

# Measurement Results

No.1-4774/22-01-10\_Annex\_MR

---

## Test logging

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

Document authorized:

---

---

**Michael Dorongovski**  
Lab Manager  
Radio Labs

## Table of Content

EUT Information	3
FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 2 Msps	4
FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT LE 2 Msps	8
FCC 15.247 # Peak power spectral density DTS ~ BT LE 2 Msps	13
FCC 15.247 # Bandwidth 6dB DTS ~ BT LE 2 Msps	16
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 2 Msps	19
FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 2 Msps	23
FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT LE 2 Msps	27
FCC 15.247 # Peak power spectral density DTS ~ BT LE 2 Msps	32
FCC 15.247 # Bandwidth 6dB DTS ~ BT LE 2 Msps	35
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 2 Msps	38
FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 2 Msps	42
FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT LE 2 Msps	46
FCC 15.247 # Peak power spectral density DTS ~ BT LE 2 Msps	51
FCC 15.247 # Bandwidth 6dB DTS ~ BT LE 2 Msps	54
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 2 Msps	57
FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 1 Msps	61
FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT LE 1 Msps	65
FCC 15.247 # Peak power spectral density DTS ~ BT LE 1 Msps	70
FCC 15.247 # Bandwidth 6dB DTS ~ BT LE 1 Msps	73
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 1 Msps	76
FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 1 Msps	80
FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT LE 1 Msps	84
FCC 15.247 # Peak power spectral density DTS ~ BT LE 1 Msps	89
FCC 15.247 # Bandwidth 6dB DTS ~ BT LE 1 Msps	92
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 1 Msps	95
FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 1 Msps	99
FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT LE 1 Msps	103
FCC 15.247 # Peak power spectral density DTS ~ BT LE 1 Msps	108
FCC 15.247 # Bandwidth 6dB DTS ~ BT LE 1 Msps	111
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 1 Msps	114

## EUT Information

### EUT DEFINITION

Manufacturer	beyerdynamic GmbH & Co. KG
Type	Beyerdynamic MMX200
Serial Number	NI
Setup Number	1.0
Version SW	NI
Version FW	NI
Version HW	NI
Comment 1	
Comment 2	
Temperature [°C] Min	-10
Temperature [°C] Nom	20
Temperature [°C] Max	55
Voltage [V] Min	3.3
Voltage [V] Nom	3.7
Voltage [V] Max	4.2

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

### Test References

TC Start	22.02.2023 16:49:20
Ambit Temp [°C]   Humidity [rel%]	28.6   26
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - BT LE 2 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2404
Frequency mid to test	False   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

### Test Equipment

## Test Equipment

---

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

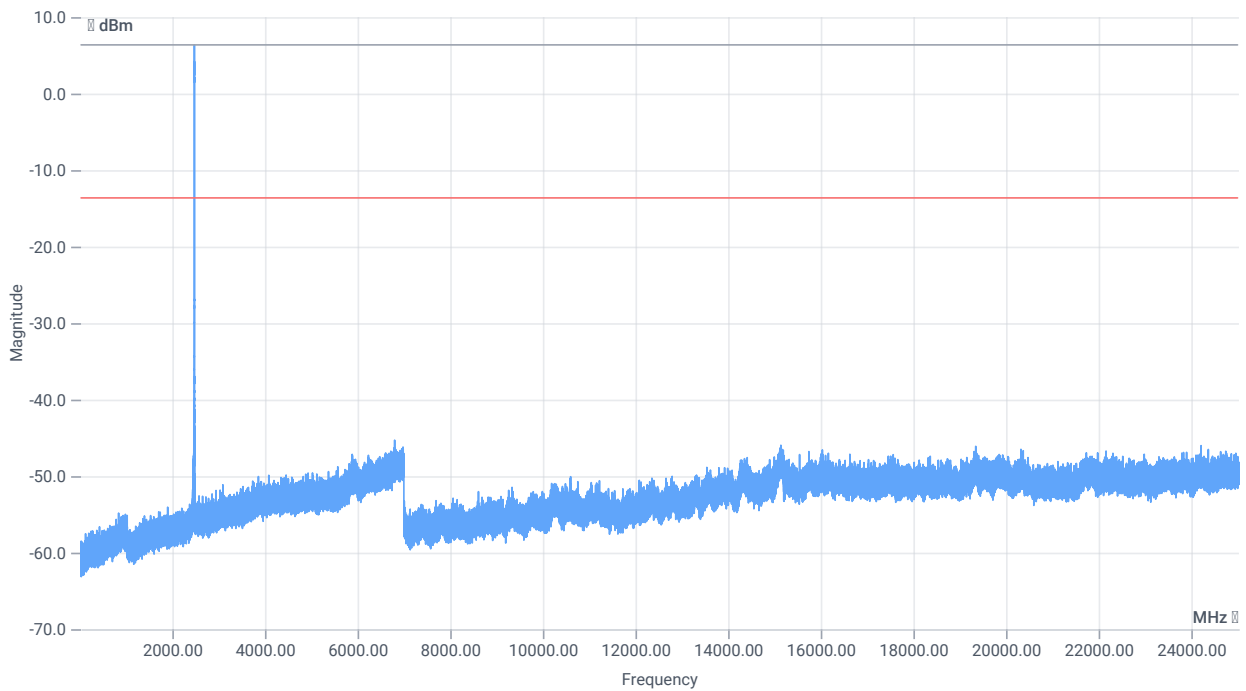
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62

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

## Test at TX 2478 MHz

RESULT: Reference Power cond.

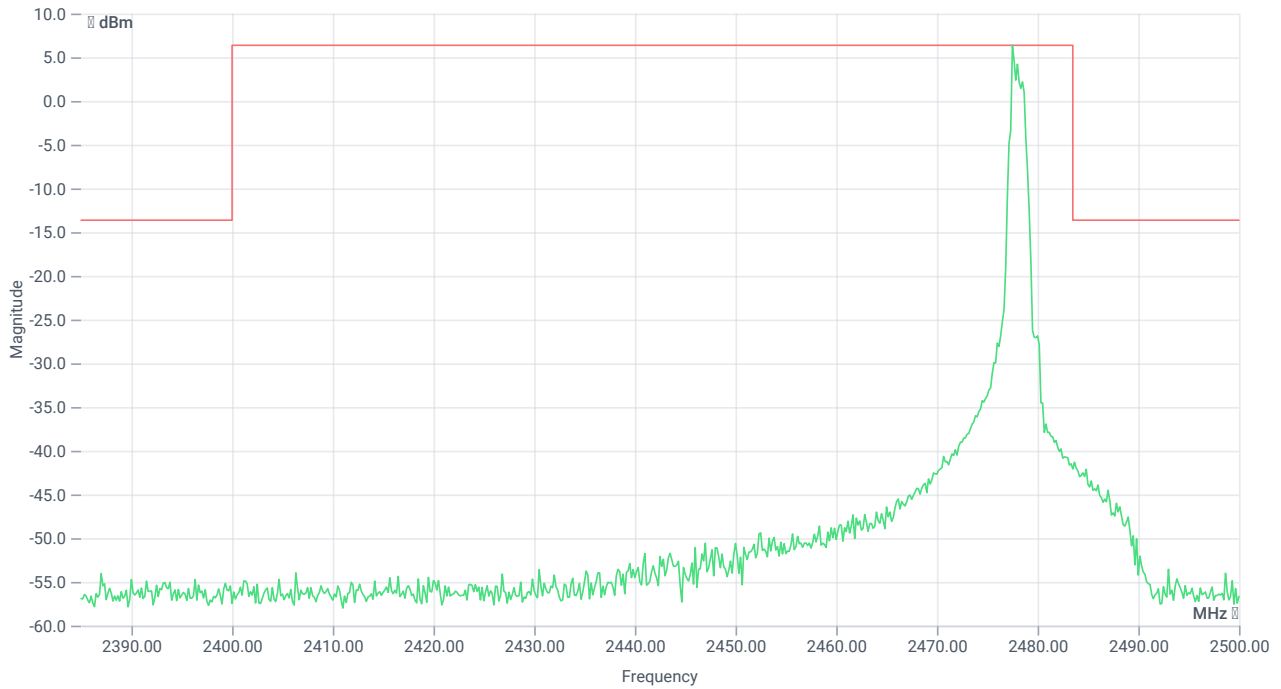
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	6.55	dBm	INFO
Ref. Frequency	--	--	2477.500	MHz	INFO



TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	6.55   0   25
Start [MHz]   Stop [MHz]	24530.000   25030.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	200   25   3001   SWE



TX emissions band zoomed

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2477.50 MHz	--	--	6.37	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 2483.667 MHz	0	--	27.68	dB	INFO

Verdict

PASS

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

## Test References

TC Start	22.02.2023 16:48:44
Ambit Temp [°C]   Humidity [rel%]	28.6   26
System Version	3.5.0.2
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 2 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2404
Frequency mid to test	False   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

## Test Equipment



## Test Equipment

---

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

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

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

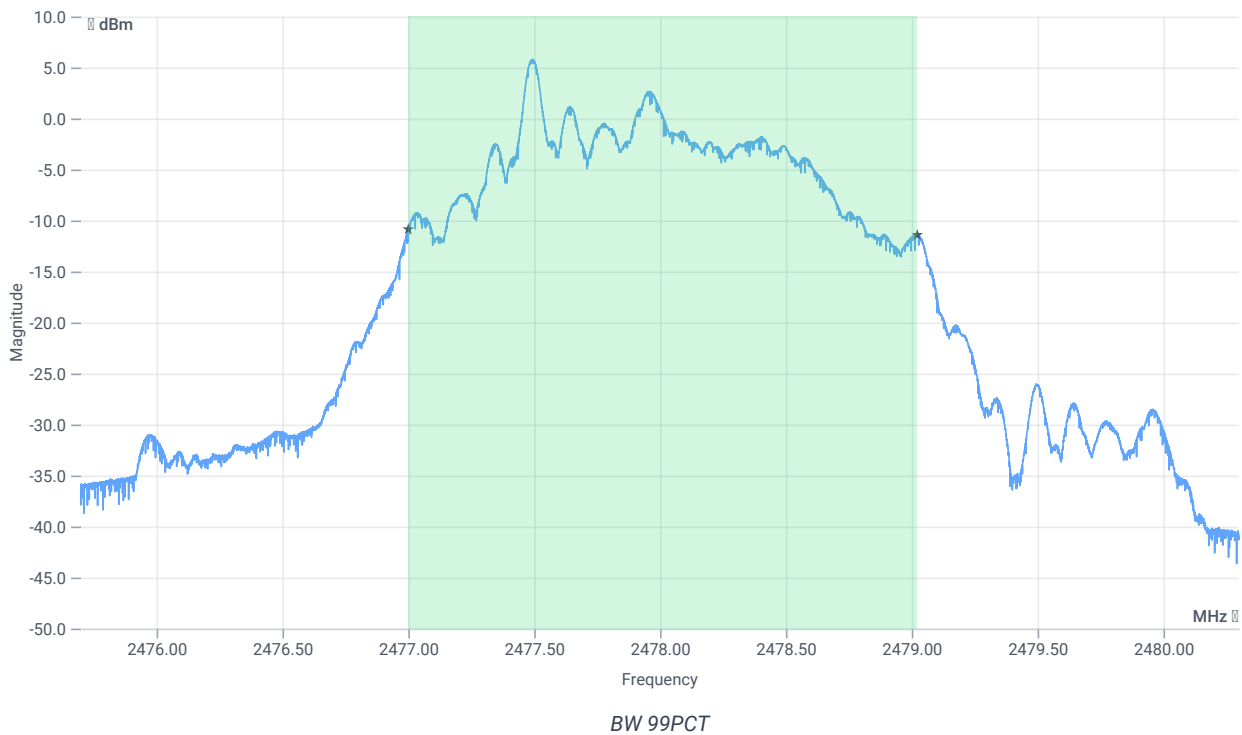
## Test at TX 2478 MHz

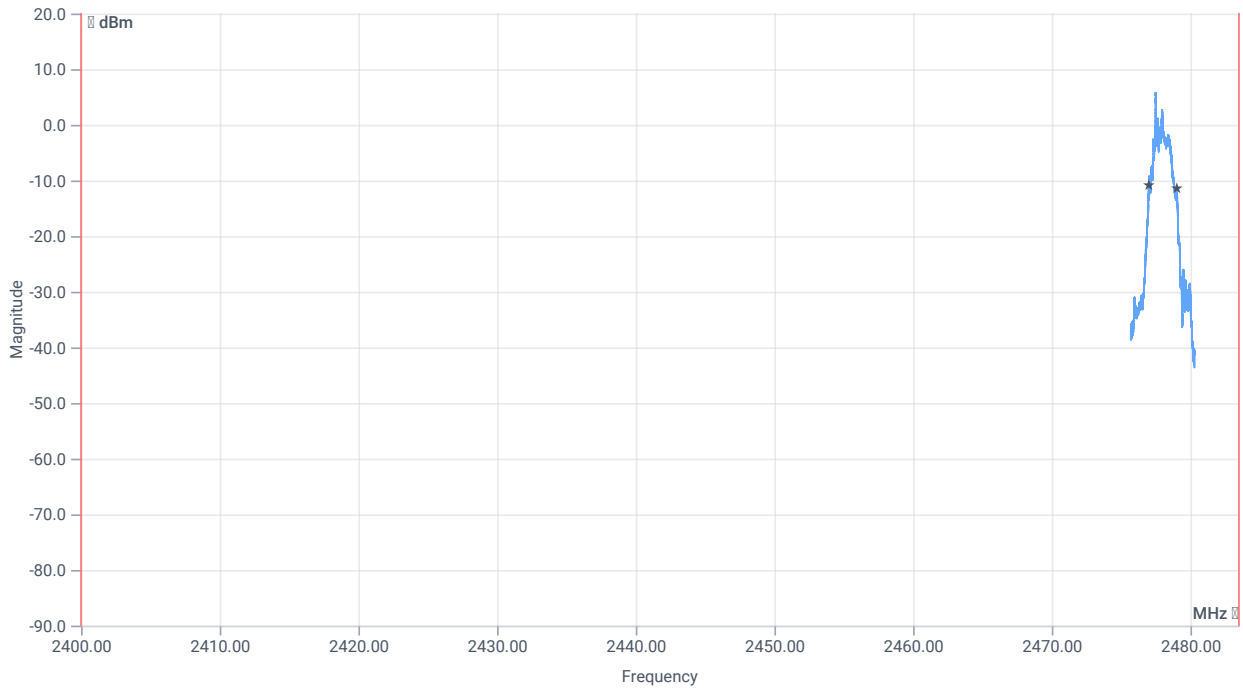
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	6.55	dBm	INFO
Ref. Frequency	--	--	2477.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	11.55   10.85   20
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

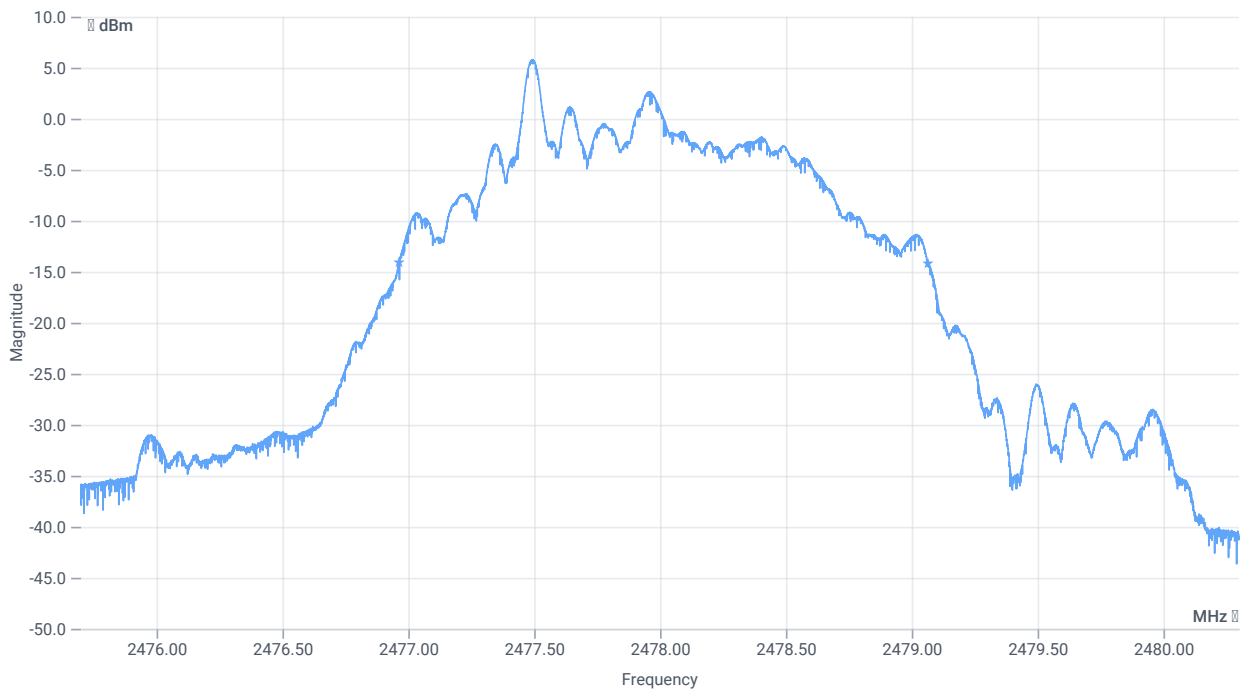




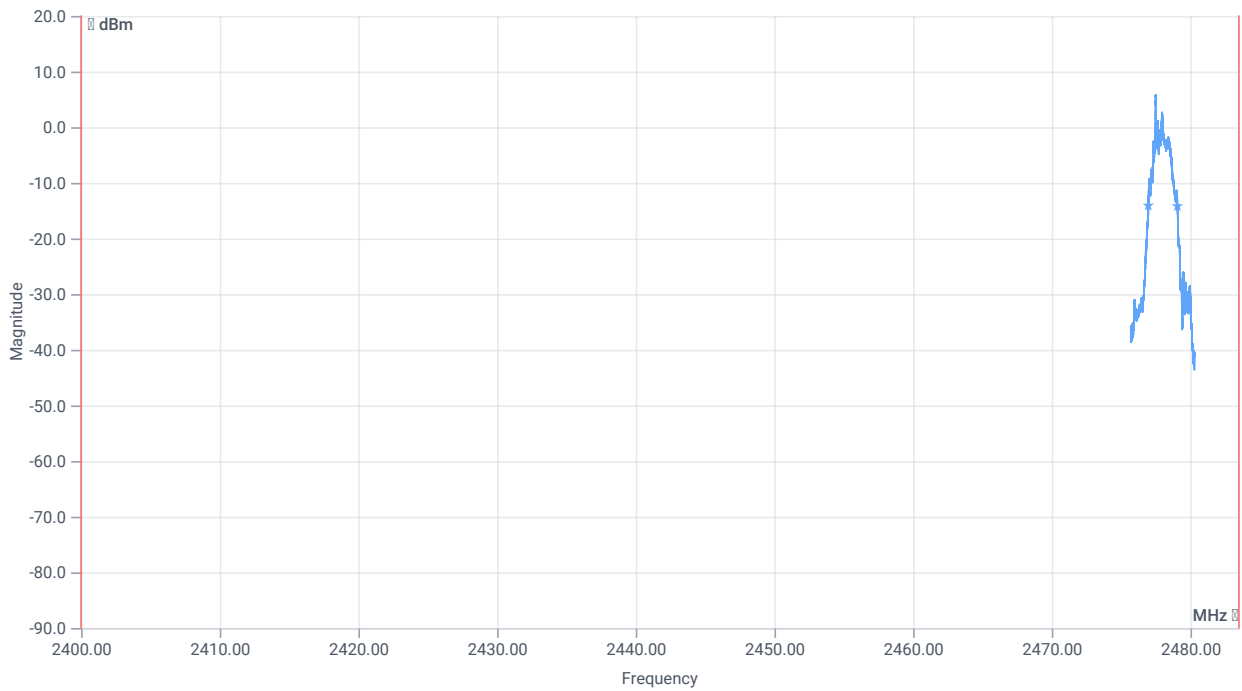
BW within Band 99PCT

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	2022.000	kHz	INFO
T1 99%	2400.000000	--	2477.0001	MHz	PASS
T2 99%	--	2483.500000	2479.0220	MHz	PASS



## BW 20dB



BW within Band 20dB

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	--	--	2101	kHz	INFO
T1 20DB	2400.000000	--	2476.9632	MHz	PASS
T2 20dB	--	2483.500000	2479.0644	MHz	PASS

## Verdict

PASS

## FCC 15.247 # Peak power spectral density DTS ~ BT LE 2 Msps

### Test References

TC Start	22.02.2023 16:48:04
Ambit Temp [°C]   Humidity [rel%]	28.7   26
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - BT LE 2 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2404
Frequency mid to test	False   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

### Test Equipment

## Test Equipment

---

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

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

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

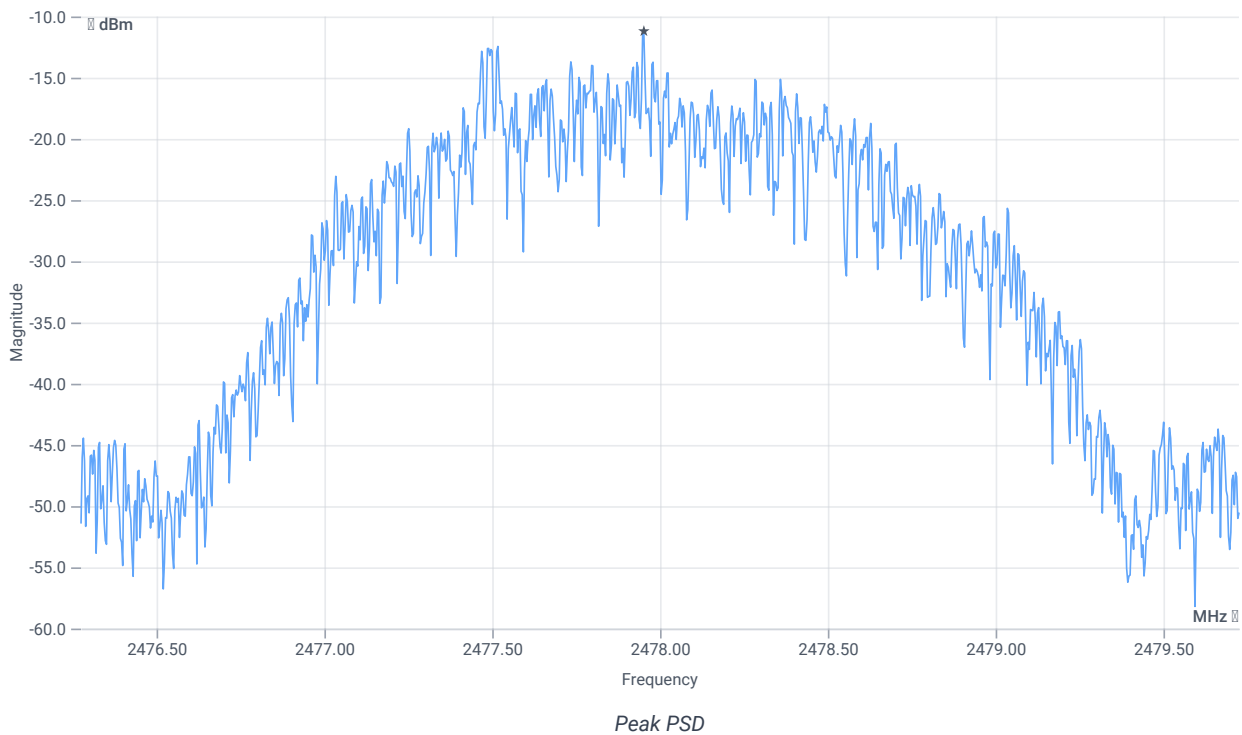
## Test at TX 2478 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	6.43	dBm	INFO
Ref. Frequency	--	--	2477.400	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	11.43   10.85   20
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

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	--	8	-11.2	dBm/3KHz	PASS

Verdict

PASS

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

### Test References

TC Start	22.02.2023 16:47:33
Ambit Temp [°C]   Humidity [rel%]	28.6   26
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - BT LE 2 Msp
Add. 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	None   HCI   15   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 Msp
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2404
Frequency mid to test	False   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

### Test Equipment

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



## Test Equipment

---

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

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

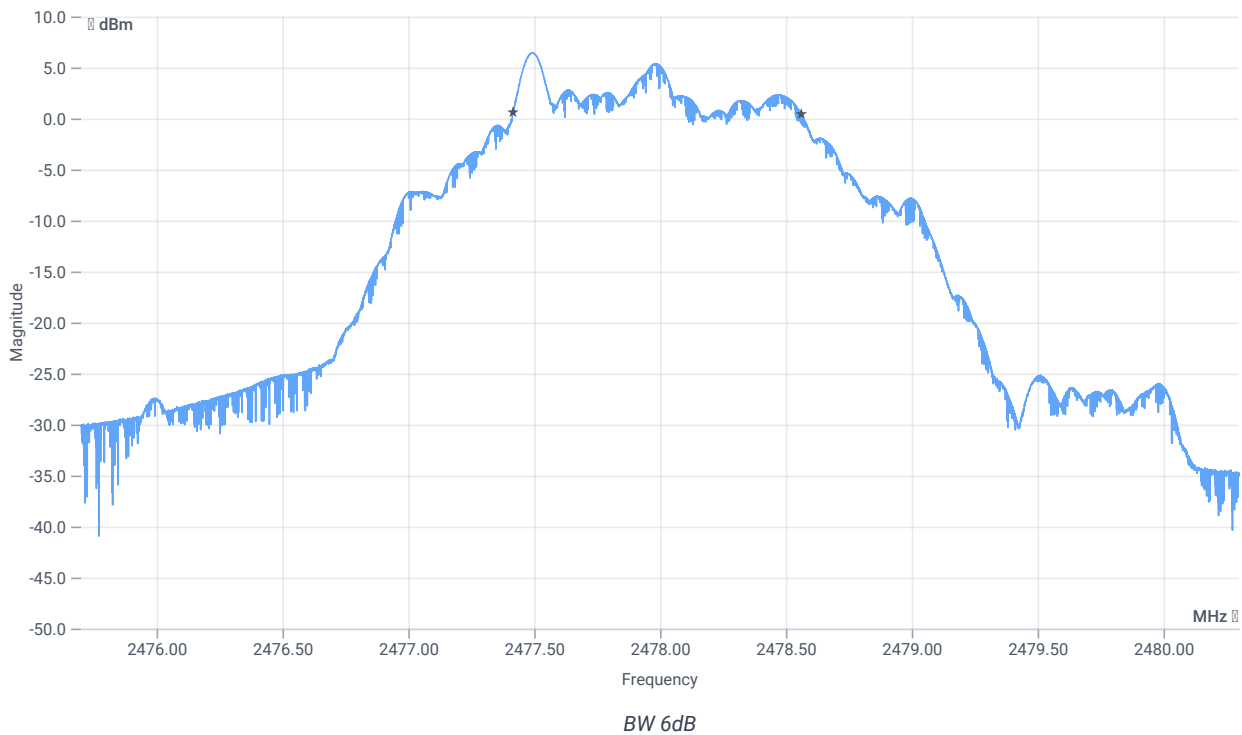
## Test at TX 2478 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	6.57	dBm	INFO
Ref. Frequency	--	--	2477.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	11.57   10.85   20
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

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	--	1145	kHz	PASS

Verdict

PASS

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

## Test References

TC Start	22.02.2023 16:46:50
Ambit Temp [°C]   Humidity [rel%]	28.6   26
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted DTS - BT LE 2 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2404
Frequency mid to test	False   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

## Test Equipment

---

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

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

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

## Test at TX 2478 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	6.49	dBm	INFO
Ref. Frequency	--	--	2477.500	MHz	INFO

### READ SA SETTINGS:

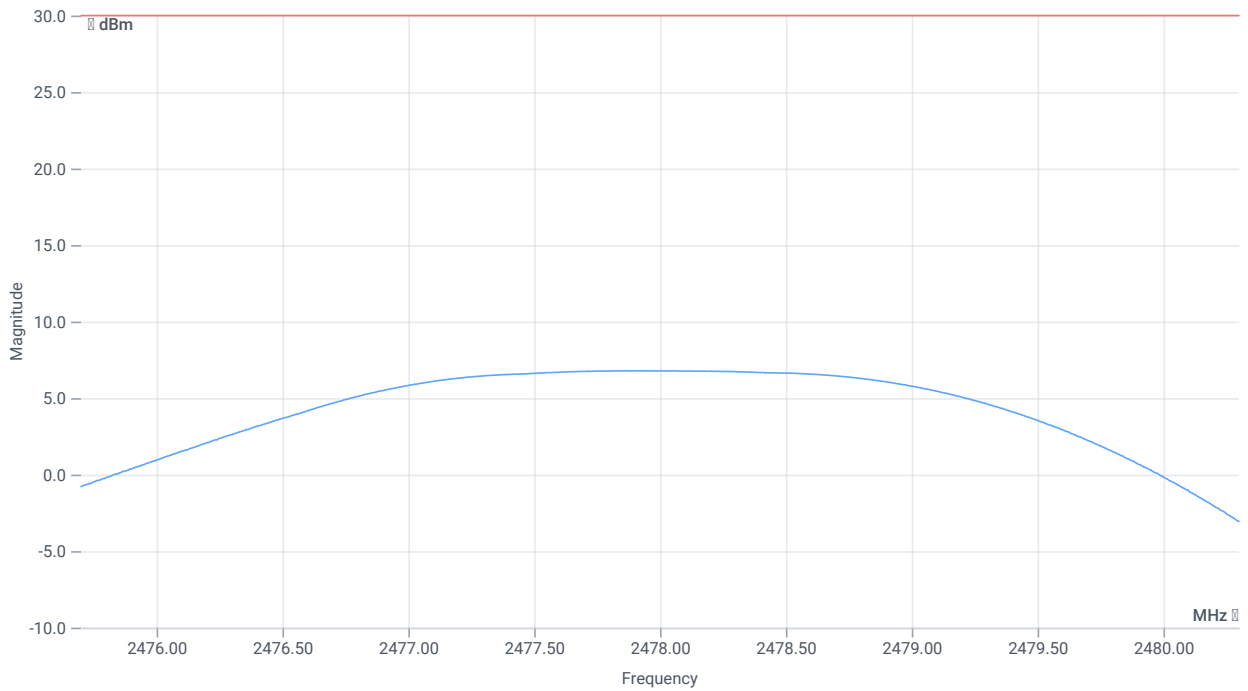
RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	11.49   10.85   20
Start [MHz]   Stop [MHz]	2475.700   2480.300
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	50   200   10001   SWE

### DTS Bandwidth

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	--	--	1147	kHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	16.49   10.85   25
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

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	--	30.00	6.79	dBm	PASS
Peak Power	--	1000	4.775293	mW	PASS
Frequency at Peak	--	--	2477.899	MHz	INFO

Verdict

PASS

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

### Test References

TC Start	22.02.2023 16:39:35
Ambit Temp [°C]   Humidity [rel%]	28.6   26
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - BT LE 2 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2404
Frequency mid to test	True   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2478
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

## Test Equipment

---

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

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

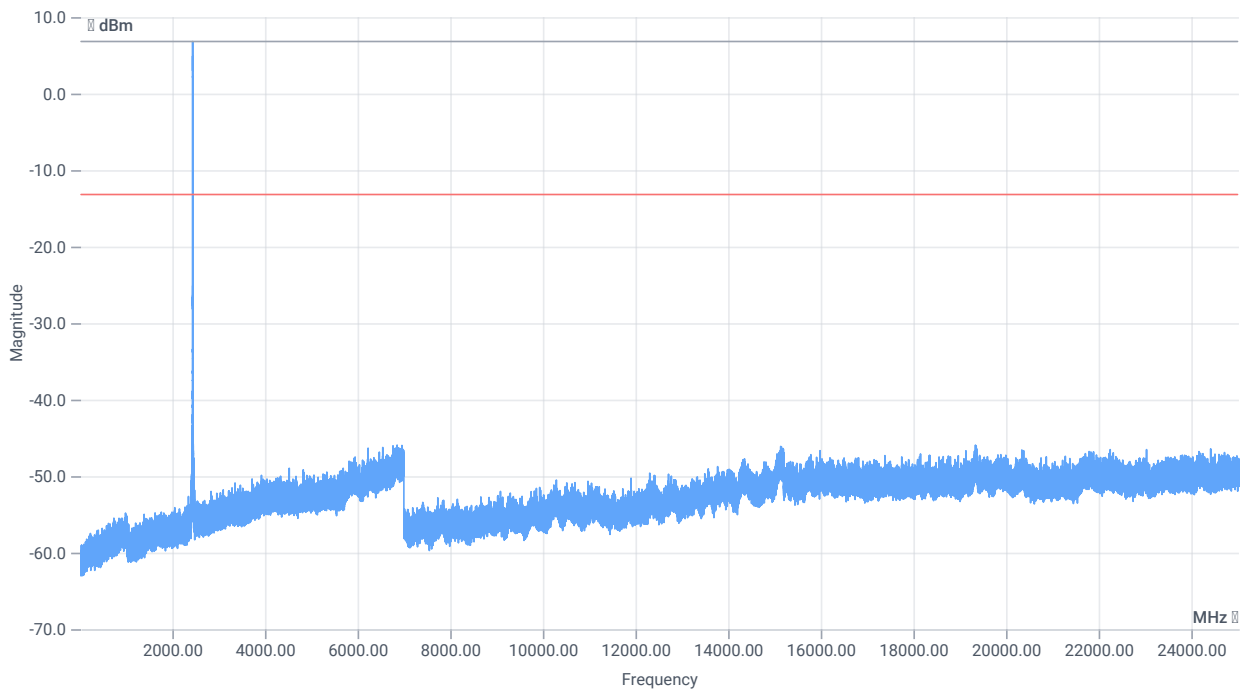
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI



## Test at TX 2440 MHz

RESULT: Reference Power cond.

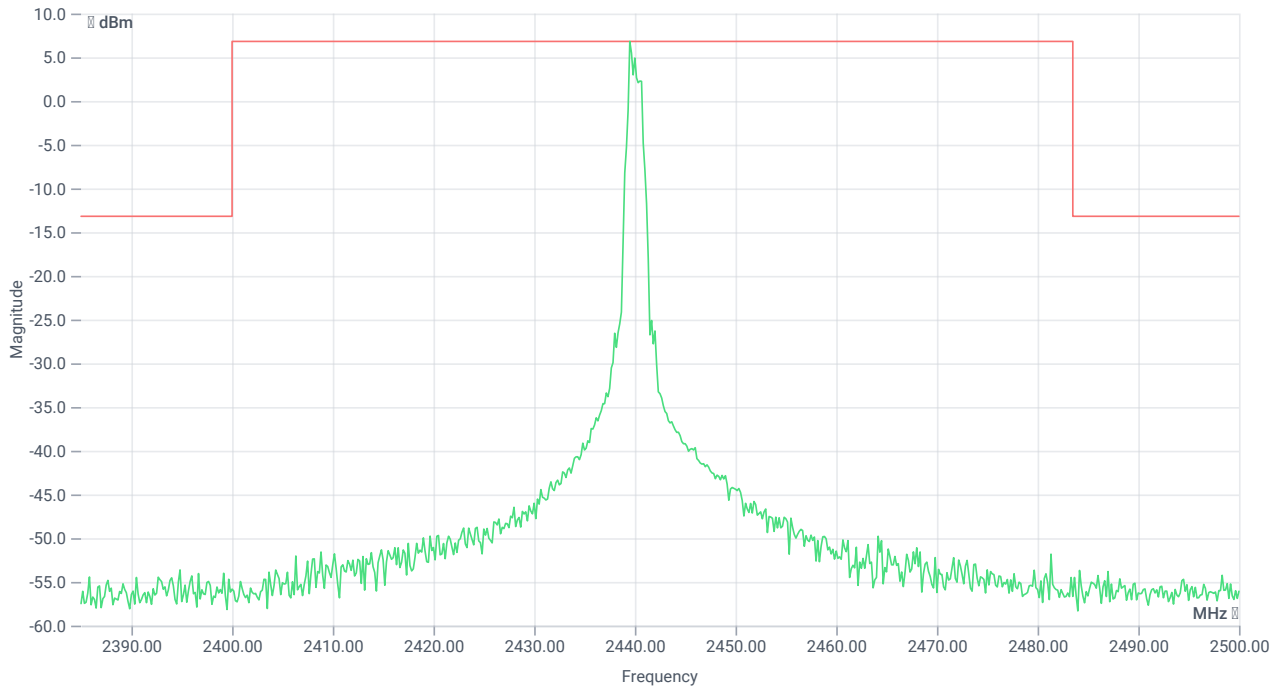
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	7.13	dBm	INFO
Ref. Frequency	--	--	2439.500	MHz	INFO



TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	7.13   0   25
Start [MHz]   Stop [MHz]	24530.000   25030.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	200   25   3001   SWE



TX emissions band zoomed

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2439.50 MHz	--	--	6.81	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 30 MHz	0	--	-139	dB	INFO

Verdict

PASS

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

## Test References

TC Start	22.02.2023 16:38:58
Ambit Temp [°C]   Humidity [rel%]	28.6   26
System Version	3.5.0.2
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 2 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2404
Frequency mid to test	True   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2478
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

## Test Equipment

## Test Equipment

---

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

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

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

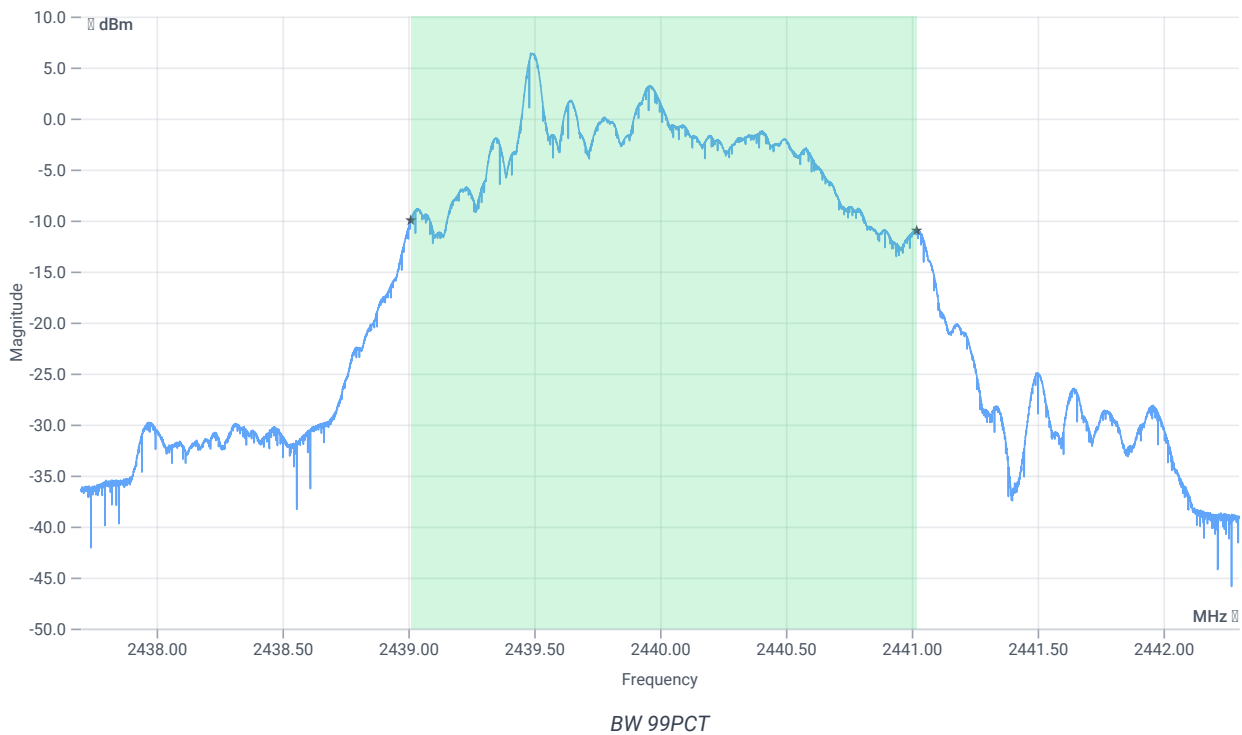
## Test at TX 2440 MHz

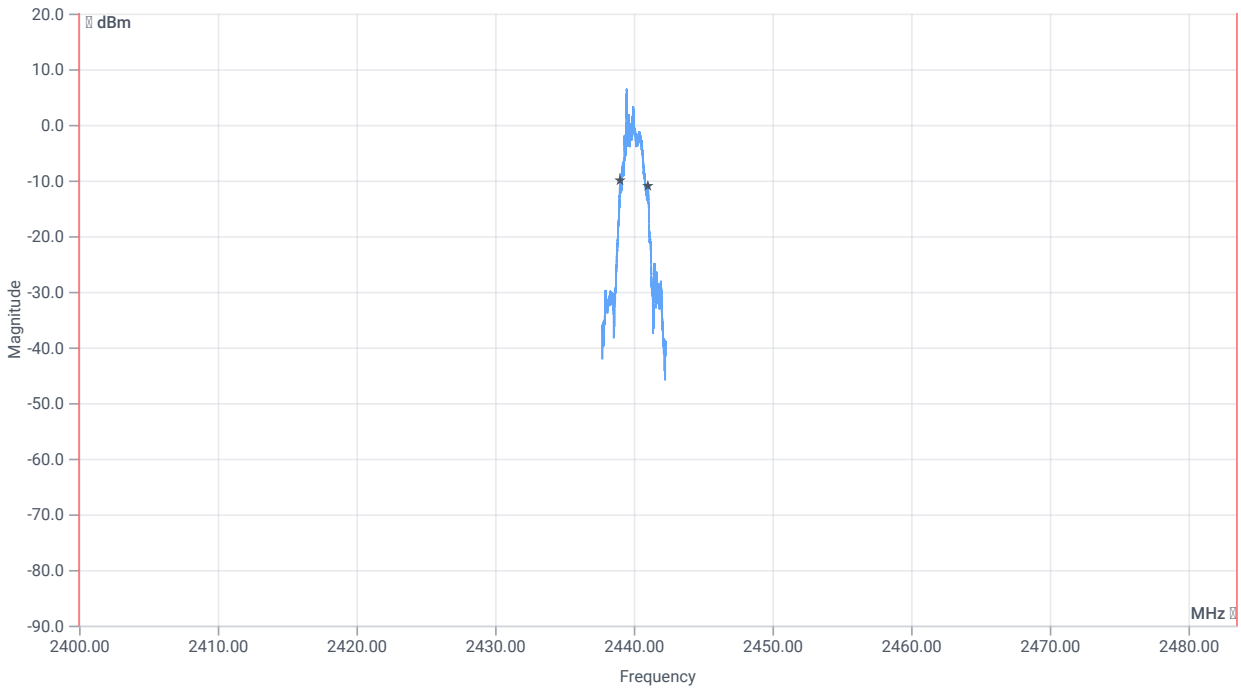
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	7.15	dBm	INFO
Ref. Frequency	--	--	2439.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	12.15   10.8   20
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

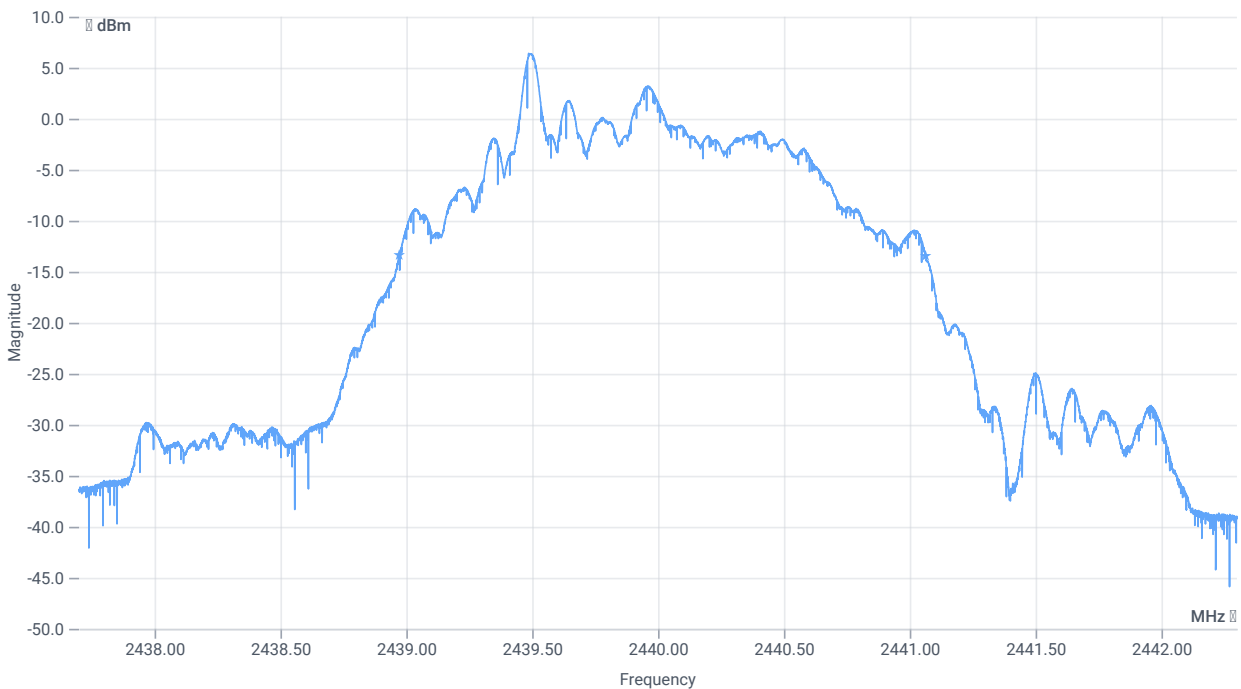




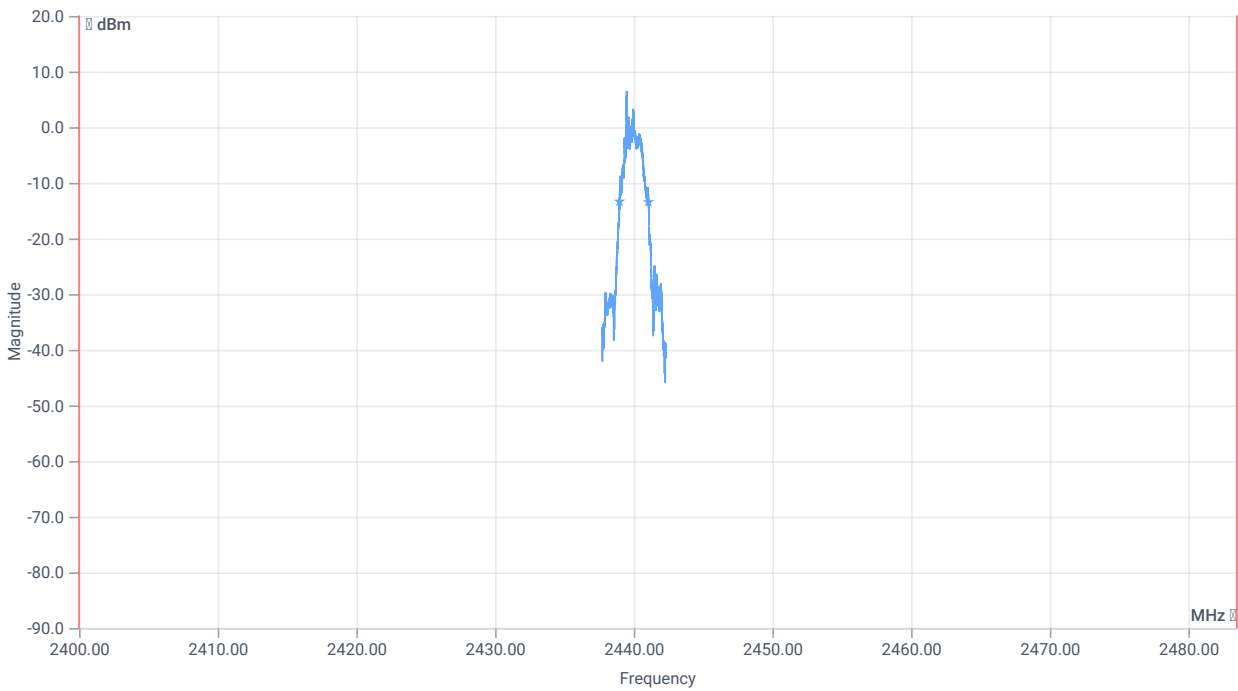
BW within Band 99PCT

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	2010.000	kHz	INFO
T1 99%	2400.000000	--	2439.0102	MHz	PASS
T2 99%	--	2483.500000	2441.0197	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	--	--	2091	kHz	INFO
T1 20DB	2400.000000	--	2438.9719	MHz	PASS
T2 20dB	--	2483.500000	2441.0631	MHz	PASS

Verdict

PASS

## FCC 15.247 # Peak power spectral density DTS ~ BT LE 2 Msps

### Test References

TC Start	22.02.2023 16:38:18
Ambit Temp [°C]   Humidity [rel%]	28.5   26
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - BT LE 2 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2404
Frequency mid to test	True   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2478
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment



## Test Equipment

---

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

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

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

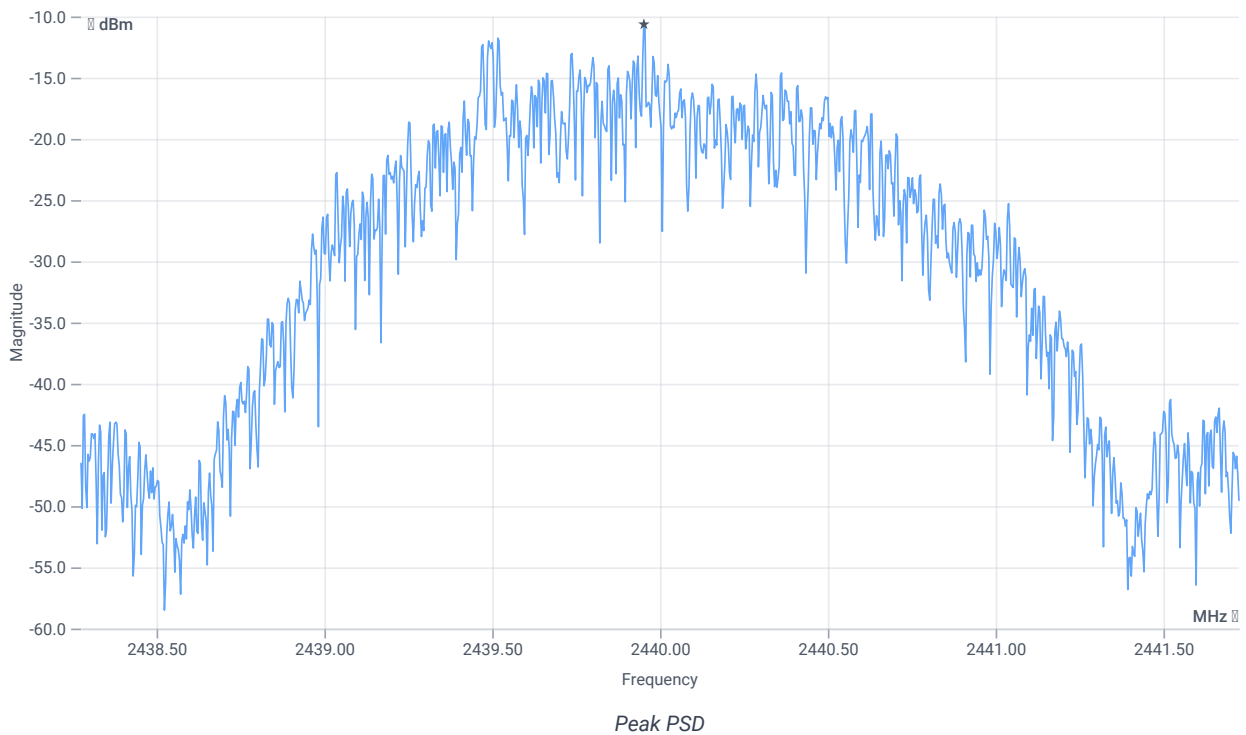
## Test at TX 2440 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	7.04	dBm	INFO
Ref. Frequency	--	--	2440.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	12.04   10.8   20
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

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	--	8	-10.64	dBm/3KHz	PASS

Verdict

PASS

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

### Test References

TC Start	22.02.2023 16:37:47
Ambit Temp [°C]   Humidity [rel%]	28.6   27
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - BT LE 2 Msp
Add. 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	None   HCI   15   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 Msp
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2404
Frequency mid to test	True   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2478
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

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

## Test Equipment

---

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

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

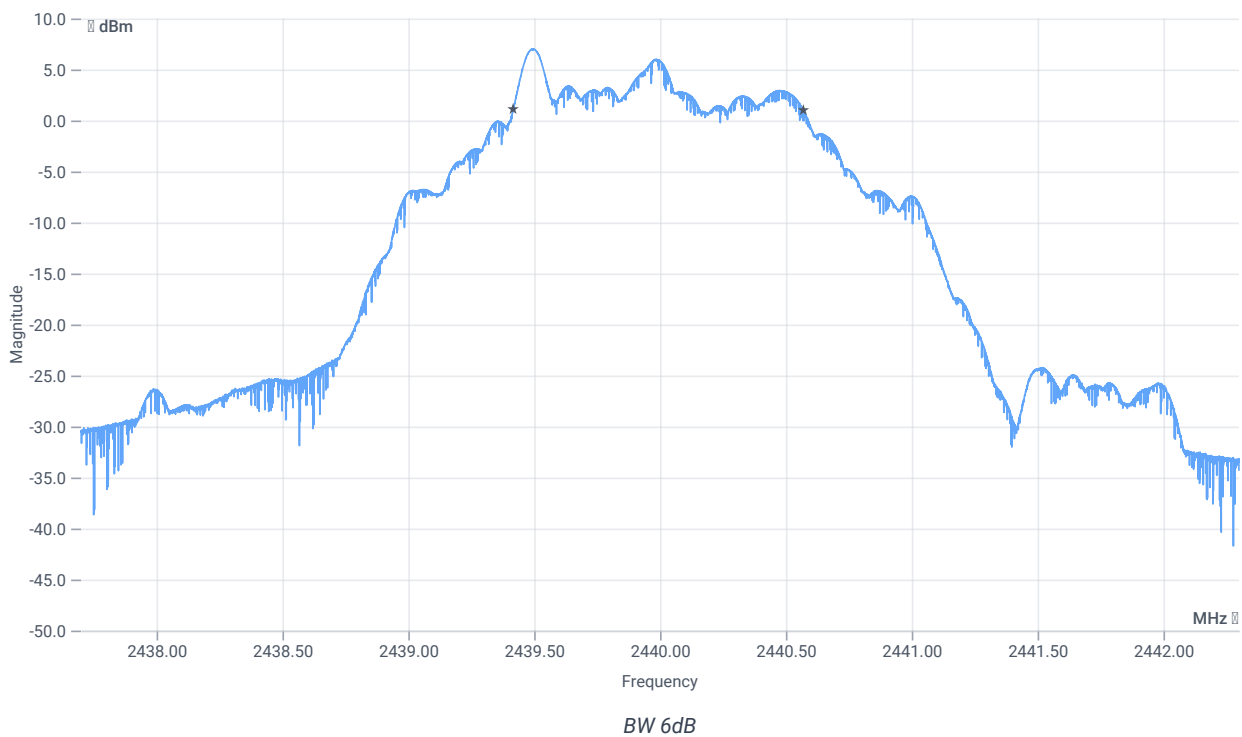
## Test at TX 2440 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	7.18	dBm	INFO
Ref. Frequency	--	--	2439.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	12.18   10.8   20
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

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	--	1153	kHz	PASS

Verdict

PASS

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

## Test References

TC Start	22.02.2023 16:37:04
Ambit Temp [°C]   Humidity [rel%]	28.5   26
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted DTS - BT LE 2 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2404
Frequency mid to test	True   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2478
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

## Test Equipment

---

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

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

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

## Test at TX 2440 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	7.16	dBm	INFO
Ref. Frequency	--	--	2439.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	12.16   10.8   20
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

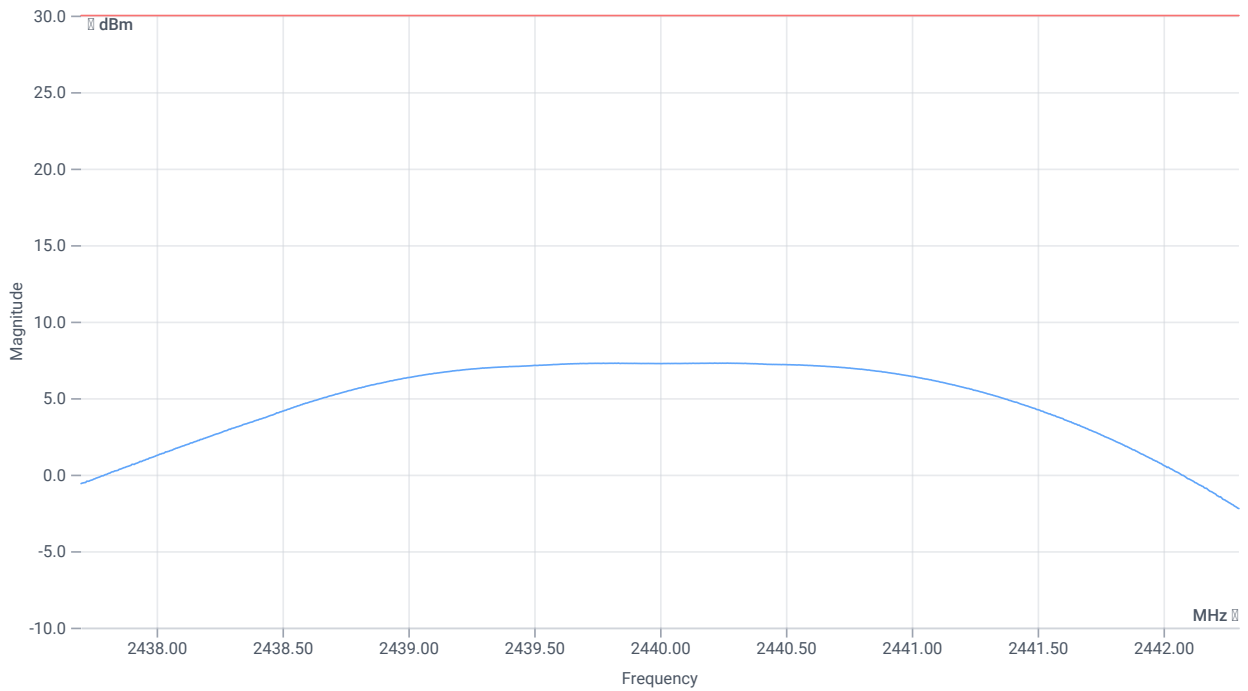
### DTS Bandwidth

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	--	--	1153	kHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	17.16   10.8   25
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

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	--	30.00	7.29	dBm	PASS
Peak Power	--	1000	5.357967	mW	PASS
Frequency at Peak	--	--	2440.216	MHz	INFO

Verdict

PASS

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

### Test References

TC Start	22.02.2023 16:28:19
Ambit Temp [°C]   Humidity [rel%]	28.3   26
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - BT LE 2 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2478
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

## Test Equipment

---

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

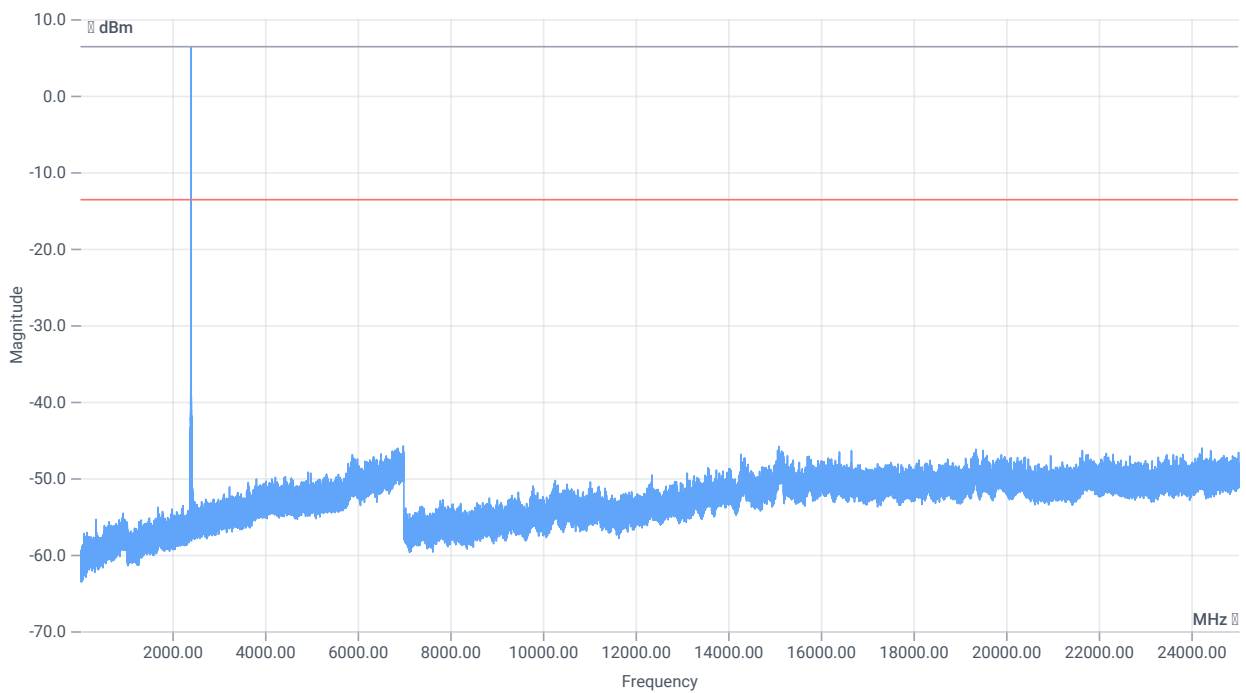
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62

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

## Test at TX 2404 MHz

RESULT: Reference Power cond.

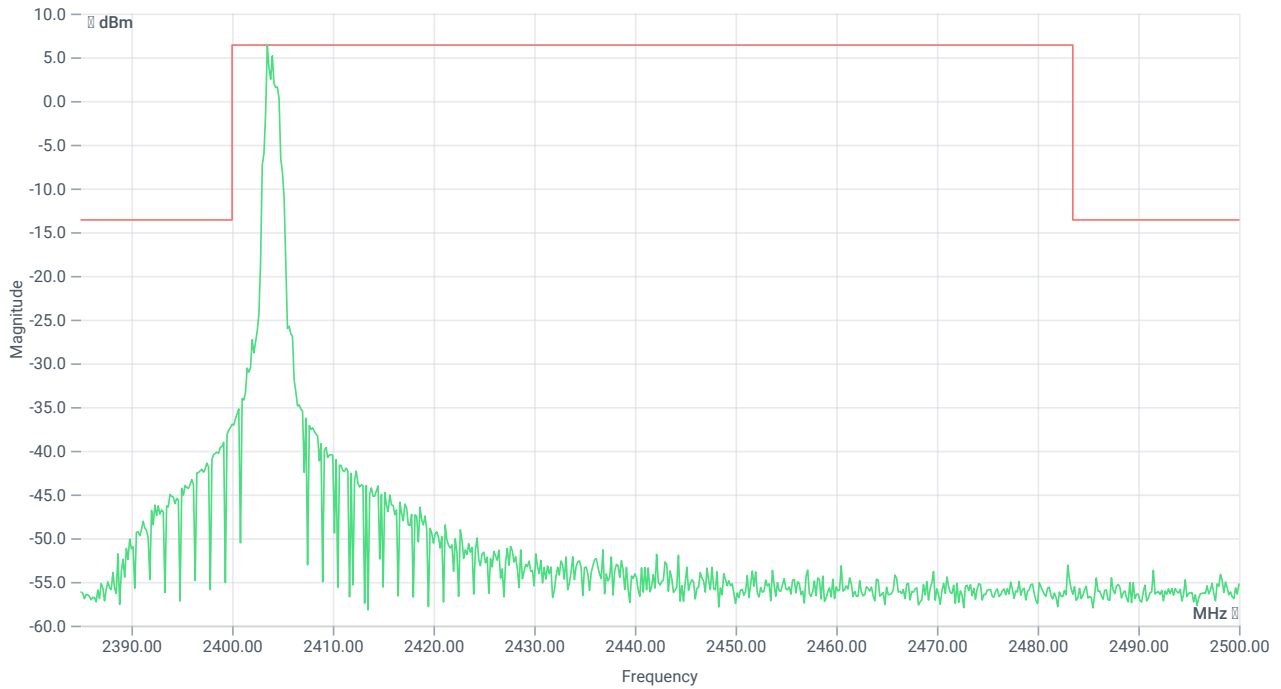
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	6.82	dBm	INFO
Ref. Frequency	--	--	2403.500	MHz	INFO



TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	6.82   0   25
Start [MHz]   Stop [MHz]	24530.000   25030.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	200   25   3001   SWE



TX emissions band zoomed

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2403.50 MHz	--	--	6.40	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 30 MHz	0	--	-139.51	dB	INFO

## Verdict

PASS

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

## Test References

TC Start	22.02.2023 16:27:42
Ambit Temp [°C]   Humidity [rel%]	28.3   26
System Version	3.5.0.2
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 2 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2478
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

## Test Equipment

## Test Equipment

---

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

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

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

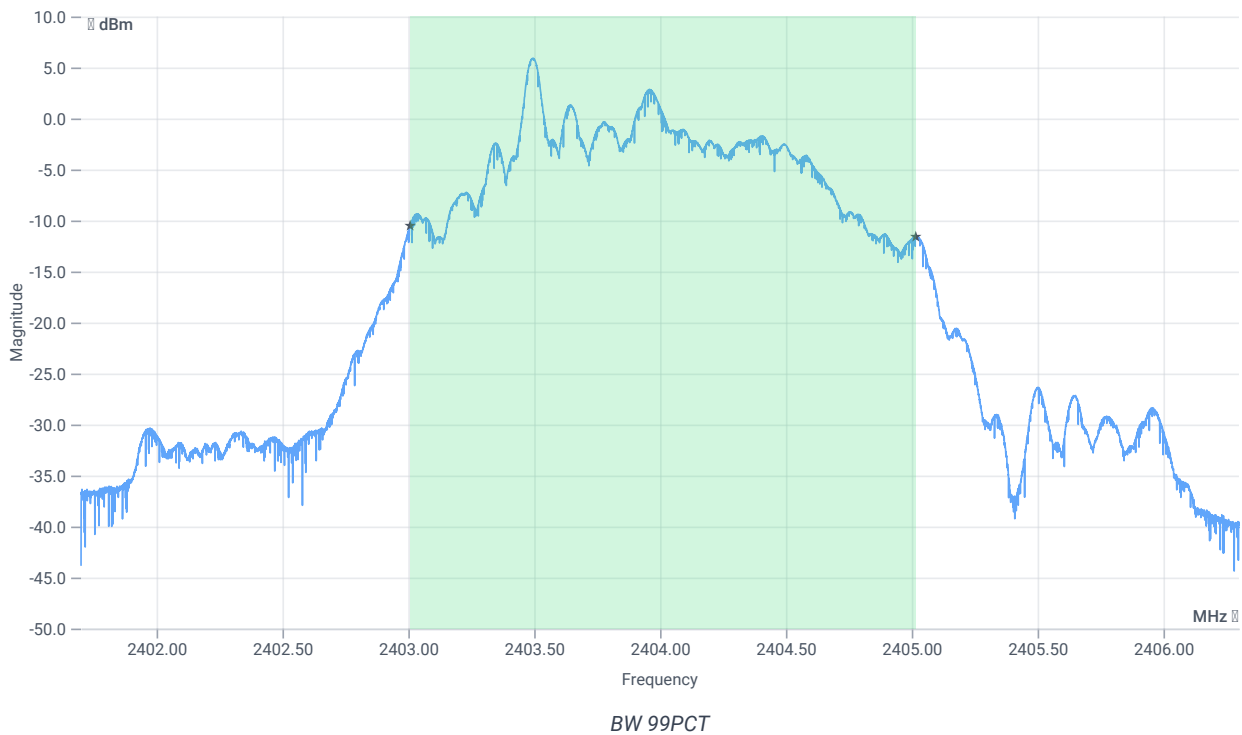
## Test at TX 2404 MHz

RESULT: Reference Power cond.

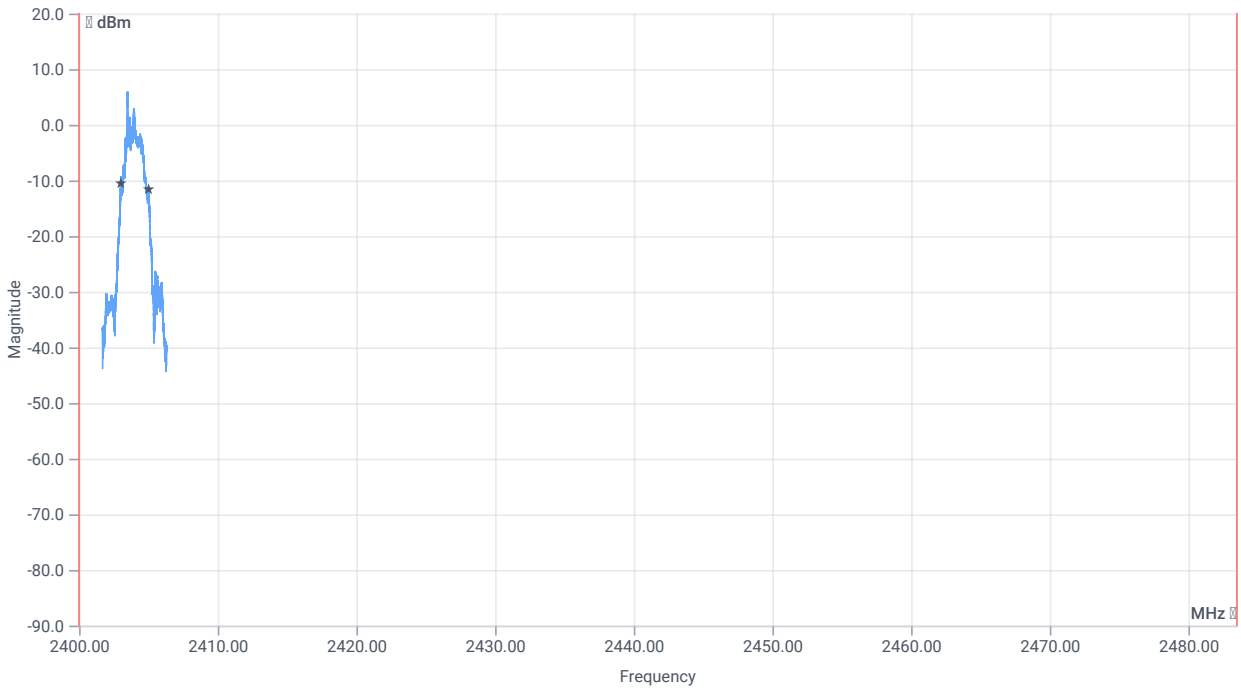
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	6.73	dBm	INFO
Ref. Frequency	--	--	2403.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	11.73   10.8   20
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



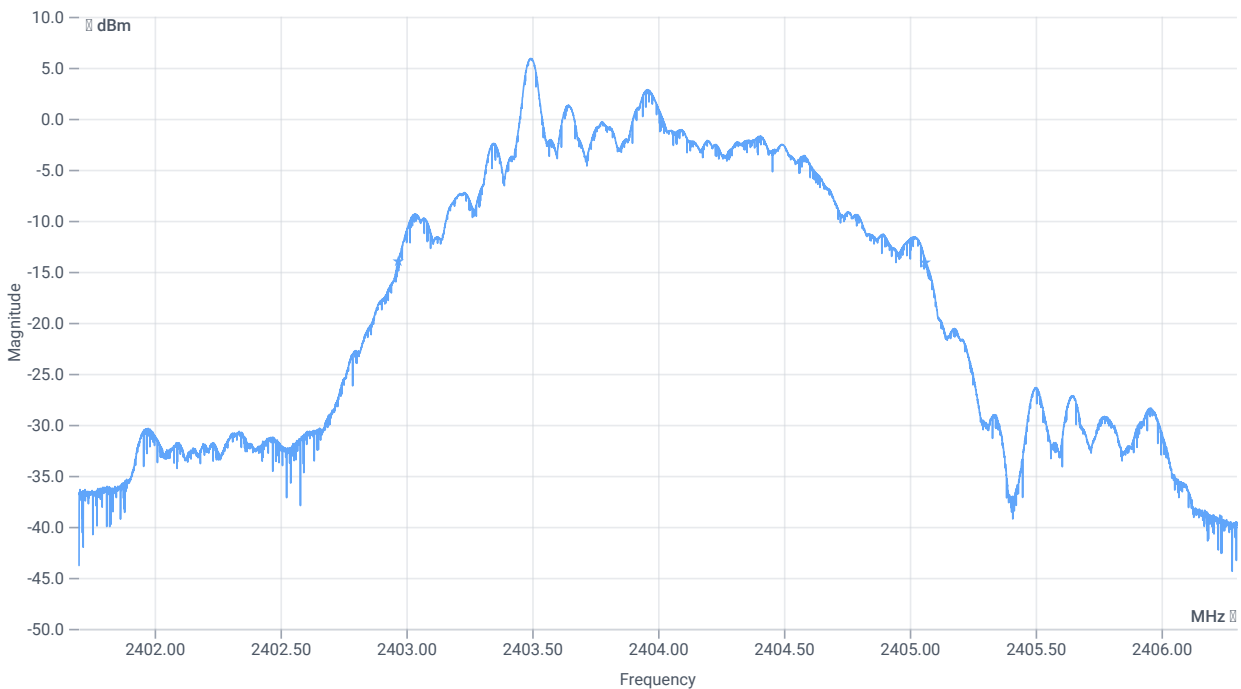




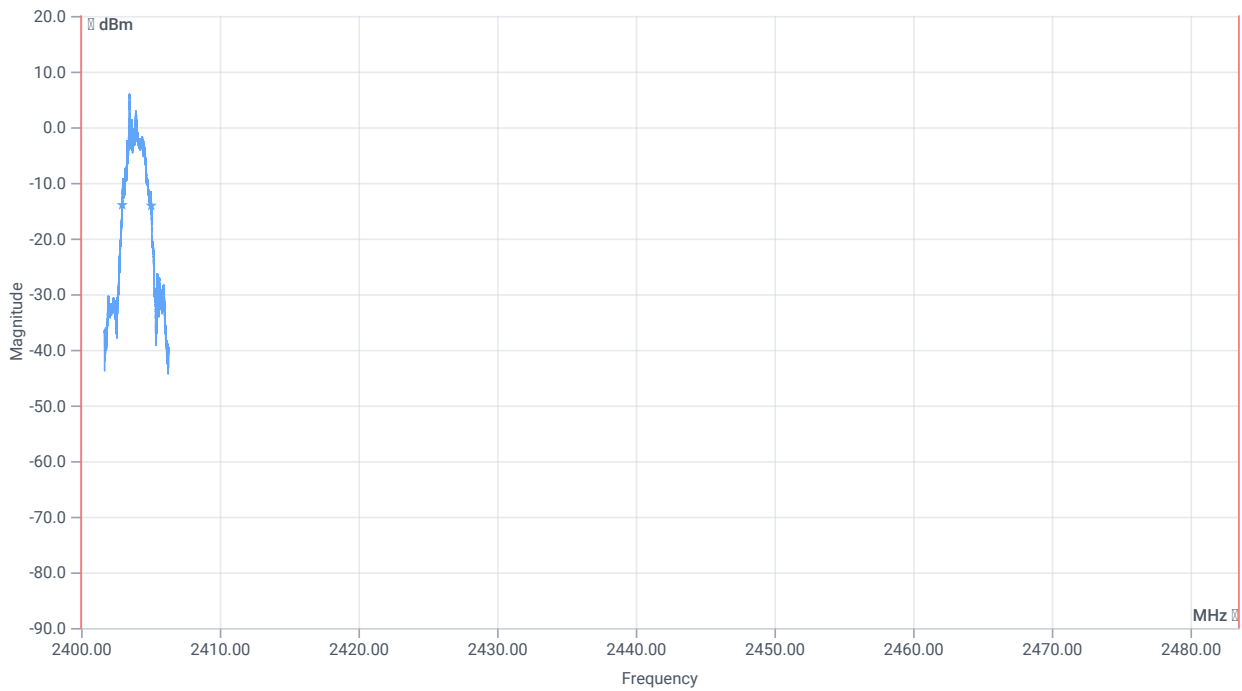
BW within Band 99PCT

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	2009.000	kHz	INFO
T1 99%	2400.000000	--	2403.0074	MHz	PASS
T2 99%	--	2483.500000	2405.0160	MHz	PASS



BW 20dB



BW within Band 20dB

**RESULT**

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	--	--	2093	kHz	INFO
T1 20DB	2400.000000	--	2402.9682	MHz	PASS
T2 20dB	--	2483.500000	2405.0617	MHz	PASS

Verdict

PASS

## FCC 15.247 # Peak power spectral density DTS ~ BT LE 2 Msps

### Test References

TC Start	22.02.2023 16:27:02
Ambit Temp [°C]   Humidity [rel%]	28.3   26
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - BT LE 2 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2478
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

## Test Equipment

---

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

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

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

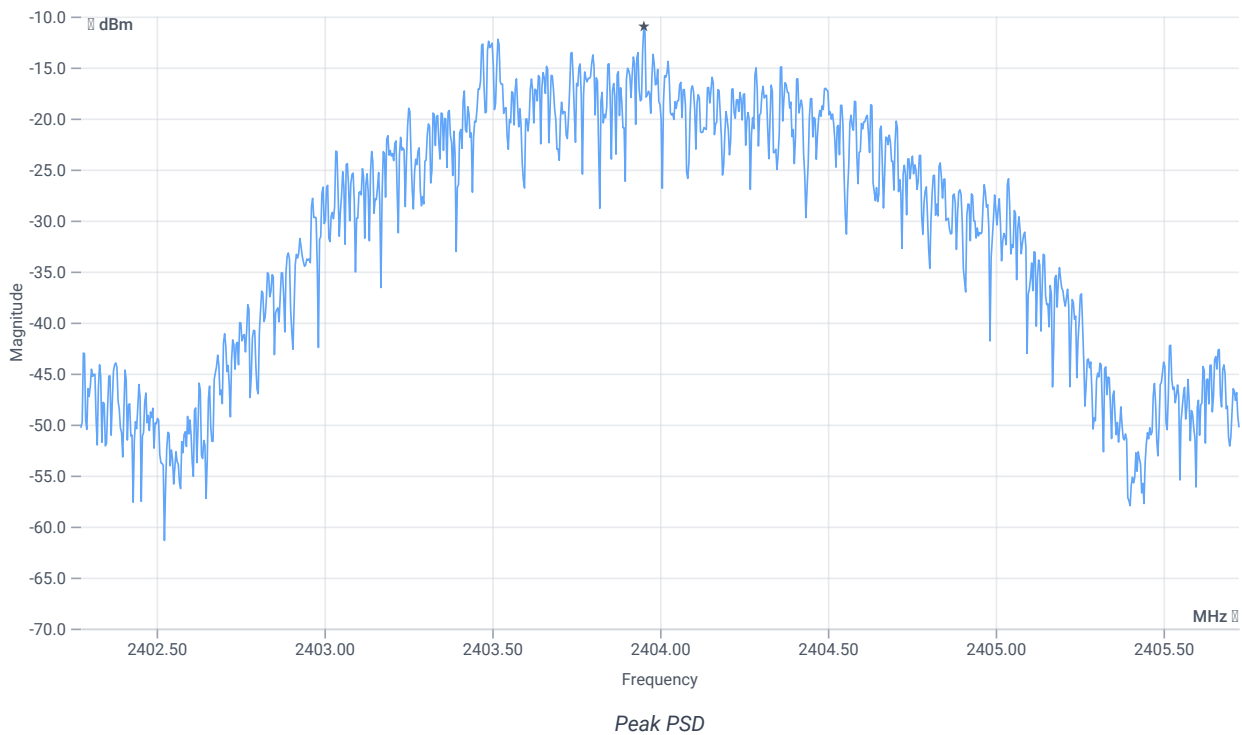
## Test at TX 2404 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	6.78	dBm	INFO
Ref. Frequency	--	--	2403.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	11.78   10.8   20
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

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	--	8	-10.98	dBm/3KHz	PASS

Verdict

PASS

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

### Test References

TC Start	22.02.2023 16:26:31
Ambit Temp [°C]   Humidity [rel%]	28.3   27
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - BT LE 2 Msp
Add. 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	None   HCI   15   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 Msp
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2404
Frequency mid to test	False   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2478
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

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

## Test Equipment

---

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

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

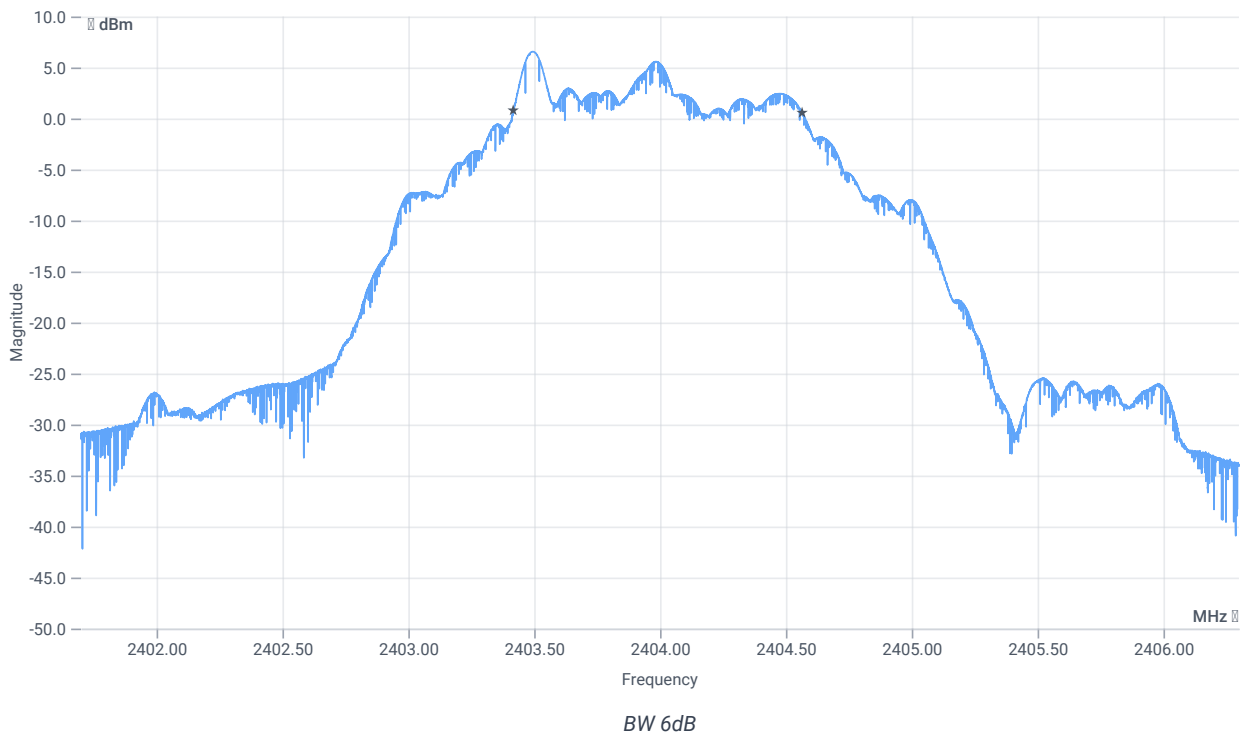
## Test at TX 2404 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	6.64	dBm	INFO
Ref. Frequency	--	--	2404.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	11.64   10.8   20
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

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	--	1148	kHz	PASS

Verdict

PASS



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

## Test References

TC Start	22.02.2023 16:25:48
Ambit Temp [°C]   Humidity [rel%]	28.3   26
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted DTS - BT LE 2 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2478
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

## Test Equipment

---

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

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

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

## Test at TX 2404 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	6.73	dBm	INFO
Ref. Frequency	--	--	2403.500	MHz	INFO

### READ SA SETTINGS:

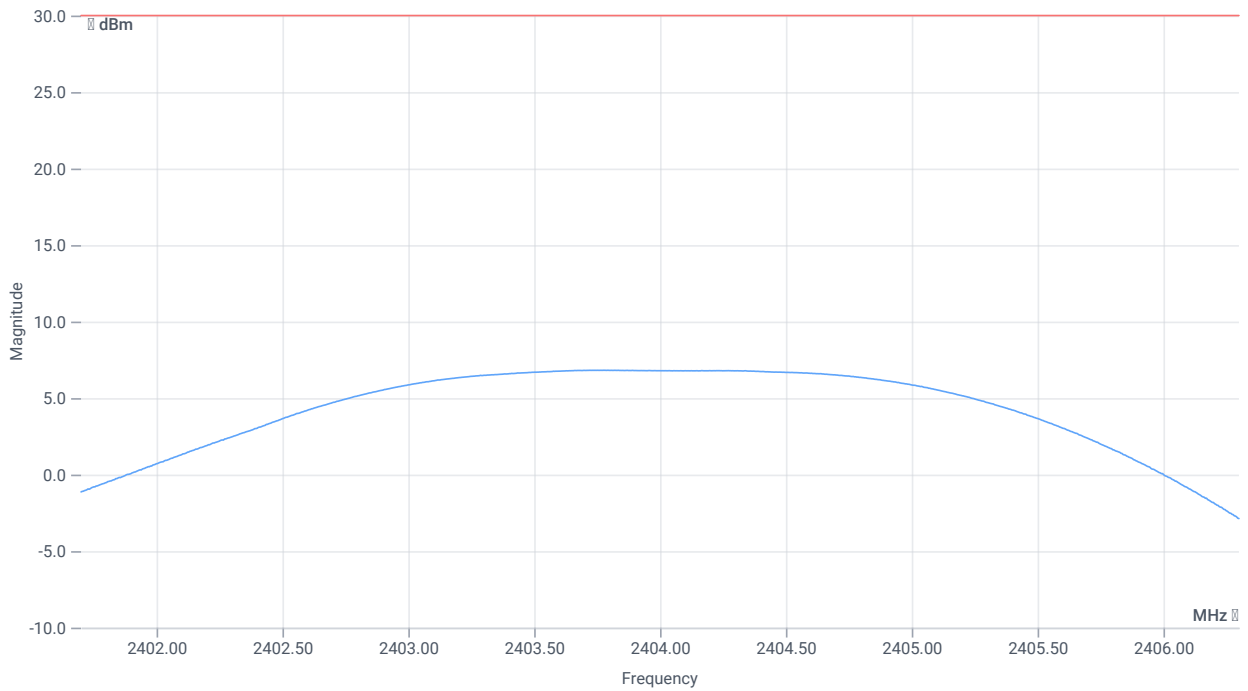
RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	11.73   10.8   20
Start [MHz]   Stop [MHz]	2401.700   2406.300
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	50   200   10001   SWE

### DTS Bandwidth

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	--	--	1149	kHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	16.73   10.8   25
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

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	--	30.00	6.82	dBm	PASS
Peak Power	--	1000	4.808393	mW	PASS
Frequency at Peak	--	--	2403.793	MHz	INFO

Verdict

PASS

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

### Test References

TC Start	22.02.2023 15:52:29
Ambit Temp [°C]   Humidity [rel%]	28.7   25
System Version	3.5.0.2
Test Specification	FCC 15.247 -
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - BT LE 1 Msps
Add. 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	None   HCI   15   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	False   Freq [MHz] 2402
Frequency mid to test	False   Freq [MHz] 2440
Frequency high to test	True   Freq [MHz] 2480
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

## Test Equipment

---

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

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

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