FCC CFR47 CERTIFICATION

PART 24E

TEST REPORT

FOR

GPRS TRI-BAND PHONE

MODEL: MX-5020

FCC ID: AWWMX5020

REPORT NUMBER: 03U2120-1

ISSUE DATE: JULY 24, 2003

Prepared for

MAXON TELECOM CO.
SEWON VENTURE TOWN BLDG., 705-18, YEUKSAM-DONG
KANGNAM-GU, SEOUL 135-080, KOREA

Prepared by

COMPLIANCE CERTIFICATION SERVICES
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MORGAN HILL, CA 95037, USA
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TABLE OF CONTENT

1. TEST RESULT CERTIFICATION

COMPANY NAME: MAXON TELECOM CO.
SEWON VENTURE TOWN BLDG., 705-18, YEUKSAM-DONG
KANGNAM-GU, SEOUL 135-080, KOREA

EUT DESCRIPTION: GPRS TRI-BAND PHONE

MODEM NAME: MX-5020

DATE TESTED: JULY 24, 2003

TYPE OF EQUIPMENT	INTENTIONAL RADIATOR
EQUIPMENT TYPE	LICENSED TX MODULE IN MOBILE APPLICATION
MEASUREMENT PROCEDURE	ANSI 63.4 / 2001, TIA/EIA 603
PROCEDURE	CERTIFICATION
FCC RULE	CFR 47 PART 24 Subpart E

Compliance Certification Services, Inc. tested the above equipment for compliance with the requirement set forth in CFR 47, PART 24 Subpart E-Broadband PCS. The equipment in the configuration described in this report, shows the measured emission levels emanating from the equipment do not exceed the specified limit.

Note: This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document.

Tested By:

WILLIM ZHUANG
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

Released For CCS By:

THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

2. EUT DESCRIPTION

The Mobile Phone has an output power 27.9dBm (PCS, EIRP). It has a –2.5dBi of antenna gain which is designed for the bands transmitting of frequency range 1850 ~ 1990MHz.

3. TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures documented on chapter 13 of ANSI C63.4 and FCC CFR 47 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057.

4. TEST FACILITY

The open area test sites and conducted measurement facilities used to collect the radiated data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

5. ACCREDITATION AND LISTING

The test facilities used to perform radiated and conducted emissions tests are accredited by National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code: 200065-0 to perform Electromagnetic Interference tests according to FCC PART 15 AND CISPR 22 requirements. No part of this report may be used to claim or imply product endorsement by NVLAP or any agency of the US Government. In addition, the test facilities are listed with Federal Communications Commission (reference no: 31040/SIT (1300B3) and 31040/SIT (1300F2))

6. MEASURING INSTRUMENT CALIBRATION

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

7. TEST SETUP, PROCEDURE AND RESULT

7.1. SECTION 2.1046: RF POWER OUTPUT

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	SERIAL NO.	CAL. DUE DATE
Modulation Analyzer	HP	8901b	3438A05272	6/23/04
PSA Analyzer	Agilent	E446A	US42070220	1/13/04
Audio Signal Generator	HP	3325A	2652A24749	5/8/04
Universal Radio Communication Tester	R & S	CMU200	838114 / 032	11/14/03
40dB Attenuator	Amplifier Research	DC7144A	305089	N/A
DC Power Supply	Kenwood	PA36-3A	7060074	N/A
Bilog Antenna	A.R.A.	LPB 2520/A	1185	3/6/04
Tune Dipole	ETS	DB-4	1629	5/14/04
Tx Horn Antenna	EMCO	3115	6739	2/4/2004
Rx Horn Antenna	EMCO	3115	6717	2/4/2004
Amplifier	MITEQ	NSP2600-SP	924342	4/25/2004
HPF	MICROLAB	FH-2400H	N/A	N/A

MEASUREMENT PROCEDURE

1). On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.

2). The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the frequency of the transmitter.

3). The output of the test antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.

4). The transmitter shall be switched on, if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.

5). The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.

6). The transmitter shall than be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.

7). The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.

8). The maximum signal level detected by the measuring receiver shall be noted.

9). The transmitter shall be replaced by a tuned dipole (substitution antenna).

10). The substitution antenna shall be oriented for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.

11). The substitution antenna shall be connected to a calibrated signal generator.

12). If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.

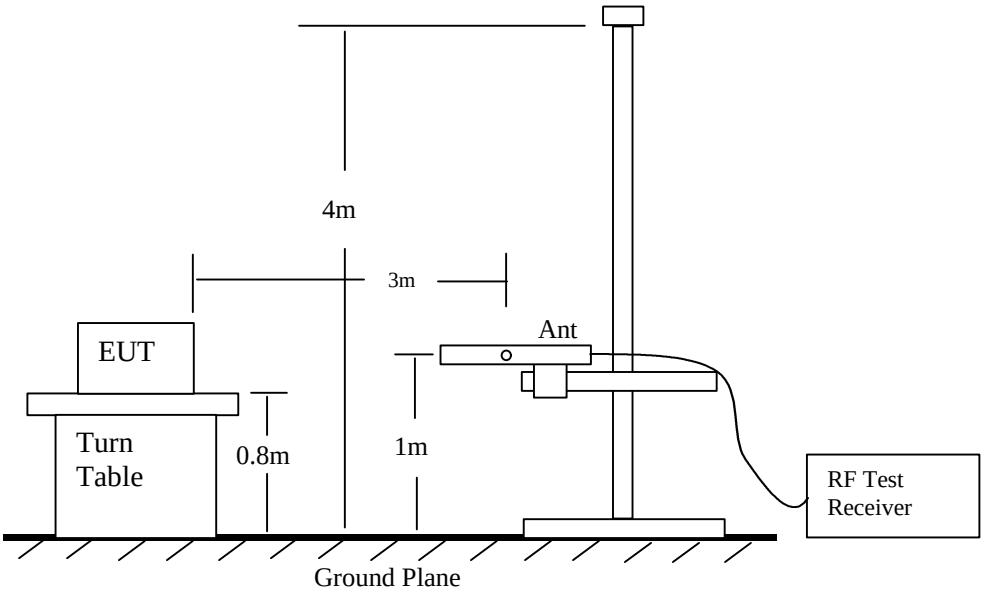
13). The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.

14). The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.

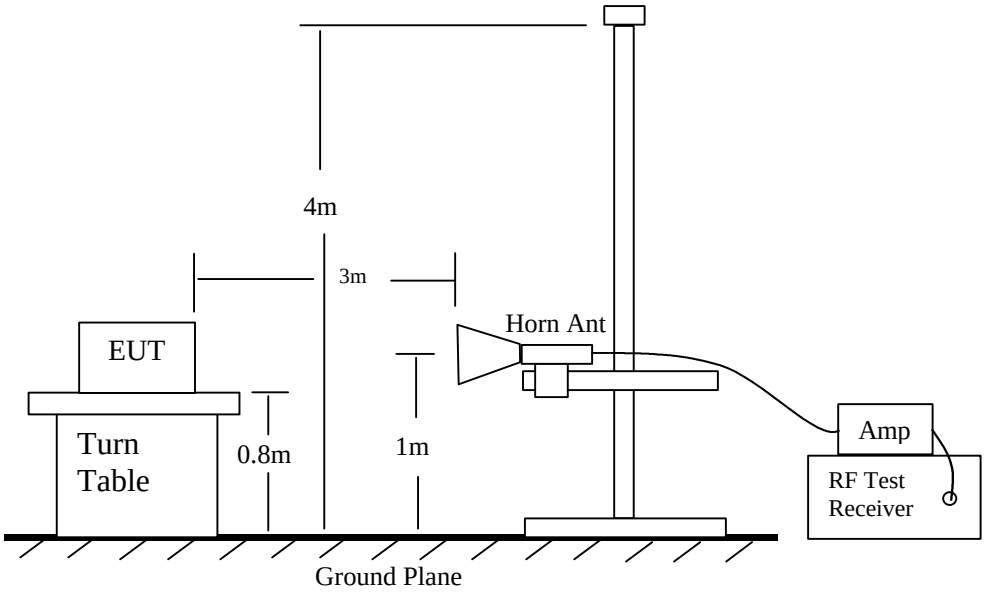
15). The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.

16). The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

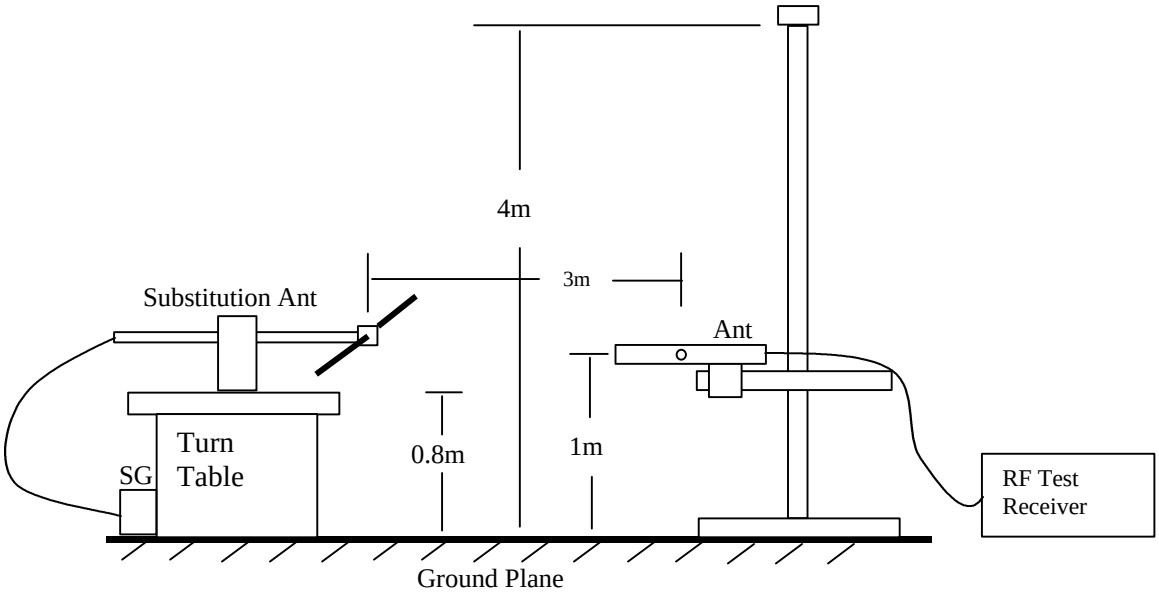
17). The measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for the gain of the substitution antenna if necessary.

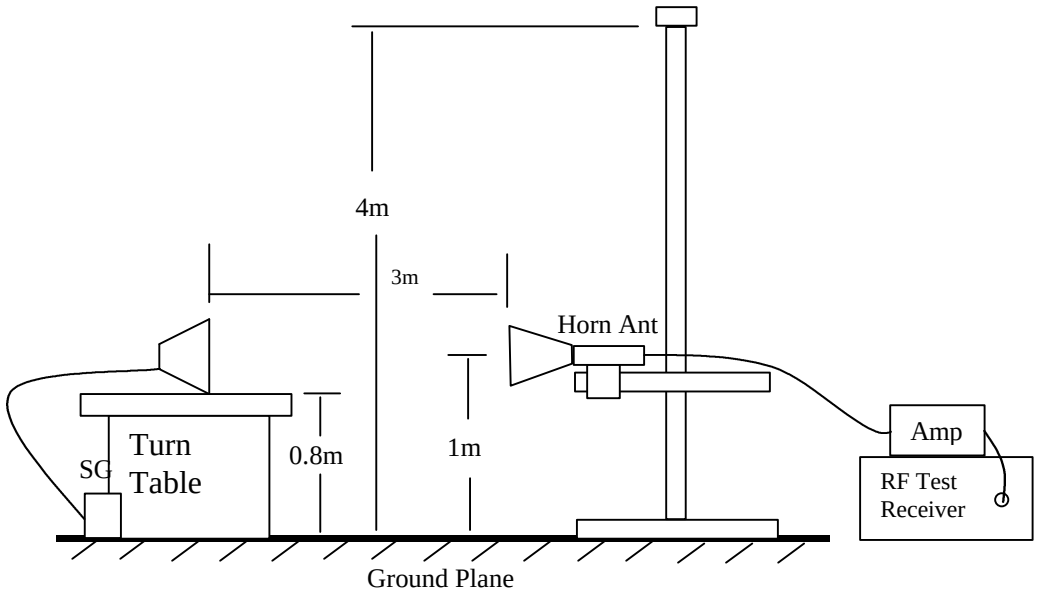


Radiated Emission Measurement 30 to 1000 MHz



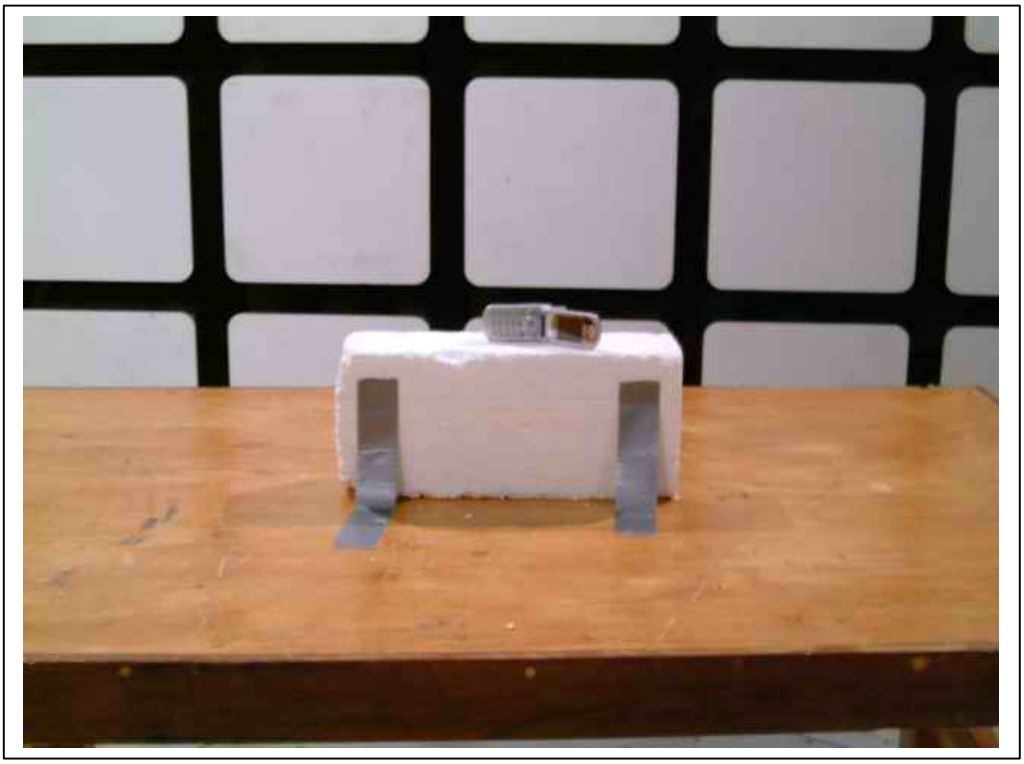
Radiated Emission Above 1000 MHz





Radiated Emission – Substitution Method Set-up

Radiated Emissions



MEASUREMENT RESULT:

Output Power (EIRP) at worst X-Position:

07/24/03 **High Frequency Substitution Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr:William Zhuang
Project #:03U2120-1
Company:7 Layer
EUT Descrip.:Tri-Band Phone(1900,900,1800MHz)
EUT M/N:MX-5020
Test Target:FCC 24 Certification
Mode Oper:PCS mode

Test Equipment:

EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz	Limit
T60; S/N: 2238 @1n		Agilent E4446A Analyzer		FCC 24

Hi Frequency Cables: [x] (2 ft) [ ] (2 ~ 3 ft) [ ] (4 ~ 6 ft) [x] (12 ft)

Peak Measurements:

Fundamental:	Bandedge:	Spurious
RBW>99% or 26dB Emissions BW	RBW=>1% Emissions BW	RBW=1MHz
VBW=RBW	VBW=> 3*RBW	VBW=1MHz

f GHz	SA reading (dBm)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Fundamental Measurement:									
1.850	94.5	21.1	1.3	7.7	5.5	27.4	33.0	-5.6	H, X position, Ant-1
1.850	94.3	17.7	1.3	7.7	5.5	24.0	33.0	-9.0	V, X position, Ant-1
1.880	91.3	21.5	1.4	7.7	5.6	27.9	33.0	-5.2	H, X position, Ant-1
1.880	92.7	19.4	1.4	7.7	5.6	25.8	33.0	-7.3	V, X position, Ant-1
1.909	98.0	21.4	1.4	7.8	5.6	27.8	33.0	-5.2	H, X position, Ant-1
1.909	94.5	20.2	1.4	7.8	5.6	26.6	33.0	-6.4	V, X position, Ant-1

7.2. SECTION 2.1047: MODULATION CHARACTERISTICS

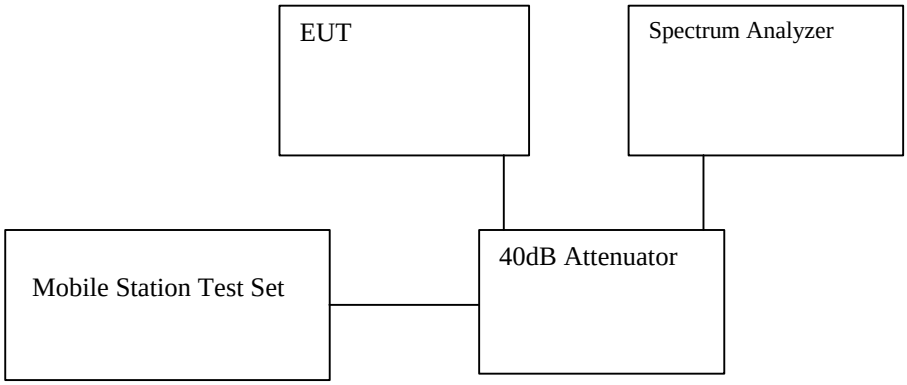
Not applicable.

7.3. SECTION 2.1049: OCCUPIED BANDWIDTH

TEST PROCEDURE

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RES BW was set to about 1% of emission BW, -26 dBc display line was placed on the screen, the occupied BW is the delta frequency between the two points where the display line intersects the signal trace. 26dB BW was measured for low, middle and high channels on both RF input and output ports of the EUT.

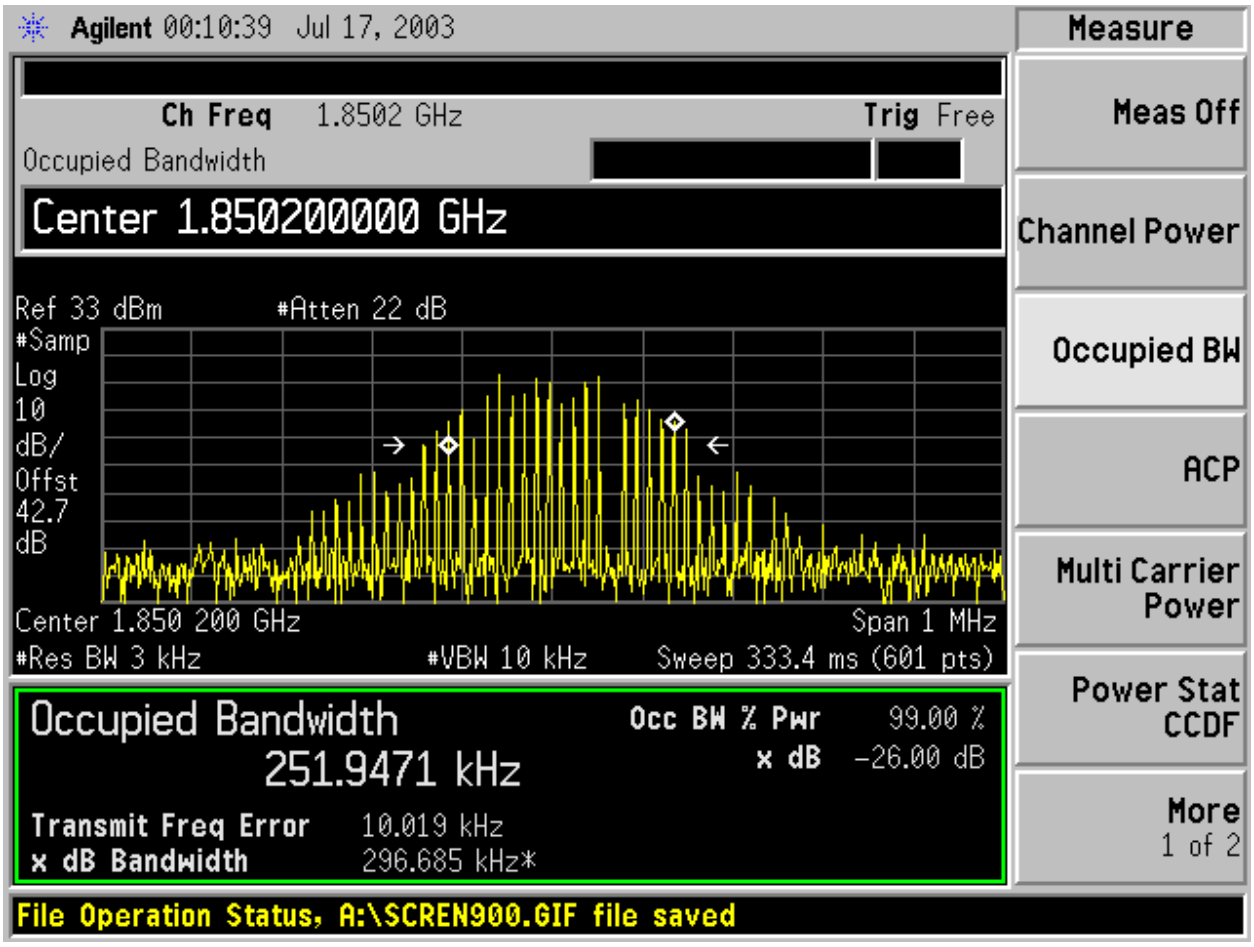
TEST SETUP



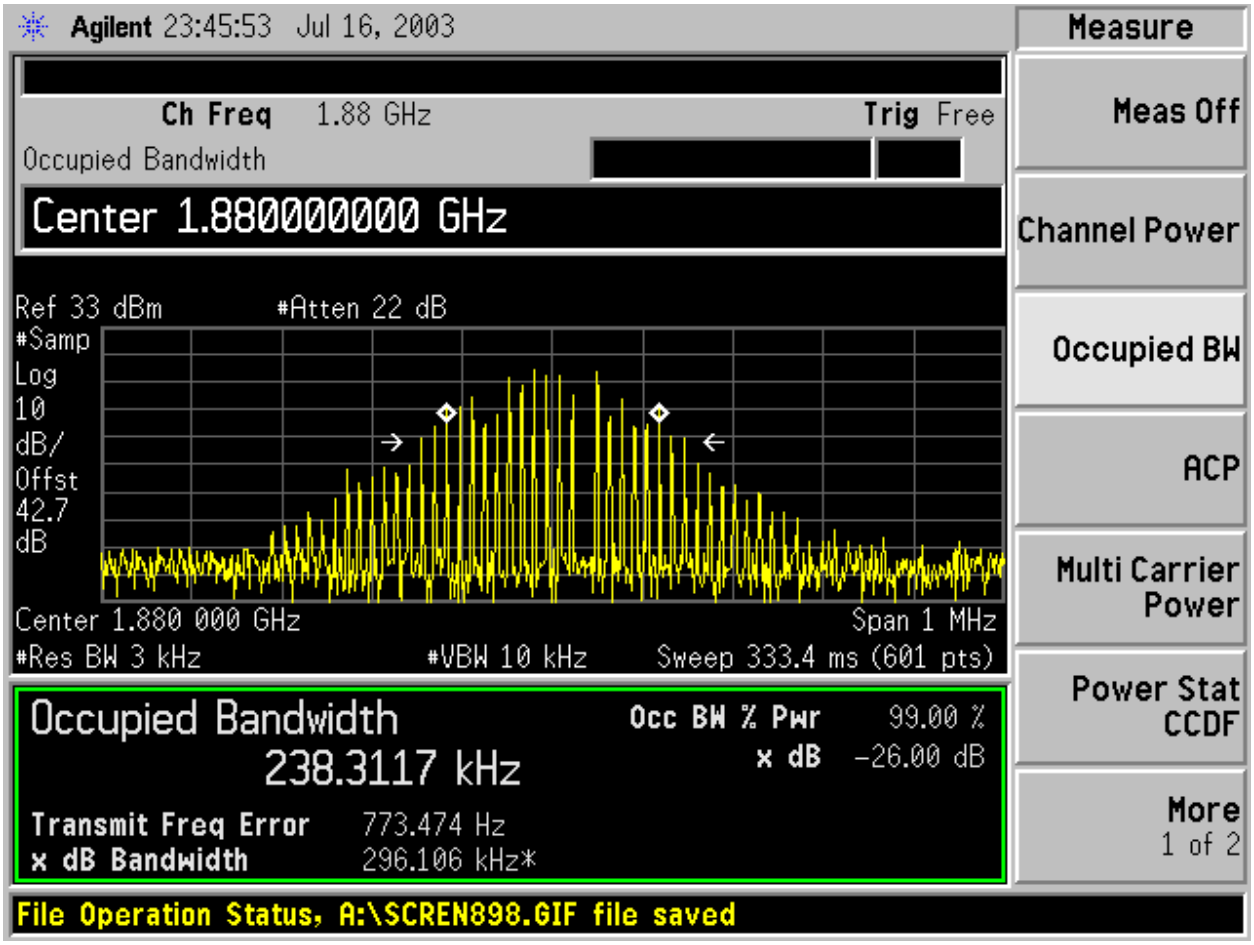
RESULT

Channel	Frequency (MHz)	-26dBc BW (KHz)
Low	1850.2	296.685
Middle	1880.0	296.106
High	1909.8	296.588

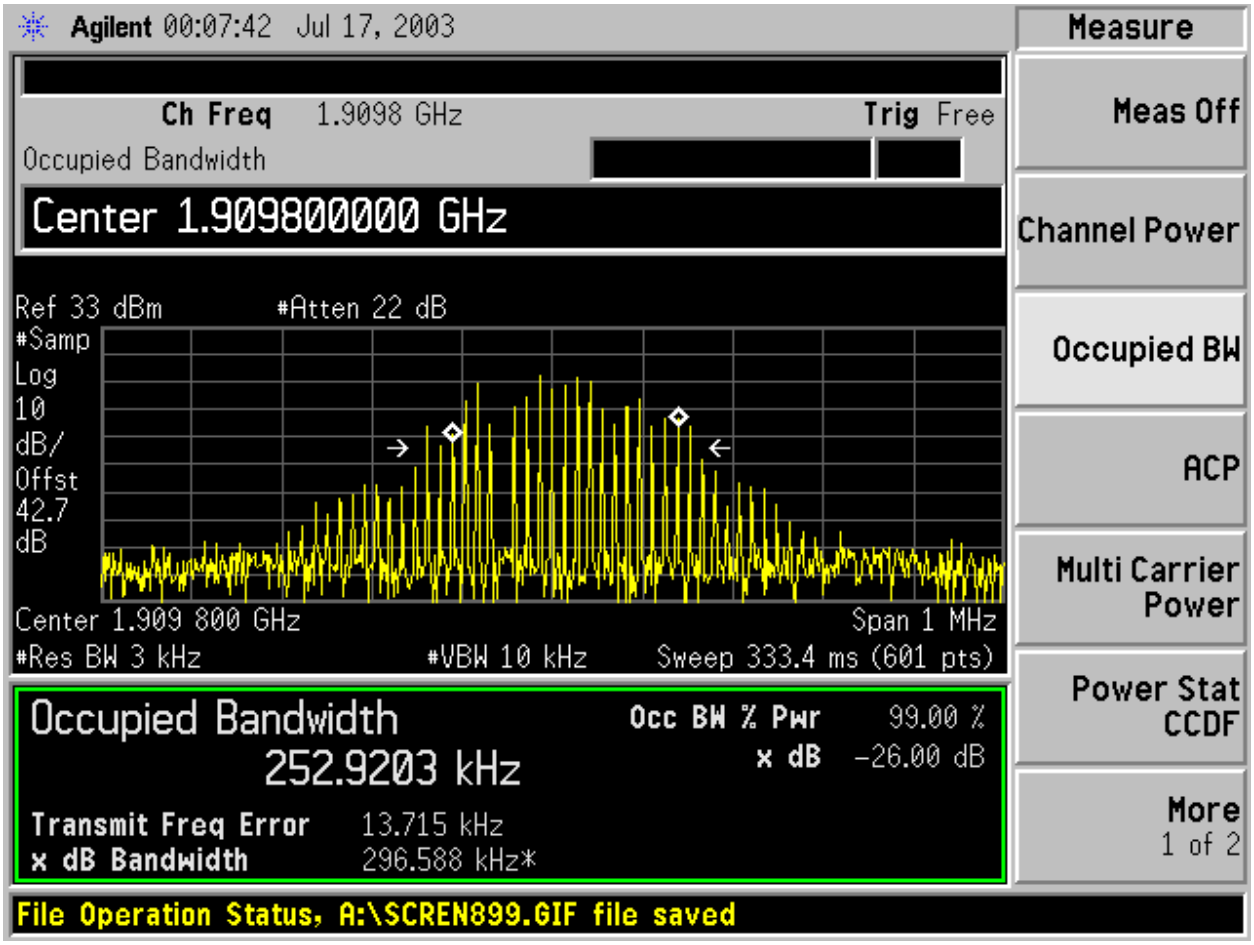
Low Channel



Mid Channel



High Channel

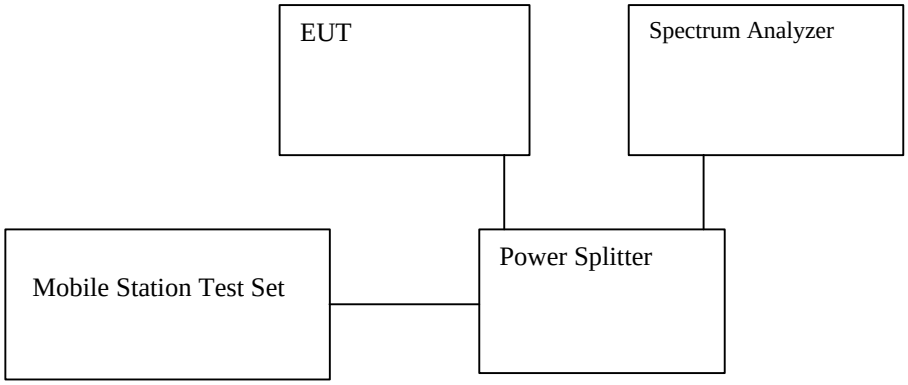


7.4. SECTION 2.1051: SPURIOUS EMISSION AT ANTENNA TERMINAL

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	SERIAL NO.	CAL. DUE DATE
Modulation Analyzer	HP	8901B	3438A05272	6/23/04
PSA Analyzer	Agilent	E446A	US42070220	1/13/04
Audio Signal Generator	HP	3325A	2652A24749	5/8/04
Universal Radio Communication Tester	R & S	CMU200	838114 / 032	11/14/03
40dB Attenuator	Amplifier Research	DC7144A	305089	N/A
Power Splitter	Agilent	11667B	53331	N/A

TEST SETUP



TEST PROCEDURE

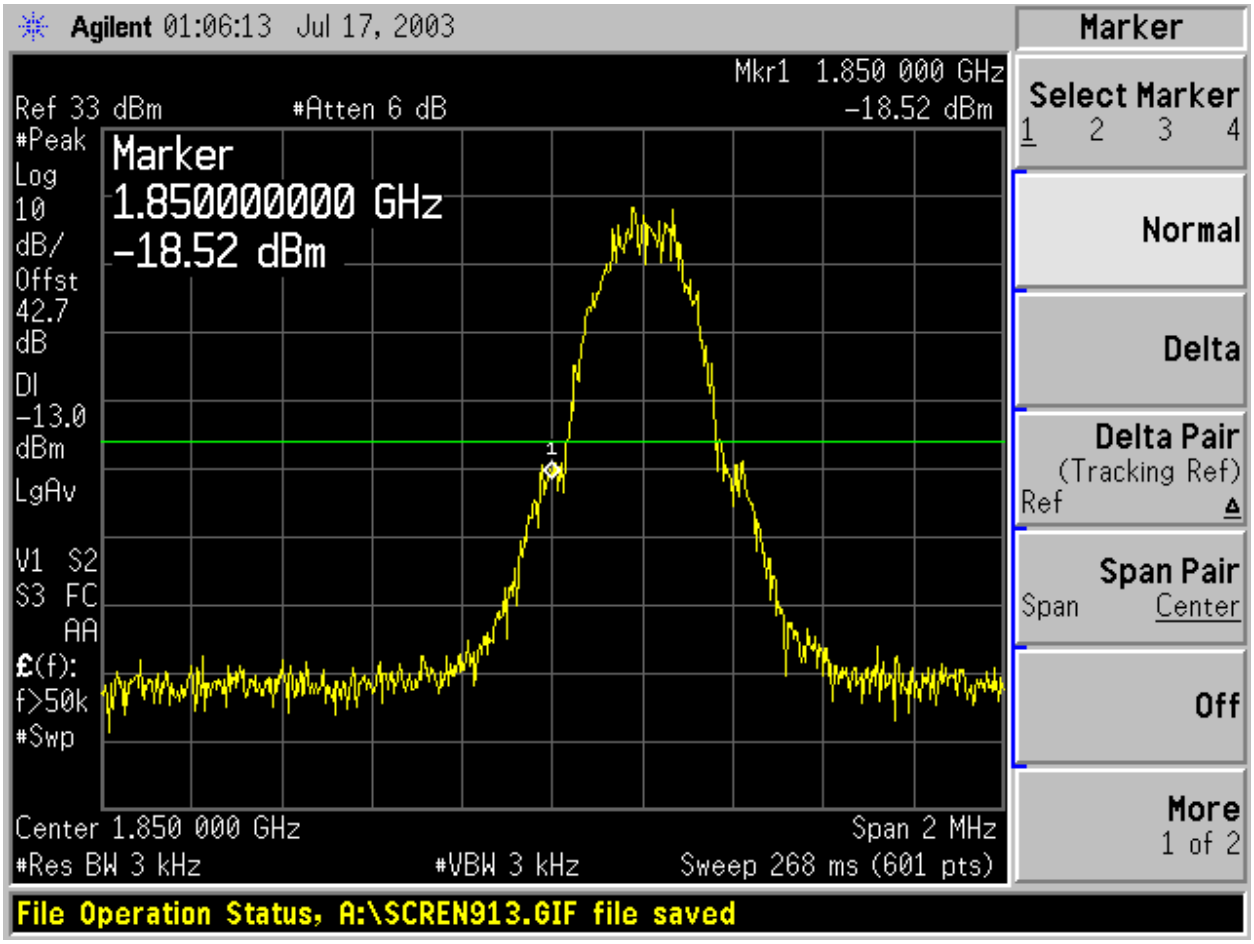
1) EUT's RF output connector (made solely for the purpose of the test) is connected to the spectrum analyzer, and set as close as possible to the bottom of the block edge and one set as close as possible to the top of the block edge. Set the RES BW to 1% of the emission bandwidth to show compliance with the –13dBm limit, in the 1 MHz bands immediately outside and adjacent to the top and bottom edges of the frequency block.

2) For the Out-of-Band measurements a 1 MHz RES BW was used to scan from 15 MHz to 10xfo of the fundamental carrier for all frequency block. A display line was placed at –13dBm to show compliance for spurious, and harmonics.

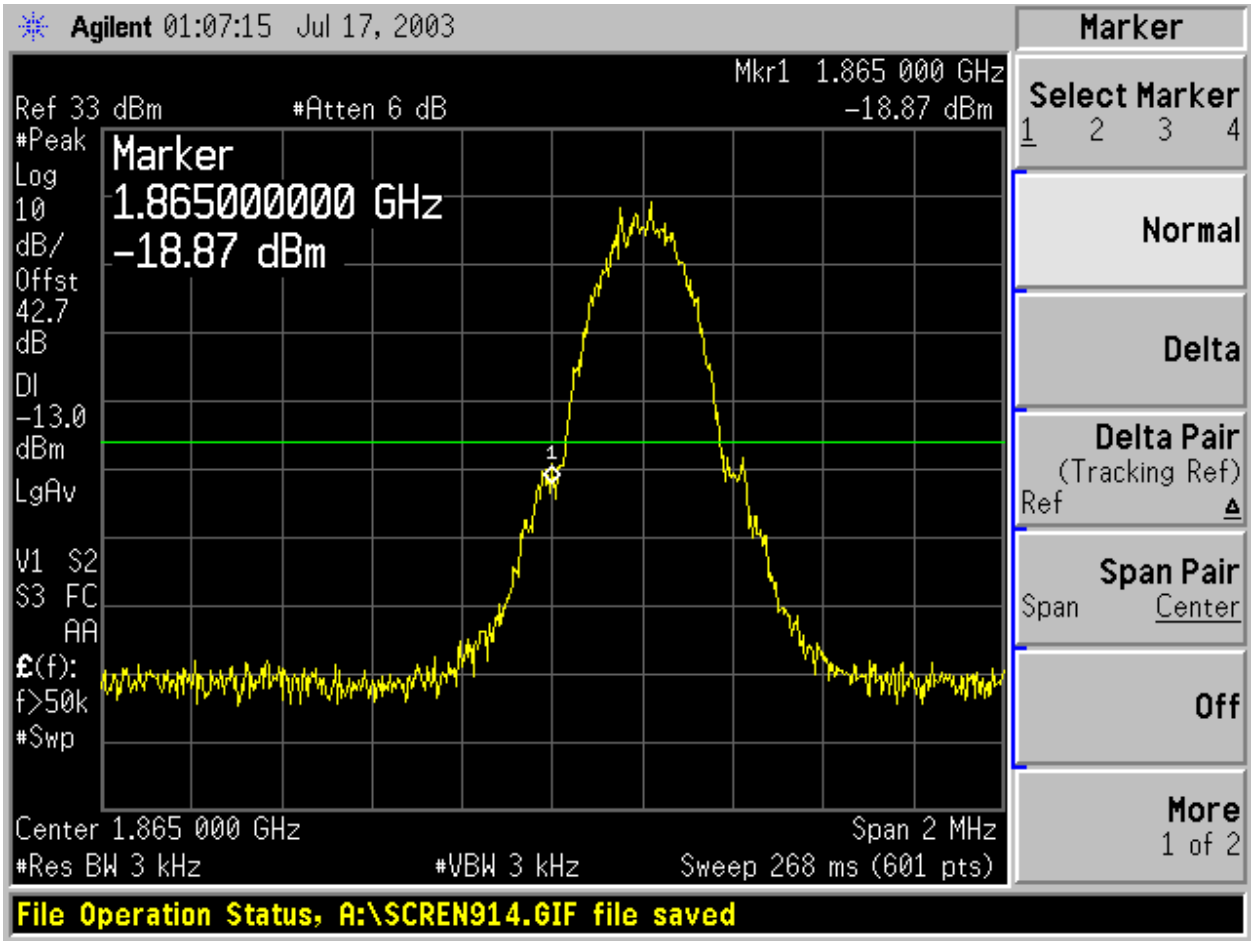
MEASUREMENT RESULT:

PCS Modulation: Low / Mid / High, Band Edge, Out-Of-Band Emissions

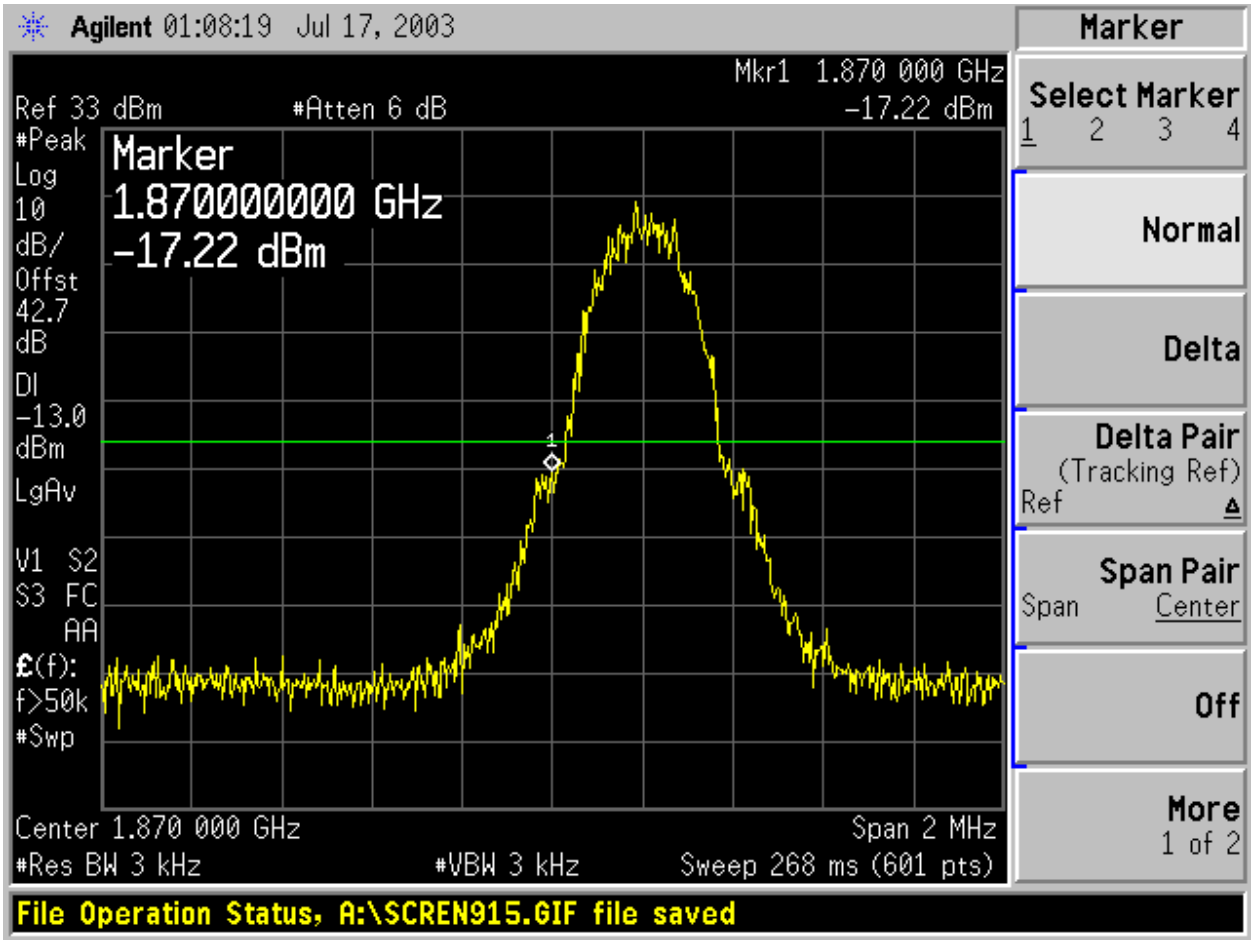
Low Band Edge- Ch 512 (Block A Low Channel)



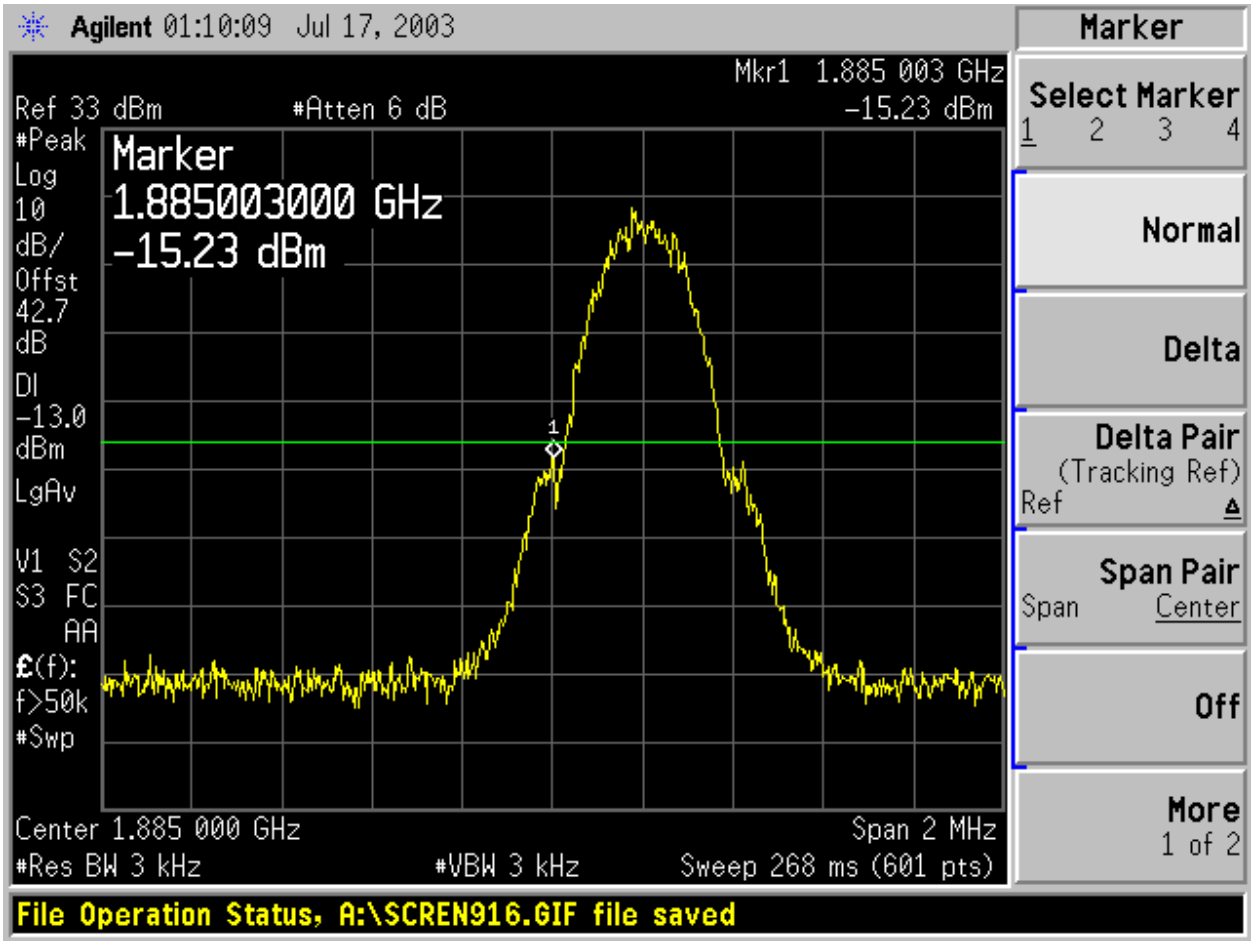
Low Band Edge- Ch 587 (Block D Low Channel)



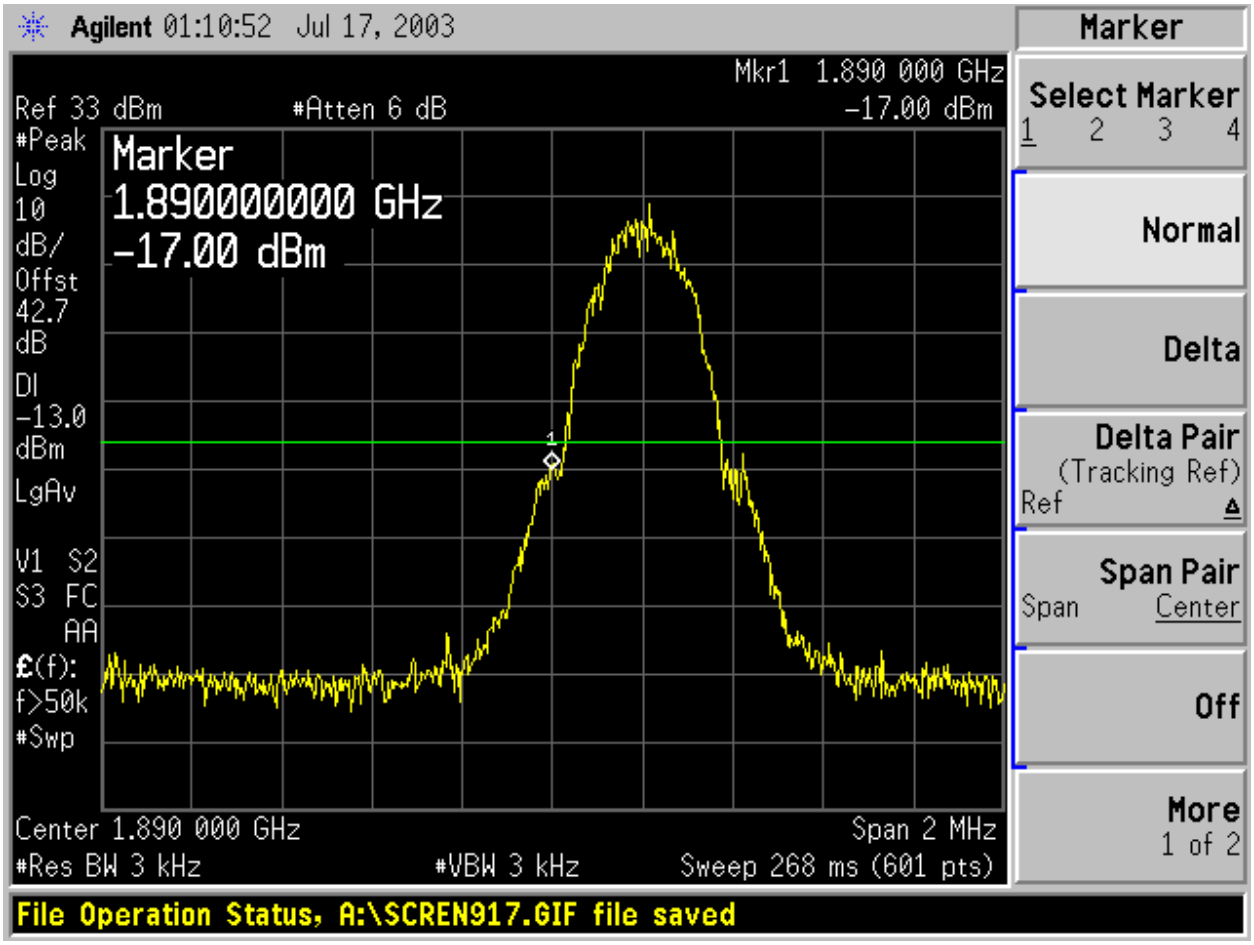
Low Band Edge- Ch 612 (Block B Low Channel)



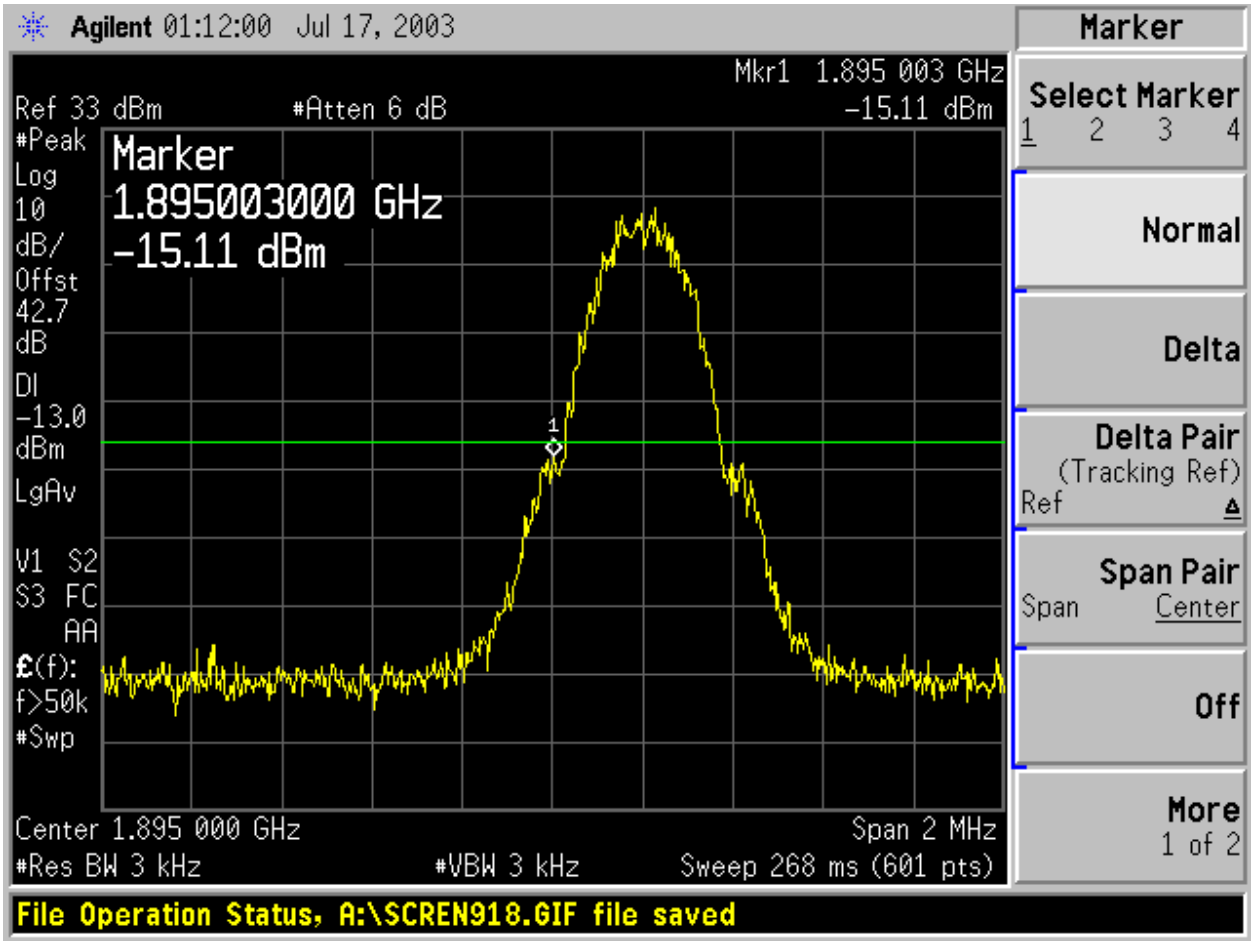
Low Band Edge- Ch 687 (Block E Low Channel)



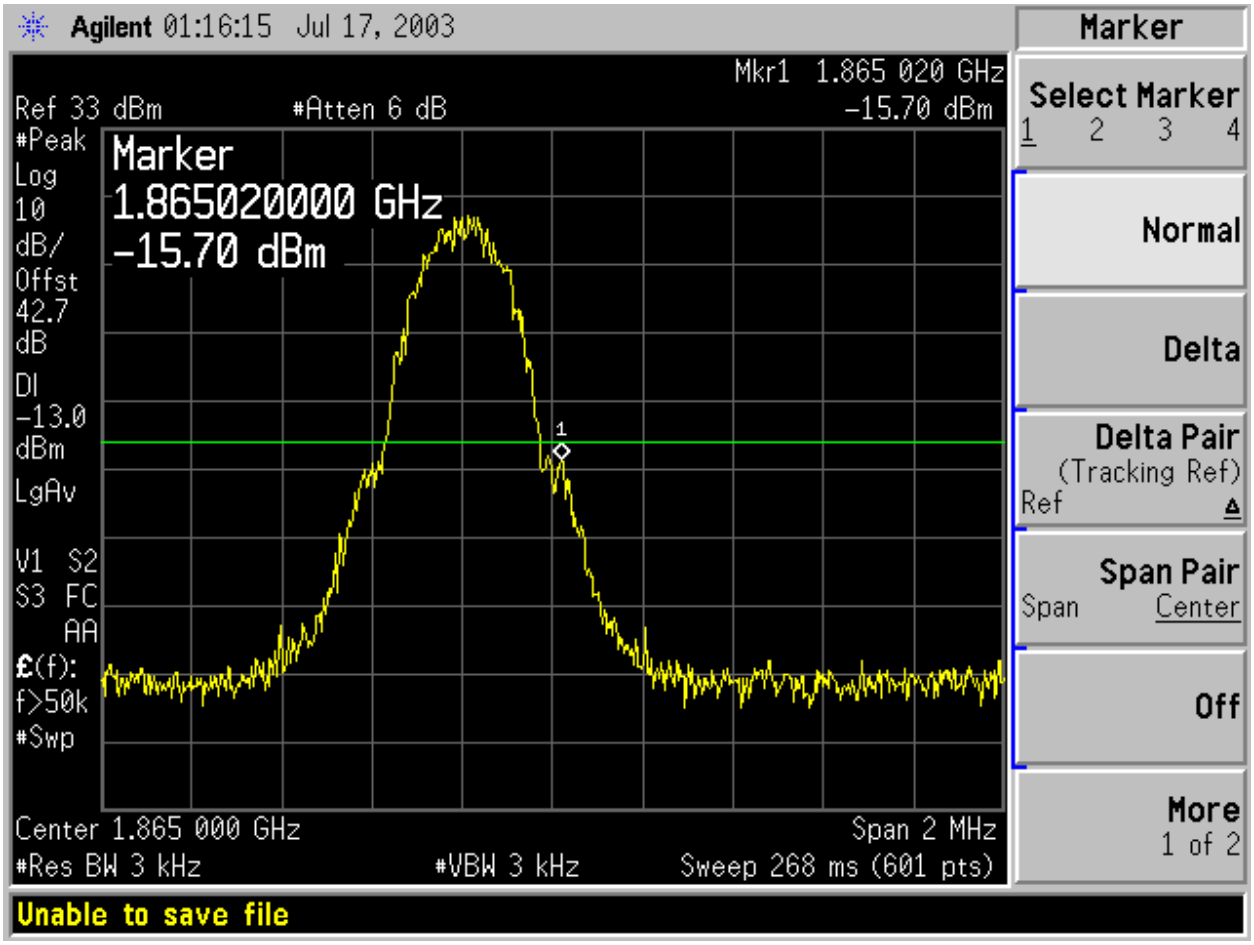
Low Band Edge- Ch 712 (Block F Low Channel)



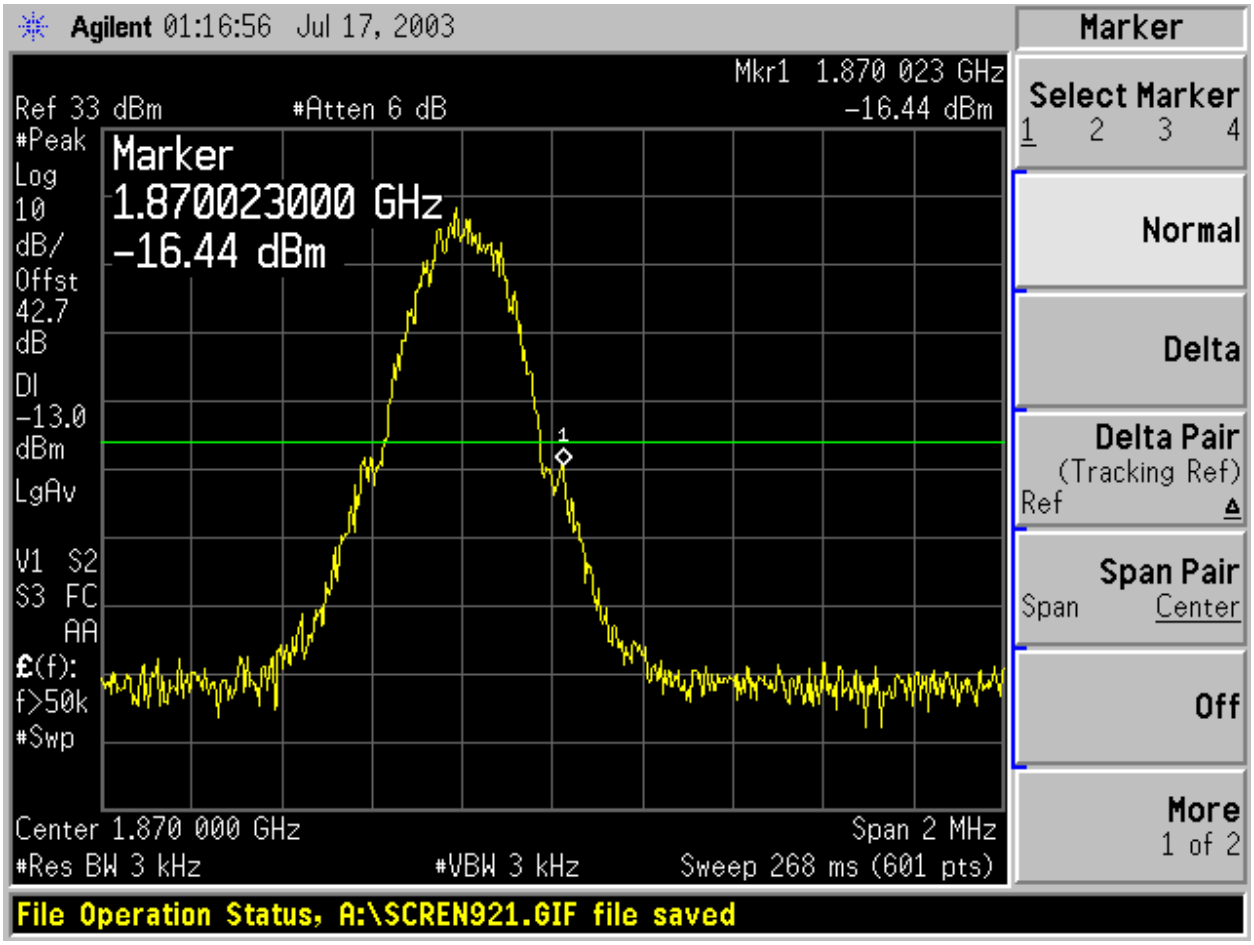
Low Band Edge- Ch 737 (Block C Low Channel)



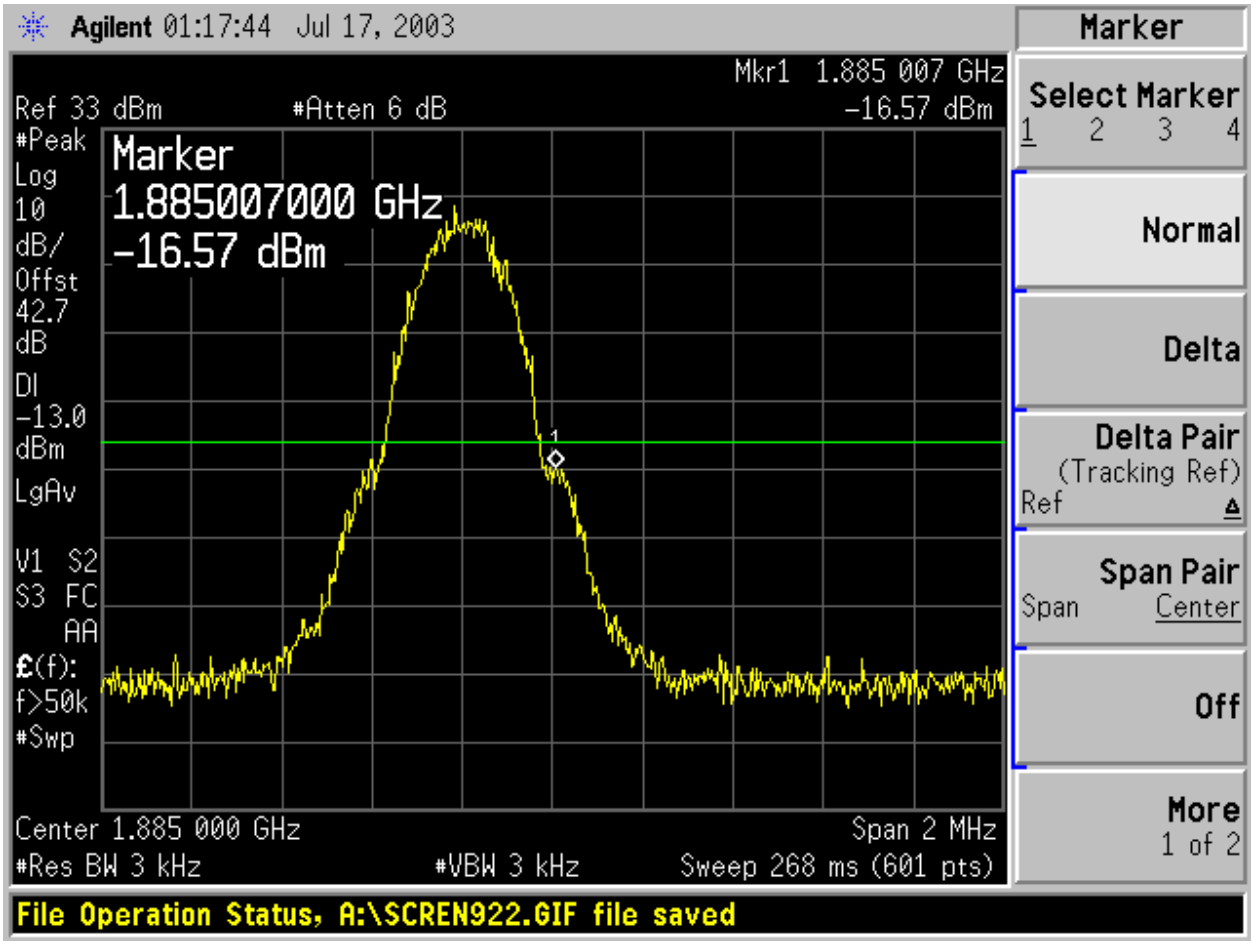
High Band Edge- Ch 585-1865MHz (Block A High Channel)



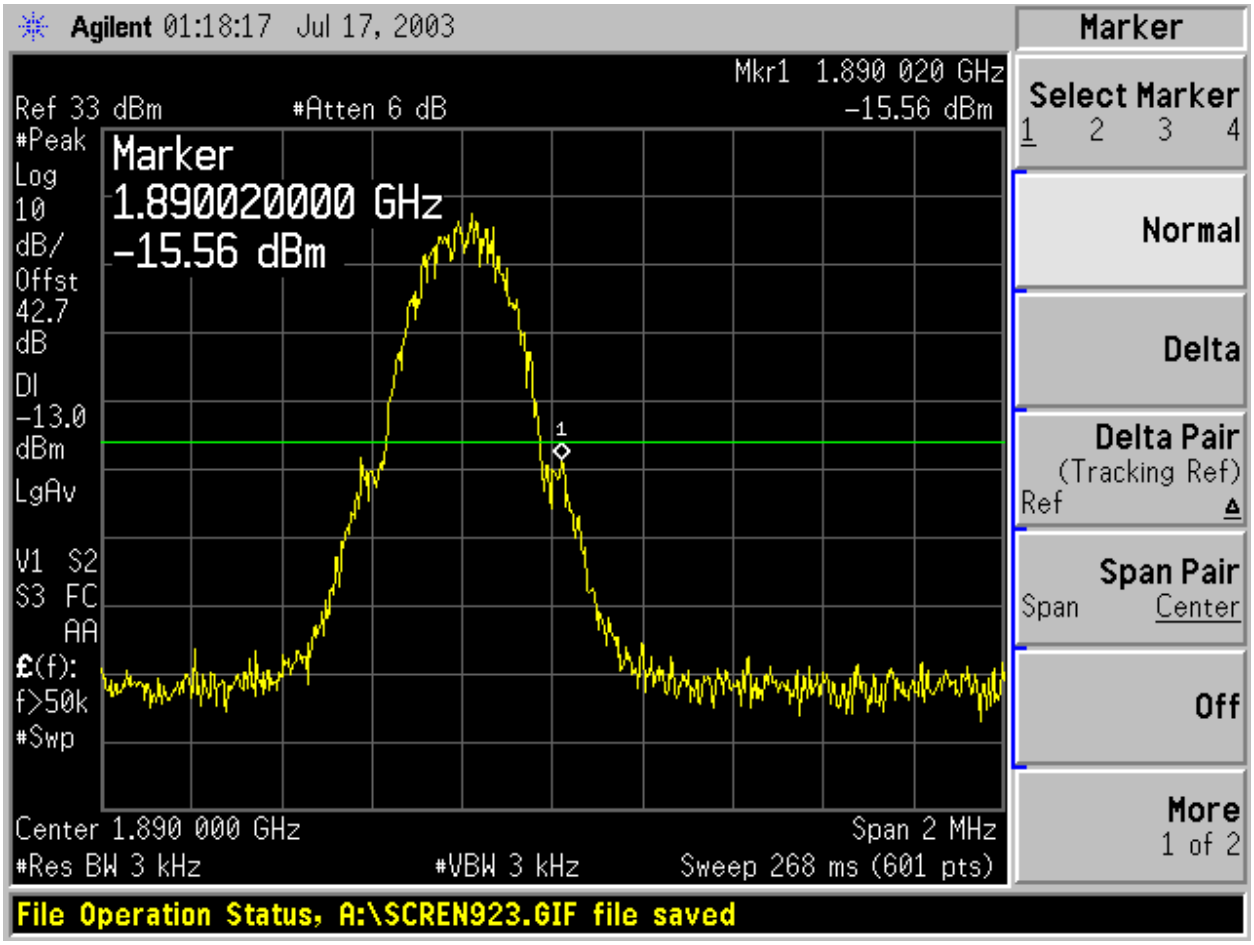
High Band Edge- Ch 610 (Block D High Channel)



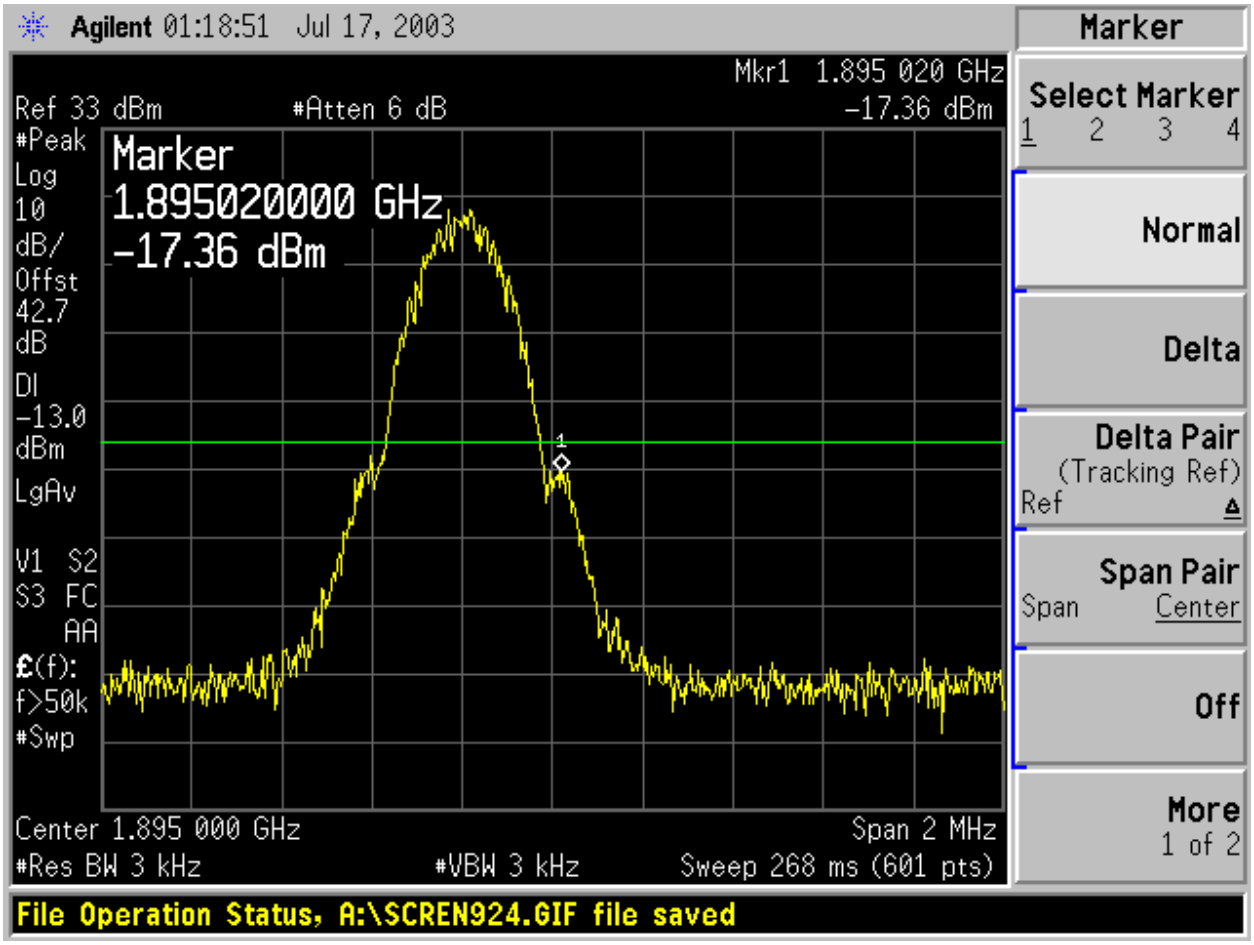
High Band Edge- Ch 685 (Block B High Channel)



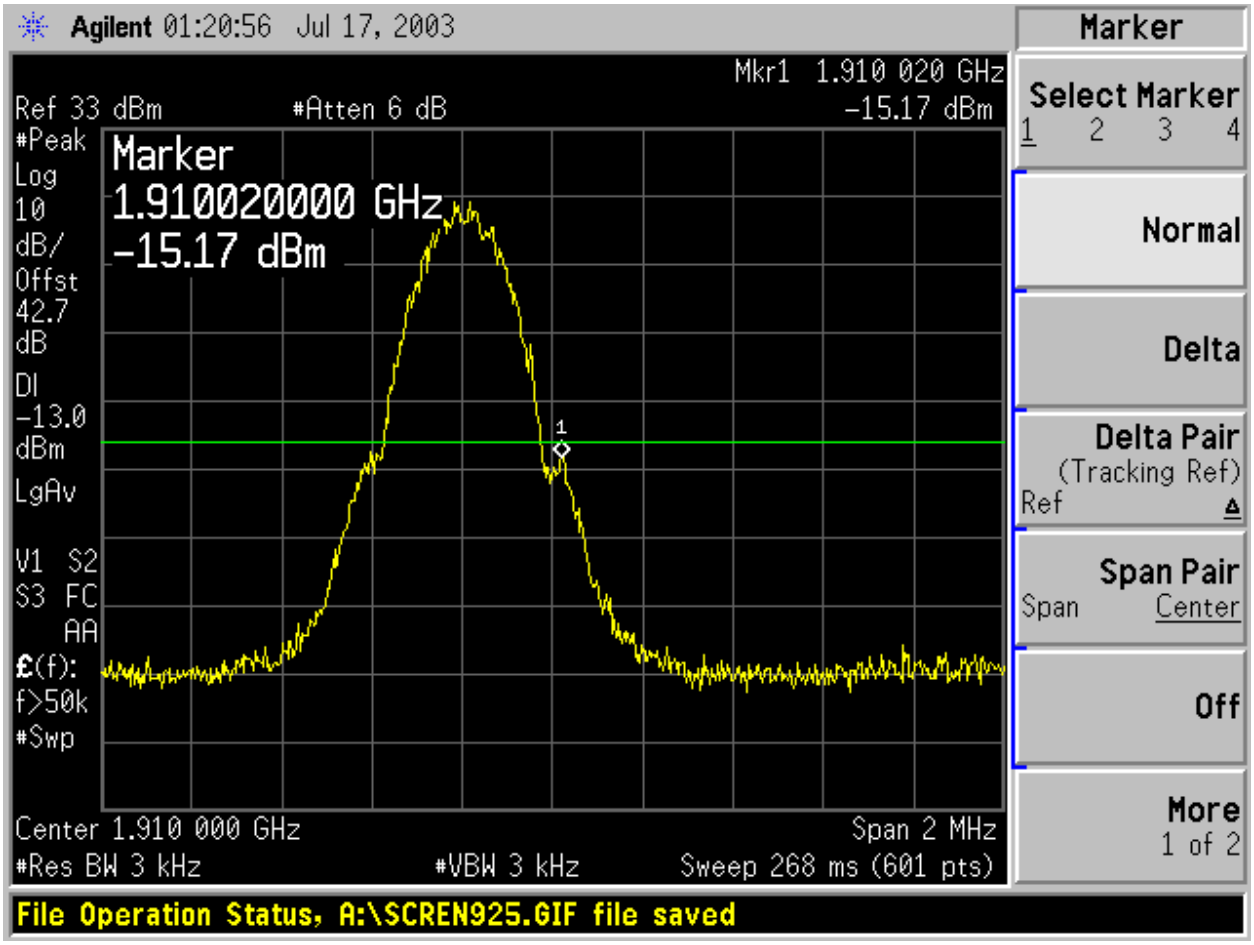
High Band Edge- Ch 710 (Block E High Channel)



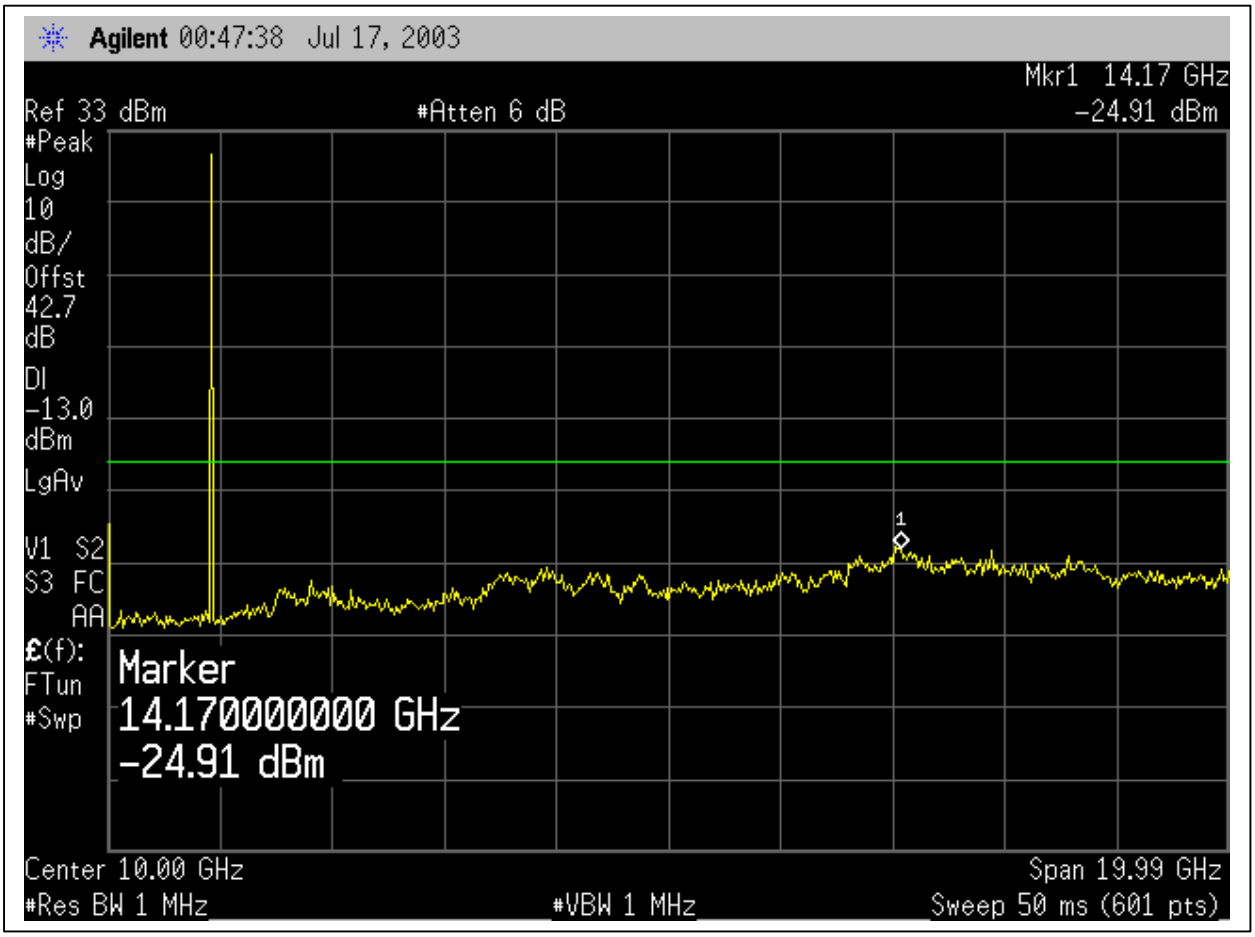
High Band Edge- Ch 735 (Block F High Channel)



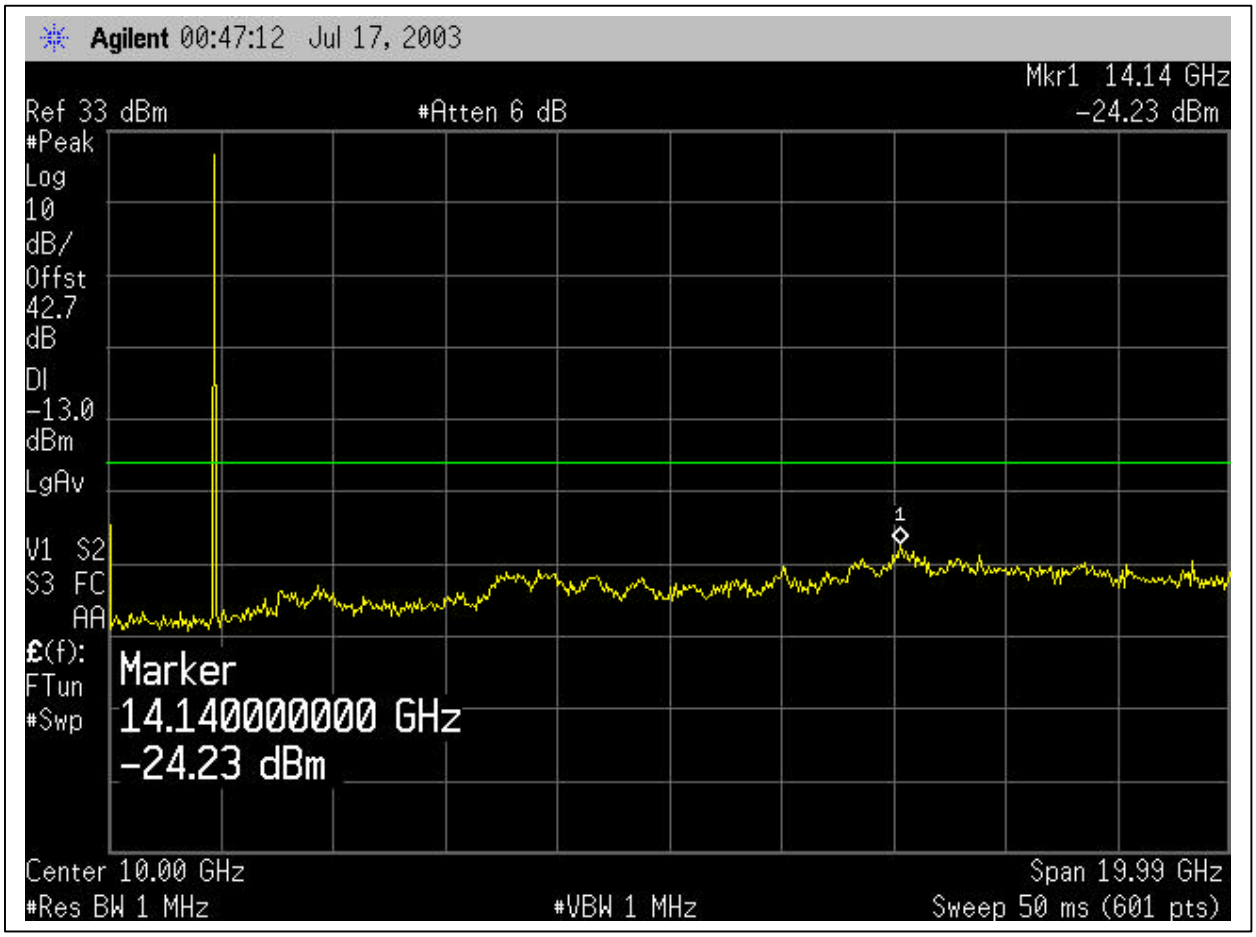
High Band Edge- Ch 810 (Block C High Channel)



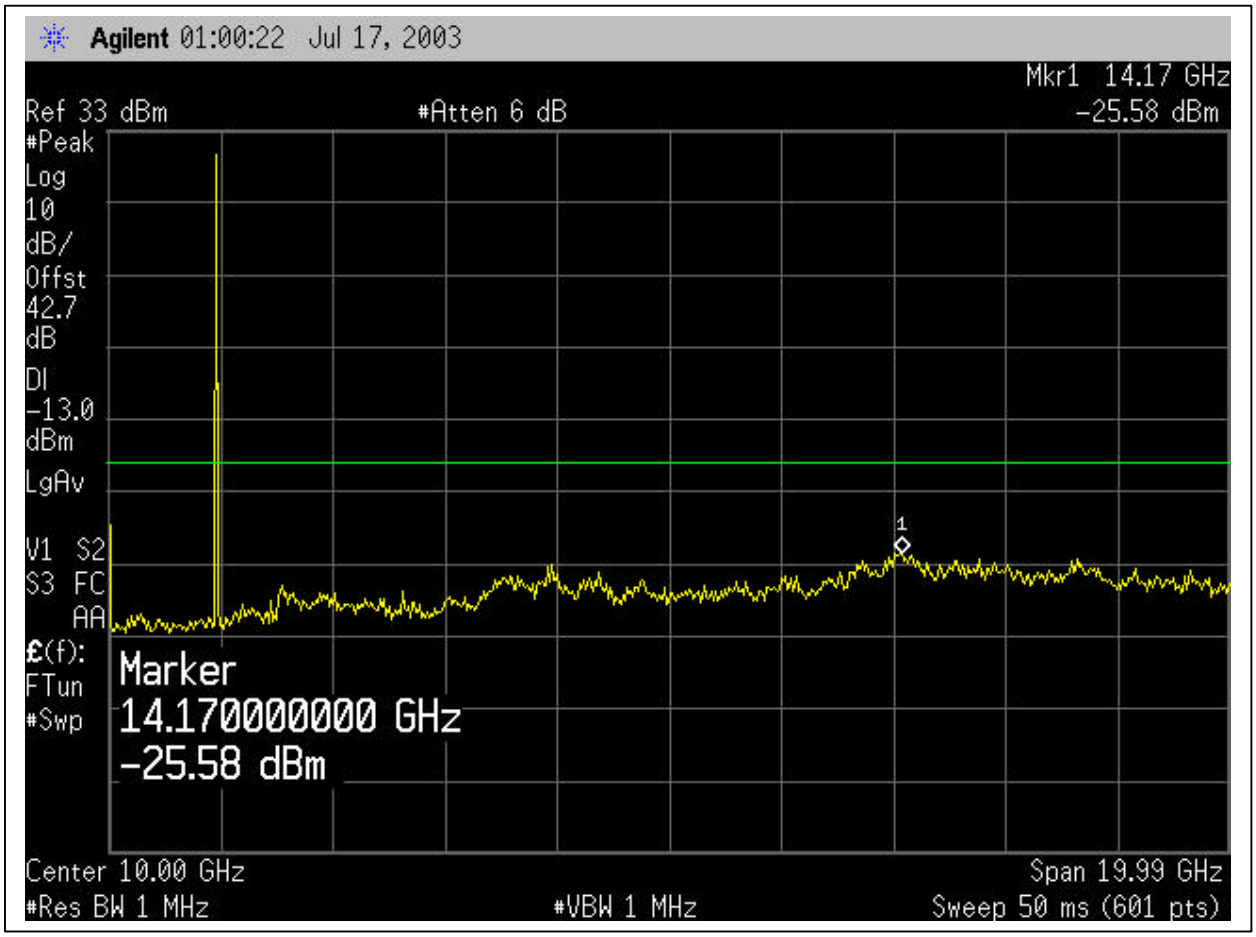
Out-Of-Band Emissions-Low Channel



Out-Of-Band Emissions-Mid Channel



Out-Of-Band Emissions-High Channel



7.5. SECTION 2.1053: FIELD STRENGTH OF SPURIOUS RADIATION

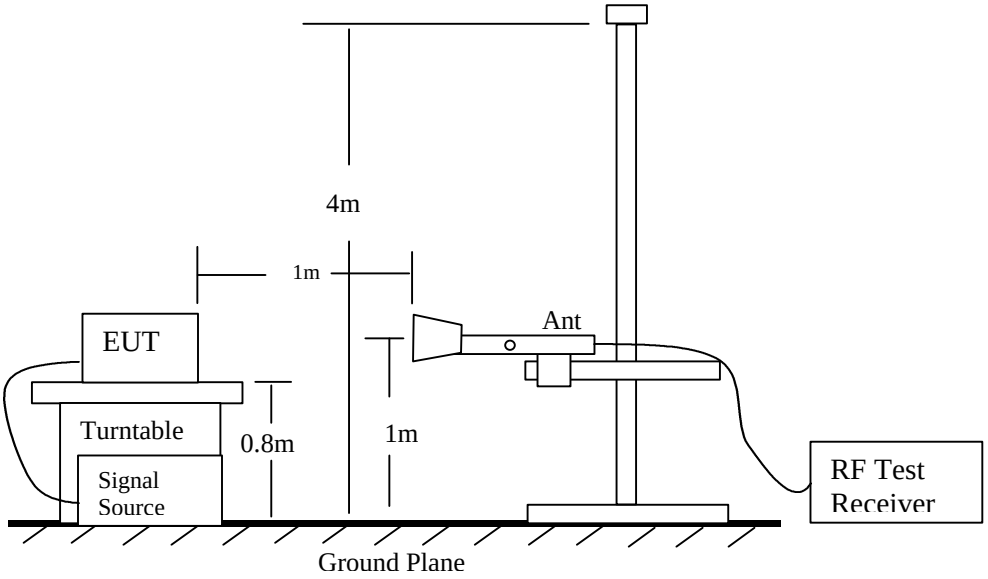
INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	SERIAL NO.	CAL. DUE DATE
Modulation Analyzer	HP	8901b	3438A05272	6/23/04
PSA Analyzer	Agilent	E446A	US42070220	1/13/04
10dB Attenuator	Agilent	8493C	59028	N/A
Universal Radio Communication Tester	R & S	CMU200	838114 / 032	11/14/03
Bilog Antenna	A.R.A.	LPB 2520/A	1185	3/6/04
Tune Dipole	ETS	DB-4	1629	5/14/04
Tx Horn Antenna	EMCO	3115	6739	2/4/2004
Rx Horn Antenna	EMCO	3115	6717	2/4/2004
Amplifier	MITEQ	NSP2600-SP	924342	4/25/2004
HPF	MICROLAB	FH-2400H	N/A	N/A

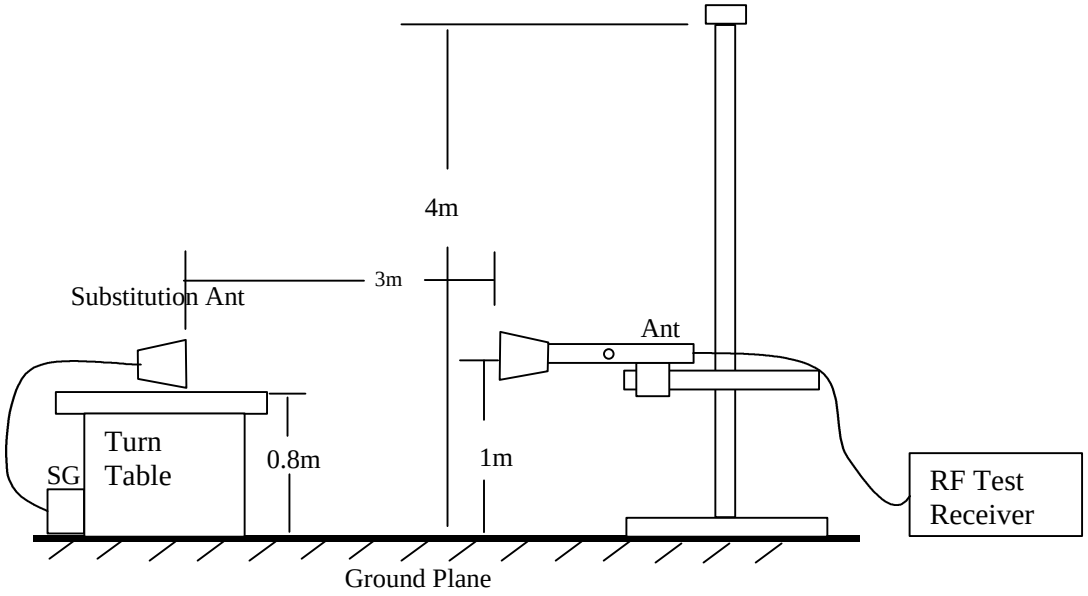
Detector Function Setting of Test Receiver

Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
Above 1000	☒ Peak ☐ Average	☒ 1 MHz ☐ 1 MHz	☒ 1 MHz ☐ 10 Hz

TEST SETUP



Radiated Emission Measurement



Radiated Emission – Substitution Method set-up

TEST PROCEDURE

1). On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.
2). The test antenna shall be oriented initially for vertical polarization located 1m from the EUT to correspond to the frequency of the transmitter.
3). The output of the test antenna shall be connected to the measuring receiver and either a peak or average detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
4). The transmitter shall be switched on, if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
5). The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
6). The transmitter shall than be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
7). The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.
8). The maximum signal level detected by the measuring receiver shall be noted.
9). The transmitter shall be replaced by a substitution antenna.
10). The substitution antenna shall be oriented for vertical polarization.
11). The substitution antenna shall be connected to a calibrated signal generator.
12). If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
13). The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
14). The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
15). The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
16). The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.
17). The measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for the gain of the substitution antenna if necessary.

MEASUREMENT RESULT

No non-compliance noted, as shown below

Harmonics & Spurious Emissions: Low, Mid, & High Channels:

07/20/03 **High Frequency Substitution Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr:James Lee
Project #:03U2120-1
Company:7 Layer
EUT Descrip.:Tri-Band Phone(1900,900,1800MHz)
EUT M/N:MX-5020
Test Target:FCC 24 Certification
Mode Oper:PCS mode

Test Equipment:

EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz	Limit
T73; S/N: 6717 @3n	T87 Miteq 924342	Agilent E4446A Analyzer		FCC 24

Hi Frequency Cables: ☐ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☑ (12 ft)

Peak Measurements:

Fundamental:	Bandedge:	Spurious
RBW>99% or 26dB Emissions BW	RBW=>1% Emissions BW	RBW=1MHz
VBW=RBW	VBW=> 3*RBW	VBW=1MHz

f GHz	SA reading (dBm)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
3.700	76.6	-32.9	2.2	9.5	7.3	-25.6	-13.0	-12.6	H
5.550	77.9	-30.6	2.8	11.3	9.1	-22.1	-13.0	-9.1	H
7.400	73.6	-32.4	3.2	11.5	9.3	-24.1	-13.0	-11.1	H
9.250	66.4	-34.7	3.7	11.4	9.2	-27.0	-13.0	-14.0	H
11.100	64.3	-35.2	3.9	12.8	10.7	-26.3	-13.0	-13.3	H
12.950	61.8	-38.6	3.7	12.3	10.2	-30.0	-13.0	-17.0	H
14.800	60.4	-39.0	4.6	12.7	10.5	-30.9	-13.0	-17.9	H
16.650	56.9	-44.4	4.5	14.1	12.0	-34.8	-13.0	-21.8	H, Noise Floor
3.700	75.9	-33.4	2.2	9.5	7.3	-26.1	-13.0	-13.1	V
5.550	77.8	-31.0	2.8	11.3	9.1	-22.5	-13.0	-9.5	V
7.400	73.3	-33.0	3.2	11.5	9.3	-24.8	-13.0	-11.8	V
9.250	66.0	-36.6	3.7	11.4	9.2	-29.0	-13.0	-16.0	V
11.100	64.9	-34.4	3.9	12.8	10.7	-25.5	-13.0	-12.5	V
12.950	60.9	-41.1	3.7	12.3	10.2	-32.5	-13.0	-19.5	V
14.800	62.2	-37.5	4.6	12.7	10.5	-29.4	-13.0	-16.4	V
16.650	56.9	-44.8	4.5	14.1	12.0	-35.2	-13.0	-22.2	V, Noise Floor
3.760	76.0	-31.1	2.2	9.5	7.4	-23.8	-13.0	-10.8	H
5.640	80.9	-25.4	2.9	11.3	9.2	-16.9	-13.0	-3.9	H
7.520	73.7	-29.2	3.3	11.4	9.3	-21.0	-13.0	-8.0	H
9.400	63.1	-35.4	3.7	11.6	9.5	-27.6	-13.0	-14.6	H
11.280	63.5	-34.2	3.9	12.8	10.6	-25.4	-13.0	-12.4	H
13.160	61.3	-37.1	3.9	12.2	10.1	-28.8	-13.0	-15.8	H
15.040	60.6	-36.4	4.7	13.1	10.9	-28.0	-13.0	-15.0	H
16.920	55.4	-42.3	4.3	13.4	11.3	-33.1	-13.0	-20.1	H, Noise Floor
3.760	74.6	-34.5	2.2	9.5	7.4	-27.2	-13.0	-14.2	V
5.640	77.8	-31.0	2.9	11.3	9.2	-22.5	-13.0	-9.5	V
7.520	73.1	-32.9	3.3	11.4	9.3	-24.7	-13.0	-11.7	V
9.400	63.6	-38.5	3.7	11.6	9.5	-30.7	-13.0	-17.7	V
11.280	61.5	-38.1	3.9	12.8	10.6	-29.3	-13.0	-16.3	V
13.160	62.9	-39.2	3.9	12.2	10.1	-30.9	-13.0	-17.9	V
15.040	60.5	-38.8	4.7	13.1	10.9	-30.4	-13.0	-17.4	V
16.920	54.2	-46.1	4.3	13.4	11.3	-37.0	-13.0	-24.0	V, Noise Floor
3.820	74.6	-32.3	2.2	9.5	7.4	-25.0	-13.0	-12.0	H
5.730	80.8	-25.5	2.9	11.4	9.2	-17.0	-13.0	-4.0	H
7.640	75.9	-26.7	3.3	11.4	9.3	-18.6	-13.0	-5.6	H
9.550	66.7	-31.4	3.8	11.8	9.7	-23.3	-13.0	-10.3	H
11.460	65.0	-33.2	3.9	12.7	10.6	-24.4	-13.0	-11.4	H
13.370	67.1	-31.5	4.1	12.1	9.9	-23.5	-13.0	-10.5	H
15.280	68.1	-30.2	4.8	13.7	11.6	-21.3	-13.0	-8.3	H
17.190	61.1	-35.0	4.1	12.5	10.4	-26.6	-13.0	-13.6	H, Noise Floor
3.820	72.8	-36.2	2.2	9.5	7.4	-28.9	-13.0	-15.9	V
5.730	78.3	-30.4	2.9	11.4	9.2	-21.9	-13.0	-8.9	V
7.640	72.9	-32.8	3.3	11.4	9.3	-24.7	-13.0	-11.7	V
9.550	66.8	-34.8	3.8	11.8	9.7	-26.8	-13.0	-13.8	V
11.460	65.6	-34.3	3.9	12.7	10.6	-25.5	-13.0	-12.5	V

7.6. SECTION 2.1055: FREQUENCY STABILITY

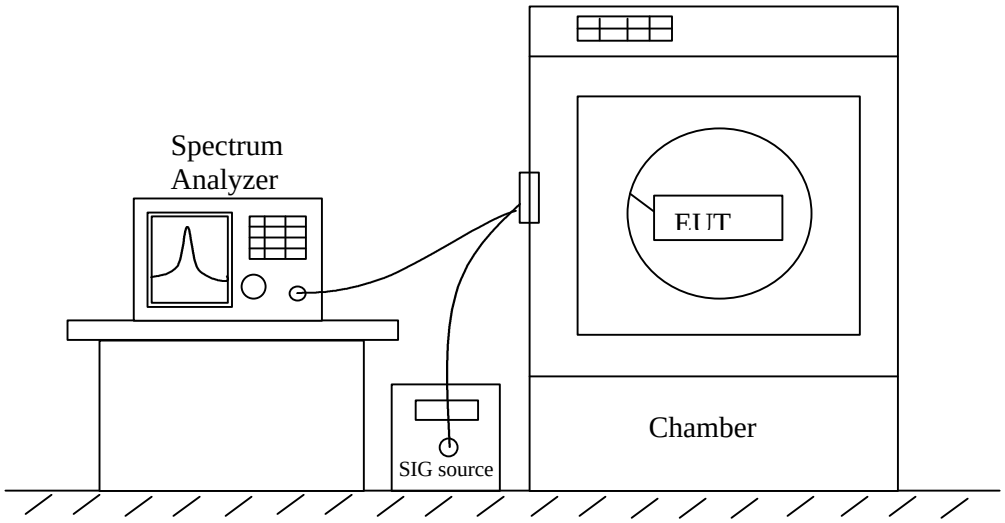
INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	SERIAL NO.	CAL. DUE DATE
Modulation Analyzer	HP	8901b	3438A05272	6/23/04
PSA Analyzer	Agilent	E446A	US42070220	1/13/04
Audio Signal Generator	HP	3325A	2652A24749	5/8/04
Environmental Chamber	Thermotron	SE 600-10-10	2980	4/23/04
Universal Radio Communication Tester	R & S	CMU200	838114 / 032	11/14/03
40dB Attenuator	Amplifier Research	DC7144A	305089	N/A
DC Power Supply	Kenwood	PA36-3A	7060074	N/A

Detector Function Setting of Test Receiver

Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
Above 1000	Peak	300 Hz	300 Hz

TEST SETUP



Frequency Stability Setup

TEST PROCEDURE

- **Frequency stability versus environmental temperature**

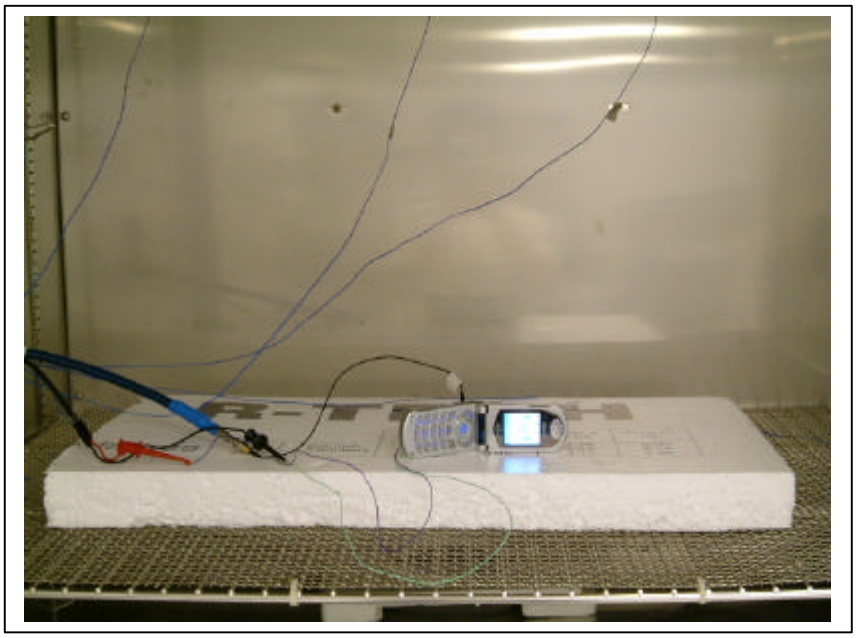
1). Setup the configuration per figure 6 for frequencies measurement inside the environmental chamber. Set the temperature of the chamber to 25°C. Set SA Resolution Bandwidth low enough to obtain the desired frequency resolution and measure the EUT 25°C operating frequency as reference frequency.
2). Turn EUT off and set Chamber temperature to -30°C.
3). Allow sufficient time (approximately 20 to 30 minus after chamber reach the assigned temperature) for EUT to stabilize. Turn on EUT and measure the EUT operating frequency. Turn off EUT after the measurement.
4). Repeat step 3 with a 10°C increased per stage until the highest temperature of +50°C reached, record all measured frequencies on each temperature step.

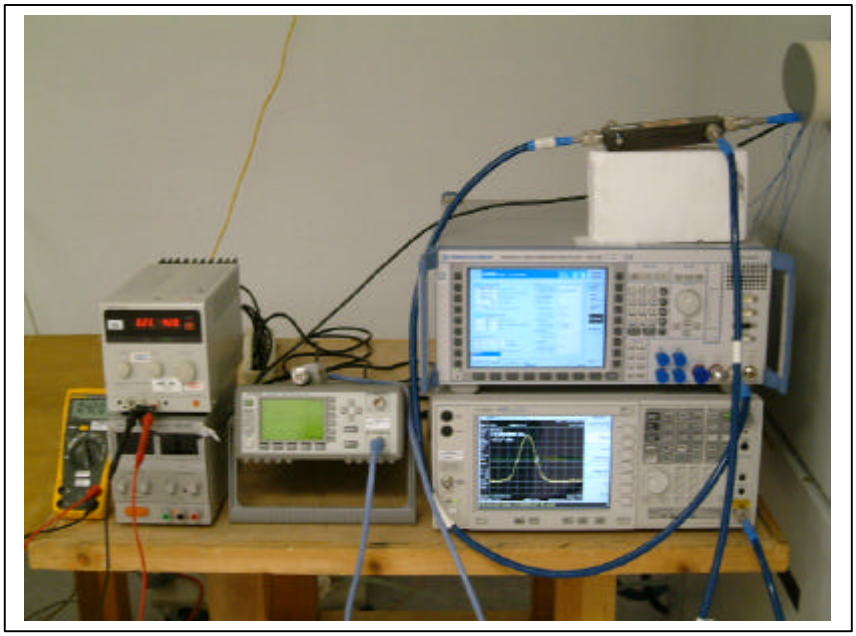
- **Frequency stability versus AC input voltage**

1). Setup the configuration per figure 6 and set chamber temperature to 25°C. Use a variable AC power supply to power the EUT and set AC output voltage to EUT nominal input AC voltage. Set SA Resolution Bandwidth low enough to obtain the desired frequency resolution and measure the EUT 25°C operating frequency as reference frequency.
2). Slowly reduce the EUT input voltage to specified extreme voltage variation (±15%) and record the maximum frequency change.

MEASUREMENT RESULT

No non-compliance noted, as shown below.





Reference Frequency: PCS Mid Channel 1879.99993MHz @ 25°C Limit: to stay ± 2.5 ppm = 4700.000 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measureed with Time Elapse (MHz)	Delta (ppm)	Limit (ppm)
4.20	50	1880.00008	-0.005	± 2.5
4.20	40	1880.00007	-0.003	± 2.5
4.20	30	1880.00007	0.000	± 2.5
4.20	***25***	**1880.00007**	***0***	***± 2.5***
4.20	20	1880.00008	-0.008	± 2.5
4.20	10	1880.00008	-0.007	± 2.5
4.20	0	1880.00007	-0.003	± 2.5
4.20	-10	1880.00007	-0.004	± 2.5
4.20	-20	1880.00006	0.003	± 2.5
4.20	-30	1880.00007	0.001	± 2.5
3.27(end point)	25	1879.99927	0.426	± 2.5
4.83	25	1879.99992	0.079	± 2.5

8. APENDIX

8.1. EXTERNAL & INTERNAL PHOTOS

8.2. SCHEMATICS

8.3. BLOCK DIAGRAM

8.4. USER MANUAL

END OF REPORT