

Conducted test results

No.1-7035-23-01-02_TR1-A201-R1

February 04, 2025

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

cn=Andreas Curette, o=cetecom
advanced GmbH,
ou=CUR-230601,
email=andreas.curette@cetecom
advanced.com, c=DE
2025.02.04 14:01:40 +01'00'

Andreas Curette

Lab Manager
Radio Labs

Table of Content

NA # Peak output power 3MHz/3MHz ~ BT LE 1 Msps	3
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 1 Msps	9
FCC 15.247 # Bandwidth 6dB DTS ~ BT LE 1 Msps	17
FCC 15.247 # Peak psd DTS ~ BT LE 1 Msps	22
FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT LE 1 Msps	27
FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 1 Msps	38
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 2 Msps	46
FCC 15.247 # Bandwidth 6dB DTS ~ BT LE 2 Msps	54
FCC 15.247 # Peak psd DTS ~ BT LE 2 Msps	59
FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT LE 2 Msps	64
FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 2 Msps	75

NA # Peak output power 3MHz/3MHz ~ BT LE 1 Msps

References

TC start	04.02.2025 10:16:44
Ambit temp (test rack) [°C] humidity [rel%]	not enabled not enabled
System version	5.1.6.4
Standard Version	NA NI
Method	
Description	Peak OP 3MHz/3MHz - BT LE 1 Msps
Information	

EUT Common Settings BT Low Energy

Intermodulation value N	3
Image freq. Low Mid High [MHz]	0 0 0
Power class	2
1 Mbps supported	True TXpayload 255 RXpayload 255
2 Mbps supported	True TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling settings	WS_USB_RS232 HCI 4 115200 None S1 None On
Signaling RF settings	RF1com 0 0 On
User interaction	No

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70
Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0

Test Parameter

Technology to test	BT LE 1 Msps
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path type	EUT_SA_GEN_SIG
Full path name	EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/

Test Parameter

Switch bits	00010001:00010001:00000000:00000001
-------------	-------------------------------------

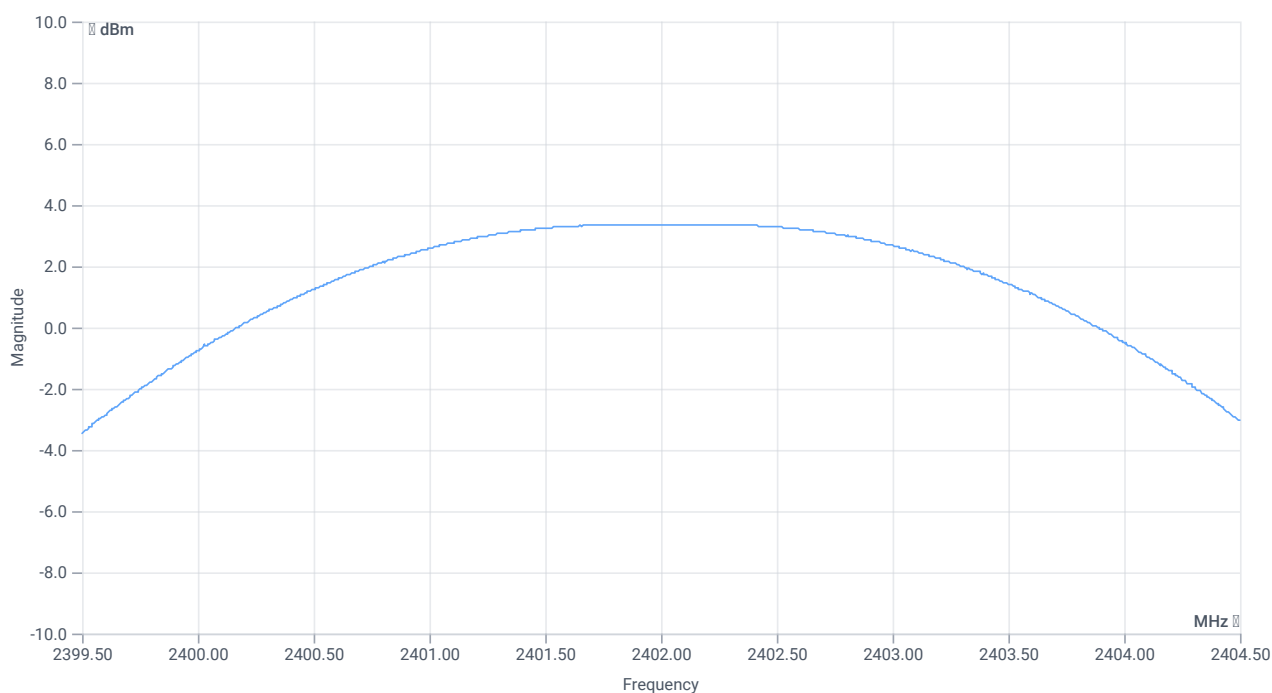
Test at TX 2402 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.38	dBm	INFO
Ref. frequency	---	---	2402.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.38 8.85 20
Start [MHz] Stop [MHz]	2399.500 2404.500
RBW [MHz] VBW [MHz]	3.000000 3.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 10 1001 SWE



Peak output power

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak power	---	---	3.36	dBm	INFO
Peak power	---	---	2.167704	mW	INFO
Frequency at peak	---	---	2401.975	MHz	INFO

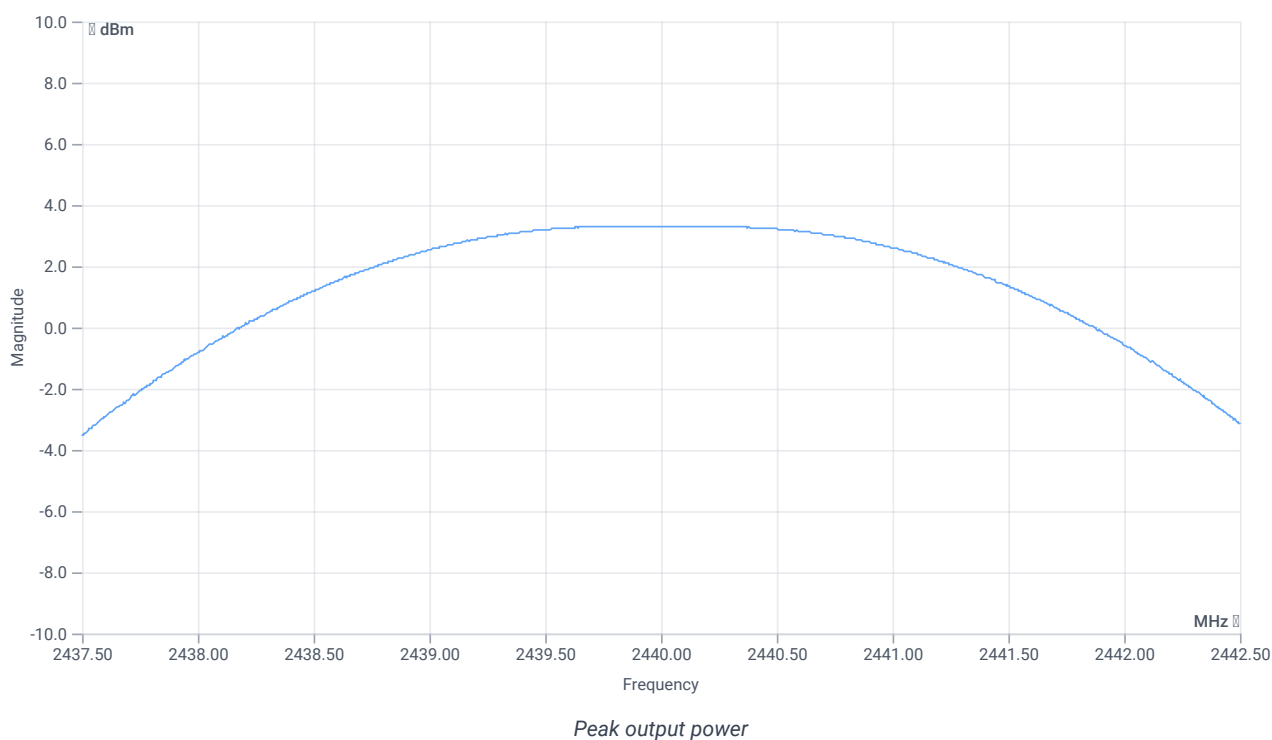
Test at TX 2440 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.31	dBm	INFO
Ref. frequency	---	---	2440.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.31 8.94 20
Start [MHz] Stop [MHz]	2437.500 2442.500
RBW [MHz] VBW [MHz]	3.000000 3.000000
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	---	---	3.3	dBm	INFO
Peak power	---	---	2.137962	mW	INFO
Frequency at peak	---	---	2440.03	MHz	INFO

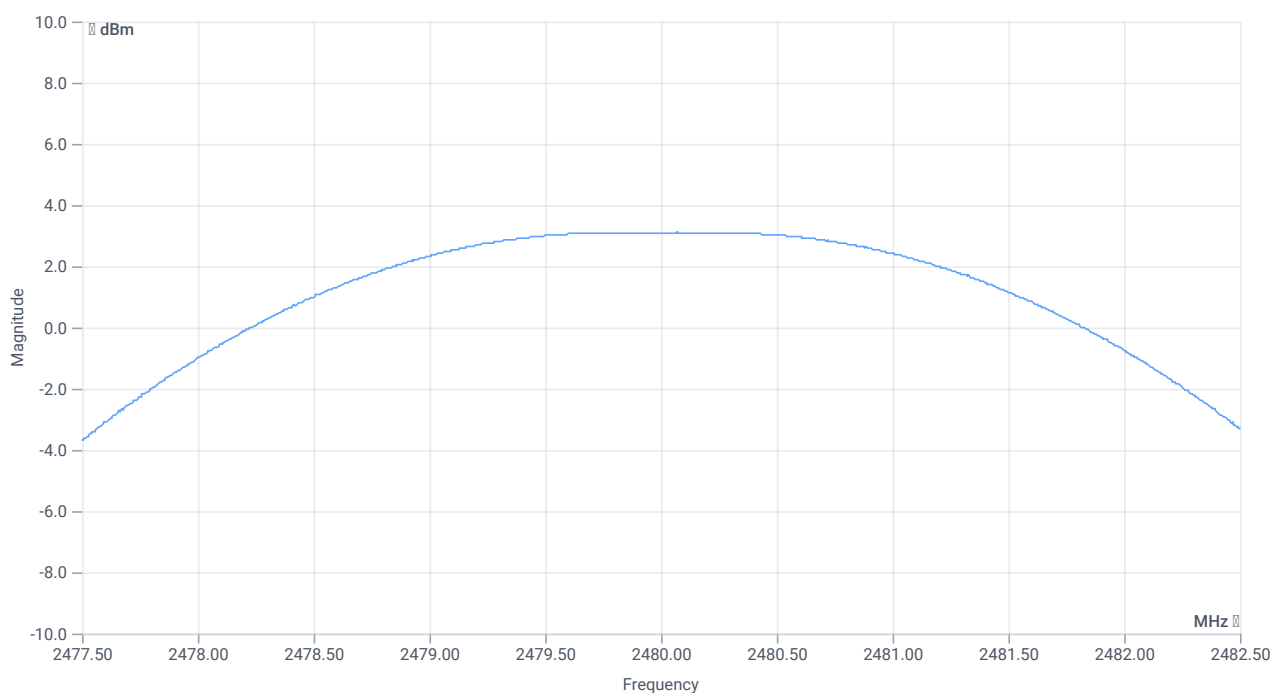
Test at TX 2480 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.14	dBm	INFO
Ref. frequency	---	---	2480.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.14 9.03 20
Start [MHz] Stop [MHz]	2477.500 2482.500
RBW [MHz] VBW [MHz]	3.000000 3.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 10 1001 SWE



Peak output power

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak power	---	---	3.11	dBm	INFO
Peak power	---	---	2.046445	mW	INFO
Frequency at peak	---	---	2480.07	MHz	INFO

Verdict

PASS

FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 1 Msps

References

TC start	04.02.2025 10:18:04
Ambit temp (test rack) [°C] humidity [rel%]	not enabled not enabled
System version	5.1.6.4
Standard Version	FCC 15.247 NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
Description	FCC 15.247 Maximum peak output power conducted DTS - BT LE 1 Msps
Information	

EUT Common Settings BT Low Energy

Intermodulation value N	3
Image freq. Low Mid High [MHz]	0 0 0
Power class	2
1 Mbps supported	True TXpayload 255 RXpayload 255
2 Mbps supported	True TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling settings	WS_USB_RS232 HCI 4 115200 None S1 None On
Signaling RF settings	RF1com 0 0 On
User interaction	No

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70
Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0

Test Parameter

Technology to test	BT LE 1 Msps
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7

Test Parameter

Full path type	EUT_SA_GEN_SIG
Full path name	EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/
Switch bits	00010001:00010001:00000000:00000001

Test at TX 2402 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.41	dBm	INFO
Ref. frequency	---	---	2402.300	MHz	INFO

READ SA SETTINGS:

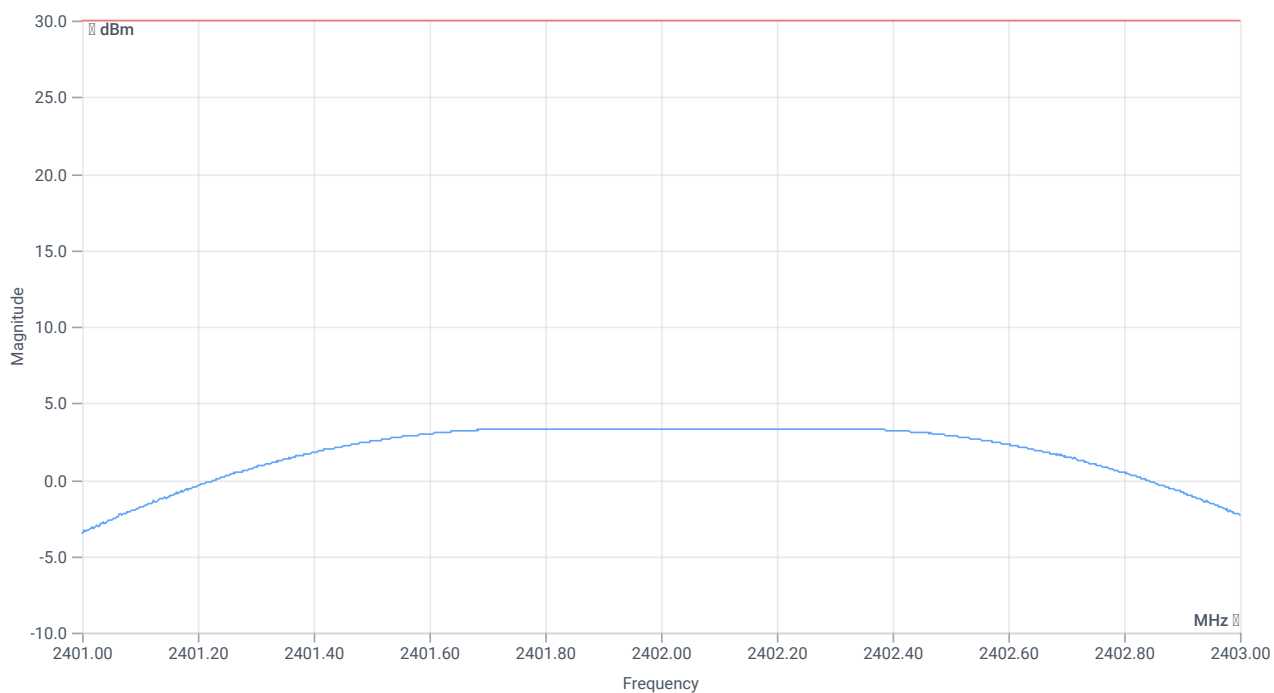
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.41 8.85 15
Start [MHz] Stop [MHz]	2401.000 2403.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

DTS bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	---	---	674	kHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.41 8.85 20
Start [MHz] Stop [MHz]	2401.000 2403.000
RBW [MHz] VBW [MHz]	1.000000 5.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 1001 SWE



Peak output power

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak power	---	30.00	3.34	dBm	PASS
Peak power	---	1000	2.157744	mW	PASS
Frequency at peak	---	---	2402.044	MHz	INFO

Test at TX 2440 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.30	dBm	INFO
Ref. frequency	---	---	2440.300	MHz	INFO

READ SA SETTINGS:

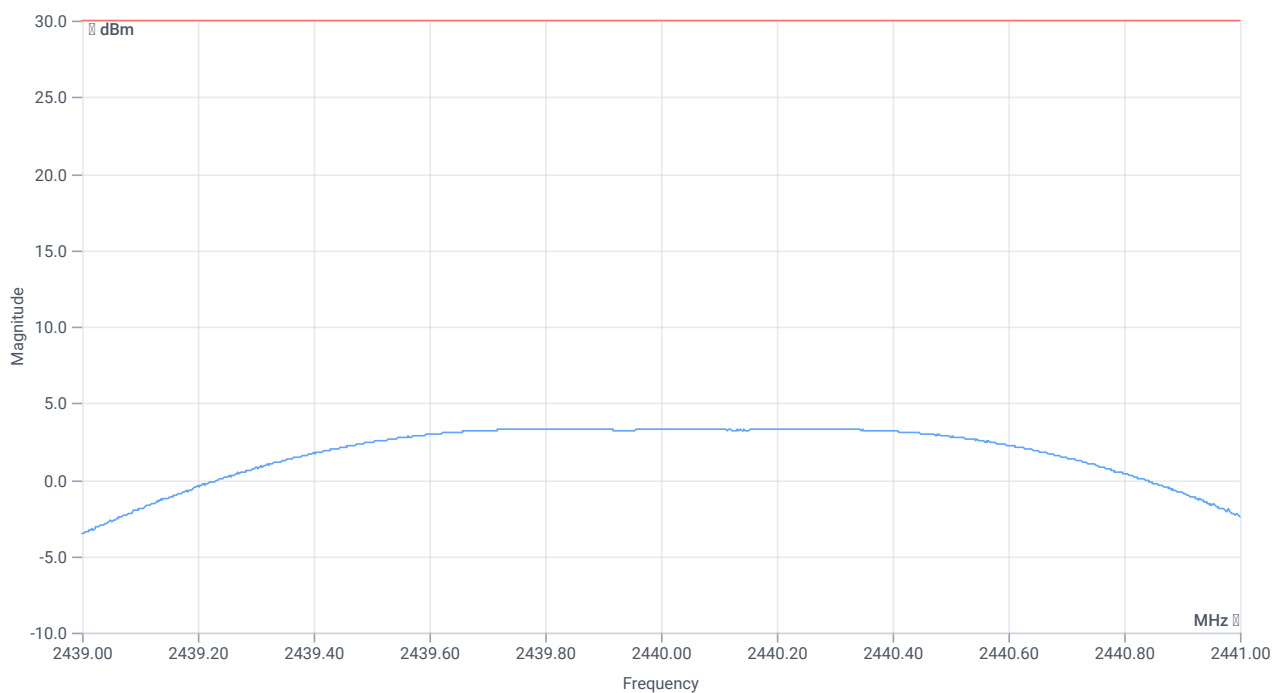
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.30 8.94 15
Start [MHz] Stop [MHz]	2439.000 2441.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

DTS bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	---	---	673	kHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.30 8.94 20
Start [MHz] Stop [MHz]	2439.000 2441.000
RBW [MHz] VBW [MHz]	1.000000 5.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 1001 SWE



Peak output power

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak power	---	30.00	3.29	dBm	PASS
Peak power	---	1000	2.133045	mW	PASS
Frequency at peak	---	---	2440.04	MHz	INFO

Test at TX 2480 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.13	dBm	INFO
Ref. frequency	---	---	2480.300	MHz	INFO

READ SA SETTINGS:

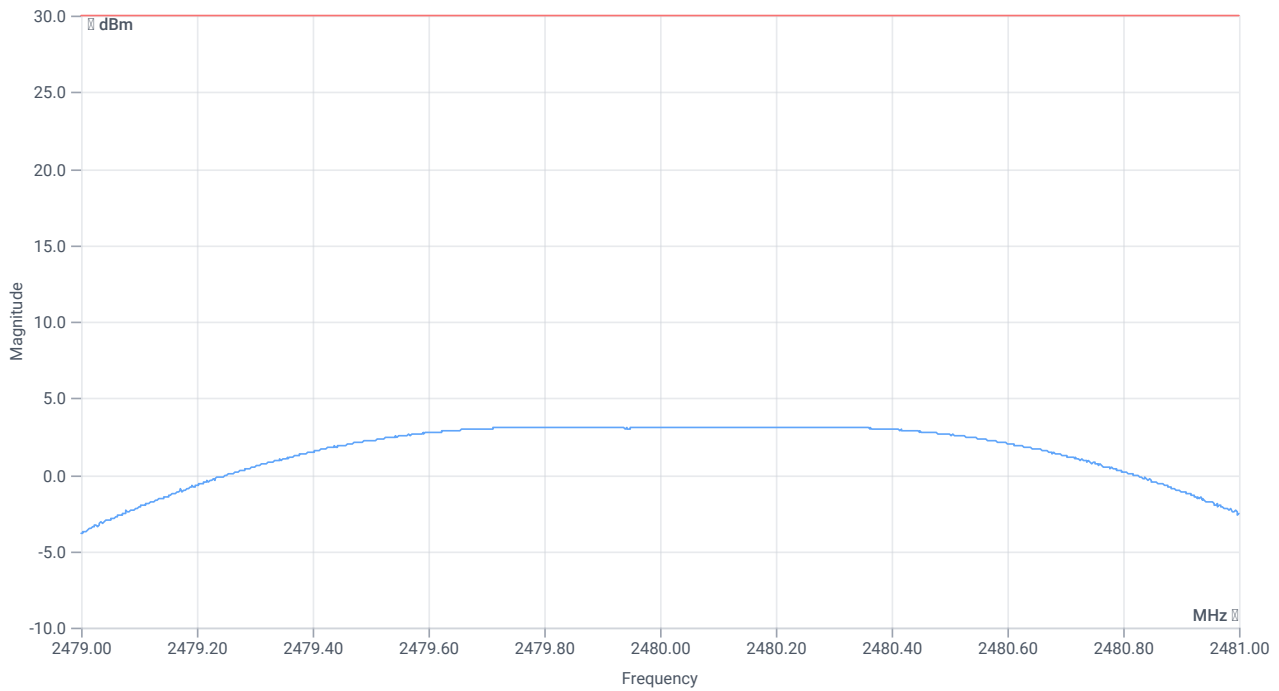
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.13 9.03 15
Start [MHz] Stop [MHz]	2479.000 2481.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

DTS bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	---	---	669	kHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.13 9.03 20
Start [MHz] Stop [MHz]	2479.000 2481.000
RBW [MHz] VBW [MHz]	1.000000 5.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 1001 SWE



Peak output power

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak power	---	30.00	3.09	dBm	PASS
Peak power	---	1000	2.037042	mW	PASS
Frequency at peak	---	---	2480.02	MHz	INFO

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ BT LE 1 Msps

References

TC start	04.02.2025 10:20:06
Ambit temp (test rack) [°C] humidity [rel%]	not enabled not enabled
System version	5.1.6.4
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - BT LE 1 Msps
Information	

EUT Common Settings BT Low Energy

Intermodulation value N	3
Image freq. Low Mid High [MHz]	0 0 0
Power class	2
1 Mbps supported	True TXpayload 255 RXpayload 255
2 Mbps supported	True TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling settings	WS_USB_RS232 HCI 4 115200 None S1 None On
Signaling RF settings	RF1com 0 0 On
User interaction	No

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70
Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0

Test Parameter

Technology to test	BT LE 1 Msps
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path type	EUT_SA_GEN_SIG
Full path name	EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/

Test Parameter

Switch bits	00010001:00010001:00000000:00000001
-------------	-------------------------------------

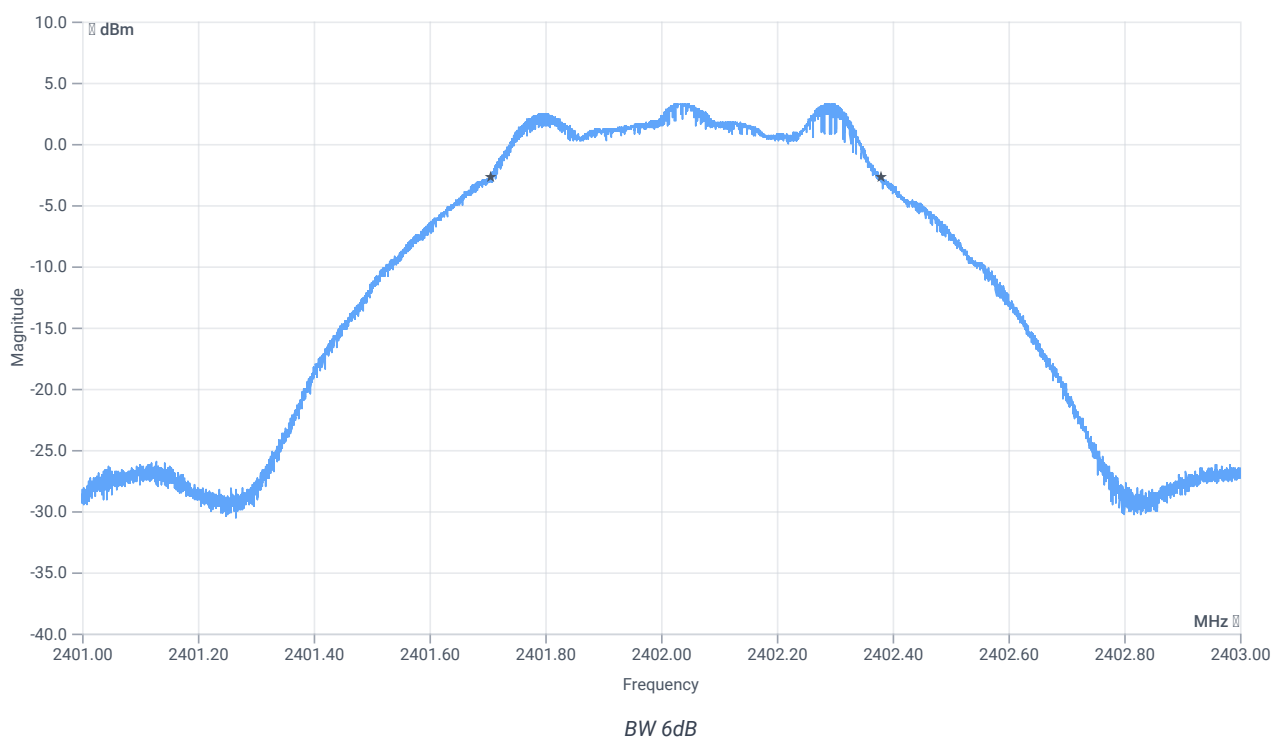
Test at TX 2402 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.36	dBm	INFO
Ref. frequency	---	---	2402.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.36 8.85 15
Start [MHz] Stop [MHz]	2401.000 2403.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	500	---	675	kHz	PASS

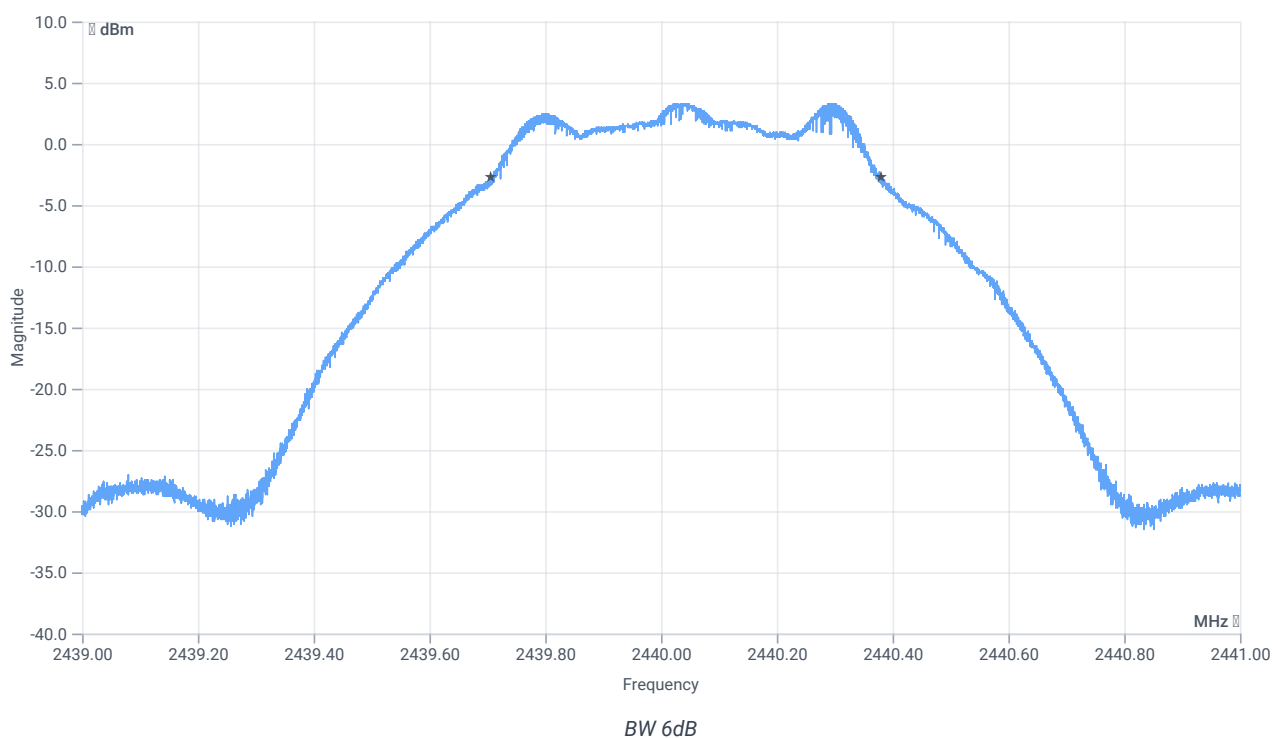
Test at TX 2440 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.35	dBm	INFO
Ref. frequency	---	---	2440.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.35 8.94 15
Start [MHz] Stop [MHz]	2439.000 2441.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	500	---	674	kHz	PASS

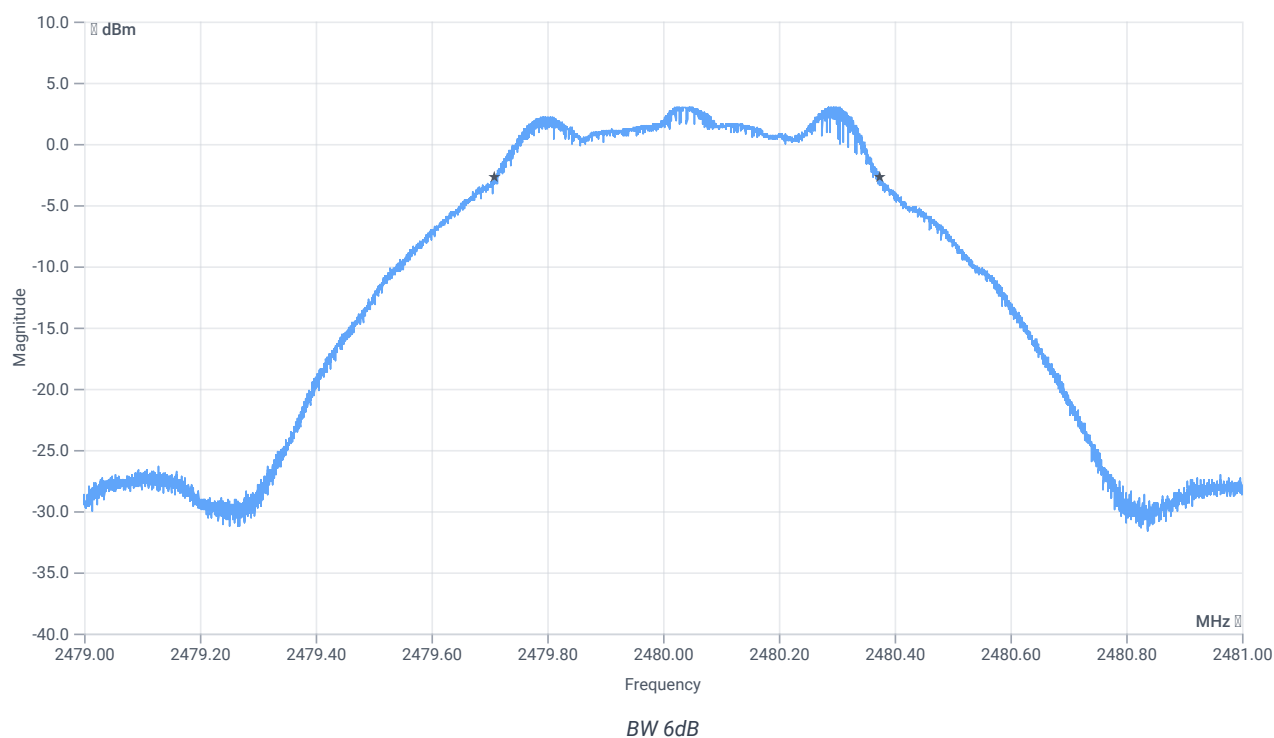
Test at TX 2480 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.09	dBm	INFO
Ref. frequency	---	---	2480.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.09 9.03 15
Start [MHz] Stop [MHz]	2479.000 2481.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	500	---	666	kHz	PASS

Verdict

PASS

FCC 15.247 # Peak psd DTS ~ BT LE 1 Msps

References

TC start	04.02.2025 10:21:30
Ambit temp (test rack) [°C] humidity [rel%]	not enabled not enabled
System version	5.1.6.4
Standard Version	FCC 15.247 NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
Description	FCC 15.247 Peak psd DTS - BT LE 1 Msps
Information	

EUT Common Settings BT Low Energy

Intermodulation value N	3
Image freq. Low Mid High [MHz]	0 0 0
Power class	2
1 Mbps supported	True TXpayload 255 RXpayload 255
2 Mbps supported	True TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling settings	WS_USB_RS232 HCI 4 115200 None S1 None On
Signaling RF settings	RF1com 0 0 On
User interaction	No

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70
Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0

Test Parameter

Technology to test	BT LE 1 Msps
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path type	EUT_SA_GEN_SIG

Test Parameter

Full path name	EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/
Switch bits	00010001:00010001:00000000:00000001

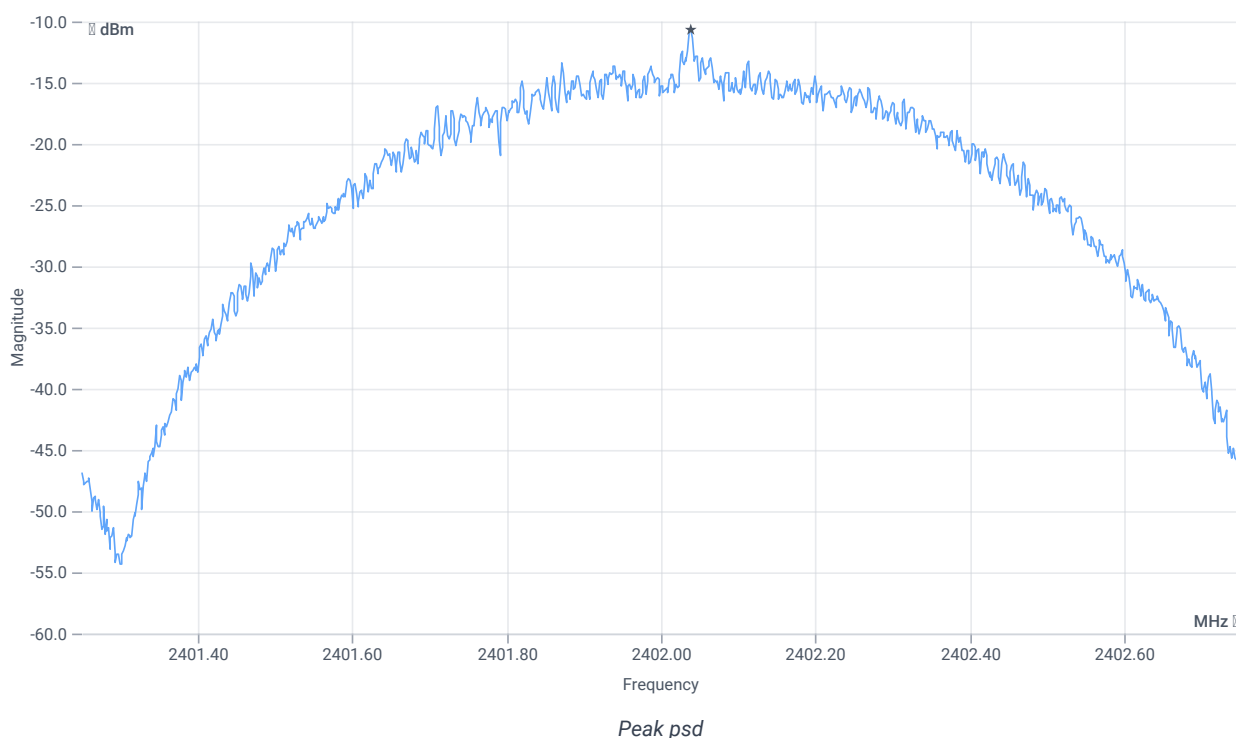
Test at TX 2402 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.37	dBm	INFO
Ref. frequency	---	---	2402.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.37 8.85 15
Start [MHz] Stop [MHz]	2401.250 2402.750
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 20 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-10.62	dBm/3KHz	PASS

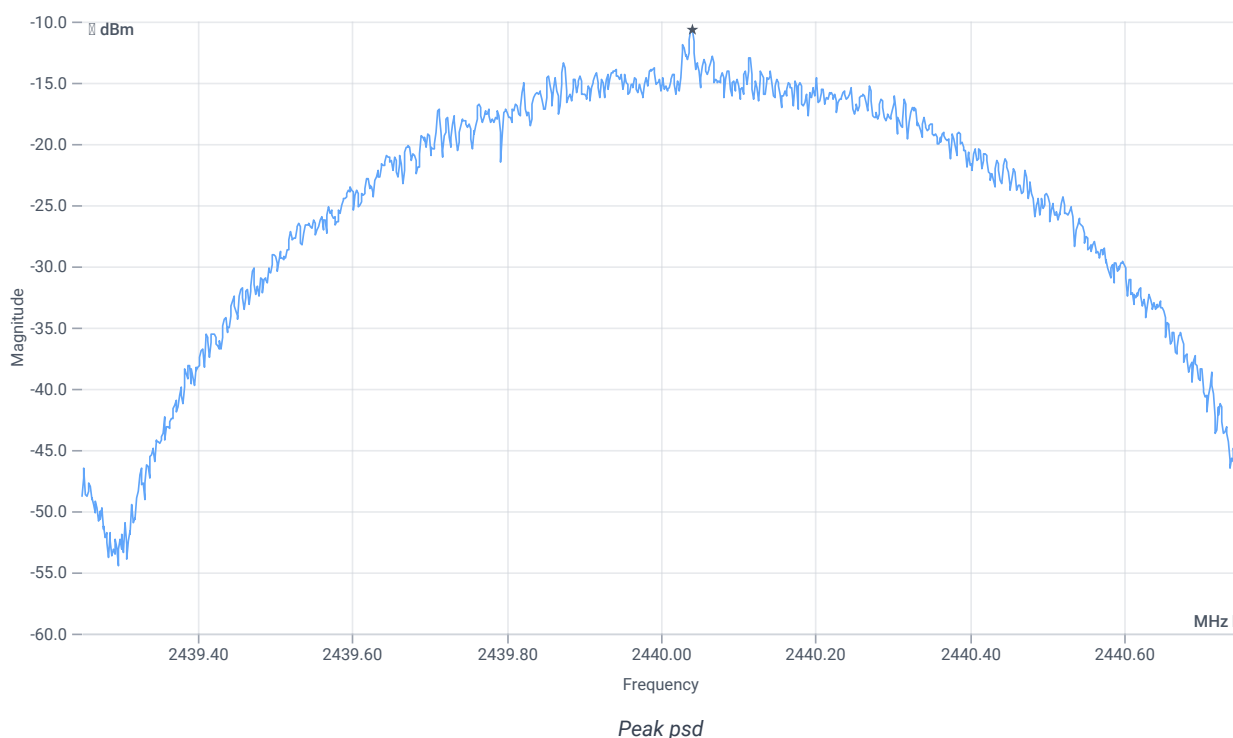
Test at TX 2440 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.34	dBm	INFO
Ref. frequency	---	---	2440.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.34 8.94 15
Start [MHz] Stop [MHz]	2439.250 2440.750
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 20 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-10.69	dBm/3KHz	PASS

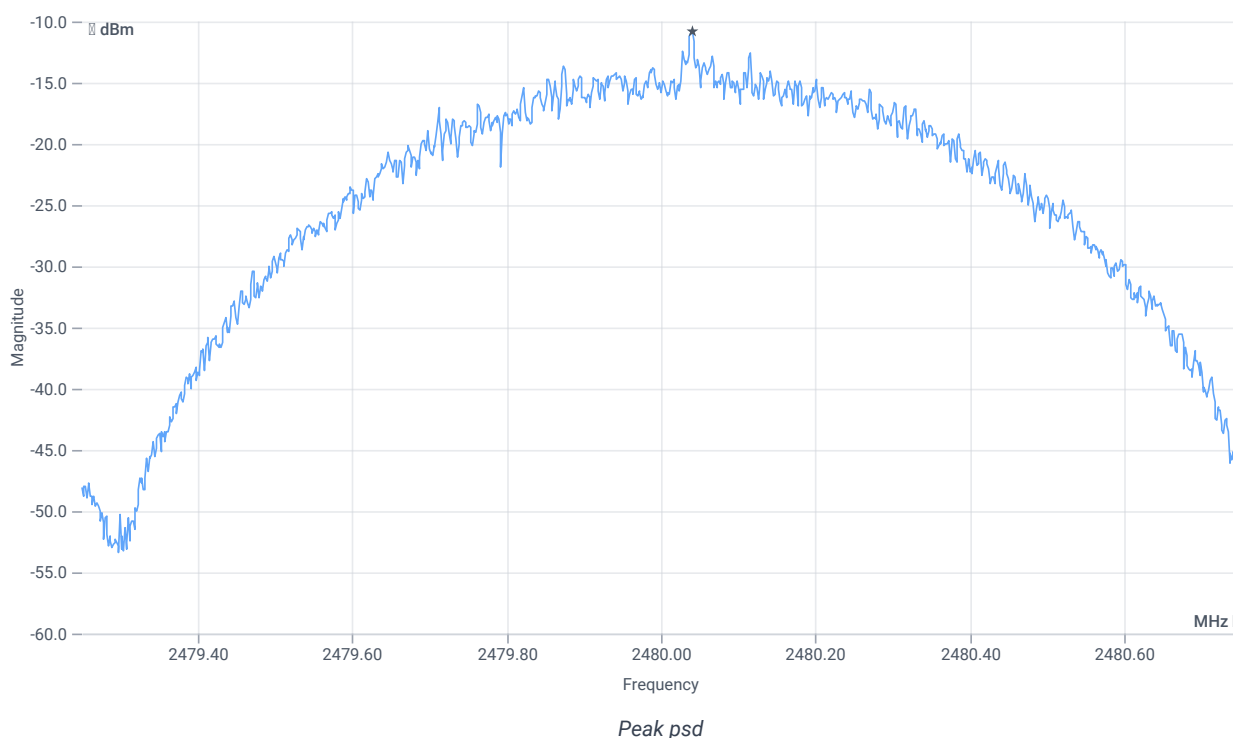
Test at TX 2480 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.09	dBm	INFO
Ref. frequency	---	---	2480.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.09 9.03 15
Start [MHz] Stop [MHz]	2479.250 2480.750
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 20 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-10.75	dBm/3KHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT LE 1 Msps

References

TC start	04.02.2025 10:23:20
Ambit temp (test rack) [°C] humidity [rel%]	not enabled not enabled
System version	5.1.6.4
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 1 Msps
Information	

EUT Common Settings BT Low Energy

Intermodulation value N	3
Image freq. Low Mid High [MHz]	0 0 0
Power class	2
1 Mbps supported	True TXpayload 255 RXpayload 255
2 Mbps supported	True TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling settings	WS_USB_RS232 HCI 4 115200 None S1 None On
Signaling RF settings	RF1com 0 0 On
User interaction	No

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70
Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0

Test Parameter

Technology to test	BT LE 1 Msps
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path type	EUT_SA_GEN_SIG

Test Parameter

Full path name	EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/
Switch bits	00010001:00010001:00000000:00000001

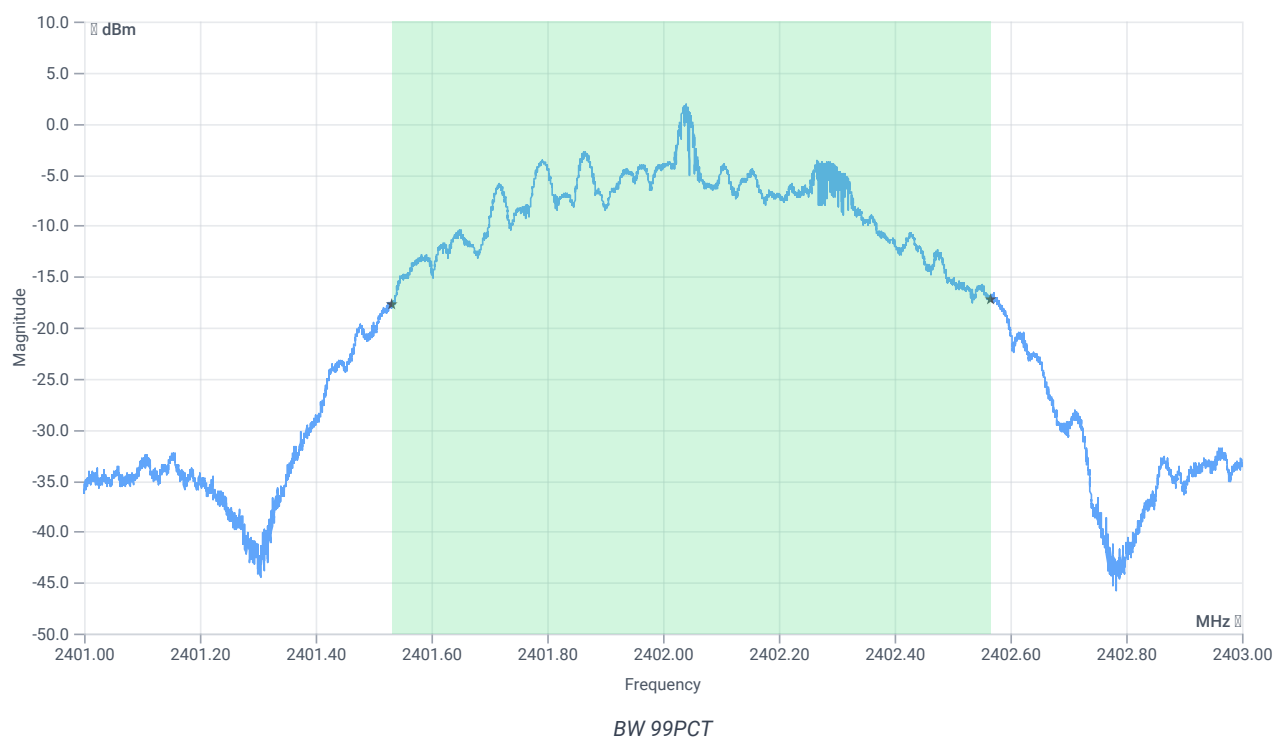
Test at TX 2402 MHz

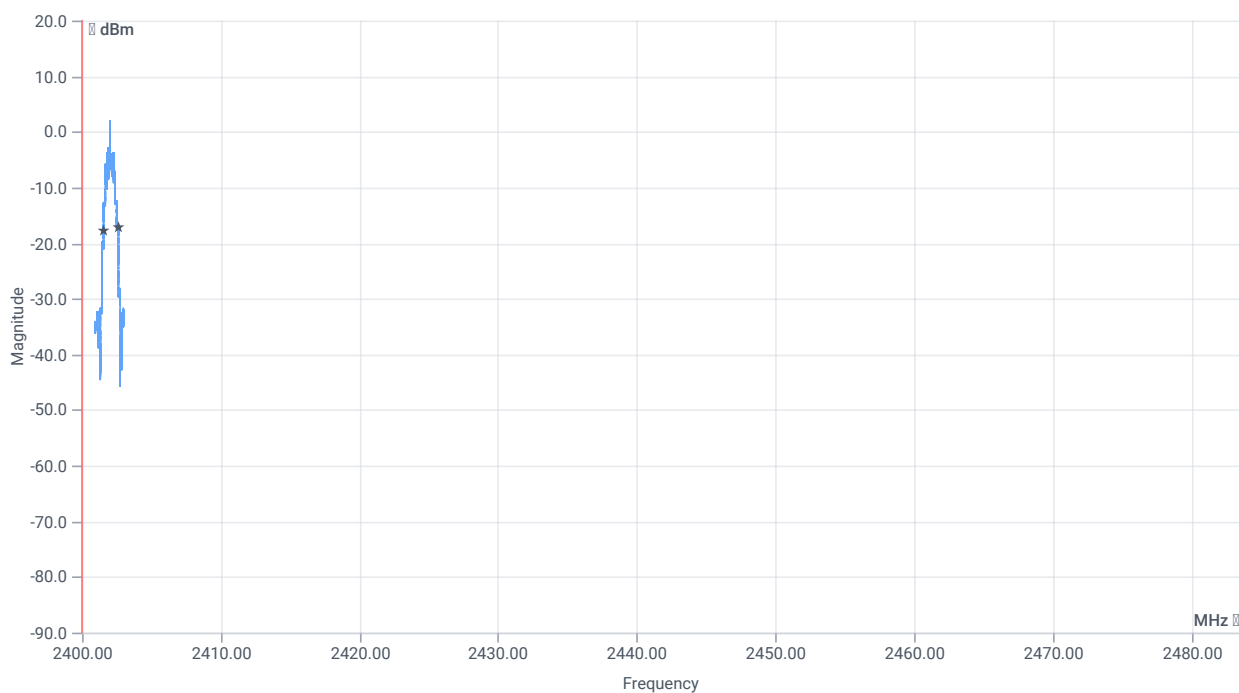
RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.36	dBm	INFO
Ref. frequency	---	---	2402.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.36 8.85 15
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

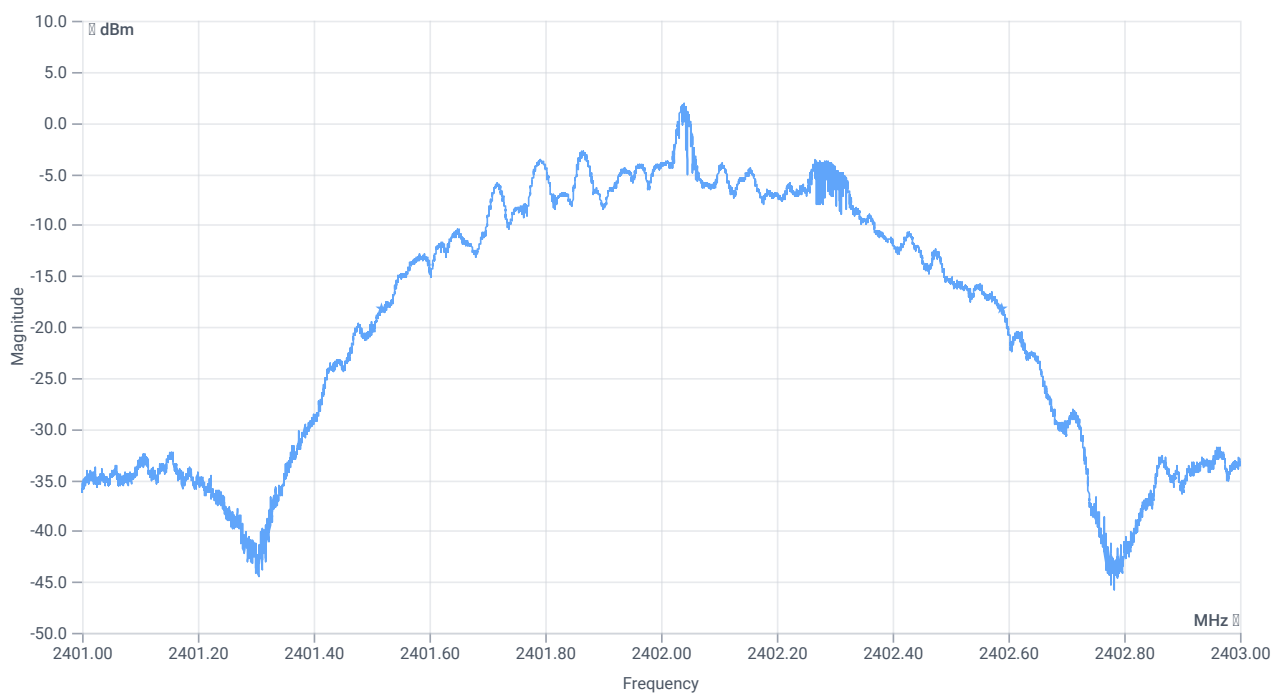




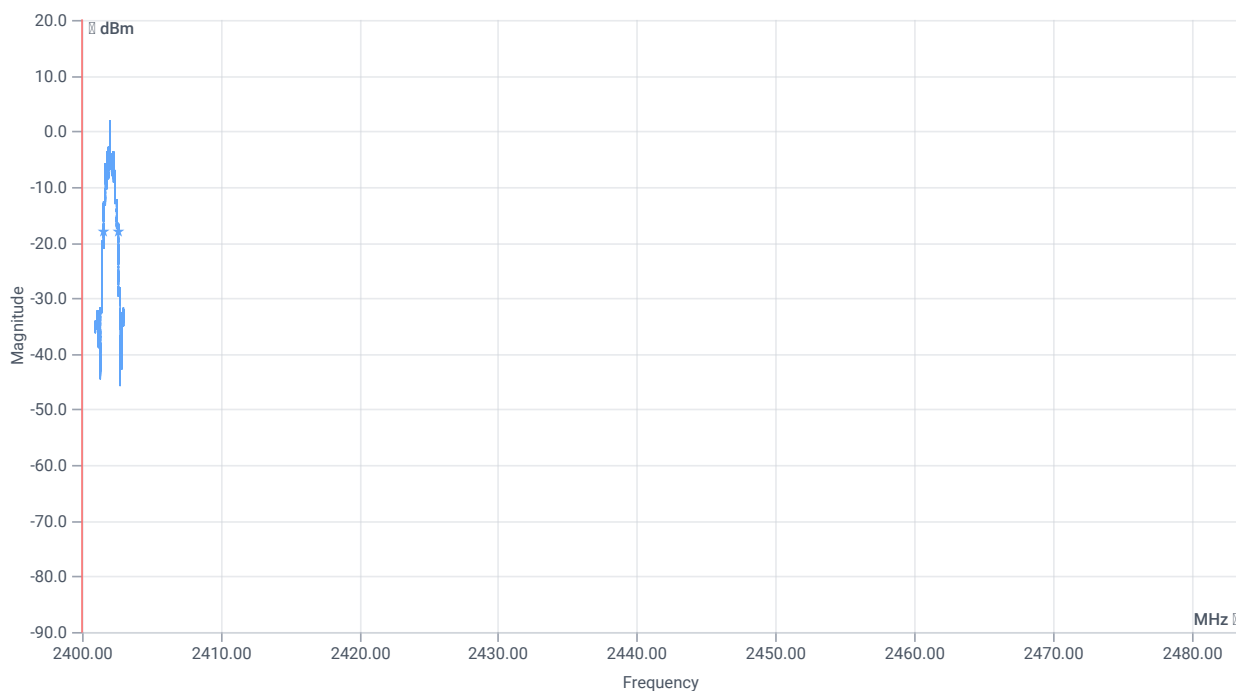
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1034.000	kHz	INFO
T1 99%	2400.000000	---	2401.5314	MHz	PASS
T2 99%	---	2483.500000	2402.5655	MHz	PASS



BW 20dB



BW within band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1070	kHz	INFO
T1 20dB	2400.000000	---	2401.5182	MHz	PASS
T2 20dB	---	2483.500000	2402.5878	MHz	PASS

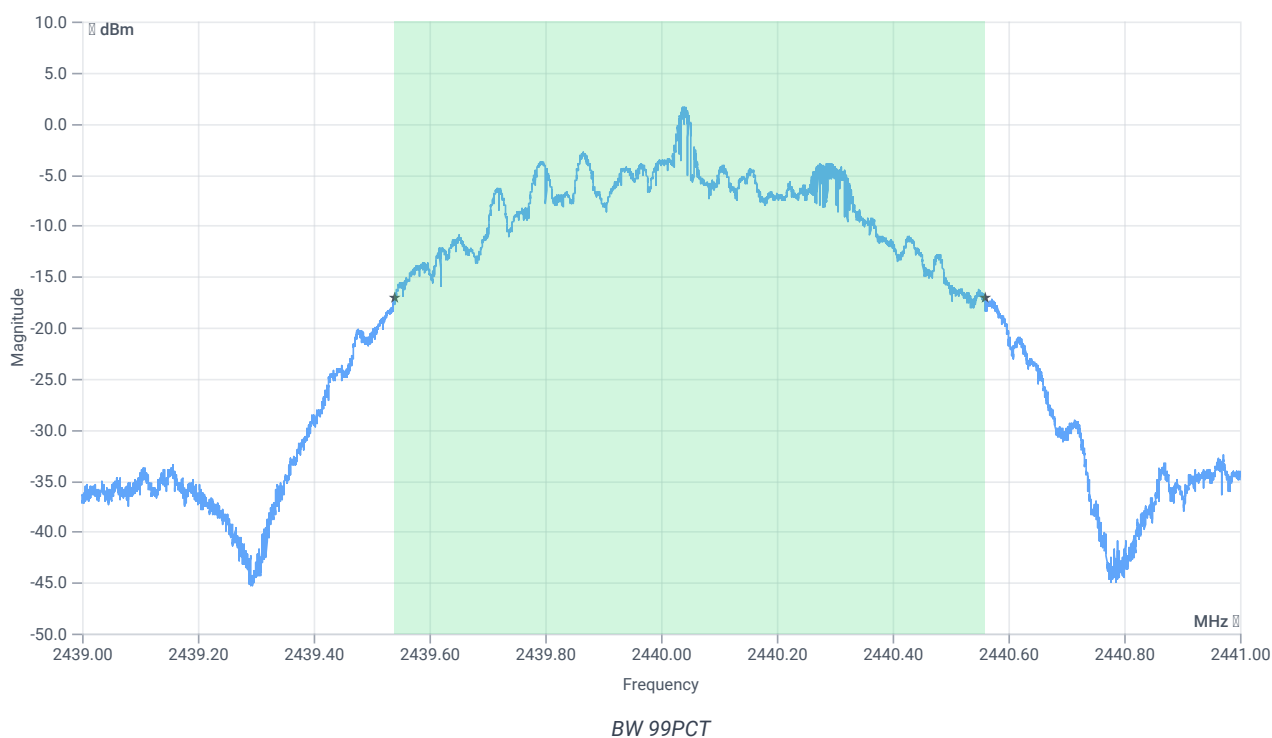
Test at TX 2440 MHz

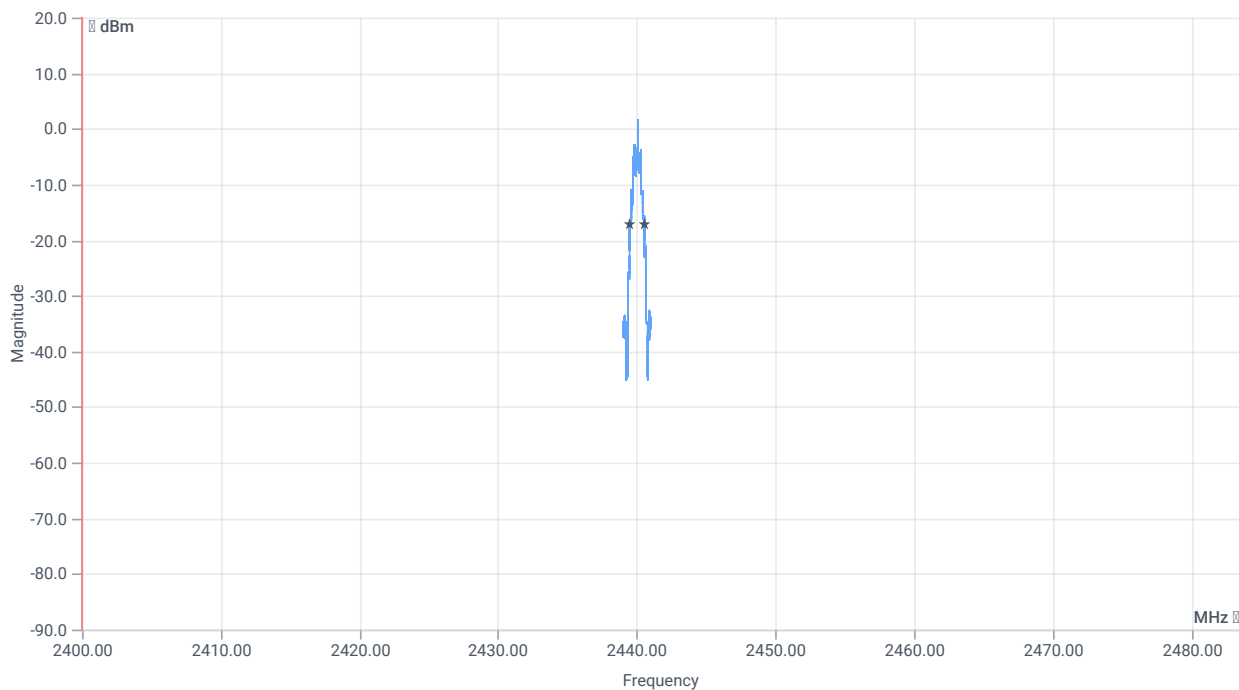
RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.33	dBm	INFO
Ref. frequency	---	---	2440.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.33 8.94 15
Start [MHz] Stop [MHz]	2439.000 2441.000
RBW [MHz] VBW [MHz]	0.020000 0.100000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

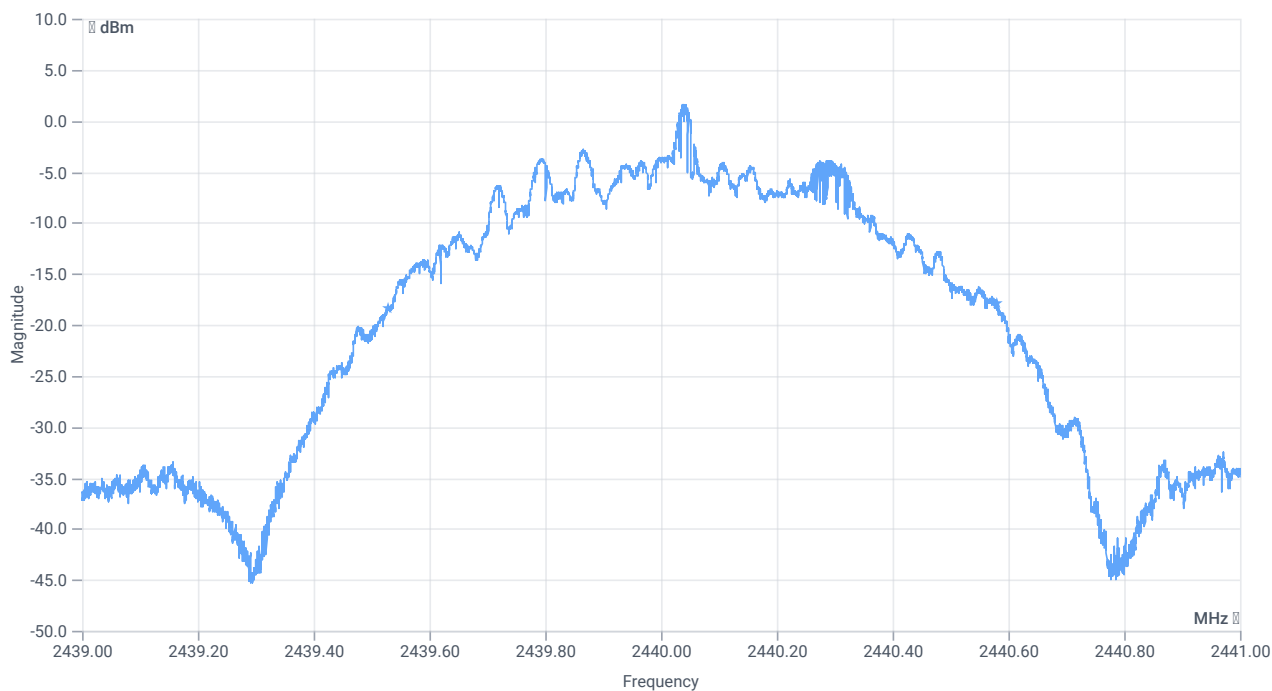




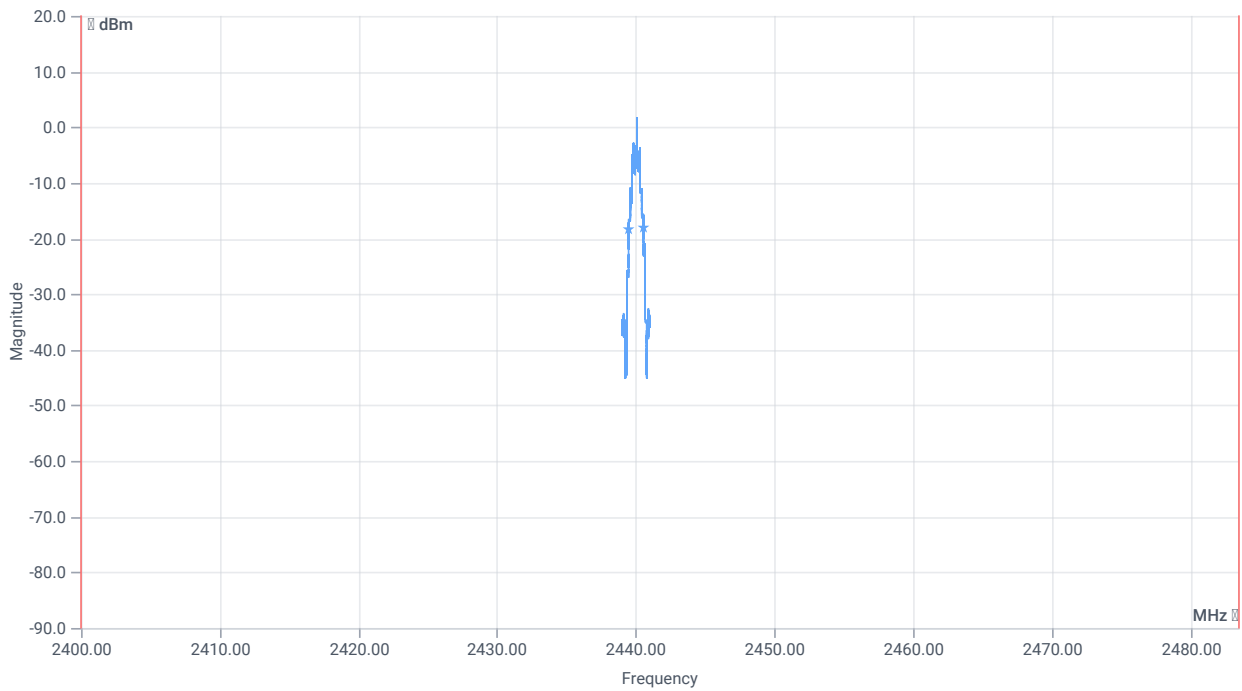
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1018.000	kHz	INFO
T1 99%	2400.000000	---	2439.5410	MHz	PASS
T2 99%	---	2483.500000	2440.5591	MHz	PASS



BW 20dB



BW within band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1054	kHz	INFO
T1 20dB	2400.000000	---	2439.5278	MHz	PASS
T2 20dB	---	2483.500000	2440.5814	MHz	PASS

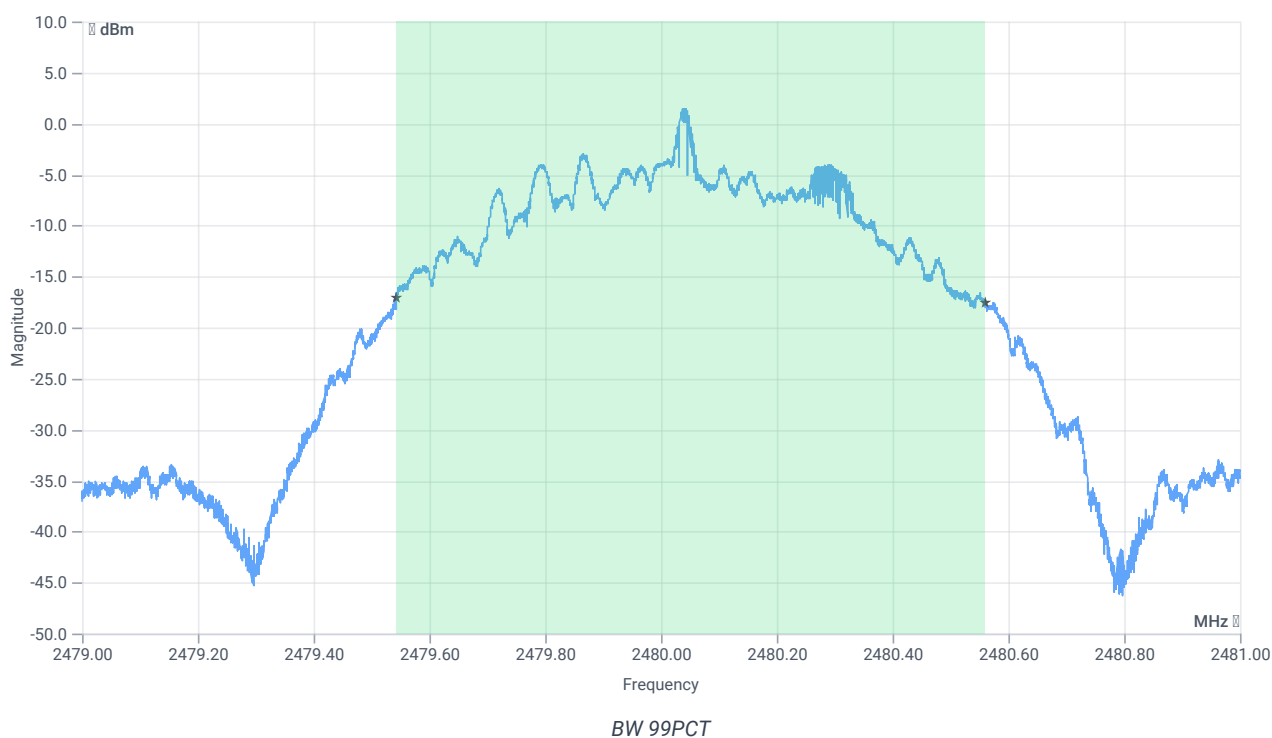
Test at TX 2480 MHz

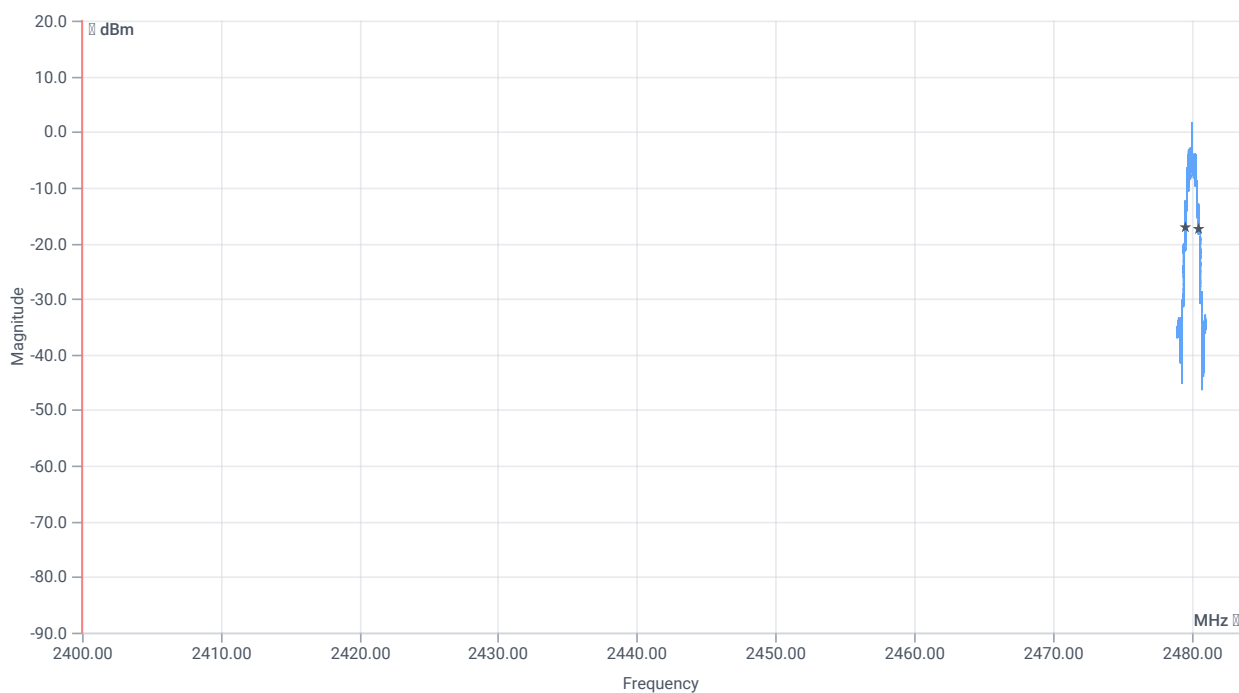
RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.15	dBm	INFO
Ref. frequency	---	---	2480.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.15 9.03 15
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

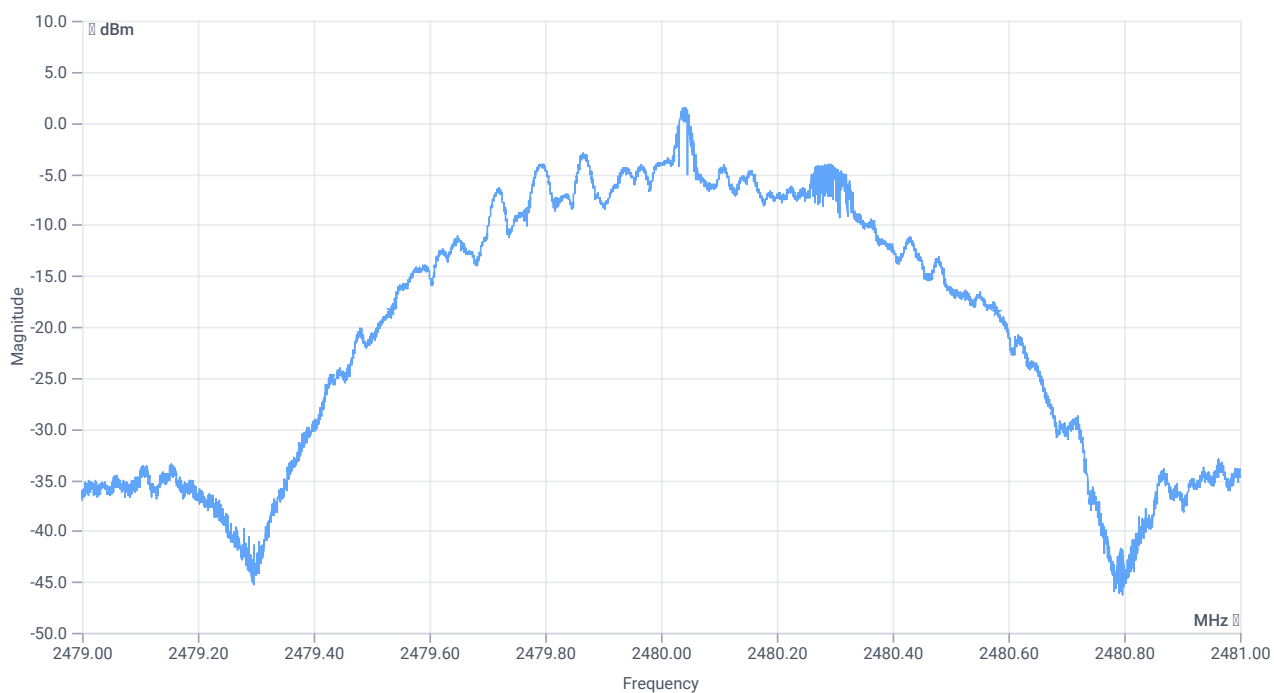




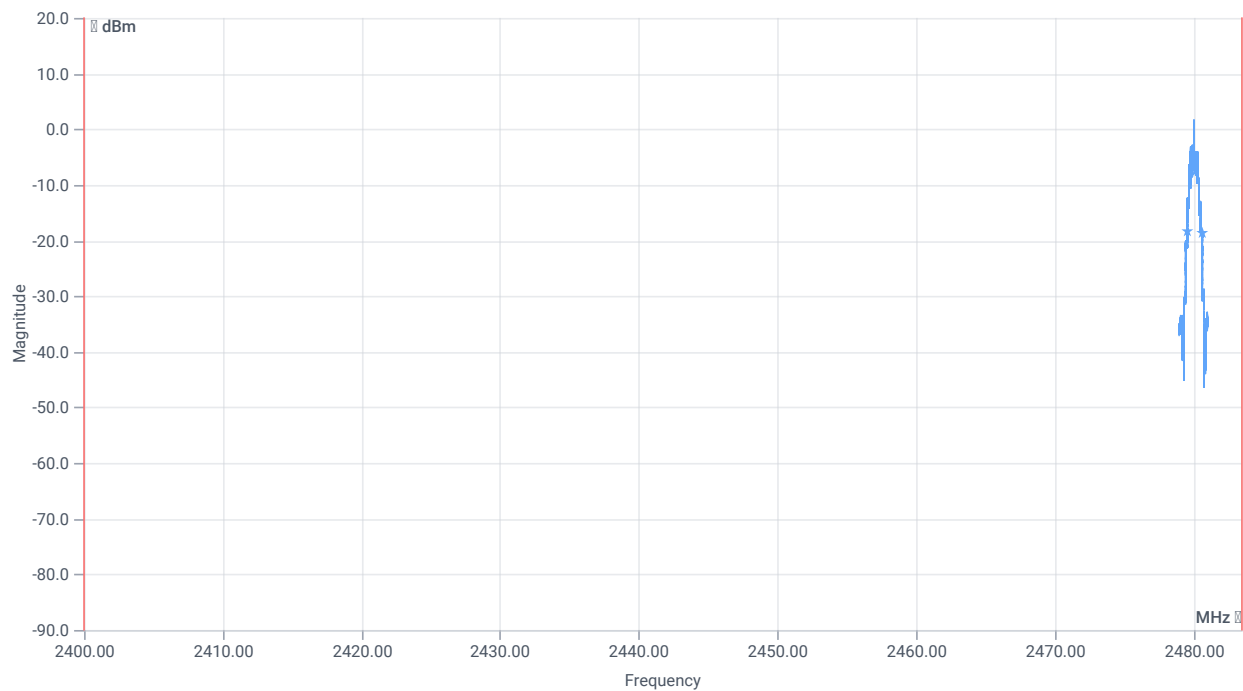
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	1017.000	kHz	INFO
T1 99%	2400.000000	---	2479.5420	MHz	PASS
T2 99%	---	2483.500000	2480.5589	MHz	PASS



BW 20dB



BW within band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	1046	kHz	INFO
T1 20dB	2400.000000	---	2479.5334	MHz	PASS
T2 20dB	---	2483.500000	2480.5796	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 1 Msps

References

TC start	04.02.2025 11:49:20
Ambit temp (test rack) [°C] humidity [rel%]	not enabled not enabled
System version	5.1.6.4
Standard Version	FCC 15.247 NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX emissions conducted DTS - BT LE 1 Msps
Information	

EUT Common Settings BT Low Energy

Intermodulation value N	3
Image freq. Low Mid High [MHz]	0 0 0
Power class	2
1 Mbps supported	True TXpayload 255 RXpayload 255
2 Mbps supported	True TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling settings	WS_USB_RS232 HCI 4 115200 None S1 None On
Signaling RF settings	RF1com 0 0 On
User interaction	No

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70
Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0

Test Parameter

Technology to test	BT LE 1 Msps
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path type	EUT_SA_GEN_SIG

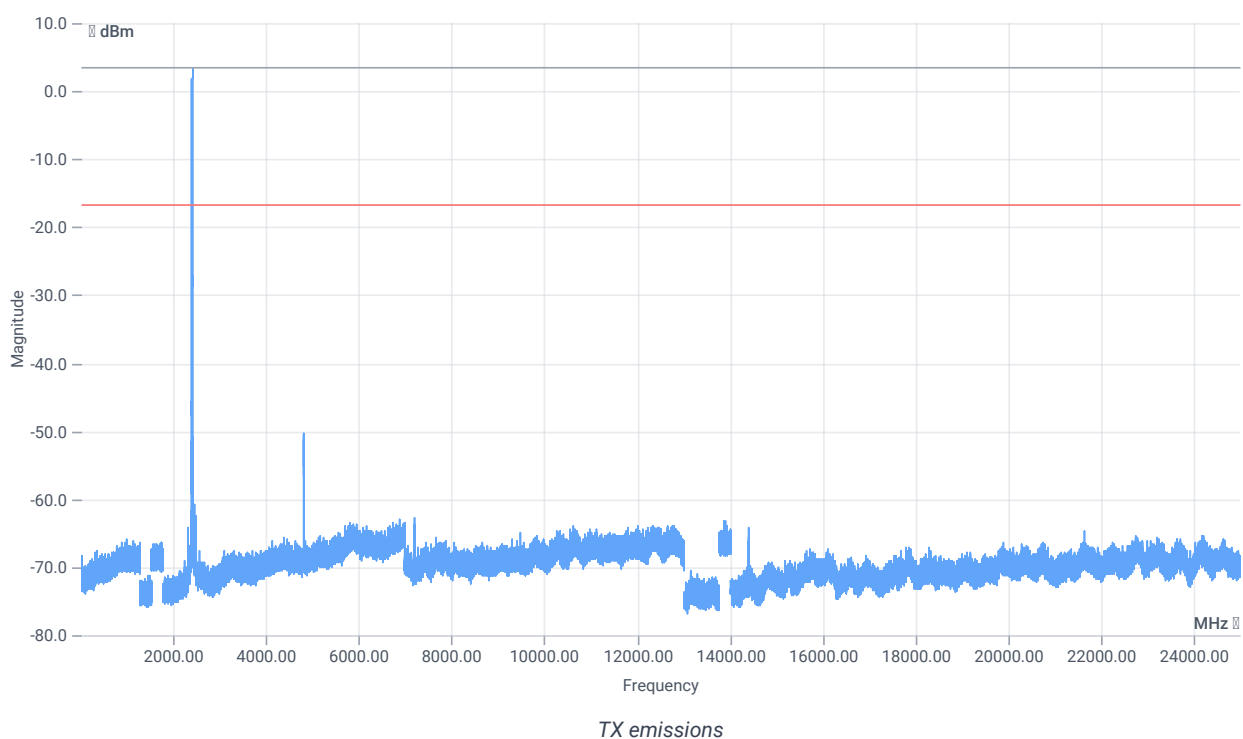
Test Parameter

Full path name	EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/
Switch bits	00010001:00010001:00000000:00000001

Test at TX 2402 MHz

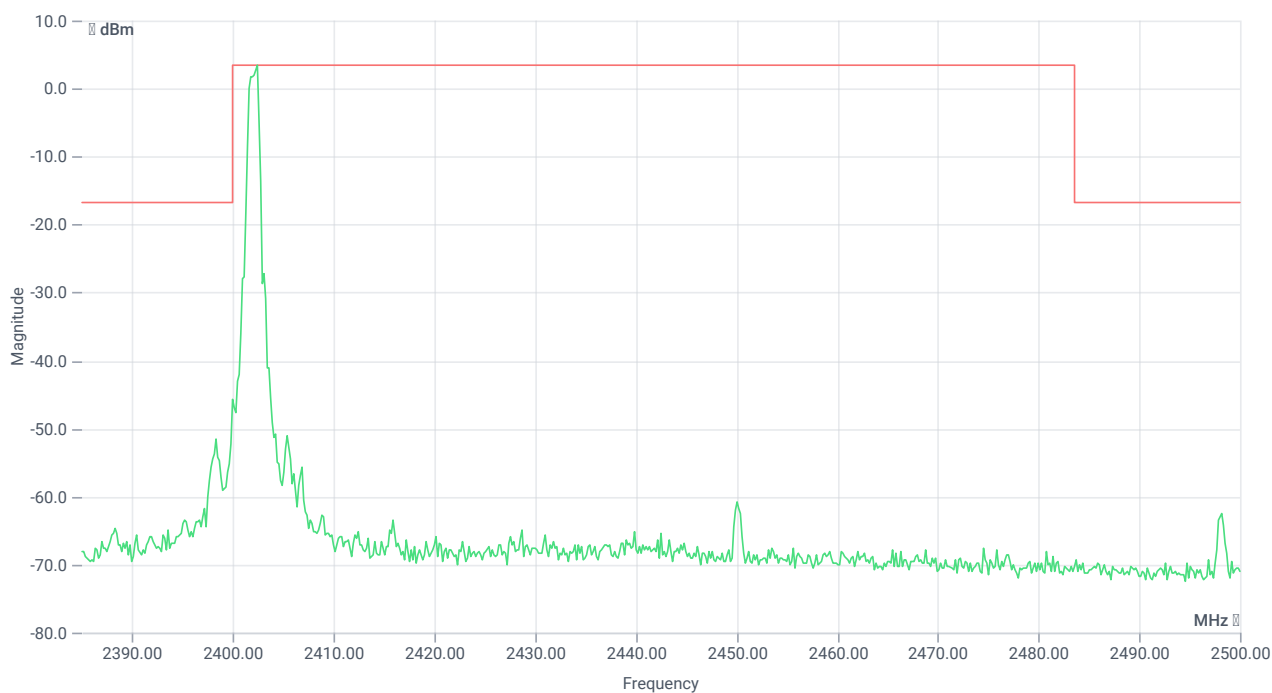
RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.32	dBm	INFO
Ref. frequency	---	---	2402.300	MHz	INFO



READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.32 17.03 5
Start [MHz] Stop [MHz]	24780.000 25000.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	200 25 1501 SWE



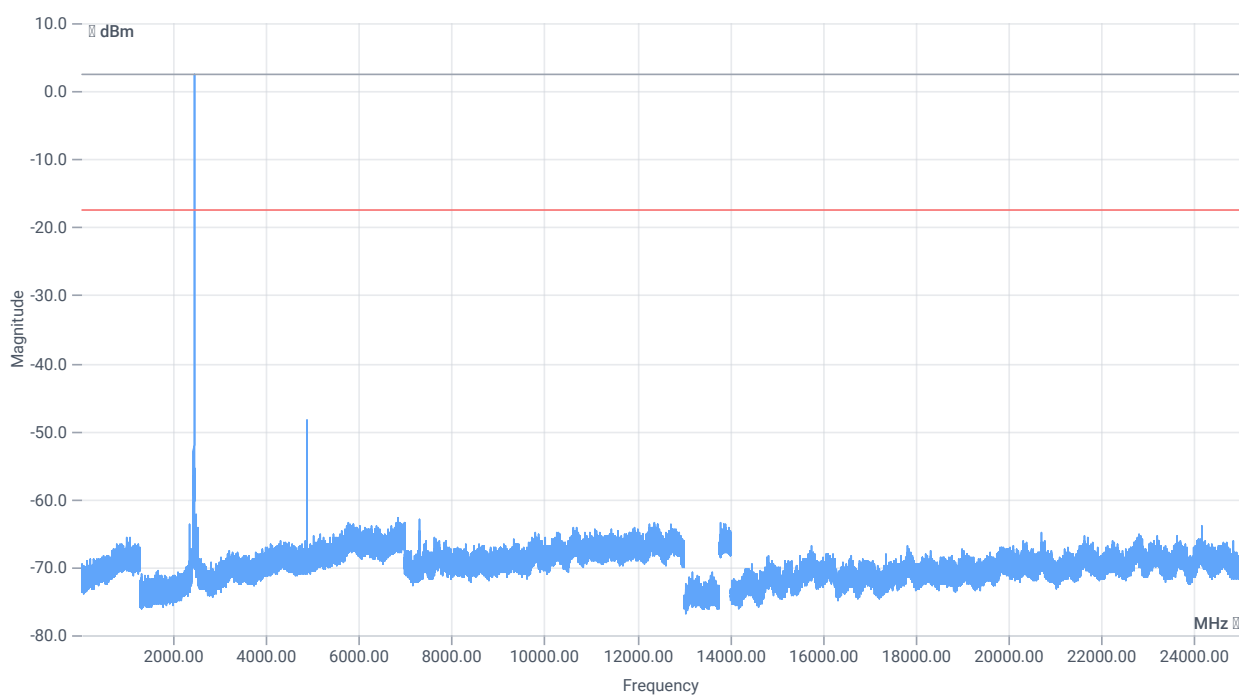
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2402.33 MHz	---	---	3.33	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4804.5 MHz	0	---	33.56	dB	INFO

Test at TX 2440 MHz

RESULT: Reference power cond.

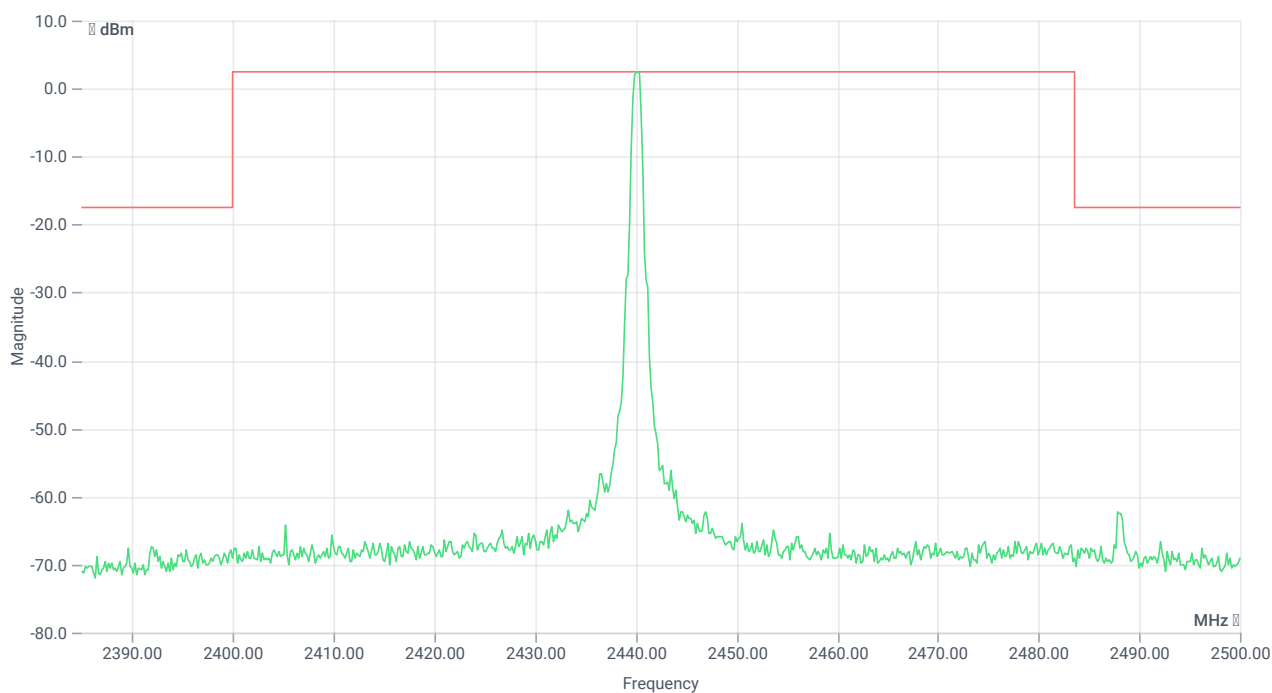
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.28	dBm	INFO
Ref. frequency	---	---	2440.300	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.28 17.03 5
Start [MHz] Stop [MHz]	24780.000 25000.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	200 25 1501 SWE



TX emissions band zoomed

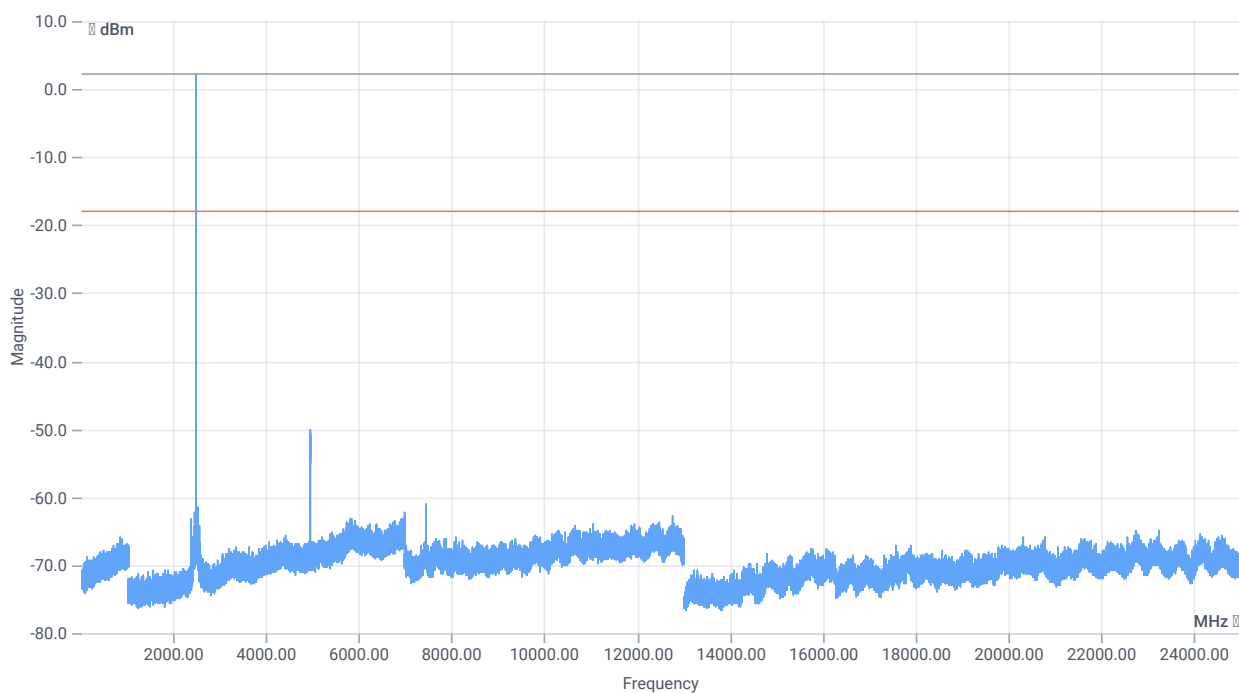
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2440.00 MHz	---	---	2.54	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4880.5 MHz	0	---	30.85	dB	INFO

Test at TX 2480 MHz

RESULT: Reference power cond.

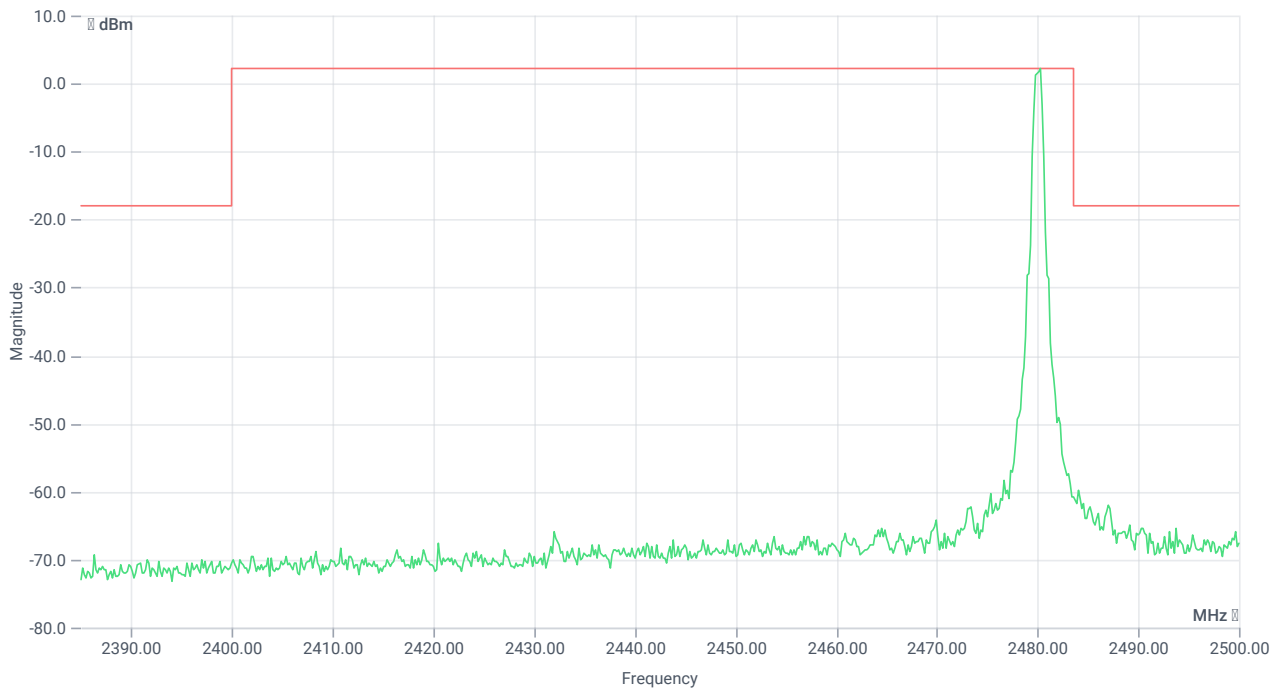
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.07	dBm	INFO
Ref. frequency	---	---	2480.300	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.07 17.03 5
Start [MHz] Stop [MHz]	24780.000 25000.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	200 25 1501 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2480.33 MHz	---	---	2.10	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4959.667 MHz	0	---	32.28	dB	INFO

Verdict

PASS

FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 2 Msps

References

TC start	04.02.2025 11:02:49
Ambit temp (test rack) [°C] humidity [rel%]	not enabled not enabled
System version	5.1.6.4
Standard Version	FCC 15.247 NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
Description	FCC 15.247 Maximum peak output power conducted DTS - BT LE 2 Msps
Information	

EUT Common Settings BT Low Energy

Intermodulation value N	3
Image freq. Low Mid High [MHz]	0 0 0
Power class	2
1 Mbps supported	True TXpayload 255 RXpayload 255
2 Mbps supported	True TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling settings	WS_USB_RS232 HCI 4 115200 None S1 None On
Signaling RF settings	RF1com 0 0 On
User interaction	No

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70
Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0

Test Parameter

Technology to test	BT LE 2 Msps
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2404
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2478
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7

Test Parameter

Full path type	EUT_SA_GEN_SIG
Full path name	EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/
Switch bits	00010001:00010001:00000000:00000001

Test at TX 2404 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.39	dBm	INFO
Ref. frequency	---	---	2404.500	MHz	INFO

READ SA SETTINGS:

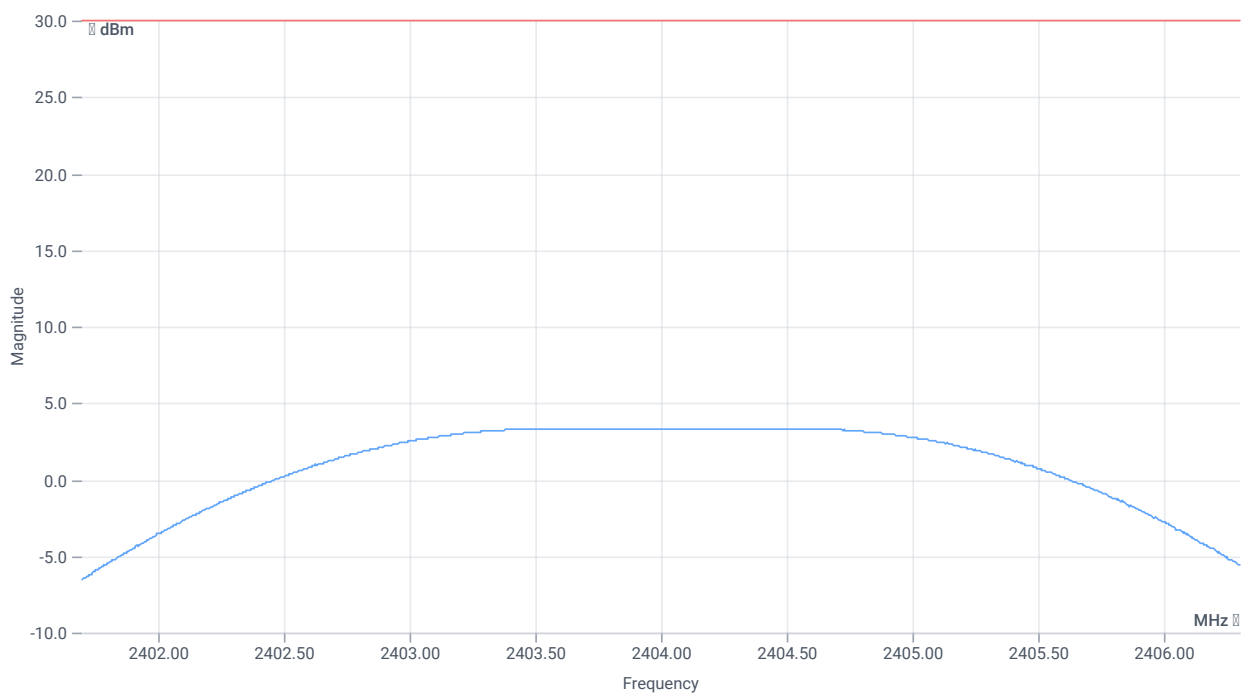
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.39 8.86 15
Start [MHz] Stop [MHz]	2401.700 2406.300
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

DTS bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	---	---	1142	kHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.39 8.86 20
Start [MHz] Stop [MHz]	2401.700 2406.300
RBW [MHz] VBW [MHz]	2.000000 5.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 1001 SWE



Peak output power

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak power	---	30.00	3.34	dBm	PASS
Peak power	---	1000	2.157744	mW	PASS
Frequency at peak	---	---	2404.519	MHz	INFO

Test at TX 2440 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.25	dBm	INFO
Ref. frequency	---	---	2440.500	MHz	INFO

READ SA SETTINGS:

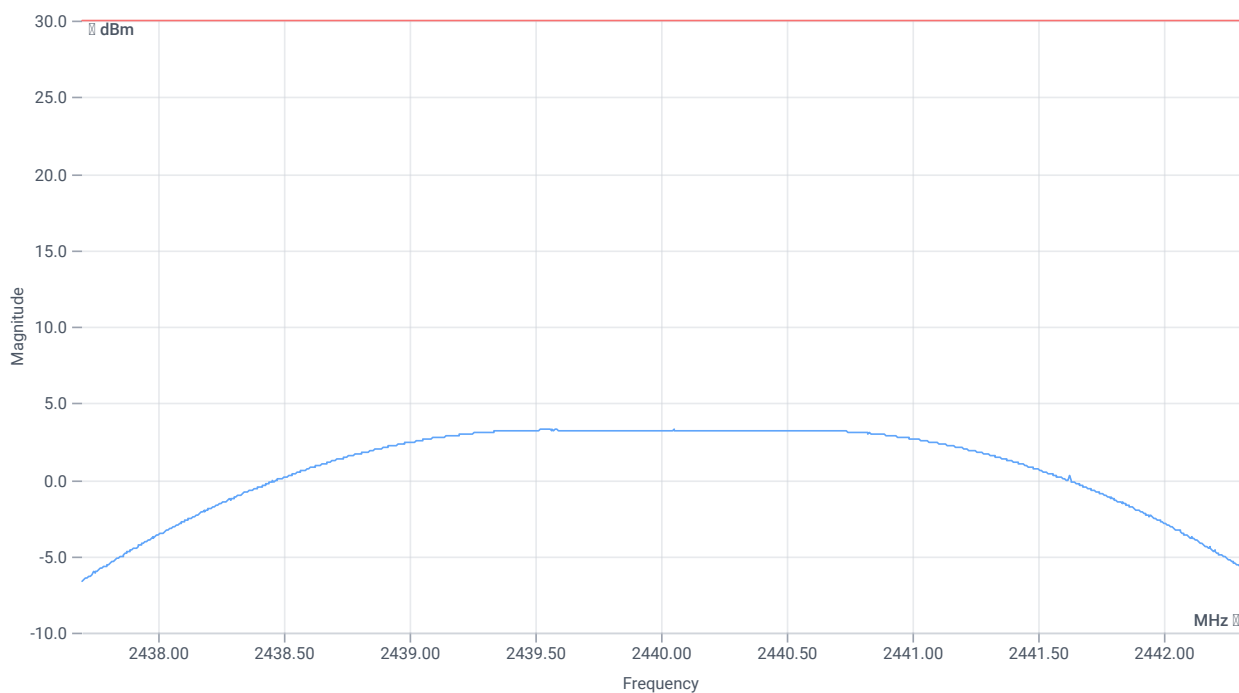
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.25 8.94 15
Start [MHz] Stop [MHz]	2437.700 2442.300
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

DTS bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	---	---	1142	kHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.25 8.94 20
Start [MHz] Stop [MHz]	2437.700 2442.300
RBW [MHz] VBW [MHz]	2.000000 5.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 1001 SWE



Peak output power

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak power	---	30.00	3.25	dBm	PASS
Peak power	---	1000	2.113489	mW	PASS
Frequency at peak	---	---	2439.522	MHz	INFO

Test at TX 2478 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.00	dBm	INFO
Ref. frequency	---	---	2478.500	MHz	INFO

READ SA SETTINGS:

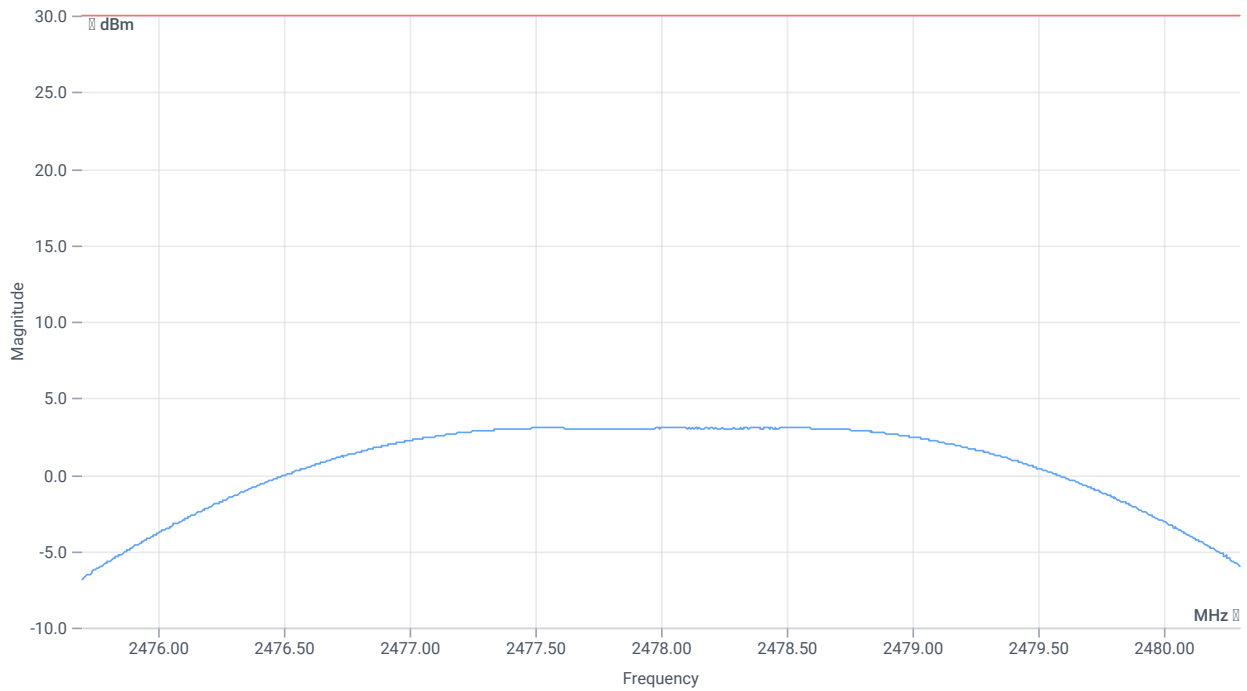
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.00 9.03 15
Start [MHz] Stop [MHz]	2475.700 2480.300
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

DTS bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	---	---	1139	kHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.00 9.03 20
Start [MHz] Stop [MHz]	2475.700 2480.300
RBW [MHz] VBW [MHz]	2.000000 5.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 1001 SWE



Peak output power

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak power	---	30.00	3.04	dBm	PASS
Peak power	---	1000	2.013724	mW	PASS
Frequency at peak	---	---	2477.559	MHz	INFO

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ BT LE 2 Msps

References

TC start	04.02.2025 11:04:51
Ambit temp (test rack) [°C] humidity [rel%]	not enabled not enabled
System version	5.1.6.4
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - BT LE 2 Msps
Information	

EUT Common Settings BT Low Energy

Intermodulation value N	3
Image freq. Low Mid High [MHz]	0 0 0
Power class	2
1 Mbps supported	True TXpayload 255 RXpayload 255
2 Mbps supported	True TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling settings	WS_USB_RS232 HCI 4 115200 None S1 None On
Signaling RF settings	RF1com 0 0 On
User interaction	No

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70
Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0

Test Parameter

Technology to test	BT LE 2 Msps
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2404
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2478
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path type	EUT_SA_GEN_SIG
Full path name	EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/

Test Parameter

Switch bits	00010001:00010001:00000000:00000001
-------------	-------------------------------------

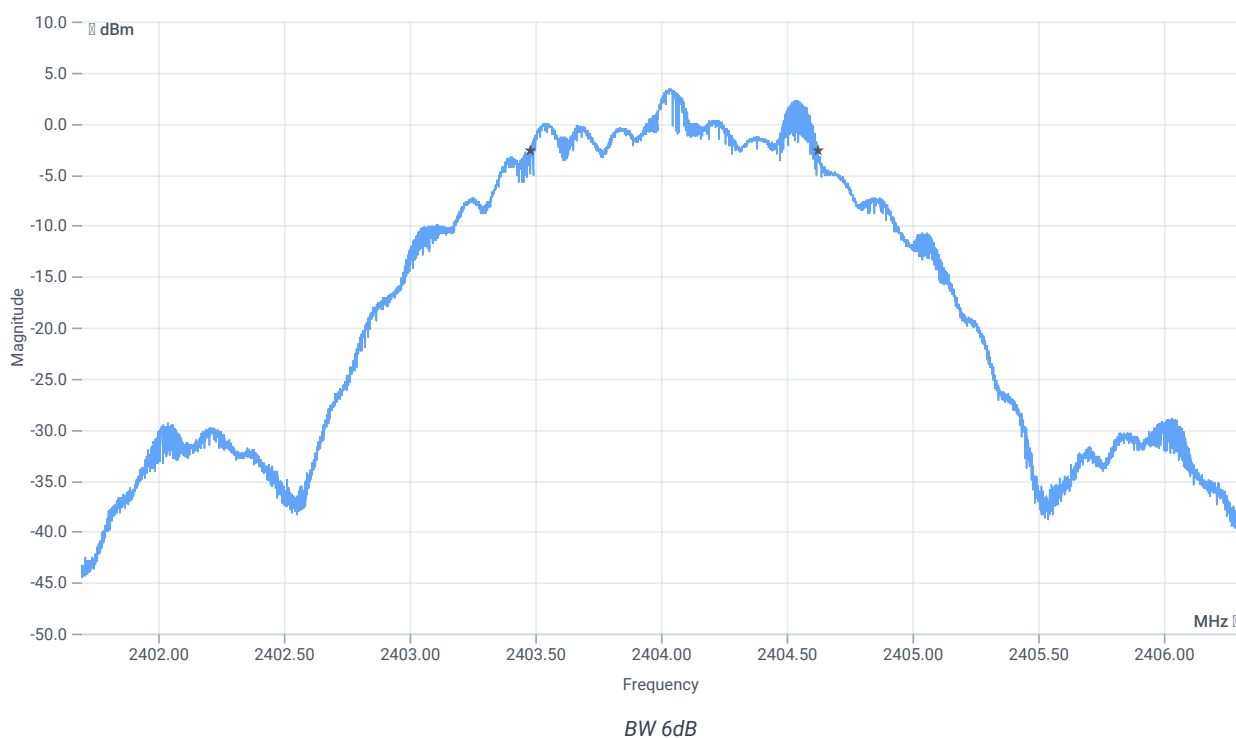
Test at TX 2404 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.33	dBm	INFO
Ref. frequency	---	---	2404.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.33 8.86 15
Start [MHz] Stop [MHz]	2401.700 2406.300
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	500	---	1144	kHz	PASS

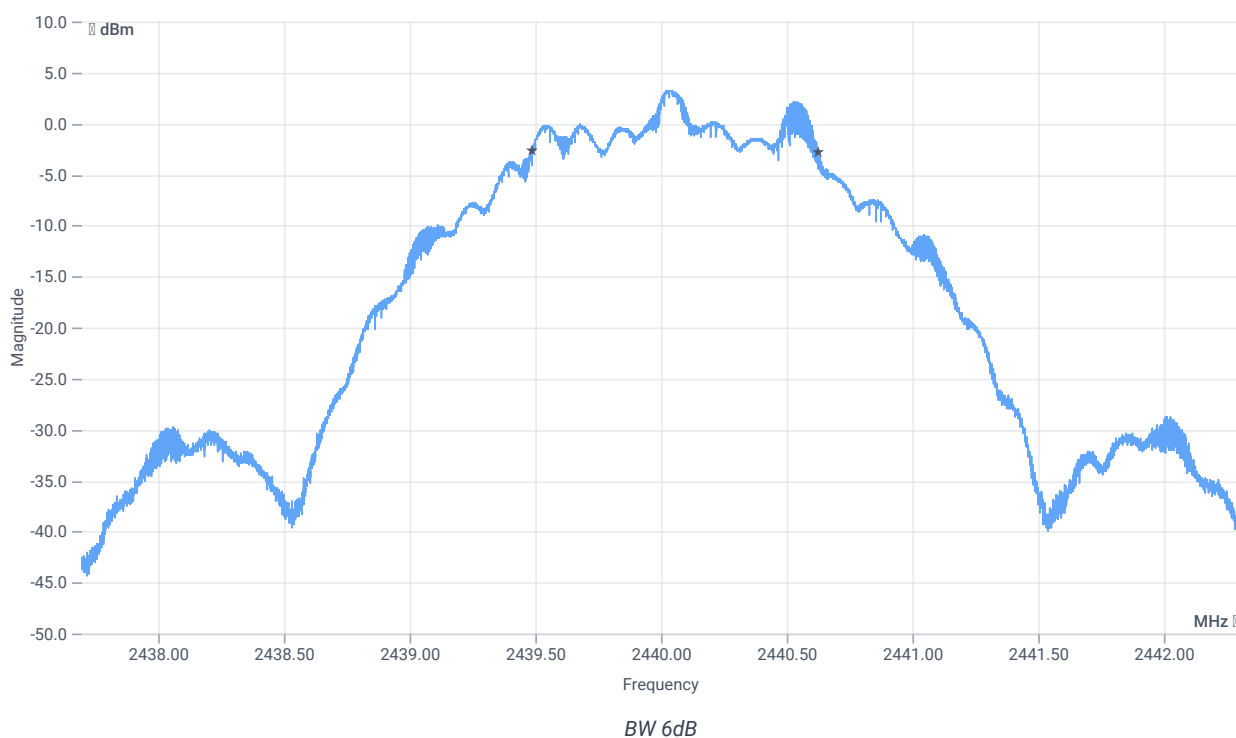
Test at TX 2440 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.25	dBm	INFO
Ref. frequency	---	---	2440.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.25 8.94 15
Start [MHz] Stop [MHz]	2437.700 2442.300
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	500	---	1133	kHz	PASS

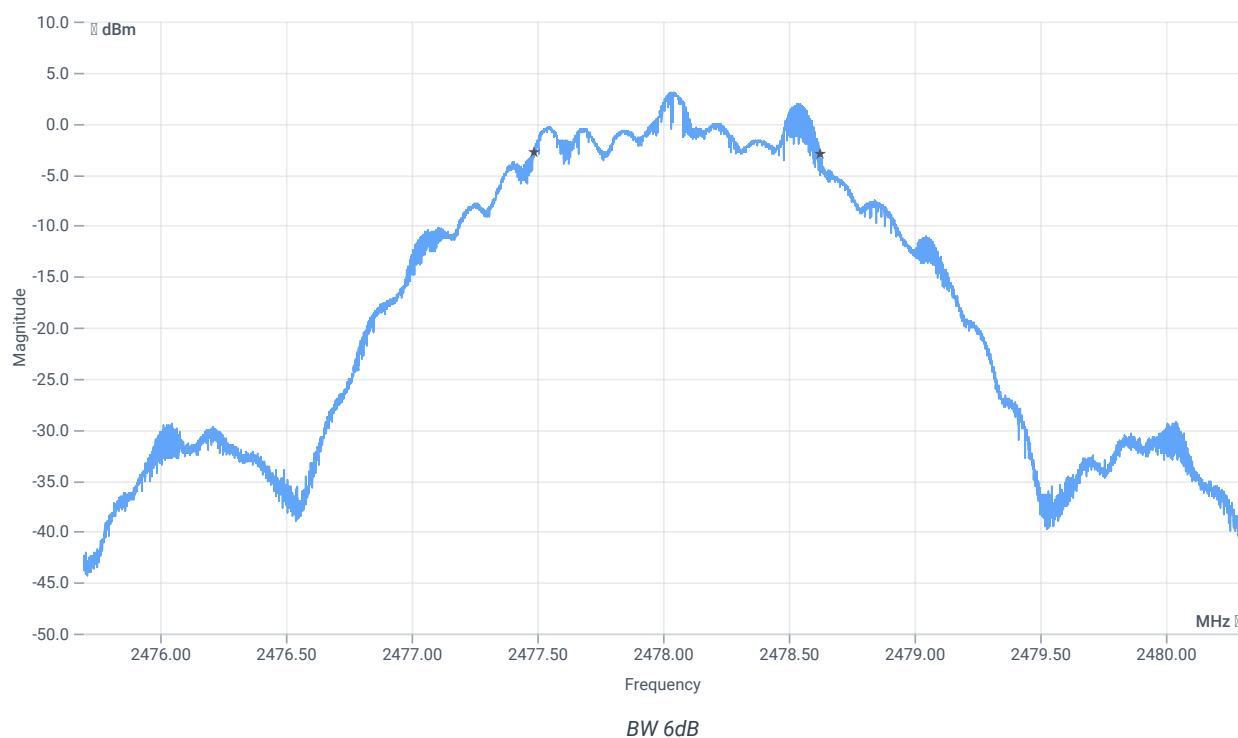
Test at TX 2478 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.06	dBm	INFO
Ref. frequency	---	---	2478.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.06 9.03 15
Start [MHz] Stop [MHz]	2475.700 2480.300
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	500	---	1138	kHz	PASS

Verdict

PASS

FCC 15.247 # Peak psd DTS ~ BT LE 2 Msps

References

TC start	04.02.2025 11:06:16
Ambit temp (test rack) [°C] humidity [rel%]	not enabled not enabled
System version	5.1.6.4
Standard Version	FCC 15.247 NI
Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
Description	FCC 15.247 Peak psd DTS - BT LE 2 Msps
Information	

EUT Common Settings BT Low Energy

Intermodulation value N	3
Image freq. Low Mid High [MHz]	0 0 0
Power class	2
1 Mbps supported	True TXpayload 255 RXpayload 255
2 Mbps supported	True TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling settings	WS_USB_RS232 HCI 4 115200 None S1 None On
Signaling RF settings	RF1com 0 0 On
User interaction	No

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70
Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0

Test Parameter

Technology to test	BT LE 2 Msps
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2404
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2478
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path type	EUT_SA_GEN_SIG

Test Parameter

Full path name	EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/
Switch bits	00010001:00010001:00000000:00000001

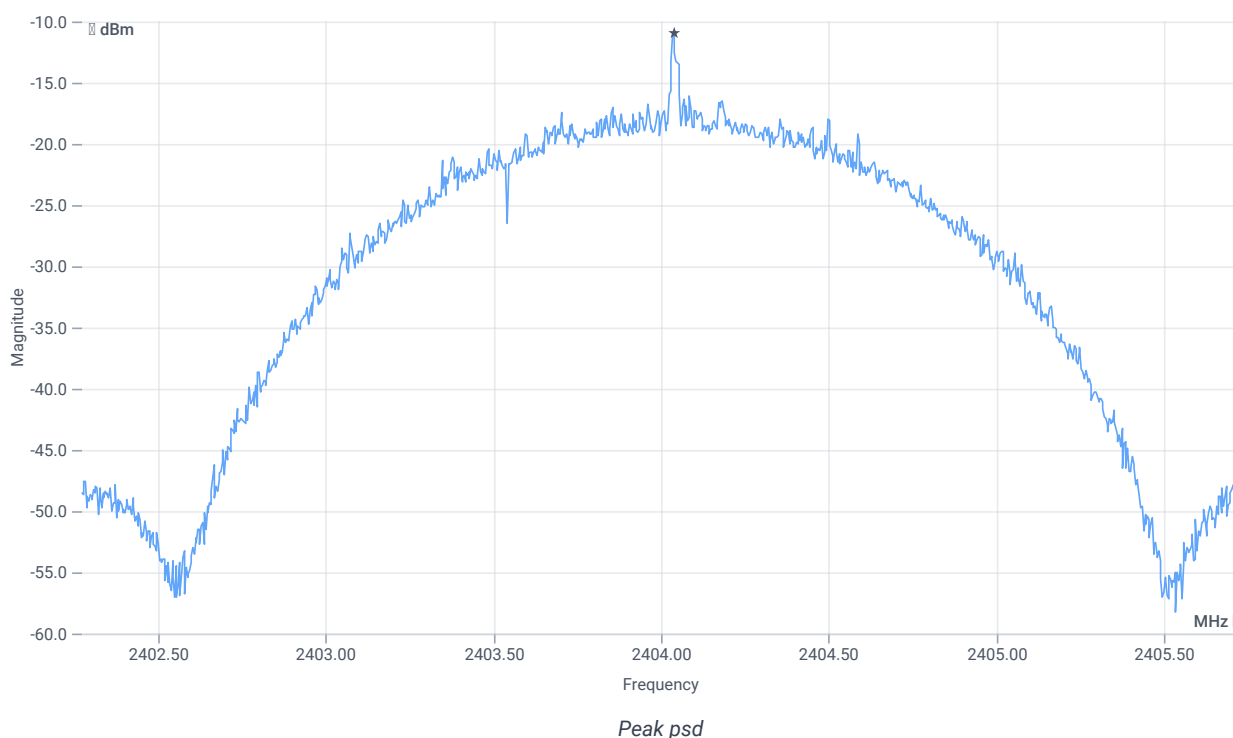
Test at TX 2404 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.34	dBm	INFO
Ref. frequency	---	---	2404.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.34 8.86 15
Start [MHz] Stop [MHz]	2402.275 2405.725
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 20 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-10.98	dBm/3KHz	PASS

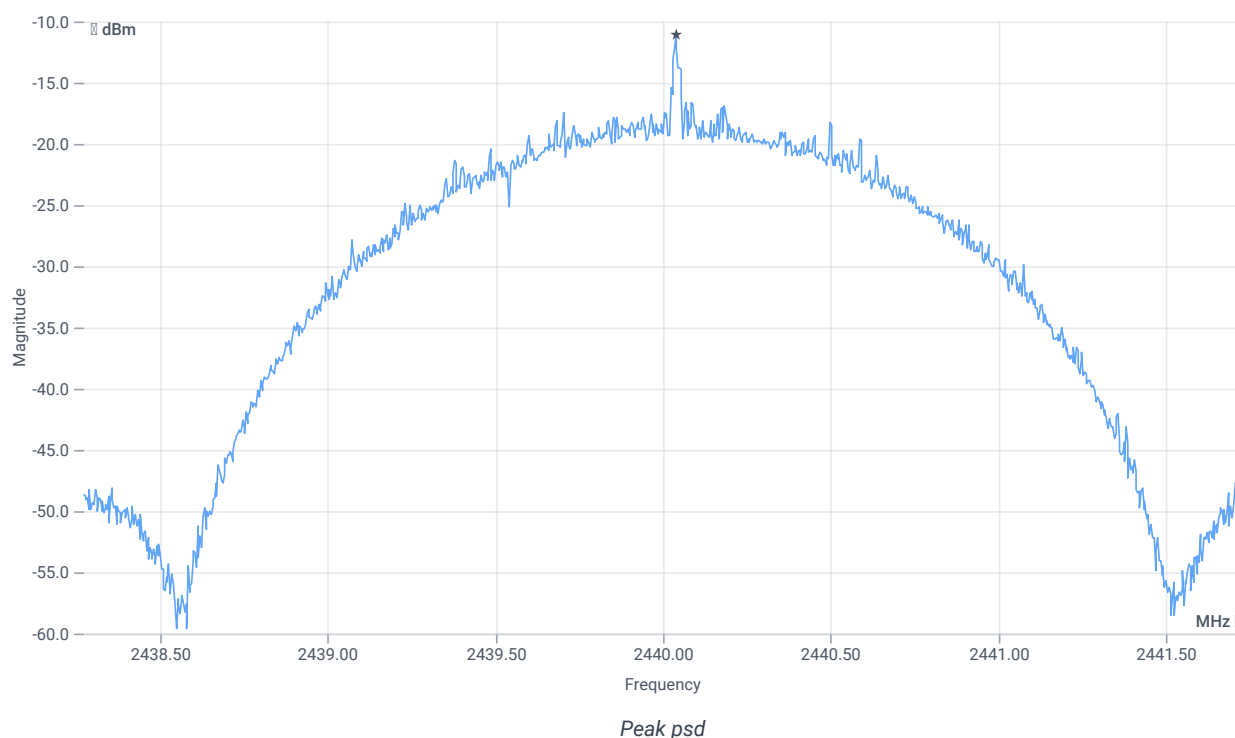
Test at TX 2440 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.26	dBm	INFO
Ref. frequency	---	---	2440.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.26 8.94 15
Start [MHz] Stop [MHz]	2438.275 2441.725
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 20 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-11.07	dBm/3KHz	PASS

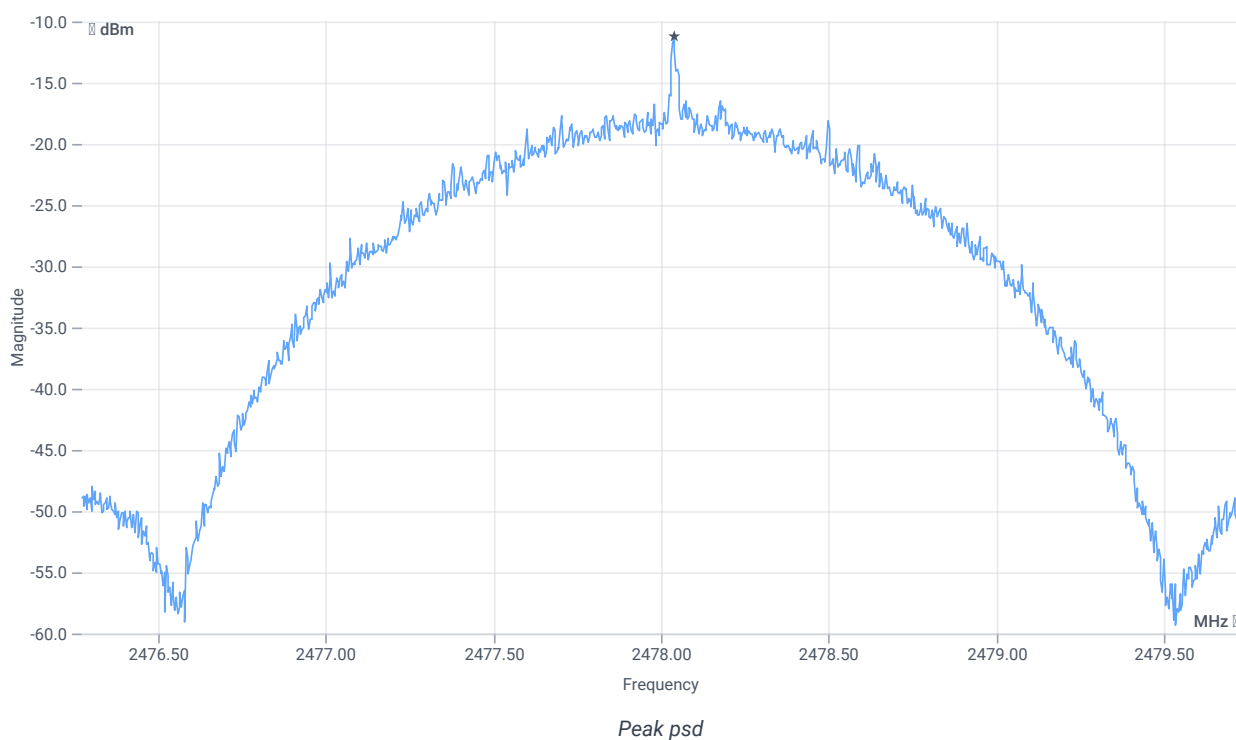
Test at TX 2478 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	2.99	dBm	INFO
Ref. frequency	---	---	2478.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.99 9.03 15
Start [MHz] Stop [MHz]	2476.275 2479.725
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	1000 20 1001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak psd	---	8	-11.2	dBm/3KHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT LE 2 Msps

References

TC start	04.02.2025 11:08:07
Ambit temp (test rack) [°C] humidity [rel%]	not enabled not enabled
System version	5.1.6.4
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 2 Msps
Information	

EUT Common Settings BT Low Energy

Intermodulation value N	3
Image freq. Low Mid High [MHz]	0 0 0
Power class	2
1 Mbps supported	True TXpayload 255 RXpayload 255
2 Mbps supported	True TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling settings	WS_USB_RS232 HCI 4 115200 None S1 None On
Signaling RF settings	RF1com 0 0 On
User interaction	No

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70
Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0

Test Parameter

Technology to test	BT LE 2 Msps
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2404
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2478
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path type	EUT_SA_GEN_SIG

Test Parameter

Full path name	EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/
Switch bits	00010001:00010001:00000000:00000001

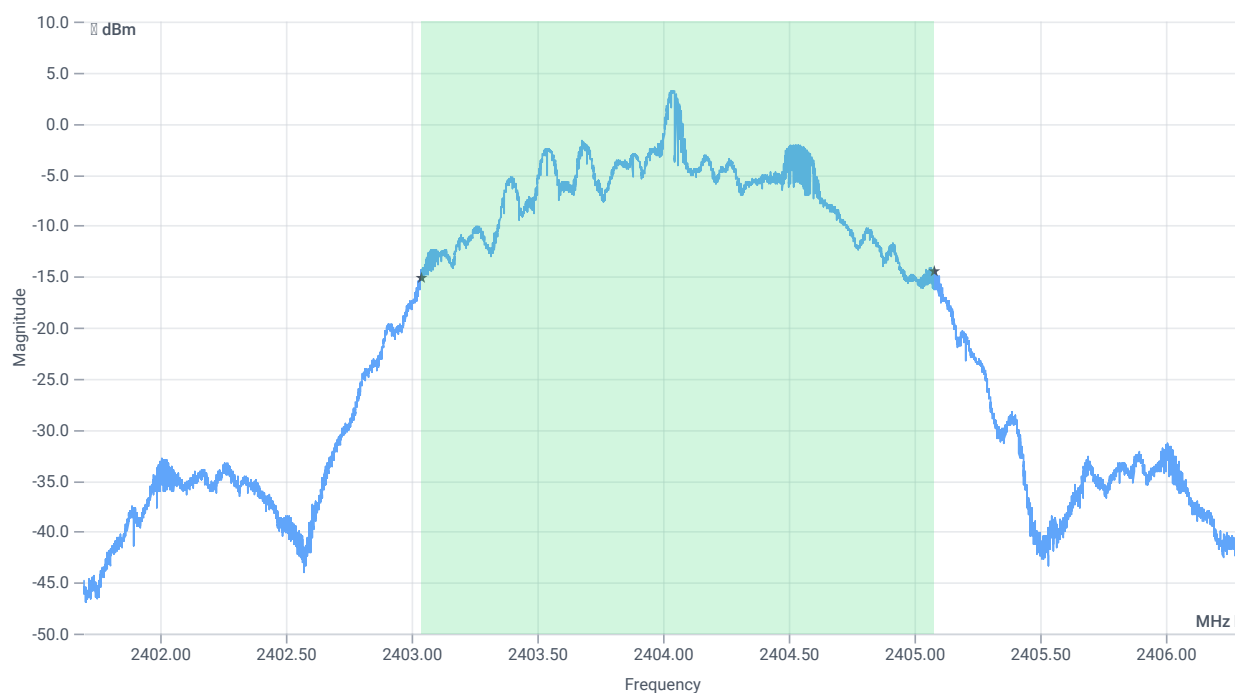
Test at TX 2404 MHz

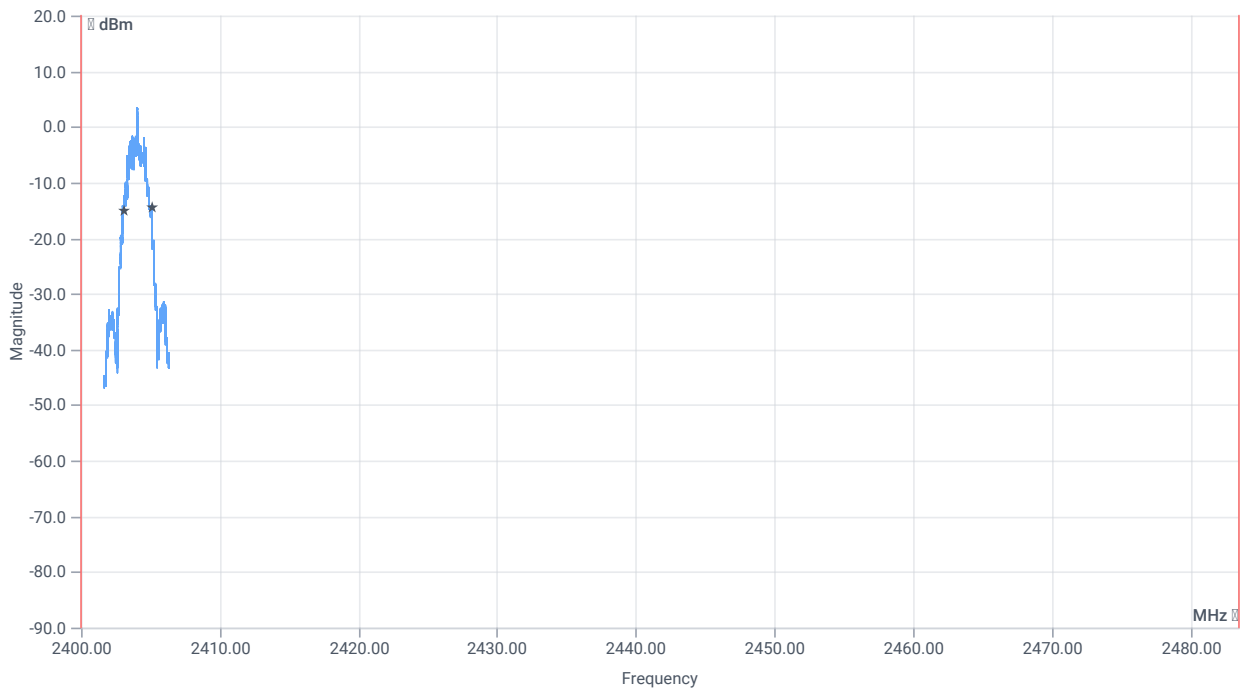
RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.34	dBm	INFO
Ref. frequency	---	---	2404.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.34 8.86 15
Start [MHz] Stop [MHz]	2401.700 2406.300
RBW [MHz] VBW [MHz]	0.050000 0.200000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

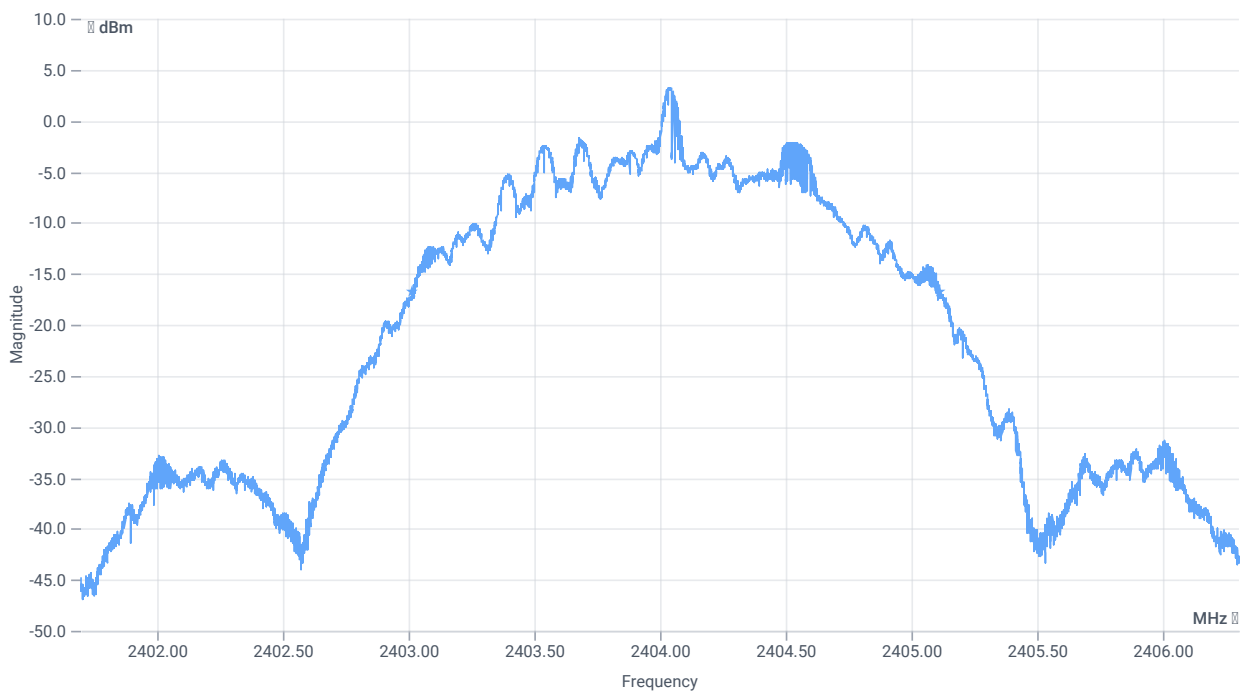




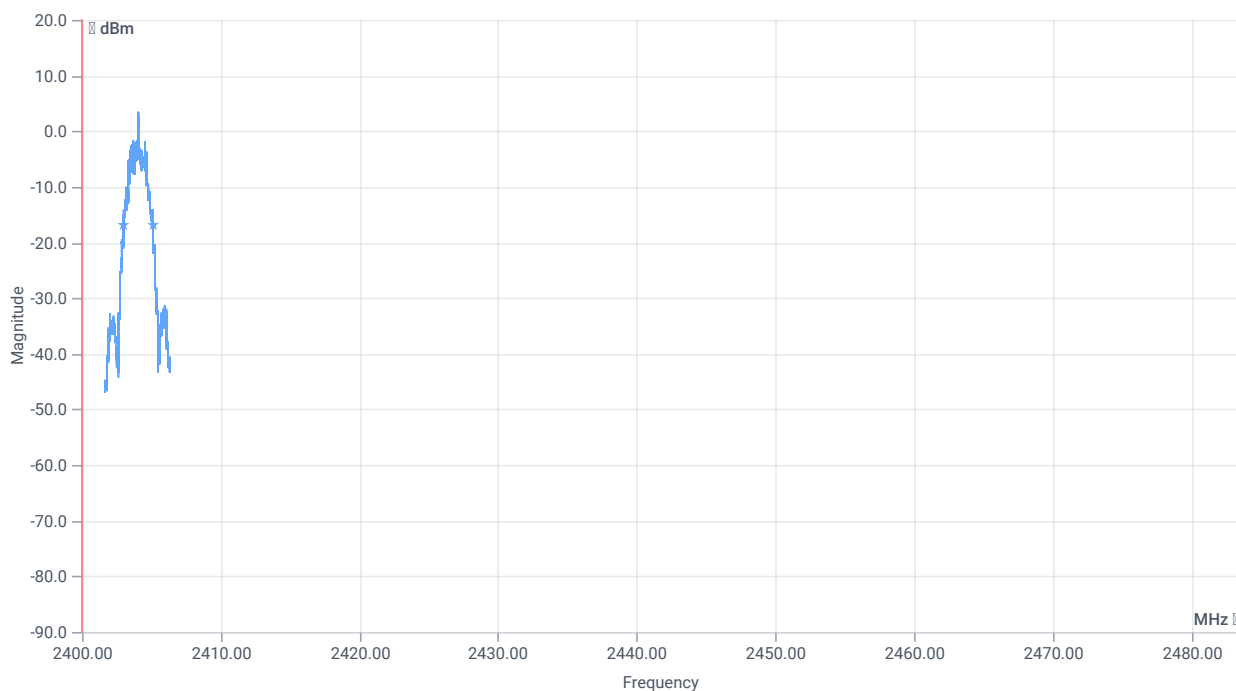
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	2031.000	kHz	INFO
T1 99%	2400.000000	---	2403.0433	MHz	PASS
T2 99%	---	2483.500000	2405.0745	MHz	PASS



BW 20dB



BW within band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	2099	kHz	INFO
T1 20dB	2400.000000	---	2403.0138	MHz	PASS
T2 20dB	---	2483.500000	2405.1127	MHz	PASS

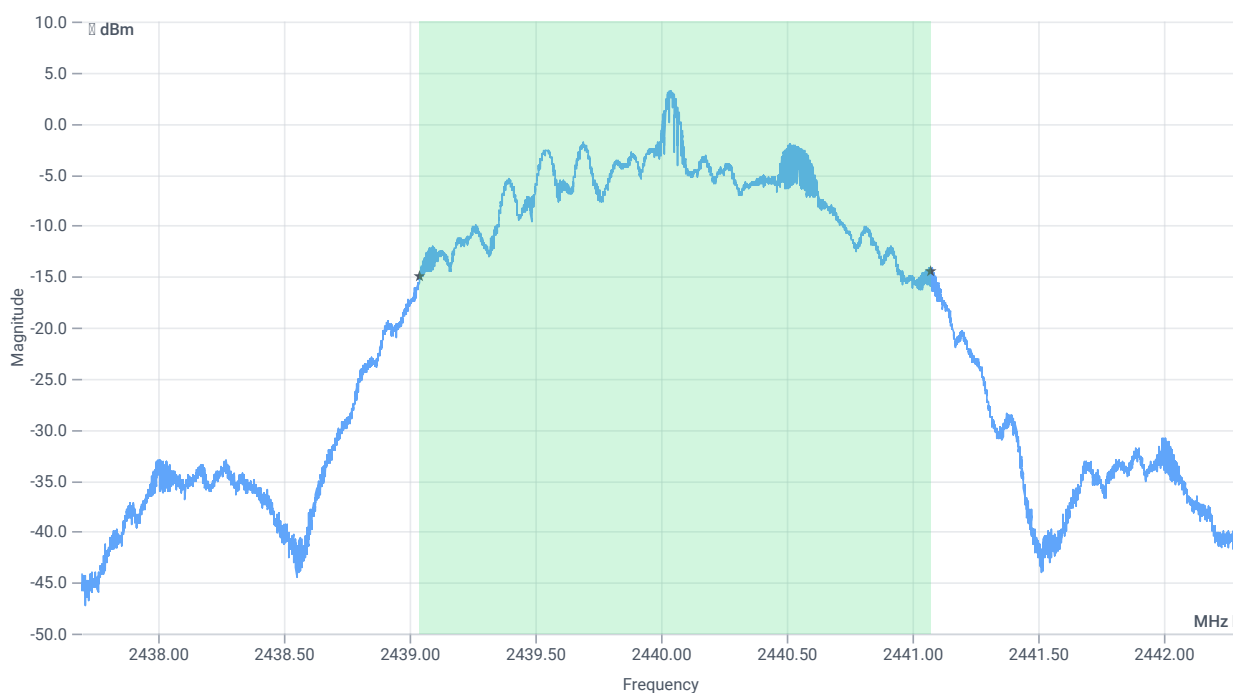
Test at TX 2440 MHz

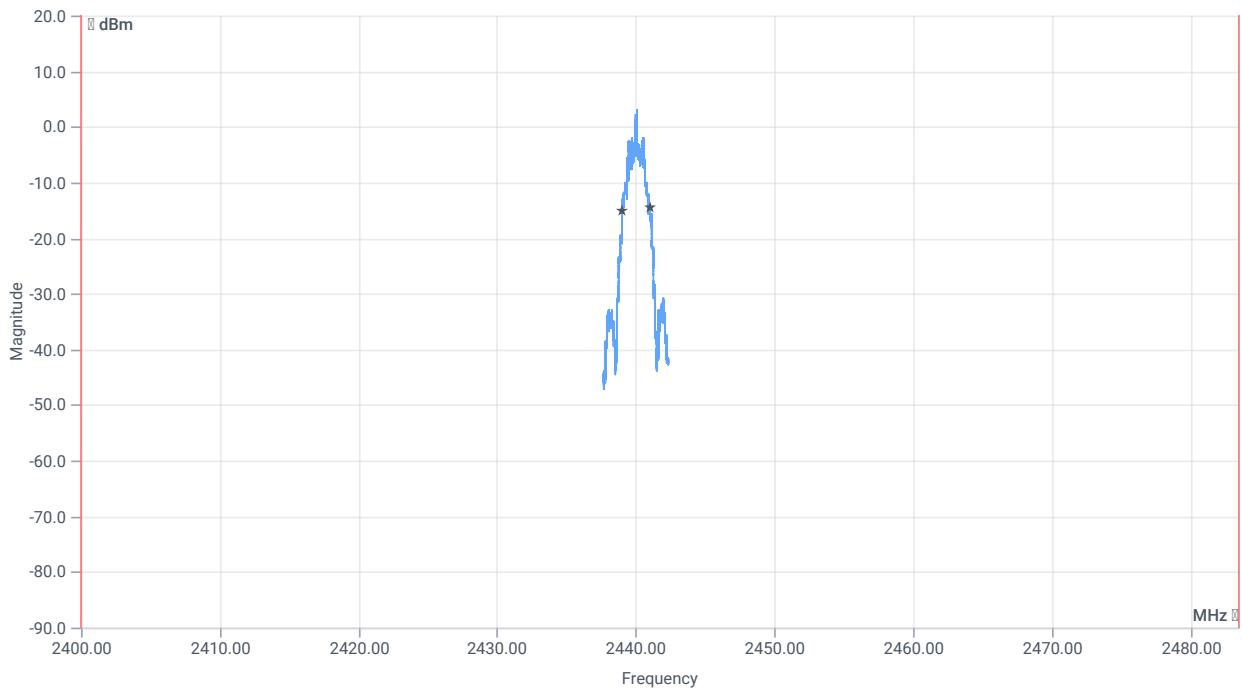
RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.18	dBm	INFO
Ref. frequency	---	---	2440.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.18 8.94 15
Start [MHz] Stop [MHz]	2437.700 2442.300
RBW [MHz] VBW [MHz]	0.050000 0.200000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

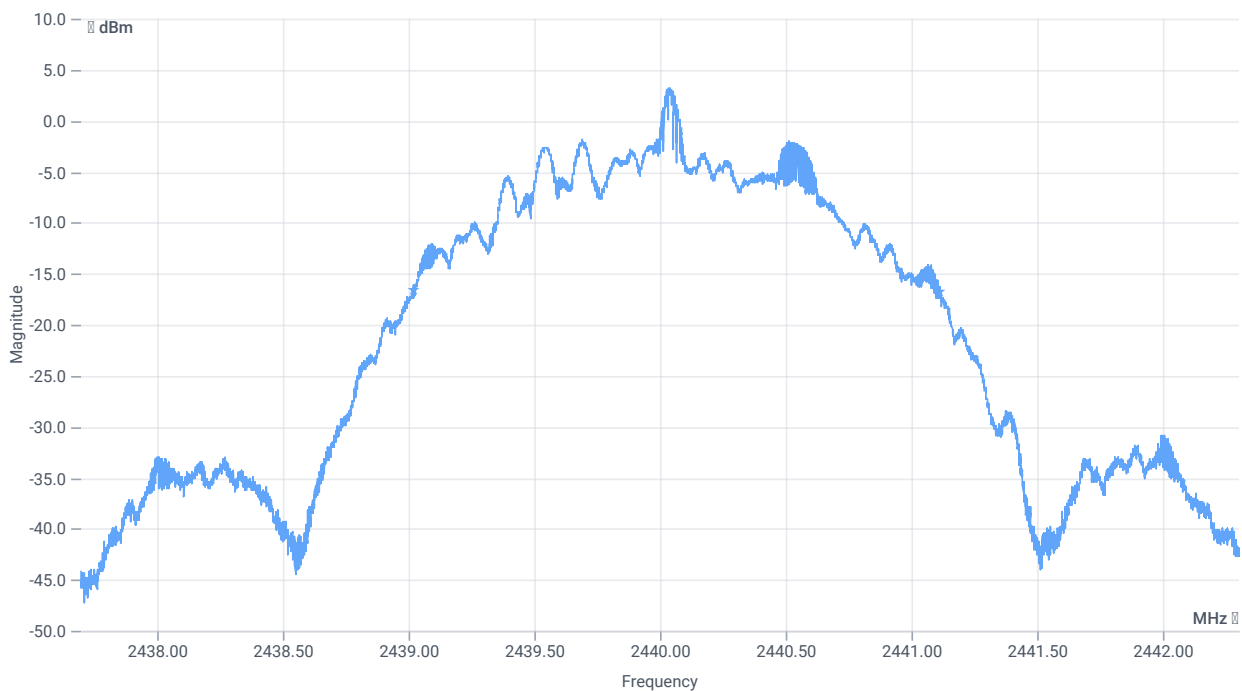




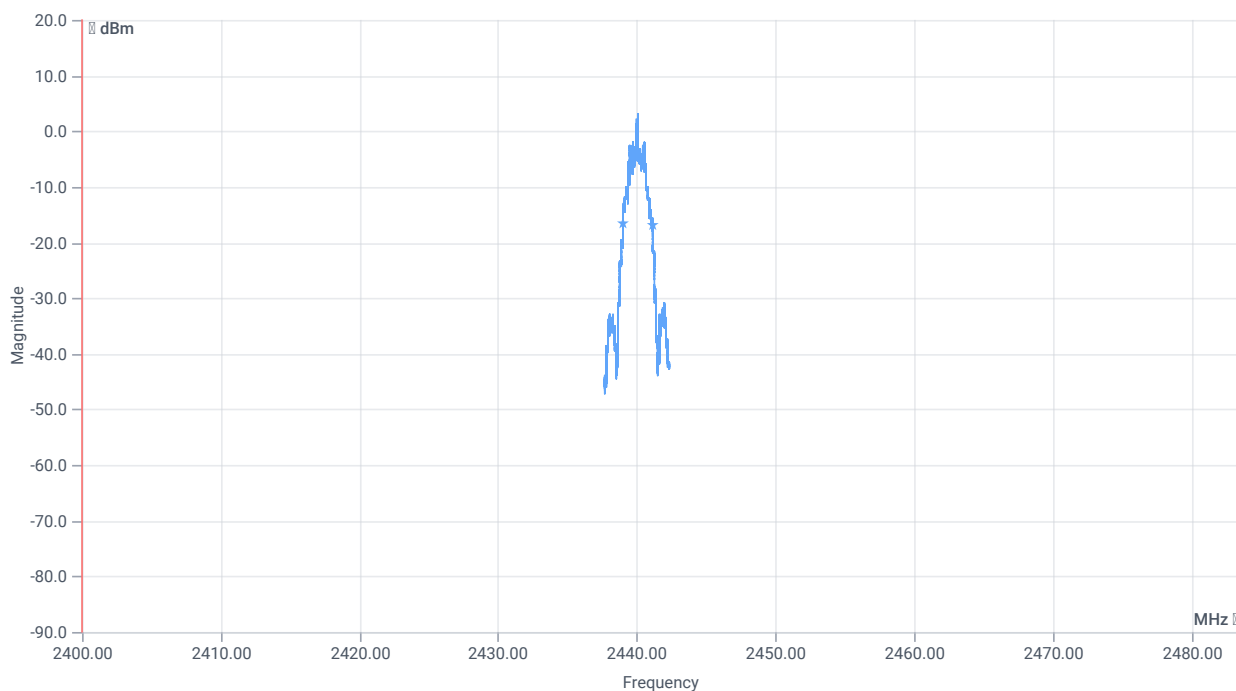
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	2032.000	kHz	INFO
T1 99%	2400.000000	---	2439.0415	MHz	PASS
T2 99%	---	2483.500000	2441.0735	MHz	PASS



BW 20dB



BW within band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	2093	kHz	INFO
T1 20dB	2400.000000	---	2439.0179	MHz	PASS
T2 20dB	---	2483.500000	2441.1104	MHz	PASS

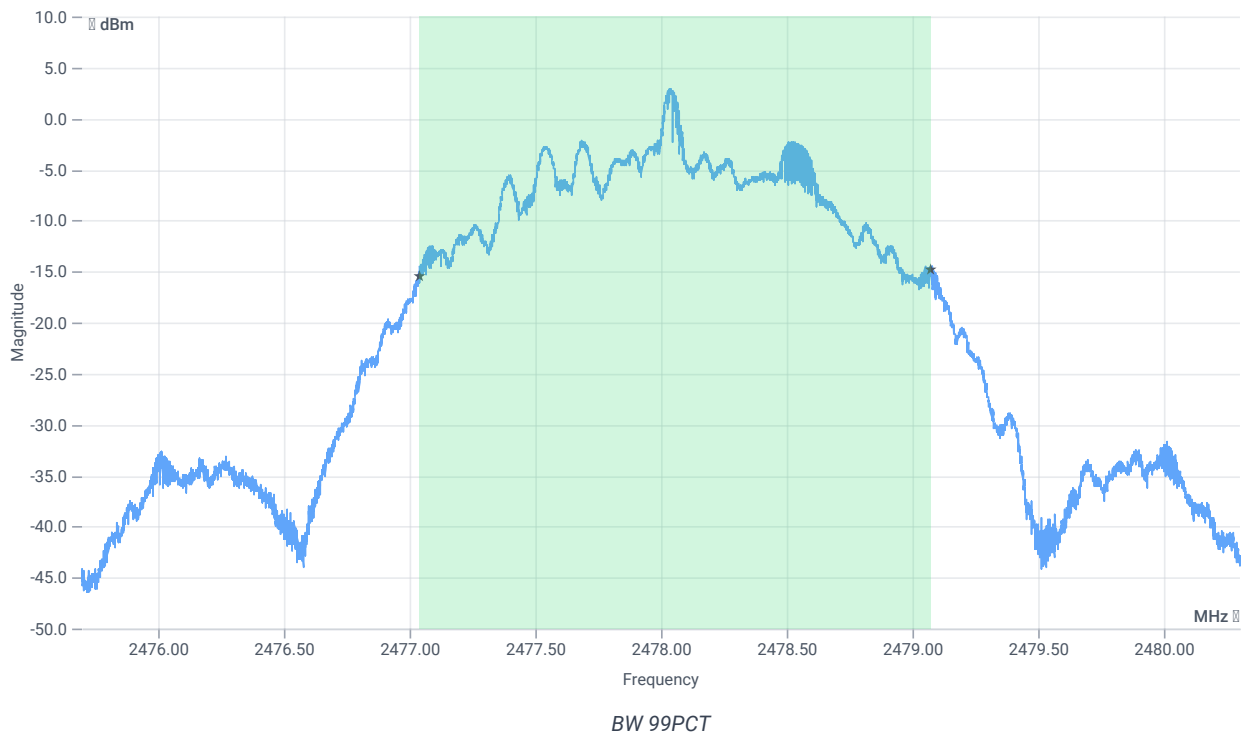
Test at TX 2478 MHz

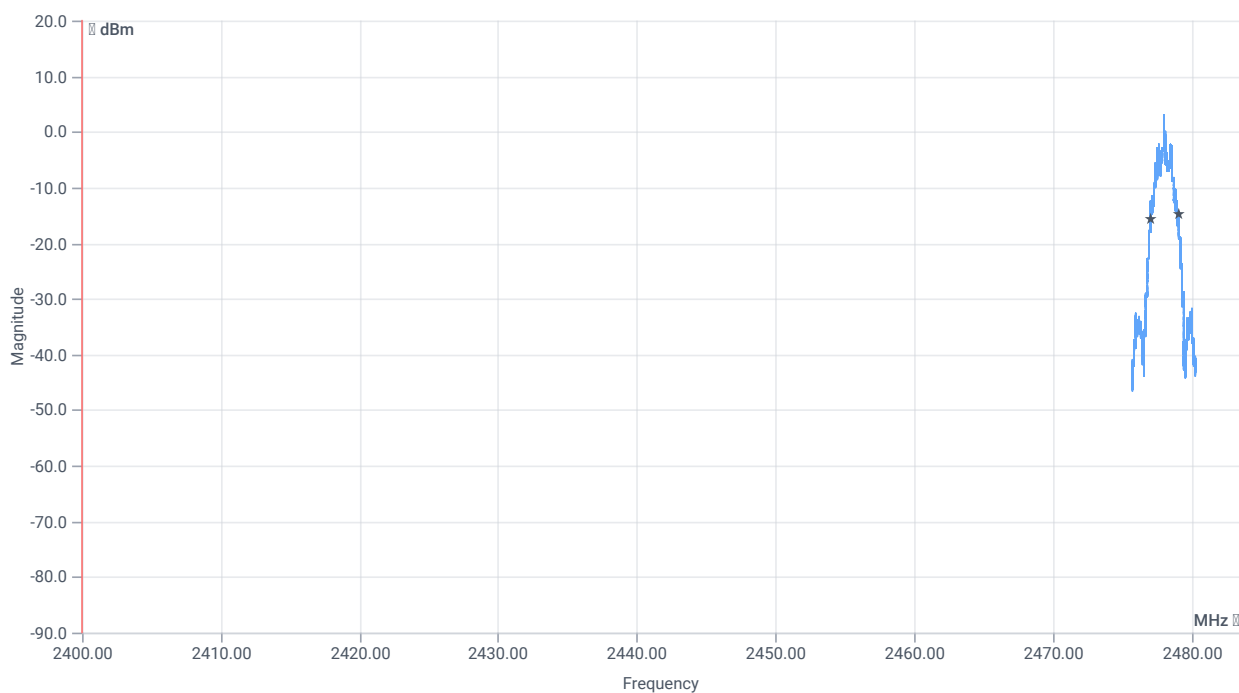
RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.03	dBm	INFO
Ref. frequency	---	---	2478.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.03 9.03 15
Start [MHz] Stop [MHz]	2475.700 2480.300
RBW [MHz] VBW [MHz]	0.050000 0.200000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

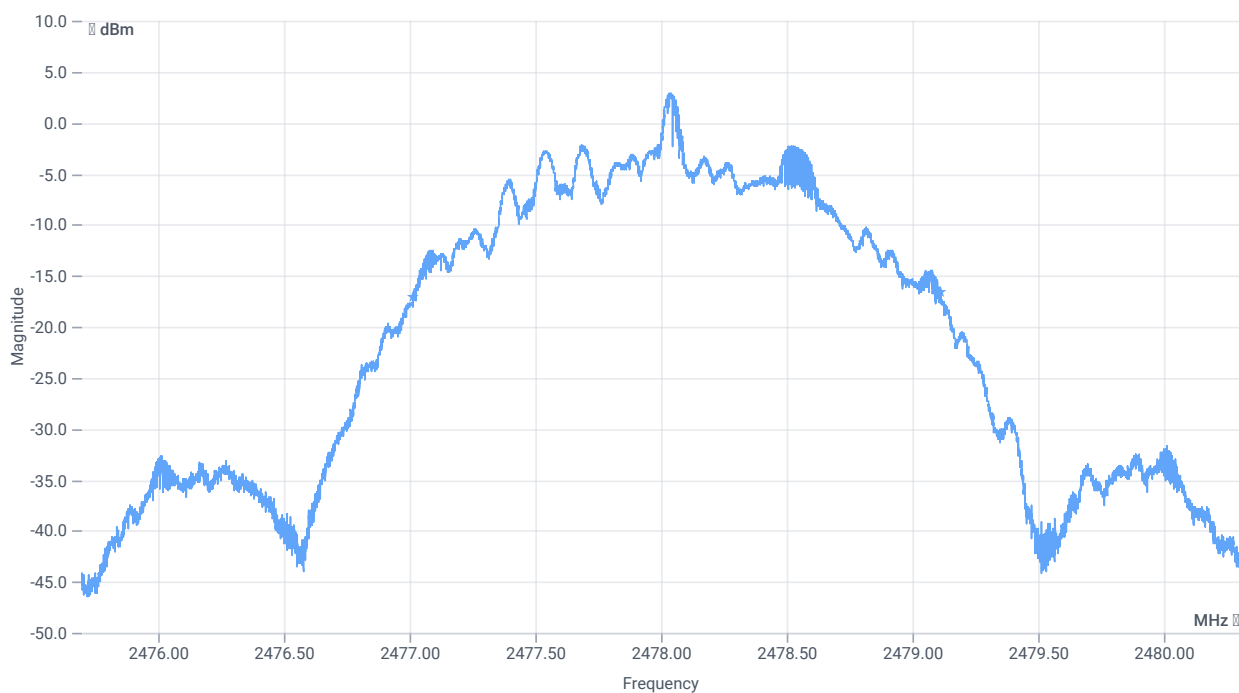




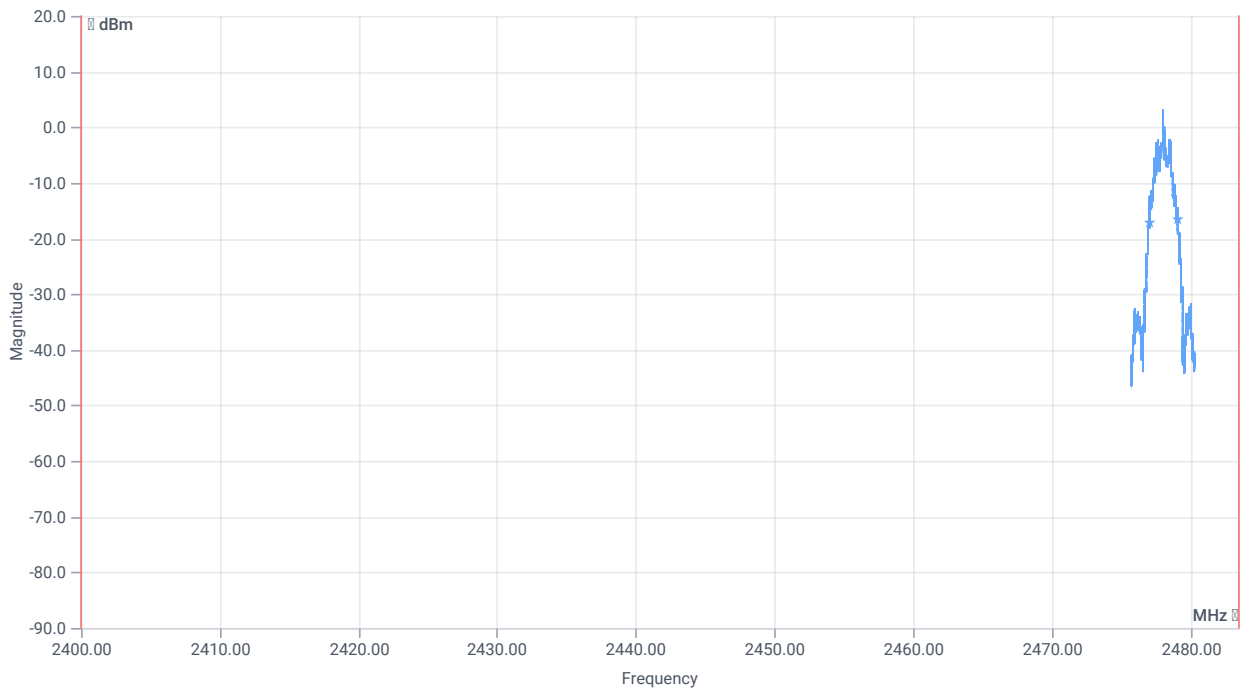
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	2029.000	kHz	INFO
T1 99%	2400.000000	---	2477.0428	MHz	PASS
T2 99%	---	2483.500000	2479.0717	MHz	PASS



BW 20dB



BW within band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	2093	kHz	INFO
T1 20dB	2400.000000	---	2477.0170	MHz	PASS
T2 20dB	---	2483.500000	2479.1104	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 2 Msps

References

TC start	04.02.2025 11:09:55
Ambit temp (test rack) [°C] humidity [rel%]	not enabled not enabled
System version	5.1.6.4
Standard Version	FCC 15.247 NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX emissions conducted DTS - BT LE 2 Msps
Information	

EUT Common Settings BT Low Energy

Intermodulation value N	3
Image freq. Low Mid High [MHz]	0 0 0
Power class	2
1 Mbps supported	True TXpayload 255 RXpayload 255
2 Mbps supported	True TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling settings	WS_USB_RS232 HCI 4 115200 None S1 None On
Signaling RF settings	RF1com 0 0 On
User interaction	No

Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70
Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0

Test Parameter

Technology to test	BT LE 2 Msps
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2404
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2478
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path type	EUT_SA_GEN_SIG

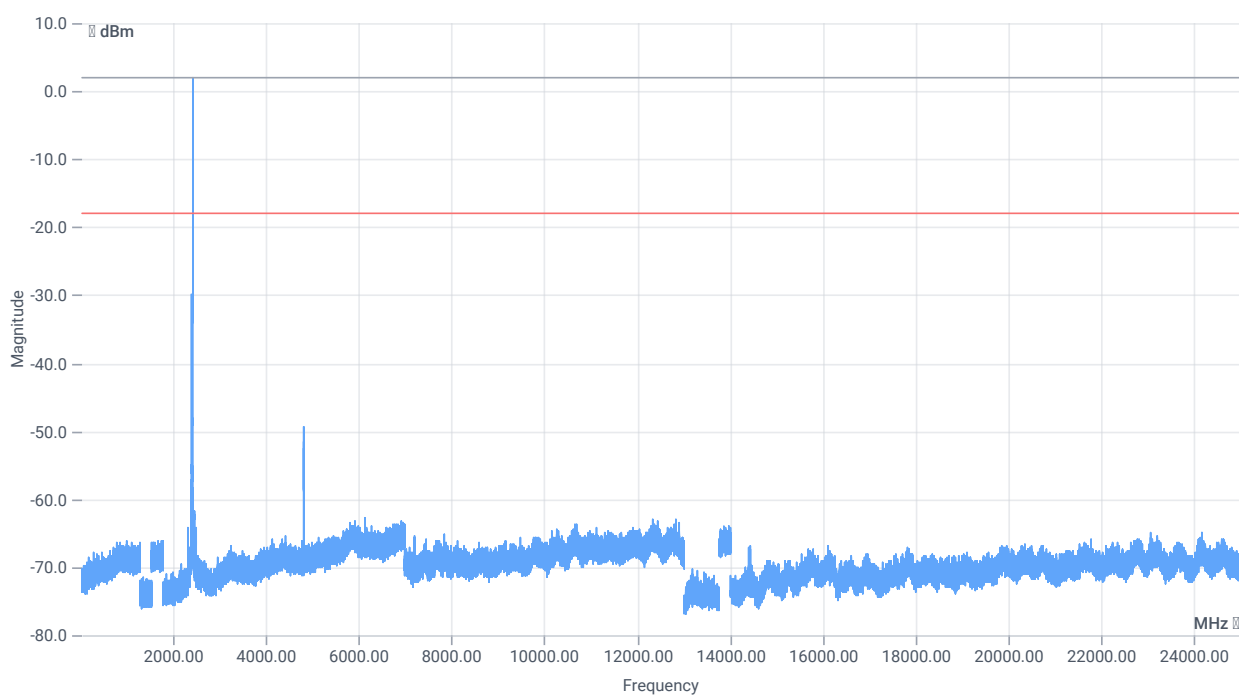
Test Parameter

Full path name	EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/
Switch bits	00010001:00010001:00000000:00000001

Test at TX 2404 MHz

RESULT: Reference power cond.

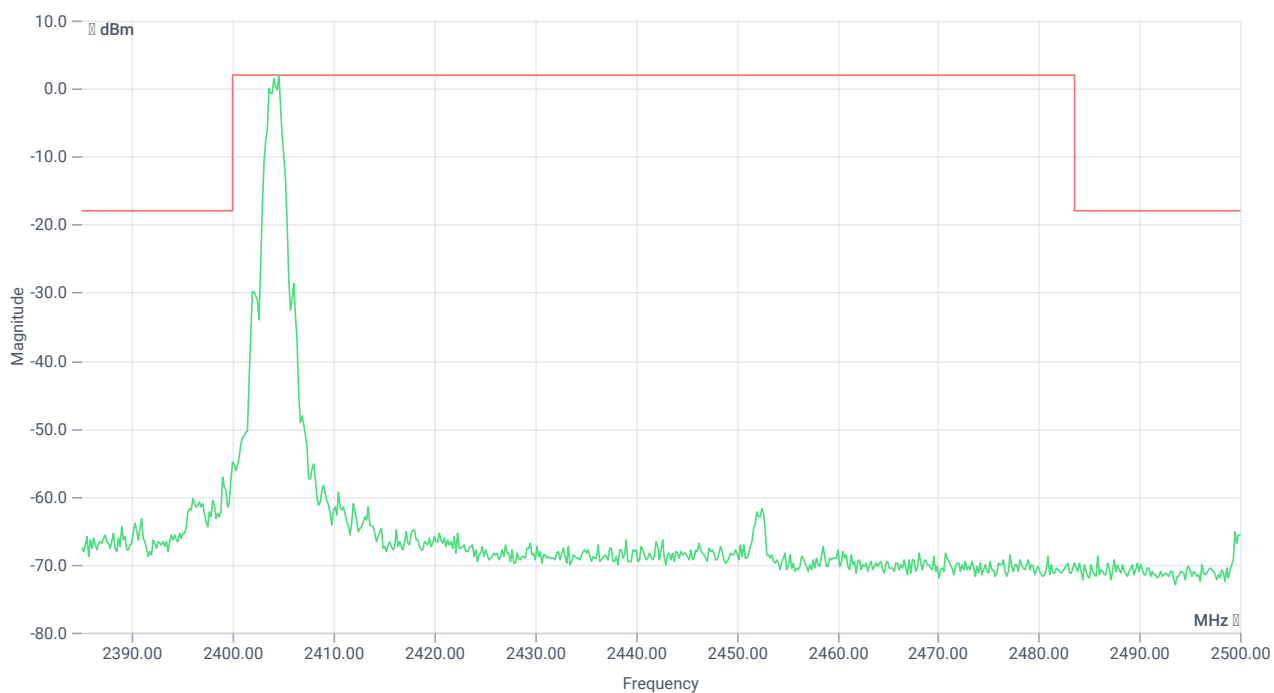
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.33	dBm	INFO
Ref. frequency	---	---	2404.500	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.33 17.03 5
Start [MHz] Stop [MHz]	24780.000 25000.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	200 25 1501 SWE



TX emissions band zoomed

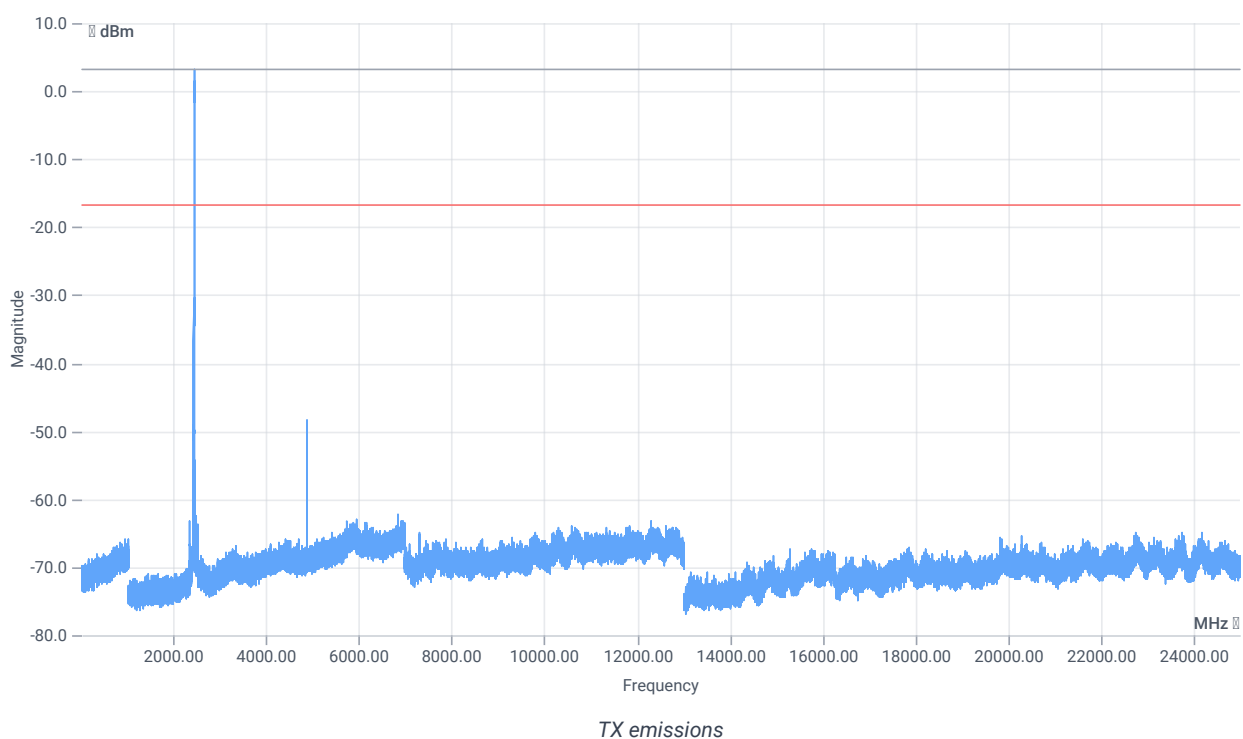
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2404.50 MHz	---	---	2.00	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4808 MHz	0	---	31.27	dB	INFO

Test at TX 2440 MHz

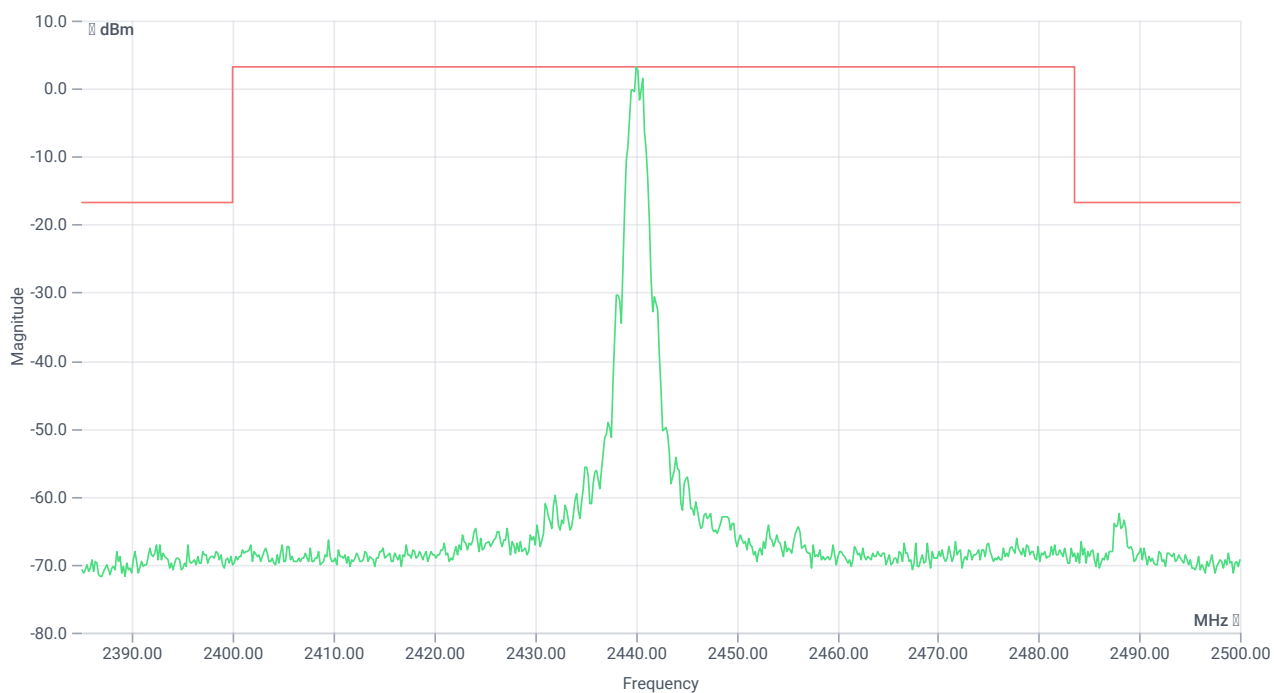
RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.22	dBm	INFO
Ref. frequency	---	---	2440.600	MHz	INFO



READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.22 17.03 5
Start [MHz] Stop [MHz]	24780.000 25000.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	200 25 1501 SWE



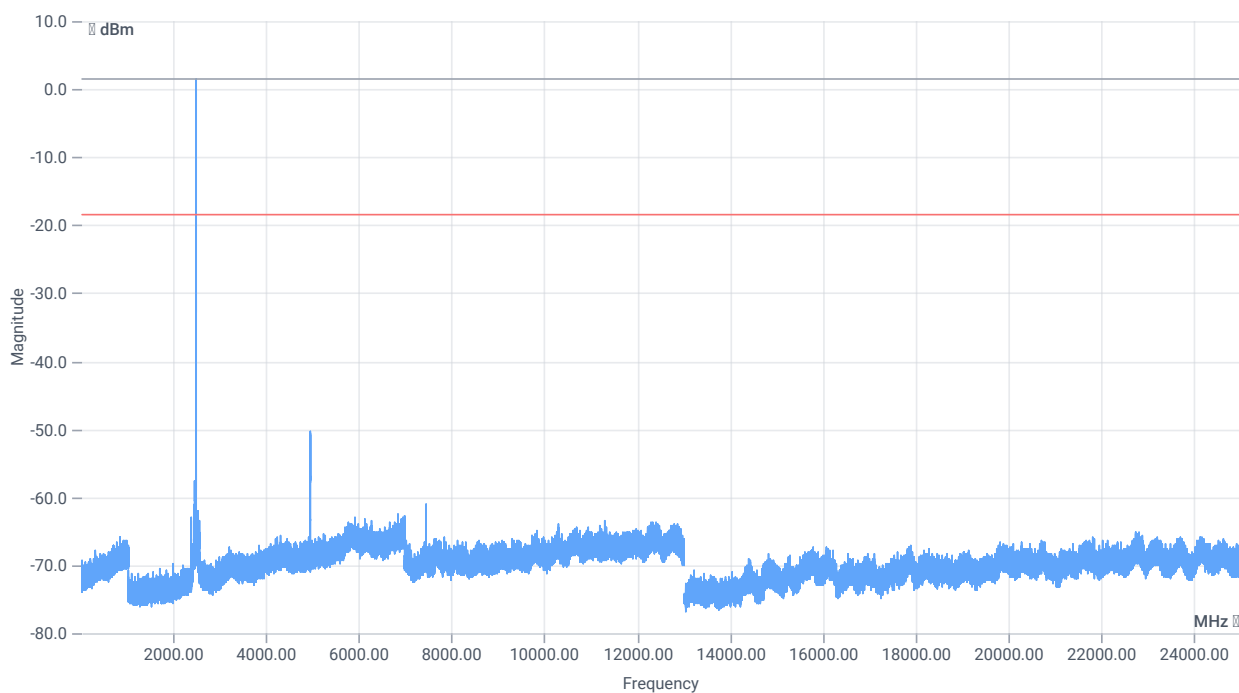
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2440.00 MHz	---	---	3.26	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4880.167 MHz	0	---	31.54	dB	INFO

Test at TX 2478 MHz

RESULT: Reference power cond.

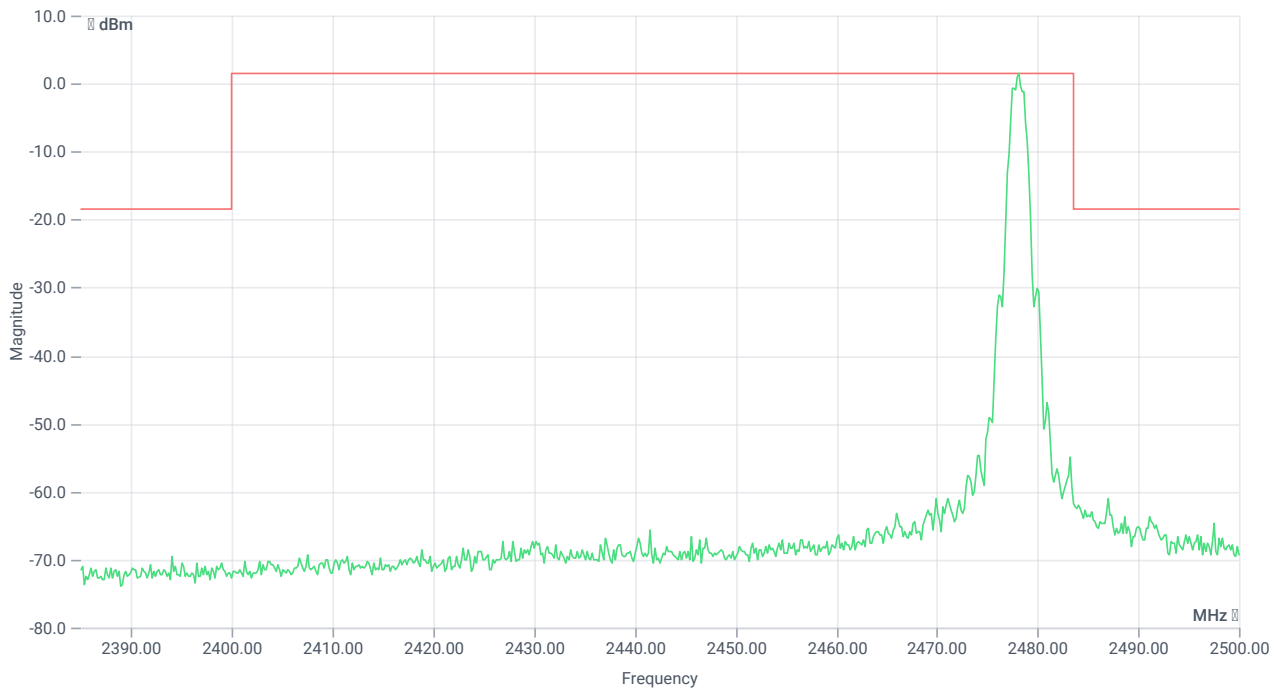
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	3.05	dBm	INFO
Ref. frequency	---	---	2478.600	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.05 17.03 5
Start [MHz] Stop [MHz]	24780.000 25000.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	200 25 1501 SWE



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2478.17 MHz	---	---	1.57	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4956 MHz	0	---	31.91	dB	INFO

Verdict

PASS

- END OF DOCUMENT -