

# Hearing Aid Compatibility (HAC) T-Coil Test Report

for

# **HTC Corporation**

# on the

# **Smart phone**

<b>Report Number</b>	:	HA8D1718B
Trade Name	:	НТС
Model Name	:	ROSE130
FCC ID	:	NM8RSB
Date of Testing	:	Dec. 23, 2008 ~ Jan. 16, 2009
Date of Report	:	Jan. 23, 2009

- Results Summary : T Category = T4 (ANSI C63.19-2006)
- The test results refer exclusively to the presented test model/sample only.
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- Report Version: Rev.04

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#### **Statement of Compliance** 1.

The Hearing Aid Compliance (HAC) maximum results found during testing for the HTC Corporation Smart phone HTC ROSE130 are as follows (with expanded uncertainly ±8.1% for AMB1 and ±12.3% for AMB2):

Reference (63.19)	Description	Verdict	Section
7.3.1.1	Axial Field Intensity	Pass	9.2.1
7.3.1.2	Radial Field Intensity	Pass	9.2.2
7.3.2	Frequency Response	Pass	9.2.3
7.3.3	Signal Quality	Т3	9.2.4

EUT Slide Mode	Band	(S+N)/N in dB	T Rating
	GSM850	15.20	T4
Slide Off	GSM1900	25.60	T4
Slide Off	WCDMA Band V	35.00	T4
	WCDMA Band II	34.70	T4
	GSM850	25.10	T4
Slide Right	GSM1900	22.70	T4
	WCDMA Band V	32.50	T4
	WCDMA Band II	32.50	T4

They are in compliance with HAC limits specified in guidelines FCC 47 CFR §20.19 and ANSI Standard ANSI C63.19 for HAC Rated category.

**Results Summary : T Category = T4 (ANSI C63.19-2006)** 

Approved by

y Wu Roy Wu

Manager

# 2. Administration Data

# 2.1 <u>Testing Laboratory</u>

<b>Company Name :</b>	Sporton International Inc.		
Address :	No.52, Hwa-Ya 1 <sup>st</sup> RD., Hwa Ya Technology Park, Kwei-Shan Hsiang,		
	TaoYuan Hsien, Taiwan, R.O.C.		
Test Site :	SAR01-HY		
<b>Telephone Number</b>	: 886-3-327-3456		
Fax Number :	886-3-328-4978		

## 2.2 Detail of Applicant

<b>Company Name :</b>	HTC Corporation
Address :	No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan,
	R.O.C.

#### 2.3 Detail of Manufacturer

<b>Company Name :</b>	HTC Corporation
Address:	No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan,
	R.O.C.

## 2.4 Application Details

Date of reception of application:	Dec. 17, 2008
Start of test :	Dec. 23, 2008
End of test :	Jan. 16, 2009



# 3. General Information

## 3.1 <u>Description of Device Under Test (DUT)</u>

Product Feature & Specification		
DUT Type :	Smart phone	
Trade Name :	HTC	
Model Name :	ROSE130	
FCC ID :	NM8RSB	
	GSM850 : 824 MHz ~ 849 MHz	
	GSM1900 : 1850 MHz ~ 1910 MHz	
Ty Freemoney	WCDMA Band V : 824 MHz ~ 849 MHz	
Tx Frequency :	WCDMA Band II: 1850 MHz ~ 1910 MHz	
	WLAN : 2400 ~ 2483.5 MHz	
	Bluetooth : 2400 MHz ~ 2483.5 MHz	
	GSM850 : 869 MHz ~ 894 MHz	
	GSM1900 : 1930 MHz ~ 1990 MHz	
Der Frisker ander an	WCDMA Band V: 869 MHz ~ 894 MHz	
Rx Frequency :	WCDMA Band II: 1930 MHz ~ 1990 MHz	
	WLAN : 2400 ~ 2483.5 MHz	
	Bluetooth : 2400 MHz ~ 2483.5 MHz	
	GSM850 : 33.08 dBm	
Marinena Ordered Barrow to Antonno i	GSM1900 : 30.37 dBm	
Maximum Output Power to Antenna :	WCDMA Band V : 22.54 dBm	
	WCDMA Band II : 22.34 dBm	
Antenna Type :	GSM / WCDMA : Fixed Internal	
Antenna Type :	WLAN / Bluetooth : Mono-pole	
	GSM / GPRS / EDGE 850 MHz : -2.5 dBi	
Antenna Gain :	GSM / GPRS / EDGE 1900 MHz : 1.5 dBi	
Antenna Gam.	WCDMA band V : -2.5 dBi	
	WCDMA band II : 1.5 dBi	
HW Version :	A05	
SW Version :	1.62.442	
	GSM : GMSK	
Type of Modulation .	WCDMA : QPSK	
Type of Modulation :	WLAN : DSSS / OFDM	
	Bluetooth : GFSK	
DUT Stage :	Identical Prototype	

**Note:** This device does not support V.O.I.P.. It means that the functions of WLAN and Bluetooth do not have voice capability in the held to ear mode.



#### 3.2 <u>Applied Standards</u>

The Standard ANSI C63.19:2006 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.

#### 3.3 <u>Test Conditions</u>

#### 3.3.1 Ambient Condition

Ambient Temperature (°C)	20-24
Humidity (%)	<60 %
Acoustic Ambient Noise	>10dB below the measurement level

#### 3.3.2 Test Configuration

The device was controlled by using a base station emulator R&S CMU200. Communication between the device and the emulator was established by coaxial connection.

The DUT was set from the emulator to radiate maximum output power during all testing.

# 4. <u>Hearing Aid Compliance (HAC)</u>

## 4.1 Introduction

In September 2006, the T-Coil requirements of ANSI C63.19-2006 Standard went into effect. The federal communication commission (FCC) adopted ANSI C63.19 as HAC test standard.



# 5. <u>HAC T-Coil Measurement Setup</u>

# 5.1 System Configuration

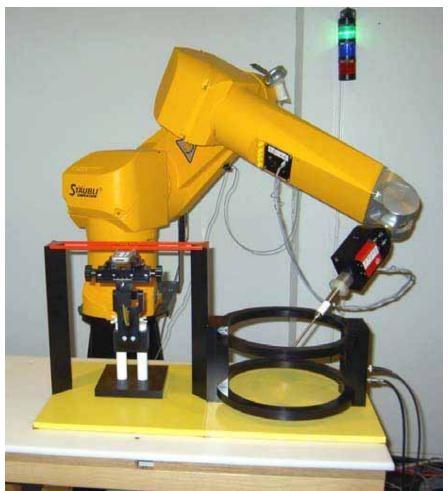


Figure 5.1: T-Coil setup with HAC Test Arch and AMCC



The DASY4 system for performance compliance tests is illustrated above graphically. This system consists of the following items:

- A standard high precision 6-axis robot with controller, a teach pendant and software
- A data acquisition electronic (DAE) attached to the robot arm extension
- A dosimetric probe equipped with an optical surface detector system
- The electro-optical converter (EOC) performs the conversion between optical and electrical signals
- A measurement server performs the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the accuracy of the probe positioning
- A computer operating Windows XP
- DASY4 software
- Remove control with teach pendant and additional circuitry for robot safety such as warming lamps, etc.
- > The SAM twin phantom
- ➤ A device holder
- > Dipole for evaluating the proper functioning of the system
- Arch Phantom

Some of the components are described in details in the following sub-sections.

#### 5.2 AM1D probe

The AM1D probe is an active probe with a single sensor. It is fully RF-shielded and has a rounded tip 6mm in diameter incorporating a pickup coil with its center offset 3mm from the tip and the sides. The symmetric signal preamplifier in the probe is fed via the shielded symmetric output cable from the AMMI with a 48V "phantom" voltage supply. The 7-pin connector on the back in the axis of the probe does not carry any signals. It is mounted to the DAE for the correct orientation of the sensor. If the probe axis is tilted 54.7 degree from the vertical, the sensor is approximately vertical when the signal connector is at the underside of the probe (cable hanging downwards).

Specification:

Frequency range	$0.1 \sim 20 \text{ kHz}$ (RF sensitivity <-100dB, fully RF shielded )
Sensitivity	<-50dB A/m @ 1 kHz
Pre-amplifier	40 dB, symmetric
Dimensions	Tip diameter/ length: 6/ 290 mm, sensor according to ANSI-PC63.19



#### 5.2.1 Probe Tip Description

HAC field measurements take place in the close near field with high gradients. Increasing the measuring distance from the source will generally decrease the measured field values (in case of the validation dipole approx. 10% per mm).

Magnetic field sensors are measuring the integral of the H-field across their sensor area surrounded by the loop. They are calibrated in a precise, homogeneous field. When measuring a gradient field, the result will be very close to the field in the center of the loop which is equivalent to the value of a homogeneous field equivalent to the center value. But it will be different from the field at the field at the border of the loop.

Consequently, two sensors with different loop diameters – both calibrated ideally – would give different results when measuring from the edge of the probe sensor elements. The behavior for electrically small E-field sensors is equivalent. See below for distance plots from a WD which show the conservative nature of field readings at the probe element center vs. measurements at the sensor end.

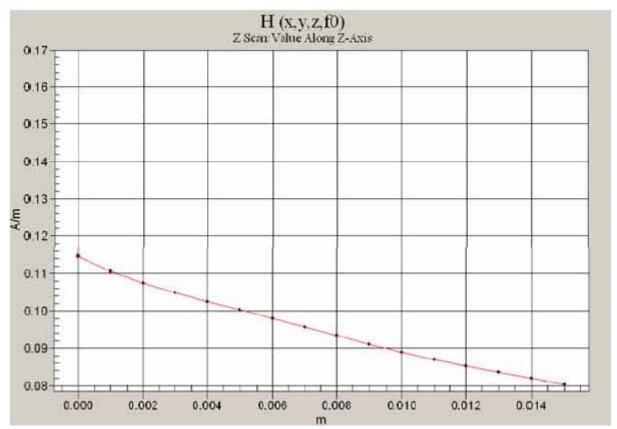


Figure 5.2: Z-Axis Scan at maximum point above a typical wireless device for H-field



#### 5.2.2 Probe Calibration in AMCC

The probe sensitivity at 1 kHz is 0.0625214V/(A/m) (-24.0dBV/(A/m)) was calibrated by AMCC coil for verification of setup performance. The evaluated probe sensitivity was able to be compared to the calibration of the AM1D probe. The frequency response and sensitivity was shown in Figure 5.3. The probe signal is represented after application of an ideal integrator. The green curve represents the current though the AMCC, the blue curve the integrated probe signal. The DIFFERENCE between the two curves is equivalent to the frequency response of the probe system and shows the characteristics. The probe/system complies with the frequency response and linearity requirements in C63.19 according to the Speag's calibrated report as shown in Annex B (AM1D probe: SPAM100AF) (1)The frequency response has been tested within +/- 0.5 dB of ideal differentiator from 100 Hz to 10 kHz. (2)The linearity has also been tested within 0.1dB from 5 dB below limitation to 16 dB above noise level. The AMCC coil is qualified according to certificate report, SDHACPO02A as shown in Annex B.

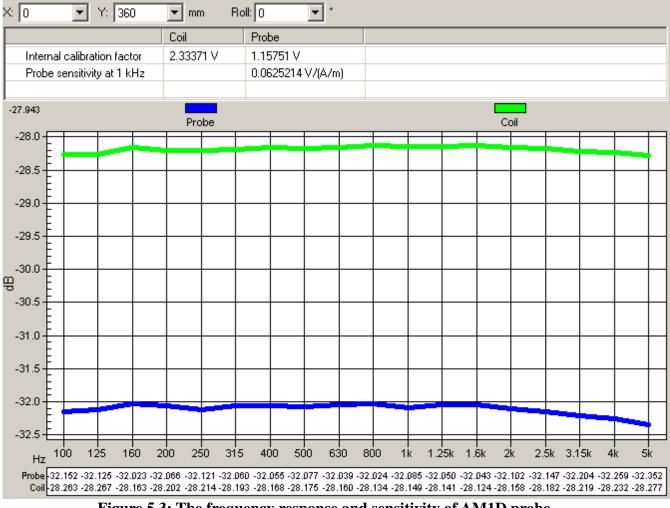


Figure 5.3: The frequency response and sensitivity of AM1D probe



## 5.3 <u>AMCC</u>

The Audio Magnetic Calibration coil is a Helmholtz Coil designed for calibration of the AM1D probe. The two horizontal coils generate a homogeneous magnetic field in the z direction. The DC input resistance is adjusted by a series resistor to approximately 500hm, and a shunt resistor of 10 Ohm permits monitoring the current with a scale of 1:10.

#### **Port description:**

Signal	Connector	Resistance
Coil In	BNC	typically 50 Ohm
Coil Monitor	BNO	$100hm \pm 1\%(100mV \text{ corresponding to } 1 \text{ A/m})$

#### **Specification:**

Dimensions	370 x 370 x 196 mm, according to ANSI C63.19

## 5.4 <u>AMMI</u>



Figure 5.4: AMMI front panel

The Audio Magnetic Measuring Instrument (AMMI) is a desktop 19-inch unit containing a sampling unit, a waveform generator for test and calibration signals, and a USB interface. Specification:

Sampling rate	48 kHz/24 bit
Dynamic range	85 dB
Test signal generation	User selectable and predefined (vis PC)
Calibration	Auto-calibration/full system calibration using AMCC with monitor output
Dimensions	482 x 65 x 270 mm



#### 5.5 <u>DATA Acquisition Electronics (DAE)</u>

The data acquisition electronics (DAE3) 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 measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of the DAE3 is 200M Ohm; the inputs are symmetrical and floating. Common mode rejection is above 80dB.

#### 5.6 <u>Robot</u>

The DASY4 system uses the high precision robots RX90BL type out of the newer series from Stäubli SA (France). For the 6-axis controller DASY4 system, the CS7MB robot controller version from Stäubli is used. The RX robot series have many features that are important for our application:

- High precision (repeatability 0.02 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)
- ➢ 6-axis controller

#### 5.7 <u>Measurement Server</u>

The DASY4 measurement server is based on a PC/104 CPU board with

166 MHz CPU 32 MB chipset and 64 MB RAM.

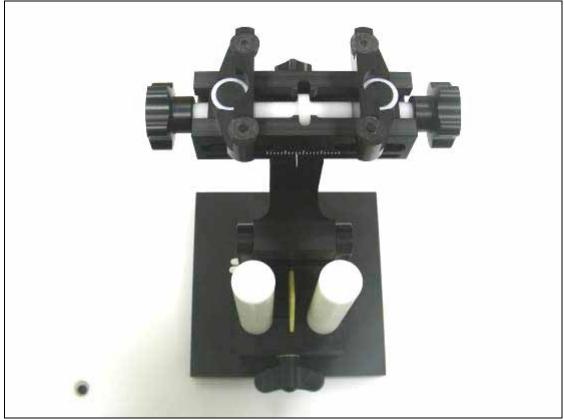
Communication with the DAE3 electronic box the 16-bit AD-converter system for optical detection and digital I/O interface.

The measurement server performs all the real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operations.



# 5.8 <u>Phone Positioner</u>

The phone positioner shown in Figure 5.5 is used to adjust DUT to the suitable position.



**Figure 5.5: Phone Positioner** 



#### 5.8.1 Test Arch Phantom

Construction	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



Figure 5.6: Test Arch Phantom



### 5.9 <u>Cabling of System</u>

The principal cabling of the T-Coil setup is shown in Figure 5.6. All cables provided with the basic setup have a length of approximately 5 m.

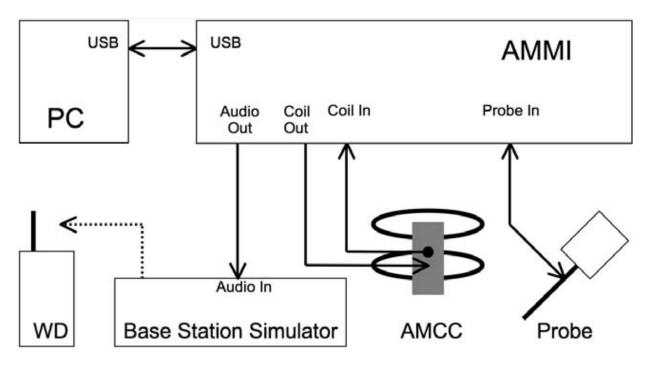


Figure 5.7: T-Coil setup cabling

#### 5.10 HAC Extension Software for DASY4

#### Specification:

Precise teaching	Easy teaching with adaptive distance verification
Measurement area	Flexible selection of measurement area, predefined according to ANSI
	C63.19
Evaluation	ABM: spectral processing, filtering, weighting and evaluation according to
	ANSI C63.19
Report	Documentation ready for compliance report



## 5.11 <u>Test Equipment List</u>

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calib	ration
Manufacturei	Name of Equipment	1 ype/woder	Serial Number	Last Cal.	Due Date
SPEAG	Audio Magnetic 1D Field Probe	AM1DV2	1038	Jan. 23, 2008	Jan. 22, 2009
SPEAG	Audio Magnetic Calibration Coil	AMCC	1049	NCR	NCR
SPEAG	Audio Measuring Instrument	AMMI	1041	NCR	NCR
SPEAG	835MHz Calibration Dipole	CD835V3	1045	Sep. 25, 2007	Sep. 24, 2009
SPEAG	1880MHz Calibration Dipole	CD1880V3	1038	Sep. 27, 2007	Sep. 26, 2009
SPEAG	Data Acquisition Electronics	DAE3	577	Nov. 12, 2008	Nov. 11, 2009
SPEAG	Test Arch Phantom	N/A	N/A	NCR	NCR
SPEAG	Phone Positoiner	N/A	N/A	NCR	NCR

Table 5.1 Test Equipment List



#### 5.12 <u>Reference Input of Audio Signal Spectrum</u>

With the reference job "use as reference" in the beginning of a procedure, measure the spectrum of the current when applied to the AMCC, i.e. the input magnetic field spectrum, as shown below Fig. 5.8 and Fig. 5.9. For this, the delay of the window shall be set to a multiple of the signal period and at least 2s. From the measurement on the device, using the same signal, the postprocessor deducts the input spectrum, so the result represents the net DUT response.

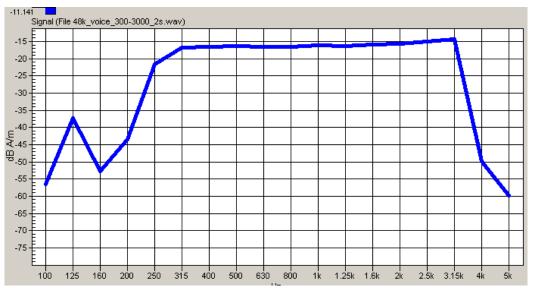


Figure 5.8: Audio signal spectrum of the broadband signal (48kHz\_voice\_300Hz~3 kHz)



Figure 5.9: Audio signal spectrum of the narrowband signal (48kHz\_voice\_1kHz)



#### 5.13 Signal Verification

According to ANSI C63.19:2006 section 6.3.2.1, the normal speech input level for HAC T-coil tests shall be set to -16 dBm0 for GSM and UMTS (WCDMA), and to -18 dBm0 for CDMA. This technical note shows a possibility to evaluate and set the correct level with the HAC T-Coil setup with a Rohde&Schwarz communication tester CMU200 with audio option B52 and B85.

Establish a call from the CMU200 to a wireless device. Select CMU200 Network Bitstream "Decoder Cal" to have a 1kHz signal with a level of 3.14 dBm0 at the speech output. Run the measurement job and read the voltage level at the multi-meter display "Coil signal". Read the RMS voltage corresponding to 3.14 dBm0 and note it. Calculate the desired signal levels of -16dBm0:

3.14 dBm0 = -2.555 dBV -16 dBm0 = -21.695 dBV

Determine the 1 kHz input level to generate the desired signal level of -18 dBm0. Select CMU200 Network Bitstream "Codec Cal" to loop the input via the codec to the output. Run the measurement job (AMMI 1kHz signal with gain 10 inserted) and read the voltage level at the multimeter display "Coil signal". Calculate the required gain setting for the above levels:

Gain 10 = -19.92 dBVDifference for -16 dBm0 = -21.695 - (-19.92) = -1.775 dB Gain factor =  $10 \land ((-1.775) / 20) = 0.815$ Resulting Gain =  $10 \ge 0.815 = 8.15$ 

The predefined signal types have the following differences / factors compared to the 1 kHz sine signal:

Signal Type	Duration (s)	Peak to RMS (dB)	RMS (dB)	Gain Factor	Gain Setting
1kHz	1	16.2	-12.7	4.33	35.297
$300 \text{Hz} \sim 3 \text{kHz}$	2	21.6	-18.6	8.48	69.126



# 6. <u>Description for DUT Testing Position</u>

Figure 6.1 illustrate the references and reference plane that shall be used in a typical DUT emissions measurement. The principle of this section is applied to DUT with similar geometry.

- 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 DUT.
- 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 DUT handset, which, in normal handset use, rest against the ear.
- The measurement plane is parallel to, and 1.0 cm in front of, the reference plane.



Figure 6.1: A typical DUT reference and plane for HAC measurements



# 7. <u>*T-Coil Test Procedure*</u>

The following illustrate a typical test scan over a wireless communications device:

- 1. Geometry and signal check: system probe alignment, proper operation of the field probe, probe measurement system, other instrumentation, and the positioning system was confirmed. A surface calibration was performed before each setup change to ensure repeatable spacing and proper maintenance of the measurement plane using the test Arch.
- 2. Set the reference drive level of signal voice defined in C63.19 per 6.3.2.1, as shown in this report of section 5.12.
- 3. The ambient and test system background noise (dB A/m) was measured as well as ABM2 over the full measurement. The maximum noise level must be at least 10dB below the limit of C63.19 per 7.3.2.
- 4. The DUT was positioned in its intended test position, acoustic output point of the device perpendicular to the field probe.
- 5. The DUT operation for maximum rated RF output power was configured and connected by using of coaxial cable connection to the base station simulator at the test channel and other normal operating parameters as intended for the test. The battery was ensured to be fully charged before each test. The center sub-grid was centered over the center of the acoustic output (also audio band magnetic output, if applicable). The DUT audio output was positioned tangent (as physically possible) to the measurement plane.
- 6. The DUT's RF emission field was eliminated from T-coil results by using a well RF-shielding of the probe, AM1D, and by using of coaxial cable connection to a Base Station Simulator. One test channel was pre-measurement to avoid this possibility.
- 7. Determined the optimal measurement locations for the DUT by following the three steps, coarse resolution scan, fine resolution scans, and point measurement, as described in C63.19 per 6.3.4.4. At each measurement locations, samples in the measurement window duration were evaluated to get ABM1 and the signal spectrum. The noise measurement was performed after the scan with the signal, the same happened, just with the voice signal switched off. The ABM2 was calculated from this second scan.

(1) Coarse resolution scans (1 kHz signal at 50 x 50 mm grid area with 10 mm spacing). Only ABM1 was measured in order to find the location of T-Coil source.

(2)Fine resolution scans (1 kHz signal at 10 x 10 mm grid area with 2 mm spacing). The positioned appropriately based on optimal AMB1 of coarse resolution scan. Both ABM1 and ABM2 were measured in order to find the location of the SNR point.

(3) Point measurement (1 kHz signal) for ABM1 and ABM2 in axial, radial transverse and radial longitudinal. The positioned appropriately based on optimal SNR of fine resolution scan. The SNR was calculated for axial, radial transverse and radial longitudinal orientation.

(4) Point measurement (300Hz to 3 kHz signal) for frequency response in axial. The positioned appropriately based on optimal SNR of fine resolution axial scan.



- 8. All results resulting from a measurement point in a T-Coil job were calculated from the signal samples during this window interval. ABM values were averaged over the sequence of these samples.
- 9. At an optimal point measurement, the SNR (ABM1/ABM2) was calculated for axial, radial transverse and radial longitudinal orientation, and the frequency response was measured in axial axis.
- 10. Corrected for the frequency response after the DUT measurement since the DASY4 system had known the spectrum of the input signal by using a reference job, as shown in this report of section 5.12.
- 11. In SEMCAD post-processing, the spectral points are in addition scaled with the high-pass (half-band) and the A-weighting, bandwidth compensated factor (BWC) and those results are final as shown in this report.
- 12. Classified the signal quality based on the table 8.1: T-Coil Signal Quality Categories.

# 8. <u>T-Coil Articulation Weighting Factor and Signal Quality Categories</u>

### 8.1 Articulation weighting factor (AWF)

The following AWF factors shall be used for the standard transmission protocols:

Standard	Technology	AWF (dB)
TIA/EIA/IS-2000	CDMA	0
TIA/EIA-136	TDMA (50Hz)	0
J-STD-007	GSM (217)	-5
T1/P1P1/3GPP	UMTS (WCDMA)	0
iDEN <sup>TM</sup>	TDMA (22 and 11 Hz)	0

#### 8.2 Signal Quality Categories

This section provides the signal quality requirement for the intended T-Coil signal from a WD. Only the RF immunity of the hearing aid is measured in T-Coil mode. It is assumed that a hearing aid can have no immunity to an interference signal in the audio band, which is the intended reception band for this mode. A device is assessed beginning by determining the category of the RF environment in the area of the T-Coil source.

The RF measurements made for the T-Coil evaluation are used to assign the category T1 through T4. The limitation is given in Table 8.1. This establishes the RF environment presented by the WD to a hearing aid.

Category	Telephone parameters WD signal quality ((signal + noise) to noise ratio in dB)						
	AWF = 0	AWF = -5					
Category T1	-20 to -10 dB	-15 to -5 dB					
Category T2	-10 to 0 dB	-5 to 5 dB					
Category T3	0 to 10 dB	5 to 15 dB					
Category T4	>10 dB	>15 dB					
(Note: For cases where it can be shown that the audio-band interference is not dominated by the RF pulse rate of the phone, AWF does not apply)							

Table 8.1: T-Coil signal quality categories



# 9. <u>Summary of Measurement Result</u>

# 9.1 <u>Test Result</u>

#### 9.1.1 Conducted Power

Band		GSM 850		GSM 1900			
Channel	128	189	251	512	661	810	
GSM	32.70	32.94	33.08	30.29	30.36	30.37	

Band	WCDMA Band V			WCDMA Band V WCDMA Band II				II
Channel	4132 4182 4233 9262 94			9400	9538			
AMR	22.54	22.48	22.41	22.34	22.27	22.14		

Unit: dBm



#### 9.1.2 Magnitude Result

The Table 9.1 and 9.2 shows testing result in position coordinates which are defined as deviation from earpiece center in millimeters. Axial measurement location was defined by the manufacture of the device. Signal strength measurement scans are presented in Annex A.

Probe Position	Band	Chan.	Measurement Position (x mm, y mm)	Ambient Background Noise (dB A/m)	ABM2 (dB A/m)	ABM1 (dB A/m)	AWF	SNR (dB)
		128	(6,4)	-47.61	-20.45	-5.210	-5	15.20
	GSM850	189	(4,2)	-47.17	-21.78	-4.160	-5	17.60
		251	(6,4)	-47.50	-20.79	-4.990	-5	15.80
		512	(6,2)	-47.59	-30.38	-4.790	-5	25.60
Radial 1	GSM1900	661	(4,2)	-47.78	-31.23	-4.710	-5	26.50
Kadial I (Longitudinal)		810	(4,2)	-47.55	-31.20	-4.520	-5	26.70
		4132	(6,2)	-48.56	-40.43	-5.030	0	35.40
	WCDMA Band V	4182	(6,2)	-48.49	-40.26	-5.210	0	35.00
	Dallu v	4233	(6,2)	-48.95	-40.45	-5.190	0	35.30
	WCDMA	9262	(6,2)	-47.96	-39.98	-5.290	0	34.70
	WCDMA Band II	9400	(6,2)	-48.07	-40.11	-5.150	0	35.00
	Dallu II	9538	(6,2)	-47.20	-40.16	-5.180	0	35.00
		128	(0,-4)	-40.95	-34.68	-2.390	-5	32.30
	GSM850	189	(-2,-4)	-40.98	-35.43	-3.700	-5	31.70
		251	(0,-4)	-40.89	-34.75	-2.610	-5	32.10
Radial 2	GSM1900	512	(-2,-4)	-41.26	-37.83	-2.140	-5	35.70
		661	(-2,-4)	-41.09	-37.97	-2.200	-5	35.80
Kadial 2		810	(-2,-6)	-40.74	-37.66	-2.110	-5	35.60
	wersal) WCDMA Band V	4132	(0,-6)	-40.59	-38.58	-2.560	0	36.00
(Transversal)		4182	(-2,-6)	-40.51	-38.79	-2.680	0	36.10
	Band v	4233	(0,-6)	-40.64	-39.41	-2.770	0	36.60
		9262	(0,-6)	-42.12	-39.74	-2.930	0	36.80
	WCDMA Dend II	9400	(0,8)	-41.81	-39.21	-3.010	0	36.20
	Band II	9538	(0,-6)	-41.74	-37.61	-2.770	0	34.80
		128	(-2,2)	-50.76	-17.65	3.450	-5	21.10
	GSM850	189	(-2,2)	-50.61	-17.91	4.140	-5	22.10
		251	(-2,2)	-49.60	-17.88	3.610	-5	21.50
		512	(-2,2)	-50.68	-26.66	3.860	-5	30.50
	GSM1900	661	(-2,2)	-50.75	-26.53	3.960	-5	30.50
		810	(-2,2)	-50.58	-26.50	4.010	-5	30.50
Axial	martin	4132	(-2,0)	-51.52	-36.08	3.470	0	39.50
	WCDMA Dand V	4182	(-2,0)	-51.12	-36.38	3.340	0	39.70
	Band V	4233	(-2,0)	-51.55	-36.63	3.280	0	39.90
	NIGES (	9262	(-2,0)	-51.39	-36.78	3.070	0	39.90
	WCDMA Dand II	9400	(-2,0)	-52.06	-35.46	3.440	0	38.90
	Band II	9538	(-2,0)	-51.60	-35.32	3.360	0	38.70

Table 9.1: Test Result for Various Positions for EUT Slide Off



Probe Position	Band	Chan.	Measurement Position (x mm, y mm)	Ambient Background Noise (dB A/m)	ABM2 (dB A/m)	ABM1 (dB A/m)	AWF	SNR (dB)
		128	(4,2)	-47.08	-31.06	-5.910	-5	25.10
	GSM850	189	(4,2)	-46.93	-32.38	-5.270	-5	27.10
		251	(4,2)	-47.82	-32.31	-5.480	-5	26.80
		512	(4,2)	-46.90	-28.53	-5.820	-5	22.70
Radial 1	GSM1900	661	(4,2)	-47.50	-29.14	-5.550	-5	23.60
Kaulai 1		810	(4,2)	-47.63	-29.35	-5.610	-5	23.70
(1	WCDMA	4132	(4,2)	-48.62	-44.02	-5.070	0	38.90
(Longitudinal)	Band V	4182	(4,2)	-46.98	-42.07	-5.230	0	36.80
	Dand V	4233	(4,2)	-47.93	-44.30	-5.090	0	39.20
	WCDMA	9262	(4,2)	-47.10	-42.08	-5.630	0	36.40
	WCDMA Band II	9400	(4,2)	-48.45	-44.43	-5.220	0	39.20
	Dand II	9538	(4,2)	-48.36	-44.31	-5.060	0	39.30
		128	(-2,-4)	-42.62	-36.06	-5.480	-5	30.60
Radial 2	GSM850	189	(-2,-6)	-40.05	-35.76	-5.460	-5	30.30
		251	(-2,-6)	-39.80	-35.73	-5.440	-5	30.30
	GSM1900	512	(-2,-4)	-42.72	-38.20	-5.470	-5	32.70
		661	(-2,-4)	-40.03	-37.08	-5.860	-5	31.20
Kaulai 2		810	(-2,-6)	-40.22	-38.01	-5.960	-5	32.00
(Transversal)	WCDMA Band V	4132	(-2,-6)	-40.22	-37.88	-5.430	0	32.50
		4182	(0,-4)	-42.77	-39.10	-4.680	0	34.40
		4233	(-2,-6)	-40.16	-38.36	-5.480	0	32.90
		9262	(0,-4)	-42.56	-39.58	-5.190	0	34.40
	WCDMA Band II	9400	(-2,-4)	-39.56	-38.07	-5.550	0	32.50
	Dallu II	9538	(-2,-6)	-39.13	-38.25	-5.550	0	32.70
		128	(-2,2)	-51.75	-22.13	3.600	-5	25.70
	GSM850	189	(-2,2)	-50.64	-22.25	3.270	-5	25.50
		251	(-2,2)	-50.50	-22.17	3.340	-5	25.50
		512	(-2,2)	-51.58	-25.51	3.550	-5	29.10
	GSM1900	661	(-2,2)	-50.37	-25.90	3.090	-5	29.00
A		810	(-2,2)	-50.98	-26.19	3.070	-5	29.30
Axial		4132	(-2,2)	-50.99	-36.86	3.640	0	40.50
	WCDMA Band V	4182	(0,2)	-51.78	-34.11	4.060	0	38.20
	Danu v	4233	(-2,2)	-50.80	-37.61	3.690	0	41.30
	WGELC	9262	(-2,2)	-51.63	-34.88	3.700	0	38.60
	WCDMA Dand II	9400	(0,2)	-50.51	-36.92	3.830	0	40.70
	Band II	9538	(0,2)	-49.88	-37.27	3.900	0	41.10

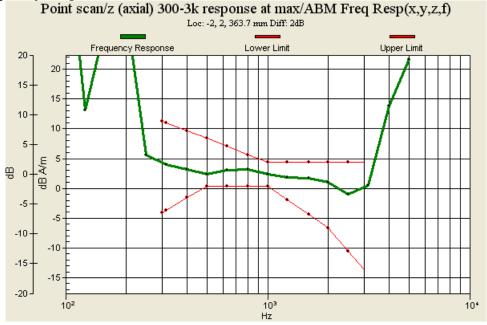
Table 9.2: Test Result for Various Positions for EUT Slide Right

#### **Remark:**

- **1.** The HAC mode of DUT is turn on and LCD backlight, Bluetooth and WLAN functions are turn off, and the volume is adjusted to maximum level during T-Coil testing.
- **2.** This device does not support V.O.I.P.. It means that the functions of WLAN and Bluetooth do not have voice capability in the held to ear mode.



#### 9.1.3 Frequency Response





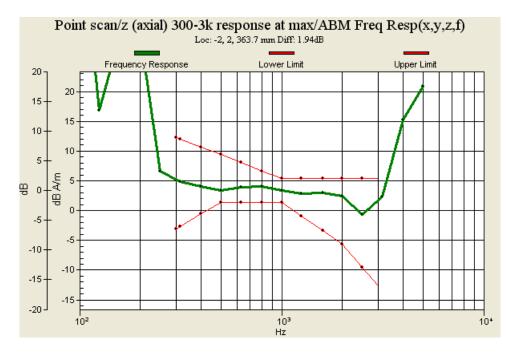
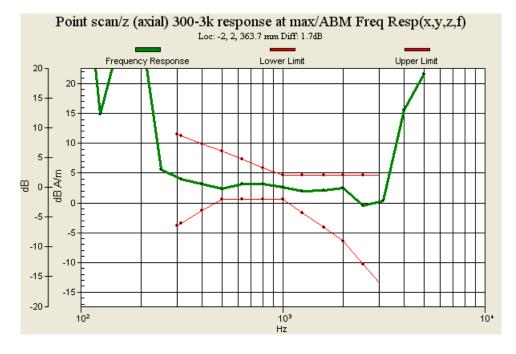


Figure 9.2: Frequency Response of GSM850 for Ch189 for EUT Slide Off





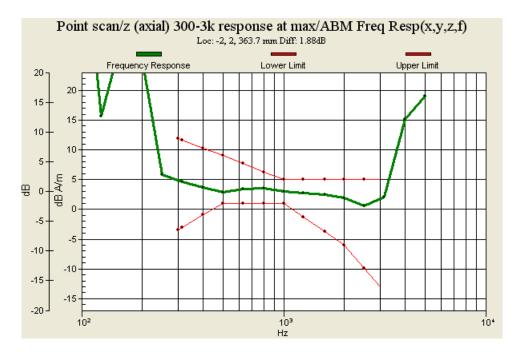
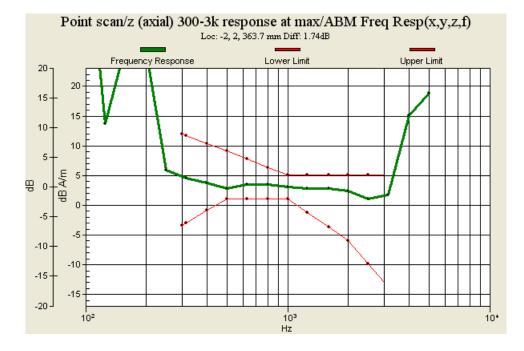


Figure 9.4: Frequency Response of GSM1900 for Ch512 for EUT Slide Off







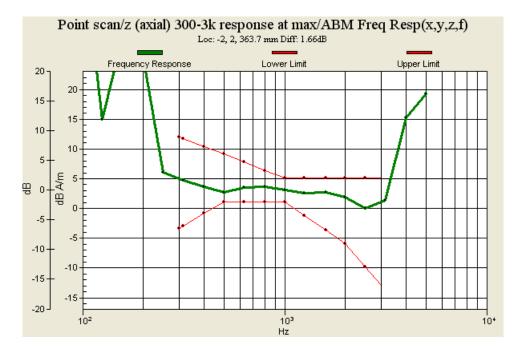


Figure 9.6: Frequency Response of GSM1900 for Ch810 for EUT Slide Off



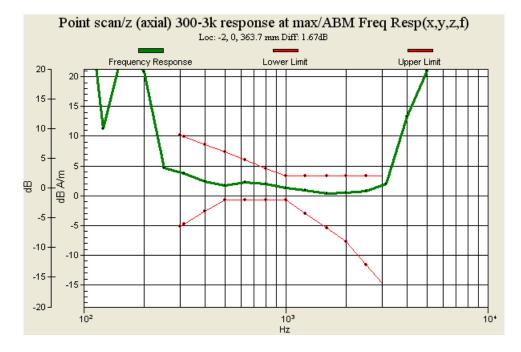


Figure 9.7: Frequency Response of WCDMA Band V for Ch4132 for EUT Slide Off

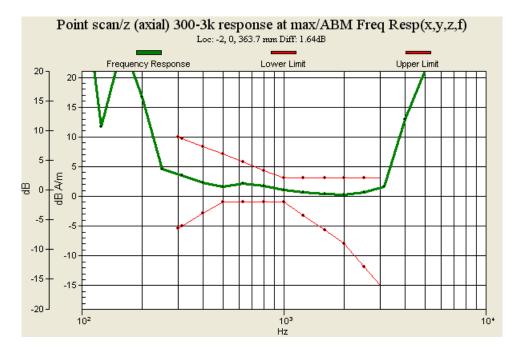


Figure 9.8: Frequency Response of WCDMA Band V for Ch4182 for EUT Slide Off



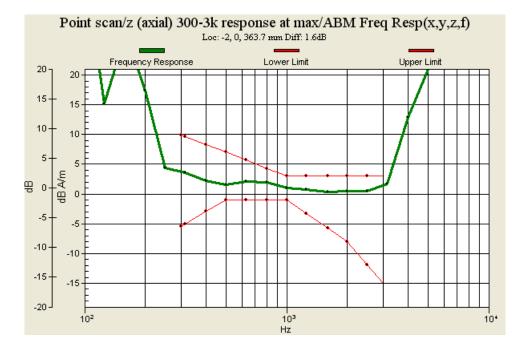


Figure 9.9: Frequency Response of WCDMA Band V for Ch4233 for EUT Slide Off

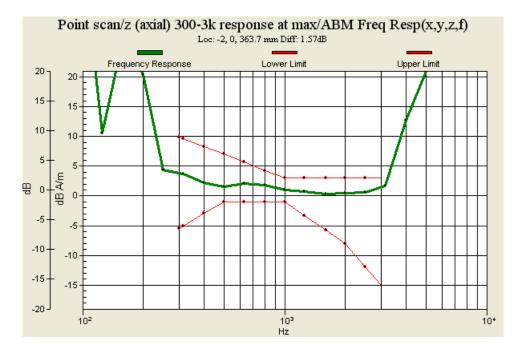


Figure 9.10: Frequency Response of WCDMA Band II for Ch9262 for EUT Slide Off



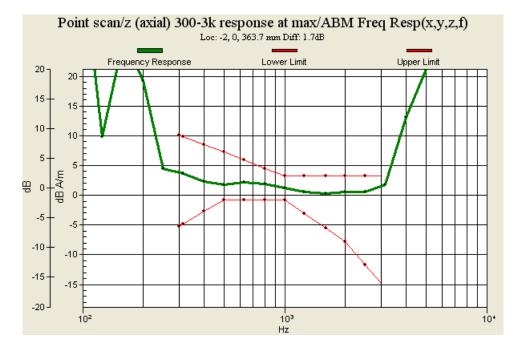


Figure 9.11: Frequency Response of WCDMA Band II for Ch9400 for EUT Slide Off

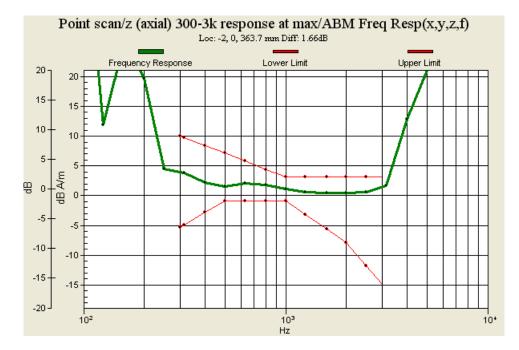


Figure 9.12: Frequency Response of WCDMA Band II for Ch9538 for EUT Slide Off

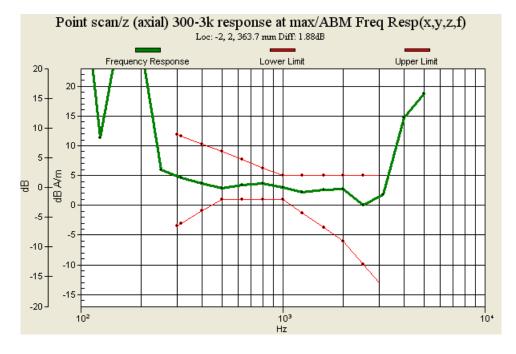


Figure 9.13: Frequency Response of GSM850 for Ch128 for EUT Slide Right

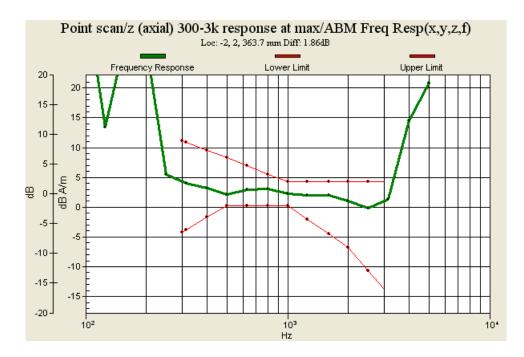


Figure 9.14: Frequency Response of GSM850 for Ch189 for EUT Slide Right

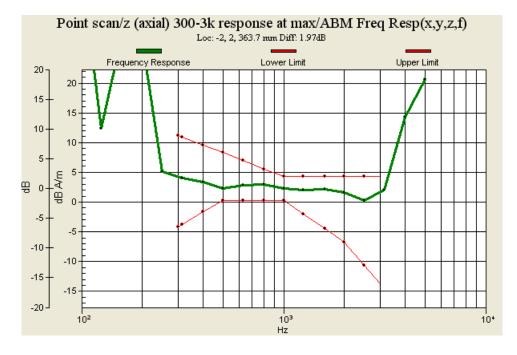


Figure 9.15: Frequency Response of GSM850 for Ch251 for EUT Slide Right

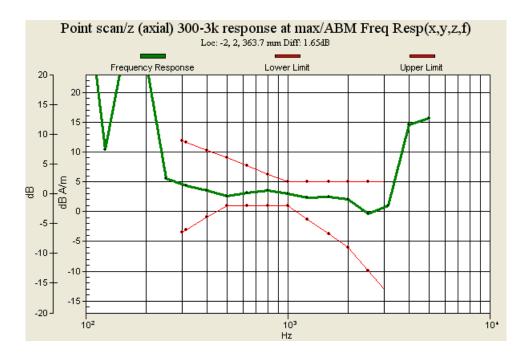


Figure 9.16: Frequency Response of GSM1900 for Ch512 for EUT Slide Right

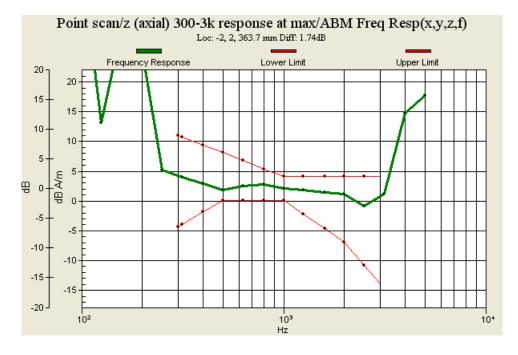


Figure 9.17: Frequency Response of GSM1900 for Ch661 for EUT Slide Right

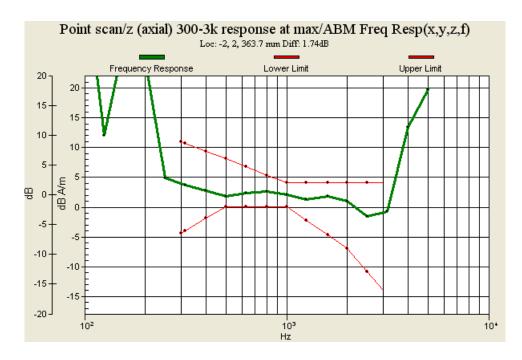


Figure 9.18: Frequency Response of GSM1900 for Ch810 for EUT Slide Right

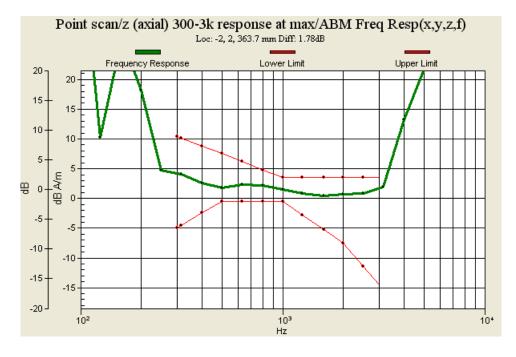


Figure 9.19: Frequency Response of WCDMA Band V for Ch4132 for EUT Slide Right

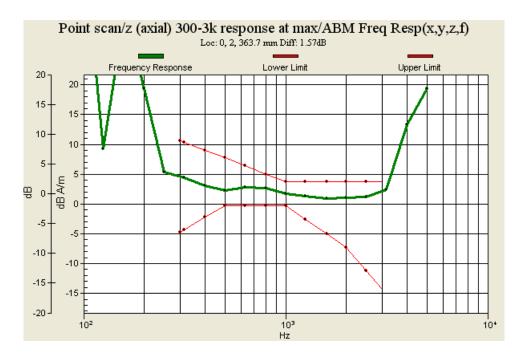


Figure 9.20: Frequency Response of WCDMA Band V for Ch4182 for EUT Slide Right

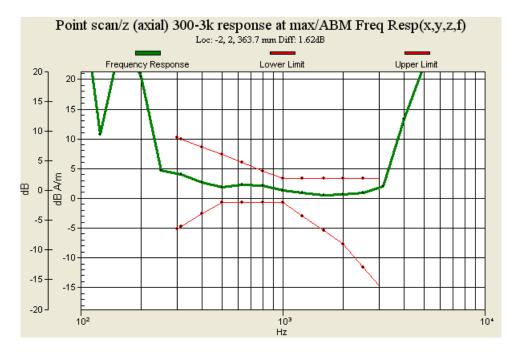


Figure 9.21: Frequency Response of WCDMA Band V for Ch4233 for EUT Slide Right

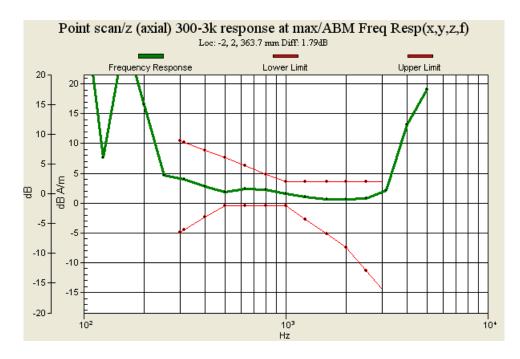


Figure 9.22: Frequency Response of WCDMA Band II for Ch9262 for EUT Slide Right

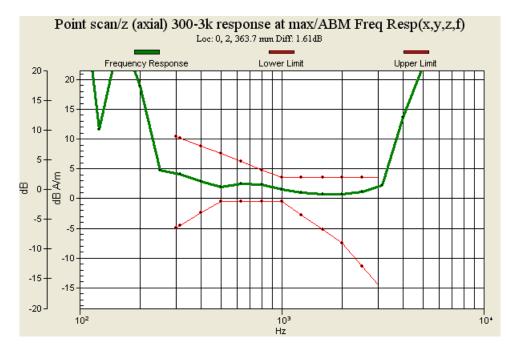


Figure 9.23: Frequency Response of WCDMA Band II for Ch9400 for EUT Slide Right

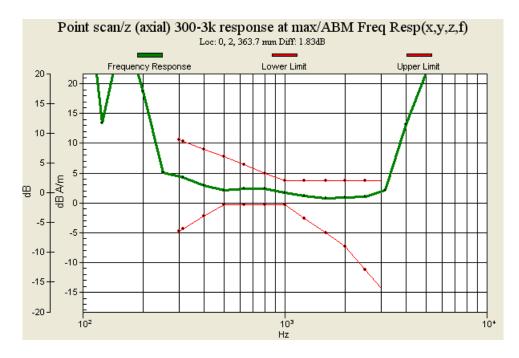


Figure 9.24: Frequency Response of WCDMA Band II for Ch9538 for EUT Slide Right



# 9.2 <u>T-Coil Coupling Field Intensity</u>

# 9.2.1 Axial Field Intensity

EUT Slide Mode	Cell Phone Mode	Minimum limit Result (dB A/m) (dB A/m)		Verdict
	GSM850	-13	3.450	Pass
Slide Off	GSM1900	-13	3.860	Pass
Silde Oli	WCDMA Band V	-13	3.280	Pass
	WCDMA Band II	-13	3.070	Pass
	GSM850	-13	3.270	Pass
Slide Dight	GSM1900	-13	3.070	Pass
Slide Right	WCDMA Band V	-13	3.640	Pass
	WCDMA Band II	-13	3.700	Pass

# 9.2.2 Radial Field Intensity

EUT Slide Mode	Cell Phone Mode	Minimum limit (dB A/m)	Result (dB A/m)	Verdict
	GSM850	-18	-5.21	Pass
Slide Off	GSM1900	-18	-4.79	Pass
Side Oil	WCDMA Band V	-18	-5.21	Pass
	WCDMA Band II	-18	-5.29	Pass
	GSM850	-18	-5.91	Pass
Slide Right	GSM1900 -18 -	-5.96	Pass	
Silde Right	WCDMA Band V	-18	-5.48	Pass
	WCDMA Band II	-18	-5.63	Pass

# 9.2.3 Frequency Response at Axial Measurement Point

EUT Slide Mode	Cell Phone Mode	Verdict
	GSM850	Pass
Slide Off	GSM1900	Pass
Slide Off	WCDMA Band V	Pass
	WCDMA Band II	Pass
	GSM850	Pass
Slide Right	GSM1900	Pass
	WCDMA Band V	Pass
	WCDMA Band II	Pass



# 9.2.4 Signal Quality

EUT Slide Mode	Cell Phone Mode	Minimum limit (dB)				Minimum	Verdict	
EUT Silde Mode		T1	T2	Т3	T4	Result (dB)	verdict	
	GSM850	-20	-10	0	10	15.20	T4	
Slide Off	GSM1900	-20	-10	0	10	25.60	T4	
Slide Oli	WCDMA Band V	-20	-10	0	10	35.00	T4	
	WCDMA Band II	-20	-10	0	10	34.70	T4	
	GSM850	-20	-10	0	10	25.10	T4	
Slide Diabt	GSM1900	-20	-10	0	10	22.70	T4	
Slide Right	WCDMA Band V	-20	-10	0	10	32.50	T4	
	WCDMA Band II	-20	-10	0	10	32.50	T4	



# 10. <u>Uncertainty Assessment</u>

The component of uncertainly may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainly by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in Table 10.1

Uncertainty Distributions	Normal	Rectangular	Triangular	U-shape
Multiplying factor <sup>(a)</sup>	<sub>1/k</sub> (b)	1/ 3	1/ 6	1/ 2

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) is the coverage factor

# Table 10.1: Uncertainty classification

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY4 uncertainty Budget is showed in Table 10.2.



Error Description Uncertain Value (± %		Probability Distribution	Divisor	(Ci) ABM1	(Ci) ABM2	Std. Unc. ABM1	Std. Unc. ABM2
Probe Sensitivity							
Reference Level	$\pm 3.0\%$	Normal	1	1	1	± 3.0%	± 3.0%
AMCC Geometry	$\pm 0.4\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.2\%$	$\pm 0.2\%$
AMCC Current	$\pm 0.6\%$	Rectangular	$\sqrt{3}$	1	0.145	$\pm 0.4\%$	$\pm 0.4\%$
Probe Positioning during Calibration	$\pm 0.1\%$	Rectangular	$\sqrt{3}$	1	1	± 0.1%	$\pm 0.1\%$
Noise Contribution	$\pm 0.7\%$	Rectangular	$\sqrt{3}$	0.0143	1	± 0.0%	$\pm 0.4\%$
Frequency Slope	$\pm 5.9\%$	Rectangular	$\sqrt{3}$	1	1	± 0.3%	± 3.5%
Probe System							
Repeatability/Drift	$\pm 1.0\%$	Rectangular	$\sqrt{3}$	1	1	± 0.6%	$\pm 0.6\%$
Linearity/Dynamic Range	$\pm 0.6\%$	Rectangular	$\sqrt{3}$	1	1	± 0.4%	$\pm 0.4\%$
Acoustic Noise	$\pm 1.0\%$	Rectangular	$\sqrt{3}$	0.1	1	± 0.1%	$\pm 0.6\%$
Probe Angle	$\pm 2.3\%$	Rectangular	$\sqrt{3}$	1	1	± 1.4%	± 1.4%
Spectral Processing	$\pm 0.9\%$	Rectangular	$\sqrt{3}$	1	1	± 0.5%	$\pm 0.5\%$
Integration Time	$\pm 0.6\%$	Normal	1	1	5	± 0.6%	± 3.0%
Field Distribution	$\pm 0.2\%$	Rectangular	$\sqrt{3}$	1	1	± 0.1%	$\pm 0.1\%$
Test Signal							
Ref. Signal Spectral Response	$\pm 0.6\%$	Rectangular	$\sqrt{3}$	0	1	$\pm 0.0\%$	$\pm 0.4\%$
Positioning							
Probe Positioning	± 1.9%	Rectangular	$\sqrt{3}$	1	1	± 1.1%	± 1.1%
Phantom Thickness	$\pm 0.9\%$	Rectangular	$\sqrt{3}$	1	1	± 0.5%	$\pm 0.5\%$
DUT Positioning	± 1.9%	Rectangular	$\sqrt{3}$	1	1	± 1.1%	± 1.1%
External Contributions							
RF Interference	$\pm 0.0\%$	Rectangular	$\sqrt{3}$	1	0.3	± 0.0%	$\pm 0.0\%$
Test Signal Variation $\pm 2.0\%$		Rectangular	$\sqrt{3}$	1	1	± 1.2%	± 1.2%
Combined Uncertainty							
Combined Std. Uncertainty (ABM F					± 4.1%	± 6.1%	
Expanded Std. Uncertainty					± 8.1%	± 12.3%	

Table 10.2: Uncertainty of audio band magnetic measurements

Test Report No : HA8D1718B



# 11. <u>References</u>

 ANSI C63.19 2006, "American National Standard for Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids"
 DASY4 System Hand book.

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# Appendix A – HAC Measurement Data

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab

Date: 2008/12/23

## T-Coil\_GSM850 Ch128\_X longitudinal\_Slide Off

## DUT: 8D1718

Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

# Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.148042 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -5.31 dB A/m BWC Factor = 0.148042 dB Location: 5, 5, 363.7 mm

## Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.141977 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -5.00 dB A/m BWC Factor = 0.141977 dB Location: 6, 4, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm



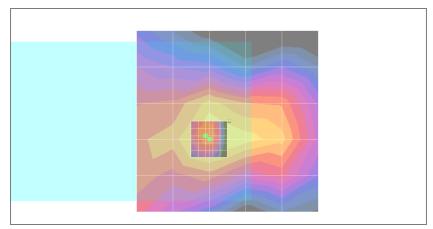
Cursor: ABM1 comp = -5.21 dB A/m BWC Factor = 0.150005 dB Location: 6, 4, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 15.2 dB ABM1 comp = -5.21 dB A/m BWC Factor = 0.150005 dB Location: 6, 4, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/23

## T-Coil\_GSM850 Ch128\_Y transversal\_Slide Off

# DUT: 8D1718

Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.148042 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -4.21 dB A/m BWC Factor = 0.148042 dB Location: -5, -5, 363.7 mm

## Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.141977 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -2.33 dB A/m BWC Factor = 0.141977 dB Location: 0, -4, 363.7 mm

## Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm



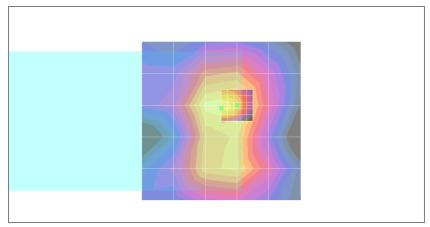
**Cursor:** ABM1 comp = -2.39 dB A/m BWC Factor = 0.150005 dB Location: 0, -4, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 32.3 dB ABM1 comp = -2.39 dB A/m BWC Factor = 0.150005 dB Location: 0, -4, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/23

## T-Coil\_GSM850 Ch128\_Z Axial\_Slide Off

# DUT: 8D1718

Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.148042 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = 0.901 dB A/m BWC Factor = 0.148042 dB Location: -5, 5, 363.7 mm

# Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.141977 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.65 dB A/m BWC Factor = 0.141977 dB Location: -2, 2, 363.7 mm

#### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm



**Cursor:** ABM1 comp = 3.45 dB A/m BWC Factor = 0.150005 dB Location: -2, 2, 363.7 mm

# Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

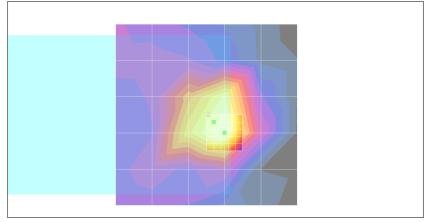
#### Cursor:

ABM1/ABM2 = 21.1 dB ABM1 comp = 3.45 dB A/m BWC Factor = 0.150005 dB Location: -2, 2, 363.7 mm

## Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 69.126 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: Diff = 2.00 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



0 dB = 1.00A/m

Date: 2008/12/23

# T-Coil\_GSM850 Ch189\_X longitudinal\_Slide Off

# DUT: 8D1718

Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.9 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.197003 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -4.74 dB A/m BWC Factor = 0.197003 dB Location: 5, 5, 363.7 mm

## Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.176005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

**Cursor:** ABM1 comp = -3.90 dB A/m BWC Factor = 0.176005 dB Location: 4, 2, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.12701 dB Device Reference Point: 0.000, 0.000, 353.7 mm



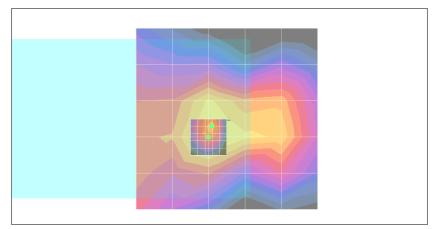
Cursor: ABM1 comp = -4.16 dB A/m BWC Factor = 0.12701 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.12701 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 17.6 dB ABM1 comp = -4.16 dB A/m BWC Factor = 0.12701 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/23

## T-Coil\_GSM850 Ch189\_Y transversal\_Slide Off

# DUT: 8D1718

Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.9 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.197003 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -4.84 dB A/m BWC Factor = 0.197003 dB Location: -5, -5, 363.7 mm

## Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.176005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

**Cursor:** ABM1 comp = -3.48 dB A/m BWC Factor = 0.176005 dB Location: -2, -4, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.12701 dB Device Reference Point: 0.000, 0.000, 353.7 mm



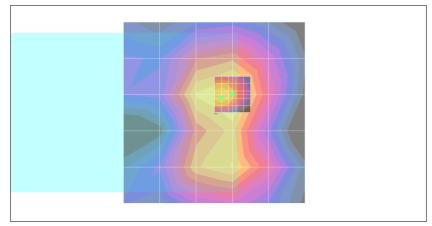
**Cursor:** ABM1 comp = -3.70 dB A/m BWC Factor = 0.12701 dB Location: -2, -4, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.12701 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 31.7 dB ABM1 comp = -3.70 dB A/m BWC Factor = 0.12701 dB Location: -2, -4, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/23

### T-Coil\_GSM850 Ch189\_Z Axial\_Slide Off

# DUT: 8D1718

Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.9 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.197003 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = 1.47 dB A/m BWC Factor = 0.197003 dB Location: -5, 5, 363.7 mm

# Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.176005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 4.37 dB A/m BWC Factor = 0.176005 dB Location: -2, 2, 363.7 mm

#### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.12701 dB Device Reference Point: 0.000, 0.000, 353.7 mm



**Cursor:** ABM1 comp = 4.14 dB A/m BWC Factor = 0.12701 dB Location: -2, 2, 363.7 mm

# Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.12701 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

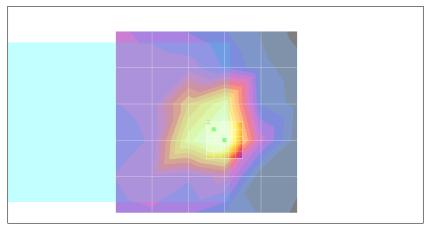
ABM1/ABM2 = 22.1 dB ABM1 comp = 4.14 dB A/m BWC Factor = 0.12701 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 69.126 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.94 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



0 dB = 1.00A/m

Date: 2008/12/23

## T-Coil\_GSM850 Ch251\_X longitudinal\_Slide Off

# DUT: 8D1718

Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -5.25 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

## Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: ABM1 comp = -4.96 dB A/m

BWC Factor = 0.150005 dB Location: 6, 4, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm



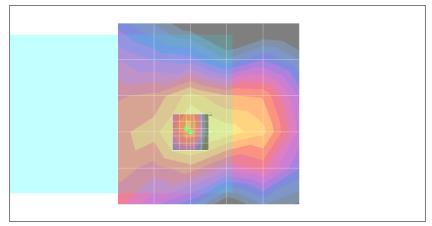
Cursor: ABM1 comp = -4.99 dB A/m BWC Factor = 0.151969 dB Location: 6, 4, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 15.8 dB ABM1 comp = -4.99 dB A/m BWC Factor = 0.151969 dB Location: 6, 4, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/23

## T-Coil\_GSM850 Ch251\_Y transversal\_Slide Off

# DUT: 8D1718

Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -4.49 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

## Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -2.38 dB A/m BWC Factor = 0.150005 dB Location: 0, -4, 363.7 mm

## Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm



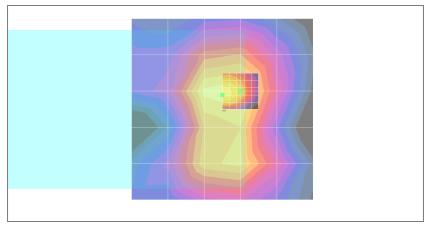
**Cursor:** ABM1 comp = -2.61 dB A/m BWC Factor = 0.151969 dB Location: 0, -4, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 32.1 dB ABM1 comp = -2.61 dB A/m BWC Factor = 0.151969 dB Location: 0, -4, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/23

### T-Coil\_GSM850 Ch251\_Z Axial\_Slide Off

# DUT: 8D1718

Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = 0.850 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

# Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.74 dB A/m BWC Factor = 0.150005 dB Location: -2, 2, 363.7 mm

#### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm



**Cursor:** ABM1 comp = 3.61 dB A/m BWC Factor = 0.151969 dB Location: -2, 2, 363.7 mm

# Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

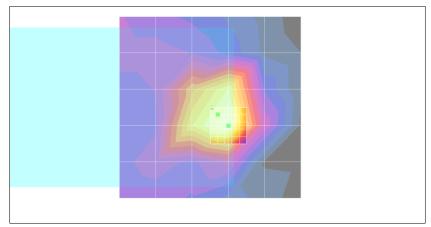
ABM1/ABM2 = 21.5 dB ABM1 comp = 3.61 dB A/m BWC Factor = 0.151969 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 69.126 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.70 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



0 dB = 1.00A/m

Date: 2008/12/24

# T-Coil\_GSM1900 Ch512\_X longitudinal\_Slide Off

# DUT: 8D1718

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.8 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

# Cursor:

ABM1 comp = -4.94 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

## Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: ABM1 comp = -4.60 dB A/m

BWC Factor = 0.151969 dB Location: 6, 2, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm



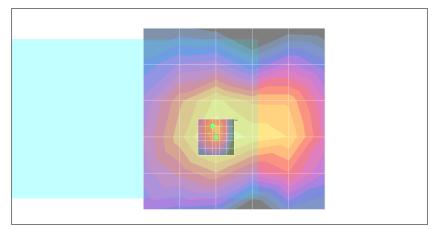
Cursor: ABM1 comp = -4.79 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 25.6 dB ABM1 comp = -4.79 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm



0 dB = 1.00A/m

Date: 2008/12/24

# T-Coil\_GSM1900 Ch512\_Y transversal\_Slide Off

# DUT: 8D1718

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.8 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

# Cursor:

ABM1 comp = -3.83 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

#### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

**Cursor:** ABM1 comp = -1.96 dB A/m BWC Factor = 0.151969 dB Location: -2, -4, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm



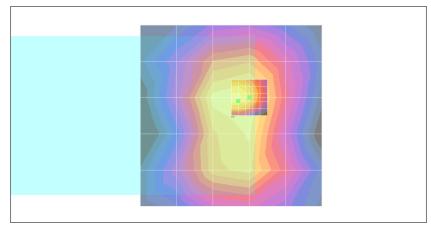
**Cursor:** ABM1 comp = -2.14 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 35.7 dB ABM1 comp = -2.14 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/24

### T-Coil\_GSM1900 Ch512\_Z Axial\_Slide Off

# DUT: 8D1718

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.8 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = 1.05 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

# Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 4.01 dB A/m BWC Factor = 0.151969 dB Location: -2, 2, 363.7 mm

#### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm



**Cursor:** ABM1 comp = 3.86 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

# Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

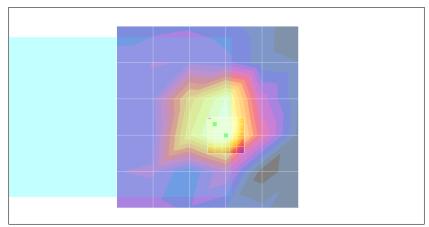
ABM1/ABM2 = 30.5 dB ABM1 comp = 3.86 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 69.126 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.88 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



<sup>0</sup> dB = 1.00A/m

Date: 2008/12/24

# T-Coil\_GSM1900 Ch661\_X longitudinal\_Slide Off

# DUT: 8D1718

Communication System: PCS; Frequency: 1880 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

# Cursor:

ABM1 comp = -4.96 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

## Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: ABM1 comp = -4.52 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm



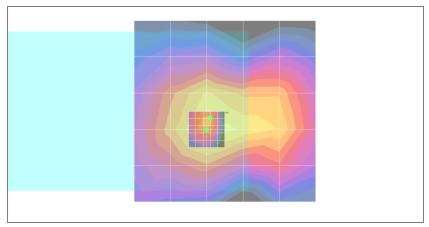
Cursor: ABM1 comp = -4.71 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 26.5 dB ABM1 comp = -4.71 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/24

## T-Coil\_GSM1900 Ch661\_Y transversal\_Slide Off

# DUT: 8D1718

Communication System: PCS; Frequency: 1880 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -3.84 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

## Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

**Cursor:** ABM1 comp = -2.03 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm



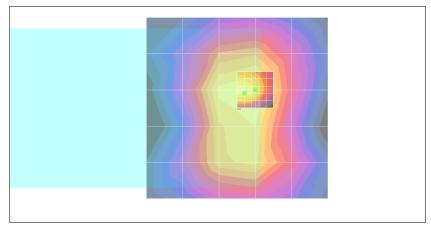
**Cursor:** ABM1 comp = -2.20 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 35.8 dB ABM1 comp = -2.20 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/24

### T-Coil\_GSM1900 Ch661\_Z Axial\_Slide Off

# DUT: 8D1718

Communication System: PCS; Frequency: 1880 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = 0.953 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

# Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 4.17 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

# Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm



**Cursor:** ABM1 comp = 3.96 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

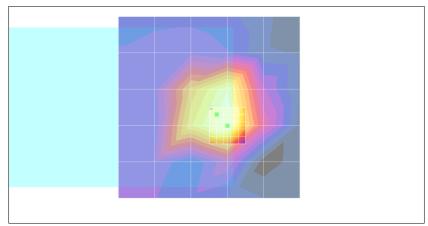
ABM1/ABM2 = 30.5 dB ABM1 comp = 3.96 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 69.126 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.74 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



0 dB = 1.00A/m

Date: 2008/12/24

## T-Coil\_GSM1900 Ch810\_X longitudinal\_Slide Off

## DUT: 8D1718

Communication System: PCS; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -5.12 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: ABM1 comp = -4.59 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



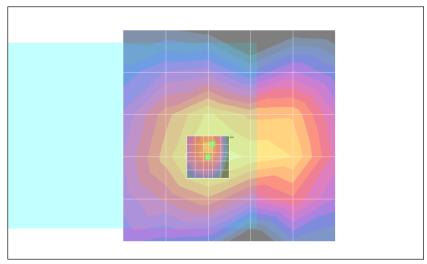
Cursor: ABM1 comp = -4.52 dB A/m BWC Factor = 0.151969 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 26.7 dB ABM1 comp = -4.52 dB A/m BWC Factor = 0.151969 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/24

### T-Coil\_GSM1900 Ch810\_Y transversal\_Slide Off

## DUT: 8D1718

Communication System: PCS; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -3.79 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

**Cursor:** ABM1 comp = -2.13 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



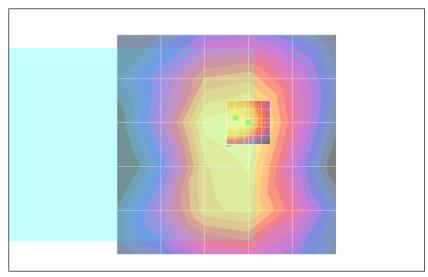
**Cursor:** ABM1 comp = -2.11 dB A/m BWC Factor = 0.151969 dB Location: -2, -6, 363.7 mm

## Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 35.6 dB ABM1 comp = -2.11 dB A/m BWC Factor = 0.151969 dB Location: -2, -6, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/24

### T-Coil\_GSM1900 Ch810\_Z Axial\_Slide Off

## DUT: 8D1718

Communication System: PCS; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = 1.00 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

## Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 4.13 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 4.01 dB A/m BWC Factor = 0.151969 dB Location: -2, 2, 363.7 mm

# Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

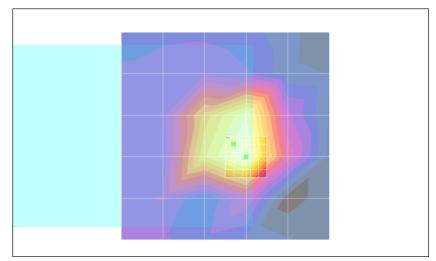
### Cursor:

ABM1/ABM2 = 30.5 dB ABM1 comp = 4.01 dB A/m BWC Factor = 0.151969 dB Location: -2, 2, 363.7 mm

Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 69.126 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.66 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



<sup>0</sup> dB = 1.00A/m



Date: 2008/12/24

### T-Coil\_WCDMA850 Ch4132\_X longitudinal\_Slide Off

### DUT: 8D1718

Communication System: WCDMA; Frequency: 826.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1$  kg/m<sup>3</sup> Ambient Temperature : 22.5 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1): Measurement arid: dx=10mm. dv=10mm

Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1 comp = -5.67 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

#### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

# Cursor:

ABM1 comp = -4.95 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm

### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



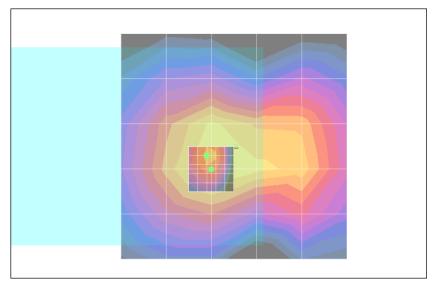
Cursor: ABM1 comp = -5.03 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 35.4 dB ABM1 comp = -5.03 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/24

### T-Coil\_WCDMA850 Ch4132\_Y transversal\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 826.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -4.56 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

**Cursor:** ABM1 comp = -2.51 dB A/m BWC Factor = 0.15103 dB Location: 0, -6, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



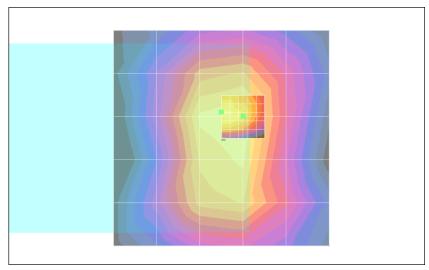
**Cursor:** ABM1 comp = -2.56 dB A/m BWC Factor = 0.15103 dB Location: 0, -6, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 36.0 dB ABM1 comp = -2.56 dB A/m BWC Factor = 0.15103 dB Location: 0, -6, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/24

### T-Coil\_WCDMA850 Ch4132\_Z Axial\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 826.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -0.157 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

## Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.61 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 3.47 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

# Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

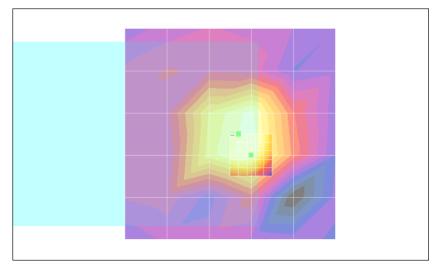
Cursor:

ABM1/ABM2 = 39.5 dB ABM1 comp = 3.47 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 69.126 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.67 dB BWC Factor = 10.8 dB Location: -2, 0, 363.7 mm



<sup>0</sup> dB = 1.00A/m

Date: 2008/12/24

## T-Coil\_WCDMA850 Ch4182\_X longitudinal\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 836.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -5.72 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: ABM1 comp = -5.15 dB A/m BWC Factor = 0.151969 dB Location: 6, 2, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



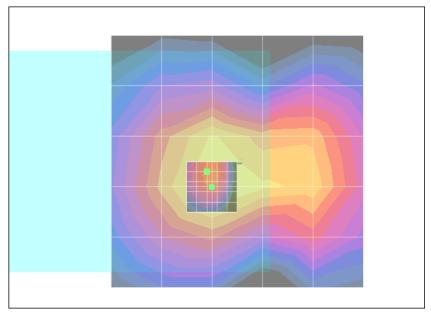
Cursor: ABM1 comp = -5.21 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 35.0 dB ABM1 comp = -5.21 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/24

### T-Coil\_WCDMA850 Ch4182\_Y transversal\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 836.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -4.42 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: ABM1 comp = -2.74 dB A/m BWC Factor = 0.151969 dB

BWC Factor = 0.151969 dB Location: -2, -6, 363.7 mm

### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



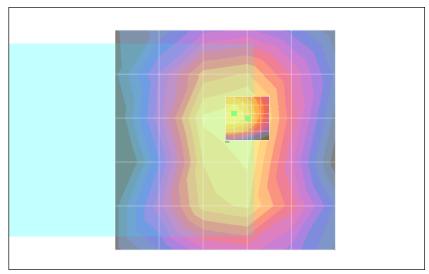
**Cursor:** ABM1 comp = -2.68 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm

## Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 36.1 dB ABM1 comp = -2.68 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/24

### T-Coil\_WCDMA850 Ch4182\_Z Axial\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 836.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = 0.152 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

## Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.36 dB A/m BWC Factor = 0.151969 dB Location: -2, 0, 363.7 mm

### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 3.34 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

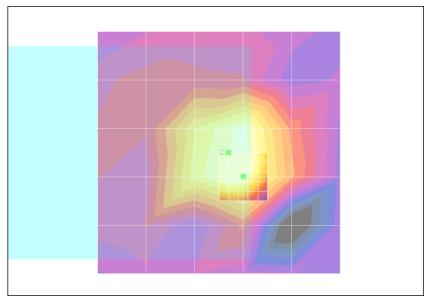
ABM1/ABM2 = 39.7 dB ABM1 comp = 3.34 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 69.126 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.64 dB BWC Factor = 10.8 dB Location: -2, 0, 363.7 mm





Date: 2008/12/24

## T-Coil\_WCDMA850 Ch4233\_X longitudinal\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 846.6 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -5.76 dB A/m BWC Factor = 0.151969 dB Location: 5, 5, 363.7 mm

### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: ABM1 comp = -5.06 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



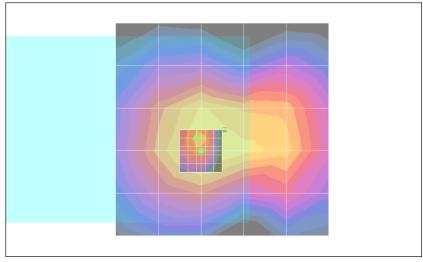
Cursor: ABM1 comp = -5.19 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 35.3 dB ABM1 comp = -5.19 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm







Date: 2008/12/24

### T-Coil\_WCDMA850 Ch4233\_Y transversal\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 846.6 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -4.78 dB A/m BWC Factor = 0.151969 dB Location: -5, -5, 363.7 mm

### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

**Cursor:** ABM1 comp = -2.75 dB A/m BWC Factor = 0.15103 dB Location: 0, -6, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



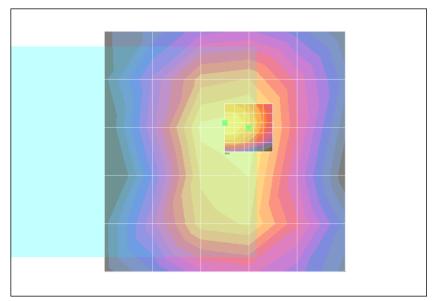
**Cursor:** ABM1 comp = -2.77 dB A/m BWC Factor = 0.15103 dB Location: 0, -6, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 36.6 dB ABM1 comp = -2.77 dB A/m BWC Factor = 0.15103 dB Location: 0, -6, 363.7 mm



0 dB = 1.00A/m



Date: 2008/12/24

### T-Coil\_WCDMA850 Ch4233\_Z Axial\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 846.6 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -0.228 dB A/m BWC Factor = 0.151969 dB Location: -5, 5, 363.7 mm

## Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.49 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



Cursor: ABM1 comp = 3.28 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

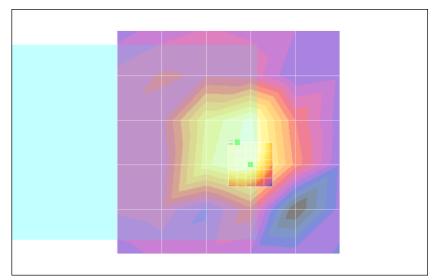
ABM1/ABM2 = 39.9 dB ABM1 comp = 3.28 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 69.126 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.60 dB BWC Factor = 10.8 dB Location: -2, 0, 363.7 mm



## 0 dB = 1.00A/m



Date: 2008/12/24

## T-Coil\_WCDMA1900 Ch9262\_X longitudinal\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1852.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.6 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -5.75 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

#### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.27 dB A/m BWC Factor = 0.151969 dB Location: 6, 2, 363.7 mm

### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



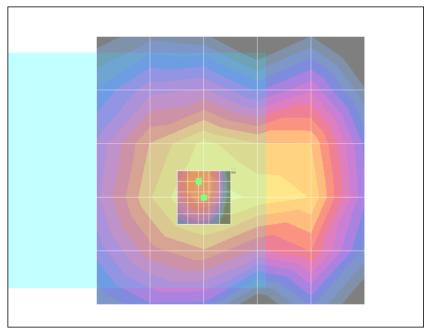
Cursor: ABM1 comp = -5.29 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm

## Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1/ABM2 = 34.7 dB ABM1 comp = -5.29 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm



0 dB = 1.00A/m

Date: 2008/12/24

## T-Coil\_WCDMA1900 Ch9262\_Y transversal\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma = 0$  mho/m,  $\varepsilon_r = 1$ ;  $\rho = 1$  kg/m<sup>3</sup> Ambient Temperature : 22.6 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -8.91 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k voice 1kHz 1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -2.79 dB A/m BWC Factor = 0.151969 dB Location: 0, -6, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



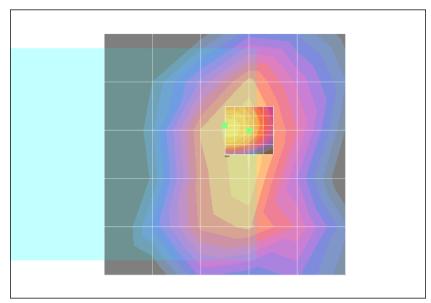
**Cursor:** ABM1 comp = -2.93 dB A/m BWC Factor = 0.15103 dB Location: 0, -6, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 36.8 dB ABM1 comp = -2.93 dB A/m BWC Factor = 0.15103 dB Location: 0, -6, 363.7 mm



0 dB = 1.00 A/m



Date: 2008/12/24

### T-Coil\_WCDMA1900 Ch9262\_Z Axial\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1852.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.6 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = 0.026 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

## Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.21 dB A/m BWC Factor = 0.151969 dB Location: -2, 0, 363.7 mm

### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



Cursor: ABM1 comp = 3.07 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

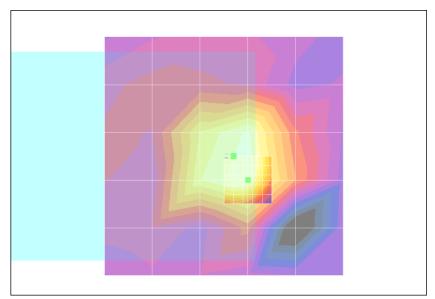
ABM1/ABM2 = 39.9 dB ABM1 comp = 3.07 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 69.126 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.57 dB BWC Factor = 10.8 dB Location: -2, 0, 363.7 mm



0 dB = 1.00A/m

Date: 2008/12/24

## T-Coil\_WCDMA1900 Ch9400\_X longitudinal\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1880 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.4 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -5.59 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: ABM1 comp = -4.99 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



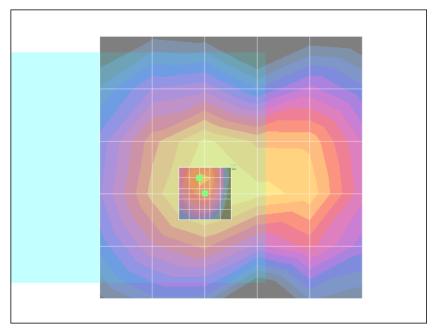
Cursor: ABM1 comp = -5.15 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm

## Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1/ABM2 = 35.0 dB ABM1 comp = -5.15 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm



0 dB = 1.00A/m

Date: 2008/12/24

## T-Coil\_WCDMA1900 Ch9400\_Y transversal\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1880 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.4 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -12.5 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: ABM1 comp = -2.89 dB A/m BWC Factor = 0.15103 dB Location: 0, 8, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



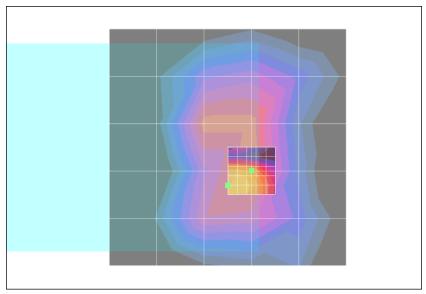
Cursor: ABM1 comp = -3.01 dB A/m BWC Factor = 0.15103 dB Location: 0, 8, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 36.2 dB ABM1 comp = -3.01 dB A/m BWC Factor = 0.15103 dB Location: 0, 8, 363.7 mm



<sup>0</sup> dB = 1.00A/m



Date: 2008/12/24

### T-Coil\_WCDMA1900 Ch9400\_Z Axial\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1880 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.4 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = 0.071 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

## Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.59 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

#### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 3.44 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

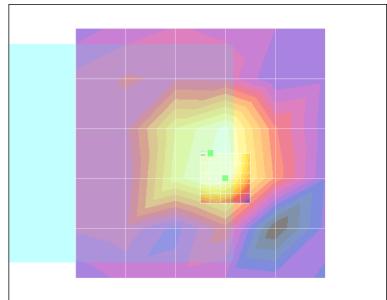
ABM1/ABM2 = 38.9 dB ABM1 comp = 3.44 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 69.126 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.70 dB BWC Factor = 10.8 dB Location: -2, 0, 363.7 mm



<sup>0</sup> dB = 1.00A/m

Date: 2008/12/24

## T-Coil\_WCDMA1900 Ch9538\_X longitudinal\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1907.6 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -6.80 dB A/m BWC Factor = 0.151969 dB Location: 5, 5, 363.7 mm

### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: ABM1 comp = -5.18 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

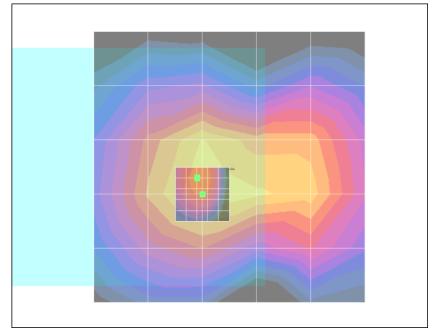


## Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1/ABM2 = 35.0 dB ABM1 comp = -5.18 dB A/m BWC Factor = 0.15103 dB Location: 6, 2, 363.7 mm



0 dB = 1.00A/m

Date: 2008/12/24

## T-Coil\_WCDMA1900 Ch9538\_Y transversal\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1907.6 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -4.55 dB A/m BWC Factor = 0.151969 dB Location: -5, -5, 363.7 mm

### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

**Cursor:** ABM1 comp = -2.74 dB A/m BWC Factor = 0.15103 dB Location: 0, -6, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



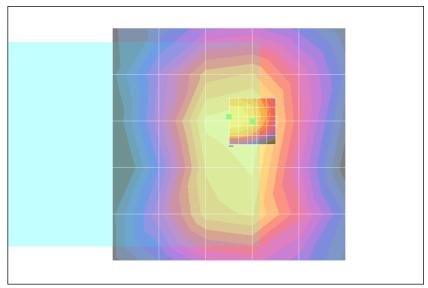
**Cursor:** ABM1 comp = -2.77 dB A/m BWC Factor = 0.15103 dB Location: 0, -6, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 34.8 dB ABM1 comp = -2.77 dB A/m BWC Factor = 0.15103 dB Location: 0, -6, 363.7 mm



<sup>0</sup> dB = 1.00A/m



Date: 2008/12/24

### T-Coil\_WCDMA1900 Ch9538\_Z Axial\_Slide Off

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1907.6 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.151969 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = 0.036 dB A/m BWC Factor = 0.151969 dB Location: -5, 5, 363.7 mm

## Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.44 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

#### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



Cursor: ABM1 comp = 3.36 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 35.297 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

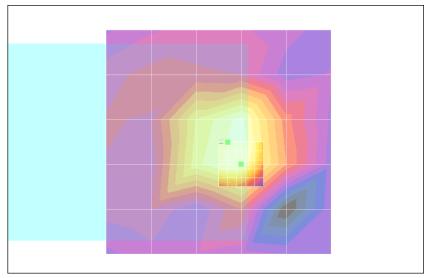
ABM1/ABM2 = 38.7 dB ABM1 comp = 3.36 dB A/m BWC Factor = 0.15103 dB Location: -2, 0, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 69.126 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.66 dB BWC Factor = 10.8 dB Location: -2, 0, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/13

## T-Coil\_GSM850 Ch128\_X longitudinal\_Slide Right

# DUT: 8D1718

Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.2 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -6.41 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

#### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.91 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

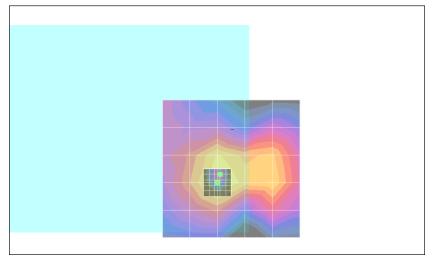


### Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1/ABM2 = 25.1 dB ABM1 comp = -5.91 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m

Test Report No : HA8D1718B

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab

Date: 2009/1/13

## T-Coil\_GSM850 Ch128\_Y transversal\_Slide Right

## DUT: 8D1718

Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.2 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

#### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -6.45 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

## Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

**Cursor:** ABM1 comp = -5.33 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm

## Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



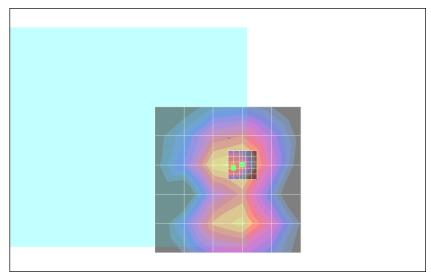
**Cursor:** ABM1 comp = -5.48 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 30.6 dB ABM1 comp = -5.48 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/13

## T-Coil\_GSM850 Ch128\_Z Axial\_Slide Right

# DUT: 8D1718

Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.2 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = 0.290 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

#### Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.65 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



Cursor: ABM1 comp = 3.60 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

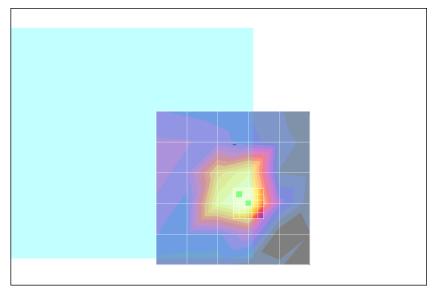
ABM1/ABM2 = 25.7 dB ABM1 comp = 3.60 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 72.7711 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.88 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



<sup>0</sup> dB = 1.00A/m



Date: 2009/1/13

# T-Coil\_GSM850 Ch189\_X longitudinal\_Slide Right

## DUT: 8D1718

Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.6 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: -0.00378787 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -6.46 dB A/m BWC Factor = -0.00378787 dB Location: 5, 5, 363.7 mm

#### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.0654184 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.20 dB A/m BWC Factor = 0.0654184 dB Location: 4, 2, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



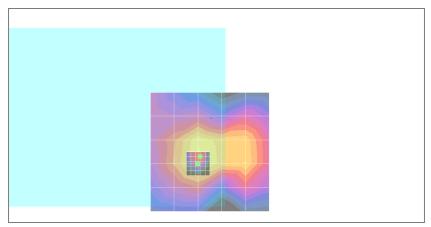
Cursor: ABM1 comp = -5.27 dB A/m BWC Factor = 0.135993 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.135993 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 27.1 dB ABM1 comp = -5.27 dB A/m BWC Factor = 0.135993 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/13

## T-Coil\_GSM850 Ch189\_Y transversal\_Slide Right

## DUT: 8D1718

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma = 0$  mho/m,  $\varepsilon_r = 1$ ;  $\rho = 1$  kg/m<sup>3</sup> Ambient Temperature: 22.7

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23 Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: -0.00378787 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -6.57 dB A/m BWC Factor = -0.00378787 dB Location: -5, -5, 363.7 mm

## Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.0654184 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.47 dB A/m BWC Factor = 0.0654184 dB Location: -2, -6, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



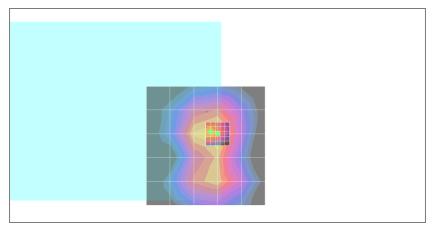
**Cursor:** ABM1 comp = -5.46 dB A/m BWC Factor = 0.135993 dB Location: -2, -6, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.135993 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 30.3 dB ABM1 comp = -5.46 dB A/m BWC Factor = 0.135993 dB Location: -2, -6, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/13

# T-Coil\_GSM850 Ch189\_Z Axial\_Slide Right

# DUT: 8D1718

Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: -0.00378787 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -0.538 dB A/m BWC Factor = -0.00378787 dB Location: -5, 5, 363.7 mm

#### Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.0654184 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1 comp = 3.38 dB A/m BWC Factor = 0.0654184 dB Location: -2, 2, 363.7 mm

#### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 3.27 dB A/m BWC Factor = 0.135993 dB Location: -2, 2, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.135993 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

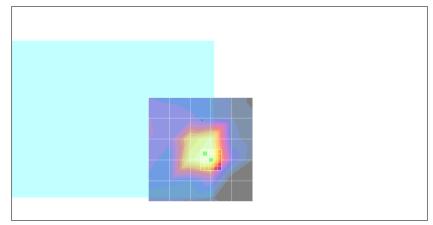
ABM1/ABM2 = 25.5 dB ABM1 comp = 3.27 dB A/m BWC Factor = 0.135993 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 72.7711 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.86 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/13

# T-Coil\_GSM850 Ch251\_X longitudinal\_Slide Right

# DUT: 8D1718

Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -6.38 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

#### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.23 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



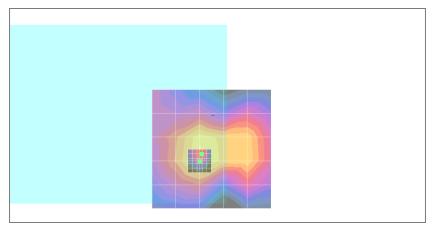
Cursor: ABM1 comp = -5.48 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 26.8 dB ABM1 comp = -5.48 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/13

# T-Coil\_GSM850 Ch251\_Y transversal\_Slide Right

# DUT: 8D1718

Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -6.64 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

#### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.46 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



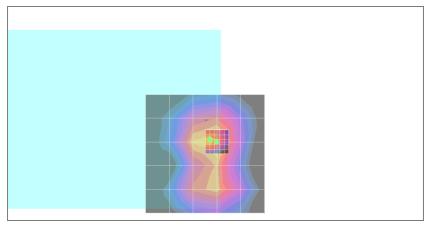
**Cursor:** ABM1 comp = -5.44 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 30.3 dB ABM1 comp = -5.44 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/13

# T-Coil\_GSM850 Ch251\_Z Axial\_Slide Right

# DUT: 8D1718

Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.8 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -0.715 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

#### Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1 comp = 3.42 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

#### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 3.34 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

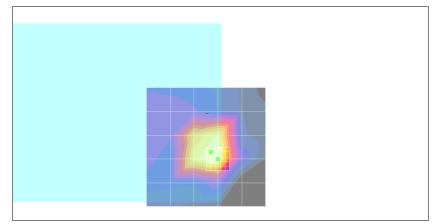
ABM1/ABM2 = 25.5 dB ABM1 comp = 3.34 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 72.7711 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

Diff = 1.97 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



<sup>0</sup> dB = 1.00A/m



Date: 2009/1/13

## T-Coil\_GSM1900 Ch512\_X longitudinal\_Slide Right

## DUT: 8D1718

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.3 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -6.78 dB A/m BWC Factor = 0.150005 dB Location: 5, 5, 363.7 mm

#### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.65 dB A/m BWC Factor = 0.150005 dB Location: 4, 2, 363.7 mm

### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



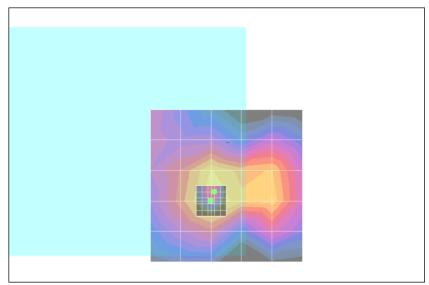
Cursor: ABM1 comp = -5.82 dB A/m BWC Factor = 0.150005 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 22.7 dB ABM1 comp = -5.82 dB A/m BWC Factor = 0.150005 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/13

## T-Coil\_GSM1900 Ch512\_Y transversal\_Slide Right

## DUT: 8D1718

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.3 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -6.58 dB A/m BWC Factor = 0.150005 dB Location: -5, -5, 363.7 mm

#### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.38 dB A/m BWC Factor = 0.150005 dB Location: -2, -4, 363.7 mm

### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



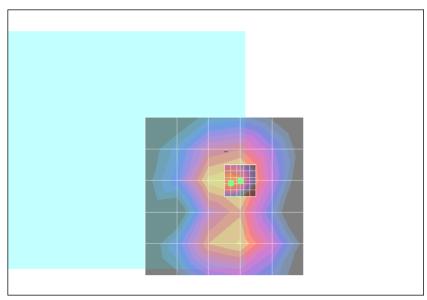
**Cursor:** ABM1 comp = -5.47 dB A/m BWC Factor = 0.150005 dB Location: -2, -4, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 32.7 dB ABM1 comp = -5.47 dB A/m BWC Factor = 0.150005 dB Location: -2, -4, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/13

## T-Coil\_GSM1900 Ch512\_Z Axial\_Slide Right

# DUT: 8D1718

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.3 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -0.100 dB A/m BWC Factor = 0.150005 dB Location: -5, 5, 363.7 mm

#### Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.39 dB A/m BWC Factor = 0.150005 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 3.55 dB A/m BWC Factor = 0.150005 dB Location: -2, 2, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

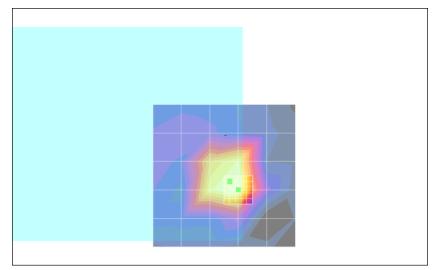
ABM1/ABM2 = 29.1 dB ABM1 comp = 3.55 dB A/m BWC Factor = 0.150005 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 72.7711 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.65 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/14

## T-Coil\_GSM1900 Ch661\_X longitudinal\_Slide Right

# DUT: 8D1718

Communication System: PCS; Frequency: 1880 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -6.52 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

#### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.34 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



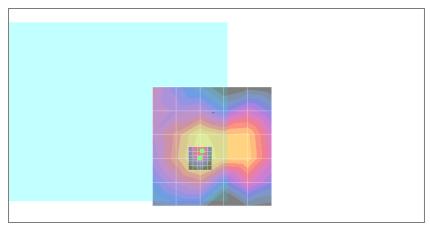
Cursor: ABM1 comp = -5.55 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 23.6 dB ABM1 comp = -5.55 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/14

# T-Coil\_GSM1900 Ch661\_Y transversal\_Slide Right

# DUT: 8D1718

Communication System: PCS; Frequency: 1880 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -6.88 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

#### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.73 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



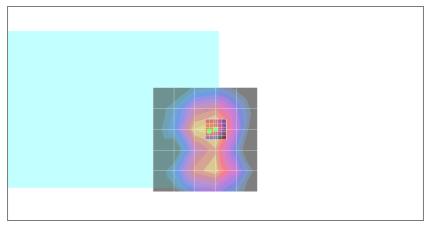
**Cursor:** ABM1 comp = -5.86 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 31.2 dB ABM1 comp = -5.86 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/14

# T-Coil\_GSM1900 Ch661\_Z Axial\_Slide Right

## DUT: 8D1718

Communication System: PCS; Frequency: 1880 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.6 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -0.745 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

#### Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.15 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

#### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 3.09 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

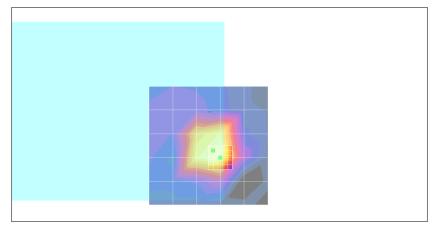
ABM1/ABM2 = 29.0 dB ABM1 comp = 3.09 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 72.7711 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.74 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/14

## T-Coil\_GSM1900 Ch810\_X longitudinal\_Slide Right

# DUT: 8D1718

Communication System: PCS; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.7 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -6.58 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.35 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



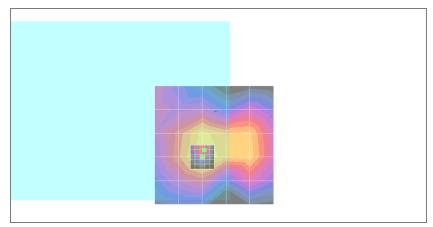
Cursor: ABM1 comp = -5.61 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 23.7 dB ABM1 comp = -5.61 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/14

# T-Coil\_GSM1900 Ch810\_Y transversal\_Slide Right

# DUT: 8D1718

Communication System: PCS; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.9 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -6.92 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

#### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.86 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



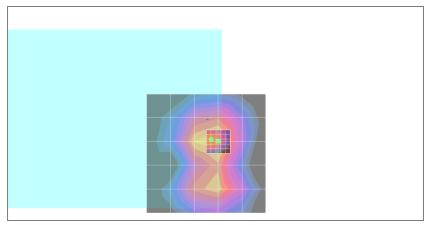
**Cursor:** ABM1 comp = -5.96 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 32.0 dB ABM1 comp = -5.96 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/14

# T-Coil\_GSM1900 Ch810\_Z Axial\_Slide Right

# DUT: 8D1718

Communication System: PCS; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.6 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -0.641 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

#### Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1 comp = 3.27 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

#### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 3.07 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

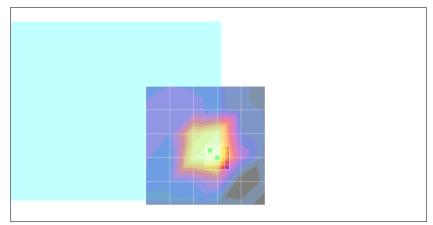
ABM1/ABM2 = 29.3 dB ABM1 comp = 3.07 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 72.7711 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.74 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/14

## T-Coil\_WCDMA850 Ch4132\_X longitudinal\_Slide Right

# DUT: 8D1718

Communication System: WCDMA; Frequency: 826.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.4 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -5.96 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -4.98 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



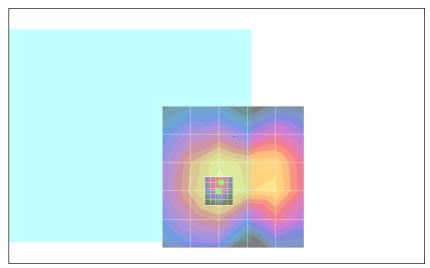
Cursor: ABM1 comp = -5.07 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 38.9 dB ABM1 comp = -5.07 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/14

## T-Coil\_WCDMA850 Ch4132\_Y transversal\_Slide Right

# DUT: 8D1718

Communication System: WCDMA; Frequency: 826.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.4 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -6.47 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.39 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm

### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



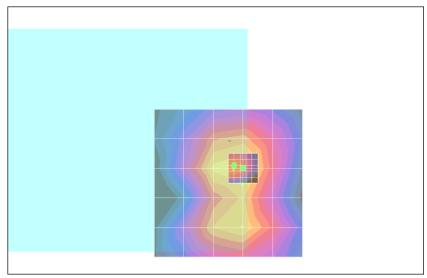
**Cursor:** ABM1 comp = -5.43 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 32.5 dB ABM1 comp = -5.43 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/14

# T-Coil\_WCDMA850 Ch4132\_Z Axial\_Slide Right

## DUT: 8D1718

Communication System: WCDMA; Frequency: 826.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.4 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -0.120 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

### Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.76 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 3.64 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

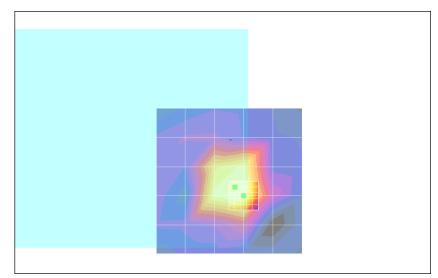
ABM1/ABM2 = 40.5 dB ABM1 comp = 3.64 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 72.7711 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.78 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/13

## T-Coil\_WCDMA850 Ch4182\_X longitudinal\_Slide Right

# DUT: 8D1718

Communication System: WCDMA; Frequency: 836.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.4 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -5.85 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.15 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



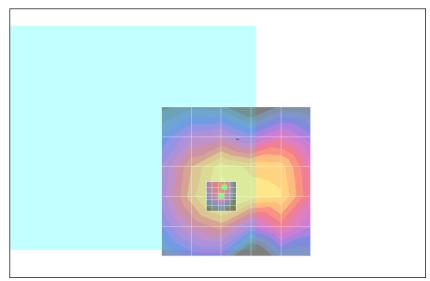
**Cursor:** ABM1 comp = -5.23 dB A/m BWC Factor = 0.148981 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.148981 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 36.8 dB ABM1 comp = -5.23 dB A/m BWC Factor = 0.148981 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/13

## T-Coil\_WCDMA850 Ch4182\_Y transversal\_Slide Right

## DUT: 8D1718

Communication System: WCDMA; Frequency: 836.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.4 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -6.19 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

#### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1 comp = -4.69 dB A/m BWC Factor = 0.15103 dB Location: 0, -4, 363.7 mm

#### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



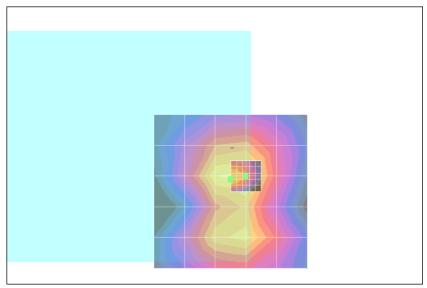
**Cursor:** ABM1 comp = -4.68 dB A/m BWC Factor = 0.148981 dB Location: 0, -4, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.148981 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 34.4 dB ABM1 comp = -4.68 dB A/m BWC Factor = 0.148981 dB Location: 0, -4, 363.7 mm



<sup>0</sup> dB = 1.00A/m



Date: 2009/1/13

# T-Coil\_WCDMA850 Ch4182\_Z Axial\_Slide Right

# DUT: 8D1718

Communication System: WCDMA; Frequency: 836.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.4 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -0.014 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

#### Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1 comp = 4.13 dB A/m BWC Factor = 0.15103 dB Location: 0, 2, 363.7 mm

### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 4.06 dB A/m BWC Factor = 0.148981 dB Location: 0, 2, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.148981 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

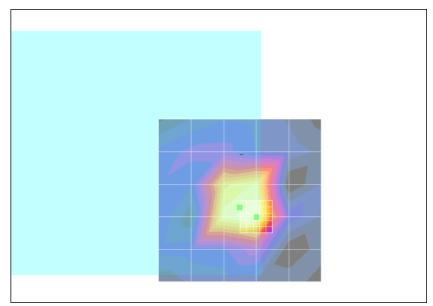
ABM1/ABM2 = 38.2 dB ABM1 comp = 4.06 dB A/m BWC Factor = 0.148981 dB Location: 0, 2, 363.7 mm

## Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 72.7711 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.57 dB BWC Factor = 10.8 dB Location: 0, 2, 363.7 mm



0 dB = 1.00A/m

Date: 2009/1/14

## T-Coil\_WCDMA850 Ch4233\_X longitudinal\_Slide Right

## DUT: 8D1718

Communication System: WCDMA; Frequency: 846.6 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -6.02 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

## Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: ABM1 comp = -4.92 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



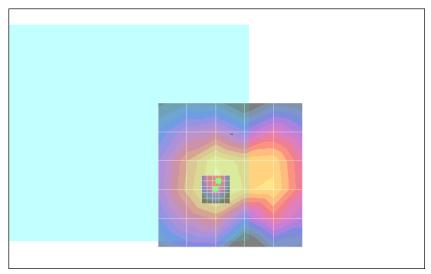
Cursor: ABM1 comp = -5.09 dB A/m BWC Factor = 0.150005 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 39.2 dB ABM1 comp = -5.09 dB A/m BWC Factor = 0.150005 dB Location: 4, 2, 363.7 mm



<sup>0</sup> dB = 1.00A/m



Date: 2009/1/14

## T-Coil\_WCDMA850 Ch4233\_Y transversal\_Slide Right

# DUT: 8D1718

Communication System: WCDMA; Frequency: 846.6 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -6.46 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.39 dB A/m BWC Factor = 0.15103 dB Location: -2, -6, 363.7 mm

### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



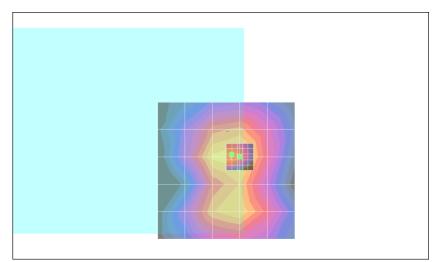
**Cursor:** ABM1 comp = -5.48 dB A/m BWC Factor = 0.150005 dB Location: -2, -6, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 32.9 dB ABM1 comp = -5.48 dB A/m BWC Factor = 0.150005 dB Location: -2, -6, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/14

# T-Coil\_WCDMA850 Ch4233\_Z Axial\_Slide Right

# DUT: 8D1718

Communication System: WCDMA; Frequency: 846.6 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1 comp = -1.09 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

### Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.71 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 3.69 dB A/m BWC Factor = 0.150005 dB Location: -2, 2, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

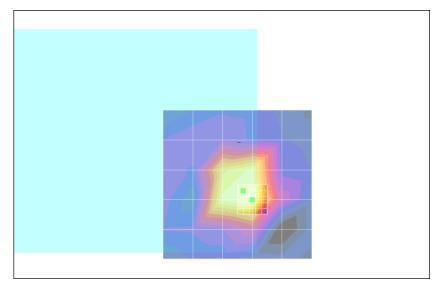
ABM1/ABM2 = 41.3 dB ABM1 comp = 3.69 dB A/m BWC Factor = 0.150005 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 72.7711 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.62 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/13

## T-Coil\_WCDMA1900 Ch9262\_X longitudinal\_Slide Right

# DUT: 8D1718

Communication System: WCDMA; Frequency: 1852.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.3 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -6.30 dB A/m BWC Factor = 0.15103 dB Location: 5, 5, 363.7 mm

### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.60 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



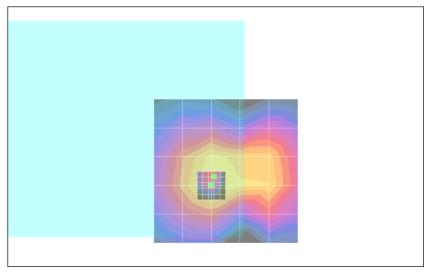
Cursor: ABM1 comp = -5.63 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 36.4 dB ABM1 comp = -5.63 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm



<sup>0</sup> dB = 1.00A/m



Date: 2009/1/13

## T-Coil\_WCDMA1900 Ch9262\_Y transversal\_Slide Right

# DUT: 8D1718

Communication System: WCDMA; Frequency: 1852.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.3 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -6.44 dB A/m BWC Factor = 0.15103 dB Location: -5, -5, 363.7 mm

### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.13 dB A/m BWC Factor = 0.15103 dB Location: 0, -4, 363.7 mm

### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



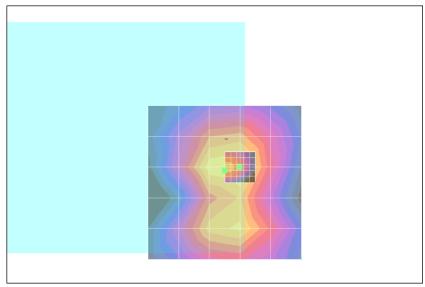
Cursor: ABM1 comp = -5.19 dB A/m BWC Factor = 0.15103 dB Location: 0, -4, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 34.4 dB ABM1 comp = -5.19 dB A/m BWC Factor = 0.15103 dB Location: 0, -4, 363.7 mm



<sup>0</sup> dB = 1.00A/m



Date: 2009/1/13

# T-Coil\_WCDMA1900 Ch9262\_Z Axial\_Slide Right

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1852.4 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.3 °C

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -0.259 dB A/m BWC Factor = 0.15103 dB Location: -5, 5, 363.7 mm

### Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = 3.76 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



**Cursor:** ABM1 comp = 3.70 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

## Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

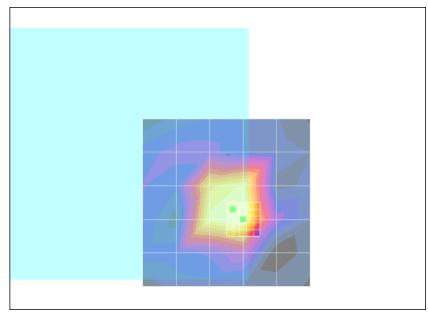
ABM1/ABM2 = 38.6 dB ABM1 comp = 3.70 dB A/m BWC Factor = 0.15103 dB Location: -2, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 72.7711 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.79 dB BWC Factor = 10.8 dB Location: -2, 2, 363.7 mm



0 dB = 1.00A/m

Date: 2009/1/14

## T-Coil\_WCDMA1900 Ch9400\_X longitudinal\_Slide Right

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1880 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -5.82 dB A/m BWC Factor = 0.150005 dB Location: 5, 5, 363.7 mm

## Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor: ABM1 comp = -5.12 dB A/m BWC Factor = 0.150005 dB Location: 4, 2, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



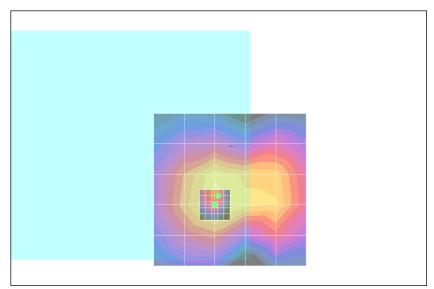
Cursor: ABM1 comp = -5.22 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 39.2 dB ABM1 comp = -5.22 dB A/m BWC Factor = 0.15103 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/14

# T-Coil\_WCDMA1900 Ch9400\_Y transversal\_Slide Right

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1880 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -6.74 dB A/m BWC Factor = 0.150005 dB Location: -5, -5, 363.7 mm

### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.49 dB A/m BWC Factor = 0.150005 dB Location: -2, -4, 363.7 mm

### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



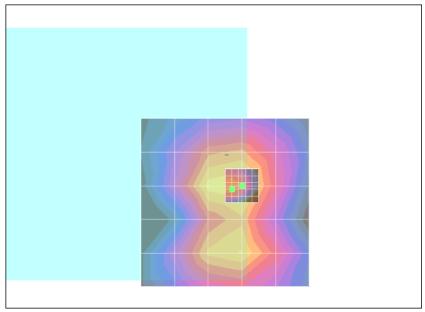
**Cursor:** ABM1 comp = -5.55 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1/ABM2 = 32.5 dB ABM1 comp = -5.55 dB A/m BWC Factor = 0.15103 dB Location: -2, -4, 363.7 mm



0 dB = 1.00A/m



Date: 2009/1/14

# T-Coil\_WCDMA1900 Ch9400\_Z Axial\_Slide Right

## DUT: 8D1718

Communication System: WCDMA; Frequency: 1880 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.5

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1 comp = -0.413 dB A/m BWC Factor = 0.150005 dB Location: -5, 5, 363.7 mm

### Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.150005 dB Device Reference Point: 0.000, 0.000, 353.7 mm

## Cursor:

ABM1 comp = 3.76 dB A/m BWC Factor = 0.150005 dB Location: 0, 2, 363.7 mm

### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):



Cursor: ABM1 comp = 3.83 dB A/m BWC Factor = 0.15103 dB Location: 0, 2, 363.7 mm

# Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.15103 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

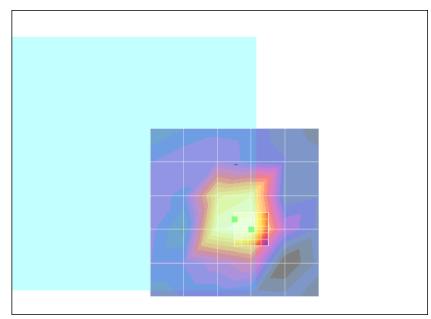
ABM1/ABM2 = 40.7 dB ABM1 comp = 3.83 dB A/m BWC Factor = 0.15103 dB Location: 0, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 72.7711 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.8 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.61 dB BWC Factor = 10.8 dB Location: 0, 2, 363.7 mm



0 dB = 1.00A/m

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab

Date: 2009/1/14

# T-Coil\_WCDMA1900 Ch9538\_X longitudinal\_Slide Right

# DUT: 8D1718

Communication System: WCDMA; Frequency: 1907.6 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.4

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### Coarse Scans/x (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.113989 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -5.91 dB A/m BWC Factor = 0.113989 dB Location: 5, 5, 363.7 mm

### Fine scan/x (longitudinal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.0903825 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.04 dB A/m BWC Factor = 0.0903825 dB Location: 4, 2, 363.7 mm

#### Point scan/x (longitudinal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.0933906 dB Device Reference Point: 0.000, 0.000, 353.7 mm



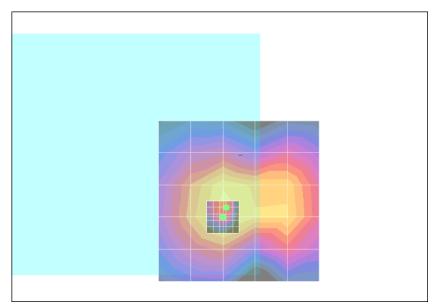
**Cursor:** ABM1 comp = -5.06 dB A/m BWC Factor = 0.0933906 dB Location: 4, 2, 363.7 mm

# Point scan/x (longitudinal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.0933906 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 39.3 dB ABM1 comp = -5.06 dB A/m BWC Factor = 0.0933906 dB Location: 4, 2, 363.7 mm



0 dB = 1.00A/m



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab

Date: 2009/1/14

# T-Coil\_WCDMA1900 Ch9538\_Y transversal\_Slide Right

# DUT: 8D1718

Communication System: WCDMA; Frequency: 1907.6 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.4

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

# Coarse Scans/y (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.113989 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -6.67 dB A/m BWC Factor = 0.113989 dB Location: -5, -5, 363.7 mm

#### Fine scan/y (transversal) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.0903825 dB Device Reference Point: 0.000, 0.000, 353.7 mm

Cursor:

ABM1 comp = -5.49 dB A/m BWC Factor = 0.0903825 dB Location: -2, -6, 363.7 mm

### Point scan/y (transversal) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.0933906 dB Device Reference Point: 0.000, 0.000, 353.7 mm



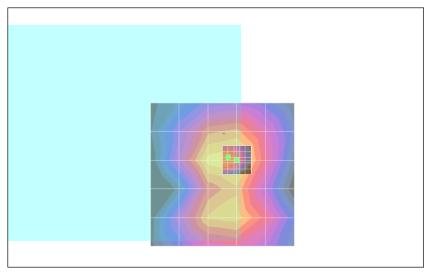
**Cursor:** ABM1 comp = -5.55 dB A/m BWC Factor = 0.0933906 dB Location: -2, -6, 363.7 mm

# Point scan/y (transversal) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.0933906 dB Device Reference Point: 0.000, 0.000, 353.7 mm

### Cursor:

ABM1/ABM2 = 32.7 dB ABM1 comp = -5.55 dB A/m BWC Factor = 0.0933906 dB Location: -2, -6, 363.7 mm



0 dB = 1.00A/m



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab

Date: 2009/1/14

# T-Coil\_WCDMA1900 Ch9538\_Z Axial\_Slide Right

# DUT: 8D1718

Communication System: WCDMA; Frequency: 1907.6 MHz;Duty Cycle: 1:1 Medium: Air Medium parameters used:  $\sigma$  = 0 mho/m,  $\epsilon_r$  = 1;  $\rho$  = 1 kg/m<sup>3</sup> Ambient Temperature : 22.4

DASY4 Configuration:

- Probe: AM1DV2 1038; ; Calibrated: 2008/1/23
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn577; Calibrated: 2008/11/12
- Phantom: HAC Test Arch with Coil; Type: SD HAC P01 BA
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## Coarse Scans/z (axial) scan 50 x 50 (grid 10) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.113989 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

ABM1 comp = -0.373 dB A/m BWC Factor = 0.113989 dB Location: -5, 5, 363.7 mm

#### Fine scan/z (axial) scan 10 x 10 (grid 2) with noise/ABM Signal(x,y,z) (6x6x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.0903825 dB Device Reference Point: 0.000, 0.000, 353.7 mm

# Cursor:

ABM1 comp = 3.82 dB A/m BWC Factor = 0.0903825 dB Location: 0, 2, 363.7 mm

### Point scan/z (axial) scan at point with noise/ABM Signal(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.0933906 dB Device Reference Point: 0.000, 0.000, 353.7 mm



**Cursor:** ABM1 comp = 3.90 dB A/m BWC Factor = 0.0933906 dB Location: 0, 2, 363.7 mm

# Point scan/z (axial) scan at point with noise/ABM SNR(x,y,z) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_1kHz\_1s.wav Output Gain: 37.161 Measure Window Start: 0ms Measure Window Length: 2000ms BWC applied: 0.0933906 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

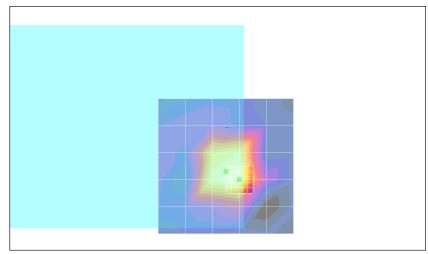
ABM1/ABM2 = 41.1 dB ABM1 comp = 3.90 dB A/m BWC Factor = 0.0933906 dB Location: 0, 2, 363.7 mm

### Point scan/z (axial) 300-3k response at max/ABM Freq Resp(x,y,z,f) (1x1x1):

Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k\_voice\_300-3000\_2s.wav Output Gain: 72.7711 Measure Window Start: 2000ms Measure Window Length: 4000ms BWC applied: 10.7 dB Device Reference Point: 0.000, 0.000, 353.7 mm

#### Cursor:

Diff = 1.83 dB BWC Factor = 10.7 dB Location: 0, 2, 363.7 mm



<sup>0</sup> dB = 1.00A/m



# Appendix B – Calibration Data

Please refer to the calibration certificates of DASY as below.

#### Schmid & Partner Engineering AG

s p e a g

Zeughausstrasse 43, 8004 Zurich, Switzerland Phone +41 44 245 9700, Fax +41 44 245 9779 info@speag.com, http://www.speag.com

#### Client

#### Sporton (Auden)

#### Certificate of test and configuration

Item	AM1DV2 Audio Magnetic 1D Field Probe	
Type No	SP AM1 001 AF	_
Series No	1038	
Manufacturer / Origin	Schmid & Partner Engineering AG, Zürich, Switzerland	

#### Description of the item

The Audio Magnetic Field Probe is a fully shielded magnetic field probe for the frequency range from 100 Hz to 20 kHz. The pickup coil is compliant with the dimensional requirements of [1]. The probe includes a symmetric 40dB low noise amplifier for the signal available at the shielded 3 pin connector at the side. Power is supplied via the same connector (phantom power supply) and monitored via the LED near the connector. The 7 pin connector at the end of the probe does not carry any signals, but determines the angle of the sensor when mounted on the DAE. The probe supports mechanical detection of the surface. The single sensor in the probe is arranged in a tilt angle allowing measurement of 3 orthogonal field components when rotating the probe by 120° around its axis. It is aligned with the perpendicular connector rotation and Sensor angle stated below.

The probe is fully RF shielded when operated with the matching signal cable (shielded) and allows measurement of audio magnetic fields in the close vicinity of RF emitting wireless devices according to [1] without additional shielding.

#### Handling of the item

The probe is manufactured from stainless steel. In order to maintain the performance and calibration of the probe, it must not be opened. The probe is designed for operation in air and shall not be exposed to humidity or liquids. For proper operation of the surface detection and emergency stop functions in the DASY system, the probe must be operated with the special probe cup provided (larger diameter). Verify that the probe can slide in the probe cup rubber smoothly.

#### Functional test, configuration data and sensitivity

23.1.2008 MM

The probe configuration data were evaluated after a functional test including noise level and RF immunity. Connector rotation, sensor angle and sensitivity are specific for this probe.

#### DASY configuration data for the probe

Condition	Configuration Data	Dimension
mounted on DAE in DASY system	296	mm
at the cylindrical part	6	mm
center of sensor, from tip	3	mm
Evaluated in homogeneous 1 kHz	39.8	0
magnetic field generated with AMCC Helmholtz Calibration Coil	3.09	0
at 1 kHz	0.0666	V / (A/m)
	mounted on DAE in DASY system           at the cylindrical part           center of sensor, from tip           Evaluated in homogeneous 1 kHz           magnetic field generated with           AMCC Helmholtz Calibration Coil	mounted on DAE in DASY system     296       at the cylindrical part     6       center of sensor, from tip     3'       Evaluated in homogeneous 1 kHz     39.8       magnetic field generated with     3.09       AMCC Helmholtz Calibration Coil     3.09

#### Standards

[1] ANSI-C63.19-2007

Test date

Issue date

Signature



Doc No 884 - SP AM1 001 AF - 1038 - 080125 - G

Page 1 (1)



#### Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland



Schweizerischer Kalibrierdienst Service suisse d'étalonnage Servizio svizzero di taratura Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates Accreditation No.: SCS 108

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	)	Certificate N	lo: DAE3-577_Nov08
CALIBRATION CI	ERTIFICATE		
Object	DAE3 - SD 000 D	03 AA - SN: 577	
Calibration procedure(s)	QA CAL-06.v12 Calibration proceed	dure for the data acquisition ele	ctronics (DAE)
Calibration date:	November 12, 200	08	
Condition of the calibrated item	In Tolerance		
	d in the closed laboratory	obability are given on the following pages a / facility: environment temperature (22 ± 3)	
<sup>D</sup> rimary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Fluke Process Calibrator Type 702	SN: 6295803	30-Sep-08 (No: 7673)	Sep-09
Fluke Process Calibrator Type 702			
Fluke Process Calibrator Type 702 Keithley Multimeter Type 2001	SN: 6295803	30-Sep-08 (No: 7673) 30-Sep-08 (No: 7670)	Sep-09
Primary Standards Fluke Process Calibrator Type 702 Keithley Multimeter Type 2001 Secondary Standards Calibrator Box V1.1	SN: 6295803 SN: 0810278	30-Sep-08 (No: 7673)	Sep-09 Sep-09
Fluke Process Calibrator Type 702 Keithley Multimeter Type 2001 Secondary Standards	SN: 6295803 SN: 0810278	30-Sep-08 (No: 7673) 30-Sep-08 (No: 7670) Check Date (in house)	Sep-09 Sep-09 Scheduled Check In house check: Jun-09
Fluke Process Calibrator Type 702 Keithley Multimeter Type 2001 Secondary Standards	SN: 6295803 SN: 0810278	30-Sep-08 (No: 7673) 30-Sep-08 (No: 7670) Check Date (in house)	Sep-09 Sep-09 Scheduled Check In house check: Jun-09
Fluke Process Calibrator Type 702 Keithley Multimeter Type 2001 Secondary Standards	SN: 6295803 SN: 0810278 ID # SE UMS 006 AB 1004	30-Sep-08 (No: 7673) 30-Sep-08 (No: 7670) Check Date (in house) 06-Jun-08 (in house check)	Sep-09 Sep-09 Scheduled Check In house check: Jun-09 Signature
Fluke Process Calibrator Type 702 Keithley Multimeter Type 2001 Secondary Standards Calibrator Box V1.1	SN: 6295803 SN: 0810278 ID # SE UMS 006 AB 1004 Name	30-Sep-08 (No: 7673) 30-Sep-08 (No: 7670) Check Date (in house) 06-Jun-08 (in house check)	Sep-09 Sep-09 Scheduled Check In house check: Jun-09

Certificate No: DAE3-577\_Nov08

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Schweizerischer Kalibrierdienst Service suisse d'étalonnage Servizio svizzero di taratura Swiss Calibration Service

Accreditation No.: SCS 108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

# Glossary

DAE data acquisition electronics Connector angle information used in DASY system to align probe sensor X to the robot coordinate system.

# Methods Applied and Interpretation of Parameters

- DC Voltage Measurement: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- Connector angle: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a
  result from the performance test and require no uncertainty.
  - DC Voltage Measurement Linearity: Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
  - Common mode sensitivity: Influence of a positive or negative common mode voltage on the differential measurement.
  - Channel separation: Influence of a voltage on the neighbor channels not subject to an input voltage.
  - AD Converter Values with inputs shorted: Values on the internal AD converter corresponding to zero input voltage
  - Input Offset Measurement: Output voltage and statistical results over a large number of zero voltage measurements.
  - Input Offset Current: Typical value for information; Maximum channel input offset current, not considering the input resistance.
  - Input resistance: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
  - Low Battery Alarm Voltage: Typical value for information. Below this voltage, a battery alarm signal is generated.
  - Power consumption: Typical value for information. Supply currents in various operating modes.

Certificate No: DAE3-577\_Nov08

# DC Voltage Measurement

A/D - Converter Resolution nominal

 High Range:
 1LSB =
  $6.1\mu$ V
 full range =
 -100...+300 mV

 Low Range:
 1LSB =
 61nV
 full range =
 -10...+3mV 

 DASY measurement parameters: Auto Zero Time:
 3 sec; Measuring time:
 3 sec

Calibration Factors	X	Y	Z
High Range	404.437 ± 0.1% (k=2)	403.882 ± 0.1% (k=2)	404.321 ± 0.1% (k=2)
Low Range	3.93985 ± 0.7% (k=2)	3.94699 ± 0.7% (k=2)	$3.94542 \pm 0.7\%$ (k=2)

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#### **Connector Angle**

Connector Angle to be used in DASY system	268 ° ± 1 °
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# Appendix

1. DC Voltage Linearity

High Range	Input (µV)	Reading (µV)	Error (%)
Channel X + Input	200000	200000.5	. 0.00
Channel X + Input	20000	20006.28	0.03
Channel X - Input	20000	-19997.96	-0.01
Channel Y + Input	200000	199999.8	0.00
Channel Y + Input	20000	20003.35	0.02
Channel Y - Input	20000	-20003.31	0.02
Channel Z + Input	200000	200000.3	0.00
Channel Z + Input	20000	20006.28	0.03
Channel Z - Input	20000	-19999.42	0.00

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Low Range	Input (µV)	Reading (µV)	Error (%)
Channel X + Input	2000	2000	0.00
Channel X + Input	200	200.64	0.32
Channel X - Input	200	-199.61	-0.19
Channel Y + Input	2000	2000	0.00
Channel Y + Input	200	199.39	-0.31
Channel Y - Input	200	-201.03	0.52
Channel Z + Input	2000	2000	0.00
Channel Z + Input	200	199.42	-0.29
Channel Z - Input	200	-200.73	0.36

# 2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (µV)
Channel X	200	13.38	13.83
	- 200	-13.53	-13.82
Channel Y	200	-5.55	-6.09
	- 200	5.06	5.66
Channel Z	200	-1.00	-0.72
	- 200	-0.80	-0.52

# 3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (µV)	Channel Y (µV)	Channel Z (µV)
Channel X	200	-	1.66	0.50
Channel Y	200	1.90	-	3.95
Channel Z	200	-0.95	0.48	

Certificate No: DAE3-577\_Nov08

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# 4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	15967	_ 16080
Channel Y	15851	16385
Channel Z	16197	16100

#### 5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec Input  $10 M \Omega$ 

	Average (µV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (µV)
Channel X	1.13	-1.22	2.29	0.58
Channel Y	-1.51	-2.99	0.83	0.52
Channel Z	0.02	-0.89	0.92	0.38

# 6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

# 7. Input Resistance

	Zeroing (MOhm)	Measuring (MOhm)
Channel X	0.2000	198.6
Channel Y	0.2001	199.4
Channel Z	0.2000	198.8

#### 8. Low Battery Alarm Voltage (verified during pre test)

Typical values	Alarm Level (VDC)	
Supply (+ Vcc)	+7.9	
Supply (- Vcc)	-7.6	

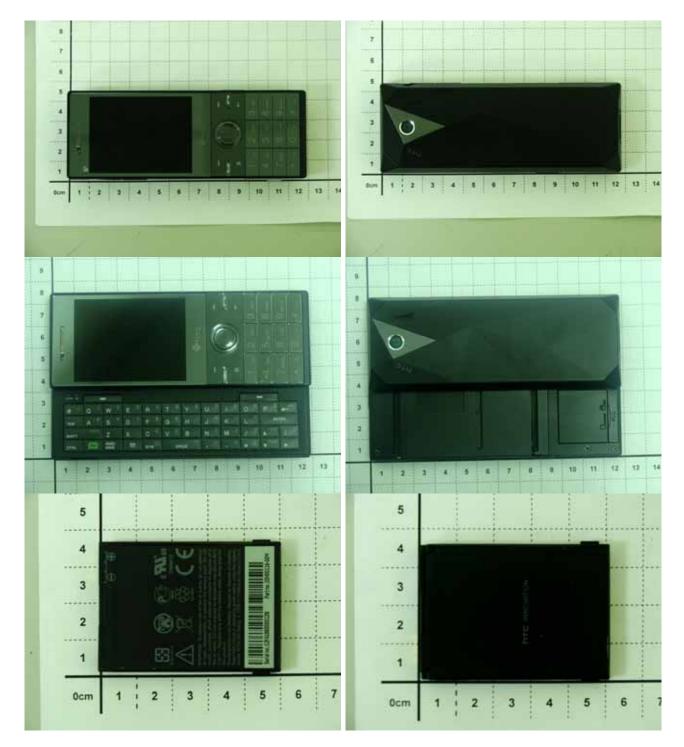
### 9. Power Consumption (verified during pre test)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.0	+6	+14
Supply (- Vcc)	-0.01	-8	-9

Certificate No: DAE3-577\_Nov08



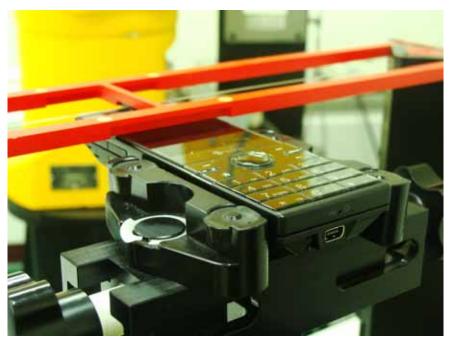
Appendix C - Product Photographs



Appendix D - Setup Photographs

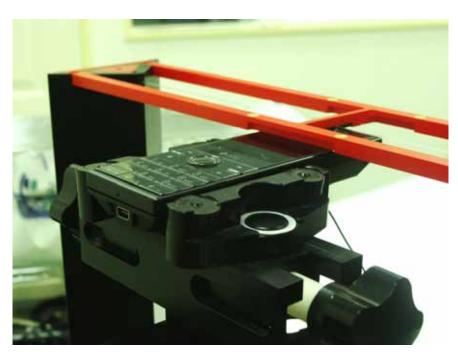


Front View for EUT Slide Off

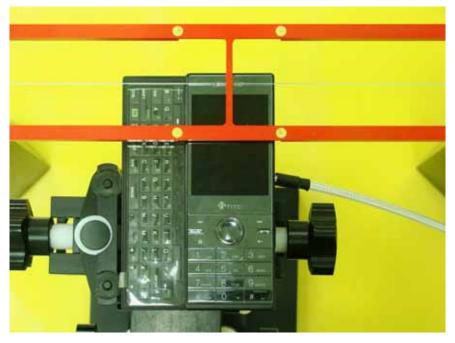


**Right Side View for EUT Slide Off** 



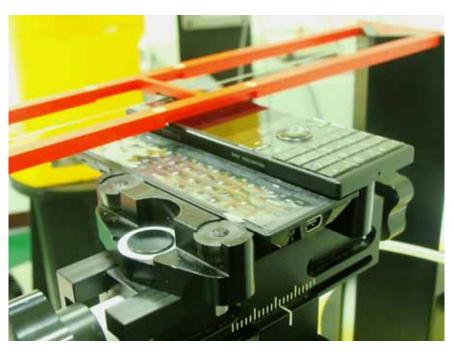


Left Side View for EUT Slide Off

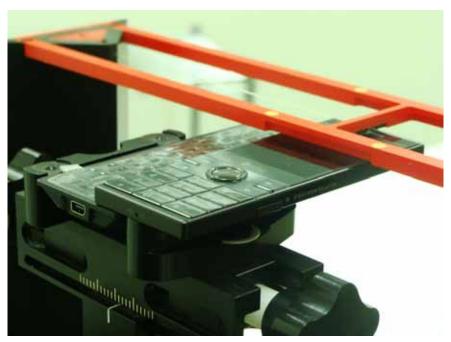


Front View for EUT Slide Right





**Right Side View for EUT Slide Right** 



Left Side View for EUT Slide Right