

Measurement Results

No.1-3176/21-01-07_Annex_MR_A1

Test logging

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Test/s performed:

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EUT Information

EUT DEFINITION	
Manufacturer	ifm electronic gmbh
Type	EIO344
Serial Number	3
Setup Number	1.0
Version SW	NI
Version FW	NI
Version HW	NI
Comment 1	
Comment 2	
Temperature [°C] Min	-25
Temperature [°C] Nom	20
Temperature [°C] Max	60
Voltage [V] Min	18
Voltage [V] Nom	24
Voltage [V] Max	32

FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S2

Test References	
TC Start	24.01.2022 14:08:13
Ambit Temp [°C] Humidity [rel%]	22.7 25
System Version	3.0.3.8
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 coded S2
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	False TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling Settings	WS_USB_RS232 TWO 7 115200 None S1 None Off
Signaling RF Settings	RF1com 0 0 On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter	
Technology to test	BT LE coded S2
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]	0.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2402 MHz

RESULT: Reference Power cond.

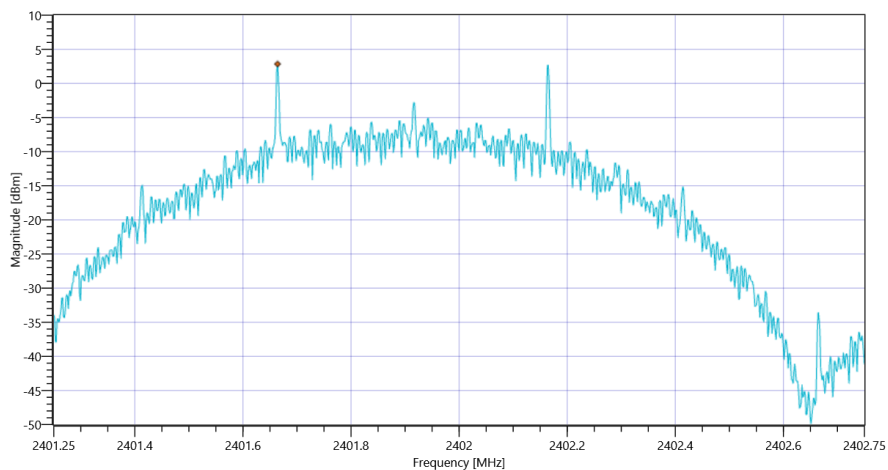
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.33	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.33 10.99 20
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	2.85	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S2

Test at TX 2440 MHz

RESULT: Reference Power cond.

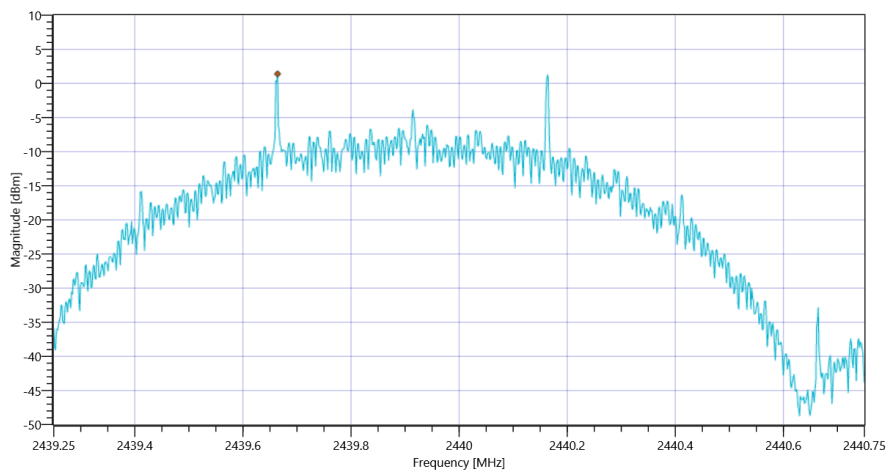
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.35	dBm	INFO
Ref. Frequency	---	---	2440.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.35 11.06 20
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	1.4	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S2

Test at TX 2480 MHz

RESULT: Reference Power cond.

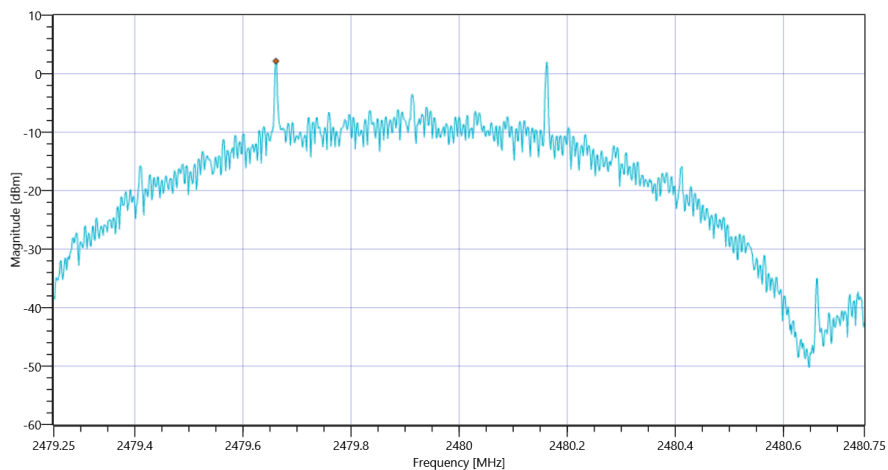
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.66	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.66 11.11 20
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	2.16	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S2

General verdict

PASS

FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2

Test References	
TC Start	24.01.2022 14:05:41
Ambit Temp [°C] Humidity [rel%]	22.7 25
System Version	3.0.3.8
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 coded S2
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	False TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling Settings	WS_USB_RS232 TWO 7 115200 None S1 None Off
Signaling RF Settings	RF1com 0 0 On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter	
Technology to test	BT LE coded S2
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]	0.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2402 MHz

RESULT: Reference Power cond.

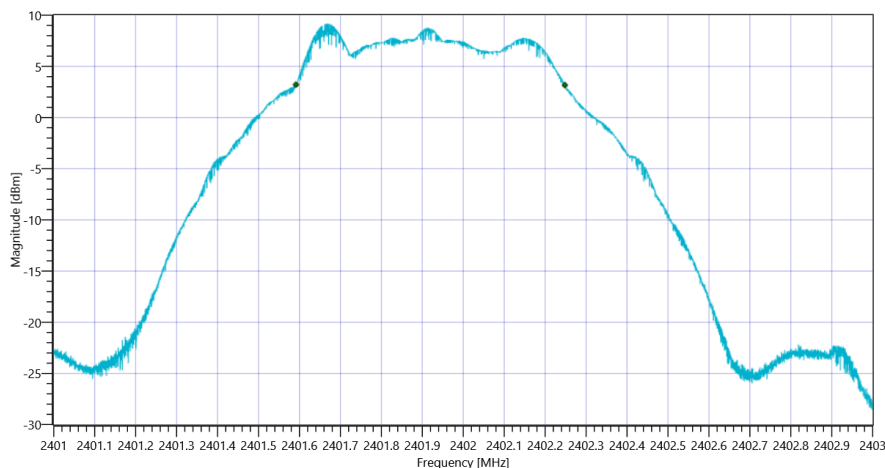
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.34	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.34 10.99 20
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)	---	---	657	kHz	INFO



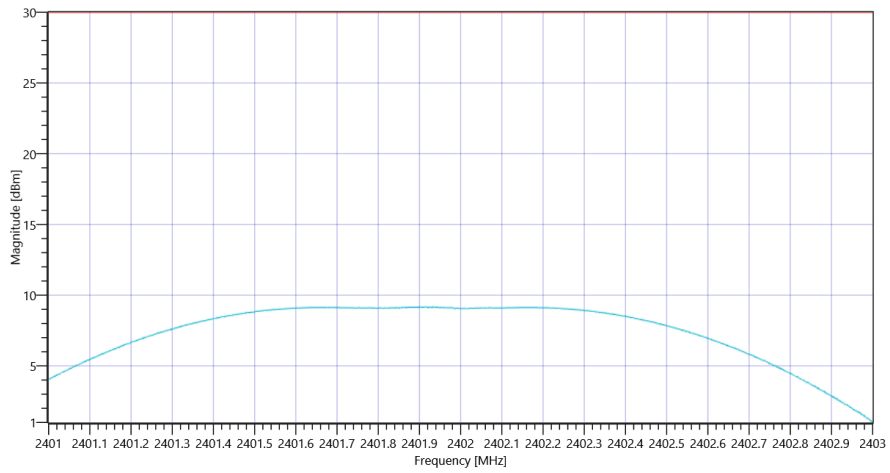
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2 DTS BW

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.34 10.99 25
Start [MHz] Stop [MHz]	2401.000 2403.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
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	9.16	dBm	PASS
Peak Power	---	1000	8.241381	mW	PASS
Frequency at Peak	---	---	2401.936	MHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2

Test at TX 2440 MHz

RESULT: Reference Power cond.

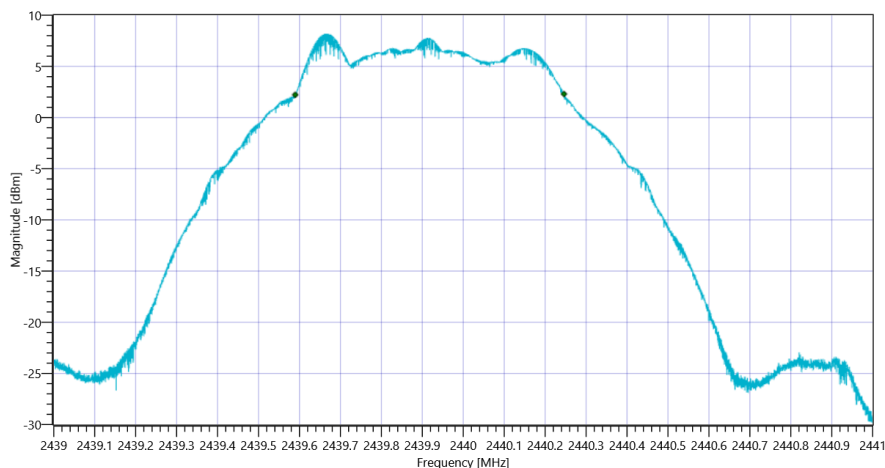
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.32	dBm	INFO
Ref. Frequency	---	---	2440.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.32 11.06 20
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)	---	---	656	kHz	INFO



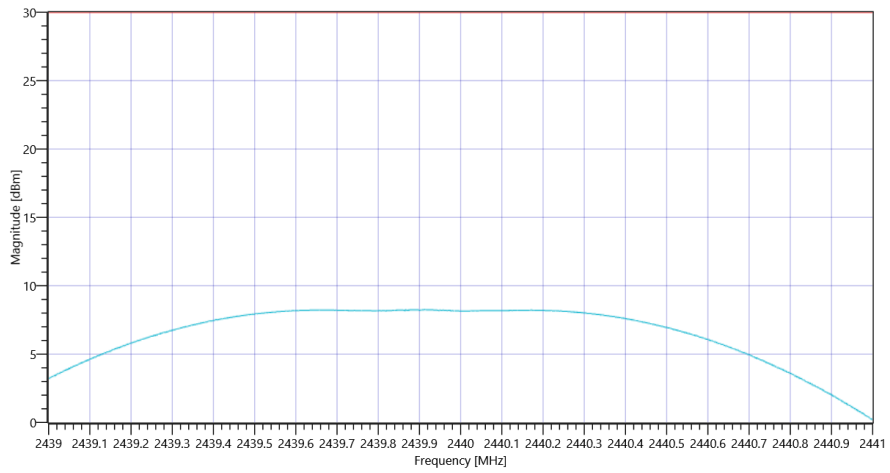
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2 DTS BW

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.32 11.06 25
Start [MHz] Stop [MHz]	2439.000 2441.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
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	8.25	dBm	PASS
Peak Power	---	1000	6.683439	mW	PASS
Frequency at Peak	---	---	2439.914	MHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2

Test at TX 2480 MHz

RESULT: Reference Power cond.

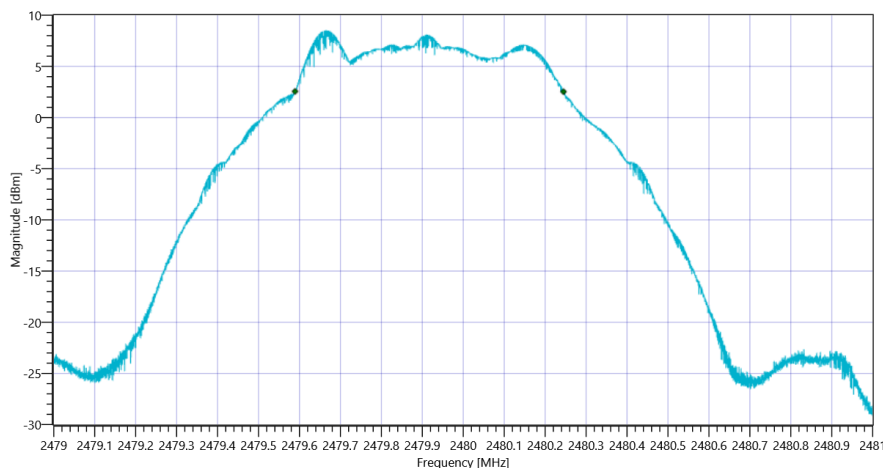
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.66	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.66 11.11 20
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)	---	---	656	kHz	INFO



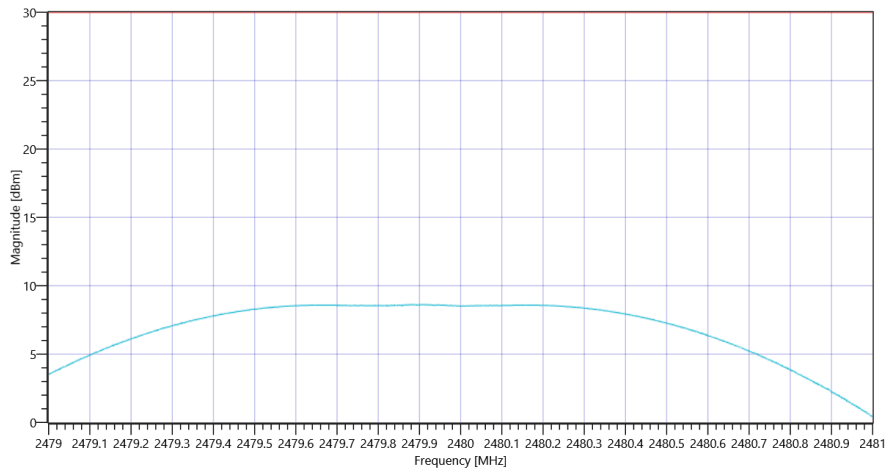
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2 DTS BW

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.66 11.11 25
Start [MHz] Stop [MHz]	2479.000 2481.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
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	8.62	dBm	PASS
Peak Power	---	1000	7.277798	mW	PASS
Frequency at Peak	---	---	2479.894	MHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2

General verdict

PASS

FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S8

Test References	
TC Start	24.01.2022 14:03:37
Ambit Temp [°C] Humidity [rel%]	22.6 25
System Version	3.0.3.8
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 coded S8
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	False TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling Settings	WS_USB_RS232 TWO 7 115200 None S1 None Off
Signaling RF Settings	RF1com 0 0 On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter	
Technology to test	BT LE coded S8
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]	0.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2402 MHz

RESULT: Reference Power cond.

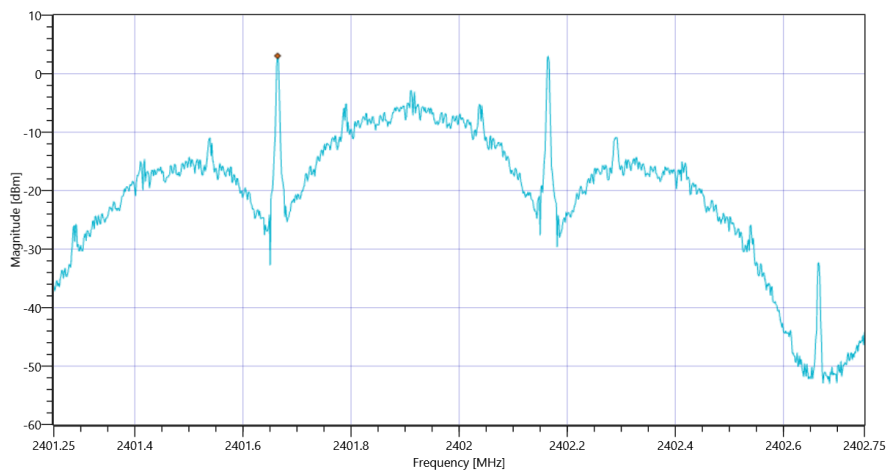
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.32	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.32 10.99 20
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	3.05	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S8

Test at TX 2440 MHz

RESULT: Reference Power cond.

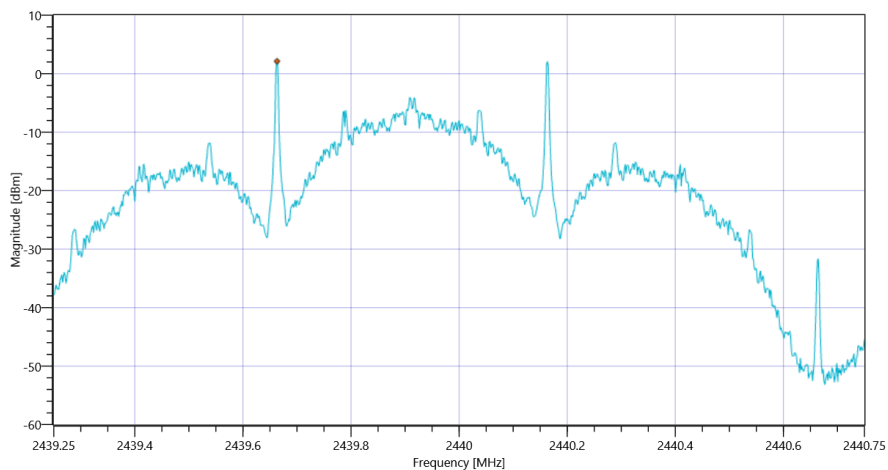
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.35	dBm	INFO
Ref. Frequency	---	---	2440.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.35 11.06 20
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	2.13	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S8

Test at TX 2480 MHz

RESULT: Reference Power cond.

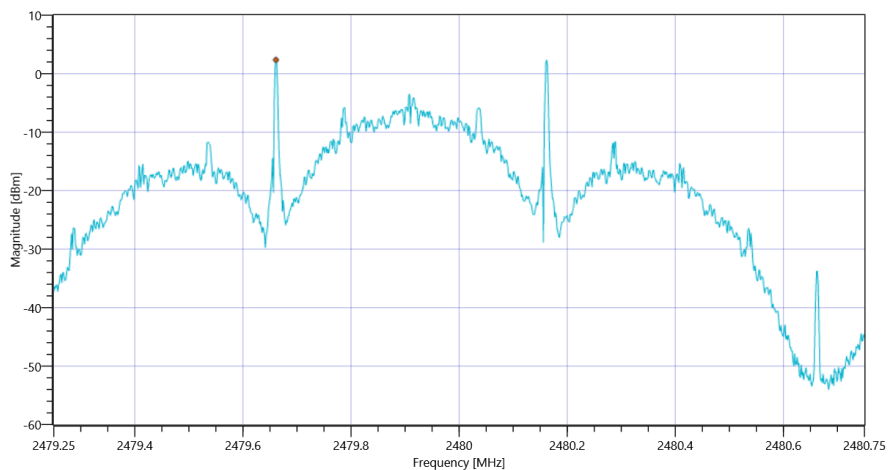
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.64	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.64 11.11 20
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	2.36	dBm/3KHz	PASS



FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S8

General verdict

PASS

FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8

Test References	
TC Start	24.01.2022 14:01:04
Ambit Temp [°C] Humidity [rel%]	22.6 25
System Version	3.0.3.8
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 coded S8
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	False TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling Settings	WS_USB_RS232 TWO 7 115200 None S1 None Off
Signaling RF Settings	RF1com 0 0 On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter	
Technology to test	BT LE coded S8
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]	0.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2402 MHz

RESULT: Reference Power cond.

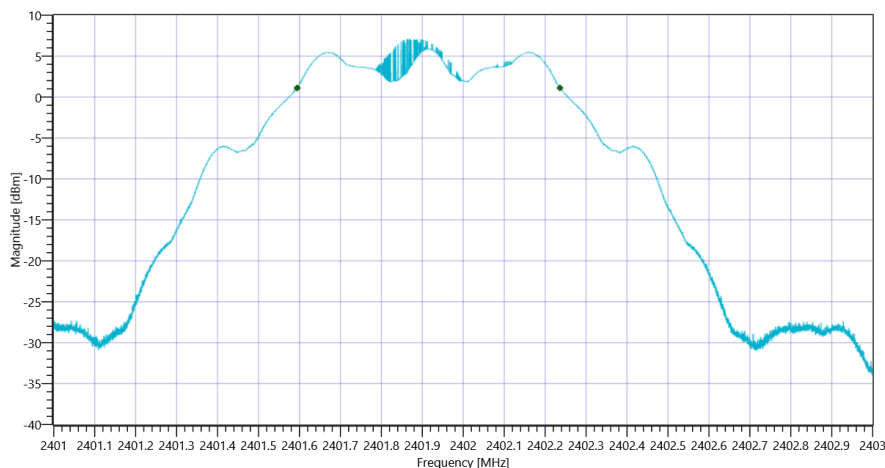
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.30	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.30 10.99 20
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)	---	---	642	kHz	INFO



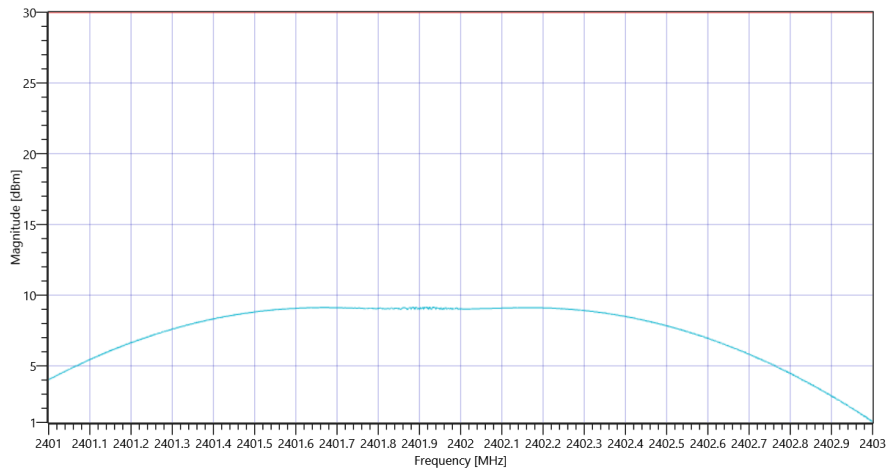
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8 DTS BW

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.30 10.99 25
Start [MHz] Stop [MHz]	2401.000 2403.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
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	9.16	dBm	PASS
Peak Power	---	1000	8.241381	mW	PASS
Frequency at Peak	---	---	2401.892	MHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8

Test at TX 2440 MHz

RESULT: Reference Power cond.

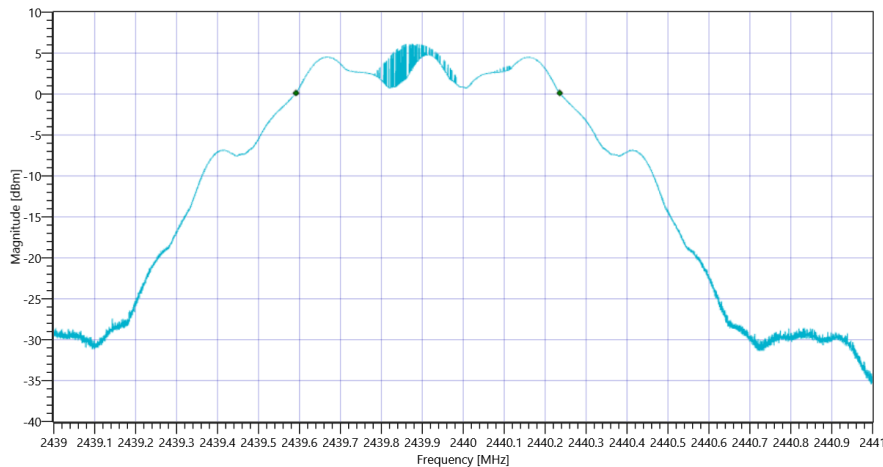
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.33	dBm	INFO
Ref. Frequency	---	---	2440.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.33 11.06 20
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)	---	---	644	kHz	INFO



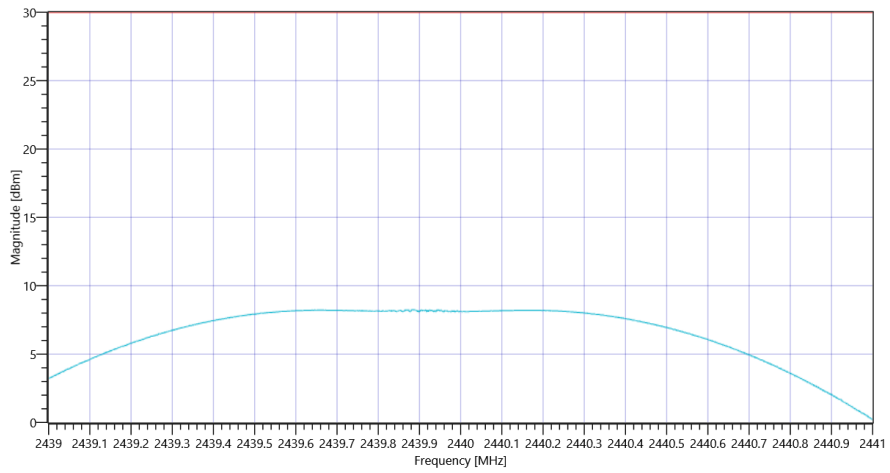
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8 DTS BW

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.33 11.06 25
Start [MHz] Stop [MHz]	2439.000 2441.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
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	8.24	dBm	PASS
Peak Power	---	1000	6.668068	mW	PASS
Frequency at Peak	---	---	2439.91	MHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8

Test at TX 2480 MHz

RESULT: Reference Power cond.

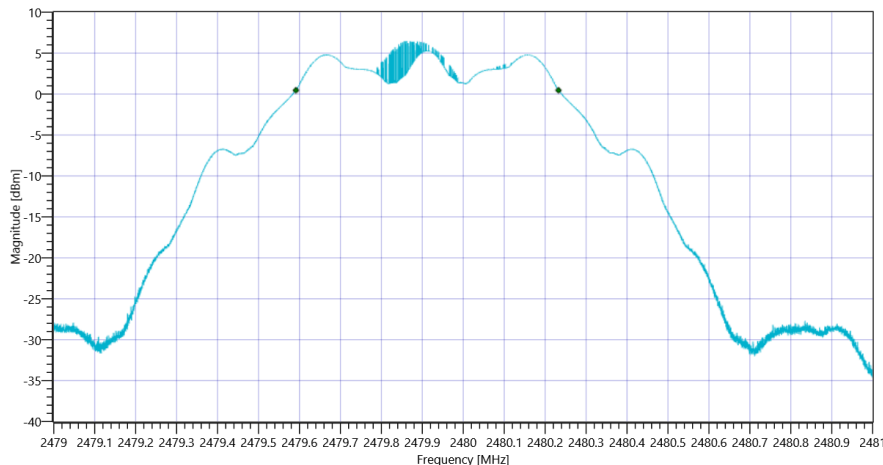
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.63	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.63 11.11 20
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)	---	---	641	kHz	INFO



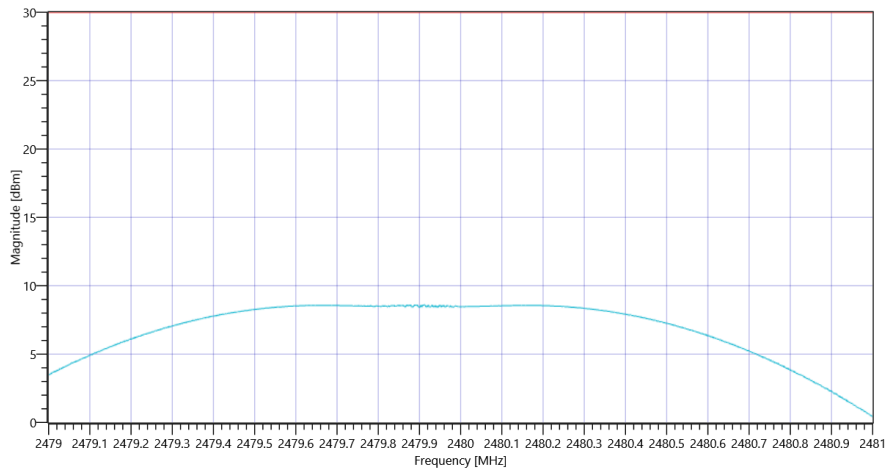
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8 DTS BW

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.63 11.11 25
Start [MHz] Stop [MHz]	2479.000 2481.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
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	8.6	dBm	PASS
Peak Power	---	1000	7.24436	mW	PASS
Frequency at Peak	---	---	2479.93	MHz	INFO



FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8

General verdict

PASS

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

Test References	
TC Start	24.01.2022 13:57:16
Ambit Temp [°C] Humidity [rel%]	22.7 25
System Version	3.0.3.8
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 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	False TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling Settings	WS_USB_RS232 TWO 7 115200 None S1 None Off
Signaling RF Settings	RF1com 0 0 On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

Test Parameter	
Technology to test	BT LE 1 Msp
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2402 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.29	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

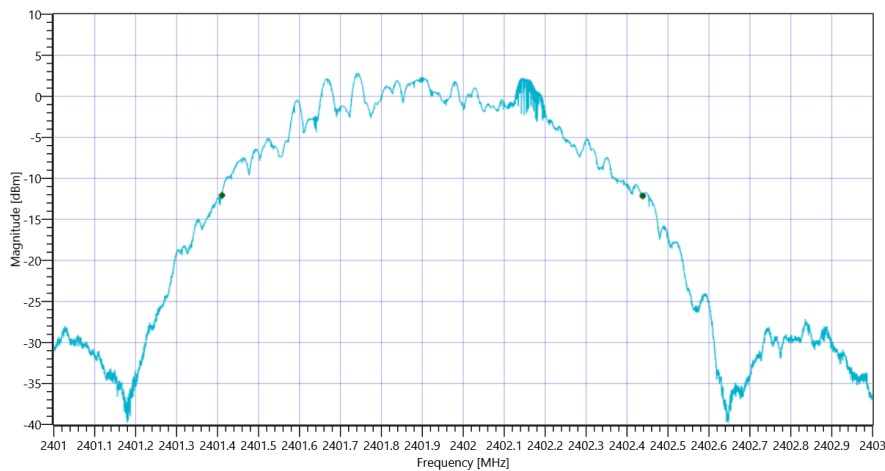
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.29 10.99 20
Start [MHz] Stop [MHz]	2401.000 2403.000
RBW [MHz] VBW [MHz]	0.020000 0.100000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

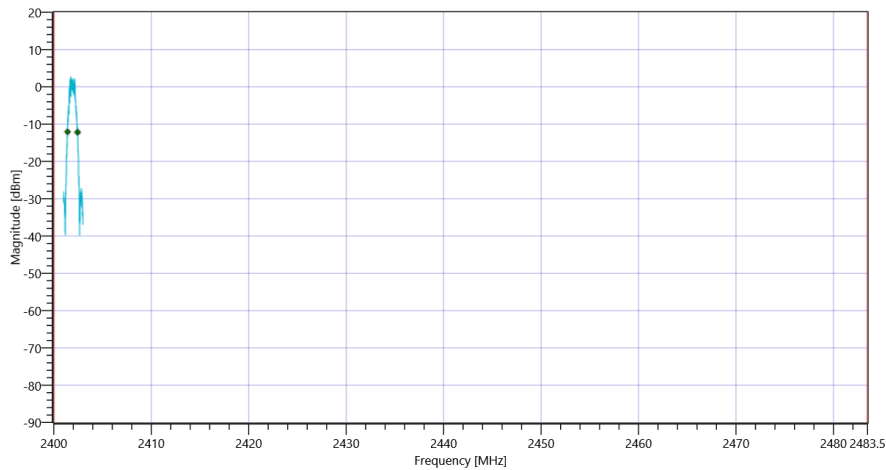
RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1027.497	kHz	INFO
T1 99%	2400.000000	---	2401.4109	MHz	PASS
T2 99%	---	2483.500000	2402.4384	MHz	PASS

Plot: Bandwidth only



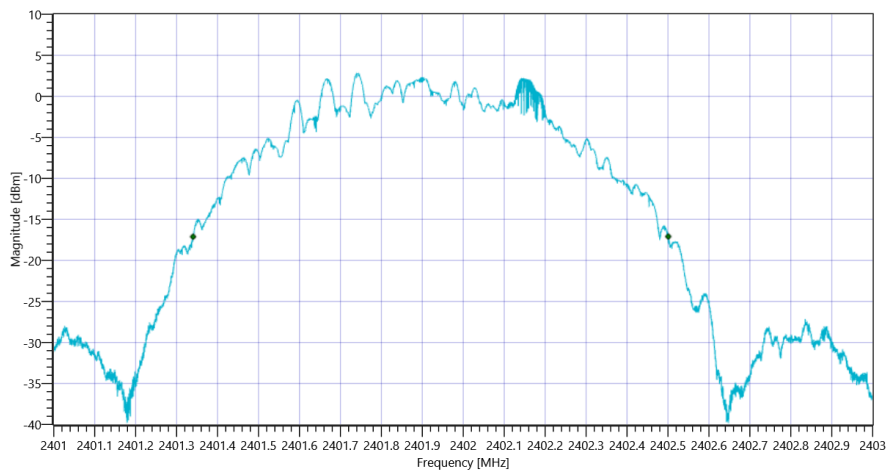
Plot: Bandwidth within Band



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

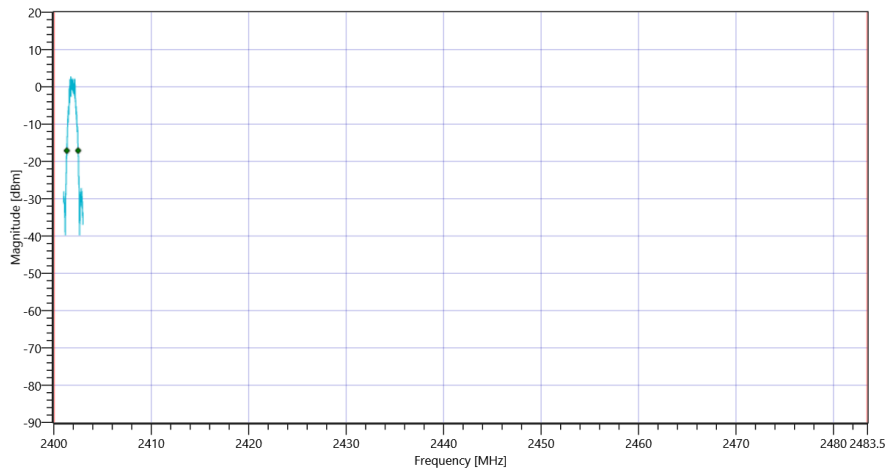
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1161	kHz	INFO
T1 20dB	2400.000000	---	2401.3402	MHz	PASS
T2 20dB	---	2483.500000	2402.5008	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msp 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.	---	---	8.34	dBm	INFO
Ref. Frequency	---	---	2440.200	MHz	INFO

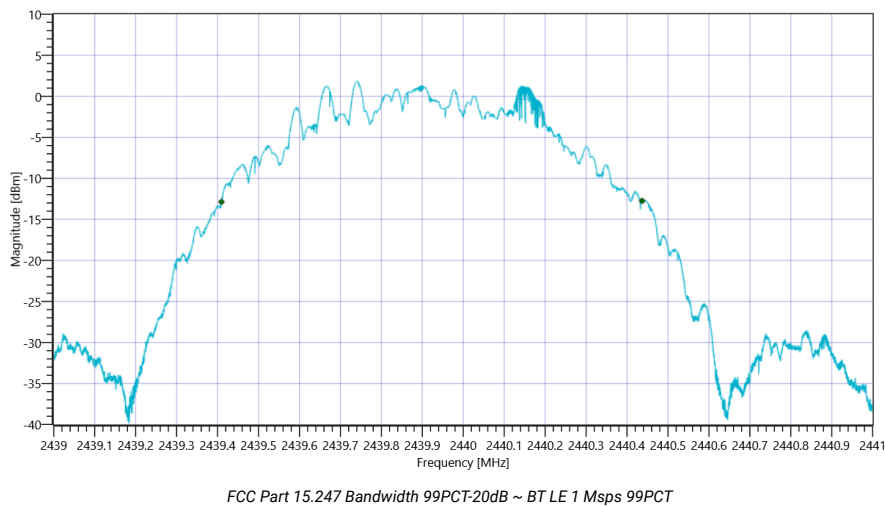
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.34 11.06 20
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

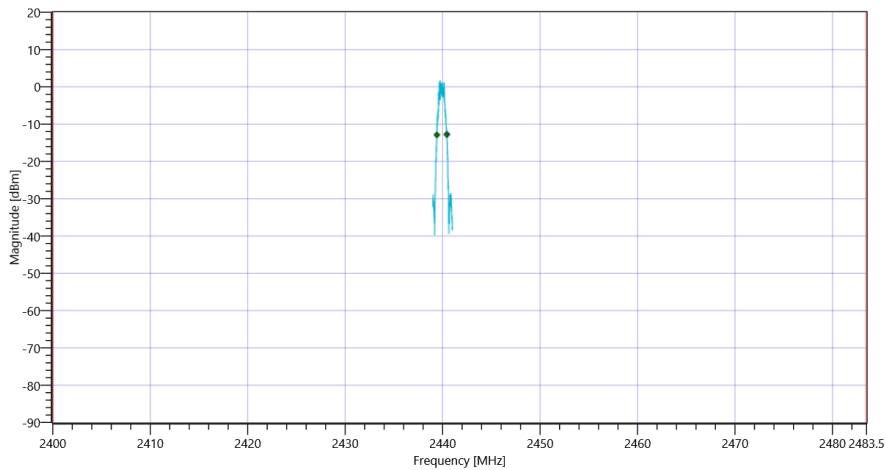
RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1027.097	kHz	INFO
T1 99%	2400.000000	---	2439.4095	MHz	PASS
T2 99%	---	2483.500000	2440.4366	MHz	PASS

Plot: Bandwidth only



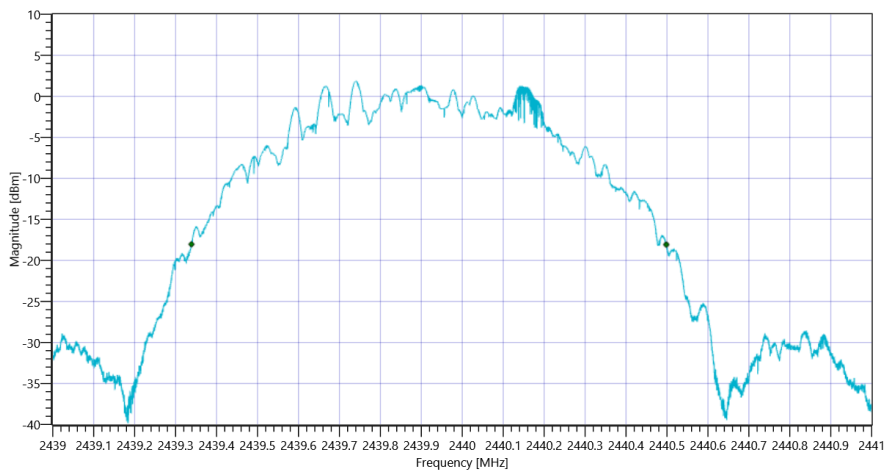
Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msp/s

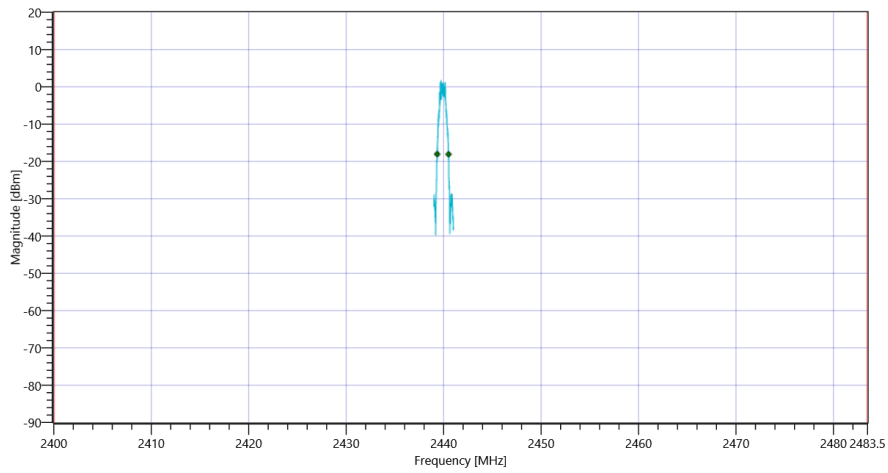
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1160	kHz	INFO
T1 20dB	2400.000000	---	2439.3386	MHz	PASS
T2 20dB	---	2483.500000	2440.4984	MHz	PASS

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msp/s 20dB

Plot: Bandwidth within Band



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

Test at TX 2480 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.63	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

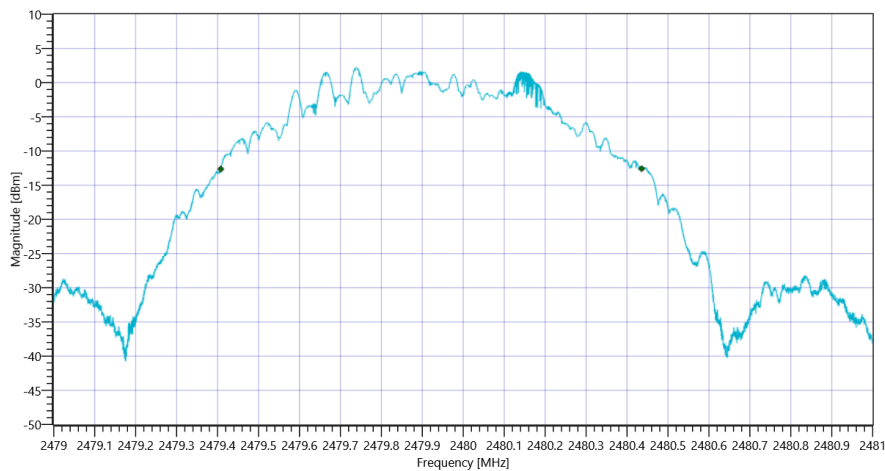
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.63 11.11 20
Start [MHz] Stop [MHz]	2479.000 2481.000
RBW [MHz] VBW [MHz]	0.020000 0.100000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

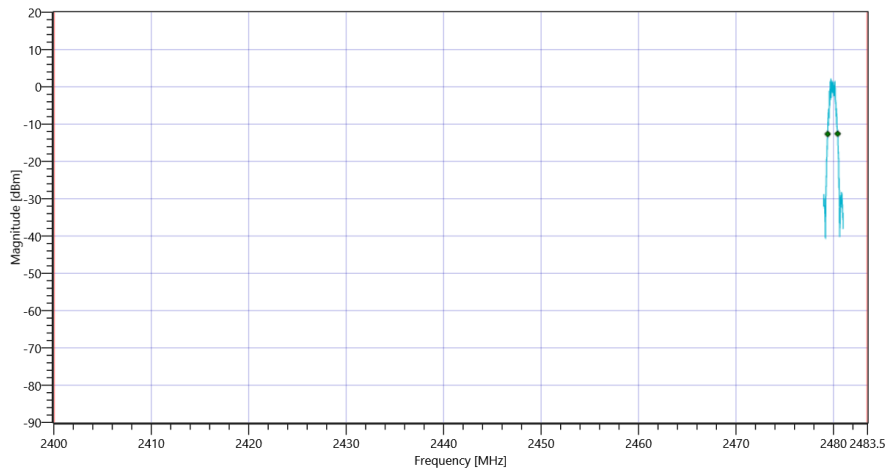
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1027.697	kHz	INFO
T1 99%	2400.000000	---	2479.4079	MHz	PASS
T2 99%	---	2483.500000	2480.4356	MHz	PASS

Plot: Bandwidth only



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

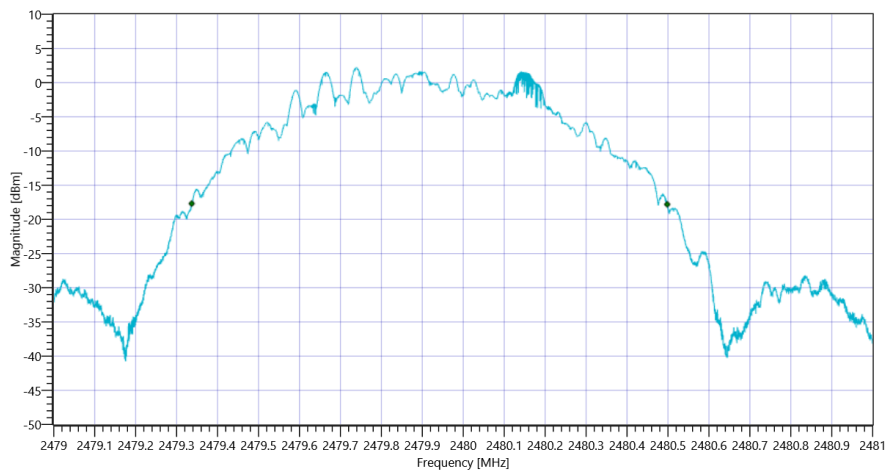
Plot: Bandwidth within Band



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

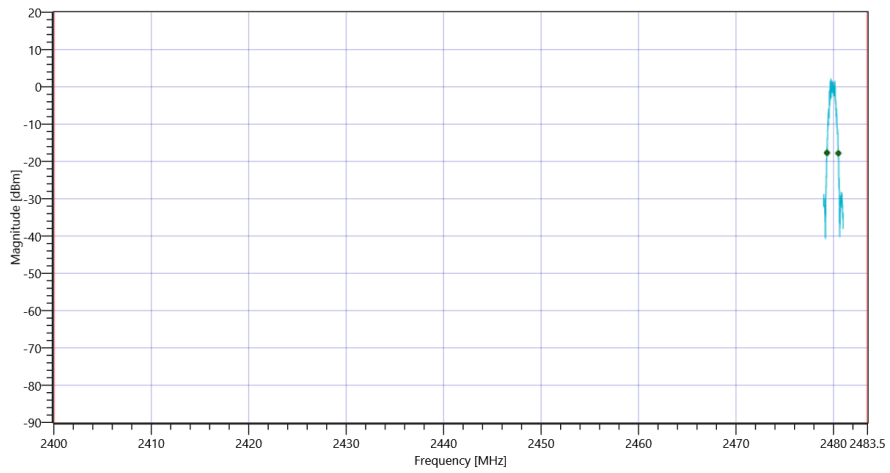
RESULT						
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict	
Bandwidth 20dB	---	---	1161	kHz	INFO	
T1 20dB	2400.000000	---	2479.3368	MHz	PASS	
T2 20dB	---	2483.500000	2480.4982	MHz	PASS	

Plot: Bandwidth only



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

Plot: Bandwidth within Band



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

General verdict

PASS

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

Test References	
TC Start	24.01.2022 13:55:12
Ambit Temp [°C] Humidity [rel%]	22.7 25
System Version	3.0.3.8
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	False TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling Settings	WS_USB_RS232 TWO 7 115200 None S1 None Off
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]	0.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2402 MHz

RESULT: Reference Power cond.

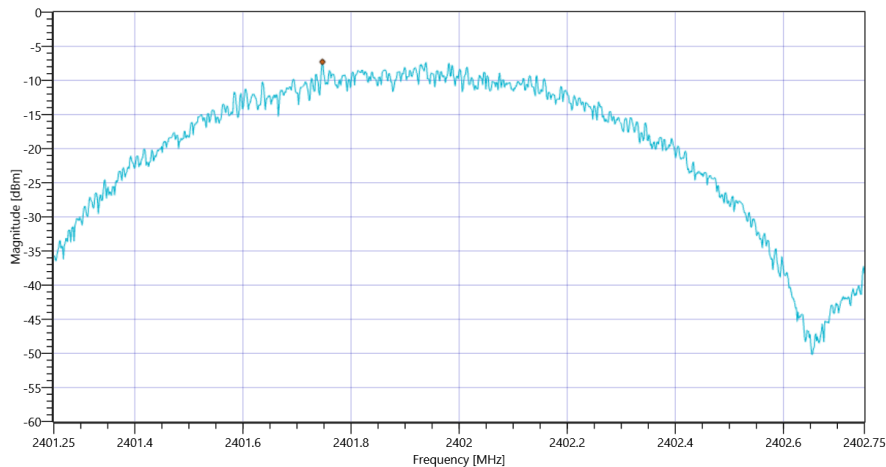
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.30	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.30 10.99 20
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	-7.28	dBm/3KHz	PASS



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

Test at TX 2440 MHz

RESULT: Reference Power cond.

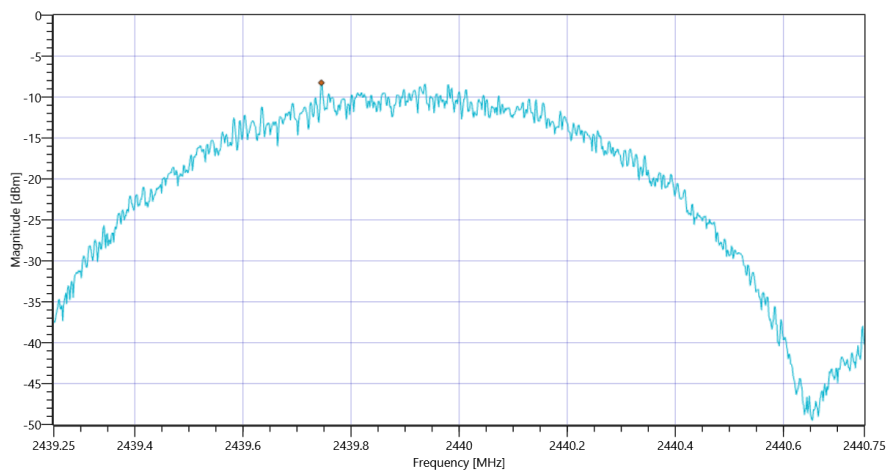
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.30	dBm	INFO
Ref. Frequency	---	---	2440.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.30 11.06 20
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	-8.25	dBm/3KHz	PASS



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

Test at TX 2480 MHz

RESULT: Reference Power cond.

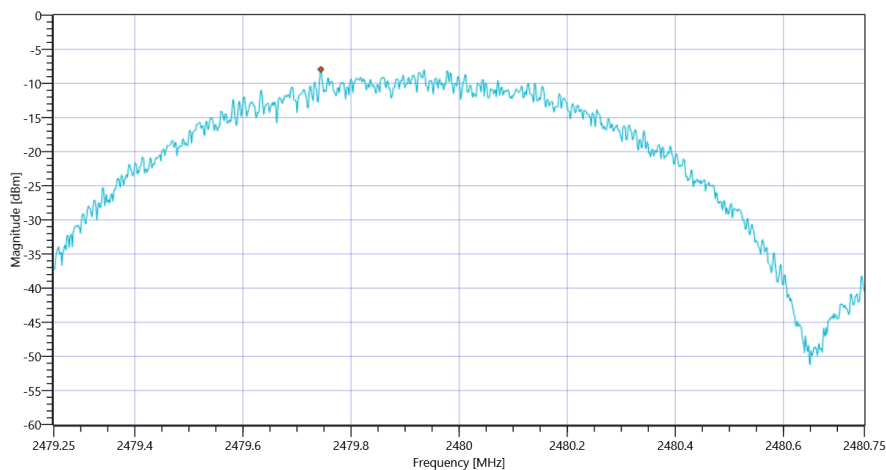
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.62	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.62 11.11 20
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	-7.94	dBm/3KHz	PASS



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

General verdict

PASS

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

Test References	
TC Start	24.01.2022 13:53:36
Ambit Temp [°C] Humidity [rel%]	22.6 25
System Version	3.0.3.8
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	False TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling Settings	WS_USB_RS232 TWO 7 115200 None S1 None Off
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]	0.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2402 MHz

RESULT: Reference Power cond.

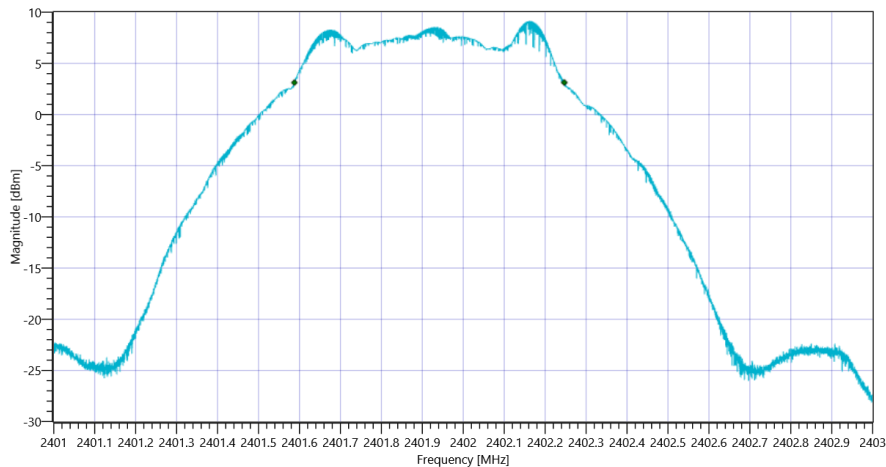
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.28	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.28 10.99 20
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	---	659	kHz	PASS



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

Test at TX 2440 MHz

RESULT: Reference Power cond.

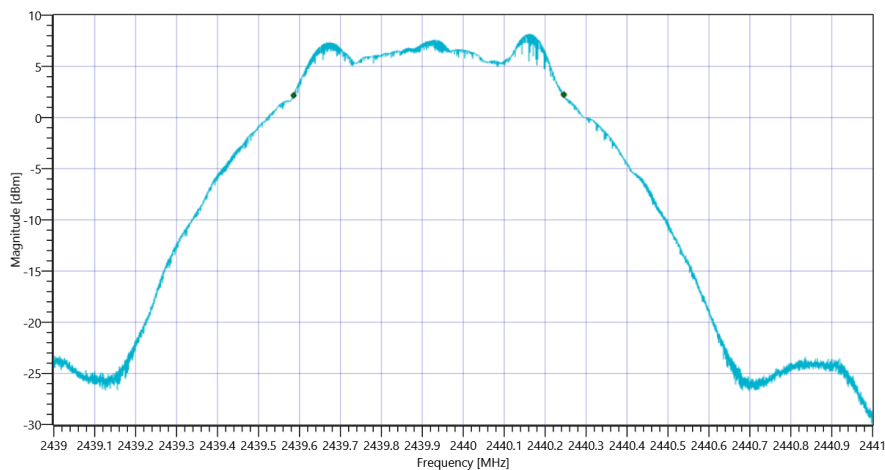
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.31	dBm	INFO
Ref. Frequency	---	---	2440.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.31 11.06 20
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	---	660	kHz	PASS



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

Test at TX 2480 MHz

RESULT: Reference Power cond.

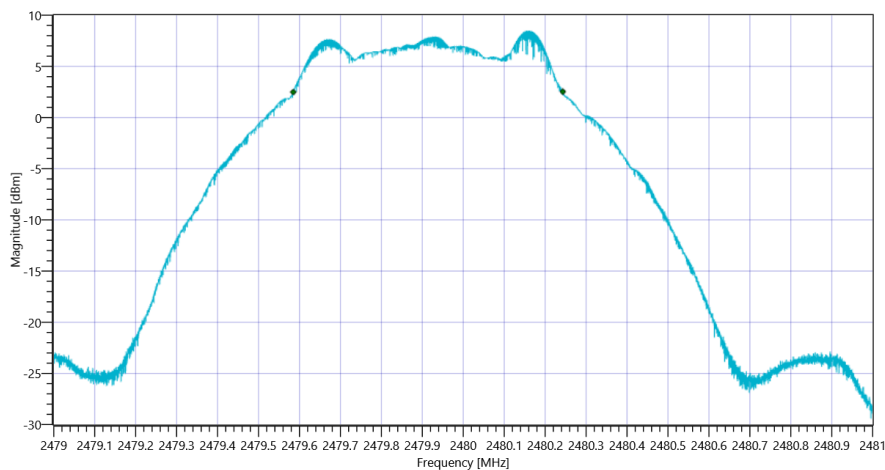
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.61	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.61 11.11 20
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	---	658	kHz	PASS



FCC Part 15.247 Bandwidth 6dB DTS ~ BTLE 1 Msps

General verdict

PASS

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

Test References	
TC Start	24.01.2022 13:51:05
Ambit Temp [°C] Humidity [rel%]	22.6 25
System Version	3.0.3.8
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	False TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling Settings	WS_USB_RS232 TWO 7 115200 None S1 None Off
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]	0.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2402 MHz

RESULT: Reference Power cond.

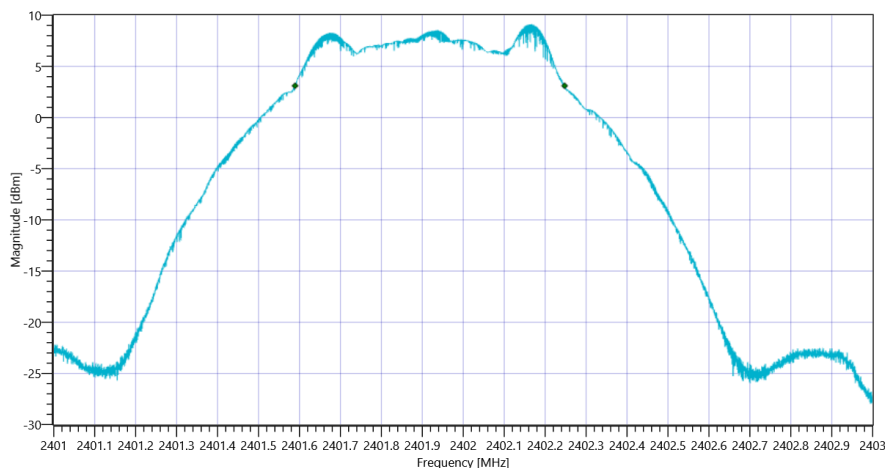
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.25	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.25 10.99 20
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)	---	---	658	kHz	INFO



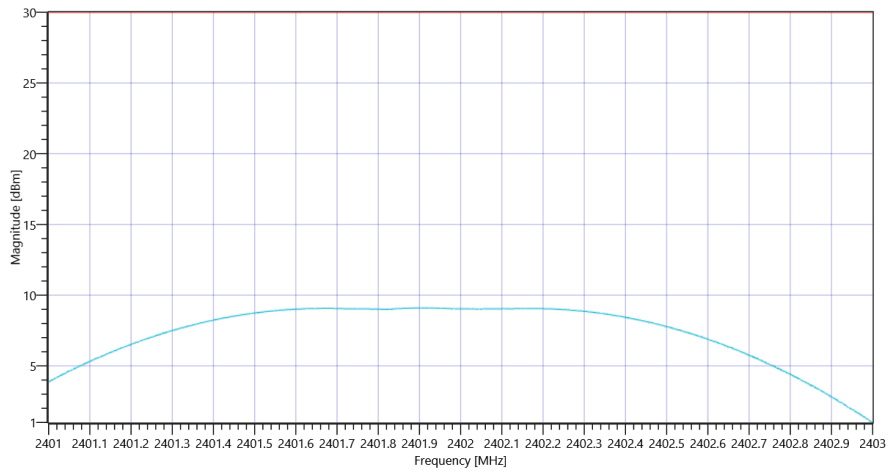
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.25 10.99 25
Start [MHz] Stop [MHz]	2401.000 2403.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
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	9.1	dBm	PASS
Peak Power	---	1000	8.128305	mW	PASS
Frequency at Peak	---	---	2401.904	MHz	INFO



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

Test at TX 2440 MHz

RESULT: Reference Power cond.

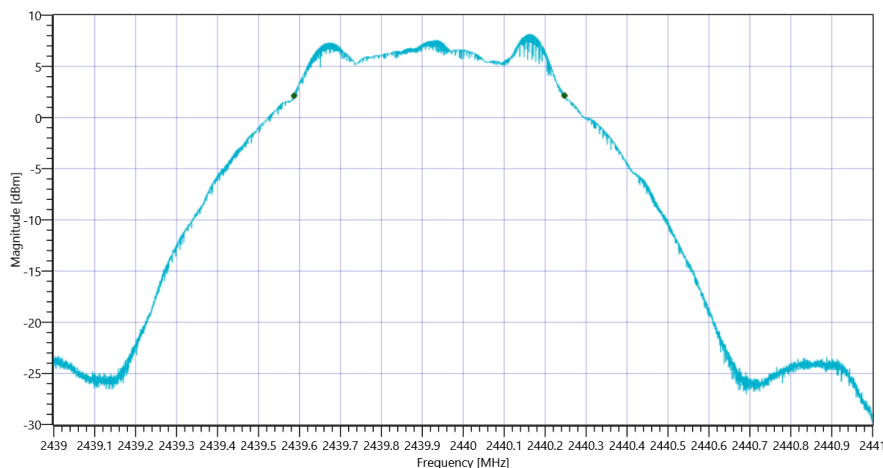
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.29	dBm	INFO
Ref. Frequency	---	---	2440.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.29 11.06 20
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)	---	---	660	kHz	INFO



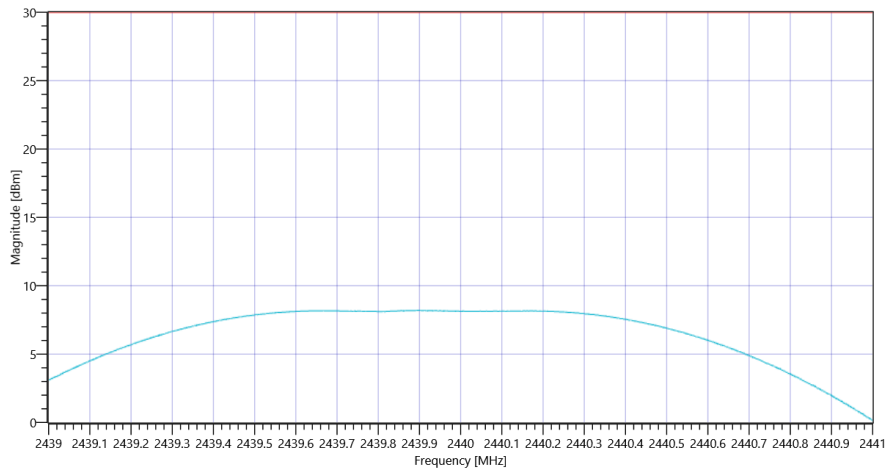
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.29 11.06 25
Start [MHz] Stop [MHz]	2439.000 2441.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
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	8.19	dBm	PASS
Peak Power	---	1000	6.591739	mW	PASS
Frequency at Peak	---	---	2439.902	MHz	INFO



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

Test at TX 2480 MHz

RESULT: Reference Power cond.

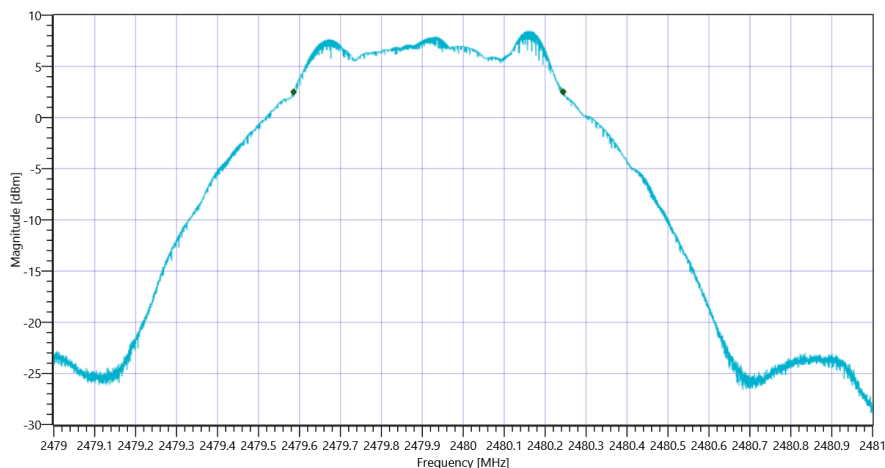
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.59	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.59 11.11 20
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)	---	---	658	kHz	INFO



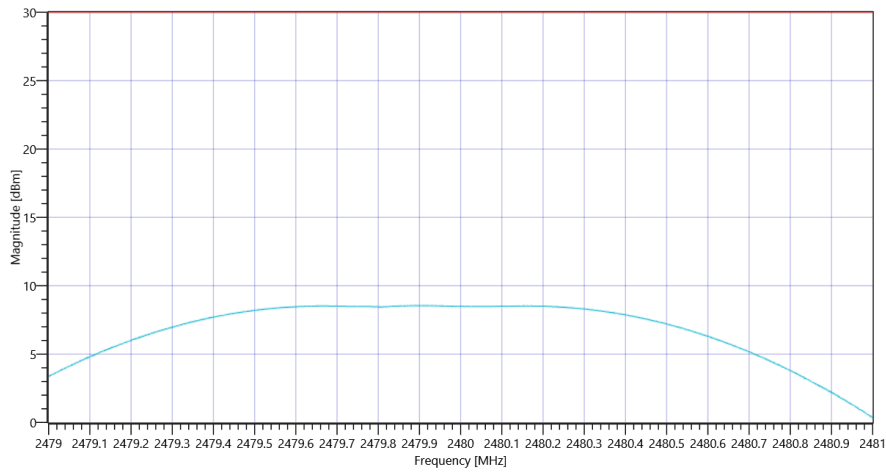
FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.59 11.11 25
Start [MHz] Stop [MHz]	2479.000 2481.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
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	8.55	dBm	PASS
Peak Power	---	1000	7.161434	mW	PASS
Frequency at Peak	---	---	2479.892	MHz	INFO



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

General verdict

PASS

FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps

Test References	
TC Start	18.01.2022 11:33:49
Ambit Temp [°C] Humidity [rel%]	22.4 30
System Version	3.0.3.7
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	False TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling Settings	WS_USB_RS232 TWO 4 115200 None S1 None Off
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	Yes No
Additional Path Loss [dB]	0.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70	
Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.20	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI	
Power supply,Agilent Technologies,N5767A,US14J1569PB.00.06,REV:F	

Test at TX 2402 MHz

RESULT: Reference Power cond.

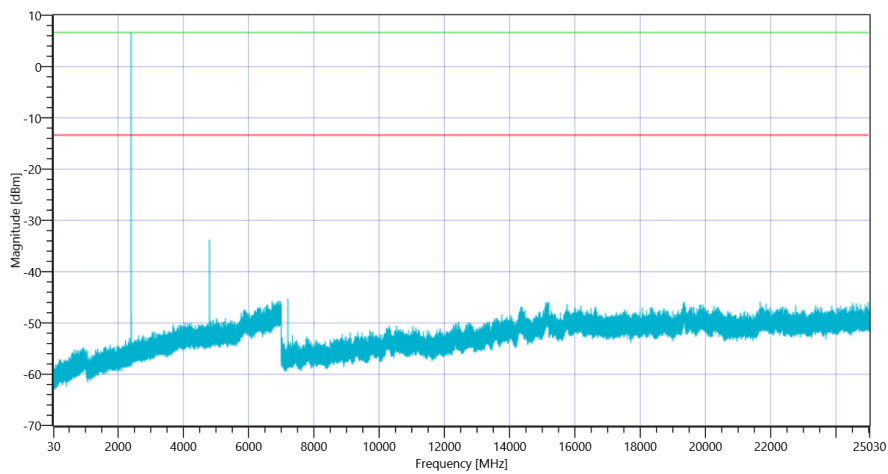
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.05	dBm	INFO
Ref. Frequency	---	---	2401.700	MHz	INFO

READ SA SETTINGS:

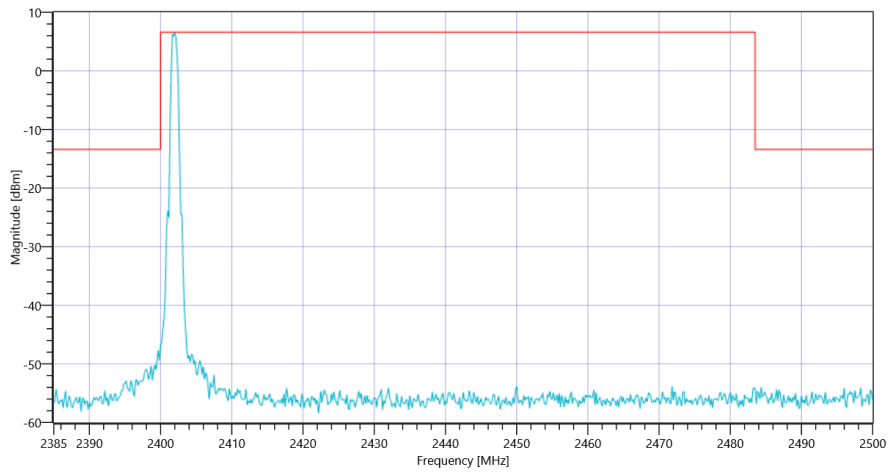
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.05 0 25
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2402.00 MHz	---	---	6.61	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4804.333 MHz	0	---	20.33	dB	INFO



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



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

Test at TX 2440 MHz

RESULT: Reference Power cond.

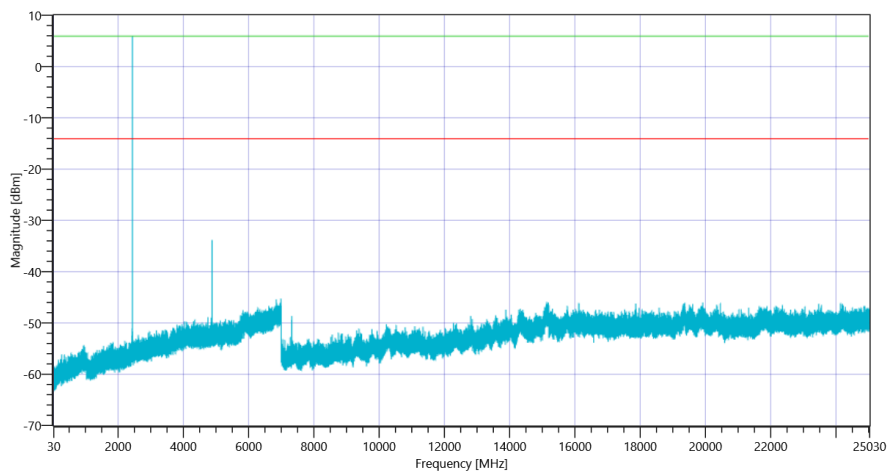
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	7.48	dBm	INFO
Ref. Frequency	---	---	2439.700	MHz	INFO

READ SA SETTINGS:

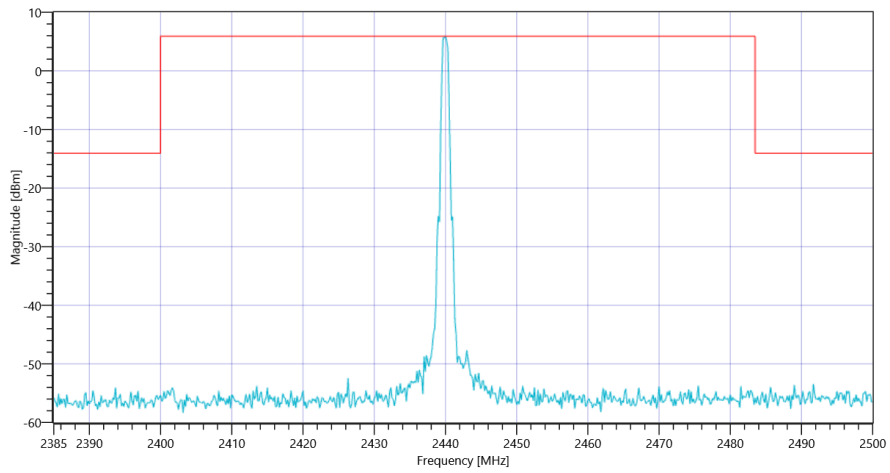
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.48 0 25
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2440.00 MHz	---	---	5.91	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4879.333 MHz	0	---	19.72	dB	INFO



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



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

Test at TX 2480 MHz

RESULT: Reference Power cond.

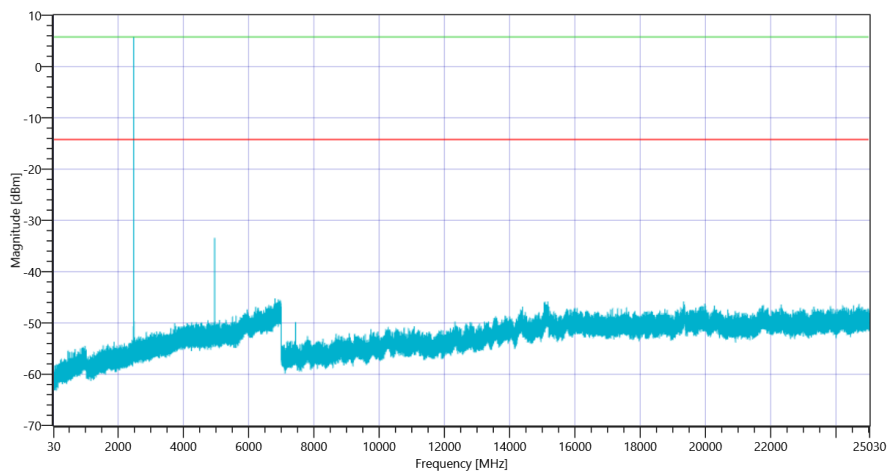
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	6.99	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

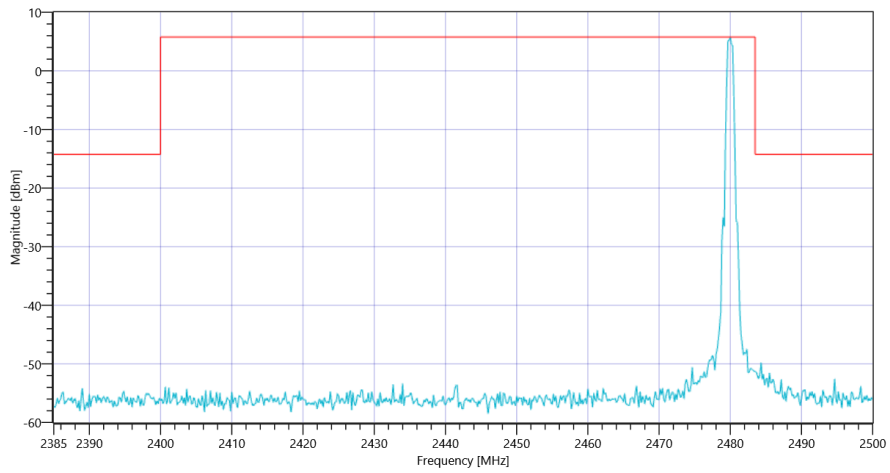
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.99 0 25
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2480.00 MHz	---	---	5.76	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4960.333 MHz	0	---	19.17	dB	INFO



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



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

General verdict

PASS

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

Test References	
TC Start	24.01.2022 15:21:14
Ambit Temp [°C] Humidity [rel%]	22.7 26
System Version	3.0.3.8
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	False TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling Settings	WS_USB_RS232 TWO 7 115200 None S1 None Off
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]	0.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60	
Switch matrix,CTCadvanced,RSM-1 NI DAQ,31534892,NI	

Test at TX 2402 MHz

RESULT: Reference Power cond.

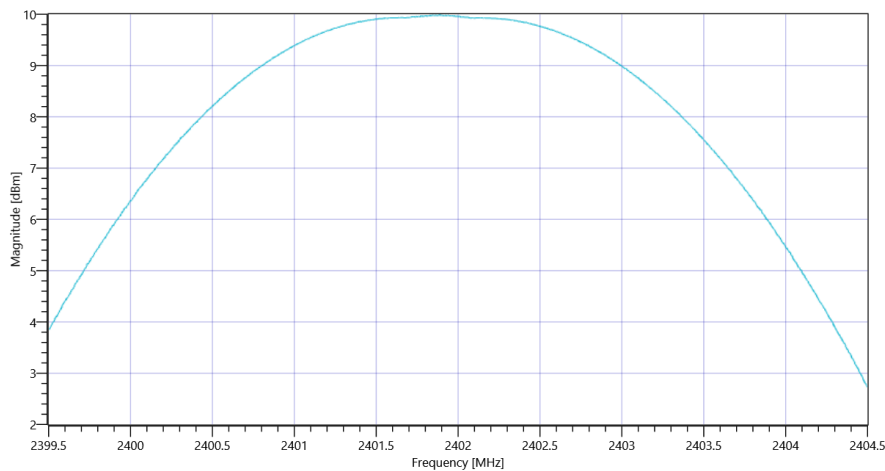
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	10.05	dBm	INFO
Ref. Frequency	---	---	2402.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.05 10.99 25
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	---	---	9.99	dBm	INFO
Peak Power	---	---	9.977001	mW	INFO
Frequency at Peak	---	---	2401.89	MHz	INFO



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

Test at TX 2440 MHz

RESULT: Reference Power cond.

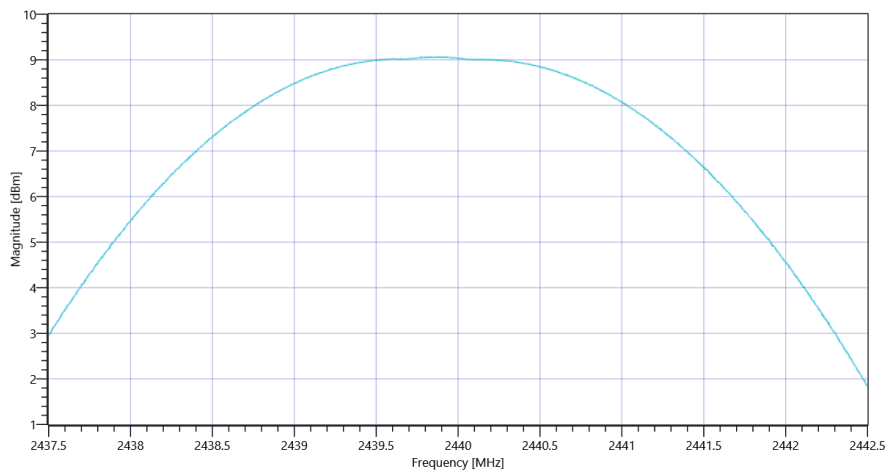
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.06	dBm	INFO
Ref. Frequency	---	---	2440.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.06 11.06 25
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	---	---	9.06	dBm	INFO
Peak Power	---	---	8.053784	mW	INFO
Frequency at Peak	---	---	2439.835	MHz	INFO



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

Test at TX 2480 MHz

RESULT: Reference Power cond.

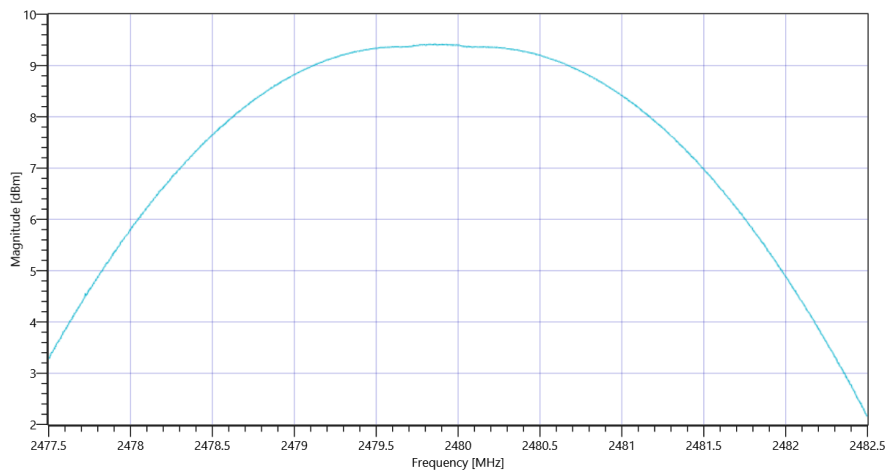
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.37	dBm	INFO
Ref. Frequency	---	---	2480.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.37 11.11 25
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	---	---	9.42	dBm	INFO
Peak Power	---	---	8.749838	mW	INFO
Frequency at Peak	---	---	2479.855	MHz	INFO



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

General verdict

PASS

- END OF DOCUMENT -