

Annex 1: Measurement diagrams to TEST REPORT

No.: 17-1-0180901T12a

According to:

## **FCC Regulations**

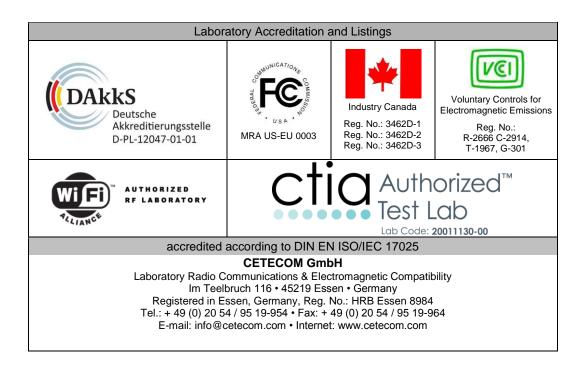
Part 15.205 Part 15.209 Part 15.247

for

Datalogic S.r.l.

# FALCON X4 Type E00ANM4HS0GF0A4

FCC ID: U4GFX4WB





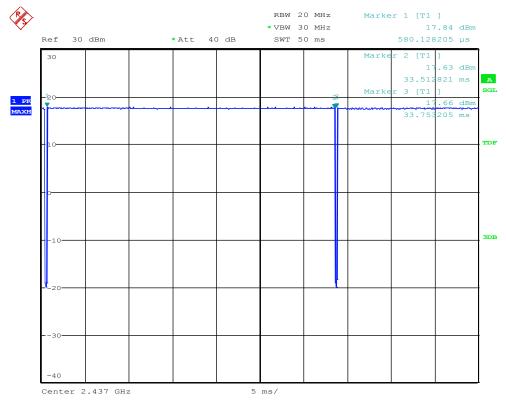
# **TABLE OF CONTENTS:**

1. CONDUCTED RF-MEASUREMENTS	3
1.1. Duty Cycle Measurements	3
1.2. Peak Power Spectral Density Measurements (n MIMO Mode)	9
1.3. 6 dB Bandwidth Measurements (n MIMO Mode)	
1.4. 99% Bandwidth Measurements (n MIMO Mode)	15
1.5. 20dBc Conducted Spurious Emissions (n MIMO Mode)	18
2. RADIATED FIELD STRENGTH MEASUREMENTS	30
2.1. Radiated Field Strength Emissions – 9 kHz to 30 MHz	30
2.2. Radiated Field Strength Emissions – 30 MHz to 1 GHz	
2.3. Radiated Field Strength Emissions – 1 GHz to 18 GHz	
2.4. Radiated Field Strength Emissions – 18 GHz to 25 GHz	
3. RADIATED BAND-EDGE MEASUREMENTS	50
3.1. b SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge)	50
3.2. b SISO Mode-High Channel 2462 MHz ( 2.4 GHz ISM: right band edge)	
3.3. g SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge)	52
3.4. g SISO Mode-High Channel 2462 MHz ( 2.4 GHz ISM: right band edge)	53
3.5. n SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge)	54
3.6. n SISO Mode-High Channel 2462 MHz ( 2.4 GHz ISM: right band edge)	55
3.7. n MIMO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge)	
3.8. n MIMO Mode-High Channel 2462 MHz ( 2.4 GHz ISM: right band edge)	

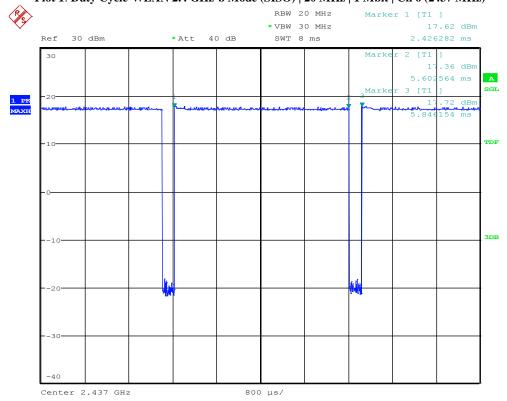


# 1. Conducted RF-Measurements

# 1.1. Duty Cycle Measurements

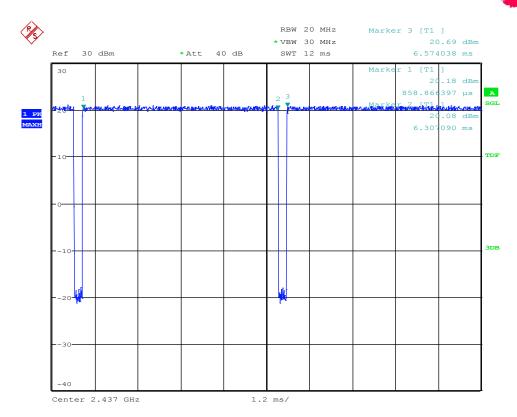


Plot 1: Duty Cycle-WLAN 2.4 GHz-b Mode (SISO) | 20 MHz | 1 Mbit | Ch 6 (2437 MHz)

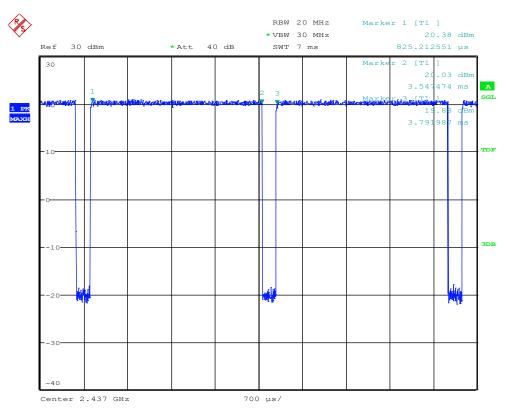


Plot 2: Duty Cycle-WLAN 2.4 GHz-b Mode (SISO) | 20 MHz | 11 Mbit | Ch 6 (2437 MHz)



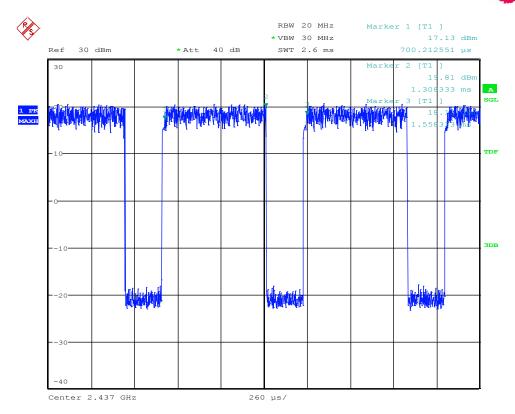


Plot 3: Duty Cycle-WLAN 2.4 GHz-g Mode (SISO) | 20 MHz | 6 Mbit | Ch 6 (2437 MHz)

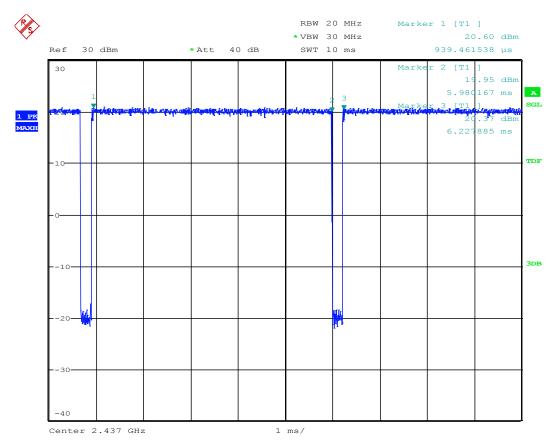


Plot 4:DC-TX-gMode-SISO-20MHz- 12MBit-Ch6+20dBm



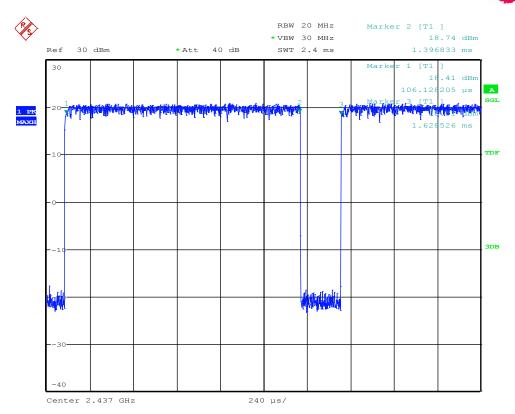


Plot 5: Duty Cycle-WLAN 2.4 GHz-g Mode (SISO) | 20 MHz | 54 Mbit | Ch 6 (2437 MHz)

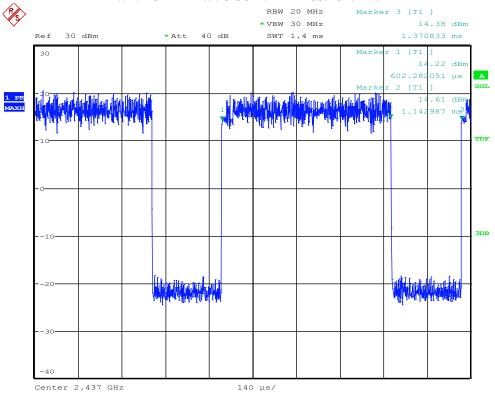


Plot 6: Duty Cycle-WLAN 2.4 GHz-n Mode (SISO) | 20 MHz | MCS0 | Ch 6 (2437 MHz)



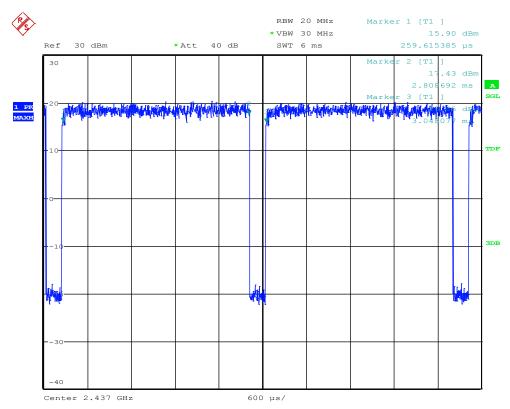


Plot 7: DC-TX-nMode-SISO-20MHz-MCS3-Ch6+20dBm

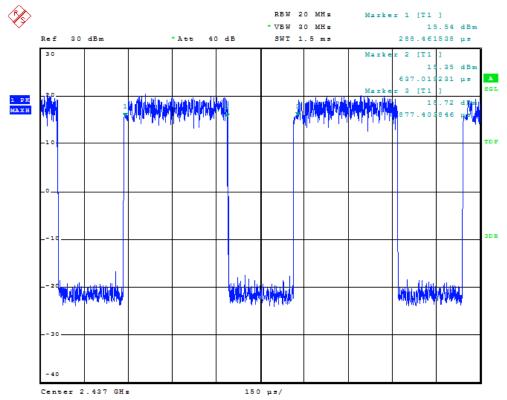


Plot 8: Duty Cycle-WLAN 2.4 GHz-n Mode (SISO) | 20 MHz | MCS7 | Ch 6 (2437 MHz)



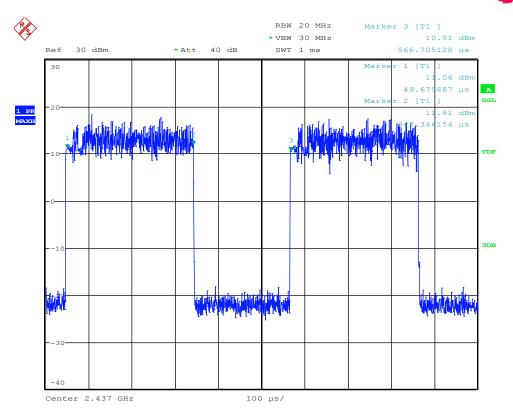


Plot 9: Duty Cycle-WLAN 2.4 GHz-n Mode (MIMO) | 20 MHz | MCS8 | Ch 6 (2437 MHz)



Plot 10: Duty Cycle-WLAN 2.4 GHz-n Mode (MIMO) | AUX | 20 MHz | MCS13 | Ch 6 (2437 MHz)





Plot 11: Duty Cycle-WLAN 2.4 GHz-n Mode (MIMO) | 20 MHz | MCS15 | Ch 6 (2437 MHz)



# 1.2. Peak Power Spectral Density Measurements (n MIMO Mode)

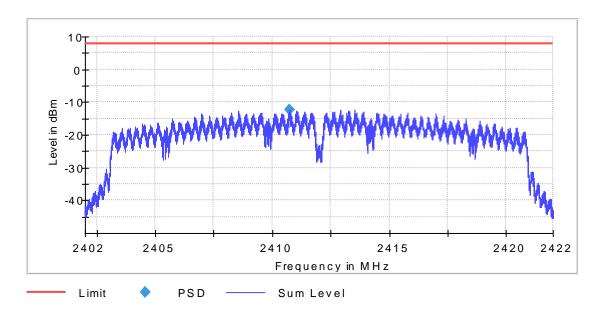
# 1.2.1. n-Mode MIMO|20 MHz| MCS13| Lowest Channel 1 (2412 MHz)

# Power Spectral Density (2412 MHz; 20,000 dBm; 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

#### Result

DUT Frequency (MHz)			Limit Max (dBm)	Result	
2412.000000 2410.738346		-12.226	8.0	PASS	



Setting	Instrument Value	Target Value
Start Frequency	2.40200 GHz	2.40200 GHz
Stop Frequency	2.42200 GHz	2.42200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13301	~ 13333
Sweeptime	450.000 s	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off



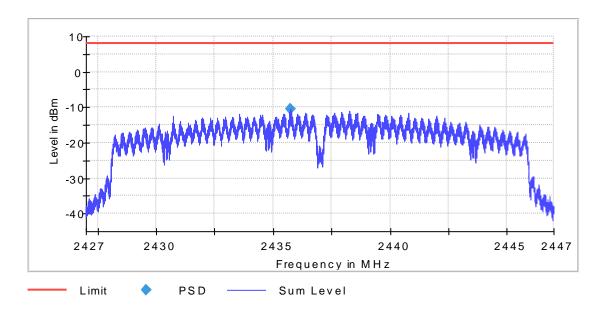
# 1.2.2. n-Mode MIMO|20 MHz| MCS13| Middle Channel 6 (2437 MHz)

# Power Spectral Density (2437 MHz; 20,000 dBm; 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

#### Result

DUT Frequency (MHz)			Limit Max (dBm)	Result
2437.000000	2435.741353	-10.420	8.0	PASS



Setting	Instrument Value	Target Value		
Start Frequency	2.42700 GHz	2.42700 GHz		
Stop Frequency	2.44700 GHz	2.44700 GHz		
Span	20.000 MHz	20.000 MHz		
RBW	3.000 kHz	<= 3.000 kHz		
VBW	10.000 kHz	>= 9.000 kHz		
SweepPoints	13301	~ 13333		
Sweeptime	450.000 s	AUTO		
Reference Level	10.000 dBm	10.000 dBm		
Attenuation	35.000 dB	AUTO		
Detector	RMS	RMS		
SweepCount	1	1		
Filter	Channel	Channel		
Trace Mode	Max Hold	Max Hold		
Sweeptype	Sweep	Sweep		
Preamp	off	off		



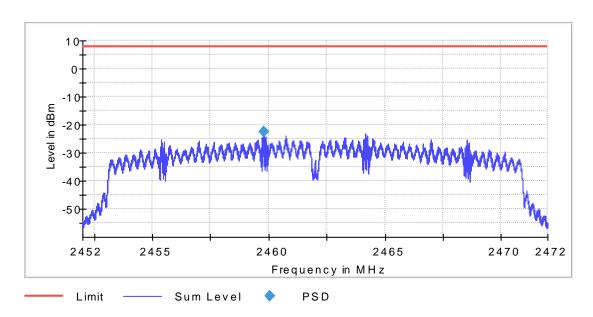
# 1.2.3. n-Mode MIMO|20 MHz| MCS13| Highest Channel 11 (2462 MHz)

# Power Spectral Density (2462 MHz; 20,000 dBm; 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

#### Result

DUT Frequency (MHz)	1 0		Limit Max (dBm)	Result
2462.000000	2460.733835	-11.315	8.0	PASS



Setting	Instrument Value	Target Value
Start Frequency	2.45200 GHz	2.45200 GHz
Stop Frequency	2.47200 GHz	2.47200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13301	~ 13333
Sweeptime	450.000 s	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off



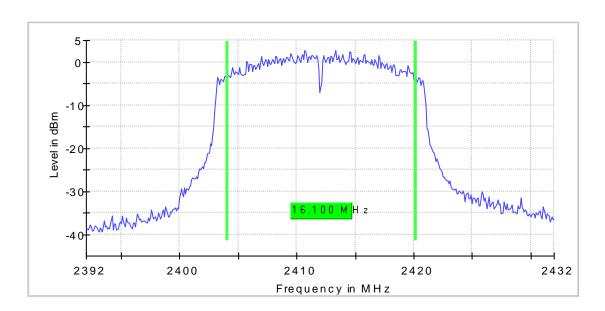
# 1.3. 6 dB Bandwidth Measurements (n MIMO Mode)

## 1.3.1. n-Mode MIMO|20 MHz| MCS13| Lowest Channel 1 (2412 MHz) Minimum Emission Bandwidth 6 dB (2412 MHz; 20,000 dBm; 20 MHz)

Test according to FCC title 47 part 15  $\$15.247(a),\,KDB$  558074 D01 DTS Meas Guidance v04 and ANSI C63.10

#### 6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2412.000000	16.100000	0.500000		2404.100000	2420.200000	2.7	PASS



Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.43200 GHz	2.43200 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	401	~ 400
Sweeptime	15.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	97 / max. 150	max. 150
Stable	15 / 15	15
Max Stable Difference	0.21 dB	0.50 dB

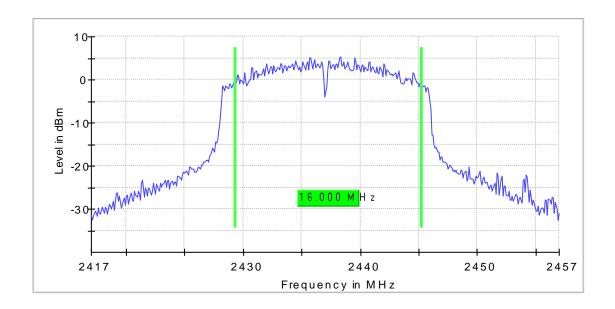


## 1.3.2. n-Mode MIMO|20 MHz| MCS13| Middle Channel 6 (2437 MHz) Minimum Emission Bandwidth 6 dB (2437 MHz; 20,000 dBm; 20 MHz)

Test according to FCC title 47 part 15 \$15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

#### 6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2437.000000	16.000000	0.500000		2429.300000	2445.300000	5.4	PASS



Setting	Instrument Value	Target Value
Start Frequency	2.41700 GHz	2.41700 GHz
Stop Frequency	2.45700 GHz	2.45700 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	401	~ 400
Sweeptime	15.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	79 / max. 150	max. 150
Stable	15 / 15	15
Max Stable Difference	0.00 dB	0.50 dB

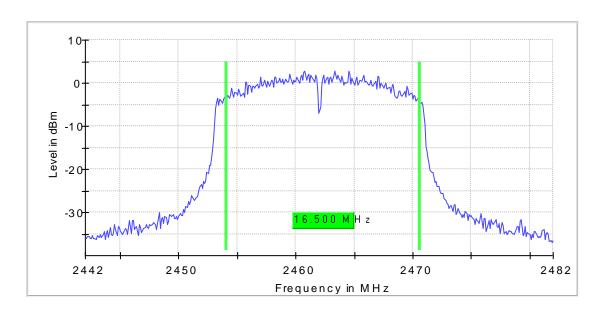


## 1.3.3. n-Mode MIMO|20 MHz| MCS13| Highest Channel 11 (2462 MHz) Minimum Emission Bandwidth 6 dB (2462 MHz; 20,000 dBm; 20 MHz)

Test according to FCC title 47 part 15 \$15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

#### 6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2462.000000	16.500000	0.500000		2454.100000	2470.600000	2.9	2462.0 00000



Setting	Instrument Value	Target Value
Start Frequency	2.44200 GHz	2.44200 GHz
Stop Frequency	2.48200 GHz	2.48200 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	401	~ 400
Sweeptime	15.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	85 / max. 150	max. 150
Stable	15 / 15	15
Max Stable Difference	0.27 dB	0.50 dB



# 1.4. 99% Bandwidth Measurements (n MIMO Mode)

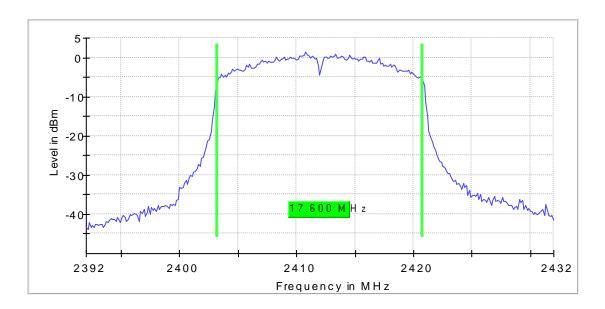
# 1.4.1. n-Mode MIMO|20 MHz| MCS13| Lowest Channel 1 (2412 MHz)

99 % Occupied Channel Bandwidth (2412 MHz; 20,000 dBm; 20 MHz)

I	DUT Frequency	Bandwidth	Limit Min	Limit Max	Band Edge Left	Limit Min BE L
	(MHz)	(MHz)	(MHz)	(MHz)	(MHz)	(MHz)
	2412.000000	17.600000		20.000000	2403.200000	2400.000000

(continuation of the "99 % Bandwidth" table from column  $\ 6 \dots$ )

DUT Frequency (MHz)	Band Edge Right (MHz)	Limit Max BE R (MHz)	Result
2412.000000	2420.800000	2483,500000	PASS



Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.43200 GHz	2.43200 GHz
Span	40.000 MHz	40.000 MHz
RBW	300.000 kHz	<= 400.000 kHz
VBW	500.000 kHz	<= 900.000 kHz
SweepPoints	301	~ 267
Sweeptime	10.000 ms	10.000 ms
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	RMS	RMS
SweepCount	50	50
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	1.00 dB	1.00 dB
Run	19	no maximum
Stable	10 / 10	10
Max Stable Difference	0.41 dB	1.00 dB



# 1.4.2. n-Mode MIMO|20 MHz| MCS13| Middle Channel 6 (2437 MHz)

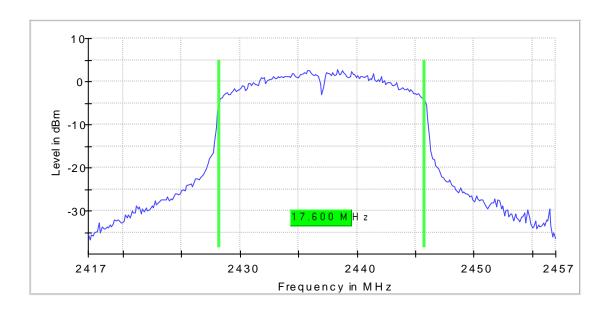
Occupied Channel Bandwidth (2437 MHz; 20,000 dBm; 20 MHz)

Definition: The Occupied Channel Bandwidth is the bandwidth that contains 99 % of the power of the signal.

D	UT Frequency	Bandwidth	Limit Min	Limit Max	Band Edge Left	Limit Min BE L
	(MHz)	(MHz)	(MHz)	(MHz)	(MHz)	(MHz)
	2437.000000	17.600000		20.000000	2428.200000	2400.000000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency	Band Edge Right	Limit Max BE R	Result
(MHz)	(MHz)	(MHz)	
2437.000000	2445.800000	2483,500000	PASS



Setting	Instrument Value	Target Value
Start Frequency	2.41700 GHz	2.41700 GHz
Stop Frequency	2.45700 GHz	2.45700 GHz
Span	40.000 MHz	40.000 MHz
RBW	300.000 kHz	<= 400.000 kHz
VBW	500.000 kHz	<= 900.000 kHz
SweepPoints	301	~ 267
Sweeptime	10.000 ms	10.000 ms
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	RMS	RMS
SweepCount	50	50
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	1.00 dB	1.00 dB
Run	13	no maximum
Stable	10 / 10	10
Max Stable Difference	0.51 dB	1.00 dB



# 1.4.3. n-Mode MIMO|20 MHz| MCS13| Highest Channel 11 (2462 MHz)

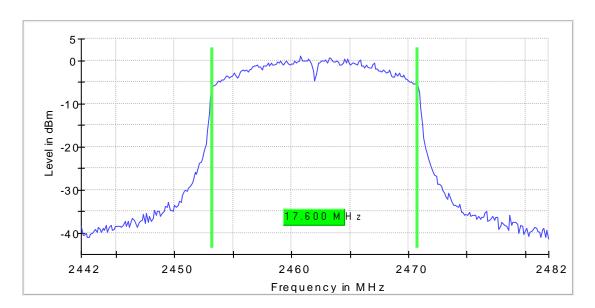
Occupied Channel Bandwidth (2462 MHz; 20,000 dBm; 20 MHz)

Definition: The Occupied Channel Bandwidth is the bandwidth that contains 99 % of the power of the signal.

DUT Frequency	Bandwidth	Limit Min	Limit Max	Band Edge Left	Limit Min BE L
(MHz)	(MHz)	(MHz)	(MHz)	(MHz)	(MHz)
2462.000000	17.600000		20.000000	2453.200000	

(continuation of the "99 % Bandwidth" table from column  $\ 6 \dots$ )

DUT Frequency	Band Edge Right	Limit Max BE R	Result
(MHz)	(MHz)	(MHz)	
2462.000000	2470.800000	2483.500000	PASS

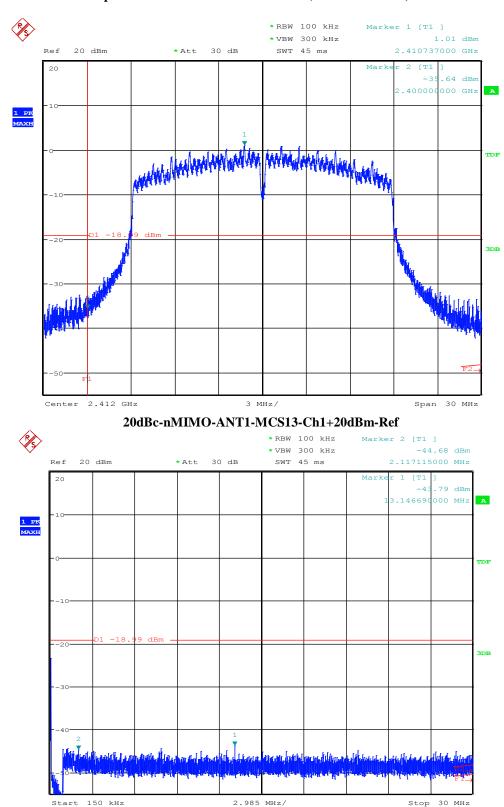


Setting	Instrument Value	Target Value
Start Frequency	2.44200 GHz	2.44200 GHz
Stop Frequency	2.48200 GHz	2.48200 GHz
Span	40.000 MHz	40.000 MHz
RBW	300.000 kHz	<= 400.000 kHz
VBW	500.000 kHz	<= 900.000 kHz
SweepPoints	301	~ 267
Sweeptime	10.000 ms	10.000 ms
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	RMS	RMS
SweepCount	50	50
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	1.00 dB	1.00 dB
Run	13	no maximum
Stable	10 / 10	10
Max Stable Difference	0.45 dB	1.00 dB



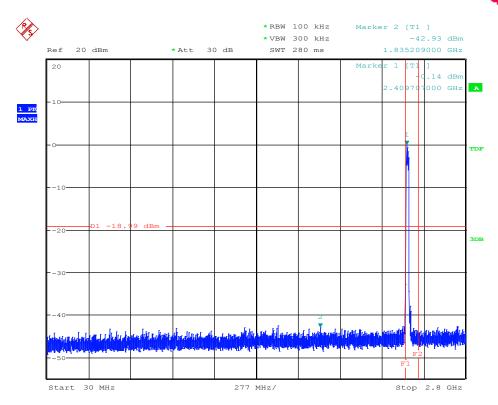
# 1.5. 20dBc Conducted Spurious Emissions (n MIMO Mode)

#### 1.5.1. 20dBc Conducted Spurious Emissions on ANTENNA 1 (MAIN Antenna )

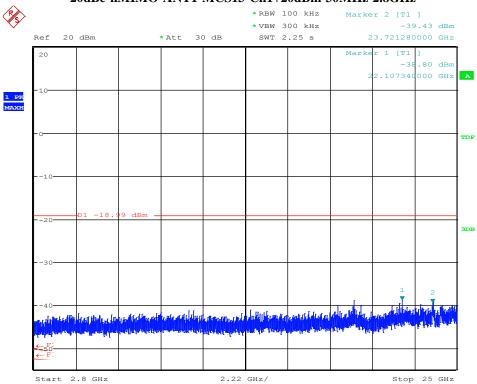


20dBc-nMIMO-ANT1-MCS13-Ch1+20dBm-0.15-30MHz



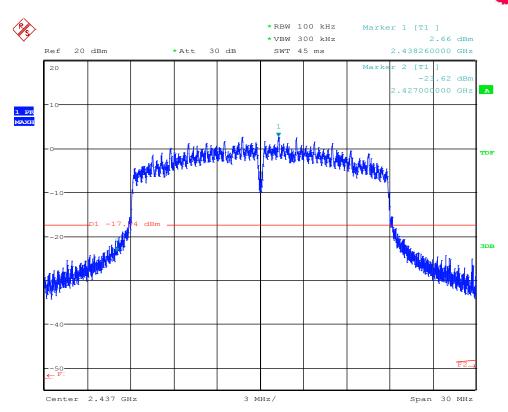


#### 20 dBc-nMIMO-ANT1-MCS13-Ch1+20 dBm-30 MHz-2.8 GHz

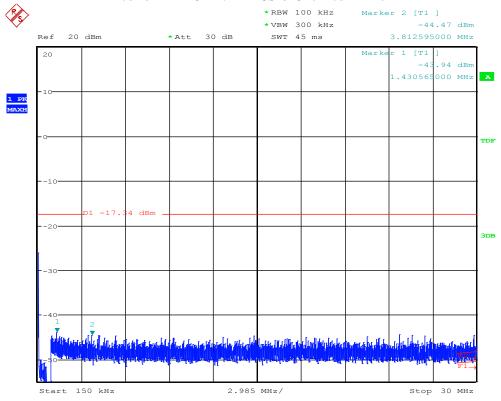


20dBc-nMIMO-ANT1-MCS13-Ch1+20dBm-2.8GHz-25GHz



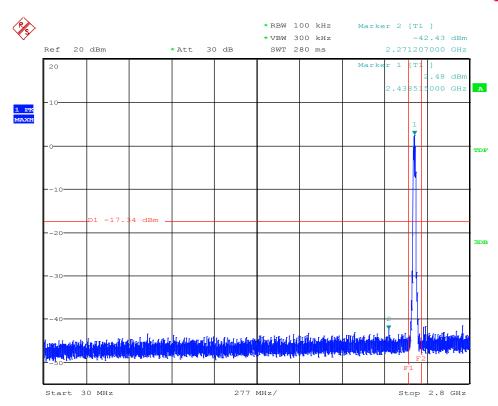


#### 20dBc-nMIMO-ANT1-MCS13-Ch6+20dBm-Ref

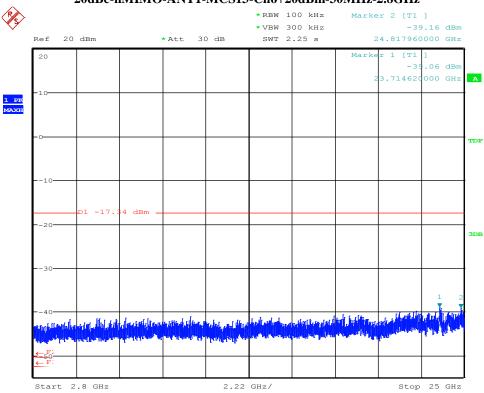


20dBc-nMIMO-ANT1-MCS13-Ch6+20dBm-0.15-30MHz



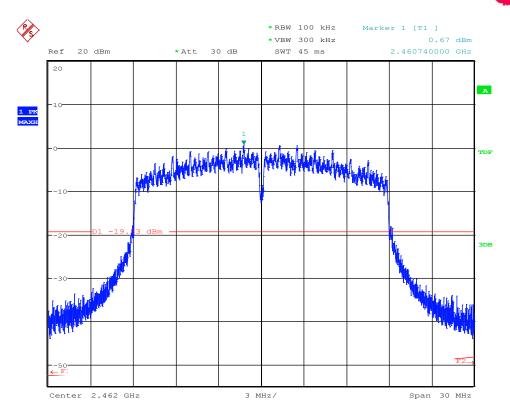


#### 20 dB c-nMIMO-ANT1-MCS13-Ch6+20 dB m-30 MHz-2.8 GHz

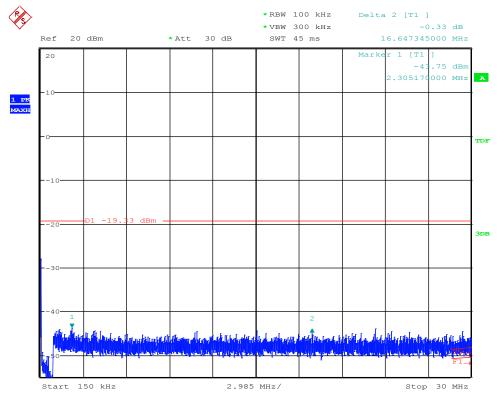


20dBc-nMIMO-ANT1-MCS13-Ch6+20dBm-2.8GHz-25GHz



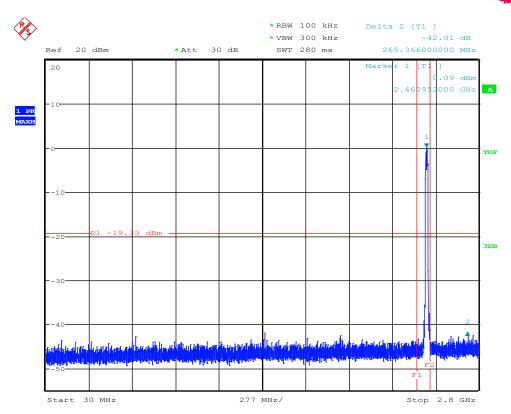


20dBc-nMIMO-ANT1-MCS13-Ch11+20dBm-Ref

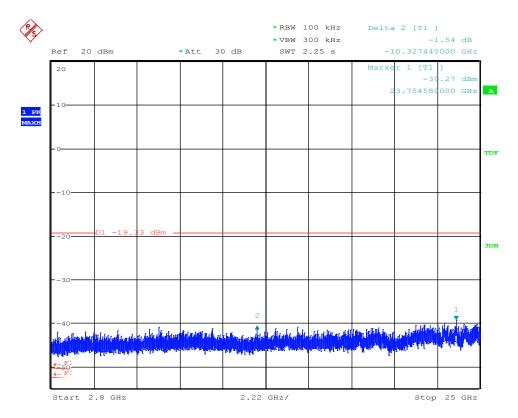


20dBc-nMIMO-ANT1-MCS13-Ch11+20dBm-0.15-30MHz





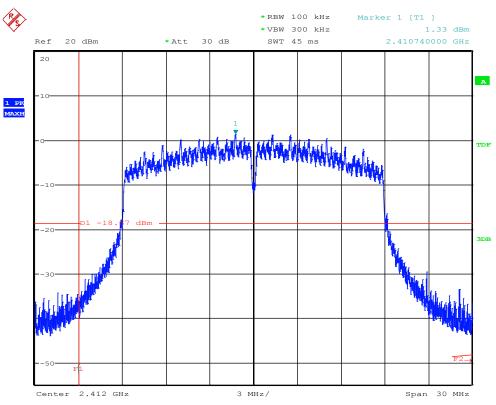
20dBc-nMIMO-ANT1-MCS13-Ch11+20dBm-30MHz-2.8GHz



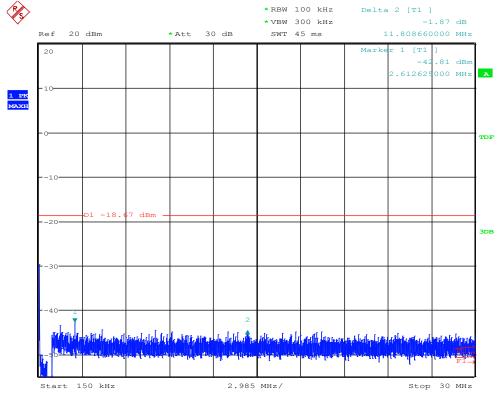
20dBc-nMIMO-ANT1-MCS13-Ch11+20dBm-2.8GHz-25GHz



#### 1.5.2. 20dBc Conducted Spurious Emissions on ANTENNA 2 (AUX Antenna)

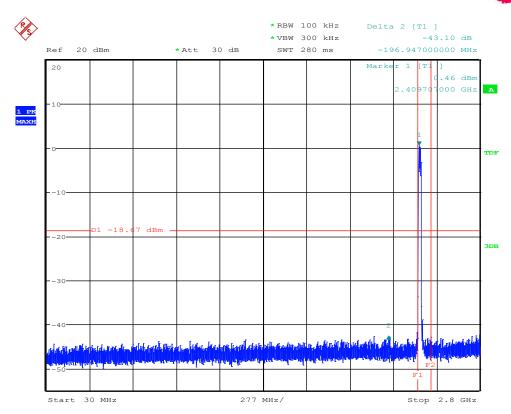


20dBc-nMIMO-ANT2-MCS13-Ch1+20dBm-Ref

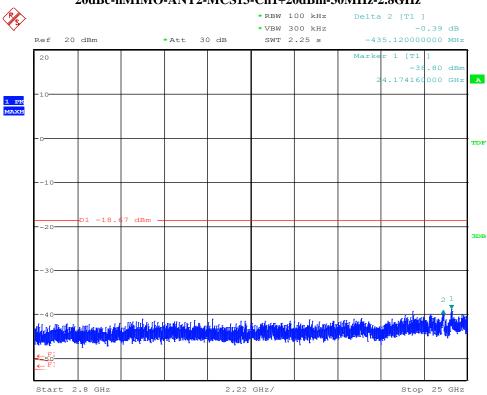


20dBc-nMIMO-ANT2-MCS13-Ch1+20dBm-0.15-30MHz



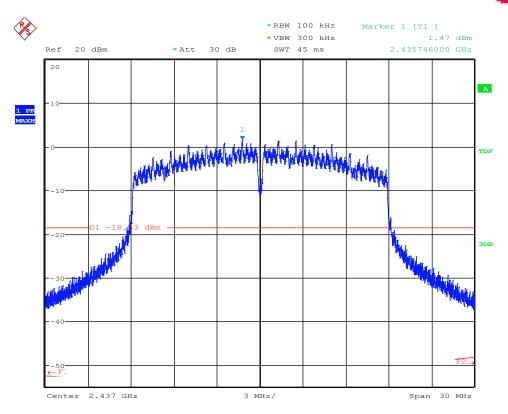


#### 20 dBc-nMIMO-ANT2-MCS13-Ch1+20 dBm-30 MHz-2.8 GHz

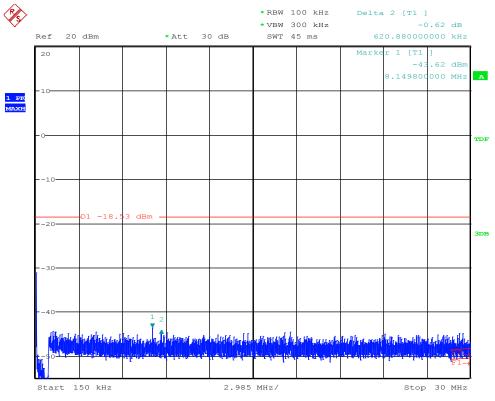


20dBc-nMIMO-ANT2-MCS13-Ch1+20dBm-2.8GHz-25GHz



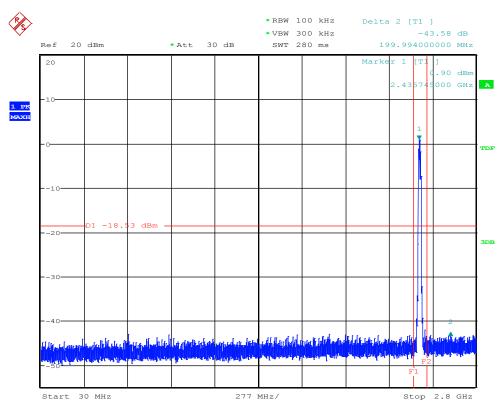


20dBc-nMIMO-ANT2-MCS13-Ch6+20dBm-Ref

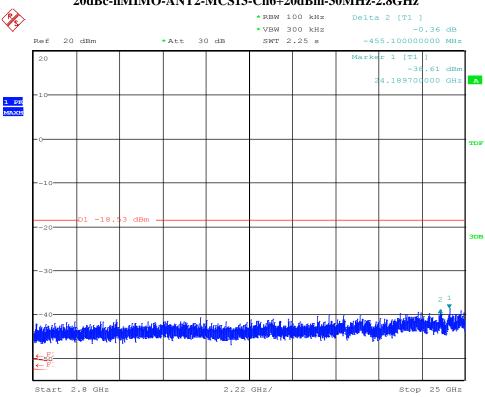


20dBc-nMIMO-ANT2-MCS13-Ch6+20dBm-0.15-30MHz



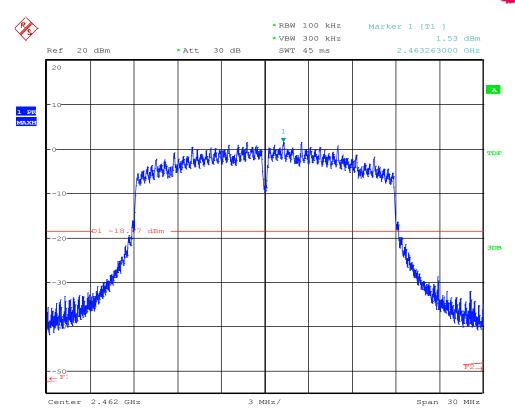


## 20 dB c-nMIMO-ANT2-MCS13-Ch6+20 dB m-30 MHz-2.8 GHz

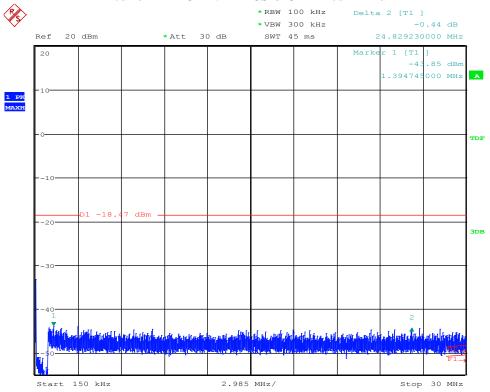


20dBc-nMIMO-ANT2-MCS13-Ch6+20dBm-2.8GHz-25GHz



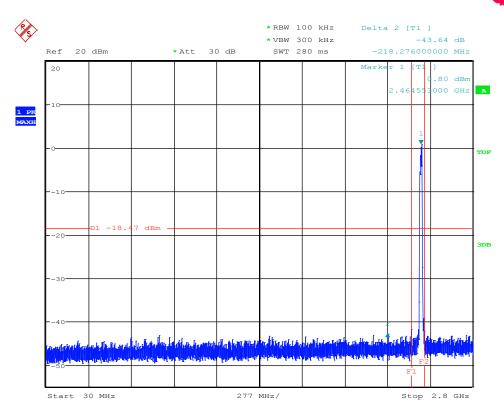


#### 20dBc-nMIMO-ANT2-MCS13-Ch11+20dBm-Ref

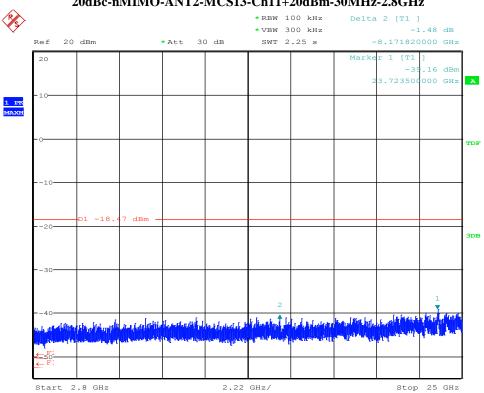


20dBc-nMIMO-ANT2-MCS13-Ch11+20dBm-0.15-30MHz





## 20 dB c-nMIMO-ANT 2-MCS 13-Ch 11+20 dB m-30 MHz-2.8 GHz



20dBc-nMIMO-ANT2-MCS13-Ch11+20dBm-2.8GHz-25GHz



# 2. Radiated Field Strength Measurements

# 2.1. Radiated Field Strength Emissions – 9 kHz to 30 MHz

#### Diagram No. 2.01\_FALCON X4-WLAN2.4 GHz-TX-bMode-SISO-20MHz- 11Mbit-Ch11+20dBm

**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 15.247/15.209/15.205

Operator: AF

Operating conditions: Continuous TX - b Mode-SISO-B.W. 20 MHz-11Mbit-Ch 11 (2462 MHz)- PWR+20dBm

Power during tests: Battery

#### **EUT Information**

Manufacturer: Datalogic S.r.l.
EUT MODEL: FALCON X4
EuT Type: E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

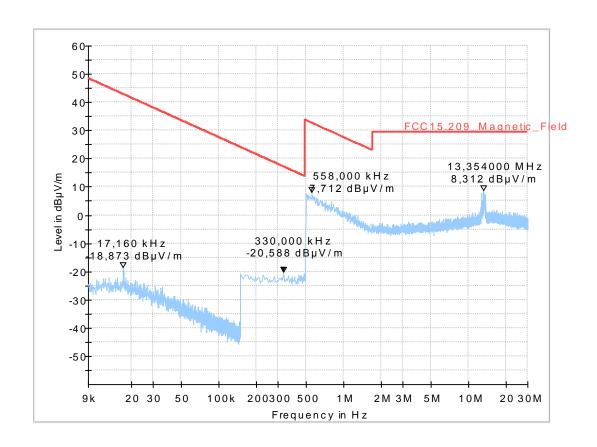
 HW Version:
 BETA

 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully Internal Battery charging

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)





#### Diagram No. 2.02\_FALCON X4-WLAN2.4 GHz-TX-gMode-SISO-20MHz-12Mbit-Ch6+20dBm

**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 15.247/15.209/15.205

Operator: AF1

Operating conditions: Continuous TX - g Mode-SISO-B.W. 20 MHz-12Mbit-Ch 6 (2437 MHz)- PWR+20dBm

Power during tests: Battery

#### **EUT Information**

Manufacturer: Datalogic S.r.l.
EUT MODEL: FALCON X4
EuT Type: E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

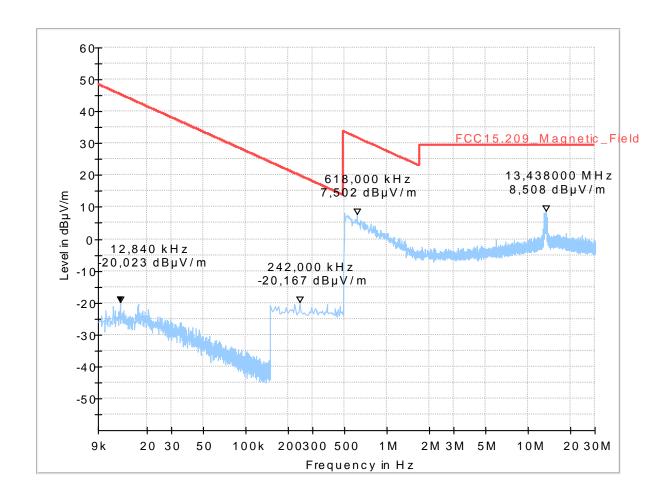
 HW Version:
 BETA

 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully Internal Battery charging

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)





#### $Diagram~No.~2.03\_FALCON~X4-WLAN2.4~GHz-TX-nMode-SISO-20MHz-MCS3-Ch1+20dBm$

**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 15.247/15.209/15.205

Operator: AF

Operating conditions: Continuous TX - n Mode-SISO-B.W. 20 MHz-MCS3-Ch 1 (2412 MHz)- PWR+20dBm

Power during tests: Battery

#### **EUT Information**

Manufacturer:Datalogic S.r.l.EUT MODEL:FALCON X4EuT Type:E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

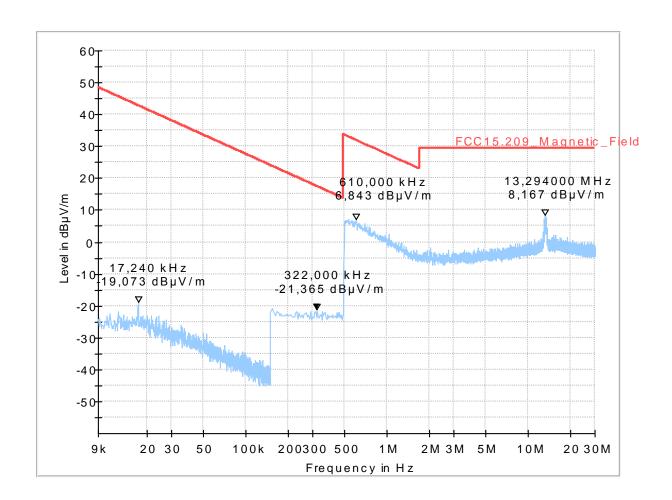
 HW Version:
 BETA

 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully Internal Battery charging

Battery Type: BT-26 | L





#### Diagram No. 2.04\_FALCON X4-WLAN2.4 GHz-TX-nMode-MIMO-20MHz-MCS13-Ch11+20dBm

**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 15.247/15.209/15.205; RSS-Gen., Issue 4

Operator: AF1

Operating conditions: Continuous TX - n Mode-MIMO-B.W. 20 MHz- MCS13-Ch 11 (2462 MHz)-

PWR+20dBm

Power during tests: Battery

#### **EUT Information**

 Manufacturer:
 Datalogic S.r.l.

 EUT MODEL:
 FALCON X4

 EuT Type:
 E00ANM4HS0GF0A4

 P/N:
 945550001

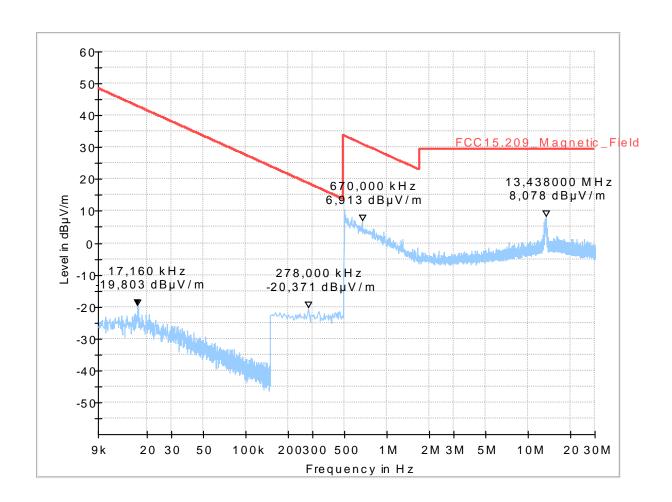
 S/N:
 Z17P02008

 HW Version:
 BETA

HW Version: BETA
SW Version: Android 4.4.4
Firmware Version: 2.01.46.20180109

Input: fully Internal Battery charging

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)





# 2.2. Radiated Field Strength Emissions – 30 MHz to 1 GHz

#### Diagram No. 3.01\_FALCON X4-WLAN2.4 GHz-TX-bMode-SISO-20MHz- 11Mbit-Ch11+20dBm

**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 15.247/15.209/15.205

Operator: SLo

Operating conditions: Continuous TX - b Mode-SISO-B.W. 20 MHz-11 Mbit-Ch 11 (2462 MHz)- PWR+20dBm

Power during tests: Battery

#### **EUT Information**

Manufacturer:Datalogic S.r.l.EUT MODEL:FALCON X4EuT Type:E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

 HW Version:
 BETA

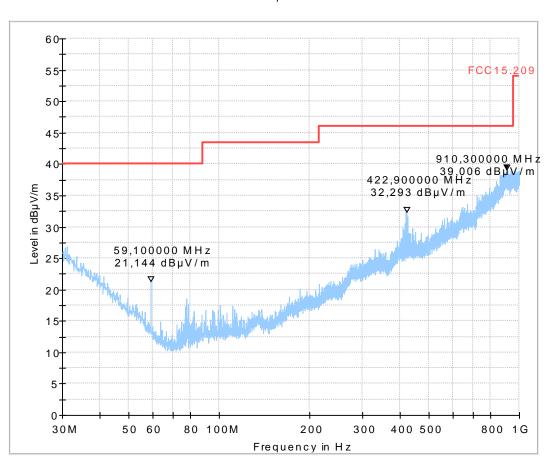
 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully Internal Battery charging

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

#### Full Spectrum





#### Diagram No. 3.02\_FALCON X4-WLAN2.4 GHz-TX-gMode-SISO-20MHz-12Mbit-Ch6+20dBm

**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 15.247/15.209/15.205

Operator: SLo

Operating conditions: Continuous TX - g Mode-SISO-B.W. 20 MHz-12 Mbit-Ch 6 (2437 MHz)- PWR+20dBm

Power during tests: Battery

#### **EUT Information**

 Manufacturer:
 Datalogic S.r.l.

 EUT MODEL:
 FALCON X4

 EuT Type:
 E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

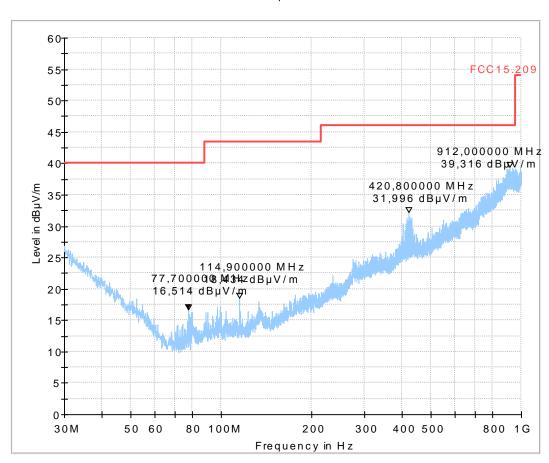
 HW Version:
 BETA

HW Version:BETASW Version:Android 4.4.4Firmware Version:2.01.46.20180109

Input: fully Internal Battery charging

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

#### Full Spectrum





#### Diagram No. 3.03\_FALCON X4-WLAN2.4 GHz-TX-nMode-SISO-20MHz-MCS3-Ch1+20dBm

#### **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 15.247/15.209/15.205

Operator: SLo

Operating conditions: Continuous TX - n Mode-SISO-B.W. 20 MHz-MCS3-Ch 1 (2412 MHz)- PWR+20dBm

Power during tests: Battery

#### **EUT Information**

 Manufacturer:
 Datalogic S.r.l.

 EUT MODEL:
 FALCON X4

 EuT Type:
 E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

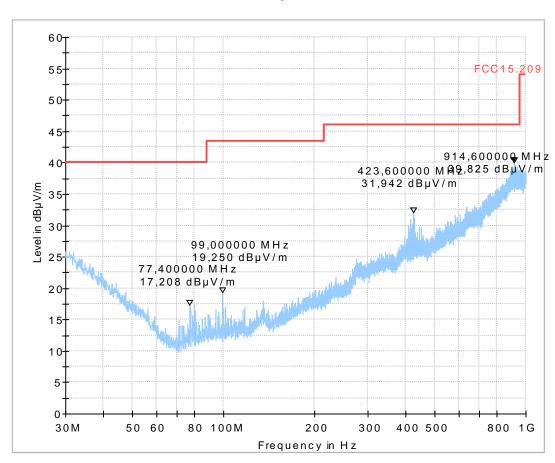
 HW Version:
 BETA

HW Version: BETA
SW Version: Android 4.4.4
Firmware Version: 2.01.46.20180109

Input: fully Internal Battery charging

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

#### Full Spectrum





## Diagram No. 3.04\_FALCON X4-WLAN2.4 GHz-TX-nMode-MIMO-20MHz-MCS13-Ch11+20dBm

## **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 15.247/15.209/15.205

Operator: SLo

Operating conditions: Continuous TX - n Mode-MIMO-B.W. 20 MHz- MCS13-Ch 11 (2462 MHz)-

PWR+20dBm

Power during tests: Battery

## **EUT Information**

 Manufacturer:
 Datalogic S.r.l.

 EUT MODEL:
 FALCON X4

 EuT Type:
 E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

 HW Version:
 BETA

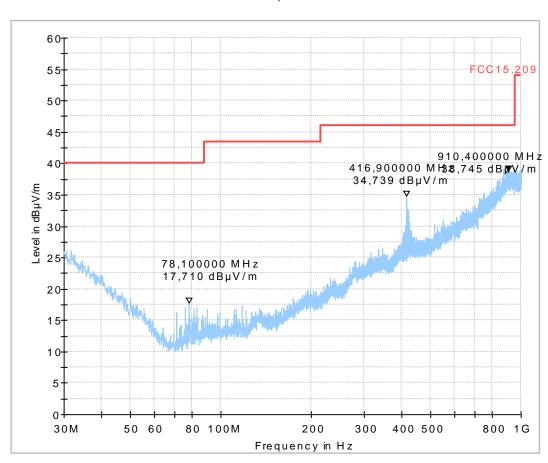
 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully Internal Battery charging

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

## Full Spectrum





## 2.3. Radiated Field Strength Emissions – 1 GHz to 18 GHz

## Diagram No.: 4.01\_FALCON X4-WLAN2.4 GHz-TX-bMode-SISO-20MHz-11Mbit-Ch11+20dBm

## **Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

Antenna polarisation: horizontal/vertical

Operation mode: Continuous TX - b Mode-SISO-B.W. 20 MHz-11 Mbit-Ch 11 (2462 MHz)- PWR+20dBm

Operator Name: KIv

## **EUT Information**

Manufacturer:Datalogic S.r.l.EUT MODEL:FALCON X4EuT Type:E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

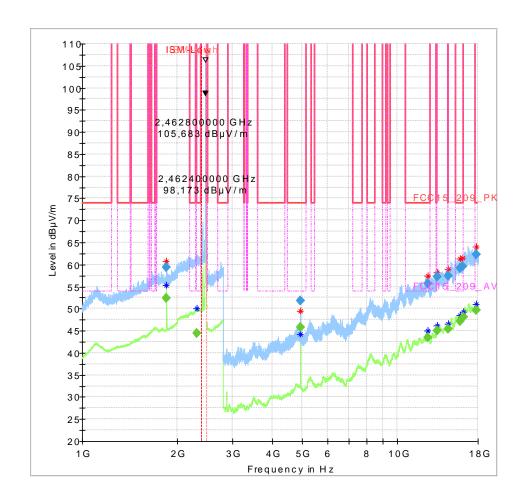
 HW Version:
 BETA

 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)





## **Final Result**

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m) + Duty Cycle Correction (dB)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
1853.200000		52,78	150.00	97.22	100.0	1000.000	155.0	V	222.0
1853.200000	59.32		150.00	90.68	100.0	1000.000	155.0	Н	278.0
2310.040000		44,78	54.00	9.22	100.0	1000.000	155.0	Н	251.0
4924.000000	51.88		74.00	22.12	100.0	1000.000	155.0	V	237.0
4924.000000		46,15	54.00	7.85	100.0	1000.000	155.0	V	237.0
12489.880000	55.76		74.00	18.24	100.0	1000.000	155.0	V	170.0
12502.600000		43,82	54.00	10.18	100.0	1000.000	155.0	Н	303.0
13367.200000	57.25		74.00	16.75	100.0	1000.000	155.0	Н	63.0
13385.600000		45,25	54.00	8.75	100.0	1000.000	155.0	Н	297.0
14490.760000	57.43		74.00	16.57	100.0	1000.000	155.0	V	254.0
14491.800000		45,66	54.00	8.34	100.0	1000.000	155.0	Н	218.0
15796.760000	59.12		74.00	14.88	100.0	1000.000	155.0	Н	-13.0
15802.440000		47,40	54.00	6.60	100.0	1000.000	155.0	V	49.0
16062.280000	59.64		74.00	14.36	100.0	1000.000	155.0	Н	111.0
16198.800000		48,48	54.00	5.52	100.0	1000.000	155.0	Н	248.0
17773.640000		50,03	54.00	3.97	100.0	1000.000	155.0	V	311.0
17775.720000	62.29		74.00	11.71	100.0	1000.000	155.0	Н	87.0

Frequency (MHz)	Elevatio n (deg)	Corr (dB)
1853.200000	0.0	32.4
1853.200000	90.0	32.4
2310.040000	0.0	35.8
4924.000000	0.0	4.5
4924.000000	0.0	4.5
12489.880000	90.0	20.1
12502.600000	0.0	20.1
13367.200000	0.0	20.6
13385.600000	90.0	20.7
14490.760000	90.0	22.9
14491.800000	90.0	22.9
15796.760000	90.0	24.2
15802.440000	0.0	24.2
16062.280000	0.0	24.3
16198.800000	0.0	25.0
17773.640000	90.0	26.5
17775.720000	90.0	26.5



## Diagram No.: 4.02\_FALCON X4-WLAN2.4 GHz-TX-gMode-SISO-20MHz-12Mbit-Ch6+20dBm

## **Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

Antenna polarisation: horizontal/vertical

Operation mode: Continuous TX - g Mode-SISO-B.W. 20 MHz-12 Mbit-Ch 6 (2437 MHz)- PWR+20dBm

Operator Name: KIv

## **EUT Information**

Manufacturer:Datalogic S.r.l.EUT MODEL:FALCON X4EuT Type:E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

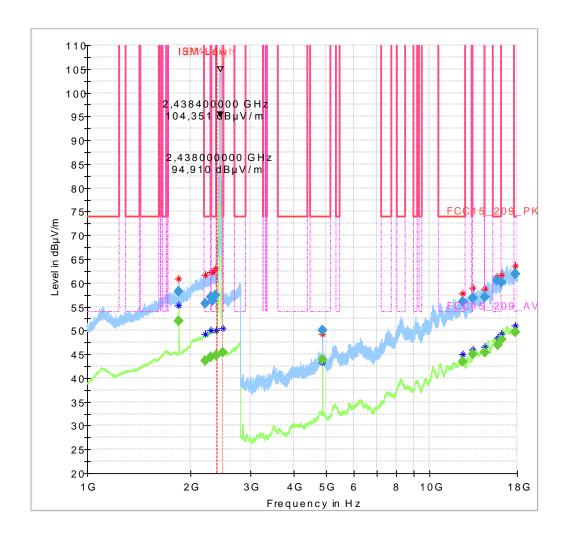
 HW Version:
 BETA

 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)





## **Final Result**

Final_Result									
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBµV/m) + Duty Cycle Correctio n (dB))	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
1853.200000		52,31	150.00	97.69	100.0	1000.000	155.0	Н	324.0
1853.200000	58.18		150.00	91.82	100.0	1000.000	155.0	V	45.0
2206.000000		43,98	54.00	10.02	100.0	1000.000	155.0	V	-5.0
2208.560000	55.70		74.00	18.30	100.0	1000.000	155.0	V	233.0
2296.040000	57.10		74.00	16.90	100.0	1000.000	155.0	Н	313.0
2297.720000		44,85	54.00	9.15	100.0	1000.000	155.0	V	141.0
2321.440000	56.29		74.00	17.71	100.0	1000.000	155.0	V	315.0
2373.920000	57.46		74.00	16.54	100.0	1000.000	155.0	V	-14.0
2385.760000		45,22	54.00	8.78	100.0	1000.000	155.0	V	159.0
2483.500000		45,81	54.00	8.19	100.0	1000.000	155.0	V	129.0
4874.000000	49.99		74.00	24.01	100.0	1000.000	155.0	V	225.0
4874.000000		44,18	54.00	9.82	100.0	1000.000	155.0	Н	312.0
12492.840000	56.05		74.00	17.95	100.0	1000.000	155.0	V	280.0
12493.280000		43,79	54.00	10.21	100.0	1000.000	155.0	Н	-36.0
13370.400000	56.94		74.00	17.06	100.0	1000.000	155.0	V	207.0
13396.120000		45,32	54.00	8.68	100.0	1000.000	155.0	V	238.0
14473.800000	57.01		74.00	16.99	100.0	1000.000	155.0	Н	188.0
14497.280000		45,77	54.00	8.23	100.0	1000.000	155.0	V	228.0
15720.280000	60.55		74.00	13.45	100.0	1000.000	155.0	V	308.0
15811.160000		47,43	54.00	6.57	100.0	1000.000	155.0	V	252.0
16188.920000	60.19		74.00	13.81	100.0	1000.000	155.0	Н	180.0
16197.080000		48,52	54.00	5.48	100.0	1000.000	155.0	Н	145.0
17789.800000		50,13	54.00	3.87	100.0	1000.000	155.0	V	159.0
17794.840000	61.92		74.00	12.08	100.0	1000.000	155.0	Н	146.0

Frequency (MHz)	Elevation (deg)	Corr. (dB)
1853.200000	90.0	32.4
1853.200000	0.0	32.4
2206.000000	90.0	35.2
2208.560000	0.0	35.2
2296.040000	90.0	35.7
2297.720000	0.0	35.7
2321.440000	90.0	35.7
2373.920000	90.0	35.6
2385.760000	0.0	35.6
2483.500000	0.0	35.9
4874.000000	0.0	4.7
4874.000000	0.0	4.7
12492.840000	0.0	20.1
12493.280000	0.0	20.1
13370.400000	0.0	20.6
13396.120000	90.0	20.8
14473.800000	90.0	22.7
14497.280000	90.0	23.0
15720.280000	0.0	24.2
15811.160000	0.0	24.2
16188.920000	0.0	24.9
16197.080000	90.0	25.0
17789.800000	90.0	26.6
17794.840000	0.0	26.6



## Diagram No.: 4.03\_FALCON X4-WLAN2.4 GHz-TX-nMode-SISO-20MHz-MCS3-Ch1+20dBm

### **Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

Antenna polarisation: horizontal/vertical

Operation mode: Continuous TX - n Mode-SISO-B.W. 20 MHz-MCS3-Ch 1 (2412 MHz)- PWR+20dBm

Operator Name: SRa

### **EUT Information**

Manufacturer: Datalogic S.r.l.
EUT MODEL: FALCON X4
EuT Type: E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

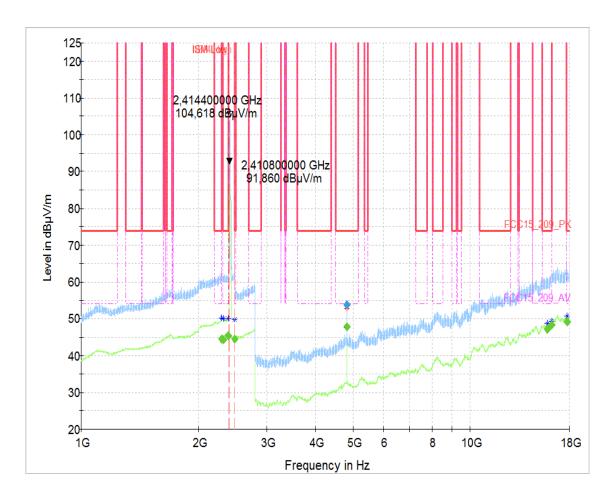
 HW Version:
 BETA

 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)





## **Final Result**

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBµV/m) + Duty Cycle Correction (dB)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
2483.500000	57.31		74.00	16.69	100.0	1000.000	155.0	Н	122.0
1853.280000	58.81		150.00	91.19	100.0	1000.000	155.0	Н	15.0
2209.120000	55.94		74.00	18.06	100.0	1000.000	155.0	Н	62.0
2384.720000	56.72		74.00	17.28	100.0	1000.000	155.0	V	206.0
2295.120000	56.37		74.00	17.63	100.0	1000.000	155.0	V	291.0
2204.360000		44,37	54.00	9.63	100.0	1000.000	155.0	Н	68.0
2312.360000		45,16	54.00	8,84	100.0	1000.000	155.0	V	179.0
1853.200000		53,69	150.00	96.31	100.0	1000.000	155.0	Н	77.0
2483.500000		45,64	54.00	8.36	100.0	1000.000	155.0	V	10.0
2296.800000		45,21	54.00	8.79	100.0	1000.000	155.0	V	216.0

Frequency	Elevatio	Corr	
(MHz)	n	(-ID)	Comment
	(deg)	(dB)	
2483.500000	0.0	35.9	06:34:10 - 10.11.2017
1853.280000	90.0	32.4	06:36:56 - 10.11.2017
2209.120000	90.0	35.2	06:39:16 - 10.11.2017
2384.720000	90.0	35.6	06:42:06 - 10.11.2017
2295.120000	90.0	35.6	06:44:29 - 10.11.2017
2204.360000	0.0	35.3	06:47:46 - 10.11.2017
2312.360000	0.0	35.8	06:50:38 - 10.11.2017
1853.200000	90.0	32.4	06:53:34 - 10.11.2017
2483.500000	90.0	35.9	06:56:19 - 10.11.2017
2296.800000	90.0	35.7	06:59:16 - 10.11.2017



## Diagram No.: 4.04\_FALCON X4-WLAN2.4 GHz-TX-nMode-MIMO-20MHz-MCS13-Ch11+20dBm

## **Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

Antenna polarisation: horizontal/vertical

Operation mode: Continuous TX - n Mode-MIMO-B.W. 20 MHz- MCS13-Ch 11 (2462 MHz)-

PWR + 20dBm

Operator Name: TFr

## **EUT Information**

Manufacturer:Datalogic S.r.l.EUT MODEL:FALCON X4EuT Type:E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

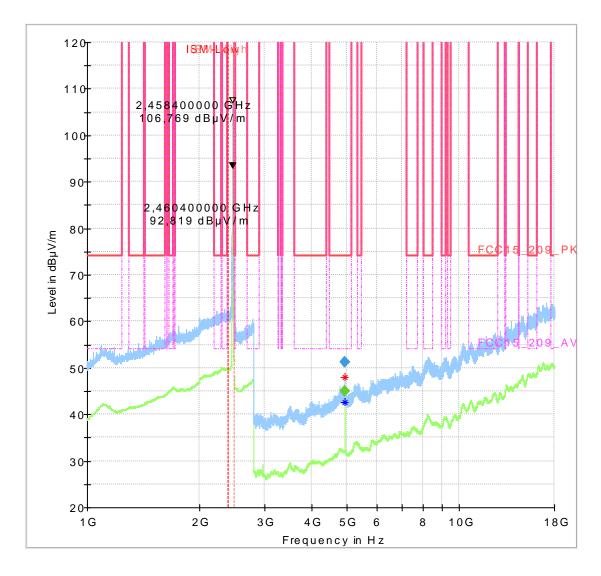
 HW Version:
 BETA

 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)





## Final\_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBµV/m) + Duty Cycle Correction (dB)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
4924.000000		47.26	54.00	6.74	100.0	1000.000	155.0	V	245.0
4924.000000	51.31		74.00	22.69	100.0	1000.000	155.0	V	246.0

Frequency (MHz)	Elevatio n (deg)
4924.000000	0.0
4924.000000	0.0



# 2.4. Radiated Field Strength Emissions – 18 GHz to 25 GHz

# Diagram No.: 4.01a\_FALCON X4-WLAN2.4 GHz-TX-bMode-SISO-20MHz-11Mbit-Ch11-20dBm

### **Common Information**

Test Description: Radiated field strength emission in 1m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

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: Continuous TX - b Mode-SISO-B.W. 20 MHz-11 Mbit-Ch 11 (2462 MHz)-

PWR+20dBm

Operator Name: DLe

Comment: Channel no. low/middle/high

## **EUT Information**

Manufacturer: Datalogic S.r.l. EUT MODEL: FALCON X4

EuT Type: E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

 HW Version:
 BETA

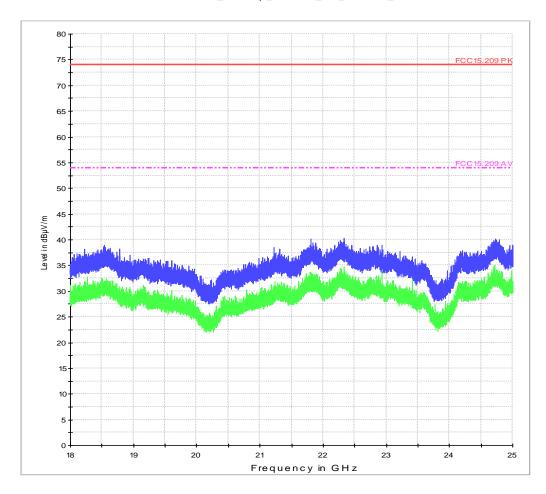
 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

FCC\_Sweep\_15.247\_18\_25GHz\_Pre





## Diagram No.: 4.02a\_FALCON X4-WLAN2.4 GHz-TX-gMode-SISO-20M0Hz-12Mbit-Ch6-20dBm

### **Common Information**

Test Description: Radiated field strength emission in 1m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

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: Continuous TX - g Mode-SISO-B.W. 20 MHz-12 Mbit-Ch 6 (2437 MHz)- PWR+20dBm

Operator Name: DLe

Comment: Channel no. low/middle/high

## **EUT Information**

Manufacturer: Datalogic S.r.l. EUT MODEL: FALCON X4

EuT Type: E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

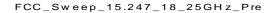
 HW Version:
 BETA

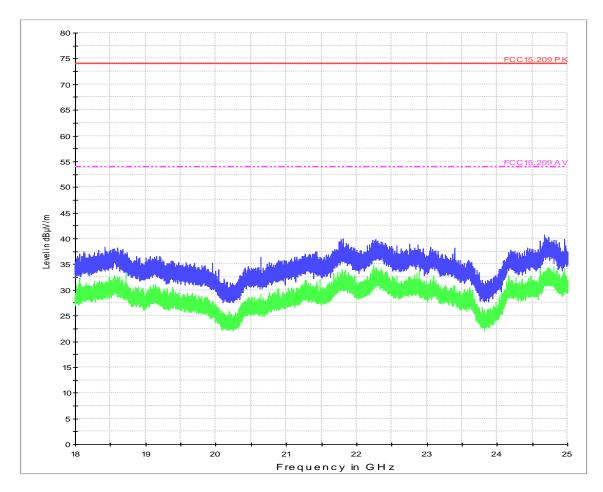
 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)







## Diagram No.: 4.03a\_FALCON X4-WLAN2.4 GHz-TX-nMode-SISO-20MHz-MCS3-Ch1-20dBm

### **Common Information**

Test Description: Radiated field strength emission in 1m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

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: Continuous TX - n Mode-SISO-B.W. 20 MHz-MCS3-Ch 1 (2412 MHz)- PWR+20dBm

Operator Name: DLe

Comment: Channel no. low/middle/high

### **EUT Information**

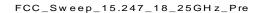
Manufacturer: Datalogic S.r.l. EUT MODEL: FALCON X4

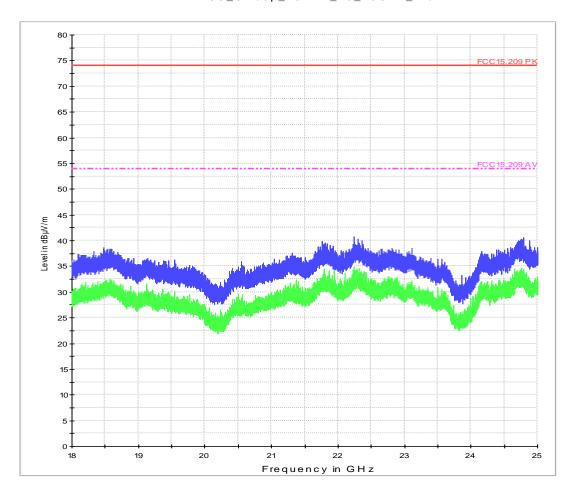
EuT Type: E00ANM4HS0GF0A4

945550001 P/N: S/N: Z17P02008 HW Version: BETA SW Version: Android 4.4.4 2.01.46.20180109 Firmware Version:

fully charged Internal Battery Input:

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)







## Diagram No.: 4.04a\_FALCON X4-WLAN2.4 GHz-TX-nMode-MIMO-20MHz-MCS13-Ch11-20dBm

### **Common Information**

Test Description: Radiated field strength emission in 1m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

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: Continuous TX - n Mode-MIMO-B.W. 20 MHz- MCS13-Ch 11 (2462 MHz)-

PWR+20dBm

Operator Name: DLe

Comment: Channel no. low/middle/high

## **EUT Information**

Manufacturer: Datalogic S.r.l.
EUT MODEL: FALCON X4

EuT Type: E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

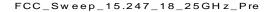
 HW Version:
 BETA

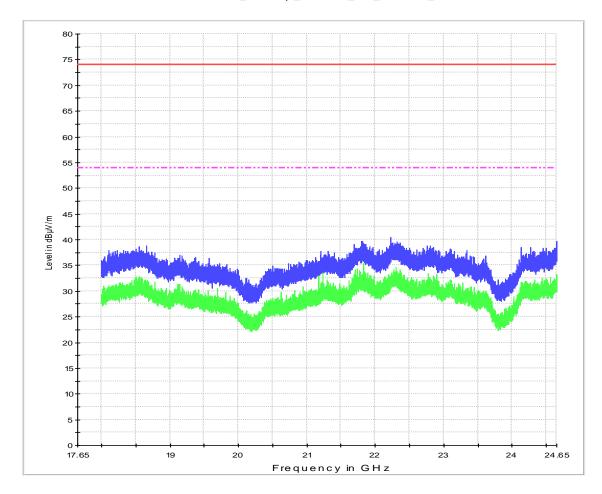
 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)







# 3. Radiated Band-Edge Measurements

## 3.1. b SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge)

## 9.01\_BE-Low-FALCON X4-WLAN2.4 GHz-TX-bMode-SISO-20MHz-- 11Mbit-Ch1+20dBm

### **Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions in 3m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

Antenna polarisation: horizontal/vertical

Operation mode: Continuous TX - b Mode-SISO-B.W. 20 MHz-- 11Mbit-Ch 1 (2412 MHz)- PWR+20dBm

Operator Name: RIs

## **EUT Information**

Manufacturer:Datalogic S.r.l.EUT MODEL:FALCON X4EuT Type:E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

 HW Version:
 BETA

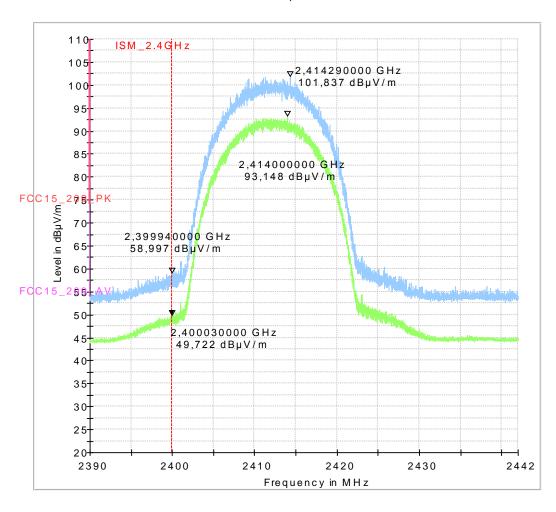
 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

## Full Spectrum





# 3.2. b SISO Mode-High Channel 2462 MHz ( 2.4 GHz ISM: right band edge)

# Diagram No.: 9.02\_BE-High-FALCON X4-WLAN2.4 GHz-TX-bMode-SISO-20MHz- 11Mbit-Ch11+20dBm

### **Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions in 3m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

Antenna polarisation: horizontal/vertical

Operation mode: Continuous TX - b Mode-SISO-B.W. 20 MHz-- 11Mbit-Ch 11 (2462 MHz)-

PWR+20dBm

Operator Name: RIs

### **EUT Information**

Manufacturer:Datalogic S.r.l.EUT MODEL:FALCON X4

EuT Type: E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

 HW Version:
 BETA

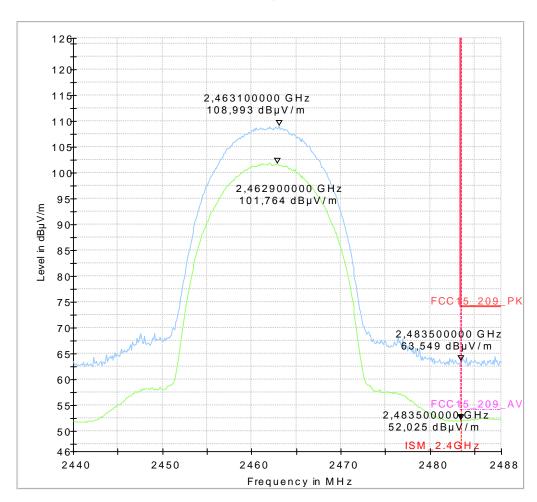
 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

## Full Spectrum





# 3.3. g SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge)

# $9.03\_BE-Low-FALCON~X4-WLAN2.4~GHz-TX-gMode-SISO-20MHz-12Mbit~Ch1+20dBm$

### **Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

Antenna polarisation: horizontal/vertical

Operation mode: Continuous TX - g Mode-SISO-B.W. 20 MHz- 12 Mbit -Ch 1 (2412 MHz)- PWR+20dBm

Operator Name: RIs

## **EUT Information**

 Manufacturer:
 Datalogic S.r.l.

 EUT MODEL:
 FALCON X4

 EuT Type:
 E00ANM4HS0GF0A4

 P/N:
 945550001

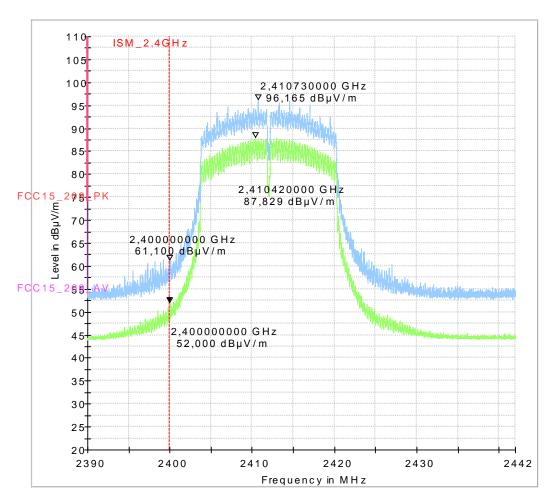
 S/N:
 Z17P02008

HW Version: BETA
SW Version: Android 4.4.4
Firmware Version: 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

## Full Spectrum





# 3.4. g SISO Mode-High Channel 2462 MHz ( 2.4 GHz ISM: right band edge)

# Diagram No.: 9.04\_BE-High-FALCON X4-WLAN2.4 GHz-TX-gMode-SISO-20MHz- 12 Mbit-Ch11+20dBm

## **Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

Antenna polarisation: horizontal/vertical

Operation mode: Continuous TX - g Mode-SISO-B.W. 20 MHz- 12 Mbit -Ch 11 (2462 MHz)-

PWR+20dBm

Operator Name: RIs

## **EUT Information**

Manufacturer:Datalogic S.r.l.EUT MODEL:FALCON X4EuT Type:E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

 HW Version:
 BETA

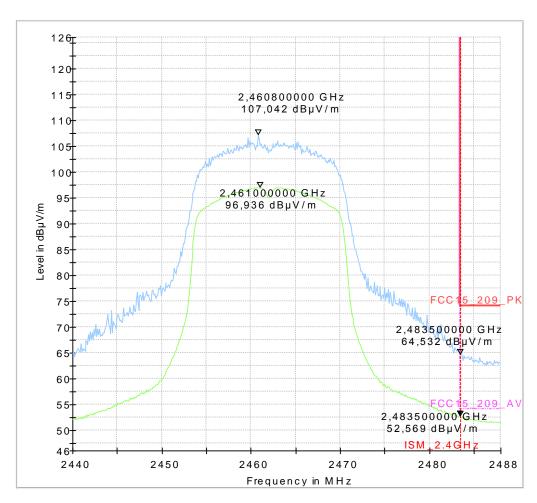
 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

### Full Spectrum





# 3.5. n SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge)

# Diagram No.: 9.05\_BE-Low-FALCON X4-WLAN2.4 GHz-TX-nMode-SISO-20MHz-MCS3-Ch1+20dBm

### **Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

Antenna polarisation: horizontal/vertical

Operation mode: Continuous TX - g Mode-SISO-B.W. 20 MHz- 12 Mbit -Ch 1 (2412 MHz)- PWR+20dBm

Operator Name: RIs

### **EUT Information**

Manufacturer: Datalogic S.r.l.
EUT MODEL: FALCON X4
EuT Type: E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

 HW Version:
 BETA

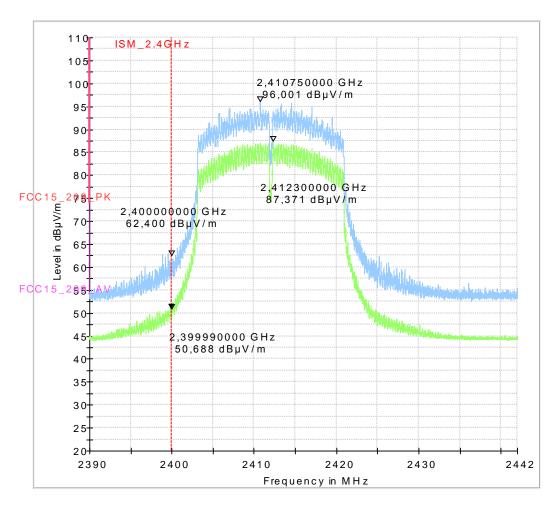
 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

## Full Spectrum





# 3.6. n SISO Mode-High Channel 2462 MHz (2.4 GHz ISM: right band edge)

# Diagram No.: 9.06\_BE-High-FALCON X4-WLAN2.4 GHz-TX-nMode-SISO-20MHz- MCS3-Ch11+20dBm

### **Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

Antenna polarisation: horizontal/vertical

Operation mode: Continuous TX - n Mode-SISO-B.W. 20 MHz- MCS3-Ch 11 (2462 MHz)- PWR+20dBm

Operator Name: TFr

## **EUT Information**

Manufacturer:Datalogic S.r.l.EUT MODEL:FALCON X4EuT Type:E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

 HW Version:
 BETA

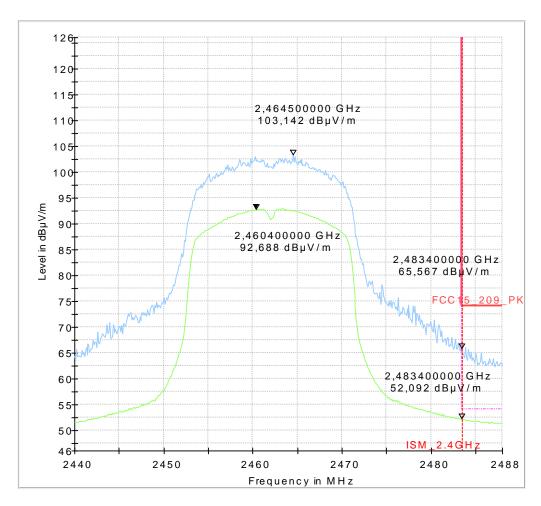
 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

### Full Spectrum





# 3.7. n MIMO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge)

## Diagram No.: 9.07\_BE-Low-FALCON X4-WLAN2.4 GHz-TX-nMode-SISO-20MHz-MCS13-Ch1+20dBm

### **Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

Antenna polarisation: horizontal/vertical

Operation mode: Continuous TX - n Mode-MIMO-B.W. 20 MHz- MCS13-Ch 1 (2412 MHz)-

PWR+20dBm

Operator Name: RIs

## **EUT Information**

Manufacturer:Datalogic S.r.l.EUT MODEL:FALCON X4EuT Type:E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

 HW Version:
 BETA

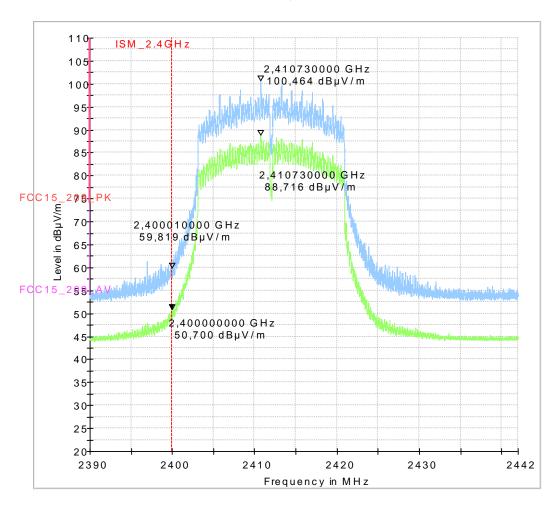
 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

## Full Spectrum





# 3.8. n MIMO Mode-High Channel 2462 MHz (2.4 GHz ISM: right band edge)

# Diagram No.: 9.08\_BE-High-FALCON X4-WLAN2.4 GHz-TX-nMode-MIMO-20MHz- MCS13-Ch11+20dBm

### **Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance

Test Site: CETECOM GmbH Essen

Test Standard: FCC 15.247- Intentional Radiator /15.209/15.205

Antenna polarisation: horizontal/vertical

Operation mode: Continuous TX - n Mode-MIMO-B.W. 20 MHz- MCS13-Ch 11 (2462 MHz)-

PWR+20dBm

Operator Name: TFr

### **EUT Information**

Manufacturer: Datalogic S.r.l. EUT MODEL: FALCON X4

EuT Type: E00ANM4HS0GF0A4

 P/N:
 945550001

 S/N:
 Z17P02008

 HW Version:
 BETA

 SW Version:
 Android 4.4.4

 Firmware Version:
 2.01.46.20180109

Input: fully charged Internal Battery

Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

## Full Spectrum

