

# Measurement Results

1-9907/19-01-05\_Annex\_MR\_A\_2

[Test logging](#)

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## IUT Summary

IUT DEFINITION	
Manufacturer	m&h Inprocess Messtechnik GmbH
Type	RWR95.51
Serial No.	1001
Setup No.	NI
SW Version	NI
HW Version	NI
Comment 1	NI
Comment 2	NI

IUT Common Settings	
Tlow [°C]	5
Tmid [°C]	20
Thigh [°C]	50
Vlow [V]	12
Vmid [V]	24
Vhigh [V]	30
Imax [A]	1
Auto Control enabled Power Supply   Climatic Box	No   No
Antenna Gain [dBi]	0
Additional Path Loss [dB]	0.7

IUT Common Settings 2G4 Init Values from IUT file	
Hopping supported	No
Frequency low [MHz]	2405
Frequency mid [MHz]	2440
Frequency high [MHz]	2480
Burst length [ms]	10
Nominal Bandwidth [MHz]	2.6
User Interaction	No

## 1. Common2G4 Peak Output Power conducted 3MHz\_3MHz ~ Generic 2G4

Test References	
TC Start	17.07.2019 15:06:16
System Version	1.0.0.16
Test Specification	None
Test Method	
Class / TC Version / TC ID	TC_VM_Common2G4_Peak_Output_Power_Conducted_3MHz_3MHz_V01 Version: 0.0.1   TCID_Common2G4_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] 2405
Frequency mid to test	False   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2480
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

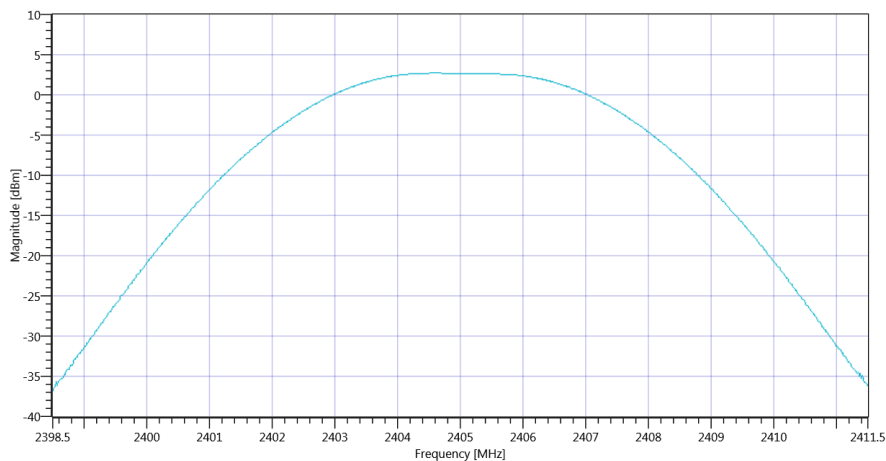
## Test at TX 2405 MHz

### READ SA SETTINGS:

Ref. Level [dBm]	12.50
Ref. Lev. offs [dB]	10.51
Input Attenuation [dB]	20
Freq. Start [MHz]	2398.500
Freq. Stop [MHz]	2411.500
Resolution BW. [MHz]	3.000000
Video BW. [MHz]	3.000000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: TC\_VM\_Common2G4\_Peak\_Output\_Power\_Conducted\_3MHz\_3MHz\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	2.71	dBm	Information
Peak Power	---	1000	1.86638	mW	Information
Frequency at Peak	---	---	2404.571	MHz	Information



Plot\_Common2G4 Peak Output Power conducted 3MHz\_3MHz ~ Generic 2G4\_17072019\_150640.png

### TEST FINISHED

General Verdict

17.07.2019 15:06:40 / RT: 23 s

PASS

## 2. Common2G4 Peak Output Power conducted 3MHz\_3MHz ~ Generic 2G4

Test References	
TC Start	17.07.2019 15:08:41
System Version	1.0.0.16
Test Specification	None
Test Method	
Class / TC Version / TC ID	TC_VM_Common2G4_Peak_Output_Power_Conducted_3MHz_3MHz_V01 Version: 0.0.1   TCID_Common2G4_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] 2405
Frequency mid to test	True   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2480
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

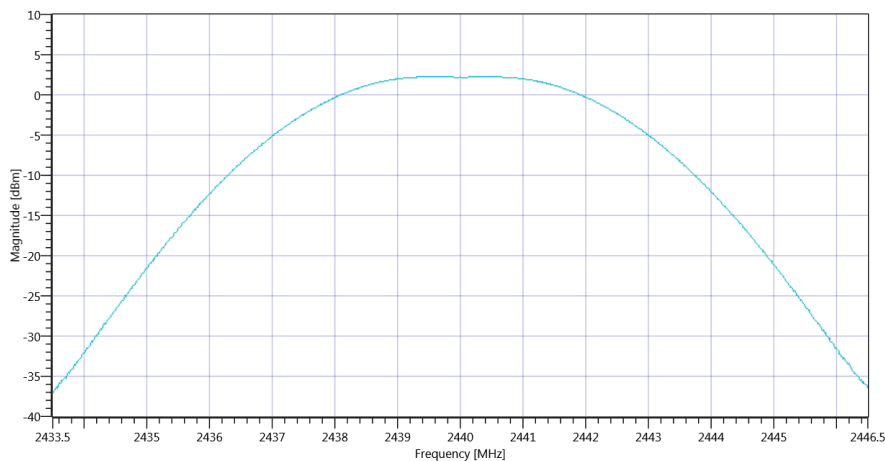
## Test at TX 2440 MHz

### READ SA SETTINGS:

Ref. Level [dBm]	12.19
Ref. Lev. offs [dB]	10.6
Input Attenuation [dB]	20
Freq. Start [MHz]	2433.500
Freq. Stop [MHz]	2446.500
Resolution BW. [MHz]	3.000000
Video BW. [MHz]	3.000000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: TC\_VM\_Common2G4\_Peak\_Output\_Power\_Conducted\_3MHz\_3MHz\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	2.28	dBm	Information
Peak Power	---	1000	1.690441	mW	Information
Frequency at Peak	---	---	2439.597	MHz	Information



Plot\_Common2G4 Peak Output Power conducted 3MHz\_3MHz ~ Generic 2G4\_17072019\_150904.png

### TEST FINISHED

General Verdict

17.07.2019 15:09:04 / RT: 23 s

PASS

### 3. Common2G4 Peak Output Power conducted 3MHz\_3MHz ~ Generic 2G4

Test References	
TC Start	17.07.2019 15:10:49
System Version	1.0.0.16
Test Specification	None
Test Method	
Class / TC Version / TC ID	TC_VM_Common2G4_Peak_Output_Power_Conducted_3MHz_3MHz_V01 Version: 0.0.1   TCID_Common2G4_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] 2405
Frequency mid to test	False   Freq [MHz] 2440
Frequency high to test	True   Freq [MHz] 2480
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40



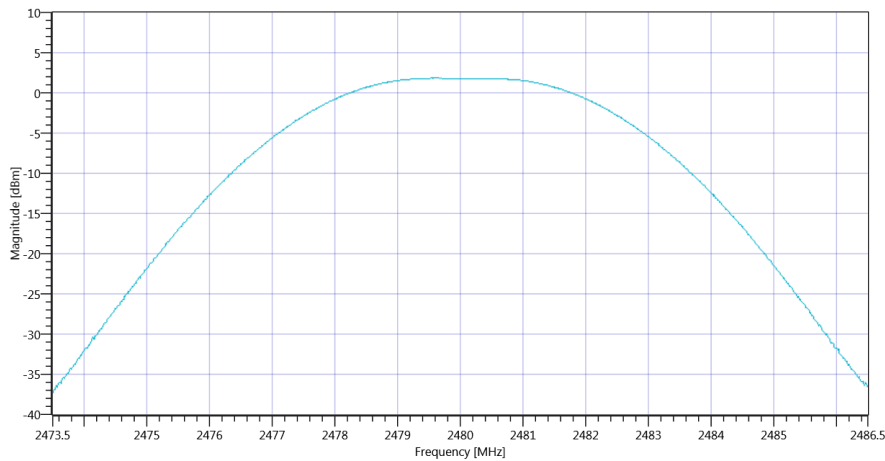
## Test at TX 2480 MHz

### READ SA SETTINGS:

Ref. Level [dBm]	11.66
Ref. Lev. offs [dB]	10.65
Input Attenuation [dB]	20
Freq. Start [MHz]	2473.500
Freq. Stop [MHz]	2486.500
Resolution BW. [MHz]	3.000000
Video BW. [MHz]	3.000000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: TC\_VM\_Common2G4\_Peak\_Output\_Power\_Conducted\_3MHz\_3MHz\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	1.83	dBm	Information
Peak Power	---	1000	1.524053	mW	Information
Frequency at Peak	---	---	2479.623	MHz	Information



Plot\_Common2G4 Peak Output Power conducted 3MHz\_3MHz ~ Generic 2G4\_17072019\_151112.png

### TEST FINISHED

General Verdict

17.07.2019 15:11:12 / RT: 23 s

PASS

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

Test References	
TC Start	17.07.2019 15:05:19
System Version	1.0.0.16
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 ID	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_DTS_V01 Version: 0.0.1   TCID_FCC15247_3
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] 2405
Frequency mid to test	False   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2480
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

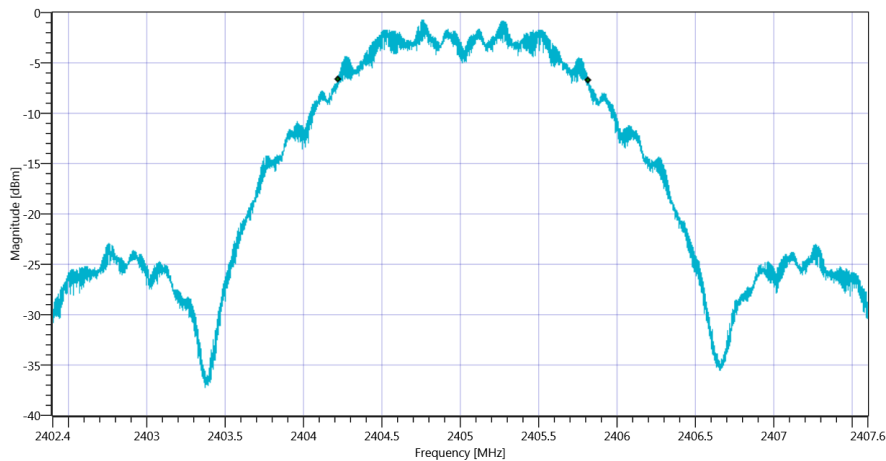
## Test at TX 2405 MHz

### READ SA SETTINGS:

Ref. Level [dBm]	7.54
Ref. Lev. offs [dB]	10.51
Input Attenuation [dB]	15
Freq. Start [MHz]	2402.400
Freq. Stop [MHz]	2407.600
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: DTS Bandwidth

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1598	kHz	Information



Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4 DTS BW \_17072019\_150544.png

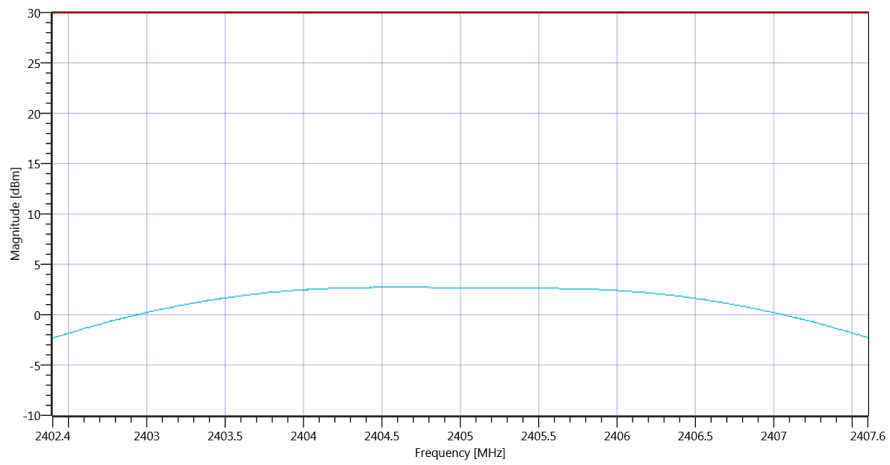
### READ SA SETTINGS:

Ref. Level [dBm]	12.54
Ref. Lev. offs [dB]	10.51
Input Attenuation [dB]	20
Freq. Start [MHz]	2402.400
Freq. Stop [MHz]	2407.600
Resolution BW. [MHz]	3.000000
Video BW. [MHz]	10.000000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	1001
Sweep Count	200
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: TC\_VM\_FCC15247\_Maximum\_Peak\_Conducted\_Output\_Power\_DTS\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	2.74	dBm	PASS
Peak Power	---	1000	1.879317	mW	PASS

Frequency at Peak	--	--	2404.595	MHz	Information
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Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4\_17072019\_150558.png

<b>TEST FINISHED</b>		
General Verdict	17.07.2019 15:05:59 / RT: 39 s	PASS

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

Test References	
TC Start	17.07.2019 15:07:44
System Version	1.0.0.16
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 ID	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_DTS_V01 Version: 0.0.1   TCID_FCC15247_3
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] 2405
Frequency mid to test	True   Freq [MHz] 2440
Frequency high to test	False   Freq [MHz] 2480
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

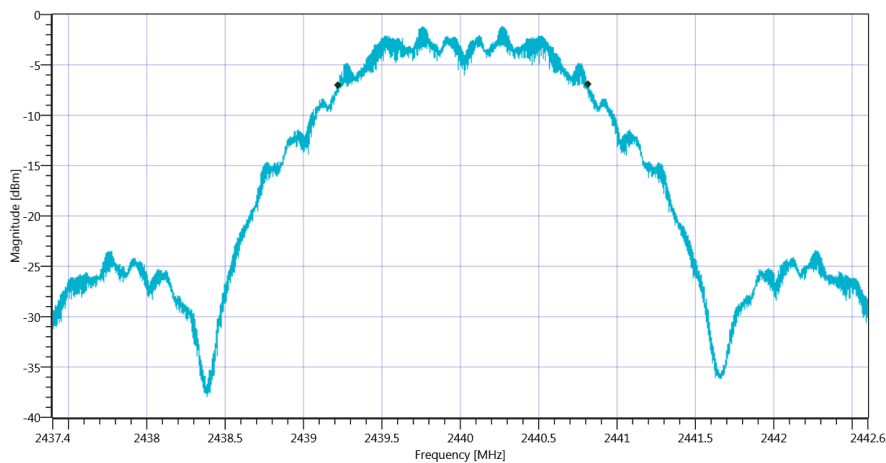
## Test at TX 2440 MHz

### READ SA SETTINGS:

Ref. Level [dBm]	7.23
Ref. Lev. offs [dB]	10.6
Input Attenuation [dB]	15
Freq. Start [MHz]	2437.400
Freq. Stop [MHz]	2442.600
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: DTS Bandwidth

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1595	kHz	Information



Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4 DTS BW \_17072019\_150808.png

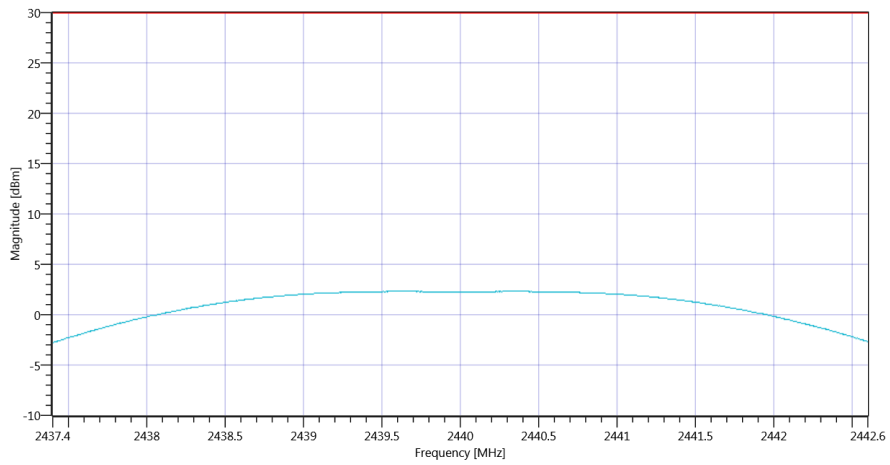
### READ SA SETTINGS:

Ref. Level [dBm]	12.23
Ref. Lev. offs [dB]	10.6
Input Attenuation [dB]	20
Freq. Start [MHz]	2437.400
Freq. Stop [MHz]	2442.600
Resolution BW. [MHz]	3.000000
Video BW. [MHz]	10.000000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	1001
Sweep Count	200
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: TC\_VM\_FCC15247\_Maximum\_Peak\_Conducted\_Output\_Power\_DTS\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	2.32	dBm	PASS
Peak Power	---	1000	1.706082	mW	PASS

Frequency at Peak	--	--	2439.642	MHz	Information
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Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4\_17072019\_150823.png

TEST FINISHED		
General Verdict	17.07.2019 15:08:23 / RT: 38 s	PASS

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

Test References	
TC Start	17.07.2019 15:09:52
System Version	1.0.0.16
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 ID	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_DTS_V01 Version: 0.0.1   TCID_FCC15247_3
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] 2405
Frequency mid to test	False   Freq [MHz] 2440
Frequency high to test	True   Freq [MHz] 2480
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40



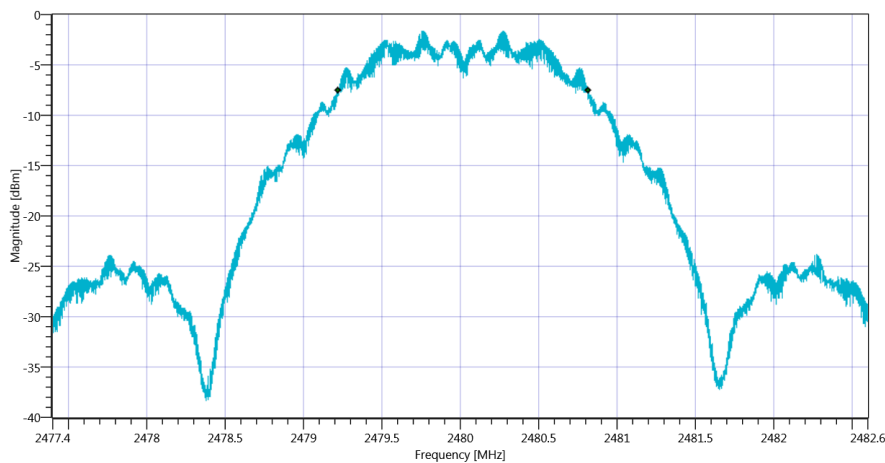
## Test at TX 2480 MHz

### READ SA SETTINGS:

Ref. Level [dBm]	6.63
Ref. Lev. offs [dB]	10.65
Input Attenuation [dB]	15
Freq. Start [MHz]	2477.400
Freq. Stop [MHz]	2482.600
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: DTS Bandwidth

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1598	kHz	Information



Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4 DTS BW \_17072019\_151016.png

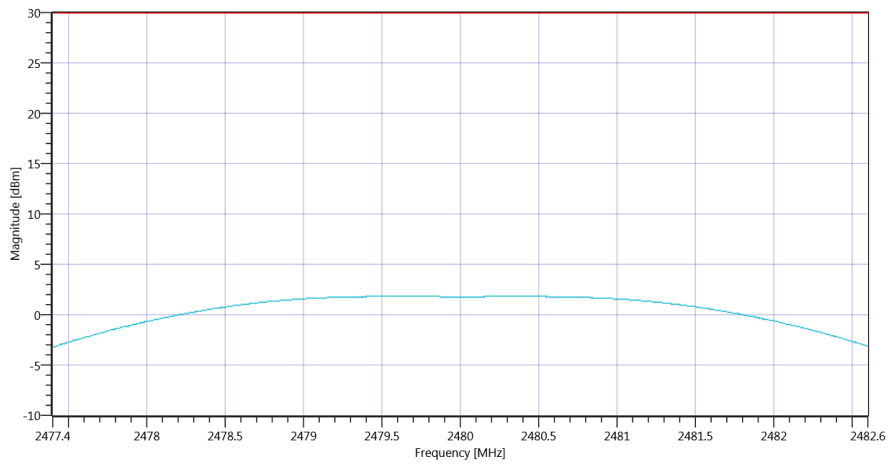
### READ SA SETTINGS:

Ref. Level [dBm]	11.63
Ref. Lev. offs [dB]	10.65
Input Attenuation [dB]	20
Freq. Start [MHz]	2477.400
Freq. Stop [MHz]	2482.600
Resolution BW. [MHz]	3.000000
Video BW. [MHz]	10.000000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	1001
Sweep Count	200
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: TC\_VM\_FCC15247\_Maximum\_Peak\_Conducted\_Output\_Power\_DTS\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	1.86	dBm	PASS
Peak Power	---	1000	1.534617	mW	PASS

Frequency at Peak	--	--	2479.678	MHz	Information
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Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ Generic 2G4\_17072019\_151031.png

<b>TEST FINISHED</b>		
General Verdict	17.07.2019 15:10:31 / RT: 38 s	<b>PASS</b>

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