

Annex 4: Diagrams to
TEST REPORT
 No.: 6-0592-14-2-8a

According to:
FCC Regulations
 Part 15.109

for

ASCOM AB

SH1-ABAA
Wi-Fi Smartphone
 (Continuous MP3 play + Camera mode)

FCC ID: BXZSH1B







Laboratory Accreditation and Listings			
 <p>DAkKS Deutsche Akkreditierungsstelle D-PL-12047-01-01</p>	 <p>FEDERAL COMMUNICATIONS COMMISSION FC USA Reg. No.: 736496 MRA US-EU 0003</p>	 <p>Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3</p>	 <p>Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2666 C-2914, T-1967, G-301</p>
 <p>Wi-Fi ALLIANCE AUTHORIZED RF LABORATORY</p>	 <p>CTIA Authorized Test Lab LAB CODE 20011130-00</p>		
accredited according to DIN EN ISO/IEC 17025			
<p align="center">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</p>			

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1. Measurement diagrams

1.1. Conducted emissions on AC-Power lines

1.07

Common Information

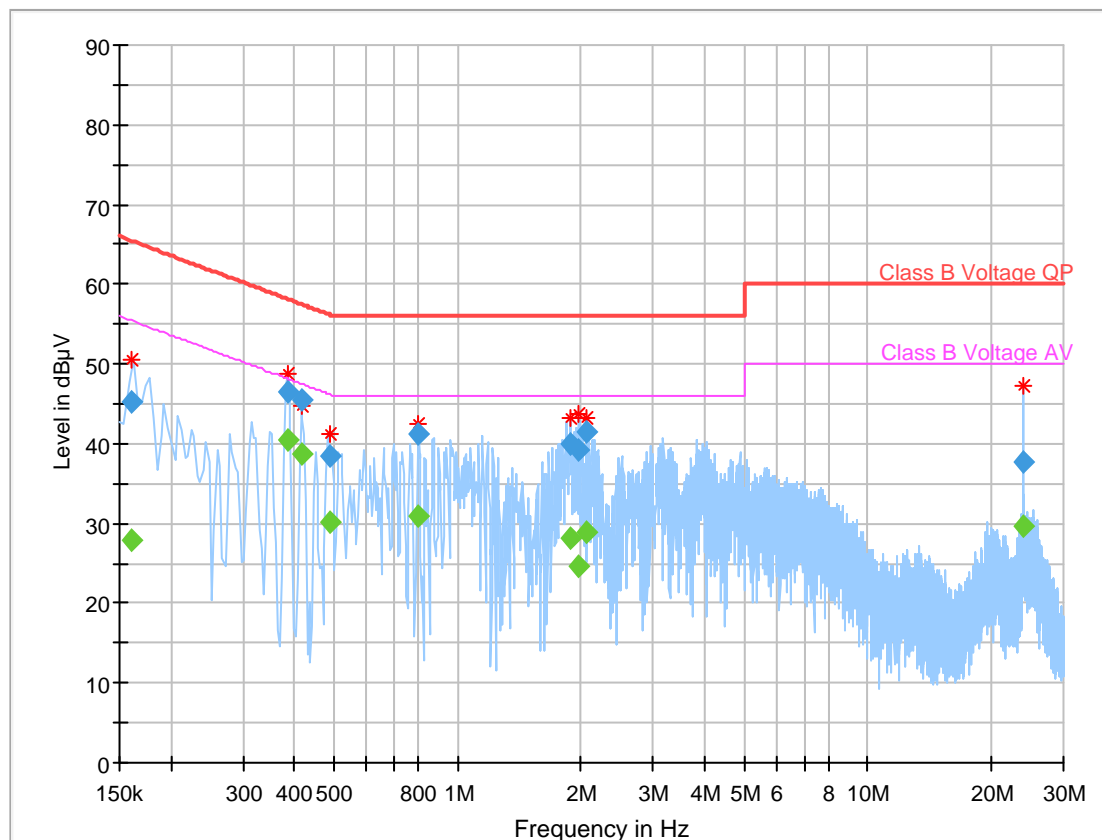
Test Description:	Conducted Voltage Measurement Class B
Test Site & Location:	Conducted Emission, CETECOM GmbH Essen
Test Software:	R&S EMC32 v9.15
Test Specification:	FCC 15.107, FCC 15.207
Operating Mode:	camera + MP3
Measured on line:	N/L1
Diagram details:	Shows the peak values as a sum of measured ports in maxhold mode
Environmental Conditions:	Humidity: 31%rH; Temperature: 22°C
Operator:	HLA
Comments:	

EUT Information

Manufacturer:	Ascom AB
EuT:	SH1-ACAA/PF

HW Version:	
SW Version:	myco-eng 4.4.2 daily_2014-12-11_eng daily_379_214-12-11 dev-keys
Serial Number:	T26105EA0D
Connected Interfaces:	1m USB cable + USB Charger (UNIFIVE Model:UBX305-0510)
Power Supply:	120VAC
Comments:	

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)
0.160000	---	27.98	55.46
0.160000	45.29	---	65.46
0.386875	46.52	---	58.13
0.386875	---	40.55	48.13
0.418125	45.61	---	57.49
0.418125	---	38.80	47.49
0.489531	---	30.10	46.18
0.489531	38.46	---	56.18
0.799844	41.19	---	56.00
0.799844	---	30.98	46.00
1.881875	40.09	---	56.00
1.881875	---	28.21	46.00
1.979531	39.24	---	56.00
1.979531	---	24.75	46.00
2.057656	---	28.81	46.00
2.057656	41.40	---	56.00
24.000156	37.77	---	60.00
24.000156	---	29.62	50.00

Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)
0.160000	---	27.98	55.46
0.160000	45.29	---	65.46
0.386875	46.52	---	58.13
0.386875	---	40.55	48.13
0.418125	45.61	---	57.49
0.418125	---	38.80	47.49
0.489531	---	30.10	46.18
0.489531	38.46	---	56.18
0.799844	41.19	---	56.00
0.799844	---	30.98	46.00
1.881875	40.09	---	56.00
1.881875	---	28.21	46.00
1.979531	39.24	---	56.00
1.979531	---	24.75	46.00
2.057656	---	28.81	46.00
2.057656	41.40	---	56.00
24.000156	37.77	---	60.00
24.000156	---	29.62	50.00

1.2. Radiated field strength emissions, 30 MHz - 1 GHz

Diagram No. 3.01

Test description:	18.03.2015 Page 1 of 1 Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	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.:	FCC 15.209; RSS-Gen: Issue 3
Operator:	HLa
Operating conditions:	MP3 play, camera active
Comment 1:	

EUT Information

Manufacturer:	Ascom AB
EuT:	SH1-ABAA/PF

HW Version:	
SW Version:	myco-eng 4.4.2 daily_2014-12-11_eng daily_379_214-12-11 dev-keys
Serial Number:	T26105EEQA
Connected Interfaces:	1m USB cable + USB Charger (UNIFIVE Model:UBX305-0510)
Power Supply:	120VAC/60Hz

01_FCC15.209_hor+vert_kipp

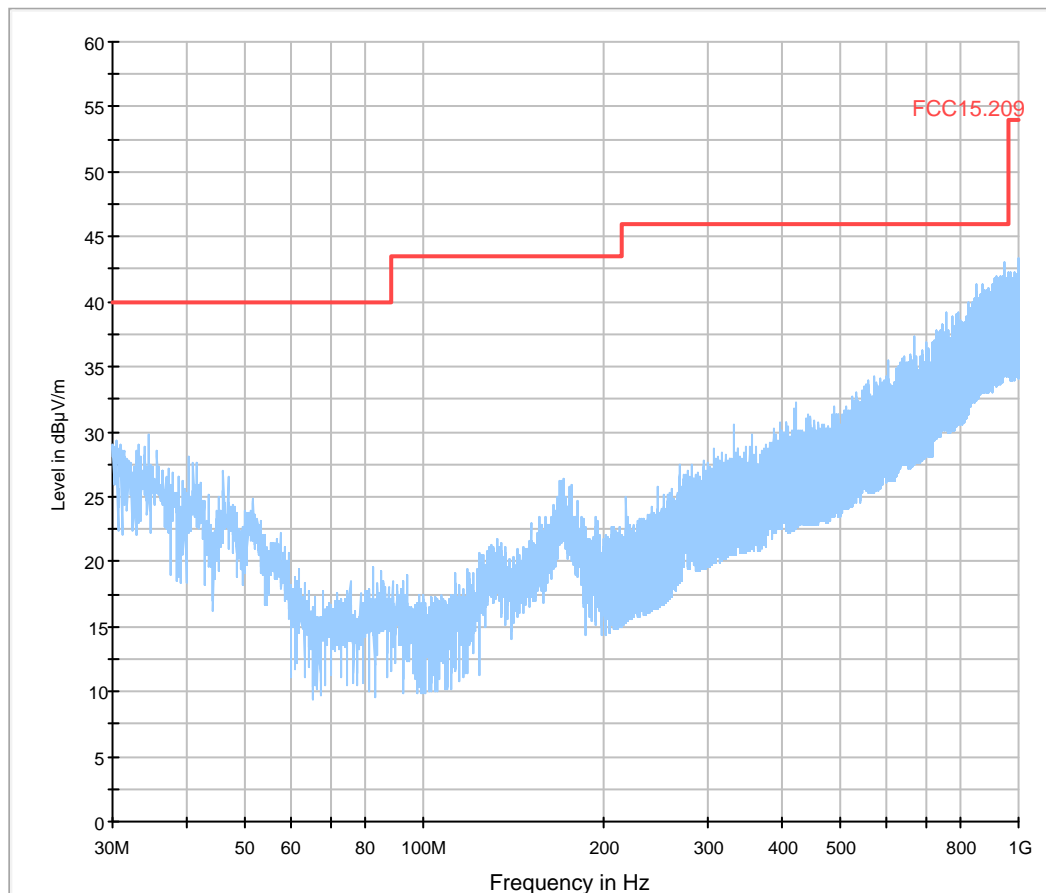


Diagram No. 3.02

13.05.2015 Page 1 of 2
Electric Field Strength Measurement
Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
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.: FCC 15.209; RSS-Gen: Issue 3

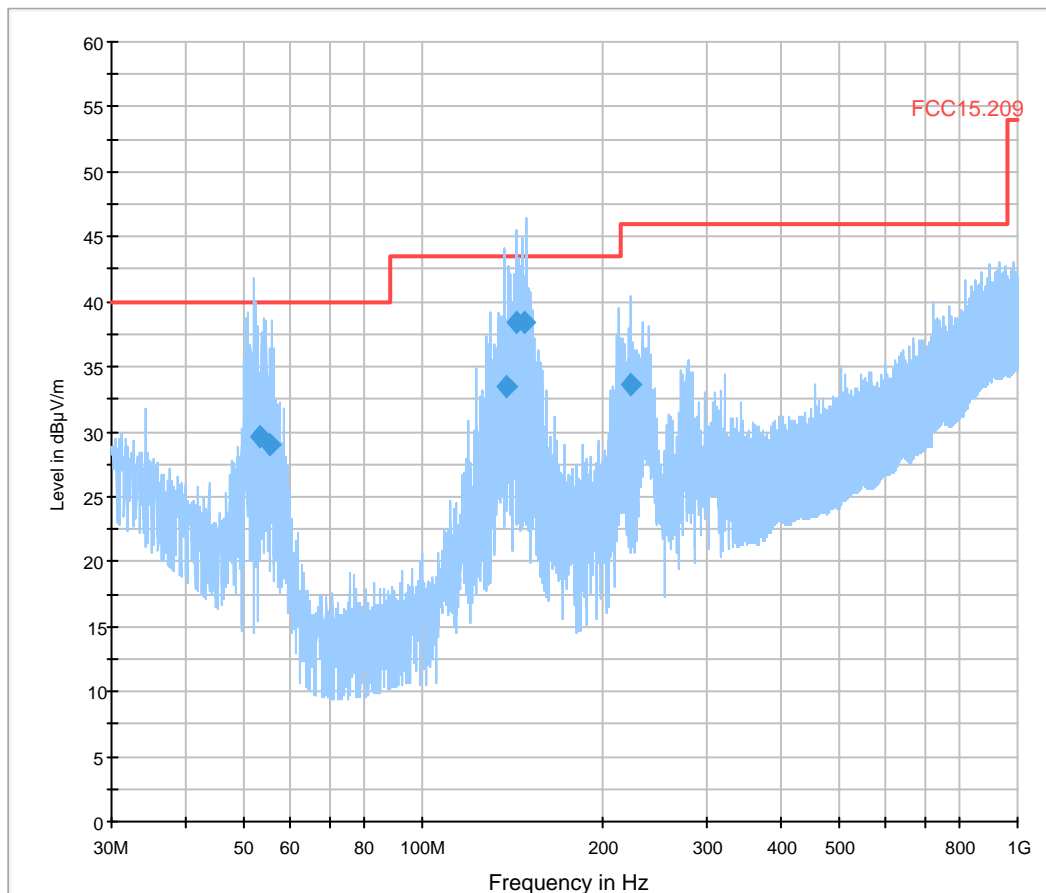
Operator: HLa
Operating conditions: Continous transferring data from PC to EUT
Power during tests: --
Comment 1: --

EUT Information

Manufacturer: Ascom AB
EuT: SH1-ACAA/PF

HW Version:
SW Version: myco-eng 4.4.2 daily_2014-12-11_eng daily_379_214-12-11 dev-keys
Serial Number: T26105EEQA
Connected Interfaces: 1m USB cable + USB Charger (UNIFIVE Model:UBX305-0510)
Power Supply: 120VAC/60Hz

01_FCC15.209_hor+vert_kipp



Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Corr. (dB)	Margin (dB)
53.150000	29.6	1000.0	120.000	105.0	V	297.0	90.0	12.5	10.40
55.480000	29.0	1000.0	120.000	331.0	V	280.0	90.0	11.7	11.00
138.280000	33.4	1000.0	120.000	150.0	H	15.0	0.0	9.7	10.10
144.320000	38.4	1000.0	120.000	198.0	H	16.0	90.0	9.0	5.10
148.150000	38.4	1000.0	120.000	207.0	H	24.0	90.0	8.9	5.10
...

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

Frequency (MHz)	Limit (dB μ V/m)
53.150000	40.00
55.480000	40.00
138.280000	43.50
144.320000	43.50
148.150000	43.50
...	...

1.3. General Limit - Radiated emissions, above 1 GHz

8.01

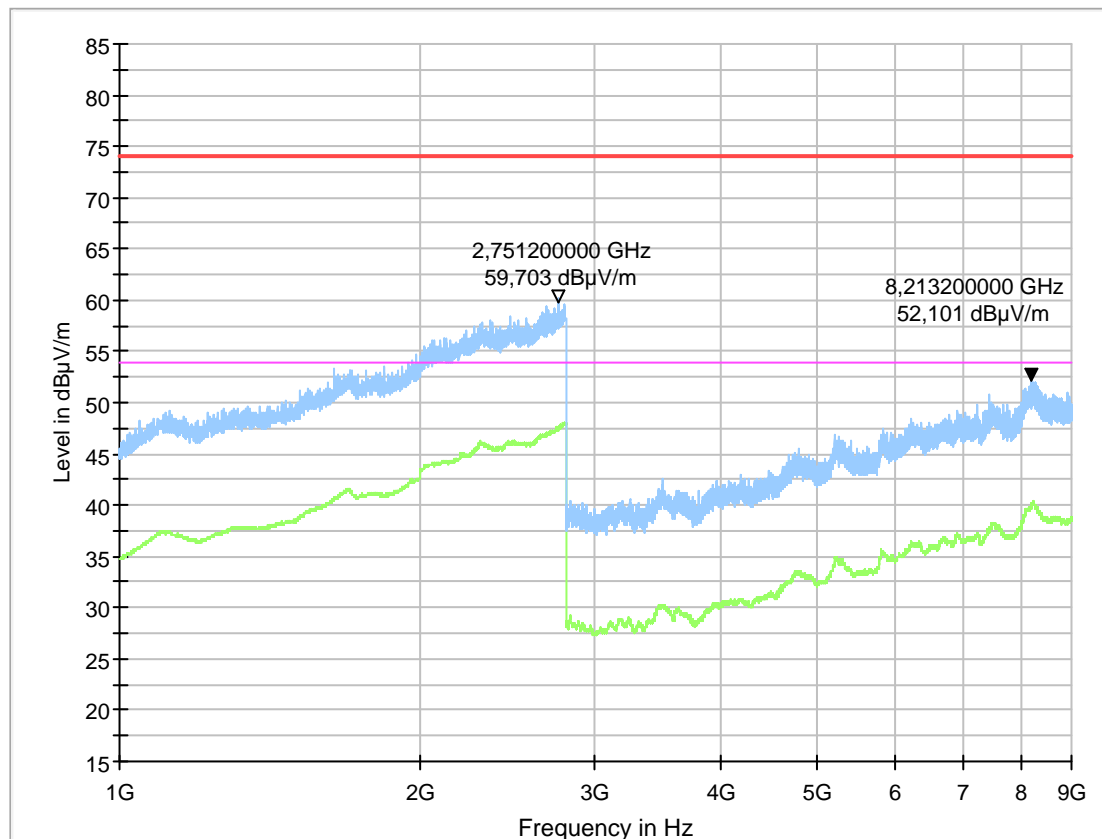
Common Information

Test Description:	Radiated Filed 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:	continuous MP3 play + camera active
Equipment Class:	Class B
Environmental Conditions:	Humidity: 34%rH; Temperature: 22°C
Operator:	npe

EUT Information

Manufacturer:	Ascom AB
EuT:	SH1-ABAA/PF
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HW Version:	
SW Version:	myco-eng 4.4.2 daily_2014-12-11_eng daily_379_214-12-11 dev-keys
Serial Number:	T26105EEQA
Connected Interfaces:	1m USB cable + USB Charger (UNIFIVE Model:UBX305-0510)
Power Supply:	120VAC/60Hz
Comments:	

Full Spectrum



8.02

Common Information

Test Description:	Radiated Filed 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:	Continous transferring data from PC to EUT
Equipment Class:	Class B
Environmental Conditions:	Humidity: 44%rH; Temperature: 20°C
Operator:	kre/npe

EUT Information

Manufacturer:	Ascom AB
EuT:	SH1-ACAA/PF

HW Version:	
SW Version:	myco-eng 4.4.2 daily_2014-12-11_eng daily_379_214-12-11 dev-keys
Serial Number:	T26105EEQA
Connected Interfaces:	1m USB cable + USB Charger (UNIFIVE Model:UBX305-0510)
Power Supply:	120VAC/60Hz
Comments:	

Full Spectrum

