

Conducted test results

No.1-6998/23-01-23_TR1-A201-R1

February 05, 2024

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

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

Authorized

Andreas Curette
Testing Manager
Radio Labs

Table of Content

FCC 15.247 # Maximum peak conducted output power FHSS ~ BT Classic Basic rate	3
FCC 15.247 # Number of hopping channels FHSS ~ BT Classic Basic rate	9
FCC 15.247 # Carrier frequency separation FHSS ~ BT Classic Basic rate	16
FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT Classic Basic rate	20
FCC 15.247 # TX spurious conducted 20dBc ~ BT Classic Basic rate	31
FCC 15.247 # TX Emissions on band edge FCC ~ BT Classic Basic rate	39
FCC 15.247 # Maximum peak conducted output power FHSS ~ BT Classic EDR Pi/4DQPSK	43
FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT Classic EDR Pi/4DQPSK	49
FCC 15.247 # TX spurious conducted 20dBc ~ BT Classic EDR Pi/4DQPSK	60
FCC 15.247 # TX Emissions on band edge FCC ~ BT Classic EDR Pi/4DQPSK	68
FCC 15.247 # Maximum peak conducted output power FHSS ~ BT Classic EDR 8DPSK	72
FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT Classic EDR 8DPSK	78
FCC 15.247 # TX spurious conducted 20dBc ~ BT Classic EDR 8DPSK	89
FCC 15.247 # TX Emissions on band edge FCC ~ BT Classic EDR 8DPSK	97

FCC 15.247 # Maximum peak conducted output power FHSS ~ BT Classic Basic rate

References

TC start	15.12.2023 11:43:13
Ambit temp [°C] humidity [rel%]	26.7 31
System version	4.7.1.4
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Maximum Peak Output Power Conducted FHSS - BT Classic Basic Rate
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic Basic rate
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2441
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

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

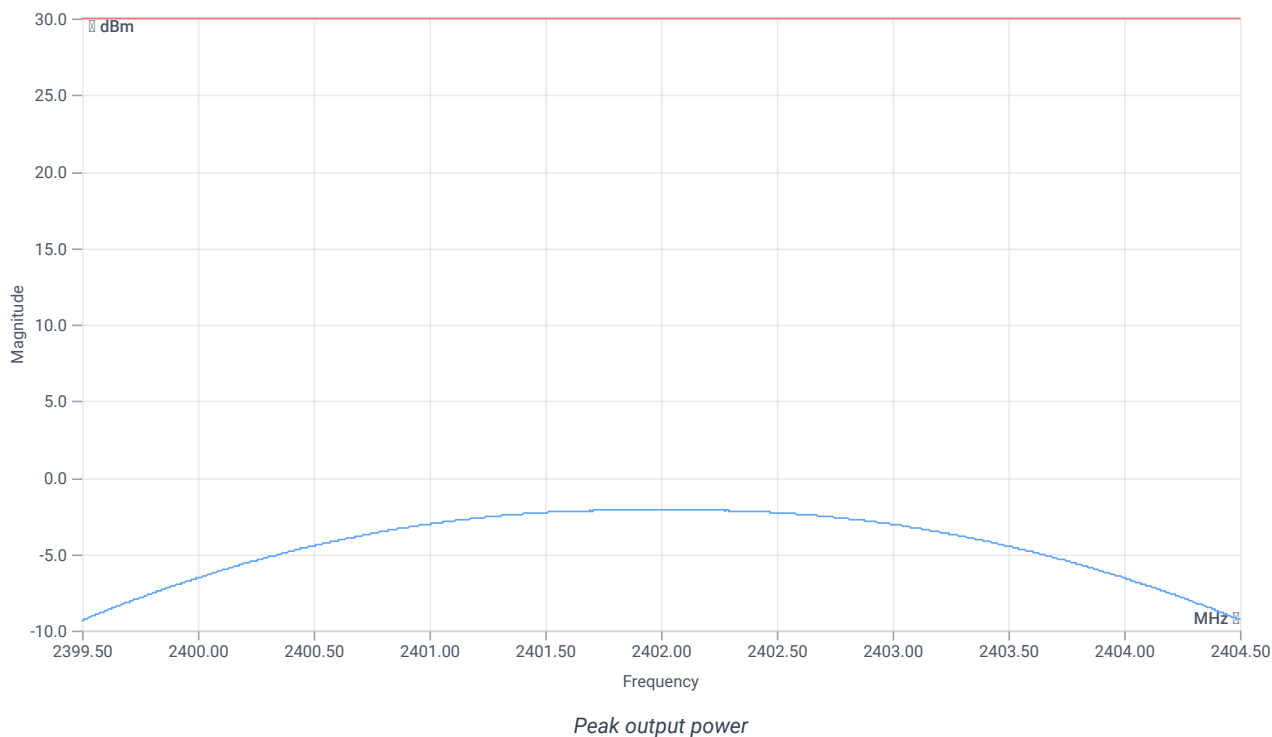
Test at TX 2402 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-1.94	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.06 11.29 15
Start [MHz] Stop [MHz]	2399.500 2404.500
RBW [MHz] VBW [MHz]	3.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 10 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	-2.13	dBm	PASS
Peak Power	---	1000	0.61235	mW	PASS
Frequency at Peak	---	---	2401.875	MHz	INFO

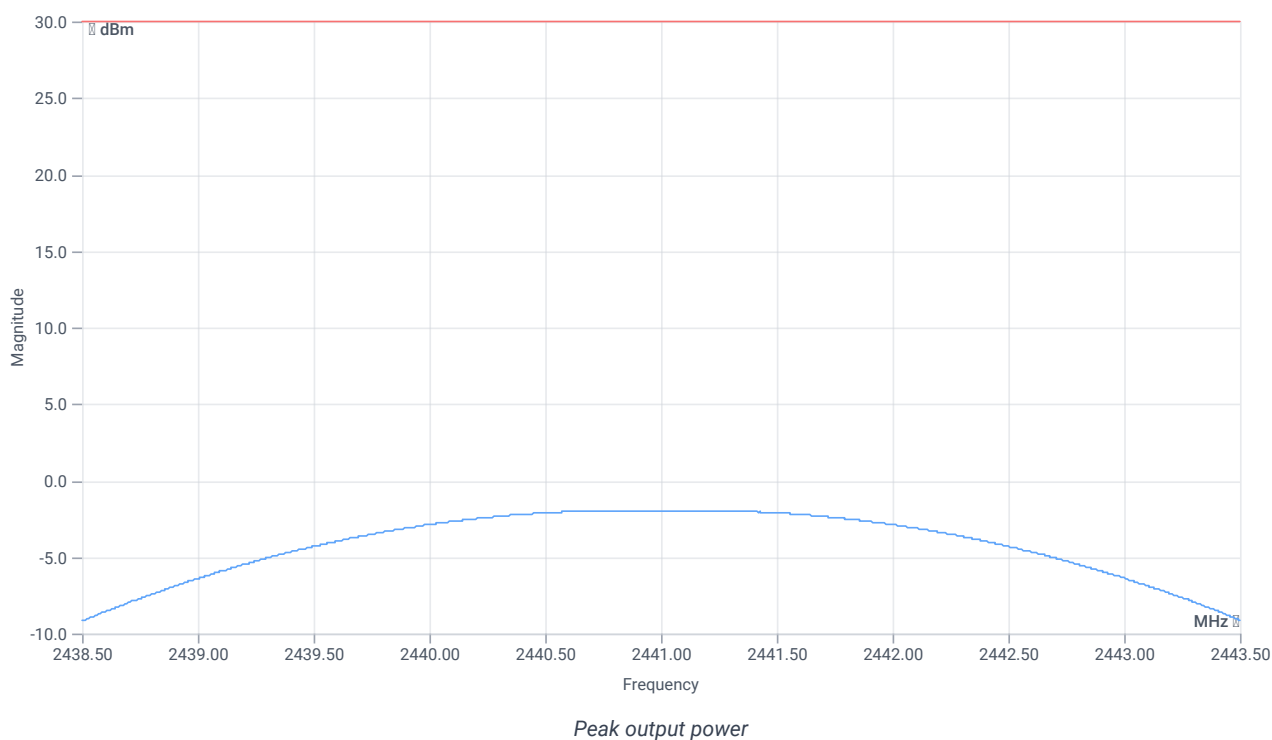
Test at TX 2441 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-1.83	dBm	INFO
Ref. Frequency	---	---	2441.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.17 11.36 15
Start [MHz] Stop [MHz]	2438.500 2443.500
RBW [MHz] VBW [MHz]	3.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 10 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	-1.95	dBm	PASS
Peak Power	---	1000	0.638263	mW	PASS
Frequency at Peak	---	---	2441.12	MHz	INFO

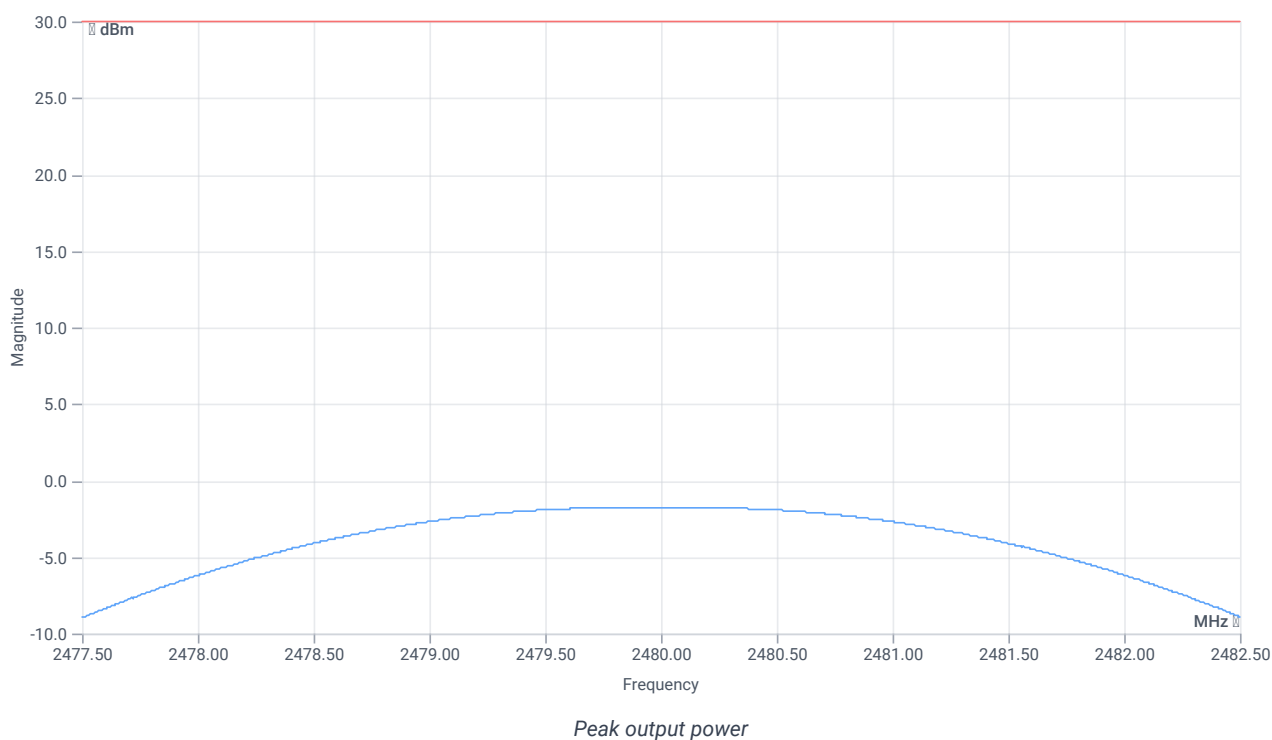
Test at TX 2480 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-1.62	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.38 11.41 15
Start [MHz] Stop [MHz]	2477.500 2482.500
RBW [MHz] VBW [MHz]	3.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 10 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	-1.76	dBm	PASS
Peak Power	---	1000	0.666807	mW	PASS
Frequency at Peak	---	---	2479.845	MHz	INFO

Verdict

PASS

FCC 15.247 # Number of hopping channels FHSS ~ BT Classic Basic rate

References

TC start	15.12.2023 11:45:38
Ambit temp [°C] humidity [rel%]	26.7 31
System version	4.7.1.4
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Number Of Hopping Channels FHSS - BT Classic Basic Rate
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic Basic rate
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2441
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

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

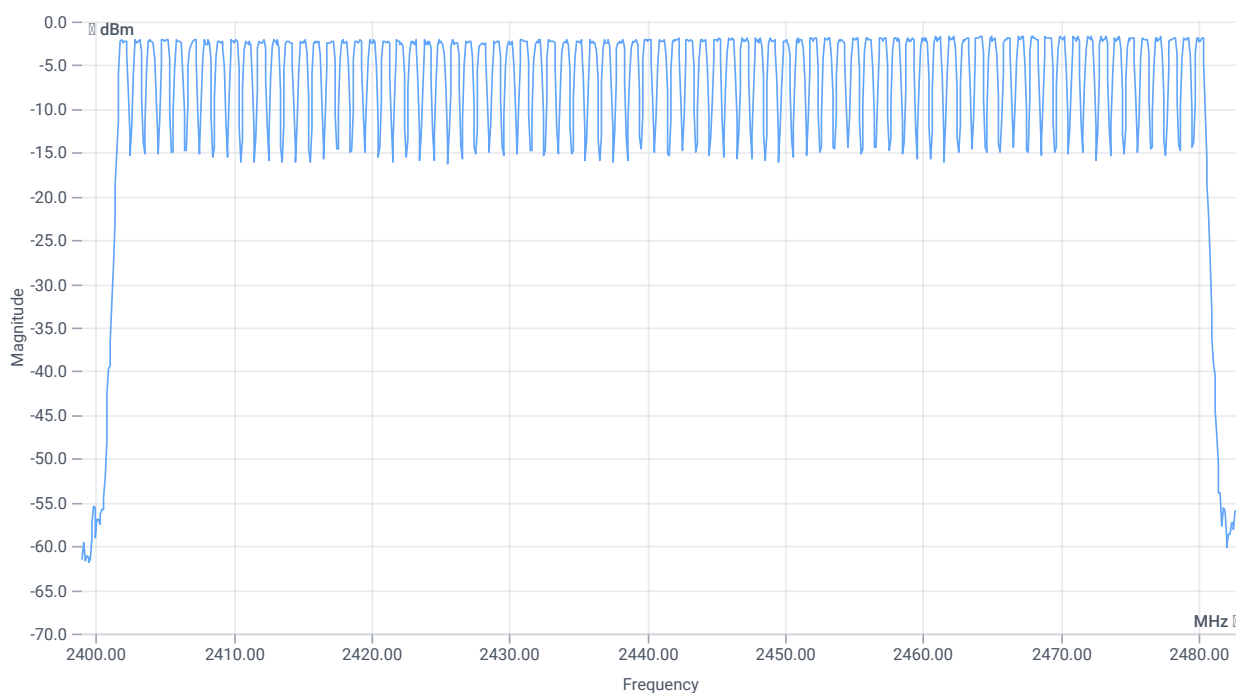
Test at TX hopping MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-1.51	dBm	INFO
Ref. Frequency	---	---	2461.180	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.49 11.36 10
Start [MHz] Stop [MHz]	2399.000 2483.000
RBW [MHz] VBW [MHz]	0.200000 0.500000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1 10000 1001 SWE



Number of hopping channels

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Hopp channel (rounded)	---	---	2402	MHz	INFO
Hopp channel (rounded)	---	---	2403	MHz	INFO
Hopp channel (rounded)	---	---	2404	MHz	INFO

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Hopp channel (rounded)	---	---	2405	MHz	INFO
Hopp channel (rounded)	---	---	2406	MHz	INFO
Hopp channel (rounded)	---	---	2407	MHz	INFO
Hopp channel (rounded)	---	---	2408	MHz	INFO
Hopp channel (rounded)	---	---	2409	MHz	INFO
Hopp channel (rounded)	---	---	2410	MHz	INFO
Hopp channel (rounded)	---	---	2411	MHz	INFO
Hopp channel (rounded)	---	---	2412	MHz	INFO
Hopp channel (rounded)	---	---	2413	MHz	INFO
Hopp channel (rounded)	---	---	2414	MHz	INFO
Hopp channel (rounded)	---	---	2415	MHz	INFO
Hopp channel (rounded)	---	---	2416	MHz	INFO
Hopp channel (rounded)	---	---	2417	MHz	INFO
Hopp channel (rounded)	---	---	2418	MHz	INFO
Hopp channel (rounded)	---	---	2419	MHz	INFO
Hopp channel (rounded)	---	---	2420	MHz	INFO
Hopp channel (rounded)	---	---	2421	MHz	INFO
Hopp channel (rounded)	---	---	2422	MHz	INFO
Hopp channel (rounded)	---	---	2423	MHz	INFO
Hopp channel (rounded)	---	---	2424	MHz	INFO
Hopp channel (rounded)	---	---	2425	MHz	INFO
Hopp channel (rounded)	---	---	2426	MHz	INFO
Hopp channel (rounded)	---	---	2427	MHz	INFO
Hopp channel (rounded)	---	---	2428	MHz	INFO
Hopp channel (rounded)	---	---	2429	MHz	INFO

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Hopp channel (rounded)	---	---	2430	MHz	INFO
Hopp channel (rounded)	---	---	2431	MHz	INFO
Hopp channel (rounded)	---	---	2432	MHz	INFO
Hopp channel (rounded)	---	---	2433	MHz	INFO
Hopp channel (rounded)	---	---	2434	MHz	INFO
Hopp channel (rounded)	---	---	2435	MHz	INFO
Hopp channel (rounded)	---	---	2436	MHz	INFO
Hopp channel (rounded)	---	---	2437	MHz	INFO
Hopp channel (rounded)	---	---	2438	MHz	INFO
Hopp channel (rounded)	---	---	2439	MHz	INFO
Hopp channel (rounded)	---	---	2440	MHz	INFO
Hopp channel (rounded)	---	---	2441	MHz	INFO
Hopp channel (rounded)	---	---	2442	MHz	INFO
Hopp channel (rounded)	---	---	2443	MHz	INFO
Hopp channel (rounded)	---	---	2444	MHz	INFO
Hopp channel (rounded)	---	---	2445	MHz	INFO
Hopp channel (rounded)	---	---	2446	MHz	INFO
Hopp channel (rounded)	---	---	2447	MHz	INFO
Hopp channel (rounded)	---	---	2448	MHz	INFO
Hopp channel (rounded)	---	---	2449	MHz	INFO
Hopp channel (rounded)	---	---	2450	MHz	INFO
Hopp channel (rounded)	---	---	2451	MHz	INFO
Hopp channel (rounded)	---	---	2452	MHz	INFO
Hopp channel (rounded)	---	---	2453	MHz	INFO
Hopp channel (rounded)	---	---	2454	MHz	INFO

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Hopp channel (rounded)	---	---	2455	MHz	INFO
Hopp channel (rounded)	---	---	2456	MHz	INFO
Hopp channel (rounded)	---	---	2457	MHz	INFO
Hopp channel (rounded)	---	---	2458	MHz	INFO
Hopp channel (rounded)	---	---	2459	MHz	INFO
Hopp channel (rounded)	---	---	2460	MHz	INFO
Hopp channel (rounded)	---	---	2461	MHz	INFO
Hopp channel (rounded)	---	---	2462	MHz	INFO
Hopp channel (rounded)	---	---	2463	MHz	INFO
Hopp channel (rounded)	---	---	2464	MHz	INFO
Hopp channel (rounded)	---	---	2465	MHz	INFO
Hopp channel (rounded)	---	---	2466	MHz	INFO
Hopp channel (rounded)	---	---	2467	MHz	INFO
Hopp channel (rounded)	---	---	2468	MHz	INFO
Hopp channel (rounded)	---	---	2469	MHz	INFO
Hopp channel (rounded)	---	---	2470	MHz	INFO
Hopp channel (rounded)	---	---	2471	MHz	INFO
Hopp channel (rounded)	---	---	2472	MHz	INFO
Hopp channel (rounded)	---	---	2473	MHz	INFO
Hopp channel (rounded)	---	---	2474	MHz	INFO
Hopp channel (rounded)	---	---	2475	MHz	INFO
Hopp channel (rounded)	---	---	2476	MHz	INFO
Hopp channel (rounded)	---	---	2477	MHz	INFO
Hopp channel (rounded)	---	---	2478	MHz	INFO
Hopp channel (rounded)	---	---	2479	MHz	INFO

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Hopp channel (rounded)	---	---	2480	MHz	INFO
Σ Hopping channels	15	---	79	Number	PASS

Verdict

PASS

FCC 15.247 # Carrier frequency separation FHSS ~ BT Classic Basic rate

References

TC start	15.12.2023 11:46:43
Ambit temp [°C] humidity [rel%]	26.7 31
System version	4.7.1.4
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Carrier Frequency Separation FHSS - BT Classic Basic Rate
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic Basic rate
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2441
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

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

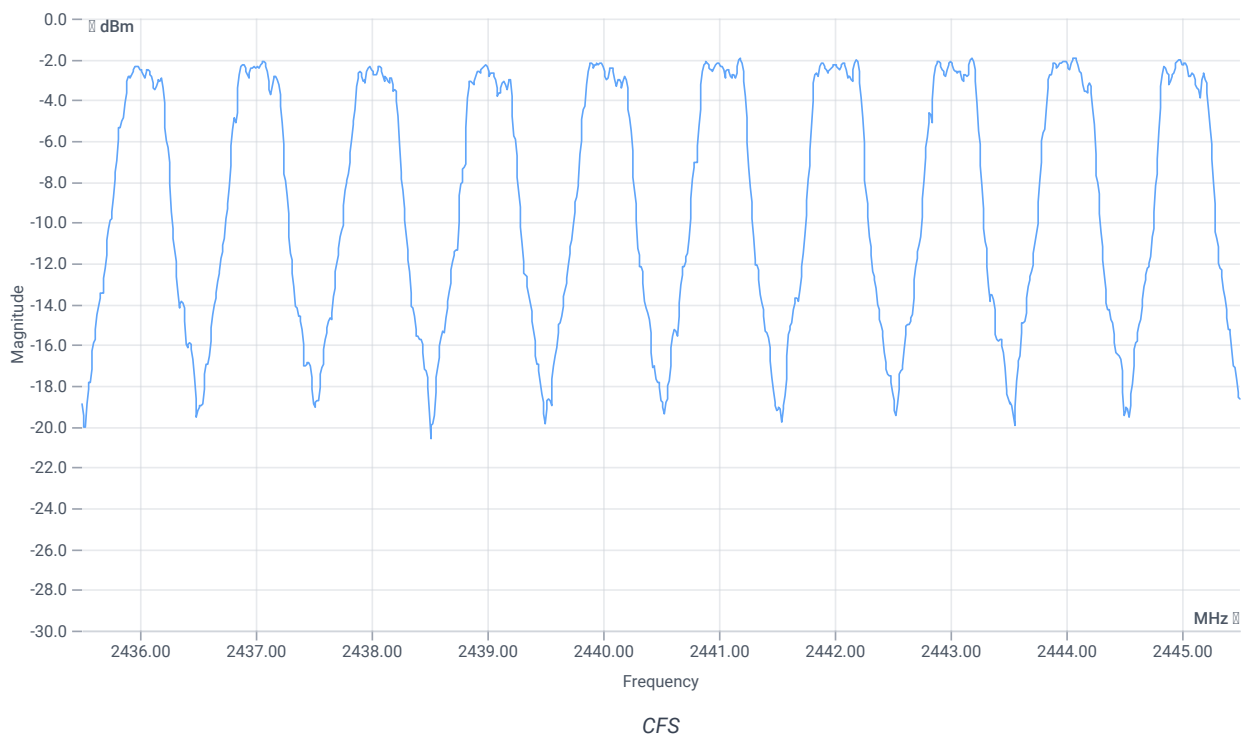
Test at TX hopping MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-1.43	dBm	INFO
Ref. Frequency	---	---	2462.880	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.57 11.36 10
Start [MHz] Stop [MHz]	2435.500 2445.500
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1 20000 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
1 CFS n to n+1 (rnd)	0.025	---	1	MHz	PASS
1 CFS n to n+1 (rnd)	0.667 (2/3 Nom.BW)	---	1	MHz	PASS
2 CFS n to n+1 (rnd)	0.025	---	1	MHz	PASS
2 CFS n to n+1 (rnd)	0.667 (2/3 Nom.BW)	---	1	MHz	PASS
3 CFS n to n+1 (rnd)	0.025	---	1	MHz	PASS

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
3 CFS n to n+1 (rnd)	0.667 (2/3 Nom.BW)	---	1	MHz	PASS
4 CFS n to n+1 (rnd)	0.025	---	1	MHz	PASS
4 CFS n to n+1 (rnd)	0.667 (2/3 Nom.BW)	---	1	MHz	PASS
5 CFS n to n+1 (rnd)	0.025	---	1	MHz	PASS
5 CFS n to n+1 (rnd)	0.667 (2/3 Nom.BW)	---	1	MHz	PASS
6 CFS n to n+1 (rnd)	0.025	---	1	MHz	PASS
6 CFS n to n+1 (rnd)	0.667 (2/3 Nom.BW)	---	1	MHz	PASS
7 CFS n to n+1 (rnd)	0.025	---	1	MHz	PASS
7 CFS n to n+1 (rnd)	0.667 (2/3 Nom.BW)	---	1	MHz	PASS
8 CFS n to n+1 (rnd)	0.025	---	1	MHz	PASS
8 CFS n to n+1 (rnd)	0.667 (2/3 Nom.BW)	---	1	MHz	PASS
9 CFS n to n+1 (rnd)	0.025	---	1	MHz	PASS
9 CFS n to n+1 (rnd)	0.667 (2/3 Nom.BW)	---	1	MHz	PASS
Carrier Freq. (rnd)	---	---	2436	MHz	INFO
Carrier Freq. (rnd)	---	---	2437	MHz	INFO
Carrier Freq. (rnd)	---	---	2438	MHz	INFO
Carrier Freq. (rnd)	---	---	2439	MHz	INFO
Carrier Freq. (rnd)	---	---	2440	MHz	INFO
Carrier Freq. (rnd)	---	---	2441	MHz	INFO
Carrier Freq. (rnd)	---	---	2442	MHz	INFO
Carrier Freq. (rnd)	---	---	2443	MHz	INFO
Carrier Freq. (rnd)	---	---	2444	MHz	INFO
Carrier Freq. (rnd)	---	---	2445	MHz	INFO

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT Classic Basic rate

References

TC start	15.12.2023 11:49:15
Ambit temp [°C] humidity [rel%]	26.7 31
System version	4.7.1.4
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT - 20dB FHSS - BT Classic Basic Rate
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic Basic rate
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2441
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-30,1321.3008K30/103170,3.60

Equipment

Switch matrix, CTCadvanced, RSM-1 NI DAQ, 31534892, NI

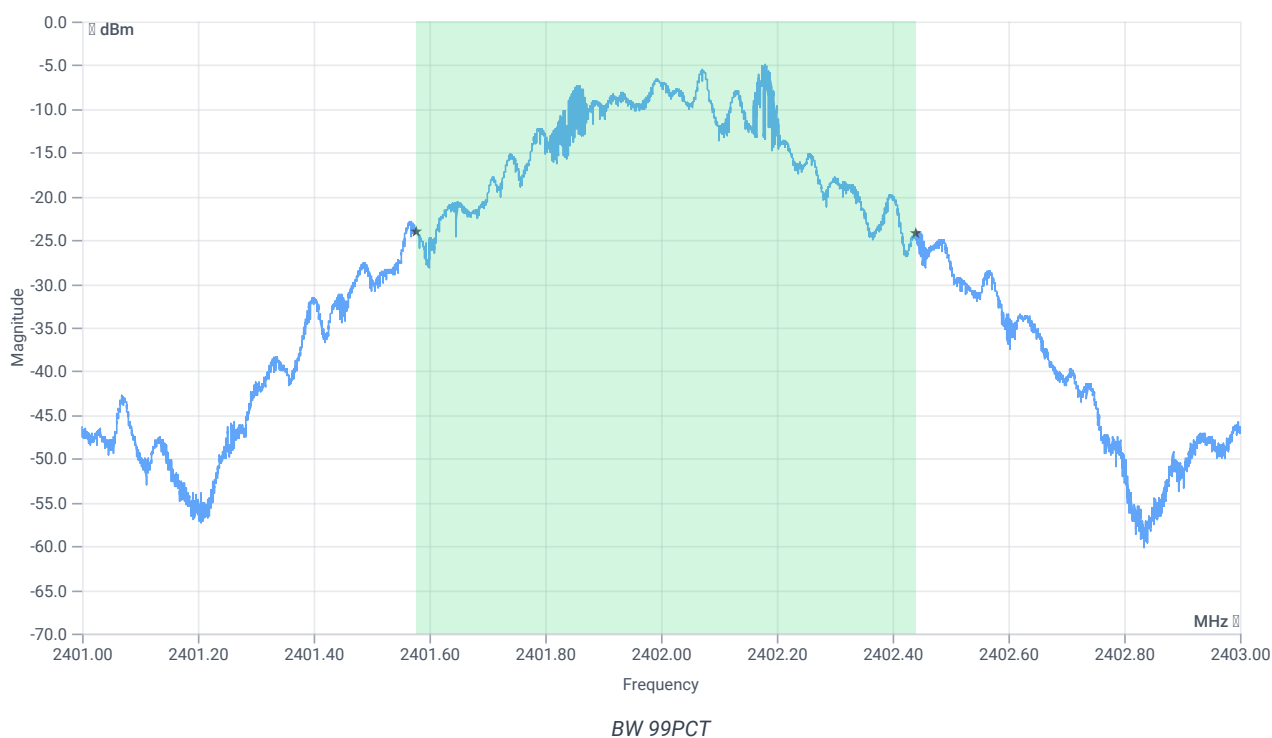
Test at TX 2402 MHz

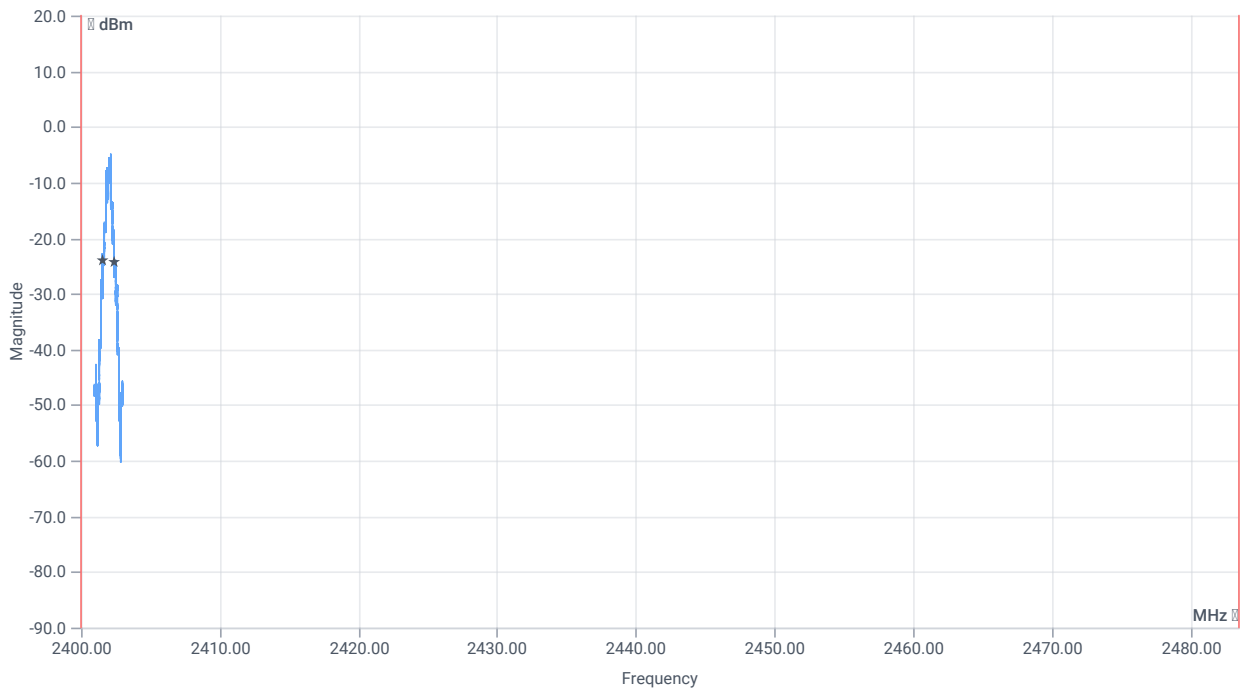
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-1.99	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.01 11.29 10
Start [MHz] Stop [MHz]	2401.000 2403.000
RBW [MHz] VBW [MHz]	0.020000 0.100000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

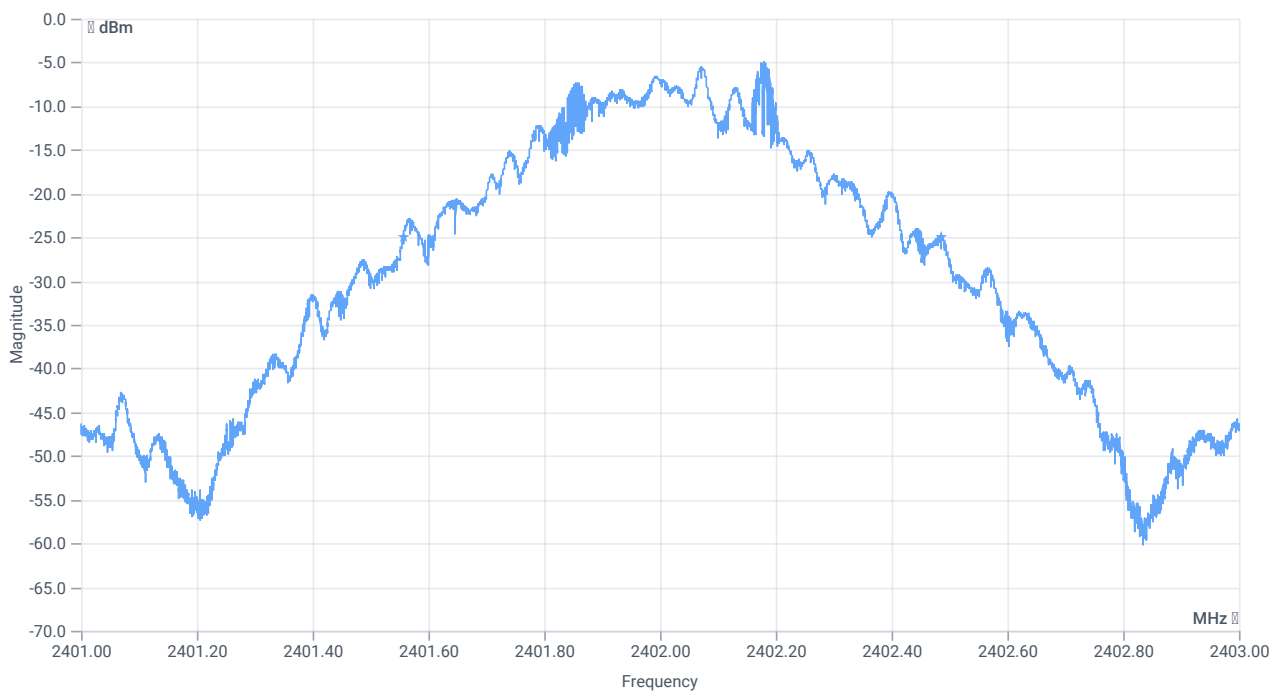




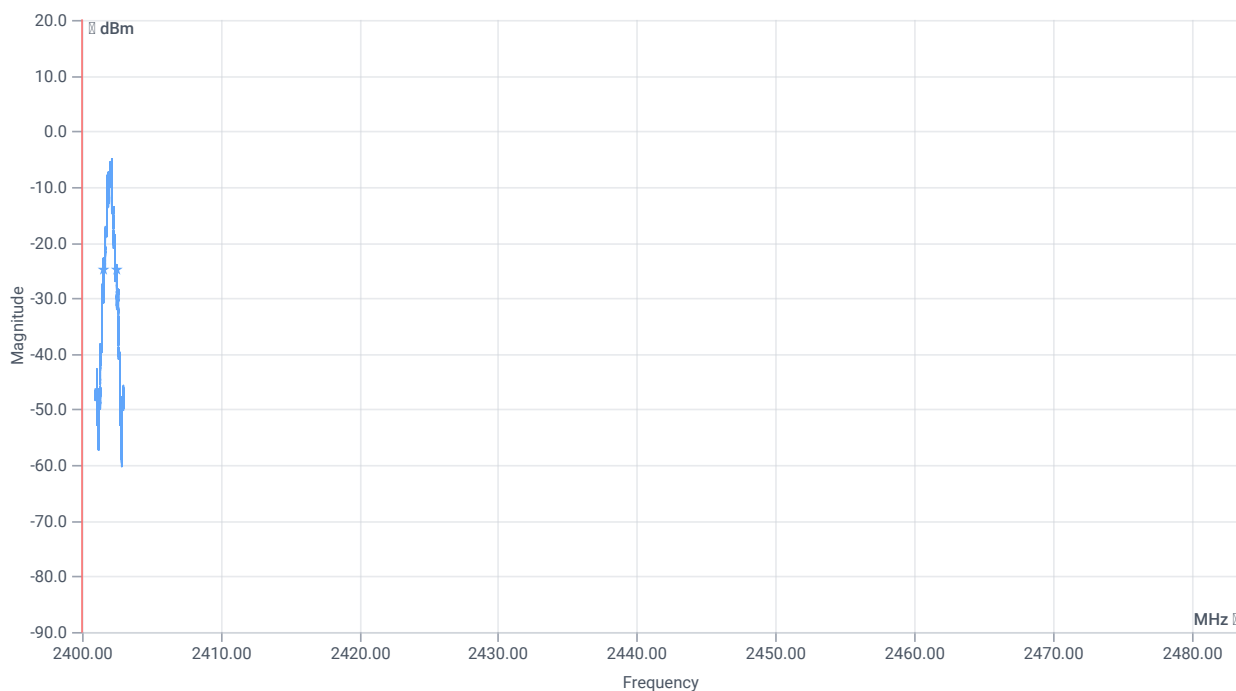
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	862.000	kHz	INFO
T1 99%	2400.000000	---	2401.5782	MHz	PASS
T2 99%	---	2483.500000	2402.4400	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	931	kHz	INFO
T1 20dB	2400.000000	---	2401.5560	MHz	PASS
T2 20dB	---	2483.500000	2402.4870	MHz	PASS

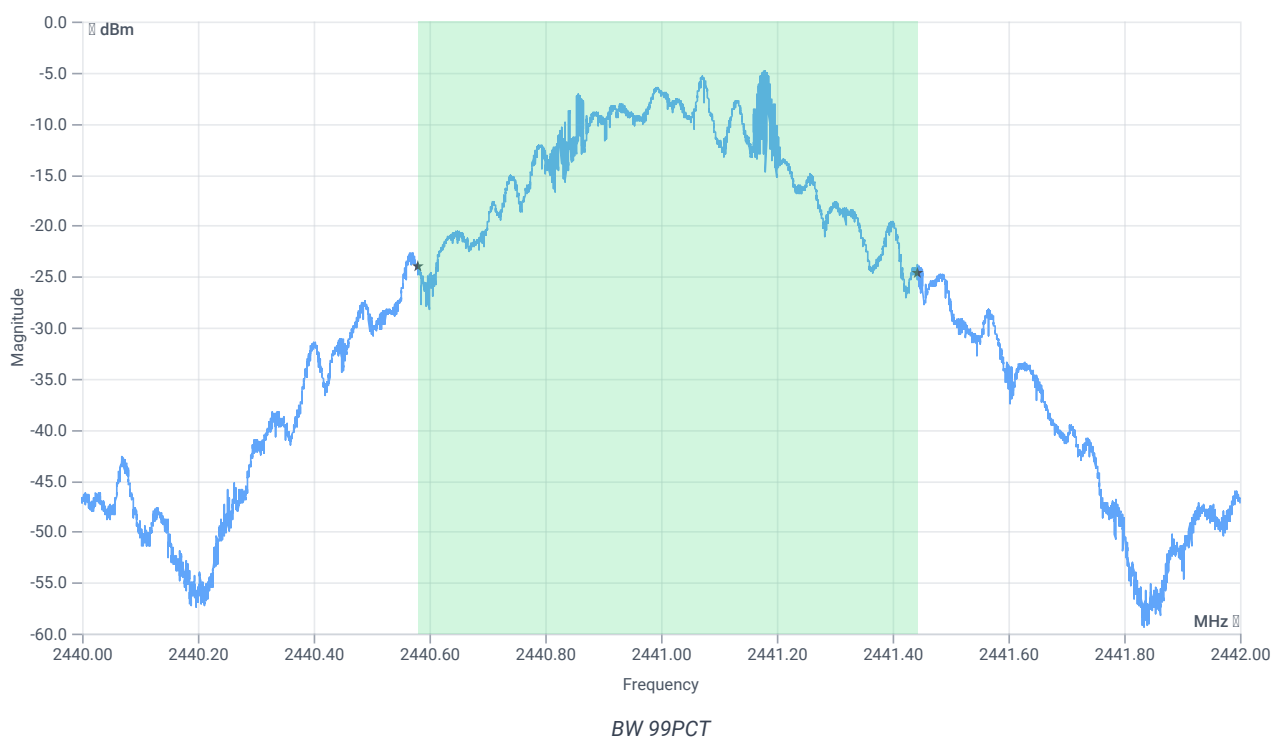
Test at TX 2441 MHz

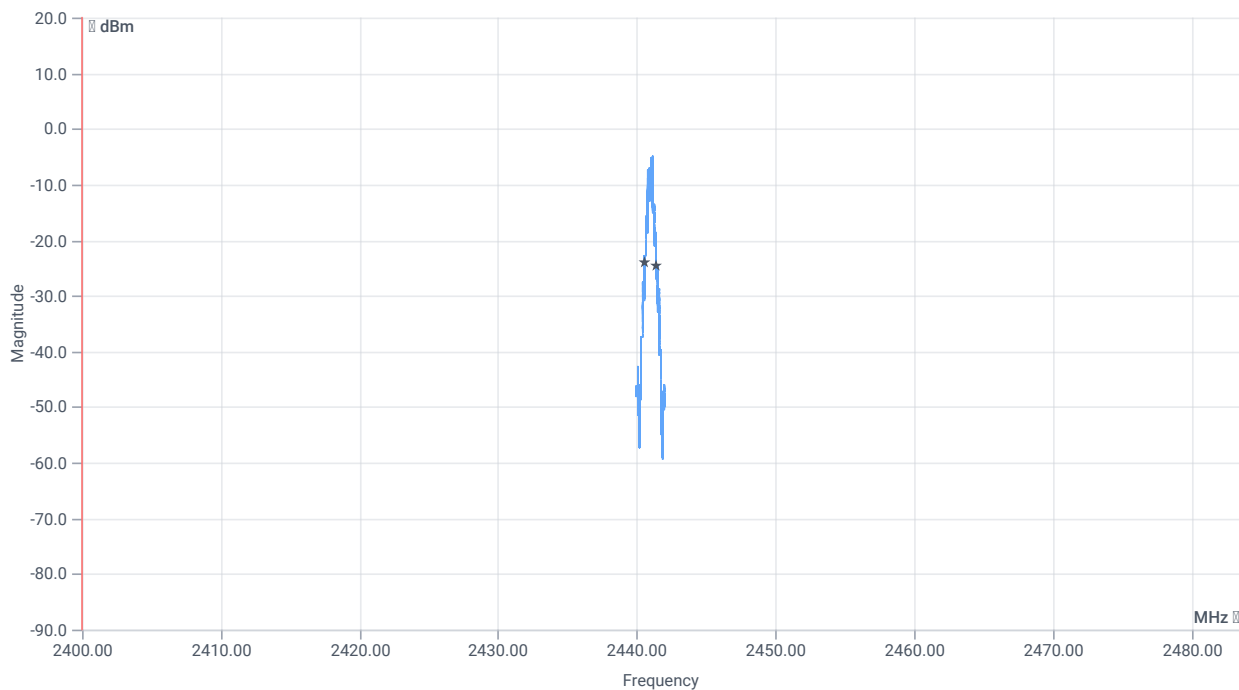
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-1.84	dBm	INFO
Ref. Frequency	---	---	2441.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.16 11.36 10
Start [MHz] Stop [MHz]	2440.000 2442.000
RBW [MHz] VBW [MHz]	0.020000 0.100000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

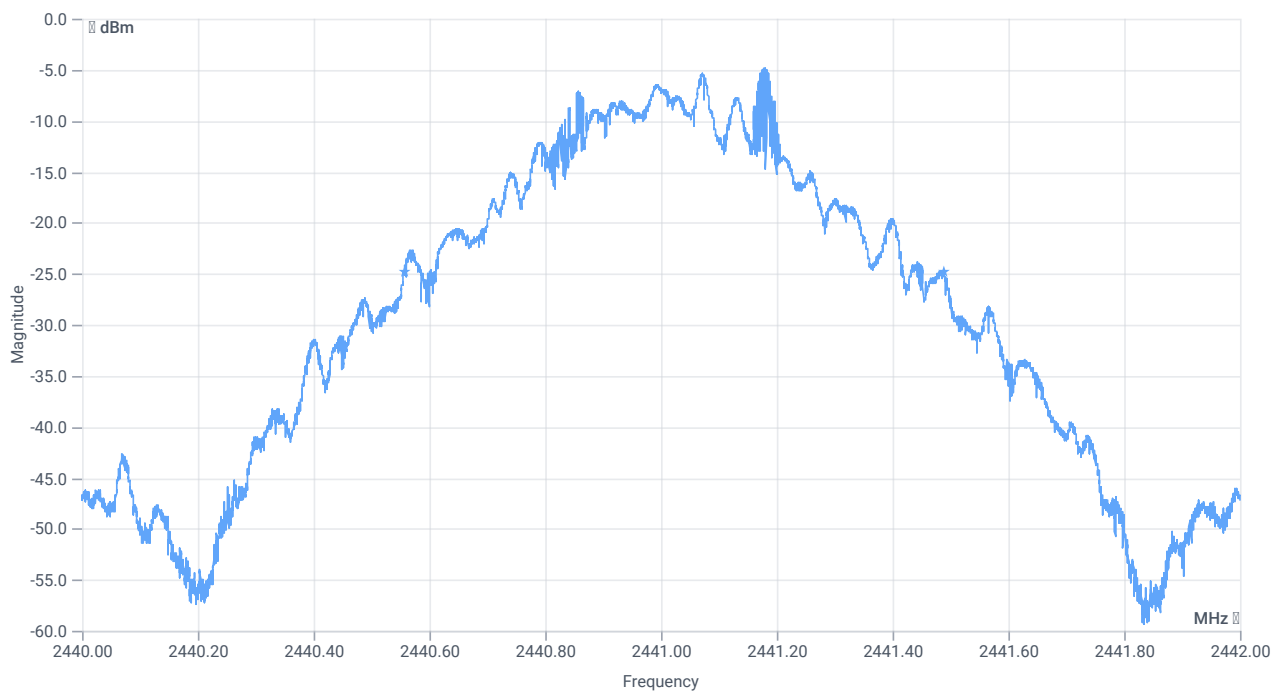




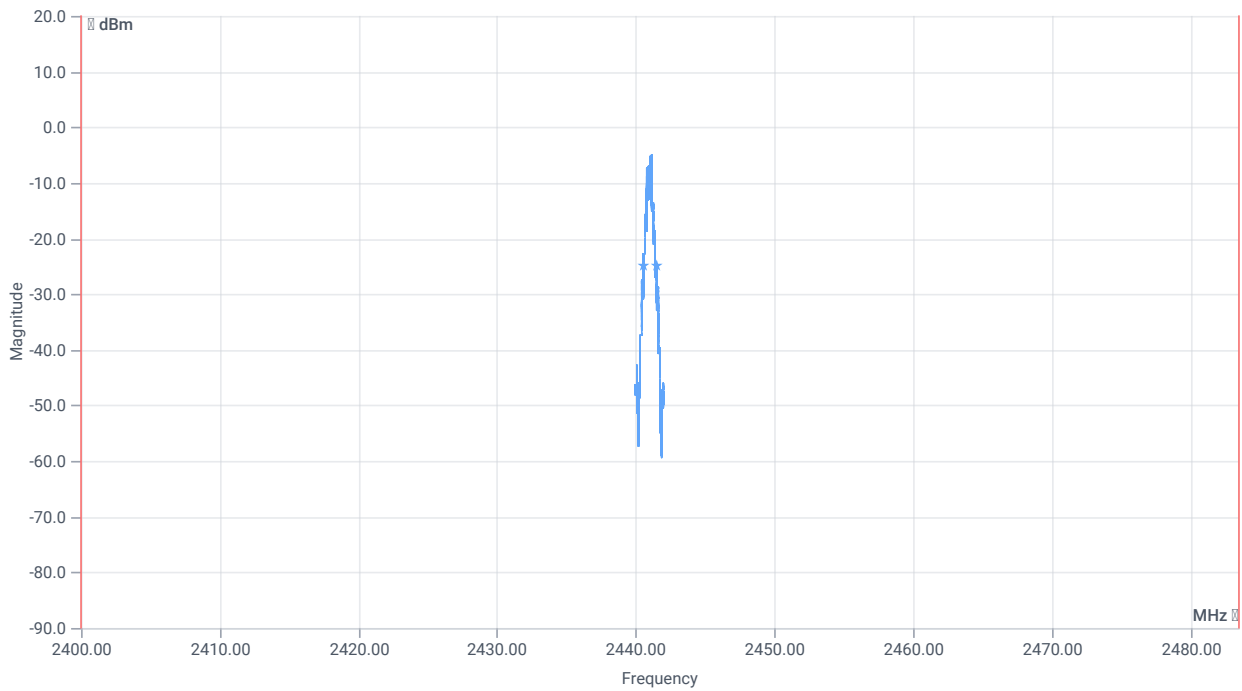
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	863.000	kHz	INFO
T1 99%	2400.000000	---	2440.5788	MHz	PASS
T2 99%	---	2483.500000	2441.4416	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	932	kHz	INFO
T1 20dB	2400.000000	---	2440.5558	MHz	PASS
T2 20dB	---	2483.500000	2441.4876	MHz	PASS

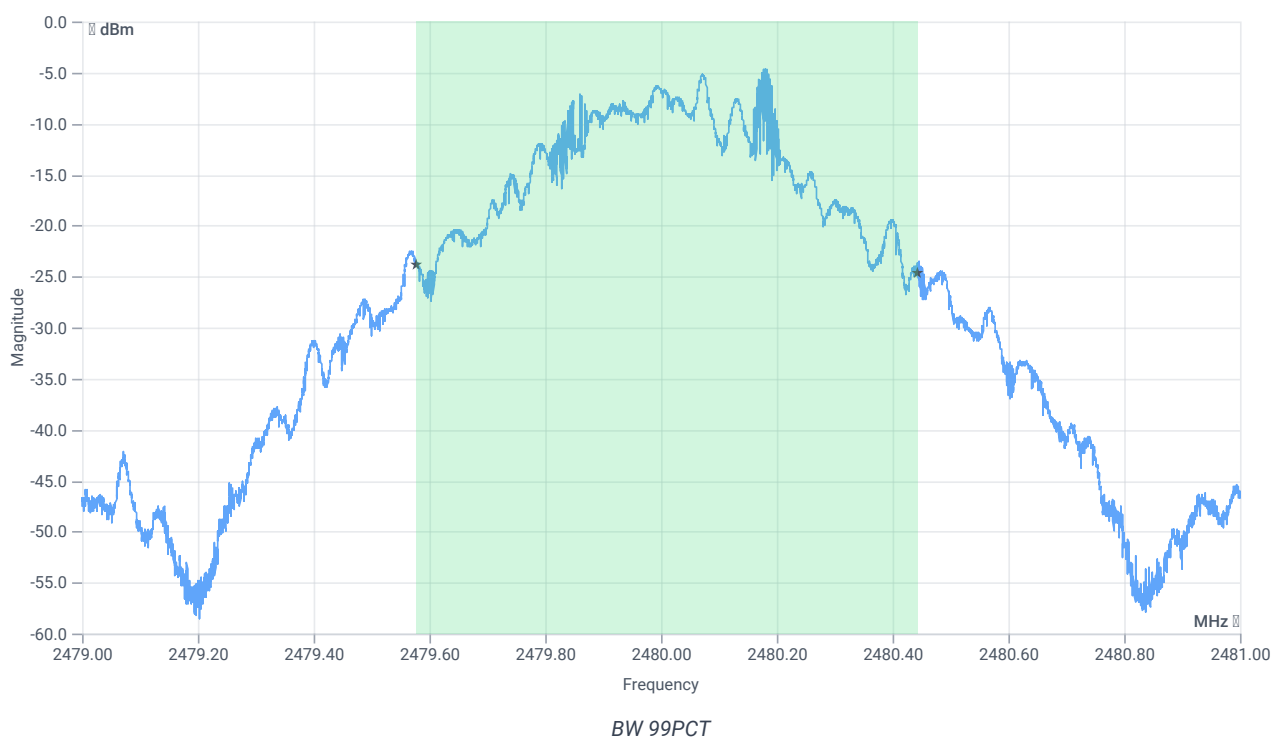
Test at TX 2480 MHz

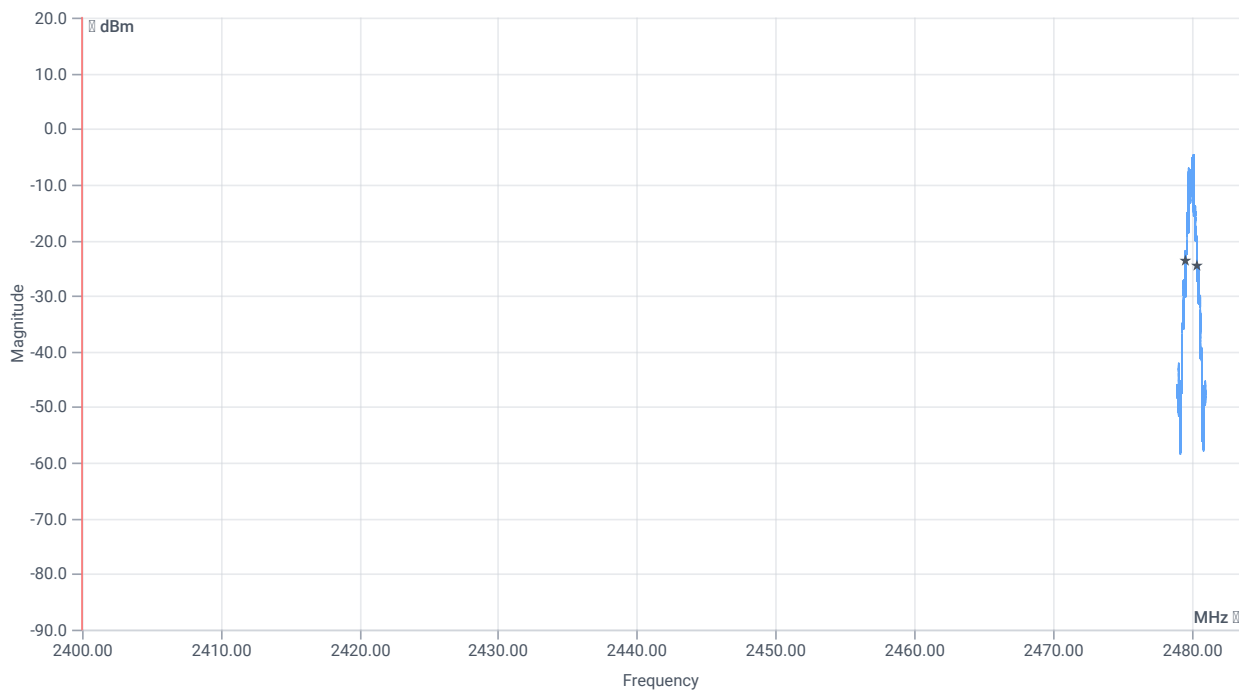
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-1.64	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.36 11.41 10
Start [MHz] Stop [MHz]	2479.000 2481.000
RBW [MHz] VBW [MHz]	0.020000 0.100000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

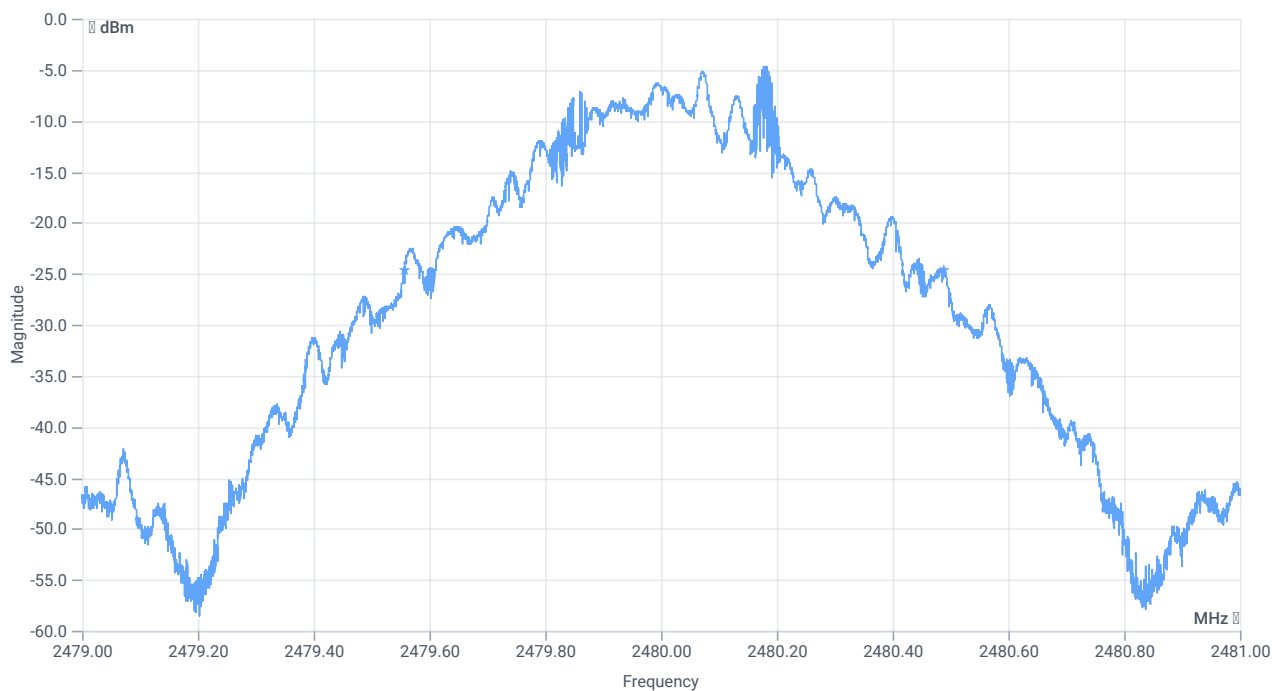




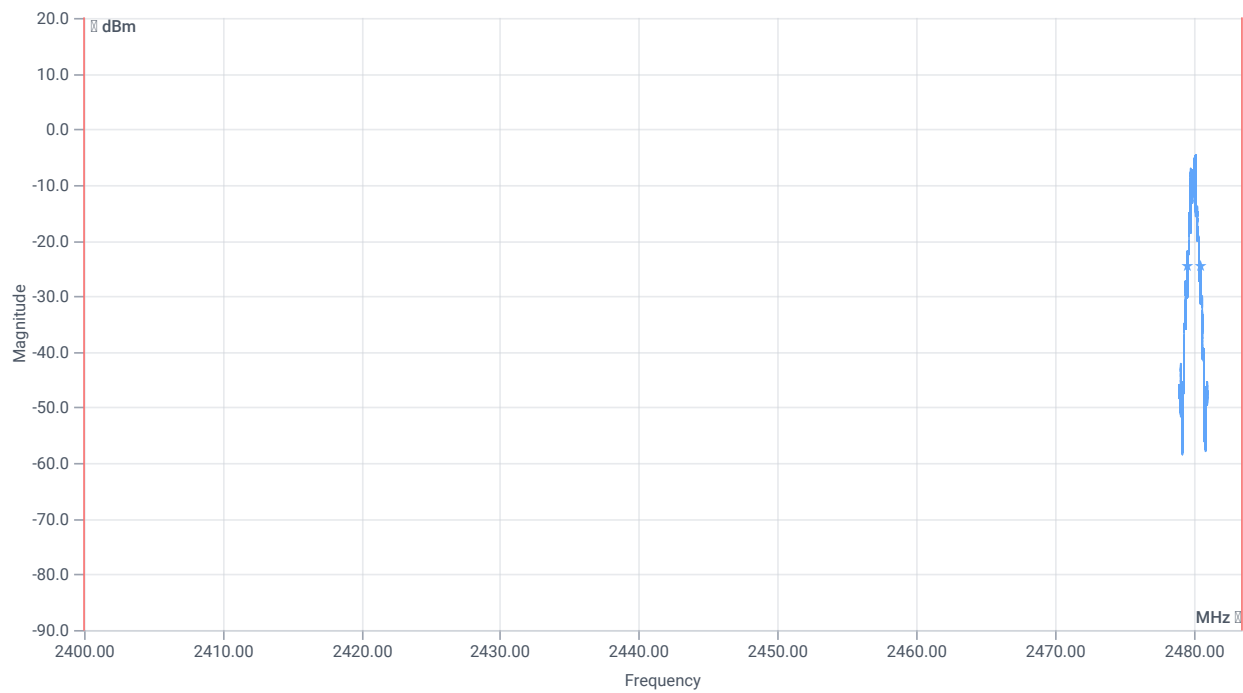
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	864.000	kHz	INFO
T1 99%	2400.000000	---	2479.5780	MHz	PASS
T2 99%	---	2483.500000	2480.4420	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	931	kHz	INFO
T1 20dB	2400.000000	---	2479.5568	MHz	PASS
T2 20dB	---	2483.500000	2480.4876	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 20dBc ~ BT Classic Basic rate

References

TC start	15.12.2023 11:51:51
Ambit temp [°C] humidity [rel%]	26.7 31
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 FHSS - BT Classic Basic Rate
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic Basic rate
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2441
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-30,1321.3008K30/103170,3.60

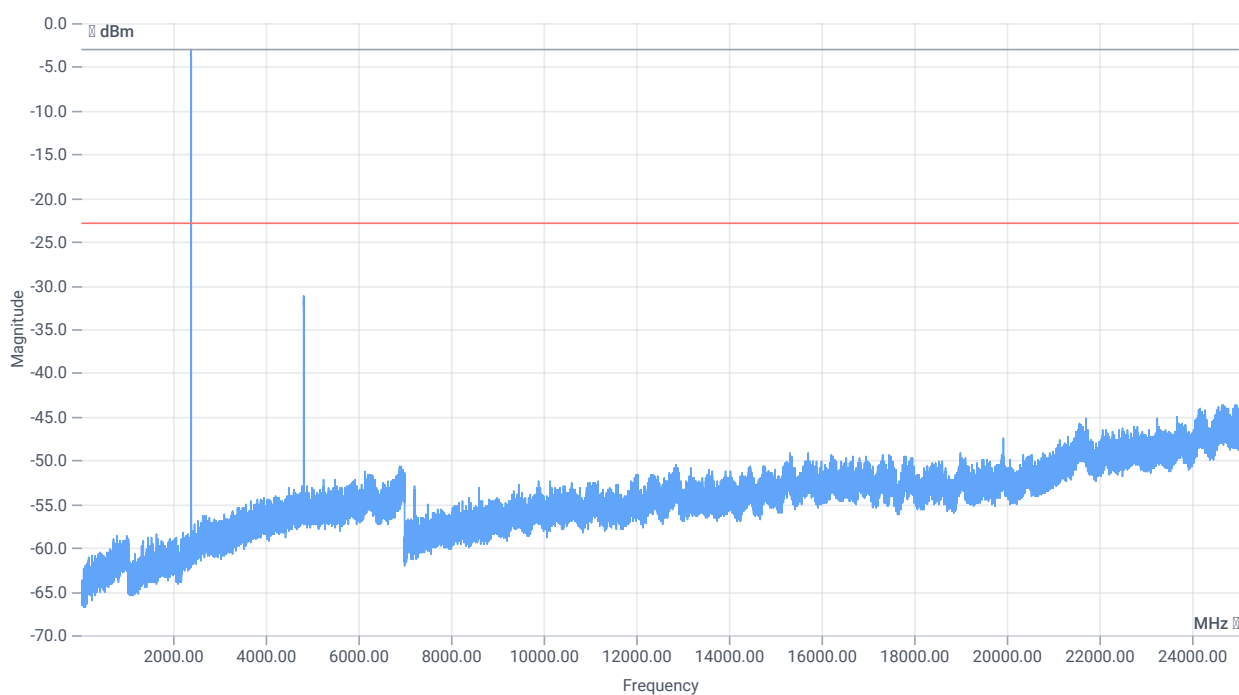
Equipment

Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

Test at TX 2402 MHz

RESULT: Reference Power cond.

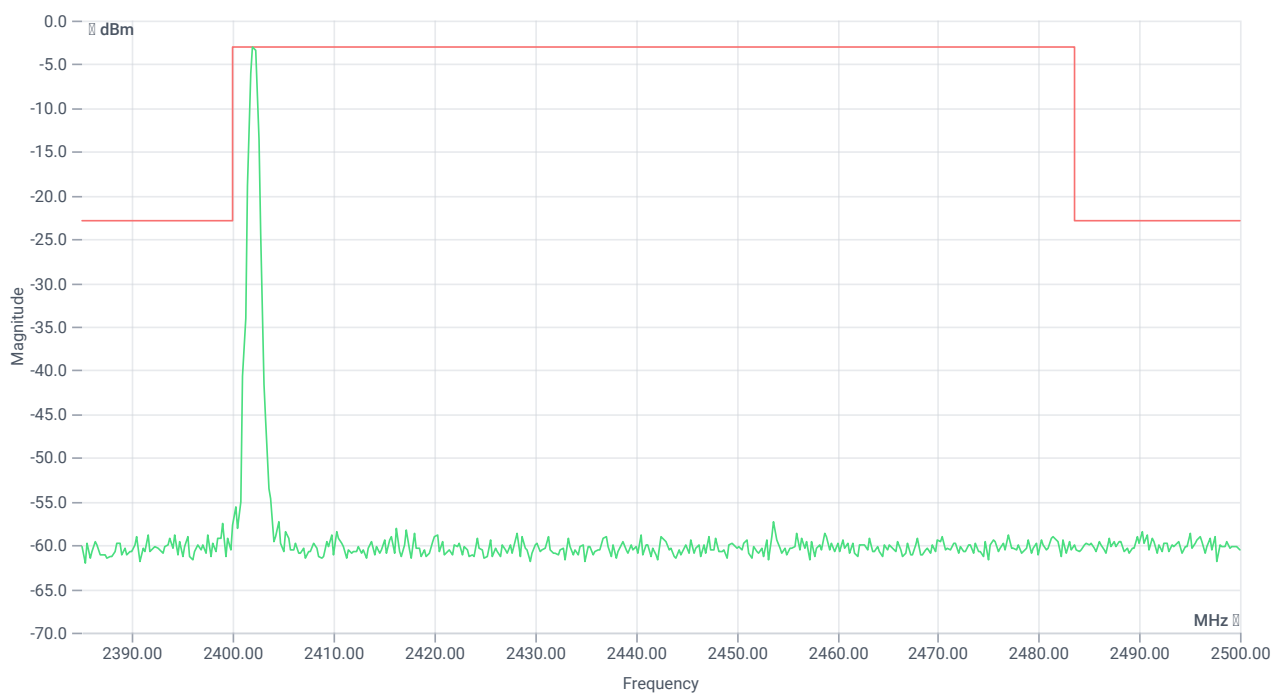
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-1.94	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-1.94 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	200 25 2001 SWE



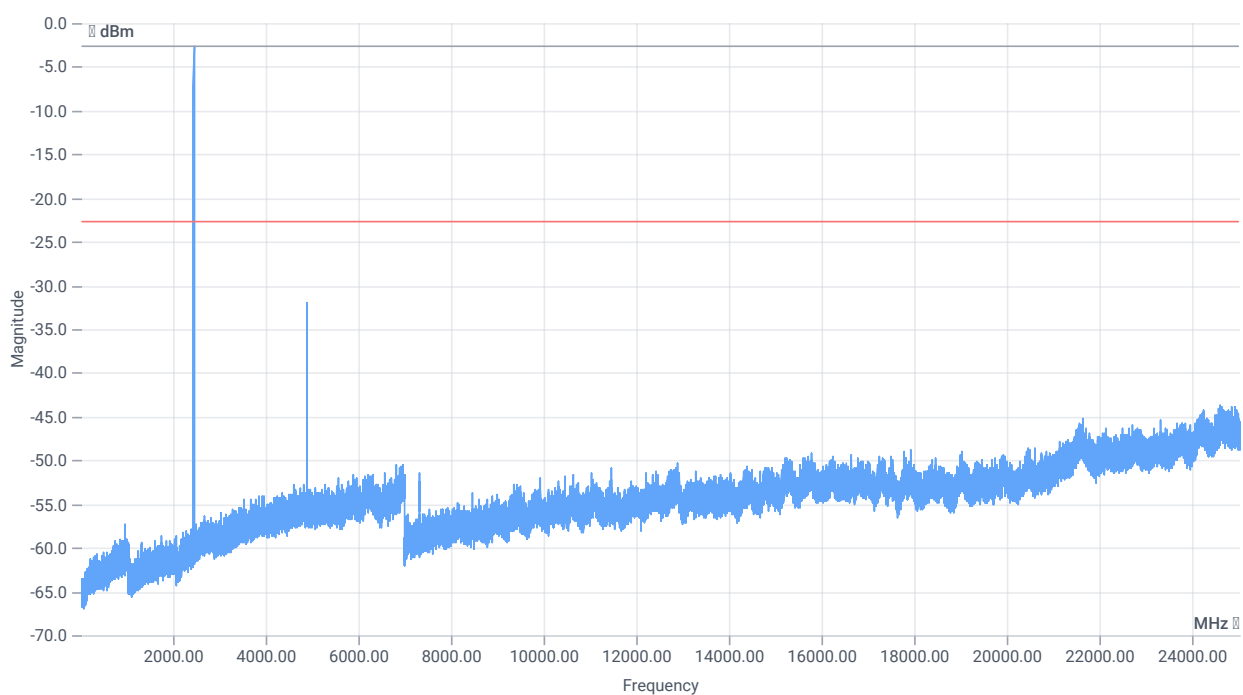
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2402.00 MHz	---	---	-2.94	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4804.5 MHz	0	---	8.3	dB	INFO

Test at TX 2441 MHz

RESULT: Reference Power cond.

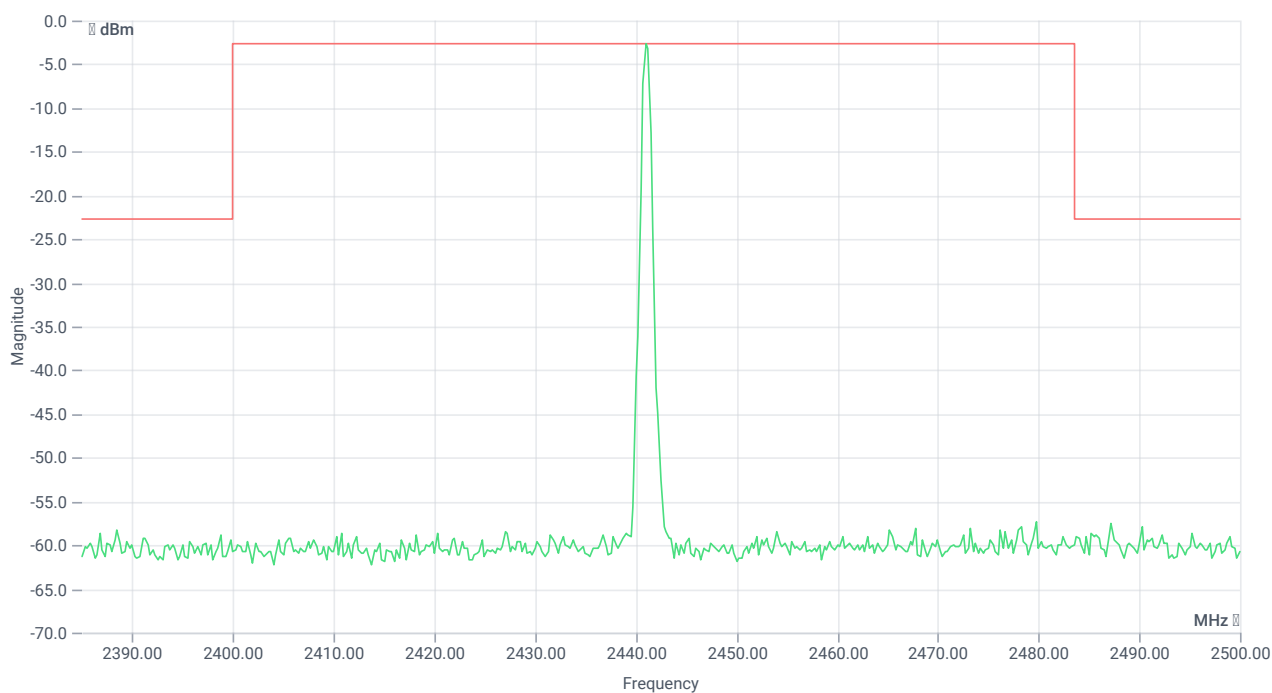
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-1.79	dBm	INFO
Ref. Frequency	---	---	2441.200	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-1.79 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	200 25 2001 SWE



TX emissions band zoomed

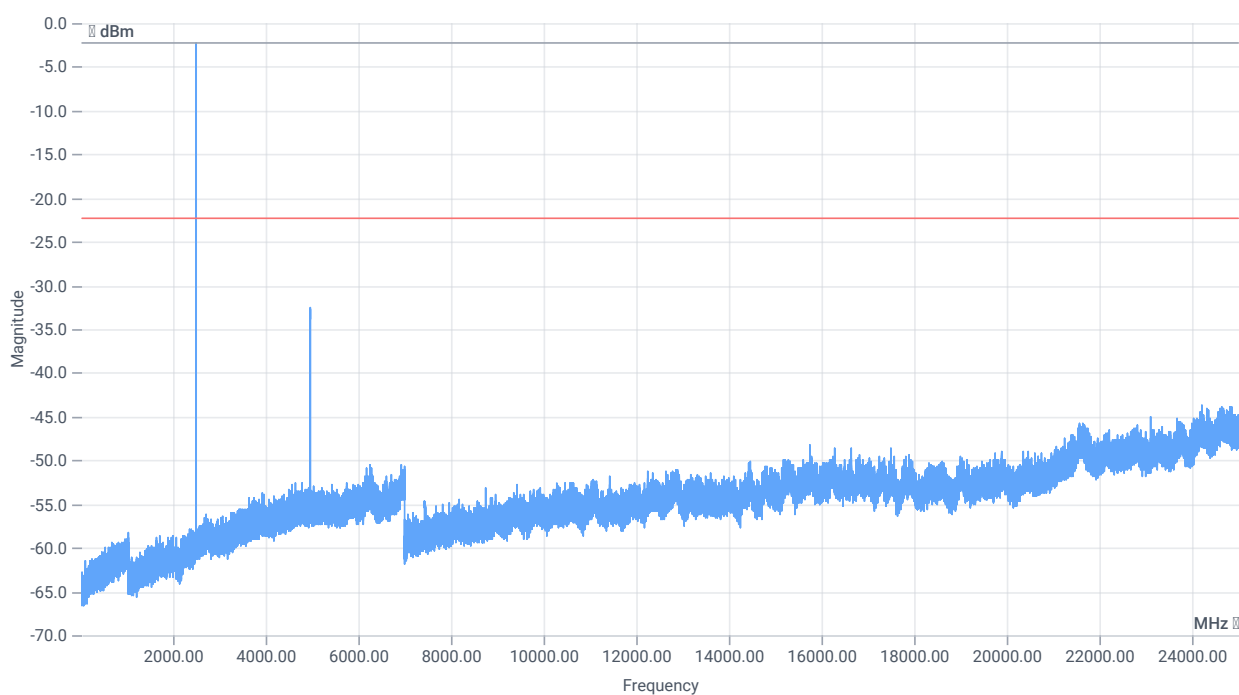
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2441.00 MHz	---	---	-2.62	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4882.5 MHz	0	---	9.42	dB	INFO

Test at TX 2480 MHz

RESULT: Reference Power cond.

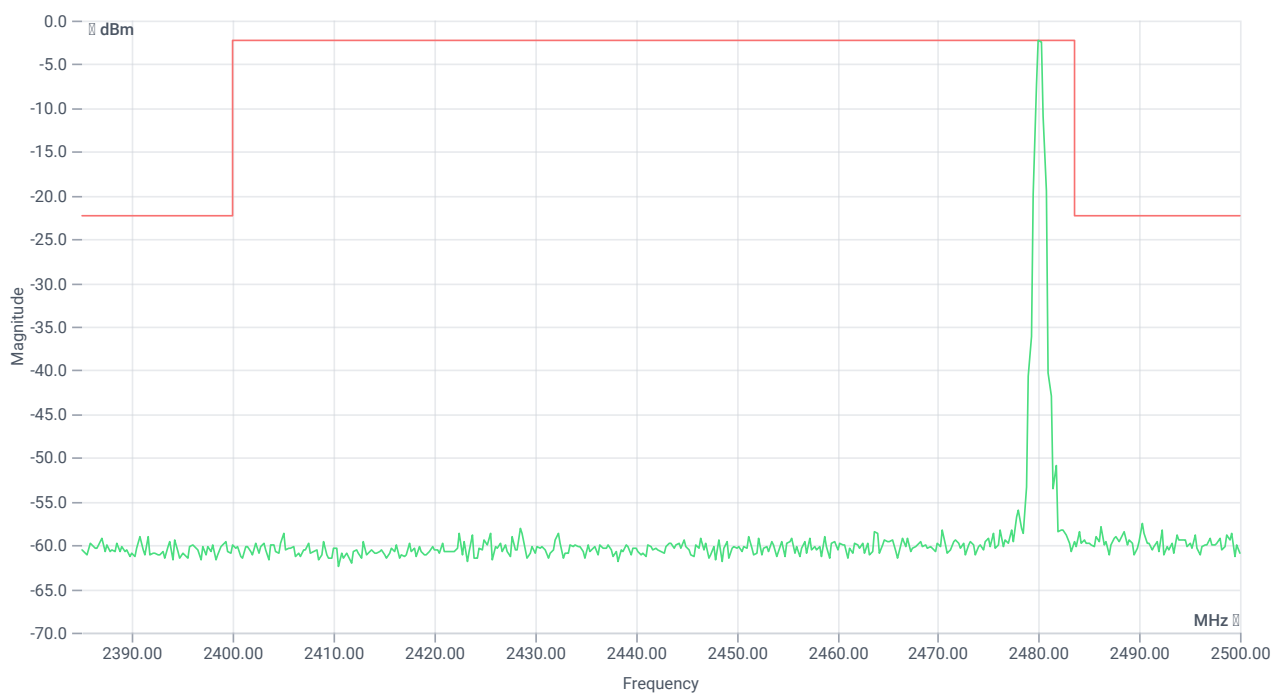
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-1.62	dBm	INFO
Ref. Frequency	---	---	2480.100	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-1.62 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	200 25 2001 SWE



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2480.00 MHz	---	---	-2.31	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4960.5 MHz	0	---	10.31	dB	INFO

Verdict

PASS

FCC 15.247 # TX Emissions on band edge FCC ~ BT Classic Basic rate

References

TC start	15.12.2023 13:32:18
Ambit temp [°C] humidity [rel%]	27.0 32
System version	4.7.1.4
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 TX Emissions conducted on band edge FHSS - BT Classic Basic Rate
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic Basic rate
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2441
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

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

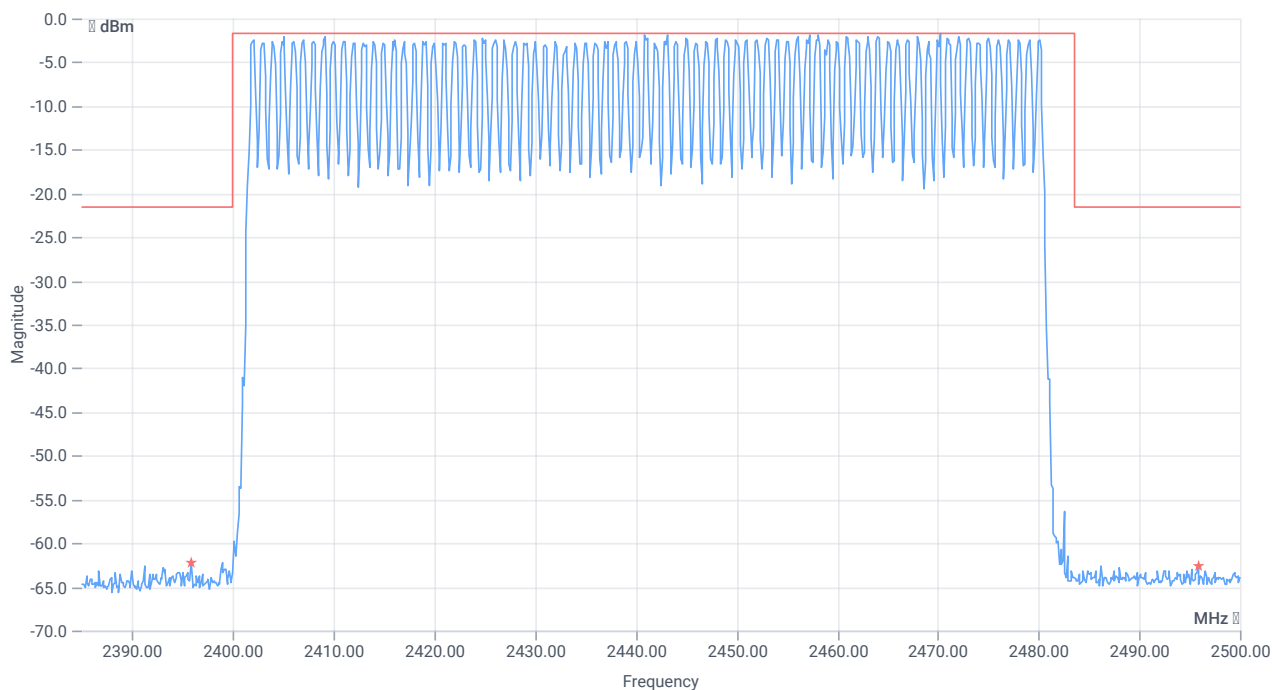
Test at TX hopping MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-1.38	dBm	INFO
Ref. Frequency	---	---	2467.170	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.62 11.36 10
Start [MHz] Stop [MHz]	2385.000 2500.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	30 1800 1001 SWE



TX emissions on band edge

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Max peak lower Band	---	-21.63	-62.20	dBm	PASS
Max peak upper Band	---	-21.63	-62.55	dBm	PASS

Verdict

FCC 15.247 # Maximum peak conducted output power FHSS ~ BT Classic EDR Pi/4DQPSK

References

TC start	15.12.2023 12:18:21
Ambit temp [°C] humidity [rel%]	26.8 31
System version	4.7.1.4
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Maximum Peak Output Power Conducted FHSS - BT Classic EDR Pi/4DQPSK
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic EDR Pi/4DQPSK
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2441
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

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

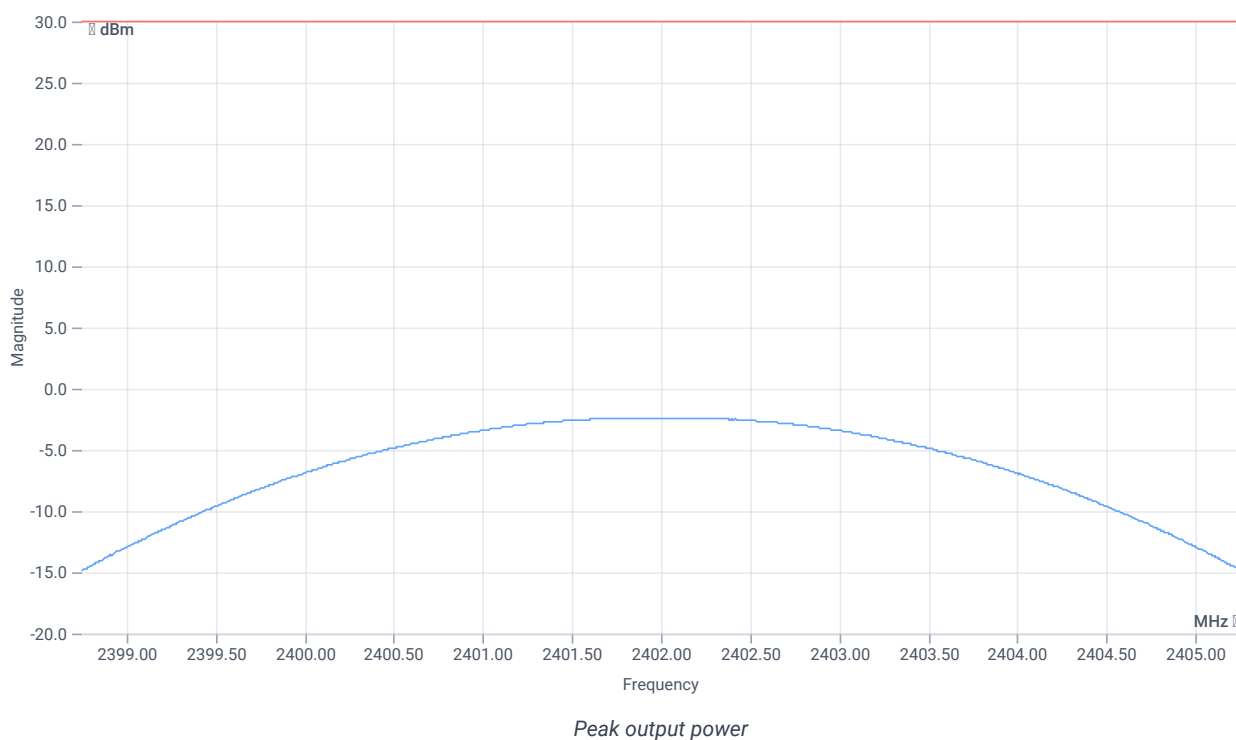
Test at TX 2402 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-3.24	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.76 11.29 15
Start [MHz] Stop [MHz]	2398.750 2405.250
RBW [MHz] VBW [MHz]	3.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 10 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	-2.39	dBm	PASS
Peak Power	---	1000	0.576766	mW	PASS
Frequency at Peak	---	---	2401.844	MHz	INFO

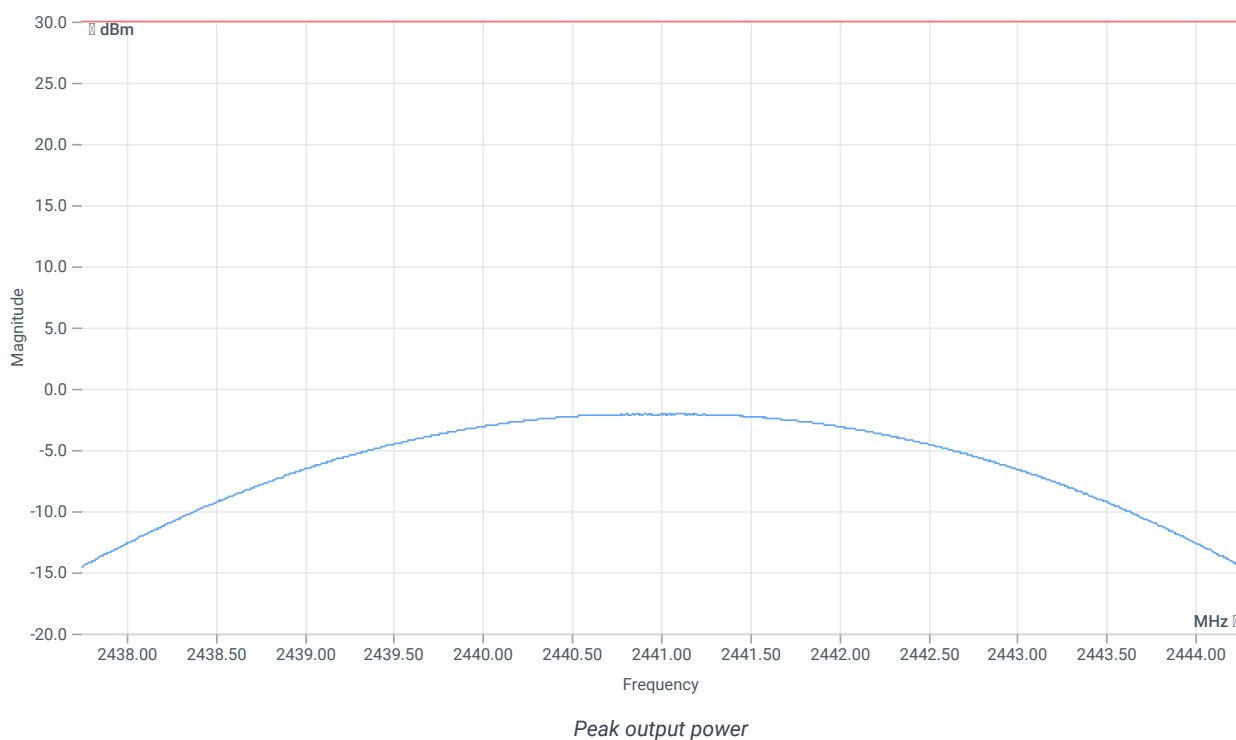
Test at TX 2441 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-3.05	dBm	INFO
Ref. Frequency	---	---	2441.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.95 11.36 15
Start [MHz] Stop [MHz]	2437.750 2444.250
RBW [MHz] VBW [MHz]	3.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 10 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	-2.07	dBm	PASS
Peak Power	---	1000	0.620869	mW	PASS
Frequency at Peak	---	---	2440.844	MHz	INFO

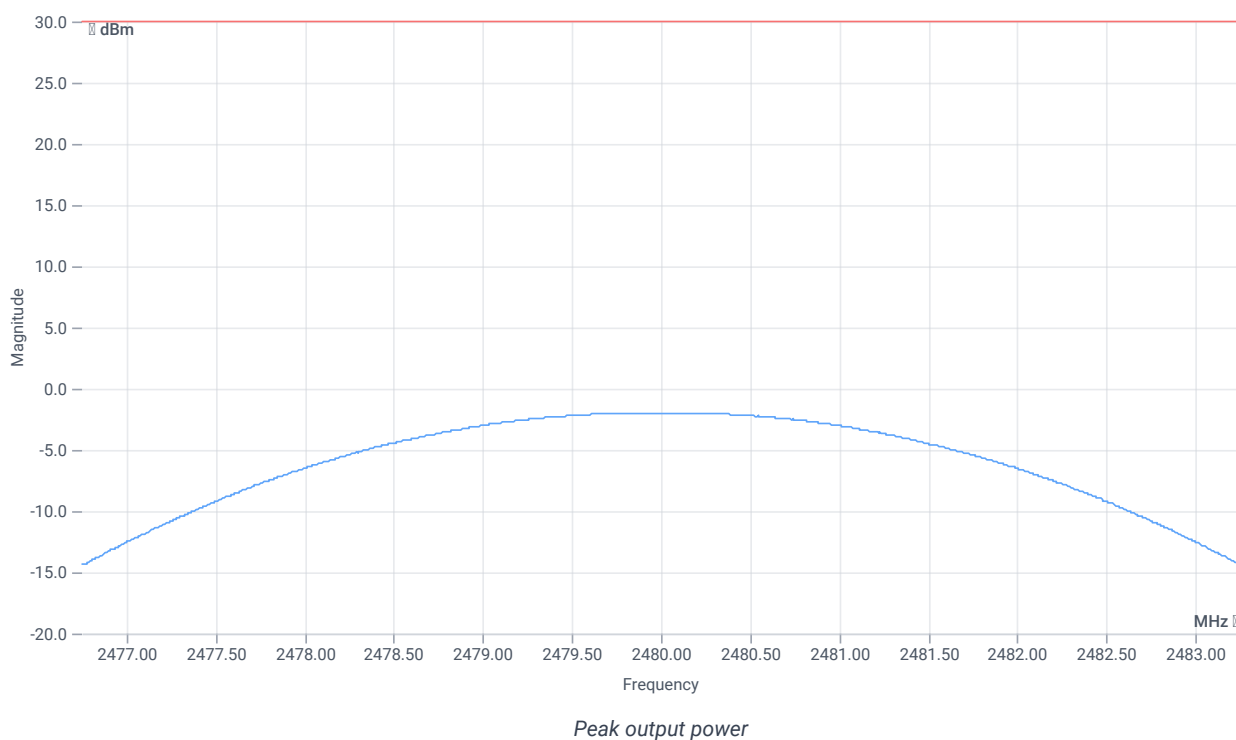
Test at TX 2480 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-3.06	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.94 11.41 15
Start [MHz] Stop [MHz]	2476.750 2483.250
RBW [MHz] VBW [MHz]	3.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 10 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	-1.99	dBm	PASS
Peak Power	---	1000	0.632412	mW	PASS
Frequency at Peak	---	---	2479.864	MHz	INFO

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT Classic EDR Pi/4DQPSK

References

TC start	15.12.2023 12:20:37
Ambit temp [°C] humidity [rel%]	26.8 32
System version	4.7.1.4
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT - 20dB FHSS - BT Classic EDR Pi/4DQPSK
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic EDR Pi/4DQPSK
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2441
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

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

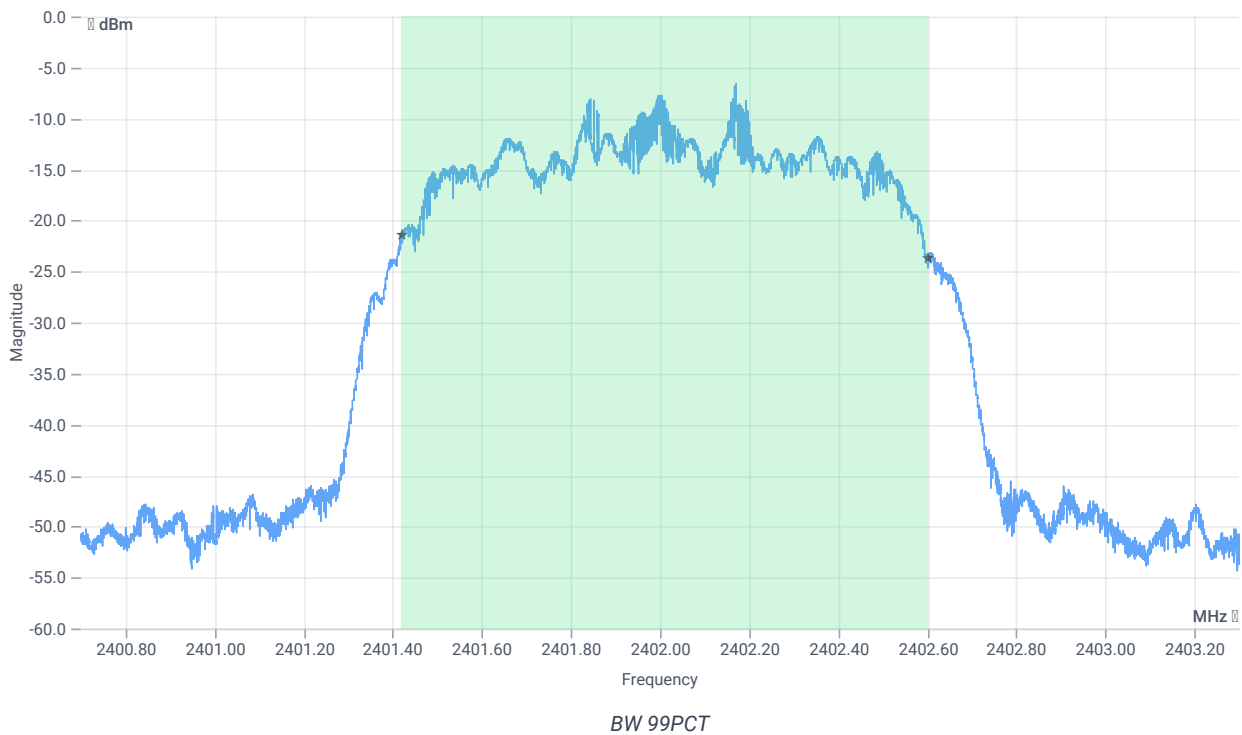
Test at TX 2402 MHz

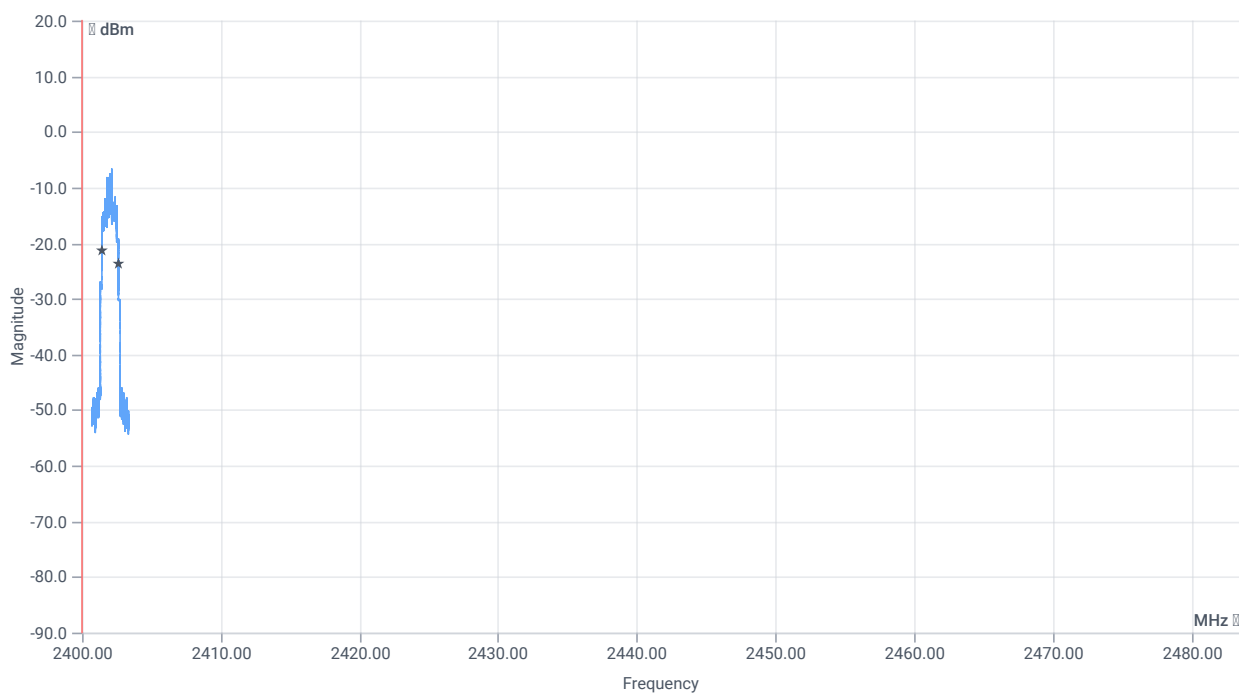
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-3.35	dBm	INFO
Ref. Frequency	---	---	2402.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.65 11.29 10
Start [MHz] Stop [MHz]	2400.700 2403.300
RBW [MHz] VBW [MHz]	0.030000 0.100000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

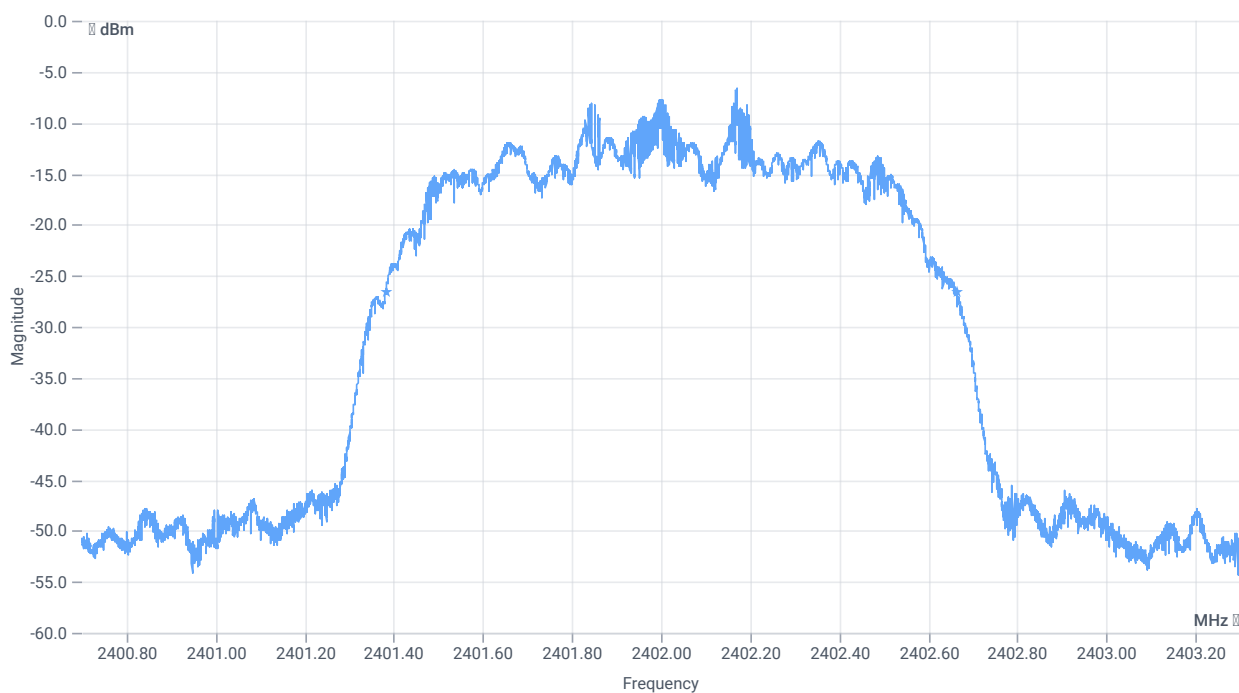




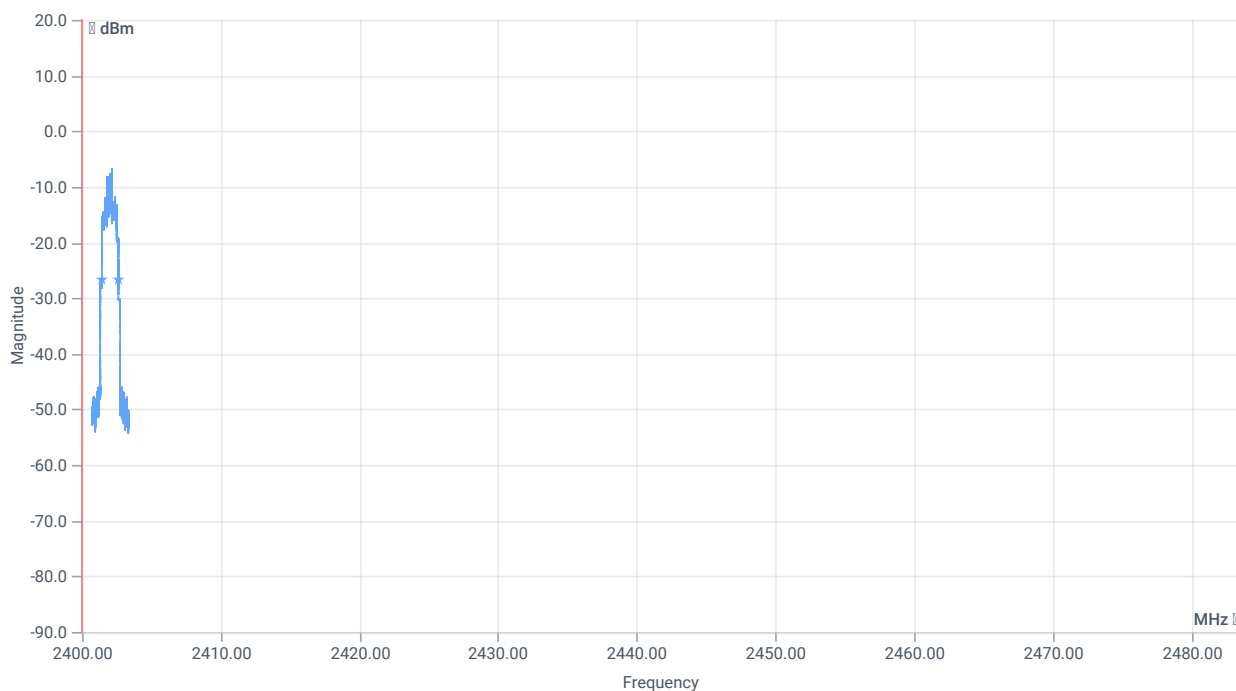
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1181.000	kHz	INFO
T1 99%	2400.000000	---	2401.4218	MHz	PASS
T2 99%	---	2483.500000	2402.6024	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1282	kHz	INFO
T1 20dB	2400.000000	---	2401.3820	MHz	PASS
T2 20dB	---	2483.500000	2402.6635	MHz	PASS

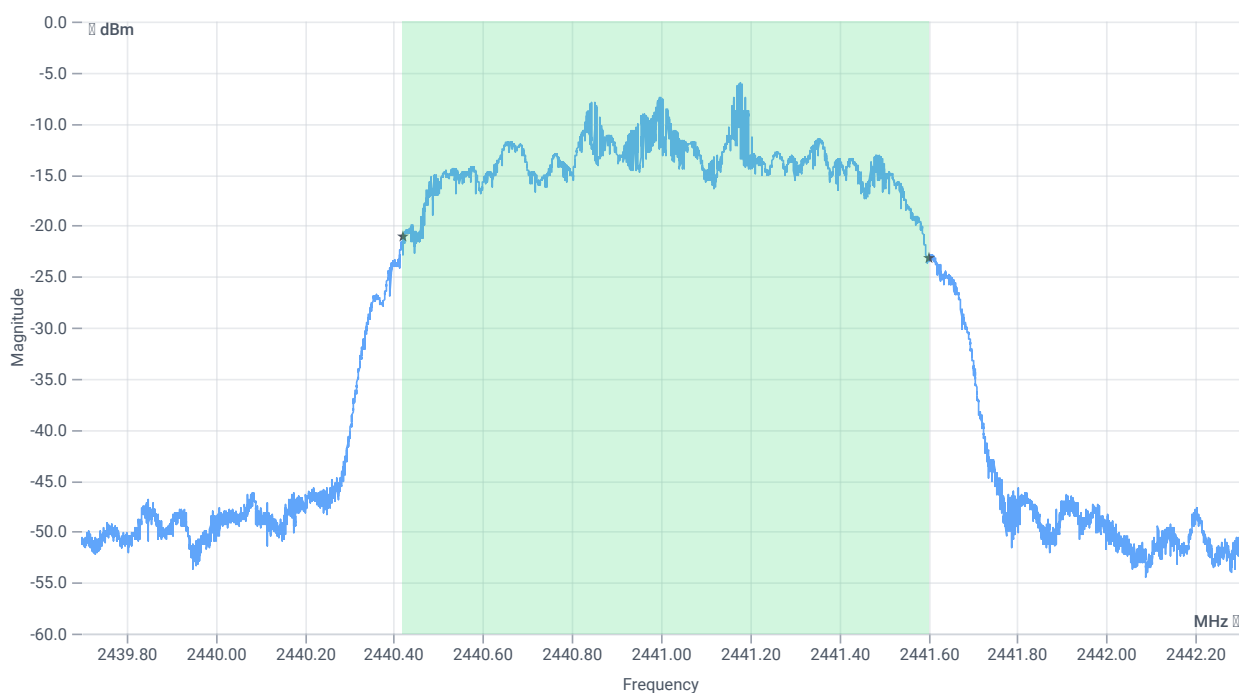
Test at TX 2441 MHz

RESULT: Reference Power cond.

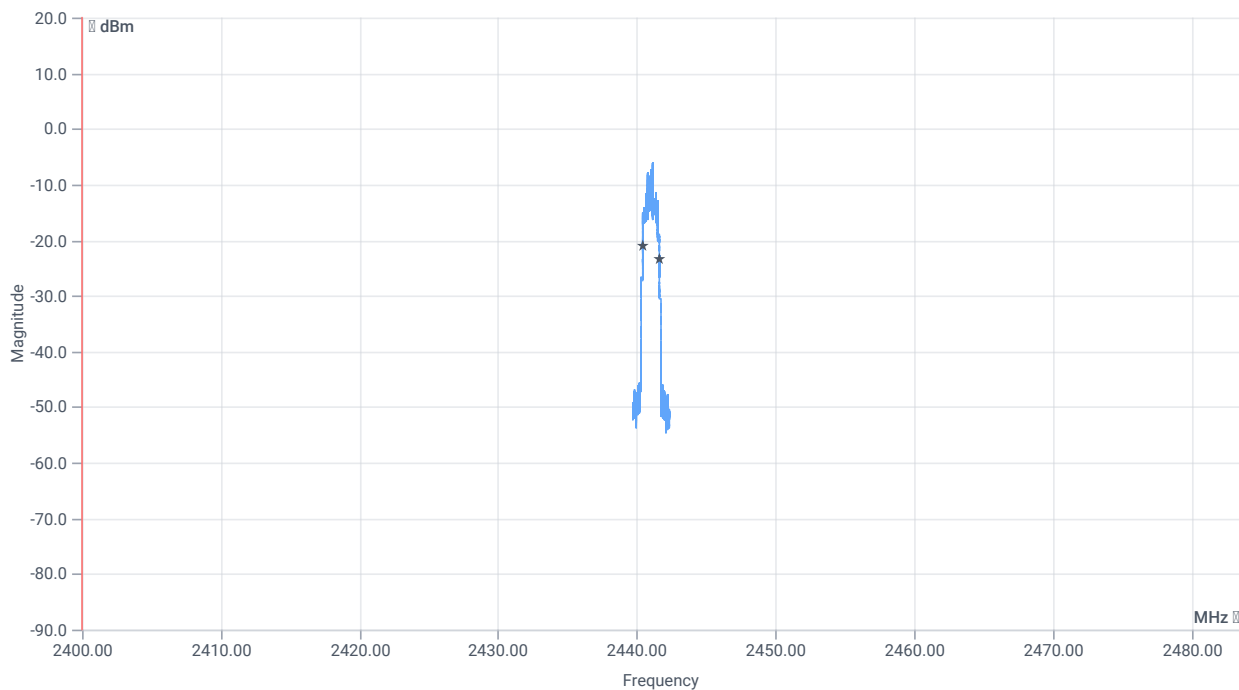
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-3.12	dBm	INFO
Ref. Frequency	---	---	2440.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.88 11.36 10
Start [MHz] Stop [MHz]	2439.700 2442.300
RBW [MHz] VBW [MHz]	0.030000 0.100000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE



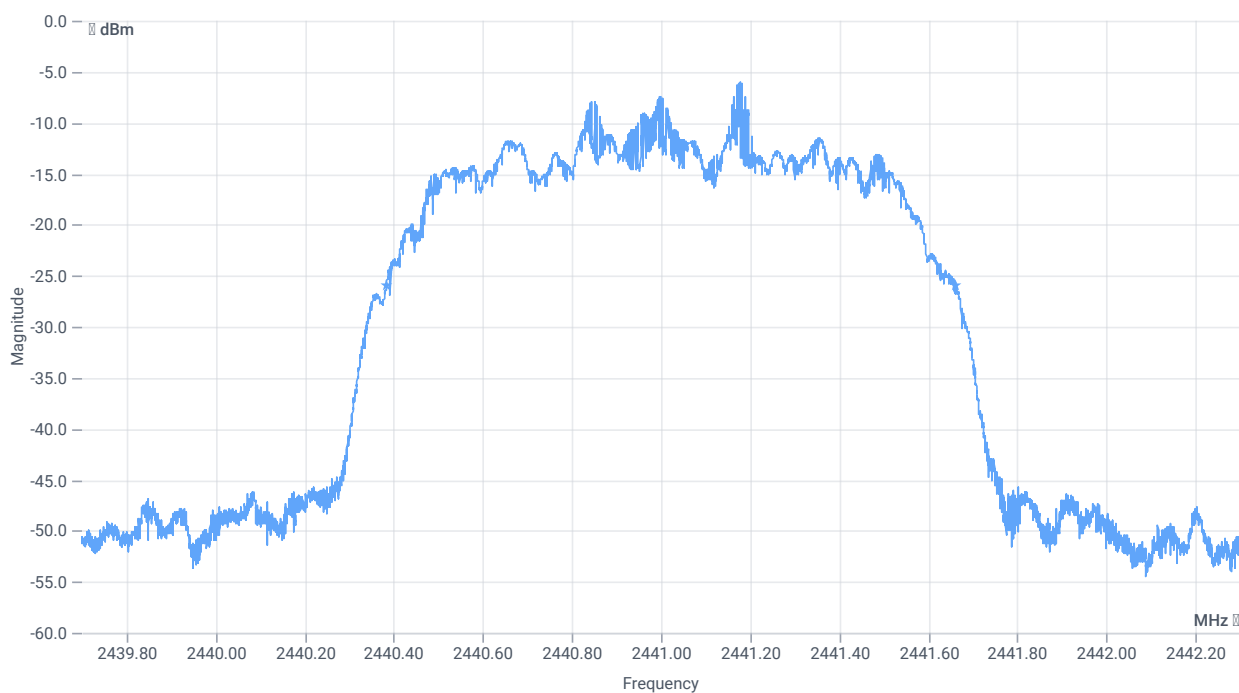
BW 99PCT



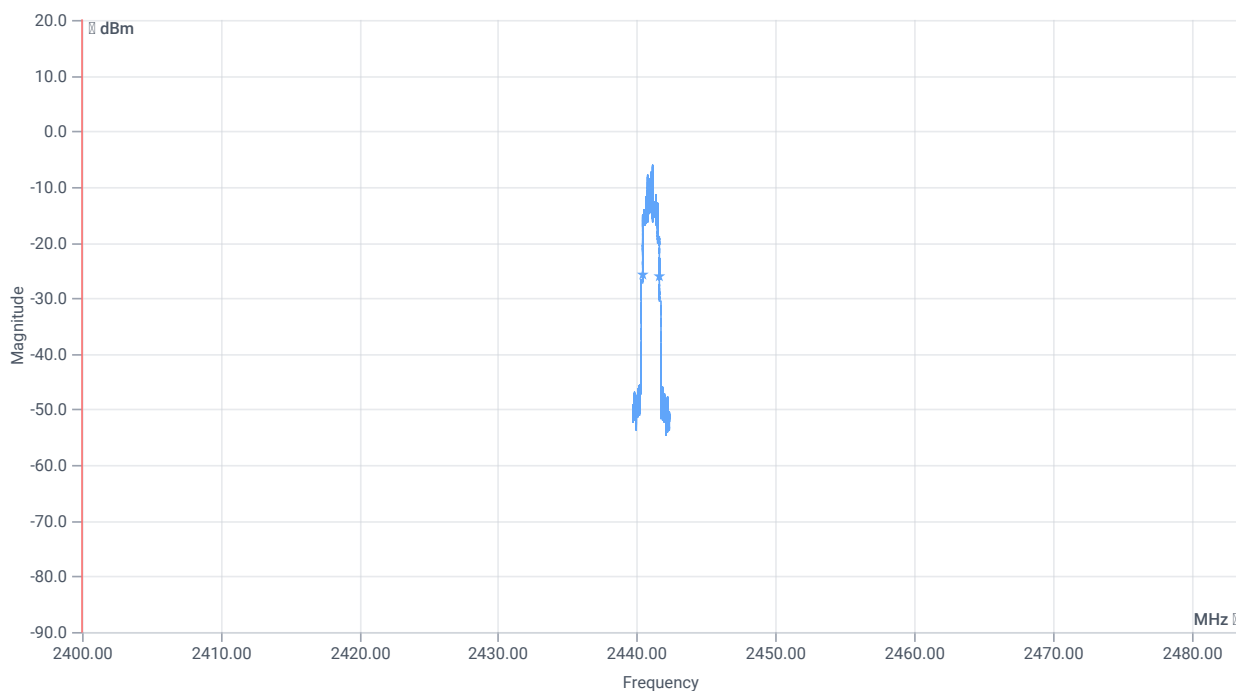
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1180.000	kHz	INFO
T1 99%	2400.000000	---	2440.4223	MHz	PASS
T2 99%	---	2483.500000	2441.6024	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1279	kHz	INFO
T1 20dB	2400.000000	---	2440.3828	MHz	PASS
T2 20dB	---	2483.500000	2441.6622	MHz	PASS

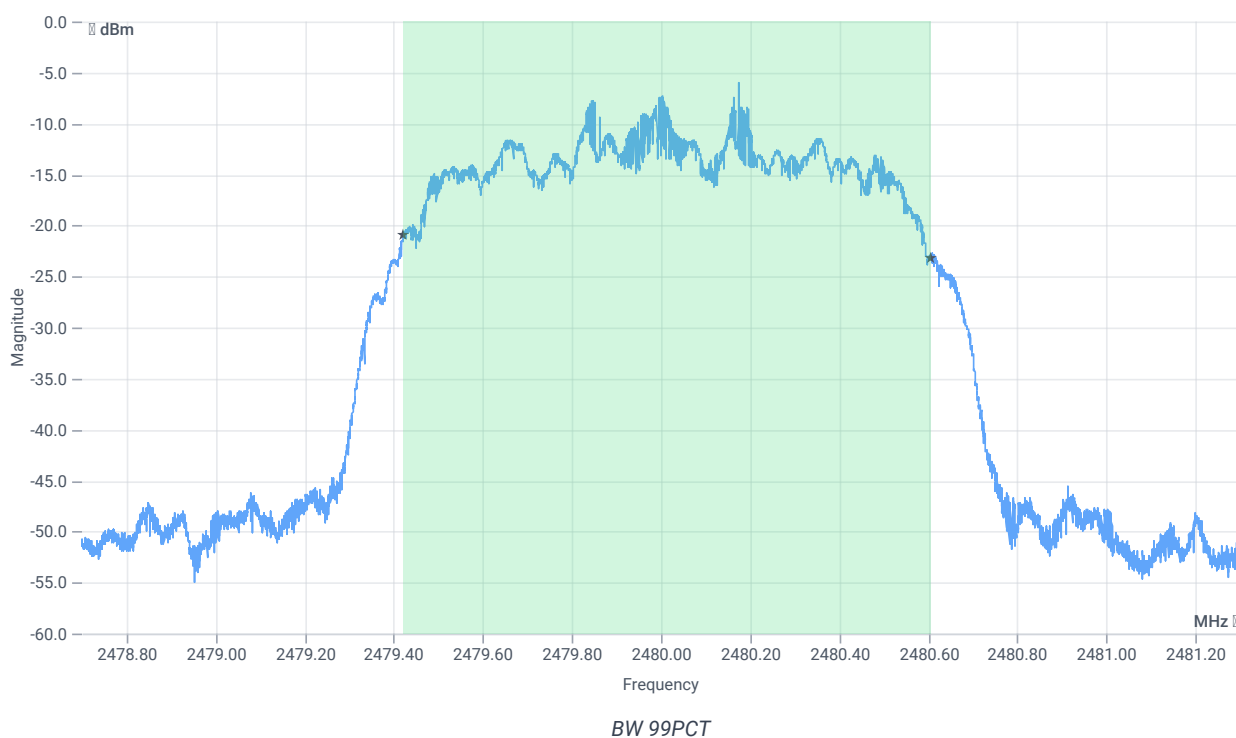
Test at TX 2480 MHz

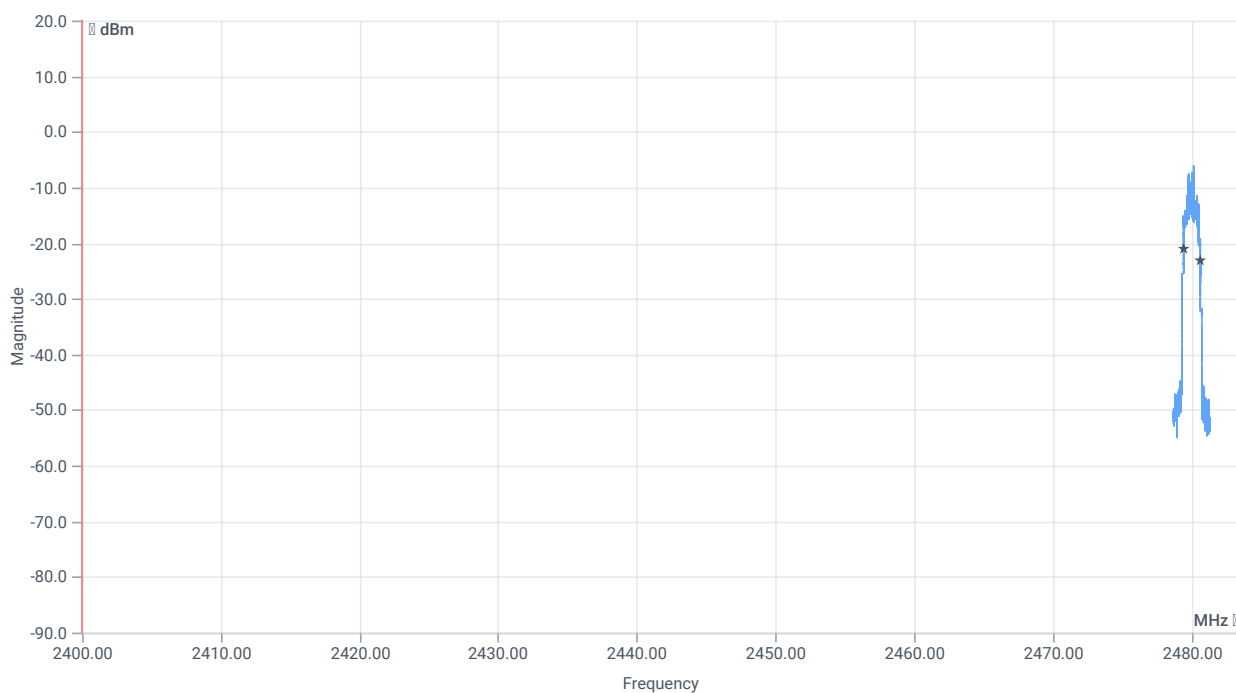
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-3.05	dBm	INFO
Ref. Frequency	---	---	2480.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.95 11.41 10
Start [MHz] Stop [MHz]	2478.700 2481.300
RBW [MHz] VBW [MHz]	0.030000 0.100000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

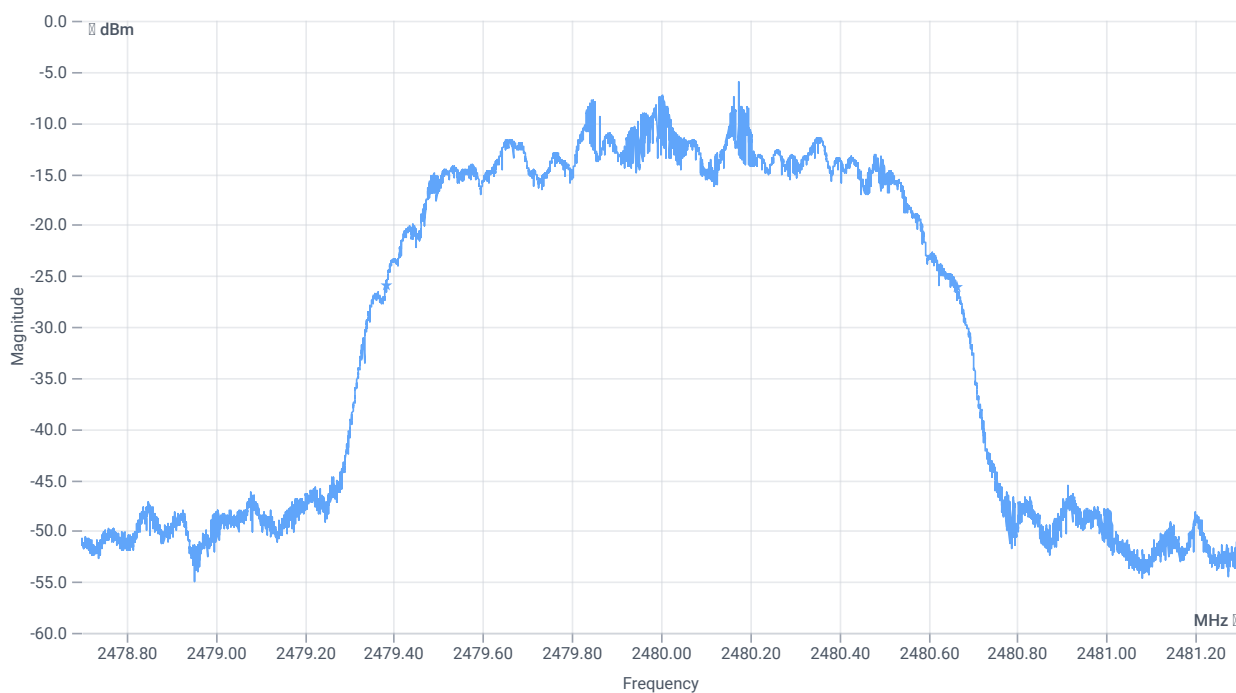




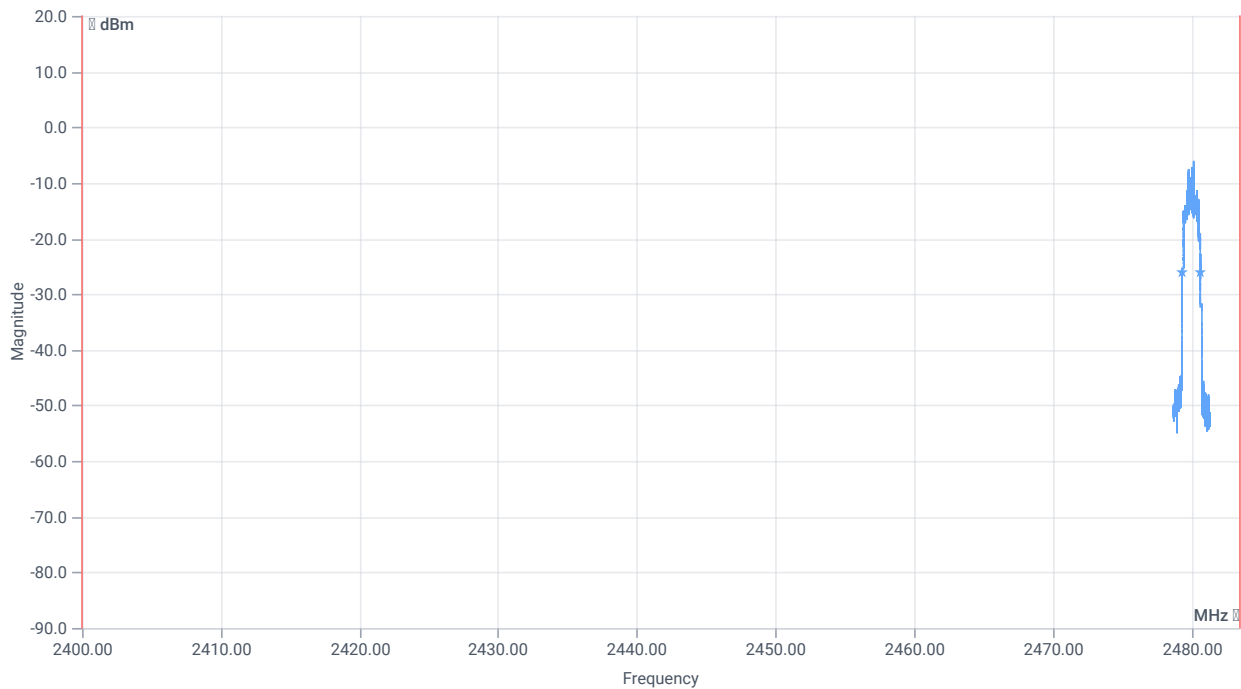
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1182.000	kHz	INFO
T1 99%	2400.000000	---	2479.4213	MHz	PASS
T2 99%	---	2483.500000	2480.6037	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1280	kHz	INFO
T1 20dB	2400.000000	---	2479.3830	MHz	PASS
T2 20dB	---	2483.500000	2480.6633	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 20dBc ~ BT Classic EDR Pi/4DQPSK

References

TC start	15.12.2023 12:33:43
Ambit temp [°C] humidity [rel%]	26.7 32
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 FHSS - BT Classic EDR Pi/4DQPSK
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic EDR Pi/4DQPSK
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2441
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

Equipment

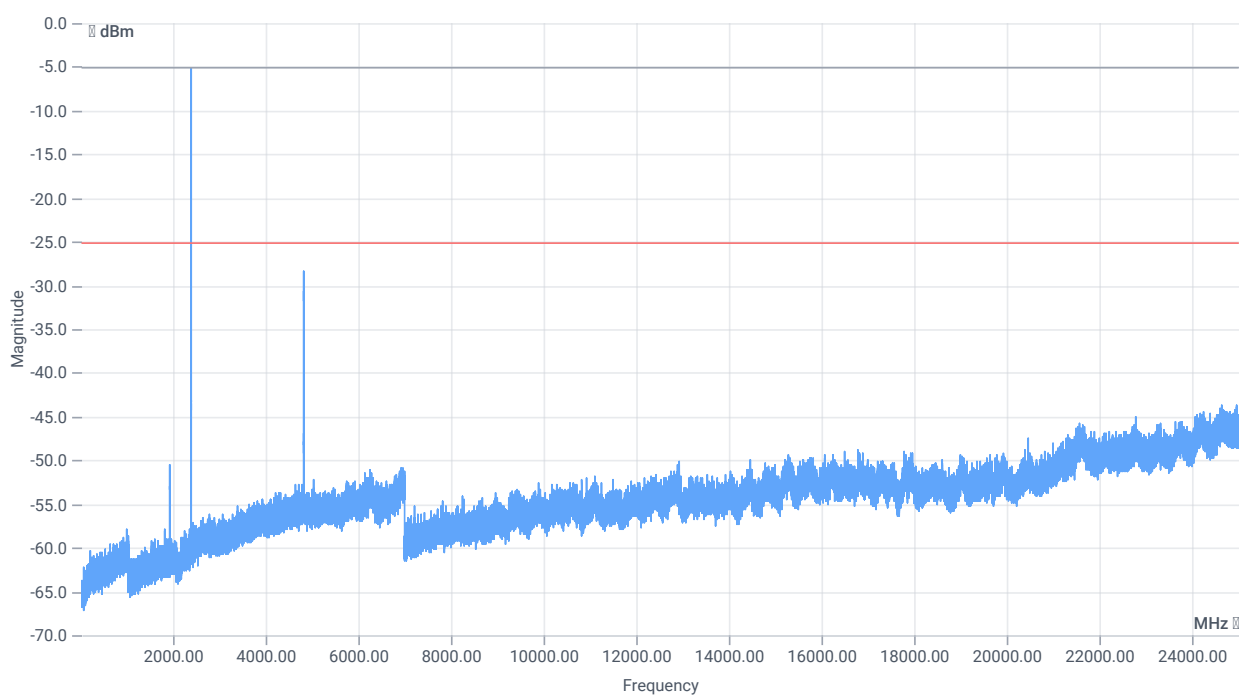
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

Test at TX 2402 MHz

RESULT: Reference Power cond.

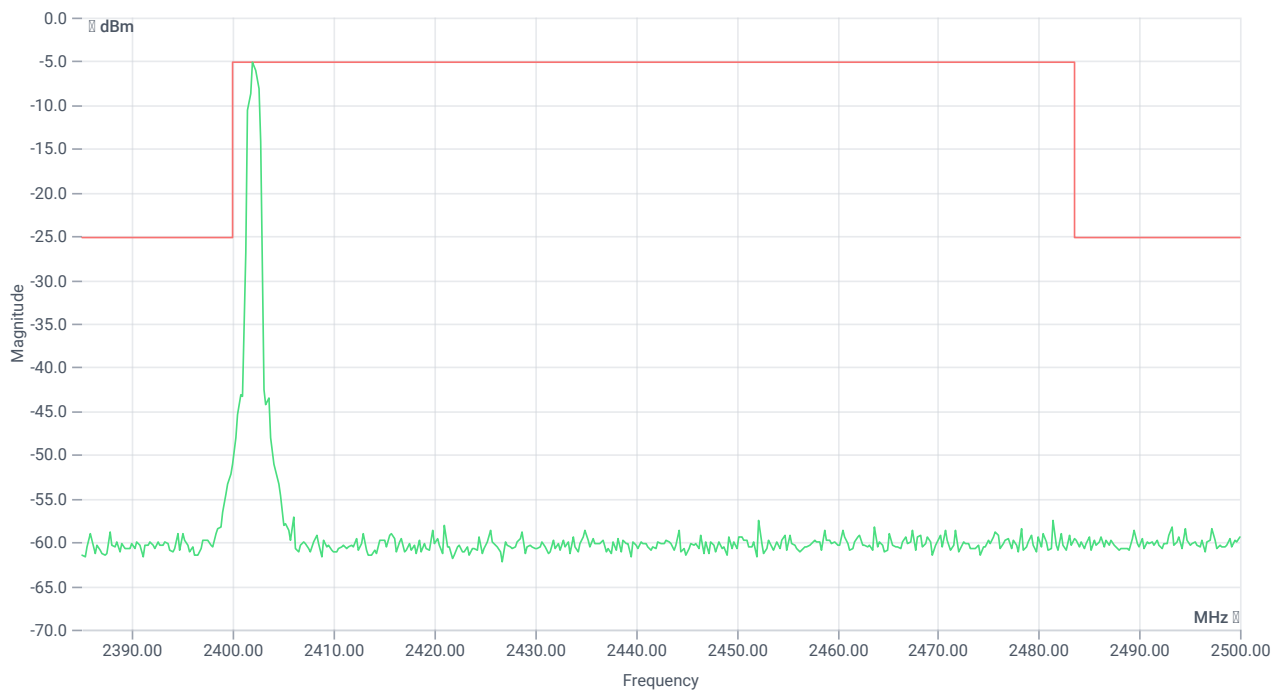
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-3.42	dBm	INFO
Ref. Frequency	---	---	2402.100	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-3.42 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	200 25 2001 SWE



TX emissions band zoomed

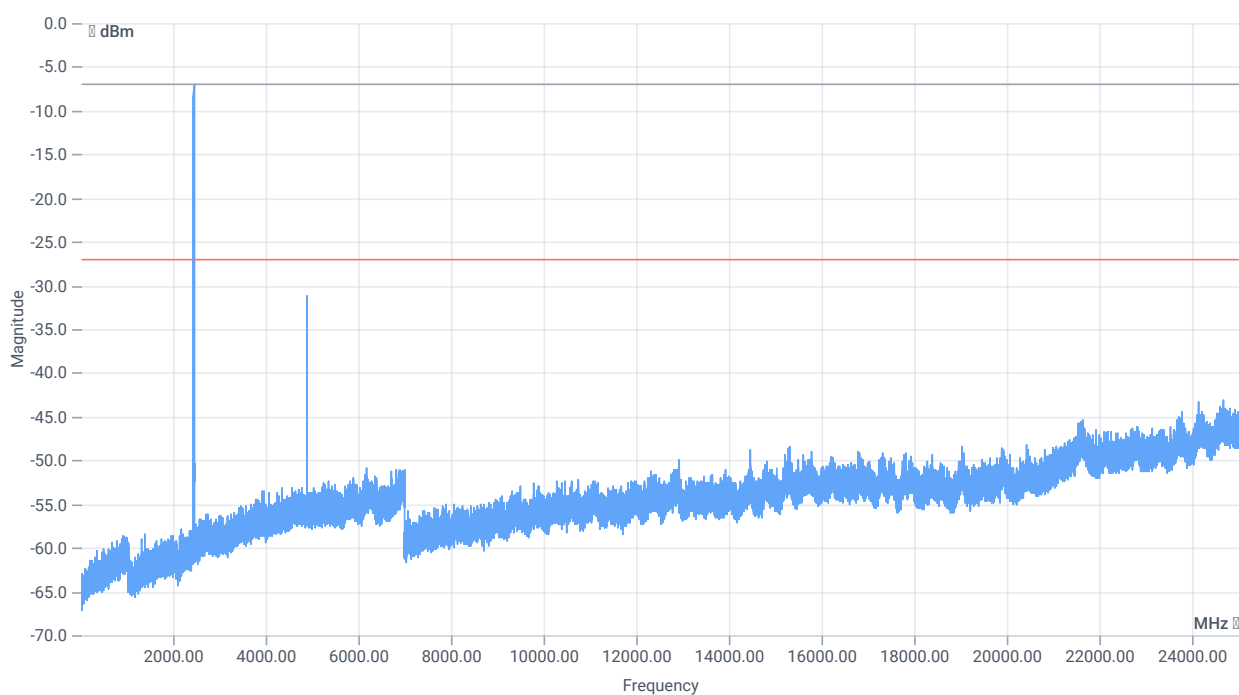
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2402.00 MHz	---	---	-5.13	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4803.75 MHz	0	---	3.2	dB	INFO

Test at TX 2441 MHz

RESULT: Reference Power cond.

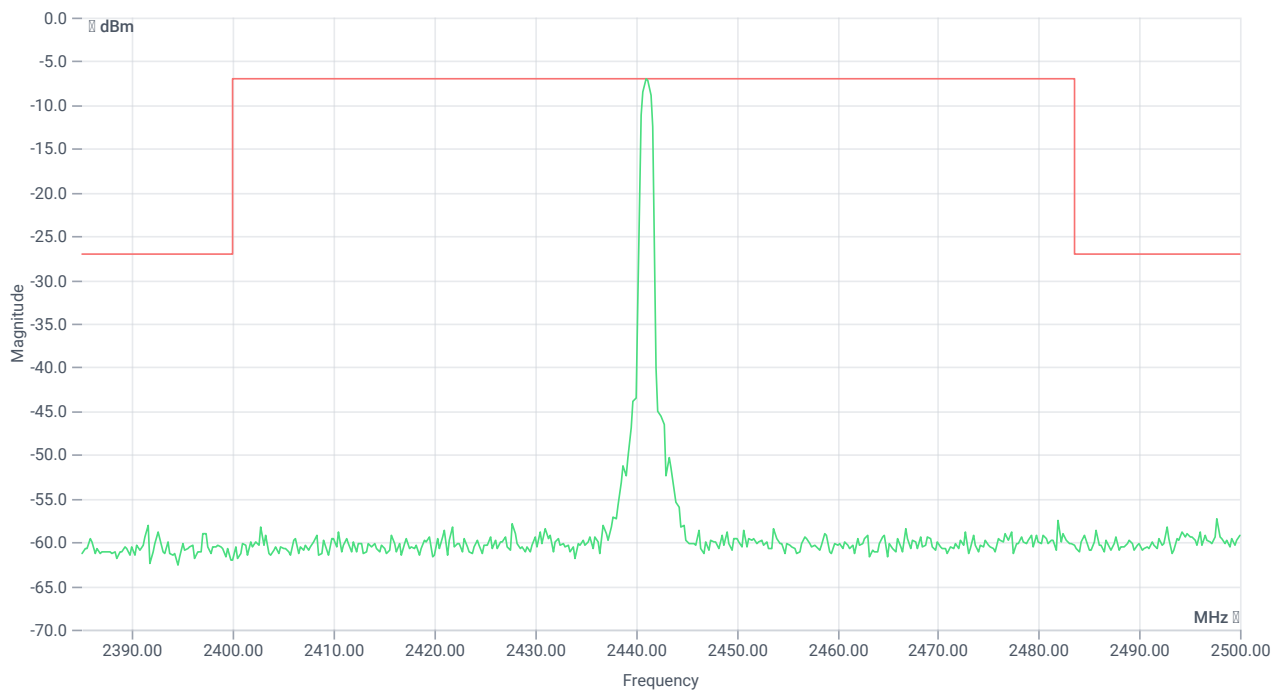
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-2.95	dBm	INFO
Ref. Frequency	---	---	2441.200	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-2.95 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	200 25 2001 SWE



TX emissions band zoomed

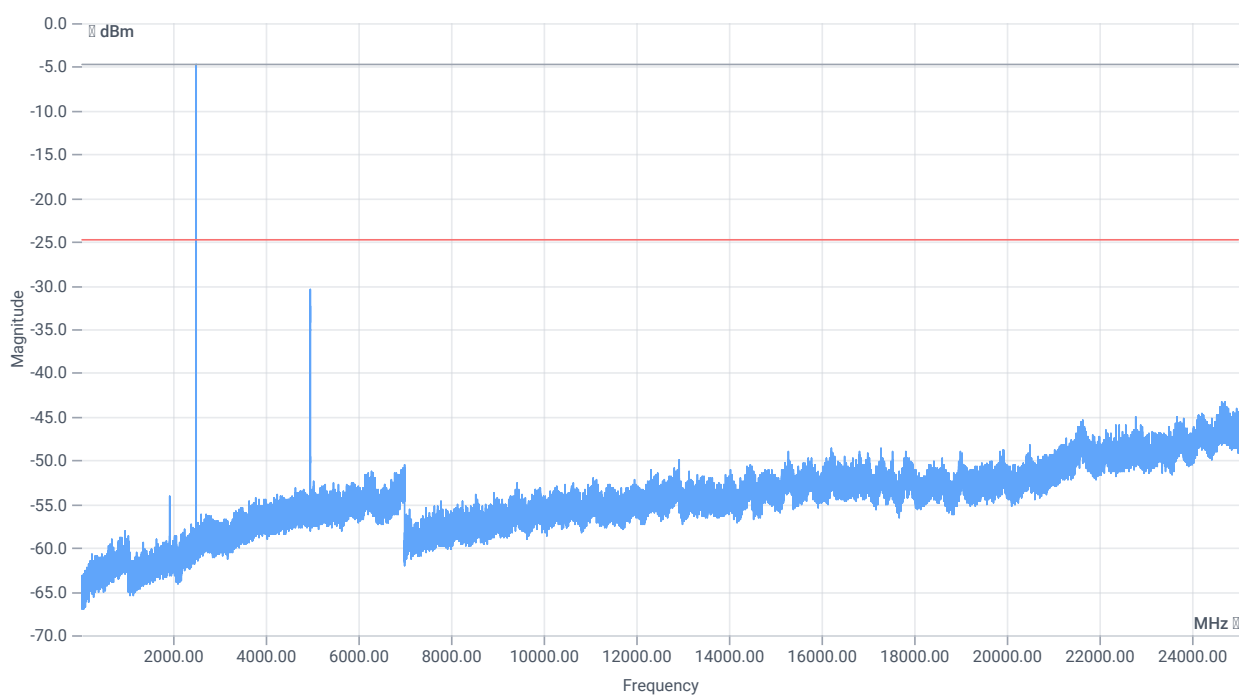
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2441.00 MHz	---	---	-7.03	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4881.75 MHz	0	---	4.16	dB	INFO

Test at TX 2480 MHz

RESULT: Reference Power cond.

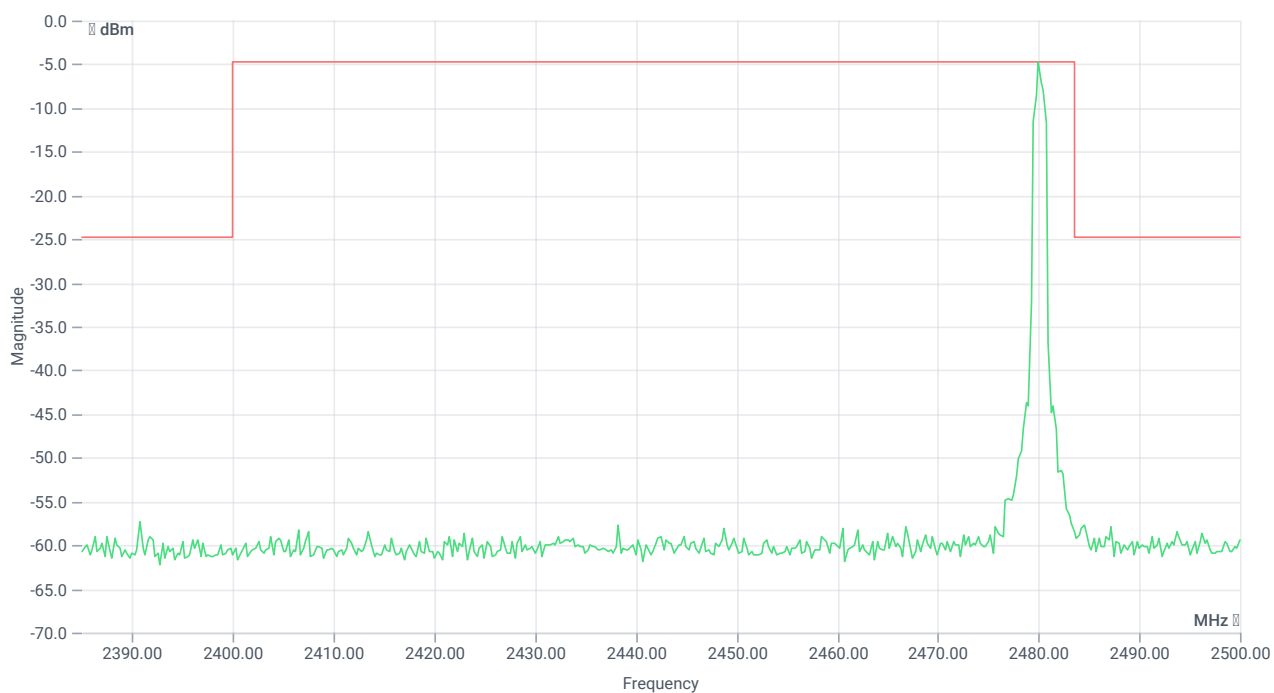
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-2.63	dBm	INFO
Ref. Frequency	---	---	2479.800	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-2.63 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	200 25 2001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2480.00 MHz	---	---	-4.73	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4960 MHz	0	---	5.74	dB	INFO

Verdict

PASS

FCC 15.247 # TX Emissions on band edge FCC ~ BT Classic EDR Pi/4DQPSK

References

TC start	15.12.2023 13:34:32
Ambit temp [°C] humidity [rel%]	27.0 32
System version	4.7.1.4
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 TX Emissions conducted on band edge FHSS - BT Classic EDR Pi/4DQPSK
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic EDR Pi/4DQPSK
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2441
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

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

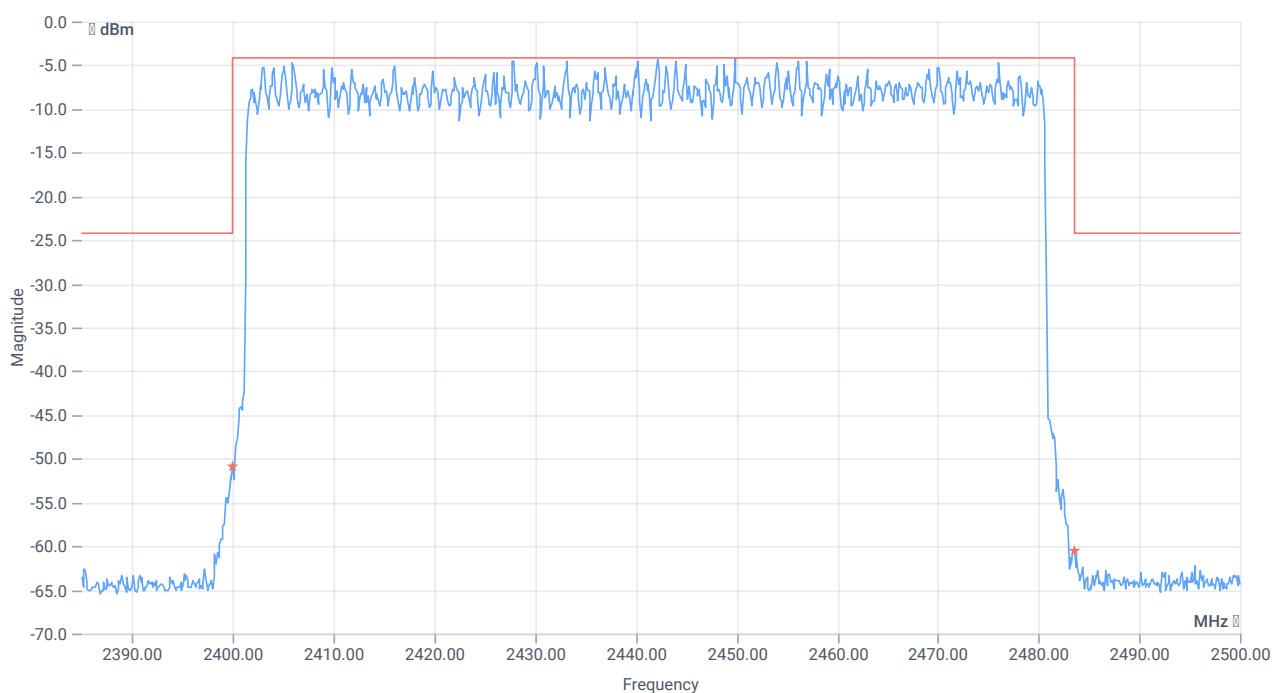
Test at TX hopping MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-2.29	dBm	INFO
Ref. Frequency	---	---	2473.870	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.71 11.36 10
Start [MHz] Stop [MHz]	2385.000 2500.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	30 1800 1001 SWE



TX emissions on band edge

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Max peak lower Band	---	-24.25	-50.94	dBm	PASS
Max peak upper Band	---	-24.25	-60.48	dBm	PASS

Verdict

FCC 15.247 # Maximum peak conducted output power FHSS ~ BT Classic EDR 8DPSK

References

TC start	15.12.2023 13:05:49
Ambit temp [°C] humidity [rel%]	26.9 32
System version	4.7.1.4
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Maximum Peak Output Power Conducted FHSS - BT Classic EDR 8DPSK
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic EDR 8DPSK
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2441
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

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

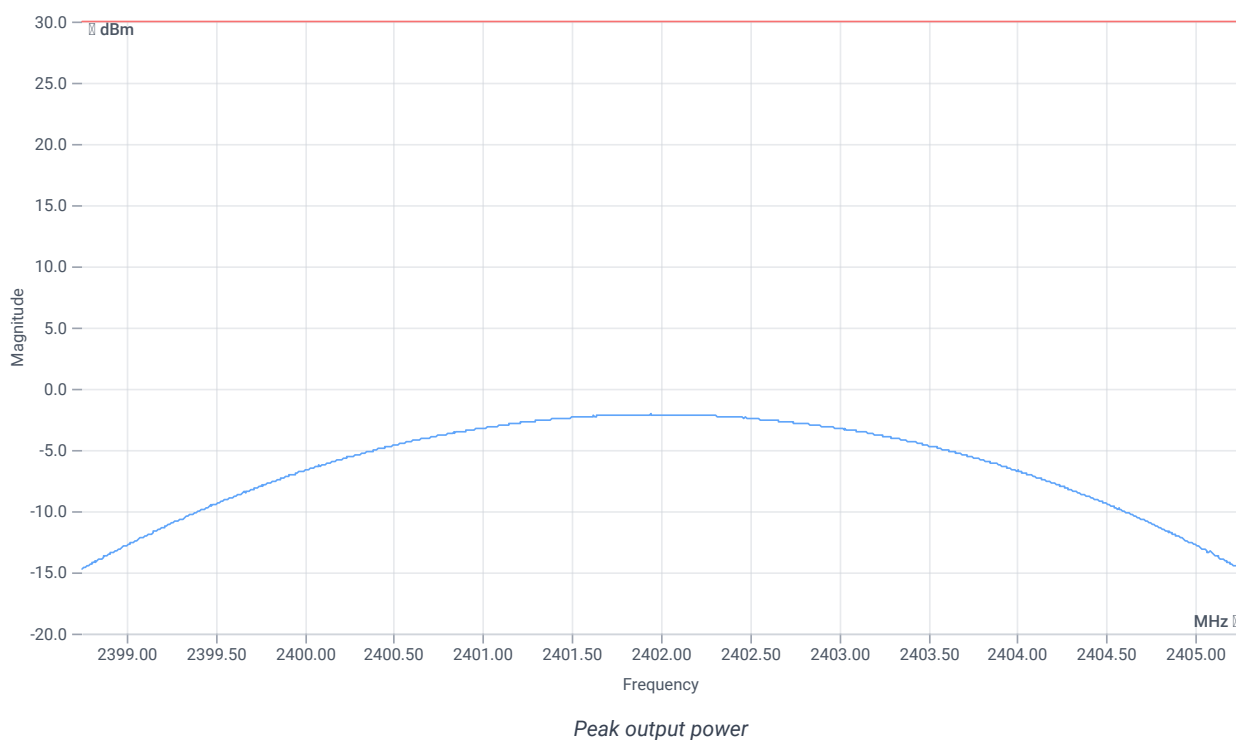
Test at TX 2402 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-3.21	dBm	INFO
Ref. Frequency	---	---	2402.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.79 11.29 15
Start [MHz] Stop [MHz]	2398.750 2405.250
RBW [MHz] VBW [MHz]	3.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 10 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	-2.09	dBm	PASS
Peak Power	---	1000	0.618016	mW	PASS
Frequency at Peak	---	---	2401.942	MHz	INFO

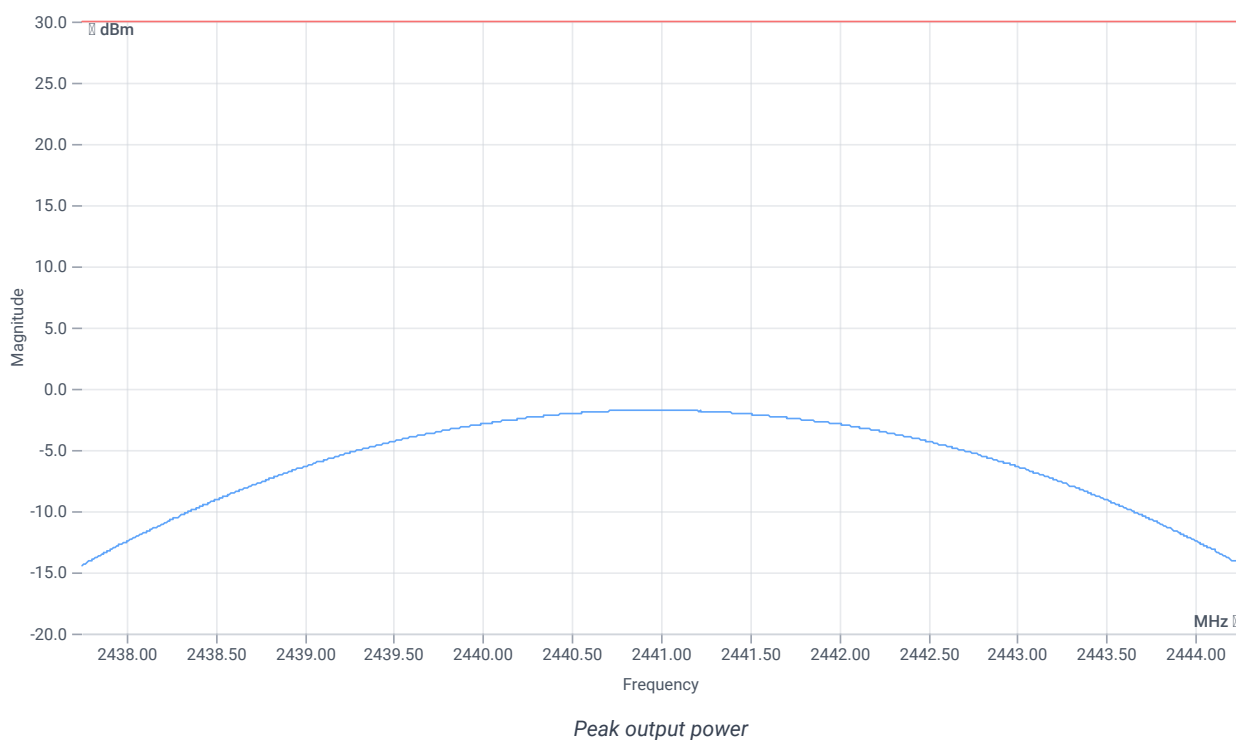
Test at TX 2441 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-3.02	dBm	INFO
Ref. Frequency	---	---	2441.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.98 11.36 15
Start [MHz] Stop [MHz]	2437.750 2444.250
RBW [MHz] VBW [MHz]	3.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 10 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	-1.75	dBm	PASS
Peak Power	---	1000	0.668344	mW	PASS
Frequency at Peak	---	---	2440.974	MHz	INFO

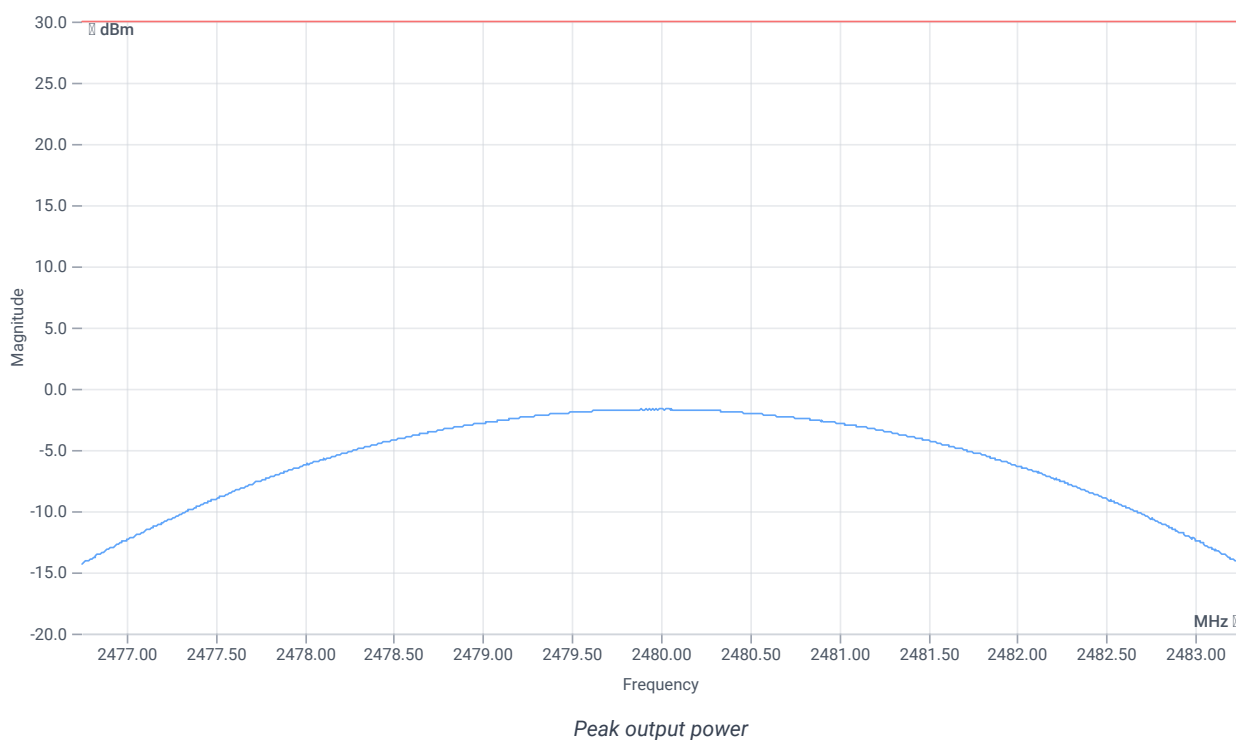
Test at TX 2480 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-2.56	dBm	INFO
Ref. Frequency	---	---	2480.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.44 11.41 15
Start [MHz] Stop [MHz]	2476.750 2483.250
RBW [MHz] VBW [MHz]	3.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 10 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	-1.67	dBm	PASS
Peak Power	---	1000	0.680769	mW	PASS
Frequency at Peak	---	---	2480	MHz	INFO

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT Classic EDR 8DPSK

References

TC start	15.12.2023 13:08:13
Ambit temp [°C] humidity [rel%]	27.0 32
System version	4.7.1.4
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT - 20dB FHSS - BT Classic EDR 8DPSK
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic EDR 8DPSK
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2441
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-30,1321.3008K30/103170,3.60

Equipment

Switch matrix, CTCadvanced, RSM-1 NI DAQ, 31534892, NI

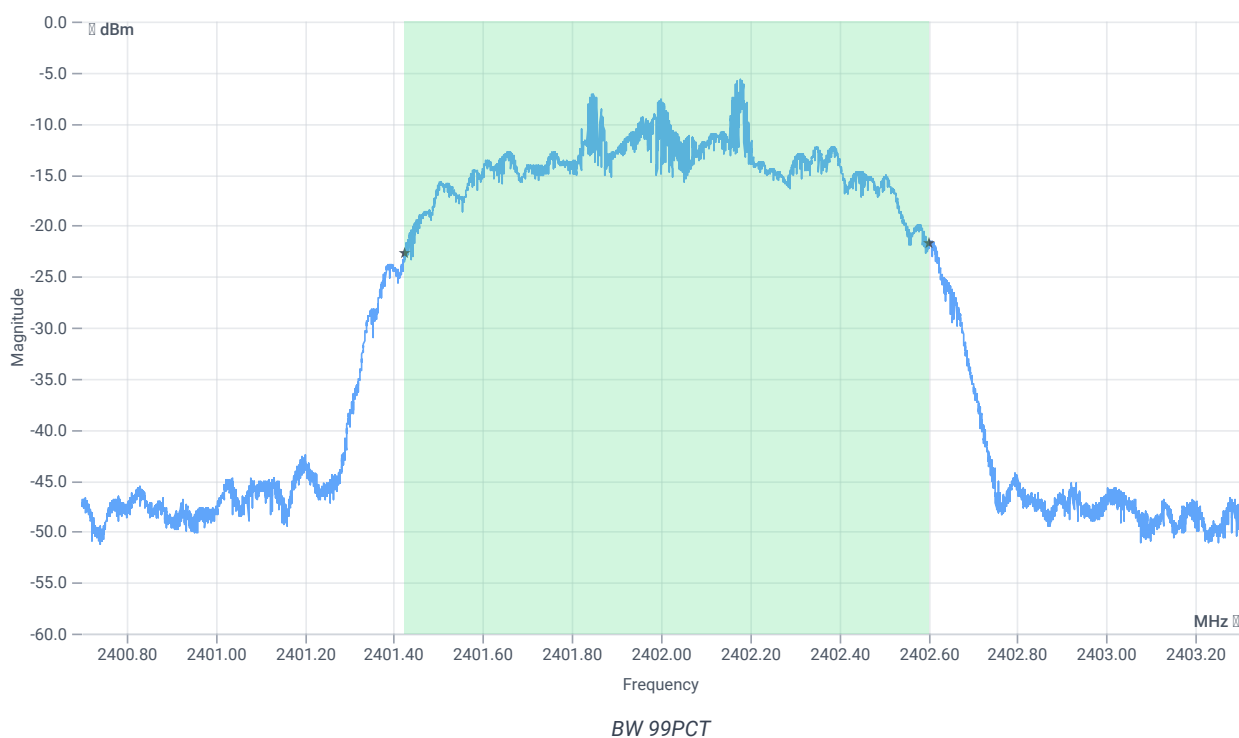
Test at TX 2402 MHz

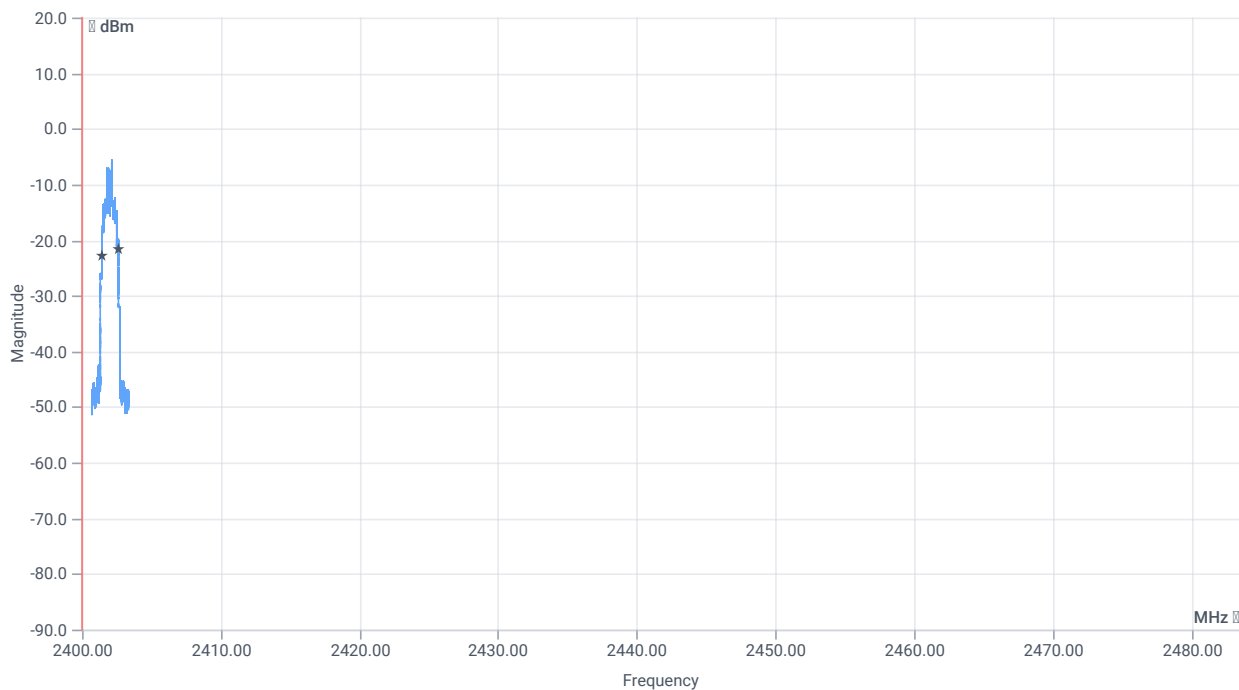
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-3.35	dBm	INFO
Ref. Frequency	---	---	2401.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.65 11.29 10
Start [MHz] Stop [MHz]	2400.700 2403.300
RBW [MHz] VBW [MHz]	0.030000 0.100000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

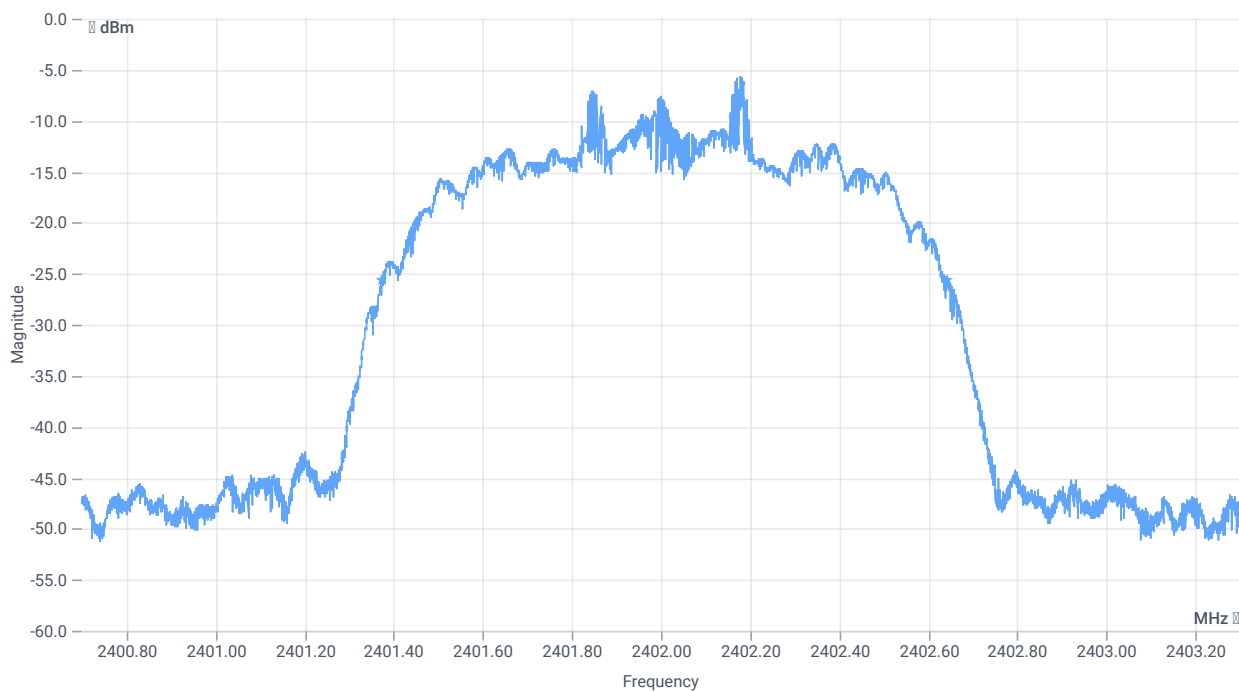




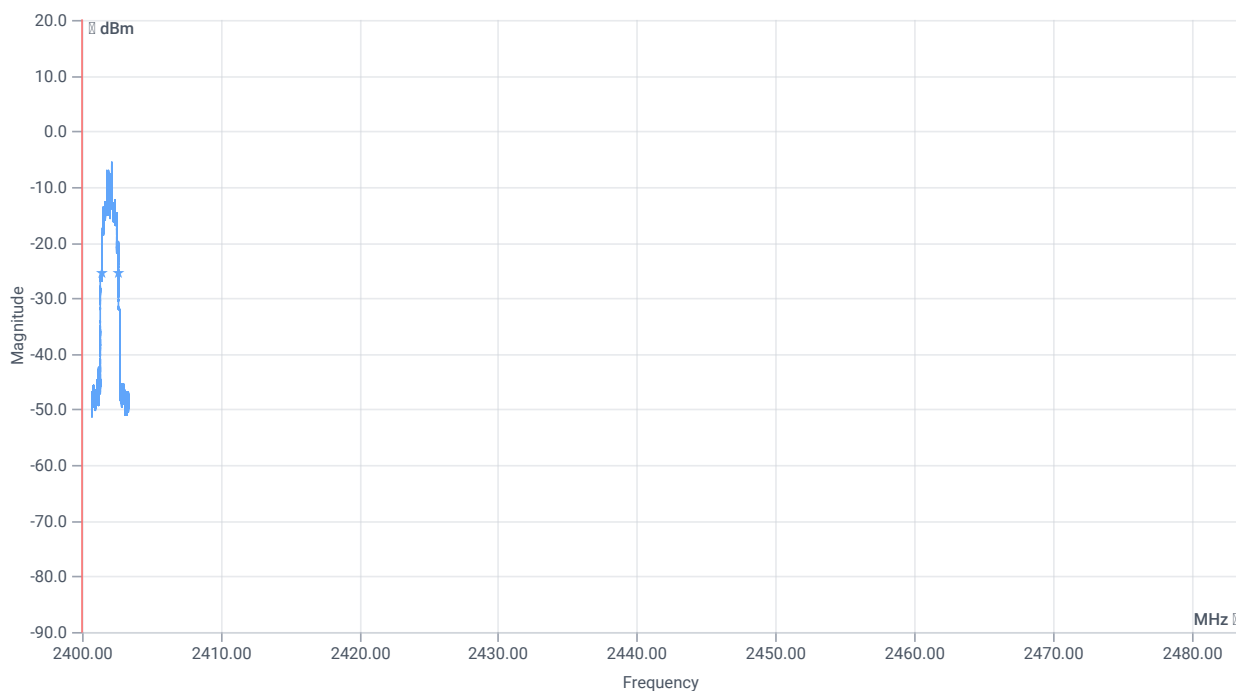
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1178.000	kHz	INFO
T1 99%	2400.000000	---	2401.4247	MHz	PASS
T2 99%	---	2483.500000	2402.6026	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1269	kHz	INFO
T1 20dB	2400.000000	---	2401.3739	MHz	PASS
T2 20dB	---	2483.500000	2402.6425	MHz	PASS

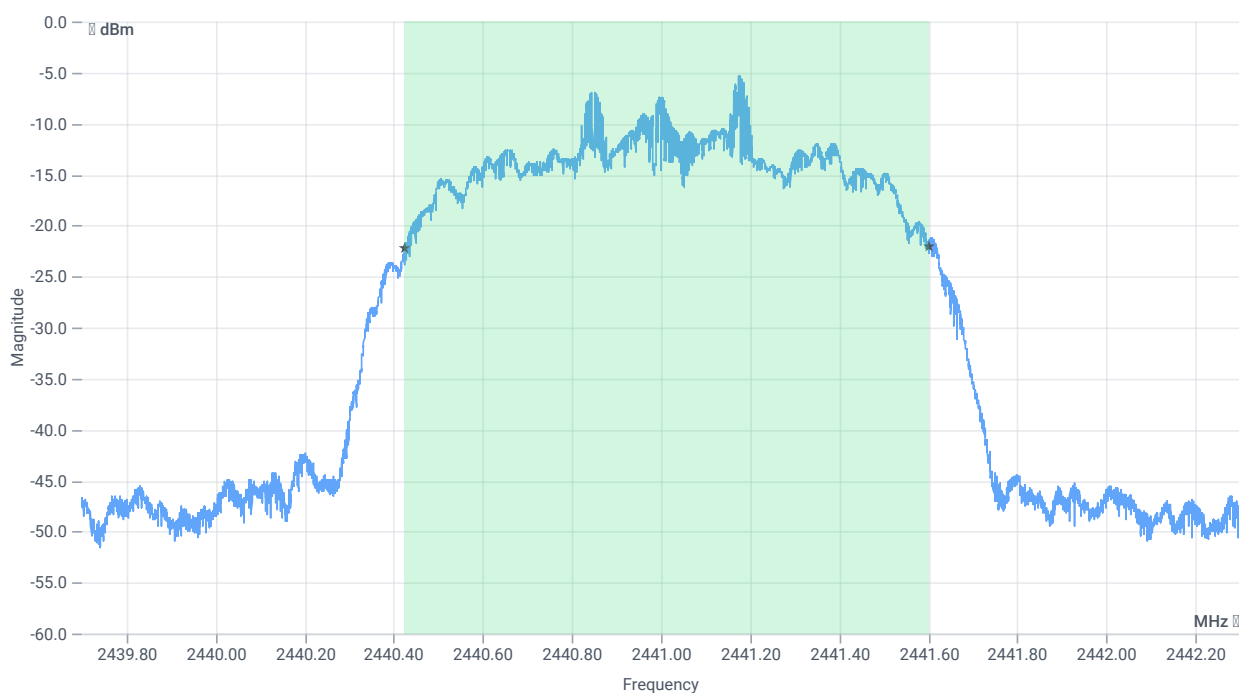
Test at TX 2441 MHz

RESULT: Reference Power cond.

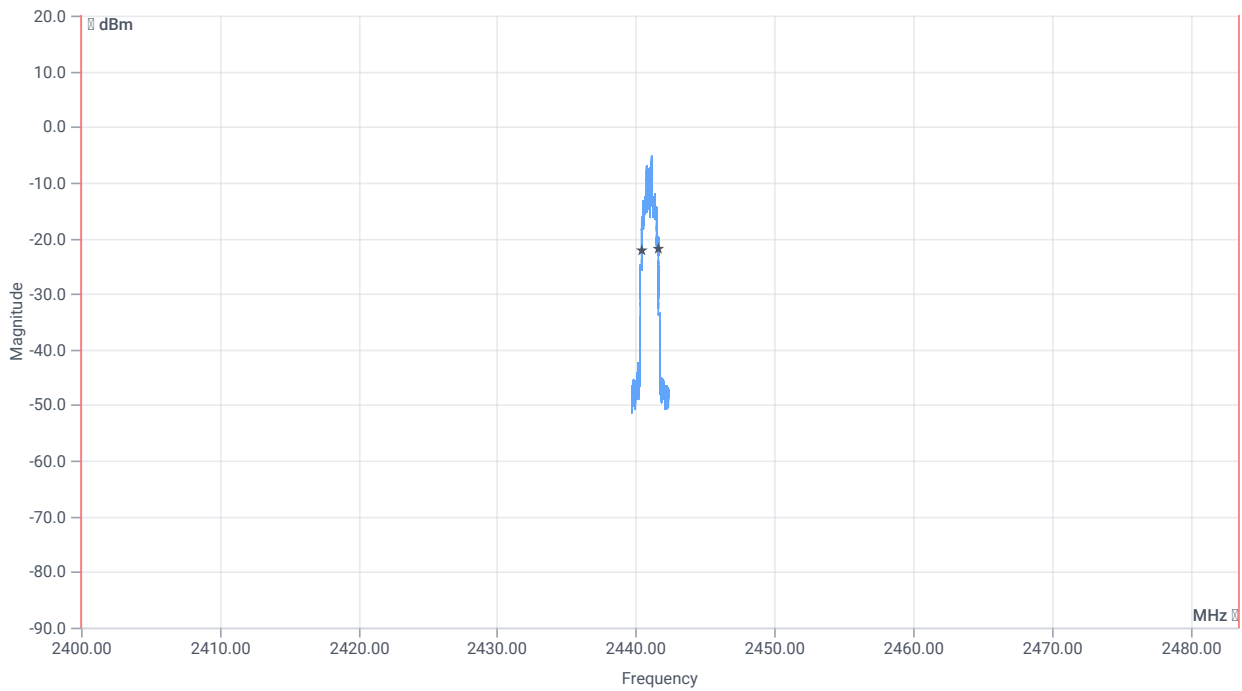
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-2.76	dBm	INFO
Ref. Frequency	---	---	2441.000	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.24 11.36 10
Start [MHz] Stop [MHz]	2439.700 2442.300
RBW [MHz] VBW [MHz]	0.030000 0.100000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE



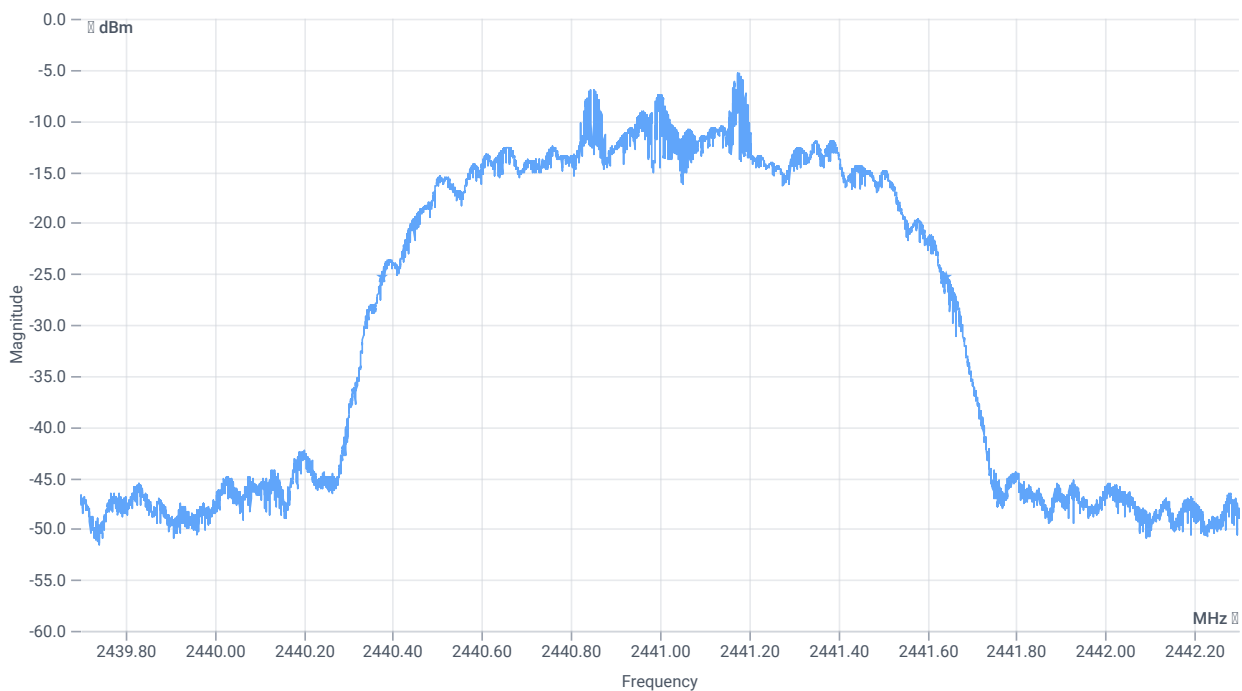
BW 99PCT



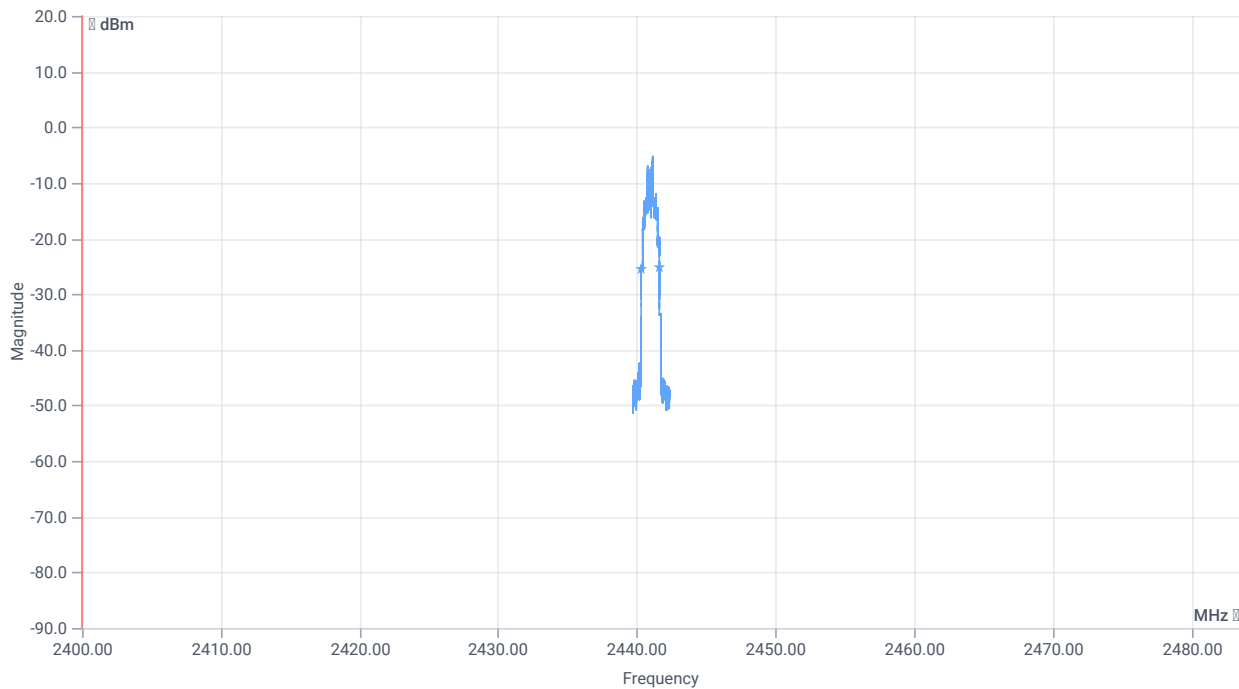
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1178.000	kHz	INFO
T1 99%	2400.000000	---	2440.4252	MHz	PASS
T2 99%	---	2483.500000	2441.6029	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1267	kHz	INFO
T1 20dB	2400.000000	---	2440.3747	MHz	PASS
T2 20dB	---	2483.500000	2441.6422	MHz	PASS

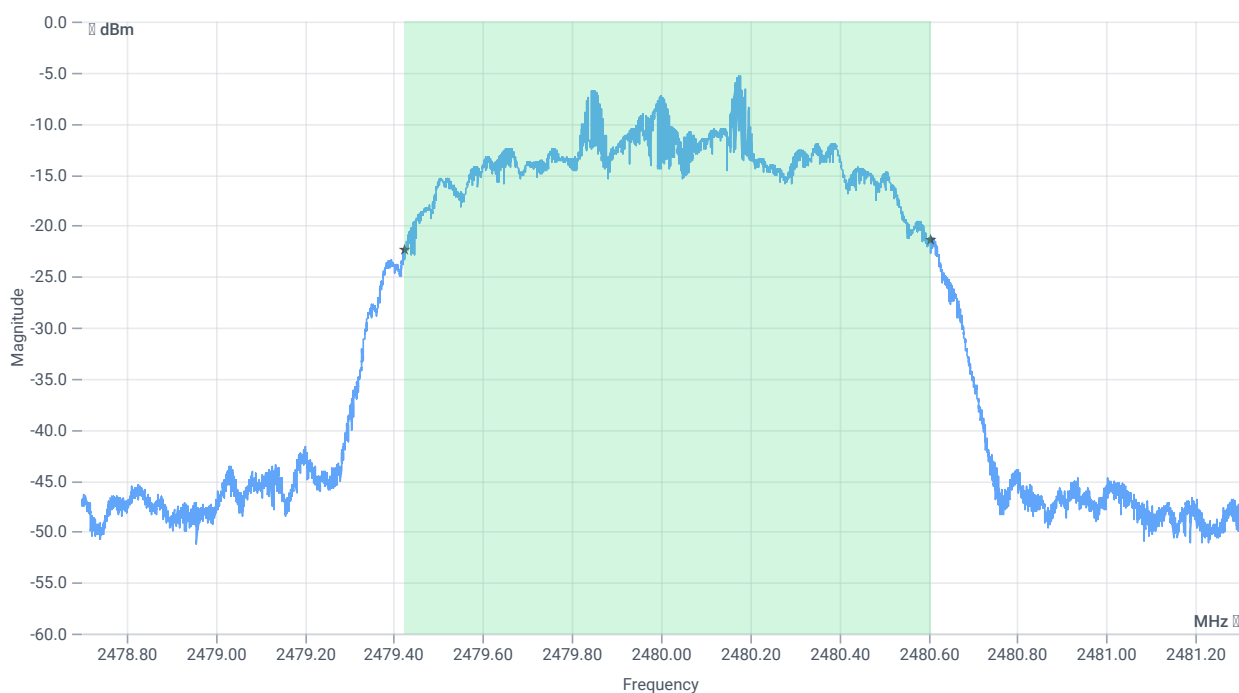
Test at TX 2480 MHz

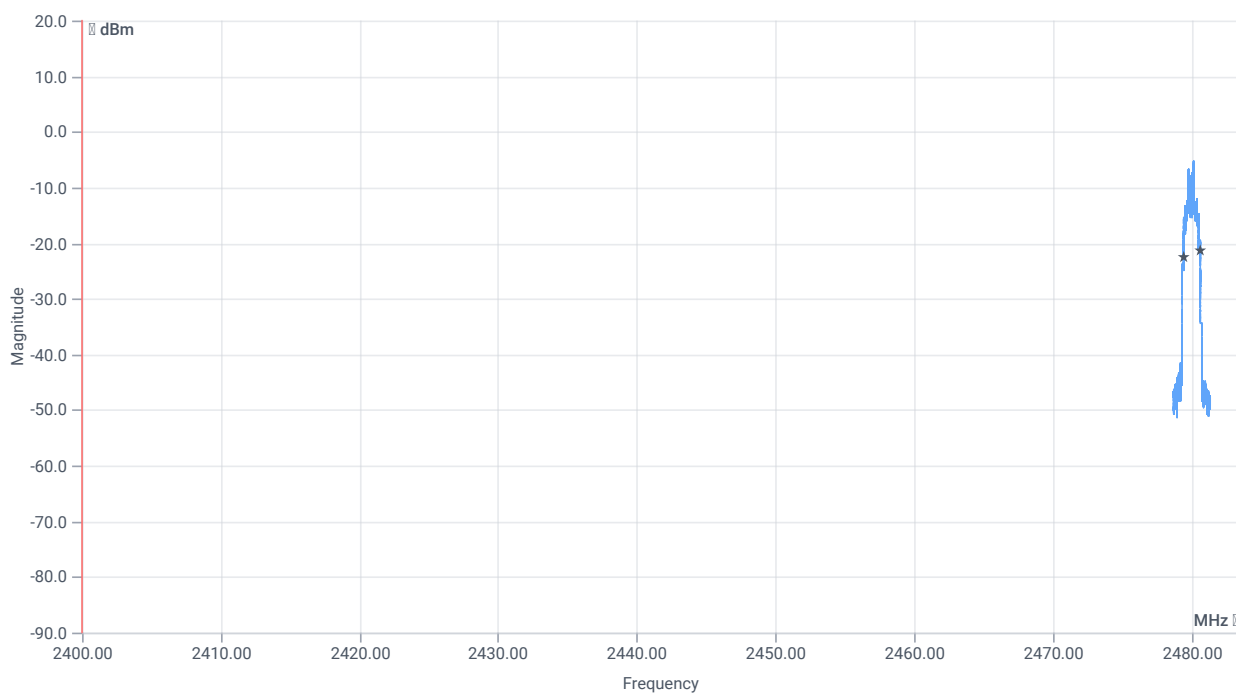
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-2.95	dBm	INFO
Ref. Frequency	---	---	2479.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.05 11.41 10
Start [MHz] Stop [MHz]	2478.700 2481.300
RBW [MHz] VBW [MHz]	0.030000 0.100000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

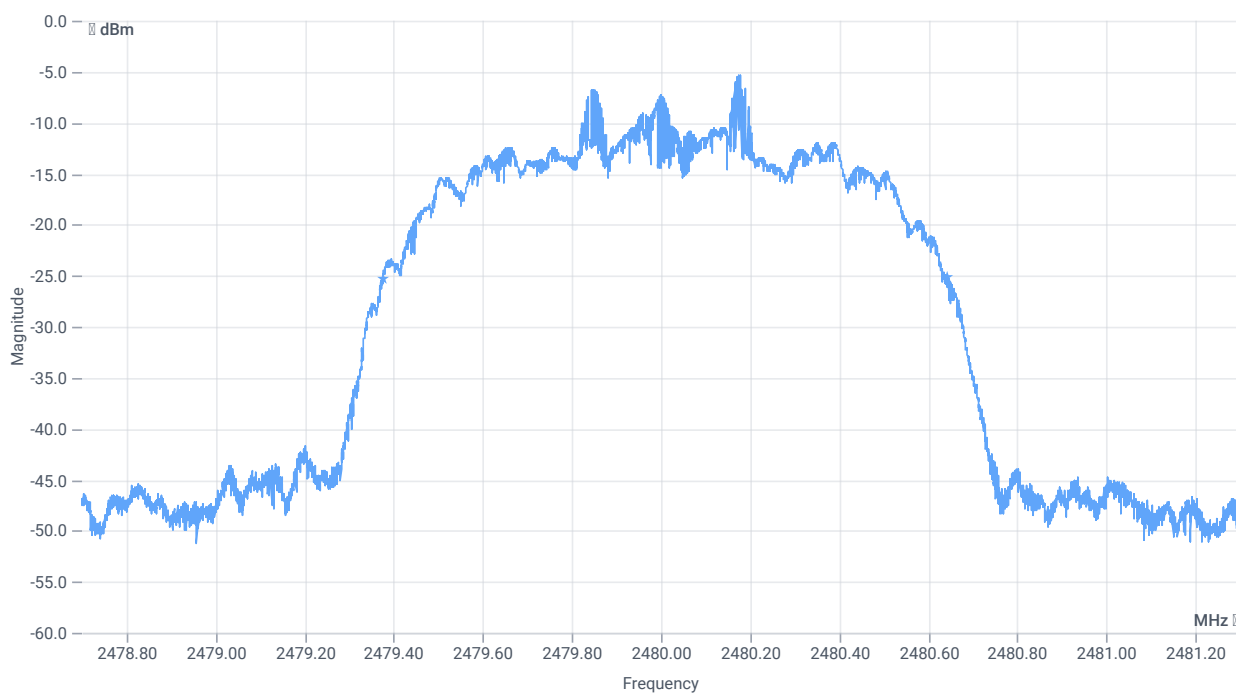




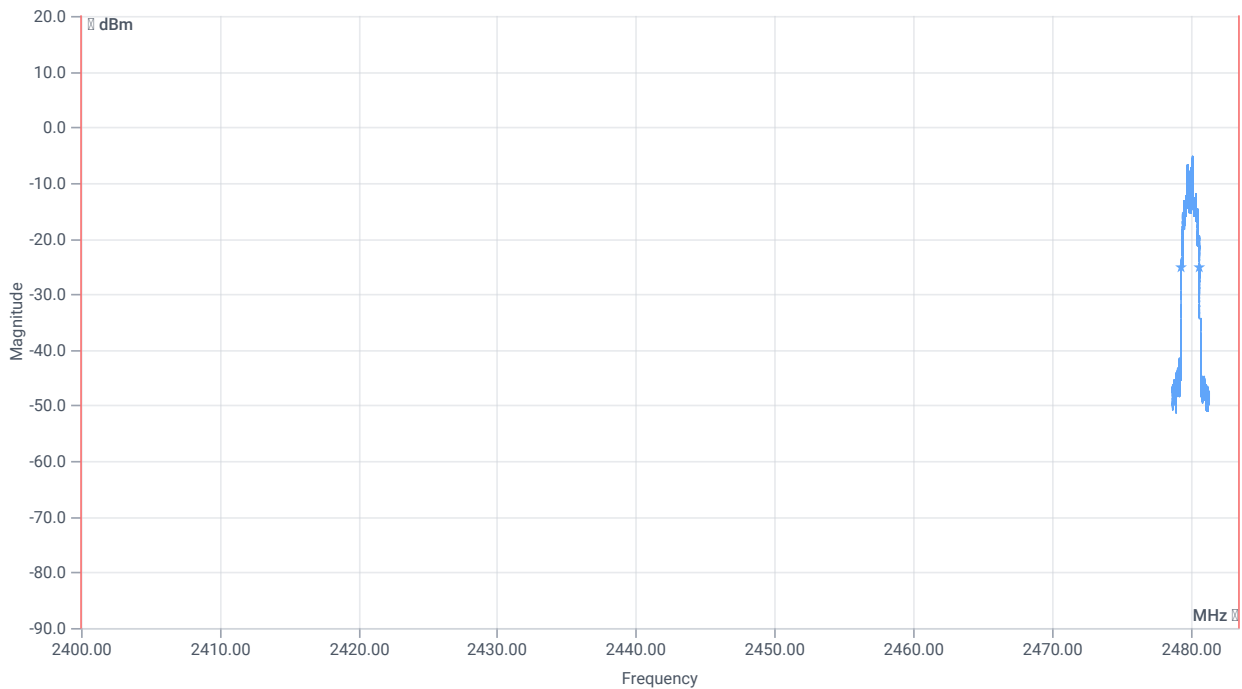
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1179.000	kHz	INFO
T1 99%	2400.000000	---	2479.4249	MHz	PASS
T2 99%	---	2483.500000	2480.6037	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1270	kHz	INFO
T1 20dB	2400.000000	---	2479.3744	MHz	PASS
T2 20dB	---	2483.500000	2480.6443	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 20dBc ~ BT Classic EDR 8DPSK

References

TC start	15.12.2023 13:11:04
Ambit temp [°C] humidity [rel%]	26.9 33
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 FHSS - BT Classic EDR 8DPSK
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic EDR 8DPSK
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2441
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-30,1321.3008K30/103170,3.60

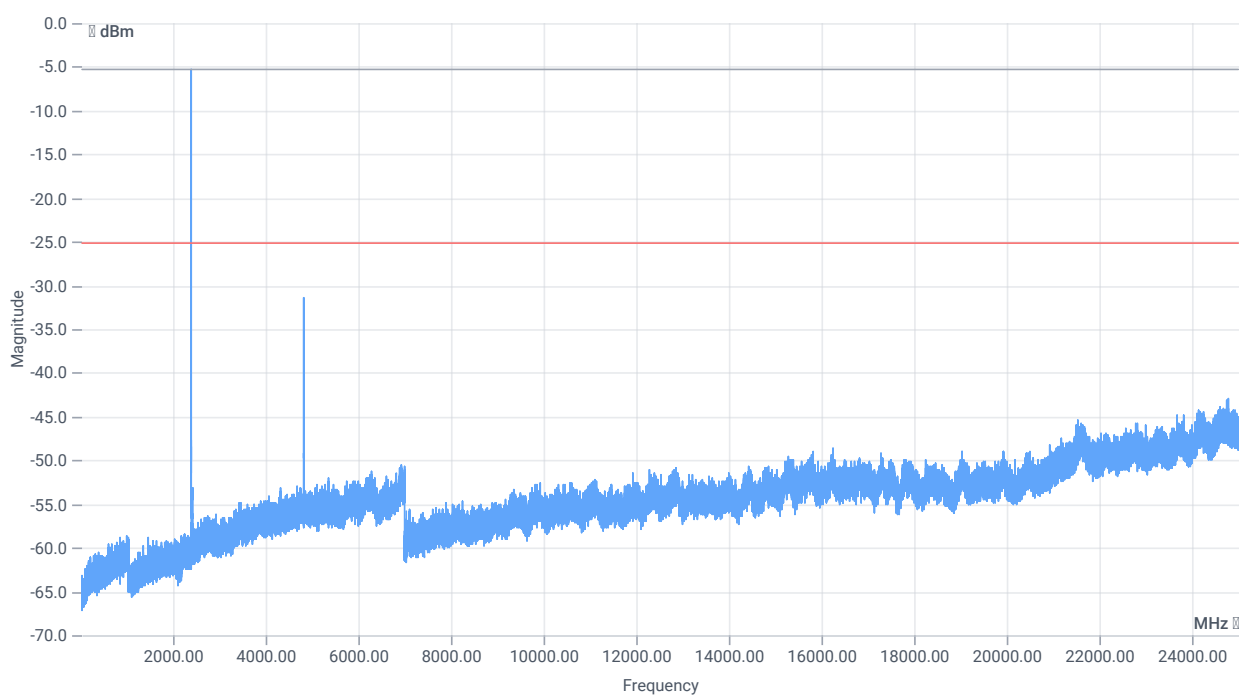
Equipment

Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

Test at TX 2402 MHz

RESULT: Reference Power cond.

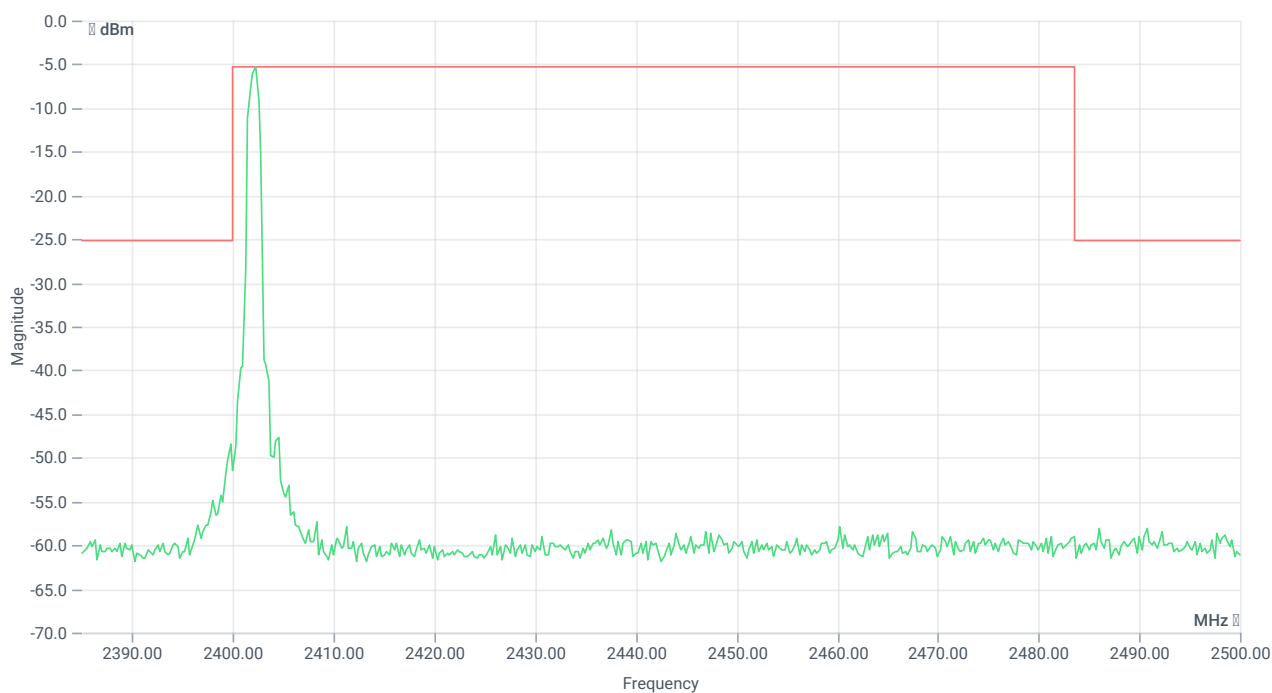
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-3.40	dBm	INFO
Ref. Frequency	---	---	2402.100	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-3.40 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	200 25 2001 SWE



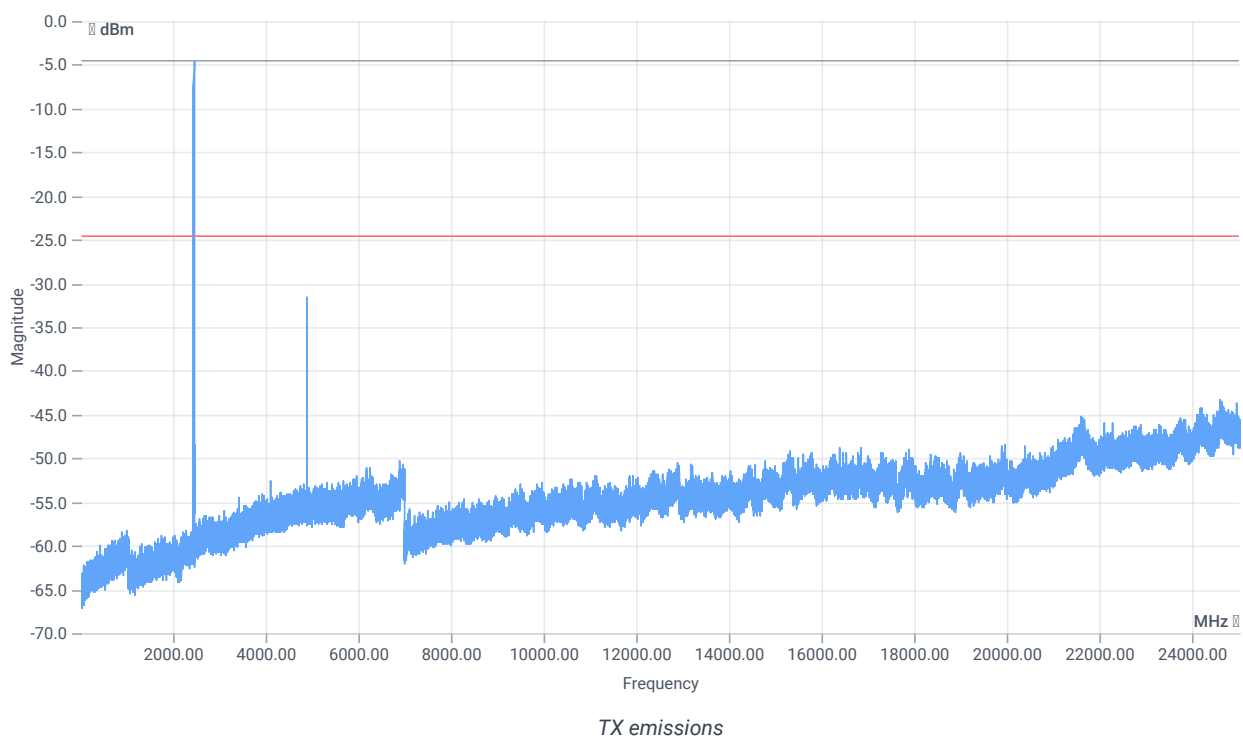
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2402.25 MHz	---	---	-5.22	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4804 MHz	0	---	6.26	dB	INFO

Test at TX 2441 MHz

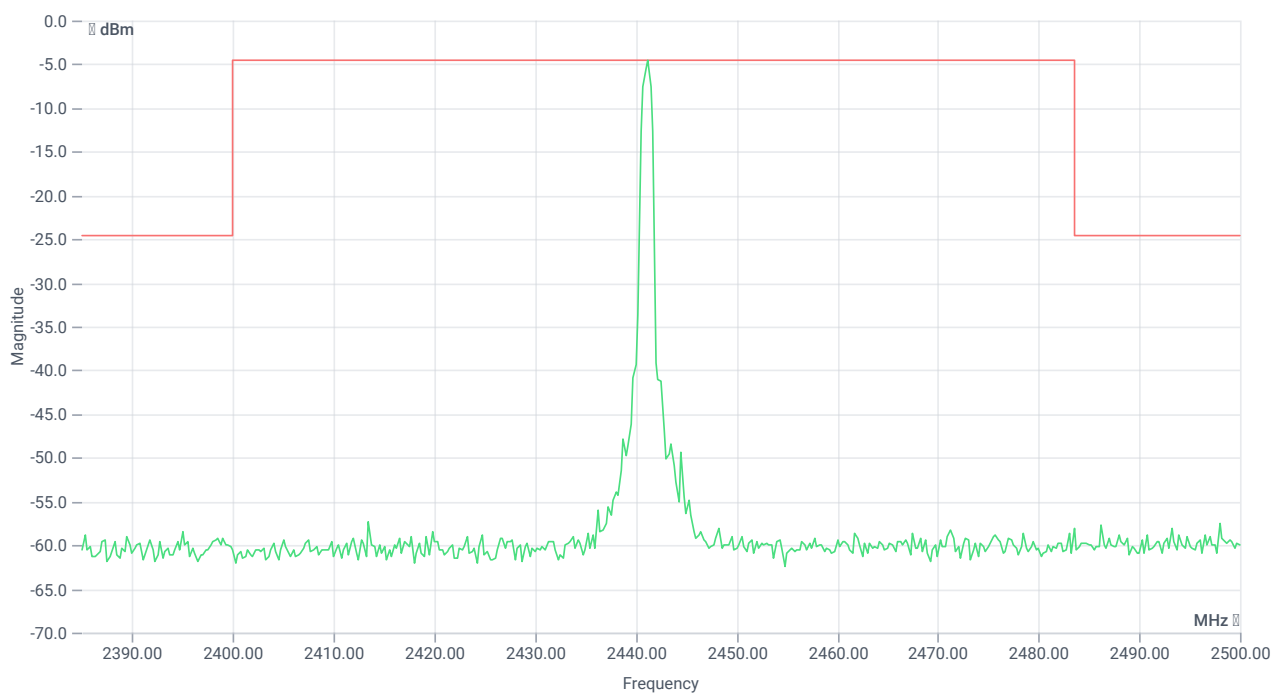
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-3.16	dBm	INFO
Ref. Frequency	---	---	2441.100	MHz	INFO



READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-3.16 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	200 25 2001 SWE



TX emissions band zoomed

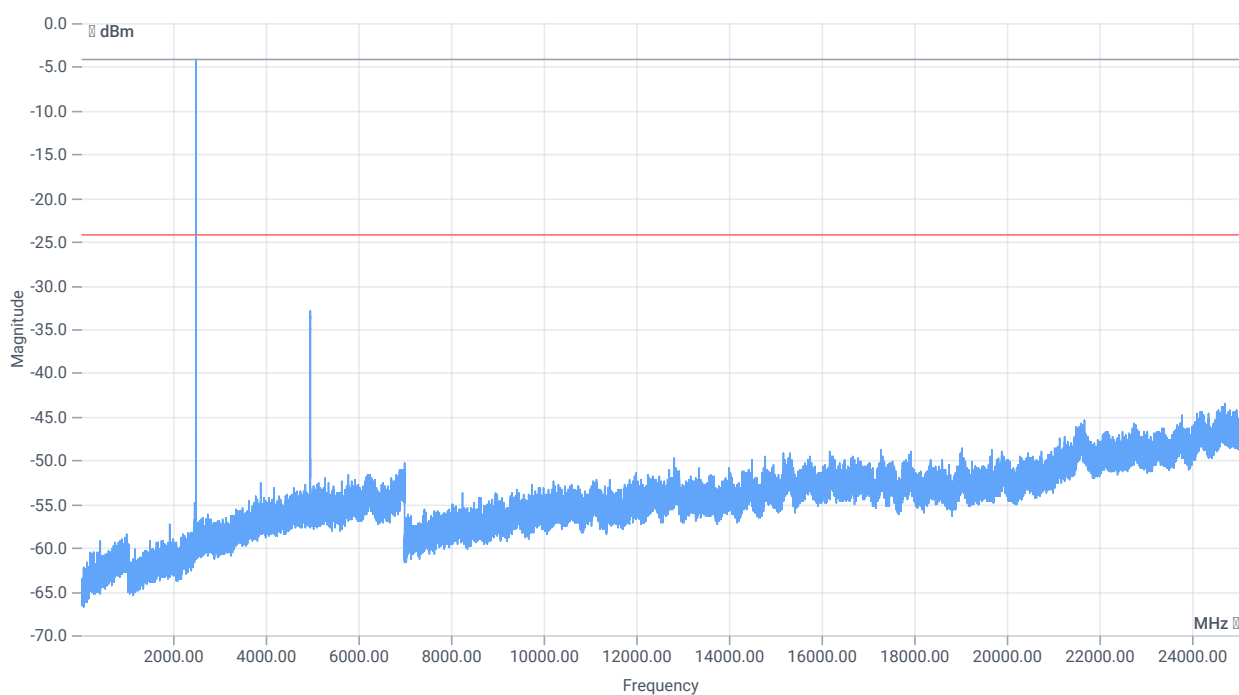
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2441.25 MHz	---	---	-4.61	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 30 MHz	0	---	-135.54	dB	INFO

Test at TX 2480 MHz

RESULT: Reference Power cond.

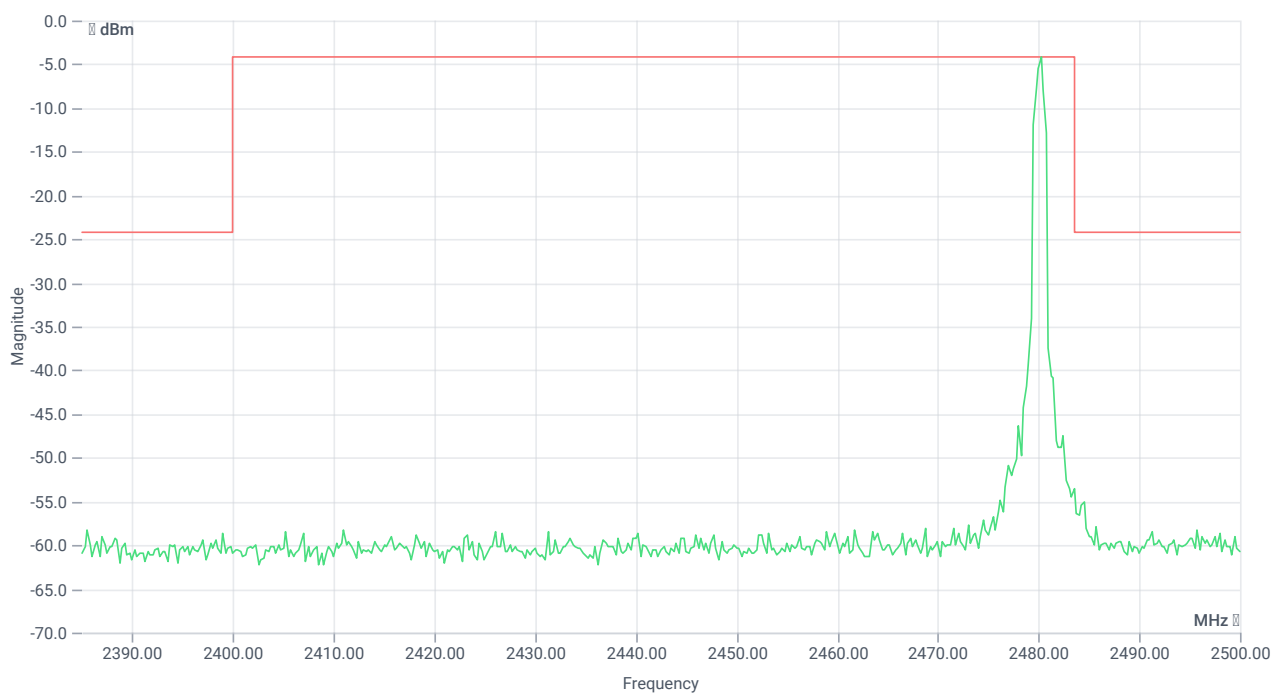
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-2.96	dBm	INFO
Ref. Frequency	---	---	2480.100	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-2.96 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	200 25 2001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2480.25 MHz	---	---	-4.22	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4960.5 MHz	0	---	8.77	dB	INFO

Verdict

PASS

FCC 15.247 # TX Emissions on band edge FCC ~ BT Classic EDR 8DPSK

References

TC start	15.12.2023 13:36:14
Ambit temp [°C] humidity [rel%]	27.0 32
System version	4.7.1.4
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 TX Emissions conducted on band edge FHSS - BT Classic EDR 8DPSK
Information	

EUT Common Settings BT Classic

Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	1
Power Control	No
Longest Supported Packet Type	DH5
RF Supported	Basic Rate True EDR Pi/4DQPSK True EDR 8DPSK True
Testmode	None
Perform Inquiry	Yes
EUT BT Address (if Inquiry No)	6C1DEB90A60A
Signaling BT Address	BABEBEDADBAD
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter

Technology to test	BT Classic EDR 8DPSK
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2441
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

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

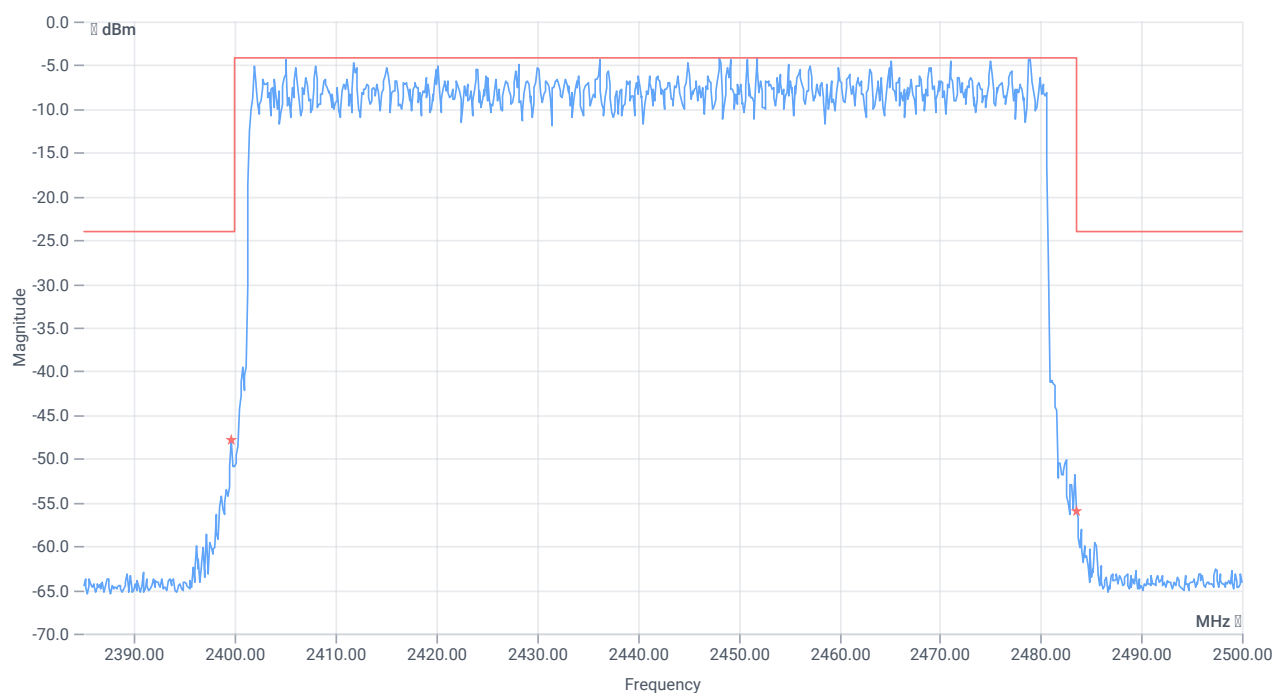
Test at TX hopping MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	-2.06	dBm	INFO
Ref. Frequency	---	---	2462.080	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.94 11.36 10
Start [MHz] Stop [MHz]	2385.000 2500.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	30 1800 1001 SWE



TX emissions on band edge

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Max peak lower Band	---	-24.11	-47.87	dBm	PASS
Max peak upper Band	---	-24.11	-55.96	dBm	PASS

Verdict

PASS

- END OF DOCUMENT -