Lab Code: 200707-0

FCC PART 22 &24 TYPE APPROVAL

EMI MEASUREMENT AND TEST REPORT

For

ZTE Corporation

ZTE Plaza, Hi-tech Park, Nanshan District, Shenzhen, Guangdong, China

FCC ID: Q78-ZXG-OB06

July 28, 2006

This Report Concerns: ☒ Original Report	**Equipment Type:** GSM Base Transceiver Station

Test Engineer:	Merry Zhao
Report No.:	RSZ06062602
Test Date:	April 22- 26, 2006
Reviewed By:	Boni Baniqued
Prepared By:	Bay Area Compliance Lab Corp. (ShenZhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone, ShenZhen, Guangdong 518038, P.R.China Tel: +86-755-33320018 Fax: +86-755-33320008

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *ZTE Corporation*'s product, model number: ZXG10 OB06 or the "EUT" as referred to in this report is a GSM Base Transceiver Station. The EUT is measured approximately 180 cm L x 90 cmW x 78 cmH, rated input voltage: 120 VAC/60 Hz.

** The test data gathered are from production sample, serial number: 0606050 provided by the manufacturer, we receive the EUT on 2006-6-26.*

Objective

This Type approval report is prepared on behalf of *ZTE Corporation* in accordance with Part 2, Subpart J, Part 22 Subpart H, and Part 24 Subpart E of the Federal Communication Commissions rules.

Related Submittal(s)/Grant(s)

No related submittal(s).

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 22 Subpart H - Public Mobile Services
Part 24 Subpart E - PCS

Applicable Standards: TIA/EIA 603-C, ANSI C63.4-2003.

Test Facility

The Test site used by Bay Area Compliance Lab Corp. (ShenZhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone, ShenZhen, Guangdong 518038, P.R.China.

Test site at Bay Area Compliance Lab Corp. (ShenZhen) 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 November 04, 2004. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C 63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179 and Industrial Canada registration test site No.: 5500A. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Lab Corp. (ShenZhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0). The current scope of accreditations can be found at http://ts.nist.gov/ts/htdocs/210/214/scopes/2007070.htm

SYSTEM TEST CONFIGURATION

Justification

The system was configured for testing in a typical fashion (as normally used by a typical user).

EUT Exercise Software

EDGE-INSTECTOR

Special Accessories

The special accessories were provided by Manufacturer.

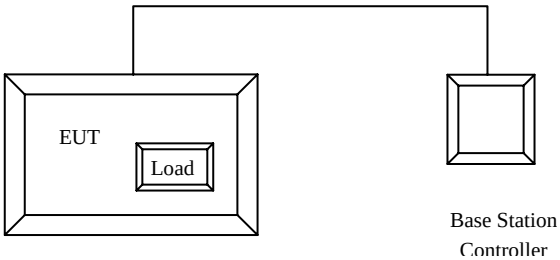
Schematics and Block Diagram

Please refer to the Exhibit D.

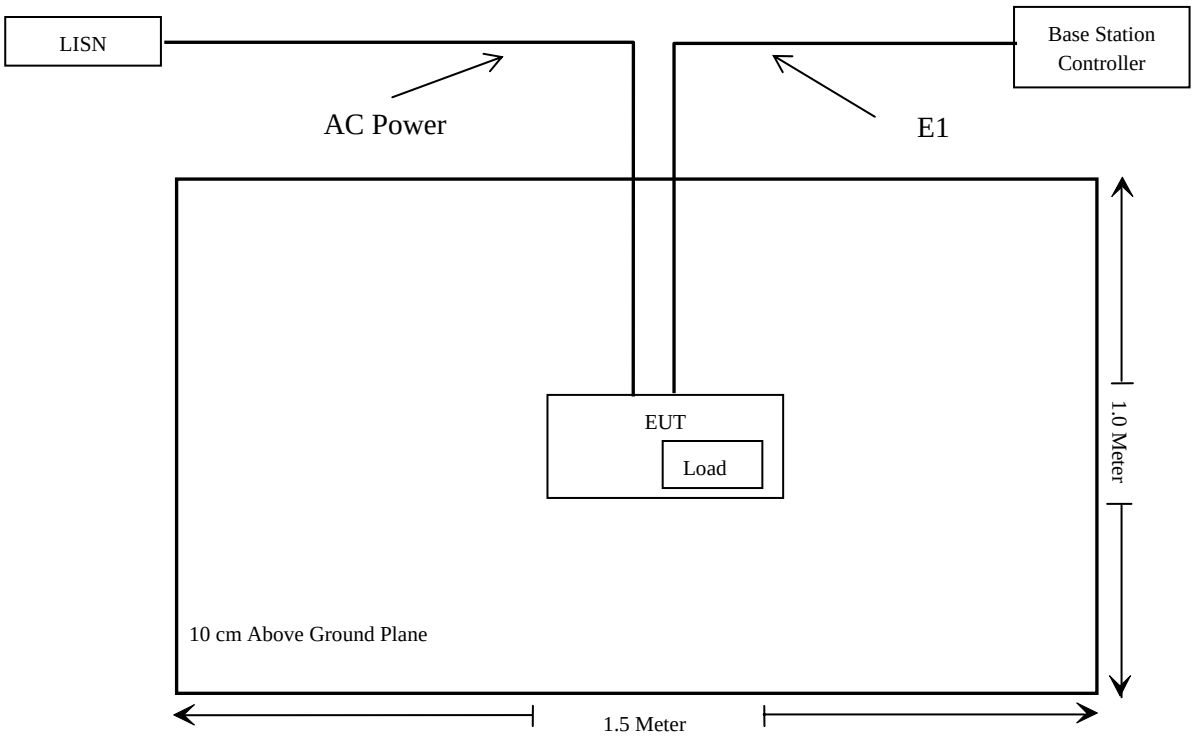
Equipment Modifications

Bay Area Compliance Lab Corp. (ShenZhen) has not done any modification on the EUT.

Configuration of Test Setup



Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§2.1046	RF Output Power	Compliant
§ 2.1091	RF Exposure	Compliant
§2.1047	Modulation characteristic	Compliant
§15.209(a)	Radiation Emissions	Compliant*
§2.1053	Spurious Radiated Emissions	Compliant
§2.1051, §22.917(a), §24.238(a)	Spurious Emissions At Antenna Terminals	Compliant
§2.1049 §22.917 §22.905, §24.238	Occupied Bandwidth	Compliant
§22.917, §24.238	Band Edge	Compliant
§ 2.1055 (a) § 2.1055 (d) § 22.355, § 24.235	Frequency stability	Compliant

* Within the measurement uncertainty

§2.1091 - RF EXPOSURE

Limit

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f\2\)	6
30-300.	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6

f = frequency in MHz
* = Plane-wave equivalent power density

Test Data

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

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

For 850 MHz:

Maximum peak output power at antenna input terminal: 46.66(dBm)
Maximum peak output power at antenna input terminal: 46.344(W)
Prediction distance: 400 (cm)
Predication frequency: 881.6 (MHz)
Antenna Gain (typical): 17 (dBi)
Power density at predication frequency at 400 cm: 1.16 (mW/cm^2)
MPE limit for uncontrolled exposure at prediction frequency: 881.6/300=2.94 (mW/cm^2)

1.16 (mW/cm^2) < 2.94 (mW/cm^2)

For 1900 MHz:

Maximum peak output power at antenna input terminal: 45.77 (dBm)
Maximum peak output power at antenna input terminal: 37.757 (W)
Prediction distance: 300 (cm)
Predication frequency: 1960 (MHz)
Antenna Gain (typical): 17 (dBi)
Power density at predication frequency at 300 cm: 1.67 (mW/cm^2)
MPE limit for uncontrolled exposure at prediction frequency: 5 (mW/cm^2)

1.67 (mW/cm^2) < 5 (mW/cm^2)

Result: Compliant

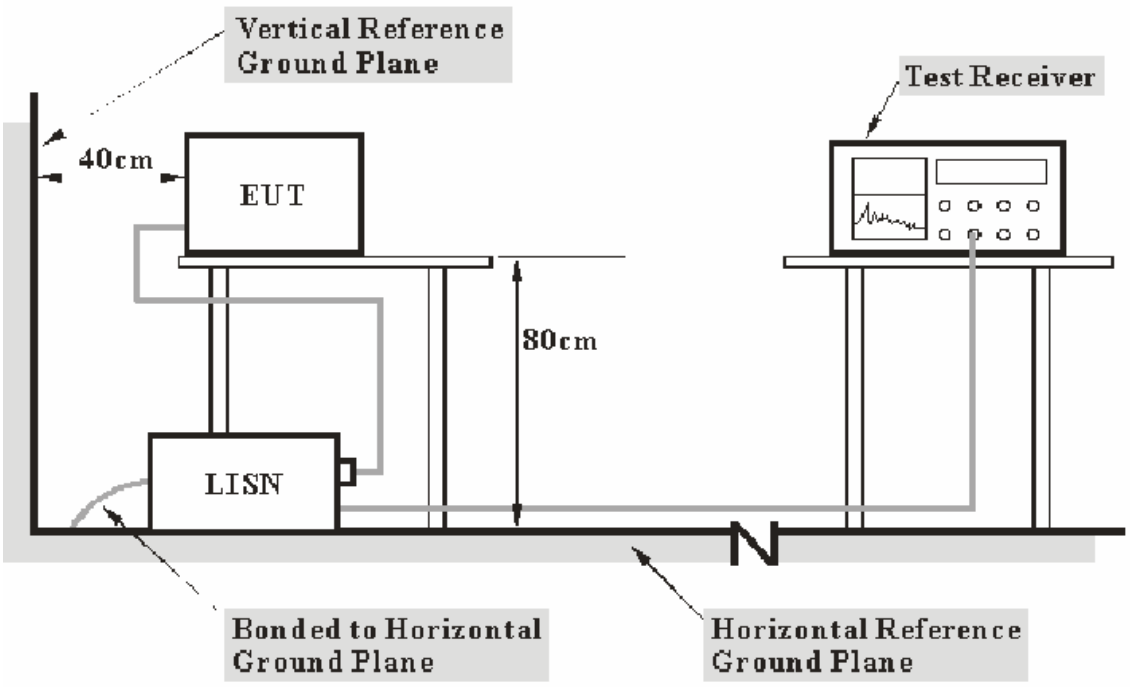
§15.207 (a) - CONDUCTED EMISSIONS

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Lab Corp. (ShenZhen) is ±2.7 dB.

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.207 (a) limits.

The EUT was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	***IFBW***
150 kHz – 30 MHz	9 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCS30	100068	2005-10-17	2006-10-16
R&S	LISN	ESH2-Z5	100027	2005-10-17	2006-10-16
SCHWARZBECK	LISN	NNLK8129	8129-151	2005-10-17	2006-10-16
R&S	ISN	ENY22	100046	2005-10-17	2006-10-16
R&S	ISN	ENY41	100057	2005-10-17	2006-10-16
R&S	Pulse Limiter	ESH3-Z2	100063	2005-10-17	2006-10-16
HP	Current Probe	HP11967A	555	2005-10-18	2006-10-17
R&S	Software	ES-K1	N/A	N/A	N/A
R&S	Cable	CE Cable	N/A	2005-10-17	2006-10-16

***** Com-Power's LISN were used as the supporting equipment.
*** Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

During the conducted emission test, the EUT power system cord was connected to LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207, with the worst margin reading of:

B Channel (850 MHz): -2.30 dB at **9.228689 MHz** in the **Neutral** conductor mode.
M Channel (850 MHz): -9.70 dB at **11.260754 MHz** in the **Live** conductor mode.
T Channel (850 MHz): -7.70 dB at **10.399118 MHz** in the **Neutral** conductor mode.

B Channel (1900 MHz): -5.20 dB at **9.228689 MHz** in the **Live** conductor mode.
M Channel (1900 MHz): -4.00 dB at **9.228689MHz** in the **Neutral** conductor mode.
T Channel (1900 MHz): -4.80 dB at **9.228689 MHz** in the **Neutral** conductor mode.

Test Data

Environmental Conditions

Temperature:	25° C
Relative Humidity:	55%
ATM Pressure:	1009mbar

The testing was performed by Merry Zhao on 2006-4-22.

Test Mode: Transmitting/Receiving (B Channel 850 MHz)

LINE CONDUCTED EMISSIONS				FCC 15.207	
Frequency MHz	Amplitude dBµV	Detector QP/AV	Phase Live/Neutral	Limit dBµV	Margin dB
9.228689	47.70	AV	Neutral	50.00	-2.30*
9.228689	52.80	QP	Neutral	60.00	-7.20
9.228689	42.40	AV	Live	50.00	-7.60
9.228689	47.70	QP	Live	60.00	-12.30
8.189993	35.70	AV	Neutral	50.00	-14.30
11.260754	34.70	AV	Live	50.00	-15.30
7.12499	33.60	AV	Neutral	50.00	-16.40
5.130728	33.50	AV	Neutral	50.00	-16.50
7.19624	43.00	QP	Neutral	60.00	-17.00
11.260754	33.00	AV	Neutral	50.00	-17.00
8.957275	41.70	QP	Neutral	60.00	-18.30
6.846976	30.40	AV	Neutral	50.00	-19.60
8.189993	30.10	AV	Live	50.00	-19.90
8.189993	38.50	QP	Neutral	60.00	-21.50
5.130728	38.10	QP	Neutral	60.00	-21.90
9.796439	27.90	AV	Live	50.00	-22.10
7.19624	27.60	AV	Live	50.00	-22.40
5.130728	37.10	QP	Live	60.00	-22.90
9.796439	37.10	QP	Live	60.00	-22.90
11.260754	36.50	QP	Neutral	60.00	-23.50
7.19624	35.40	QP	Live	60.00	-24.60
0.164053	40.20	QP	Live	65.00	-24.80
10.399118	16.10	AV	Live	50.00	-33.90
10.399118	21.70	QP	Live	60.00	-38.30

Test Mode: Transmitting/Receiving (M Channel 850 MHz)

LINE CONDUCTED EMISSIONS				FCC 15.207	
Frequency MHz	Amplitude dBµV	Detector QP/AV	Phase Live/Neutral	Limit dBµV	Margin dB
11.260754	40.30	AV	Live	50.00	-9.70
9.228689	38.90	AV	Neutral	50.00	-11.10
9.796439	38.80	AV	Neutral	50.00	-11.20
9.228689	37.60	AV	Live	50.00	-12.40
11.260754	36.90	AV	Neutral	50.00	-13.10
10.503109	36.10	AV	Neutral	50.00	-13.90
9.228689	45.90	QP	Neutral	60.00	-14.10
10.399118	34.60	AV	Live	50.00	-15.40
9.228689	43.30	QP	Live	60.00	-16.70
9.796439	42.80	QP	Neutral	60.00	-17.20
11.260754	42.10	QP	Live	60.00	-17.90
8.189993	30.50	AV	Neutral	50.00	-19.50
6.846976	30.30	AV	Neutral	50.00	-19.70
8.189993	29.70	AV	Live	50.00	-20.30
0.164053	39.20	QP	Neutral	60.00	-20.80
10.399118	39.00	QP	Live	60.00	-21.00
10.503109	38.90	QP	Neutral	60.00	-21.10
11.260754	38.60	QP	Neutral	60.00	-21.40
5.079928	28.20	AV	Live	50.00	-21.80
7.12499	27.20	AV	Live	50.00	-22.80
5.130728	34.50	QP	Neutral	60.00	-25.50
5.130728	34.10	QP	Live	60.00	-25.90
0.164053	39.00	QP	Live	65.00	-26.00
7.19624	33.90	QP	Live	60.00	-26.10

Test Mode: Transmitting/Receiving (T Channel 850 MHz)

LINE CONDUCTED EMISSIONS				FCC 15.207	
Frequency MHz	Amplitude dBµV	Detector QP/AV	Phase Live/Neutral	Limit dBµV	Margin dB
10.399118	42.30	AV	Neutral	50.00	-7.70
9.228689	40.60	AV	Live	50.00	-9.40
11.260754	40.30	AV	Neutral	50.00	-9.70
9.796439	38.00	AV	Live	50.00	-12.00
11.260754	36.70	AV	Live	50.00	-13.30
9.228689	36.60	AV	Neutral	50.00	-13.40
9.228689	45.50	QP	Live	60.00	-14.50
10.399118	45.10	QP	Neutral	60.00	-14.90
9.228689	43.70	QP	Neutral	60.00	-16.30
10.503109	33.60	AV	Live	50.00	-16.40
9.796439	42.30	QP	Live	60.00	-17.70
11.260754	42.10	QP	Neutral	60.00	-17.90
6.846976	30.80	AV	Live	50.00	-19.20
8.271893	29.70	AV	Neutral	50.00	-20.30
8.189993	29.40	AV	Live	50.00	-20.60
5.079928	29.40	AV	Neutral	50.00	-20.60
7.19624	29.30	AV	Neutral	50.00	-20.70
0.164053	39.10	QP	Neutral	60.00	-20.90
11.260754	38.30	QP	Live	60.00	-21.70
10.503109	36.60	QP	Live	60.00	-23.40
5.130728	35.00	QP	Neutral	60.00	-25.00
0.164053	39.70	QP	Live	65.00	-25.30
7.19624	34.40	QP	Live	60.00	-25.60
7.19624	34.00	QP	Neutral	60.00	-26.00

Test Mode: Transmitting/Receiving (B Channel 1900 MHz)

LINE CONDUCTED EMISSIONS				FCC 15.207	
Frequency MHz	Amplitude dBµV	Detector QP/AV	Phase Live/Neutral	Limit dBµV	Margin dB
9.228689	44.80	AV	Live	50.00	-5.20
9.228689	43.10	AV	Neutral	50.00	-6.90
8.868589	42.70	AV	Neutral	50.00	-7.30
8.868589	41.70	AV	Live	50.00	-8.30
9.228689	49.60	QP	Live	60.00	-10.40
9.228689	49.60	QP	Neutral	60.00	-10.40
7.19624	36.70	AV	Neutral	50.00	-13.30
8.189993	36.70	AV	Neutral	50.00	-13.30
7.19624	36.60	AV	Live	50.00	-13.40
8.868589	45.80	QP	Neutral	60.00	-14.20
8.271893	35.70	AV	Live	50.00	-14.30
8.868589	45.20	QP	Live	60.00	-14.80
9.046847	34.30	AV	Neutral	50.00	-15.70
5.130728	34.10	AV	Live	50.00	-15.90
9.046847	34.00	AV	Live	50.00	-16.00
5.130728	32.60	AV	Neutral	50.00	-17.40
7.19624	41.30	QP	Live	60.00	-18.70
7.19624	40.10	QP	Neutral	60.00	-19.90
8.189993	39.70	QP	Live	60.00	-20.30
9.046847	39.10	QP	Neutral	60.00	-20.90
8.189993	39.00	QP	Neutral	60.00	-21.00
5.130728	38.00	QP	Live	60.00	-22.00
0.162429	40.30	QP	Neutral	65.00	-24.70
0.165693	38.60	QP	Live	65.00	-26.40

Test Mode: Transmitting/Receiving (M Channel 1900 MHz)

LINE CONDUCTED EMISSIONS				FCC 15.207	
Frequency MHz	Amplitude dBµV	Detector QP/AV	Phase Live/Neutral	Limit dBµV	Margin dB
9.228689	46	AV	Neutral	50.00	-4.00
9.228689	44.5	AV	Live	50.00	-5.50
8.522539	42.6	AV	Live	50.00	-7.40
8.868589	40.5	AV	Neutral	50.00	-9.50
9.228689	49.7	QP	Live	60.00	-10.30
9.228689	49	QP	Neutral	60.00	-11.00
7.19624	37.3	AV	Live	50.00	-12.70
7.19624	36.6	AV	Neutral	50.00	-13.40
8.189993	35.7	AV	Neutral	50.00	-14.30
8.189993	35.6	AV	Live	50.00	-14.40
8.522539	44.9	QP	Live	60.00	-15.10
8.522539	34.9	AV	Neutral	50.00	-15.10
9.046847	34.1	AV	Live	50.00	-15.90
9.046847	32.7	AV	Neutral	50.00	-17.30
5.130728	32	AV	Live	50.00	-18.00
7.19624	40.4	QP	Neutral	60.00	-19.60
7.12499	39.3	QP	Live	60.00	-20.70
8.189993	39	QP	Live	60.00	-21.00
8.189993	38.7	QP	Neutral	60.00	-21.30
8.522539	38.6	QP	Neutral	60.00	-21.40
5.130728	37.8	QP	Live	60.00	-22.20
7.340885	35	QP	Neutral	60.00	-25.00
0.165693	37.7	QP	Live	65.00	-27.30
0.165693	37.4	QP	Neutral	65.00	-27.60

Test Mode: Transmitting/Receiving (T Channel 1900 MHz)

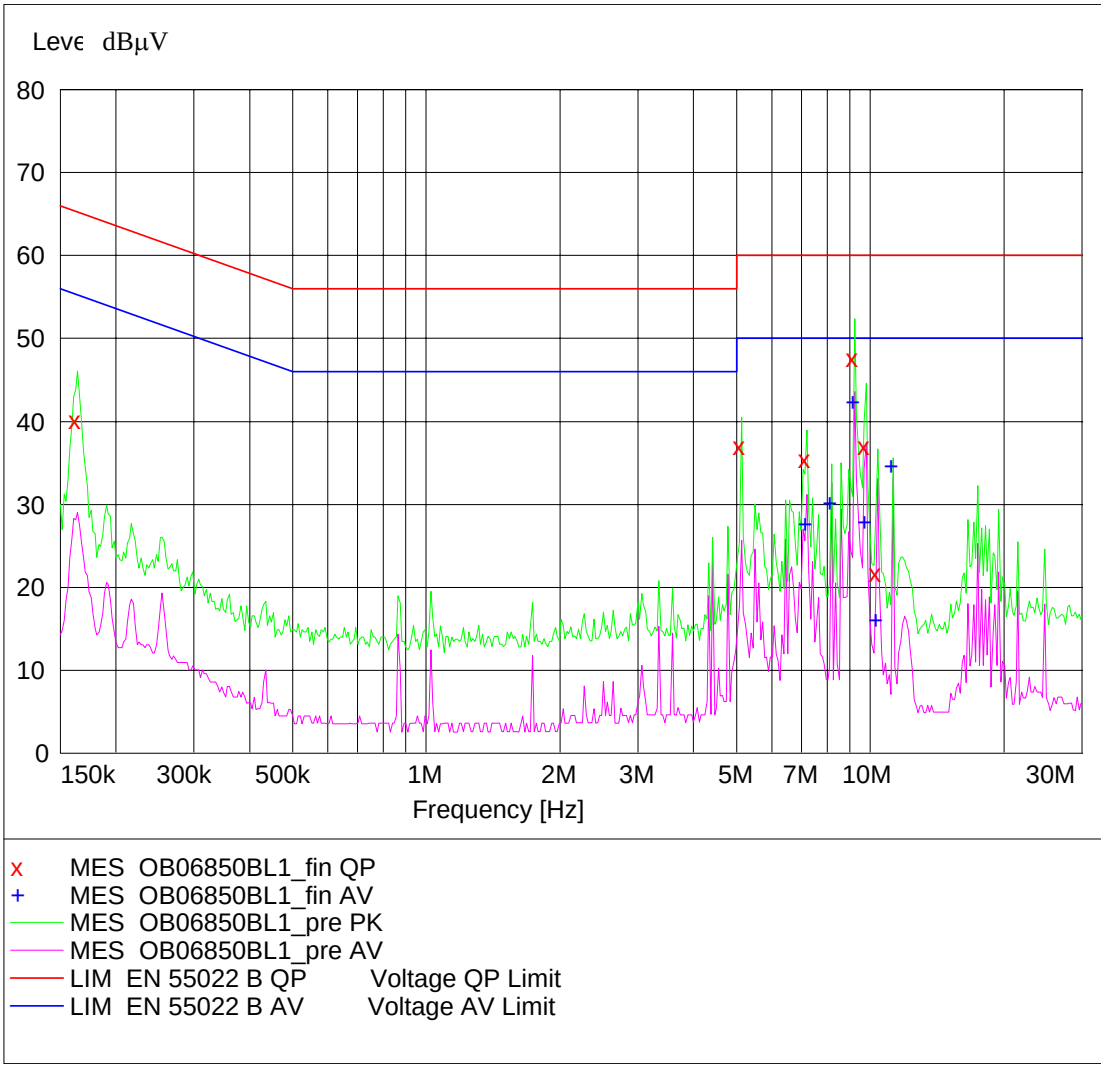
LINE CONDUCTED EMISSIONS				FCC 15.207	
Frequency MHz	Amplitude dBµV	Detector QP/AV	Phase Live/Neutral	Limit dBµV	Margin dB
9.228689	45.20	AV	Neutral	50.00	-4.80
9.228689	44.60	AV	Live	50.00	-5.40
7.19624	40.30	AV	Neutral	50.00	-9.70
9.228689	48.40	QP	Neutral	60.00	-11.60
7.19624	38.30	AV	Live	50.00	-11.70
9.228689	48.10	QP	Live	60.00	-11.90
8.189993	37.00	AV	Neutral	50.00	-13.00
8.607765	37.00	AV	Neutral	50.00	-13.00
8.189993	36.70	AV	Live	50.00	-13.30
5.130728	33.40	AV	Neutral	50.00	-16.60
7.19624	43.20	QP	Live	60.00	-16.80
5.130728	32.20	AV	Live	50.00	-17.80
7.19624	41.90	QP	Neutral	60.00	-18.10
8.028618	31.30	AV	Live	50.00	-18.70
8.607765	40.60	QP	Neutral	60.00	-19.40
8.189993	39.90	QP	Neutral	60.00	-20.10
8.189993	39.40	QP	Live	60.00	-20.60
5.130728	38.30	QP	Live	60.00	-21.70
5.130728	38.10	QP	Neutral	60.00	-21.90
11.260754	27.80	AV	Neutral	50.00	-22.20
8.028618	35.30	QP	Live	60.00	-24.70
6.645607	25.10	AV	Live	50.00	-24.90
0.164053	38.60	QP	Neutral	65.00	-26.40
0.165693	37.50	QP	Live	65.00	-27.50

Plot(s) of Test Data

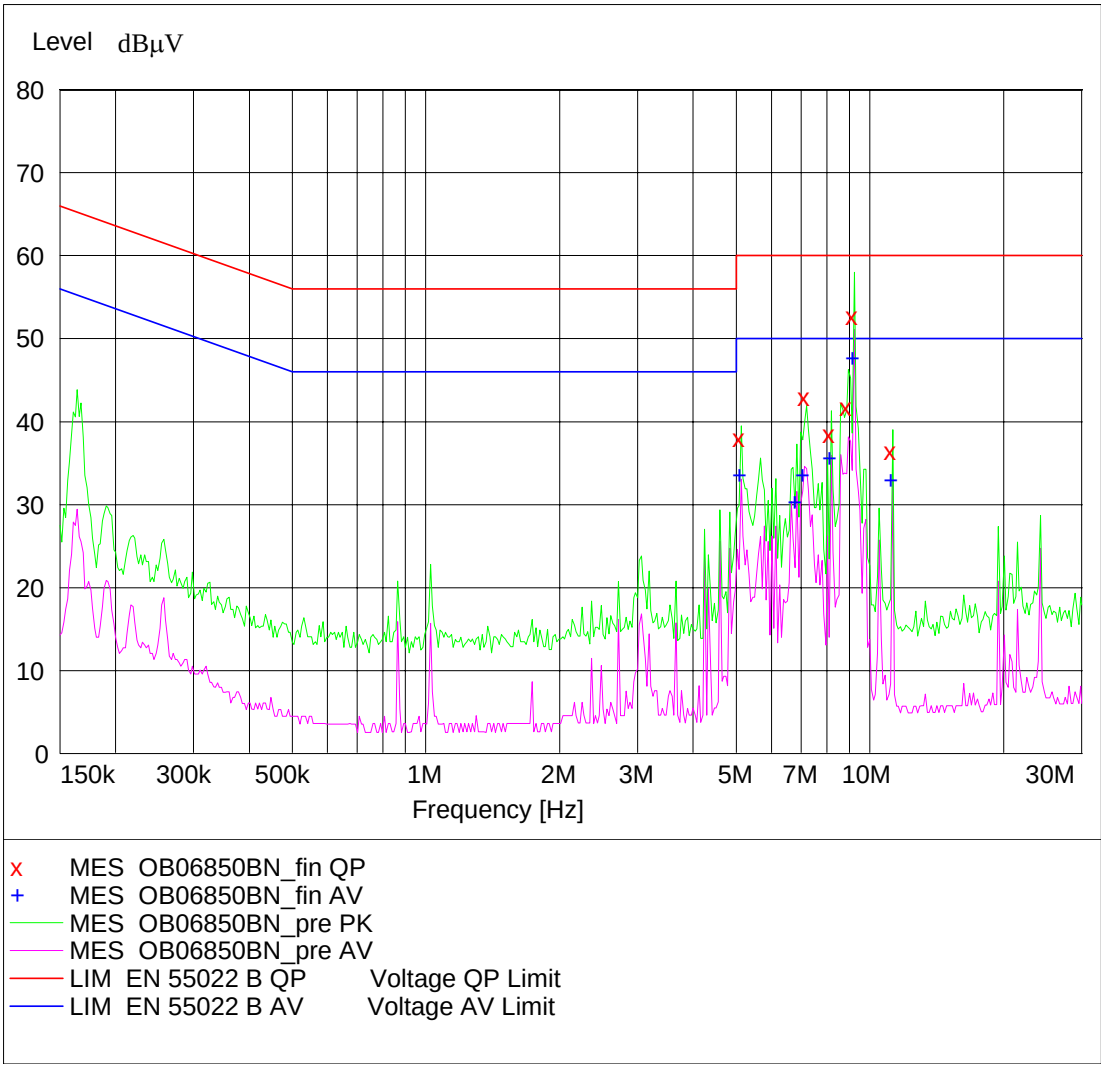
Plot(s) of Test Data is presented hereinafter as reference.

B Channel 850 MHz

Live



Neutral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70
60
50
40
30
20
10
0
150k
300k
500k
1M
2M
3M
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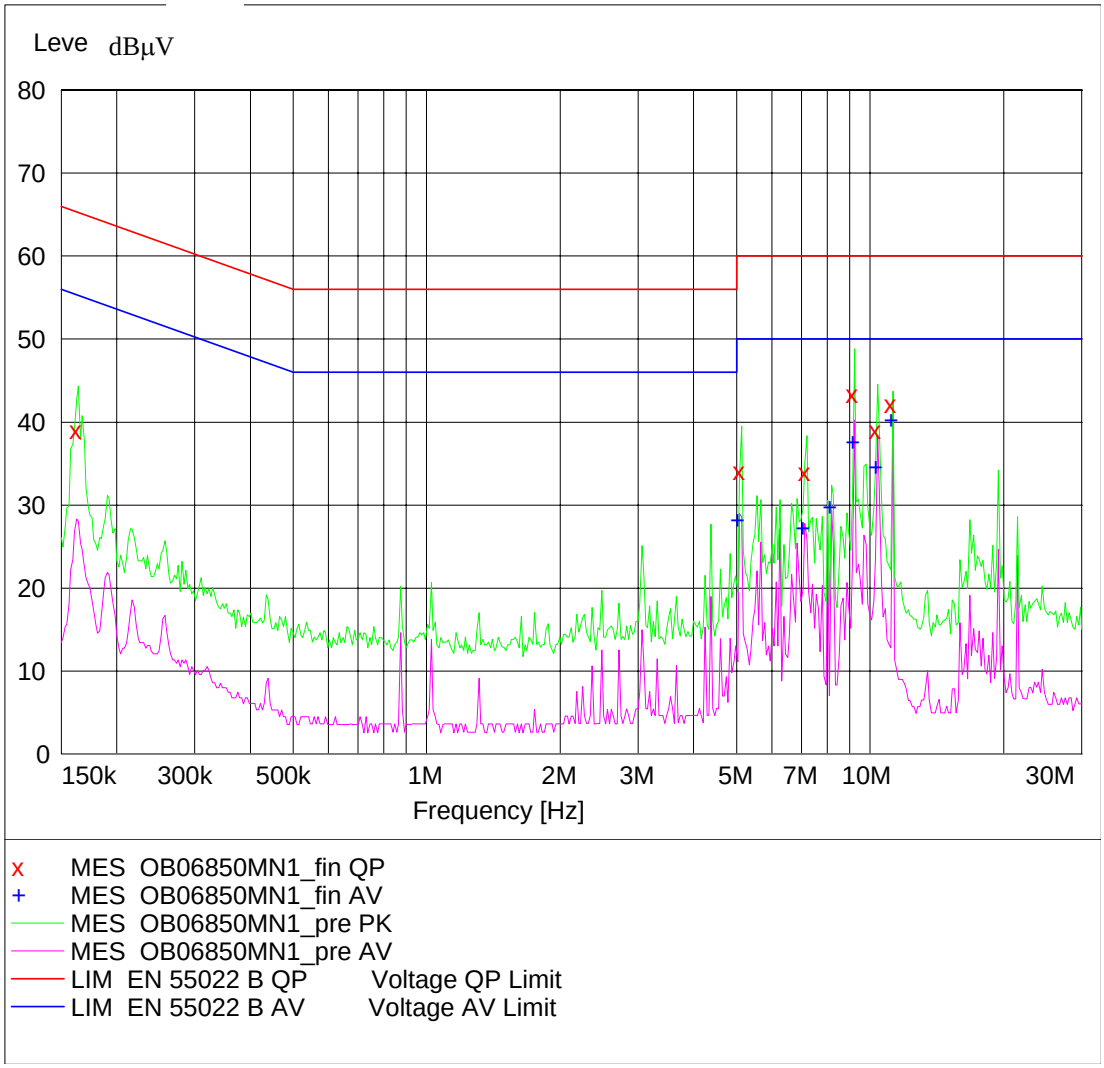
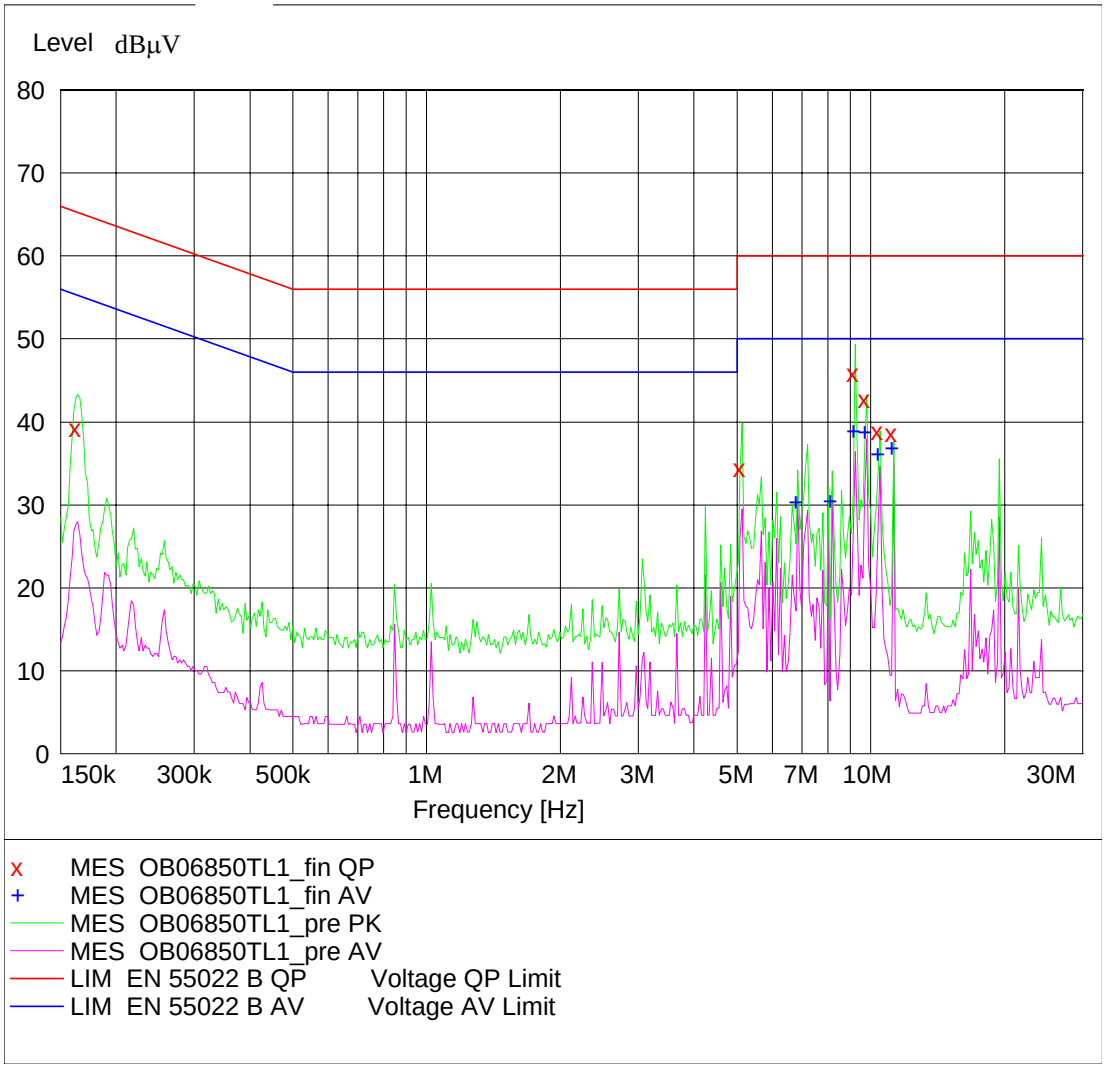
7M
10M
30M
Frequency [Hz]
x MES OB06850BN_fin QP
+ MES OB06850BN_fin AV
MES OB06850BN_pre PK
MES OB06850BN_pre AV
LIM EN 55022 B QP Voltage QP Limit
LIM EN 55022 B AV Voltage AV Limit

M Channel 850 MHz

Live

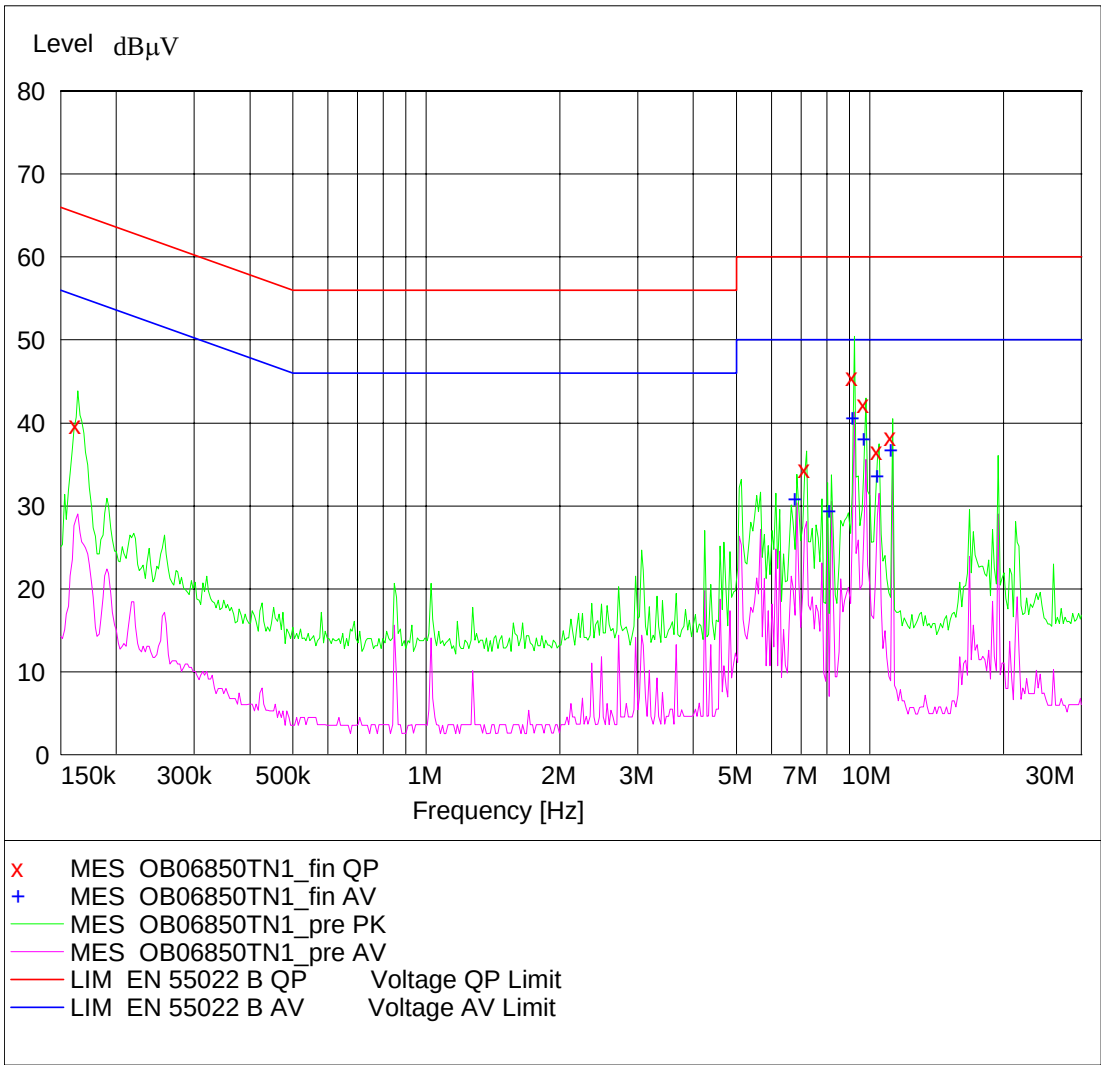


Neutral

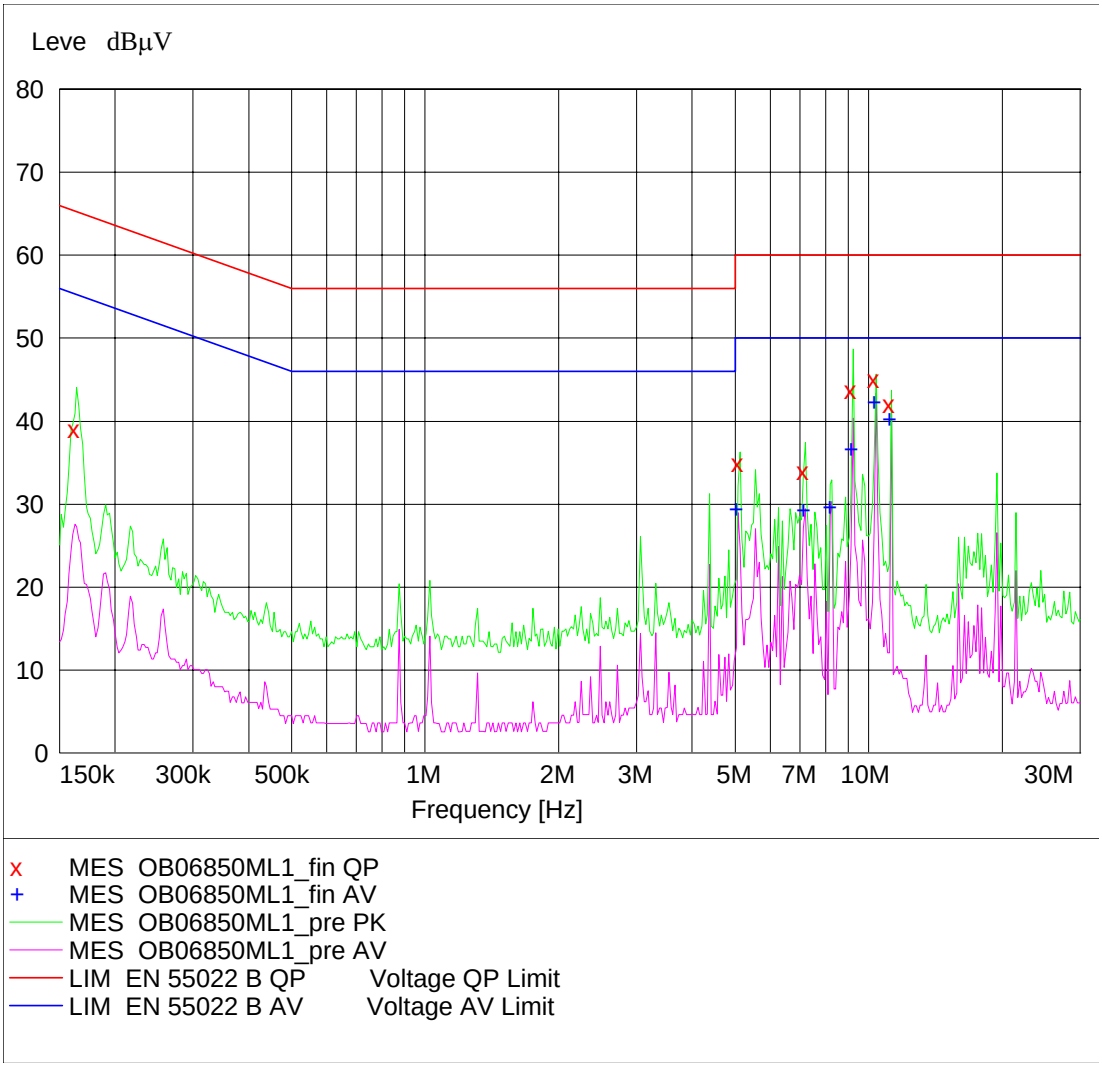

Level dBµV
80
70
60
50
40
30
20
10
0
150k
300k
500k
1M
2M
3M
5M
7M
10M
30M
Frequency [Hz]
x MES OB06850TL1_fin QP
+ MES OB06850TL1_fin AV
MES OB06850TL1_pre PK
MES OB06850TL1_pre AV
LIM EN 55022 B QP Voltage QP Limit
LIM EN 55022 B AV Voltage AV Limit

T Channel 850 MHz

Live

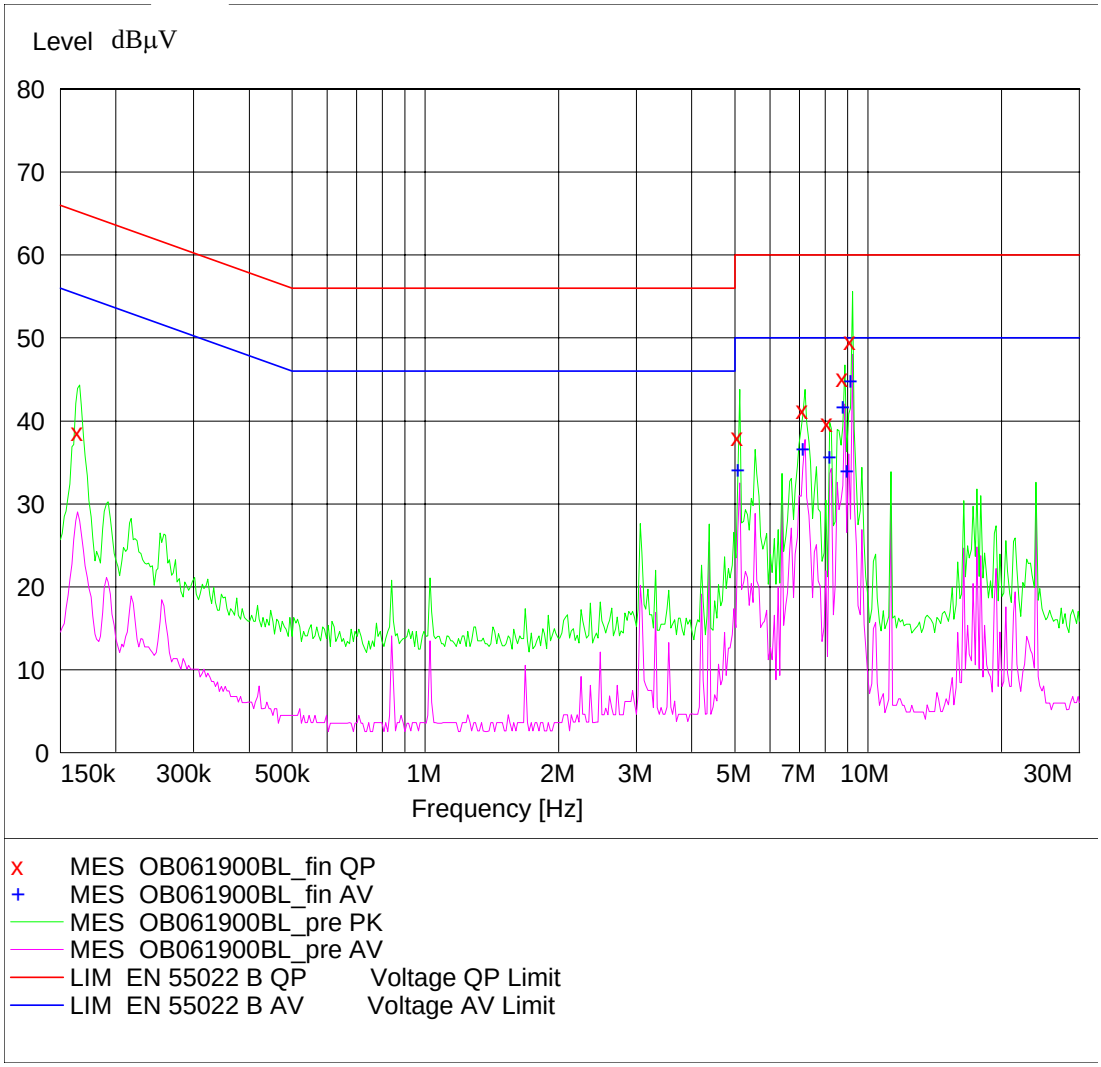


Neutral

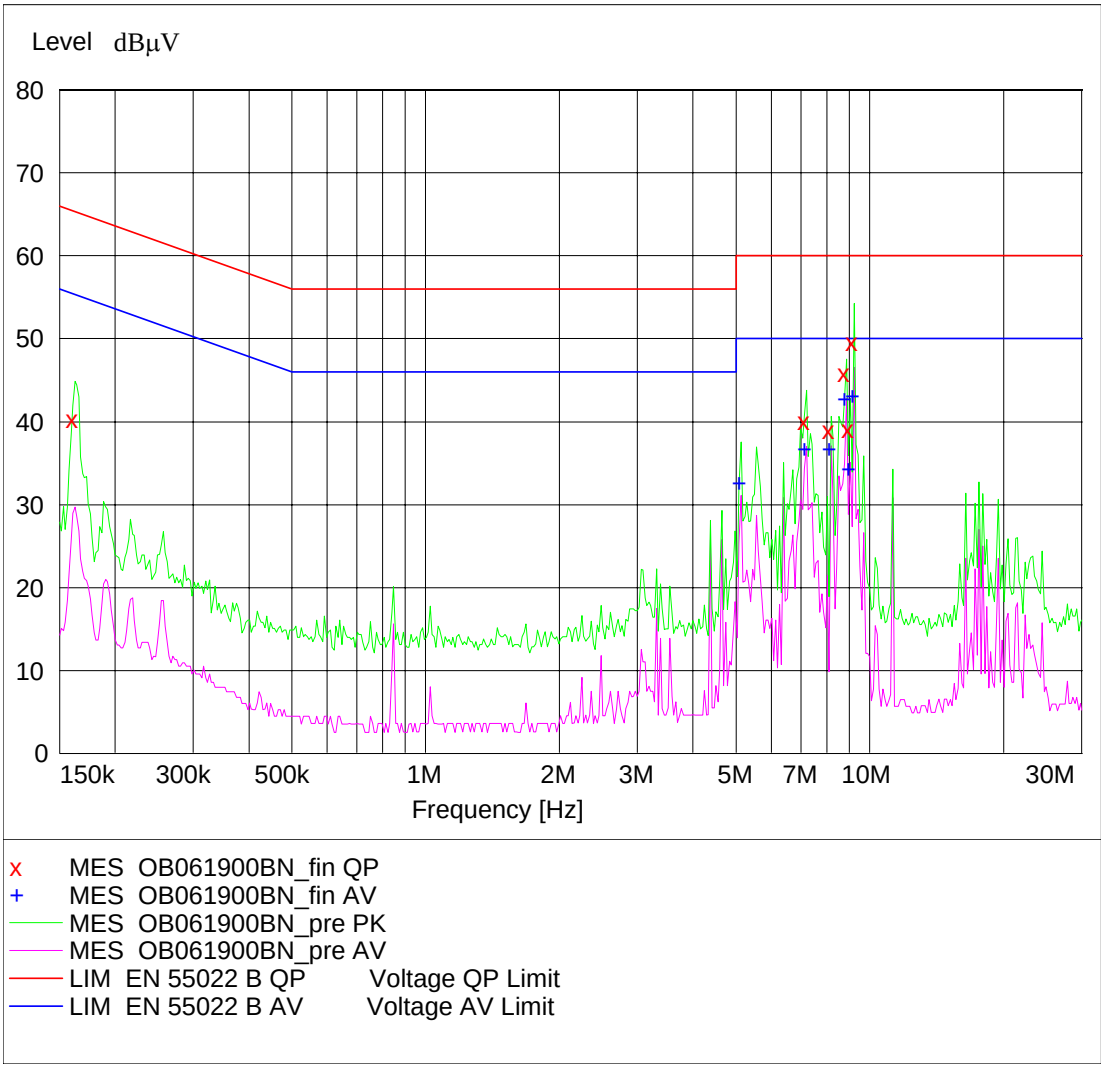

Leve dBµV
80
70
60
50
40
30
20
10
0
150k
300k
500k
1M
2M
3M
5M
7M
10M
30M
Frequency [Hz]
x MES OB06850ML1_fin QP
+ MES OB06850ML1_fin AV
MES OB06850ML1_pre PK
MES OB06850ML1_pre AV
LIM EN 55022 B QP Voltage QP Limit
LIM EN 55022 B AV Voltage AV Limit

B Channel 1900 MHz

Live

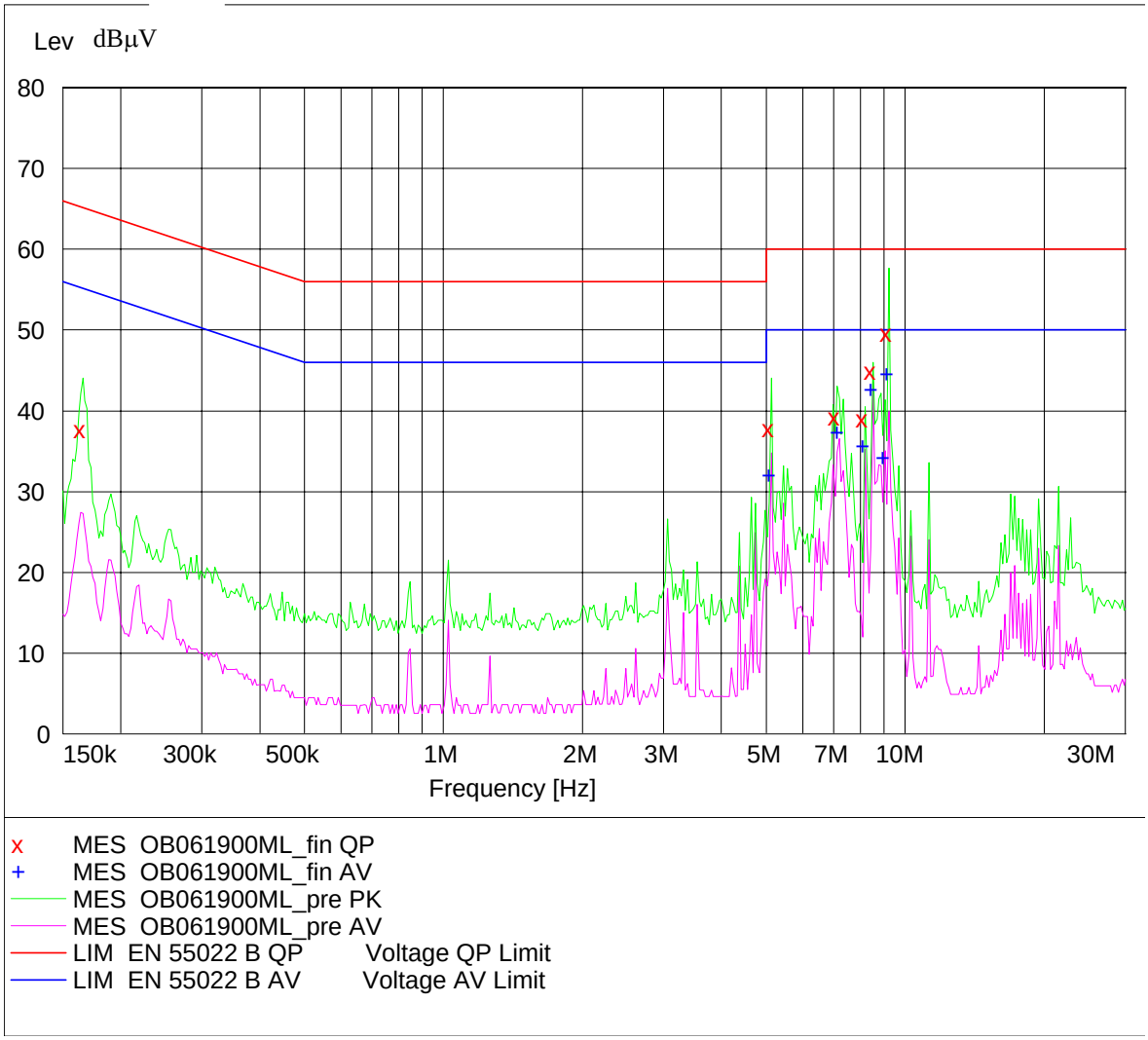


Neutral

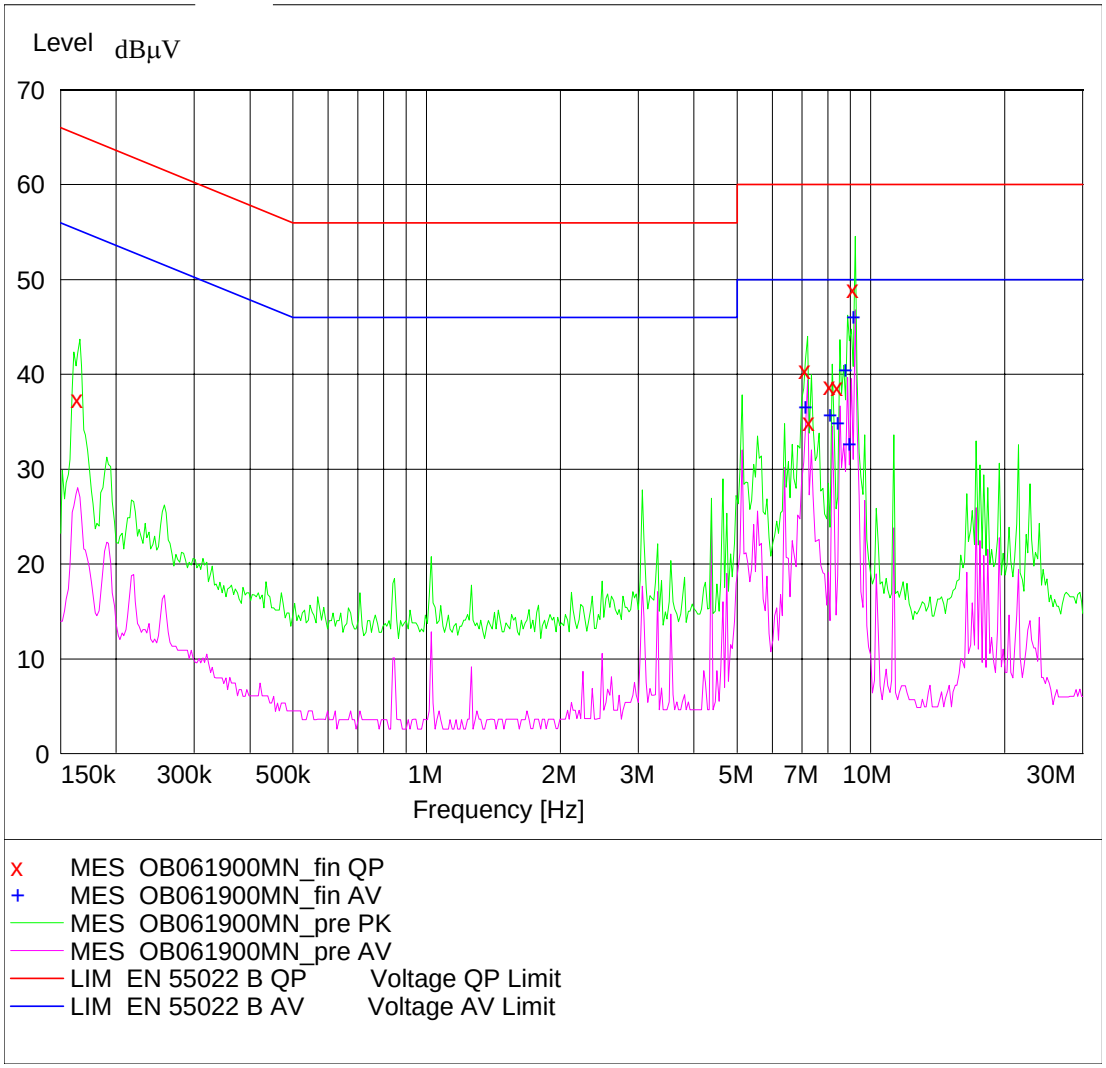

Level dBµV
80
70
60
50
40
30
20
10
0
150k
300k
500k
1M
2M
3M
5M
7M
10M
30M
Frequency [Hz]
x MES OB061900BN_fin QP
+ MES OB061900BN_fin AV
MES OB061900BN_pre PK
MES OB061900BN_pre AV
LIM EN 55022 B QP Voltage QP Limit
LIM EN 55022 B AV Voltage AV Limit

M Channel 1900 MHz

Live

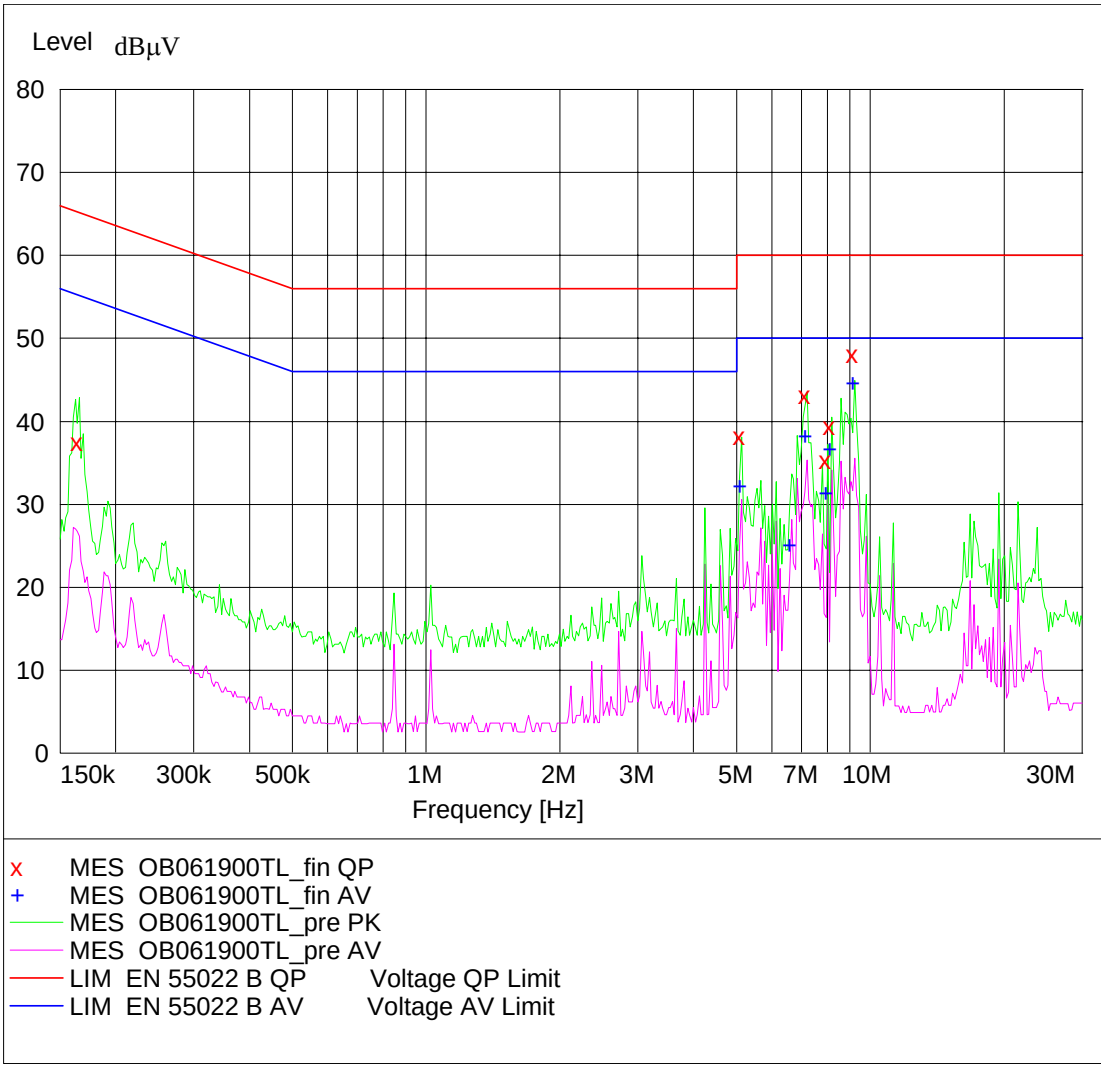


Neutral

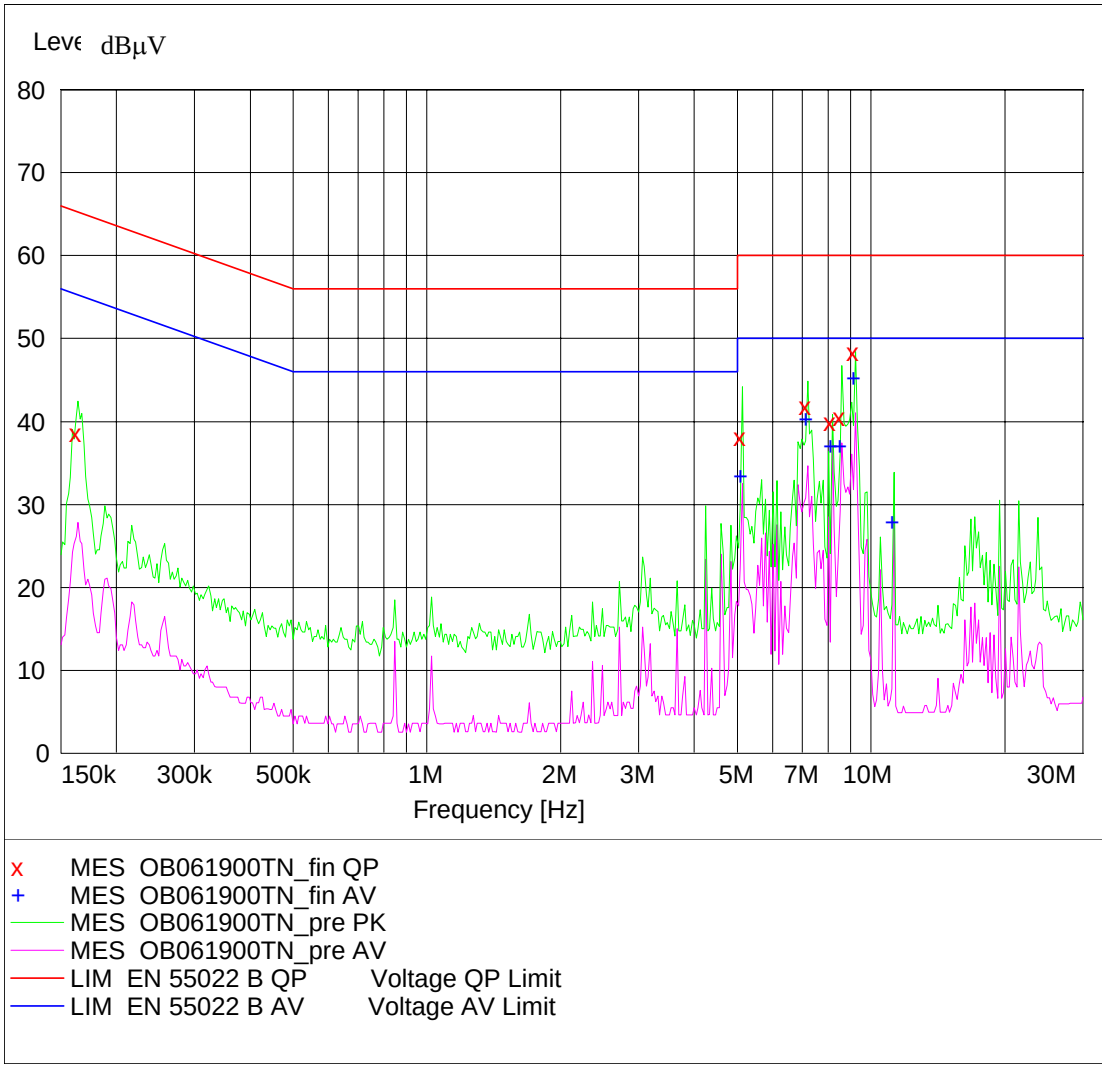

Level dBµV
70
60
50
40
30
20
10
0
150k
300k
500k
1M
2M
3M
5M
7M
10M
30M
Frequency [Hz]
x MES OB061900MN_fin QP
+ MES OB061900MN_fin AV
MES OB061900MN_pre PK
MES OB061900MN_pre AV
LIM EN 55022 B QP Voltage QP Limit
LIM EN 55022 B AV Voltage AV Limit

T Channel 1900 MHz

Live



Neutral


Leve dBµV
80
70
60
50
40
30
20
10
0
150k
300k
500k
1M
2M
3M
5M
7M
10M
30M
Frequency [Hz]
x MES OB061900TN_fin QP
+ MES OB061900TN_fin AV
MES OB061900TN_pre PK
MES OB061900TN_pre AV
LIM EN 55022 B QP Voltage QP Limit
LIM EN 55022 B AV Voltage AV Limit

§2.1046- RF OUTPUT POWER

Applicable Standard

According to FCC §2.1046(a), For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in §2.1033(c)(8). The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
GW	Dual tracking with 5V fixed	GPC-0303D	PC303IPE	2005-10-26	2006-10-25
Agilent	Spectrum analyzer	E4445A	MY45300953	2006-02-20	2007-02-19
Shanghai Huaxiang	Attenuator	30dB	0302707	2005-11-04	2006-11-03

*** Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

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

Test Data

Environmental Conditions

Temperature:	18 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

The testing was performed by Merry Zhao on 2006-4-24, 2006-4-25.

Test Result: Pass

Test Mode: Transmitting

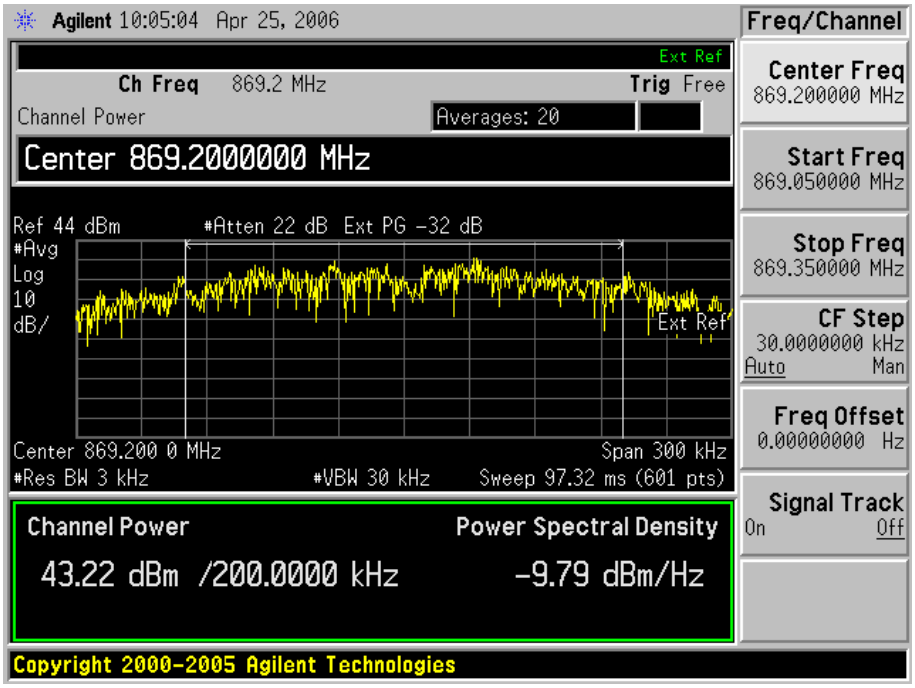
For 850 MHz

GSM Modulation

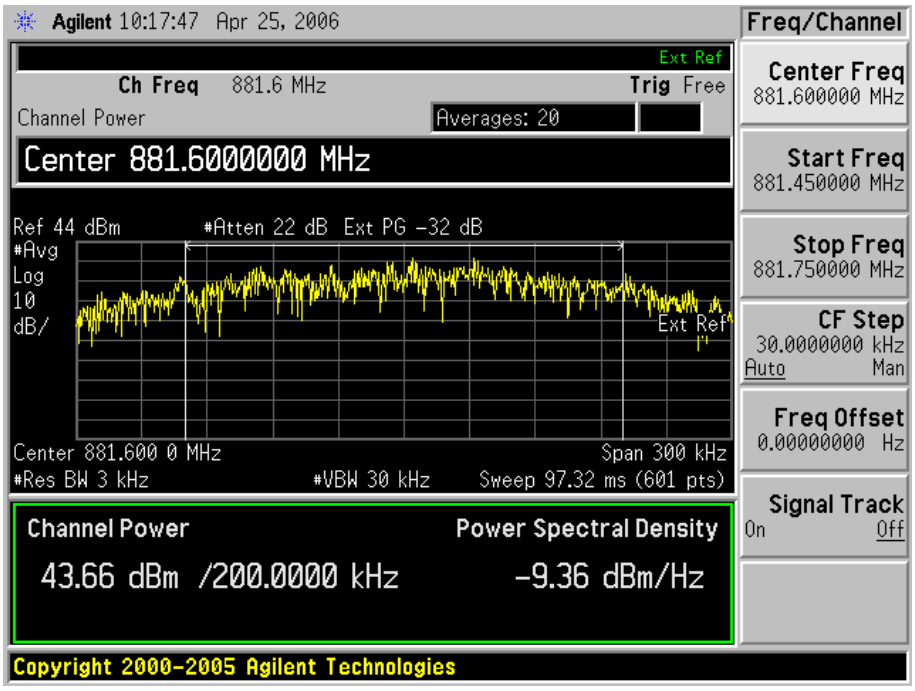
Channel	Frequency (MHz)	Single signal Output power (dBm)	Ant. Port Output Power (dBm)	Output power (W)
Channel 128	869.2	43.22	46.22	41.879
Channel 190	881.6	43.66	46.66	46.344
Channel 251	893.8	43.63	46.63	46.025

Note: There are two ways signals operation at antenna port at same time, so the maximum output power at the antenna port with internal combiner shall add 3 dB.

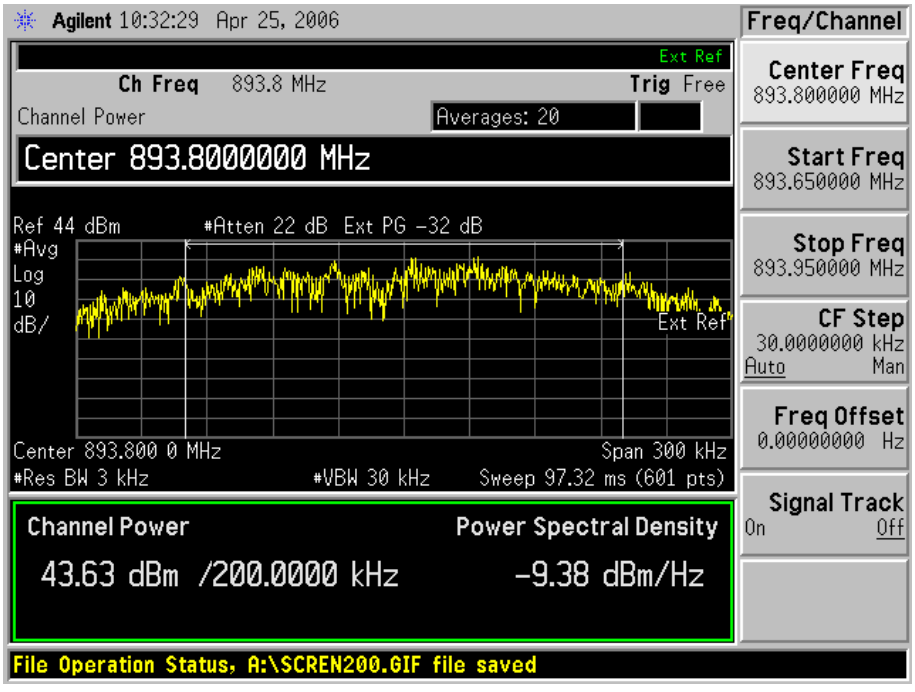
Channel 128



Channel 190



Channel 251

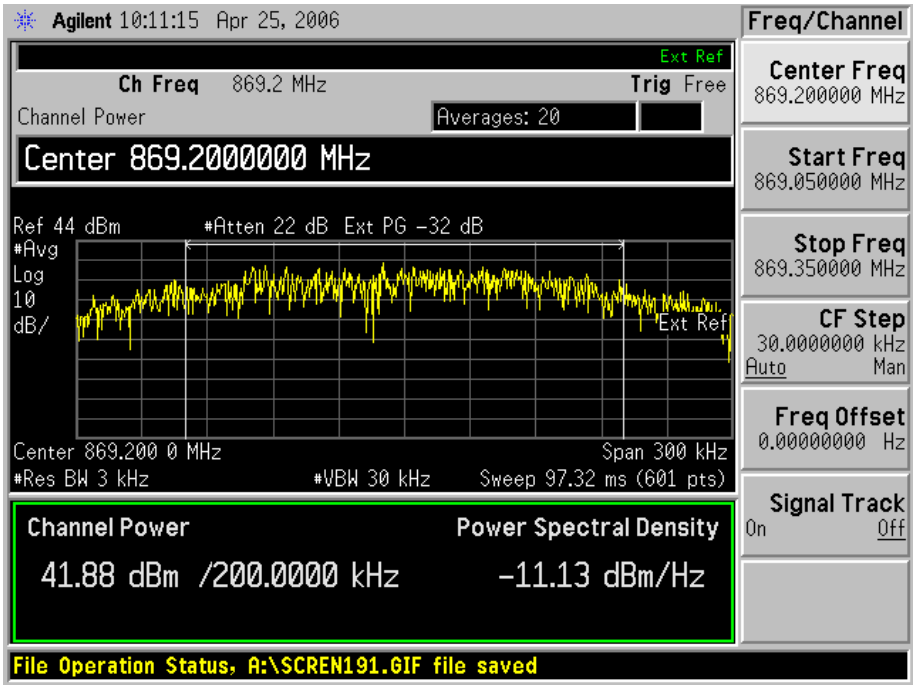


8PSK Modulation

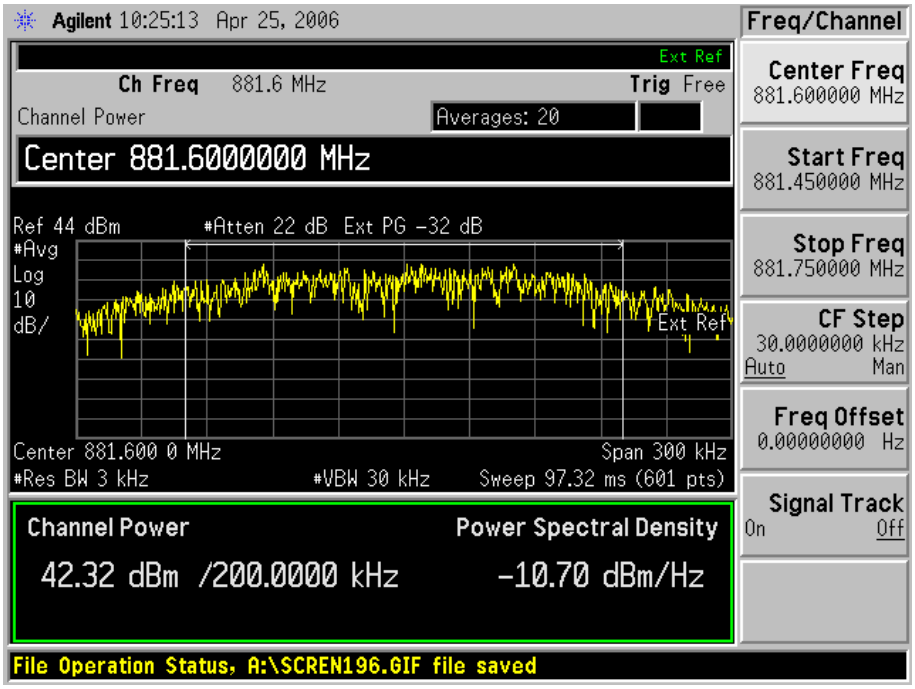
Channel	Frequency (MHz)	Single signal Output power (dBm)	Ant. Port Output power (dBm)	Output power (W)
Channel 128	869.2	41.88	44.88	30.760
Channel 190	881.6	42.32	45.32	34.040
Channel 251	893.8	42.03	45.03	31.841

Note: There are two ways signals operation at antenna port at same time, so the maximum output power at the antenna port with internal combiner shall add 3 dB.

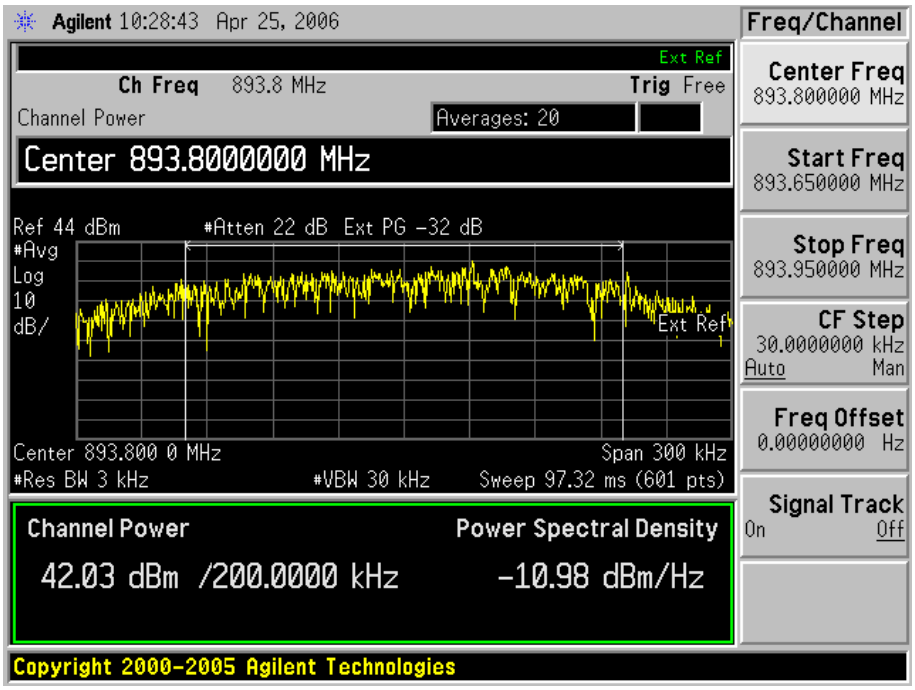
Channel 128:



Channel 190:



Channel 251:



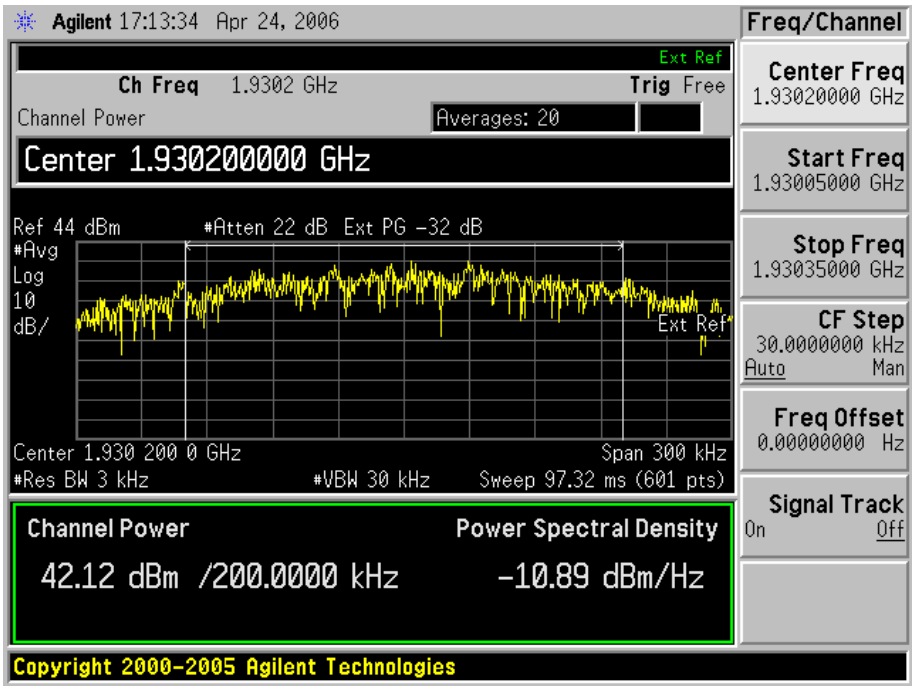
For 1900 MHz

GSM Modulation:

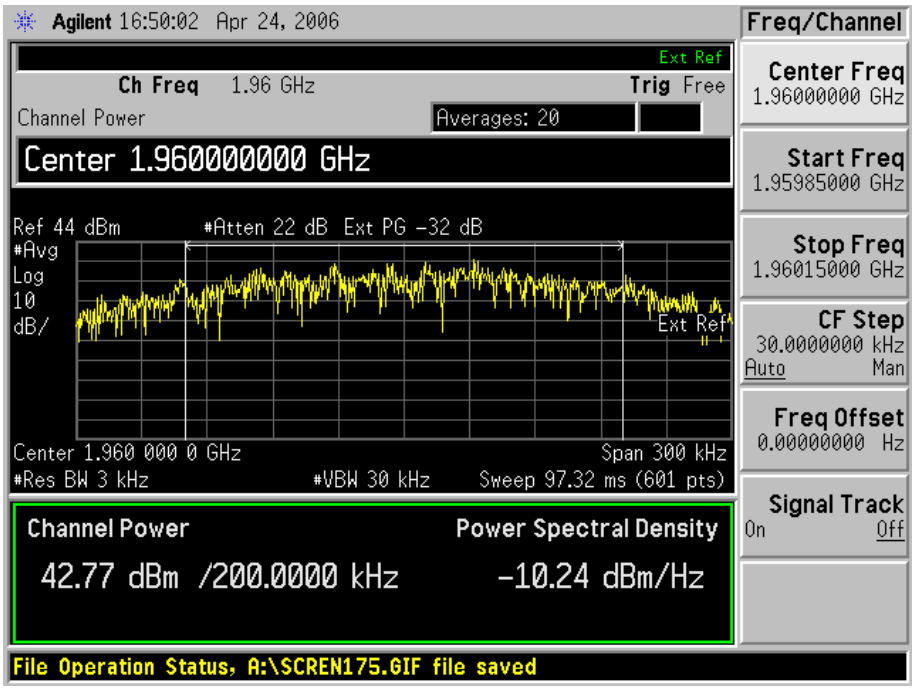
Channel	Frequency (MHz)	Single signal Output power (dBm)	Ant. Port Output power (dBm)	Output power (W)
Channel 512	1930.2	42.12	45.12	32.508
Channel 661	1960.0	42.77	45.77	37.757
Channel 810	1989.8	42.3	45.3	33.884

Note: There are two ways signals operation at antenna port at same time, so the maximum output power at the antenna port with internal combiner shall add 3 dB.

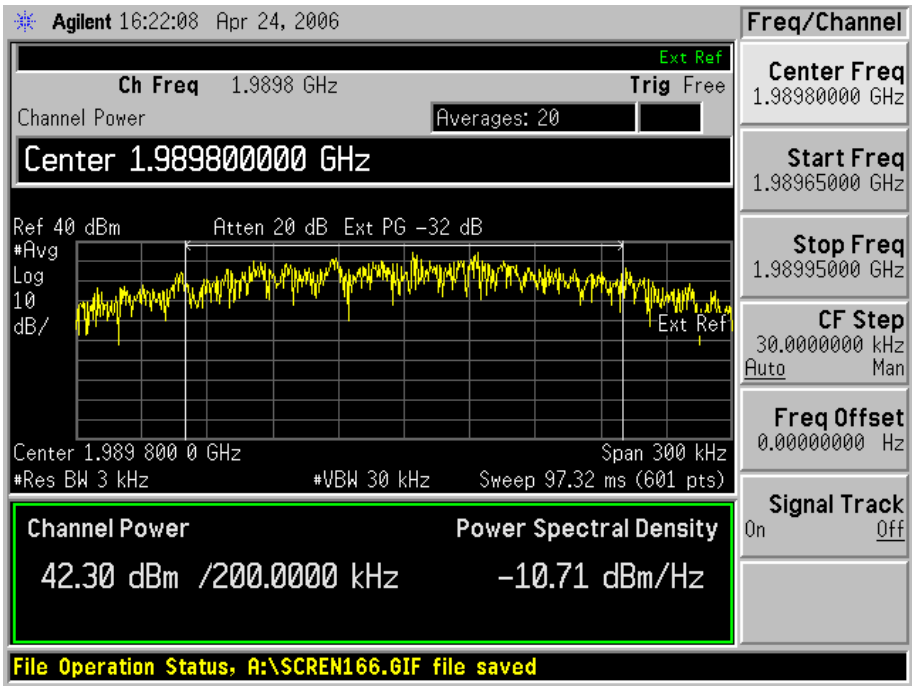
Channel 512:



Channel 661:



Channel 810:

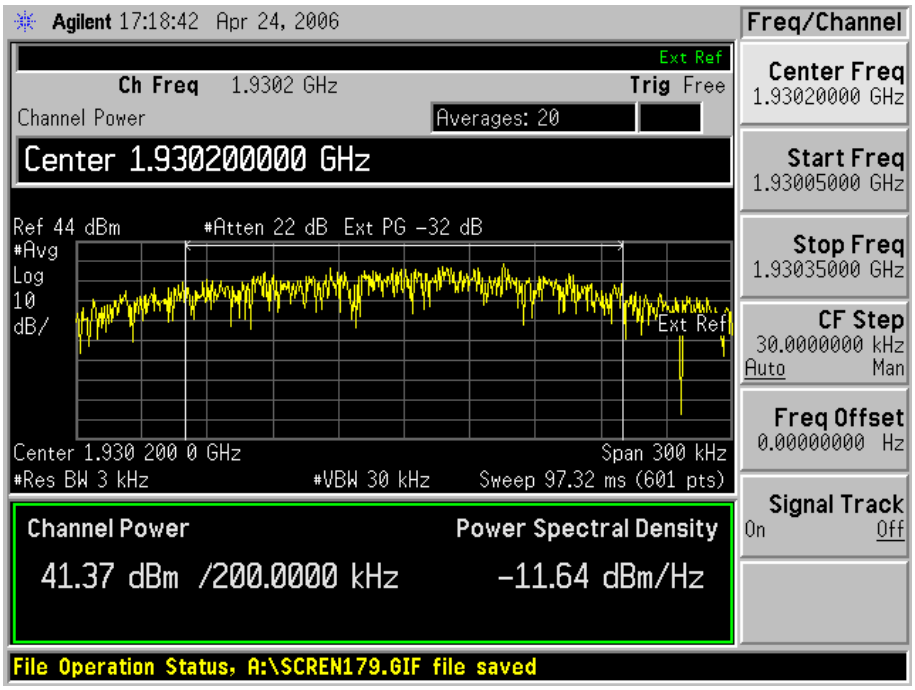


8PSK Modulation

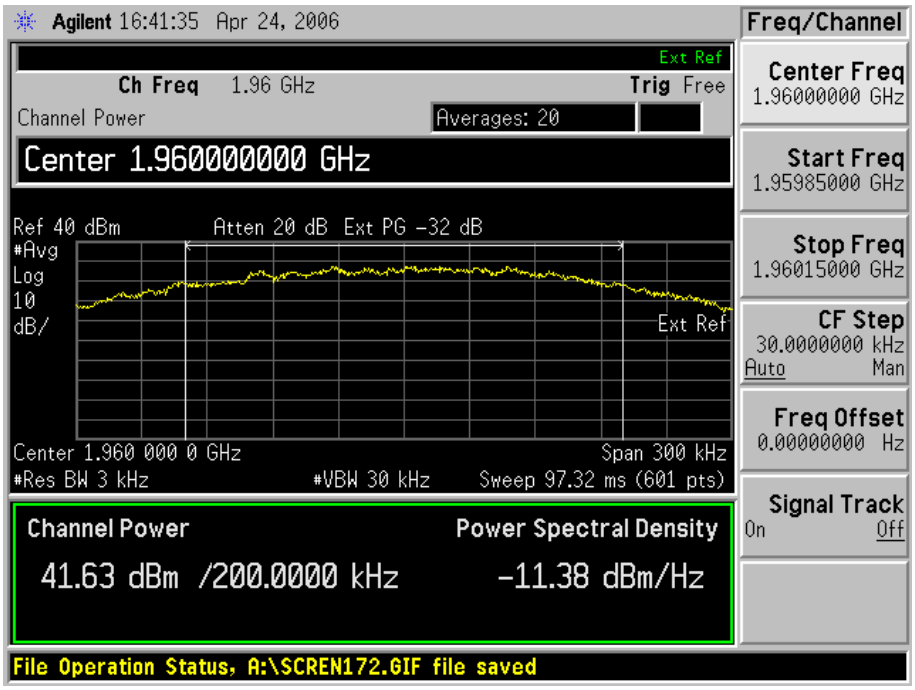
Channel	Frequency (MHz)	Single signal Output power (dBm)	Ant. Port Output power (dBm)	Output power (W)
Channel 512	1930.2	41.37	44.37	27.352
Channel 661	1960.0	41.63	44.63	29.040
Channel 810	1989.8	41.18	44.18	26.18

Note: There are two ways signals operation at antenna port at same time, so the maximum output power at the antenna port with internal combiner shall add 3 dB.

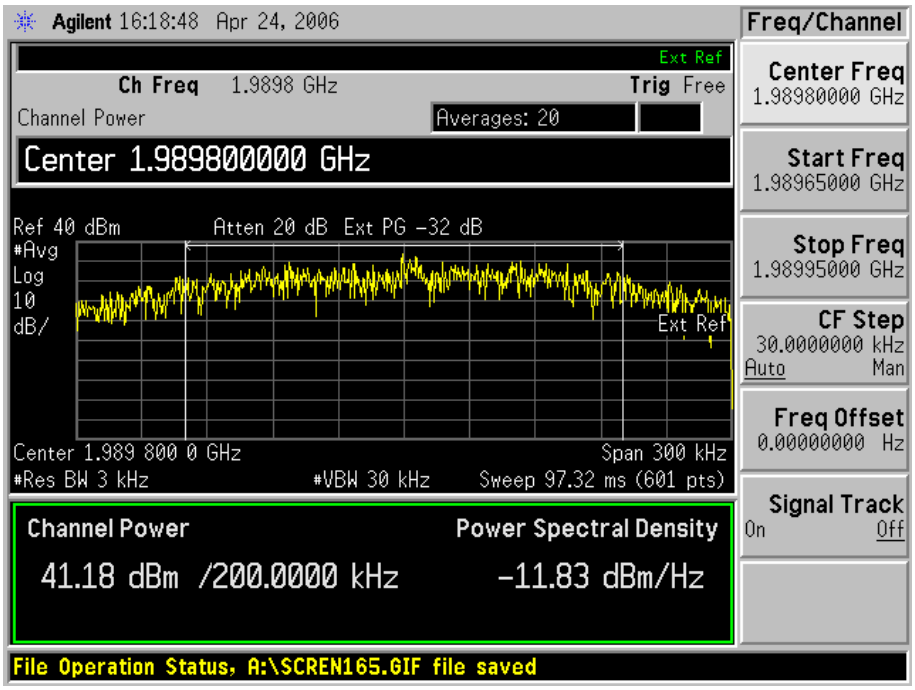
Channel 512:



Channel 661:



Channel 810:



§2.1047- MODULATION CHARACTERISTIC

Applicable Standard

Requirement: §2.1047.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
GW	Dual tracking with 5V fixed	GPC-0303D	PC303IPE	2005-10-26	2006-10-25
Agilent	Spectrum analyzer	E4445A	MY45300953	2006-02-20	2007-02-19
Shanghai Huaxiang	Attenuator	30dB	0302707	2005-11-04	2006-11-03

*** Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

CDMA digital mode is used by EUT.

Test Data

Environmental Conditions

Temperature:	18 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

The testing was performed by Merry Zhao on 2006-4-24.

Test Result: Pass

Test Mode: Transmitting

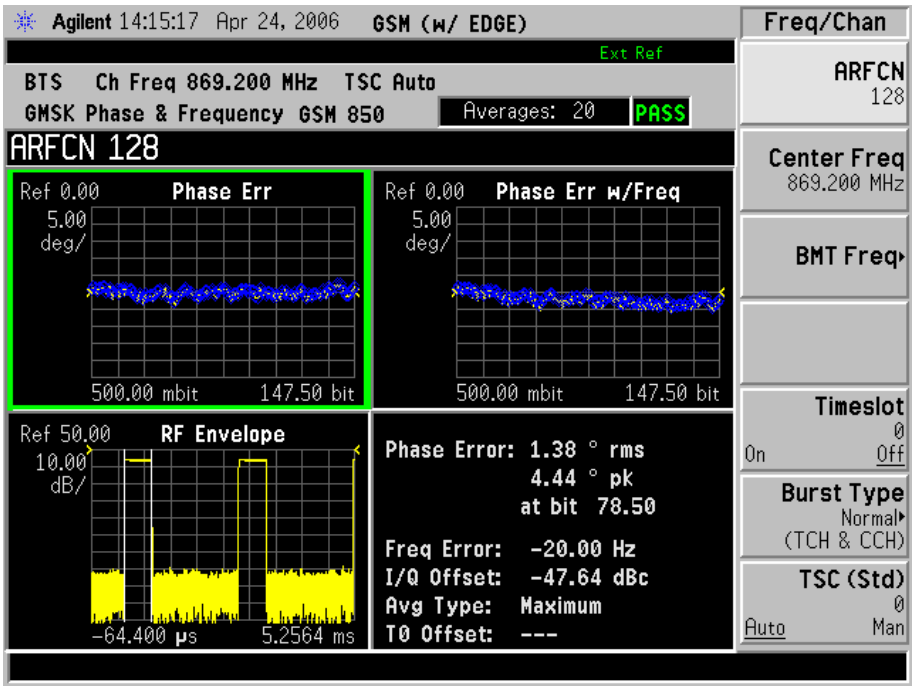
For 850 MHz

Modulation characteristic:

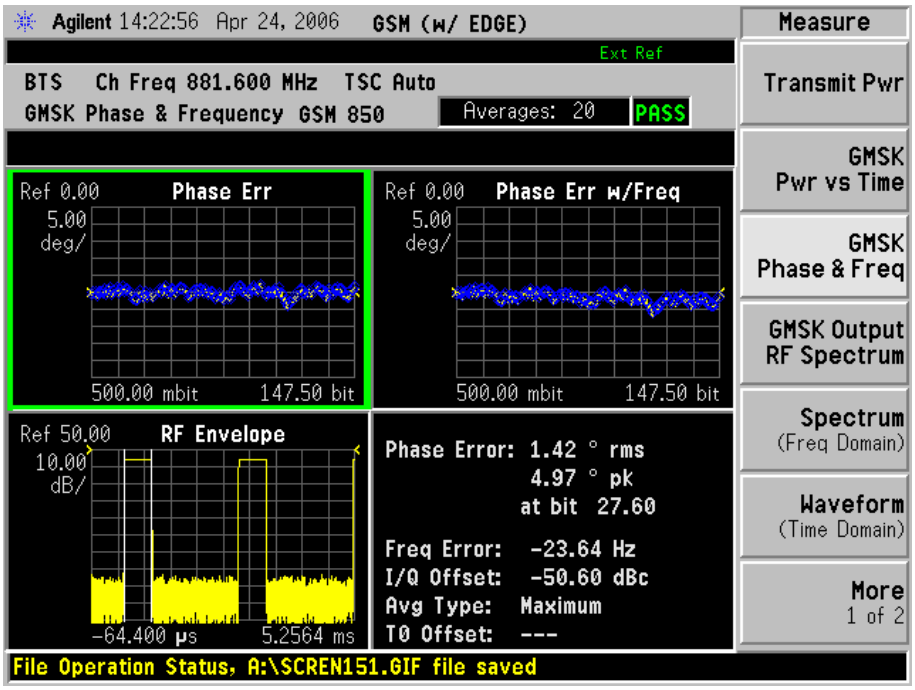
GSMK modulation:

Channel	Frequency (MHz)	Phase error		Frequency error (Hz)	I/Q offset (dBc)
		rms (°)	peak (°)		
Channel 128	869.2	1.38	4.44	-20	-47.64
Channel 190	881.6	1.42	4.97	-23.64	-50.60
Channel 251	893.8	1.57	4.74	-28.82	-47.75

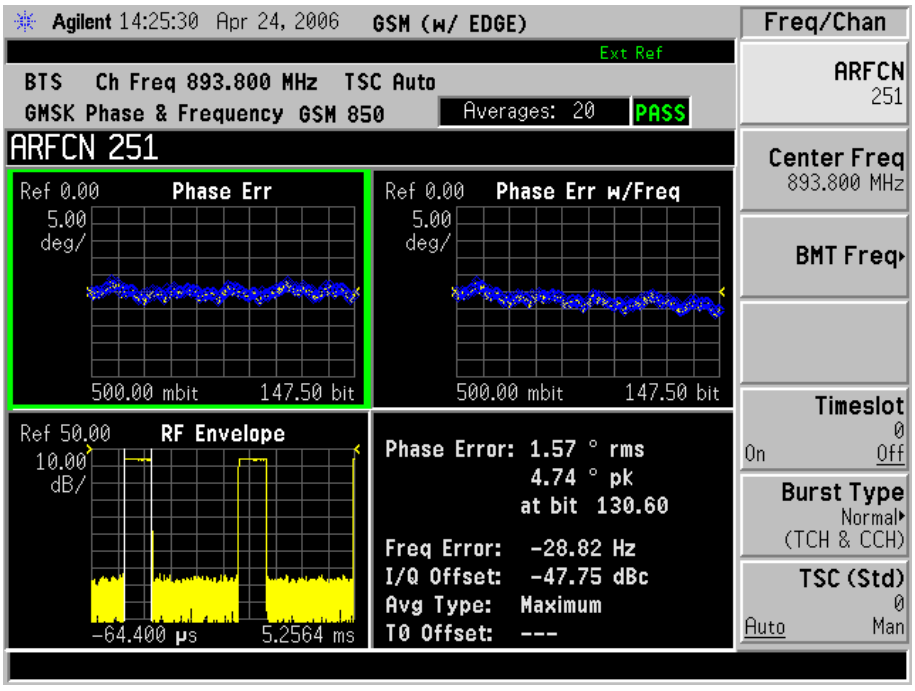
Channel 128



Channel 190:



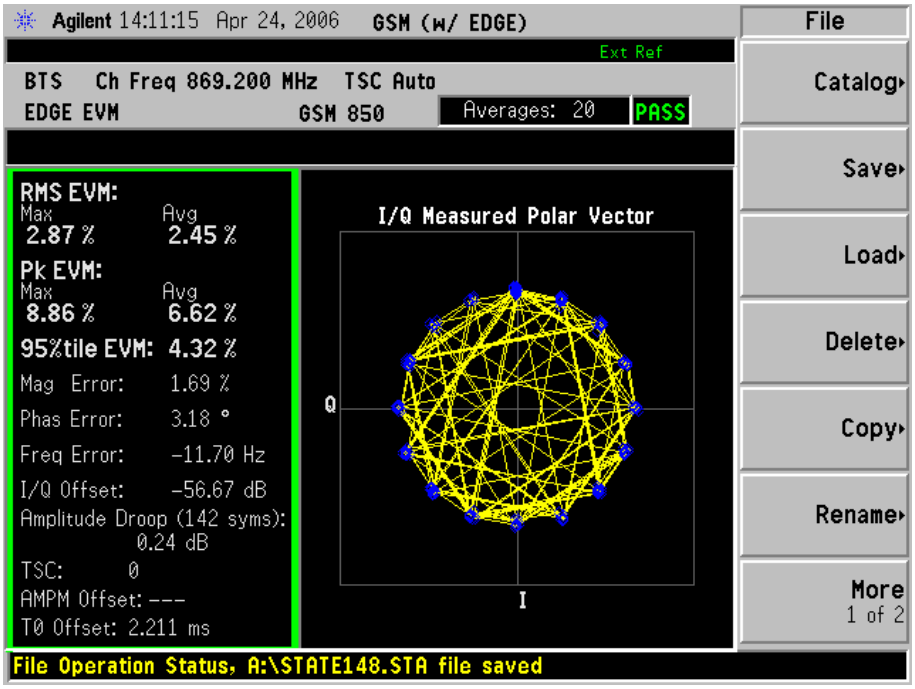
Channel 251:



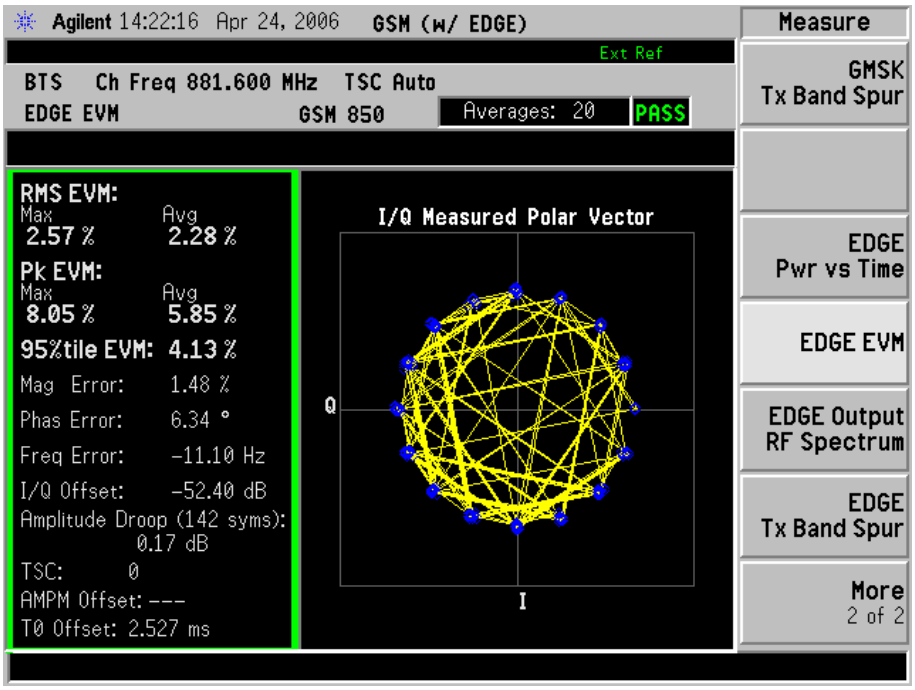
8PSK modulation:

Channel	Frequency (MHz)	RMS EVM		PK EVM		95% title EVM (%)
		Max (%)	Avg (%)	Max (%)	Avg (%)	
Channel 128	869.2	2.87	2.45	8.86	6.62	4.32
Channel 190	881.6	2.57	2.28	8.05	5.85	4.13
Channel 251	893.8	2.68	2.27	9.02	6.10	4.15

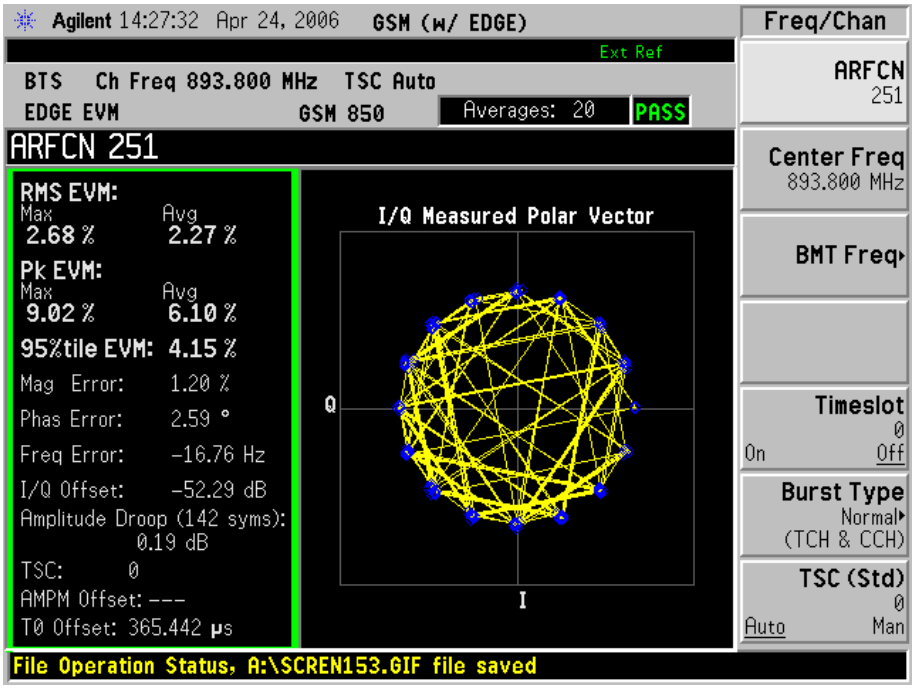
Channel 128:



Channel 190:



Channel 251:



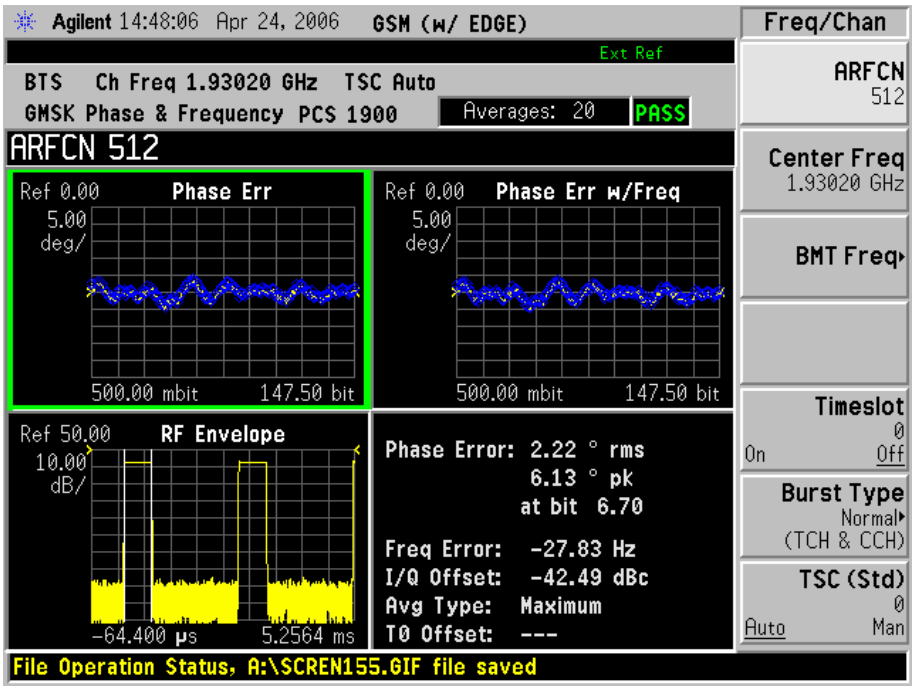
For1900 MHz

Modulation characteristic:

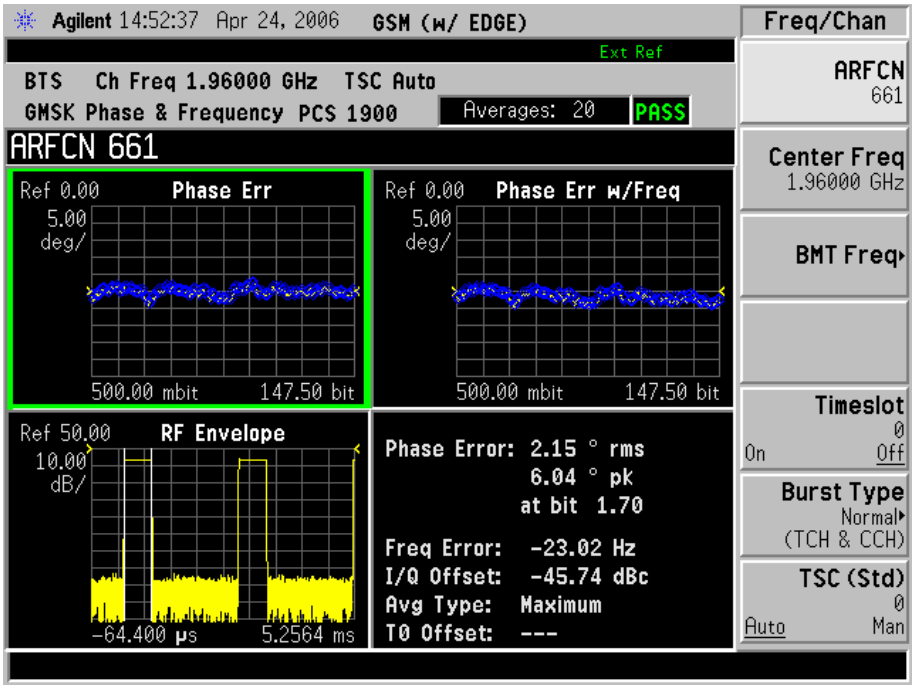
GSMK modulation:

Channel	Frequency (MHz)	Phase error		Frequency error (Hz)	I/Q offset (dBc)
		rms (º)	peak (º)		
Channel 512	1930.2	2.22	6.13	-27.83	-42.49
Channel 661	1960.0	2.15	6.04	-23.02	-45.74
Channel 810	1989.8	2.22	6.10	-26.97	-41.91

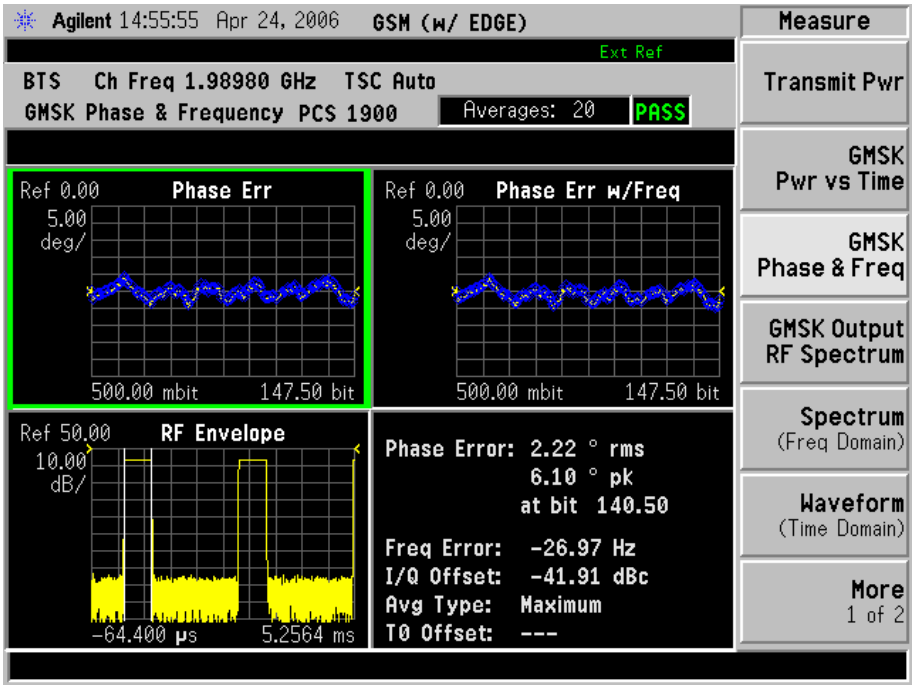
Channel 512



Channel 661:



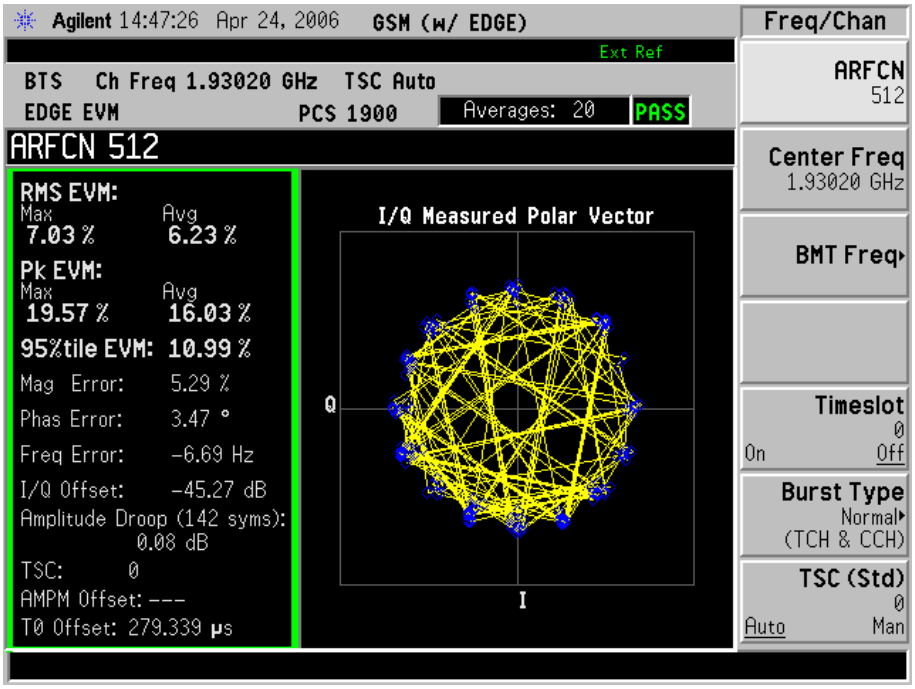
Channel 810:



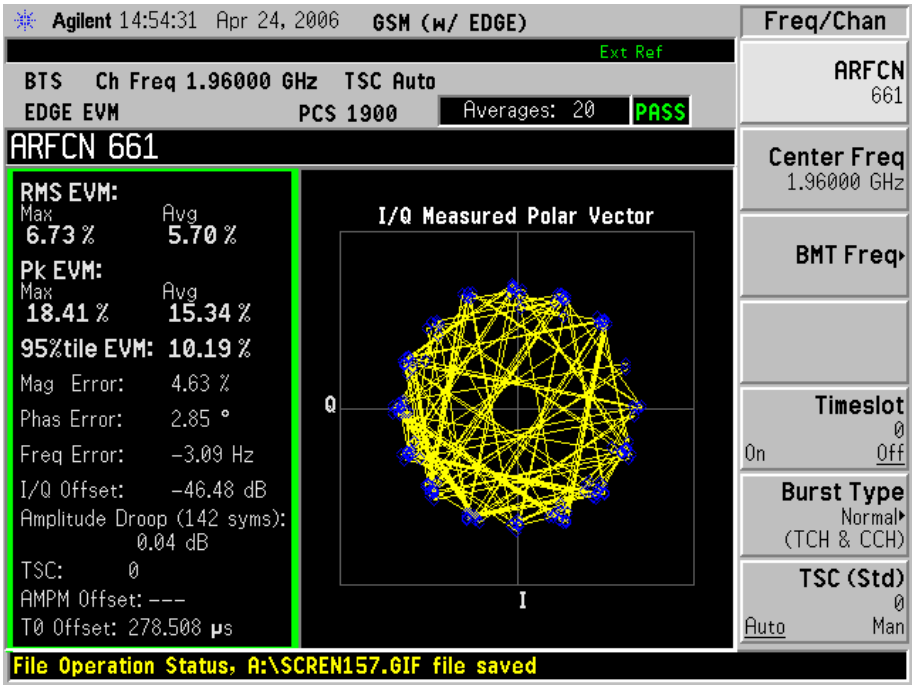
8PSK modulation:

Channel	Frequency (MHz)	RMS EVM		PK EVM		95% title EVM (%)
		Max (%)	Avg (%)	Max (%)	Avg (%)	
Channel 512	1930.2	7.03	6.23	19.57	16.03	10.99
Channel 661	1960.0	6.73	5.70	18.41	15.34	10.19
Channel 810	1989.8	6.24	5.70	16.87	14.15	10.05

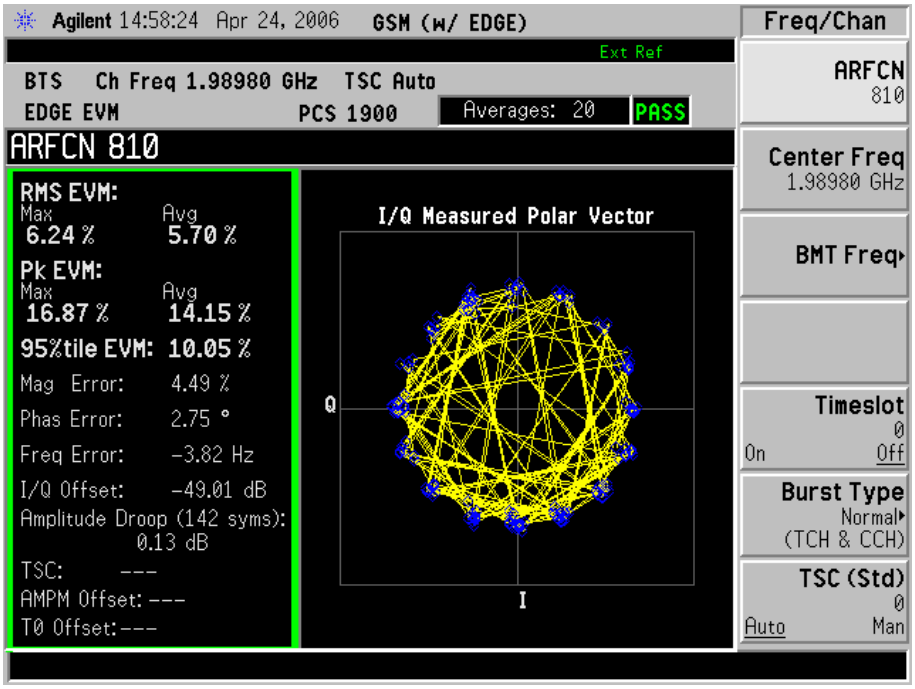
Channel 512



Channel 661:



Channel 810:



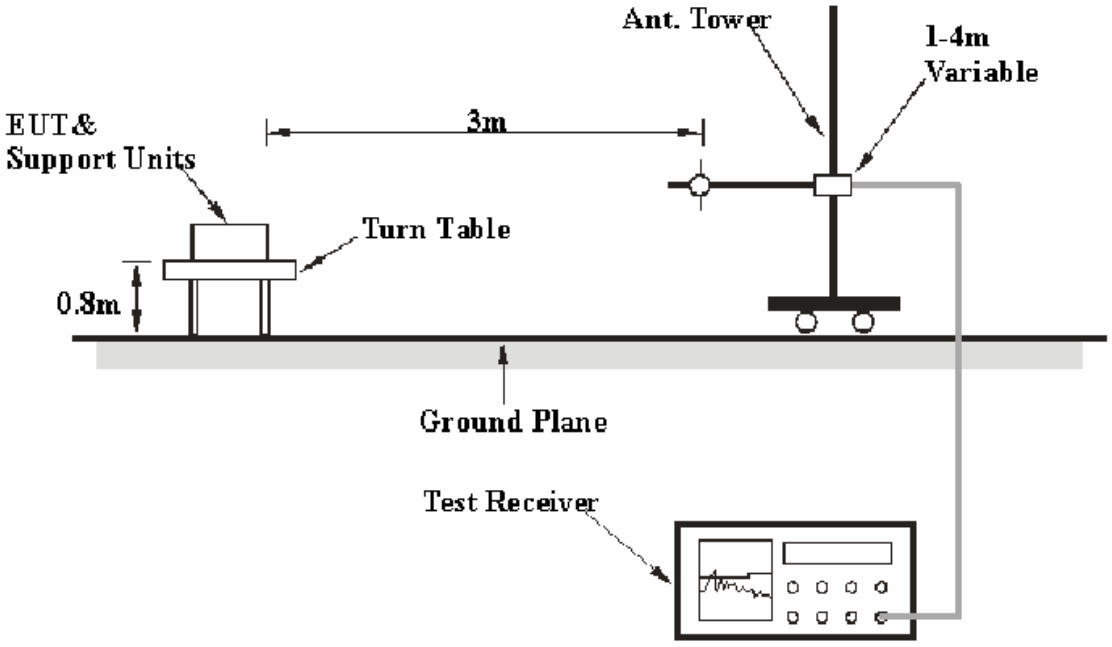
§15.209(a) - RADIATED EMISSION

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Lab Corp. (ShenZhen) is ±4.0 dB.

EUT Setup



The radiated emission tests were performed in the 3-meter Chamber B using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.209(a) limits.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 1000 MHz.

During the radiated emission test, the EMI Test Receiver was set with the following configurations:

Frequency Range	***RBW***	***Video B/W***	***IF B/W***
30 – 1000 MHz	100 kHz	300kHz	120kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESI26	100058	2005-10-17	2006-10-16
R&S	Ultra Broadband Antenna	HL562	100022	2003-03-07	2008-03-06
R&S	Filters	TS-FILT	N/A	N/A	N/A
R&S	Cable Set	RE Cable	N/A	2005-10-17	2006-10-16

*** Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the PK detection mode.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter reading. The basic equation is as follows:

Corr. Ampl. =Meter Reading + Antenna Loss+ Cable Loss - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Corr. Ampl. –Limit

Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15.209(a), with the worst margin reading of:

For 850 MHz

-2.7 dB at**74.709419 MHz** in the **Horizontal** polarization, B Channel
-2.7 dB at **70.821643 MHz** in the **Vertical** polarization, M Channel
-1.39 dB at **47.49499 MHz** in the **Horizontal** polarization, T Channel.

For 1900 MHz

-3.96 dB at **82.48497 MHz** in the **Horizontal** polarization, B Channel
-2.04 dB at **61.102204 MHz** in the **Horizontal** polarization, M Channel
-1.68 dB at **76.653307 MHz** in the **Horizontal** polarization, T Channel.

Test Data

Environmental Conditions

Temperature:	26 °C
Relative Humidity:	47 %
ATM Pressure:	1000 mbar

The testing was performed by Merry Zhao on 2006-4-21, and the data were only for unintentional radiator and be subjected to verification

Test Mode: Transmitting

For 850 MHz

B Channel

INDICATED		TABLE	ANTENNA		TRANSDUCER	FCC Part 15.209(a)	
Frequency MHz	Meter Reading dBμV/m	Angle Degree	Height Meter	Polar H/ V	dB	Limit dBμV/m	Margin dB
74.709419	37.34	36	1	V	-16.7	40	-2.7*
47.49499	37.03	357	1	V	-15.1	40	-3.0*
41.663327	36.28	36	1	V	-11.6	40	-3.7*
82.48497	35.46	48	1	V	-15.7	40	-4.5
66.933868	33.41	90	3	H	-18.8	40	-6.6
59.158317	33.18	16	2	V	-20.8	40	-6.8
74.709419	32.55	102	3	H	-16.7	40	-7.4
80.541082	30.34	139	3	H	-15.9	40	-9.7
30.000000	28.01	200	3	H	-5.4	40	-12.0
47.49499	26.23	308	2	H	-15.1	40	-13.8
45.551102	25.81	308	2	H	-13.9	40	-14.2
206.89379	28.23	201	1	V	-15.5	43.5	-15.3

M Channel

INDICATED		TABLE	ANTENNA		TRANSDUCER	FCC Part 15.209(a)	
Frequency MHz	Meter Reading dBμV/m	Angle Degree	Height Meter	Polar H/ V	dB	Limit dBμV/m	Margin dB
70.821643	37.29	60	1	V	-17.6	40	-2.70*
80.541082	34.96	237	1	V	-15.9	40	-5.00
41.663327	32.83	0	2	V	-11.6	40	-7.20
68.877756	32.22	144	2	H	-18.1	40	-7.80
70.821643	31.33	120	2	H	-17.6	40	-8.67
30.0000	30.08	360	1	V	-5.4	40	-9.90
59.158317	30.09	27	2	V	-20.8	40	-9.90
47.49499	29.04	23	1	V	-15.1	40	-11.00
80.541082	27.96	108	2	H	-15.9	40	-12.04
30.0000	27.5	144	2	H	-5.4	40	-12.50
39.719439	23.97	297	2	H	-10.5	40	-16.03
35.831663	23.79	274	2	H	-8.4	40	-16.21

T Channel

INDICATED		TABLE	ANTENNA		TRANSDUCER	FCC Part 15.209(a)	
Frequency MHz	Meter Reading dBμV/m	Angle Degree	Height Meter	Polar H/ V	dB	Limit dBμV/m	Margin dB
47.49499	38.61	98	1	V	-15.1	40	-1.39*
74.709419	37.57	37	1	V	-16.7	40	-2.43*
80.541082	36.33	24	1	V	-15.9	40	-3.67*
66.933868	35.6	360	1	V	-18.8	40	-4.40
30.0000	31.13	328	1	V	-5.4	40	-8.87
37.775551	30.3	328	1	V	-9.4	40	-9.70
70.821643	29.84	296	2	H	-17.6	40	-10.16
80.541082	28.05	320	2	H	-15.9	40	-11.95
66.933868	27.94	296	2	H	-18.8	40	-12.06
30.0000	26.9	11	1	H	-5.4	40	-13.10
47.49499	25.2	284	2	H	-15.1	40	-14.80
35.831663	24.75	65	2	H	-8.4	40	-15.25

For 1900 MHz

B Channel

INDICATED		TABLE	ANTENNA		TRANSDUCER	FCC Part 15.209(a)	
Frequency MHz	Meter Reading dBμV/m	Angle Degree	Height Meter	Polar H/ V	dB	Limit dBμV/m	Margin dB
82.48497	36.04	24	1	V	-15.7	40.0	-3.96*
41.663327	35.43	49	1	V	-11.6	40.0	-4.57
61.102204	33.22	29	2	V	-20.6	40.0	-6.78
61.102204	32.60	120	3	H	-20.6	40.0	-7.4
906.69339	36.71	85	3	H	1.3	46.0	-9.29
78.597194	28.94	74	2	H	-16.1	40.0	-11.06
103.86774	29.76	330	1	V	-14.9	43.5	-13.74
370.18036	30.20	330	1	V	-9.2	46.0	-15.8
43.607214	24.17	0	3	H	-12.8	40.0	-15.83
35.831663	23.74	35	1	H	-8.4	40.0	-16.26
409.05812	28.59	10	1	H	-8.0	46.0	-17.41
311.86373	27.33	232	1	V	-10.8	46.0	-18.76

M Channel

INDICATED		TABLE	ANTENNA		TRANSDUCER	FCC Part 15.209(a)	
Frequency MHz	Meter Reading dBμV/m	Angle Degree	Height Meter	Polar H/ V	dB	Limit dBμV/m	Margin dB
61.102204	37.96	15	2	V	-20.6	40	-2.04*
74.709419	36.92	37	1	V	-16.7	40	-3.08
51.3828	36.61	296	2	H	-17.7	40	-3.39
63.0461	34.54	125	3	H	-20.2	40	-5.45
51.382766	34.19	96	1	V	17.7	40	-5.81
45.551102	32.79	49	1	V	-13.9	40	-7.21
74.7094	31.84	295	2	H	-16.7	40	-8.16
37.775551	31.64	329	1	V	-9.4	40	-8.36
30.0000	31.34	159	1	V	-5.4	40	-8.66

T Channel

INDICATED		TABLE	ANTENNA		TRANSDUCER	FCC Part 15.209(a)	
Frequency MHz	Meter Reading dBμV/m	Angle Degree	Height Meter	Polar H/ V	dB	Limit dBμV/m	Margin dB
76.653307	38.32	354	1	V	-16.4	40.0	-1.68*
80.541082	35.51	25	1	V	-15.9	40.0	-4.49
47.49499	33.3	360	2	V	-15.1	40.0	-6.70
59.158317	33.11	15	1	V	-20.8	40.0	-6.89
39.719439	33.08	28	1	V	-10.5	40.0	-6.92
30.0000	31.19	147	3	V	-5.4	40.0	-8.81
76.653307	30.98	307	2	H	-16.4	40.0	-9.02
66.933868	30.7	88	3	H	-18.8	40.0	-9.30
815.33066	36.05	330	1	H	-0.1	46.0	-9.95
30.0000	27.09	40	3	H	-5.4	40.0	-12.91
121.36273	25.29	112	3	H	-14.3	43.5	-18.21
206.89379	21.97	320	2	H	-15.5	43.5	-21.53

* Within the measurement uncertainty

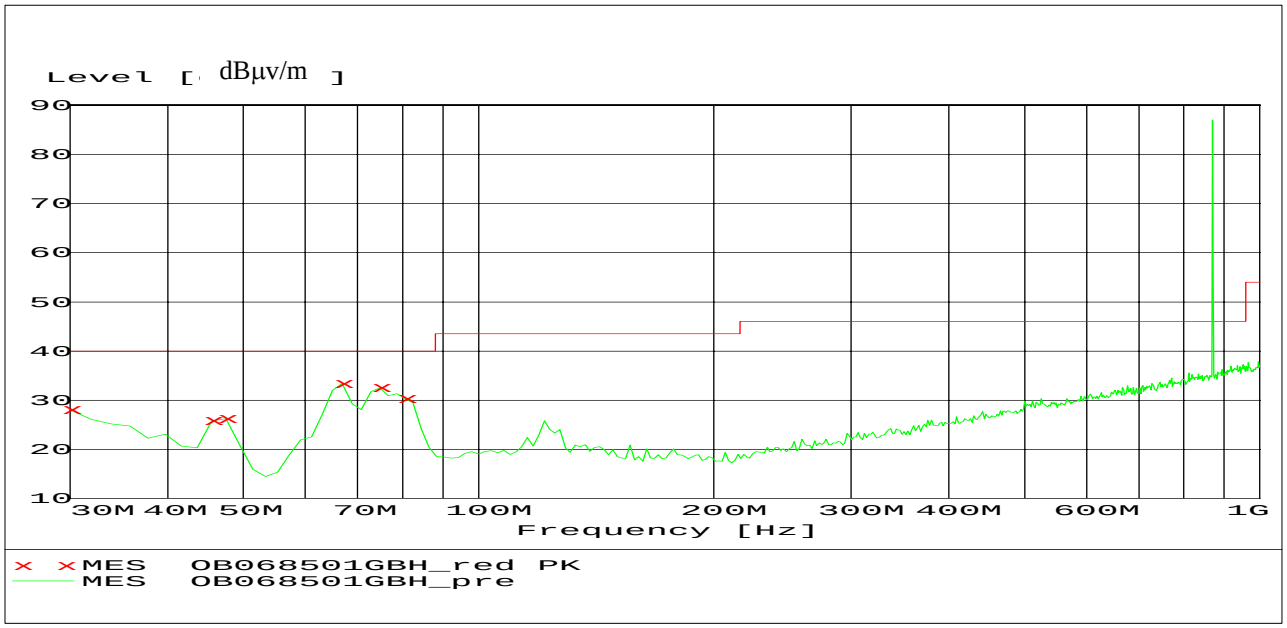
Plot(s) of Test Data

Plot(s) of Test Data is presented hereinafter as reference.

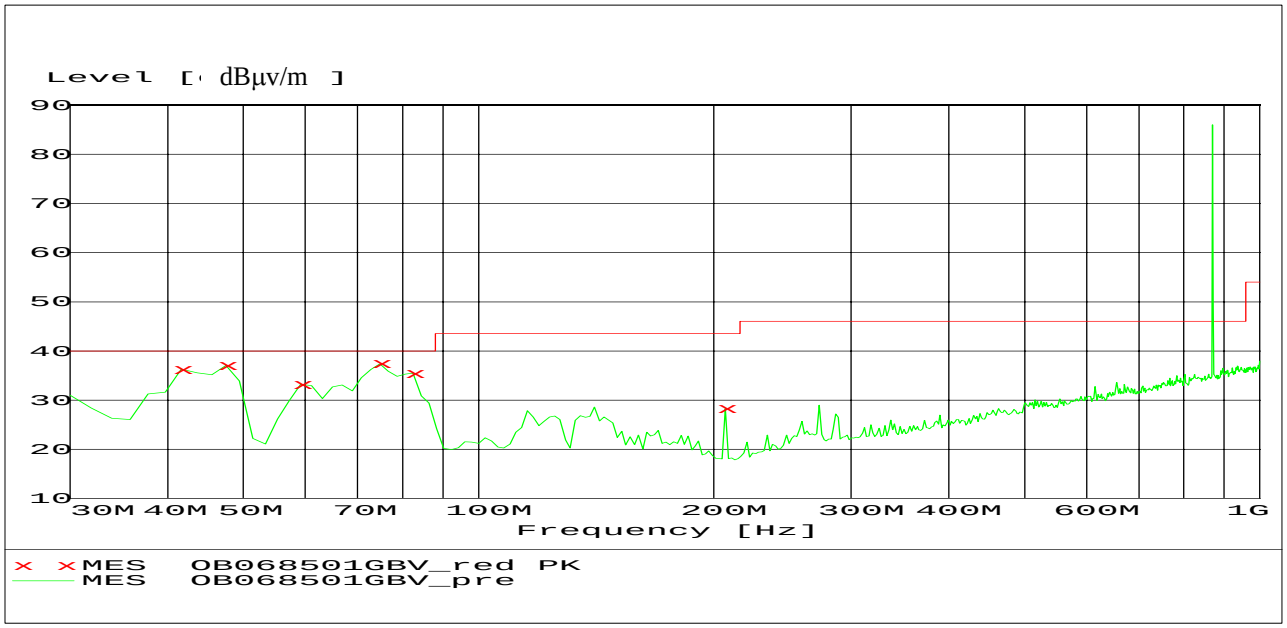
For 850 MHz

B Channel

Horizontal

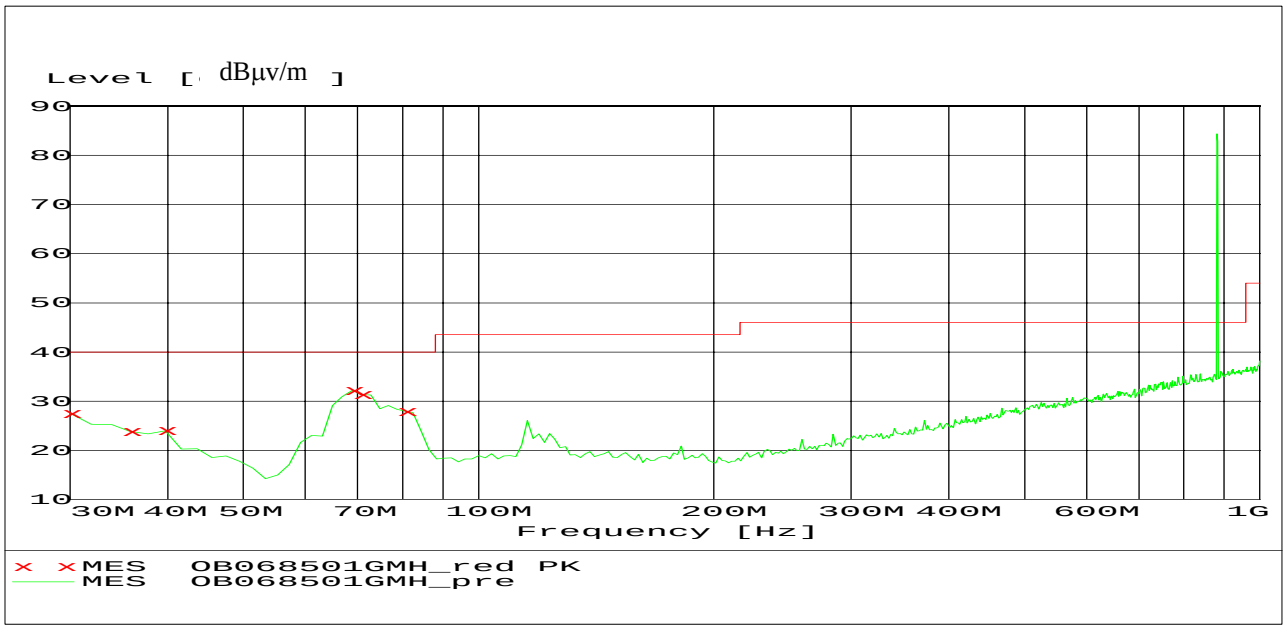


Vertical



M Channel

Horizontal



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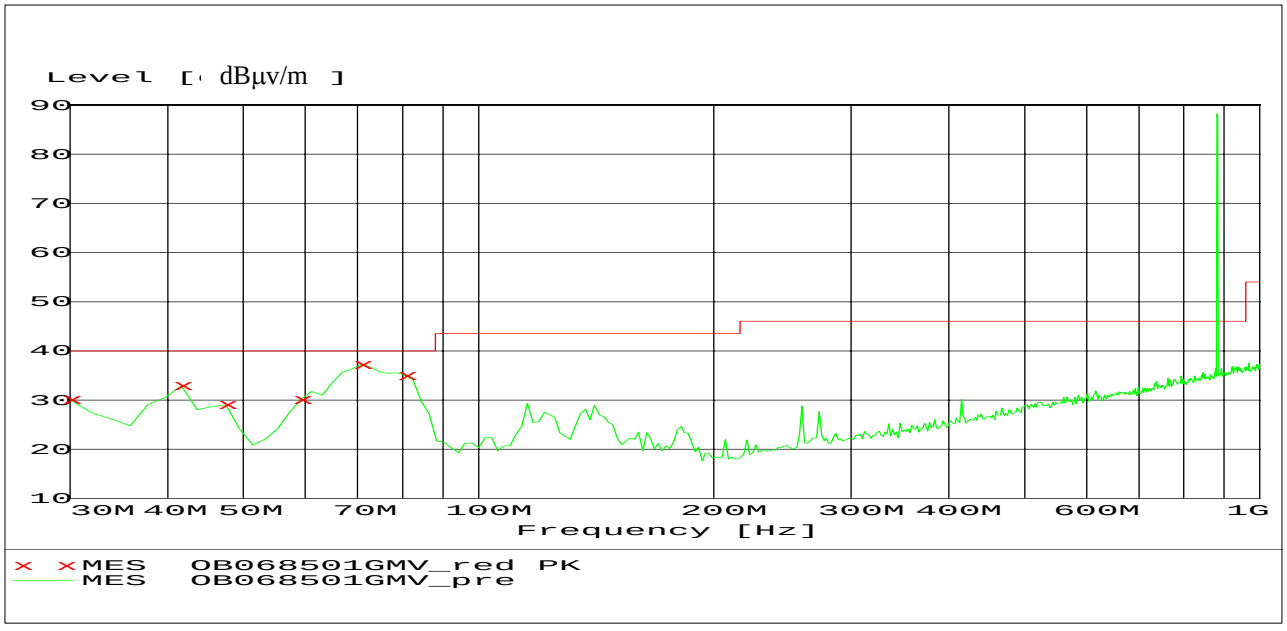
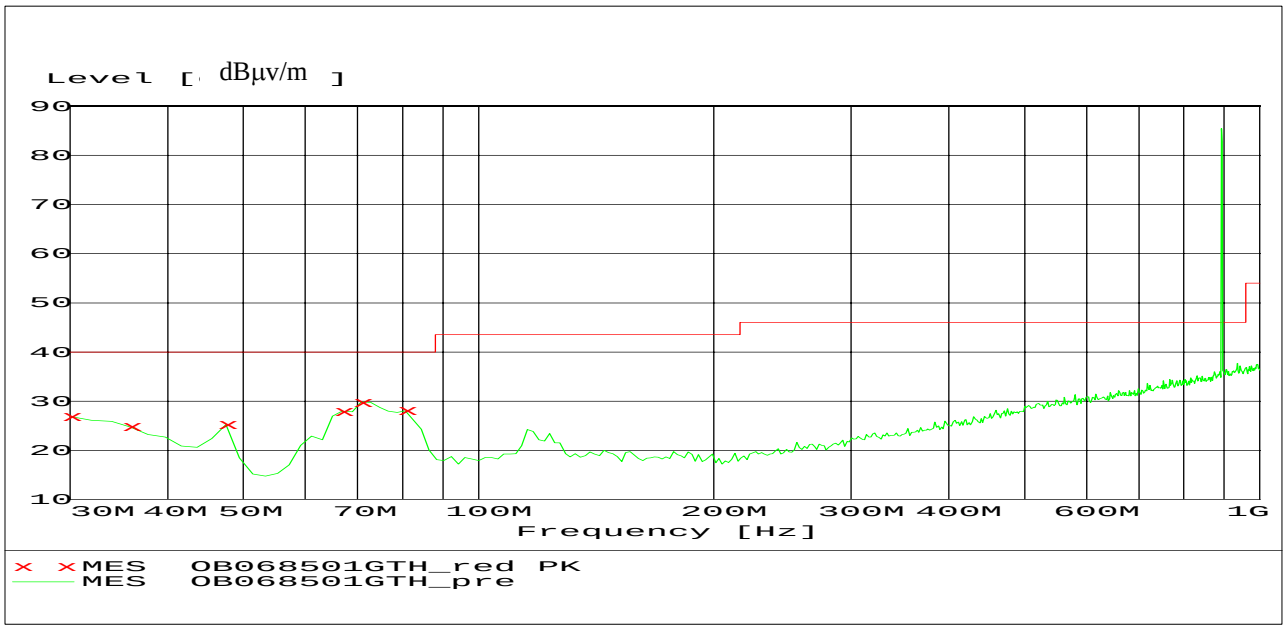


T Channel

Horizontal



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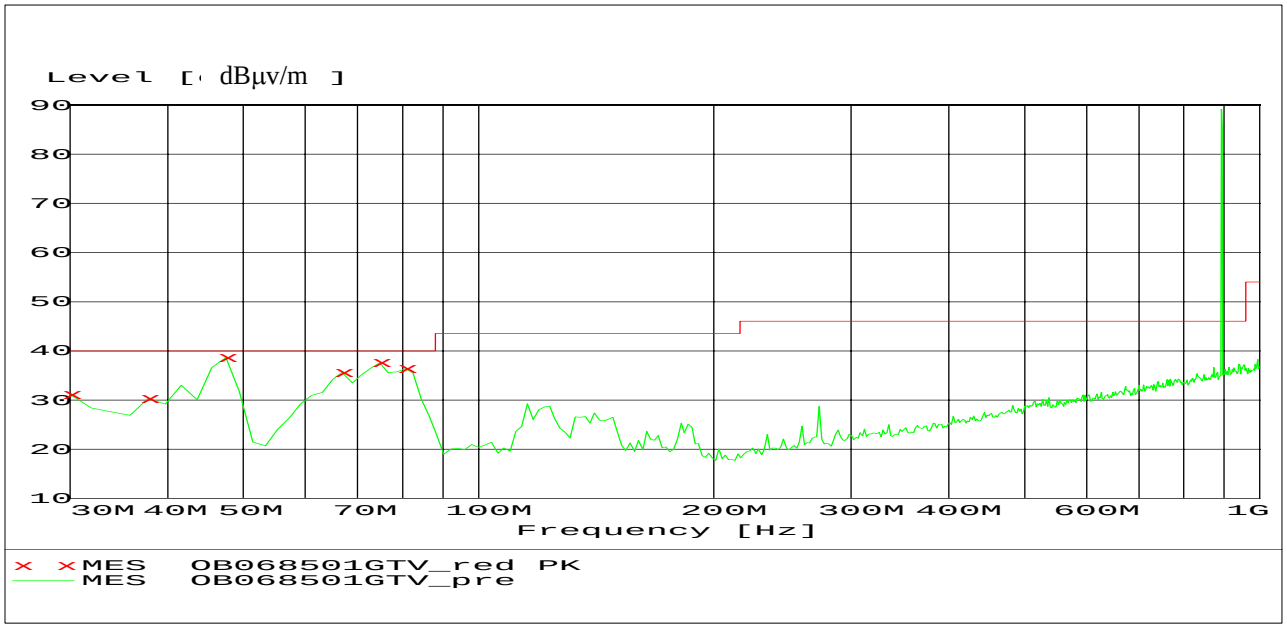
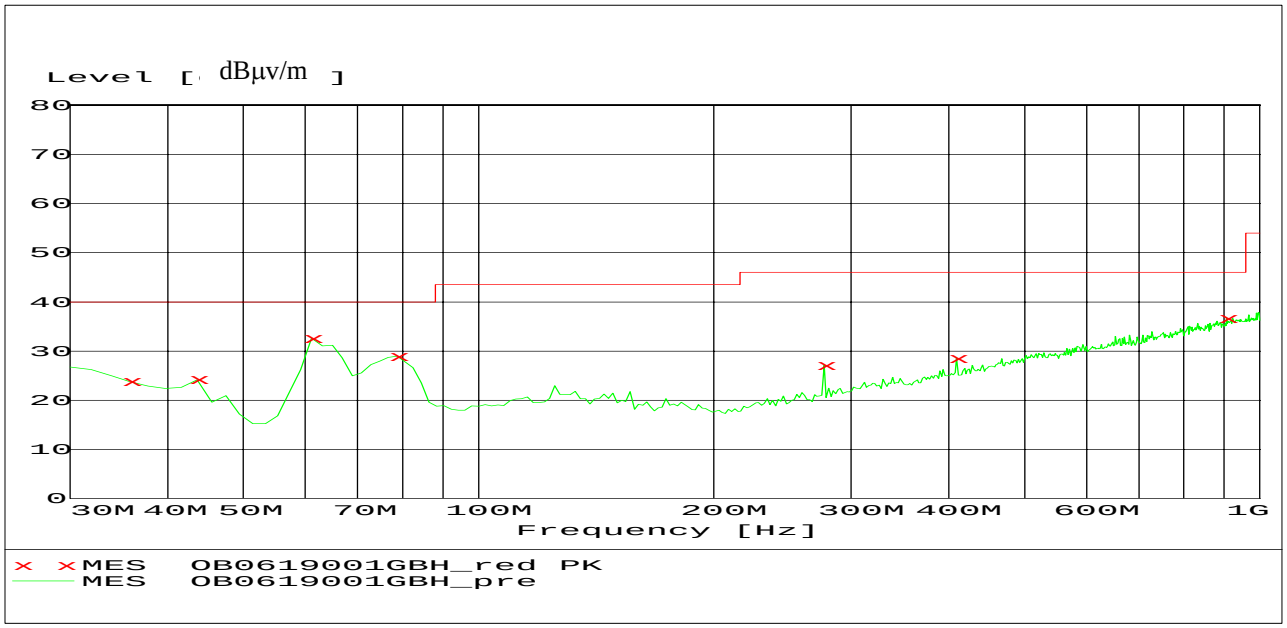


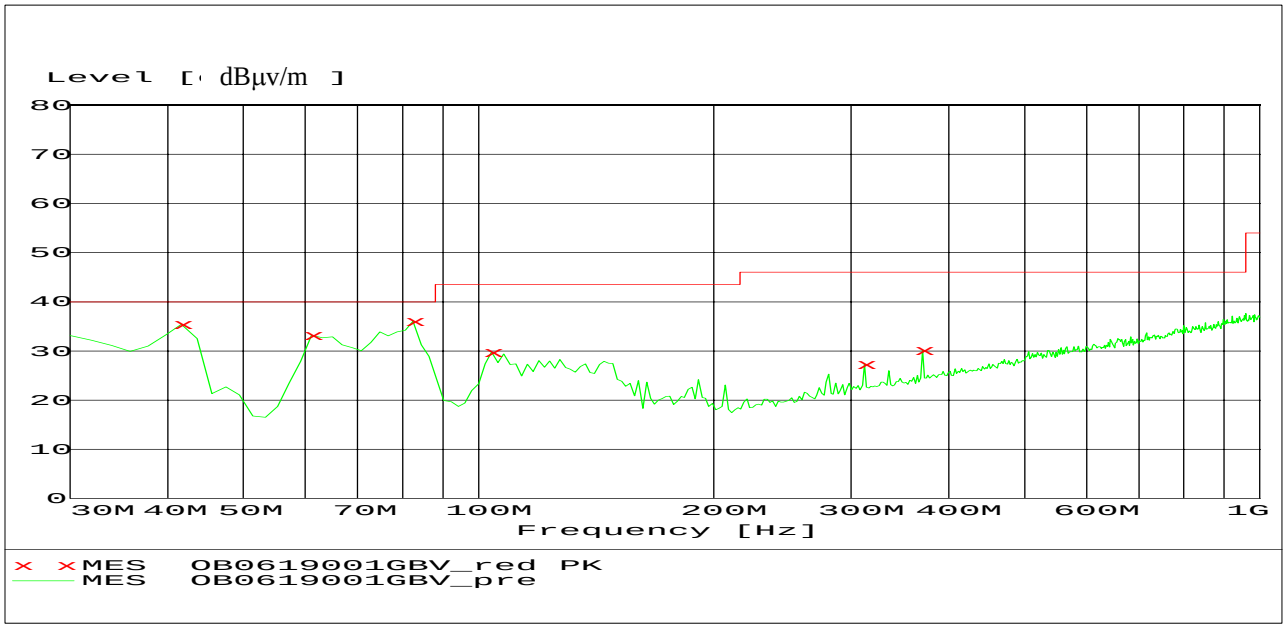
For 1900 MHz

B Channel

Horizontal

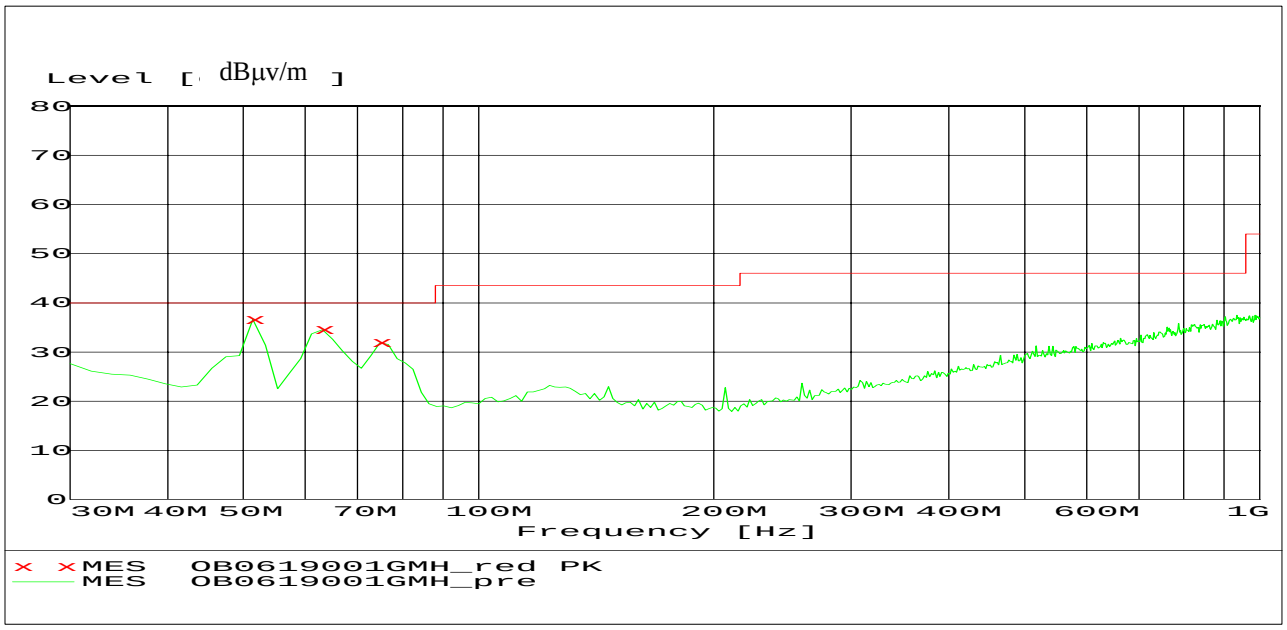


Vertical



M Channel

Horizontal



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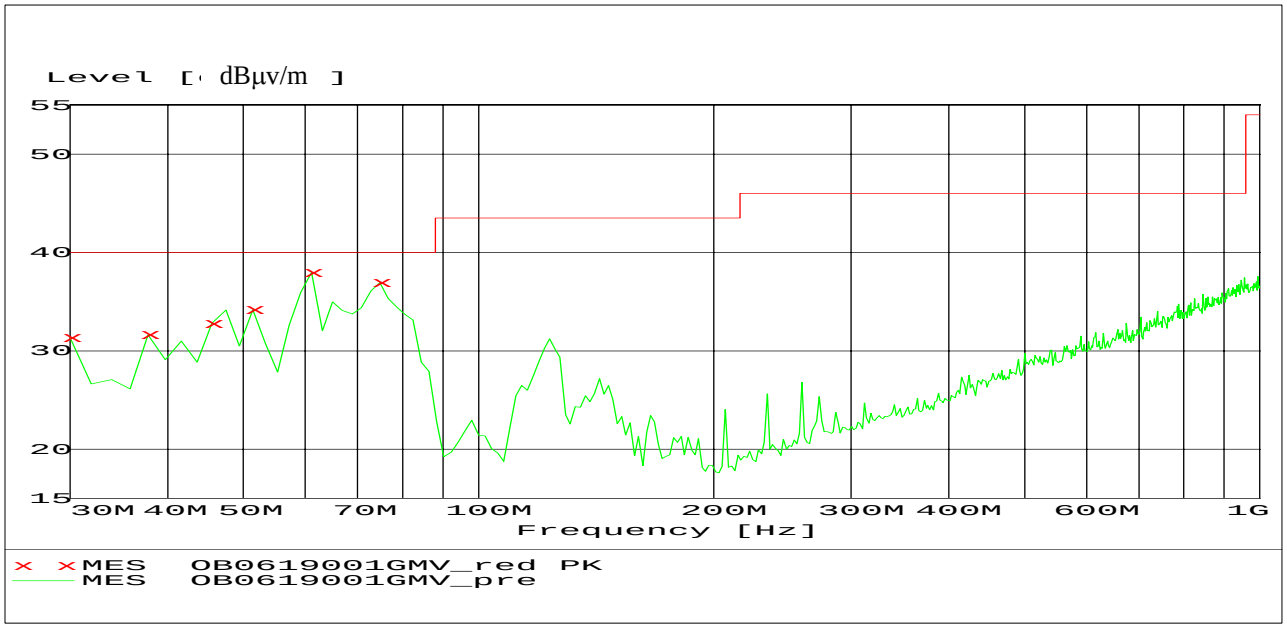
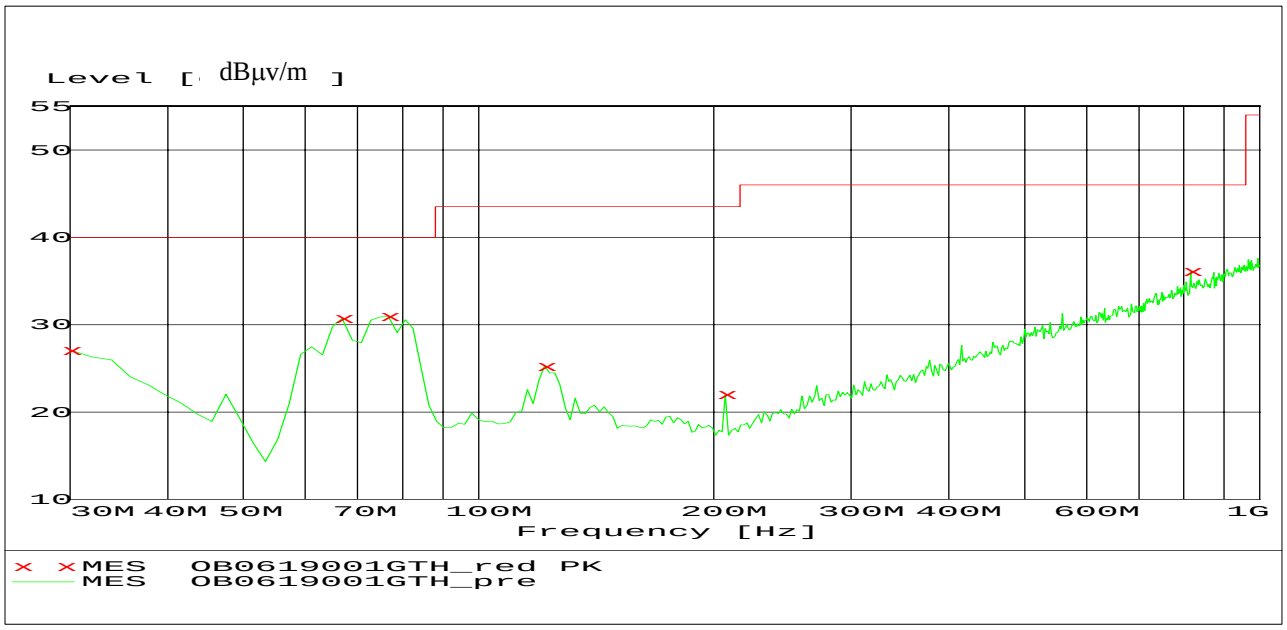
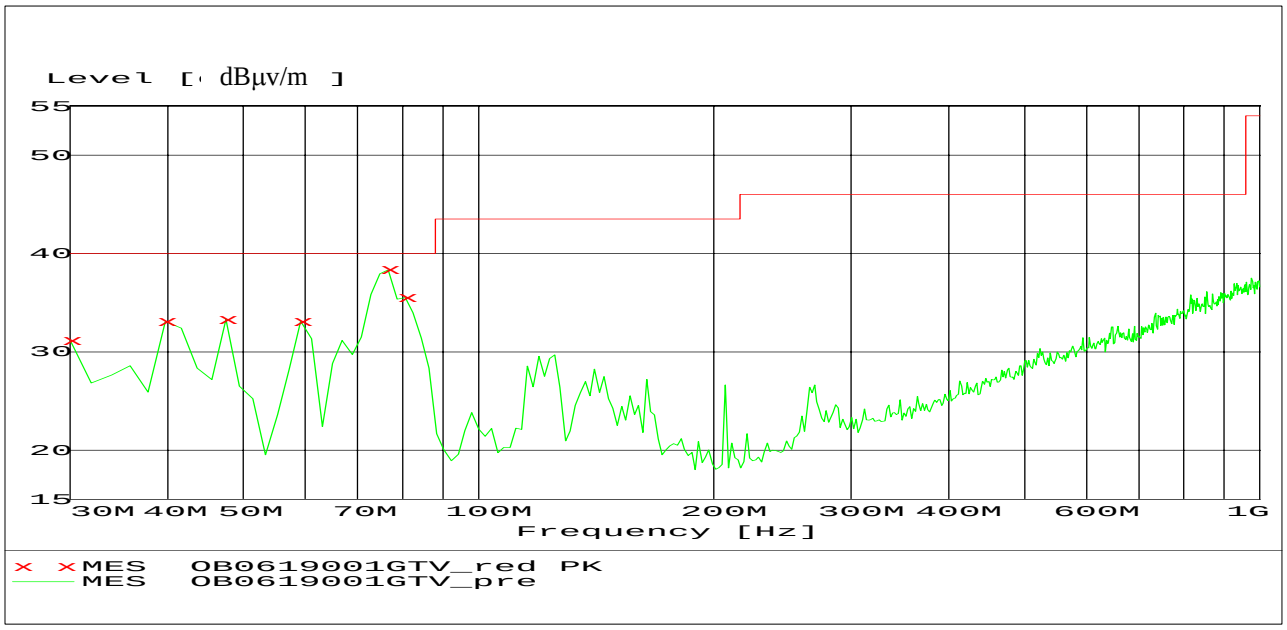


T Channel

Horizontal



Vertical



§2.1053- SPURIOUS RADIATED EMISSIONS

Applicable Standard

Requirements: CFR 47, §2.1053

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESI26	100058	2005-10-17	2006-10-16
R&S	Double-Ridged Waveguide Horn Antenna	HF906	100032	2004-10-10	2009-10-9
R&S	Filters	TS-FILT	N/A	N/A	N/A
R&S	Cable Set	RE Cable	N/A	2005-10-17	2006-10-16
Albatross	Anechoic Chamber	3m Site	N/A	2005-07-15	2008-07-14
R&S	Software	ES-K1	N/A	N/A	N/A
R&S	Signal Generator	SMR20	100098	2005-10-17	2006-10-16
R&S	Double-Ridged Waveguide Horn Antenna	HF906	100013	2004-01-31	2007-01-30

*** Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating 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 teeth 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 1g (TXpwr in Watts/0.001)-the absolute level

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

Test Results Summary

For 850 MHz

Bottom Channel: -33.44 dB at 11701.403 MHz
Middle Channel: -37.08 dB at 5016.0321 MHz
Top Channel: -28.48 dB at 12427.355 MHz

For 1900 MHz

Bottom Channel: -24.85 dB at 19192.385 MHz
Middle Channel: -28.99 dB at 18176.353 MHz
Top Channel: -27.55 dB at 18306.613 MHz

Test Data

Environmental Conditions

Temperature:	18 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

The testing was performed by Merry Zhao on 2006-4-24

Test Mode: Transmitting

For 850 MHz

Indicated		Table	Test Antenna		Substituted			Antenna	Cable	Absolute	Limit	Margin
Frequency MHz	Meter Reading dBuV/m	Angle Degree	Height Meter	Polar H/V	Frequency MHz	Level dBm	Polar H/V	Gain Correction dBi	Loss dB	Level dBm	dBm	dB
Bottom Channel												
11701.403	57.51	45	1.0	H	11701.403	-48.69	H	11.85	9.6	-46.44	-13.00	-33.44
12726.954	57.42	180	1.2	V	12726.954	-53.55	V	12.15	9.9	-51.3	-13.00	-38.3
5148.2966	47.13	45	1.0	H	5148.2966	-53.77	H	8.55	6.2	-51.42	-13.00	-38.42
1733.4669	40.56	45	1.2	V	1733.4669	-56.04	V	6.55	3.5	-52.89	-13.00	-39.89
6170.3407	51.28	270	1.0	V	6170.3407	-56.19	V	9.05	6.9	-54.04	-13.00	-41.04
4186.3727	46.24	60	1.2	H	4186.3727	-57.08	H	7.95	5.5	-54.63	-13.00	-41.63
1733.4669	40.64	45	1.2	H	1733.4669	-64.59	H	6.55	3.5	-61.54	-13.00	-48.54
1601.2024	43.75	180	1.2	H	1601.2024	-66.28	H	6.55	3.3	-63.03	-13.00	-50.03
1625.2505	36.58	0	1.0	V	1625.2505	-71.29	V	6.55	3.4	-68.14	-13.00	-55.14
1168.3367	34.45	45	1.0	V	1168.3367	-71.01	V	4.25	2.9	-69.66	-13.00	-56.66
1372.7455	34.73	90	1.2	H	1372.7455	-71.37	H	4.25	3.1	-70.22	-13.00	-57.22
Middle Channel												
5016.0321	47.37	238	1.0	H	5016.0321	-53.53	H	8.55	6.1	-51.08	-13.00	-37.08
6170.3407	50.71	97	1.2	H	6170.3407	-52.68	H	9.05	6.9	-50.53	-13.00	-37.53
8693.8878	54.14	360	1.2	V	8693.8878	-56.88	V	9.65	8.3	-55.13	-13.00	-42.13
12669.339	57.58	125	1.2	H	12669.339	-57.4	H	12.15	9.9	-55.15	-13.00	-42.15
6134.2685	50.56	180	1.0	V	6134.2685	-56.91	V	9.05	6.8	-55.56	-13.00	-42.56
2647.2946	41.83	60	1.0	H	2647.2946	-63.39	H	7.95	4.3	-59.74	-13.00	-46.74
3753.507	43.83	90	1.0	V	3753.507	-64.18	V	7.75	5.1	-61.53	-13.00	-48.53
2635.2705	40.67	270	1.2	V	2635.2705	-66.86	V	7.95	4.3	-63.21	-13.00	-50.21
1757.515	39.01	220	1.0	H	1757.515	-67.5	H	6.55	3.5	-64.45	-13.00	-51.45
1757.515	38.33	115	1.0	V	1757.515	-68.19	V	6.55	3.5	-65.14	-13.00	-52.14
1264.5291	35.64	300	1.0	V	1264.5291	-70.01	V	4.25	3	-68.76	-13.00	-55.76
1384.7695	35.1	158	1.2	H	1384.7695	-71	H	4.25	3.1	-69.85	-13.00	-56.85
Top Channel												
12427.355	57.48	168	1.0	V	12427.355	-43.63	V	12.05	9.9	-41.48	-13.00	-28.48
12358.216	57.55	228	1.0	H	12358.216	-54.6	H	12.05	9.9	-43.45	-13.00	-30.45
6170.3407	51.97	124	1.2	H	6170.3407	-51.42	H	9.05	6.9	-49.27	-13.00	-36.27
6170.3407	50.57	309	1.0	V	6170.3407	-56.9	V	9.05	6.9	-54.71	-13.00	-41.71
2671.3427	45.69	263	1.2	H	2671.3427	-59.05	H	7.95	4.4	-55.50	-13.00	-42.05
4030.0601	44.25	120	1.0	H	4030.0601	-60.4	H	7.95	5.3	-57.75	-13.00	-42.75
2671.3427	43.93	321	1.0	V	2671.3427	-63.6	V	7.95	4.4	-60.5	-13.00	-47.03
1781.5631	39.08	125	1.0	V	1781.5631	-67.44	V	6.55	3.5	-64.39	-13.00	-51.39
1108.2164	34.7	98	1.0	V	1108.2164	-73.15	V	4.25	2.7	-71.60	-13.00	-58.60

For 1900 MHz

Indicated		Table	Test Antenna		Substituted			Antenna	Cable	Absolute	Limit	Margin
Frequency MHz	Meter Reading dBuV/m	Angle Degree	Height Meter	Polar H/V	Frequency MHz	Level dBm	Polar H/V	Gain Correction dBi	Loss dB	Level dBm	dBm	dB
Bottom Channel												
19192.385	69.74	22	2.0	V	19192.385	-32.1	V	6.45	12.2	-37.85	-13.00	-24.85
18671.343	70.15	45	1.0	H	18671.343	-32.9	H	6.45	12.2	-38.65	-13.00	-25.65
14633.267	64.31	45	1.0	H	14633.267	-44.6	H	9.15	11	-46.45	-13.00	-33.45
6615.2305	52.31	60	1.2	H	6615.2305	-49.46	H	9.25	7.1	-47.31	-13.00	-34.31
14529.058	64.41	207	1.0	V	14529.058	-48.84	V	9.15	11	-50.69	-13.00	-37.69
6639.2786	51.88	180	1.2	V	6639.2786	-56.29	V	9.25	7.1	-54.14	-13.00	-41.14
2659.3186	41	45	1.2	H	2659.3186	-63.74	H	7.95	4.3	-60.09	-13.00	-47.09
3765.5311	45.07	270	1.0	V	3765.5311	-62.94	V	7.75	5.2	-60.39	-13.00	-47.39
2659.3186	41.61	45	1.2	V	2659.3186	-65.92	V	7.95	4.3	-62.27	-13.00	-49.27
1757.515	37.81	0	1.0	V	1757.515	-68.71	V	6.55	3.5	-65.66	-13.00	-52.66
1769.5391	37.8	180	1.2	H	1769.5391	-69.2	H	6.55	3.5	-66.15	-13.00	-53.15
1204.4088	34.57	45	1.0	V	1204.4088	-71.08	V	4.25	2.9	-69.73	-13.00	-56.73
1180.3607	34.47	90	1.2	H	1180.3607	-72.55	H	4.25	2.9	-71.2	-13.00	-58.2
Middle Channel												
18176.353	70.2	97	1.2	H	18176.353	-36.24	H	6.45	12.2	-41.99	-13.00	-28.99
18228.457	70.29	180	1.0	V	18228.457	-39.1	V	6.45	12.2	-44.85	-13.00	-31.85
14529.058	64.05	238	1.0	H	14529.058	-43.2	H	9.15	11	-45.05	-13.00	-32.05
6182.3647	52.41	60	1.0	H	6182.3647	-50.98	H	9.05	6.9	-48.83	-13.00	-35.83
5965.9319	50.68	115	1.0	V	5965.9319	-52.8	V	9.05	6.7	-50.45	-13.00	-37.45
14529.058	64.15	90	1.0	V	14529.058	-49.1	V	9.15	11	-50.95	-13.00	-37.95
13278.557	60.31	270	1.2	V	13278.557	-53.15	V	11.85	10.2	-51.50	-13.00	-38.50
2647.2946	40.81	220	1.0	H	2647.2946	-64.41	H	7.95	4.3	-60.76	-13.00	-47.76
2647.2946	40.84	300	1.0	V	2647.2946	-66.69	V	7.95	4.3	-63.04	-13.00	-50.04
1252.505	39.69	125	1.2	V	1252.505	-65.96	V	4.25	3	-64.71	-13.00	-51.71
1108.2164	34.53	158	1.2	H	1108.2164	-71.16	H	4.25	2.7	-69.61	-13.00	-56.61
Top Channel												
18306.613	70.72	168	1.0	V	18306.613	-34.8	V	6.45	12.2	-40.55	-13.00	-27.55
18280.561	69.99	124	1.2	H	18280.561	-36	H	6.45	12.2	-41.75	-13.00	-28.75
14503.006	63.92	120	1.0	H	14503.006	-41.4	H	9.15	11	-43.25	-13.00	-30.25
14503.006	64.22	309	1.0	V	14503.006	-45.3	V	9.15	11	-47.15	-13.00	-34.15
4871.7435	46.42	263	1.2	H	4871.7435	-54.48	H	9.15	5.9	-51.23	-13.00	-38.23
6182.3647	52.92	321	1.0	V	6182.3647	-56.13	V	9.05	6.9	-53.98	-13.00	-40.98
3981.9639	45.18	125	1.0	V	3981.9639	-60.91	V	7.75	5.3	-58.46	-13.00	-45.46
2466.9339	41.2	98	1.0	V	2466.9339	-62.02	V	7.05	4.2	-59.17	-13.00	-46.17
2683.3667	41.24	162	1.0	H	2683.3667	-63.5	H	7.95	4.4	-59.95	-13.00	-46.95
1793.5872	37.95	238	1.2	H	1793.5872	-65.38	H	6.55	3.6	-62.43	-13.00	-49.43
1192.3848	35.1	228	1.0	V	1192.3848	-70.36	V	4.25	2.9	-69.01	-13.00	-56.01

§2.1051, §22.917(a), §24.238(a)- SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Applicable Standard

Requirements: CFR 47§ 2.1051, §22.917(a), and §24.238(a)

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

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Spectrum analyzer	E4445A	MY45300953	2006-02-20	2007-02-19
GW	Dual tracking with 5V fixed	GPC-0303D	PC303IPE	2005-10-26	2006-10-25
Shanghai Huaxiang	Attenuator	30dB	0302707	2005-11-04	2006-11-03
R & S	Spectrum analyzer	FSU26/FS-K76/K40	200209/026	2006-05-30	2007-05-30

*** Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.

Test Data

Environmental Conditions

Temperature:	18 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

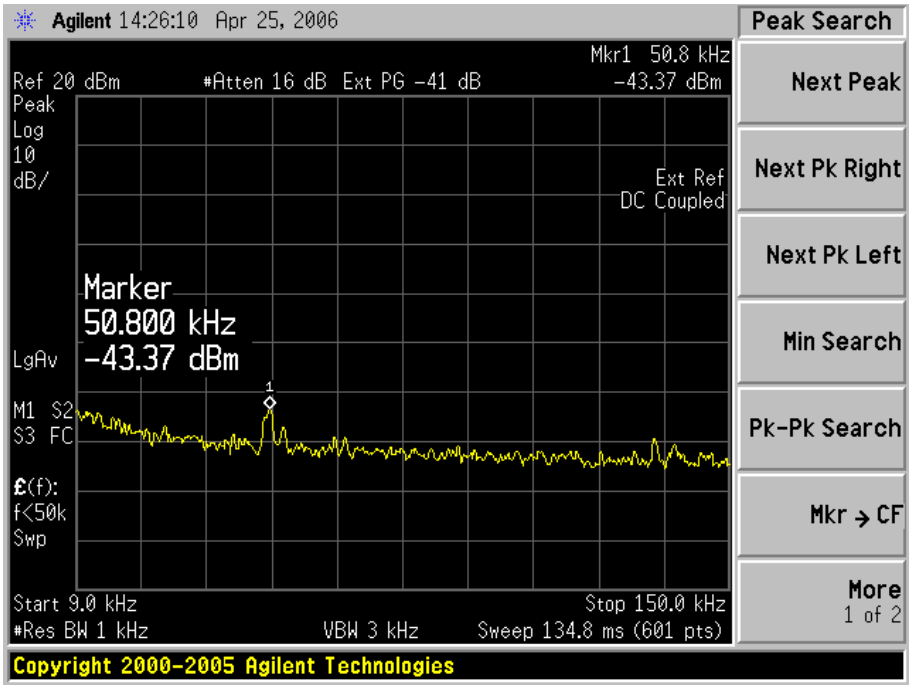
The testing was performed by Merry Zhao on 2006-4-25, 2006-7-26.

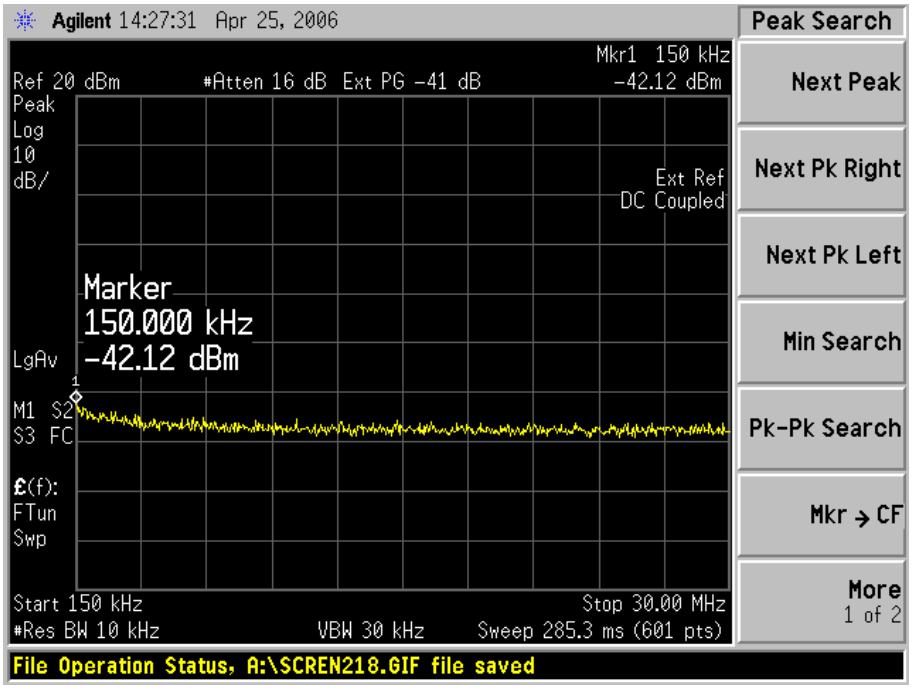
Test Result: Pass

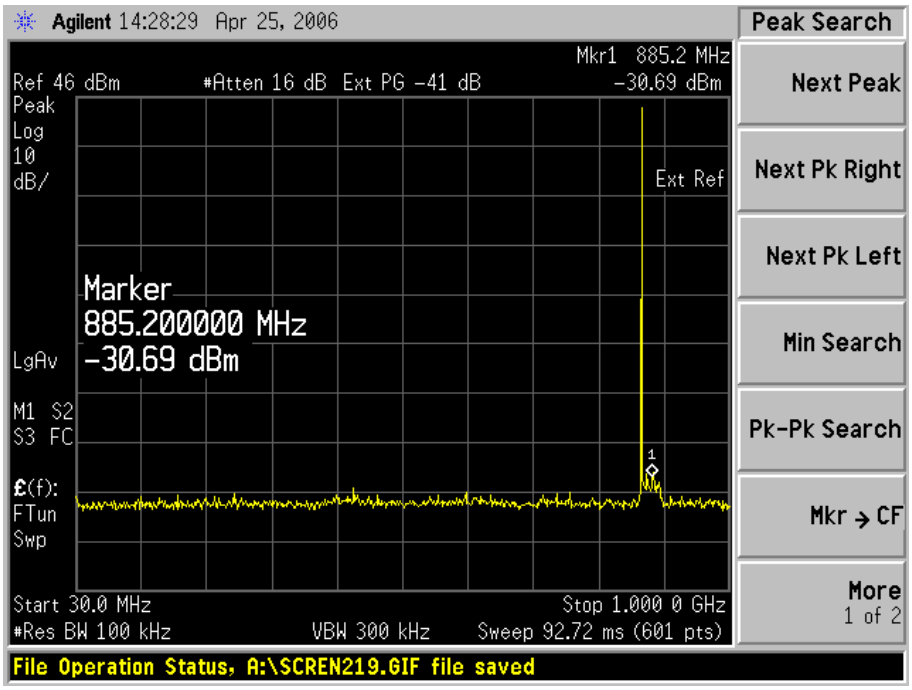
Test Mode: Transmitting

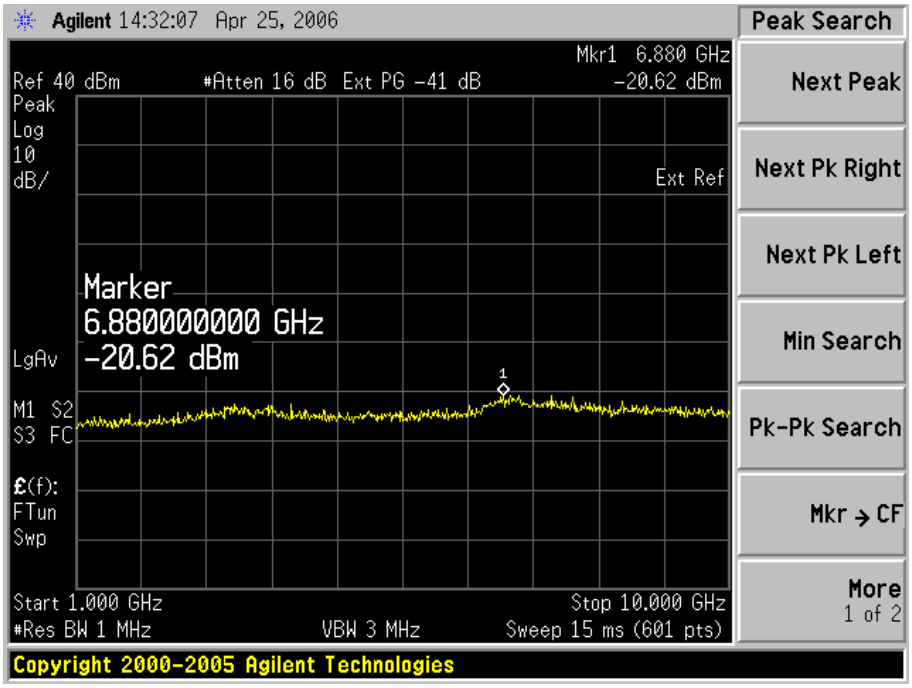
For 850 MHz

Channel 128

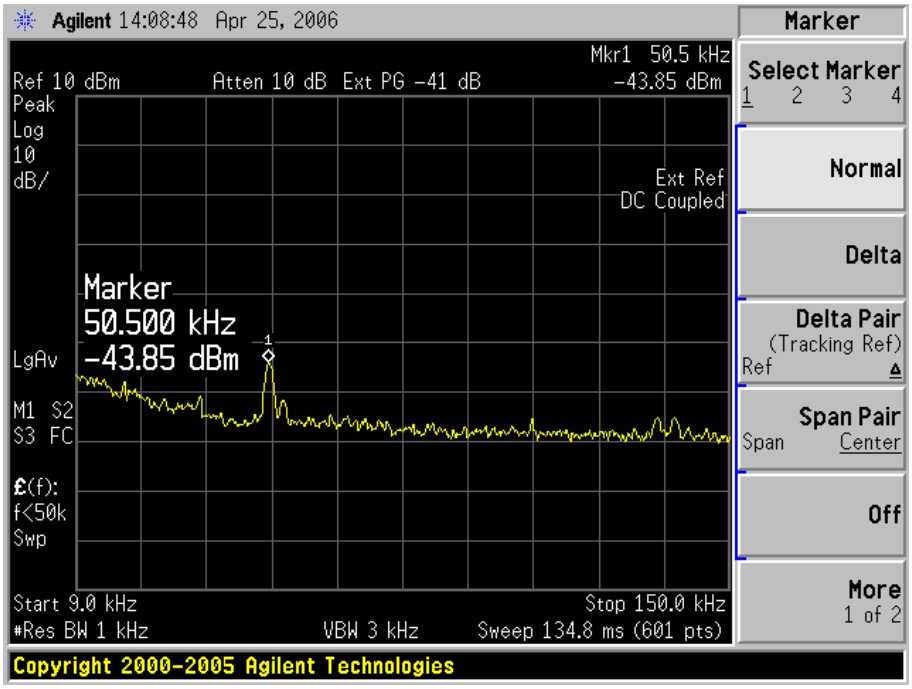





Agilent 14:28:29 Apr 25, 2006
Peak Search
Mkr1 885.2 MHz
Ref 46 dBm
#Atten 16 dB Ext PG -41 dB
-30.69 dBm
Peak
Log
10
dB/
Ext Ref
Marker
885.200000 MHz
-30.69 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
VBW 300 kHz
Sweep 92.72 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN219.GIF file saved


Agilent 14:32:07 Apr 25, 2006
Peak Search
Mkr1 6.880 GHz
Ref 40 dBm
#Atten 16 dB Ext PG -41 dB
-20.62 dBm
Peak
Log
10
dB/
Ext Ref
Marker
6.880000000 GHz
-20.62 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 15 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

Channel 190


Agilent 14:08:48 Apr 25, 2006
Marker
Mkr1 50.5 kHz
Ref 10 dBm
Atten 10 dB Ext PG -41 dB
-43.85 dBm
Peak
Log
10
dB/
Ext Ref
DC Coupled
Marker
50.500 kHz
-43.85 dBm
LgAv
M1 S2
S3 FC
£(f):
f<50k
Swp
Start 9.0 kHz
Stop 150.0 kHz
#Res BW 1 kHz
VBW 3 kHz
Sweep 134.8 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
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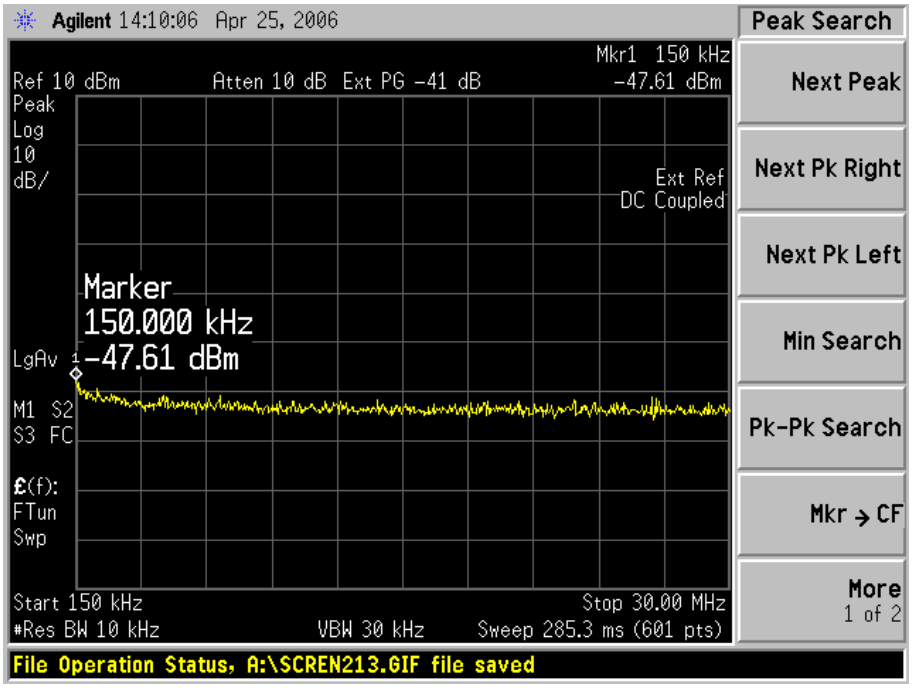
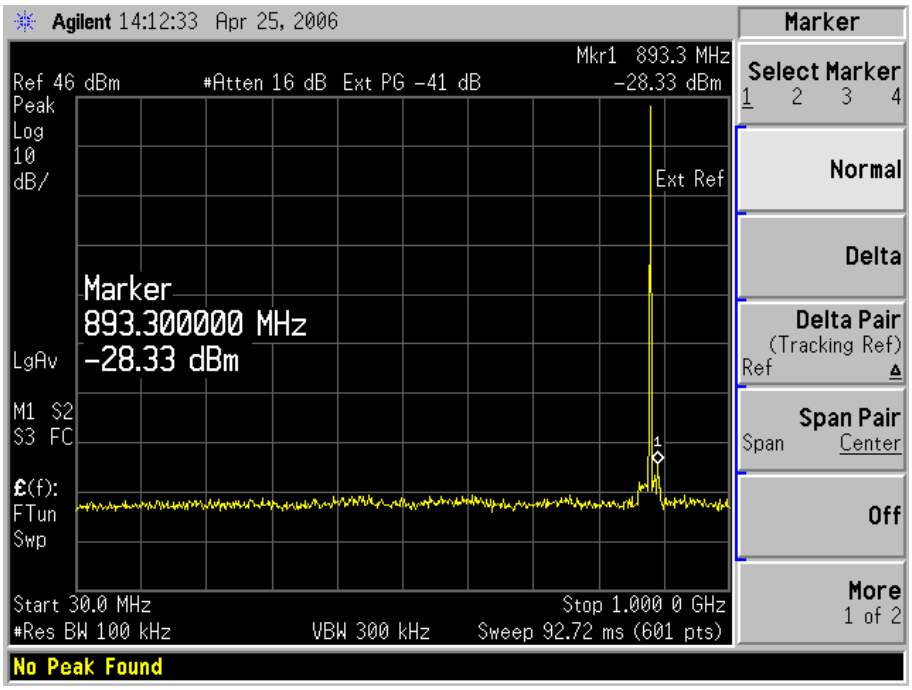
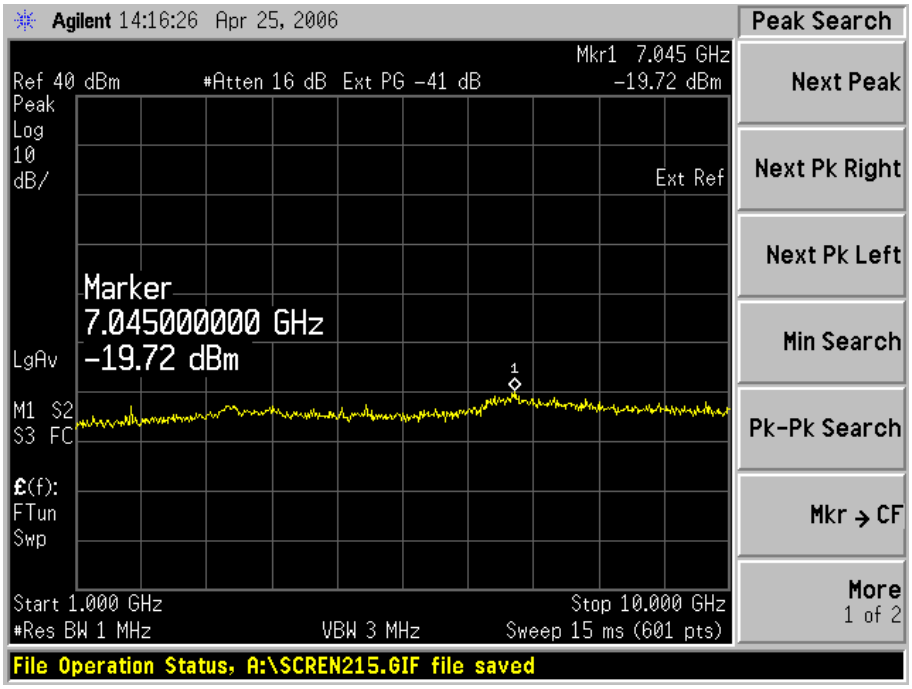
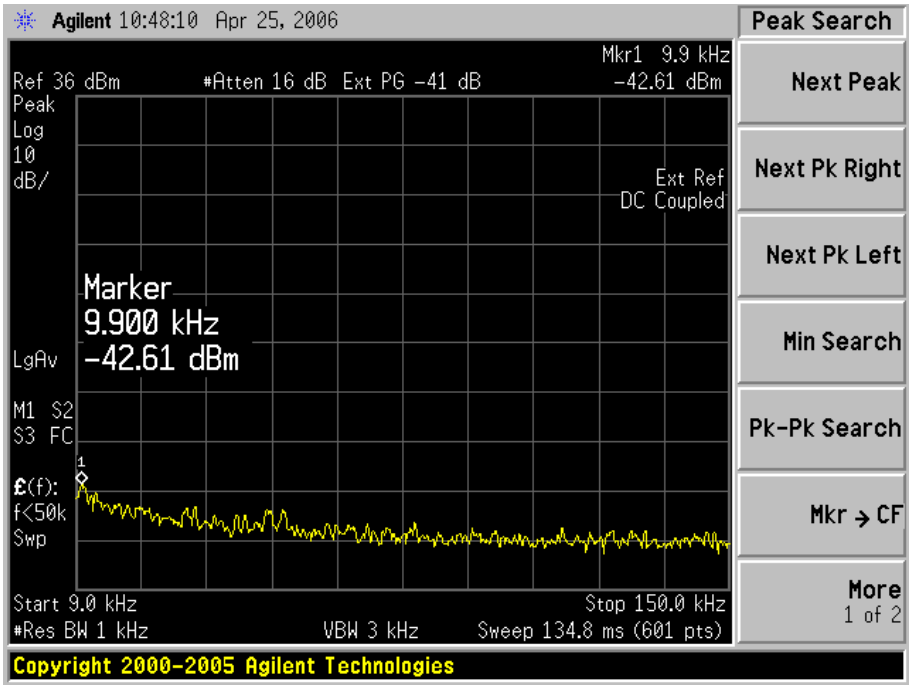

Agilent 14:10:06 Apr 25, 2006
Peak Search
Mkr1 150 kHz
Ref 10 dBm
Atten 10 dB Ext PG -41 dB
-47.61 dBm
Peak
Log
10
dB/
Ext Ref
DC Coupled
Marker
150.000 kHz
-47.61 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 150 kHz
Stop 30.00 MHz
#Res BW 10 kHz
VBW 30 kHz
Sweep 285.3 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN213.GIF file saved


Agilent 14:12:33 Apr 25, 2006
Mkr1 893.3 MHz
Ref 46 dBm
#Atten 16 dB Ext PG -41 dB
-28.33 dBm
Peak
Log
10
dB/
Ext Ref
Marker
893.300000 MHz
-28.33 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
VBW 300 kHz
Sweep 92.72 ms (601 pts)
No Peak Found
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2


Agilent 14:16:26 Apr 25, 2006
Mkr1 7.045 GHz
Ref 40 dBm
#Atten 16 dB Ext PG -41 dB
-19.72 dBm
Peak
Log
10
dB/
Ext Ref
Marker
7.045000000 GHz
-19.72 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 15 ms (601 pts)
File Operation Status, A:\SCREN215.GIF file saved
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

Channel 251


Agilent 10:48:10 Apr 25, 2006
Peak Search
Mkr1 9.9 kHz
Ref 36 dBm
#Atten 16 dB Ext PG -41 dB
-42.61 dBm
Peak
Log
10
dB/
Ext Ref
DC Coupled
Marker
9.900 kHz
-42.61 dBm
LgAv
M1 S2
S3 FC
£(f):
f<50k
Swp
Start 9.0 kHz
Stop 150.0 kHz
#Res BW 1 kHz
VBW 3 kHz
Sweep 134.8 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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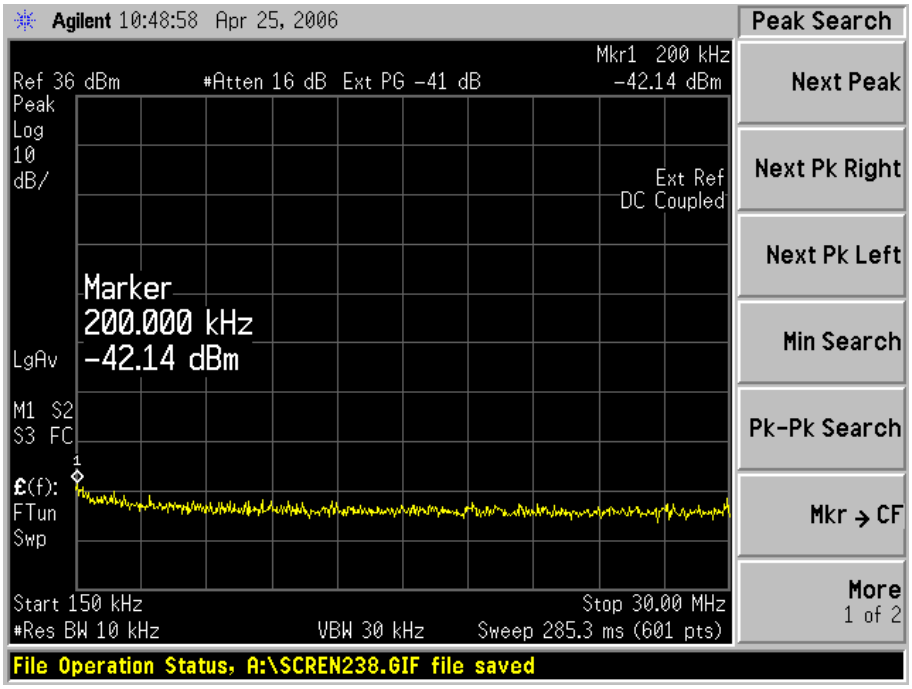
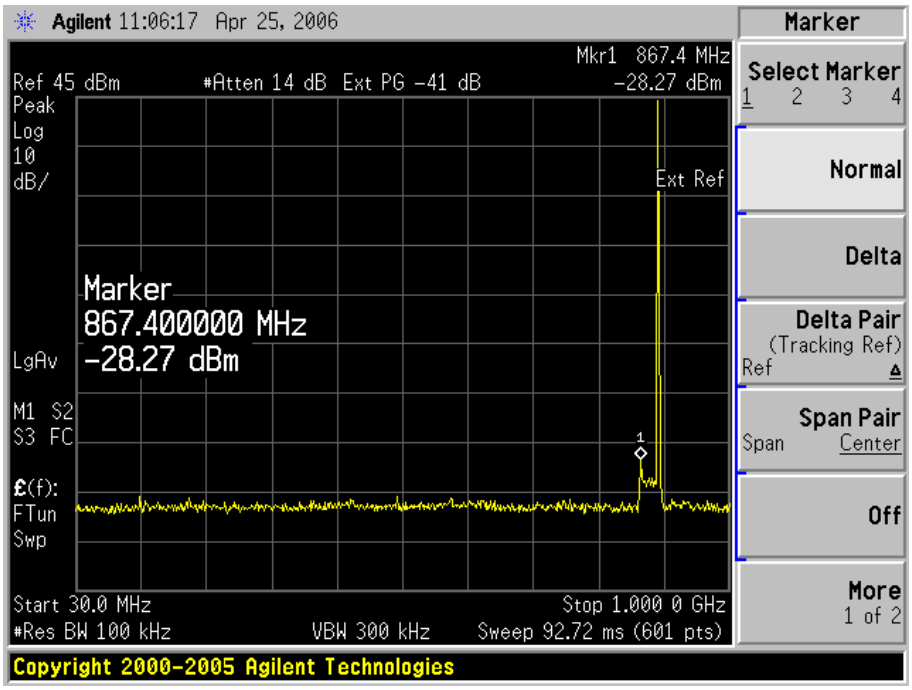
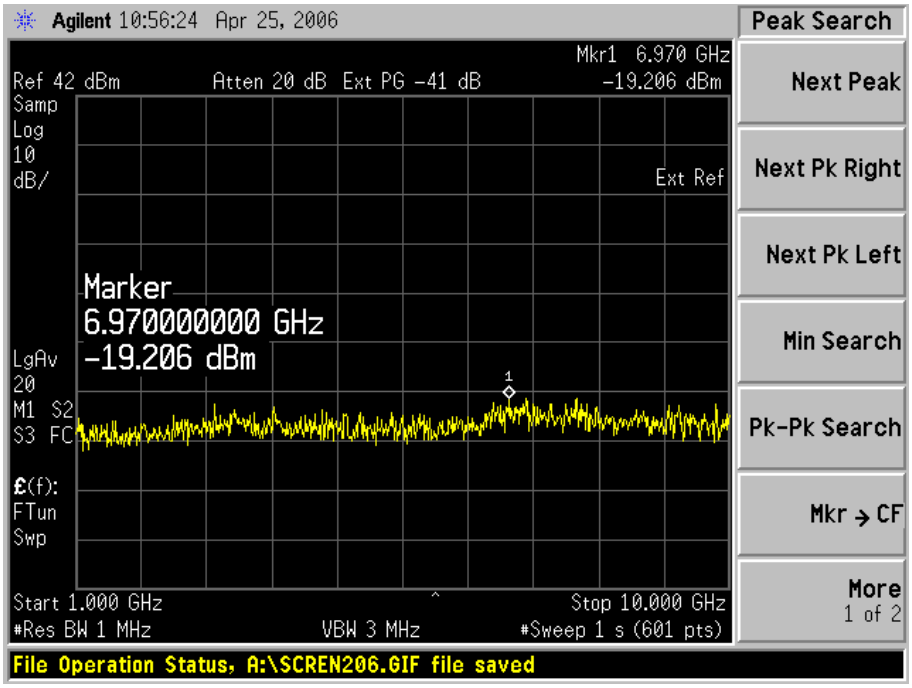
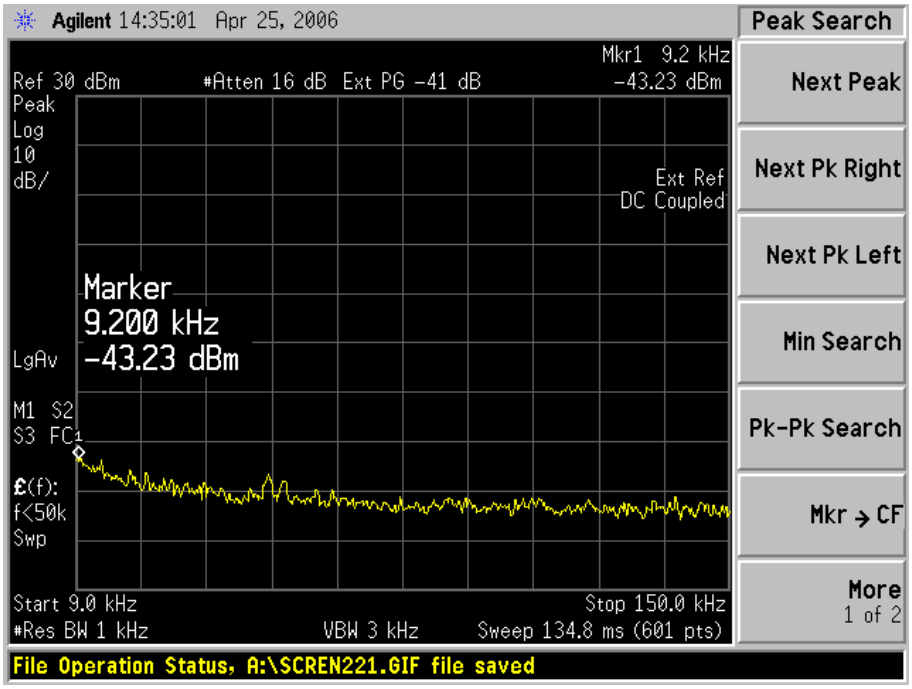

Agilent 10:48:58 Apr 25, 2006
Peak Search
Mkr1 200 kHz
Ref 36 dBm
#Atten 16 dB Ext PG -41 dB
-42.14 dBm
Peak
Log
10
dB/
Ext Ref
DC Coupled
Marker
200.000 kHz
-42.14 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 150 kHz
Stop 30.00 MHz
#Res BW 10 kHz
VBW 30 kHz
Sweep 285.3 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN238.GIF file saved

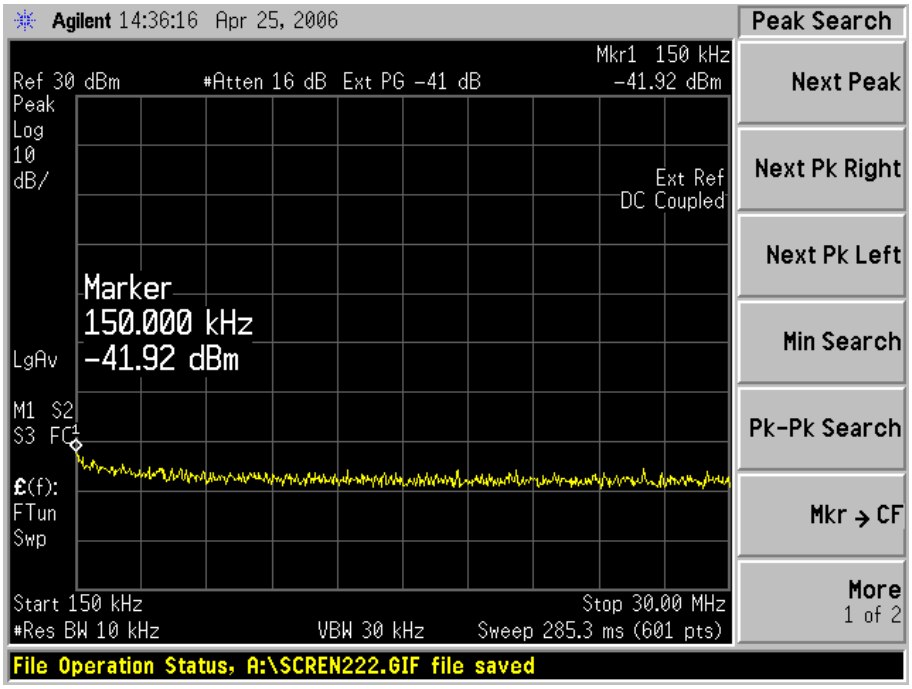

Agilent 11:06:17 Apr 25, 2006
Marker
Mkr1 867.4 MHz
Ref 45 dBm
#Atten 14 dB Ext PG -41 dB
-28.27 dBm
Peak
Log
10
dB/
Ext Ref
Marker
867.400000 MHz
-28.27 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
VBW 300 kHz
Sweep 92.72 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Copyright 2000-2005 Agilent Technologies

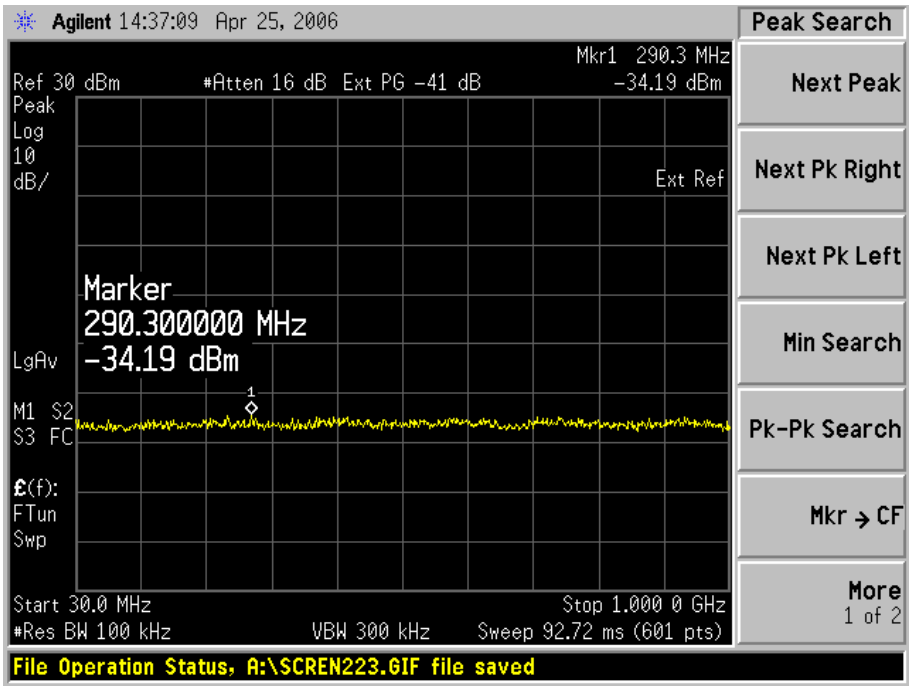

Agilent 10:56:24 Apr 25, 2006
Peak Search
Mkr1 6.970 GHz
Ref 42 dBm
Atten 20 dB Ext PG -41 dB
-19.206 dBm
Samp
Log
10
dB/
Ext Ref
Marker
6.970000000 GHz
-19.206 dBm
LgAv
20
M1 S2
S3 FC
£(f):
FTun
Swp
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 1 MHz
VBW 3 MHz
#Sweep 1 s (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN206.GIF file saved

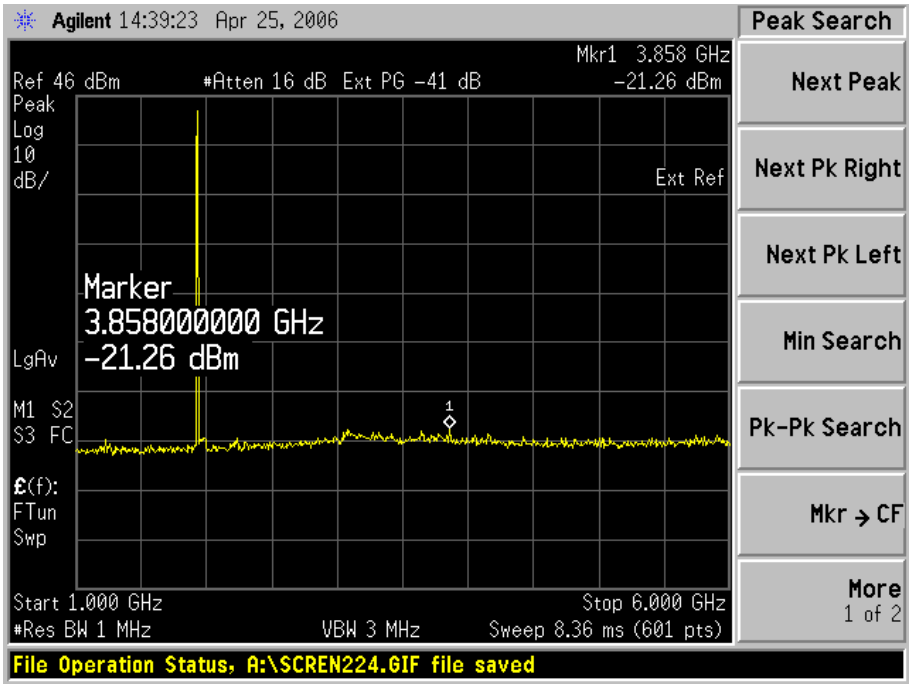
For 1900 MHz

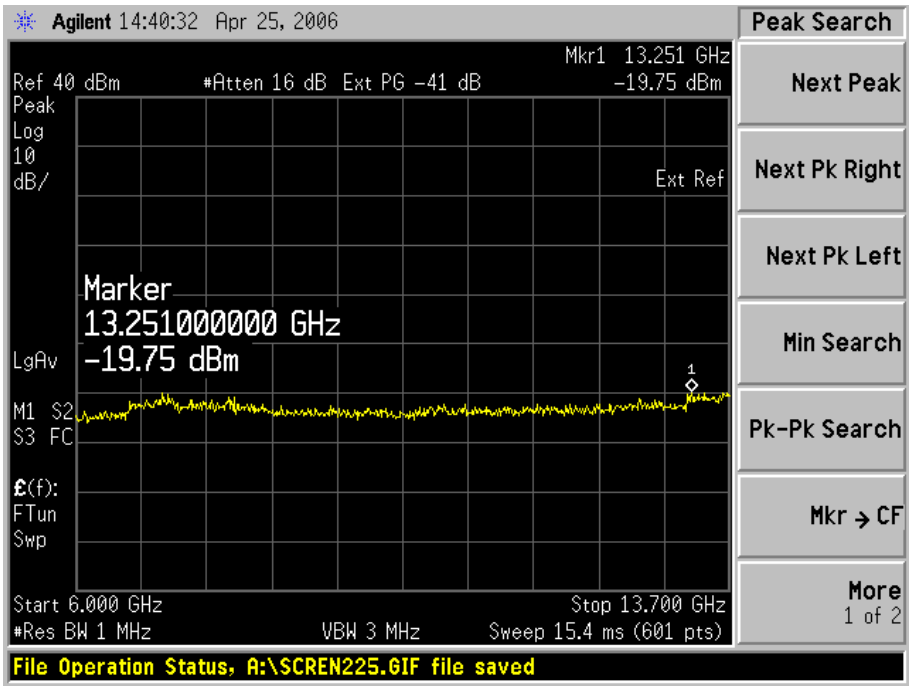
Channel 512

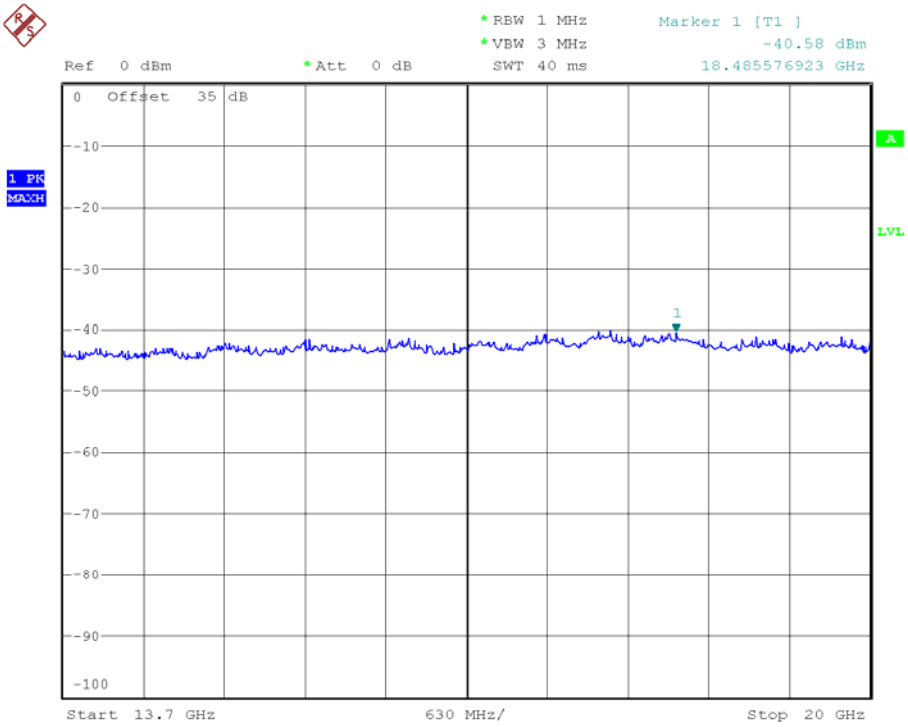




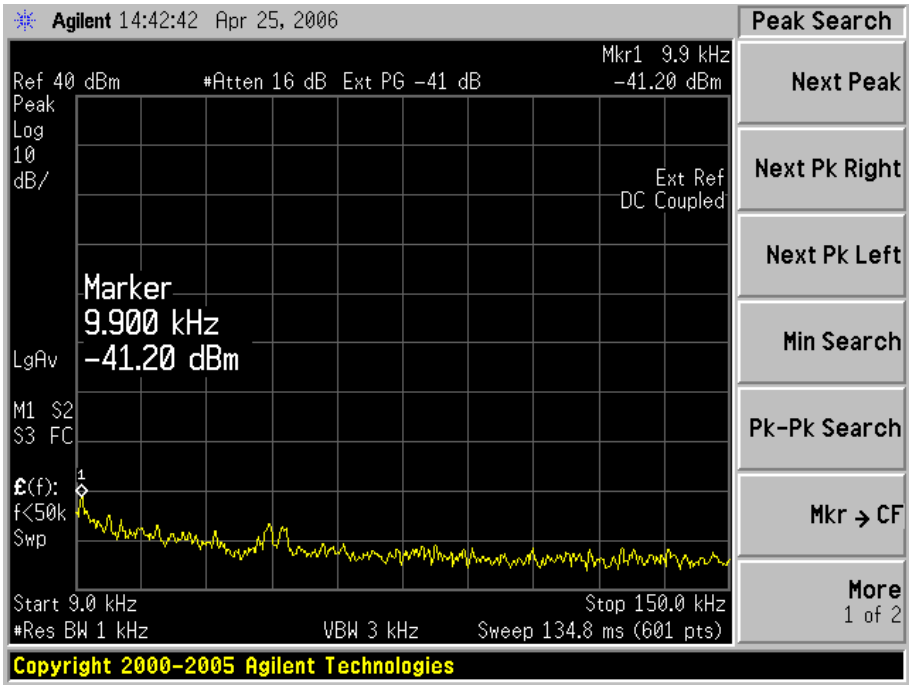

Agilent 14:37:09 Apr 25, 2006
Peak Search
Mkr1 290.3 MHz
Ref 30 dBm
#Atten 16 dB Ext PG -41 dB
-34.19 dBm
Peak
Log
10
dB/
Ext Ref
Marker
290.300000 MHz
-34.19 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
VBW 300 kHz
Sweep 92.72 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN223.GIF file saved


Agilent 14:39:23 Apr 25, 2006
Peak Search
Mkr1 3.858 GHz
Ref 46 dBm
#Atten 16 dB Ext PG -41 dB
-21.26 dBm
Peak
Log
10
dB/
Ext Ref
Marker
3.858000000 GHz
-21.26 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 1.000 GHz
Stop 6.000 GHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 8.36 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN224.GIF file saved


Agilent 14:40:32 Apr 25, 2006
Peak Search
Mkr1 13.251 GHz
Ref 40 dBm
#Atten 16 dB Ext PG -41 dB
-19.75 dBm
Next Peak
Peak
Log
10
dB/
Ext Ref
Next Pk Right
Next Pk Left
Marker
13.251000000 GHz
-19.75 dBm
Min Search
LgAv
M1 S2
S3 FC
Pk-Pk Search
£(f):
FTun
Swp
Mkr → CF
Start 6.000 GHz
Stop 13.700 GHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 15.4 ms (601 pts)
More
1 of 2
File Operation Status, A:\SCREN225.GIF file saved


*RBW 1 MHz
Marker 1 [T1]
*VBW 3 MHz
-40.58 dBm
Ref 0 dBm
*Att 0 dB
SWT 40 ms
18.485576923 GHz
0 Offset 35 dB
1 PK
MAXH
A
LVL
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Start 13.7 GHz
630 MHz/
Stop 20 GHz
Date: 26.JUL.2006 11:31:28

Channel 661


Agilent 14:42:42 Apr 25, 2006
Peak Search
Mkr1 9.9 kHz
Ref 40 dBm
#Atten 16 dB Ext PG -41 dB
-41.20 dBm
Peak
Log
10
dB/
Ext Ref
DC Coupled
Marker
9.900 kHz
-41.20 dBm
LgAv
M1 S2
S3 FC
£(f):
f<50k
Swp
Start 9.0 kHz
Stop 150.0 kHz
#Res BW 1 kHz
VBW 3 kHz
Sweep 134.8 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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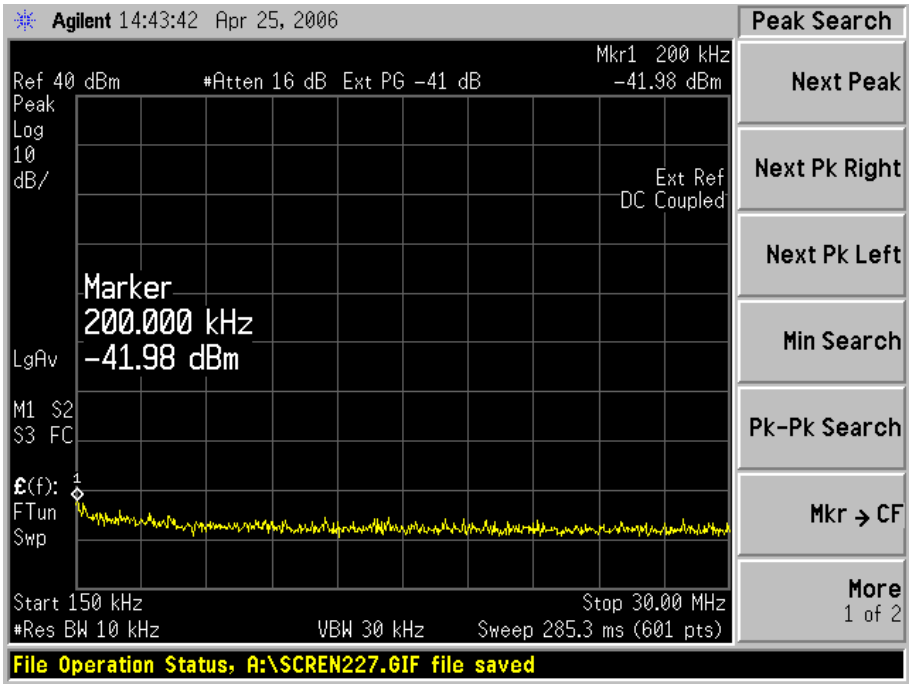
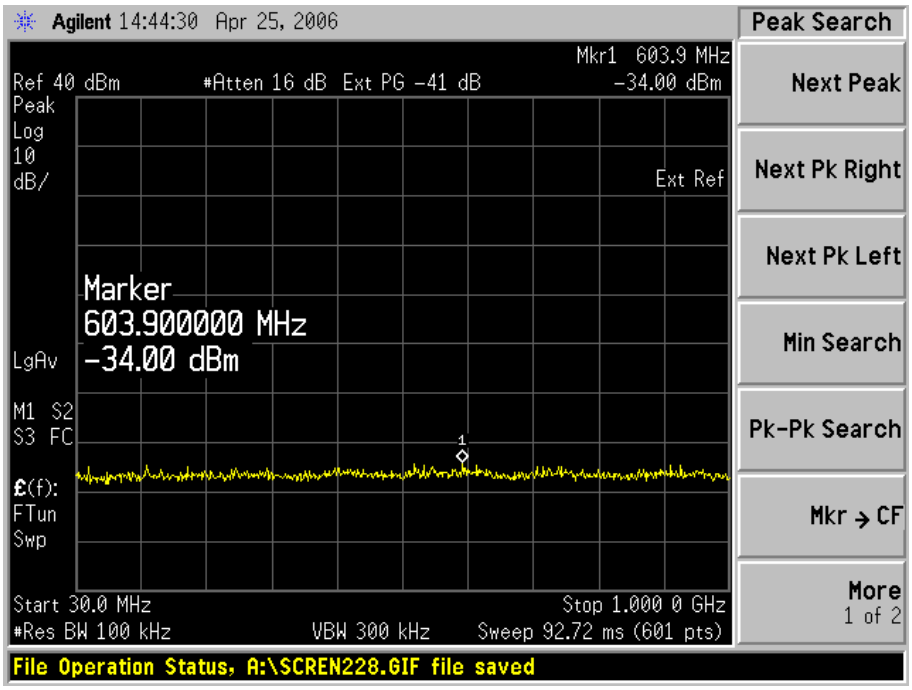
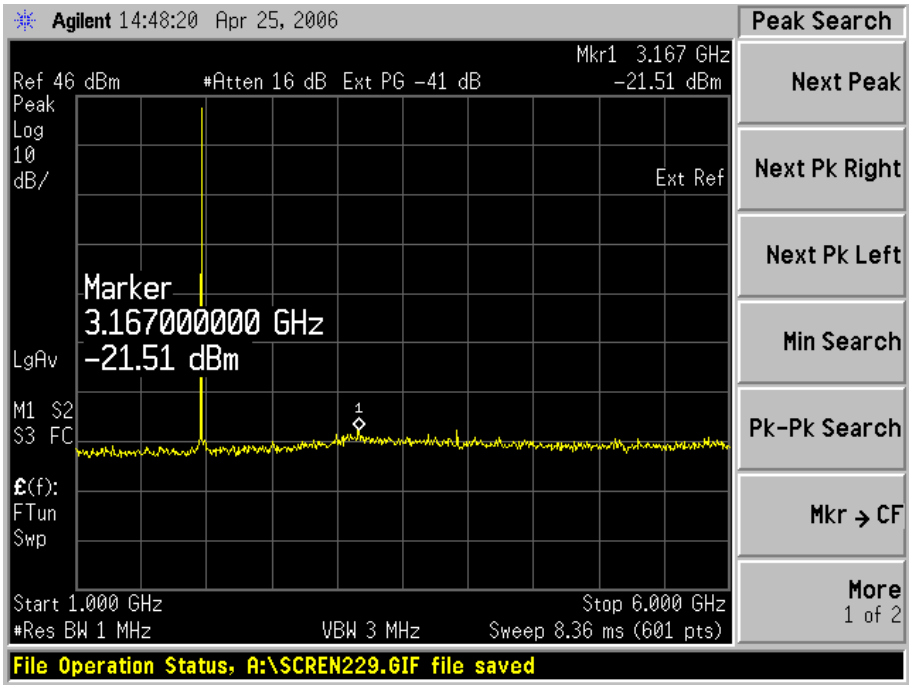
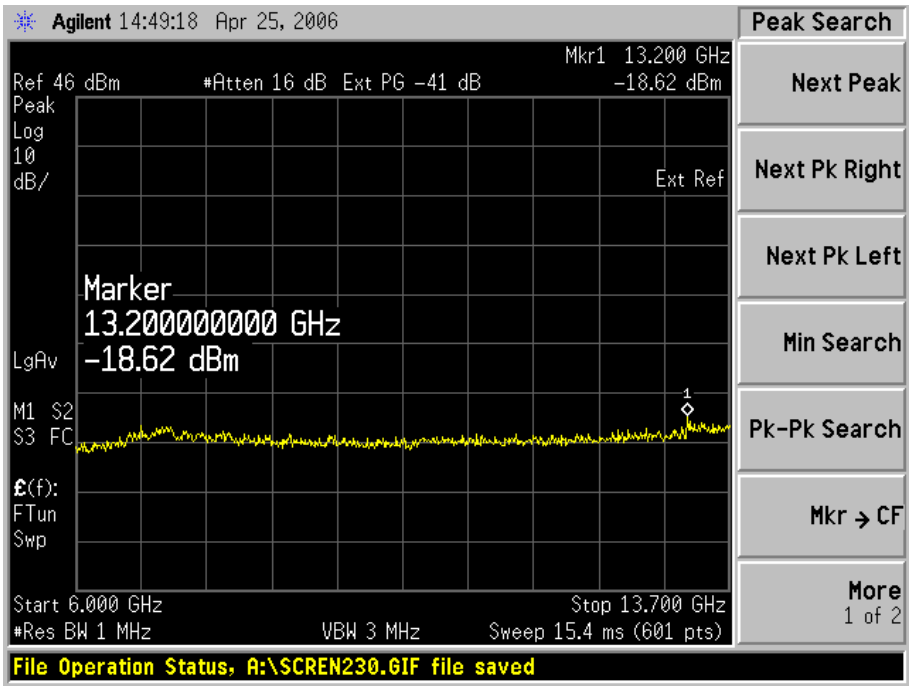
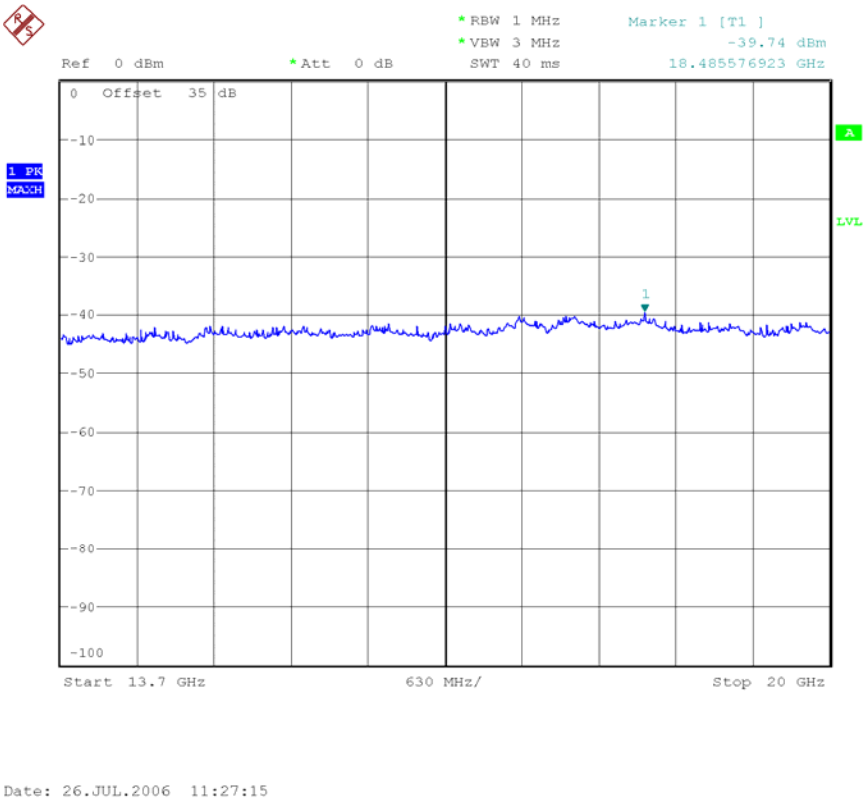

Agilent 14:43:42 Apr 25, 2006
Peak Search
Mkr1 200 kHz
Ref 40 dBm
#Atten 16 dB Ext PG -41 dB
-41.98 dBm
Peak
Log
10
dB/
Ext Ref
DC Coupled
Marker
200.000 kHz
-41.98 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 150 kHz
Stop 30.00 MHz
#Res BW 10 kHz
VBW 30 kHz
Sweep 285.3 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN227.GIF file saved

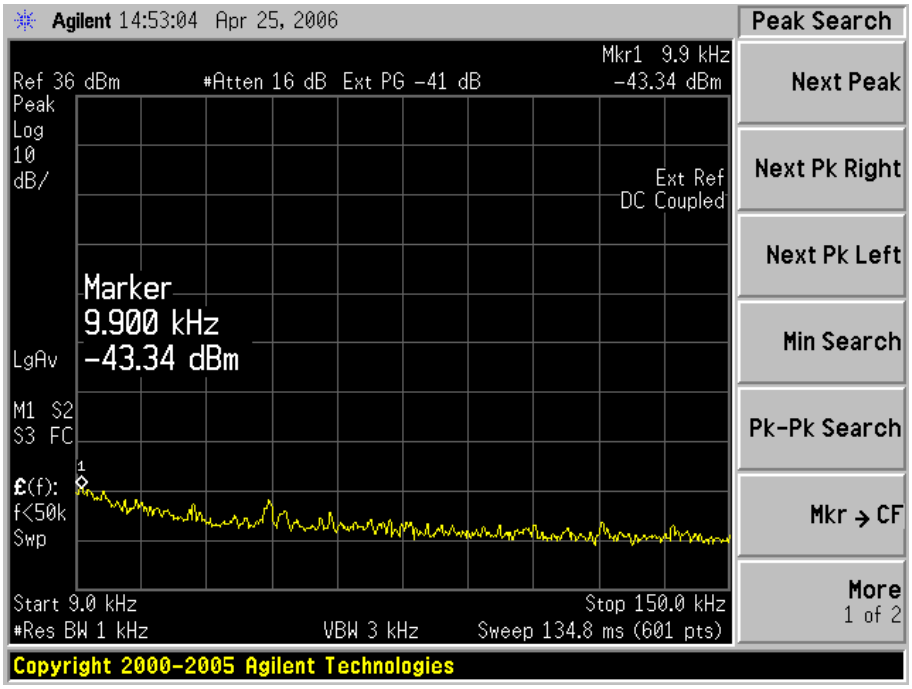

Agilent 14:44:30 Apr 25, 2006
Peak Search
Mkr1 603.9 MHz
Ref 40 dBm
#Atten 16 dB Ext PG -41 dB
-34.00 dBm
Peak
Log
10
dB/
Ext Ref
Marker
603.900000 MHz
-34.00 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
VBW 300 kHz
Sweep 92.72 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN228.GIF file saved

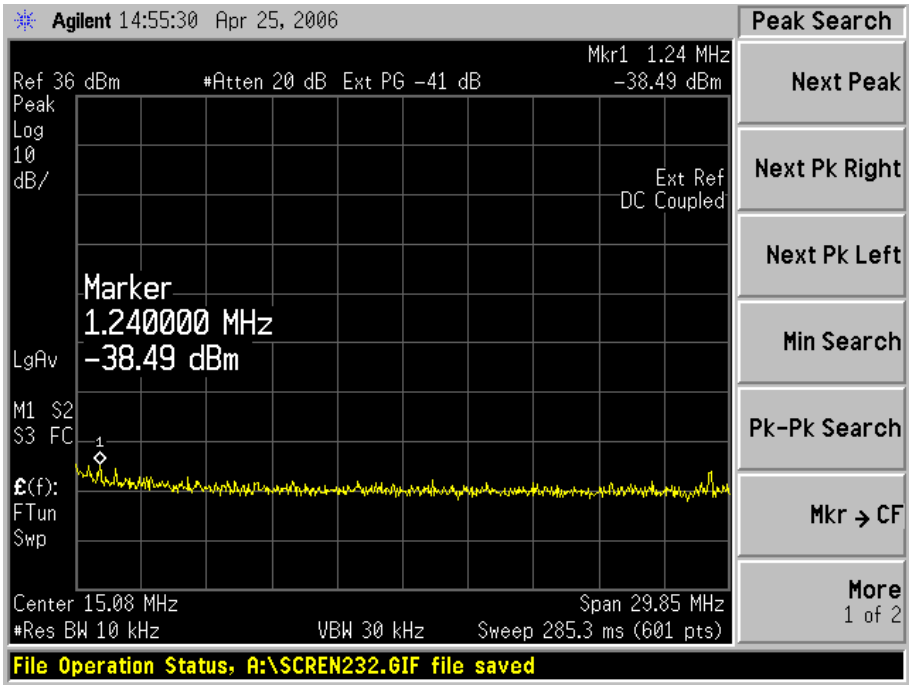

Agilent 14:48:20 Apr 25, 2006
Peak Search
Mkr1 3.167 GHz
Ref 46 dBm
#Atten 16 dB Ext PG -41 dB
-21.51 dBm
Peak
Log
10
dB/
Ext Ref
Marker
3.167000000 GHz
-21.51 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 1.000 GHz
Stop 6.000 GHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 8.36 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN229.GIF file saved

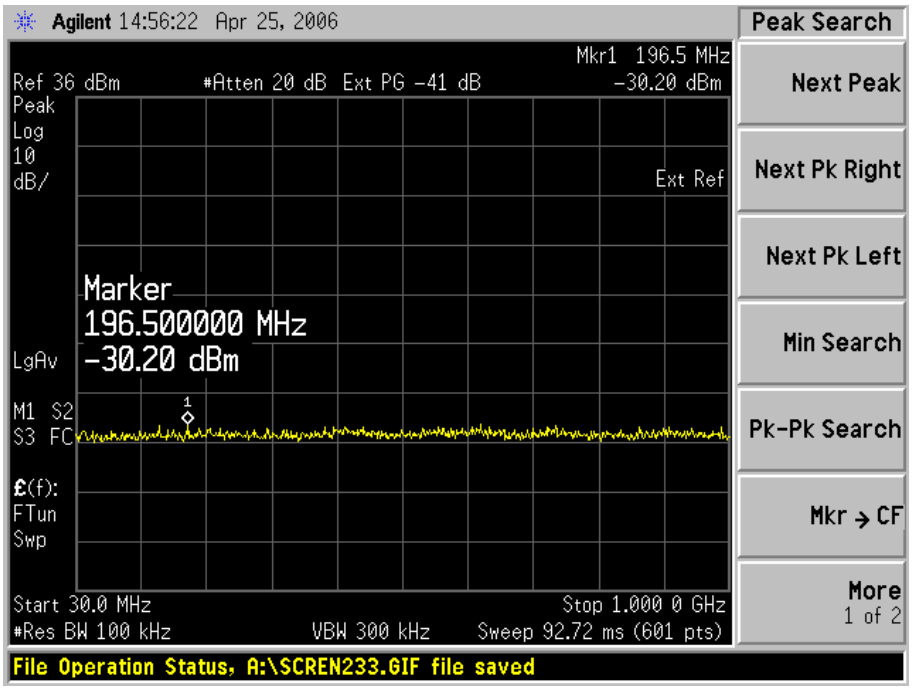

Agilent 14:49:18 Apr 25, 2006
Peak Search
Mkr1 13.200 GHz
Ref 46 dBm
#Atten 16 dB Ext PG -41 dB
-18.62 dBm
Next Peak
Peak
Log
10
dB/
Ext Ref
Next Pk Right
Next Pk Left
Marker
13.200000000 GHz
-18.62 dBm
Min Search
LgAv
M1 S2
S3 FC
Pk-Pk Search
£(f):
FTun
Swp
Mkr → CF
Start 6.000 GHz
Stop 13.700 GHz
More
1 of 2
#Res BW 1 MHz
VBW 3 MHz
Sweep 15.4 ms (601 pts)
File Operation Status, A:\SCREN230.GIF file saved

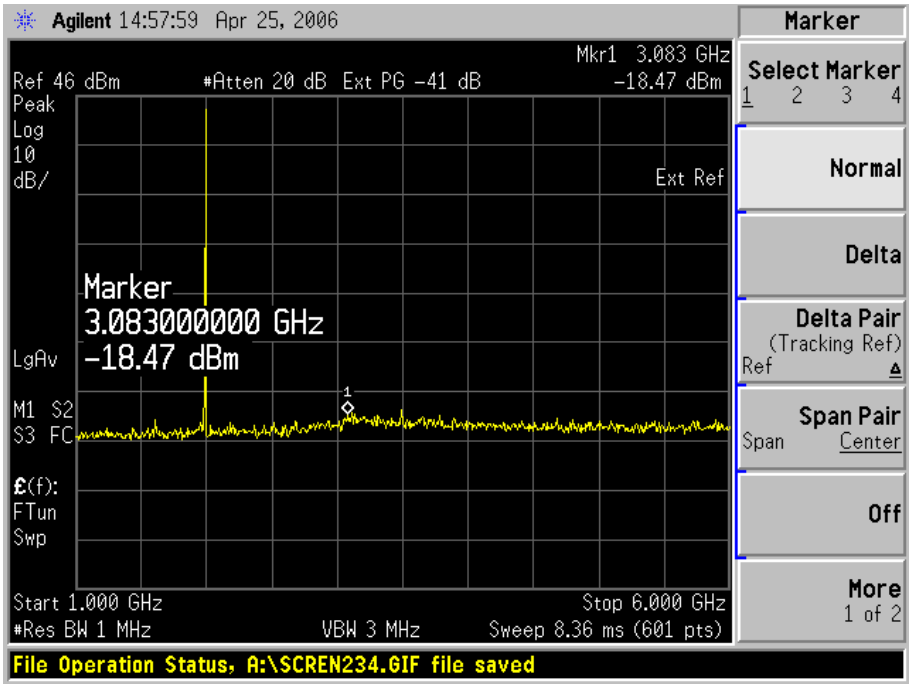

*RBW 1 MHz
Marker 1 [T1]
*VBW 3 MHz
-39.74 dBm
Ref 0 dBm
*Att 0 dB
SWT 40 ms
18.485576923 GHz
0 Offset 35 dB
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Start 13.7 GHz
630 MHz/
Stop 20 GHz
Date: 26.JUL.2006 11:27:15

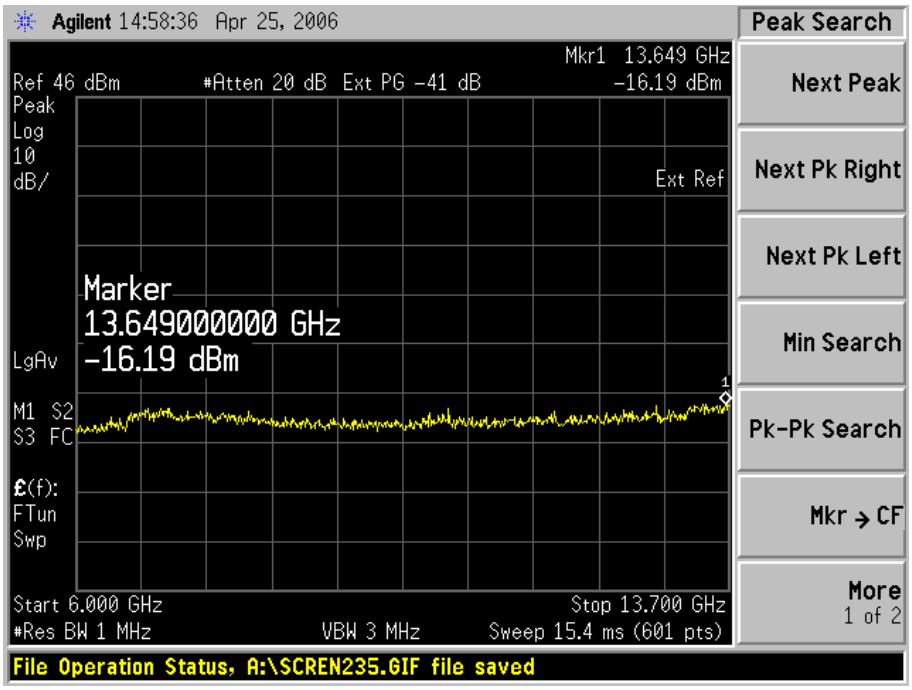
Channel 810

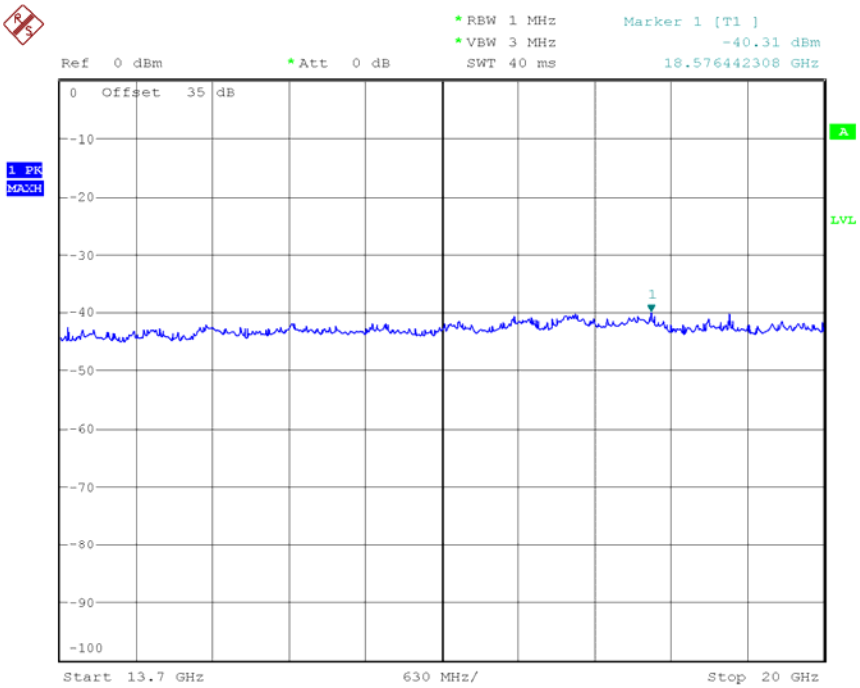

Agilent 14:53:04 Apr 25, 2006
Peak Search
Mkr1 9.9 kHz
Ref 36 dBm
#Atten 16 dB Ext PG -41 dB
-43.34 dBm
Peak
Log
10
dB/
Ext Ref
DC Coupled
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Marker
9.900 kHz
-43.34 dBm
LgAv
M1 S2
S3 FC
£(f):
f<50k
Swp
Start 9.0 kHz
Stop 150.0 kHz
#Res BW 1 kHz
VBW 3 kHz
Sweep 134.8 ms (601 pts)
Copyright 2000-2005 Agilent Technologies


Agilent 14:55:30 Apr 25, 2006
Peak Search
Mkr1 1.24 MHz
Ref 36 dBm
#Atten 20 dB Ext PG -41 dB
-38.49 dBm
Peak
Log
10
dB/
Ext Ref
DC Coupled
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Marker
1.240000 MHz
-38.49 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 15.08 MHz
Span 29.85 MHz
#Res BW 10 kHz
VBW 30 kHz
Sweep 285.3 ms (601 pts)
File Operation Status, A:\SCREN232.GIF file saved


Agilent 14:56:22 Apr 25, 2006
Peak Search
Mkr1 196.5 MHz
Ref 36 dBm
#Atten 20 dB Ext PG -41 dB
-30.20 dBm
Peak
Log
10
dB/
Ext Ref
Marker
196.500000 MHz
-30.20 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
VBW 300 kHz
Sweep 92.72 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN233.GIF file saved


Agilent 14:57:59 Apr 25, 2006
Marker
Mkr1 3.083 GHz
Ref 46 dBm
#Atten 20 dB Ext PG -41 dB
-18.47 dBm
Peak
Log
10
dB/
Ext Ref
Marker
3.083000000 GHz
-18.47 dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 1.000 GHz
Stop 6.000 GHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 8.36 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, A:\SCREN234.GIF file saved





Date: 26.JUL.2006 11:37:42

§2.1049, §22.905, §22.917, §24.238-OCCUPIED BANDWIDTH

Applicable Standard

Requirements: CFR 47, § 2.1049, § 22.905 and § 22.917and § 24.238.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Spectrum analyzer	E4445A	MY45300953	2006-02-20	2007-02-19
GW	Dual tracking with 5V fixed	GPC-0303D	PC303IPE	2005-10-26	2006-10-25
Shanghai Huaxiang	Attenuator	30dB	0302707	2005-11-04	2006-11-03

*** Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

The RF out of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

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

Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	1009mbar

The testing was performed by Merry Zhao on 2006-4-25.

Test Result: Pass

Test Mode: Transmitting

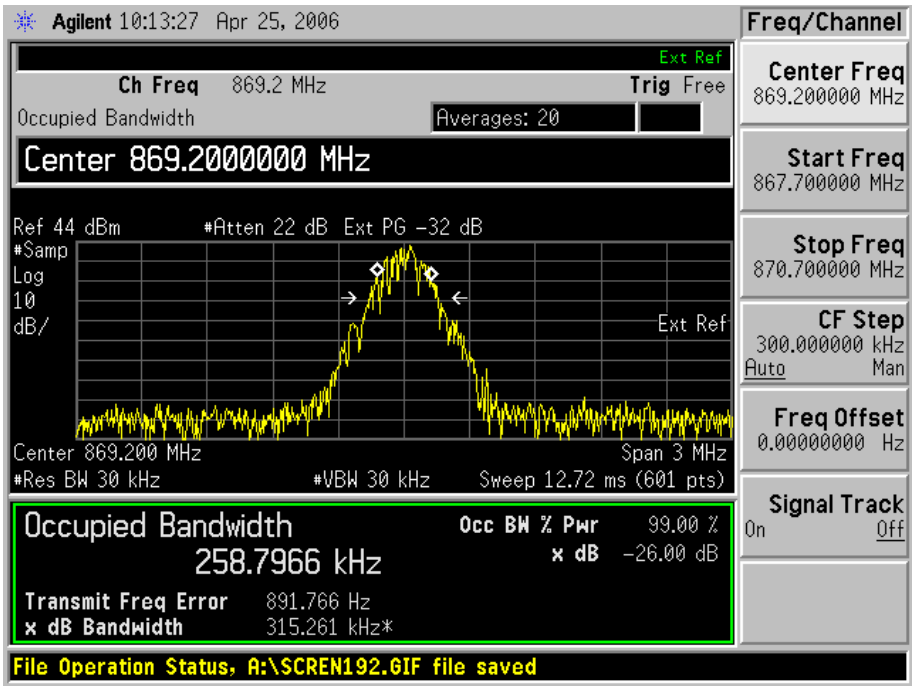
For 850 MHz

Occupied Bandwidth

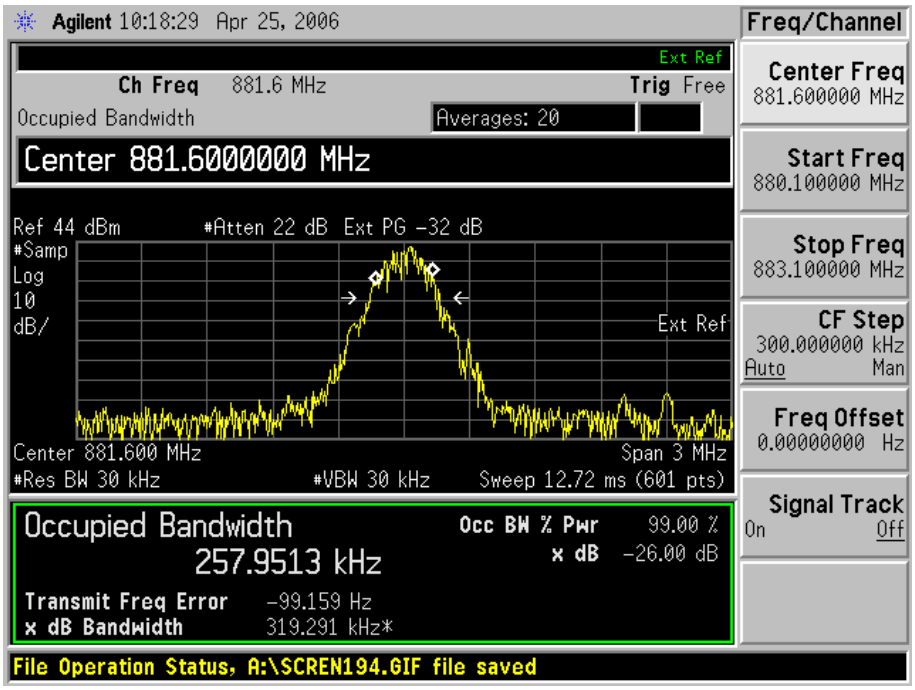
GMSK modulation:

Channel	Channel frequency(MHz))	99% Power Bandwidth (kHz)	26dB Bandwidth (kHz)
Channel 128	869.20	258.7966	315.261
Channel 190	881.6	257.9513	319.291
Channel 251	893.8	259.1787	315.514

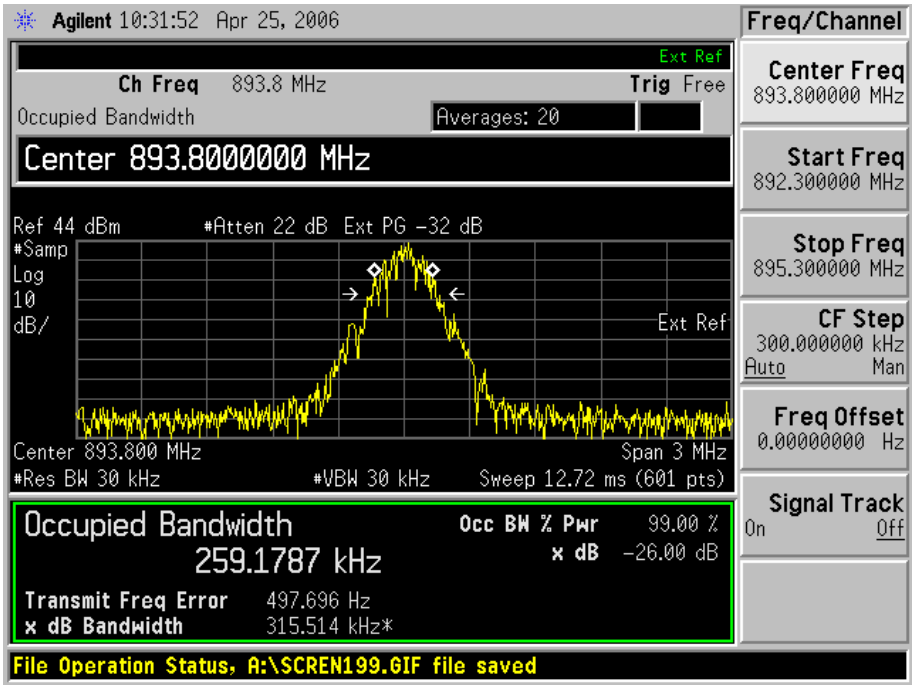
Channel 128:



Channel 190



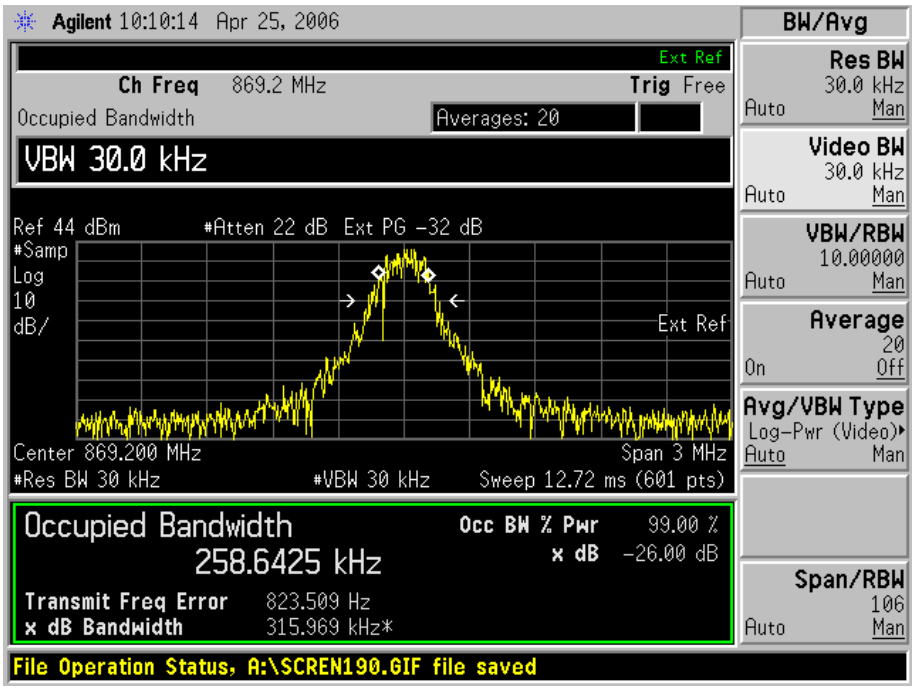
Channel 251:



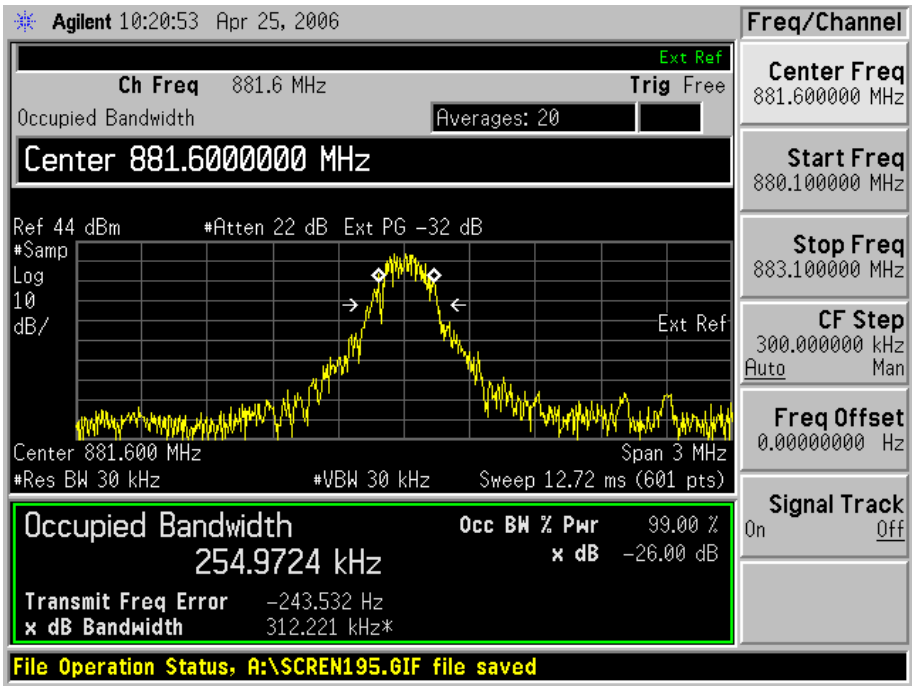
8PSK modulation:

Channel	Channel frequency(MHz))	99% Power Bandwidth (MHz)	26dB Bandwidth
Channel 128	869.2	258.6425	315.969
Channel 190	881.6	254.9724	312.221
Channel 251	893.8	228.6259	314.604

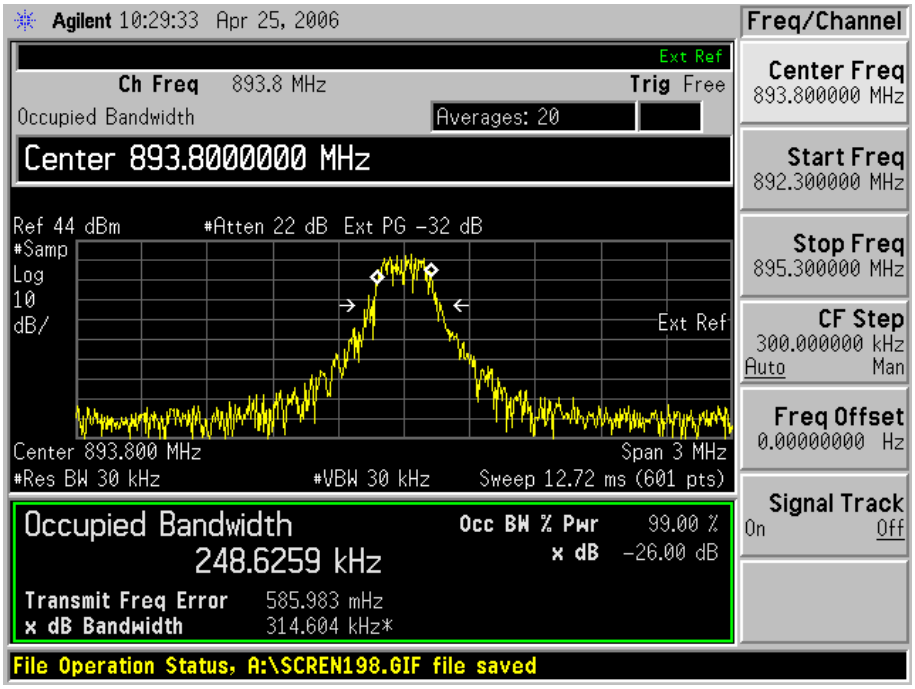
Channel 128:



Channel 190:



Channel 251:



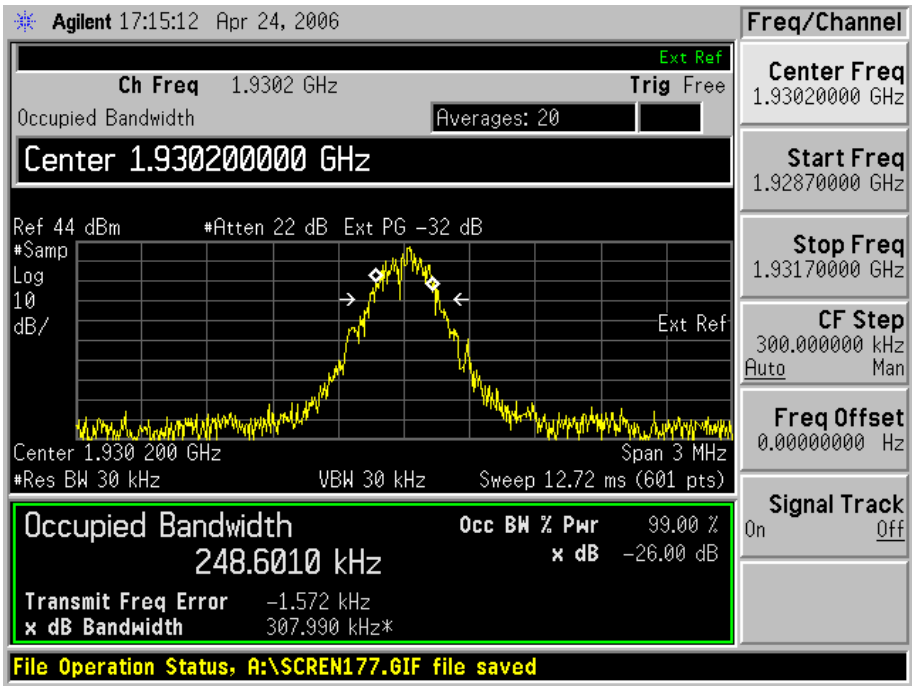
For 1900 MHz

Occupied Bandwidth

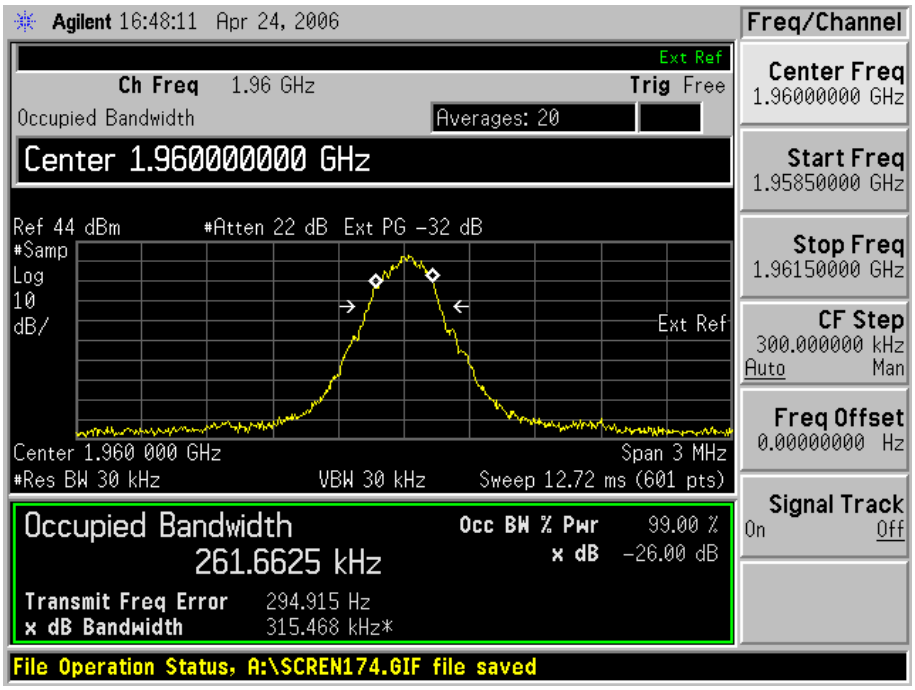
GMSK modulation:

Channel	Channel frequency(MHz))	99% Power Bandwidth (kHz)	26dB Bandwidth (kHz)
Channel 512	1930.2	248.6010	307.990
Channel 661	1960	261.6625	315.468
Channel 810	1989.8	255.8725	316.265

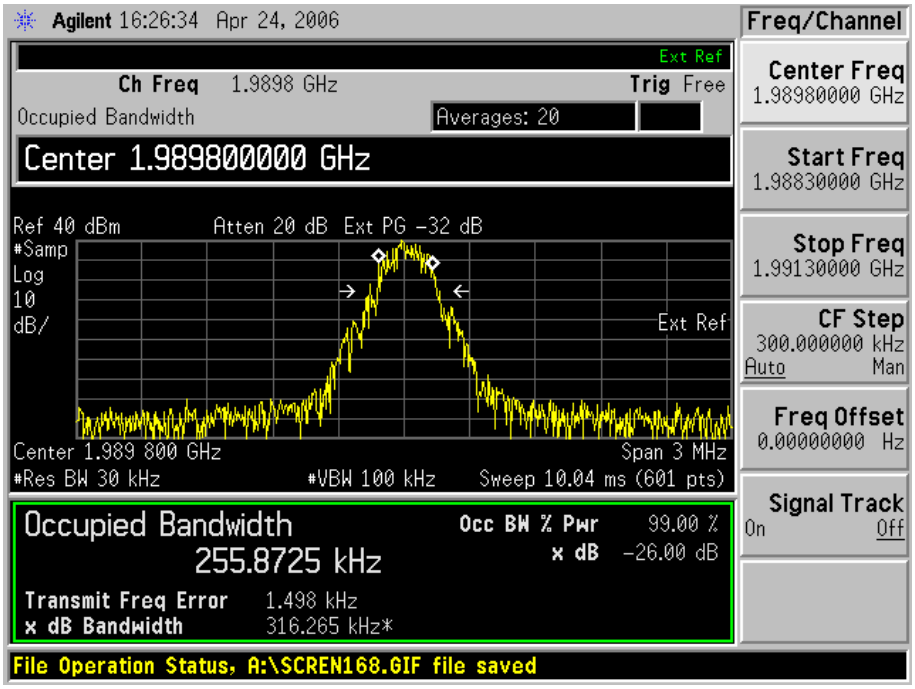
Channel 512:



Channel 661



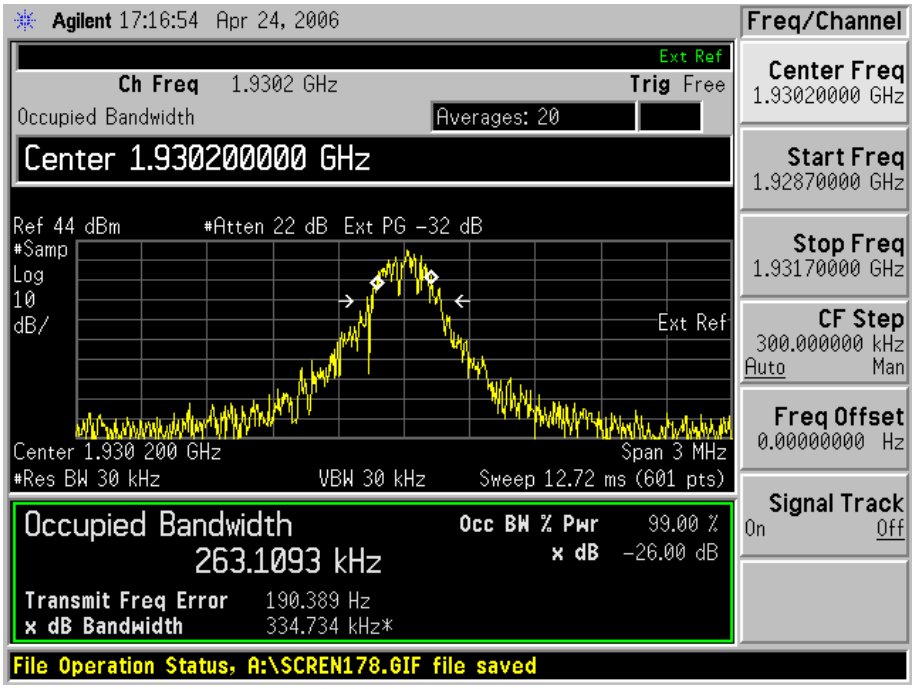
Channel 810:



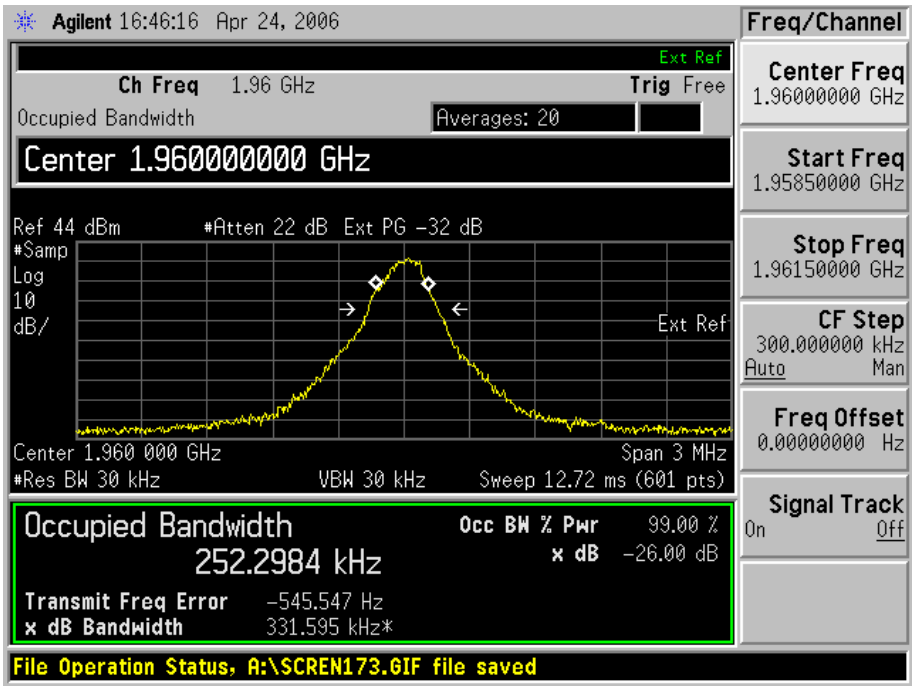
8PSK modulation:

Channel	Channel frequency(MHz))	99% Power Bandwidth (MHz)	26dB Bandwidth
Channel 512	1930.2	263.1093	334.734
Channel 661	1960	252.2984	331.595
Channel 810	1989.8	260.1433	323.282

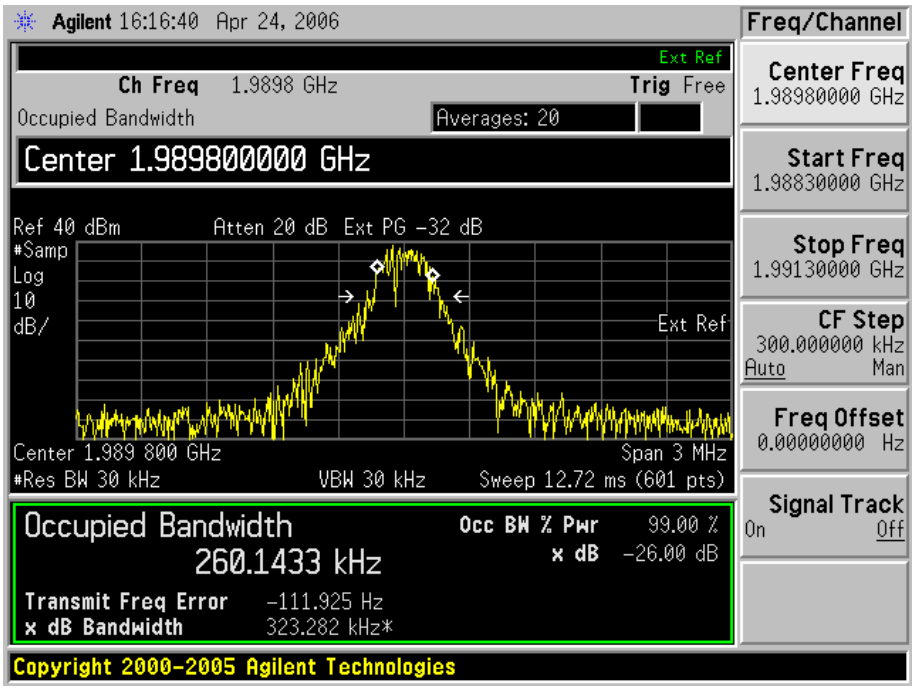
Channel 512:



Channel 661:



Channel 810:



§24.238- BAND EDGES

Applicable Standard

According to §24.238 and §22.917, 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.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Spectrum analyzer	E4445A	MY45300953	2006-02-20	2007-02-19
GW	Dual tracking with 5V fixed	GPC-0303D	PC303IPE	2005-10-26	2006-10-25
Shanghai Huaxiang	Attenuator	30dB	0302707	2005-11-04	2006-11-03

*** Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

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, RBW set to 30 kHz.

Test Data

Environmental Conditions

Temperature:	24 °C
Relative Humidity:	59%
ATM Pressure:	1009 mbar

The testing was performed by Merry Zhao on 2006-4-24.

Test Result: Pass

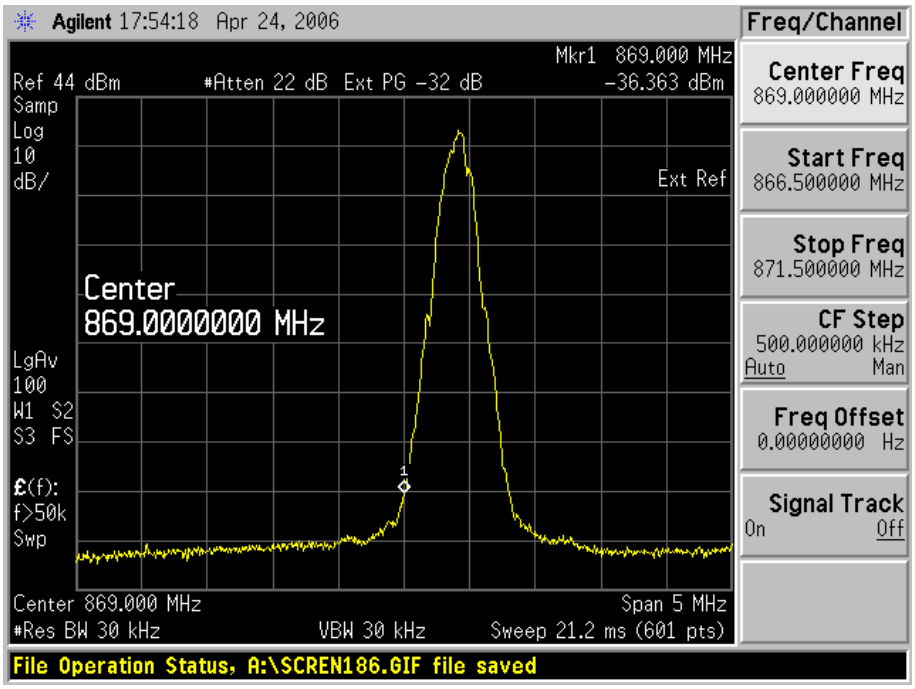
Test Mode: Transmitting

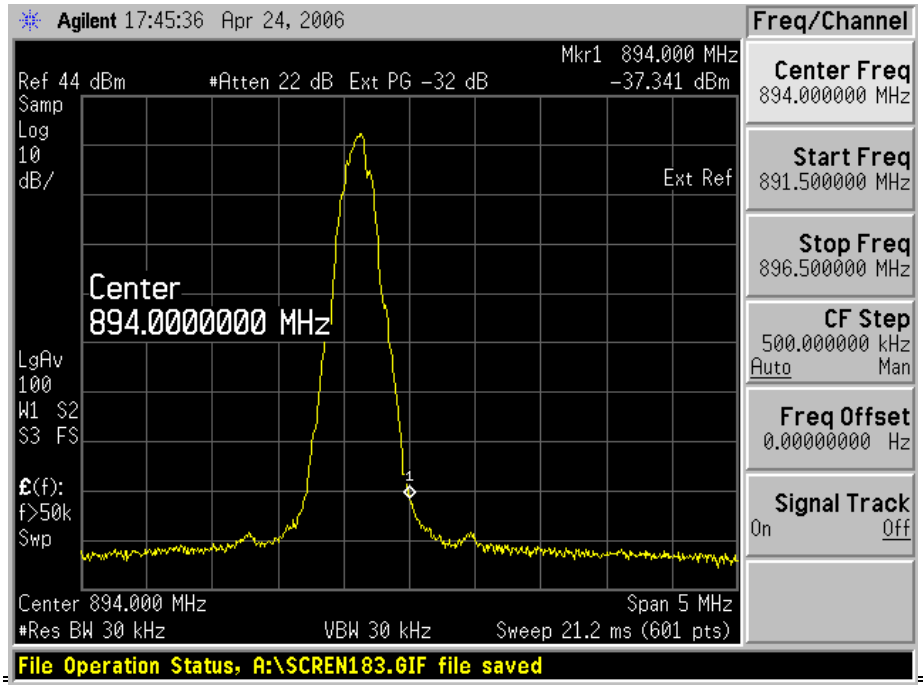
For 850 MHz

BAND EDGES

GMSK modulation:

Frequency (MHz)	Emission	Limit(dBm)
869.0	-36.363	-13
894.0	-37.341	-13

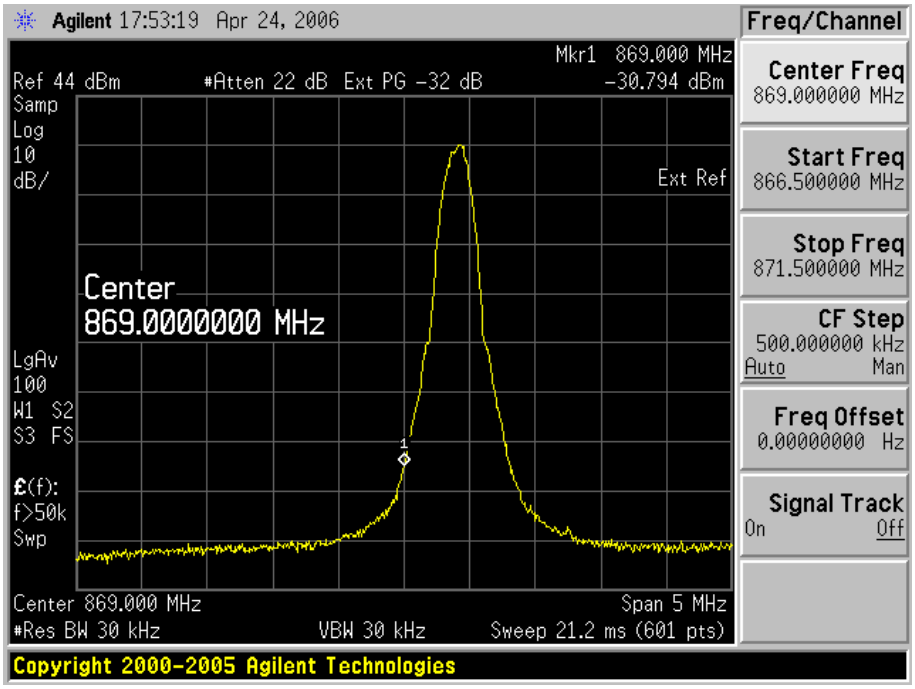


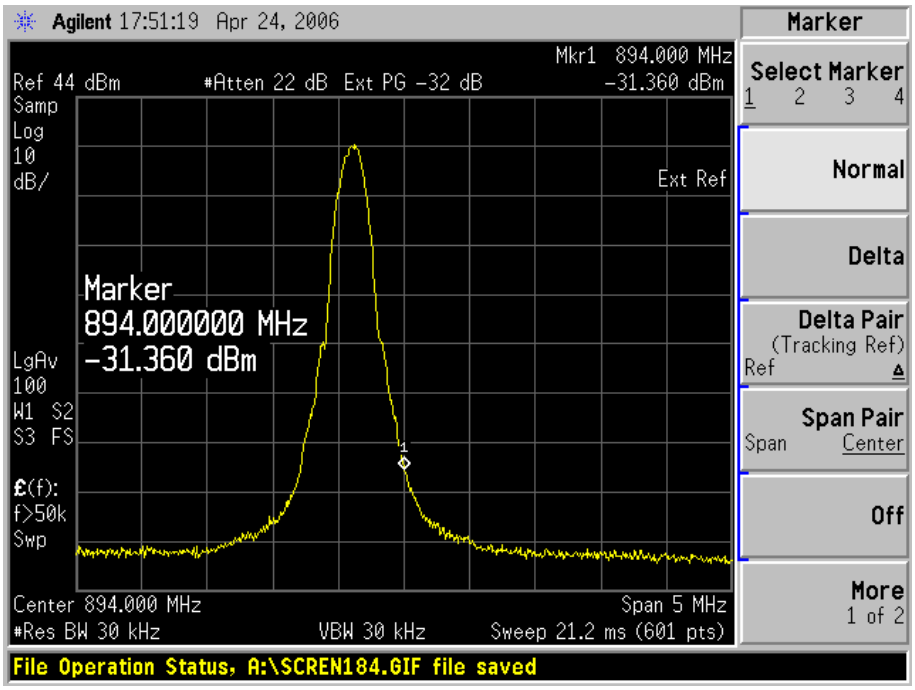


8PSK modulation:

GMSK modulation:

Frequency (MHz)	Emission	Limit(dBm)
869.0	-30.794	-13
894.0	-31.360	-13



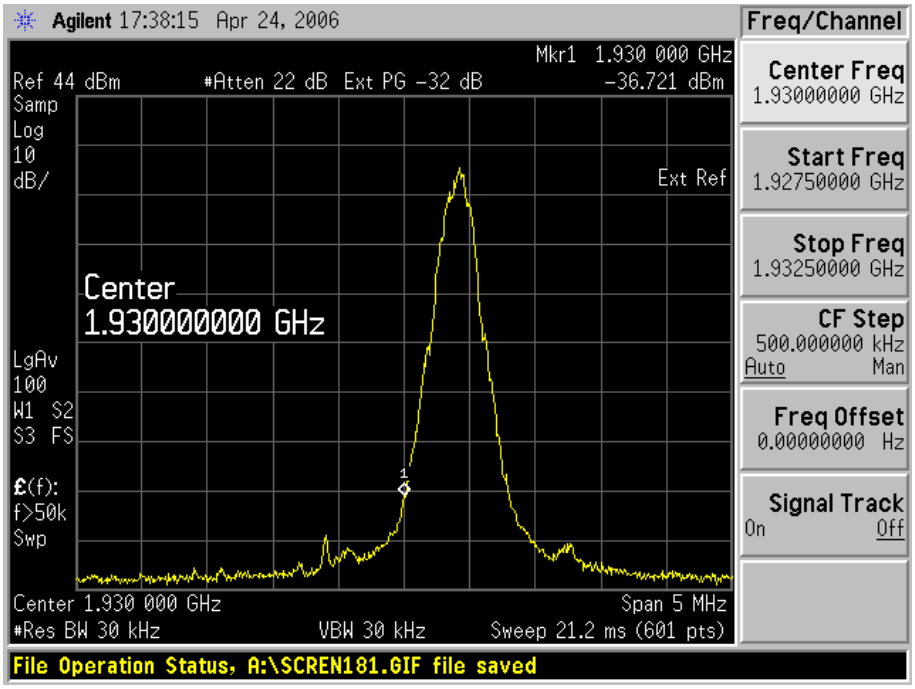


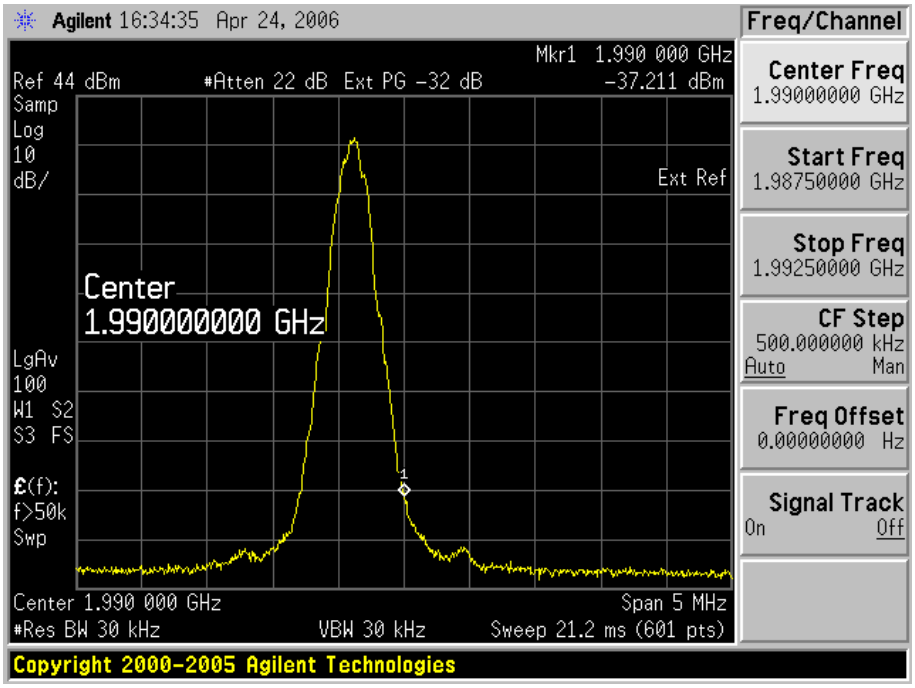
For 1900 MHz

BAND EDGES:

GMSK modulation:

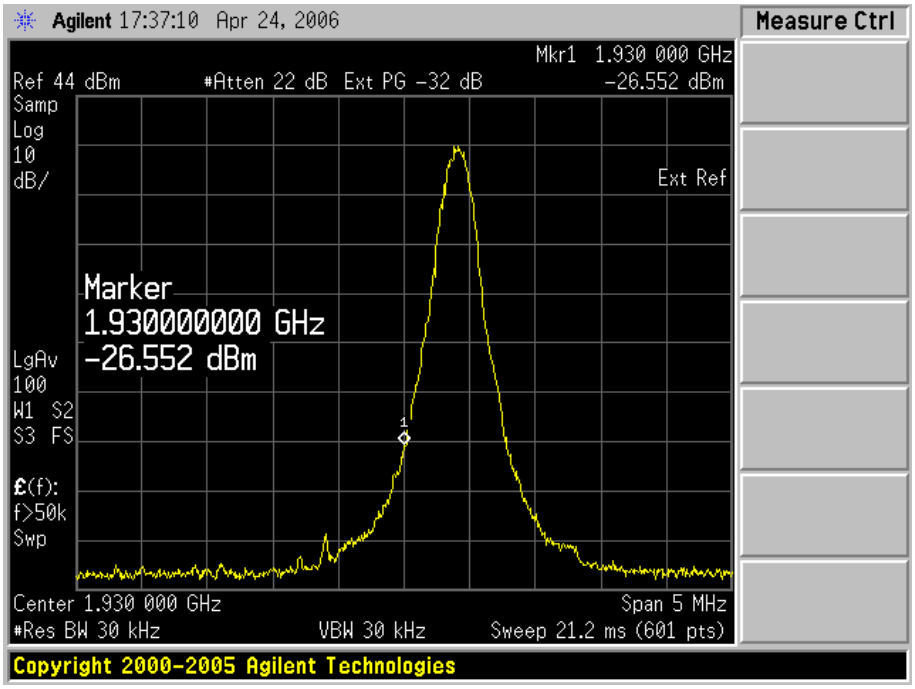
Frequency (MHz)	Emission (dBm)	Limit (dBm)
1930	-36.721	-13
1990	-37.211	-13

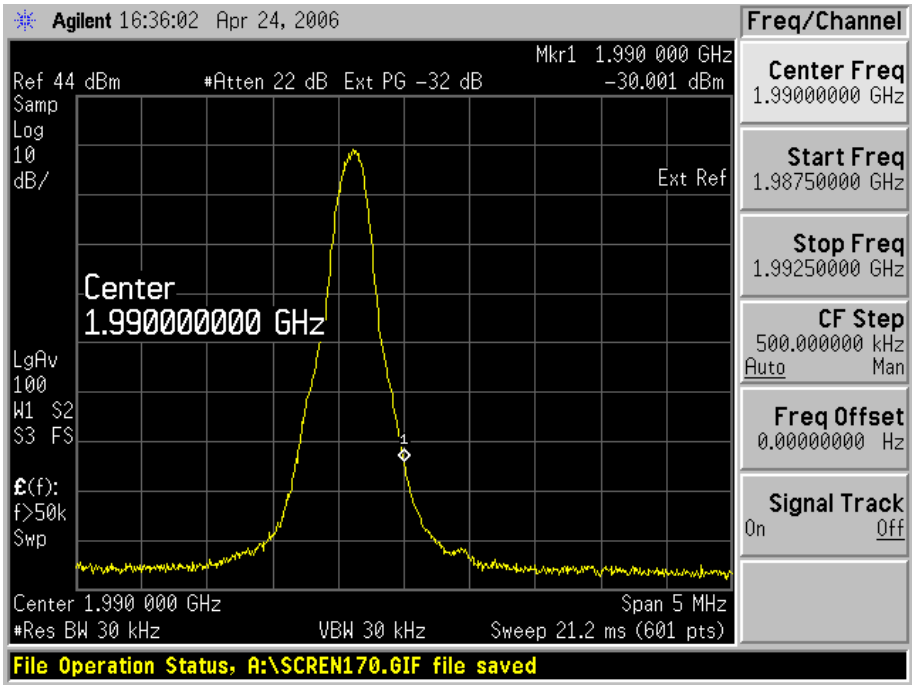




8PSK modulation:

Frequency (MHz)	Emission (dBm)	Limit (dBm)
1930	-26.552	-13
1990	-30.001	-13





§2.1055 (a), §2.1055 (d), §22.355 & §24.235 - FREQUENCY STABILITY

Applicable Standard

Requirements: FCC § 2.1055 (a), § 2.1055 (d) & following:

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.

Table C-1_Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency range (MHz)	Base, fixed (ppm)	Mobile [SU][le][/ SU]3 watts (ppm)	Mobile [le]3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929	5.0	n/a	n/a
929 to 960	1.5	n/a	n/a
2110 to 2220	10.0	n/a	n/a

According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Universal radio communication tester	CMU300	100207	2005-12-13	2006-12-12
GW	Dual tracking with 5V fixed	GPC-0303D	PC303IPE	2005-10-26	2006-10-25
KSON	Digital Temperature Cell	ATH-EHL100	2152	2006-02-28	2007-02-27
Shanghai Huaxiang	Attenuator	30dB	0302707	2005-11-04	2006-11-03

*** Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to a f Spectrum Analyzer 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.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the Spectrum Analyzer.

Frequency Stability vs. Voltage: An external variable DC power supply Source. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the end point. The output frequency was recorded for each voltage.

Test Data

Environmental Conditions

Temperature:	20° C
Relative Humidity:	49%
ATM Pressure:	1009 mbar

The testing was performed by Merry Zhao on 2006-4-24, 2006-4-25.

Test Result: Pass

Test Mode: Transmitting

For 850 MHz

Temperature (℃)	AC Power Supply(V)	Frequency Measure Error (Hz)	Error (ppm)	Limit (ppm)
Bottom Channel:128 f = 869.2MHz				
-40	102	-9.93	-0.01142	1.5
	120	-11.36	-0.01307	1.5
	138	-14.7	-0.01691	1.5
-30	102	-10.86	-0.01249	1.5
	120	-10.95	-0.01260	1.5
	138	-16.76	-0.01928	1.5
-20	102	-13.88	-0.01597	1.5
	120	-14.82	-0.01705	1.5
	138	11.23	0.01292	1.5
-10	102	-13.80	-0.01588	1.5
	120	-13.11	-0.01508	1.5
	138	-13.53	-0.01557	1.5
0	102	-9.64	-0.01109	1.5
	120	8.47	0.00974	1.5
	138	-8.01	-0.00922	1.5
10	102	-14.59	-0.01679	1.5
	120	-14.41	-0.01658	1.5
	138	-9.43	-0.01085	1.5
20	102	-10.45	-0.01202	1.5
	120	-11.17	-0.01285	1.5
	138	-10.67	-0.01228	1.5
30	102	-17.21	-0.01980	1.5
	120	-20.63	-0.02373	1.5
	138	-14.45	-0.01662	1.5
40	102	-17.72	-0.02039	1.5
	120	-13.37	-0.01538	1.5
	138	-8.67	-0.00997	1.5
50	102	-13.37	-0.01538	1.5
	120	-14.66	-0.01687	1.5
	138	-16.37	-0.01883	1.5

Temperature (℃)	AC Power Supply(V)	Frequency Measure Error (Hz)	Error (ppm)	Limit (ppm)
Middle Channel:190 f = 881.6MHz				
-40	102	-12.27	-0.01392	1.5
	120	-10.47	-0.01188	1.5
	138	-12.07	-0.01369	1.5
-30	102	8.97	0.01017	1.5
	120	-13.87	-0.01573	1.5
	138	-9.32	-0.01057	1.5
-20	102	-12.45	-0.01412	1.5
	120	-11.51	-0.01306	1.5
	138	-13.30	-0.01509	1.5
-10	102	-10.62	-0.01205	1.5
	120	-13.18	-0.01495	1.5
	138	-15.62	-0.01772	1.5
0	102	6.64	0.00753	1.5
	120	6.98	0.00792	1.5
	138	-7.10	-0.00805	1.5
10	102	-15.10	-0.01713	1.5
	120	-14.48	-0.01642	1.5
	138	-17.22	-0.01953	1.5
20	102	8.80	0.00998	1.5
	120	8.35	0.00947	1.5
	138	-8.08	-0.00917	1.5
30	102	-20.56	-0.02332	1.5
	120	-14.69	-0.01666	1.5
	138	-8.89	-0.01008	1.5
40	102	-17.04	-0.01933	1.5
	120	-17.45	-0.01979	1.5
	138	-18.45	-0.02093	1.5
50	102	-14.59	-0.01655	1.5
	120	-16.95	-0.01923	1.5
	138	-15.04	-0.01706	1.5

Temperature (℃)	AC Power Supply(V)	Frequency Measure Error (Hz)	Error (ppm)	Limit (ppm)
Top Channel:251 f = 893.8MHz				
-40	102	13.58	0.01519	1.5
	120	-14.93	-0.01670	1.5
	138	-14.12	-0.01580	1.5
-30	102	11.73	0.01312	1.5
	120	-13.95	-0.01561	1.5
	138	-16.59	-0.01856	1.5
-20	102	-16.67	-0.01865	1.5
	120	-13.89	-0.01554	1.5
	138	-14.51	-0.01623	1.5
-10	102	-11.19	-0.01252	1.5
	120	-12.07	-0.01350	1.5
	138	-12.21	-0.01366	1.5
0	102	9.02	0.01009	1.5
	120	-8.97	-0.01004	1.5
	138	-8.00	-0.00895	1.5
10	102	-15.60	-0.01745	1.5
	120	-16.68	-0.01866	1.5
	138	-18.33	-0.02051	1.5
20	102	9.63	0.01077	1.5
	120	7.19	0.00804	1.5
	138	7.96	0.00891	1.5
30	102	-15.43	-0.01726	1.5
	120	-19.87	-0.02223	1.5
	138	-17.62	-0.01971	1.5
40	102	-16.44	-0.01839	1.5
	120	-20.83	-0.02330	1.5
	138	-15.00	-0.01678	1.5
50	102	-18.03	-0.02017	1.5
	120	-18.44	-0.02063	1.5
	138	-18.52	-0.02072	1.5

For 1900 MHz

Temperature (℃)	AC Power Supply(V)	Frequency Measure Error (Hz)	Error (ppm)	Limit (ppm)
Bottom Channel:512 f = 1930.2MHz				
-40	102	-19.99	-0.01036	PASS
	120	-16.37	-0.00848	PASS
	138	-14.43	-0.00748	PASS
-30	102	-16.20	-0.00839	PASS
	120	-14.83	-0.00768	PASS
	138	-13.66	-0.00708	PASS
-20	102	-14.17	-0.00734	PASS
	120	-16.95	-0.00878	PASS
	138	-14.45	-0.00749	PASS
-10	102	-19.11	-0.00990	PASS
	120	-17.31	-0.00897	PASS
	138	-18.29	-0.00948	PASS
0	102	-15.92	-0.00825	PASS
	120	-13.45	-0.00697	PASS
	138	-13.04	-0.00676	PASS
10	102	-15.69	-0.00813	PASS
	120	-16.03	-0.00830	PASS
	138	-15.23	-0.00789	PASS
20	102	-15.69	-0.00813	PASS
	120	-15.62	-0.00809	PASS
	138	-15.35	-0.00795	PASS
30	102	-18.55	-0.00961	PASS
	120	14.47	0.00750	PASS
	138	-22.23	-0.01152	PASS
40	102	-22.38	-0.01159	PASS
	120	-20.62	-0.01068	PASS
	138	-17.15	-0.00889	PASS
50	102	-22.83	-0.01183	PASS
	120	-19.60	-0.01015	PASS
	138	-17.57	-0.00910	PASS

Temperature (℃)	AC Power Supply(V)	Frequency Measure Error (Hz)	Error (ppm)	Limit (ppm)
Middle Channel:661 f = 1960.0MHz				
-40	102	17.09	0.00872	PASS
	120	-18.70	-0.00954	PASS
	138	-20.37	-0.01039	PASS
-30	102	-13.74	-0.00701	PASS
	120	-16.04	-0.00818	PASS
	138	-20.08	-0.01024	PASS
-20	102	-16.94	-0.00864	PASS
	120	-18.66	-0.00952	PASS
	138	-20.76	-0.01059	PASS
-10	102	15.64	0.00798	PASS
	120	-20.26	-0.01034	PASS
	138	-20.36	-0.01039	PASS
0	102	18.64	0.00951	PASS
	120	17.29	0.00882	PASS
	138	-15.97	-0.00815	PASS
10	102	-14.33	-0.00731	PASS
	120	-20.11	-0.01026	PASS
	138	-17.33	-0.00884	PASS
20	102	-18.03	-0.00920	PASS
	120	-14.89	-0.00760	PASS
	138	17.58	0.00897	PASS
30	102	-17.06	-0.00870	PASS
	120	-18.15	-0.00926	PASS
	138	-21.03	-0.01073	PASS
40	102	-18.63	-0.00951	PASS
	120	-17.80	-0.00908	PASS
	138	-15.35	-0.00783	PASS
50	102	-17.67	-0.00902	PASS
	120	-24.81	-0.01266	PASS
	138	-22.75	-0.01161	PASS

Temperature (℃)	AC Power Supply(V)	Frequency Measure Error (Hz)	Error (ppm)	Limit (ppm)
Top Channel:810 f = 1989.8MHz				
-40	102	16.62	0.00835	PASS
	120	20.16	0.01013	PASS
	138	-18.44	-0.00927	PASS
-30	102	18.18	0.00914	PASS
	120	-17.47	-0.00878	PASS
	138	-17.03	-0.00856	PASS
-20	102	-19.44	-0.00977	PASS
	120	21.02	0.01056	PASS
	138	-18.62	-0.00936	PASS
-10	102	17.84	0.00897	PASS
	120	14.62	0.00735	PASS
	138	18.03	0.00906	PASS
0	102	-24.93	-0.01253	PASS
	120	-18.42	-0.00926	PASS
	138	17.50	0.00879	PASS
10	102	-23.77	-0.01195	PASS
	120	-18.44	-0.00927	PASS
	138	23.71	0.01192	PASS
20	102	-18.55	-0.00932	PASS
	120	-17.34	-0.00871	PASS
	138	-16.31	-0.00820	PASS
30	102	-20.64	-0.01037	PASS
	120	-21.34	-0.01072	PASS
	138	20.76	0.01043	PASS
40	102	-27.34	-0.01374	PASS
	120	-26.57	-0.01335	PASS
	138	-21.25	-0.01068	PASS
50	102	-22.5	-0.01131	PASS
	120	-19.32	-0.00971	PASS
	138	-22.11	-0.01111	PASS