

Annex 1: Measurement diagrams to
TEST REPORT
 No.: 18-1-0018601T01b

According to:
FCC Regulations
 Part 15.205
 Part 15.209
 Part 15.247

ISED-Regulations
 RSS-Gen, Issue 4
 RSS-247, Issue 1

for

Robert Bosch Car Multimedia GmbH
AIVICMFB0

FCC-ID: YBN-AIVICMBF0
 ISED: 9595A-AIVICMBF0
 PMN: AIVICMBF0
 HVIN: AIVICMBF0







Laboratory Accreditation and Listings		
 Deutsche Akkreditierungsstelle D-PL-12047-01-01 Accredited EMC-Test Laboratory	 Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions Reg. No.: R-20013, C-20009, T-20006, G-20013
 WiFi ALLIANCE AUTHORIZED RF LABORATORY	 ctia Authorized Test Lab Lab Code: 20011130-00	 FEDERAL COMMUNICATIONS COMMISSION MRA US-EU 0003
accredited according to DIN EN ISO/IEC 17025		
<p align="center"> CETECOM GmbH Laboratory Radio Communications & Electromagnetic Compatibility Im Teelbruch 116 • 45219 Essen • Germany Registered in Essen, Germany, Reg. No.: HRB Essen 8984 Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964 E-mail: info@cetecom.com • Internet: www.cetecom.com </p>		
Laboratory Accreditation and Listings		

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1. Measurement diagrams

1.1. Radiated magnetic field measurements below 30 MHz

2.02_BTLE_ch00

Common Information

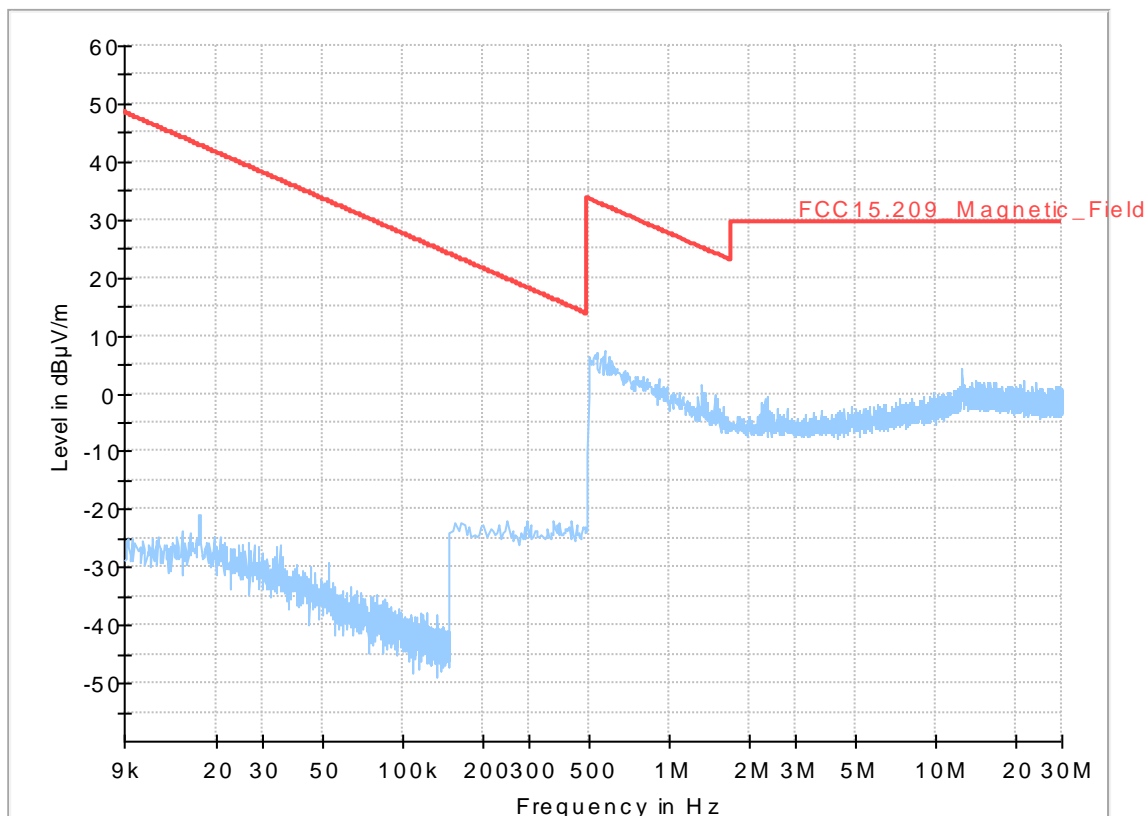
Test Description:	Radiated field strength (f<30MHz)
Test site and distance	Ref.-Nr.441, Semi Anechoic Room (SAR) with 3m measurement distance
Version of Test software	EMC32 V9.25.0
Distance Correction	used accord. table, pls. see test report
Technical Data	please see page 2 for detailed data of measurement setup
Rec.Antenna (pre-scan)	height = 1m , polarisation according to pre-scan results
Used filter	bypass
Test specification	FCC 15.209/15.205; RSS-Gen., Issue 4
Operator	DLe
Operating mode	BT LE GFSK 1Mbps ch00 = 2402MHz
operating conditions	Humidity: 48%rH; Temperature: 20°C

EUT Information

EUT Name:	AIVICMFBO
Manufacturer:	Robert Bosch Car Multimedia
Serial Number:	5603
Hardware Rev:	001
Software Rev:	0507
Comment:	

Full Spectrum

Full Spectrum



1.2. Radiated electric field measurement 30 MHz to 1 GHz

3.02_BTLE_ch00

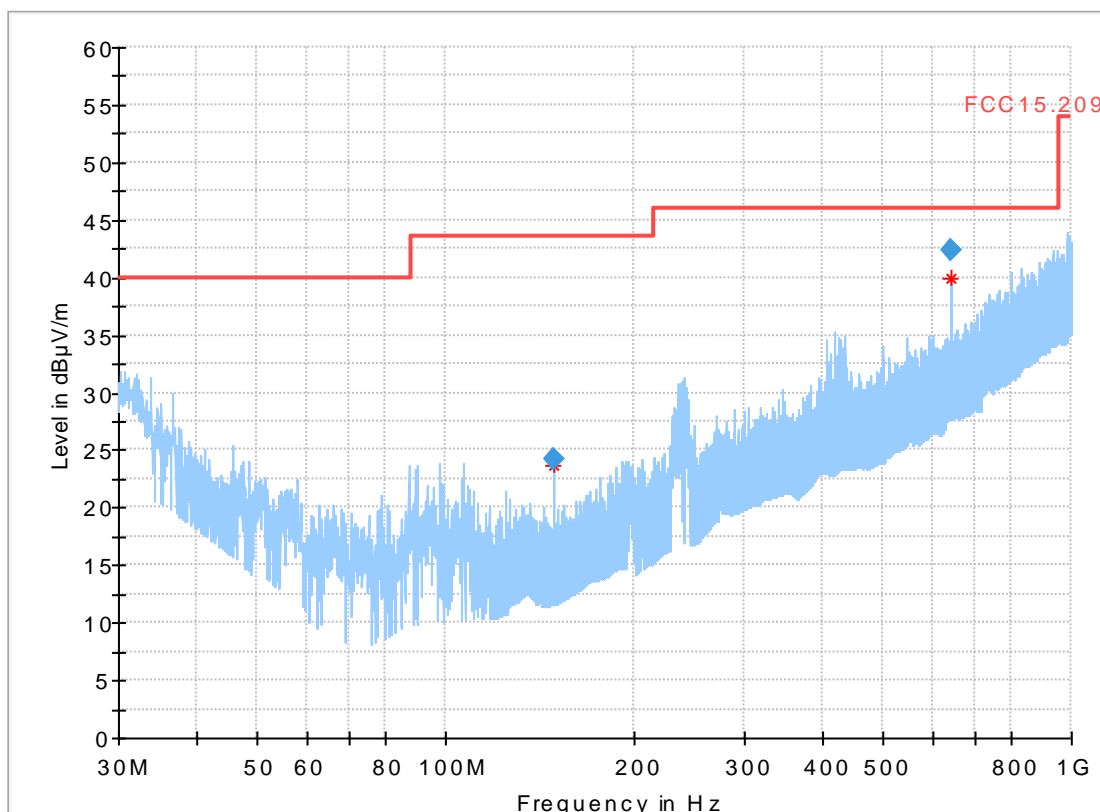
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	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 specification.:	FCC 15.209; RSS-Gen: Issue 4
Operator:	JVo
Operating conditions:	BT LE GFSK 1Mbps ch00 = 2402MHz
Power during tests:	13.5V DC
Comment 1:	

EUT Information

EUT Name:	AIVICMFBO
Manufacturer:	Robert Bosch Car Multimedia
Serial Number:	5603
Hardware Rev:	001
Software Rev:	0507
Comment:	

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
148.500000	24.26	43.50	19.24	1000.0	120.000	126.0	H	82.0	8.6
643.496000	42.30	46.00	3.70	1000.0	120.000	120.0	H	129.0	23.2

1.3. Radiated electric field measurement above 1 GHz

Diagram No.: 4.02a_BTLE_ch00

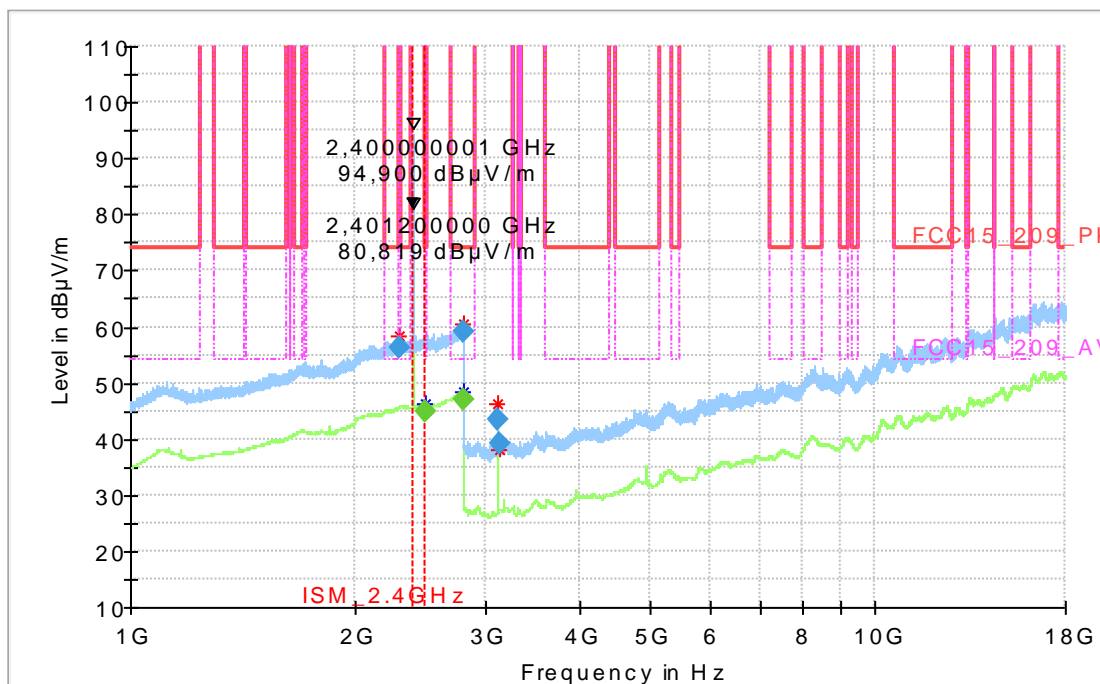
Common Information

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 4
 Antenna polarisation: horizontal/vertical

Operation mode: TX, continuous
 Operator Name: Lor
 Comment: Channel no. low
 Comment2: Modulation Type: GFSK Data Rate: BTLE CH low

EUT Information

EUT Name: AIVICMFBO
 Manufacturer: Robert Bosch Car Multimedia
 Serial Number: 5603
 Hardware Rev: 001
 Software Rev: 0507
 Comment:



Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)
2298.800000	56.42	---	74.00	17.58	100.0	1000.000	155.0	H	111.0	90.0
2495.200000	---	44.94	54.00	9.06	100.0	1000.000	155.0	H	90.0	90.0
2795.600000	59.05	---	74.00	14.95	100.0	1000.000	155.0	H	316.0	90.0
2798.400000	---	46.90	54.00	7.10	100.0	1000.000	155.0	H	200.0	90.0
3118.400000	43.42	---	150.00	106.58	100.0	1000.000	155.0	V	225.0	90.0
3122.000000	39.07	---	150.00	110.93	100.0	1000.000	155.0	V	322.0	0.0

Diagram No.: 4.02_BTLE_Ch0

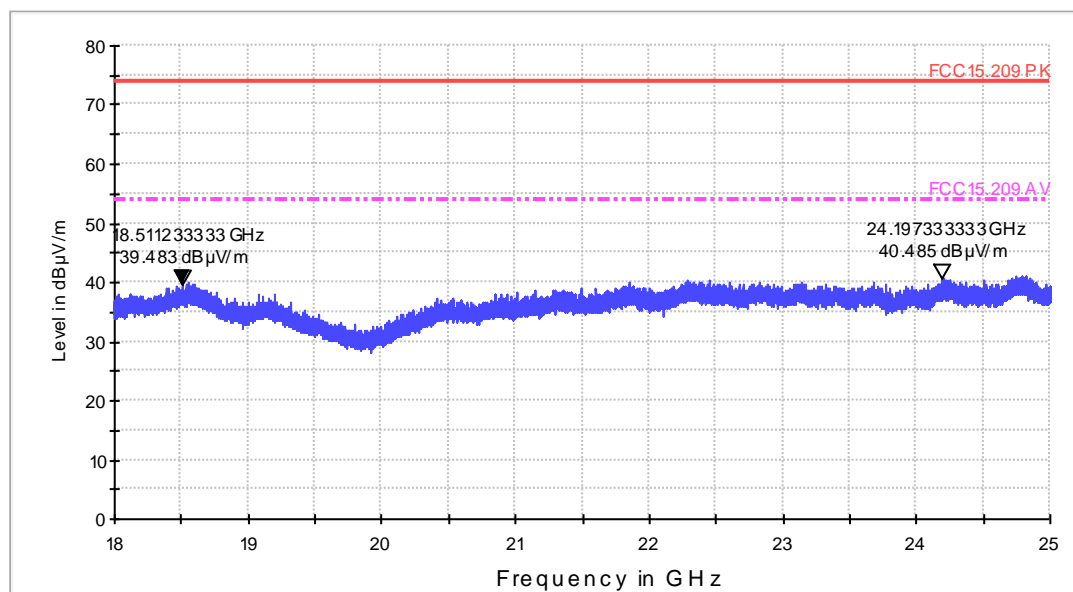
Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	
Comment:	Channel no. low

EUT Information

EUT Name:	AIVICMFBO
Manufacturer:	Robert Bosch Car Multimedia
Serial Number:	5603
Hardware Rev:	001
Software Rev:	0507
Comment:	

FCC_Sweep_15.247_18_25GHz_Pre



1.4. Radiated band edge compliance

Diagram No.: 9.01_BE_low_BT_LE_ch00

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	JVoigt
Comment:	Channel no. low 2402 MHz
Comment2:	Modulation Type: BT_LE_GFSK_CH low

EUT Information

EUT Name:	AIVICMFBO
Manufacturer:	Robert Bosch Car Multimedia
Serial Number:	5603
Hardware Rev:	001
Software Rev:	0507
Comment:	

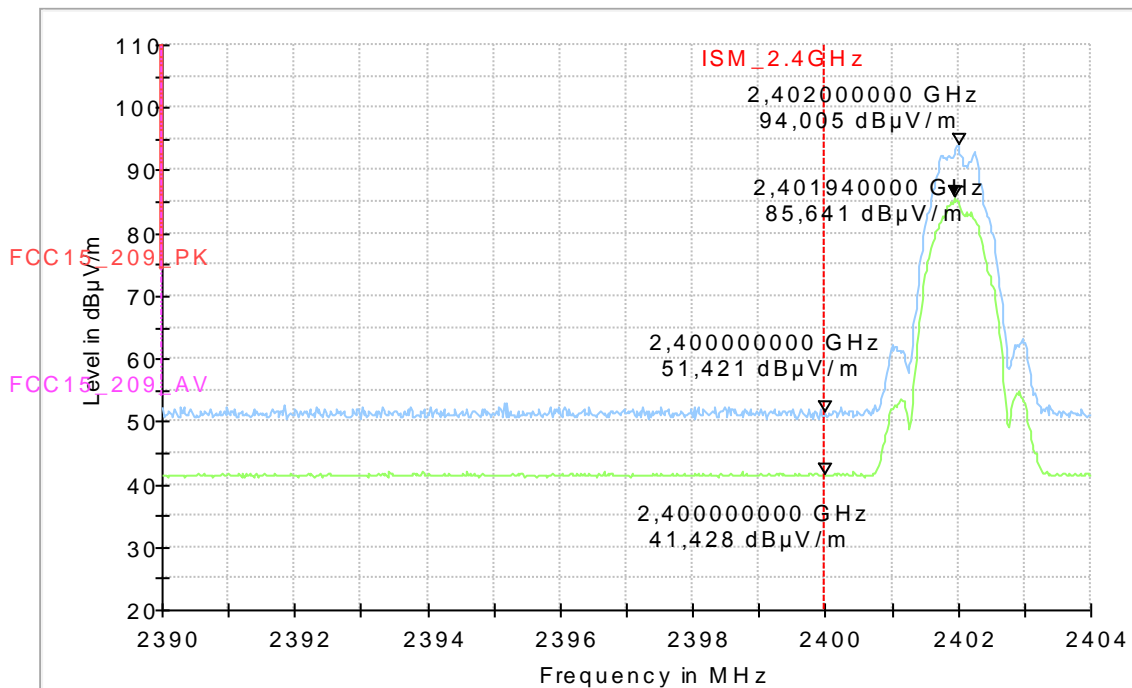


Diagram No.: 9.02_BE_high_BT_LE_ch78

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	Lor
Comment:	Channel no. low/high
Comment2:	Modulation Type: GFSK_BT_LE CH High

EUT Information

EUT Name:	AIVICMFBO
Manufacturer:	Robert Bosch Car Multimedia
Serial Number:	5603
Hardware Rev:	001
Software Rev:	0507
Comment:	

