Conducted test results g-mode PS 16

No.1-6998/23-01-11_TR1-A202-R2

January 04, 2024

Test Standard(s)	FCC 15.247 - NI
	FCC 15.247, ISED RSS247 - NI

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Authorized

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Testing Manager
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Table of Content

EUT Information

EUT DEFINITION

Manufacturer	Leica Geosystems AG
Type	LG1001
Serial Number	3800113
Setup Number	1.0
Version SW	0.1
Version FW	BSP v4.0.20
Version HW	C
Comment 1	
Comment 2	
Temperature [°C] Min	-30
Temperature [°C] Nom	20
Temperature [°C] Max	60
Voltage [V] Min	2.5
Voltage [V] Nom	3.7
Voltage [V] Max	4.1

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 g mode

References

TC start	04.01.2024 11:29:47
Ambit temp [°C] | humidity [rel%]	22.3 | 41
System version	4.7.1.4
Standard | Version	FCC 15.247 | NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

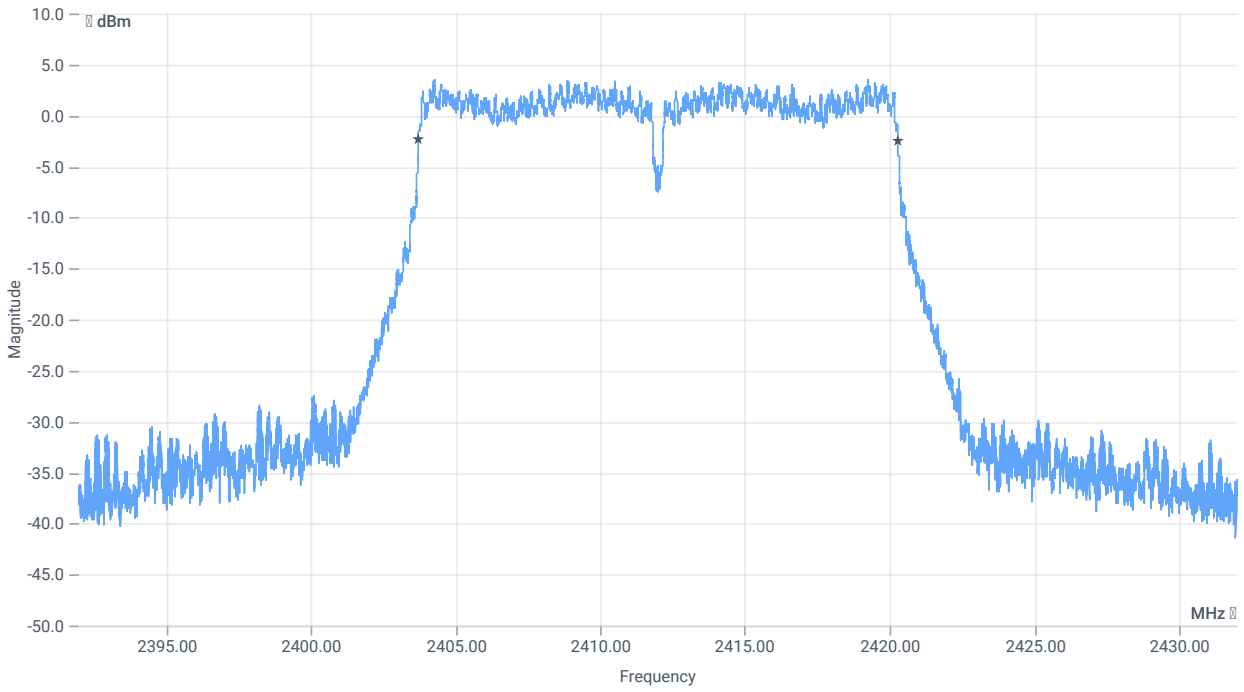
Test at TX 2412 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.55	dBm	INFO
Ref. Frequency	---	---	2414.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.55 | 13.85 | 25
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



BW 6dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	---	16576	kHz	PASS

Verdict

PASS

FCC 15.247 # Peak psd DTS ~ WLAN2G4 g mode

References

TC start	04.01.2024 11:30:22
Ambit temp [°C] | humidity [rel%]	22.3 | 41
System version	4.7.1.4
Standard | Version	FCC 15.247 | NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
Description	FCC 15.247 Peak psd DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

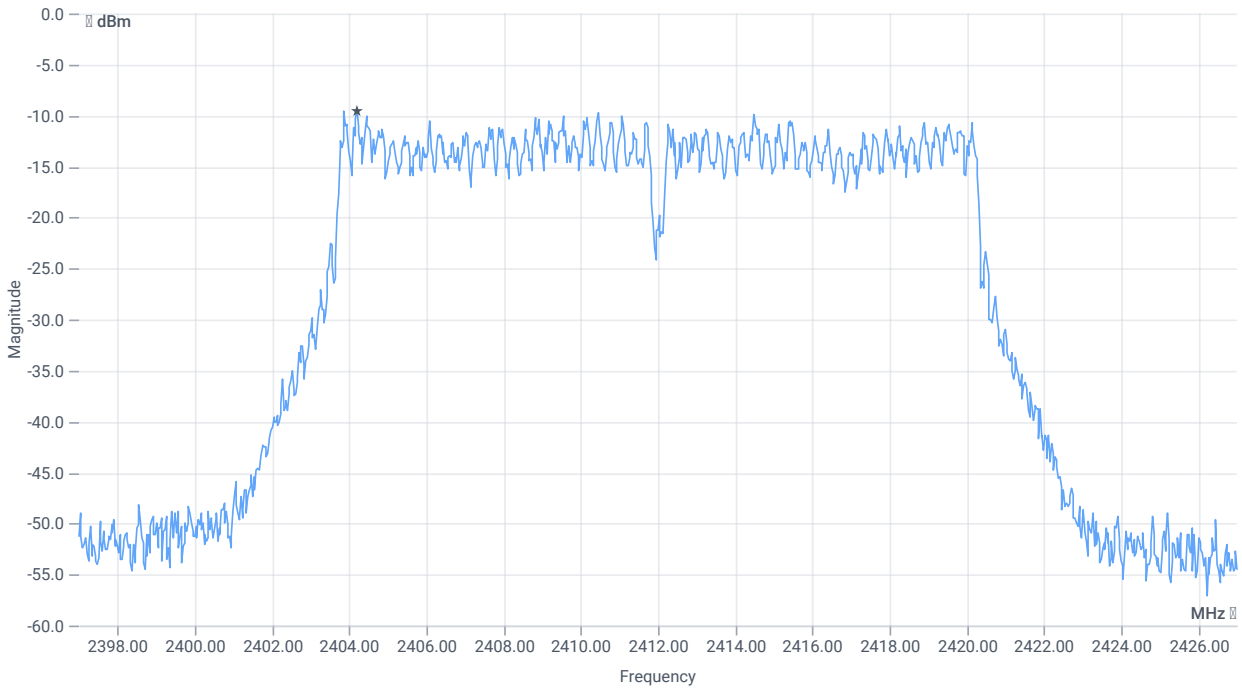
Test at TX 2412 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.27	dBm	INFO
Ref. Frequency	---	---	2409.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.27 | 13.85 | 25
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



Peak psd

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-9.49	dBm/3KHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 g mode

References

TC start	04.01.2024 11:31:03
Ambit temp [°C] | humidity [rel%]	22.4 | 41
System version	4.7.1.4
Standard | Version	FCC 15.247, ISED RSS247 | NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

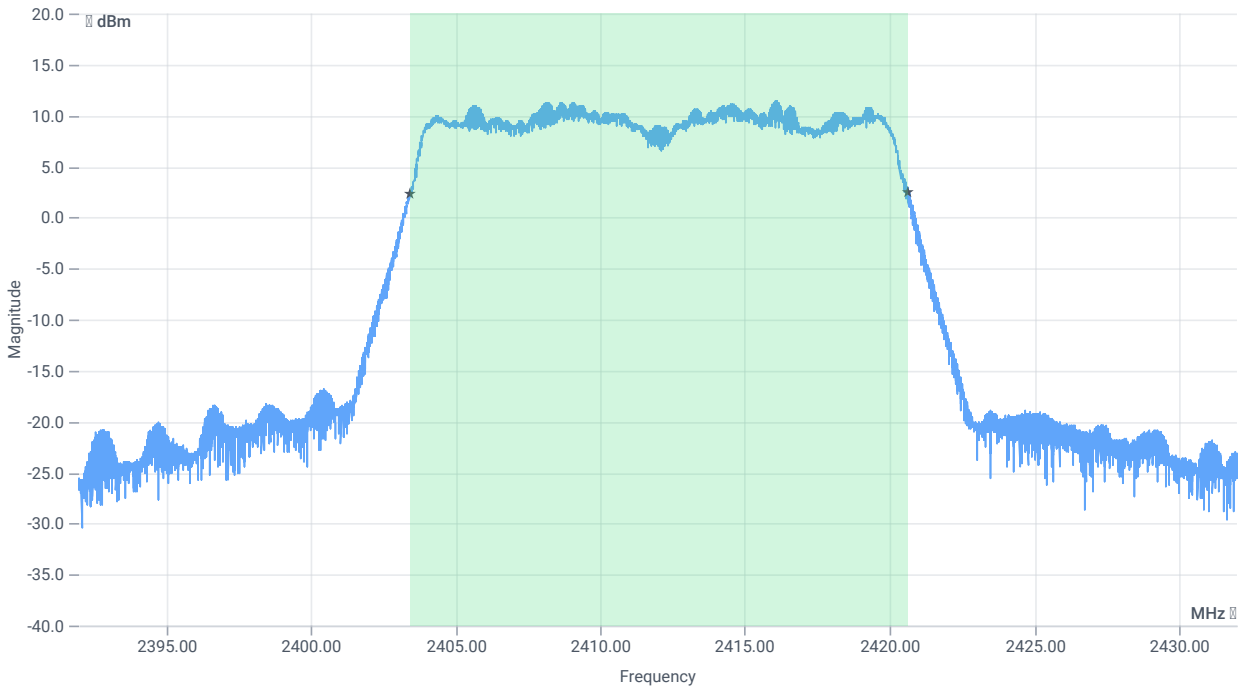
Test at TX 2412 MHz

RESULT: Reference Power cond.

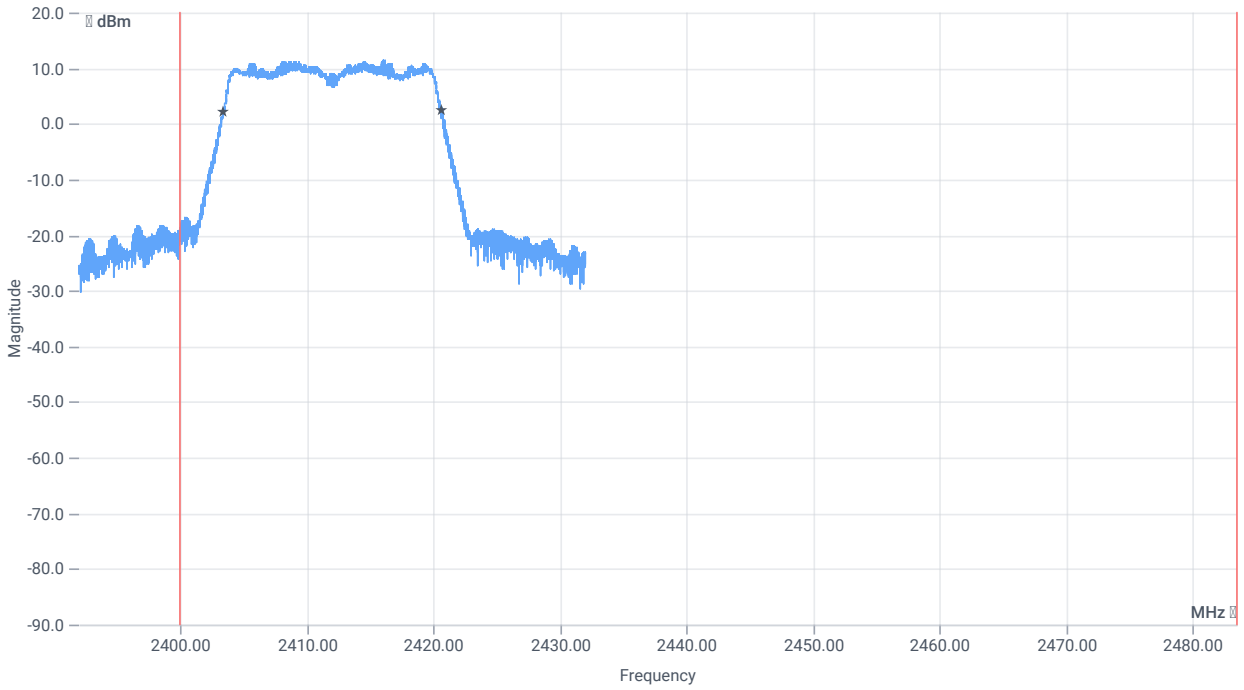
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.22	dBm	INFO
Ref. Frequency	---	---	2409.400	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.22 | 13.85 | 25
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



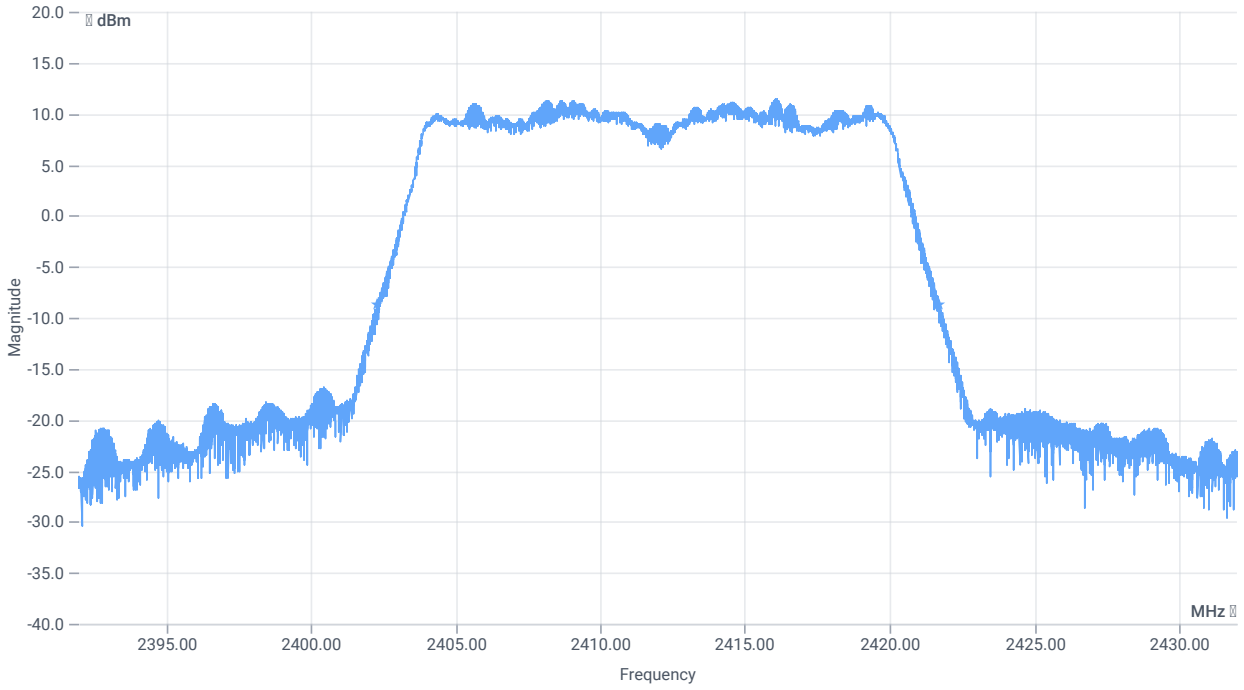
BW 99PCT



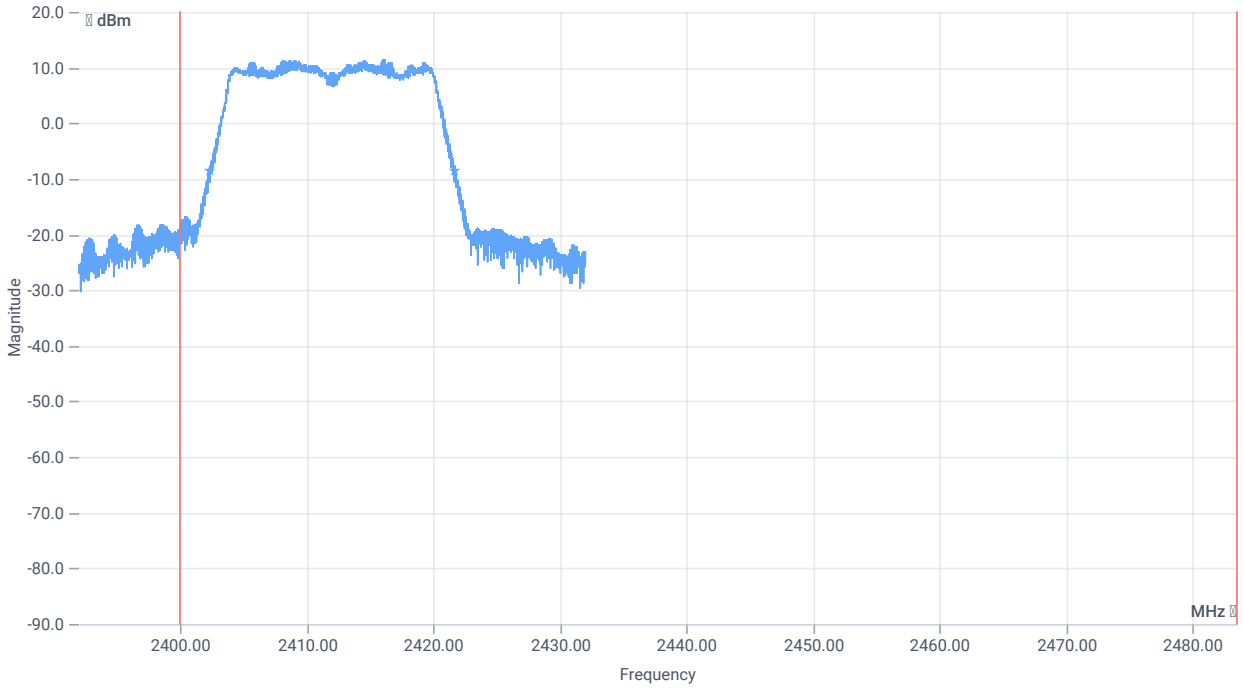
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	17186.000	kHz	INFO
T1 99%	2400.000000	---	2403.4249	MHz	PASS
T2 99%	---	2483.500000	2420.6111	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	19412	kHz	INFO
T1 20DB	2400.000000	---	2402.3080	MHz	PASS
T2 20dB	---	2483.500000	2421.7200	MHz	PASS

Verdict
PASS

FCC 15.247 # TX spurious conducted 20dBc ~ WLAN2G4 g mode

References

TC start	04.01.2024 11:31:42
Ambit temp [°C] | humidity [rel%]	22.3 | 41
System version	4.7.1.4
Standard | Version	FCC 15.247 | NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - SpectrumAnalyzer

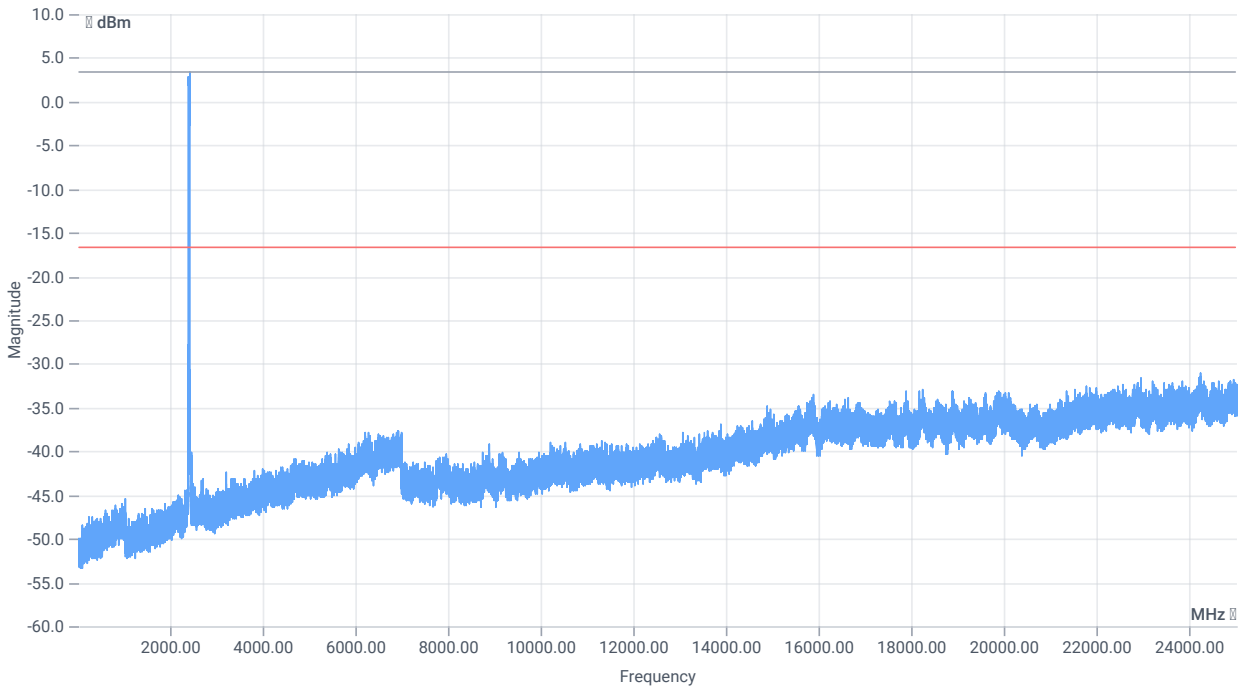
Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2412 MHz

RESULT: Reference Power cond.

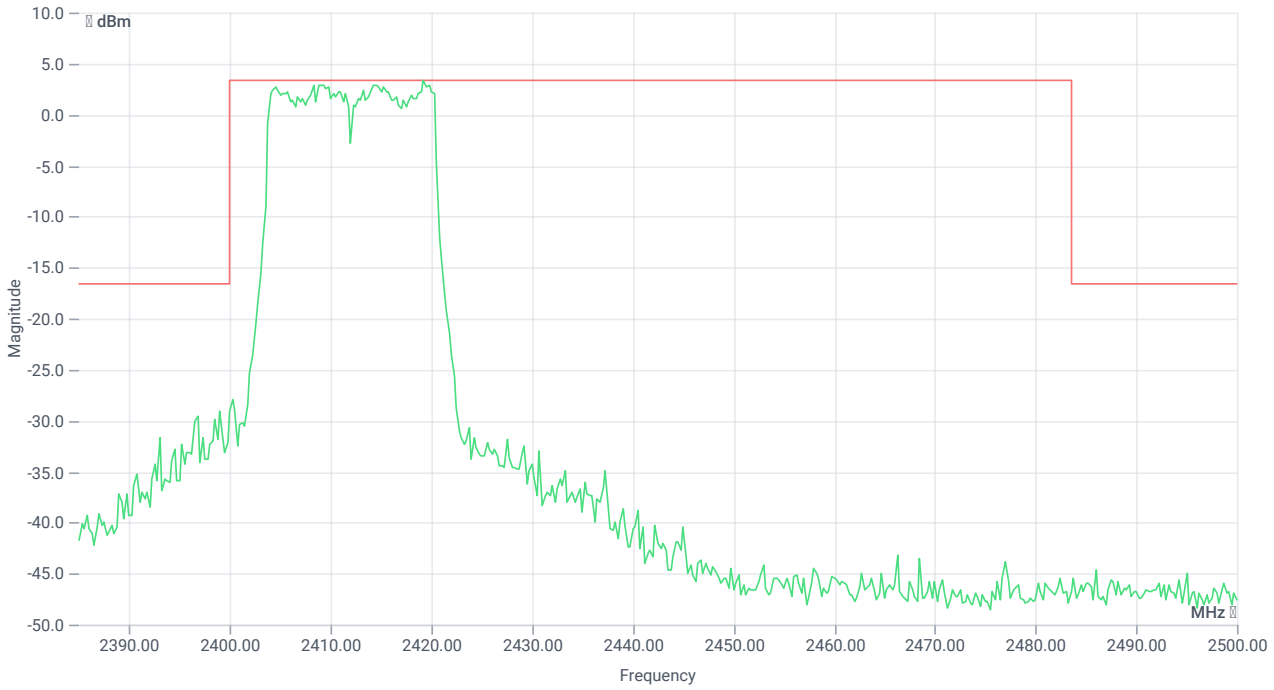
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.16	dBm	INFO
Ref. Frequency	---	---	2414.600	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	14.16 | 0 | 30
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	200 | 25 | 2001 | SWE



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2419.25 MHz	---	---	3.34	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 2399 MHz	0	---	12.36	dB	INFO

Verdict
PASS

FCC 15.247 # Peak output power PM DTS ~ WLAN2G4 g mode

References

TC start	04.01.2024 11:39:06
Ambit temp [°C] | humidity [rel%]	22.4 | 40
System version	4.7.1.4
Standard | Version	FCC 15.247 | NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
Description	FCC 15.247 Peak output power PM DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - PowerMeter

Equipment

Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI
Power sensor,Keysight Technologies,U2021XA,MY59190010,A.04.06

Test at TX 2412 MHz

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak power	---	30	26.76	dBm	PASS

Verdict
PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 g mode

References

TC start	04.01.2024 11:54:49
Ambit temp [°C] | humidity [rel%]	22.6 | 39
System version	4.7.1.4
Standard | Version	FCC 15.247 | NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

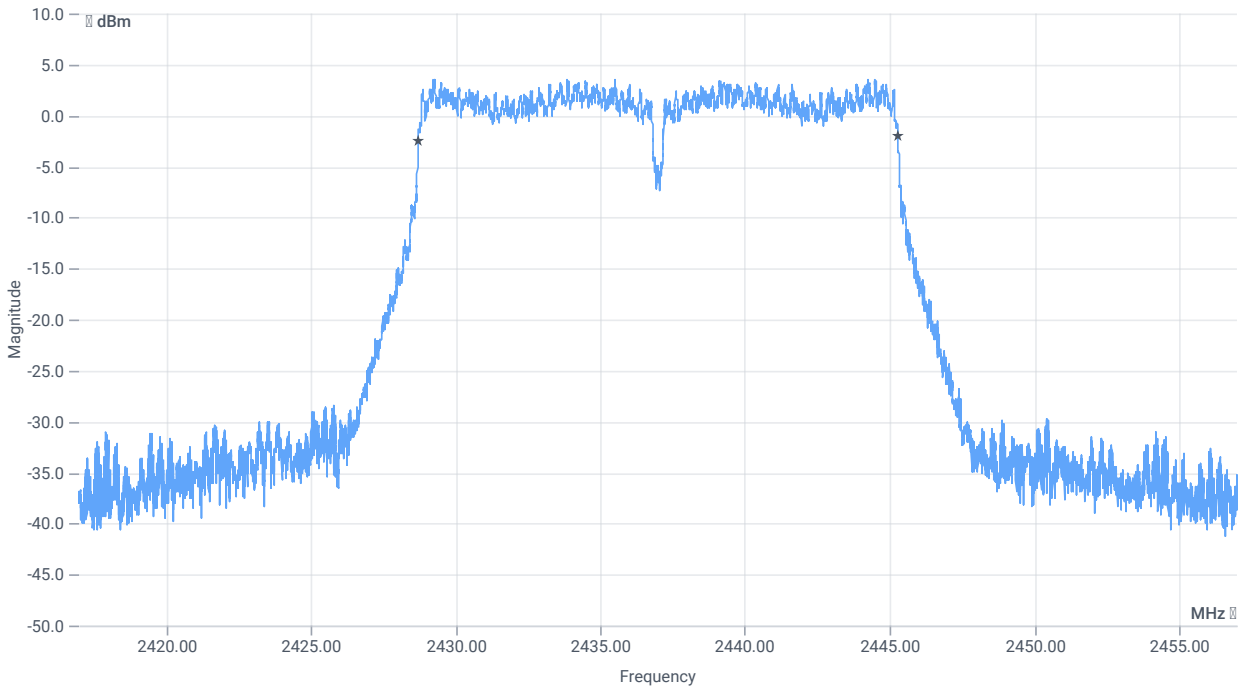
Test at TX 2437 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.53	dBm	INFO
Ref. Frequency	---	---	2433.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.53 | 14.01 | 25
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



BW 6dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	---	16576	kHz	PASS

Verdict

PASS

FCC 15.247 # Peak psd DTS ~ WLAN2G4 g mode

References

TC start	04.01.2024 11:55:23
Ambit temp [°C] | humidity [rel%]	22.5 | 39
System version	4.7.1.4
Standard | Version	FCC 15.247 | NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
Description	FCC 15.247 Peak psd DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

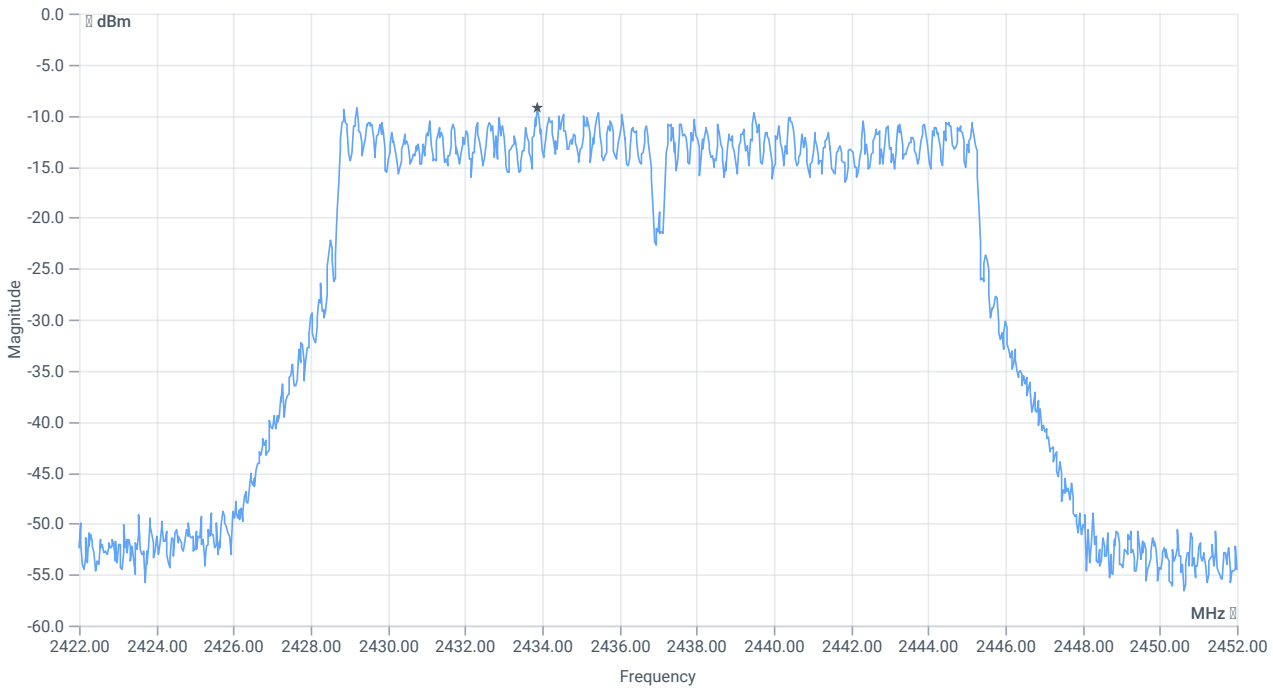
Test at TX 2437 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.77	dBm	INFO
Ref. Frequency	---	---	2439.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.77 | 14.01 | 25
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



Peak psd

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-9.26	dBm/3KHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 g mode

References

TC start	04.01.2024 11:56:04
Ambit temp [°C] | humidity [rel%]	22.5 | 39
System version	4.7.1.4
Standard | Version	FCC 15.247, ISED RSS247 | NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

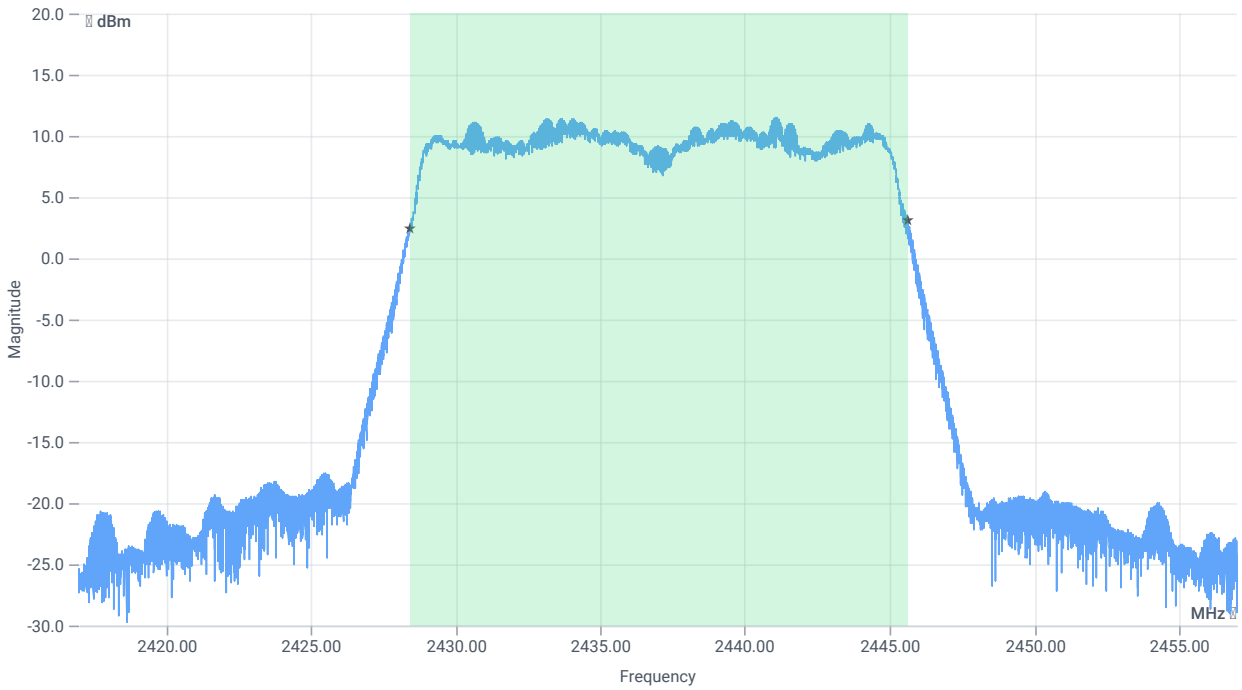
Test at TX 2437 MHz

RESULT: Reference Power cond.

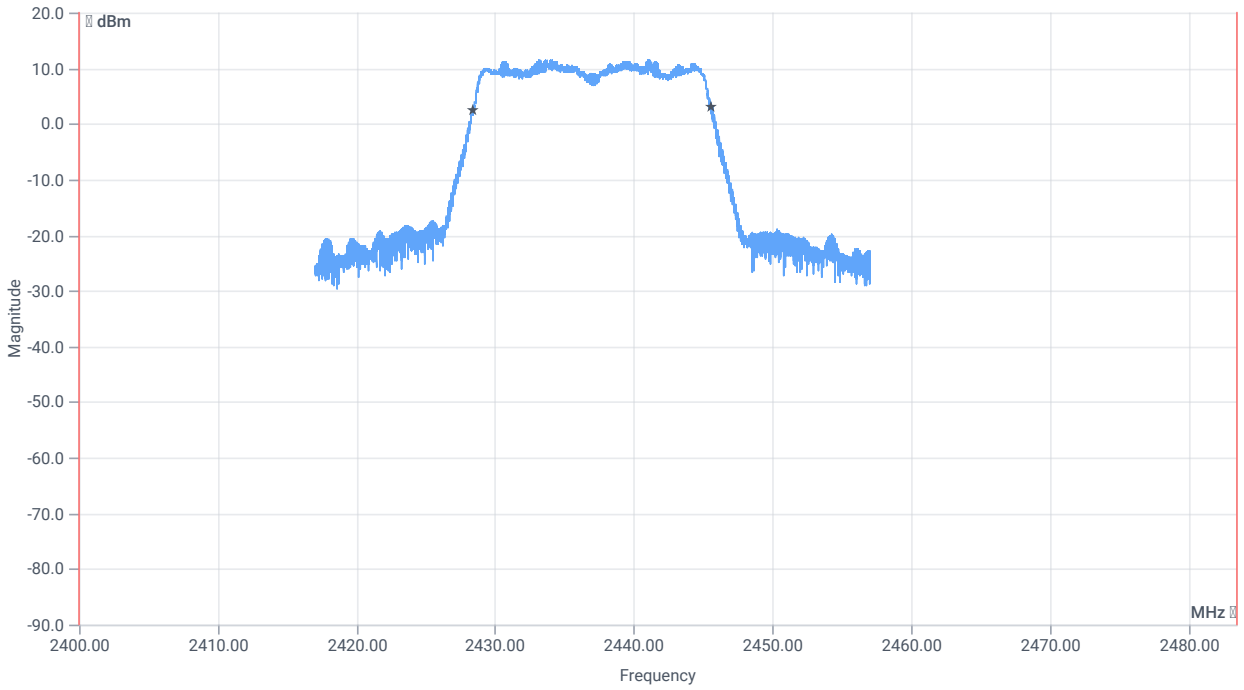
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.36	dBm	INFO
Ref. Frequency	---	---	2433.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.36 | 14.01 | 25
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



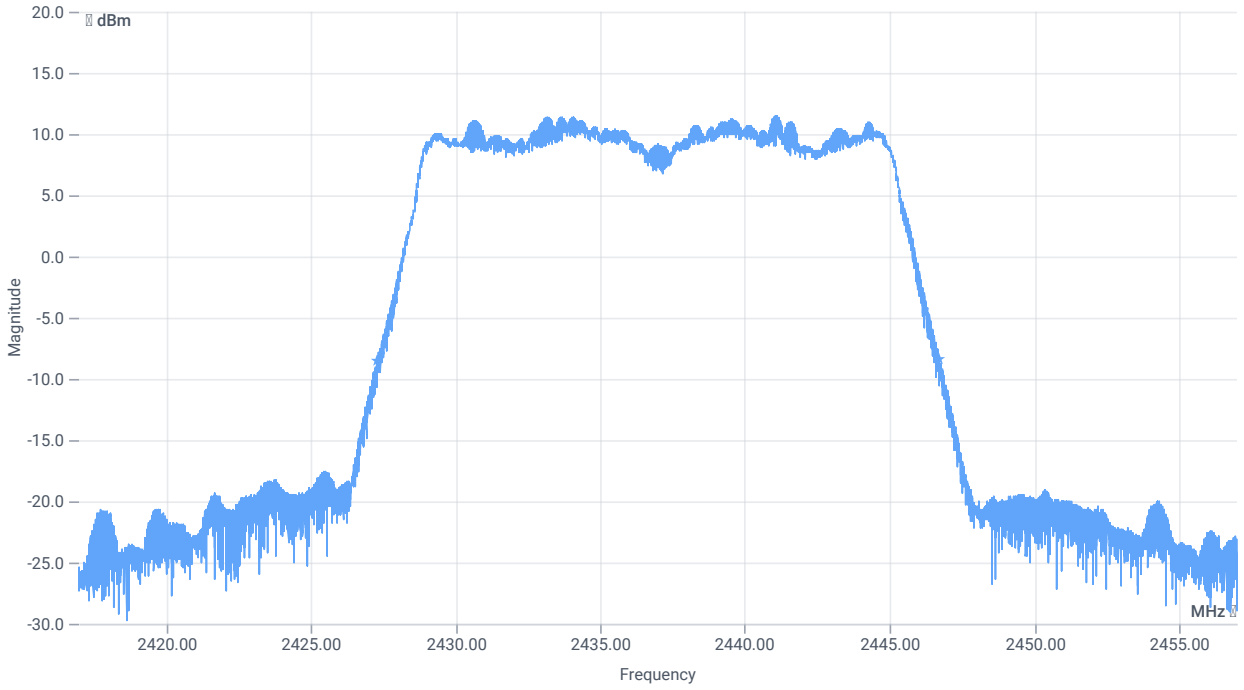
BW 99PCT



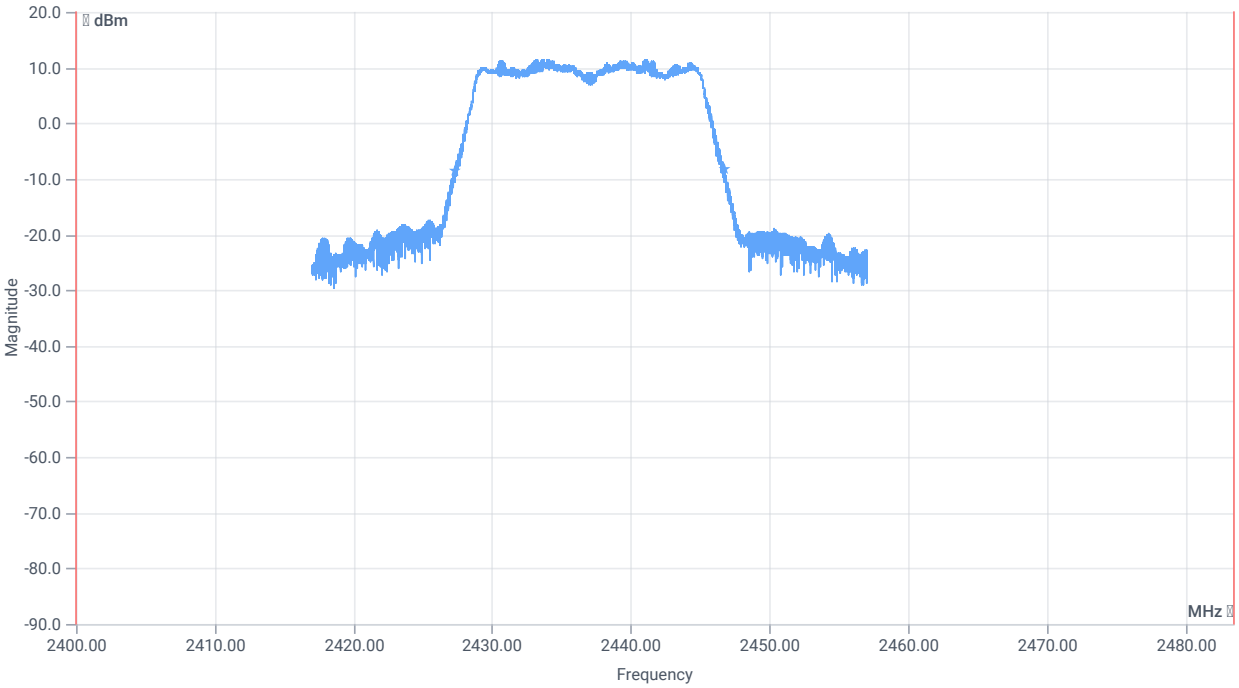
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	17186.000	kHz	INFO
T1 99%	2400.000000	---	2428.4249	MHz	PASS
T2 99%	---	2483.500000	2445.6111	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	19412	kHz	INFO
T1 20DB	2400.000000	---	2427.3080	MHz	PASS
T2 20dB	---	2483.500000	2446.7200	MHz	PASS

Verdict
PASS

FCC 15.247 # TX spurious conducted 20dBc ~ WLAN2G4 g mode

References

TC start	04.01.2024 11:56:43
Ambit temp [°C] | humidity [rel%]	22.5 | 39
System version	4.7.1.4
Standard | Version	FCC 15.247 | NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - SpectrumAnalyzer

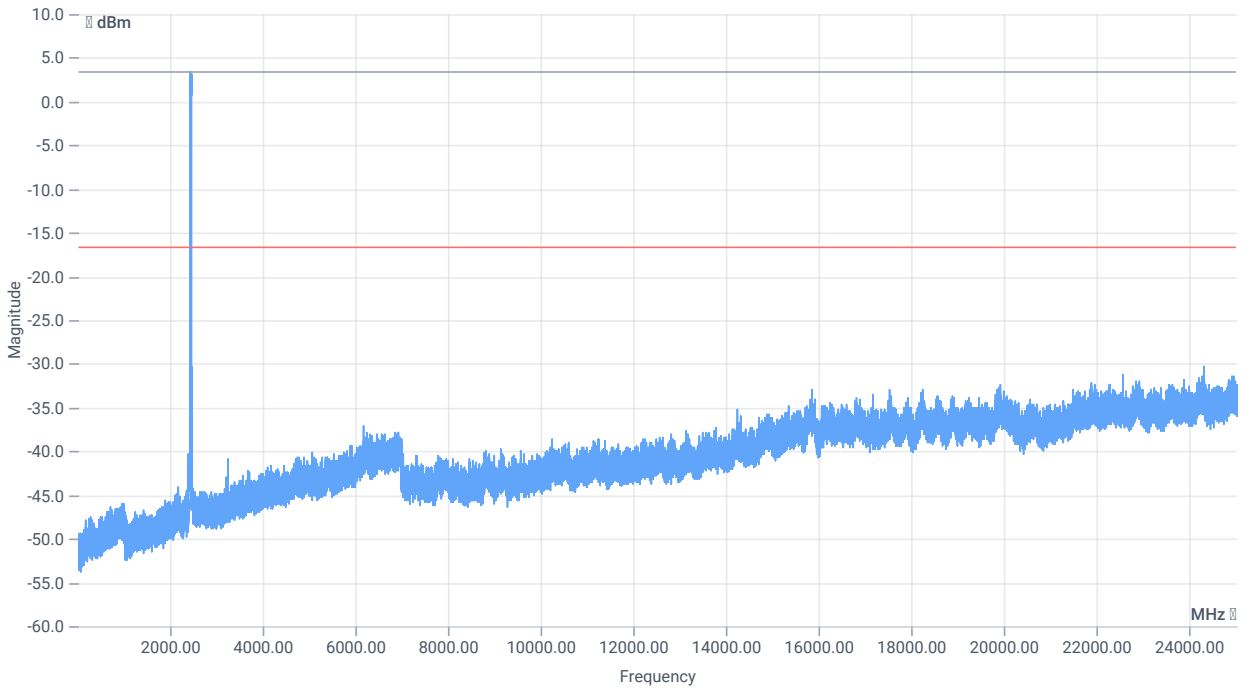
Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2437 MHz

RESULT: Reference Power cond.

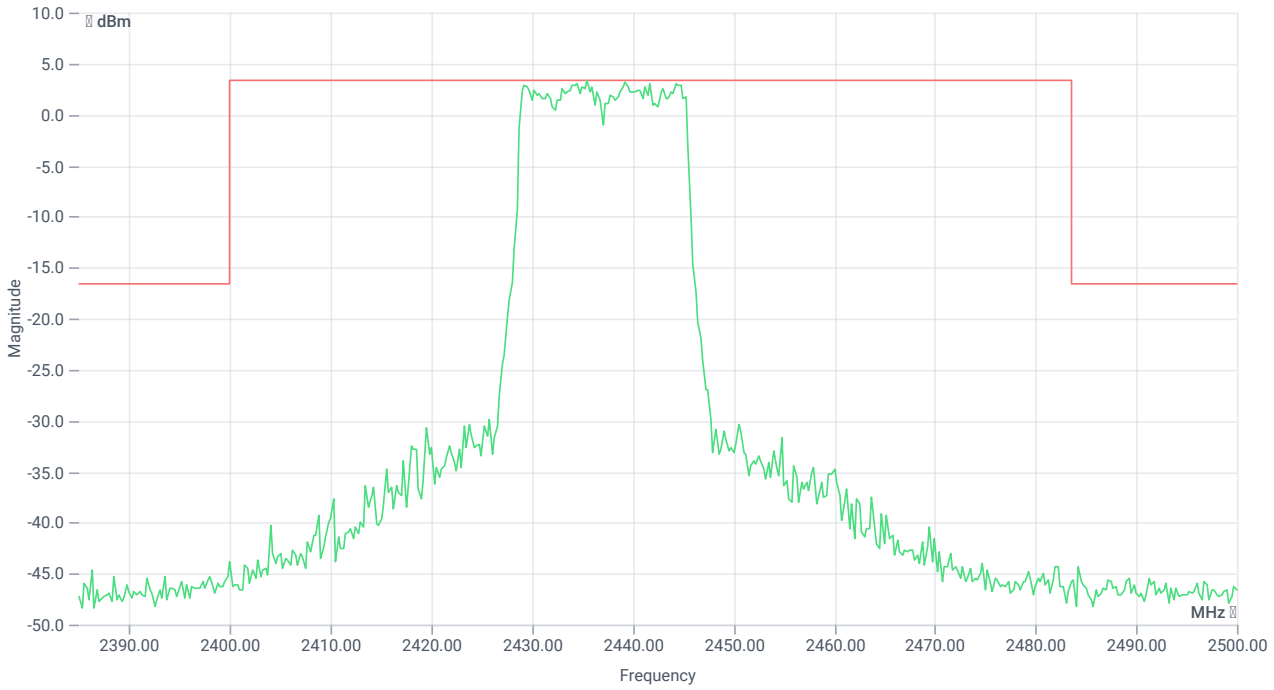
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.25	dBm	INFO
Ref. Frequency	---	---	2434.600	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	14.25 | 0 | 30
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	200 | 25 | 2001 | SWE



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2435.50 MHz	---	---	3.36	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24322.75 MHz	0	---	13.57	dB	INFO

Verdict
PASS

FCC 15.247 # Peak output power PM DTS ~ WLAN2G4 g mode

References

TC start	04.01.2024 12:04:06
Ambit temp [°C] | humidity [rel%]	22.6 | 38
System version	4.7.1.4
Standard | Version	FCC 15.247 | NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
Description	FCC 15.247 Peak output power PM DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - PowerMeter

Equipment

Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI
Power sensor,Keysight Technologies,U2021XA,MY59190010,A.04.06

Test at TX 2437 MHz

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak power	---	30	26.73	dBm	PASS

Verdict
PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 g mode

References

TC start	04.01.2024 12:09:19
Ambit temp [°C] | humidity [rel%]	22.5 | 39
System version	4.7.1.4
Standard | Version	FCC 15.247 | NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

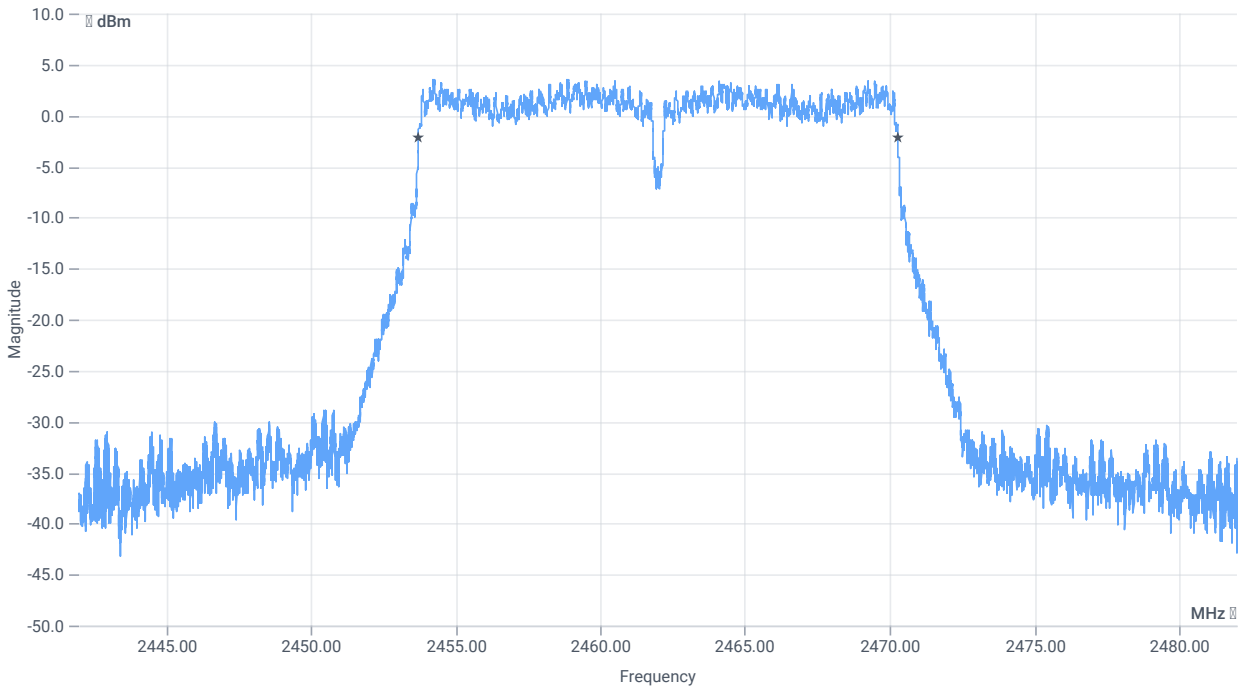
Test at TX 2462 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.80	dBm	INFO
Ref. Frequency	---	---	2464.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.80 | 14.14 | 25
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



BW 6dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	---	16568	kHz	PASS

Verdict

PASS

FCC 15.247 # Peak psd DTS ~ WLAN2G4 g mode

References

TC start	04.01.2024 12:09:53
Ambit temp [°C] | humidity [rel%]	22.4 | 39
System version	4.7.1.4
Standard | Version	FCC 15.247 | NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
Description	FCC 15.247 Peak psd DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

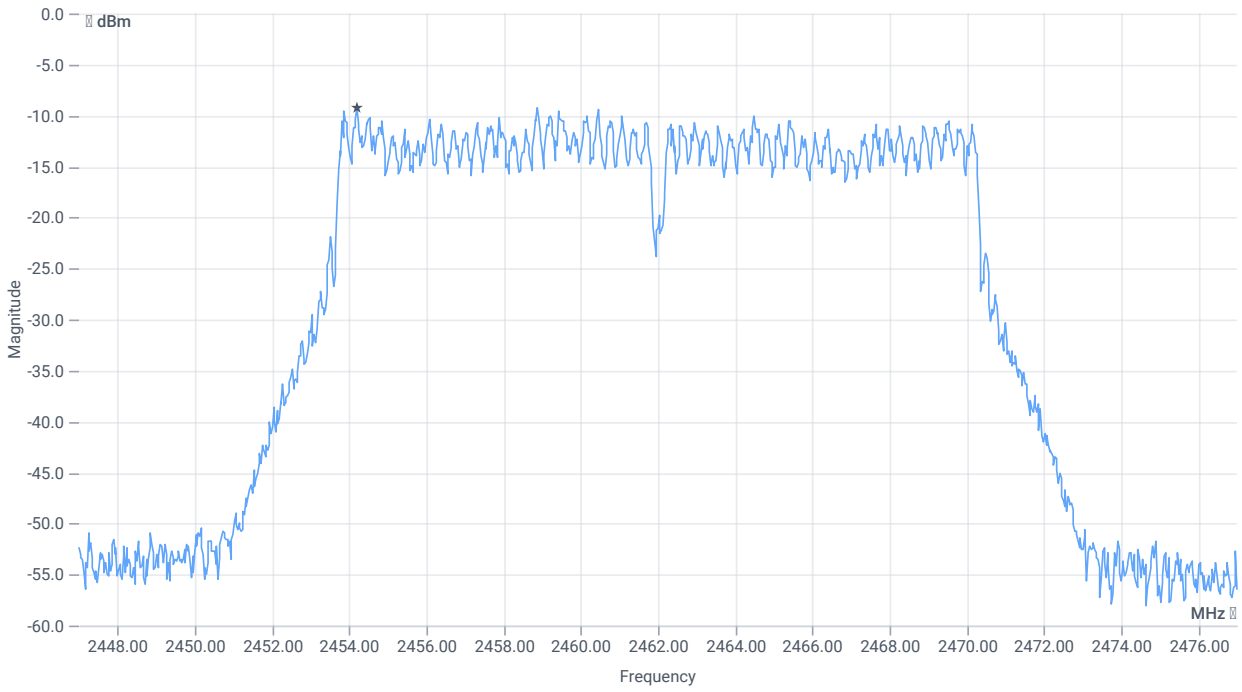
Test at TX 2462 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.22	dBm	INFO
Ref. Frequency	---	---	2459.400	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.22 | 14.14 | 25
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



Peak psd

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-9.19	dBm/3KHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 g mode

References

TC start	04.01.2024 12:10:34
Ambit temp [°C] | humidity [rel%]	22.4 | 40
System version	4.7.1.4
Standard | Version	FCC 15.247, ISED RSS247 | NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

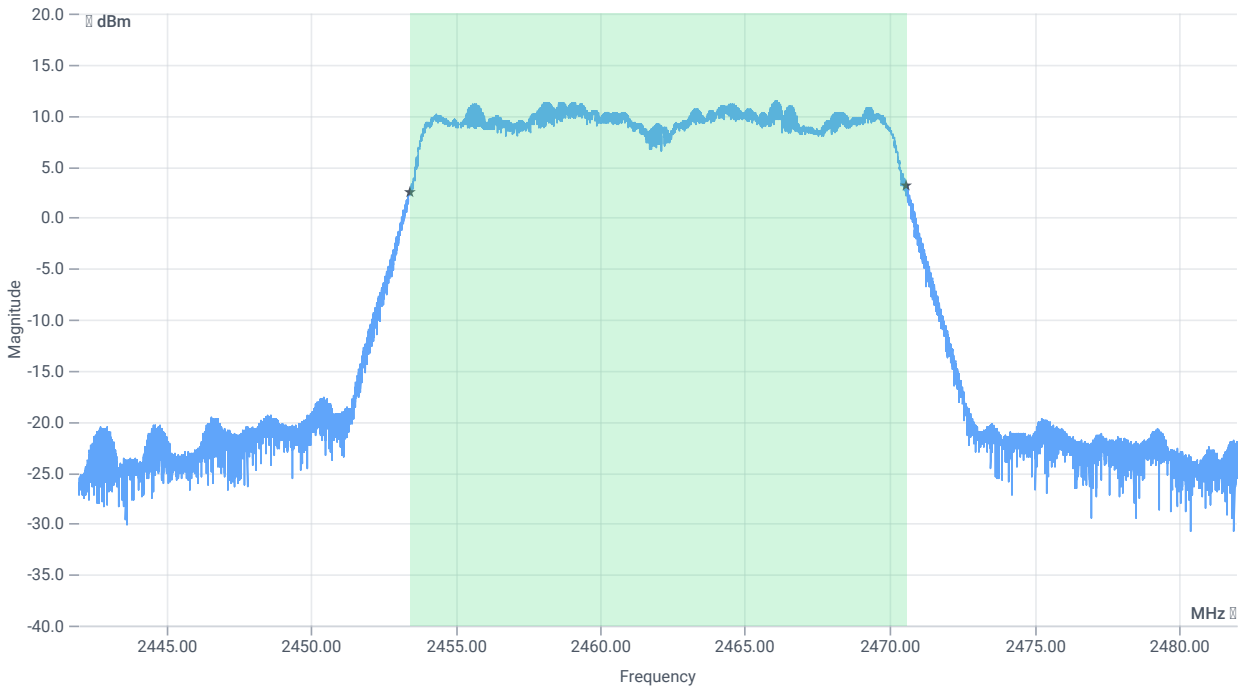
Test at TX 2462 MHz

RESULT: Reference Power cond.

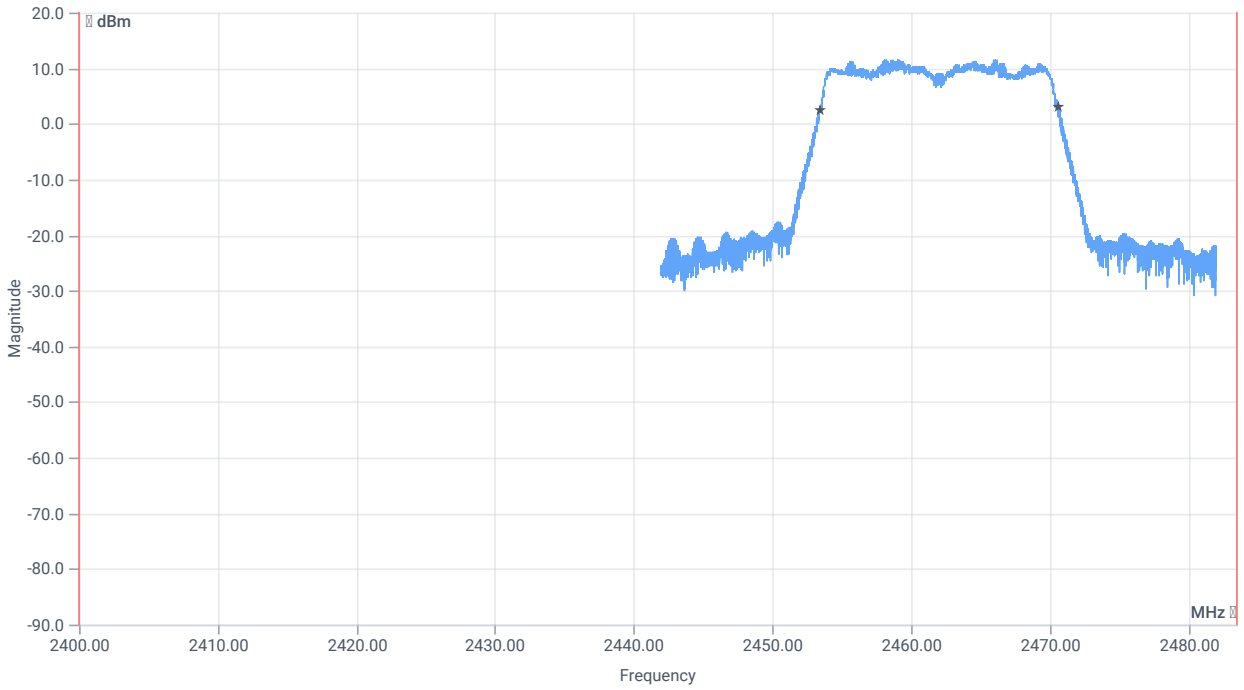
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.32	dBm	INFO
Ref. Frequency	---	---	2459.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.32 | 14.14 | 25
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



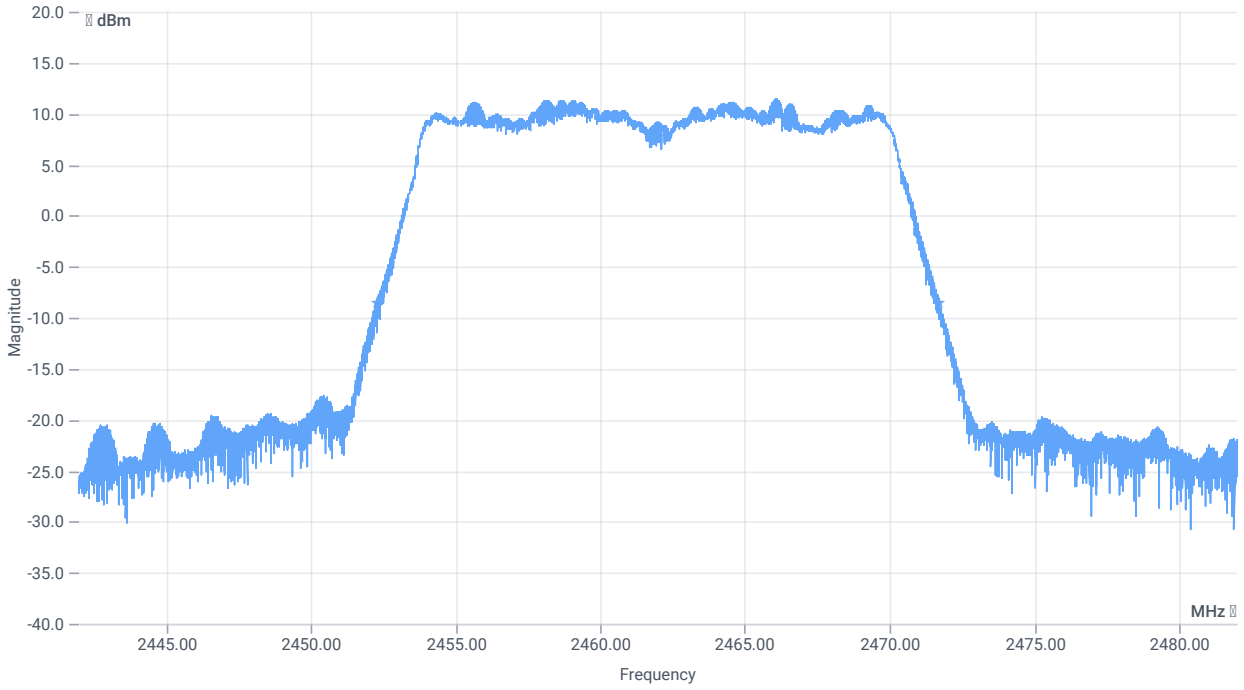
BW 99PCT



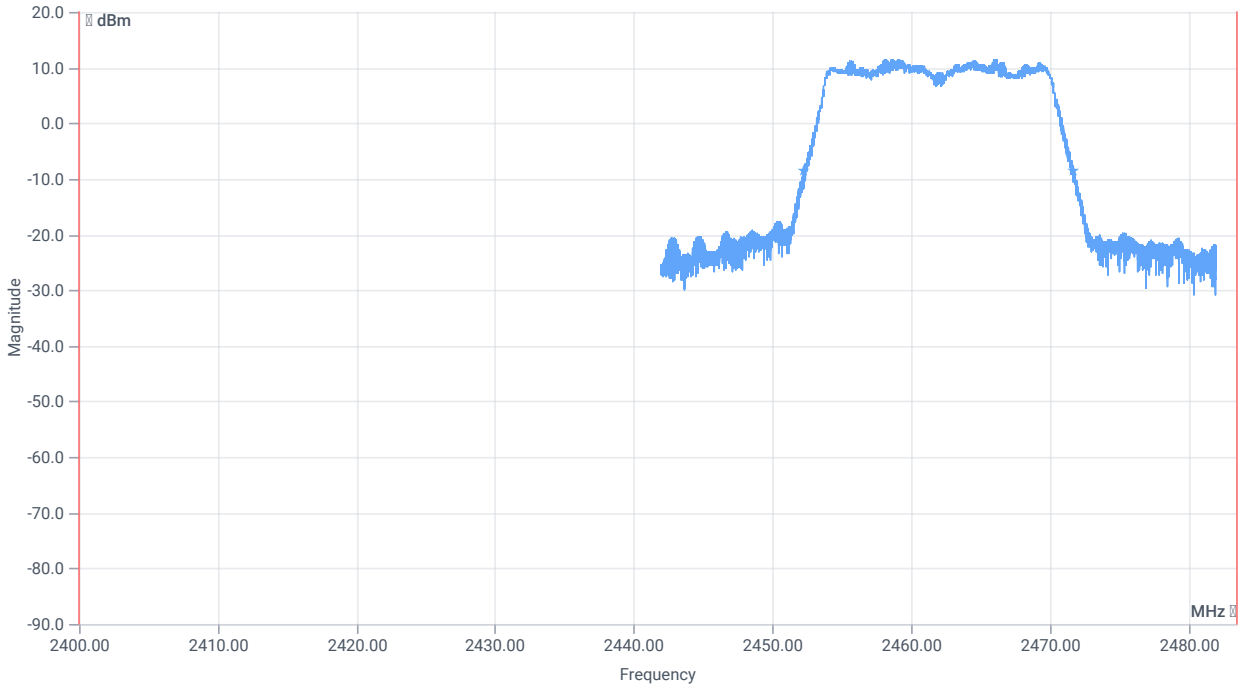
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	17174.000	kHz	INFO
T1 99%	2400.000000	---	2453.4249	MHz	PASS
T2 99%	---	2483.500000	2470.5991	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	19428	kHz	INFO
T1 20DB	2400.000000	---	2452.2880	MHz	PASS
T2 20dB	---	2483.500000	2471.7160	MHz	PASS

Verdict
PASS

FCC 15.247 # TX spurious conducted 20dBc ~ WLAN2G4 g mode

References

TC start	04.01.2024 12:11:12
Ambit temp [°C] | humidity [rel%]	22.4 | 40
System version	4.7.1.4
Standard | Version	FCC 15.247 | NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - SpectrumAnalyzer

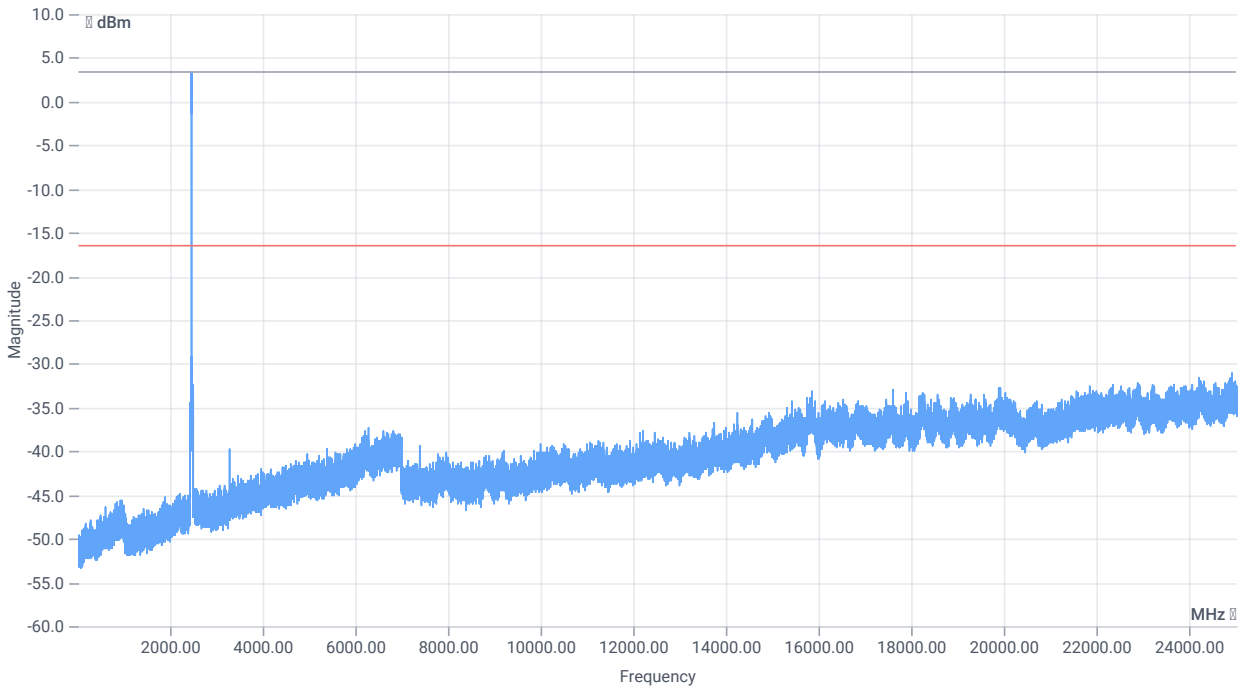
Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2462 MHz

RESULT: Reference Power cond.

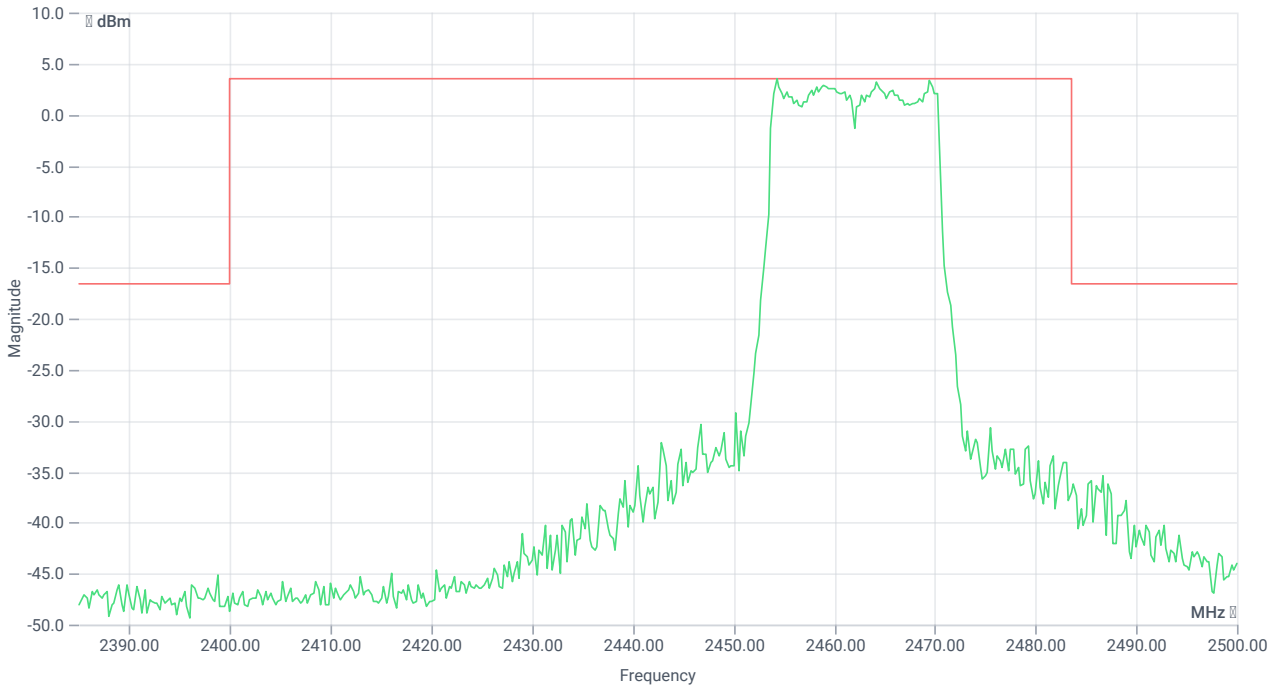
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.37	dBm	INFO
Ref. Frequency	---	---	2465.300	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	14.37 | 0 | 30
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	200 | 25 | 2001 | SWE



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2454.25 MHz	---	---	3.45	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24916 MHz	0	---	14.57	dB	INFO

Verdict
PASS

FCC 15.247 # Peak output power PM DTS ~ WLAN2G4 g mode

References

TC start	04.01.2024 12:18:36
Ambit temp [°C] | humidity [rel%]	22.4 | 40
System version	4.7.1.4
Standard | Version	FCC 15.247 | NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
Description	FCC 15.247 Peak output power PM DTS - WLAN2G4 g mode
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]	0.7
Full path name | type	EUT - SignalingUnit - PowerMeter

Equipment

Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI
Power sensor,Keysight Technologies,U2021XA,MY59190010,A.04.06

Test at TX 2462 MHz

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak power	---	30	26.5	dBm	PASS

Verdict

PASS

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