



FCC Test Report

FCC Part 22, 24 / RSS 129, 133

SONY Corporation

Notebook PC

Model Number: PCG-4R1L

FCC ID: AK8PCG4R1L

IC-ID: 409B-PCG4R1L

TEST REPORT #: EMC_SONYE_029_08001_FCC22_24_PCG4R1L
DATE: 2008-11-05



FCC listed:
A2LA accredited

IC recognized #
3462B

CETECOM Inc.

411 Dixon Landing Road ♦ Milpitas, CA 95035 ♦ U.S.A.

Phone: + 1 (408) 586 6200 ♦ Fax: + 1 (408) 586 6299 ♦ E-mail: info@cetecomusa.com ♦ <http://www.cetecom.com>

CETECOM Inc. is a Delaware Corporation with Corporation number: 2113686

Board of Directors: Dr. Harald Ansorge, Dr. Klaus Matkey, Hans Peter May

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1 Assessment

The following is in compliance with the applicable criteria specified in FCC rules Parts 2, 22 and 24 of Title 47 of the Code of Federal Regulations and in compliance with the applicable criteria specified in Industry Canada rules RSS129 and RSS133.

Company	Description	Model #
SONY Corporation	Notebook PC	PCQ-4R1L

Technical responsibility for area of testing:

Lothar Schmidt
(Director Regulatory and
Antenna Services)

2008-11-05 EMC & Radio

Date	Section	Name	Signature
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This report is prepared by:

Peter Mu
(EMC Project Engineer)

2008-11-05 EMC & Radio

Date	Section	Name	Signature
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The test results of this test report relate exclusively to the test item specified in Identification of the Equipment under Test. The CETECOM Inc. USA does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM Inc USA.

2 Administrative Data

2.1 Identification of the Testing Laboratory

Company Name:	CETECOM Inc.
Department:	EMC
Address:	411 Dixon Landing Road Milpitas, CA 95035 U.S.A.
Telephone:	+1 (408) 586 6200
Fax:	+1 (408) 586 6299
Responsible Test Lab Manager:	Lothar Schmidt

2.2 Identification of the Client

Applicant's Name:	SONY Corporation
Address:	1-7-1 Konan, Minato-ku, Tokyo 108-0075, Japan
Contact Person:	Michio Kobayashi
Phone No.	+81-263-72-5696
Fax:	+81-263-72-9755
e-mail:	Michio.Kobayashi@jp.sony.com

2.3 Identification of the Manufacturer

MANUFACTURER (If different from Applicant)	
Applicant (Firm Name):	Sony EMCS Corporation
Contact Person:	Michio Kobayashi
Telephone:	+81-263-72-5696
Fax:	+81-263-72-9755
Address Line 1:	5432 Toyoshima,
City:	Azumino-shi, Nagano
Postal Code:	399-8282,
Country:	Japan
e-mail:	Michio.Kobayashi@jp.sony.com

3 Equipment under Test (EUT)

3.1 Specification of the Equipment under Test

Product Type	Notebook PC
Marketing Name:	PCG-4R1L
Model No:	PCG-4R1L
FCC-ID:	AK8PCG4R1L
IC-ID :	409B-PCG4R1L
Frequency Range:	824.7 MHz to 848.31 MHz & 1851.25 MHz to 1908.75 MHz
Type(s) of Modulation:	CDMA
Antenna Type:	PIFA: 0.51dBi peak in 850 band, 0.11dBi peak in 1900 band
	Conducted:
	CDMA Cellular: 24.89dBm (0.303W)
	CDMA PCS: 24.61dBm (0.289W)
	EVDO Cellular: 24.92dBm (0.310W)
	EVDO PCS: 24.56dBm (0.286W)
Output Power	Radiated:
	CDMA Cellular: 22.64dBm (0.184W) ERP
	CDMA PCS: 26.31dBm (0.428W) EIRP
	EVDO Cellular: 22.49dBm (0.177W) ERP
	EVDO PCS: 26.6dBm (0.457W) EIRP

4 Subject of Investigation

All testing was performed on the EUT listed in Section 3. The EUT was maximized in the X, Y, Z positions, all data in this report shows the worst case between horizontal and vertical polarization for above 1GHz.

The objective of the measurements done by Cetecom Inc. was to measure the performance of the EUT as specified by requirements listed in FCC rules Parts 2, 22 and 24 of Title 47 of the Code of Federal Regulations. The maximization of portable equipment is conducted in accordance with ANSI C63.4.

5 Measurements

5.1 RF Power Output

5.1.1 FCC 2.1046 Measurements required: RF power output.

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 circuit elements as specified. The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.

5.1.2 Limits:

5.1.2.1 FCC 22.913 (a) Effective radiated power limits.

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

5.1.2.2 FCC 24.232 (b)(c) Power limits.

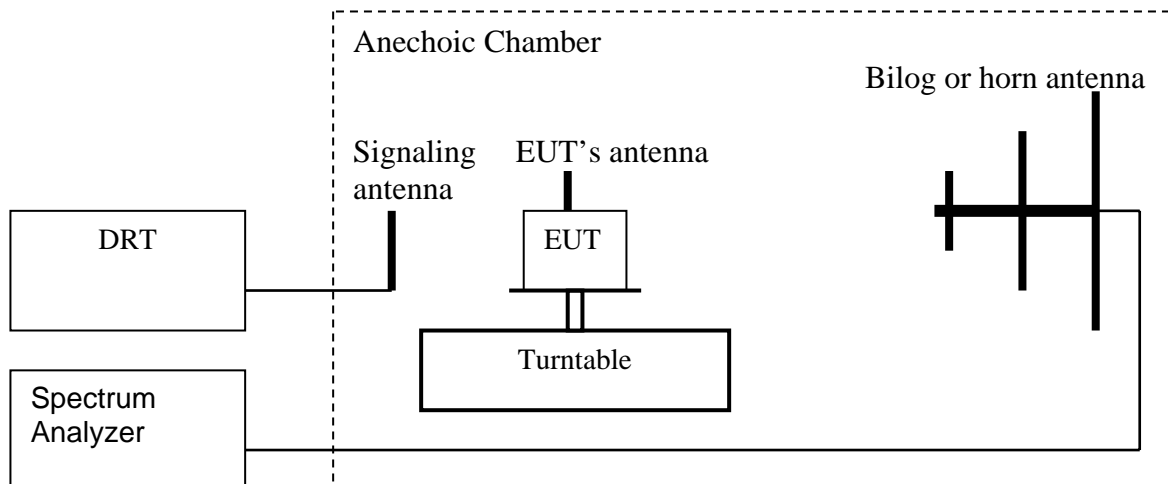
(b) Mobile/portable stations are limited to 2 Watts effective isotropic radiated power (EIRP).

(c) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms equivalent voltage. The measurement results shall be properly adjusted for any limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement over the full bandwidth of the channel.

5.1.3 Radiated Output Power measurement procedure:

Based on TIA-603C 2004

2.2.17.2 Effective Radiated Power (ERP) or Effective Isotropic Radiated Power (EIRP)



1. Connect the equipment as shown in the above diagram with the EUT's antenna in a vertical orientation.

2. Adjust the settings of the Digital Radiocommunication Tester (DRT) to set the EUT to its maximum power at the required channel.
 3. Set the spectrum analyzer to the channel frequency. Set the analyzer to measure peak hold with the required settings.
 4. Rotate the EUT 360°. Record the peak level in dBm (**LVL**).
 5. Replace the EUT with a vertically polarized half wave dipole or known gain antenna. The center of the antenna should be at the same location as the center of the EUT's antenna.
 6. Connect the antenna to a signal generator with known output power and record the path loss in dB (**LOSS**). **LOSS** = Generator Output Power (dBm) – Analyzer reading (dBm).
 7. Determine the ERP using the following equation:
ERP (dBm) = LVL (dBm) + LOSS (dB)
 8. Determine the EIRP using the following equation:
EIRP (dBm) = ERP (dBm) + 2.14 (dB)
 9. Measurements are to be performed with the EUT set to the low, middle and high channel of each frequency band. **Spectrum analyzer settings = rbw=vbw=3MHz**
- (note: Steps 5 and 6 above are performed prior to testing and **LOSS** is recorded by test software. Steps 3, 4, 7 and 8 above are performed with test software.)

5.1.4 ERP Results 800 MHz band:

	Burst Peak ERP
	≤38.45dBm (7W)

Frequency (MHz)	Effective Radiated Power (dBm)	
	CDMA	EVDO
824.7	21.00	22.28
836.6	21.24	22.35
848.31	22.64	22.49

5.1.5 EIRP Results 1900 MHz band:

	Burst Peak EIRP
	≤33dBm (2W)

Frequency (MHz)	Equivalent Isotropic Radiated Power (dBm)	
	CDMA	EVDO
1851.25	25.36	26.01
1880.0	26.13	26.6
1908.25	26.31	26.51

**EIRP (800 band) CDMA
CHANNEL 1013**

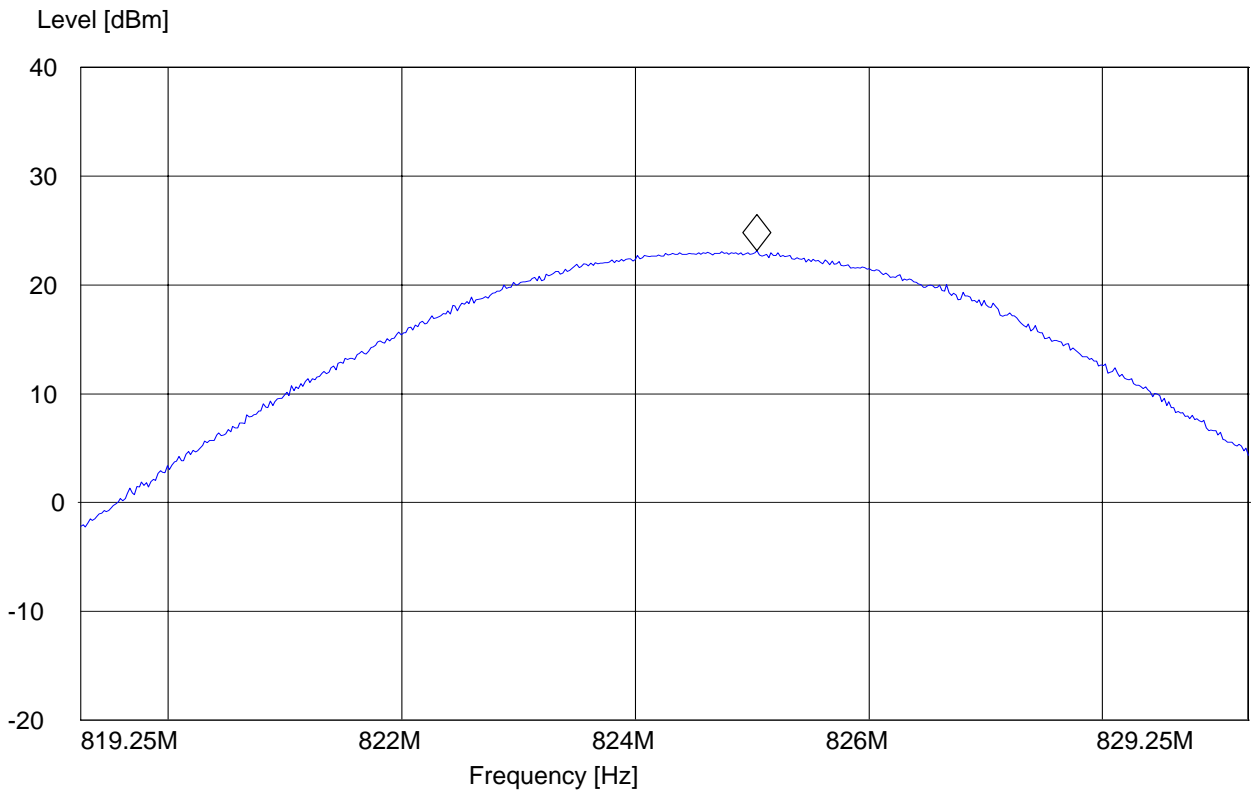
§22.913(a)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.1013
ANT Orientation: V
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "EIRP CDMA 850 CH8"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
819.3 MHz	829.3 MHz	MaxPeak	Coupled	3 MHz	DUMMY-DBM

Marker: 825.041583 MHz 23.14 dBm



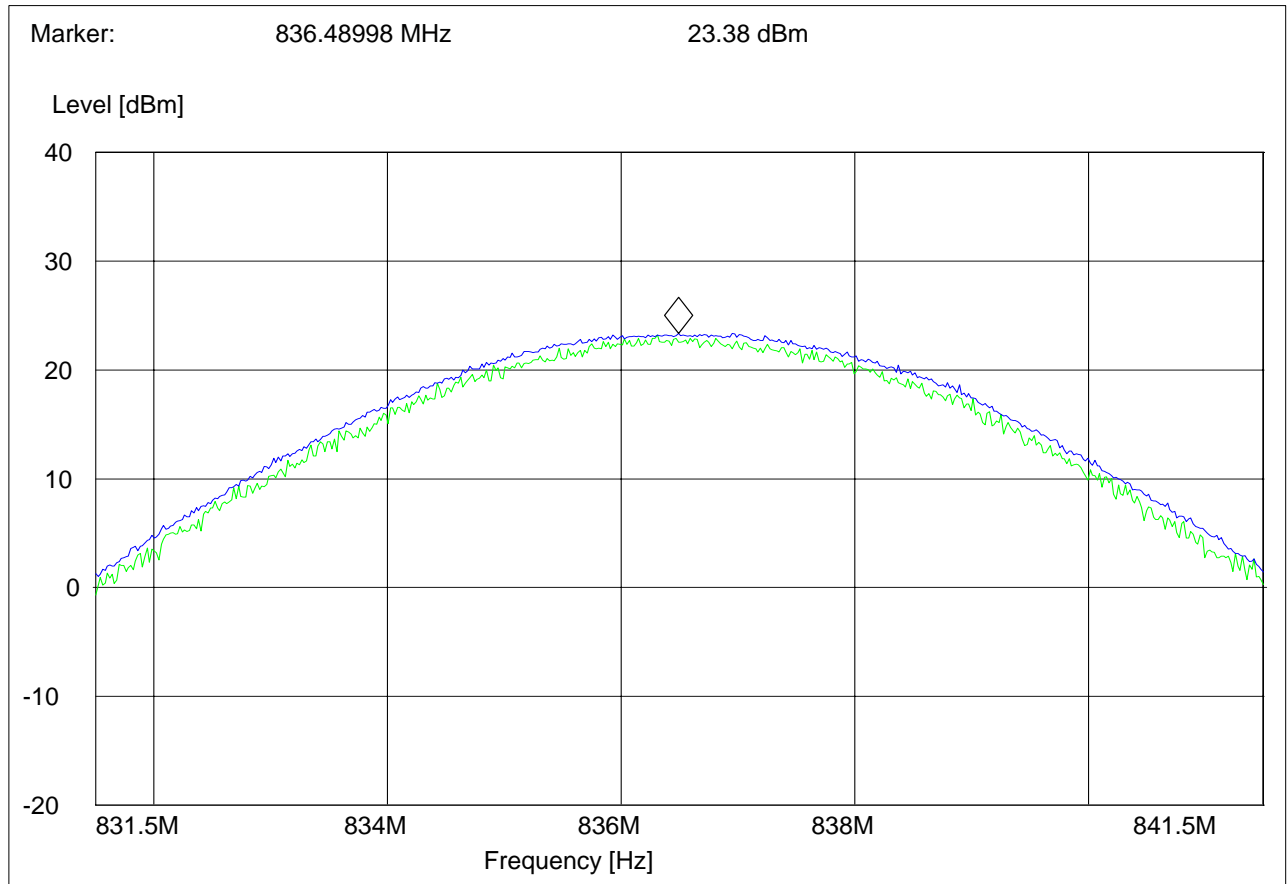
**EIRP (800 band) CDMA
CHANNEL 384**

§22.913(a)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.384
ANT Orientation: V
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "EIRP CDMA 850 CH383"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
831.5 MHz	841.5 MHz	MaxPeak MaxPeak	Coupled	3 MHz	DUMMY-DBM



**EIRP (800 band) CDMA
CHANNEL 777**

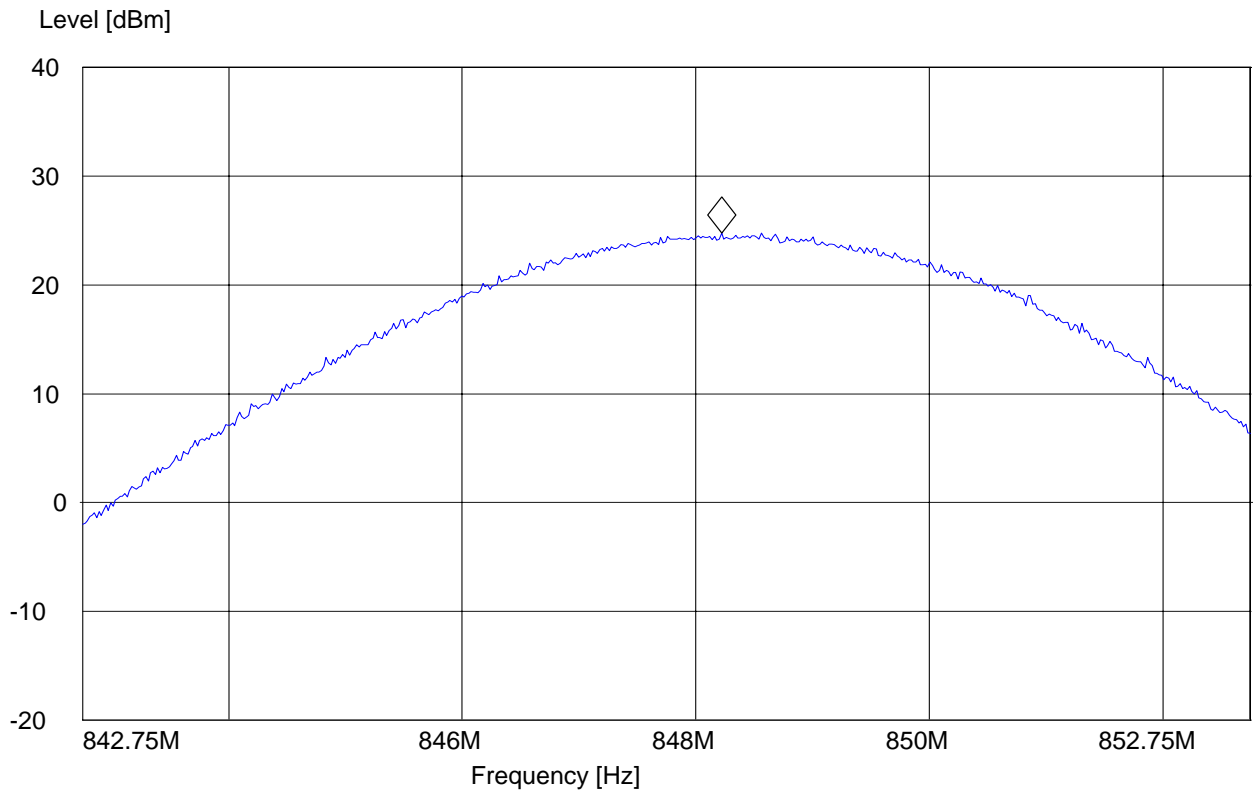
§22.913(a)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.777
ANT Orientation: V
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "EIRP CDMA 850 CH758"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
842.8 MHz	852.8 MHz	MaxPeak	Coupled	3 MHz	DUMMY-DBM

Marker: 848.220942 MHz 24.78 dBm



**EIRP (PCS-1900) CDMA
CHANNEL 25**

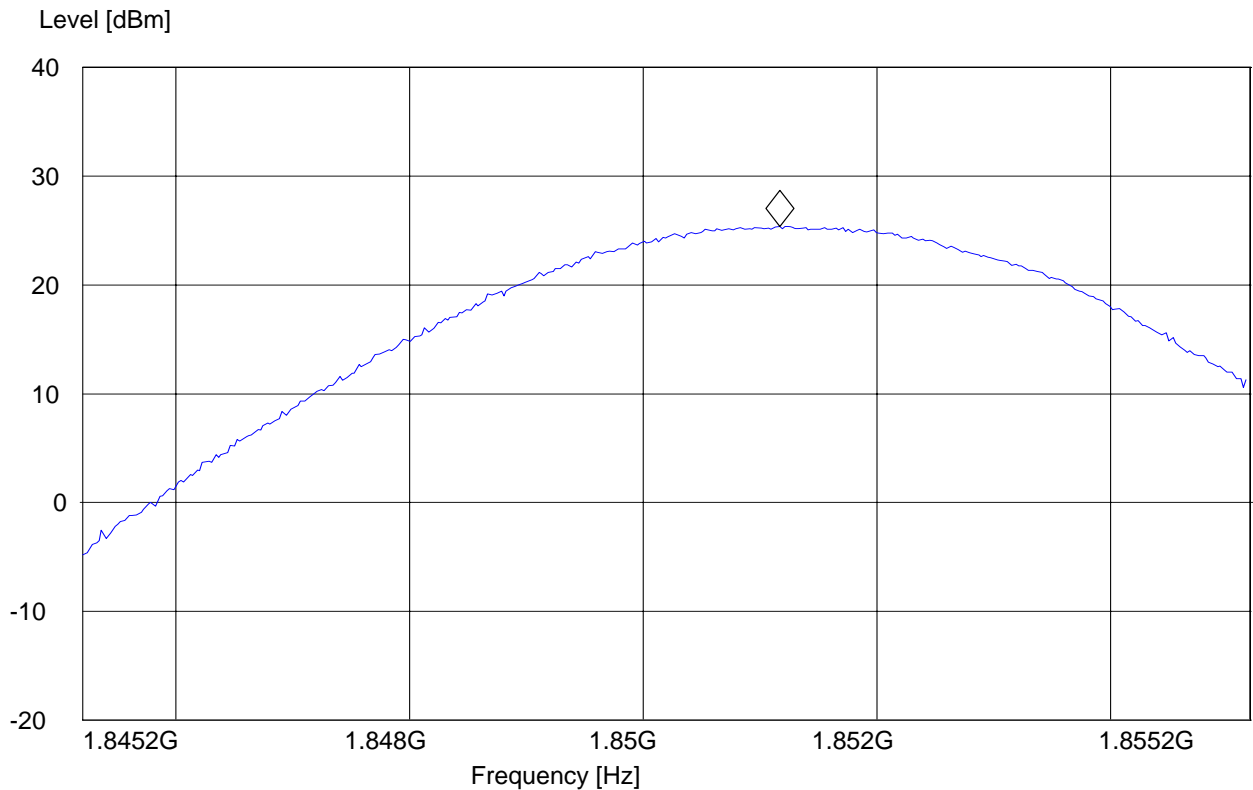
§24.232(b)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900; CH.25
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "EIRP 1900 CH512"

Short Description:		EIRP PCS 1900 for channel-512			
Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
1.8 GHz	1.9 GHz	MaxPeak	Coupled	3 MHz	DUMMY-DBM

Marker: 1.851171944 GHz 25.36 dBm



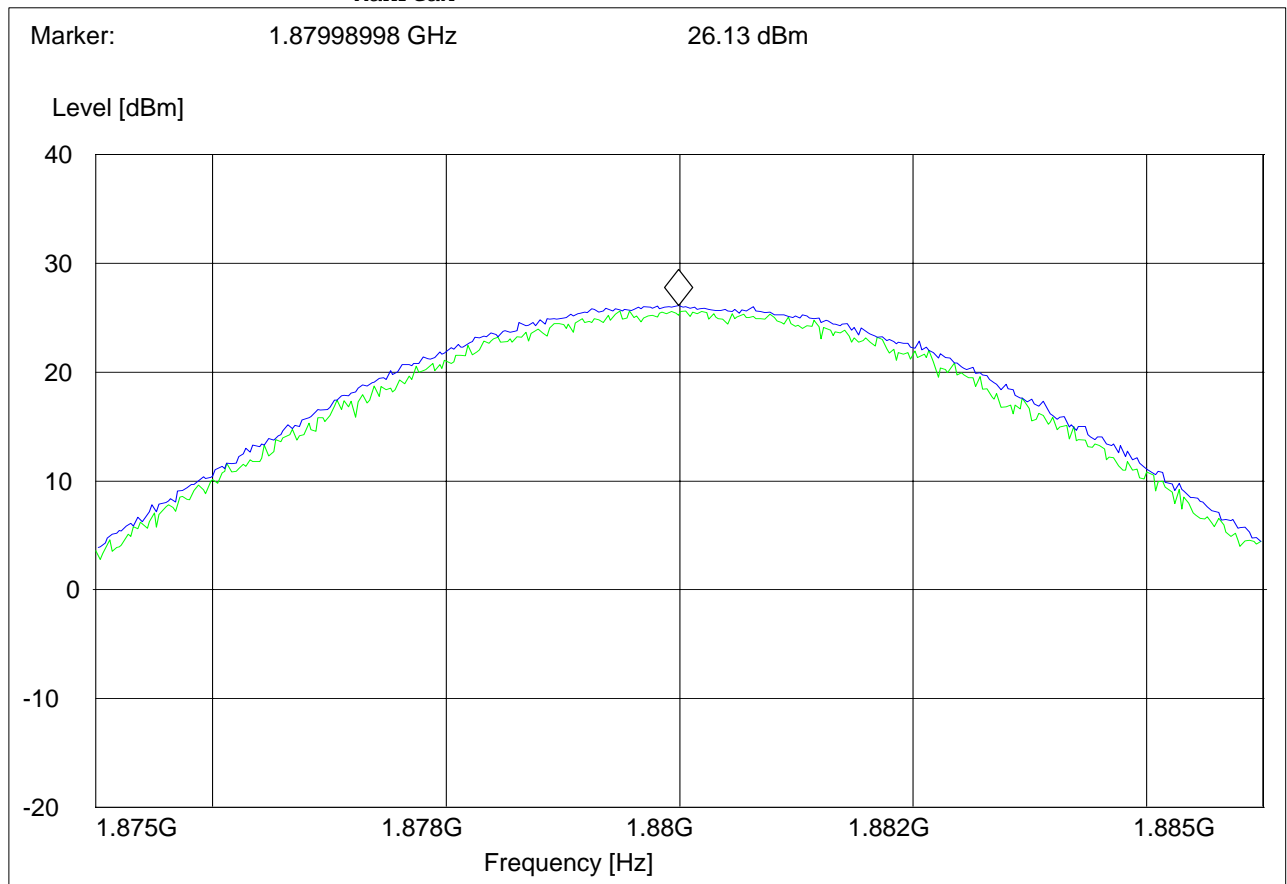
**EIRP (PCS-1900) CDMA
CHANNEL 600**

§24.232(b)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900; CH.600
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "EIRP 1900 CH661"

Short Description:		EIRP PCS 1900 for channel-661			
Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
1.9 GHz	1.9 GHz	MaxPeak	Coupled	3 MHz	DUMMY-DBM
		MaxPeak			



**EIRP (PCS-1900) CDMA
CHANNEL 1175**

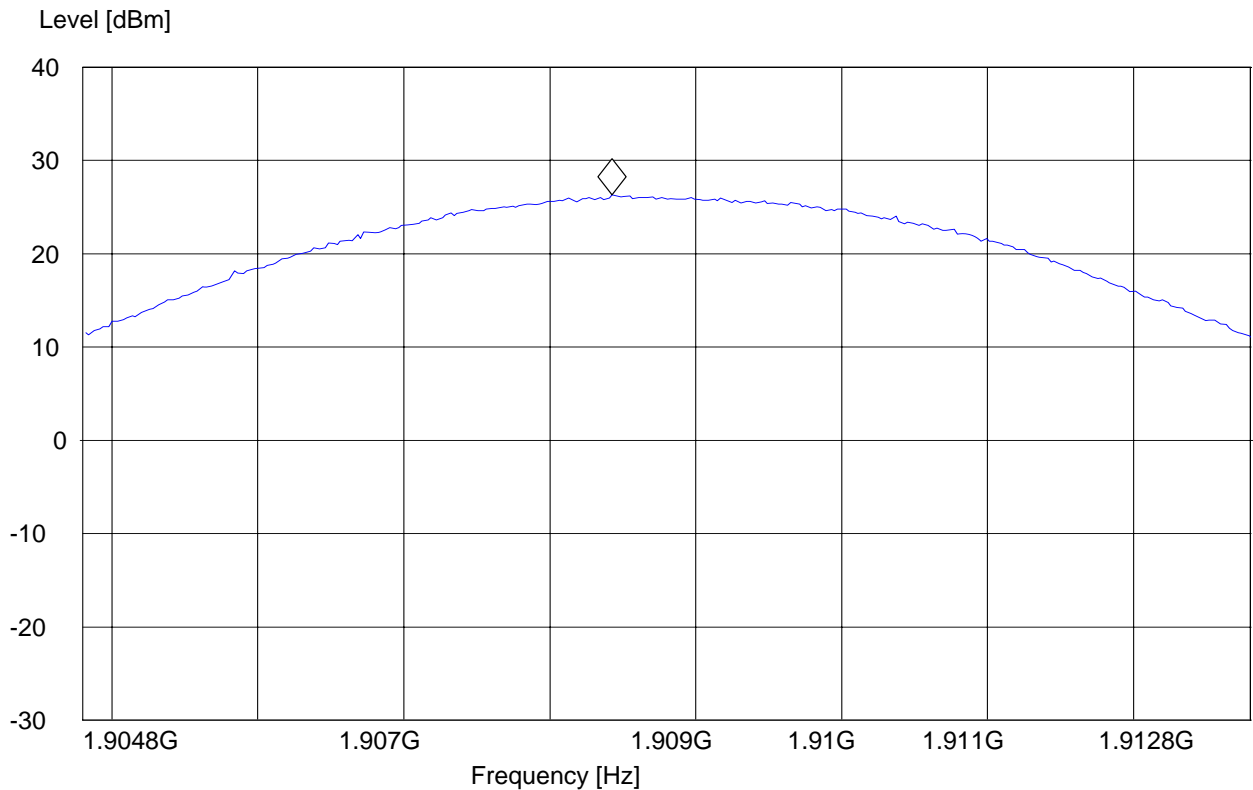
§24.232(b)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900; CH.1175
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "EIRP 1900 CH810"

Short Description:		EIRP PCS 1900 for channel-810			
Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
1.9 GHz	1.9 GHz	MaxPeak	Coupled	3 MHz	DUMMY-DBM

Marker: 1.908427255 GHz 26.31 dBm



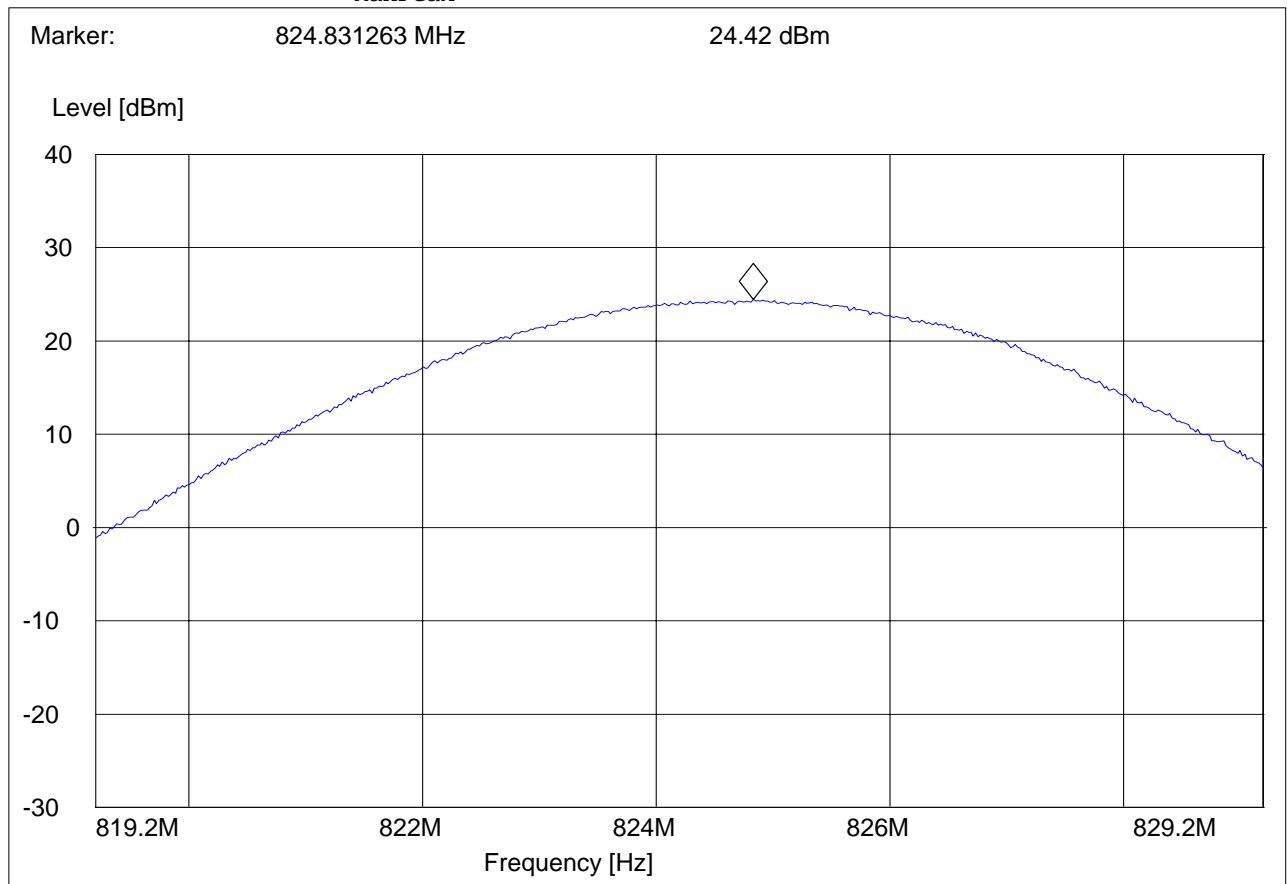
**EIRP (800 band) EVDO
CHANNEL 1013**

§22.913(a)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH1013
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "EIRP 850 CH 128 H"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
819.2 MHz	829.2 MHz	MaxPeak MaxPeak	Coupled	3 MHz	DUMMY-DBM



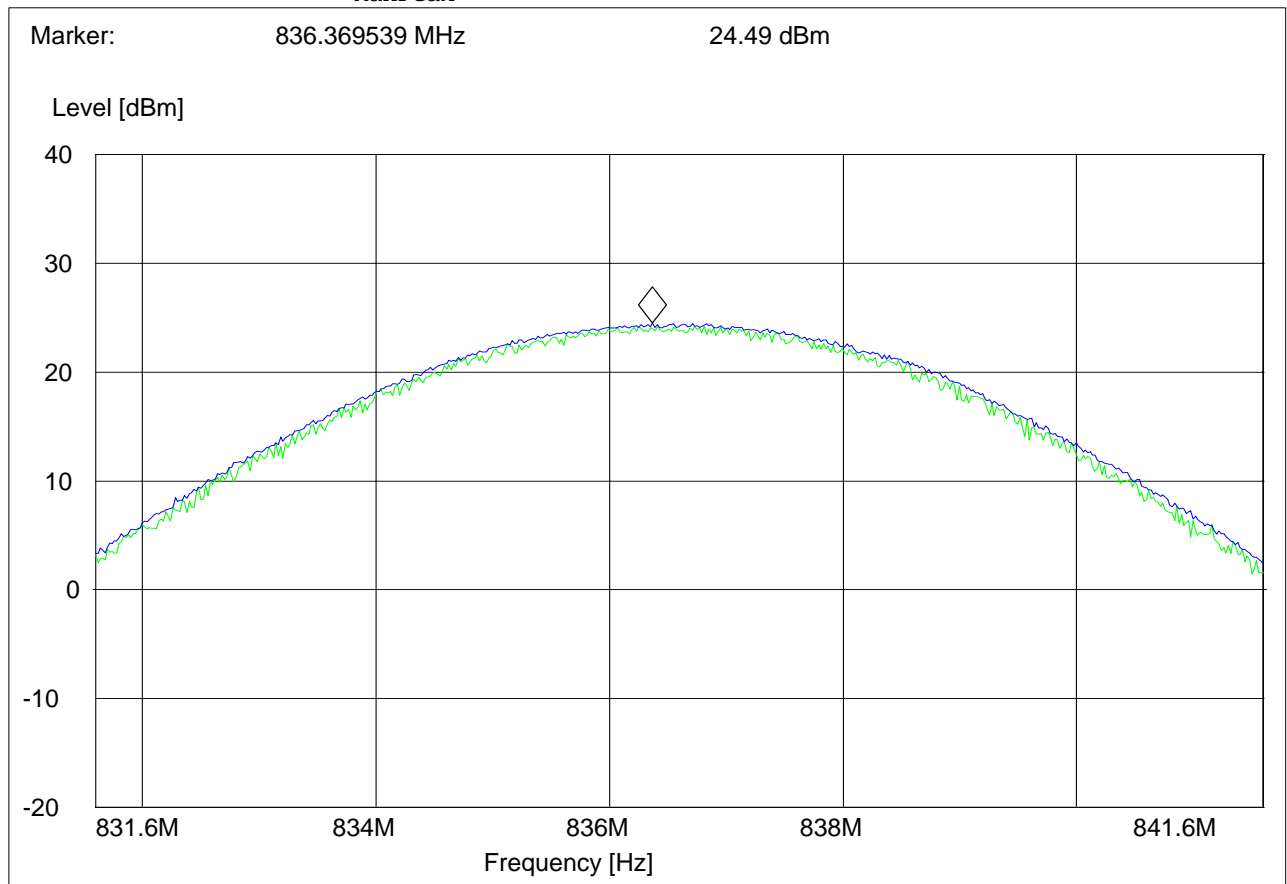
**EIRP (800 band) EVDO
CHANNEL 384**

§22.913(a)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH384
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "EIRP 850 CH 190 H"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
831.6 MHz	841.6 MHz	MaxPeak MaxPeak	Coupled	3 MHz	DUMMY-DBM



**EIRP (800 band) EVDO
CHANNEL 777**

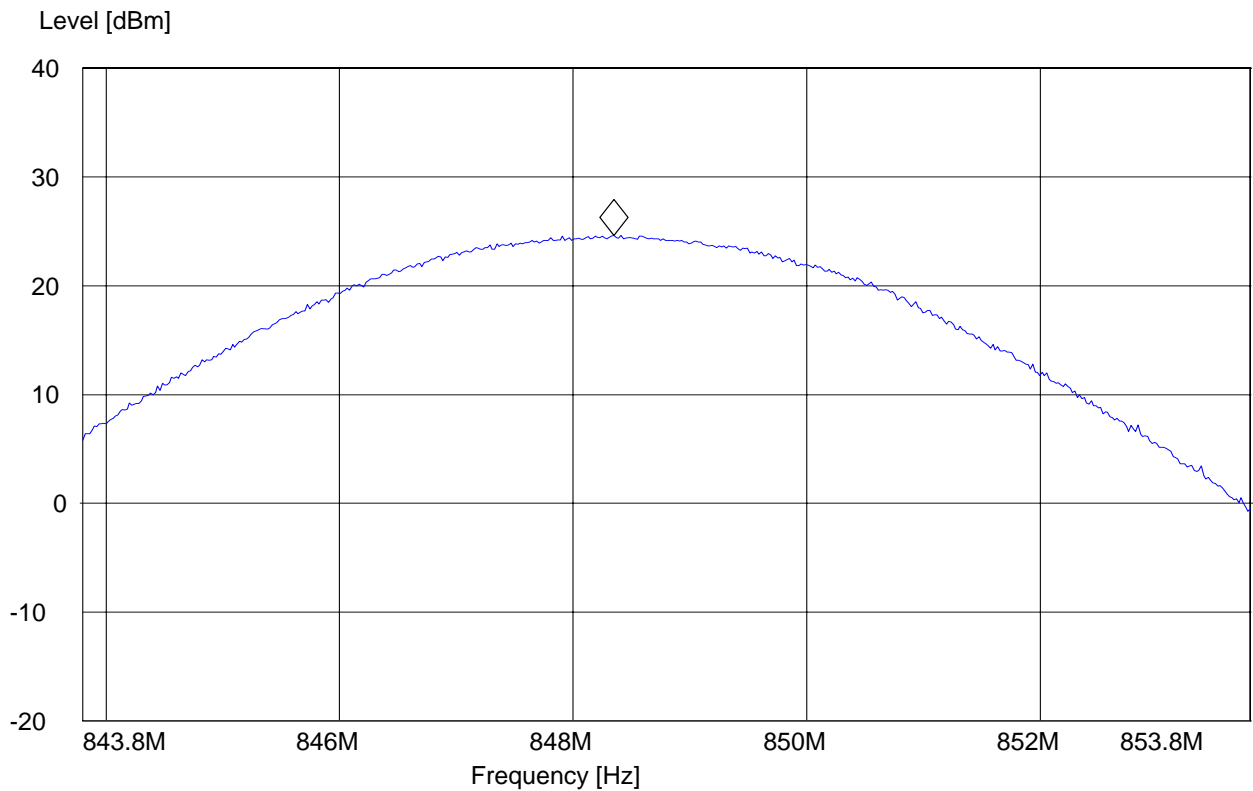
§22.913(a)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH777
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "EIRP 850 CH 251 H"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
843.8 MHz	853.8 MHz	MaxPeak	Coupled	3 MHz	DUMMY-DBM

Marker: 848.349098 MHz 24.63 dBm



**EIRP (PCS-1900) EVDO
CHANNEL 25**

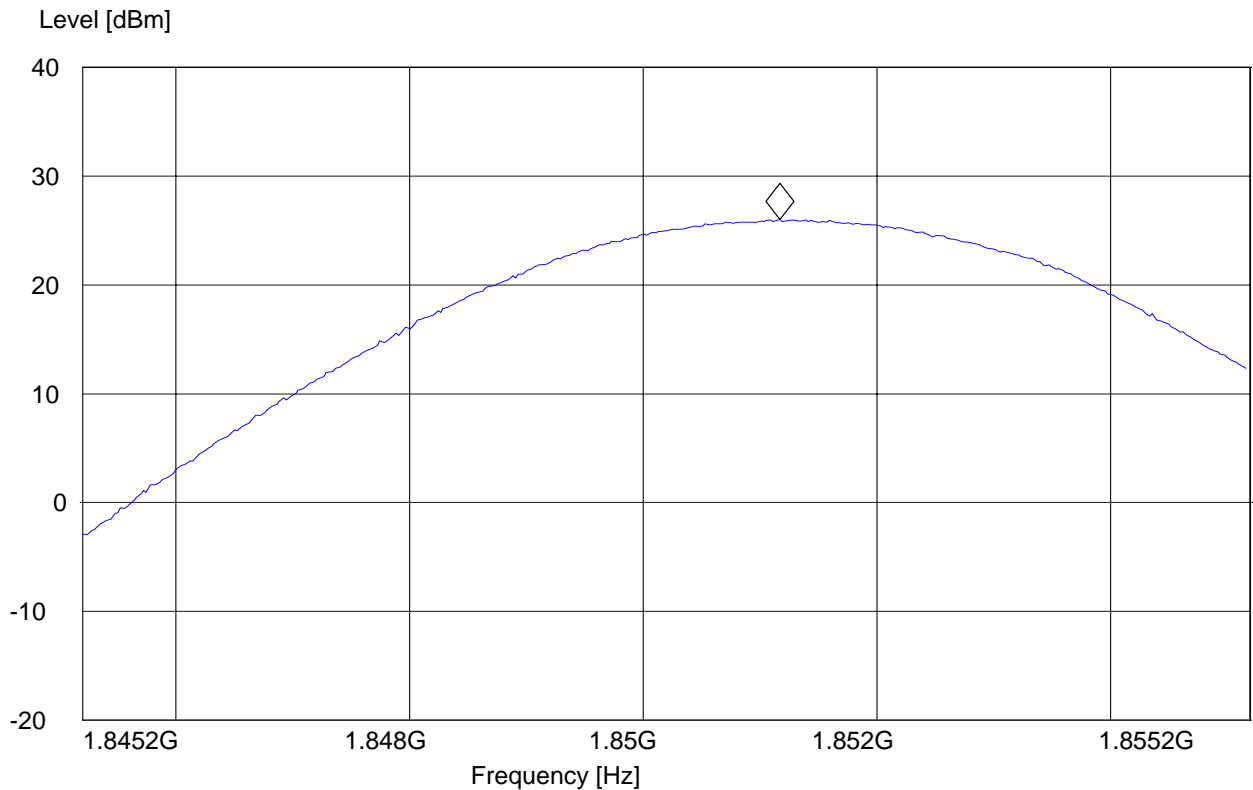
§24.232(b)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900; CH25
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "EIRP 1900 CH512"

Short Description:		EIRP PCS 1900 for channel-512			
Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
1.8 GHz	1.9 GHz	MaxPeak	Coupled	3 MHz	DUMMY-DBM

Marker: 1.851171944 GHz 26.01 dBm



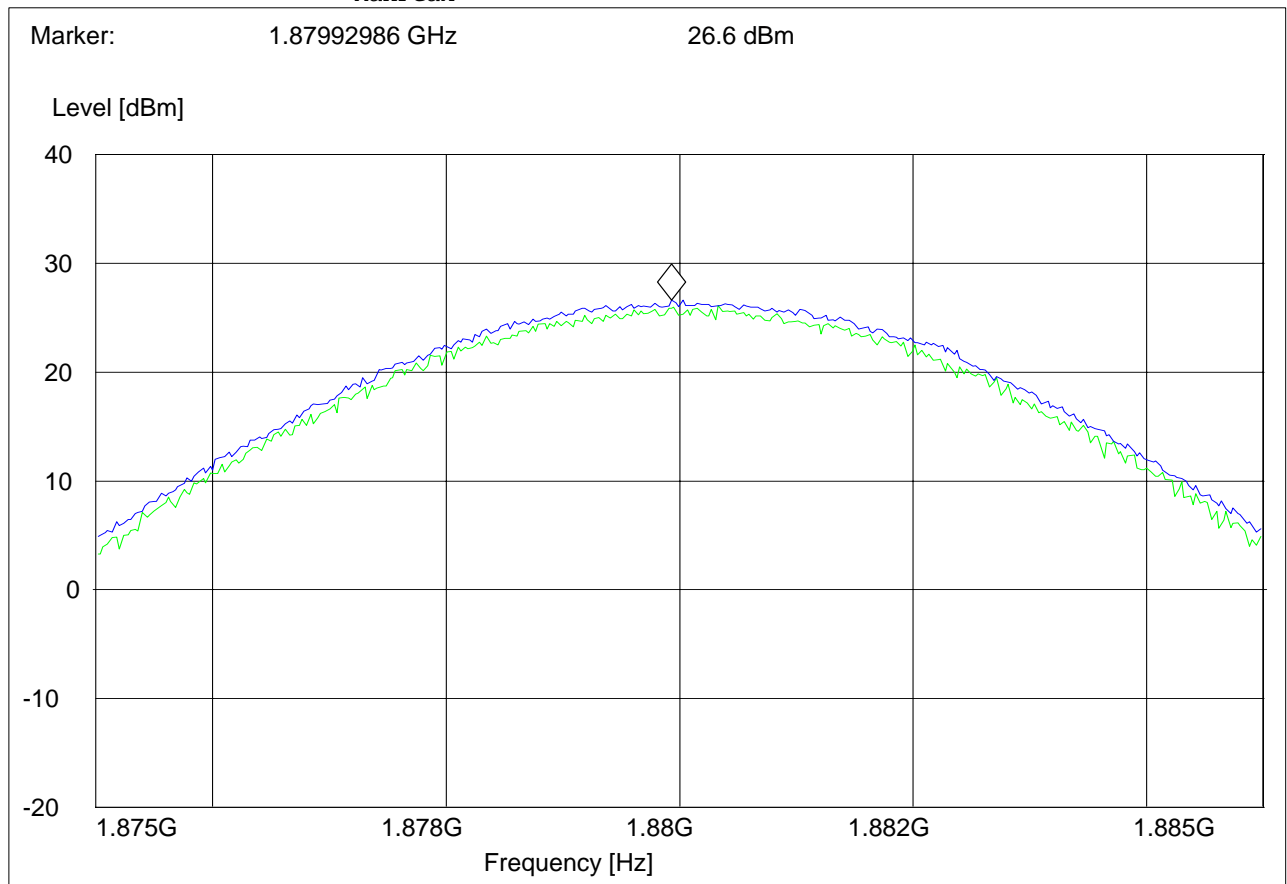
**EIRP (PCS-1900) EVDO
CHANNEL 600**

§24.232(b)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900; CH600
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "EIRP 1900 CH661"

Short Description:		EIRP PCS 1900 for channel-661			
Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
1.9 GHz	1.9 GHz	MaxPeak	Coupled	3 MHz	DUMMY-DBM
		MaxPeak			



**EIRP (PCS-1900) EVDO
CHANNEL 1175**

§24.232(b)

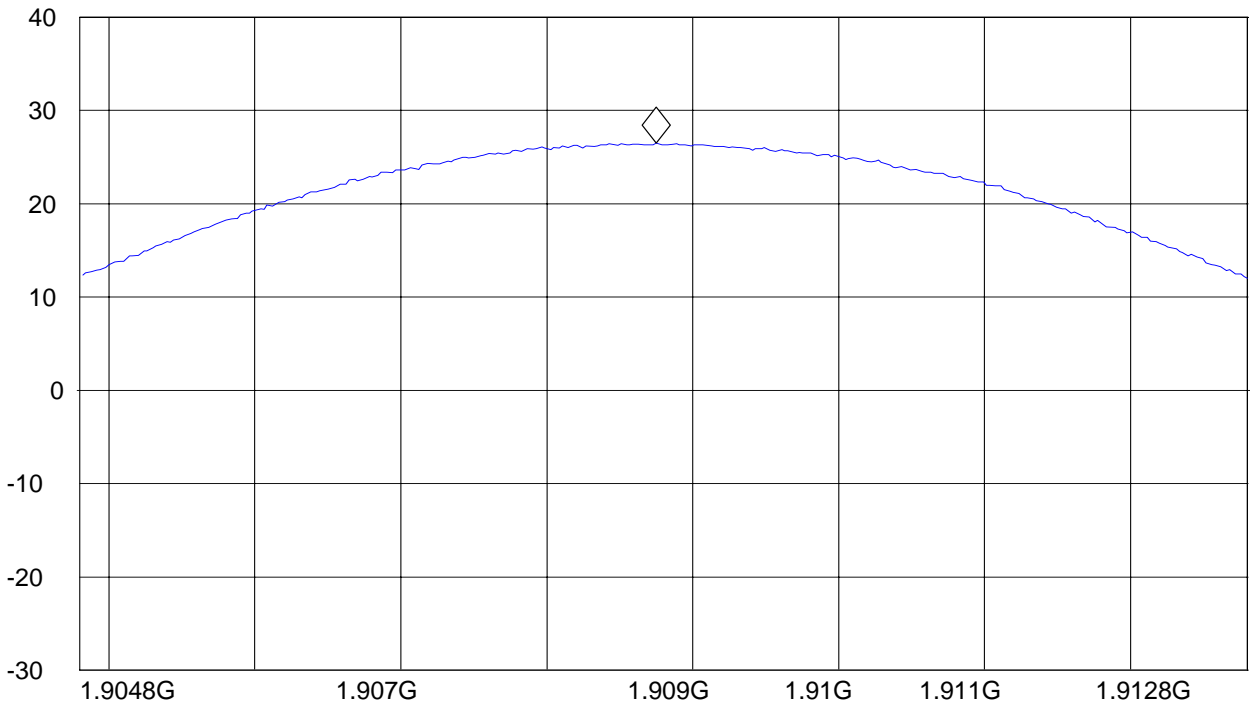
EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900; CH1175
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "EIRP 1900 CH810"

Short Description: EIRP PCS 1900 for channel-810
Start Stop Detector Meas. IF Transducer
Frequency Frequency Time Bandw.
1.9 GHz 1.9 GHz MaxPeak Coupled 3 MHz DUMMY-DBM

Marker: 1.908747896 GHz 26.51 dBm

Level [dBm]



5.2 Spurious Emissions Radiated

5.2.1 FCC 2.1053 Measurements required: Field strength of spurious radiation.

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

5.2.2 Limits:

5.2.2.1 FCC 22.917 Emission limitations for cellular equipment.

The rules in this section govern the spectral characteristics of emissions in the Cellular Radiotelephone Service.

- (a) *Out of band emissions.* 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.

- (b) *Measurement procedure.* Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (*i.e.* 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

5.2.2.2 FCC 24.238 Emission limitations for Broadband PCS equipment.

The rules in this section govern the spectral characteristics of emissions in the Broadband Personal Communications Service.

- (a) *Out of band emissions.* 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.

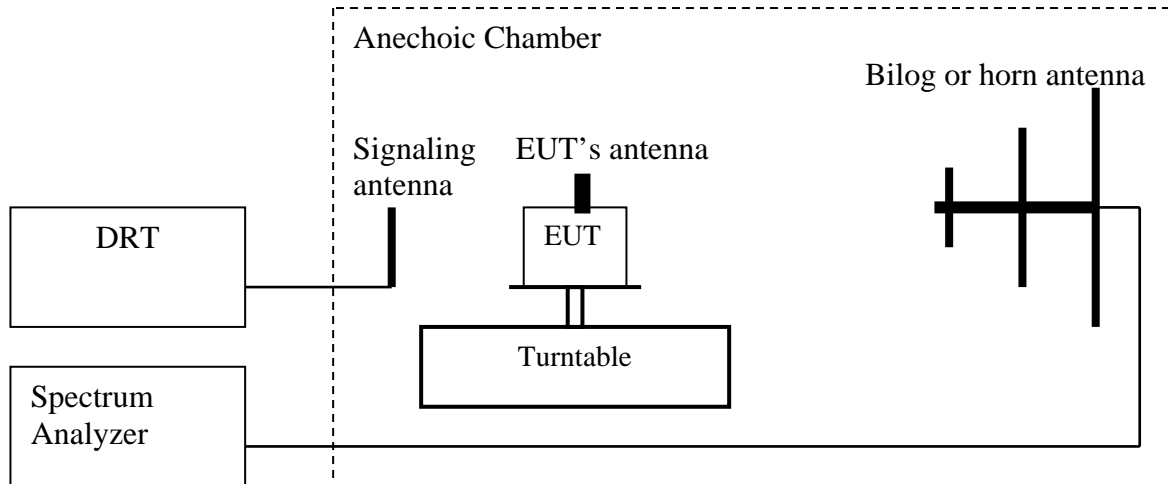
- (b) *Measurement procedure.* Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required

measurement bandwidth (*i.e.* 100 kHz of 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

5.2.3 Radiated out of band measurement procedure:

Based on TIA-603C 2004

2.2.12 Unwanted emissions: Radiated Spurious



1. Connect the equipment as shown in the above diagram with the EUT's antenna in a horizontal orientation.
2. Adjust the settings of the Digital Radiocommunication Tester (DRT) to set the EUT to its maximum power at the required channel.
3. Set the spectrum analyzer to measure peak hold with the required settings.
4. Place the measurement antenna in a horizontal orientation. Rotate the EUT 360°. Raise the measurement antenna up to 4 meters in 0.5 meters increments and rotate the EUT 360° at each height to maximize all emissions. Measure and record all spurious emissions (LVL) up to the tenth harmonic of the carrier frequency.
5. Replace the EUT with a horizontally polarized half wave dipole or known gain antenna. The center of the antenna should be at the same location as the center of the EUT's antenna.
6. Connect the antenna to a signal generator with known output power and record the path loss in dB (LOSS). $LOSS = \text{Generator Output Power (dBm)} - \text{Analyzer reading (dBm)}$.
7. Determine the level of spurious emissions using the following equation:
Spurious (dBm) = LVL (dBm) + LOSS (dB):
8. Repeat steps 4, 5 and 6 with all antennas vertically polarized.
9. Determine the level of spurious emissions using the following equation:
Spurious (dBm) = LVL (dBm) + LOSS (dB):
10. Measurements are to be performed with the EUT set to the low, middle and high channel of each frequency band.

(**note:** Steps 5 and 6 above are performed prior to testing and **LOSS** is recorded by test software. Steps 3, 4 and 7 above are performed with test software.)

Spectrum analyzer settings:

Res B/W: 1 MHz

Vid B/W: 1 MHz

Measurement Survey:

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of the GSM-850 & PCS-1900 bands. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of the GSM-850 & PCS-1900 band into any of the other blocks respectively. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this.

5.2.4 Radiated out of band emissions results on EUT:

5.2.4.1 RESULTS OF RADIATED TESTS 800: CDMA

Harmonics	Tx ch-1013 Freq. (MHz)	Level (dBm)	Tx ch-600 Freq. (MHz)	Level (dBm)	Tx ch-777 Freq. (MHz)	Level (dBm)
2	1648.4	NF	1673.2	NF	1697.6	NF
3	2472.6	NF	2509.8	NF	2546.4	NF
4	3296.8	NF	3346.4	NF	3395.2	NF
5	4121	NF	4183	NF	4244	NF
6	4945.2	NF	5019.6	NF	5092.8	NF
7	5769.4	NF	5856.2	NF	5941.6	NF
8	6593.6	NF	6692.8	NF	6790.4	NF
9	7417.8	NF	7529.4	NF	7639.2	NF
10	8242	NF	8366	NF	8488	NF
NF = NOISE FLOOR						

TX: 30MHz - 1GHz Ant Vertical

Spurious emission limit -13dBm

Note:

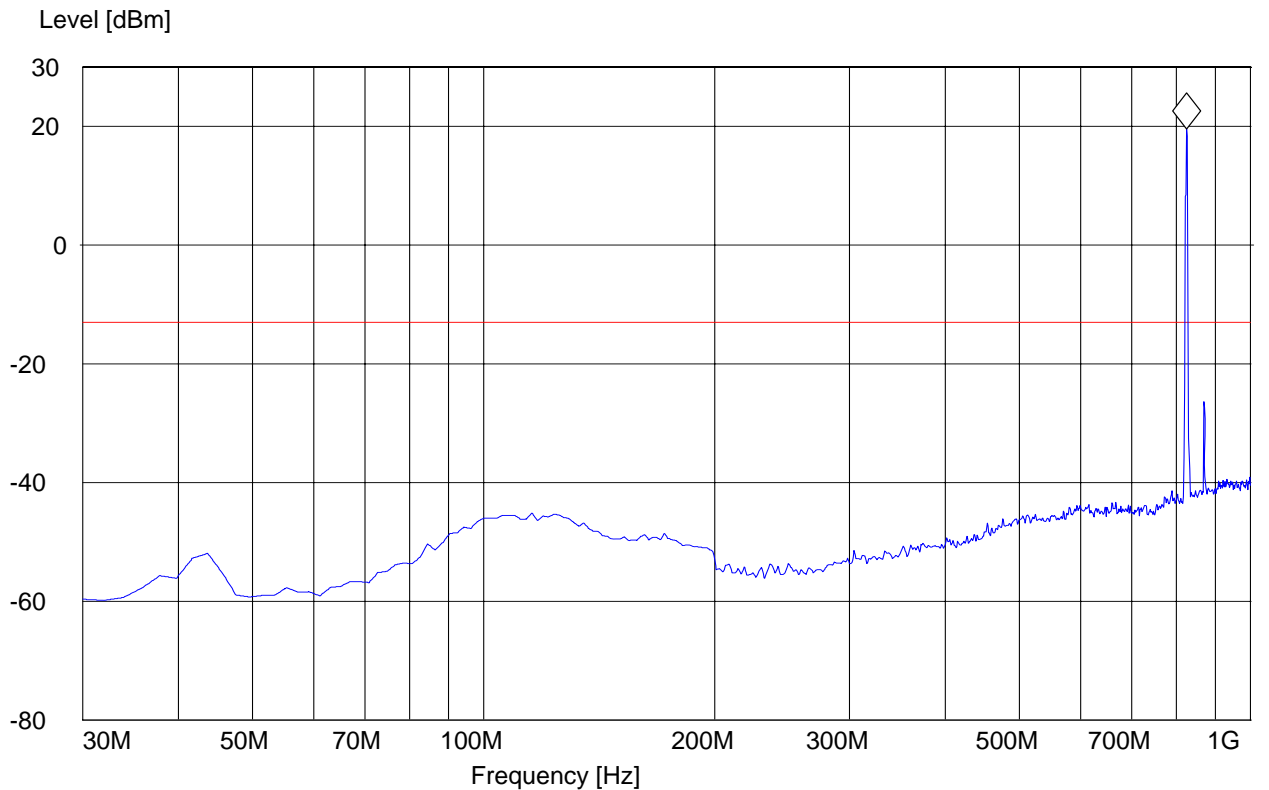
1.The peak above the limit line is the carrier freq.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.1013
ANT Orientation: V
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments: Maker placed on uplink

SWEEP TABLE: "FCC 24 Spur 30M-1G_V"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 825.0501 MHz 19.56 dBm



TX: 30MHz - 1GHz Ant Horizontal

Spurious emission limit -13dBm

Note:

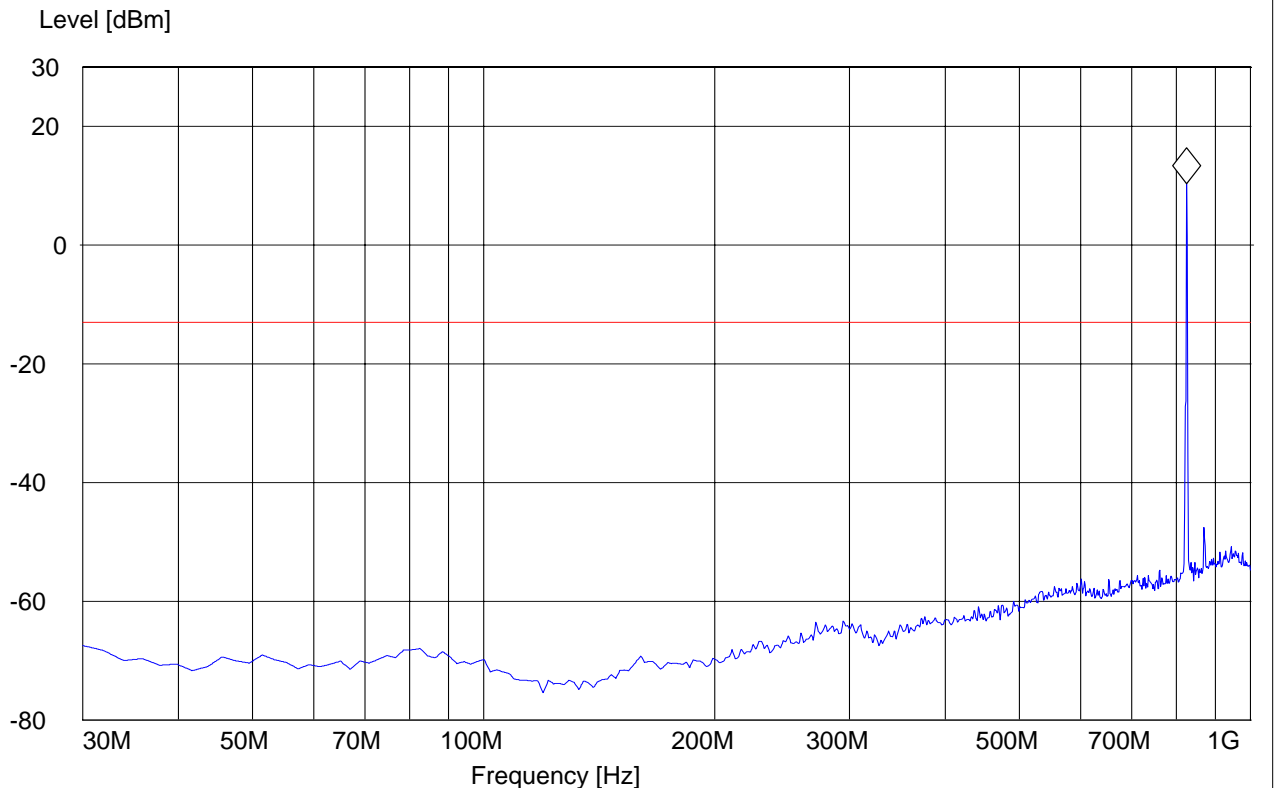
1.The peak above the limit line is the carrier freq.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.1013
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments: Maker placed on uplink

SWEEP TABLE: "FCC 24 Spur 30M-1G_H"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	DUMMY-DBM

Marker: 825.0501 MHz 10.35 dBm



RADIATED SPURIOUS EMISSIONS (800 band)

Ch 1013

1GHz – 1.58GHz

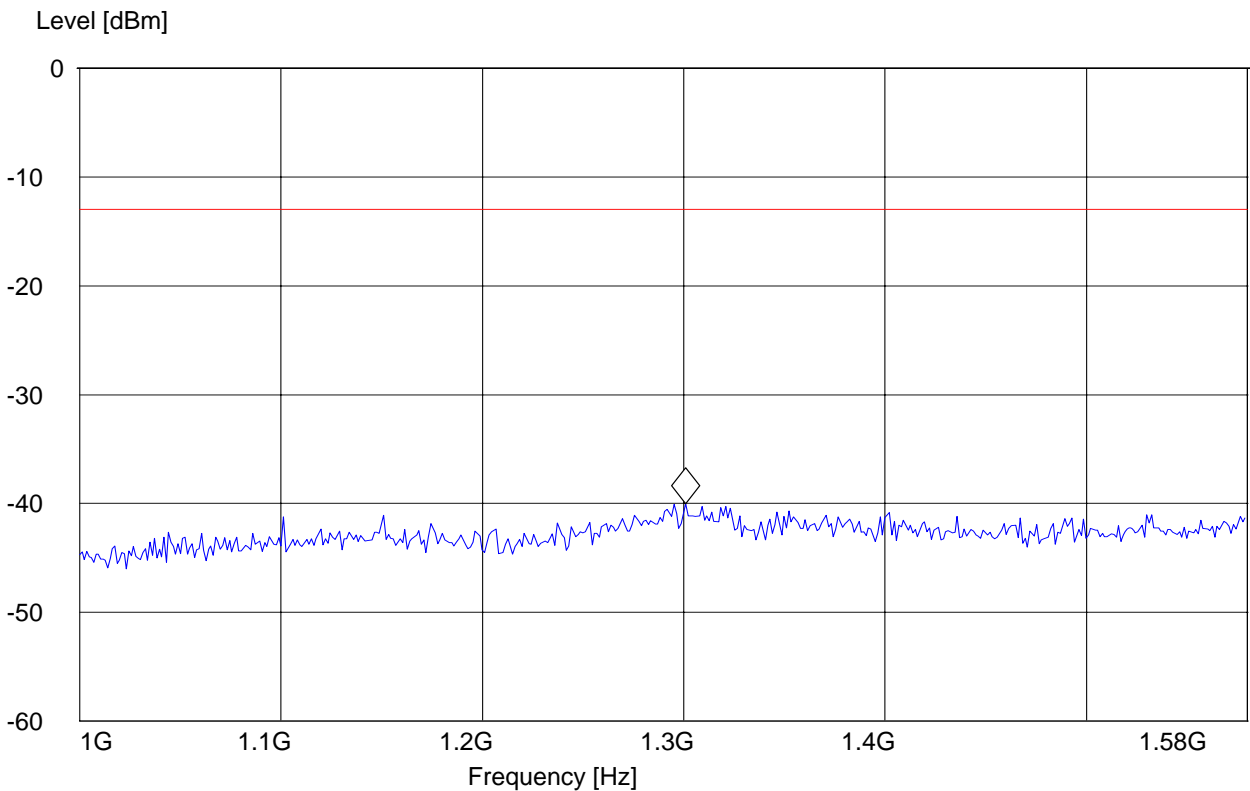
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.1013
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 22Spuri 1-1.58G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	1.6 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 1.301042084 GHz -40.06 dBm



RADIATED SPURIOUS EMISSIONS (800 band)

Ch1013

1.58GHz – 9GHz

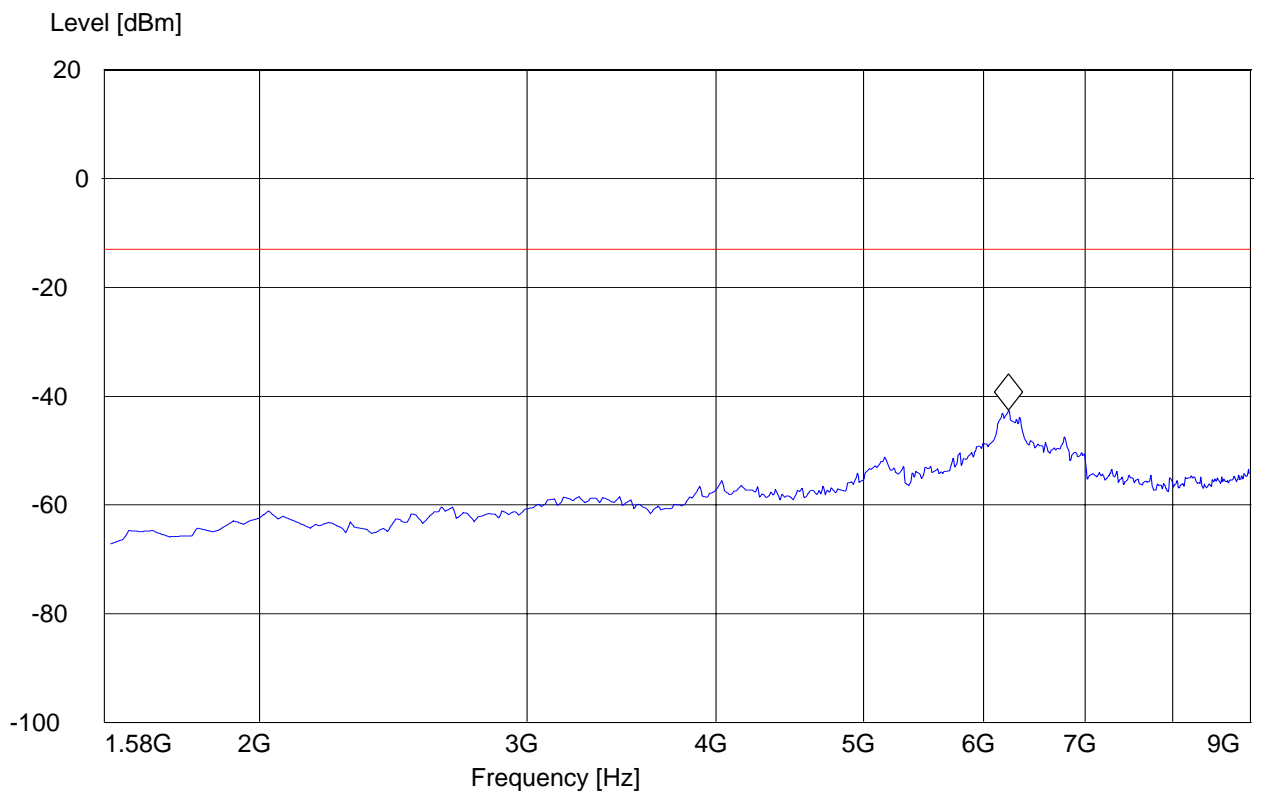
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.1013
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 22Spuri 1.58-9G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.6 GHz	9.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 6.234228457 GHz -42.59 dBm



TX: 30MHz - 1GHz Ant Vertical

Spurious emission limit -13dBm

Note:

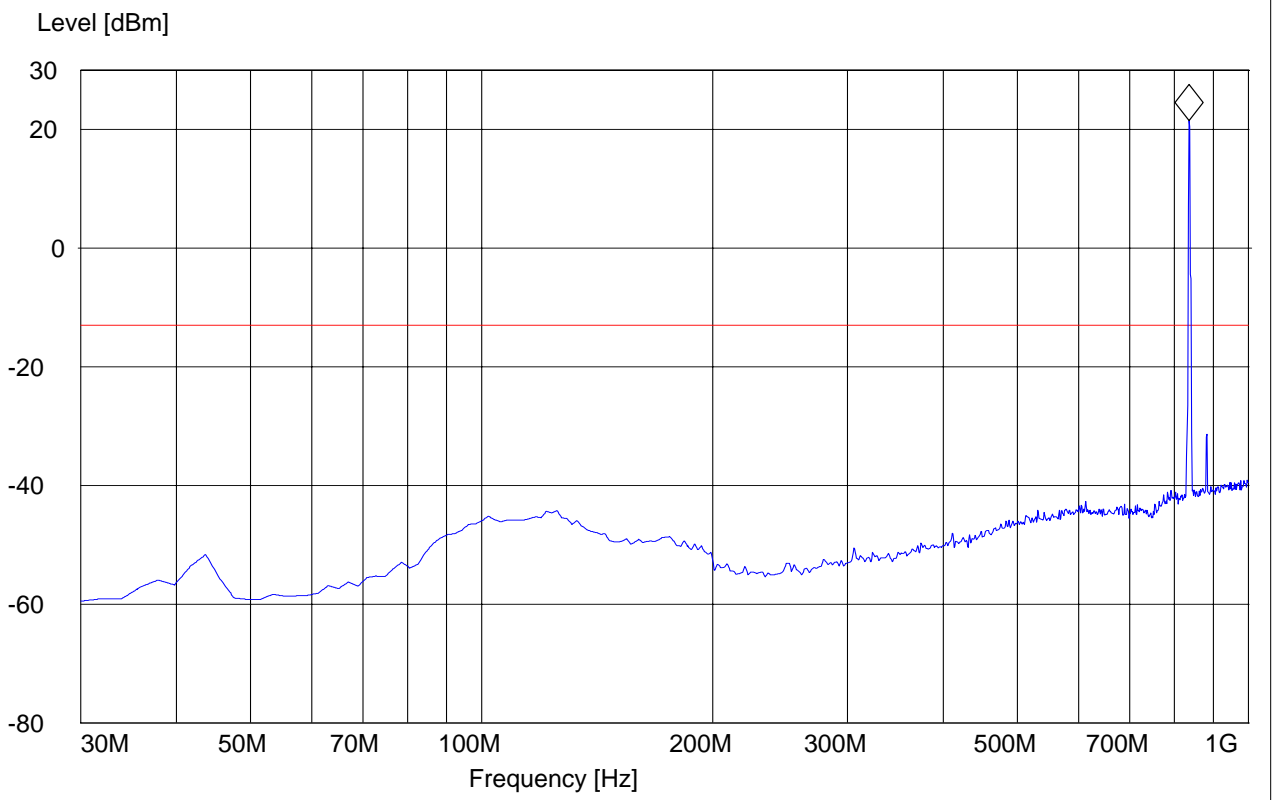
1.The peak above the limit line is the carrier freq.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.384
ANT Orientation: V
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments: Maker placed on uplink

SWEEP TABLE: "FCC 24 Spur 30M-1G_V"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 836.713427 MHz 21.5 dBm



TX: 30MHz - 1GHz Ant Horizontal

Spurious emission limit -13dBm

Note:

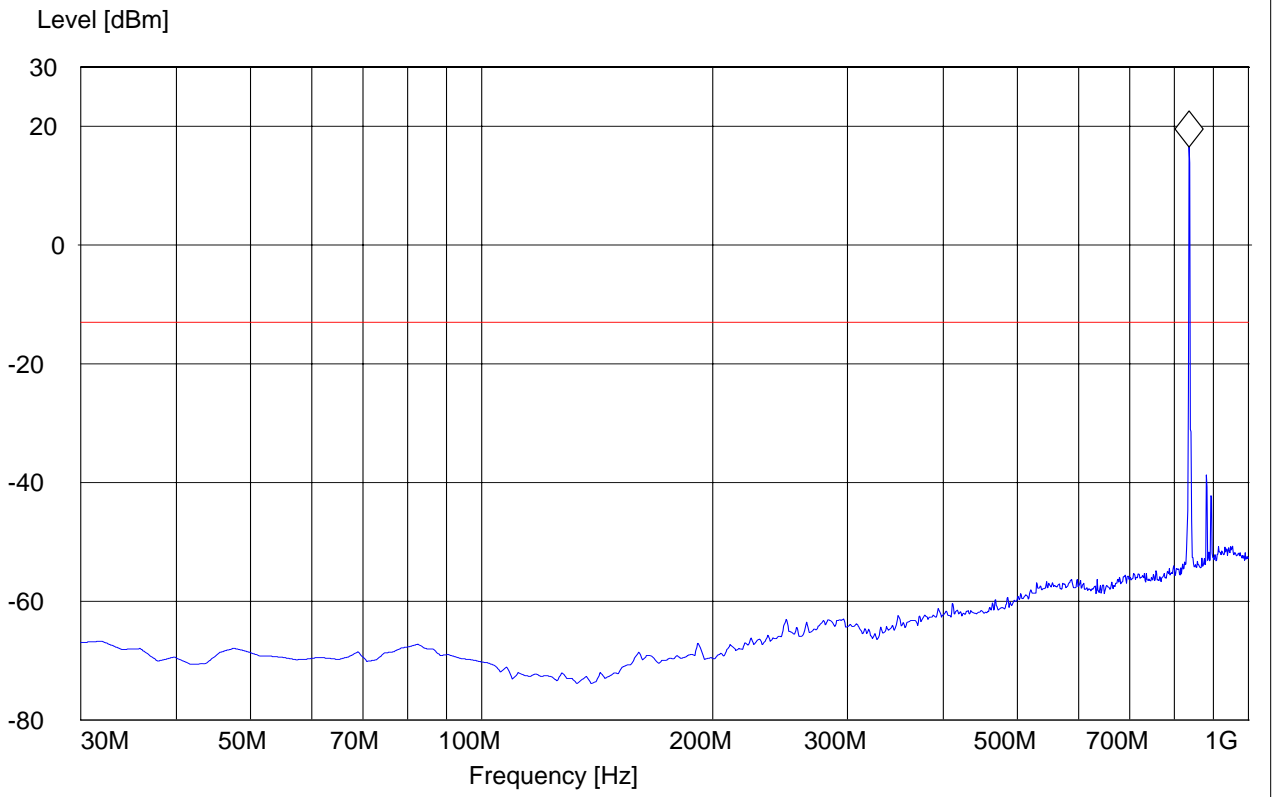
1.The peak above the limit line is the carrier freq.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.384
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments: Marker placed on uplink

SWEEP TABLE: "FCC 24 Spur 30M-1G_H"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	DUMMY-DBM

Marker: 836.713427 MHz 16.51 dBm



ADIATED SPURIOUS EMISSIONS (800 band)

Ch 384

1GHz – 1.58GHz

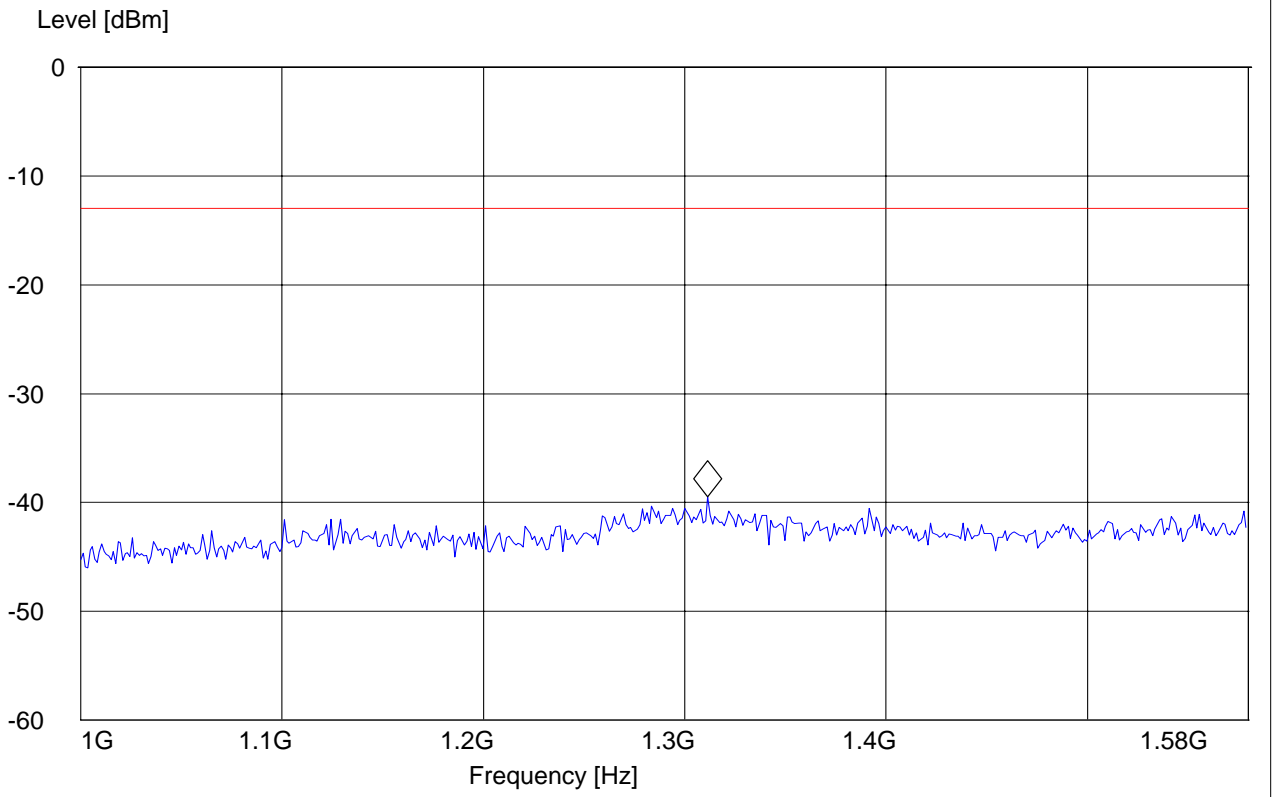
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.384
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 22Spuri 1-1.58G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	1.6 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 1.311503006 GHz -39.47 dBm



RADIATED SPURIOUS EMISSIONS (800 band)

Ch 384

1.58GHz – 9GHz

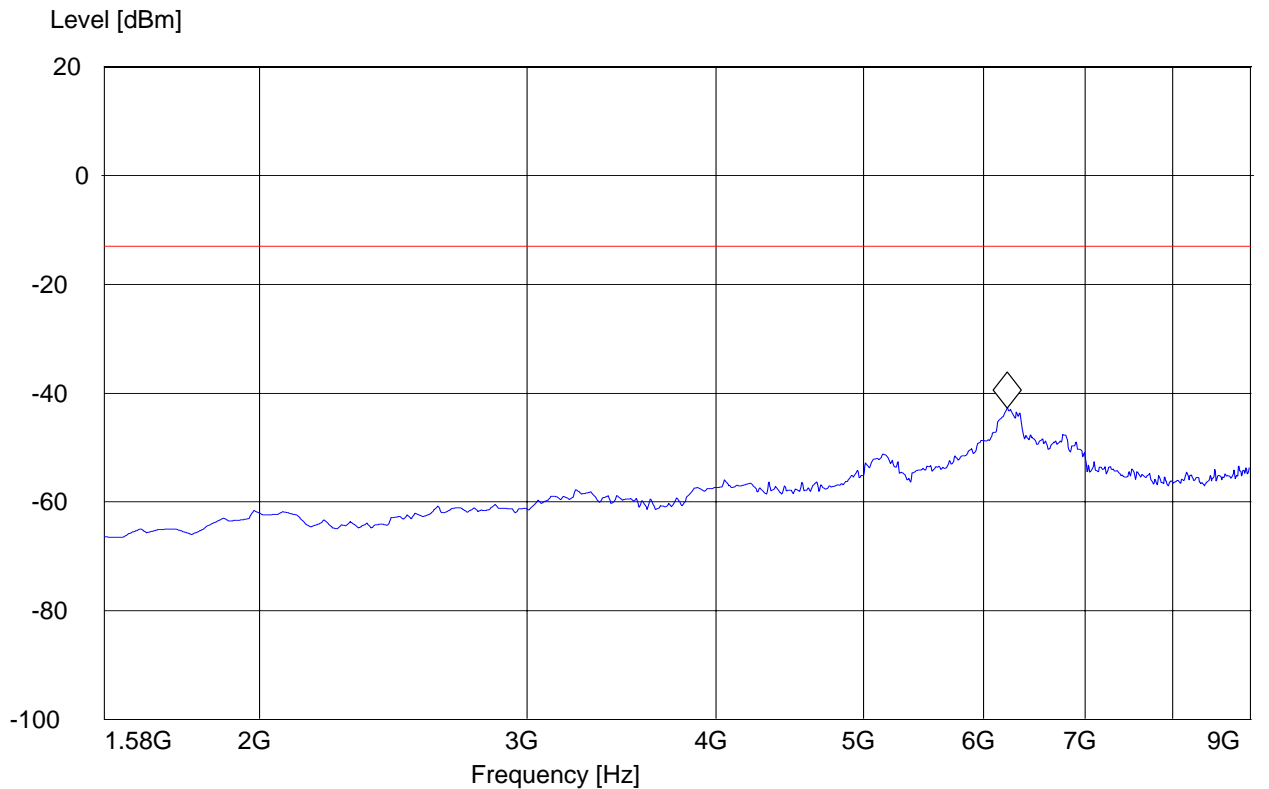
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.384
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 22Spuri 1.58-9G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.6 GHz	9.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 6.219358717 GHz -42.73 dBm



TX: 30MHz - 1GHz Ant Vertical

Spurious emission limit -13dBm

Note:

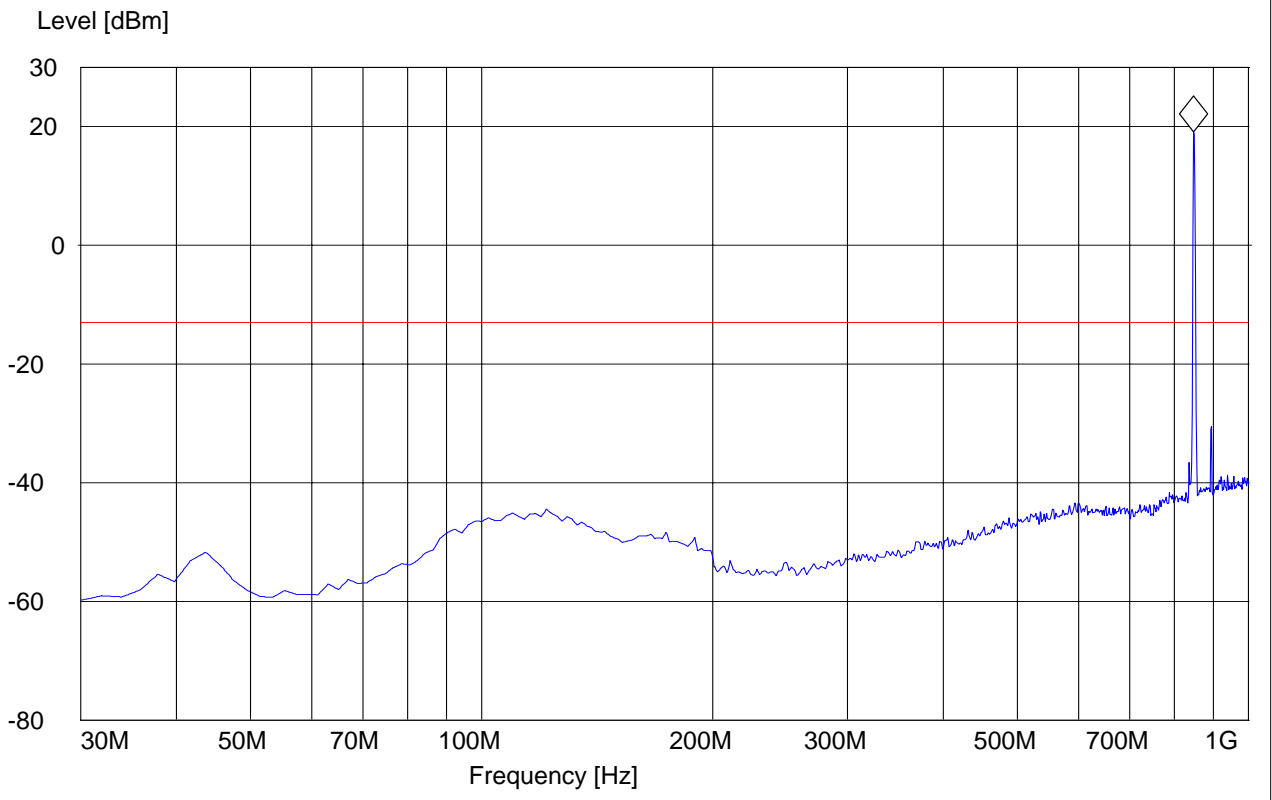
1.The peak above the limit line is the carrier freq.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.777
ANT Orientation: V
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments: Maker placed on uplink

SWEEP TABLE: "FCC 24 Spur 30M-1G_V"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 848.376754 MHz 19.09 dBm



TX: 30MHz - 1GHz Ant Horizontal

Spurious emission limit -13dBm

Note:

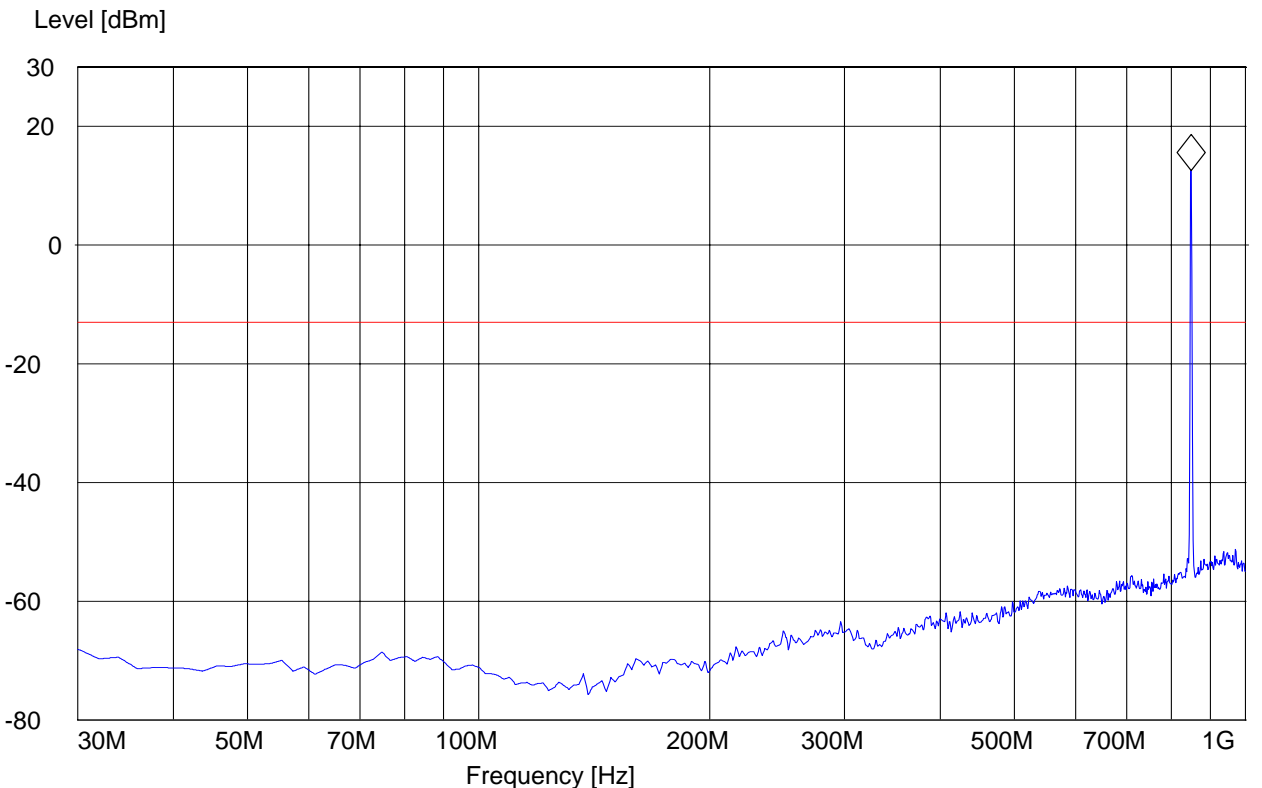
1.The peak above the limit line is the carrier freq.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.777
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments: Maker placed on uplink

SWEEP TABLE: "FCC 24 Spur 30M-1G_H"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	DUMMY-DBM

Marker: 850.320641 MHz 12.61 dBm



RADIATED SPURIOUS EMISSIONS (800 band)

Ch 777

1GHz – 1.58GHz

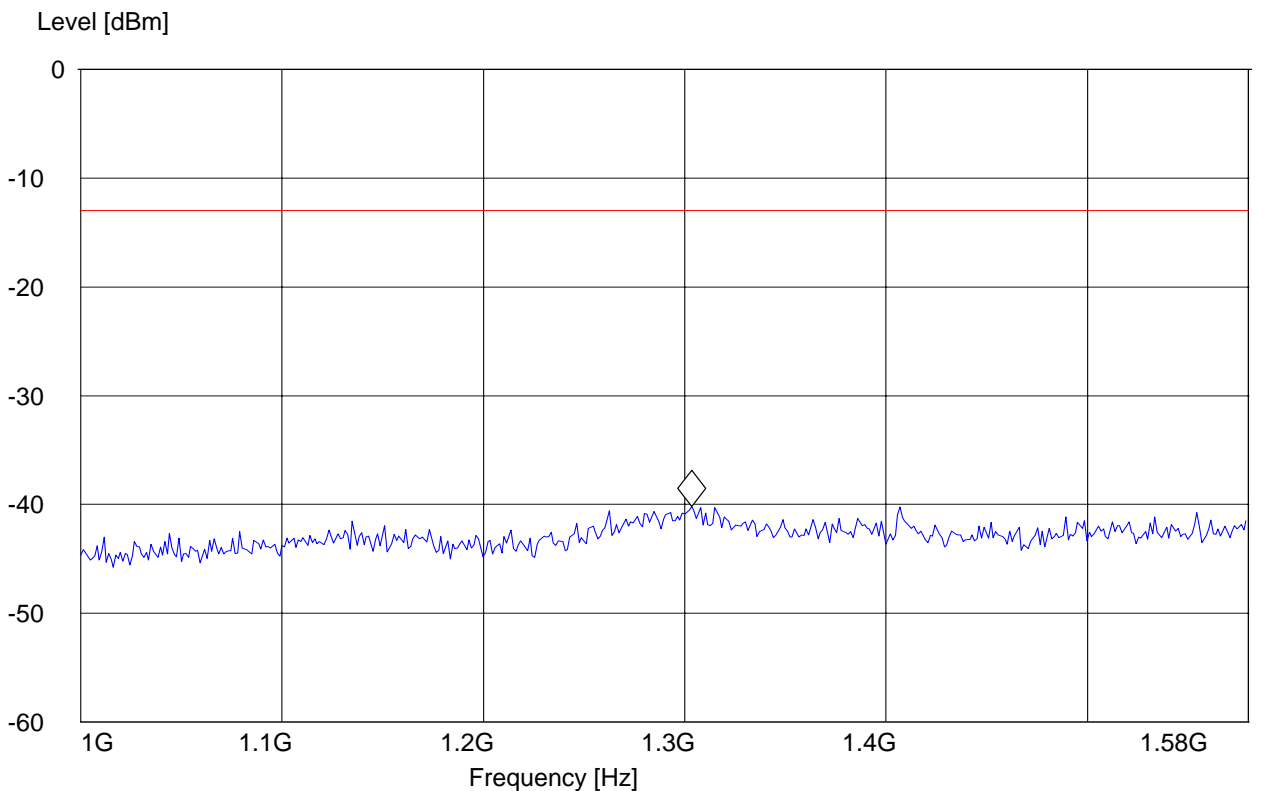
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.777
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 22Spuri 1-1.58G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	1.6 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 1.303366733 GHz -40.19 dBm



RADIATED SPURIOUS EMISSIONS (800)

Ch 777

1.58GHz – 9GHz

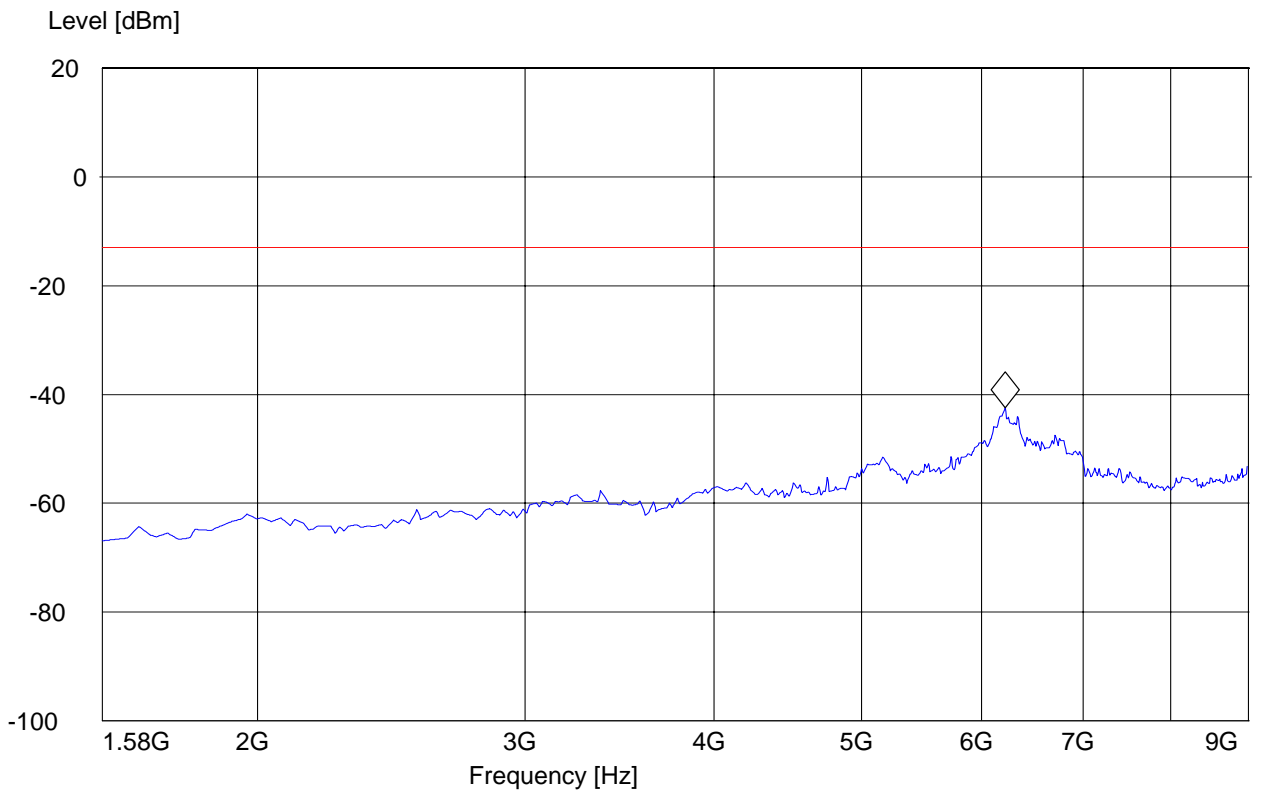
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 850; CH.777
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 22Spuri 1.58-9G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.6 GHz	9.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 6.219358717 GHz -42.46 dBm



5.2.4.2 RESULTS OF RADIATED TESTS 800: EVDO

Harmonics	Tx ch-1013 Freq. (MHz)	Level (dBm)	Tx ch-600 Freq. (MHz)	Level (dBm)	Tx ch-777 Freq. (MHz)	Level (dBm)
2	1648.4	NF	1673.2	NF	1697.6	NF
3	2472.6	NF	2509.8	NF	2546.4	NF
4	3296.8	NF	3346.4	NF	3395.2	NF
5	4121	NF	4183	NF	4244	NF
6	4945.2	NF	5019.6	NF	5092.8	NF
7	5769.4	NF	5856.2	NF	5941.6	NF
8	6593.6	NF	6692.8	NF	6790.4	NF
9	7417.8	NF	7529.4	NF	7639.2	NF
10	8242	NF	8366	NF	8488	NF
NF = NOISE FLOOR						

TX: 30MHz - 1GHz Ant Vertical

Spurious emission limit -13dBm

Note:

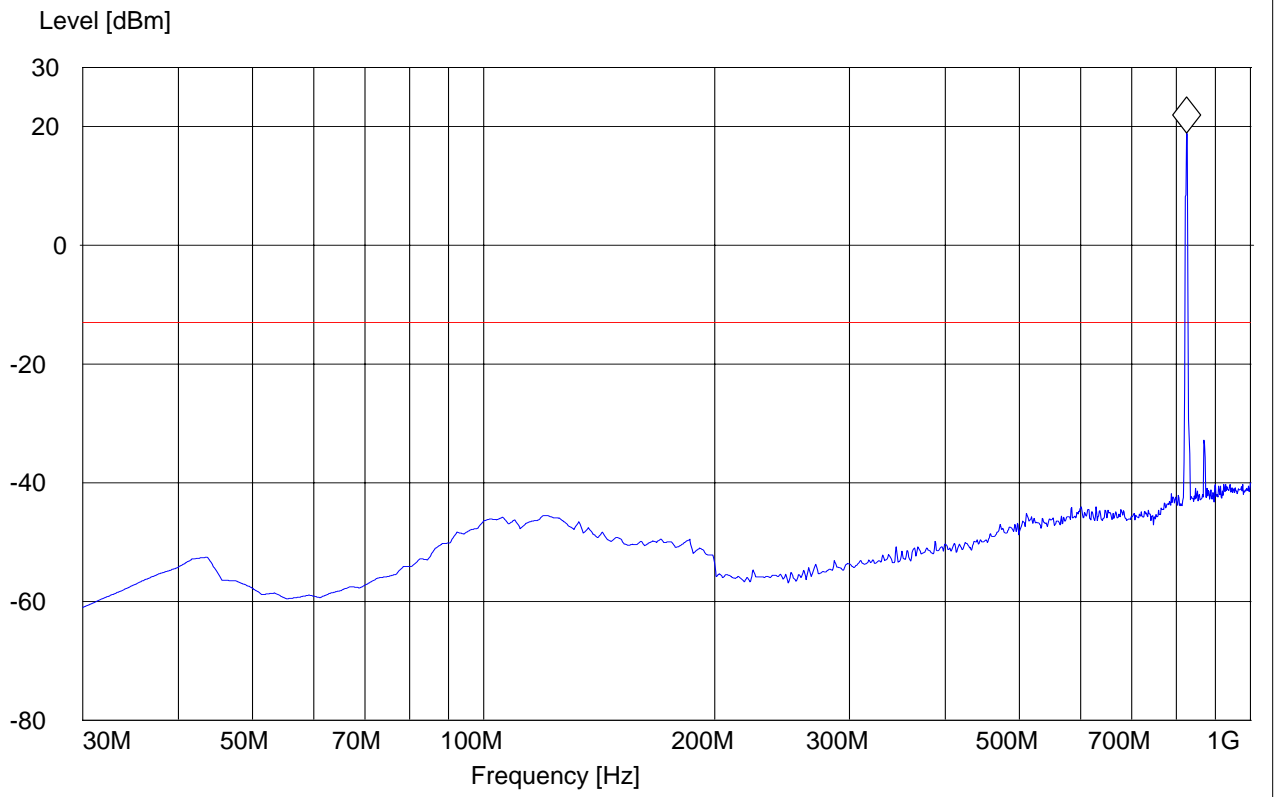
1.The peak above the limit line is the carrier freq.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH1013
ANT Orientation: V
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24 Spur 30M-1G_V"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 825.0501 MHz 18.93 dBm



TX: 30MHz - 1GHz Ant Horizontal

Spurious emission limit -13dBm

Note:

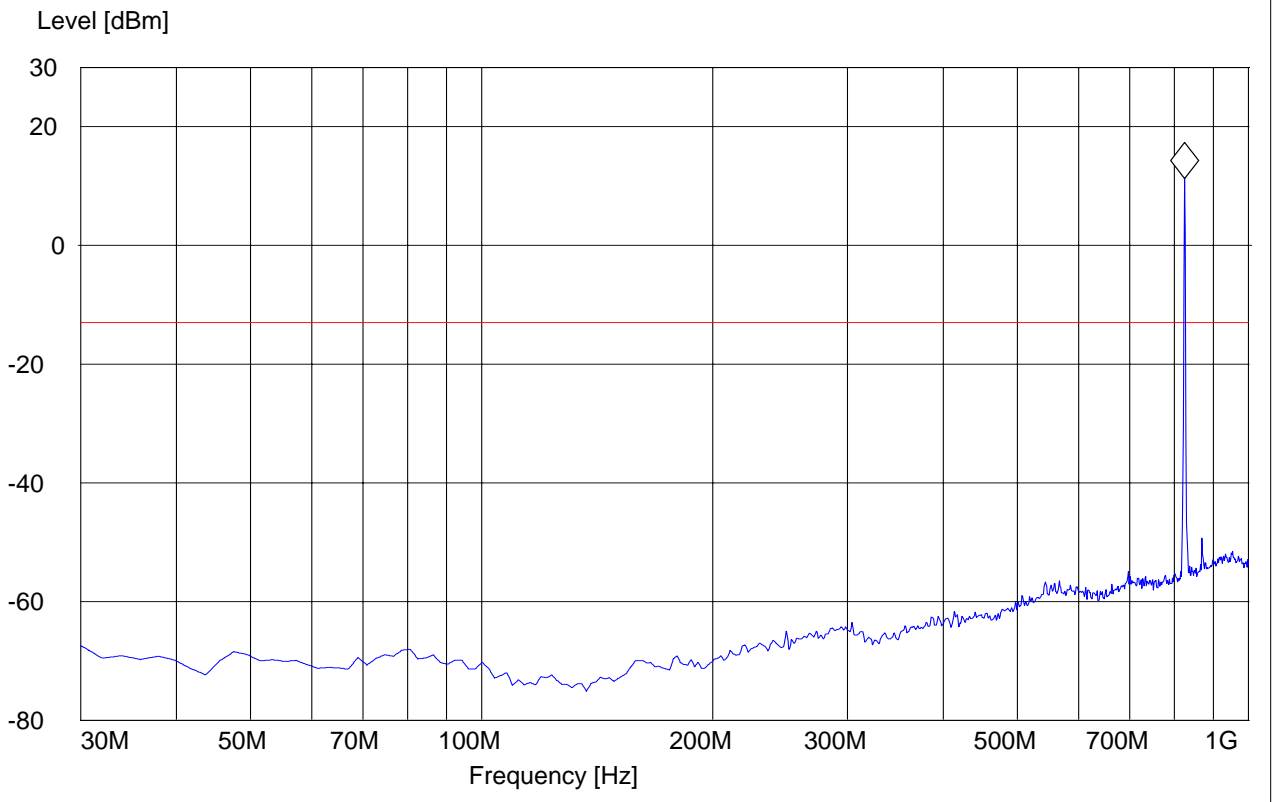
1. The peak above the limit line is the carrier freq.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH1013
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24 Spur 30M-1G_H"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	DUMMY-DBM

Marker: 825.0501 MHz 11.31 dBm



RADIATED SPURIOUS EMISSIONS (800 band)

Ch 1013

1GHz – 1.58GHz

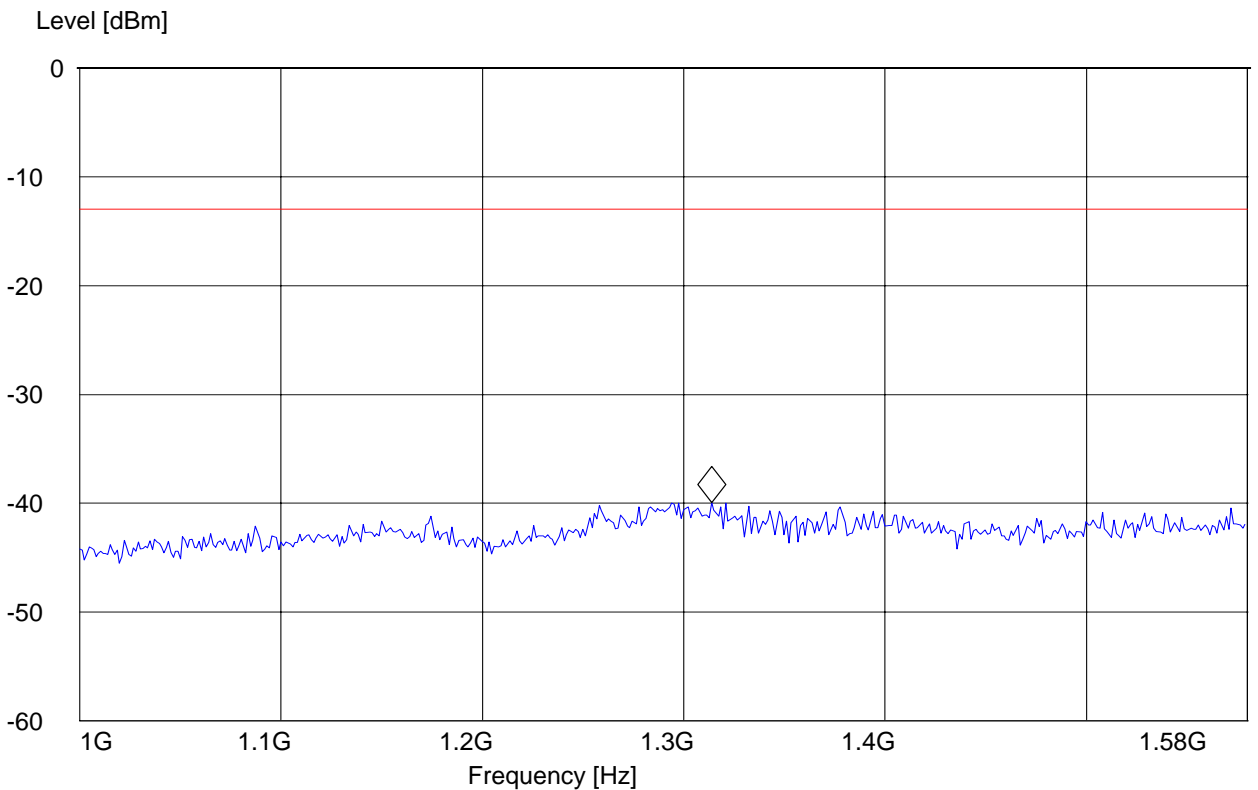
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH1013
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 22Spuri 1-1.58G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	1.6 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 1.313827655 GHz -39.92 dBm



RADIATED SPURIOUS EMISSIONS (800 band)

Ch1013

1.58GHz – 9GHz

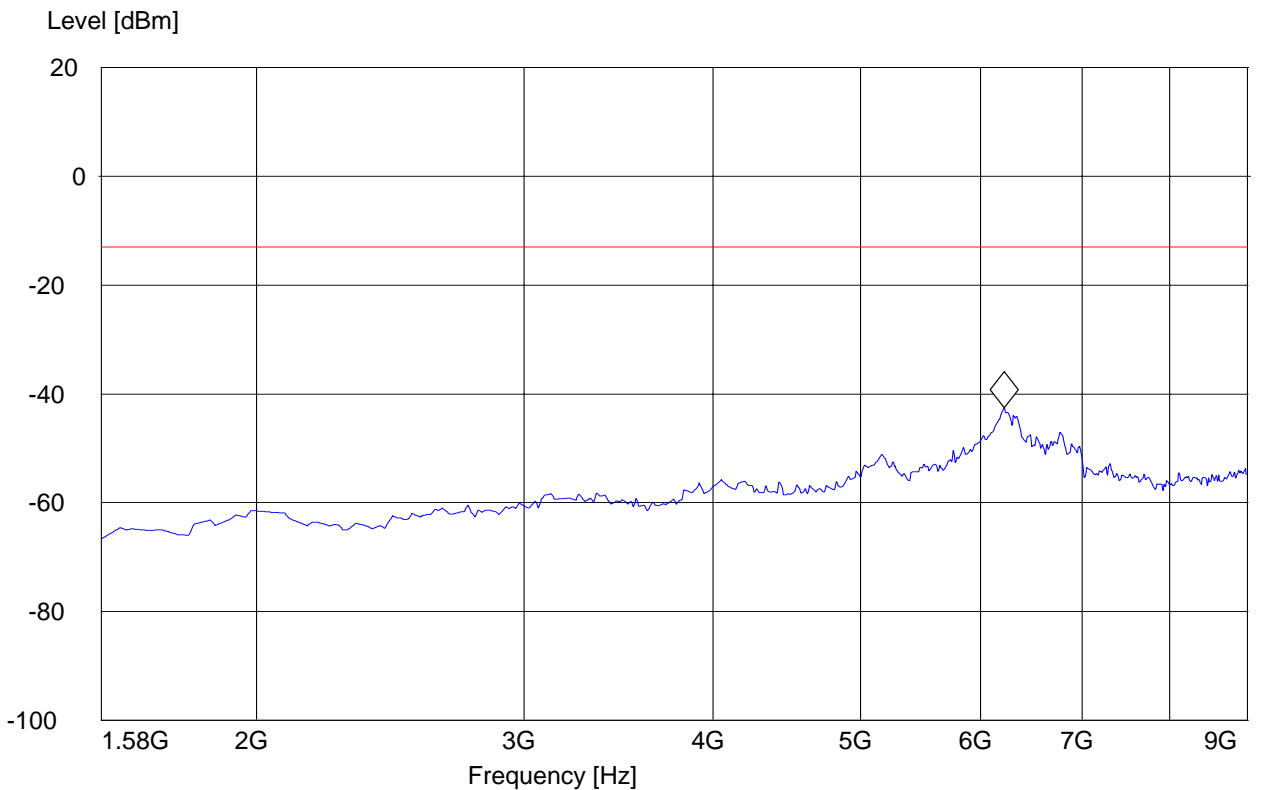
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH1013
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 22Spuri 1.58-9G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.6 GHz	9.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 6.219358717 GHz -42.56 dBm



TX: 30MHz - 1GHz Ant Vertical

Spurious emission limit -13dBm

Note:

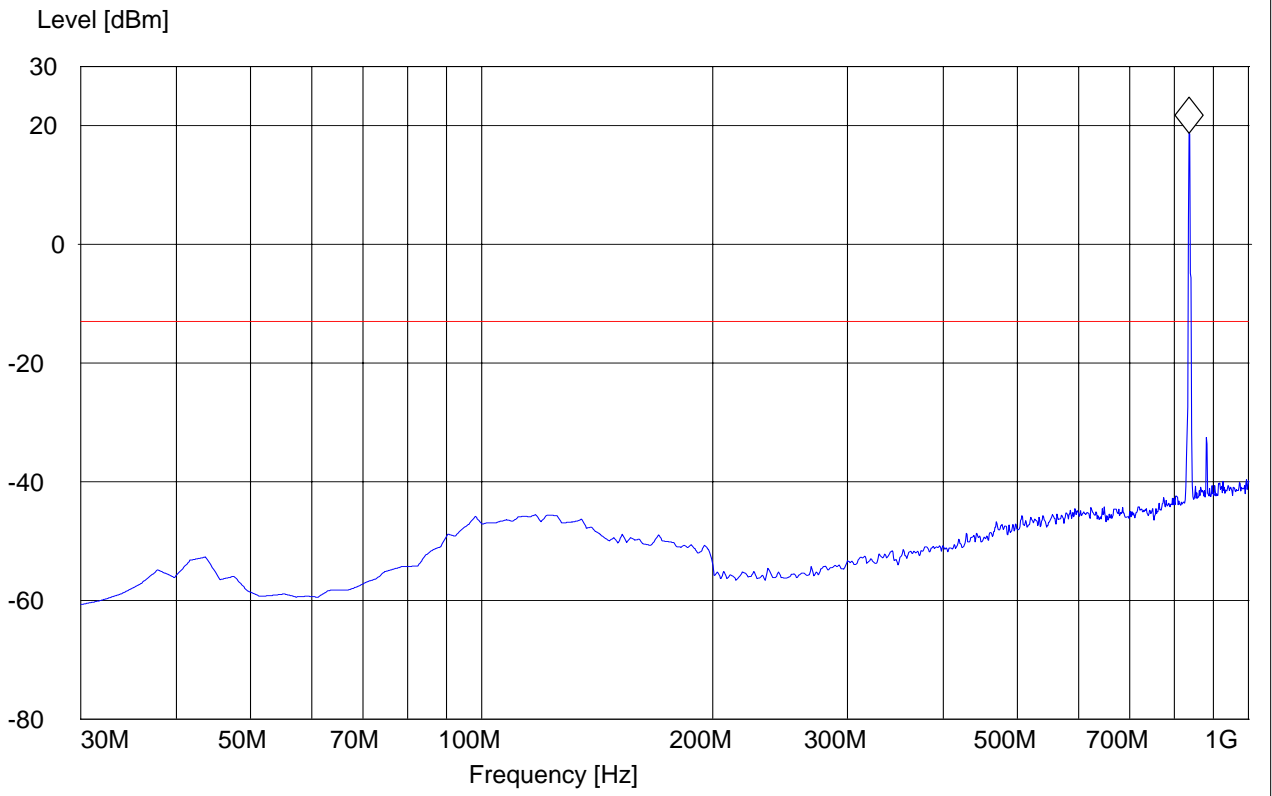
1. The peak above the limit line is the carrier freq.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH384
ANT Orientation: V
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24 Spur 30M-1G_V"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 836.713427 MHz 18.72 dBm



TX: 30MHz - 1GHz Ant Horizontal

Spurious emission limit -13dBm

Note:

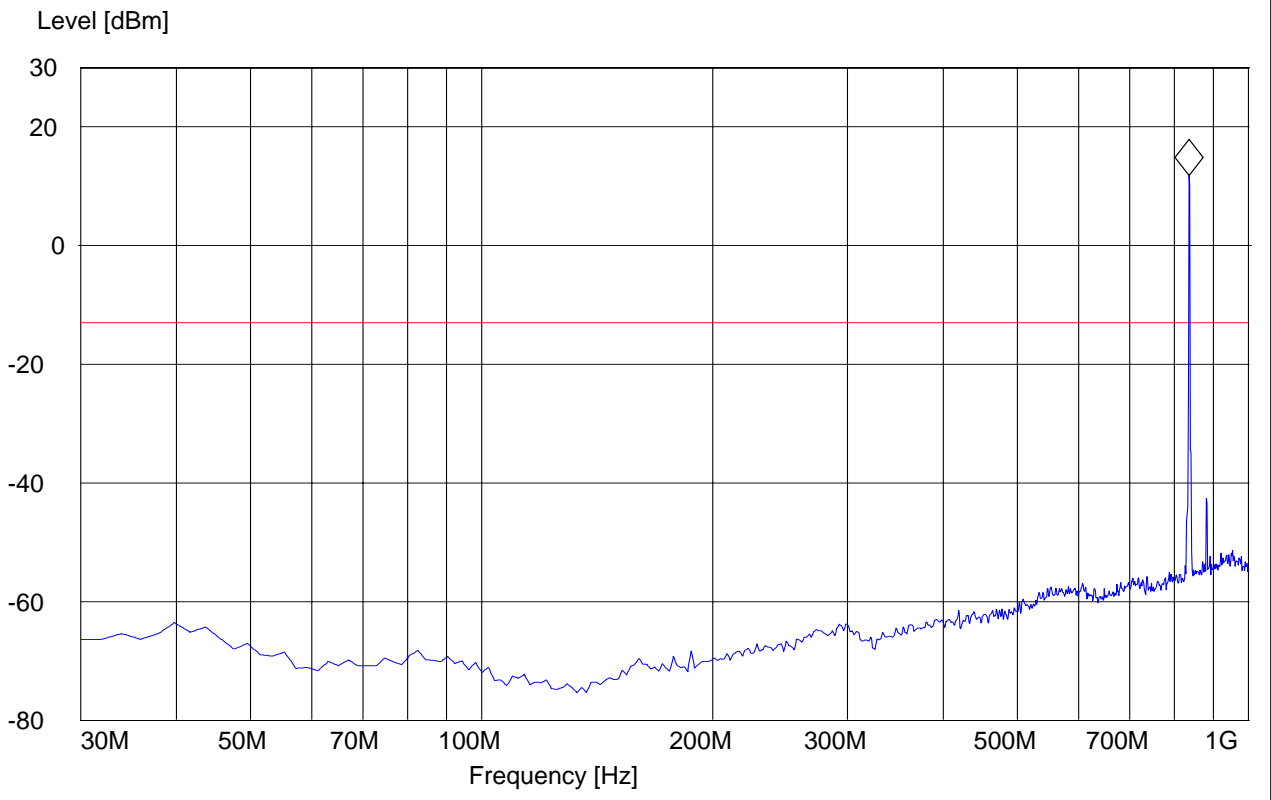
1.The peak above the limit line is the carrier freq.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH384
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24 Spur 30M-1G_H"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	DUMMY-DBM

Marker: 836.713427 MHz 11.87 dBm



RADIATED SPURIOUS EMISSIONS (800 band)

Ch 384

1GHz – 1.58GHz

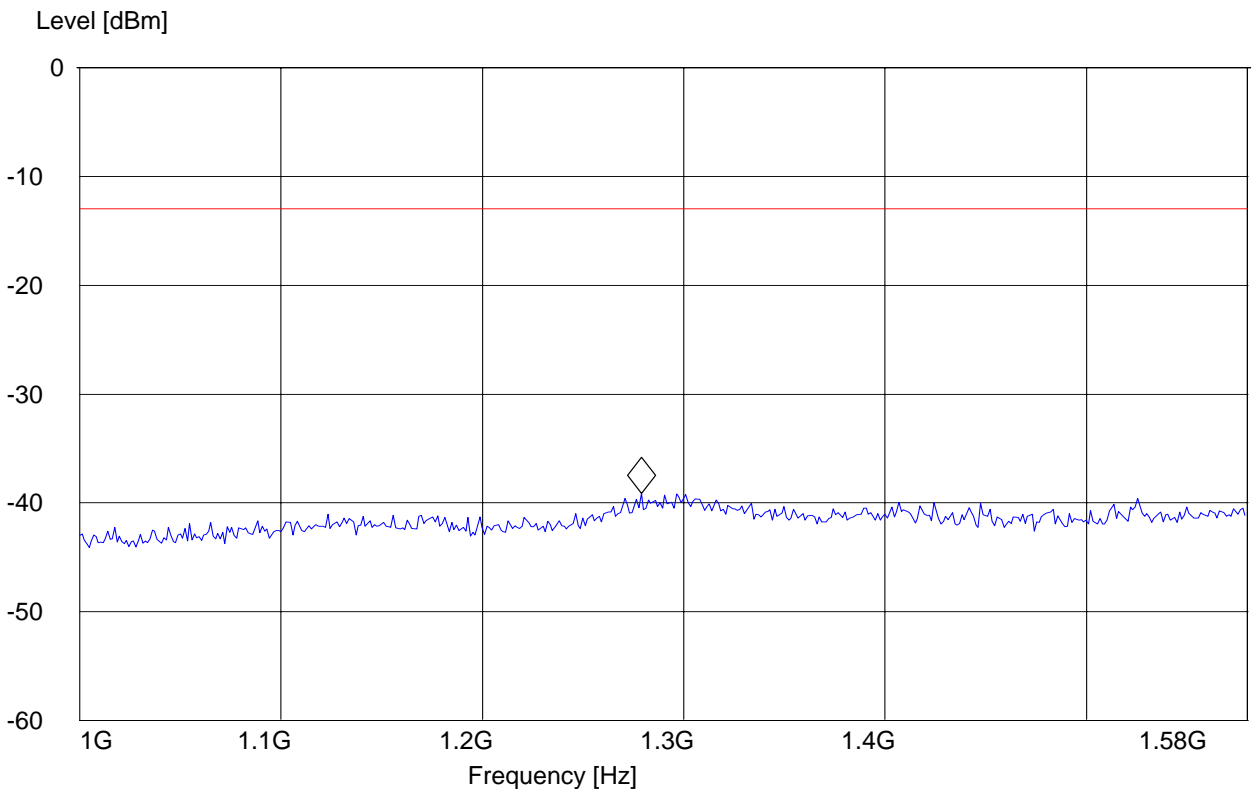
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH384
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 22Spuri 1-1.58G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	1.6 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 1.278957916 GHz -39.14 dBm



RADIATED SPURIOUS EMISSIONS (800 band)

Ch 384

1.58GHz – 9GHz

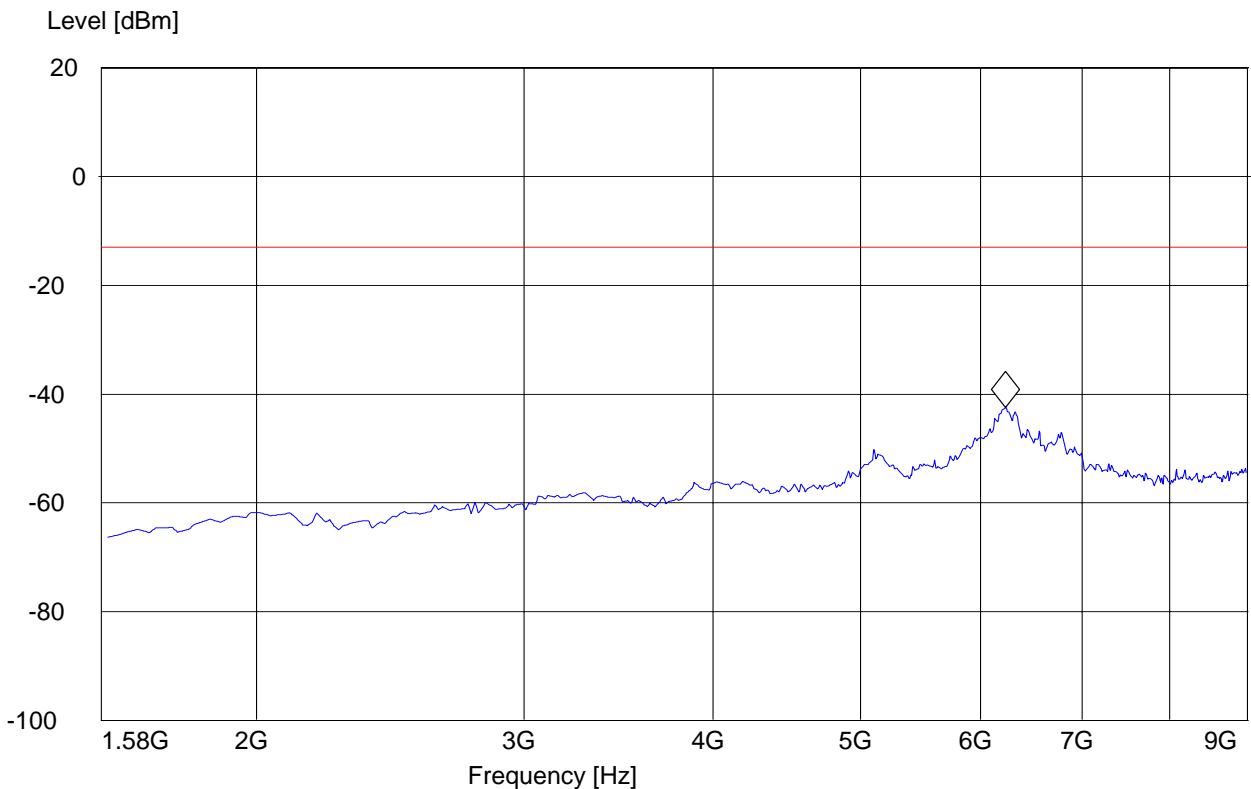
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH384
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 22Spuri 1.58-9G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.6 GHz	9.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 6.234228457 GHz -42.47 dBm



TX: 30MHz - 1GHz Ant Vertical

Spurious emission limit -13dBm

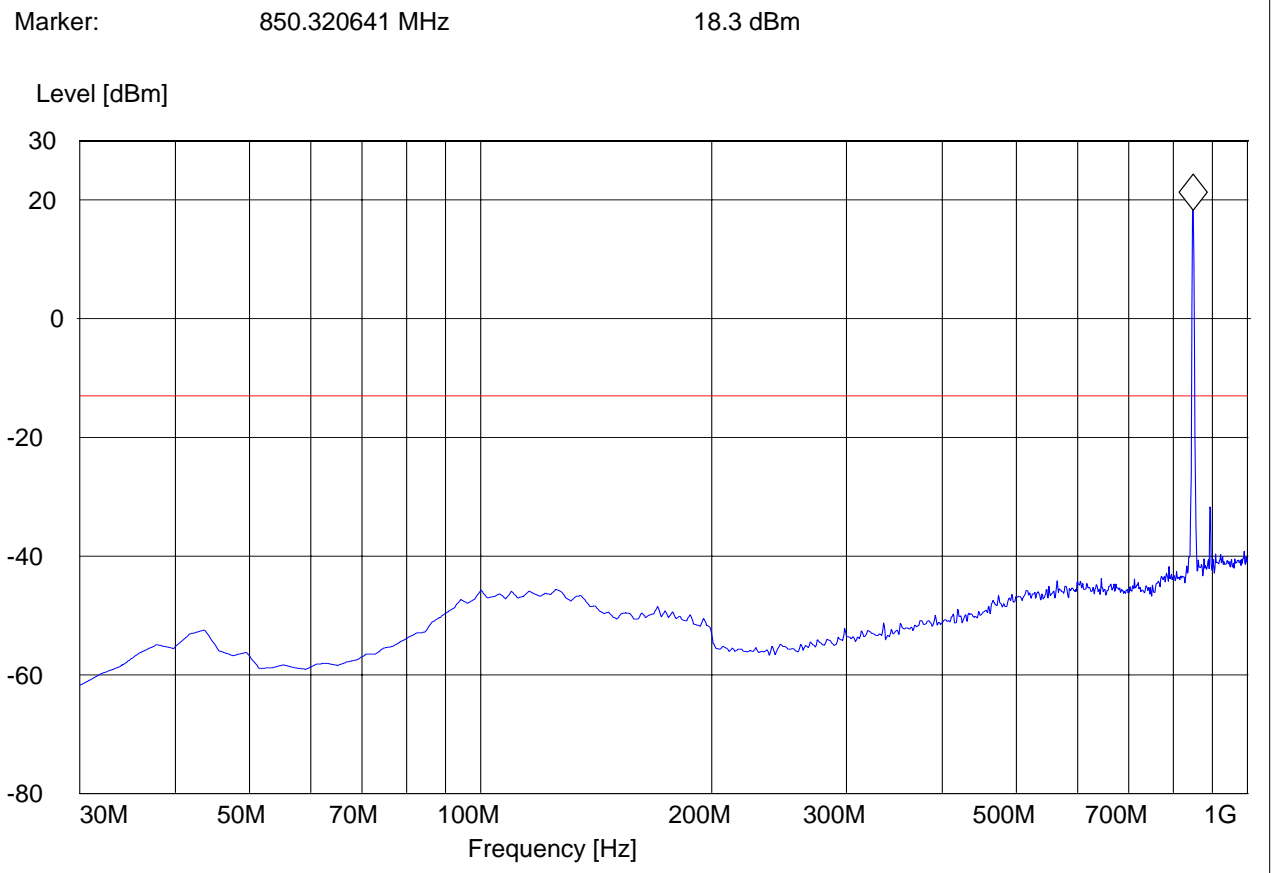
Note:

1. The peak above the limit line is the carrier freq.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH777
ANT Orientation: V
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24 Spur 30M-1G_V"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM



TX: 30MHz - 1GHz Ant Horizontal

Spurious emission limit -13dBm

Note:

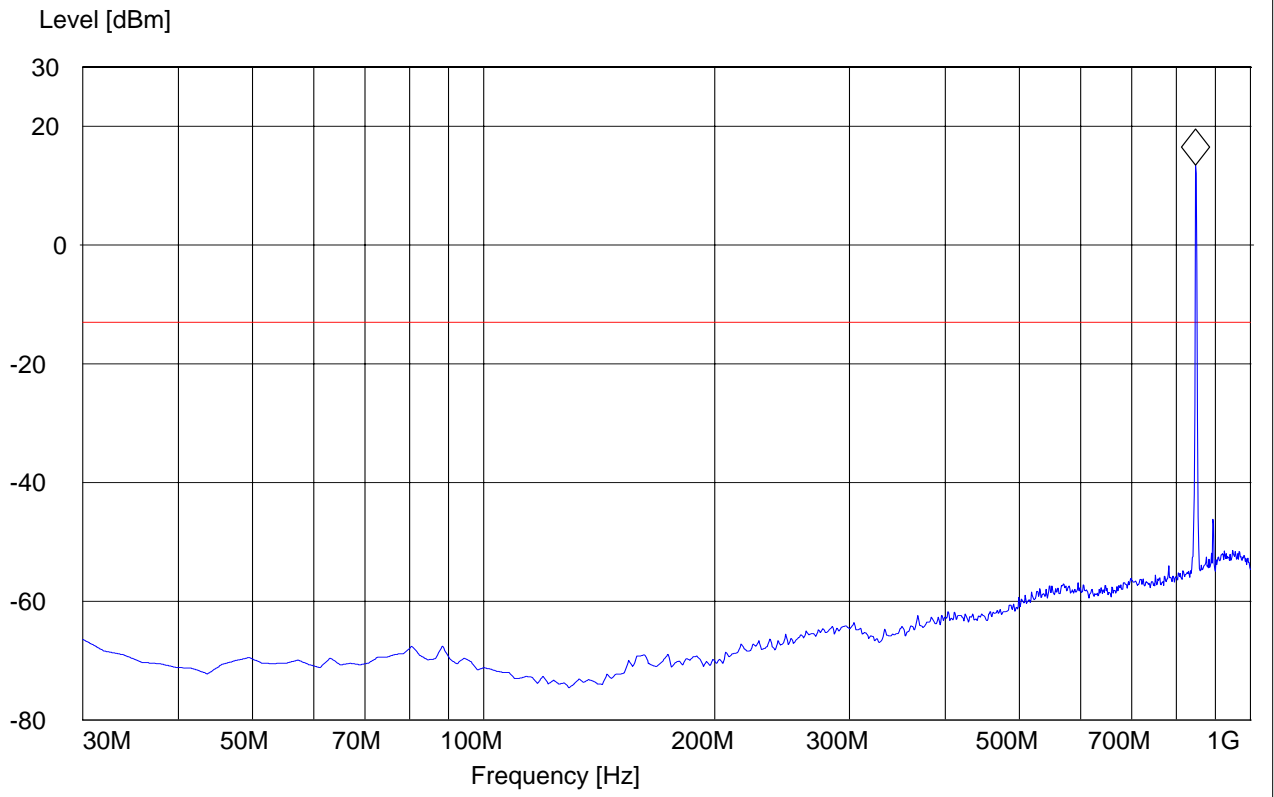
1.The peak above the limit line is the carrier freq.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH777
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24 Spur 30M-1G_H"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	DUMMY-DBM

Marker: 848.376754 MHz 13.52 dBm



RADIATED SPURIOUS EMISSIONS (800 band)

Ch 777

1GHz – 1.58GHz

Spurious emission limit –13dBm

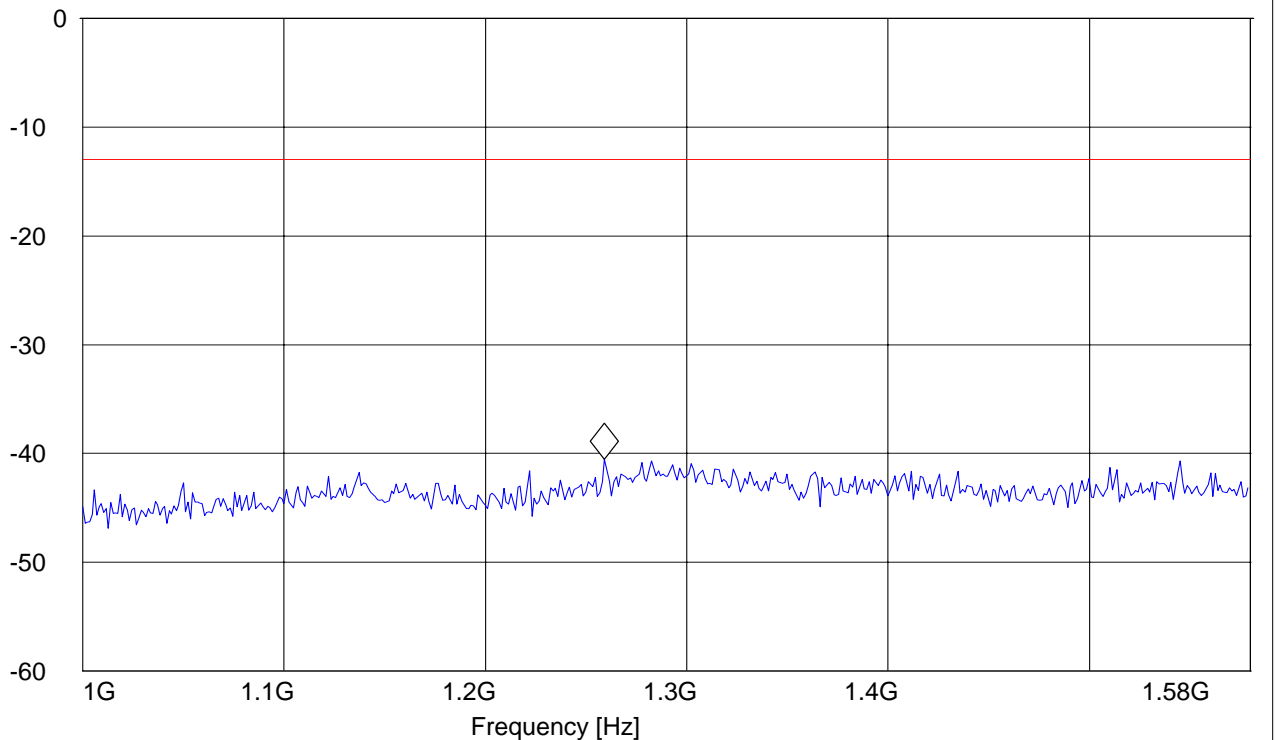
EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH777
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 22Spuri 1-1.58G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	1.6 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 1.259198397 GHz -40.55 dBm

Level [dBm]



RADIATED SPURIOUS EMISSIONS (800)

Ch 777

1.58GHz – 9GHz

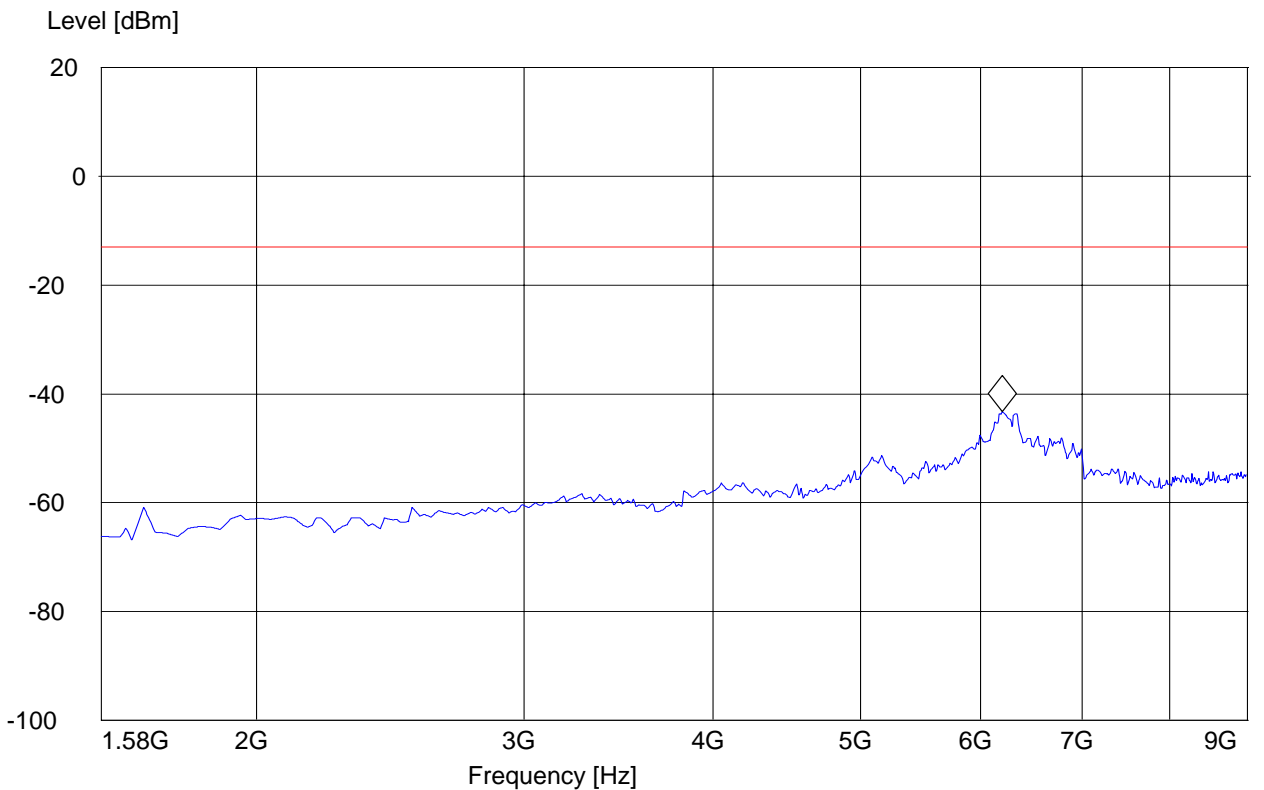
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 850; CH777
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 22Spuri 1.58-9G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.6 GHz	9.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 6.204488978 GHz -43.28 dBm



5.2.4.3 RESULTS OF RADIATED TESTS PCS-1900: CDMA

Harmonic	Tx ch-25 Freq.(MHz)	Level (dBm)	Tx ch-600 Freq. (MHz)	Level (dBm)	Tx ch-1175 Freq. (MHz)	Level (dBm)
2	3700.4	NF	3760	NF	3819.6	NF
3	5550.6	NF	5640	NF	5729.4	NF
4	7400.8	NF	7520	NF	7639.2	NF
5	9251	NF	9400	NF	9549	NF
6	11101.2	NF	11280	NF	11458.8	NF
7	12951.4	NF	13160	NF	13368.6	NF
8	14801.6	NF	15040	NF	15278.4	NF
9	16651.8	NF	16920	NF	17188.2	NF
10	18502	NF	18800	NF	19098	NF
NF = NOISE FLOOR						

TX: 30MHz - 1GHz

Spurious emission limit -13dBm

Antenna: vertical

Note: This plot is valid for low, mid & high channels (worst-case plot)

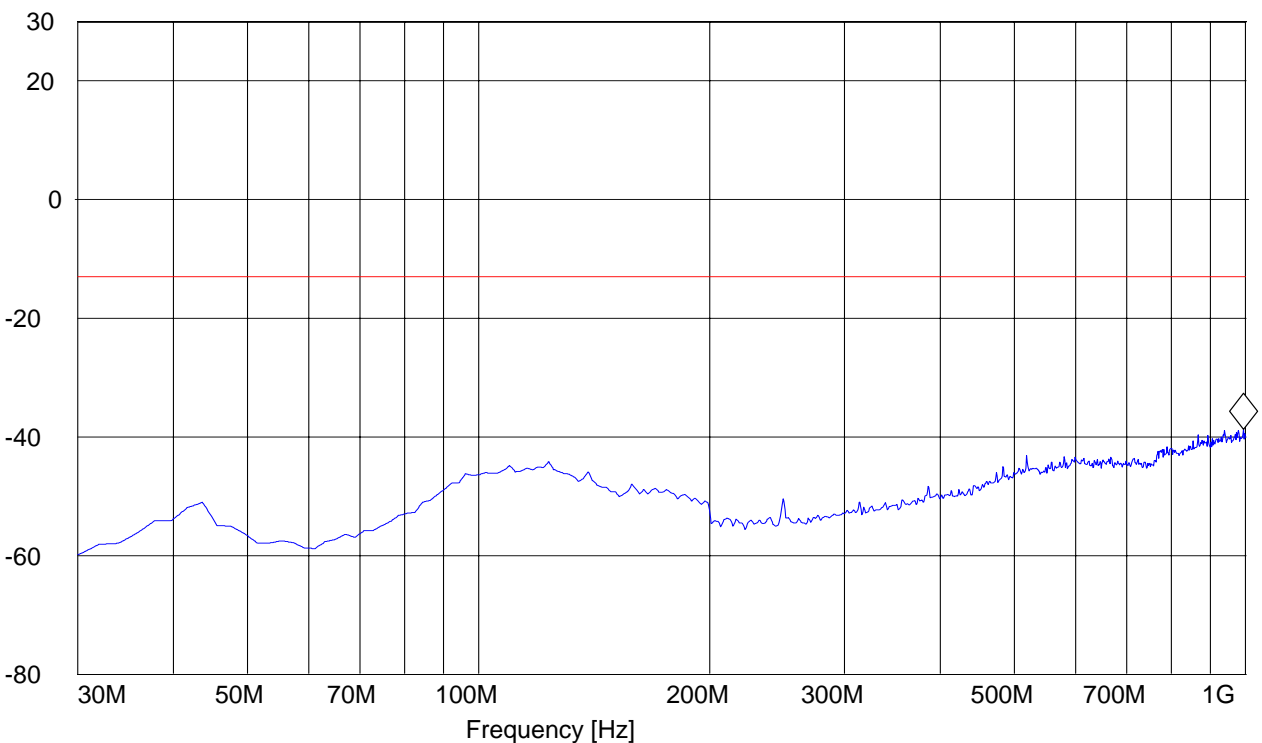
EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900
ANT Orientation: V
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24 Spur 30M-1G_V"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 994.168337 MHz -38.73 dBm

Level [dBm]



TX: 30MHz - 1GHz

Spurious emission limit -13dBm

Antenna: Horizontal

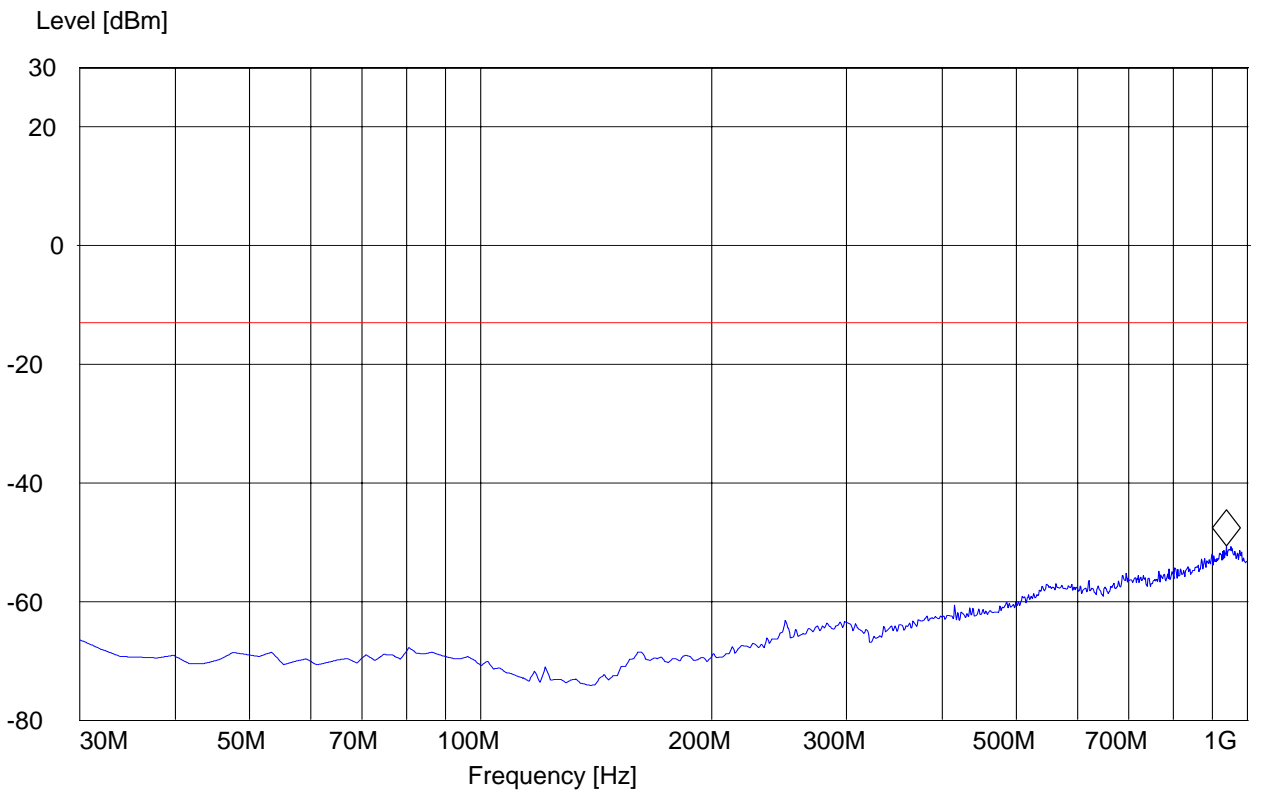
Note: This plot is valid for low, mid & high channels (worst-case plot)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24 Spur 30M-1G_H"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	DUMMY-DBM

Marker: 937.79591 MHz -50.58 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 25

1GHz – 3GHz

Spurious emission limit –13dBm

Note: The peak above the limit line is the carrier freq. at ch-25.

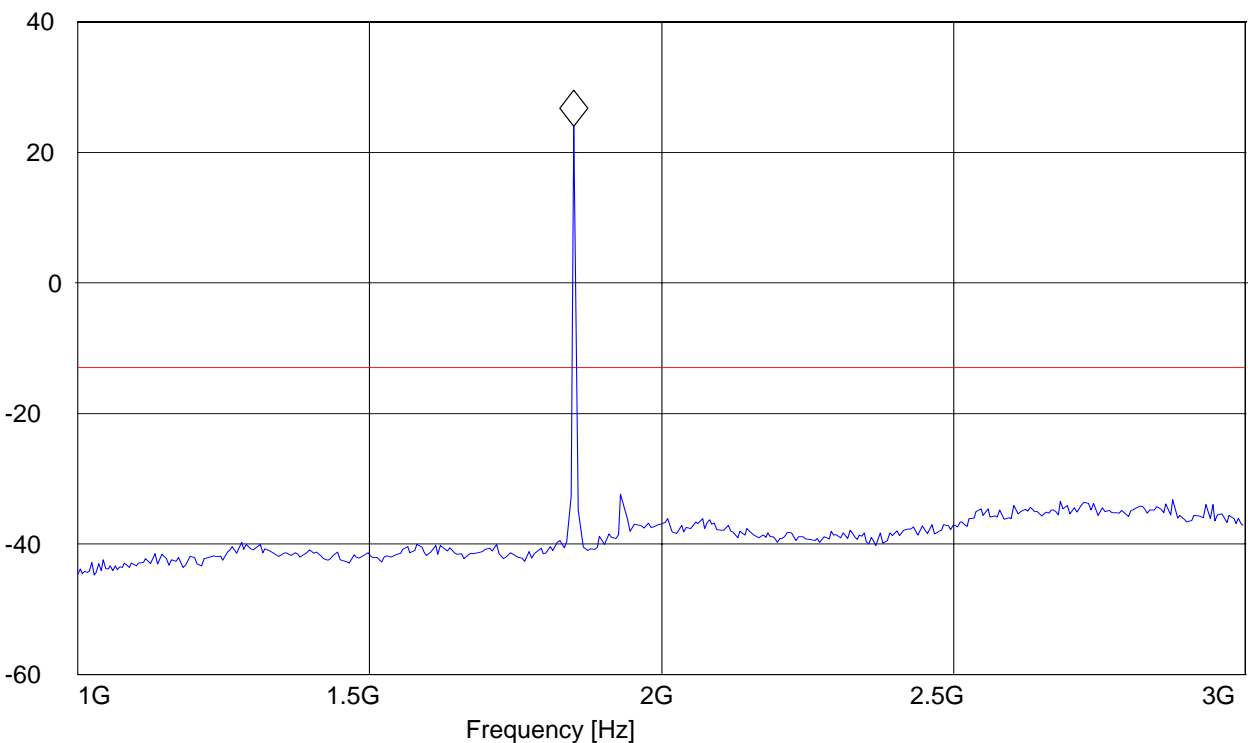
EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900; CH.25
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments: Marker placed on uplink

SWEEP TABLE: "FCC 24Spuri 1-3G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	3.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 1.849699399 GHz 23.97 dBm

Level [dBm]



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 25

3GHz – 18GHz

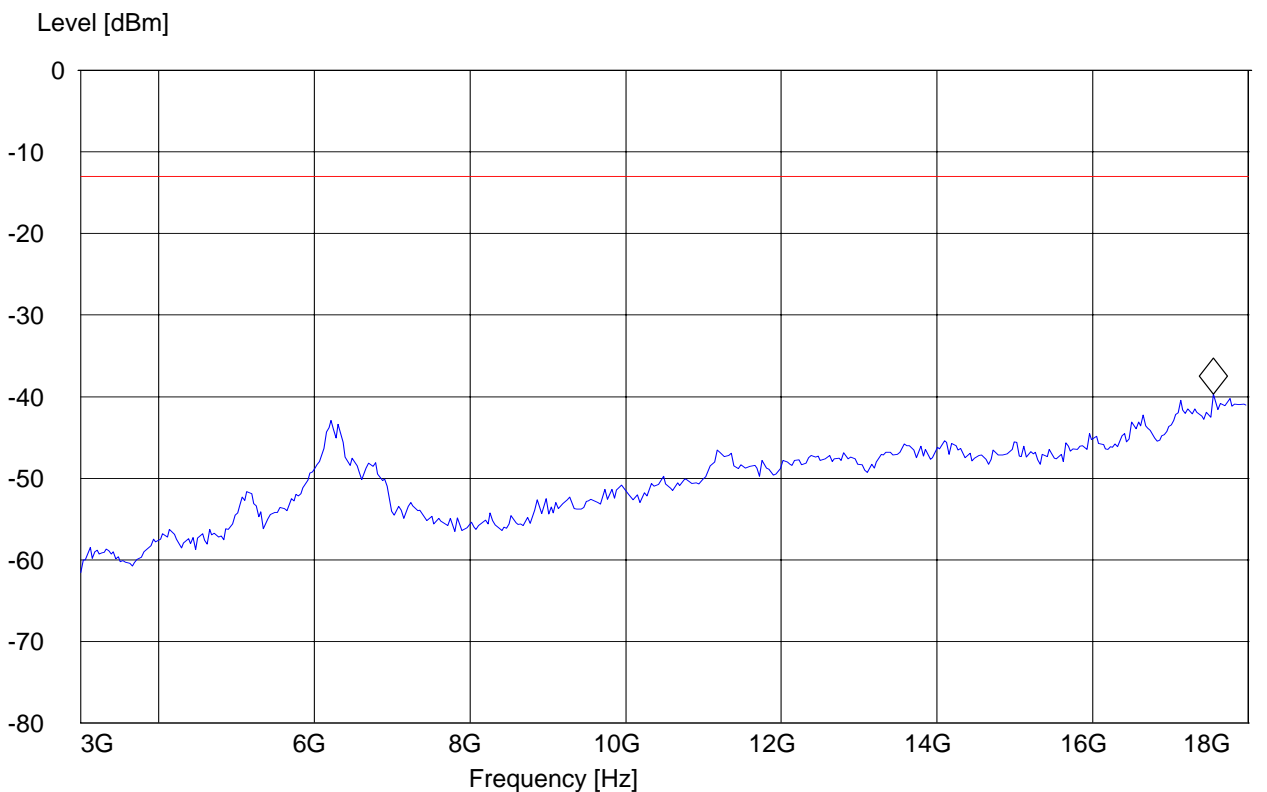
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900; CH.25
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24Spuri 3-18G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
3.0 GHz	18.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 17.549098196 GHz -39.73 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 25

18GHz – 19GHz

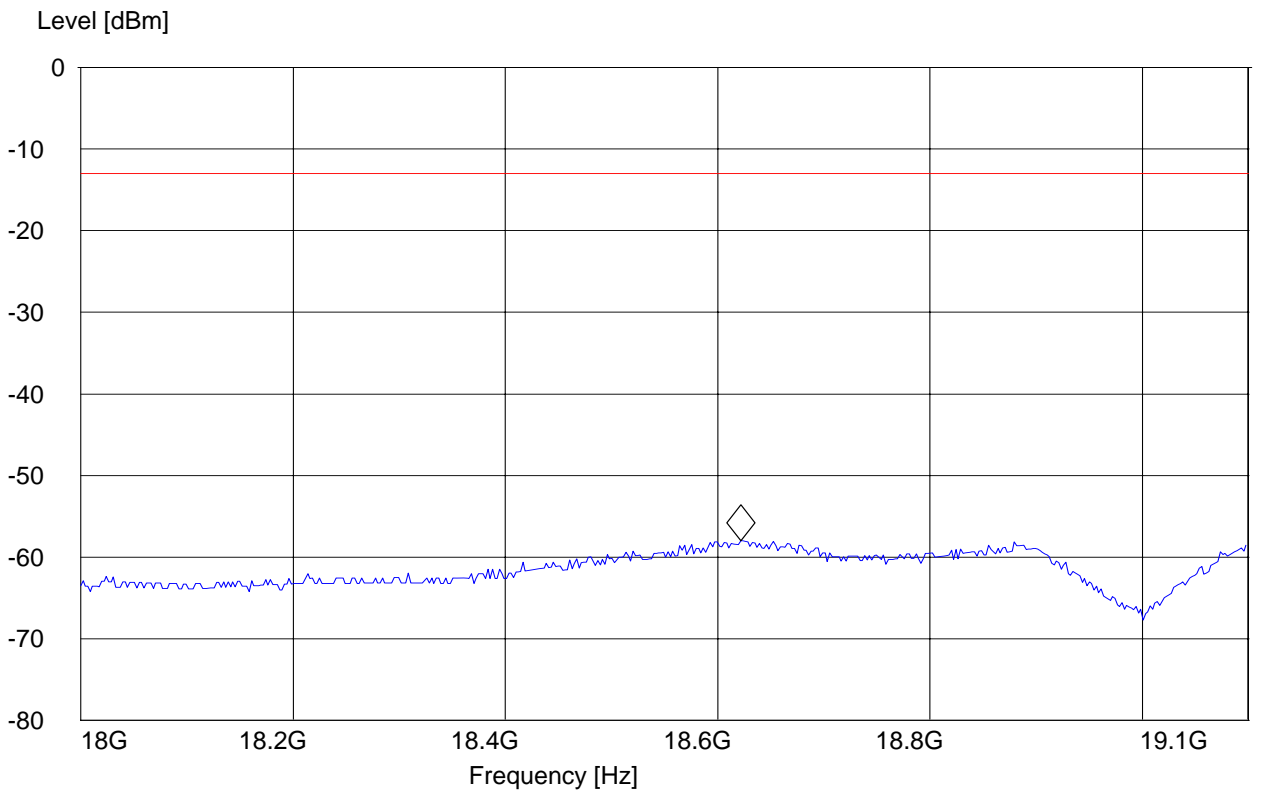
Spurious emission limit -13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900; CH.25
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24spuri 18-19.1G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	19.1 GHz	Average	Coupled	1 MHz	DUMMY-DBM

Marker: 18.621643287 GHz -57.99 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 600

1GHz – 3GHz

Spurious emission limit –13dBm

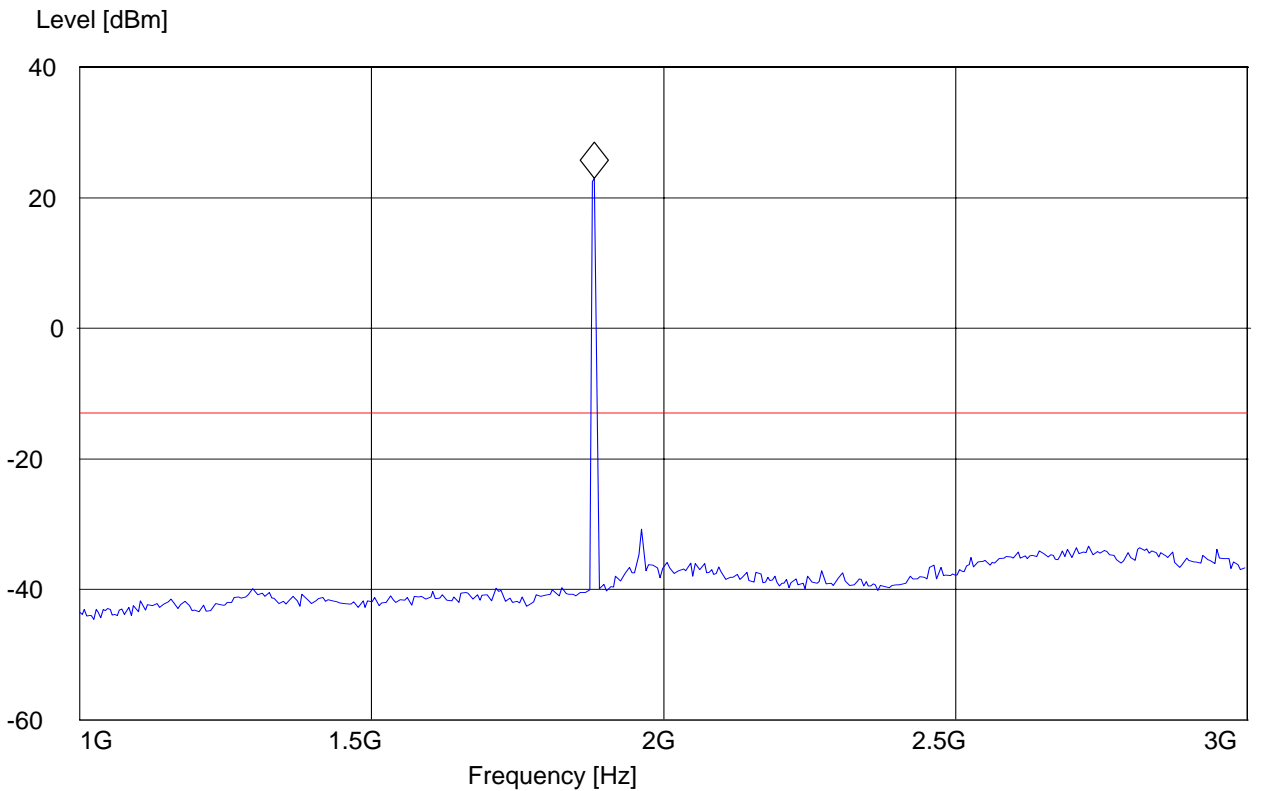
Note: The peak above/close to the limit line is the carrier freq. at ch-600.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900; CH.600
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments: Marker placed on uplink

SWEEP TABLE: "FCC 24Spuri 1-3G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	3.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 1.881763527 GHz 23.02 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 600

3GHz – 18GHz

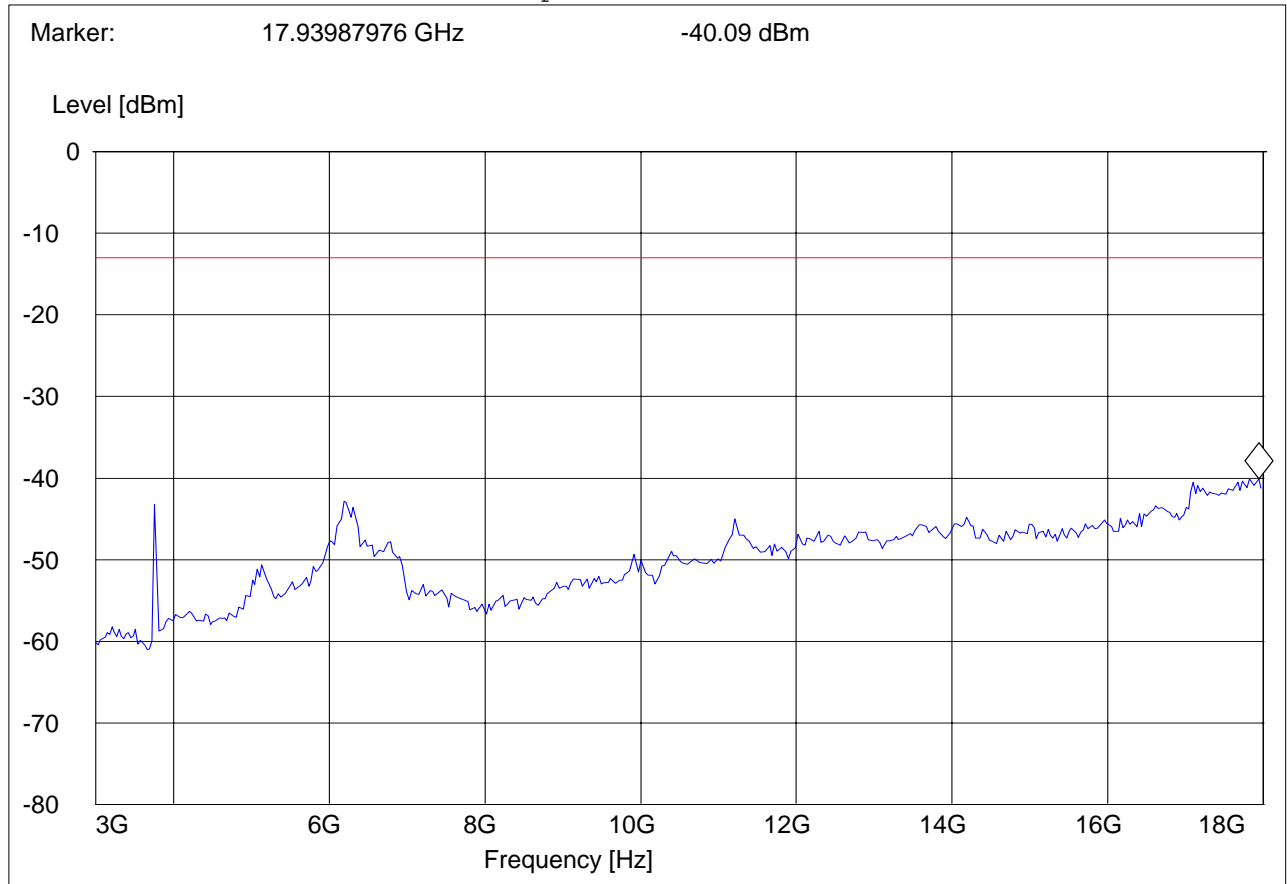
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900; CH.600
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24Spuri 3-18G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
3.0 GHz	18.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 17.93987976 GHz -40.09 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 600

18GHz – 19GHz

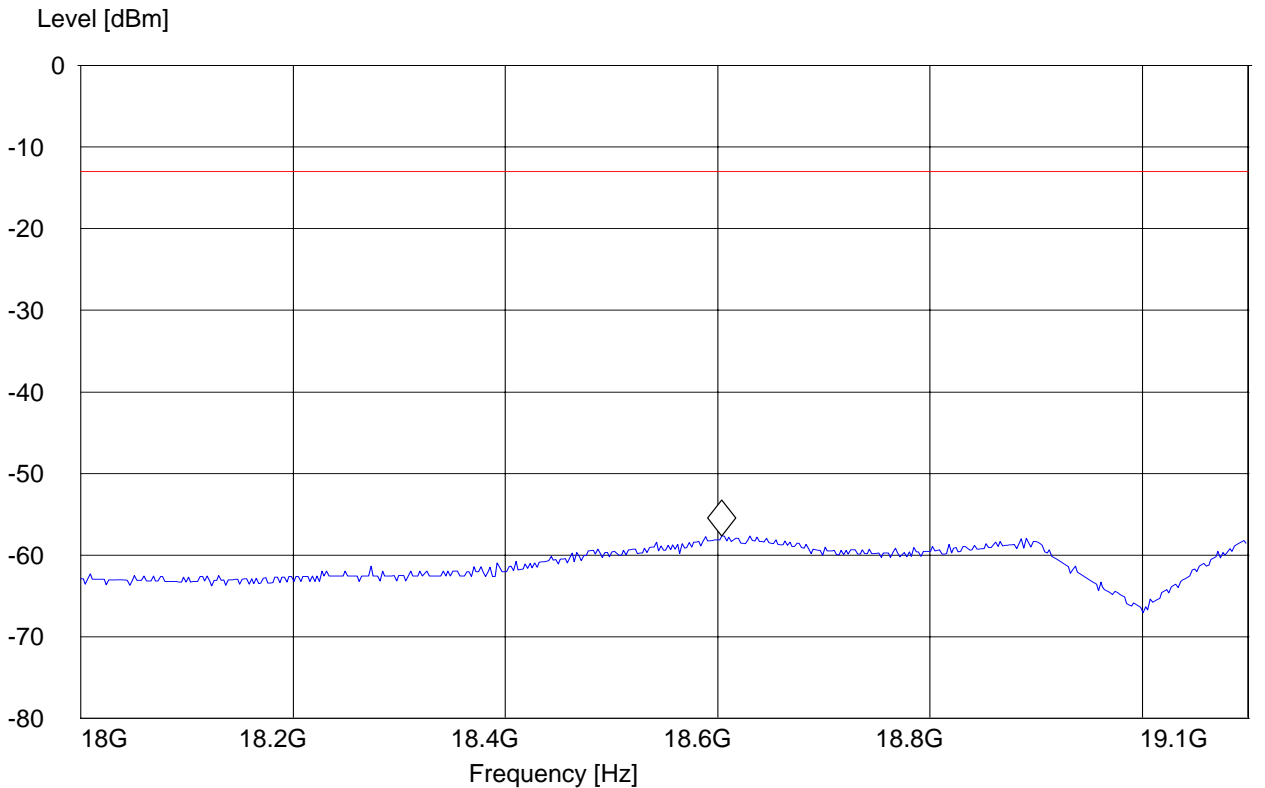
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900; CH.600
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24spuri 18-19.1G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	19.1 GHz	Average	Coupled	1 MHz	DUMMY-DBM

Marker: 18.604008016 GHz -57.65 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 1175

1GHz – 3GHz

Spurious emission limit –13dBm

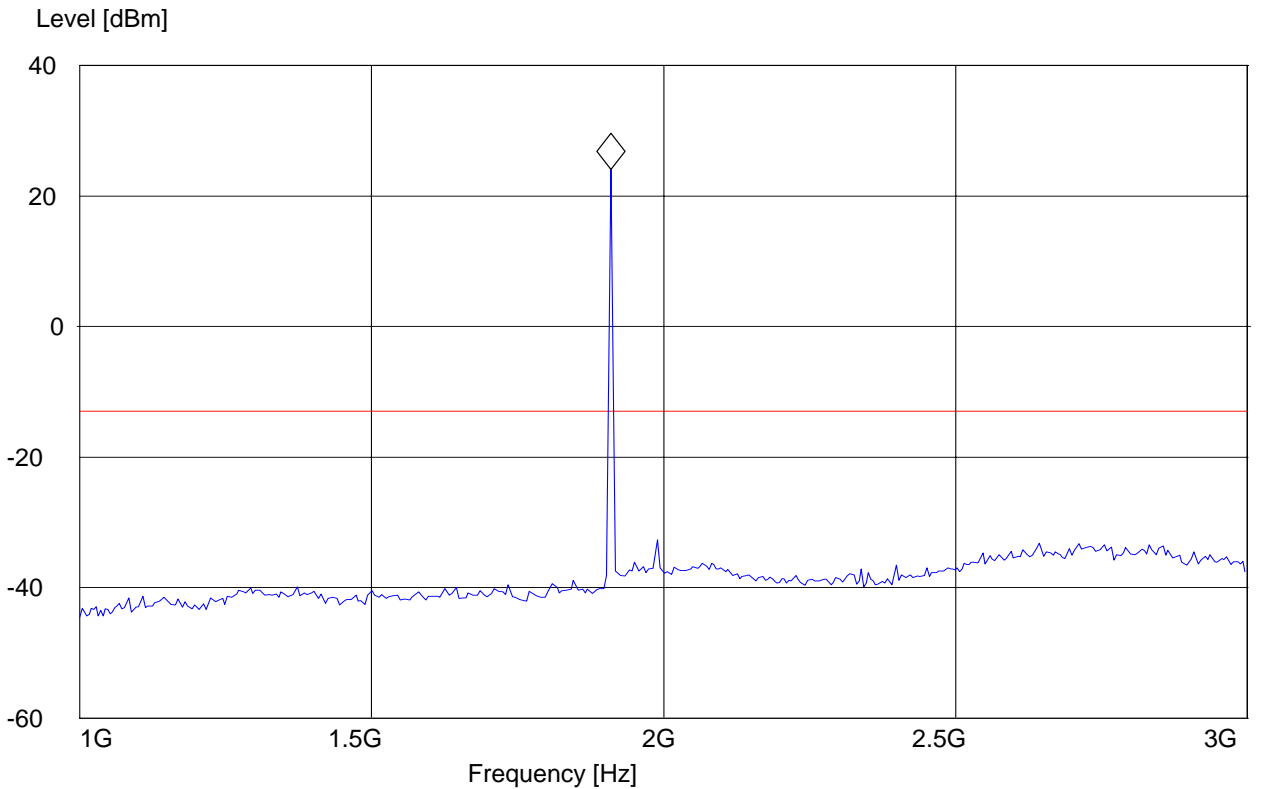
Note: The peak above the limit line is the carrier freq. at ch-1175.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900; CH.1175
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments: Marker placed on uplink

SWEEP TABLE: "FCC 24Spuri 1-3G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	3.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 1.909819639 GHz 24.08 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 1175

3GHz – 18GHz

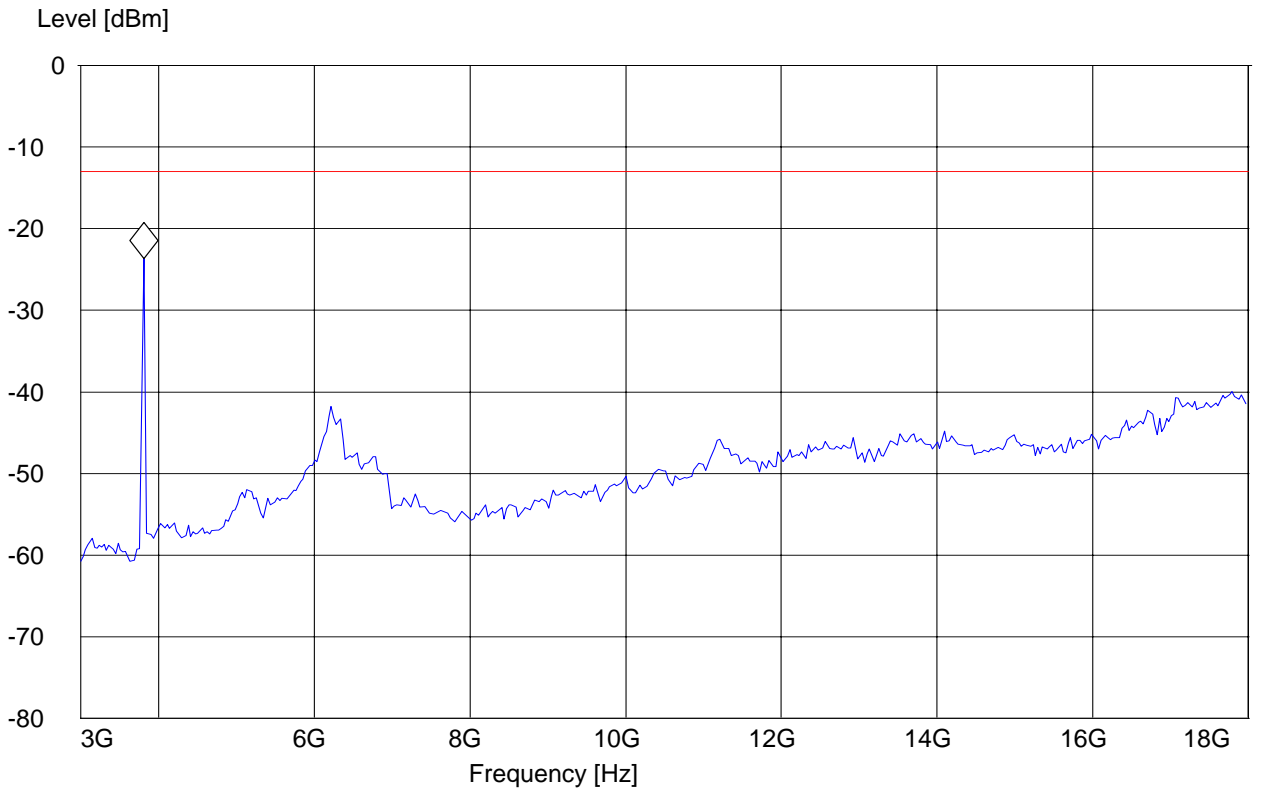
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900; CH.1175
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24Spuri 3-18G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
3.0 GHz	18.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 3.811623246 GHz -23.67 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 1175

18GHz – 19.1GHz

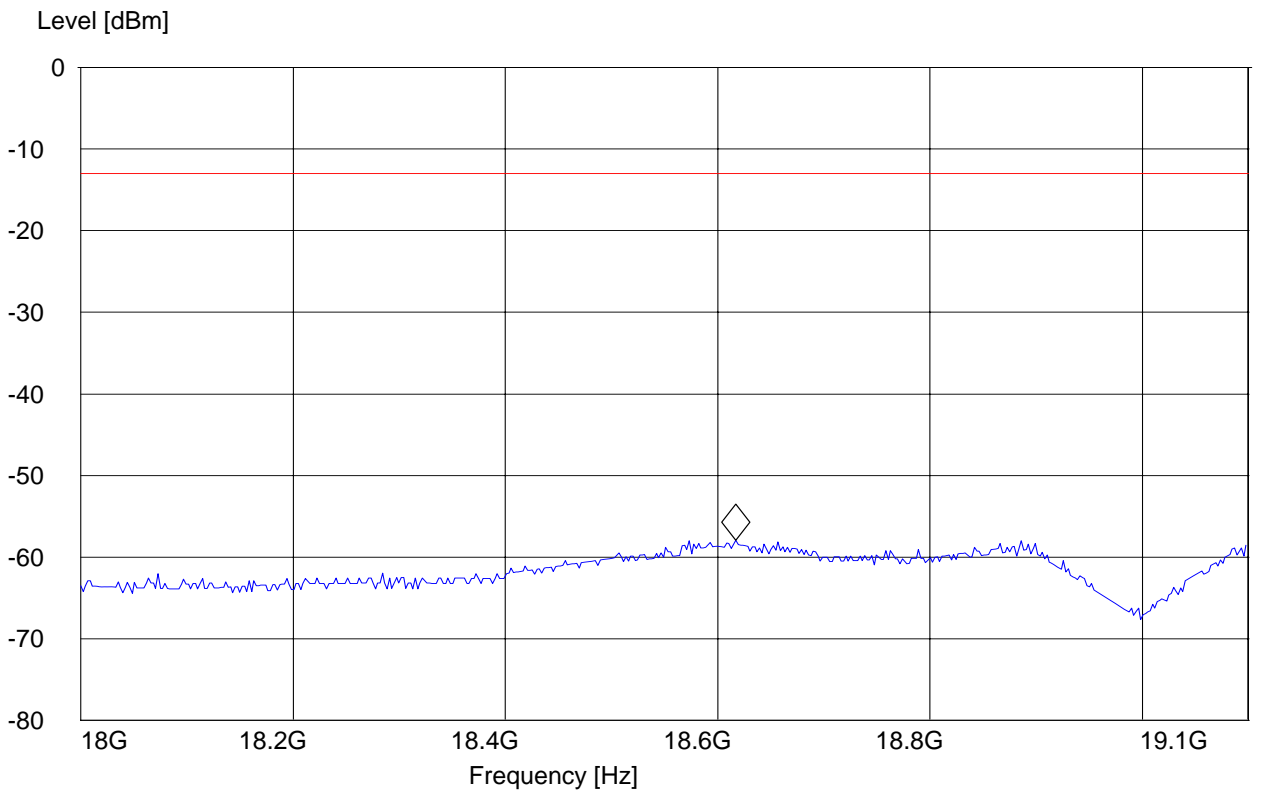
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: CDMA 1900; CH.600
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24spuri 18-19.1G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	19.1 GHz	Average	Coupled	1 MHz	DUMMY-DBM

Marker: 18.617234469 GHz -57.91 dBm



5.2.4.4 RESULTS OF RADIATED TESTS PCS-1900: EVDO

Harmonic	Tx ch-25 Freq.(MHz)	Level (dBm)	Tx ch-600 Freq. (MHz)	Level (dBm)	Tx ch-1175 Freq. (MHz)	Level (dBm)
2	3700.4	NF	3760	NF	3819.6	NF
3	5550.6	NF	5640	NF	5729.4	NF
4	7400.8	NF	7520	NF	7639.2	NF
5	9251	NF	9400	NF	9549	NF
6	11101.2	NF	11280	NF	11458.8	NF
7	12951.4	NF	13160	NF	13368.6	NF
8	14801.6	NF	15040	NF	15278.4	NF
9	16651.8	NF	16920	NF	17188.2	NF
10	18502	NF	18800	NF	19098	NF
NF = NOISE FLOOR						

TX: 30MHz - 1GHz

Spurious emission limit -13dBm

Antenna: vertical

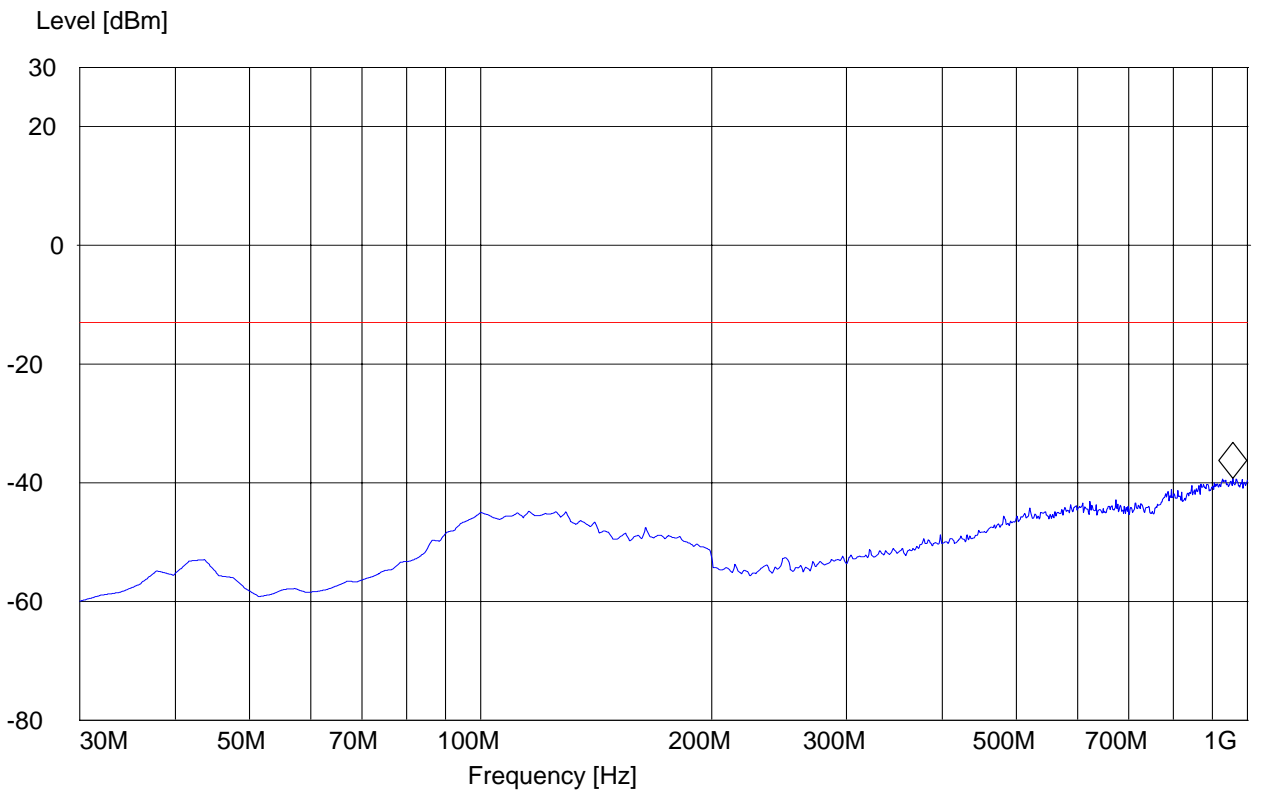
Note: This plot is valid for low, mid & high channels (worst-case plot)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900
ANT Orientation: V
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24 Spur 30M-1G_V"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 957.234469 MHz -39.23 dBm



TX: 30MHz - 1GHz

Spurious emission limit -13dBm

Antenna: Horizontal

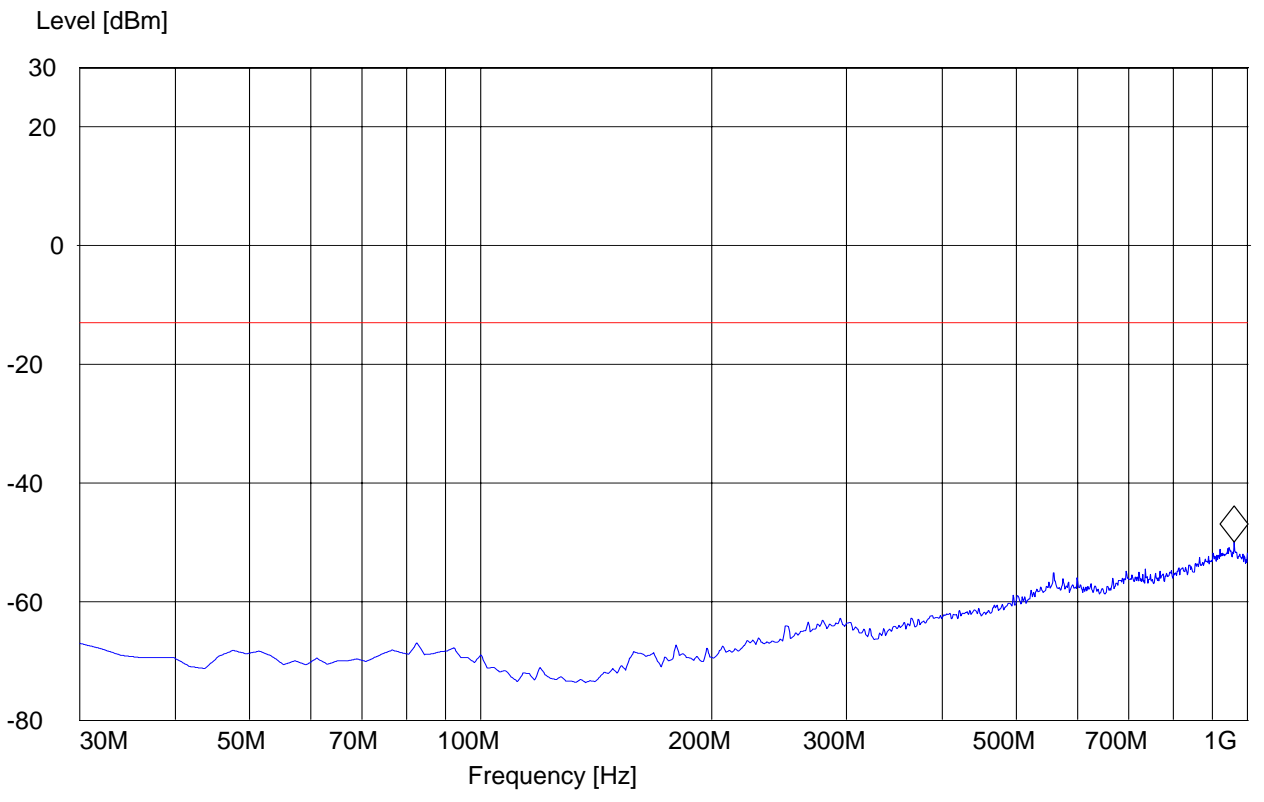
Note: This plot is valid for low, mid & high channels (worst-case plot)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24 Spur 30M-1G_H"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	DUMMY-DBM

Marker: 961.122244 MHz -49.9 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 25

1GHz – 3GHz

Spurious emission limit –13dBm

Note: The peak above the limit line is the carrier freq. at ch-25.

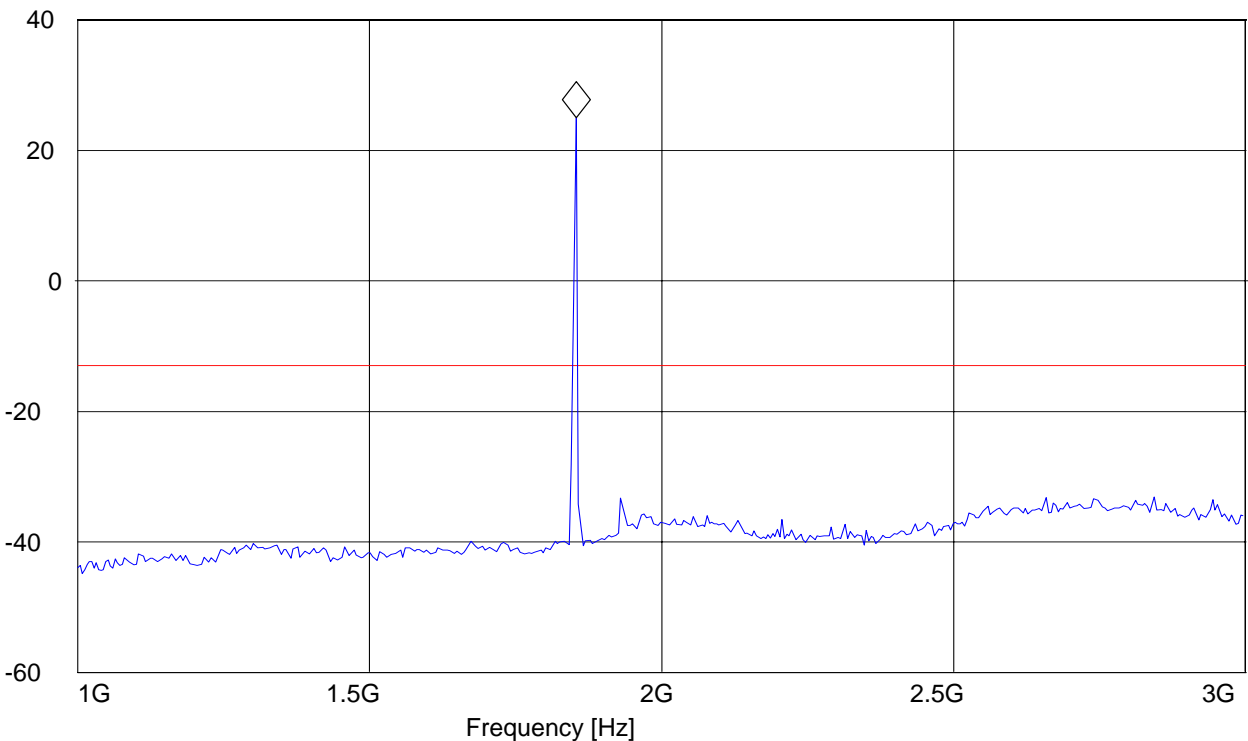
EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900; CH25
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments: Marker placed on uplink

SWEEP TABLE: "FCC 24Spuri 1-3G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	3.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 1.853707415 GHz 24.97 dBm

Level [dBm]



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 25

3GHz – 18GHz

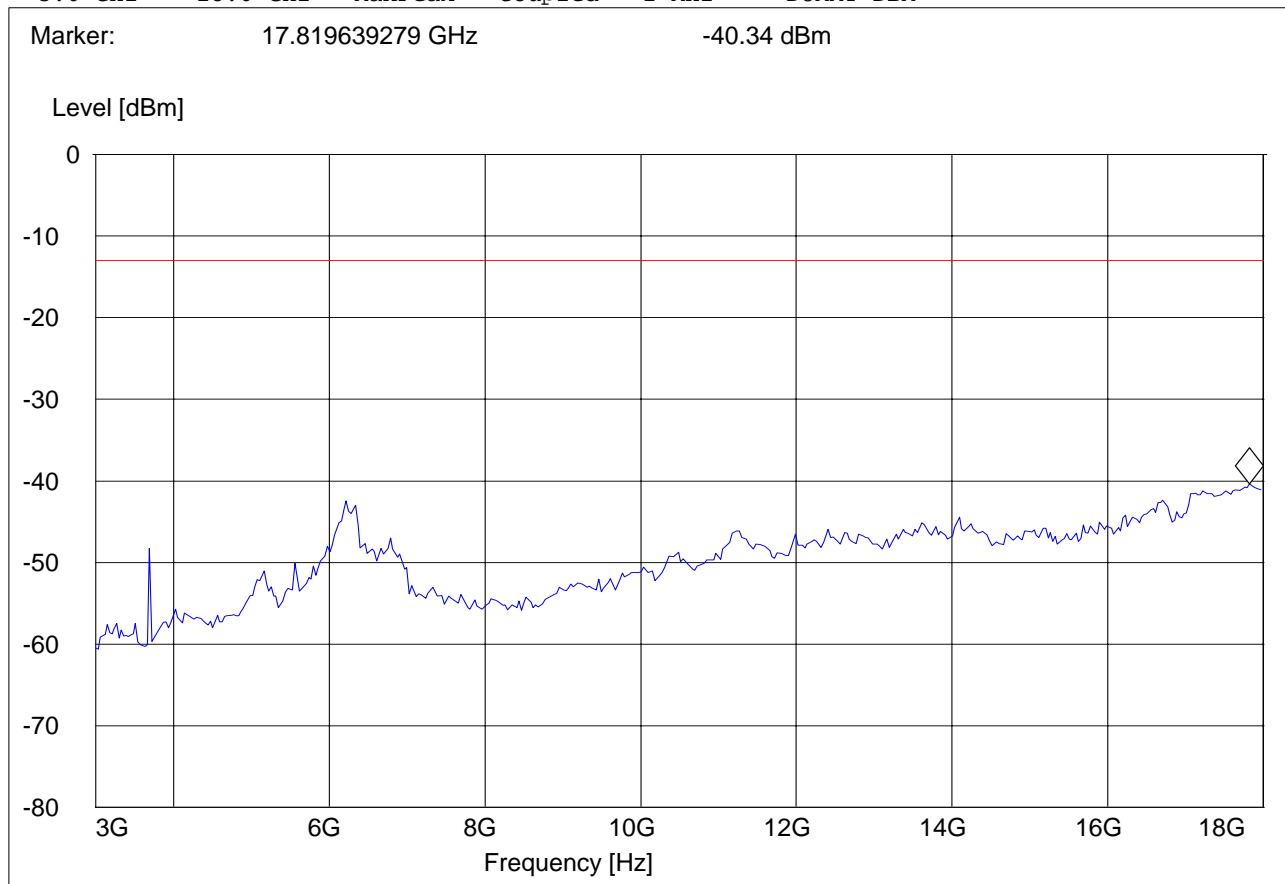
Spurious emission limit -13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900; CH25
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24Spuri 3-18G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
3.0 GHz	18.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 17.819639279 GHz -40.34 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 25

18GHz – 19GHz

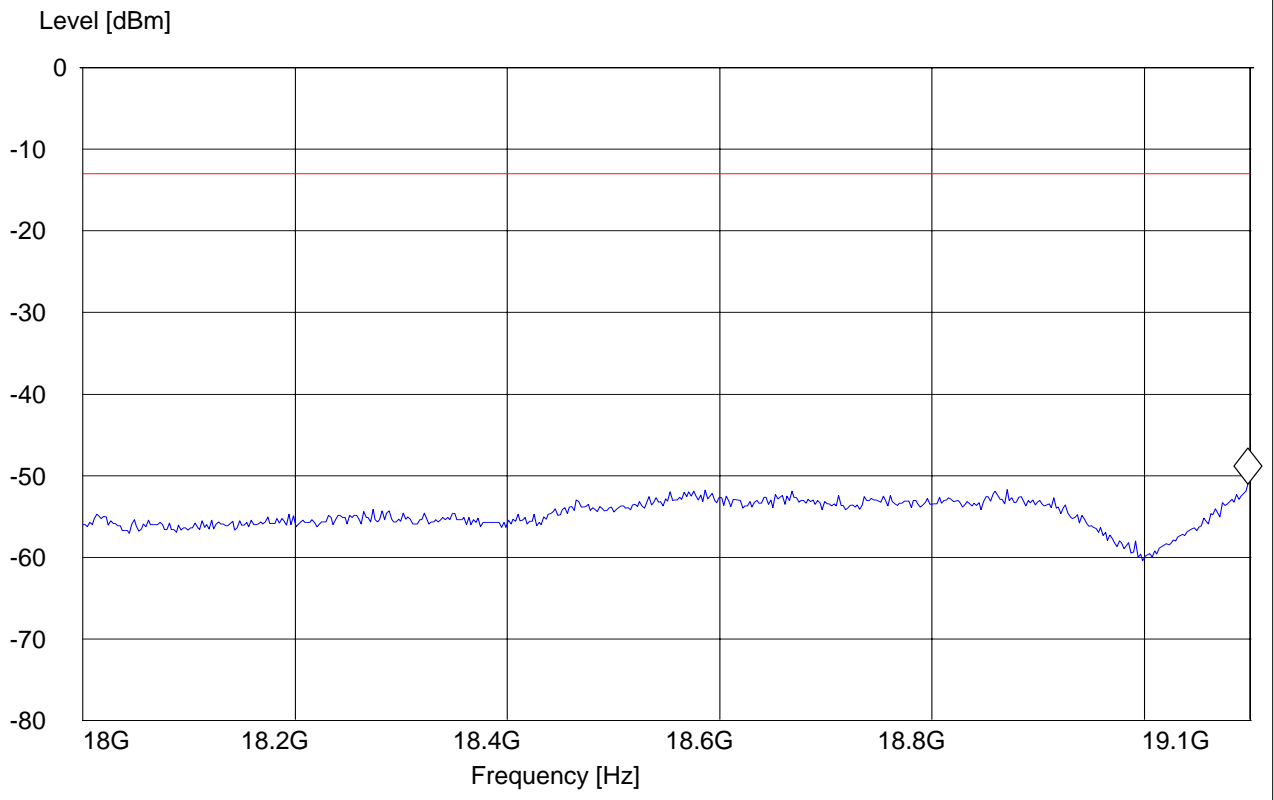
Spurious emission limit -13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900; CH25
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24spuri 18-19.1G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	19.1 GHz	Average	Coupled	1 MHz	DUMMY-DBM

Marker: 19.097795591 GHz -51.03 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 600

1GHz – 3GHz

Spurious emission limit –13dBm

Note: The peak above/close to the limit line is the carrier freq. at ch-600.

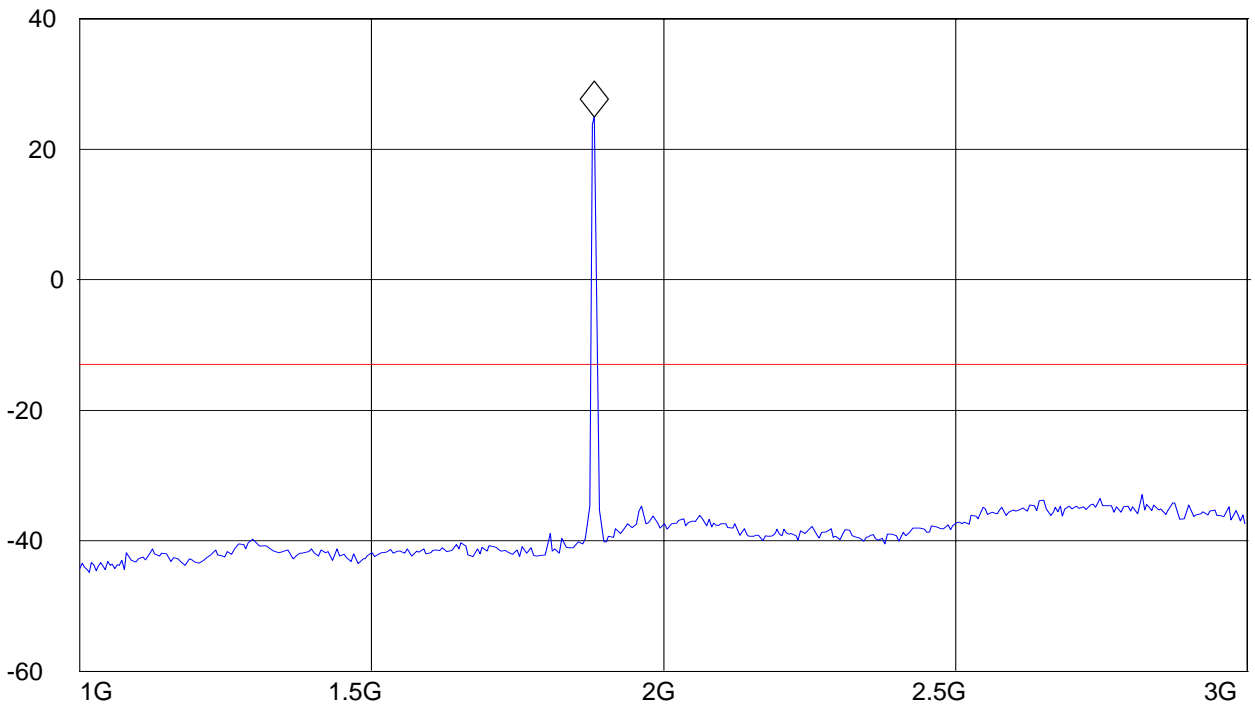
EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900; CH600
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments: Marker placed on uplink

SWEEP TABLE: "FCC 24Spuri 1-3G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	3.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 1.881763527 GHz 24.92 dBm

Level [dBm]



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 600

3GHz – 18GHz

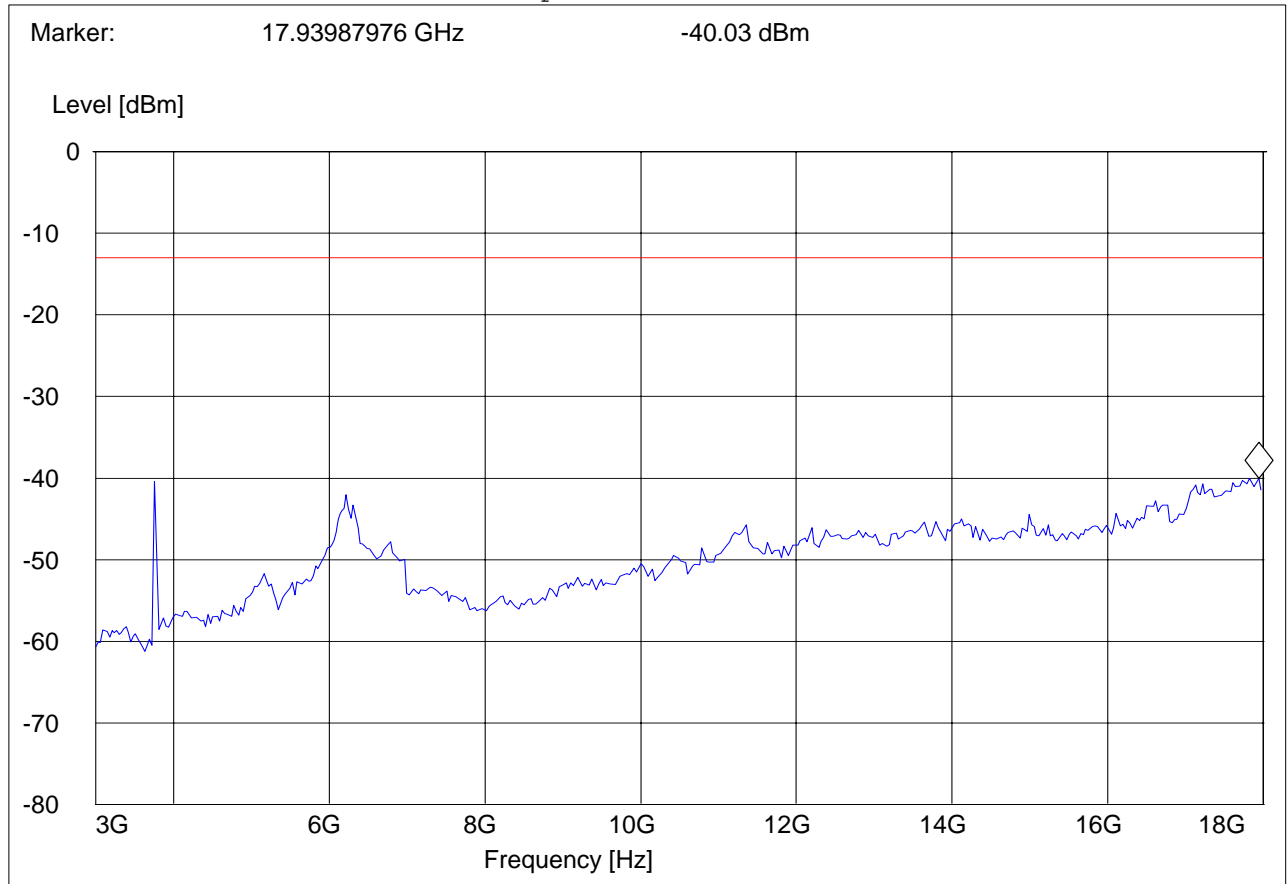
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900; CH600
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24Spuri 3-18G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
3.0 GHz	18.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 17.93987976 GHz -40.03 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 600

18GHz – 19GHz

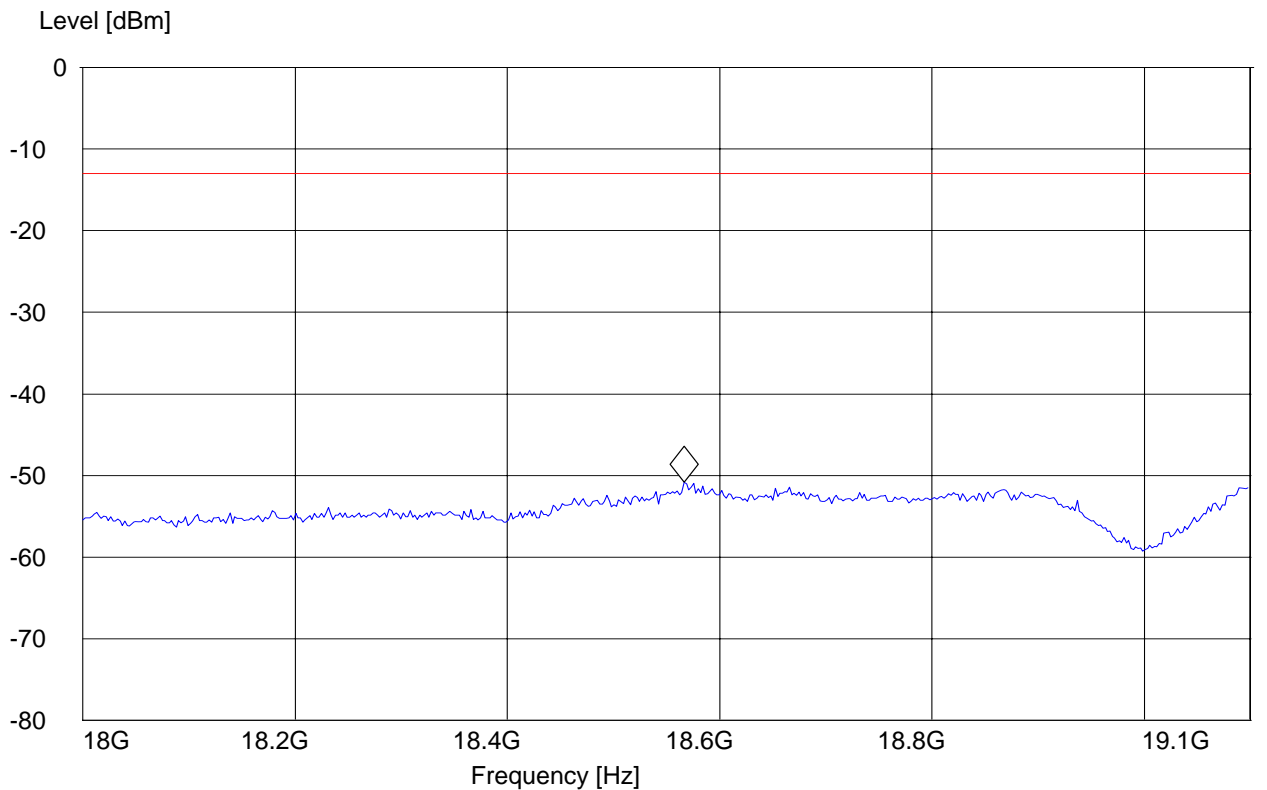
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900; CH600
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24spuri 18-19.1G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	19.1 GHz	Average	Coupled	1 MHz	DUMMY-DBM

Marker: 18.566533066 GHz -50.86 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 1175

1GHz – 3GHz

Spurious emission limit –13dBm

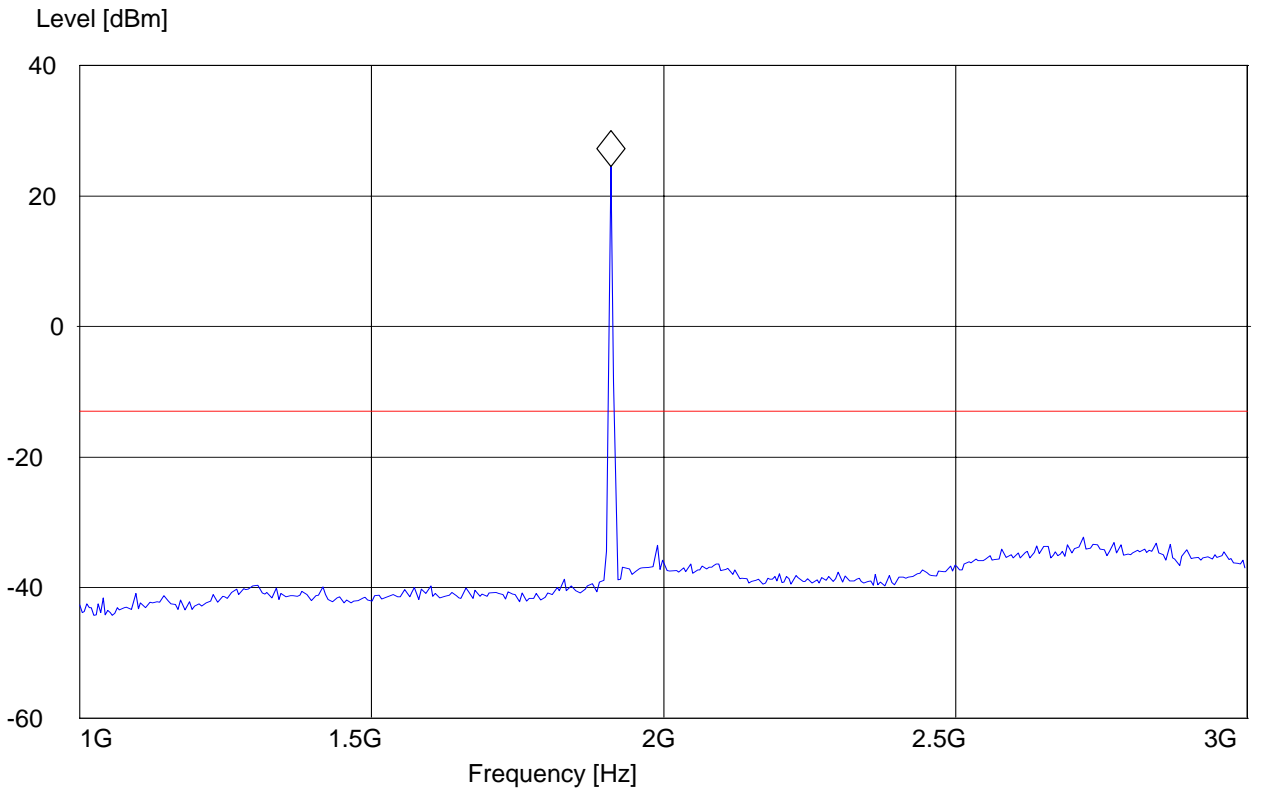
Note: The peak above the limit line is the carrier freq. at ch-1175.

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900; CH1175
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments: Marker placed on uplink

SWEEP TABLE: "FCC 24Spuri 1-3G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	3.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 1.909819639 GHz 24.48 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 1175

3GHz – 18GHz

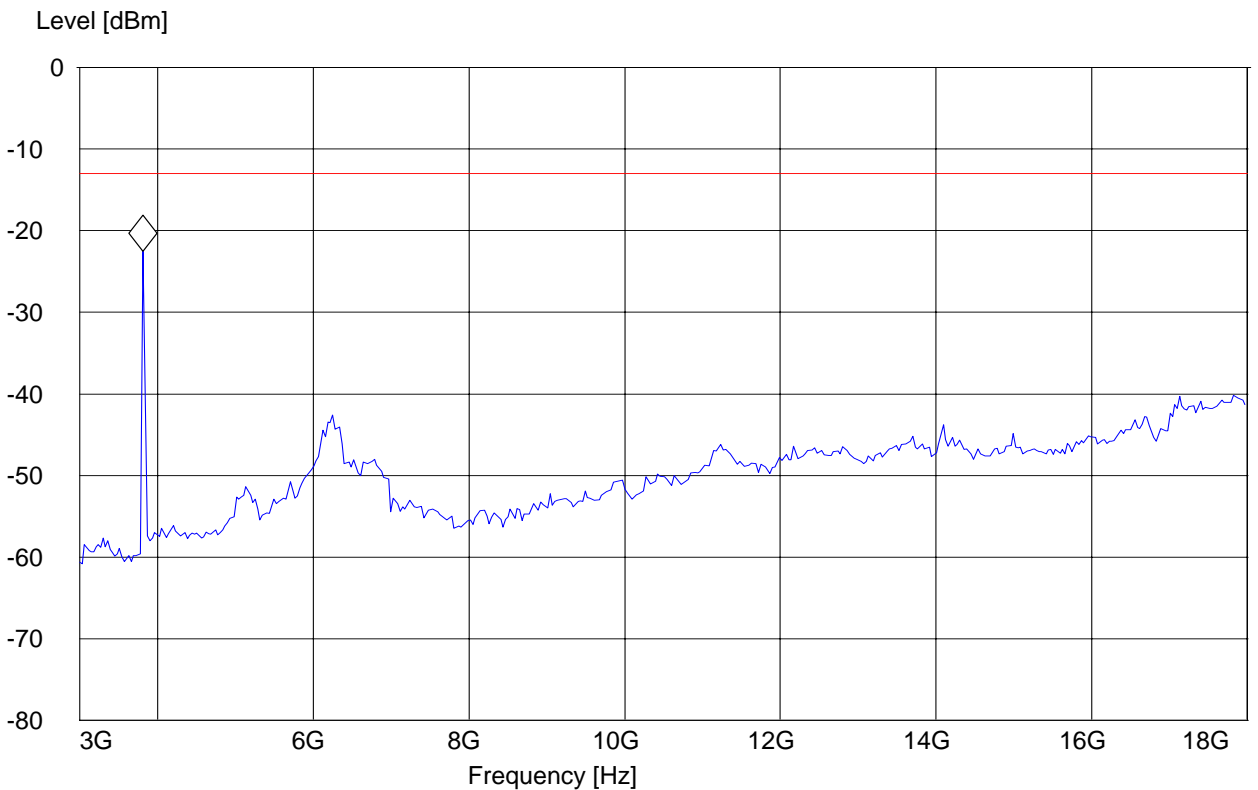
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900; CH1175
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24Spuri 3-18G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
3.0 GHz	18.0 GHz	MaxPeak	Coupled	1 MHz	DUMMY-DBM

Marker: 3.811623246 GHz -22.53 dBm



RADIATED SPURIOUS EMISSIONS(PCS 1900)

Ch 1175

18GHz – 19.1GHz

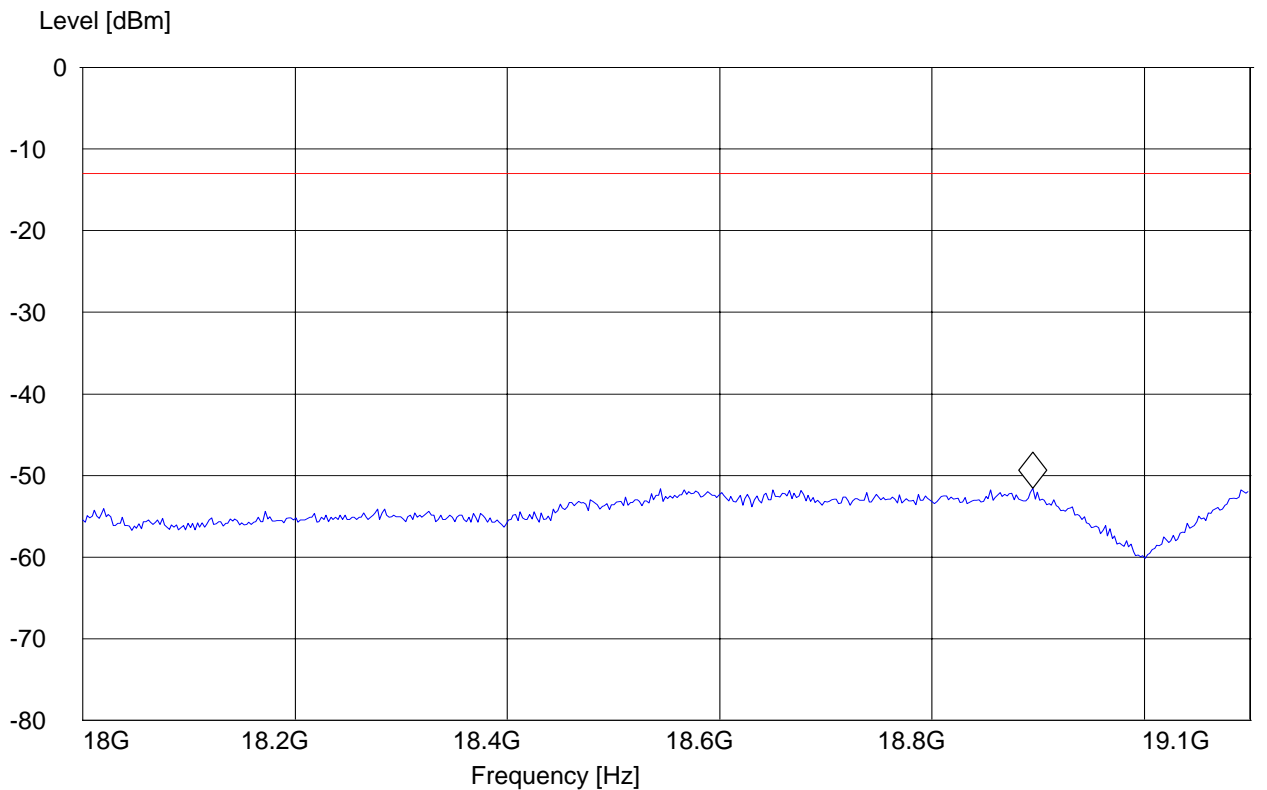
Spurious emission limit –13dBm

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: EVDO 1900; CH1175
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "FCC 24spuri 18-19.1G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	19.1 GHz	Average	Coupled	1 MHz	DUMMY-DBM

Marker: 18.89498998 GHz -51.55 dBm



5.3 RECEIVER RADIATED EMISSIONS

§ 2.1053 / RSS-129 & 133

NOTE:

1. The radiated emissions were done with different settings, using the relevant pre-amplifiers for the relevant frequency ranges. This is the reason that the graphs show different noise levels. In the range between 3GHz and 26.5GHz very short cable connections to the antenna was used to minimize the noise level.

Limits

SUBCLAUSE § RSS-133

Frequency (MHz)	Field strength (µV/m)	Measurement distance (m)
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

5.3.1 Receiver Radiated Spurious Emissions Results

Measurements were performed with the EUT in X, Y and Z orientations with the measurement antenna in both horizontal and vertical polarity. The plots below show the results of the worst case orientation and polarity.

RECEIVER RADIATED SPURIOUS EMISSIONS

RX: 30MHz - 1GHz

Spurious emission limit -13dBm

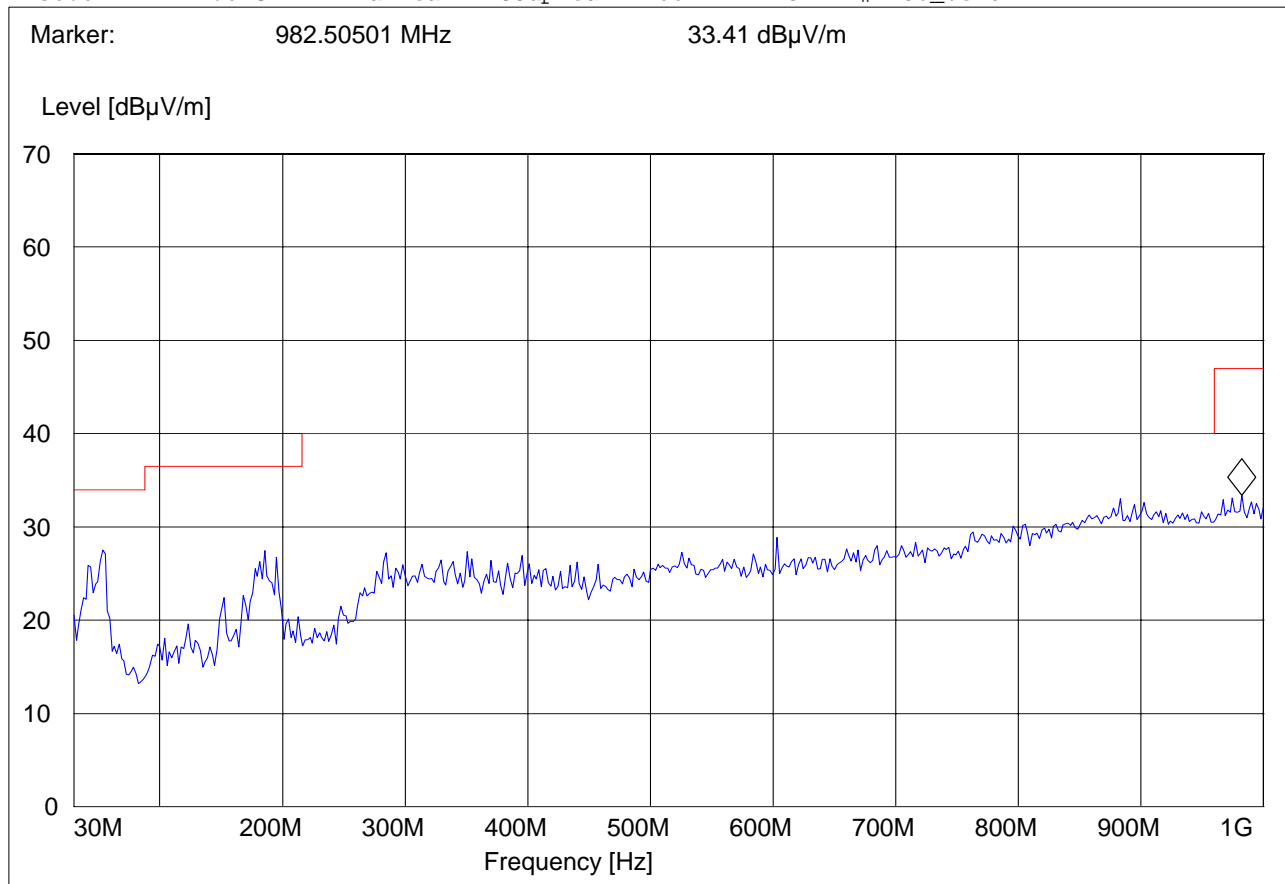
Antenna Vertical

Note: This plot is valid for low, mid & high channels (worst-case plot)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: RX
ANT Orientation: V
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "CANADA RE_30M-1G_Ver"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	3141-#1186_Vert



RECEIVER RADIATED SPURIOUS EMISSIONS

RX: 30MHz - 1GHz

Spurious emission limit -13dBm

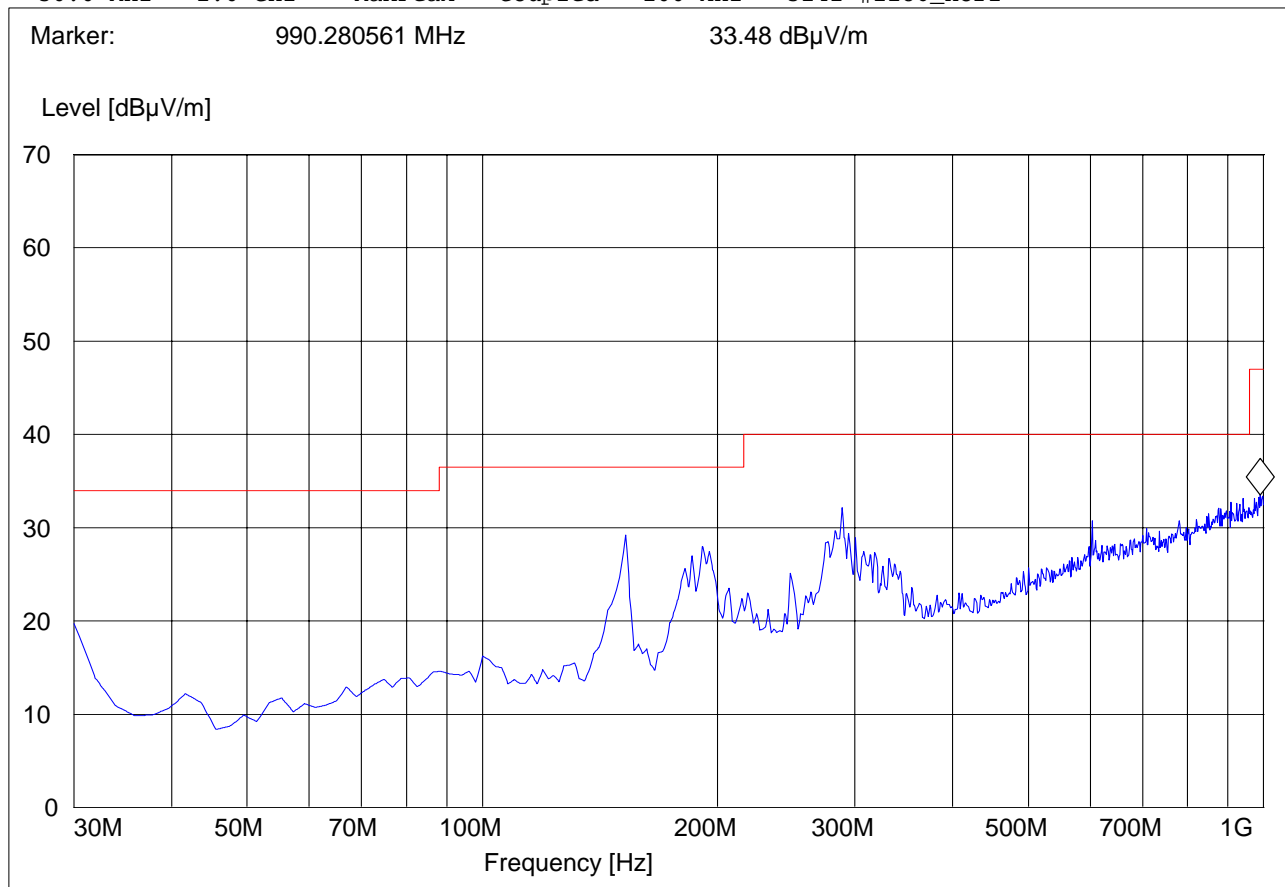
Antenna Horizontal

Note: This plot is valid for low, mid & high channels (worst-case plot)

EUT: M2 Platform
Customer:: Sony Electronics
Test Mode: RX
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments:

SWEEP TABLE: "CANDA RE_30M-1G_Hor"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	3141-#1186_Horz



RECEIVER RADIATED SPURIOUS EMISSIONS

RX: 1GHz - 18GHz

Spurious emission limit -13dBm

CETECOM Inc.

411 Dixon Landing Road; Milpitas, CA 95035

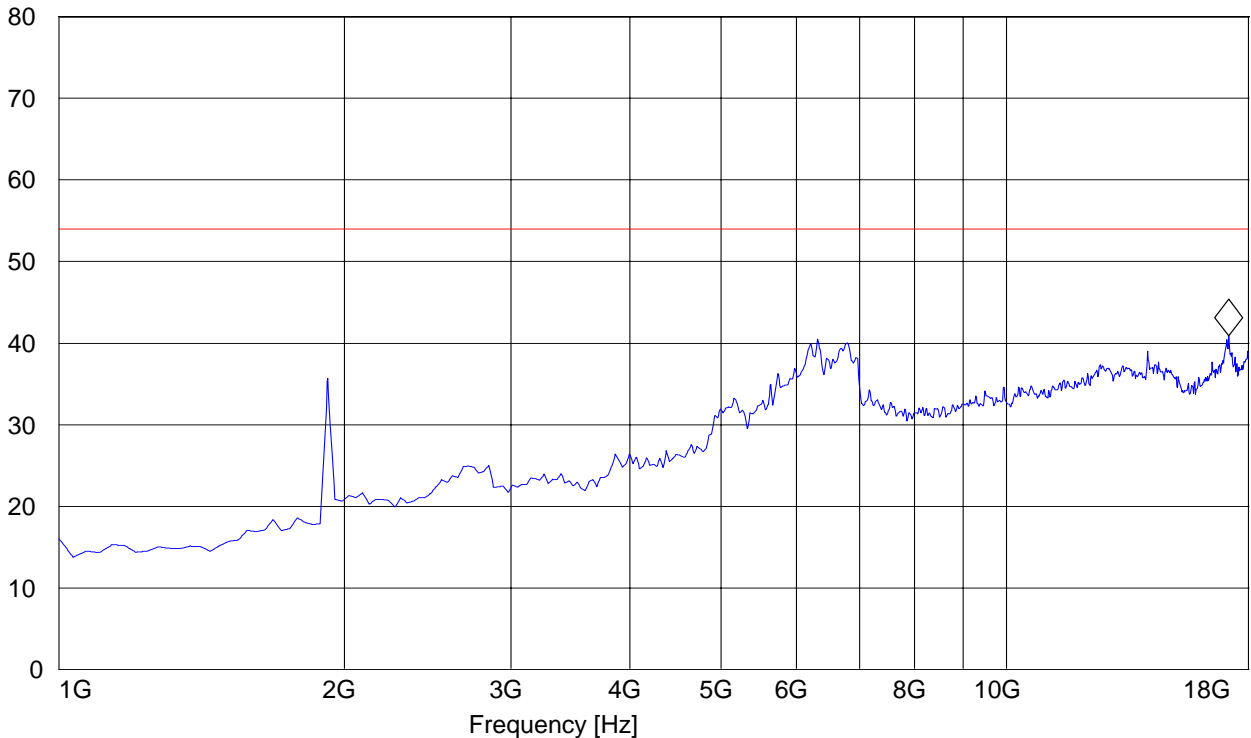
EUT / Description: M2 Platform
Customer: Sony Electronics
Operation Mode: RX
ANT Orientation: : H
EUT Orientation:: H
Test Engineer: Chris
Voltage: AC + Internal Battery
Comments::

SWEEP TABLE: "CANADA RE_1-18G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	18.0 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_horz

Marker: 17.148296593 GHz 40.93 dBμV/m

Level [dBμV/m]



6 AC POWER LINE CONDUCTED EMISSIONS § 15.107/207

6.1.1 LIMITS

Technical specification: 15.107 / 15.207 (Revised as of August 20, 2002)

§15.107 (a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Limit

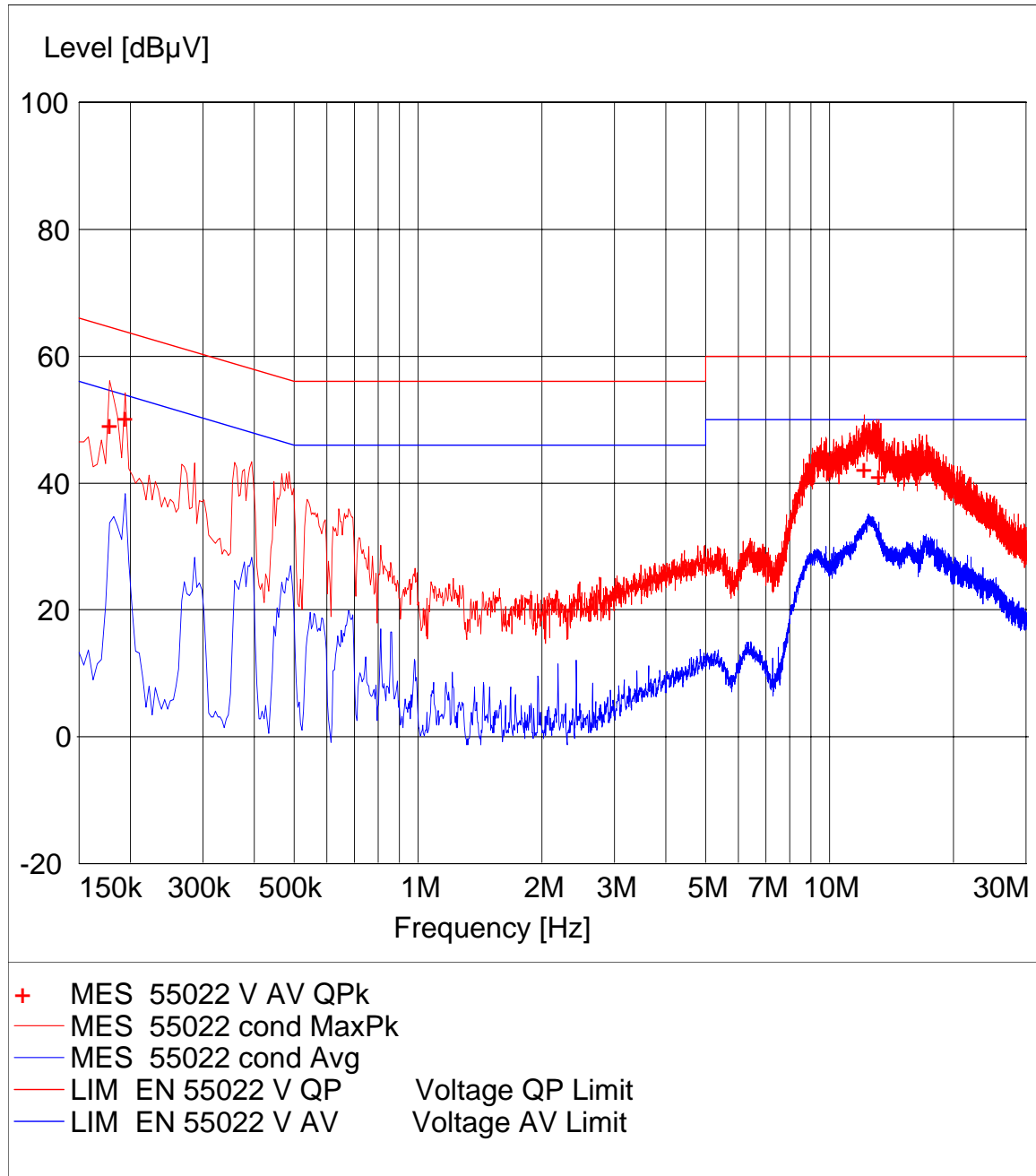
Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	Quasi-Peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30	60	50
* Decreases with logarithm of the frequency		

ANALYZER SETTINGS: RBW = 10KHz

VBW = 10KHz

6.1.2 RESULTS TX Line CDMA 800:

EUT: M2 Platform
Manufacturer: Sony Electronics
Test Mode: CDMA 850
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC + Laptop
Comments: : Line





MEASUREMENT RESULT: "55022 V AV QPk"

11/3/2008 10:34AM

Frequency	Level	Transd	Limit	Margin	Line	PE	AUX STATE
MHz	dBμV	dB	dBμV	dB			
0.178000	49.20	0.0	65	15.3	1	---	OFF
0.194000	50.40	0.1	64	13.4	1	---	OFF
12.126000	42.40	0.7	60	17.6	1	---	OFF
13.182000	41.20	0.7	60	18.8	1	---	OFF

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBμV
0.150000	56.00
0.500000	46.00
5.000000	46.00
5.000000	50.00
30.000000	50.00

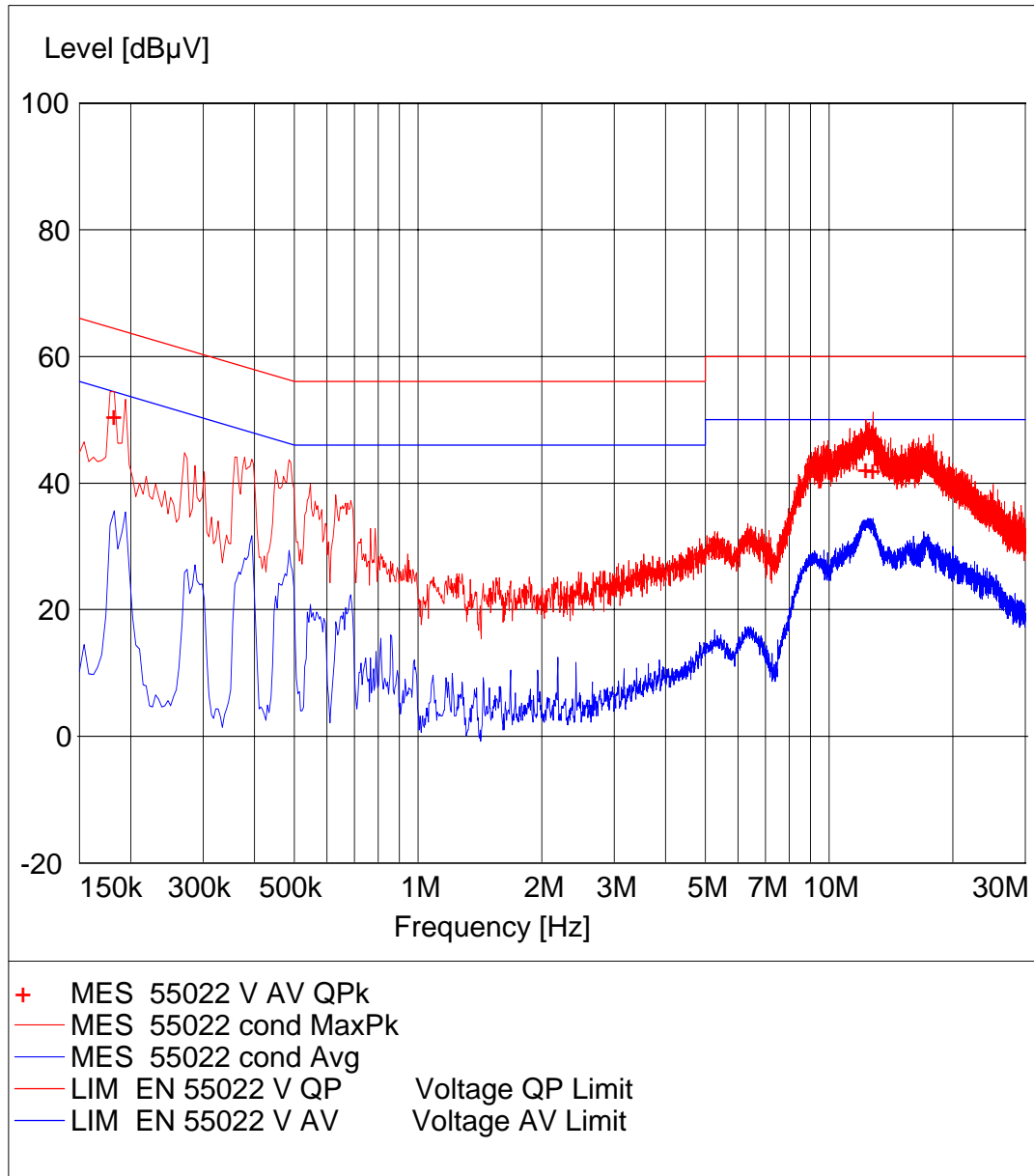
LIMIT LINE: "EN 55022 V QP"

Short Description: Voltage QP Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBμV
0.150000	66.00
0.500000	56.00
5.000000	56.00
5.000000	60.00
30.000000	60.00

6.1.3 RESULTS TX Neutral CDMA 800:

EUT: M2 Platform
Manufacturer: Sony Electronics
Test Mode: CDMA 850
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC + Laptop
Comments: : Neutral



MEASUREMENT RESULT: "55022 V AV QPk"

11/3/2008 10:28AM

Frequency	Level	Transd	Limit	Margin	Line	PE	AUX STATE
MHz	dBμV	dB	dBμV	dB			
0.182000	50.60	0.1	64	13.8	1	---	OFF
12.298000	42.30	0.7	60	17.7	1	---	OFF
12.774000	42.20	0.7	60	17.8	1	---	OFF

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBμV
0.150000	56.00
0.500000	46.00
5.000000	46.00
5.000000	50.00
30.000000	50.00

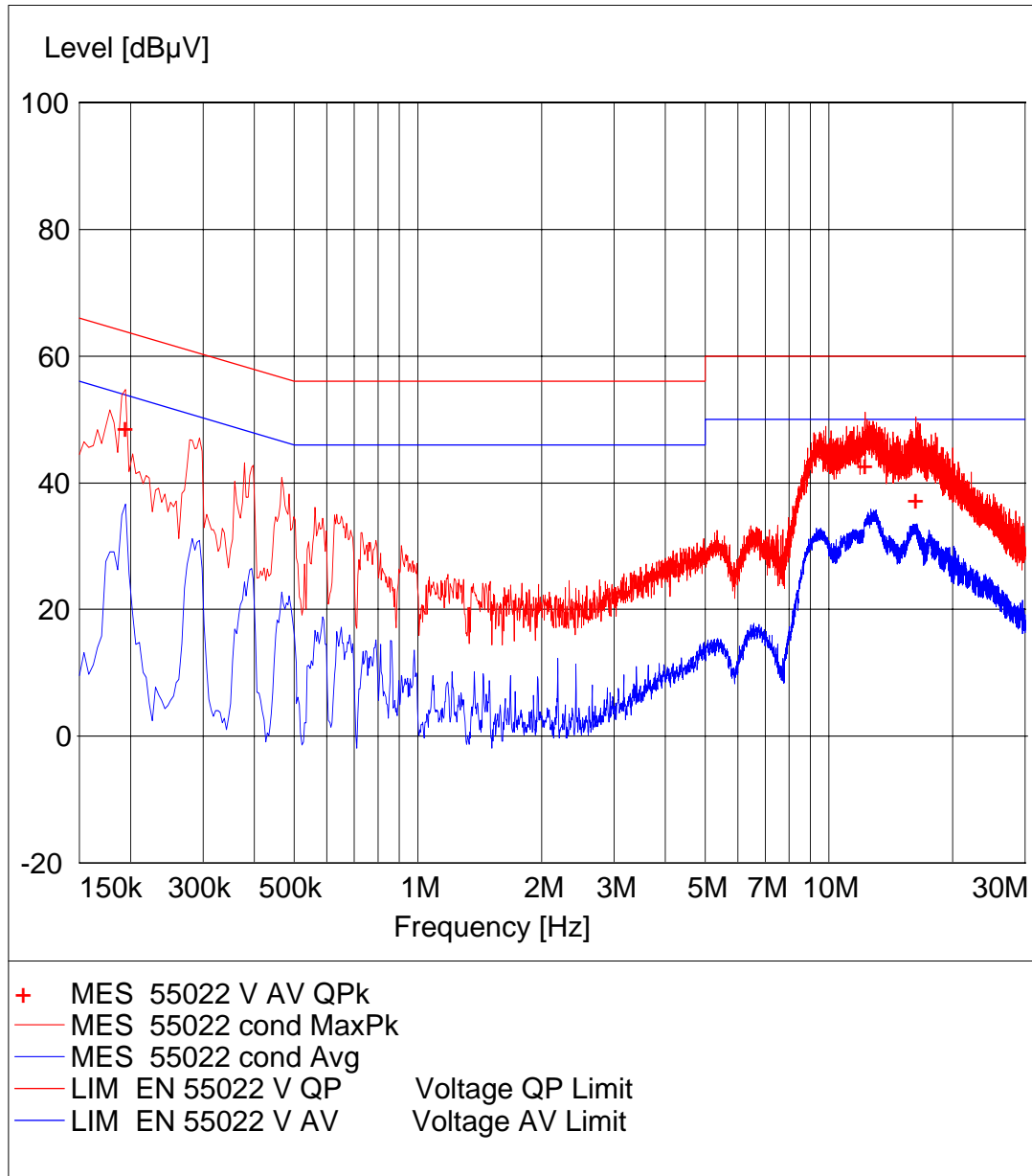
LIMIT LINE: "EN 55022 V QP"

Short Description: Voltage QP Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBμV
0.150000	66.00
0.500000	56.00
5.000000	56.00
5.000000	60.00
30.000000	60.00

6.1.4 RESULTS TX Line EVDO 800:

EUT: M2 Platform
Manufacturer: Sony Electronics
Test Mode: EVDO 850
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC + Laptop
Comments: : Line



MEASUREMENT RESULT: "55022 V AV QPk"

11/3/2008 10:02AM

Frequency	Level	Transd	Limit	Margin	Line	PE	AUX STATE
MHz	dBμV	dB	dBμV	dB			
0.194000	48.70	0.1	64	15.2	1	---	OFF
12.234000	42.90	0.7	60	17.1	1	---	OFF
16.282000	37.40	0.1	60	22.6	1	---	OFF

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBμV
0.150000	56.00
0.500000	46.00
5.000000	46.00
5.000000	50.00
30.000000	50.00

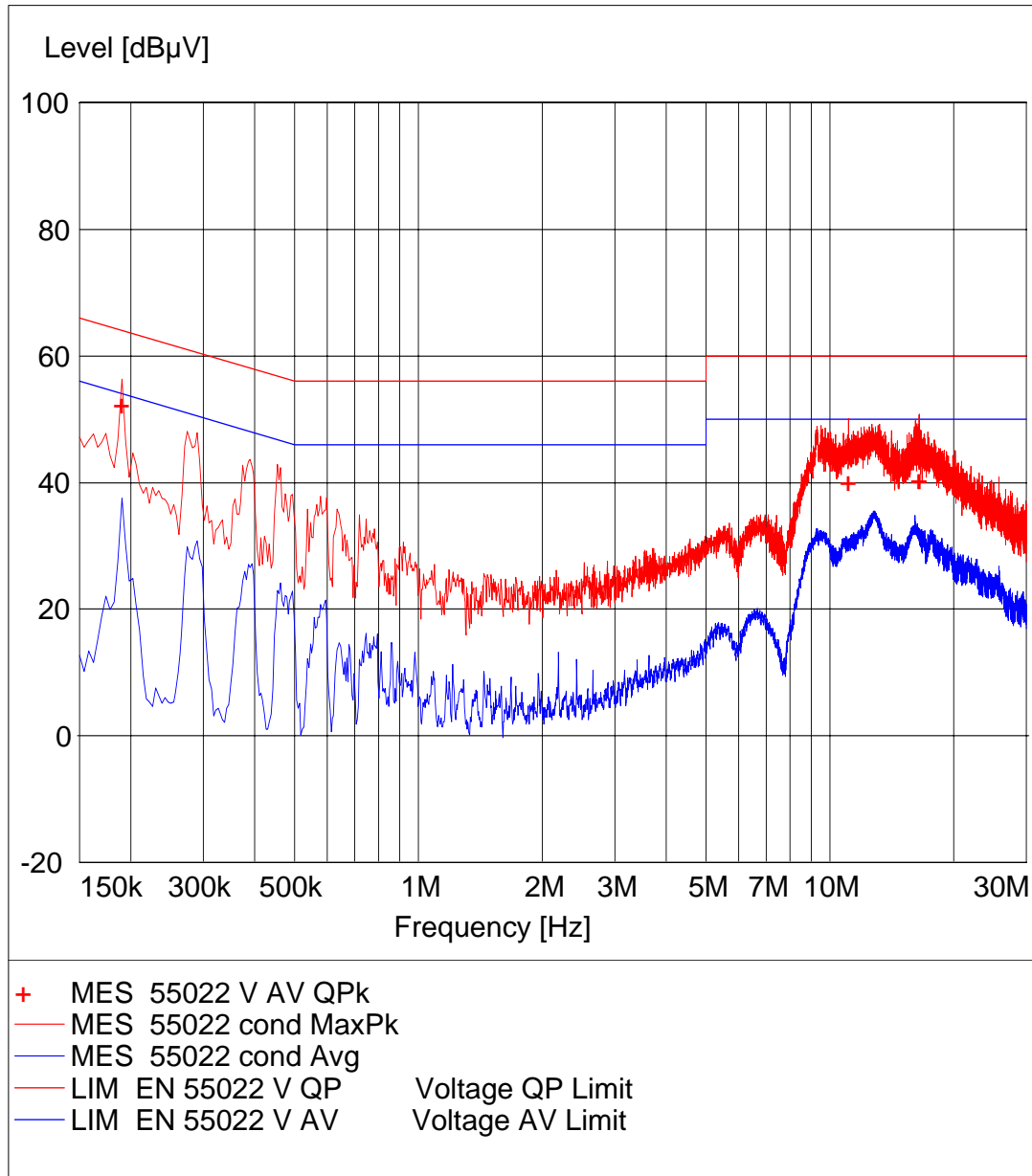
LIMIT LINE: "EN 55022 V QP"

Short Description: Voltage QP Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBμV
0.150000	66.00
0.500000	56.00
5.000000	56.00
5.000000	60.00
30.000000	60.00

6.1.5 RESULTS TX Neutral EVDO 800:

EUT: M2 Platform
Manufacturer: Sony Electronics
Test Mode: EVDO 850
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC + Laptop
Comments: : Neutral



MEASUREMENT RESULT: "55022 V AV QPk"

11/3/2008 9:57AM

Frequency	Level	Transd	Limit	Margin	Line	PE	AUX STATE
MHz	dBµV	dB	dBµV	dB			
0.190000	52.40	0.1	64	11.7	1	---	OFF
11.098000	40.20	0.6	60	19.8	1	---	OFF
16.458000	40.50	0.1	60	19.5	1	---	OFF
16.486000	40.50	0.1	60	19.5	1	---	OFF

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBµV
0.150000	56.00
0.500000	46.00
5.000000	46.00
5.000000	50.00
30.000000	50.00

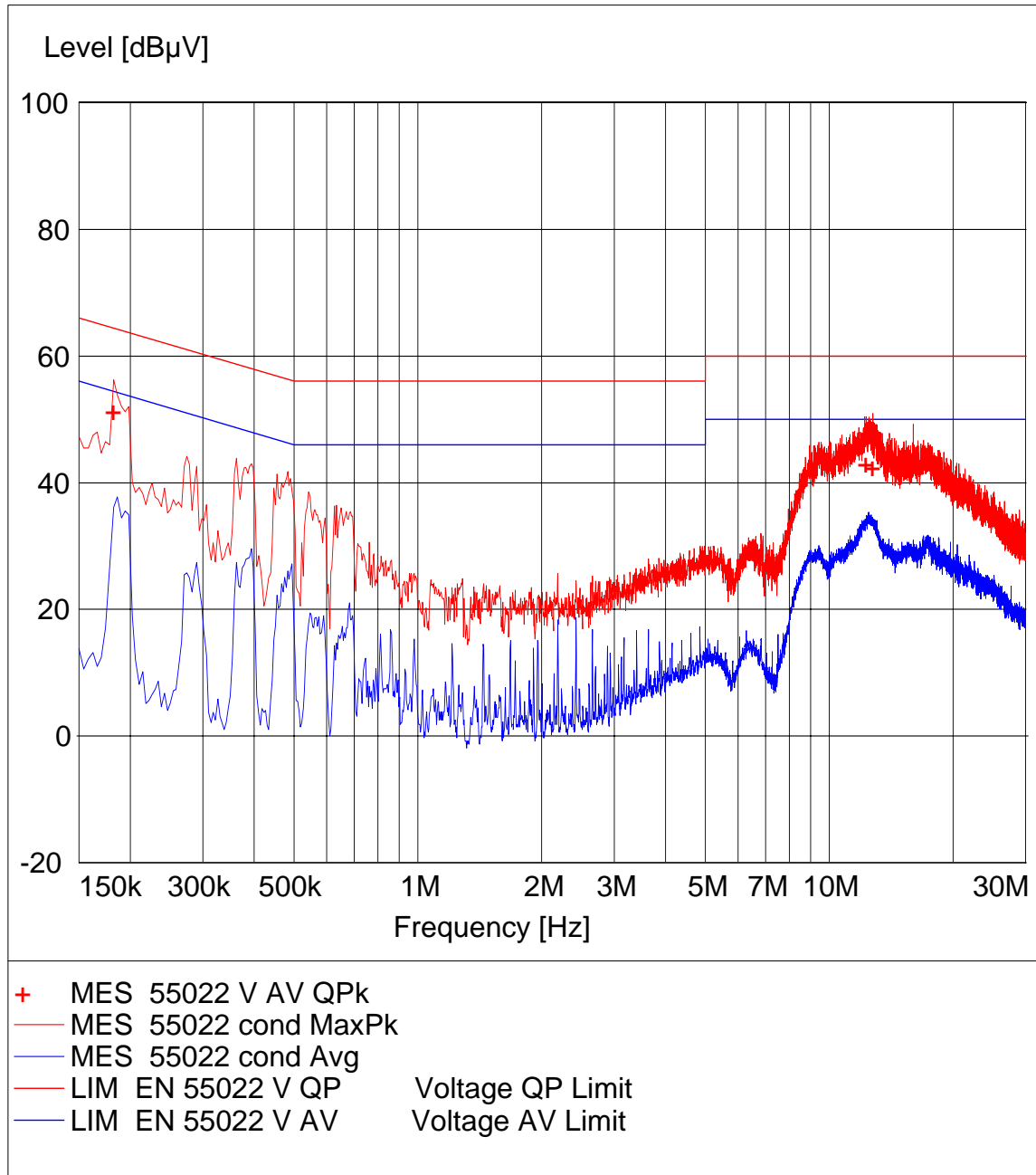
LIMIT LINE: "EN 55022 V QP"

Short Description: Voltage QP Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBµV
0.150000	66.00
0.500000	56.00
5.000000	56.00
5.000000	60.00
30.000000	60.00

6.1.6 RESULTS TX Line CDMA 1900:

EUT: M2 Platform
Manufacturer: Sony Electronics
Test Mode: CDMA1900
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC + Laptop
Comments: : Line



MEASUREMENT RESULT: "55022 V AV QPk"

11/3/2008 10:38AM

Frequency	Level	Transd	Limit	Margin	Line	PE	AUX STATE
MHz	dBμV	dB	dBμV	dB			
0.182000	51.40	0.1	64	13.0	1	---	OFF
12.290000	43.10	0.7	60	16.9	1	---	OFF
12.762000	42.50	0.7	60	17.5	1	---	OFF

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBμV
0.150000	56.00
0.500000	46.00
5.000000	46.00
5.000000	50.00
30.000000	50.00

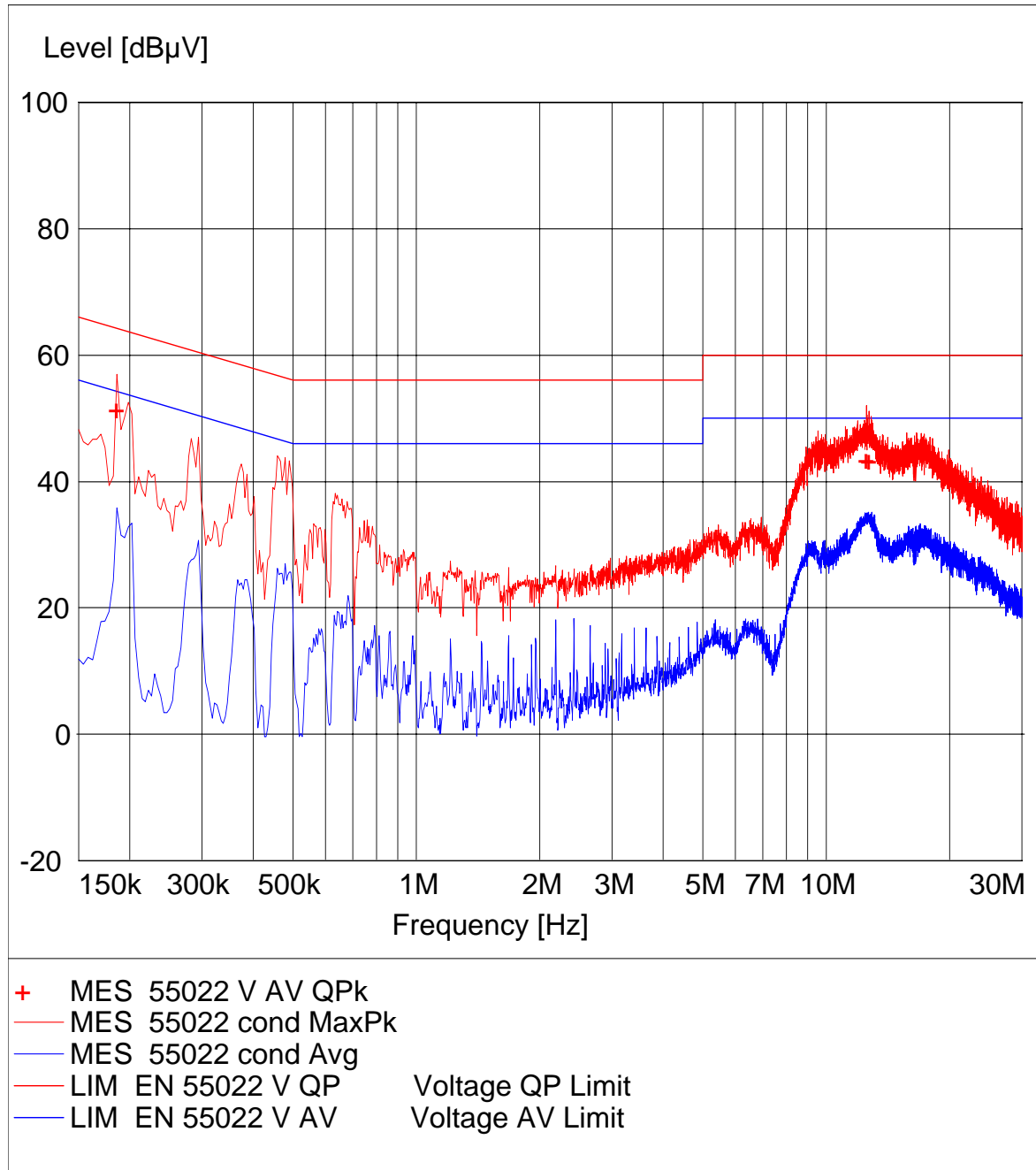
LIMIT LINE: "EN 55022 V QP"

Short Description: Voltage QP Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBμV
0.150000	66.00
0.500000	56.00
5.000000	56.00
5.000000	60.00
30.000000	60.00

6.1.7 RESULTS TX Neutral CDMA 1900:

EUT: M2 Platform
Manufacturer: Sony Electronics
Test Mode: CDMA1900
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC + Laptop
Comments: : Neutral



MEASUREMENT RESULT: "55022 V AV QPk"

11/3/2008 10:43AM

Frequency	Level	Transd	Limit	Margin	Line	PE	AUX STATE
MHz	dBµV	dB	dBµV	dB			
0.186000	51.50	0.1	64	12.7	1	---	OFF
12.522000	43.60	0.7	60	16.4	1	---	OFF
12.722000	43.40	0.7	60	16.6	1	---	OFF

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBµV
0.150000	56.00
0.500000	46.00
5.000000	46.00
5.000000	50.00
30.000000	50.00

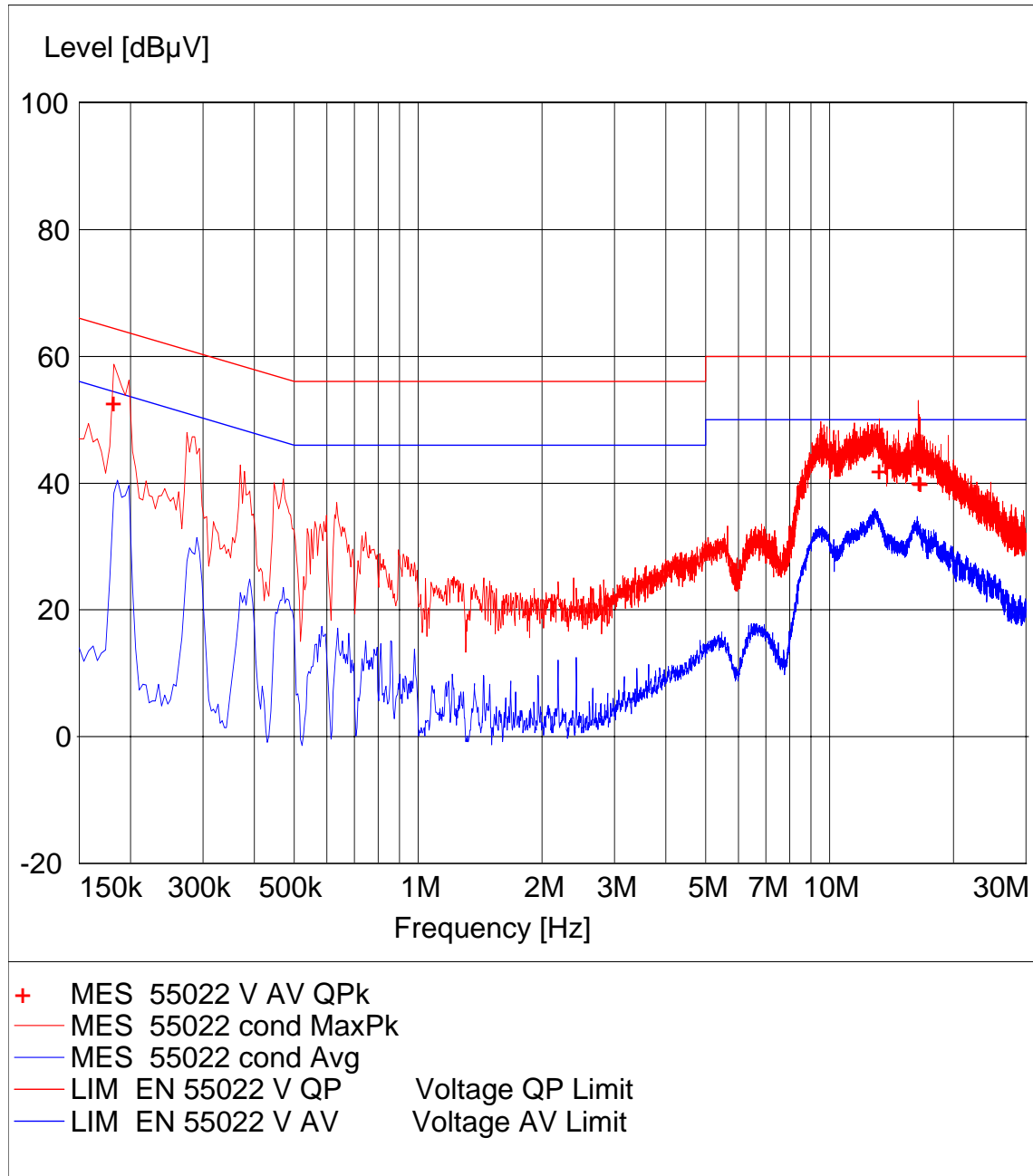
LIMIT LINE: "EN 55022 V QP"

Short Description: Voltage QP Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBµV
0.150000	66.00
0.500000	56.00
5.000000	56.00
5.000000	60.00
30.000000	60.00

6.1.8 RESULTS TX Line EVDO 1900:

EUT: M2 Platform
Manufacturer: Sony Electronics
Test Mode: EVDO 1900
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC + Laptop
Comments: : Line



MEASUREMENT RESULT: "55022 V AV QPk"

11/3/2008 9:45AM

Frequency	Level	Transd	Limit	Margin	Line	PE	AUX STATE
MHz	dBµV	dB	dBµV	dB			
0.182000	52.80	0.1	64	11.6	1	---	OFF
13.206000	42.10	0.7	60	17.9	1	---	OFF
16.406000	43.30	0.1	60	16.7	1	---	OFF
16.502000	40.20	0.1	60	19.8	1	---	OFF
16.598000	40.10	0.1	60	19.9	1	---	OFF

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit

4/27/1998 2:24PM

Frequency	Level
MHz	dBµV
0.150000	56.00
0.500000	46.00
5.000000	46.00
5.000000	50.00
30.000000	50.00

LIMIT LINE: "EN 55022 V QP"

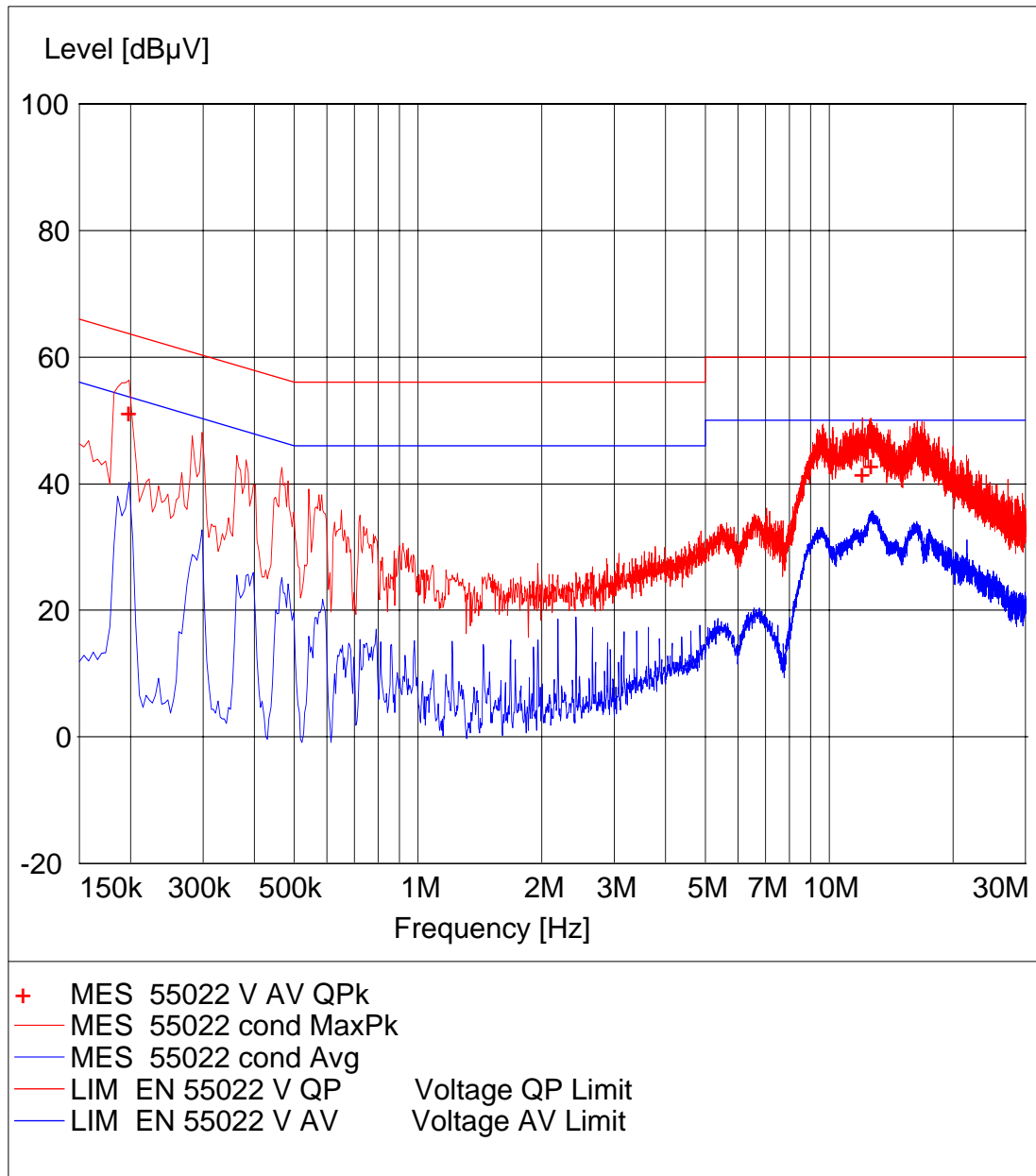
Short Description: Voltage QP Limit

4/27/1998 2:24PM

Frequency	Level
MHz	dBµV
0.150000	66.00
0.500000	56.00
5.000000	56.00
5.000000	60.00
30.000000	60.00

6.1.9 RESULTS TX Neutral EVDO 1900:

EUT: M2 Platform
Manufacturer: Sony Electronics
Test Mode: EVDO 1900
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC + Laptop
Comments: : Neutral



MEASUREMENT RESULT: "55022 V AV QPk"

11/3/2008 9:52AM

Frequency	Level	Transd	Limit	Margin	Line	PE	AUX STATE
MHz	dBμV	dB	dBμV	dB			
0.198000	51.40	0.1	64	12.2	1	---	OFF
12.034000	41.70	0.7	60	18.3	1	---	OFF
12.630000	43.10	0.7	60	16.9	1	---	OFF

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBμV
0.150000	56.00
0.500000	46.00
5.000000	46.00
5.000000	50.00
30.000000	50.00

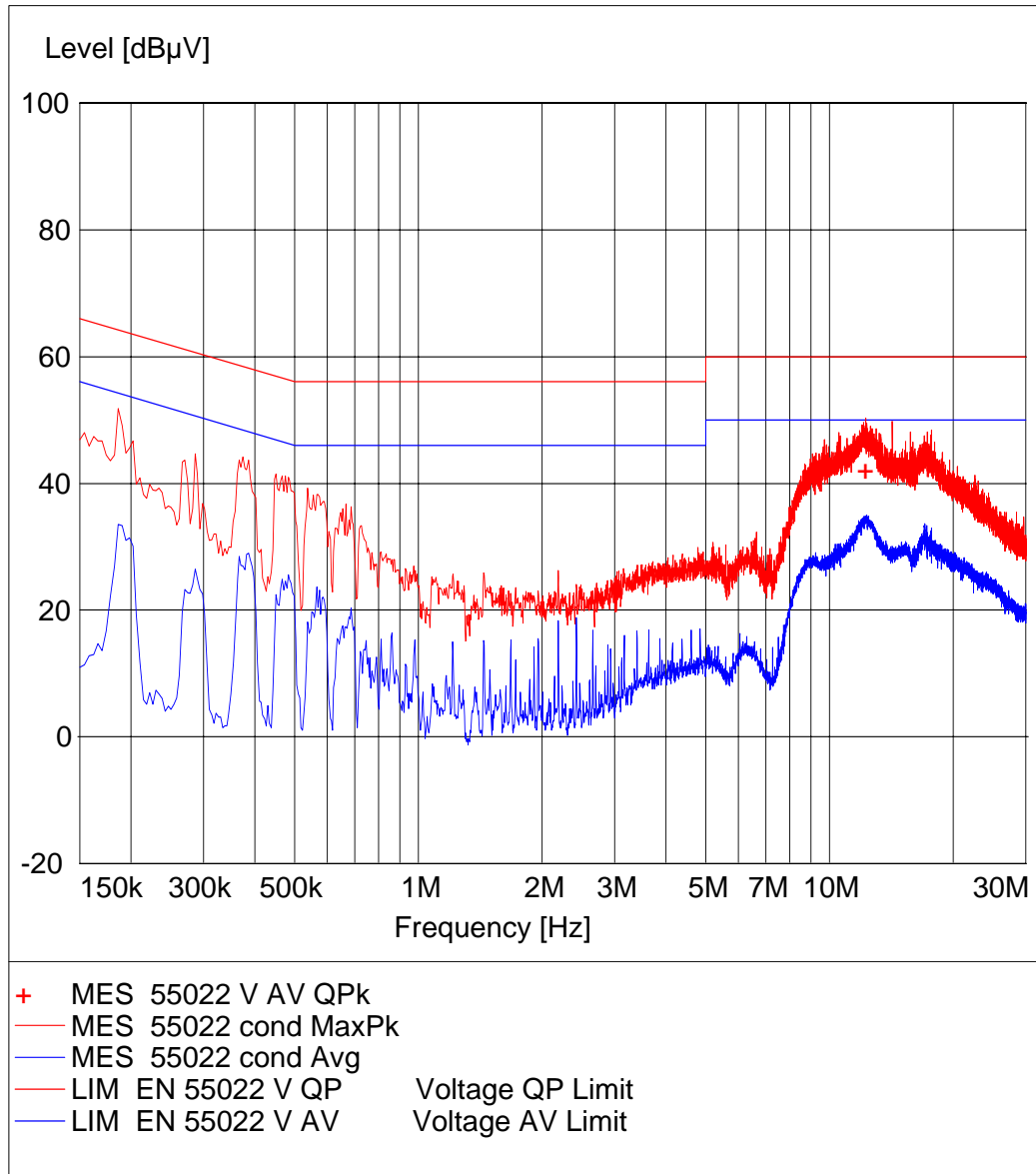
LIMIT LINE: "EN 55022 V QP"

Short Description: Voltage QP Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBμV
0.150000	66.00
0.500000	56.00
5.000000	56.00
5.000000	60.00
30.000000	60.00

6.1.10 RESULTS RX Line CDMA:

EUT: M2 Platform
Manufacturer: Sony Electronics
Test Mode: RX
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC + Laptop
Comments: : Line



MEASUREMENT RESULT: "55022 V AV QPk"

11/3/2008 10:06AM

Frequency	Level	Transd	Limit	Margin	Line	PE	AUX STATE
MHz	dBμV	dB	dBμV	dB			
12.242000	42.20	0.7	60	17.8	1	---	OFF

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBμV
0.150000	56.00
0.500000	46.00
5.000000	46.00
5.000000	50.00
30.000000	50.00

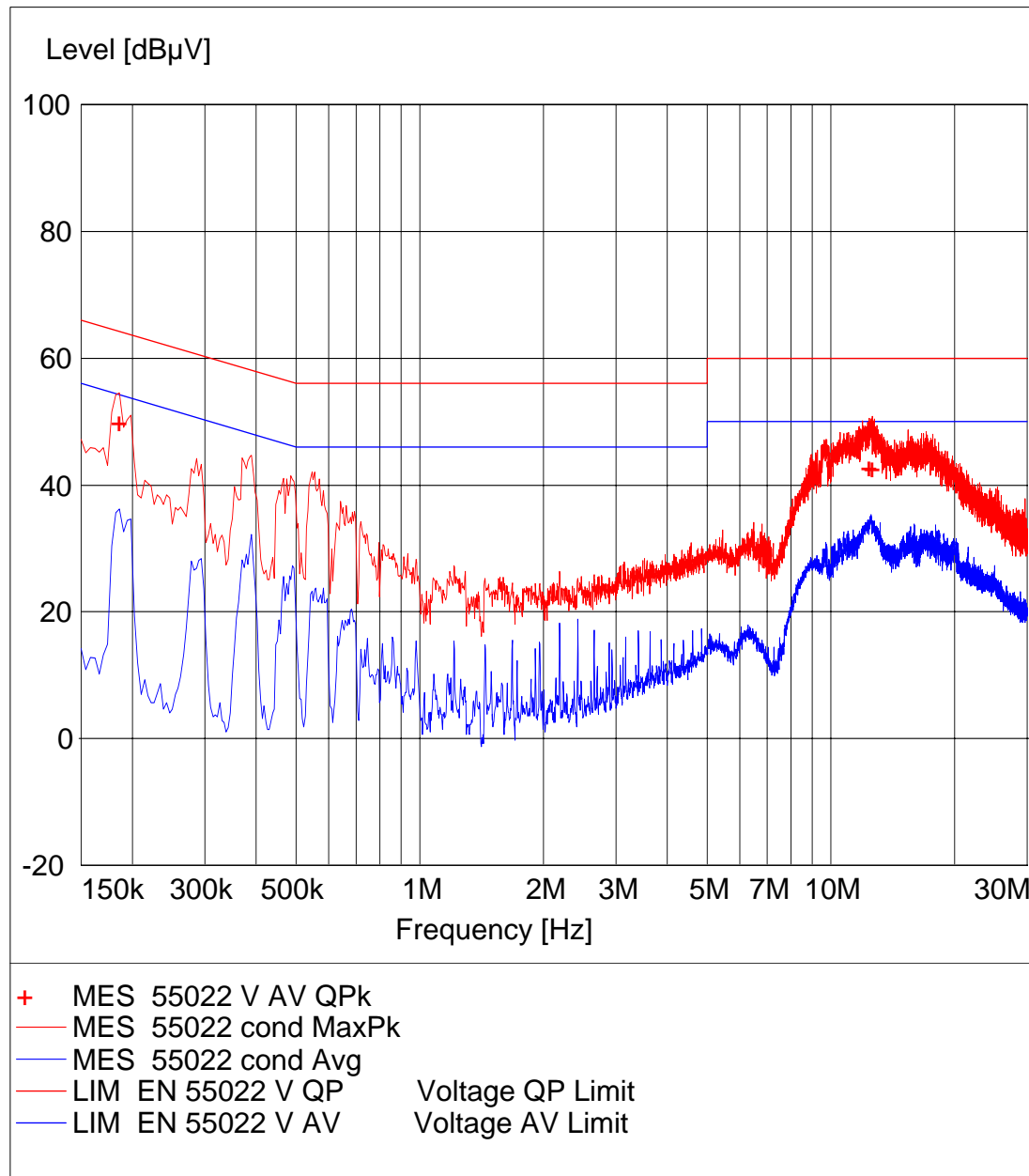
LIMIT LINE: "EN 55022 V QP"

Short Description: Voltage QP Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBμV
0.150000	66.00
0.500000	56.00
5.000000	56.00
5.000000	60.00
30.000000	60.00

6.1.11 RESULTS RX Neutral CDMA:

EUT: M2 Platform
Manufacturer: Sony Electronics
Test Mode: RX
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC + Laptop
Comments: : Neutral



MEASUREMENT RESULT: "55022 V AV QPk"

11/3/2008 10:11AM

Frequency	Level	Transd	Limit	Margin	Line	PE	AUX STATE
MHz	dBµV	dB	dBµV	dB			
0.186000	50.00	0.1	64	14.2	1	---	OFF
12.382000	42.90	0.7	60	17.1	1	---	OFF
12.602000	42.70	0.7	60	17.3	1	---	OFF

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBµV
0.150000	56.00
0.500000	46.00
5.000000	46.00
5.000000	50.00
30.000000	50.00

LIMIT LINE: "EN 55022 V QP"

Short Description: Voltage QP Limit
4/27/1998 2:24PM

Frequency	Level
MHz	dBµV
0.150000	66.00
0.500000	56.00
5.000000	56.00
5.000000	60.00
30.000000	60.00

7 TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS

No	Instrument/Ancillary	Type	Manufacturer	Serial No.	Cal Due	Interval
01	Spectrum Analyzer	ESIB 40	Rohde & Schwarz	100107	May 2009	1 year
02	Spectrum Analyzer	FSEM 30	Rohde & Schwarz	100017	August 2009	1 year
03	Signal Generator	SMY02	Rohde & Schwarz	836878/011	May 2009	1 year
04	Power-Meter	NRVD	Rohde & Schwarz	0857.8008.02	May 2009	1 year
05	Biconilog Antenna	3141	EMCO	0005-1186	June 2009	1 year
06	Horn Antenna (1-18GHz)	SAS-200/571	AH Systems	325	June 2009	1 year
07	Horn Antenna (18-26.5GHz)	3160-09	EMCO	1240	June 2009	1 year
08	Power Splitter	11667B	Hewlett Packard	645348	n/a	n/a
09	Climatic Chamber	VT4004	Voltsch	G1115	May 2009	1 year
10	High Pass Filter	5HC2700	Trilithic Inc.	9926013	n/a	n/a
11	High Pass Filter	4HC1600	Trilithic Inc.	9922307	n/a	n/a
12	Pre-Amplifier	JS4-00102600	Miteq	00616	May 2009	1 year
13	Power Sensor	URV5-Z2	Rohde & Schwarz	DE30807	May 2009	1 year
14	Digital Radio Comm. Tester	CMD-55	Rohde & Schwarz	847958/008	May 2009	1 year
15	Universal Radio Comm. Tester	CMU 200	Rohde & Schwarz	832221/06	May 2009	1 year
16	LISN	ESH3-Z5	Rohde & Schwarz	836679/003	May 2009	1 year
17	Loop Antenna	6512	EMCO	00049838	July 2009	2 years

8 References

Title 47—Telecommunication, CHAPTER I--FEDERAL COMMUNICATIONS COMMISSION,
PART 2--FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS October 1, 2001.

Title 47—Telecommunication, CHAPTER I--FEDERAL COMMUNICATIONS COMMISSION,
PART 22 PUBLIC MOBILE SERVICES October 1, 1998.

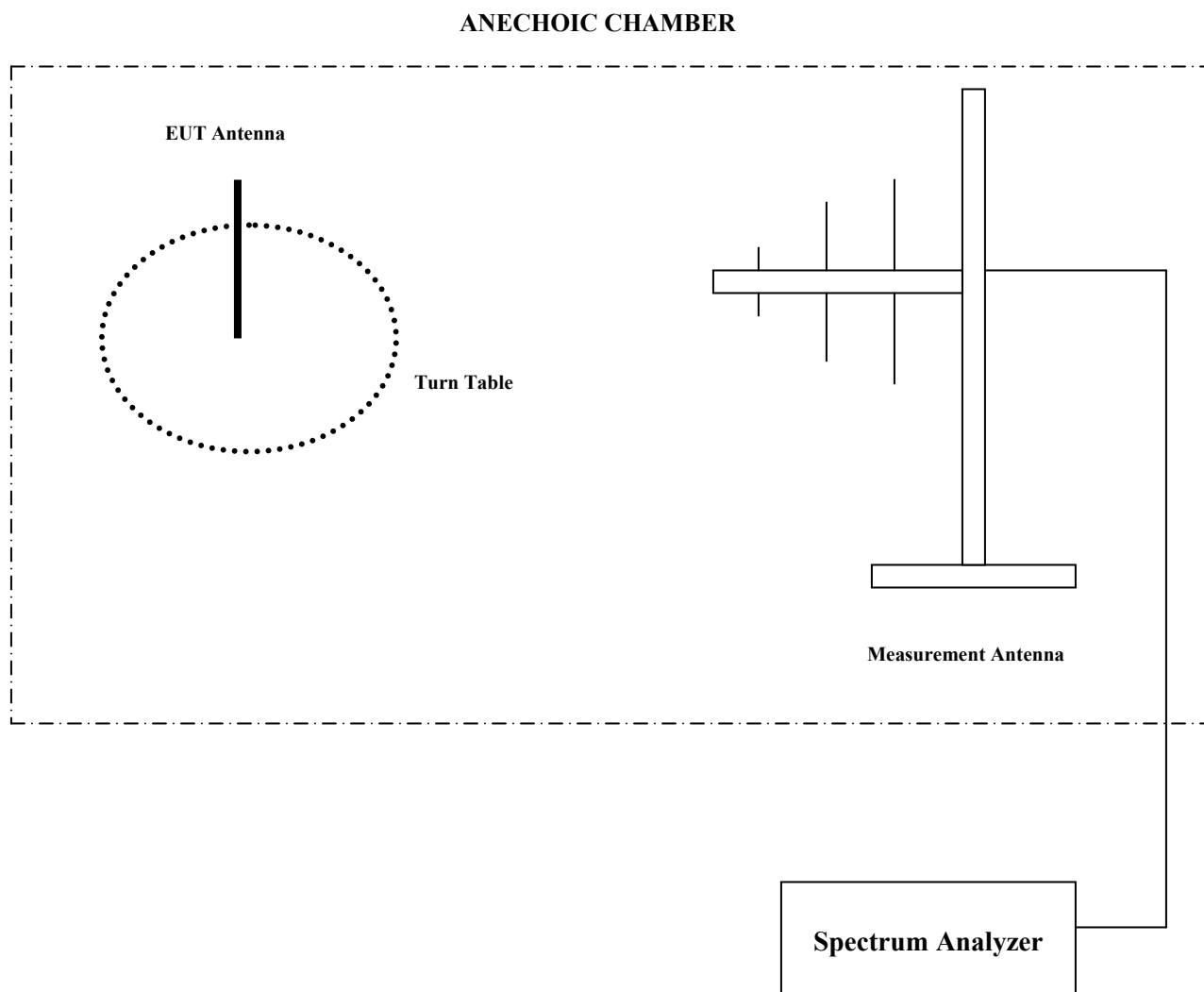
FCC Report and order 02-229 September 24, 2002.

Title 47—Telecommunication, CHAPTER I--FEDERAL COMMUNICATIONS COMMISSION,
PART 24 PERSONAL COMMUNICATIONS SERVICES October 1, 1998.

ANSI / TIA-603-C-2004 Land Mobile FM or PM Communications Equipment Measurement and Performance Standard November 7, 2002.

9 BLOCK DIAGRAMS

Radiated Testing



10 Revision History

2008-11-05: First Issue