FCC HAC (RF Emission) Test Report

Report No.	:	**SA120717C01-1**
Applicant	:	**HTC Corporation**
Address	:	**23, Xinghua Rd., Taoyuan 330, Taiwan, R.O.C.**
Product	:	**Windows Phone**
FCC ID	:	**NM8PM23100**
Brand	:	**HTC**
Model No.	:	**PM23100**
Standards	:	**FCC 47 CFR Part 20.19**
		ANSI C63.19-2007
Date of Testing	:	**Aug. 05, 2012**
Summary M-Rating	:	**M4**

CERTIFICATION: The above equipment have been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch - Taiwan HwaYa Lab**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's HAC characteristics under the conditions specified in this report. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval, or endorsement by TAF or any government agencies.

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Testing Laboratory 2021

Table of Contents

Release Control Record

Issue No.	Reason for Change	Date Issued
R01	Original release	Aug. 20, 2012

1. Summary of Maximum M-Rating

Mode / Band	Maximum Field		M-Rating
GSM850	E-Field (V/m)	133.8	M4
	H-Field (A/m)	0.2276	M4
GSM1900	E-Field (V/m)	45.04	M4
	H-Field (A/m)	0.1155	M4
WCDMA Band V	E-Field (V/m)	49.69	M4
	H-Field (A/m)	0.09294	M4
WCDMA Band II	E-Field (V/m)	26.75	M4
	H-Field (A/m)	0.09953	M4
CDMA2000 BC0	E-Field (V/m)	53.19	M4
	H-Field (A/m)	0.11	M4
CDMA2000 BC1	E-Field (V/m)	25.17	M4
	H-Field (A/m)	0.0738	M4
Summary		M4	

Note:

The HAC RF emission limit **(M-rating Category M3)** is specified in FCC 47 CFR part 20.19 and ANSI C63.19.

2. Description of Equipment Under Test

EUT Type	Windows Phone
FCC ID	NM8PM23100
Brand Name	HTC
Model Name	PM23100
Tx Frequency Bands (Unit: MHz)	GSM850 : 824 ~ 849 GSM1900 : 1850 ~ 1910 WCDMA Band II : 1850 ~ 1910 WCDMA Band V : 824 ~ 849 CDMA BC0 : 824 ~ 849 CDMA BC1 : 1850 ~ 1910
Uplink Modulations	GSM : GMSK WCDMA : QPSK CDMA : QPSK
Maximum AVG Conducted Power (Unit: dBm)	GSM850 : 33.41 GSM1900 : 31.03 WCDMA Band II : 24.46 WCDMA Band V : 24.31 CDMA BC0 : 24.78 CDMA BC1 : 24.75
Antenna Type	Fixed Internal Antenna
EUT Stage	Production Unit

Note:

1. The above EUT information is declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.

Air Interfaces/Bands List						
Air Interface	**Band**	**Type**	**C63.19 Tested**	**Simultaneous Transmissions**	**Reduced Power**	**VOIP**
GSM	850	Voice	Yes	WLAN/BT	N/A	N/A
	1900	Voice	Yes	WLAN/BT	N/A	N/A
WCDMA	II	Voice	Yes	WLAN/BT	N/A	N/A
	V	Voice	Yes	WLAN/BT	N/A	N/A
CDMA2000	BC0	Voice	Yes	LTE + WLAN/BT	N/A	N/A
	BC1	Voice	Yes	LTE + WLAN/BT	N/A	N/A
GSM	850	Data	N/A	WLAN/BT	N/A	Yes
	1900	Data	N/A	WLAN/BT	N/A	Yes
WCDMA	II	Data	N/A	WLAN/BT	N/A	Yes
	V	Data	N/A	WLAN/BT	N/A	Yes
CDMA2000	BC0	Data	N/A	WLAN/BT	N/A	Yes
	BC1	Data	N/A	WLAN/BT	N/A	Yes
LTE	13	Data	N/A	CDMA2000 + WLAN/BT	N/A	Yes
WLAN	2.4G	Data	N/A	GSM / WCDMA / CDMA / LTE	N/A	Yes
	5G	Data	N/A	GSM / WCDMA / CDMA / LTE	N/A	Yes
Bluetooth	2450	Data	N/A	GSM / WCDMA / CDMA / LTE	N/A	N/A

Note: The HAC rating was evaluated for voice mode only.

3. HAC RF Emission Measurement System

3.1 SPEAG DASY System

DASY system consists of high precision robot, probe alignment sensor, phantom, robot controller, controlled measurement server and near-field probe. The robot includes six axes that can move to the precision position of the DASY4/5 software defined. The DASY software can define the area that is detected by the probe. The robot is connected to controlled box. Controlled measurement server is connected to the controlled robot box. The DAE includes amplifier, signal multiplexing, AD converter, offset measurement and surface detection. It is connected to the Electro-optical coupler (ECO). The ECO performs the conversion form the optical into digital electric signal of the DAE and transfers data to the PC.

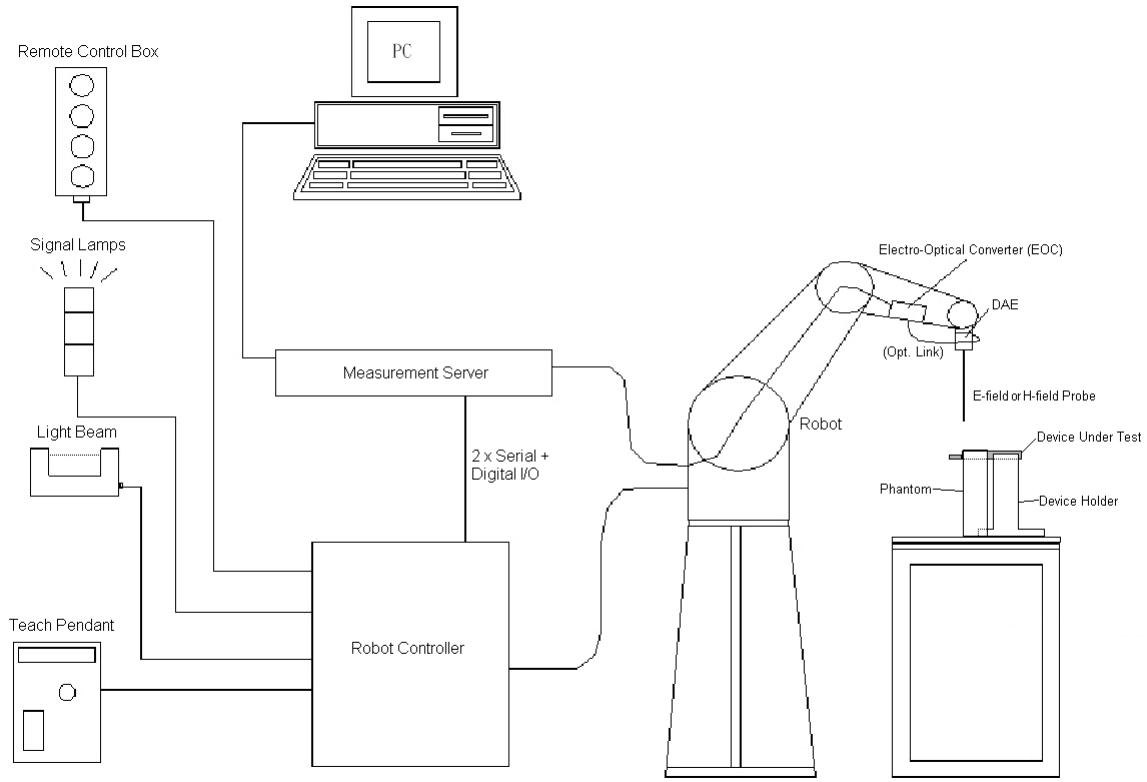


Fig-3.1 DASY System Setup

3.1.1 Robot

The DASY system uses the high precision robots from Stäubli SA (France). For the 6-axis controller system, the robot controller version (DASY4: CS7MB; DASY5: CS8c) from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability ±0.035 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)

Fig-3.2 DASY4

Fig-3.3 DASY5

3.1.2 Probes

Model	ER3DV6
Construction	One dipole parallel, two dipoles normal to probe axis Built-in shielding against static charges
Frequency	40 MHz to 6 GHz Linearity: ± 0.2 dB
Directivity	± 0.2 dB in air (rotation around probe axis) ± 0.4 dB in air (rotation normal to probe axis)
Dynamic Range	2 V/m to 1000 V/m Linearity: ± 0.2 dB
Dimensions	Overall length: 337 mm (Tip: 16 mm) Tip diameter: 8 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.5 mm

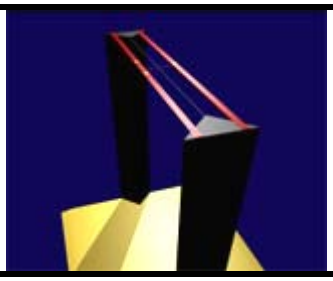
Model	H3DV6
Construction	Three concentric loop sensors with 3.8 mm loop diameters Resistively loaded detector diodes for linear response Built-in shielding against static charges
Frequency	200 MHz to 3 GHz Output Linearized
Directivity	± 0.2 dB (spherical isotropy error)
Dynamic Range	10 mA/m to 2 A/m at 1GHz
E-Field Interference	< 10 % at 3 GHz (for plane wave)
Dimensions	Overall length: 337 mm (Tip: 40 mm) Tip diameter: 6 mm (Body: 12 mm) Distance from probe tip to dipole centers: 3 mm

3.1.3 Data Acquisition Electronics (DAE)

Model	DAE3, DAE4
Construction	Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY4/5 embedded system (fully remote controlled). Two step probe touch detector for mechanical surface detection and emergency robot stop.
Measurement Range	-100 to +300 mV (16 bit resolution and two range settings: 4mV, 400mV)
Input Offset Voltage	< 5µV (with auto zero)
Input Bias Current	< 50 fA
Dimensions	60 x 60 x 68 mm

3.1.4 Phantoms

Model	Test Arch
Construction	Enables easy and well defined positioning of the phone and validation dipoles as well as simple teaching of the robot.
Dimensions	Length : 370 mm Width : 370 mm Height : 370 mm



3.1.5 Device Holder

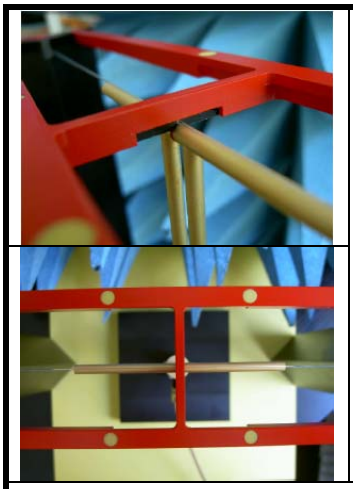
Model	Mounting Device
Construction	The Mounting Device enables the rotation of the mounted transmitter device in spherical coordinates. Rotation point is the ear opening point. Transmitter devices can be easily and accurately positioned according to ANSI C63.19.
Material	POM

3.1.6 RF Emission Calibration Dipoles

Model	CD-Serial
Construction	Free space antenna Hearing Aid susceptibility measurements according to ANSI C63.19. Validation of Hearing Aid RF setup for wireless device emission measurements according to ANSI C63.19
Frequency	CD835V3 : 800 ~ 960 MHz CD1880V3 : 1710 ~ 2000 MHz CD2450 : 2250 ~ 2650 MHz
Return Loss	CD835V3 : > 15 dB (835 MHz > 25 dB) CD1880V3 : > 18 dB (1880 MHz > 20 dB) CD2450V3 : > 18 dB (2450 MHz > 25 dB)
Power Capability	> 40 W continuous

3.2 DASY System Verification

The system check verifies that the system operates within its specifications. It is performed before every E-field or H-file measurement. The system check uses normal measurements in the center section of the arch phantom with a matched dipole at a specified distance. The system verification setup is shown as below.



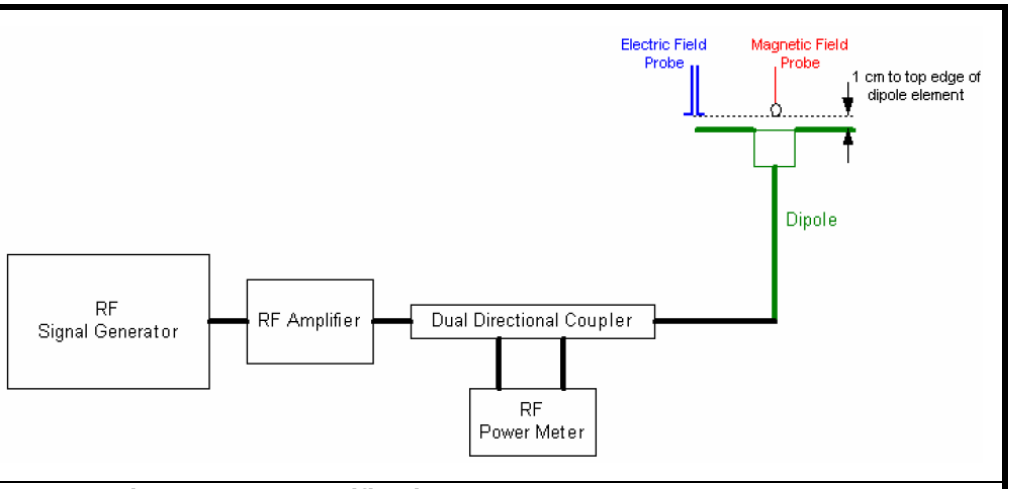


Fig-3.4 System Verification Setup

The validation dipole is placed beneath the center of arch phantom. The power meter measures the forward power at the location of the system check dipole connector. The signal generator is adjusted for the desired forward power, 100 mW (20 dBm) at the dipole connector and the RF power meter is read at that level. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at RF power meter.

After system check testing, the E-field or H-field result will be compared with the reference value derived from validation dipole certificate report. The deviation of system check should be within 25 %.

The result of system verification is shown in section 4.3 of this report.

3.3 EUT Measurements Reference and Plane

The EUT is mounted in the device holder. The acoustic output of the EUT will coincide with the center point of the area formed by the dielectric wire and the middle bar of the arch's top frame. Then EUT will be moved vertically upwards until it touches the frame.

Fig-3.5 and Fig-3.6 illustrate the references and reference plane that is used in the RF emissions measurement.

(a) The grid is 50 mm by 50 mm area that is divided into nine evenly sized blocks or sub-grids.

(b) The grid is centered on the audio frequency output transducer of the EUT.

(c) The grid is in a reference plane, which is defined as the planar area that contains the highest point in the area of the phone that normally rests against the user's ear. It is parallel to the centerline of the receiver area of the phone and is defined by the points of the receiver-end of the EUT handset, which in normal handset use rest against the ear.

(d) The measurement plane is parallel to and 15 mm in front of the reference plane.

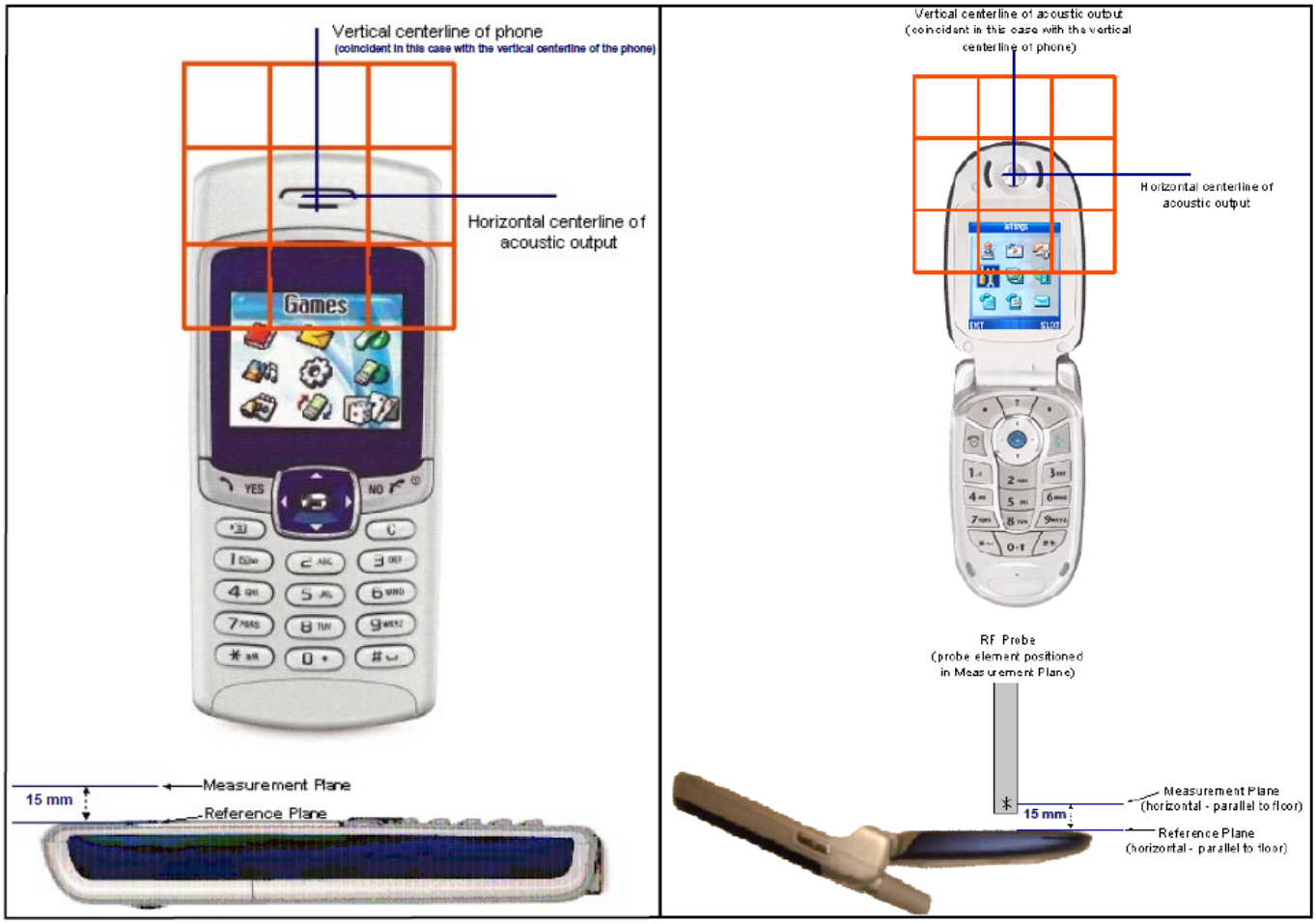


Fig-3.5 EUT Reference and Plane

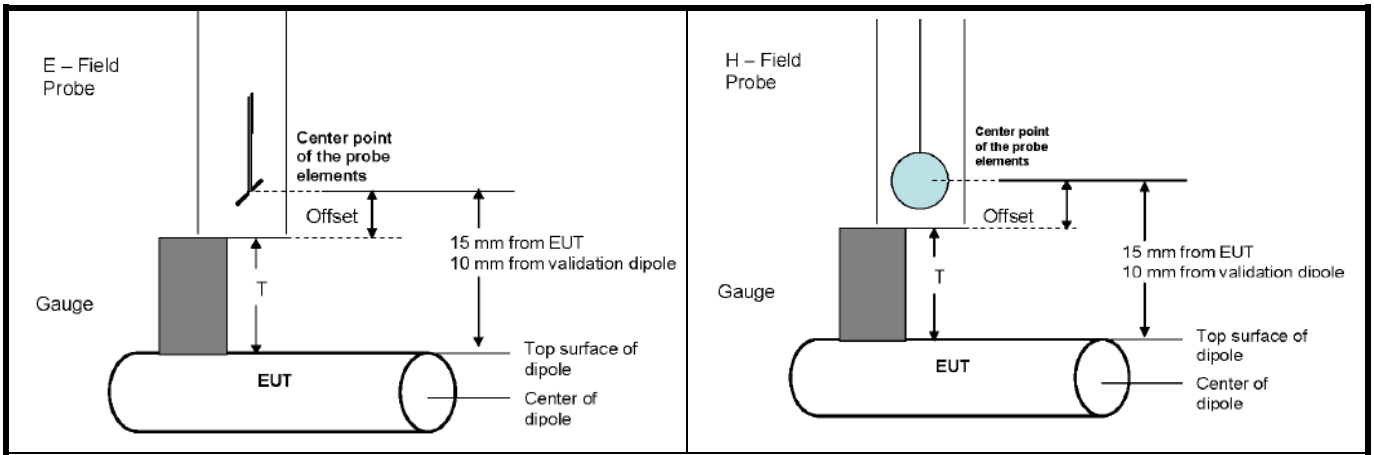


Fig-3.6 Gauge Block for Setting Measurement Distance to Probe

3.4 HAC RF Emission Measurement Procedure

The RF emissions test procedure for wireless communications device is as below.

1. Position the EUT in its intended test position.
2. Configure the EUT normal operation for maximum rated RF output power, at the desired channel and other operating parameters as intended for the test.
3. The center sub-grid shall center on the center of the acoustic output. Locate the field probe at the initial test position in the 50 mm by 50 mm grid, which is contained in the measurement plane.
4. Record the reading.
5. Scan the entire 50 mm by 50 mm region in equally spaced increments and record the reading at each measurement point. The distance between measurement points shall be sufficient to assure the identification of the maximum reading.
6. Identify the five contiguous sub-grids around the center sub-grid with the lowest maximum field strength readings. Thus the six areas to be used to determine the EUT's highest emissions are identified and outlined for the final manual scan. Please note that a maximum of five blocks can be excluded for both E-field and H-field measurements for the EUT output being measured. Stated another way, the center sub-grid and three others must be common to both the E-field and H-field measurements.
7. Identify the maximum field reading within the non-excluded sub-grids identified in Step 6.
8. Convert the maximum field strength reading identified in Step 7 to V/m or A/m as appropriate. For probes which require a probe modulation factor, this conversion shall be done using the appropriate probe modulation factor.
9. Repeat step 1 through step 9 for both the E-field and H-field measurements.
10. Compare this reading to the categories and record the resulting category.

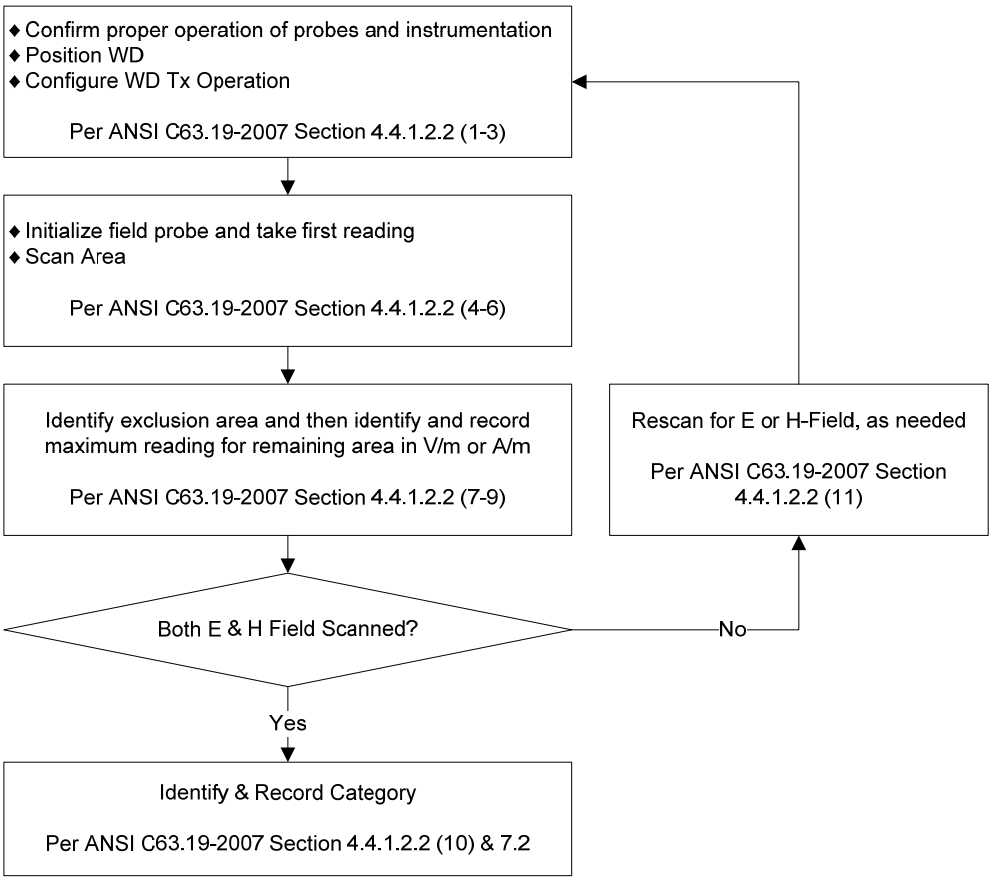


Fig-3.7 WD Near-Field Emission Test Flowchart

3.5 Probe Modulation Factor

The HAC standard ANSI C63.19-2007 requires measurement of the peak envelope E-field and H-field of the wireless device. Paragraph 4.2.2.1 and C.3.1 of that standard describes the probe modulation factor that shall be applied to convert the probe reading to peak envelope field.

The PMF measurement procedure is as follows.

1. Install a validation dipole for the appropriate frequency band under the Test Arch Phantom and select the proper phantom section according to the probe type installed (E-field or H-field). Move the probe to the point with the highest field, with very similar field contributions from all channels. Switch the arm power off and do not move the probe between the subsequent CW and modulated measurement.
2. The modulated signal to the dipole must be monitored to record peak amplitude and compared to a CW signal with the same peak envelope level.
3. Do not move the setup after the coupler between the modulated and the CW measurement.
4. For modulated signal measurement, connect the modulated signal using the appropriate frequency via the cable to the dipole.
5. Run the multi-meter in the procedure with the corresponding modulation setting in continuous mode.
6. Adjust the signal amplitude to achieve the same field level display in the multi-meter as during the WD field scan. Read the multi-meter display and note it together with the probe ID, modulation type and frequency.
7. Read the envelope peak on the monitor in order to adjust the CW signal later to the same level.
8. Switch the signal source off and verify that the ambient and instrumentation noise level is at least 10 dB lower.
9. For CW measurement, change the signal to CW at the same center frequency, without touching or moving the dipole or probe in the setup.
10. Adjust the CW signal amplitude to the same peak level on the spectrum analyzer.
11. Run the multi-meter in the CW procedure in continuous mode.
12. Read the multi-meter total field display and note it together with the probe ID, modulation type and frequency.
13. Calculate the PMF as the ratio between the CW multi-meter field reading and the reading for the applicable modulation.

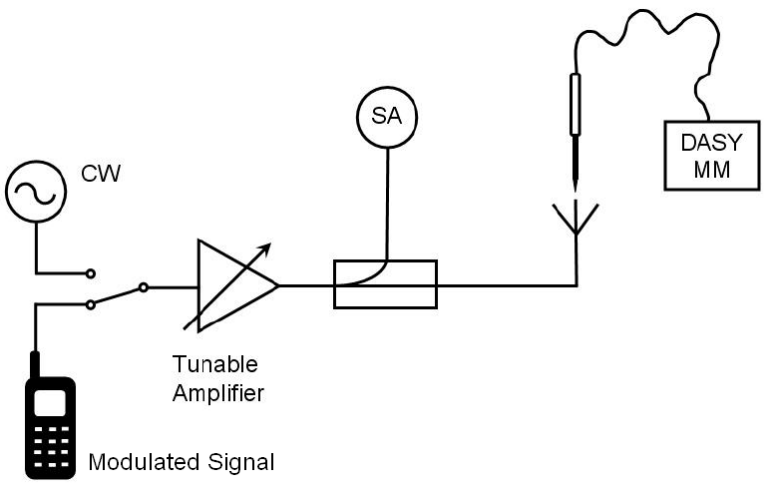


Fig-3.8 PMF Measurement Setup

The probe modulation factor has calibrated by SPEAG and the detailed parameter can be found in the probe calibration report in appendix C.

Modulation Type	PMF
GSM	2.948
WCDMA	1.020
CDMA2000	1.023

4. HAC Measurement Evaluation

4.1 M-Rating Category

The HAC Standard ANSI C63.19-2007 represents performance requirements for acceptable interoperability of hearing aids with wireless communications devices. When these parameters are met, a hearing aid operates acceptably in close proximity to a wireless communications device.

The following AWF (Articulation Weighting Factor) factors shall be used for the standard transmission protocols.

Standard	Technology	AWF (dB)
TIA/EIA/IS-2000	CDMA	0
TIA/EIA-136	TDMA (50 Hz)	0
J-STD-007	GSM	-5
T1/T1P1/3GPP	UMTS (WCDMA)	0
iDEN	TDMA (22 and 11 Hz)	0

Category		Telephone RF Parameters < 960 MHz	
Near Field	AWF	E-Field Emissions (V/m)	H-Field Emissions (A/m)
Category M1	0	631.0 – 1122.0	1.91 – 3.39
	-5	473.2 – 841.4	1.43 – 2.54
Category M2	0	354.8 – 631.0	1.07 – 1.91
	-5	266.1 – 473.2	0.80 – 1.43
Category M3	0	199.5 – 354.8	0.60 – 1.07
	-5	149.6 – 266.1	0.45 – 0.80
Category M4	0	< 199.5	< 0.60
	-5	< 149.6	< 0.45

Category		Telephone RF Parameters > 960 MHz	
Near Field	AWF	E-Field Emissions (V/m)	H-Field Emissions (A/m)
Category M1	0	199.5 – 354.8	0.60 – 1.07
	-5	149.6 – 266.1	0.45 – 0.80
Category M2	0	112.2 – 199.5	0.34 – 0.60
	-5	84.1 – 149.6	0.25 – 0.45
Category M3	0	63.1 – 112.2	0.19 – 0.34
	-5	47.3 – 84.1	0.14 – 0.25
Category M4	0	< 63.1	< 0.19
	-5	< 47.3	< 0.14

4.2 EUT Configuration and Setting

For HAC RF emission testing, the EUT was linked and controlled by base station emulator. Communication between the EUT and the emulator was established by air link. The distance between the EUT and the communicating antenna of the emulator is larger than 50 cm and the output power radiated from the emulator antenna is at least 30 dB smaller than the output power of EUT. The EUT was set from the emulator to radiate maximum output power during HAC testing.

4.3 System Verification

The measuring results for system check are shown as below.

Frequency (MHz)	Input Power (dBm)	Target Value (V/m)	E-Field 1 (V/m)	E-Field 2 (V/m)	Average E-Field (V/m)	Deviation (%)	Test Date
835	20	168.0	165.2	163.8	164.5	-2.08	Aug. 05, 2012
1880	20	140.1	141.5	143.2	142.35	1.61	Aug. 05, 2012
Frequency (MHz)	**Input Power (dBm)**	**Target Value (A/m)**	**H-Field (A/m)**			**Deviation (%)**	**Test Date**
835	20	0.471	0.4293			-8.85	Aug. 05, 2012
1880	20	0.461	0.4666			1.21	Aug. 05, 2012

Note:

1. Comparing to the reference target value provided by SPEAG, the validation data should be within its specification of 25 %. The result indicates the system check can meet the variation criterion and the plots can be referred to Appendix A of this report.
2. For E-Field, the deviation is **[(E-Field 1 + E-Field 2) / 2 – Target Value] / Target Value x 100%**
3. For H-Field, the deviation is **(H-Field – Target Value) / Target Value x 100%**

4.4 Conducted Power Results

The measuring conducted power (Unit: dBm) are shown as below.

Band	GSM850			GSM1900		
Channel	**128**	**189**	**251**	**512**	**661**	**810**
Frequency (MHz)	**824.2**	**836.4**	**848.8**	**1850.2**	**1880.0**	**1909.8**
Maximum Burst-Averaged Output Power						
GSM (GMSK, 1 Uplink)	33.41	33.32	33.26	31.03	30.66	30.52

Band	WCDMA Band II			WCDMA Band V		
Channel	**9262**	**9400**	**9538**	**4132**	**4182**	**4233**
Frequency (MHz)	**1852.4**	**1880.0**	**1907.6**	**826.4**	**836.4**	**846.6**
RMC 12.2K	24.30	24.03	24.46	24.31	24.12	24.17

Band	CDMA BC0			CDMA BC1		
Channel	**1013**	**384**	**777**	**25**	**600**	**1175**
Frequency (MHz)	**824.70**	**836.52**	**848.31**	**1851.25**	**1880.00**	**1908.75**
1xRTT RC3+SO55	24.55	24.78	24.59	24.55	24.75	24.56

4.5 HAC RF Emission Testing Results

4.5.1 E-Field Emissions

Plot No.	Band	Mode	Channel	Peak E-Field (V/m)	M-Rating
1	GSM850	GSM	189	128.0	M4
2	GSM850	GSM	128	112.3	M4
3	GSM850	GSM	251	**133.8**	**M4**
4	GSM1900	GSM	661	40.76	M4
5	GSM1900	GSM	512	**45.04**	**M4**
6	GSM1900	GSM	810	40.17	M4
7	WCDMA V	RMC12.2K	4182	48.15	M4
8	WCDMA V	RMC12.2K	4131	36.82	M4
9	WCDMA V	RMC12.2K	4233	**49.69**	**M4**
10	WCDMA II	RMC12.2K	9400	25.63	M4
11	WCDMA II	RMC12.2K	9262	**26.75**	**M4**
12	WCDMA II	RMC12.2K	9538	24.63	M4
23	CDMA2000 BC0	RC3+SO55_Full	384	50.51	M4
28	CDMA2000 BC0	RC3+SO55_Full	1013	44.68	M4
29	CDMA2000 BC0	RC3+SO55_Full	777	**53.19**	**M4**
30	CDMA2000 BC1	RC3+SO55_Full	600	23.92	M4
31	CDMA2000 BC1	RC3+SO55_Full	25	**25.17**	**M4**
32	CDMA2000 BC1	RC3+SO55_Full	1175	22.01	M4

Note: Per pre-scan for CDMA2000, the RC3+SO55 is worst mode which is used for HAC test.

4.5.2 H-Field Emissions

Plot No.	Band	Mode	Channel	Peak H-Field (A/m)	M-Rating
34	GSM850	GSM	189	**0.2276**	**M4**
35	GSM850	GSM	128	0.1999	M4
36	GSM850	GSM	251	0.2246	M4
52	GSM1900	GSM	810	**0.1155**	**M4**
53	GSM1900	GSM	661	0.1094	M4
54	GSM1900	GSM	512	0.1125	M4
40	WCDMA V	RMC12.2K	4182	0.09221	M4
41	WCDMA V	RMC12.2K	4131	0.07415	M4
42	WCDMA V	RMC12.2K	4233	**0.09294**	**M4**
43	WCDMA II	RMC12.2K	9400	0.09534	M4
44	WCDMA II	RMC12.2K	9262	0.09622	M4
45	WCDMA II	RMC12.2K	9538	**0.09953**	**M4**
46	CDMA2000 BC0	RC3+SO55_Full	384	0.1067	M4
47	CDMA2000 BC0	RC3+SO55_Full	1013	0.09647	M4
48	CDMA2000 BC0	RC3+SO55_Full	777	**0.11**	**M4**
49	CDMA2000 BC1	RC3+SO55_Full	600	0.07288	M4
50	CDMA2000 BC1	RC3+SO55_Full	25	**0.0738**	**M4**
51	CDMA2000 BC1	RC3+SO55_Full	1175	0.06879	M4

Note: Per pre-scan for CDMA2000, the RC3+SO55 is worst mode which is used for HAC test.

Test Engineer： Sam Onn

5. Calibration of Test Equipment

Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
835MHz Calibration Dipole	SPEAG	CD835V3	1041	Mar. 19, 2012	Annual
1880MHz Calibration Dipole	SPEAG	CD1880V3	1032	Apr. 26, 2012	Annual
Isotropic E-Field Probe	SPEAG	ER3DV6	2445	Feb. 17, 2012	Annual
Isotropic H-Field Probe	SPEAG	H3DV6	6274	Feb. 17, 2012	Annual
Data Acquisition Electronics	SPEAG	DAE4	861	Aug. 29, 2011	Annual
Test Arch Phantom	SPEAG	Arch	N/A	N/A	N/A
MXG Analog Signal Generator	Agilent	N5181A	MY50143868	May 06, 2012	Annual
Power Meter	Anritsu	ML2495A	1218009	May 07, 2012	Annual
Power Sensor	Anritsu	MA2411B	1207252	May 07, 2012	Annual
EXA Spectrum Analyzer	Agilent	N9010A	MY52100136	Apr. 23, 2012	Annual
Directional Coupler	Woken	0110A05602O-10	11122702	Apr. 19, 2012	Annual
Power Amplifier	AR	5S1G4	0339656	Apr. 23, 2012	Annual
Power Amplifier	Mini-Circuit	ZVE-8G	001000422	Apr. 23, 2012	Annual
Attenuator	Woken	00800A1G01L-03	N/A	Apr. 19, 2012	Annual

6. Measurement Uncertainty

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (E)	Ci (H)	Standard Uncertainty (E)	Standard Uncertainty (H)
Measurement System							
Probe Calibration	5.1	Normal	1	1	1	± 5.1 %	± 5.1 %
Axial Isotropy	4.7	Rectangular	√3	1	1	± 2.7 %	± 2.7 %
Sensor Displacement	16.5	Rectangular	√3	1	0.145	± 9.5 %	± 1.4 %
Boundary Effects	2.4	Rectangular	√3	1	1	± 1.4 %	± 1.4 %
Phantom Boundary Effect	7.2	Rectangular	√3	1	0	± 4.1 %	± 0.0 %
Linearity	4.7	Rectangular	√3	1	1	± 2.7 %	± 2.7 %
Scaling with PMR Calibration	10.0	Rectangular	√3	1	1	± 5.8 %	± 5.8 %
System Detection Limit	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Readout Electronics	0.3	Normal	1	1	1	± 0.3 %	± 0.3 %
Response Time	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Integration Time	2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %
RF Ambient Conditions	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
RF Reflections	12.0	Rectangular	√3	1	1	± 6.9 %	± 6.9 %
Probe Positioner	1.2	Rectangular	√3	1	0.67	± 0.7 %	± 0.5 %
Probe Positioning	4.7	Rectangular	√3	1	0.67	± 2.7 %	± 1.8 %
Extrap. and Interpolation	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Test Sample Related							
Device Positioning Vertical	4.7	Rectangular	√3	1	0.67	± 2.7 %	± 1.8 %
Device Positioning Lateral	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Device Holder and Phantom	2.4	Rectangular	√3	1	1	± 1.4 %	± 1.4 %
Power Drift	5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %
Phantom and Setup Related							
Phantom Thickness	2.4	Rectangular	√3	1	0.67	± 1.4 %	± 0.9 %
Combined Standard Uncertainty						± 16.3 %	± 12.3 %
Coverage Factor for 95 %						K = 2	
Expanded Uncertainty						**± 32.6 %**	**± 24.6 %**

Uncertainty budget for HAC RF Emission

7. Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Copies of accreditation and authorization certificates of our laboratories obtained from approval agencies can be downloaded from our web site. If you have any comments, please feel free to contact us at the following:

Taiwan HwaYa EMC/RF/Safety/Telecom Lab:
Add: No. 19, Hwa Ya 2nd Rd, Wen Hwa Vil., Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.
Tel: 886-3-318-3232
Fax: 886-3-327-0892

Taiwan LinKo EMC/RF Lab:
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Fax: 886-2-2605-1924

Taiwan HsinChu EMC/RF Lab:
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Tel: 886-3-593-5343
Fax: 886-3-593-5342

Email: service.adt@tw.bureauveritas.com
Web Site: www.adt.com.tw

The road map of all our labs can be found in our web site also.

---END---

Appendix A. Plots of System Verification

The plots for system verification are shown as follows.

System Check_E-Field_835_120805

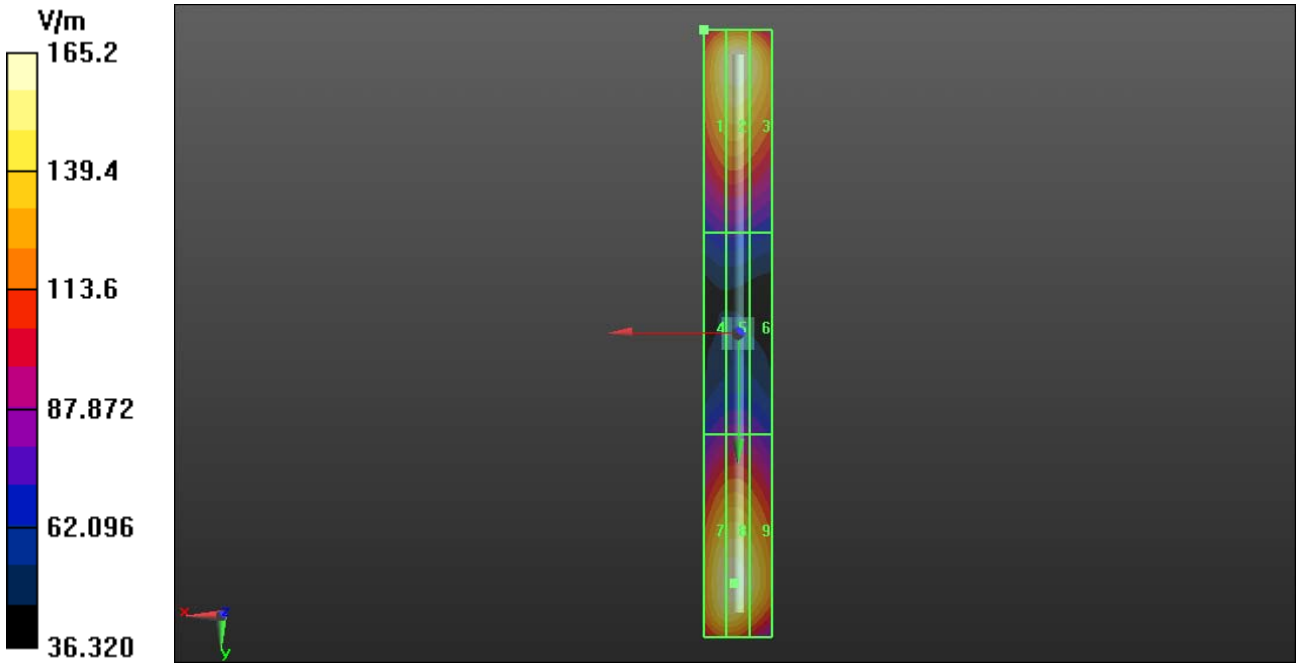
DUT: HAC Dipole 835 MHz; Type: CD835V3; SN: 1041

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Hearing Aid Compatibility (41x361x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 120.1 V/m; Power Drift = -0.02 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 165.2 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **158.3 V/m**	Grid 2 **M4** **165.2 V/m**	Grid 3 **M4** **157.7 V/m**
Grid 4 **M4** **84.29 V/m**	Grid 5 **M4** **86.33 V/m**	Grid 6 **M4** **83.00 V/m**
Grid 7 **M4** **160.6 V/m**	Grid 8 **M4** **163.8 V/m**	Grid 9 **M4** **153.7 V/m**



System Check_E-Field_1880_120805

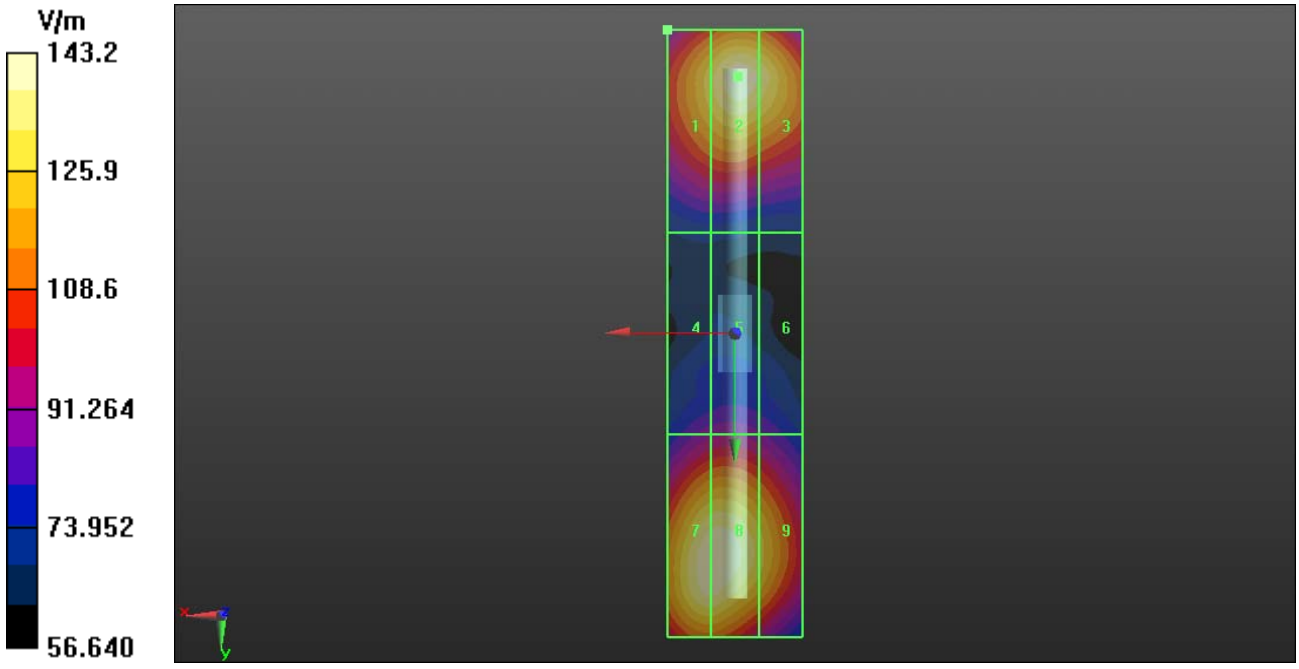
DUT: HAC Dipole 1880 MHz; Type: CD1880V3; SN: 1032

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Hearing Aid Compatibility (41x181x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 147.3 V/m; Power Drift = -0.13 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 143.2 V/m
Near-field category: M2 (AWF 0 dB)

Grid 1 **M2** **130.5 V/m**	Grid 2 **M2** **141.5 V/m**	Grid 3 **M2** **137.0 V/m**
Grid 4 **M3** **89.81 V/m**	Grid 5 **M3** **91.83 V/m**	Grid 6 **M3** **87.56 V/m**
Grid 7 **M2** **143.1 V/m**	Grid 8 **M2** **143.2 V/m**	Grid 9 **M2** **129.4 V/m**



System Check_H-Field_835_120805

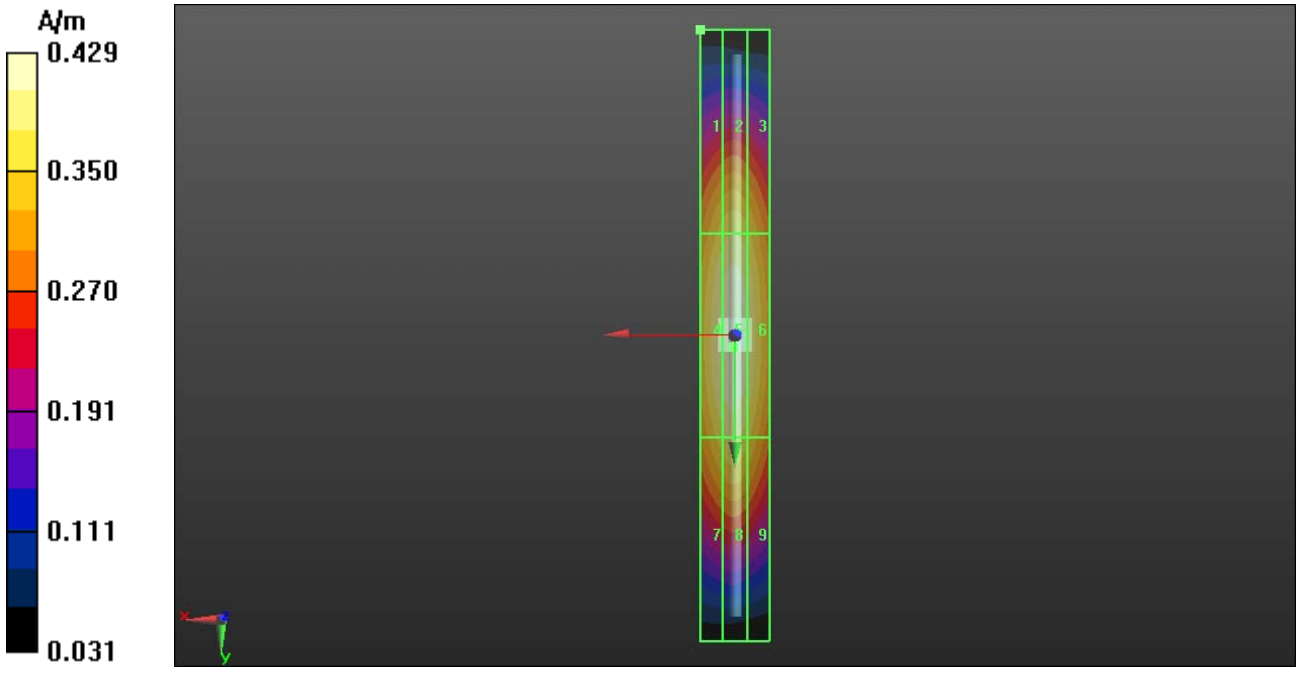
DUT: HAC Dipole 835 MHz; Type: CD835V3; SN: 1041

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Hearing Aid Compatibility (41x361x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.4560 A/m; Power Drift = 0.01 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.4293 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.365 A/m**	Grid 2 **M4** **0.377 A/m**	Grid 3 **M4** **0.359 A/m**
Grid 4 **M4** **0.414 A/m**	Grid 5 **M4** **0.429 A/m**	Grid 6 **M4** **0.406 A/m**
Grid 7 **M4** **0.367 A/m**	Grid 8 **M4** **0.381 A/m**	Grid 9 **M4** **0.358 A/m**



System Check_H-Field_1880_120805

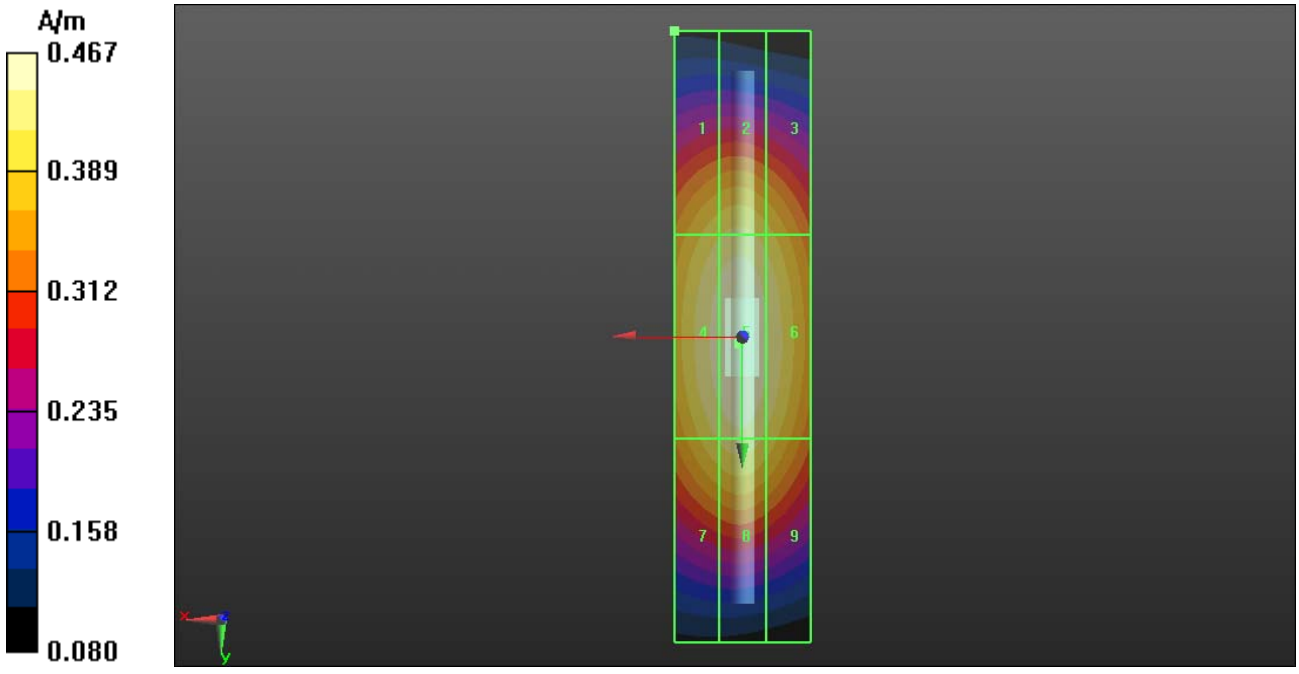
DUT: HAC Dipole 1880 MHz; Type: CD1880V3; SN: 1032

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Hearing Aid Compatibility (41x181x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.5030 A/m; Power Drift = -0.18 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.4666 A/m
Near-field category: M2 (AWF 0 dB)

Grid 1 **M2** **0.412 A/m**	Grid 2 **M2** **0.424 A/m**	Grid 3 **M2** **0.403 A/m**
Grid 4 **M2** **0.453 A/m**	Grid 5 **M2** **0.467 A/m**	Grid 6 **M2** **0.444 A/m**
Grid 7 **M2** **0.417 A/m**	Grid 8 **M2** **0.432 A/m**	Grid 9 **M2** **0.408 A/m**



Appendix B. Plots of HAC RF Emission Measurement

The plots for HAC measurement are shown as follows.

P01 E_Field GSM850_Ch189

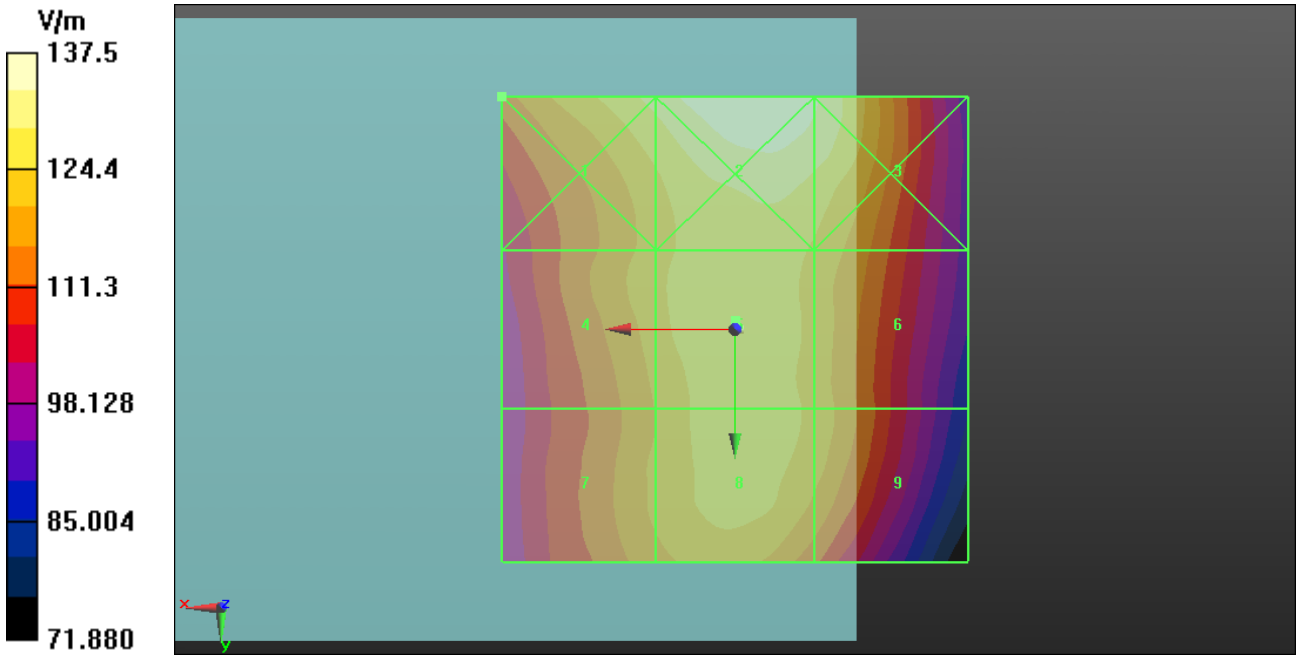
DUT: 120717C01

Communication System: GSM-FDD (TDMA, GMSK); Frequency: 836.4 MHz;Duty Cycle: 1:8.70964
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch189/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 55.03 V/m; Power Drift = -0.11 dB
PMR calibrated. Calibrated PMF = 2.948 is applied.
E-field emissions = 128.0 V/m
Near-field category: M4 (AWF -5 dB)

Grid 1 **M4** **130.5 V/m**	Grid 2 **M4** **137.5 V/m**	Grid 3 **M4** **133.8 V/m**
Grid 4 **M4** **123.3 V/m**	Grid 5 **M4** **128.0 V/m**	Grid 6 **M4** **123.8 V/m**
Grid 7 **M4** **121.0 V/m**	Grid 8 **M4** **127.1 V/m**	Grid 9 **M4** **123.4 V/m**



P02 E_Field GSM850_Ch128

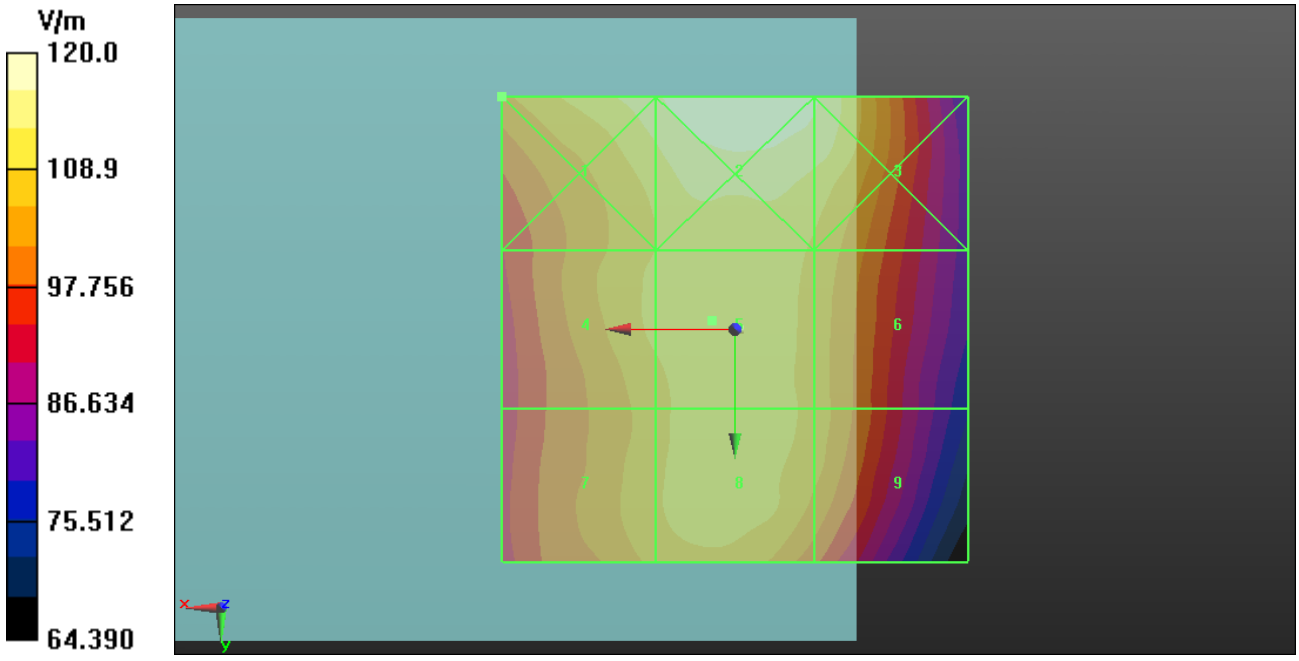
DUT: 120717C01

Communication System: GSM-FDD (TDMA, GMSK); Frequency: 824.2 MHz;Duty Cycle: 1:8.70964
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch128/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 48.66 V/m; Power Drift = -0.05 dB
PMR calibrated. Calibrated PMF = 2.948 is applied.
E-field emissions = 112.3 V/m
Near-field category: M4 (AWF -5 dB)

Grid 1 **M4** **115.5 V/m**	Grid 2 **M4** **120.0 V/m**	Grid 3 **M4** **116.8 V/m**
Grid 4 **M4** **110.1 V/m**	Grid 5 **M4** **112.3 V/m**	Grid 6 **M4** **108.3 V/m**
Grid 7 **M4** **108.4 V/m**	Grid 8 **M4** **111.8 V/m**	Grid 9 **M4** **107.5 V/m**



P03 E_Field GSM850_Ch251

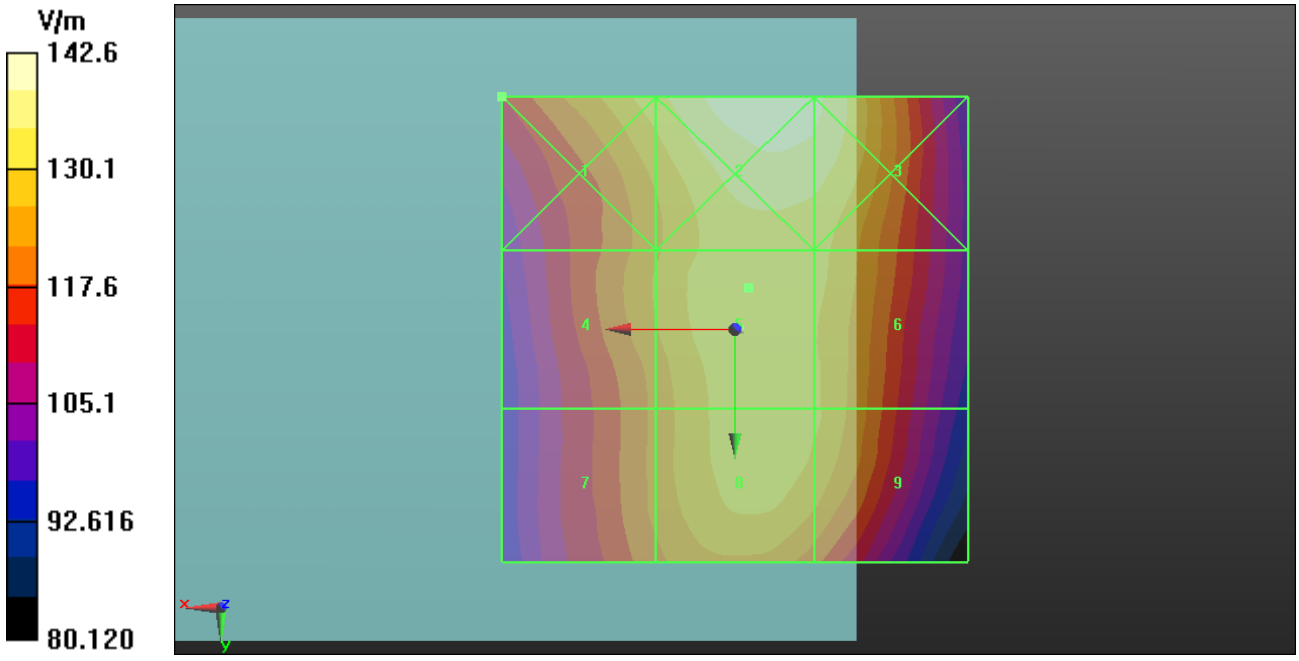
DUT: 120717C01

Communication System: GSM-FDD (TDMA, GMSK); Frequency: 848.8 MHz;Duty Cycle: 1:8.70964
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch251/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 56.55 V/m; Power Drift = -0.03 dB
PMR calibrated. Calibrated PMF = 2.948 is applied.
E-field emissions = 133.8 V/m
Near-field category: M4 (AWF -5 dB)

Grid 1 **M4** **133.0 V/m**	Grid 2 **M4** **142.6 V/m**	Grid 3 **M4** **139.7 V/m**
Grid 4 **M4** **126.5 V/m**	Grid 5 **M4** **133.8 V/m**	Grid 6 **M4** **131.6 V/m**
Grid 7 **M4** **123.3 V/m**	Grid 8 **M4** **132.6 V/m**	Grid 9 **M4** **130.8 V/m**



P04 E_Field GSM1900_Ch661

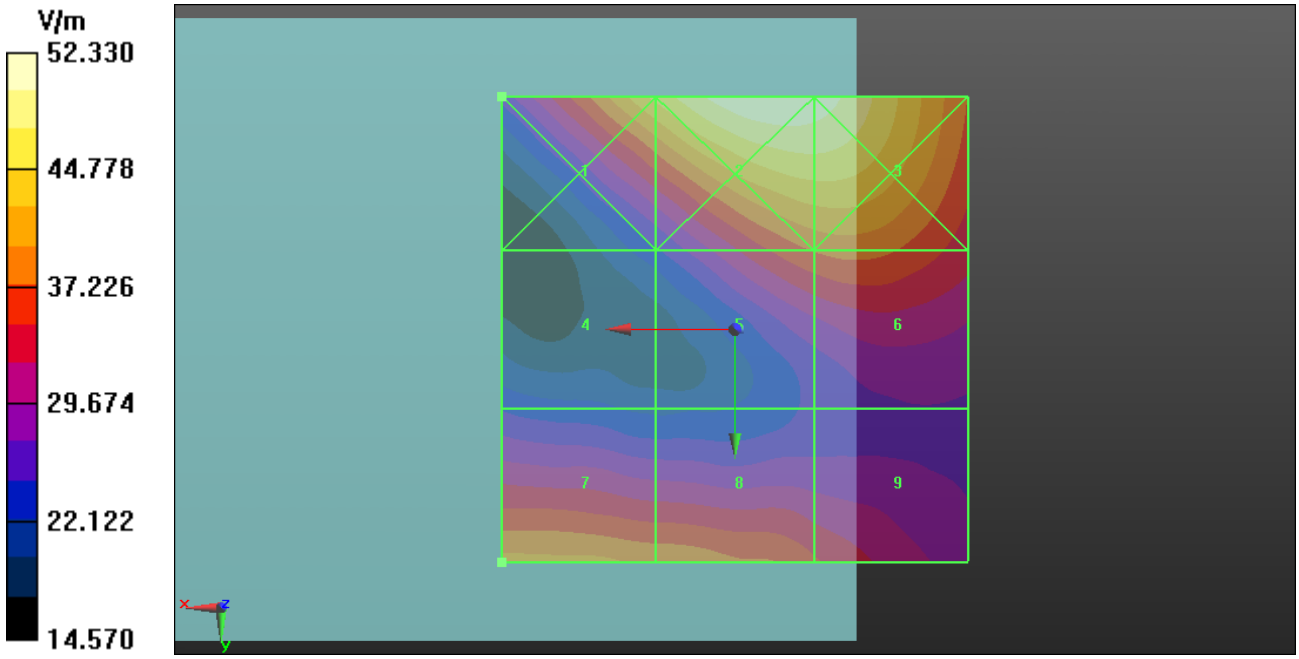
DUT: 120717C01

Communication System: GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz;Duty Cycle: 1:8.70964
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch661/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 8.220 V/m; Power Drift = 0.15 dB
PMR calibrated. Calibrated PMF = 2.948 is applied.
E-field emissions = 40.76 V/m
Near-field category: M4 (AWF -5 dB)

Grid 1 **M4** **45.60 V/m**	Grid 2 **M3** **52.33 V/m**	Grid 3 **M3** **51.35 V/m**
Grid 4 **M4** **24.54 V/m**	Grid 5 **M4** **37.44 V/m**	Grid 6 **M4** **38.27 V/m**
Grid 7 **M4** **40.76 V/m**	Grid 8 **M4** **39.32 V/m**	Grid 9 **M4** **35.22 V/m**



P05 E_Field GSM1900_Ch512

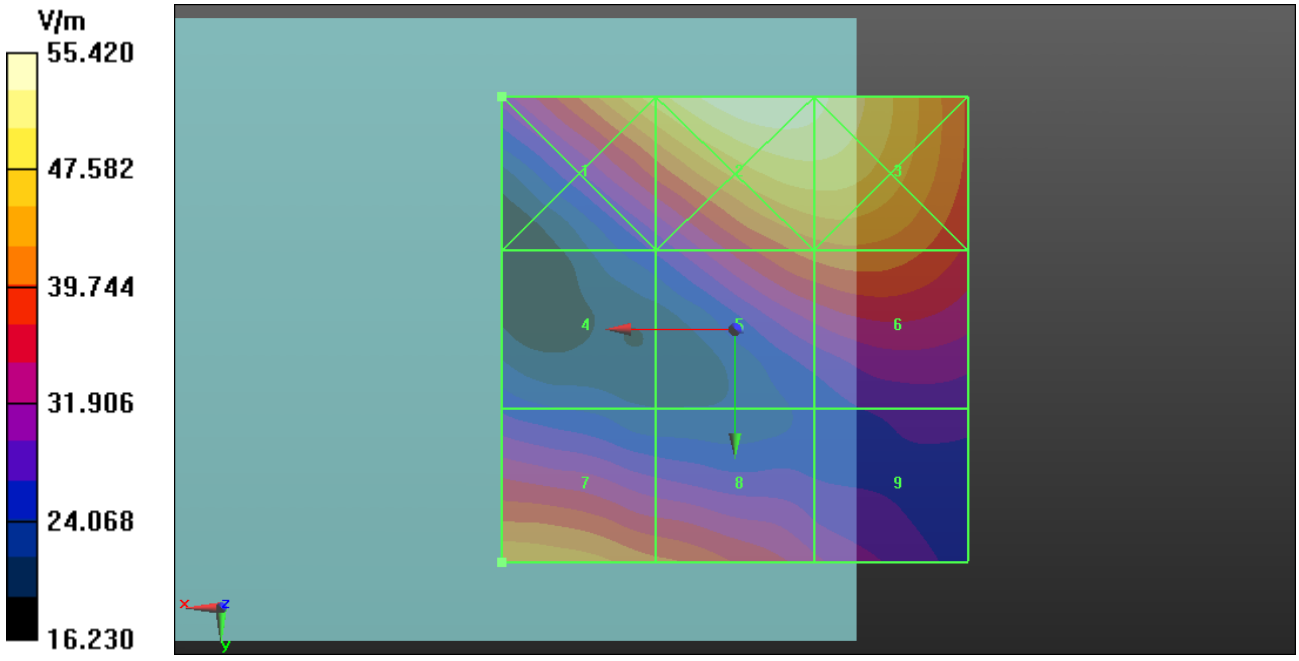
DUT: 120717C01

Communication System: GSM-FDD (TDMA, GMSK); Frequency: 1850.2 MHz;Duty Cycle: 1:8.70964
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch512/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 9.119 V/m; Power Drift = 0.10 dB
PMR calibrated. Calibrated PMF = 2.948 is applied.
E-field emissions = 45.04 V/m
Near-field category: M4 (AWF -5 dB)

Grid 1 **M3** **49.18 V/m**	Grid 2 **M3** **55.42 V/m**	Grid 3 **M3** **53.74 V/m**
Grid 4 **M4** **27.28 V/m**	Grid 5 **M4** **41.03 V/m**	Grid 6 **M4** **41.91 V/m**
Grid 7 **M4** **45.04 V/m**	Grid 8 **M4** **40.48 V/m**	Grid 9 **M4** **32.74 V/m**



P06 E_Field GSM1900_Ch810

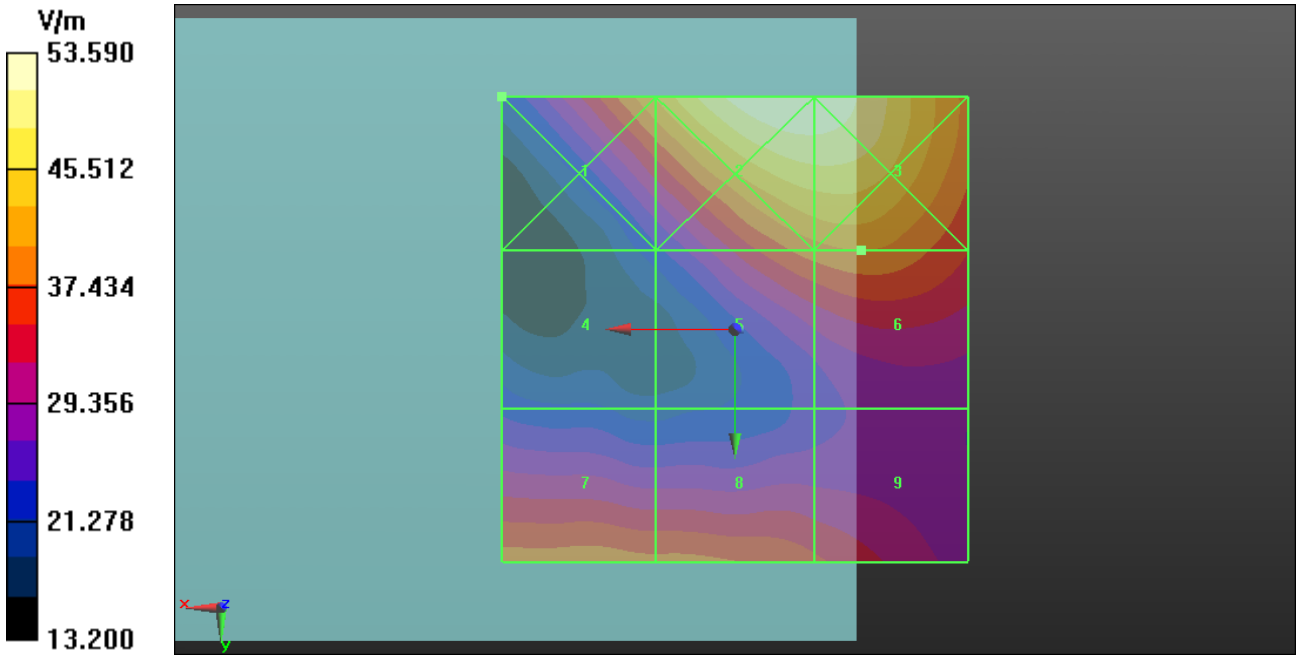
DUT: 120717C01

Communication System: GSM-FDD (TDMA, GMSK); Frequency: 1909.8 MHz;Duty Cycle: 1:8.70964
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch810/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 8.304 V/m; Power Drift = 0.07 dB
PMR calibrated. Calibrated PMF = 2.948 is applied.
E-field emissions = 40.17 V/m
Near-field category: M4 (AWF -5 dB)

Grid 1 **M4** **43.25 V/m**	Grid 2 **M3** **53.59 V/m**	Grid 3 **M3** **53.21 V/m**
Grid 4 **M4** **23.45 V/m**	Grid 5 **M4** **38.92 V/m**	Grid 6 **M4** **40.17 V/m**
Grid 7 **M4** **39.29 V/m**	Grid 8 **M4** **38.46 V/m**	Grid 9 **M4** **35.50 V/m**



P07 E_Field WCDMA V_Ch4182

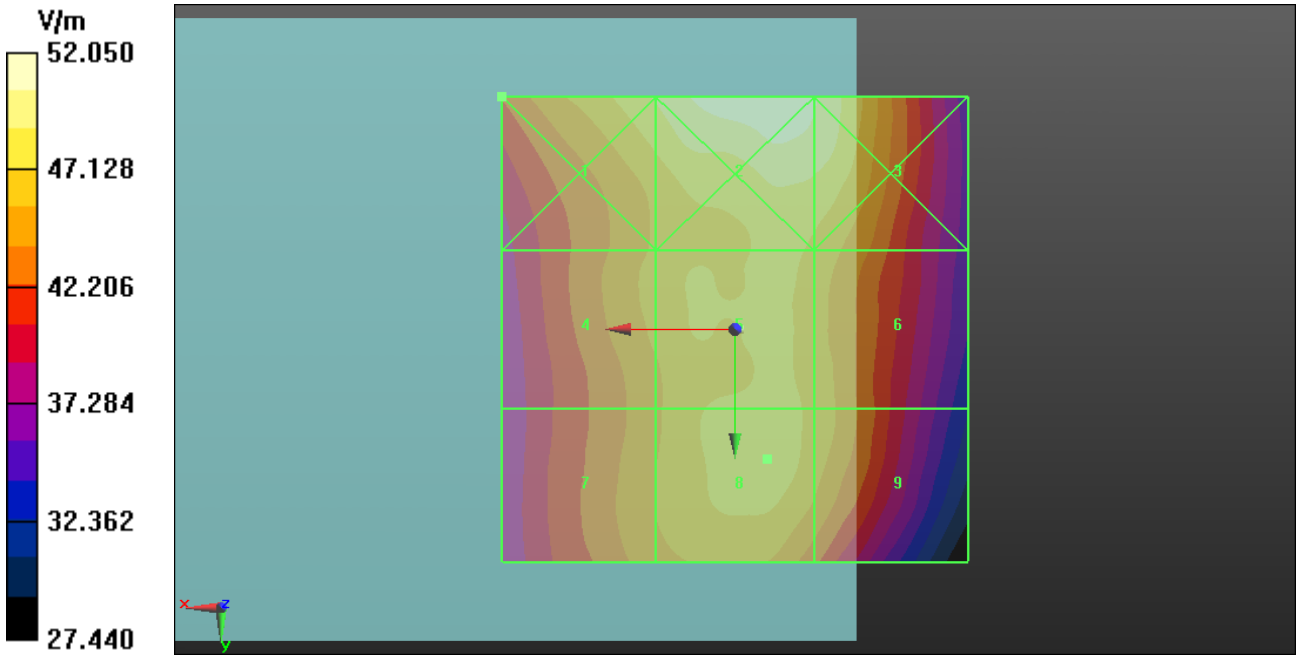
DUT: 120717C01

Communication System: UMTS-FDD (WCDMA); Frequency: 836.4 MHz;Duty Cycle: 1:2.18776
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4182/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 58.83 V/m; Power Drift = 0.11 dB
PMR calibrated. Calibrated PMF = 1.020 is applied.
E-field emissions = 48.15 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **48.98 V/m**	Grid 2 **M4** **52.05 V/m**	Grid 3 **M4** **50.60 V/m**
Grid 4 **M4** **46.19 V/m**	Grid 5 **M4** **47.75 V/m**	Grid 6 **M4** **46.80 V/m**
Grid 7 **M4** **45.58 V/m**	Grid 8 **M4** **48.15 V/m**	Grid 9 **M4** **46.84 V/m**



P08 E_Field WCDMA V_Ch4132

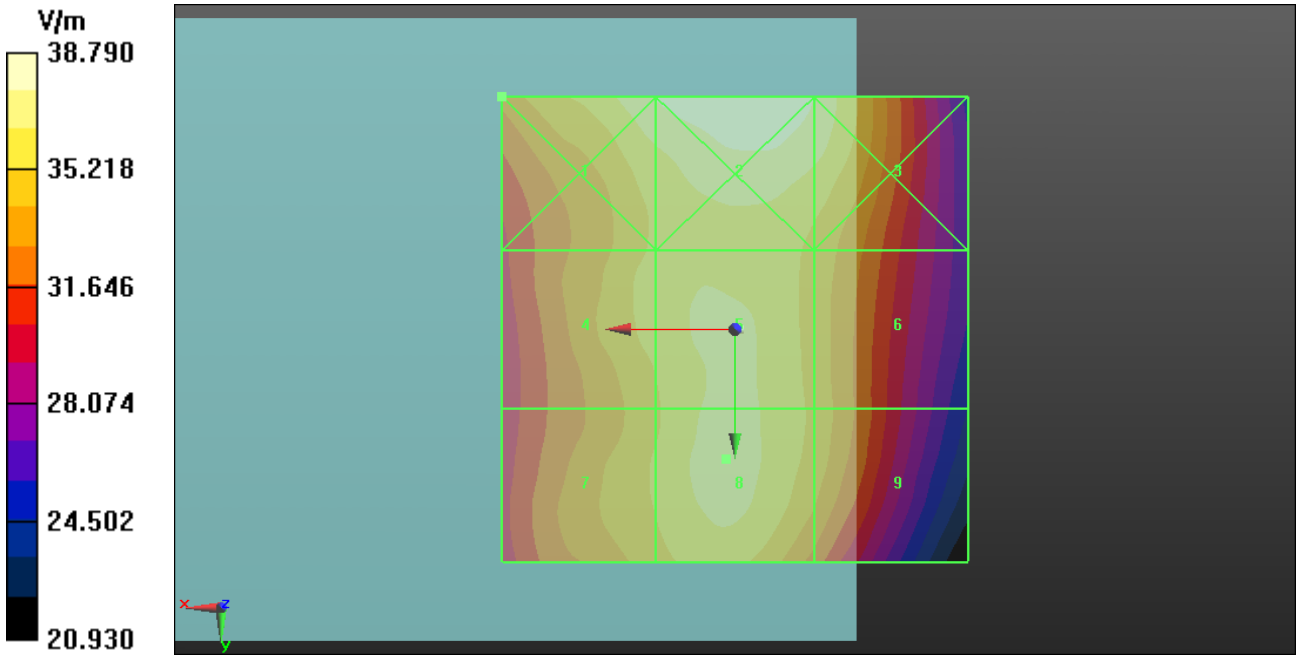
DUT: 120717C01

Communication System: UMTS-FDD (WCDMA); Frequency: 826.4 MHz;Duty Cycle: 1:2.18776
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4132/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 45.17 V/m; Power Drift = 0.06 dB
PMR calibrated. Calibrated PMF = 1.020 is applied.
E-field emissions = 36.82 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **37.73 V/m**	Grid 2 **M4** **38.79 V/m**	Grid 3 **M4** **37.61 V/m**
Grid 4 **M4** **35.84 V/m**	Grid 5 **M4** **36.77 V/m**	Grid 6 **M4** **34.95 V/m**
Grid 7 **M4** **35.42 V/m**	Grid 8 **M4** **36.82 V/m**	Grid 9 **M4** **34.98 V/m**



P09 E_Field WCDMA V_Ch4233

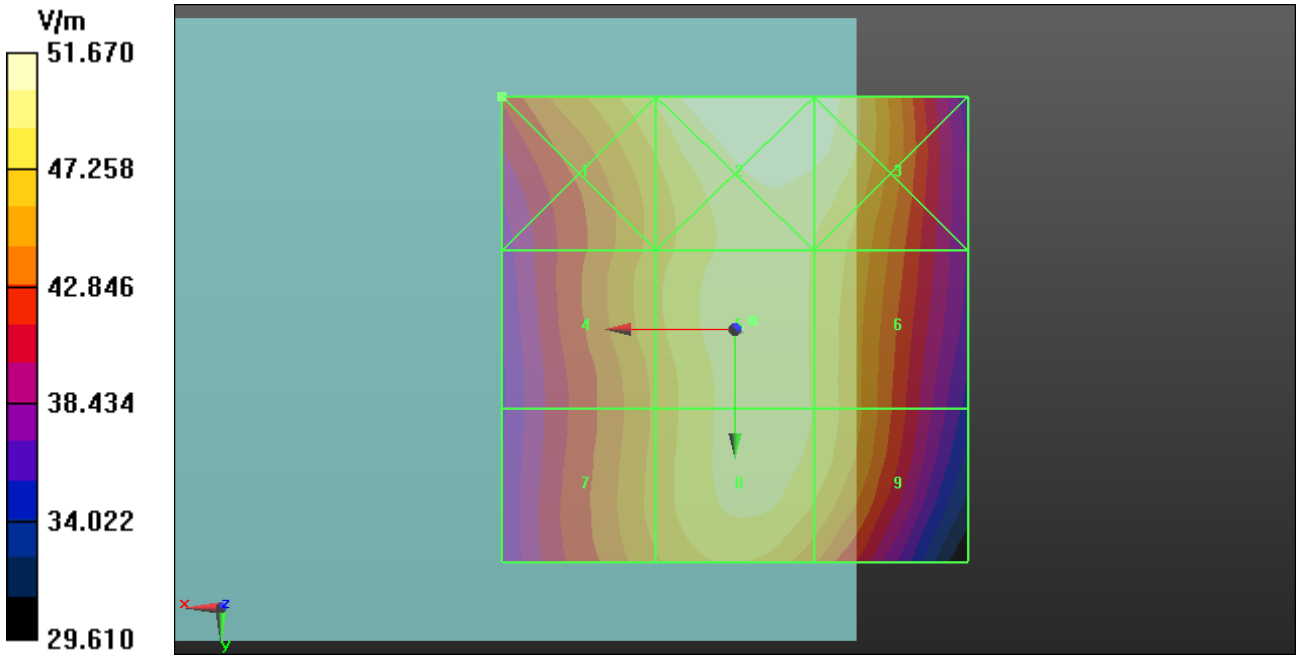
DUT: 120717C01

Communication System: UMTS-FDD (WCDMA); Frequency: 846.6 MHz;Duty Cycle: 1:2.18776
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4233/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 60.55 V/m; Power Drift = -0.02 dB
PMR calibrated. Calibrated PMF = 1.020 is applied.
E-field emissions = 49.69 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **49.02 V/m**	Grid 2 **M4** **51.67 V/m**	Grid 3 **M4** **51.41 V/m**
Grid 4 **M4** **46.97 V/m**	Grid 5 **M4** **49.69 V/m**	Grid 6 **M4** **48.64 V/m**
Grid 7 **M4** **46.39 V/m**	Grid 8 **M4** **49.59 V/m**	Grid 9 **M4** **48.66 V/m**



P10 E_Field WCDMA II_Ch9400

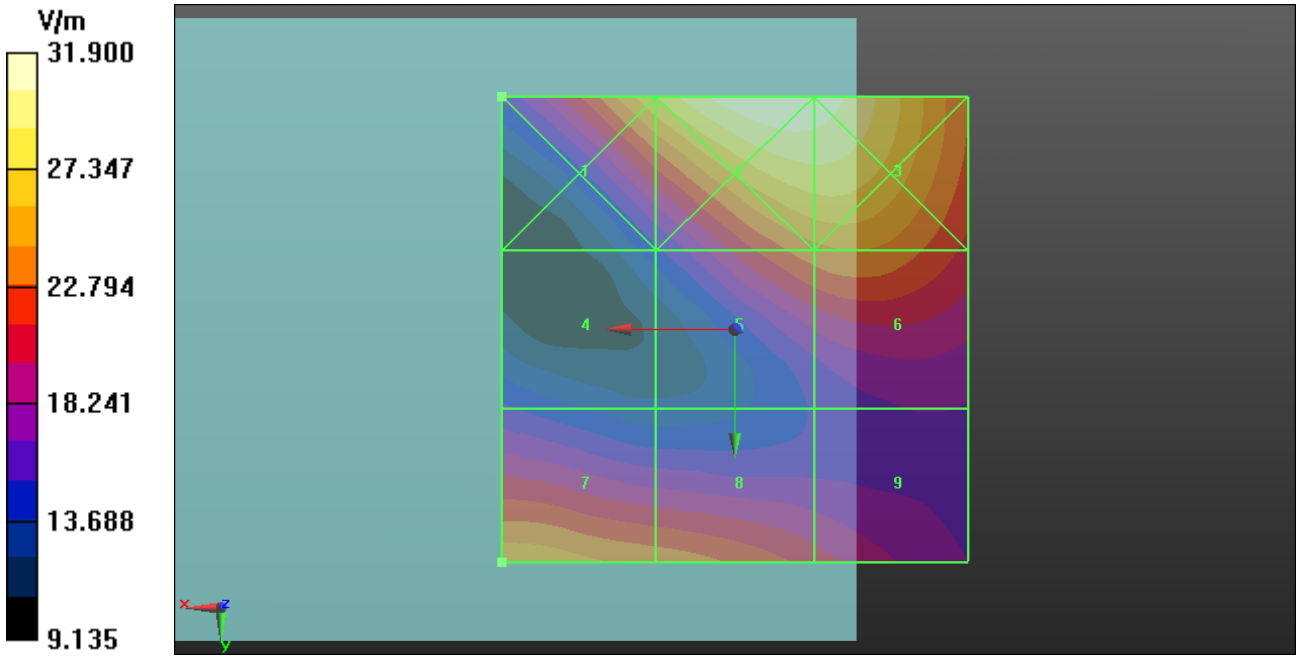
DUT: 120717C01

Communication System: UMTS-FDD (WCDMA); Frequency: 1880 MHz;Duty Cycle: 1:2.18776
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9400/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 15.19 V/m; Power Drift = -0.06 dB
PMR calibrated. Calibrated PMF = 1.020 is applied.
E-field emissions = 25.63 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **27.46 V/m**	Grid 2 **M4** **31.90 V/m**	Grid 3 **M4** **31.38 V/m**
Grid 4 **M4** **15.64 V/m**	Grid 5 **M4** **23.80 V/m**	Grid 6 **M4** **24.38 V/m**
Grid 7 **M4** **25.63 V/m**	Grid 8 **M4** **23.90 V/m**	Grid 9 **M4** **20.63 V/m**



P11 E_Field WCDMA II_Ch9262

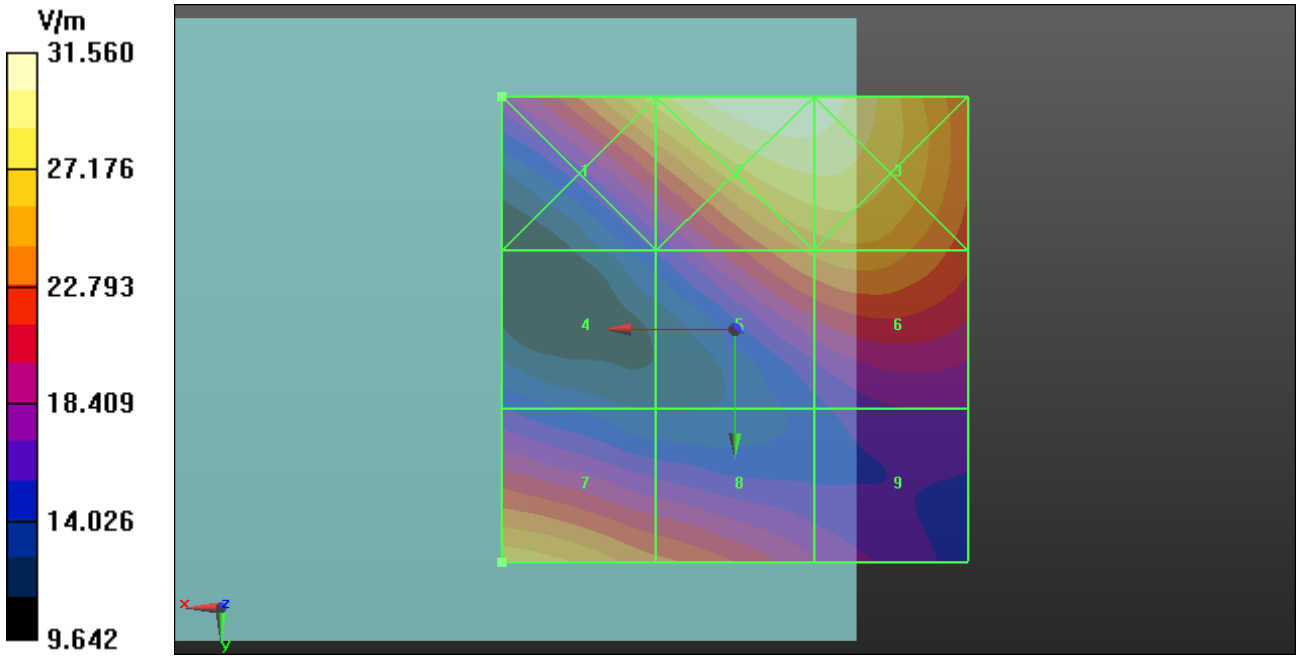
DUT: 120717C01

Communication System: UMTS-FDD (WCDMA); Frequency: 1852.4 MHz;Duty Cycle: 1:2.18776
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9262/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 15.99 V/m; Power Drift = -0.13 dB
PMR calibrated. Calibrated PMF = 1.020 is applied.
E-field emissions = 26.75 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **27.95 V/m**	Grid 2 **M4** **31.56 V/m**	Grid 3 **M4** **31.03 V/m**
Grid 4 **M4** **15.74 V/m**	Grid 5 **M4** **24.68 V/m**	Grid 6 **M4** **25.37 V/m**
Grid 7 **M4** **26.75 V/m**	Grid 8 **M4** **23.25 V/m**	Grid 9 **M4** **18.64 V/m**



P12 E_Field WCDMA II_Ch9538

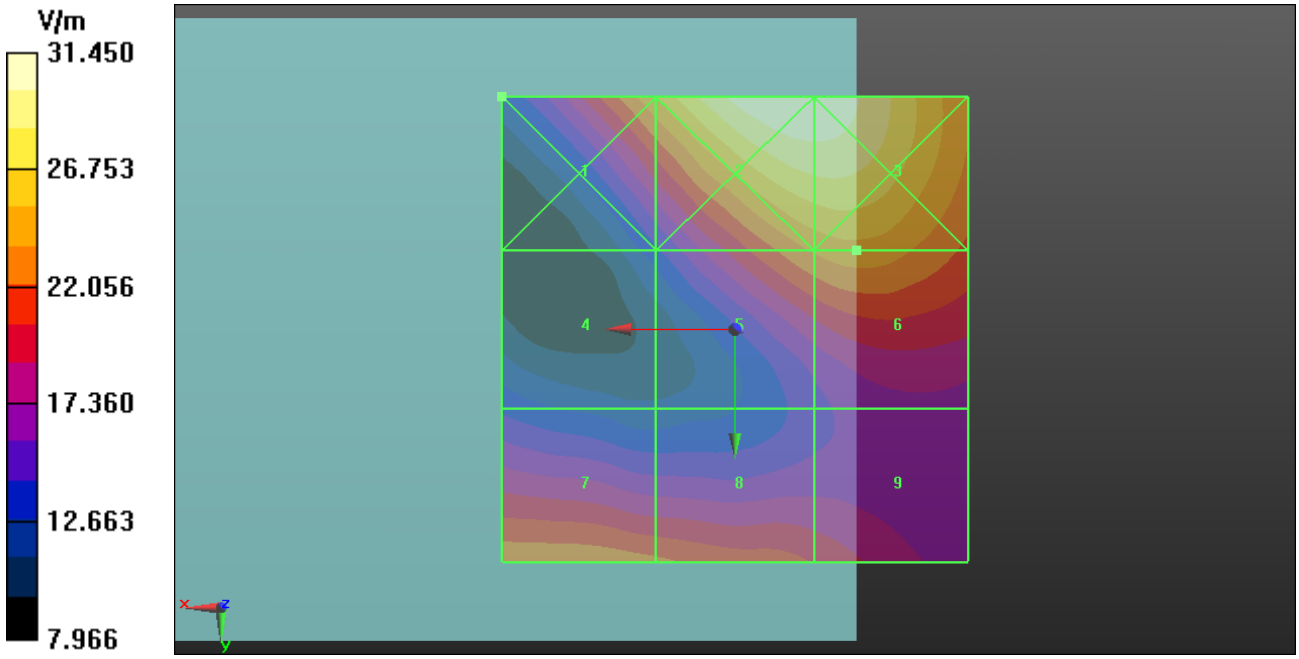
DUT: 120717C01

Communication System: UMTS-FDD (WCDMA); Frequency: 1907.6 MHz;Duty Cycle: 1:2.18776
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9538/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 14.54 V/m; Power Drift = 0.02 dB
PMR calibrated. Calibrated PMF = 1.020 is applied.
E-field emissions = 24.63 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **25.24 V/m**	Grid 2 **M4** **31.45 V/m**	Grid 3 **M4** **31.24 V/m**
Grid 4 **M4** **14.03 V/m**	Grid 5 **M4** **23.85 V/m**	Grid 6 **M4** **24.63 V/m**
Grid 7 **M4** **23.34 V/m**	Grid 8 **M4** **22.51 V/m**	Grid 9 **M4** **20.43 V/m**



P23 E_Field CDMA2000 BC0_RC3+SO55_Full_Ch384

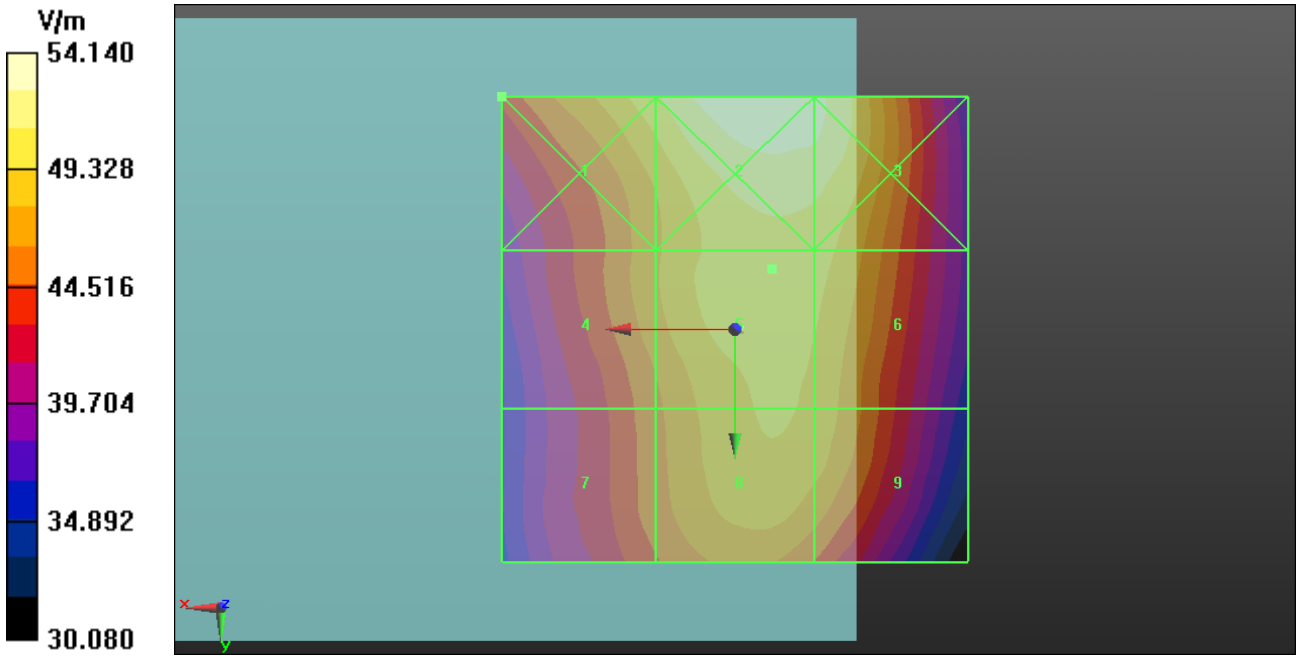
DUT: 120717C01

Communication System: CDMA2000 (1xRTT, RC3); Frequency: 836.52 MHz;Duty Cycle: 1:2.48886
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch384/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 60.20 V/m; Power Drift = 0.03 dB
PMR calibrated. Calibrated PMF = 1.034 is applied.
E-field emissions = 50.51 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **50.71 V/m**	Grid 2 **M4** **54.14 V/m**	Grid 3 **M4** **53.21 V/m**
Grid 4 **M4** **47.59 V/m**	Grid 5 **M4** **50.51 V/m**	Grid 6 **M4** **50.13 V/m**
Grid 7 **M4** **45.77 V/m**	Grid 8 **M4** **49.57 V/m**	Grid 9 **M4** **48.97 V/m**



P28 E_Field CDMA2000 BC0_RC3+SO55_Full_Ch1013

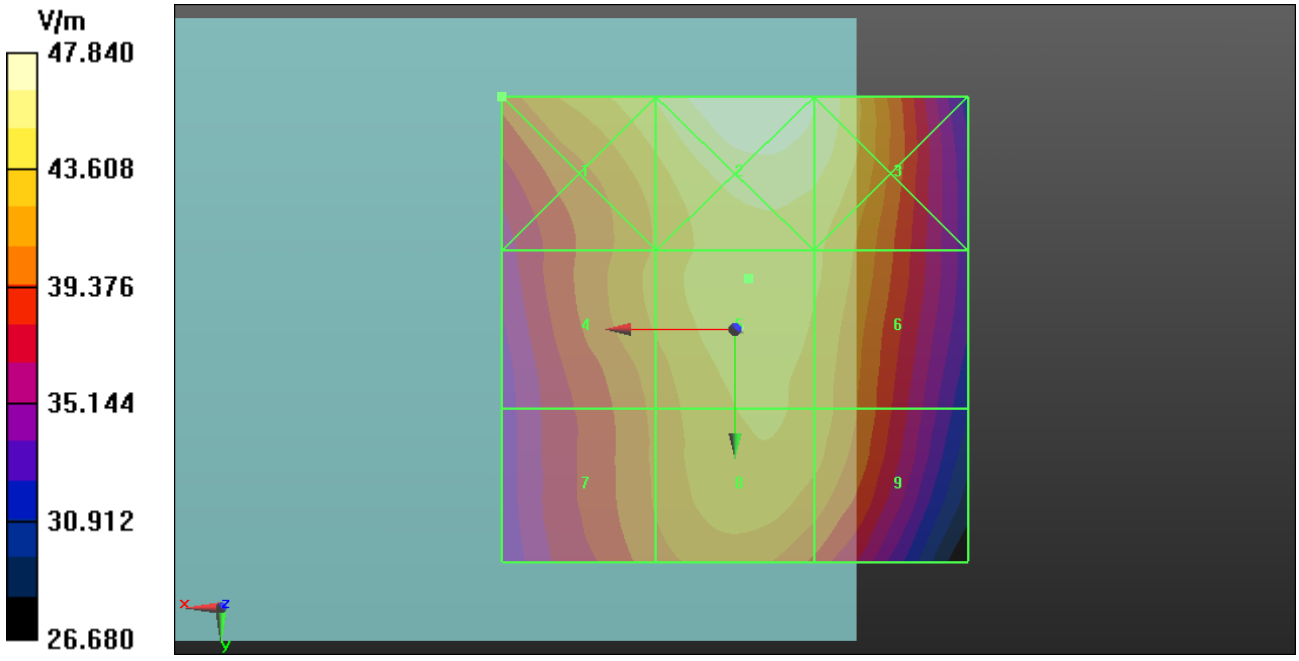
DUT: 120717C01

Communication System: CDMA2000 (1xRTT, RC3); Frequency: 836.52 MHz;Duty Cycle: 1:2.48886
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch1013/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 53.94 V/m; Power Drift = -0.02 dB
PMR calibrated. Calibrated PMF = 1.034 is applied.
E-field emissions = 44.68 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **45.20 V/m**	Grid 2 **M4** **47.84 V/m**	Grid 3 **M4** **46.62 V/m**
Grid 4 **M4** **42.70 V/m**	Grid 5 **M4** **44.68 V/m**	Grid 6 **M4** **43.93 V/m**
Grid 7 **M4** **41.21 V/m**	Grid 8 **M4** **43.82 V/m**	Grid 9 **M4** **43.06 V/m**



P29 E_Field CDMA2000 BC0_RC3+SO55_Full_Ch777

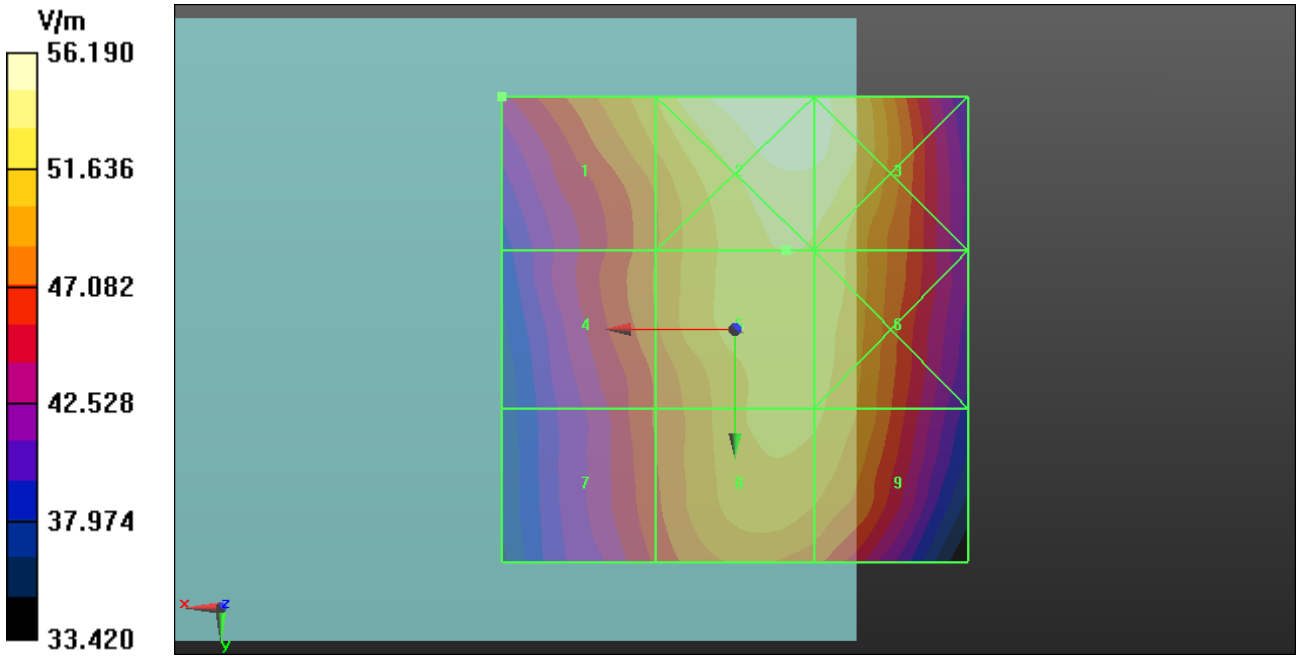
DUT: 120717C01

Communication System: CDMA2000 (1xRTT, RC3); Frequency: 836.52 MHz;Duty Cycle: 1:2.48886
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch777/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 63.09 V/m; Power Drift = -0.02 dB
PMR calibrated. Calibrated PMF = 1.034 is applied.
E-field emissions = 53.19 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **51.61 V/m**	Grid 2 **M4** **56.19 V/m**	Grid 3 **M4** **55.53 V/m**
Grid 4 **M4** **48.84 V/m**	Grid 5 **M4** **53.19 V/m**	Grid 6 **M4** **53.01 V/m**
Grid 7 **M4** **47.31 V/m**	Grid 8 **M4** **52.23 V/m**	Grid 9 **M4** **51.97 V/m**



P30 E_Field CDMA2000 BC1_RC3+SO55_Full_Ch600

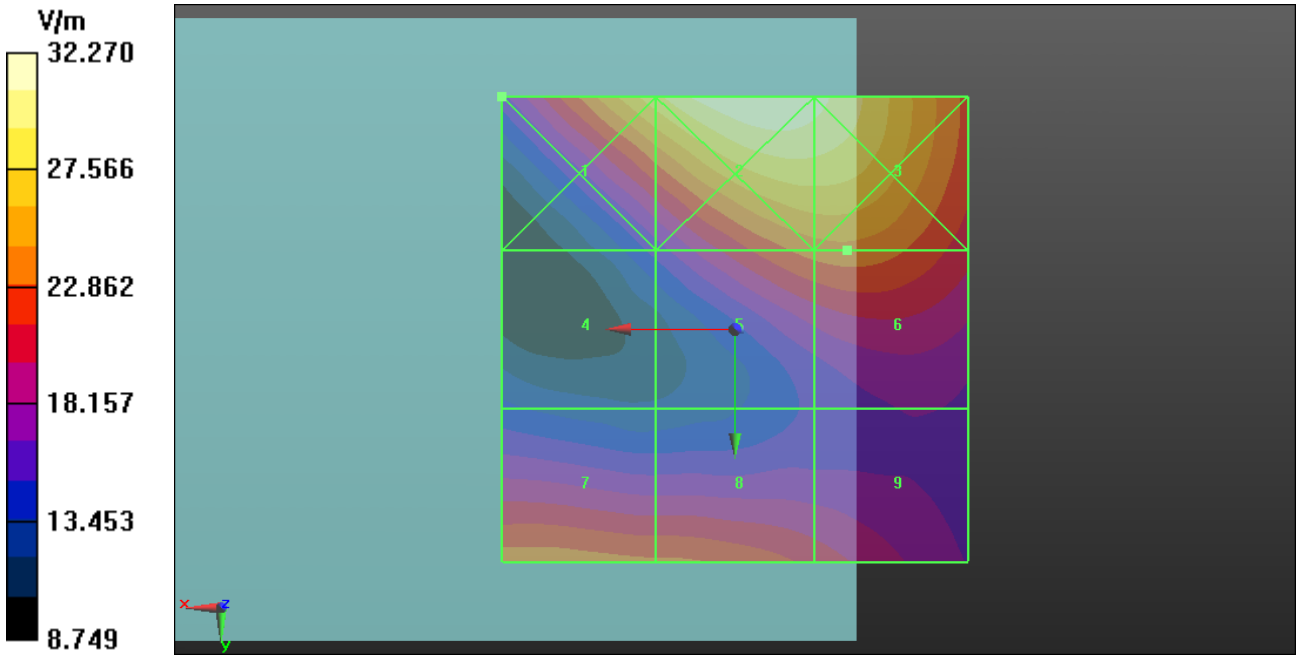
DUT: 120717C01

Communication System: CDMA2000 (1xRTT, RC3); Frequency: 1880 MHz;Duty Cycle: 1:2.48886
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch600/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 15.12 V/m; Power Drift = 0.00 dB
PMR calibrated. Calibrated PMF = 1.034 is applied.
E-field emissions = 23.92 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **28.69 V/m**	Grid 2 **M4** **32.27 V/m**	Grid 3 **M4** **31.31 V/m**
Grid 4 **M4** **15.77 V/m**	Grid 5 **M4** **23.58 V/m**	Grid 6 **M4** **23.92 V/m**
Grid 7 **M4** **23.87 V/m**	Grid 8 **M4** **23.20 V/m**	Grid 9 **M4** **20.79 V/m**



P31 E_Field CDMA2000 BC1_RC3+SO55_Full_Ch25

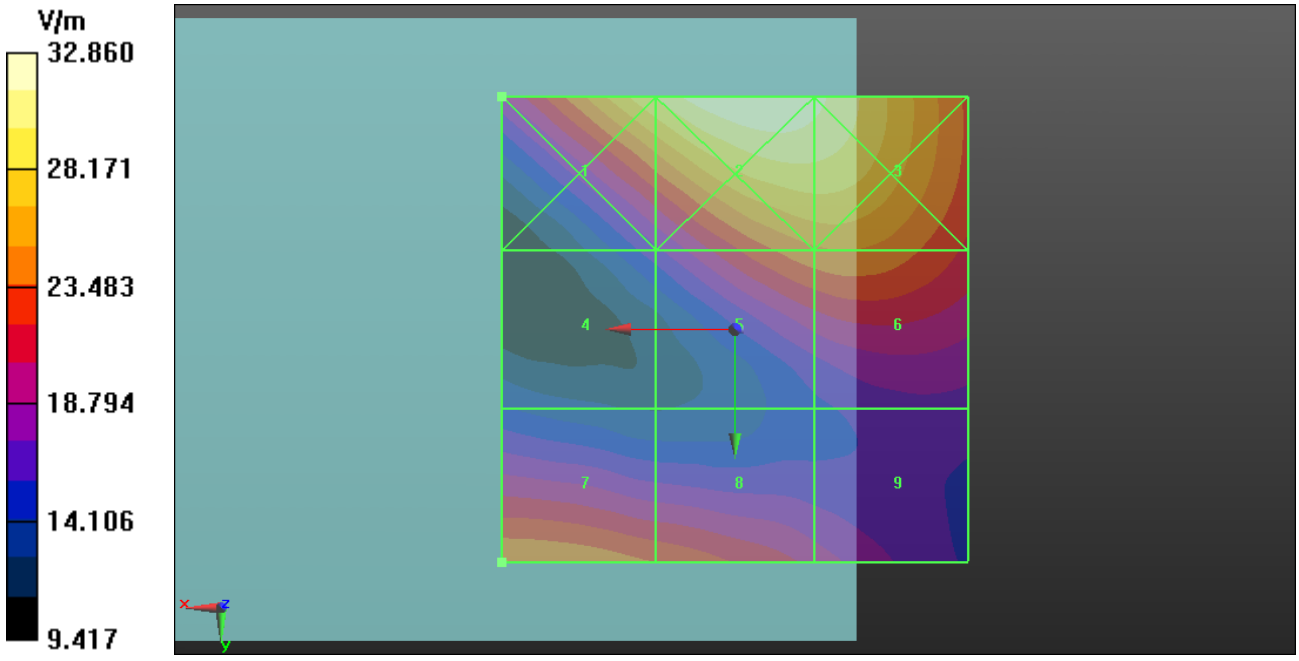
DUT: 120717C01

Communication System: CDMA2000 (1xRTT, RC3); Frequency: 1851.25 MHz;Duty Cycle: 1:2.48886
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch25/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 16.14 V/m; Power Drift = 0.02 dB
PMR calibrated. Calibrated PMF = 1.034 is applied.
E-field emissions = 25.17 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **29.89 V/m**	Grid 2 **M4** **32.86 V/m**	Grid 3 **M4** **31.77 V/m**
Grid 4 **M4** **16.88 V/m**	Grid 5 **M4** **24.75 V/m**	Grid 6 **M4** **25.08 V/m**
Grid 7 **M4** **25.17 V/m**	Grid 8 **M4** **23.50 V/m**	Grid 9 **M4** **19.81 V/m**



P32 E_Field CDMA2000 BC1_RC3+SO55_Full_Ch1175

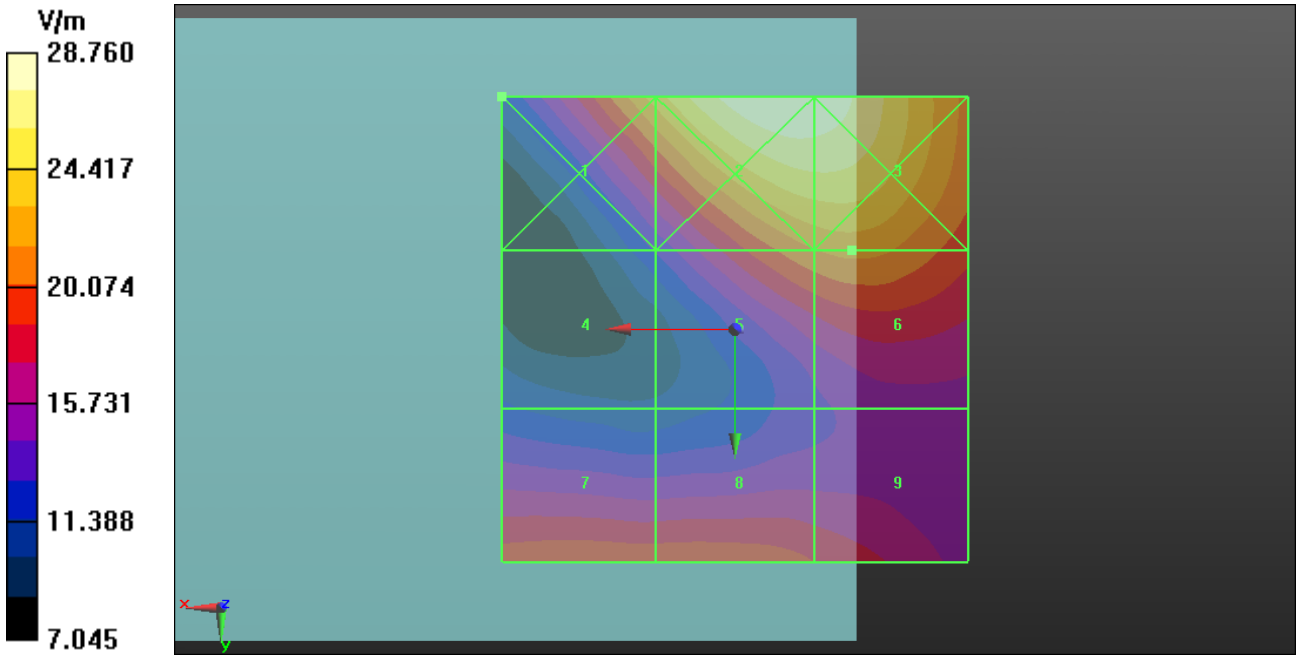
DUT: 120717C01

Communication System: CDMA2000 (1xRTT, RC3); Frequency: 1908.75 MHz;Duty Cycle: 1:2.48886
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: ER3DV6 - SN2445; ConvF(1, 1, 1); Calibrated: 2012/02/17;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch1175/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 13.25 V/m; Power Drift = 0.02 dB
PMR calibrated. Calibrated PMF = 1.034 is applied.
E-field emissions = 22.01 V/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **23.75 V/m**	Grid 2 **M4** **28.76 V/m**	Grid 3 **M4** **28.48 V/m**
Grid 4 **M4** **13.11 V/m**	Grid 5 **M4** **21.45 V/m**	Grid 6 **M4** **22.01 V/m**
Grid 7 **M4** **19.95 V/m**	Grid 8 **M4** **19.88 V/m**	Grid 9 **M4** **18.69 V/m**



P34 H_Field GSM850_Ch189

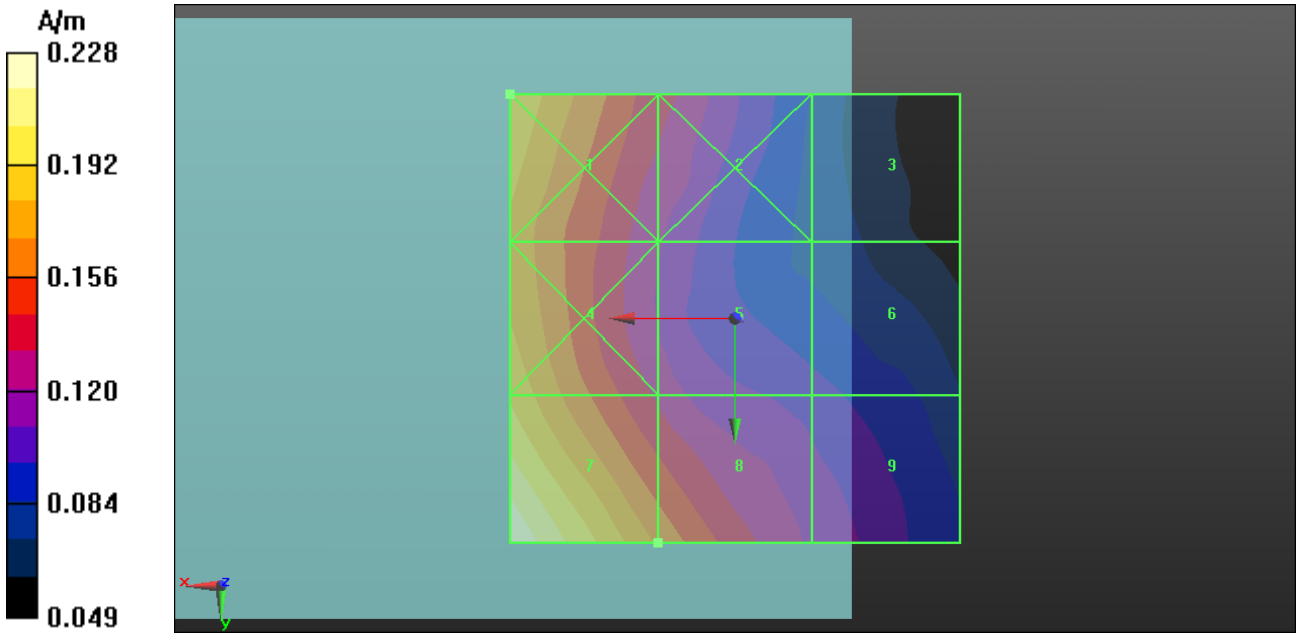
DUT: 120717C01

Communication System: GSM-FDD (TDMA, GMSK); Frequency: 836.6 MHz;Duty Cycle: 1:8.70964
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch189/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.03900 A/m; Power Drift = -0.15 dB
PMR calibrated. Calibrated PMF = 2.948 is applied.
H-field emissions = 0.2276 A/m
Near-field category: M4 (AWF -5 dB)

Grid 1 **M4** **0.193 A/m**	Grid 2 **M4** **0.137 A/m**	Grid 3 **M4** **0.085 A/m**
Grid 4 **M4** **0.191 A/m**	Grid 5 **M4** **0.130 A/m**	Grid 6 **M4** **0.103 A/m**
Grid 7 **M4** **0.228 A/m**	Grid 8 **M4** **0.167 A/m**	Grid 9 **M4** **0.119 A/m**



P35 H_Field GSM850_Ch128

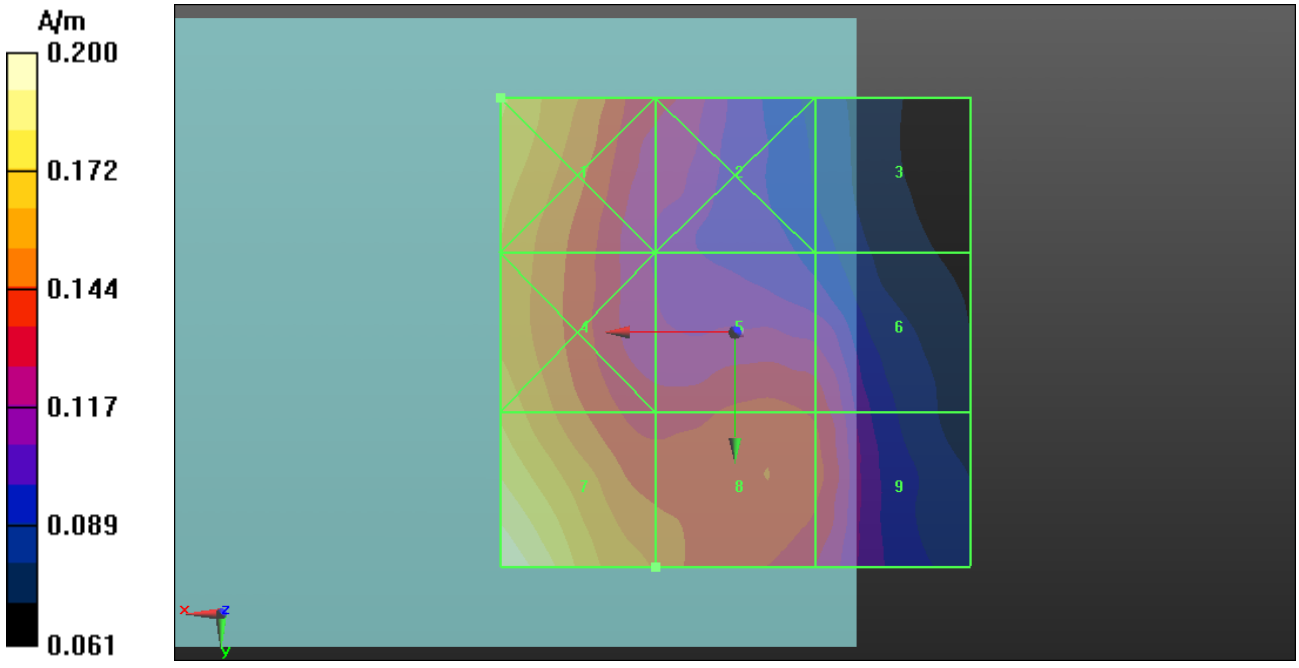
DUT: 120717C01

Communication System: GSM-FDD (TDMA, GMSK); Frequency: 824.2 MHz;Duty Cycle: 1:8.70964
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch128/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.04300 A/m; Power Drift = -0.14 dB
PMR calibrated. Calibrated PMF = 2.948 is applied.
H-field emissions = 0.1999 A/m
Near-field category: M4 (AWF -5 dB)

Grid 1 **M4** **0.174 A/m**	Grid 2 **M4** **0.128 A/m**	Grid 3 **M4** **0.095 A/m**
Grid 4 **M4** **0.171 A/m**	Grid 5 **M4** **0.139 A/m**	Grid 6 **M4** **0.133 A/m**
Grid 7 **M4** **0.200 A/m**	Grid 8 **M4** **0.152 A/m**	Grid 9 **M4** **0.139 A/m**



P36 H_Field GSM850_Ch251

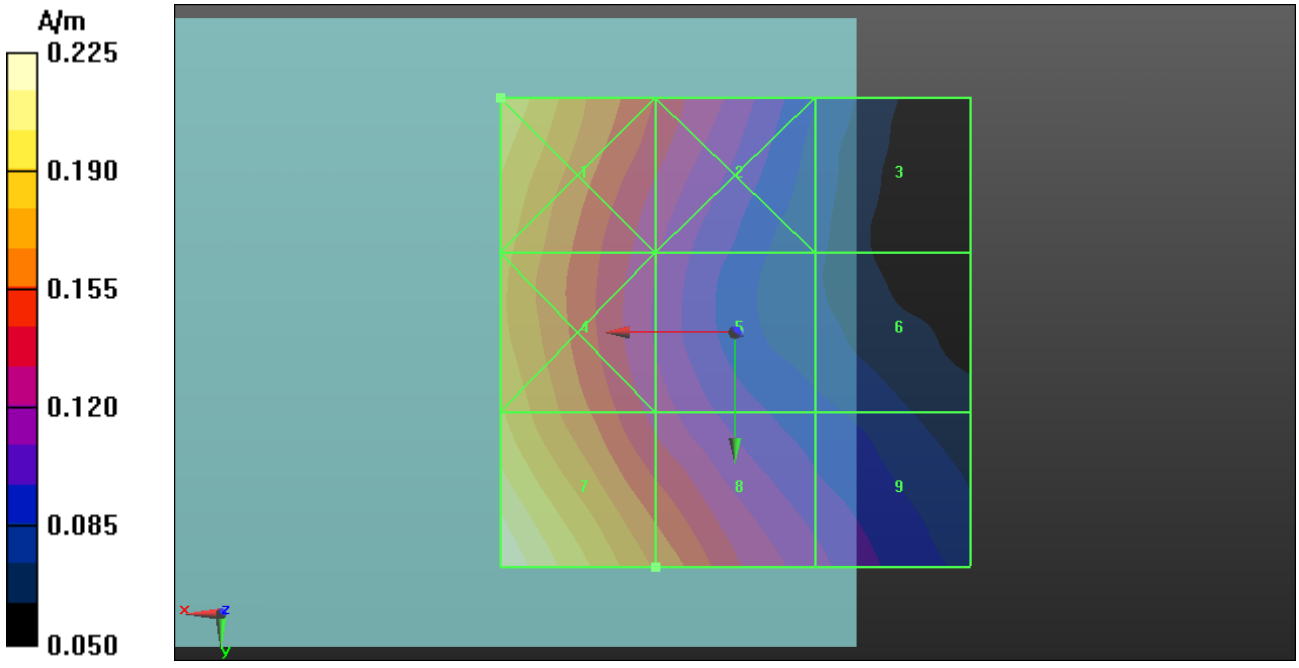
DUT: 120717C01

Communication System: GSM-FDD (TDMA, GMSK); Frequency: 848.6 MHz;Duty Cycle: 1:8.70964
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch251/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.03200 A/m; Power Drift = 0.02 dB
PMR calibrated. Calibrated PMF = 2.948 is applied.
H-field emissions = 0.2246 A/m
Near-field category: M4 (AWF -5 dB)

Grid 1 **M4** **0.201 A/m**	Grid 2 **M4** **0.143 A/m**	Grid 3 **M4** **0.087 A/m**
Grid 4 **M4** **0.191 A/m**	Grid 5 **M4** **0.128 A/m**	Grid 6 **M4** **0.090 A/m**
Grid 7 **M4** **0.225 A/m**	Grid 8 **M4** **0.165 A/m**	Grid 9 **M4** **0.113 A/m**



P52 H_Field GSM1900_Ch810

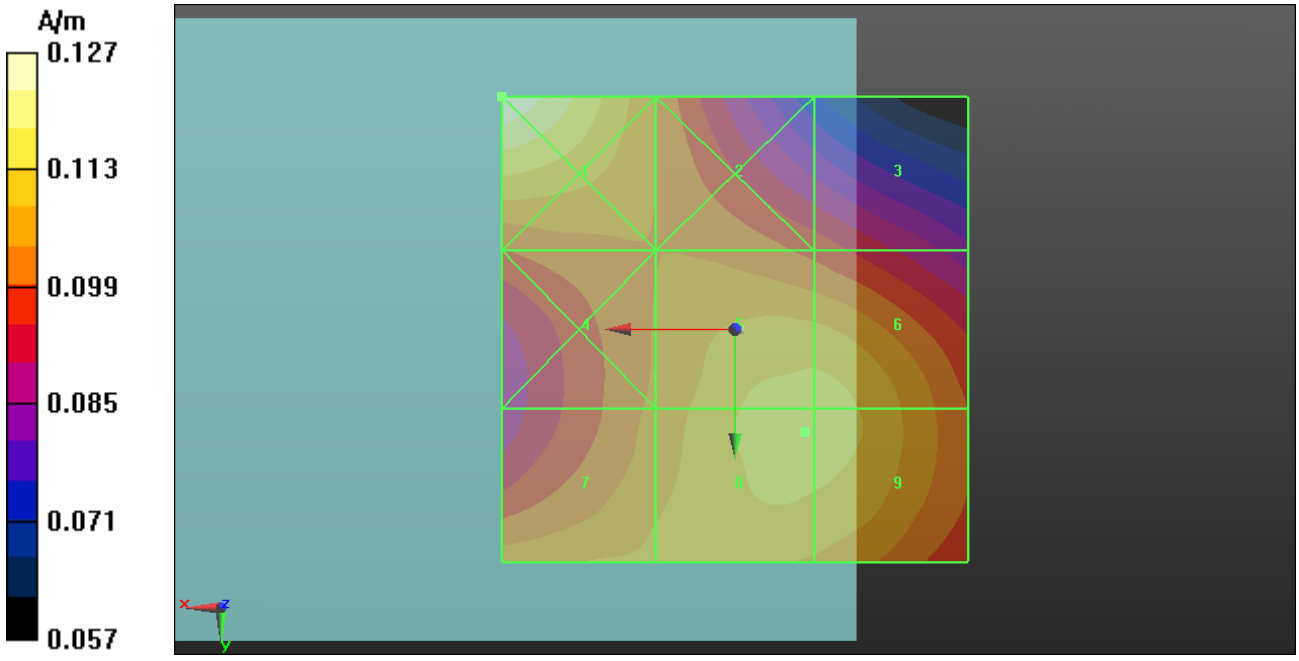
DUT: 120717C01

Communication System: GSM-FDD (TDMA, GMSK); Frequency: 1909.8 MHz;Duty Cycle: 1:8.70964
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch810/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.04000 A/m; Power Drift = 0.00 dB
PMR calibrated. Calibrated PMF = 2.948 is applied.
H-field emissions = 0.1155 A/m
Near-field category: M4 (AWF -5 dB)

Grid 1 **M4** **0.127 A/m**	Grid 2 **M4** **0.104 A/m**	Grid 3 **M4** **0.098 A/m**
Grid 4 **M4** **0.105 A/m**	Grid 5 **M4** **0.115 A/m**	Grid 6 **M4** **0.115 A/m**
Grid 7 **M4** **0.109 A/m**	Grid 8 **M4** **0.115 A/m**	Grid 9 **M4** **0.115 A/m**



P53 H_Field GSM1900_Ch661

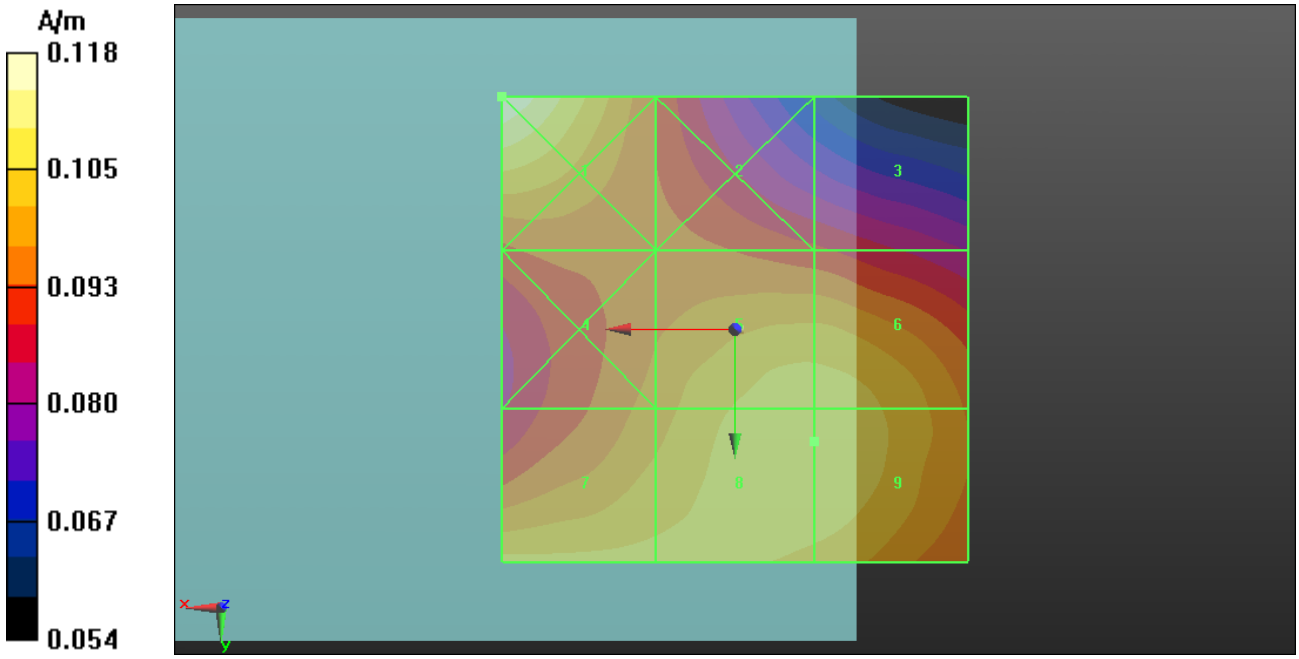
DUT: 120717C01

Communication System: GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz;Duty Cycle: 1:8.70964
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch661/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.03600 A/m; Power Drift = 0.06 dB
PMR calibrated. Calibrated PMF = 2.948 is applied.
H-field emissions = 0.1094 A/m
Near-field category: M4 (AWF -5 dB)

Grid 1 **M4** **0.118 A/m**	Grid 2 **M4** **0.095 A/m**	Grid 3 **M4** **0.089 A/m**
Grid 4 **M4** **0.099 A/m**	Grid 5 **M4** **0.109 A/m**	Grid 6 **M4** **0.109 A/m**
Grid 7 **M4** **0.107 A/m**	Grid 8 **M4** **0.109 A/m**	Grid 9 **M4** **0.109 A/m**



P54 H_Field GSM1900_Ch512

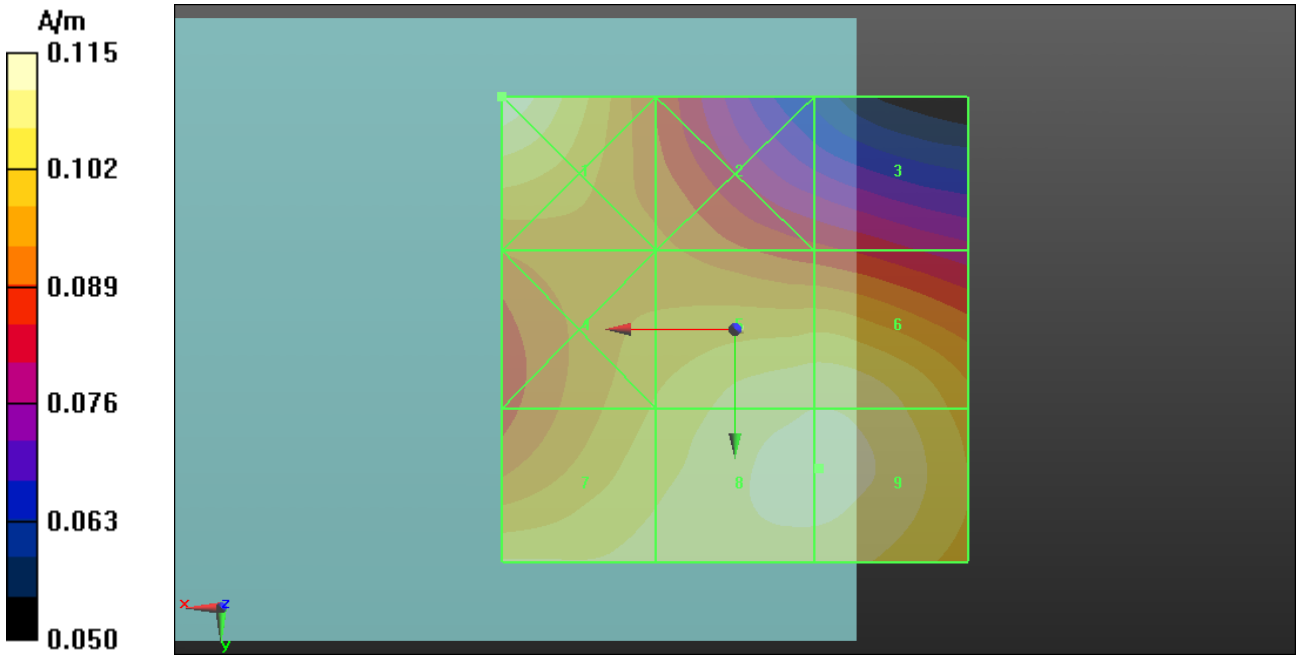
DUT: 120717C01

Communication System: GSM-FDD (TDMA, GMSK); Frequency: 1850.2 MHz;Duty Cycle: 1:8.70964
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch512/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.03600 A/m; Power Drift = 0.09 dB
PMR calibrated. Calibrated PMF = 2.948 is applied.
H-field emissions = 0.1125 A/m
Near-field category: M4 (AWF -5 dB)

Grid 1 **M4** **0.115 A/m**	Grid 2 **M4** **0.095 A/m**	Grid 3 **M4** **0.087 A/m**
Grid 4 **M4** **0.103 A/m**	Grid 5 **M4** **0.111 A/m**	Grid 6 **M4** **0.111 A/m**
Grid 7 **M4** **0.108 A/m**	Grid 8 **M4** **0.112 A/m**	Grid 9 **M4** **0.112 A/m**



P40 H_Field WCDMA V_Ch4182

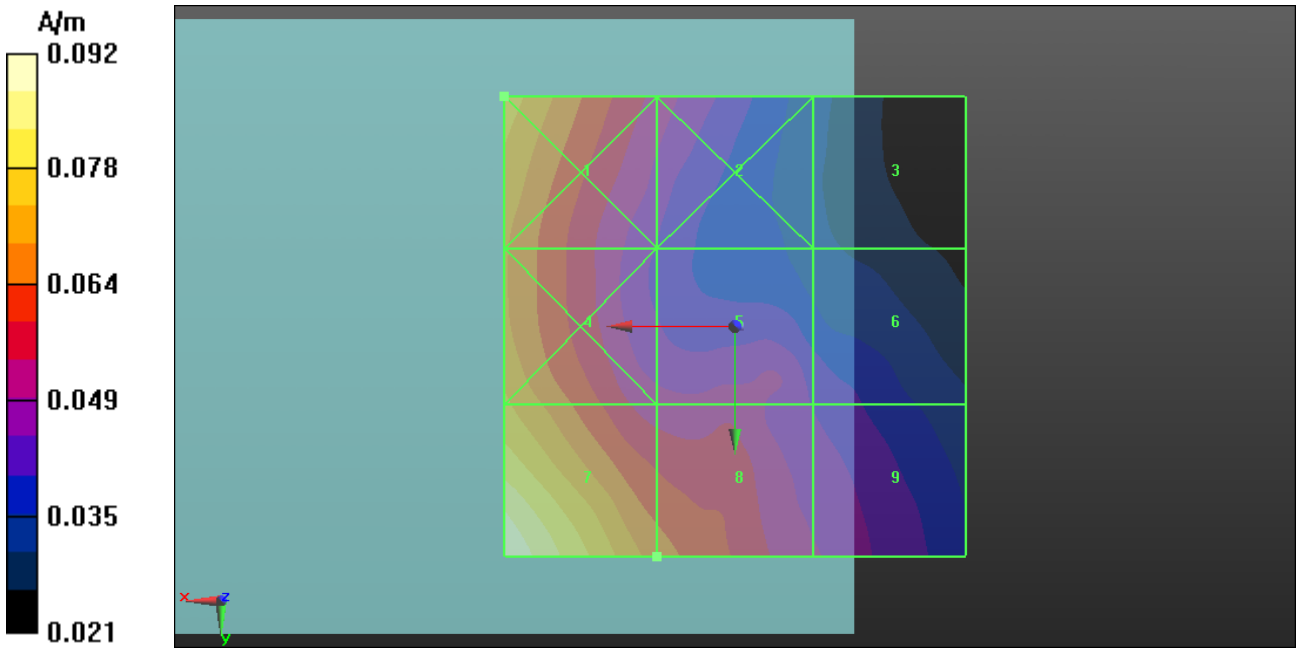
DUT: 120717C01

Communication System: UMTS-FDD (WCDMA); Frequency: 836.4 MHz;Duty Cycle: 1:2.18776
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4182/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.05700 A/m; Power Drift = -0.16 dB
PMR calibrated. Calibrated PMF = 1.020 is applied.
H-field emissions = 0.09221 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.076 A/m**	Grid 2 **M4** **0.053 A/m**	Grid 3 **M4** **0.033 A/m**
Grid 4 **M4** **0.074 A/m**	Grid 5 **M4** **0.052 A/m**	Grid 6 **M4** **0.045 A/m**
Grid 7 **M4** **0.092 A/m**	Grid 8 **M4** **0.067 A/m**	Grid 9 **M4** **0.050 A/m**



P41 H_Field WCDMA V_Ch4132

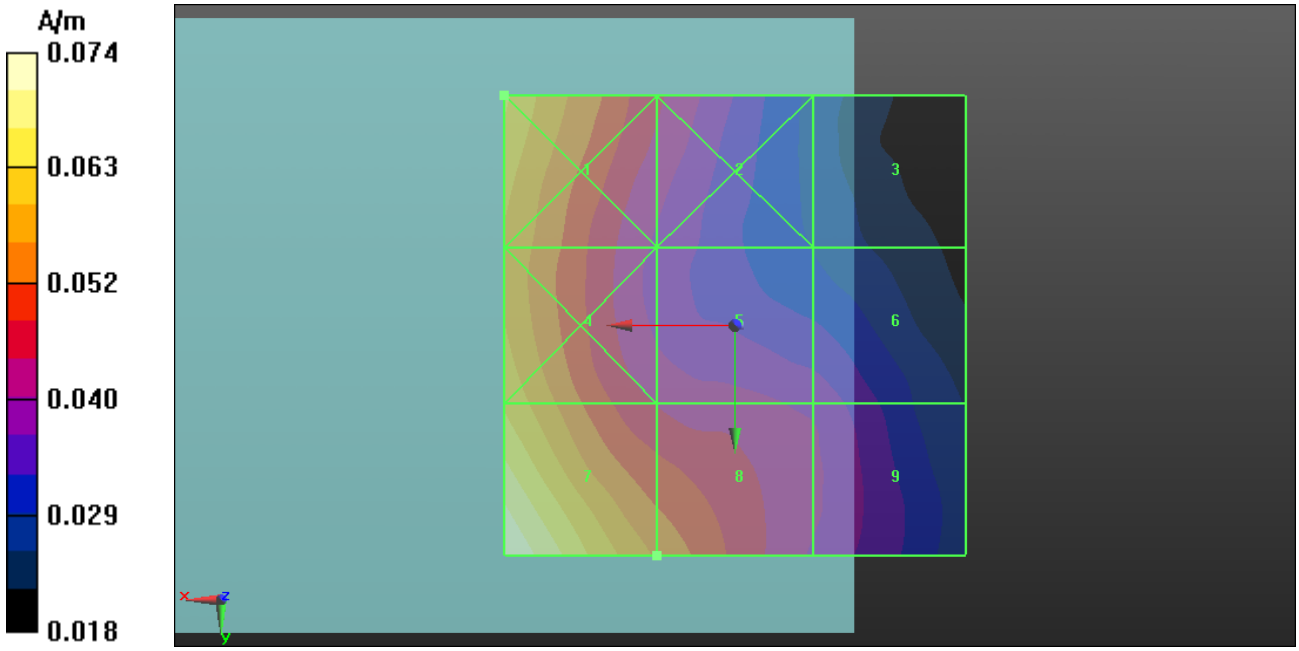
DUT: 120717C01

Communication System: UMTS-FDD (WCDMA); Frequency: 826.4 MHz;Duty Cycle: 1:2.18776
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4132/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.04600 A/m; Power Drift = 0.02 dB
PMR calibrated. Calibrated PMF = 1.020 is applied.
H-field emissions = 0.07415 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.064 A/m**	Grid 2 **M4** **0.045 A/m**	Grid 3 **M4** **0.029 A/m**
Grid 4 **M4** **0.063 A/m**	Grid 5 **M4** **0.044 A/m**	Grid 6 **M4** **0.039 A/m**
Grid 7 **M4** **0.074 A/m**	Grid 8 **M4** **0.055 A/m**	Grid 9 **M4** **0.041 A/m**



P42 H_Field WCDMA V_Ch4233

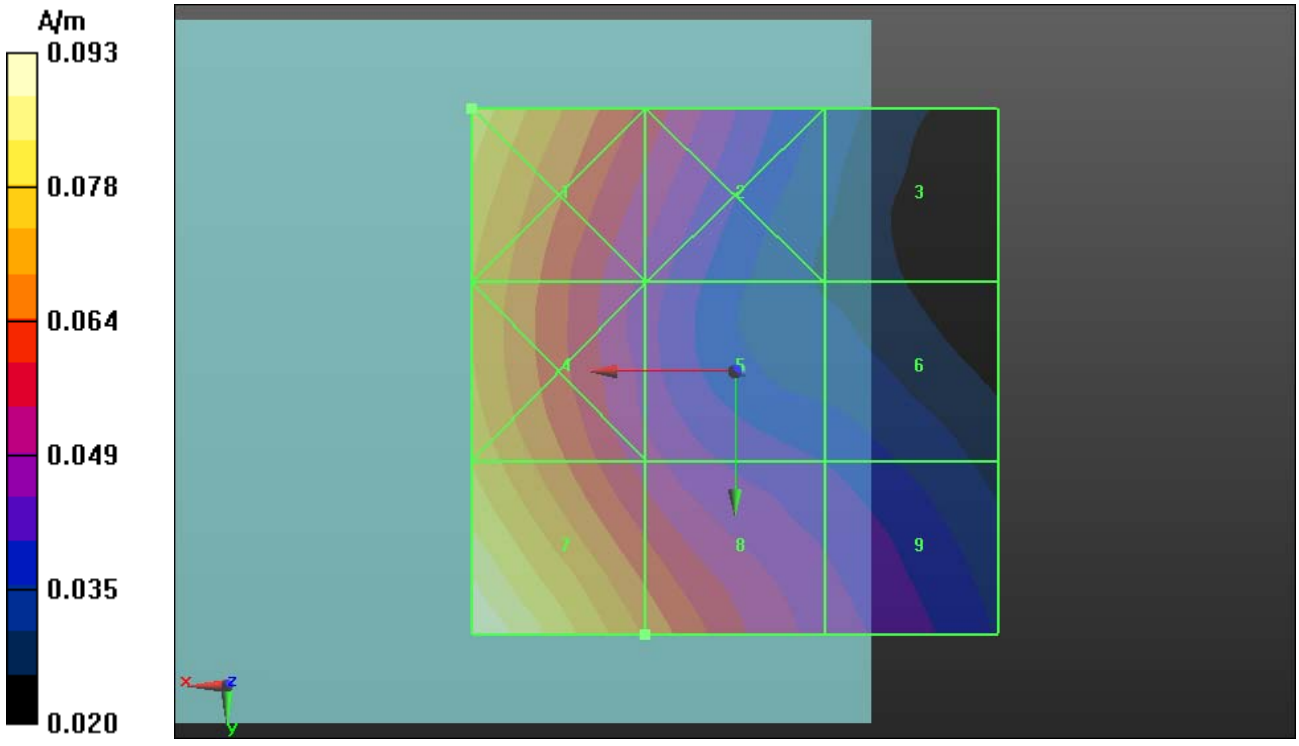
DUT: 120717C01

Communication System: UMTS-FDD (WCDMA); Frequency: 846.6 MHz;Duty Cycle: 1:2.18776
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4233/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.04000 A/m; Power Drift = 0.09 dB
PMR calibrated. Calibrated PMF = 1.020 is applied.
H-field emissions = 0.09294 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.082 A/m**	Grid 2 **M4** **0.058 A/m**	Grid 3 **M4** **0.034 A/m**
Grid 4 **M4** **0.078 A/m**	Grid 5 **M4** **0.052 A/m**	Grid 6 **M4** **0.040 A/m**
Grid 7 **M4** **0.093 A/m**	Grid 8 **M4** **0.068 A/m**	Grid 9 **M4** **0.048 A/m**



P43 H_Field WCDMA II_Ch9400

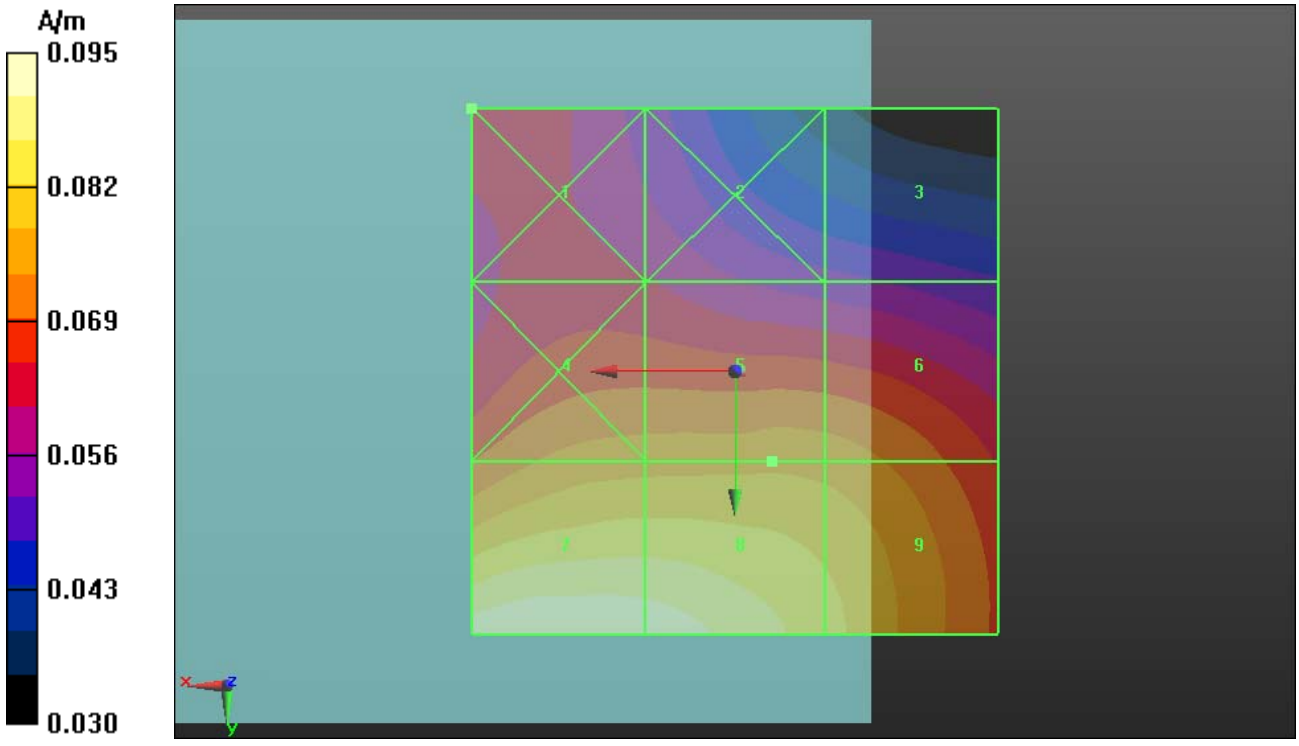
DUT: 120717C01

Communication System: UMTS-FDD (WCDMA); Frequency: 1880 MHz;Duty Cycle: 1:2.18776
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9400/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.06800 A/m; Power Drift = -0.03 dB
PMR calibrated. Calibrated PMF = 1.020 is applied.
H-field emissions = 0.09534 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.064 A/m**	Grid 2 **M4** **0.061 A/m**	Grid 3 **M4** **0.054 A/m**
Grid 4 **M4** **0.076 A/m**	Grid 5 **M4** **0.077 A/m**	Grid 6 **M4** **0.076 A/m**
Grid 7 **M4** **0.095 A/m**	Grid 8 **M4** **0.094 A/m**	Grid 9 **M4** **0.084 A/m**



P44 H_Field WCDMA II_Ch9262

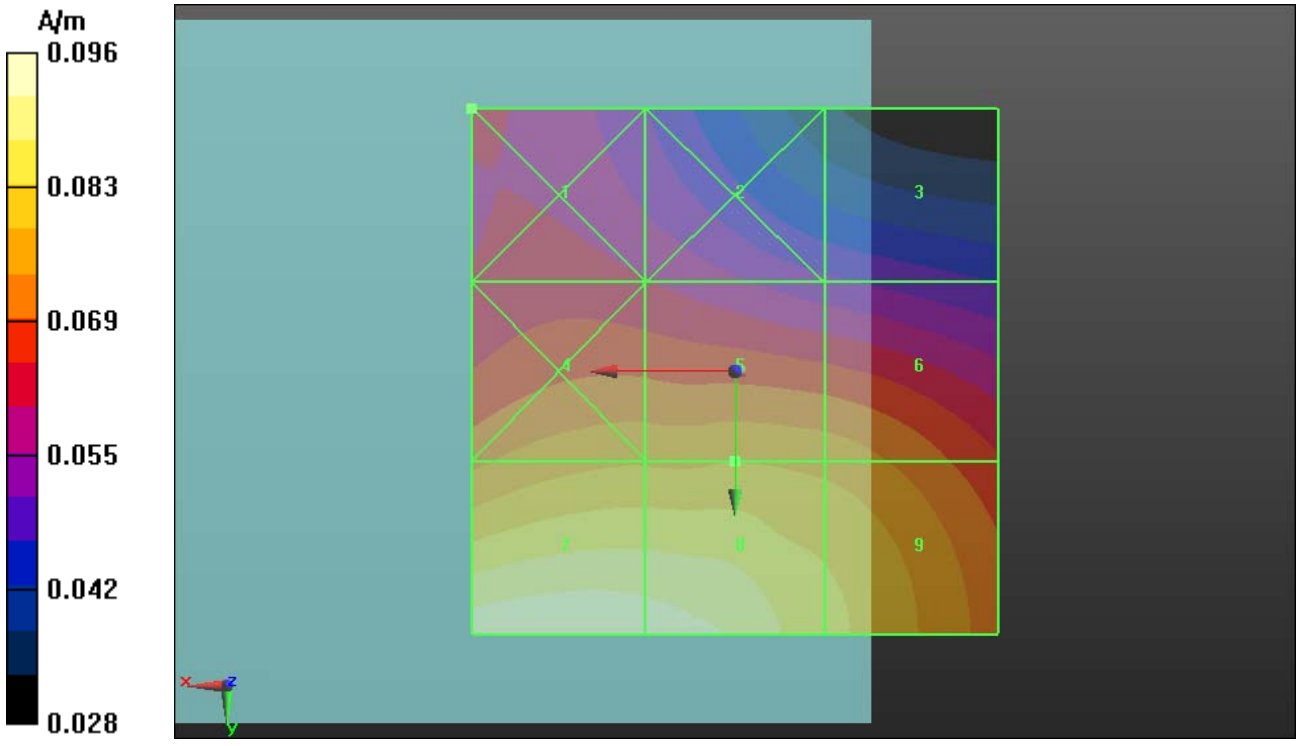
DUT: 120717C01

Communication System: UMTS-FDD (WCDMA); Frequency: 1852.4 MHz;Duty Cycle: 1:2.18776
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9262/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.06800 A/m; Power Drift = -0.01 dB
PMR calibrated. Calibrated PMF = 1.020 is applied.
H-field emissions = 0.09622 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.063 A/m**	Grid 2 **M4** **0.060 A/m**	Grid 3 **M4** **0.052 A/m**
Grid 4 **M4** **0.078 A/m**	Grid 5 **M4** **0.078 A/m**	Grid 6 **M4** **0.077 A/m**
Grid 7 **M4** **0.096 A/m**	Grid 8 **M4** **0.095 A/m**	Grid 9 **M4** **0.084 A/m**



P45 H_Field WCDMA II_Ch9538

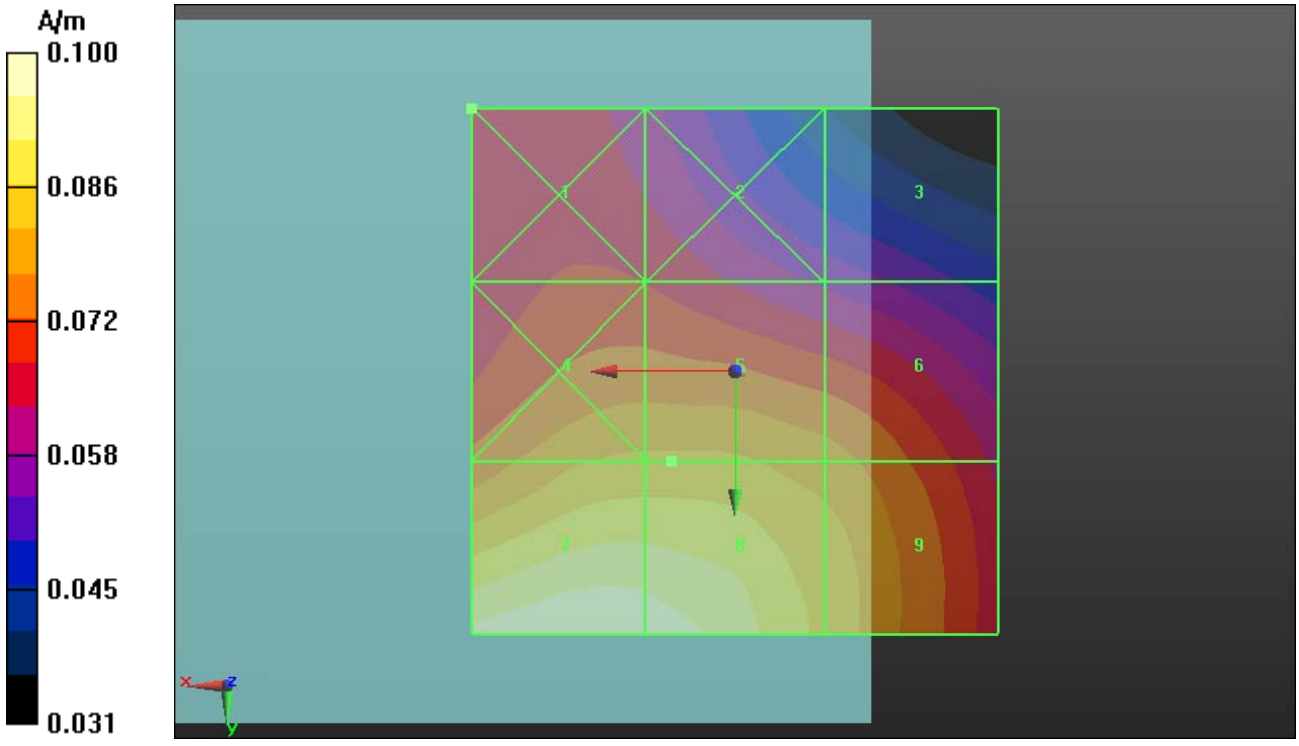
DUT: 120717C01

Communication System: UMTS-FDD (WCDMA); Frequency: 1907.6 MHz;Duty Cycle: 1:2.18776
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9538/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.07400 A/m; Power Drift = -0.12 dB
PMR calibrated. Calibrated PMF = 1.020 is applied.
H-field emissions = 0.09953 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.068 A/m**	Grid 2 **M4** **0.068 A/m**	Grid 3 **M4** **0.058 A/m**
Grid 4 **M4** **0.082 A/m**	Grid 5 **M4** **0.082 A/m**	Grid 6 **M4** **0.079 A/m**
Grid 7 **M4** **0.100 A/m**	Grid 8 **M4** **0.098 A/m**	Grid 9 **M4** **0.085 A/m**



P46 H_Field CDMA2000 BC0_RC3+SO55_Full_Ch384

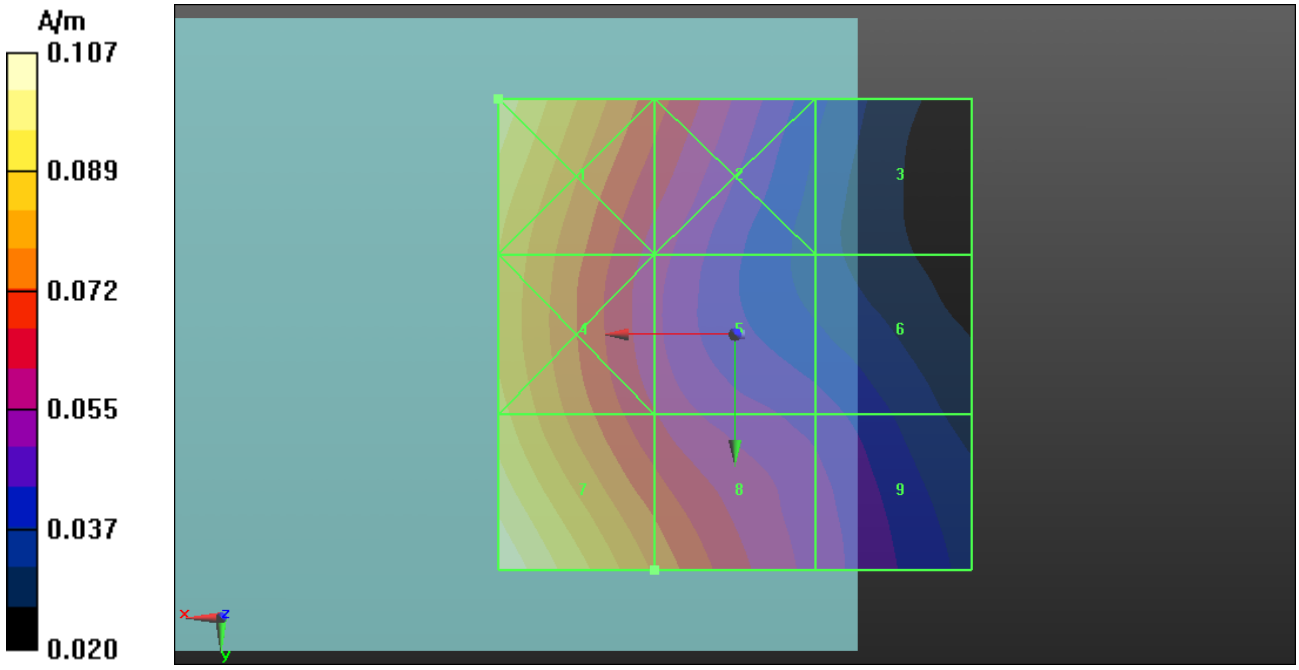
DUT: 120717C01

Communication System: CDMA2000 (1xRTT, RC3); Frequency: 836.52 MHz;Duty Cycle: 1:2.48886
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch384/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.04900 A/m; Power Drift = -0.02 dB
PMR calibrated. Calibrated PMF = 1.034 is applied.
H-field emissions = 0.1067 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.099 A/m**	Grid 2 **M4** **0.069 A/m**	Grid 3 **M4** **0.040 A/m**
Grid 4 **M4** **0.092 A/m**	Grid 5 **M4** **0.061 A/m**	Grid 6 **M4** **0.046 A/m**
Grid 7 **M4** **0.107 A/m**	Grid 8 **M4** **0.077 A/m**	Grid 9 **M4** **0.053 A/m**



P47 H_Field CDMA2000 BC0_RC3+SO55_Full_Ch1013

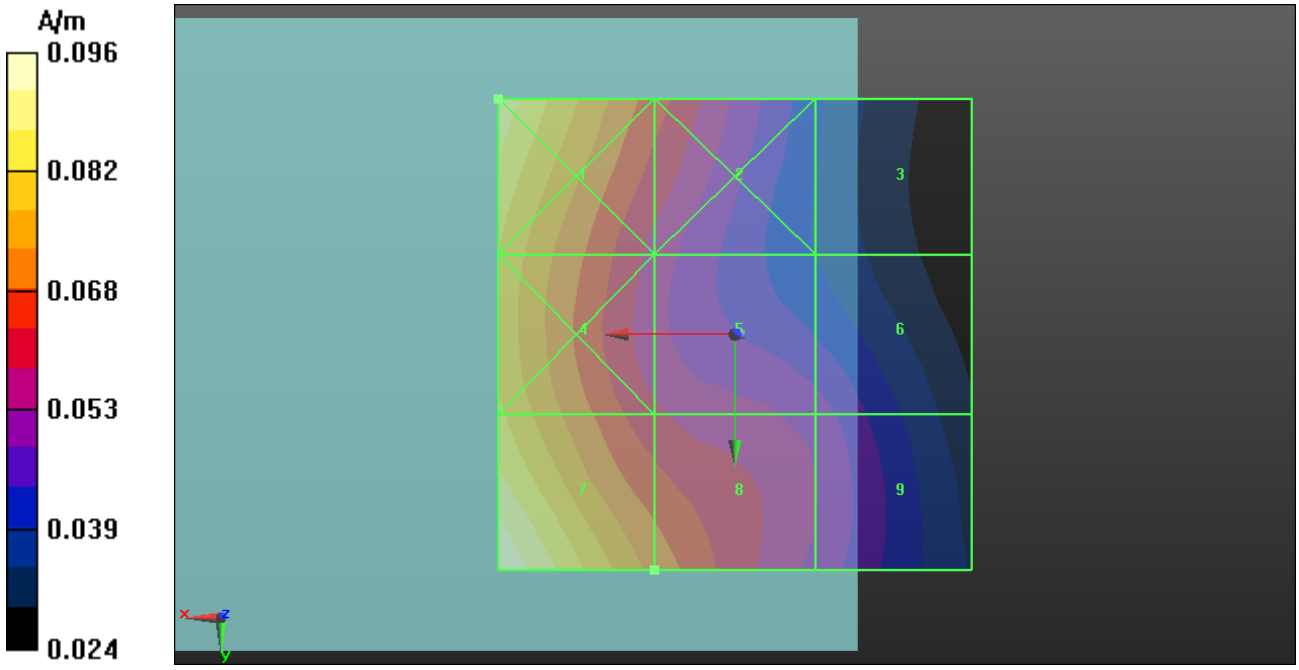
DUT: 120717C01

Communication System: CDMA2000 (1xRTT, RC3); Frequency: 824.7 MHz;Duty Cycle: 1:2.48886
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch1013/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.05800 A/m; Power Drift = -0.16 dB
PMR calibrated. Calibrated PMF = 1.034 is applied.
H-field emissions = 0.09647 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.091 A/m**	Grid 2 **M4** **0.065 A/m**	Grid 3 **M4** **0.040 A/m**
Grid 4 **M4** **0.083 A/m**	Grid 5 **M4** **0.059 A/m**	Grid 6 **M4** **0.051 A/m**
Grid 7 **M4** **0.096 A/m**	Grid 8 **M4** **0.071 A/m**	Grid 9 **M4** **0.054 A/m**



P48 H_Field CDMA2000 BC0_RC3+SO55_Full_Ch777

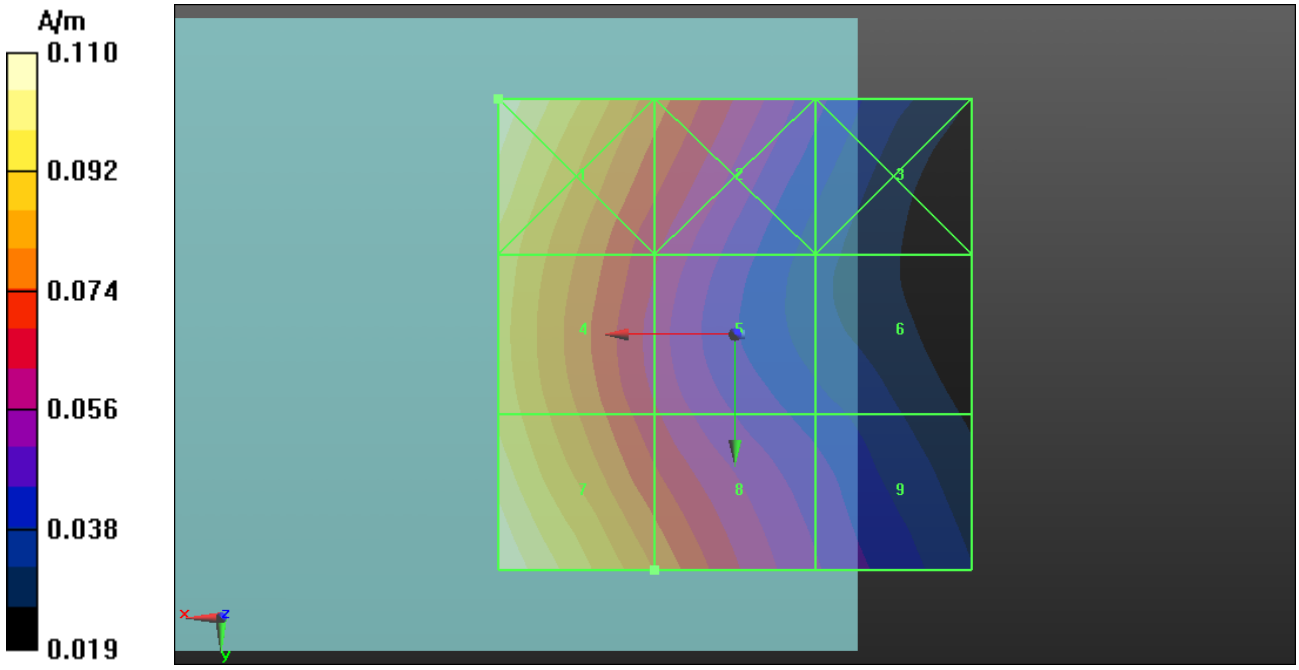
DUT: 120717C01

Communication System: CDMA2000 (1xRTT, RC3); Frequency: 848.31 MHz;Duty Cycle: 1:2.48886
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch777/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.04300 A/m; Power Drift = 0.16 dB
PMR calibrated. Calibrated PMF = 1.034 is applied.
H-field emissions = 0.1100 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.109 A/m**	Grid 2 **M4** **0.077 A/m**	Grid 3 **M4** **0.046 A/m**
Grid 4 **M4** **0.097 A/m**	Grid 5 **M4** **0.063 A/m**	Grid 6 **M4** **0.041 A/m**
Grid 7 **M4** **0.110 A/m**	Grid 8 **M4** **0.080 A/m**	Grid 9 **M4** **0.051 A/m**



P49 H_Field CDMA2000 BC1_RC3+SO55_Full_Ch600

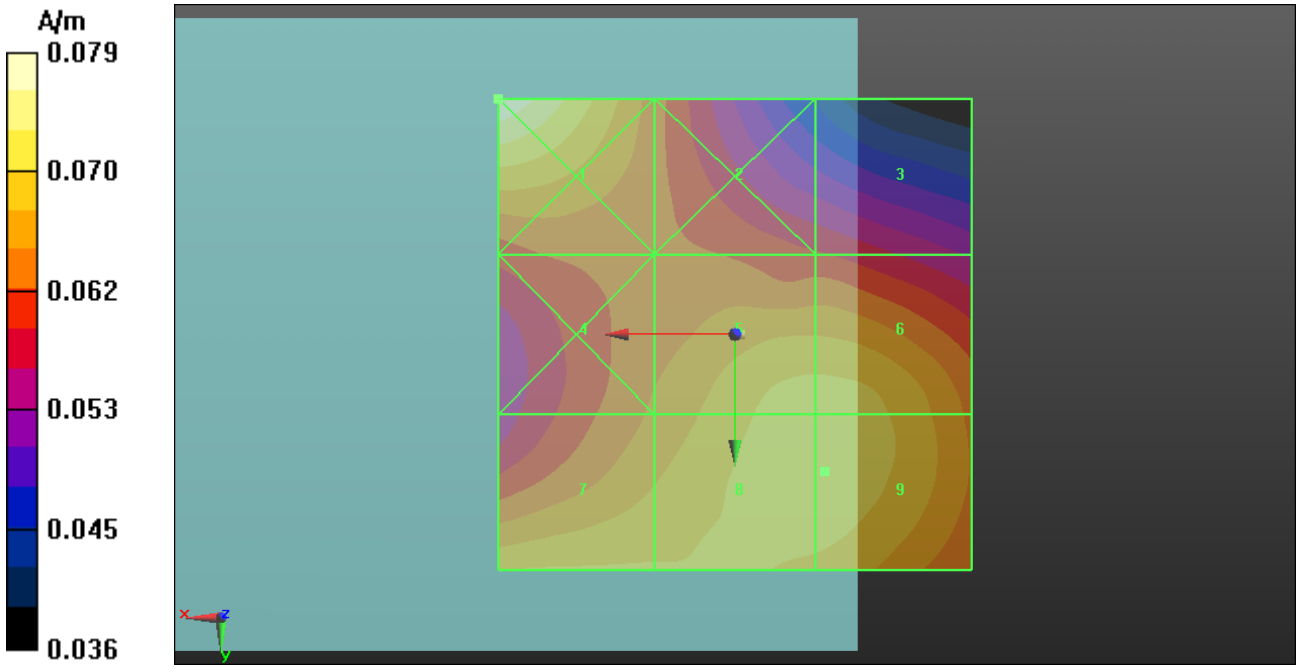
DUT: 120717C01

Communication System: CDMA2000 (1xRTT, RC3); Frequency: 1880 MHz;Duty Cycle: 1:2.48886
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch600/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.06900 A/m; Power Drift = 0.00 dB
PMR calibrated. Calibrated PMF = 1.034 is applied.
H-field emissions = 0.07288 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.079 A/m**	Grid 2 **M4** **0.063 A/m**	Grid 3 **M4** **0.060 A/m**
Grid 4 **M4** **0.065 A/m**	Grid 5 **M4** **0.072 A/m**	Grid 6 **M4** **0.072 A/m**
Grid 7 **M4** **0.071 A/m**	Grid 8 **M4** **0.073 A/m**	Grid 9 **M4** **0.073 A/m**



P50 H_Field CDMA2000 BC1_RC3+SO55_Full_Ch25

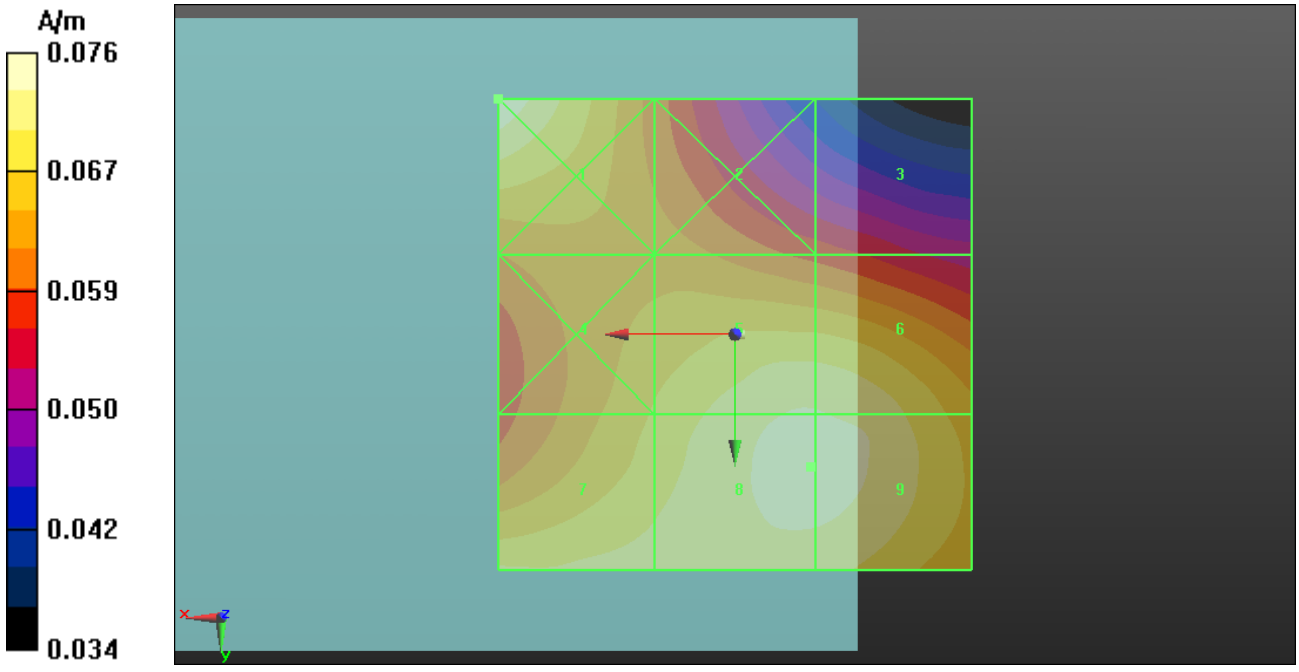
DUT: 120717C01

Communication System: CDMA2000 (1xRTT, RC3); Frequency: 1851.25 MHz;Duty Cycle: 1:2.48886
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch25/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.06900 A/m; Power Drift = -0.05 dB
PMR calibrated. Calibrated PMF = 1.034 is applied.
H-field emissions = 0.07380 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.076 A/m**	Grid 2 **M4** **0.063 A/m**	Grid 3 **M4** **0.058 A/m**
Grid 4 **M4** **0.067 A/m**	Grid 5 **M4** **0.073 A/m**	Grid 6 **M4** **0.073 A/m**
Grid 7 **M4** **0.071 A/m**	Grid 8 **M4** **0.074 A/m**	Grid 9 **M4** **0.074 A/m**



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2012/08/05

P51 H_Field CDMA2000 BC1_RC3+SO55_Full_Ch1175

DUT: 120717C01

Communication System: CDMA2000 (1xRTT, RC3); Frequency: 1908.75 MHz;Duty Cycle: 1:2.48886
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Ambient Temperature：21.6 ℃;

DASY5 Configuration:
- Probe: H3DV6 - SN6274; ; Calibrated: 2012/02/17
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch1175/Hearing Aid Compatibility (101x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.06600 A/m; Power Drift = 0.15 dB
PMR calibrated. Calibrated PMF = 1.034 is applied.
H-field emissions = 0.06879 A/m
Near-field category: M4 (AWF 0 dB)

Grid 1 **M4** **0.073 A/m**	Grid 2 **M4** **0.062 A/m**	Grid 3 **M4** **0.058 A/m**
Grid 4 **M4** **0.063 A/m**	Grid 5 **M4** **0.069 A/m**	Grid 6 **M4** **0.069 A/m**
Grid 7 **M4** **0.066 A/m**	Grid 8 **M4** **0.069 A/m**	Grid 9 **M4** **0.069 A/m**