

Annex 4: Measurement diagrams to
TEST REPORT
 No.: 2-20828020b-14

According to:
FCC Regulations
 Part 15.109 Class B
 Part 15.209

for

Sony Mobile Communications

Smartphone FCC-ID: PY7PM-0740
 with
 Qi-Charging Phone Cover AI-0070

Laboratory Accreditation and Listings			
 Deutsche Akkreditierungsstelle D-PL-12047-01-01	 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
 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. MEASUREMENT DIAGRAMS.....3

1.1. Radiated magnetic field strength measurements (f<30MHz)3

1.2. Radiated emissions in the frequency range 30 to 1000MHz.....4

1.3. Radiated emissions in the frequency range above 1000MHz5

1. Measurement diagrams

1.1. Radiated magnetic field strength measurements ($f < 30\text{MHz}$)

Diagram No. 2.01

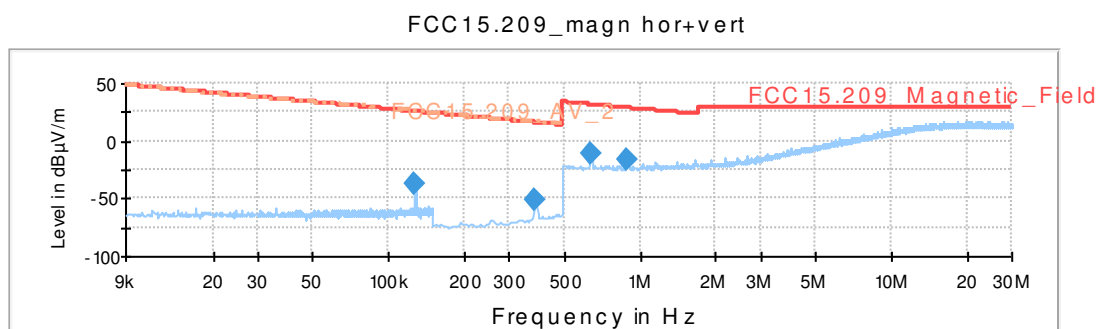
Date: 13.06.2014 Page 1 of 1
 Test description: Magnetic Field Strength Measurement related to 30/300 m distance
 Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
 Version of Testsoftware: R&S EMC32 V8.51.0
 Distance correction: used accord. table, pls. see test report
 Technical Data: Please see page 2 for detailed data of measurement setup
 Rec. antenna (pre-scan): height 1.00 m, parallel and 90° to EUT polarisation
 Used filter: bypass
 Test specification: FCC 15.209

 Operator: FTe
 Operating conditions: W-LAN Traffic (continuous ping to AE5) + Qi charging (empty battery)
 Power during tests: 120V/60Hz
 Comment 1: Channel 100

EUT Information

Manufacturer: Sony
 Model: AI-0700
 Type: Qi Cover

 EUT: WCR12
 HW version: #24967
 SW version: -
 SVN: -
 Config: -
 Serial number: 1415FF2E0000252
 Connected Interfaces: Mobile #24734, SW 17.1.A.0.70 ; USB-cable EC803 Type AI-0404, SN 134912A71205832 ; HS MH-410c, Type AG-1100, SN12311A150001F46 ; Qi Transmitter LPIC-L0001, HW Rev04, FW Rev1.1.0349.1, SN 070811000261
 Power Supply: 120VAC/60Hz during test
 Comments: -



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.127400	-36.7	1000.0	0.200	V	242.0	-94.5	62.20	25.50
0.382000	-50.4	1000.0	10.000	V	190.0	-83.7	66.40	16.00
0.636000	-10.3	1000.0	10.000	V	220.0	-36.0	41.80	31.50
0.892000	-16.7	1000.0	10.000	V	61.0	-35.4	45.30	28.60

1.2. Radiated emissions in the frequency range 30 to 1000MHz

Diagram No. 3.01

13.06.2014 Page 1 of 3
 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: R&S EMC32 V8.51.0
 Distance correction: not used
 Used filter: not used
 Technical Data: please see page 2 for detailed data of measurement setup
 Test specification.: Part 15.109, Class B, FCC 15.205&15.209

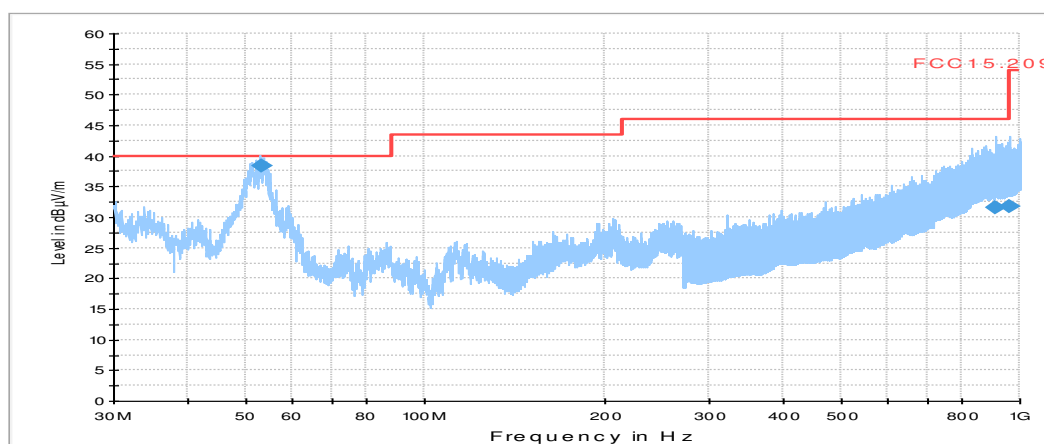
Operator: Lor
 Operating conditions: W-LAN Traffic (continuous ping to AE5) + Qi charging (empty battery)
 Power during tests: 120V/60Hz
 Comment 1: Channel no. 100

EUT Information

Manufacturer: Sony
 Model: AI-0700
 Type: Qi Cover

 EUT: WCR12
 HW version: #24967
 SW version: -
 SVN: -
 Config: -
 Serial number: 1415FF2E0000252
 Connected Interfaces: Mobile #24734, SW 17.1.A.0.70 ; USB-cable EC803 Type AI-0404, SN 134912A71205832 ; HS MH-410c, Type AG-1100, SN12311A150001F46 ; Qi Transmitter LPIC-L0001, HW Rev04, FW Rev1.1.0349.1, SN 070811000261
 Power Supply: 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)	Correction (dB)	Margin (dB)
53.260000	38.5	1000.0	120.000	105.0	V	73.0	0.0	12.4	1.50
908.300000	31.6	1000.0	120.000	240.0	H	31.0	90.0	27.4	14.40
959.090000	31.7	1000.0	120.000	193.0	V	342.0	90.0	27.5	14.30

Frequency (MHz)	Limit (dBµV/m)
53.260000	40.00
908.300000	46.00
959.090000	46.00

1.3. Radiated emissions in the frequency range above 1000MHz

Diagram No.: 4.0a

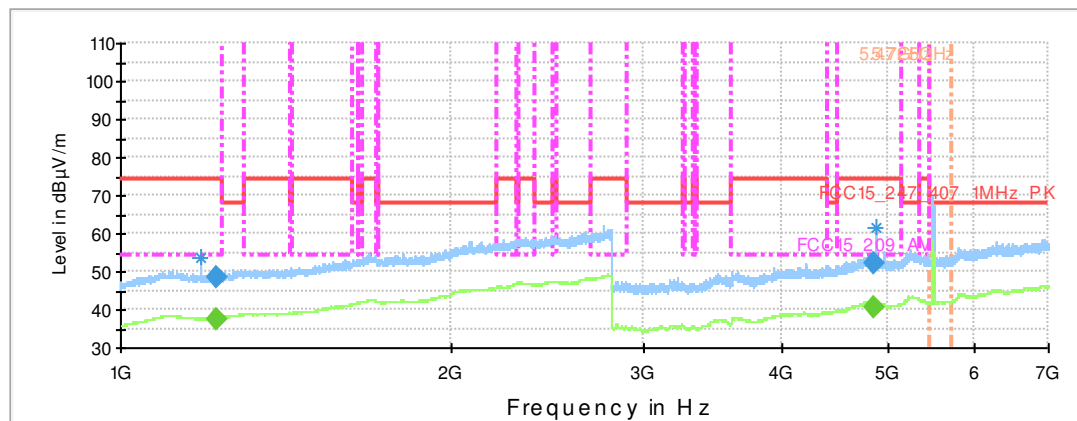
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.205&15.209
Antenna polarisation:	horizontal/vertical
Version of Testsoftware:	R&S EMC32 V8.53.0
Test specification.:	Part 15.109, Class B, FCC 15.205&15.209
Operation mode:	W-LAN Traffic (continuous ping to AE5) + Qi charging (empty battery)
Operator Name:	FTe
Comment:	Channel no. 100

EUT Information

Manufacturer:	Sony
Model:	AI-0700
Type:	Qi Cover
EUT:	WCR12
HW version:	#24967
SW version:	-
SVN:	-
Config:	-
Serial number:	1415FF2E0000252
Connected Interfaces:	Mobile #24734, SW 17.1.A.0.70 ; USB-cable EC803 Type AI-0404, SN 134912A71205832 ; HS MH-410c, Type AG-1100, SN12311A150001F46 ; Qi Transmitter LPIC-L0001, HW Rev04, FW Rev1.1.0349.1, SN 070811000261
Power Supply:	120VAC/60Hz during test
Comments:	-

00431_Sweep1_SM1_KP1_W LAN_FCC15407(b)(3)



Final Result 1

Frequency (MHz)	MaxPeak (dBμV/m)	Measurement Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Correction (dB)	Margin (dB)	Limit (dBμV/m)
1224.600000	48.6	100.0	1000.000	155.0	H	265.0	0.0	34.0	25.4	74.0
4848.350000	51.8	100.0	1000.000	155.0	V	128.0	0.0	10.8	22.2	74.0

Final Result 2

Frequency (MHz)	RMS (dB)	Measurement Time	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Correction (dB)	Margin (dB)	Limit (dBμV/m)
1224.60000	37.3	100.0	1000.000	155.0	H	265.0	0.0	34.0	16.7	54.0
4848.35000	40.4	100.0	1000.000	155.0	V	128.0	0.0	10.8	13.6	54.0

Diagram No.: 4.0b

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.205&15.209
Antenna polarisation:	horizontal/vertical
Version of Testsoftware:	R&S EMC32 V8.53.0
Test specification.:	Part 15.109, Class B, FCC 15.205&15.209
Operation mode:	W-LAN Traffic (continuous ping to AE5) + Qi charging (empty battery)
Operator Name:	FTe
Comment:	Channel no. 100

EUT Information

Manufacturer:	Sony
Model:	AI-0700
Type:	Qi Cover

EUT:	WCR12
HW version:	#24967
SW version:	-
SVN:	-
Config:	-
Serial number:	1415FF2E0000252
Connected Interfaces:	Mobile #24734, SW 17.1.A.0.70 ; USB-cable EC803 Type AI-0404, SN 134912A71205832 ; HS MH-410c, Type AG-1100, SN12311A150001F46 ; Qi Transmitter LPIC-L0001, HW Rev04, FW Rev1.1.0349.1, SN 070811000261
Power Supply:	120VAC/60Hz during test
Comments:	-

Sweep2_SM1_KP1_W LAN_FCC15407

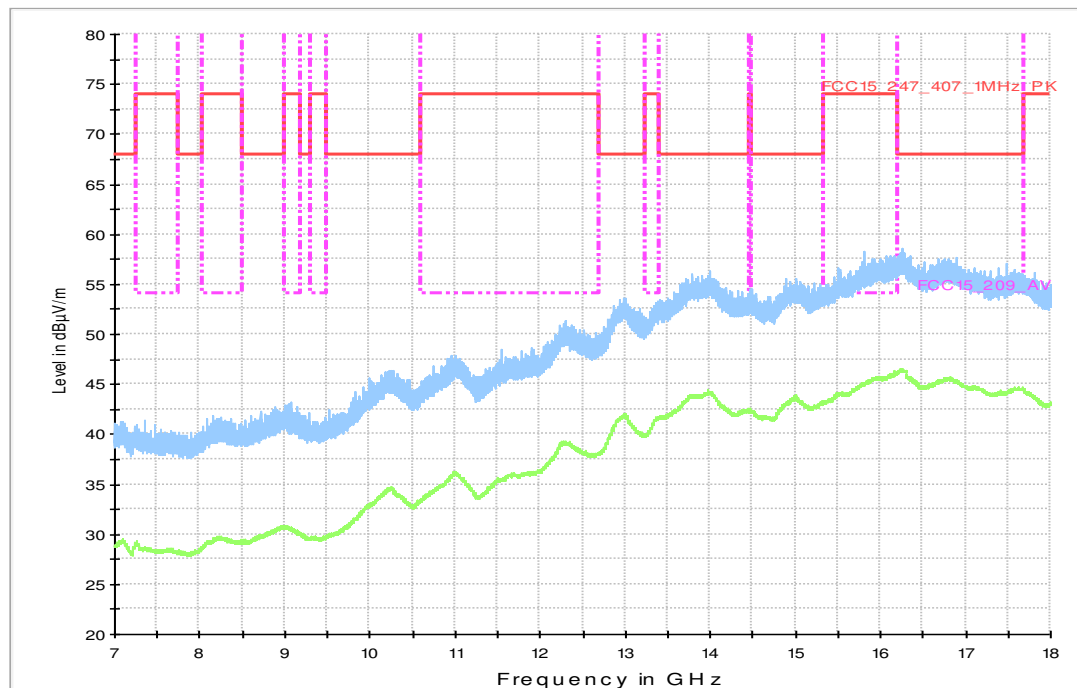


Diagram No.: 4.04

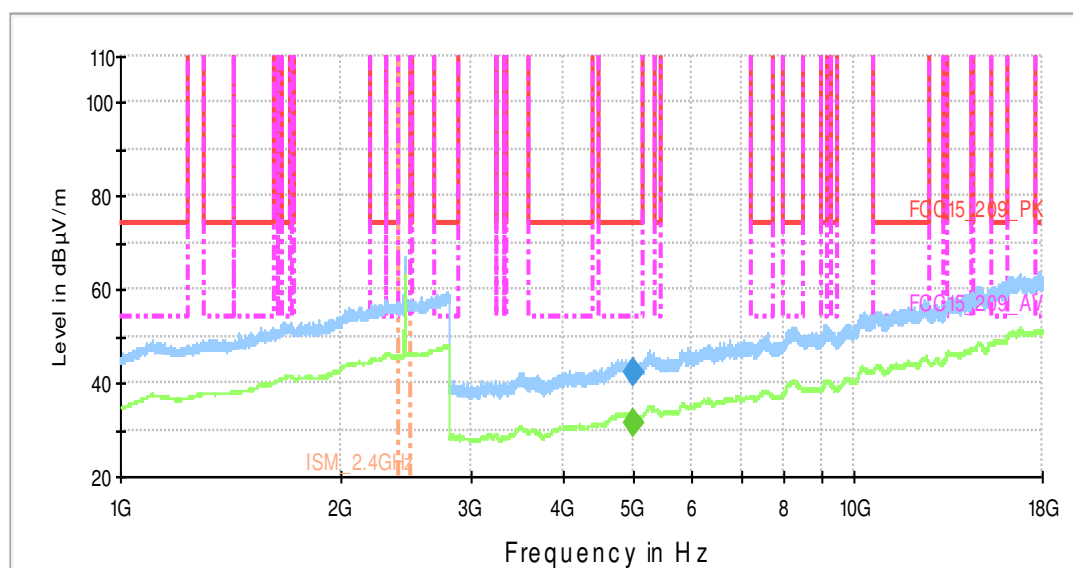
Common Information

Test Description:	Radiated Band-Edge Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.205&15.209
Antenna polarisation:	horizontal/vertical
Version of Testsoftware:	R&S EMC32 V8.53.0
Test specification.:	Part 15.109, Class B, FCC 15.205&15.209
Operation mode:	WLAN Traffic (continuous ping to AE5) + Qi charging (empty battery)
Operator Name:	FTe
Comment:	Channel no. 6

EUT Information

Manufacturer:	Sony
Model:	AI-0700
Type:	Qi Cover

EUT:	WCR12
HW version:	#24967
SW version:	-
SVN:	-
Config:	-
Serial number:	1415FF2E0000252
Connected Interfaces:	Mobile #24734, SW 17.1.A.0.70 ; USB-cable EC803 Type AI-0404, SN 134912A71205832 ; HS MH-410c, Type AG-1100, SN12311A150001F46 ; Qi Transmitter LPIC-L0001, HW Rev04, FW Rev1.1.0349.1, SN 070811000261
Power Supply:	120VAC/60Hz during test
Comments:	-



Final Result 1

Frequency (MHz)	MaxPeak (dBµV/m)	Measurement Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Correction (dB)	Margin (dB)	Limit (dBµV/m)
4992.010000	42.2	100.0	1000.000	155.0	V	317.0	0.0	4.1	31.8	74.0