



FCC Test Report

FCC Part 15.247 for FHSS systems/ CANADA RSS-210

Model #: PCG-21112L

FCC ID: AK8PCG21112L

IC ID: 409B-PCG21112L

**Sony Corporation
1-7-1 Konan, Minato-ku,
Tokyo, 108-0075
Japan**

**TEST REPORT #: EMC_SONYE_033_15.247_FHSS_PCG21112L_Rev1
DATE: 2009-08-07**



**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

TABLE OF CONTENTS

1	Assessment	3
2	Administrative Data	4
2.1	Identification of the Testing Laboratory Issuing the EMC Test Report	4
2.2	Identification of the Client	4
2.3	Identification of the Manufacturer	4
3	Equipment Under Test (EUT)	5
3.1	Specification of the Equipment under Test	5
3.2	Identification of the Equipment under Test (EUT)	5
3.3	Identification of Accessory equipment	5
4	Subject Of Investigation	6
5	Measurements (RADIATED)	7
5.1	MAXIMUM PEAK OUTPUT POWER § 15.247 (RADIATED)	7
5.1.1	LIMIT SUB CLAUSE § 15.247 (b) (1) (2) (3) (4)	7
5.1.2	Test Results	7
5.1.3	LIMITS	11
5.1.4	RESULTS: GFSK	12
5.1.5	RESULTS: $\pi/4$ DQPSK	16
5.1.6	RESULTS: 8DPSK	20
5.2	TRANSMITTER SPURIOUS EMISSIONS RADIATED § 15.247/15.205/15.209	24
5.2.1	LIMITS	24
5.2.2	RESULTS	25
5.3	RECEIVER SPURIOUS RADIATION RSS-Gen(4.10)	30
5.3.1	LIMITS	30
5.3.2	Results	31
5.4	AC POWER LINE CONDUCTED EMISSIONS § 15.107/207	33
5.4.1	LIMITS	33
5.4.2	RESULTS TX	34
6	TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS	36
7	Block Diagrams	37
8	Revision History.	38



1 Assessment

The following is in compliance with the applicable criteria specified in FCC rules Part 15.247 of the Code of Federal Regulations and in compliance with the applicable criteria specified in Industry Canada rules RSS210.

Company	Description	Model #
Sony Corporation	Personal Computer	PCG-21112L

Technical responsibility for area of testing:

Heiko Strehlow
(Director Compliance
Services)

2009-08-07 Compliance

Date	Section	Name	Signature
------	---------	------	-----------

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.

This report is prepared by:

Marc Douat
(Test Lab Manager)

2009-08-07 Compliance

Date	Section	Name	Signature
------	---------	------	-----------

2 Administrative Data

2.1 Identification of the Testing Laboratory Issuing the EMC Test Report

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 Project Leader:	Marc Douat
Date of test:	2009-07-20 to 2009-07-22

2.2 Identification of the Client

APPLICANT	
Applicant (Company Name)	Sony Corporation
Street Address	1-7-1 Konan, Minato-ku,
City/Zip Code	Tokyo, 108-0075
Country	Japan
Contact Person	Michio Kobayashi
Telephone	+81-263-72-5696
Fax	+81-263-72-9755
e-mail	<u>Michio.Kobayashi@jp.sony.com</u>

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:	<u>Michio.Kobayashi@jp.sony.com</u>

3 Equipment Under Test (EUT)

3.1 Specification of the Equipment under Test

EUT	
Marketing Name of EUT (if not same as Model No.)	PCG-21112L
Description	Personal Computer
Model No.	PCG-21112L
FCC-ID:	AK8PCG21112L
IC-ID (Industry Canada):	409B-PCG21112L

Frequency Range:	2400MHz – 2483.5MHz
Type(s) of Modulation:	GFSK, DQPSK, 8PSK
Number of Channels:	79
Antenna Type:	PIFA, peak gain -3.1 dBi
Output Power:	Radiated GFSK: -5.98 dBm, 0.252 mW DQPSK: -5.84 dBm, 0.261 mW 8DPSK: -3.6 dBm, 0.437 mW

3.2 Identification of the Equipment under Test (EUT)

EUT #	TYPE	MANF.	MODEL	SERIAL #
1	EUT	Sony Corporation	PCG-21112L	FCC1

3.3 Identification of Accessory equipment

AE #	TYPE	MANF.	MODEL	SERIAL #
1	AC/DC ADAPTER	Sony Corporation	VGP-AC10V4	000094600 0000275



4 Subject Of Investigation

All testing was performed on the product referred to in Section 3 as EUT. This test report contains radiated testing as per FCC15.247 on the EUT with the Bluetooth module.

The EUT integrates an FCC approved Bluetooth module with FCC ID: QDS-BRCM1026. This report contains findings from radiated measurements only. All the conducted measurements are referenced from the original report of the module.

During the testing process the EUT was tested on low, mid, and high channels using PRBS9 payload using DH5, 2DH5, and 3DH5 packets, 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 Part 15.247 of Title 47 of the Code of Federal Regulations and Industry Canada rules RSS210. The maximization of portable equipment is conducted in accordance with ANSI C63.4.

5 Measurements (RADIATED)

5.1 MAXIMUM PEAK OUTPUT POWER § 15.247 (RADIATED)

5.1.1 LIMIT SUB CLAUSE § 15.247 (b) (1) (2) (3) (4)

Frequency range	RF power output
2400-2483.5 MHz	36dBm EIRP

*limit is based upon antenna gain of less than or equal to 6dBi.

5.1.2 Test Results

EIRP: GFSK

TEST CONDITIONS		MAXIMUM PEAK OUTPUT POWER (dBm)		
Frequency (MHz)		2402	2441	2480
T _{nom} (23)°C	V _{nom} VDC	-8.5	-5.98	-7.84
Measurement uncertainty		±0.5dBm		

EIRP: $\pi/4$ DQPSK

TEST CONDITIONS		MAXIMUM PEAK OUTPUT POWER (dBm)		
Frequency (MHz)		2402	2441	2480
T _{nom} (23)°C	V _{nom} VDC	-7.57	-5.84	-7.23
Measurement uncertainty		±0.5dBm		

EIRP: 8DPSK

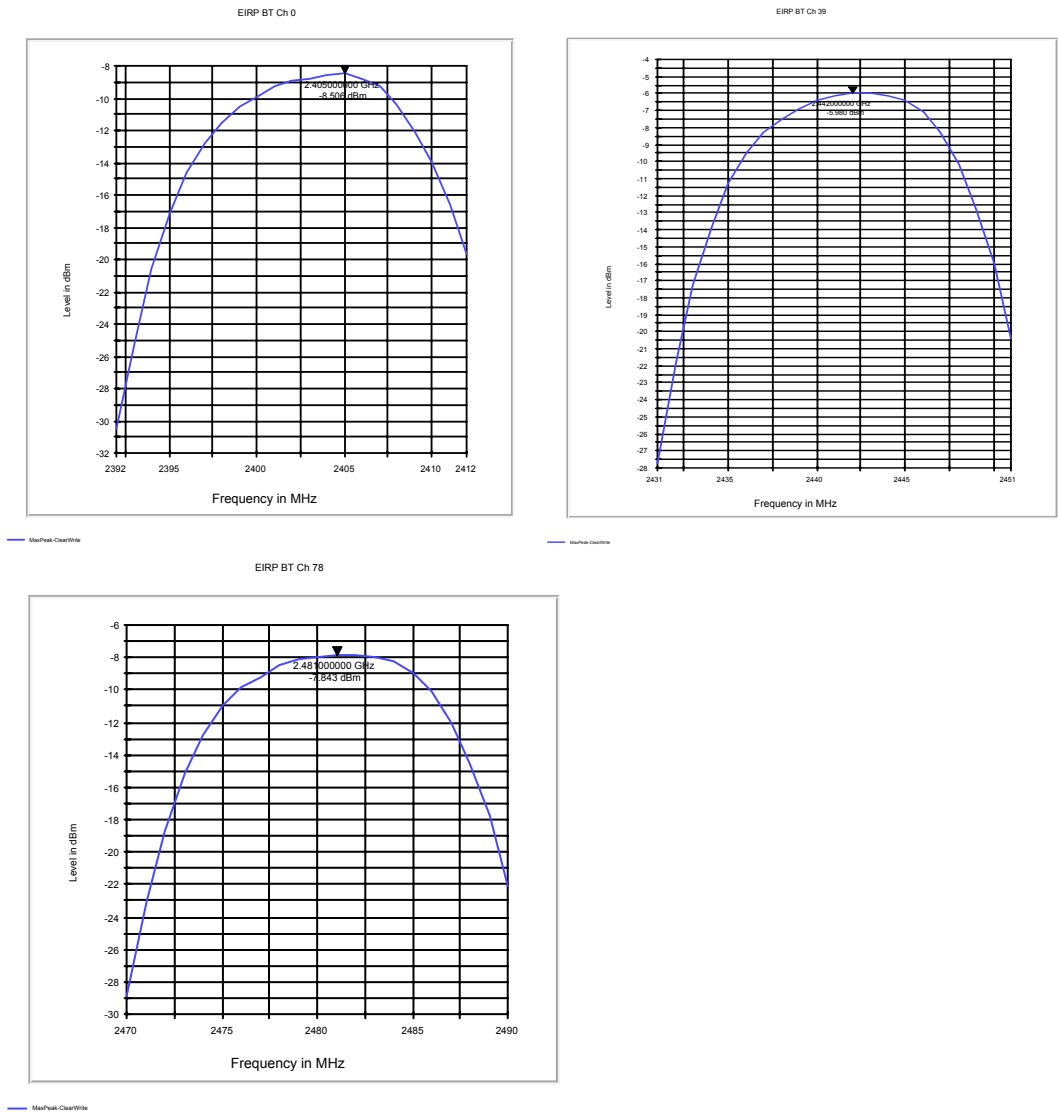
TEST CONDITIONS		MAXIMUM PEAK OUTPUT POWER (dBm)		
Frequency (MHz)		2402	2441	2480
T _{nom} (23)°C	V _{nom} VDC	-7.98	-3.6	-5.03
Measurement uncertainty		±0.5dBm		



EIRP GFSK

Scan Setup: EIRP BT [EMI radiated]

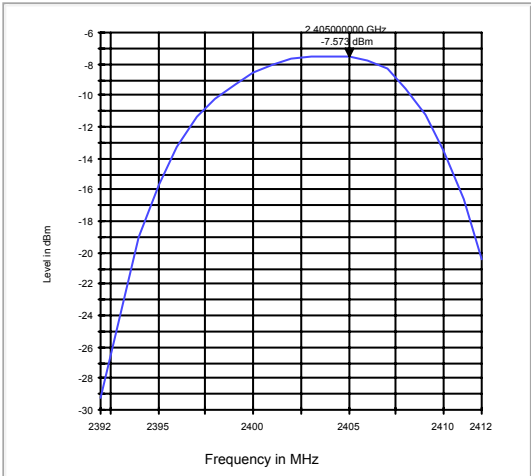
Hardware Setup:	EIRP			
Level Unit:	dBm			
Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
2.392 GHz - 2.412 GHz	MaxPeak	10 MHz	0.02 s	Analyzer



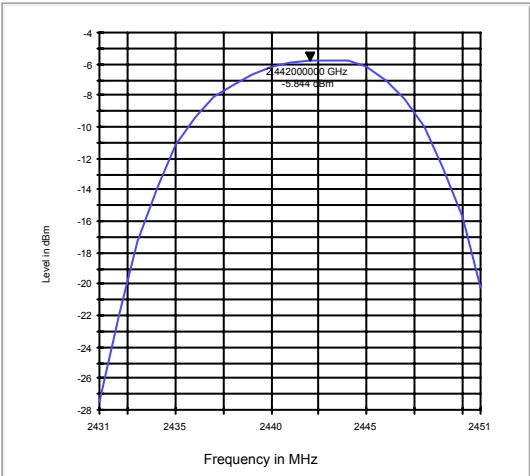


EIRP $\pi/4$ DQPSK

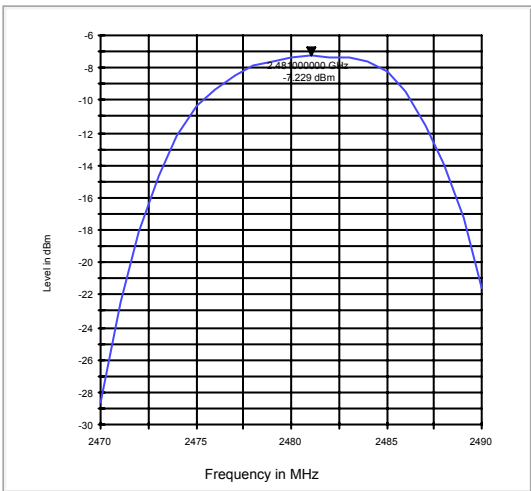
EIRP BT Ch 0



EIRP BT Ch 39

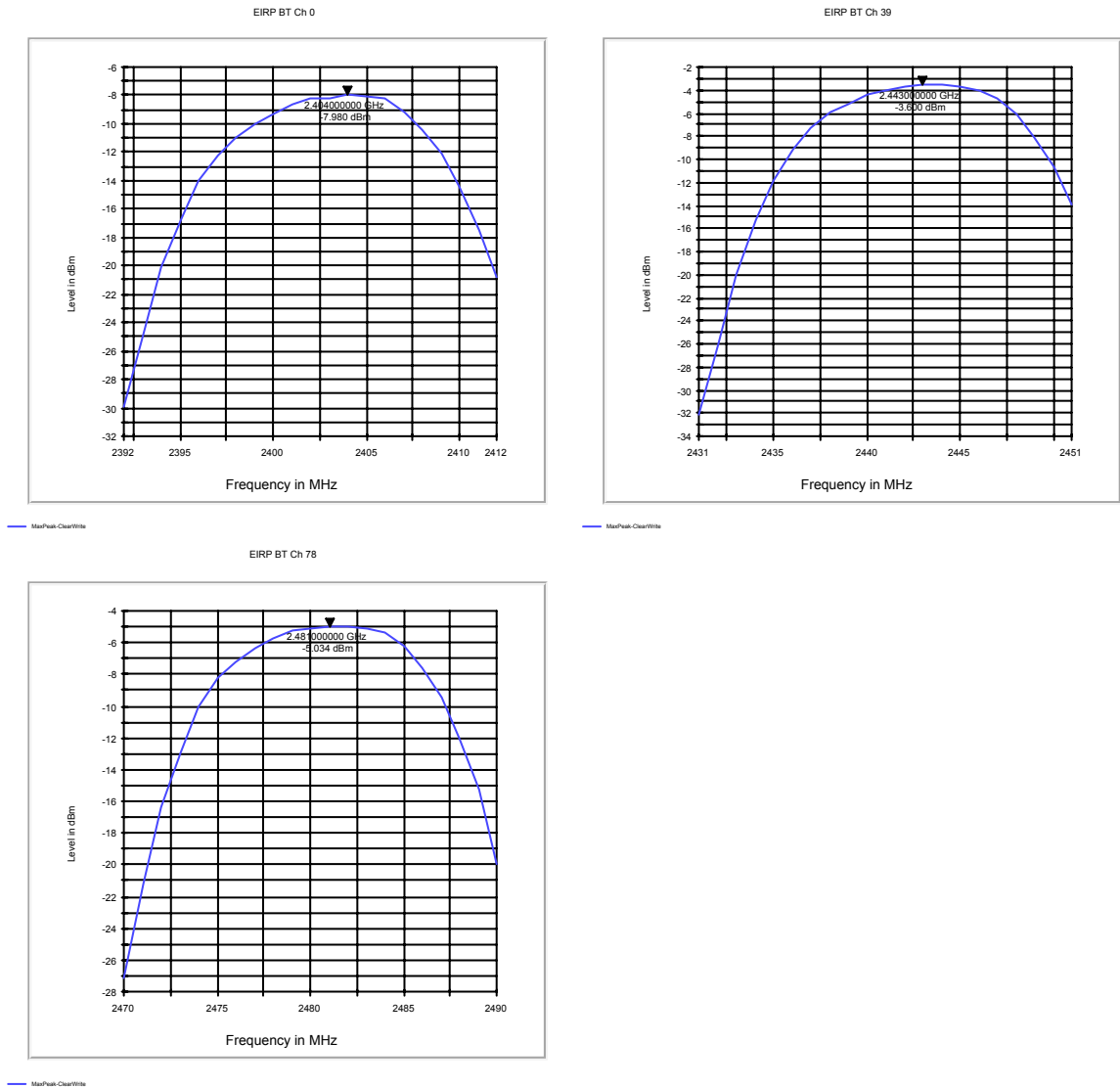


EIRP BT Ch 78





EIRP 8DPSK



RESTRICTED BAND EDGE COMPLIANCE RADIATED §15.247/15.205

5.1.3 LIMITS

30.□ Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any

of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

*PEAK LIMIT= 74dBuV/m

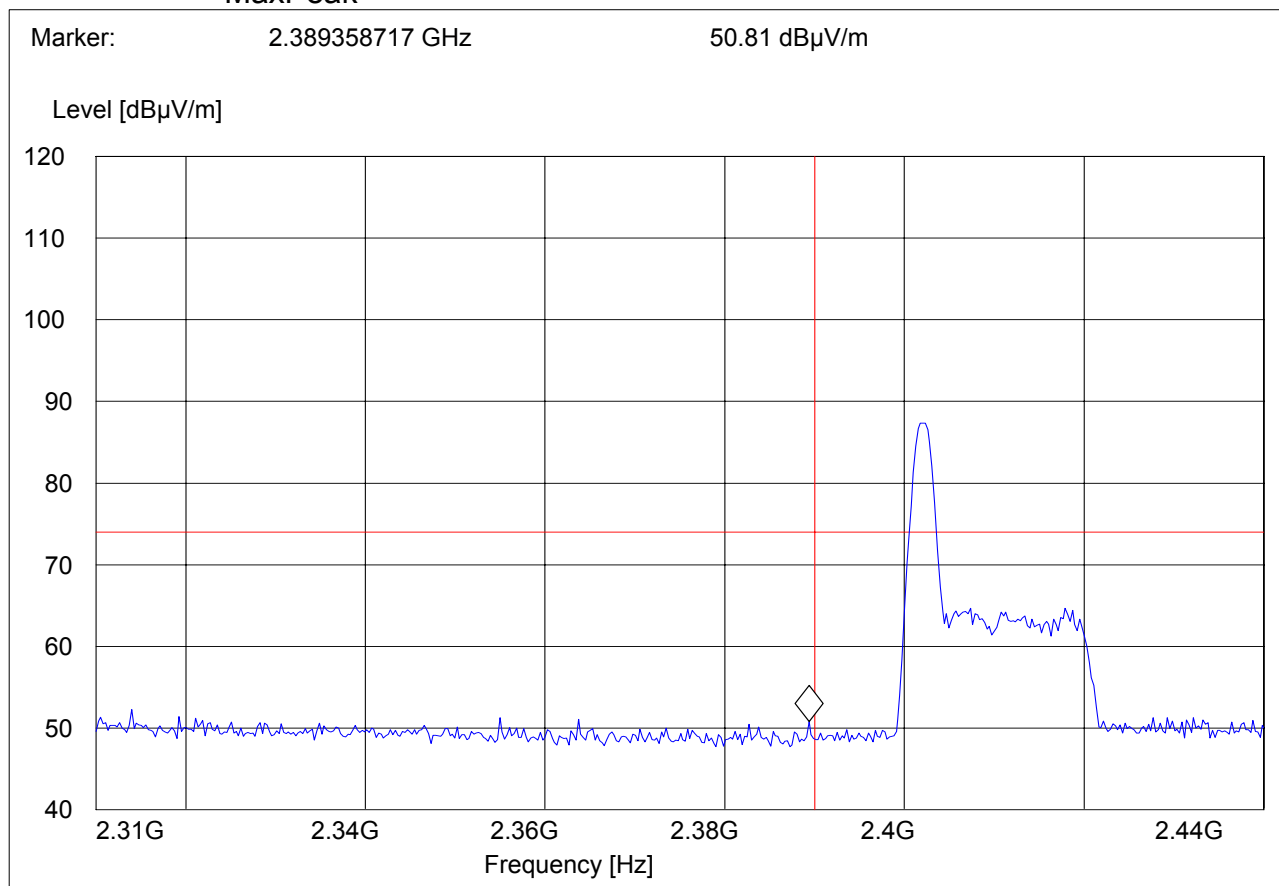
*AVG. LIMIT= 54dBuV/m

5.1.4 RESULTS: GFSK (2402MHz) LOWER BAND EDGE PEAK –GFSK MODULATION

EUT: PCG-21112L
Customer:: Sony
Test Mode: BT Ch.0
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 LBE_PK"

Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.3 GHz	2.4 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert
MaxPeak					

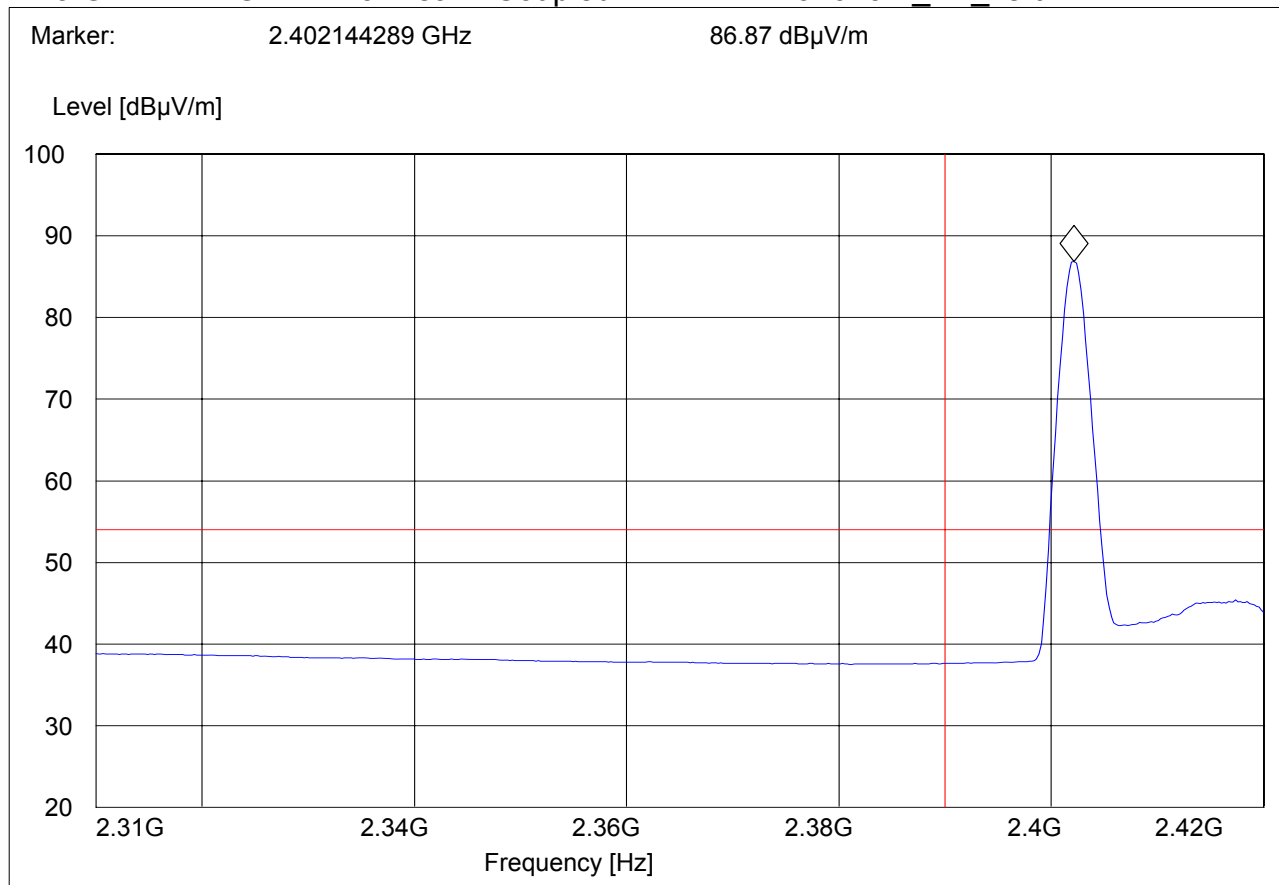


(2402MHz) LOWER BAND EDGE AVERAGE –GFSK MODULATION

EUT: PCG-21112L
Customer:: Sony
Test Mode: BT Ch.0
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 LBE_AVG"

Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.3 GHz	2.4 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert

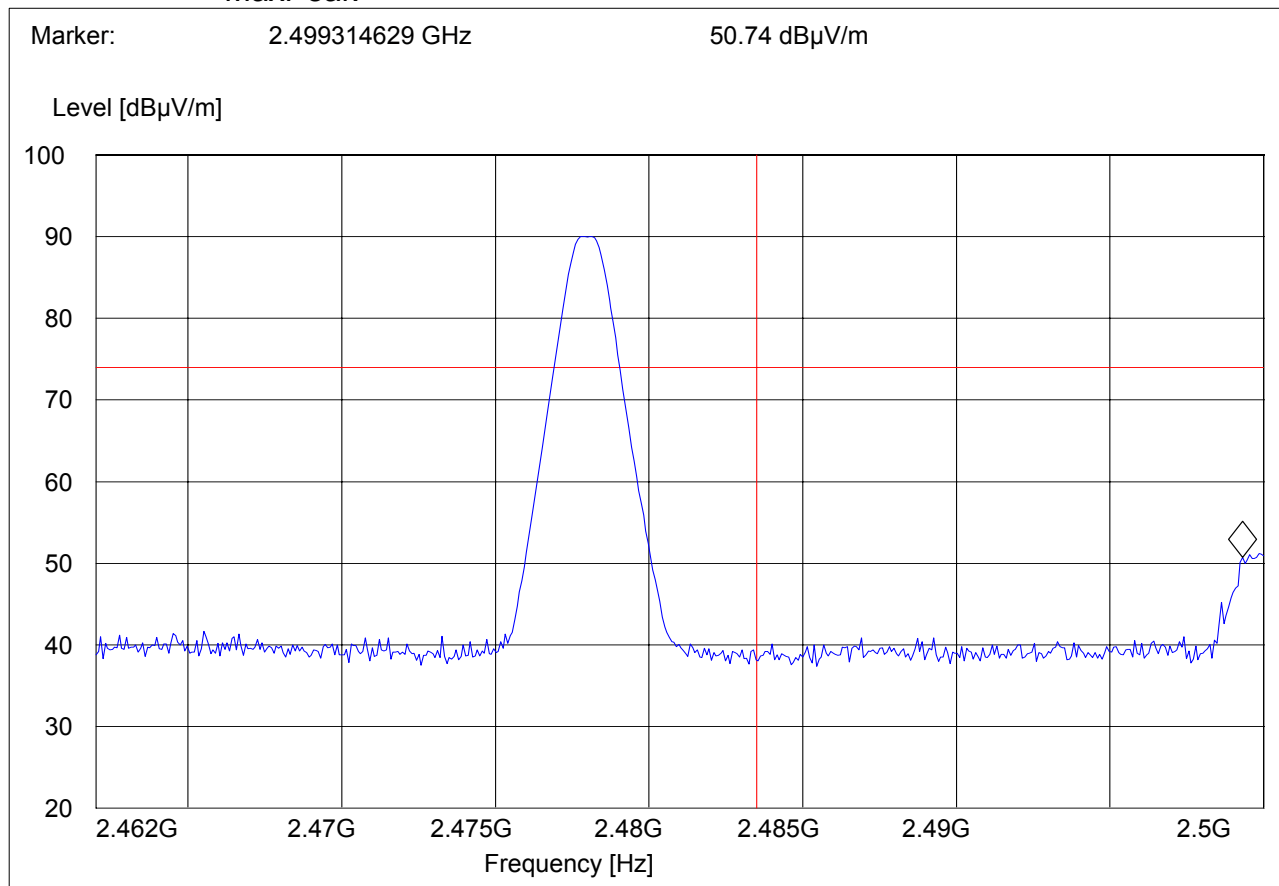


(2480MHz) HIGHER BAND EDGE PEAK –GFSK MODULATION

EUT: PCG-21112L
Customer:: Sony
Test Mode: BT Ch.78
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 HBE_PK"

Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.5 GHz	2.5 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert
MaxPeak					



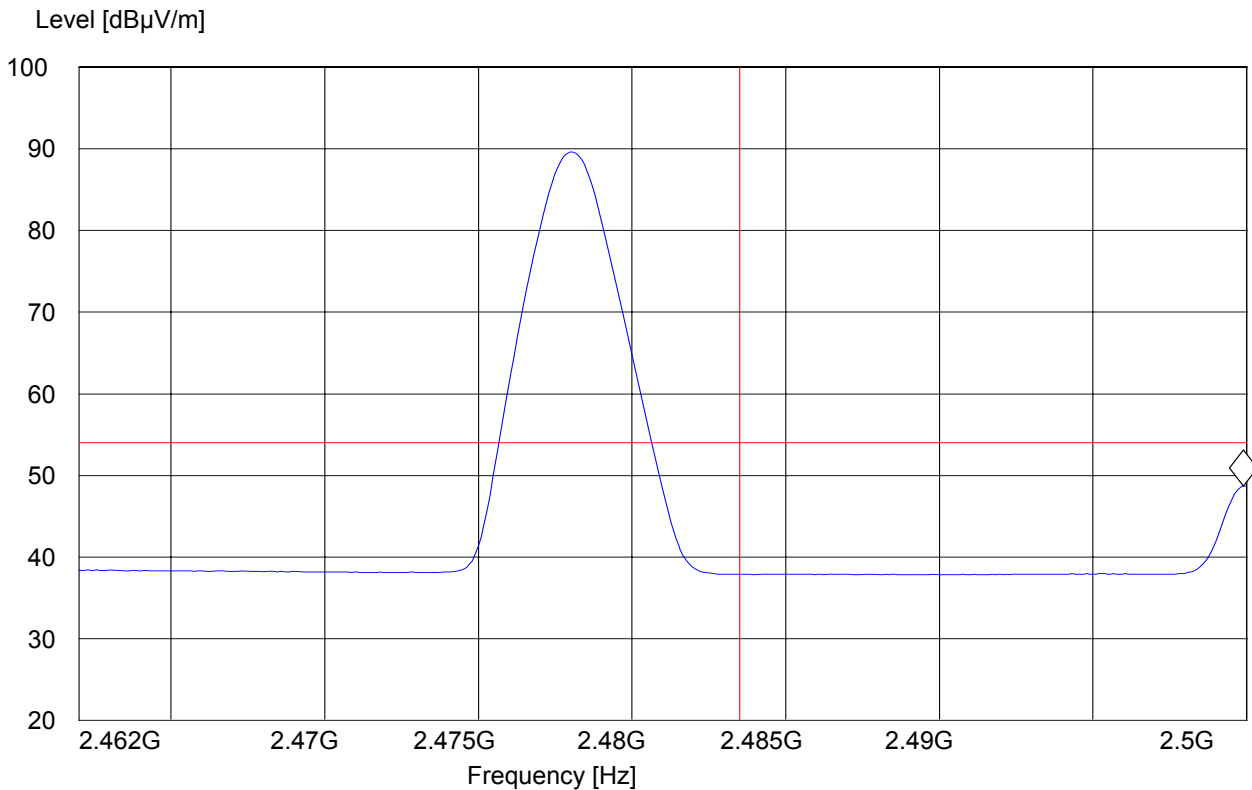
(2480MHz) HIGHER BAND EDGE AVERAGE-GFSK MODULATION

EUT: PCG-21112L
Customer:: Sony
Test Mode: BT Ch.78
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 HBE_AVG"

Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.5 GHz	2.5 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_horz

Marker: 2.4998998 GHz 48.68 dBμV/m



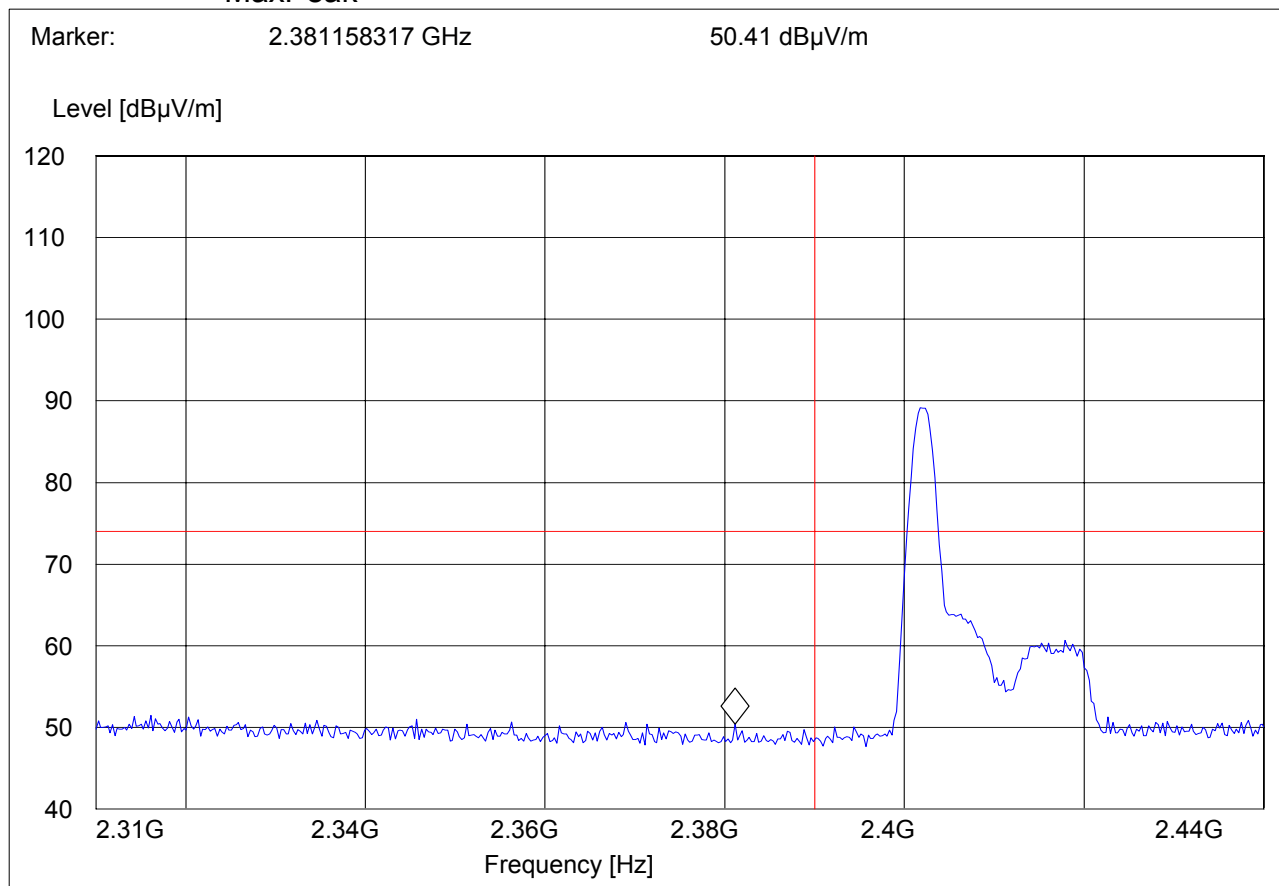
5.1.5 RESULTS: $\pi/4$ DQPSK

(2402MHz) LOWER BAND EDGE PEAK – $\pi/4$ DQPSK MODULATION

EUT: PCG-21112L
Customer:: Sony
Test Mode: BT Ch.0
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 LBE_PK"

Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.3 GHz	2.4 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert
MaxPeak					



(2402MHz) LOWER BAND EDGE AVERAGE $-\pi/4$ DQPSK MODULATION

EUT: PCG-21112L

Customer:: Sony

Test Mode: BT Ch.0

ANT Orientation: H

EUT Orientation: H

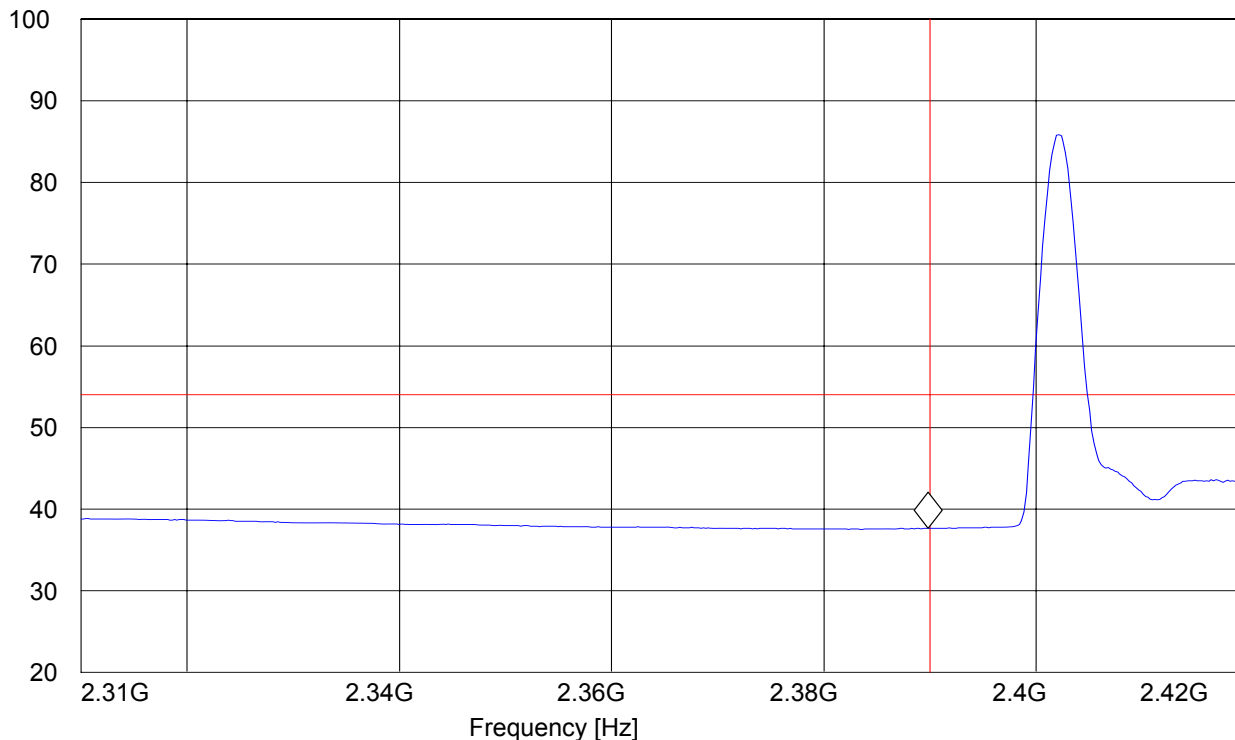
Test Engineer: Chris

Voltage: AC

Comments:

SWEEP TABLE: "FCC15.247 LBE_AVG"

Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.3 GHz	2.4 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert

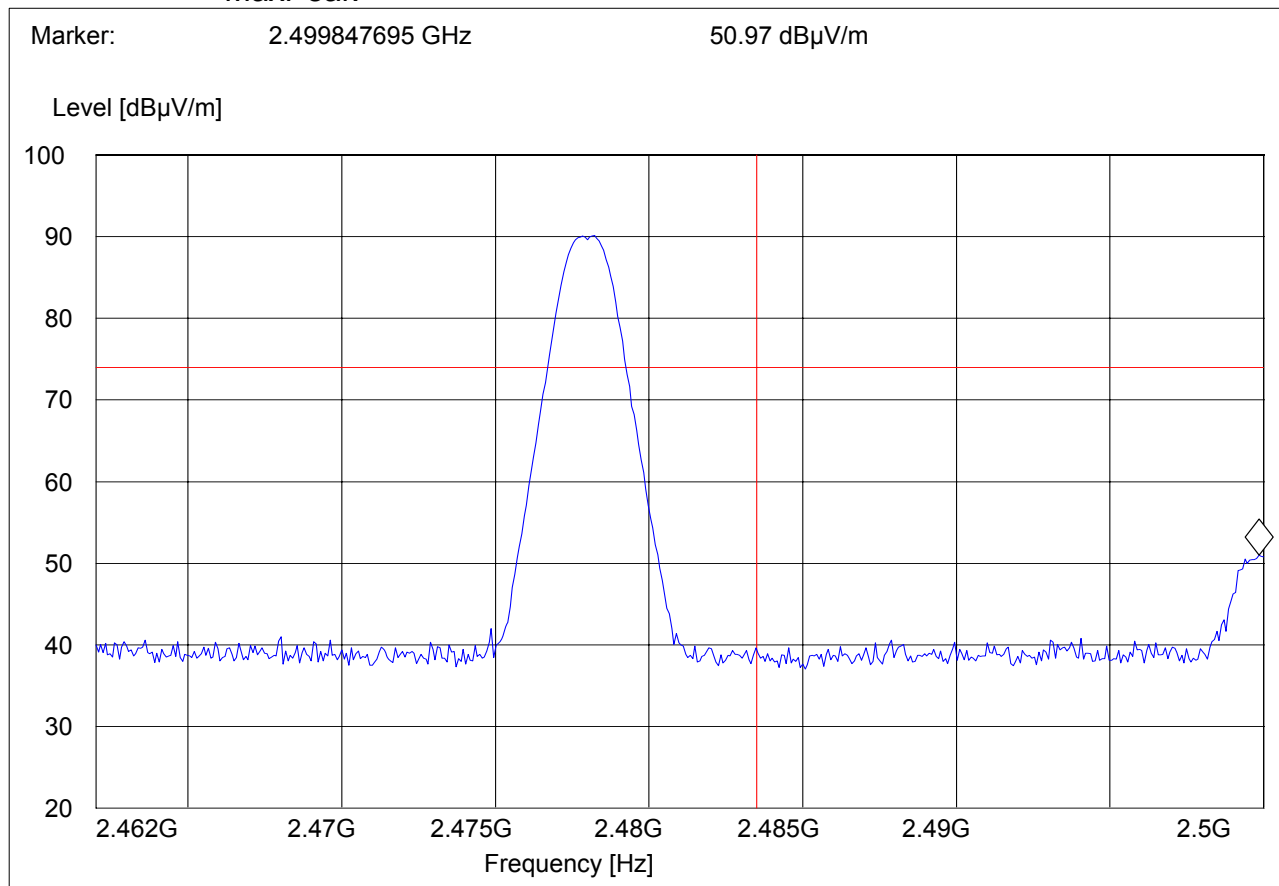
Marker: 2.389799599 GHz 37.62 dB μ V/mLevel [dB μ V/m]

(2480MHz) HIGHER BAND EDGE PEAK $-\pi/4$ DQPSK MODULATION

EUT: PCG-21112L
Customer:: Sony
Test Mode: BT Ch.78
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 HBE_PK"

Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.5 GHz	2.5 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert
		MaxPeak			



(2480MHz) HIGHER BAND EDGE AVERAGE- $\pi/4$ DQPSK MODULATION

EUT: PCG-21112L

Customer:: Sony

Test Mode: BT Ch.78

ANT Orientation: H

EUT Orientation: H

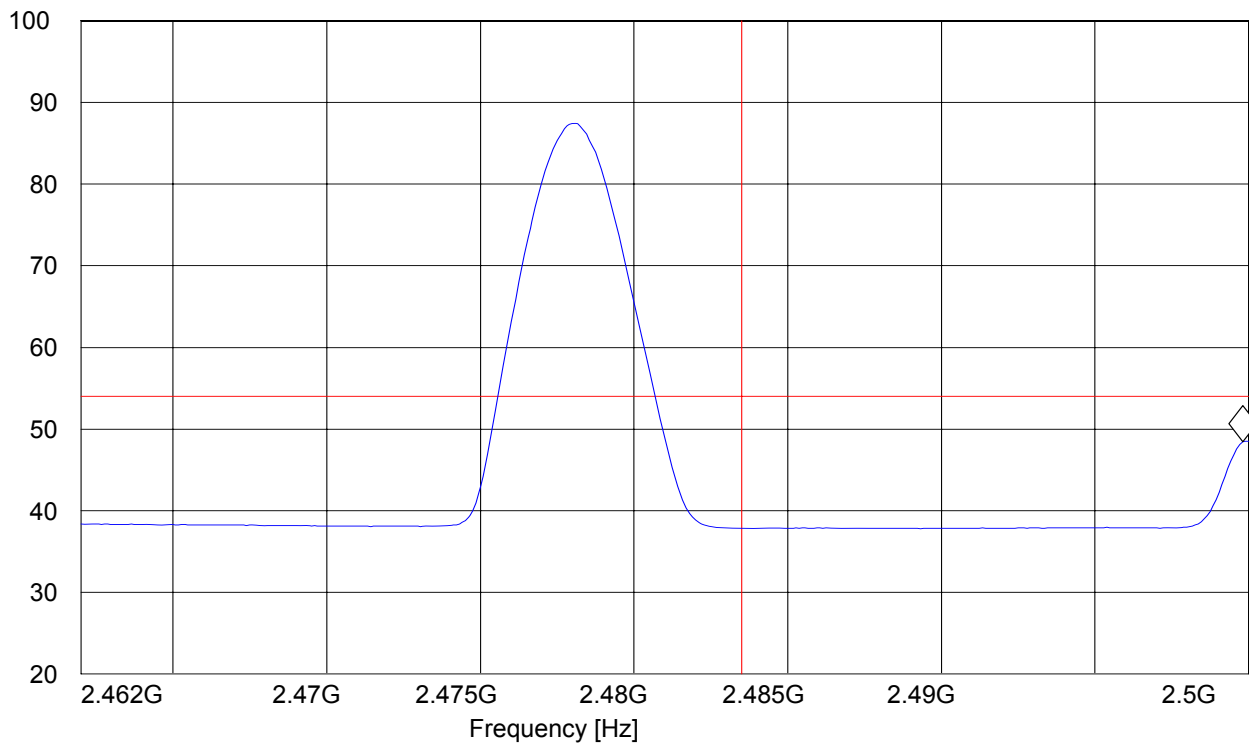
Test Engineer: Chris

Voltage: AC

Comments:

SWEEP TABLE: "FCC15.247 HBE_AVG"

Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.5 GHz	2.5 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_horz

Marker: 2.499803607 GHz 48.41 dB μ V/mLevel [dB μ V/m]

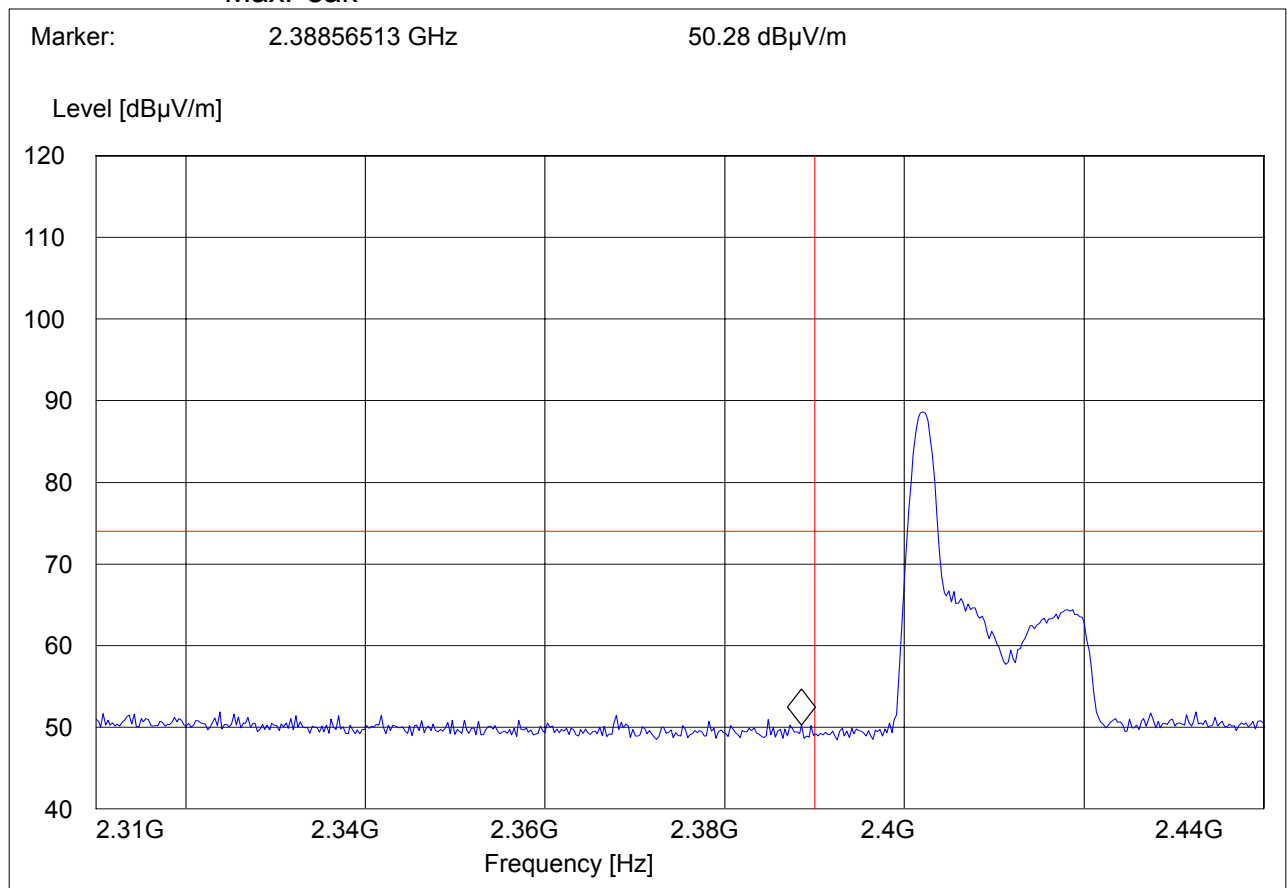
5.1.6 RESULTS: 8DPSK

(2402MHz) LOWER BAND EDGE PEAK – 8DPSK MODULATION

EUT: PCG-21112L
Customer:: Sony
Test Mode: BT Ch.0
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 LBE_PK"

Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.3 GHz	2.4 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert
MaxPeak					



(2402MHz) LOWER BAND EDGE AVERAGE -8DPSK MODULATION

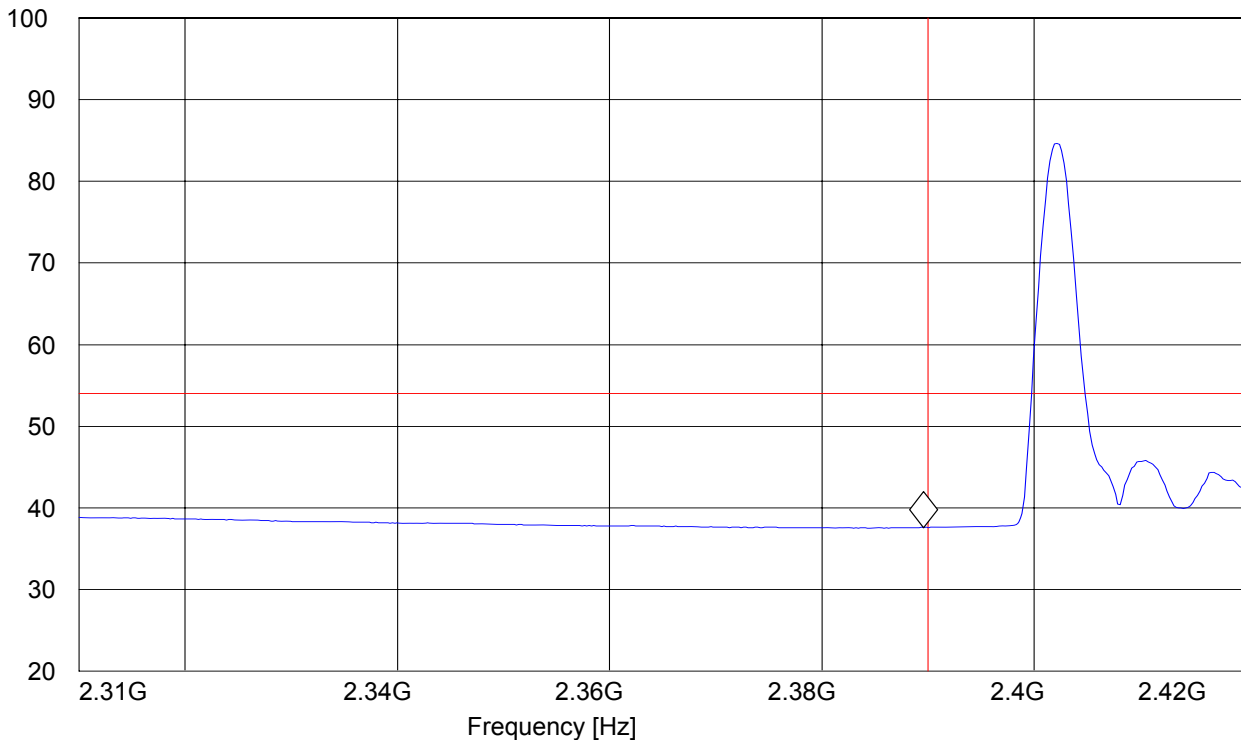
EUT: PCG-21112L
Customer:: Sony
Test Mode: BT Ch.0
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 LBE_AVG"

Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.3 GHz	2.4 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert

Marker: 2.389579158 GHz 37.59 dB μ V/m

Level [dB μ V/m]

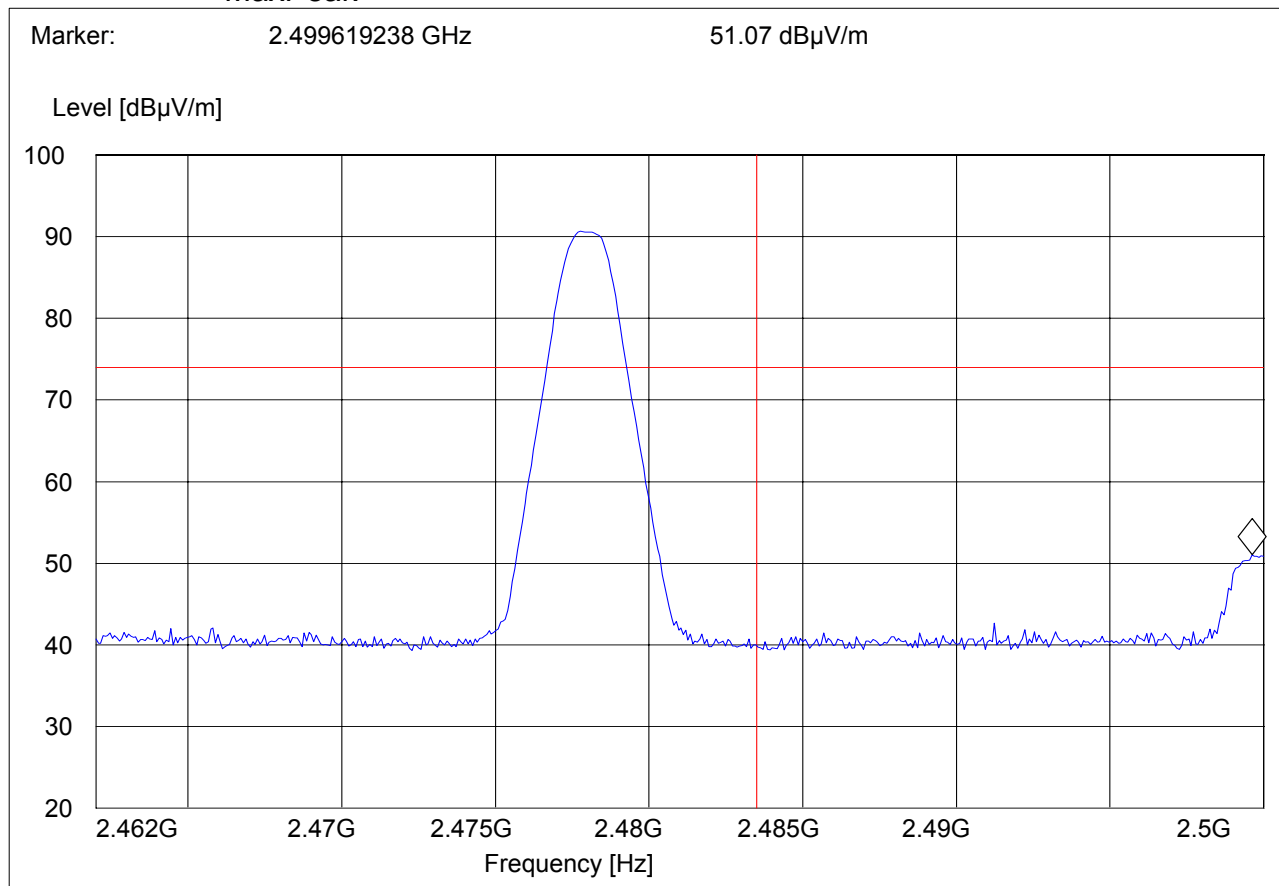


(2480MHz) HIGHER BAND EDGE PEAK – 8DPSK MODULATION

EUT: PCG-21112L
Customer:: Sony
Test Mode: BT Ch.78
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 HBE_PK"

Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.5 GHz	2.5 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert
MaxPeak					



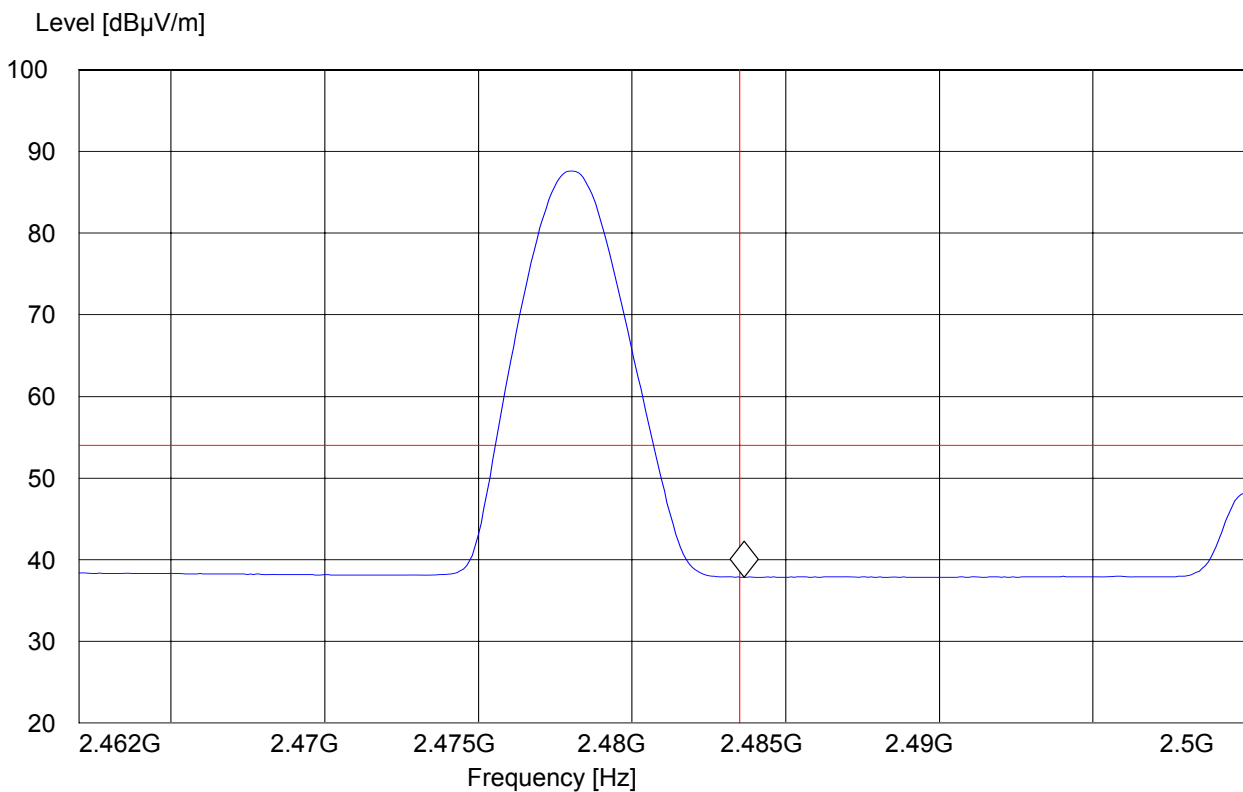
(2480MHz) HIGHER BAND EDGE AVERAGE-8DPSK MODULATION

EUT: PCG-21112L
Customer:: Sony
Test Mode: BT Ch.78
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 HBE_AVG"

Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.5 GHz	2.5 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_horz

Marker: 2.483643287 GHz 37.86 dBμV/m



5.2 TRANSMITTER SPURIOUS EMISSIONS RADIATED § 15.247/15.205/15.209

5.2.1 LIMITS

Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

*PEAK LIMIT= 74dBuV/m

*AVG. LIMIT= 54dBuV/m

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 3 and 25 GHz very short cable connections to the antenna was used to minimize the noise level.

2. All measurements are done in peak mode using an average limit , unless specified with the plots.

Results for the radiated measurements below 30MHz according § 15.33

Frequency	Measured values	Remarks
9KHz – 30MHz	No emissions found, caused by the EUT	This is valid for all the tested channels

All Spurious Emission measurements are done in GFSK mode and represent the worse case emission from the device.

5.2.2 RESULTS

30MHz – 1GHz Worst case for all channels

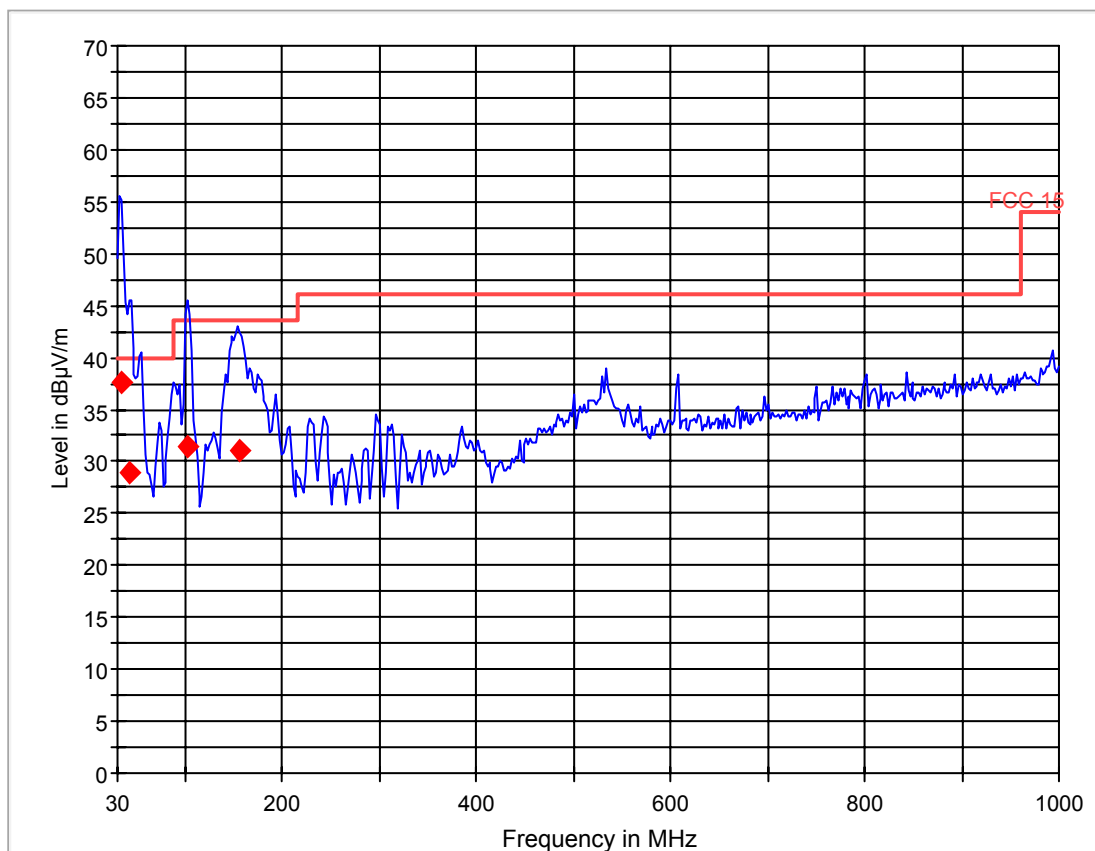
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
34.035526	37.7	20.000	120.000	120.0	V	21.0	6.6	2.3	40.0
42.575150	28.9	20.000	120.000	120.0	V	156.0	5.8	11.1	40.0
101.813628	31.3	20.000	120.000	120.0	V	247.0	9.6	12.2	43.5
156.262525	31.0	20.000	120.000	119.0	V	17.0	11.7	12.5	43.5

(continuation of the "Final Result 1" table from column 10 ...)

Frequency (MHz)	Comment
34.035526	
42.575150	
101.813628	
156.262525	

FCC 15 30-1000MHz

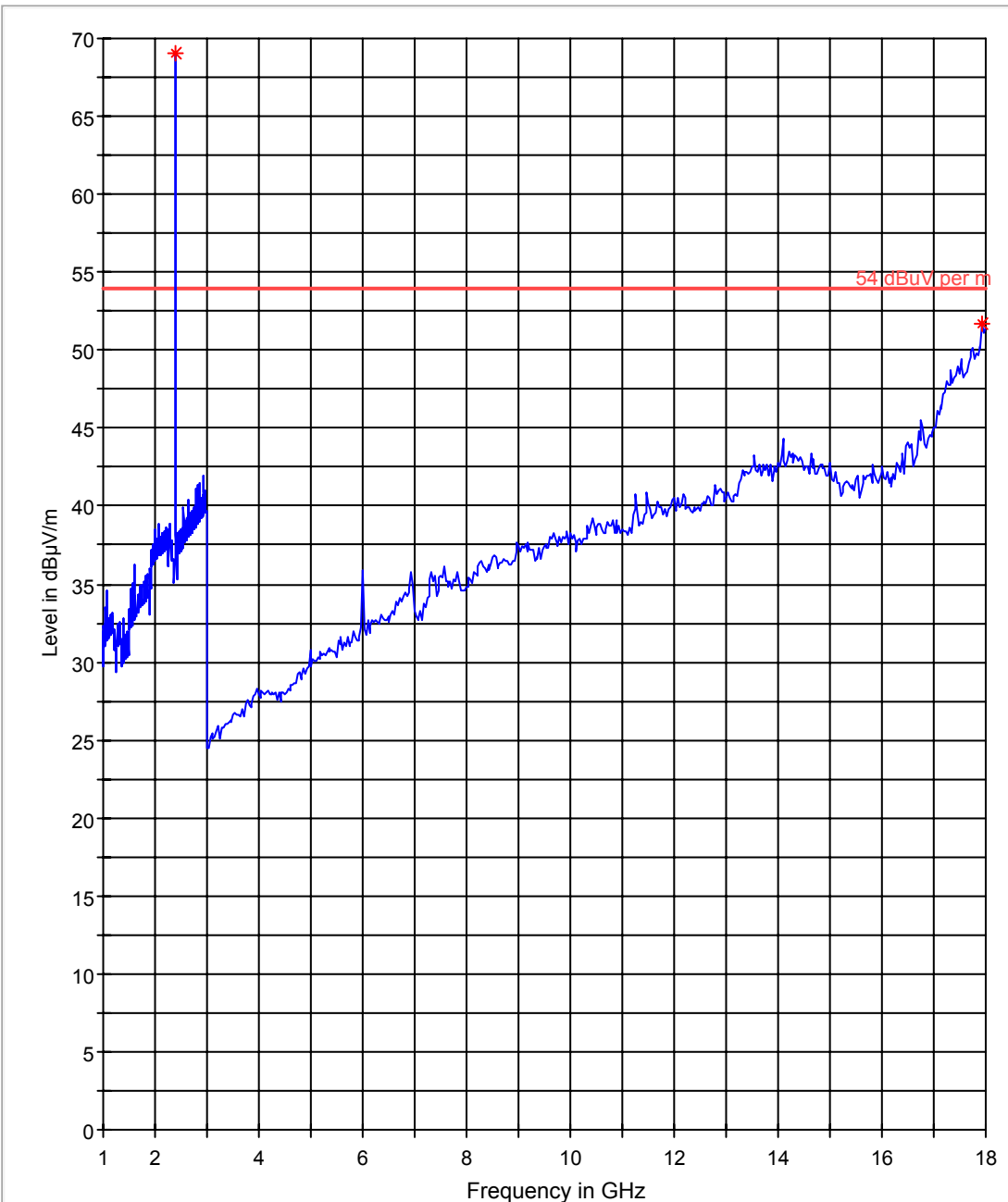


— FCC 15.LimitLine — Preview Result 1 ◆ Final Result 1

1-18GHz (2402MHz)

Note: The peak above the limit line is the carrier freq.

FCC 15 1-18GHz



54 dBuV per m.LimitLine

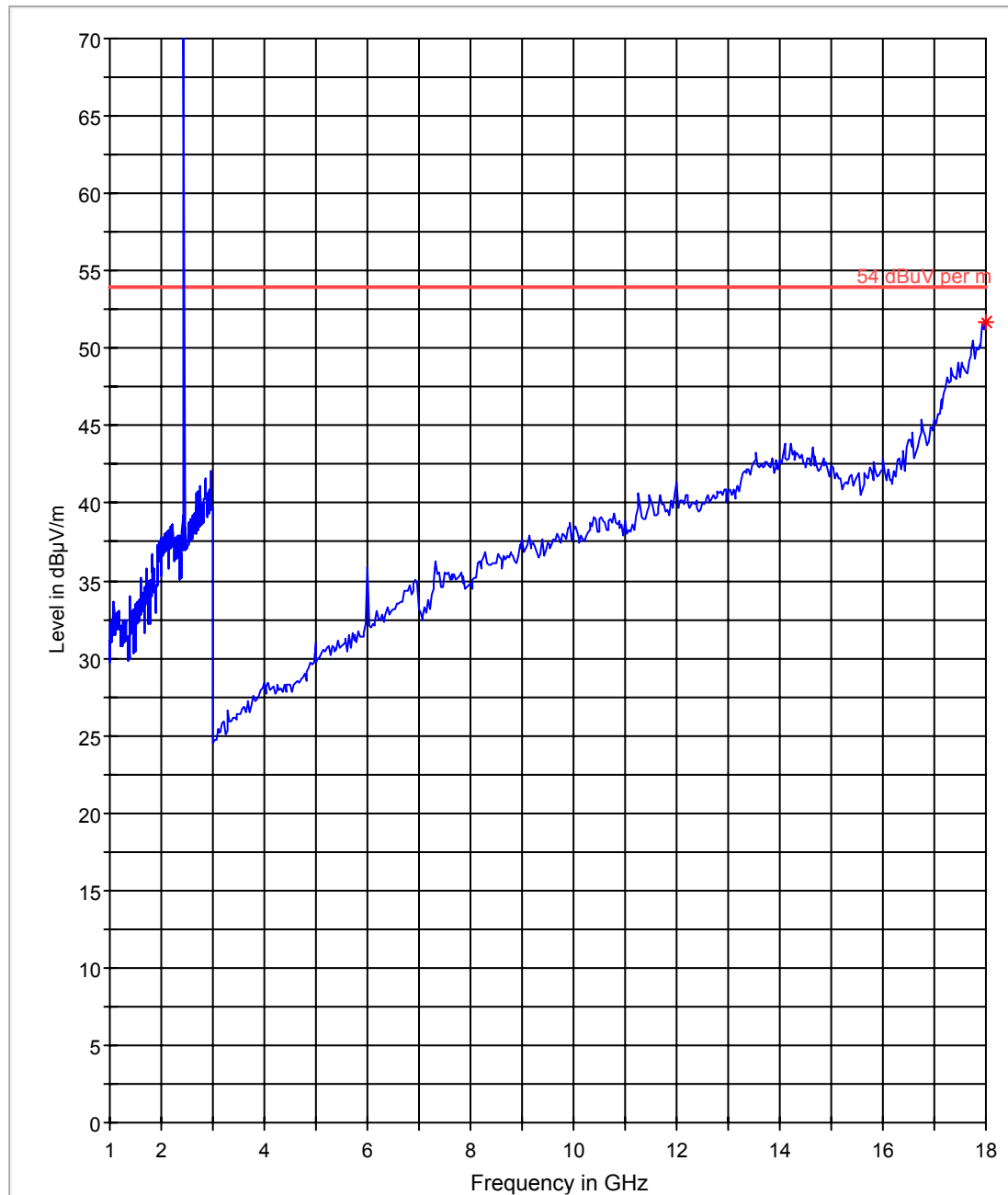
Preview Result 1

*

Data Reduction 1 [2]

1-18GHz (2441MHz)**Note: The peak above the limit line is the carrier freq.**

FCC 15 1-18GHz



— 54 dBuV per m.LimitLine

— Preview Result 1

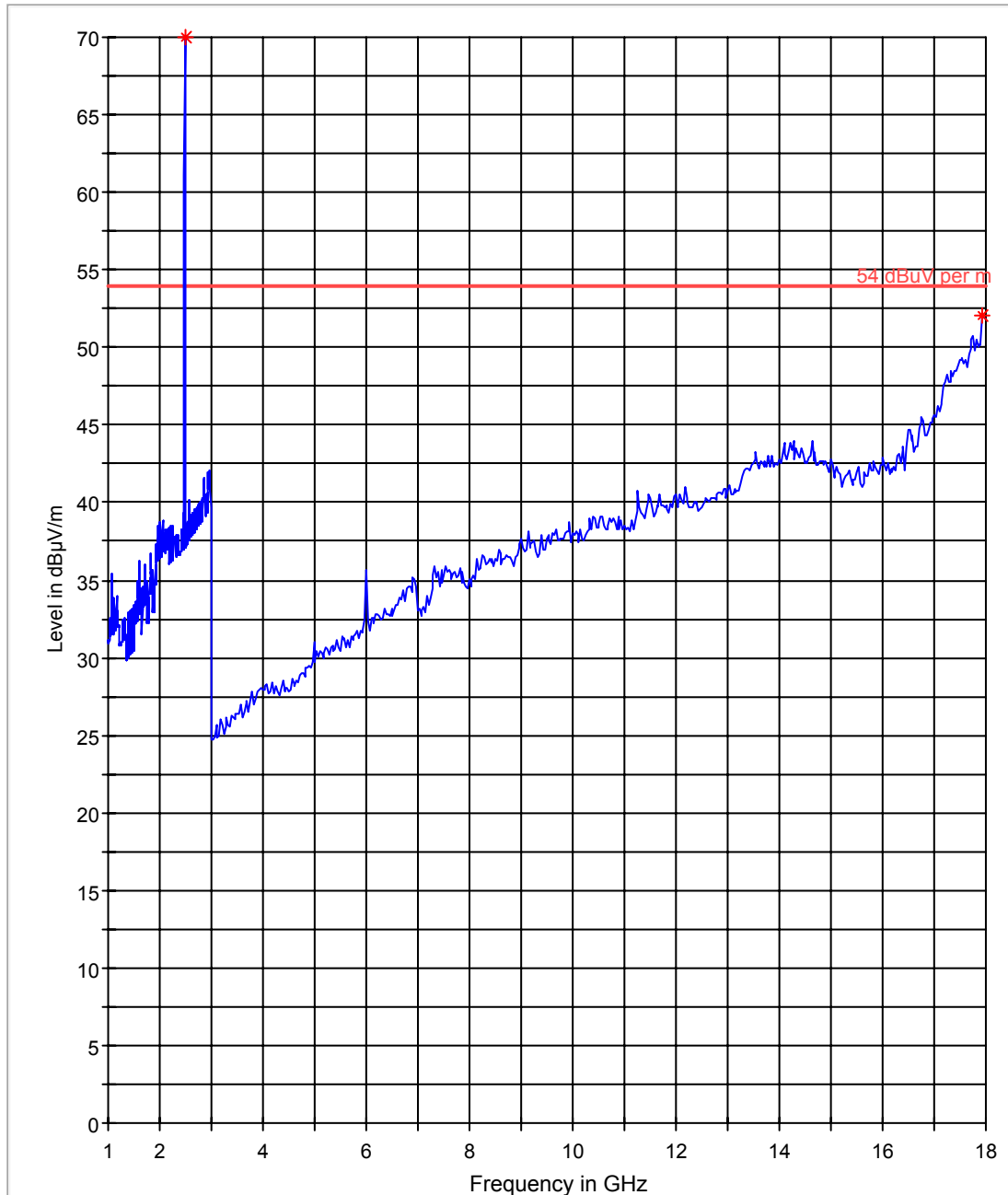
*

Data Reduction 1 [2]

1-18GHz (2480MHz)

Note: The peak above the limit line is the carrier freq.

FCC 15 1-18GHz



54 dBμV per m.LimitLine

Preview Result 1

*

Data Reduction 1 [2]

18-25GHz

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

Note: Peak Reading vs. Average limit

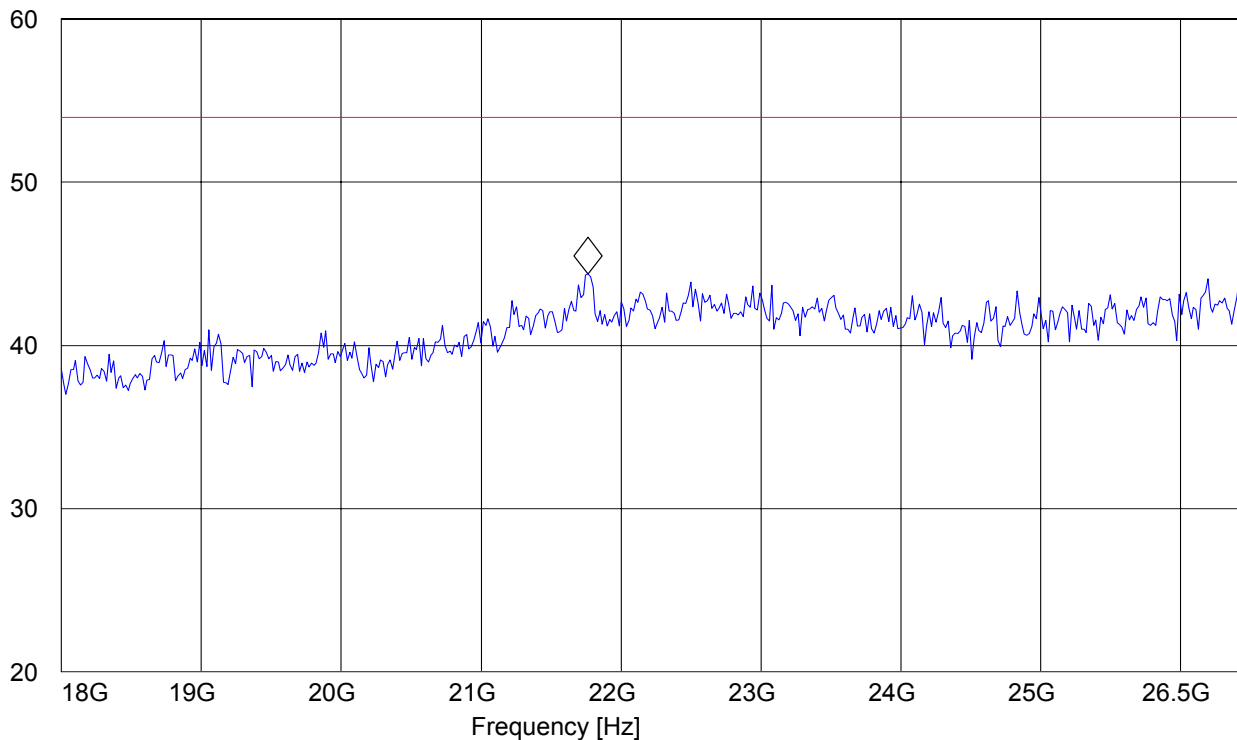
EUT: 21112L
Customer:: Sony Electronics
Test Mode: BT 8DPSK; CH 39
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_18-26.5G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	26.5 GHz	MaxPeak MaxPeak	Coupled	100 kHz	Horn # 3116_18-40G

Marker: 21.764529058 GHz 44.37 dBμV/m

Level [dBμV/m]



5.3 RECEIVER SPURIOUS RADIATION RSS-Gen(4.10)

5.3.1 LIMITS

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	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

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 3 and 25 GHz very short cable connections to the antenna was used to minimize the noise level.

5.3.2 Results

30MHz – 1GHz

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

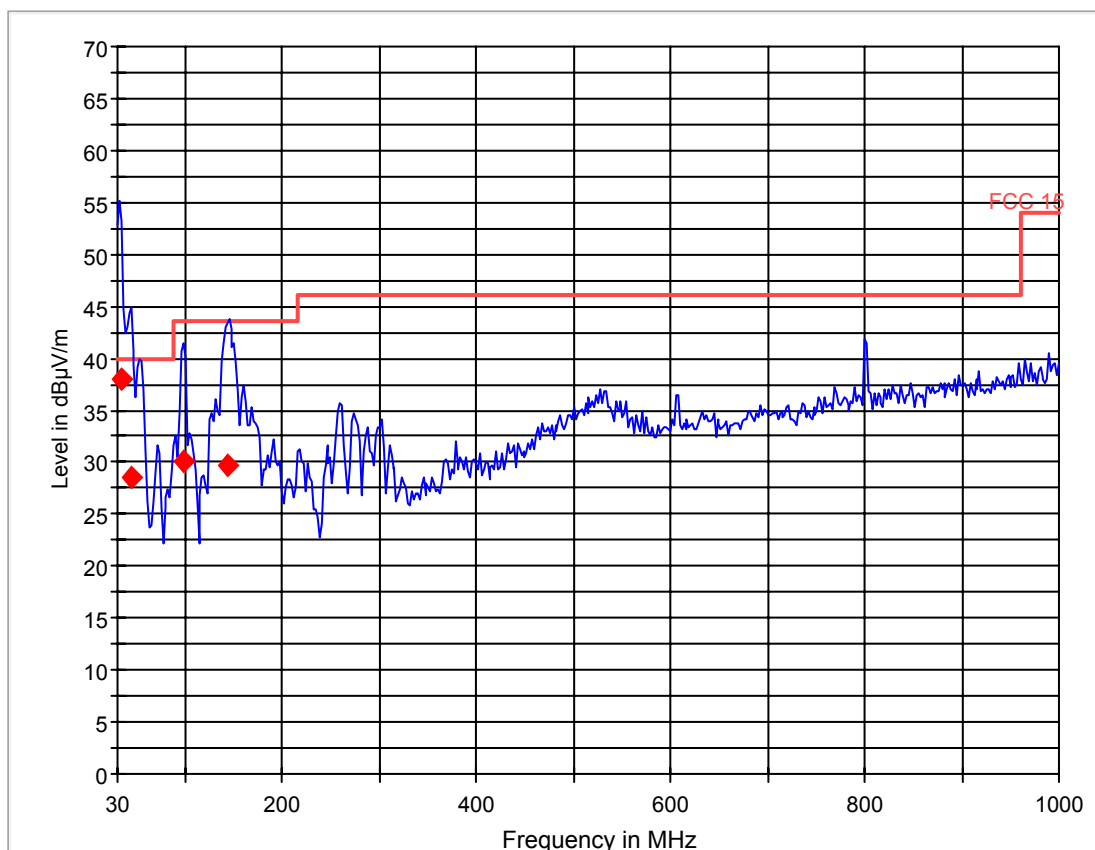
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
33.228421	37.9	20.000	120.000	121.0	V	1.0	6.8	2.1	40.0
43.997996	28.5	20.000	120.000	121.0	V	69.0	6.0	11.5	40.0
98.206413	30.0	20.000	120.000	121.0	V	278.0	9.9	13.5	43.5
144.358718	29.6	20.000	120.000	121.0	V	292.0	9.6	13.9	43.5

(continuation of the "Final Result 1" table from column 10 ...)

Frequency (MHz)	Comment
33.228421	
43.997996	
98.206413	
144.358718	

FCC 15 30-1000MHz



— FCC 15.LimitLine

— Preview Result 1



Final Result 1

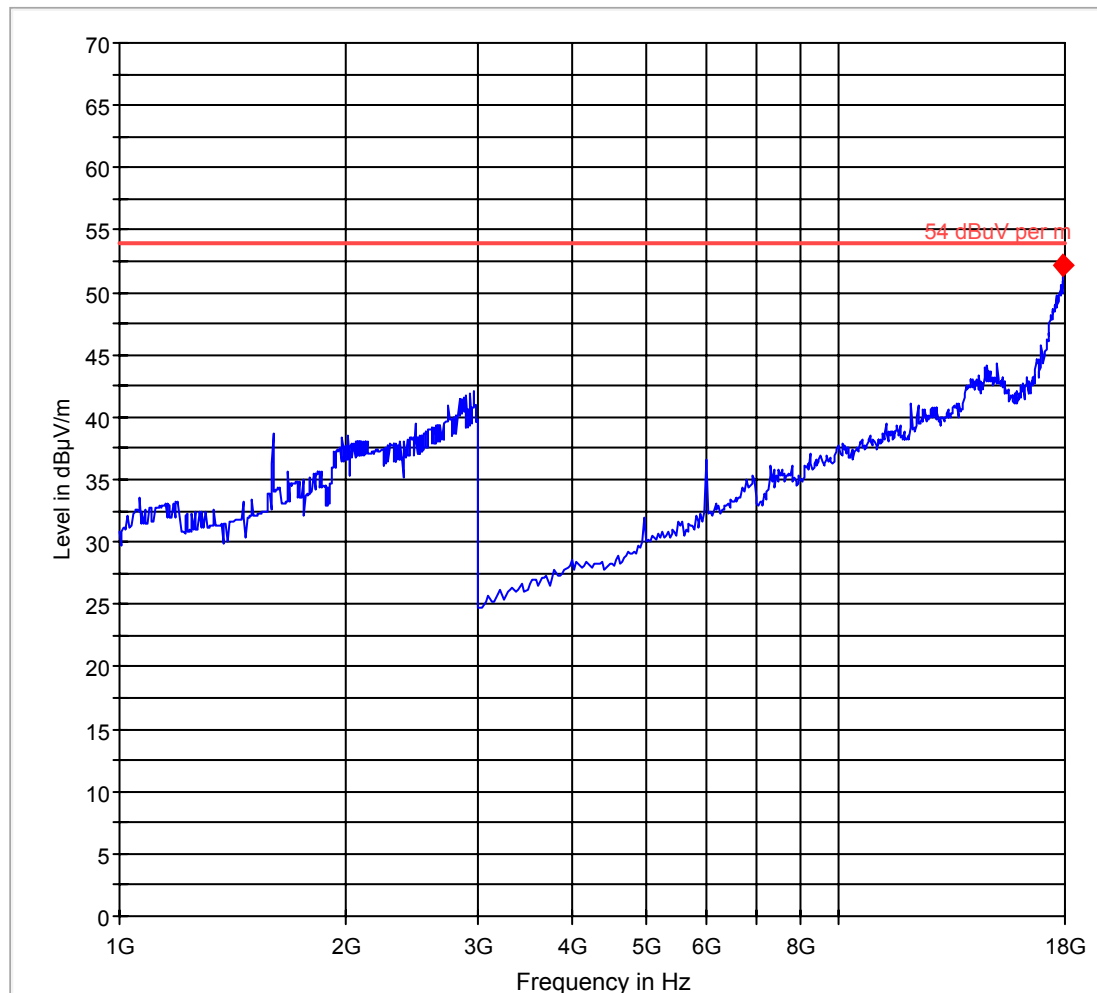
1-18GHz**Final Result 1**

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
17944.058117	52.1	20.000	1000.000	120.0	V	108.0	29.5	1.9	54.0

(continuation of the "Final Result 1" table from column 10 ...)

Frequency (MHz)	Comment
17944.058117	

FCC 15 1-18GHz



— 54 dBµV per m.LimitLine

— Preview Result 1



Final Result 1

5.4 AC POWER LINE CONDUCTED EMISSIONS § 15.107/207

5.4.1 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		

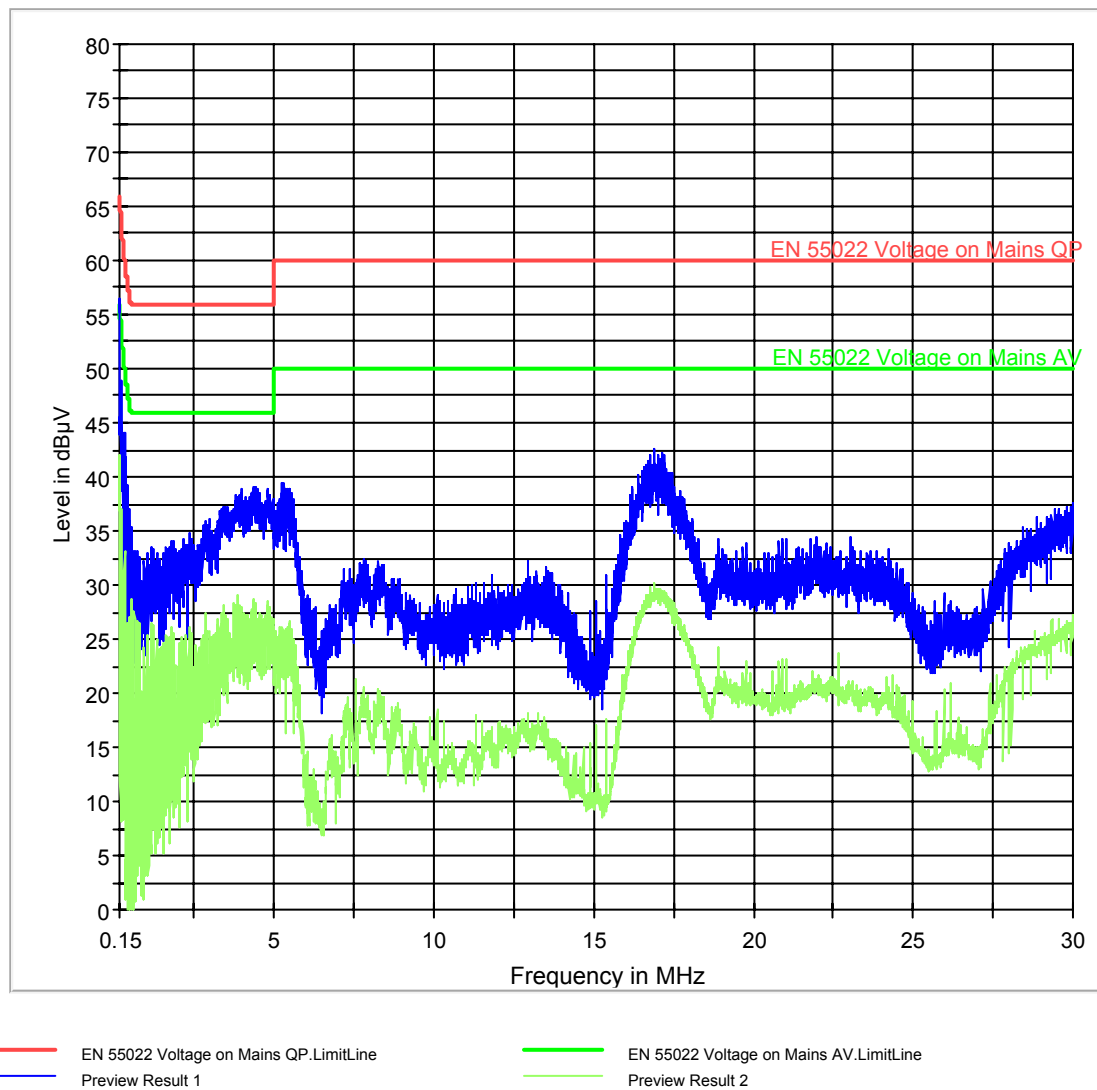
ANALYZER SETTINGS: RBW = 10KHz

VBW = 10KHz

5.4.2 RESULTS TX

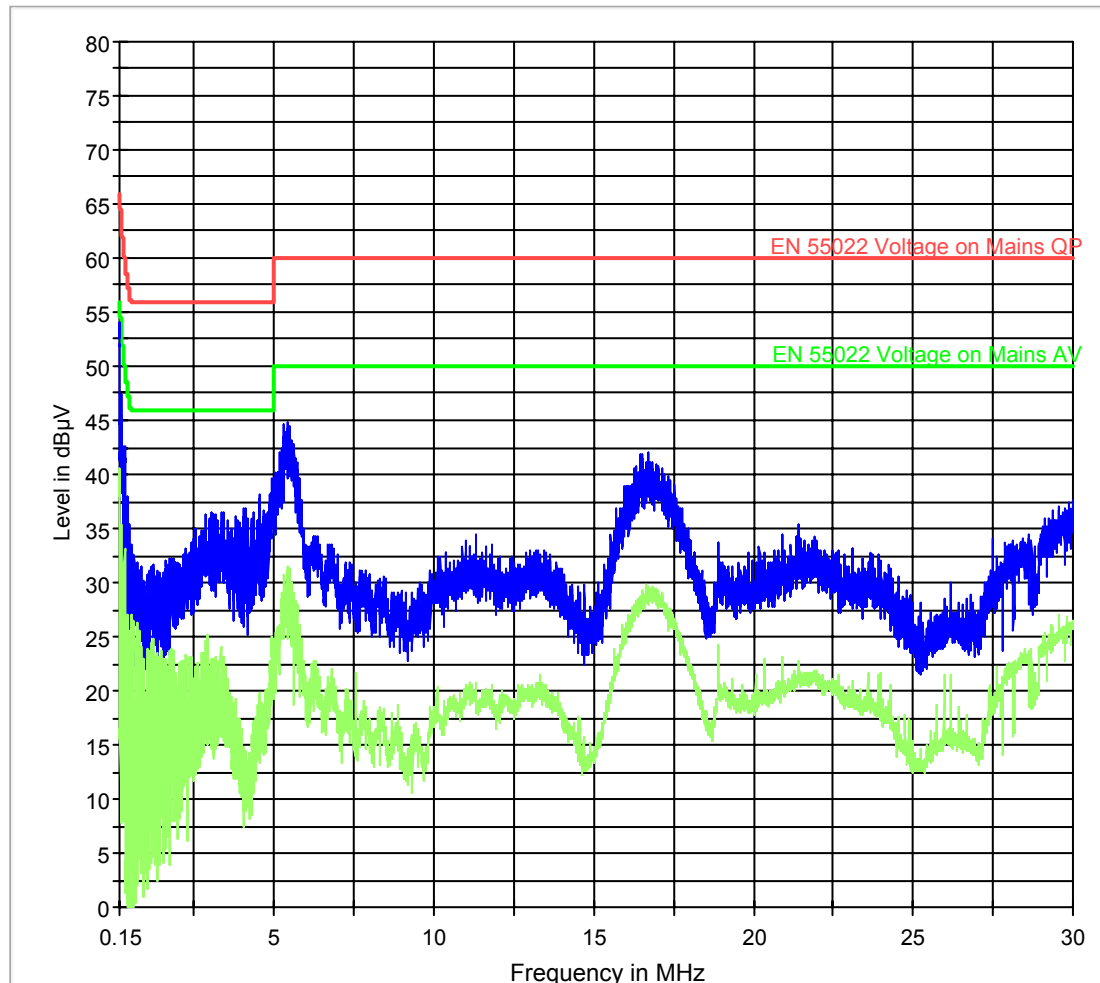
Line

CISPR 22 Mains Conducted - L



Neutral

CISPR 22 Mains Conducted - N



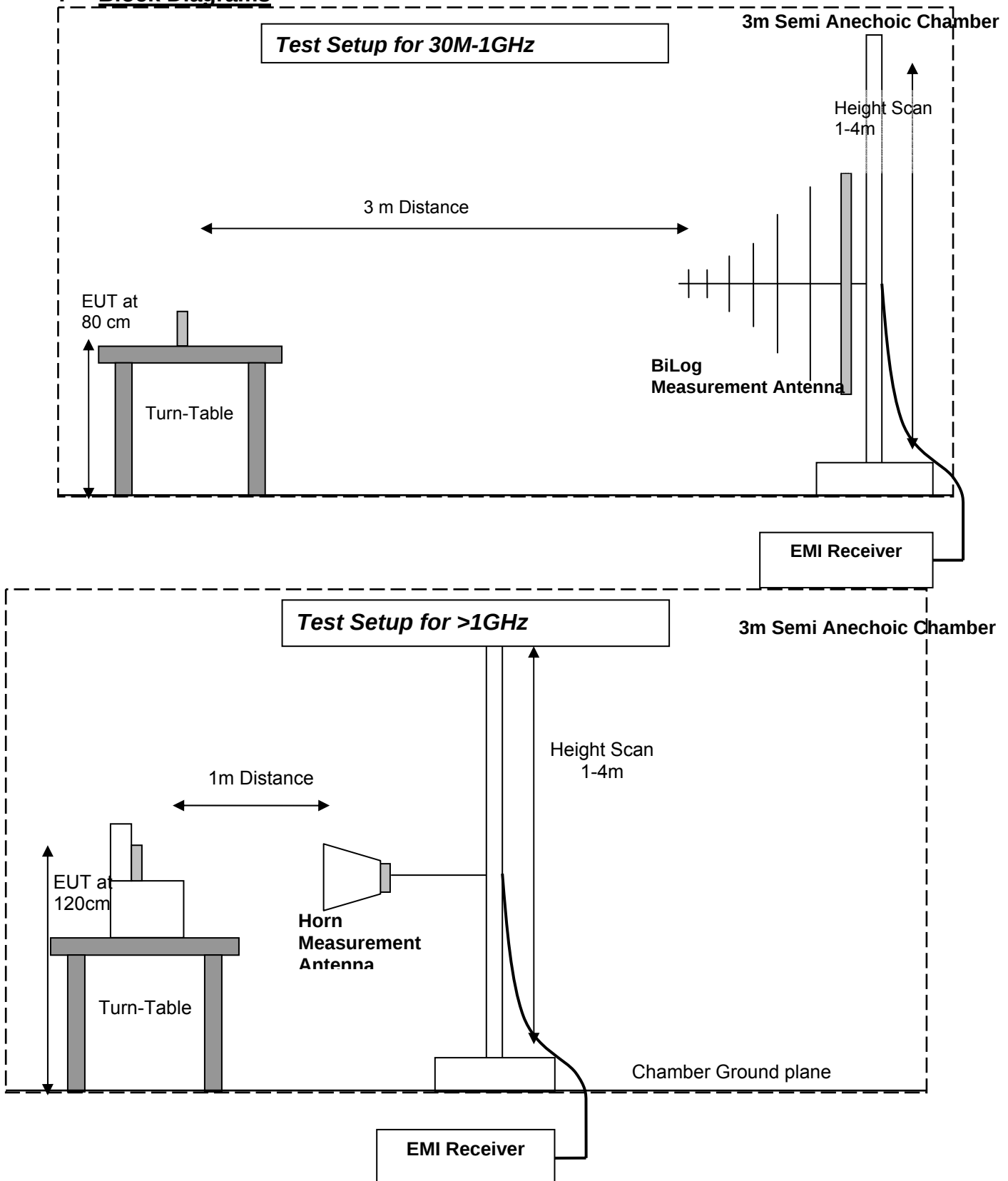
EN 55022 Voltage on Mains QP.LimitLine
Preview Result 1

EN 55022 Voltage on Mains AV.LimitLine
Preview Result 2

6 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 2010	1 year
02	Spectrum Analyzer	FSEM 30	Rohde & Schwarz	100017	May 2010	1 year
03	Signal Generator	SMY02	Rohde & Schwarz	836878/011	May 2010	1 year
04	Power-Meter	NRVD	Rohde & Schwarz	0857.8008.02	May 2010	1 year
05	Biconilog Antenna	3141	EMCO	0005-1186	June 2011	2 year
06	Horn Antenna (1-18GHz)	SAS-200/571	AH Systems	325	June 2011	2 year
07	Horn Antenna (18-26.5GHz)	3160-09	EMCO	1240	June 2011	2 year
08	Power Splitter	11667B	Hewlett Packard	645348	n/a	n/a
09	High Pass Filter	5HC2700	Trilithic Inc.	9926013	n/a	n/a
10	High Pass Filter	4HC1600	Trilithic Inc.	9922307	n/a	n/a
11	Pre-Amplifier	JS4-00102600	Miteq	00616	May 2010	1 year
12	Power Sensor	URV5-Z2	Rohde & Schwarz	DE30807	May 2010	1 year
13	Digital Radio Comm. Tester	CMD-55	Rohde & Schwarz	847958/008	May 2010	1 year
14	Universal Radio Comm. Tester	CMU 200	Rohde & Schwarz	832221/06	May 2010	1 year
15	LISN	ESH3-Z5	Rohde & Schwarz	836679/003	May 2010	1 year
16	Loop Antenna	6512	EMCO	00049838	July 2011	2 years

7 Block Diagrams



Test Report #: EMC_SONYE_033_15.247_FHSS_PCG21112L_Rev1

Date of Report : 2009-08-07

Page 38 of 38



8 Revision History.

2009-07-30 First Issue

2009-08-07 Rev1, updated EUT description