HAC RF TEST REPORT

No. I16Z41093-SEM04

For

TCL Communication Ltd.

CDMA EVDO BC0/BC1 2band Mobile phone

Model Name: A573VC

With

HW version: PIO

SW version: vQAS3

FCC ID: 2ACCJB027

Results Summary: M Category = M4

Issued Date: 2016-6-1

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Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

Test Laboratory:

CTTL, Telecommunication Technology Labs, Academy of Telecommunication Research, MIIT

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REPORT HISTORY

Report Number	Revision	Issue Date	Description
I16Z41093-SEM04	Rev.0	2016-6-1	Initial creation of test report

TABLE OF CONTENT

1 Test Laboratory

1.1 Testing Location

Company Name:	CTTL(Shouxiang)
Address:	No. 51 Shouxiang Science Building, Xueyuan Road, Haidian District, Beijing, P. R. China100191

1.2 Testing Environment

Temperature:	18°C~25 °C,
Relative humidity:	30%~ 70%
Ground system resistance:	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards	

1.3 Project Data

Project Leader:	Qi Dianyuan
Test Engineer:	Lin Hao
Testing Start Date:	January 1, 2016
Testing End Date:	January 1, 2016

1.4 Signature

Lin Hao

(Prepared this test report)

Qi Dianyuan

(Reviewed this test report)

Xiao Li

Deputy Director of the laboratory

(Approved this test report)

2 Client Information

2.1 Applicant Information

Company Name:	TCL Communication Ltd.
Address /Post:	5F, C building, No. 232, Liang Jing Road, ZhangJiang High-Tech Park, Pudong Area, Shanghai, P.R. China. 201203
City:	Shanghai
Postal Code:	201203
Country:	P.R.China
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2.2 Manufacturer Information

Company Name:	TCL Communication Ltd.
Address /Post:	5F, C building, No. 232, Liang Jing Road, ZhangJiang High-Tech Park, Pudong Area, Shanghai, P.R. China. 201203
City:	Shanghai
Postal Code:	201203
Country:	P.R.China
Contact:	Gong Zhizhou
Email:	zhizhou.gong@tcl.com
Telephone:	+86 21 51798260
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3 Equipment Under Test (EUT) and Ancillary Equipment (AE)

This EUT is a variant product and the report of original sample is No.I15Z43256-SEM04. According to the client request, we quote the test results of original sample directly.

3.1 About EUT

Description:	CDMA EVDO BC0/BC1 2band Mobile phone
Model name:	A573VC
Operating mode(s):	CDMA BC 0/1, BT, Wi-Fi

3.2 Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
EUT1	/	PIO	vQAS3

*EUT ID: is used to identify the test sample in the lab internally.

3.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	TLi017C1	CAB1780002C1	BYD

*AE ID: is used to identify the test sample in the lab internally.

3.4 Air Interfaces / Bands Indicating Operating Modes

Air-interface	Band(MHz)	Type	C63.19/tested	Simultaneous Transmissions	OTT	Power Reduction
CDMA	BC0	VO	Yes	BT, WLAN	NA	NA
	BC1					
BT	2450	DT	NA	CDMA	NA	NA
WLAN	2450	DT	NA	CDMA	NA	NA

VO: Voice CMRS/PSTN Service Only

V/D: Voice CMRS/PSTN and Data Service

DT: Digital Transport

* HAC Rating was not based on concurrent voice and data modes, Non current mode was found to represent worst case rating for both M and T rating

4 CONDUCTED OUTPUT POWER MEASUREMENT

4.1 Summary

During the process of testing, the EUT was controlled via Agilent Digital Radio Communication tester (E5515C) to ensure the maximum power transmission and proper modulation. This result contains conducted output power for the EUT. In all cases, the measured output power should be greater and within 5% than EMI measurement.

4.2 Conducted Power

CDMA BC0	Conducted Power (dBm)		
	777 (848.31MHz)	384 (836.52MHz)	1013 (824.7MHz)
	23.50	23.55	23.65
CDMA BC1	Conducted Power (dBm)		
	1175 (1908.75MHz)	600 (1880MHz)	25 (1851.25MHz)
	23.11	23.78	23.37

5. Reference Documents

5.1 Reference Documents for testing

The following document listed in this section is referred for testing.

Reference	Title	Version
ANSI C63.19-2011	American National Standard for Methods of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids	2011 Edition
FCC 47 CFR §20.19	Hearing Aid Compatible Mobile Headsets	/
KDB 285076 D01	Equipment Authorization Guidance for Hearing Aid Compatibility	v04

6 OPERATIONAL CONDITIONS DURING TEST

6.1 HAC MEASUREMENT SET-UP

These measurements are performed using the DASY5 NEO automated dosimetric assessment system. It is made by Schmid & Partner Engineering AG (SPEAG) in Zurich, Switzerland. It consists of high precision robotics system (Stäubli), robot controller, Intel Core2 computer, near-field probe, probe alignment sensor. The robot is a six-axis industrial robot performing precise movements. A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The PC consists of the HP Intel Core2 1.86 GHz computer with Windows XP system and HAC Measurement Software DASY5 NEO, A/D interface card, monitor, mouse, and keyboard. The Stäubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

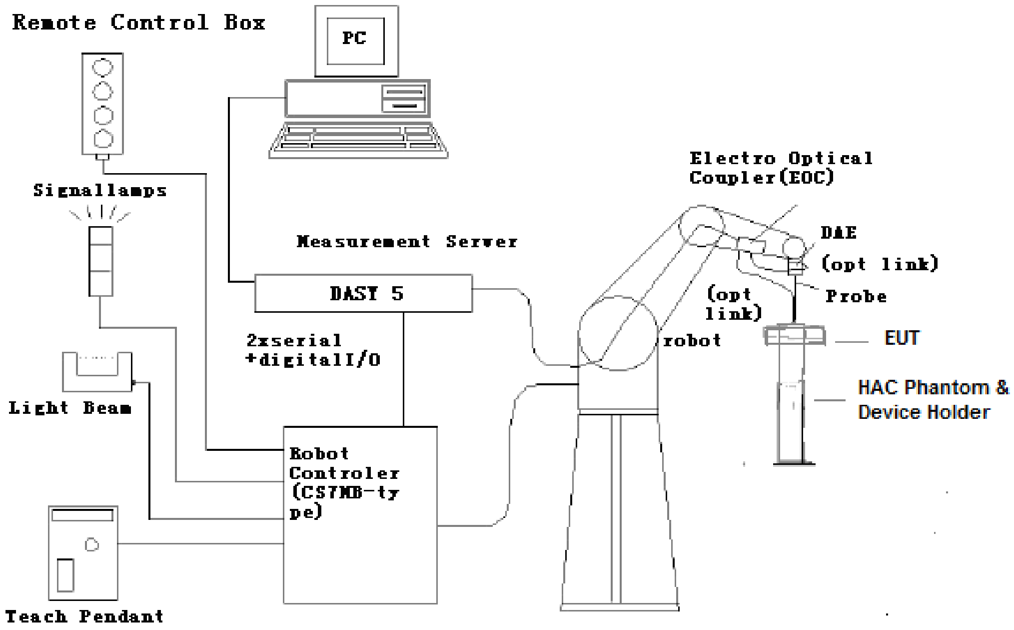
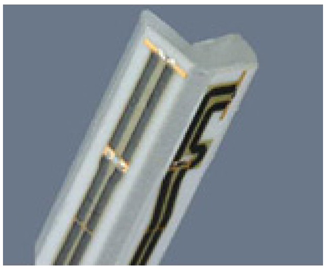


Fig. 1 HAC Test Measurement Set-up

The DAE4 consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer.

6.2 Probe Specification

E-Field Probe Description



[ER3DV6]

Construction	One dipole parallel, two dipoles normal to probe axis Built-in shielding against static charges PEEK enclosure material
Calibration	In air from 100 MHz to 3.0 GHz (absolute accuracy ±6.0%, k=2)
Frequency	40 MHz to > 6 GHz (can be extended to < 20 MHz) Linearity: ± 0.2 dB (100 MHz to 3 GHz)
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: 330 mm (Tip: 16 mm) Tip diameter: 8 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.5 mm
Application	General near-field measurements up to 6 GHz Field component measurements Fast automatic scanning in phantoms

6.3 Test Arch Phantom & Phone Positioner

The Test Arch phantom should be positioned horizontally on a stable surface. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot. It enables easy and well defined positioning of the phone and validation dipoles as well as simple teaching of the robot (Dimensions: 370 x 370 x 370 mm).

The Phone Positioner supports accurate and reliable positioning of any phone with effect on near field <±0.5 dB.

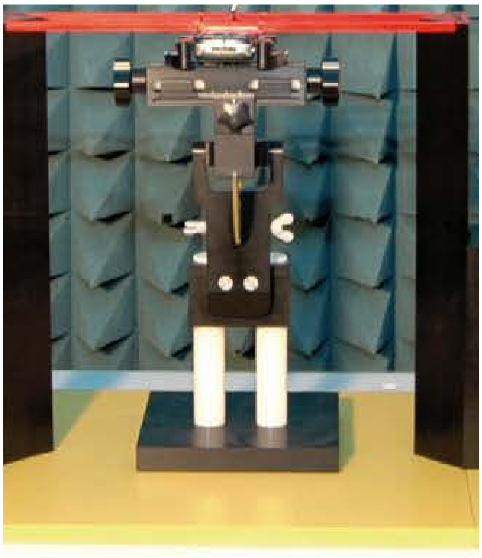


Fig. 2 HAC Phantom & Device Holder

6.4 Robotic System Specifications

Specifications

Positioner: Stäubli Unimation Corp. Robot Model: RX160L
Repeatability: ±0.02 mm
No. of Axis: 6

Data Acquisition Electronic (DAE) System

Cell Controller
Processor: Intel Core2
Clock Speed: 1.86 GHz
Operating System: Windows XP
Data Converter
Features: Signal Amplifier, multiplexer, A/D converter, and control logic
Software: DASY5 software
Connecting Lines: Optical downlink for data and status info.
Optical uplink for commands and clock

7 EUT ARRANGEMENT

7.1 WD RF Emission Measurements Reference and Plane

Figure 4 illustrates the references and reference plane that shall be used in the WD emissions measurement.

- The grid is 5 cm by 5 cm area that is divided into 9 evenly sized blocks or sub-grids.
- The grid is centered on the audio frequency output transducer of the WD (speaker or T-coil).
- The grid is located by reference to a reference plane. This reference plane is the planar area that contains the highest point in the area of the WD that normally rests against the user's ear
- The measurement plane is located parallel to the reference plane and 15 mm from it, out from the phone. The grid is located in the measurement plane.

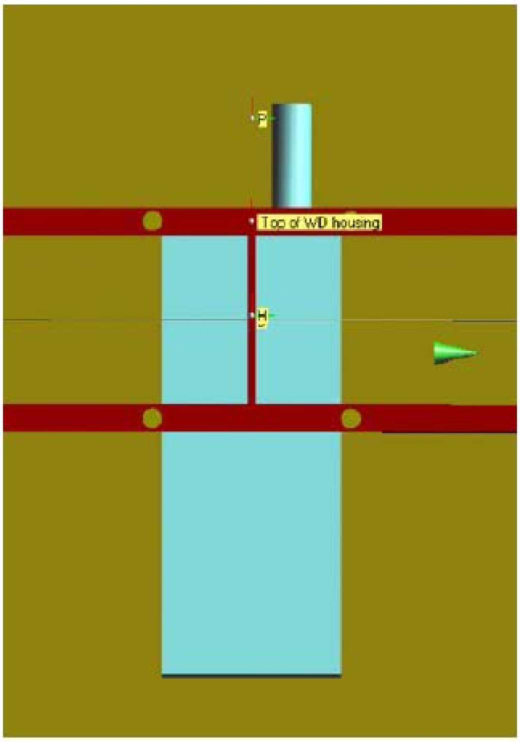


Fig. 3 WD reference and plane for RF emission measurements

8 SYSTEM VALIDATION

8.1 Validation Procedure

Place a dipole antenna meeting the requirements given in ANSI C63.19 in the position normally occupied by the WD. The dipole antenna serves as a known source for an electrical output. Position the E-field probes so that:

- The probes and their cables are parallel to the coaxial feed of the dipole antenna
- The probe cables and the coaxial feed of the dipole antenna approach the measurement area from opposite directions
- The center point of the probe element(s) are 15 mm from the closest surface of the dipole elements.

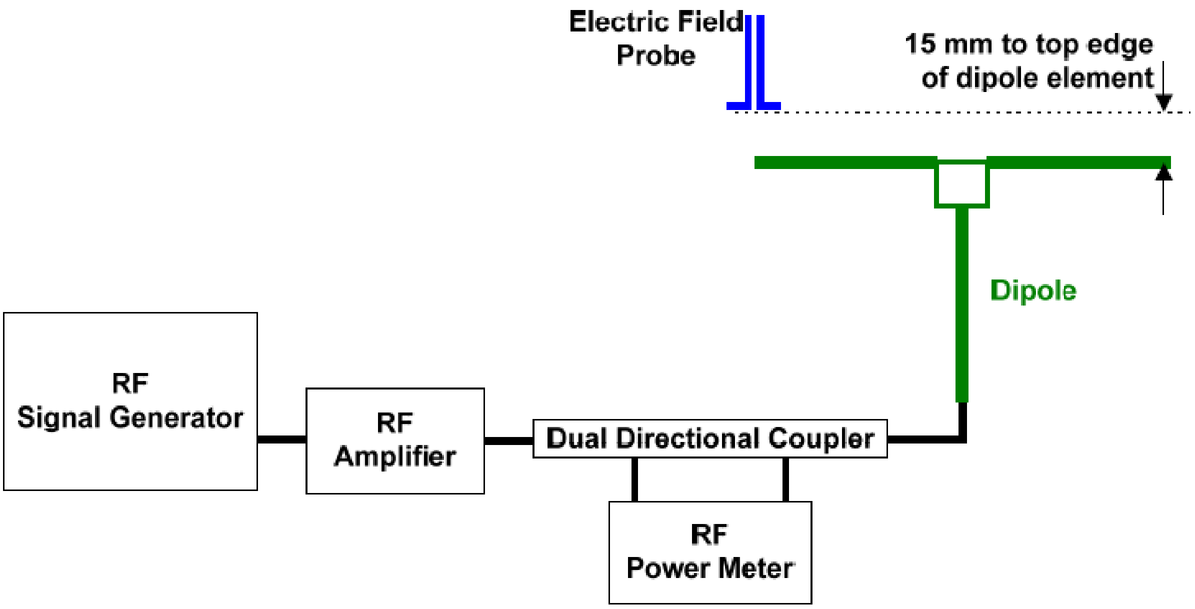


Fig. 4 Dipole Validation Setup

8.2 Validation Result

E-Field Scan						
Mode	**Frequency (MHz)**	**Input Power (mW)**	**Measured[1] Value(dBV/m)**	**Target[2] Value(dBV/m)**	**Deviation[3] (%)**	**Limit[4] (%)**
CW	835	100	40.51	40.70	-2.16	±25
CW	1880	100	39.25	39.04	2.45	±25

Notes:

1. Please refer to the attachment for detailed measurement data and plot.
2. Target value is provided by SPEAD in the calibration certificate of specific dipoles.
3. Deviation (%) = 100 * (Measured value minus Target value) divided by Target value.
4. ANSI C63.19 requires values within ± 25% are acceptable, of which 12% is deviation and 13% is measurement uncertainty. Values independently validated for the dipole actually used in the measurements should be used, when available.

9 Evaluation of MIF

9.1 Introduction

The MIF (Modulation Interference Factor) is used to classify E-field emission to determine Hearing Aid Compatibility (HAC). It scales the power-averaged signal to the RF audio interference level and is characteristic to a modulation scheme. The HAC standard preferred "indirect" measurement method is based on average field measurement with separate scaling by the MIF. With an Audio Interference Analyzer (AIA) designed by SPEAG specifically for the MIF measurement, these values have been verified by practical measurements on an RF signal modulated with each of the waveforms. The resulting deviations from the simulated values are within the requirements of the HAC standard.

The AIA (Audio Interference Analyzer) is an USB powered electronic sensor to evaluate signals in the frequency range 698 MHz - 6 GHz. It contains RMS detector and audio frequency circuits for sampling of the RF envelope.

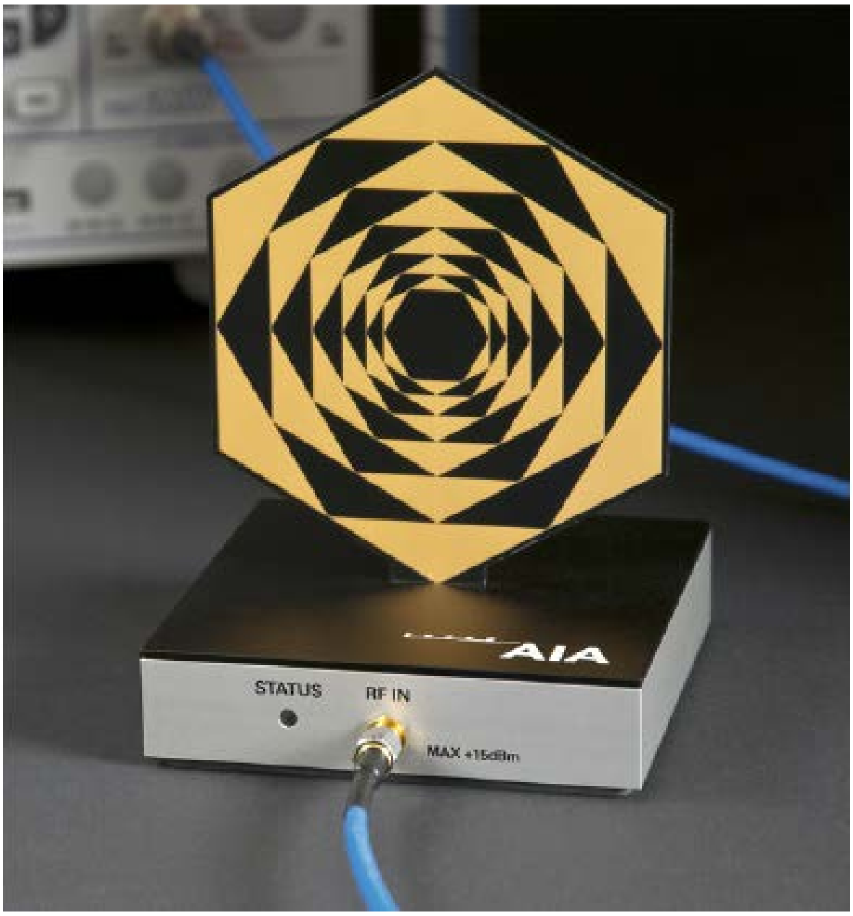


Fig. 5 AIA Front View

9.2 MIF measurement with the AIA

The MIF is measured with the AIA as follows:

1. Connect the AIA via USB to the DASY5 PC and verify the configuration settings.
2. Couple the RF signal to be evaluated to an AIA via cable or antenna.
3. Generate a MIF measurement job for the unknown signal and select the measurement port and timing settings.
4. Document the results via the post processor in a report.

9.3 Test equipment for the MIF measurement

No.	Name	Type	Serial Number	Manufacturer
01	Signal Generator	E4438C	MY49071430	Agilent
02	AIA	SE UMS 170 CB	1029	SPEAG
03	BTS	E5515C	MY50263375	Agilent

9.4 Test signal validation

The signal generator (E4438C) is used to generate a 1GHz signal with different modulation in the below table based on the ANSI C63.19-2011. The measured MIF with AIA are compared with the target values given in ANSI C63.19-2011 table D.3, D.4 and D5.

Pulse modulation	Target MIF	Measured MIF	Deviation
0.5ms pulse, 1000Hz repetition rate	-0.9 dB	-0.9 dB	0 dB
1ms pulse, 100Hz repetition rate	+3.9 dB	+3.7 dB	0.2 dB
0.1ms pulse, 100Hz repetition rate	+10.1 dB	+10.0 dB	0.1 dB
10ms pulse, 10Hz repetition rate	+1.6 dB	+1.7 dB	0.1 dB
Sine-wave modulation	**Target MIF**	**Measured MIF**	**Deviation**
1 kHz, 80% AM	-1.2 dB	-1.3 dB	0.1 dB
1 kHz, 10% AM	-9.1 dB	-9.0 dB	0.1 dB
1 kHz, 1% AM	-19.1 dB	-18.9 dB	0.2 dB
100 Hz, 10% AM	-16.1 dB	-16.0 dB	0.1 dB
10 kHz, 10% AM	-21.5 dB	-21.6 dB	0.1 dB
Transmission protocol	**Target MIF**	**Measured MIF**	**Deviation**
GSM; full-rate version 2; speech codec/handset low	+3.5 dB	+3.47 dB	0.03 dB
WCDMA; speech; speech codec low; AMR 12.2 kb/s	-20.0 dB	-19.8 dB	0.2 dB
CDMA; speech; SO3; RC3; full frame rate; 8kEVRC	-19.0 dB	-19.1 dB	0.1 dB
CDMA; speech; SO3; RC1; 1/8th frame rate; 8kEVRC	+3.3 dB	+3.44 dB	0.14 dB

9.5 DUT MIF results

Typical MIF levels in ANSI C63.19-2011	
Transmission protocol	Modulation interference factor
CDMA; speech; SO3; RC1; 1/8th frame rate; 8kEVRC	+3.3 dB
CDMA; data; SO55; RC1; full; 8kEVRC	-19.0 dB

Measured MIF levels		
Band	Channel	Modulation interference factor(dB)
CDMA BC0 (SO3)	777	+3.00
	384	+2.91
	1013	+3.10
CDMA BC1 (SO3)	1175	+2.94
	600	+3.01
	25	+3.01

10 RF TEST PROCEDUERES

The evaluation was performed with the following procedure:

1) Confirm proper operation of the field probe, probe measurement system and other instrumentation and the positioning system.

2) Position the WD in its intended test position. The gauge block can simplify this positioning.

3) Configure the WD normal operation for maximum rated RF output power, at the desired channel and other operating parameters (e.g., test mode), as intended for the test.

4) The center sub-grid shall be centered on the center of the T-Coil mode axial measurement point or the acoustic output, as appropriate. Locate the field probe at the initial test position in the 50 mm by 50 mm grid, which is contained in the measurement plane. If the field alignment method is used, align the probe for maximum field reception.

5) Record the reading.

6) 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.

7) Identify the five contiguous sub-grids around the center sub-grid whose maximum reading is the lowest of all available choices. This eliminates the three sub-grids with the maximum readings. Thus, the six areas to be used to determine the WD's highest emissions are identified.

8) Identify the maximum field reading within the non-excluded sub-grids identified in Step 7)

9) Evaluate the MIF and add to the maximum steady-state rms field-strength reading to obtain the RF audio interference level..

10) Compare this RF audio interference level with the categories and record the resulting WD category rating.

11 Measurement Results (E-Field)

SO3				
Frequency		Measured Value	Power Drift	Category
MHz	Channel	dB (V/m)	(dB)	
CDMA BC0				
848.31	777	31.39	0.1	**M4** (see Fig B.1)
836.52	384	31.66	-0.08	**M4** (see Fig B.2)
824.7	1013	32.8	0.08	**M4** (see Fig B.3)
CDMA BC1				
1908.75	1175	23.04	-0.13	**M4** (see Fig B.4)
1880	600	23.61	0.14	**M4** (see Fig B.5)
1851.25	25	21.14	-0.19	**M4** (see Fig B.6)

12 ANSI C 63.19-2011 LIMITS

WD RF audio interference level categories in logarithmic units

Emission categories	< 960 MHz	
	E-field emissions	
Category M1	50 to 55	dB (V/m)
Category M2	45 to 50	dB (V/m)
Category M3	40 to 45	dB (V/m)
Category M4	< 40	dB (V/m)
Emission categories	**> 960 MHz**	
	E-field emissions	
Category M1	40 to 45	dB (V/m)
Category M2	35 to 40	dB (V/m)
Category M3	30 to 35	dB (V/m)
Category M4	< 30	dB (V/m)

13 MEASUREMENT UNCERTAINTY

No.	Error source	Type	Uncertainty Value (%)	Prob. Dist.	k	c_i E	Standard Uncertainty (%) $u_i^{'}$ (%) E	Degree of freedom V_{eff} or v_i
Measurement System								
1	Probe Calibration	B	5.	N	1	1	5.1	∞
2	Axial Isotropy	B	4.7	R	$\sqrt{3}$	1	2.7	∞
3	Sensor Displacement	B	16.5	R	$\sqrt{3}$	1	9.5	∞
4	Boundary Effects	B	2.4	R	$\sqrt{3}$	1	1.4	∞
5	Linearity	B	4.7	R	$\sqrt{3}$	1	2.7	∞
6	Scaling to Peak Envelope Power	B	2.0	R	$\sqrt{3}$	1	1.2	∞
7	System Detection Limit	B	1.0	R	$\sqrt{3}$	1	0.6	∞
8	Readout Electronics	B	0.3	N	1	1	0.3	∞
9	Response Time	B	0.8	R	$\sqrt{3}$	1	0.5	∞
10	Integration Time	B	2.6	R	$\sqrt{3}$	1	1.5	∞
11	RF Ambient Conditions	B	3.0	R	$\sqrt{3}$	1	1.7	∞
12	RF Reflections	B	12.0	R	$\sqrt{3}$	1	6.9	∞
13	Probe Positioner	B	1.2	R	$\sqrt{3}$	1	0.7	∞
14	Probe Positioning	A	4.7	R	$\sqrt{3}$	1	2.7	∞
15	Extra. And Interpolation	B	1.0	R	$\sqrt{3}$	1	0.6	∞
Test Sample Related								
16	Device Positioning Vertical	B	4.7	R	$\sqrt{3}$	1	2.7	∞
17	Device Positioning Lateral	B	1.0	R	$\sqrt{3}$	1	0.6	∞
18	Device Holder and Phantom	B	2.4	R	$\sqrt{3}$	1	1.4	∞
19	Power Drift	B	5.0	R	$\sqrt{3}$	1	2.9	∞

20	AIA measurement	B	12	R	$\sqrt{3}$	1	6.9	∞
Phantom and Setup related								
21	Phantom Thickness	B	2.4	R	$\sqrt{3}$	1	1.4	∞
Combined standard uncertainty(%)							16.2	
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$		N	k=2		32.4	

14 MAIN TEST INSTRUMENTS

Table 1: List of Main Instruments

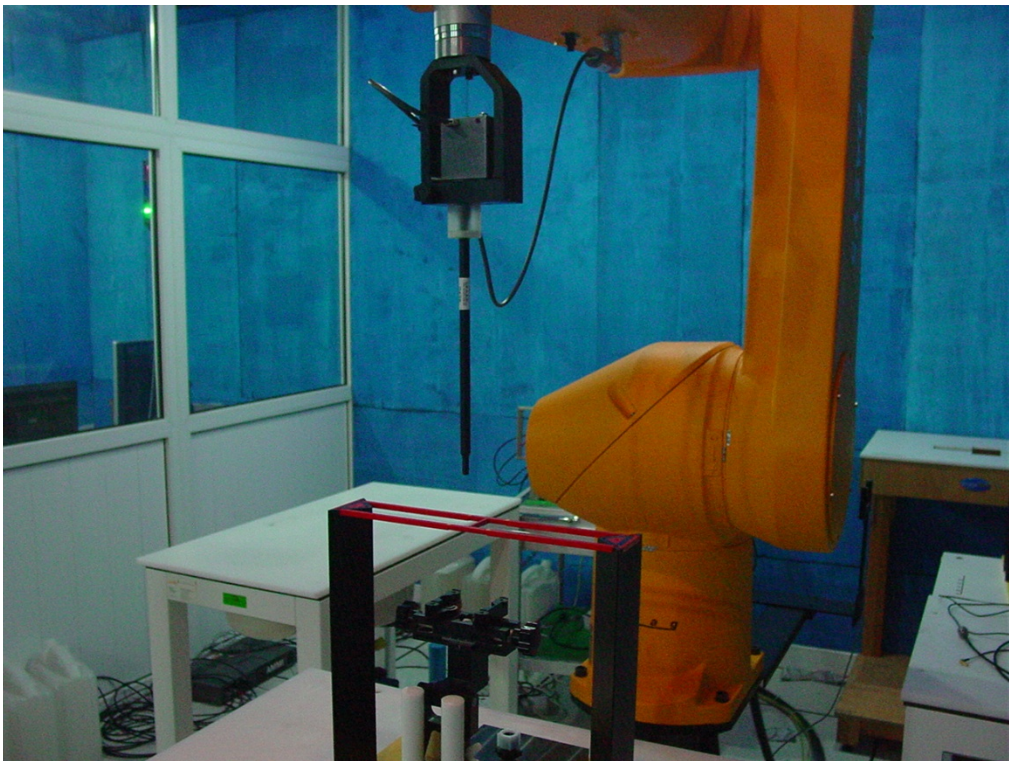
No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Signal Generator	E4438C	MY49071430	February 2, 2015	One Year
02	Power meter	NRVD	102196	March 14, 2015	One year
03	Power sensor	NRV-Z5	100596		
04	Amplifier	60S1G4	0331848	No Calibration Requested	
05	E-Field Probe	ER3DV6	2428	January 23, 2015	One year
06	HAC Dipole	CD835V3	1023	August 20, 2015	One year
07	HAC Dipole	CD1880V3	1018	August 20, 2015	One year
08	BTS	E5515C	MY50263375	January 30, 2015	One year
09	DAE	SPEAG DAE4	771	January 27, 2015	One year
10	AIA	SE UMS 170 CB	1029	No Calibration Requested	

15 CONCLUSION

The HAC measurement indicates that the EUT complies with the HAC limits of the ANSI C63.19-2011. The total M-rating is **M4.**

END OF REPORT BODY

ANNEX A TEST LAYOUT



Picture A1: HAC RF System Layout

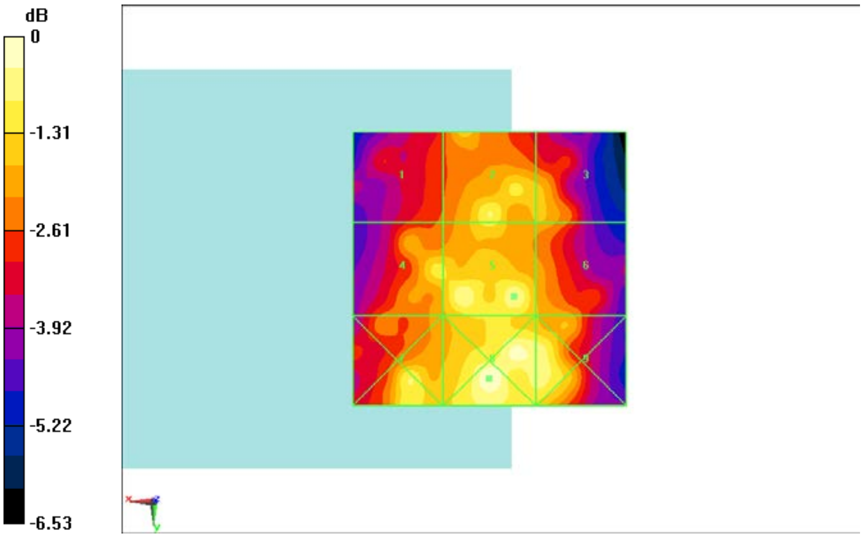
ANNEX B TEST PLOTS

HAC RF E-Field CDMA 835 High – SO3

Date: 2016-1-1
Electronics: DAE4 Sn771
Medium: Air
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature:22.7^{o}C
Communication System: CDMA 835; Frequency: 848.31 MHz; Duty Cycle: 1:1
Probe: ER3DV6 - SN2428;ConvF(1, 1, 1)
E Scan - ER3DV6 - 2011: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 28.97 V/m; Power Drift = 0.10 dB
Applied MIF = 3.00 dB
RF audio interference level = 31.39 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **29.37 dBV/m**	Grid 2 **M4** **31.02 dBV/m**	Grid 3 **M4** **30.36 dBV/m**
Grid 4 **M4** **30.74 dBV/m**	Grid 5 **M4** **31.39 dBV/m**	Grid 6 **M4** **30.19 dBV/m**
Grid 7 **M4** **31.03 dBV/m**	Grid 8 **M4** **31.85 dBV/m**	Grid 9 **M4** **31.37 dBV/m**



0 dB = 39.14 V/m = 31.85 dBV/m

Fig B.1 HAC RF E-Field CDMA 835 High

HAC RF E-Field CDMA 835 Middle – SO3

Date: 2016-1-1

Electronics: DAE4 Sn771

Medium: Air

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Ambient Temperature:22.7°C

Communication System: CDMA 835; Frequency: 836.52 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428;ConvF(1, 1, 1)

E Scan - ER3DV6 - 2011: 15 mm from Probe Center to the Device 2/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 35.59 V/m; Power Drift = -0.08 dB

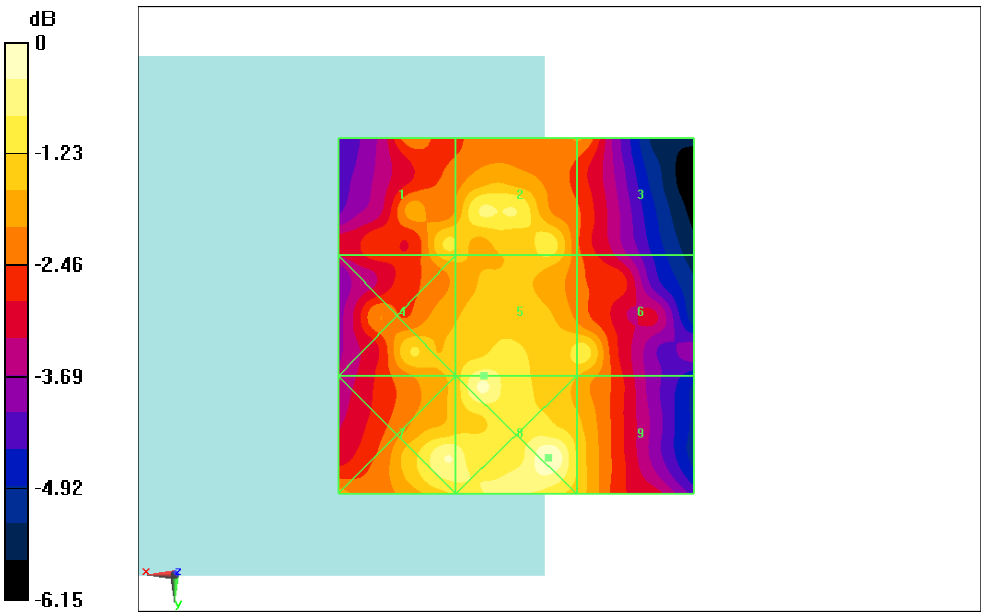
Applied MIF = 2.91 dB

RF audio interference level = 31.66 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 **M4** **31.08 dBV/m**	Grid 2 **M4** **31.45 dBV/m**	Grid 3 **M4** **30.26 dBV/m**
Grid 4 **M4** **31.02 dBV/m**	Grid 5 **M4** **31.66 dBV/m**	Grid 6 **M4** **31.2 dBV/m**
Grid 7 **M4** **31.82 dBV/m**	Grid 8 **M4** **32.2 dBV/m**	Grid 9 **M4** **30.96 dBV/m**



0 dB = 40.73 V/m = 32.20 dBV/m

Fig B.2 HAC RF E-Field CDMA 835 Middle

HAC RF E-Field CDMA 835 Low – SO3

Date: 2016-1-1

Electronics: DAE4 Sn771

Medium: Air

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3

Ambient Temperature:22.7^{o}C

Communication System: CDMA 835; Frequency: 824.7 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428;ConvF(1, 1, 1)

E Scan - ER3DV6 - 2011: 15 mm from Probe Center to the Device 3/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 33.54 V/m; Power Drift = 0.08 dB

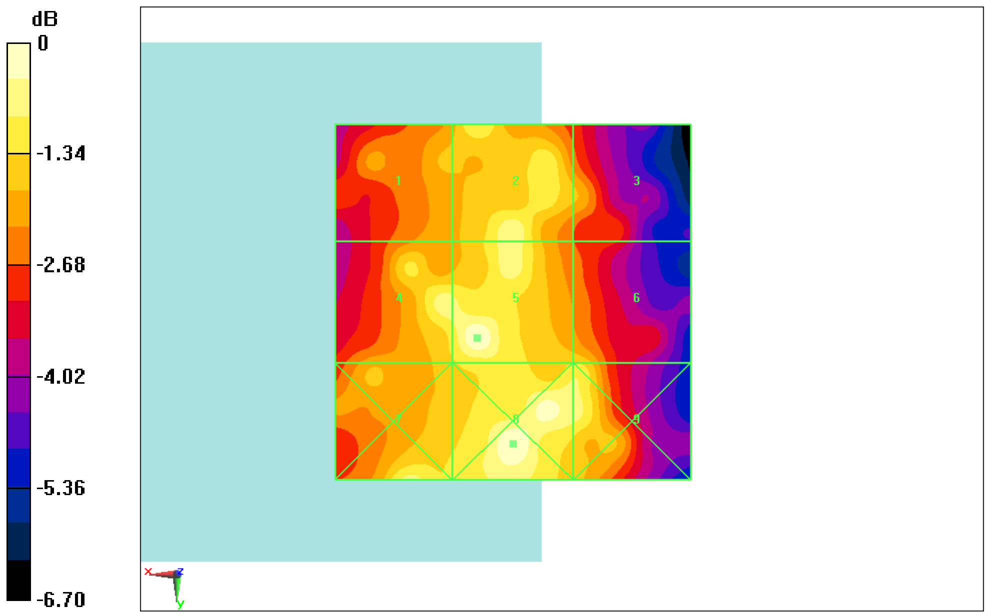
Applied MIF = 3.10 dB

RF audio interference level = 32.80 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 **M4** **31.2 dBV/m**	Grid 2 **M4** **32.3 dBV/m**	Grid 3 **M4** **31.21 dBV/m**
Grid 4 **M4** **32.23 dBV/m**	Grid 5 **M4** **32.8 dBV/m**	Grid 6 **M4** **31.53 dBV/m**
Grid 7 **M4** **32.19 dBV/m**	Grid 8 **M4** **32.87 dBV/m**	Grid 9 **M4** **32.25 dBV/m**



0 dB = 44.00 V/m = 32.87 dBV/m

Fig B.3 HAC RF E-Field CDMA 835 Low

HAC RF E-Field CDMA 1900 High – SO3

Date: 2016-1-1

Electronics: DAE4 Sn771

Medium: Air

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3

Ambient Temperature:22.7^{o}C

Communication System: CDMA 1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428;ConvF(1, 1, 1)

E Scan - ER3DV6 - 2011: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 11.02 V/m; Power Drift = -0.13 dB

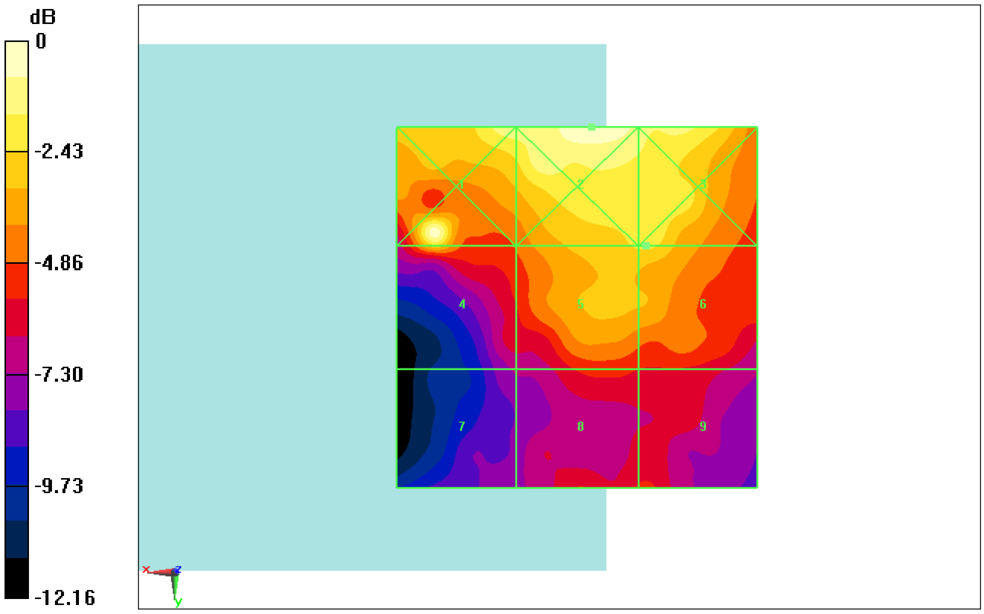
Applied MIF = 2.94 dB

RF audio interference level = 23.04 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 **M4** **24.84 dBV/m**	Grid 2 **M4** **25.23 dBV/m**	Grid 3 **M4** **24.02 dBV/m**
Grid 4 **M4** **22.46 dBV/m**	Grid 5 **M4** **22.96 dBV/m**	Grid 6 **M4** **23.04 dBV/m**
Grid 7 **M4** **18.1 dBV/m**	Grid 8 **M4** **19.95 dBV/m**	Grid 9 **M4** **19.75 dBV/m**



0 dB = 18.25 V/m = 25.23 dBV/m

Fig B.4 HAC RF E-Field CDMA 1900 High

HAC RF E-Field CDMA 1900 Middle – SO3

Date: 2016-1-1

Electronics: DAE4 Sn771

Medium: Air

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3

Ambient Temperature:22.7^{o}C

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428;ConvF(1, 1, 1)

E Scan - ER3DV6 - 2011: 15 mm from Probe Center to the Device 2/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 9.068 V/m; Power Drift = 0.14 dB

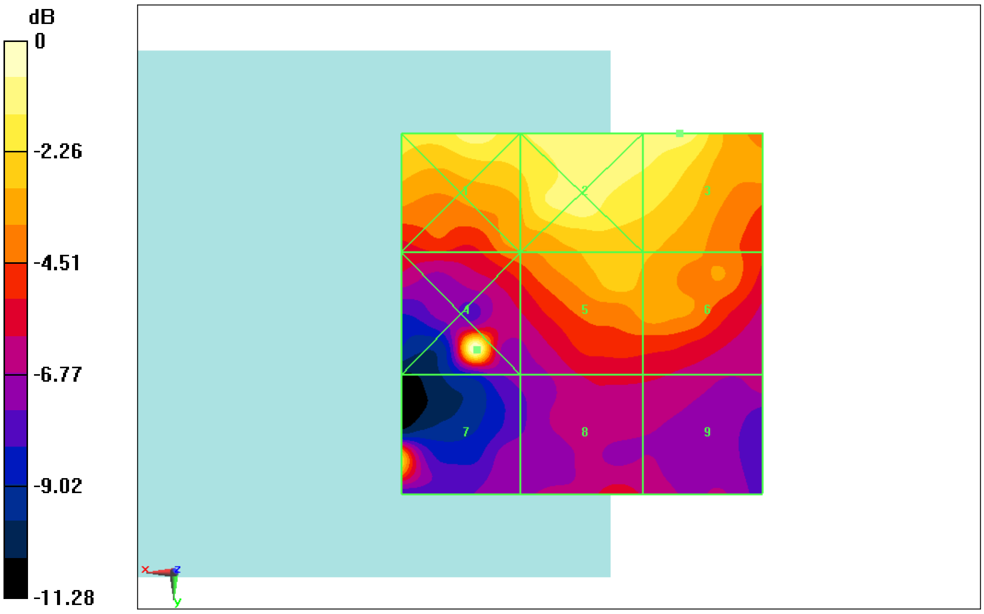
Applied MIF = 3.01 dB

RF audio interference level = 23.61 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 **M4** **23.73 dBV/m**	Grid 2 **M4** **23.76 dBV/m**	Grid 3 **M4** **23.61 dBV/m**
Grid 4 **M4** **24.65 dBV/m**	Grid 5 **M4** **22.39 dBV/m**	Grid 6 **M4** **21.82 dBV/m**
Grid 7 **M4** **22.62 dBV/m**	Grid 8 **M4** **19.27 dBV/m**	Grid 9 **M4** **18.83 dBV/m**



0 dB = 17.09 V/m = 24.65 dBV/m

Fig B.5 HAC RF E-Field CDMA 1900 Middle

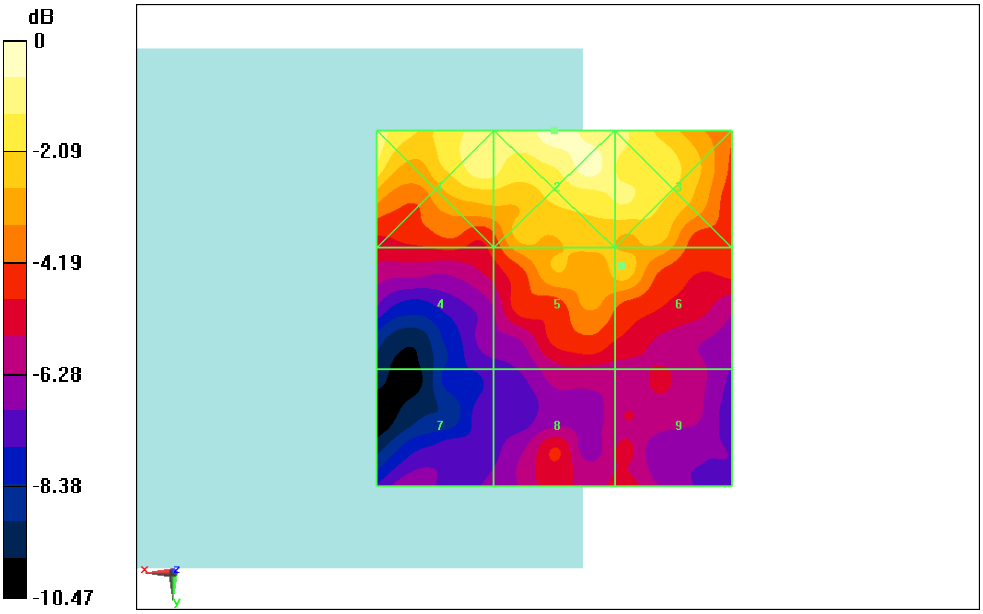
HAC RF E-Field CDMA 1900 Low – SO3

Date: 2016-1-1
Electronics: DAE4 Sn771
Medium: Air
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Ambient Temperature:22.7^{o}C
Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1
Probe: ER3DV6 - SN2428;ConvF(1, 1, 1)

E Scan - ER3DV6 - 2011: 15 mm from Probe Center to the Device 3/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 8.382 V/m; Power Drift = -0.19 dB
Applied MIF = 3.01 dB
RF audio interference level = 21.14 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **22.82 dBV/m**	Grid 2 **M4** **23.52 dBV/m**	Grid 3 **M4** **22.37 dBV/m**
Grid 4 **M4** **18.91 dBV/m**	Grid 5 **M4** **21 dBV/m**	Grid 6 **M4** **21.14 dBV/m**
Grid 7 **M4** **17.11 dBV/m**	Grid 8 **M4** **18.76 dBV/m**	Grid 9 **M4** **18.31 dBV/m**



0 dB = 14.99 V/m = 23.52 dBV/m

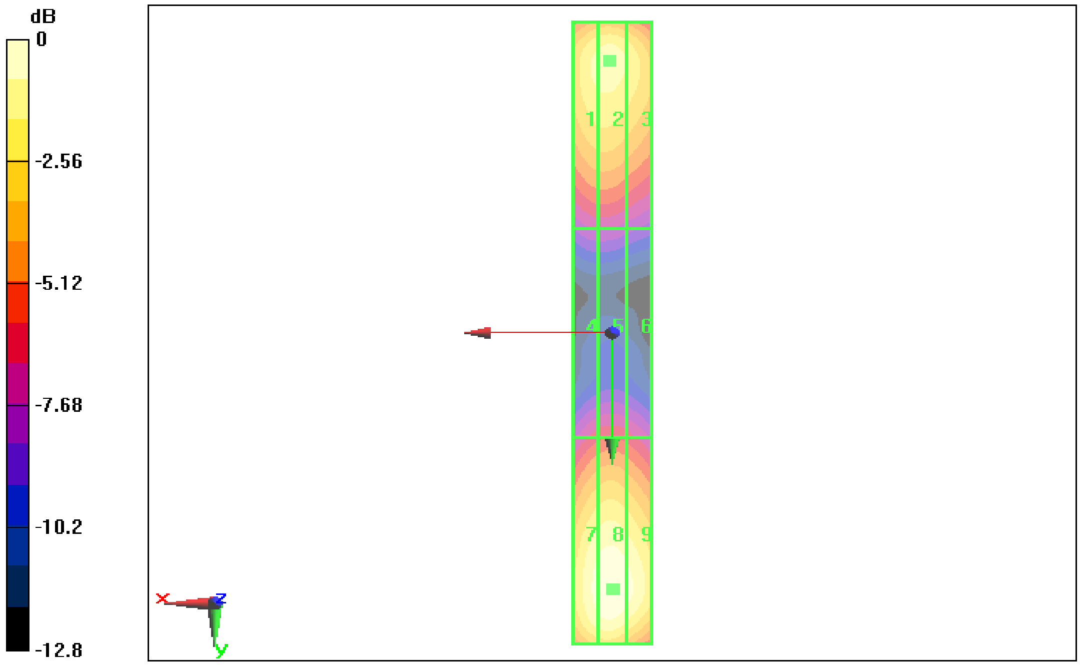
Fig B.6 HAC RF E-Field CDMA 1900 Low

ANNEX C SYSTEM VALIDATION RESULT

E SCAN of Dipole 835 MHz
Date: 2016-1-1
Electronics: DAE4 Sn771
Medium: Air
Medium parameters used: σ = 0 mho/m, εr = 1; ρ = 1000 kg/m3
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Probe: ER3DV6 - SN2428;ConvF(1, 1, 1)
E Scan - measurement distance from the probe sensor center to CD835 Dipole = 15mm/Hearing Aid Compatibility Test (41x361x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 117.7 V/m; Power Drift = 0.04 dB
Applied MIF = 0.00 dB
RF audio interference level = 40.51 dBV/m
Emission category: M3

MIF scaled E-field

Grid 1 **M3** **40.32 dBV/m**	Grid 2 **M3** **40.51 dBV/m**	Grid 3 **M3** **40.41 dBV/m**
Grid 4 **M4** **35.52 dBV/m**	Grid 5 **M4** **35.84 dBV/m**	Grid 6 **M4** **35.81 dBV/m**
Grid 7 **M3** **39.97 dBV/m**	Grid 8 **M3** **40.23 dBV/m**	Grid 9 **M3** **40.17 dBV/m**

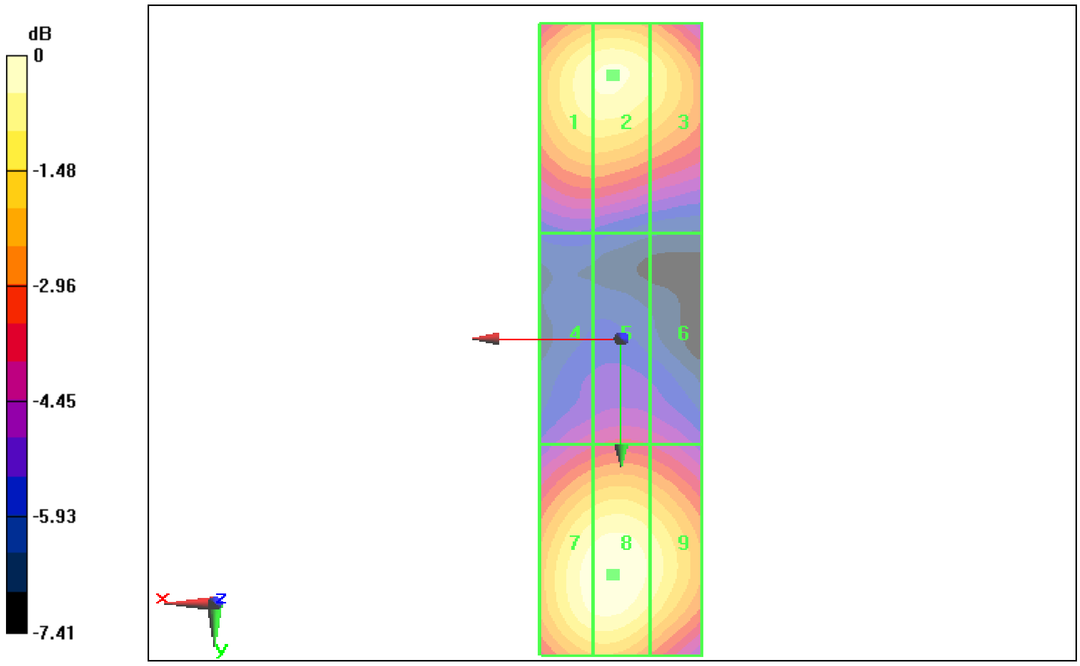


0 dB = 40.51 dBV/m

E SCAN of Dipole 1880 MHz
Date: 2016-1-1
Electronics: DAE4 Sn771
Medium: Air
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1
Probe: ER3DV6 - SN2428;ConvF(1, 1, 1)
E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 15mm/Hearing Aid Compatibility Test (41x181x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 142.1 V/m; Power Drift = 0.01 dB
Applied MIF = 0.00 dB
RF audio interference level = 39.25 dBV/m
Emission category: M2

MIF scaled E-field

Grid 1 **M2** **39.02 dBV/m**	Grid 2 **M2** **39.25 dBV/m**	Grid 3 **M2** **39.11 dBV/m**
Grid 4 **M2** **36.66 dBV/m**	Grid 5 **M2** **36.86 dBV/m**	Grid 6 **M2** **36.81 dBV/m**
Grid 7 **M2** **39.04 dBV/m**	Grid 8 **M2** **39.17 dB V/m**	Grid 9 **M2** **39.08 dBV/m**



0 dB = 39.25 dBV/m