

# Conducted test results

No.1-6611/23-01-03\_Annex\_MR

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September 13, 2023

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

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

### References

TC start	11.09.2023 11:43:13
Ambit temp [°C]   humidity [rel%]	25.5   39
System version	4.6.1.2
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	False   TXpayload 255   RXpayload 255
Longrange S2 supported	False   TXpayload 255   RXpayload 255
Signaling Settings	USB_RS232   HCI   14   115200   None   S1   None   On
Signaling RF Settings	RF1com   0   0   On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

### Test Parameter

Technology to test	BT LE 1 Msps
Antenna port used	1
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
Switched path	EUT - SignalingUnit - SpectrumAnalyzer

### Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62

## Equipment

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Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

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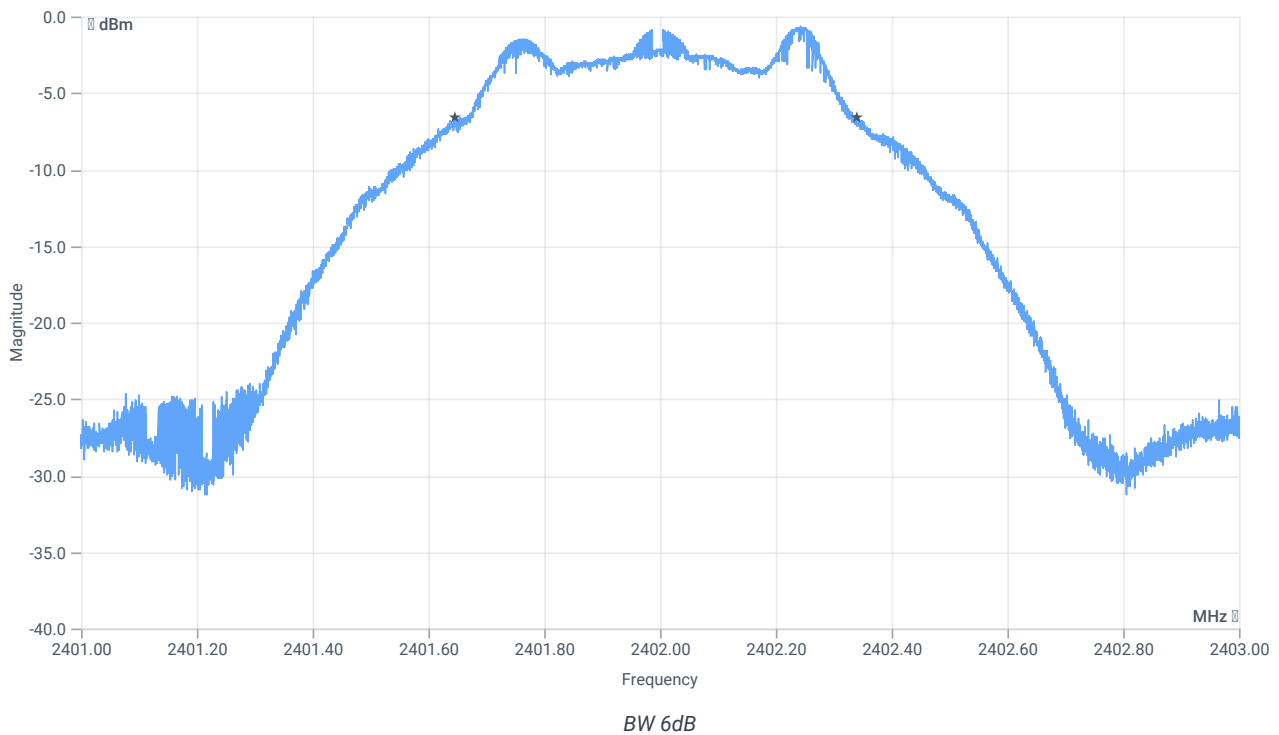
## Test at TX 2402 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.60	dBm	INFO
Ref. Frequency	--	--	2401.700	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.40   10.79   10
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	--	694	kHz	PASS

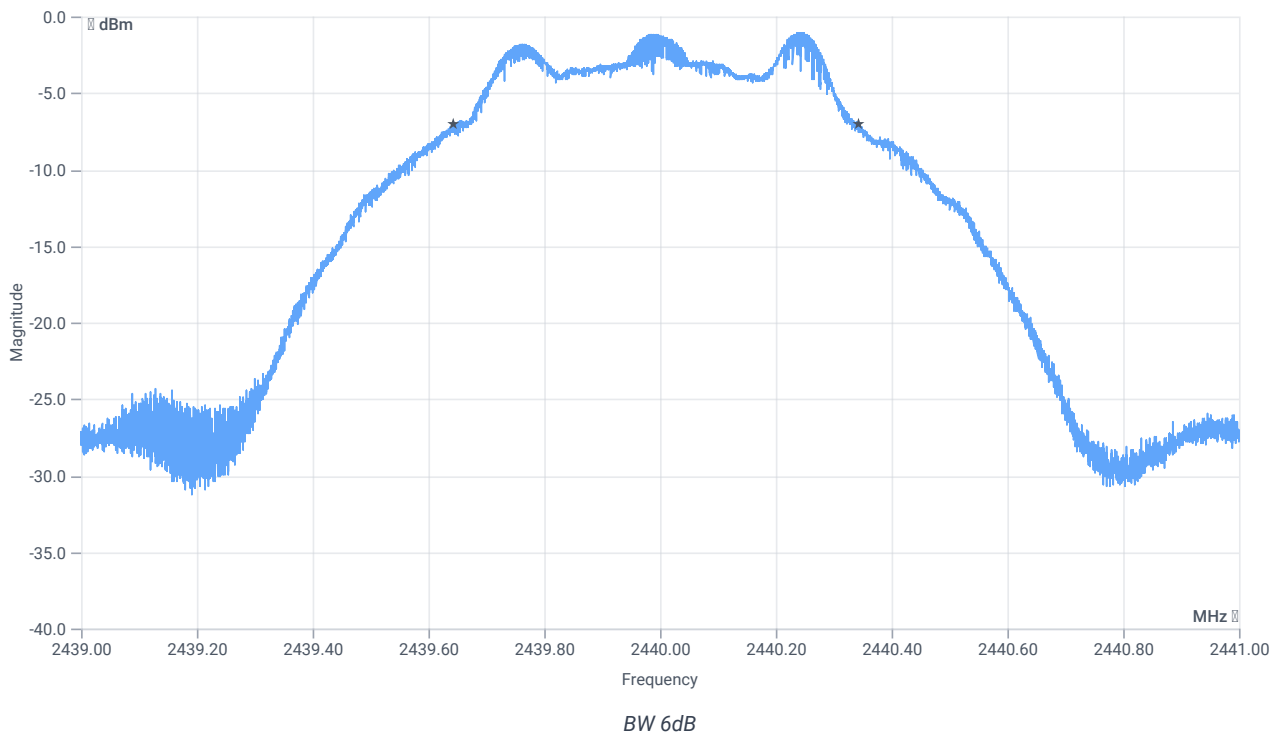
## Test at TX 2440 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.94	dBm	INFO
Ref. Frequency	--	--	2439.700	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.06   10.8   10
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	--	699	kHz	PASS

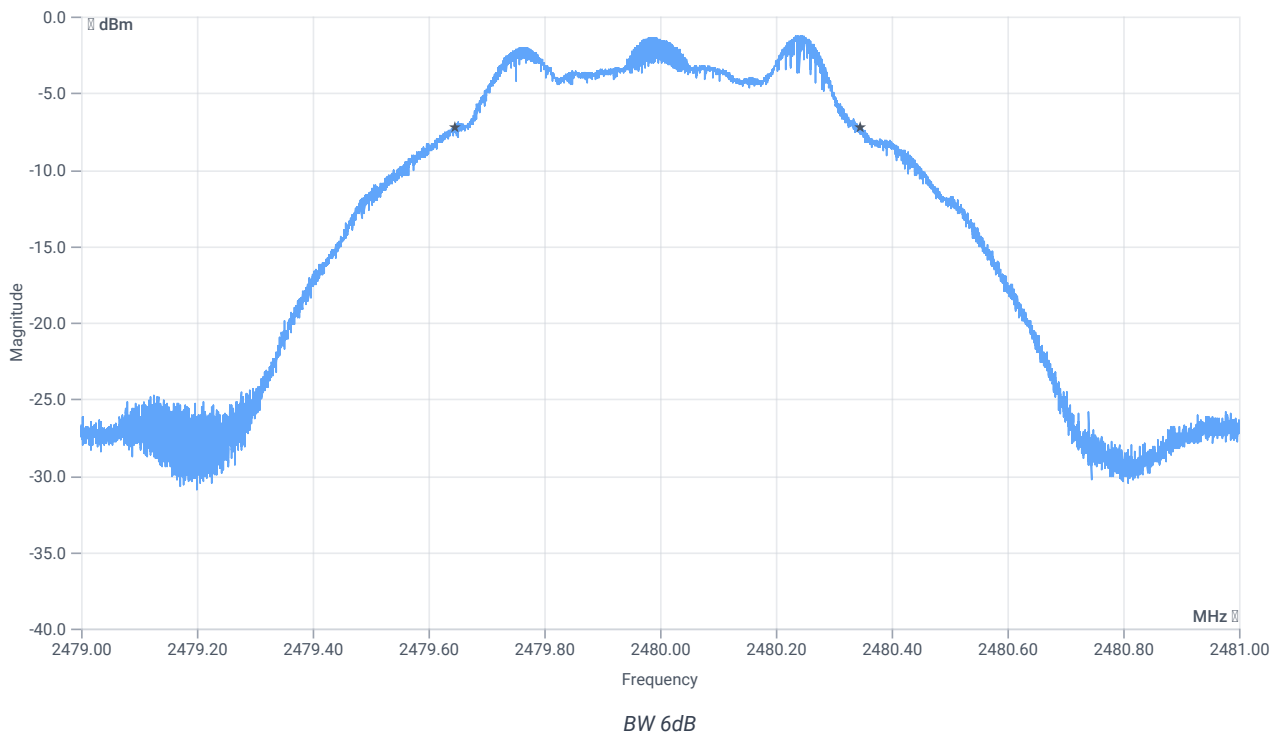
## Test at TX 2480 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-1.14	dBm	INFO
Ref. Frequency	--	--	2480.300	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	3.86   10.85   10
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	--	701	kHz	PASS

Verdict

PASS

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

### References

TC start	11.09.2023 12:10:50
Ambit temp [°C]   humidity [rel%]	25.2   38
System version	4.6.1.2
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	False   TXpayload 255   RXpayload 255
Longrange S2 supported	False   TXpayload 255   RXpayload 255
Signaling Settings	USB_RS232   HCI   14   115200   None   S1   None   On
Signaling RF Settings	RF1com   0   0   On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

### Test Parameter

Technology to test	BT LE 2 Msps
Antenna port used	1
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
Switched path	EUT - SignalingUnit - SpectrumAnalyzer

### Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62



## Equipment

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Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

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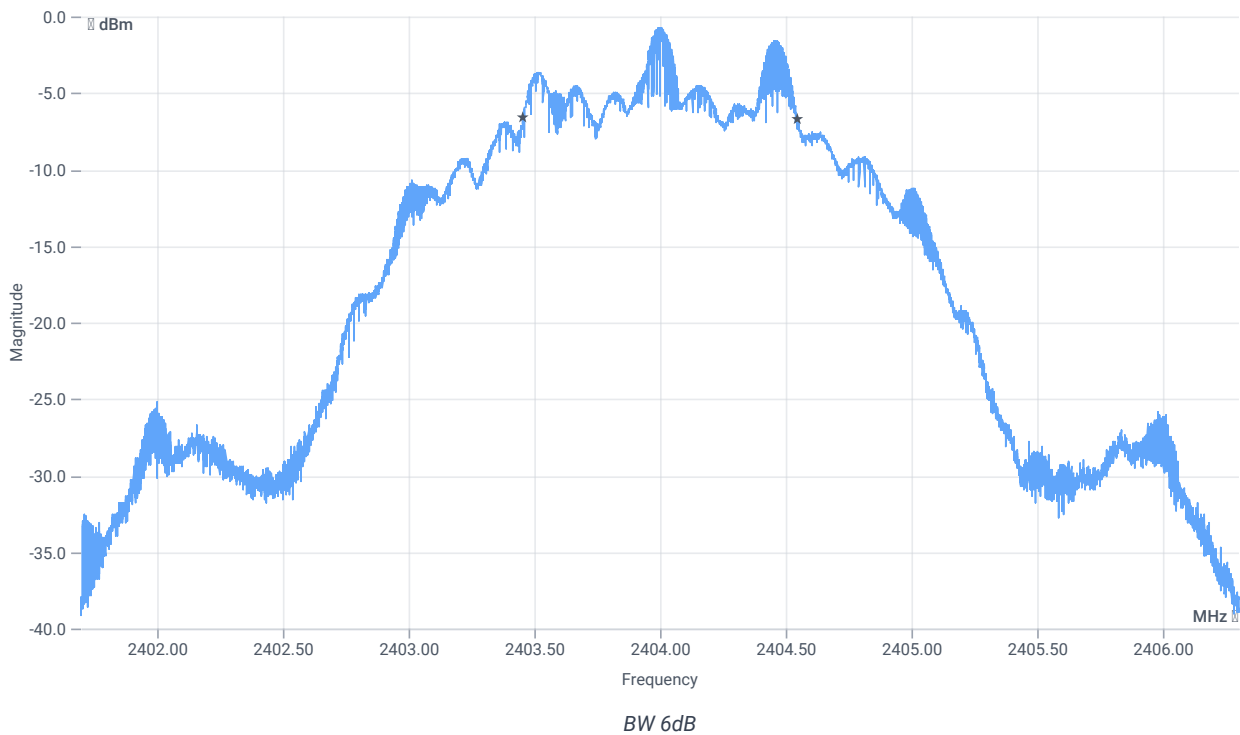
## Test at TX 2404 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.57	dBm	INFO
Ref. Frequency	--	--	2403.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.43   10.8   10
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	--	1088	kHz	PASS

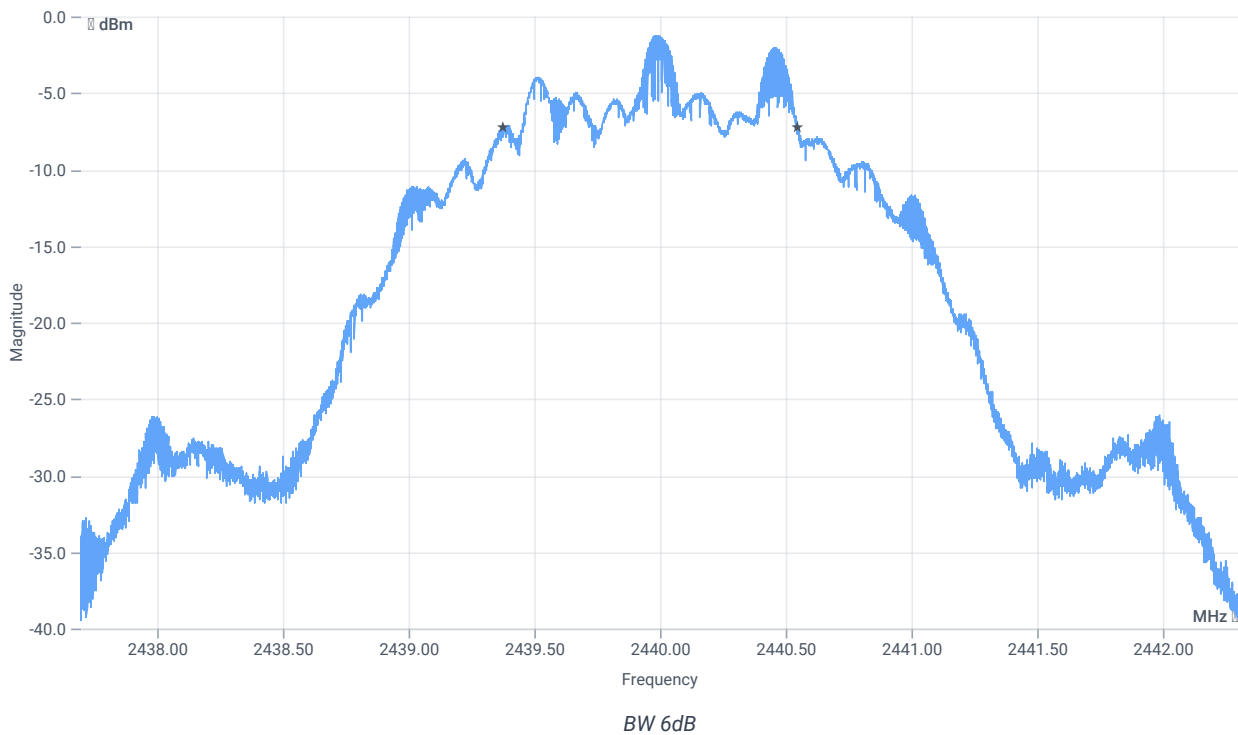
## Test at TX 2440 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.99	dBm	INFO
Ref. Frequency	--	--	2440.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.01   10.8   10
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	--	1169	kHz	PASS

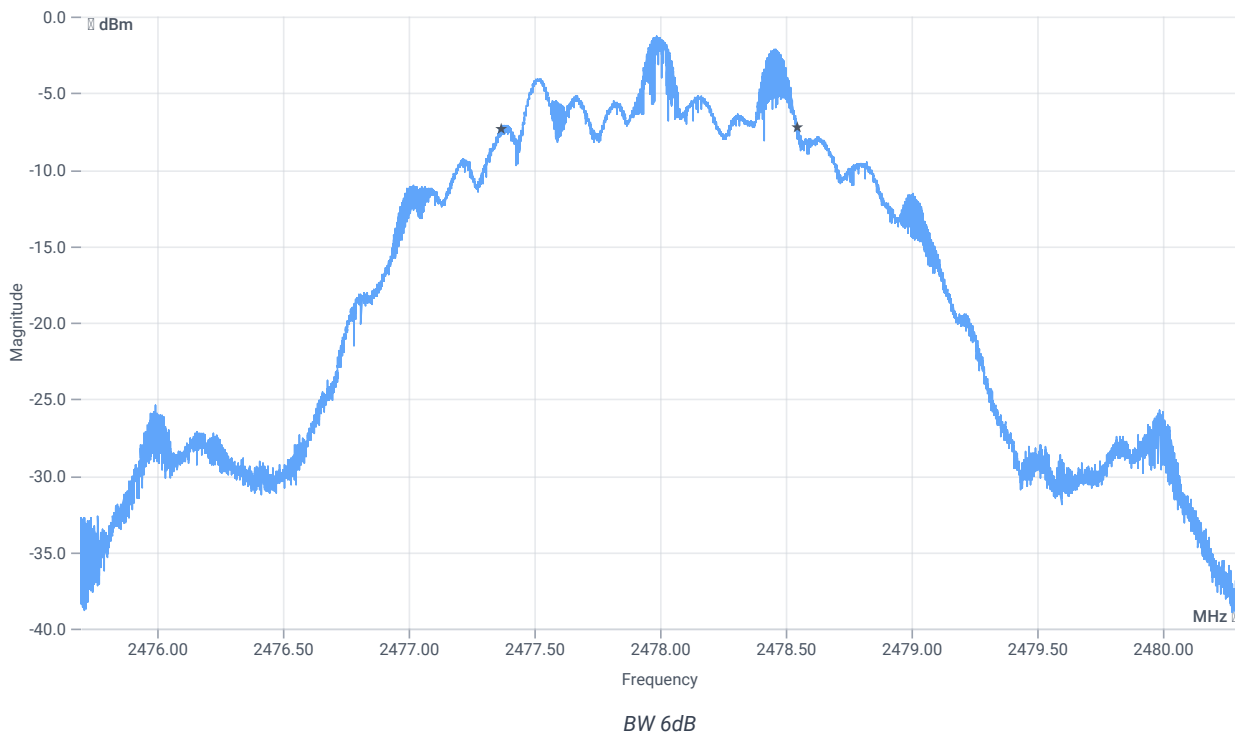
## Test at TX 2478 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-1.02	dBm	INFO
Ref. Frequency	--	--	2477.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	3.98   10.85   10
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	--	1178	kHz	PASS

Verdict

PASS

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

## References

TC start	11.09.2023 11:46:45
Ambit temp [°C]   humidity [rel%]	25.2   38
System version	4.6.1.2
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	False   TXpayload 255   RXpayload 255
Longrange S2 supported	False   TXpayload 255   RXpayload 255
Signaling Settings	USB_RS232   HCI   14   115200   None   S1   None   On
Signaling RF Settings	RF1com   0   0   On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

## Test Parameter

Technology to test	BT LE 1 Msps
Antenna port used	1
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
Switched path	EUT - SignalingUnit - SpectrumAnalyzer

## Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70

## Equipment

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Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62

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Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

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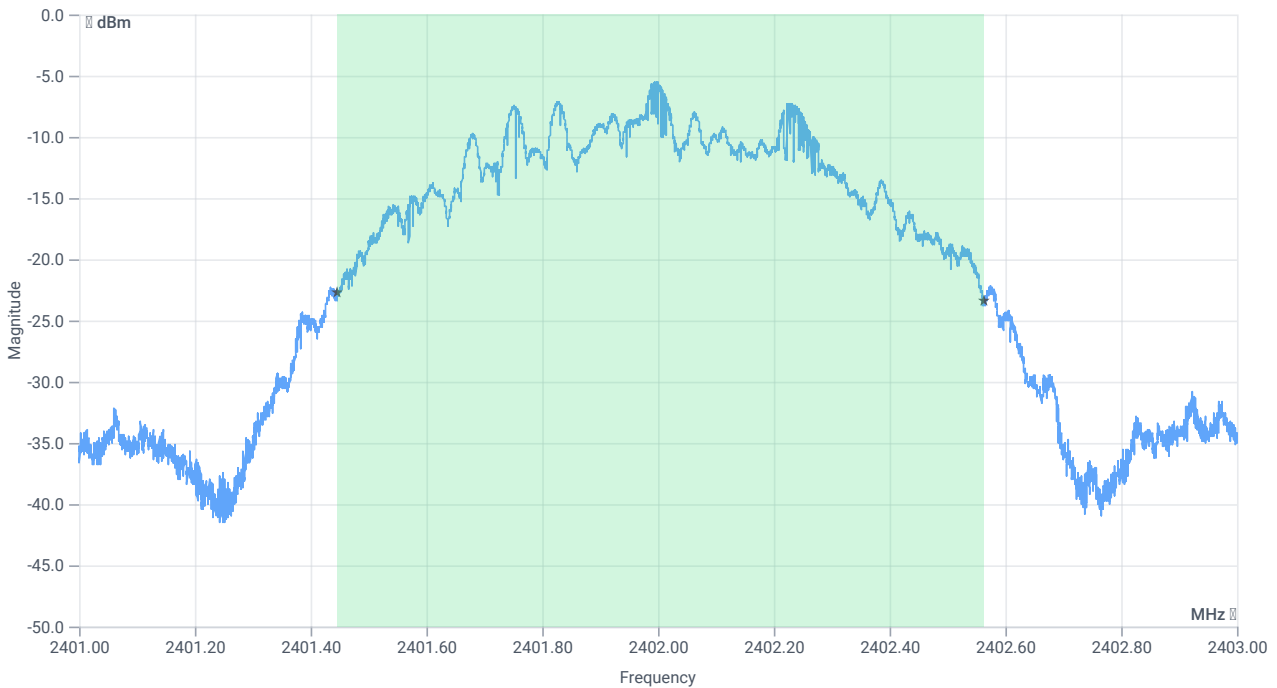
### Test at TX 2402 MHz

RESULT: Reference Power cond.

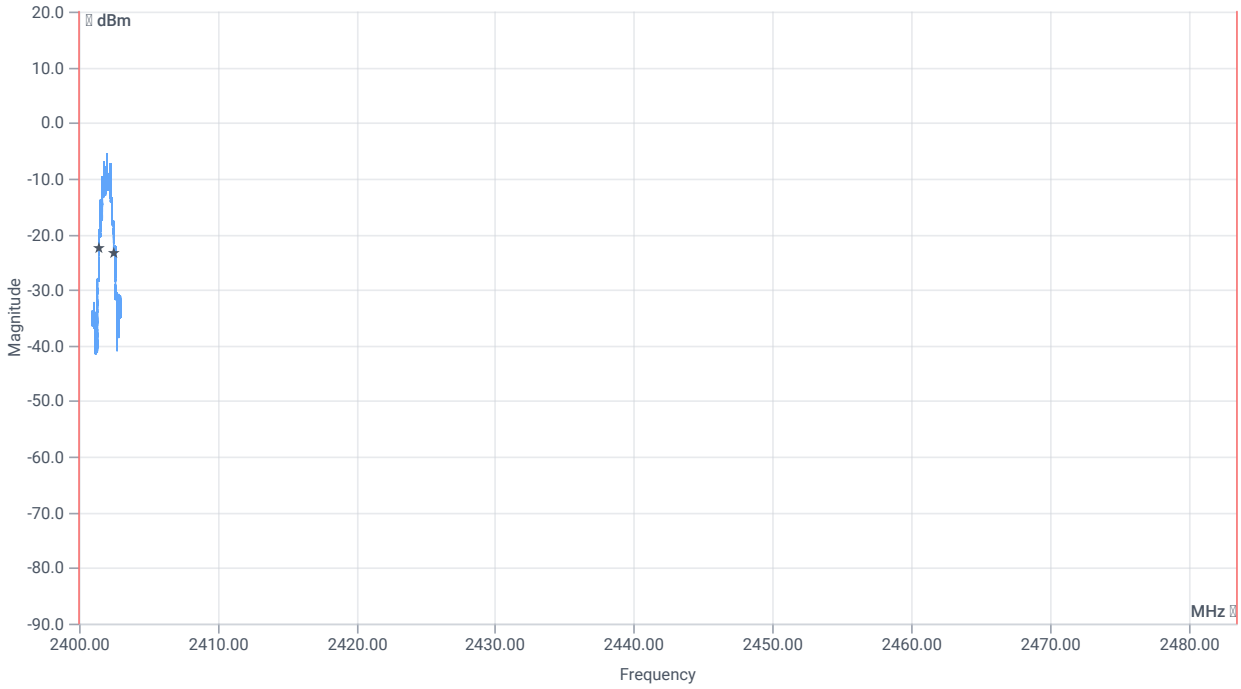
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.56	dBm	INFO
Ref. Frequency	--	--	2402.200	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.44   10.79   10
Start [MHz]   Stop [MHz]	2401.000   2403.000
RBW [MHz]   VBW [MHz]	0.020000   0.100000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	50   200   10001   SWE



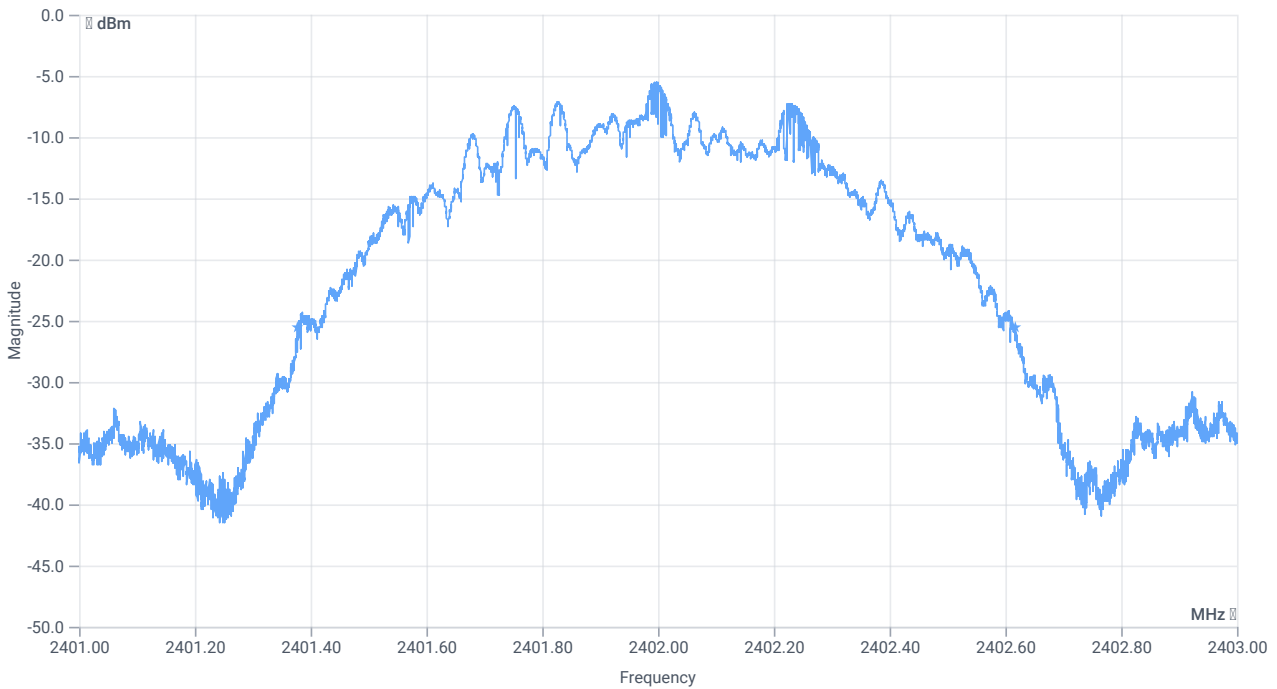
BW 99PCT



BW within Band 99PCT

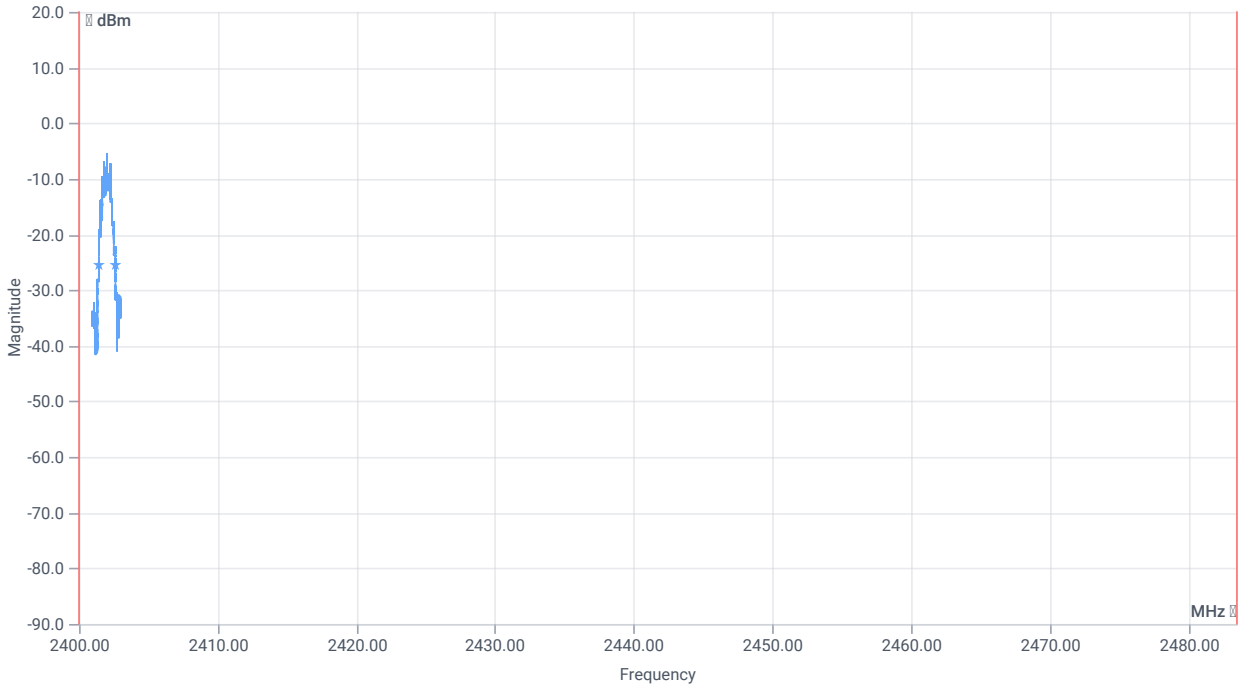
## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	1116.000	kHz	INFO
T1 99%	2400.000000	--	2401.4471	MHz	PASS
T2 99%	--	2483.500000	2402.5635	MHz	PASS





BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	1238	kHz	INFO
T1 20dB	2400.000000	--	2401.3778	MHz	PASS
T2 20dB	--	2483.500000	2402.6158	MHz	PASS

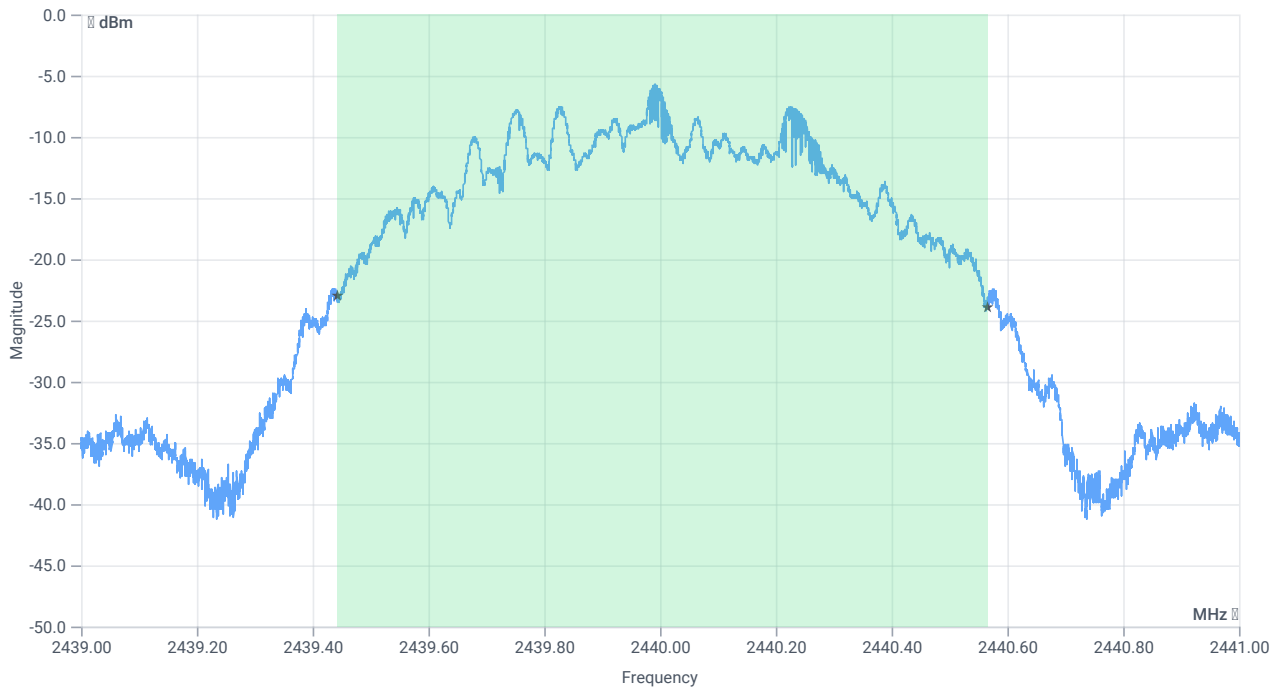
## Test at TX 2440 MHz

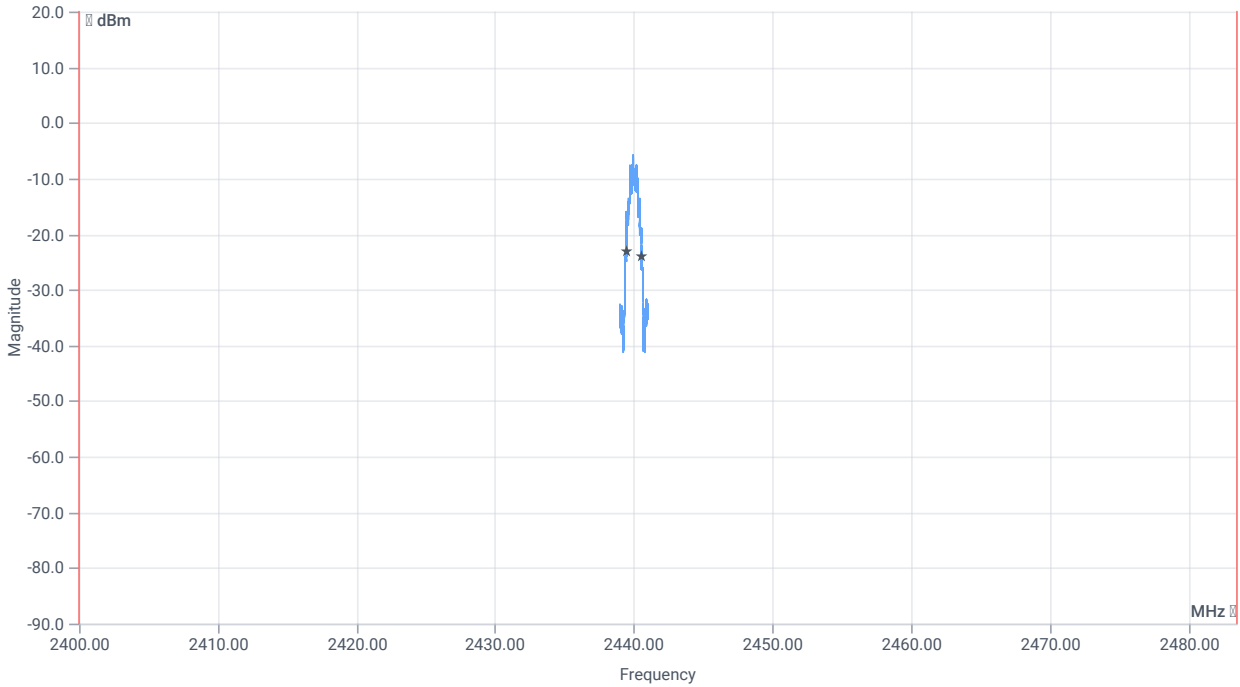
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.94	dBm	INFO
Ref. Frequency	--	--	2440.200	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.06   10.8   10
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

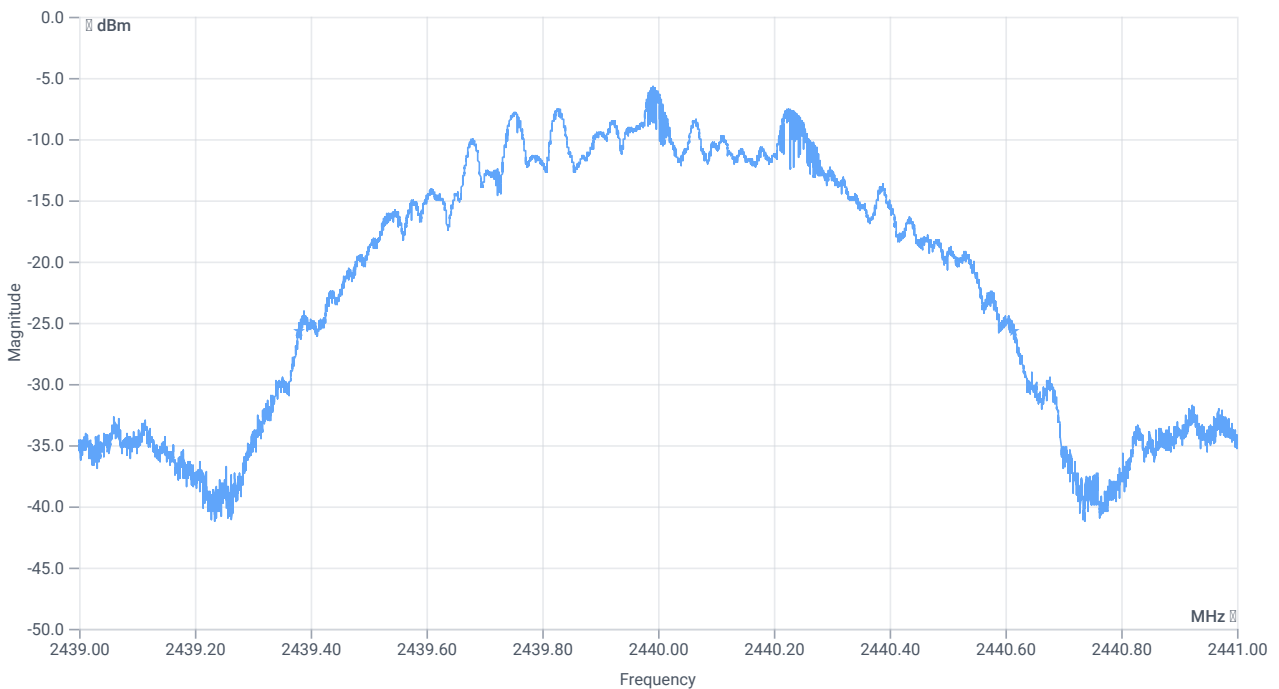




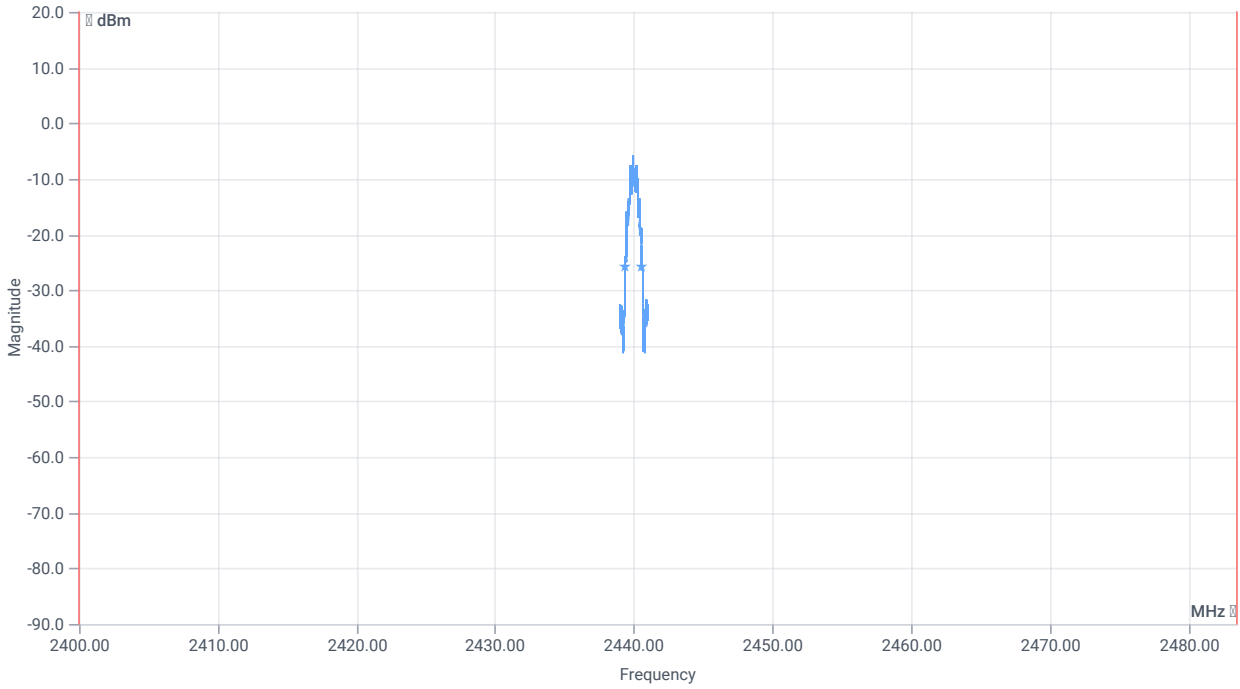
BW within Band 99PCT

**RESULT**

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	1124.000	kHz	INFO
T1 99%	2400.000000	--	2439.4417	MHz	PASS
T2 99%	--	2483.500000	2440.5655	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	1235	kHz	INFO
T1 20dB	2400.000000	--	2439.3794	MHz	PASS
T2 20dB	--	2483.500000	2440.6148	MHz	PASS

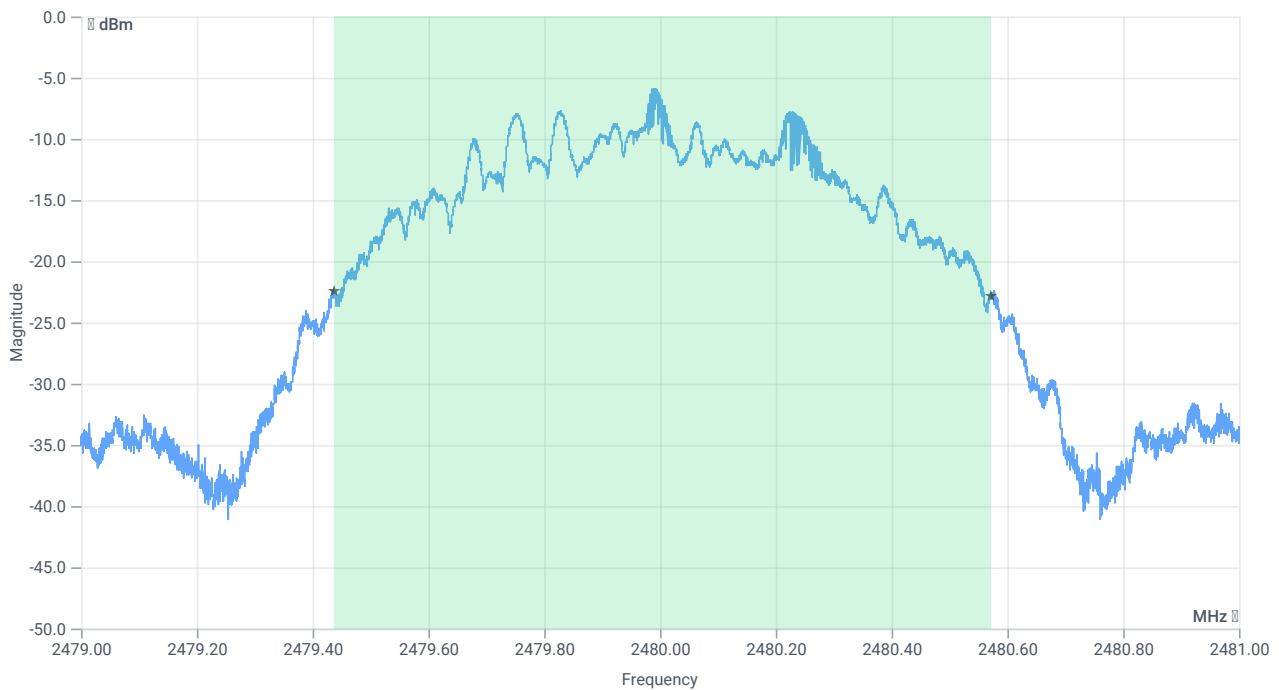
## Test at TX 2480 MHz

RESULT: Reference Power cond.

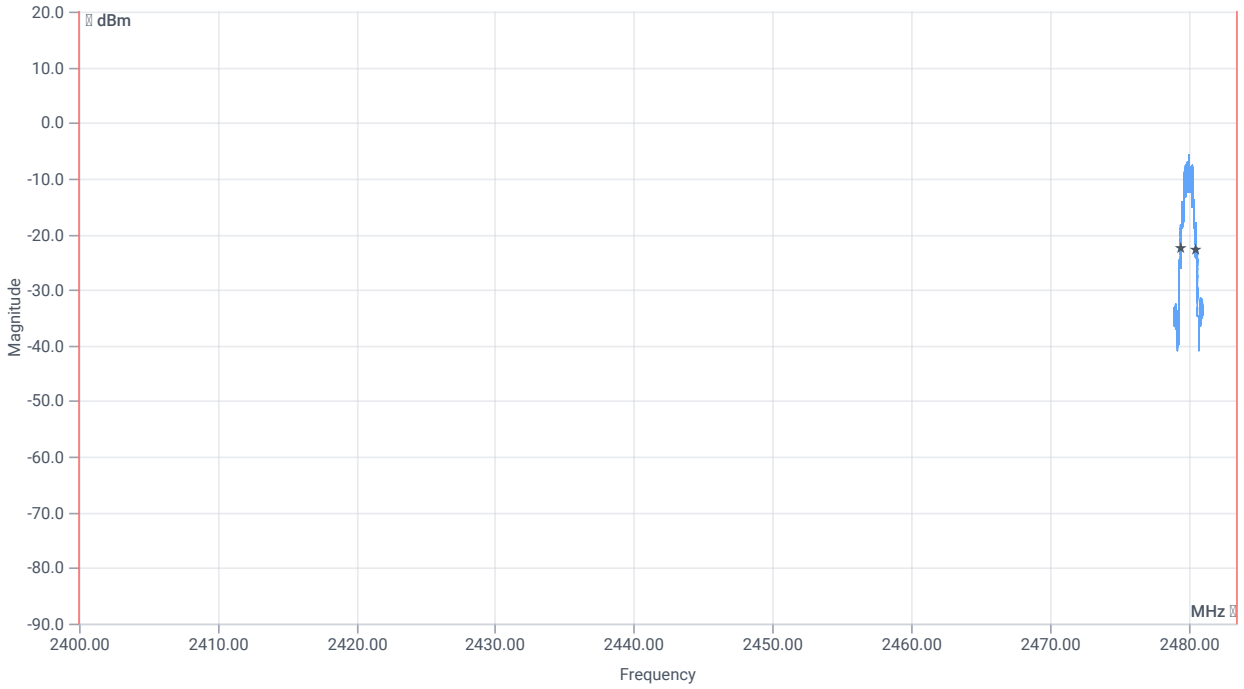
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-1.15	dBm	INFO
Ref. Frequency	--	--	2480.300	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	3.85   10.85   10
Start [MHz]   Stop [MHz]	2479.000   2481.000
RBW [MHz]   VBW [MHz]	0.020000   0.100000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	50   200   10001   SWE



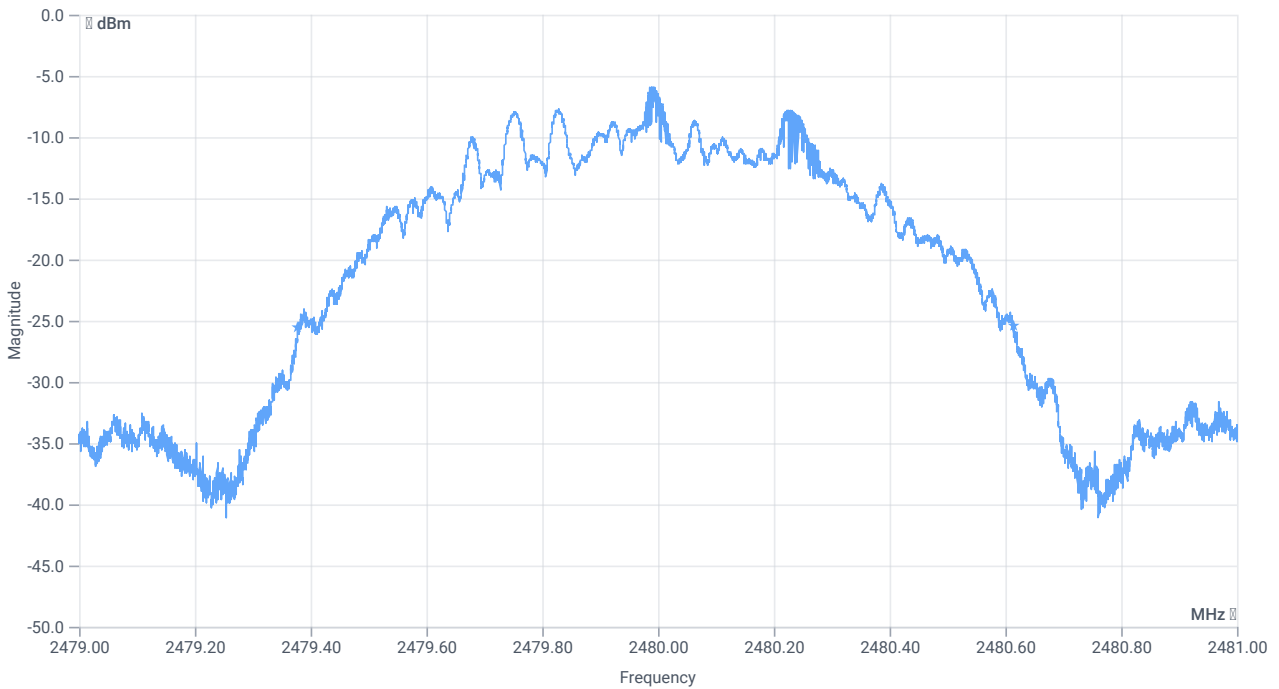
BW 99PCT



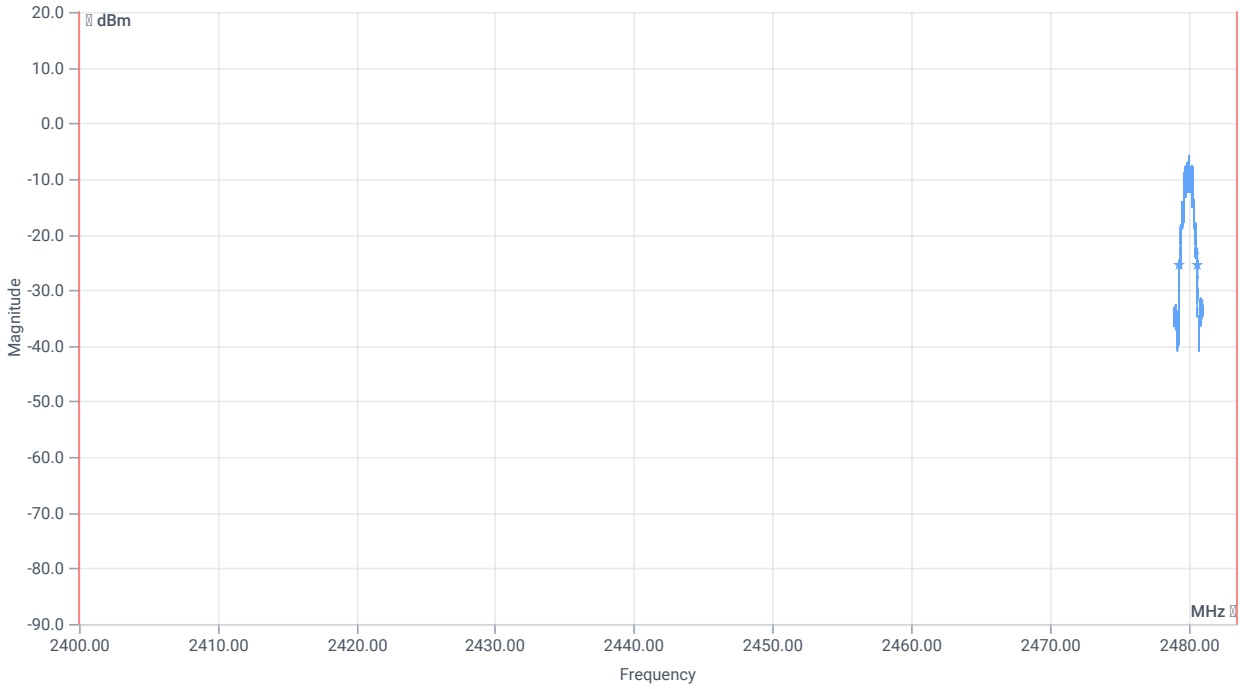
*BW within Band 99PCT*

## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	1133.000	kHz	INFO
T1 99%	2400.000000	--	2479.4369	MHz	PASS
T2 99%	--	2483.500000	2480.5703	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	1237	kHz	INFO
T1 20dB	2400.000000	--	2479.3776	MHz	PASS
T2 20dB	--	2483.500000	2480.6148	MHz	PASS

Verdict

PASS

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

## References

TC start	11.09.2023 12:14:23
Ambit temp [°C]   humidity [rel%]	25.0   35
System version	4.6.1.2
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	False   TXpayload 255   RXpayload 255
Longrange S2 supported	False   TXpayload 255   RXpayload 255
Signaling Settings	USB_RS232   HCI   14   115200   None   S1   None   On
Signaling RF Settings	RF1com   0   0   On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

## Test Parameter

Technology to test	BT LE 2 Msps
Antenna port used	1
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
Switched path	EUT - SignalingUnit - SpectrumAnalyzer

## Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70



## Equipment

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Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62

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Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

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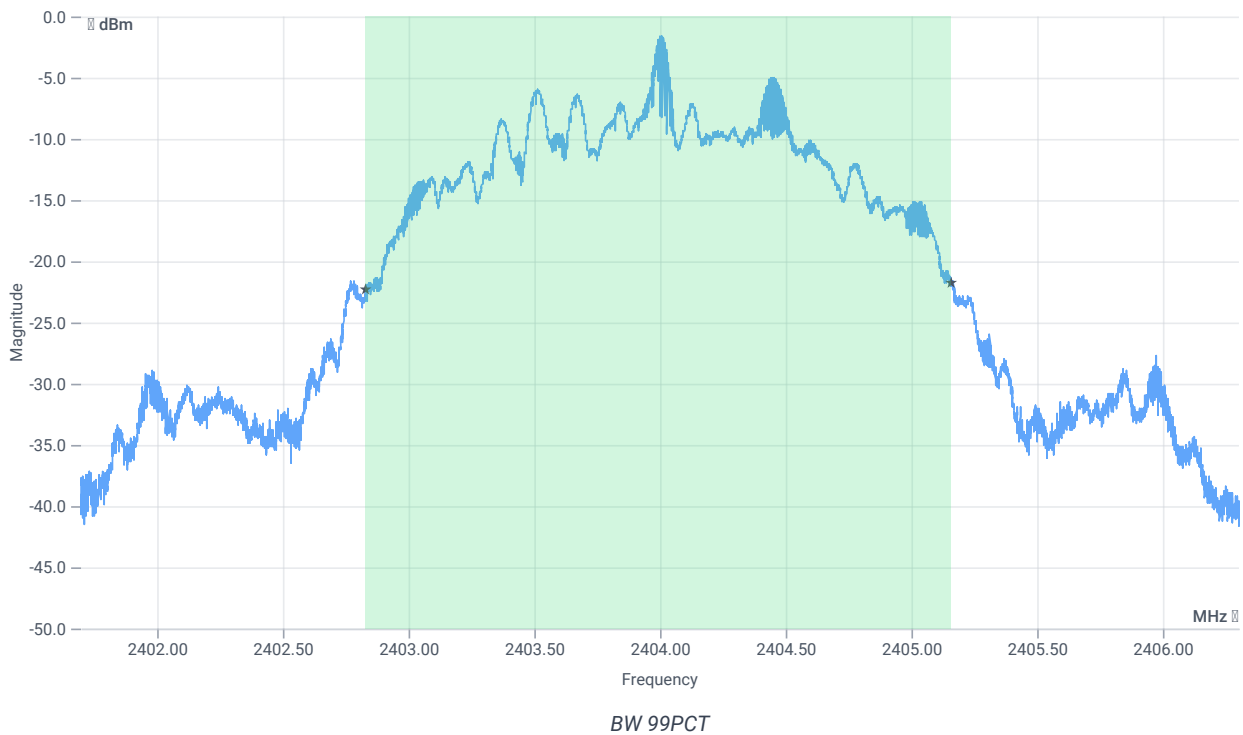
## Test at TX 2404 MHz

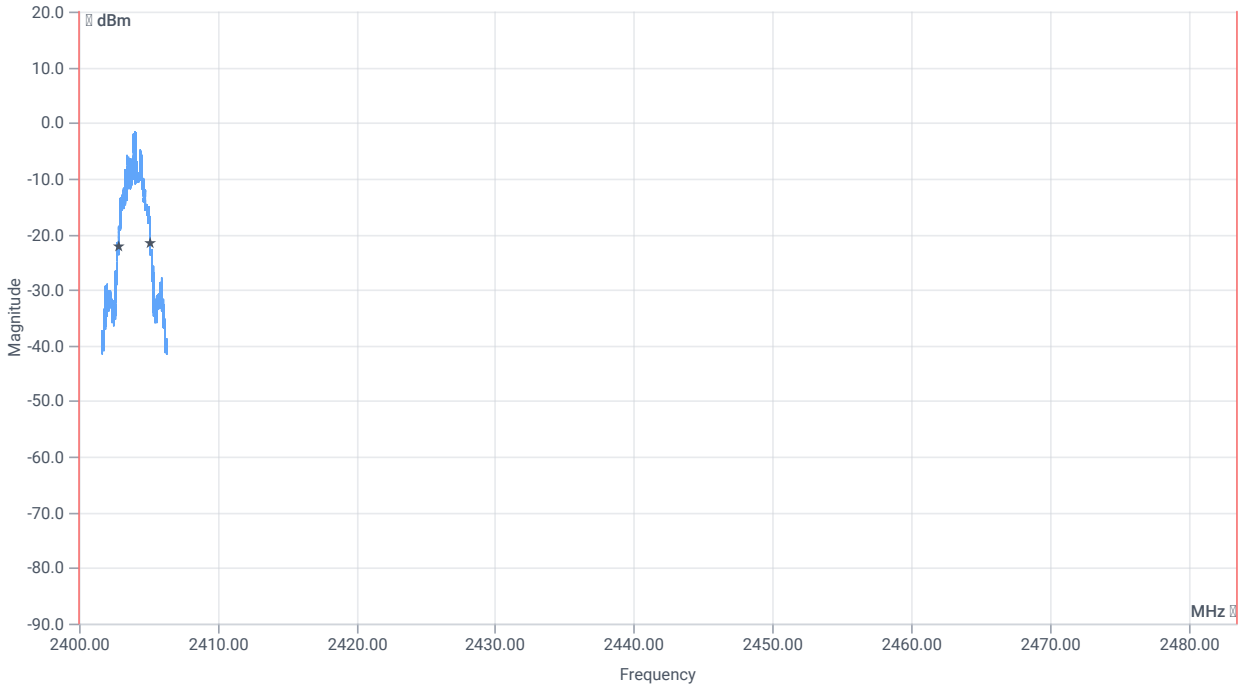
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.53	dBm	INFO
Ref. Frequency	--	--	2404.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.47   10.8   10
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

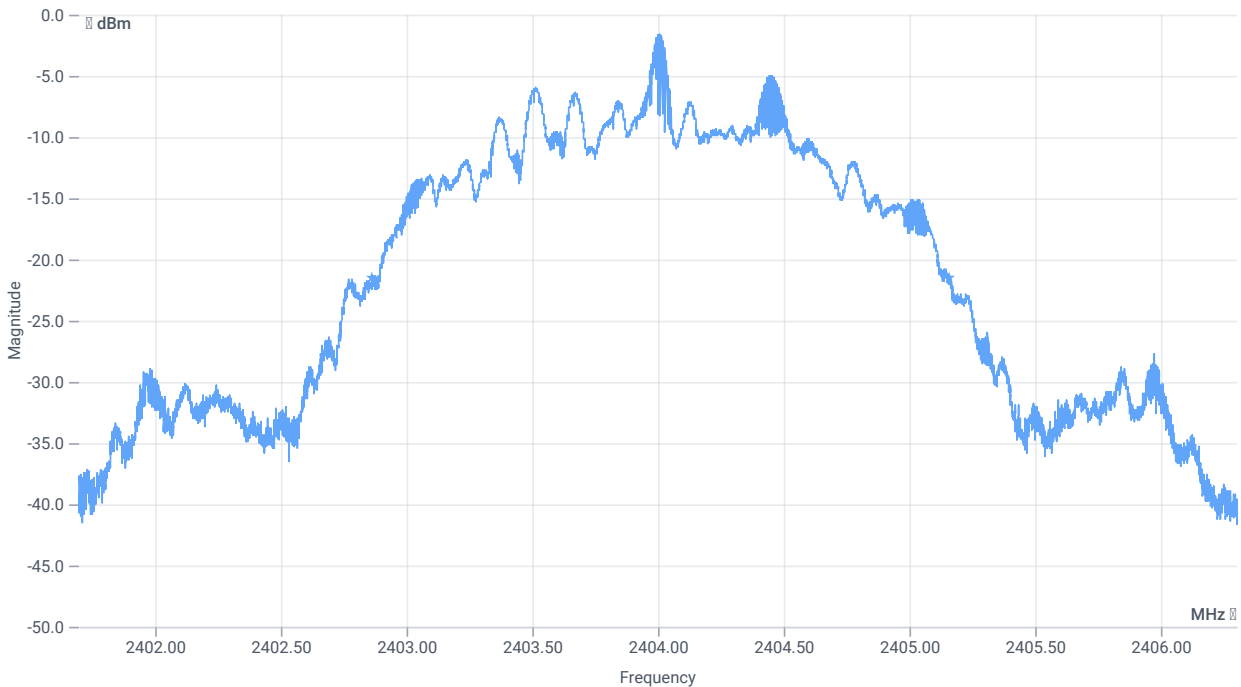




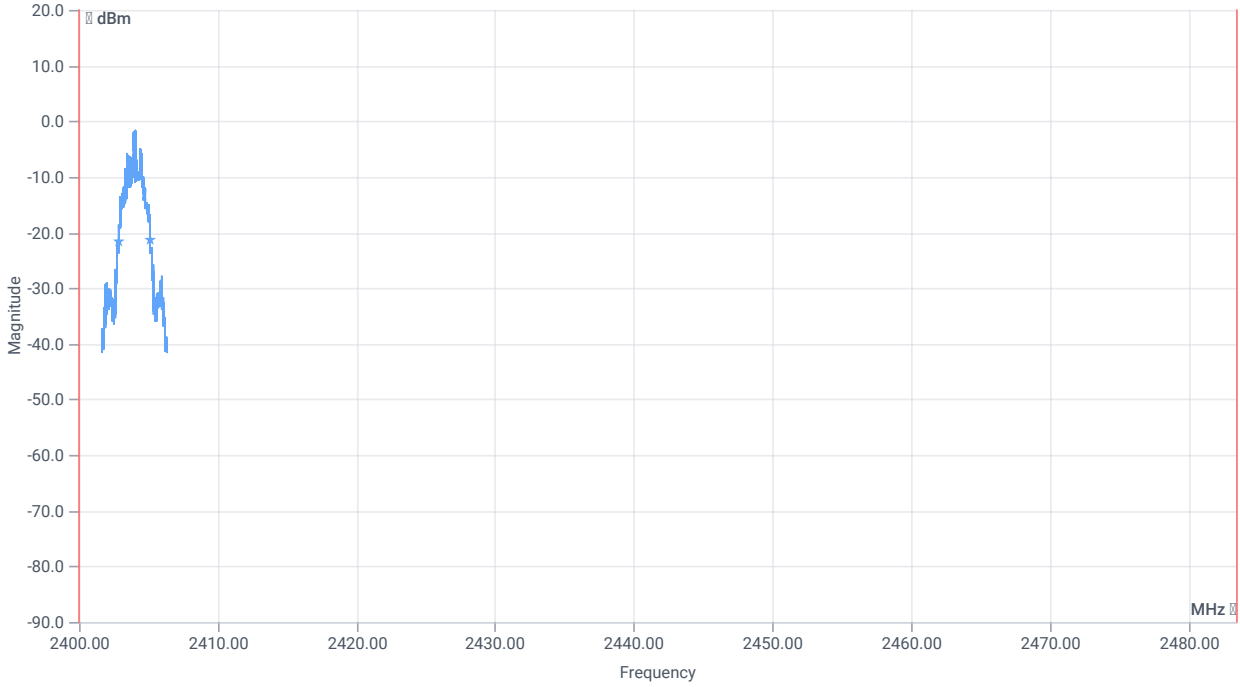
BW within Band 99PCT

**RESULT**

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	2325.000	kHz	INFO
T1 99%	2400.000000	--	2402.8326	MHz	PASS
T2 99%	--	2483.500000	2405.1572	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	2295	kHz	INFO
T1 20dB	2400.000000	--	2402.8629	MHz	PASS
T2 20dB	--	2483.500000	2405.1583	MHz	PASS

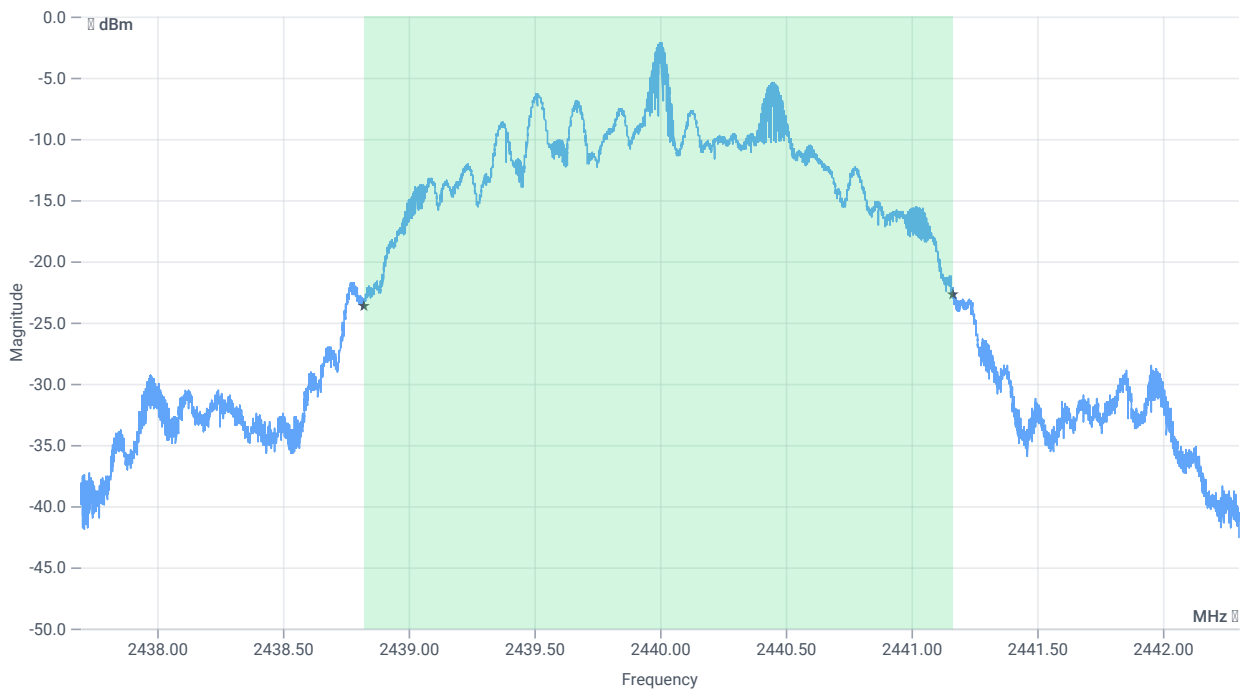
## Test at TX 2440 MHz

RESULT: Reference Power cond.

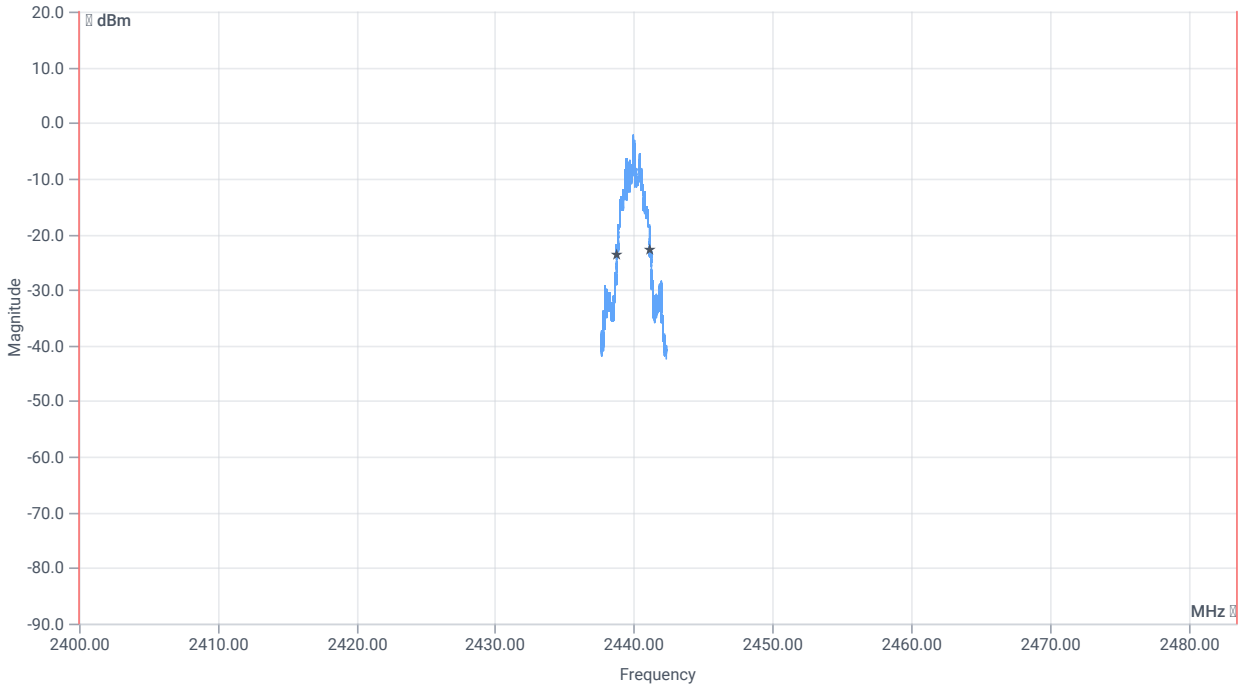
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.96	dBm	INFO
Ref. Frequency	--	--	2440.600	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.04   10.8   10
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



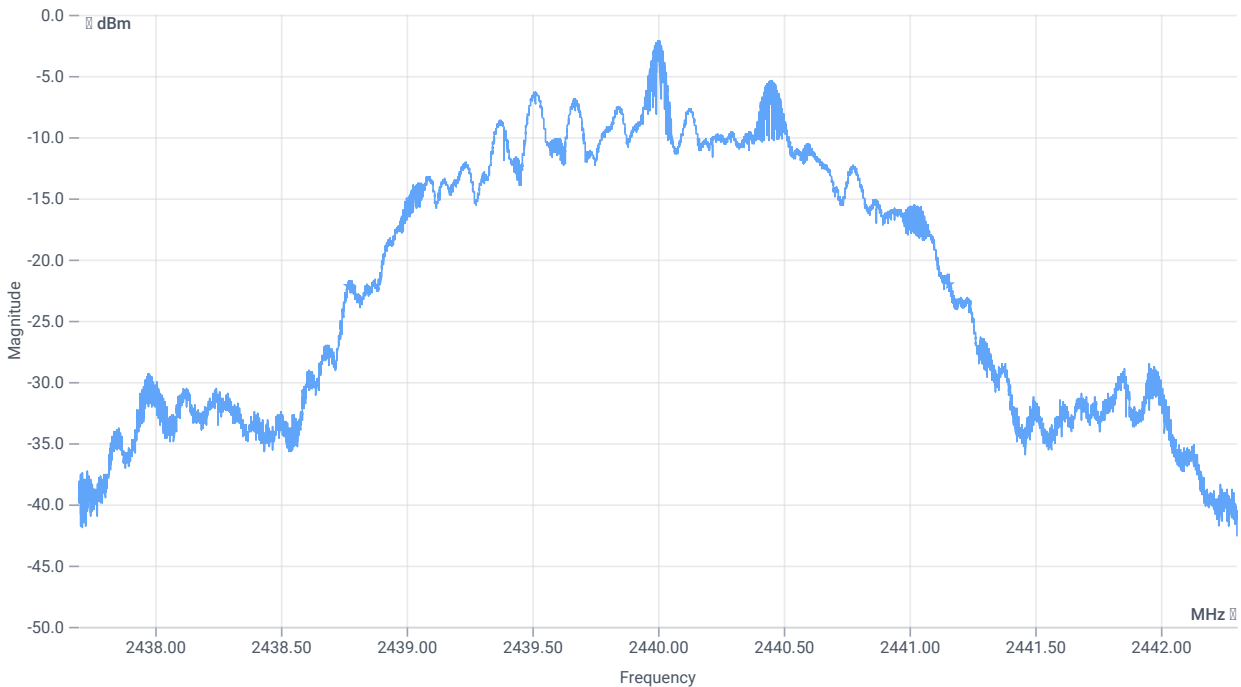
BW 99PCT



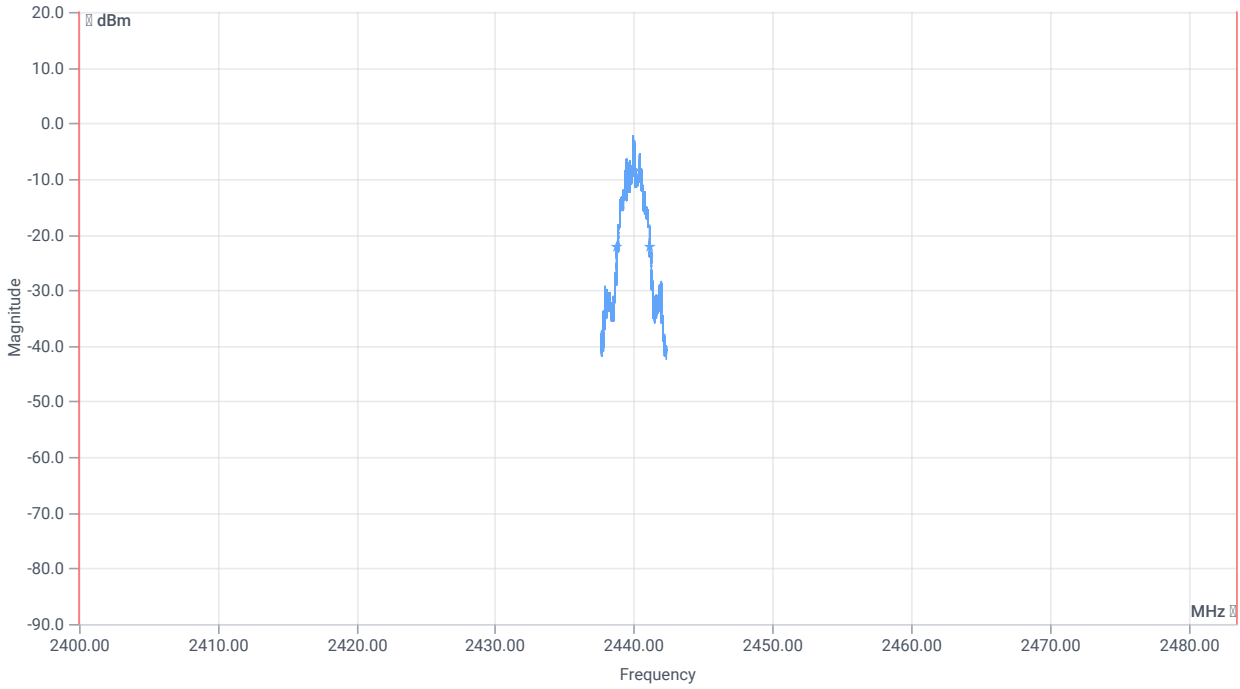
BW within Band 99PCT

## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	2340.000	kHz	INFO
T1 99%	2400.000000	--	2438.8234	MHz	PASS
T2 99%	--	2483.500000	2441.1637	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	2390	kHz	INFO
T1 20dB	2400.000000	--	2438.7681	MHz	PASS
T2 20dB	--	2483.500000	2441.1583	MHz	PASS

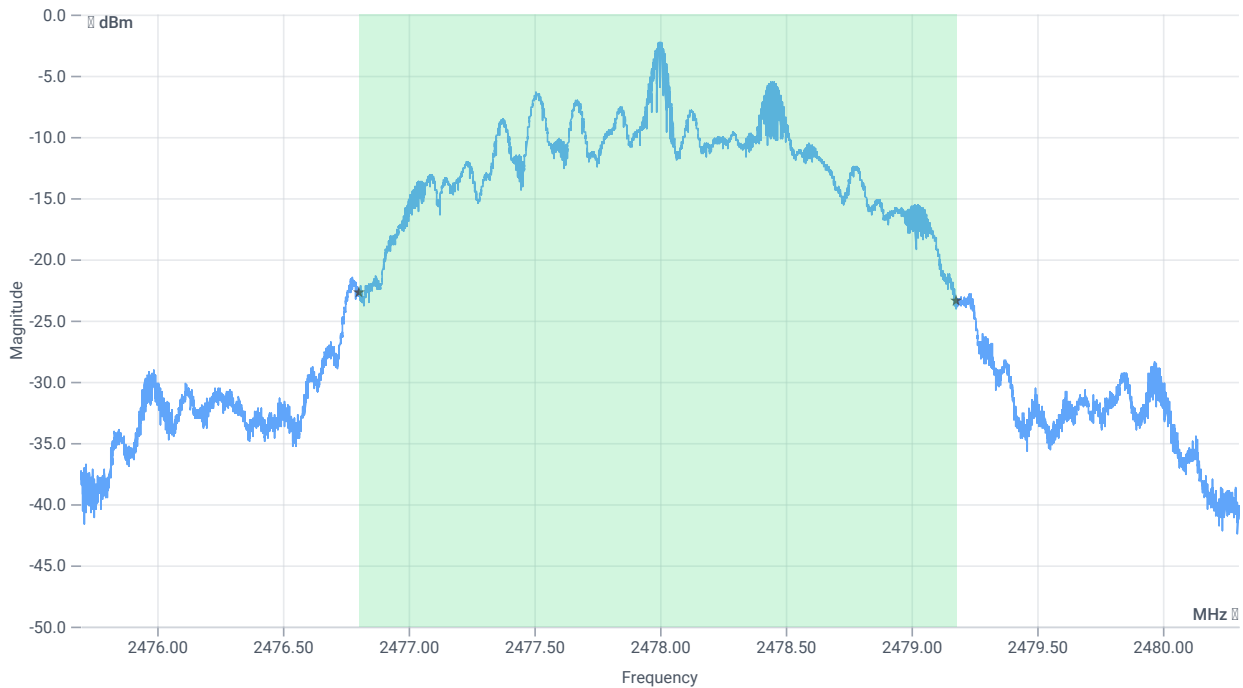
## Test at TX 2478 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-1.02	dBm	INFO
Ref. Frequency	--	--	2478.500	MHz	INFO

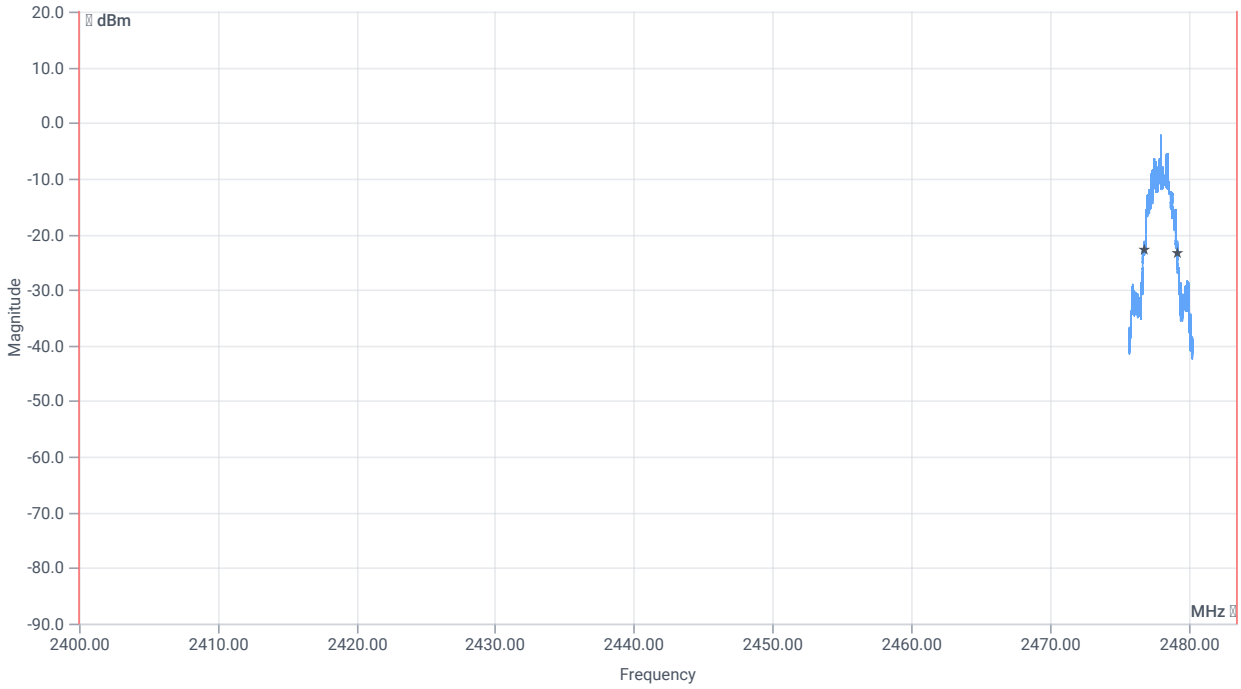
### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	3.98   10.85   10
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 99PCT

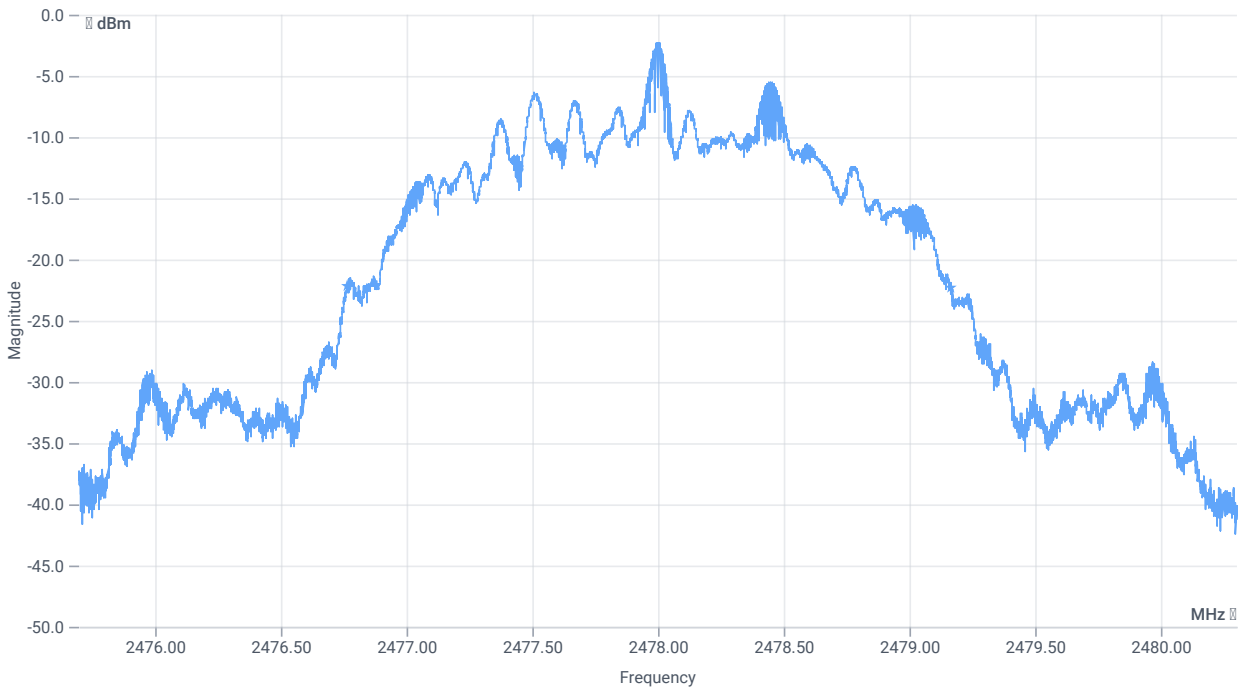




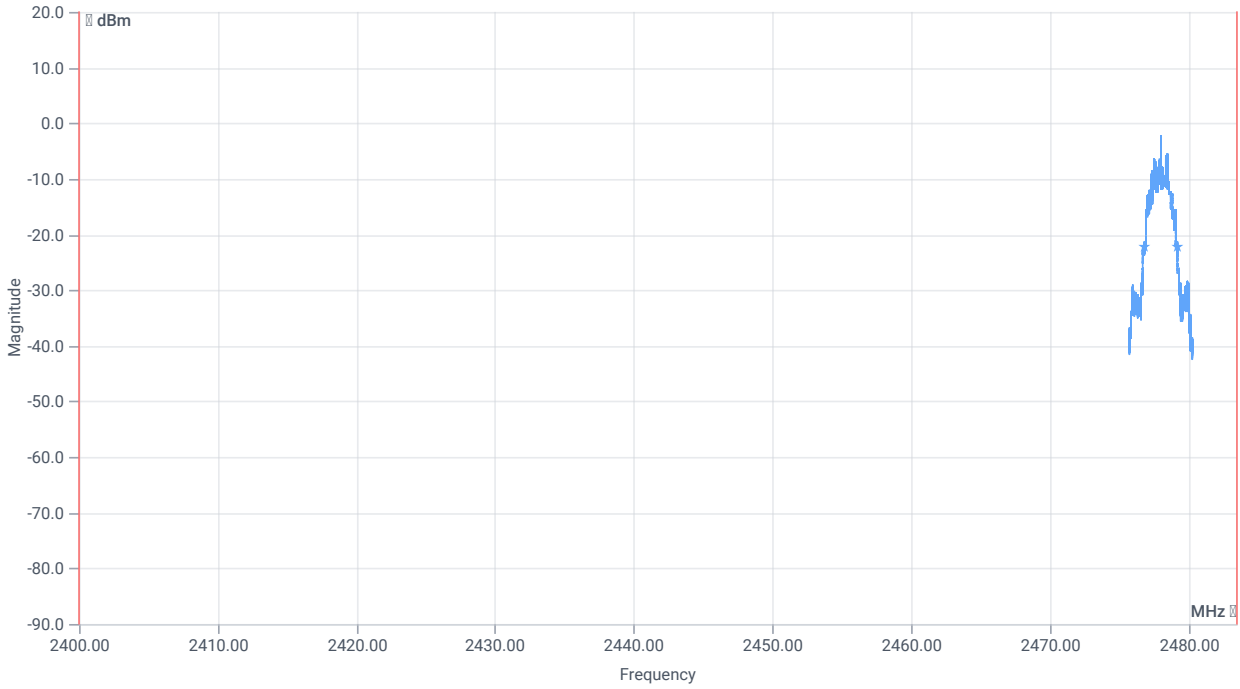
*BW within Band 99PCT*

## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	2370.000	kHz	INFO
T1 99%	2400.000000	--	2476.8050	MHz	PASS
T2 99%	--	2483.500000	2479.1747	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	2400	kHz	INFO
T1 20dB	2400.000000	--	2476.7649	MHz	PASS
T2 20dB	--	2483.500000	2479.1647	MHz	PASS

Verdict

PASS

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

## References

TC start	11.09.2023 11:41:03
Ambit temp [°C]   humidity [rel%]	25.4   43
System version	4.6.1.2
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	False   TXpayload 255   RXpayload 255
Longrange S2 supported	False   TXpayload 255   RXpayload 255
Signaling Settings	USB_RS232   HCI   14   115200   None   S1   None   On
Signaling RF Settings	RF1com   0   0   On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

## Test Parameter

Technology to test	BT LE 1 Msps
Antenna port used	1
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
Switched path	EUT - SignalingUnit - SpectrumAnalyzer

## Equipment

## Equipment

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Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70

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Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62

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Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

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## Test at TX 2402 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.59	dBm	INFO
Ref. Frequency	--	--	2402.300	MHz	INFO

### READ SA SETTINGS:

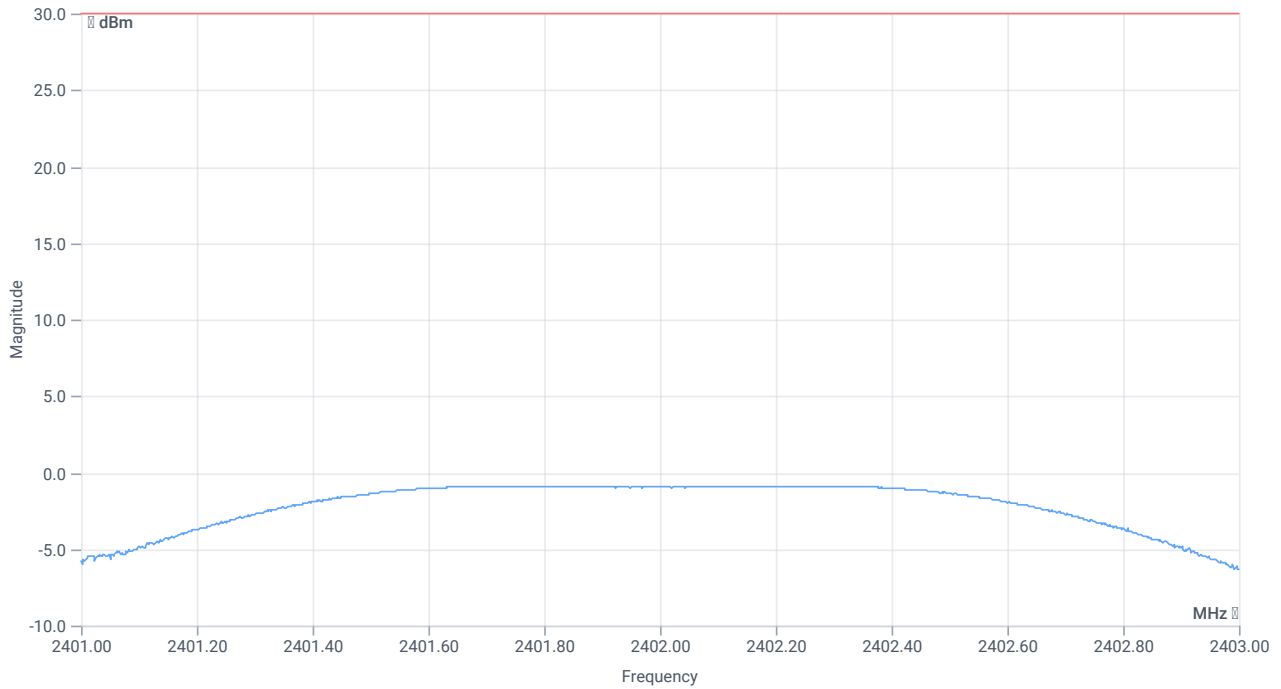
RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.41   10.79   10
Start [MHz]   Stop [MHz]	2401.000   2403.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	50   200   10001   SWE

### DTS Bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	--	--	691	kHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	9.41   10.79   15
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	-0.87	dBm	PASS
Peak Power	--	1000	0.818465	mW	PASS
Frequency at Peak	--	--	2402.254	MHz	INFO

## Test at TX 2440 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.96	dBm	INFO
Ref. Frequency	--	--	2440.300	MHz	INFO

### READ SA SETTINGS:

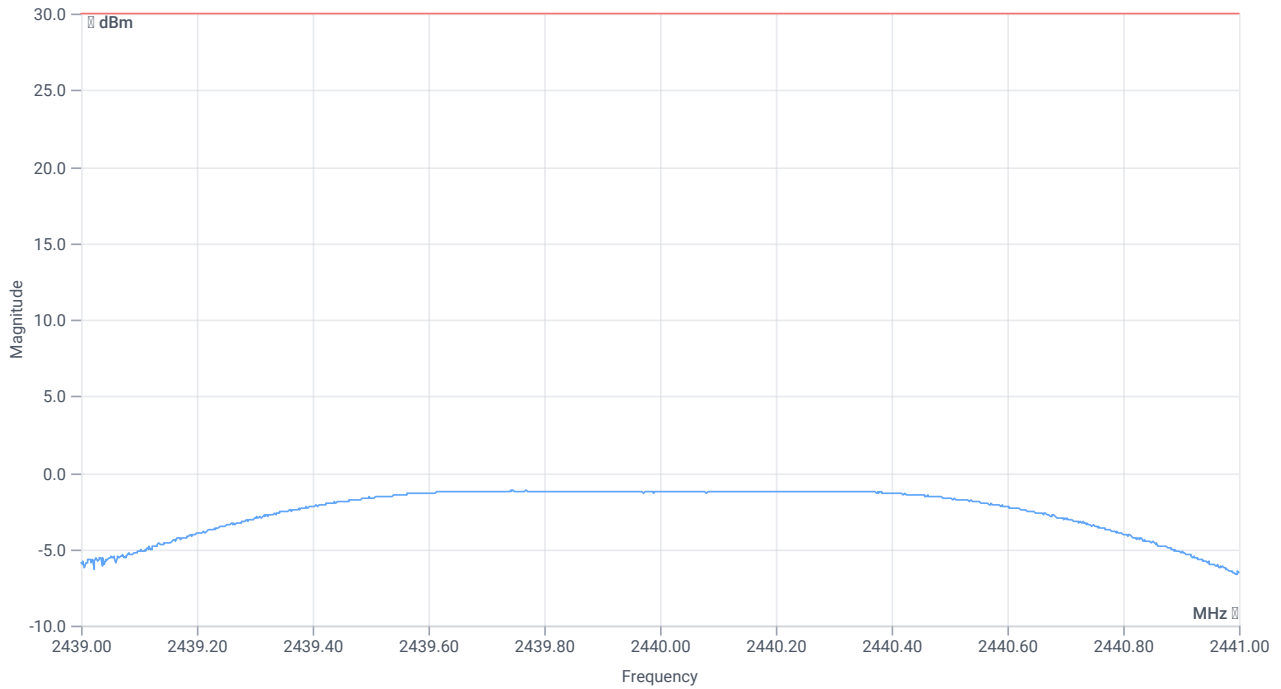
RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.04   10.8   10
Start [MHz]   Stop [MHz]	2439.000   2441.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	50   200   10001   SWE

### DTS Bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	--	--	701	kHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	9.04   10.8   15
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	-1.19	dBm	PASS
Peak Power	--	1000	0.760326	mW	PASS
Frequency at Peak	--	--	2439.768	MHz	INFO



## Test at TX 2480 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-1.13	dBm	INFO
Ref. Frequency	--	--	2479.700	MHz	INFO

### READ SA SETTINGS:

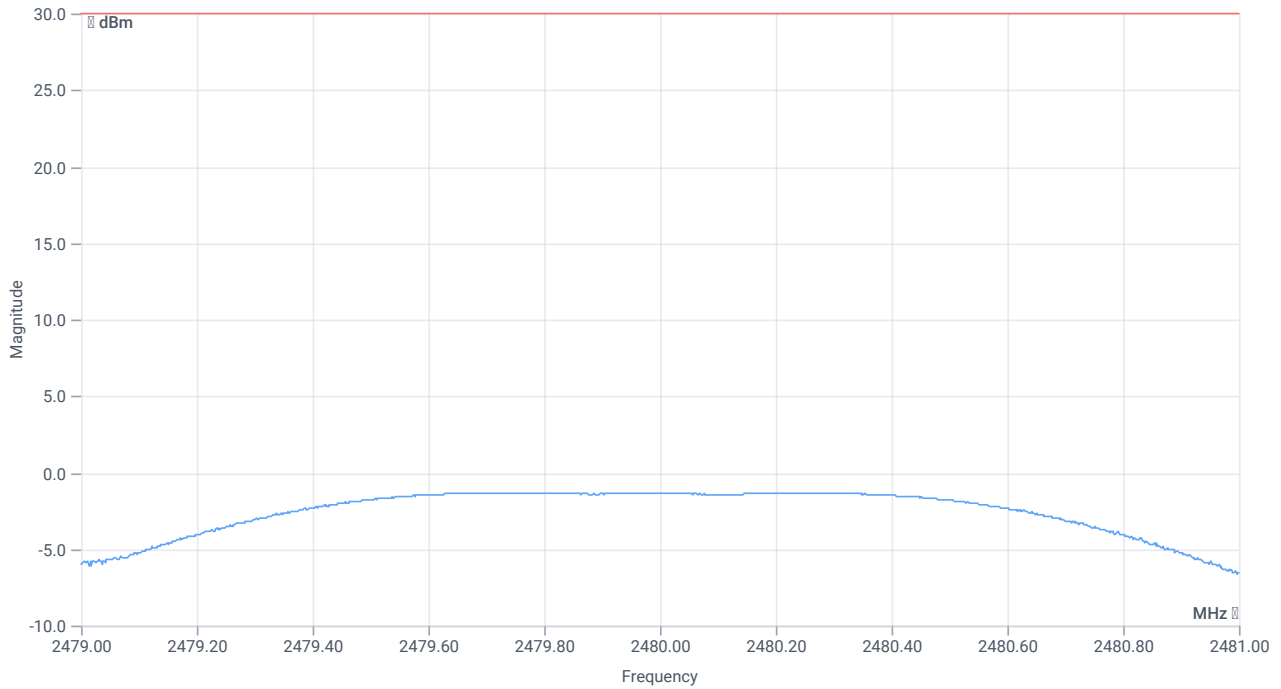
RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	3.87   10.85   10
Start [MHz]   Stop [MHz]	2479.000   2481.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	50   200   10001   SWE

### DTS Bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	--	--	704	kHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	8.87   10.85   15
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	-1.33	dBm	PASS
Peak Power	--	1000	0.736207	mW	PASS
Frequency at Peak	--	--	2479.77	MHz	INFO

Verdict

PASS

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

### References

TC start	11.09.2023 12:08:40
Ambit temp [°C]   humidity [rel%]	25.2   42
System version	4.6.1.2
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	False   TXpayload 255   RXpayload 255
Longrange S2 supported	False   TXpayload 255   RXpayload 255
Signaling Settings	USB_RS232   HCI   14   115200   None   S1   None   On
Signaling RF Settings	RF1com   0   0   On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

### Test Parameter

Technology to test	BT LE 2 Msps
Antenna port used	1
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
Switched path	EUT - SignalingUnit - SpectrumAnalyzer

### Equipment

## Equipment

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Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70

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Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62

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Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

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## Test at TX 2404 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.52	dBm	INFO
Ref. Frequency	--	--	2404.500	MHz	INFO

### READ SA SETTINGS:

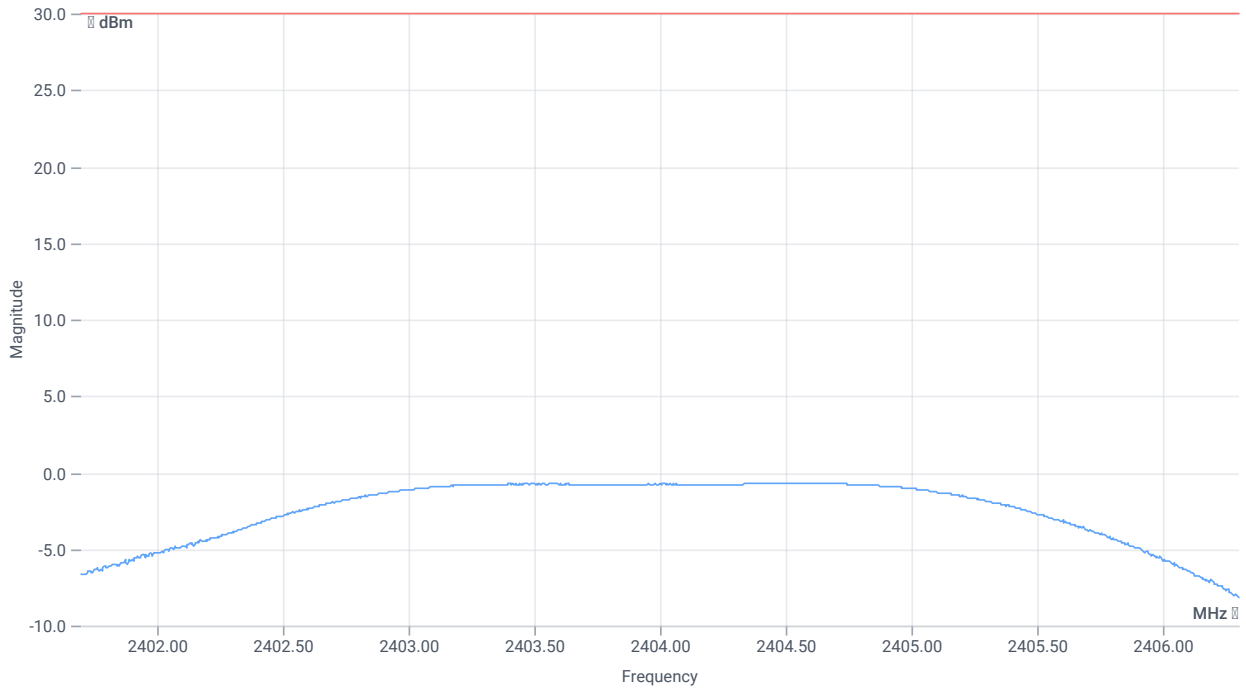
RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.48   10.8   10
Start [MHz]   Stop [MHz]	2401.700   2406.300
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	50   200   10001   SWE

### DTS Bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	--	--	1089	kHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	9.48   10.8   15
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	-0.71	dBm	PASS
Peak Power	--	1000	0.84918	mW	PASS
Frequency at Peak	--	--	2404.492	MHz	INFO

## Test at TX 2440 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.97	dBm	INFO
Ref. Frequency	--	--	2439.500	MHz	INFO

### READ SA SETTINGS:

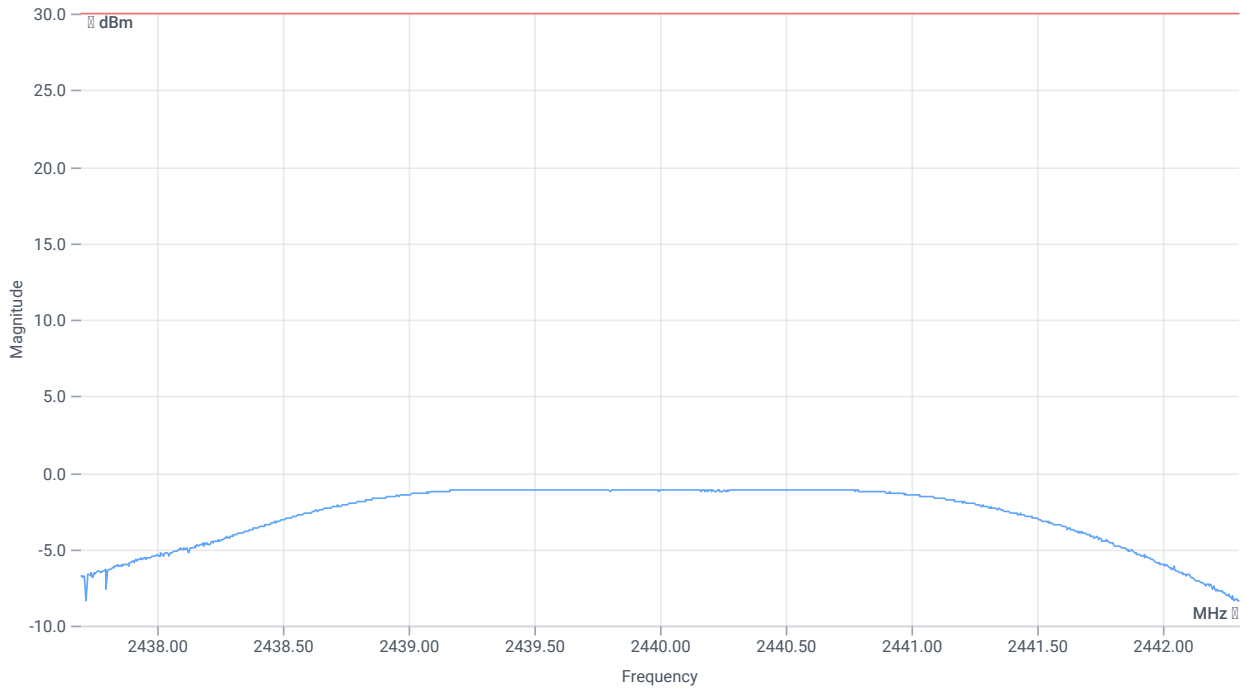
RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.03   10.8   10
Start [MHz]   Stop [MHz]	2437.700   2442.300
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	50   200   10001   SWE

### DTS Bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	--	--	1176	kHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	9.03   10.8   15
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	-1.08	dBm	PASS
Peak Power	--	1000	0.77983	mW	PASS
Frequency at Peak	--	--	2439.393	MHz	INFO



## Test at TX 2478 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-1.01	dBm	INFO
Ref. Frequency	--	--	2478.500	MHz	INFO

### READ SA SETTINGS:

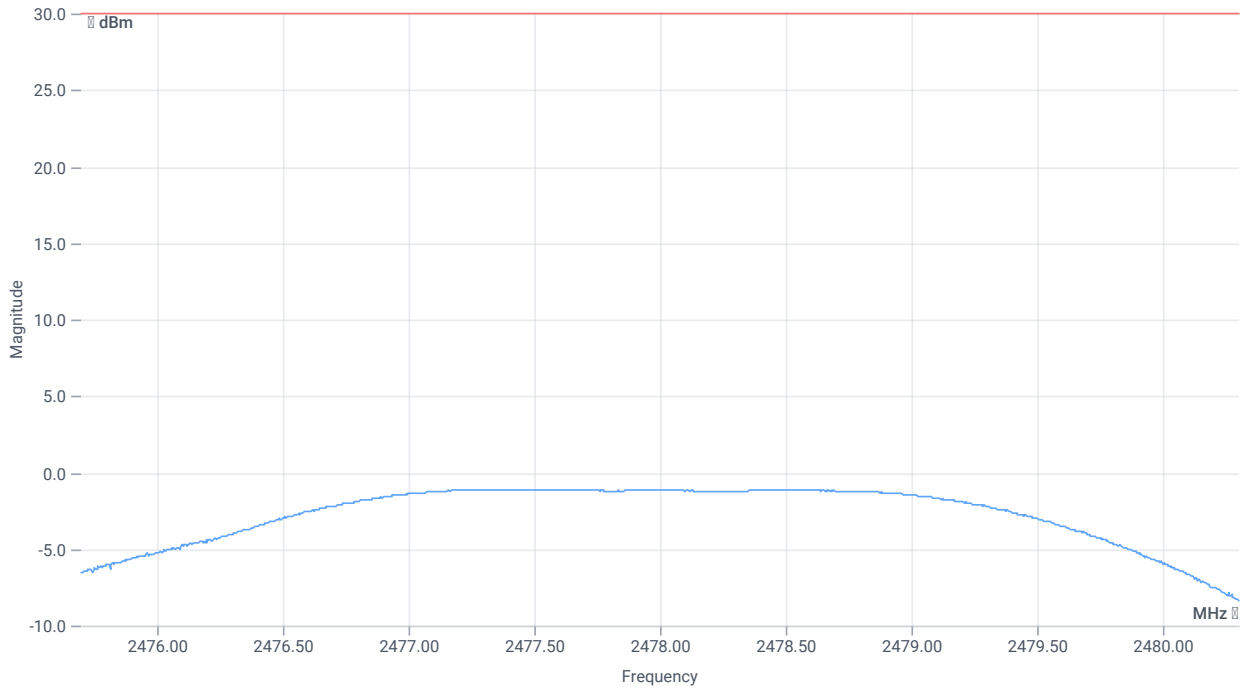
RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	3.99   10.85   10
Start [MHz]   Stop [MHz]	2475.700   2480.300
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	50   200   10001   SWE

### DTS Bandwidth

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	--	--	1184	kHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	8.99   10.85   15
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	-1.11	dBm	PASS
Peak Power	--	1000	0.774462	mW	PASS
Frequency at Peak	--	--	2477.462	MHz	INFO

Verdict

PASS

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

### References

TC start	11.09.2023 13:15:43
Ambit temp [°C]   humidity [rel%]	24.7   43
System version	4.6.1.2
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	False   TXpayload 255   RXpayload 255
Longrange S2 supported	False   TXpayload 255   RXpayload 255
Signaling Settings	USB_RS232   HCI   14   115200   None   S1   None   On
Signaling RF Settings	RF1com   0   0   On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

### Test Parameter

Technology to test	BT LE 1 Msps
Antenna port used	1
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
Switched path	EUT - SignalingUnit - SpectrumAnalyzer

### Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62

## Equipment

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Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

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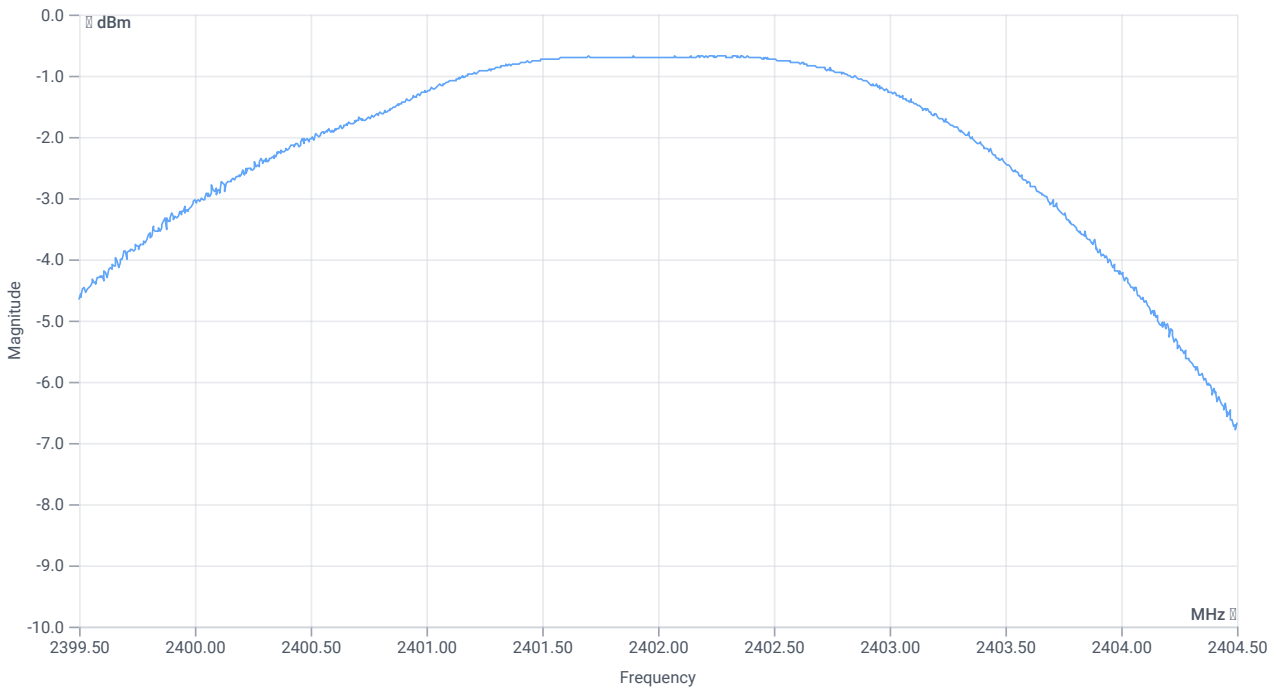
### Test at TX 2402 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.48	dBm	INFO
Ref. Frequency	--	--	2401.700	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	9.52   10.79   15
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	--	--	-0.68	dBm	INFO
Peak Power	--	--	0.855067	mW	INFO
Frequency at Peak	--	--	2402.265	MHz	INFO

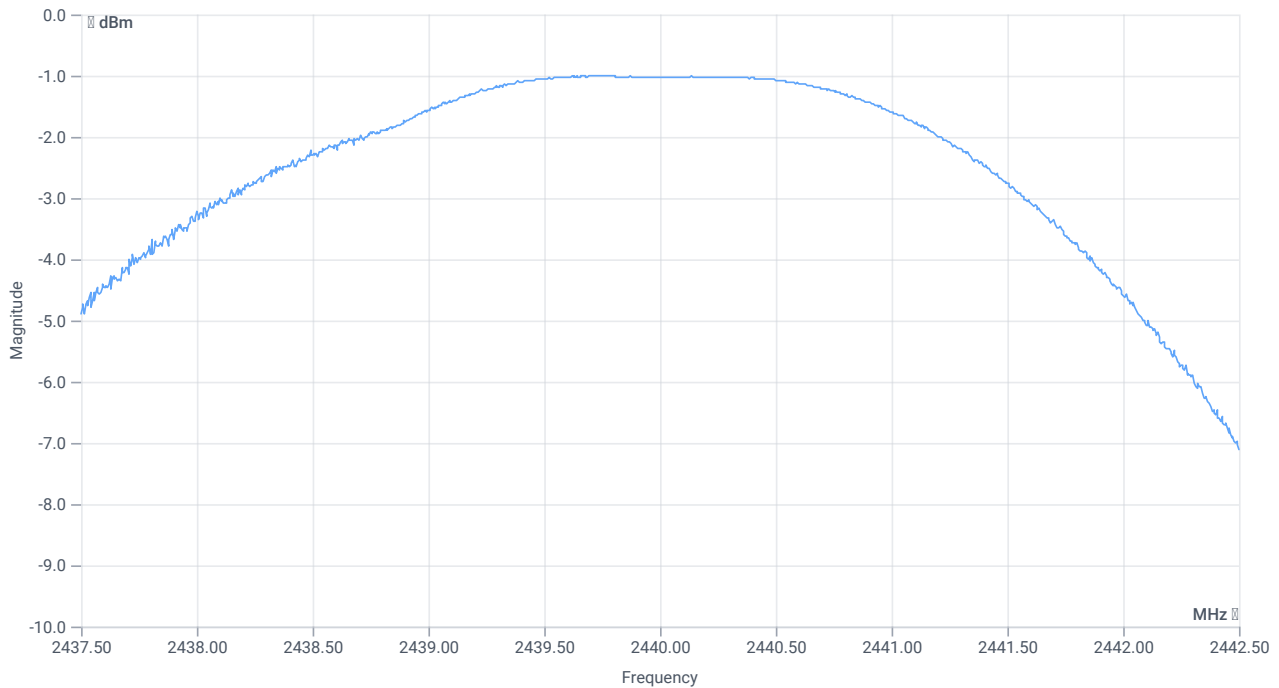
## Test at TX 2440 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.80	dBm	INFO
Ref. Frequency	--	--	2440.200	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	9.20   10.8   15
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



Peak output power

### RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak Power	--	--	-1	dBm	INFO
Peak Power	--	--	0.794328	mW	INFO
Frequency at Peak	--	--	2439.705	MHz	INFO

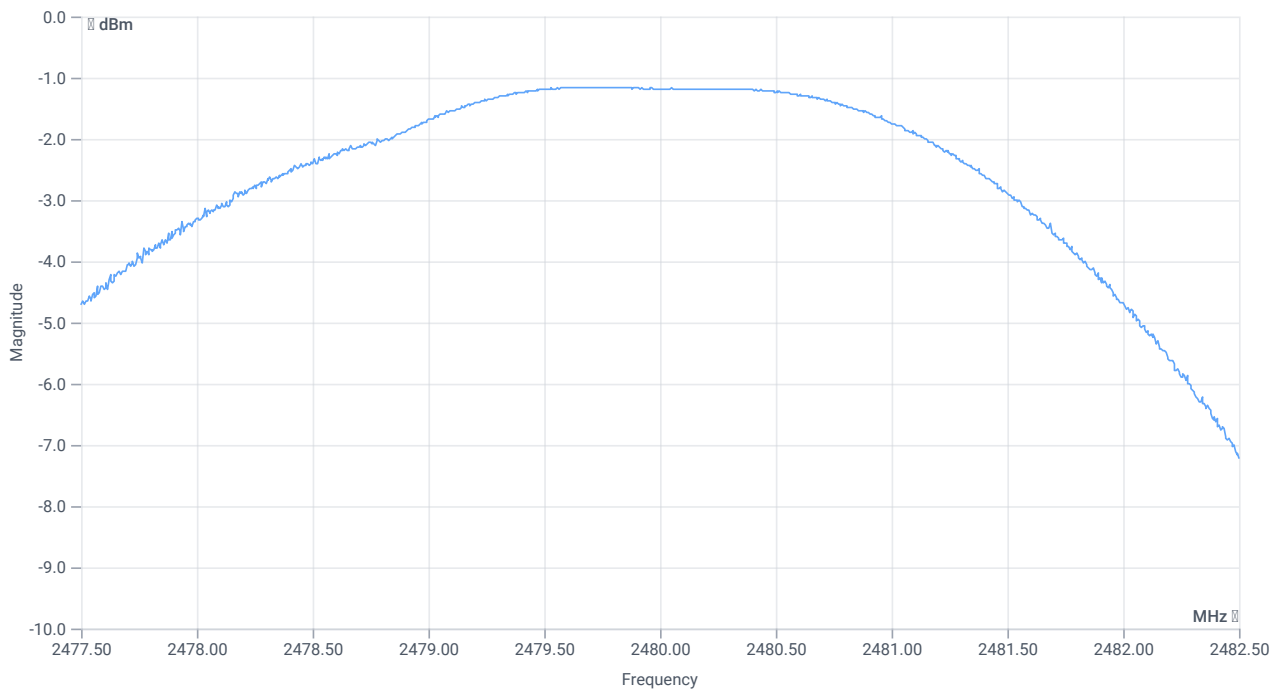
## Test at TX 2480 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-1.00	dBm	INFO
Ref. Frequency	--	--	2480.200	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	9.00   10.85   15
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	--	--	-1.15	dBm	INFO
Peak Power	--	--	0.767361	mW	INFO
Frequency at Peak	--	--	2479.725	MHz	INFO

Verdict

PASS



## FCC 15.247 # Peak psd DTS ~ BT LE 1 Msps

### References

TC start	11.09.2023 11:44:45
Ambit temp [°C]   humidity [rel%]	25.3   37
System version	4.6.1.2
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	False   TXpayload 255   RXpayload 255
Longrange S2 supported	False   TXpayload 255   RXpayload 255
Signaling Settings	USB_RS232   HCI   14   115200   None   S1   None   On
Signaling RF Settings	RF1com   0   0   On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

### Test Parameter

Technology to test	BT LE 1 Msps
Antenna port used	1
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
Switched path	EUT - SignalingUnit - SpectrumAnalyzer

### Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
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## Equipment

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Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62

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Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

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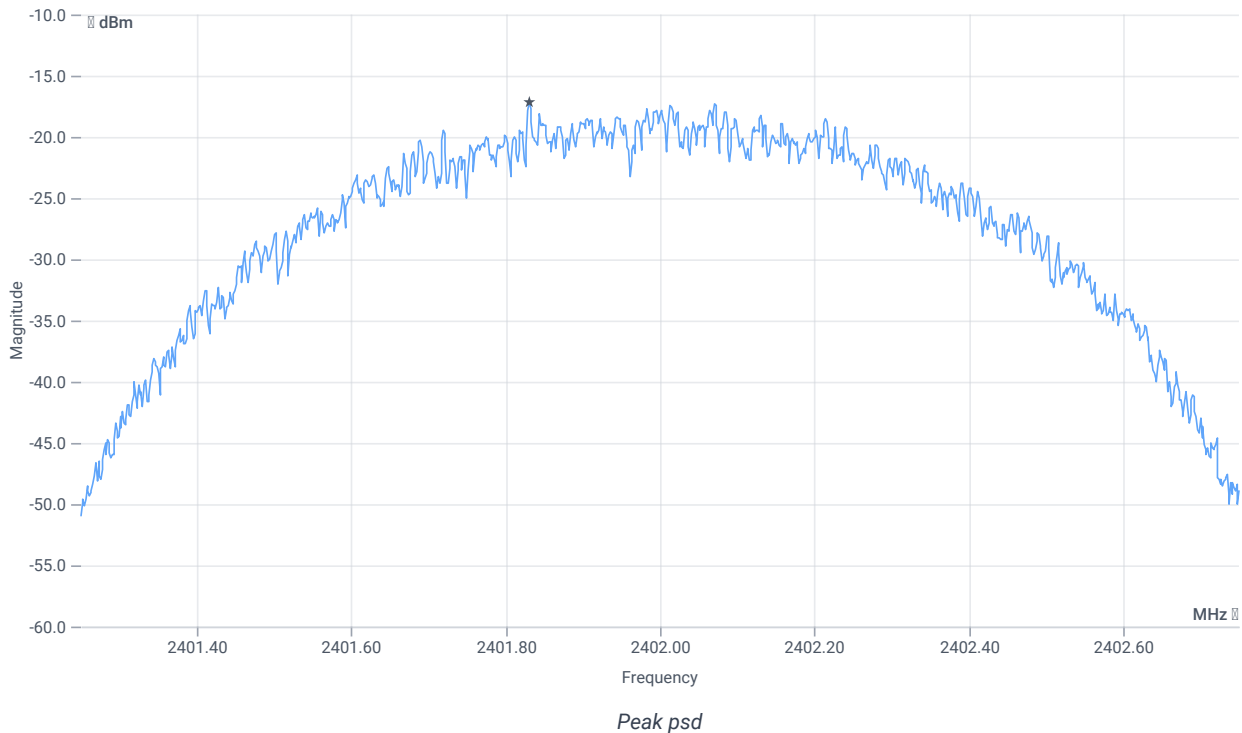
## Test at TX 2402 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.62	dBm	INFO
Ref. Frequency	--	--	2401.800	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.38   10.79   10
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	-17.17	dBm/3KHz	PASS

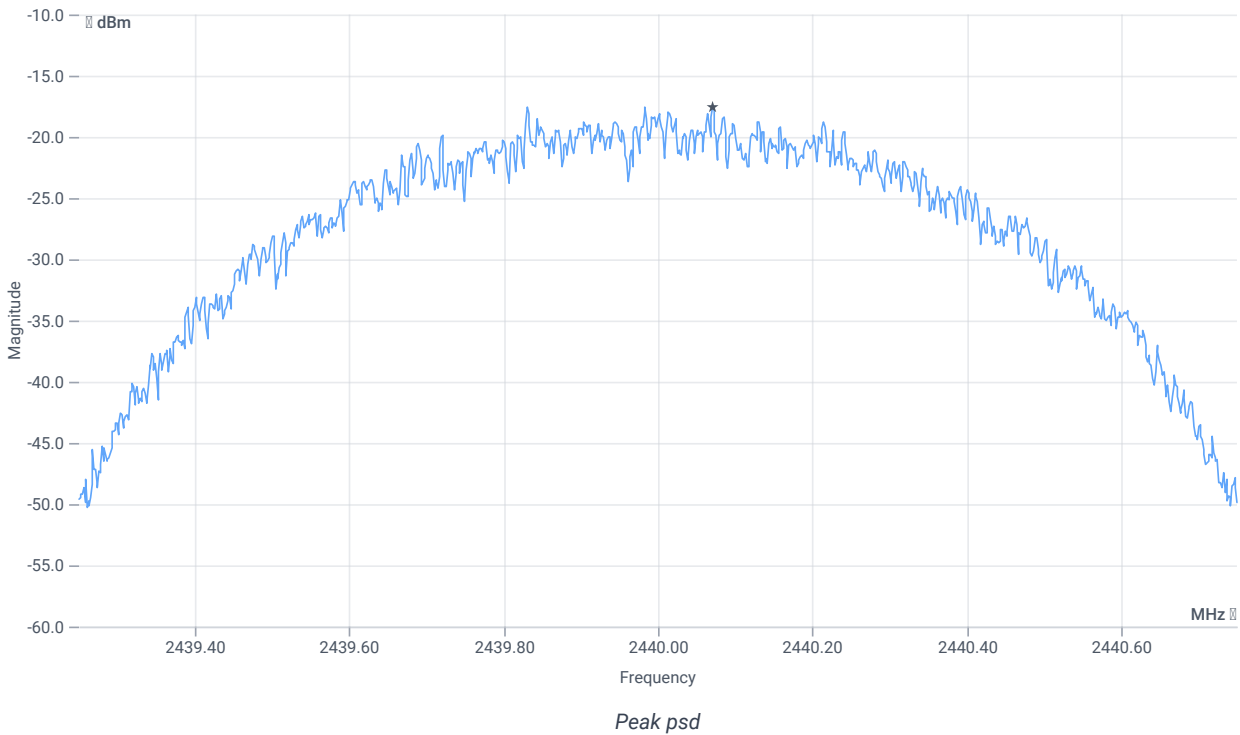
### Test at TX 2440 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.98	dBm	INFO
Ref. Frequency	--	--	2439.700	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.02   10.8   10
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	-17.5	dBm/3KHz	PASS

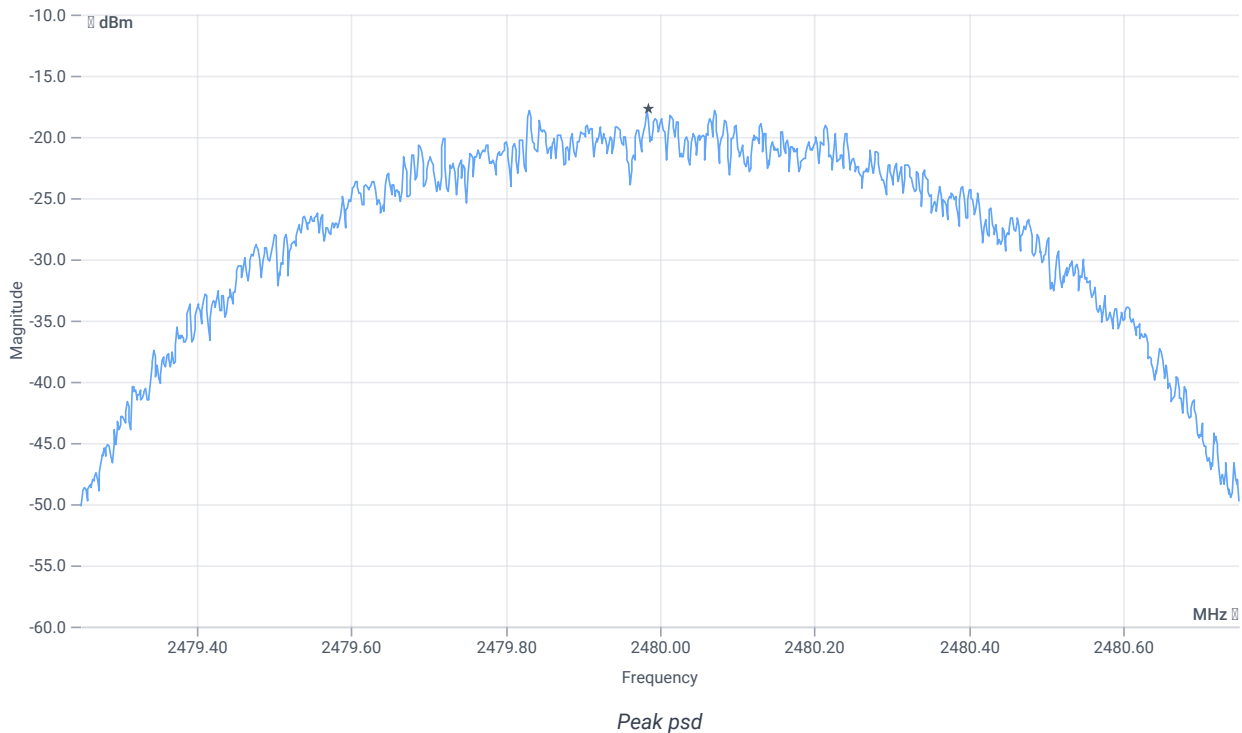
## Test at TX 2480 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-1.14	dBm	INFO
Ref. Frequency	--	--	2479.800	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	3.86   10.85   10
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	-17.69	dBm/3KHz	PASS

Verdict

PASS

## FCC 15.247 # Peak psd DTS ~ BT LE 2 Msps

### References

TC start	11.09.2023 12:12:22
Ambit temp [°C]   humidity [rel%]	25.1   37
System version	4.6.1.2
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	False   TXpayload 255   RXpayload 255
Longrange S2 supported	False   TXpayload 255   RXpayload 255
Signaling Settings	USB_RS232   HCI   14   115200   None   S1   None   On
Signaling RF Settings	RF1com   0   0   On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

### Test Parameter

Technology to test	BT LE 2 Msps
Antenna port used	1
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
Switched path	EUT - SignalingUnit - SpectrumAnalyzer

### Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
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## Equipment

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Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62

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Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

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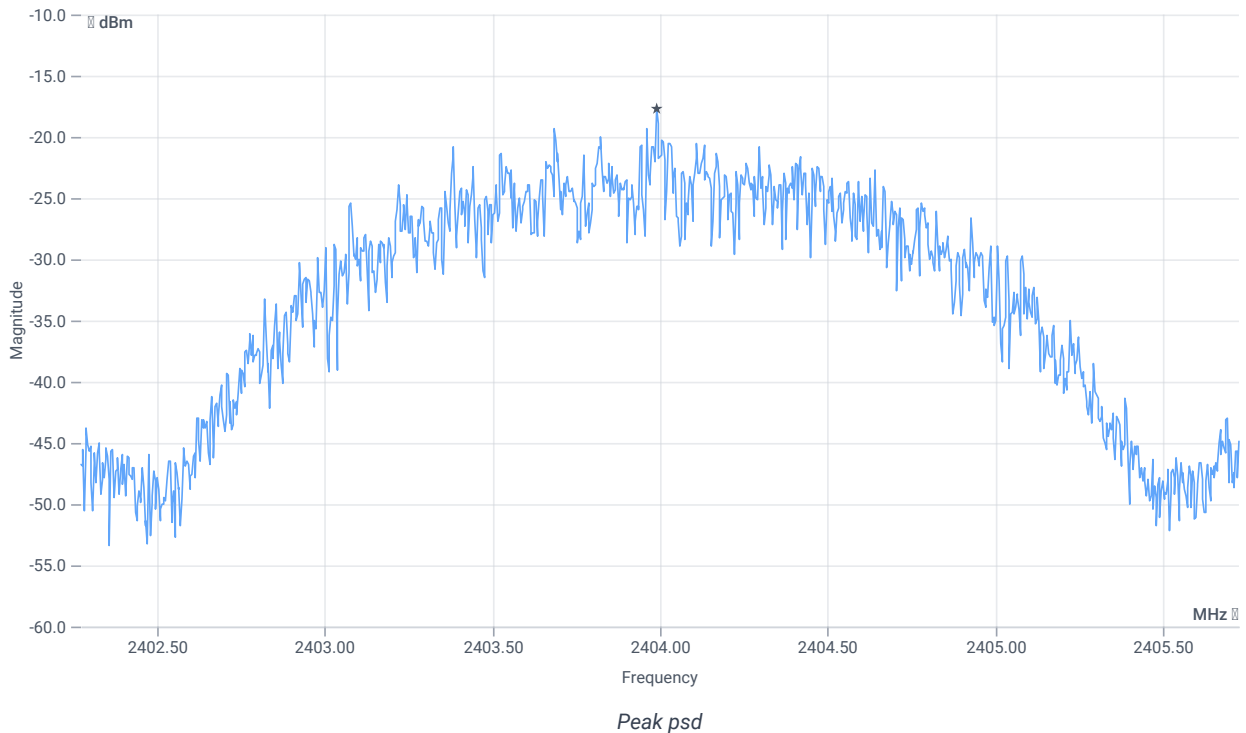
## Test at TX 2404 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.60	dBm	INFO
Ref. Frequency	--	--	2403.600	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.40   10.8   10
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	-17.72	dBm/3KHz	PASS



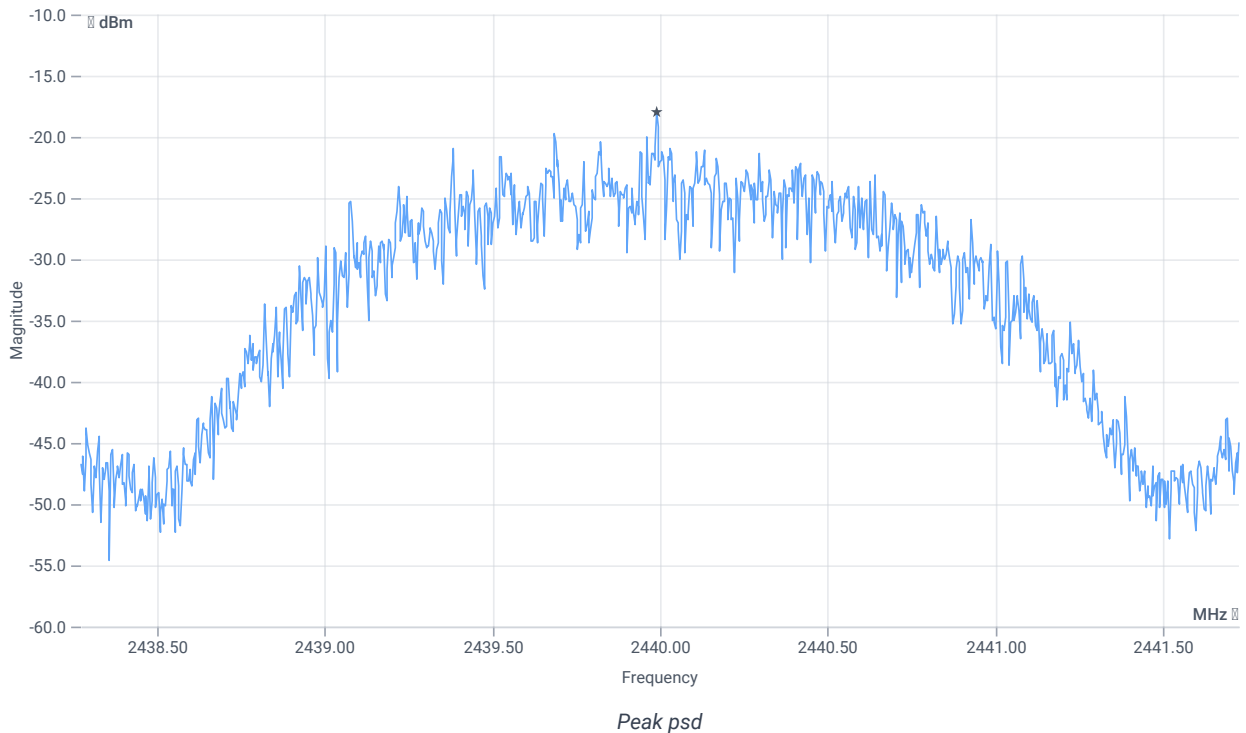
## Test at TX 2440 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.91	dBm	INFO
Ref. Frequency	--	--	2440.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.09   10.8   10
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	-17.99	dBm/3KHz	PASS

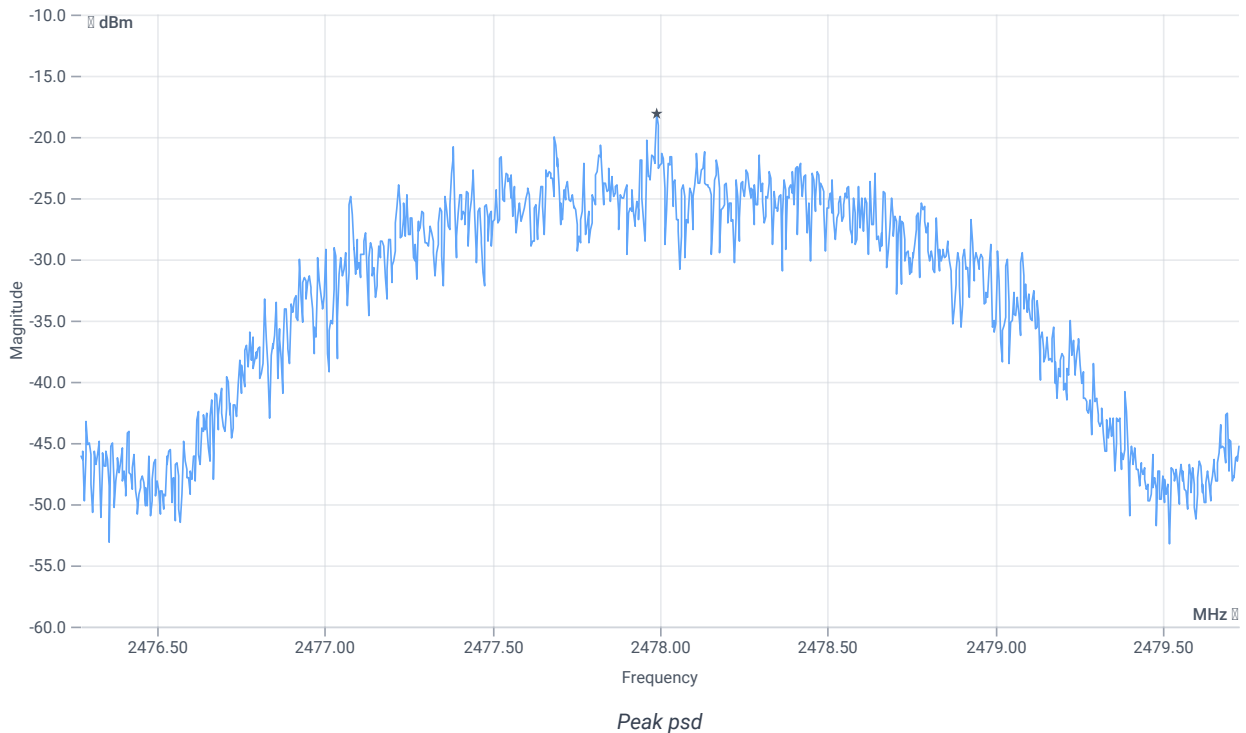
## Test at TX 2478 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.93	dBm	INFO
Ref. Frequency	--	--	2478.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	4.07   10.85   10
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	-18.15	dBm/3KHz	PASS

Verdict

PASS

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

### References

TC start	11.09.2023 11:48:40
Ambit temp [°C]   humidity [rel%]	25.2   37
System version	4.6.1.2
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 Msp
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	False   TXpayload 255   RXpayload 255
Longrange S2 supported	False   TXpayload 255   RXpayload 255
Signaling Settings	USB_RS232   HCI   14   115200   None   S1   None   On
Signaling RF Settings	RF1com   0   0   On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

### Test Parameter

Technology to test	BT LE 1 Msp
Antenna port used	1
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
Switched path	EUT - SignalingUnit - SpectrumAnalyzer

### Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
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## Equipment

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Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62

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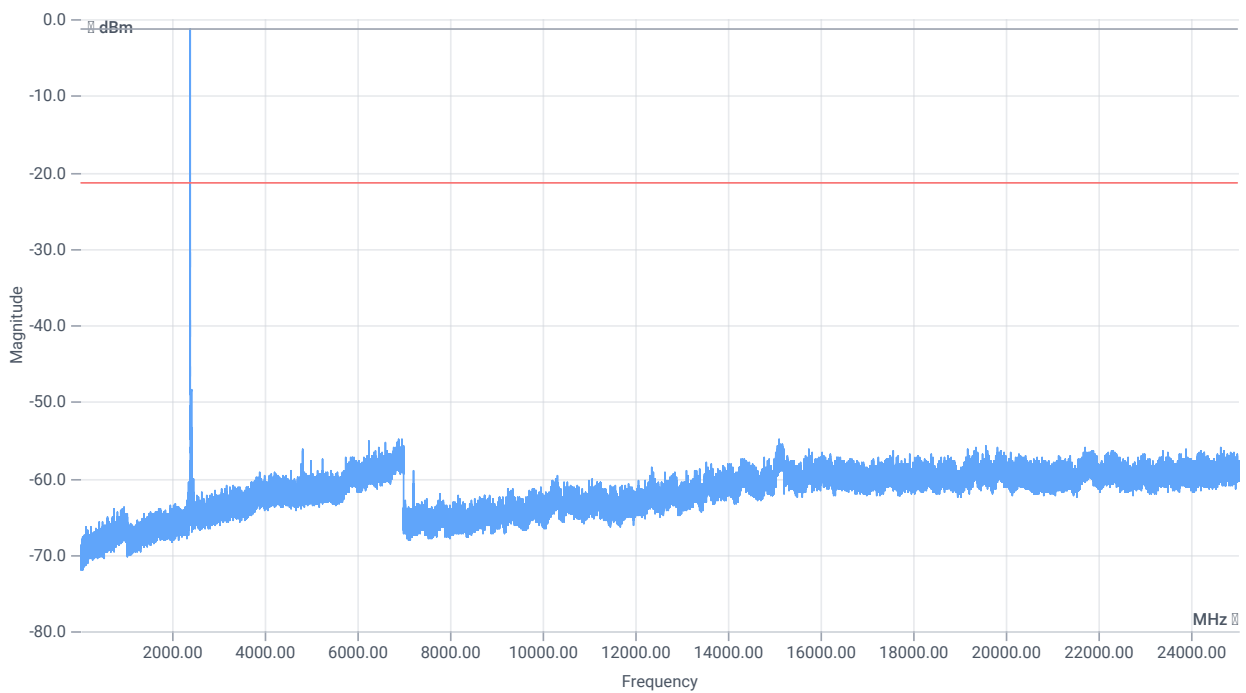
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

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## Test at TX 2402 MHz

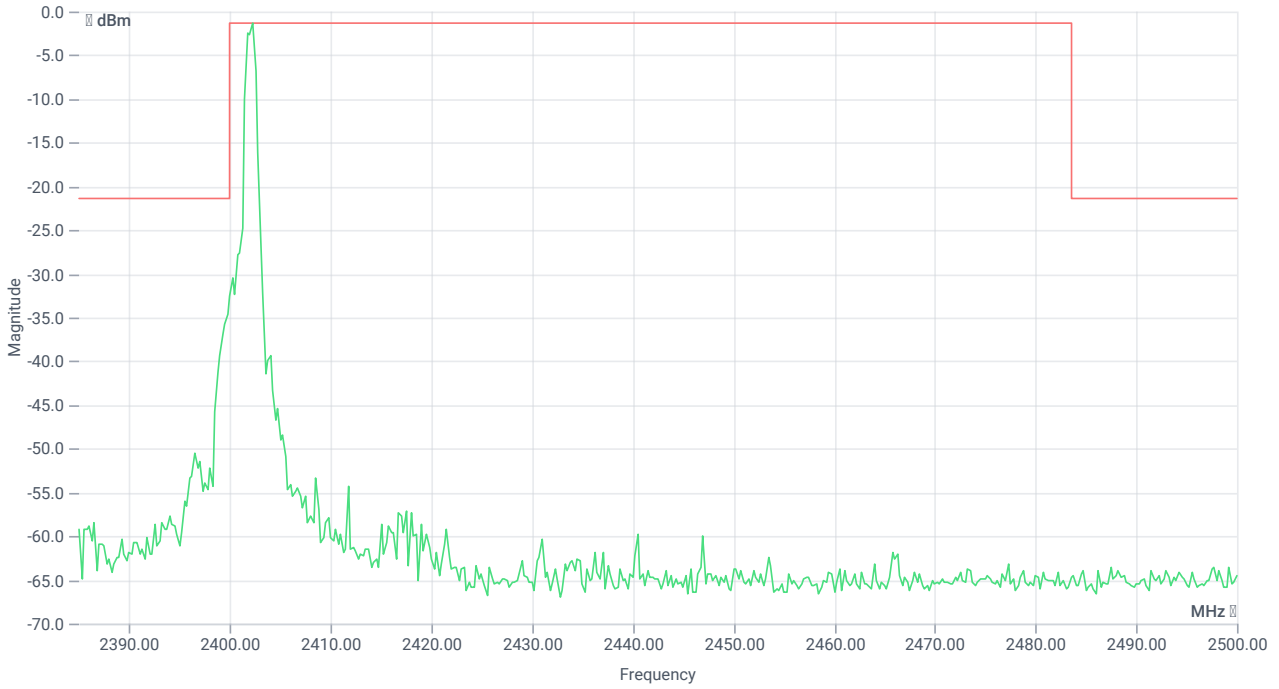
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.55	dBm	INFO
Ref. Frequency	--	--	2402.300	MHz	INFO



### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	-0.55   0   15
Start [MHz]   Stop [MHz]	24530.000   25030.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	200   25   2001   SWE



TX emissions band zoomed

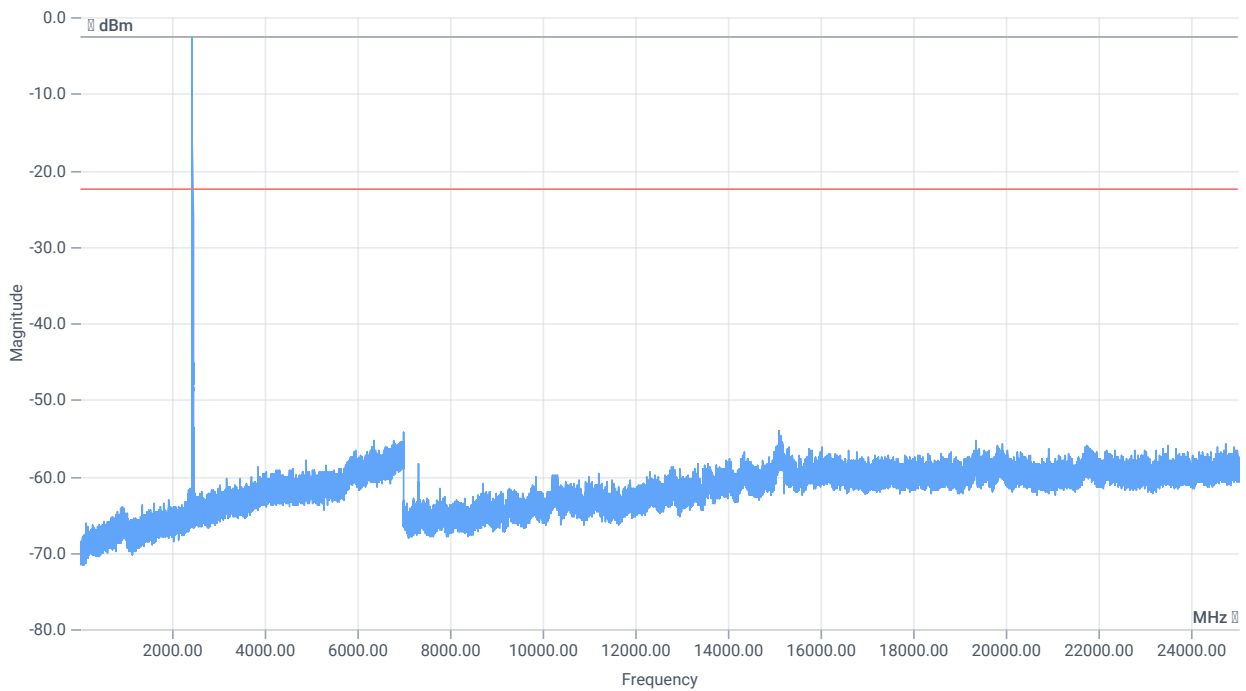
## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2402.25 MHz	--	--	-1.32	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 2399.75 MHz	0	--	13.34	dB	INFO

## Test at TX 2440 MHz

RESULT: Reference Power cond.

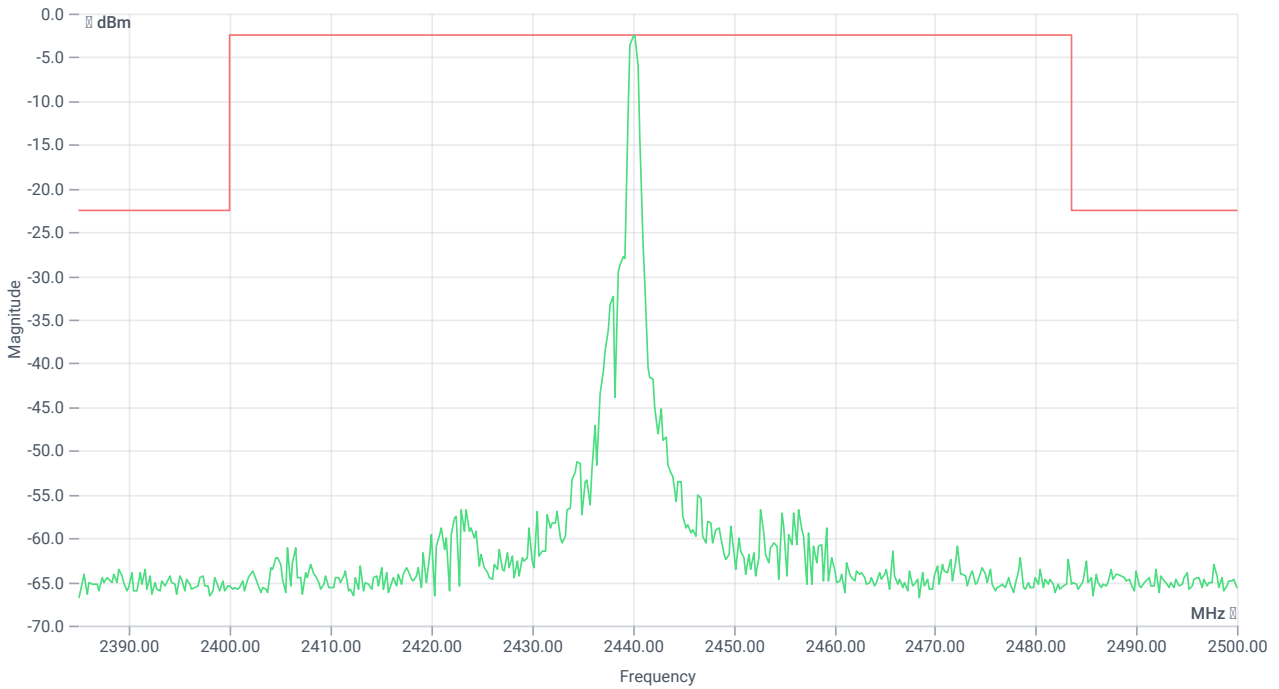
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.89	dBm	INFO
Ref. Frequency	--	--	2440.300	MHz	INFO



TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	-0.89   0   15
Start [MHz]   Stop [MHz]	24530.000   25030.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	200   25   2001   SWE



TX emissions band zoomed

## RESULT

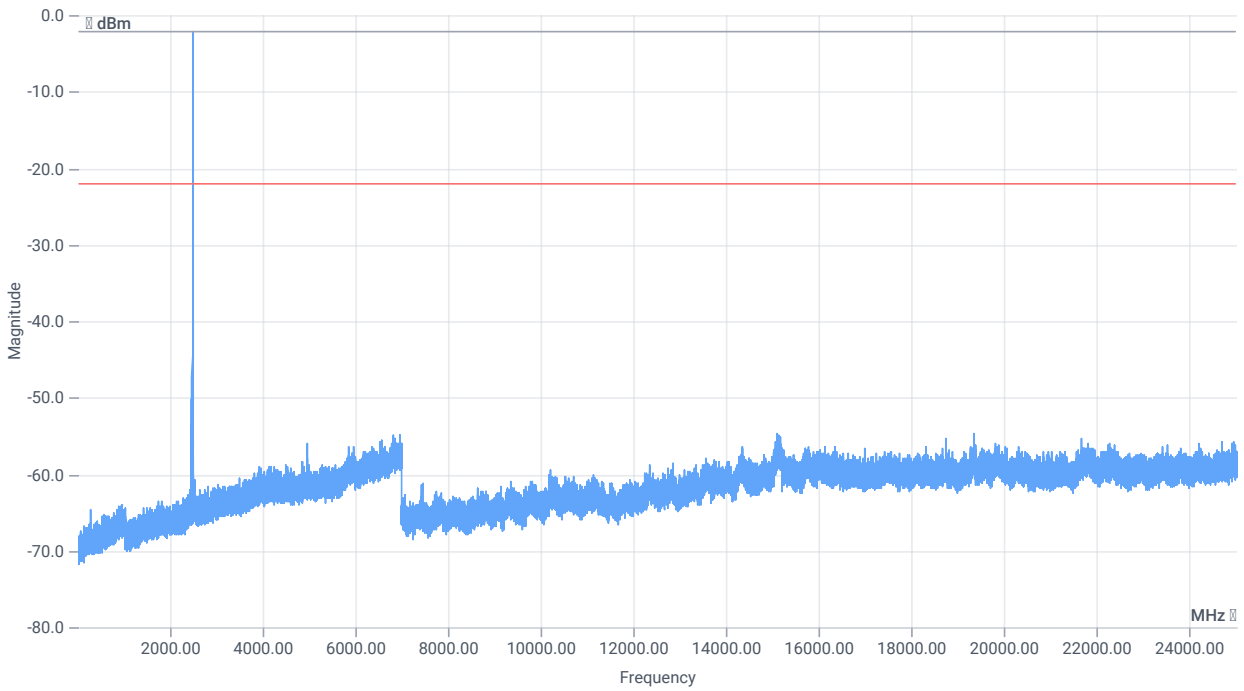
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2440.25 MHz	--	--	-2.49	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 15115.25 MHz	0	--	31.63	dB	INFO



## Test at TX 2480 MHz

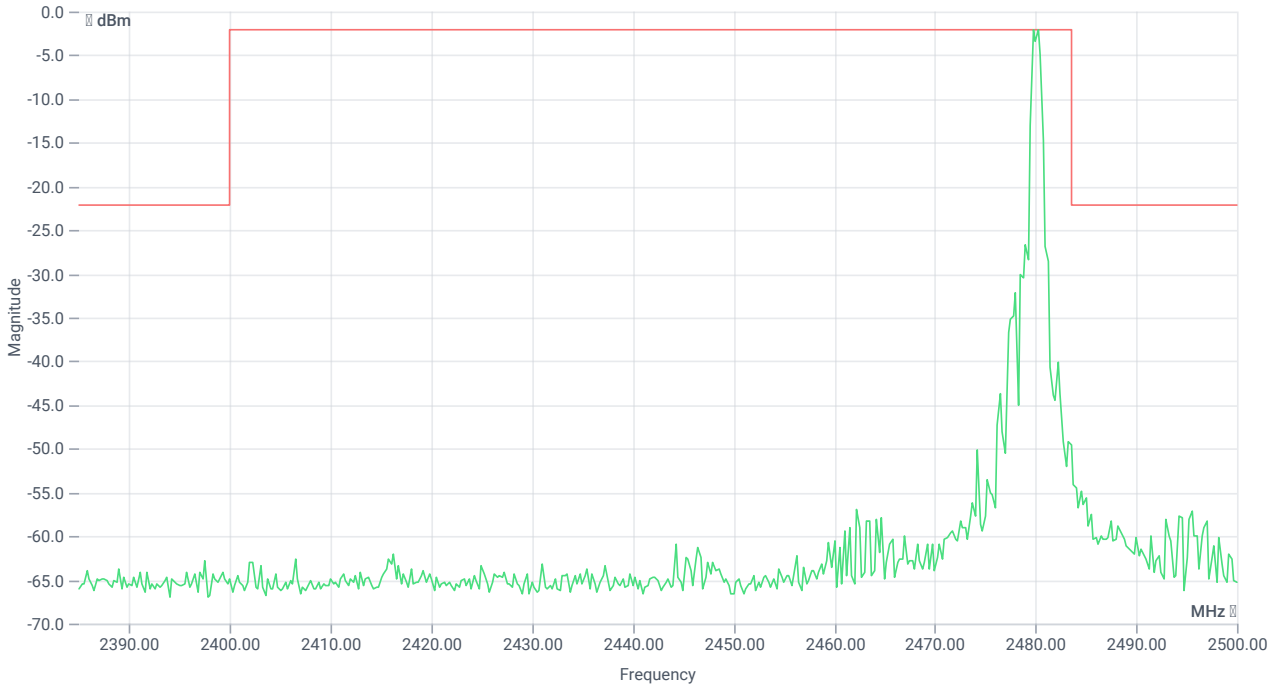
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-1.10	dBm	INFO
Ref. Frequency	--	--	2480.200	MHz	INFO



### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	-1.10   0   15
Start [MHz]   Stop [MHz]	24530.000   25030.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	200   25   2001   SWE



TX emissions band zoomed

## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2479.75 MHz	--	--	-2.14	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 2483.75 MHz	0	--	31.94	dB	INFO

Verdict

PASS

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

### References

TC start	11.09.2023 12:16:17
Ambit temp [°C]   humidity [rel%]	24.9   35
System version	4.6.1.2
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	False   TXpayload 255   RXpayload 255
Longrange S2 supported	False   TXpayload 255   RXpayload 255
Signaling Settings	USB_RS232   HCI   14   115200   None   S1   None   On
Signaling RF Settings	RF1com   0   0   On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

### Test Parameter

Technology to test	BT LE 2 Msps
Antenna port used	1
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
Switched path	EUT - SignalingUnit - SpectrumAnalyzer

### Equipment

Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
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## Equipment

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Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62

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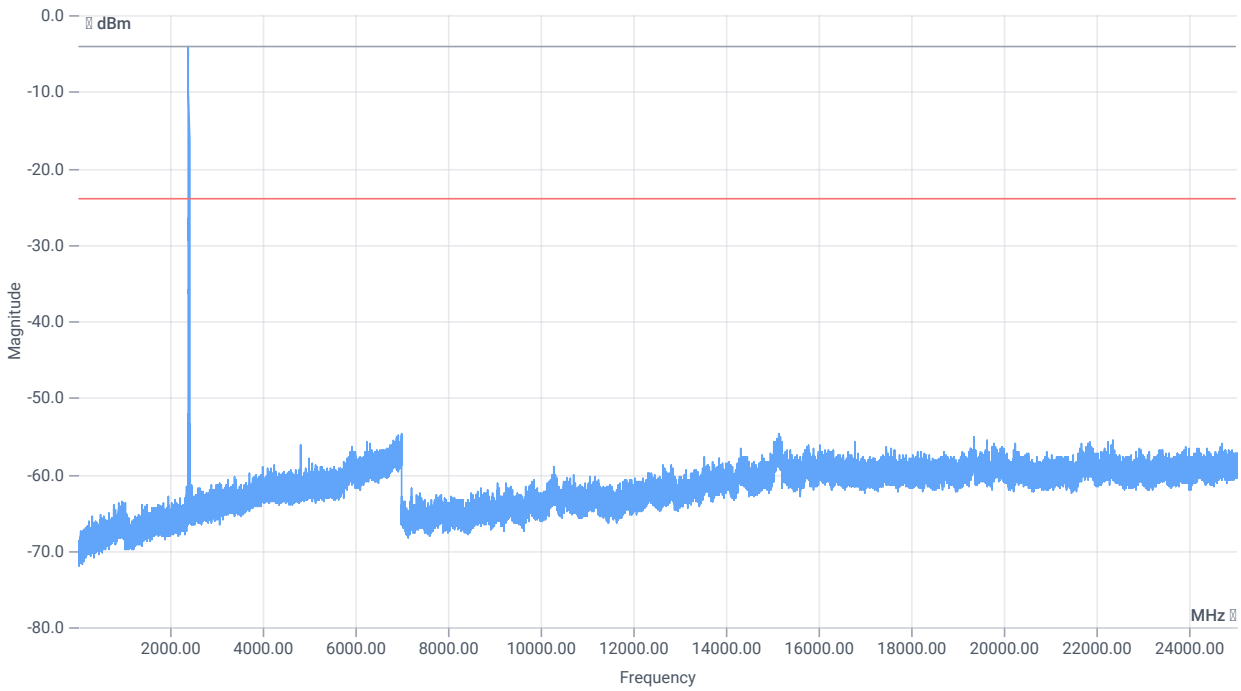
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

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Test at TX 2404 MHz

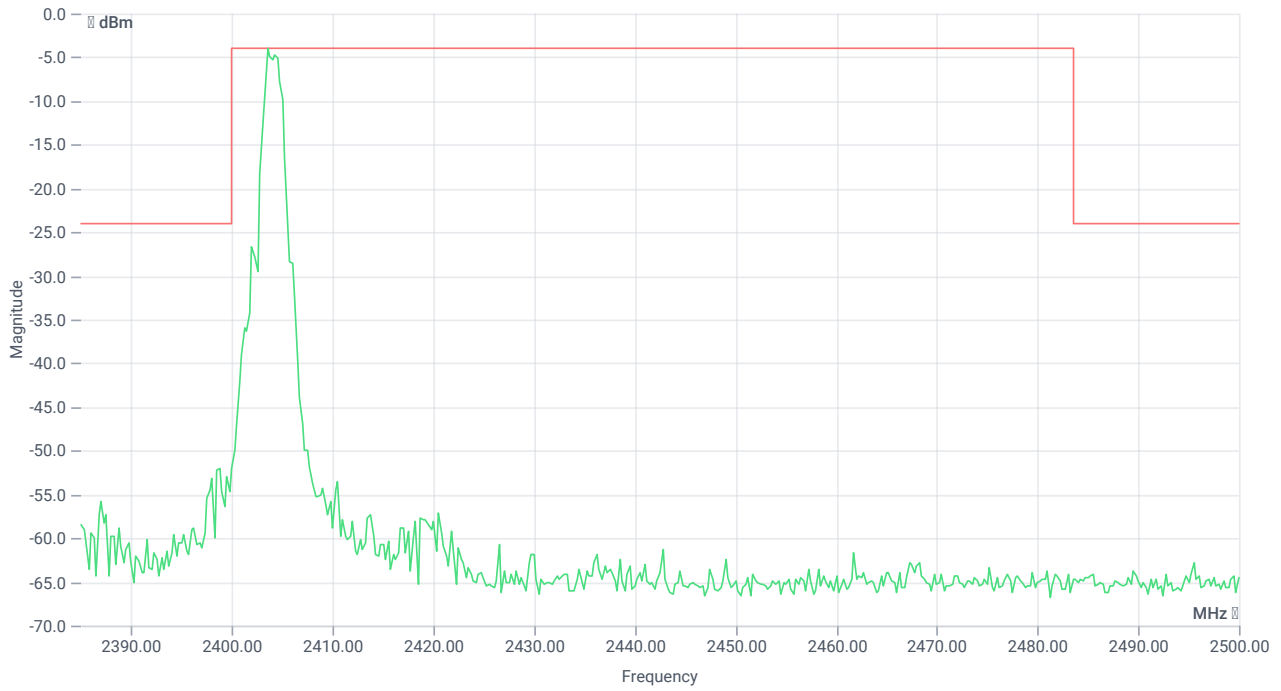
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.53	dBm	INFO
Ref. Frequency	--	--	2403.500	MHz	INFO



READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	-0.53   0   15
Start [MHz]   Stop [MHz]	24530.000   25030.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	200   25   2001   SWE



TX emissions band zoomed

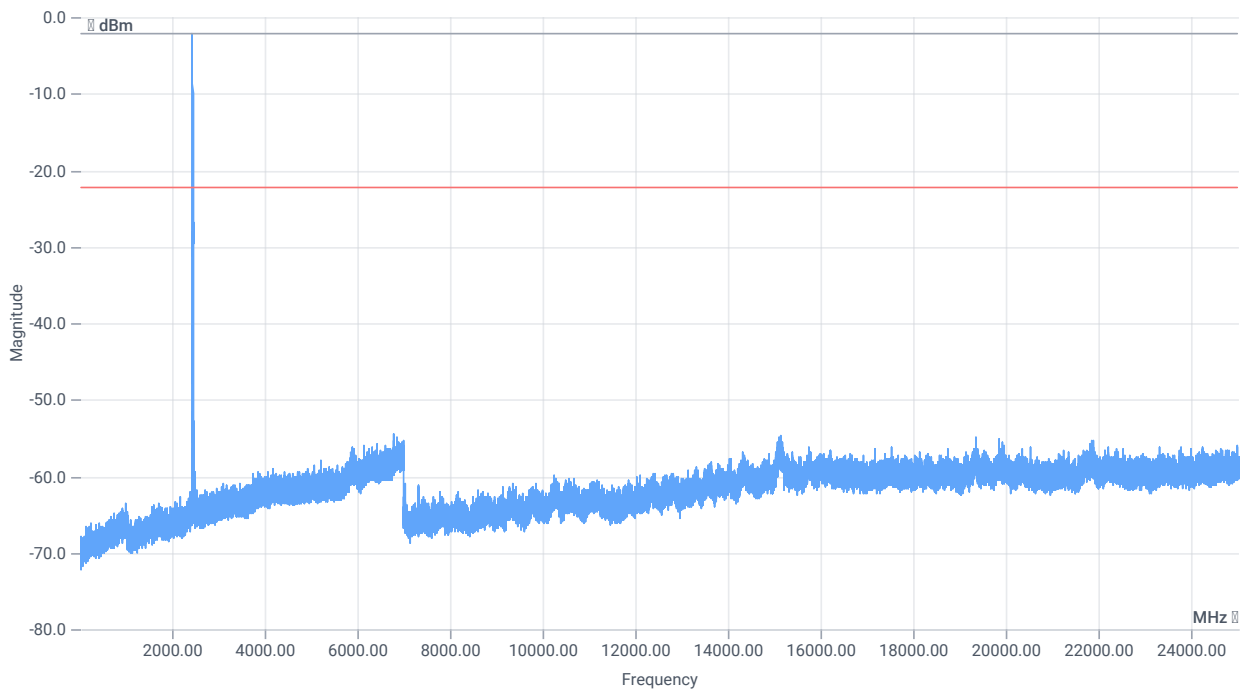
## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2403.50 MHz	--	--	-4.04	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 2398.75 MHz	0	--	27.96	dB	INFO

## Test at TX 2440 MHz

RESULT: Reference Power cond.

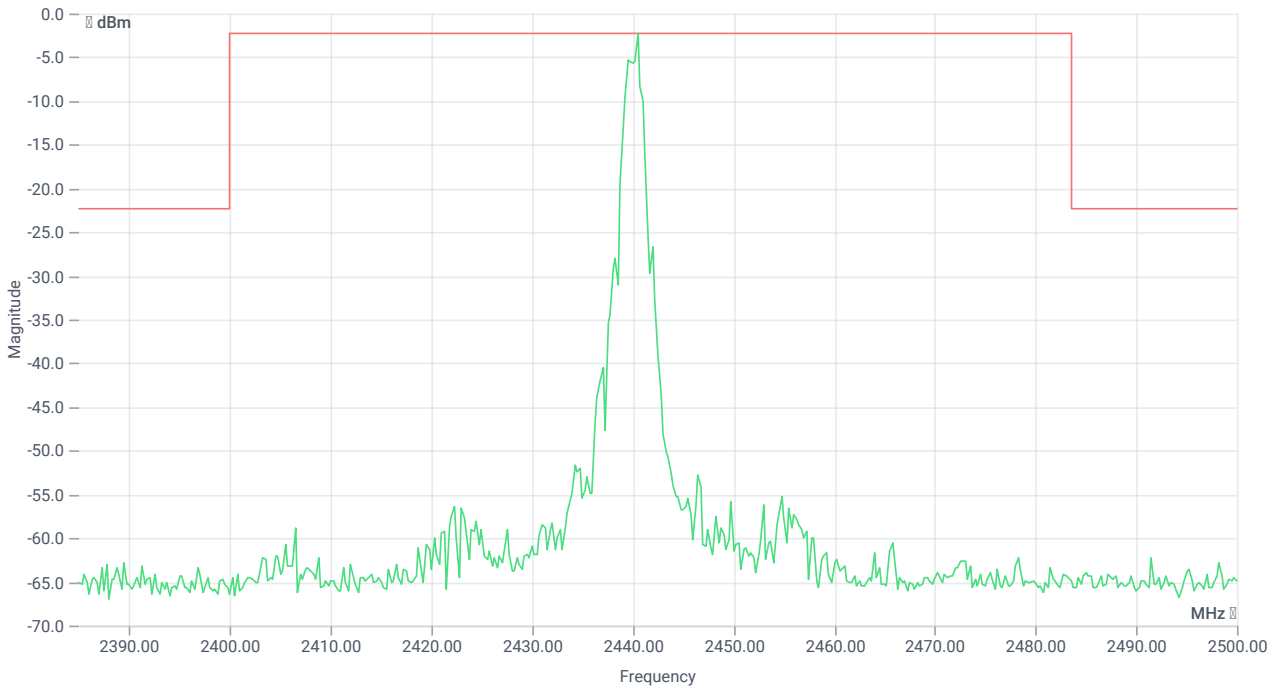
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.90	dBm	INFO
Ref. Frequency	--	--	2439.500	MHz	INFO



TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	-0.90   0   15
Start [MHz]   Stop [MHz]	24530.000   25030.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	200   25   2001   SWE



TX emissions band zoomed

## RESULT

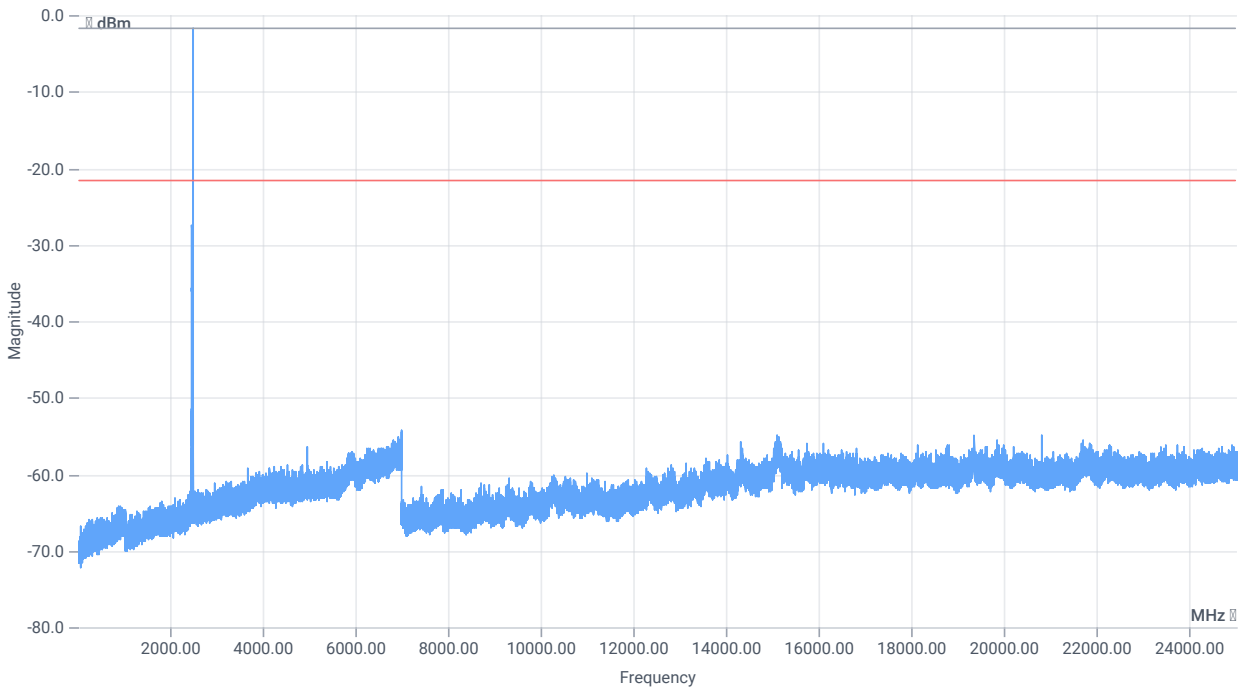
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2440.50 MHz	--	--	-2.25	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 6778.5 MHz	0	--	32.34	dB	INFO



## Test at TX 2478 MHz

RESULT: Reference Power cond.

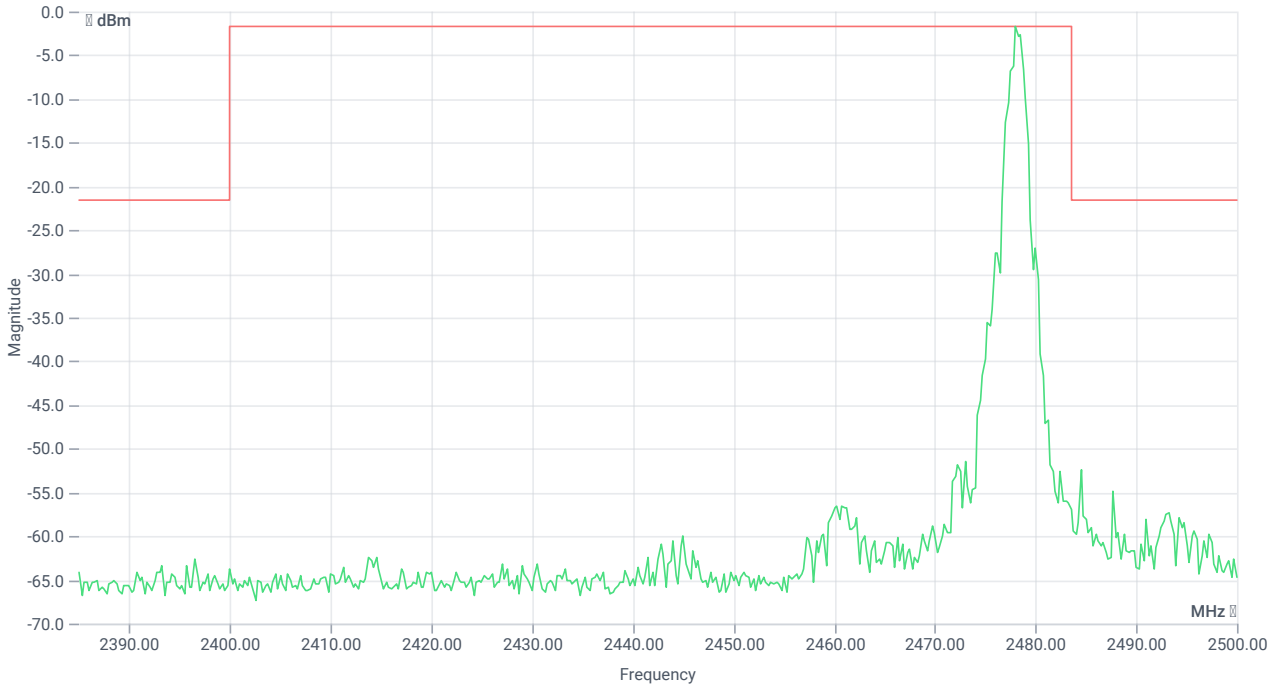
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	-0.84	dBm	INFO
Ref. Frequency	--	--	2478.500	MHz	INFO



TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	-0.84   0   15
Start [MHz]   Stop [MHz]	24530.000   25030.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	200   25   2001   SWE



TX emissions band zoomed

## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2478.00 MHz	--	--	-1.65	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 2484.5 MHz	0	--	30.76	dB	INFO

Verdict

PASS

- END OF DOCUMENT -