

Measurement Results

1-9984/20-01-07_Annex_MR_A_1

[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 & EMC

Table of Content

IUT Summary	3
1. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4	4
2. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4	7
3. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4	10
4. FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4	13
5. FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4	15
6. FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4	17
7. FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4	19
8. FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4	21
9. FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4	23
10. FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4	25
11. FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4	28
12. FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4	31
13. FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4	34
14. FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4	36
15. FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4	38
16. FCC Part 15.247 Restricted Band Edge Conducted Peak DTS Video Avg ~ Generic 2G4	40
17. FCC Part 15.247 Restricted Band Edge Conducted Peak DTS Video Avg ~ Generic 2G4	42

IUT Summary

IUT DEFINITION & Common settings	
Manufacturer	PHONAK Communications AG
Type	Roger Earpiece / Roger Earpiece C
Serial No. Setup No.	Main DUT 1.0
SW Version HW Version	RC1.2 2.0
Comment 1 2	
Tlow Tmid Thigh [°C]	-10 20 55
Vlow Vmid Vhigh [V] @Imax [A]	1 1.4 1.6 @1
Auto Control enabled Power Supply Climatic Box	No No
Antenna Gain [dBi]	0
Additional Path Loss [dB]	0.5

IUT Common Settings 2G4	
Hopping supported	No
Burst length [ms]	10
Nominal Bandwidth [MHz]	1.5
User Interaction	No

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

Test References	
TC Start	09.03.2020 15:31:46
System Version	1.0.0.33
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW $\geq$ 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

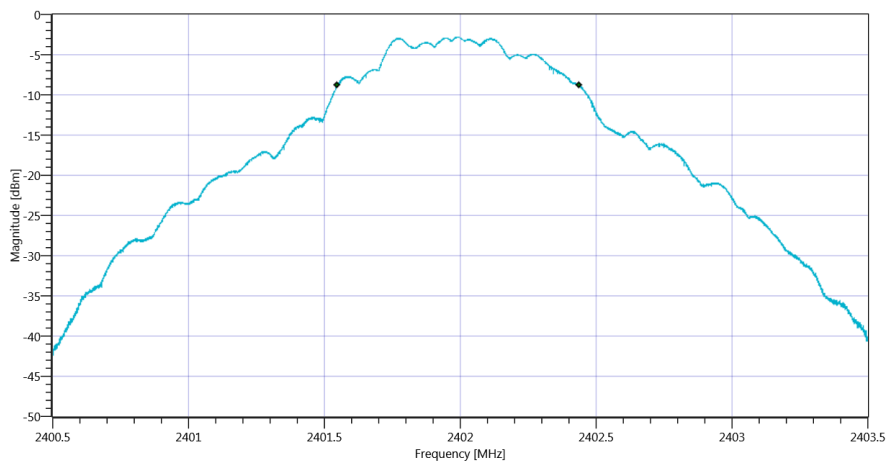
Test at TX 2402 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.64 10.31 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)	---	---	888	kHz	INFO

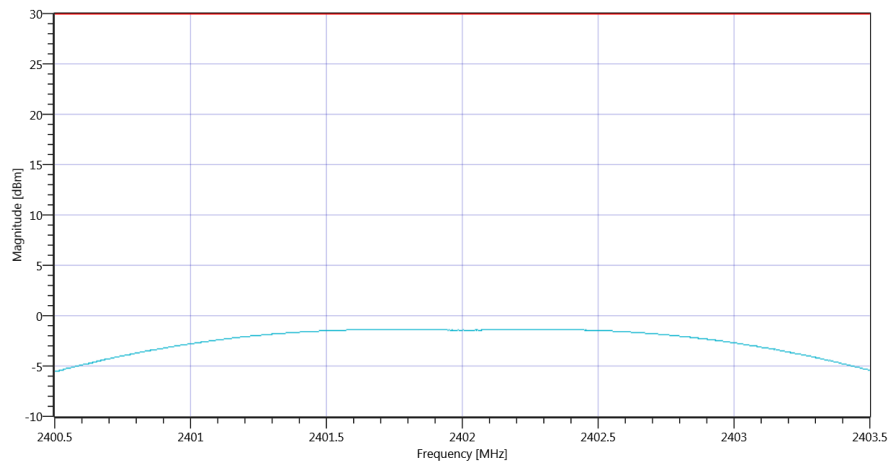


READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.64 10.31 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	-1.39	dBm	PASS
Peak Power	---	1000	0.726106	mW	PASS
Frequency at Peak	---	---	2402.312	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4_09032020_153228.png

TEST FINISHED

General Verdict

09.03.2020 15:32:29 / RT: 43 s

PASS

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

Test References	
TC Start	09.03.2020 15:57:56
System Version	1.0.0.33
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW $\geq$ 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

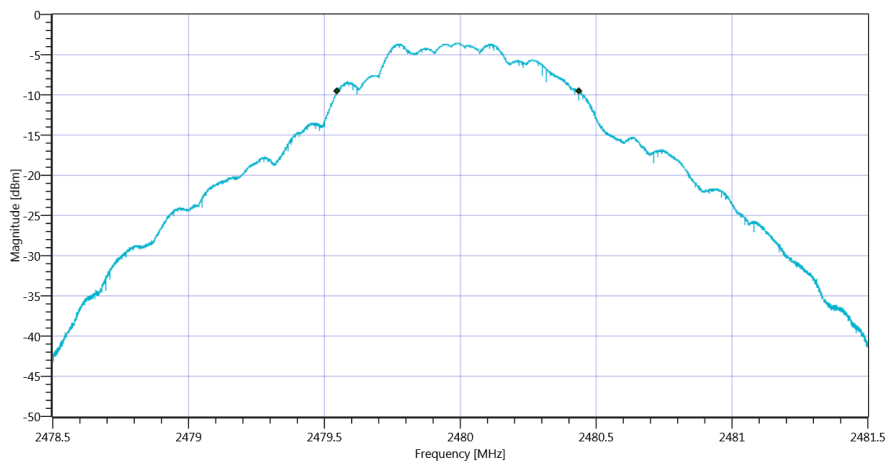
Test at TX 2480 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.99 10.45 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)	---	---	890	kHz	INFO

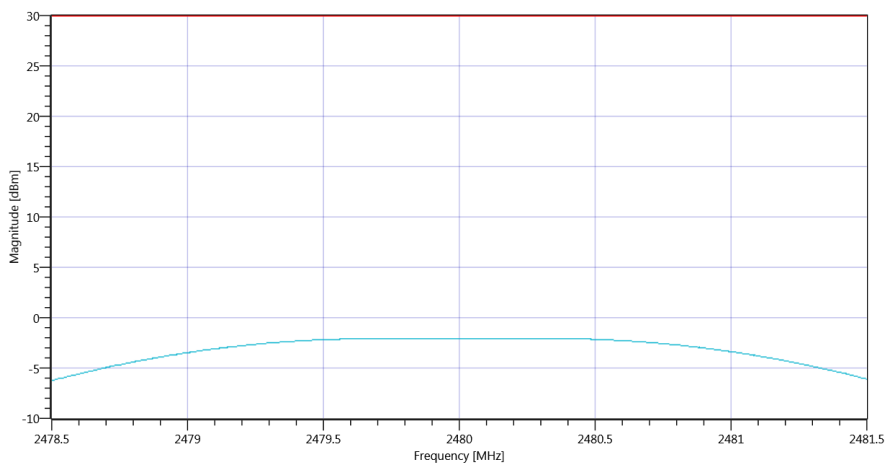


READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.99 10.45 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	-2.07	dBm	PASS
Peak Power	---	1000	0.620869	mW	PASS
Frequency at Peak	---	---	2480.351	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4_09032020_155839.png

TEST FINISHED		
General Verdict	09.03.2020 15:58:39 / RT: 43 s	PASS

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

Test References	
TC Start	09.03.2020 16:48:39
System Version	1.0.0.33
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW $\geq$ 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

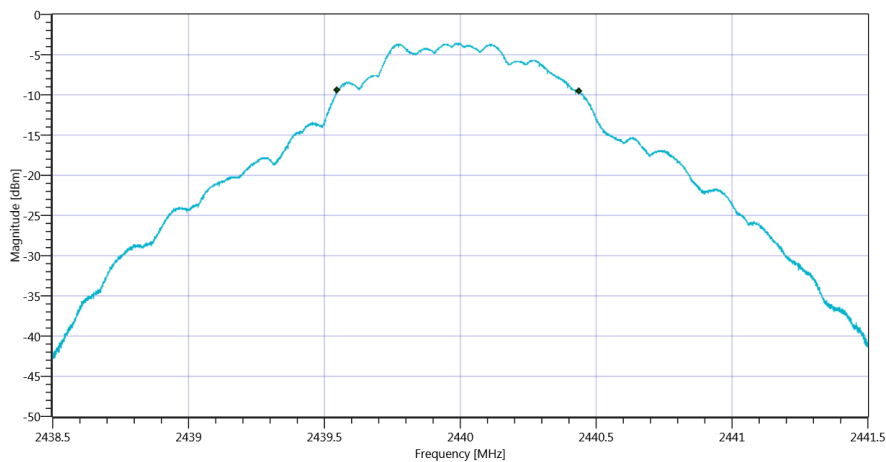
Test at TX 2440 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.93 10.4 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)	---	---	889	kHz	INFO

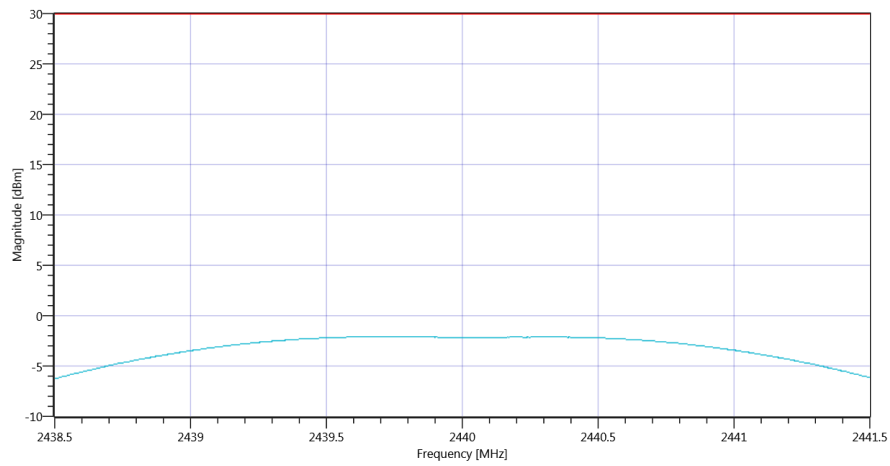


READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.93 10.4 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	-2.1	dBm	PASS
Peak Power	---	1000	0.616595	mW	PASS
Frequency at Peak	---	---	2439.712	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4_09032020_164922.png

TEST FINISHED

General Verdict

09.03.2020 16:49:23 / RT: 43 s

PASS

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

Test References	
TC Start	09.03.2020 15:32:33
System Version	1.0.0.33
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

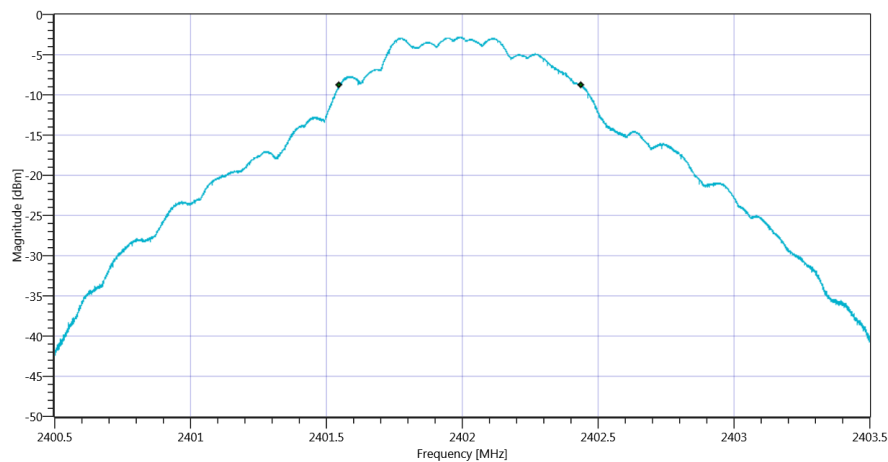
Test at TX 2402 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.67 10.31 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	---	888	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4_09032020_153300.png

TEST FINISHED

General Verdict	09.03.2020 15:33:00 / RT: 27 s	PASS
-----------------	--------------------------------	------

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

Test References	
TC Start	09.03.2020 15:58:43
System Version	1.0.0.33
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

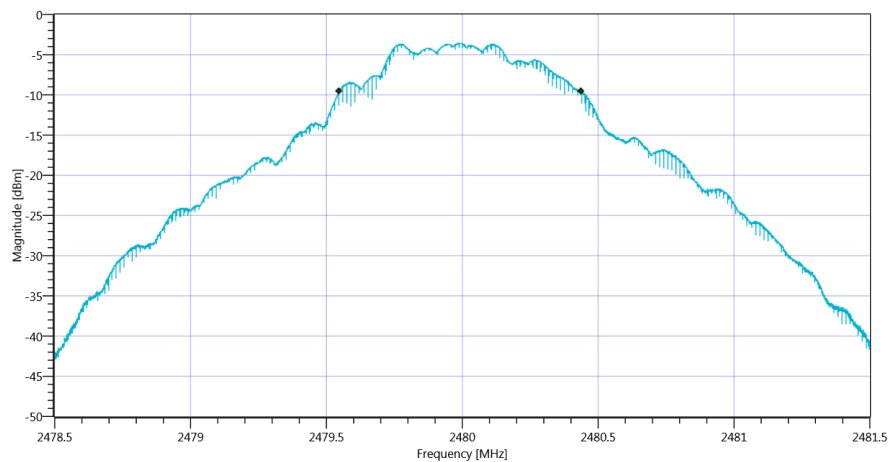
Test at TX 2480 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.94 10.45 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	---	887	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4_09032020_155911.png

TEST FINISHED

General Verdict	09.03.2020 15:59:11 / RT: 27 s	PASS
-----------------	--------------------------------	------

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

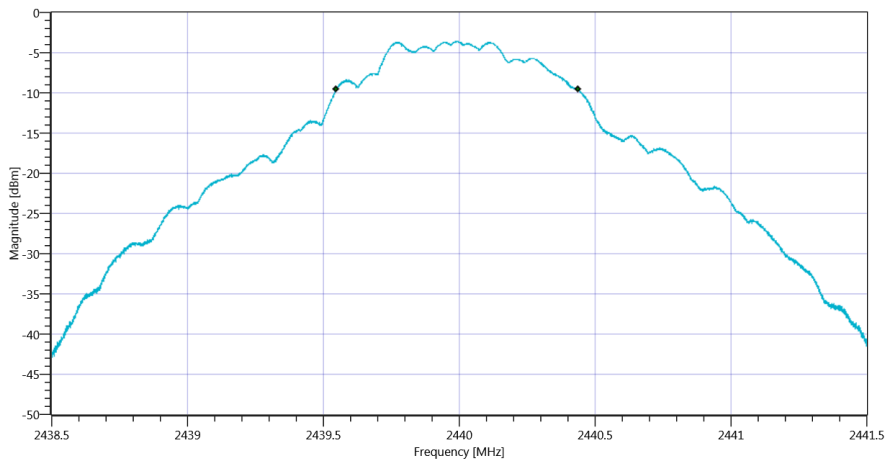
Test References	
TC Start	09.03.2020 16:49:27
System Version	1.0.0.33
Test Specification	FCC Part 15.247
Test Method	99
Class / TC Version	TC_VM_FCC15247_Bandwidth_6dB_DTS_V01 Version: 0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - Generic 2G4
Add. Information	

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]	2.95 10.4 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	---	890	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ Generic 2G4_09032020_164954.png

TEST FINISHED		
General Verdict	09.03.2020 16:49:54 / RT: 27 s	PASS

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

Test References	
TC Start	09.03.2020 15:33:49
System Version	1.0.0.33
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

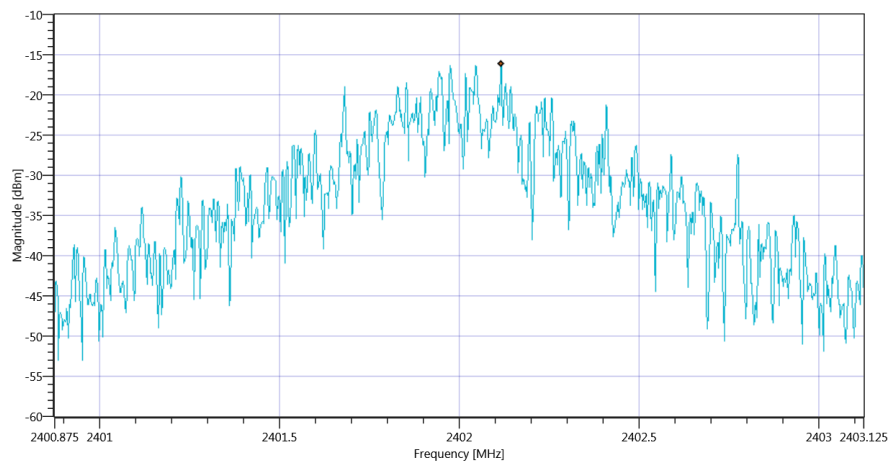
Test at TX 2402 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.65 10.31 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	-16.12	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ Generic 2G4_09032020_153425.png

TEST FINISHED

General Verdict	09.03.2020 15:34:26 / RT: 36 s	PASS
-----------------	--------------------------------	------

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

Test References	
TC Start	09.03.2020 16:00:01
System Version	1.0.0.33
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

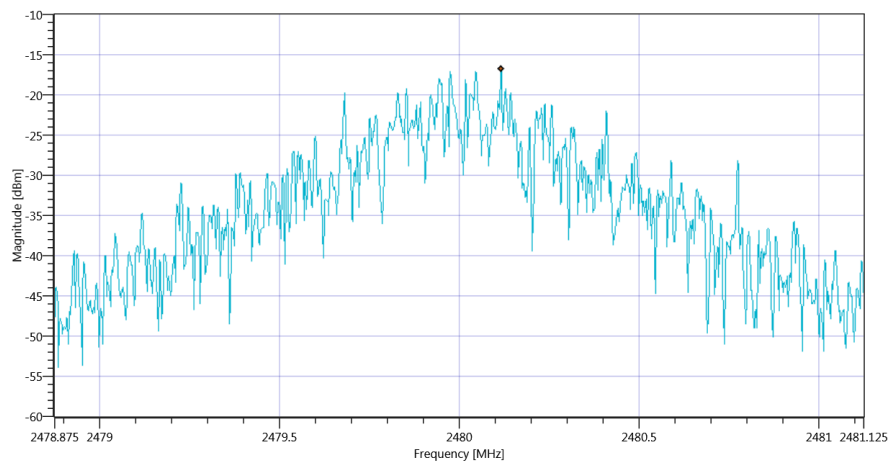
Test at TX 2480 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.01 10.45 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	-16.84	dBm/3KHz	PASS



TEST FINISHED

General Verdict	09.03.2020 16:00:38 / RT: 37 s	PASS
-----------------	--------------------------------	------

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

Test References	
TC Start	09.03.2020 16:50:44
System Version	1.0.0.33
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

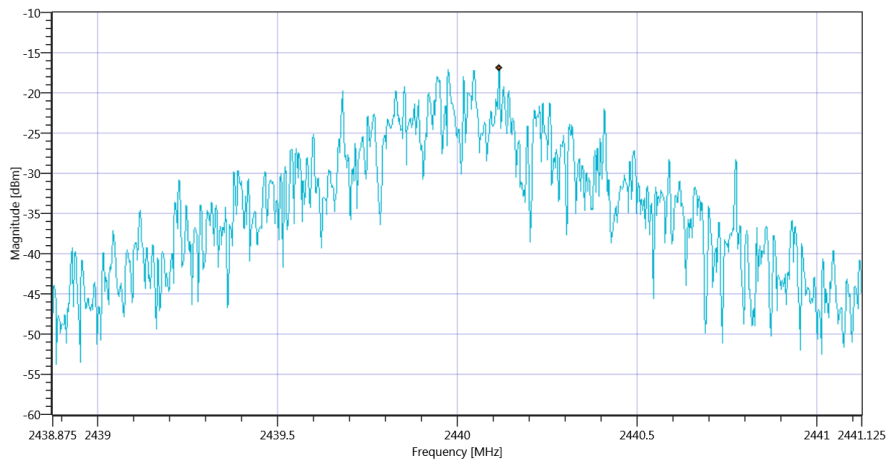
Test at TX 2440 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.96 10.4 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	-16.87	dBm/3KHz	PASS



TEST FINISHED

General Verdict	09.03.2020 16:51:21 / RT: 36 s	PASS
-----------------	--------------------------------	------

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

Test References	
TC Start	09.03.2020 15:33:04
System Version	1.0.0.33
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	

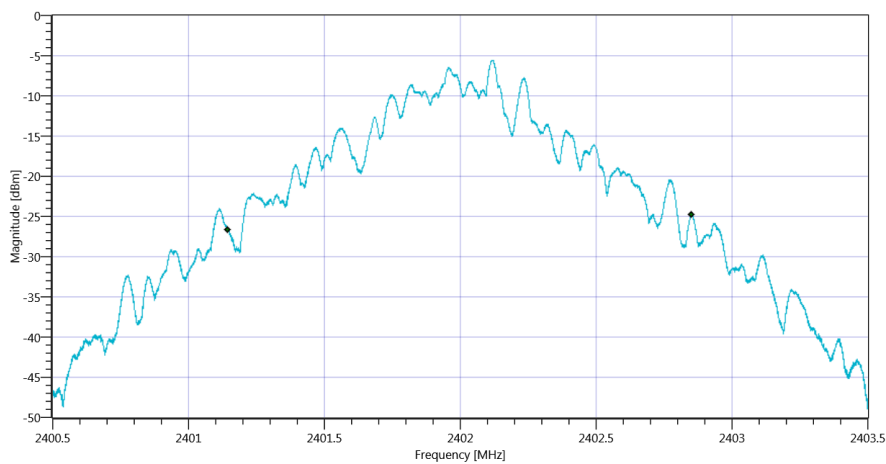
Test Parameter	
Technology to test	Generic 2G4
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	False Freq [MHz] 2440
Frequency high to test	False Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.60

Test at TX 2402 MHz

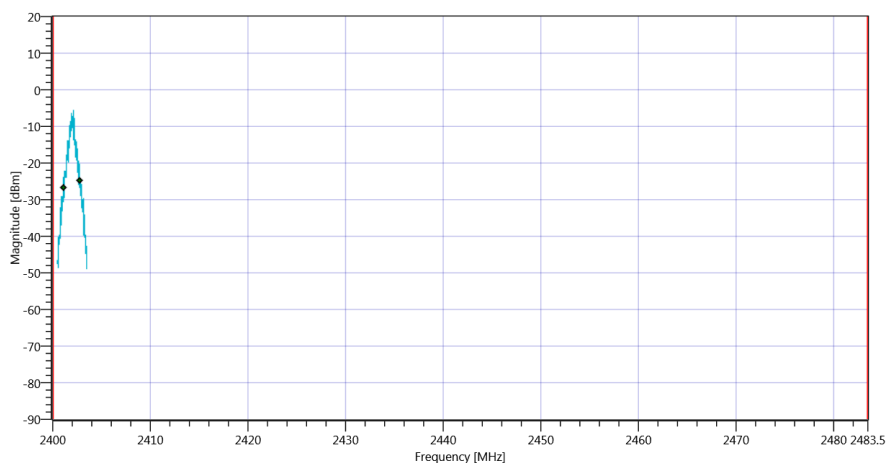
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.65 10.31 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%	---	---	1706	kHz	INFO
T1 99%	2400.000000	---	2401.1439	MHz	PASS
T2 99%	---	2483.500000	2402.8501	MHz	PASS

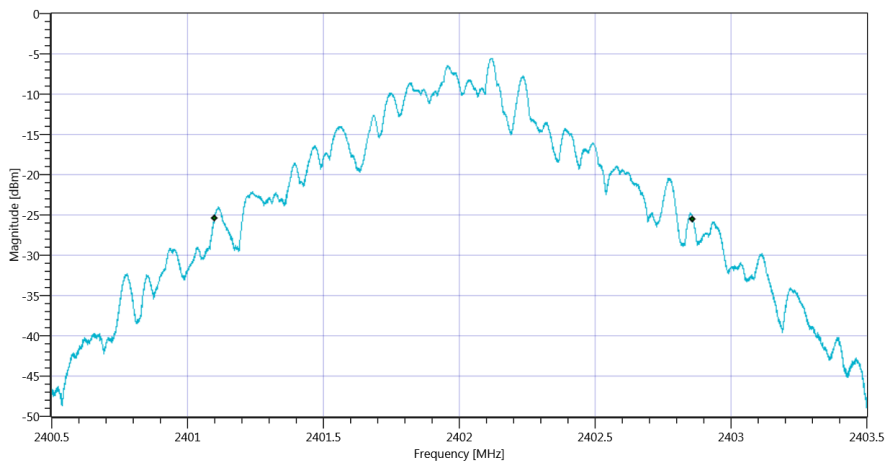


Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4 99PCT_09032020_153331.png

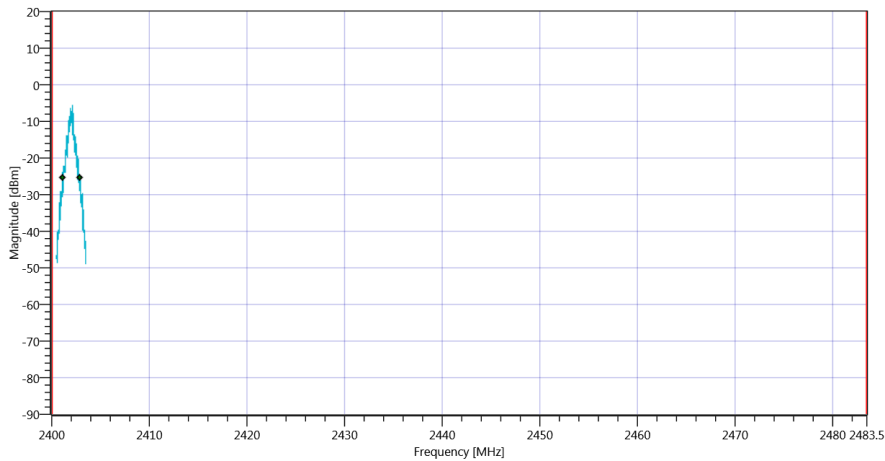


Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4_09032020_153335.png

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1761	kHz	INFO
T1 20dB	2400.000000	---	2401.0985	MHz	PASS
T2 20dB	---	2483.500000	2402.8598	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4 20dB_09032020_153340.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4_09032020_153344.png

TEST FINISHED		
General Verdict	09.03.2020 15:33:45 / RT: 40 s	PASS

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

Test References	
TC Start	09.03.2020 15:59:15
System Version	1.0.0.33
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

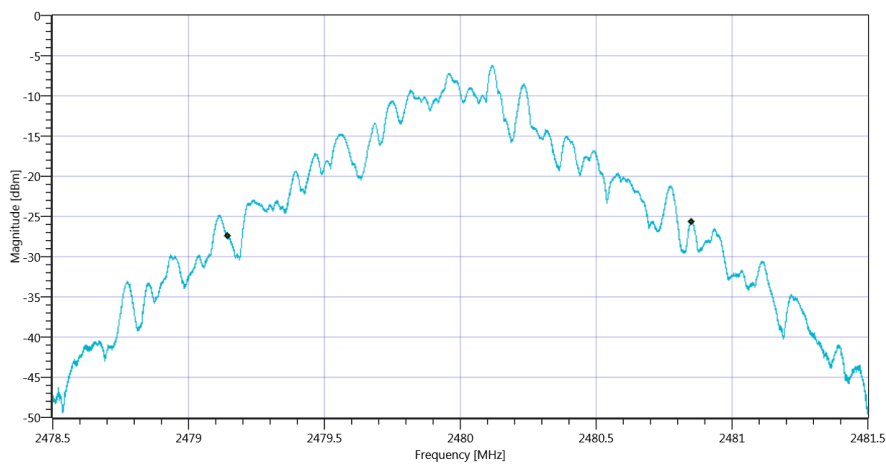
Test at TX 2480 MHz

READ SA SETTINGS:

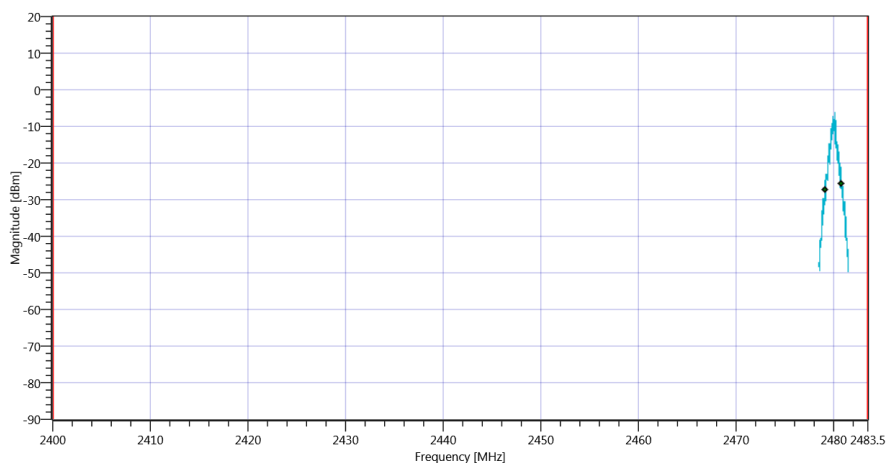
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.98 10.45 10
Start [MHz] Stop [MHz]	2478.500 2481.500
RBW [MHz] VBW [MHz]	0.030000 0.100000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1705	kHz	INFO
T1 99%	2400.000000	---	2479.1454	MHz	PASS
T2 99%	---	2483.500000	2480.8501	MHz	PASS



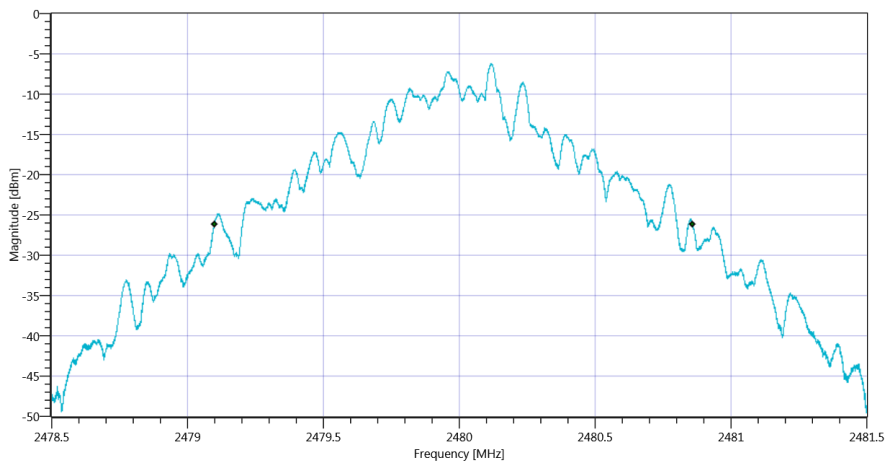
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4 99PCT_09032020_155943.png



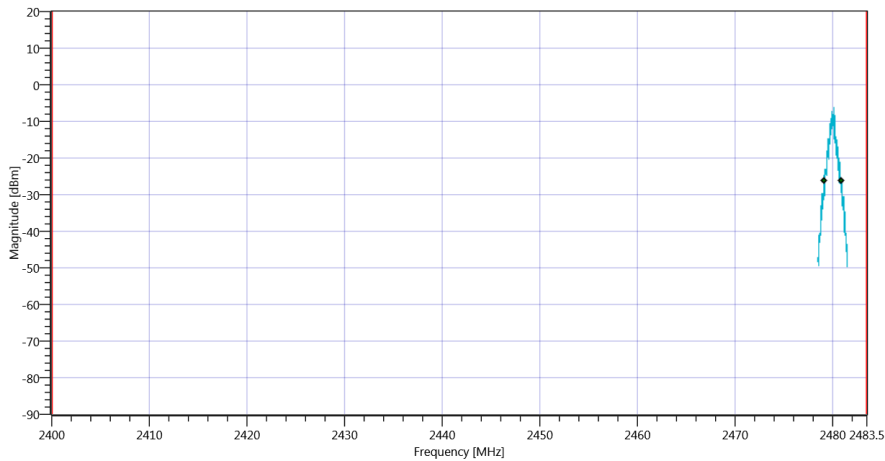
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4_09032020_155947.png

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1761	kHz	INFO
T1 20dB	2400.000000	---	2479.0988	MHz	PASS
T2 20dB	---	2483.500000	2480.8598	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4 20dB_09032020_155952.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4_09032020_155956.png

TEST FINISHED		
General Verdict	09.03.2020 15:59:57 / RT: 41 s	PASS

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

Test References	
TC Start	09.03.2020 16:49:59
System Version	1.0.0.33
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

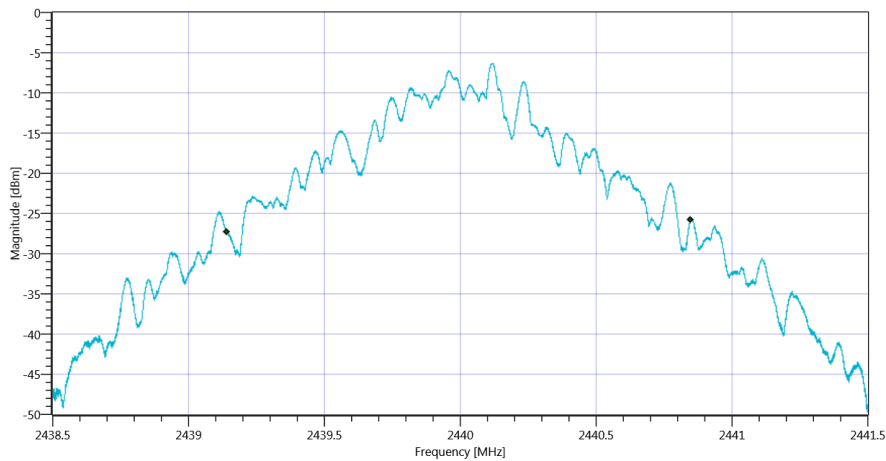
Test at TX 2440 MHz

READ SA SETTINGS:

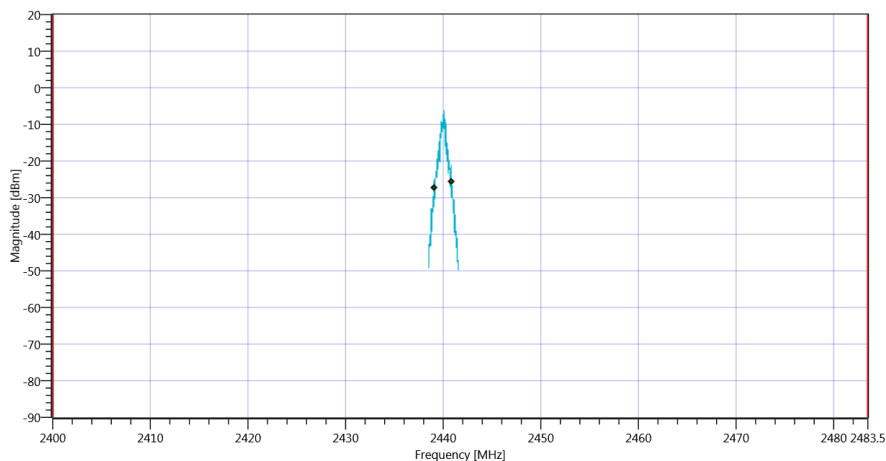
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.00 10.4 10
Start [MHz] Stop [MHz]	2438.500 2441.500
RBW [MHz] VBW [MHz]	0.030000 0.100000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1707	kHz	INFO
T1 99%	2400.000000	---	2439.1418	MHz	PASS
T2 99%	---	2483.500000	2440.8489	MHz	PASS



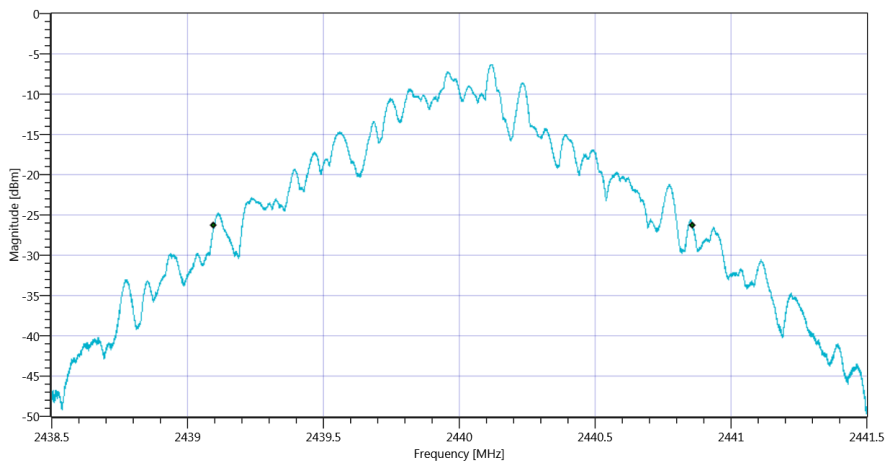
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4 99PCT_09032020_165026.png



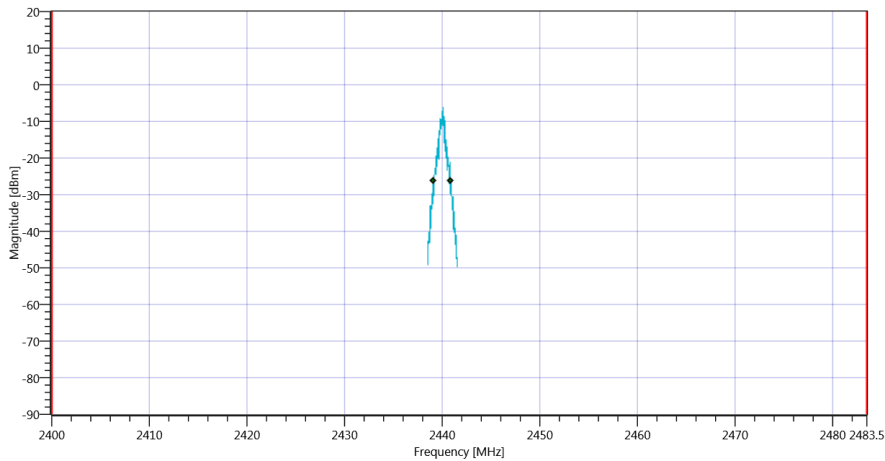
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4_09032020_165030.png

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1762	kHz	INFO
T1 20dB	2400.000000	---	2439.0979	MHz	PASS
T2 20dB	---	2483.500000	2440.8595	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4 20dB_09032020_165035.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ Generic 2G4_09032020_165039.png

TEST FINISHED		
General Verdict	09.03.2020 16:50:40 / RT: 41 s	PASS

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

Test References	
TC Start	09.03.2020 15:34:30
System Version	1.0.0.33
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

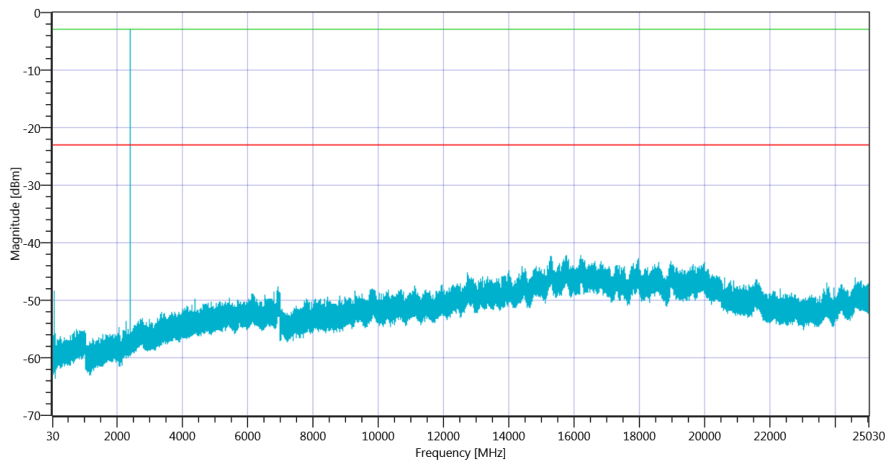
Test at TX 2402 MHz

READ SA SETTINGS:

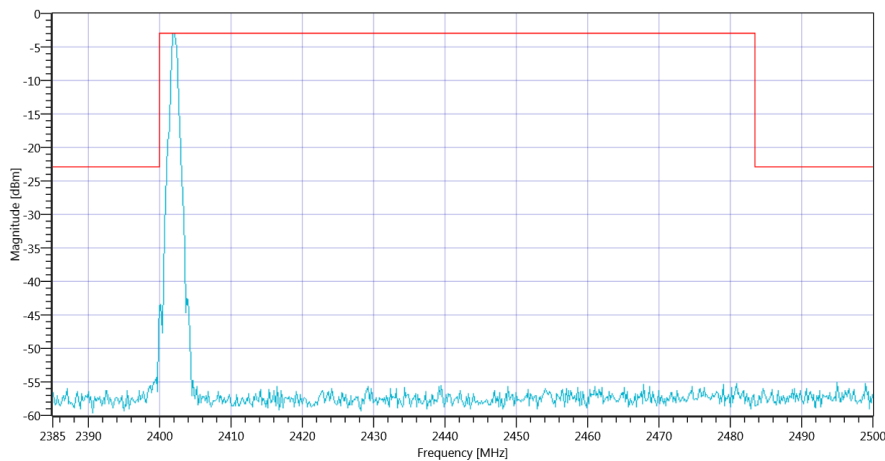
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.98 0 20
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2402.00 MHz	---	---	-2.95	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 15765.667 MHz	0	---	19.34	dB	INFO



Plot_FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4 2402_09032020_153919.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4 2402_09032020_153921.png

TEST FINISHED

General Verdict 09.03.2020 15:39:23 / RT: 293 s

PASS

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

Test References	
TC Start	09.03.2020 16:00:43
System Version	1.0.0.33
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

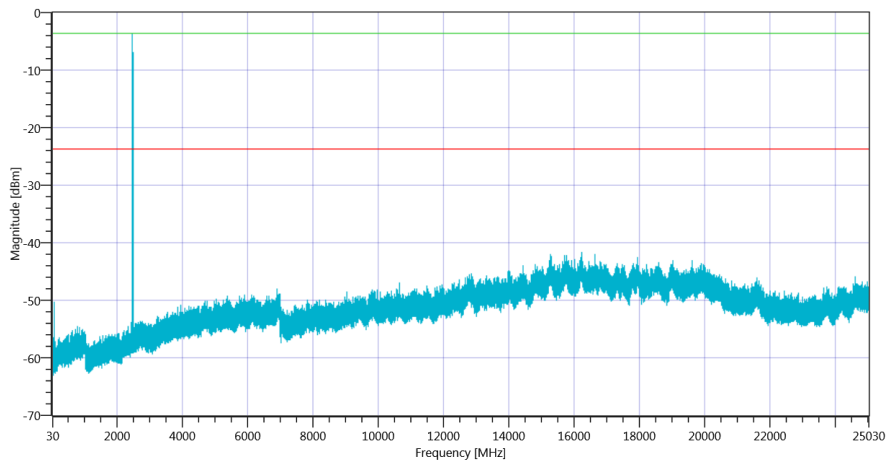
Test at TX 2480 MHz

READ SA SETTINGS:

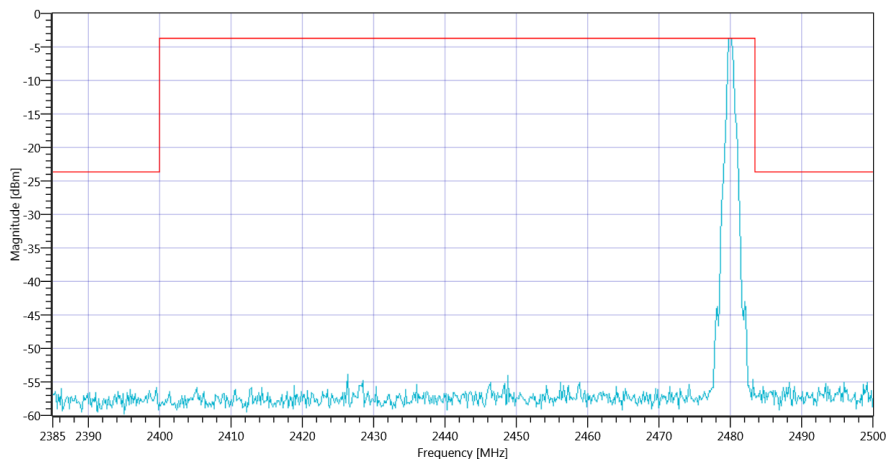
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.49 0 20
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2480.00 MHz	---	---	-3.70	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 16244.333 MHz	0	---	17.96	dB	INFO



Plot_FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4 2480_09032020_160532.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4 2480_09032020_160535.png

TEST FINISHED

General Verdict 09.03.2020 16:05:36 / RT: 293 s

PASS

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

Test References	
TC Start	09.03.2020 16:51:25
System Version	1.0.0.33
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

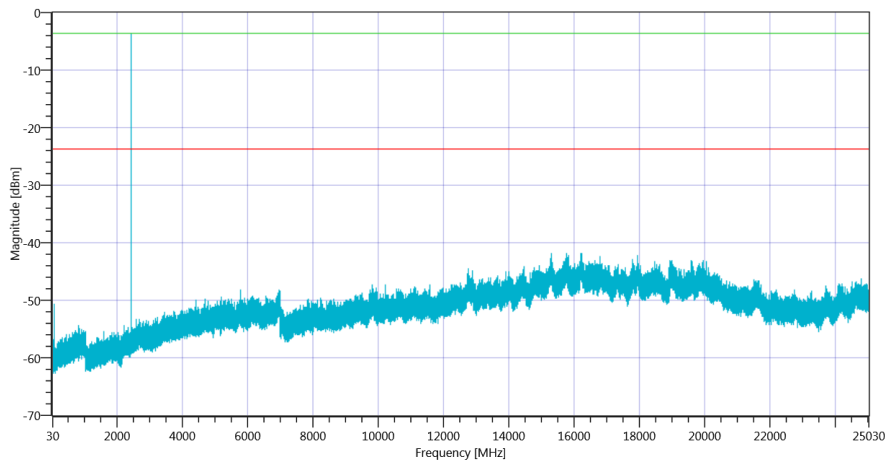
Test at TX 2440 MHz

READ SA SETTINGS:

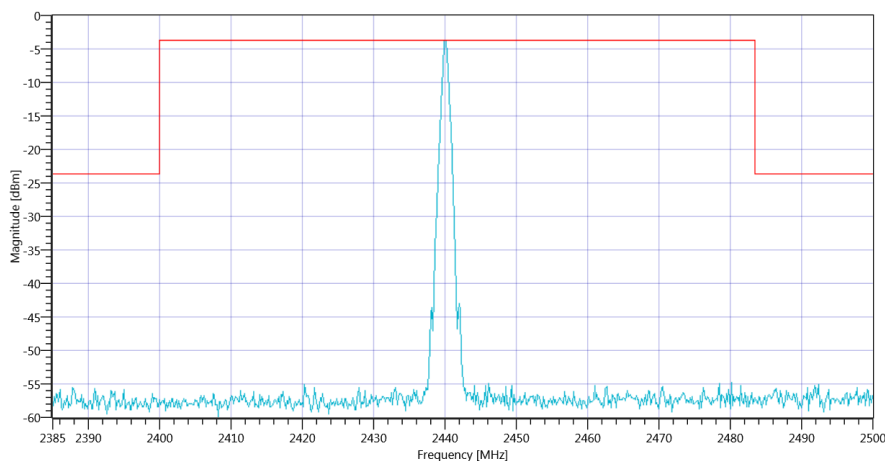
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.38 0 20
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2440.17 MHz	---	---	-3.68	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 15303 MHz	0	---	18.15	dB	INFO



Plot_FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4 2440_09032020_165614.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ Generic 2G4 2440_09032020_165617.png

TEST FINISHED

General Verdict 09.03.2020 16:56:18 / RT: 293 s

PASS

16. FCC Part 15.247 Restricted Band Edge Conducted Peak DTS Video Avg ~ Generic 2G4

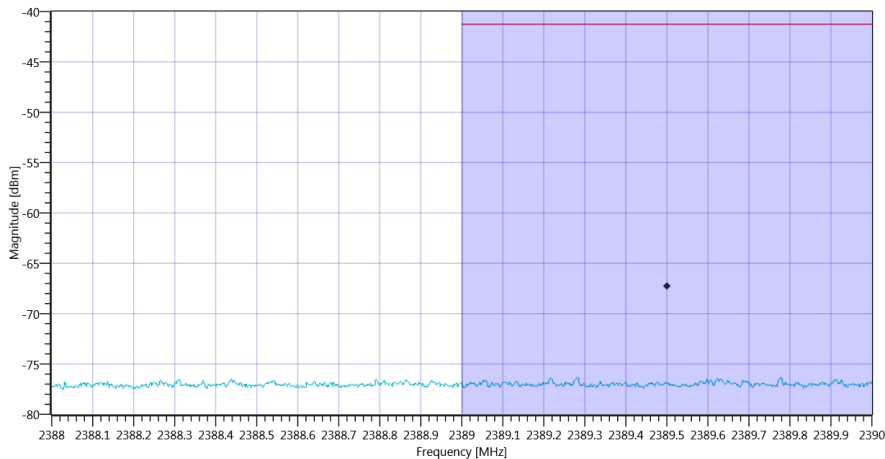
Test References	
TC Start	09.03.2020 15:39:27
System Version	1.0.0.33
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - 8.7.3 Integration Method; ANSI C63.10-2013 11.13.3.2 Peak Detection
Class / TC Version	TC_VM_FCC15247_Restricted_Band_Edge_Conducted_Peak_V01 Version: 0.0.1
My Description	FCC 15.247 Restricted Band Edge Conducted Peak 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]			3.70 10.31 10		
Start [MHz] Stop [MHz]			2388.000 2390.000		
RBW [MHz] VBW [MHz]			0.100000 0.000500		
Detector TraceMode			POS MAXH		
Sweep: Time [ms] Count Points per Section Type			31 300 1001 SWE		

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Band Power without Antenna Gain	---	-41.23	-67.27	dBm	Information
Band Power incl. Antenna Gain	---	-41.23	-67.27	dBm	PASS



Plot_FCC Part 15.247 Restricted Band Edge Conducted Peak DTS Video Avg ~ Generic 2G4_09032020_153954.png

TEST FINISHED		
General Verdict	09.03.2020 15:39:54 / RT: 26 s	PASS

17. FCC Part 15.247 Restricted Band Edge Conducted Peak DTS Video Avg ~ Generic 2G4

Test References	
TC Start	09.03.2020 16:05:40
System Version	1.0.0.33
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - 8.7.3 Integration Method; ANSI C63.10-2013 11.13.3.2 Peak Detection
Class / TC Version	TC_VM_FCC15247_Restricted_Band_Edge_Conducted_Peak_V01 Version: 0.0.1
My Description	FCC 15.247 Restricted Band Edge Conducted Peak 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

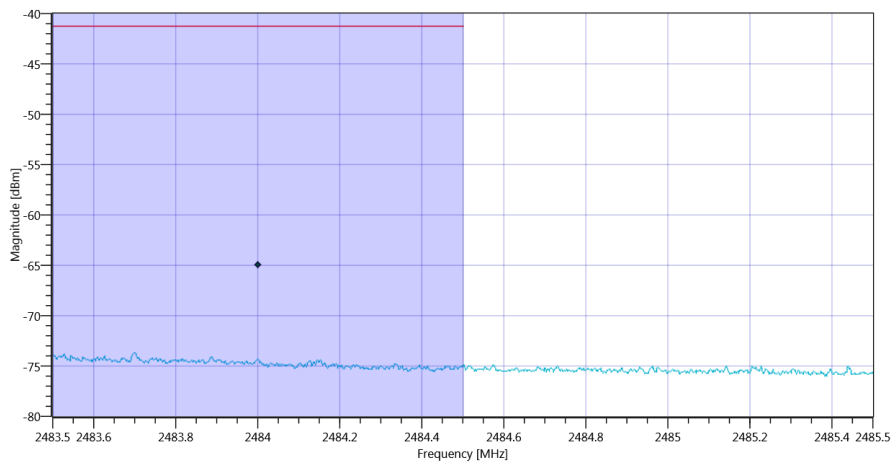
Test at TX 2480 MHz

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.02 10.45 10
Start [MHz] Stop [MHz]	2483.500 2485.500
RBW [MHz] VBW [MHz]	0.100000 0.000500
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	31 300 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Band Power without Antenna Gain	---	-41.23	-65	dBm	Information
Band Power incl. Antenna Gain	---	-41.23	-65	dBm	PASS



TEST FINISHED

General Verdict	09.03.2020 16:06:08 / RT: 27 s	PASS
-----------------	--------------------------------	------

- END OF DOCUMENT -