Annex 1: Diagramms to
P A R T I A L   T E S T   R E P O R T
No.: 2-20842790-15-9b

According to:
FCC Regulations
Part 15.407

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

for

Datalogic ADC S.r.l.
JOYA TOUCH
Type: P00AN04HL0HT0W7-GR0

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

Laboratory Accreditation and Listings			
DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01	**FC** MRA US-EU 0003	**Industry Canada** Reg. No.: 3462D-2 Reg. No.: 3462D-3	**VCI** 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			
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			

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1. Duty-Cycle of Transmitter

The characteristics of the implemented test mode was checked on middle channel no. 36 (a-Mode and n –Mode HT20) only.

Diagram a-Mode 6Mbit:
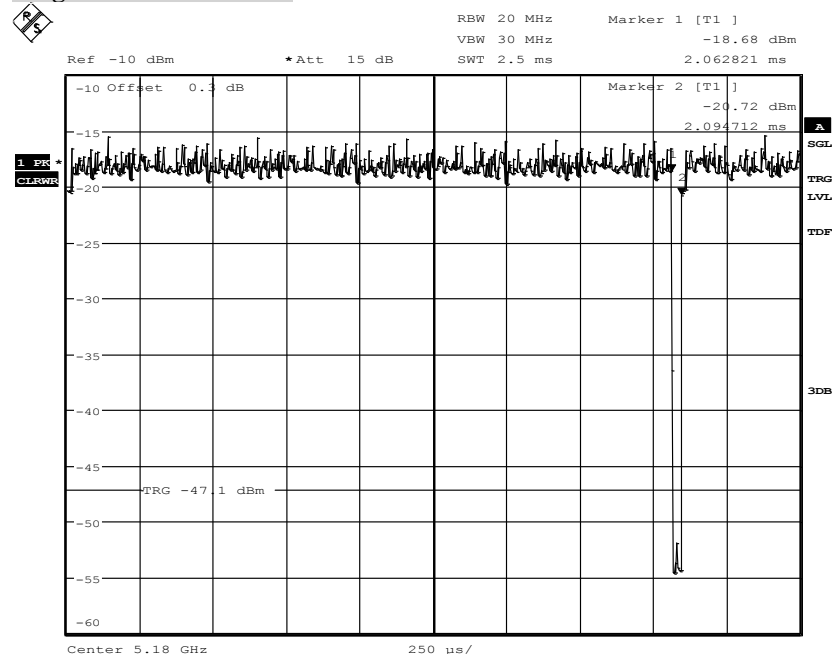
Date: 8.JUN.2016 11:00:44

Diagram a-Mode 9Mbit:
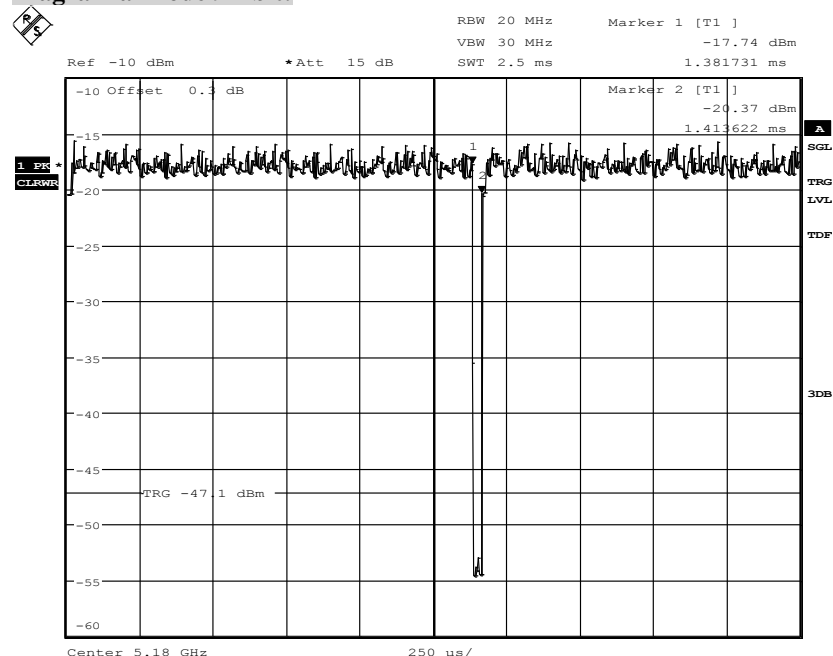
Date: 8.JUN.2016 11:01:44

Diagram a-Mode 12Mbit:

	RBW 20 MHz	Marker 1 [T1]	
	VBW 30 MHz		-17.46 dBm
Ref -10 dBm	*Att 15 dB	SWT 2.5 ms	1.041186 ms

Marker 2 [T1]
-20.22 dBm
1.073077 ms

-10 Offset 0.3 dB

TRG -47.1 dBm

Center 5.18 GHz   250 µs/
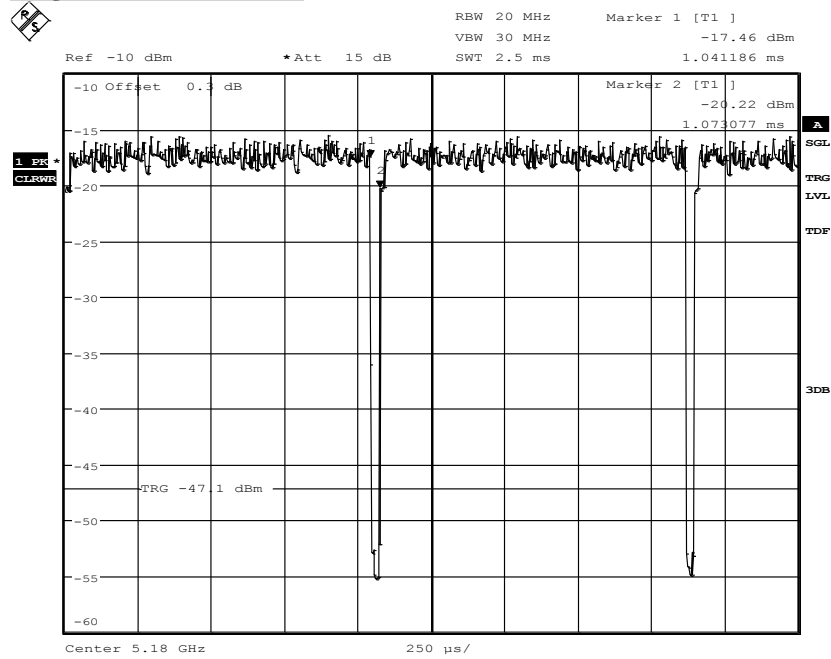
Date: 8.JUN.2016 11:02:52

Diagram a-Mode 18Mbit:

	RBW 20 MHz	Marker 1 [T1]	
	VBW 30 MHz		-17.75 dBm
Ref -10 dBm	*Att 15 dB	SWT 1 ms	706.730769 µs

Marker 2 [T1]
-20.15 dBm
735.576923 µs

-10 Offset 0.3 dB

TRG -47.1 dBm

Center 5.18 GHz   100 µs/

Date: 8.JUN.2016 11:03:52

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Diagram a-Mode 24Mbit:

	RBW 20 MHz	Marker 1 [T1]
	VBW 30 MHz	-17.34 dBm
Ref -10 dBm	*Att 15 dB SWT 1 ms	533.653846 µs

Marker 2 [T1]
-20.34 dBm
562.500000 µs

Center 5.18 GHz   100 µs/
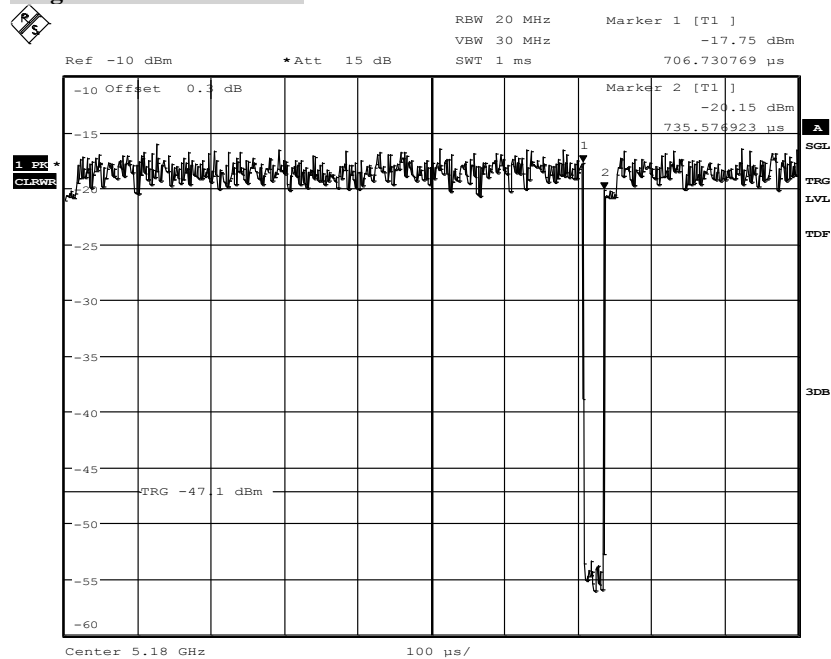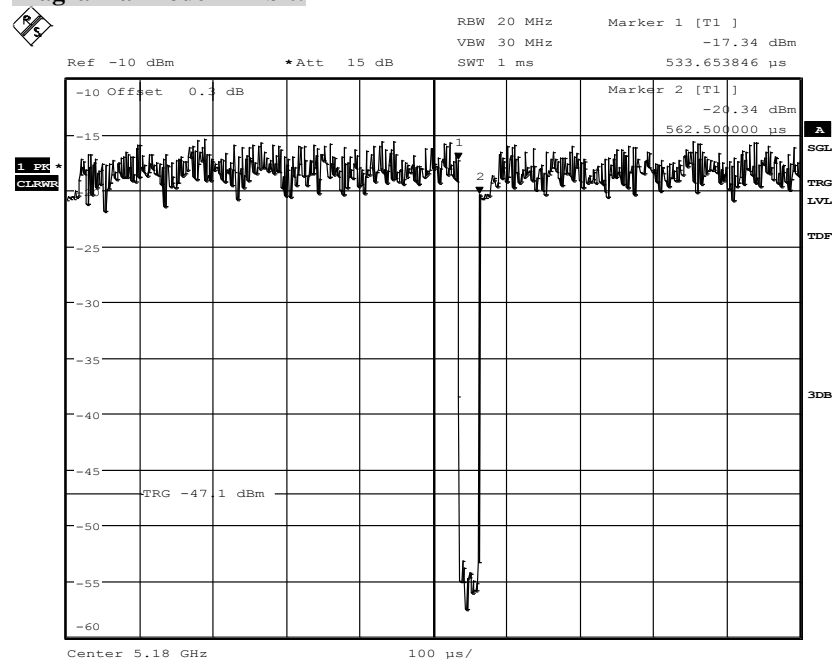
Date: 8.JUN.2016 11:04:48

Diagram a-Mode 36Mbit:

	RBW 20 MHz	Marker 1 [T1]
	VBW 30 MHz	-19.03 dBm
Ref -10 dBm	*Att 15 dB SWT 1 ms	365.384615 µs

Marker 2 [T1]
-20.68 dBm
394.230769 µs

Center 5.18 GHz   100 µs/

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Diagram a-Mode 48Mbit:

	RBW 20 MHz	Marker 1 [T1]		
	VBW 30 MHz		-20.89 dBm	
Ref -10 dBm	*Att 15 dB	SWT 600 µs	275.961538 µs	

-10 Offset 0.3 dB

Marker 2 [T1]
-22.86 dBm
303.846154 µs

Center 5.18 GHz   60 µs/

TRG -47.1 dBm
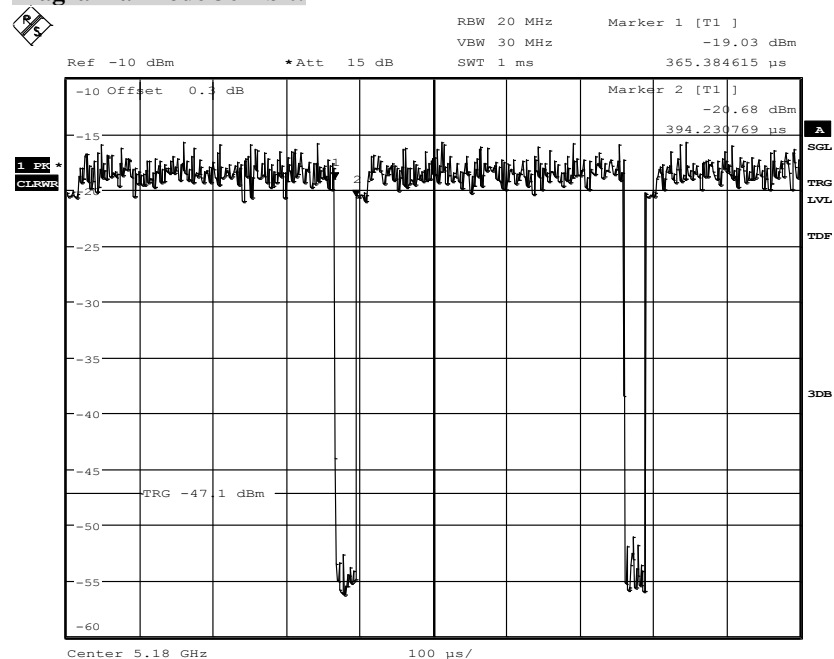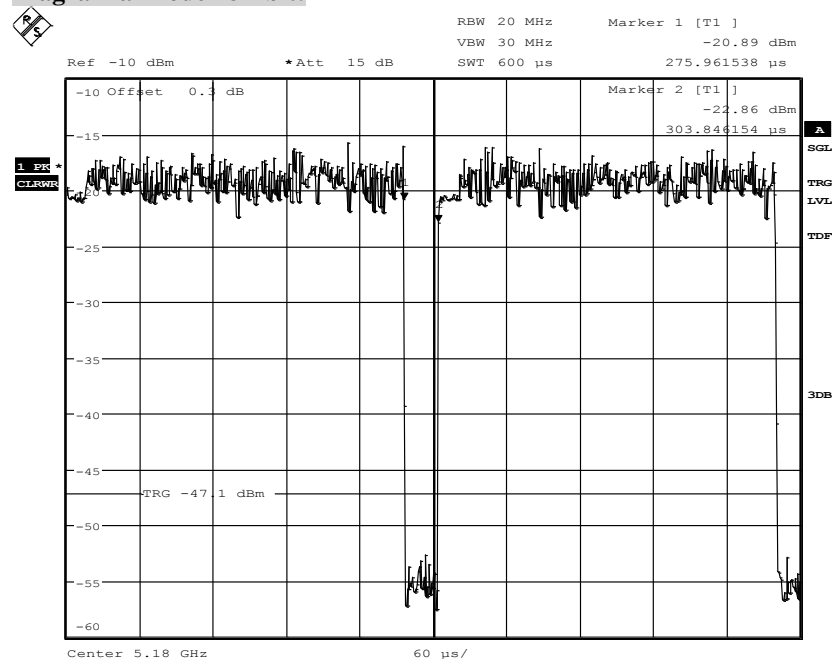
Date: 8.JUN.2016 10:58:55

Diagram a-Mode 54Mbit:

	RBW 20 MHz	Marker 1 [T1]		
	VBW 30 MHz		-18.89 dBm	
Ref -10 dBm	*Att 15 dB	SWT 600 µs	247.115385 µs	

-10 Offset 0.3 dB

Marker 2 [T1]
-22.31 dBm
276.923077 µs

Center 5.18 GHz   60 µs/

TRG -47.1 dBm
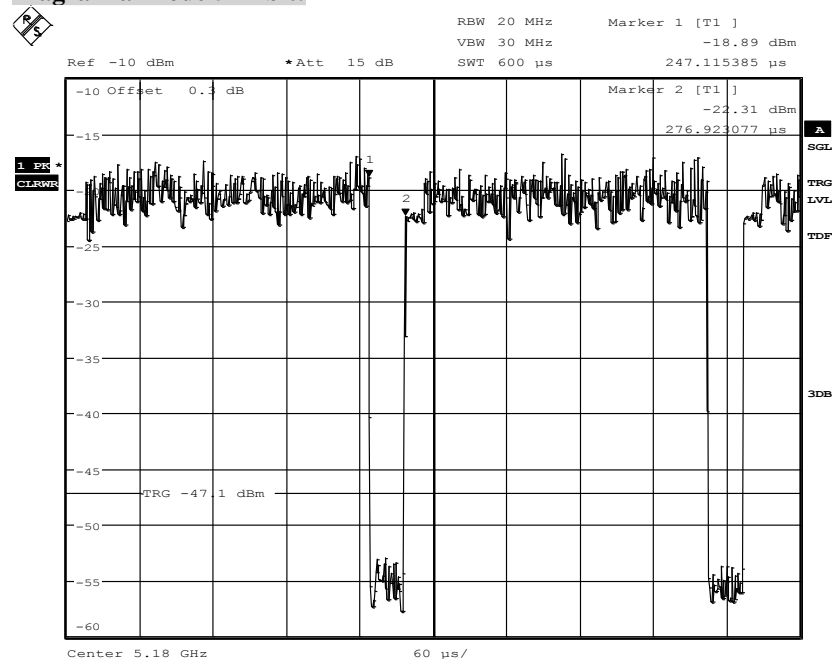
Date: 8.JUN.2016 10:57:42

Diagram n-Mode(HT20) MCS0:

```
                              RBW 20 MHz      Marker 1 [T1 ]
                              VBW 30 MHz           -18.40 dBm
    Ref -10 dBm      *Att 15 dB    SWT 2 ms        1.741026 ms

     -10 Offset   0.3 dB                  Marker 2 [T1 ]
                                               -19.74 dBm
     -15                                        1.769231 ms    SGL
1 PK
CLRWR
     -20                                                       TRG
                                                               LVL

     -25                                                       TDF

     -30

     -35

     -40

     -45                                                       3DB

          TRG -47.1 dBm
     -50

     -55

     -60
    Center 5.18 GHz              200 µs/
```
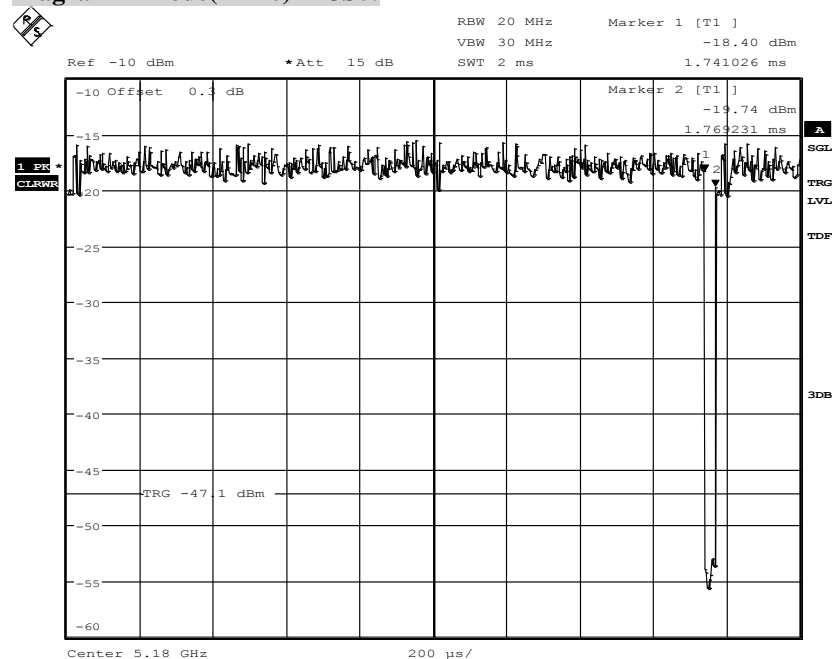
Date: 8.JUN.2016 11:07:42

Diagram n-Mode(HT20) MCS2:

```
                              RBW 20 MHz      Marker 1 [T1 ]
                              VBW 30 MHz           -22.67 dBm
    Ref -10 dBm      *Att 15 dB    SWT 1 ms        604.166667 µs

     -10 Offset   0.3 dB                  Marker 2 [T1 ]
                                               -21.28 dBm
     -15                                        633.012821 µs   SGL
1 PK
CLRWR                                                          TRG
                                                               LVL

     -25                                                       TDF

     -30

     -35

     -40

     -45                                                       3DB

          TRG -47.1 dBm
     -50

     -55

     -60
    Center 5.18 GHz              100 µs/
```
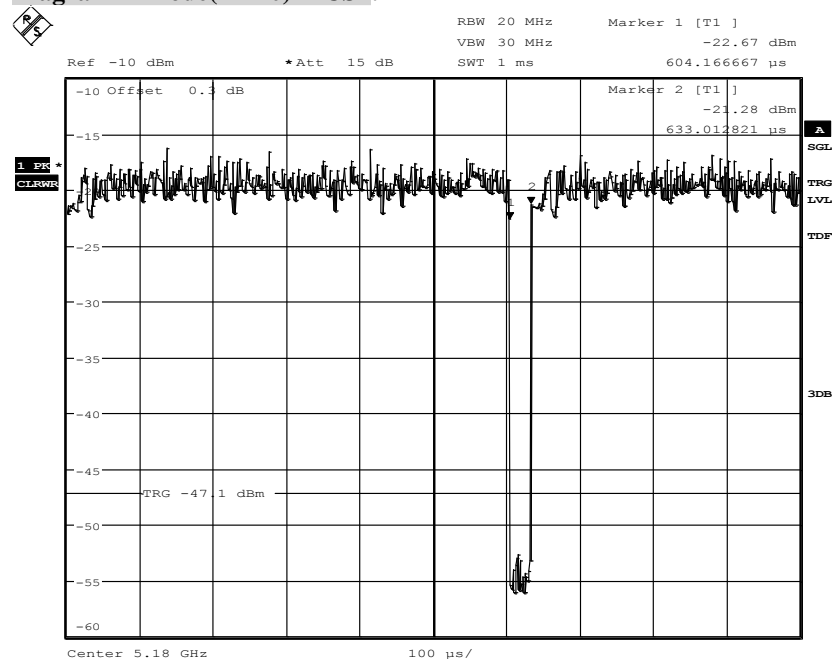
Date: 8.JUN.2016 11:25:25

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Diagram n-Mode(HT20) MCS3:
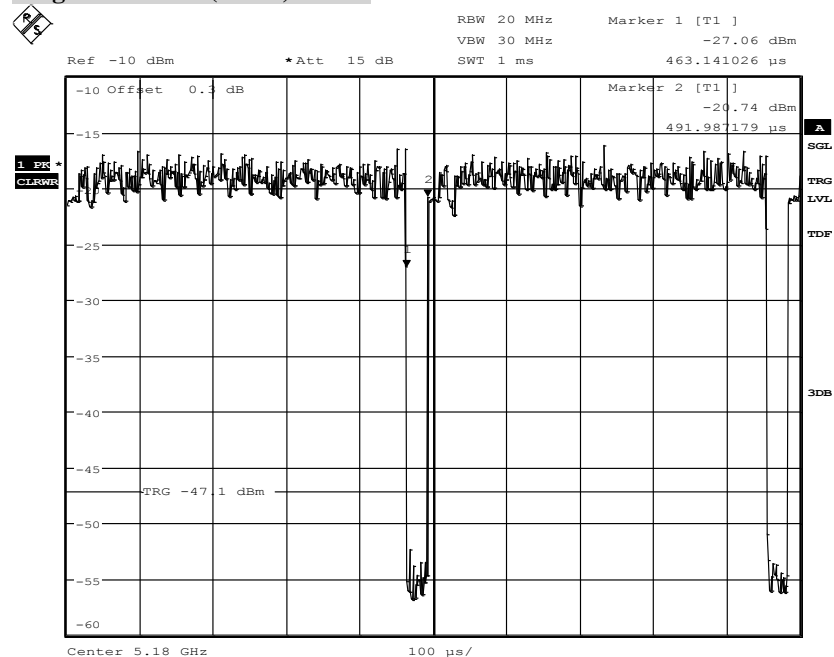
Date: 8.JUN.2016 11:29:38

Diagram n-Mode(HT20) MCS4:
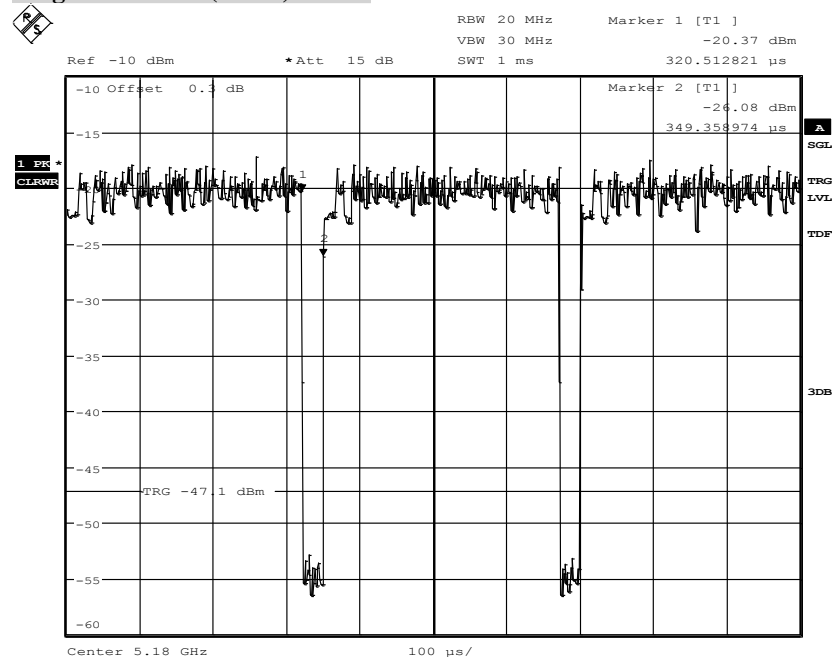
Date: 8.JUN.2016 11:26:41

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Diagram n-Mode(HT20) MCS5:
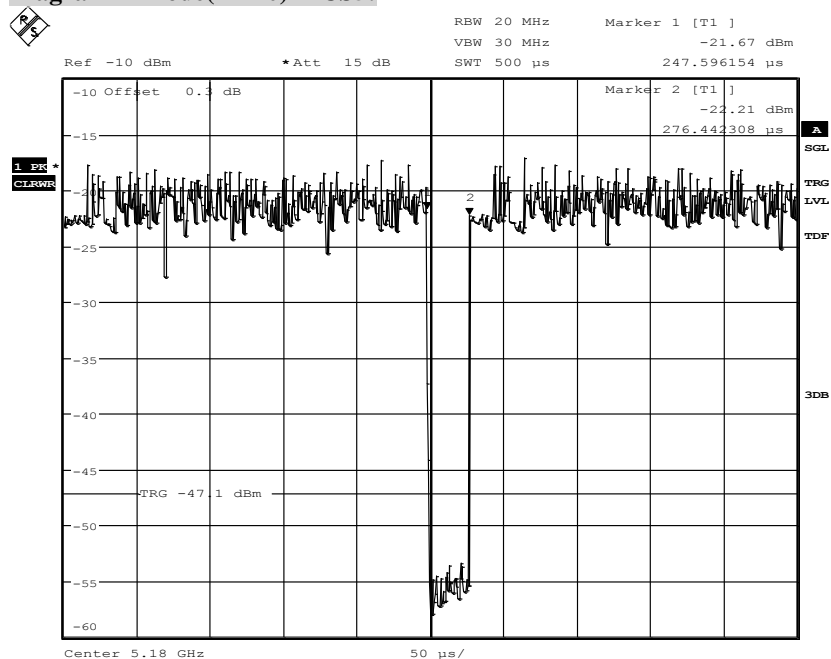
Date: 8.JUN.2016 11:35:21

Diagram n-Mode(HT20) MCS6:
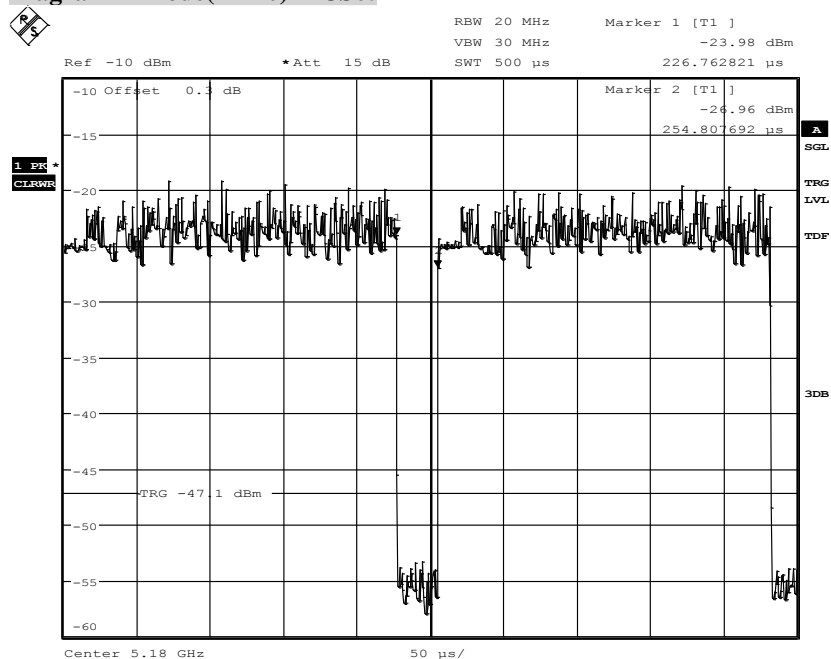
Date: 8.JUN.2016 11:33:35

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Diagram n-Mode(HT20) MCS7:

Date: 8.JUN.2016 11:32:15

Diagram n-Mode(HT20) MCS7:

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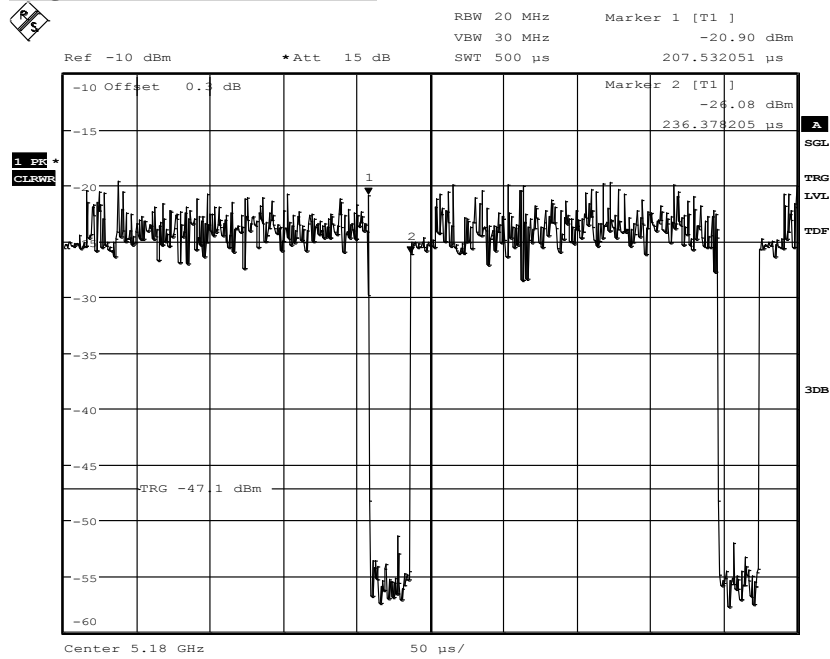
2. Maximum Peak Conducted Output Power

2.1. 20MHz signal BW

Operational bands:	U-NII 1			U-NII-2A			U-NII 2C			U-NII-3		
Channel no.:	Channel 36 (5180MHz)	Channel 40 (5200MHz)	Channel 48 (5240MHz)	Channel 52 5260MHz	Channel 56 (5280MHz)	Channel 64 (5320MHz)	Channel 100 (5500MHz)	Channel 116 (5580MHz)	Channel 140 (5700MHz)	Channel 149 (5745MHz)	Channel 157 (5785MHz)	Channel 165 (5825MHz)
a-Mode/(90% Power level)												
6Mbit	14,33	14,32	14,32	13,83	13,74	12,32	12,05	11,95	11,13	11,76	12,50	12,73
9Mbit	14,32	14,35	14,31	13,81	13,76	12,25	12,03	11,93	11,13	11,78	12,49	12,75
12Mbit	14,35	14,39	14,30	13,82	13,80	12,17	12,06	11,96	11,18	11,84	12,53	12,79
18Mbit	14,29	14,34	14,24	13,75	13,73	12,16	11,98	12,00	11,11	11,77	12,47	12,74
24Mbit	14,39	14,46	14,35	13,88	13,85	12,13	12,13	12,00	11,24	11,91	12,60	12,82
36Mbit	14,25	14,32	14,18	13,69	13,68	11,96	11,99	11,94	11,05	11,85	12,42	12,69
48Mbit	14,40	14,32	14,15	13,65	12,64	11,97	12,01	11,86	11,07	11,83	12,44	12,71
54MBit	12,89	12,80	12,68	11,52	11,48	10,95	10,92	11,17	10,38	10,63	11,21	11,72
n(HT20)-Mode/(90% Power level)												
MCS0 -6.5Mbps	14,20	14,32	14,26	13,70	13,74	11,95	12,06	11,85	11,13	11,78	12,53	12,69
MCS1 - 13Mbps	13,47	13,829	13,84	13,26	13,59	11,82	12,02	11,74	11,09	11,65	12,40	12,62
MCS2 - 19.5Mbps	14,13	14,34	14,12	13,58	13,67	11,79	12,04	11,70	11,07	11,65	12,37	12,67
MCS3 - 26Mbps	13,83	14,46	14,16	13,25	12,63	11,83	12,15	11,73	11,18	11,72	12,40	12,77
MCS4 -39Mbps	12,37	12,44	13,04	11,35	11,49	10,80	10,56	10,93	9,82	10,53	11,06	11,02
MCS5 - 52MBps	12,10	12,36	12,53	11,35	11,48	10,79	10,58	10,94	9,82	10,52	11,12	11,01
MCS6 - 58.5MBps	9,22	9,45	9,67	9,24	9,30	8,82	8,32	9,27	8,17	8,19	8,74	9,23
MCS7 - 65MBps	9,15	9,38	9,67	9,20	9,32	8,84	8,33	8,81	8,09	8,22	8,75	9,19

Operational bands:	U-NII 1 (Outdoor use: EIRP-Limit of 21dBm)	U-NII-2A	U-NII 2C	U-NII 3
FCC-Limits [dBm]	24,00	23,98	23,98	30,00

Limit Check:	Limit Check:			
Highest conducted power value over channels and modulations:	14,46	13,9	12,2	12,8
Margin to Limit:	9,54	10,10	11,83	17,18
Declared antenna Gain:	5,88	5,88	5,88	5,88
Verdict:	pass	pass	pass	pass

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.
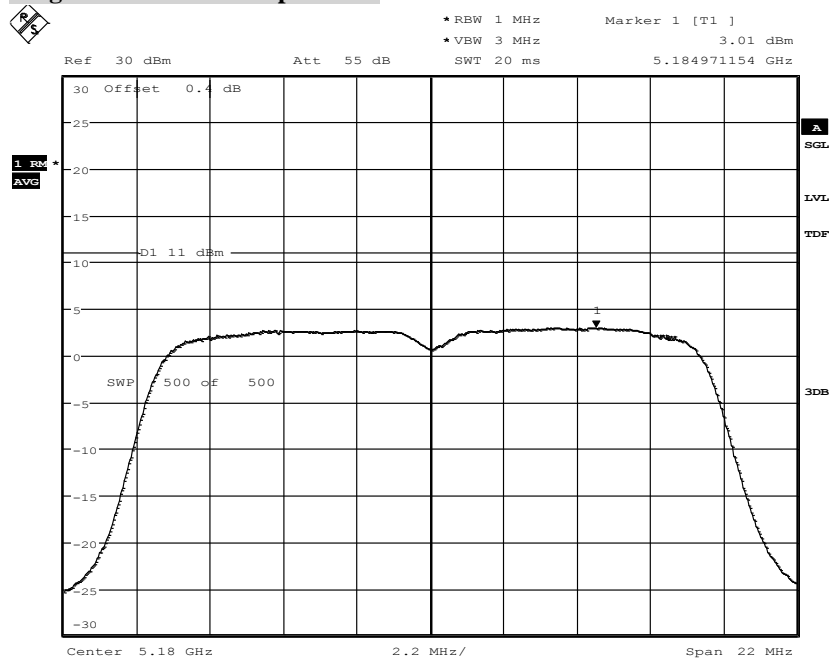3.) The above values are inclusive Duty cycle correction factors.

3. Conducted Power Spectral Density
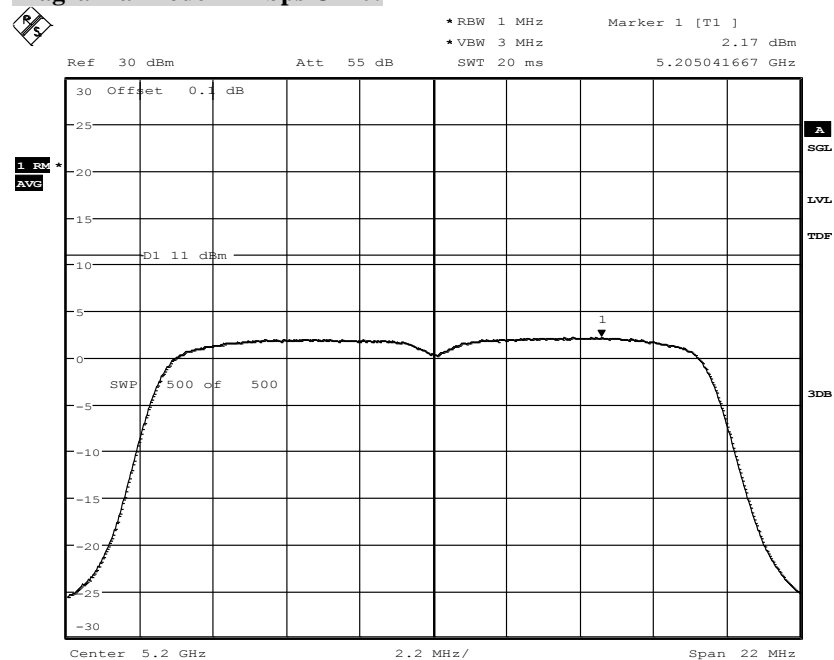
Diagram a-Mode 6Mbps Ch36:

```
                          *RBW  1 MHz        Marker 1 [T1 ]
                          *VBW  3 MHz                    2.18 dBm
   Ref  30 dBm      Att  55 dB    SWT 20 ms    5.184301282 GHz

 30  Offset  0.1  dB                                         A
  25                                                         SGL
1 RM *
AVG  20                                                      LVL

  15                                                         TDF
D1 11 dBm
  10

   5                                   1

   0
SWP  500 of  500
  -5                                                         3DB

 -10

 -15

 -20

 -25

 -30
   Center  5.18 GHz         2.2 MHz/            Span  22 MHz
```
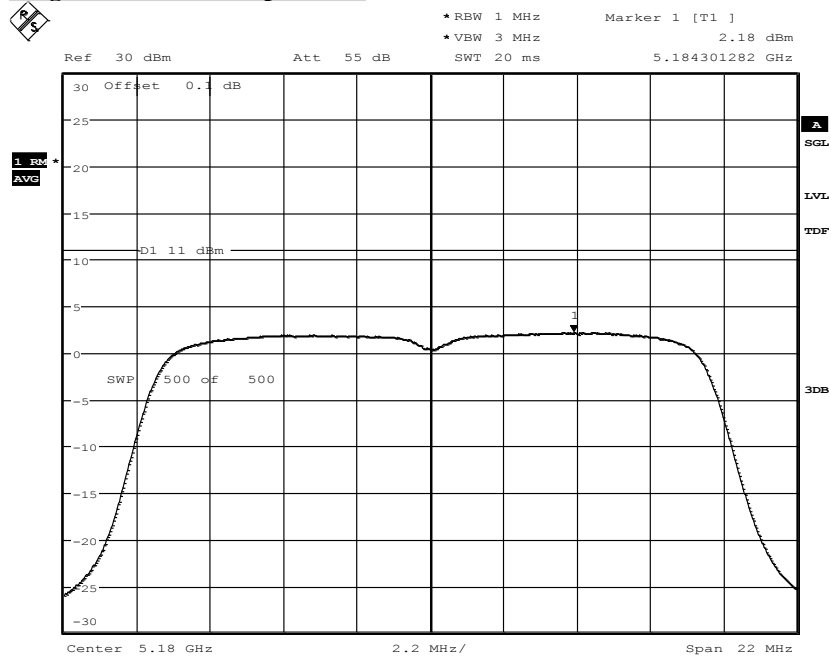
Date: 9.JUN.2016 10:43:39

Diagram a-Mode 48Mbps Ch36:

```
                          *RBW  1 MHz        Marker 1 [T1 ]
                          *VBW  3 MHz                    3.01 dBm
   Ref  30 dBm      Att  55 dB    SWT 20 ms    5.184971154 GHz

 30  Offset  0.4  dB                                         A
  25                                                         SGL
1 RM *
AVG  20                                                      LVL

  15                                                         TDF
D1 11 dBm
  10

   5                                  1

   0
SWP  500 of  500
  -5                                                         3DB

 -10

 -15

 -20

 -25

 -30
   Center  5.18 GHz         2.2 MHz/            Span  22 MHz
```

Date: 9.JUN.2016 10:46:54

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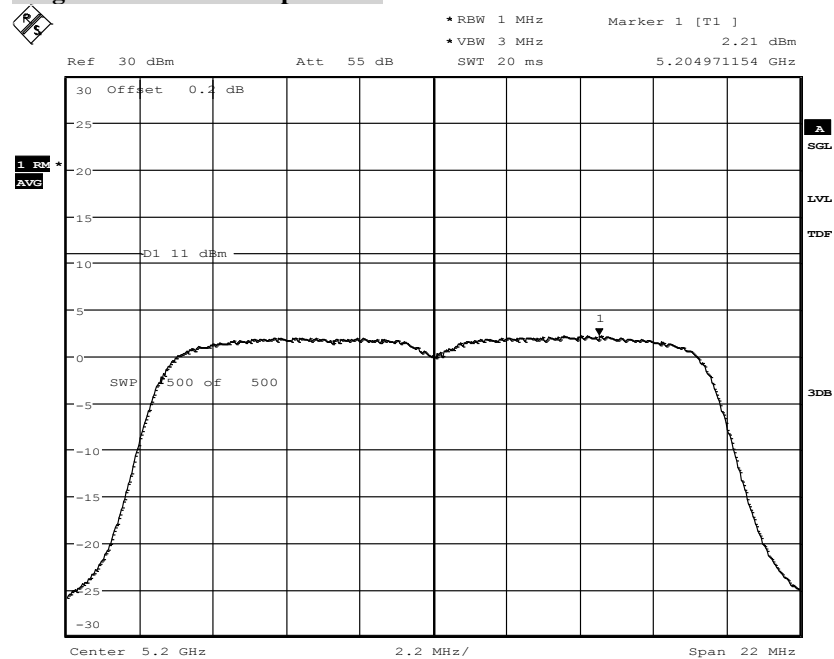
Diagram a-Mode 12Mbps Ch40:
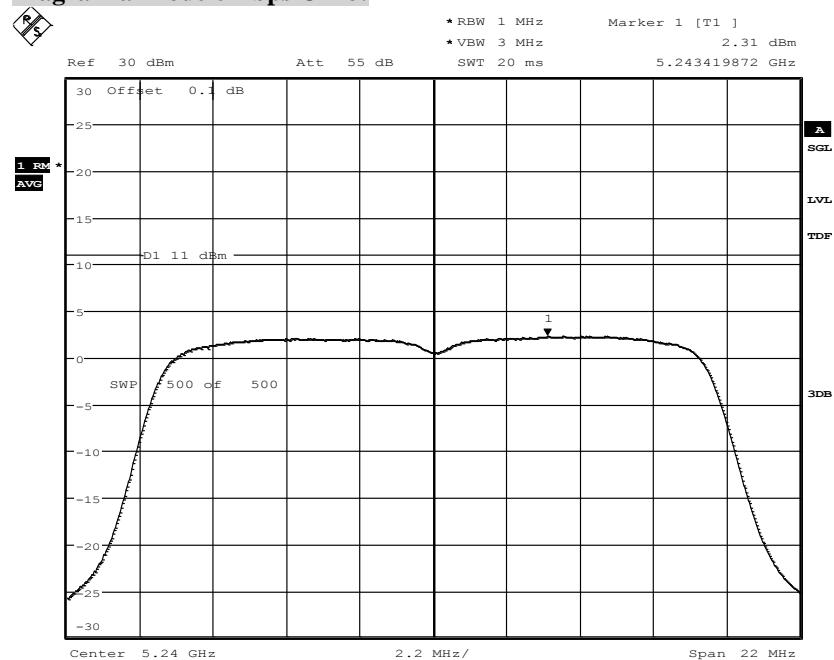

Date: 9.JUN.2016 10:51:21

Diagram a-Mode 24Mbps Ch40:

Date: 9.JUN.2016 10:54:13

Diagram a-Mode 6Mbps Ch48:
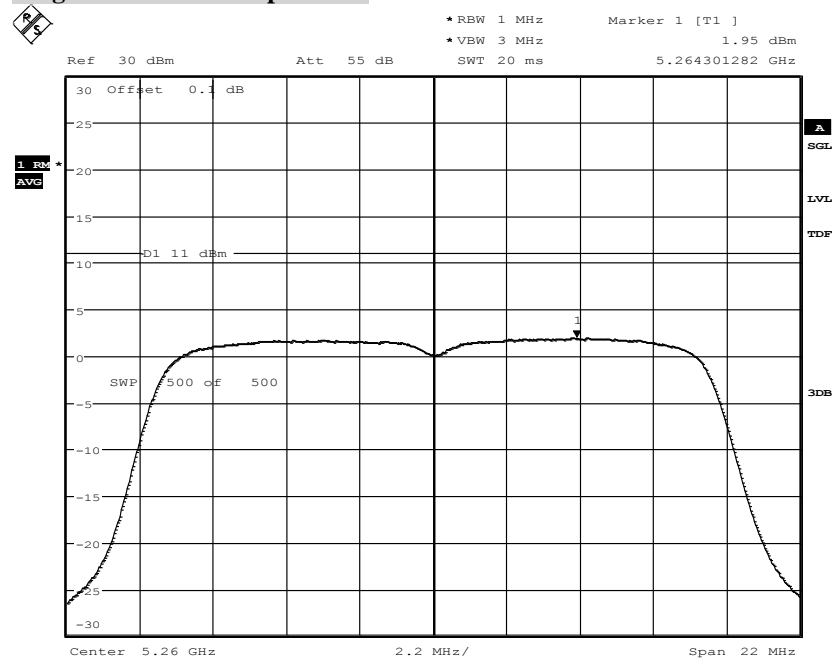
```
                              *RBW  1 MHz      Marker 1 [T1 ]
                              *VBW  3 MHz                 2.31 dBm
  Ref   30 dBm      Att  55 dB   SWT 20 ms      5.243419872 GHz

  30  Offset   0.1 dB                                          A
 -25                                                          SGL
 -20                                                          LVL
 -15                                                          TDF
 D1 11 dBm
 -10
  -5                                    1
   0
  SWP  500 of   500                                           3DB
  -5
 -10
 -15
 -20
 -25
 -30
  Center  5.24 GHz          2.2 MHz/            Span 22 MHz
```

Date: 9.JUN.2016 10:59:05

Diagram a-Mode 24Mbps Ch48:

```
                              *RBW  1 MHz      Marker 1 [T1 ]
                              *VBW  3 MHz                 2.24 dBm
  Ref   30 dBm      Att  55 dB   SWT 20 ms      5.245217949 GHz

  30  Offset   0.2 dB                                          A
 -25                                                          SGL
 -20                                                          LVL
 -15                                                          TDF
 D1 11 dBm
 -10
  -5                                    1
   0
  SWP  500 of   500                                           3DB
  -5
 -10
 -15
 -20
 -25
 -30
  Center  5.24 GHz          2.2 MHz/            Span 22 MHz
```
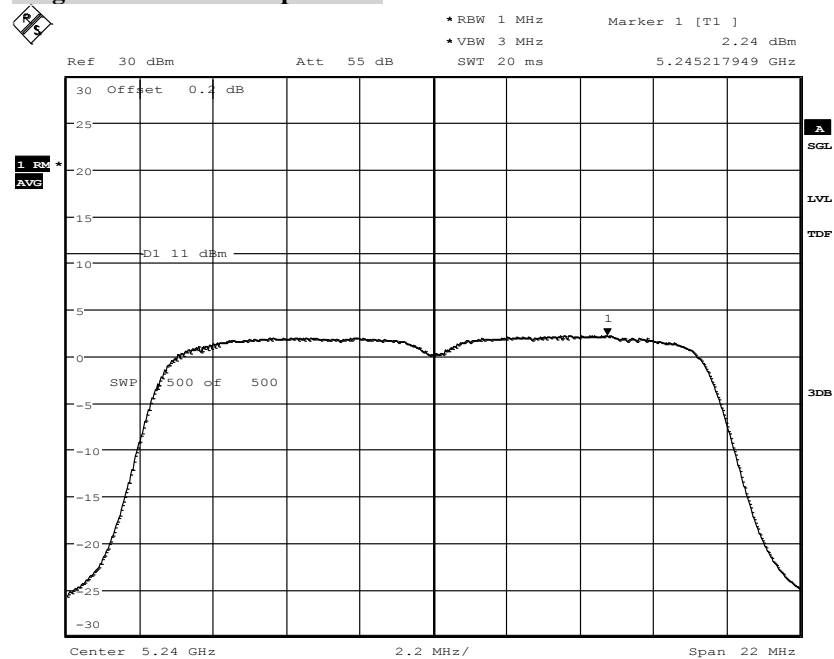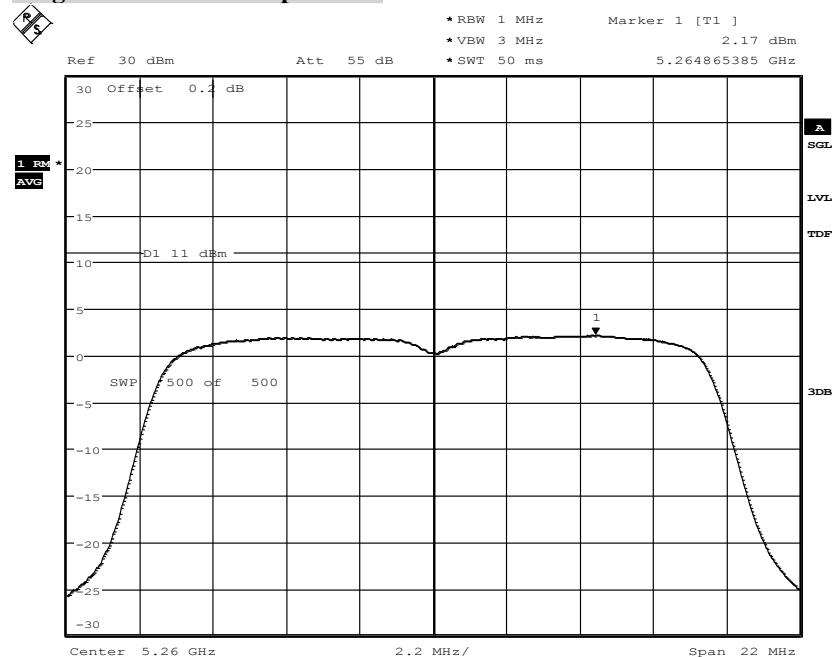
Date: 9.JUN.2016 10:56:14

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Diagram a-Mode 6Mbps Ch52:

Date: 9.JUN.2016 11:03:10

Diagram a-Mode 24Mbps Ch52:
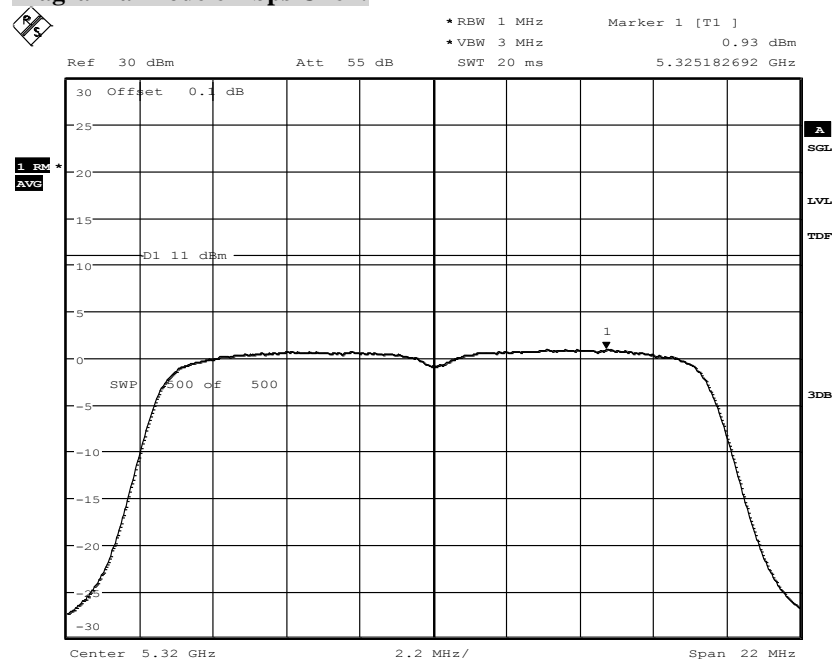

Date: 9.JUN.2016 11:33:49

Diagram a-Mode 6Mbps Ch56:


```
 R
 S

                                    ★RBW  1 MHz      Marker 1 [T1 ]
                                    ▼VBW  3 MHz                1.33 dBm
     Ref   30 dBm          Att  55 dB   SWT 20 ms     5.285147436 GHz

     30  Offset   0.1 dB                                               A
                                                                      SGL
   25
1 RM ★
AVG 20                                                                LVL

   15                                                                 TDF

   10  D1 11 dBm

    5                                1
                                     ▼
    0
        SWP  500 of   500                                             3DB
   -5

  -10

  -15

  -20

  -25
  -30
     Center  5.28 GHz          2.2 MHz/         Span  22 MHz
```
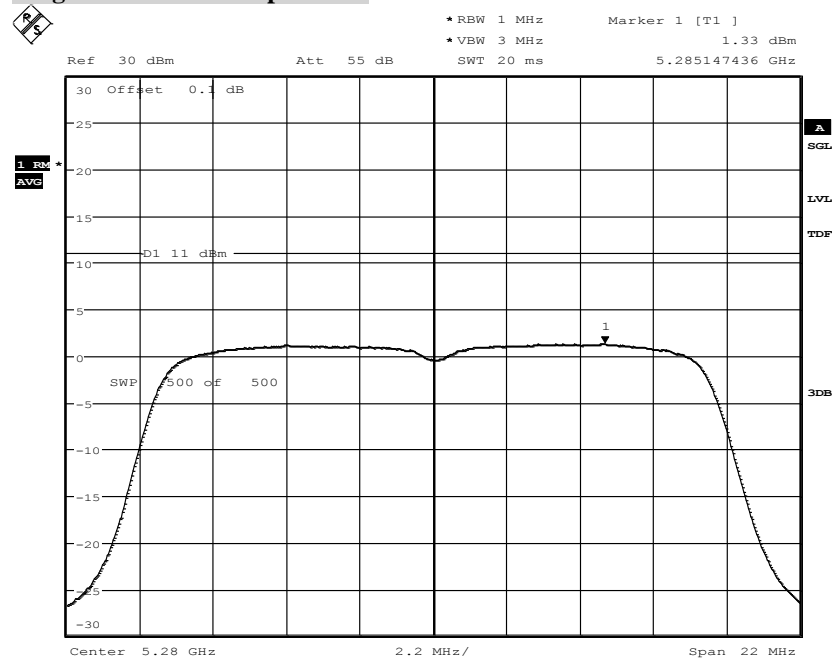
Date: 9.JUN.2016 11:07:01

Diagram a-Mode 24Mbps Ch56:


```
 R
 S

                                    ★RBW  1 MHz      Marker 1 [T1 ]
                                    ▼VBW  3 MHz                1.26 dBm
     Ref   30 dBm          Att  55 dB  ★SWT 50 ms     5.284689103 GHz

     30  Offset   0.2 dB                                               A
                                                                      SGL
   25
1 RM ★
AVG 20                                                                LVL

   15                                                                 TDF

   10  D1 11 dBm

    5
                                     1
    0                                ▼
        SWP  500 of   500                                             3DB
   -5

  -10

  -15

  -20

  -25
  -30
     Center  5.28 GHz          2.2 MHz/         Span  22 MHz
```
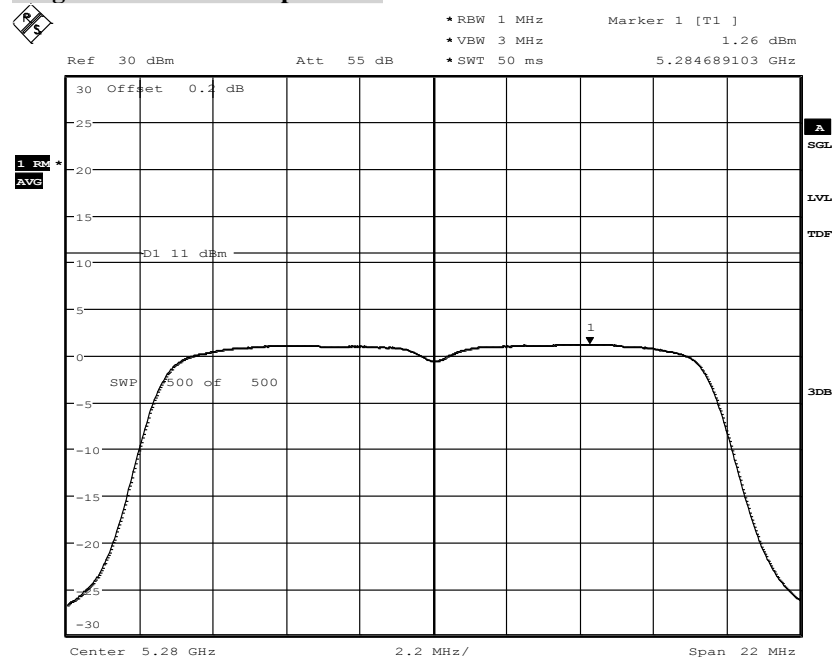
Date: 9.JUN.2016 11:35:25

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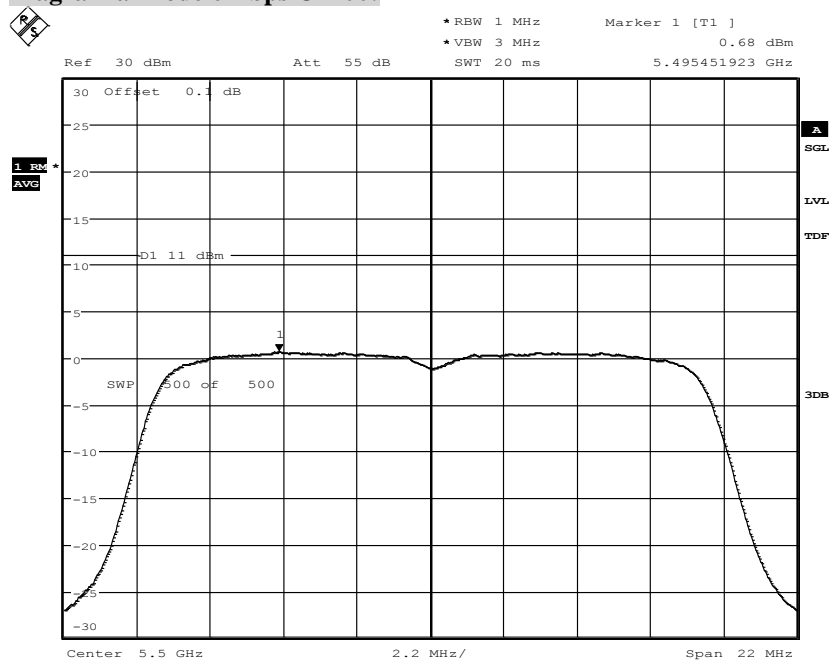**Diagram a-Mode 6Mbps Ch64:**

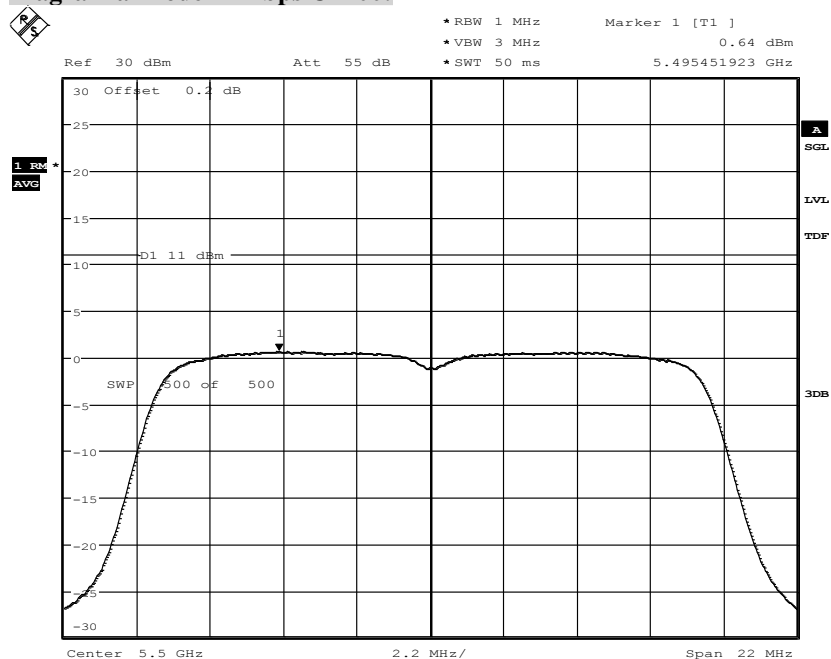Date: 9.JUN.2016 11:08:58

Diagram a-Mode 9Mbps Ch64:
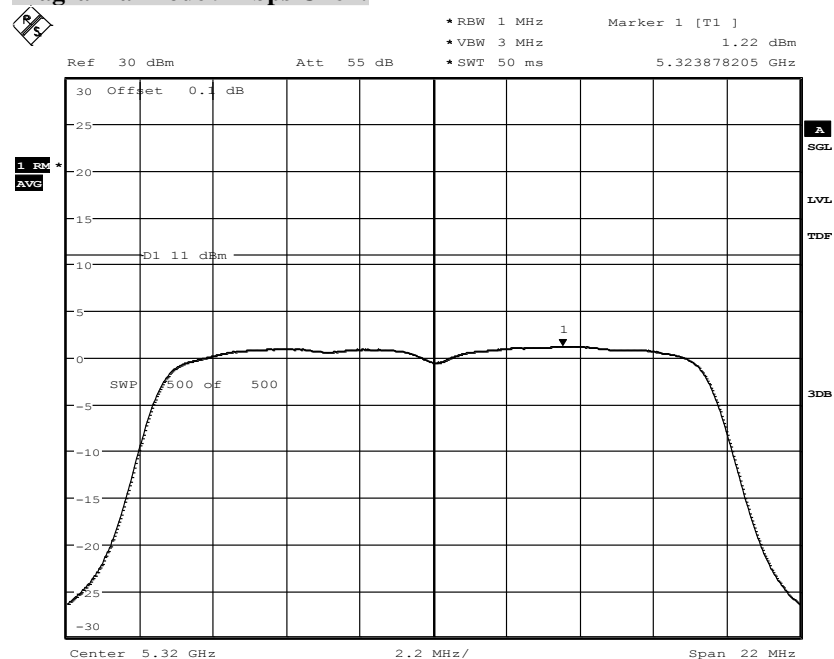
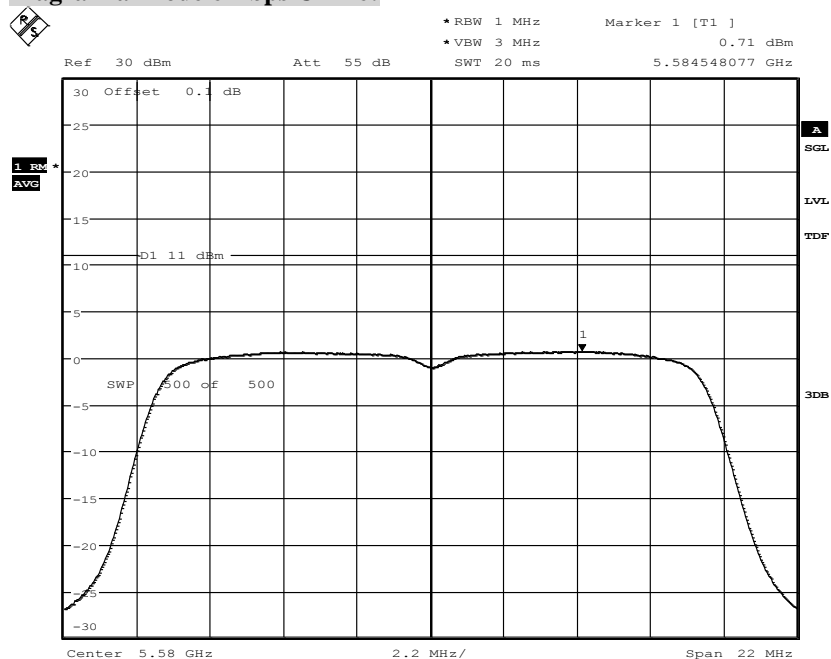

Date: 9.JUN.2016 11:47:36

Diagram a-Mode 6Mbps Ch100:

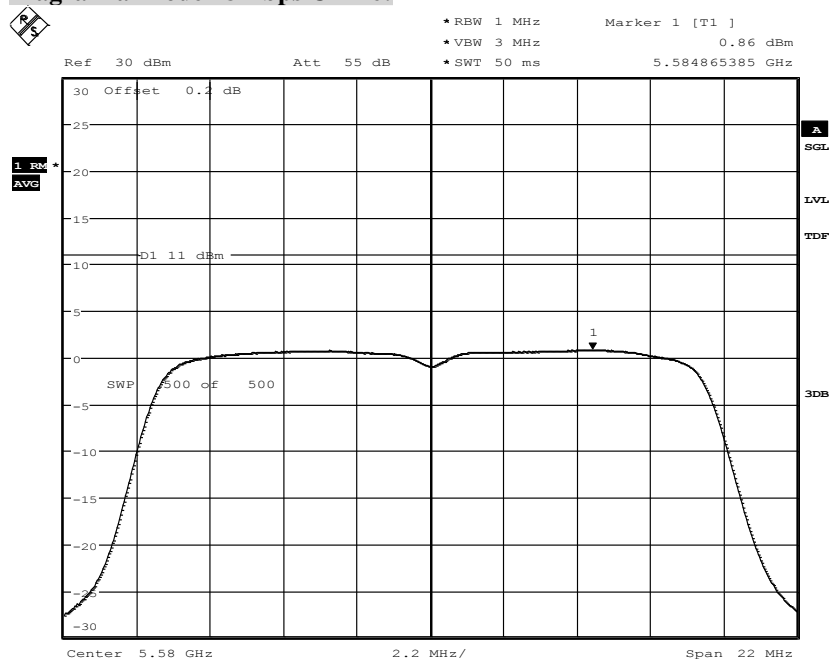Date: 9.JUN.2016 11:12:11

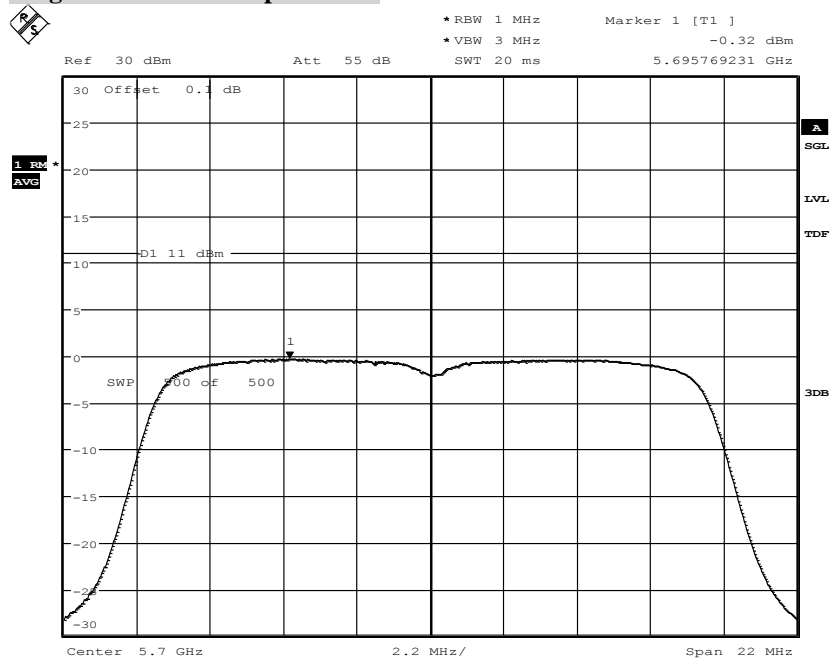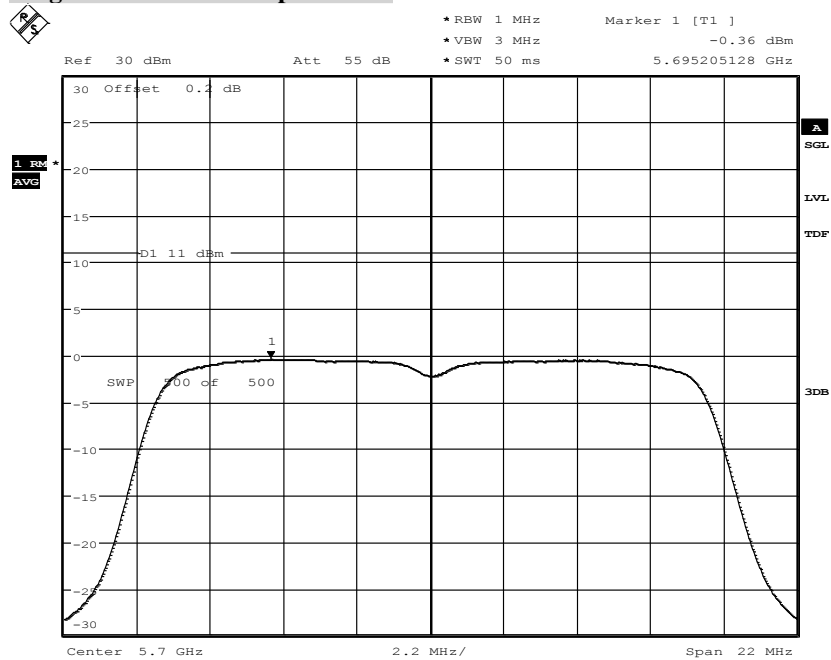**Diagram a-Mode 24Mbps Ch100:**

Date: 9.JUN.2016 11:31:06

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Diagram a-Mode 6Mbps Ch116:

Date: 9.JUN.2016 11:15:38

Diagram a-Mode 18Mbps Ch116:

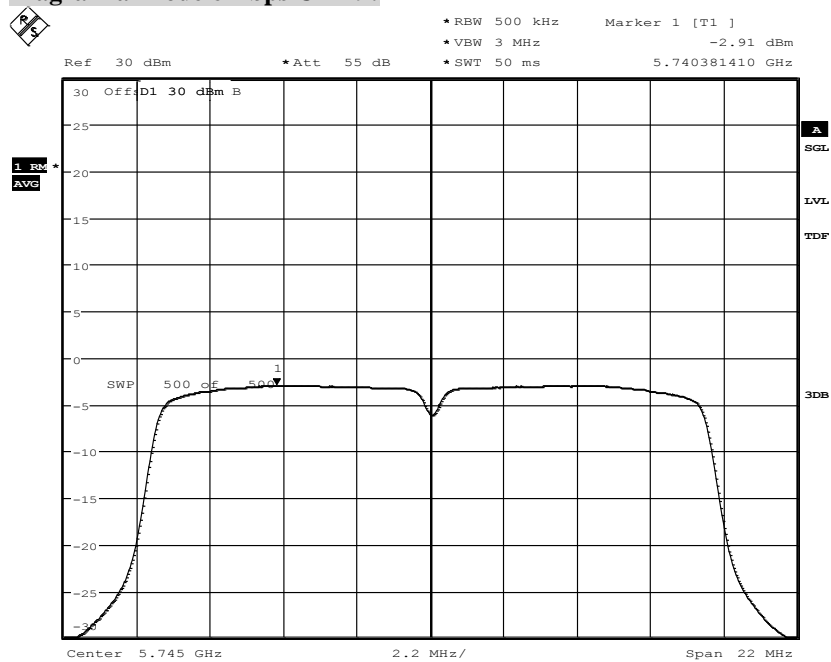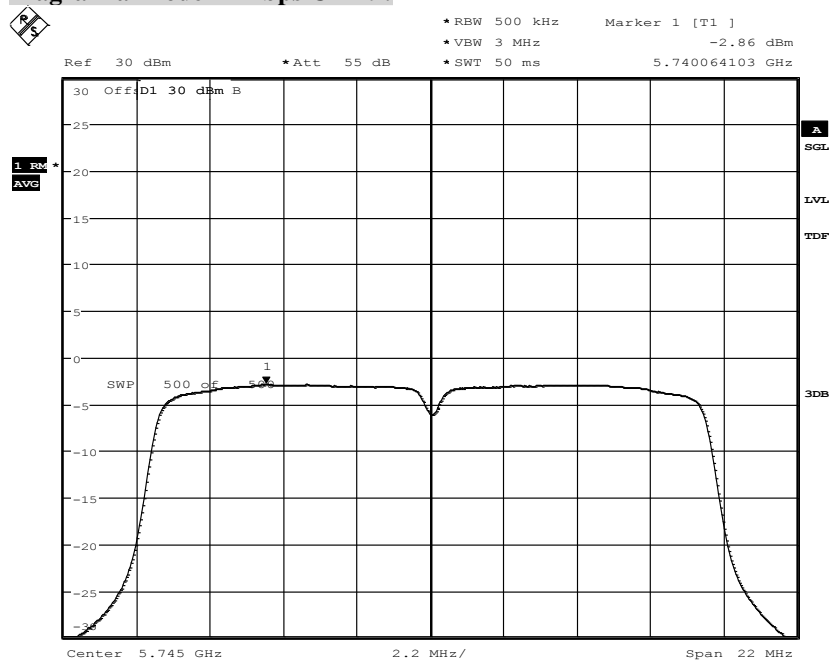

Date: 9.JUN.2016 11:44:06

Diagram a-Mode 6Mbps Ch140:

```
          *RBW  1 MHz      Marker 1 [T1 ]
          *VBW  3 MHz                    -0.32 dBm
Ref  30 dBm        Att  55 dB   SWT 20 ms       5.695769231 GHz
```



```
Center 5.7 GHz          2.2 MHz/          Span  22 MHz
```

Date: 9.JUN.2016 11:20:02

Diagram a-Mode 24Mbps Ch140:

```
          *RBW  1 MHz      Marker 1 [T1 ]
          *VBW  3 MHz                    -0.36 dBm
Ref  30 dBm        Att  55 dB  *SWT 50 ms       5.695205128 GHz
```



```
Center 5.7 GHz          2.2 MHz/          Span  22 MHz
```

Date: 9.JUN.2016 11:27:37

Diagram a-Mode 6Mbps Ch149:

Date: 9.JUN.2016 13:57:05

Diagram a-Mode 12Mbps Ch149:

Date: 9.JUN.2016 13:41:26

TR2-20842790-15-9b-A1

Diagram a-Mode 24Mbps Ch149:
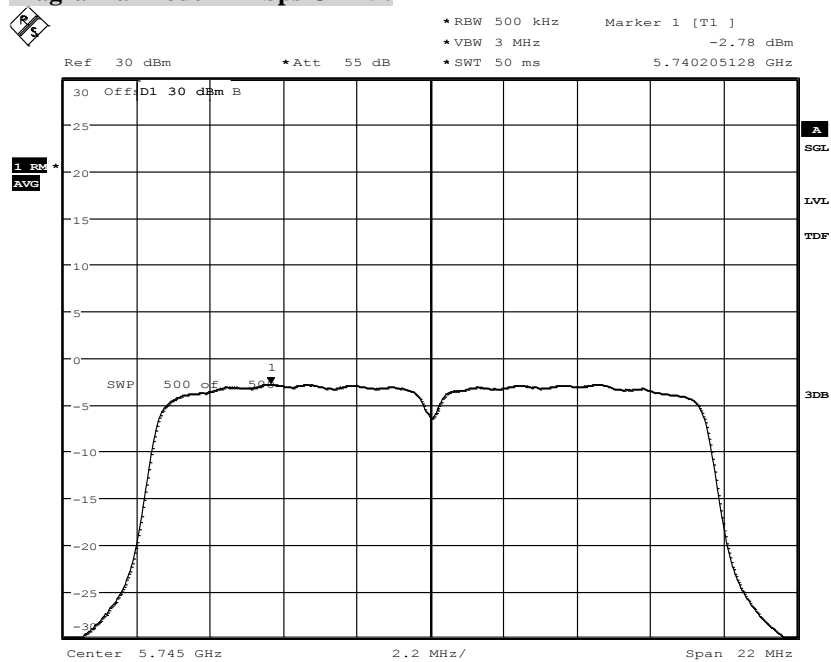
Date: 9.JUN.2016 13:54:18

Diagram a-Mode 6Mbps Ch157:
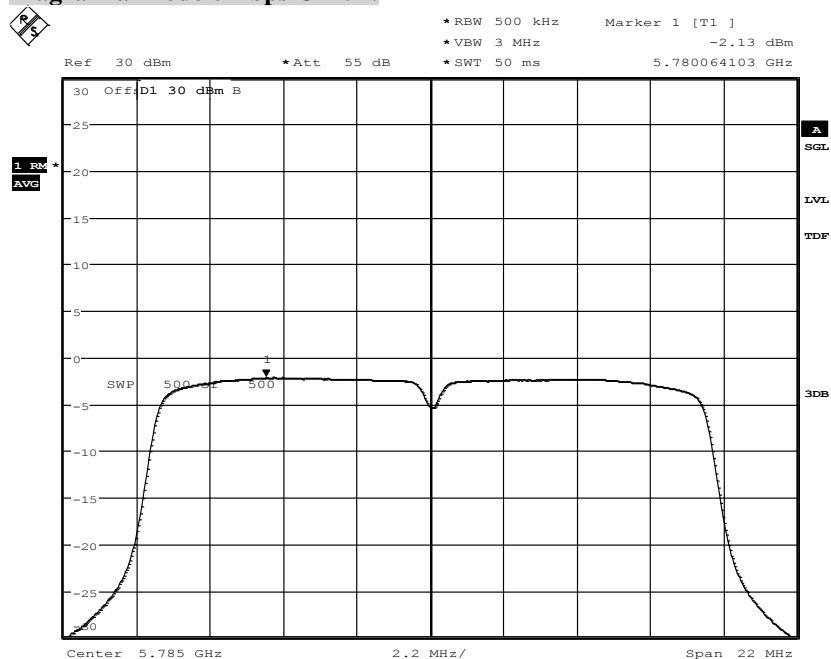
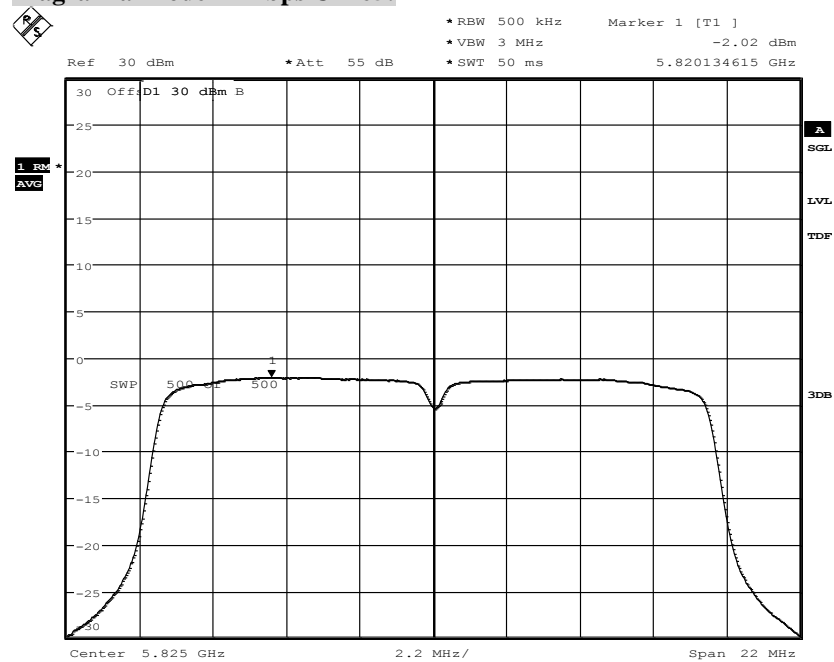
Date: 9.JUN.2016 13:38:54

Diagram a-Mode 24Mbps Ch157:


```
                              * RBW   500 kHz      Marker 1 [T1 ]
                              * VBW   3 MHz                  -1.78 dBm
    Ref   30 dBm     * Att  55 dB   * SWT  50 ms    5.780205128 GHz
```

Center 5.785 GHz   2.2 MHz/   Span 22 MHz
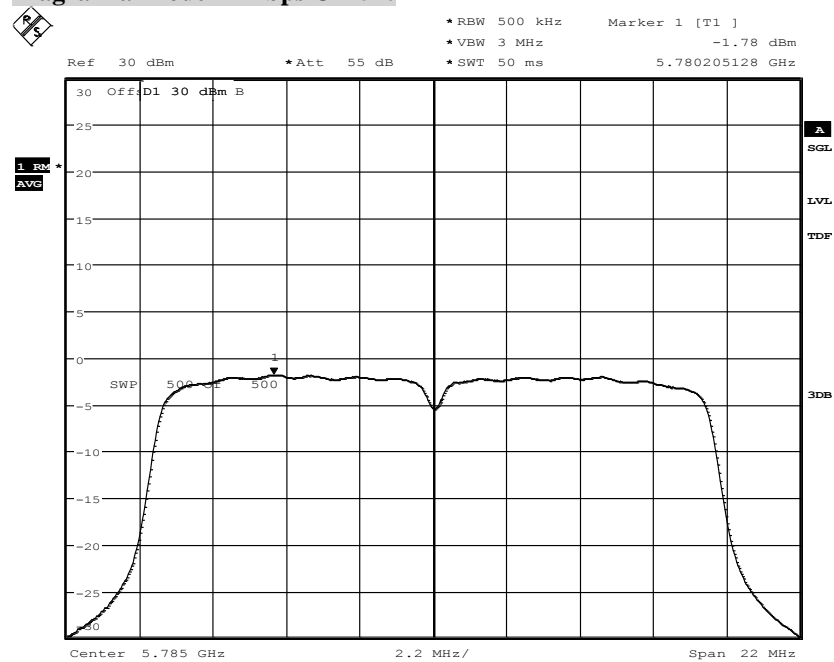
Date: 9.JUN.2016 13:51:35

Diagram a-Mode 6Mbps Ch165:


```
                              * RBW   500 kHz      Marker 1 [T1 ]
                              * VBW   3 MHz                  -2.30 dBm
    Ref   30 dBm     * Att  55 dB   * SWT  50 ms    5.820698718 GHz
```

Center 5.825 GHz   2.2 MHz/   Span 22 MHz
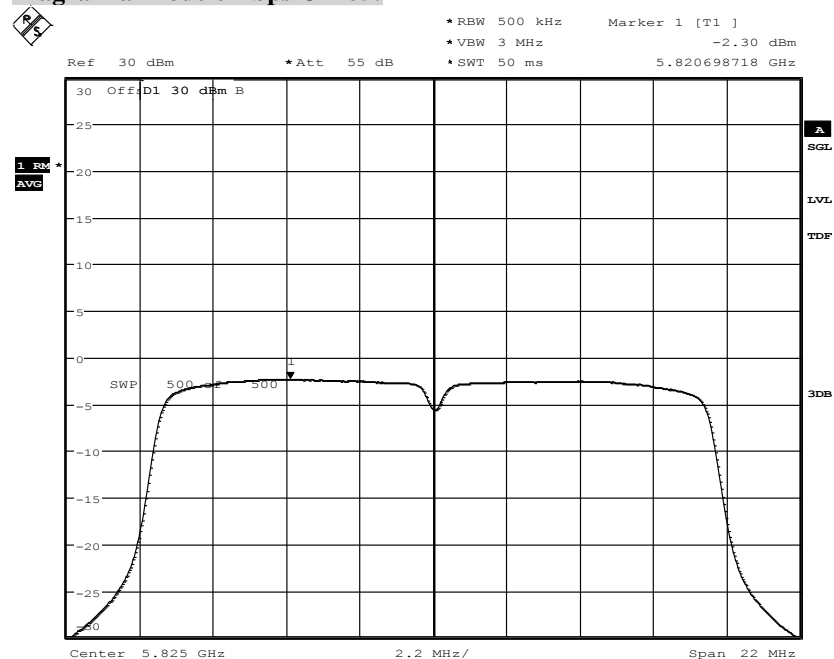
Date: 9.JUN.2016 13:34:55

TR2-20842790-15-9b-A1
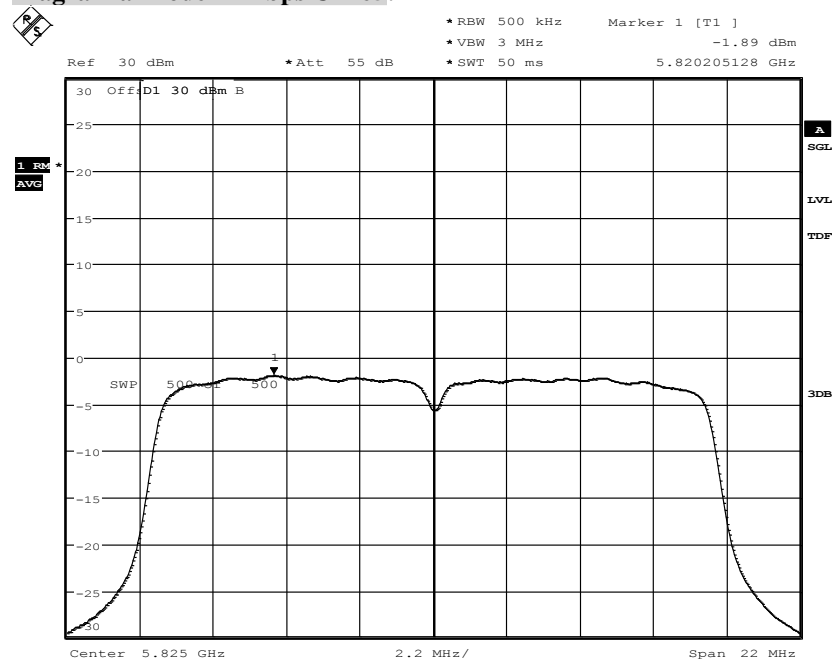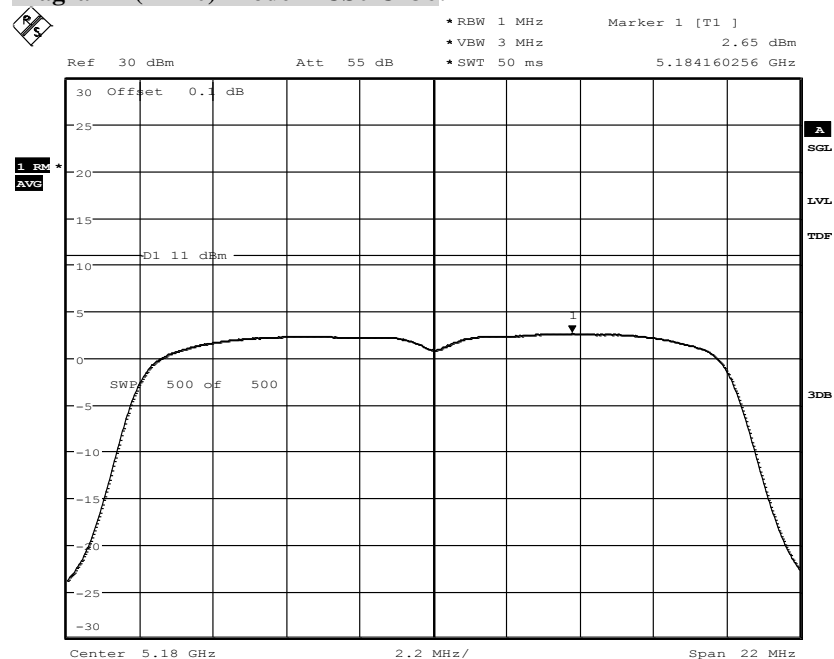
Diagram a-Mode 12Mbps Ch165:

Date: 9.JUN.2016 13:43:05
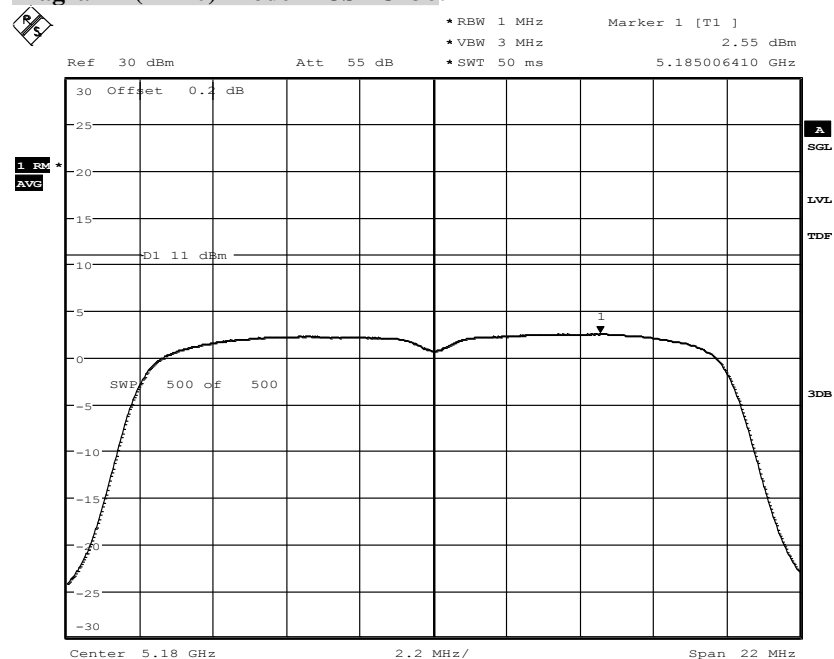
Diagram a-Mode 24Mbps Ch165:

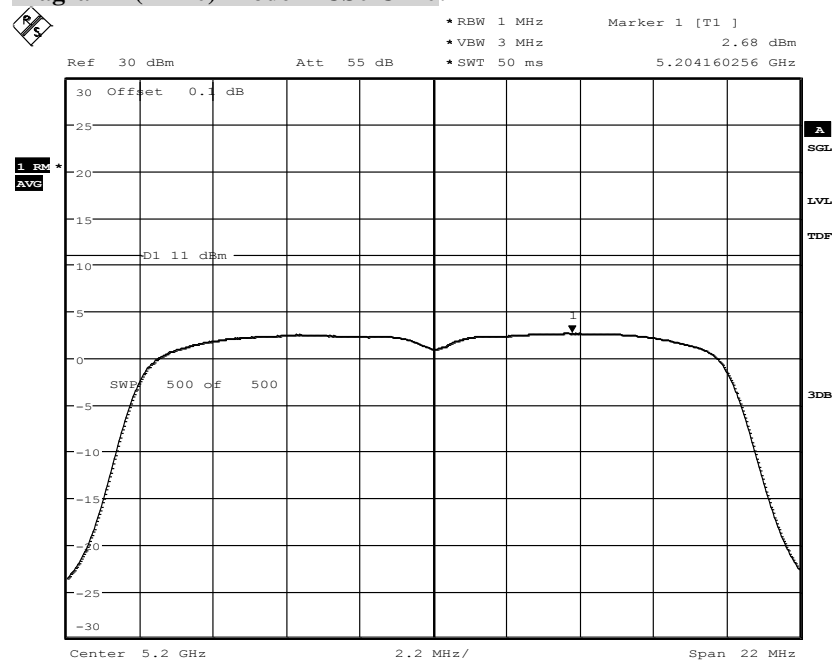Date: 9.JUN.2016 13:47:20

Diagram n(HT20)-Mode MCS0 Ch36:

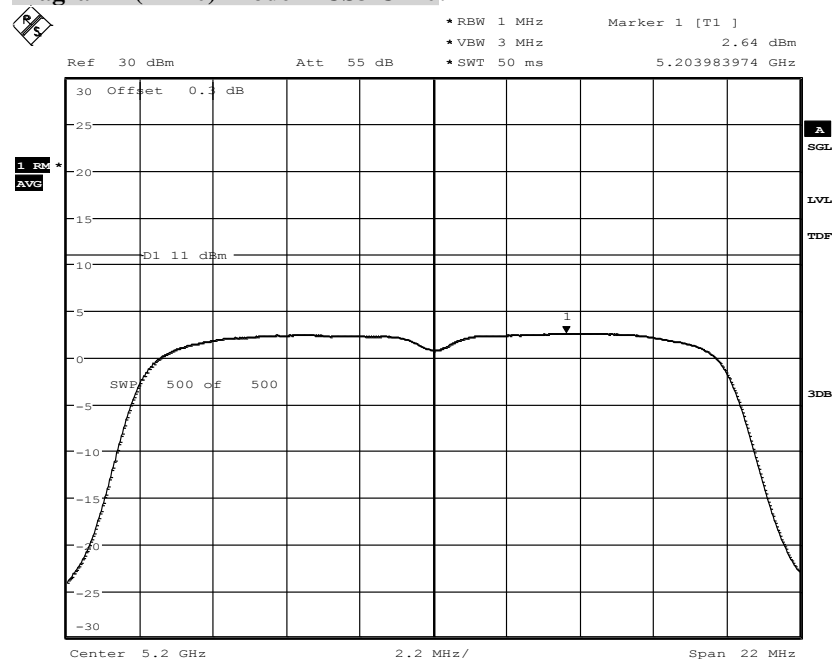Date: 9.JUN.2016 11:50:20

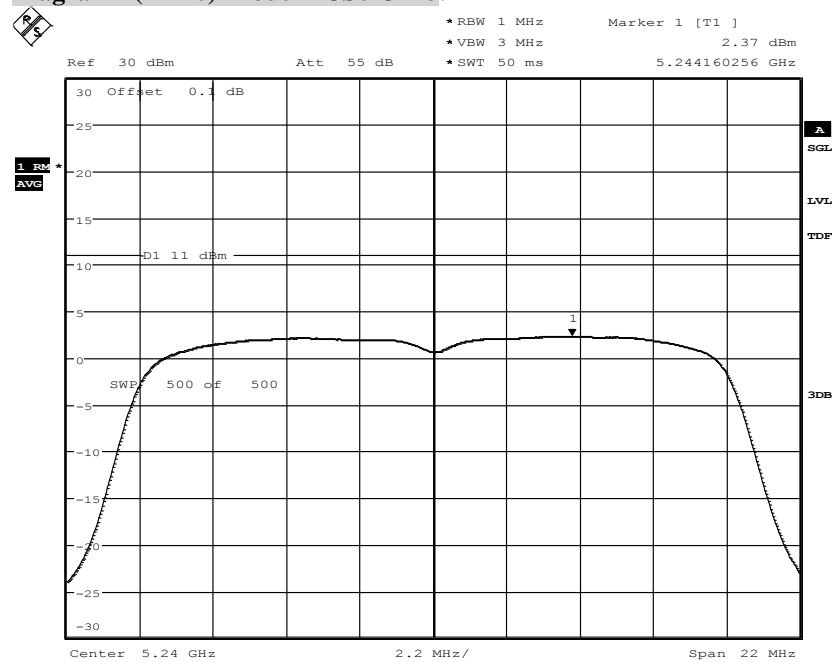### Diagram n(HT20)-Mode MCS2 Ch36:

Date: 9.JUN.2016 12:23:39

TR2-20842790-15-9b-A1

Diagram n(HT20)-Mode MCS0 Ch40:

	* RBW 1 MHz	Marker 1 [T1]
	* VBW 3 MHz	2.68 dBm
Ref 30 dBm	Att 55 dB	* SWT 50 ms	5.204160256 GHz

30 Offset 0.1 dB

Center 5.2 GHz   2.2 MHz/   Span 22 MHz

Date: 9.JUN.2016 11:51:53

Diagram n(HT20)-Mode MCS3 Ch40:

	* RBW 1 MHz	Marker 1 [T1]
	* VBW 3 MHz	2.64 dBm
Ref 30 dBm	Att 55 dB	* SWT 50 ms	5.203983974 GHz

30 Offset 0.1 dB

Center 5.2 GHz   2.2 MHz/   Span 22 MHz

Date: 9.JUN.2016 12:20:16

TR2-20842790-15-9b-A1

Diagram n(HT20)-Mode MCS0 Ch48:

	★RBW 1 MHz	Marker 1 [T1]
	★VBW 3 MHz	2.37 dBm
Ref 30 dBm Att 55 dB	★SWT 50 ms	5.244160256 GHz

```
30 Offset 0.1 dB
```

A
SGL
LVL
TDF
3DB

1 RM
AVG

D1 11 dBm

SWP 500 of 500

Center 5.24 GHz   2.2 MHz/   Span 22 MHz

Date: 9.JUN.2016 11:53:16

Diagram n(HT20)-Mode MCS3 Ch48:

	★RBW 1 MHz	Marker 1 [T1]
	★VBW 3 MHz	2.30 dBm
Ref 30 dBm Att 55 dB	★SWT 50 ms	5.243772436 GHz

```
30 Offset 0.3 dB
```

A
SGL
LVL
TDF
3DB

1 RM
AVG

D1 11 dBm

SWP 500 of 500

Center 5.24 GHz   2.2 MHz/   Span 22 MHz
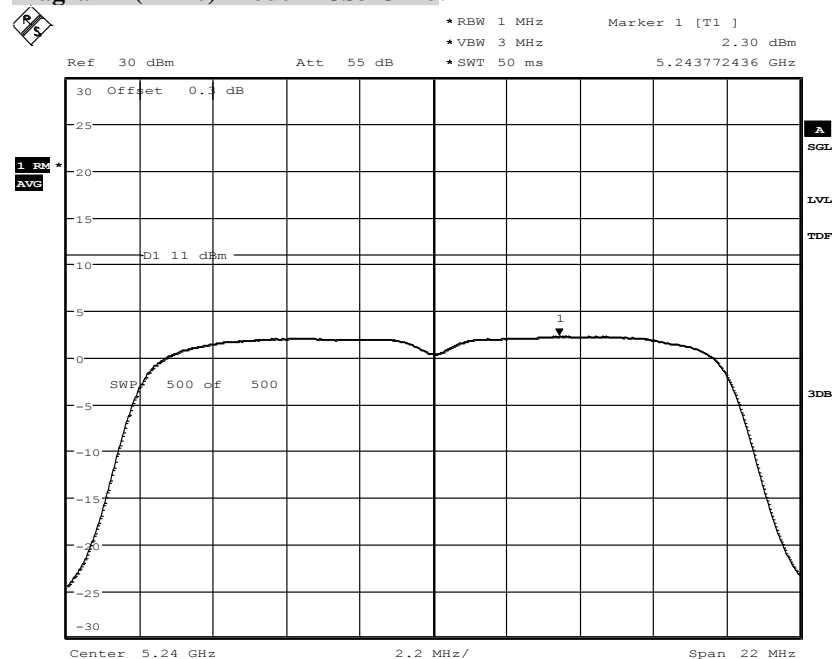
Date: 9.JUN.2016 12:18:35

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Diagram n(HT20)-Mode MCS0 Ch52:

Date: 9.JUN.2016 11:55:41

Diagram n(HT20)-Mode MCS0 Ch56:

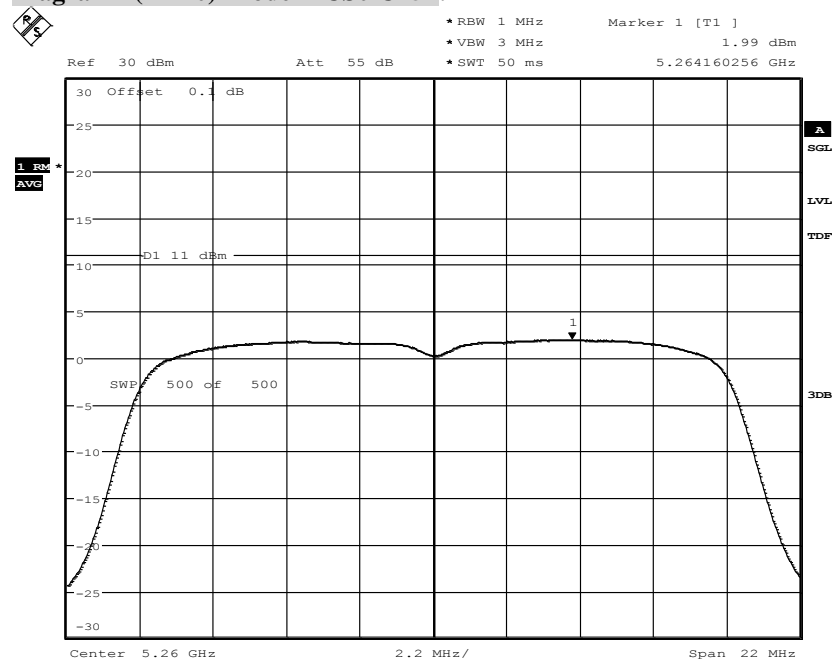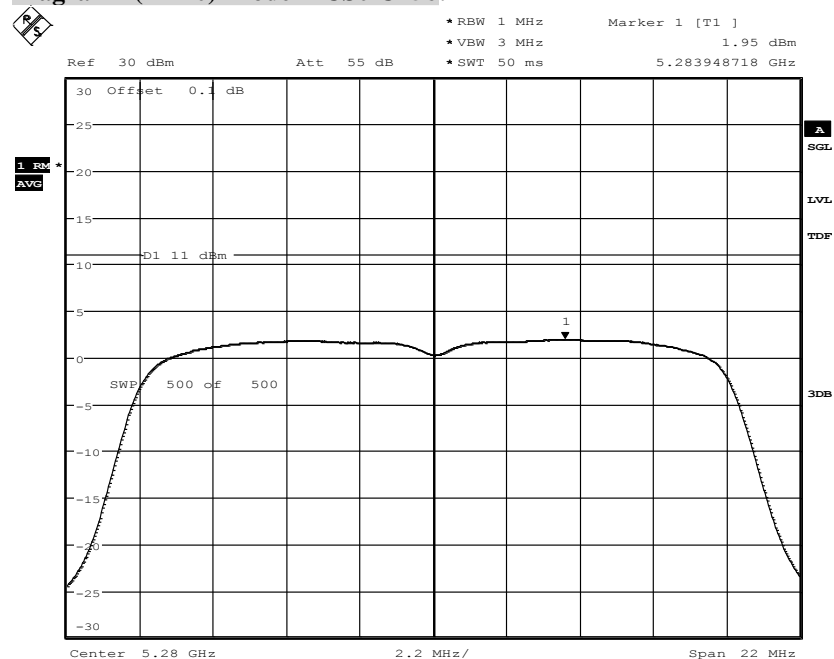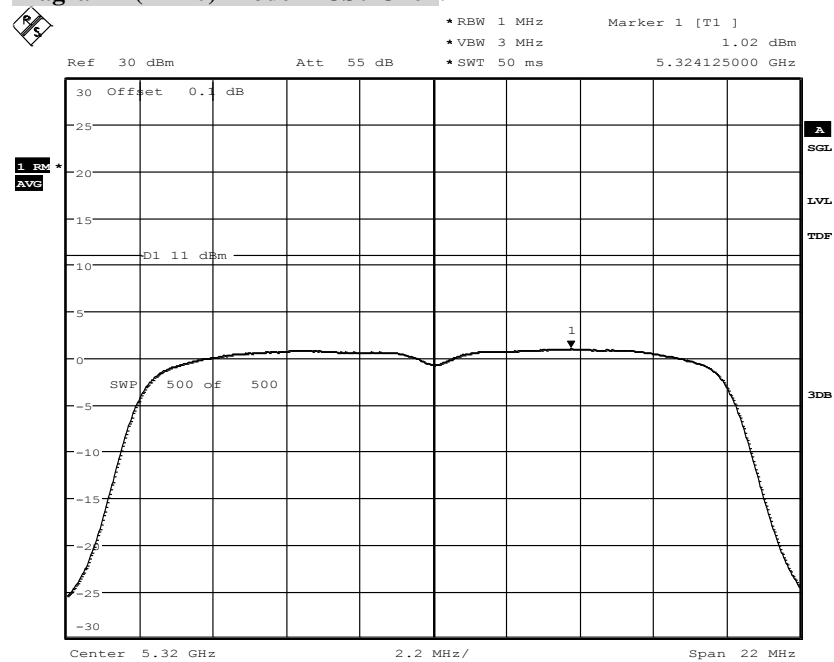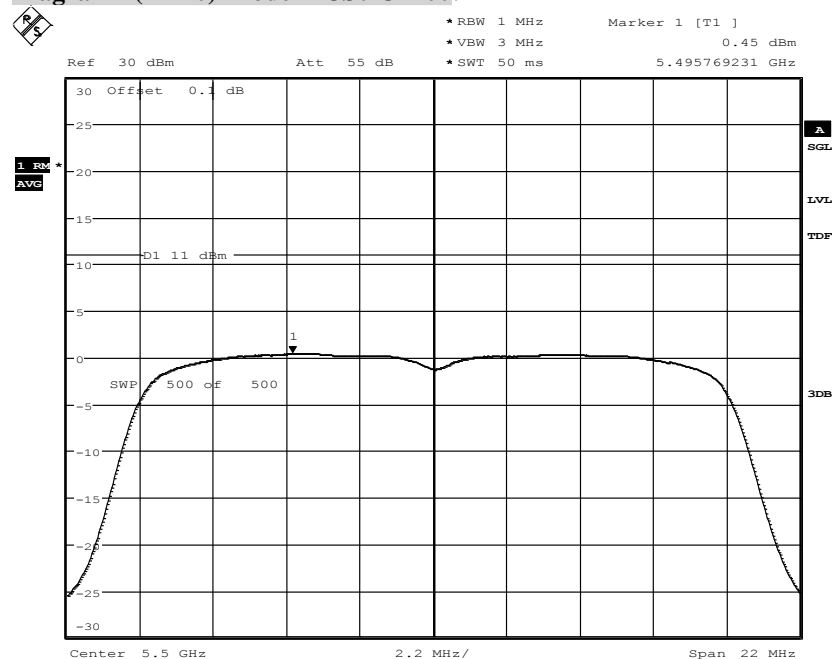Date: 9.JUN.2016 11:57:17
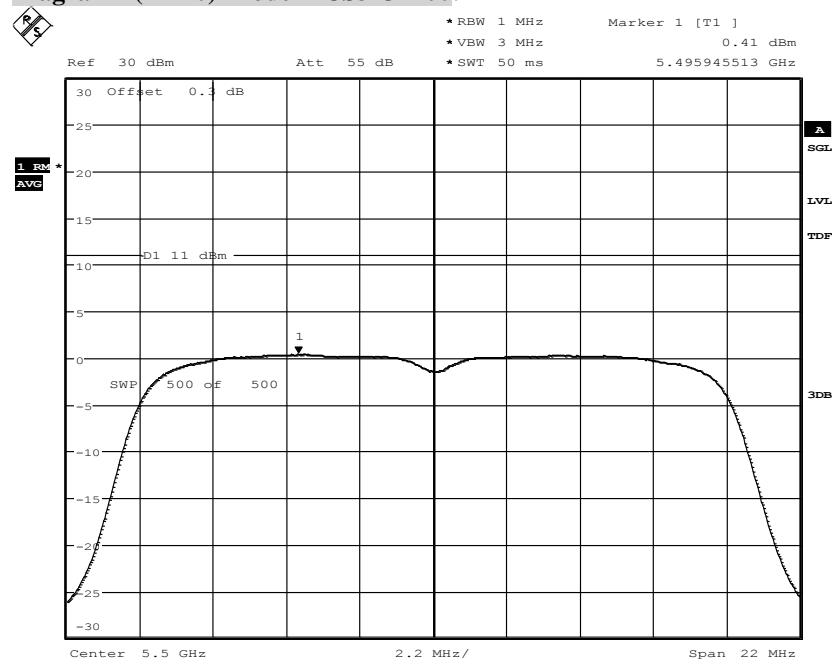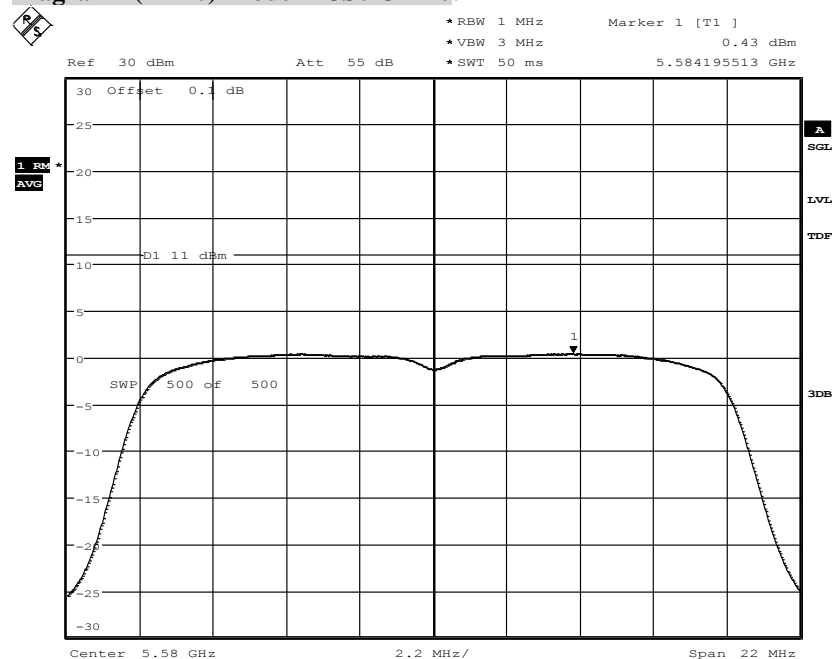
Diagram n(HT20)-Mode MCS0 Ch64:

		✱RBW 1 MHz	Marker 1 [T1]
		✱VBW 3 MHz	1.02 dBm
Ref 30 dBm	Att 55 dB	✱SWT 50 ms	5.324125000 GHz

30 Offset 0.1 dB

25

A
SGL

20

LVL

15

TDF

10 D1 11 dBm

5

1

0

SWP 500 of 500

-5

3DB

-10

-15

-20

-25

-30

Center 5.32 GHz   2.2 MHz/   Span 22 MHz

Date: 9.JUN.2016 11:59:04

Diagram n(HT20)-Mode MCS0 Ch100:

		✱RBW 1 MHz	Marker 1 [T1]
		✱VBW 3 MHz	0.45 dBm
Ref 30 dBm	Att 55 dB	✱SWT 50 ms	5.495769231 GHz

30 Offset 0.1 dB

25

A
SGL

20

LVL

15

TDF

10 D1 11 dBm

5

1

0

SWP 500 of 500

-5

3DB

-10

-15

-20

-25

-30

Center 5.5 GHz   2.2 MHz/   Span 22 MHz

Date: 9.JUN.2016 12:01:02

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Diagram n(HT20)-Mode MCS3 Ch100:

Date: 9.JUN.2016 12:14:28

Diagram n(HT20)-Mode MCS0 Ch116:

Date: 9.JUN.2016 12:03:37

TR2-20842790-15-9b-A1

Diagram n(HT20)-Mode MCS0 Ch140:

Date: 9.JUN.2016 12:05:34

Diagram n(HT20)-Mode MCS3 Ch140:

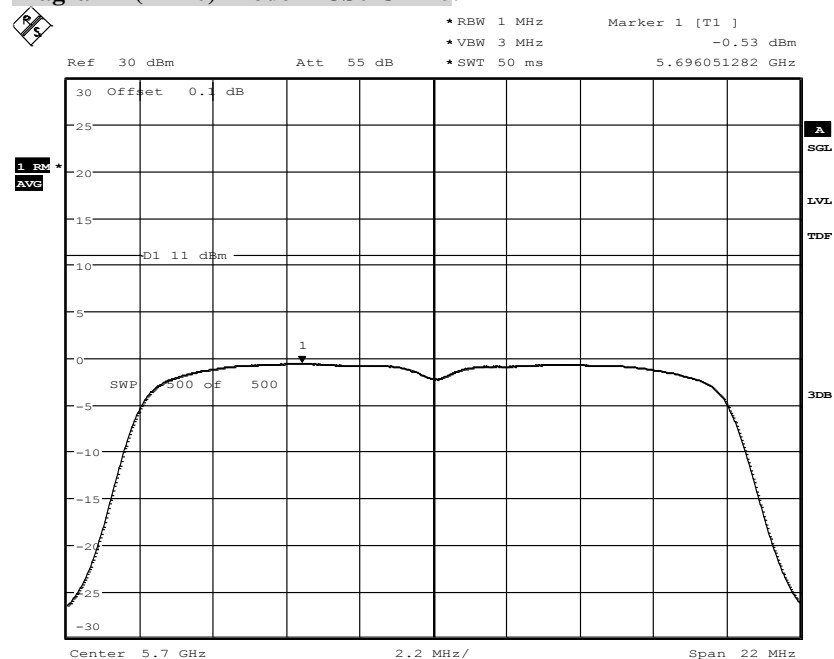Date: 9.JUN.2016 12:11:29
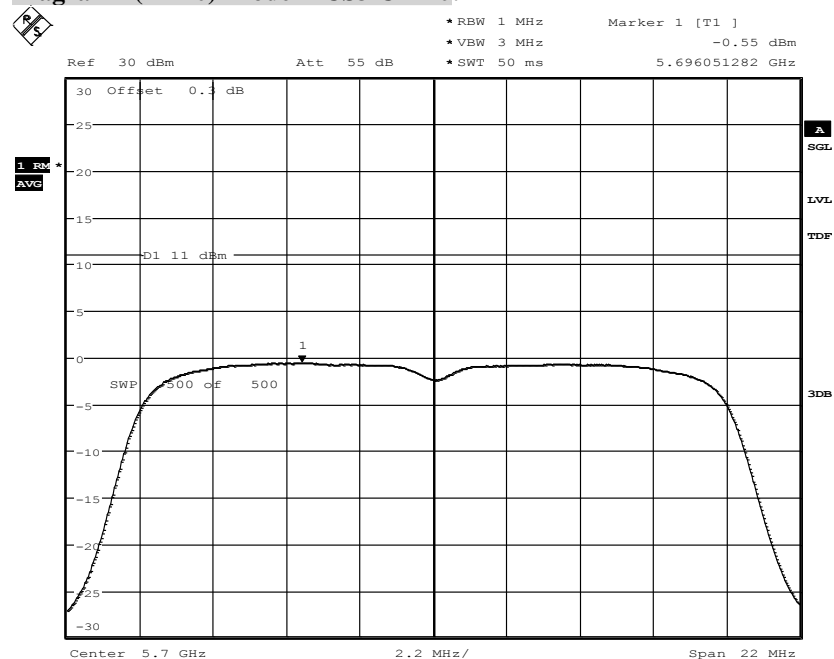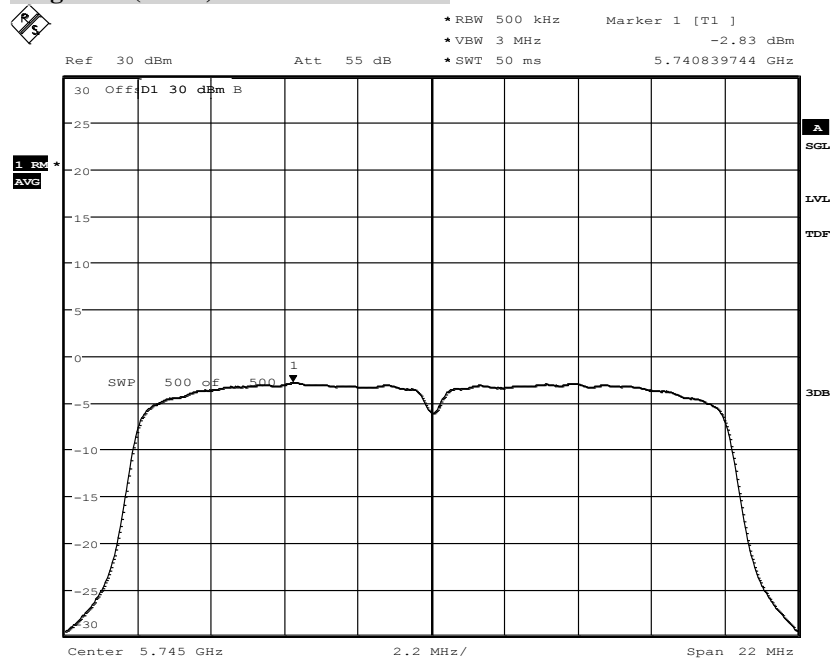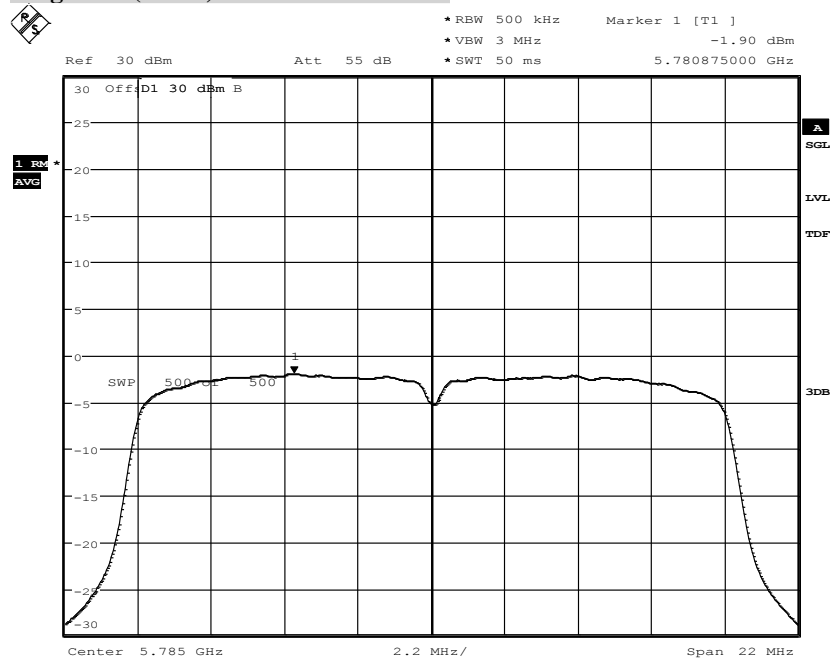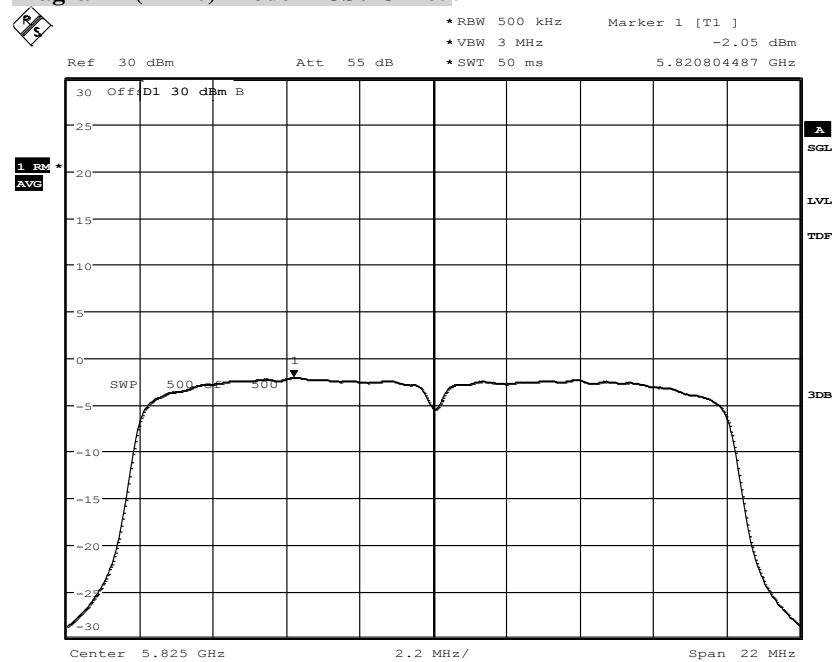
Diagram n(HT20)-Mode MCS0 Ch149:

Date: 9.JUN.2016 12:27:04

Diagram n(HT20)-Mode MCS0 Ch157:

Date: 9.JUN.2016 12:29:22

TR2-20842790-15-9b-A1

Diagram n(HT20)-Mode MCS0 Ch165:

* RBW 500 kHz	Marker 1 [T1]
* VBW 3 MHz	-2.05 dBm
Ref 30 dBm	Att 55 dB	* SWT 50 ms	5.820804487 GHz

Center 5.825 GHz   2.2 MHz/   Span 22 MHz

Date: 9.JUN.2016 12:31:12

Diagram n(HT20)-Mode MCS3 Ch165:

* RBW 500 kHz	Marker 1 [T1]
* VBW 3 MHz	-2.16 dBm
Ref 30 dBm	Att 55 dB	* SWT 50 ms	5.820028846 GHz

Center 5.825 GHz   2.2 MHz/   Span 22 MHz
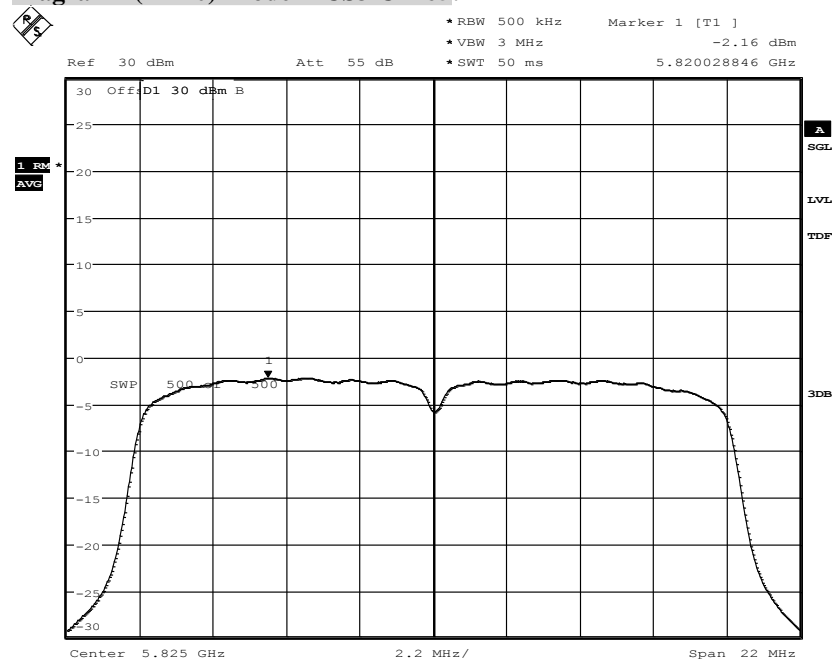
Date: 9.JUN.2016 12:33:11

TR2-20842790-15-9b-A1

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

2.09_WLAN_n(HT20)_MCS0_Ch100_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
Operating Mode:	TX-on WLAN 802.11 n(HT20), channel 100; MCS0;
Operator Name:	MFr
Operating conditions:	Humidity: 45%rH; Temperature: 22°C
Power during tests:	full chraged battery

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
HW Version:	Beta HW Version
SW Version:	WEC7
Firmware Version:	2.16
Input:	Fully Charged Internal Battery

Full Spectrum
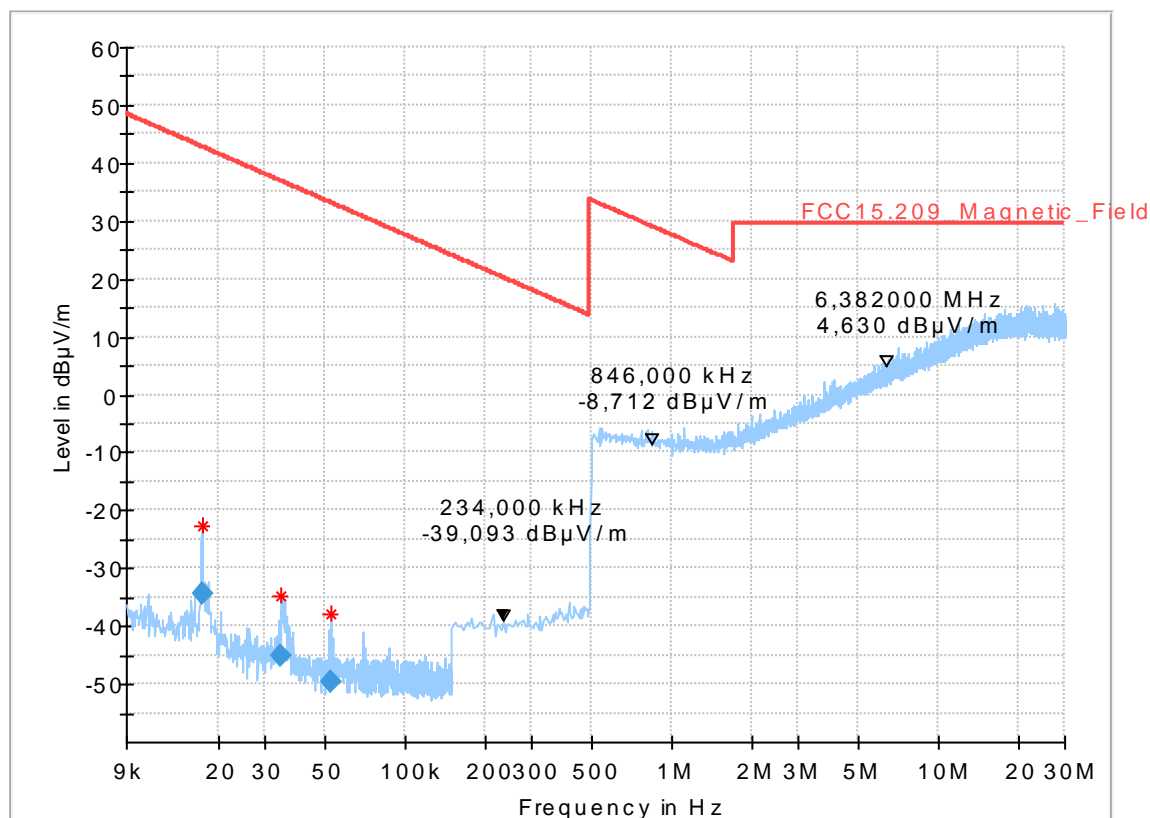
Final_Result

Frequency (MHz)	RMS (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
0.017240	-34.31	42.87	77.17	1000.0	0.200	100.0	V	210.0	-58.7
0.034440	-45.25	36.86	82.10	1000.0	0.200	100.0	V	332.0	-59.5
0.052680	-49.47	33.17	82.64	1000.0	0.200	100.0	V	223.0	-59.7

(

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

Diagram No: 3.09_WLAN_n(HT20)_MCS0_Ch100_30 MHz-1GHz

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 802.11 n(HT20)-mode, BW 20 MHz channel 40; MCS0

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
HW Version:	Beta HW Version
SW Version:	WEC7
Firmware Version:	2.16
Input:	Fully Charged Internal Battery

Full Spectrum

TR2-20842790-15-9b-A1
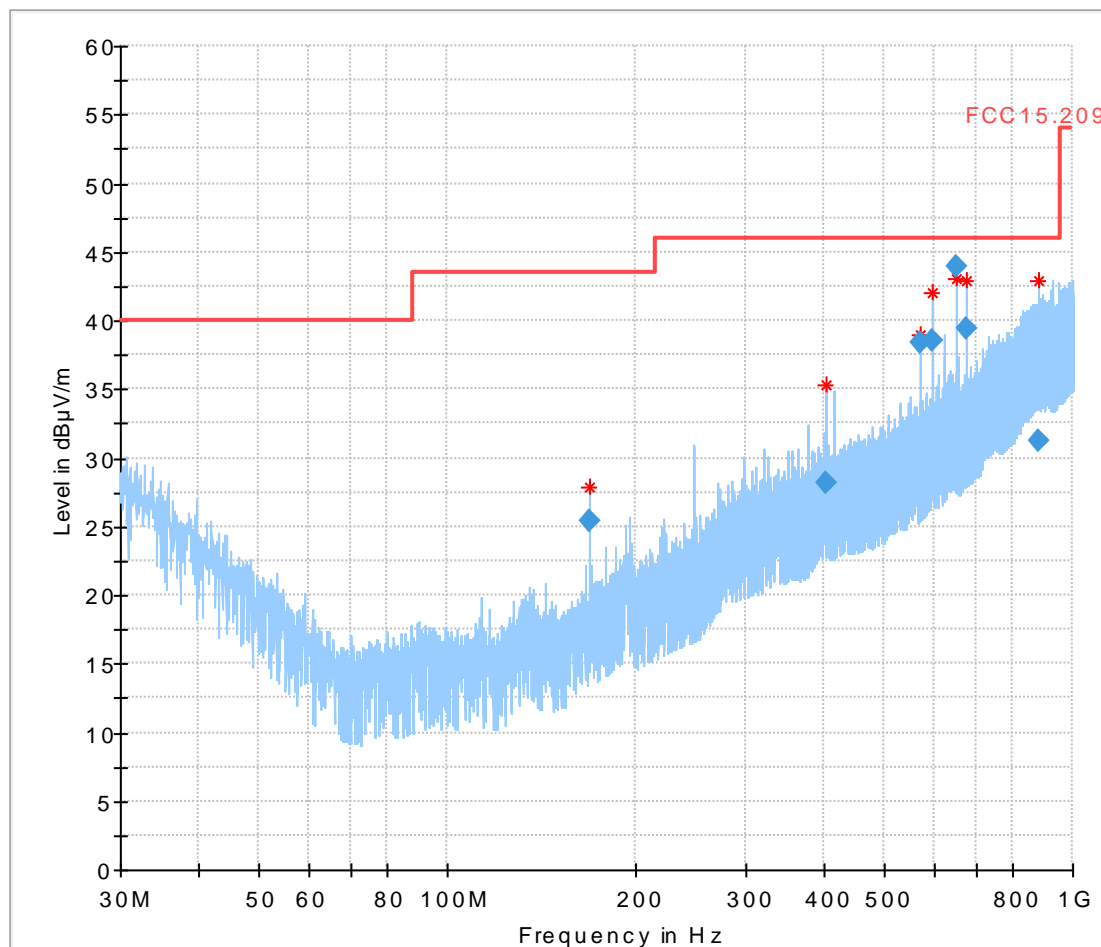
Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
169.010000	25.41	43.50	18.09	1000.0	120.000	134.0	H	101.0	90.0	10.5
402.990000	28.22	46.00	17.78	1000.0	120.000	349.0	V	74.0	90.0	18.7
572.010000	38.43	46.00	7.57	1000.0	120.000	129.0	H	329.0	0.0	21.8
597.960000	38.56	46.00	7.44	1000.0	120.000	105.0	H	105.0	0.0	22.5
649.990000	44.01	46.00	1.99	1000.0	120.000	105.0	H	111.0	0.0	23.3
675.980000	39.41	46.00	6.59	1000.0	120.000	166.0	H	90.0	0.0	23.5
882.690000	31.21	46.00	14.79	1000.0	120.000	305.0	H	254.0	90.0	26.7

6. Radiated field strength measurements (1GHz to 40 GHz)

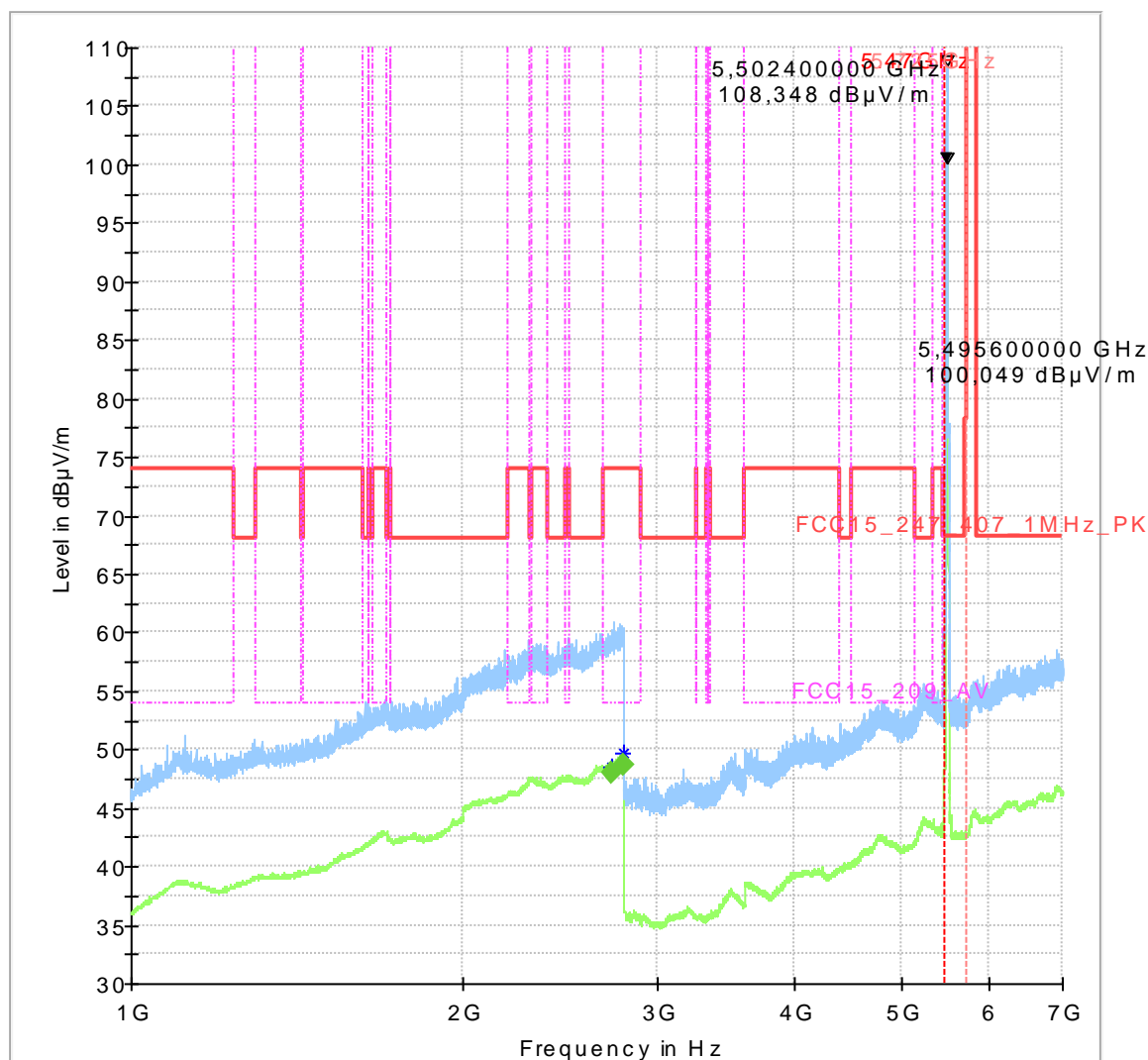## Diagram No: 4.09_WLAN 802.11_TX_n-mode_BW 20 MHz CH100_MCS0

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous WLAN 5GHz n(HT20), channel 100; MCS0;
Operator Name:	MRa

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
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)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)
2730.400000	---	47.98	54.00	6.02	100.0	1000.000	155.0	H	153.0	0.0
2797.600000	---	48.63	54.00	5.37	100.0	1000.000	155.0	H	257.0	0.0

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

Frequency (MHz)	Corr.	Comment
2730.400000	43.4	16:07:10 - 15.03.2016
2797.600000	44.1	16:08:38 - 15.03.2016

Diagram No: 4.09a_WLAN_TX_n(HT20) _MCS0_ CH100_7-18 GHz
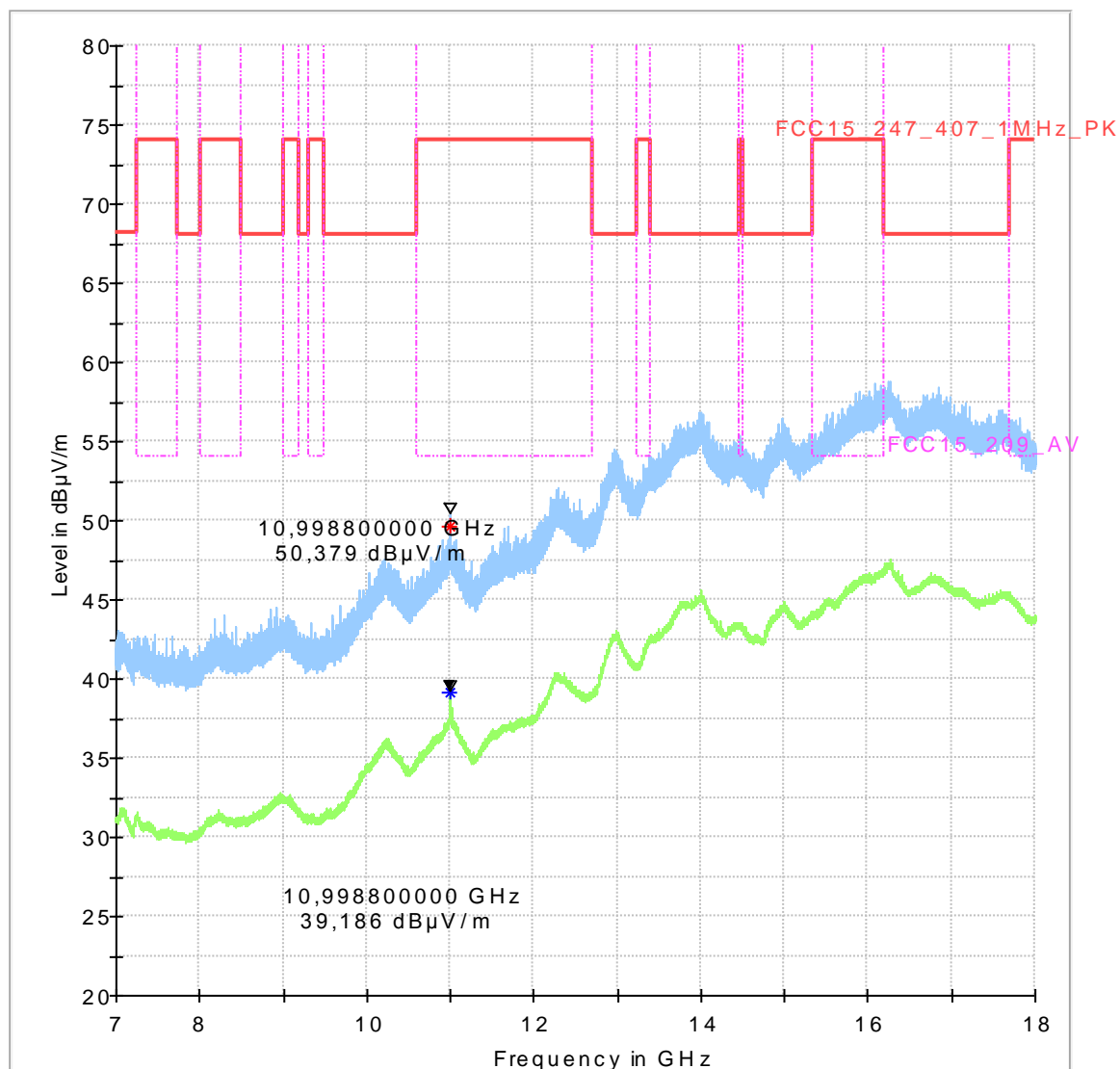
Common Information

Test Description: Radiated field strength emission in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.407&15.209 Intentional Radiator
Antenna polarisation: horizontal/vertical
Operation mode: TX, continuous WLAN 5GHz n(HT20), channel 100; MCS0;;
Operator Name: APh

EUT Information

Manufacturer: Datalogic ADCL S.r.l.
MODEL: JOYA TOUCH
EuT Type: P00AN04HL0HT0W7-GR0
P/N: 911350015
S/N: Z16P00044
HW Version: Beta HW Version
SW Version: WEC7
Firmware Version: 2.16
Input: Fully Charged Internal Battery

Full Spectrum

Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
10998.800000	---	39.19	54.00	14.81	---	---	155.0	H	180.0
11001.200000	49.58	---	74.00	24.42	---	---	155.0	H	170.0

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

Frequency (MHz)	Elevation (deg)	Corr. (dB)	Comment
10998.800000	0.0	12.2	14:49:32 - 16.03.2016
11001.200000	0.0	12.2	14:49:30 - 16.03.2016

Diagram No: 4.09b_WLAN_TX_n(HT20) _MCS0_ CH100_18-40 GHz
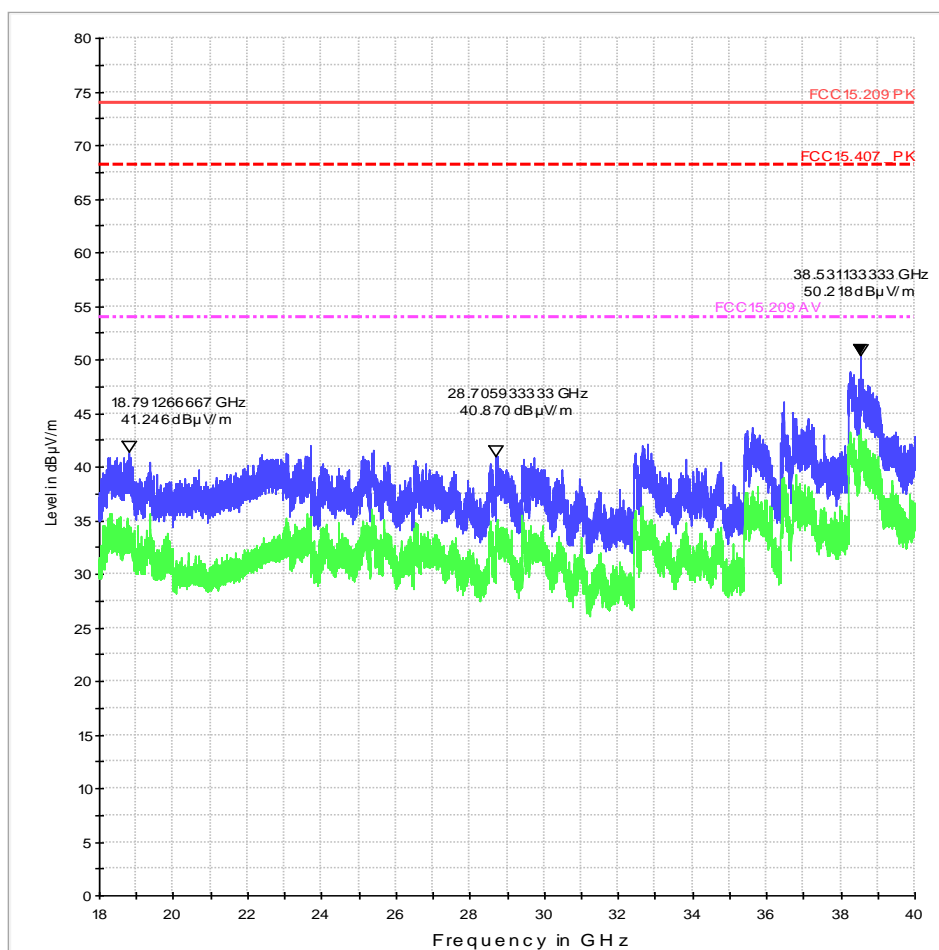
Common Information

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 CH100-nMode-MCS0
Operator Name:	TFr

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
HW Version:	Beta HW Version
SW Version:	WEC7
Firmware Version:	2.16
Input:	Fully Charged Internal Battery

FCC_Sweep_15.407_18_40GHz_Pre

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

7.1. Channel 36 a-Mode (left band edge)

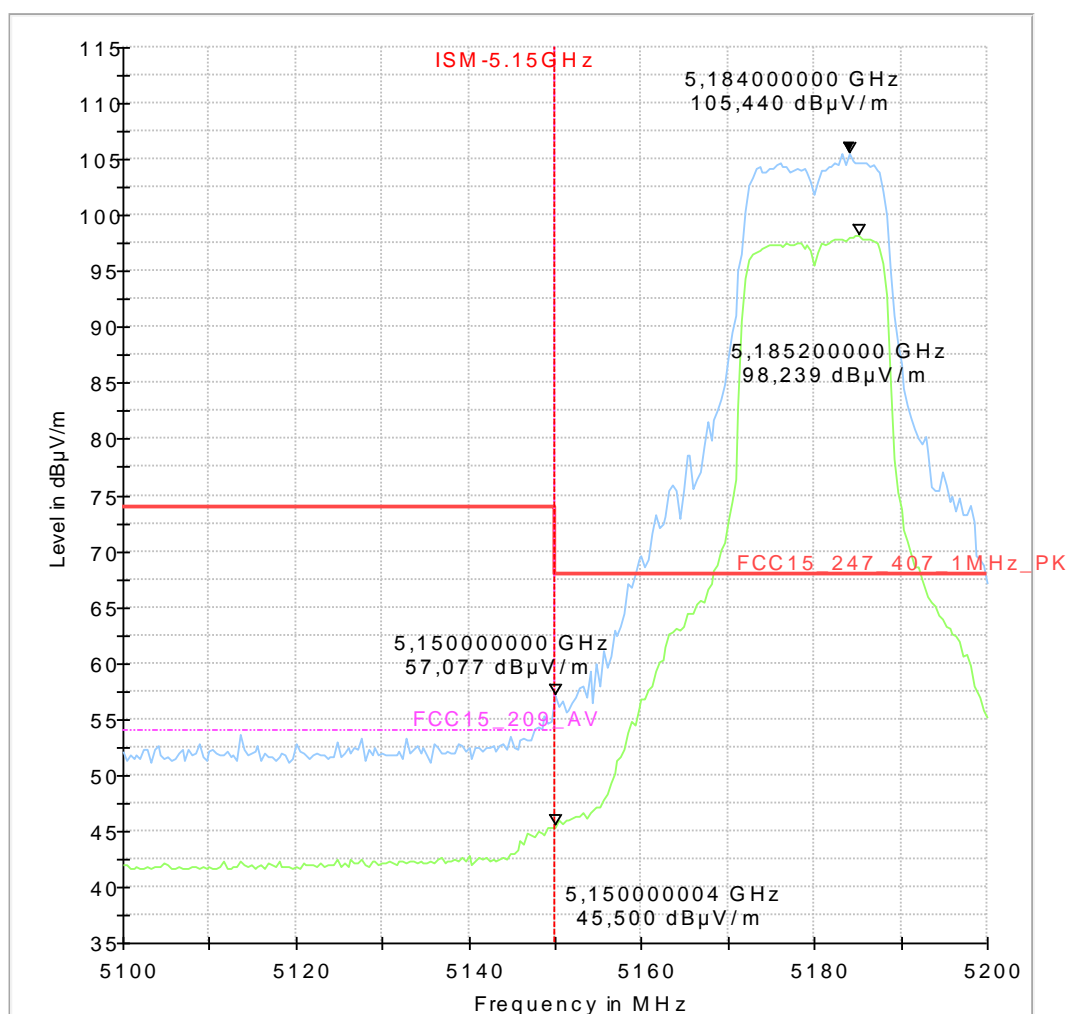### Diagram No: 9.13_BE_Low_a mode _6 Mbps_ CH36

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous WLAN 5GHz a-mode, channel 36; 6Mbps;
Environmental Conditions:	Humidity:33 %rH; Temperature: 21°C
Operator Name:	PSa/APh

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
HW Version:	Beta HW Version
SW Version:	WEC7
Firmware Version:	2.16
Input:	Fully Charged Internal Battery

Full Spectrum

7.2. Channel 64 a-Mode (right band edge)

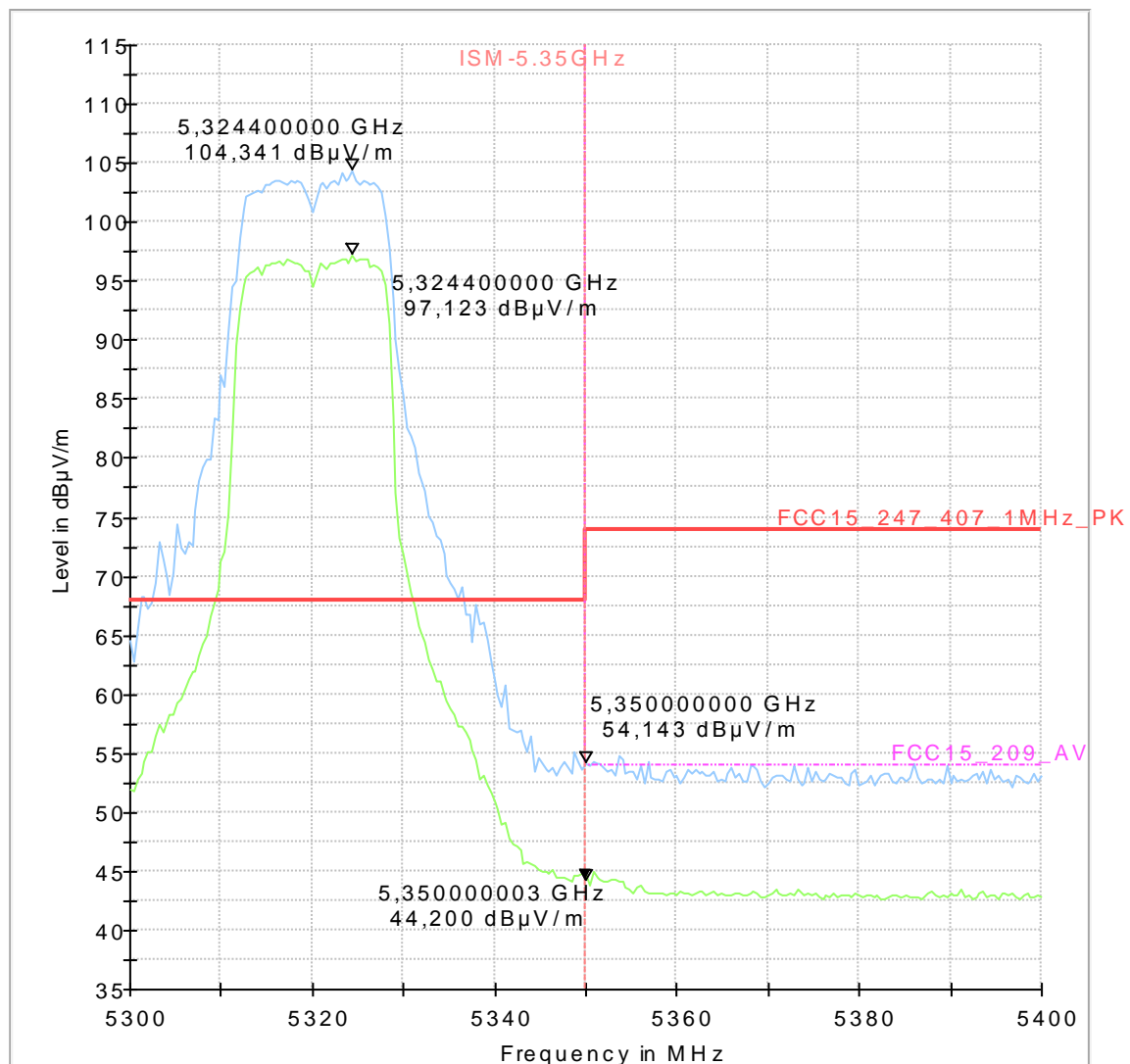### Diagram No: 9.14_BE_High_a-mode _6Mbps_ CH64

Common Information

Test Description:	Radiated field strength emission in 3m distance Band Edge
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous WLAN 5GHza-mode), channel 64; 6 Mbps;
Environmental Conditions	Humidity:33 %rH; Temperature: 21°C
Operator Name:	PSa/APh

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
HW Version:	Beta HW Version
SW Version:	WEC7
Firmware Version:	2.16
Input:	Fully Charged Internal Battery

Full Spectrum

7.3. Channel 100 a-Mode (left band edge)
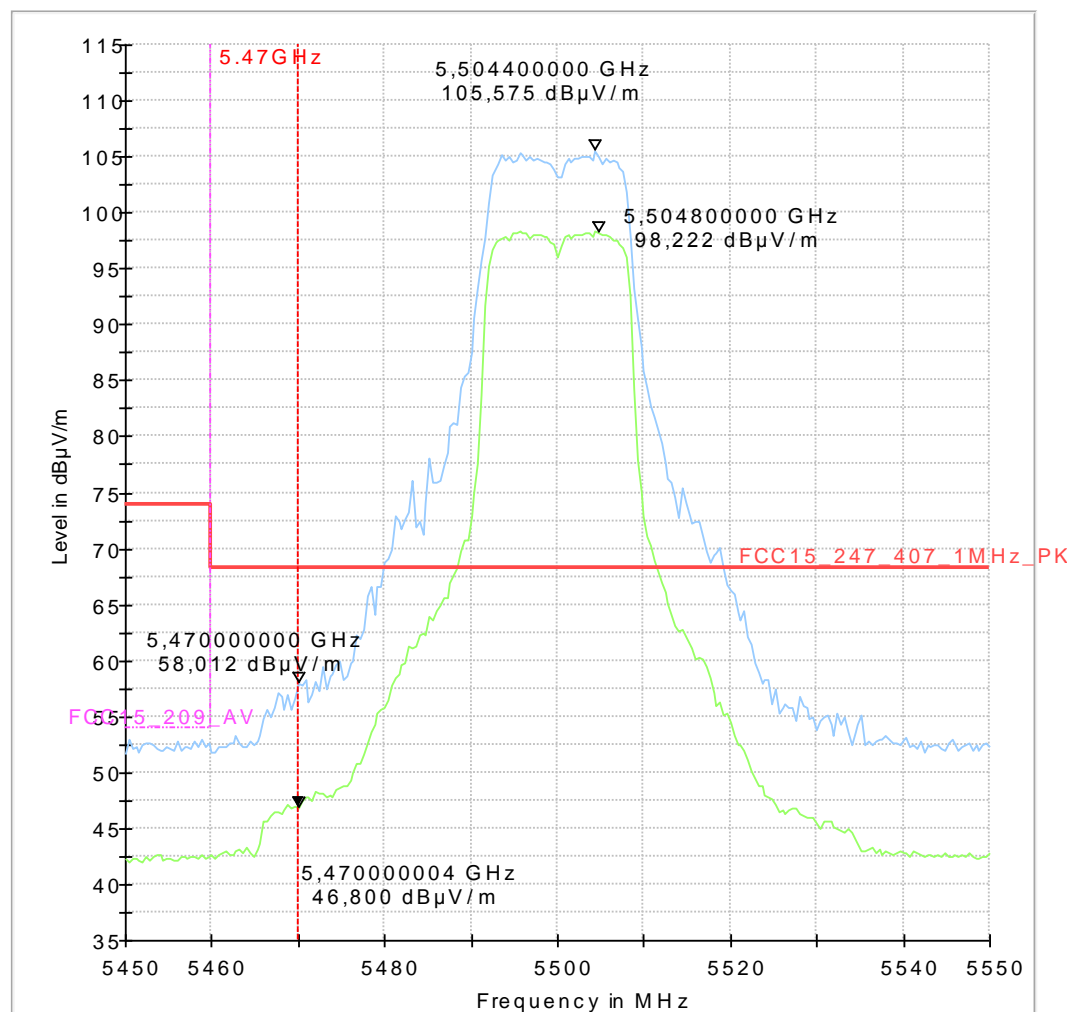
Diagram No: 9.15_BE_Low_a mode _6 Mbps_ CH100

Common Information

Test Description:	Radiated field strength emission in 3m distance Band Edge
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous WLAN 5GHz a-mode, channel 100; 6Mbps;
Environmental Conditions	Humidity: 31%rH; Temperature: 23°C
Operator Name:	PSa/APh

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
HW Version:	Beta HW Version
SW Version:	WEC7
Firmware Version:	2.16
Input:	Fully Charged Internal Battery

Full Spectrum

7.4. Channel 140 a-Mode (right band edge)

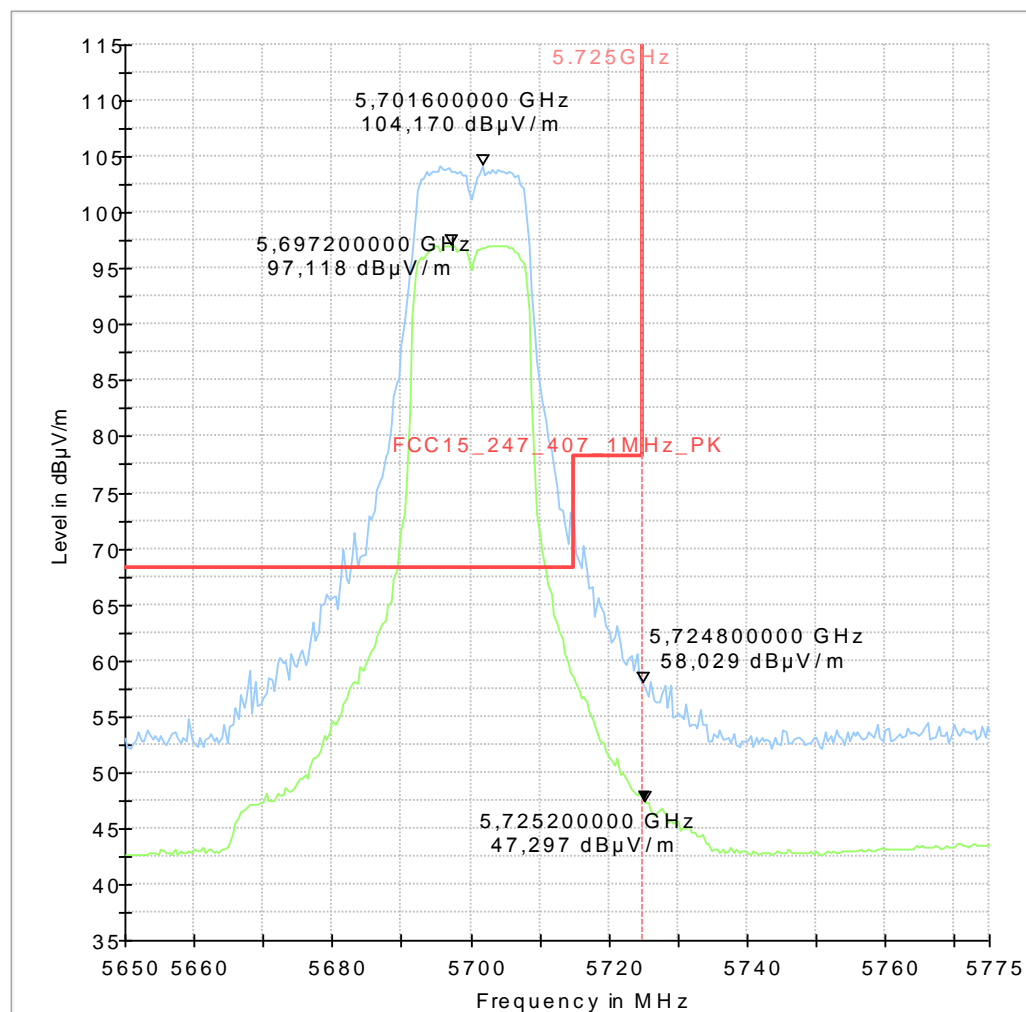## Diagram No: 9.16_BE_High_a-mode_6 Mbps_ CH140

Common Information

Test Description:	Radiated field strength emission in 3m distance Band Edge
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous WLAN 5GHz a-mode, channel 140; 6 Mbps;
Environmental Conditions:	Humidity: 31%rH; Temperature: 23°C
Operator Name:	PSa/APh

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
HW Version:	Beta HW Version
SW Version:	WEC7
Firmware Version:	2.16
Input:	Fully Charged Internal Battery

Full Spectrum

7.5. Channel 36 n-Mode(HT20) (left band edge)

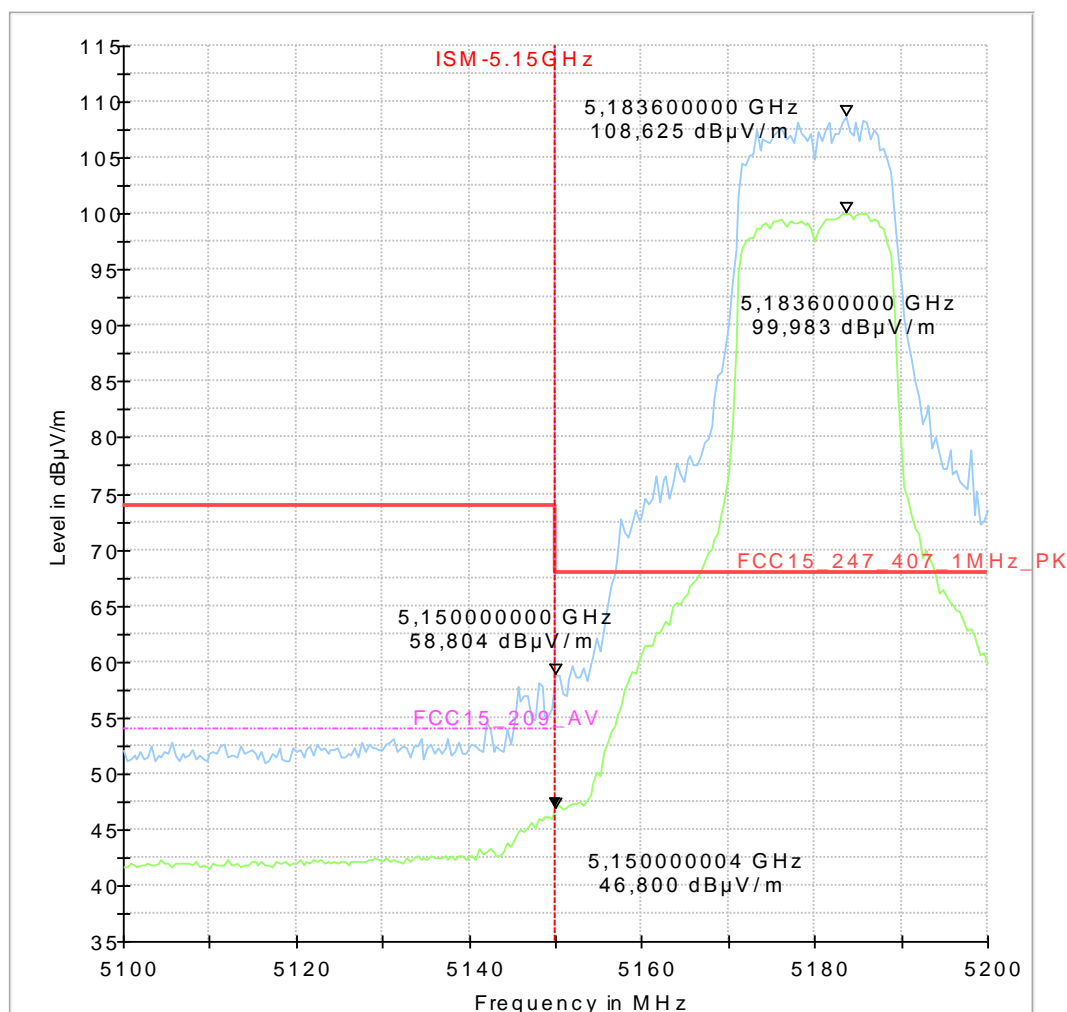## Diagram No: 9.17_BE_Low_n(HT20) _MCS0_ CH36

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous WLAN 5GHz n(HT20), channel 36; MCS0;
Environmental Conditions:	Humidity:33 %rH; Temperature: 21°C
Operator Name:	PSa/APh

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
HW Version:	Beta HW Version
SW Version:	WEC7
Firmware Version:	2.16
Input:	Fully Charged Internal Battery

Full Spectrum

7.6. Channel 64 n-Mode(HT20) (right band edge)
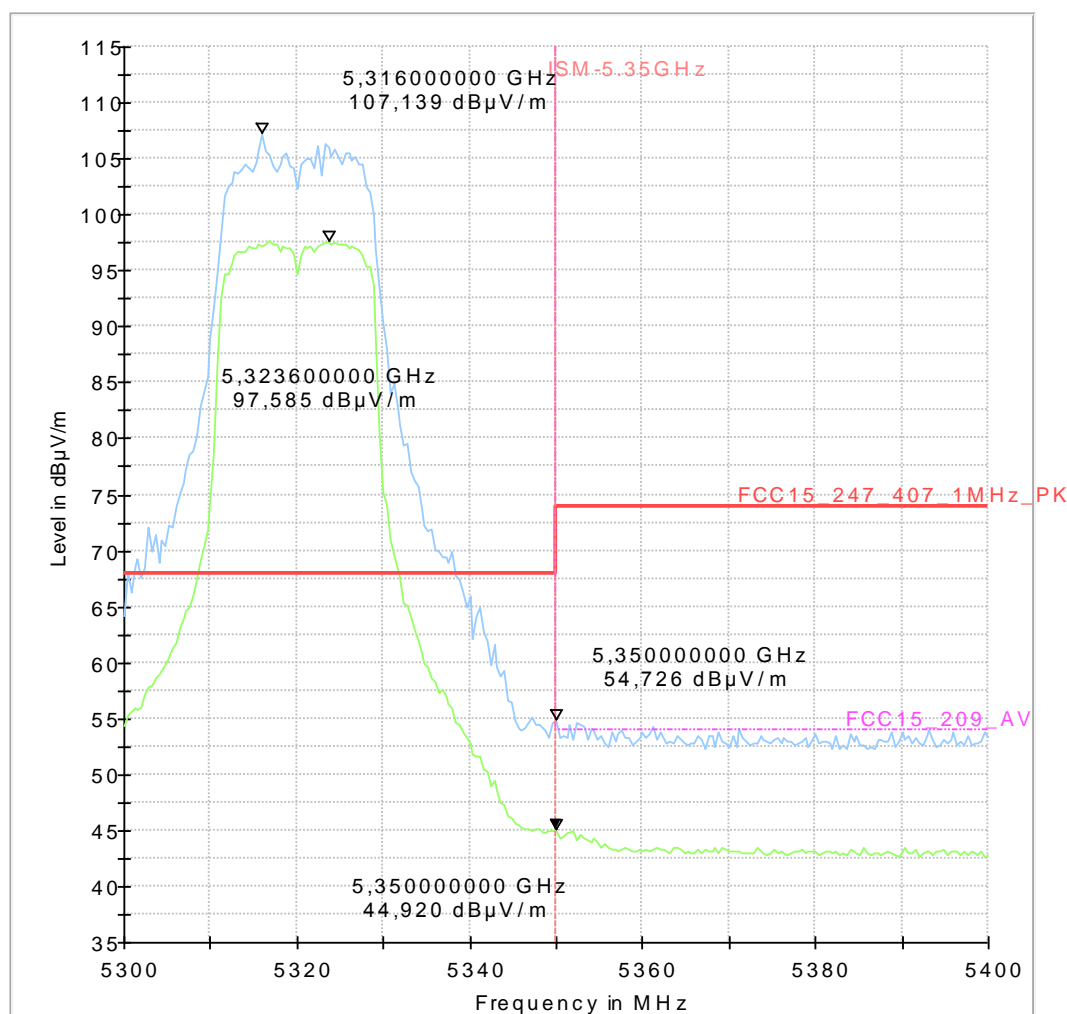
Diagram No: 9.18_BE_High_n(HT20) _MCS0_ CH64

Common Information

Test Description:	Radiated field strength emission in 3m distance Band Edge
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous WLAN 5GHz n-mode), channel 64; MCS0;
Environmental Conditions	Humidity:33 %rH; Temperature: 21°C
Operator Name:	PSa/APh

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
HW Version:	Beta HW Version
SW Version:	WEC7
Firmware Version:	2.16
Input:	Fully Charged Internal Battery

Full Spectrum

7.7. Channel 100 n-Mode(HT20) (left band edge)

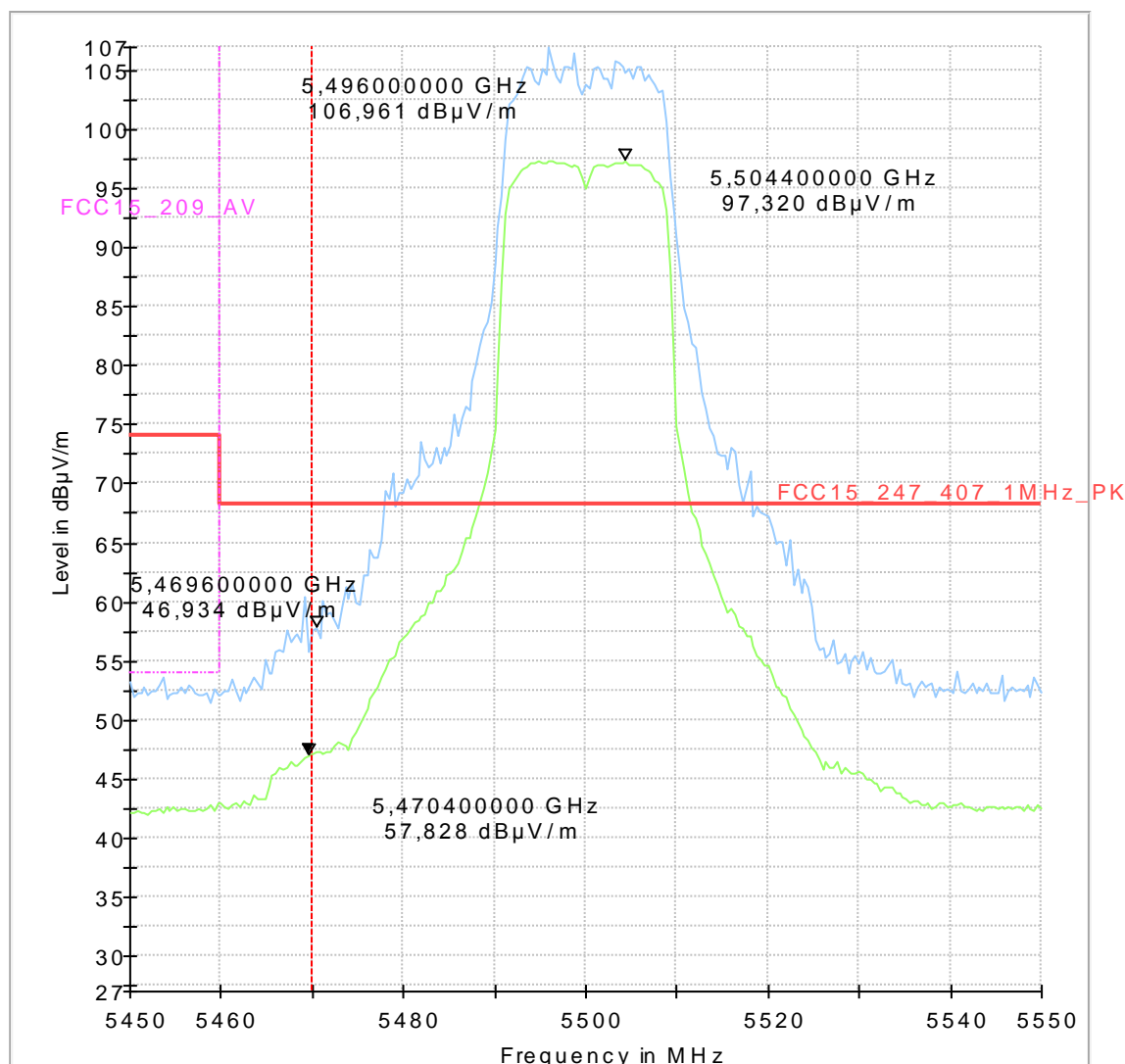## Diagram No: 9.19_BE_Low_n(HT20) _MCS0_ CH100

Common Information

Test Description:	Radiated field strength emission in 3m distance Band Edge
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous WLAN 5GHz n-mode, channel 100; MCS0;
Environmental Conditions	Humidity: 31%rH; Temperature: 23°C
Operator Name:	PSa/APh

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
HW Version:	Beta HW Version
SW Version:	WEC7
Firmware Version:	2.16
Input:	Fully Charged Internal Battery

Full Spectrum

7.8. Channel 140 n-Mode(HT20) (right band edge)
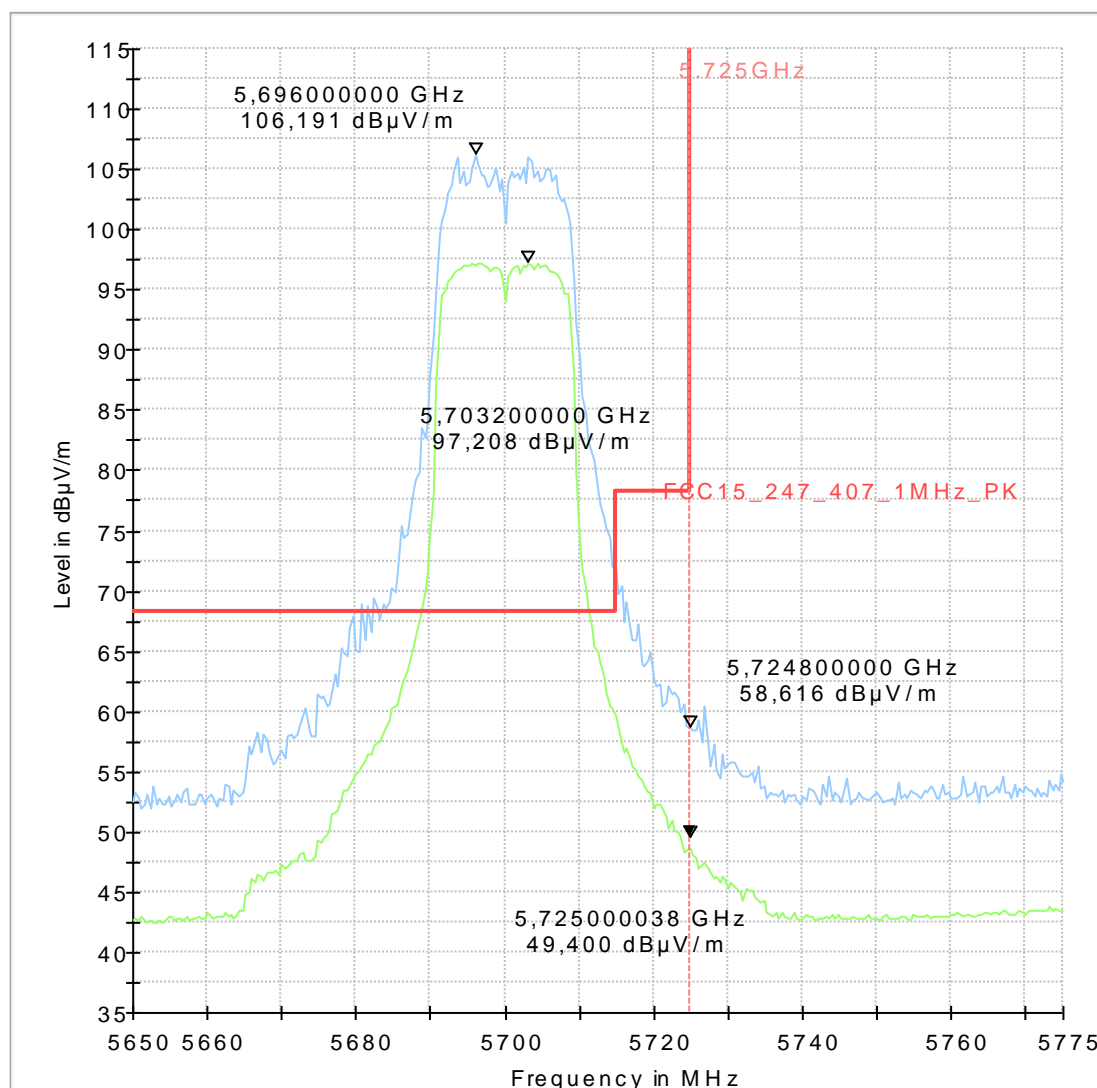
Diagram No: 9.20_BE_High_n(HT20) _MCS0_ CH140

Common Information

Test Description:	Radiated field strength emission in 3m distance Band Edge
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous WLAN 5GHz a-mode, channel 140; 6 Mbps;
Environmental Conditions:	Humidity: 31%rH; Temperature: 23°C
Operator Name:	PSa/APh

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
HW Version:	Beta HW Version
SW Version:	WEC7
Firmware Version:	2.16
Input:	Fully Charged Internal Battery

Full Spectrum

7.9. Channel 149 n-Mode(HT20) (left band edge)

Diagram No: 9.21_BE_Low_n(HT20) _MCS0_ CH149

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous WLAN 5GHz n(HT20)-mode, channel 149; MCS0
Operator Name:	APh
Comment:	Channel no. low = 149

EUT Information

Manufacturer:	Datalogic ADCL S.r.l.
MODEL:	JOYA TOUCH
EuT Type:	P00AN04HL0HT0W7-GR0
P/N:	911350015
S/N:	Z16P00044
HW Version:	Beta HW Version
SW Version:	WEC7
Firmware Version:	2.16
Input:	Fully Charged Internal Battery

Full Spectrum

7.10. Channel 165 n-Mode(HT20) (right band edge)

Diagram No: 9.22_BE_High_n(HT20) _MCS0_ CH165
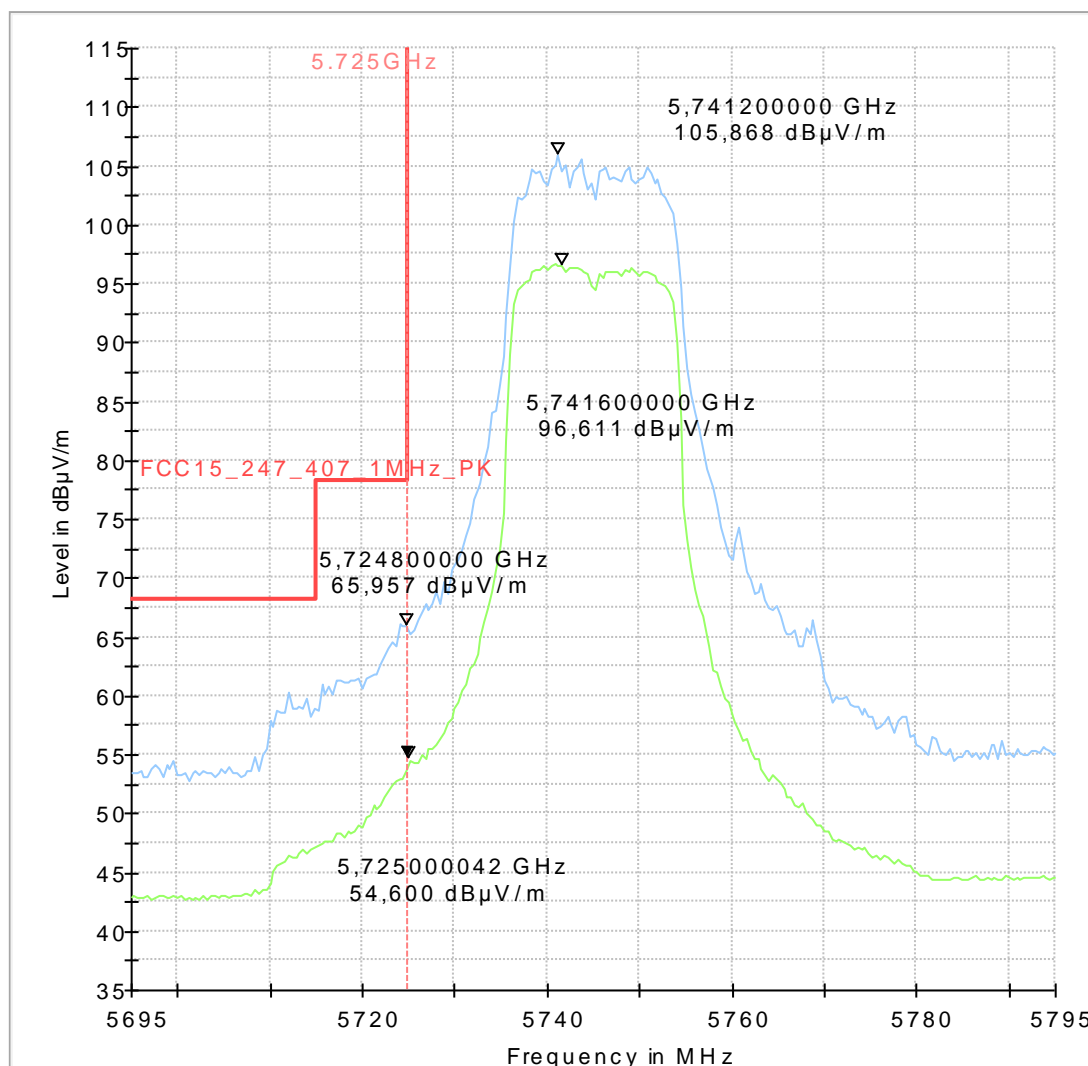
Common Information

Test Description: Radiated field strength emission in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.407&15.209 Intentional Radiator
Antenna polarisation: horizontal/vertical
Operation mode: TX, continuous WLAN 5GHz n(HT20)-mode, channel 165; MCS0
Operator Name: APh
Comment: Channel no. high = 165

EUT Information

Manufacturer: Datalogic ADCL S.r.l.
MODEL: JOYA TOUCH
EuT Type: P00AN04HL0HT0W7-GR0
P/N: 911350015
S/N: Z16P00044
HW Version: Beta HW Version
SW Version: WEC7
Firmware Version: 2.16
Input: Fully Charged Internal Battery

Full Spectrum