

Annex 1: Diagramms to
PARTIAL TEST REPORT
 No.: 2-20842790-15-10a

According to:
FCC Regulations
 Part 15.209
 Part 15.247

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

for

Datalogic ADC S.r.l.
JOYA TOUCH
 Type: P00AN04HL0GT0W7-GRR

FCC-ID: U4GJNGWB
 IC: 3862E-JNGWB
 PMN: JOYA TOUCH
 HVIN: JNG P GUN







| Laboratory Accreditation and Listings | | | |
|--|---|--|--|
|  DAkKS Deutsche Akkreditierungsstelle D-PL-12047-01-01 |  FEDERAL COMMUNICATIONS COMMISSION FC U.S.A. MRA US-EU 0003 |  Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3 |  Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2666 C-2914, T-1967, G-301 |
|  WiFi ALLIANCE AUTHORIZED RF LABORATORY |  ctia Authorized Test Lab Lab Code: 20011130-00 | | |
| 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> | | | |

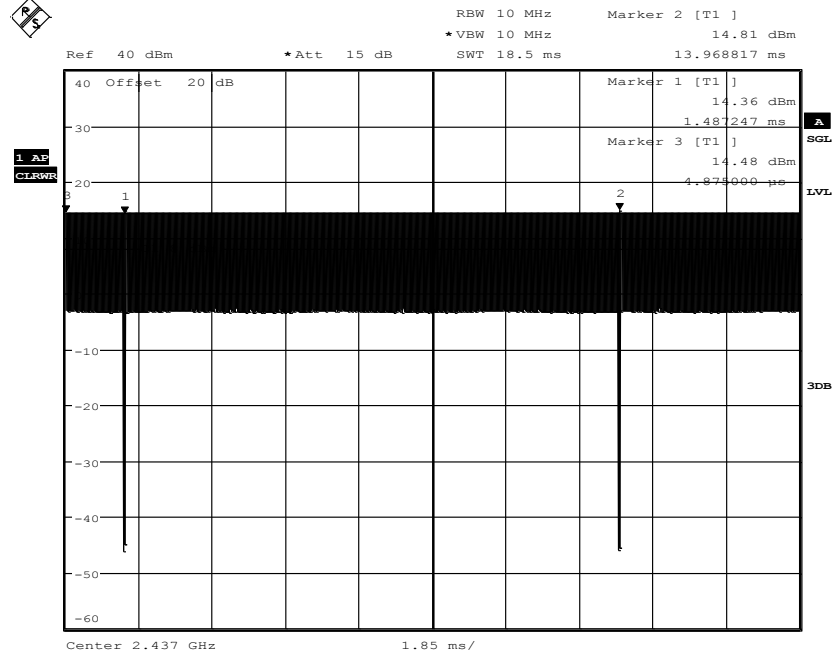
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1. Duty-Cycle of Transmitter

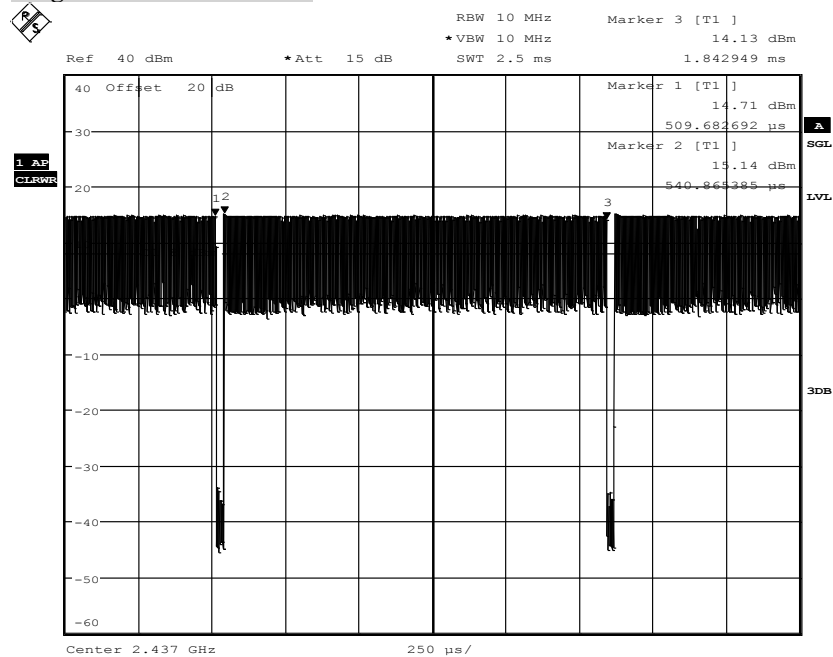
The characteristics of the implemented test mode was checked on middle channel no. 6 (b-Mode , g -Mode and n -Mode HT20) only.

Diagram b-Mode 1Mbit:



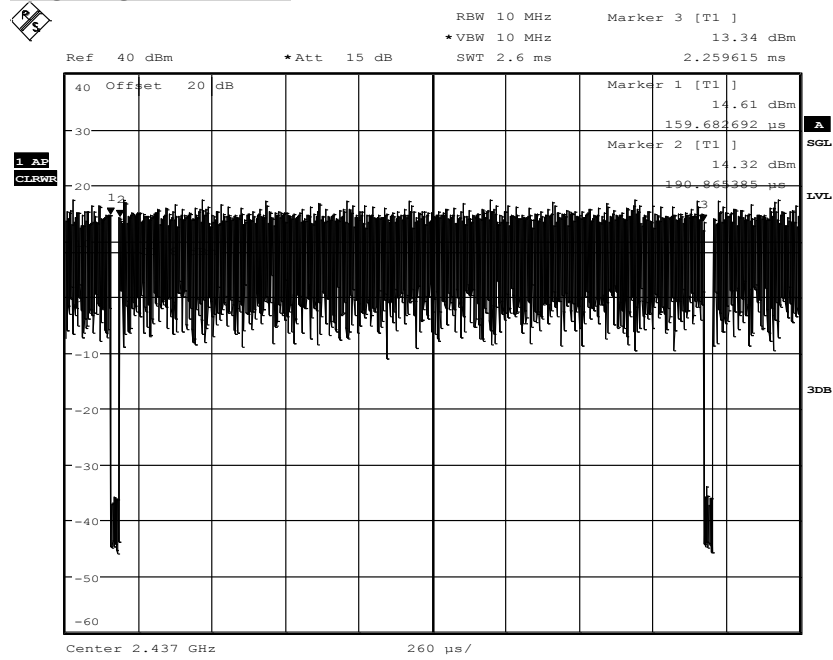
Date: 2.MAY.2016 22:40:09

Diagram b-Mode 11 Mbit:



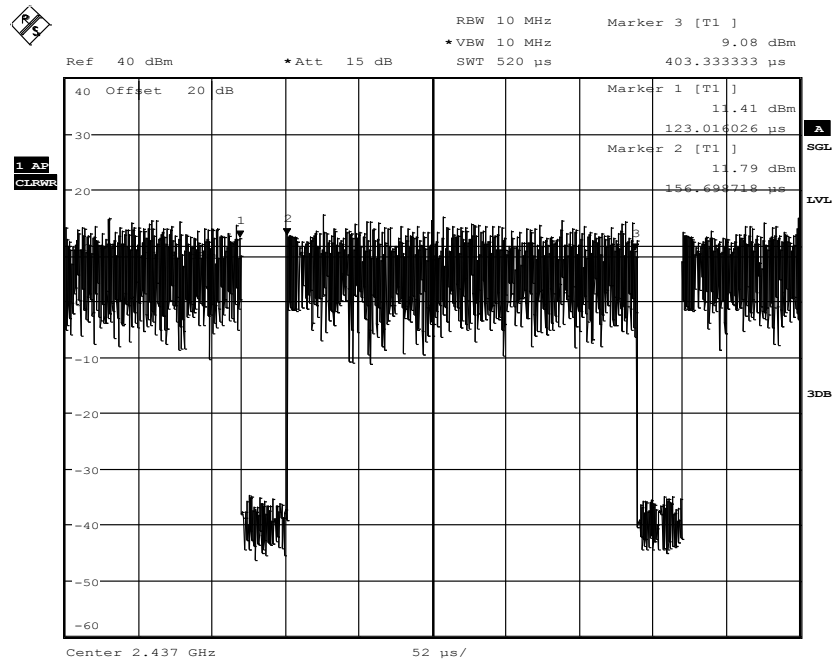
Date: 2.MAY.2016 22:42:05

Diagram g-Mode 6Mbit:



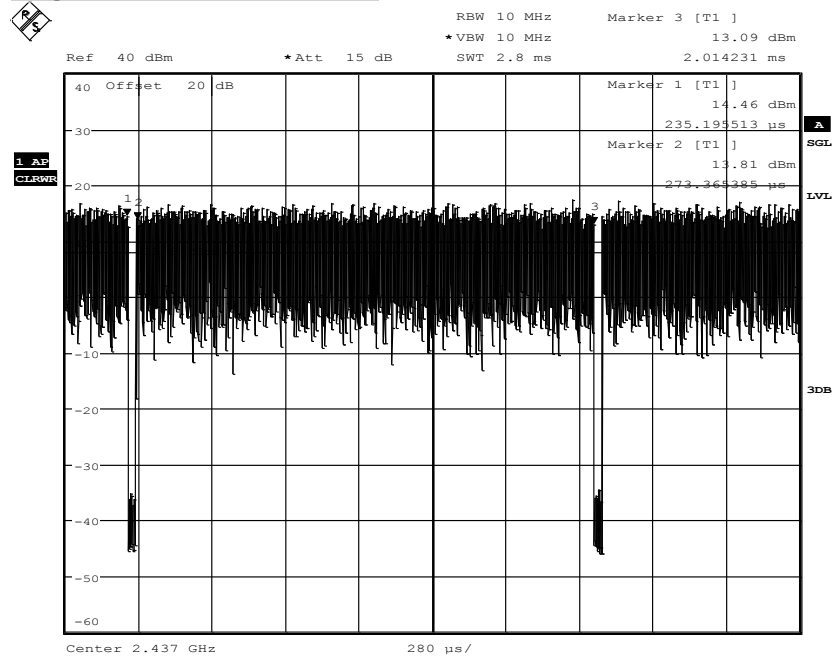
Date: 2.MAY.2016 22:43:24

Diagram g-Mode 54Mbit:



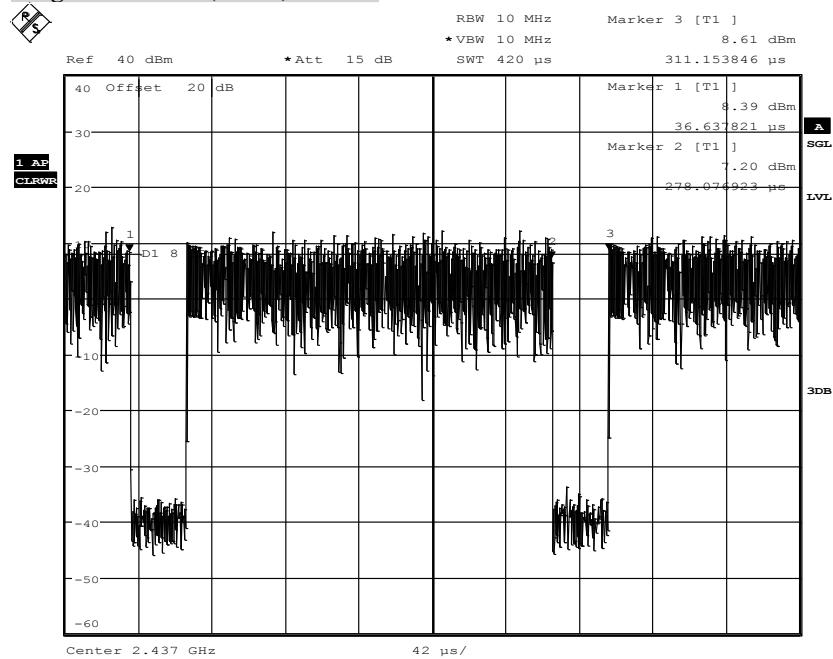
Date: 2.MAY.2016 22:44:32

Diagram n-Mode(HT20) MCS0:



Date: 2.MAY.2016 22:45:58

Diagram n-Mode(HT20) MCS7:



Date: 2.MAY.2016 22:47:40

2. Maximum Peak Conducted Output Power

2.1. 20MHz signal BW

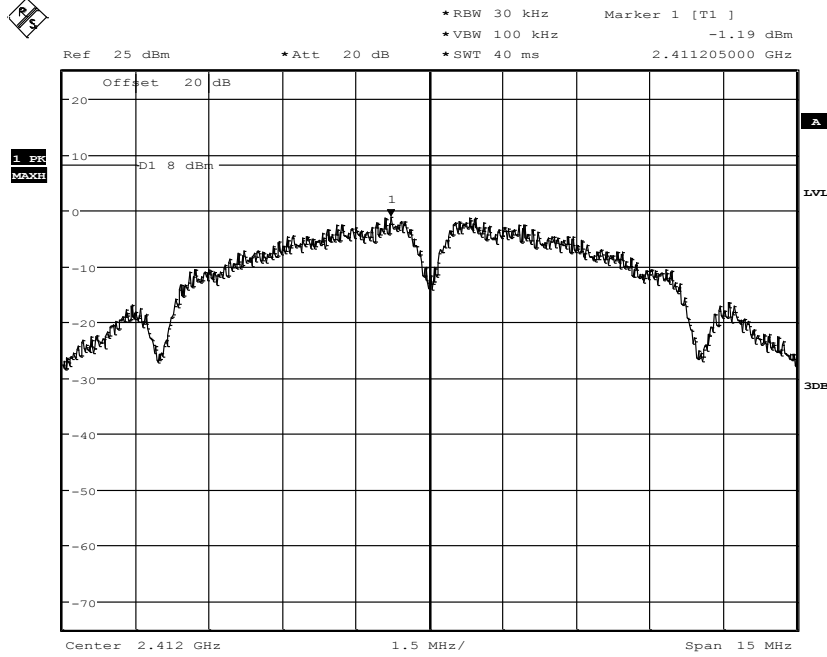
| b-mode | | Channel no. / [dBm] | | | Max-Value / [dBm] |
|--|------------|---------------------|-------|-------|-------------------|
| Data rate | Modulation | 1 | 6 | 11 | |
| 1MBit | | 14,36 | 14,27 | 13,66 | 14,36 |
| 2Mbit | | 14,35 | 14,27 | 13,45 | |
| 5.5Mbit | | 14,26 | 14,08 | 13,37 | |
| 11MBit | | 14,36 | 14,10 | 13,36 | |
| g-Mode | | Channel no. / [dBm] | | | Max-Value / [dBm] |
| Data rate | Modulation | 1 | 6 | 11 | |
| 6Mbit | | 13,62 | 15,78 | 12,25 | 15,98 |
| 9Mbit | | 13,71 | 15,73 | 12,35 | |
| 12Mbit | | 13,64 | 15,77 | 12,27 | |
| 18Mbit | | 13,55 | 15,67 | 12,17 | |
| 24Mbit | | 13,09 | 15,98 | 12,56 | |
| 36Mbit | | 12,68 | 15,64 | 12,13 | |
| 48Mbit | | 12,69 | 14,43 | 12,15 | |
| 54MBit | | 12,85 | 13,11 | 12,29 | |
| n-Mode HT20 (1 spatial stream: 1SS) | | Channel no. / [dBm] | | | Max-Value / [dBm] |
| Data rate | Modulation | 1 | 6 | 11 | |
| MCS0 -6.5Mbps | BPSK | 12,69 | 12,95 | 11,48 | 12,95 |
| MCS1 - 13Mbps | QPSK | 12,68 | 12,57 | 12,65 | |
| MCS2 - 19.5Mbps | QPSK | 12,52 | 12,54 | 11,32 | |
| MCS3 - 26Mbps | QAM16 | 12,64 | 12,61 | 11,44 | |
| MCS4 -39Mbps | QAM16 | 12,59 | 12,87 | 11,43 | |
| MCS5 - 52Mbps | QAM64 | 12,53 | 12,77 | 11,33 | |
| MCS6 - 58.5Mbps | QAM64 | 11,58 | 10,48 | 10,22 | |
| MCS7 - 65Mbps | QAM64 | 11,44 | 10,32 | 10,04 | |

Remarks:

- 1.) The values in above table are conducted output power without declared antenna gain .
- 2.) The maximum measured conducted power values among each mode for each channel are highlighted.

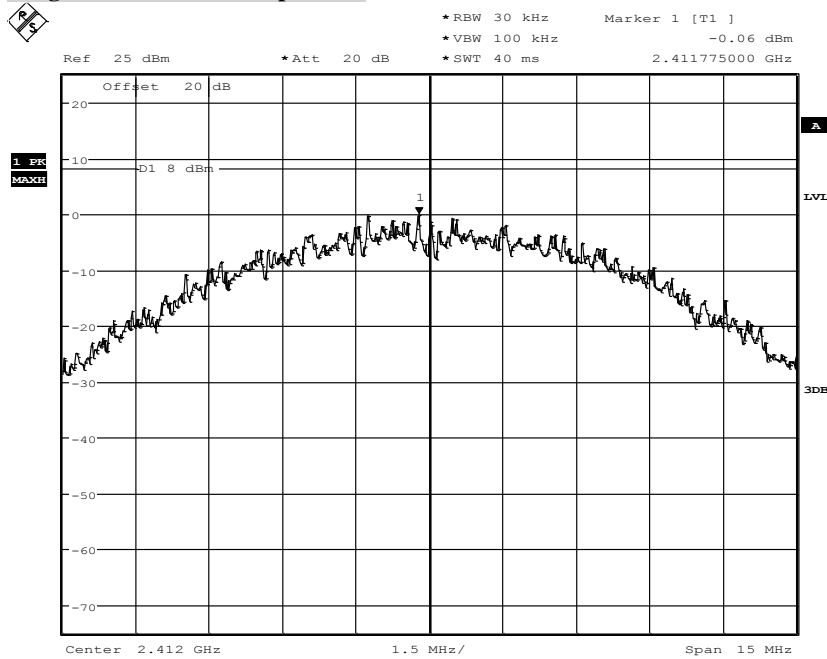
3. Conducted Power Spectral Density

Diagram b-Mode 1Mbps Ch1:



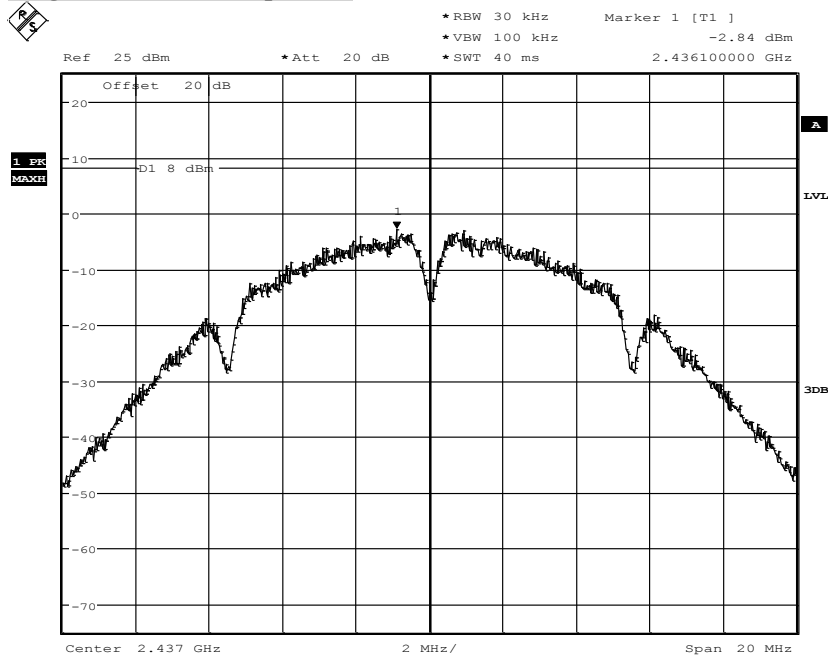
Date: 2.MAY.2016 17:48:35

Diagram b-Mode 11Mbps Ch1:



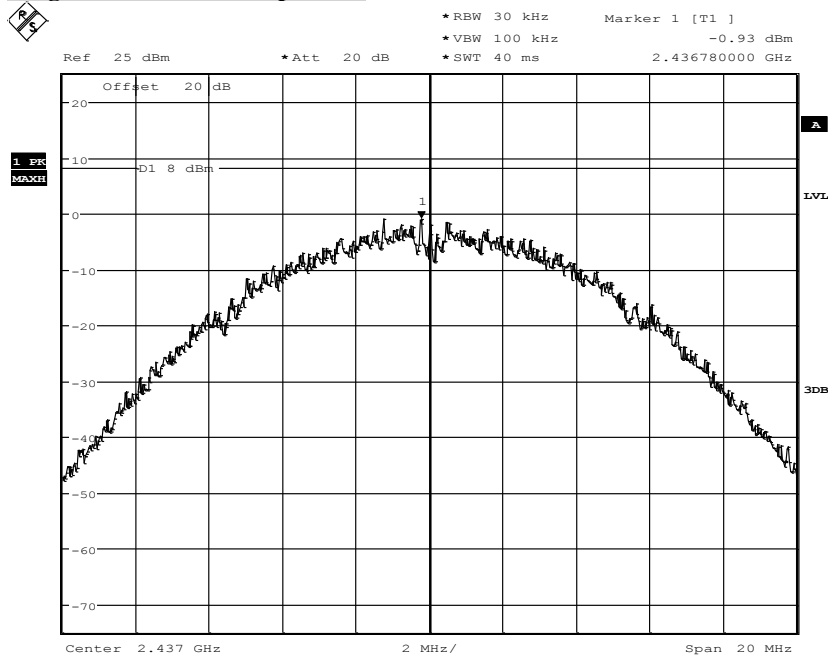
Date: 2.MAY.2016 17:54:51

Diagram b-Mode 1Mbps Ch6:



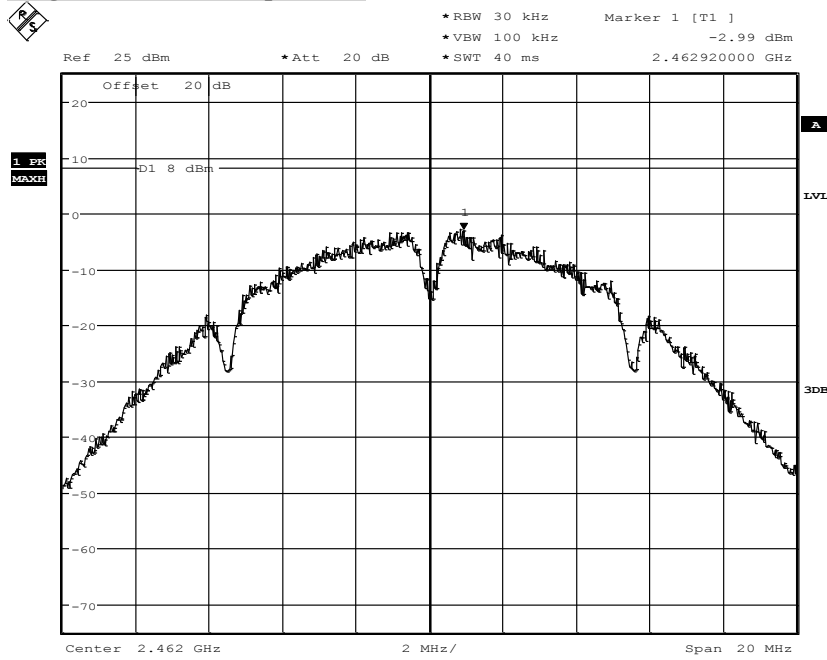
Date: 2.MAY.2016 18:25:23

Diagram b-Mode 11Mbps Ch6:



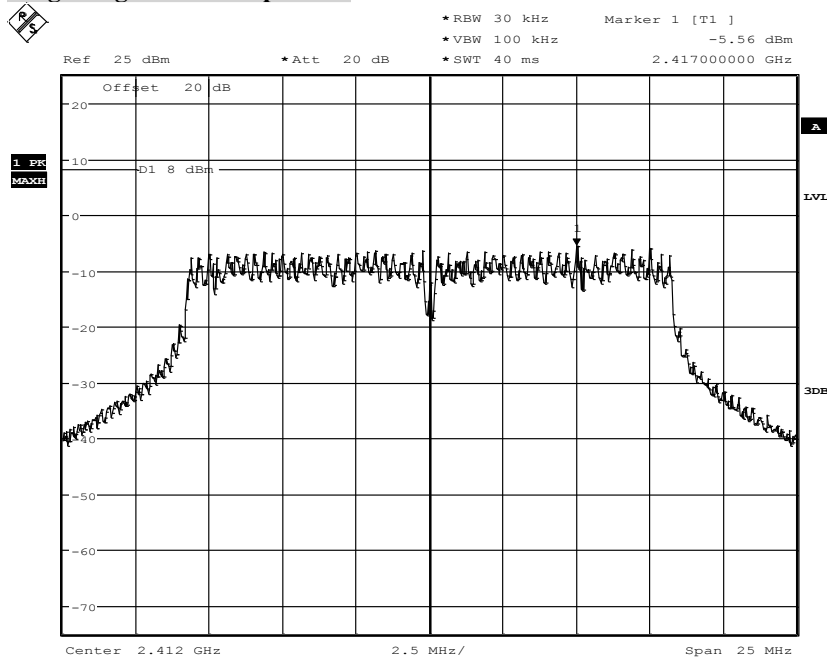
Date: 2.MAY.2016 18:26:14

Diagram b-Mode 1Mbps Ch11:



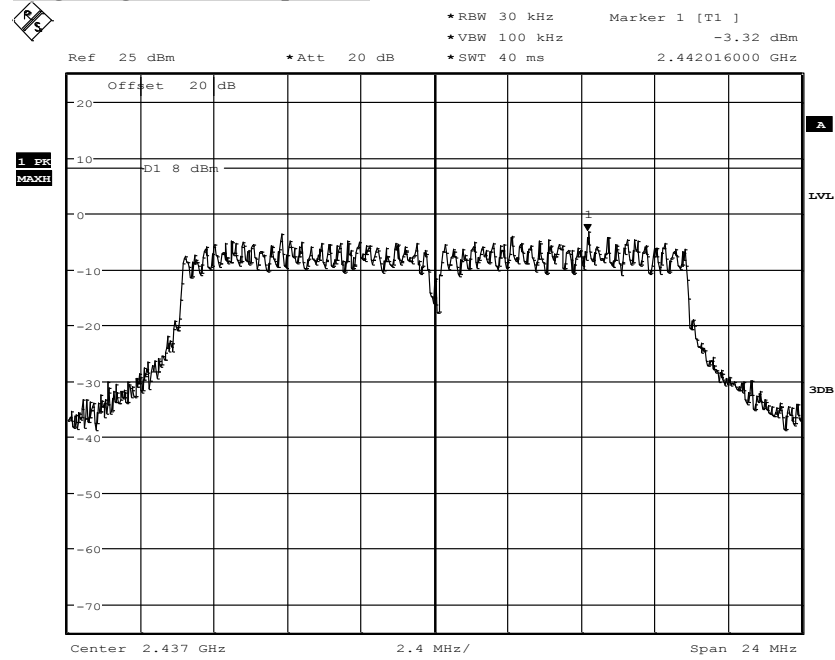
Date: 2.MAY.2016 18:42:10

Diagram g-Mode 9Mbps Ch1:



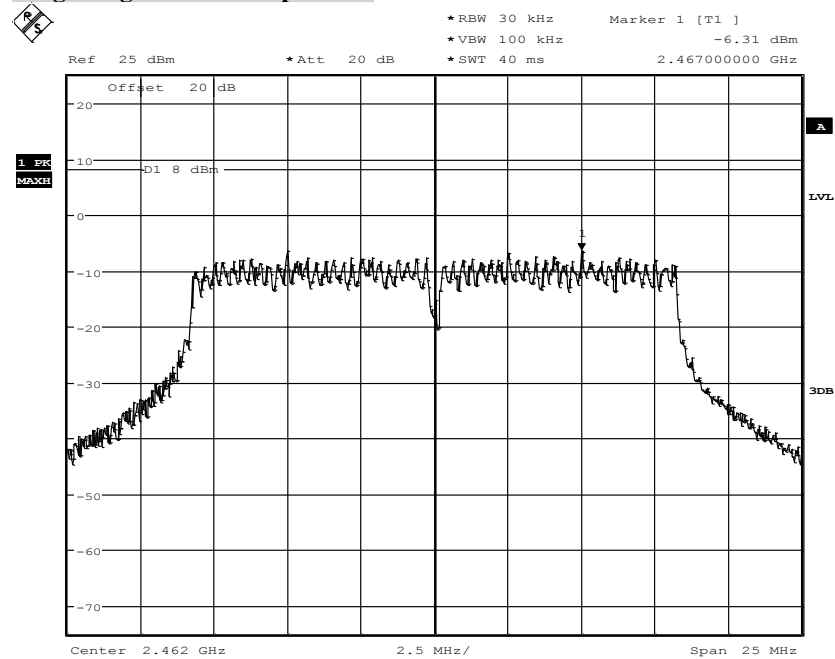
Date: 2.MAY.2016 17:58:26

Diagram g-Mode 24Mbps Ch6:



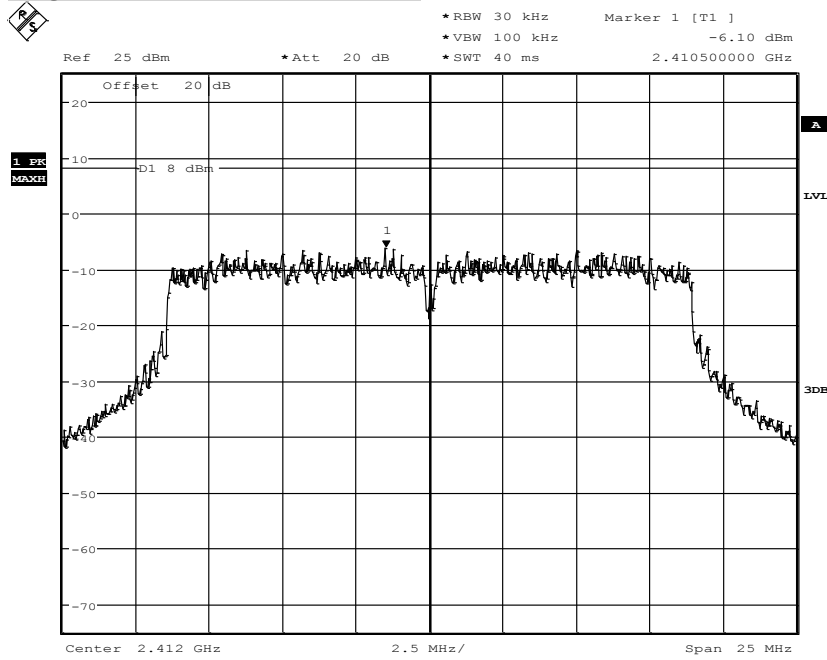
Date: 2.MAY.2016 18:27:10

Diagram g-Mode 24Mbps Ch11:



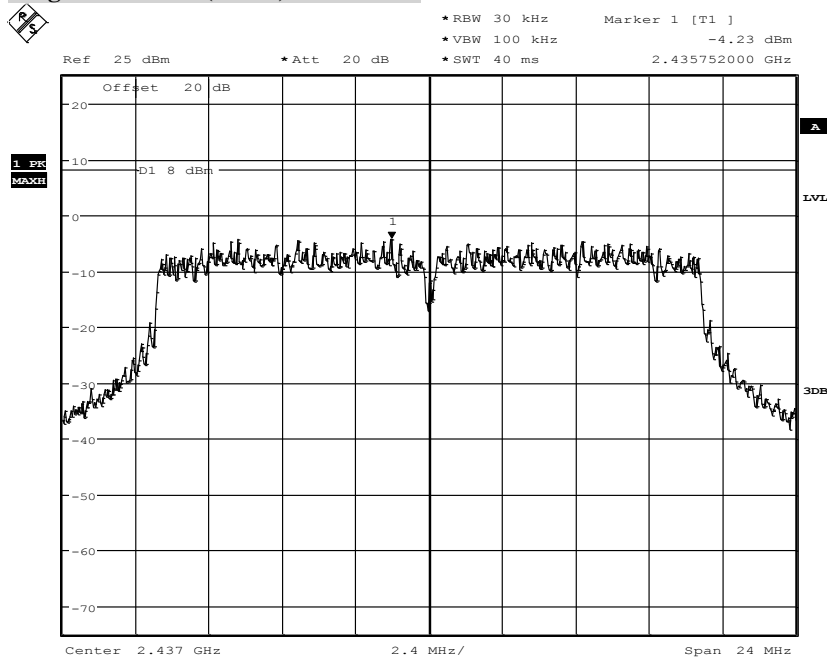
Date: 2.MAY.2016 18:43:35

Diagram n-Mode(HT20) MCS0 Ch1:



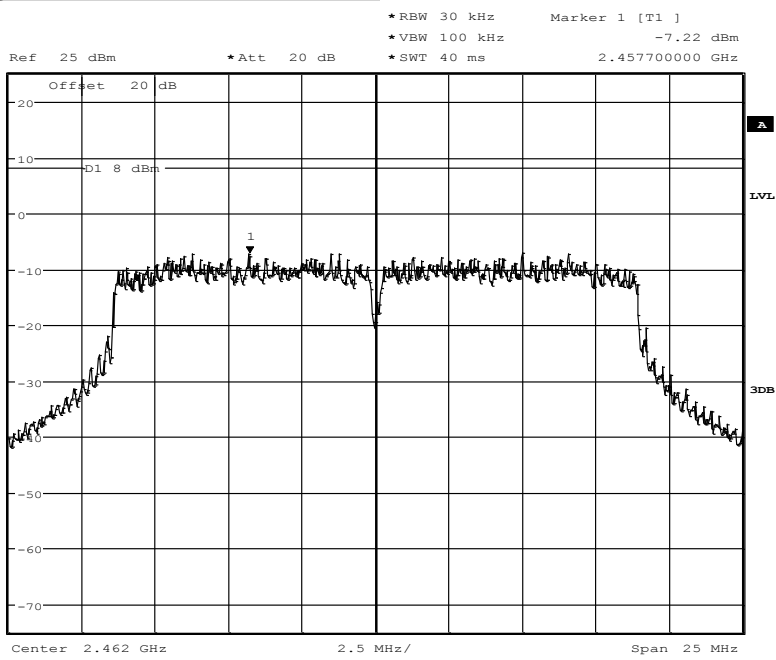
Date: 2.MAY.2016 18:10:12

Diagram n-Mode(HT20) MCS0 Ch6:



Date: 2.MAY.2016 18:39:31

Diagram n-Mode(HT20) MCS0 Ch11:



Date: 2.MAY.2016 18:46:33

4. Radiated magnetic field strengths measurements (9kHz to 30MHz)

Diagram No: 2.01_WLAN_b mode_1Mbps_Ch11_9kHz-30 MHz

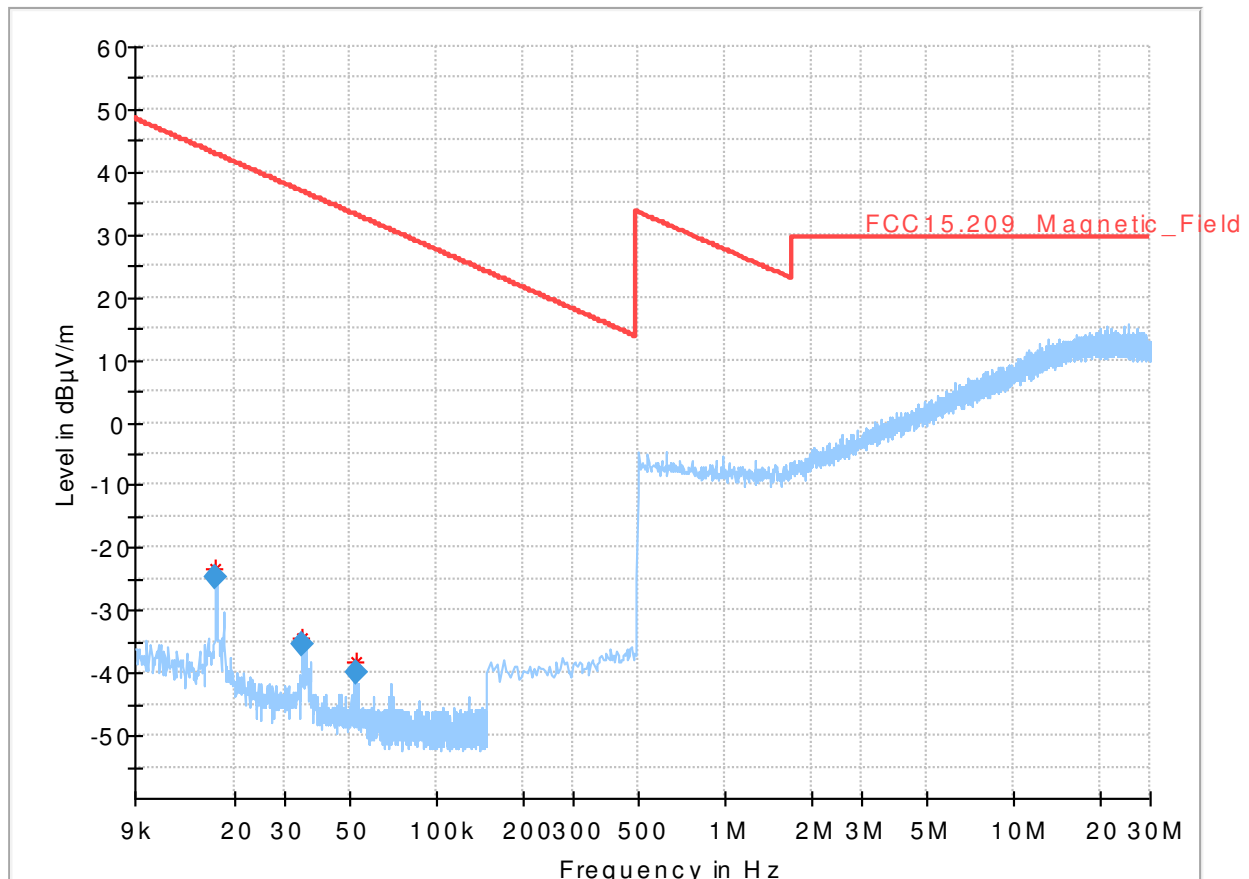
Common Information

| | |
|--------------------------|---|
| Test description: | Magnetic Field Strength Measurement related to 30/300 m distance |
| 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: | used accord. table, pls. see test report |
| Used filter: | bypass |
| Technical Data: | please see page 2 for detailed data of measurement setup |
| Rec. antenna (pre-scan): | height 1.00 m, parallel and 90° to EUT polarisation |
| Test specification.: | FCC 15.209/15.205; RSS-Gen., Issue 4 |
| Operator: | RIs |
| Operating conditions: | TX-on WLAN 802.16 b-mode, BW 20 MHz channel 11; 1Mbps; |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HLOGT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |

Full Spectrum



Final_Result

| Frequency (MHz) | RMS (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|--------------------|----------------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 0.017160 | -24.66 | 42.91 | 67.56 | 1000.0 | 0.200 | 100.0 | H | 34.0 | -58.7 |
| 0.034440 | -35.57 | 36.86 | 72.42 | 1000.0 | 0.200 | 100.0 | H | 47.0 | -59.5 |
| 0.052600 | -39.87 | 33.18 | 73.05 | 1000.0 | 0.200 | 100.0 | H | 135.0 | -59.7 |

Diagram No: 2.02_WLAN_g-mode_ 6 Mbps_CH1_9kHz-30 MHz

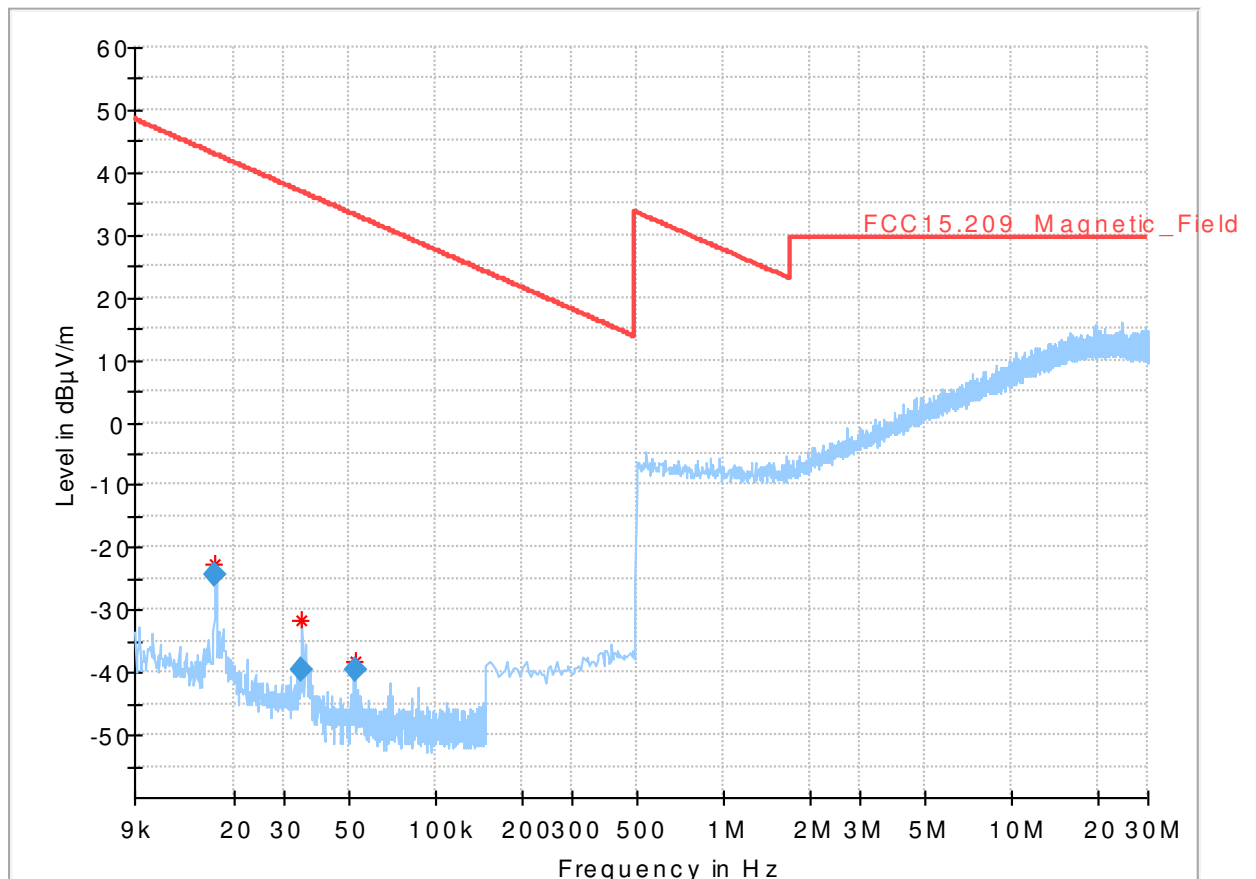
Common Information

| | |
|--------------------------|---|
| Test description: | Magnetic Field Strength Measurement related to 30/300 m distance |
| 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: | used accord. table, pls. see test report |
| Used filter: | bypass |
| Technical Data: | please see page 2 for detailed data of measurement setup |
| Rec. antenna (pre-scan): | height 1.00 m, parallel and 90° to EUT polarisation |
| Test specification.: | FCC 15.209/15.205; RSS-Gen., Issue 4 |
| Operator: | RIs |
| Operating conditions: | TX-on WLAN 802.16 g-mode, BW 20 MHz channel 1; 6Mbps; |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HLOGT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |

Full Spectrum



Final Result

| Frequency (MHz) | RMS (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|--------------------|----------------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 0.017080 | -24.47 | 42.95 | 67.42 | 1000.0 | 0.200 | 100.0 | H | 282.0 | -58.7 |
| 0.034440 | -39.55 | 36.86 | 76.40 | 1000.0 | 0.200 | 100.0 | H | 39.0 | -59.5 |
| 0.052760 | -39.59 | 33.15 | 72.75 | 1000.0 | 0.200 | 100.0 | H | 333.0 | -59.7 |

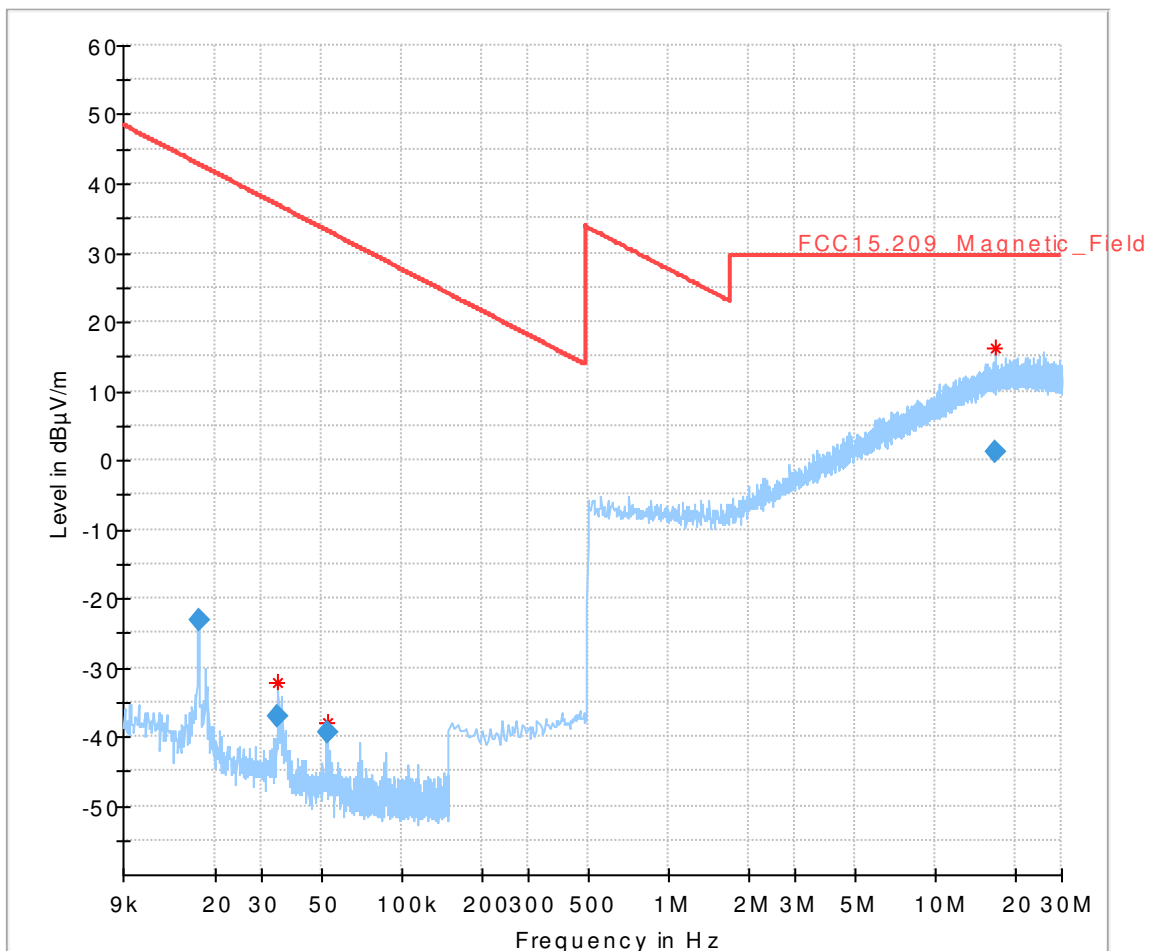
Diagram No: 2.03_WLAN_n-mode_MCS0_CH6_9kHz-30 MHz

Common Information

| | |
|--------------------------|---|
| Test description: | Magnetic Field Strength Measurement related to 30/300 m distance |
| 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: | used accord. table, pls. see test report |
| Used filter: | bypass |
| Technical Data: | please see page 2 for detailed data of measurement setup |
| Rec. antenna (pre-scan): | height 1.00 m, parallel and 90° to EUT polarisation |
| Test specification.: | FCC 15.209/15.205; RSS-Gen., Issue 4 |
| Operator: | RIs |
| Operating conditions: | TX-on WLAN 802.16 n-mode, BW 20 MHz channel 06; Data rate MCS 0; |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HLOGT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |



Final Result

| Frequency (MHz) | RMS (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|--------------------|----------------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 0.017240 | -23.32 | 42.87 | 66.18 | 1000.0 | 0.200 | 100.0 | H | 50.0 | -58.7 |
| 0.034280 | -37.18 | 36.90 | 74.07 | 1000.0 | 0.200 | 100.0 | H | 90.0 | -59.5 |
| 0.052680 | -39.41 | 33.17 | 72.58 | 1000.0 | 0.200 | 100.0 | H | 191.0 | -59.7 |
| 16.862000 | 1.17 | 29.54 | 28.37 | 1000.0 | 10.000 | 100.0 | V | 132.0 | 0.3 |

5. Radiated field strengths measurements (30MHz to 1GHz)

Diagram No: 3.01_WLAN_b mode_1Mbps_Ch11_30 MHz - 1 GHz

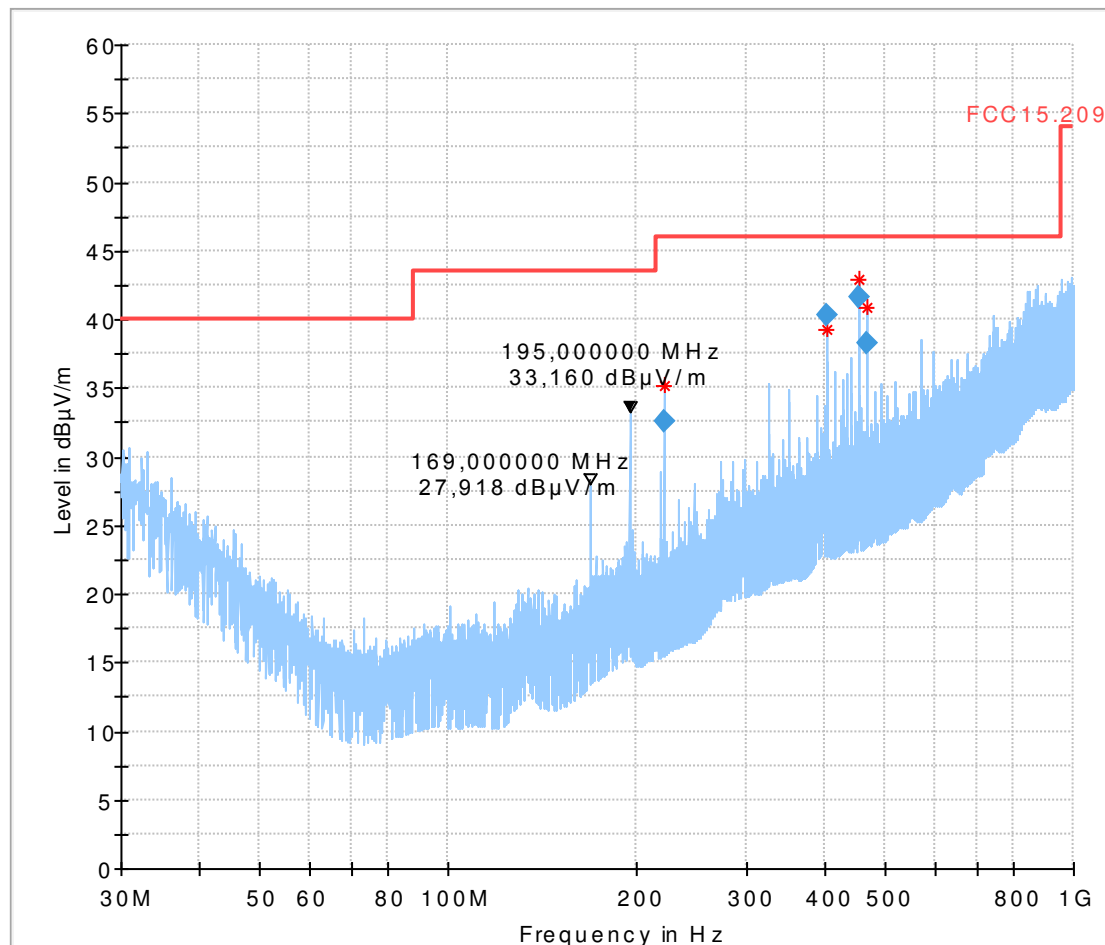
Common Information

| | |
|--------------------------|---|
| 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 |
| Technical Data: | Please see page 2 for detailed data of measurement setup |
| Rec. antenna (pre-scan): | height 1.00 m, parallel and 90° to EUT polarisation |
| Used filter: | TP NLP-1200 |
| Test specification: | FCC 15.205 § 15.209; RSS-Gen: Issue 4 |
| Operator: | APh |
| Operating conditions: | TX-on Continuous |
| Operating Mode: | TX-on WLAN 802.16 b-mode, BW 20 MHz channel 11; 1Mbps; |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HLOGT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |

Full Spectrum



Final Result

| Frequency (MHz) | QuasiPeak (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB) |
|-----------------|--------------------------|----------------------|-------------|-----------------|-----------------|-------------|-----|---------------|-----------------|------------|
| 221.000000 | 32.57 | 46.00 | 13.43 | 1000.0 | 120.000 | 105.0 | H | 95.0 | 90.0 | 12.5 |
| 402.980000 | 40.34 | 46.00 | 5.66 | 1000.0 | 120.000 | 183.0 | H | 78.0 | 0.0 | 18.7 |
| 454.990000 | 41.59 | 46.00 | 4.41 | 1000.0 | 120.000 | 113.0 | V | 323.0 | 0.0 | 19.5 |
| 468.000000 | 38.32 | 46.00 | 7.68 | 1000.0 | 120.000 | 105.0 | V | 103.0 | 90.0 | 19.7 |

Diagram No. 3.02_WLAN_g mode_6Mbps_Ch1_30 MHz - 1 GHz

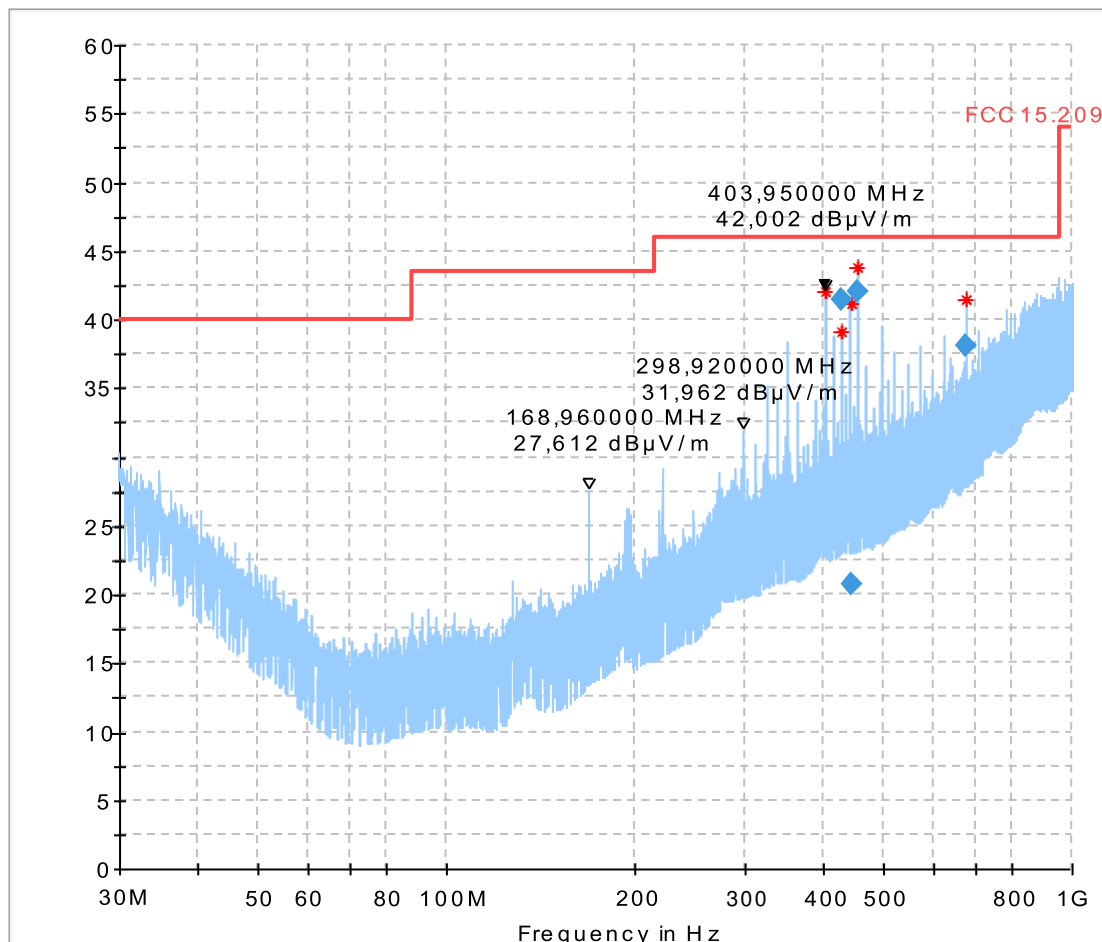
Common Information

| | |
|--------------------------|---|
| 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 |
| Technical Data: | Please see page 2 for detailed data of measurement setup |
| Rec. antenna (pre-scan): | height 1.00 m, parallel and 90° to EUT polarisation |
| Used filter: | TP NLP-1200 |
| Test specification: | FCC 15.205 § 15.209; RSS-Gen: Issue 4 |
| Operator: | APh |
| Operating conditions: | TX-on Continuous |
| Operating Mode: | TX-on WLAN 802.16 g-mode, BW 20 MHz channel 1; 6Mbps; |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.11 |
| Input: | Fully Charged Internal Battery |

Full Spectrum



Final_Result

| Frequency (MHz) | QuasiPeak (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB) |
|-----------------|--------------------------|----------------------|-------------|-----------------|-----------------|-------------|-----|---------------|-----------------|------------|
| 428.990000 | 41.42 | 46.00 | 4.58 | 1000.0 | 120.000 | 105.0 | V | 115.0 | 90.0 | 19.3 |
| 442.780000 | 20.72 | 46.00 | 25.28 | 1000.0 | 120.000 | 259.0 | V | 47.0 | 90.0 | 19.4 |
| 454.980000 | 42.03 | 46.00 | 3.97 | 1000.0 | 120.000 | 109.0 | V | 359.0 | 0.0 | 19.5 |
| 675.980000 | 38.09 | 46.00 | 7.91 | 1000.0 | 120.000 | 109.0 | H | 74.0 | 0.0 | 23.5 |

Diagram No. 3.03_WLAN_n mode_MCS0_Ch6_30 MHz - 1 GHz

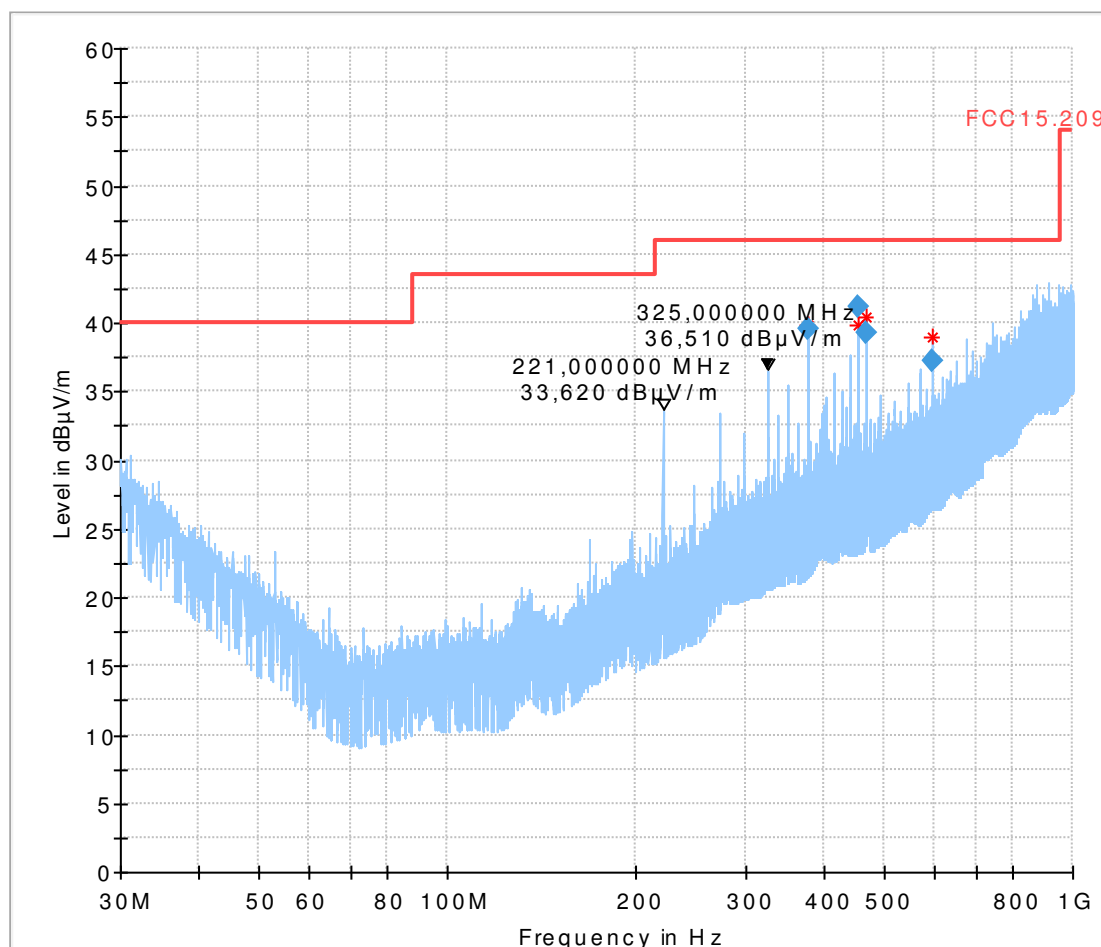
Common Information

| | |
|--------------------------|---|
| 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 |
| Technical Data: | Please see page 2 for detailed data of measurement setup |
| Rec. antenna (pre-scan): | height 1.00 m, parallel and 90° to EUT polarisation |
| Used filter: | TP NLP-1200 |
| Test specification: | FCC 15.205 § 15.209; RSS-Gen: Issue 4 |
| Operator: | Aph |
| Operating conditions: | TX-on Continuous |
| Operating Mode: | TX-on WLAN 802.16 n(HT20)-mode, BW 20 MHz channel 6; MCS0 |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |

Full Spectrum



Final_Result

| Frequency (MHz) | QuasiPeak (dB μ V/m) | Limit (dB μ V/m) | Margi n (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB) |
|-----------------|--------------------------|----------------------|--------------|-----------------|-----------------|-------------|-----|---------------|-----------------|------------|
| 377.000000 | 39.60 | 46.00 | 6.40 | 1000.0 | 120.000 | 222.0 | H | 84.0 | 0.0 | 17.3 |
| 454.980000 | 41.13 | 46.00 | 4.87 | 1000.0 | 120.000 | 105.0 | V | 127.0 | 90.0 | 19.5 |
| 467.980000 | 39.29 | 46.00 | 6.71 | 1000.0 | 120.000 | 109.0 | V | 10.0 | 0.0 | 19.7 |
| 598.000000 | 37.18 | 46.00 | 8.82 | 1000.0 | 120.000 | 109.0 | H | 266.0 | 0.0 | 22.5 |

6. Radiated field strength measurements (1GHz to 25 GHz)

Diagram No: 4.01_WLAN_b mode_1Mbps_Ch11_1-18 GHz

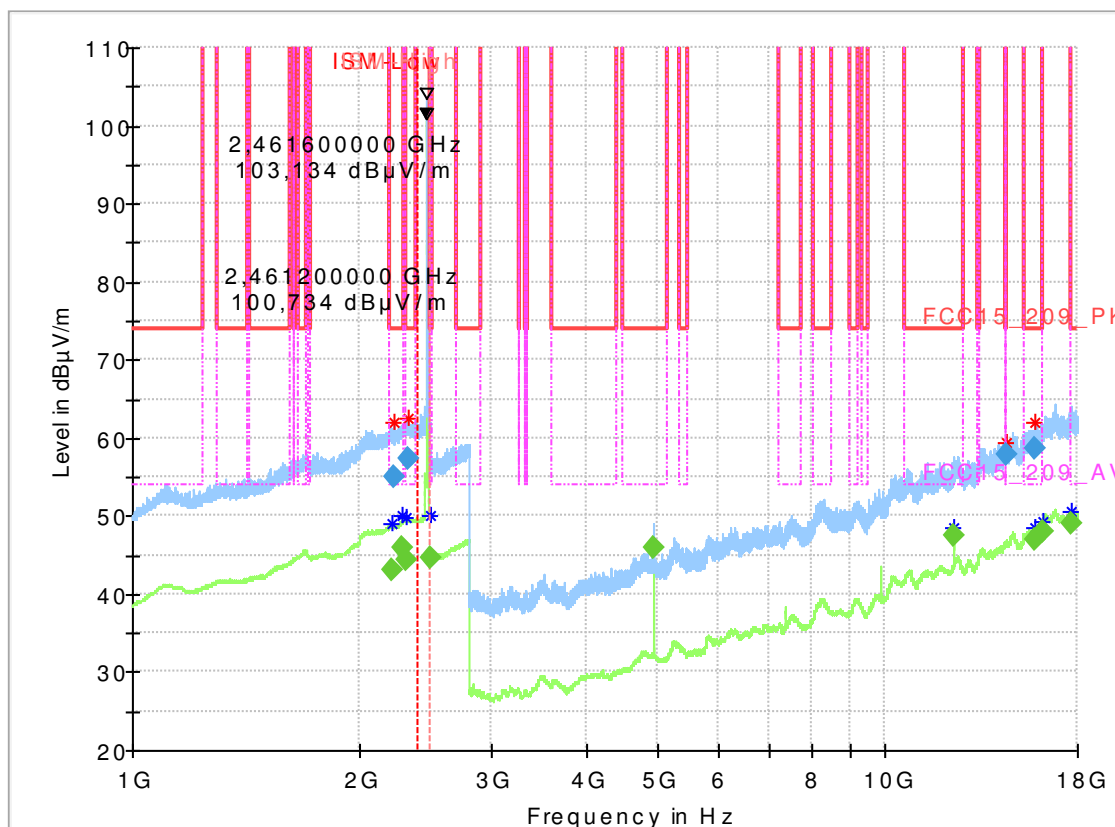
Common Information

| | |
|-----------------------|--|
| Test Description: | Radiated Field Strength 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-on WLAN 802.16 b-mode, BW 20 MHz channel 11; Data rate 1 Mbps |
| Operator Name: | KMo/APh |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |

Full Spectrum



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) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|
| 2212.000000 | --- | 43.10 | 54.00 | 10.90 | 100.0 | 1000.000 | 155.0 | V | 235.0 |
| 2228.320000 | 55.10 | --- | 74.00 | 18.90 | 100.0 | 1000.000 | 155.0 | V | 49.0 |
| 2288.000000 | --- | 46.03 | 54.00 | 7.97 | 100.0 | 1000.000 | 155.0 | V | 265.0 |
| 2310.400000 | --- | 44.29 | 54.00 | 9.71 | 100.0 | 1000.000 | 155.0 | V | 73.0 |
| 2323.040000 | 57.24 | --- | 74.00 | 16.76 | 100.0 | 1000.000 | 155.0 | H | 87.0 |
| 2483.500000 | --- | 44.52 | 54.00 | 9.48 | 100.0 | 1000.000 | 155.0 | V | 208.0 |
| 4924.000000 | --- | 46.06 | 54.00 | 7.94 | 100.0 | 1000.000 | 155.0 | V | 148.0 |
| 12310.720000 | --- | 47.56 | 54.00 | 6.44 | 100.0 | 1000.000 | 155.0 | H | 209.0 |
| 14480.560000 | 57.90 | --- | 74.00 | 16.10 | 100.0 | 1000.000 | 155.0 | V | -18.0 |
| 15771.800000 | 58.57 | --- | 74.00 | 15.43 | 100.0 | 1000.000 | 155.0 | H | 133.0 |
| 15790.040000 | --- | 46.98 | 54.00 | 7.02 | 100.0 | 1000.000 | 155.0 | V | 277.0 |
| 16174.200000 | --- | 48.08 | 54.00 | 5.92 | 100.0 | 1000.000 | 155.0 | V | 169.0 |
| 17708.720000 | --- | 49.09 | 54.00 | 4.91 | 100.0 | 1000.000 | 155.0 | H | 42.0 |

(continuation of the "Final_Result" table from column 15 ...)

| Frequency (MHz) | Elevation (deg) | Corr. (dB) |
|-----------------|-----------------|------------|
| 2212.000000 | 0.0 | 35.0 |
| 2228.320000 | 0.0 | 34.8 |
| 2288.000000 | 90.0 | 35.4 |
| 2310.400000 | 90.0 | 35.7 |
| 2323.040000 | 90.0 | 35.7 |
| 2483.500000 | 90.0 | 35.6 |
| 4924.000000 | 0.0 | 4.4 |
| 12310.720000 | 0.0 | 18.3 |
| 14480.560000 | 0.0 | 22.3 |
| 15771.800000 | 0.0 | 23.6 |
| 15790.040000 | 90.0 | 23.7 |
| 16174.200000 | 90.0 | 24.7 |
| 17708.720000 | 90.0 | 25.7 |

Diagram No: 4.01a_WLAN_b mode_1Mbps_Ch11_18-25 GHz

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 CH11-bMode-1MBit |
| Operator Name: | TFR |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |

FCC_Sweep_15.247_18_25GHz_Pre

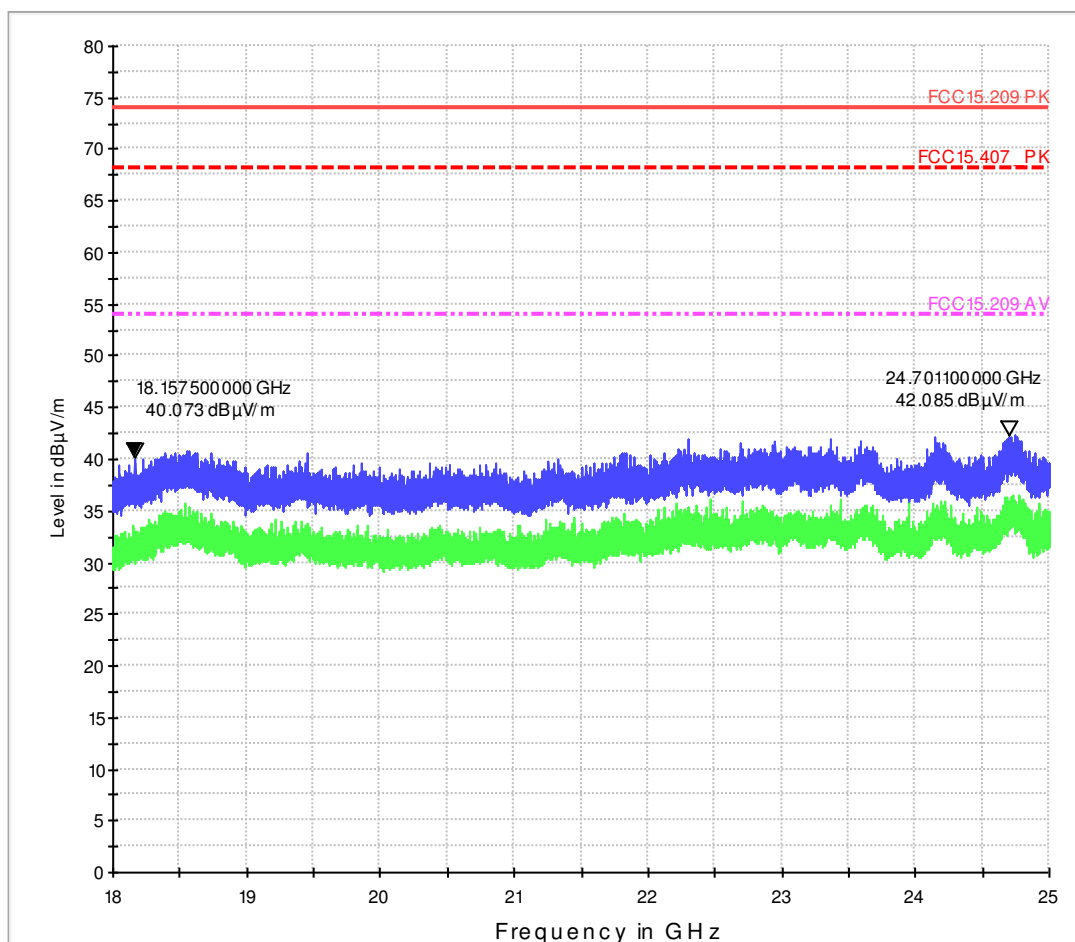


Diagram No: 4.02_WLAN 802.16_g-mode__6Mbps_CH1_1-18 GHz

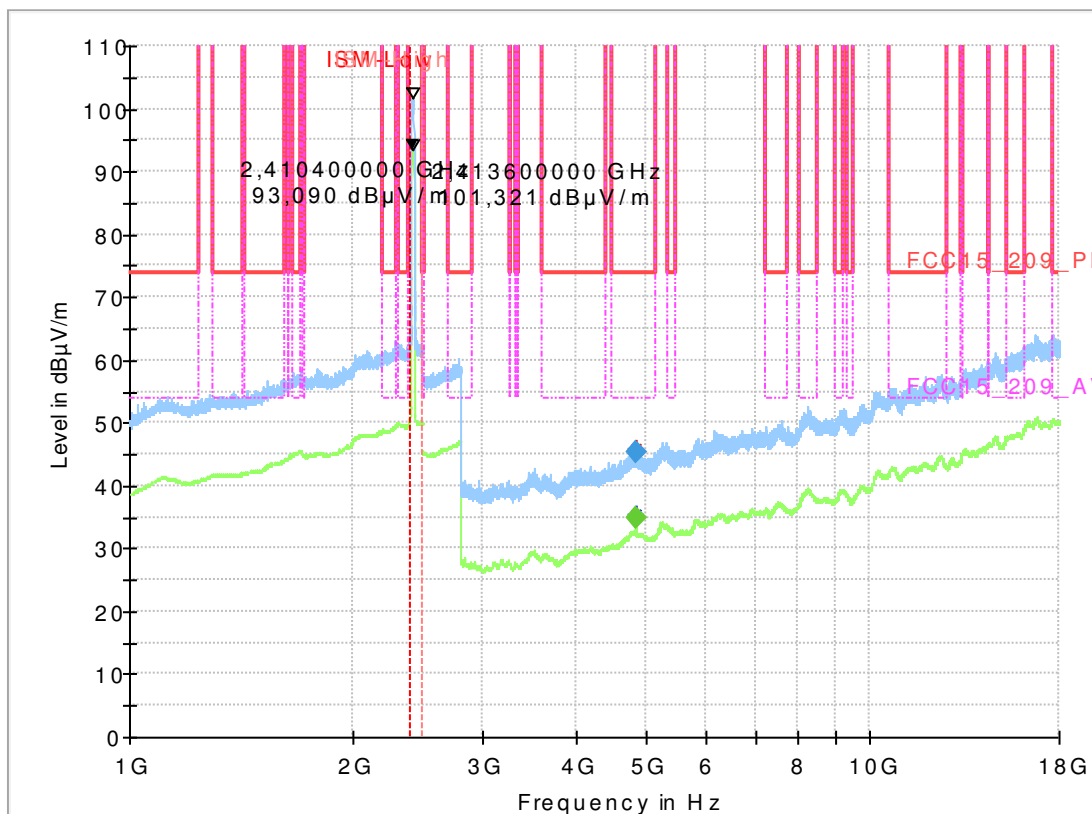
Common Information

| | |
|---------------------------|---|
| Test Description: | Radiated Field Strength 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 |
| Environmental Conditions: | Humidity:33 %rH; Temperature: 21°C |
| Operation mode: | TX-on WLAN 802.16_g-mode, BW 20 MHz channel 1; Data rate 6 Mbps |
| Operator Name: | KMo/APh |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |

Full Spectrum



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) | Corr. (dB) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|-----------------|------------|
| 4824.000000 | --- | 34.76 | 54.00 | 19.24 | 100.0 | 1000.000 | 155.0 | V | 148.0 | 0.0 | 4.8 |
| 4824.000000 | 45.49 | --- | 74.00 | 28.51 | 100.0 | 1000.000 | 155.0 | V | 162.0 | 0.0 | 4.8 |

Diagram No: 4.02a_WLAN 802.16 _g-mode__6Mbps_CH1_18-25 GHz

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 CH1-gMode-6MBit |
| Operator Name: | TFR |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |

FCC_Sweep_15.247_18_25GHz_Pre

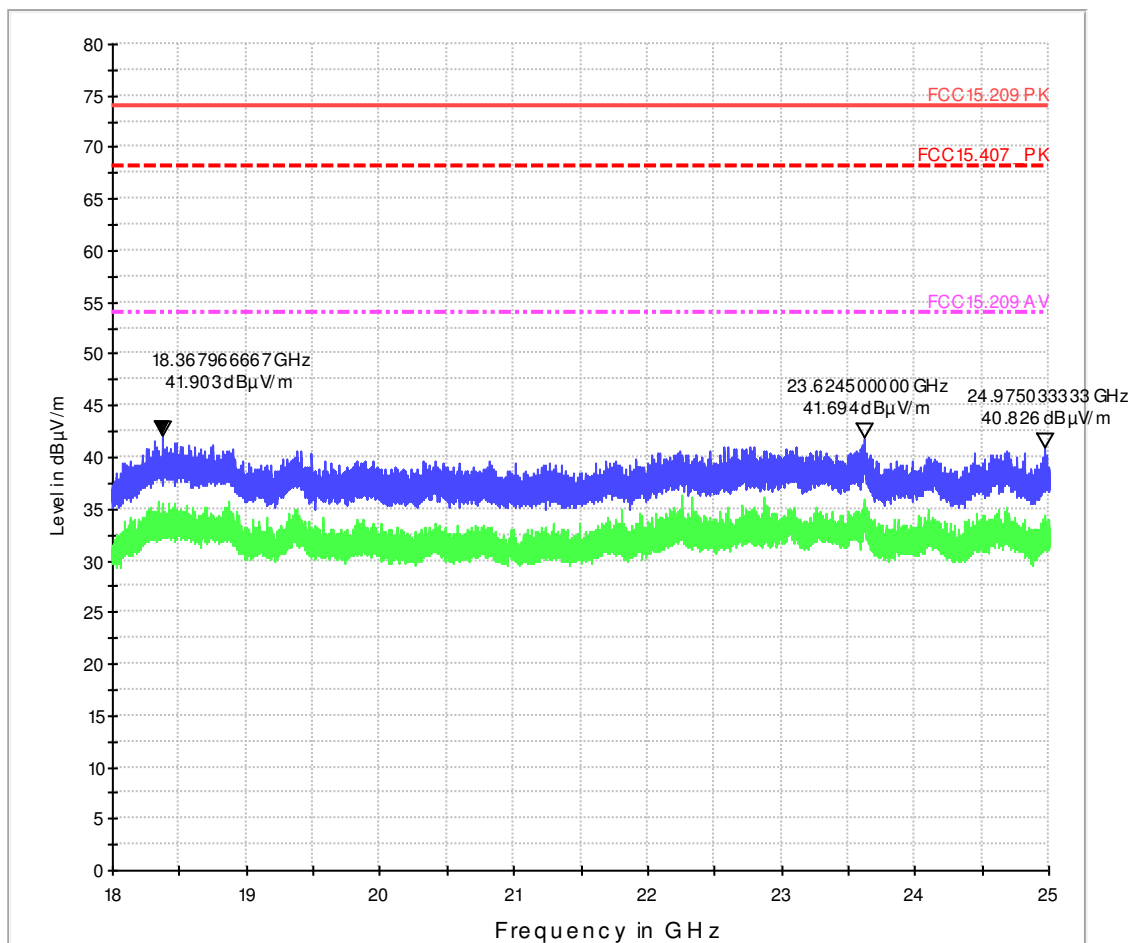


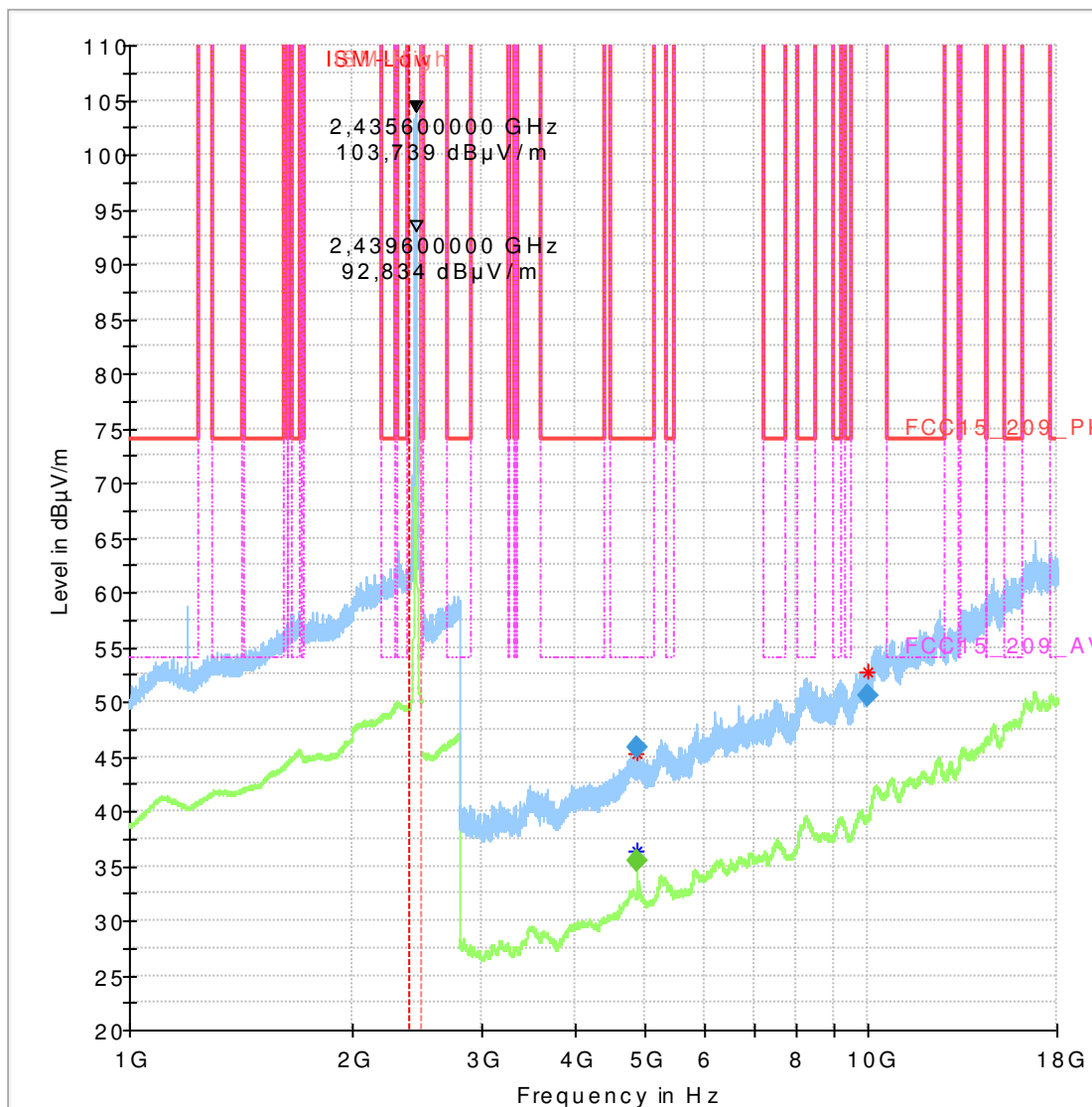
Diagram No: 4.03_WLAN 802.16_n-mode _MCS0_CH6_1-18 GHz

Common Information

| | |
|---------------------------|--|
| Test Description: | Radiated Field Strength 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 |
| Environmental Conditions: | Humidity:33 %rH; Temperature: 21°C |
| Operation mode: | TX-on WLAN 802.16 n(HT20)-mode, BW 20 MHz channel 6; Data rate MCS0 Mbps |
| Operator Name: | MFr |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |



Final_Result

| Frequency (MHz) | MaxPeak (dB μ V/m) | Average (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----------------|-----------------|-------------|-----|---------------|-----------------|------------|
| 4874.000000 | --- | 35.45 | 54.00 | 18.55 | 100.0 | 1000.000 | 155.0 | V | 45.0 | 0.0 | 4.7 |
| 4874.000000 | 45.81 | --- | 74.00 | 28.19 | 100.0 | 1000.000 | 155.0 | V | 42.0 | 0.0 | 4.7 |
| 10007.040000 | 50.50 | --- | 150.00 | 99.50 | 100.0 | 1000.000 | 155.0 | V | 330.0 | 0.0 | 14.6 |

Diagram No: 4.03a_WLAN 802.16_n-mode _MCS0_CH6_18-25 GHz

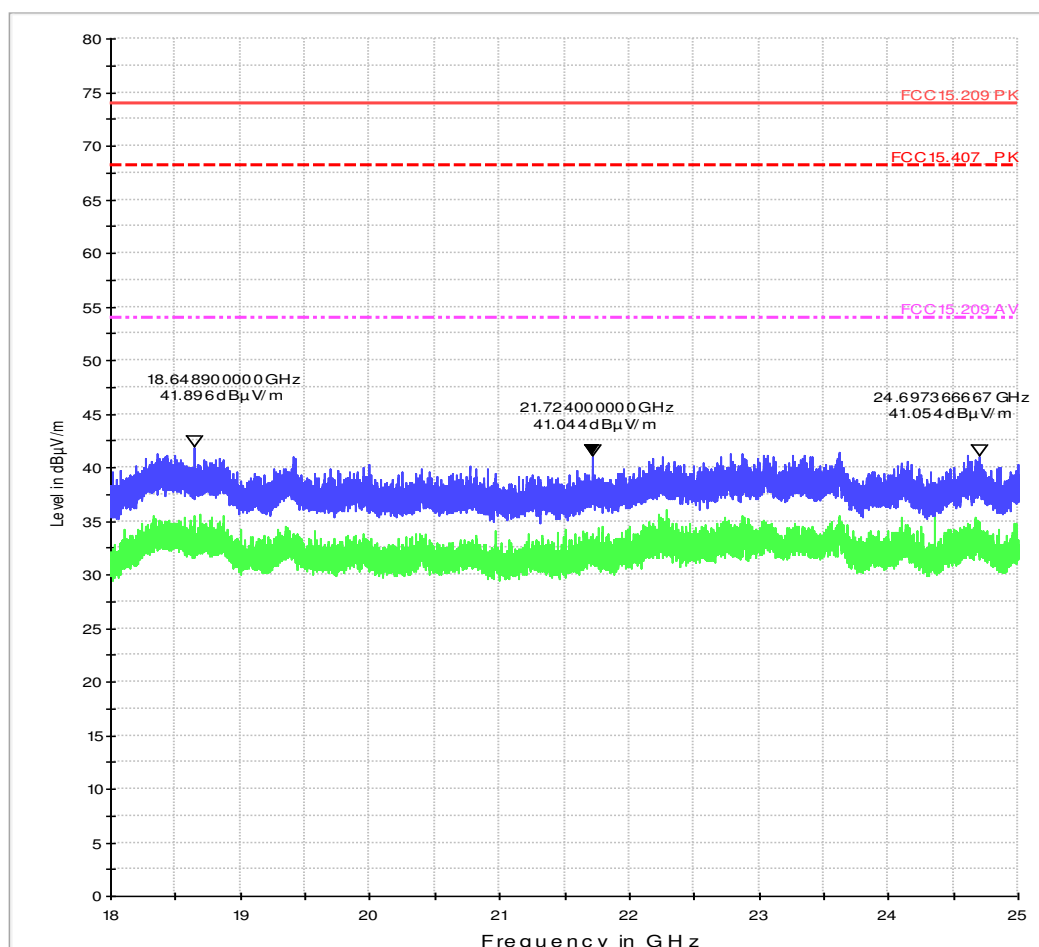
Common Information

| | |
|----------------------------|---|
| 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 CH6-nMode-MCS0 |
| Operator Name: | TFR |
| Comment: | Channel no. low/middle/high |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |

FCC_Sweep_15.247_18_25GHz_Pre



7. Radiated Band-Edge Measurements accord. §15.209 & §15.205

7.1. Channel 1 b-Mode (left band edge)

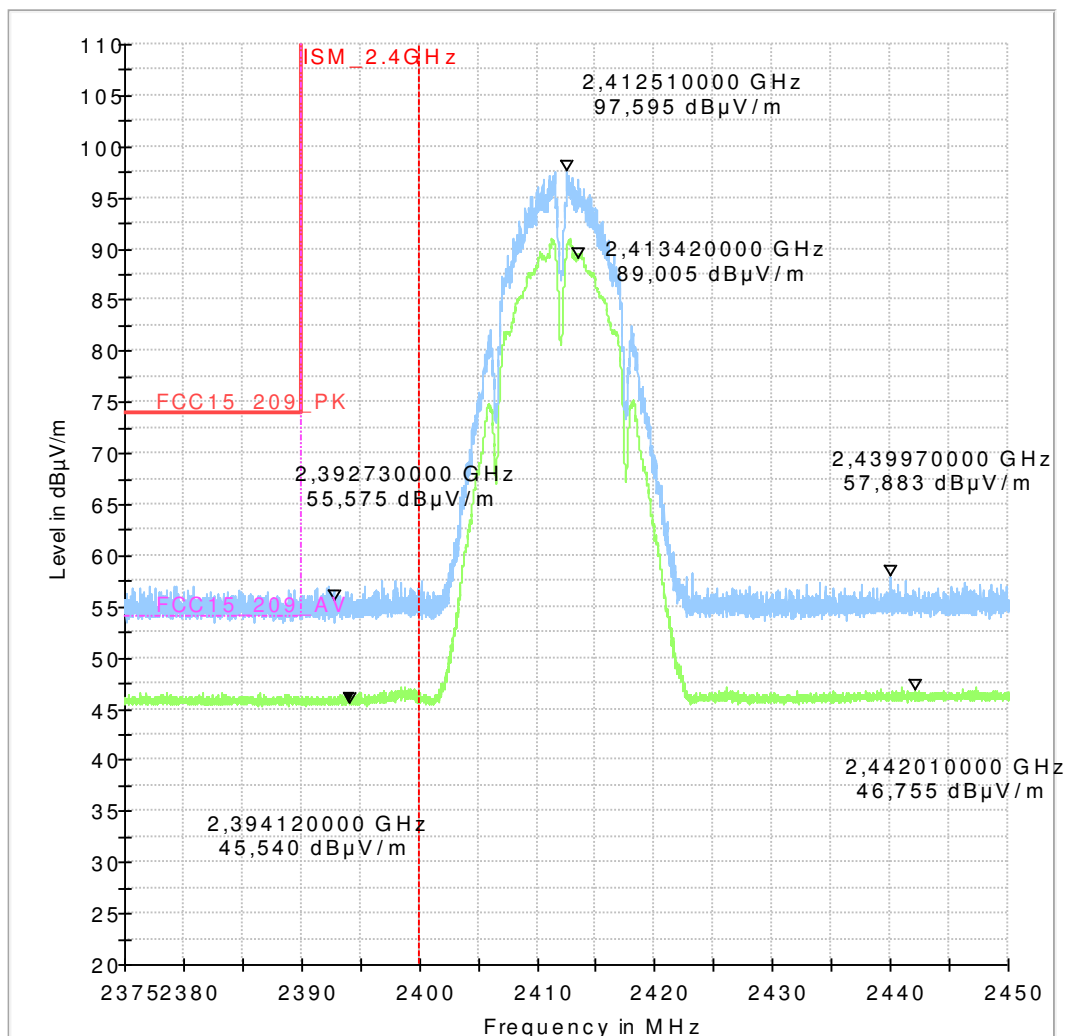
Diagram No: 9.01_BE_Low_b-mode_BW 20 MHz CH1_1Mbps

Common Information

| | |
|---------------------------|--|
| Test Description: | Band-Edge: Radiated Field Strength 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-on WLAN 802.16 b-mode, BW 20 MHz channel 1; Data rate 1Mbps |
| Operator Name: | MFr |
| Environmental Conditions: | Humidity: 38%rH; Temperature: 22°C |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HLOGT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |



7.2. Channel 11 b-Mode (right band edge)

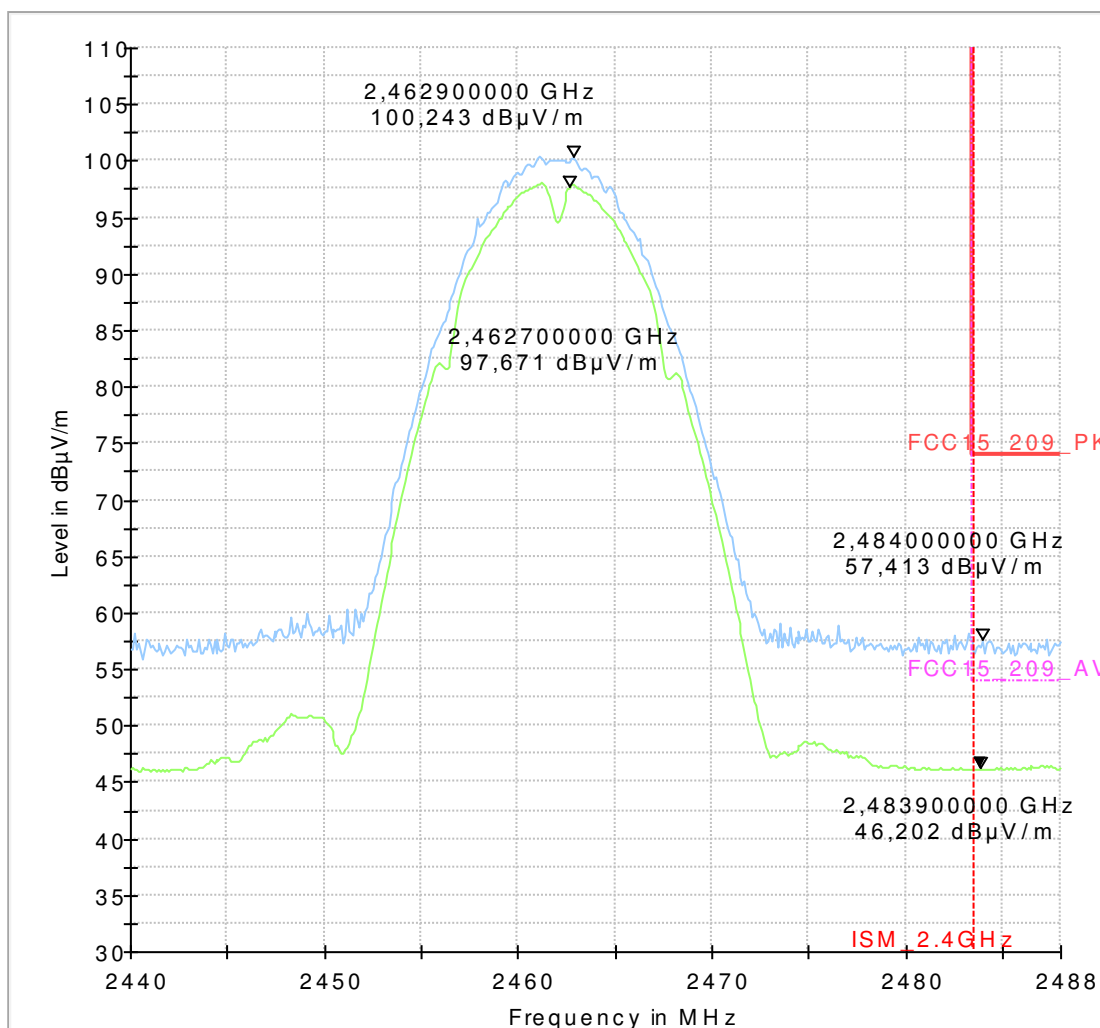
Diagram No: 9.02_BE_High_b-mode_BW 20 MHz CH11_1Mbps

Common Information

| | |
|-------------------------|--|
| Test Description: | Band-Edge: Radiated Field Strength 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-on WLAN 802.16 b-mode, BW 20 MHz channel 11; Data rate 1 Mbps |
| Environment Conditions: | Humidity: 32%RH; Temperature: 22°C |
| Operator Name: | KMo |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |



7.3. Channel 1 g-Mode (left band edge)

Diagram No: 9.03_BE_Low_g-mode_BW 20 MHz CH1_6Mbps

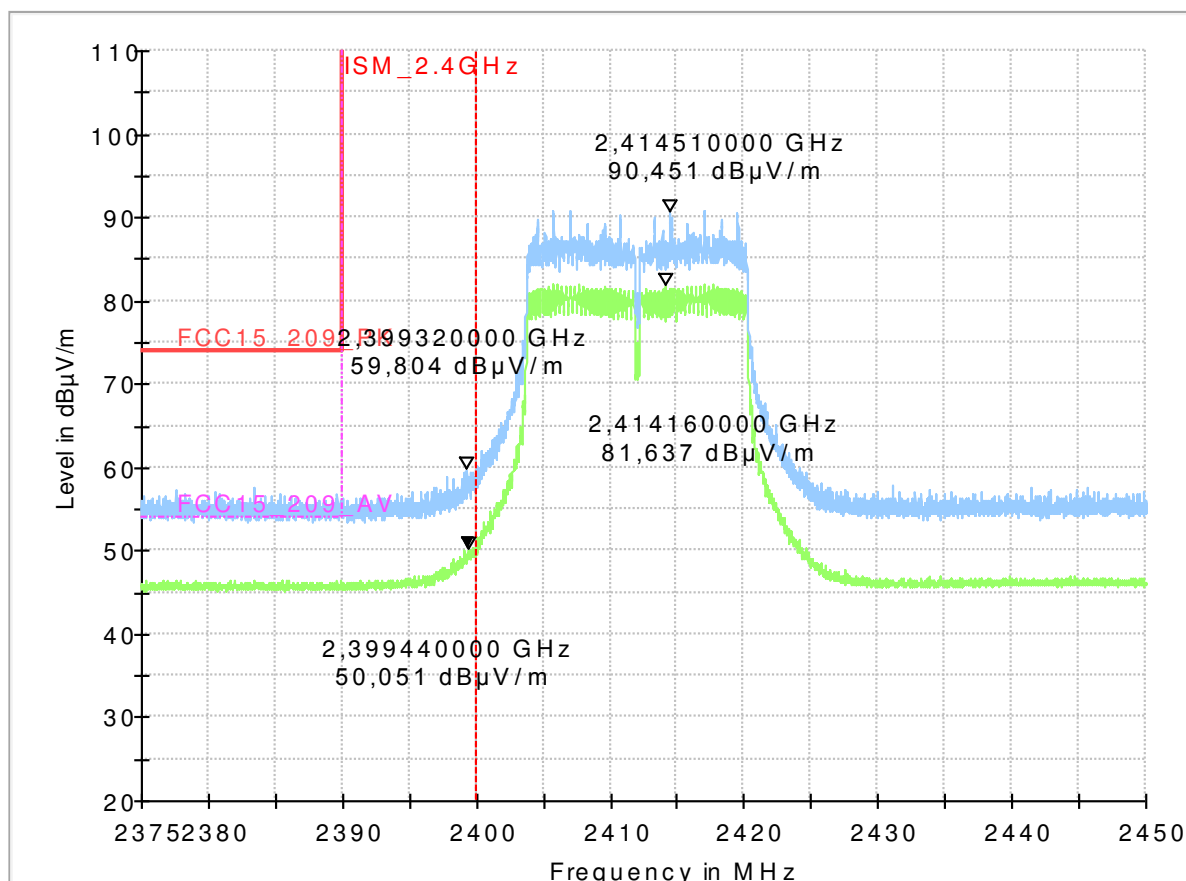
Common Information

| | |
|---------------------------|--|
| Test Description: | Band-Edge: Radiated Field Strength 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-on WLAN 802.16 g-mode, BW 20 MHz channel 1; Data rate 6Mbps |
| Operator Name: | KMo |
| Environmental Conditions: | Humidity: 38%rH; Temperature: 22°C |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16a |
| Input: | Fully Charged Internal Battery |

Full Spectrum



7.4. Channel 11 g-Mode (right band edge)

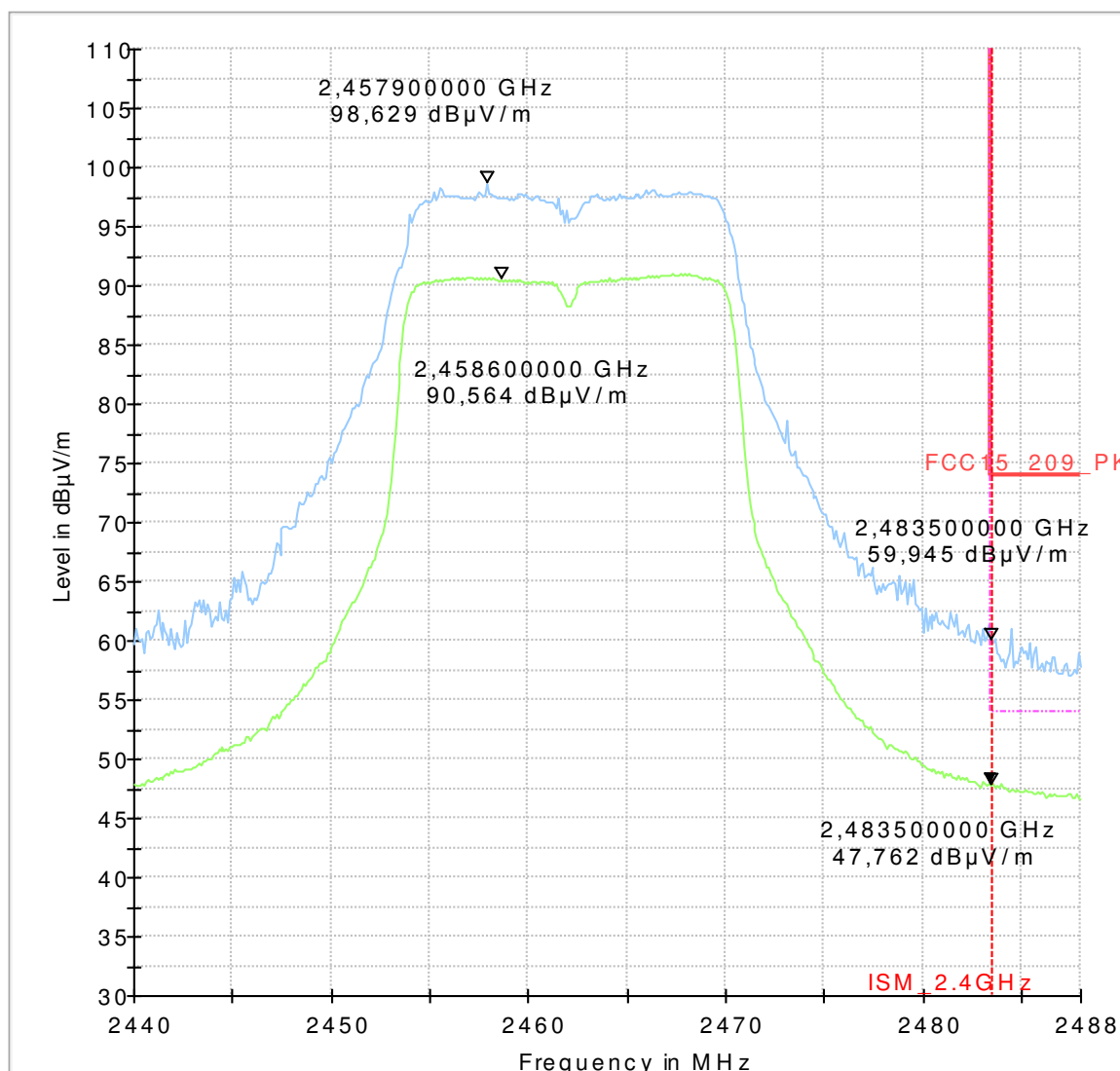
Diagram No: 9.07_BE_High_Ch11_gMode_6MBit

Common Information

| | |
|-------------------------|--|
| Test Description: | Band-Edge: Radiated Field Strength 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-on WLAN 802.16 g-mode, BW 20 MHz channel 11; Data rate 6 Mbps |
| Environment Conditions: | Humidity: 34%RH; Temperature: 23°C |
| Operator Name: | APh |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |



7.5. Channel 1 n-Mode(HT20) (left band edge)

Diagram No: 9.05_BE_Low_n-mode_BW 20 MHz CH1_MCS0

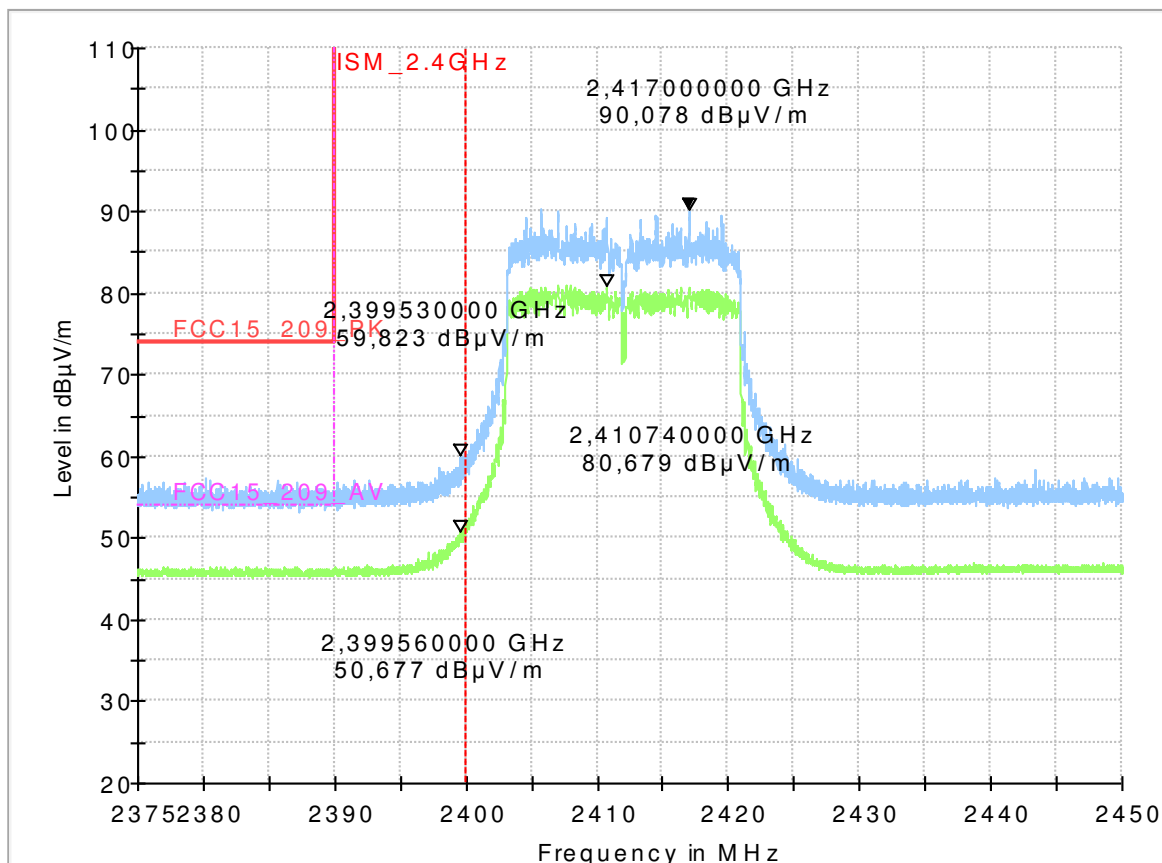
Common Information

| | |
|--------------------------|---|
| Test Description: | Band-Edge: Radiated Field Strength 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-on WLAN 802.16 n-mode, BW 20 MHz channel 1; Data rate MCS0 |
| Operator Name: | KMo |
| Environmental Conditions | Humidity: 38%rH; Temperature: 22°C |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |

Full Spectrum



7.6. Channel 11 n-Mode(HT20) (right band edge)

Diagram No: 9.8_BE_High_n-mode_BW 20 MHz CH11_MCS0

Common Information

| | |
|-------------------------|--|
| Test Description: | Band-Edge: Radiated Field Strength 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-on WLAN 802.16 n(HT20)-mode, BW 20 MHz channel 11; Data rate MCS0 |
| Environment Conditions: | Humidity: 28%RH; Temperature: 23°C |
| Operator Name: | APh |

EUT Information

| | |
|-------------------|--------------------------------|
| Manufacturer: | Datalogic ADCL S.r.l. |
| MODEL: | JOYA TOUCH |
| EuT Type: | P00AN04HL0GT0W7-GRR |
| P/N: | 911350013 |
| S/N: | Z16P00015 |
| HW Version: | Beta HW Version |
| SW Version: | WEC7 |
| Firmware Version: | 2.16 |
| Input: | Fully Charged Internal Battery |

