Measurement Results

No.1-3693/21-01-10_Annex_MR_A1

Test logging

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Test/s performed:

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EUT Information

EUT DEFINITION	
Manufacturer	Rosemount
Type	Display with BLE (03031-3513-0001)
Serial Number	NI
Setup Number	1.0
Version SW	SW rev: 0.D2 (transmitter)
Version FW	rev 164 (BLE module).
Version HW	Revision: 05, Circuit diagram rev 25)
Comment 1	
Comment 2	
Temperature [°C] Min	-40
Temperature [°C] Nom	20
Temperature [°C] Max	80
Voltage [V] Min	4.5
Voltage [V] Nom	4.5
Voltage [V] Max	4.5

Common2G4 Peak OP 3MHz/3MHz ~ BT LE 1 Msps

Test References	
TC Start	09.05.2022 17:06:21
Ambit Temp [°C] | Humidity [rel%]	28.0 | 31
System Version	3.0.6.3
Test Specification	None
Test Method	
TC Version	0.0.1
My Description	Peak Output Power conducted 3MHz/3MHz - 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	WS_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

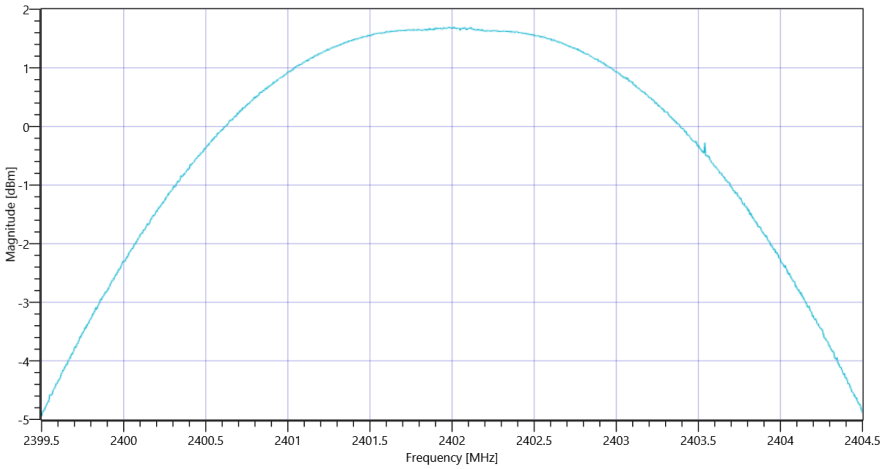
Test Equipment
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.61
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2402 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.70	dBm	INFO
Ref. Frequency	---	---	2401.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	11.70 | 10.79 | 20
Start [MHz] | Stop [MHz]	2399.500 | 2404.500
RBW [MHz] | VBW [MHz]	3.000000 | 3.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 10 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	---	1.69	dBm	INFO
Peak Power	---	---	1.475707	mW	INFO
Frequency at Peak	---	---	2401.985	MHz	INFO



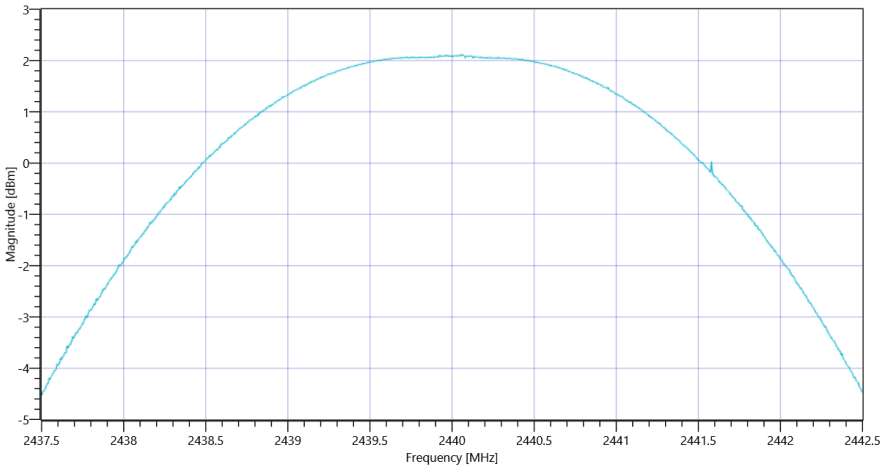
Common2G4 Peak OP 3MHz-3MHz ~ BT LE 1 Msps

Test at TX 2440 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.06	dBm	INFO
Ref. Frequency	---	---	2439.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	12.06 | 10.8 | 20
Start [MHz] | Stop [MHz]	2437.500 | 2442.500
RBW [MHz] | VBW [MHz]	3.000000 | 3.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 10 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	---	2.12	dBm	INFO
Peak Power	---	---	1.629296	mW	INFO
Frequency at Peak	---	---	2440.055	MHz	INFO



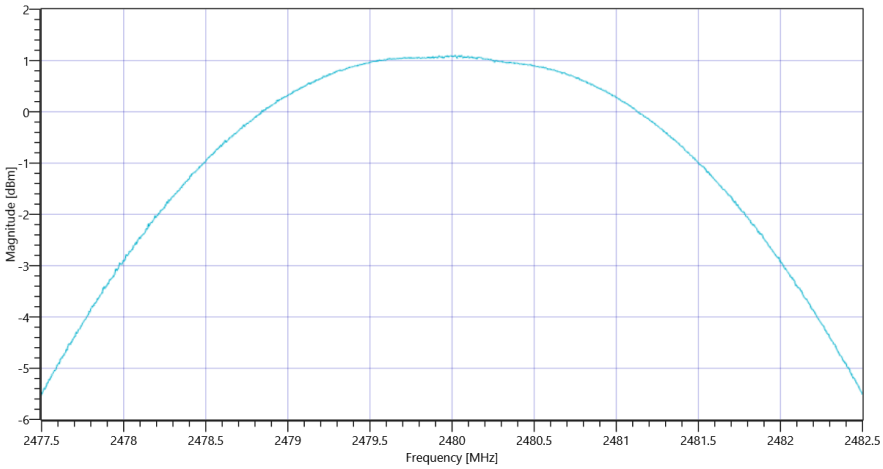
Common2G4 Peak OP 3MHz-3MHz ~ BT LE 1 Msps

Test at TX 2480 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.06	dBm	INFO
Ref. Frequency	---	---	2479.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	11.06 | 10.85 | 20
Start [MHz] | Stop [MHz]	2477.500 | 2482.500
RBW [MHz] | VBW [MHz]	3.000000 | 3.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 10 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	---	1.11	dBm	INFO
Peak Power	---	---	1.291219	mW	INFO
Frequency at Peak	---	---	2480.02	MHz	INFO



Common2G4 Peak OP 3MHz-3MHz ~ BT LE 1 Msps

General verdict	PASS

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

Test References	
TC Start	09.05.2022 17:17:05
Ambit Temp [°C] | Humidity [rel%]	27.6 | 31
System Version	3.0.6.3
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB 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	WS_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

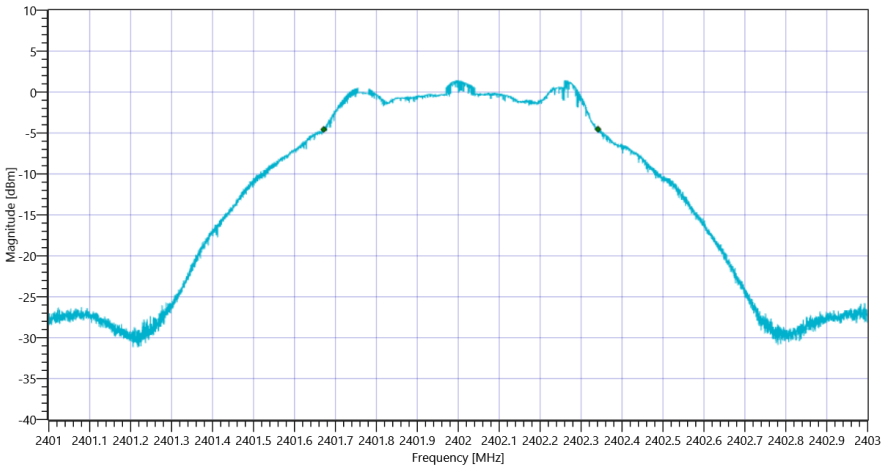
Test Equipment
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.61
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2402 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.69	dBm	INFO
Ref. Frequency	---	---	2401.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.69 | 10.79 | 15
Start [MHz] | Stop [MHz]	2401.000 | 2403.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	670	kHz	PASS



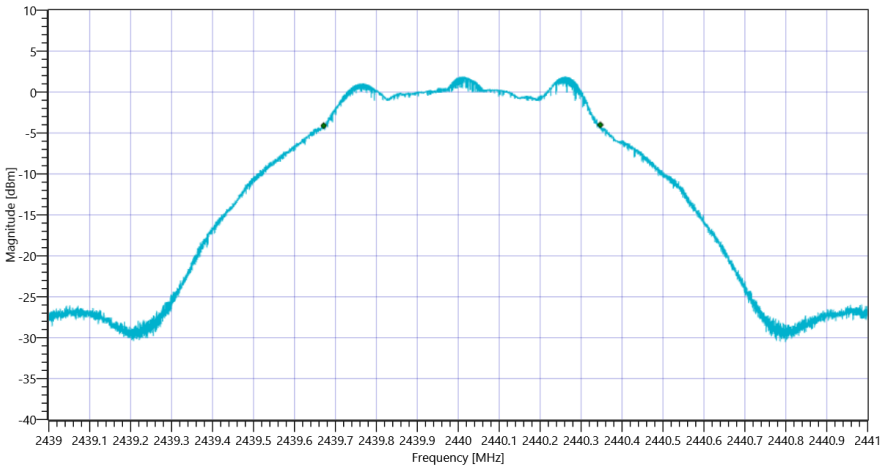
FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps

Test at TX 2440 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.06	dBm	INFO
Ref. Frequency	---	---	2439.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.06 | 10.8 | 15
Start [MHz] | Stop [MHz]	2439.000 | 2441.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	676	kHz	PASS



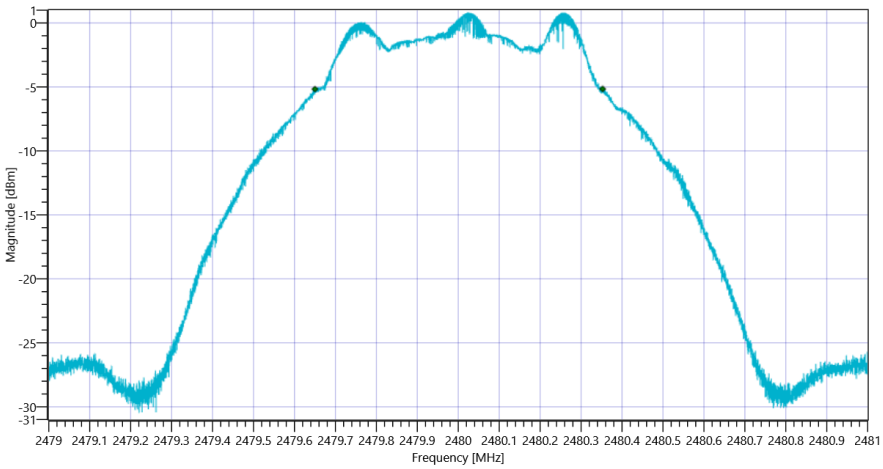
FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps

Test at TX 2480 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.03	dBm	INFO
Ref. Frequency	---	---	2479.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.03 | 10.85 | 15
Start [MHz] | Stop [MHz]	2479.000 | 2481.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	703	kHz	PASS



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

General verdict	PASS

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

Test References	
TC Start	09.05.2022 17:49:25
Ambit Temp [°C] | Humidity [rel%]	27.1 | 32
System Version	3.0.6.3
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB 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	WS_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

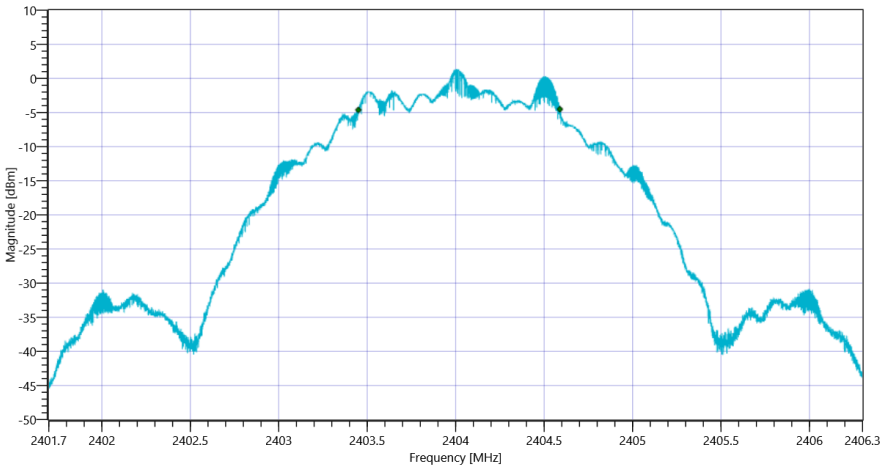
Test Equipment
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.61
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2404 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.66	dBm	INFO
Ref. Frequency	---	---	2403.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.66 | 10.8 | 15
Start [MHz] | Stop [MHz]	2401.700 | 2406.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	1139	kHz	PASS



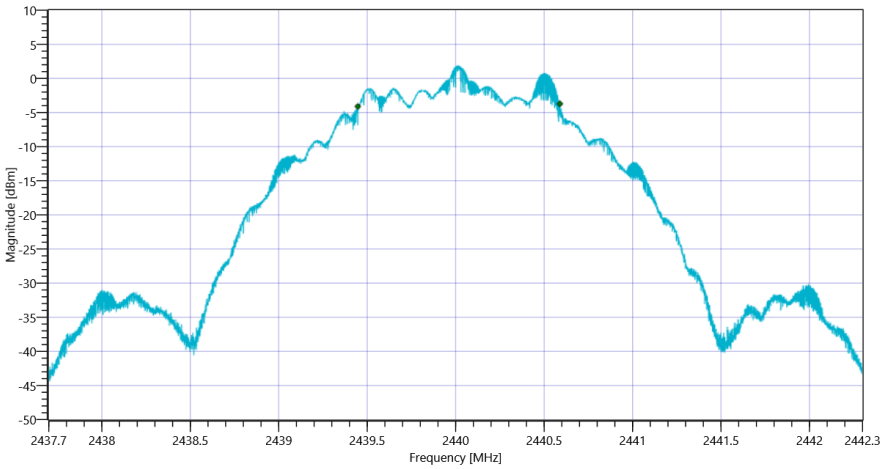
FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 2 Msps

Test at TX 2440 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.09	dBm	INFO
Ref. Frequency	---	---	2439.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.09 | 10.8 | 15
Start [MHz] | Stop [MHz]	2437.700 | 2442.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	1143	kHz	PASS



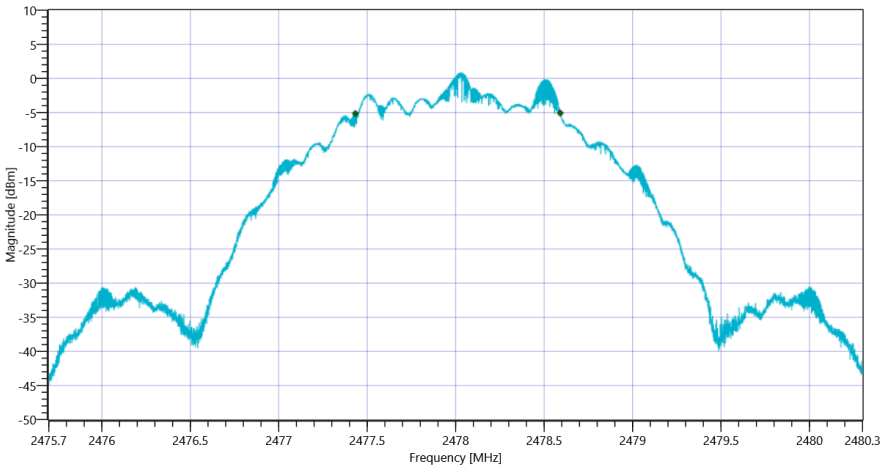
FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 2 Msps

Test at TX 2478 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.12	dBm	INFO
Ref. Frequency	---	---	2478.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.12 | 10.85 | 15
Start [MHz] | Stop [MHz]	2475.700 | 2480.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	1158	kHz	PASS



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

General verdict	PASS

FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps

Test References	
TC Start	09.05.2022 17:20:46
Ambit Temp [°C] | Humidity [rel%]	27.4 | 31
System Version	3.0.6.3
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB 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	WS_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

Test Equipment
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.61
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

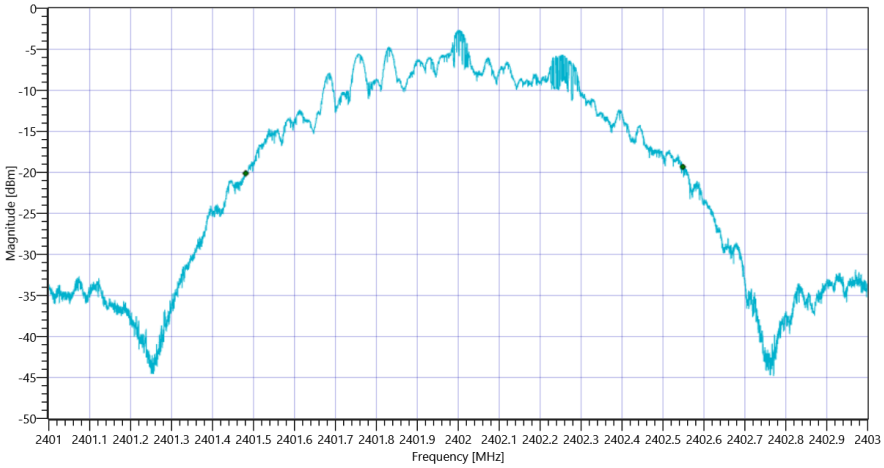
Test at TX 2402 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.69	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.69 | 10.79 | 15
Start [MHz] | Stop [MHz]	2401.000 | 2403.000
RBW [MHz] | VBW [MHz]	0.020000 | 0.100000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

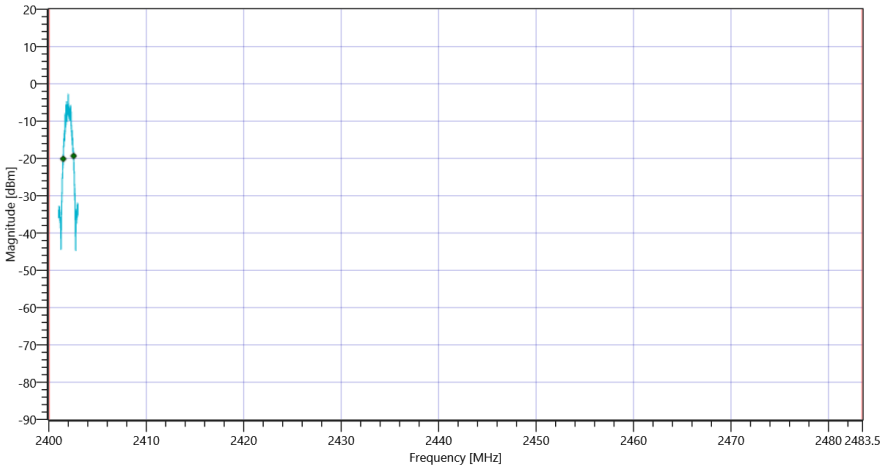
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1067.493	kHz	INFO
T1 99%	2400.000000	---	2401.4809	MHz	PASS
T2 99%	---	2483.500000	2402.5483	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 99PCT

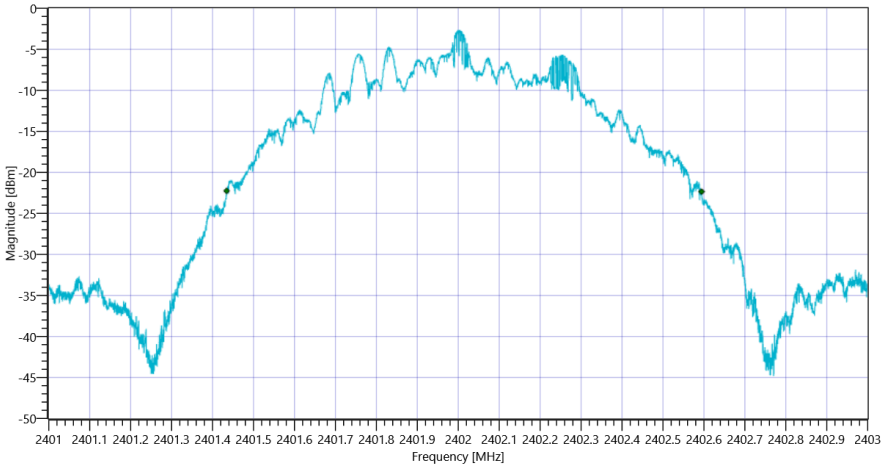
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps

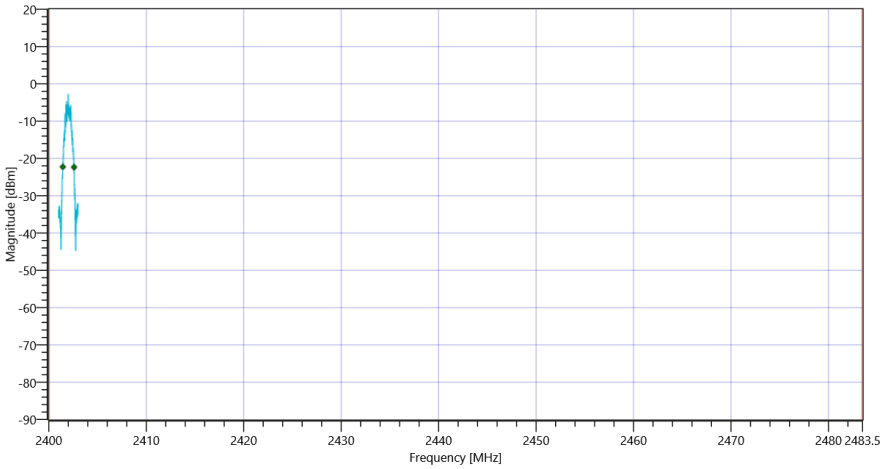
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1160	kHz	INFO
T1 20DB	2400.000000	---	2401.4342	MHz	PASS
T2 20dB	---	2483.500000	2402.5942	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps

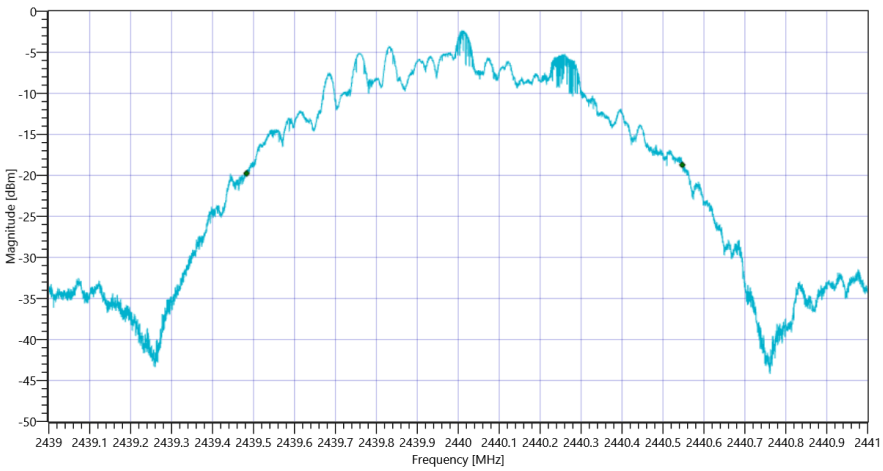
Test at TX 2440 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.10	dBm	INFO
Ref. Frequency	---	---	2440.200	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.10 | 10.8 | 15
Start [MHz] | Stop [MHz]	2439.000 | 2441.000
RBW [MHz] | VBW [MHz]	0.020000 | 0.100000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

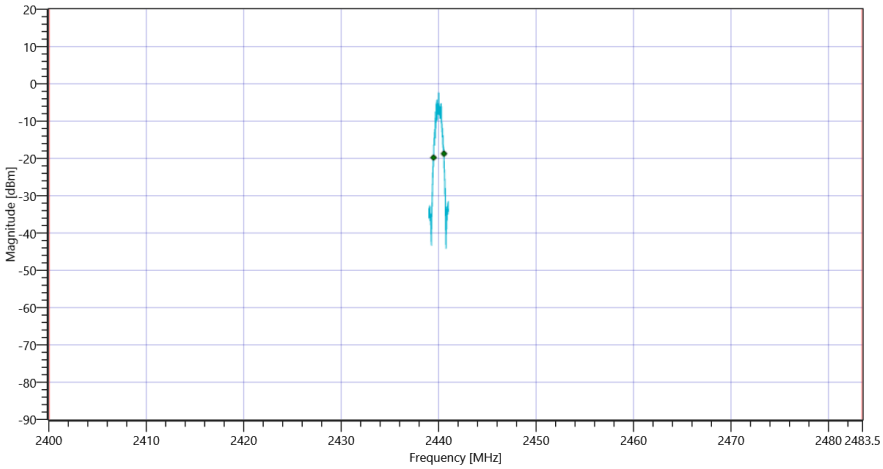
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1064.094	kHz	INFO
T1 99%	2400.000000	---	2439.4831	MHz	PASS
T2 99%	---	2483.500000	2440.5471	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 99PCT

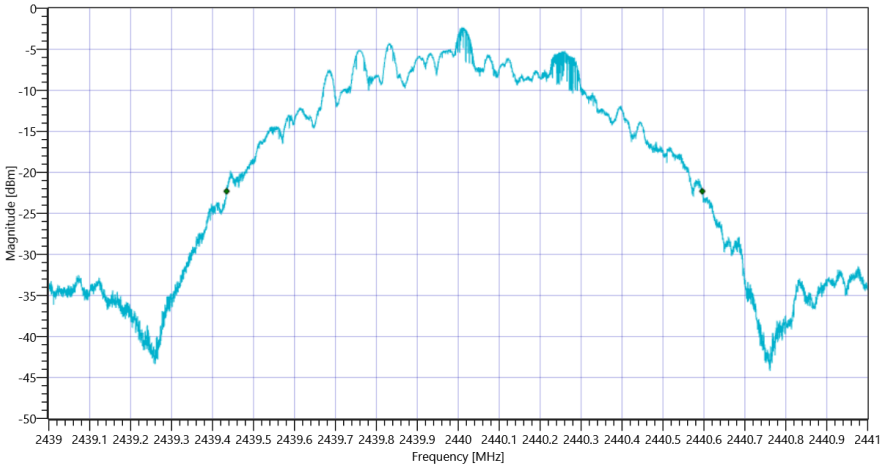
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps

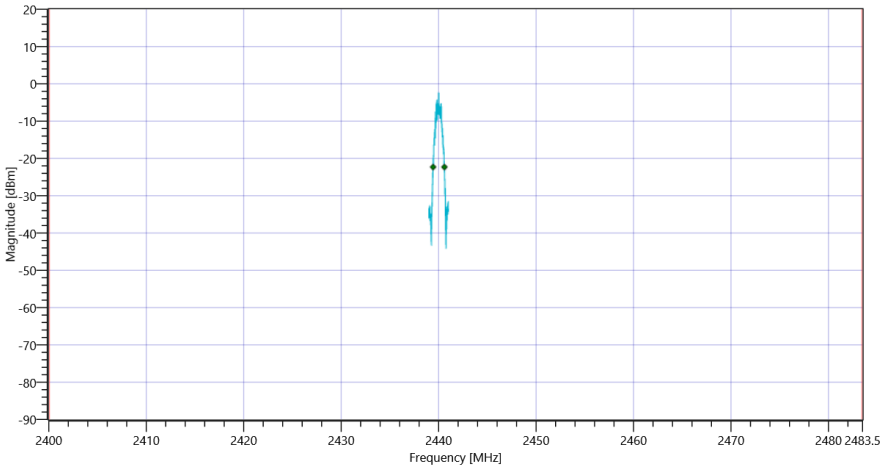
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1162	kHz	INFO
T1 20DB	2400.000000	---	2439.4342	MHz	PASS
T2 20dB	---	2483.500000	2440.5960	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps

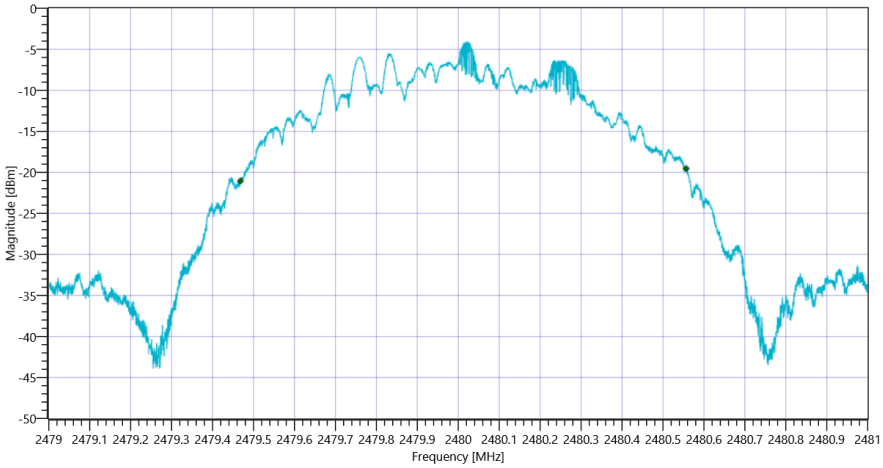
Test at TX 2480 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.05	dBm	INFO
Ref. Frequency	---	---	2479.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.05 | 10.85 | 15
Start [MHz] | Stop [MHz]	2479.000 | 2481.000
RBW [MHz] | VBW [MHz]	0.020000 | 0.100000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

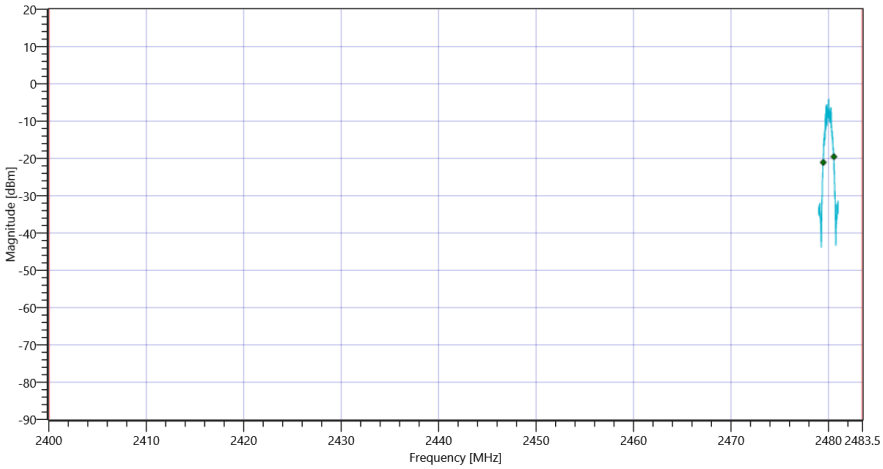
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1088.491	kHz	INFO
T1 99%	2400.000000	---	2479.4681	MHz	PASS
T2 99%	---	2483.500000	2480.5565	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 99PCT

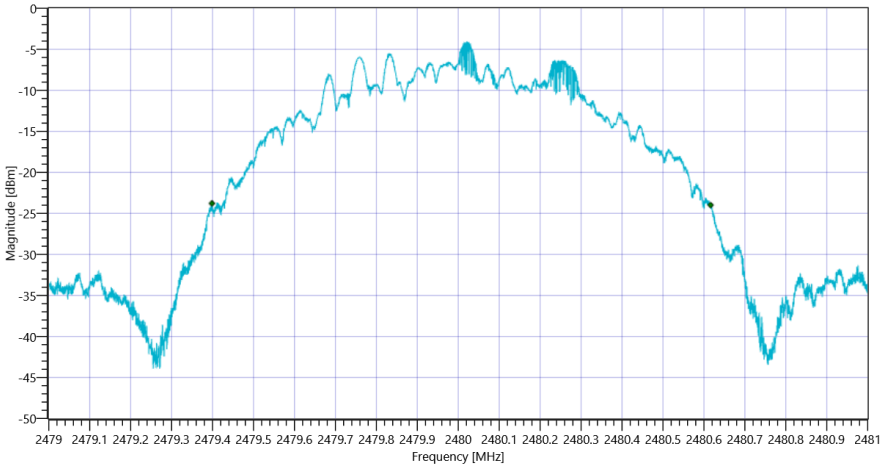
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps

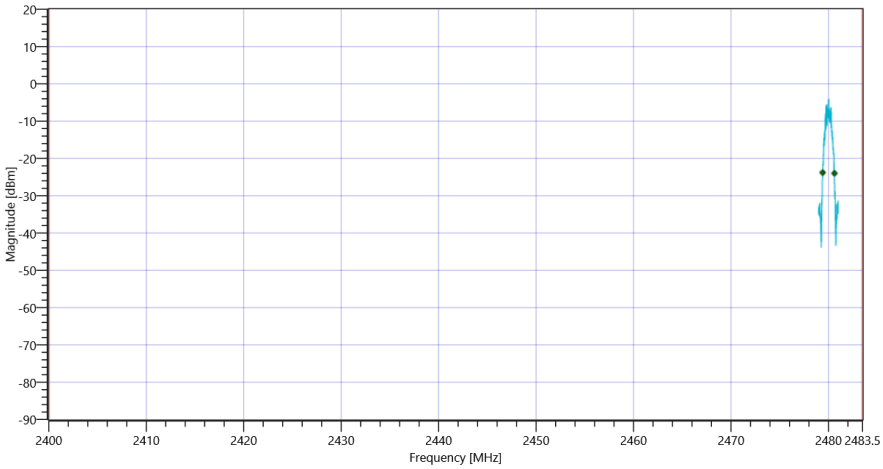
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1218	kHz	INFO
T1 20DB	2400.000000	---	2479.3984	MHz	PASS
T2 20dB	---	2483.500000	2480.6162	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps

General verdict	PASS

FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps

Test References	
TC Start	09.05.2022 17:53:08
Ambit Temp [°C] | Humidity [rel%]	27.2 | 32
System Version	3.0.6.3
Test Specification	FCC Part 15.247
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	WS_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

Test Equipment
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.61
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

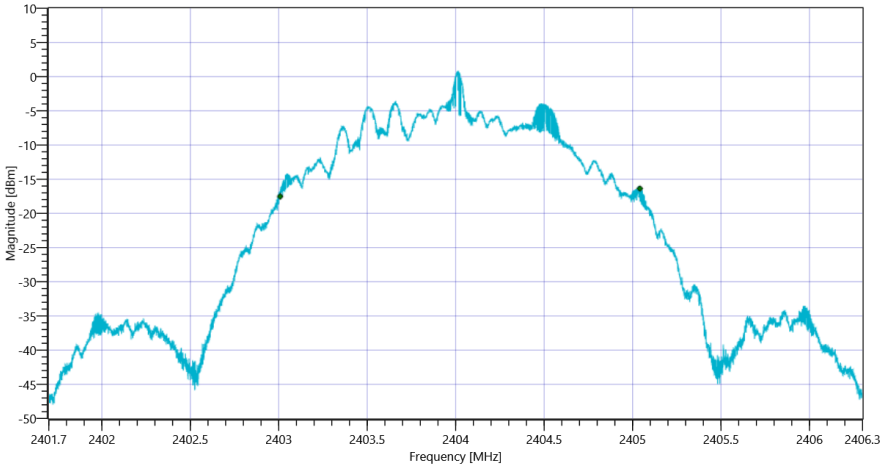
Test at TX 2404 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.65	dBm	INFO
Ref. Frequency	---	---	2403.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.65 | 10.8 | 15
Start [MHz] | Stop [MHz]	2401.700 | 2406.300
RBW [MHz] | VBW [MHz]	0.050000 | 0.200000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

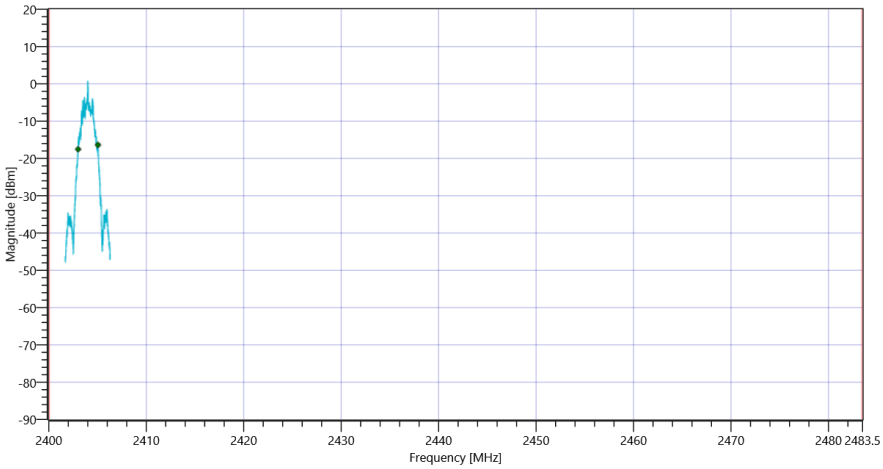
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	2033.457	kHz	INFO
T1 99%	2400.000000	---	2403.0079	MHz	PASS
T2 99%	---	2483.500000	2405.0413	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 99PCT

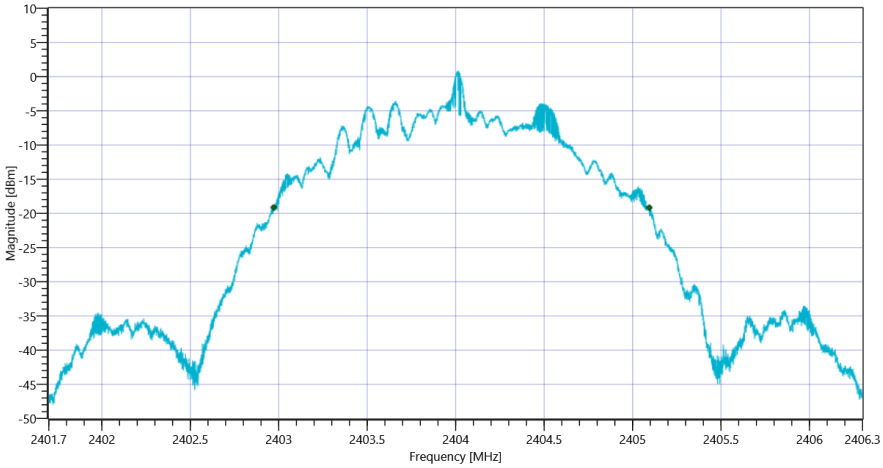
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps

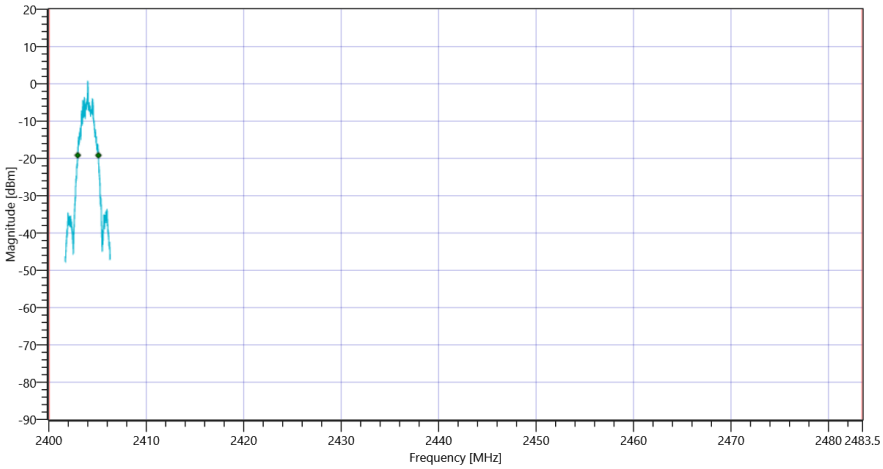
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	2123	kHz	INFO
T1 20DB	2400.000000	---	2402.9710	MHz	PASS
T2 20dB	---	2483.500000	2405.0943	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps

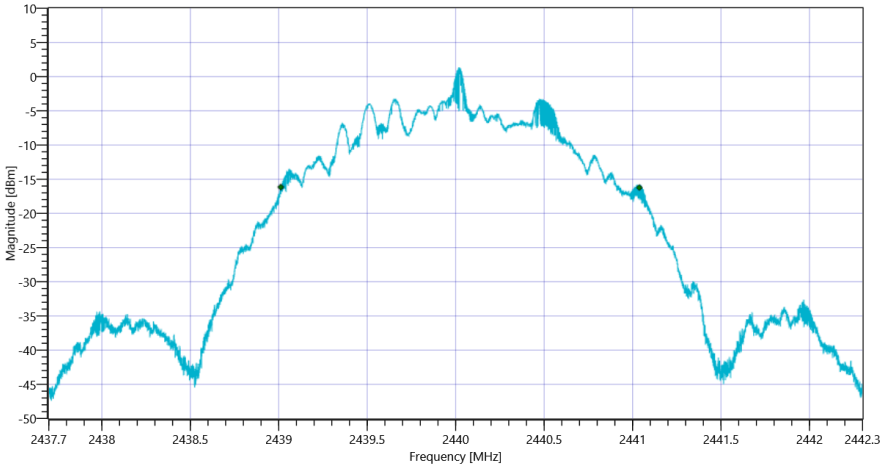
Test at TX 2440 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.06	dBm	INFO
Ref. Frequency	---	---	2439.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.06 | 10.8 | 15
Start [MHz] | Stop [MHz]	2437.700 | 2442.300
RBW [MHz] | VBW [MHz]	0.050000 | 0.200000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

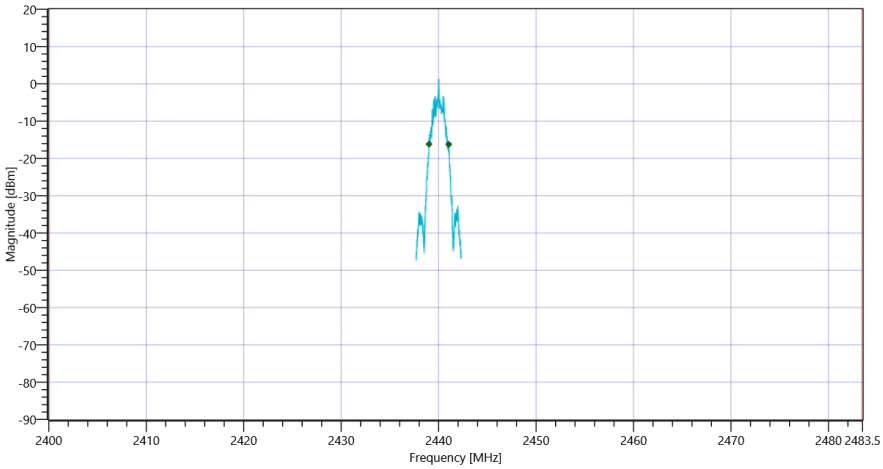
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	2026.557	kHz	INFO
T1 99%	2400.000000	---	2439.0116	MHz	PASS
T2 99%	---	2483.500000	2441.0381	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 99PCT

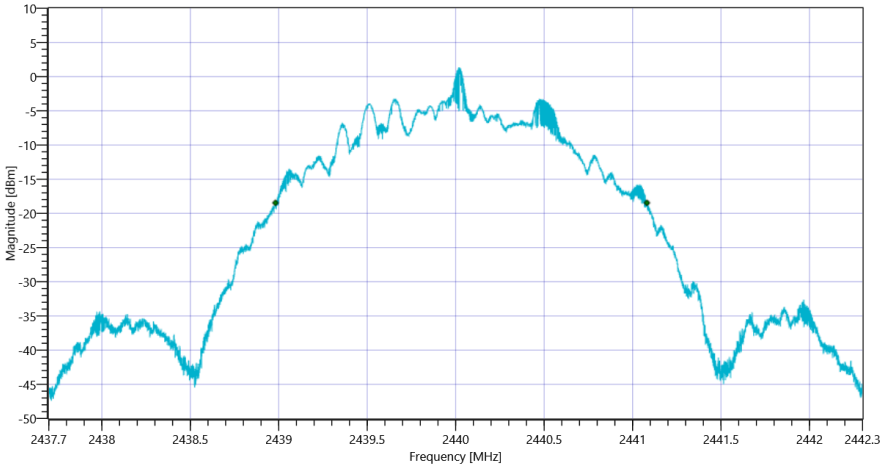
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps

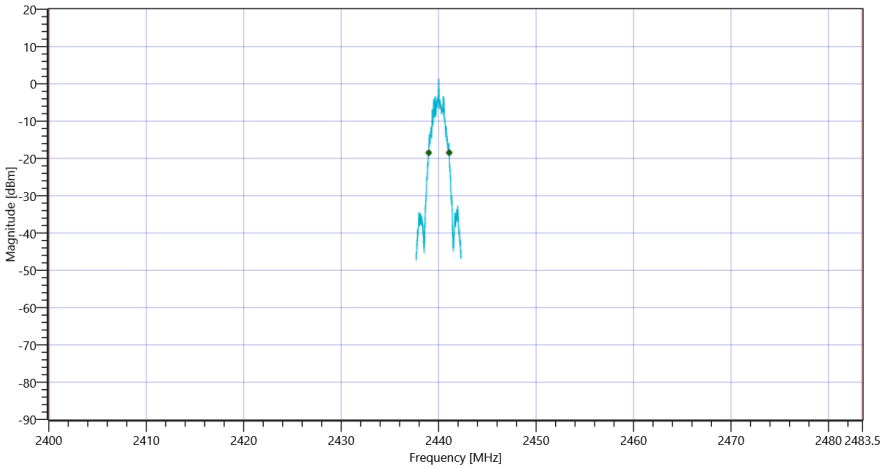
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	2100	kHz	INFO
T1 20DB	2400.000000	---	2438.9811	MHz	PASS
T2 20dB	---	2483.500000	2441.0810	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps

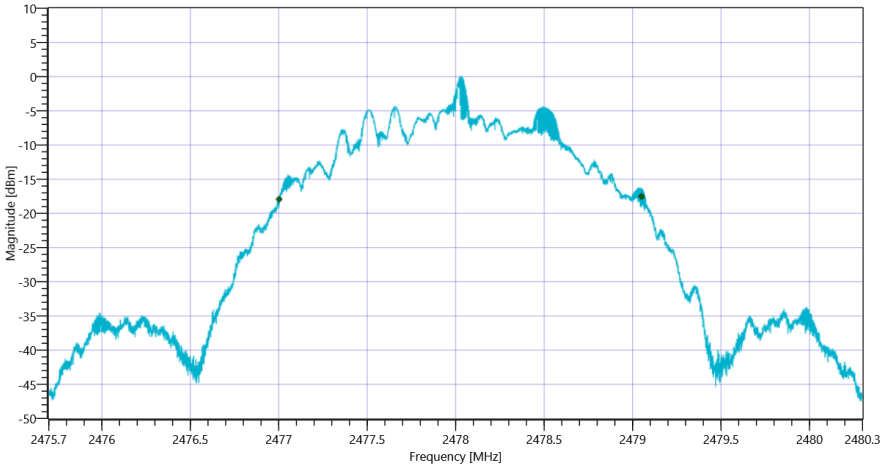
Test at TX 2478 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.15	dBm	INFO
Ref. Frequency	---	---	2478.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.15 | 10.85 | 15
Start [MHz] | Stop [MHz]	2475.700 | 2480.300
RBW [MHz] | VBW [MHz]	0.050000 | 0.200000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

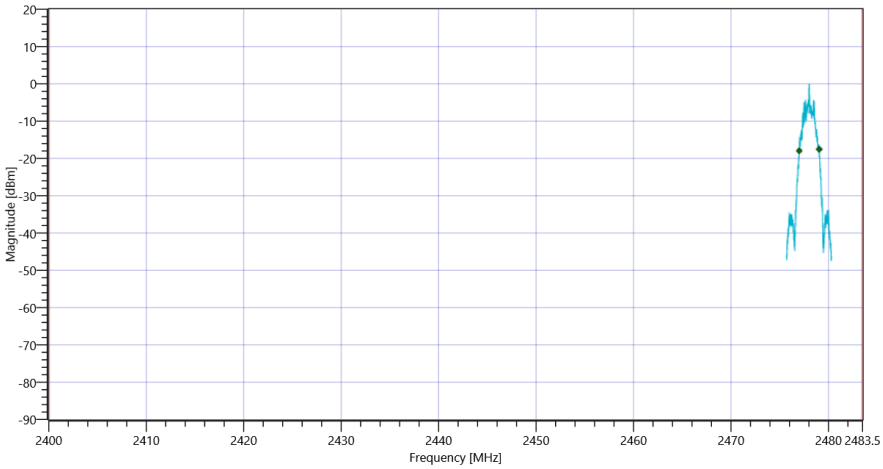
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	2050.015	kHz	INFO
T1 99%	2400.000000	---	2477.0014	MHz	PASS
T2 99%	---	2483.500000	2479.0515	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 99PCT

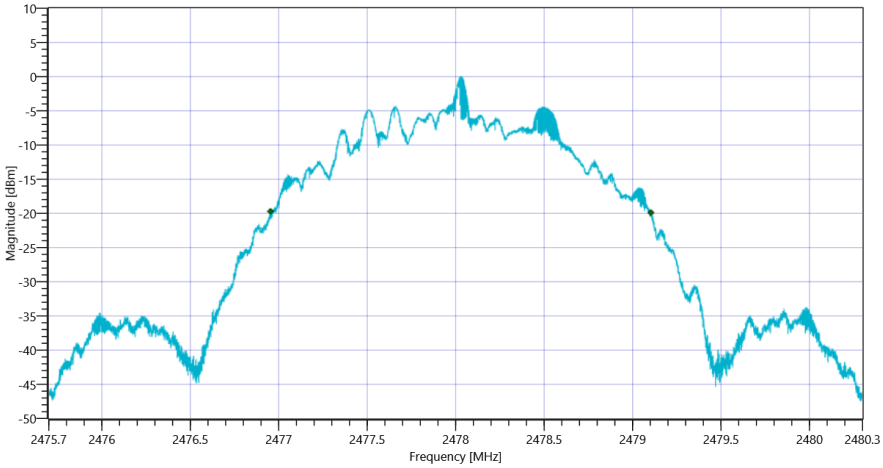
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps

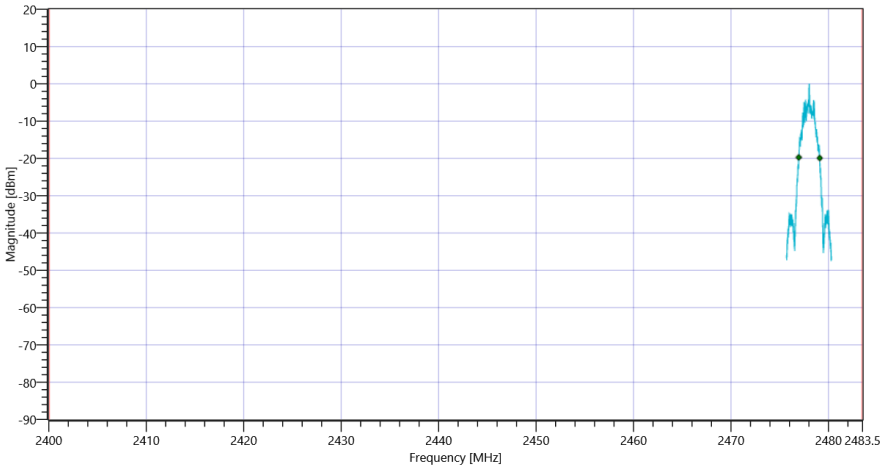
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	2151	kHz	INFO
T1 20DB	2400.000000	---	2476.9530	MHz	PASS
T2 20dB	---	2483.500000	2479.1040	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps

General verdict	PASS

FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps

Test References	
TC Start	09.05.2022 17:14:35
Ambit Temp [°C] | Humidity [rel%]	27.7 | 31
System Version	3.0.6.3
Test Specification	FCC Part 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 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	WS_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

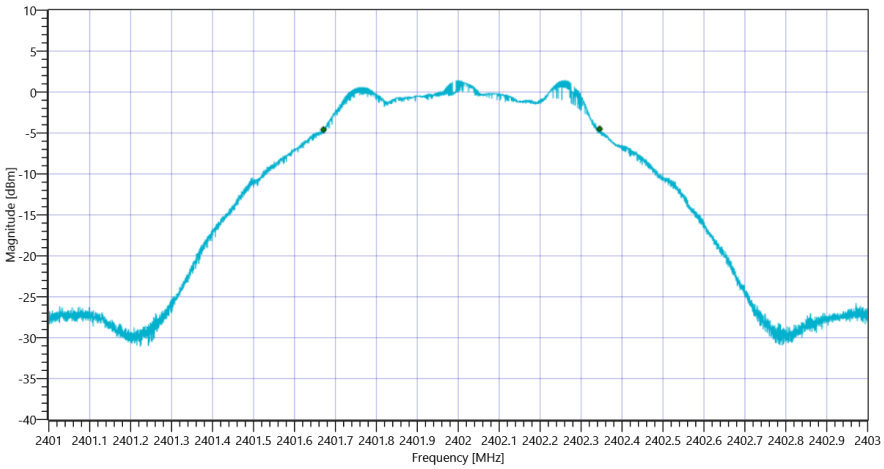
Test Equipment
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.61
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2402 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.71	dBm	INFO
Ref. Frequency	---	---	2401.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.71 | 10.79 | 15
Start [MHz] | Stop [MHz]	2401.000 | 2403.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

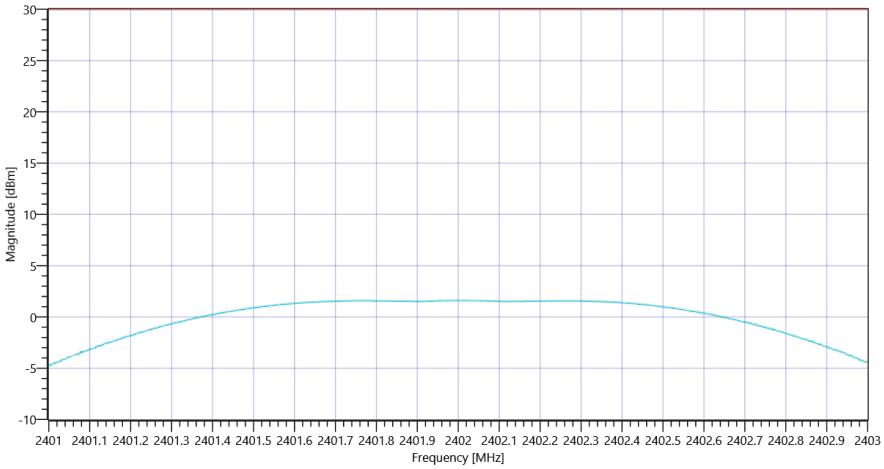
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	674	kHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	11.71 | 10.79 | 20
Start [MHz] | Stop [MHz]	2401.000 | 2403.000
RBW [MHz] | VBW [MHz]	1.000000 | 5.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	1.61	dBm	PASS
Peak Power	---	1000	1.448772	mW	PASS
Frequency at Peak	---	---	2402	MHz	INFO



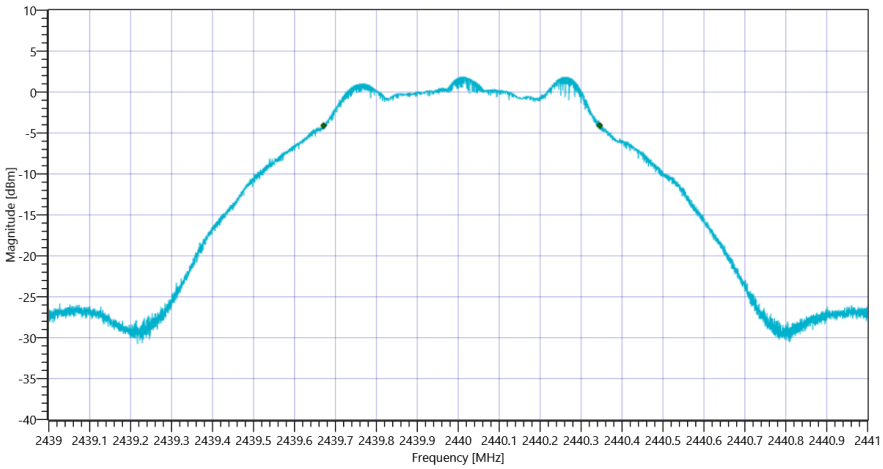
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps

Test at TX 2440 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.06	dBm	INFO
Ref. Frequency	---	---	2439.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.06 | 10.8 | 15
Start [MHz] | Stop [MHz]	2439.000 | 2441.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

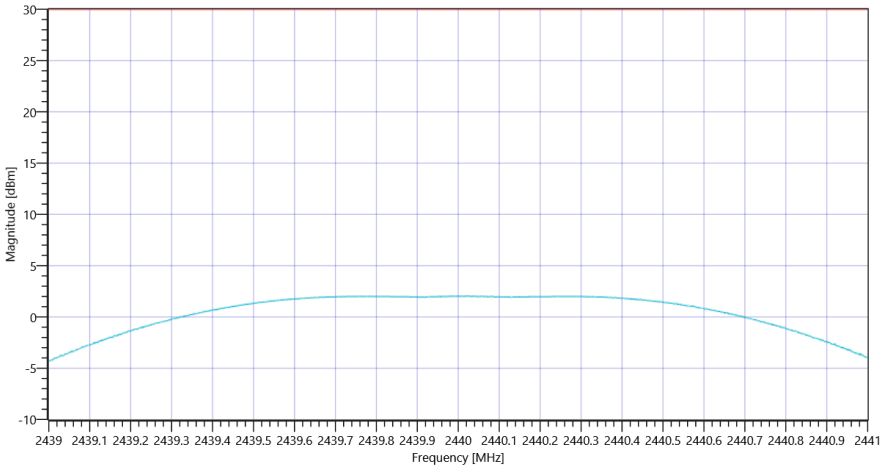
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	674	kHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	12.06 | 10.8 | 20
Start [MHz] | Stop [MHz]	2439.000 | 2441.000
RBW [MHz] | VBW [MHz]	1.000000 | 5.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	2.04	dBm	PASS
Peak Power	---	1000	1.599558	mW	PASS
Frequency at Peak	---	---	2439.992	MHz	INFO



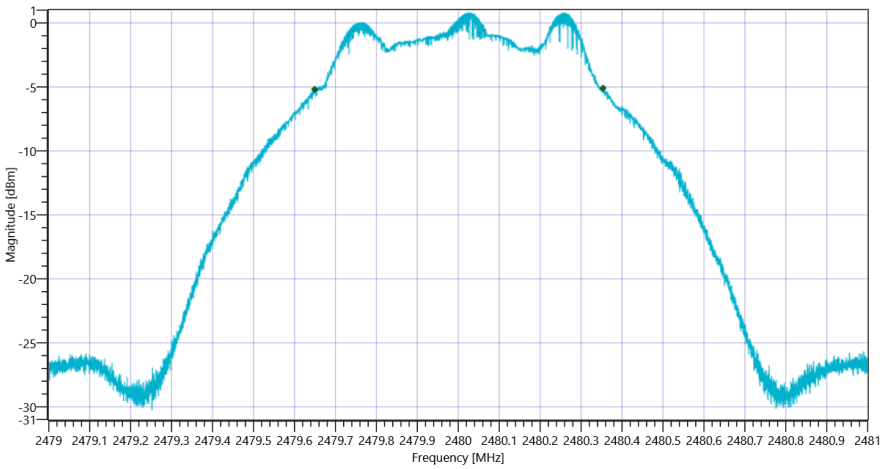
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps

Test at TX 2480 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.05	dBm	INFO
Ref. Frequency	---	---	2479.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.05 | 10.85 | 15
Start [MHz] | Stop [MHz]	2479.000 | 2481.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

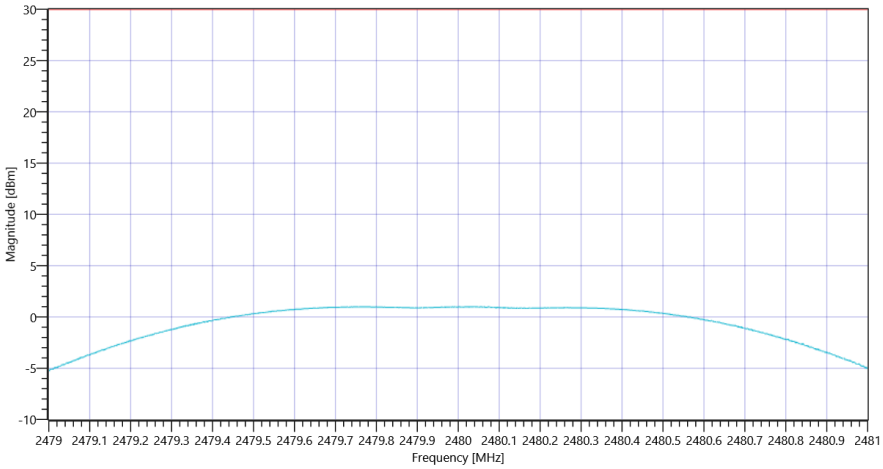
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	705	kHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	11.05 | 10.85 | 20
Start [MHz] | Stop [MHz]	2479.000 | 2481.000
RBW [MHz] | VBW [MHz]	1.000000 | 5.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	0.99	dBm	PASS
Peak Power	---	1000	1.25603	mW	PASS
Frequency at Peak	---	---	2480.02	MHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps

General verdict	PASS

FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps

Test References	
TC Start	09.05.2022 17:46:53
Ambit Temp [°C] | Humidity [rel%]	27.2 | 32
System Version	3.0.6.3
Test Specification	FCC Part 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	WS_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

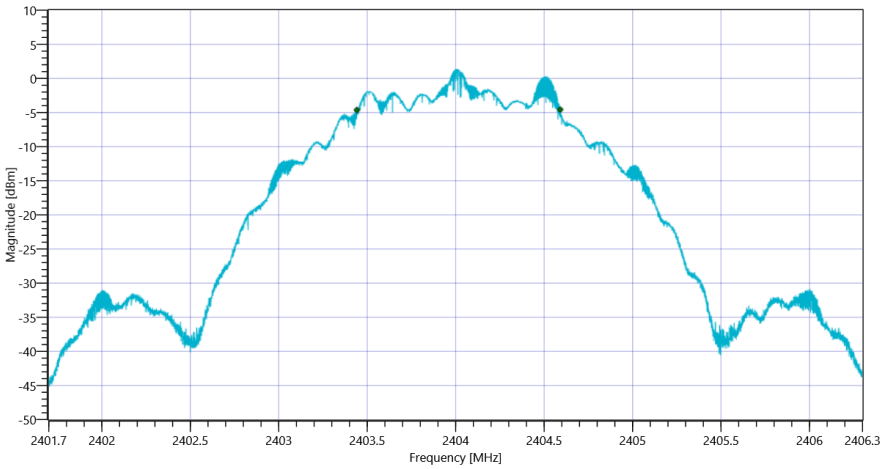
Test Equipment
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.61
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2404 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.61	dBm	INFO
Ref. Frequency	---	---	2403.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.61 | 10.8 | 15
Start [MHz] | Stop [MHz]	2401.700 | 2406.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

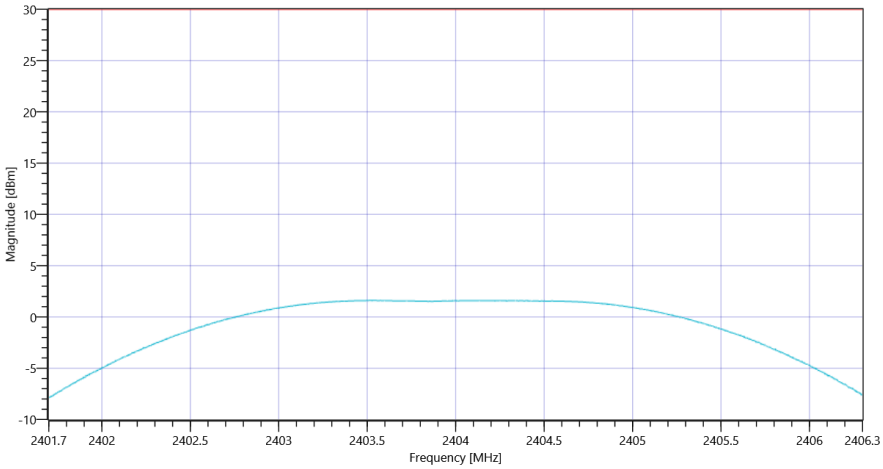
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1149	kHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps DTS BW

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	11.61 | 10.8 | 20
Start [MHz] | Stop [MHz]	2401.700 | 2406.300
RBW [MHz] | VBW [MHz]	2.000000 | 5.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	1.61	dBm	PASS
Peak Power	---	1000	1.448772	mW	PASS
Frequency at Peak	---	---	2403.518	MHz	INFO



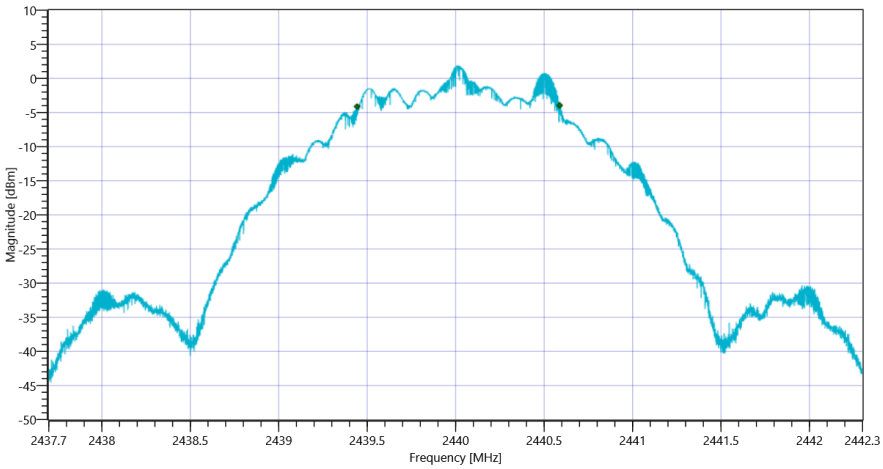
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps

Test at TX 2440 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.06	dBm	INFO
Ref. Frequency	---	---	2439.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.06 | 10.8 | 15
Start [MHz] | Stop [MHz]	2437.700 | 2442.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

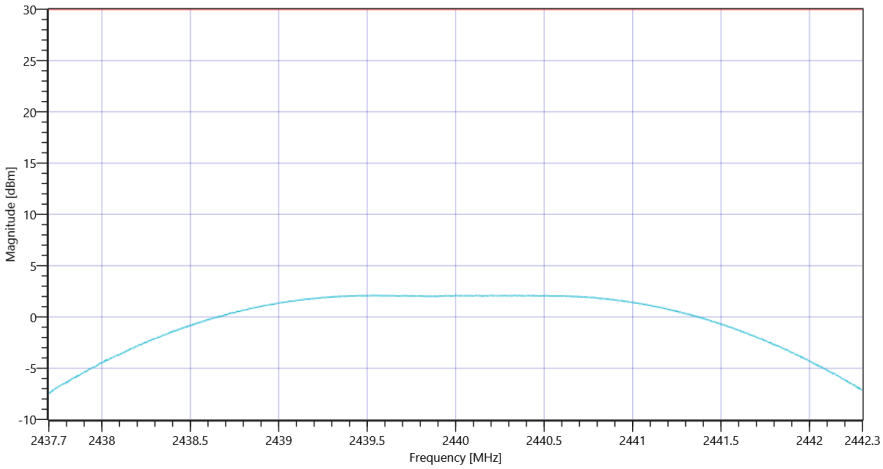
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1145	kHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps DTS BW

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	12.06 | 10.8 | 20
Start [MHz] | Stop [MHz]	2437.700 | 2442.300
RBW [MHz] | VBW [MHz]	2.000000 | 5.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	2.1	dBm	PASS
Peak Power	---	1000	1.62181	mW	PASS
Frequency at Peak	---	---	2440.409	MHz	INFO



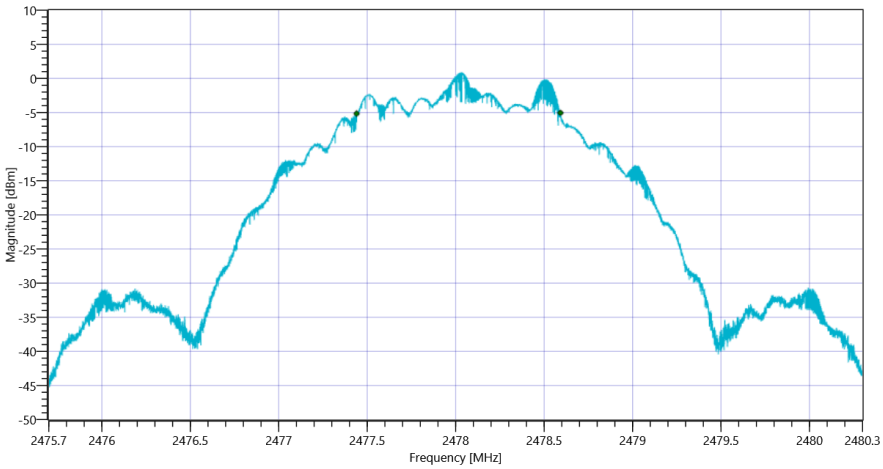
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps

Test at TX 2478 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.16	dBm	INFO
Ref. Frequency	---	---	2478.600	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.16 | 10.85 | 15
Start [MHz] | Stop [MHz]	2475.700 | 2480.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

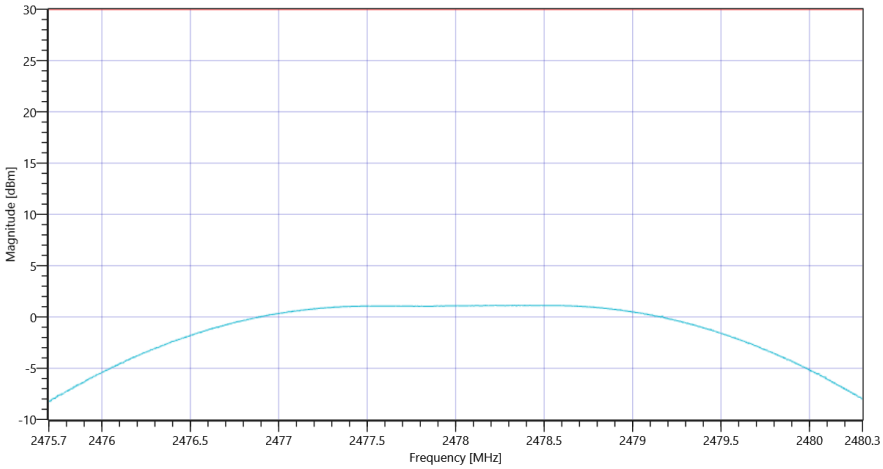
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1153	kHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps DTS BW

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	11.16 | 10.85 | 20
Start [MHz] | Stop [MHz]	2475.700 | 2480.300
RBW [MHz] | VBW [MHz]	2.000000 | 5.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	1.13	dBm	PASS
Peak Power	---	1000	1.297179	mW	PASS
Frequency at Peak	---	---	2478.322	MHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps

General verdict	PASS

FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps

Test References	
TC Start	09.05.2022 17:18:41
Ambit Temp [°C] | Humidity [rel%]	27.6 | 31
System Version	3.0.6.3
Test Specification	FCC Part 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 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	WS_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

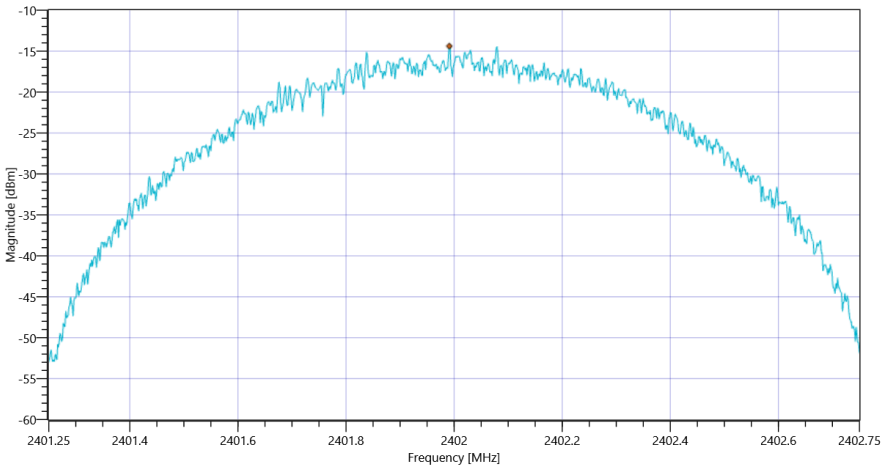
Test Equipment
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.61
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2402 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.72	dBm	INFO
Ref. Frequency	---	---	2401.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.72 | 10.79 | 15
Start [MHz] | Stop [MHz]	2401.250 | 2402.750
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-14.39	dBm/3KHz	PASS



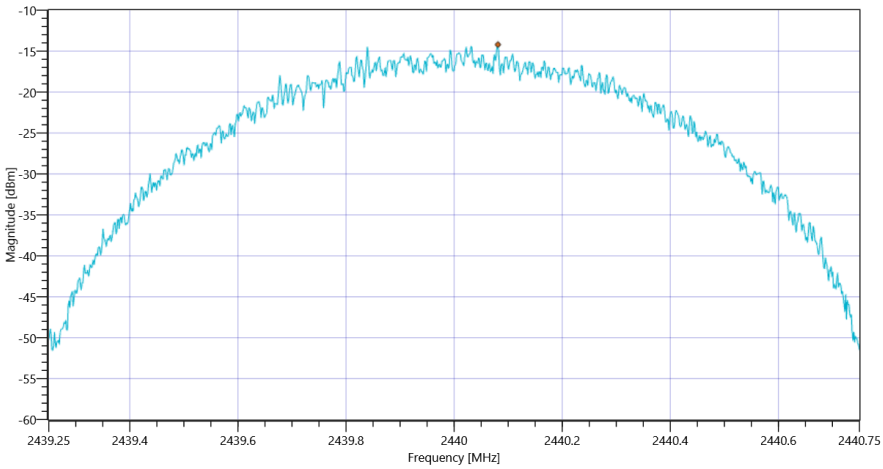
FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps

Test at TX 2440 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.05	dBm	INFO
Ref. Frequency	---	---	2439.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.05 | 10.8 | 15
Start [MHz] | Stop [MHz]	2439.250 | 2440.750
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-14.2	dBm/3KHz	PASS



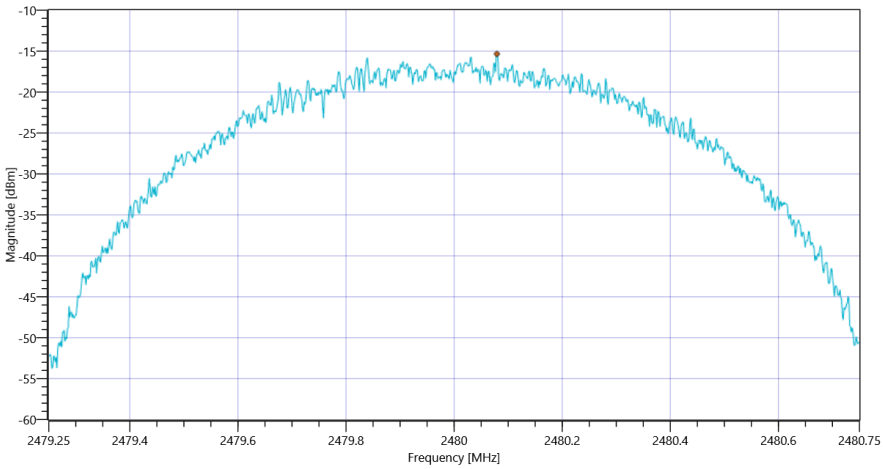
FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps

Test at TX 2480 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.07	dBm	INFO
Ref. Frequency	---	---	2479.700	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.07 | 10.85 | 15
Start [MHz] | Stop [MHz]	2479.250 | 2480.750
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-15.34	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps

General verdict	PASS

FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps

Test References	
TC Start	09.05.2022 17:51:02
Ambit Temp [°C] | Humidity [rel%]	27.2 | 32
System Version	3.0.6.3
Test Specification	FCC Part 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	WS_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

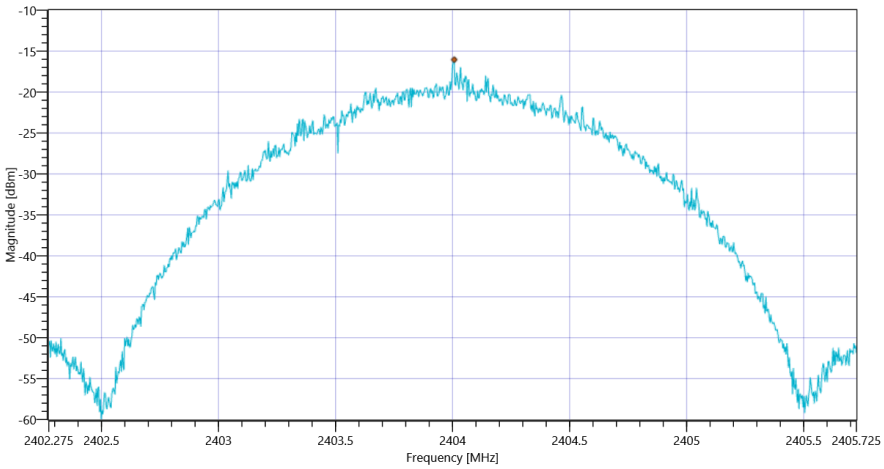
Test Equipment
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.61
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2404 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.69	dBm	INFO
Ref. Frequency	---	---	2403.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.69 | 10.8 | 15
Start [MHz] | Stop [MHz]	2402.275 | 2405.725
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-16.04	dBm/3KHz	PASS



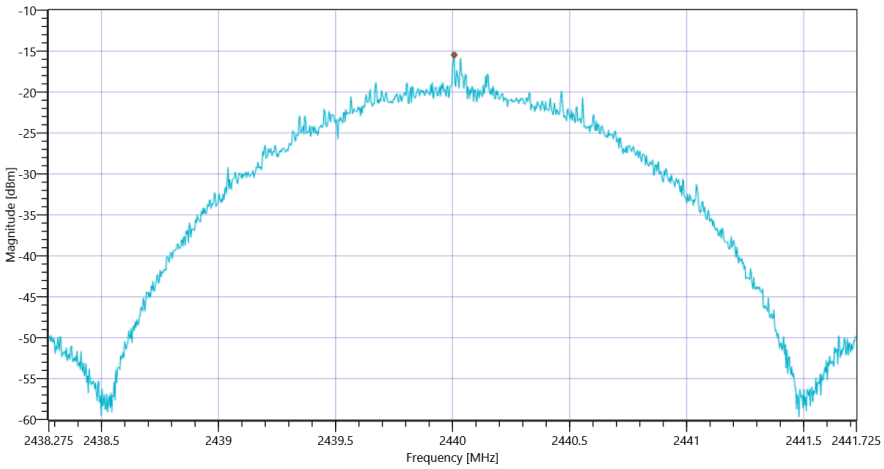
FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps

Test at TX 2440 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.04	dBm	INFO
Ref. Frequency	---	---	2439.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.04 | 10.8 | 15
Start [MHz] | Stop [MHz]	2438.275 | 2441.725
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-15.45	dBm/3KHz	PASS



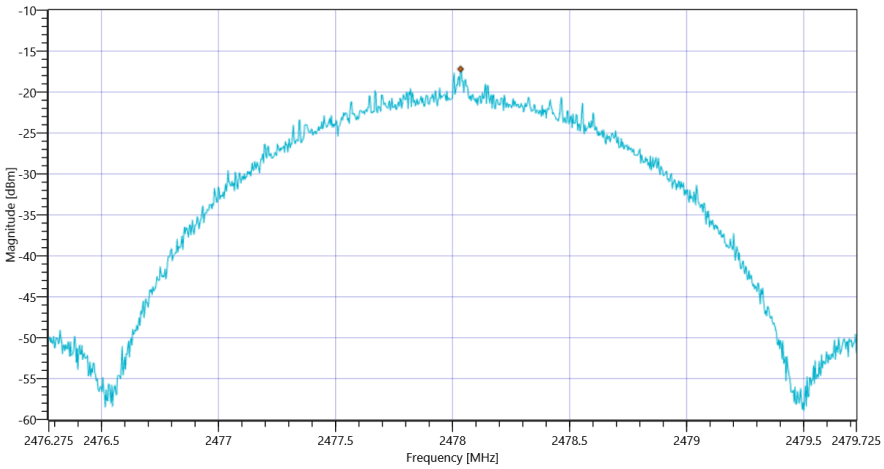
FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps

Test at TX 2478 MHz

RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.14	dBm	INFO
Ref. Frequency	---	---	2478.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	6.14 | 10.85 | 15
Start [MHz] | Stop [MHz]	2476.275 | 2479.725
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-17.19	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps

General verdict	PASS

FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 1 Msps

Test References	
TC Start	09.05.2022 17:23:33
Ambit Temp [°C] | Humidity [rel%]	27.4 | 31
System Version	3.0.6.3
Test Specification	FCC Part 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	WS_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

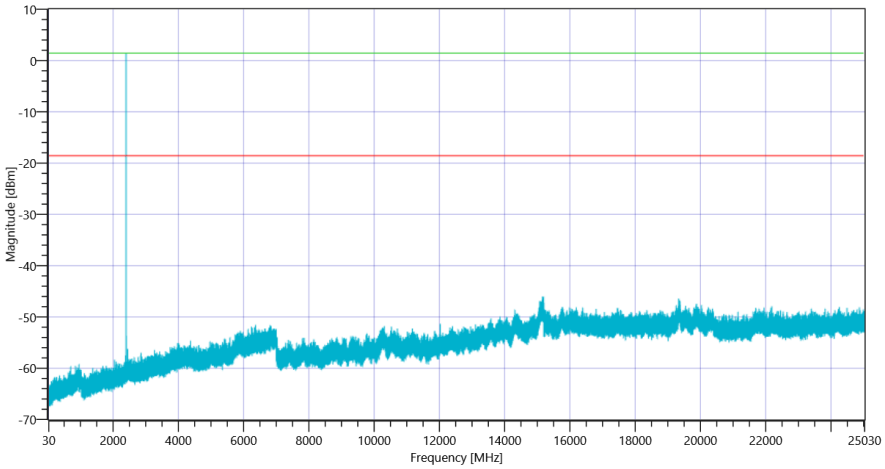
Test Equipment
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.61
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2402 MHz

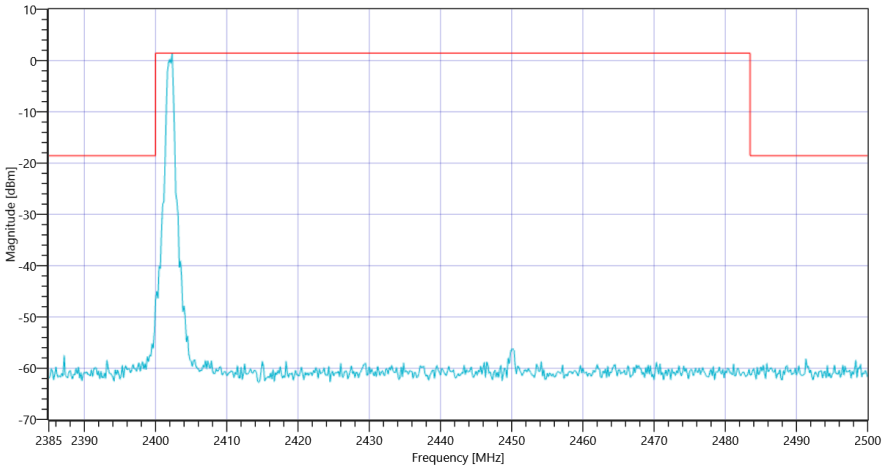
RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.70	dBm	INFO
Ref. Frequency	---	---	2401.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	1.70 | 0 | 20
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

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2402.33 MHz	---	---	1.44	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 15163.5 MHz	0	---	27.45	dB	INFO



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 1 Msps 2402



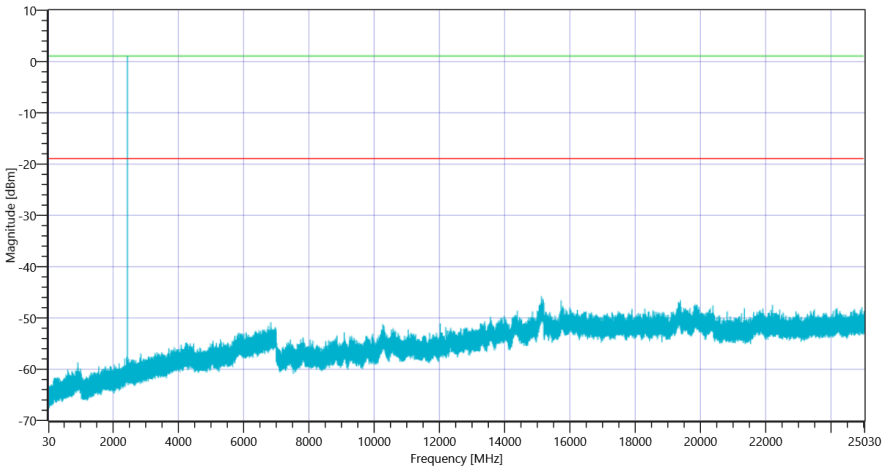
FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 1 Msps 2402

Test at TX 2440 MHz

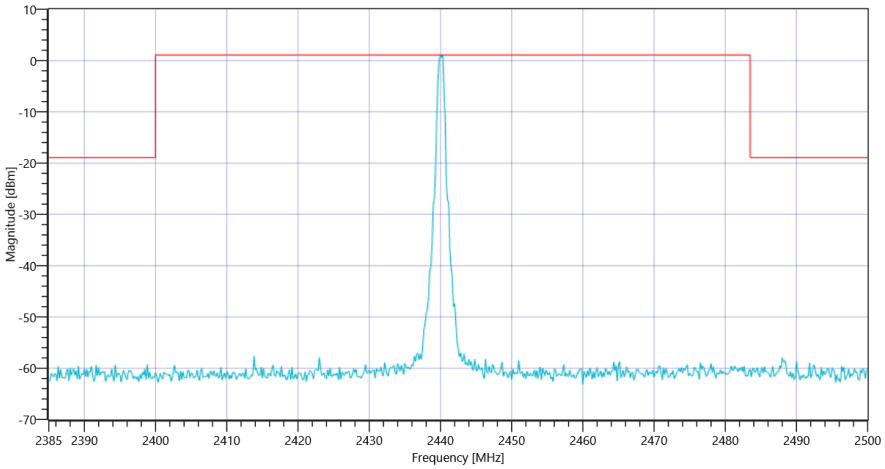
RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.07	dBm	INFO
Ref. Frequency	---	---	2439.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	2.07 | 0 | 20
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

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2440.00 MHz	---	---	1.08	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 15132.167 MHz	0	---	26.86	dB	INFO



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 1 Msps 2440



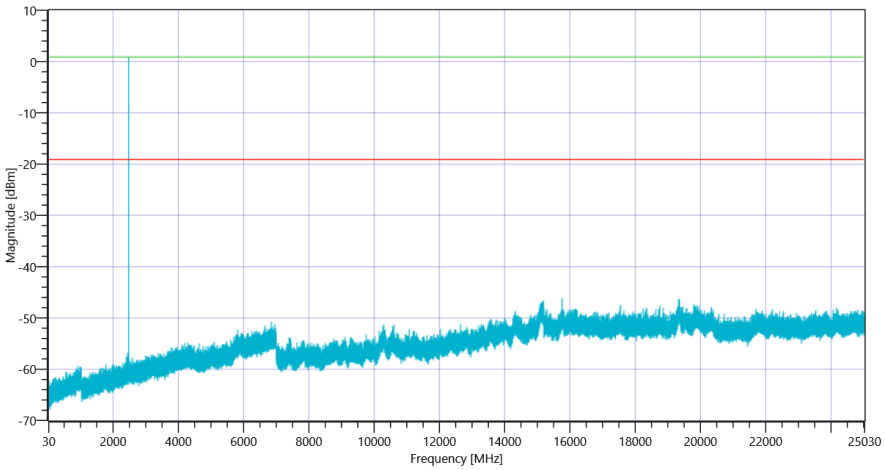
FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 1 Msps 2440

Test at TX 2480 MHz

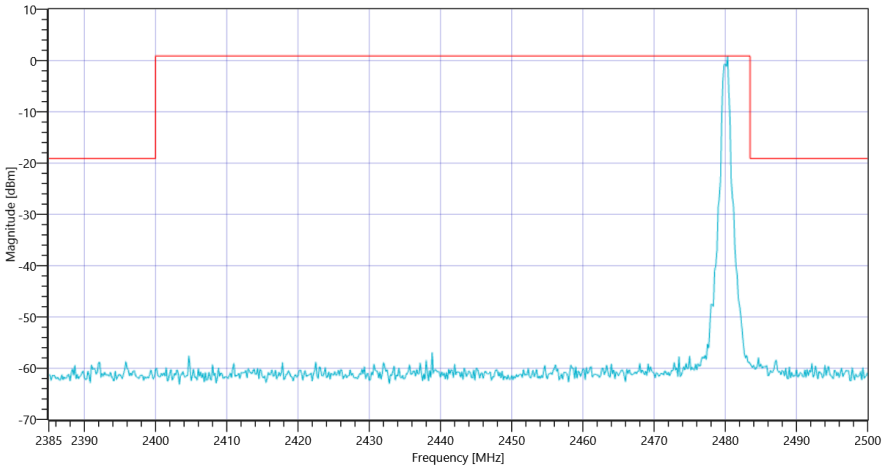
RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.07	dBm	INFO
Ref. Frequency	---	---	2479.800	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	1.07 | 0 | 20
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

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2480.33 MHz	---	---	0.86	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 15758.167 MHz	0	---	26.98	dB	INFO



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 1 Msps 2480



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 1 Msps 2480

General verdict	PASS

FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 2 Msps

Test References	
TC Start	10.05.2022 07:15:55
Ambit Temp [°C] | Humidity [rel%]	25.5 | 35
System Version	3.0.6.3
Test Specification	FCC Part 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	WS_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

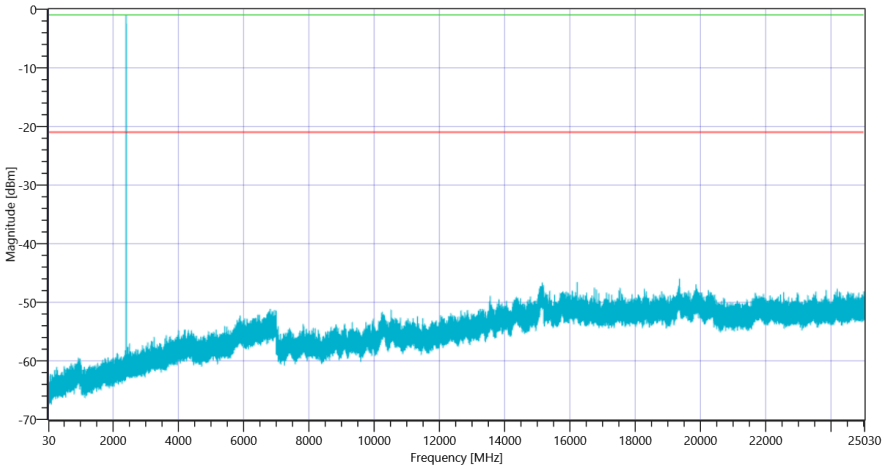
Test Equipment
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.61
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI

Test at TX 2404 MHz

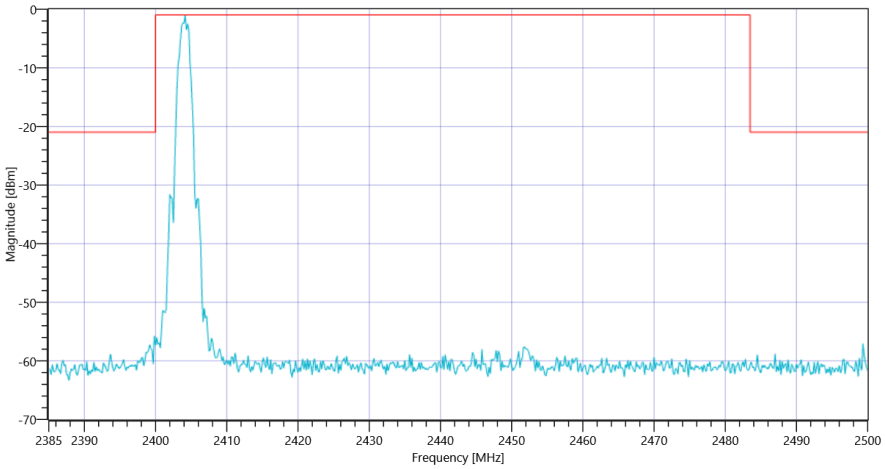
RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.70	dBm	INFO
Ref. Frequency	---	---	2403.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	1.70 | 0 | 20
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

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2404.17 MHz	---	---	-0.99	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 19355 MHz	0	---	24.98	dB	INFO



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 2 Msps 2404



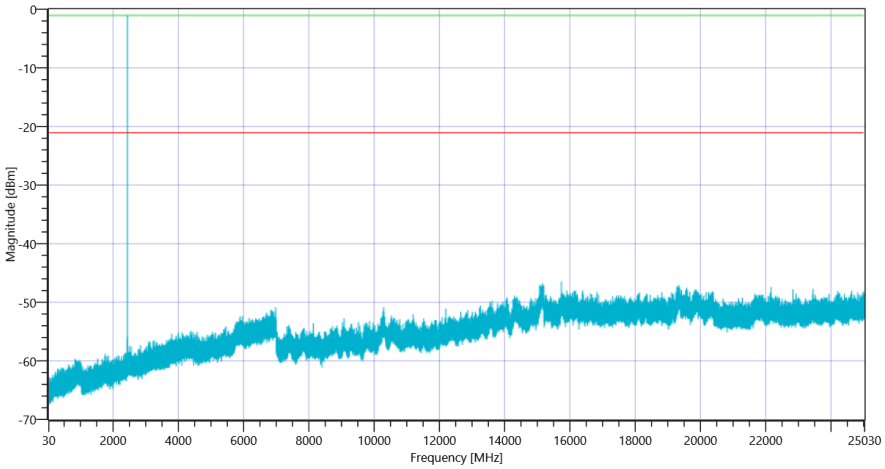
FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 2 Msps 2404

Test at TX 2440 MHz

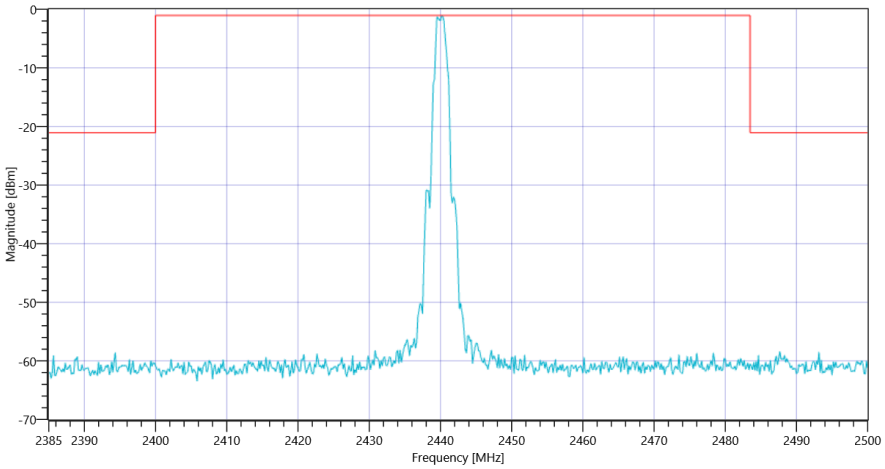
RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.13	dBm	INFO
Ref. Frequency	---	---	2439.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	2.13 | 0 | 20
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

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2440.17 MHz	---	---	-1.06	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 15741.5 MHz	0	---	25.39	dB	INFO



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 2 Msps 2440



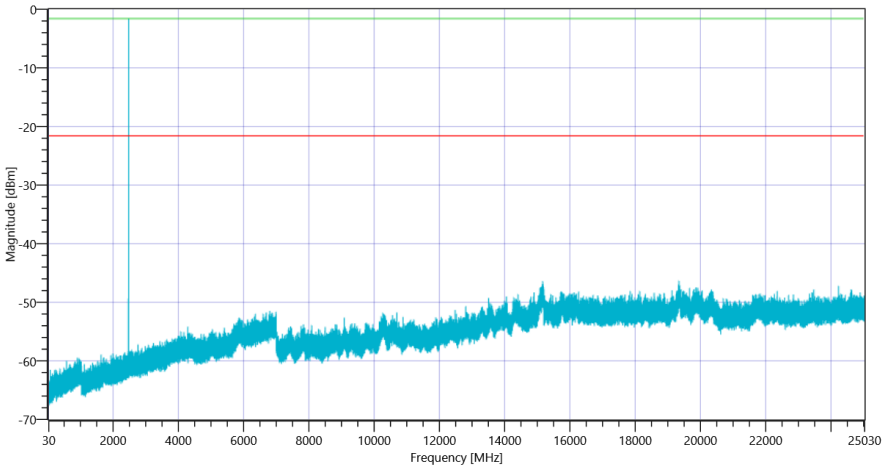
FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 2 Msps 2440

Test at TX 2478 MHz

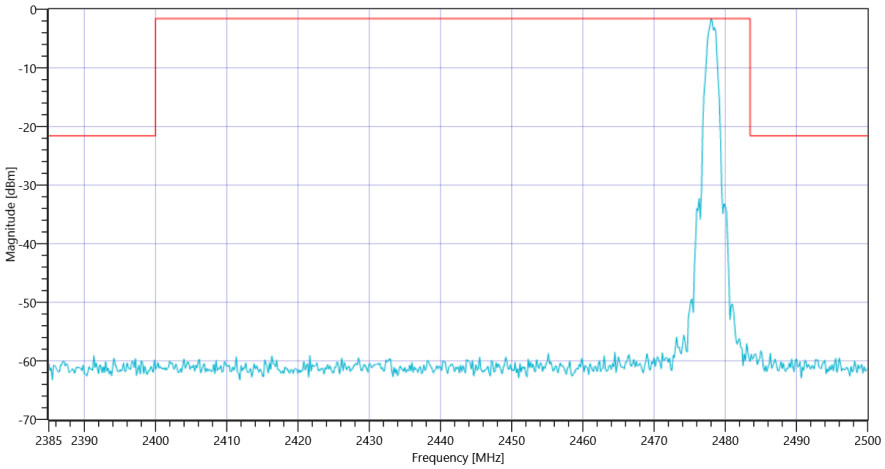
RESULT: Reference Power cond.					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.07	dBm	INFO
Ref. Frequency	---	---	2478.500	MHz	INFO

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	1.07 | 0 | 20
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

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2478.00 MHz	---	---	-1.60	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 30 MHz	0	---	-135.5	dB	INFO



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 2 Msps 2478



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT LE 2 Msps 2478

General verdict	PASS

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