

Measurement Results

No.1-0245/20-01-04_Annex_MR_A1

Test logging

This document is electronically signed and valid without handwritten signature.
For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

Test/s performed:

Michael Dorongovski
Lab Manager
Radio Communications

Table of Content

EUT Information	3
FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 b-mode	4
FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 b-mode	6
FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 b-mode	8
FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 g-mode	10
FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 g-mode	12
FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 g-mode	14
FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode	16
FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode	20
FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode	24
FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode	28
FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode	32
FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode	36
FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 b-mode	40
FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 b-mode	42
FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 b-mode	44
FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 g-mode	46
FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 g-mode	48
FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 g-mode	50
FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 b-mode	52
FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 b-mode	54
FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 b-mode	56
FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 g-mode	58
FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 g-mode	60
FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 g-mode	62
FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 b-mode	64
FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 b-mode	67
FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 b-mode	70
FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 g-mode	73
FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 g-mode	76
FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 g-mode	79

EUT Information

EUT DEFINITION	
Manufacturer	Bunker360 LLC.
Type	IoT Button
Serial Number	Not available
Setup Number	1.0
Version SW	V3.E1.01.xx.
Version FW	V3.E1.01.xx.
Version HW	XX40WBT
Comment 1	
Comment 2	
Temperature [°C] Min	-20
Temperature [°C] Nom	20
Temperature [°C] Max	55
Voltage [V] Min	3.3
Voltage [V] Nom	3.8
Voltage [V] Max	4.2

FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 14:44:50
Ambit Temp [°C] Humidity [rel%]	22.2 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2412 MHz

RESULT: Reference Power cond.

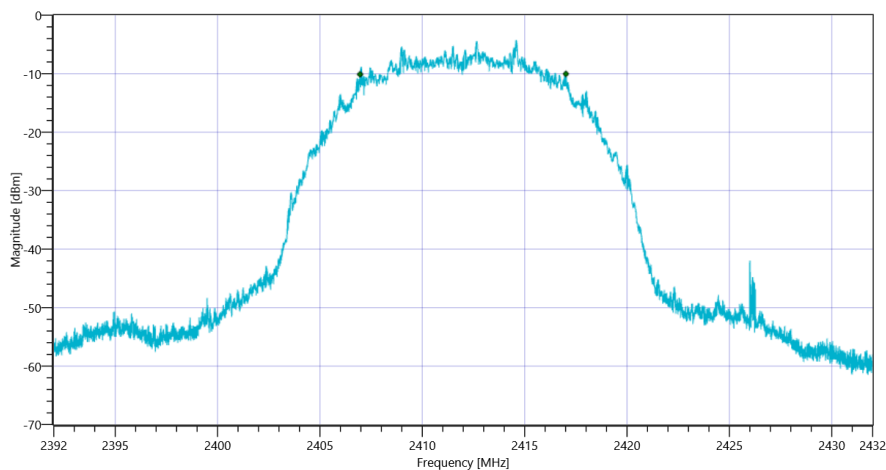
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.37	dBm	INFO
Ref. Frequency	---	---	2409.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.37 20.48 5
Start [MHz] Stop [MHz]	2392.000 2432.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	10056	kHz	PASS



FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 b-mode

General verdict

PASS

FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 14:55:39
Ambit Temp [°C] Humidity [rel%]	22.3 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2437 MHz

RESULT: Reference Power cond.

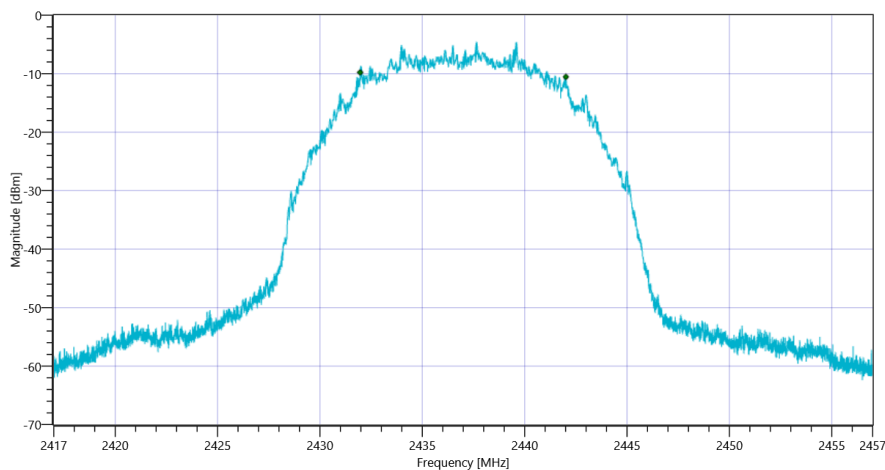
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.01	dBm	INFO
Ref. Frequency	---	---	2439.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.01 20.54 5
Start [MHz] Stop [MHz]	2417.000 2457.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	10048	kHz	PASS



FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 b-mode

General verdict

PASS

FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 15:22:04
Ambit Temp [°C] Humidity [rel%]	22.3 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2462 MHz

RESULT: Reference Power cond.

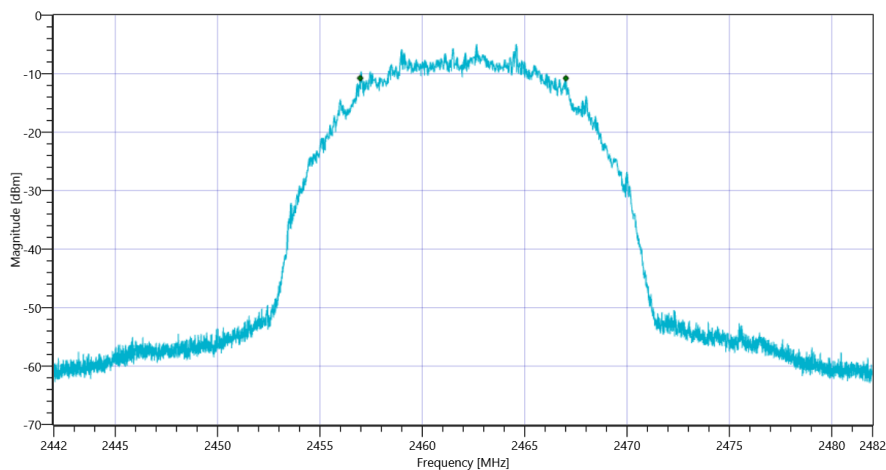
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.93	dBm	INFO
Ref. Frequency	---	---	2459.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.93 20.58 5
Start [MHz] Stop [MHz]	2442.000 2482.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	10048	kHz	PASS



FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 b-mode

General verdict

PASS

FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 15:32:46
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2412 MHz

RESULT: Reference Power cond.

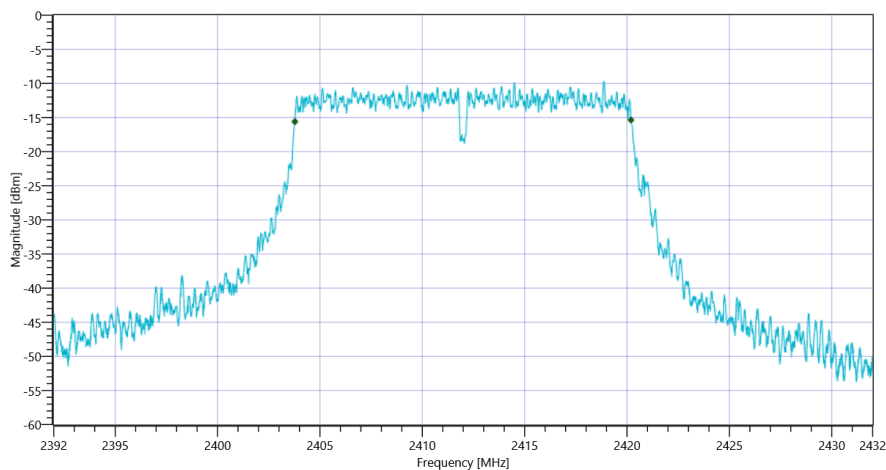
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	0.41	dBm	INFO
Ref. Frequency	---	---	2410.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.41 20.48 0
Start [MHz] Stop [MHz]	2392.000 2432.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	16416	kHz	PASS



FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 g-mode

General verdict

PASS

FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 16:13:46
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2437 MHz

RESULT: Reference Power cond.

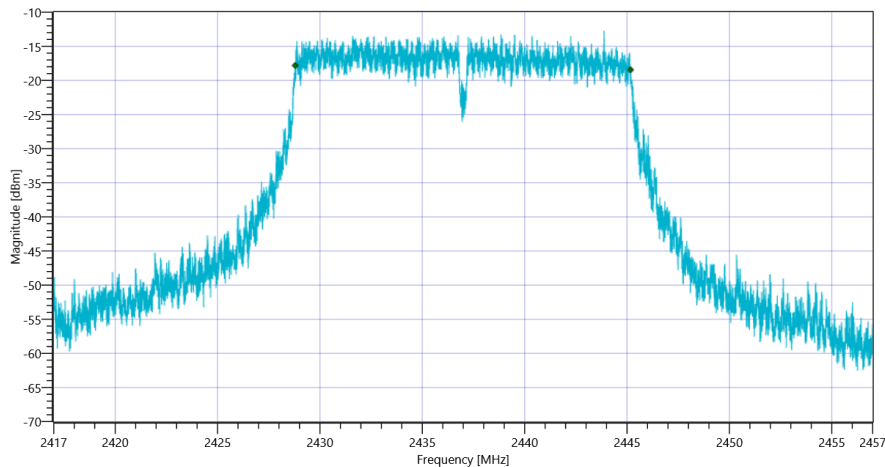
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	0.06	dBm	INFO
Ref. Frequency	---	---	2432.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.06 20.54 0
Start [MHz] Stop [MHz]	2417.000 2457.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	16376	kHz	PASS



FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 g-mode

General verdict

PASS

FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 16:23:45
Ambit Temp [°C] Humidity [rel%]	22.5 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2462 MHz

RESULT: Reference Power cond.

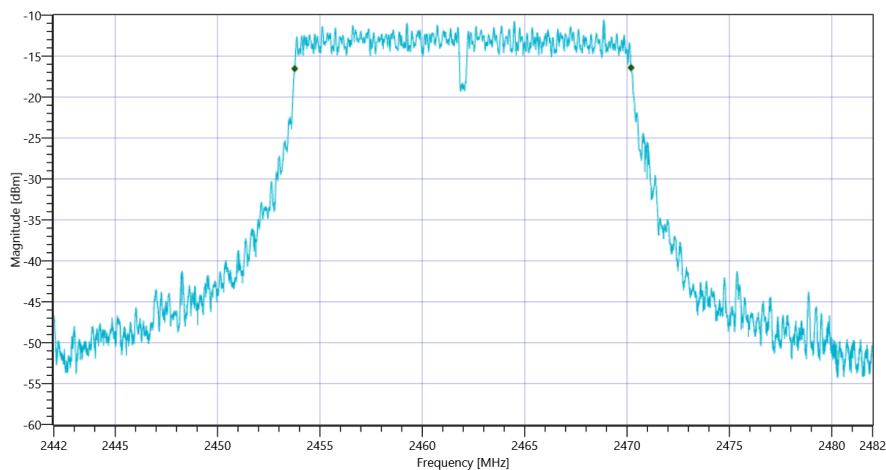
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	-0.07	dBm	INFO
Ref. Frequency	---	---	2456.610	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	4.93 20.58 0
Start [MHz] Stop [MHz]	2442.000 2482.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	16432	kHz	PASS



FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 g-mode

General verdict

PASS

FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 14:46:15
Ambit Temp [°C] Humidity [rel%]	22.3 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2412 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.66	dBm	INFO
Ref. Frequency	---	---	2413.500	MHz	INFO

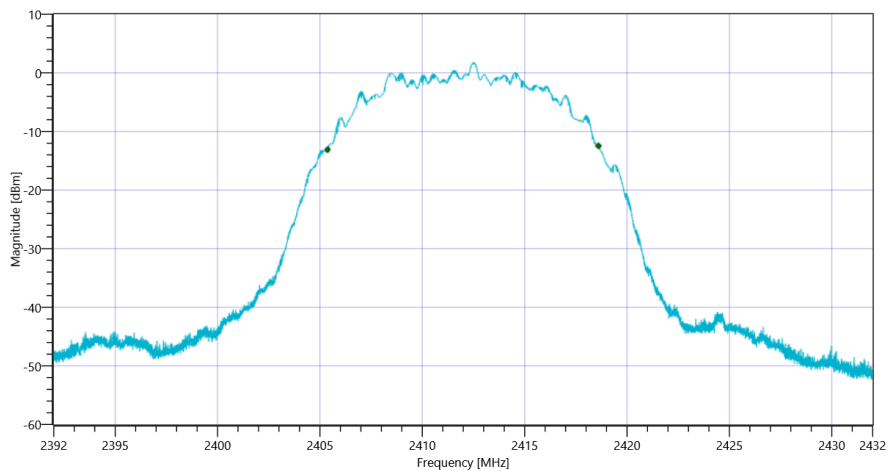
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.66 20.48 5
Start [MHz] Stop [MHz]	2392.000 2432.000
RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

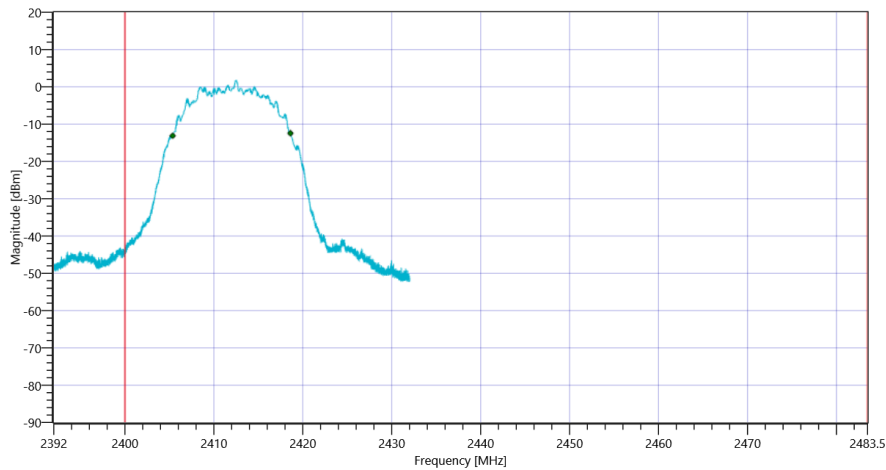
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	13234.677	kHz	INFO
T1 99%	2400.000000	---	2405.3687	MHz	PASS
T2 99%	---	2483.500000	2418.6033	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode 99PCT

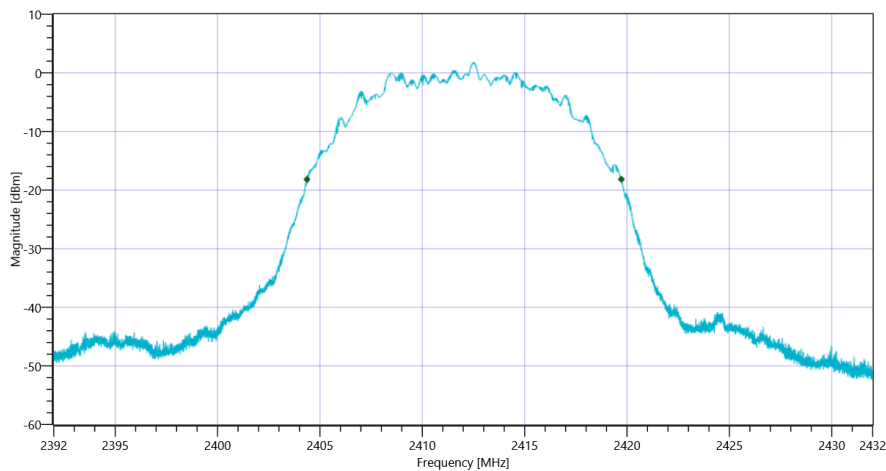
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode

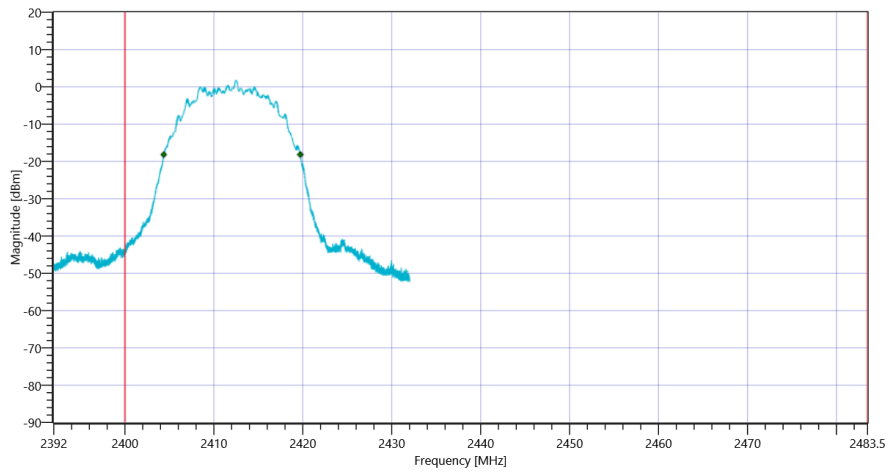
RESULT						
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict	
Bandwidth 20dB	---	---	15356	kHz	INFO	
T1 20dB	2400.000000	---	2404.3640	MHz	PASS	
T2 20dB	---	2483.500000	2419.7200	MHz	PASS	

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode

General verdict

PASS

FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 14:57:03
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2437 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.45	dBm	INFO
Ref. Frequency	---	---	2439.700	MHz	INFO

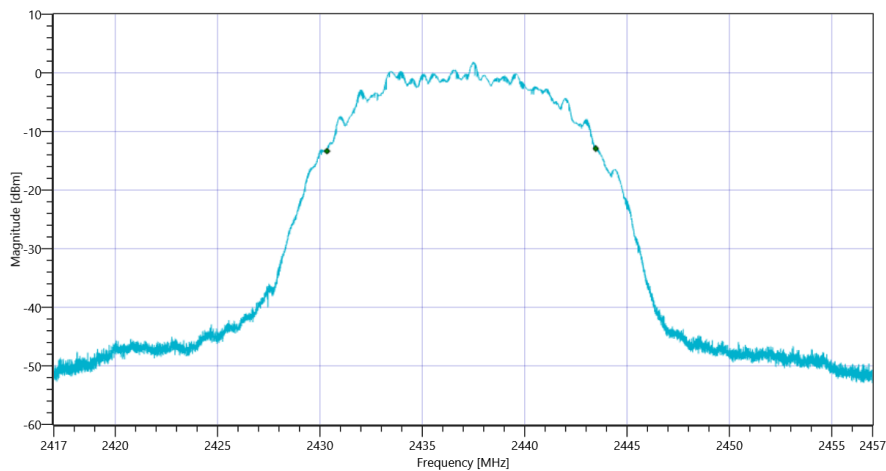
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.45 20.54 5
Start [MHz] Stop [MHz]	2417.000 2457.000
RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

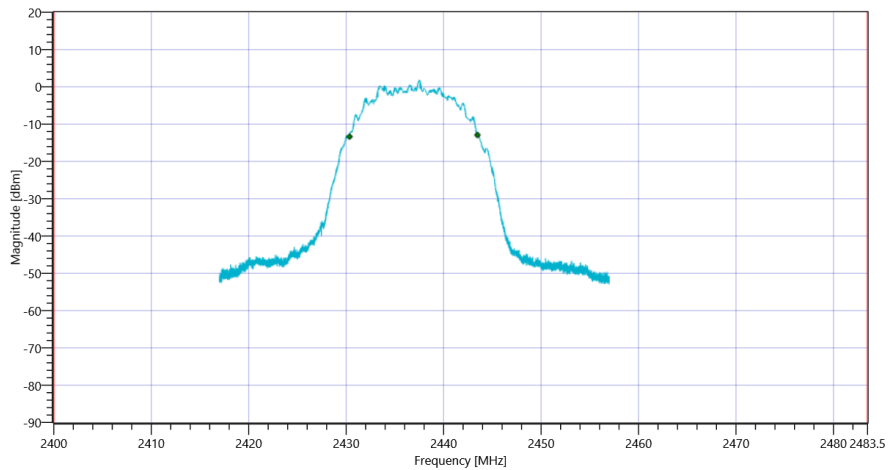
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	13126.687	kHz	INFO
T1 99%	2400.000000	---	2430.3447	MHz	PASS
T2 99%	---	2483.500000	2443.4714	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode 99PCT

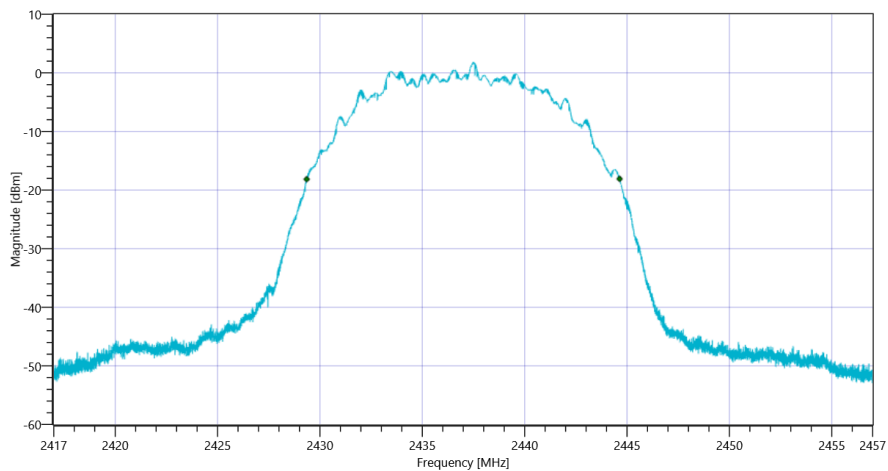
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode

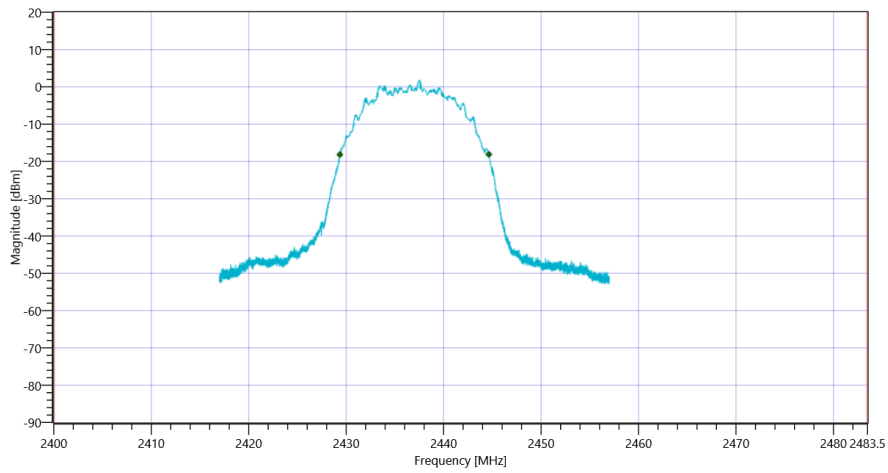
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	15284	kHz	INFO
T1 20dB	2400.000000	---	2429.3520	MHz	PASS
T2 20dB	---	2483.500000	2444.6360	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode

General verdict

PASS

FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 15:23:28
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2462 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.16	dBm	INFO
Ref. Frequency	---	---	2459.600	MHz	INFO

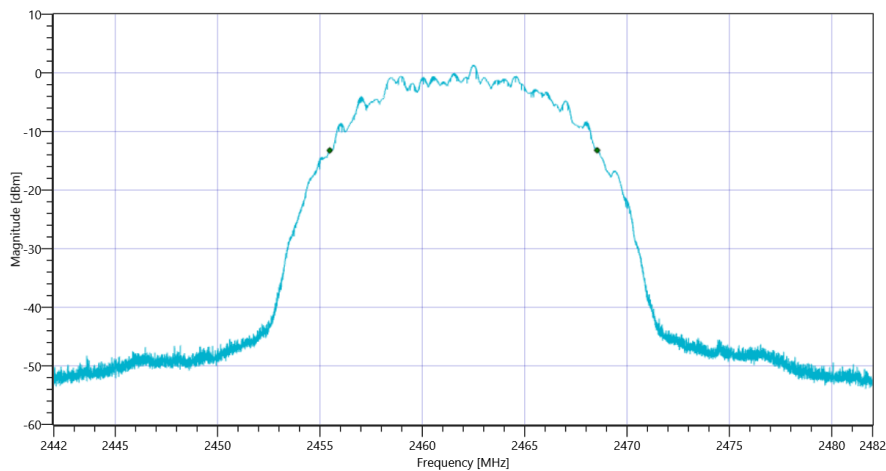
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.16 20.58 5
Start [MHz] Stop [MHz]	2442.000 2482.000
RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

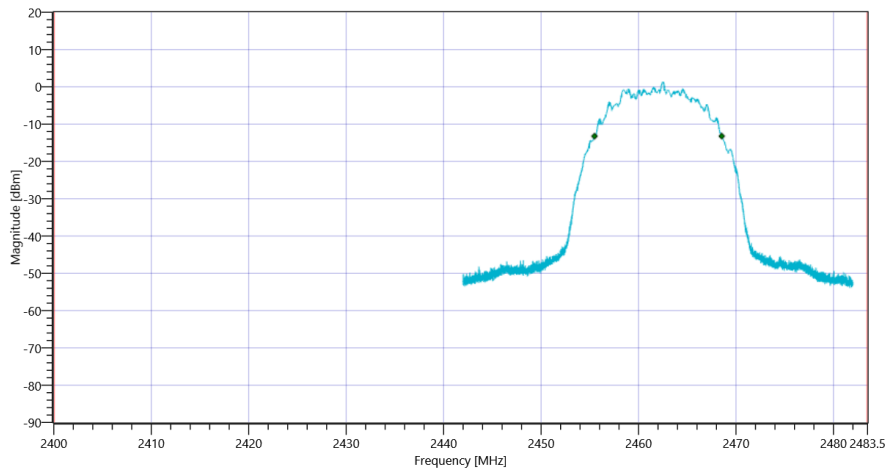
RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	13062.694	kHz	INFO
T1 99%	2400.000000	---	2455.4767	MHz	PASS
T2 99%	---	2483.500000	2468.5393	MHz	PASS

Plot: Bandwidth only



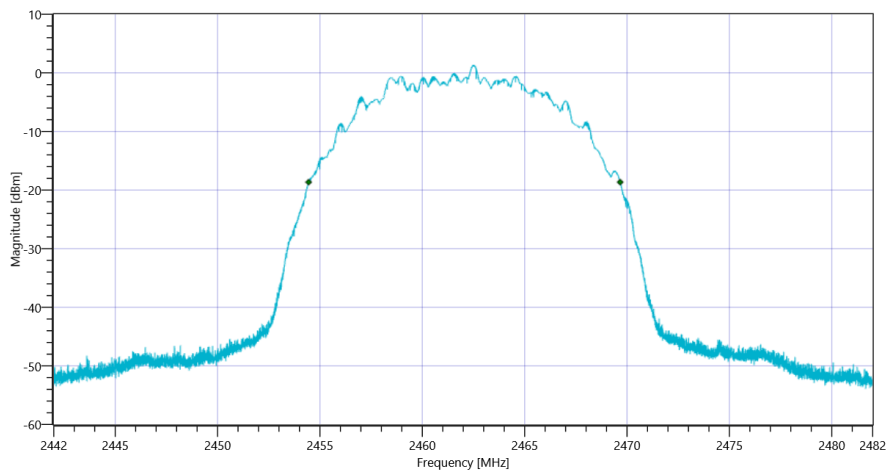
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode

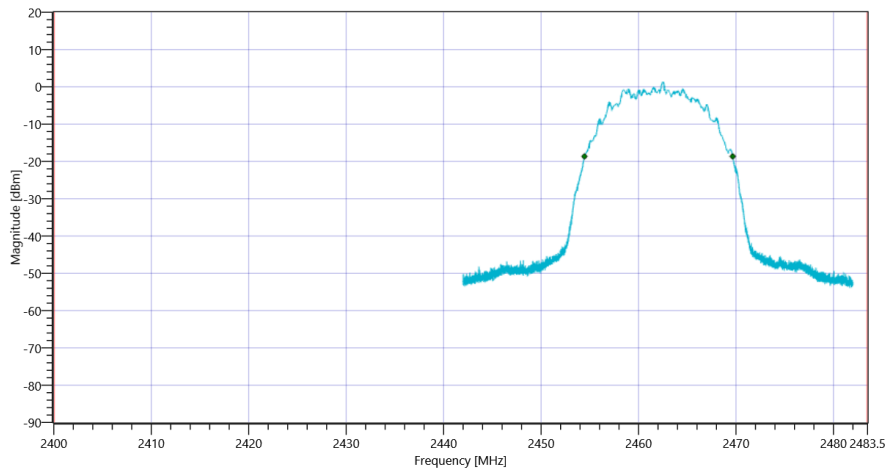
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	15216	kHz	INFO
T1 20dB	2400.000000	---	2454.4480	MHz	PASS
T2 20dB	---	2483.500000	2469.6640	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 b-mode

General verdict

PASS

FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 15:34:11
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2412 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	0.44	dBm	INFO
Ref. Frequency	---	---	2410.100	MHz	INFO

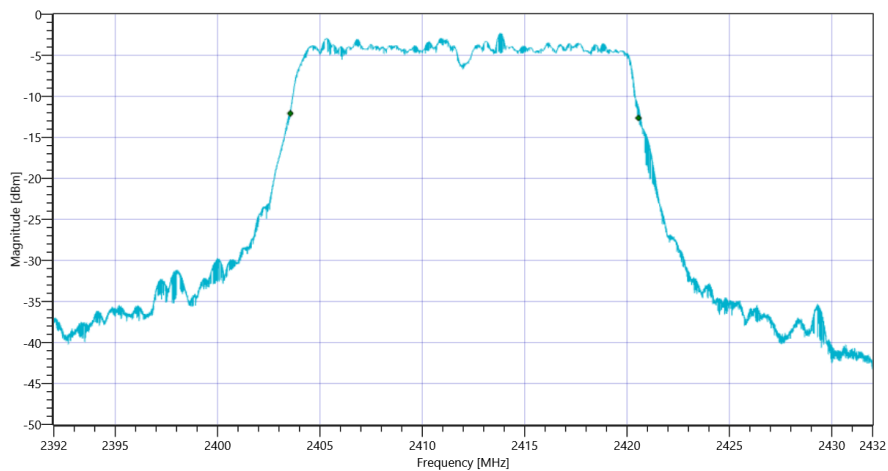
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.44 20.48 0
Start [MHz] Stop [MHz]	2392.000 2432.000
RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

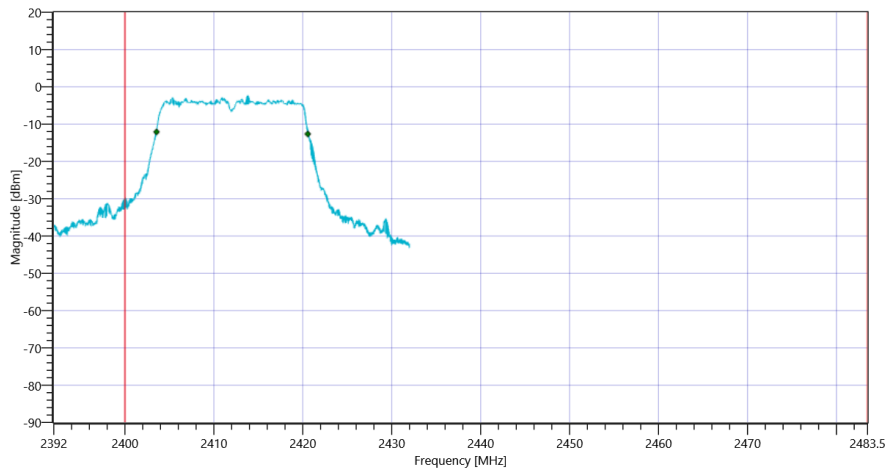
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	17002.300	kHz	INFO
T1 99%	2400.000000	---	2403.5528	MHz	PASS
T2 99%	---	2483.500000	2420.5551	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode 99PCT

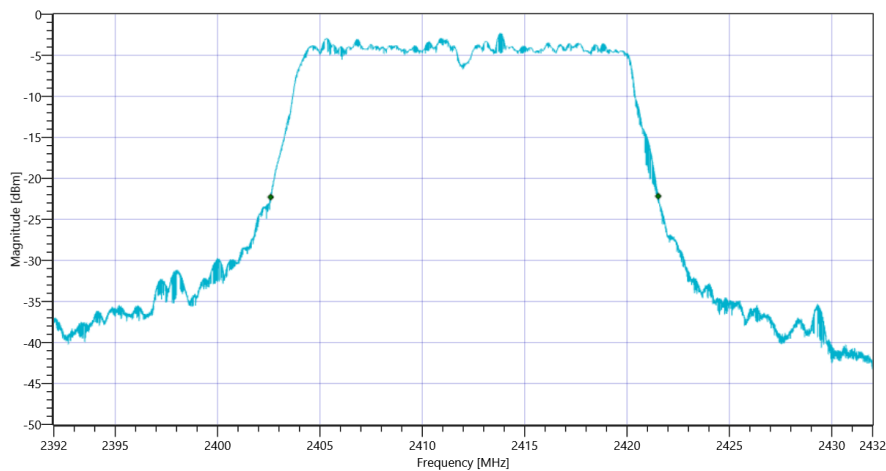
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode

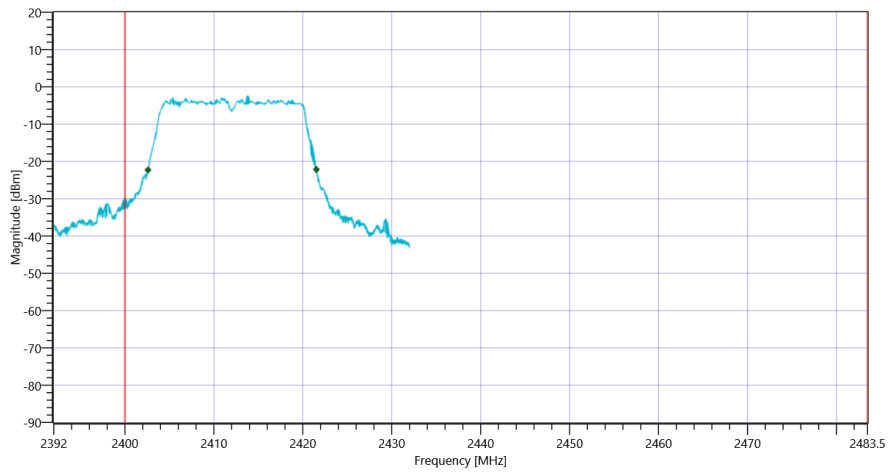
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	18932	kHz	INFO
T1 20dB	2400.000000	---	2402.5920	MHz	PASS
T2 20dB	---	2483.500000	2421.5240	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode

General verdict

PASS

FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 16:15:10
Ambit Temp [°C] Humidity [rel%]	22.5 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2437 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	0.14	dBm	INFO
Ref. Frequency	---	---	2430.810	MHz	INFO

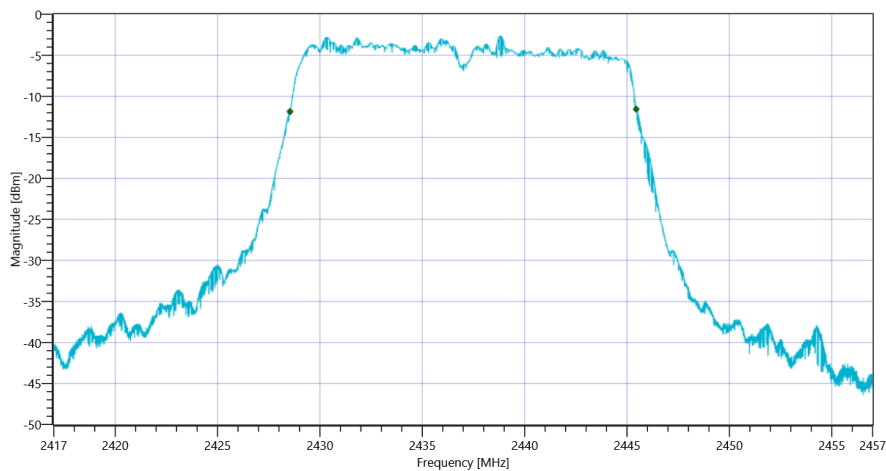
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.14 20.54 0
Start [MHz] Stop [MHz]	2417.000 2457.000
RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

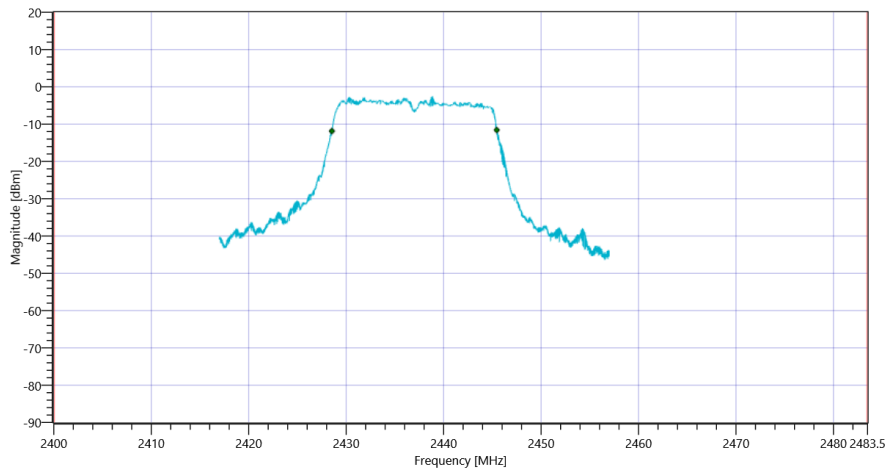
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	16910.309	kHz	INFO
T1 99%	2400.000000	---	2428.5368	MHz	PASS
T2 99%	---	2483.500000	2445.4472	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode 99PCT

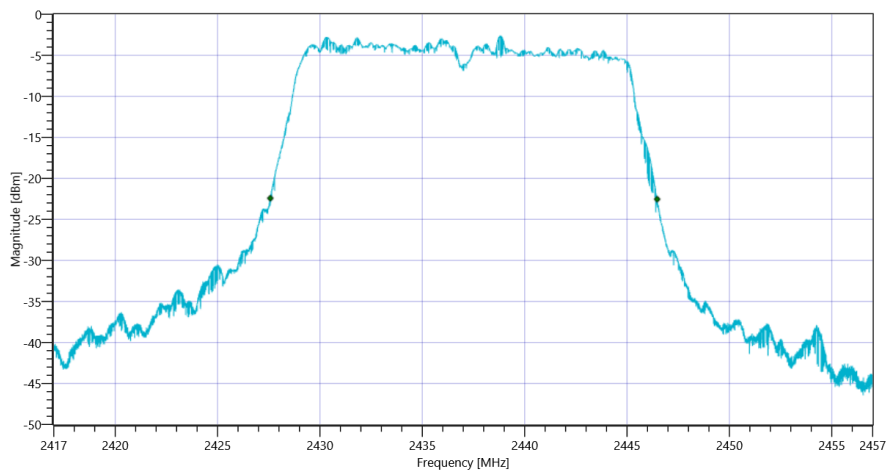
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode

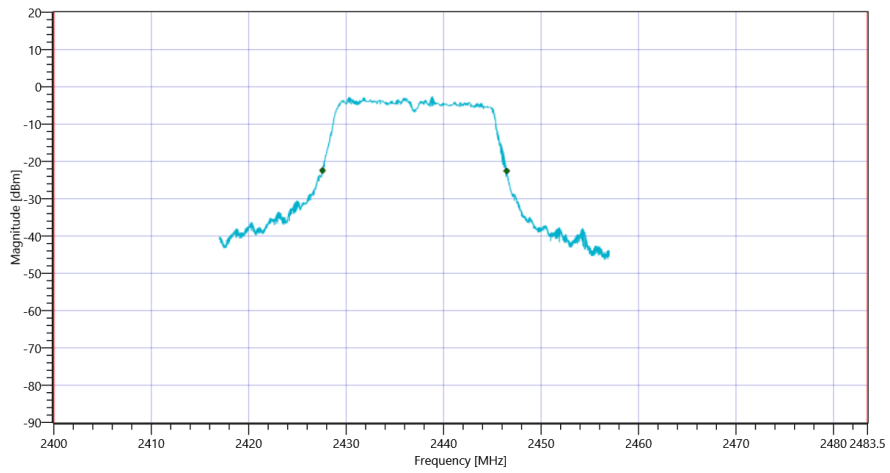
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	18896	kHz	INFO
T1 20dB	2400.000000	---	2427.5760	MHz	PASS
T2 20dB	---	2483.500000	2446.4720	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode

General verdict

PASS

FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 16:25:09
Ambit Temp [°C] Humidity [rel%]	22.5 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2462 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	-0.26	dBm	INFO
Ref. Frequency	---	---	2464.300	MHz	INFO

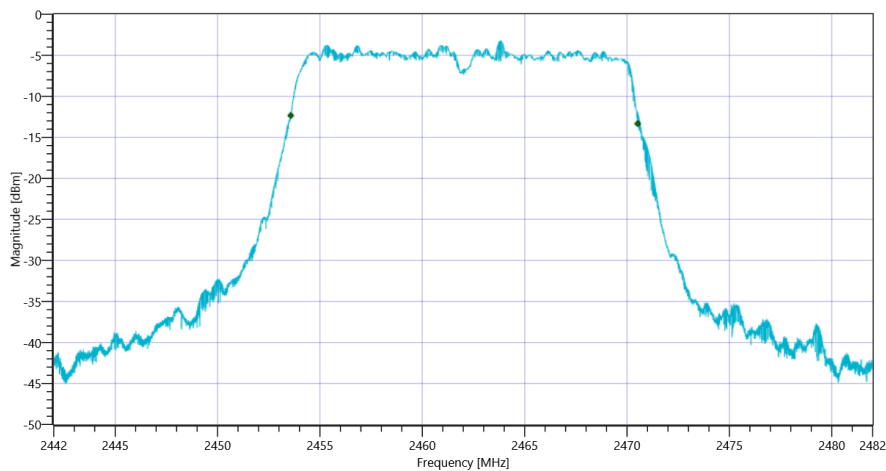
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	4.74 20.58 0
Start [MHz] Stop [MHz]	2442.000 2482.000
RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

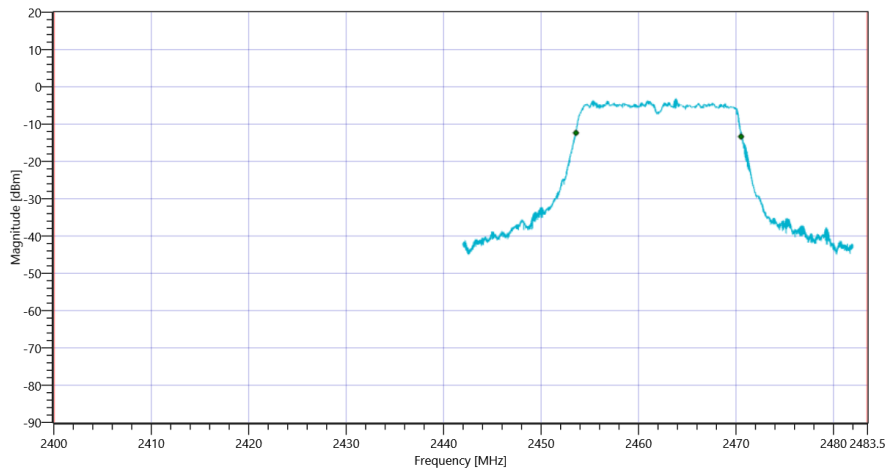
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	16942.306	kHz	INFO
T1 99%	2400.000000	---	2453.5768	MHz	PASS
T2 99%	---	2483.500000	2470.5191	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode 99PCT

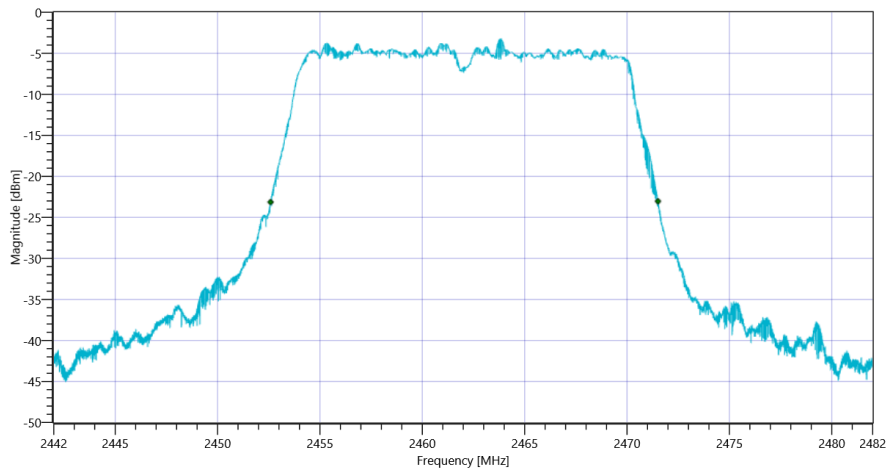
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode

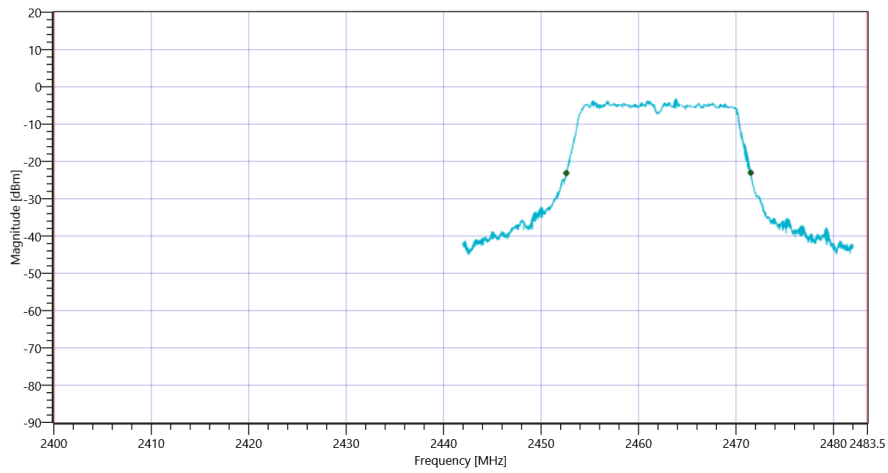
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	18924	kHz	INFO
T1 20dB	2400.000000	---	2452.5880	MHz	PASS
T2 20dB	---	2483.500000	2471.5120	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 g-mode

General verdict

PASS

FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 14:53:17
Ambit Temp [°C] Humidity [rel%]	22.2 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - PowerMeter

Test Equipment	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	
Power sensor,Keysight Technologies,U2042XA,MY58020014,A.02.06	

Test at TX 2412 MHz

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	6.95	dBm	PASS
General verdict			PASS		

FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 15:04:05
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - PowerMeter

Test Equipment	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	
Power sensor,Keysight Technologies,U2042XA,MY58020014,A.02.06	

Test at TX 2437 MHz

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	6.61	dBm	PASS
General verdict			PASS		

FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 15:30:30
Ambit Temp [°C] Humidity [rel%]	22.3 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - PowerMeter

Test Equipment	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	
Power sensor,Keysight Technologies,U2042XA,MY58020014,A.02.06	

Test at TX 2462 MHz

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	5.9	dBm	PASS
General verdict			PASS		

FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 15:41:13
Ambit Temp [°C] Humidity [rel%]	22.3 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - PowerMeter

Test Equipment	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	
Power sensor,Keysight Technologies,U2042XA,MY58020014,A.02.06	

Test at TX 2412 MHz

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	8.05	dBm	PASS
General verdict			PASS		

FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 16:22:11
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - PowerMeter

Test Equipment	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	
Power sensor,Keysight Technologies,U2042XA,MY58020014,A.02.06	

Test at TX 2437 MHz

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	7.69	dBm	PASS
General verdict			PASS		

FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 16:32:11
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - PowerMeter

Test Equipment	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	
Power sensor,Keysight Technologies,U2042XA,MY58020014,A.02.06	

Test at TX 2462 MHz

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	6.9	dBm	PASS
General verdict			PASS		

FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 14:45:29
Ambit Temp [°C] Humidity [rel%]	22.3 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2412 MHz

RESULT: Reference Power cond.

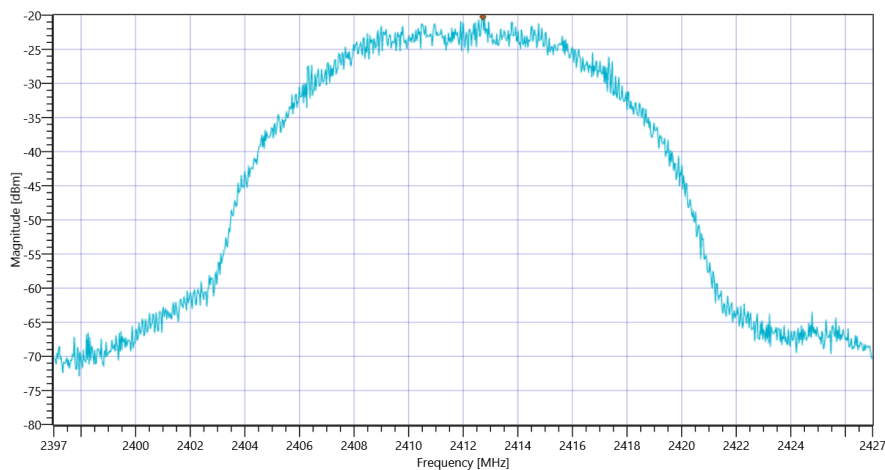
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.60	dBm	INFO
Ref. Frequency	---	---	2414.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.60 20.48 5
Start [MHz] Stop [MHz]	2397.000 2427.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-20.25	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 b-mode

General verdict

PASS

FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 14:56:17
Ambit Temp [°C] Humidity [rel%]	22.3 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2437 MHz

RESULT: Reference Power cond.

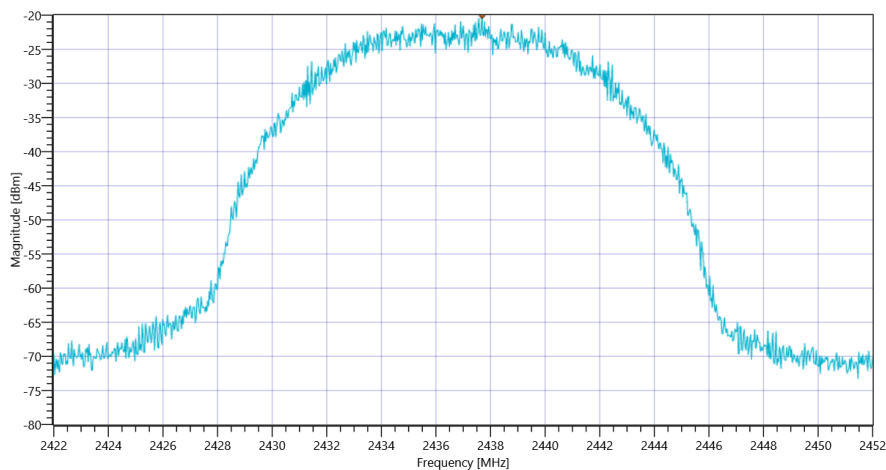
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.43	dBm	INFO
Ref. Frequency	---	---	2433.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.43 20.54 5
Start [MHz] Stop [MHz]	2422.000 2452.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-20.04	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 b-mode

General verdict

PASS

FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 15:22:42
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2462 MHz

RESULT: Reference Power cond.

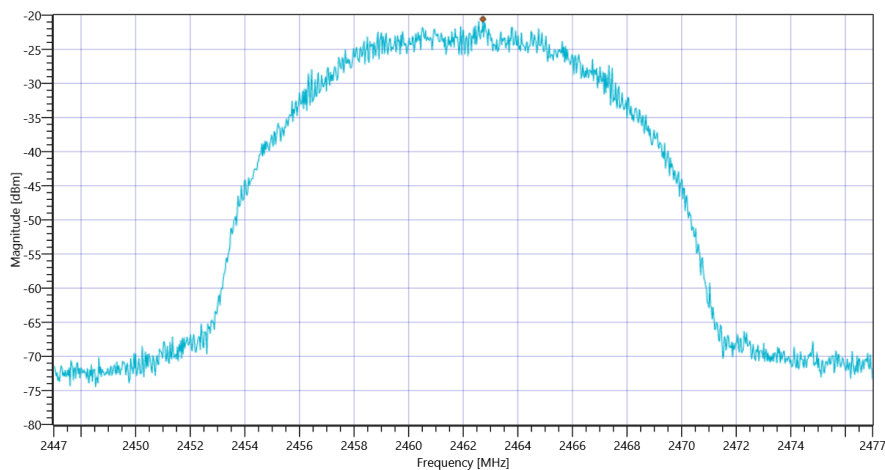
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.04	dBm	INFO
Ref. Frequency	---	---	2463.000	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.04 20.58 5
Start [MHz] Stop [MHz]	2447.000 2477.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-20.58	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 b-mode

General verdict

PASS

FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 15:33:25
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2412 MHz

RESULT: Reference Power cond.

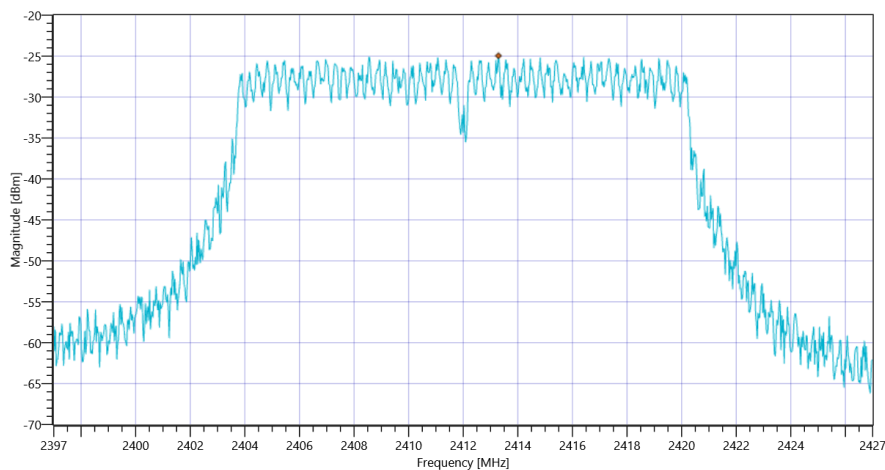
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	0.34	dBm	INFO
Ref. Frequency	---	---	2414.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.34 20.48 0
Start [MHz] Stop [MHz]	2397.000 2427.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-24.95	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 g-mode

General verdict

PASS

FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 16:14:24
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2437 MHz

RESULT: Reference Power cond.

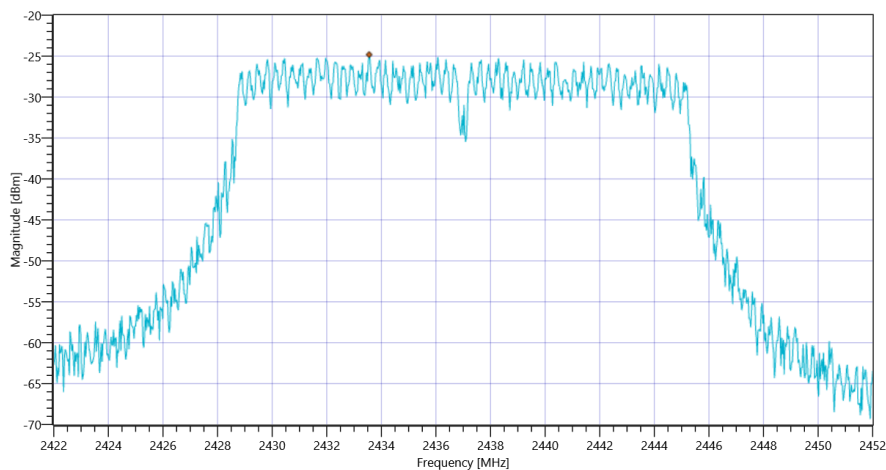
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	0.36	dBm	INFO
Ref. Frequency	---	---	2432.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.36 20.54 0
Start [MHz] Stop [MHz]	2422.000 2452.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-24.81	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 g-mode

General verdict

PASS

FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 16:24:24
Ambit Temp [°C] Humidity [rel%]	22.5 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2462 MHz

RESULT: Reference Power cond.

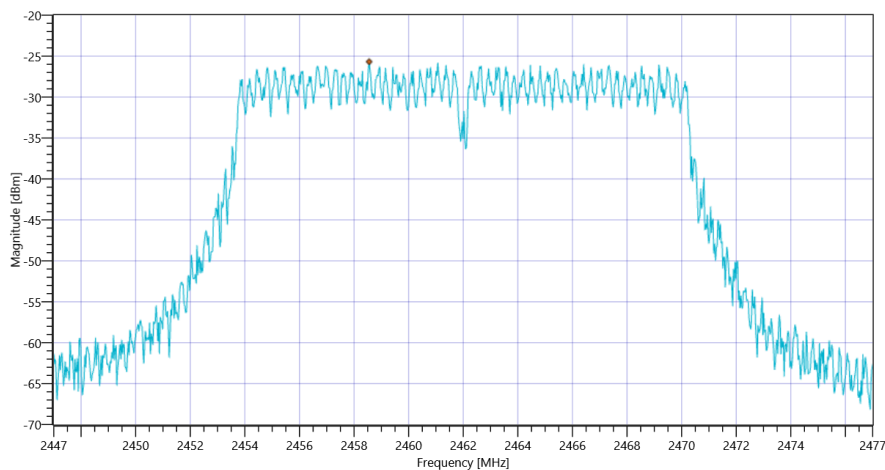
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	-0.40	dBm	INFO
Ref. Frequency	---	---	2464.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	4.60 20.58 0
Start [MHz] Stop [MHz]	2447.000 2477.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-25.68	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 g-mode

General verdict

PASS

FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 14:47:13
Ambit Temp [°C] Humidity [rel%]	22.2 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable.
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2412 MHz

RESULT: Reference Power cond.

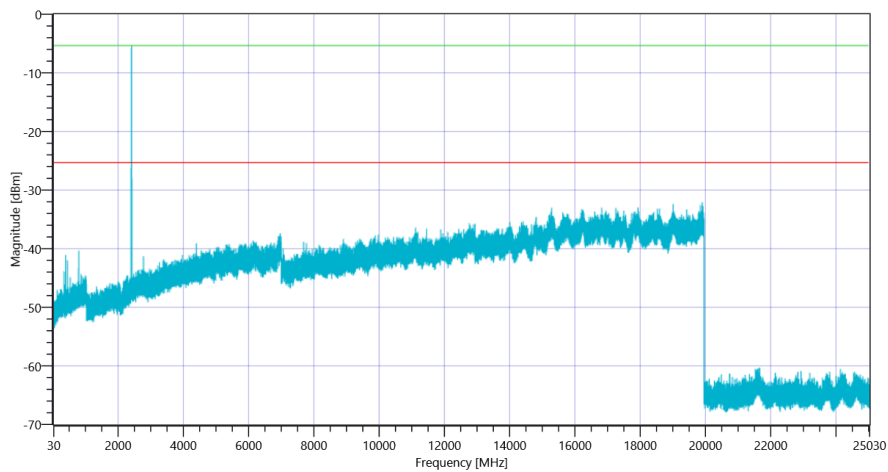
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.57	dBm	INFO
Ref. Frequency	---	---	2409.500	MHz	INFO

READ SA SETTINGS:

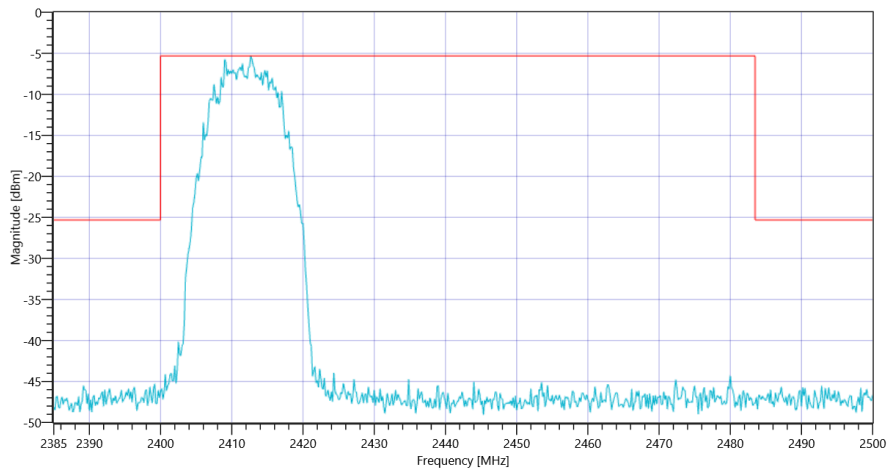
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.57 0 20
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2412.67 MHz	---	---	-5.31	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 19898.667 MHz	0	---	6.78	dB	INFO



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 b-mode 2412



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 b-mode 2412

General verdict

PASS

FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 14:58:01
Ambit Temp [°C] Humidity [rel%]	22.5 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable.
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2437 MHz

RESULT: Reference Power cond.

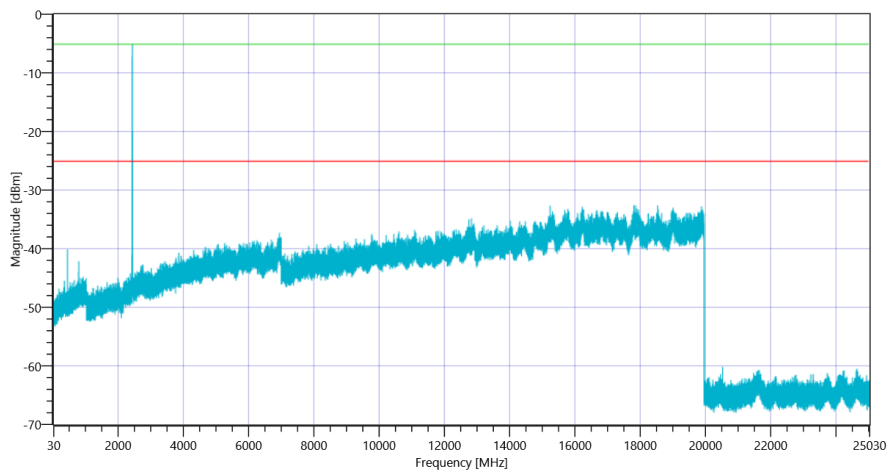
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.61	dBm	INFO
Ref. Frequency	---	---	2438.000	MHz	INFO

READ SA SETTINGS:

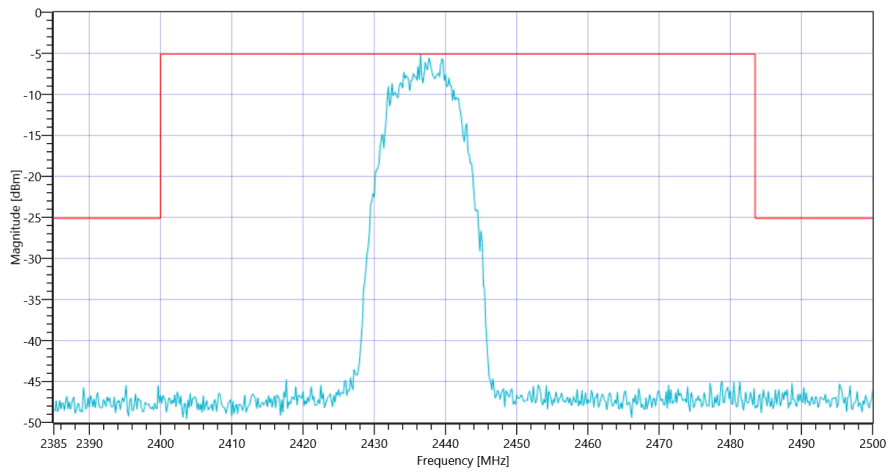
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.61 0 20
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2436.50 MHz	---	---	-5.10	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 17804.333 MHz	0	---	7.48	dB	INFO



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 b-mode 2437



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 b-mode 2437

General verdict

PASS

FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 b-mode

Test References	
TC Start	30.11.2021 15:24:27
Ambit Temp [°C] Humidity [rel%]	22.3 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable.
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - WLAN 2G4 b-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 b-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2462 MHz

RESULT: Reference Power cond.

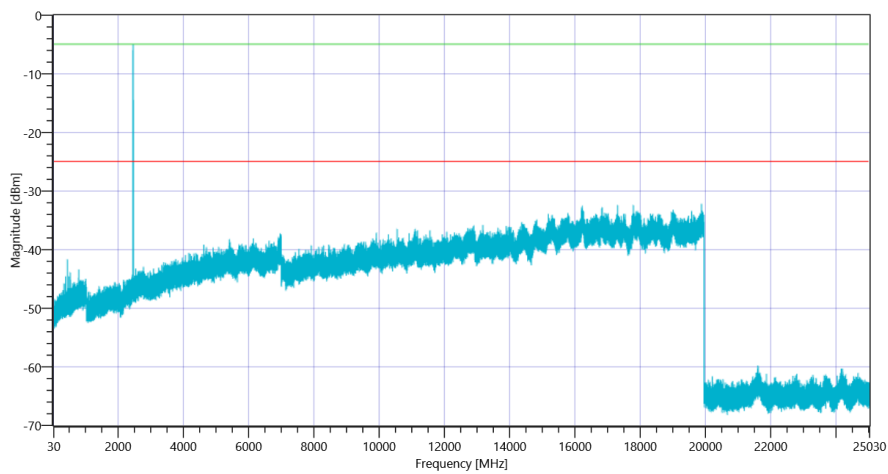
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.19	dBm	INFO
Ref. Frequency	---	---	2463.000	MHz	INFO

READ SA SETTINGS:

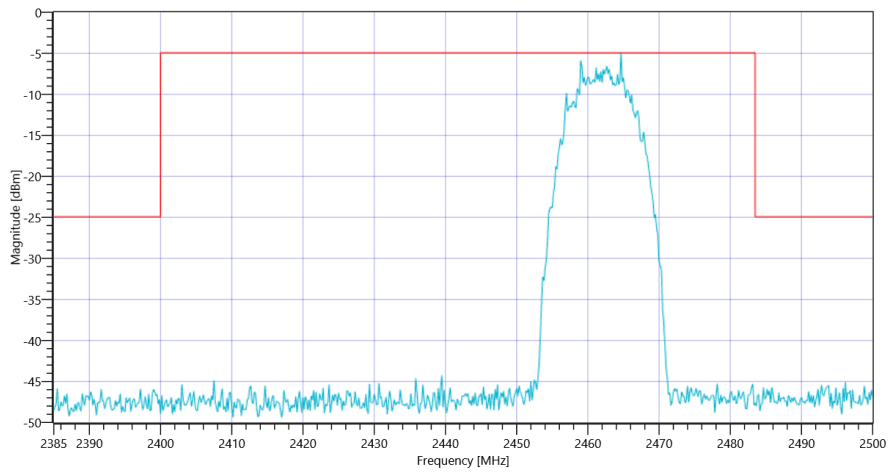
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.19 0 20
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2464.67 MHz	---	---	-4.93	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 30 MHz	0	---	-149.59	dB	INFO



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 b-mode 2462



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 b-mode 2462

General verdict

PASS

FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 15:35:10
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable.
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2412 MHz

RESULT: Reference Power cond.

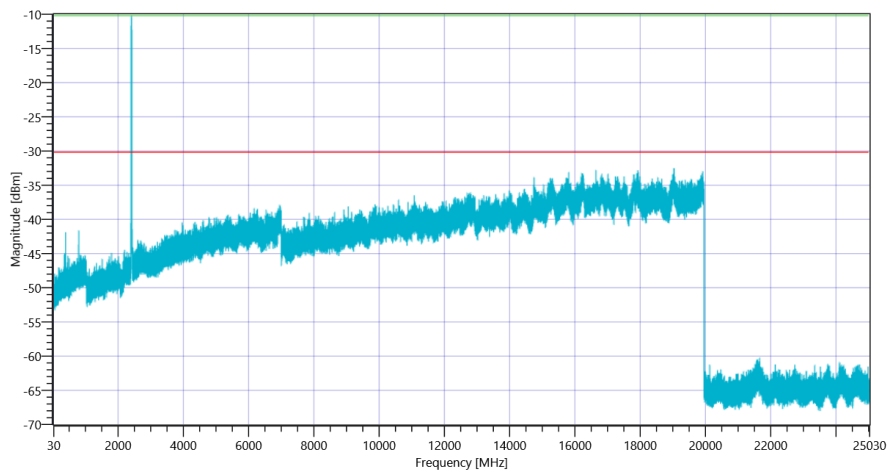
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	0.56	dBm	INFO
Ref. Frequency	---	---	2410.100	MHz	INFO

READ SA SETTINGS:

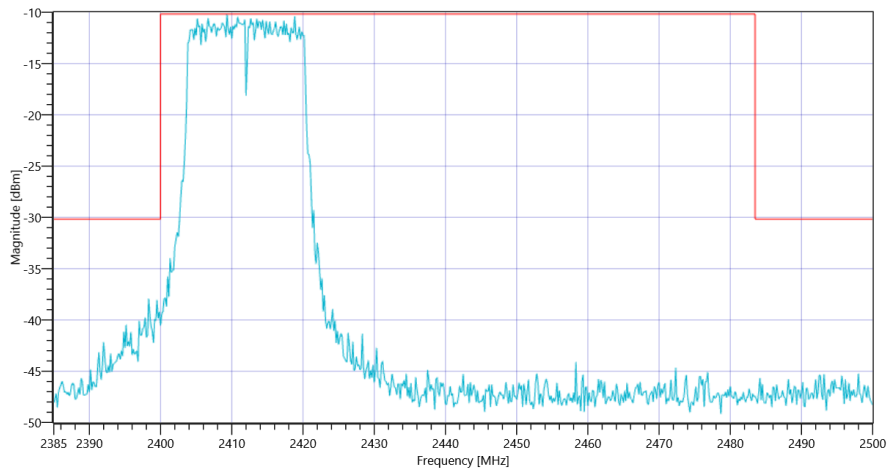
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	0.56 0 20
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2409.33 MHz	---	---	-10.18	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 19036.833 MHz	0	---	2.34	dB	INFO



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 g-mode 2412



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 g-mode 2412

General verdict

PASS

FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 16:16:08
Ambit Temp [°C] Humidity [rel%]	22.5 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable.
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2437 MHz

RESULT: Reference Power cond.

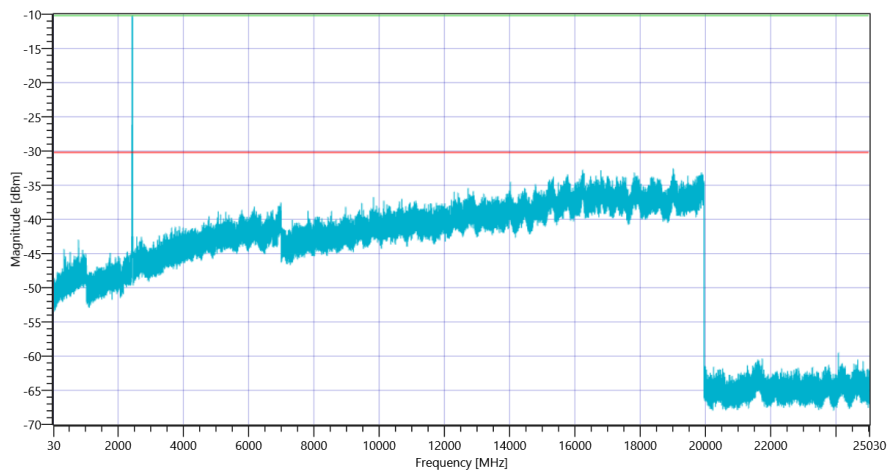
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	0.41	dBm	INFO
Ref. Frequency	---	---	2439.300	MHz	INFO

READ SA SETTINGS:

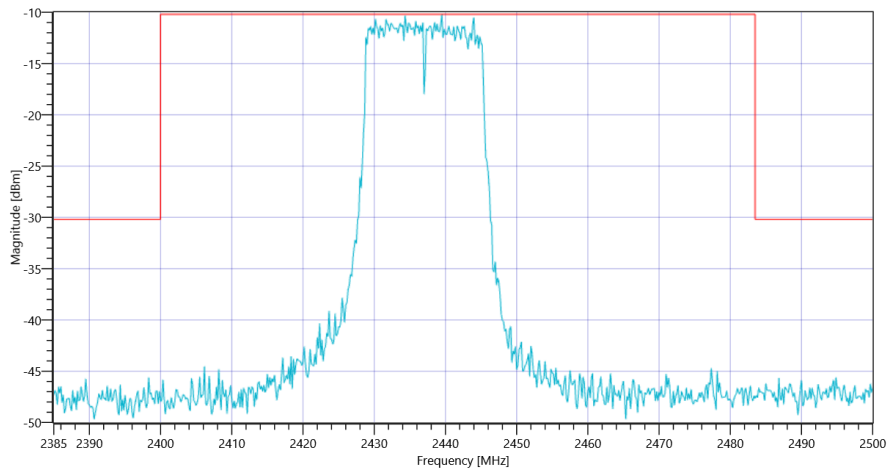
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	0.41 0 20
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2439.50 MHz	---	---	-10.20	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 19012.167 MHz	0	---	2.37	dB	INFO



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 g-mode 2437



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 g-mode 2437

General verdict

PASS

FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 g-mode

Test References	
TC Start	30.11.2021 16:26:08
Ambit Temp [°C] Humidity [rel%]	22.5 30
System Version	3.0.3.1
Test Specification	FCC Part 15.247
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable.
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - WLAN 2G4 g-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	10.3
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2462 MHz

RESULT: Reference Power cond.

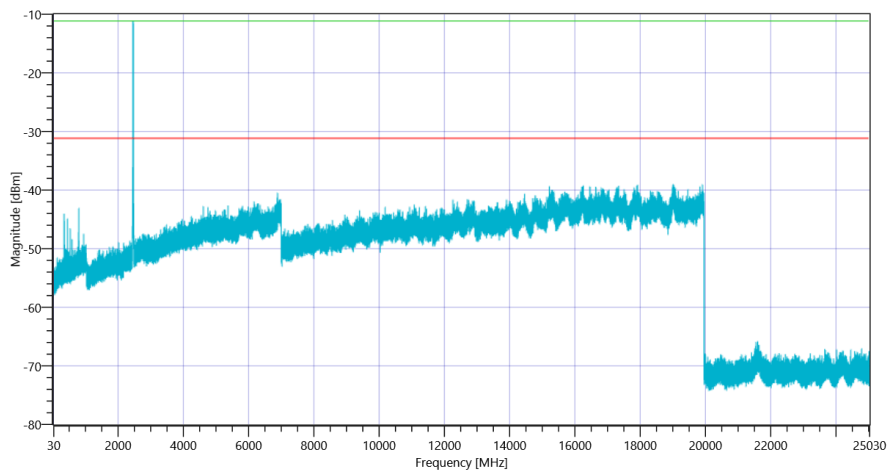
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	-0.12	dBm	INFO
Ref. Frequency	---	---	2461.200	MHz	INFO

READ SA SETTINGS:

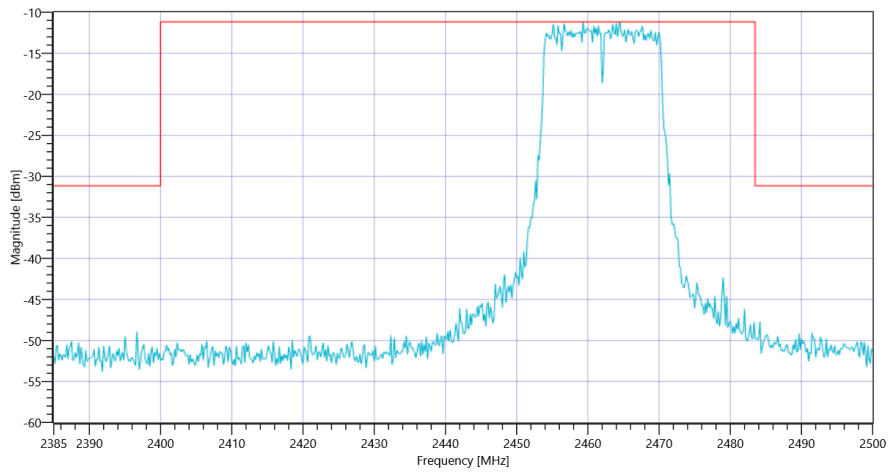
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-0.12 0 15
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2464.50 MHz	---	---	-11.16	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 19001.167 MHz	0	---	7.87	dB	INFO



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 g-mode 2462



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 g-mode 2462

General verdict

PASS

- END OF DOCUMENT -