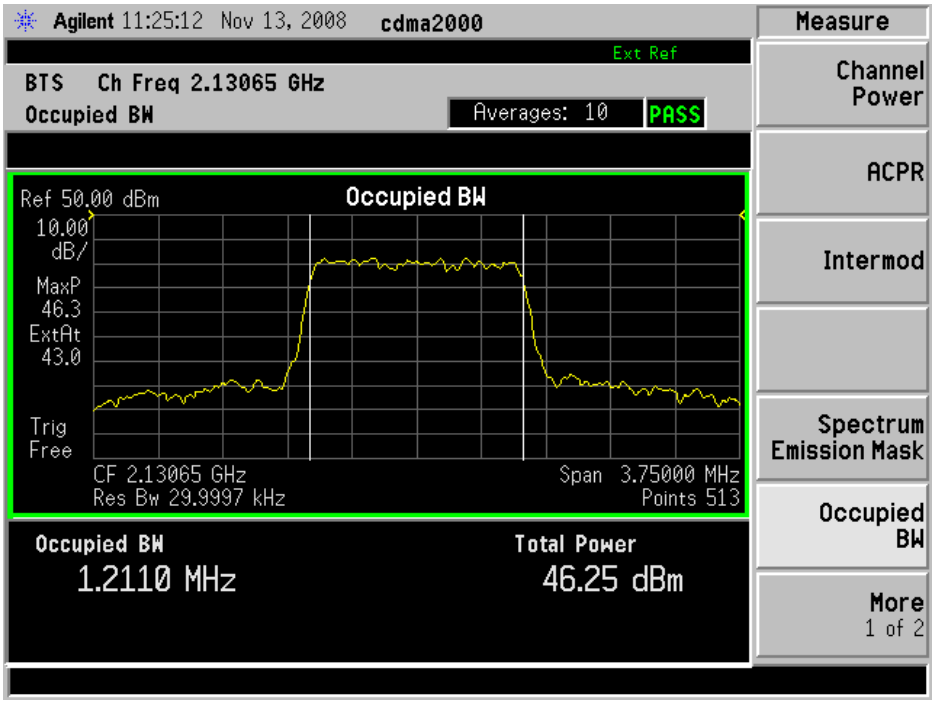

Agilent 17:42:40 Nov 12, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.11440 GHz
Occupied BW
Averages: 10
PASS
Center Freq 2.114400000 GHz
Ref 40.00 dBm
Occupied BW
10.00
dB/
MaxP
43.3
ExtAt
43.0
Trig
Free
CF 2.11440 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2136 MHz
Total Power
46.47 dBm
Freq/Chan
Center Freq
2.11440 GHz
CF Step
1.25000 MHz
Auto
Man

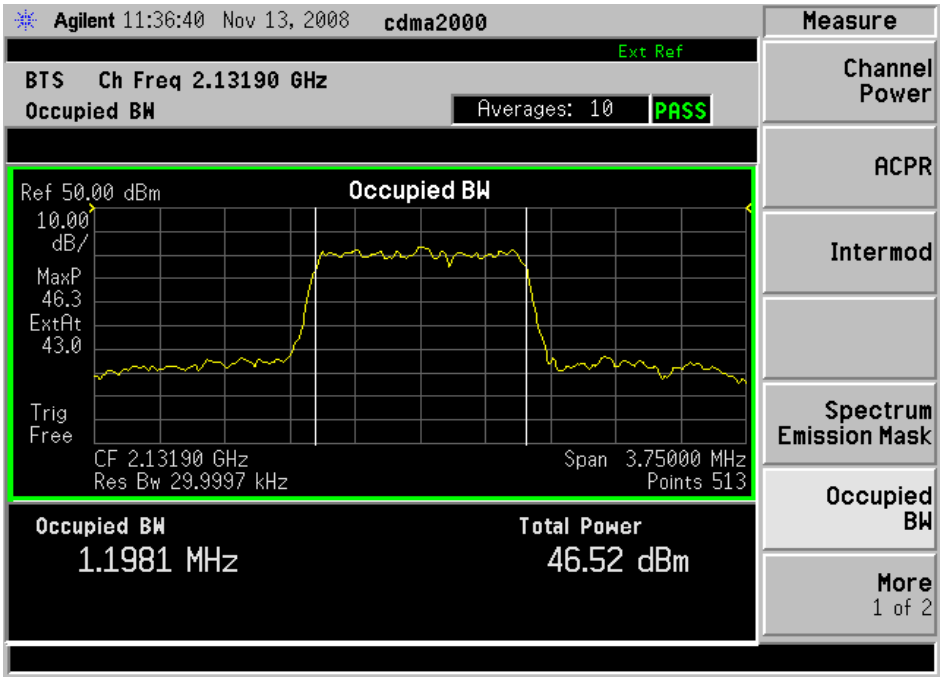

Agilent 18:23:47 Nov 12, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.11555 GHz
Occupied BW
Averages: 10
PASS
Ref 50.00 dBm
Occupied BW
10.00 dB/
MaxP 47.3
ExtAt 43.0
Trig Free
CF 2.11555 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2152 MHz
Total Power
46.59 dBm
Measure
Channel Power
ACPR
Intermod
Spectrum Emission Mask
Occupied BW
More 1 of 2

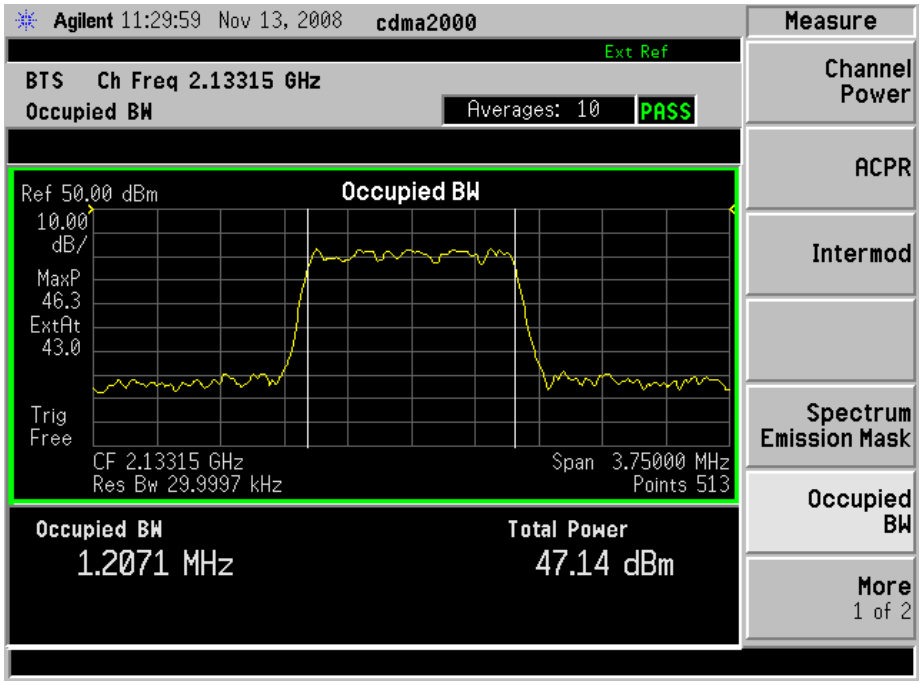

Agilent 18:29:29 Nov 12, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.11680 GHz
Occupied BW
Averages: 10
PASS
Center Freq 2.116800000 GHz
Ref 40.00 dBm
Occupied BW
10.00 dB/
MaxP 43.3
ExtAt 43.0
Trig Free
CF 2.11680 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2196 MHz
Total Power
46.45 dBm
Freq/Chan
Center Freq 2.11680 GHz
CF Step 1.25000 MHz
Auto Man


Agilent 18:35:10 Nov 12, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.11805 GHz
Occupied BW
Averages: 10
PASS
Ref 50.00 dBm
Occupied BW
10.00
dB/
MaxP
47.3
ExtAt
43.0
Trig
Free
CF 2.11805 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2194 MHz
Total Power
46.71 dBm
Measure
Channel Power
ACPR
Intermod
Spectrum Emission Mask
Occupied BW
More
1 of 2


Agilent 18:45:13 Nov 12, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.11930 GHz
Occupied BW
Averages: 10
PASS
Center Freq 2.119300000 GHz
Ref 50.00 dBm
Occupied BW
10.00
dB/
MaxP
44.3
ExtAt
43.0
Trig
Free
CF 2.11930 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2098 MHz
Total Power
46.41 dBm
Freq/Chan
Center Freq
2.11930 GHz
CF Step
1.25000 MHz
Auto
Man


Agilent 11:25:12 Nov 13, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.13065 GHz
Occupied BW
Averages: 10
PASS
Ref 50.00 dBm
Occupied BW
10.00
dB/
MaxP
46.3
ExtAt
43.0
Trig
Free
CF 2.13065 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2110 MHz
Total Power
46.25 dBm
Measure
Channel Power
ACPR
Intermod
Spectrum Emission Mask
Occupied BW
More
1 of 2


Agilent 11:36:40 Nov 13, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.13190 GHz
Occupied BW
Averages: 10
PASS
Ref 50.00 dBm
Occupied BW
10.00
dB/
MaxP
46.3
ExtAt
43.0
Trig
Free
CF 2.13190 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.1981 MHz
Total Power
46.52 dBm
Measure
Channel Power
ACPR
Intermod
Spectrum Emission Mask
Occupied BW
More
1 of 2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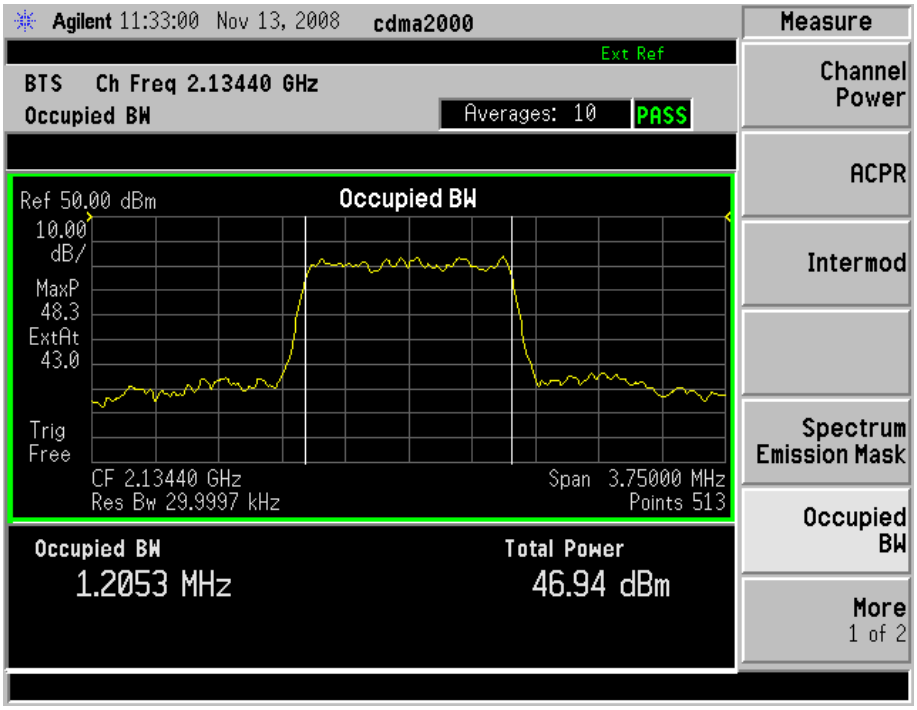
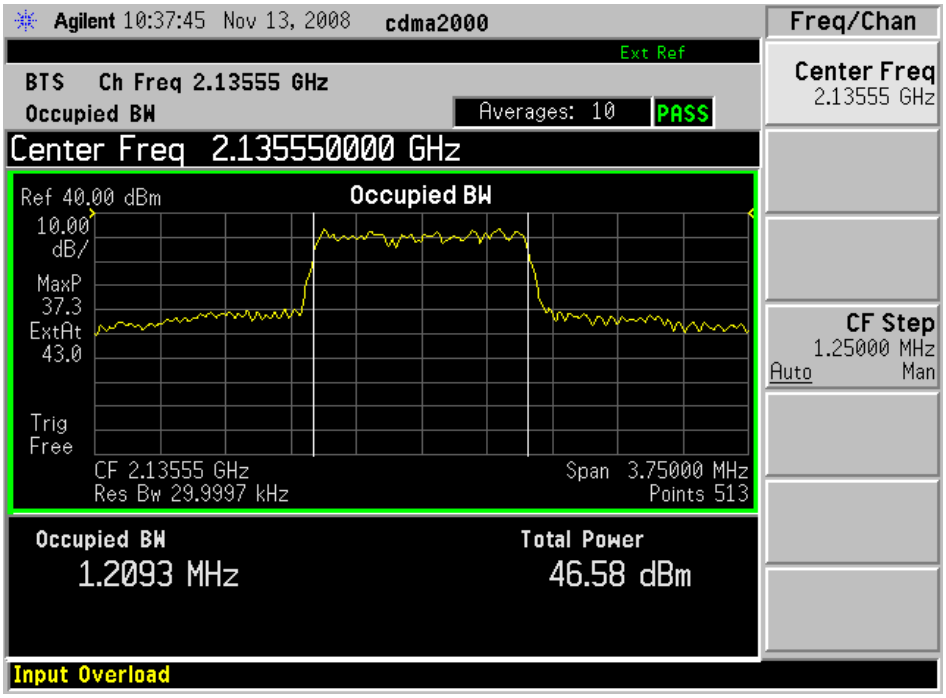
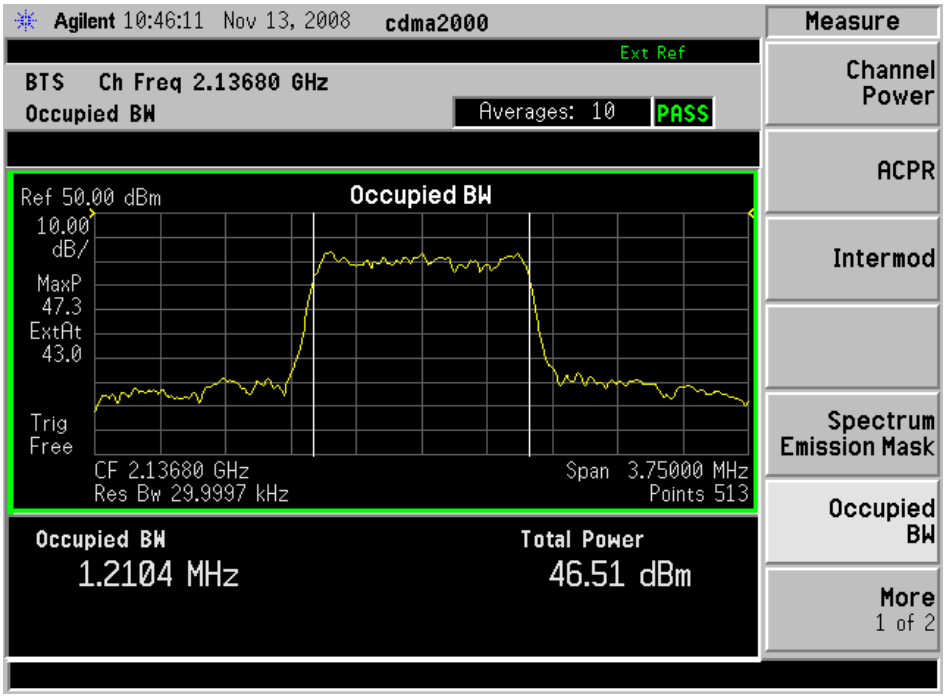
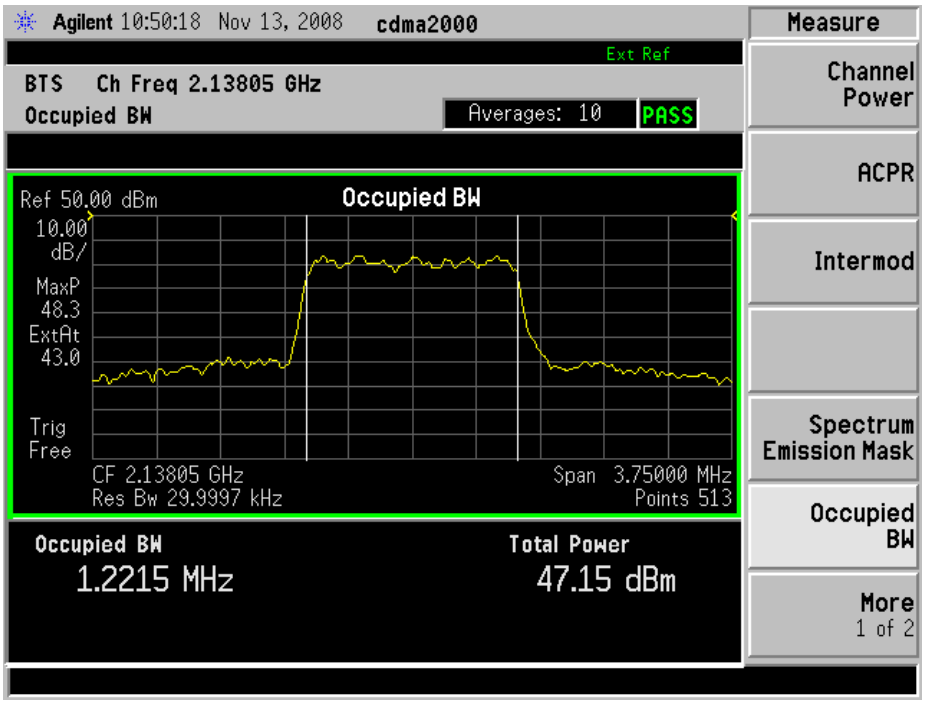
Ext Ref
BTS Ch Freq 2.13315 GHz
Occupied BW
Averages: 10
PASS
Ref 50.00 dBm
Occupied BW
10.00
dB/
MaxP
46.3
ExtAt
43.0
Trig
Free
CF 2.13315 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2071 MHz
Total Power
47.14 dBm
Measure
Channel Power
ACPR
Intermod
Spectrum Emission Mask
Occupied BW
More
1 of 2


Agilent 11:33:00 Nov 13, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.13440 GHz
Occupied BW
Averages: 10
PASS
Ref 50.00 dBm
Occupied BW
10.00
dB/
MaxP
48.3
ExtAt
43.0
Trig
Free
CF 2.13440 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2053 MHz
Total Power
46.94 dBm
Measure
Channel Power
ACPR
Intermod
Spectrum Emission Mask
Occupied BW
More
1 of 2


Agilent 10:37:45 Nov 13, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.13555 GHz
Occupied BW
Averages: 10
PASS
Center Freq 2.135550000 GHz
Ref 40.00 dBm
Occupied BW
10.00 dB/
MaxP 37.3
ExtAt 43.0
Trig Free
CF 2.13555 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2093 MHz
Total Power
46.58 dBm
Input Overload
Freq/Chan
Center Freq
2.13555 GHz
CF Step
1.25000 MHz
Auto
Man


Agilent 10:46:11 Nov 13, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.13680 GHz
Occupied BW
Averages: 10
PASS
Ref 50.00 dBm
Occupied BW
10.00 dB/
MaxP 47.3
ExtAt 43.0
Trig Free
CF 2.13680 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2104 MHz
Total Power
46.51 dBm
Measure
Channel Power
ACPR
Intermod
Spectrum Emission Mask
Occupied BW
More
1 of 2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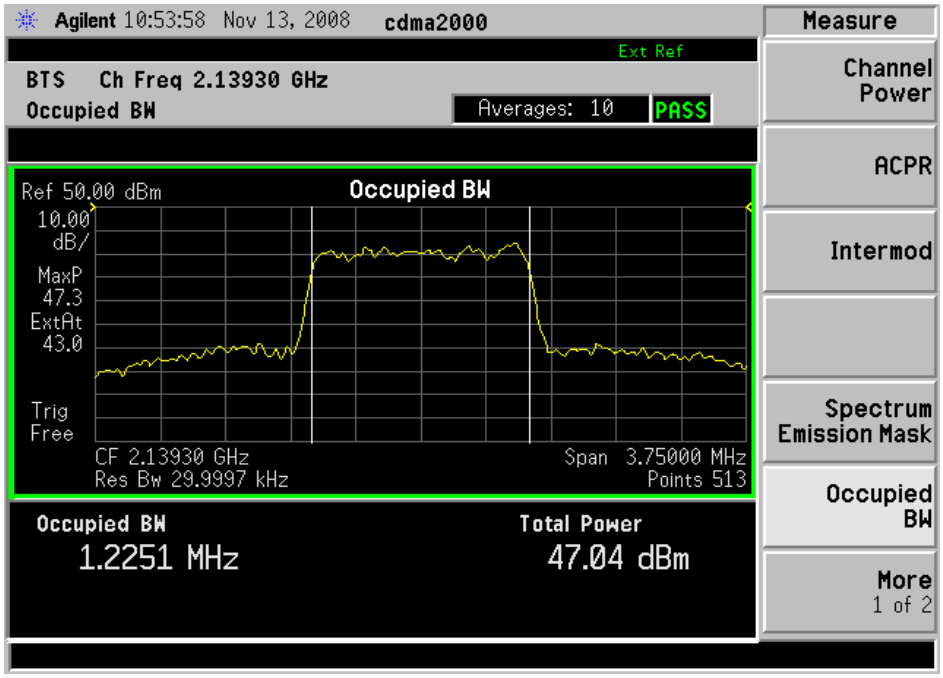
Ext Ref
BTS Ch Freq 2.13805 GHz
Occupied BW
Averages: 10
PASS
Ref 50.00 dBm
Occupied BW
10.00 dB/
MaxP 48.3
ExtAt 43.0
Trig Free
CF 2.13805 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2215 MHz
Total Power
47.15 dBm
Measure
Channel Power
ACPR
Intermod
Spectrum Emission Mask
Occupied BW
More 1 of 2


Agilent 10:53:58 Nov 13, 2008
cdma2000
Ext Ref
BTS Ch Freq 2.13930 GHz
Occupied BW
Averages: 10
PASS
Ref 50.00 dBm
Occupied BW
10.00 dB/
MaxP 47.3
ExtAt 43.0
Trig Free
CF 2.13930 GHz
Res Bw 29.9997 kHz
Span 3.75000 MHz
Points 513
Occupied BW
1.2251 MHz
Total Power
47.04 dBm
Measure
Channel Power
ACPR
Intermod
Spectrum Emission Mask
Occupied BW
More 1 of 2

§27.53 – BAND EDGE

Applicable Standard

According to §2.1051 and §27.53(g), in the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter maybe employed, and the power of any emission outside the frequency block shall be attenuated below the transmitter power (P) by at least 43 + 10 log10 (P) dB.

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation. The center of the spectrum analyzer was set to block edge frequency.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Dates
Agilent	PSA Series Spectrum Analyzer	E4445A	MY44300451	2008-5-2
DST	DST100 40dB Attenuator	DTS100-40dB-N	N/A	N/A
Hewlett Packard	Hewlett Packard RF Cable	8120-6192	01428251	N/A

*** Statement of Traceability: ZTE Corporation Reliability Testing Center** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

Temperature:	20° C
Relative Humidity:	55%
ATM Pressure:	1009mbar

** The testing was performed by Ma Tianfei on Dec5-8, 2008*

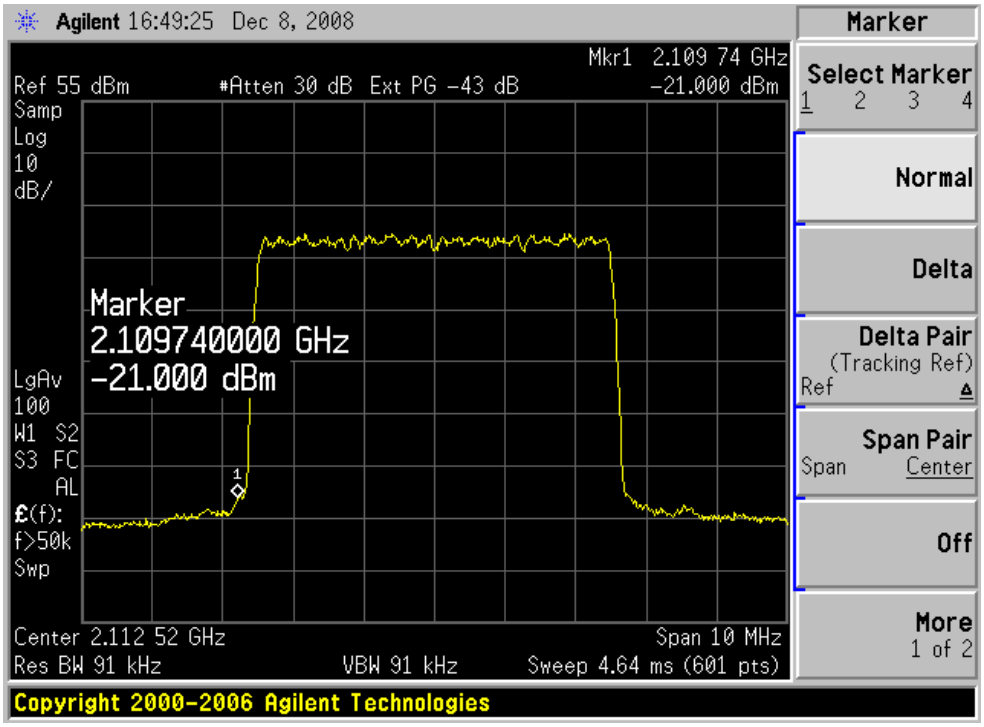
Test Mode: CDMA2000 1X

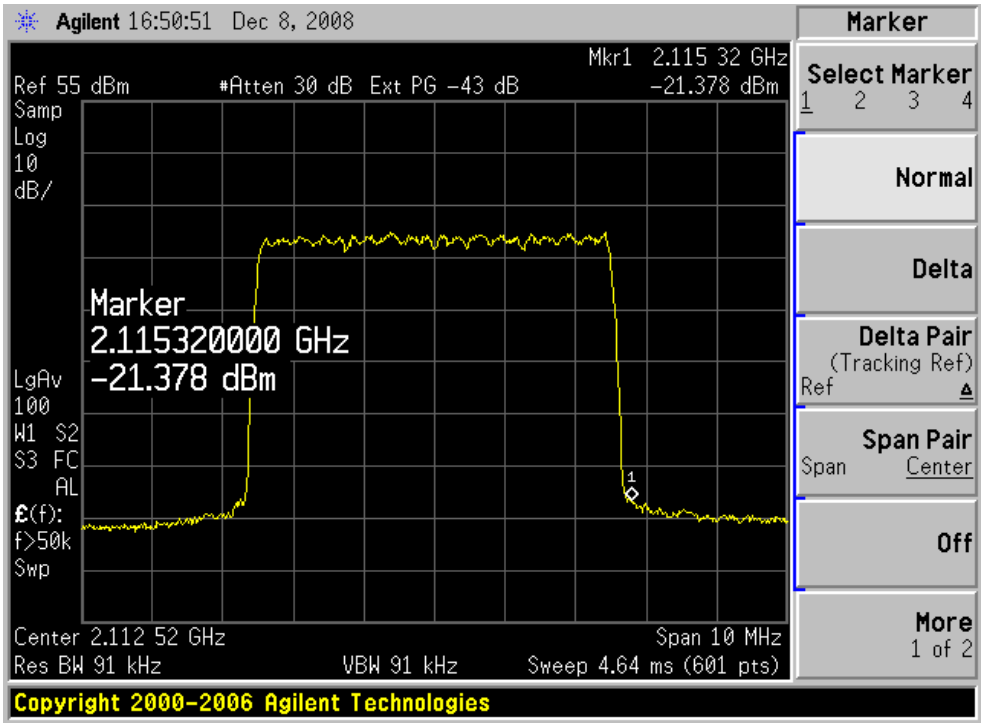
Please refer to the following table and plots.

Four Carries:

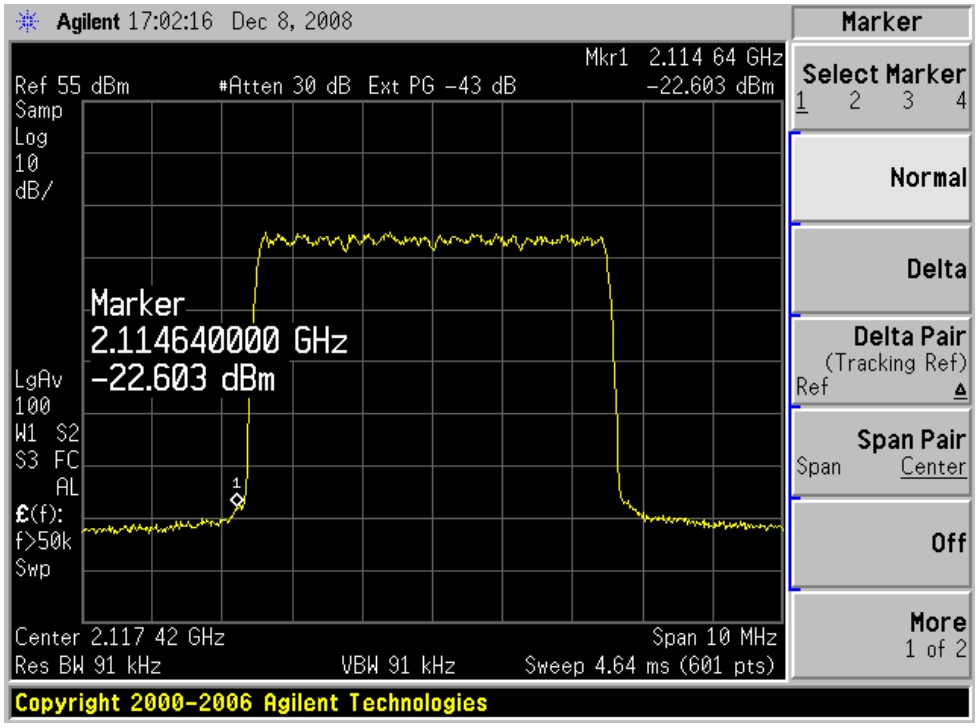
Frequency (MHz)	Channel	Emission (dBm)	Limit (dBm)
2110.65/2111.9/2113.15/2114.4	13/38/63/88	-21.000/-21.378	-13.00
2115.55/2116.8/2118.05/2119.3	111/136/161/186	-22.603/-20.280	-13.00
2130.65/2131.9/2133.15/2134.4	413/438/463/488	-22.803/-21.445	-13.00
2135.55/2136.8/2138.05/2139.3	511/536/561/586	-21.942/-21.835	-13.00

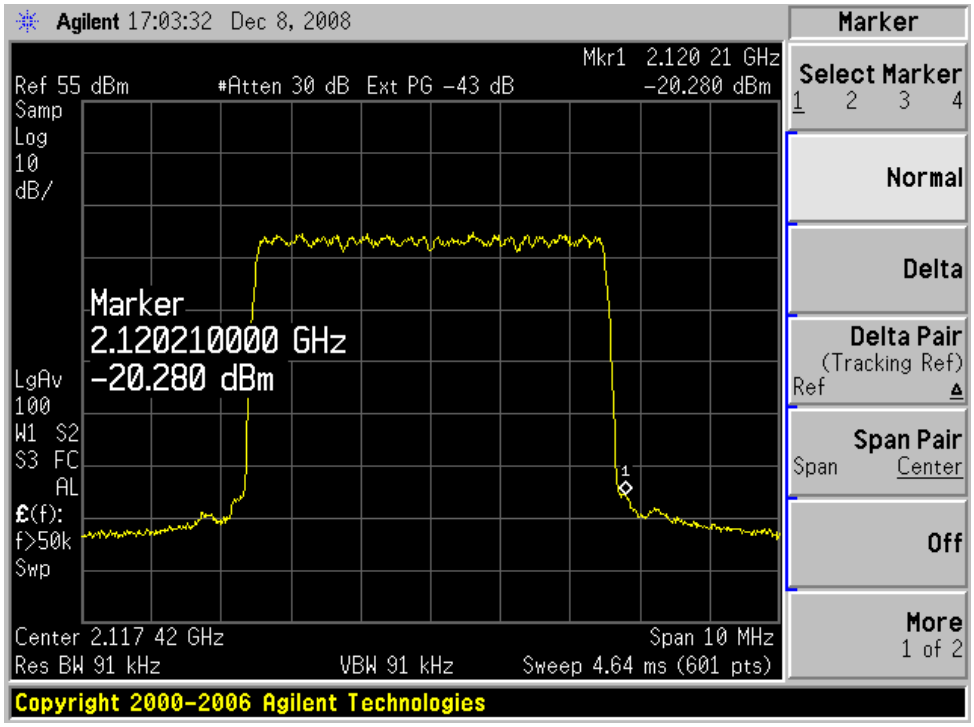
Channel: 13 / 38 / 63 / 88



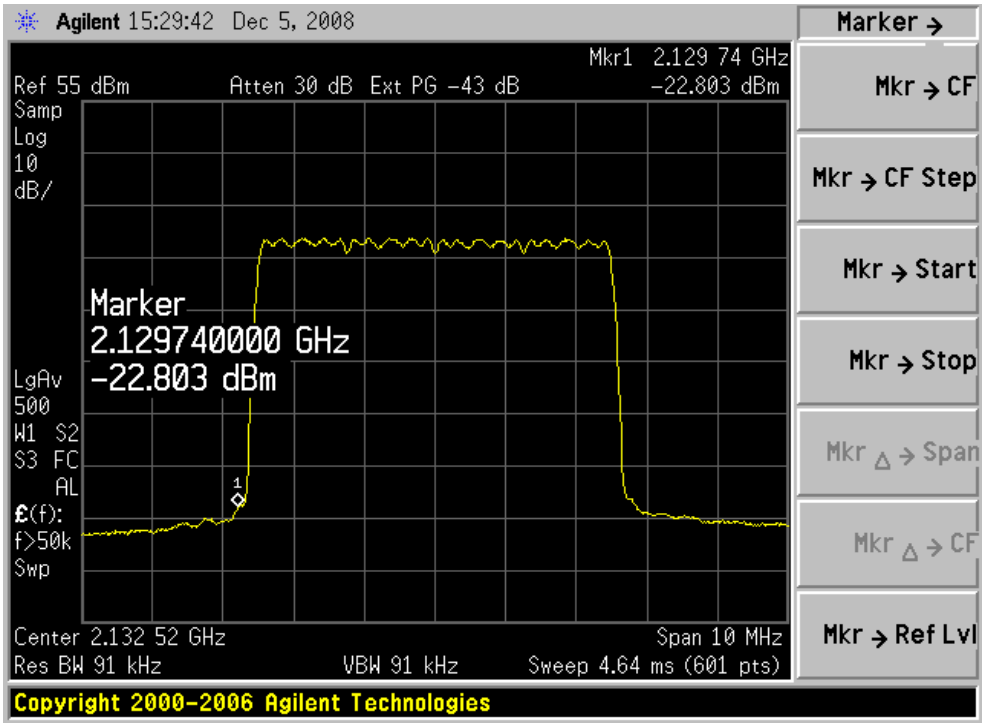


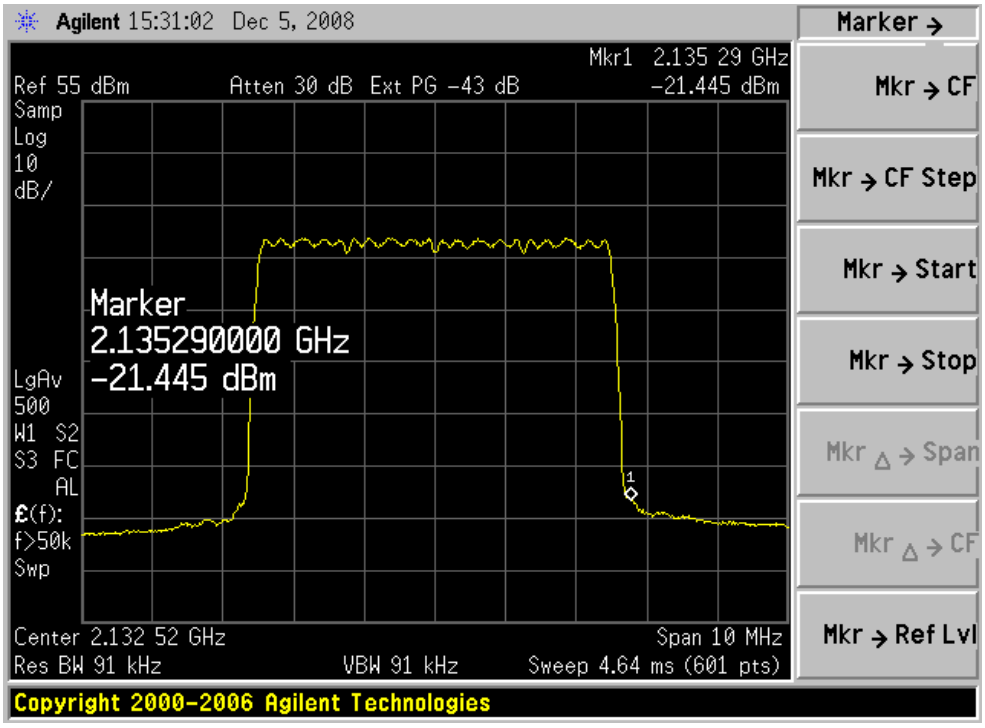
Channel: 111 / 136 / 161 / 186



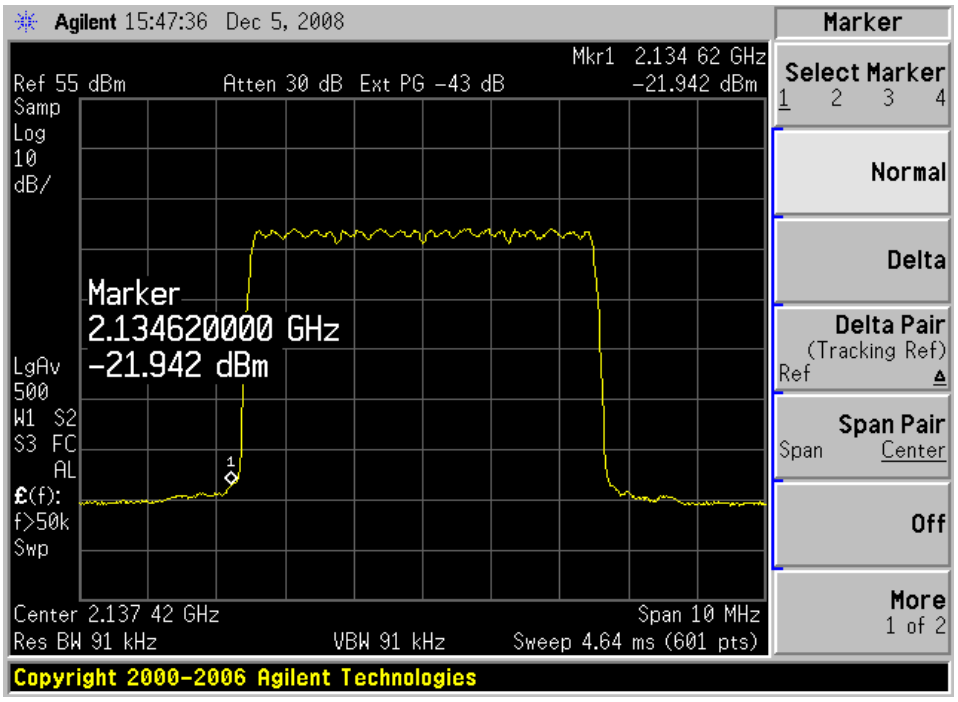


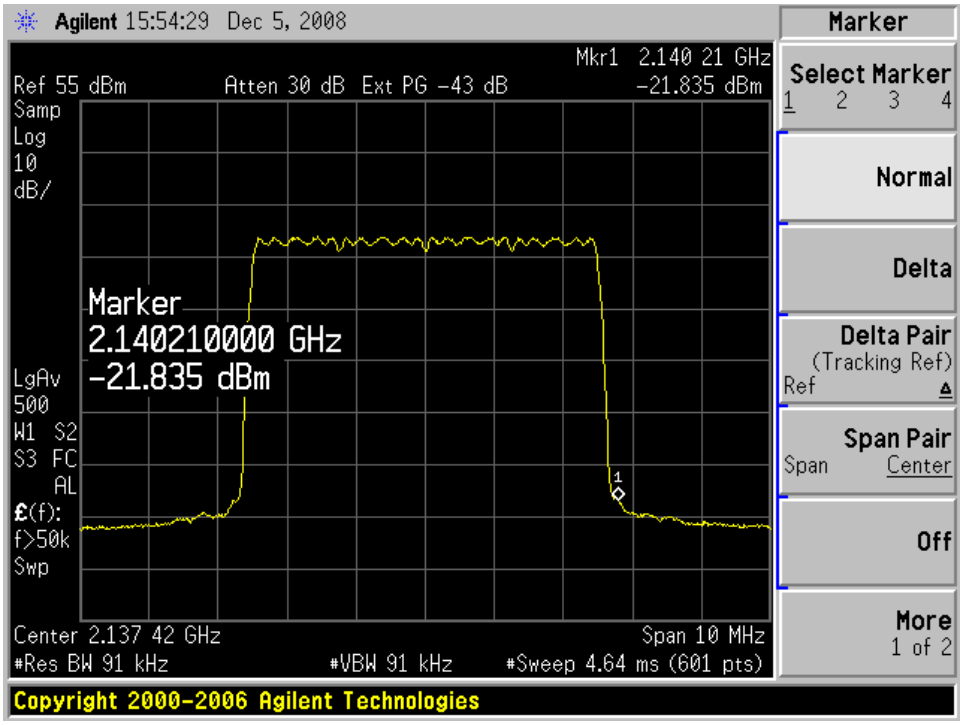
Channel: 413 / 438 / 463 / 488





Channel: 511 / 536 / 561 / 586





§2.1055 & §27.54 - FREQUENCY STABILITY

Applicable Standard

Requirements: FCC § 2.1055 (a), § 2.1055 (d) & §27.54.

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorization bands of operation.

The limits according to the technical requirement of EUT can be applied to the EUT.

Test Procedure

The frequency stability shall be measured with variation of ambient temperature from -30 °C to +50 °C.

Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10° centigrade through the range. A period of time sufficient to stabilize all of the components of the oscillator circuit at each temperature level shall be allowed prior to frequency measurement. The short term transient effects on the frequency of the transmitter due to keying (except for broadcast transmitters) and any heating element cycling normally occurring at each ambient temperature level also shall be shown. Only the portion or portions of the transmitter containing the frequency determining and stabilizing circuitry need be subjected to the temperature variation test.

The frequency stability shall be measured with variation of primary supply voltage as follows:

(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.
(2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.
(3) The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided. Effects on frequency of transmitter keying (except for broadcast transmitters) and any heating element cycling at the nominal supply voltage and at each extreme also shall be shown.

The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Dates
Agilent	PSA Spectrum Analyzer	E4445A	MY44300451	2008-5-2
GZ-ESPEC	Temperature Chamber	GRW-120	00020268	2008-3-8

*** Statement of Traceability: ZTE Corporation Reliability Testing Center** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

Temperature:	20° C
Relative Humidity:	54%
ATM Pressure:	1009mbar

** The testing was performed by Ma Tianfei on Nov 14-15, 2008*

Frequency Stability versus Temperature:

Temperature (^{O}C)	Power Supplied (Vac)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
f = 2110.65 MHz, Channel 13				
-40	-48	-3.54	0.00168	0.02
-30	-48	-6.12	0.00290	0.02
-20	-48	2.48	0.00117	0.02
-10	-48	0.17	0.00008	0.02
0	-48	0.69	0.00033	0.02
10	-48	-4.68	0.00222	0.02
20	-48	-2.50	0.00118	0.02
30	-48	-6.45	0.00306	0.02
40	-48	-2.58	0.00122	0.02
50	-48	3.14	0.00149	0.02
55	-48	3.45	0.00163	0.02

Temperature (^{O}C)	Power Supplied (Vac)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
f = 2115 MHz, Channel 100				
-40	-48	3.87	0.00183	0.02
-30	-48	6.47	0.00306	0.02
-20	-48	1.04	0.00049	0.02
-10	-48	6.31	0.00298	0.02
0	-48	-5.04	0.00238	0.02
10	-48	-3.58	0.00169	0.02
20	-48	5.75	0.00272	0.02
30	-48	5.45	0.00258	0.02
40	-48	2.48	0.00117	0.02
50	-48	3.25	0.00154	0.02
55	-48	3.12	0.00148	0.02

Temperature (^{O}C)	Power Supplied (Vac)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
f =2119.3 MHz, Channel 186				
-40	-48	-1.57	0.00074	0.02
-30	-48	-1.98	0.00093	0.02
-20	-48	2.46	0.00116	0.02
-10	-48	-1.04	0.00049	0.02
0	-48	0.39	0.00018	0.02
10	-48	3.85	0.00182	0.02
20	-48	0.29	0.00014	0.02
30	-48	2.75	0.00121	0.02
40	-48	0.69	0.00033	0.02
50	-48	-2.48	0.00117	0.02
55	-48	3.18	0.00150	0.02

Temperature (^{O}C)	Power Supplied (Vac)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
f = 2130.65 MHz, Channel 413				
-40	-48	-5.78	0.00271	0.02
-30	-48	3.16	0.00148	0.02
-20	-48	3.18	0.00149	0.02
-10	-48	-4.58	0.00215	0.02
0	-48	-0.58	0.00027	0.02
10	-48	6.75	0.00317	0.02
20	-48	-1.65	0.00077	0.02
30	-48	6.43	0.00302	0.02
40	-48	0.29	0.00014	0.02
50	-48	1.36	0.00064	0.02
55	-48	1.33	0.00062	0.02

Temperature (^{O}C)	Power Supplied (Vac)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
f = 2135 MHz, Channel 500				
-40	-48	2.46	0.00115	0.02
-30	-48	2.87	0.00134	0.02
-20	-48	1.53	0.00072	0.02
-10	-48	1.98	0.00093	0.02
0	-48	-4.69	0.00022	0.02
10	-48	-5.48	0.00257	0.02
20	-48	1.70	0.00080	0.02
30	-48	-4.68	0.00219	0.02
40	-48	-4.89	0.00229	0.02
50	-48	2.58	0.00121	0.02
55	-48	2.36	0.00111	0.02

Temperature (^{O}C)	Power Supplied (Vac)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
f = 2139.3 MHz, Channel 586				
-40	-48	-1.56	0.00071	0.02
-30	-48	-5.87	0.00268	0.02
-20	-48	6.25	0.00292	0.02
-10	-48	5.12	0.00239	0.02
0	-48	6.38	0.00298	0.02
10	-48	-4.12	0.00193	0.02
20	-48	-3.87	0.00181	0.02
30	-48	-6.48	0.00303	0.02
40	-48	5.12	0.00239	0.02
50	-48	1.98	0.00093	0.02
55	-48	3.14	0.00147	0.02

Frequency Stability vs. Voltage:

Power Supplied (Vac)	Temperature (^{O}C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
f = 2110.65 MHz, Channel 13				
-40	20	-2.21	0.00105	0.02
-44	20	-3.26	0.00154	0.02
-47	20	-3.15	0.00149	0.02
-50	20	-4.25	0.00201	0.02
-53	20	1.58	0.00075	0.02
-56	20	1.63	0.00077	0.02

Power Supplied (Vac)	Temperature (^{O}C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
f = 2115 MHz, Channel 100				
-40	20	1.69	0.00080	0.02
-44	20	3.98	0.00188	0.02
-47	20	-2.16	0.00102	0.02
-50	20	-3.45	0.00163	0.02
-53	20	-1.69	0.00080	0.02
-56	20	3.14	0.00148	0.02

Power Supplied (Vac)	Temperature (^{O}C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
f = 2119.3 MHz, Channel 186				
-40	20	-1.68	0.00079	0.02
-44	20	2.19	0.00103	0.02
-47	20	4.89	0.00231	0.02
-50	20	2.53	0.00119	0.02
-53	20	2.17	0.00102	0.02
-56	20	-0.15	0.00007	0.02

Power Supplied (Vac)	Temperature (^{O}C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
f = 2130.6 5MHz, Channel 413				
-40	20	4.88	0.00229	0.02
-44	20	-0.39	0.00018	0.02
-47	20	0.50	0.00023	0.02
-50	20	2.08	0.00098	0.02
-53	20	-3.97	0.00186	0.02
-56	20	-3.46	0.00162	0.02

Power Supplied (Vac)	Temperature (^{O}C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
f = 2135 MHz, Channel 500				
-40	20	0.99	0.00046	0.02
-44	20	-2.91	0.00136	0.02
-47	20	3.58	0.00168	0.02
-50	20	2.87	0.00134	0.02
-53	20	2.23	0.00104	0.02
-56	20	-2.21	0.00103	0.02

Power Supplied (Vac)	Temperature (^{O}C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
f = 2139.3 MHz, Channel 586				
-40	20	5.53	0.00258	0.02
-44	20	4.39	0.00205	0.02
-47	20	4.02	0.00188	0.02
-50	20	-5.17	0.00242	0.02
-53	20	-5.67	0.00265	0.02
-56	20	-4.45	0.00208	0.02