Measurement Results

No.1-5618/22-01-09_Annex_MR2

June 06, 2023

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

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

Test References

TC Start	03.05.2023 11:20:03
Ambit Temp [°C] | Humidity [rel%]	29.7 | 23
System Version	4.0.1.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted FHSS - BT Classic Basic Rate
Add. 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	LOOPback
Perform Inquiry	Yes
EUT BT Address (if Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

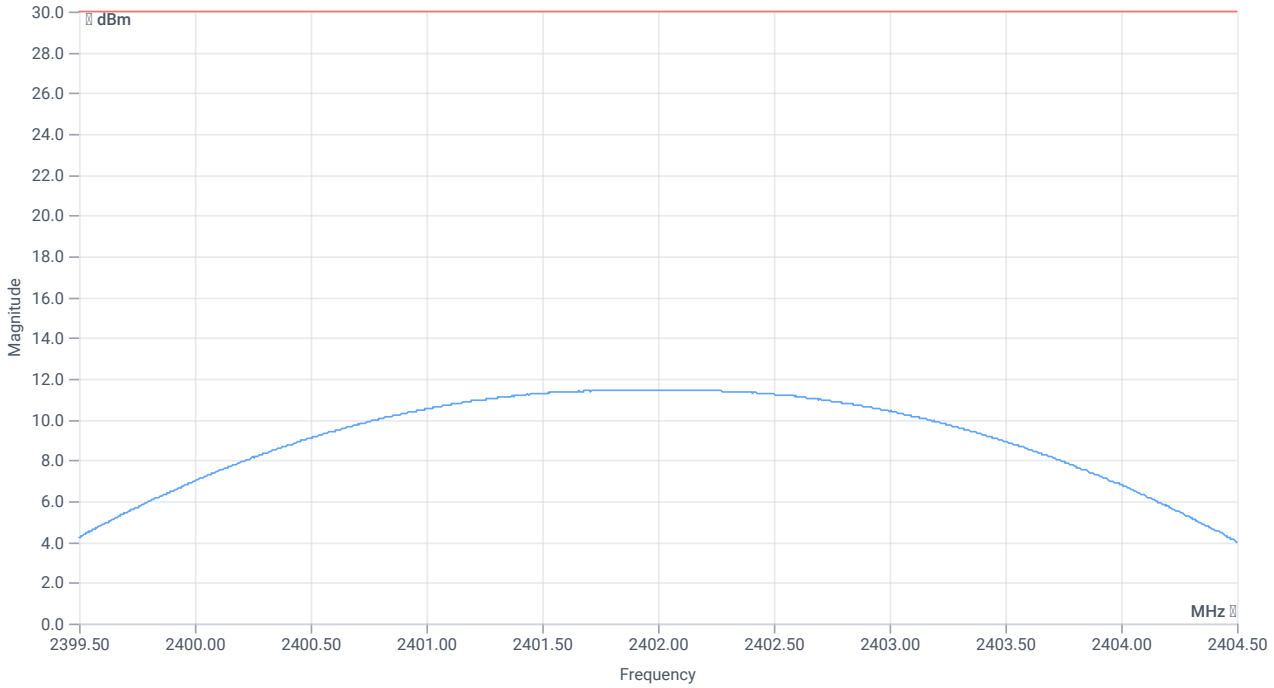
Test at TX 2402 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.36	dBm	INFO
Ref. Frequency	---	---	2402.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	21.36 | 10.59 | 30
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



Peak output power

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	11.45	dBm	PASS
Peak Power	---	1000	13.963684	mW	PASS
Frequency at Peak	---	---	2402.08	MHz	INFO

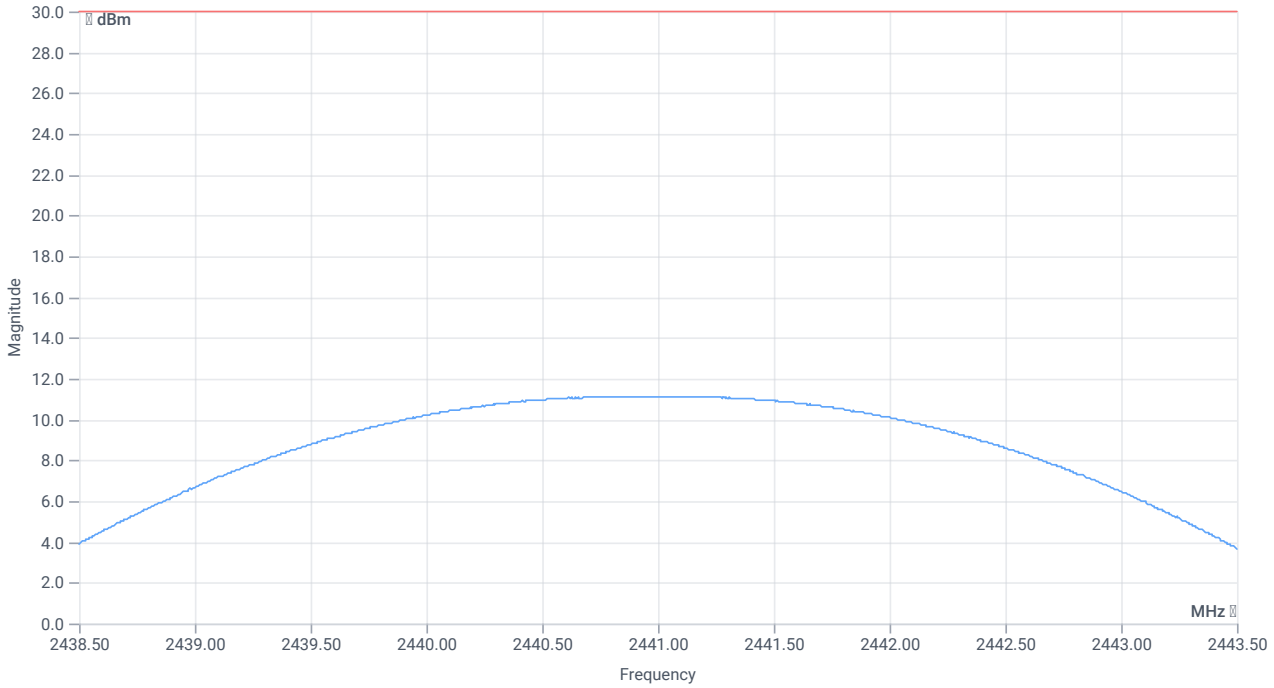
Test at TX 2441 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.03	dBm	INFO
Ref. Frequency	---	---	2441.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	21.03 | 10.66 | 30
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



Peak output power

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	11.13	dBm	PASS
Peak Power	---	1000	12.971793	mW	PASS
Frequency at Peak	---	---	2440.825	MHz	INFO

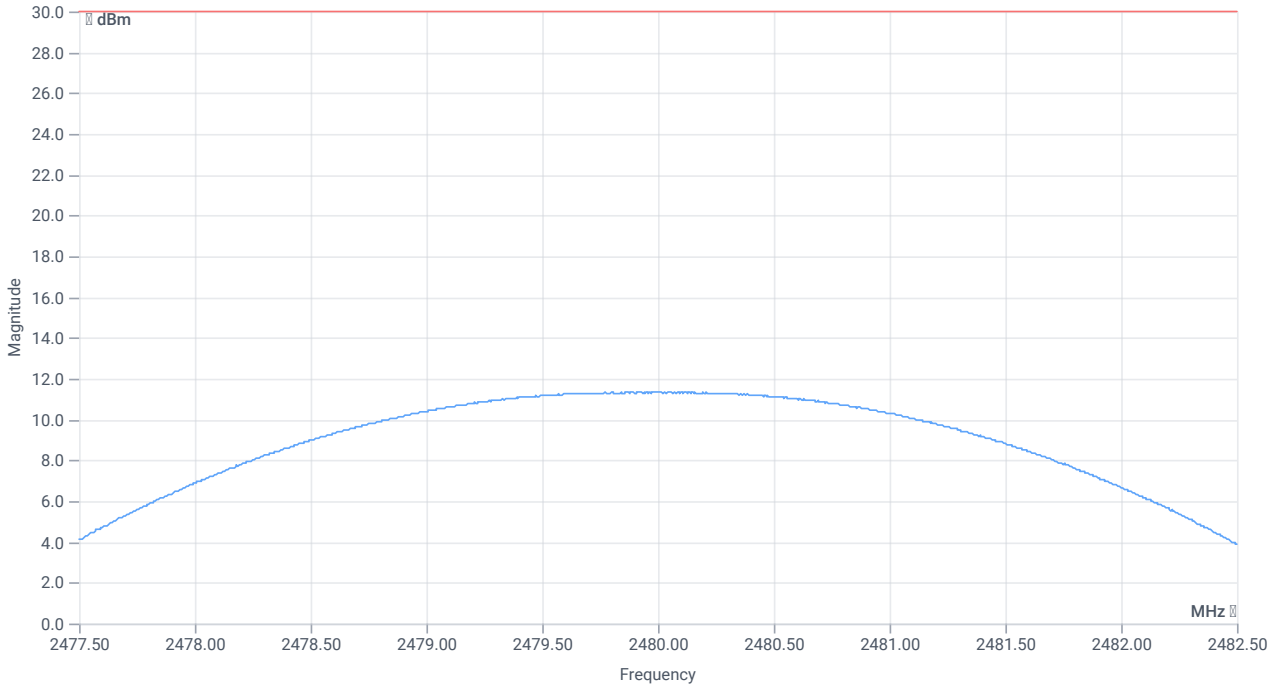
Test at TX 2480 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.23	dBm	INFO
Ref. Frequency	---	---	2480.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	21.23 | 10.71 | 30
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



Peak output power

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	11.34	dBm	PASS
Peak Power	---	1000	13.614447	mW	PASS
Frequency at Peak	---	---	2480.015	MHz	INFO

Verdict
PASS

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

Test References

TC Start	05.06.2023 10:46:21
Ambit Temp [°C] | Humidity [rel%]	0.0 | 0
System Version	4.0.1.4
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Number Of Hopping Channels FHSS - BT Classic Basic Rate
Add. 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 Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

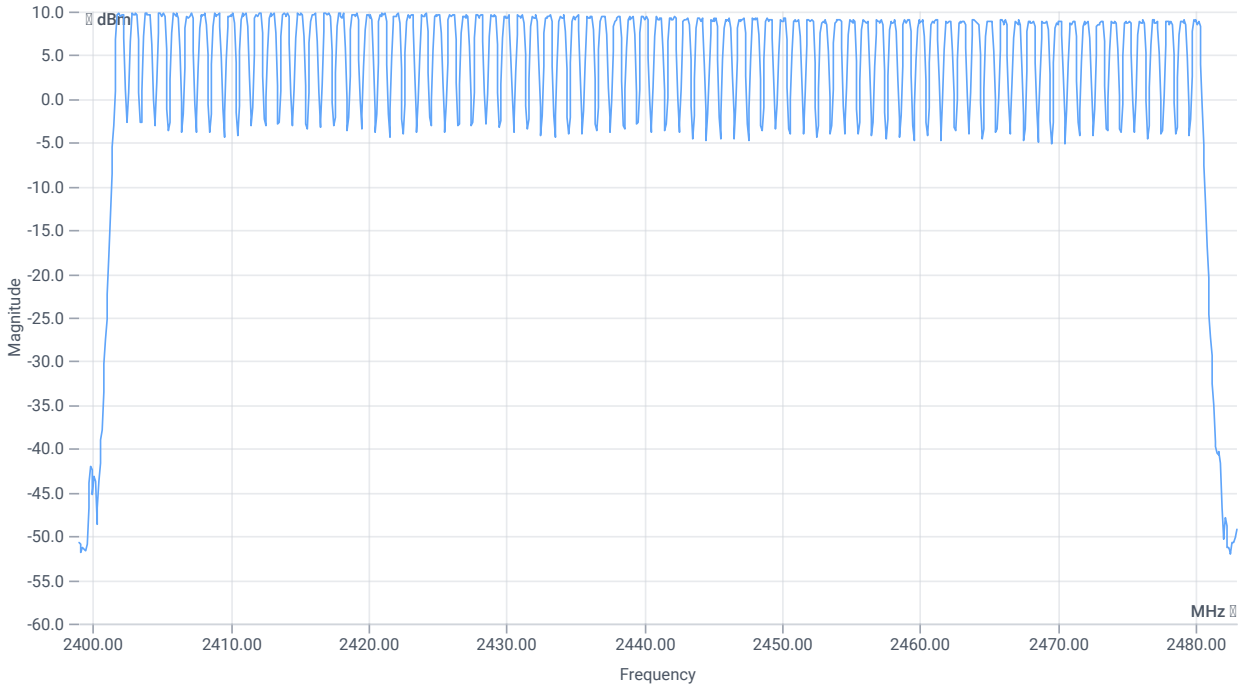
Test at TX hopping MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.00	dBm	INFO
Ref. Frequency	---	---	2416.120	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	15.00 | 10.66 | 20
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

TEST 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

TEST 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

TEST 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

TEST 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

TEST 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

Test References

TC Start	05.06.2023 10:47:22
Ambit Temp [°C] | Humidity [rel%]	0.0 | 0
System Version	4.0.1.4
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Carrier Frequency Separation FHSS - BT Classic Basic Rate
Add. 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 Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

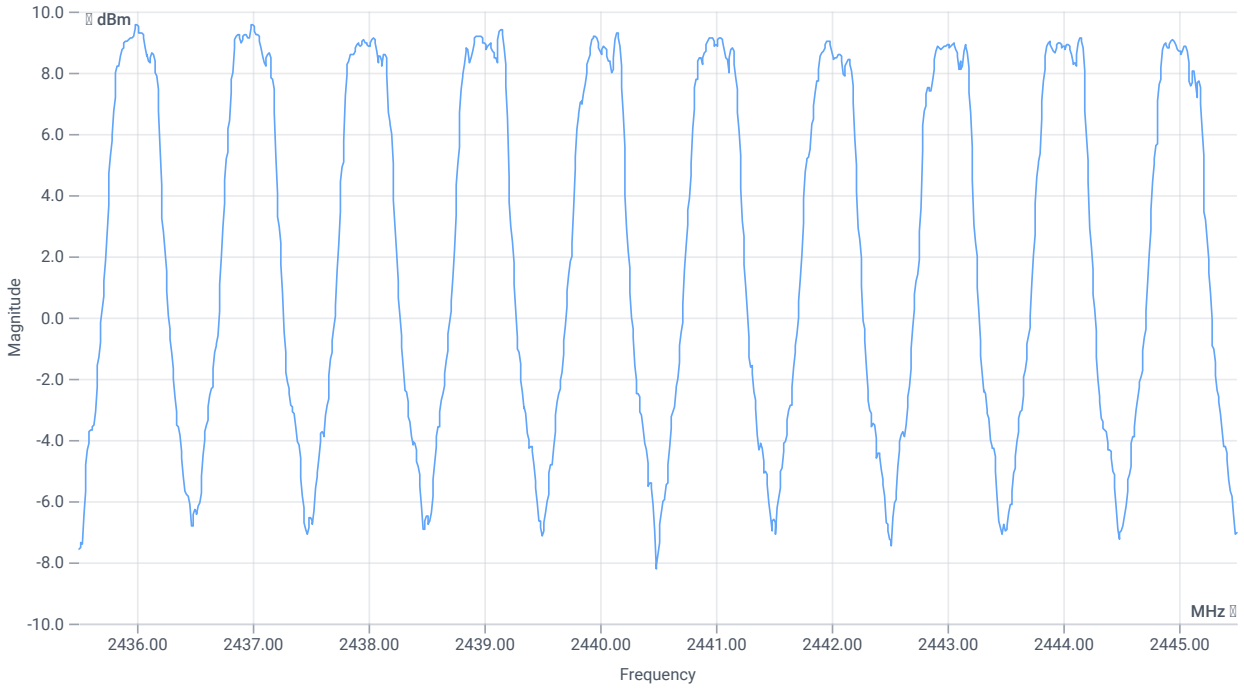
Test at TX hopping MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.89	dBm	INFO
Ref. Frequency	---	---	2411.130	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	14.89 | 10.66 | 20
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



CFS

RESULT

TEST 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

TEST 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

Test References

TC Start	05.06.2023 10:54:05
Ambit Temp [°C] | Humidity [rel%]	0.0 | 0
System Version	4.0.1.4
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT - 20dB FHSS - BT Classic Basic Rate
Add. 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 Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

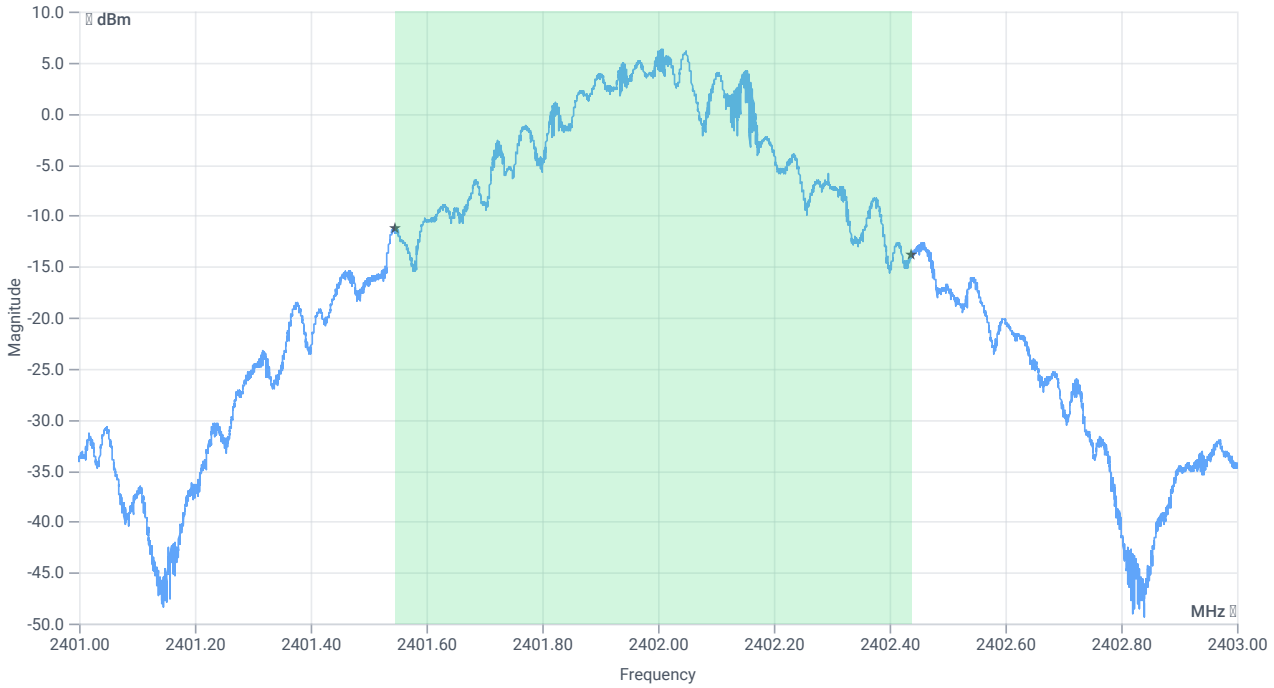
Test at TX 2402 MHz

RESULT: Reference Power cond.

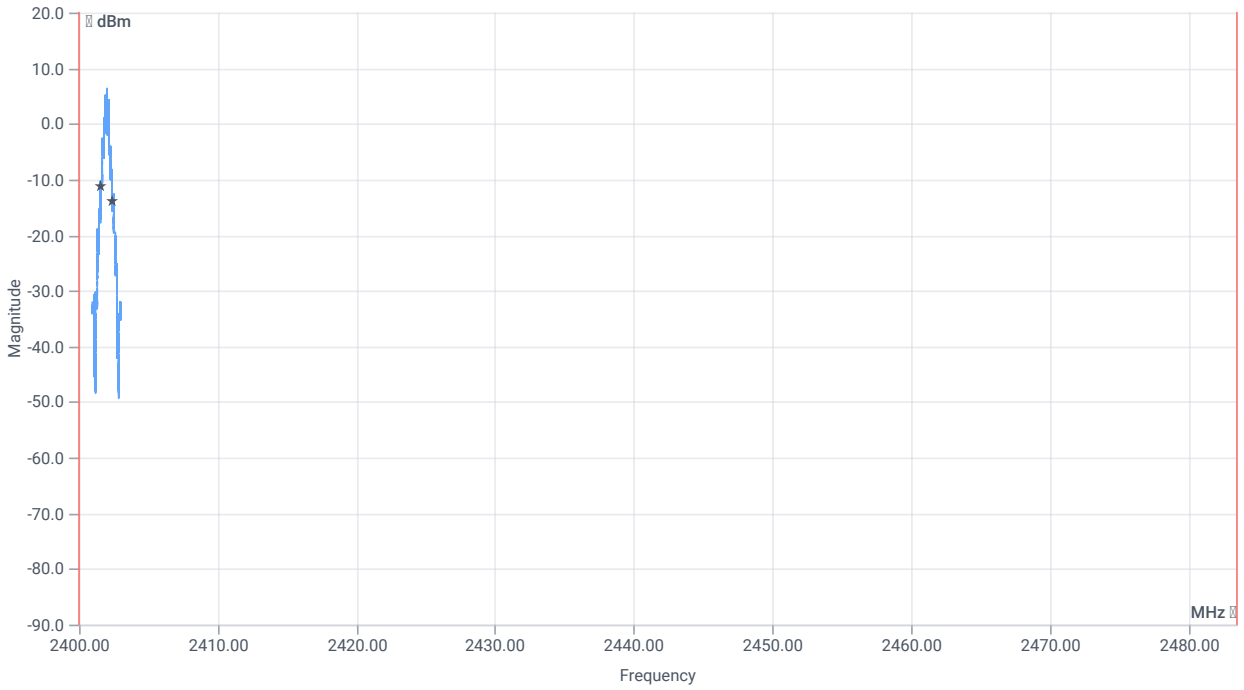
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.63	dBm	INFO
Ref. Frequency	---	---	2402.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	14.63 | 10.59 | 20
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



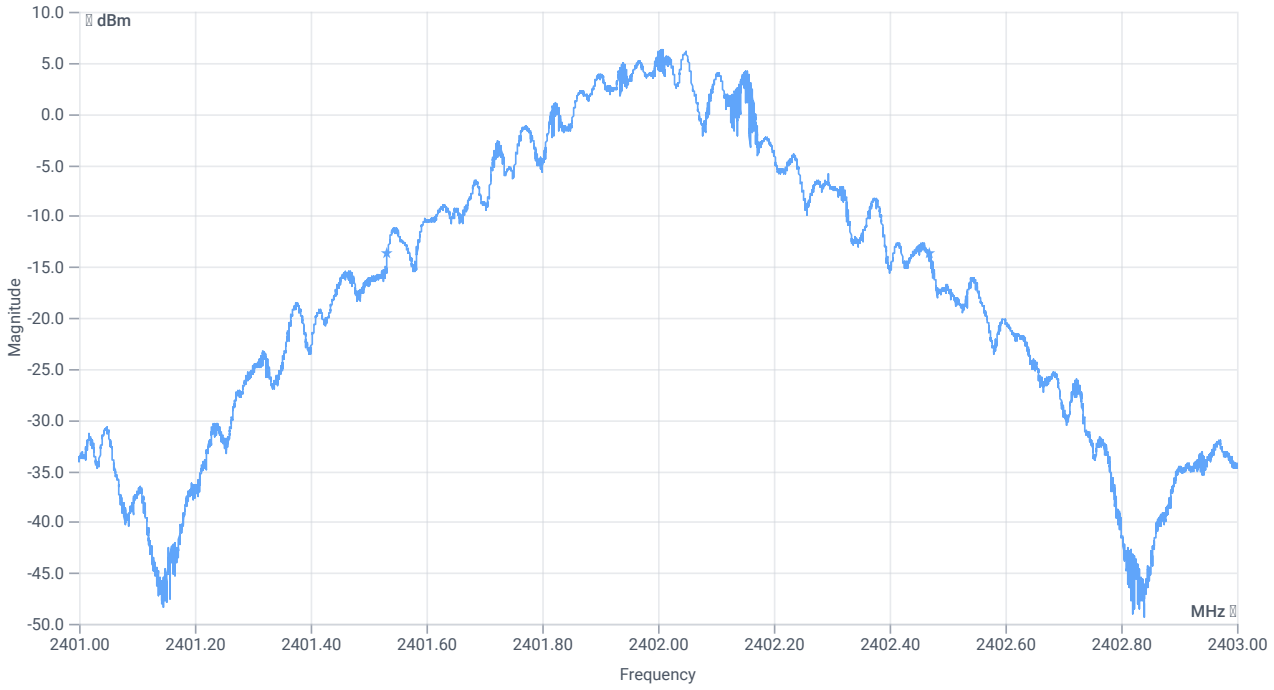
BW 99PCT



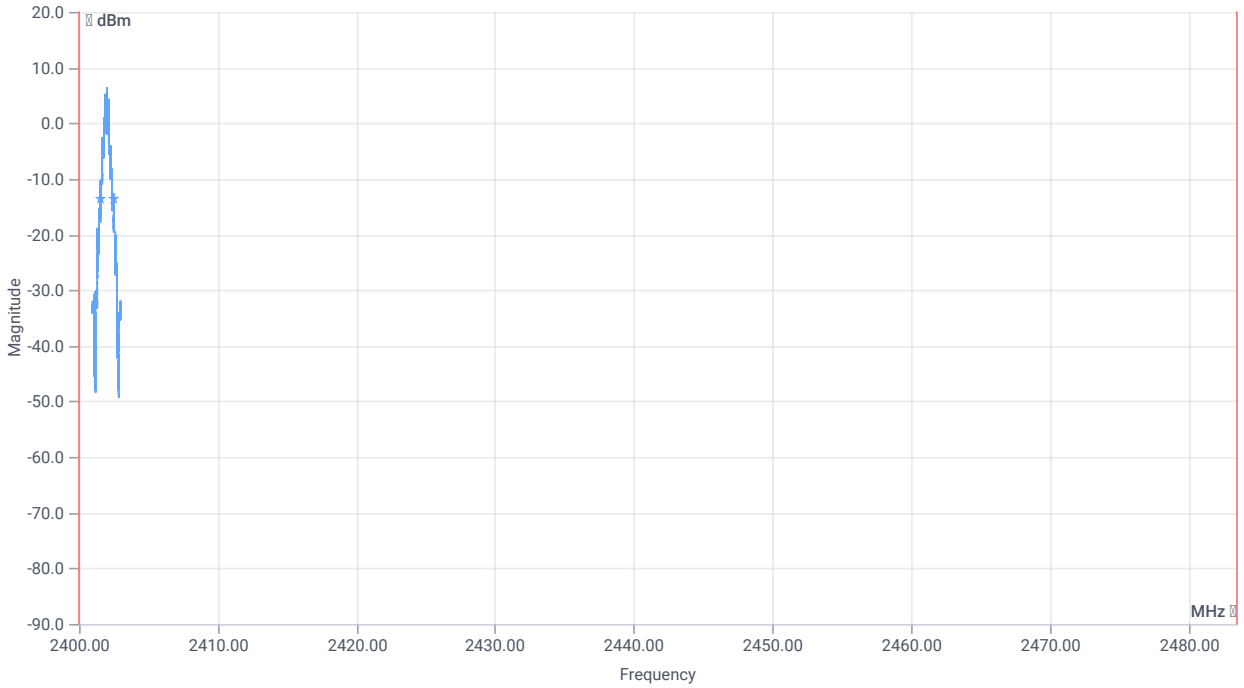
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	891.000	kHz	INFO
T1 99%	2400.000000	---	2401.5458	MHz	PASS
T2 99%	---	2483.500000	2402.4368	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	936	kHz	INFO
T1 20DB	2400.000000	---	2401.5326	MHz	PASS
T2 20dB	---	2483.500000	2402.4690	MHz	PASS

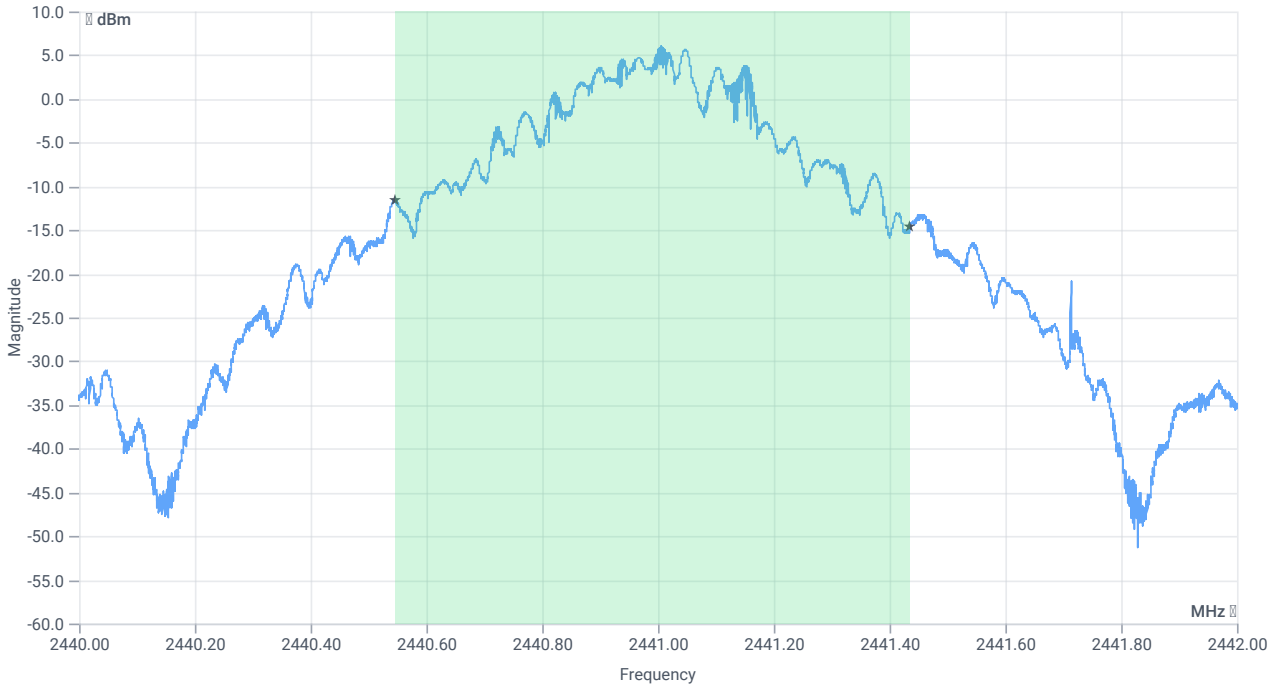
Test at TX 2441 MHz

RESULT: Reference Power cond.

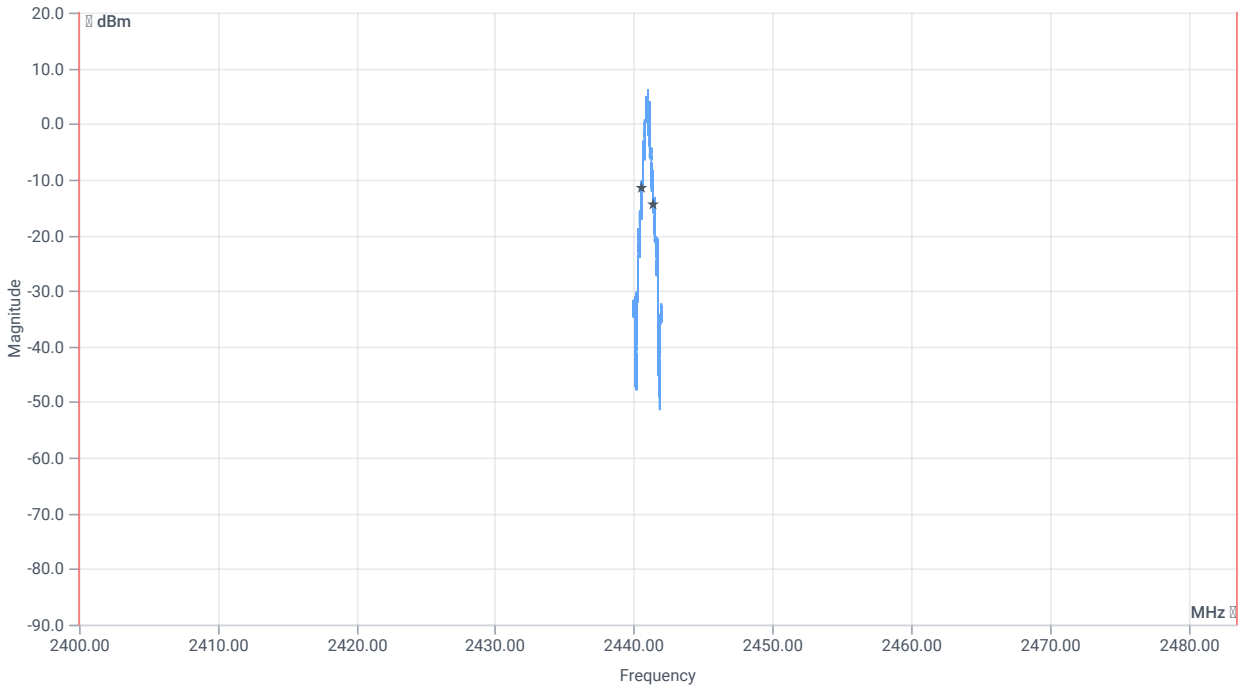
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.25	dBm	INFO
Ref. Frequency	---	---	2441.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	14.25 | 10.66 | 20
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



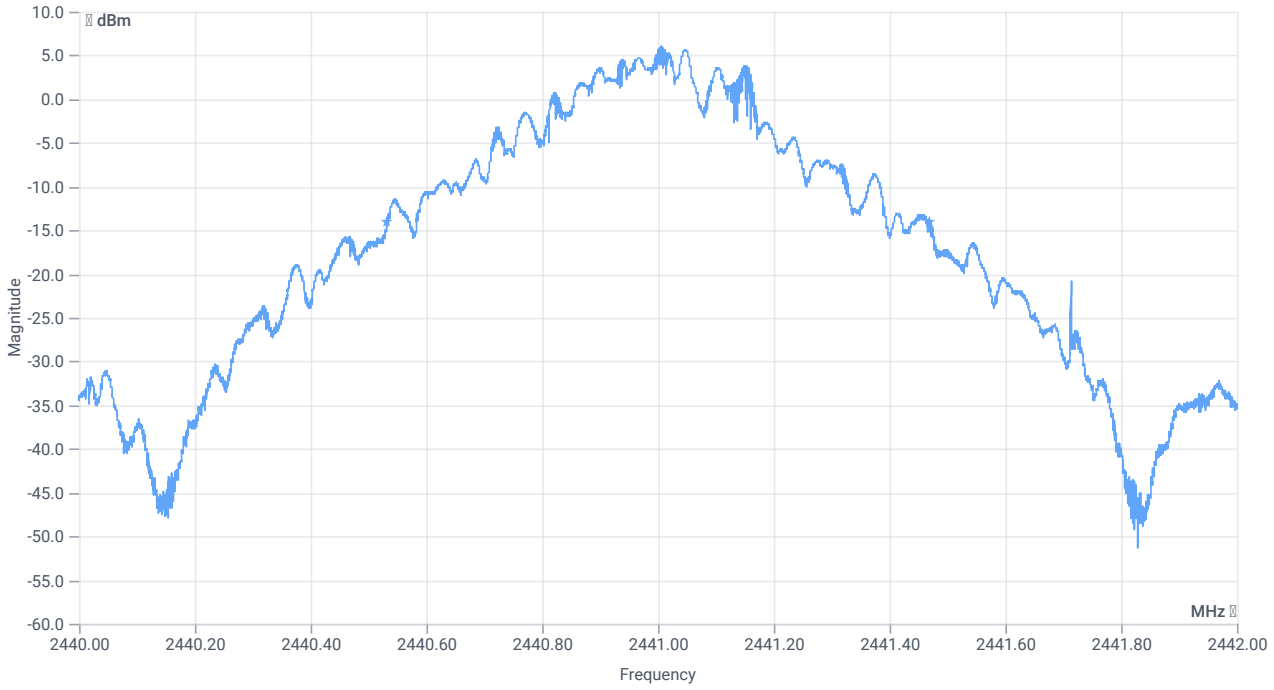
BW 99PCT



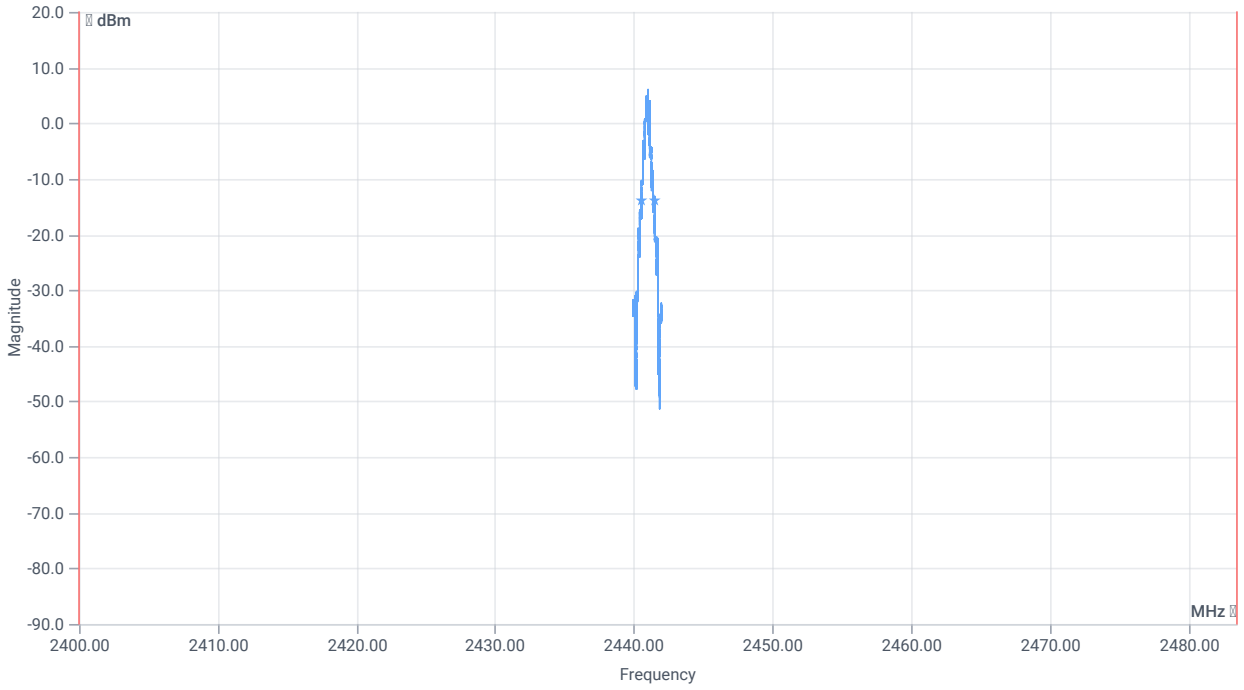
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	890.000	kHz	INFO
T1 99%	2400.000000	---	2440.5458	MHz	PASS
T2 99%	---	2483.500000	2441.4354	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	935	kHz	INFO
T1 20DB	2400.000000	---	2440.5326	MHz	PASS
T2 20dB	---	2483.500000	2441.4680	MHz	PASS

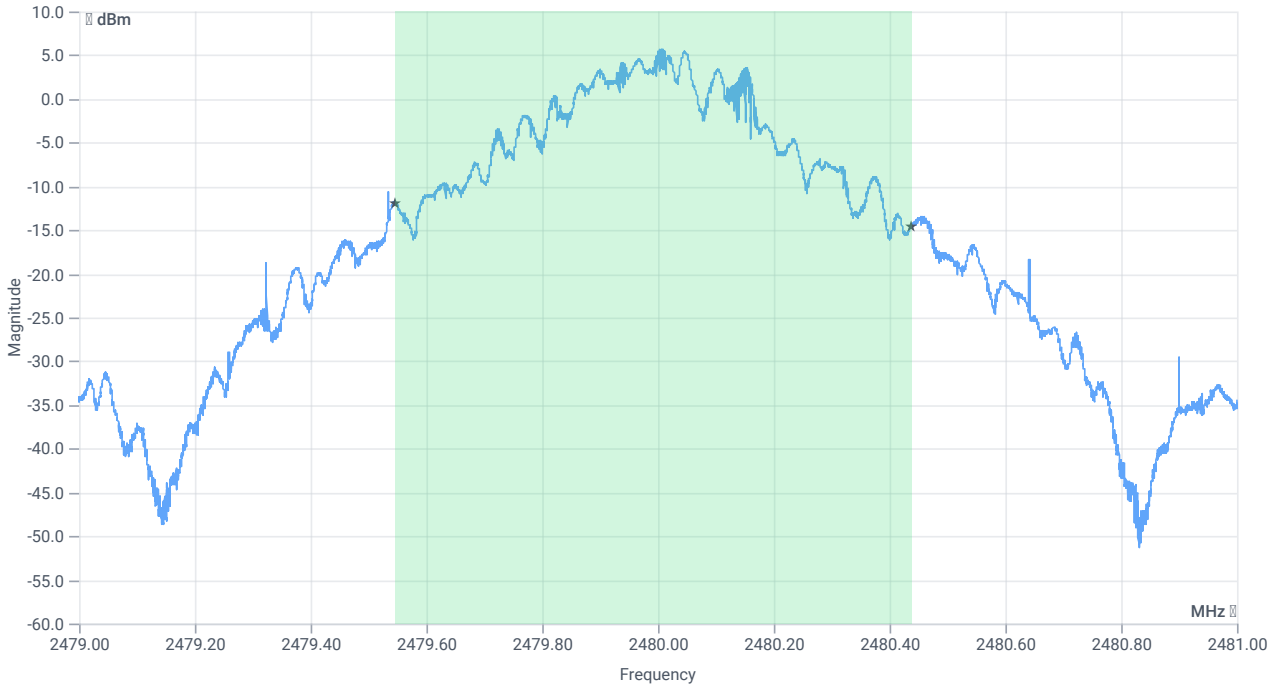
Test at TX 2480 MHz

RESULT: Reference Power cond.

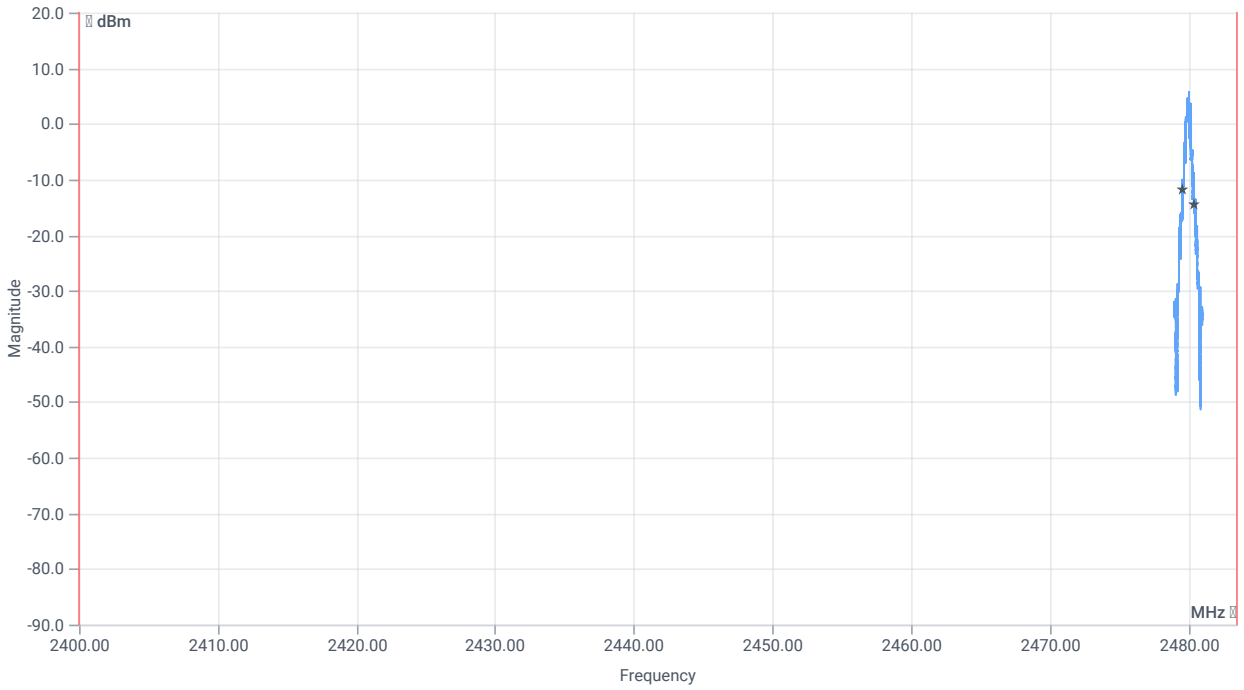
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	8.94	dBm	INFO
Ref. Frequency	---	---	2480.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	13.94 | 10.71 | 20
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



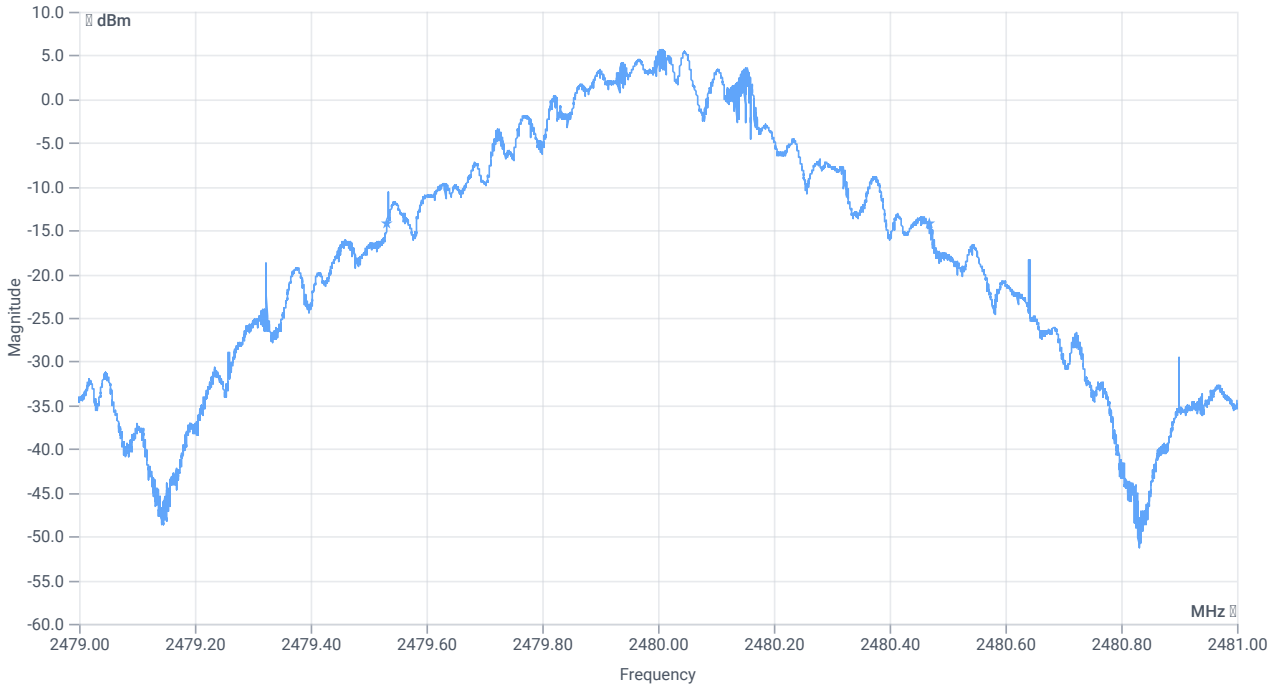
BW 99PCT



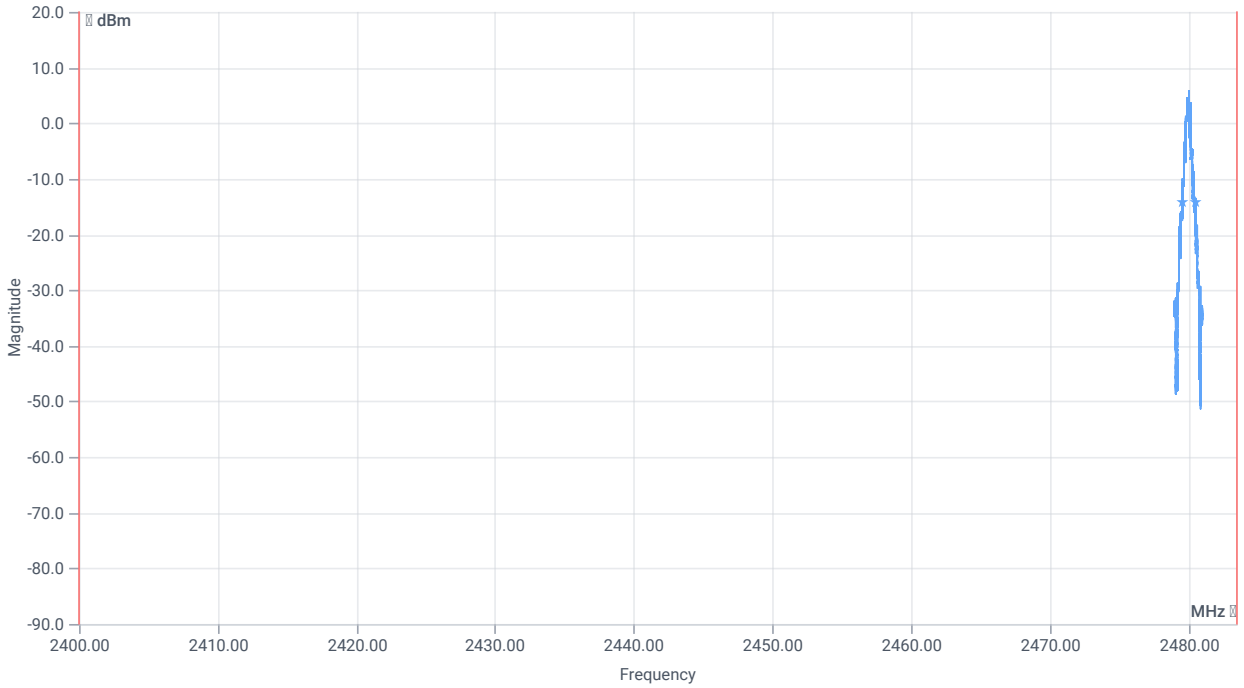
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	892.000	kHz	INFO
T1 99%	2400.000000	---	2479.5448	MHz	PASS
T2 99%	---	2483.500000	2480.4366	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	937	kHz	INFO
T1 20DB	2400.000000	---	2479.5324	MHz	PASS
T2 20dB	---	2483.500000	2480.4690	MHz	PASS

Verdict
PASS

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

Test References

TC Start	05.06.2023 10:56:33
Ambit Temp [°C] | Humidity [rel%]	0.0 | 0
System Version	4.0.1.4
Test Specification	FCC 15.247 -
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted FHSS - BT Classic Basic Rate
Add. 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 Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

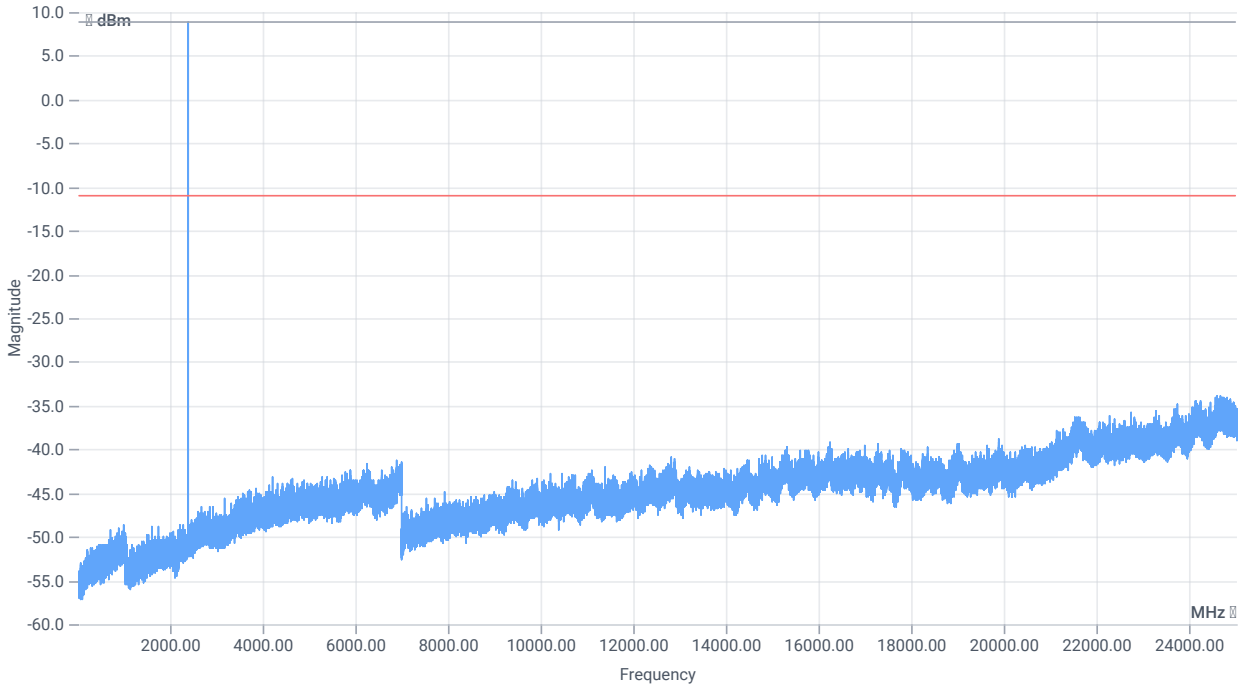
Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

Test at TX 2402 MHz

RESULT: Reference Power cond.

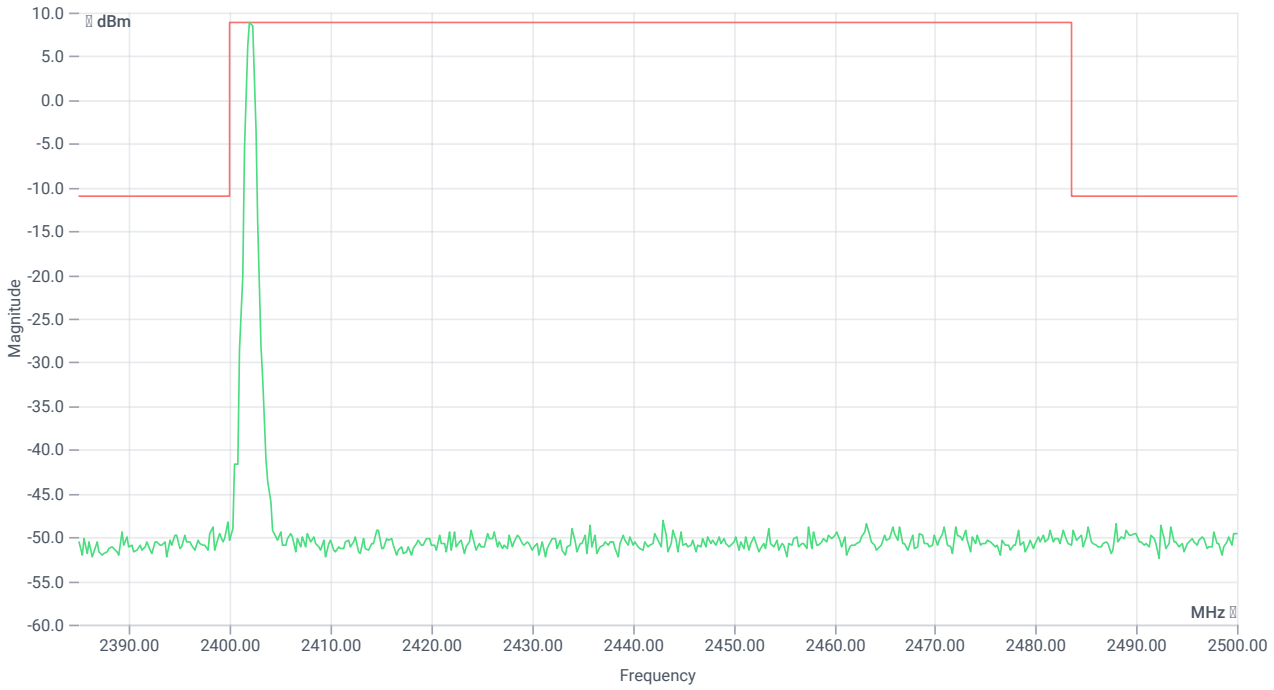
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.59	dBm	INFO
Ref. Frequency	---	---	2402.100	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	9.59 | 0 | 25
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

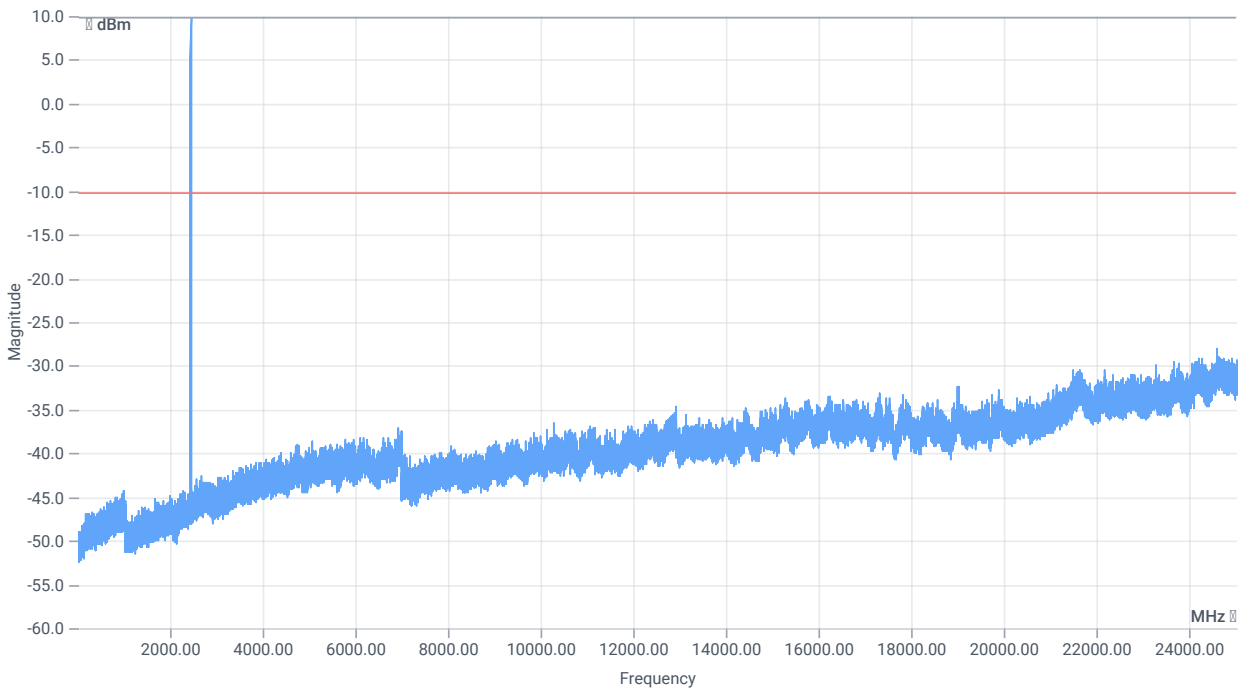
RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2402.00 MHz	---	---	8.92	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24611.5 MHz	0	---	22.75	dB	INFO

Test at TX 2441 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.37	dBm	INFO
Ref. Frequency	---	---	2441.200	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.37 | 0 | 30
Start [MHz] | Stop [MHz]	24530.000 | 25030.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	200 | 25 | 2001 | SWE

TX emissions band zoomed

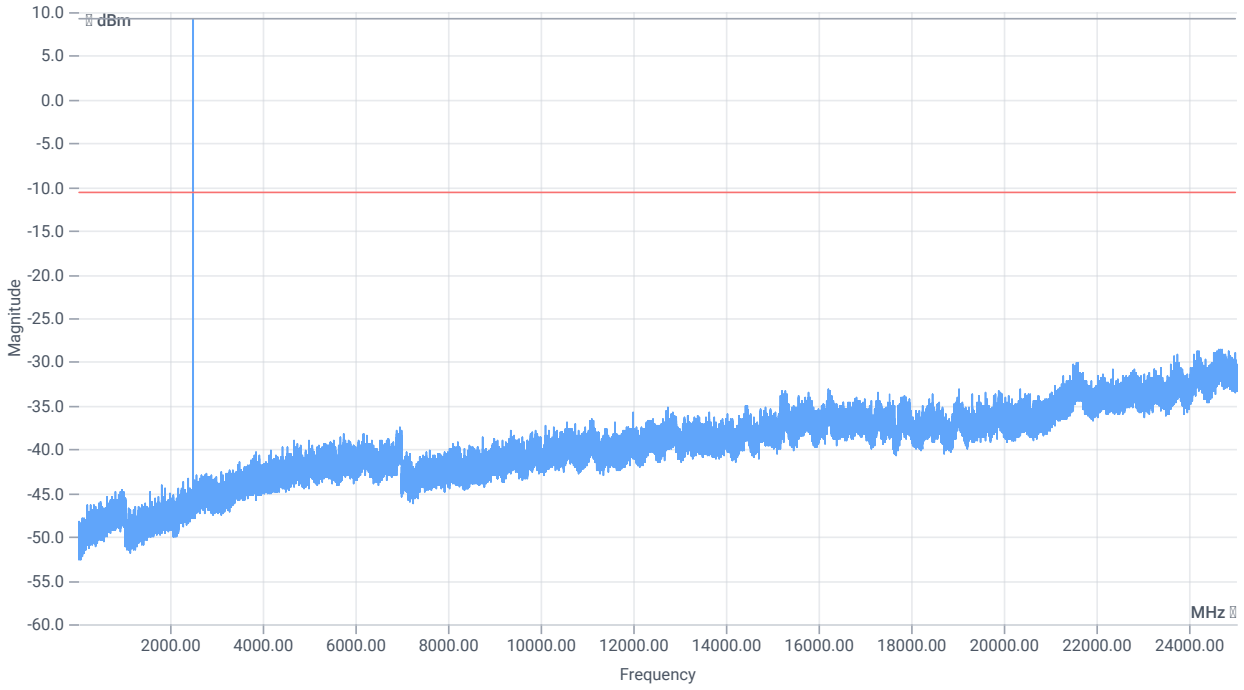
RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2441.25 MHz	---	---	9.74	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24602 MHz	0	---	17.72	dB	INFO

Test at TX 2480 MHz

RESULT: Reference Power cond.

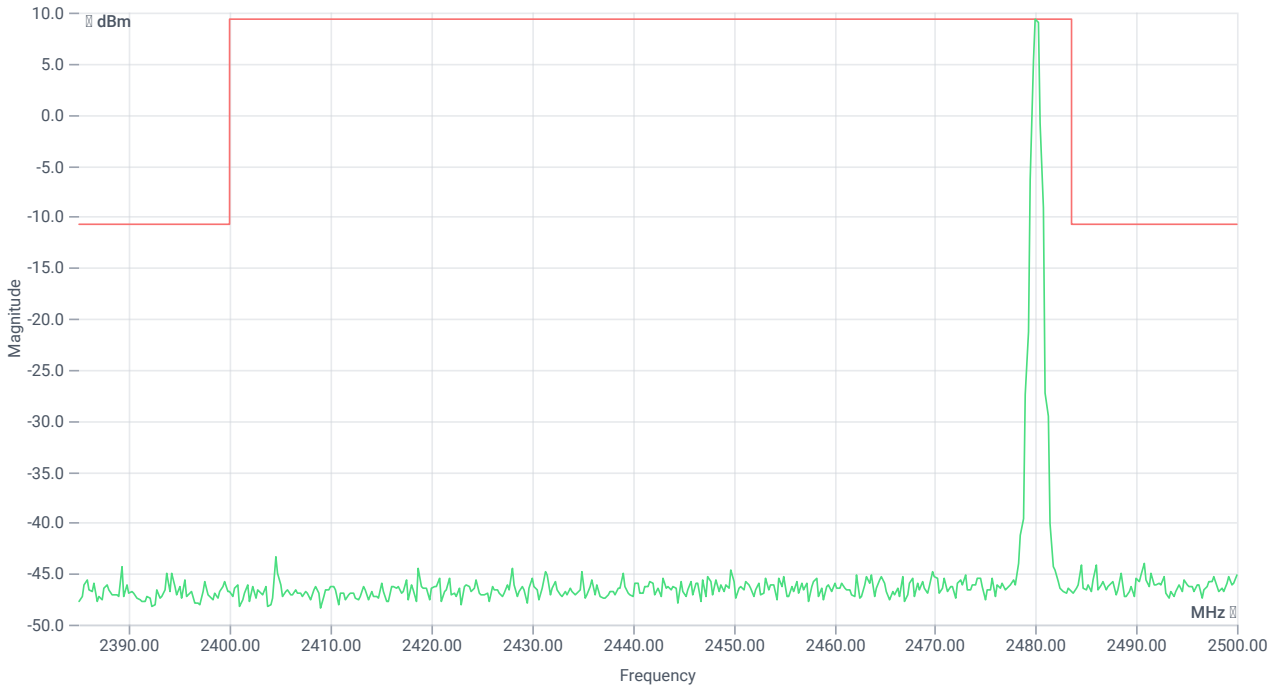
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.14	dBm	INFO
Ref. Frequency	---	---	2480.100	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.14 | 0 | 30
Start [MHz] | Stop [MHz]	24530.000 | 25030.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	200 | 25 | 2001 | SWE



TX emissions band zoomed

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2480.00 MHz	---	---	9.29	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24705.25 MHz	0	---	17.82	dB	INFO

Verdict
PASS

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

Test References

TC Start	05.06.2023 13:35:39
Ambit Temp [°C] | Humidity [rel%]	0.0 | 0
System Version	4.0.1.4
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions conducted on band edge FHSS - BT Classic Basic Rate
Add. 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 Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

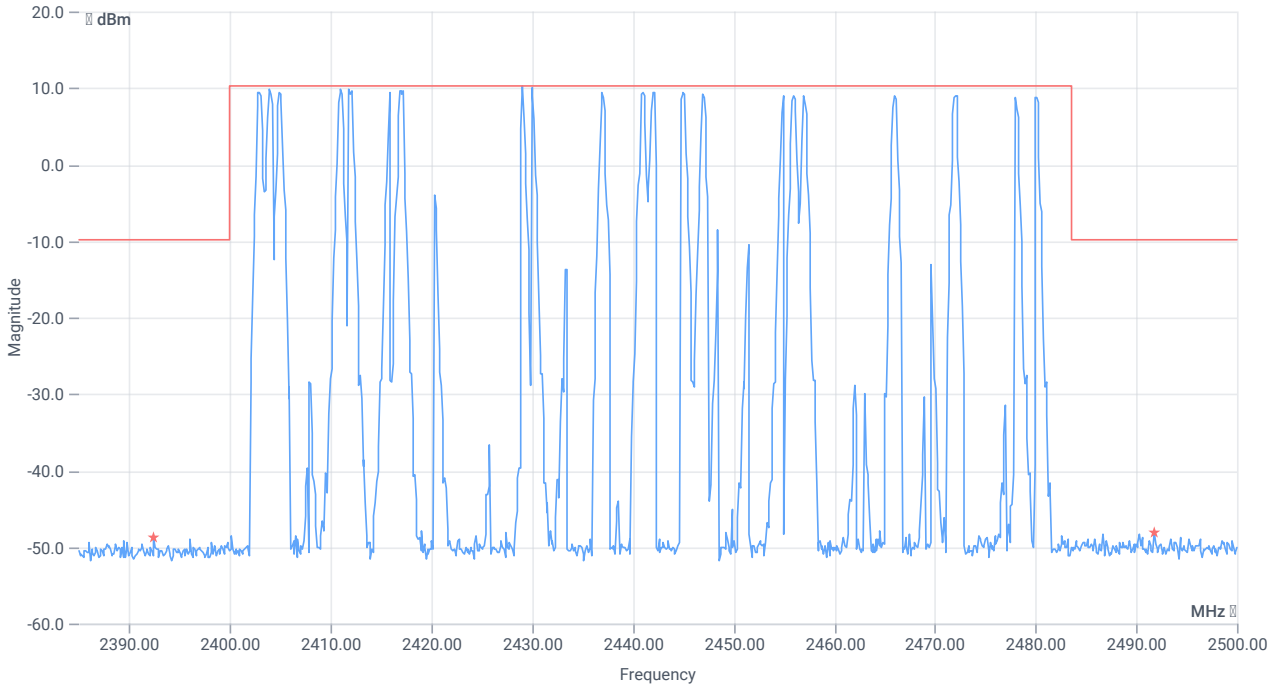
Test at TX hopping MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.74	dBm	INFO
Ref. Frequency	---	---	2417.120	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	15.74 | 10.66 | 25
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	200 | 25 | 1001 | SWE



TX emissions on band edge

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Max peak lower Band	---	-9.79	-48.66	dBm	PASS
Max peak upper Band	---	-9.79	-48.02	dBm	PASS

Verdict

PASS

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

Test References

TC Start	03.05.2023 11:21:40
Ambit Temp [°C] | Humidity [rel%]	29.7 | 23
System Version	4.0.1.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted FHSS - BT Classic EDR Pi/4DQPSK
Add. 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	LOOPback
Perform Inquiry	Yes
EUT BT Address (if Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

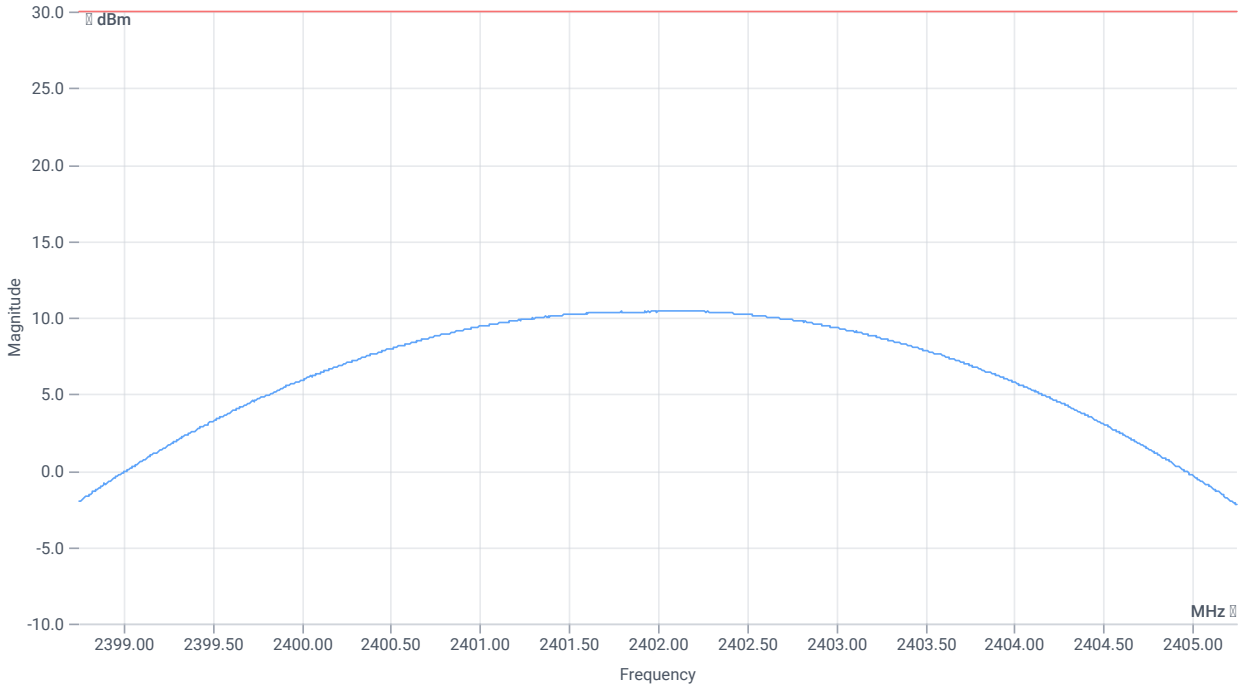
Test at TX 2402 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.51	dBm	INFO
Ref. Frequency	---	---	2401.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.51 | 10.59 | 25
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



Peak output power

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	10.45	dBm	PASS
Peak Power	---	1000	11.091748	mW	PASS
Frequency at Peak	---	---	2402.162	MHz	INFO

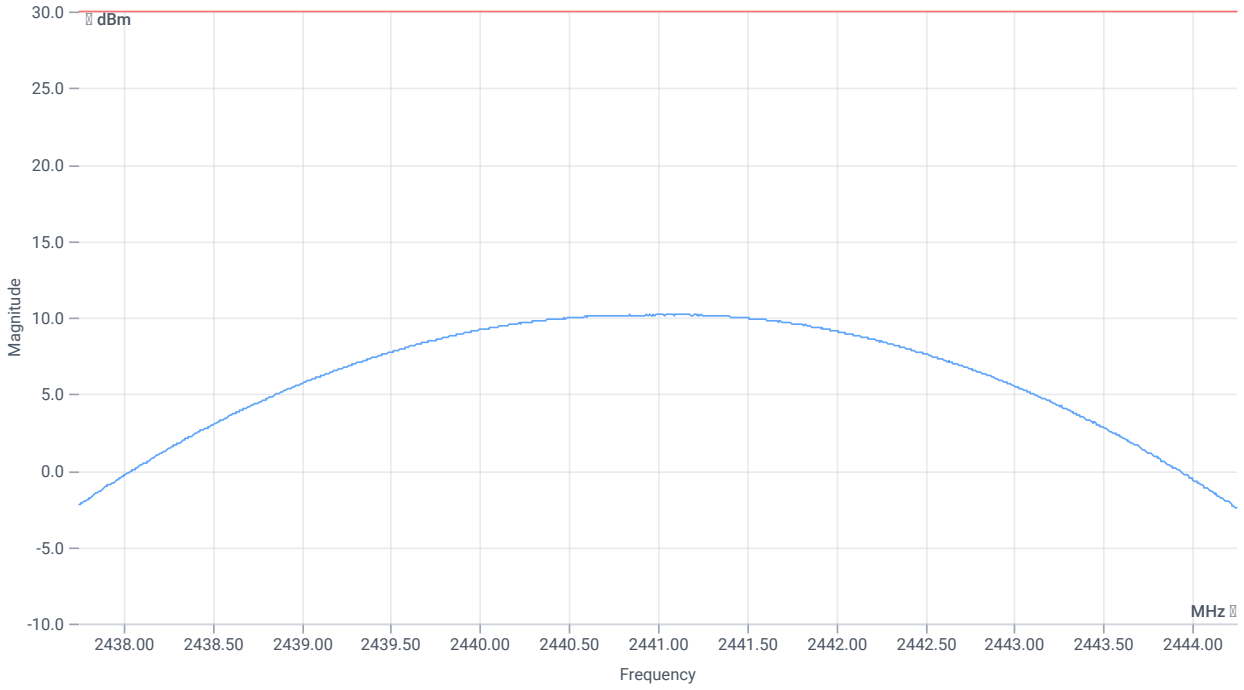
Test at TX 2441 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.03	dBm	INFO
Ref. Frequency	---	---	2440.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.03 | 10.66 | 25
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



Peak output power

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	10.2	dBm	PASS
Peak Power	---	1000	10.471285	mW	PASS
Frequency at Peak	---	---	2441.097	MHz	INFO

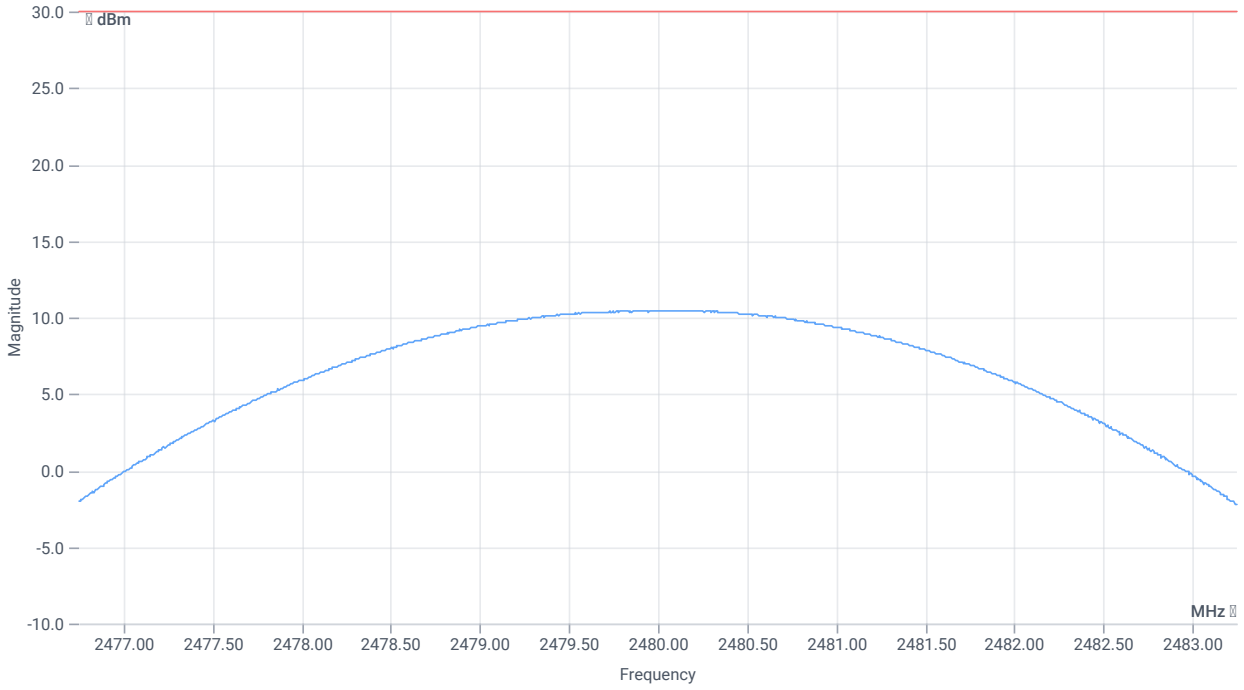
Test at TX 2480 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.37	dBm	INFO
Ref. Frequency	---	---	2479.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.37 | 10.71 | 25
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



Peak output power

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	10.46	dBm	PASS
Peak Power	---	1000	11.117317	mW	PASS
Frequency at Peak	---	---	2480.071	MHz	INFO

Verdict
PASS

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

Test References

TC Start	05.06.2023 11:18:05
Ambit Temp [°C] | Humidity [rel%]	0.0 | 0
System Version	4.0.1.4
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT - 20dB FHSS - BT Classic EDR Pi/4DQPSK
Add. 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 Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

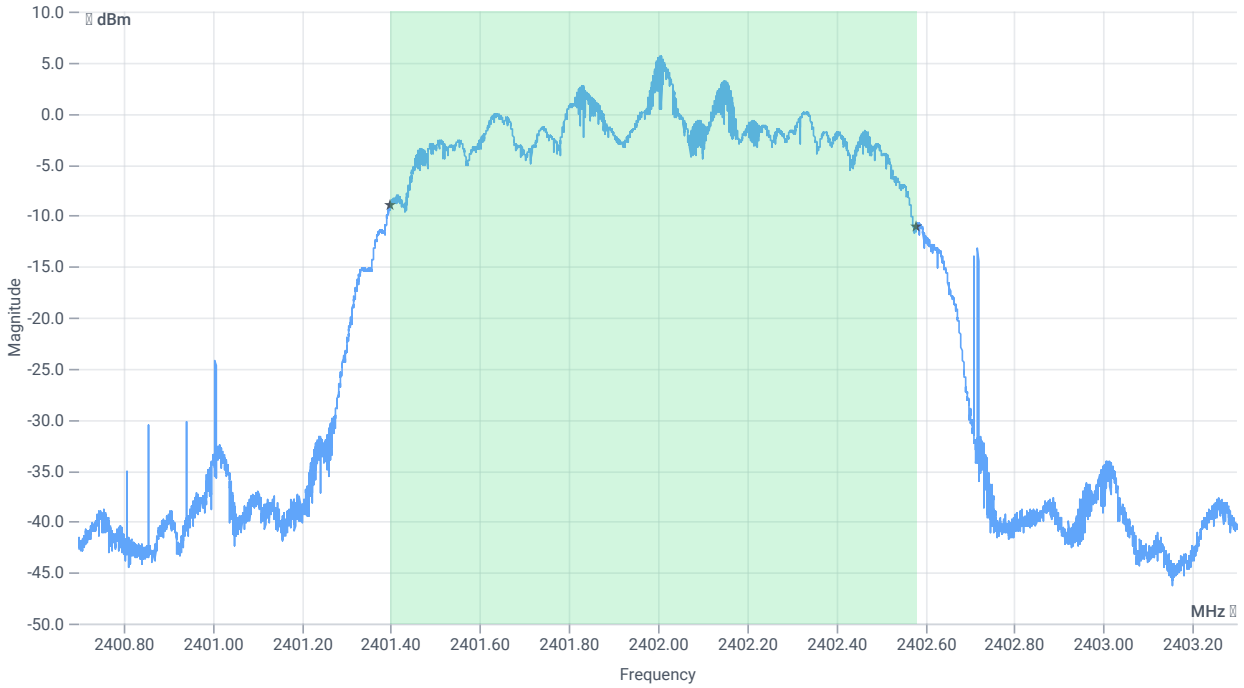
Test at TX 2402 MHz

RESULT: Reference Power cond.

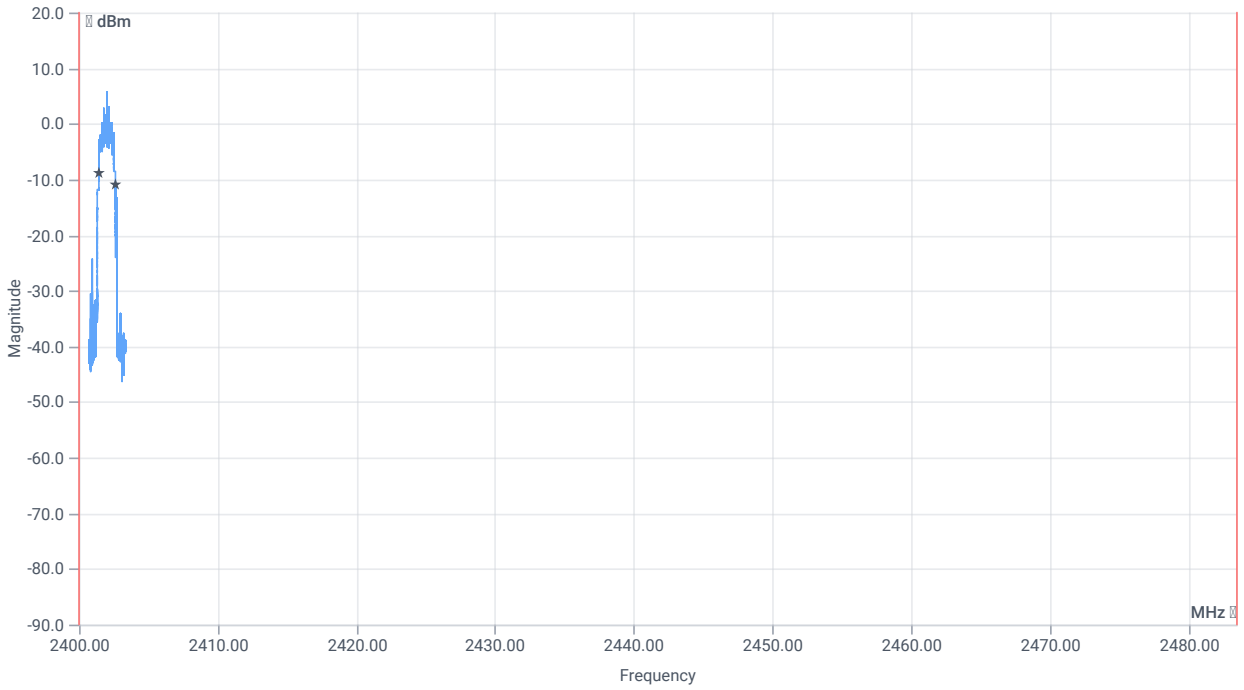
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	8.76	dBm	INFO
Ref. Frequency	---	---	2401.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	13.76 | 10.59 | 20
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



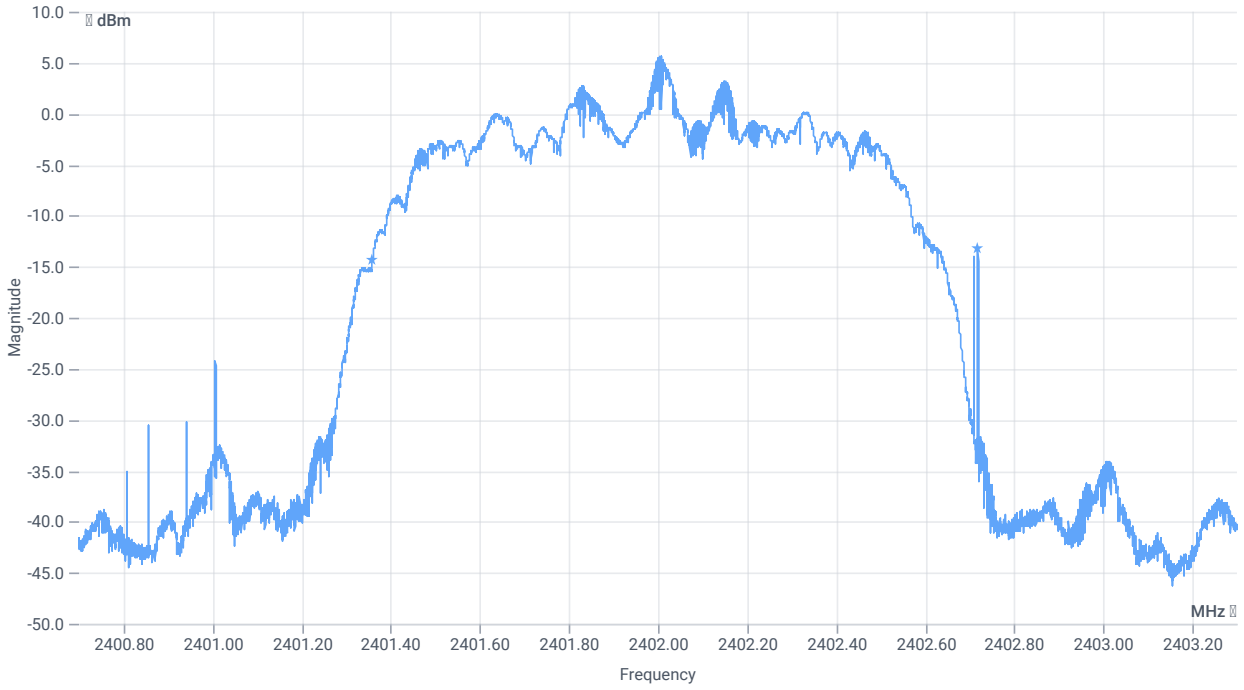
BW 99PCT



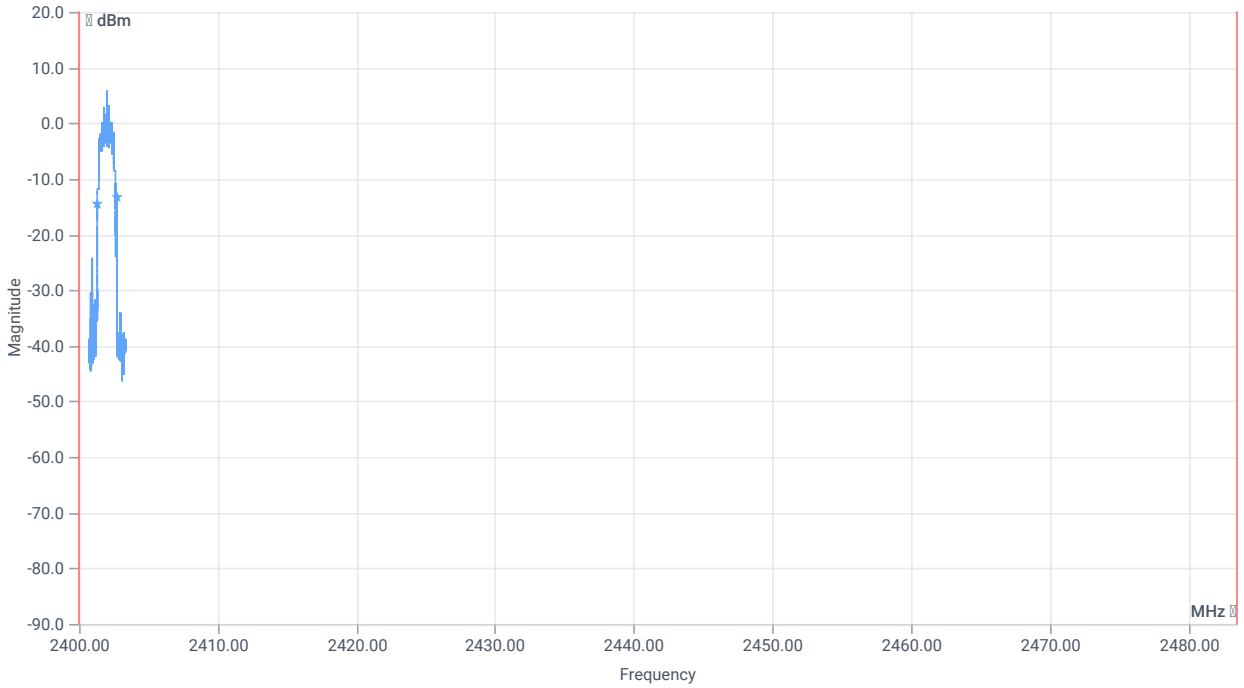
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1181.000	kHz	INFO
T1 99%	2400.000000	---	2401.3989	MHz	PASS
T2 99%	---	2483.500000	2402.5800	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1360	kHz	INFO
T1 20DB	2400.000000	---	2401.3588	MHz	PASS
T2 20dB	---	2483.500000	2402.7186	MHz	PASS

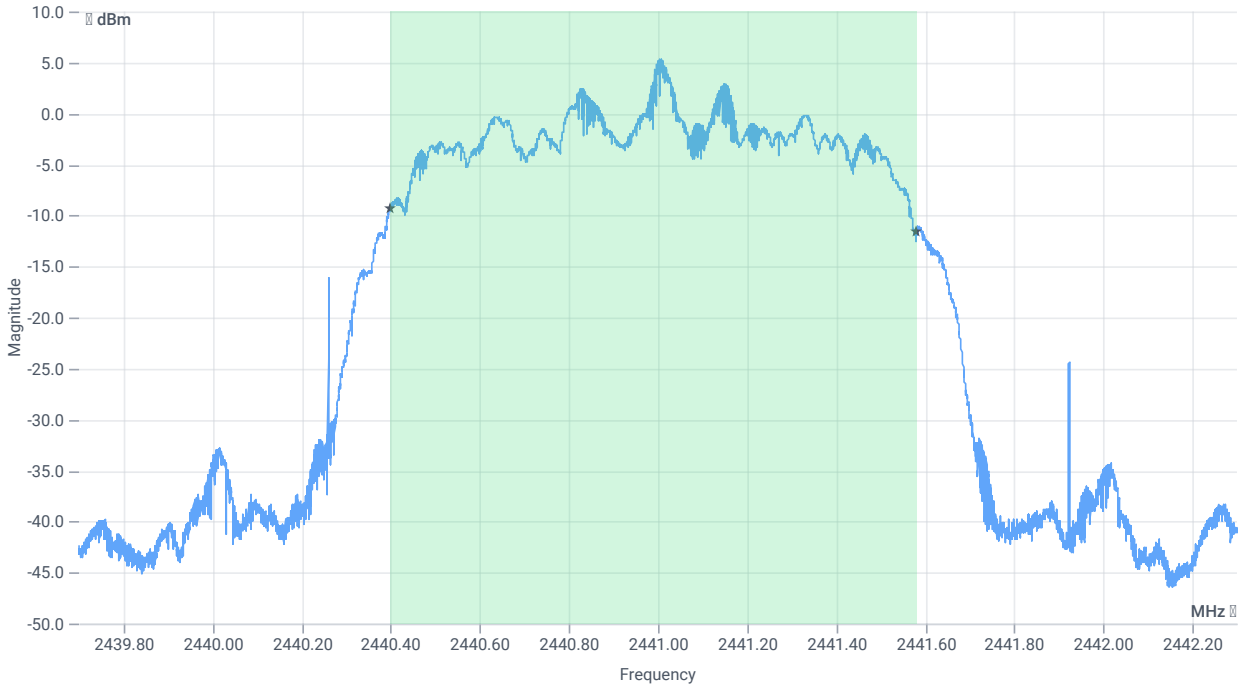
Test at TX 2441 MHz

RESULT: Reference Power cond.

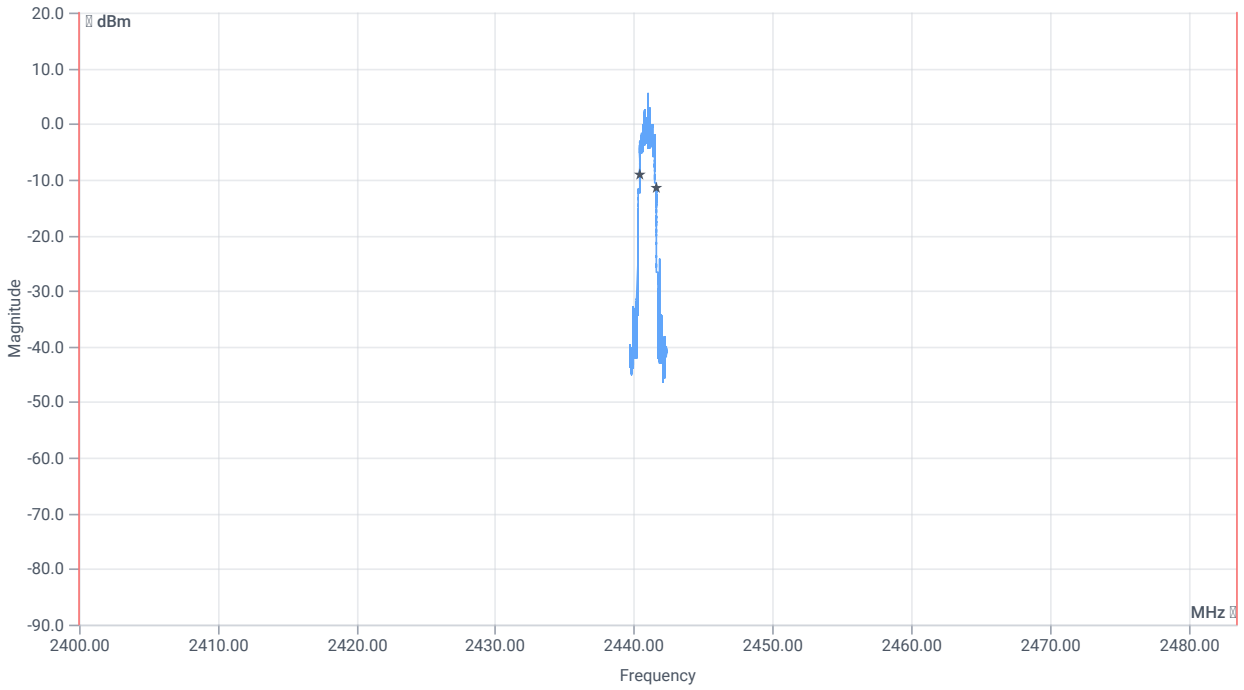
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	8.40	dBm	INFO
Ref. Frequency	---	---	2441.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	13.40 | 10.66 | 20
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



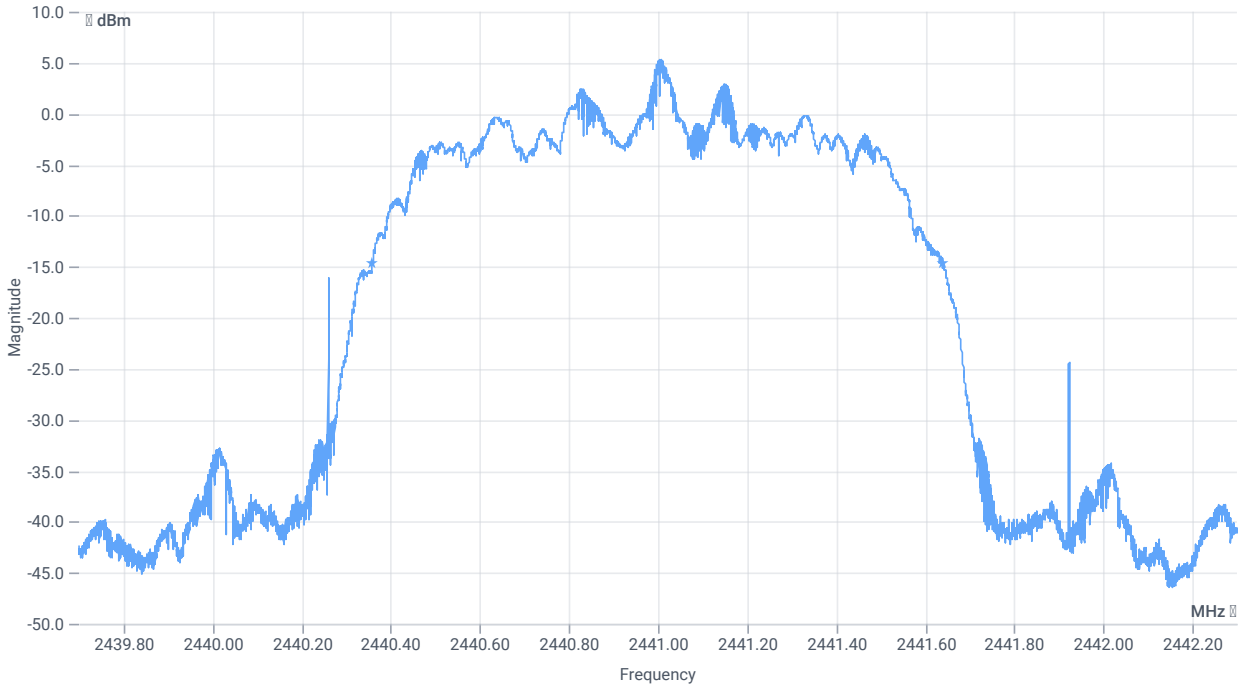
BW 99PCT



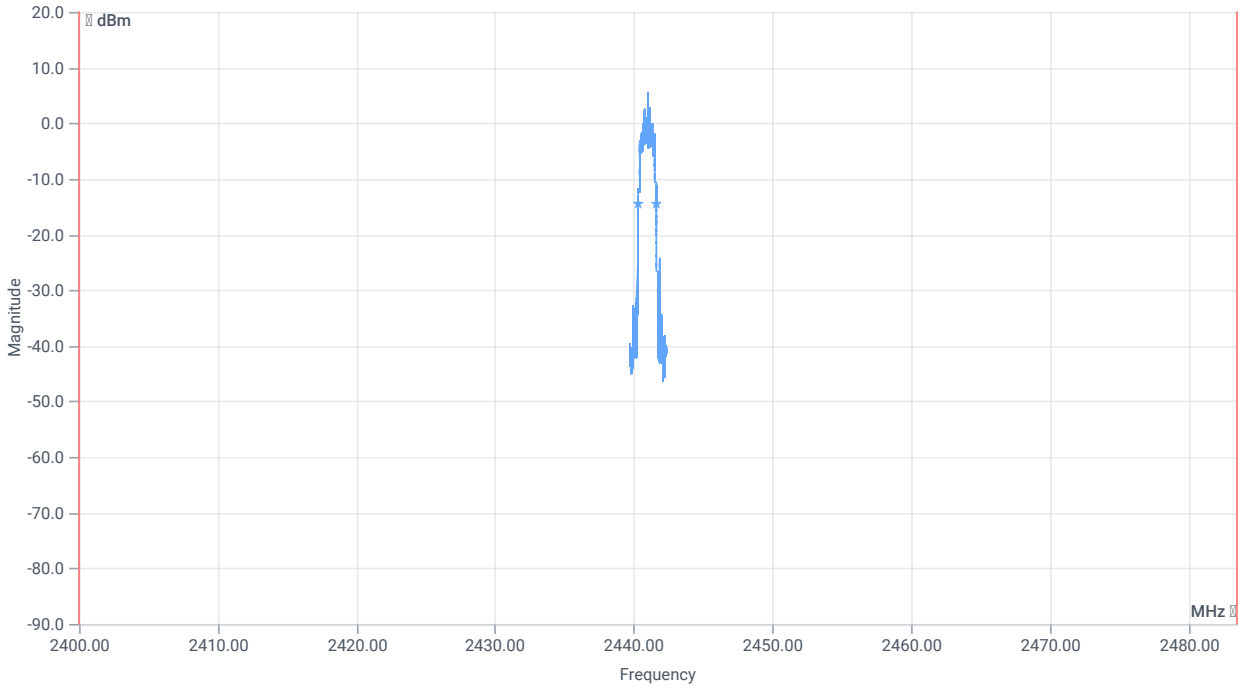
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1180.000	kHz	INFO
T1 99%	2400.000000	---	2440.3989	MHz	PASS
T2 99%	---	2483.500000	2441.5784	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1282	kHz	INFO
T1 20DB	2400.000000	---	2440.3586	MHz	PASS
T2 20dB	---	2483.500000	2441.6404	MHz	PASS

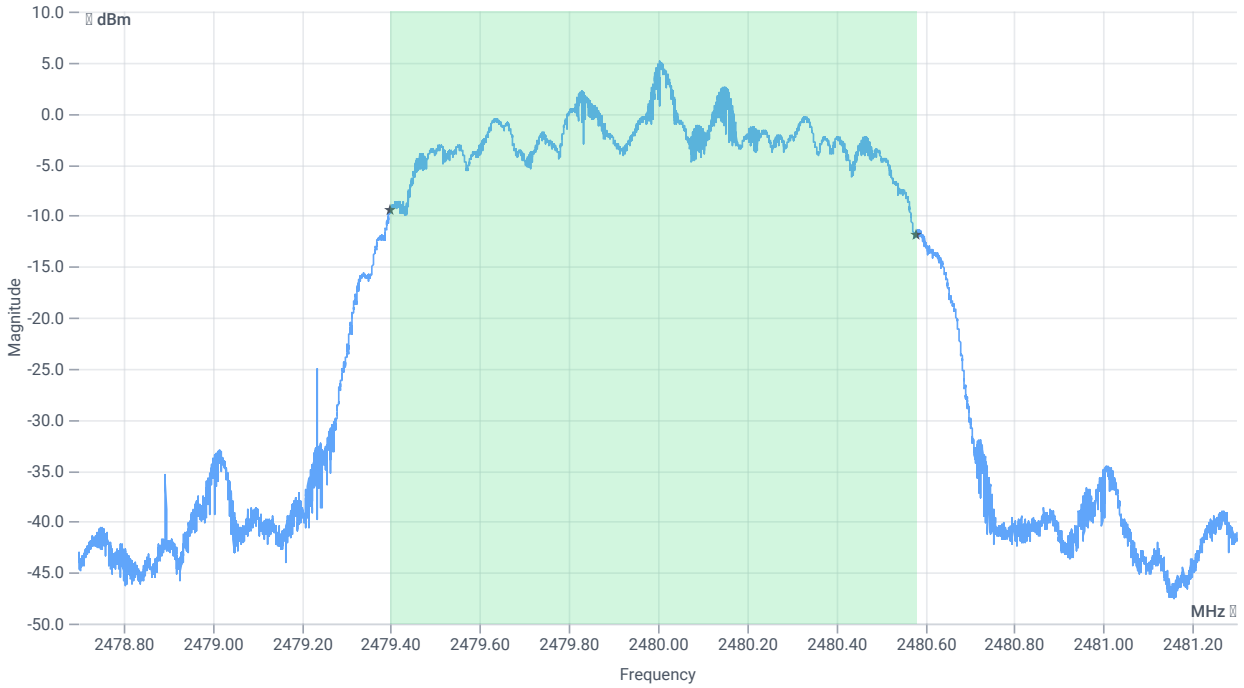
Test at TX 2480 MHz

RESULT: Reference Power cond.

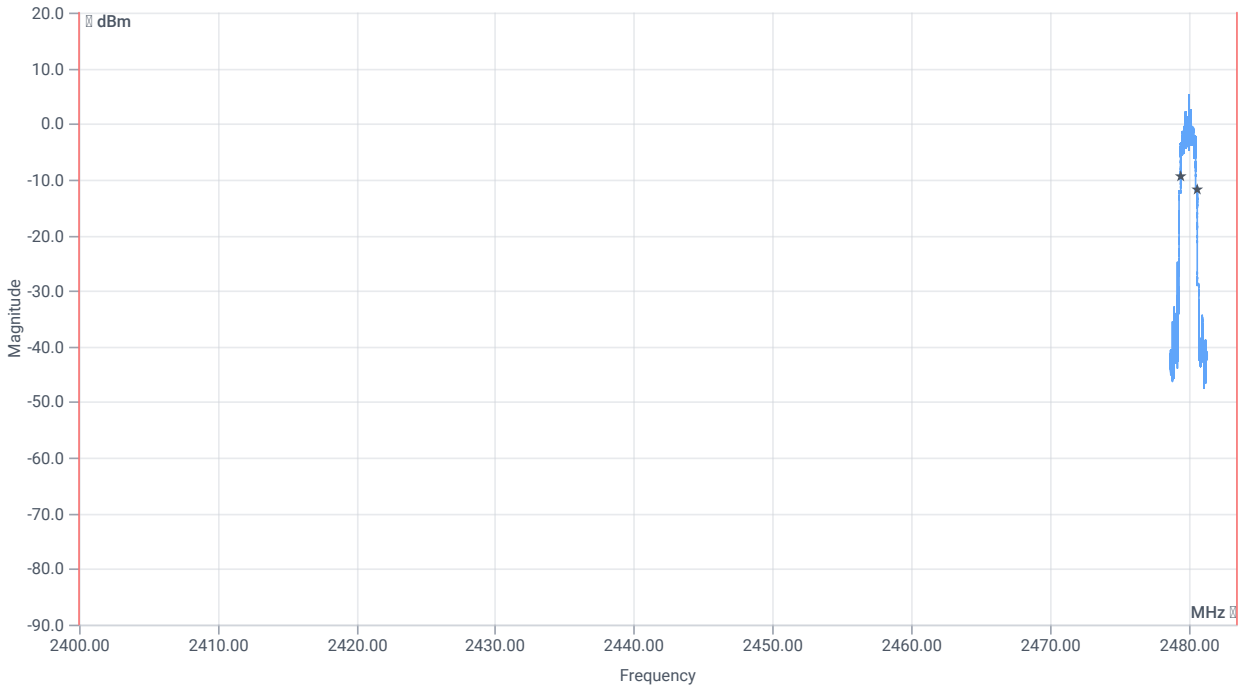
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	8.15	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	13.15 | 10.71 | 20
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



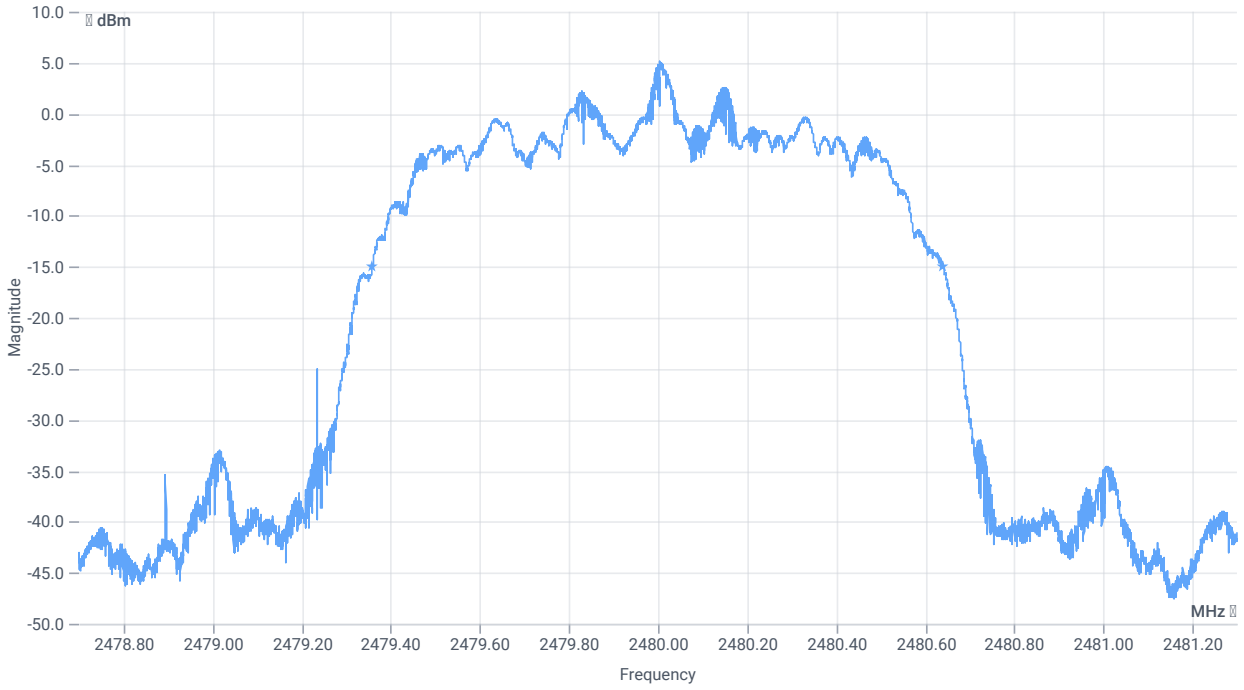
BW 99PCT



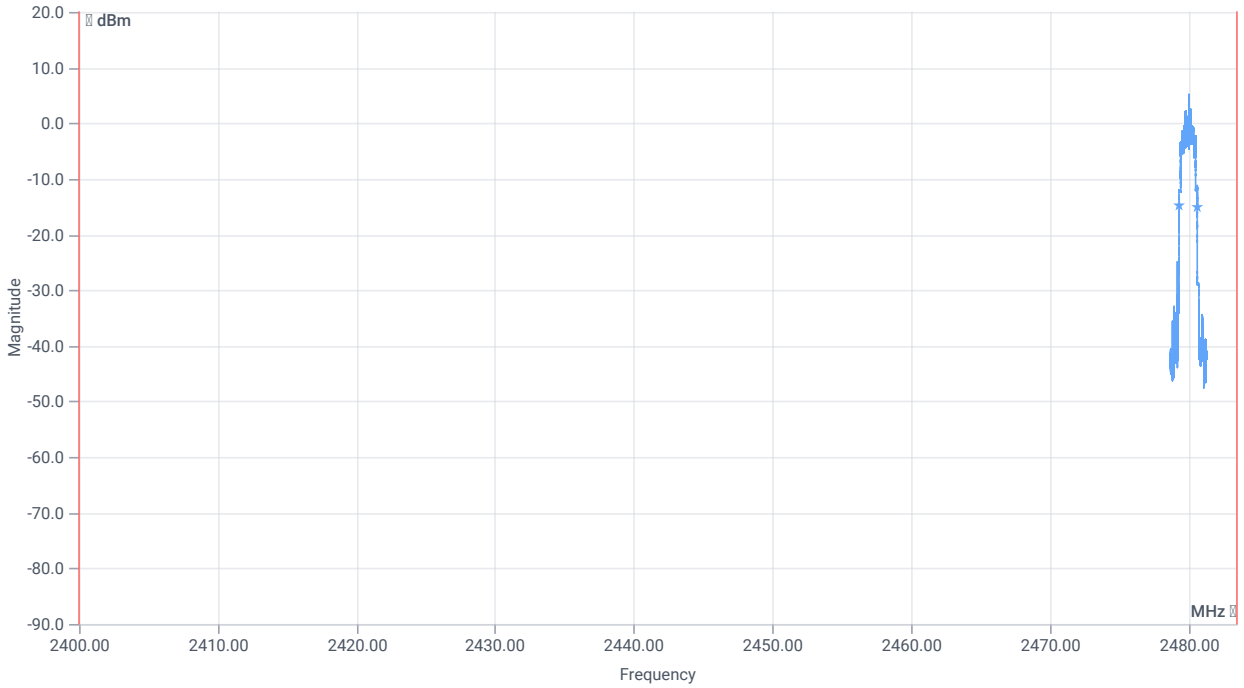
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1179.000	kHz	INFO
T1 99%	2400.000000	---	2479.3992	MHz	PASS
T2 99%	---	2483.500000	2480.5782	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1281	kHz	INFO
T1 20DB	2400.000000	---	2479.3591	MHz	PASS
T2 20dB	---	2483.500000	2480.6404	MHz	PASS

Verdict
PASS

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

Test References

TC Start	05.06.2023 11:26:59
Ambit Temp [°C] | Humidity [rel%]	0.0 | 0
System Version	4.0.1.4
Test Specification	FCC 15.247 -
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted FHSS - BT Classic EDR Pi/4DQPSK
Add. 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 Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

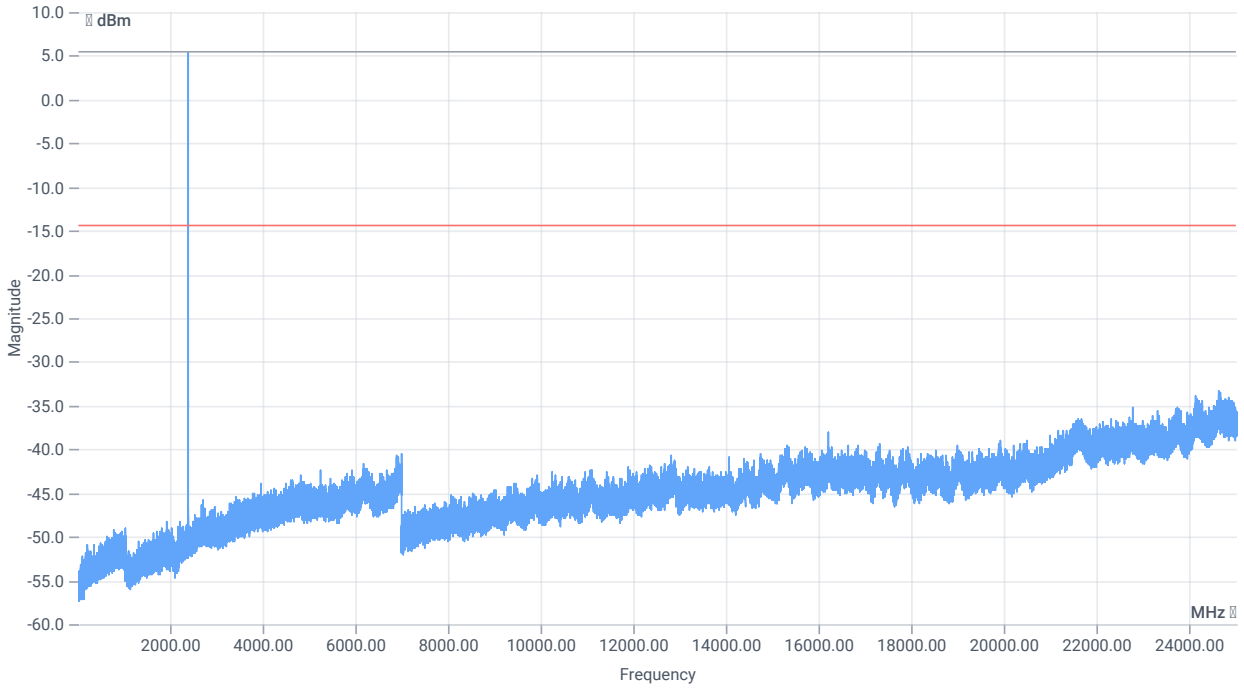
Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

Test at TX 2402 MHz

RESULT: Reference Power cond.

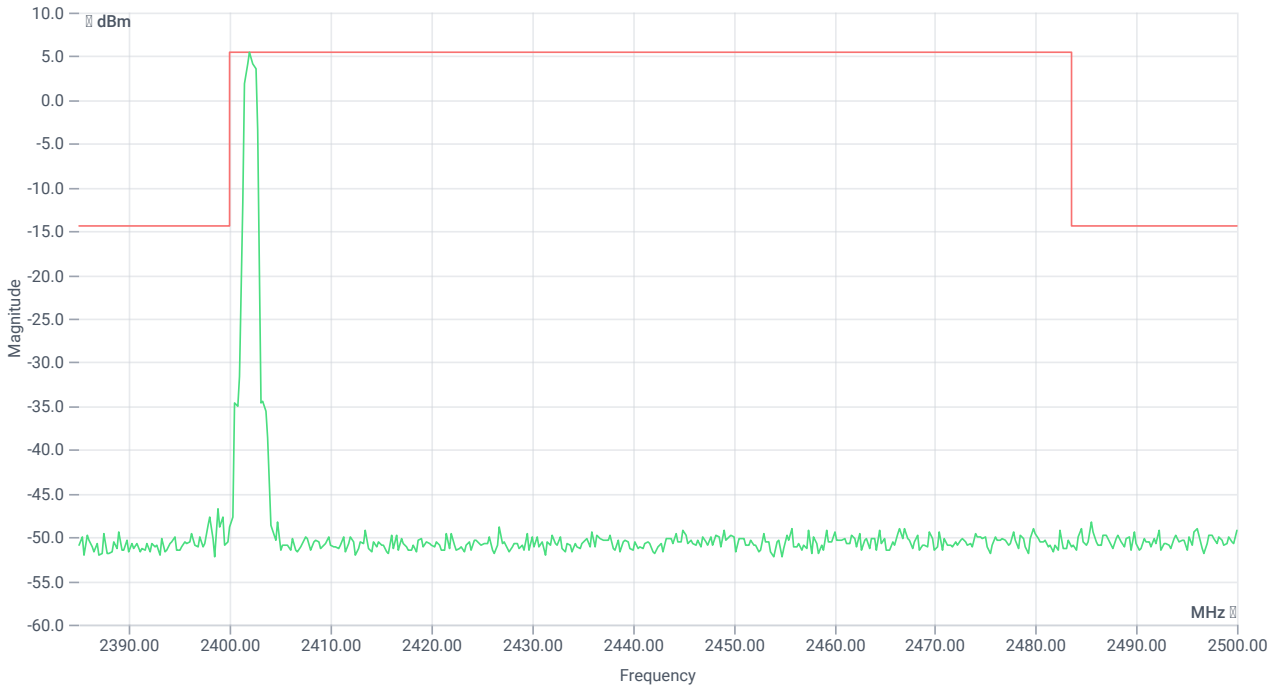
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	8.57	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	8.57 | 0 | 25
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

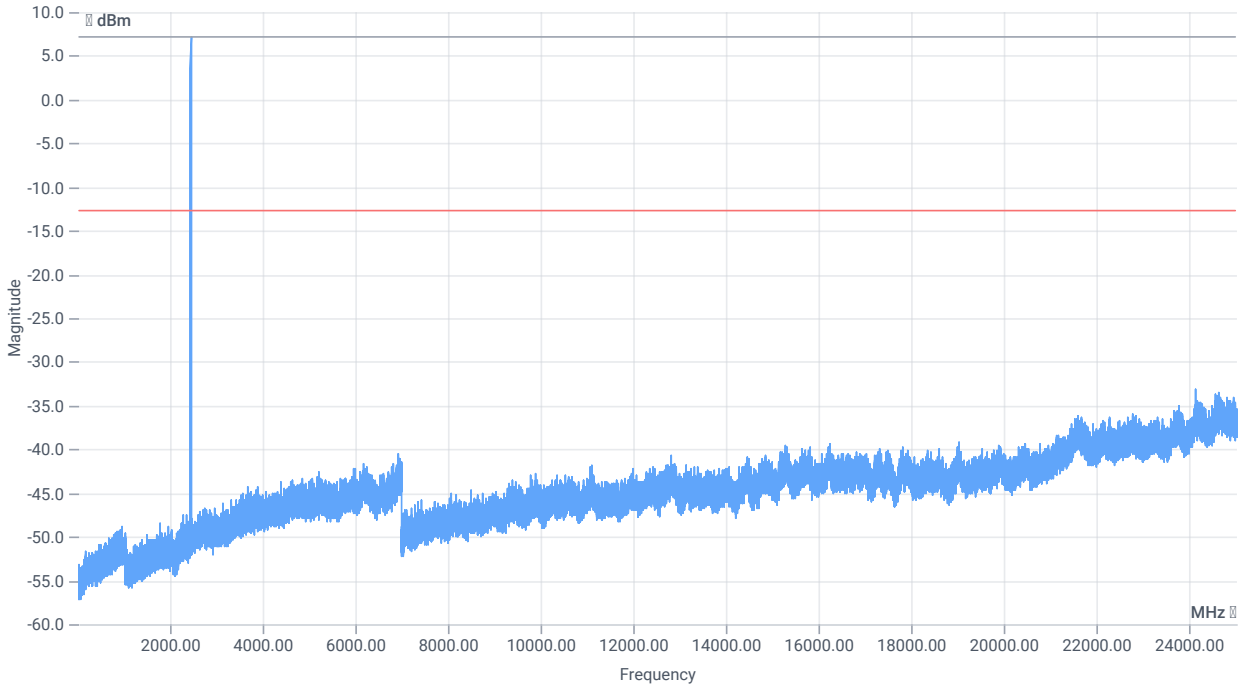
RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2402.00 MHz	---	---	5.54	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24643.5 MHz	0	---	18.92	dB	INFO

Test at TX 2441 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	8.46	dBm	INFO
Ref. Frequency	---	---	2440.800	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	8.46 | 0 | 25
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

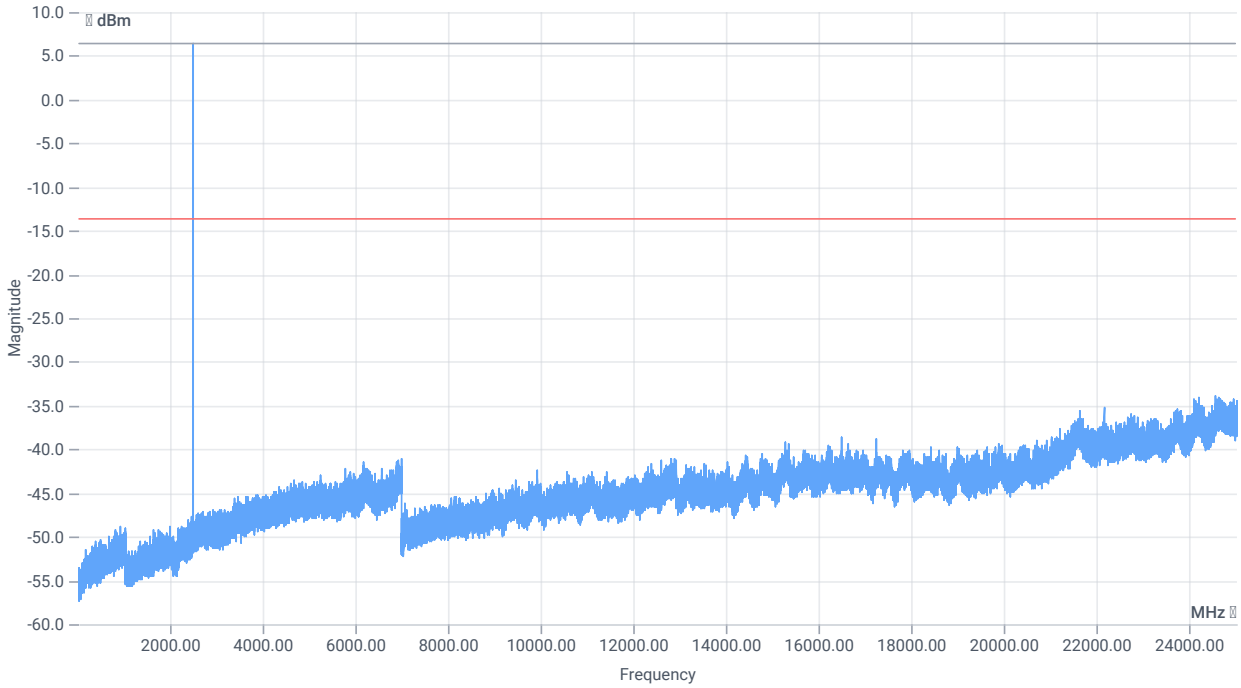
RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2441.00 MHz	---	---	7.24	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24135 MHz	0	---	20.32	dB	INFO

Test at TX 2480 MHz

RESULT: Reference Power cond.

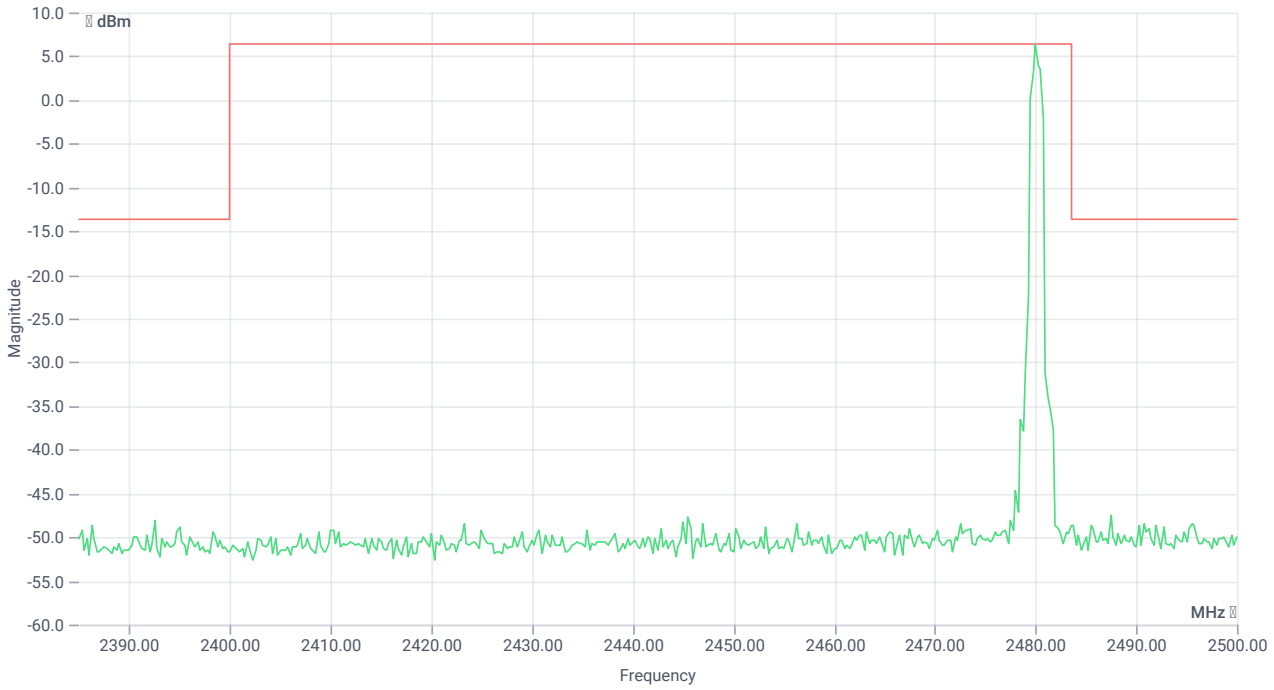
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	7.97	dBm	INFO
Ref. Frequency	---	---	2480.100	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.97 | 0 | 25
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

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2480.00 MHz	---	---	6.38	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24555 MHz	0	---	20.27	dB	INFO

Verdict
PASS

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

Test References

TC Start	05.06.2023 13:36:06
Ambit Temp [°C] | Humidity [rel%]	0.0 | 0
System Version	4.0.1.4
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions conducted on band edge FHSS - BT Classic EDR Pi/4DQPSK
Add. 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 Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

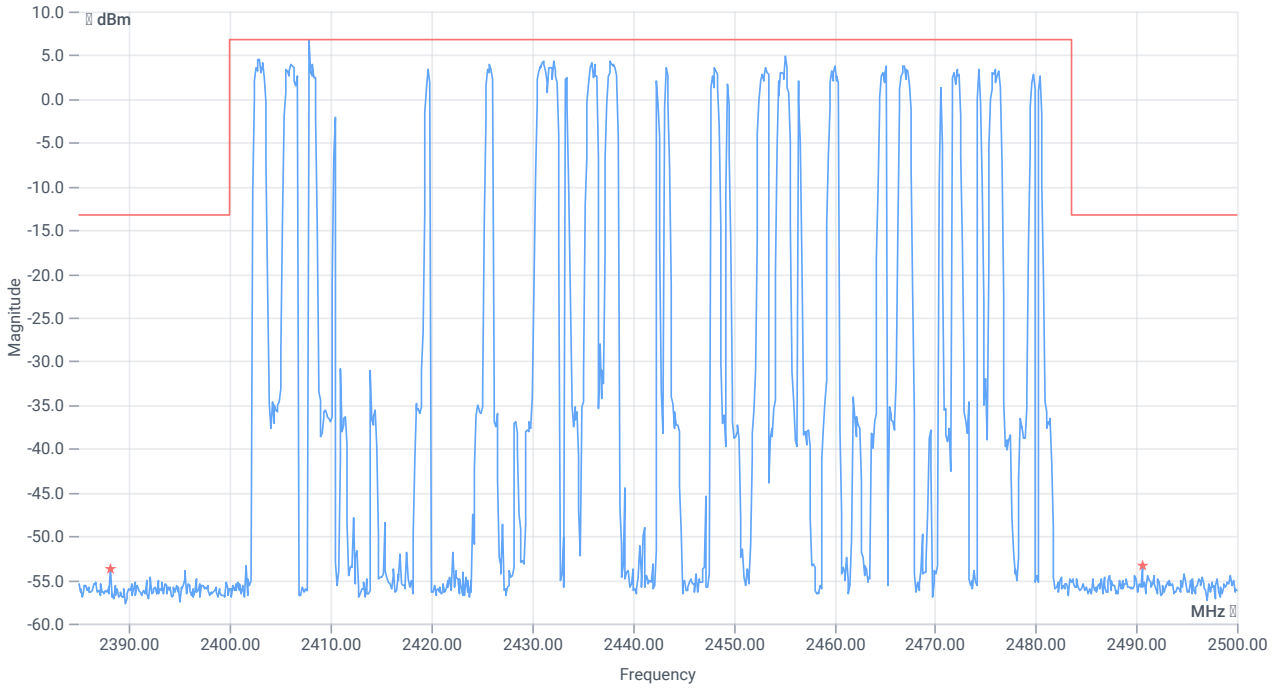
Test at TX hopping MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	8.94	dBm	INFO
Ref. Frequency	---	---	2441.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	13.94 | 10.66 | 20
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	200 | 25 | 1001 | SWE



TX emissions on band edge

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Max peak lower Band	---	-13.26	-53.71	dBm	PASS
Max peak upper Band	---	-13.26	-53.37	dBm	PASS

Verdict

PASS

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

Test References

TC Start	03.05.2023 11:23:10
Ambit Temp [°C] | Humidity [rel%]	29.6 | 23
System Version	4.0.1.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted FHSS - BT Classic EDR 8DPSK
Add. 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	LOOPback
Perform Inquiry	Yes
EUT BT Address (if Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

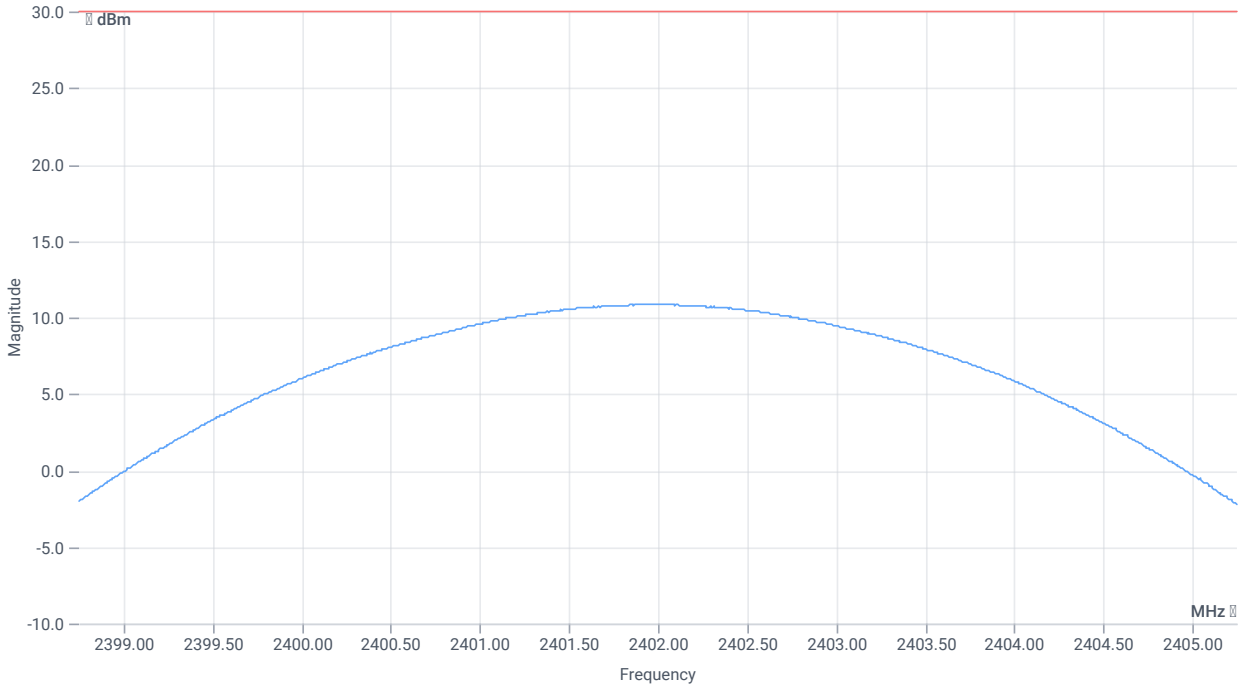
Test at TX 2402 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.83	dBm	INFO
Ref. Frequency	---	---	2402.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.83 | 10.59 | 25
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



Peak output power

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	10.85	dBm	PASS
Peak Power	---	1000	12.16186	mW	PASS
Frequency at Peak	---	---	2402	MHz	INFO

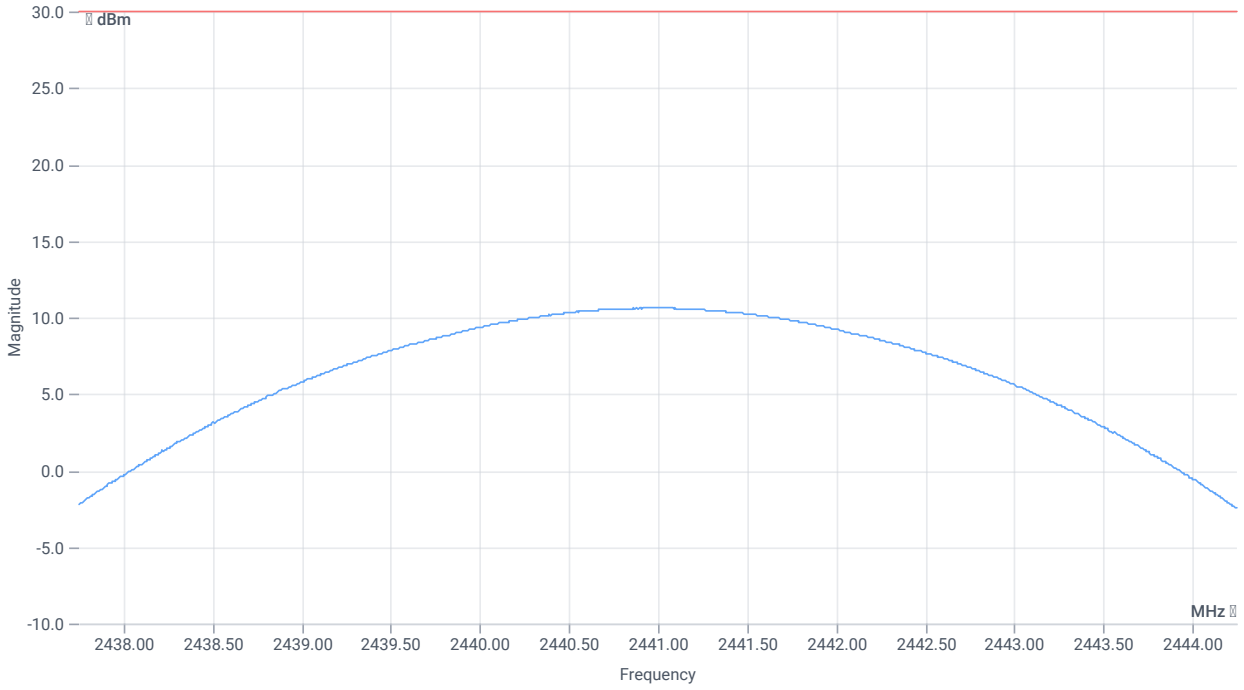
Test at TX 2441 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.06	dBm	INFO
Ref. Frequency	---	---	2440.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.06 | 10.66 | 25
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



Peak output power

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	10.63	dBm	PASS
Peak Power	---	1000	11.561122	mW	PASS
Frequency at Peak	---	---	2440.968	MHz	INFO

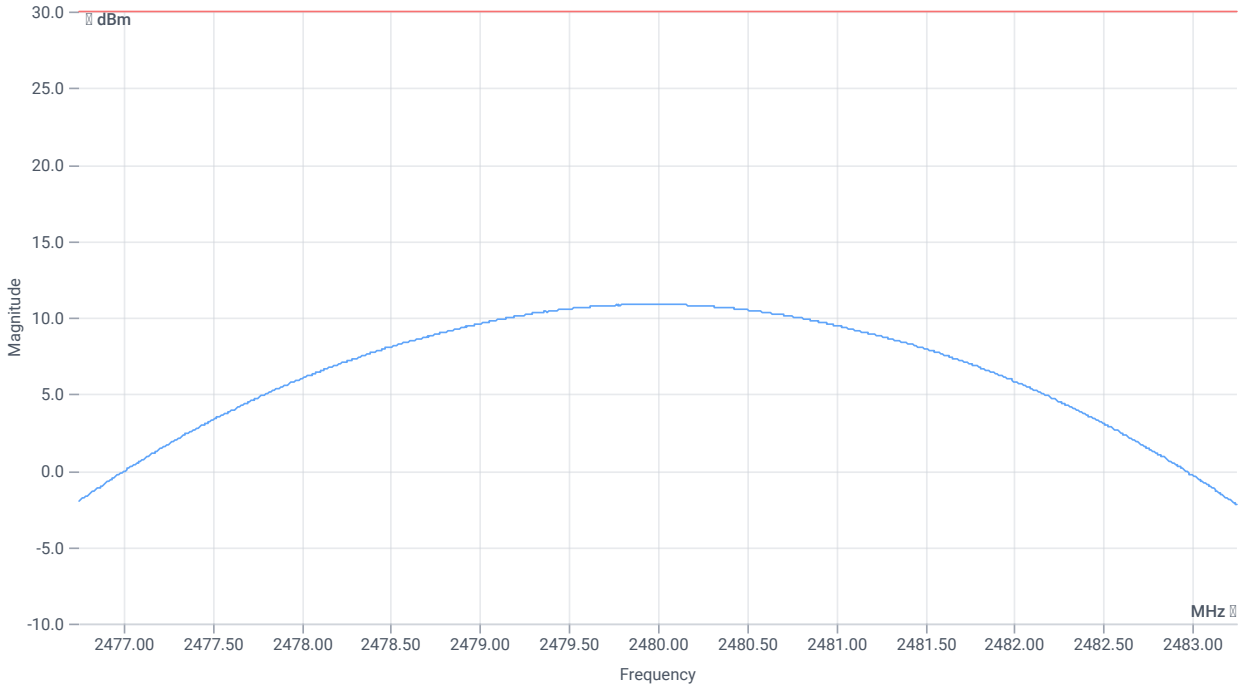
Test at TX 2480 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.53	dBm	INFO
Ref. Frequency	---	---	2480.000	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.53 | 10.71 | 25
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



Peak output power

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	---	30.00	10.88	dBm	PASS
Peak Power	---	1000	12.246162	mW	PASS
Frequency at Peak	---	---	2479.987	MHz	INFO

Verdict
PASS

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

Test References

TC Start	05.06.2023 11:59:11
Ambit Temp [°C] | Humidity [rel%]	0.0 | 0
System Version	4.0.1.4
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT - 20dB FHSS - BT Classic EDR 8DPSK
Add. 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 Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

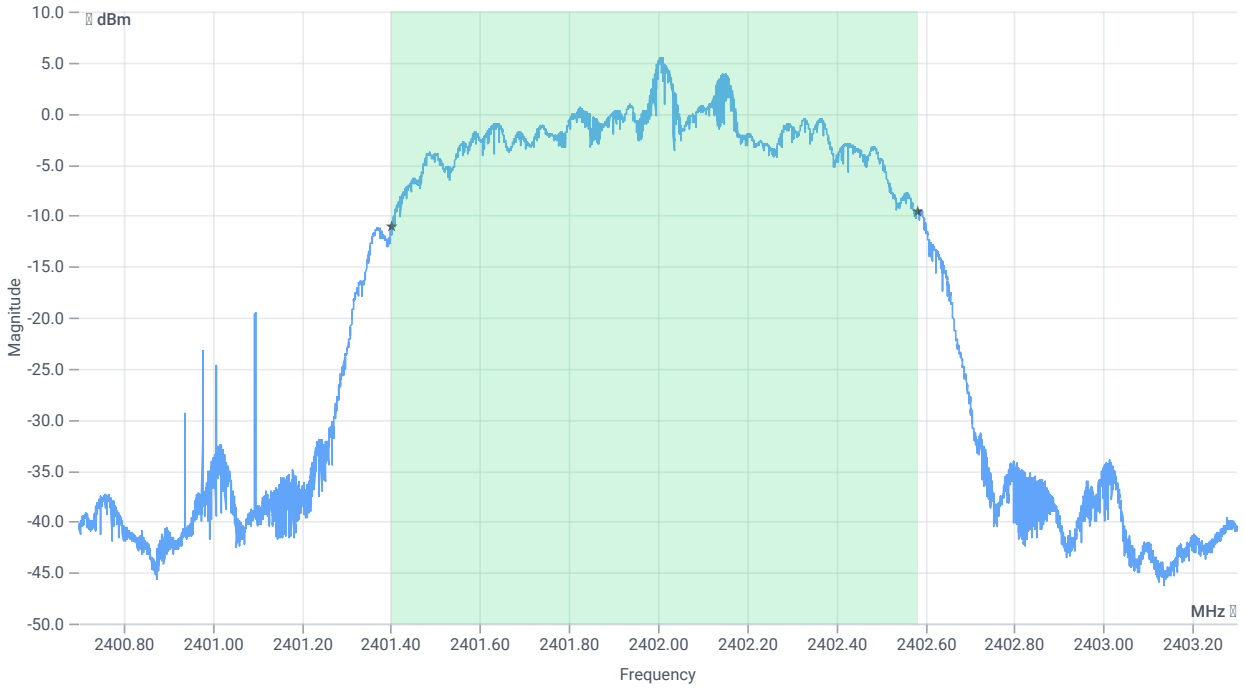
Test at TX 2402 MHz

RESULT: Reference Power cond.

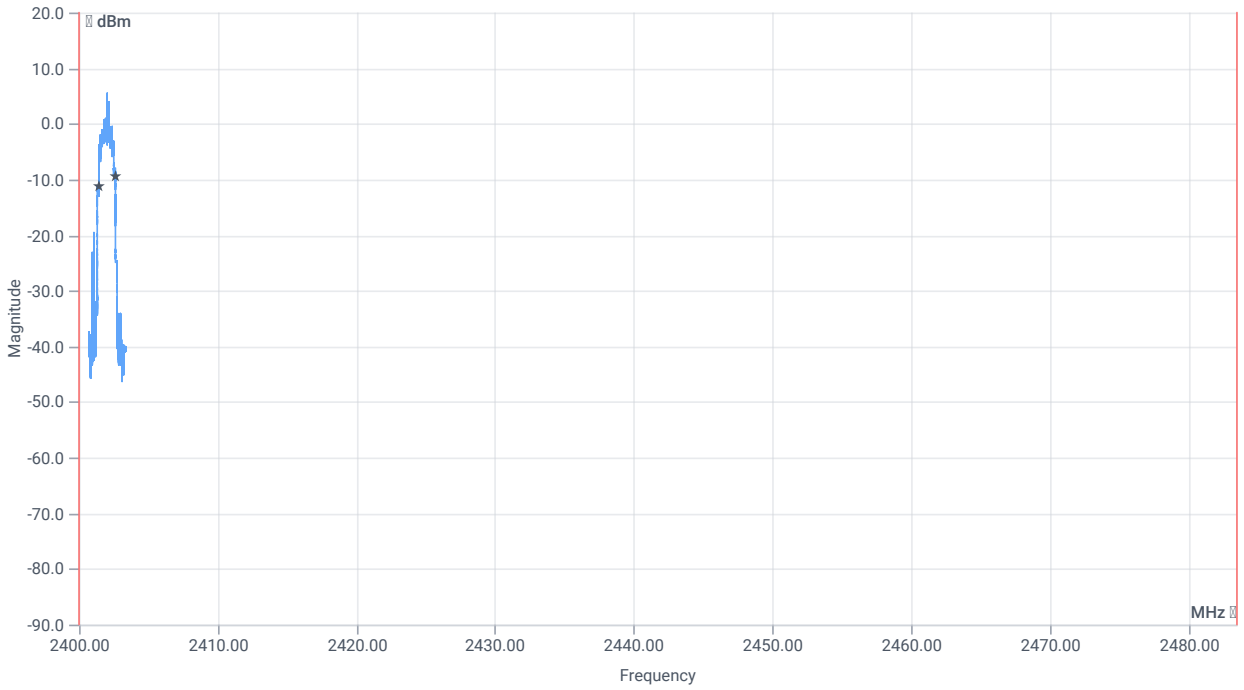
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	8.85	dBm	INFO
Ref. Frequency	---	---	2401.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	13.85 | 10.59 | 20
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



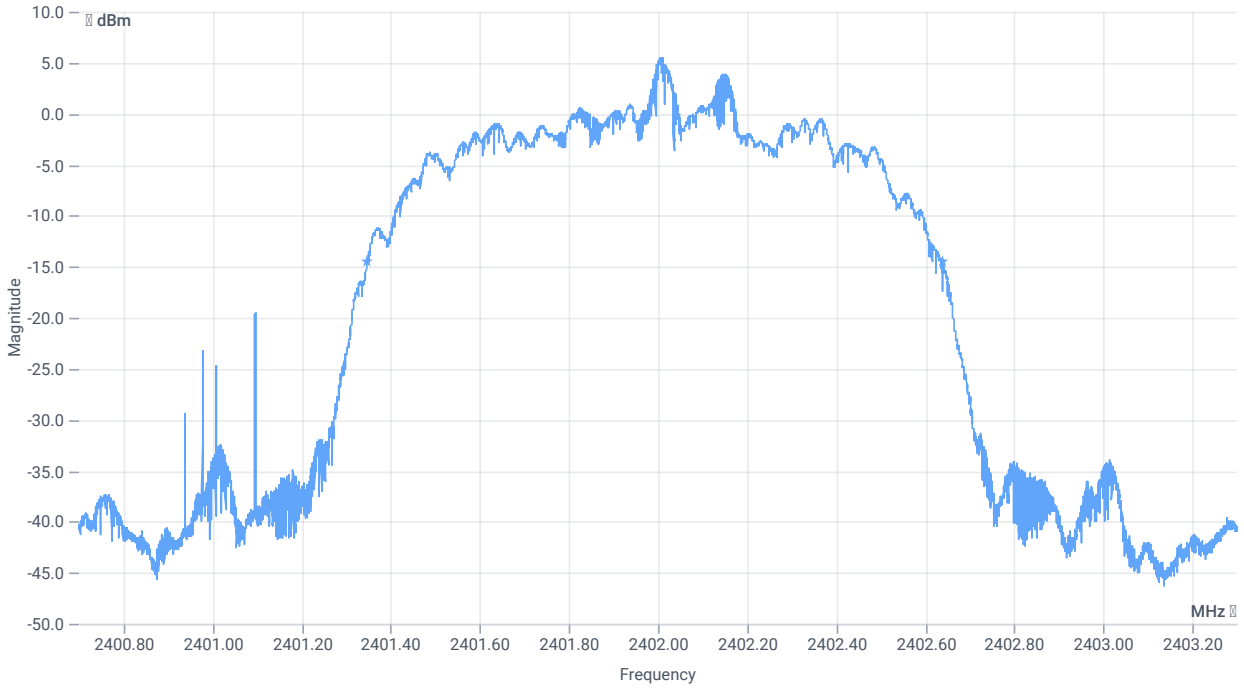
BW 99PCT



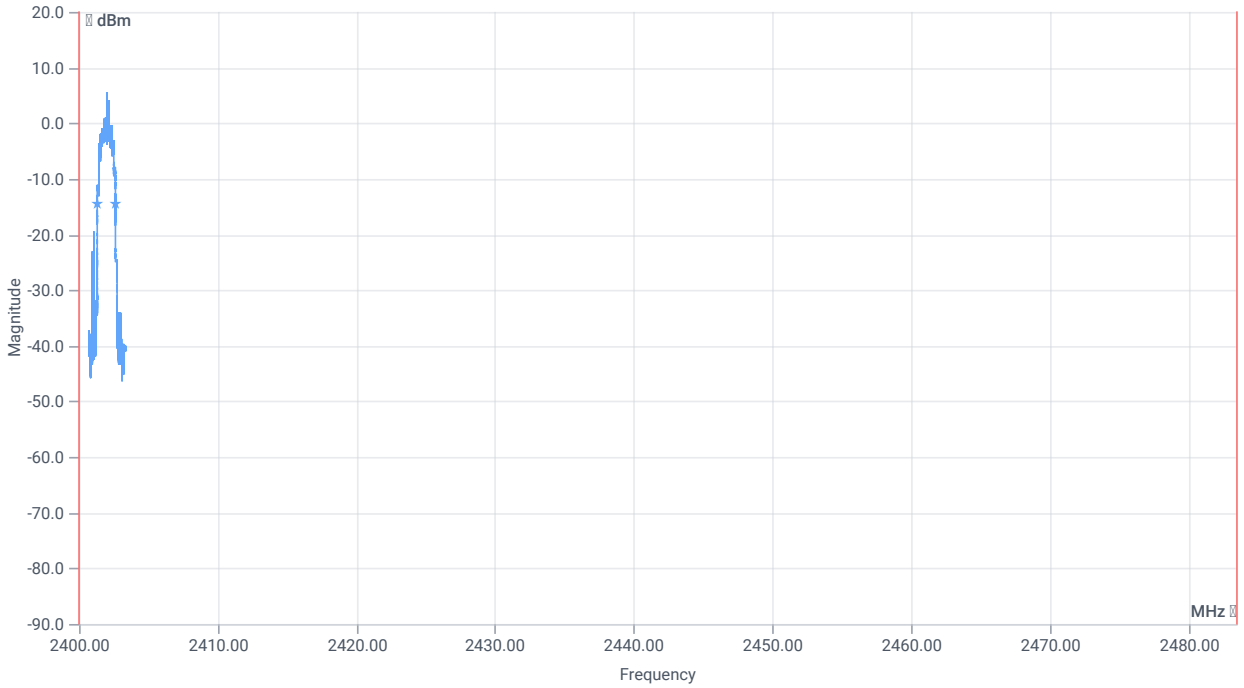
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1184.000	kHz	INFO
T1 99%	2400.000000	---	2401.4010	MHz	PASS
T2 99%	---	2483.500000	2402.5847	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1289	kHz	INFO
T1 20DB	2400.000000	---	2401.3477	MHz	PASS
T2 20dB	---	2483.500000	2402.6370	MHz	PASS

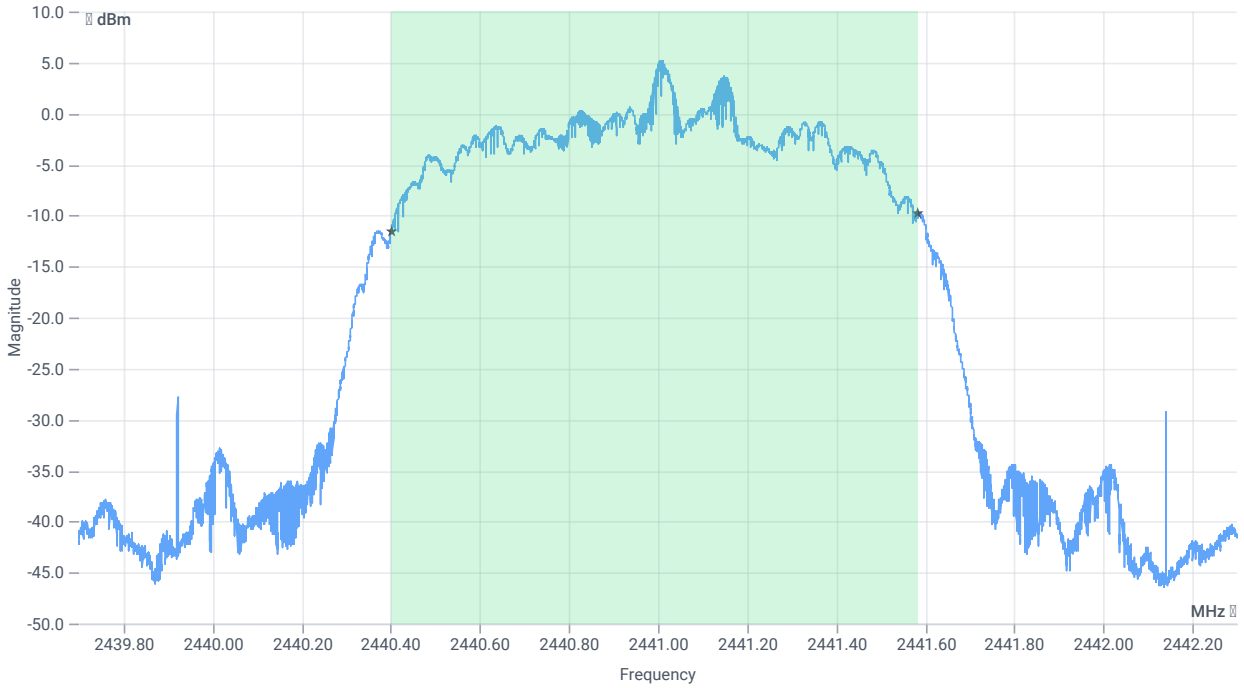
Test at TX 2441 MHz

RESULT: Reference Power cond.

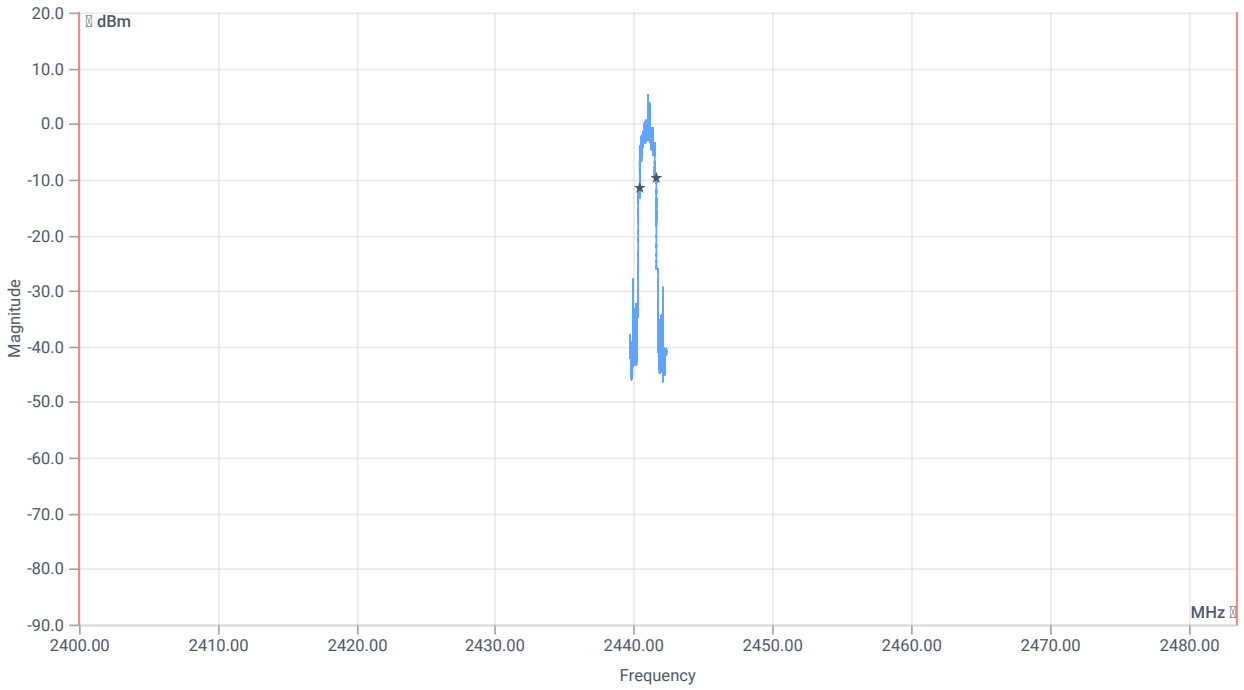
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	8.11	dBm	INFO
Ref. Frequency	---	---	2440.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	13.11 | 10.66 | 20
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



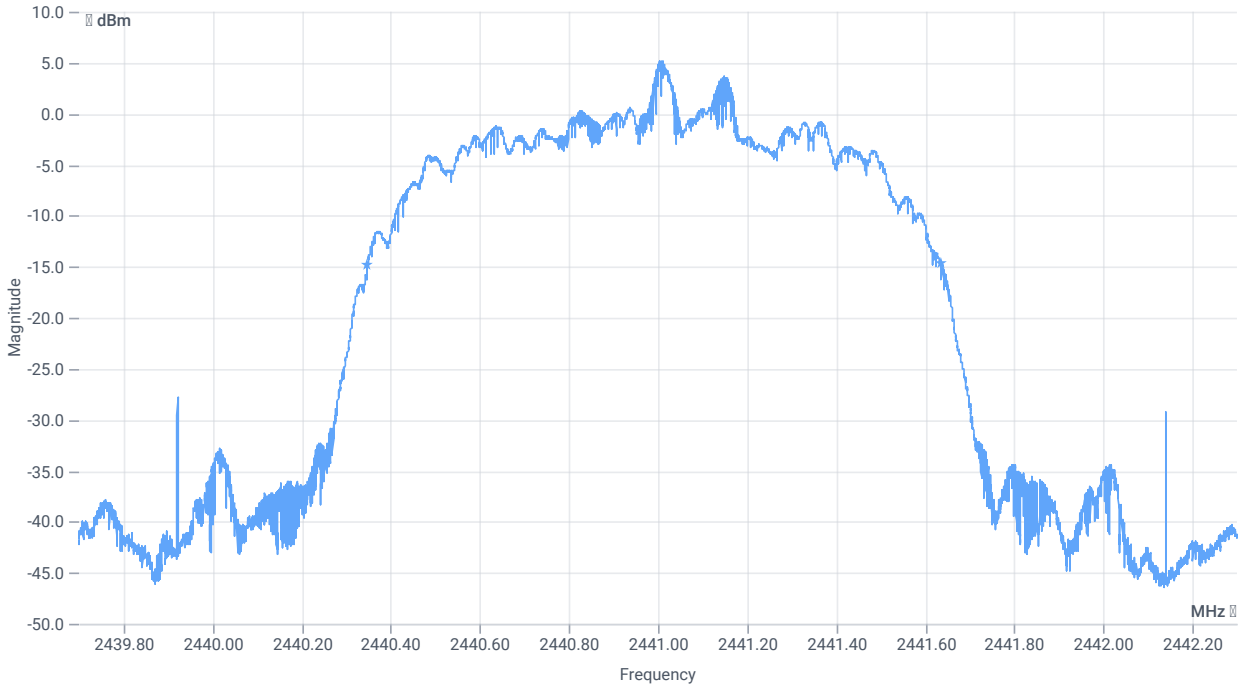
BW 99PCT



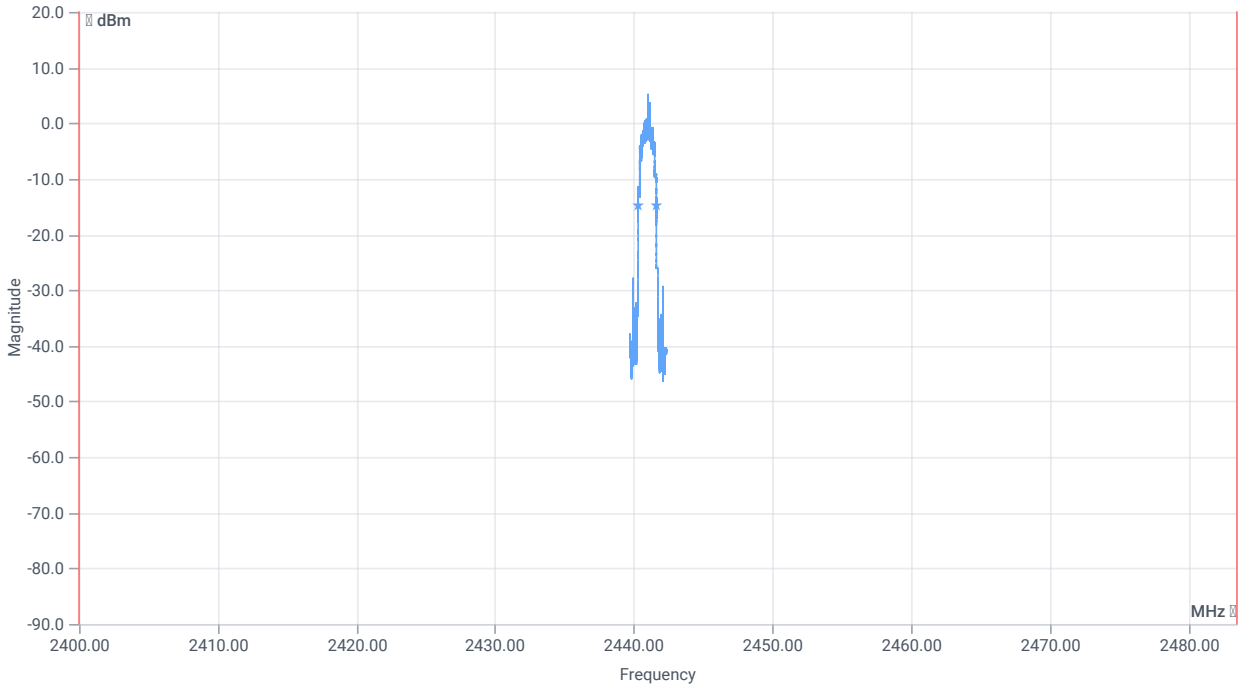
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1183.000	kHz	INFO
T1 99%	2400.000000	---	2440.4015	MHz	PASS
T2 99%	---	2483.500000	2441.5849	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1289	kHz	INFO
T1 20DB	2400.000000	---	2440.3477	MHz	PASS
T2 20dB	---	2483.500000	2441.6365	MHz	PASS

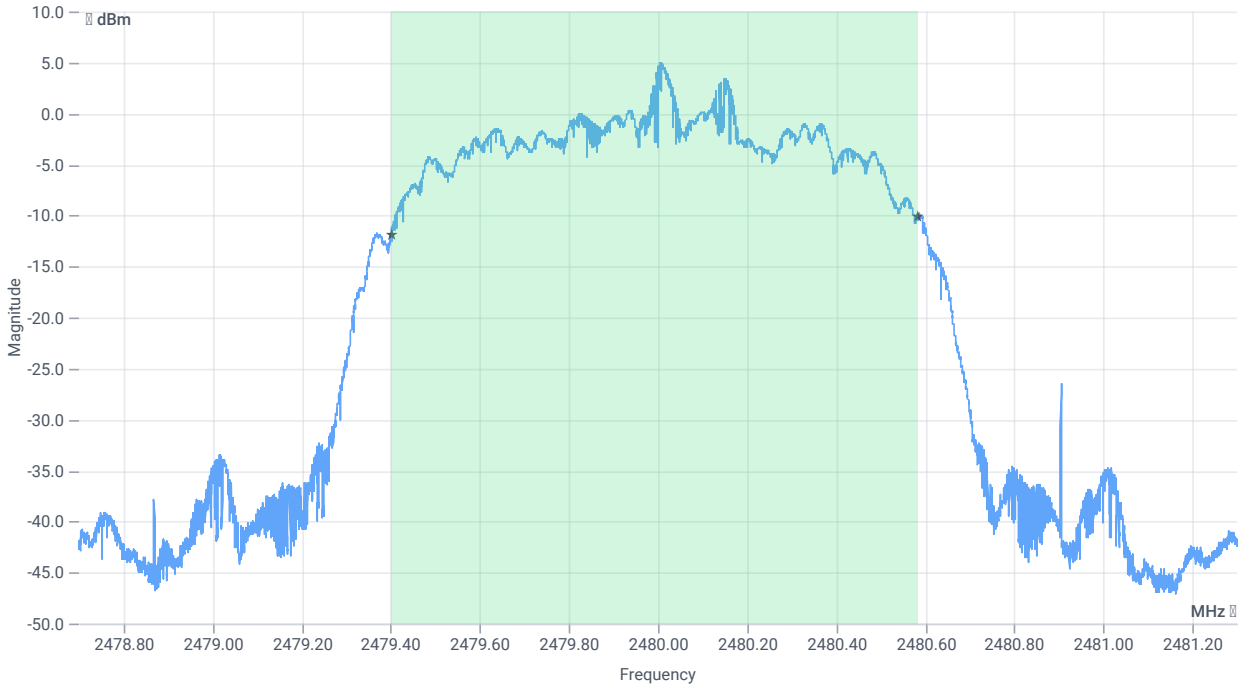
Test at TX 2480 MHz

RESULT: Reference Power cond.

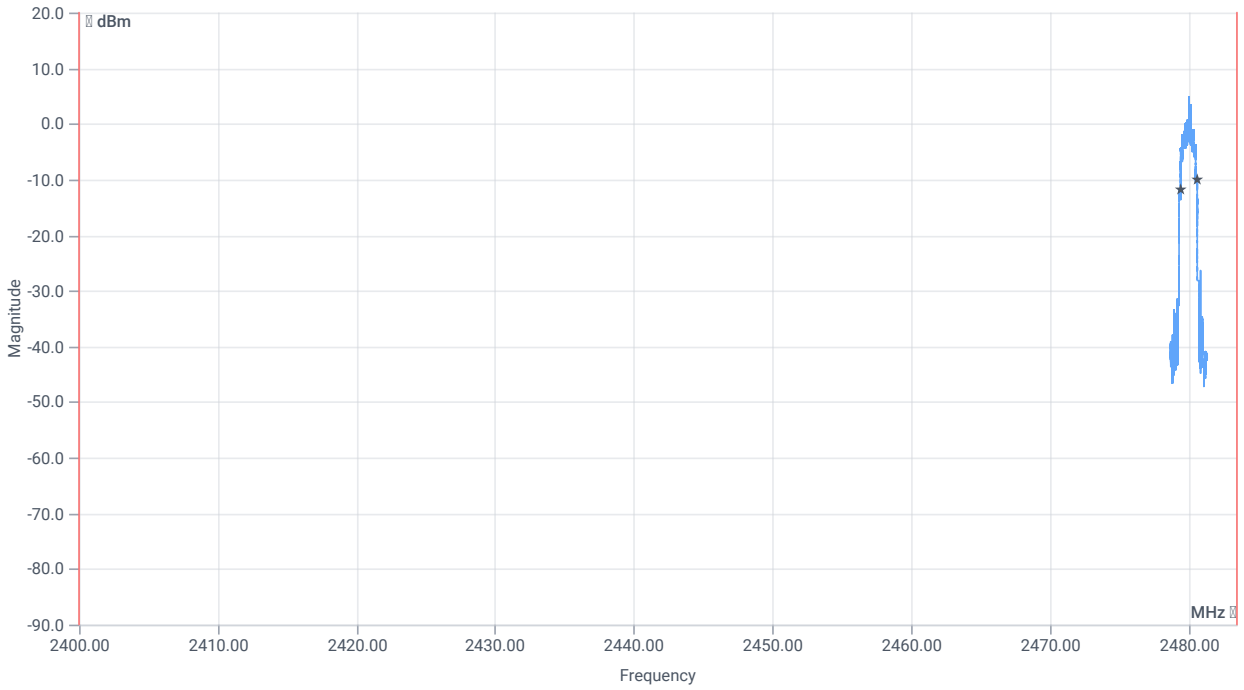
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	7.74	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	12.74 | 10.71 | 20
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



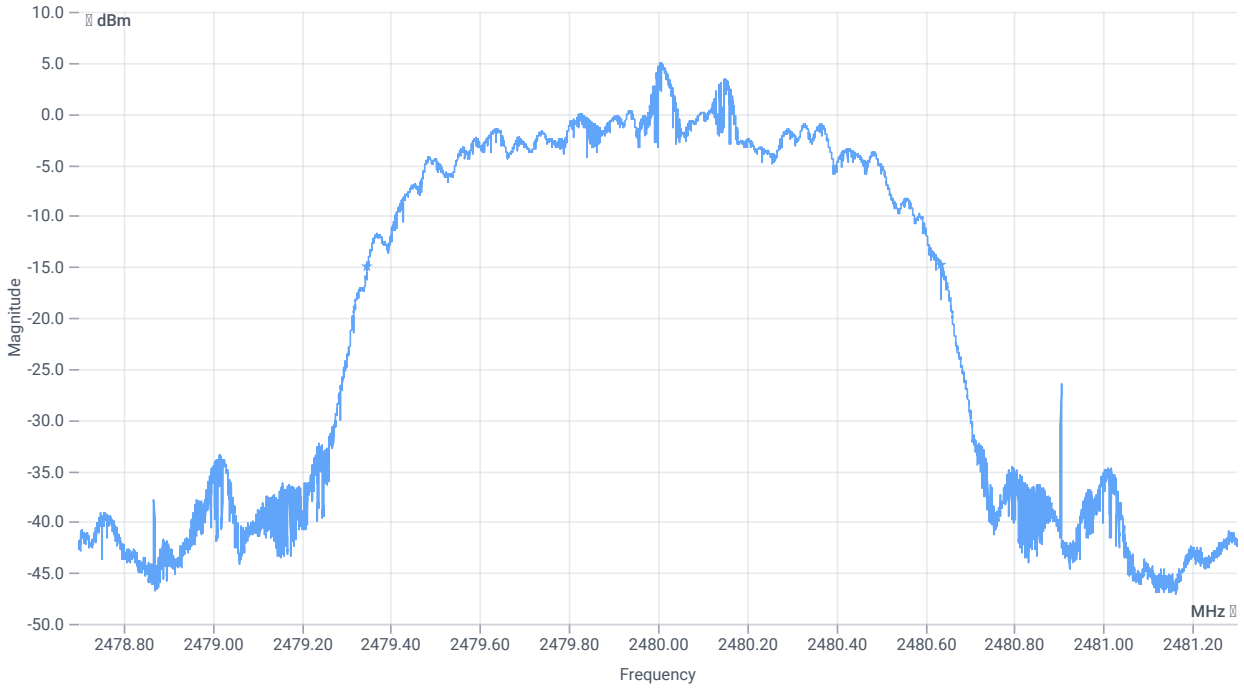
BW 99PCT



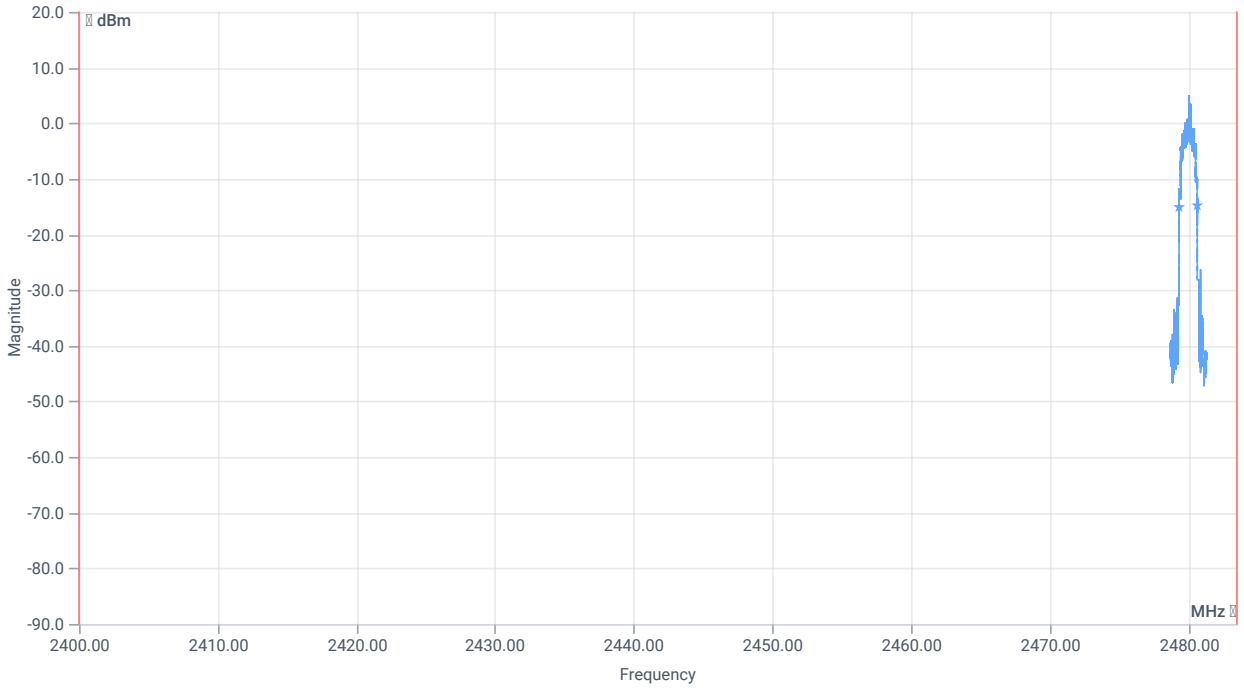
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1184.000	kHz	INFO
T1 99%	2400.000000	---	2479.4013	MHz	PASS
T2 99%	---	2483.500000	2480.5849	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1287	kHz	INFO
T1 20DB	2400.000000	---	2479.3479	MHz	PASS
T2 20dB	---	2483.500000	2480.6349	MHz	PASS

Verdict
PASS

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

Test References

TC Start	05.06.2023 13:05:45
Ambit Temp [°C] | Humidity [rel%]	0.0 | 0
System Version	4.0.1.4
Test Specification	FCC 15.247 -
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted FHSS - BT Classic EDR 8DPSK
Add. 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 Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

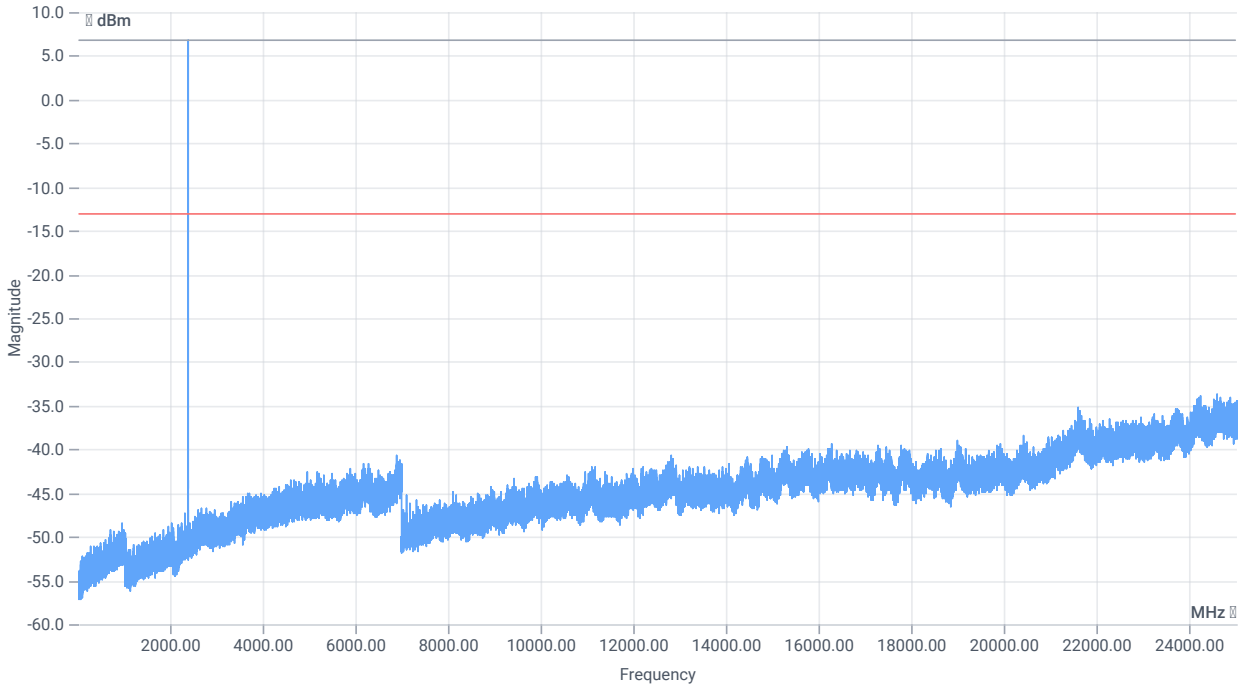
Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

Test at TX 2402 MHz

RESULT: Reference Power cond.

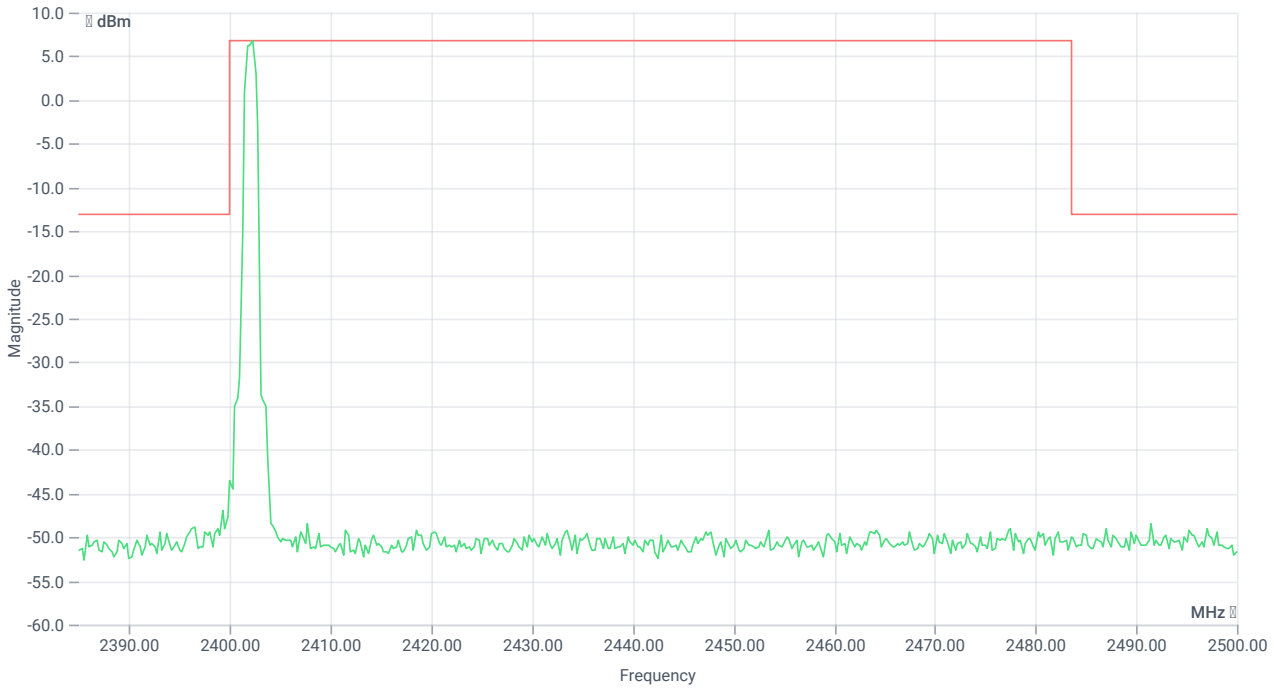
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	8.76	dBm	INFO
Ref. Frequency	---	---	2402.000	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	8.76 | 0 | 25
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

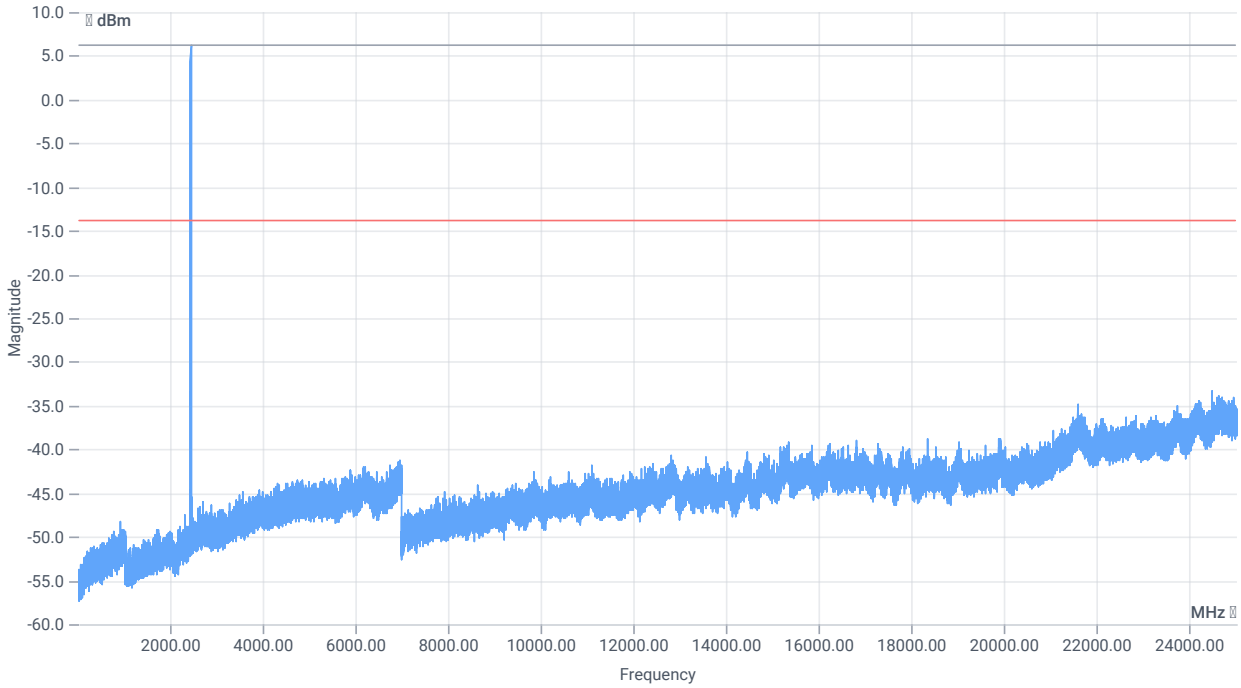
RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2402.25 MHz	---	---	6.86	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24587.25 MHz	0	---	20.65	dB	INFO

Test at TX 2441 MHz

RESULT: Reference Power cond.

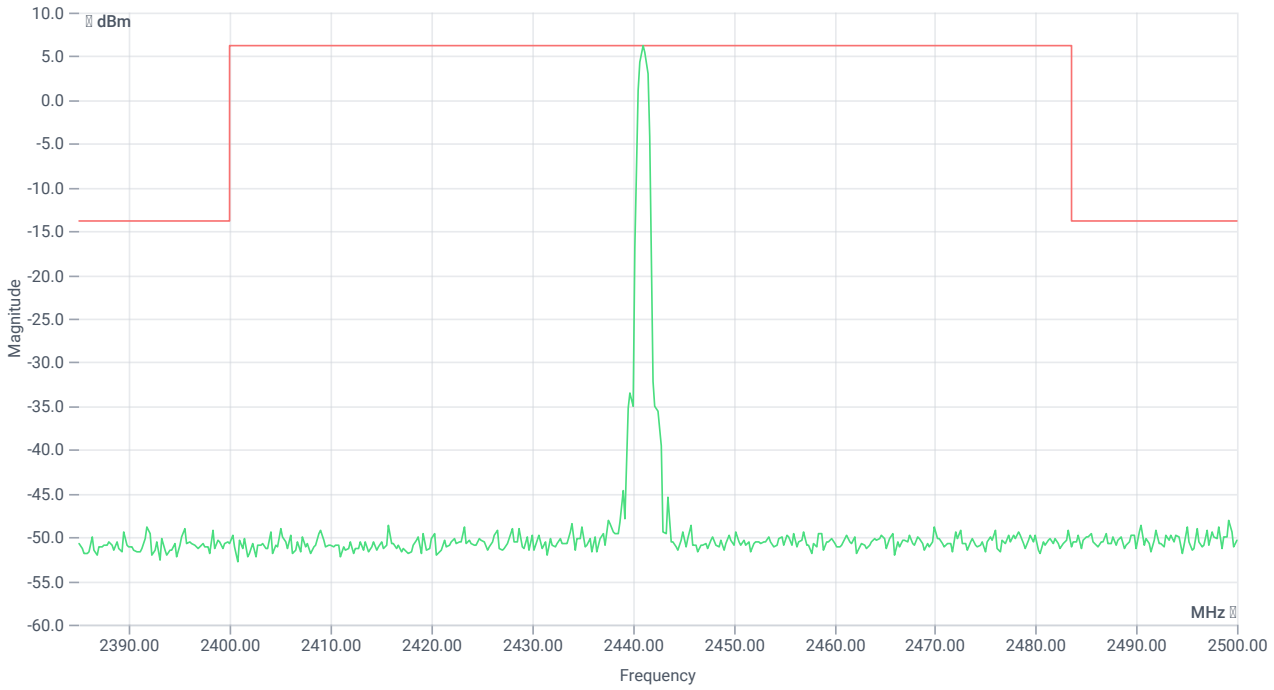
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	8.47	dBm	INFO
Ref. Frequency	---	---	2441.000	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	8.47 | 0 | 25
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

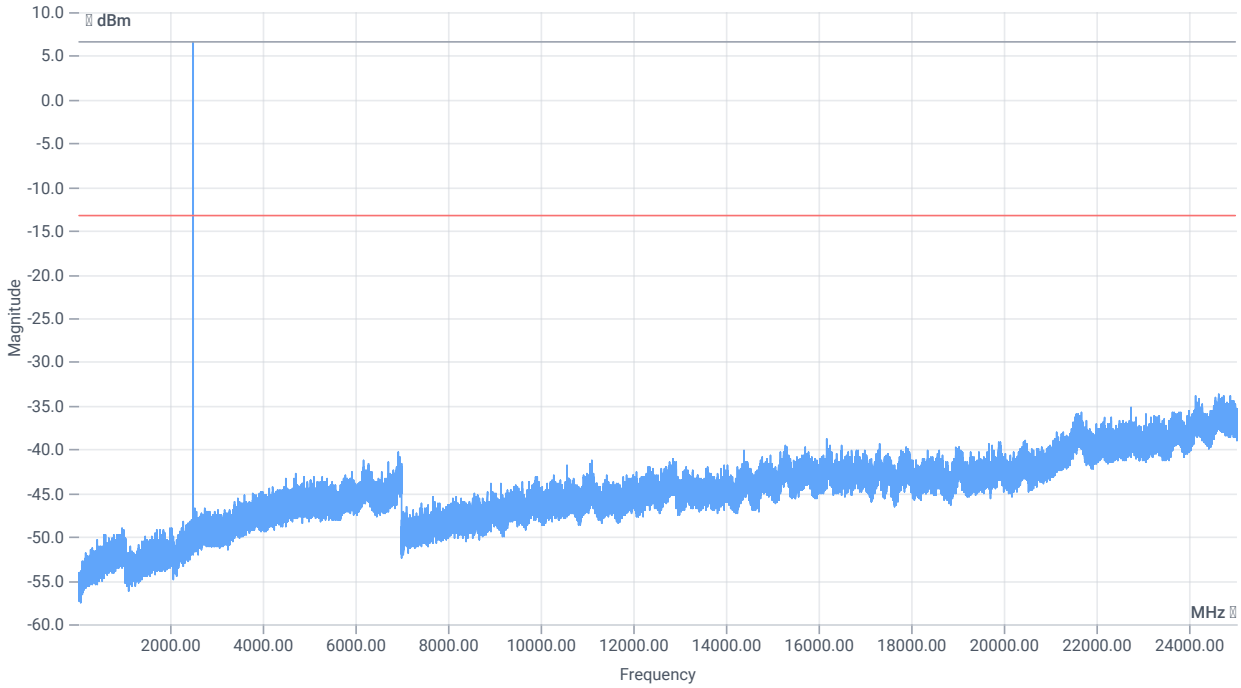
RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2441.00 MHz	---	---	6.17	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24510 MHz	0	---	19.56	dB	INFO

Test at TX 2480 MHz

RESULT: Reference Power cond.

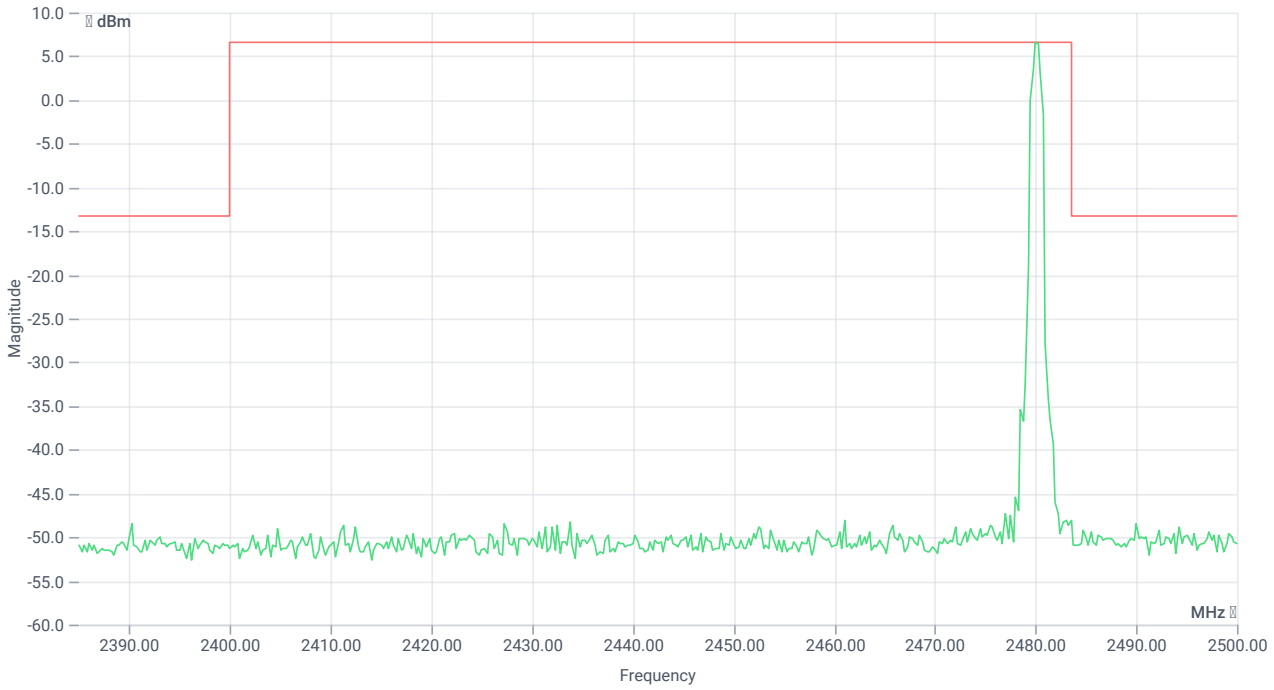
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	8.52	dBm	INFO
Ref. Frequency	---	---	2480.000	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	8.52 | 0 | 25
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

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2480.00 MHz	---	---	6.69	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24652.25 MHz	0	---	20.42	dB	INFO

Verdict
PASS

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

Test References

TC Start	05.06.2023 13:36:46
Ambit Temp [°C] | Humidity [rel%]	0.0 | 0
System Version	4.0.1.4
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions conducted on band edge FHSS - BT Classic EDR 8DPSK
Add. 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 Inqiury No)	0123456789AB
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
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI

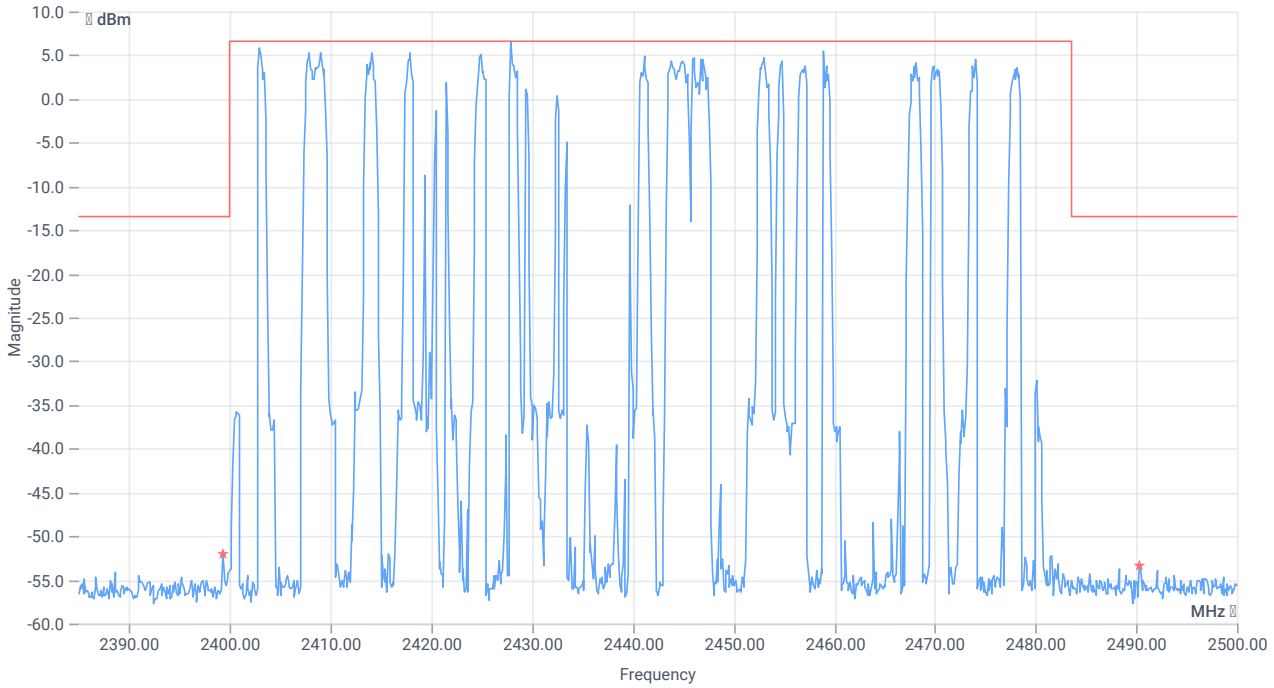
Test at TX hopping MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.28	dBm	INFO
Ref. Frequency	---	---	2405.130	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	14.28 | 10.66 | 20
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	200 | 25 | 1001 | SWE



TX emissions on band edge

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Max peak lower Band	---	-13.41	-52.02	dBm	PASS
Max peak upper Band	---	-13.41	-53.44	dBm	PASS

Verdict

PASS

- END OF DOCUMENT -