GSM850

Communication System: UID 0, GPRS-FDD (TDMA, GMSK, 1 slot) (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.00018

T-Coil scan (scan for ANSI C63.19 2011 compliance)/GSM850 Ch 190 UAT/z (axial) wideband at best S/N/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: 100

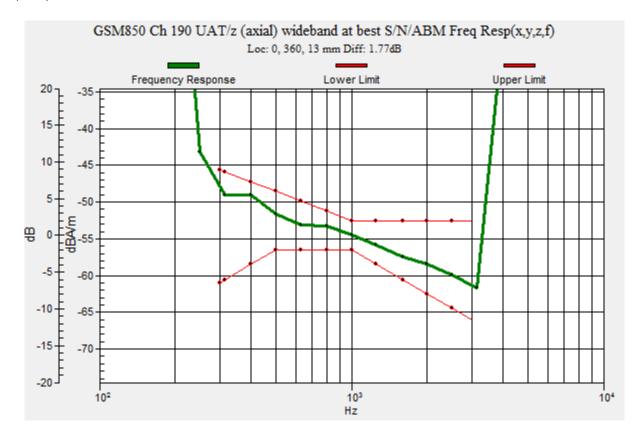
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.77 dB



GSM850

Communication System: UID 0, GPRS-FDD (TDMA, GMSK, 1 slot) (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.00018

Date: 5/28/2017

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/GSM850 Ch 190 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

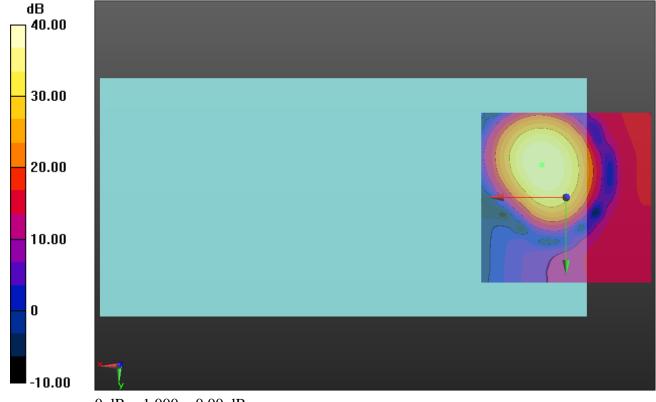
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 41.06 dB ABM1 comp = 11.89 dBA/m BWC Factor = 0.16 dB Location: 7.1, -9.6, 3.7 mm



0 dB = 1.000 = 0.00 dB

GSM850

Communication System: UID 0, GPRS-FDD (TDMA, GMSK, 1 slot) (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.00018

Date: 5/28/2017

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/GSM850 Ch 190 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

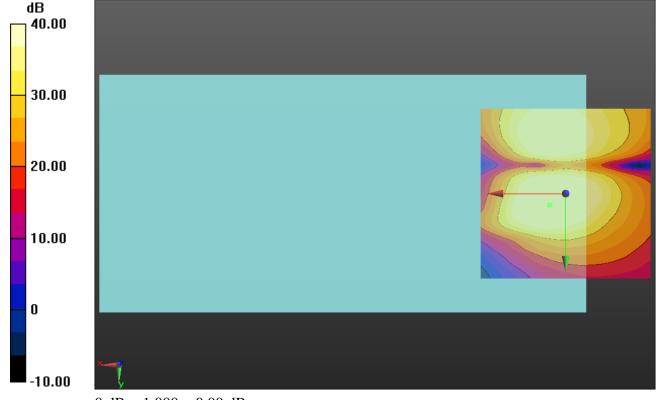
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 48.53 dB ABM1 comp = 2.46 dBA/m BWC Factor = 0.16 dB Location: 4.6, 3.3, 3.7 mm



GSM1900

Communication System: UID 0, GPRS-FDD (TDMA, GMSK, 1 slot) (0); Frequency: 1880 MHz; Duty Cycle: 1:8.00018

T-Coil scan (scan for ANSI C63.19 2011 compliance)/GSM1900 Ch 661 UAT/z (axial) wideband at best S/N/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: 100

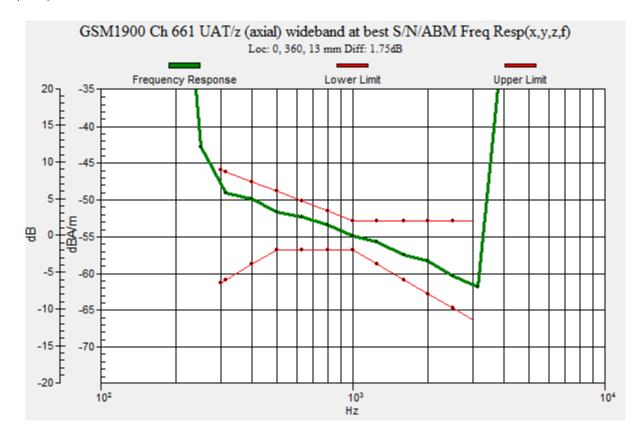
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.75 dB



GSM1900

Communication System: UID 0, GPRS-FDD (TDMA, GMSK, 1 slot) (0); Frequency: 1880 MHz; Duty Cycle: 1:8.00018

Date: 5/28/2017

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/GSM1900 Ch 661 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

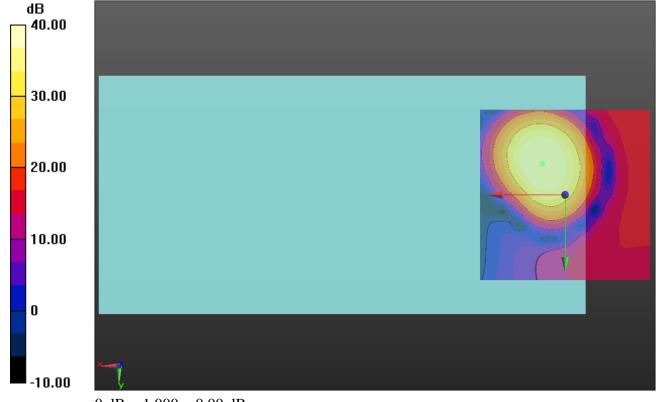
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 42.16 dB ABM1 comp = 11.66 dBA/m BWC Factor = 0.16 dB Location: 6.7, -9.2, 3.7 mm



0 dB = 1.000 = 0.00 dB

GSM1900

Communication System: UID 0, GPRS-FDD (TDMA, GMSK, 1 slot) (0); Frequency: 1880 MHz; Duty Cycle: 1:8.00018

Date: 5/28/2017

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/GSM1900 Ch 661 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

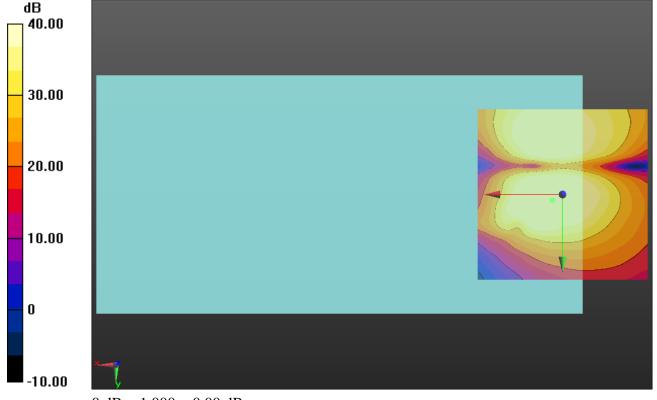
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 48.48 dB ABM1 comp = 1.66 dBA/m BWC Factor = 0.16 dB Location: 2.9, 1.7, 3.7 mm



W-CDMA Band V

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band V Ch 4183 UAT/z (axial) wideband at best S/N/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: 100

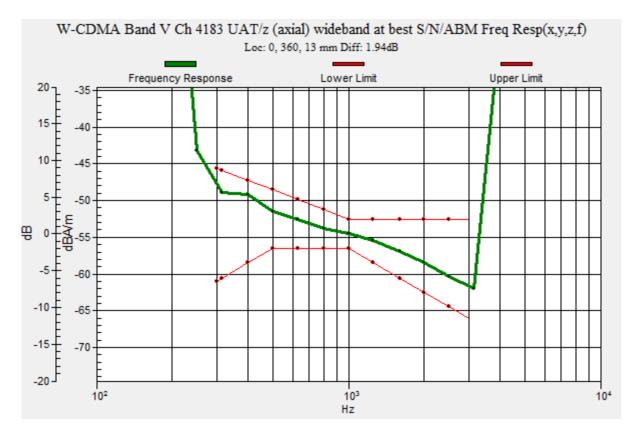
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.94 dB



W-CDMA Band V

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band V Ch 4183 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/27/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

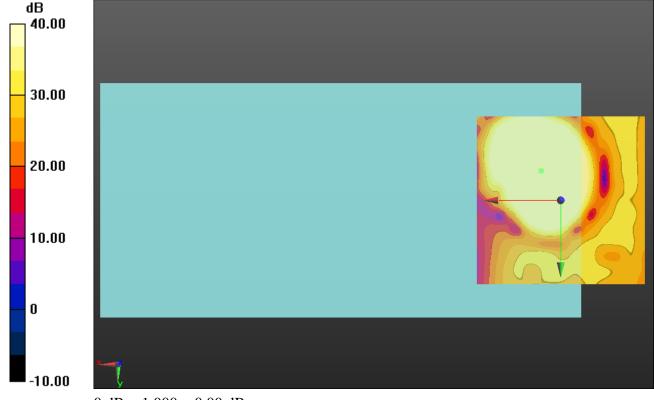
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 59.16 dB ABM1 comp = 11.61 dBA/m BWC Factor = 0.16 dB Location: 5.8, -8.8, 3.7 mm



W-CDMA Band V

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band V Ch 4183 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

Date: 5/27/2017

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

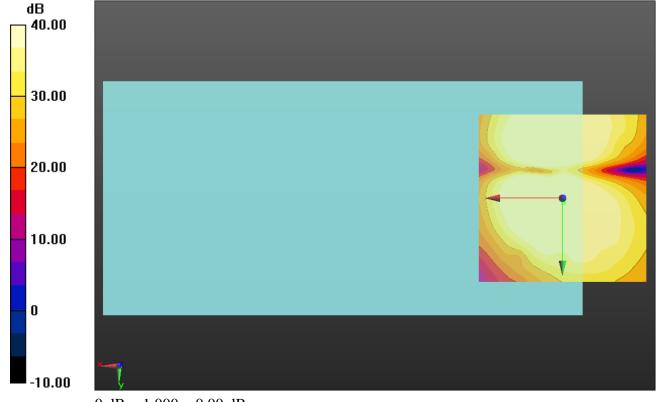
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 50.33 dB ABM1 comp = -0.11 dBA/m BWC Factor = 0.16 dB Location: -0.4, 1.2, 3.7 mm



W-CDMA Band IV

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band IV Ch 1413 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

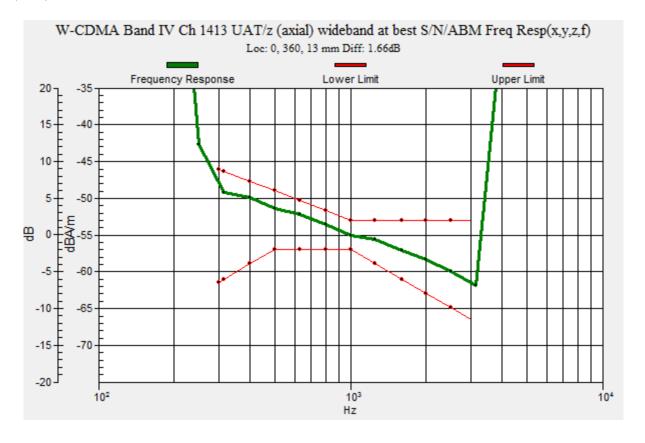
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.66 dB



W-CDMA Band IV

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band IV Ch 1413 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/27/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

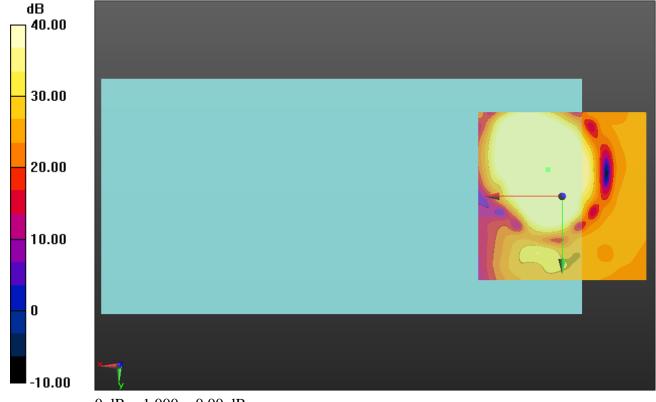
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.60 dB ABM1 comp = 10.51 dBA/m BWC Factor = 0.16 dB Location: 4.2, -7.9, 3.7 mm



W-CDMA Band IV

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band IV Ch 1413 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

Date: 5/27/2017

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

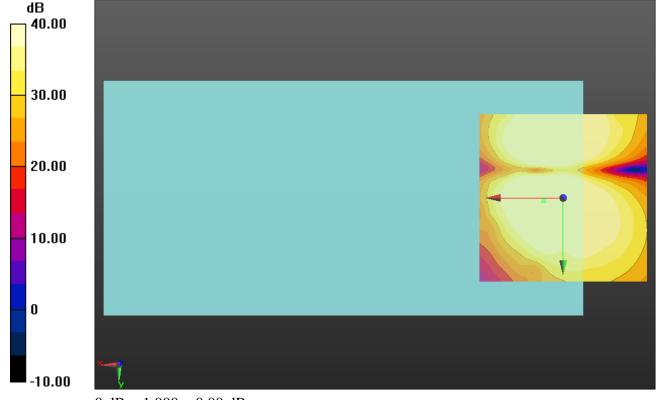
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 50.65 dB ABM1 comp = 3.48 dBA/m BWC Factor = 0.16 dB Location: 5.8, 0.8, 3.7 mm



W-CDMA Band II

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band II Ch 9400 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

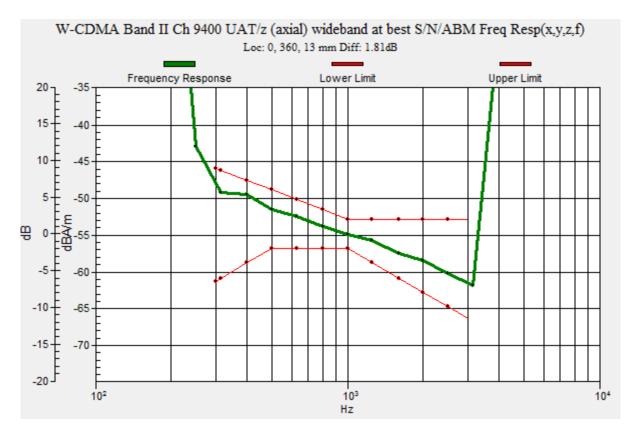
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.81 dB



W-CDMA Band II

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band II Ch 9400 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/28/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

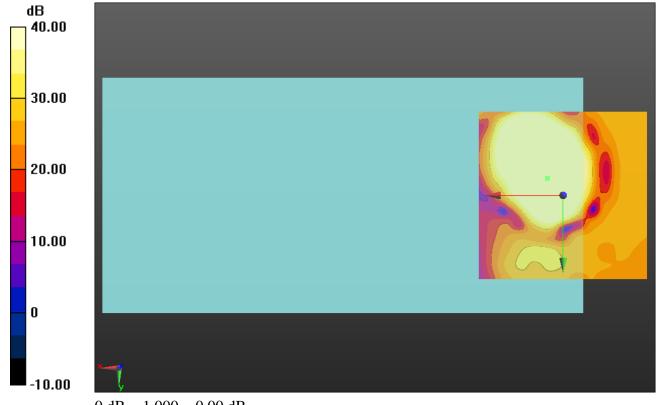
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.84 dB ABM1 comp = 10.67 dBA/m BWC Factor = 0.16 dB Location: 4.6, -5, 3.7 mm



W-CDMA Band II

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band II Ch 9400 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

Date: 5/28/2017

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

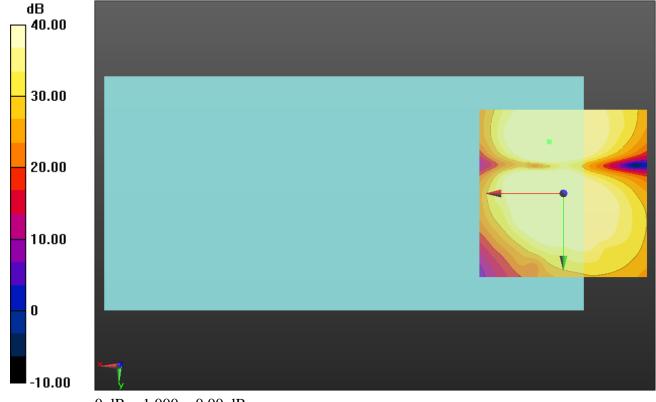
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 50.99 dB ABM1 comp = 3.38 dBA/m BWC Factor = 0.16 dB Location: 4.2, -15.4, 3.7 mm



LTE Band 2 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 18900 UAT/z (axial) wideband at best S/N/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: 100

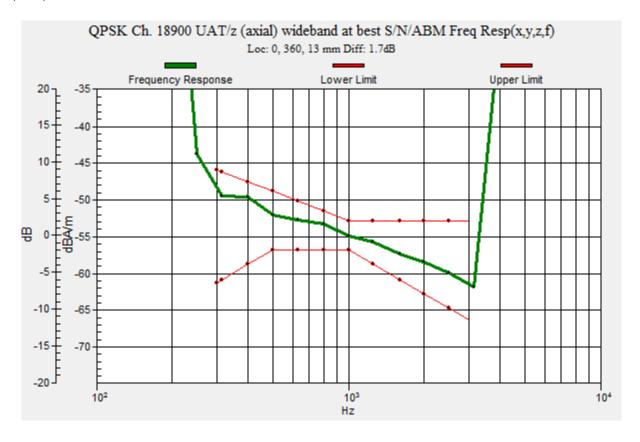
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.70 dB



LTE Band 2 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 18900 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/28/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

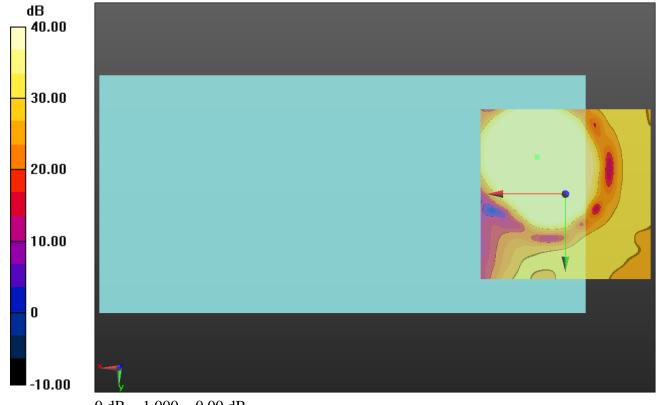
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 59.07 dB ABM1 comp = 11.16 dBA/m BWC Factor = 0.16 dB Location: 8.3, -10.8, 3.7 mm



LTE Band 2 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 18900 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

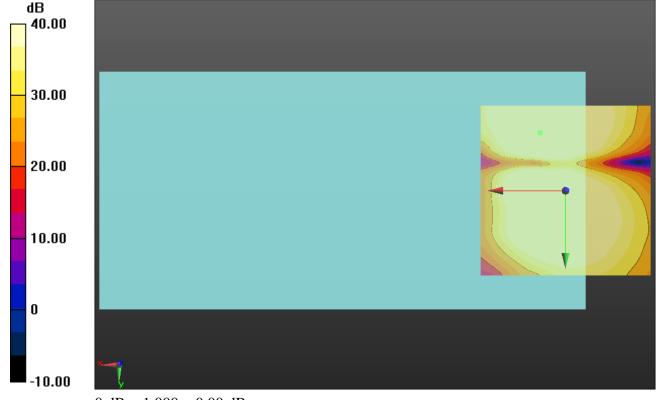
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 51.21 dB ABM1 comp = 3.24 dBA/m BWC Factor = 0.16 dB Location: 7.5, -17.1, 3.7 mm



Date: 5/28/2017

LTE Band 4 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20175 UAT/z (axial) wideband at best S/N/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: 100

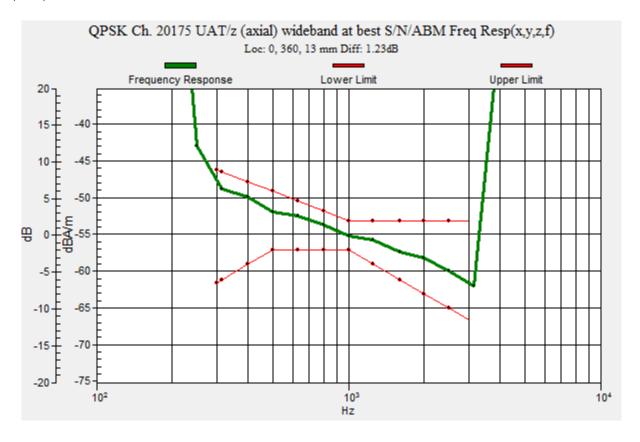
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.23 dB



LTE Band 4 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20175 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/28/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

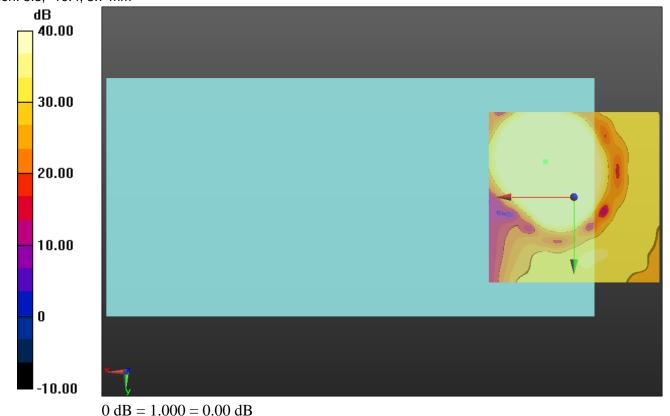
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.35 dB ABM1 comp = 11.86 dBA/m BWC Factor = 0.16 dB Location: 8.3, -10.4, 3.7 mm



LTE Band 4 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20175 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

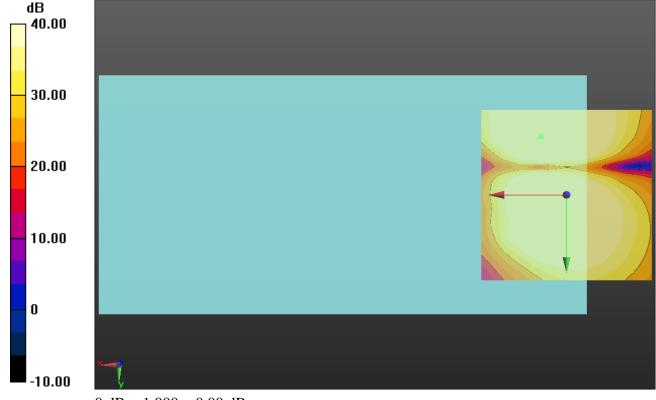
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 51.70 dB ABM1 comp = 4.14 dBA/m BWC Factor = 0.16 dB Location: 7.5, -17.1, 3.7 mm



Date: 5/28/2017

LTE Band 5 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20525 UAT/z (axial) wideband at best S/N/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: 100

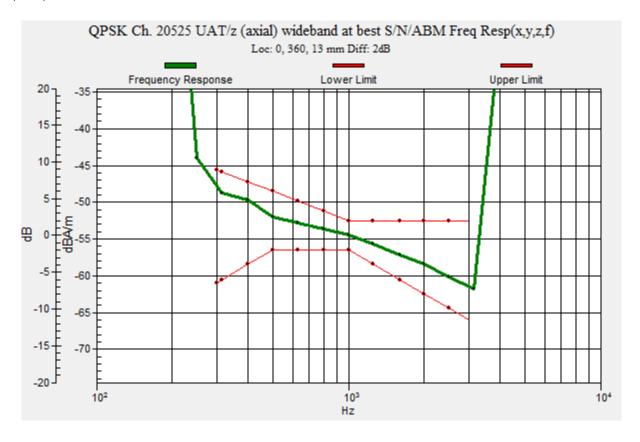
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 2.00 dB



LTE Band 5 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20525 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/28/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

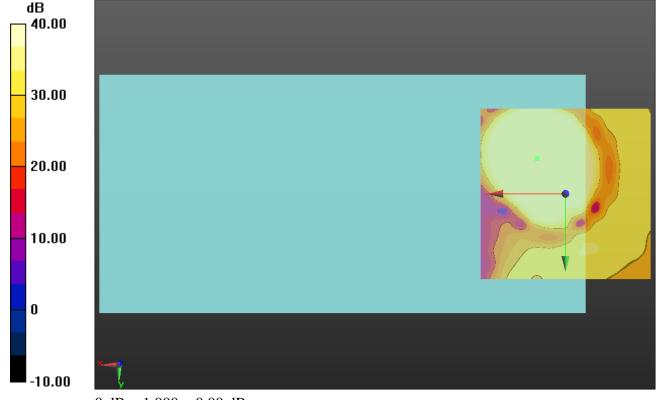
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.36 dB ABM1 comp = 11.90 dBA/m BWC Factor = 0.16 dB Location: 8.3, -10.4, 3.7 mm



LTE Band 5 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20525 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

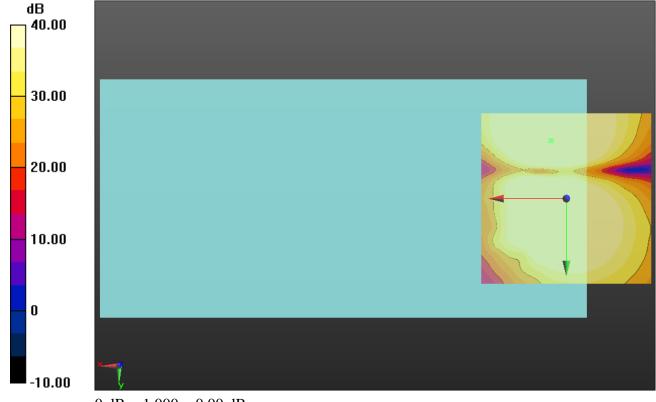
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 52.73 dB ABM1 comp = 2.94 dBA/m BWC Factor = 0.16 dB Location: 4.6, -17.1, 3.7 mm



Date: 5/28/2017

LTE Band 7 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2535 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 7 Ch. 21100 UAT/z (axial) wideband at best S/N/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: 100

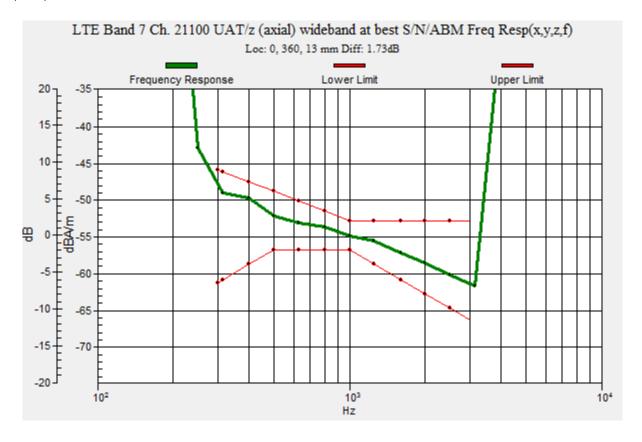
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.73 dB



Test Laboratory: UL Verification Services Inc., SAR Lab 2

LTE Band 7 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 7 Ch. 21100 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/28/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

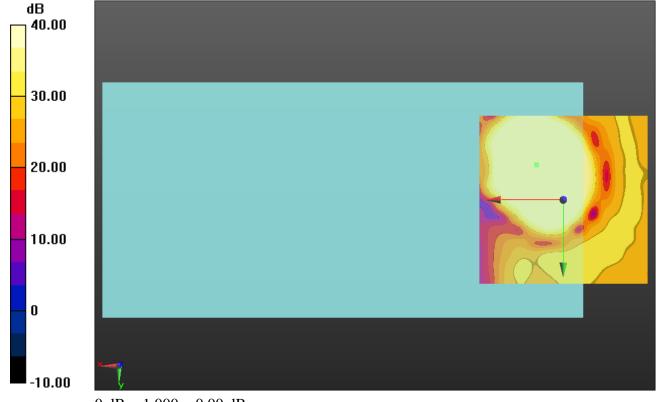
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.47 dB ABM1 comp = 11.62 dBA/m BWC Factor = 0.16 dB Location: 7.9, -10.4, 3.7 mm



LTE Band 7 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 7 Ch. 21100 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.16 dB ABM1 comp = 3.11 dBA/m BWC Factor = 0.16 dB Location: 5.8, -16.7, 3.7 mm



Date: 5/28/2017

LTE Band 12 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 12 Ch. 23095 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

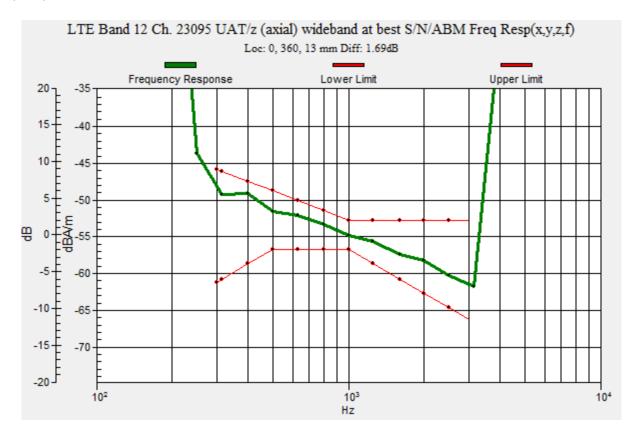
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.69 dB



LTE Band 12 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 12 Ch. 23095 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/28/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

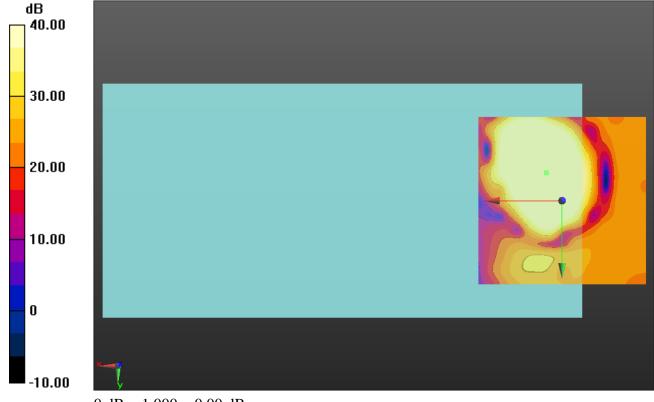
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.08 dB ABM1 comp = 10.60 dBA/m BWC Factor = 0.16 dB Location: 4.6, -8.3, 3.7 mm



LTE Band 12 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 12 Ch. 23095 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

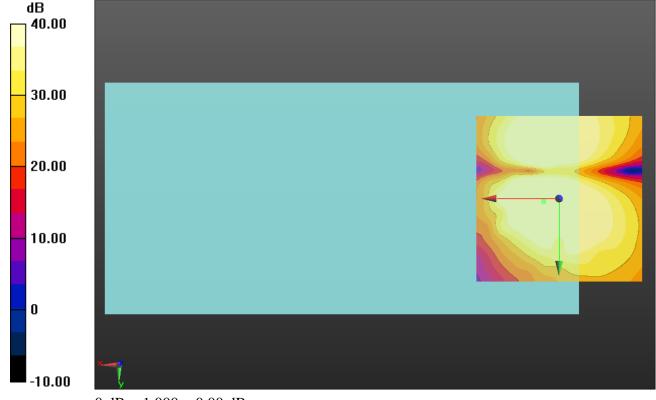
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.87 dB ABM1 comp = 2.74 dBA/m BWC Factor = 0.16 dB Location: 4.6, 0.8, 3.7 mm



Date: 5/28/2017

LTE Band 13 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 782 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 13 Ch. 23230 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

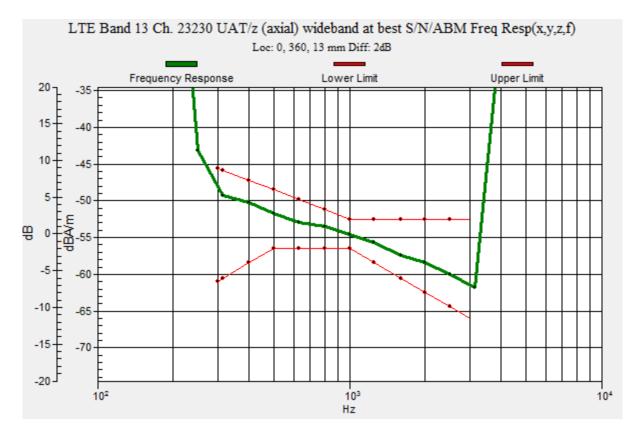
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 2.00 dB



LTE Band 13 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 782 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 13 Ch. 23230 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/28/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.60 dB ABM1 comp = 10.87 dBA/m BWC Factor = 0.16 dB Location: 4.6, -8.8, 3.7 mm



LTE Band 13 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 782 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 13 Ch. 23230 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

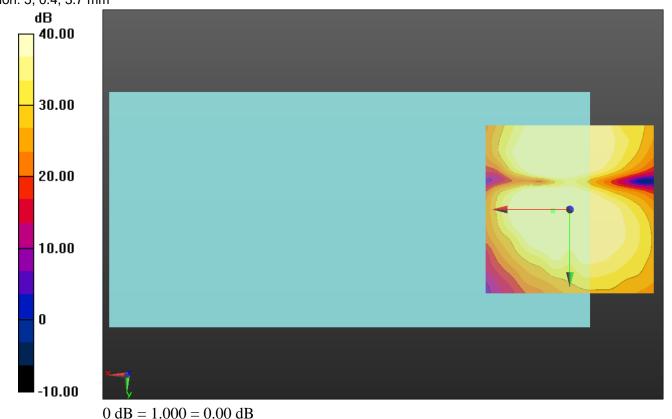
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.93 dB ABM1 comp = 3.26 dBA/m BWC Factor = 0.16 dB Location: 5, 0.4, 3.7 mm



Date: 5/28/2017

LTE Band 17 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 710 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 17 Ch. 23790 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

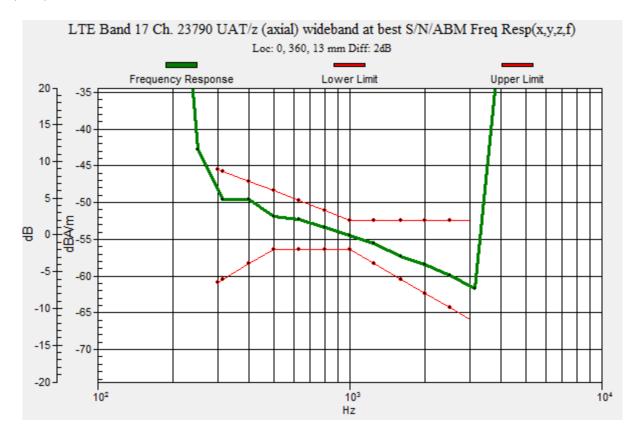
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 2.00 dB



LTE Band 17 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 710 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 17 Ch. 23790 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/28/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

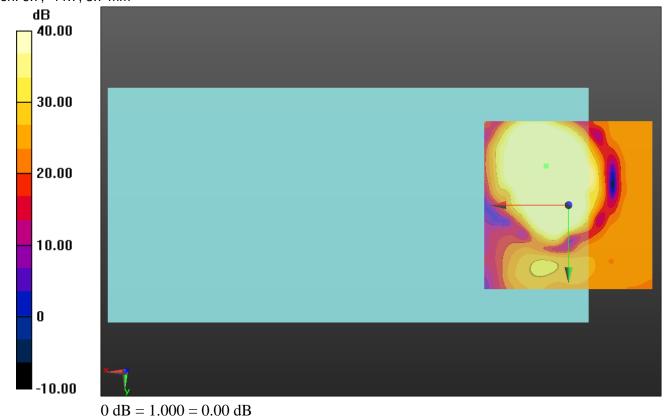
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.84 dB ABM1 comp = 10.60 dBA/m BWC Factor = 0.16 dB Location: 6.7, -11.7, 3.7 mm



LTE Band 17 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 710 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 17 Ch. 23790 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k voice 1kHz 1s.wav

Output Gain: 100

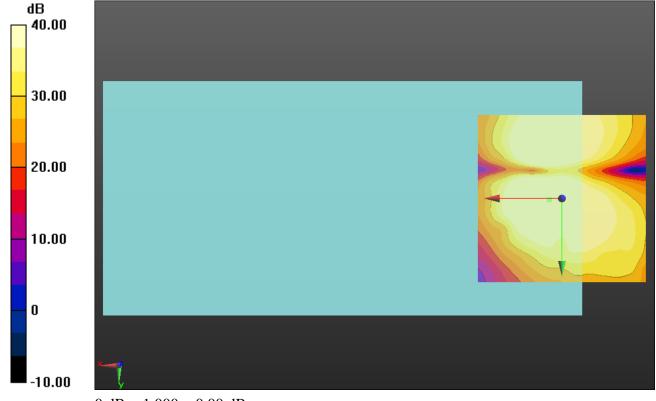
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 48.98 dB ABM1 comp = 1.97 dBA/m BWC Factor = 0.16 dB Location: 3.8, 0.4, 3.7 mm



Date: 5/28/2017

LTE Band 25 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1882.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 25 Ch. 26365 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

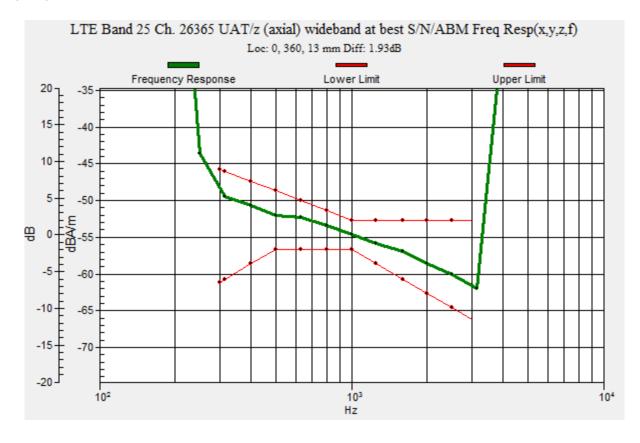
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.93 dB



LTE Band 25 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1882.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 25 Ch. 26365 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/29/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

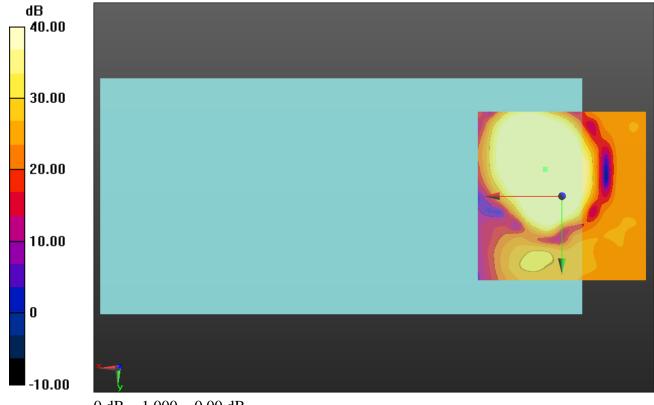
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.15 dB ABM1 comp = 11.17 dBA/m BWC Factor = 0.16 dB Location: 5, -7.9, 3.7 mm



LTE Band 25 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1882.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 25 Ch. 26365 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

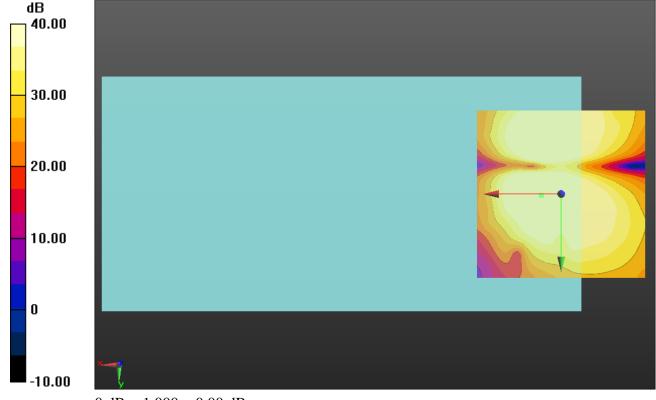
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.02 dB ABM1 comp = 3.22 dBA/m BWC Factor = 0.16 dB Location: 5.8, 0.4, 3.7 mm



Date: 5/29/2017

LTE Band 26 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 26 Ch. 26865 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

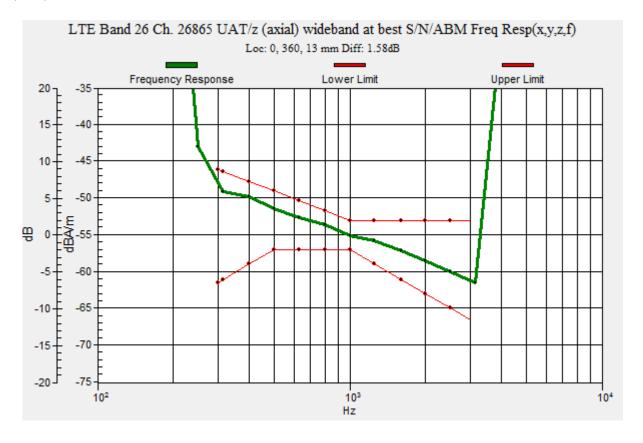
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.58 dB



LTE Band 26 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 26 Ch. 26865 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/29/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

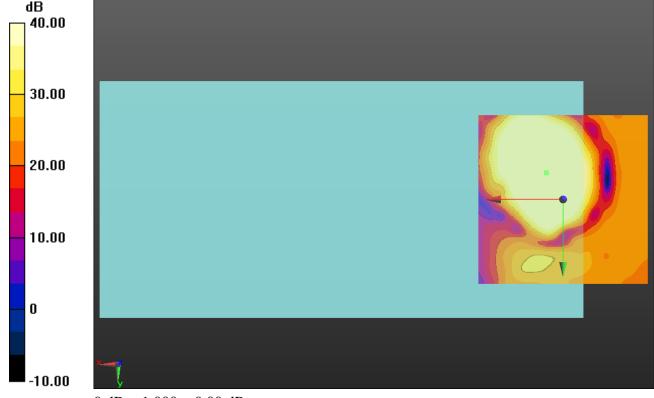
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.03 dB ABM1 comp = 10.82 dBA/m BWC Factor = 0.16 dB Location: 5, -7.9, 3.7 mm



LTE Band 26 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 26 Ch. 26865 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

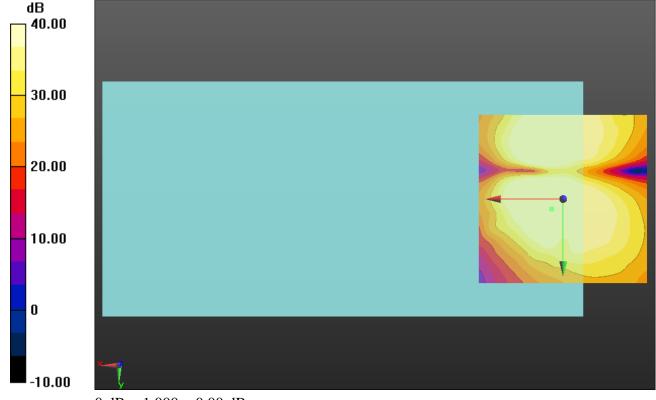
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 48.88 dB ABM1 comp = 1.90 dBA/m BWC Factor = 0.16 dB Location: 3.3, 2.9, 3.7 mm



Date: 5/29/2017

LTE Band 30 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2310 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 30 Ch. 27710 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

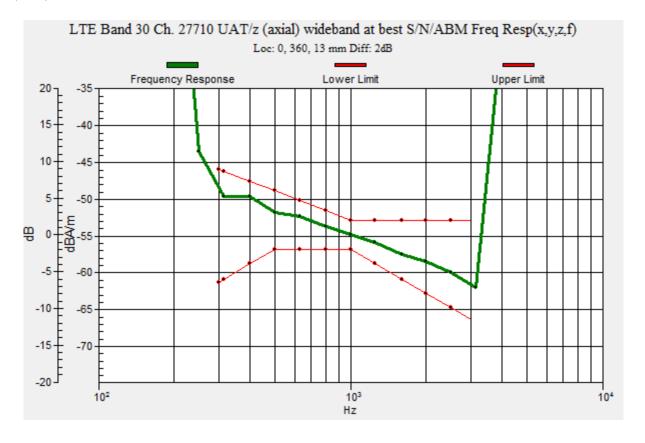
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 2.00 dB



LTE Band 30 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2310 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 30 Ch. 27710 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/30/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

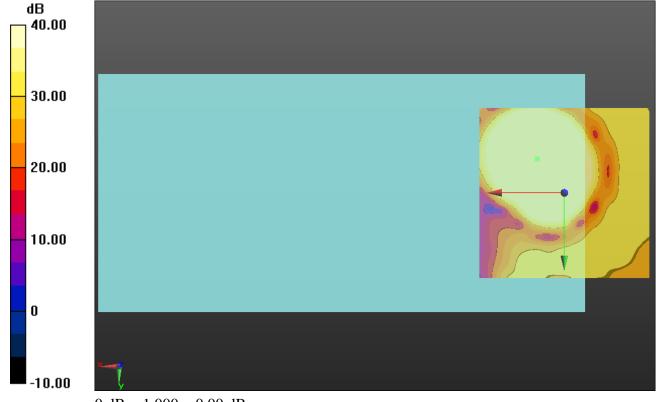
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.33 dB ABM1 comp = 11.81 dBA/m BWC Factor = 0.16 dB Location: 7.9, -10, 3.7 mm



LTE Band 30 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2310 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 30 Ch. 27710 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

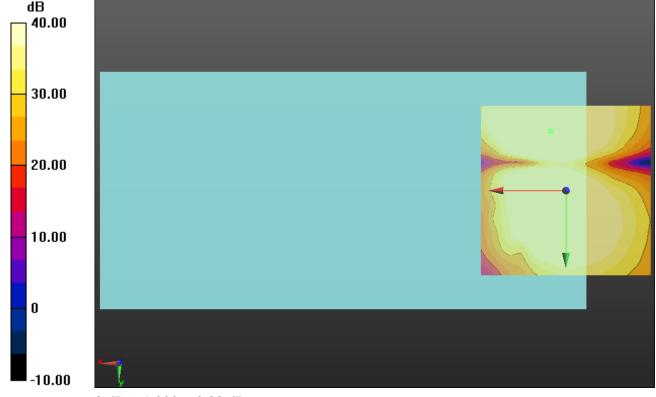
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 52.37 dB ABM1 comp = 2.80 dBA/m BWC Factor = 0.16 dB Location: 4.6, -17.5, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 41 Narrow Band

Communication System: UID 0, LTE (TDD) (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 41 Ch. 40620 UAT/z (axial) wideband at best S/N/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: 100

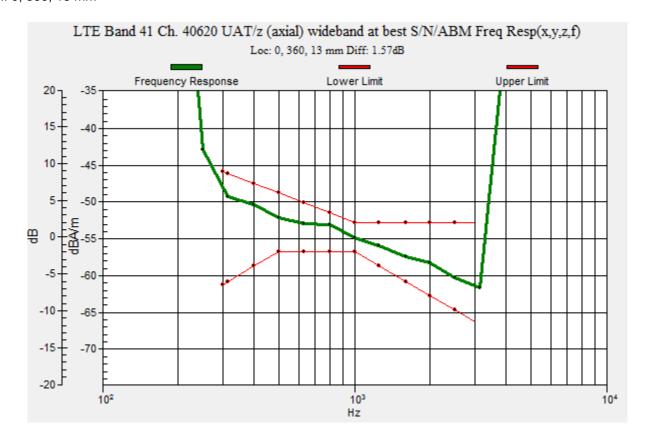
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.57 dB



LTE Band 41 Narrow Band

Communication System: UID 0, LTE (TDD) (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 41 Ch. 40620 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/30/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

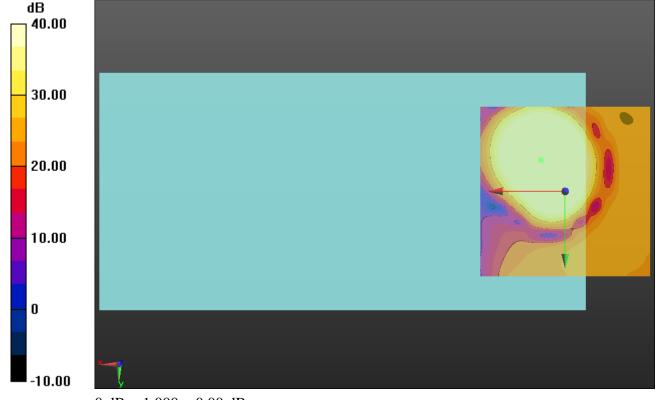
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 53.85 dB ABM1 comp = 11.56 dBA/m BWC Factor = 0.16 dB Location: 7.1, -9.2, 3.7 mm



LTE Band 41 Narrow Band

Communication System: UID 0, LTE (TDD) (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 41 Ch. 40620 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

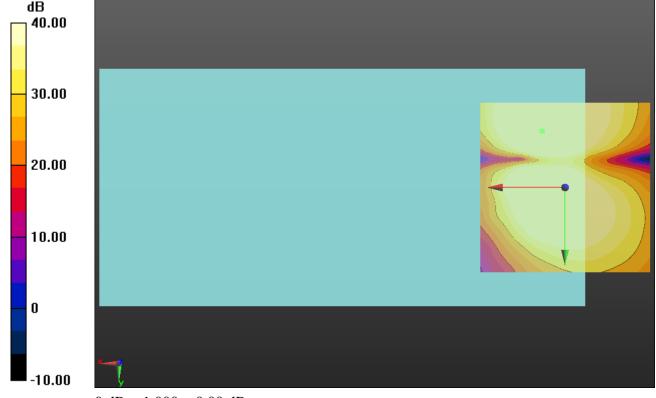
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.47 dB ABM1 comp = 3.60 dBA/m BWC Factor = 0.16 dB Location: 6.7, -16.7, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 66 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1745 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 66 Ch. 132322 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

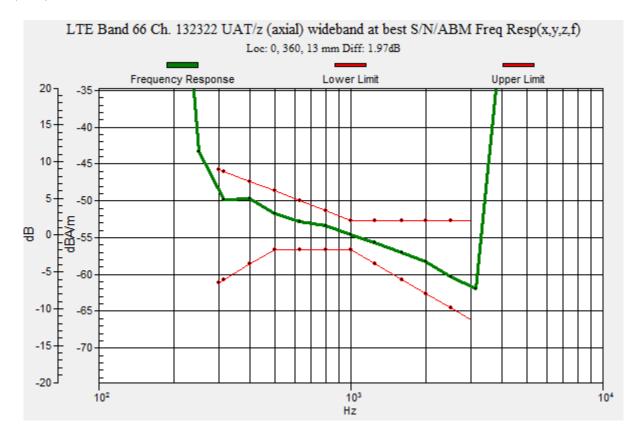
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.97 dB



LTE Band 66 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 3092; ; Calibrated: 7/22/2016
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 66 Ch. 132322 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/30/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

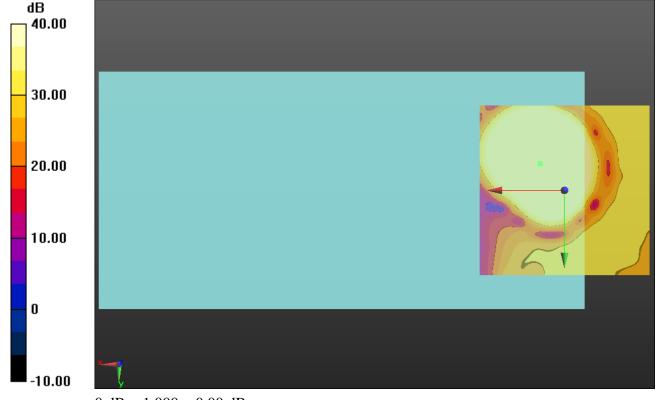
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.06 dB ABM1 comp = 11.97 dBA/m BWC Factor = 0.16 dB Location: 7.1, -7.9, 3.7 mm



LTE Band 66 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 66 Ch. 132322 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

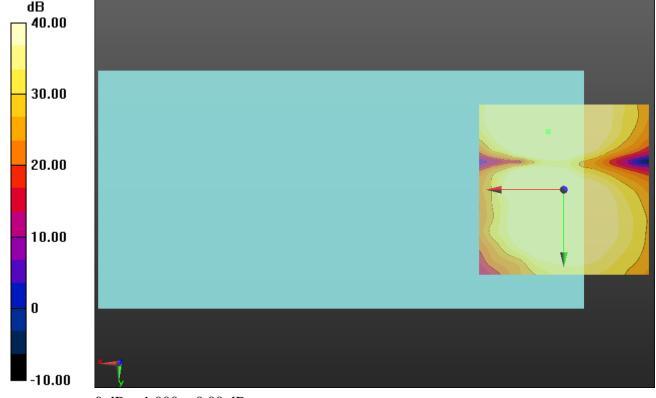
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 52.69 dB ABM1 comp = 2.82 dBA/m BWC Factor = 0.16 dB Location: 4.6, -17.1, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 2 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 18900 UAT/z (axial) wideband at best S/N/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: 100

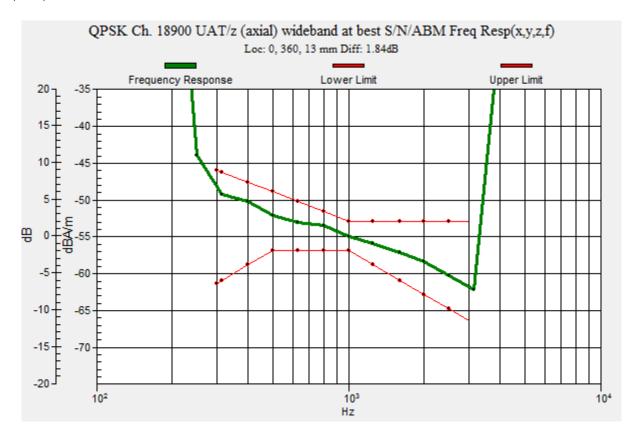
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.84 dB



LTE Band 2 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 18900 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/30/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

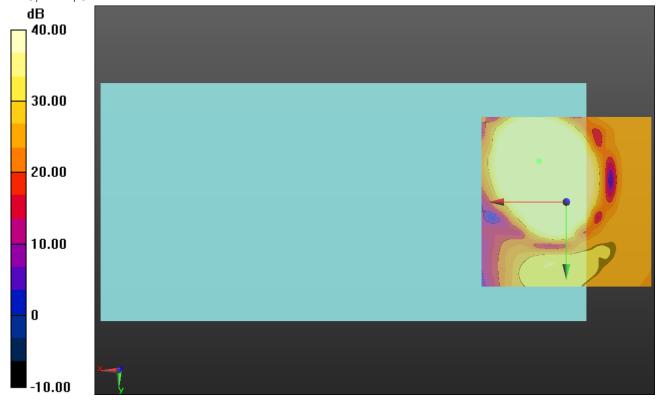
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.13 dB ABM1 comp = 10.33 dBA/m BWC Factor = 0.16 dB Location: 7.9, -12.1, 3.7 mm



LTE Band 2 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 18900 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 48.91 dB ABM1 comp = 3.06 dBA/m BWC Factor = 0.16 dB Location: 7.5, 0.4, 3.7 mm



LTE Band 4 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20175 UAT/z (axial) wideband at best S/N/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: 100

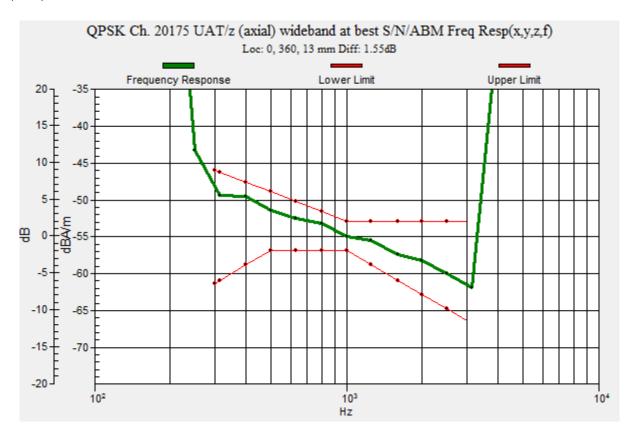
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.55 dB



LTE Band 4 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20175 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/30/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

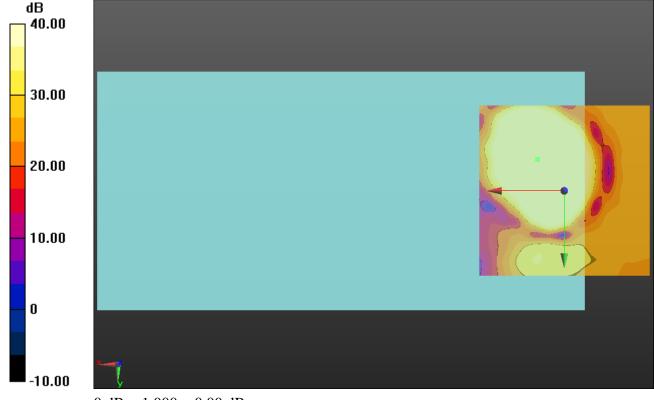
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.82 dB ABM1 comp = 11.73 dBA/m BWC Factor = 0.16 dB Location: 7.9, -9.2, 3.7 mm



LTE Band 4 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20175 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

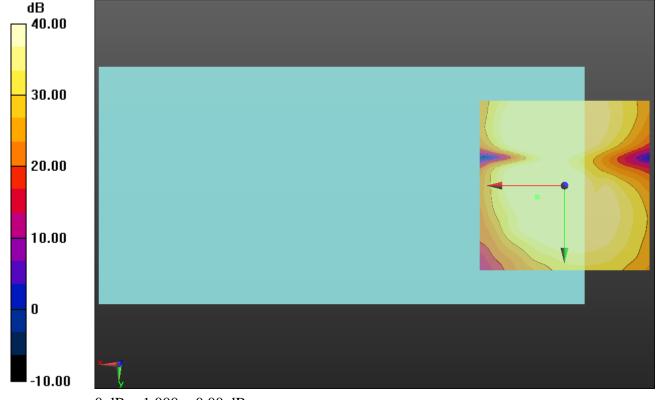
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.16 dB ABM1 comp = 3.34 dBA/m BWC Factor = 0.16 dB Location: 7.9, 3.3, 3.7 mm



LTE Band 5 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20525 UAT/z (axial) wideband at best S/N/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: 100

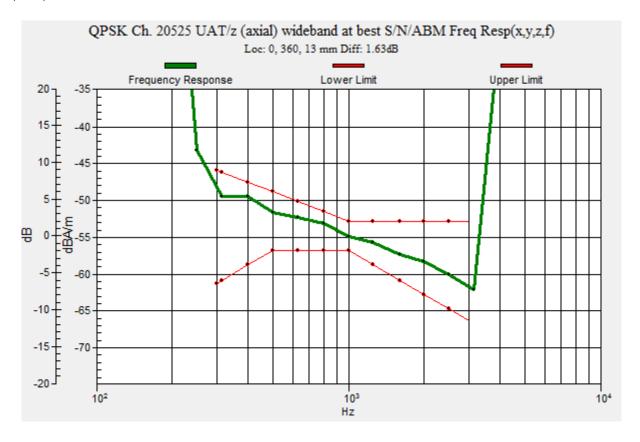
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.63 dB



LTE Band 5 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20525 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/30/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

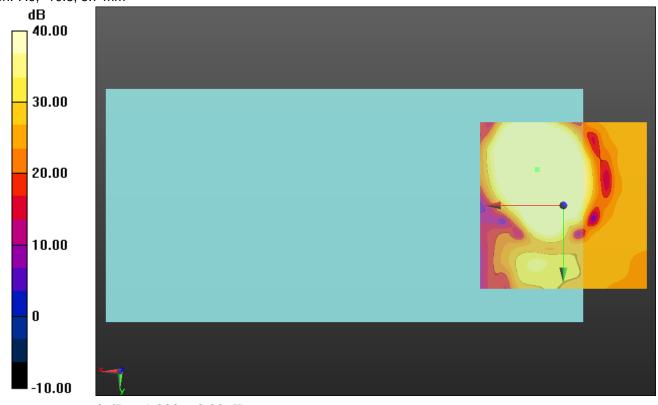
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.56 dB ABM1 comp = 11.89 dBA/m BWC Factor = 0.16 dB Location: 7.9, -10.8, 3.7 mm



LTE Band 5 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20525 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

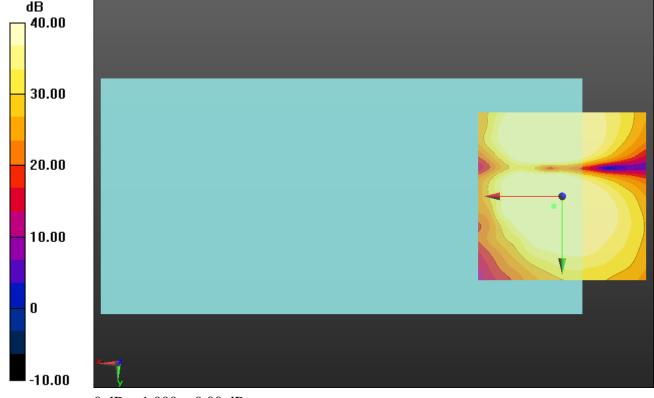
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 48.79 dB ABM1 comp = 1.28 dBA/m BWC Factor = 0.16 dB Location: 2.5, 2.9, 3.7 mm



LTE Band 7 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2535 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 7 Ch. 21100 UAT/z (axial) wideband at best S/N/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: 100

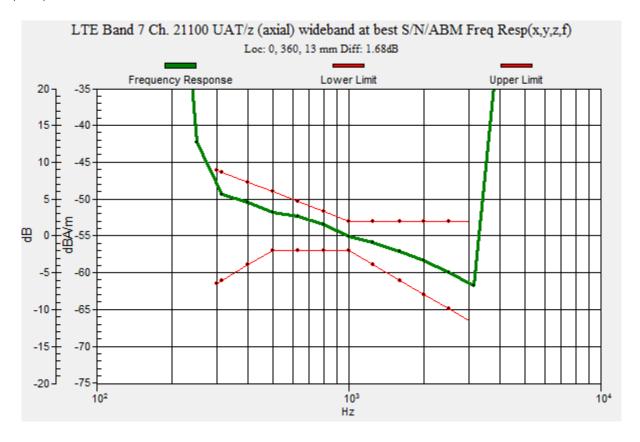
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.68 dB



Test Laboratory: UL Verification Services Inc., SAR Lab 2

LTE Band 7 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 7 Ch. 21100 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/30/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

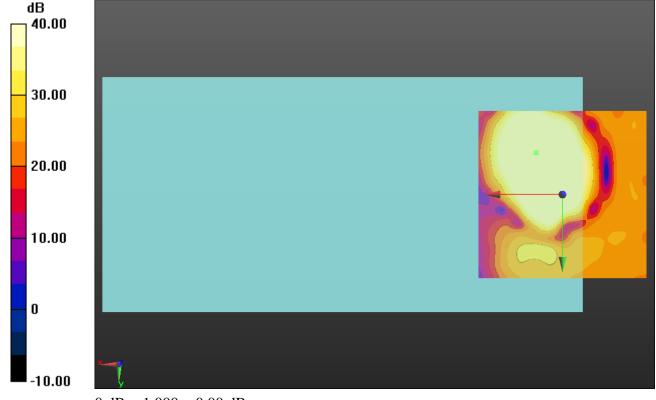
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.14 dB ABM1 comp = 11.29 dBA/m BWC Factor = 0.16 dB Location: 7.9, -12.5, 3.7 mm



LTE Band 7 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 7 Ch. 21100 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

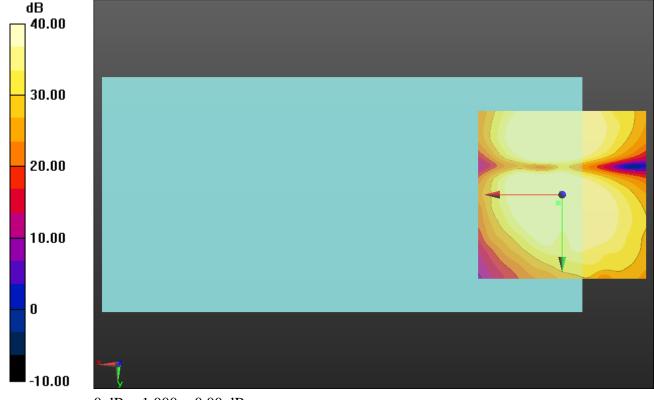
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.14 dB ABM1 comp = 0.91 dBA/m BWC Factor = 0.16 dB Location: 1.3, 2.5, 3.7 mm



LTE Band 12 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 12 Ch. 23095 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

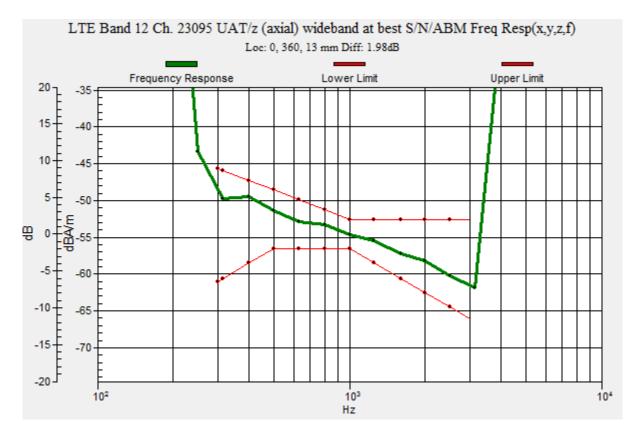
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.98 dB



LTE Band 12 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/201749

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 12 Ch. 23095 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/30/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

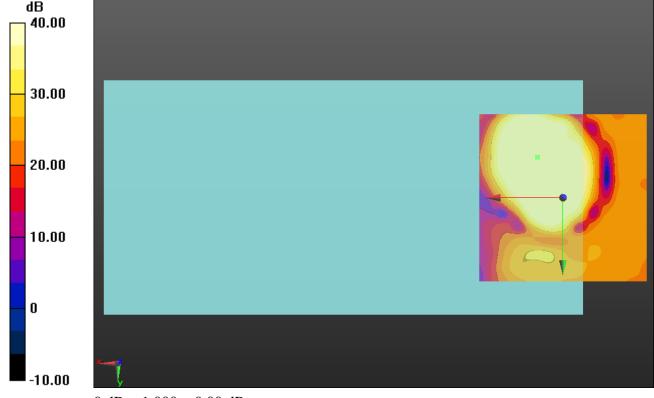
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.12 dB ABM1 comp = 11.37 dBA/m BWC Factor = 0.16 dB Location: 7.5, -12.1, 3.7 mm



LTE Band 12 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 12 Ch. 23095 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

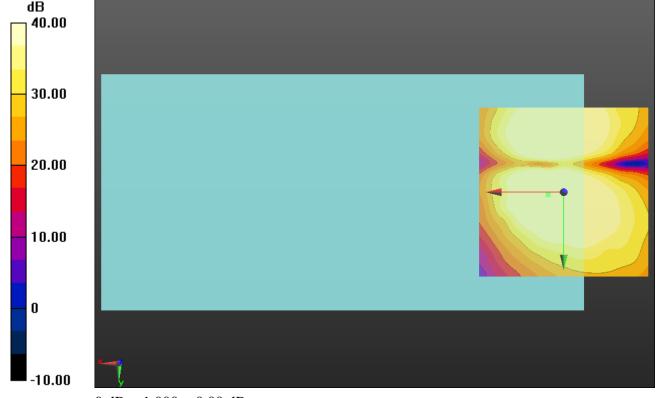
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.84 dB ABM1 comp = 3.41 dBA/m BWC Factor = 0.16 dB Location: 4.6, 0.8, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 13 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 782 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 13 Ch. 23230 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

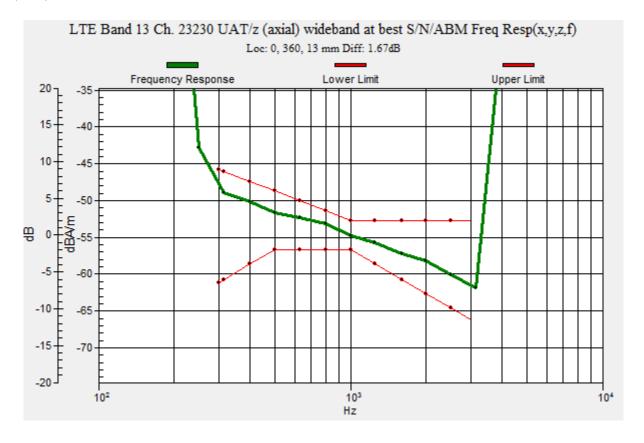
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.67 dB



LTE Band 13 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 782 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 13 Ch. 23230 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/30/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

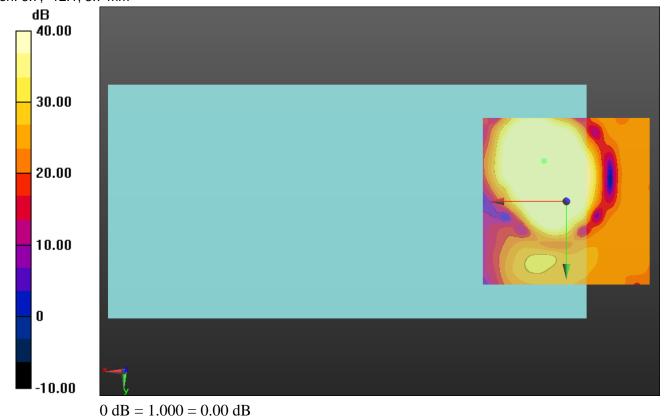
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.37 dB ABM1 comp = 11.27 dBA/m BWC Factor = 0.16 dB Location: 6.7, -12.1, 3.7 mm



LTE Band 13 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 782 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 13 Ch. 23230 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

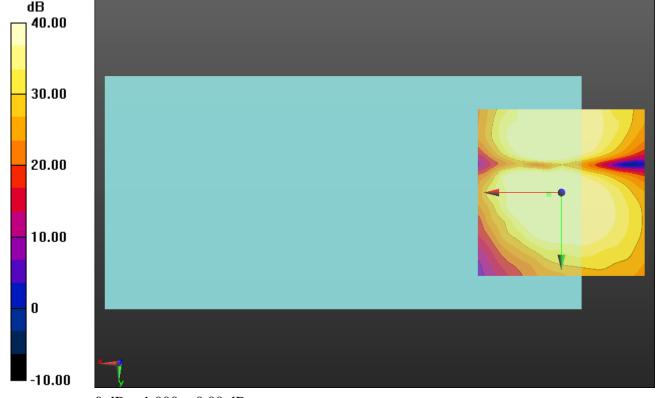
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.98 dB ABM1 comp = 2.65 dBA/m BWC Factor = 0.16 dB Location: 3.8, 0.4, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 17 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 710 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 17 Ch. 23790 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

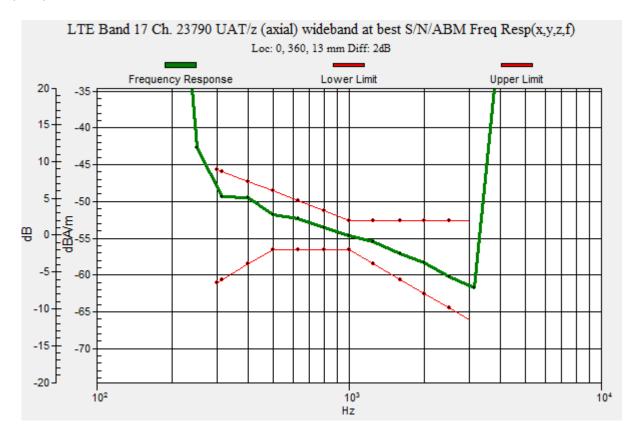
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 2.00 dB



LTE Band 17 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 710 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 17 Ch. 23790 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/30/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

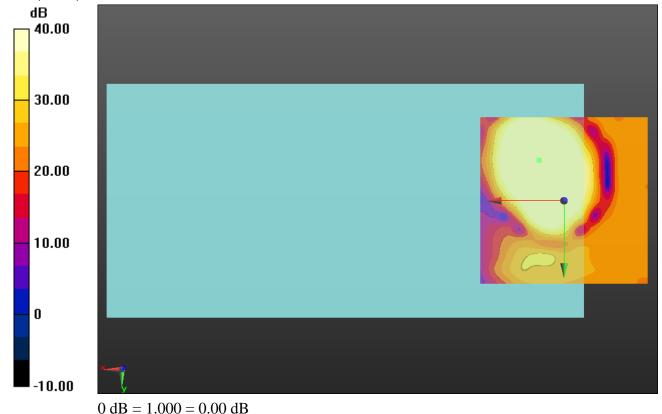
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.78 dB ABM1 comp = 11.47 dBA/m BWC Factor = 0.16 dB Location: 7.5, -12.1, 3.7 mm



LTE Band 17 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 710 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 17 Ch. 23790 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

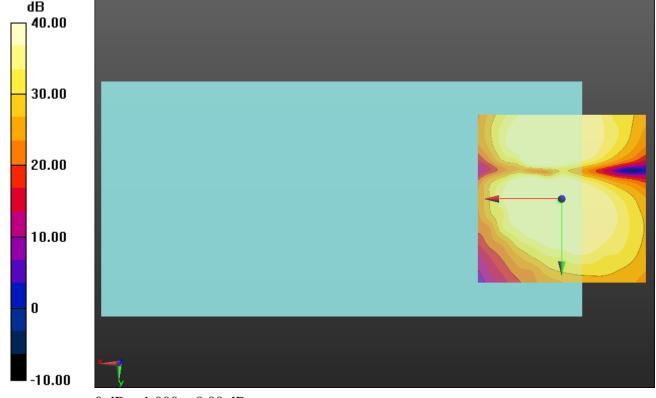
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.28 dB ABM1 comp = 0.48 dBA/m BWC Factor = 0.16 dB Location: 0.8, 0.8, 3.7 mm



0 dB = 1.000 = 0.00 dB

Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/31/2017

LTE Band 25 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1882.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 25 Ch. 26365 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

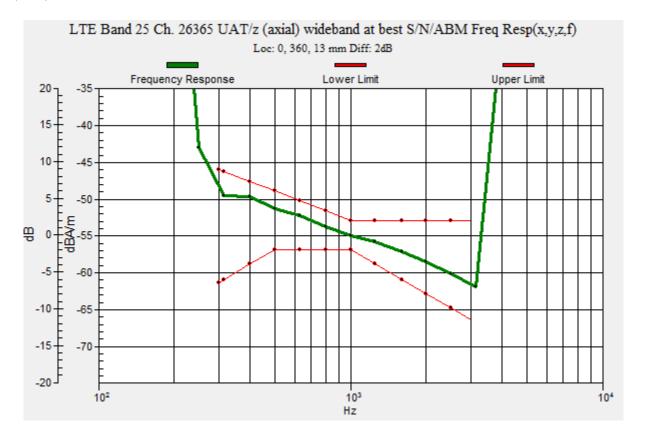
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 2.00 dB



LTE Band 25 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1882.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 25 Ch. 26365 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/30/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

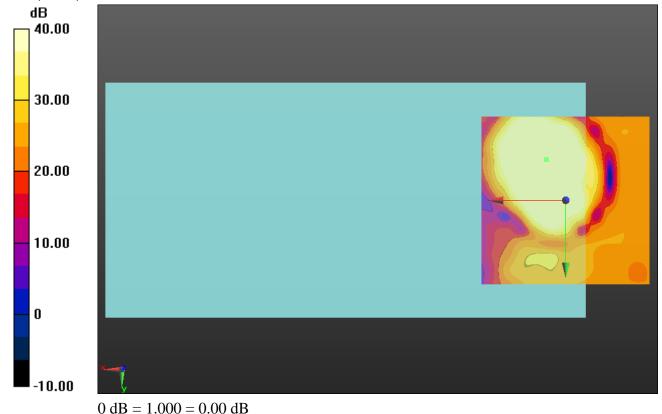
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.31 dB ABM1 comp = 10.94 dBA/m BWC Factor = 0.16 dB Location: 5.8, -12.1, 3.7 mm



LTE Band 25 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1882.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 25 Ch. 26365 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

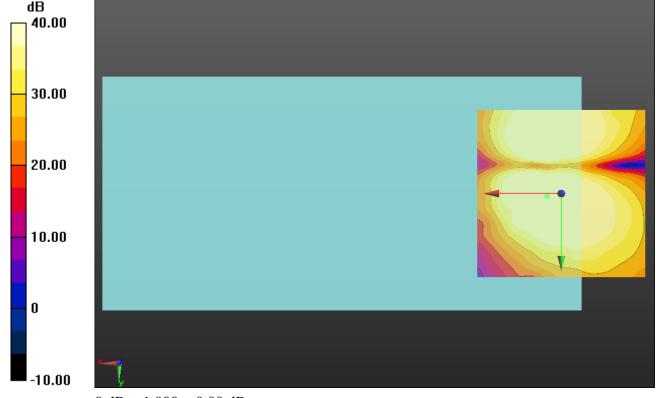
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 48.62 dB ABM1 comp = 2.69 dBA/m BWC Factor = 0.16 dB Location: 4.2, 0.8, 3.7 mm



0 dB = 1.000 = 0.00 dB

Date: 5/31/2017

Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/31/2017

LTE Band 26 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 26 Ch. 26865 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

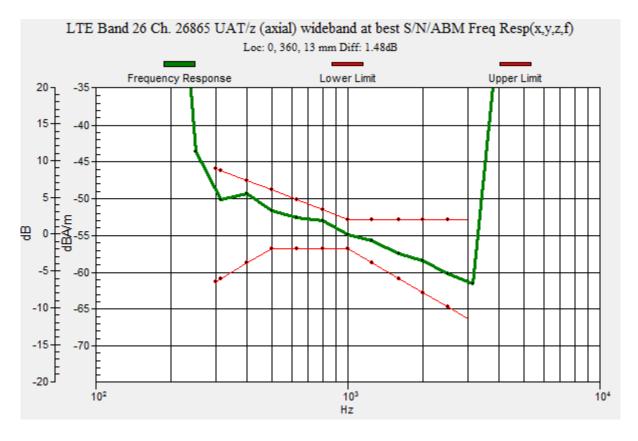
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.48 dB



LTE Band 26 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 26 Ch. 26865 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

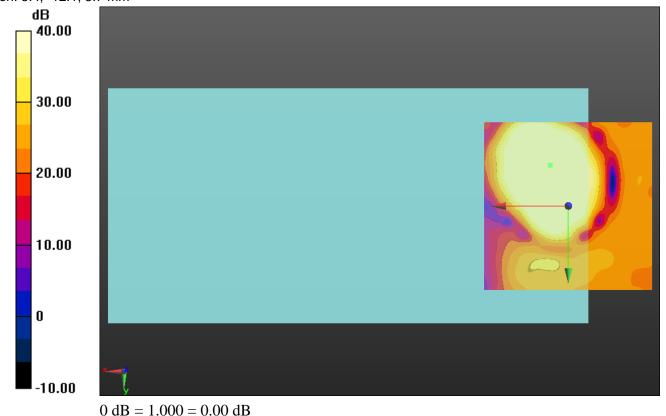
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.63 dB ABM1 comp = 10.52 dBA/m BWC Factor = 0.16 dB Location: 5.4, -12.1, 3.7 mm



Date: 5/31/2017

LTE Band 26 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 26 Ch. 26865 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

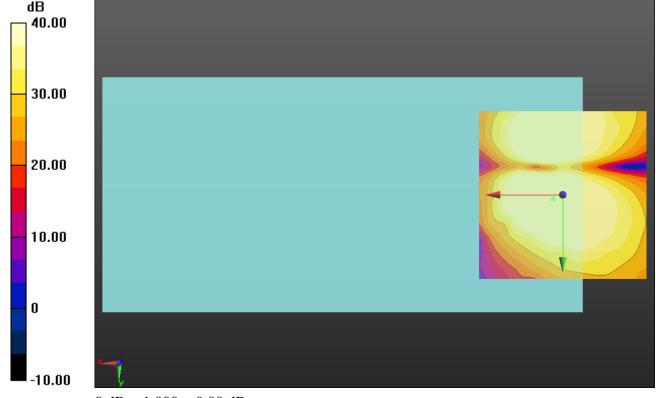
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.24 dB ABM1 comp = 2.57 dBA/m BWC Factor = 0.16 dB Location: 2.9, 1.2, 3.7 mm



0 dB = 1.000 = 0.00 dB

Date: 5/31/2017

Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/31/2017

LTE Band 30 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2310 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 30 Ch. 27710 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

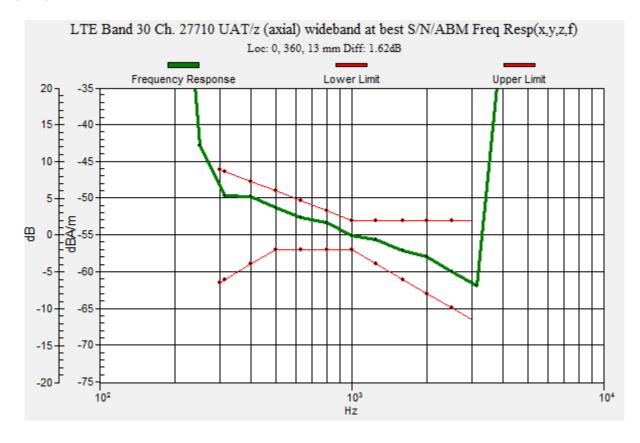
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.62 dB



LTE Band 30 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2310 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 30 Ch. 27710 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/31/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

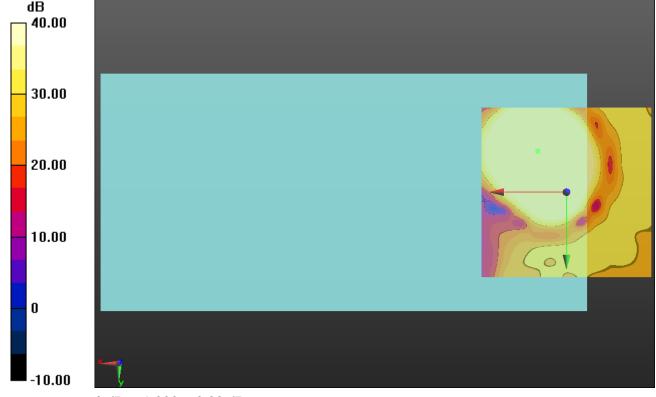
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.00 dB ABM1 comp = 11.02 dBA/m BWC Factor = 0.16 dB Location: 8.3, -12.1, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 30 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2310 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 30 Ch. 27710 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

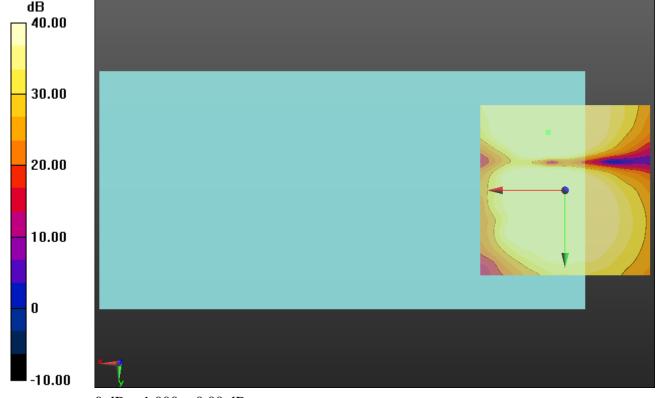
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 52.67 dB ABM1 comp = 2.44 dBA/m BWC Factor = 0.16 dB Location: 5, -17.1, 3.7 mm



0 dB = 1.000 = 0.00 dB

Date: 5/31/2017

Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/30/2017

LTE Band 41 Wide Band

Communication System: UID 0, LTE (TDD) (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 41 Ch. 40620 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

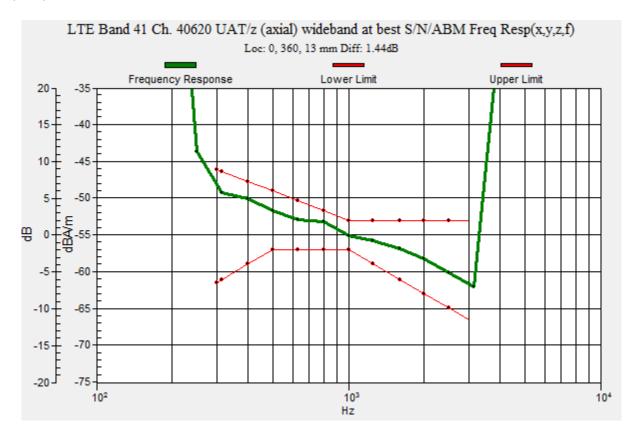
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.44 dB



LTE Band 41 Wide Band

Communication System: UID 0, LTE (TDD) (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 41 Ch. 40620 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/30/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

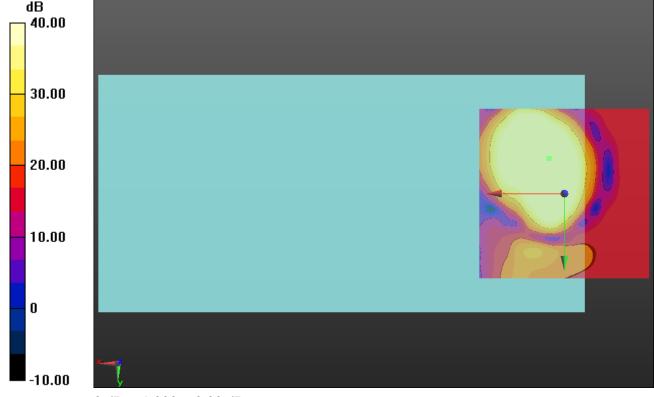
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 55.35 dB ABM1 comp = 9.06 dBA/m BWC Factor = 0.16 dB Location: 4.6, -10.4, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 41 Wide Band

Communication System: UID 0, LTE (TDD) (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 41 Ch. 40620 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

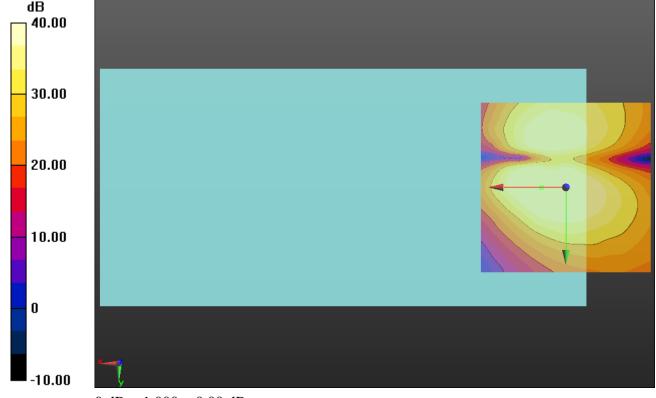
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 47.20 dB ABM1 comp = 2.89 dBA/m BWC Factor = 0.16 dB Location: 7.1, 0, 3.7 mm



0 dB = 1.000 = 0.00 dB

Date: 5/30/2017

Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/31/2017

LTE Band 66 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1745 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 66 Ch. 132322 UAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

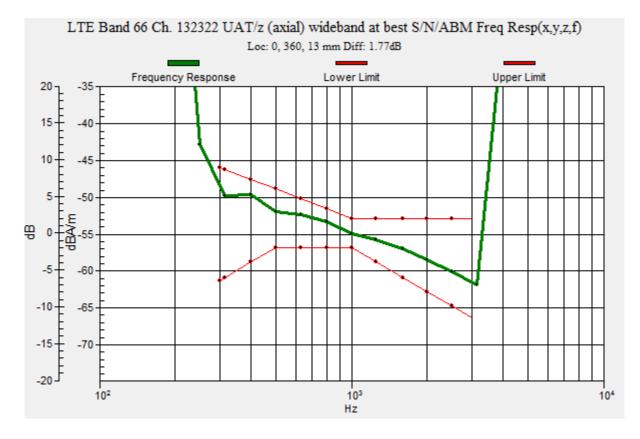
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.77 dB



LTE Band 66 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 66 Ch. 132322 UAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/31/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

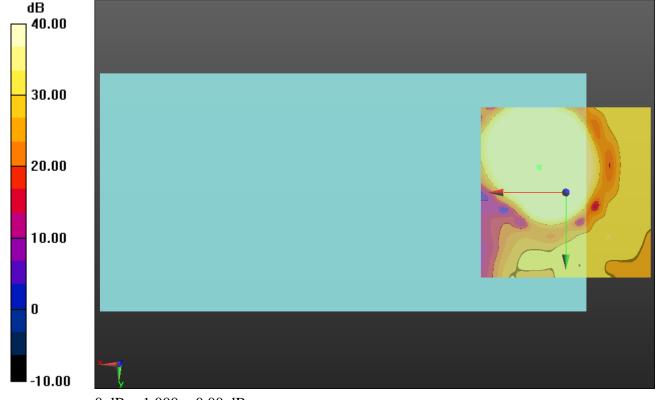
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.37 dB ABM1 comp = 11.91 dBA/m BWC Factor = 0.16 dB Location: 7.9, -7.5, 3.7 mm



LTE Band 66 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 66 Ch. 132322 UAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

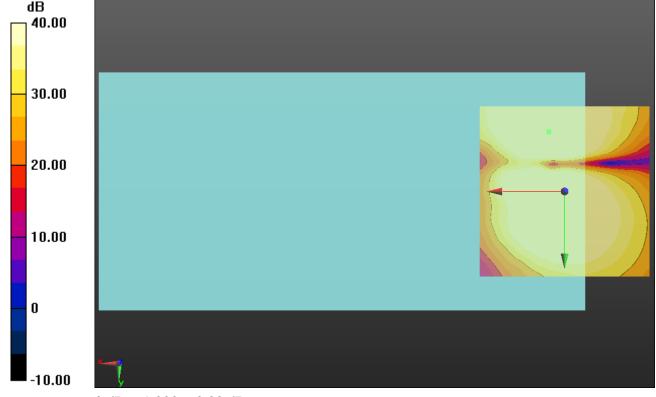
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 51.59 dB ABM1 comp = 2.67 dBA/m BWC Factor = 0.16 dB Location: 4.6, -17.5, 3.7 mm



Date: 5/31/2017

Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/28/2017

GSM850

Communication System: UID 0, GPRS-FDD (TDMA, GMSK, 1 slot) (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.00018

T-Coil scan (scan for ANSI C63.19 2011 compliance)/GSM850 Ch 190 LAT/z (axial) wideband at best S/N/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: 100

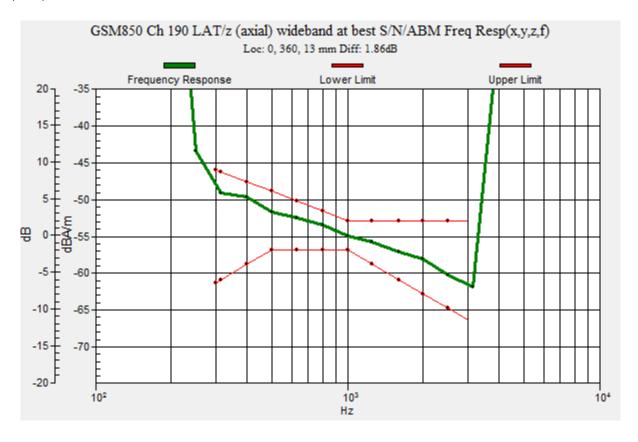
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.86 dB



GSM850

Communication System: UID 0, GPRS-FDD (TDMA, GMSK, 1 slot) (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.00018

Date: 5/28/2017

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/GSM850 Ch 190 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

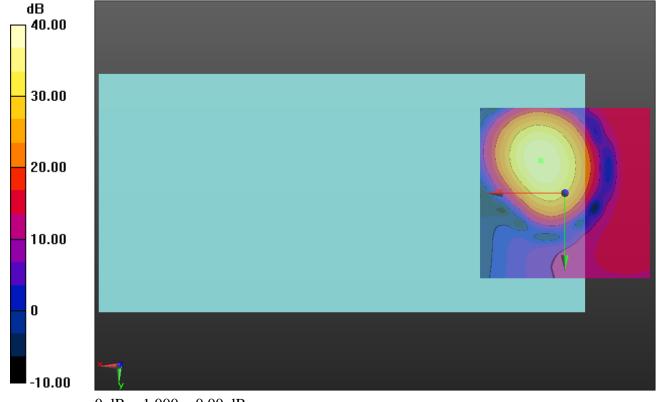
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 40.17 dB ABM1 comp = 11.97 dBA/m BWC Factor = 0.16 dB Location: 7.1, -9.6, 3.7 mm



GSM850

Communication System: UID 0, GPRS-FDD (TDMA, GMSK, 1 slot) (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.00018

Date: 5/28/2017

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/GSM850 Ch 190 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

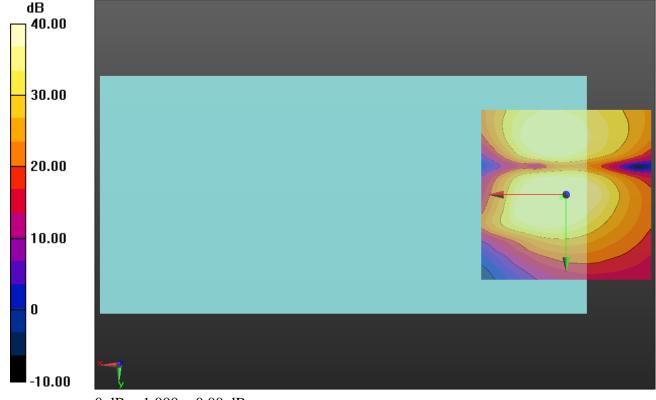
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 48.13 dB ABM1 comp = 0.31 dBA/m BWC Factor = 0.16 dB Location: 1.3, 0.8, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2

GSM1900

Communication System: UID 0, GPRS-FDD (TDMA, GMSK, 1 slot) (0); Frequency: 1880 MHz; Duty Cycle: 1:8.00018

Date: 5/28/2017

T-Coil scan (scan for ANSI C63.19 2011 compliance)/GSM1900 Ch 661 LAT/z (axial) wideband at best S/N/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: 100

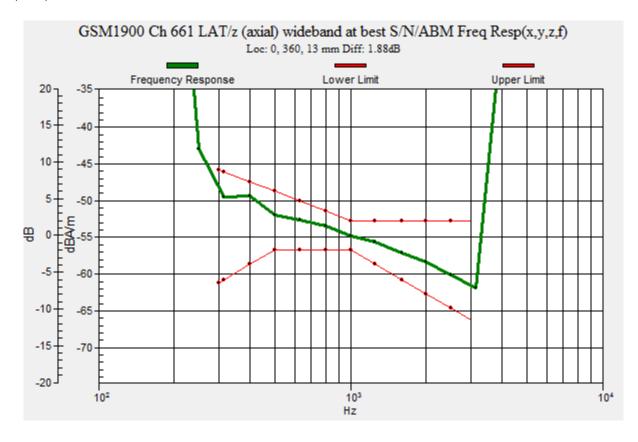
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.88 dB



GSM1900

Communication System: UID 0, GPRS-FDD (TDMA, GMSK, 1 slot) (0); Frequency: 1880 MHz; Duty Cycle: 1:8.00018

Date: 5/28/2017

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/GSM1900 Ch 661 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

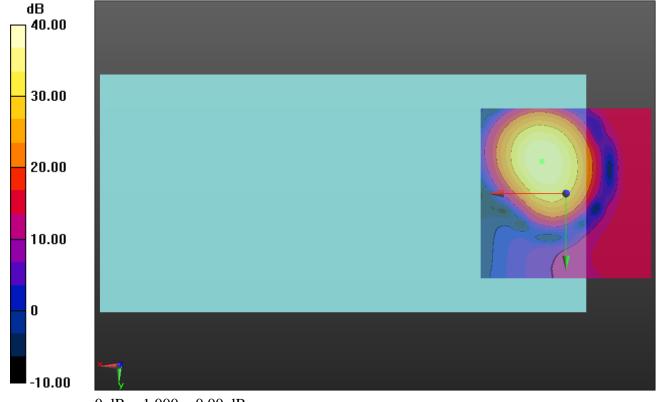
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 40.31 dB ABM1 comp = 11.77 dBA/m BWC Factor = 0.16 dB Location: 7.1, -9.6, 3.7 mm



GSM1900

Communication System: UID 0, GPRS-FDD (TDMA, GMSK, 1 slot) (0); Frequency: 1880 MHz; Duty Cycle: 1:8.00018

Date: 5/28/2017

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/GSM1900 Ch 661 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

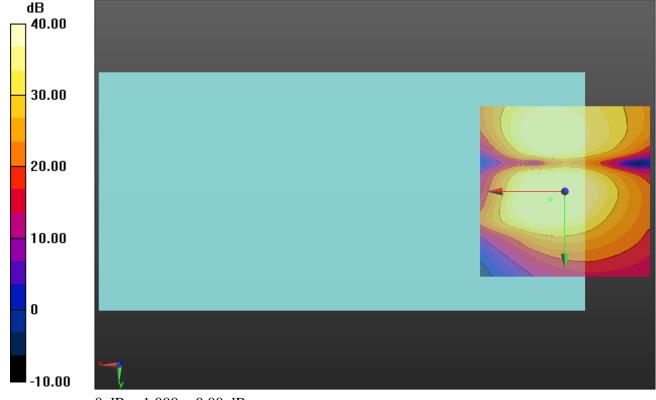
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 47.78 dB ABM1 comp = 2.34 dBA/m BWC Factor = 0.16 dB Location: 4.2, 2.5, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/27/2017

W-CDMA Band V

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band V Ch 4183 LAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

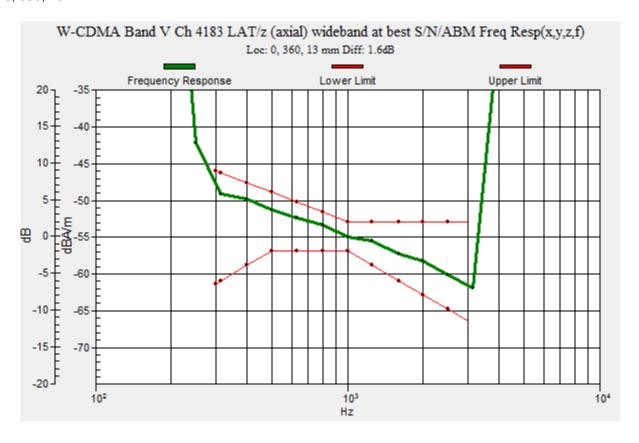
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.60 dB



W-CDMA Band V

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band V Ch 4183 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/27/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k voice 1kHz 1s.wav

Output Gain: 100

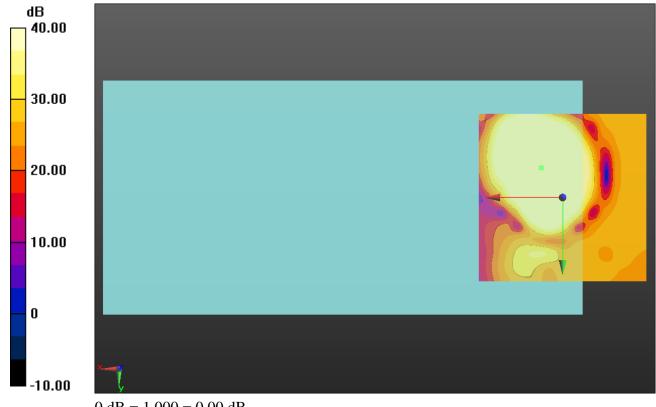
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 59.42 dBABM1 comp = 12.17 dBA/mBWC Factor = 0.16 dB Location: 6.3, -8.8, 3.7 mm



W-CDMA Band V

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band V Ch 4183 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

Date: 5/27/2017

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

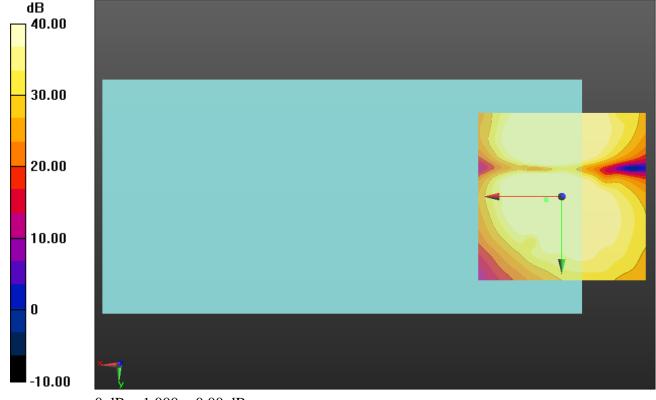
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 51.15 dB ABM1 comp = 3.65 dBA/m BWC Factor = 0.16 dB Location: 4.6, 0.8, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/28/2017

W-CDMA Band IV

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band IV Ch 1413 LAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

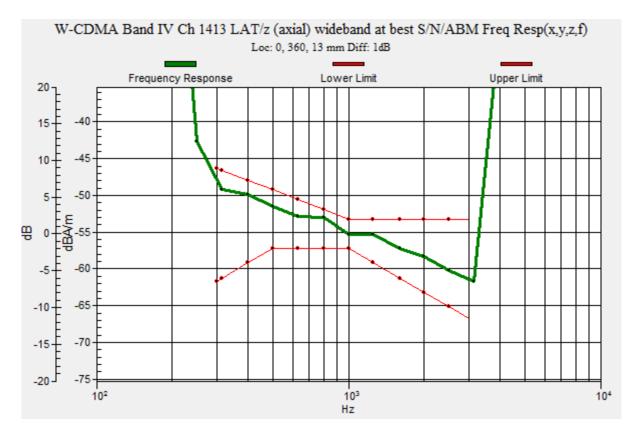
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.00 dB



W-CDMA Band IV

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band IV Ch 1413 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/27/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

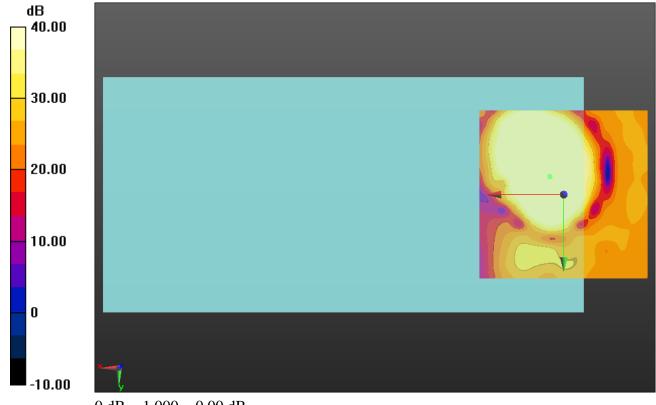
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.34 dB ABM1 comp = 9.97 dBA/m BWC Factor = 0.16 dB Location: 4.2, -5.4, 3.7 mm



W-CDMA Band IV

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band IV Ch 1413 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

Date: 5/28/2017

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

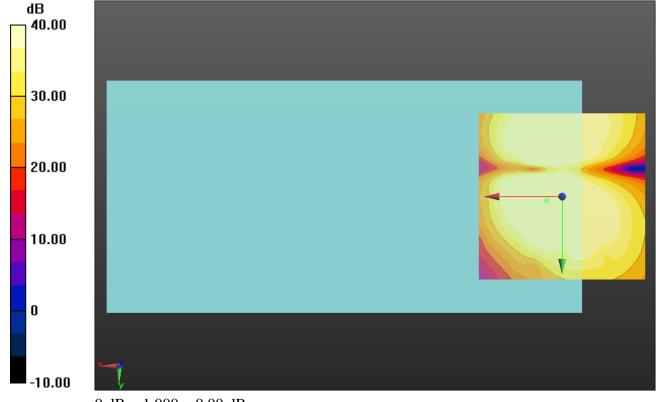
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 50.89 dB ABM1 comp = 2.92 dBA/m BWC Factor = 0.16 dB Location: 4.6, 1.2, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/28/2017

W-CDMA Band II

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band II Ch 9400 LAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

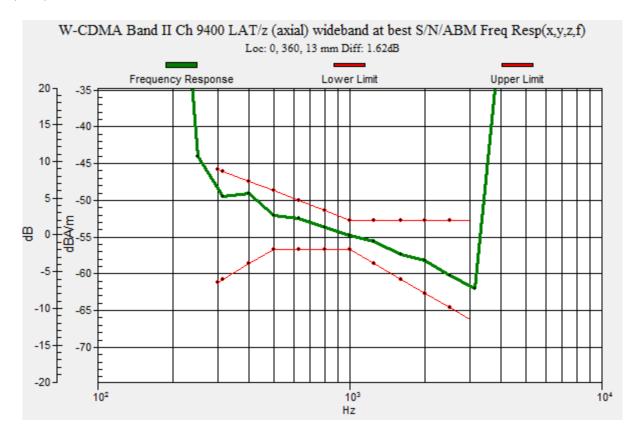
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.62 dB



W-CDMA Band II

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band II Ch 9400 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

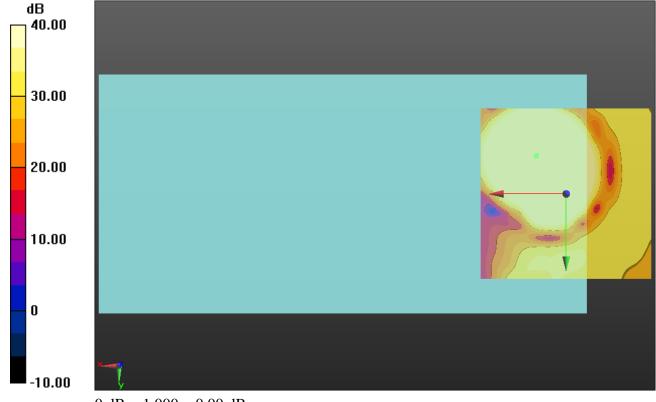
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 59.45 dB ABM1 comp = 10.79 dBA/m BWC Factor = 0.16 dB Location: 8.8, -11.3, 3.7 mm



Date: 5/28/2017

W-CDMA Band II

Communication System: UID 0, UMTS-FDD (WCDMA) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/W-CDMA Band II Ch 9400 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

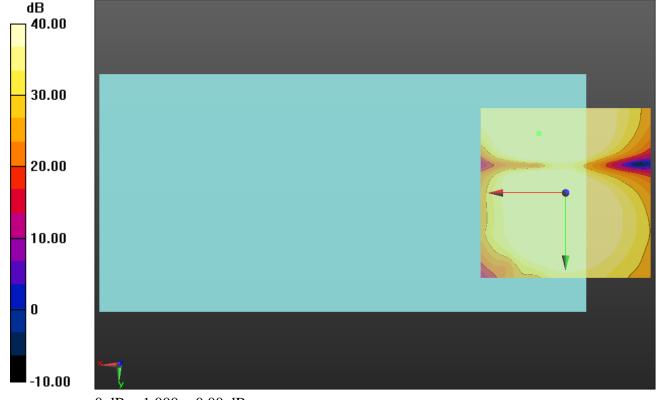
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 54.14 dB ABM1 comp = 3.58 dBA/m BWC Factor = 0.16 dB Location: 7.9, -17.5, 3.7 mm



Date: 5/28/2017

Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/28/2017

LTE Band 2 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch 18900 LAT/z (axial) wideband at best S/N/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: 100

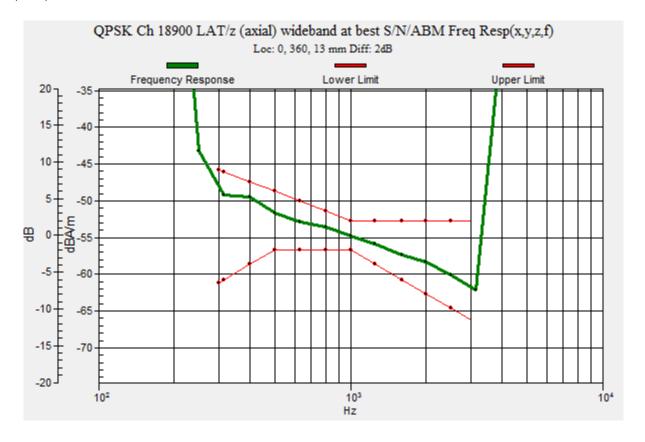
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 2.00 dB



LTE Band 2 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch 18900 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

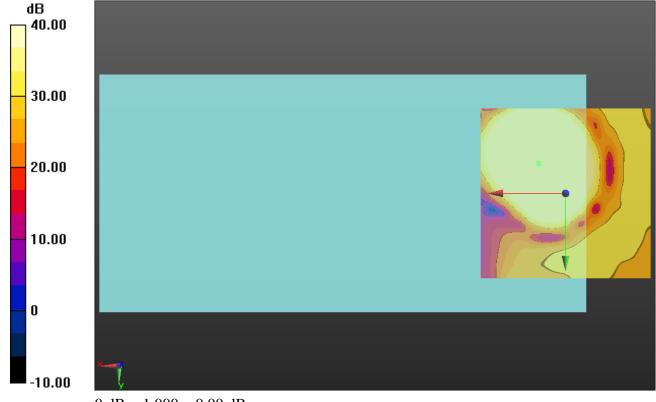
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.35 dB ABM1 comp = 11.25 dBA/m BWC Factor = 0.16 dB Location: 7.9, -8.8, 3.7 mm



Date: 5/28/2017

LTE Band 2 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch 18900 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/28/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

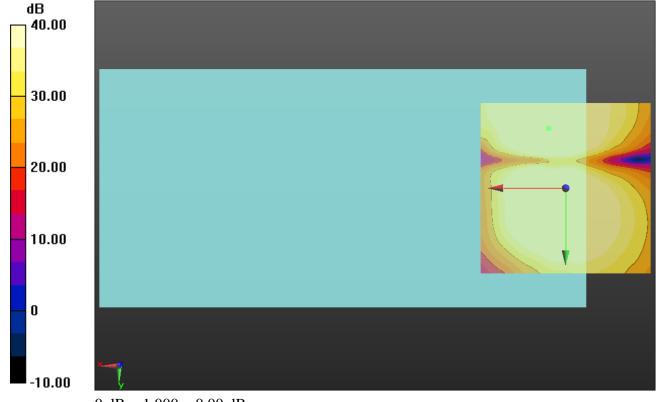
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 51.42 dB ABM1 comp = 2.23 dBA/m BWC Factor = 0.16 dB Location: 5, -17.5, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/28/2017

LTE Band 4 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20175 LAT/z (axial) wideband at best S/N/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: 100

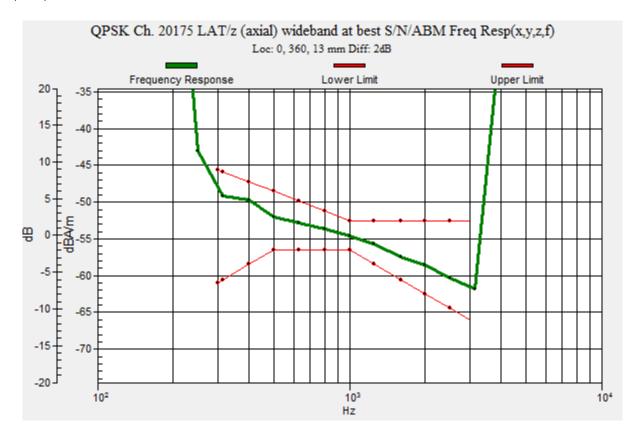
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 2.00 dB



LTE Band 4 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20175 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

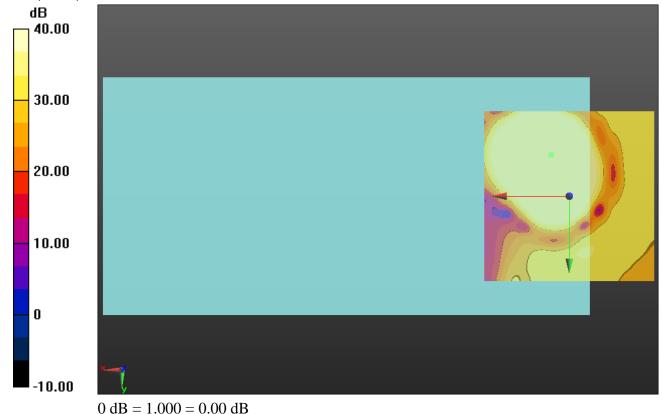
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.25 dB ABM1 comp = 9.80 dBA/m BWC Factor = 0.16 dB Location: 5.4, -12.1, 3.7 mm



Date: 5/28/2017

LTE Band 4 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20175 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 50.74 dB ABM1 comp = 1.65 dBA/m BWC Factor = 0.16 dB Location: 4.2, -14.2, 3.7 mm



Date: 5/28/2017

Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/28/2017

LTE Band 5 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20525 LAT/z (axial) wideband at best S/N/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: 100

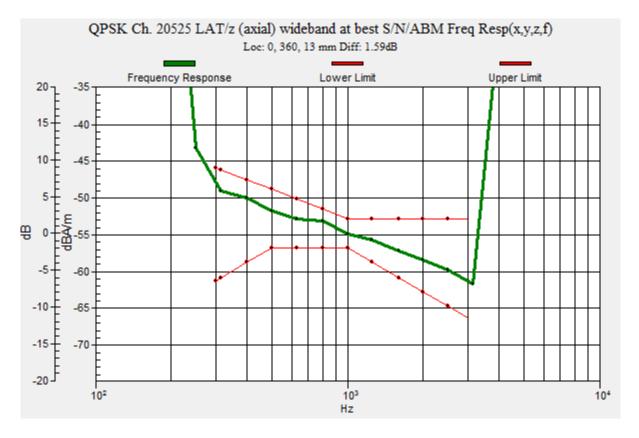
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.59 dB



LTE Band 5 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20525 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

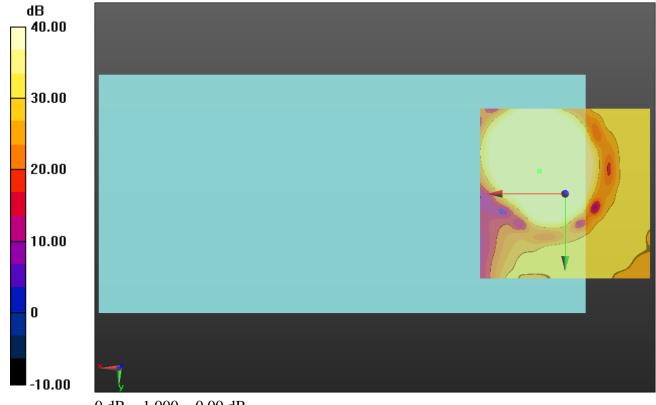
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.58 dB ABM1 comp = 11.66 dBA/m BWC Factor = 0.16 dB Location: 7.5, -6.7, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 5 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20525 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

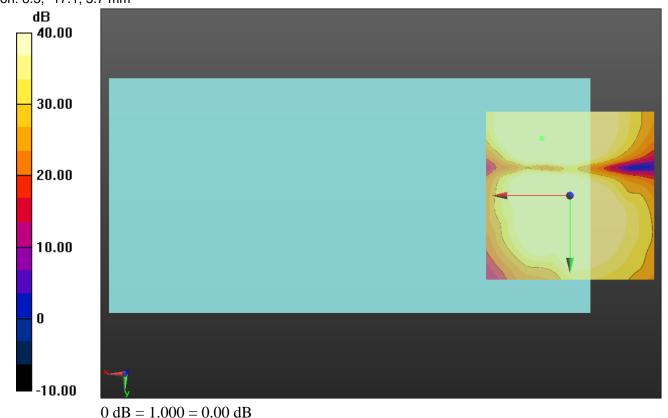
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 51.64 dB ABM1 comp = 4.16 dBA/m BWC Factor = 0.16 dB Location: 8.3, -17.1, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/28/2017

LTE Band 7 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2535 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 7 Ch. 21100 LAT/z (axial) wideband at best S/N/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: 100

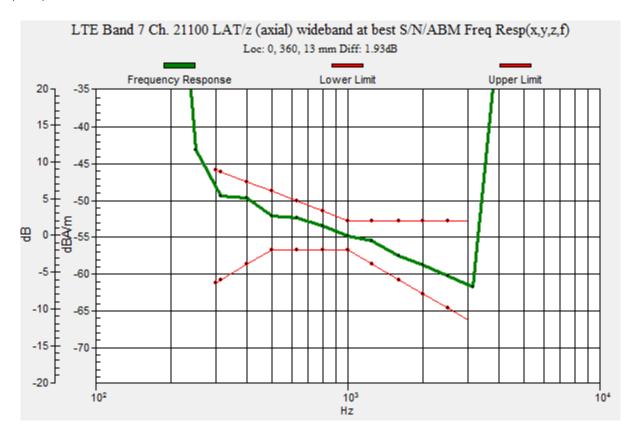
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.93 dB



LTE Band 7 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 7 Ch. 21100 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/28/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

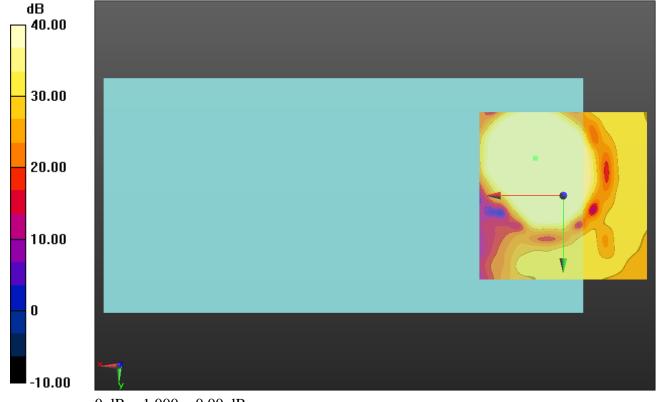
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.53 dB ABM1 comp = 11.35 dBA/m BWC Factor = 0.16 dB Location: 8.3, -11.3, 3.7 mm



LTE Band 7 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 7 Ch. 21100 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

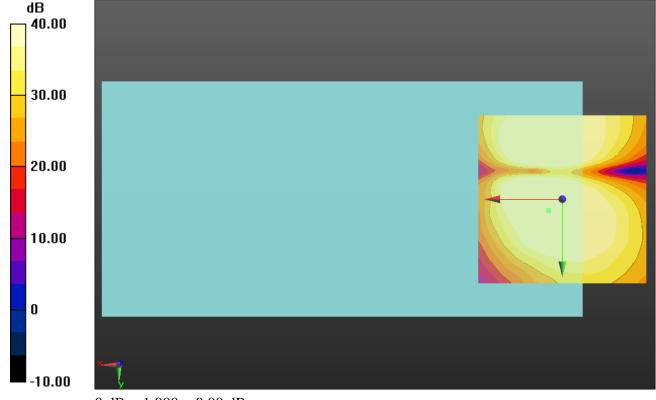
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.18 dB ABM1 comp = 1.85 dBA/m BWC Factor = 0.16 dB Location: 4.2, 3.3, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/28/2017

LTE Band 12 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 12 Ch. 23095 LAT/z (axial) wideband at best S/N/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: 100

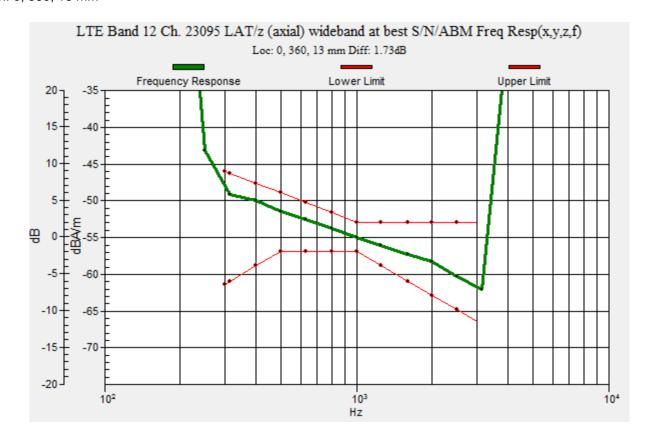
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.73 dB



LTE Band 12 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 12 Ch. 23095 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

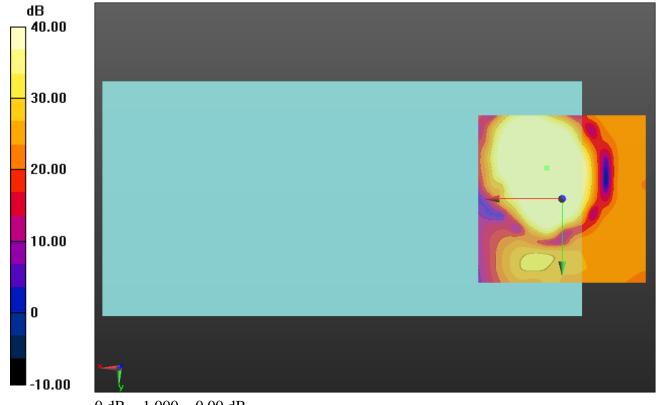
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.37 dB ABM1 comp = 10.31 dBA/m BWC Factor = 0.16 dB Location: 4.6, -9.2, 3.7 mm



LTE Band 12 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 12 Ch. 23095 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

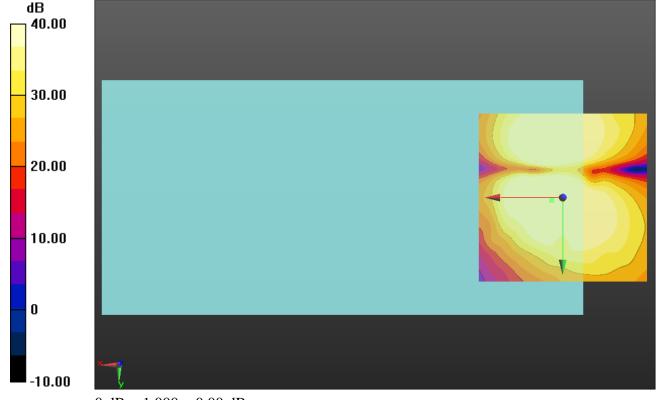
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.15 dB ABM1 comp = 1.90 dBA/m BWC Factor = 0.16 dB Location: 3.3, 0.8, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/28/2017

LTE Band 13 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 782 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 13 Ch. 23230 LAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

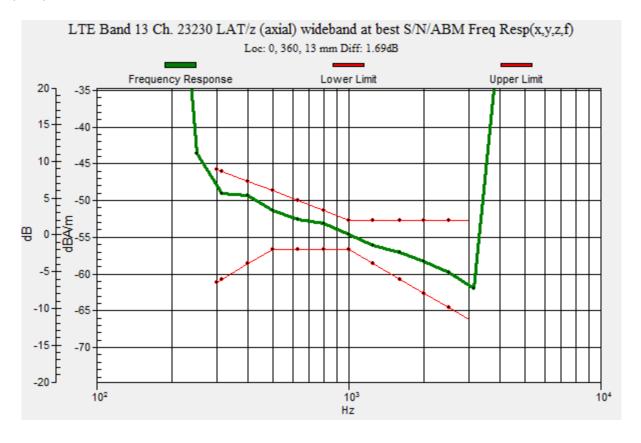
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.69 dB



LTE Band 13 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 782 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 13 Ch. 23230 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

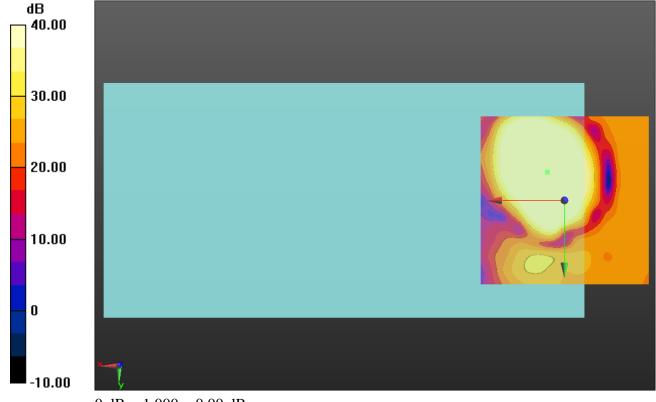
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.01 dB ABM1 comp = 10.82 dBA/m BWC Factor = 0.16 dB Location: 5, -8.3, 3.7 mm



LTE Band 13 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 782 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 13 Ch. 23230 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

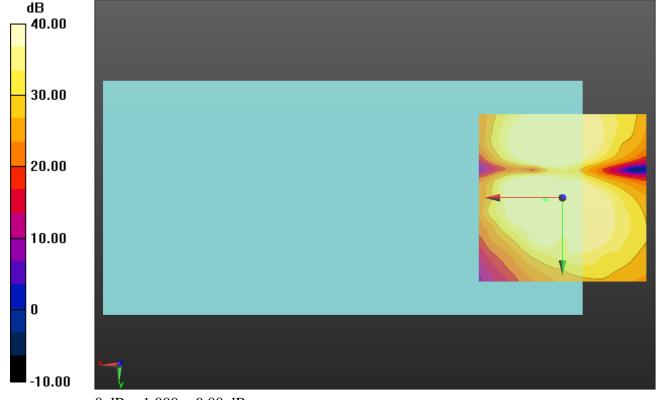
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 50.12 dB ABM1 comp = 3.23 dBA/m BWC Factor = 0.16 dB Location: 5, 0.4, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/28/2017

LTE Band 17 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 710 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 17 Ch. 23790 LAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

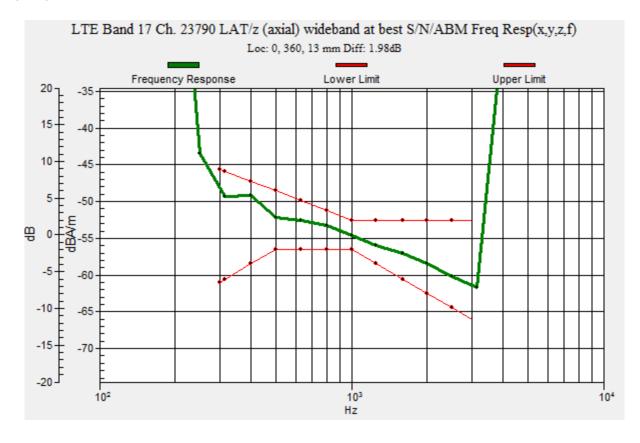
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.98 dB



LTE Band 17 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 710 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 17 Ch. 23790 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/28/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

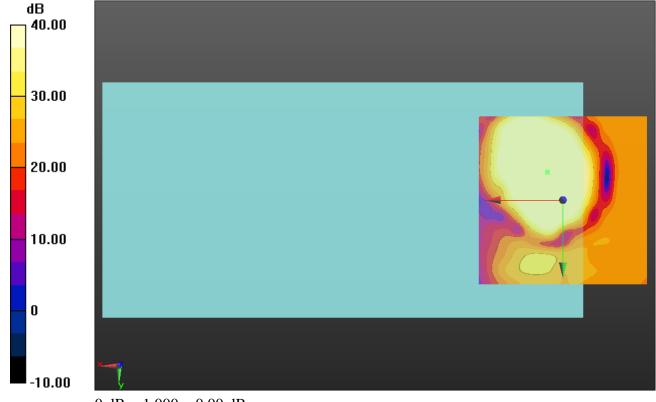
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.45 dB ABM1 comp = 11.03 dBA/m BWC Factor = 0.16 dB Location: 4.6, -8.3, 3.7 mm



LTE Band 17 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 710 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 17 Ch. 23790 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

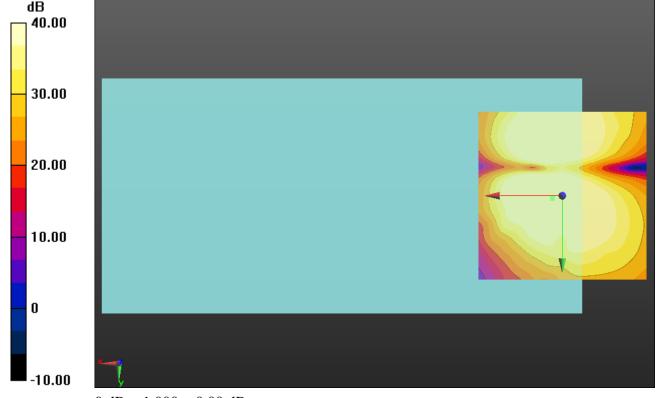
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.77 dB ABM1 comp = 2.42 dBA/m BWC Factor = 0.16 dB Location: 2.9, 0.8, 3.7 mm



0 dB = 1.000 = 0.00 dB

Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/28/2017

LTE Band 25 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1882.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 25 Ch. 26365 LAT/z (axial) wideband at best S/N/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: 100

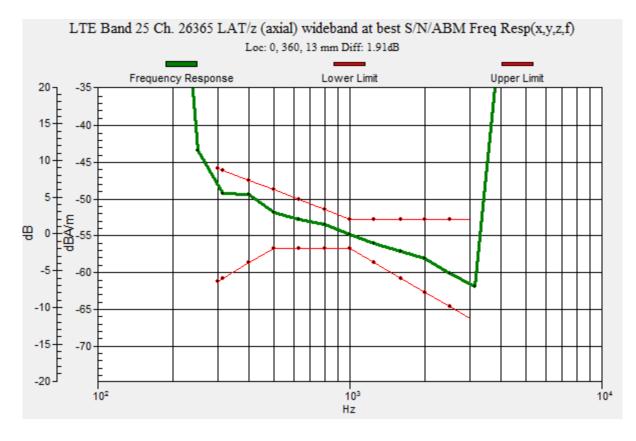
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.91 dB



LTE Band 25 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1882.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 25 Ch. 26365 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

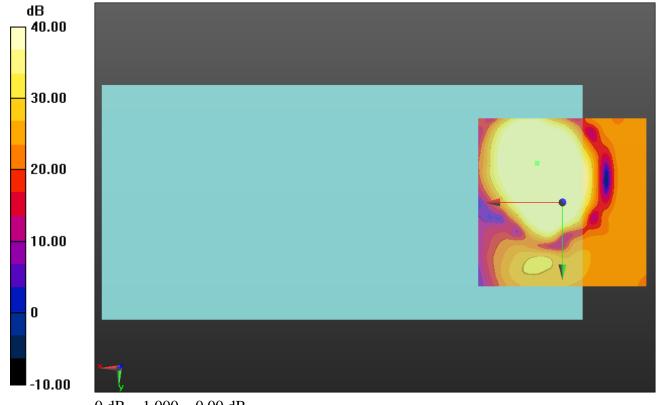
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.90 dB ABM1 comp = 10.96 dBA/m BWC Factor = 0.16 dB Location: 7.5, -11.7, 3.7 mm



LTE Band 25 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1882.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 25 Ch. 26365 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

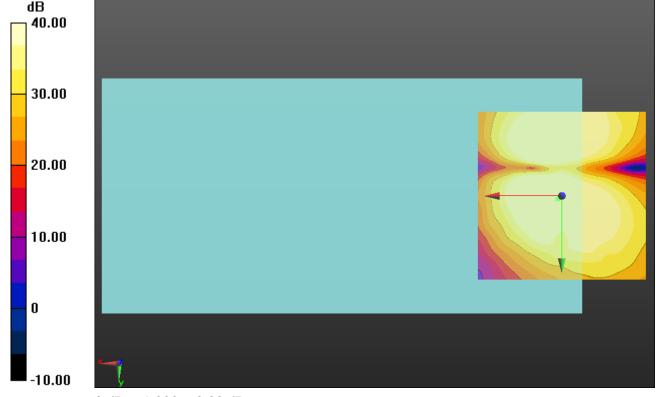
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.13 dB ABM1 comp = 0.37 dBA/m BWC Factor = 0.16 dB Location: 1.3, 0.8, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/29/2017

LTE Band 26 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 26 Ch. 26865 LAT/z (axial) wideband at best S/N/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: 100

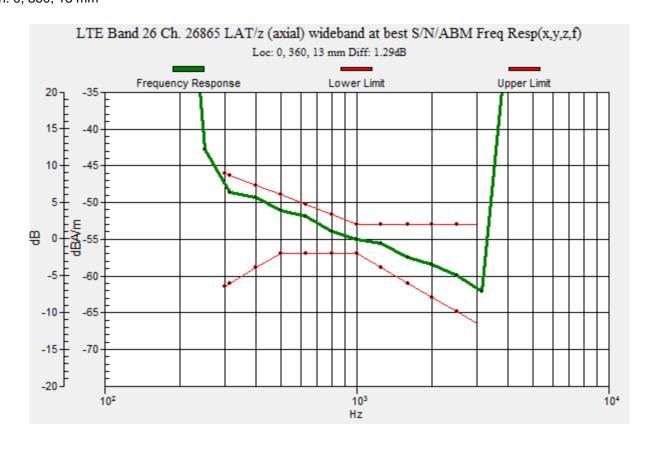
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.29 dB



LTE Band 26 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 26 Ch. 26865 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

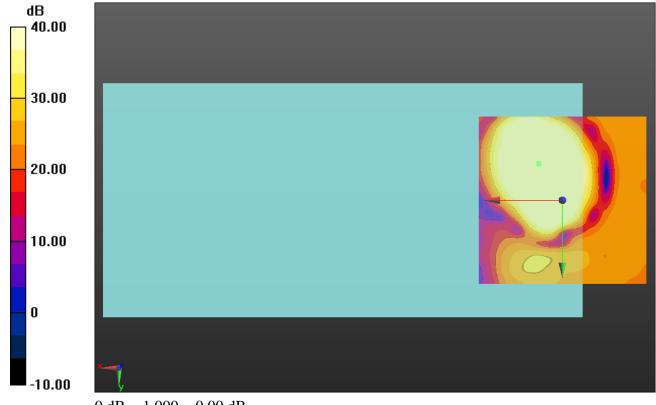
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.92 dB ABM1 comp = 11.38 dBA/m BWC Factor = 0.16 dB Location: 7.1, -10.8, 3.7 mm



LTE Band 26 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 26 Ch. 26865 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

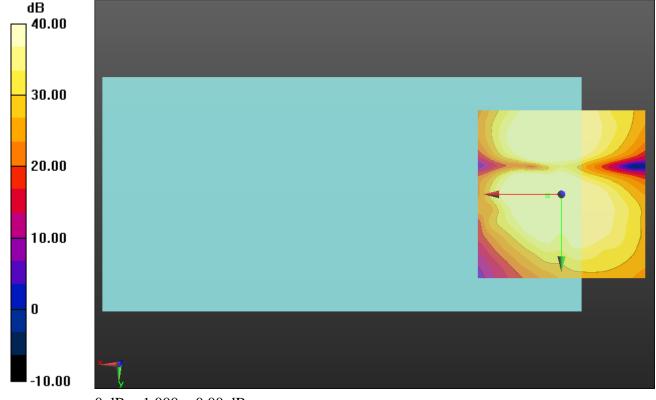
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 50.02 dB ABM1 comp = 2.35 dBA/m BWC Factor = 0.16 dB Location: 4.2, 0.4, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/30/2017

LTE Band 30 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2310 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 30 Ch. 27710 LAT/z (axial) wideband at best S/N/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: 100

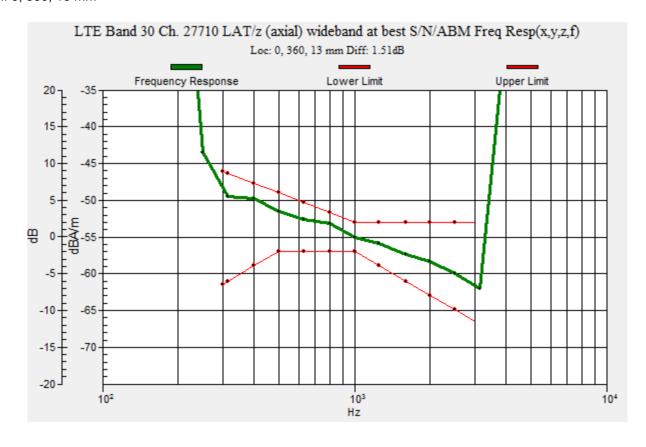
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.51 dB



LTE Band 30 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2310 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 30 Ch. 27710 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

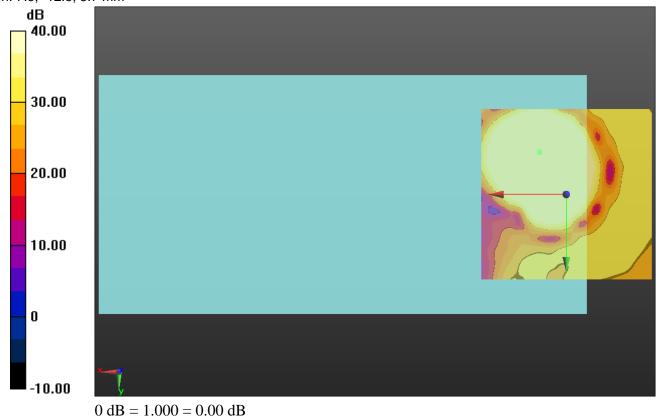
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.89 dB ABM1 comp = 10.80 dBA/m BWC Factor = 0.16 dB Location: 7.9, -12.5, 3.7 mm



Date: 5/30/2017

LTE Band 30 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2310 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 30 Ch. 27710 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k voice 1kHz 1s.wav

Output Gain: 100

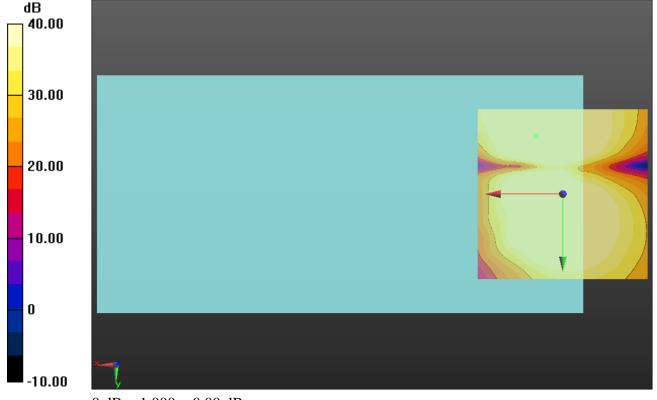
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 52.88 dB ABM1 comp = 4.38 dBA/m BWC Factor = 0.16 dB Location: 7.9, -17.1, 3.7 mm



0 dB = 1.000 = 0.00 dB

Date: 5/30/2017

Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/30/2017

LTE Band 41 Narrow Band

Communication System: UID 0, LTE (TDD) (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 41 Ch 40620 LAT/z (axial) wideband at best S/N/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: 100

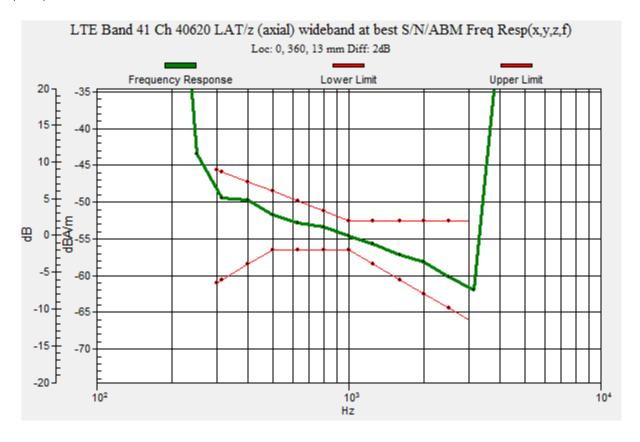
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 2.00 dB



LTE Band 41 Narrow Band

Communication System: UID 0, LTE (TDD) (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 41 Ch 40620 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/30/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

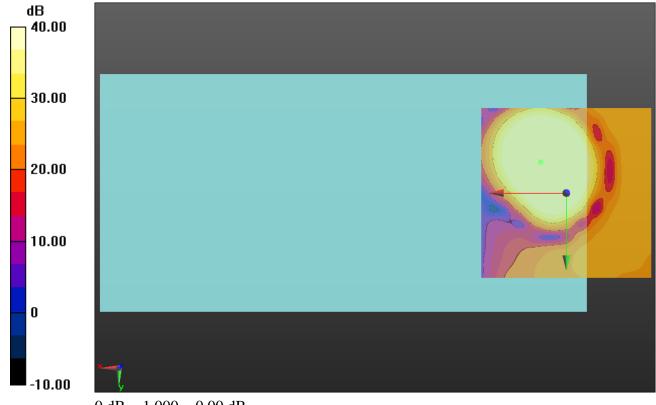
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 52.97 dB ABM1 comp = 11.71 dBA/m BWC Factor = 0.16 dB Location: 7.5, -9.2, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 41 Narrow Band

Communication System: UID 0, LTE (TDD) (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 41 Ch 40620 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k voice 1kHz 1s.wav

Output Gain: 100

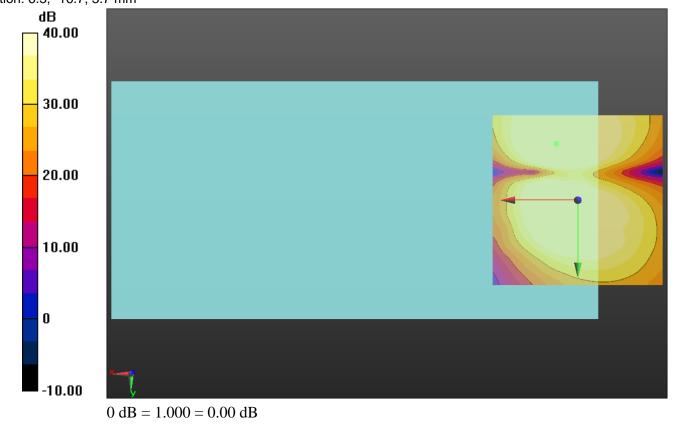
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 48.33 dB ABM1 comp = 3.32 dBA/m BWC Factor = 0.16 dB Location: 6.3, -16.7, 3.7 mm



Date: 5/30/2017

Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/30/2017

LTE Band 66 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1745 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 66 Ch 132322 LAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

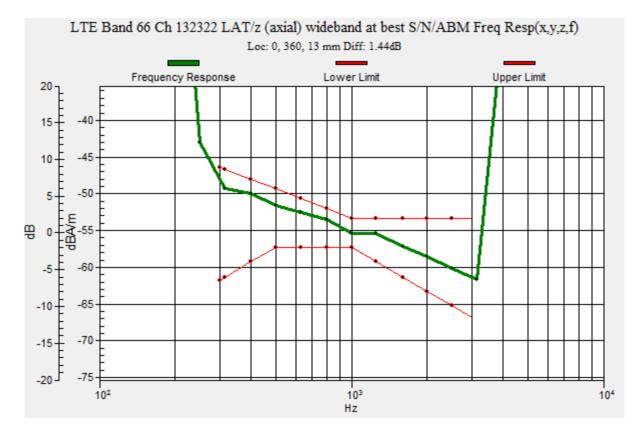
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.44 dB



LTE Band 66 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 3092; ; Calibrated: 7/22/2016
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 66 Ch 132322 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

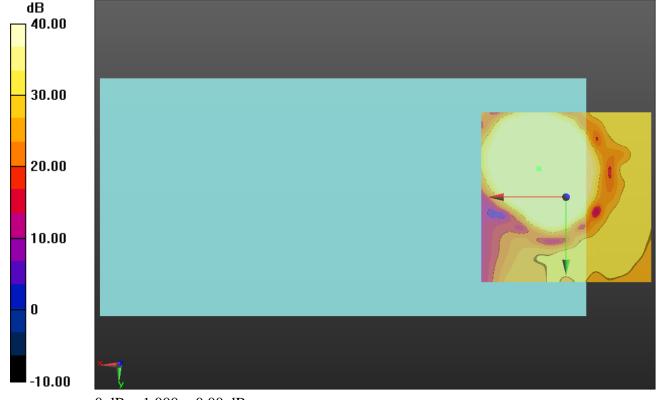
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.68 dB ABM1 comp = 12.27 dBA/m BWC Factor = 0.16 dB Location: 7.9, -8.3, 3.7 mm



Date: 5/30/2017

LTE Band 66 Narrow Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 3092; ; Calibrated: 7/22/2016
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 66 Ch 132322 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

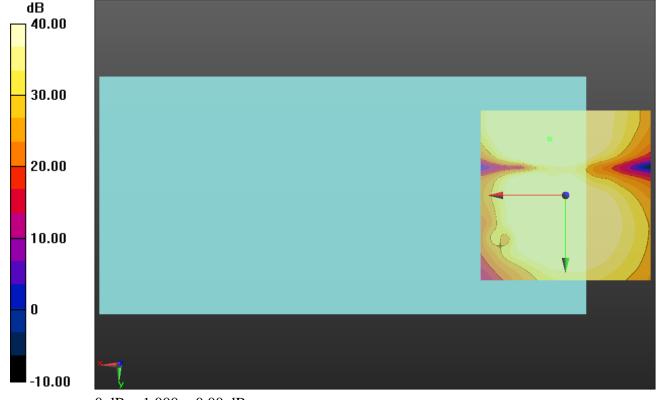
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 52.68 dB ABM1 comp = 2.82 dBA/m BWC Factor = 0.16 dB Location: 4.6, -16.7, 3.7 mm



Date: 5/30/2017

Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/30/2017

LTE Band 2 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch 18900 LAT/z (axial) wideband at best S/N/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: 100

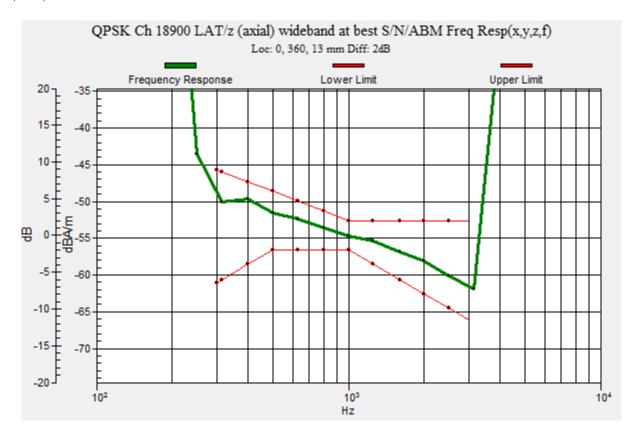
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 2.00 dB



LTE Band 2 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch 18900 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

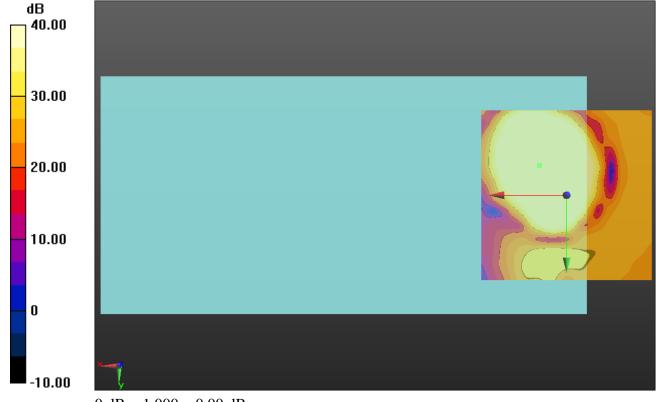
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.15 dB ABM1 comp = 11.70 dBA/m BWC Factor = 0.16 dB Location: 7.9, -8.8, 3.7 mm



Date: 5/30/2017

LTE Band 2 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch 18900 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/30/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

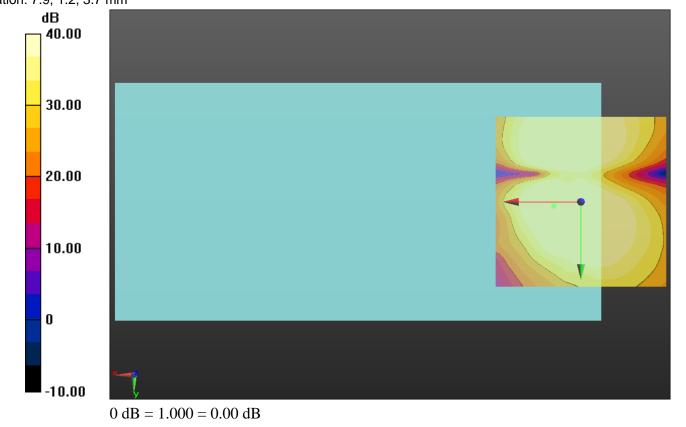
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.23 dB ABM1 comp = 3.02 dBA/m BWC Factor = 0.16 dB Location: 7.9, 1.2, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2 Date: 5/30/2017

LTE Band 4 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20175 LAT/z (axial) wideband at best S/N/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: 100

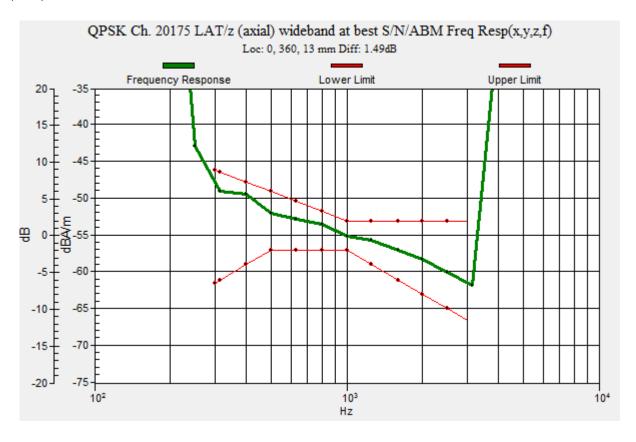
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.49 dB



LTE Band 4 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20175 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/30/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

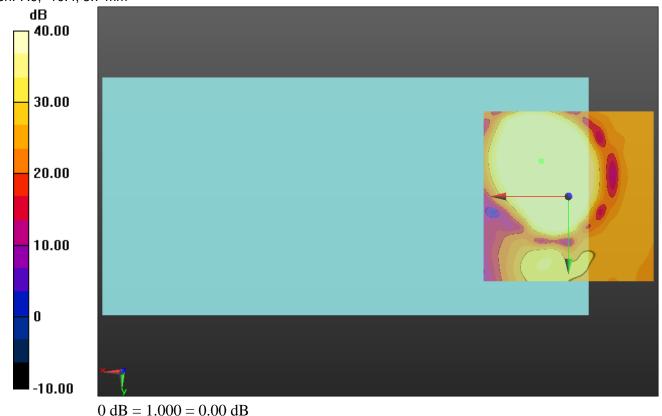
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.53 dB ABM1 comp = 11.14 dBA/m BWC Factor = 0.16 dB Location: 7.9, -10.4, 3.7 mm



LTE Band 4 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20175 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

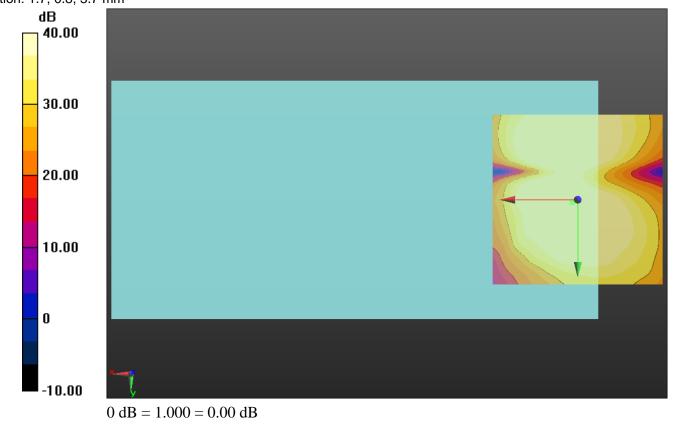
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 48.29 dB ABM1 comp = -0.25 dBA/m BWC Factor = 0.16 dB Location: 1.7, 0.8, 3.7 mm



Date: 5/30/2017

LTE Band 5 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20525 LAT/z (axial) wideband at best S/N/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: 100

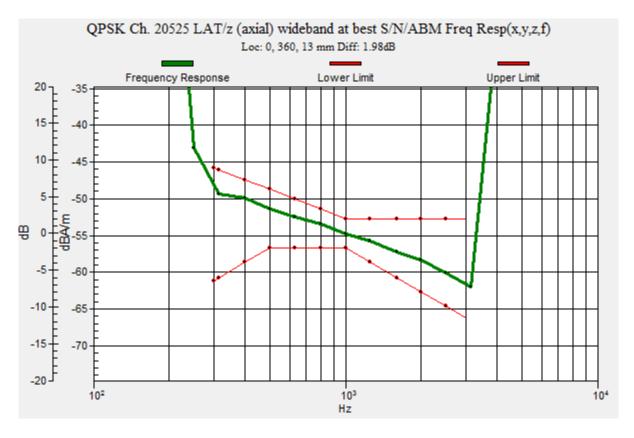
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.98 dB



LTE Band 5 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20525 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

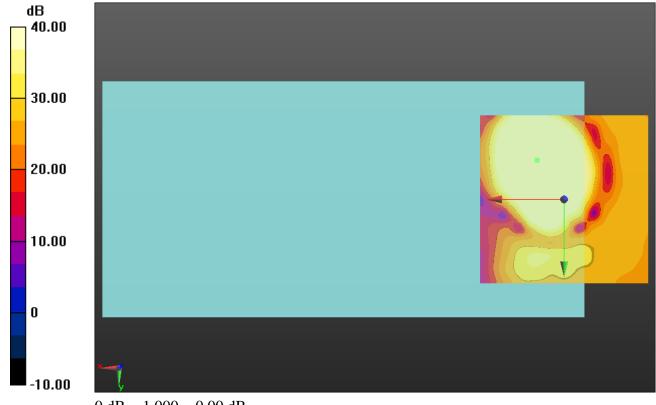
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.67 dB ABM1 comp = 11.67 dBA/m BWC Factor = 0.16 dB Location: 7.9, -11.7, 3.7 mm



LTE Band 5 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/QPSK Ch. 20525 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

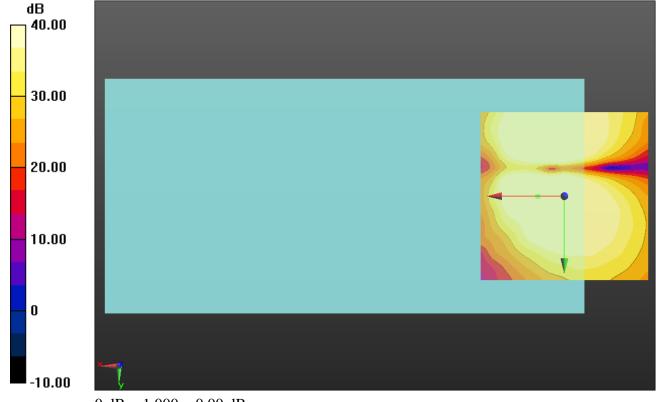
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 50.21 dB ABM1 comp = 3.85 dBA/m BWC Factor = 0.16 dB Location: 7.9, 0, 3.7 mm



LTE Band 7 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2535 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 7 Ch. 21100 LAT/z (axial) wideband at best S/N/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: 100

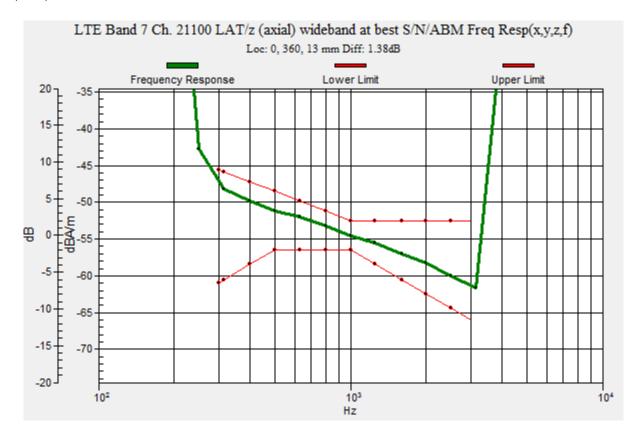
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.38 dB



LTE Band 7 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 7 Ch. 21100 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/30/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

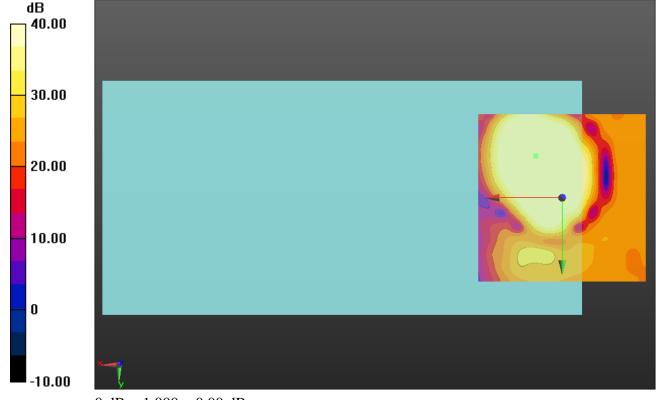
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.41 dB ABM1 comp = 11.34 dBA/m BWC Factor = 0.16 dB Location: 7.9, -12.5, 3.7 mm



LTE Band 7 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 7 Ch. 21100 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

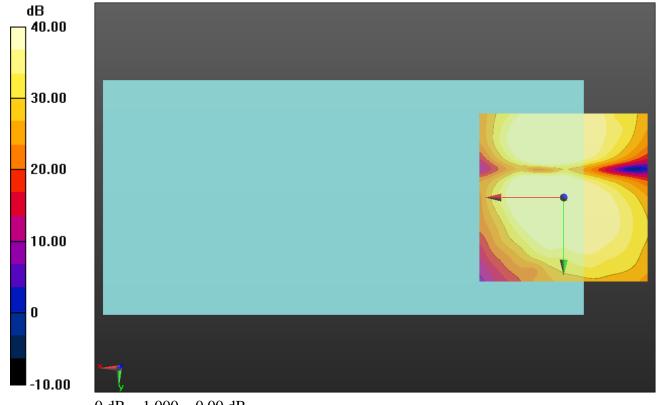
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.57 dB ABM1 comp = -0.76 dBA/m BWC Factor = 0.16 dB Location: -0.4, 0.4, 3.7 mm



LTE Band 12 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 12 Ch. 23095 LAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

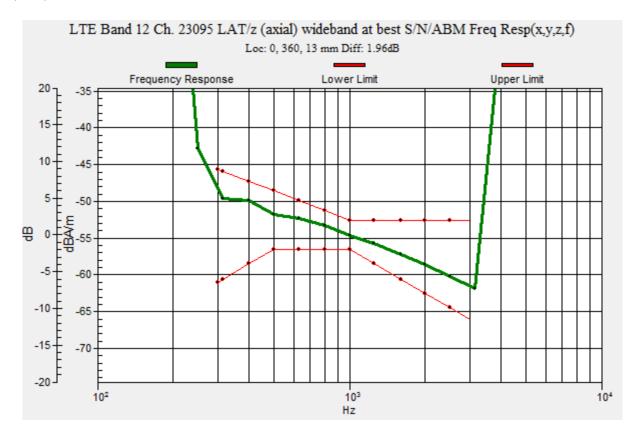
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.96 dB



LTE Band 12 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 12 Ch. 23095 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/30/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

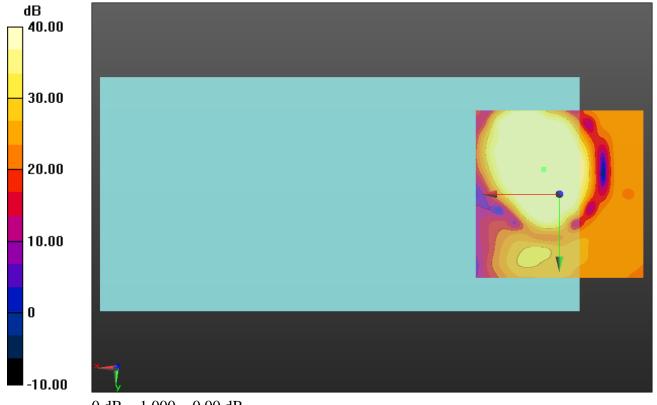
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.95 dB ABM1 comp = 10.89 dBA/m BWC Factor = 0.16 dB Location: 4.6, -7.5, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 12 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 12 Ch. 23095 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

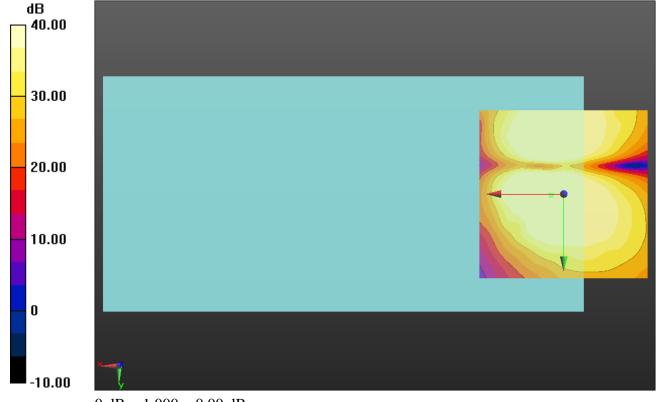
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 50.02 dB ABM1 comp = 2.54 dBA/m BWC Factor = 0.16 dB Location: 3.8, 0.4, 3.7 mm



LTE Band 13 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 782 MHz; Duty Cycle: 1:1Q

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 13 Ch. 23230 LAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

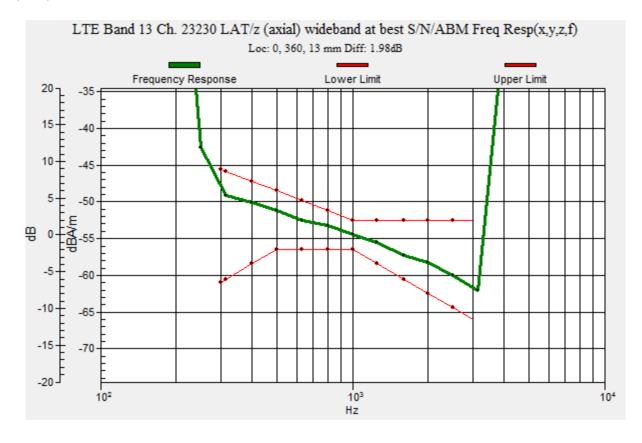
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.98 dB



LTE Band 13 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 782 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 13 Ch. 23230 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

Date: 5/30/2017

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

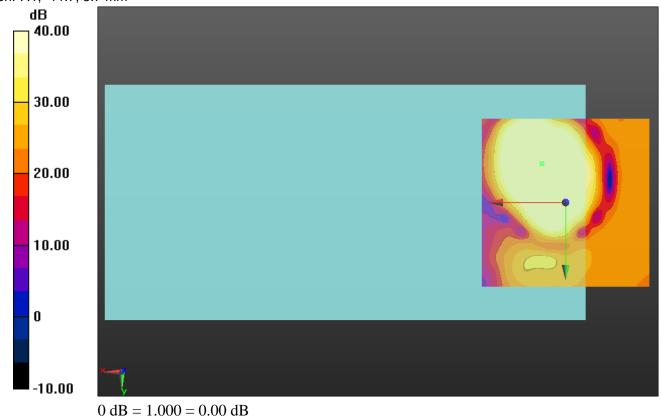
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.70 dB ABM1 comp = 11.37 dBA/m BWC Factor = 0.16 dB Location: 7.1, -11.7, 3.7 mm



LTE Band 13 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 782 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 13 Ch. 23230 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

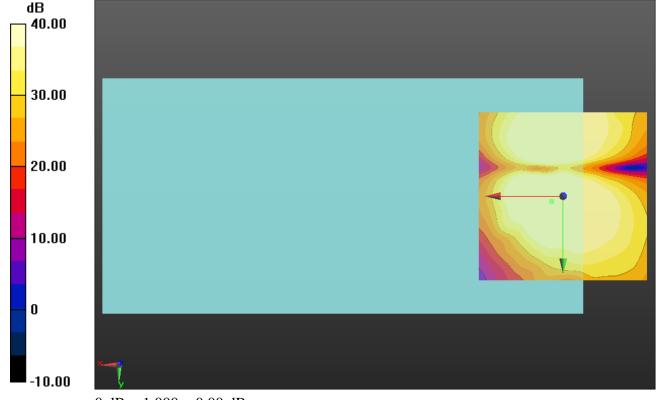
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.51 dB ABM1 comp = 3.16 dBA/m BWC Factor = 0.16 dB Location: 3.3, 1.7, 3.7 mm



LTE Band 17 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 710 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 17 Ch. 23790 LAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

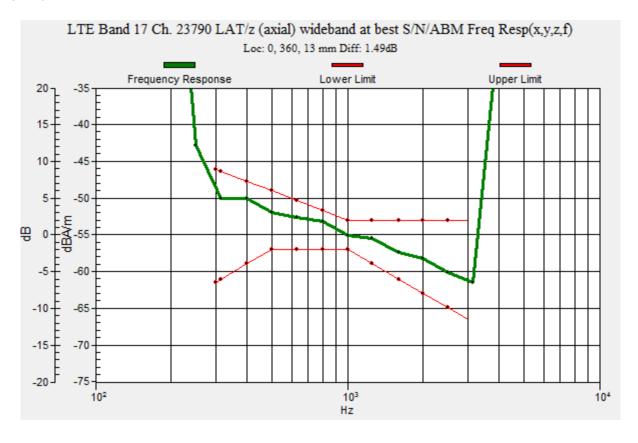
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.49 dB



LTE Band 17 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 710 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 17 Ch. 23790 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

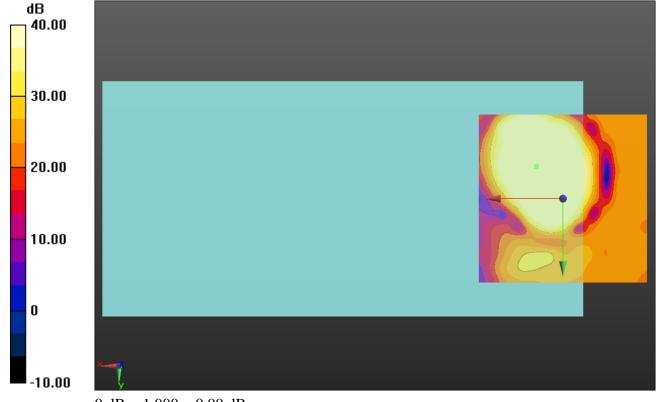
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.65 dB ABM1 comp = 12.15 dBA/m BWC Factor = 0.16 dB Location: 7.9, -9.6, 3.7 mm



LTE Band 17 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 710 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 17 Ch. 23790 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

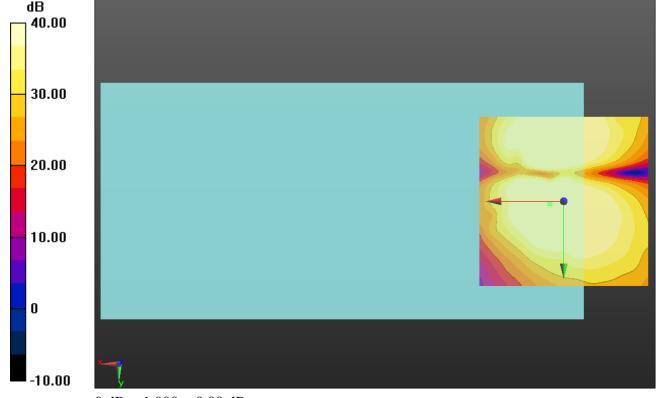
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.36 dB ABM1 comp = 3.50 dBA/m BWC Factor = 0.16 dB Location: 4.2, 0.8, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 25 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1882.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 25 Ch. 26365 LAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

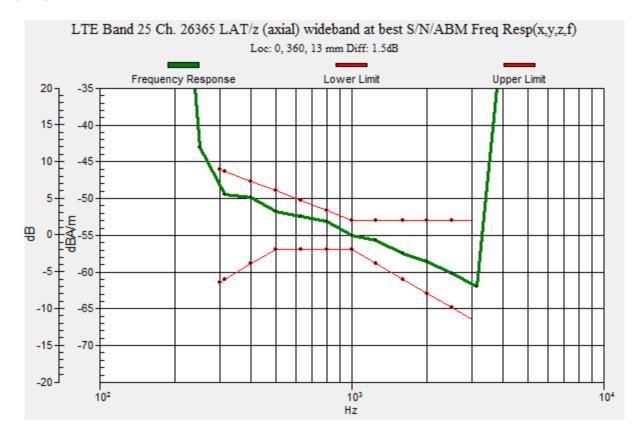
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.50 dB



LTE Band 25 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1882.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 25 Ch. 26365 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

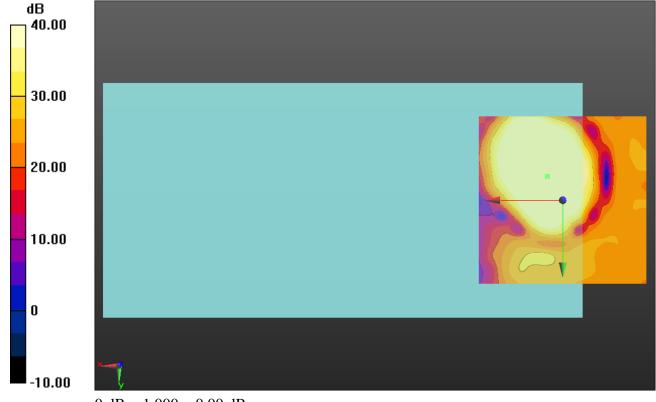
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.80 dB ABM1 comp = 10.84 dBA/m BWC Factor = 0.16 dB Location: 4.6, -7.1, 3.7 mm



LTE Band 25 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1882.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 25 Ch. 26365 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

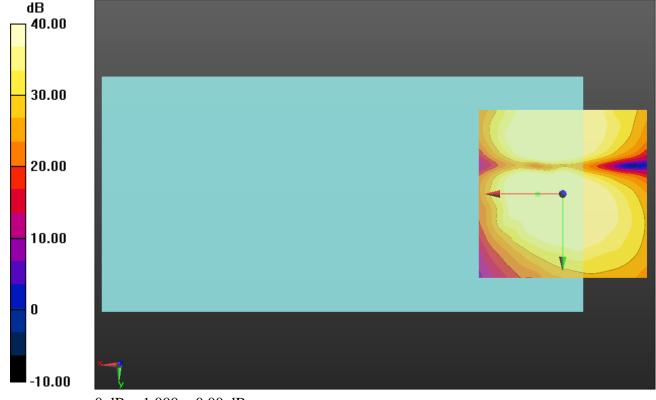
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 49.93 dB ABM1 comp = 3.73 dBA/m BWC Factor = 0.16 dB Location: 7.5, 0, 3.7 mm



Test Laboratory: UL Verification Services Inc., SAR Lab 2

LTE Band 26 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 26 Ch. 26865 LAT/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm,

Date: 5/31/2017

dy=10mm

Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav

Output Gain: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

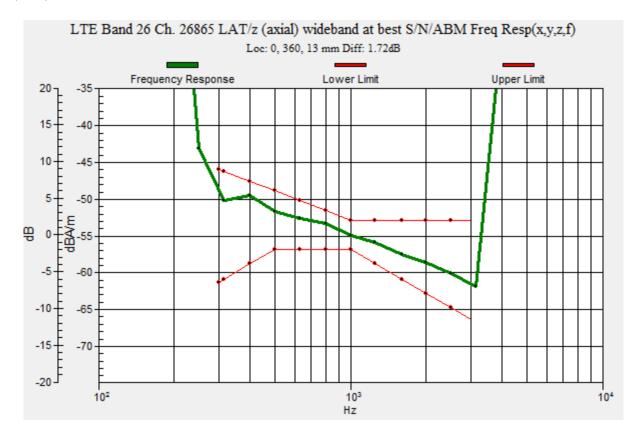
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.72 dB



LTE Band 26 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 26 Ch. 26865 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

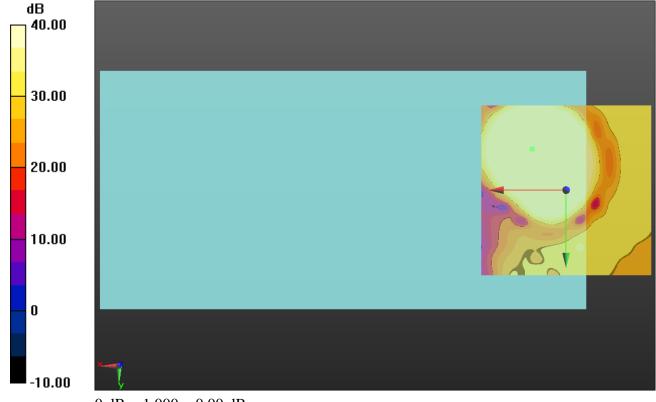
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 58.18 dB ABM1 comp = 11.49 dBA/m BWC Factor = 0.16 dB Location: 10, -12.1, 3.7 mm



LTE Band 26 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 26 Ch. 26865 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

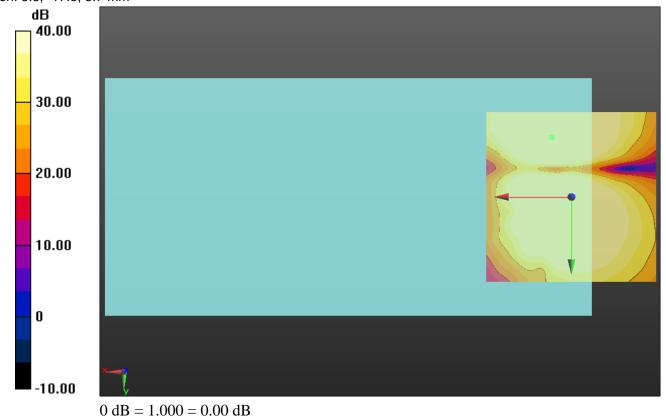
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 53.46 dB ABM1 comp = 3.73 dBA/m BWC Factor = 0.16 dB Location: 5.8, -17.5, 3.7 mm



LTE Band 30 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2310 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 30 Ch. 27710 LAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

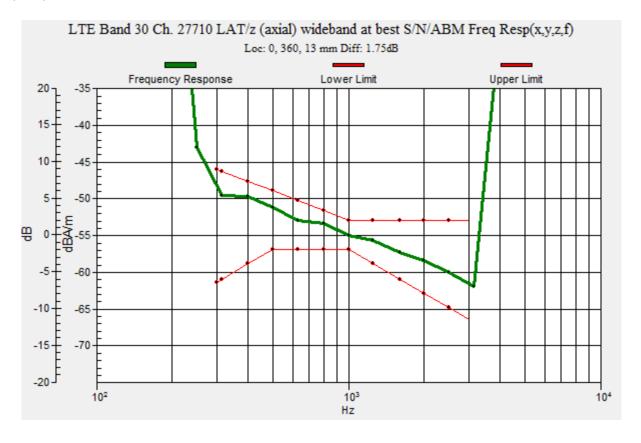
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.75 dB



LTE Band 30 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2310 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 30 Ch. 27710 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

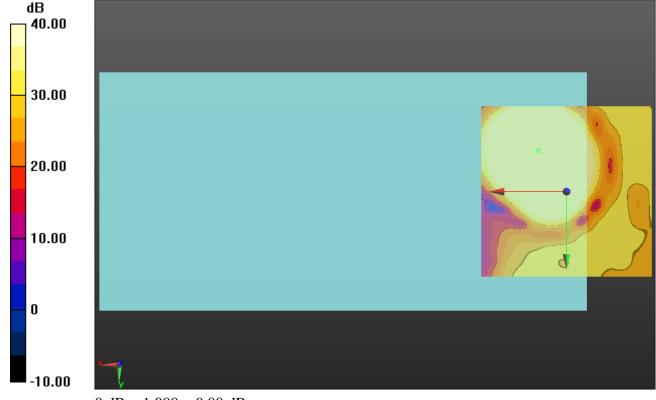
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 57.89 dB ABM1 comp = 10.70 dBA/m BWC Factor = 0.16 dB Location: 8.3, -12.1, 3.7 mm



LTE Band 30 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 2310 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 30 Ch. 27710 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

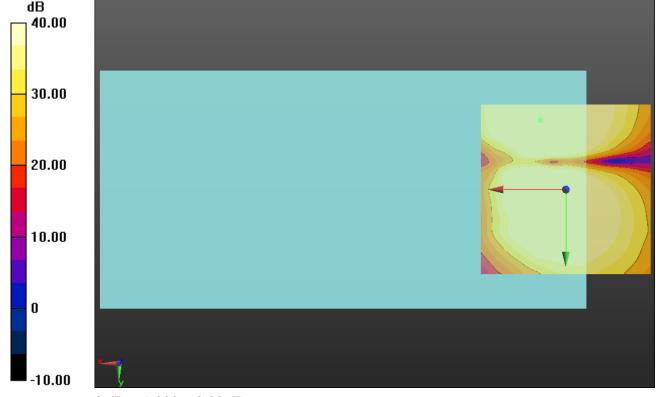
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 52.36 dB ABM1 comp = 2.46 dBA/m BWC Factor = 0.16 dB Location: 7.5, -20.4, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 41 Wide Band

Communication System: UID 0, LTE (TDD) (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 41 Ch 40620 LAT/z (axial) wideband at best S/N/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: 100

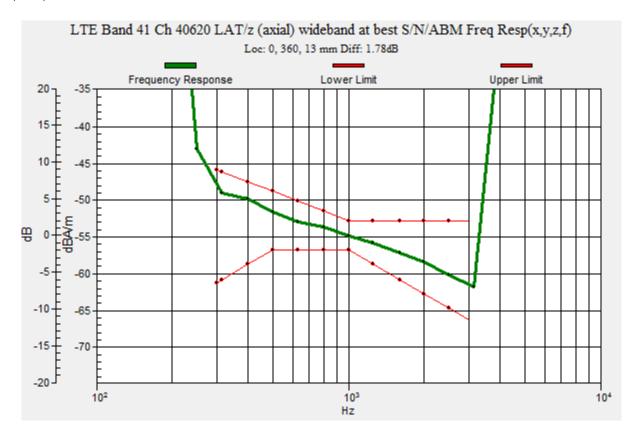
Measure Window Start: 300ms Measure Window Length: 2000ms

BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor: Diff = 1.78 dB



LTE Band 41 Wide Band

Communication System: UID 0, LTE (TDD) (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 41 Ch 40620 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000

Date: 5/30/2017

mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

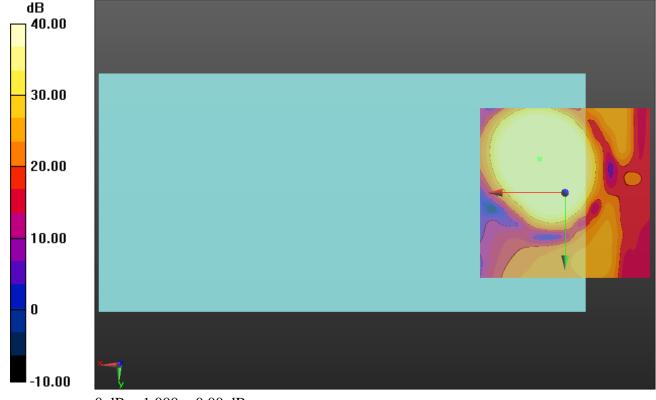
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 52.88 dB ABM1 comp = 11.18 dBA/m BWC Factor = 0.16 dB Location: 7.5, -10, 3.7 mm



LTE Band 41 Wide Band

Communication System: UID 0, LTE (TDD) (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 41 Ch 40620 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

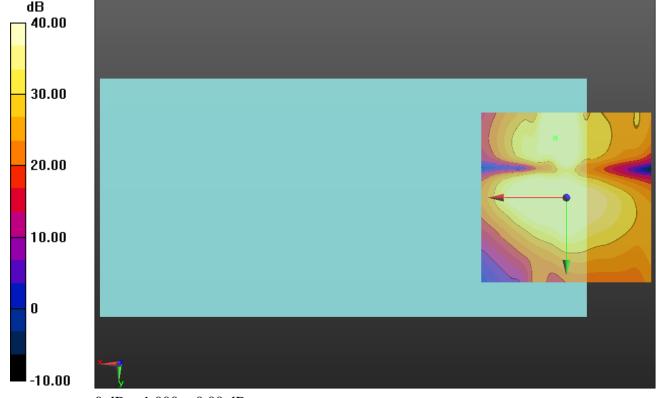
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 48.94 dB ABM1 comp = 1.36 dBA/m BWC Factor = 0.16 dB Location: 3.3, -17.5, 3.7 mm



0 dB = 1.000 = 0.00 dB

LTE Band 66 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1745 MHz; Duty Cycle: 1:1

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 66 Ch 132322 LAT/z (axial) wideband at best S/N/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: 100

Measure Window Start: 300ms Measure Window Length: 2000ms

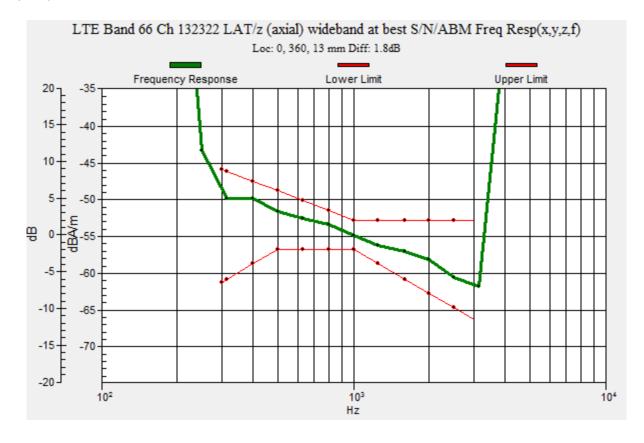
BWC applied: 10.80 dB

Device Reference Point: 0, 0, -6.3 mm

Category	Telephone parameters WD signal quality [(signal+noise)-to-noise ratio in decibels]
Category T1	0 dB to 10 dB
Category T2	10 dB to 20 dB
Category T3	20 dB to 30 dB
Category T4	> 30 dB

Cursor:

Diff = 1.80 dB



LTE Band 66 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 66 Ch 132322 LAT/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm,

dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

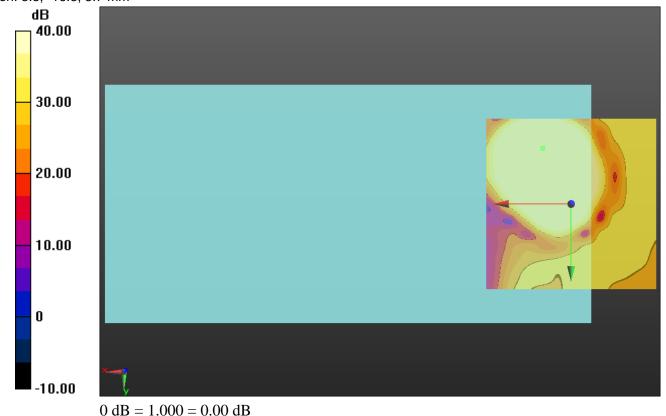
Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 56.16 dB ABM1 comp = 7.69 dBA/m BWC Factor = 0.16 dB Location: 8.3, -16.3, 3.7 mm



LTE Band 66 Wide Band

Communication System: UID 0, LTE (FDD) (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV3 - 3092; ; Calibrated: 7/22/2016

- Sensor-Surface: 0mm (Fix Surface)

- Electronics: DAE4 Sn1259; Calibrated: 1/20/2017

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

T-Coil scan (scan for ANSI C63.19 2011 compliance)/LTE Band 66 Ch 132322 LAT/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 100

Measure Window Start: 300ms Measure Window Length: 1000ms

BWC applied: 0.16 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 51.99 dB ABM1 comp = 2.66 dBA/m BWC Factor = 0.16 dB Location: 4.6, -18.8, 3.7 mm

