

Measurement Results

1-1126/20-01-07_log1_conducted

[Test logging](#)

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

Document authorized:

Mihail Dorongovskij
Lab Manager
Radio Communications

Table of Content

IUT Summary	3
1. Common2G4 Peak OP 3MHz/3MHz ~ Generic 2G4	4
2. Common2G4 Peak OP 3MHz/3MHz ~ Generic 2G4	6
3. Common2G4 Peak OP 3MHz/3MHz ~ Generic 2G4	8
4. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4	10
5. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4	13
6. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4	16
7. FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4	19
8. FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4	21
9. FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4	23
10. FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4	25
11. FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4	27
12. FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4	29
13. FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4	31
14. FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4	34
15. FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4	37
16. FCC Part 15.247 TX Spurious Conduced ~ Generic 2G4	40
17. FCC Part 15.247 TX Spurious Conduced ~ Generic 2G4	42
18. FCC Part 15.247 TX Spurious Conduced ~ Generic 2G4	44

IUT Summary

IUT DEFINITION & Common settings	
Manufacturer	PHONAK Communications AG
Type	Roger NeckLoop
Serial No. Setup No.	1 1.0
SW Version HW Version	NI NI
Comment 1 2	
Tlow Tmid Thigh [°C]	0 20 45
Vlow Vmid Vhigh [V] @Imax [A]	3.3 3.7 4.2 @1
Auto Control enabled Power Supply Climatic Box	No No
Antenna Gain [dBi] (only considered if explicitly mentioned in testresult)	0
Additional Path Loss [dB]	0.7

IUT Common Settings 2G4	
Hopping supported	Yes
Burst length [ms]	10
Nominal Bandwidth [MHz]	2
User Interaction	Yes

1. Common2G4 Peak OP 3MHz/3MHz ~ Generic 2G4

Test References	
TC Start	29.09.2020 16:02:59
Ambit Temp [°C] Humidity [rel%]	24.8 42
System Version	1.0.0.51
Test Specification	None
Test Method	
Class / TC Version	TC_VM_Common2G4_Peak_Output_Power_Conducted_3MHz_3MHz_V01 Version: 0.0.1
My Description	Peak Output Power conducted 3MHz/3MHz - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2441
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.170 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.60

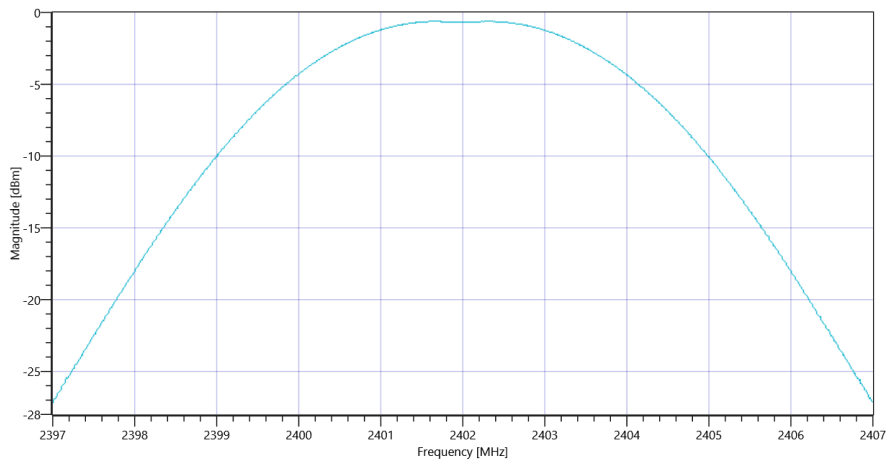
Test at TX 2402 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	9.40 10.79 15
Start [MHz] Stop [MHz]	2397.000 2407.000
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	---	---	-0.62	dBm	Info
Peak Power	---	---	0.866962	mW	Info
Frequency at Peak	---	---	2401.67	MHz	Info



Plot_Common2G4 Peak OP 3MHz-3MHz ~ Generic 2G4_29092020_160327.png

TEST FINISHED

General Verdict

29.09.2020 16:03:28 / RT: 28 s

PASS

2. Common2G4 Peak OP 3MHz/3MHz ~ Generic 2G4

Test References	
TC Start	29.09.2020 16:47:23
Ambit Temp [°C] Humidity [rel%]	27.0 38
System Version	1.0.0.51
Test Specification	None
Test Method	
Class / TC Version	TC_VM_Common2G4_Peak_Output_Power_Conducted_3MHz_3MHz_V01 Version: 0.0.1
My Description	Peak Output Power conducted 3MHz/3MHz - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.170 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.60

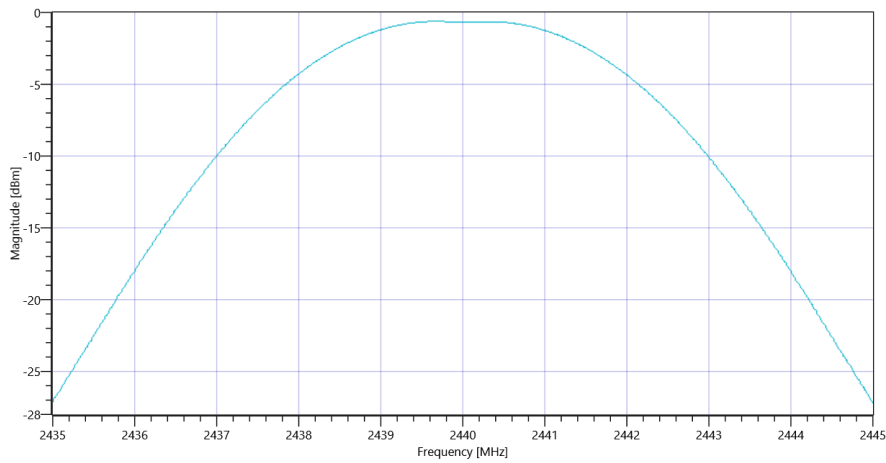
Test at TX 2440 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	9.38 10.8 15
Start [MHz] Stop [MHz]	2435.000 2445.000
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	---	---	-0.62	dBm	Info
Peak Power	---	---	0.866962	mW	Info
Frequency at Peak	---	---	2439.7	MHz	Info



Plot_Common2G4 Peak OP 3MHz-3MHz ~ Generic 2G4_29092020_164753.png

TEST FINISHED

General Verdict

29.09.2020 16:47:54 / RT: 30 s

PASS

3. Common2G4 Peak OP 3MHz/3MHz ~ Generic 2G4

Test References	
TC Start	29.09.2020 16:47:58
Ambit Temp [°C] Humidity [rel%]	26.8 38
System Version	1.0.0.51
Test Specification	None
Test Method	
Class / TC Version	TC_VM_Common2G4_Peak_Output_Power_Conducted_3MHz_3MHz_V01 Version: 0.0.1
My Description	Peak Output Power conducted 3MHz/3MHz - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.170 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.60

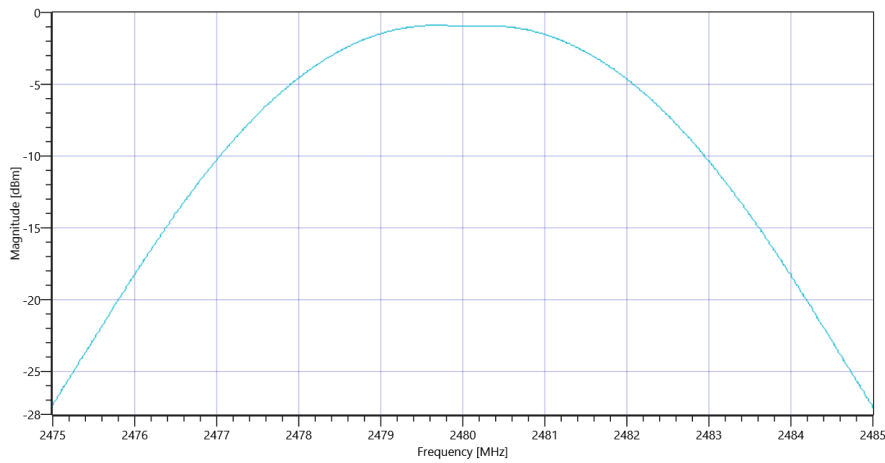
Test at TX 2480 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	9.12 10.85 15
Start [MHz] Stop [MHz]	2475.000 2485.000
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	---	---	-0.89	dBm	Info
Peak Power	---	---	0.814704	mW	Info
Frequency at Peak	---	---	2479.68	MHz	Info



Plot_Common2G4 Peak OP 3MHz-3MHz ~ Generic 2G4_29092020_164834.png

TEST FINISHED

General Verdict

29.09.2020 16:48:34 / RT: 36 s

PASS

4. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:17:45
Ambit Temp [°C] Humidity [rel%]	27.8 37
System Version	1.0.0.51
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
Class / TC Version	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_DTS_V01 Version: 0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted DTS4 - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

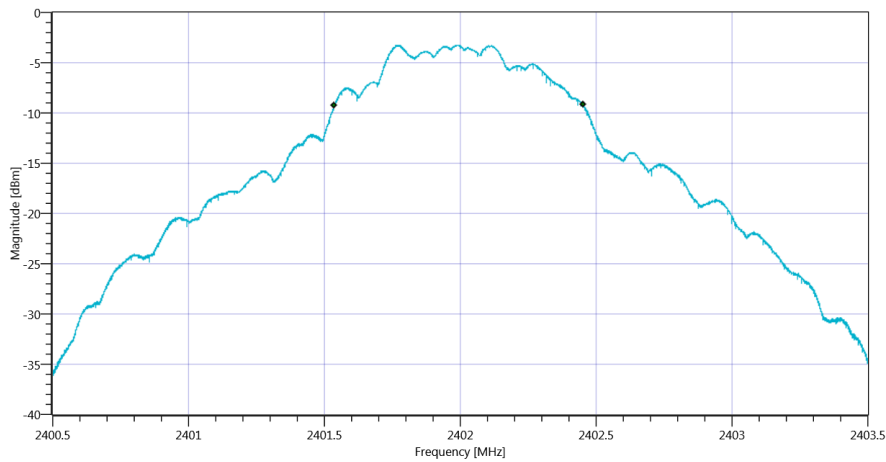
Test at TX 2402 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.60 10.91 10
Start [MHz] Stop [MHz]	2400.500 2403.500
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)	---	---	915	kHz	INFO

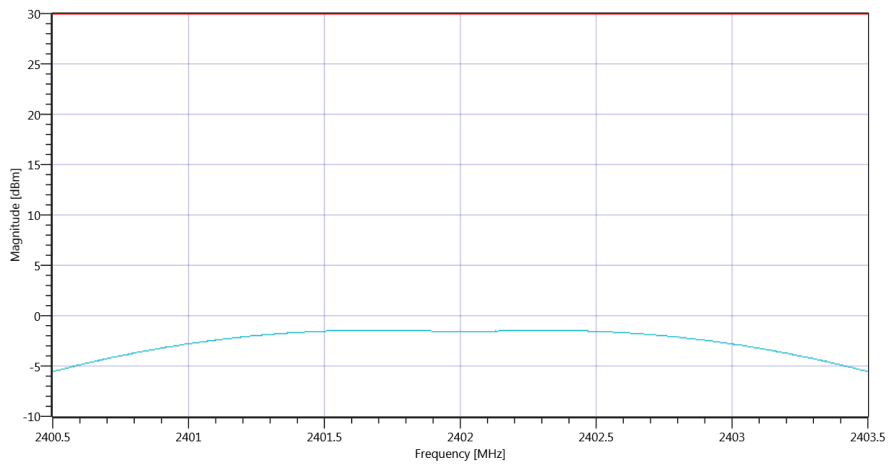


READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.60 10.91 15
Start [MHz] Stop [MHz]	2400.500 2403.500
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	-1.44	dBm	PASS
Peak Power	---	1000	0.717794	mW	PASS
Frequency at Peak	---	---	2401.688	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS -- Generic 2G4_08102020_151829.png

TEST FINISHED

General Verdict

08.10.2020 15:18:30 / RT: 45 s

PASS

5. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:28:00
Ambit Temp [°C] Humidity [rel%]	27.9 36
System Version	1.0.0.51
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
Class / TC Version	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_DTS_V01 Version: 0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted DTS4 - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

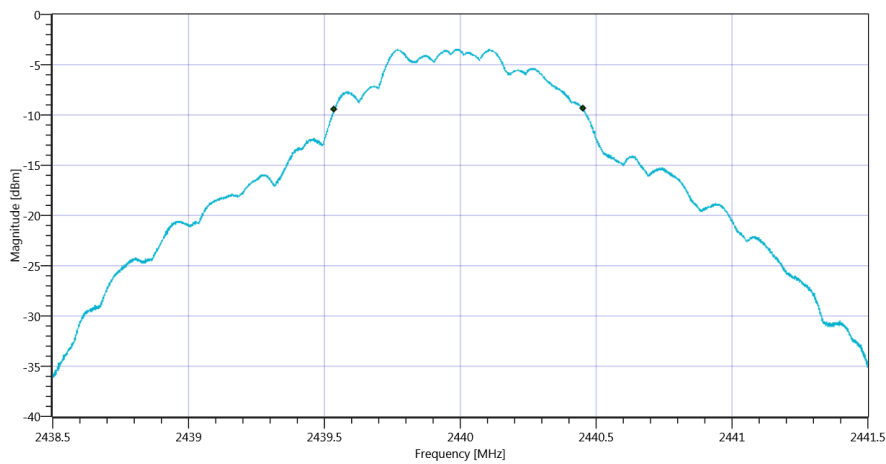
Test at TX 2440 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.38 10.99 10
Start [MHz] Stop [MHz]	2438.500 2441.500
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)	---	---	915	kHz	INFO

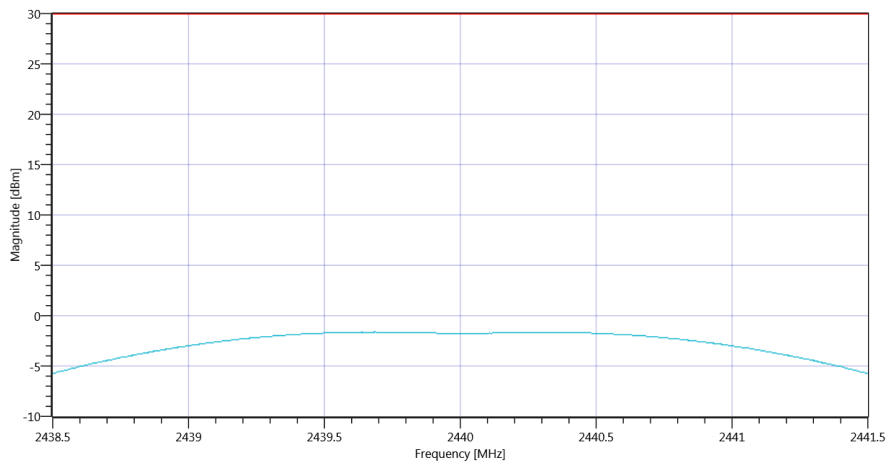


READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.38 10.99 15
Start [MHz] Stop [MHz]	2438.500 2441.500
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	-1.63	dBm	PASS
Peak Power	---	1000	0.687068	mW	PASS
Frequency at Peak	---	---	2439.688	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4_08102020_152844.png

TEST FINISHED

General Verdict

08.10.2020 15:28:45 / RT: 44 s

PASS

6. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:36:54
Ambit Temp [°C] Humidity [rel%]	27.9 36
System Version	1.0.0.51
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
Class / TC Version	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_DTS_V01 Version: 0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted DTS4 - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

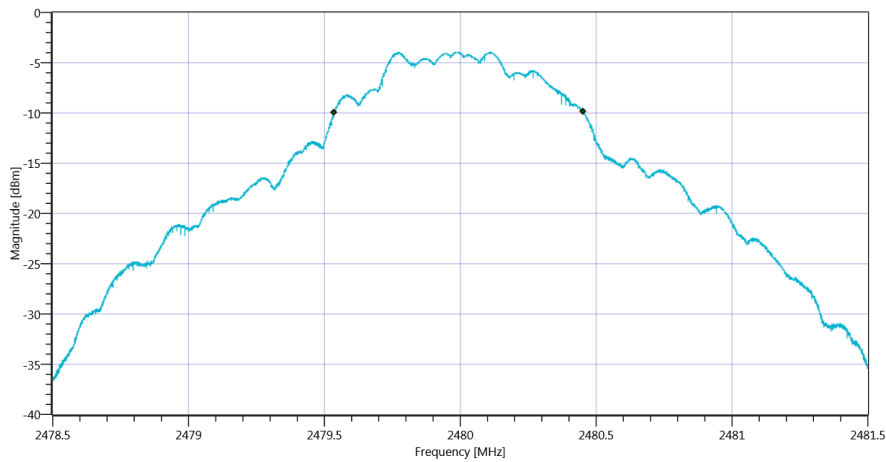
Test at TX 2480 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.89 11.06 10
Start [MHz] Stop [MHz]	2478.500 2481.500
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)	---	---	917	kHz	INFO



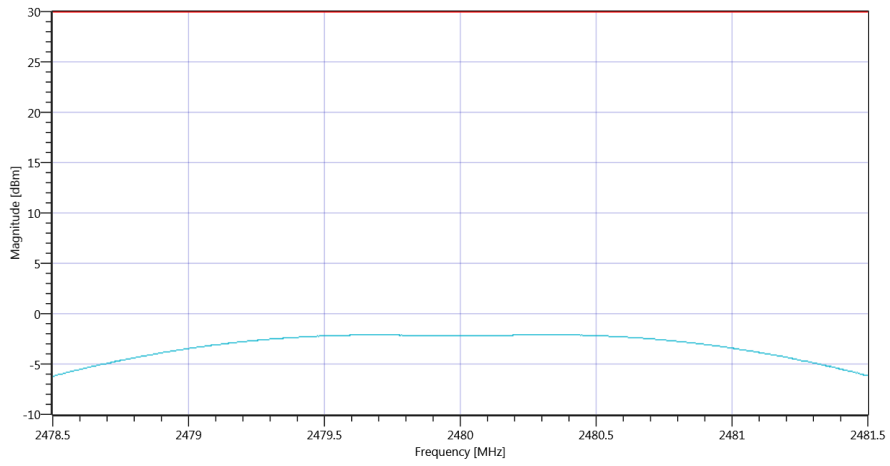
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4 DTS BW_08102020_153722.png

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.89 11.06 15
Start [MHz] Stop [MHz]	2478.500 2481.500
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	0.616595	mW	PASS
Frequency at Peak	---	---	2480.3	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS -- Generic 2G4_08102020_153738.png

TEST FINISHED

General Verdict

08.10.2020 15:37:39 / RT: 44 s

PASS

7. FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:18:47
Ambit Temp [°C] Humidity [rel%]	27.8 37
System Version	1.0.0.51
Test Specification	FCC Part 15.247
Test Method	99
Class / TC Version	TC_VM_FCC15247_Bandwidth_6dB_DTS_V01 Version: 0.0.1
My Description	FCC 15.247 Bandwidth 6DB DTS - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

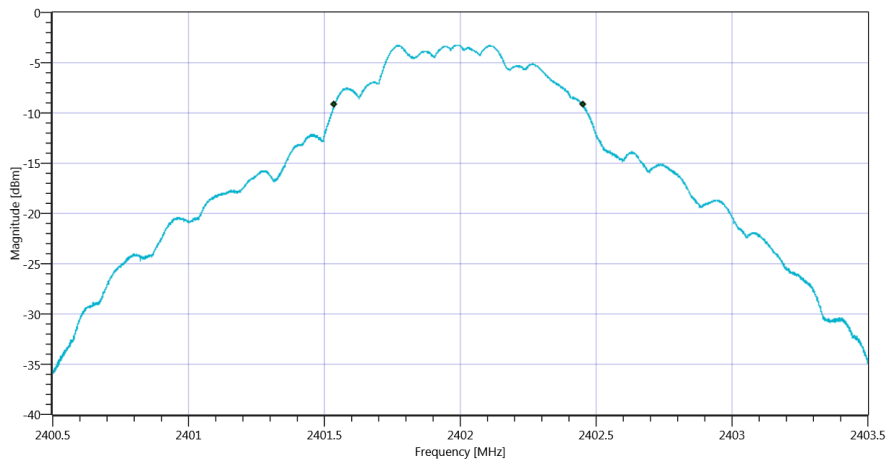
Test at TX 2402 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.51 10.91 10
Start [MHz] Stop [MHz]	2400.500 2403.500
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	--	914	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4_08102020_151915.png

TEST FINISHED

General Verdict	08.10.2020 15:19:15 / RT: 28 s	PASS
-----------------	--------------------------------	------

8. FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:29:02
Ambit Temp [°C] Humidity [rel%]	28.0 36
System Version	1.0.0.51
Test Specification	FCC Part 15.247
Test Method	99
Class / TC Version	TC_VM_FCC15247_Bandwidth_6dB_DTS_V01 Version: 0.0.1
My Description	FCC 15.247 Bandwidth 6DB DTS - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

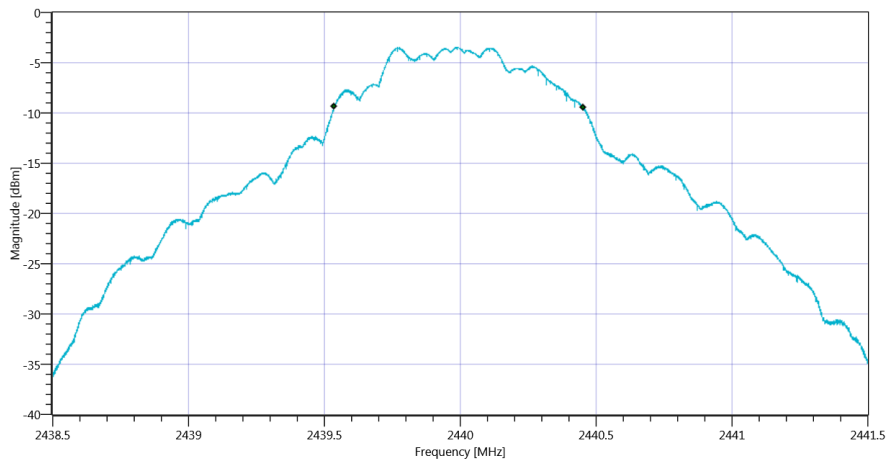
Test at TX 2440 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.39 10.99 10
Start [MHz] Stop [MHz]	2438.500 2441.500
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	--	916	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4_08102020_152930.png

TEST FINISHED

General Verdict	08.10.2020 15:29:30 / RT: 28 s	PASS
-----------------	--------------------------------	------

9. FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:37:56
Ambit Temp [°C] Humidity [rel%]	28.0 36
System Version	1.0.0.51
Test Specification	FCC Part 15.247
Test Method	99
Class / TC Version	TC_VM_FCC15247_Bandwidth_6dB_DTS_V01 Version: 0.0.1
My Description	FCC 15.247 Bandwidth 6DB DTS - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

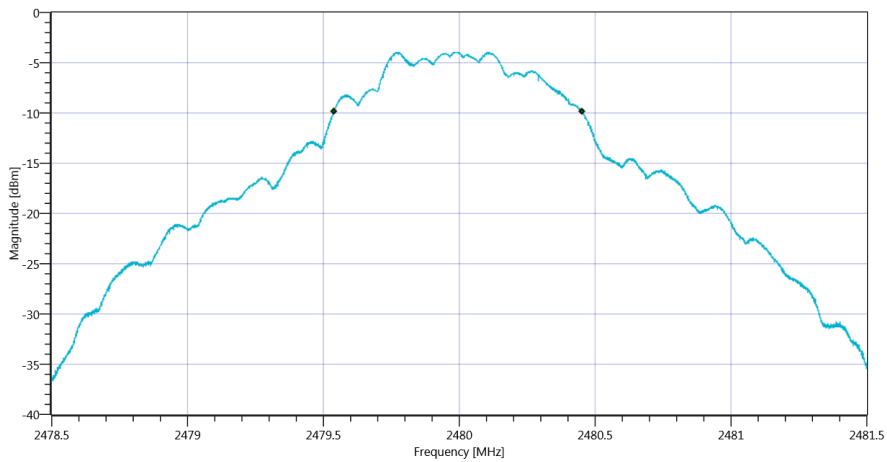
Test at TX 2480 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.88 11.06 10
Start [MHz] Stop [MHz]	2478.500 2481.500
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	---	914	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4_08102020_153824.png

TEST FINISHED

General Verdict	08.10.2020 15:38:24 / RT: 28 s	PASS
-----------------	--------------------------------	------

10. FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:19:20
Ambit Temp [°C] Humidity [rel%]	27.8 37
System Version	1.0.0.51
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
Class / TC Version	TC_VM_FCC15247_Peak_Power_Spectral_Density_DTS_V01 Version: 0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

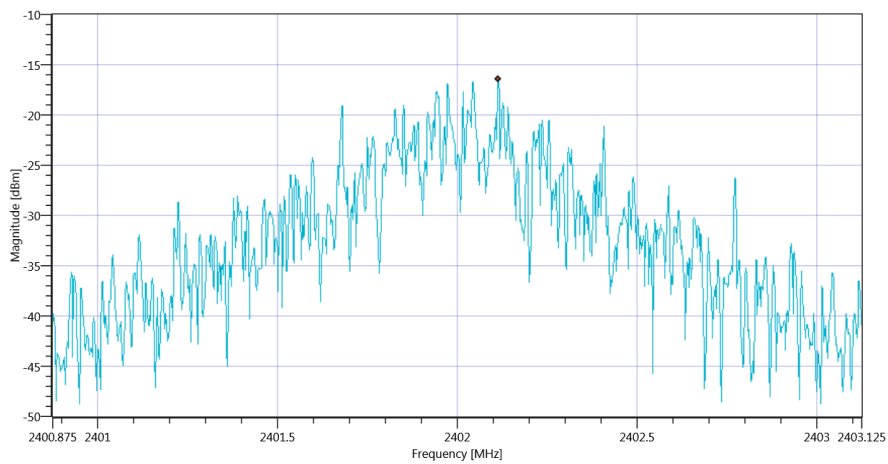
Test at TX 2402 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.55 10.91 10
Start [MHz] Stop [MHz]	2400.875 2403.125
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	-16.42	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4_08102020_151957.png

TEST FINISHED

General Verdict	08.10.2020 15:19:57 / RT: 37 s	PASS
-----------------	--------------------------------	------

11. FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:29:35
Ambit Temp [°C] Humidity [rel%]	28.0 36
System Version	1.0.0.51
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
Class / TC Version	TC_VM_FCC15247_Peak_Power_Spectral_Density_DTS_V01 Version: 0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

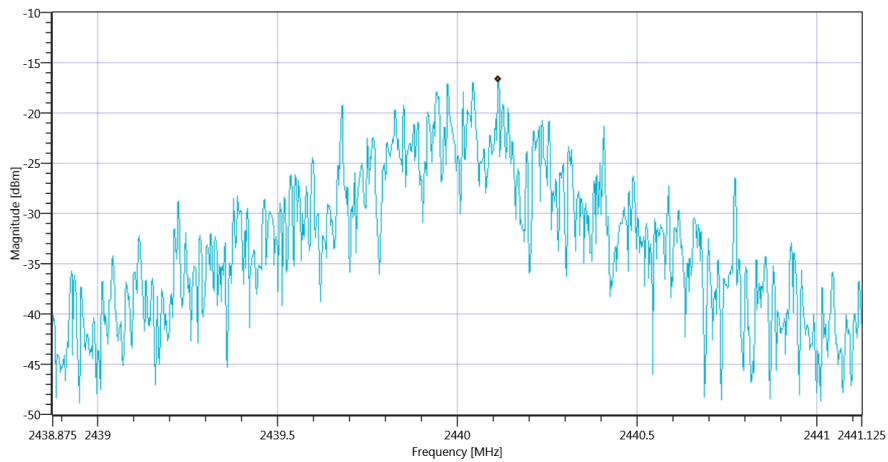
Test at TX 2440 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.36 10.99 10
Start [MHz] Stop [MHz]	2438.875 2441.125
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	-16.66	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4_08102020_153012.png

TEST FINISHED

General Verdict	08.10.2020 15:30:13 / RT: 37 s	PASS
-----------------	--------------------------------	------

12. FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:38:29
Ambit Temp [°C] Humidity [rel%]	28.0 36
System Version	1.0.0.51
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
Class / TC Version	TC_VM_FCC15247_Peak_Power_Spectral_Density_DTS_V01 Version: 0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

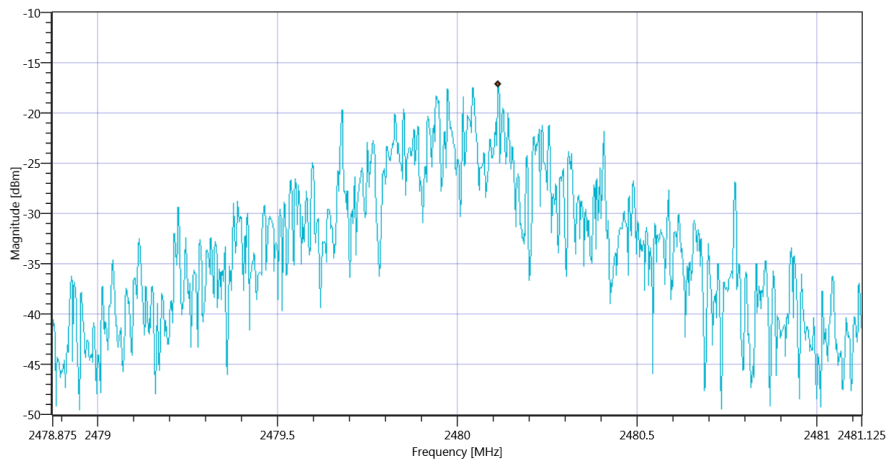
Test at TX 2480 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.86 11.06 10
Start [MHz] Stop [MHz]	2478.875 2481.125
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	-17.13	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4_08102020_153906.png

TEST FINISHED

General Verdict	08.10.2020 15:39:07 / RT: 37 s	PASS
-----------------	--------------------------------	------

13. FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:20:02
Ambit Temp [°C] Humidity [rel%]	27.9 37
System Version	1.0.0.51
Test Specification	FCC Part 15.247
Test Method	
Class / TC Version	TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01 Version: 0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20DB DTS - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

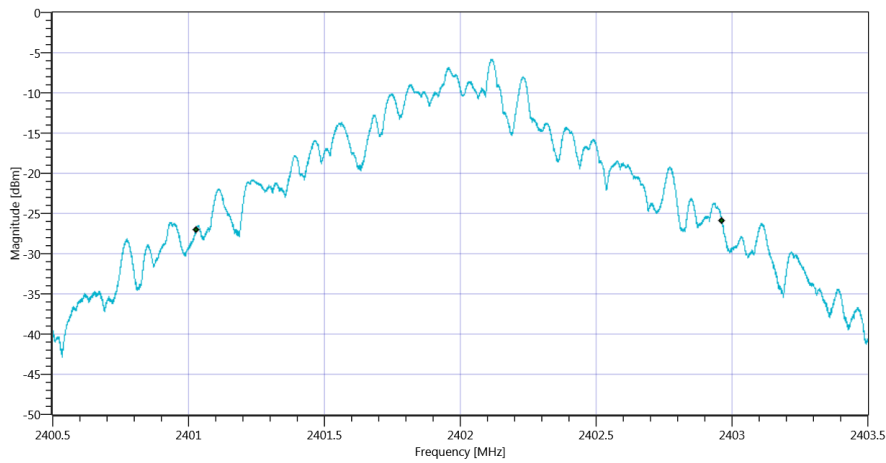
Test at TX 2402 MHz

READ SA SETTINGS:

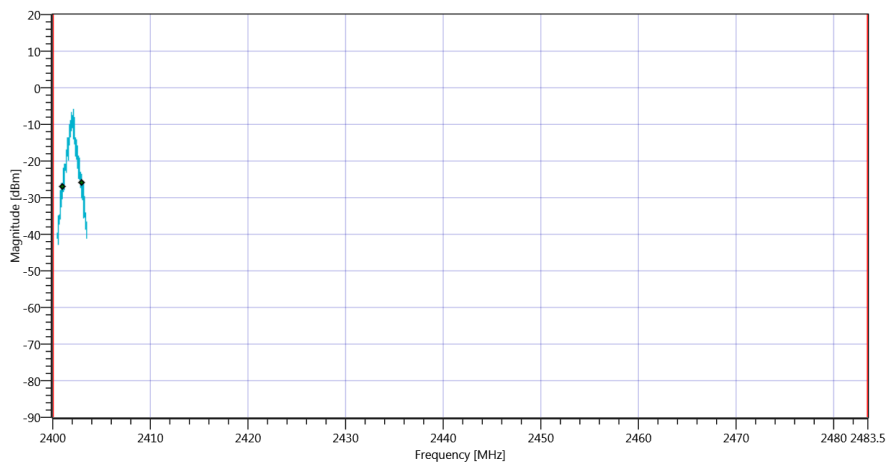
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.54 10.91 10
Start [MHz] Stop [MHz]	2400.500 2403.500
RBW [MHz] VBW [MHz]	0.030000 0.100000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1936	kHz	INFO
T1 99%	2400.000000	---	2401.0275	MHz	PASS
T2 99%	---	2483.500000	2402.9635	MHz	PASS



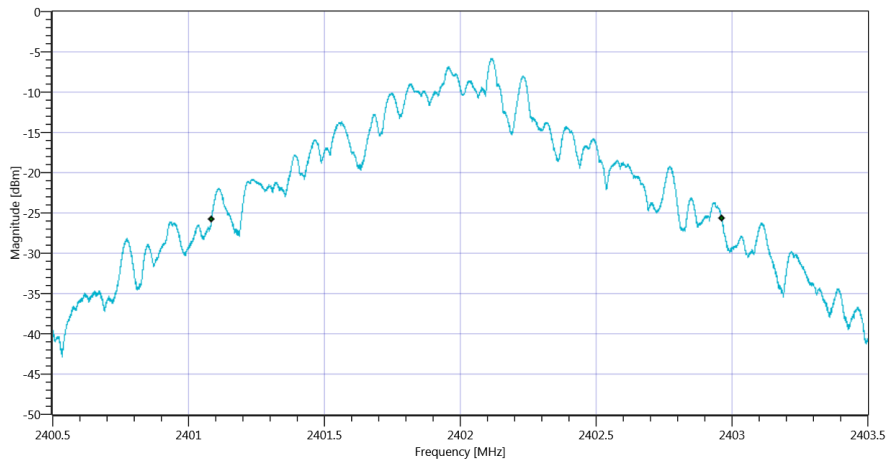
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4 99PCT_08102020_152030.png



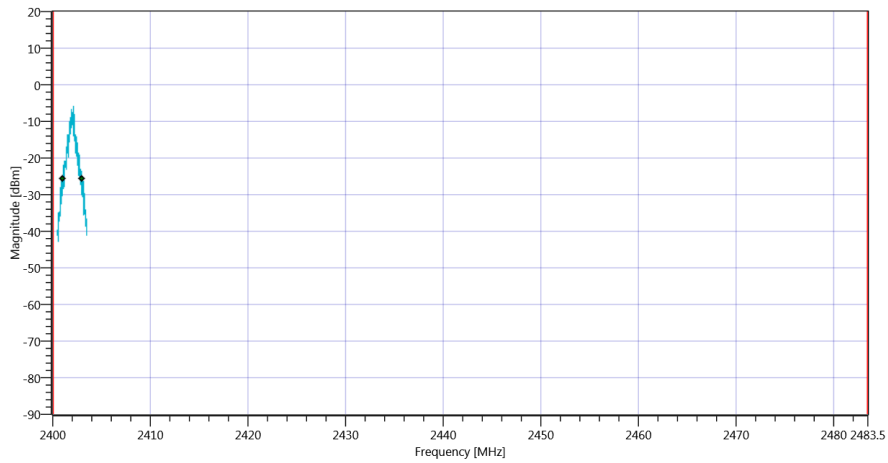
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4_08102020_152034.png

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1879	kHz	INFO
T1 20DB	2400.000000	---	2401.0841	MHz	PASS
T2 20dB	---	2483.500000	2402.9630	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4 20dB_08102020_152040.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4_08102020_152044.png

TEST FINISHED

General Verdict

08.10.2020 15:20:45 / RT: 43 s

PASS

14. FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:30:17
Ambit Temp [°C] Humidity [rel%]	27.9 36
System Version	1.0.0.51
Test Specification	FCC Part 15.247
Test Method	
Class / TC Version	TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01 Version: 0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20DB DTS - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

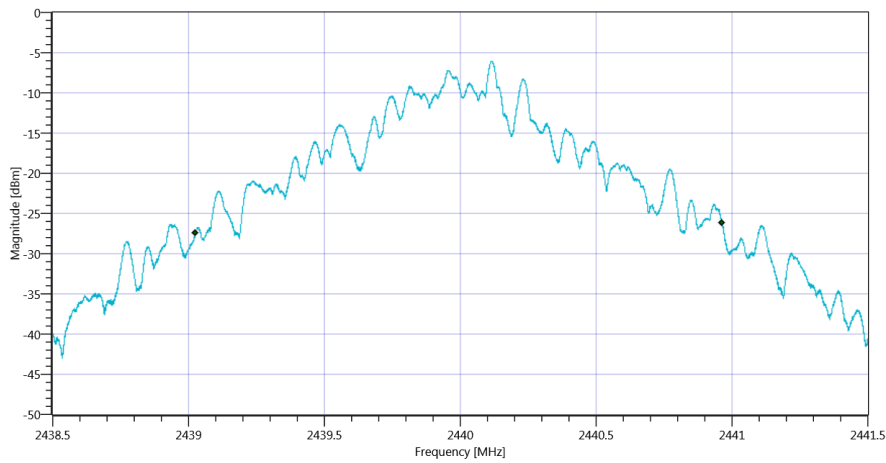
Test at TX 2440 MHz

READ SA SETTINGS:

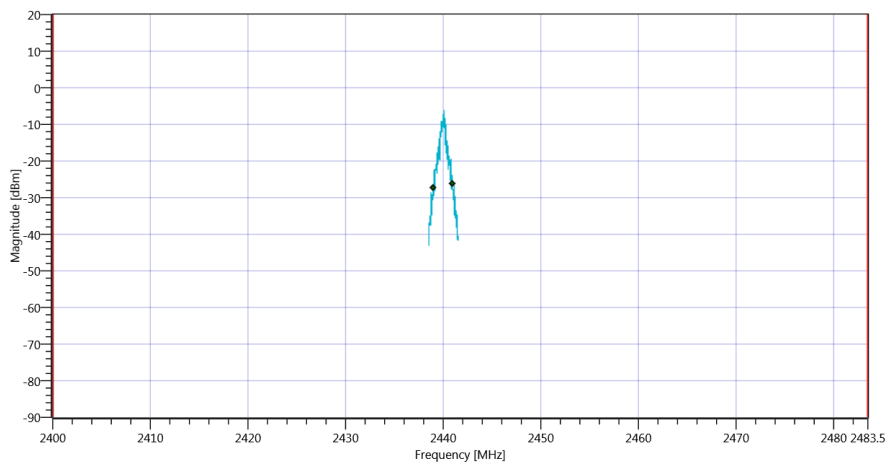
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.36 10.99 10
Start [MHz] Stop [MHz]	2438.500 2441.500
RBW [MHz] VBW [MHz]	0.030000 0.100000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1938	kHz	INFO
T1 99%	2400.000000	---	2439.0260	MHz	PASS
T2 99%	---	2483.500000	2440.9641	MHz	PASS



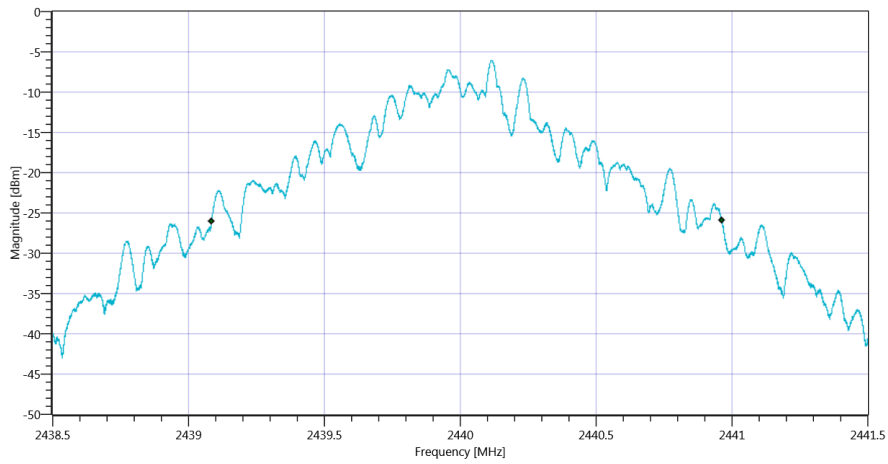
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4 99PCT_08102020_153046.png



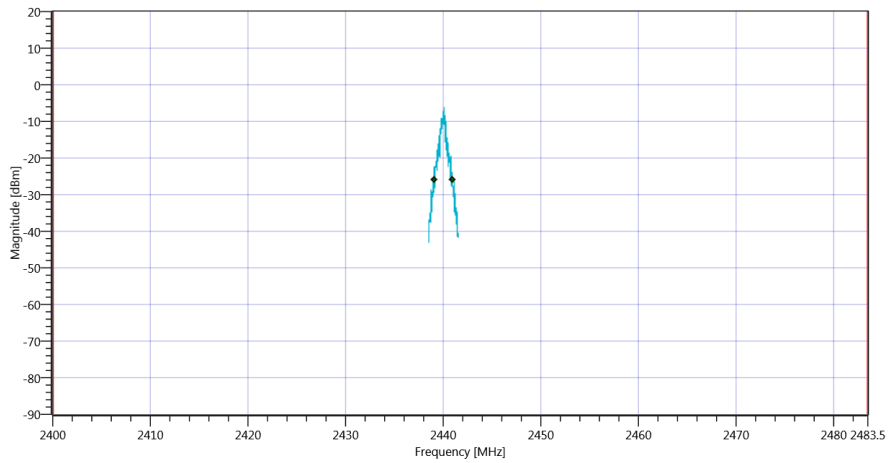
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4_08102020_153050.png

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1879	kHz	INFO
T1 20DB	2400.000000	---	2439.0844	MHz	PASS
T2 20dB	---	2483.500000	2440.9633	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4 20dB_08102020_153056.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4_08102020_153100.png

TEST FINISHED

General Verdict

08.10.2020 15:31:01 / RT: 43 s

PASS

15. FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:39:11
Ambit Temp [°C] Humidity [rel%]	28.0 36
System Version	1.0.0.51
Test Specification	FCC Part 15.247
Test Method	
Class / TC Version	TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01 Version: 0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20DB DTS - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

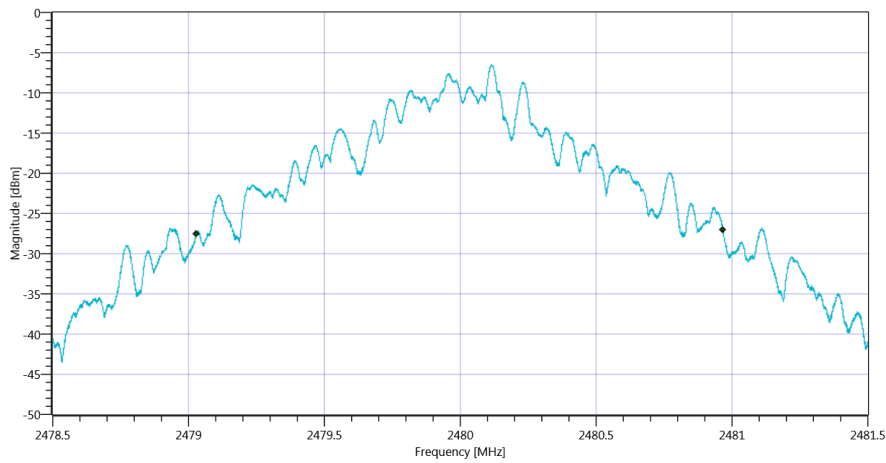
Test at TX 2480 MHz

READ SA SETTINGS:

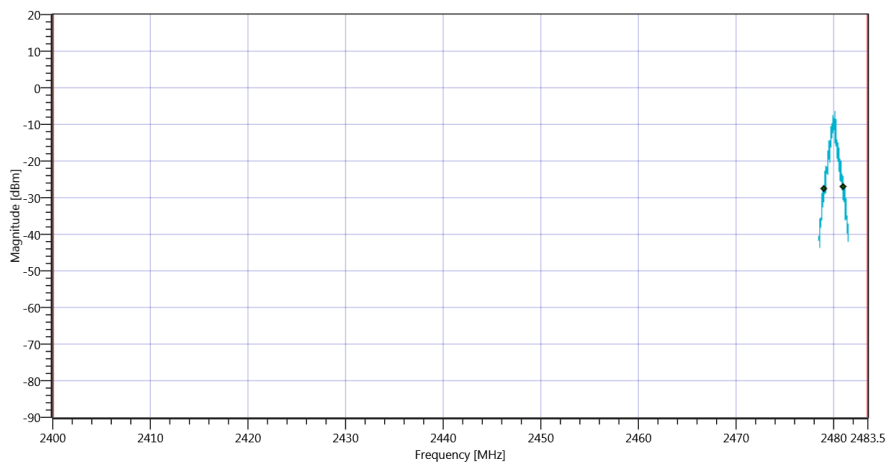
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.88 11.06 10
Start [MHz] Stop [MHz]	2478.500 2481.500
RBW [MHz] VBW [MHz]	0.030000 0.100000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1937	kHz	INFO
T1 99%	2400.000000	---	2479.0296	MHz	PASS
T2 99%	---	2483.500000	2480.9668	MHz	PASS



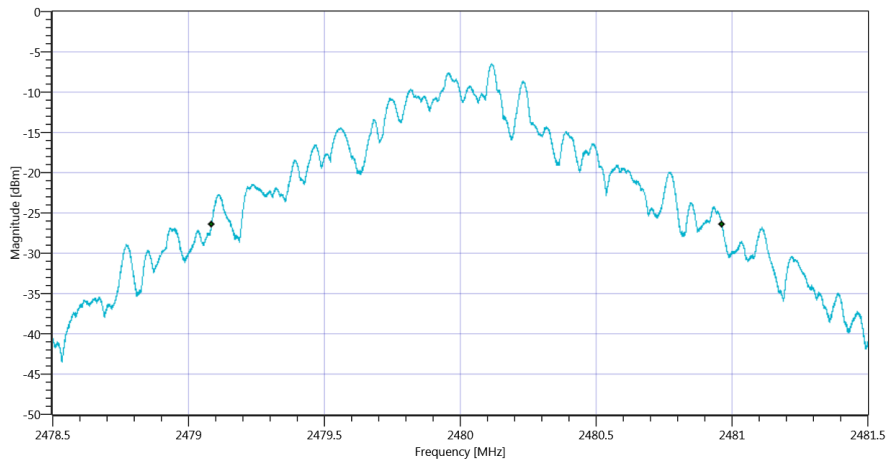
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4 99PCT_08102020_153939.png



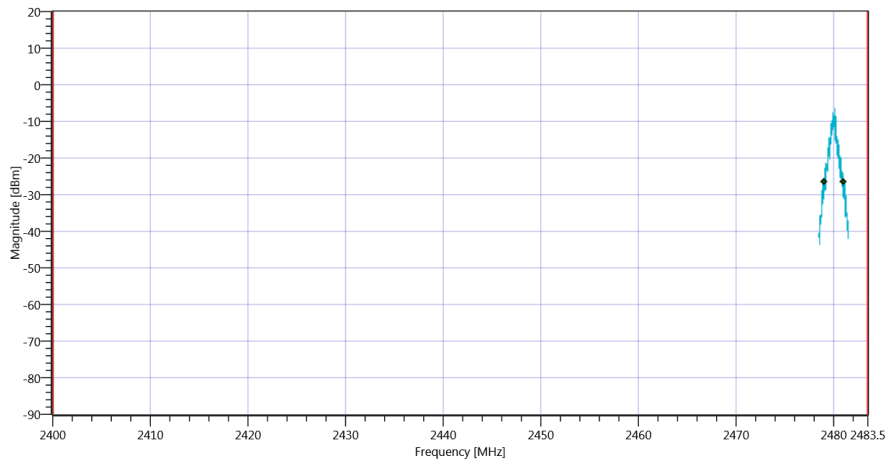
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4_08102020_153943.png

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1880	kHz	INFO
T1 20DB	2400.000000	---	2479.0847	MHz	PASS
T2 20dB	---	2483.500000	2480.9645	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4 20dB_08102020_153949.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4_08102020_153954.png

TEST FINISHED

General Verdict

08.10.2020 15:39:54 / RT: 43 s

PASS

16. FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:20:49
Ambit Temp [°C] Humidity [rel%]	27.9 37
System Version	1.0.0.51
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.
Class / TC Version	TC_VM_FCC15247_TX_Emissions_Conducted_V01 Version: 0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

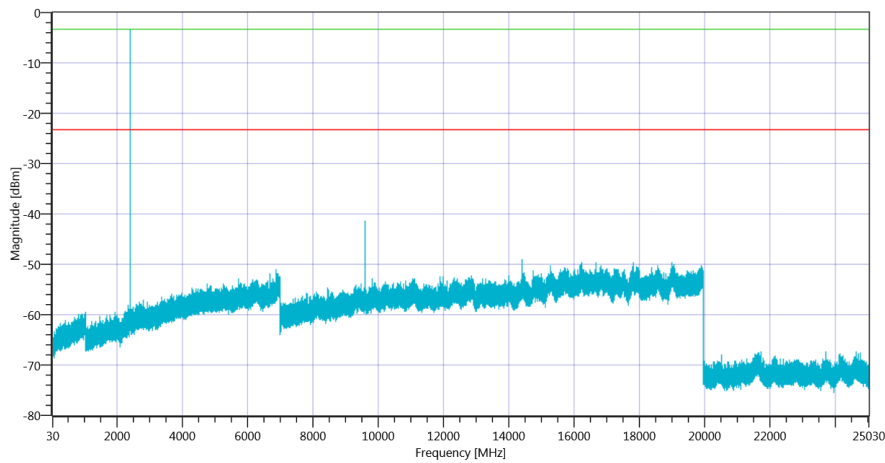
Test at TX 2402 MHz

READ SA SETTINGS:

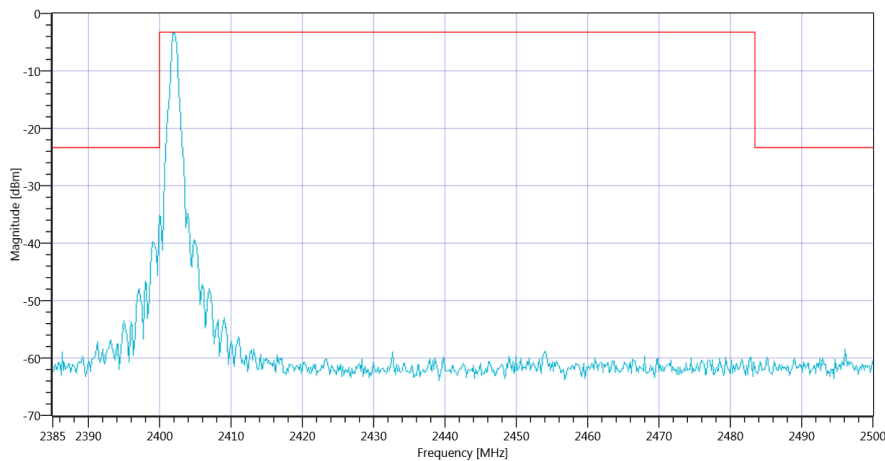
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-1.13 0 15
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2401.83 MHz	---	---	-3.32	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 2399.833 MHz	0	---	15.33	dB	INFO



Plot_FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4 2402_08102020_152538.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4 2402_08102020_152541.png

TEST FINISHED

General Verdict

08.10.2020 15:25:43 / RT: 293 s

PASS

17. FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:31:05
Ambit Temp [°C] Humidity [rel%]	27.9 36
System Version	1.0.0.51
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.
Class / TC Version	TC_VM_FCC15247_TX_Emissions_Conducted_V01 Version: 0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

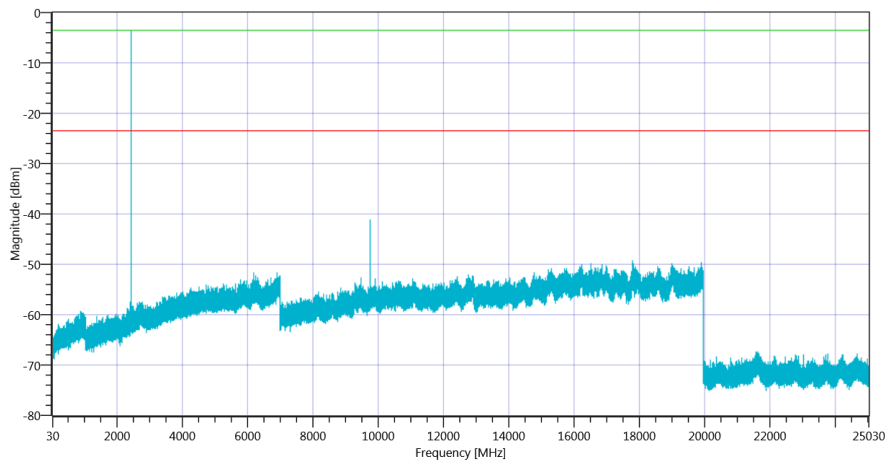
Test at TX 2440 MHz

READ SA SETTINGS:

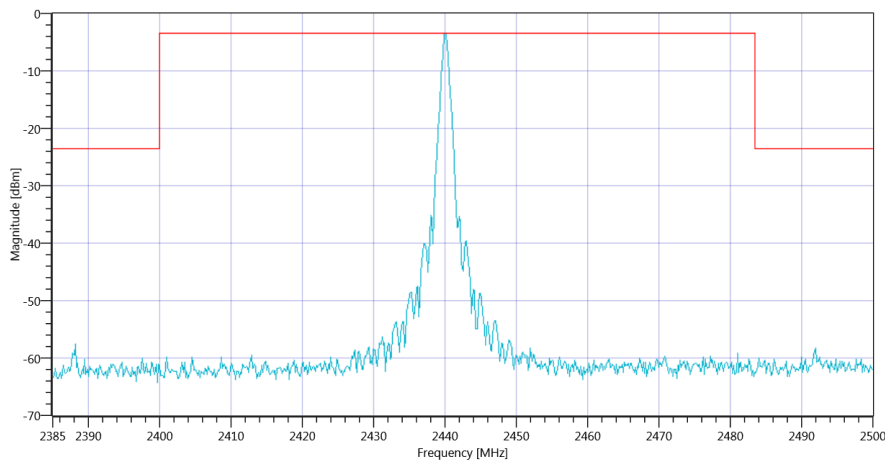
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-1.19 0 15
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2440.00 MHz	---	---	-3.50	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 9761.167 MHz	0	---	17.62	dB	INFO



Plot_FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4 2440_08102020_153554.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4 2440_08102020_153557.png

TEST FINISHED

General Verdict

08.10.2020 15:35:59 / RT: 293 s

PASS

18. FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4

Test References	
TC Start	08.10.2020 15:39:59
Ambit Temp [°C] Humidity [rel%]	28.0 36
System Version	1.0.0.51
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.
Class / TC Version	TC_VM_FCC15247_TX_Emissions_Conducted_V01 Version: 0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - Generic 2G4
Add. Information	

Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

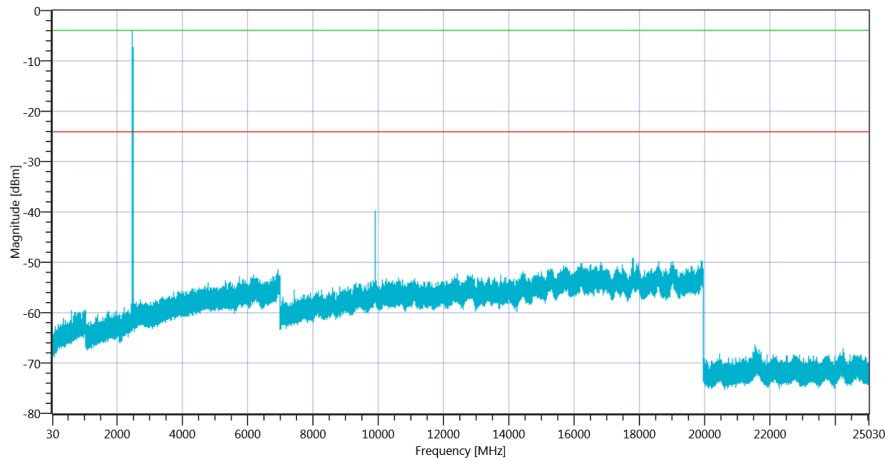
Test at TX 2480 MHz

READ SA SETTINGS:

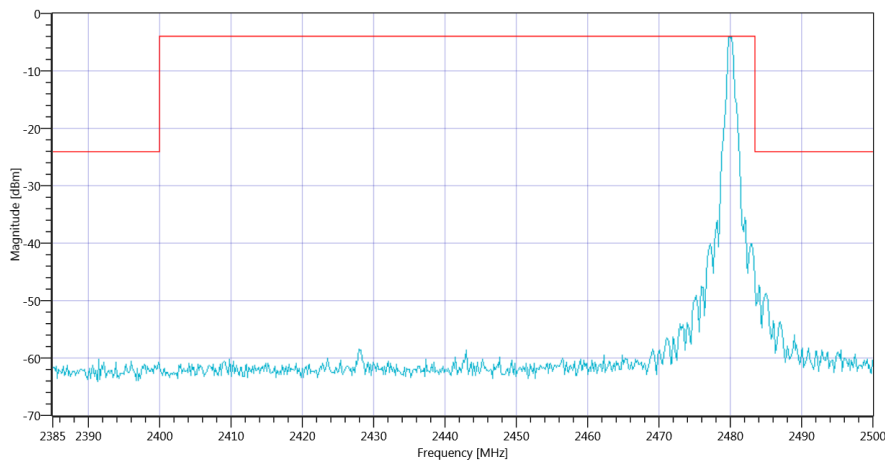
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	-1.72 0 15
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2480.17 MHz	---	---	-3.99	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 9918.833 MHz	0	---	15.88	dB	INFO



Plot_FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4 2480_08102020_154448.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4 2480_08102020_154451.png

TEST FINISHED

General Verdict

08.10.2020 15:44:52 / RT: 293 s

PASS

- END OF DOCUMENT -