



Test Report Serial Number:

45461624 R1.0

Test Report Date:

4 December 2020

Project Number:

1511

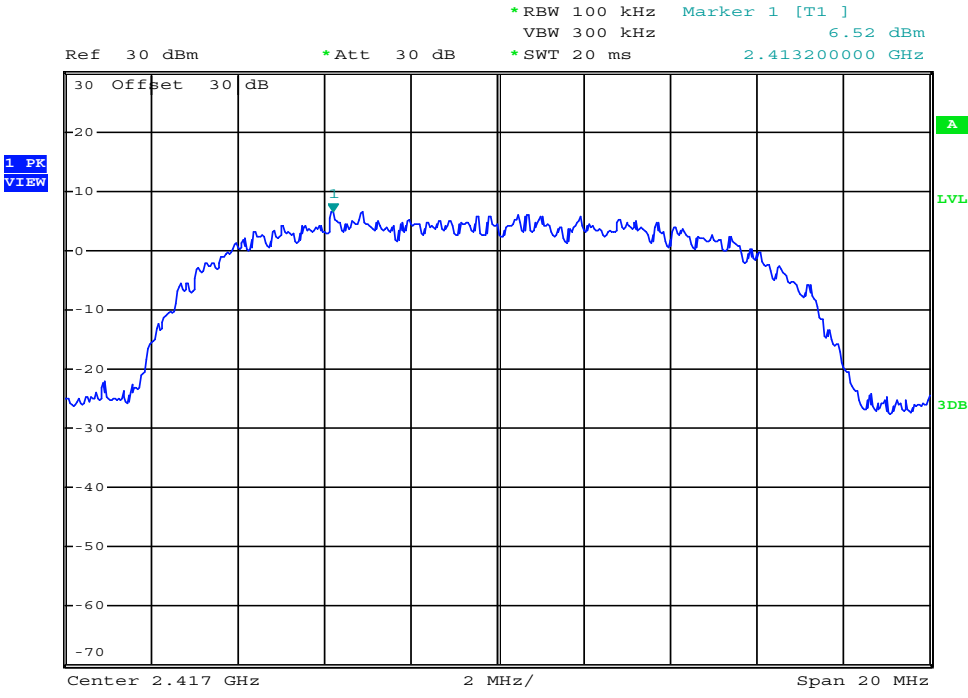
Appendix H - Conducted Tx Spurious Emissions Measurement Plots

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Conducted Spurious Emissions - Reference Measurement					
Frequency (MHz)	Modulation	Bit Rate (Mbps)	Measured PSD [P_{Meas}] (dBm)	Required Attenuation [A_R] (dB)	Limit Line [A_L] (dBm)
2412.00	DSSS	11	6.52	30	-23.480
2412.00	OFDM	54	3.70	30	-26.300
2412.00	MCS0	-	2.97	30	-27.030

Power Spectral Density



Date: 19.NOV.2020 16:18:46

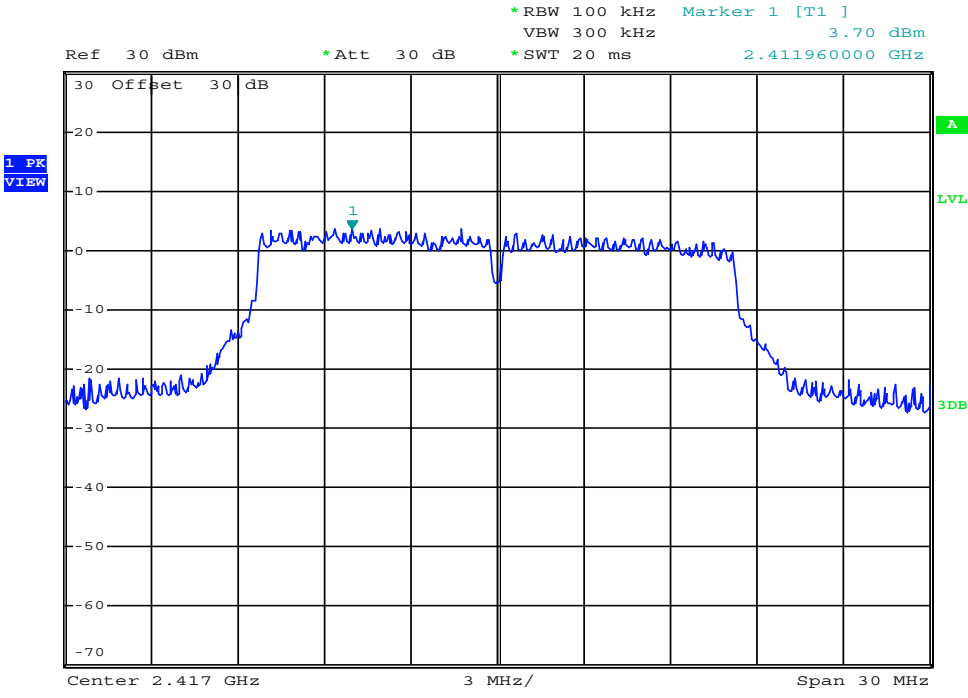
Channel Frequency:
2417.00 MHz

DUT Modulation:
DSSS

Data Rate:
11 Mbps

Measured PSD:
6.52 dBm

Power Spectral Density



Date: 19.NOV.2020 16:30:52

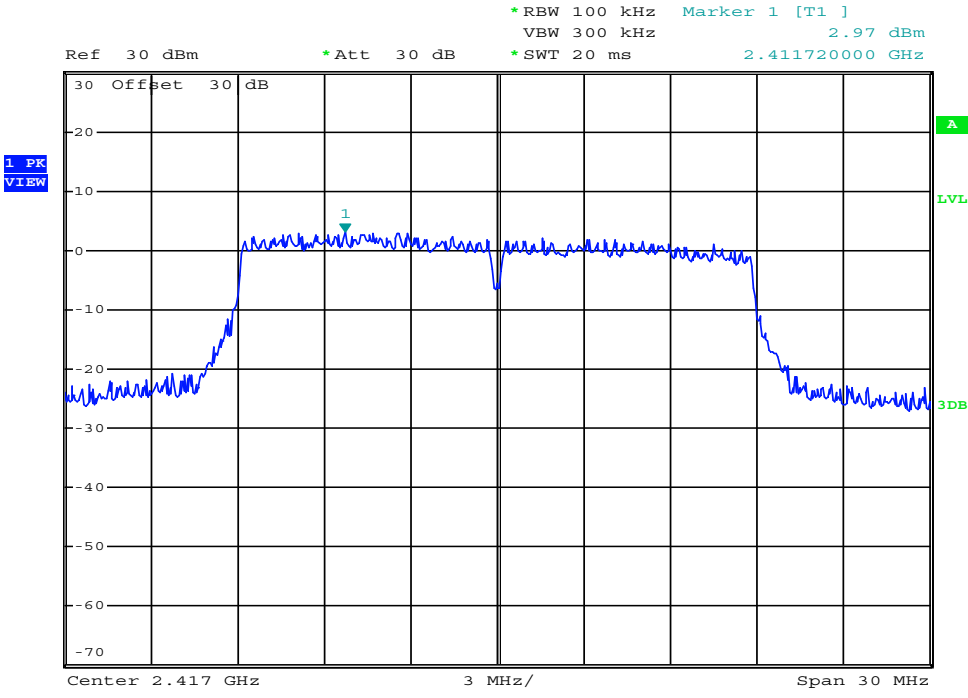
Channel Frequency:
2417.00 MHz

DUT Modulation:
OFDM

Data Rate:
54 Mbps

Measured PSD:
3.70 dBm

Power Spectral Density



Date: 19.NOV.2020 16:29:58

Channel Frequency:
2417.00 MHz

DUT Modulation:
MCS0

Data Rate:
- Mbps

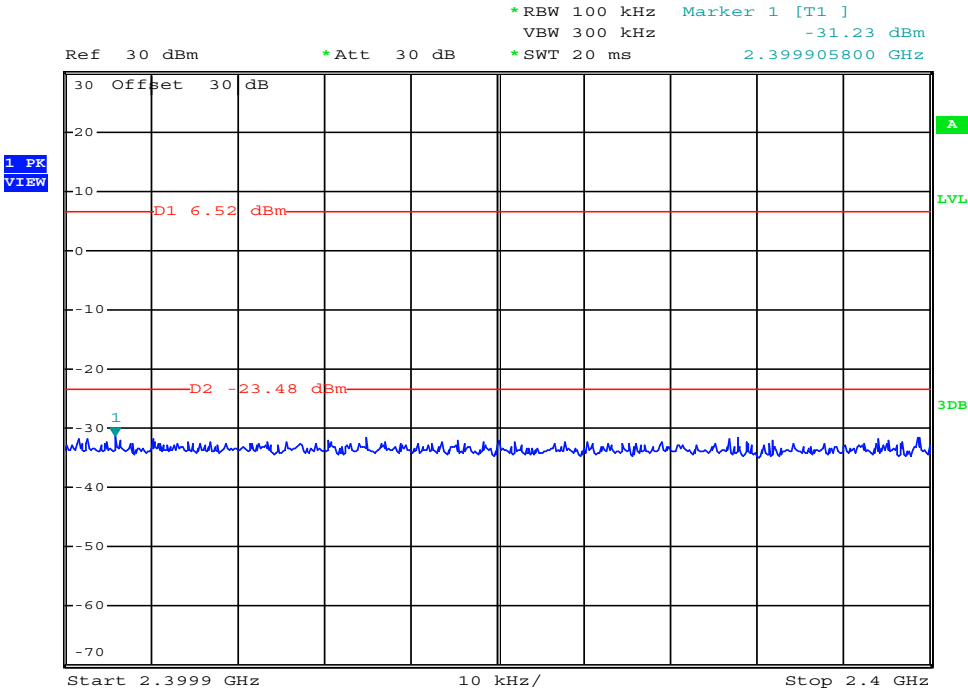
Measured PSD:
2.97 dBm

Emission Level Measurement - Band Edge						
Channel Frequency (MHz)	Modulation	Bit Rate (Mbps)	Measured Emission [E_{Meas}] (dBm)	Emission Frequency (MHz)	Limit Line [A_L] (dBm)	Margin (dB)
2412	DSSS	1	-31.23	2.399	-23.48	7.75
2412	DSSS	11	-28.35	2.399		4.87
2412	OFDM	54	-29.33	2.399		5.85
2412	MCS0	-	-29.80	2.399		6.32
2462	DSSS	1	-31.72	2.483		8.24
2462	DSSS	11	-34.38	2.483		10.90
2462	OFDM	54	-31.91	2.399		8.43
2462	MCS0	-	-31.34	2.399		7.86
Results:					Complies	

Margin = A_L - E_{MEAS}

Limit Line = Measured PSD - Required Attenuation

Conducted Spurious Emissions - Lower Band Edge



Date: 19.NOV.2020 16:39:32

Channel Frequency:
2412.00 MHz

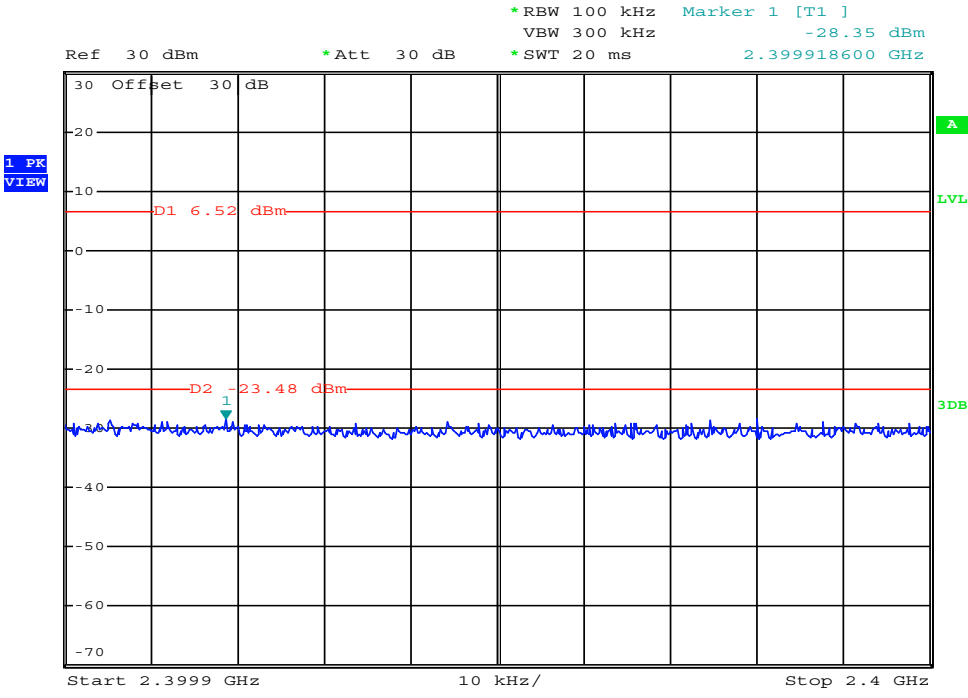
Emission Frequency:
2.399 MHz

DUT Modulation:
DSSS

Data Rate:
1 Mbps

Measured Emission:
-31.23 dBm

Conducted Spurious Emissions - Lower Band Edge



Date: 19.NOV.2020 16:40:18

Channel Frequency:
2412.00 MHz

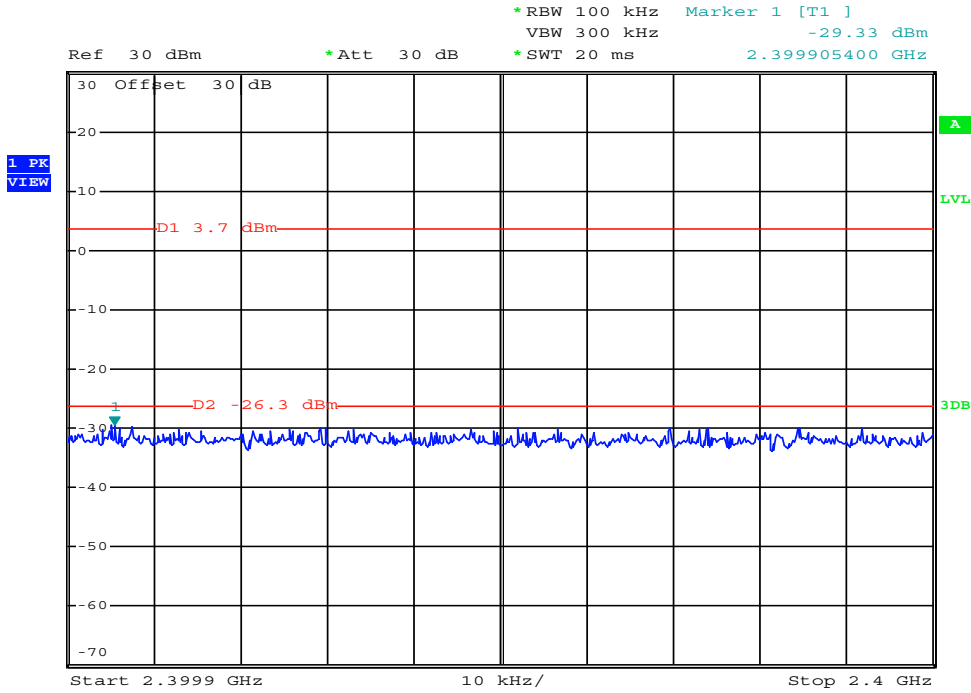
Emission Frequency:
2.399 MHz

DUT Modulation:
DSSS

Data Rate:
11 Mbps

Measured Emission:
-28.35 dBm

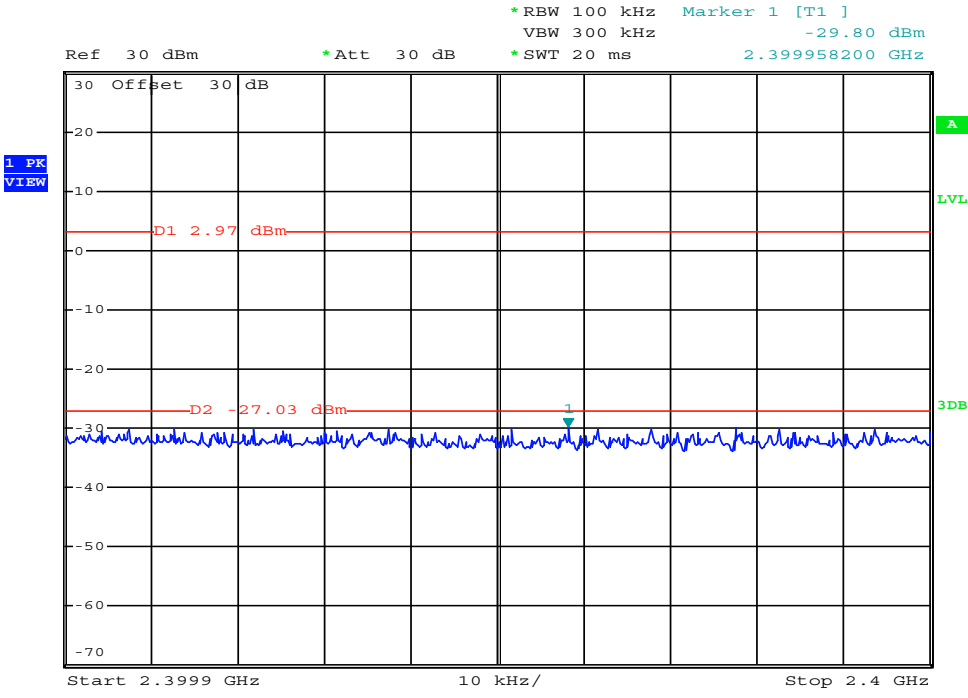
Conducted Spurious Emissions - Lower Band Edge



Date: 19.NOV.2020 16:43:14

Channel Frequency: 2412.00 MHz	Emission Frequency: 2.399 MHz	
DUT Modulation: OFDM	Data Rate: 54 Mbps	Measured Emission: -29.33 dBm

Conducted Spurious Emissions - Lower Band Edge



Date: 19.NOV.2020 16:44:31

Channel Frequency:
2412.00 MHz

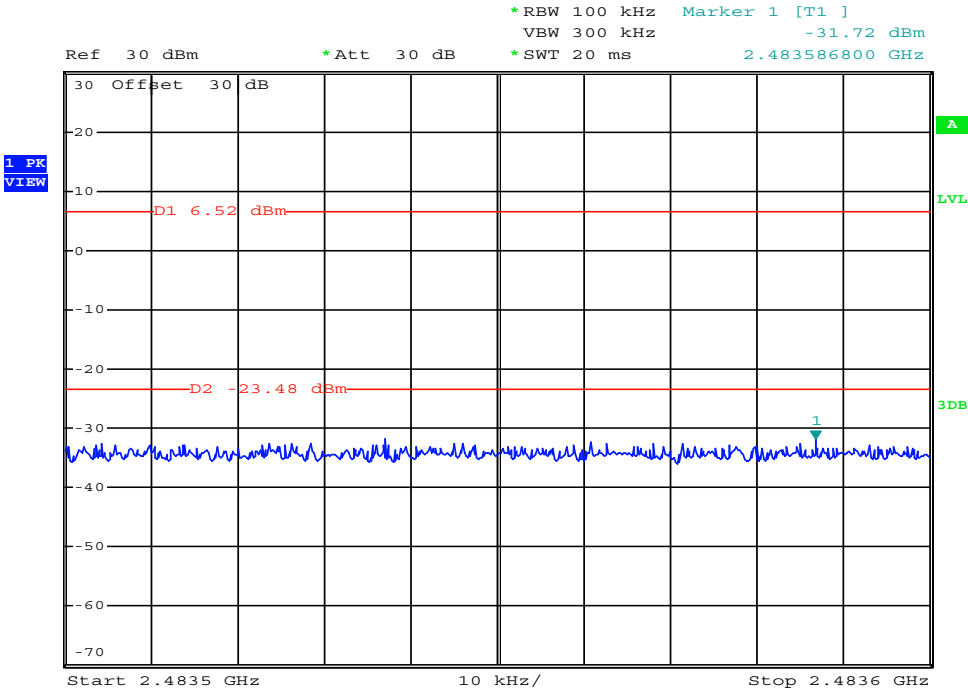
Emission Frequency:
2.399 MHz

DUT Modulation:
MCS0

Data Rate:
- Mbps

Measured Emission:
-29.80 dBm

Conducted Spurious Emissions - Upper Band Edge



Date: 19.NOV.2020 16:50:03

Channel Frequency:
2462.00 MHz

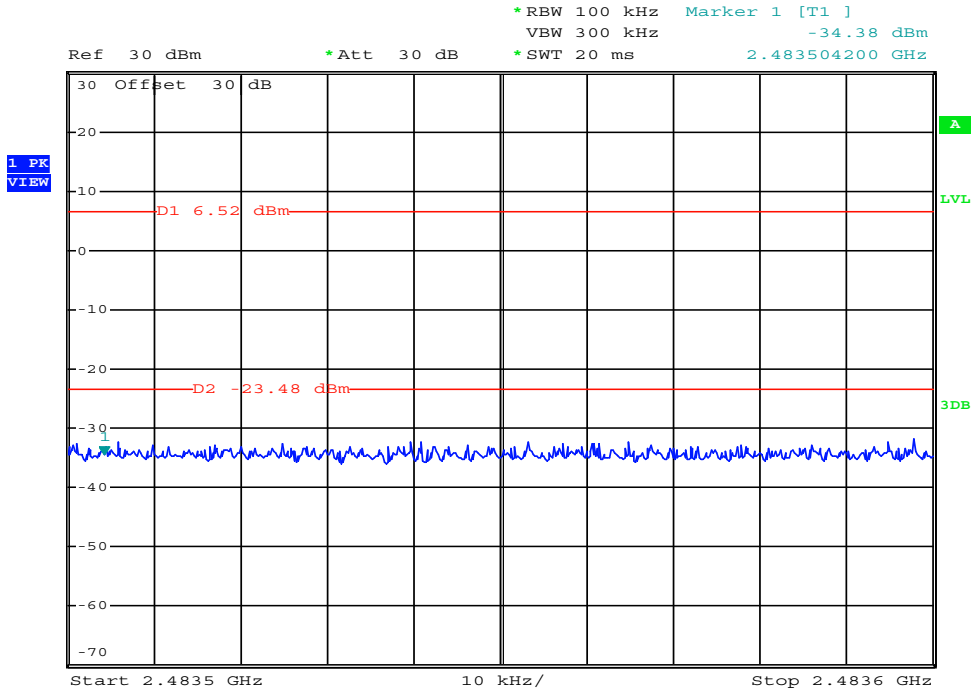
Emission Frequency:
2.483 MHz

DUT Modulation:
DSSS

Data Rate:
1 Mbps

Measured Emission:
-31.72 dBm

Conducted Spurious Emissions - Upper Band Edge



Date: 19.NOV.2020 16:49:23

Channel Frequency:
2462.00 MHz

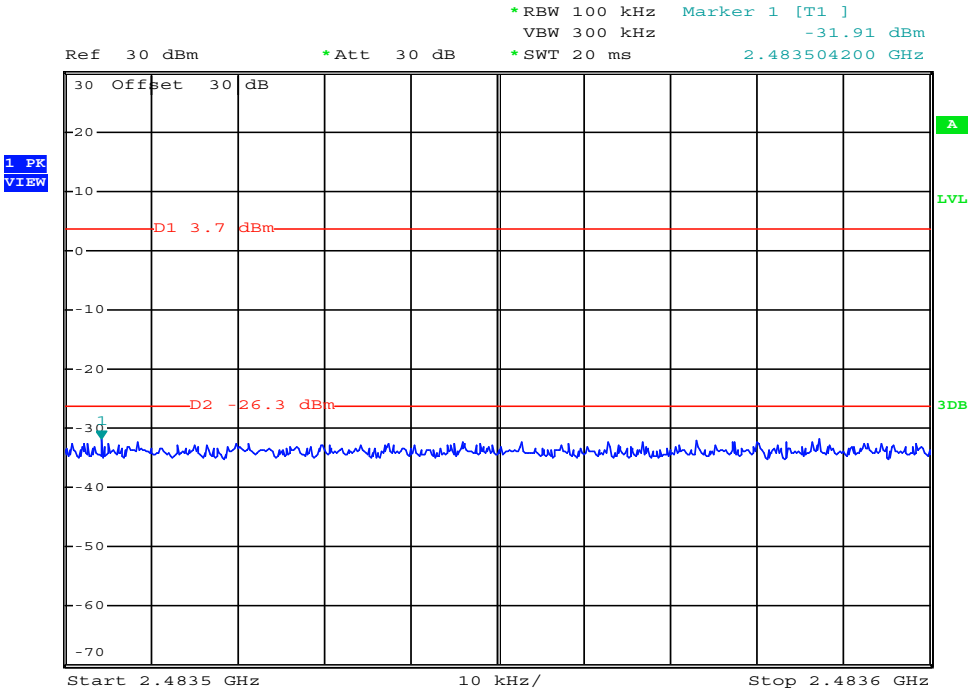
Emission Frequency:
2.483 MHz

DUT Modulation:
DSSS

Data Rate:
11 Mbps

Measured Emission:
-34.38 dBm

Conducted Spurious Emissions - Upper Band Edge



Date: 19.NOV.2020 16:48:05

Channel Frequency:
2462.00 MHz

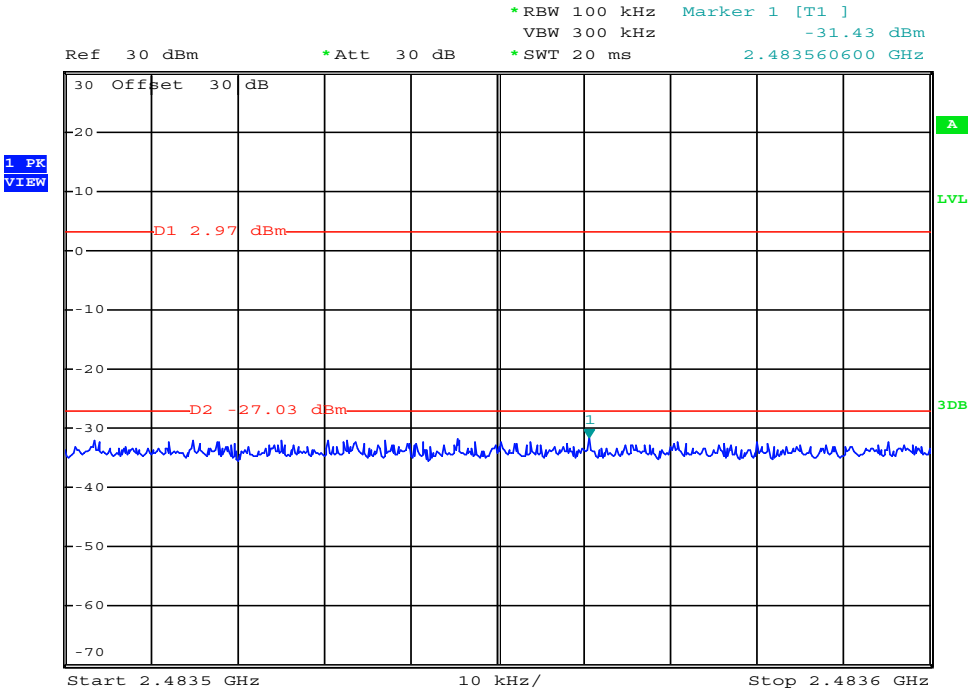
Emission Frequency:
2.399 MHz

DUT Modulation:
OFDM

Data Rate:
54 Mbps

Measured Emission:
-31.91 dBm

Conducted Spurious Emissions - Upper Band Edge



Date: 19.NOV.2020 16:46:50

Channel Frequency:
2462.00 MHz

Emission Frequency:
2.399 MHz

DUT Modulation:
MCS0

Data Rate:
- Mbps

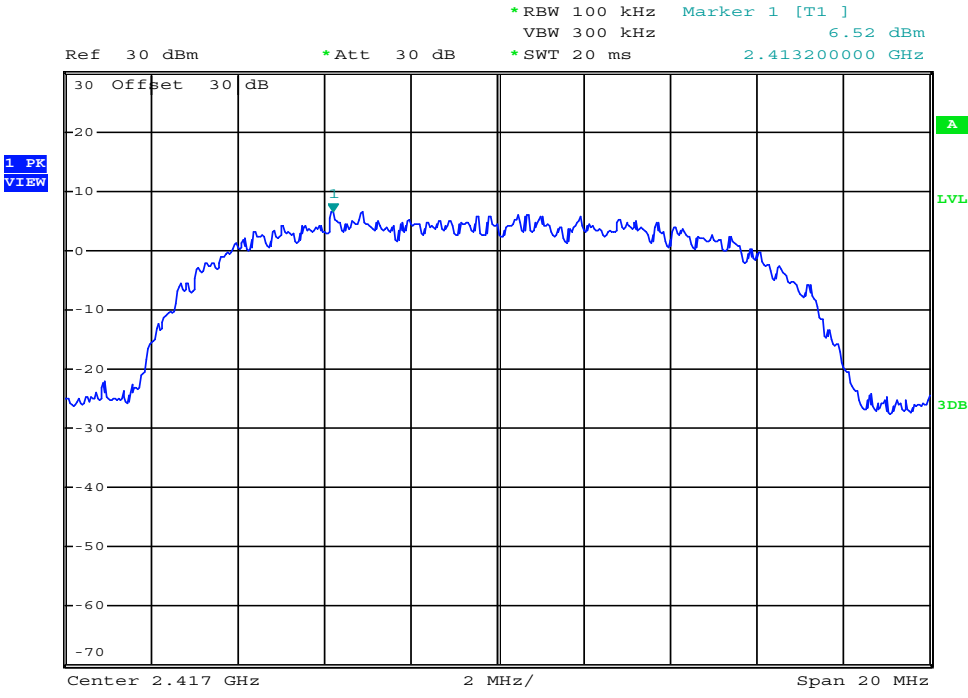
Measured Emission:
-31.34 dBm

Conducted Spurious Emissions - Reference Measurement

Frequency (MHz)	Modulation	Bit Rate (Mbps)	Measured PSD [P _{Meas}] (dBm)	Required Attenuation [A _R] (dB)	Limit Line [A _L] (dBm)
2402.00	Pi/4-DQPSK	2	7.21	30	-22.79
2442.00			7.04	30	-22.96
2480.00			7.01	30	-22.99

Limit Line = Measured PSD - Required Attenuation

Power Spectral Density



Date: 19.NOV.2020 16:18:46

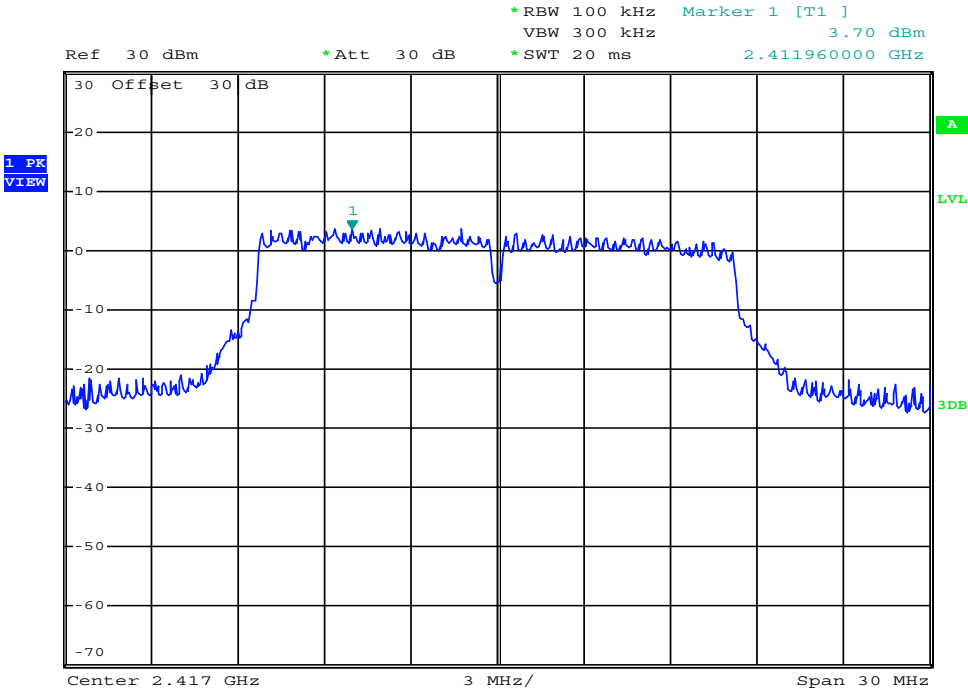
Channel Frequency:
2417.00 MHz

DUT Modulation:
DSSS

Data Rate:
11 Mbps

Measured PSD:
6.52 dBm

Power Spectral Density



Date: 19.NOV.2020 16:30:52

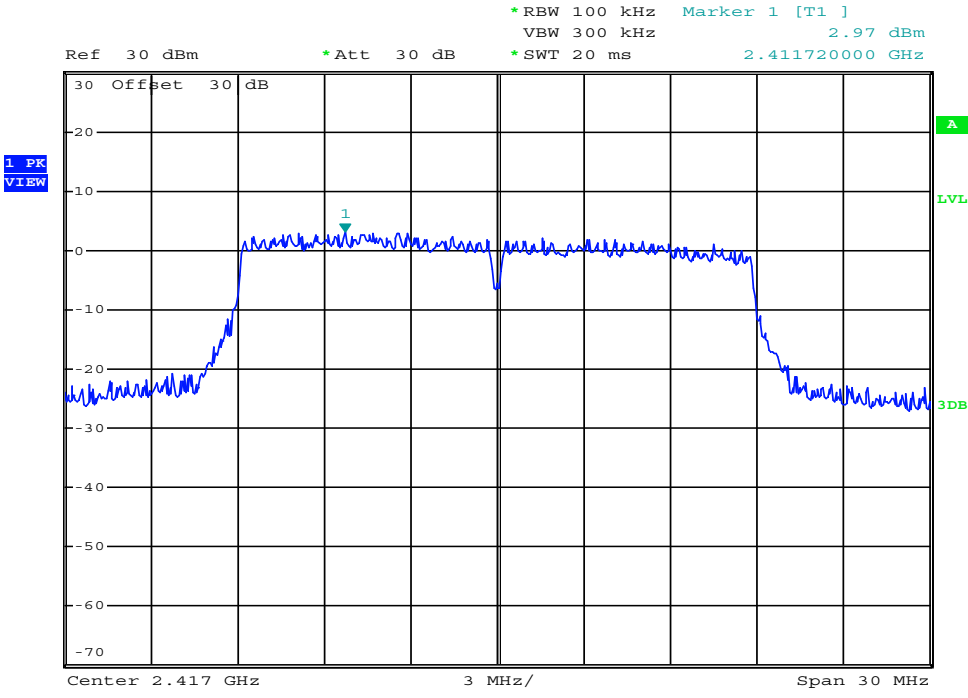
Channel Frequency:
2417.00 MHz

DUT Modulation:
OFDM

Data Rate:
54 Mbps

Measured PSD:
3.70 dBm

Power Spectral Density



Date: 19.NOV.2020 16:29:58

Channel Frequency:
2417.00 MHz

DUT Modulation:
MCS0

Data Rate:
- Mbps

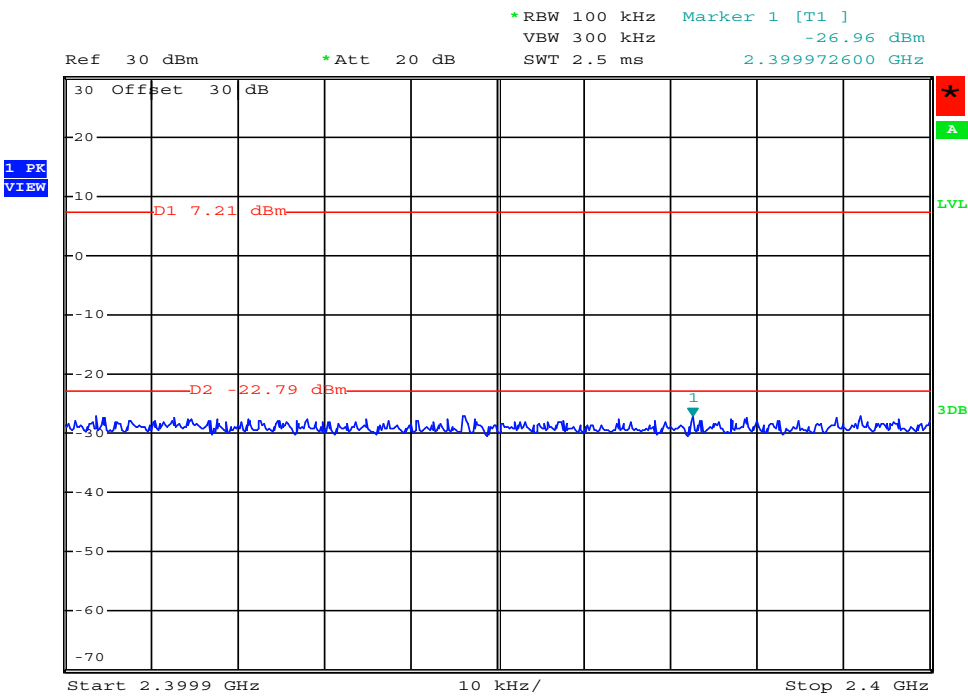
Measured PSD:
2.97 dBm

Emission Level Measurement - Band Edge

Channel Frequency (MHz)	Modulation	Bit Rate (Mbps)	Measured Emission [E _{Meas}] (dBm)	Emission Frequency (MHz)	Limit Line [A _L] (dBm)	Margin (dB)
2402	Pi/4-DQPSK	2	-26.96	2.399	-22.79	4.17
2480	Pi/4-DQPSK	2	-36.70	2.483		13.91
Results:					Complies	

Margin = A_L - E_{MEAS}

Conducted Spurious Emissions - Lower Band Edge



Date: 30.NOV.2020 16:53:39

Channel Frequency:
2402.00 MHz

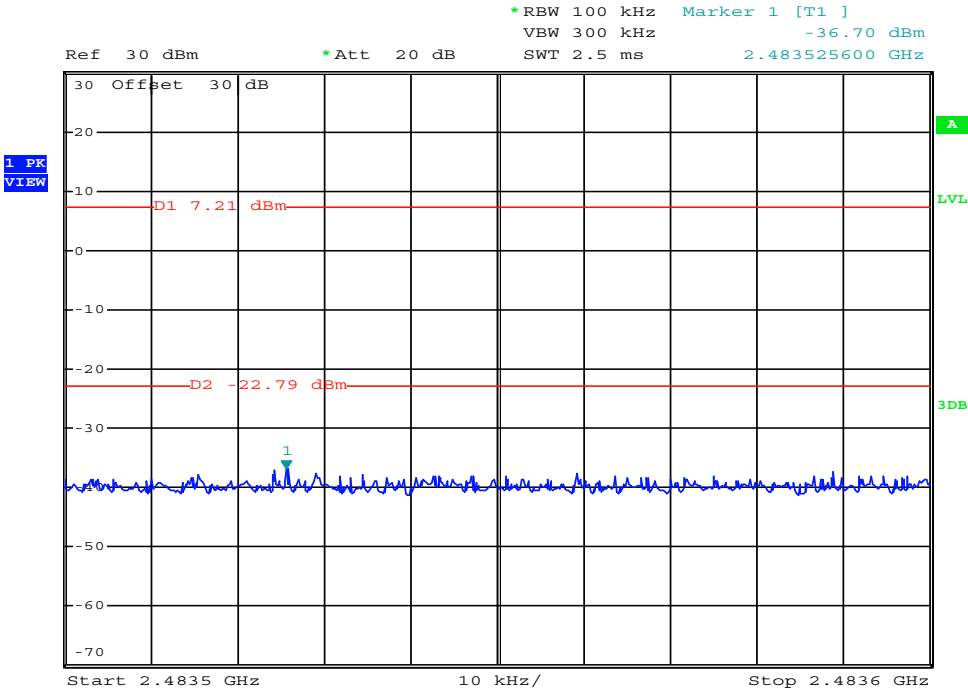
Emission Frequency:
2.399 MHz

DUT Modulation:
Pi/4-DQPSK

Data Rate:
2 Mbps

Measured Emission:
-26.96 dBm

Conducted Spurious Emissions - Upper Band Edge



Date: 30.NOV.2020 16:54:56

Channel Frequency:
2480.00 MHz

Emission Frequency:
2.483 MHz

DUT Modulation:
Pi/4-DQPSK

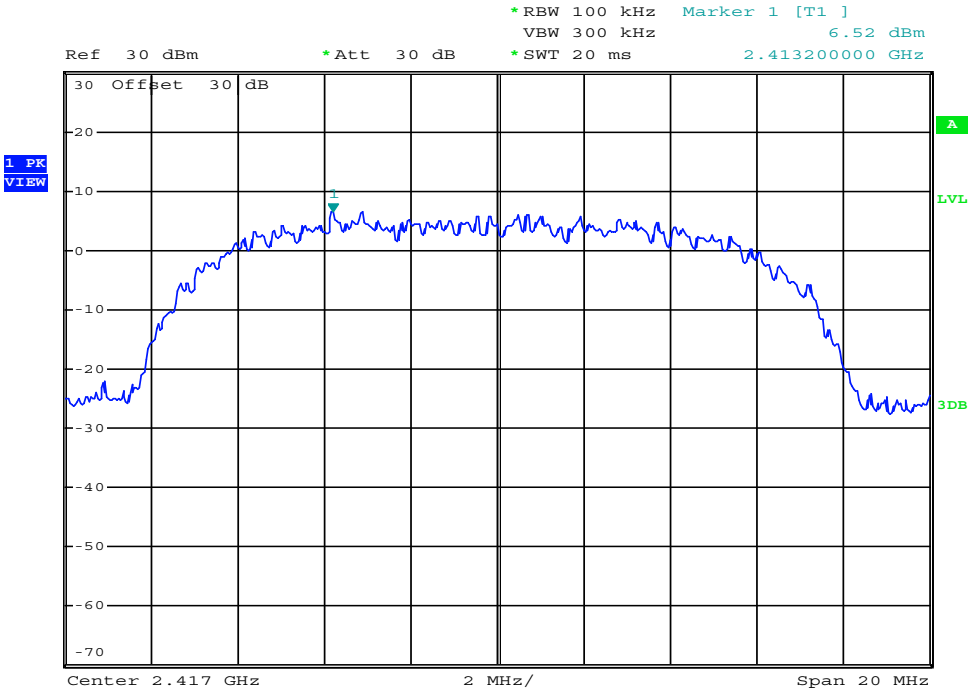
Data Rate:
2 Mbps

Measured Emission:
-36.70 dBm

Conducted Spurious Emissions - Reference Measurement					
Frequency (MHz)	Modulation	Bit Rate (Mbps)	Measured PSD [P_{Meas}] (dBm)	Required Attenuation [A_R] (dB)	Limit Line [A_L] (dBm)
2402.00	8-DPSK	2	7.09	30	-22.91
2442.00			7.51	30	-22.49
2480.00			7.07	30	-22.93

Limit Line = Measured PSD - Required Attenuation

Power Spectral Density



Date: 19.NOV.2020 16:18:46

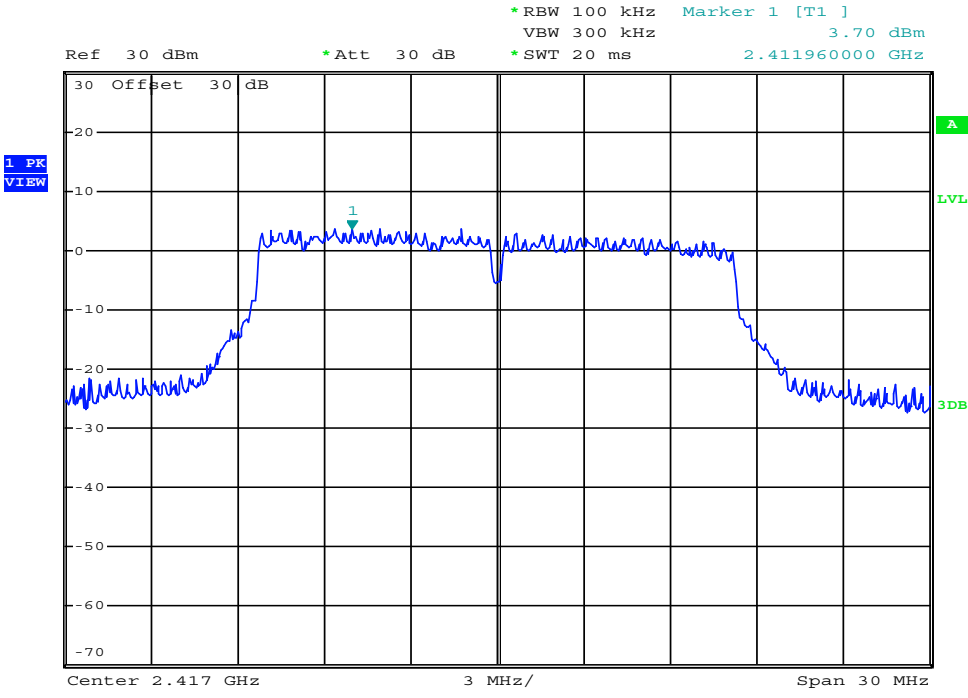
Channel Frequency:
2417.00 MHz

DUT Modulation:
DSSS

Data Rate:
11 Mbps

Measured PSD:
6.52 dBm

Power Spectral Density



Date: 19.NOV.2020 16:30:52

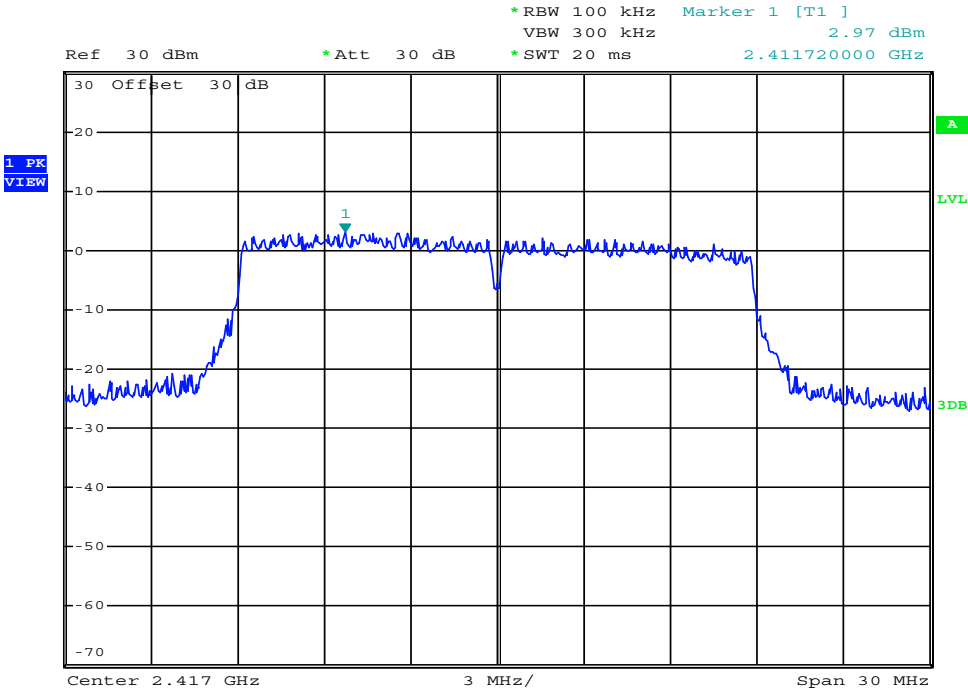
Channel Frequency:
2417.00 MHz

DUT Modulation:
OFDM

Data Rate:
54 Mbps

Measured PSD:
3.70 dBm

Power Spectral Density



Date: 19.NOV.2020 16:29:58

Channel Frequency:
2417.00 MHz

DUT Modulation:
MCS0

Data Rate:
- Mbps

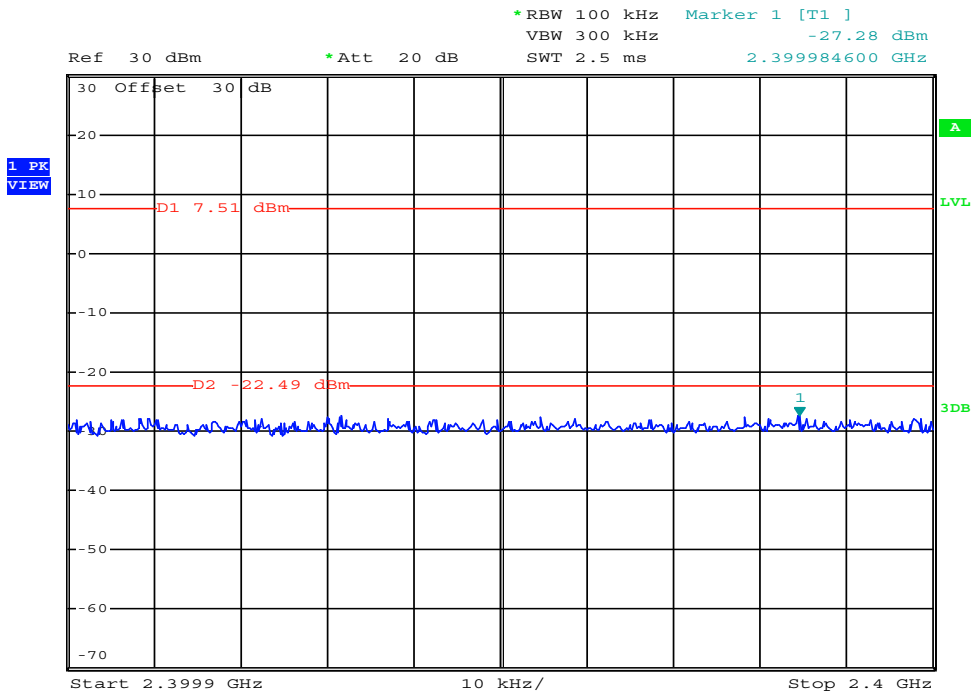
Measured PSD:
2.97 dBm

Emission Level Measurement - Band Edge

Channel Frequency (MHz)	Modulation	Bit Rate (Mbps)	Measured Emission [E _{Meas}] (dBm)	Emission Frequency (MHz)	Limit Line [A _L] (dBm)	Margin (dB)
2402	8-DPSK	3	-27.28	2.399	-22.49	4.79
2480	8-DPSK	3	-37.10	2.483		14.61
Results:					Complies	

Margin = A_L - E_{MEAS}

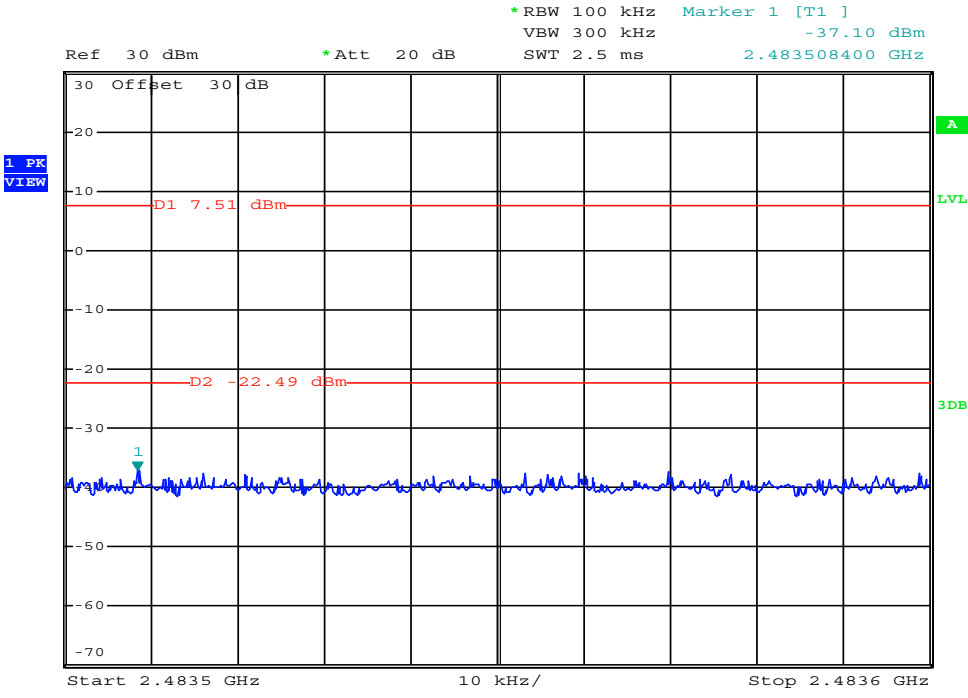
Conducted Spurious Emissions - Lower Band Edge



Date: 30.NOV.2020 16:57:02

Channel Frequency: 2402.00 MHz	Emission Frequency: 2.399 MHz	
DUT Modulation: 8-DPSK	Data Rate: 3 Mbps	Measured Emission: -27.28 dBm

Conducted Spurious Emissions - Upper Band Edge



Date: 30.NOV.2020 16:56:08

Channel Frequency:
2480.00 MHz

Emission Frequency:
2.483 MHz

DUT Modulation:
8-DPSK

Data Rate:
3 Mbps

Measured Emission:
-37.10 dBm