

Annex 4: Diagrams to
PARTIAL TEST REPORT
No.: 2-20823287o-13

According to:
FCC Regulations
Part 15.109, Part15.249

for
Sony Mobile Communications

Tablet PC
(ANT+)

FCC-ID: PY7TM-0042

Laboratory Accreditation and Listings			
 DAkks Deutsche Akkreditierungsstelle D-PL-12047-01-01	 FEDERAL COMMUNICATIONS COMMISSION USA Reg. No.: 736496 MRA US-EU 0003	 Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2666 C-2914, T-1967, G-301
 Wi-Fi ALLIANCE AUTHORIZED RF LABORATORY	 Authorized Test Lab LAB CODE 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
CETECOM GmbH Laboratory Radio Communications & Electromagnetic Compatibility Im Teelbruch 116 • 45219 Essen • Germany Registered in Essen, Germany, Reg. No.: HRB Essen 8984 Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964 E-mail: info@cetecom.com • Internet: www.cetecom.com			

Table of contents

1. TRANSMITTER SPURIOUS EMISSIONS.....	3
1.1. Max. Power radiated - EIRP-Value	3
1.2. Frequency range $f < 30\text{MHz}$	6
1.3. Frequency range $30\text{MHz} < f < 1\text{GHz}$	7
1.4. Frequency range $f > 1\text{GHz}$	10
1.5. Band-Edge radiated	14
2. RECEIVER SPURIOUS EMISSIONS	16
2.1. Frequency range $f < 1\text{GHz}$	16
2.2. Frequency range $f > 1\text{GHz}$	17

1. Transmitter spurious emissions

1.1. Max. Power radiated - EIRP-Value

Diagram No.: 7.01_Ch1

Common Information

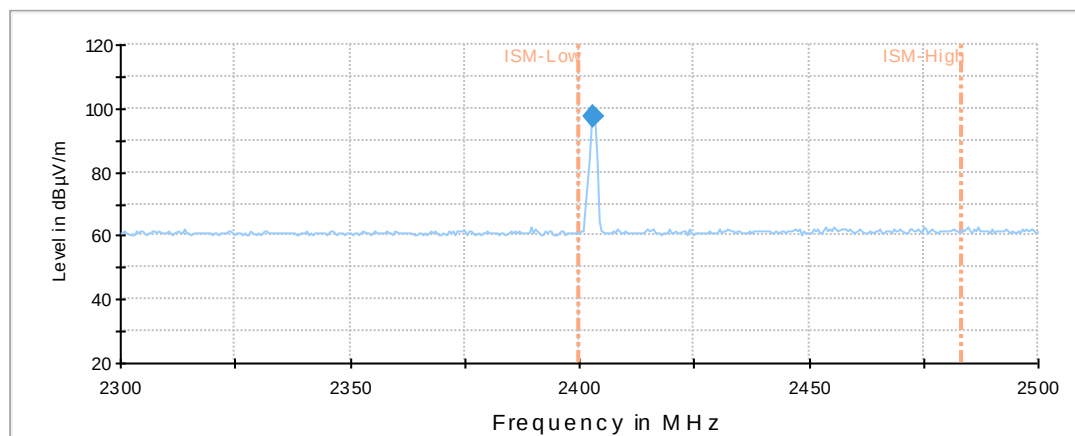
Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.205 & §15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	GAr
Comment:	Channel no. low=1
Op. Mode:	ANT+ TX continuous
Test Conditions:	Humidity: 40%rH; Temperature: 21°C

EUT Information

Manufacturer:	Sony
FCC ID:	PY7TM-0042
Type:	GSM-/ WCDMA- /LTE Tablet PC

EUT:	RSE #01
HW version:	AP1
SW version:	17.1.D.0.108
SVN:	-
Config:	-
Serial number:	CB5126DQ9V
Connected Interfaces:	Power Supply (EP850) ; USB-cable (EC700)
Power Supply:	Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
Comments:	-

Carrier_measurement_SM1_PA0_KP1_WLAN



Final Result 1

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Corr. (dB)	Comment
2403.000000	97.6	100.0	1000.000	155.0	H	191.0	0.0	35.5	

Diagram No.: 7.02_Ch39

Common Information

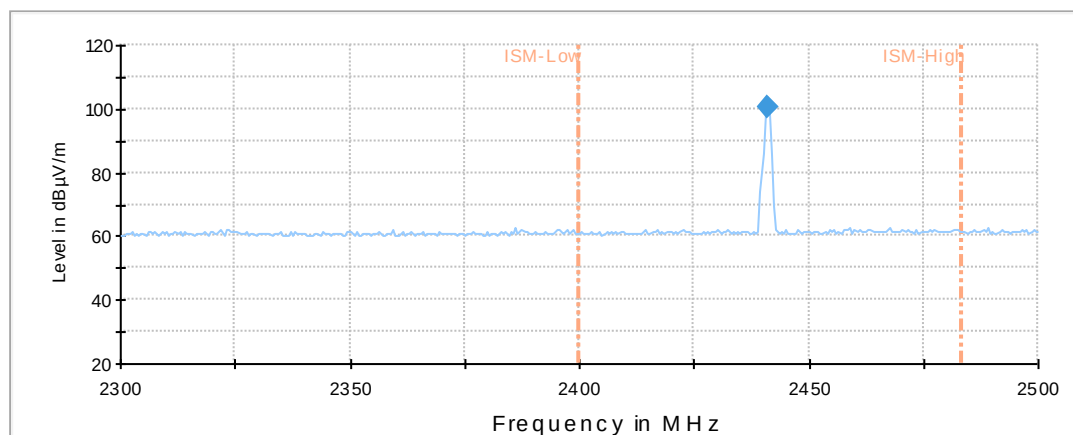
Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.205 & §15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	GA
Comment:	Channel no. middle=39
Op. Mode:	ANT+ TX continuous
Test Conditions:	Humidity: 40%rH; Temperature: 21°C

EUT Information

Manufacturer:	Sony
FCC ID:	PY7TM-0042
Type:	GSM-/ WCDMA- /LTE Tablet PC

EUT:	RSE #01
HW version:	AP1
SW version:	17.1.D.0.108
SVN:	-
Config:	-
Serial number:	CB5126DQ9V
Connected Interfaces:	Power Supply (EP850) ; USB-cable (EC700)
Power Supply:	Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
Comments:	-

Carrier_measurement_SM1_PA0_KP1_WLAN



Final Result 1

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Corr. (dB)	Comment
2441.000000	100.7	100.0	1000.000	155.0	H	221.0	0.0	35.6	

Diagram No.: 7.03_Ch78

Common Information

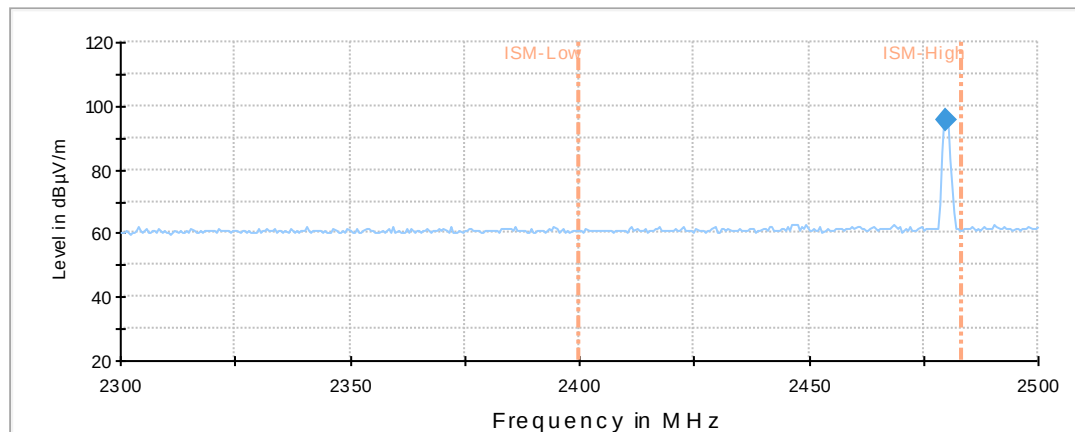
Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.205 & §15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	кта
Comment:	Channel no. high=78
Op. Mode:	ANT+ TX continuous
Test Conditions:	Humidity: 32%rH; Temperature: 23°C

EUT Information

Manufacturer:	Sony
FCC ID:	PY7TM-0042
Type:	GSM-/ WCDMA- /LTE Tablet PC

EUT:	RSE #01
HW version:	AP1
SW version:	17.1.D.0.108
SVN:	-
Config:	-
Serial number:	CB5126DQ9V
Connected Interfaces:	Power Supply (EP850) ; USB-cable (EC700)
Power Supply:	Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
Comments:	-

Carrier_measurement_SM1_PA0_KP1_WLAN



Final Result 1

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Correction (dB)	Comment
2480.000000	95.5	100.0	1000.000	155.0	H	221.0	90.0	35.7	

1.2. Frequency range $f < 30\text{MHz}$

Diagram No. 2.03_ANT_Ch39

Test description:	Date: 11.03.2014 Page 1 of 1
Test site and distance:	Magnetic Field strength Measurement related to 30/300 m distance
Version of Testsoftware:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Distance correction:	8.51.0
Technical Data:	used accord. table, pls. see test report
Rec. antenna (pre-scan):	Please see page 2 for detailed data of measurement setup
Used filter:	height 1.00 m, parallel and 90° to EUT polarisation
Test specification:	bypass
	FCC 15.205 § 15.209; RSS-Gen: Issue 3

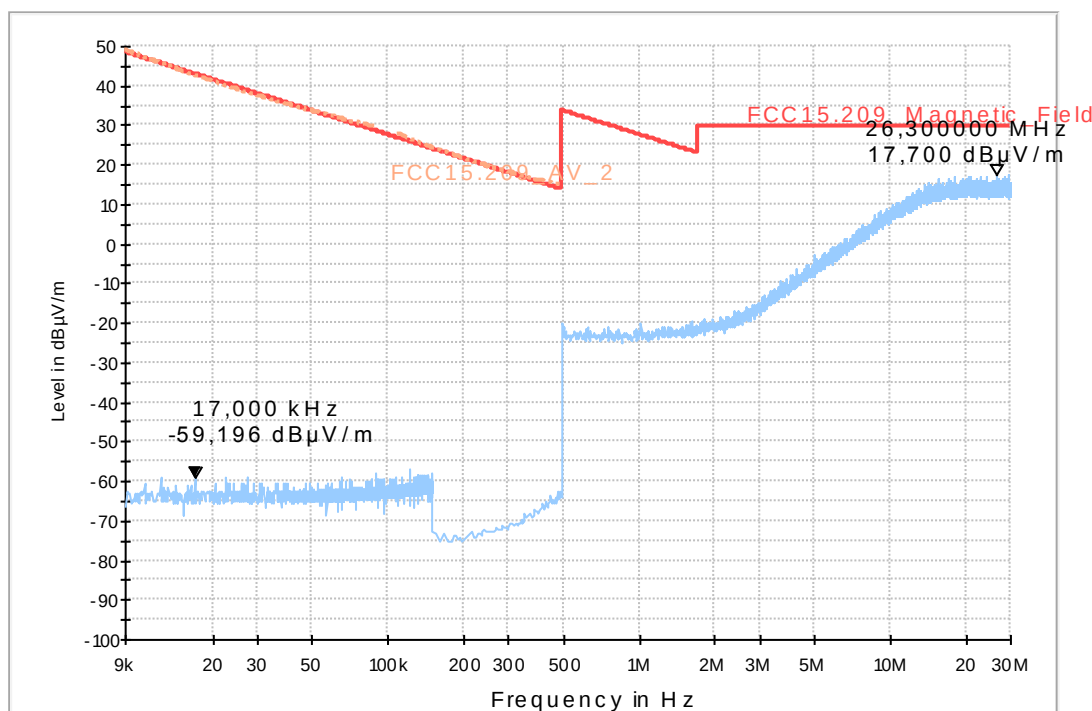
Operator:	HLA
Operating conditions:	TX-on continuous, ANT_Ch39
Power during tests:	12V DC, 110V/60Hz, full loaded batteries
Comment 1:	Channel middle
Comment 2:	

EUT Information

Manufacturer:	Sony
FCC ID:	PY7TM-0042
Type:	GSM-/ WCDMA- /LTE Tablet PC

EUT:	RSE #01
HW version:	AP1
SW version:	17.1.D.0.108
SVN:	-
Config:	-
Serial number:	CB5126DPP9
Connected Interfaces:	Power Supply (EP850) ; USB-cable (EC700)
Power Supply:	Battery fully charged before test. Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
Comments:	-

FCC15.209_magn hor+vert



1.3. Frequency range 30MHz<f<1GHz

Diagram No. 3.07_Ant_Ch1

13.03.2014 Page 1 of 1
 Test description: Electric Fieldstrength Measurement
 Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
 Version of Testsoftware: 8.51.0
 Distance correction: not used
 Used filter: not used
 Technical Data: please see page 2 for detailed data of measurement setup
 Test specification.: FCC 15.209; RSS-Gen: Issue 3

Operator: dpa
 Operating conditions: TX-on continuous, Ant+_Ch1
 Power during tests: 120V 60Hz

EUT Information

Manufacturer:	Sony
FCC ID:	PY7TM-0042
Type:	GSM-/ WCDMA- /LTE Tablet PC

EUT:	RSE #01
HW version:	AP1
SW version:	17.1.D.0.108
SVN:	-
Config:	-
Serial number:	CB5126DQ9V
Connected Interfaces:	Power Supply (EP850) ; USB-cable (EC700)
Power Supply:	Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
Comments:	-

01_FCC15.209_hor+vert_kipp

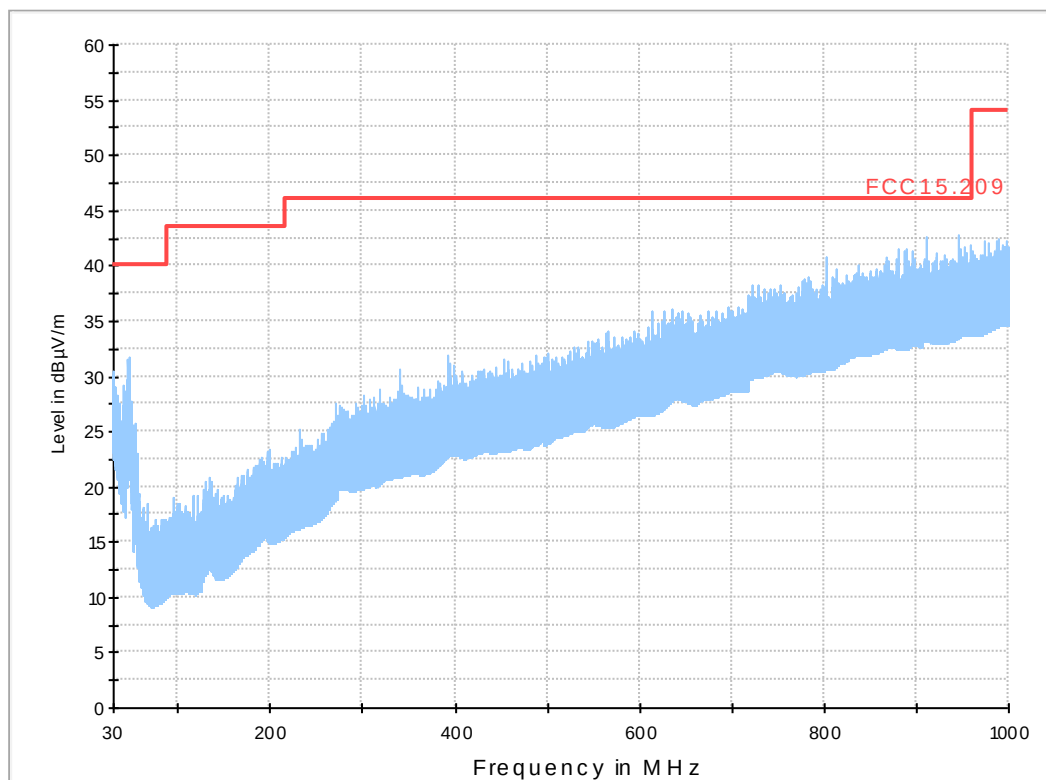


Diagram No. 3.08_Ant_Ch39

13.03.2014 Page 1 of 1
 Test description: Electric Field strength Measurement
 Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
 Version of Testsoftware: 8.51.0
 Distance correction: not used
 Used filter: not used
 Technical Data: please see page 2 for detailed data of measurement setup
 Test specification.: FCC 15.209; RSS-Gen: Issue 3

Operator: GAr / DPa
 Operating conditions: TX-on continuous, Ant+_Ch39
 Power during tests: 120V 60Hz

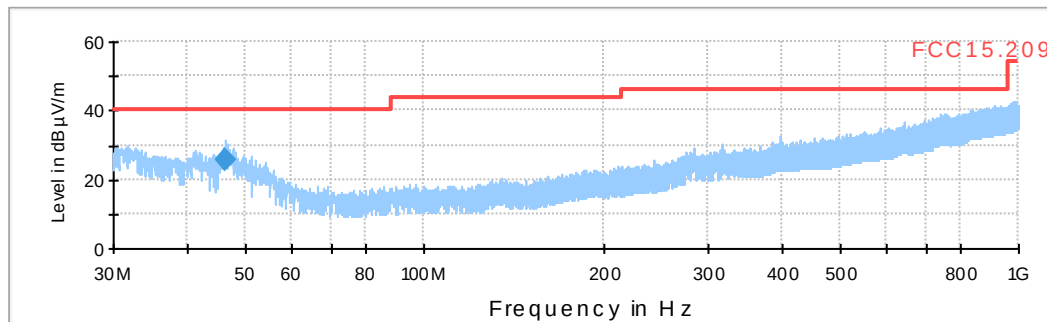
EUT Information

Manufacturer: Sony
 FCC ID: PY7TM-0042
 Type: GSM-/ WCDMA- /LTE Tablet PC

EUT: RSE #01
 HW version: AP1
 SW version: 17.1.D.0.108
 SVN: -
 Config: -
 Serial number: CB5126DQ9V
 Connected Interfaces: Power Supply (EP850) ; USB-cable (EC700)
 Power Supply: Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test

Comments: -

01_FCC15.209_hor+vert_kipp



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
46.290000	25.7	1000.0	120.000	232.0	V	227.0	0.0	15.0	14.30	40.00

Diagram No. 3.09_Ant_Ch78

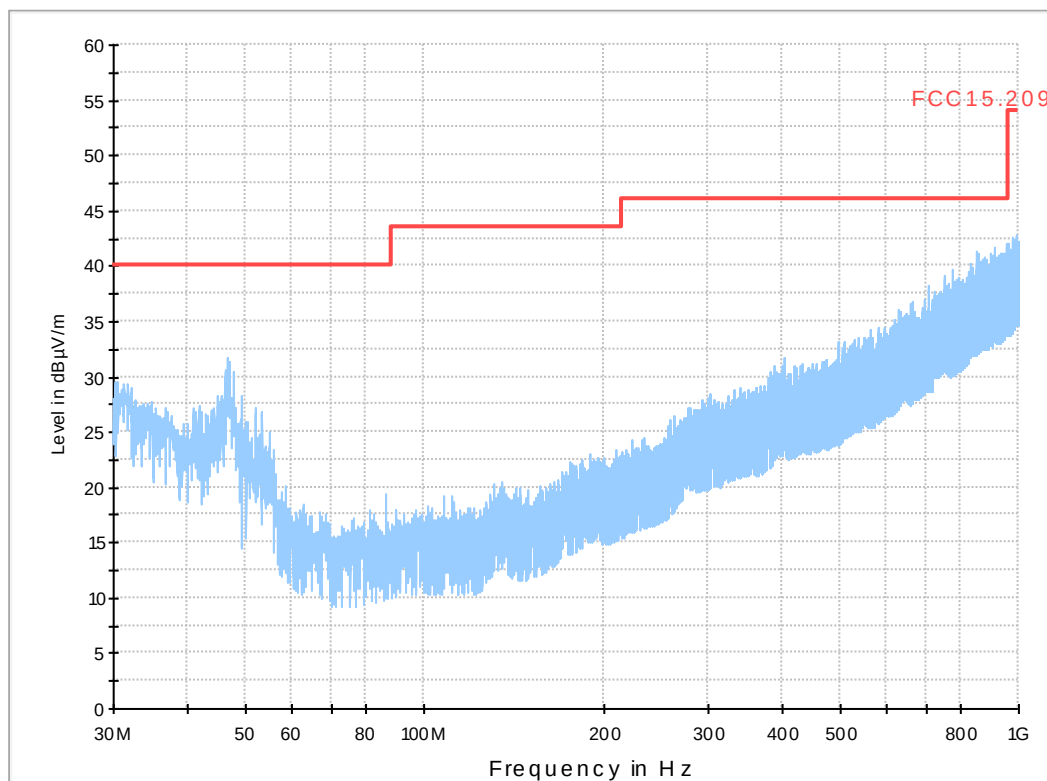
Test description:	13.03.2014 Page 1 of 1
Test site and distance:	Electric Field strength Measurement
Version of Testsoftware:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Distance correction:	8.51.0
Used filter:	not used
Technical Data:	TP
Test specification.:	please see page 2 for detailed data of measurement setup
	FCC 15.209; RSS-Gen: Issue 3
Operator:	GAr / DPa
Operating conditions:	TX-on continuous, Ant+_Ch78
Power during tests:	120V 60Hz

EUT Information

Manufacturer:	Sony
FCC ID:	PY7TM-0042
Type:	GSM-/ WCDMA- /LTE Tablet PC

EUT:	RSE #01
HW version:	AP1
SW version:	17.1.D.0.108
SVN:	-
Config:	-
Serial number:	CB5126DQ9V
Connected Interfaces:	Power Supply (EP850) ; USB-cable (EC700)
Power Supply:	Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
Comments:	-

01_FCC15.209_hor+vert_kipp



1.4. Frequency range $f > 1\text{GHz}$

Diagram 4.04_ANT_Ch1

Common Information

Test Description:	Radiated Field Strength Emission
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.205 & §15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	кта
Comment:	Channel no. low=1
Op. Mode:	ANT+ TX continuous
Test Conditions:	Humidity: 33%rH; Temperature: 24°C

EUT Information

Manufacturer:	Sony
FCC ID:	PY7TM-0042
Type:	GSM-/ WCDMA- /LTE Tablet PC
EUT:	RSE #01
HW version:	AP1
SW version:	17.1.D.0.108
SVN:	-
Config:	-
Serial number:	CB5126DQ9V
Connected Interfaces:	Power Supply (EP850) ; USB-cable (EC700)
Power Supply:	Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
Comments:	-

00431_SM1_KP1_W LAN_1_5ms

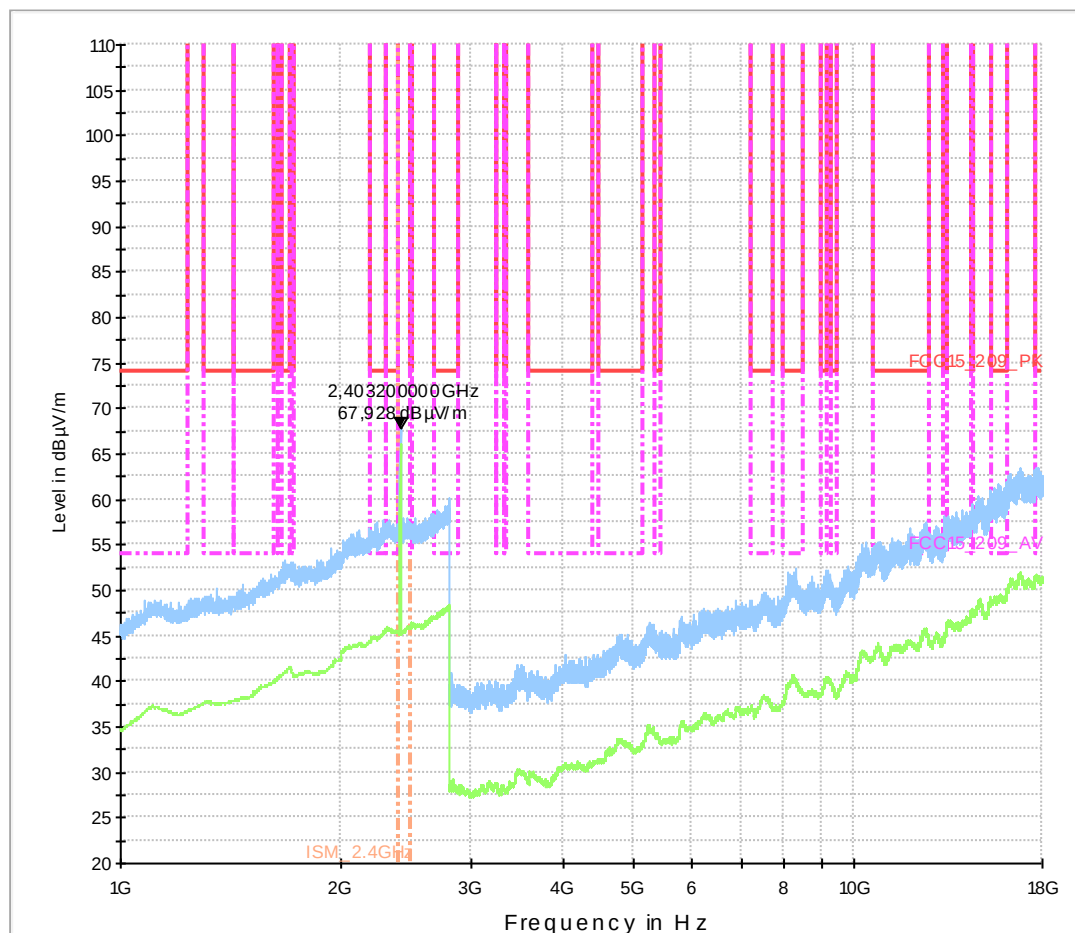


Diagram No.: 4.05_ANT_Ch39

Common Information

Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.249 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	кта
Comment:	Channel no. middle=39
Op. Mode:	ANT+ TX continuous
Test Conditions:	Humidity: 33%rH; Temperature: 24°C

EUT Information

Manufacturer:	Sony
FCC ID:	PY7TM-0042
Type:	GSM-/ WCDMA- /LTE Tablet PC

EUT:	RSE #01
HW version:	AP1
SW version:	17.1.D.0.108
SVN:	-
Config:	-
Serial number:	CB5126DQ9V
Connected Interfaces:	Power Supply (EP850) ; USB-cable (EC700)
Power Supply:	Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
Comments:	-

00431_SM1_KP1_W LAN_1_5ms

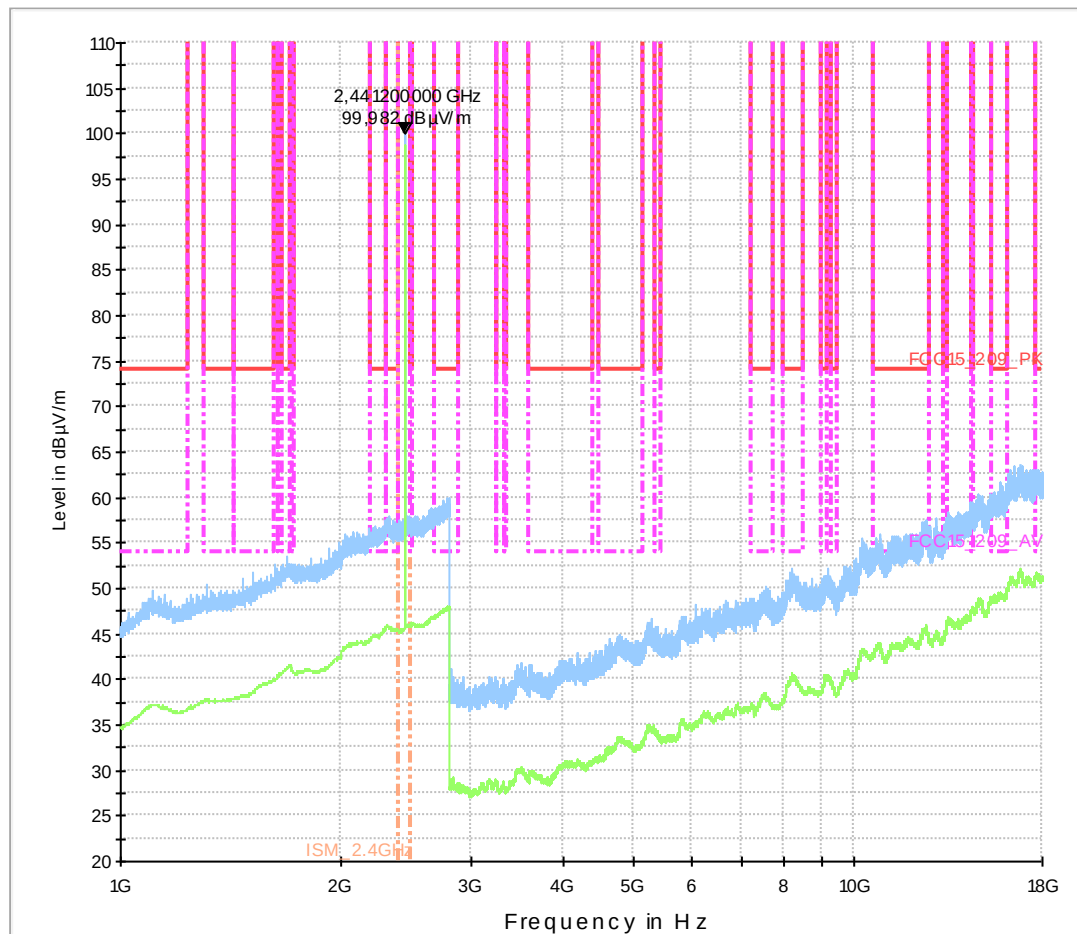


Diagram No.: 4.06a_ANT_Ch78

Common Information

Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.249 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	ka
Comment:	Channel no. high=78
Op. Mode:	ANT+ TX continuous
Test Conditions:	Humidity: 33%rH; Temperature: 24°C

EUT Information

Manufacturer:	Sony
FCC ID:	PY7TM-0042
Type:	GSM-/ WCDMA- /LTE Tablet PC
EUT:	RSE #01
HW version:	AP1
SW version:	17.1.D.0.108
SVN:	-
Config:	-
Serial number:	CB5126DQ9V
Connected Interfaces:	Power Supply (EP850) ; USB-cable (EC700)
Power Supply:	Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
Comments:	-

00431_SM1_KP1_W LAN_1_5ms

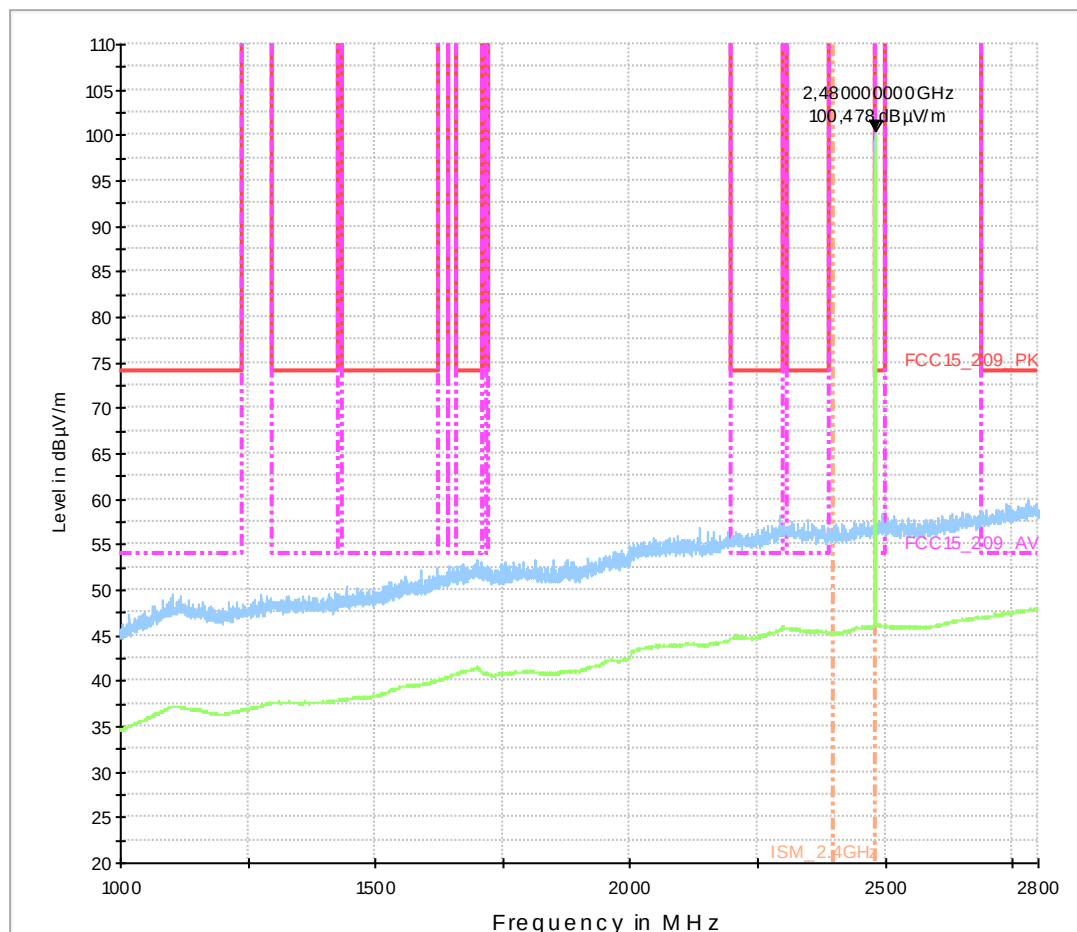


Diagram No.: 4.06b_ANT_Ch78

Common Information

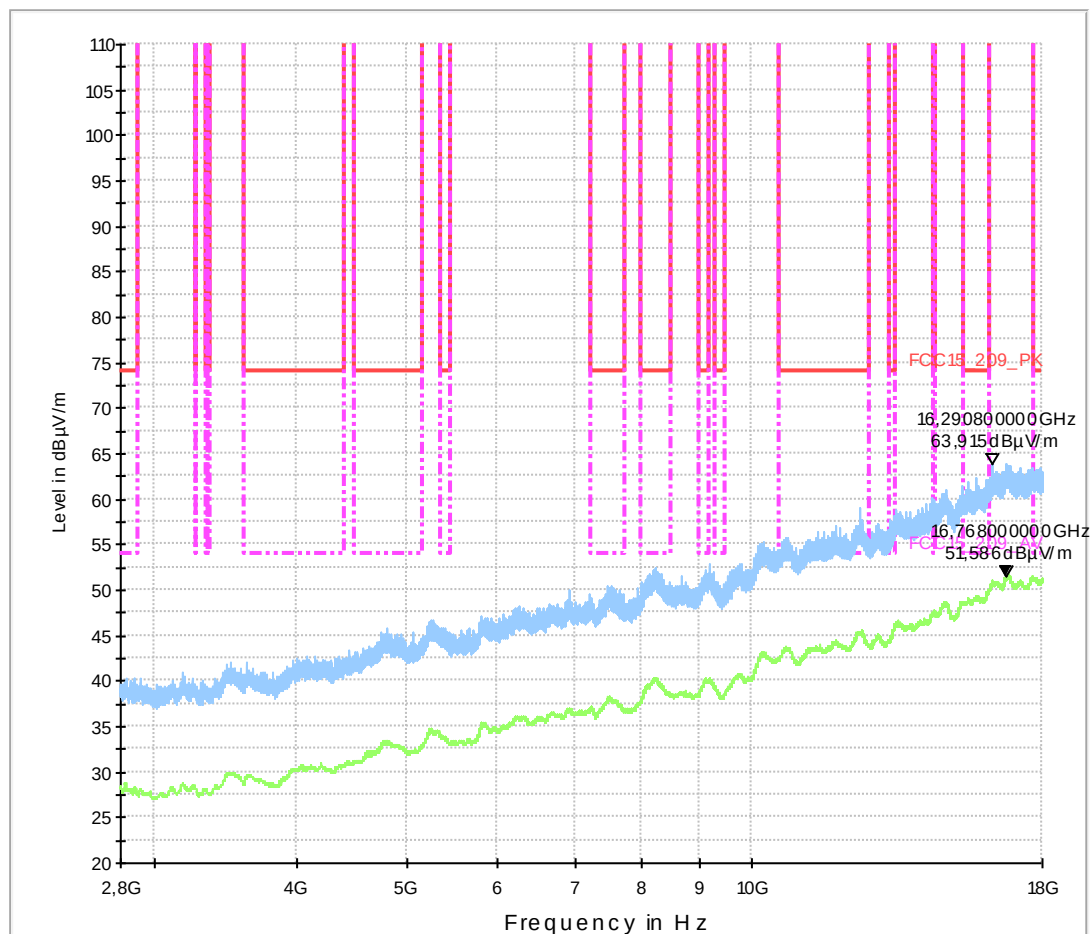
Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.249 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	кта
Comment:	Channel no. high=78
Op. Mode:	ANT+ TX continuous
Test Conditions:	Humidity: 32%rH; Temperature: 23°C

EUT Information

Manufacturer:	Sony
FCC ID:	PY7TM-0042
Type:	GSM-/ WCDMA- /LTE Tablet PC

EUT:	RSE #01
HW version:	AP1
SW version:	17.1.D.0.108
SVN:	-
Config:	-
Serial number:	CB5126DQ9V
Connected Interfaces:	Power Supply (EP850) ; USB-cable (EC700)
Power Supply:	Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
Comments:	-

00431_SM1_KP1_W LAN_1_5ms



1.5. Band-Edge radiated

1.5.1. Left Band-Edge on Channel 1

Diagram No.: 9.01_BE_Ch1

Common Information

Test Description: Radiated field strength emission accord. §15.247 in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: §15.205 & §15.209 Intentional Radiator
 Antenna polarisation: horizontal/vertical

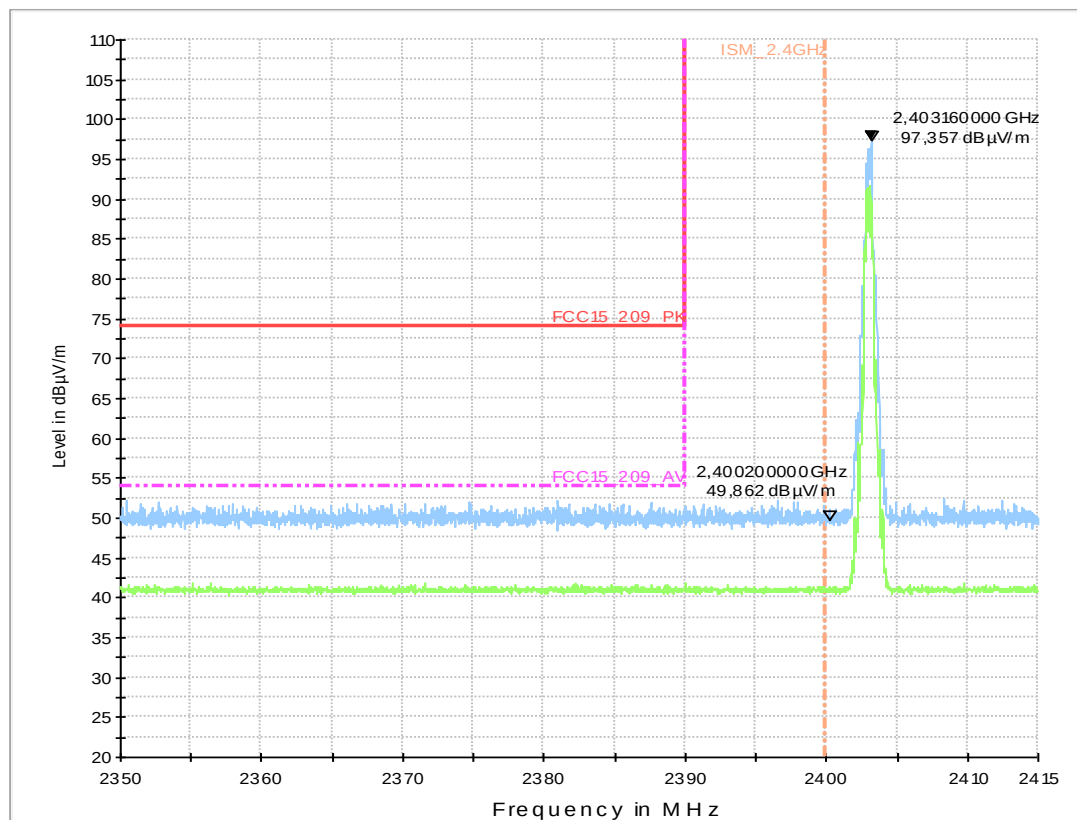
Operator Name: GAR
 Comment: Channel no. low=1
 Op. Mode: ANT+ TX continuous

EUT Information

Manufacturer: Sony
 FCC ID: PY7TM-0042
 Type: GSM-/ WCDMA- /LTE Tablet PC

EUT: RSE #01
 HW version: AP1
 SW version: 17.1.D.0.108
 SVN: -
 Config: -
 Serial number: CB5126DQ9V
 Connected Interfaces: Power Supply (EP850) ; USB-cable (EC700)
 Power Supply: Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
 Comments: -

00431_BE_Low_SM1_KP1_W LAN_1ms



1.5.2. Right Band-Edge Channel 78

Diagram No.: 9.02_BE_Ch78

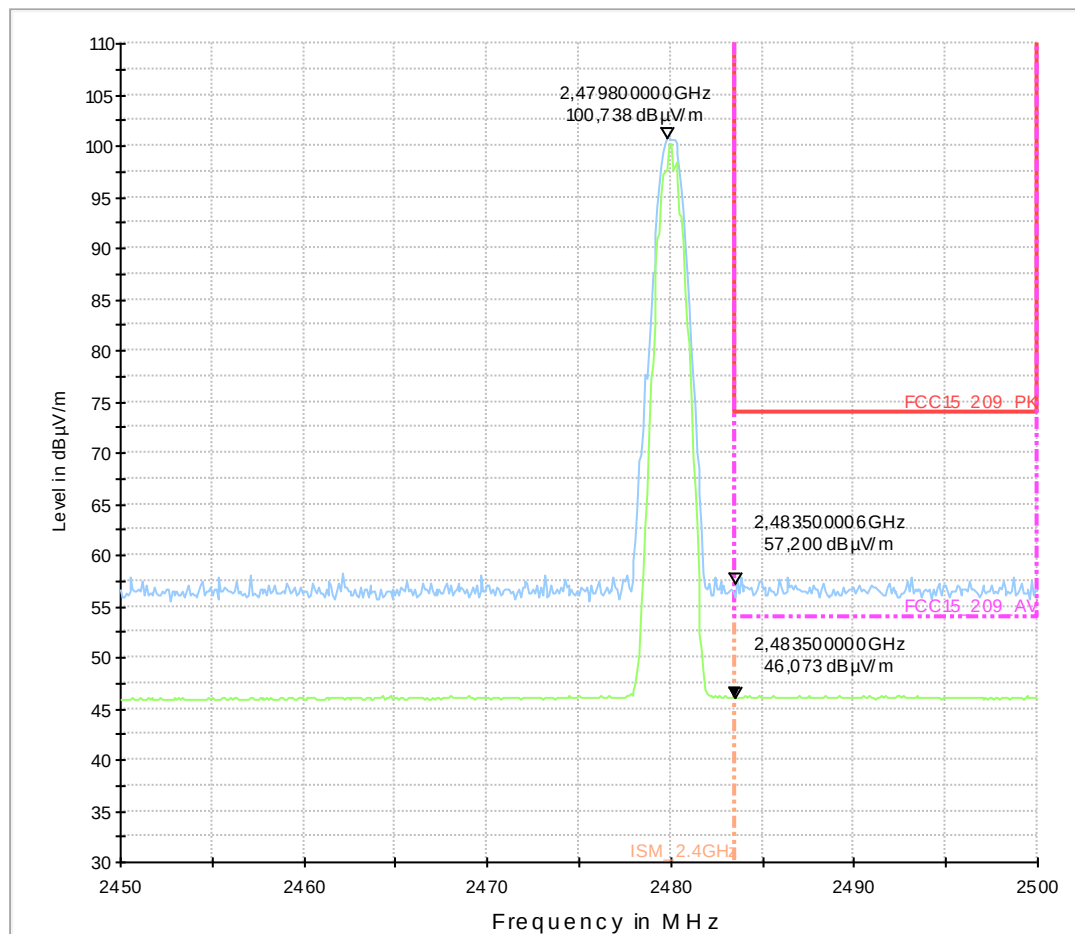
Common Information

Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.205 & §15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	GAr
Comment:	Channel no. high=78
Op. Mode:	ANT+ TX continuous

EUT Information

Manufacturer:	Sony
FCC ID:	PY7TM-0042
Type:	GSM-/ WCDMA- /LTE Tablet PC
EUT:	RSE #01
HW version:	AP1
SW version:	17.1.D.0.108
SVN:	-
Config:	-
Serial number:	CB5126DQ9V
Connected Interfaces:	Power Supply (EP850) ; USB-cable (EC700)
Power Supply:	Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
Comments:	-

00431_BE_High_SM1_KP1_W LAN_1ms



2. Receiver spurious emissions

2.1. Frequency range $f < 1\text{GHz}$

Diagram No. 3.10_ANT+_Ch39_RX

Date: 20.03.2014 Page 1 of 2
 Electric Field strength Measurement
 Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3m measurement distance
 Version of Testsoftware: 8.51.0
 Distance correction: not used
 Technical Data: Please see page 2 for detailed data of measurement setup
 Used filter: not used
 Test specification: FCC15.109, class B; RSS-Gen.: Issue 3

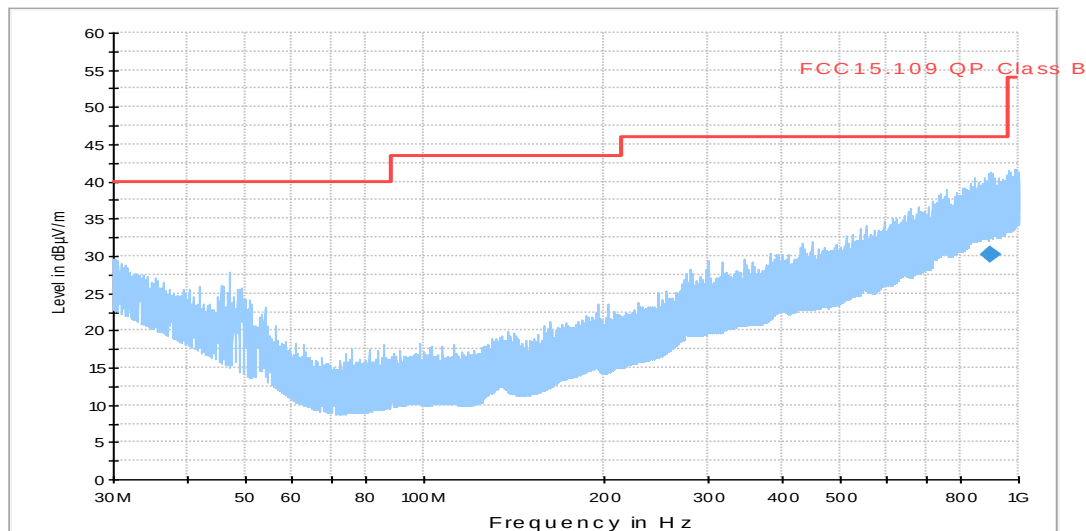
Operator: dpa
 Operating conditions: ANT+, Ch39_RX
 Measured sides of EUT: front, right, rear, left
 Power during tests: 12V DC, 110V/60Hz, full loaded batteries
 Comment 1:

EUT Information

Manufacturer: Sony
 FCC ID: PY7TM-0042
 Type: GSM-/ WCDMA- /LTE Tablet PC

 EUT: RSE #01
 HW version: AP1
 SW version: 17.1.D.0.108
 SVN: -
 Config: -
 Serial number: CB5126DQ9V
 Connected Interfaces: Power Supply (EP850) ; USB-cable (EC700)
 Power Supply: Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
 Comments: -

05_FCC15.109_hor+vert_kipp



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
895.22000	30.2	1000.0	120.000	165.0	H	269.0	90.0	27.0	15.8	46.0

2.2. Frequency range $f > 1\text{GHz}$

Diagram No.: 4.07_ANT_Ch39_RX

Common Information

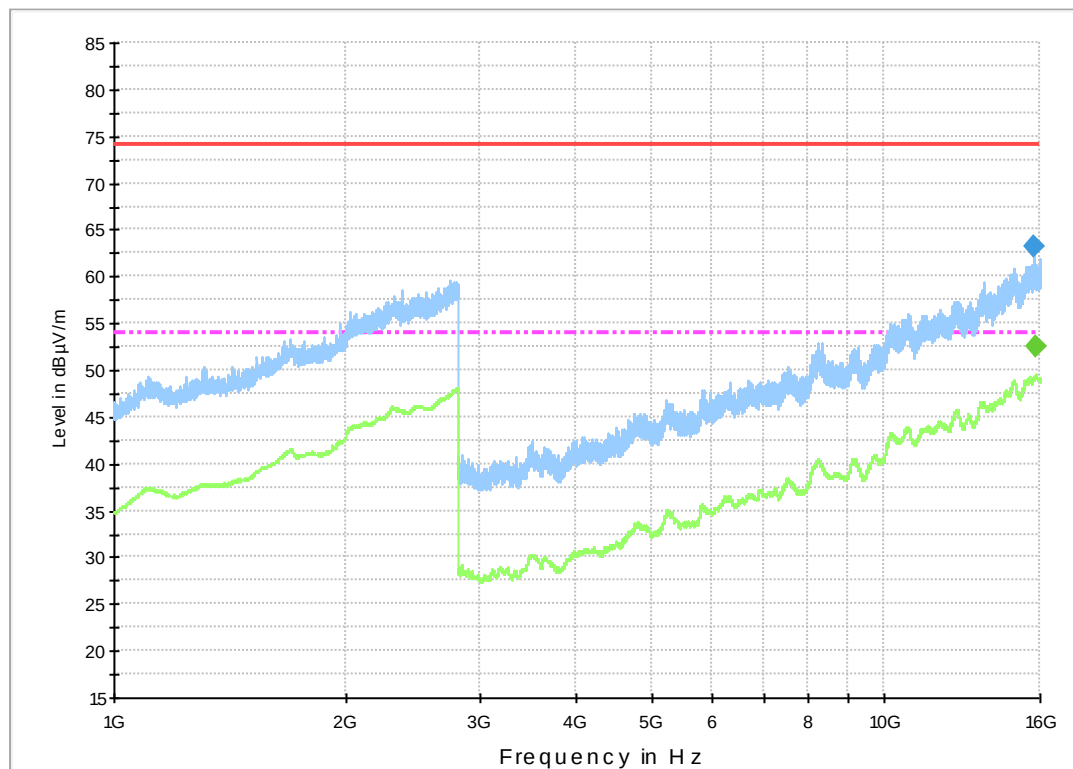
Test Description:	Radiated Field Strength Emission
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 15.109
Section:	15.109
Operating Mode:	ANT+ RX-Mode
Equipment Class:	Class B
Environmental Conditions:	Humidity: 44%rH; Temperature: 20°C
Operator:	GAr

EUT Information

Manufacturer:	Sony
FCC ID:	PY7TM-0042
Type:	GSM-/ WCDMA- /LTE Tablet PC

EUT:	RSE #01
HW version:	AP1
SW version:	17.1.D.0.108
SVN:	-
Config:	-
Serial number:	CB5126DQ9V
Connected Interfaces:	Power Supply (EP850) ; USB-cable (EC700)
Power Supply:	Battery fully charged before test, Device is powered via Power Supply & USB cable connected to 120VAC/60Hz during test
Comments:	-

030442_FCC_Part15.109_Unint_Rad_Class_B_1G-20G_ESU40



Final Result 1

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Elevation (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
15699.800	63.2	100.0	1000.000	V	315.0	90.0	23.6	10.8	74.0

Final Result 2

Frequency (MHz)	RMS (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Elevation (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
15790.600	52.6	100.0	1000.000	H	274.0	0.0	23.7	1.4	54.0