

Annex 1: Measurement results for
T E S T R E P O R T
No.: 19-1-0107603T01a-C1

According to:
Title 47 CFR, Chapter I
FCC Regulations, Subchapter A
Subpart C:
§15.247 (DTS)

ISED-Regulations
RSS-Gen, Issue 5
RSS 247 Issue 2
(DTS)

for

Continental Advanced Antenna GmbH

DDA02
BT-Transceiver

FCC ID: 2ACC7DDA02
ISED: 11980A-DDA02

Laboratory Accreditation and Listings



Accredited EMC-Test Laboratory

accredited according to DIN EN ISO/IEC 17025

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1. Radiated field strength measurements accord. §15.209&15.205

1.1. Field strength measurements $f < 1\text{GHz}$

3.01_BT_LE_2442MHz_laying

Common Information

Test Description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used Filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.209; RSS-Gen: Issue 5

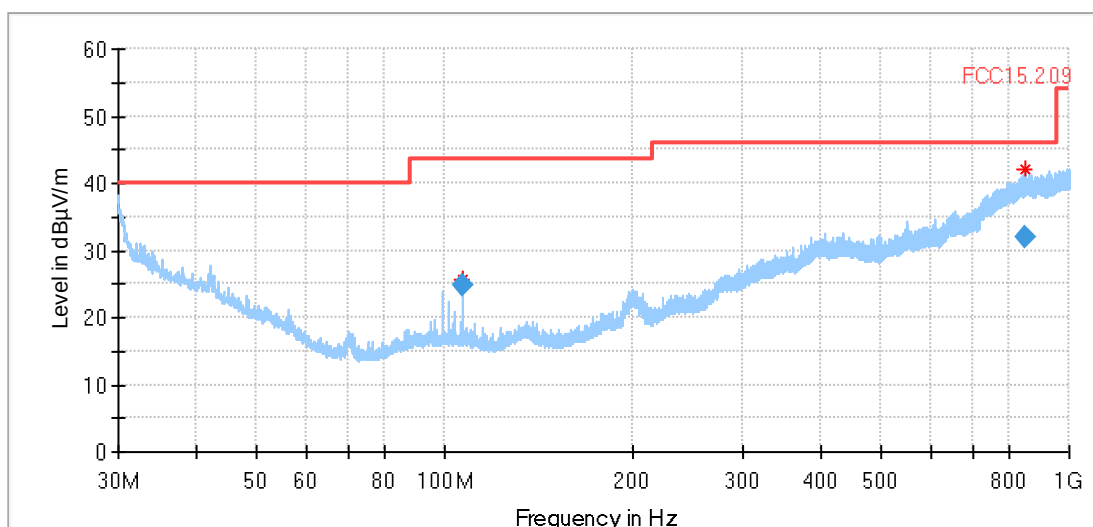
Operator:	Mah
Operating Mode:	BT_LE_2442MHz_laying
Power during tests:	13,5V DC
Comment 1:	SDARS and GNSS powered with 5VDC
Environmental Conditions.:	Humidity : 45,3%rH; Temperature: 22,6°C
EUT Setup:	Laying
Verdict:	Passed
Comment:	

EUT Information

PMT number:	19-1-01076S08
Manufacturer:	Continental Advanced Antenna GmbH
Product:	DDA02
Model:	AR radiated

HW version:	01S
SW version:	BT-Stack: 01.03.05
SVN:	
Config:	BT_LE_2442MHz
Serial number:	52512491
Connected Interfaces:	
Power Supply:	13.5V DC
Comments:	+ 5V DC for SDARS and GNSS

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
106.700000	24.89	43.50	18.61	120.000	167.0	H	287.0	8.1
850.672000	31.89	46.00	14.11	120.000	241.0	H	352.0	26.2

3.01_BT_LE_2442MHz_Standing

Common Information

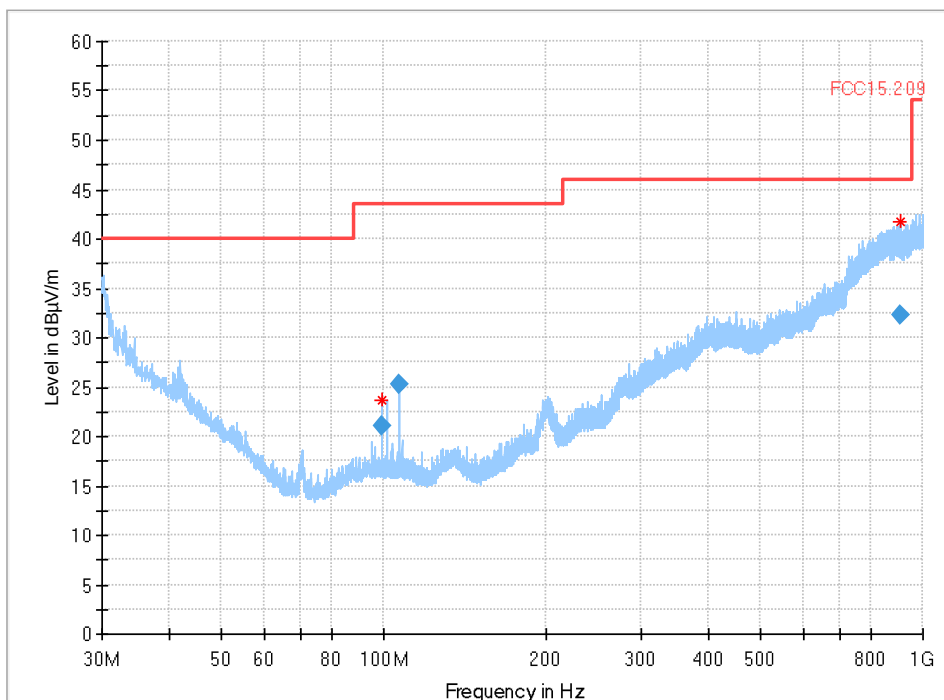
Test Description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used Filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.209; RSS-Gen: Issue 5

Operator:	TFra
Operating Mode:	BT_LE_2442MHz_Standing
Power during tests:	13.5V DC
Comment 1:	SDARS and GNSS powered with 5VDC
Environmental Conditions.:	Humidity : 45%rH; Temperature: 20°C
EUT Setup:	Standing
Verdict:	Passed
Comment:	

EUT Information

PMT number:	19-1-01076S08
Manufacturer:	Continental Advanced Antenna GmbH
Product:	DDA02
Model:	AR radiated

HW version:	01S
SW version:	BT-Stack: 01.03.05
SVN:	
Config:	BT_LE_2442MHz
Serial number:	52512491
Connected Interfaces:	
Power Supply:	13.5V DC
Comments:	+ 5V DC for SDARS and GNSS
	Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
99.196000	21.13	43.50	22.37	120.000	199.0	H	248.0	8.1
106.692000	25.19	43.50	18.31	120.000	164.0	H	79.0	8.1
910.844000	32.25	46.00	13.75	120.000	105.0	H	301.0	27.2

1.2. Field strength measurements $f < 18\text{GHz}$

4.01_BT_LE_2442MHz

Common Information

Test Description: Radiated field strength emission in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
 Antenna polarisation: horizontal/vertical

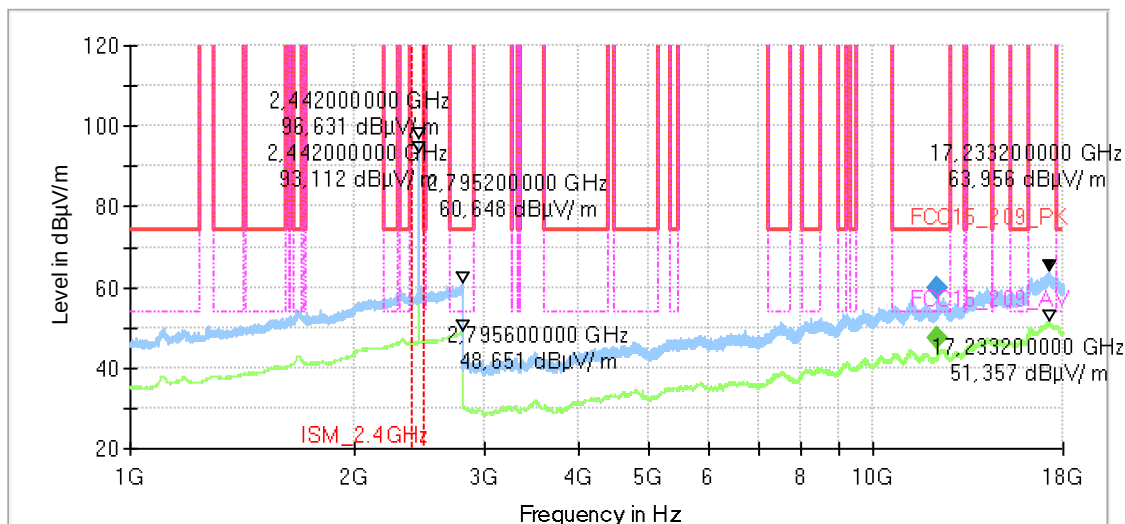
Operating Mode: BT_LE_2442MHz
 Operator: PMa
 Comment: BT_LE_2442MHz
 EUT Setup: 1
 Verdict: Passed

EUT Information

PMT number: 19-1-01076S08
 Manufacturer: Continental Advanced Antenna GmbH
 Product: DDA02
 Model: AR radiated

 HW version: 01S
 SW version: BT-Stack: 01.03.05
 SVN:
 Config: BT_LE_2442MHz
 Serial number: 52512491
 Connected Interfaces:
 Power Supply: 13.5V DC
 Comments: + 5V DC for SDARS and GNSS

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin	Meas. Time (ms)	Bandwidth (Hz)	Height	Pol	Azimuth	Elevation	Corr. (dB/m)
12208.800000	---	47.44	54.00	6.56	100.0	1000.000	155.0	V	10.0	90.0	19
12211.200000	59.76	---	74.00	14.24	100.0	1000.000	155.0	V	10.0	90.0	19

Frequency @17.2332 GHz is noise level not relevant for evaluation

1.3. Field strength measurements $18 < f < 26\text{GHz}$

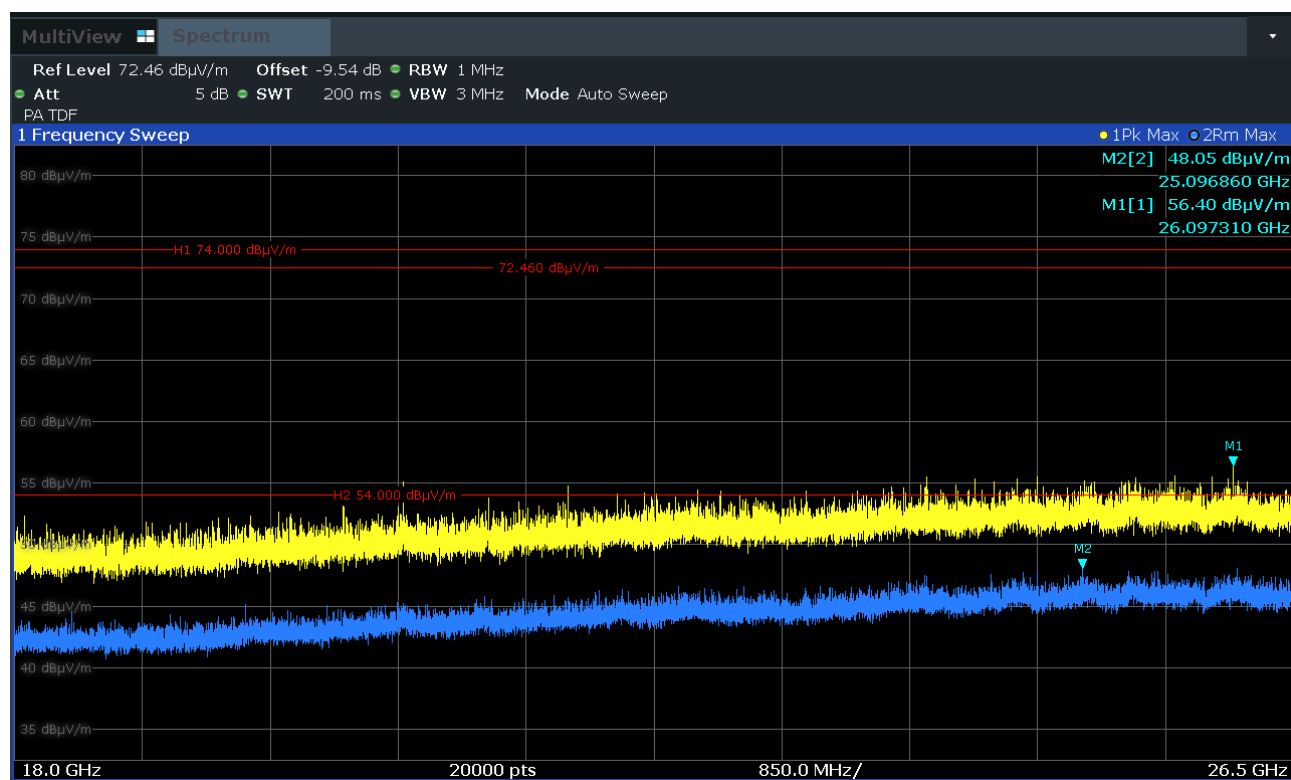


Diagram 4.02b: Channel middle (Ch38)

2. Radiated band-edge measurements accord. §15.209 & §15.205 (§15.247)

2.1. Channel low (Ch37) (left band edge)

9.01_BT_LE_2402MHz

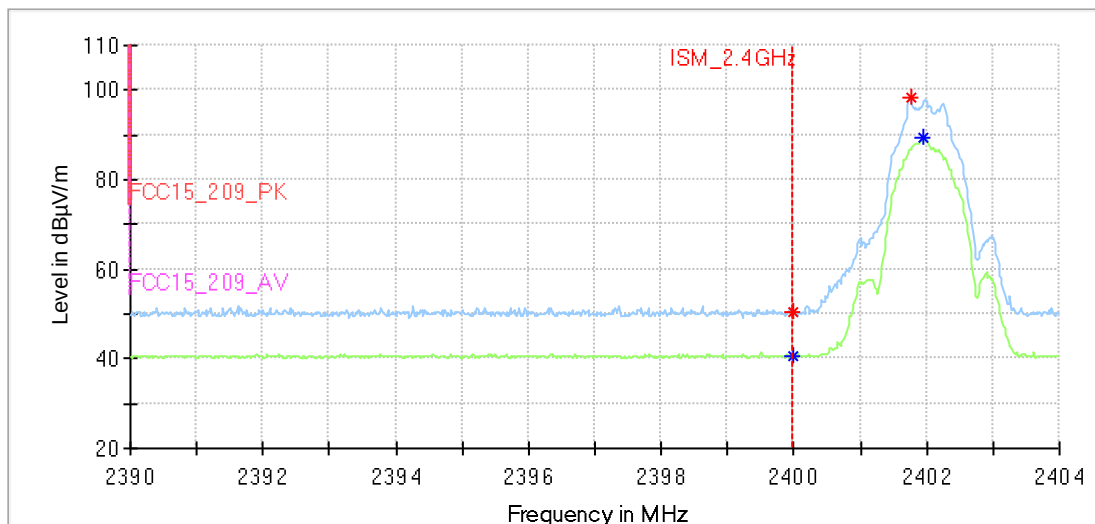
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	BT_LE_2402MHz
Operator:	mah
Comment1:	Channel no. low
EUT Setup:	1
Verdict:	passed

EUT Information

PMT number:	19-1-01076S08
Manufacturer:	Continental Advanced Antenna GmbH
Product:	DDA02
Model:	AR radiated
HW version:	01S
SW version:	BT-Stack: 01.03.05
SVN:	
Config:	BT_LE_2442MHz
Serial number:	52512491
Connected Interfaces:	
Power Supply:	13.5V DC
Comments:	+ 5V DC for SDARS and GNSS

Full Spectrum



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
2400.000000	---	40.72	150.00	109.28	155.0	V	17.0	0.0	36
2400.000000	50.62	---	150.00	99.38	155.0	H	295.0	0.0	36
2401.760000	98.31	---	150.00	51.69	155.0	H	264.0	90.0	36
2401.960000	---	89.44	150.00	60.56	155.0	H	264.0	90.0	36

2.2. Channel low (Ch39) (high band edge)

9.02_BT_LE_2480MHz

Common Information

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
 Antenna polarisation: horizontal/vertical

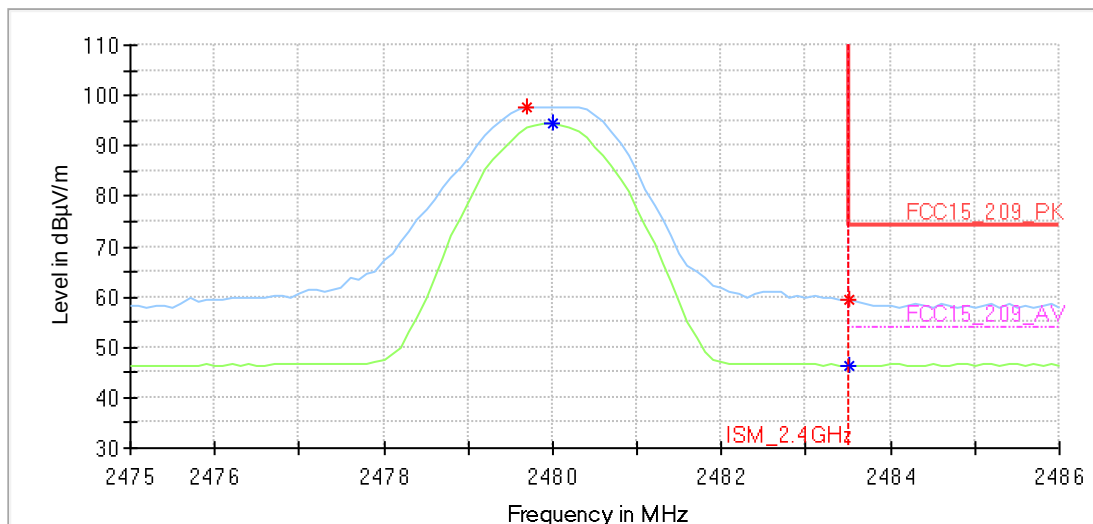
 Operating Mode: BT_LE_2480MHz
 Operator: Mah
 Comment: Channel no. high
 EUT Setup: 1
 Verdict: passed

EUT Information

PMT number: 19-1-01076S08
 Manufacturer: Continental Advanced Antenna GmbH
 Product: DDA02
 Model: AR radiated

 HW version: 01S
 SW version: BT-Stack: 01.03.05
 SVN:
 Config: BT_LE_2442MHz
 Serial number: 52512491
 Connected Interfaces:
 Power Supply: 13.5V DC
 Comments: + 5V DC for SDARS and GNSS

Full Spectrum



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
2479.700000	97.84	---	150.00	52.16	155.0	H	264.0	90.0	36
2480.000000	---	94.61	150.00	55.39	155.0	H	264.0	90.0	36
2483.500000	---	46.49	54.00	7.51	155.0	H	219.0	0.0	36
2483.500000	59.50	---	74.00	14.50	155.0	V	348.0	0.0	36

(continuation of the "Critical_Freqs" table from column 16 ...)