

Annex 1: Measurement diagrams to  
**TEST REPORT**  
 No.: 18-1-0018601T02a

According to:  
**FCC Regulations**  
 Part 15.205  
 Part 15.209  
 Part 15.247

**IC-Regulations**  
 RSS-Gen, Issue 4  
 RSS-247, Issue 2

for  
 Bosch Car Multimedia GmbH

**AIVICMBF0**

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

| Laboratory Accreditation and Listings                                                                                                                                                                                                                                                                                      |                                                                                                                                                                    |                                                                                                                                                   |                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>DAkkS</b><br>Deutsche<br>Akkreditierungsstelle<br>D-PL-12047-01-01                                                                                                                                                               | <br>FEDERAL COMMUNICATIONS<br><b>FC</b> COMMISSION<br>• USA •<br>MRA US-EU 0003 | <br>Industry Canada<br>Reg. No.: 3462D-2<br>Reg. No.: 3462D-3 | <br>Voluntary Controls for<br>Electromagnetic Emissions<br>Reg. No.:<br>R-2666 C-2914,<br>T-1967, G-301 |
| <br><b>WiFi</b><br>ALLIANCE<br>AUTHORIZED<br>RF LABORATORY                                                                                                                                                                              | <br><b>ctia</b> Authorized <sup>TM</sup><br>Test Lab<br>Lab Code: 20011130-00   |                                                                                                                                                   |                                                                                                                                                                                              |
| accredited according to DIN EN ISO/IEC 17025                                                                                                                                                                                                                                                                               |                                                                                                                                                                    |                                                                                                                                                   |                                                                                                                                                                                              |
| <b>CETECOM GmbH</b><br>Laboratory Radio Communications & Electromagnetic Compatibility<br>Im Teelbruch 116 • 45219 Essen • Germany<br>Registered in Essen, Germany, Reg. No.: HRB Essen 8984<br>Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964<br>E-mail: info@cetecom.com • Internet: www.cetecom.com |                                                                                                                                                                    |                                                                                                                                                   |                                                                                                                                                                                              |

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## 1. Measurement diagrams

### 1.1. Radiated magnetic field measurements below 30 MHz

#### 2.03\_n40-mode\_MCS0\_ch03||1

##### Common Information

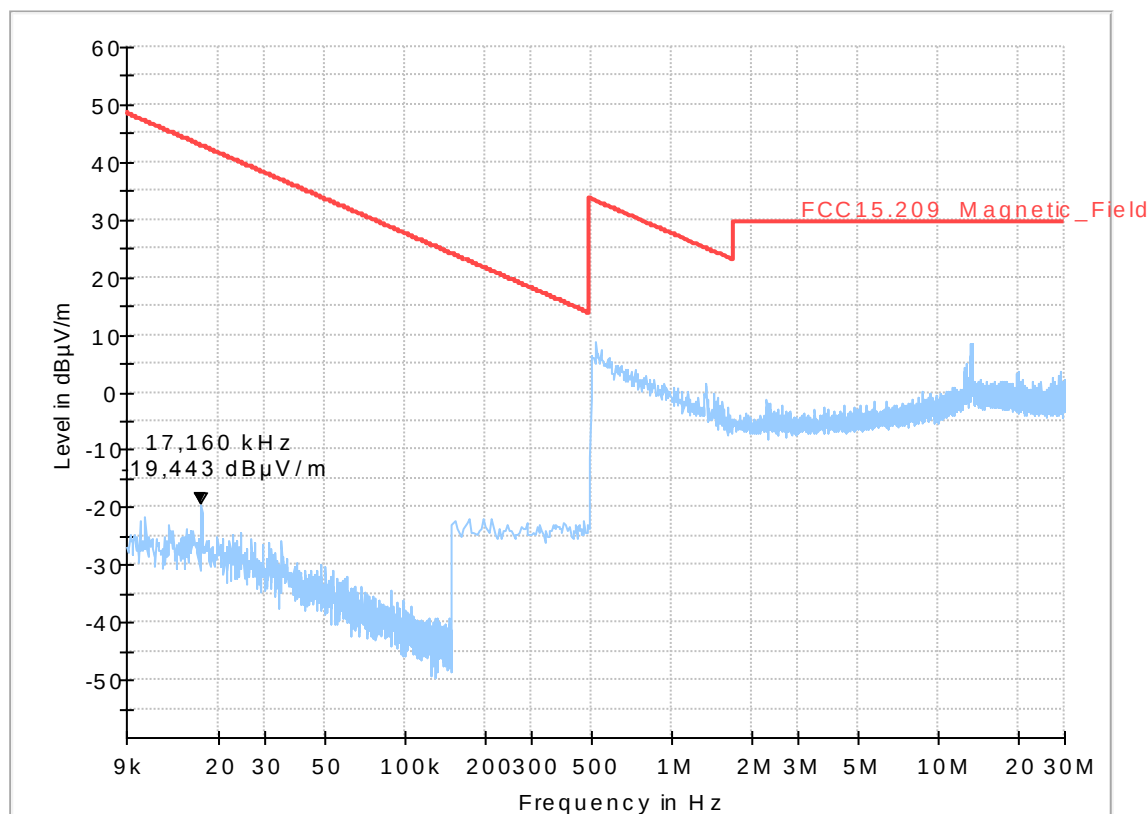
|                         |                                                                    |
|-------------------------|--------------------------------------------------------------------|
| Test Description:       | Radiated field strength (f<30MHz)                                  |
| Test site and distance  | Ref.-Nr.441, Semi Anechoic Room (SAR) with 3m measurement distance |
| Version of Testsoftware | 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          | WLAN 2.4GHz n-mode HT40   MCS0   ch03 = 2422MHz                    |
| 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

### Diagram No. 3.03\_n40-mode\_MCS0\_ch03

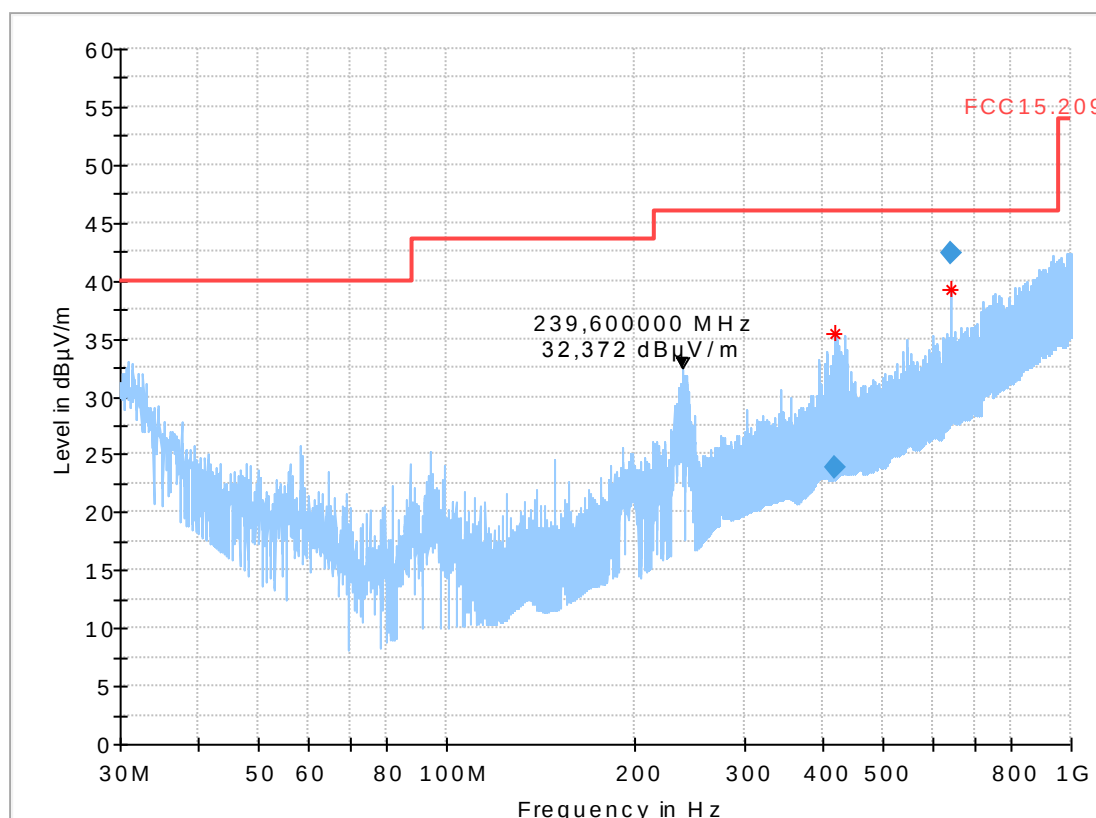
#### Common Information

|                          |                                                                     |
|--------------------------|---------------------------------------------------------------------|
| 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 3                                        |
| Operator:                | JVo                                                                 |
| Operating conditions:    | WLAN 2.4GHz n-mode HT40   MCS0   ch03 = 2422MHz                     |
| Power during tests:      | 13.5V DC                                                            |

#### EUT Information

|                |                             |
|----------------|-----------------------------|
| EUT Name:      | AIVICMFB0                   |
| 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) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 418.676000      | 23.89              | 46.00          | 22.11       | 1000.0          | 120.000         | 347.0       | V   | 321.0         | 18.8       |
| 643.496000      | 42.29              | 46.00          | 3.71        | 1000.0          | 120.000         | 126.0       | H   | 124.0         | 23.2       |



### 1.3. Radiated electric field measurement above 1 GHz

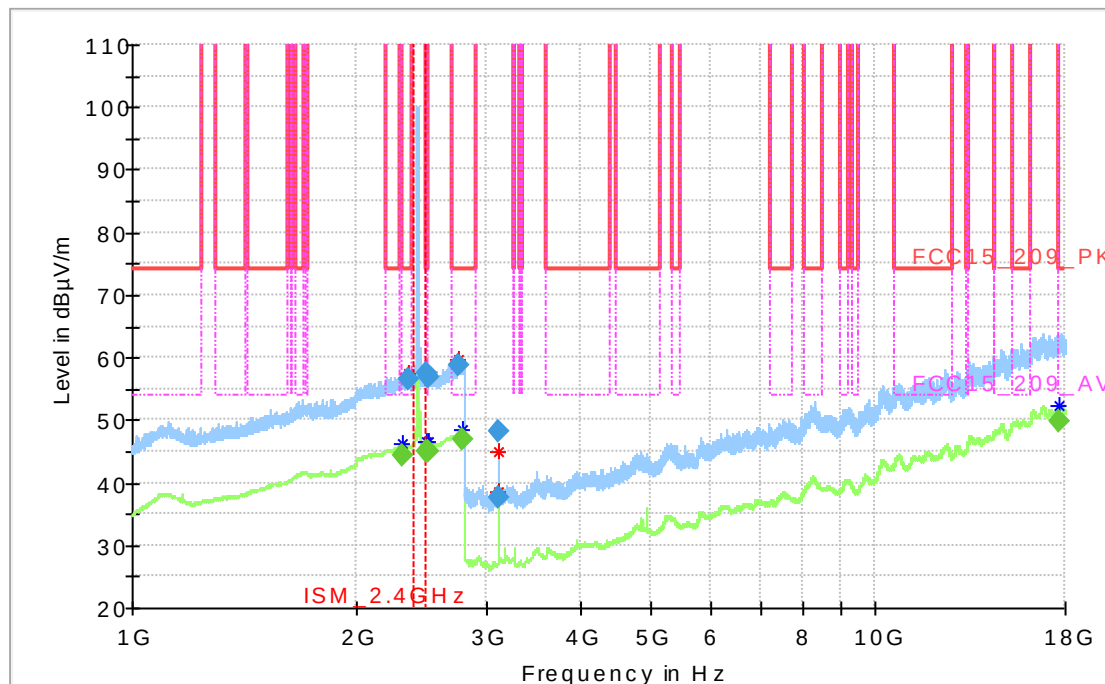
#### Diagram No.: 4.03a\_WLAN2.4\_mode\_n40MHz\_MCS0\_ch03

##### 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: xxx Data Rate: yyy                                   |

##### EUT Information

|                |                             |
|----------------|-----------------------------|
| EUT Name:      | AIVICMFB0                   |
| 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 | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) |
|-----------------|------------------|------------------|----------------|-------------|------------|-----------------|-------------|-----|---------------|
| 2314.090000     | ---              | 44.50            | 54.00          | 9.50        | 100.0      | 1000.000        | 155.0       | H   | 40.0          |
| 2358.130000     | 56.62            | ---              | 74.00          | 17.38       | 100.0      | 1000.000        | 155.0       | V   | 218.0         |
| 2485.970000     | ---              | 44.88            | 54.00          | 9.12        | 100.0      | 1000.000        | 155.0       | V   | 352.0         |
| 2488.570000     | 57.32            | ---              | 74.00          | 16.68       | 100.0      | 1000.000        | 155.0       | V   | 220.0         |
| 2497.570000     | ---              | 44.91            | 54.00          | 9.09        | 100.0      | 1000.000        | 155.0       | H   | 280.0         |
| 2498.530000     | 56.83            | ---              | 74.00          | 17.17       | 100.0      | 1000.000        | 155.0       | H   | 166.0         |
| 2744.690000     | 58.76            | ---              | 74.00          | 15.24       | 100.0      | 1000.000        | 155.0       | H   | 110.0         |
| 2783.450000     | ---              | 46.80            | 54.00          | 7.20        | 100.0      | 1000.000        | 155.0       | H   | -28.0         |
| 3108.370000     | 37.66            | ---              | 150.00         | 112.34      | 100.0      | 1000.000        | 155.0       | V   | 37.0          |
| 3118.290000     | 48.12            | ---              | 150.00         | 101.88      | 100.0      | 1000.000        | 155.0       | V   | 167.0         |

|              |     |       |        |        |       |          |       |   |     |
|--------------|-----|-------|--------|--------|-------|----------|-------|---|-----|
| 17673.490000 | --- | 49.83 | 150.00 | 100.17 | 100.0 | 1000.000 | 155.0 | V | 5.0 |
|--------------|-----|-------|--------|--------|-------|----------|-------|---|-----|

## Diagram No.: 4.03b\_WLAN2.4\_mode\_n40MHz\_MCS0\_ch03

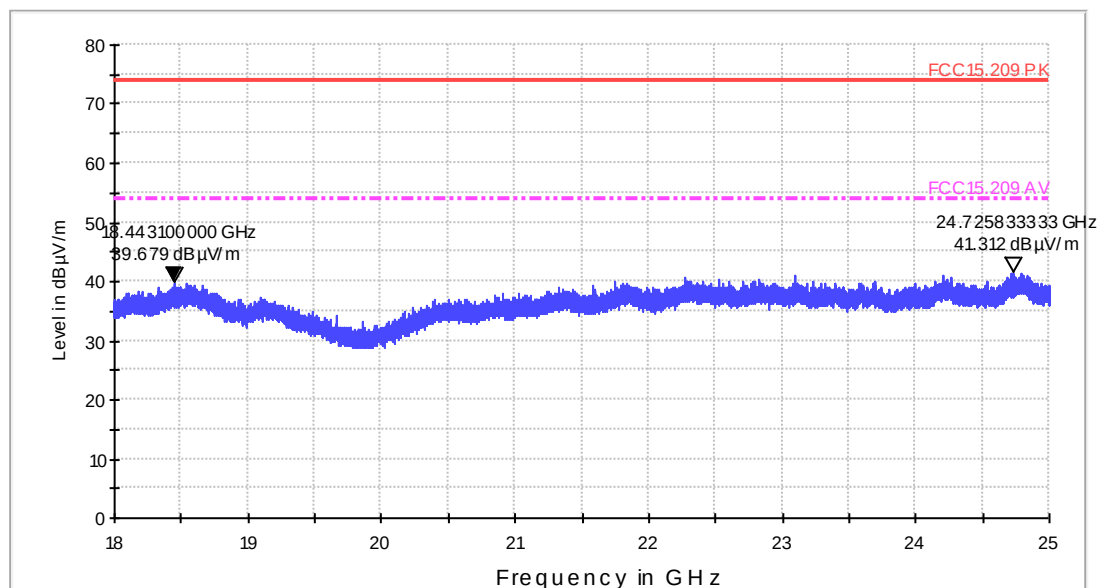
### Common Information

|                            |                                                   |
|----------------------------|---------------------------------------------------|
| 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/middle/high                       |

### EUT Information

|                |                             |
|----------------|-----------------------------|
| EUT Name:      | AIVICMFB0                   |
| 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

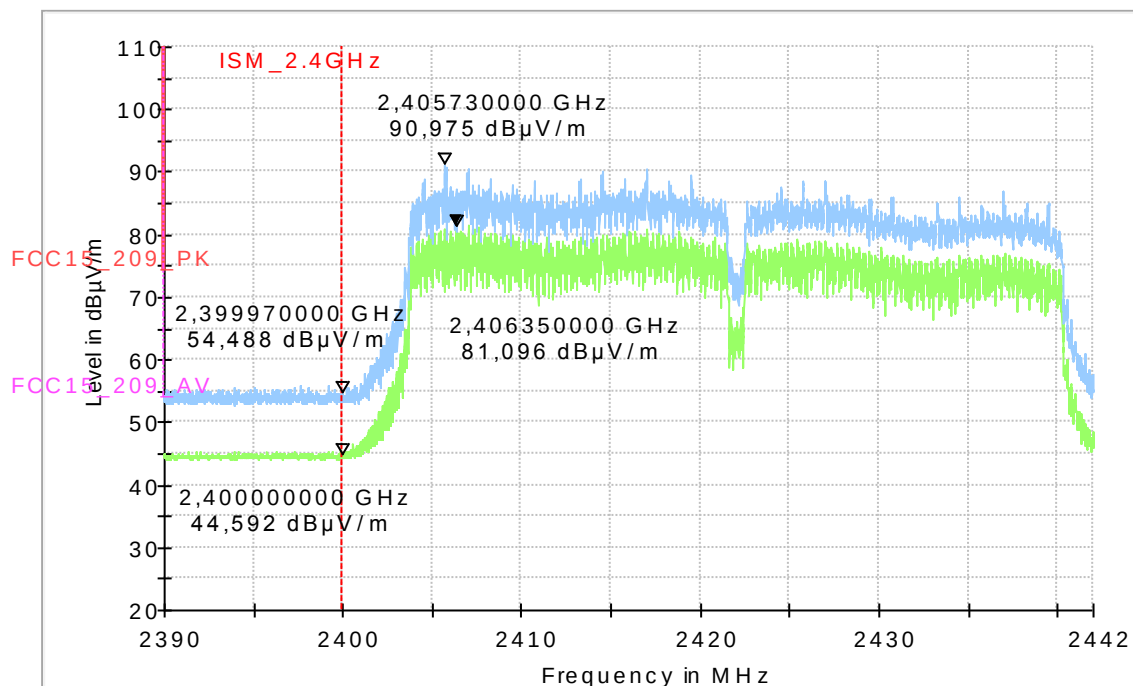
### Diagram No.: 9.05\_BE\_low\_WLAN\_24\_n40-mode\_MCS0\_ch03

#### 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                                                       |
| Comment2:             | Modulation Type: n-mode Data Rate: MCS0 ch: 03                        |

#### EUT Information

|                |                             |
|----------------|-----------------------------|
| EUT Name:      | AIVICMFB0                   |
| Manufacturer:  | Robert Bosch Car Multimedia |
| Serial Number: | 5603                        |
| Hardware Rev:  | 001                         |
| Software Rev:  | 0507                        |
| Comment:       |                             |



## Diagram No.: 9.06\_BE\_high\_WLAN\_24\_n40-mode\_MCS0\_ch011

### 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. high                                                      |
| Comment2:             | Modulation Type: n-mode HT40 Data Rate: MCS0                          |

### EUT Information

|                |                             |
|----------------|-----------------------------|
| EUT Name:      | AIVICMFB0                   |
| Manufacturer:  | Robert Bosch Car Multimedia |
| Serial Number: | 5603                        |
| Hardware Rev:  | 001                         |
| Software Rev:  | 0507                        |
| Comment:       |                             |

