

Conducted test results

No.1-5154/22-01-08_Annex_MR

October 13, 2023

Test Standard(s)	NA - NI
	FCC 15.247 - NI
	FCC 15.247, ISSED RSS247 - NI

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Authorized

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NA # Terminal communication serial ~ Common

References

TC start	06.10.2023 10:27:29
Ambit temp [°C] humidity [rel%]	25.7 36
System version	4.6.2.0
Standard Version	NA NI
Method	
Description	Terminal communication serial
Information	

Test Parameter

Command	cancel
Output result	cancel

Test Parameter

Command	data_rate ieee802154_250Kbit
Output result	data_rate ieee802154_250Kbit Data rate: NRF_RADIO_MODE_IEEE802154_250KBIT

Test Parameter

Command	output_power pos3dBm
Output result	output_power pos3dBm TX power: RADIO_TXPOWER_TXPOWER_Pos3dBm

Test Parameter

Command	start_channel 11
Output result	start_channel 11 Start channel set to: 11

Test Parameter

Command	end_channel 11
Output result	end_channel 11 End channel set to: 11

Test Parameter

Command	transmit_pattern pattern_random
Output result	transmit_pattern pattern_random Transmission pattern: TRANSMIT_PATTERN_RANDOM

Test Parameter

Command	start_duty_cycle_modulated_tx 90
Output result	start_duty_cycle_modulated_tx 90 Requested tx output power: 3 dBm Tx output power set to: 3 dBm

Verdict

INFO

FCC 15.247 # Maximum peak conducted output power DTS ~ Generic 2G4

References

TC start	06.10.2023 10:27:41
Ambit temp [°C] humidity [rel%]	25.7 36
System version	4.6.2.0
Standard Version	FCC 15.247 NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
Description	FCC 15.247 Max Peak Output Power Conducted DTS4 - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2405 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	0.82	dBm	INFO
Ref. Frequency	---	---	2405.500	MHz	INFO

READ SA SETTINGS:

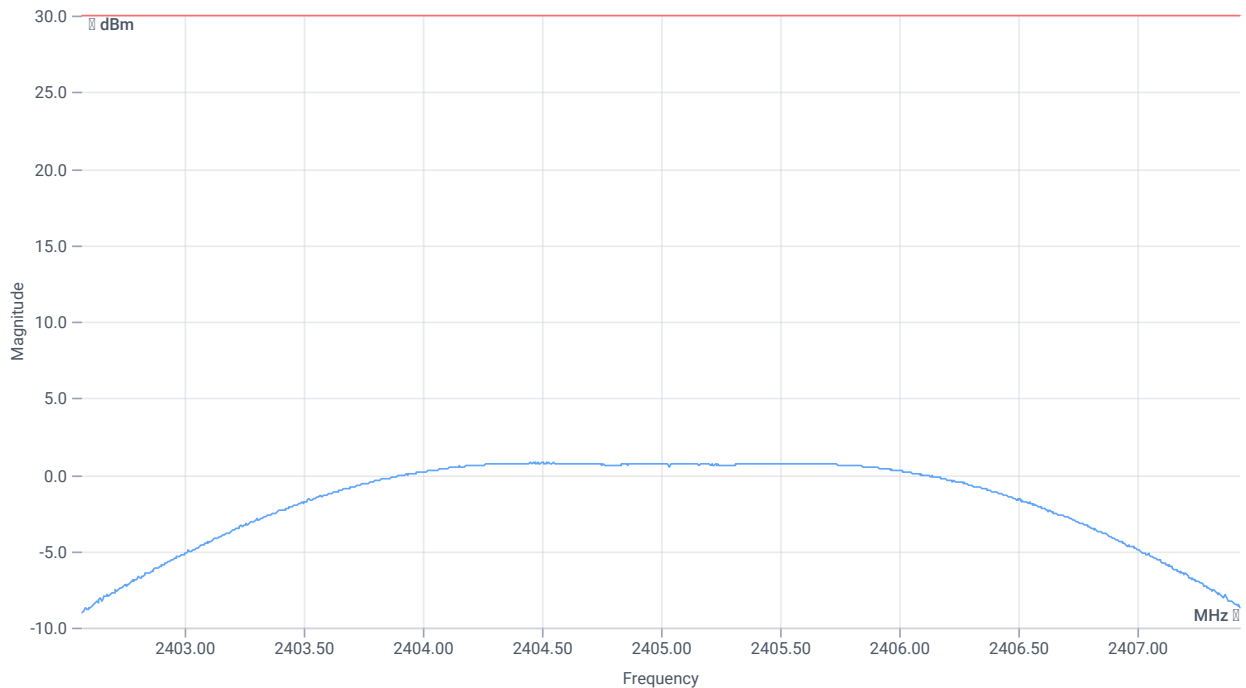
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.82 10.8 15
Start [MHz] Stop [MHz]	2402.569 2407.431
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

DTS Bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	---	---	1133	kHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	10.82 10.8 20
Start [MHz] Stop [MHz]	2402.569 2407.431
RBW [MHz] VBW [MHz]	2.000000 5.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 1001 SWE



Peak output power

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	0.76	dBm	PASS
Peak Power	---	1000	1.191242	mW	PASS
Frequency at Peak	---	---	2404.505	MHz	INFO

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ Generic 2G4

References

TC start	06.10.2023 10:28:25
Ambit temp [°C] humidity [rel%]	25.7 36
System version	4.6.2.0
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6DB DTS - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

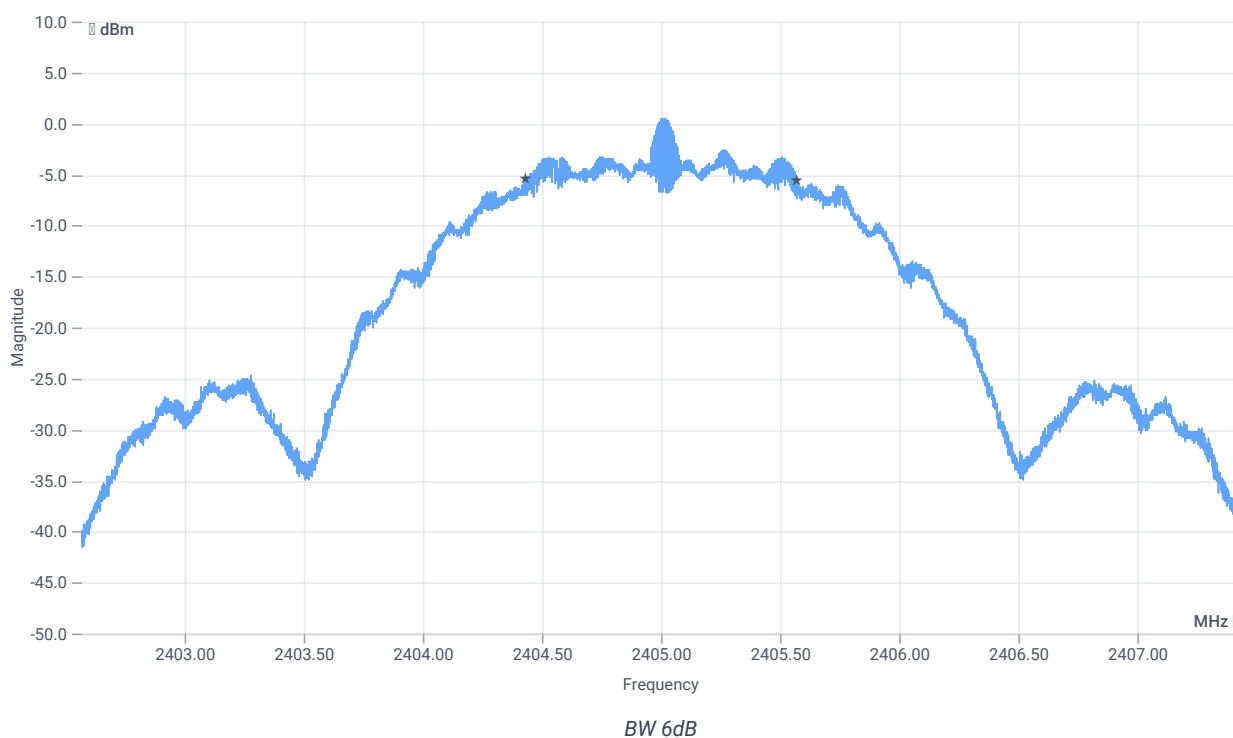
Test at TX 2405 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	0.82	dBm	INFO
Ref. Frequency	---	---	2405.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.82 10.8 15
Start [MHz] Stop [MHz]	2402.569 2407.431
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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	---	1142	kHz	PASS

Verdict

PASS

FCC 15.247 # Peak psd DTS ~ Generic 2G4

References

TC start	06.10.2023 10:28:56
Ambit temp [°C] humidity [rel%]	25.7 36
System version	4.6.2.0
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 - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

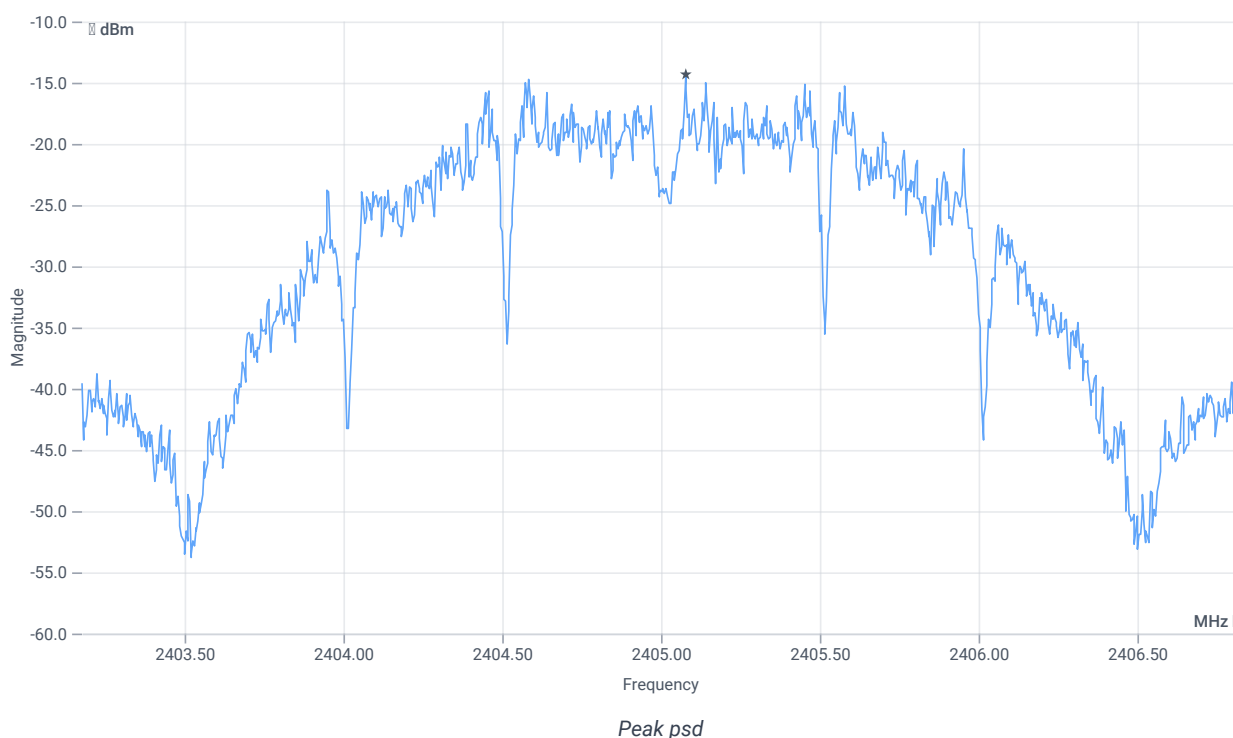
Test at TX 2405 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	0.87	dBm	INFO
Ref. Frequency	---	---	2404.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.87 10.8 15
Start [MHz] Stop [MHz]	2403.177 2406.823
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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-14.39	dBm/3KHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ Generic 2G4

References

TC start	06.10.2023 10:29:37
Ambit temp [°C] humidity [rel%]	25.7 35
System version	4.6.2.0
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20DB DTS - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

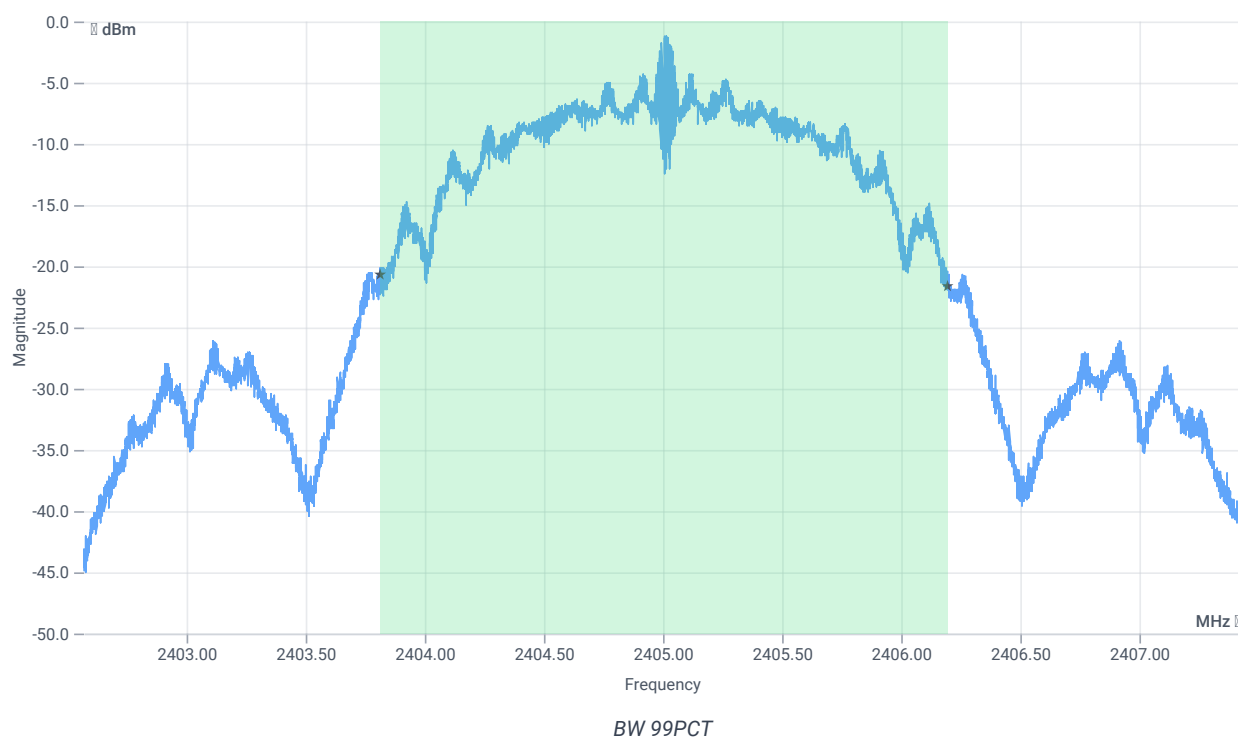
Test at TX 2405 MHz

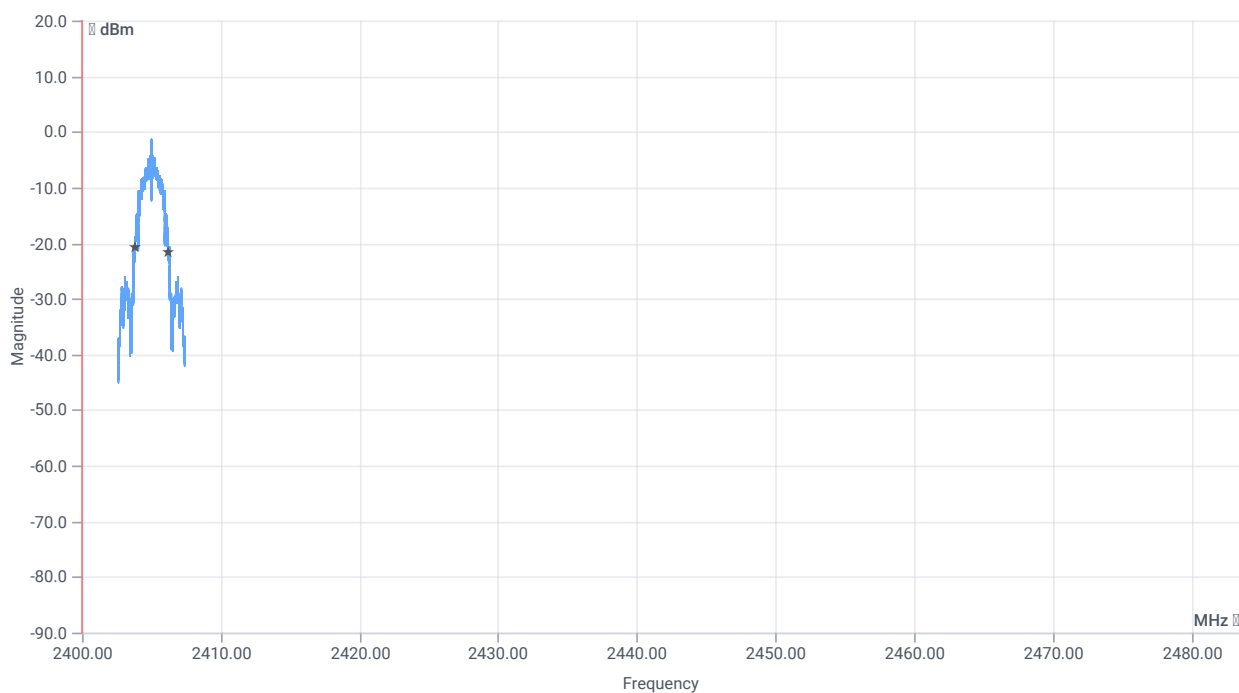
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	0.79	dBm	INFO
Ref. Frequency	---	---	2404.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.79 10.8 10
Start [MHz] Stop [MHz]	2402.569 2407.431
RBW [MHz] VBW [MHz]	0.050000 0.200000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

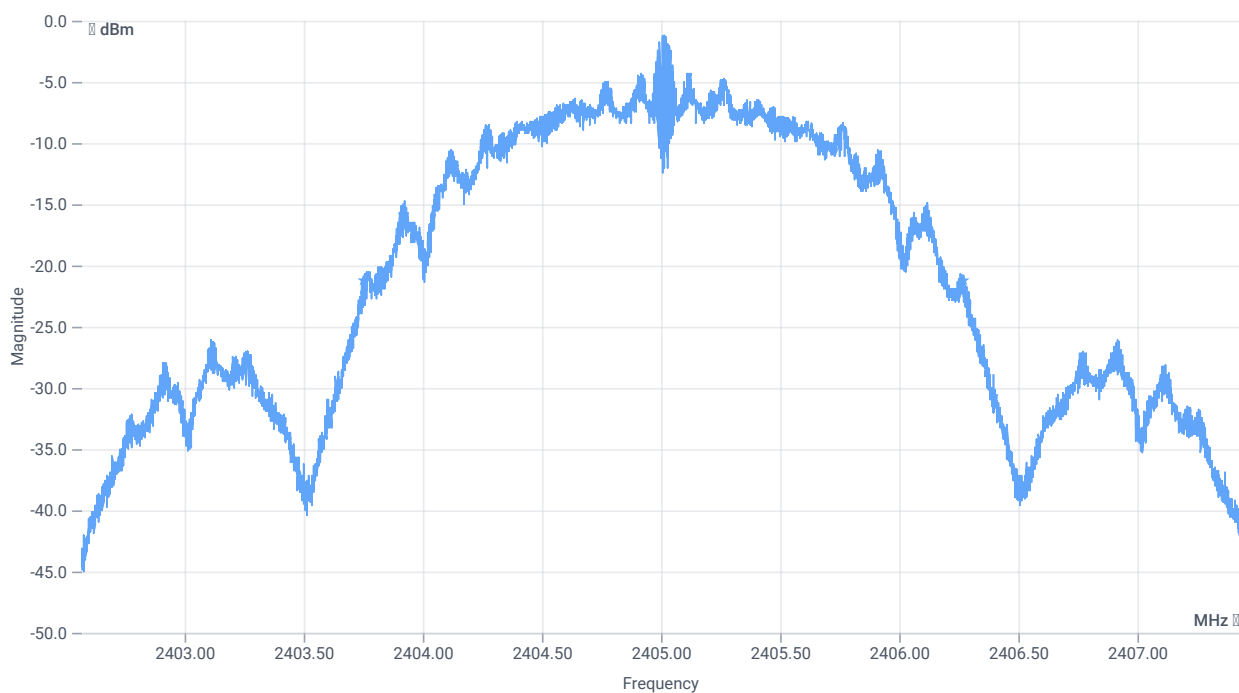




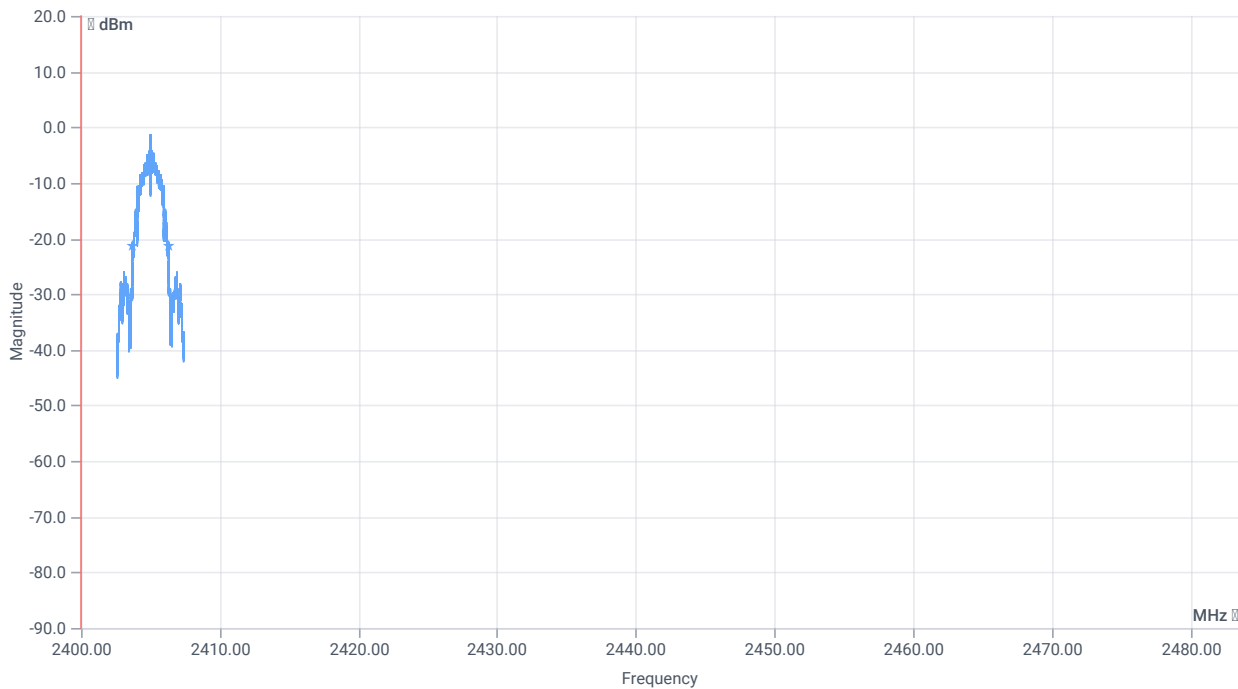
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	2383.000	kHz	INFO
T1 99%	2400.000000	---	2403.8148	MHz	PASS
T2 99%	---	2483.500000	2406.1979	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	2519	kHz	INFO
T1 20dB	2400.000000	---	2403.7529	MHz	PASS
T2 20dB	---	2483.500000	2406.2719	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 20dBc ~ Generic 2G4

References

TC start	06.10.2023 10:30:16
Ambit temp [°C] humidity [rel%]	25.8 35
System version	4.6.2.0
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 - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

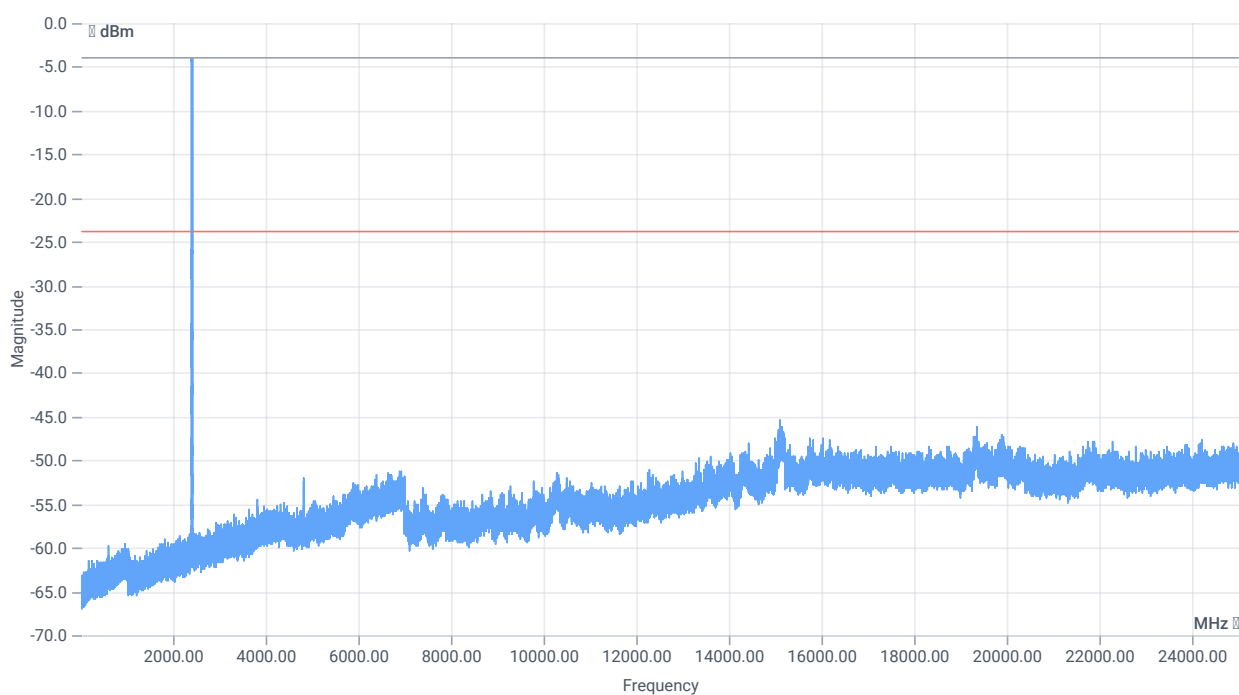
Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2405 MHz

RESULT: Reference Power cond.

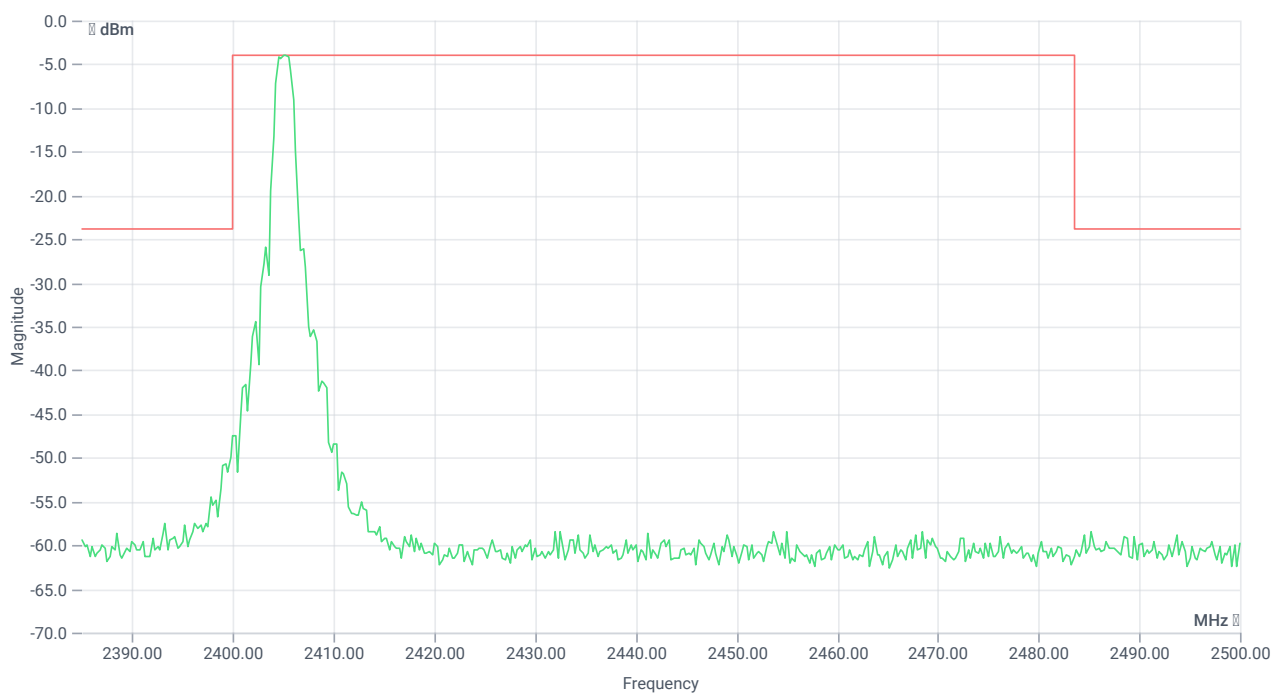
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	0.81	dBm	INFO
Ref. Frequency	---	---	2405.500	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	0.81 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	200 25 2001 SWE



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2405.00 MHz	---	---	-3.92	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 15108.5 MHz	0	---	21.55	dB	INFO

Verdict

PASS

NA # Terminal communication serial ~ Common

References

TC start	06.10.2023 10:36:56
Ambit temp [°C] humidity [rel%]	26.0 35
System version	4.6.2.0
Standard Version	NA NI
Method	
Description	Terminal communication serial
Information	

Test Parameter

Command	cancel
Output result	cancel

Test Parameter

Command	data_rate ieee802154_250Kbit
Output result	data_rate ieee802154_250Kbit Data rate: NRF_RADIO_MODE_IEEE802154_250KBIT

Test Parameter

Command	output_power pos3dBm
Output result	output_power pos3dBm TX power: RADIO_TXPOWER_TXPOWER_Pos3dBm

Test Parameter

Command	start_channel 18
Output result	start_channel 18 Start channel set to: 18

Test Parameter

Command	end_channel 18
Output result	end_channel 18 End channel set to: 18

Test Parameter

Command	transmit_pattern pattern_random
Output result	transmit_pattern pattern_random Transmission pattern: TRANSMIT_PATTERN_RANDOM

Test Parameter

Command	start_duty_cycle_modulated_tx 90
Output result	start_duty_cycle_modulated_tx 90 Requested tx output power: 3 dBm Tx output power set to: 3 dBm

Verdict

INFO

FCC 15.247 # Maximum peak conducted output power DTS ~ Generic 2G4

References

TC start	06.10.2023 10:37:09
Ambit temp [°C] humidity [rel%]	26.0 35
System version	4.6.2.0
Standard Version	FCC 15.247 NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
Description	FCC 15.247 Max Peak Output Power Conducted DTS4 - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2440 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	1.39	dBm	INFO
Ref. Frequency	---	---	2440.500	MHz	INFO

READ SA SETTINGS:

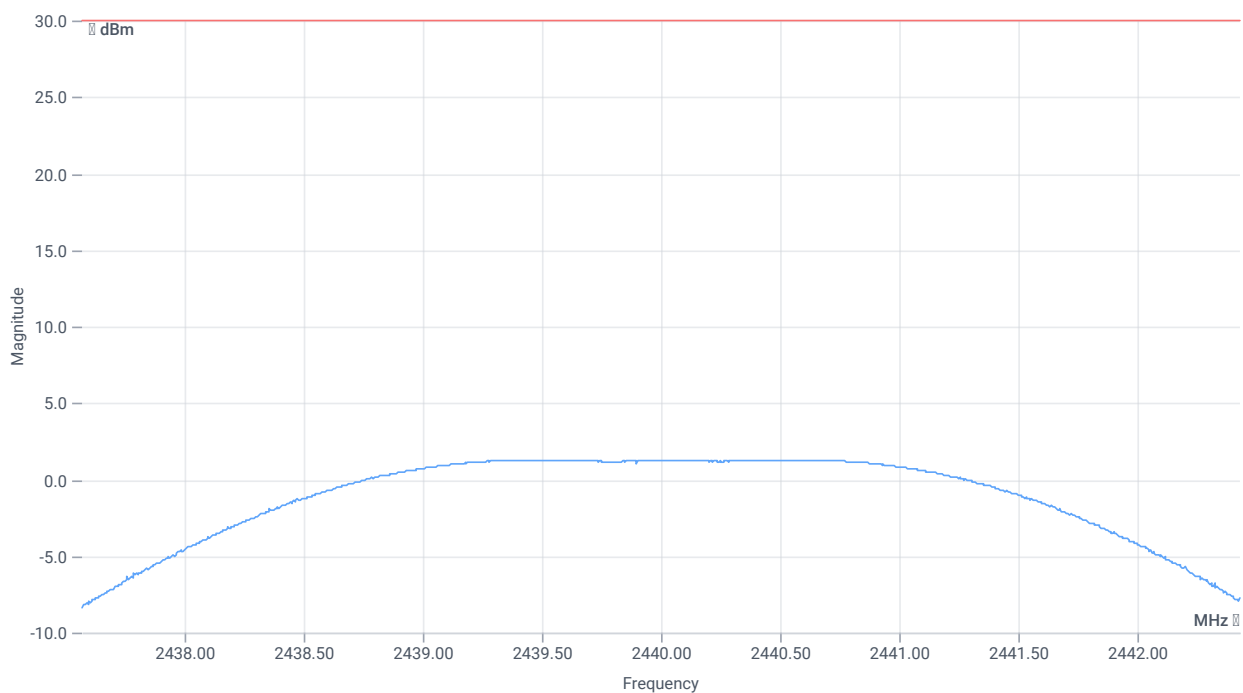
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.39 10.8 15
Start [MHz] Stop [MHz]	2437.569 2442.431
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

DTS Bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	---	---	1204	kHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	11.39 10.8 20
Start [MHz] Stop [MHz]	2437.569 2442.431
RBW [MHz] VBW [MHz]	2.000000 5.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 1001 SWE



Peak output power

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	1.29	dBm	PASS
Peak Power	---	1000	1.34586	mW	PASS
Frequency at Peak	---	---	2440.5	MHz	INFO

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ Generic 2G4

References

TC start	06.10.2023 10:37:53
Ambit temp [°C] humidity [rel%]	26.0 35
System version	4.6.2.0
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6DB DTS - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

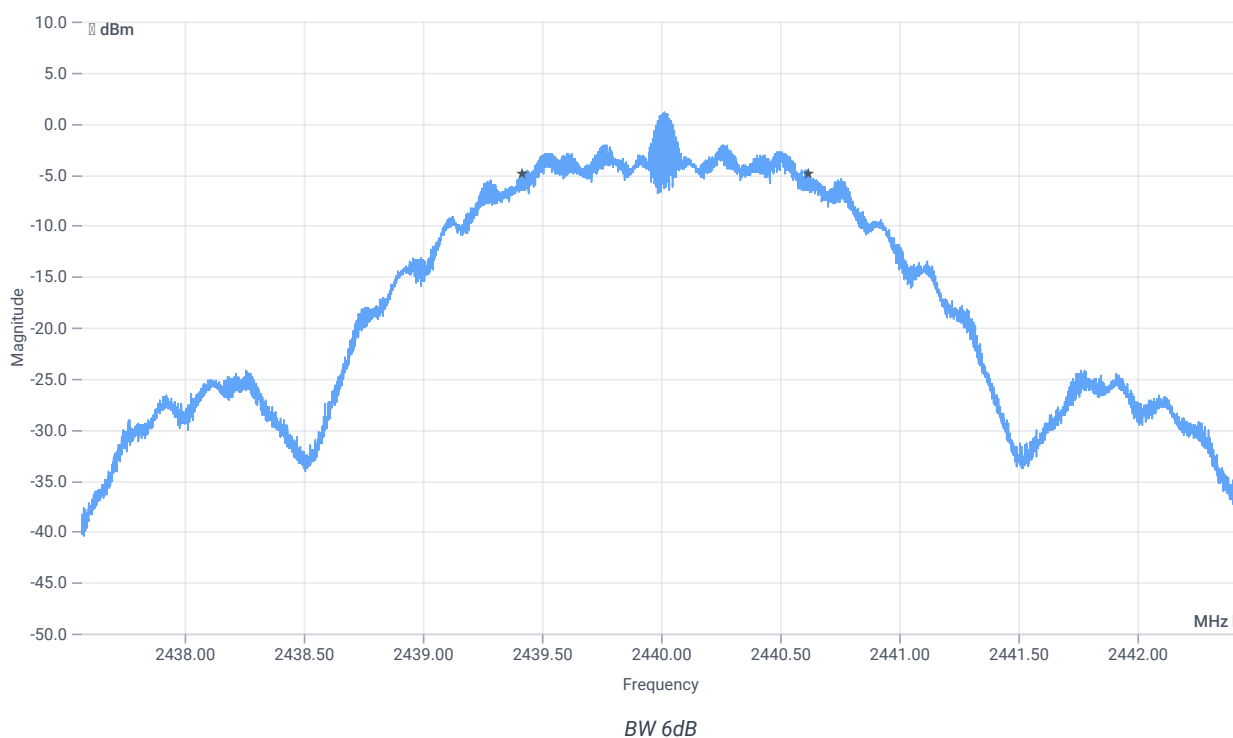
Test at TX 2440 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	1.33	dBm	INFO
Ref. Frequency	---	---	2439.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.33 10.8 15
Start [MHz] Stop [MHz]	2437.569 2442.431
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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	---	1197	kHz	PASS

Verdict

PASS

FCC 15.247 # Peak psd DTS ~ Generic 2G4

References

TC start	06.10.2023 10:38:24
Ambit temp [°C] humidity [rel%]	26.0 35
System version	4.6.2.0
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 - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

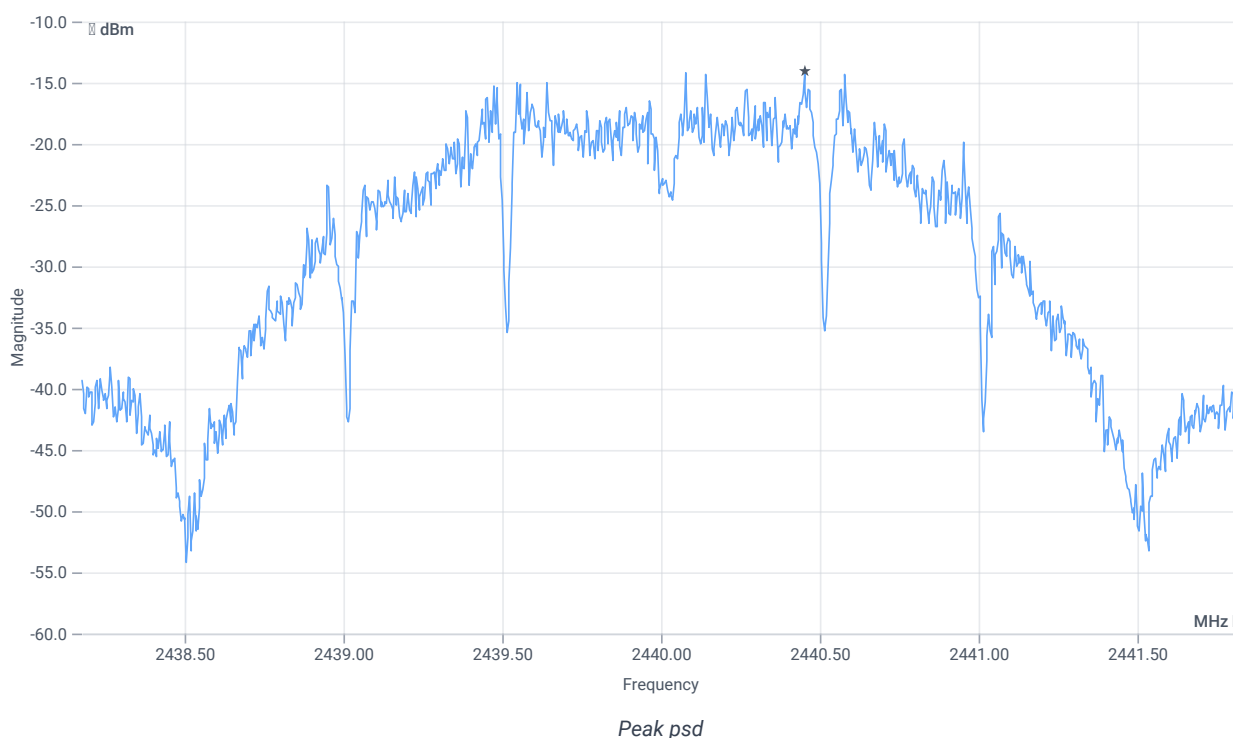
Test at TX 2440 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	1.37	dBm	INFO
Ref. Frequency	---	---	2439.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.37 10.8 15
Start [MHz] Stop [MHz]	2438.177 2441.823
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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-14.12	dBm/3KHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ Generic 2G4

References

TC start	06.10.2023 10:39:05
Ambit temp [°C] humidity [rel%]	26.0 35
System version	4.6.2.0
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20DB DTS - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

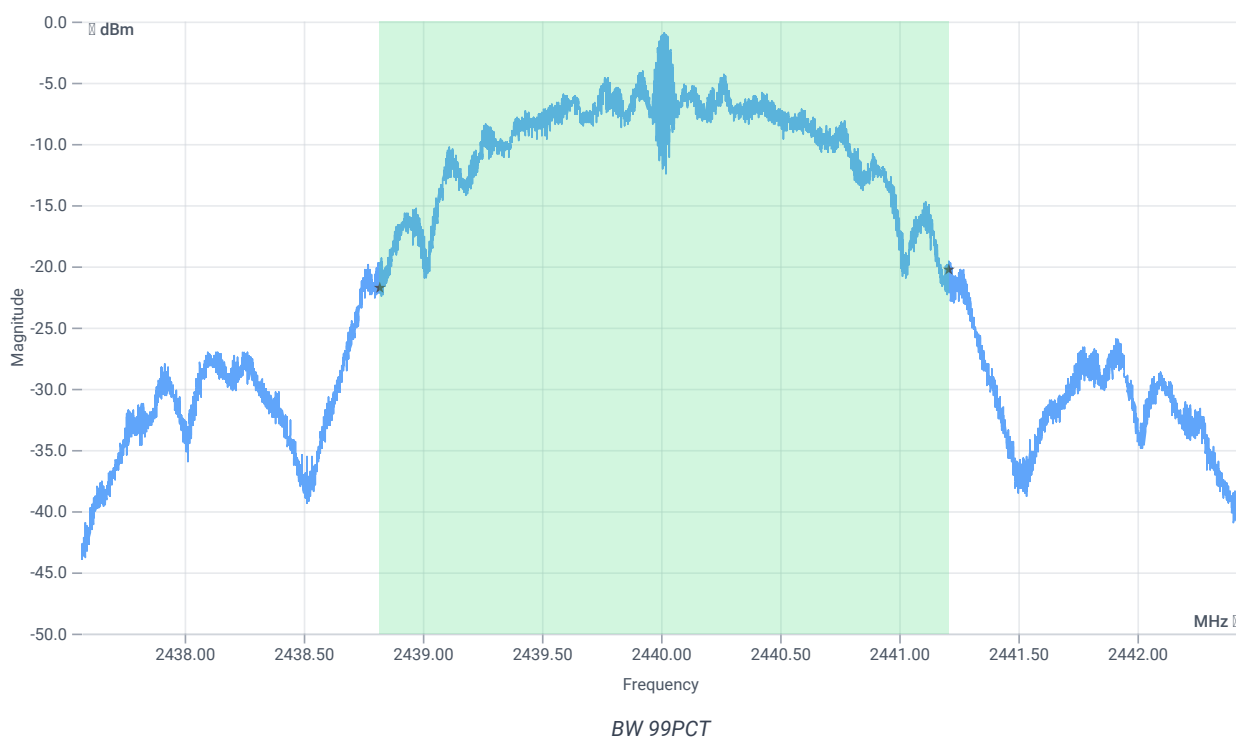
Test at TX 2440 MHz

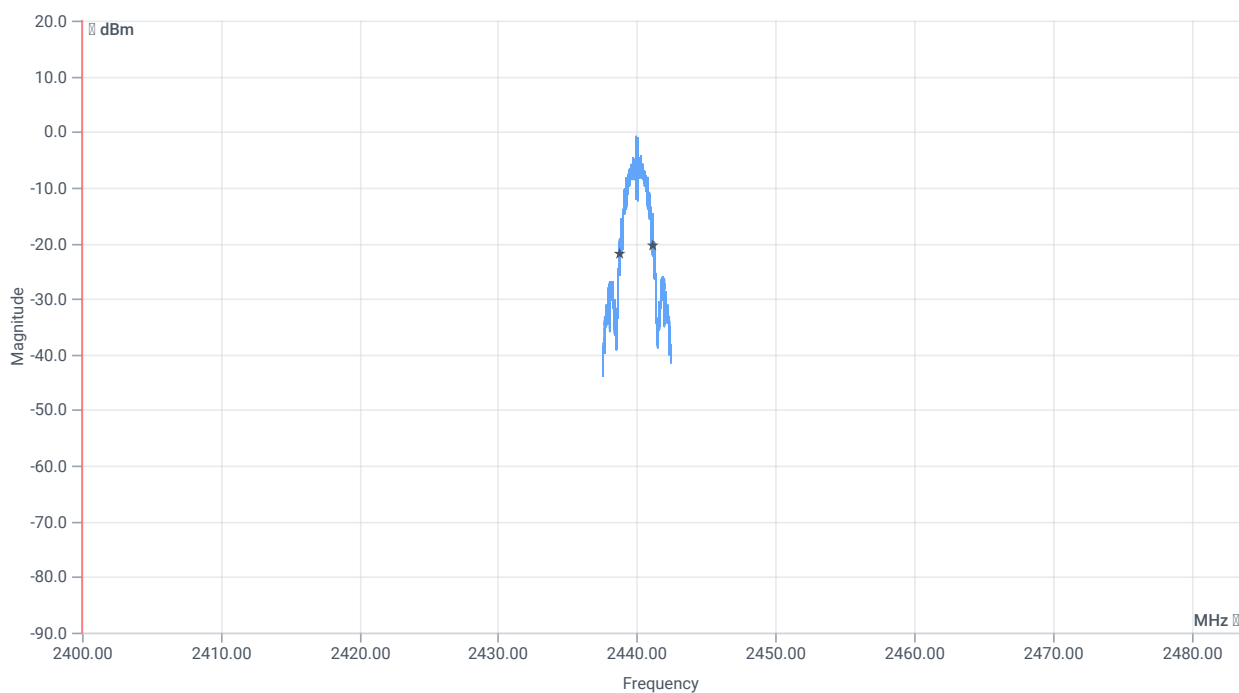
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	1.33	dBm	INFO
Ref. Frequency	---	---	2439.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.33 10.8 15
Start [MHz] Stop [MHz]	2437.569 2442.431
RBW [MHz] VBW [MHz]	0.050000 0.200000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

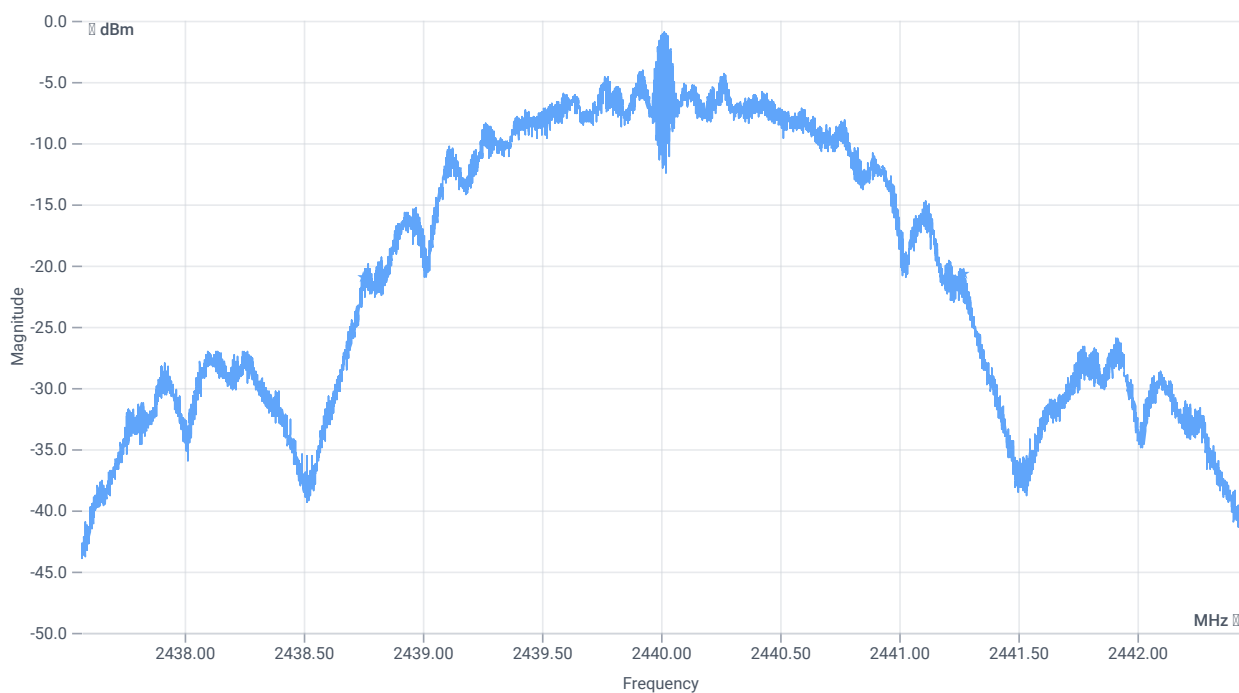




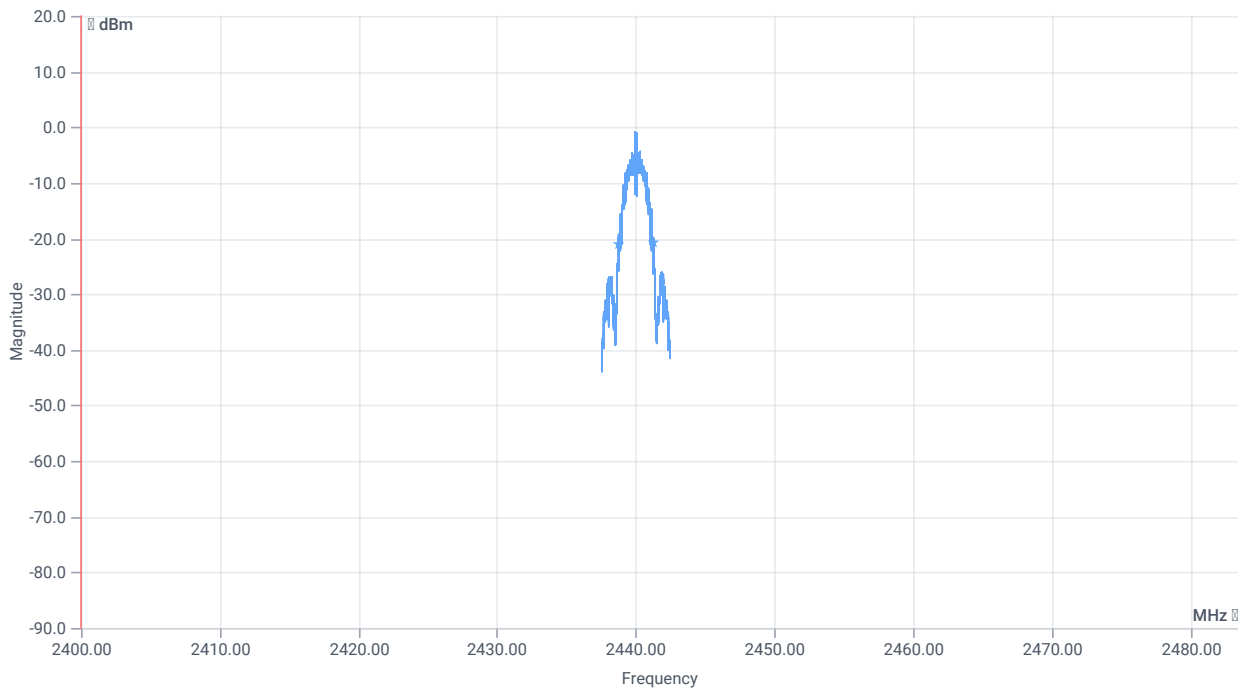
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	2386.000	kHz	INFO
T1 99%	2400.000000	---	2438.8216	MHz	PASS
T2 99%	---	2483.500000	2441.2076	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	2519	kHz	INFO
T1 20dB	2400.000000	---	2438.7524	MHz	PASS
T2 20dB	---	2483.500000	2441.2719	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 20dBc ~ Generic 2G4

References

TC start	06.10.2023 10:39:44
Ambit temp [°C] humidity [rel%]	26.1 35
System version	4.6.2.0
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 - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

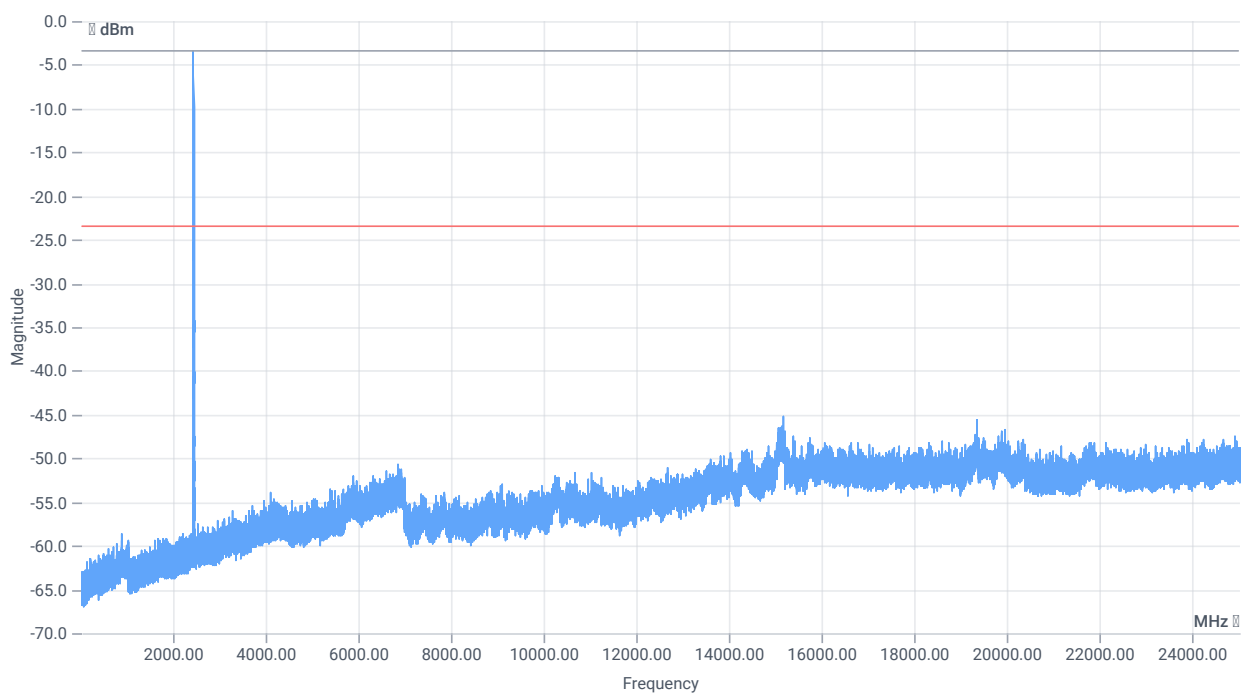
Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2440 MHz

RESULT: Reference Power cond.

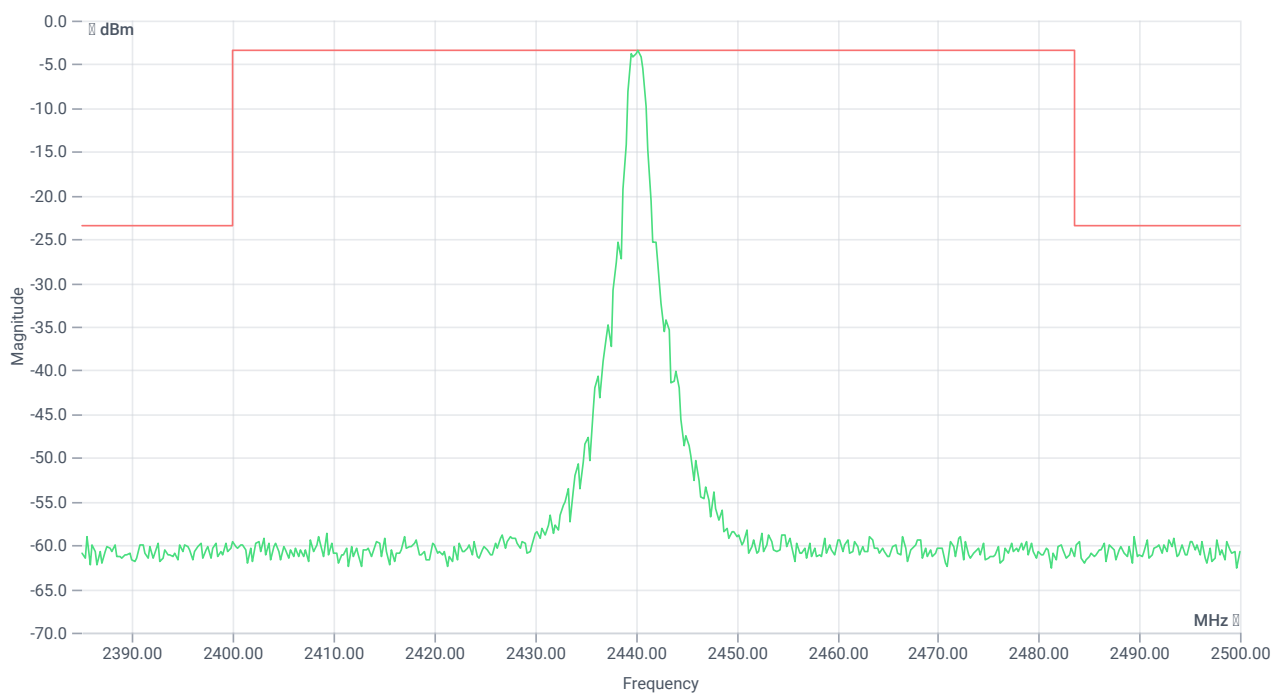
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	1.38	dBm	INFO
Ref. Frequency	---	---	2440.500	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.38 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	200 25 2001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2440.25 MHz	---	---	-3.37	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 15164 MHz	0	---	21.92	dB	INFO

Verdict

PASS

NA # Terminal communication serial ~ Common

References

TC start	06.10.2023 10:46:24
Ambit temp [°C] humidity [rel%]	26.5 35
System version	4.6.2.0
Standard Version	NA NI
Method	
Description	Terminal communication serial
Information	

Test Parameter

Command	cancel
Output result	cancel

Test Parameter

Command	data_rate ieee802154_250Kbit
Output result	data_rate ieee802154_250Kbit Data rate: NRF_RADIO_MODE_IEEE802154_250KBIT

Test Parameter

Command	output_power pos3dBm
Output result	output_power pos3dBm TX power: RADIO_TXPOWER_TXPOWER_Pos3dBm

Test Parameter

Command	start_channel 25
Output result	start_channel 25 Start channel set to: 25

Test Parameter

Command	end_channel 25
Output result	end_channel 25 End channel set to: 25

Test Parameter

Command	transmit_pattern pattern_random
Output result	transmit_pattern pattern_random Transmission pattern: TRANSMIT_PATTERN_RANDOM

Test Parameter

Command	start_duty_cycle_modulated_tx 90
Output result	start_duty_cycle_modulated_tx 90 Requested tx output power: 3 dBm Tx output power set to: 3 dBm

Verdict

INFO

FCC 15.247 # Maximum peak conducted output power DTS ~ Generic 2G4

References

TC start	06.10.2023 10:46:36
Ambit temp [°C] humidity [rel%]	26.5 34
System version	4.6.2.0
Standard Version	FCC 15.247 NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
Description	FCC 15.247 Max Peak Output Power Conducted DTS4 - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2475
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2475 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	1.47	dBm	INFO
Ref. Frequency	---	---	2475.500	MHz	INFO

READ SA SETTINGS:

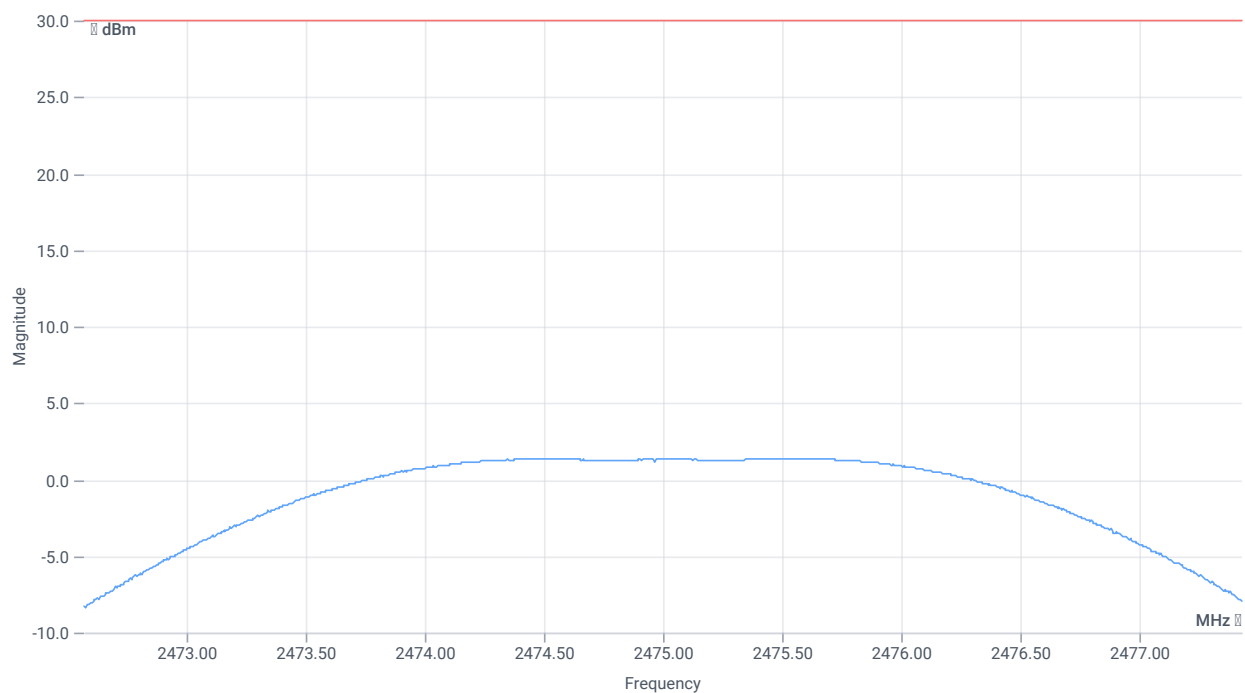
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.47 10.84 15
Start [MHz] Stop [MHz]	2472.569 2477.431
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

DTS Bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	---	---	1132	kHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	11.47 10.84 20
Start [MHz] Stop [MHz]	2472.569 2477.431
RBW [MHz] VBW [MHz]	2.000000 5.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 1001 SWE



Peak output power

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	1.36	dBm	PASS
Peak Power	---	1000	1.367729	mW	PASS
Frequency at Peak	---	---	2475.554	MHz	INFO

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ Generic 2G4

References

TC start	06.10.2023 10:47:22
Ambit temp [°C] humidity [rel%]	26.6 34
System version	4.6.2.0
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6DB DTS - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2475
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

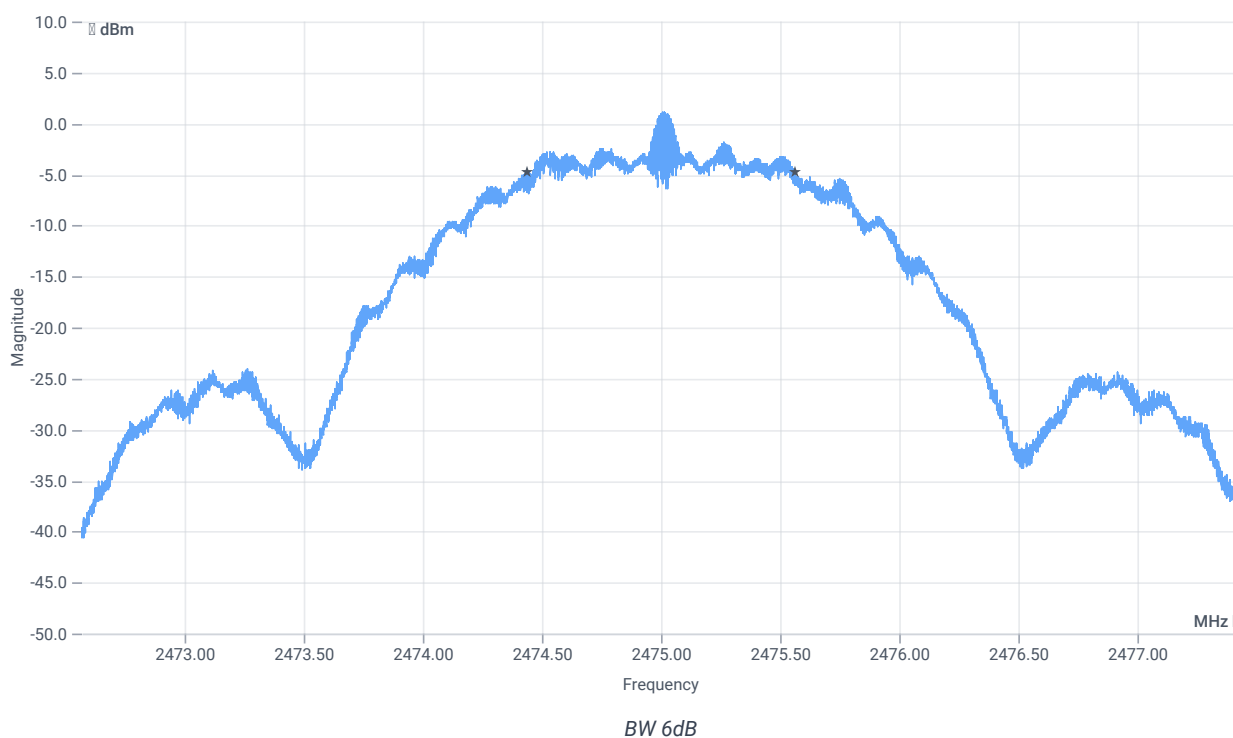
Test at TX 2475 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	1.39	dBm	INFO
Ref. Frequency	---	---	2475.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.39 10.84 15
Start [MHz] Stop [MHz]	2472.569 2477.431
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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	---	1122	kHz	PASS

Verdict

PASS

FCC 15.247 # Peak psd DTS ~ Generic 2G4

References

TC start	06.10.2023 10:47:54
Ambit temp [°C] humidity [rel%]	26.6 34
System version	4.6.2.0
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 - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2475
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

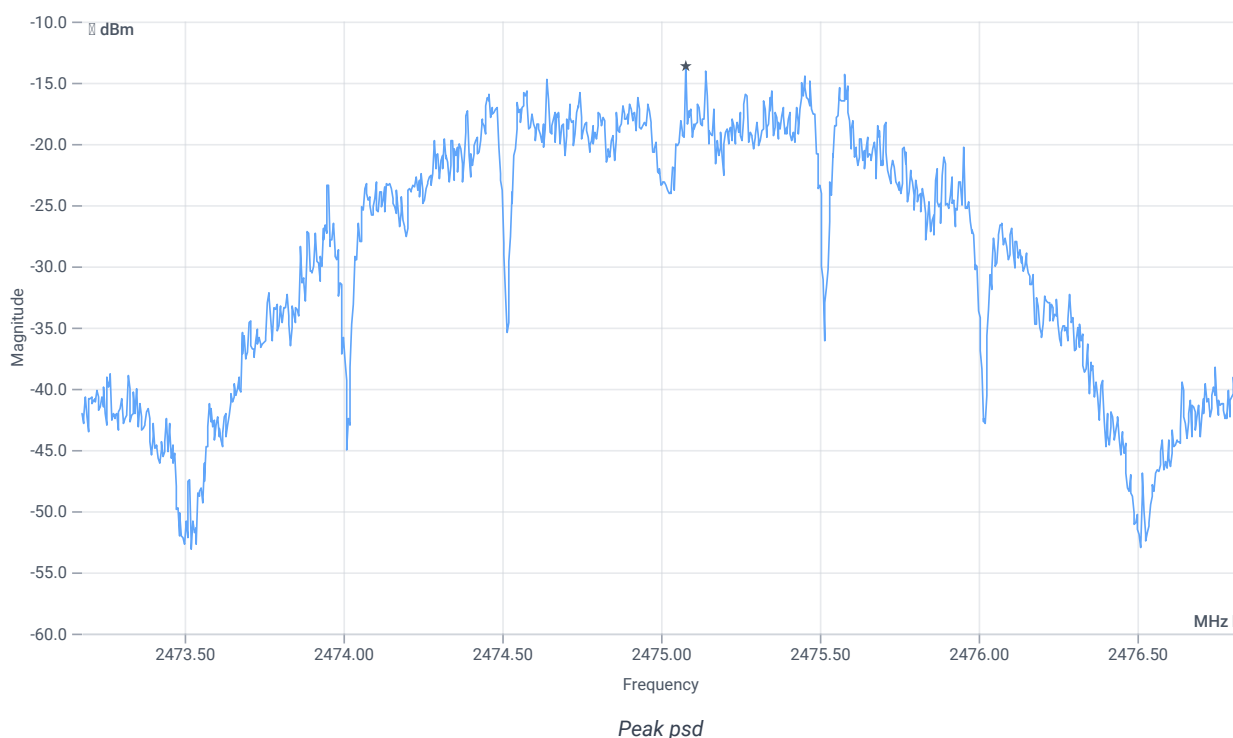
Test at TX 2475 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	1.38	dBm	INFO
Ref. Frequency	---	---	2475.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.38 10.84 15
Start [MHz] Stop [MHz]	2473.177 2476.823
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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-13.62	dBm/3KHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ Generic 2G4

References

TC start	06.10.2023 10:48:35
Ambit temp [°C] humidity [rel%]	26.7 34
System version	4.6.2.0
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20DB DTS - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2475
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

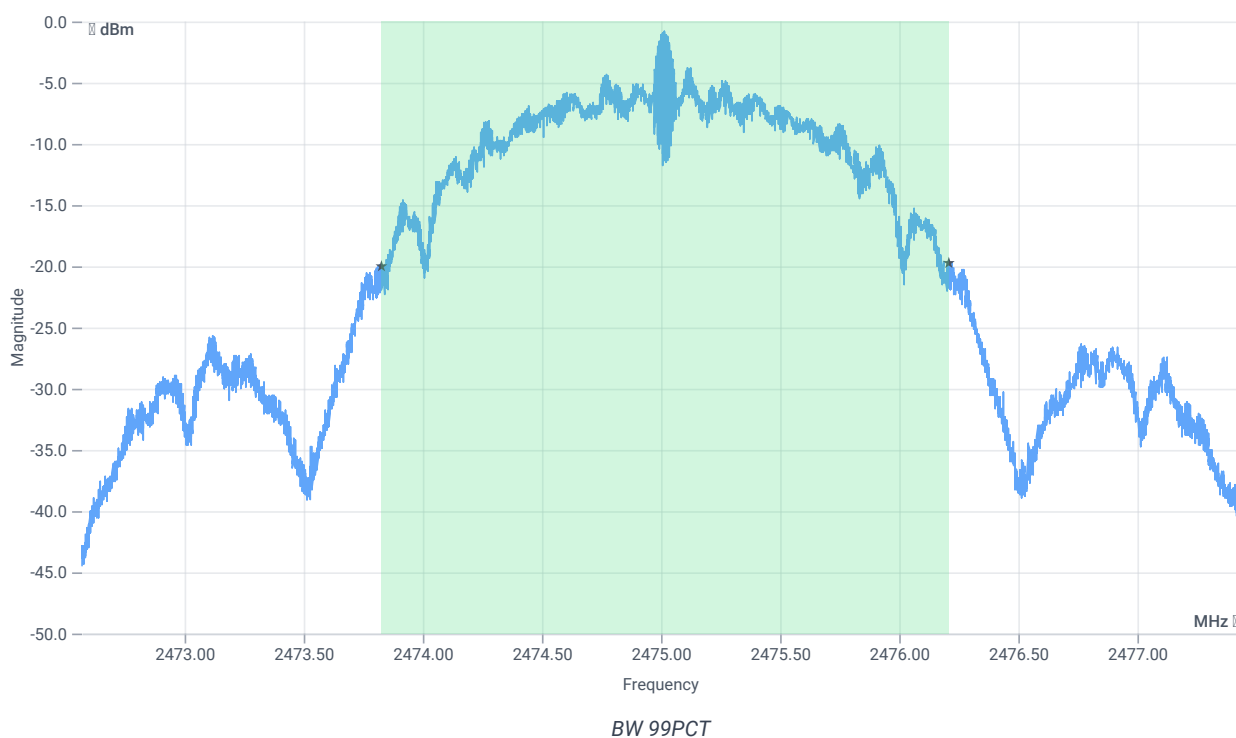
Test at TX 2475 MHz

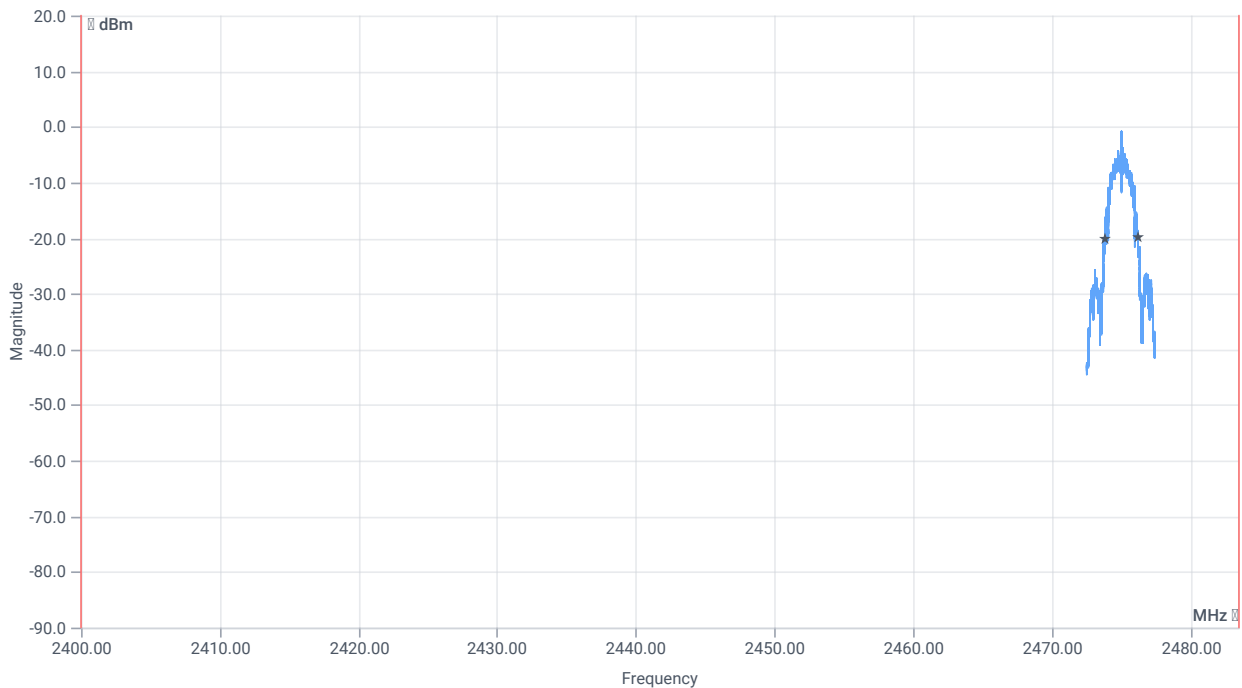
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	1.45	dBm	INFO
Ref. Frequency	---	---	2475.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.45 10.84 15
Start [MHz] Stop [MHz]	2472.569 2477.431
RBW [MHz] VBW [MHz]	0.050000 0.200000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

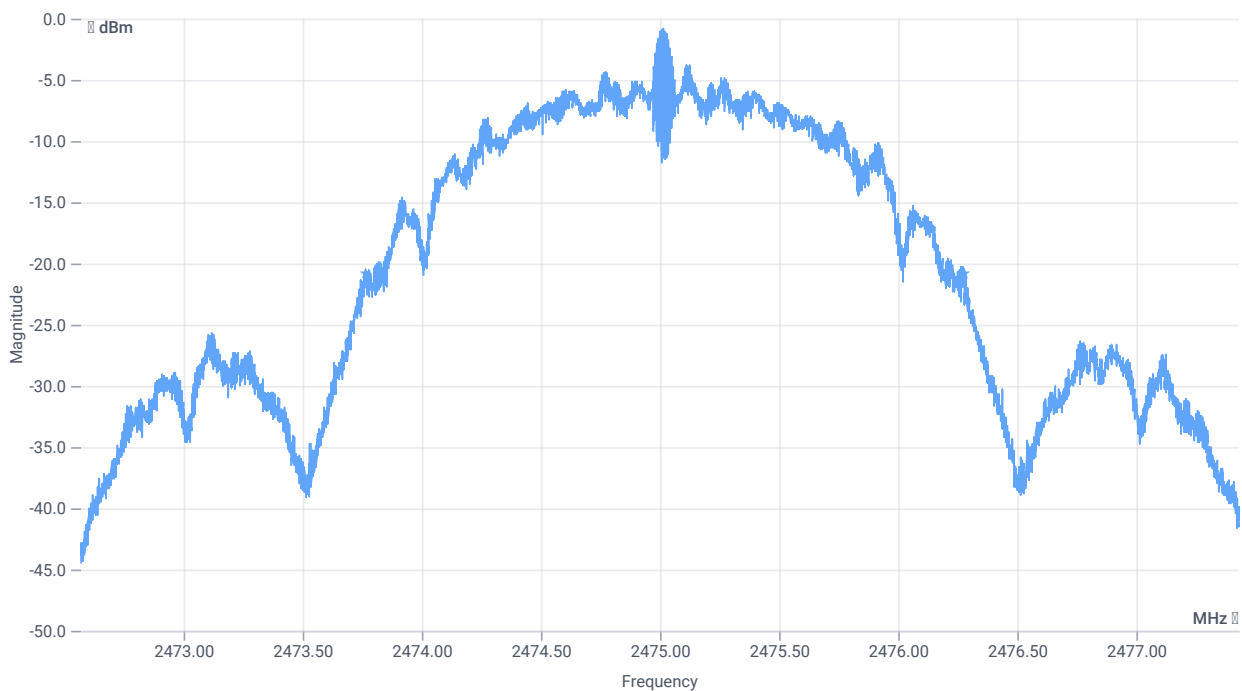




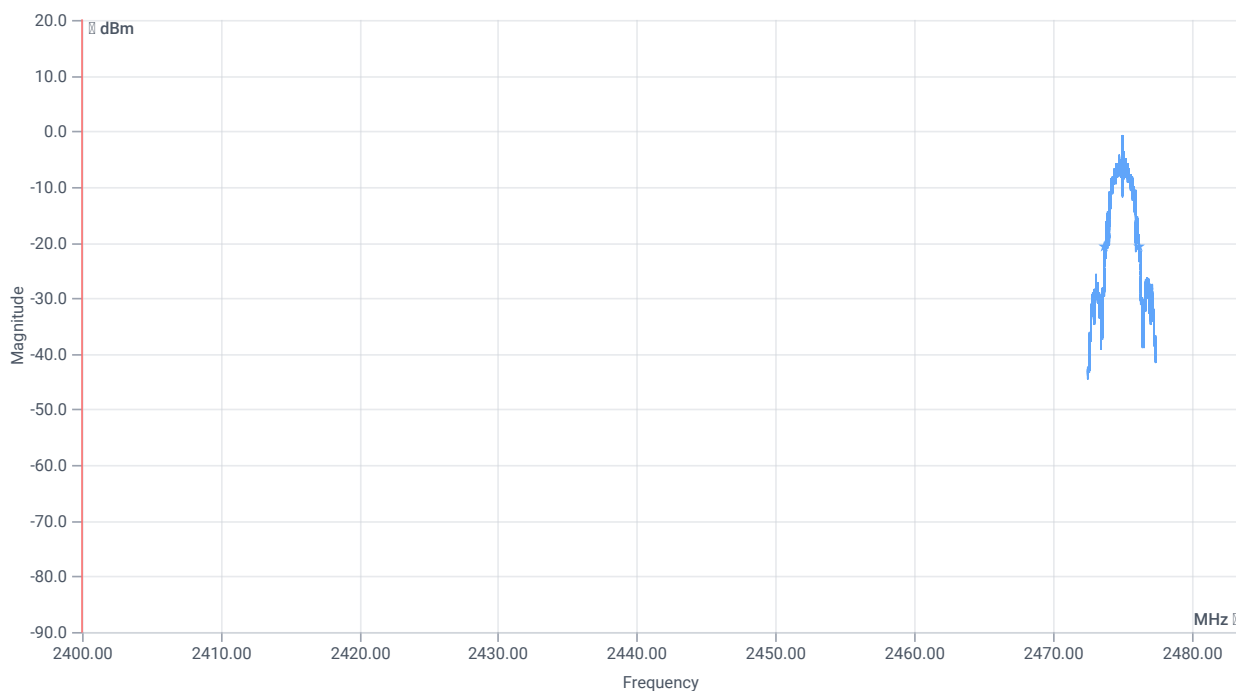
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	2381.000	kHz	INFO
T1 99%	2400.000000	---	2473.8284	MHz	PASS
T2 99%	---	2483.500000	2476.2095	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	2517	kHz	INFO
T1 20dB	2400.000000	---	2473.7612	MHz	PASS
T2 20dB	---	2483.500000	2476.2777	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 20dBc ~ Generic 2G4

References

TC start	06.10.2023 10:49:14
Ambit temp [°C] humidity [rel%]	26.7 34
System version	4.6.2.0
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 - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2475
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

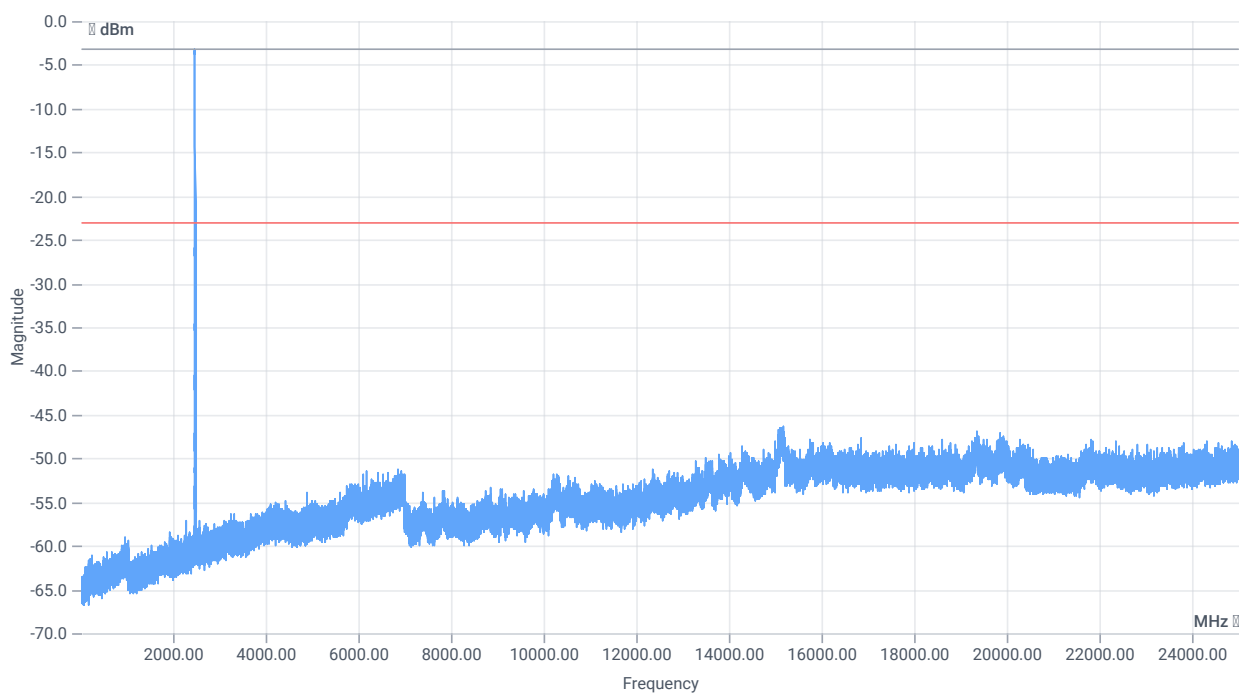
Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2475 MHz

RESULT: Reference Power cond.

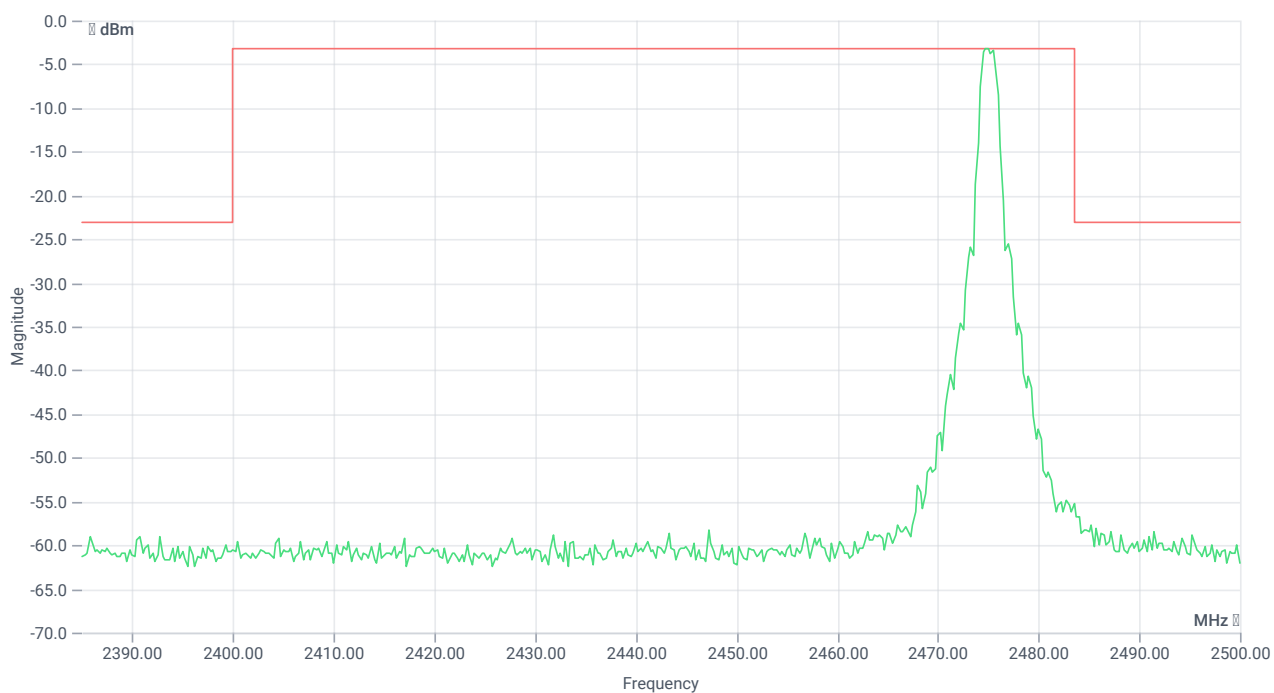
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	1.34	dBm	INFO
Ref. Frequency	---	---	2475.500	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.34 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	200 25 2001 SWE



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2474.75 MHz	---	---	-3.13	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 15173.5 MHz	0	---	23.26	dB	INFO

Verdict

PASS

NA # Terminal communication serial ~ Common

References

TC start	06.10.2023 10:55:55
Ambit temp [°C] humidity [rel%]	26.9 34
System version	4.6.2.0
Standard Version	NA NI
Method	
Description	Terminal communication serial
Information	

Test Parameter

Command	cancel
Output result	cancel

Test Parameter

Command	data_rate ieee802154_250Kbit
Output result	data_rate ieee802154_250Kbit Data rate: NRF_RADIO_MODE_IEEE802154_250KBIT

Test Parameter

Command	output_power neg12dBm
Output result	output_power neg12dBm TX power: RADIO_TXPOWER_TXPOWER_Neg12dBm

Test Parameter

Command	start_channel 26
Output result	start_channel 26 Start channel set to: 26

Test Parameter

Command	end_channel 26
Output result	end_channel 26 End channel set to: 26

Test Parameter

Command	transmit_pattern pattern_random
Output result	transmit_pattern pattern_random Transmission pattern: TRANSMIT_PATTERN_RANDOM

Test Parameter

Command	start_duty_cycle_modulated_tx 90
Output result	start_duty_cycle_modulated_tx 90 Requested tx output power: -12 dBm Tx output power set to: -12 dBm

Verdict

INFO

FCC 15.247 # Maximum peak conducted output power DTS ~ Generic 2G4

References

TC start	06.10.2023 10:56:07
Ambit temp [°C] humidity [rel%]	27.0 34
System version	4.6.2.0
Standard Version	FCC 15.247 NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
Description	FCC 15.247 Max Peak Output Power Conducted DTS4 - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2480 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-11.60	dBm	INFO
Ref. Frequency	---	---	2480.600	MHz	INFO

READ SA SETTINGS:

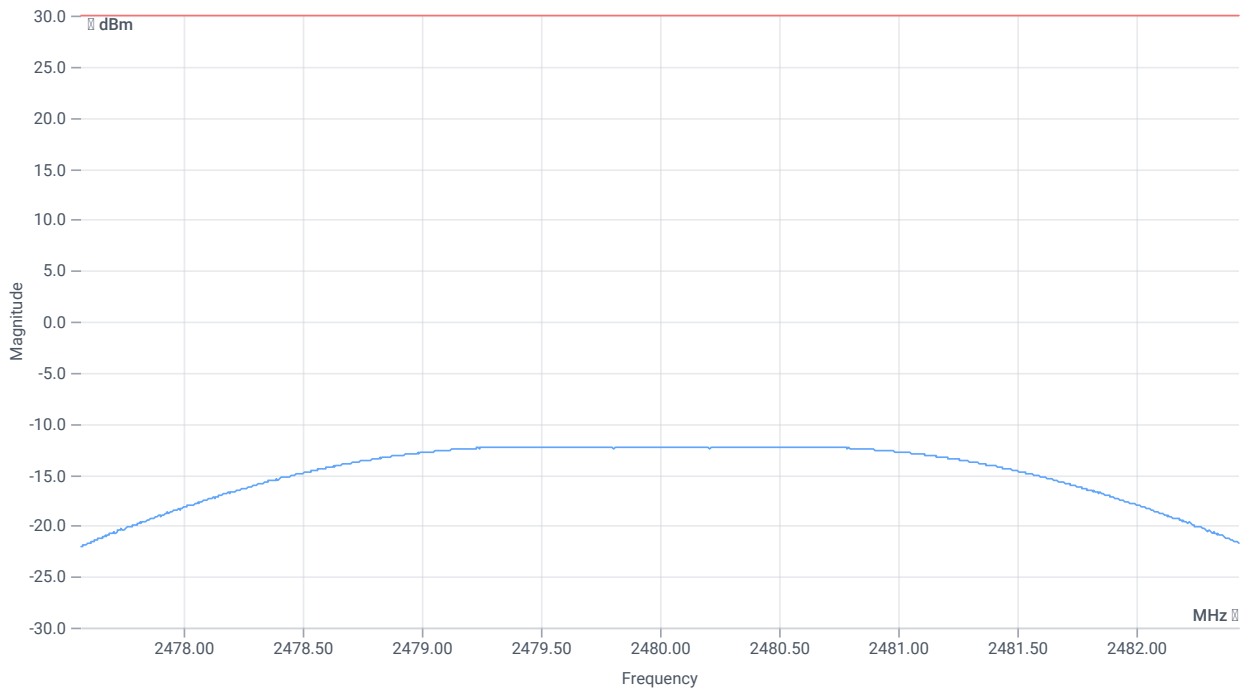
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-6.60 10.85 0
Start [MHz] Stop [MHz]	2477.569 2482.431
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

DTS Bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	---	---	1164	kHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-1.60 10.85 5
Start [MHz] Stop [MHz]	2477.569 2482.431
RBW [MHz] VBW [MHz]	2.000000 5.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 1001 SWE



Peak output power

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	-12.26	dBm	PASS
Peak Power	---	1000	0.059429	mW	PASS
Frequency at Peak	---	---	2479.514	MHz	INFO

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ Generic 2G4

References

TC start	06.10.2023 10:56:51
Ambit temp [°C] humidity [rel%]	26.9 34
System version	4.6.2.0
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6DB DTS - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

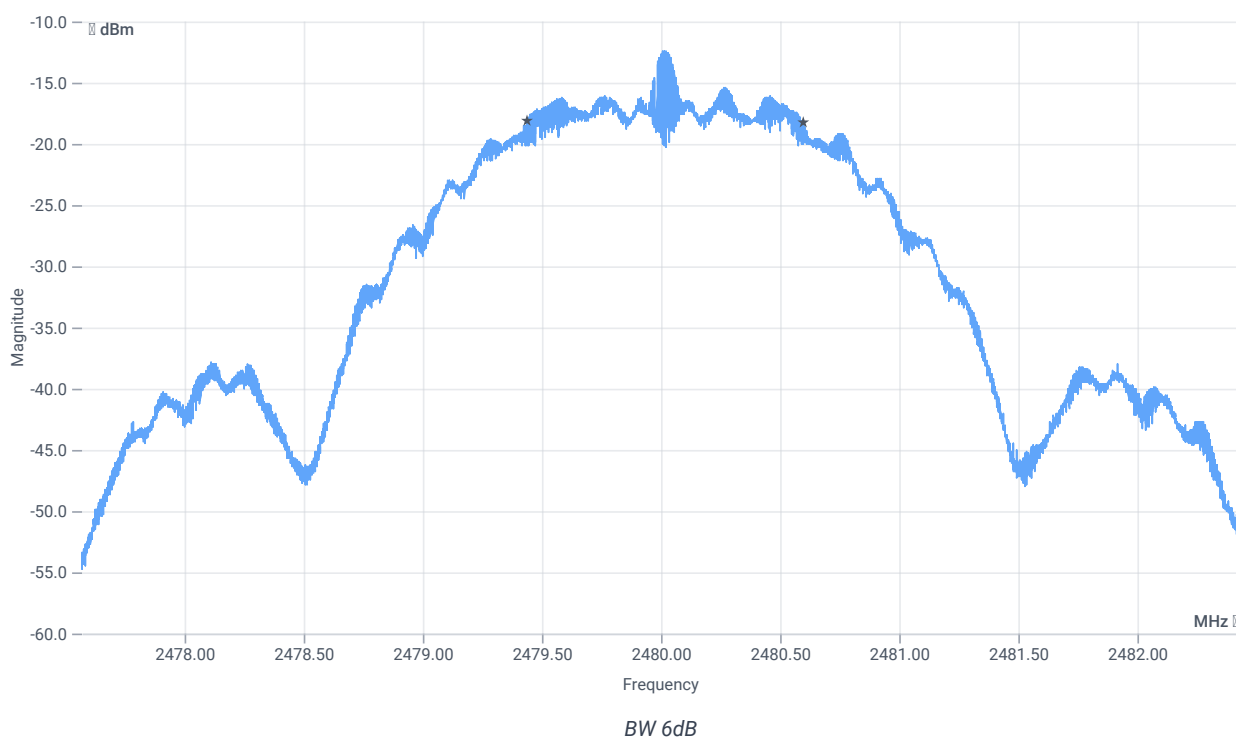
Test at TX 2480 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-11.51	dBm	INFO
Ref. Frequency	---	---	2479.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-6.51 10.85 0
Start [MHz] Stop [MHz]	2477.569 2482.431
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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	---	1159	kHz	PASS

Verdict

PASS

FCC 15.247 # Peak psd DTS ~ Generic 2G4

References

TC start	06.10.2023 10:57:22
Ambit temp [°C] humidity [rel%]	26.9 34
System version	4.6.2.0
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 - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

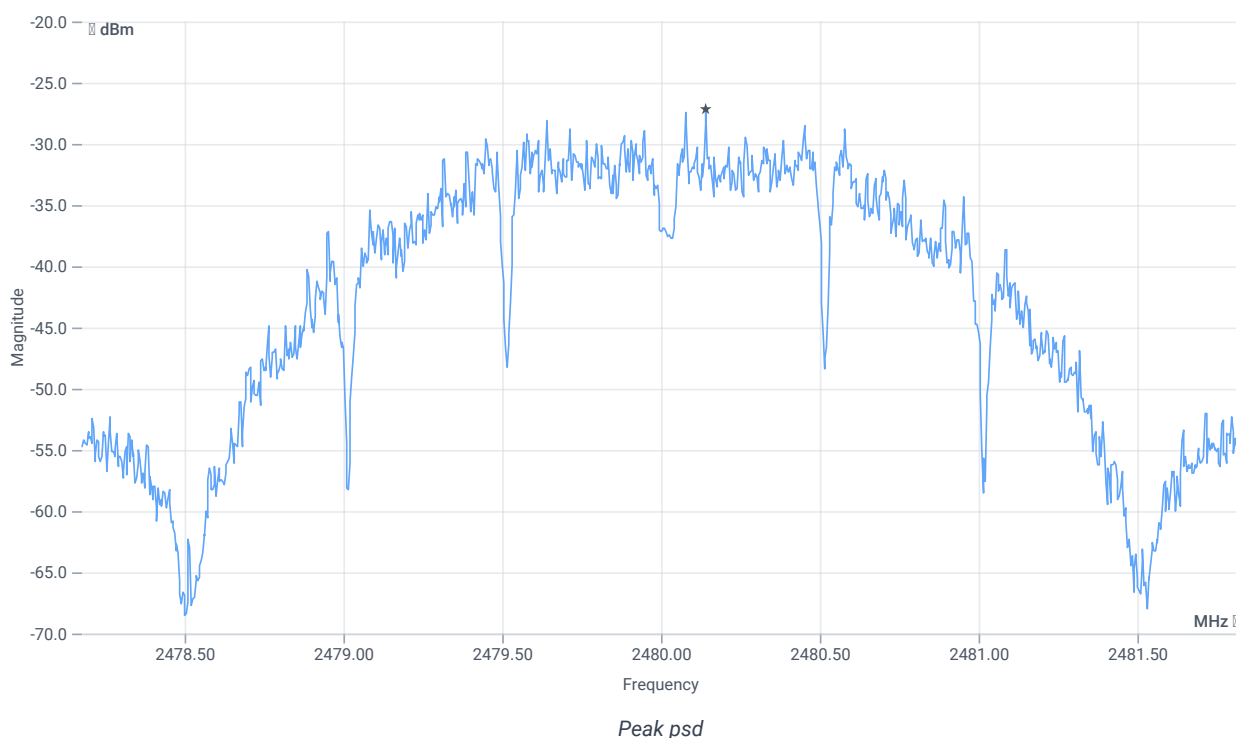
Test at TX 2480 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-11.70	dBm	INFO
Ref. Frequency	---	---	2479.400	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-6.70 10.85 0
Start [MHz] Stop [MHz]	2478.177 2481.823
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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-27.2	dBm/3KHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ Generic 2G4

References

TC start	06.10.2023 10:58:03
Ambit temp [°C] humidity [rel%]	26.9 34
System version	4.6.2.0
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20DB DTS - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
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-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

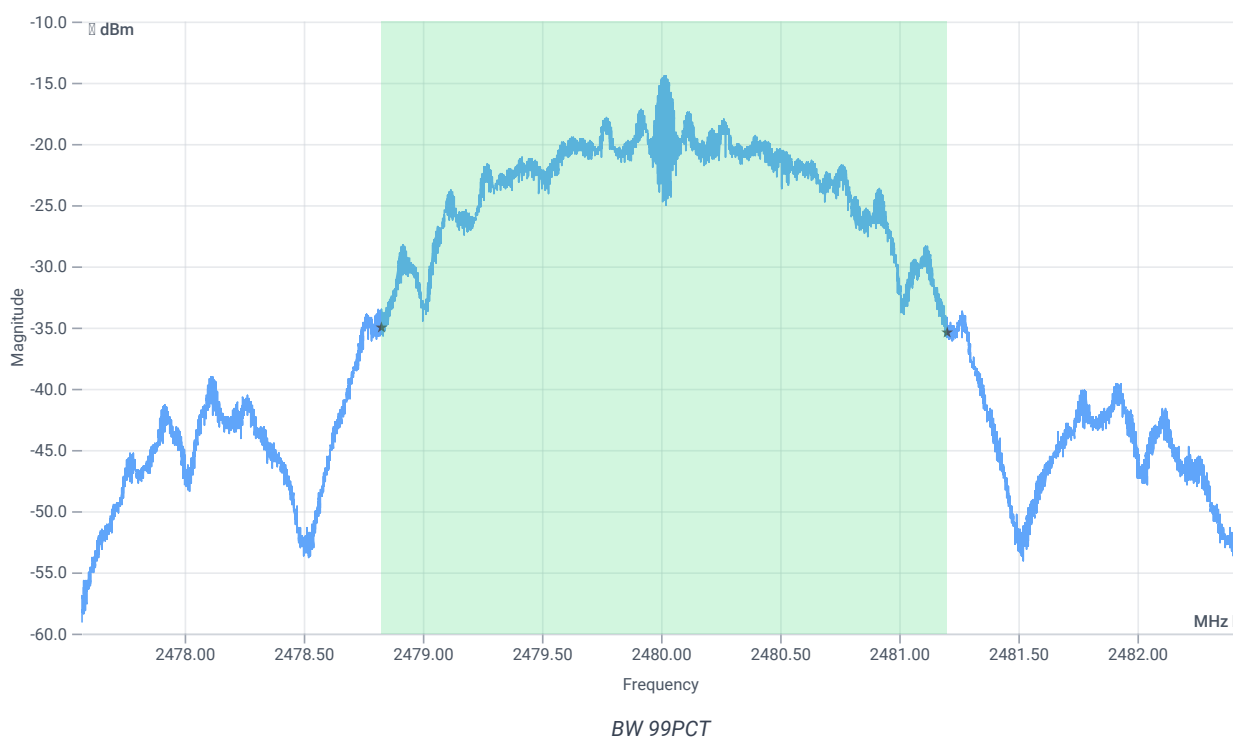
Test at TX 2480 MHz

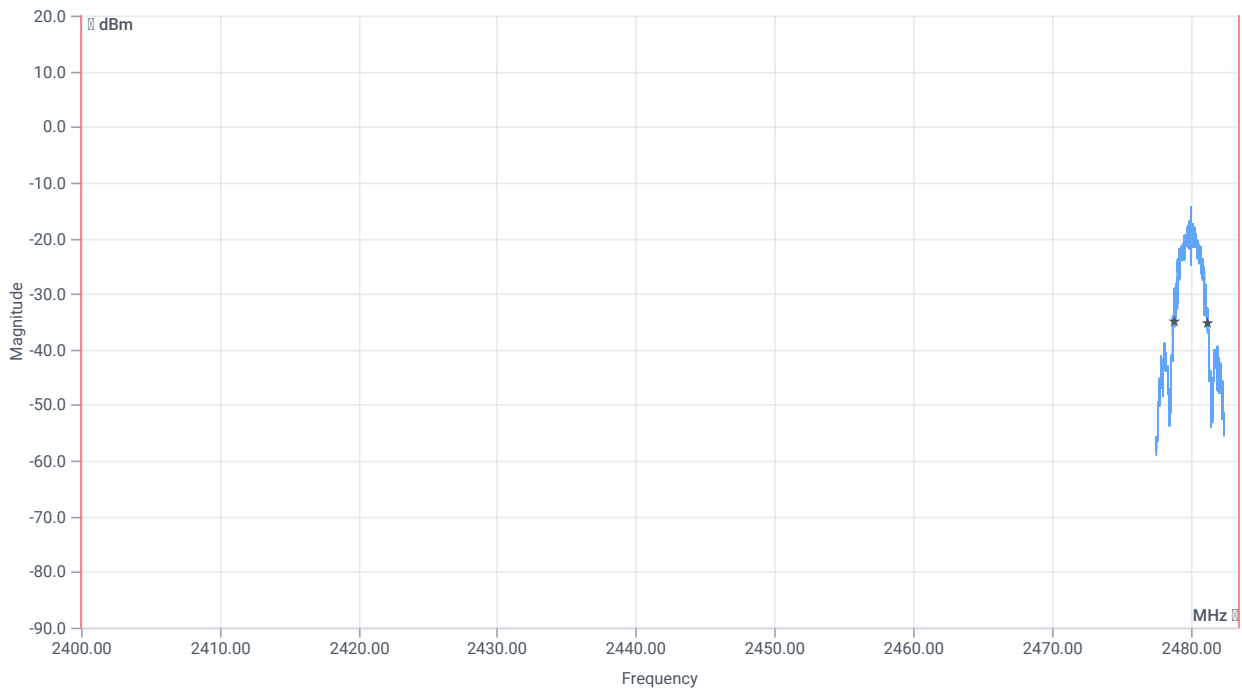
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-11.62	dBm	INFO
Ref. Frequency	---	---	2479.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-6.62 10.85 0
Start [MHz] Stop [MHz]	2477.569 2482.431
RBW [MHz] VBW [MHz]	0.050000 0.200000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

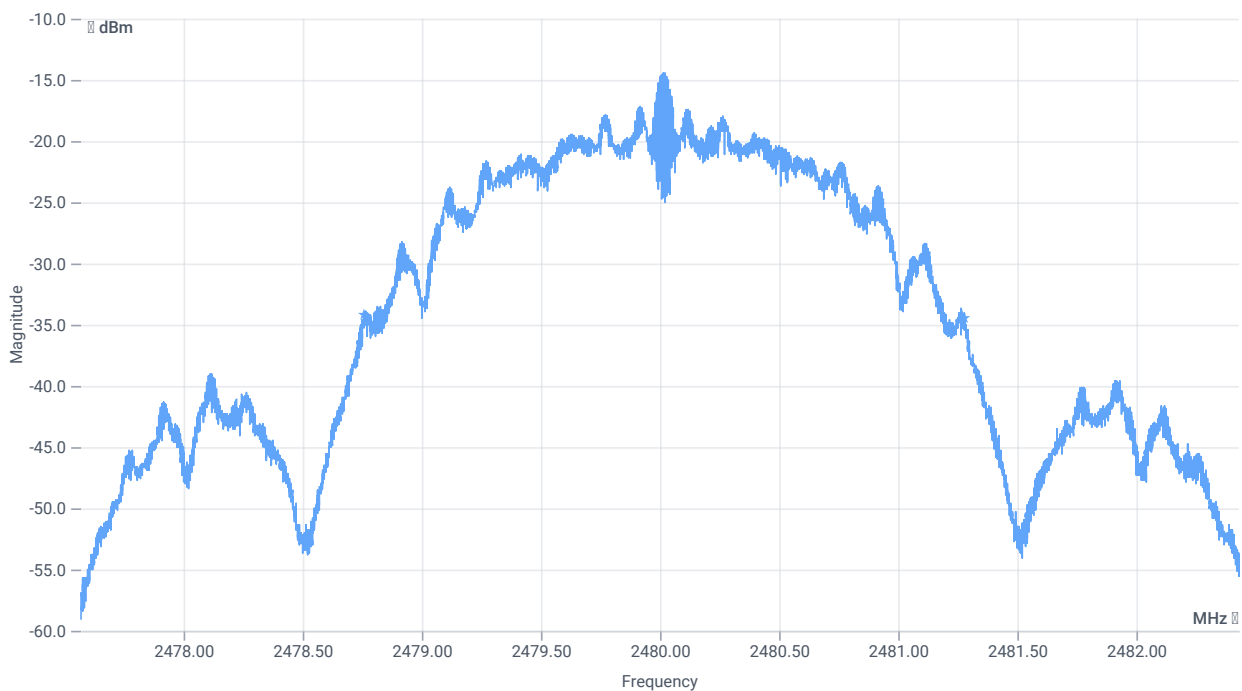




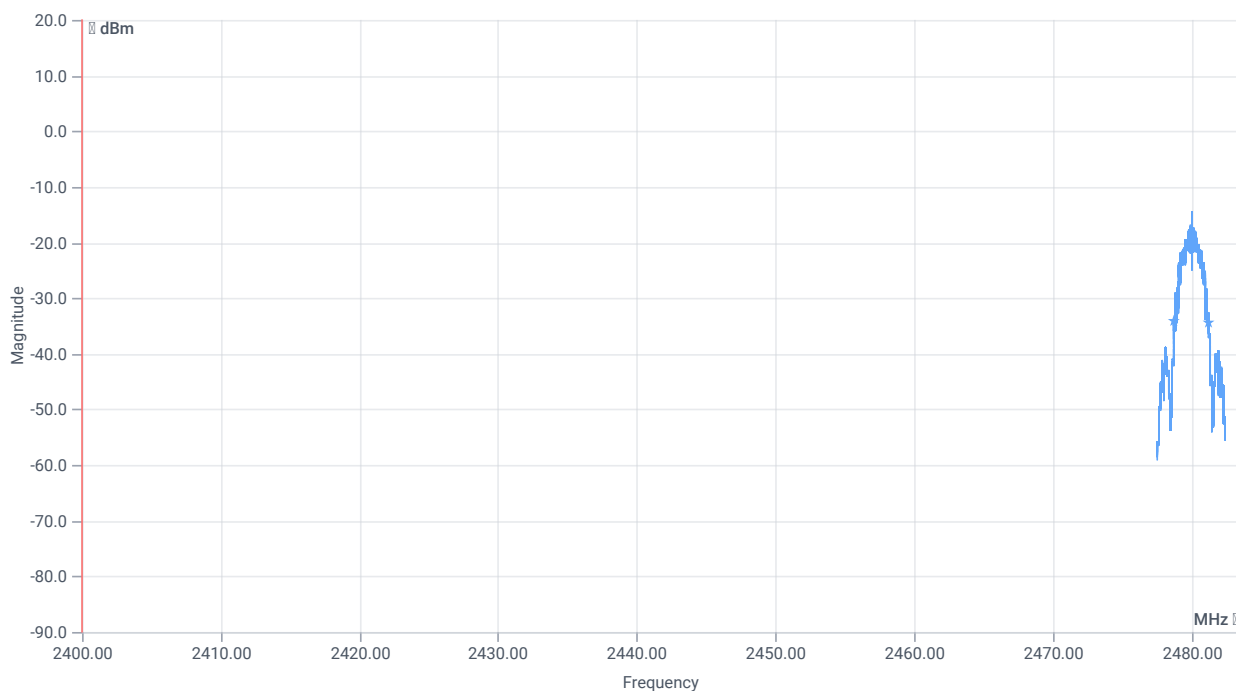
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	2370.000	kHz	INFO
T1 99%	2400.000000	---	2478.8279	MHz	PASS
T2 99%	---	2483.500000	2481.1984	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	2522	kHz	INFO
T1 20dB	2400.000000	---	2478.7544	MHz	PASS
T2 20dB	---	2483.500000	2481.2768	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 20dBc ~ Generic 2G4

References

TC start	06.10.2023 10:58:42
Ambit temp [°C] humidity [rel%]	26.9 34
System version	4.6.2.0
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 - Generic 2G4
Information	

EUT Common settings 2G4

Hopping supported	No
Burst length [ms]	2.4
Nominal Bandwidth [MHz]	2.431
User Interaction	No

Test Parameter

Technology to test	Generic 2G4
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2405
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

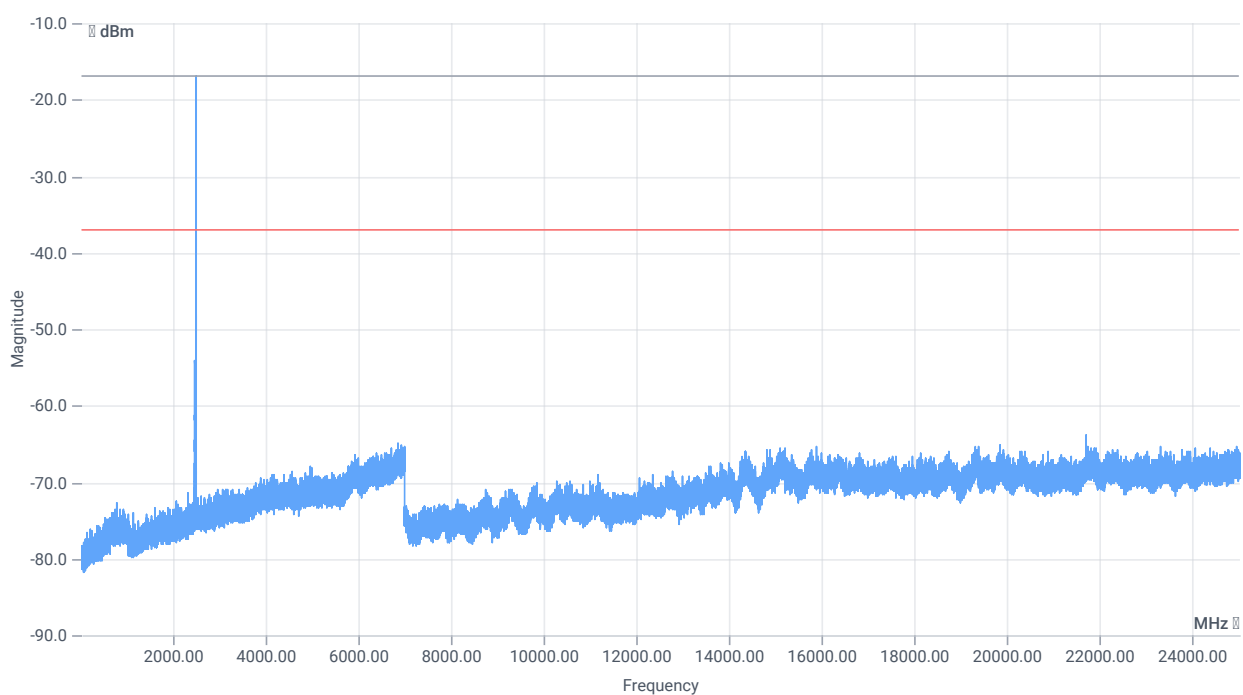
Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2480 MHz

RESULT: Reference Power cond.

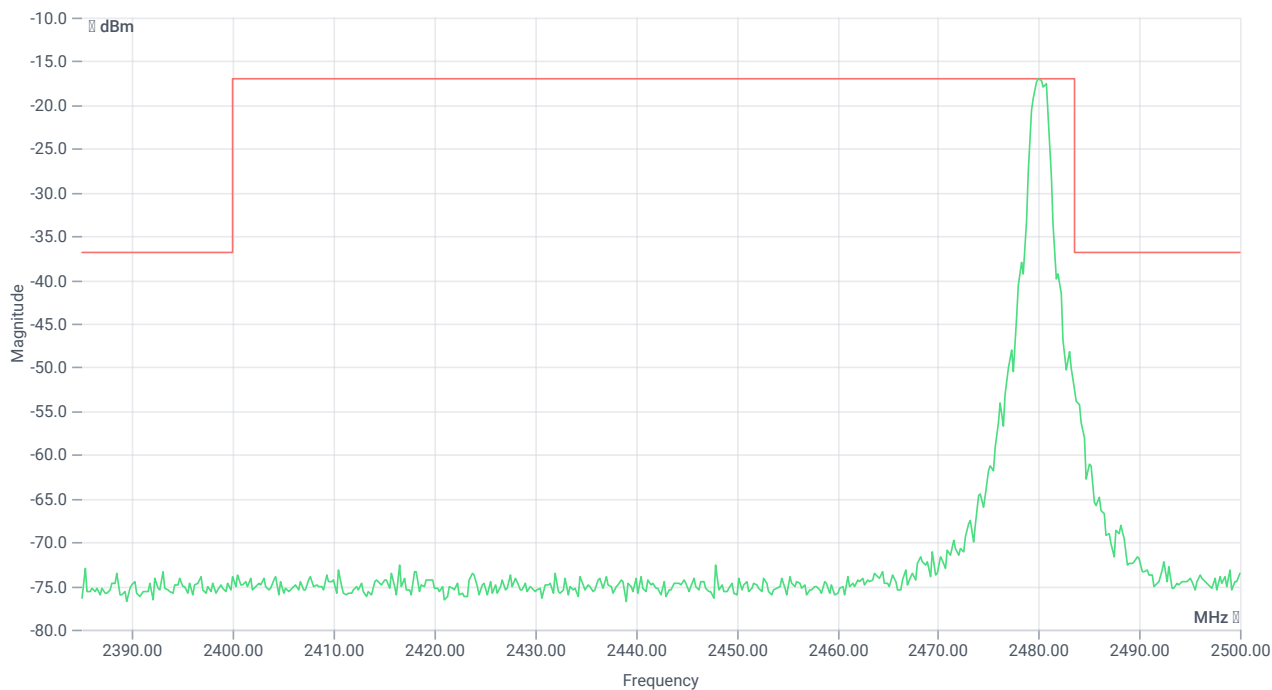
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-11.77	dBm	INFO
Ref. Frequency	---	---	2479.500	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-11.77 0 5
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 @ 2480.00 MHz	---	---	-16.92	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 2483.75 MHz	0	---	17.01	dB	INFO

Verdict

PASS

- END OF DOCUMENT -