



Appendix B

WCDMA Band II & IV & V



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1. Effective (Isotropic) Radiated Power

1.1. Test Result

Band	Modulation	Channel	Conducted Power(dBm)	EIRP (dBm)	Limit (dBm)	Verdict
Band II	QPSK	9262	23.62	23.75	33.00	PASS
Band II	QPSK	9400	23.52	23.65	33.00	PASS
Band II	QPSK	9538	23.39	23.52	33.00	PASS
Band II	16QAM	9262	20.52	20.65	33.00	PASS
Band II	16QAM	9400	20.66	20.79	33.00	PASS
Band II	16QAM	9538	20.52	20.65	33.00	PASS
Band IV	QPSK	1312	22.31	23.02	30.00	PASS
Band IV	QPSK	1413	22.35	23.06	30.00	PASS
Band IV	QPSK	1513	22.36	23.07	30.00	PASS
Band IV	16QAM	1312	19.38	20.09	30.00	PASS
Band IV	16QAM	1413	19.22	19.93	30.00	PASS
Band IV	16QAM	1513	19.16	19.87	30.00	PASS

Band	Modulation	Channel	Conducted Power(dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band V	QPSK	4132	23.08	19.44	38.45	PASS
Band V	QPSK	4182	23.12	19.48	38.45	PASS
Band V	QPSK	4233	23.01	19.37	38.45	PASS
Band V	16QAM	4132	19.82	16.18	38.45	PASS
Band V	16QAM	4182	19.69	16.05	38.45	PASS
Band V	16QAM	4233	19.58	15.94	38.45	PASS

Remark:

a: For getting the EIRP (Efficient Isotropic Radiated Power), the following formula should be taken to calculate it,

$$ERP [dBm] = \text{Conducted Power} [dBm] + \text{Gain} [dBd]$$

$$EIRP [dBm] = \text{Conducted Power} [dBm] + \text{Gain} [dBi]$$



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2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

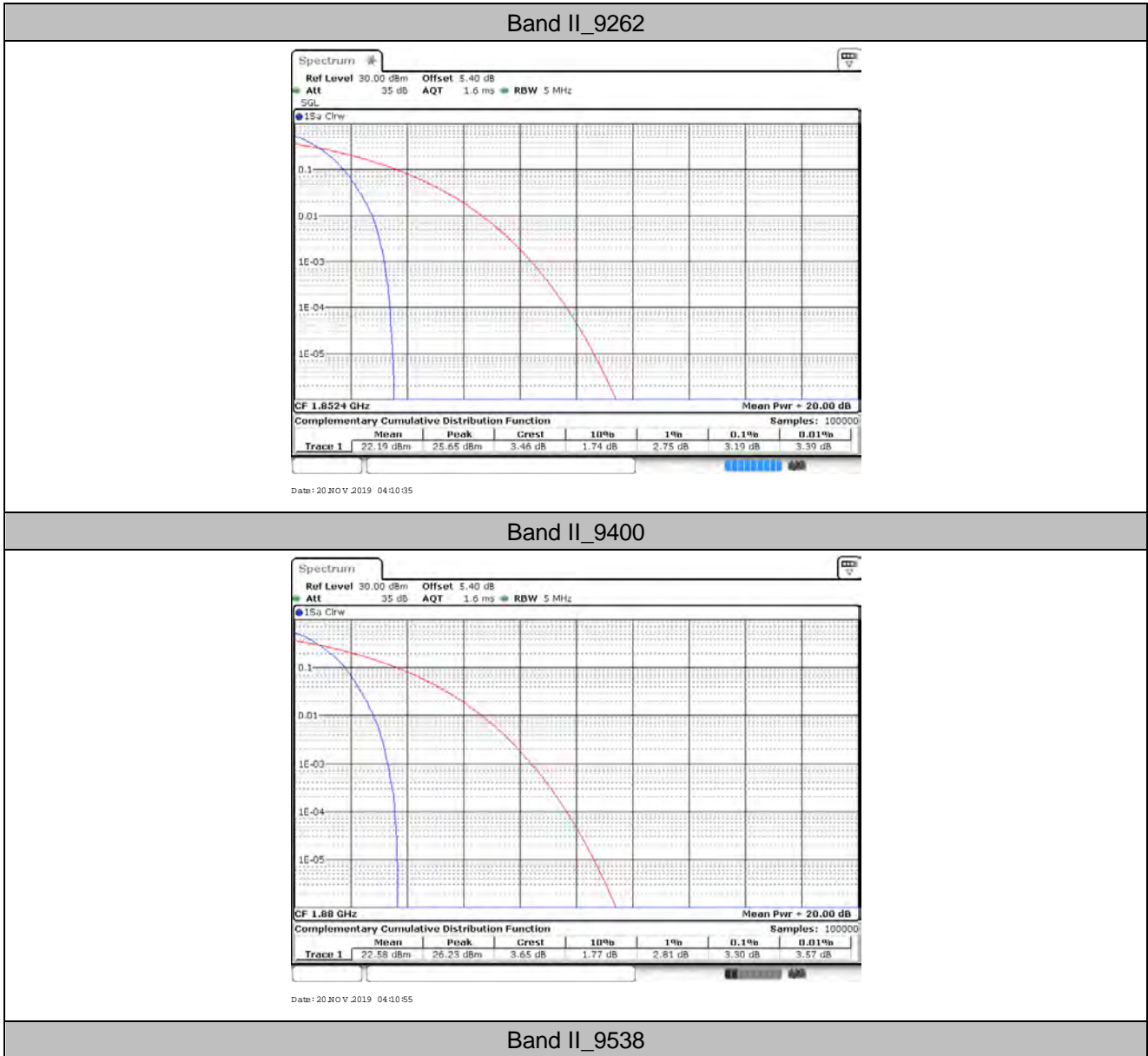
Band	Modulation	Channel	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band II	QPSK	9262	3.19	13	PASS
Band II	QPSK	9400	3.33	13	PASS
Band II	QPSK	9538	3.07	13	PASS
Band II	16QAM	9262	3.01	13	PASS
Band II	16QAM	9400	3.01	13	PASS
Band II	16QAM	9538	2.96	13	PASS
Band IV	QPSK	1312	3.04	13	PASS
Band IV	QPSK	1413	3.07	13	PASS
Band IV	QPSK	1513	3.01	13	PASS
Band IV	16QAM	1312	3.04	13	PASS
Band IV	16QAM	1413	3.07	13	PASS
Band IV	16QAM	1513	3.07	13	PASS
Band V	QPSK	4132	2.72	13	PASS
Band V	QPSK	4182	2.72	13	PASS
Band V	QPSK	4233	2.72	13	PASS
Band V	16QAM	4132	2.72	13	PASS
Band V	16QAM	4182	2.72	13	PASS
Band V	16QAM	4233	2.72	13	PASS



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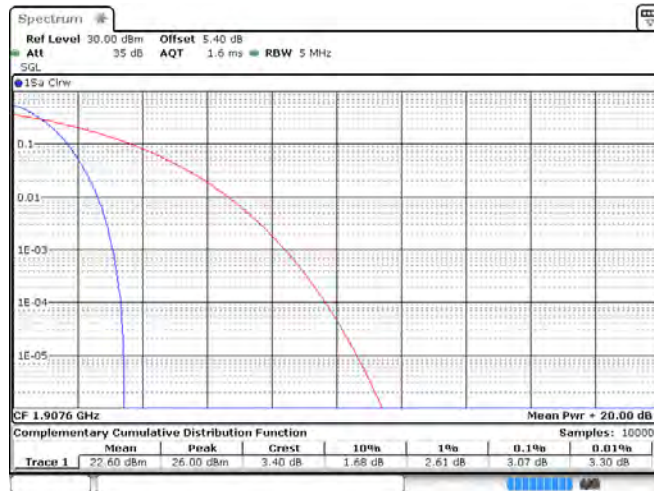
2.2. Test Plots for QPSK



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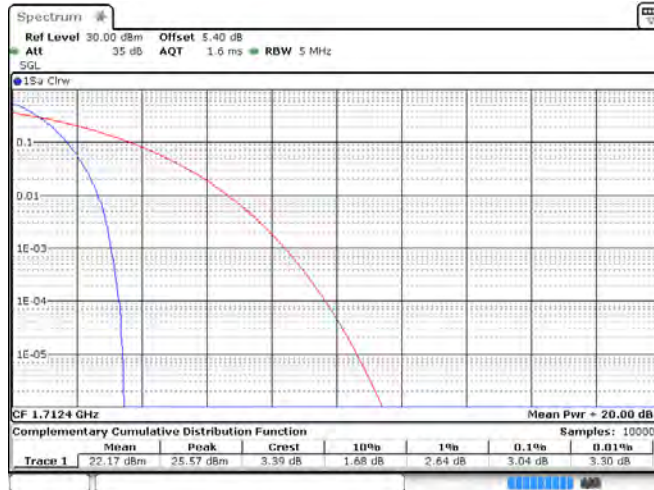
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Date: 20 NOV 2019 04:11:06

Band IV_1312

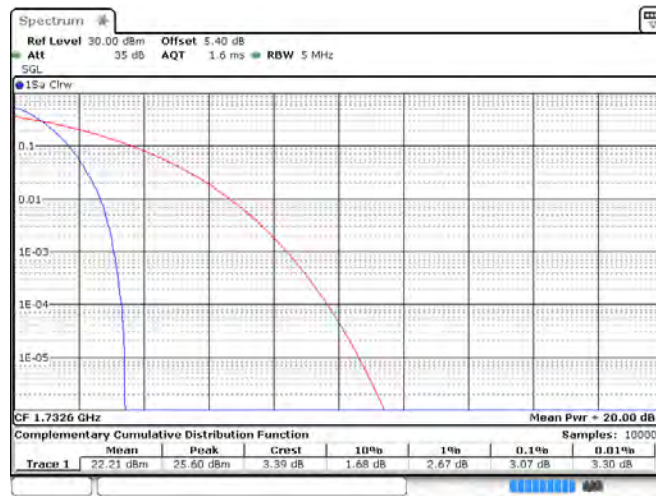


Date: 20 NOV 2019 04:24:59

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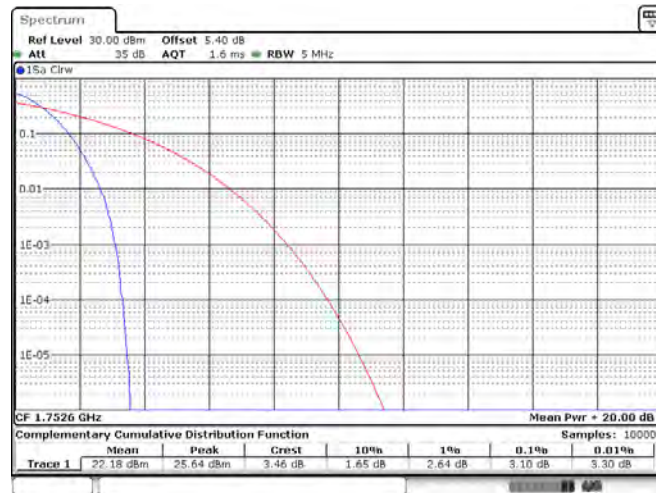


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Date: 20 NOV 2019 04:25:20

Band IV_1513

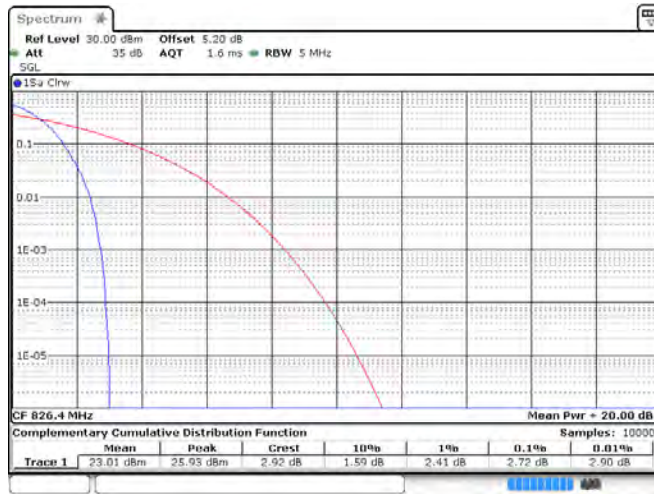


Date: 20 NOV 2019 04:25:35

Band V_4132

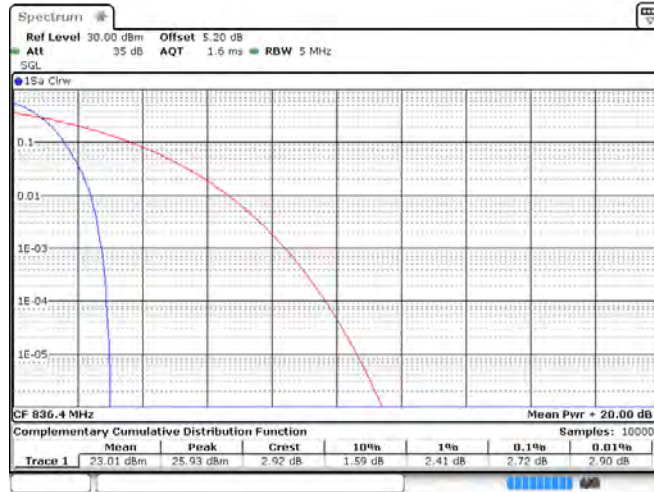


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Date: 20 NOV 2019 05:25:34

Band V_4182

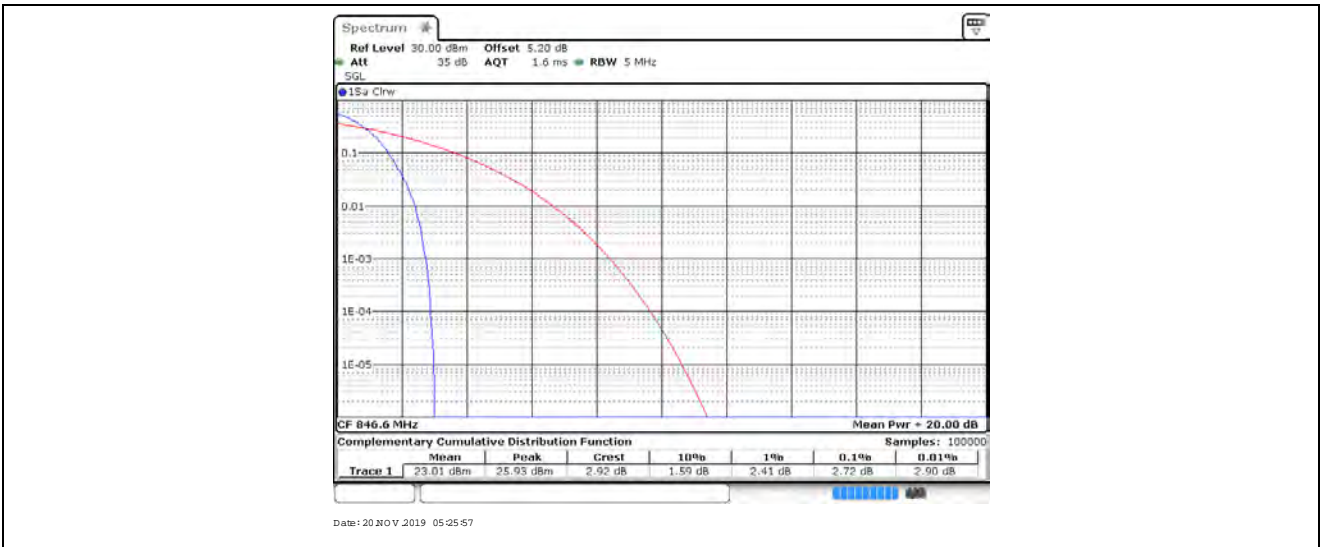


Date: 20 NOV 2019 05:25:46

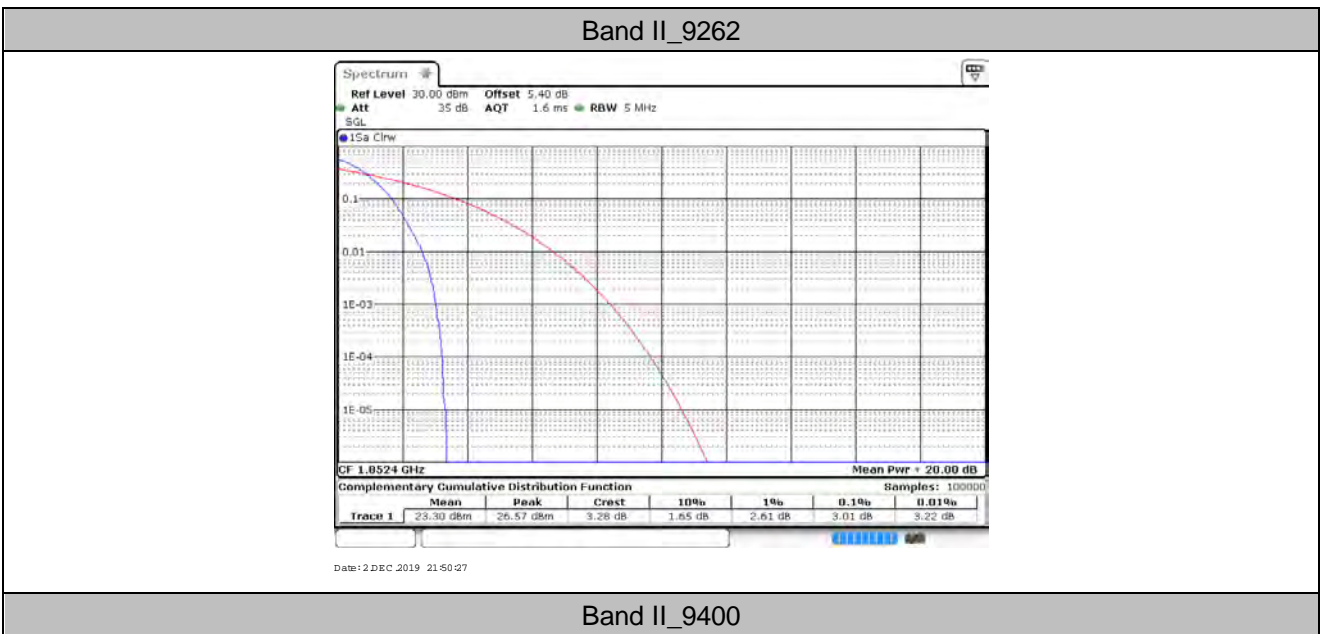
Band V_4233



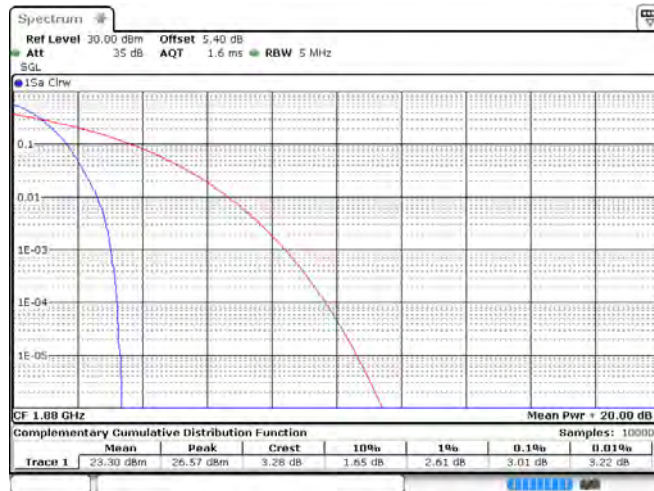
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2.3. Test Plots for 16QAM

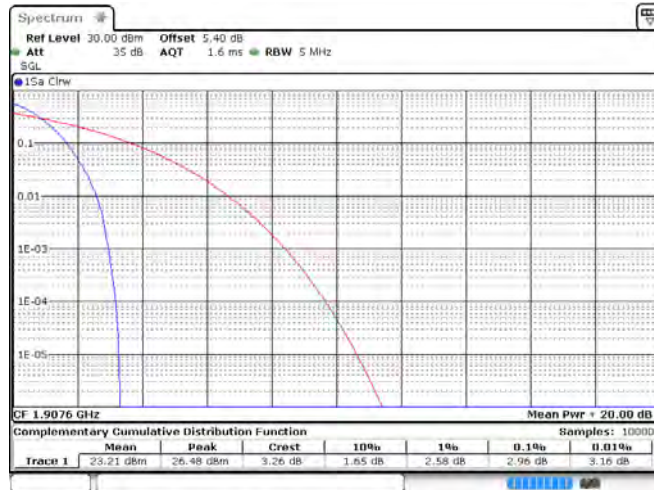


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Date: 2 DEC 2019 21:50:37

Band II_9538

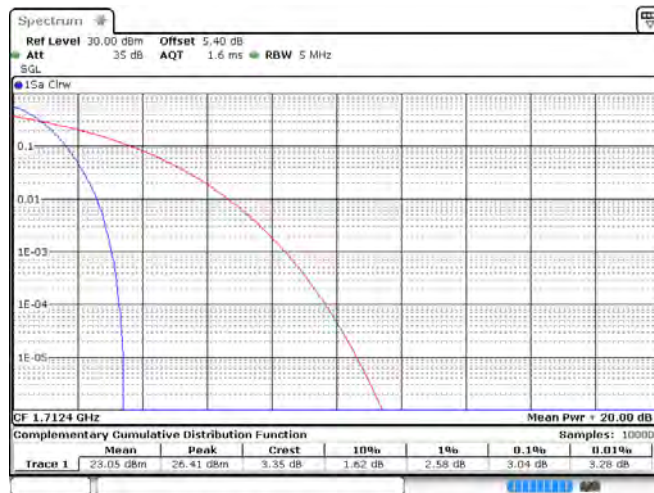


Date: 2 DEC 2019 21:51:00

Band IV_1312

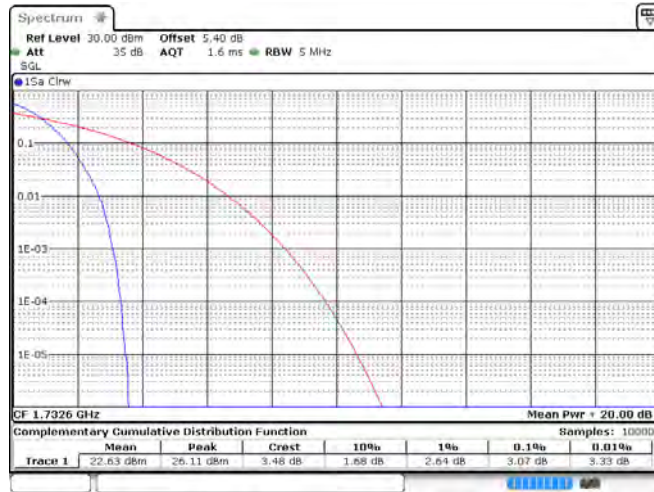


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Date: 2 DEC 2019 22:33:46

Band IV_1413

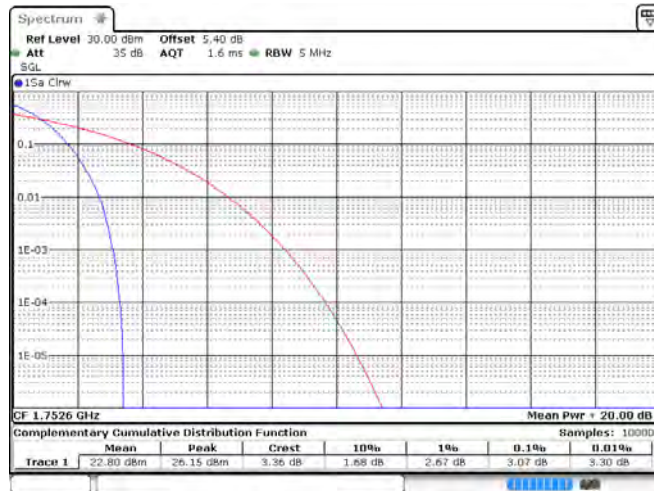


Date: 2 DEC 2019 22:34:34

Band IV_1513

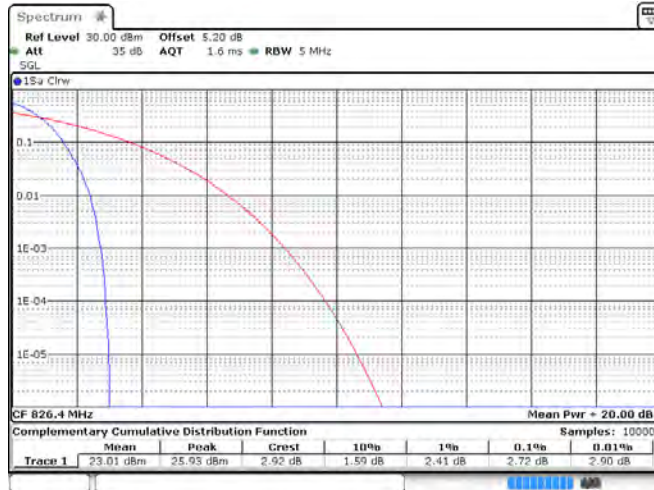


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Band V_4132

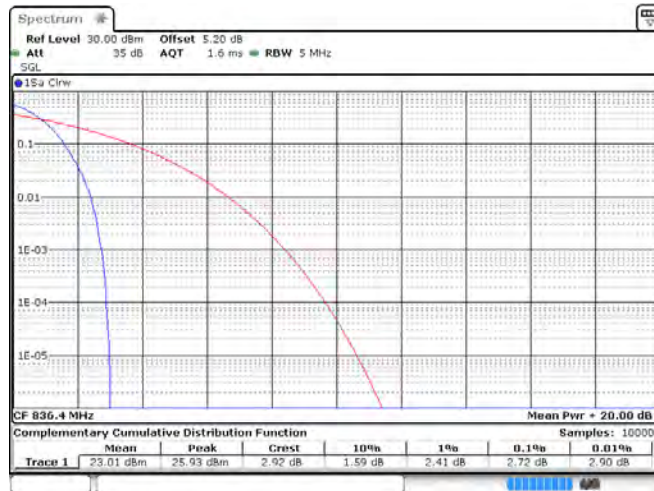


Date: 20 NOV 2019 05:25:34

Band V_4182

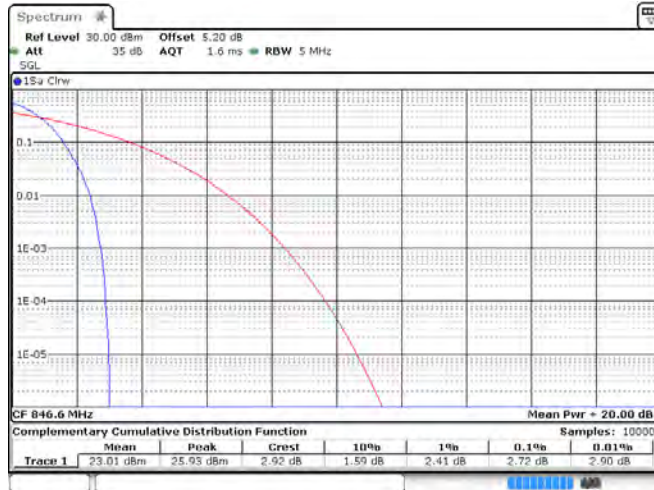


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Band V_4233



Date: 20 NOV 2019 05:25:57



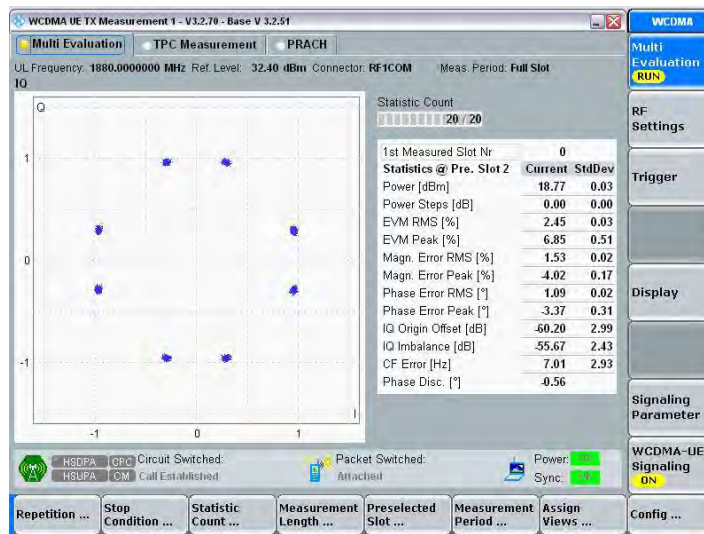
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3. Modulation Characteristics

3.1. Test Band = WCDMA Band II

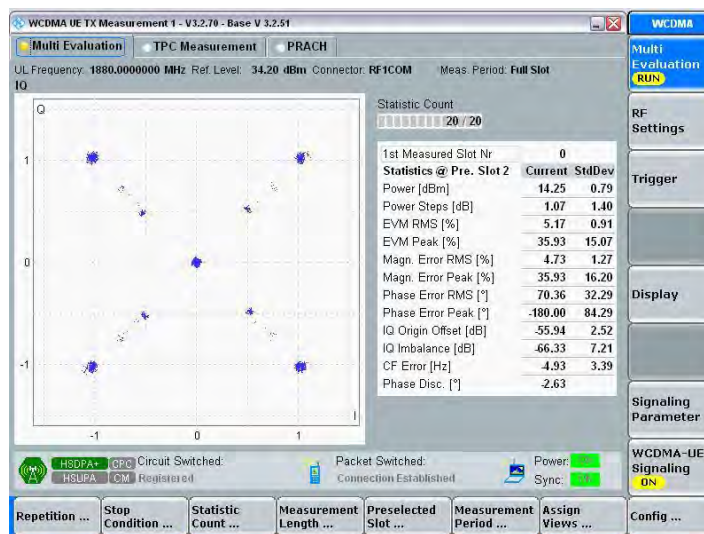
3.1.1. Test Mode = UMTS/TM1

3.1.1.1. Test Channel = MCH



3.1.2. Test Mode = UMTS/TM2

3.1.2.1. Test Channel = MCH

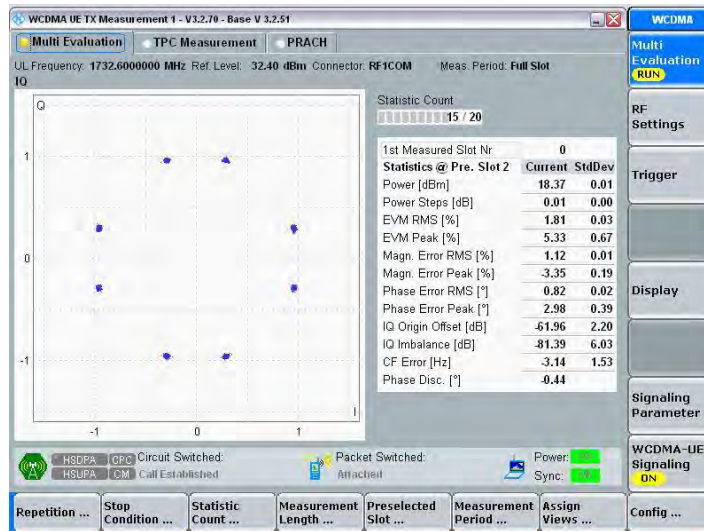


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3.2. Test Band = WCDMA Band IV

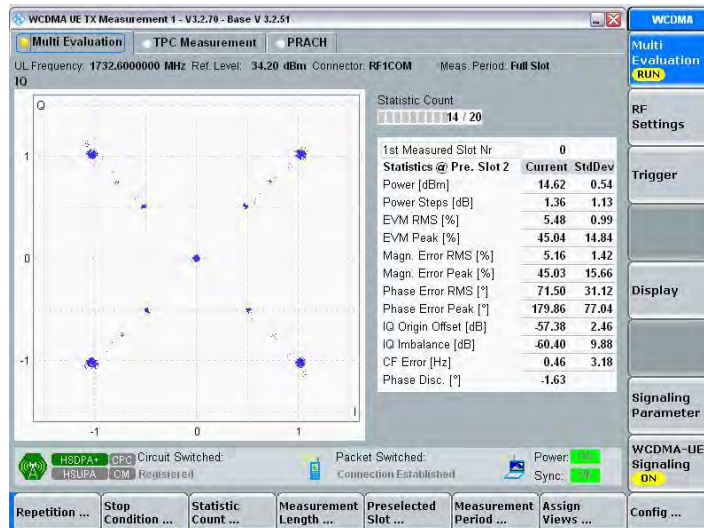
3.2.1. Test Mode = UMTS/TM1

3.2.1.1. Test Channel = MCH



3.2.2. Test Mode = UMTS/TM2

3.2.2.1. Test Channel = MCH

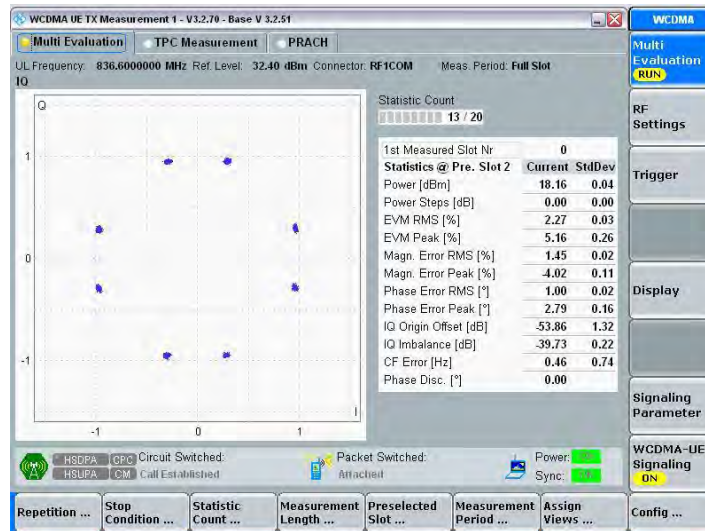


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3.3. Test Band = WCDMA Band V

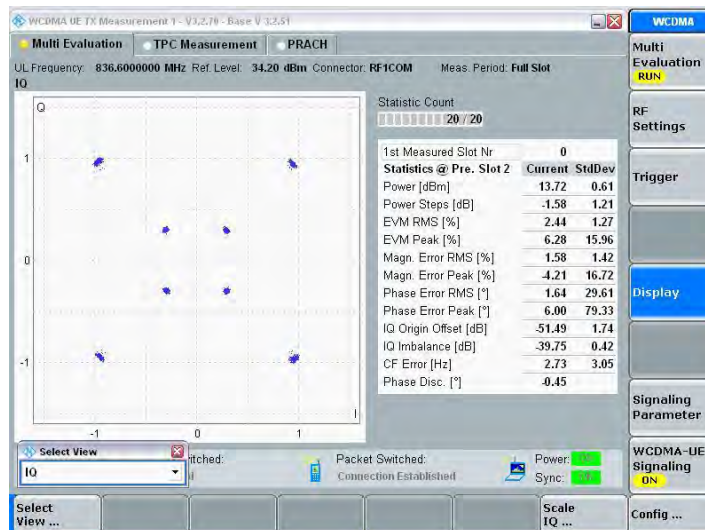
3.3.1. Test Mode = UMTS/TM1

3.3.1.1. Test Channel = MCH



3.3.2. Test Mode = UMTS/TM2

3.3.2.1. Test Channel = MCH



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4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

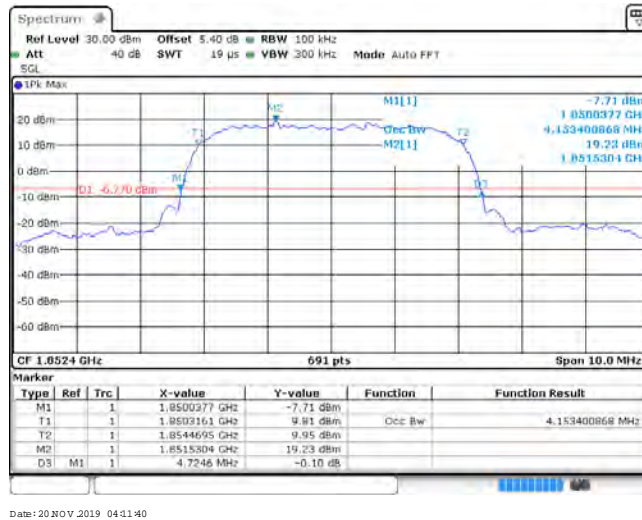
BAND	Modulation	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
Band II	QPSK	9262	4153.4	4725	---	PASS
Band II	QPSK	9400	4153.4	4725	---	PASS
Band II	QPSK	9538	4153.4	4739	---	PASS
Band II	16QAM	9262	4167.9	4739	---	PASS
Band II	16QAM	9400	4167.9	4725	---	PASS
Band II	16QAM	9538	4153.4	4739	---	PASS
Band IV	QPSK	1312	4124.5	4710	---	PASS
Band IV	QPSK	1413	4167.9	4739	---	PASS
Band IV	QPSK	1513	4167.9	4725	---	PASS
Band IV	16QAM	1312	4153.4	4725	---	PASS
Band IV	16QAM	1413	4167.9	4725	---	PASS
Band IV	16QAM	1513	4153.4	4725	---	PASS
Band V	QPSK	4132	4153.4	4754	---	PASS
Band V	QPSK	4182	4167.9	4768	---	PASS
Band V	QPSK	4233	4167.9	4754	---	PASS
Band V	16QAM	4132	4153.4	4754	---	PASS
Band V	16QAM	4182	4153.4	4725	---	PASS
Band V	16QAM	4233	4153.4	4754	---	PASS



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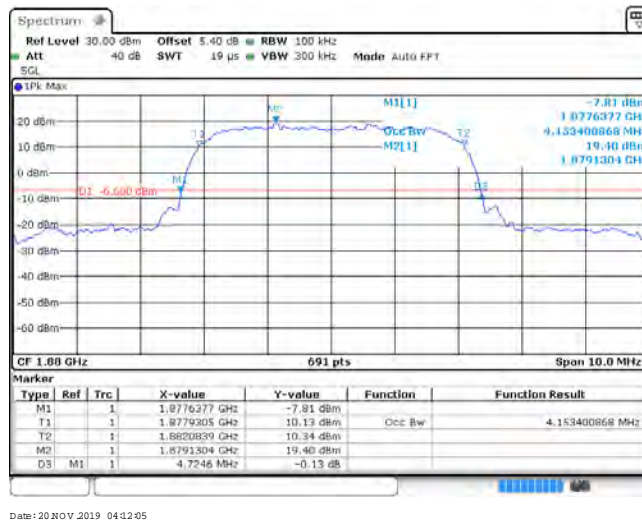
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4.2. Test Plots for QPSK



Date: 20 NOV 2019 04:11:40

Band II_9262

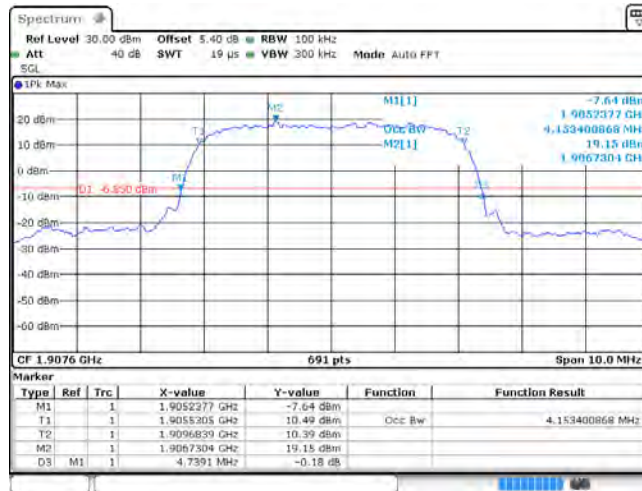


Date: 20 NOV 2019 04:12:05

Band II_9400

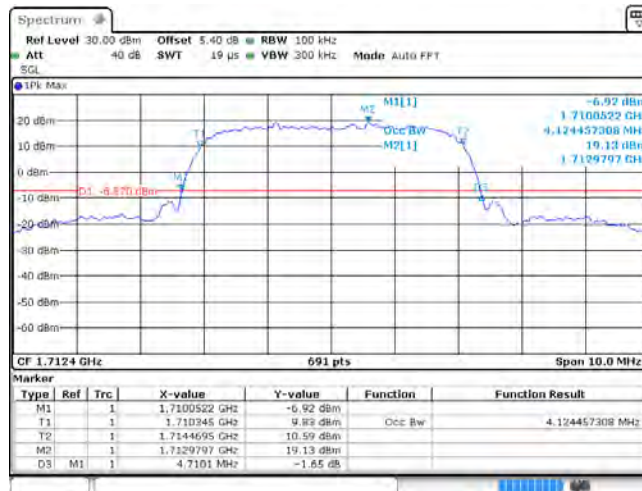


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Date: 20 NOV 2019 04:32:29

Band II_9538

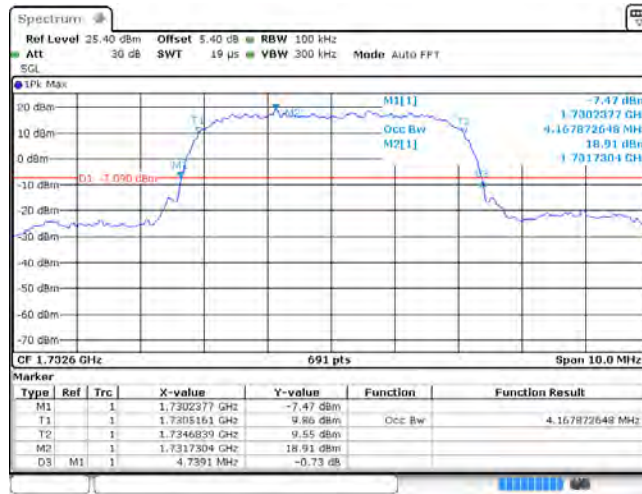


Date: 6 NOV 2019 19:34:15

Band IV_1312

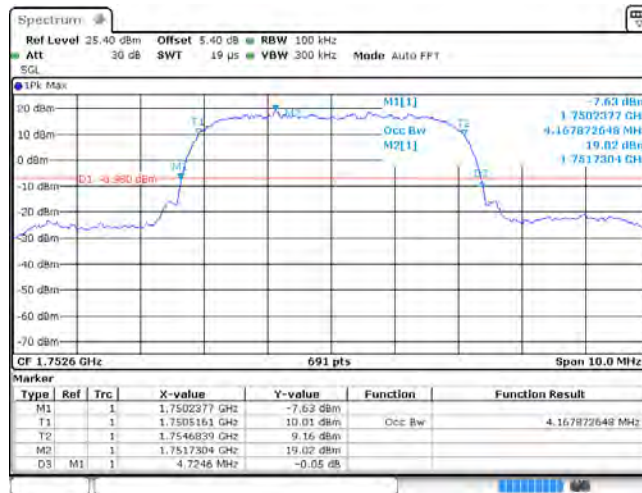


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Date: 20 NOV 2019 04:39:19

Band IV_1413

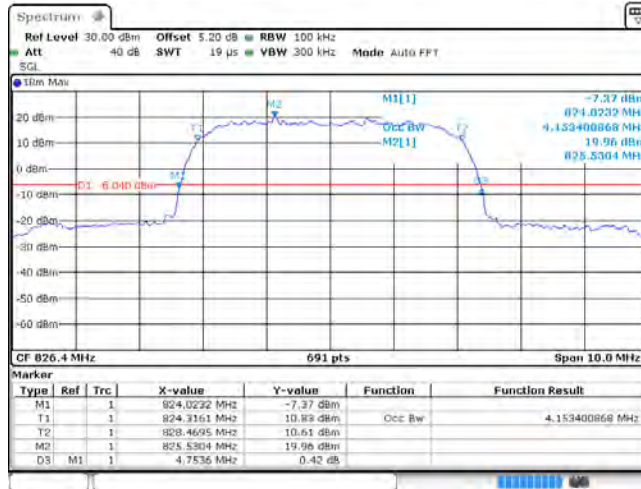


Date: 20 NOV 2019 04:39:50

Band IV_1513

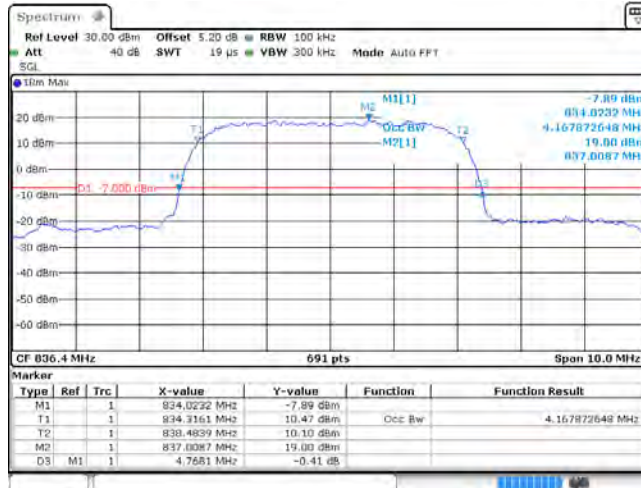


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Date: 20 NOV 2019 05:20:50

Band V_4132



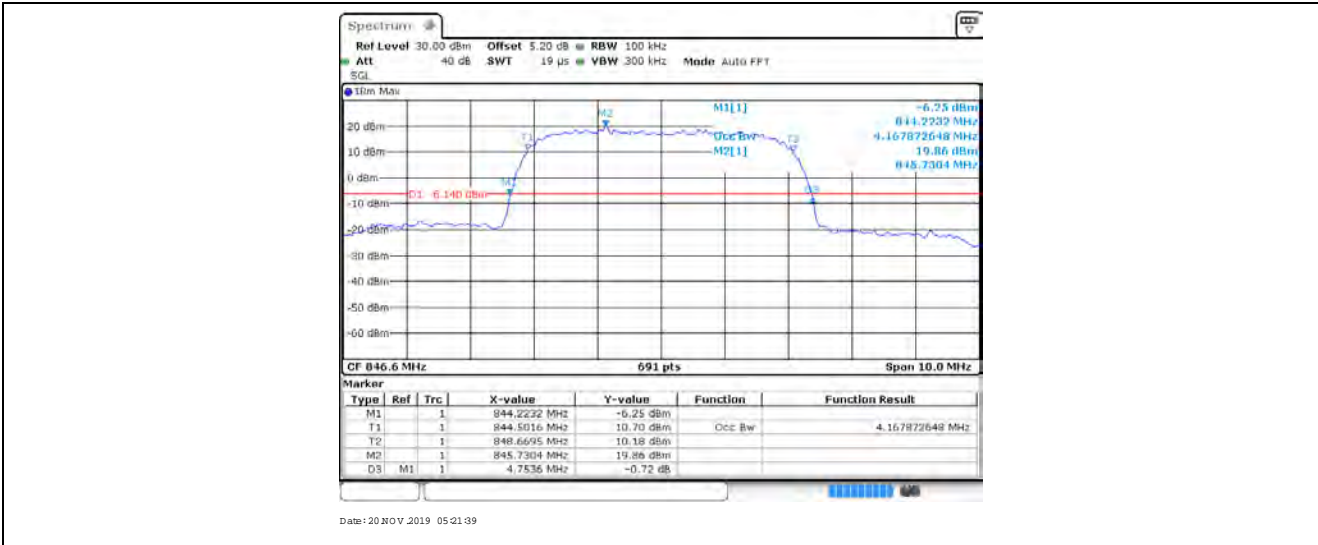
Date: 20 NOV 2019 05:21:14

Band V_4182



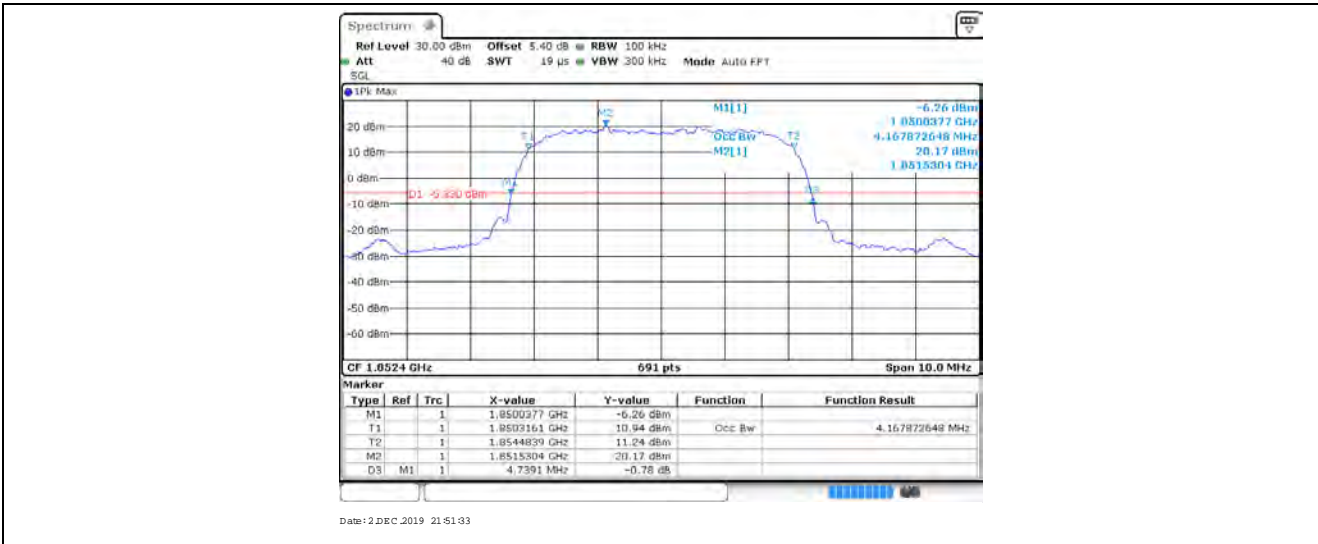
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Band V_4233

4.3. Test Plots for 16QAM

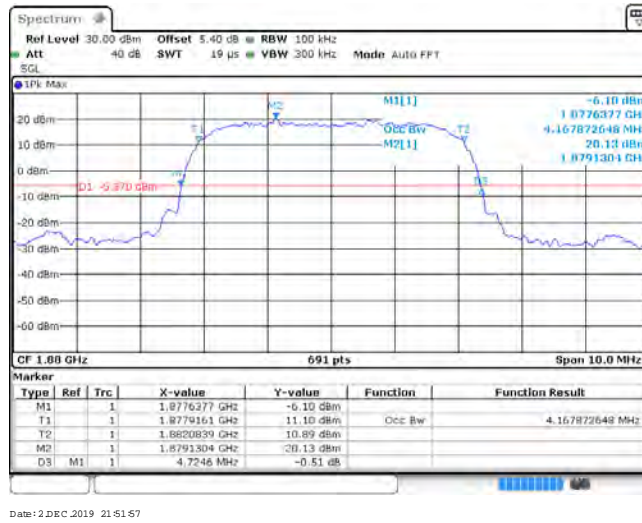


Band II_9262



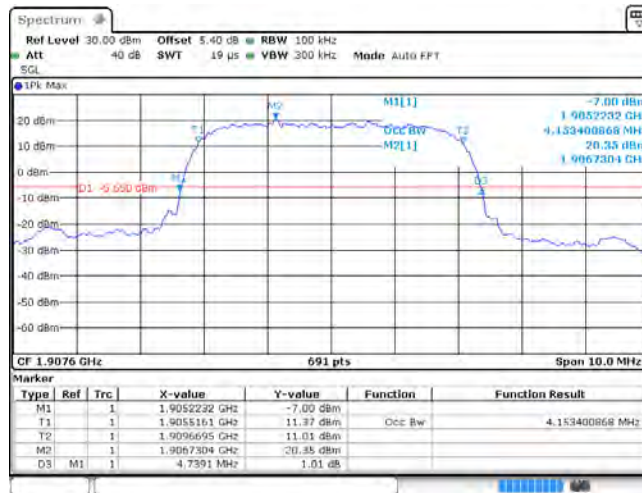
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Band II_9400

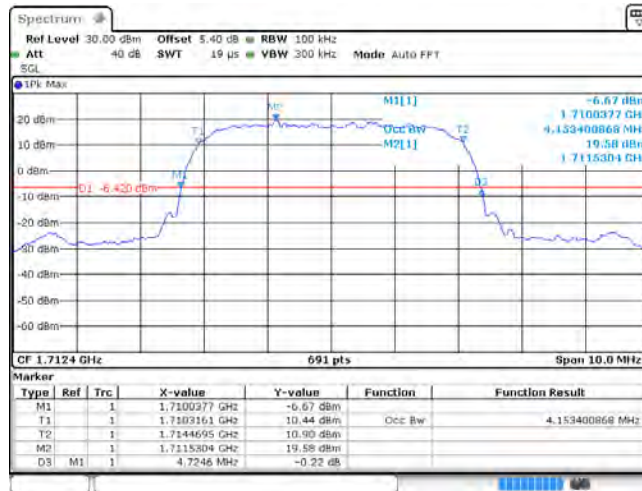


Date: 2 DEC 2019 21:52:34

Band II_9538

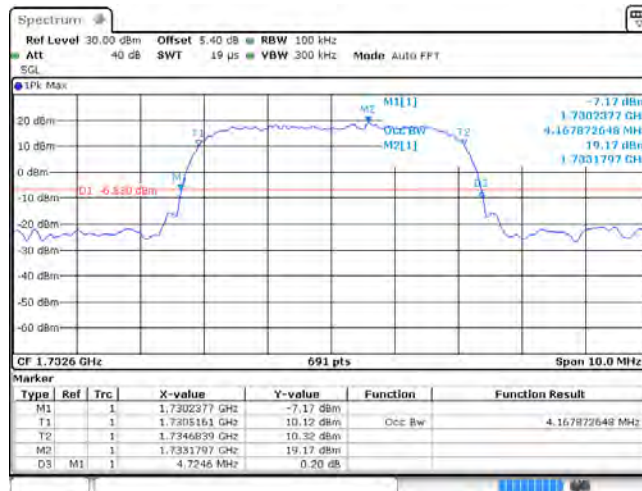


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Date: 2 DEC 2019 22:35:04

Band IV_1312



Date: 2 DEC 2019 22:35:28

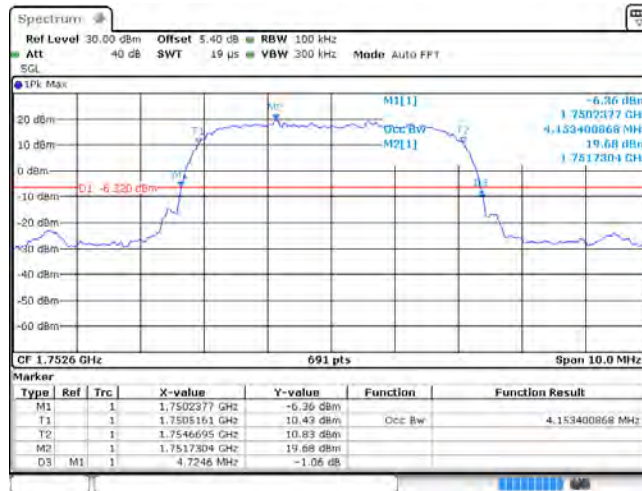
Band IV_1413



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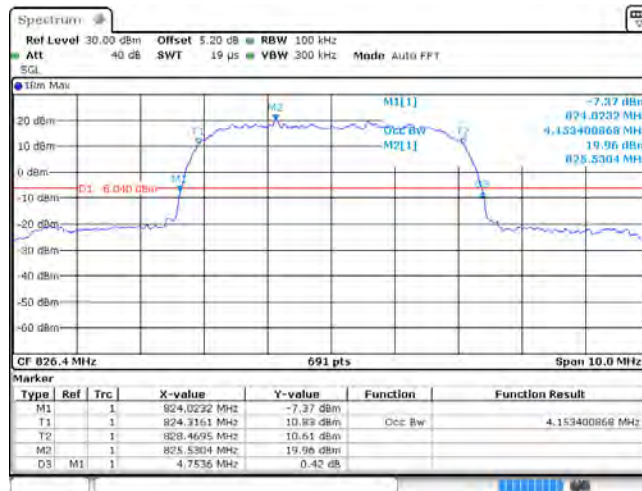
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Date: 2 DEC 2019 22:35:52

Band IV_1513



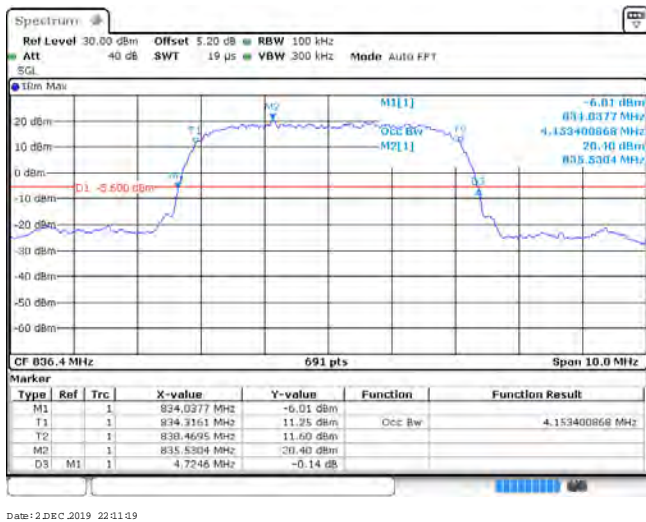
Date: 20 NOV 2019 05:20:50

Band V_4132

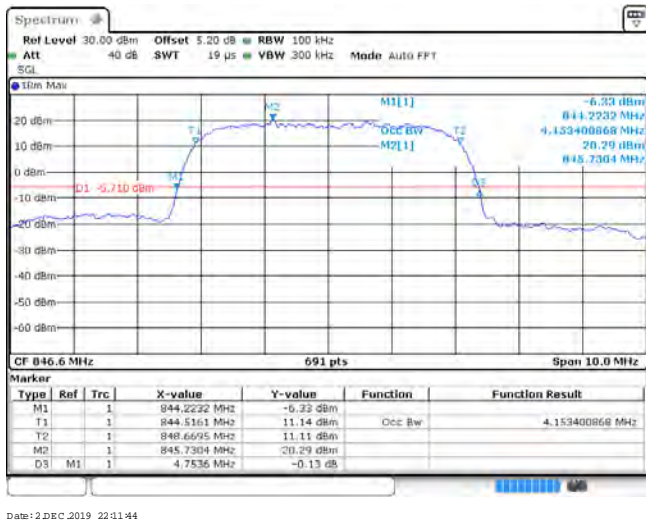


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Band V_4182



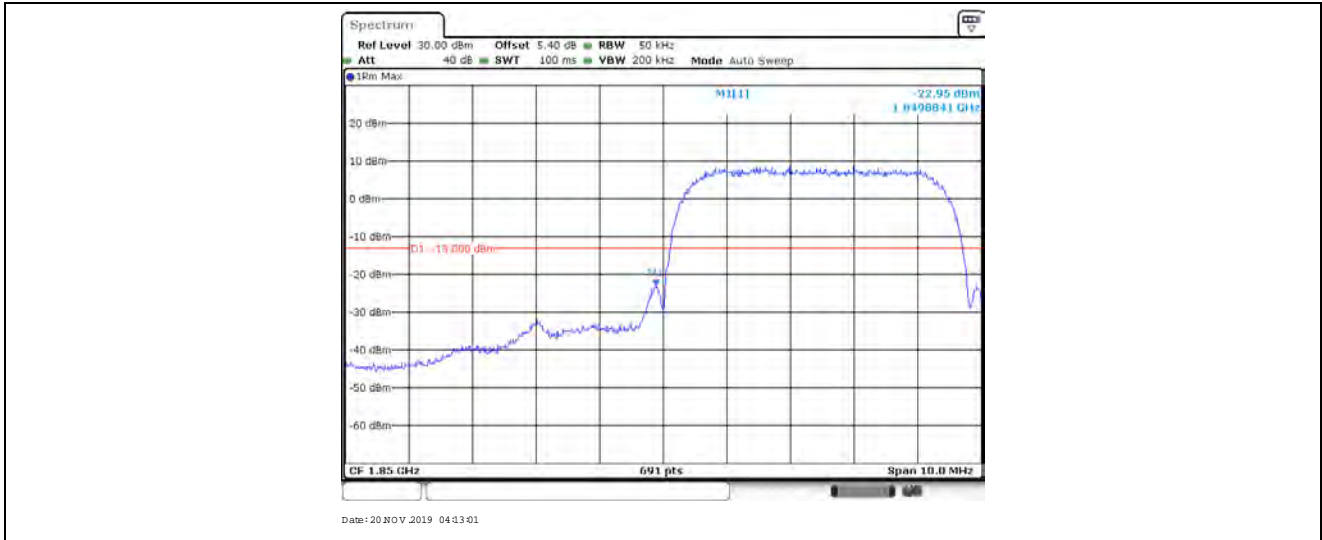
Band V_4233



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5. Band Edge Compliance

5.1. Test Plots for QPSK



Band II_9262

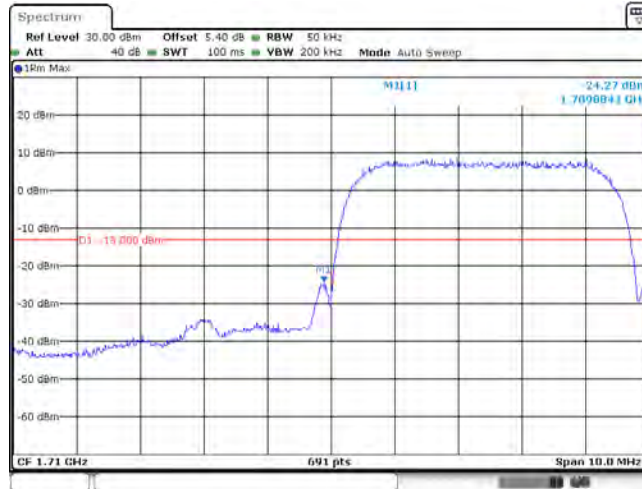


Band II_9538



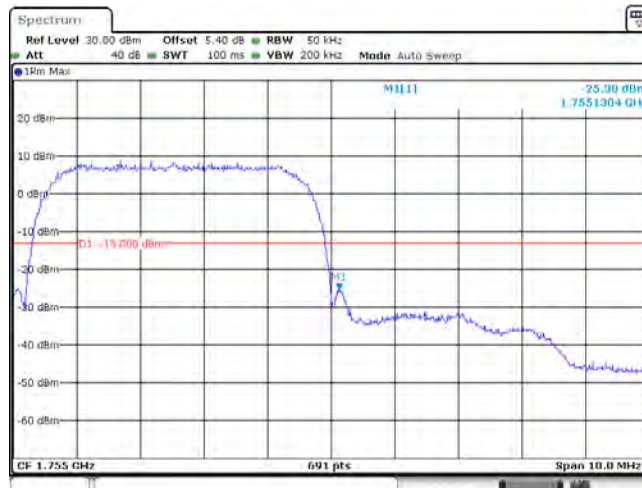
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Date: 20 NOV 2019 04:24:18

Band IV_1312



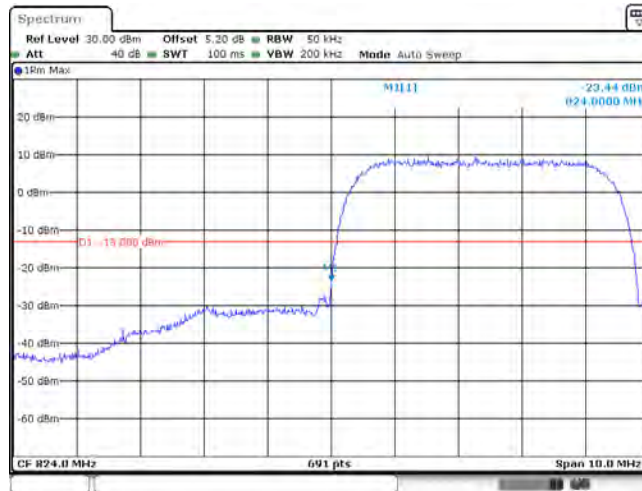
Date: 20 NOV 2019 04:24:35

Band IV_1513



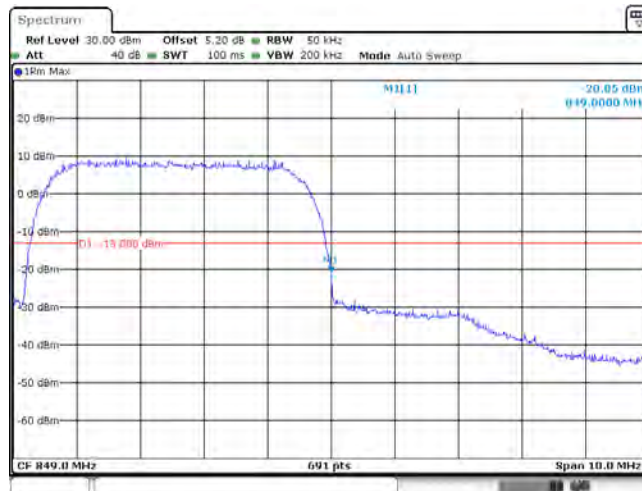
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Date: 20 NOV 2019 05:22:10

Band V_4132

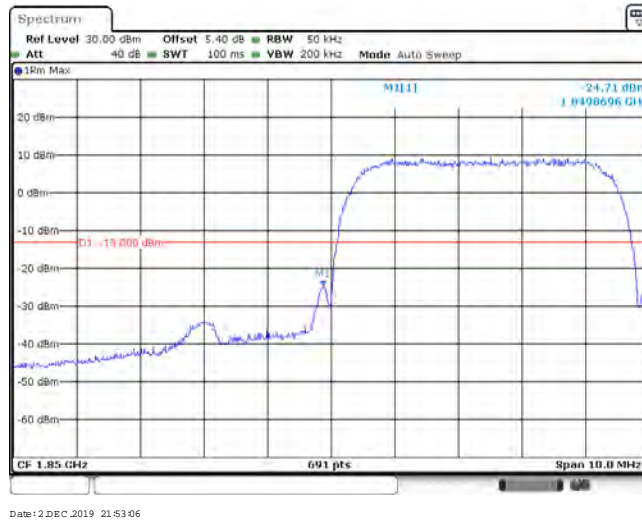


Date: 20 NOV 2019 05:22:27

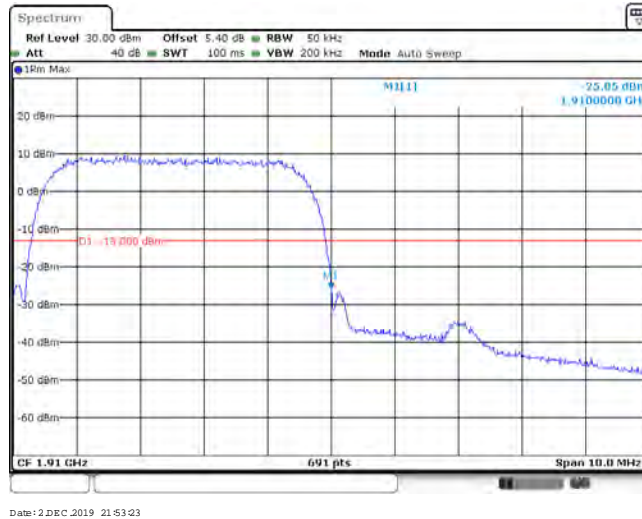
Band V_4233



5.2. Test Plots for 16QAM

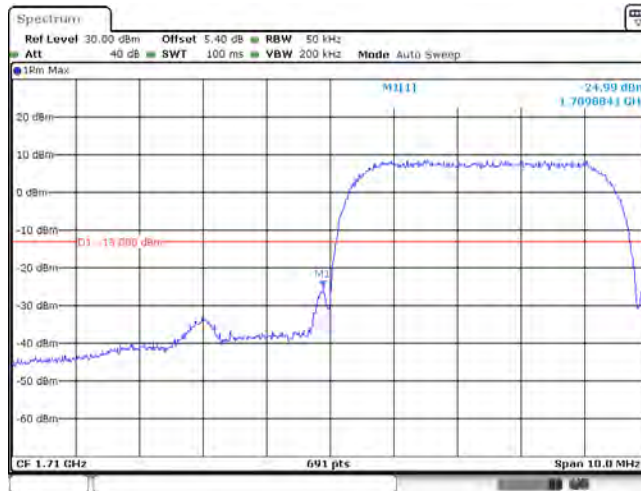


Band II_9262



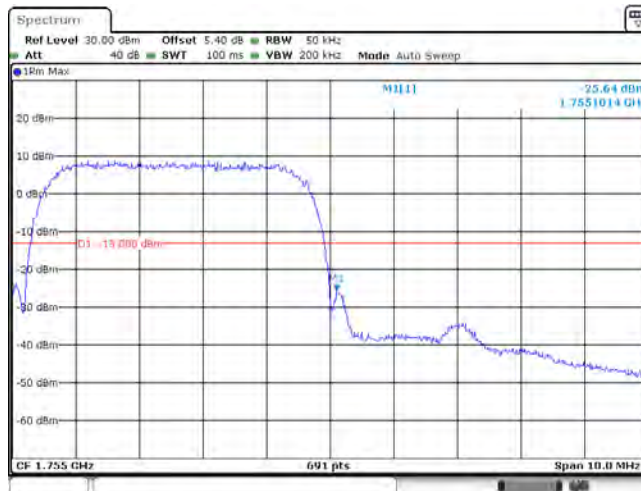
Band II_9538





Date: 2 DEC 2019 22:31:09

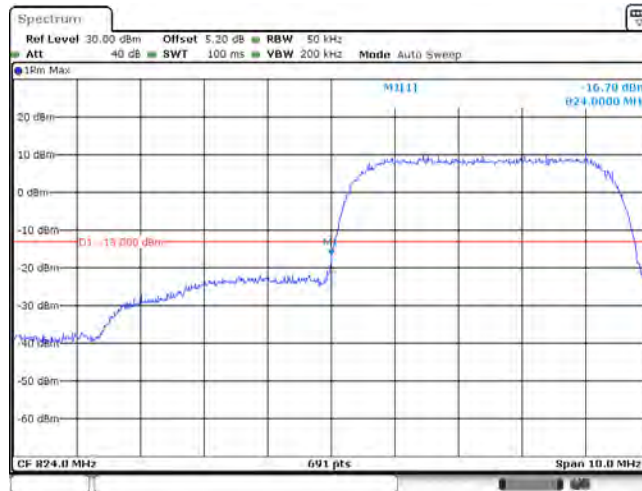
Band IV_1312



Date: 2 DEC 2019 22:31:27

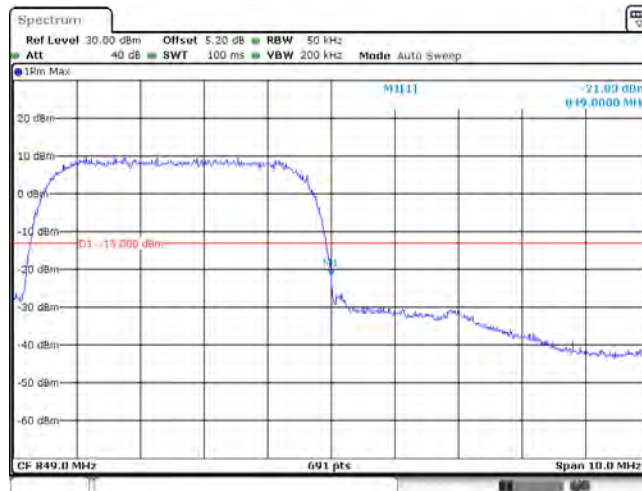
Band IV_1513





Date: 2 DEC 2019 22:12:46

Band V_4132



Date: 2 DEC 2019 22:12:34

Band V_4233

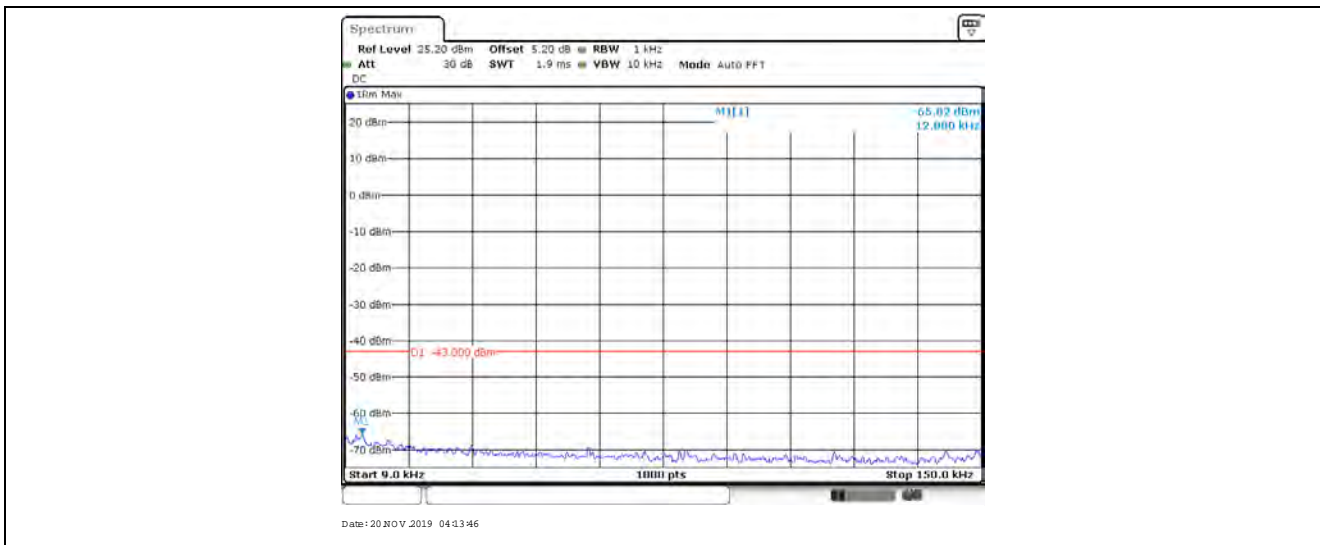


6. Spurious Emission at Antenna Terminal

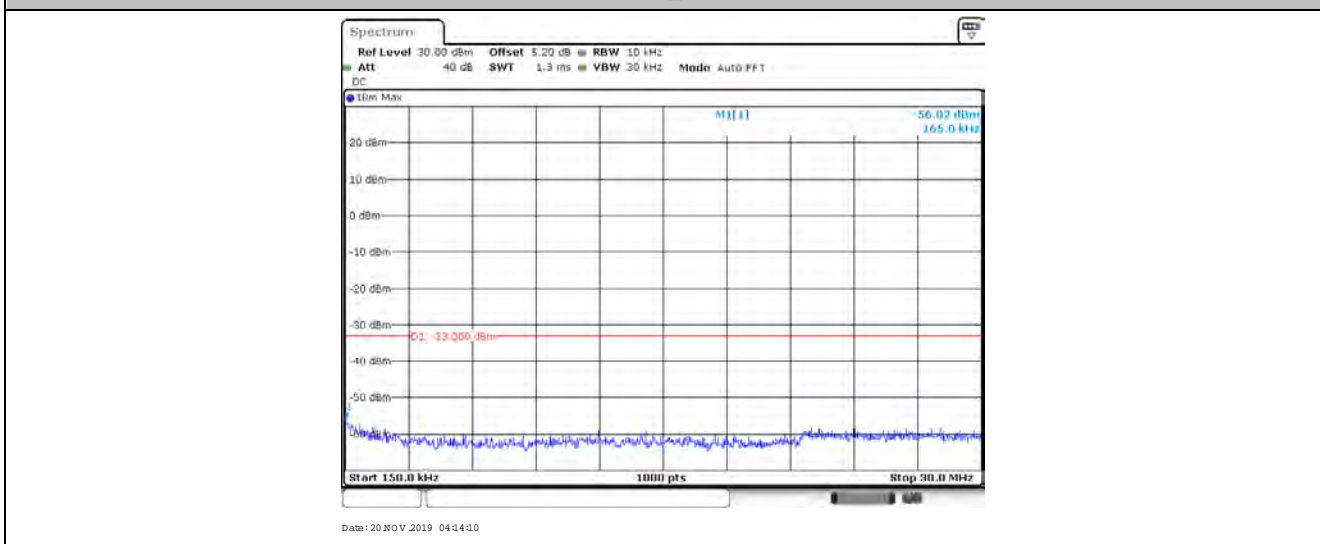
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = $k * (Span / RBW)$ " with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Remark2: only the worst case data displayed in this report.

6.1. Test Plots for QPSK



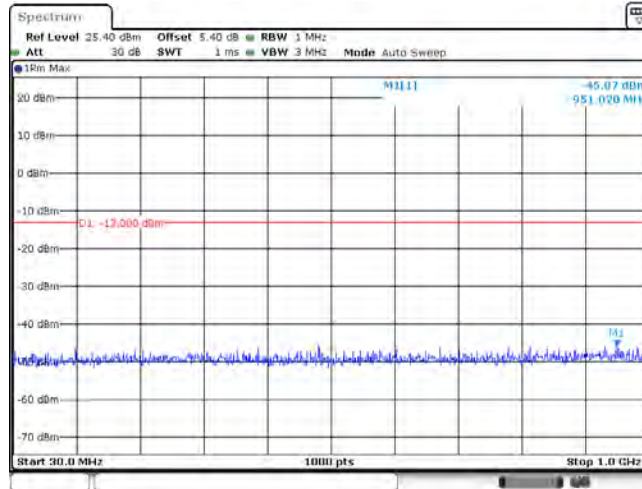
Band II_9262



Band II_9262

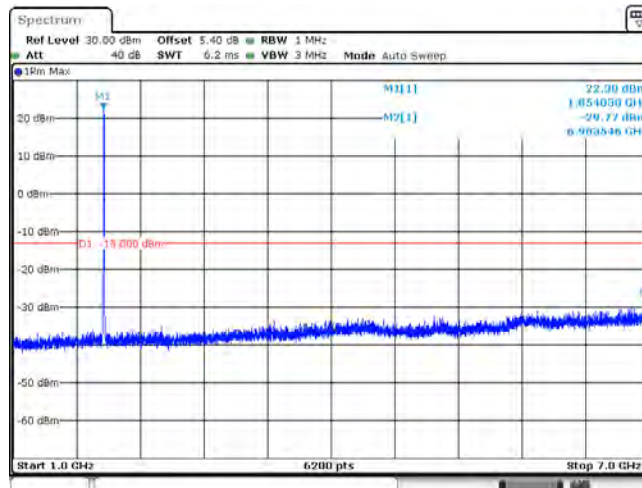


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Date: 20 NOV 2019 04:34:20

Band II_9262



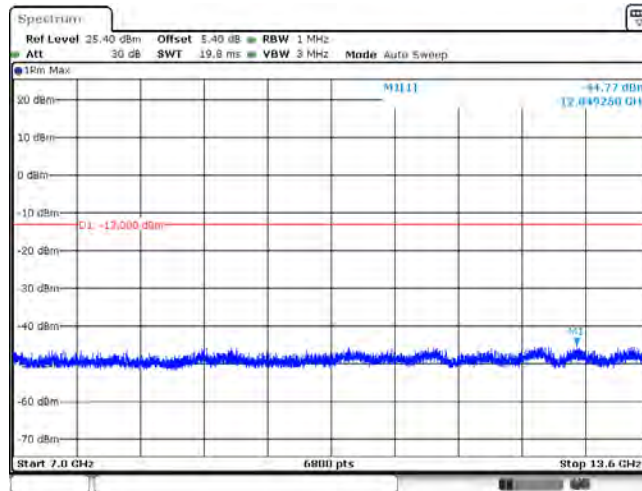
Date: 20 NOV 2019 04:34:33

Band II_9262



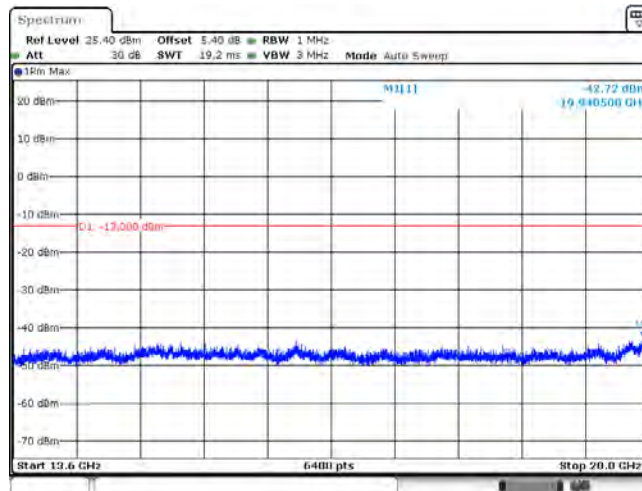
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Date: 20 NOV 2019 04:34:43

Band II_9262



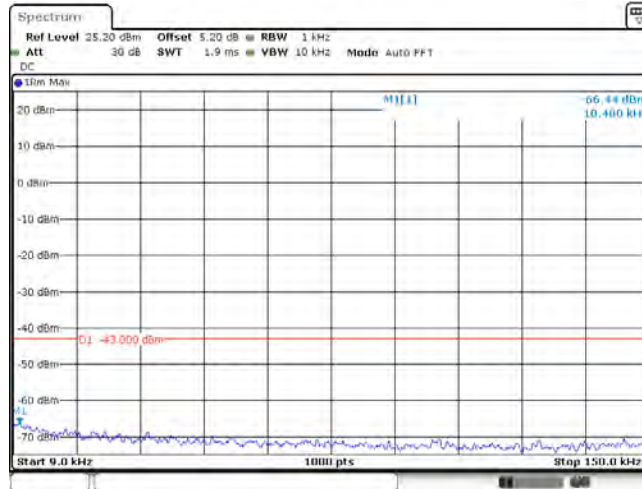
Date: 20 NOV 2019 04:34:54

Band II_9262



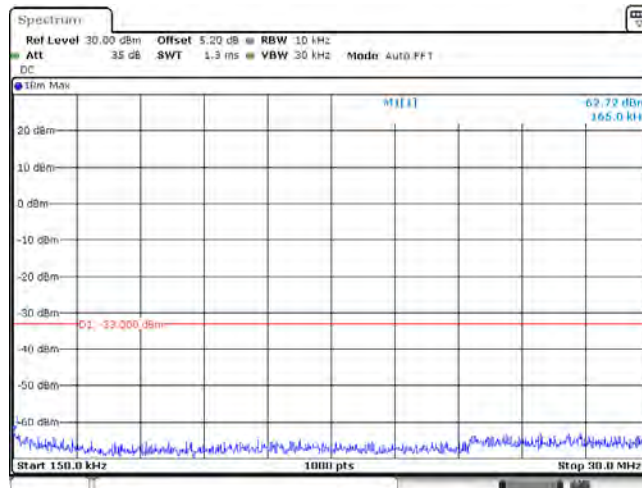
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Date: 20 NOV 2019 04:35:07

Band II_9400

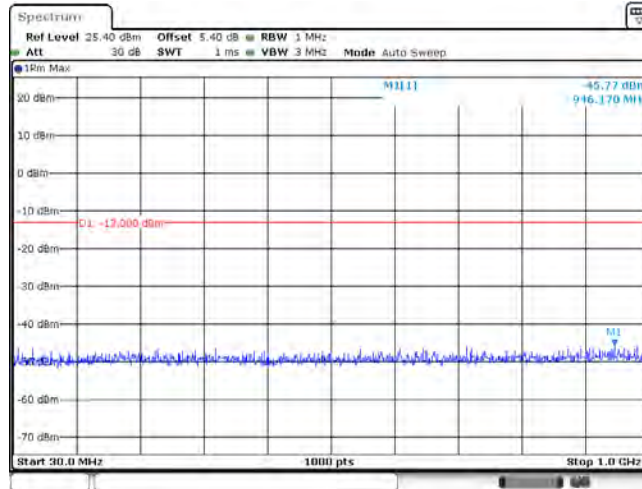


Date: 20 NOV 2019 04:35:05

Band II_9400

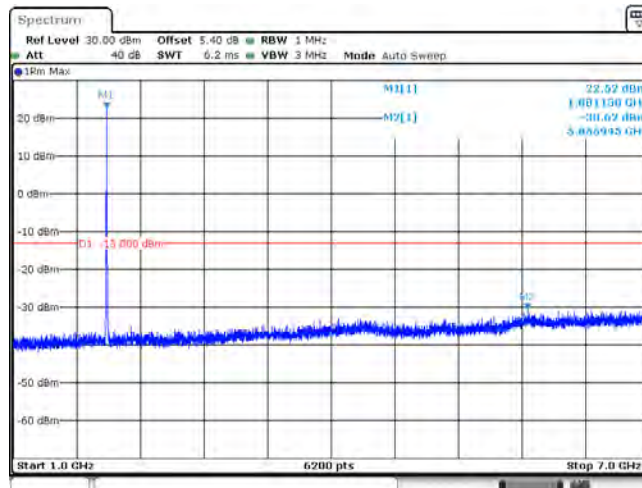


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Band II_9400



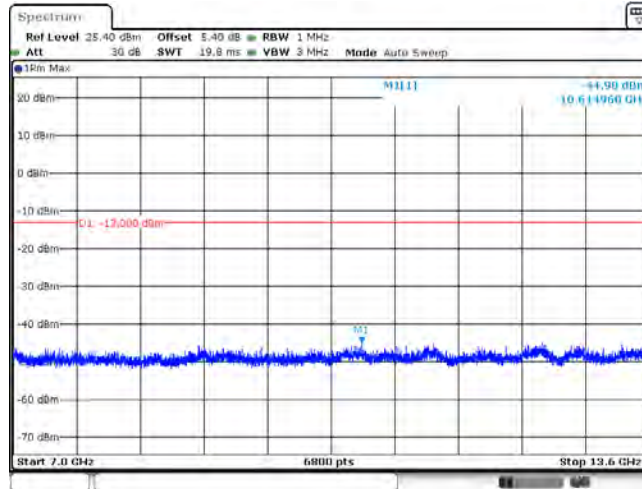
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Band II_9400



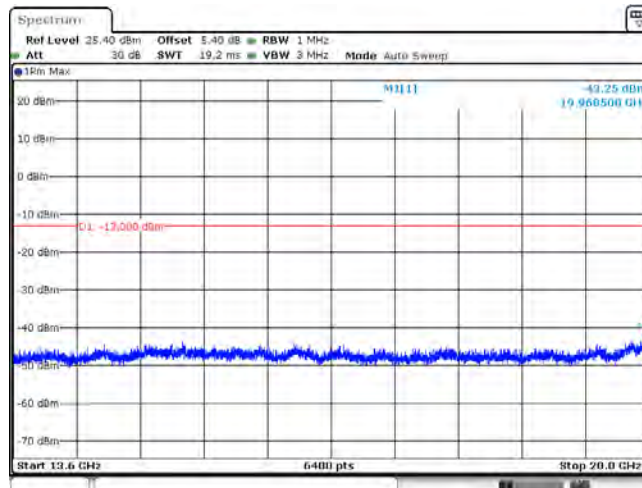
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Date: 20 NOV 2019 04:35:58

Band II_9400



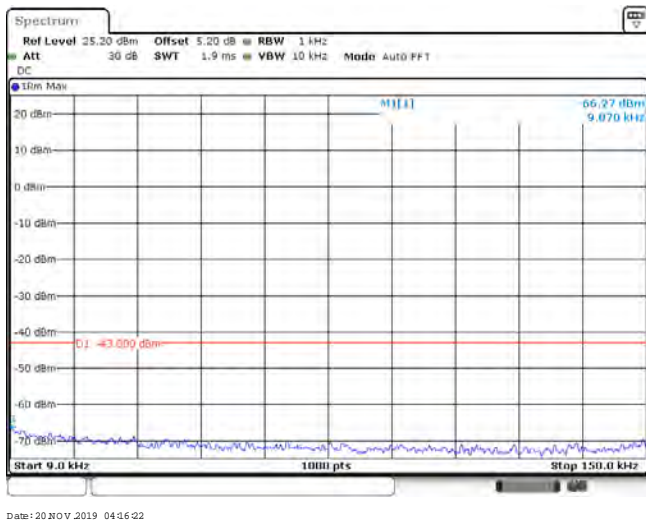
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Band II_9400

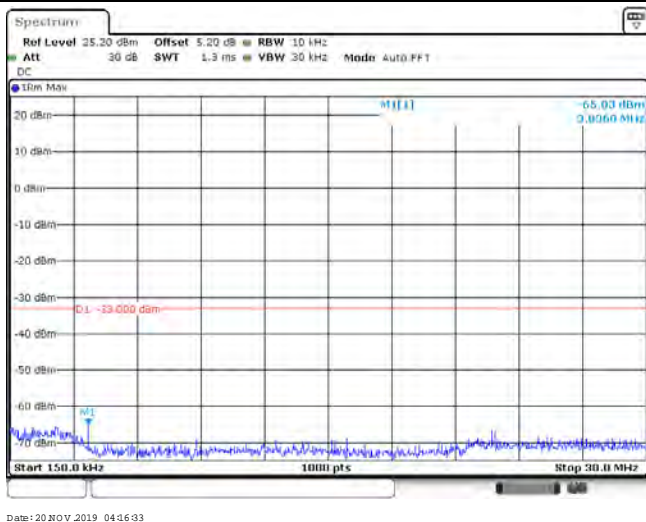


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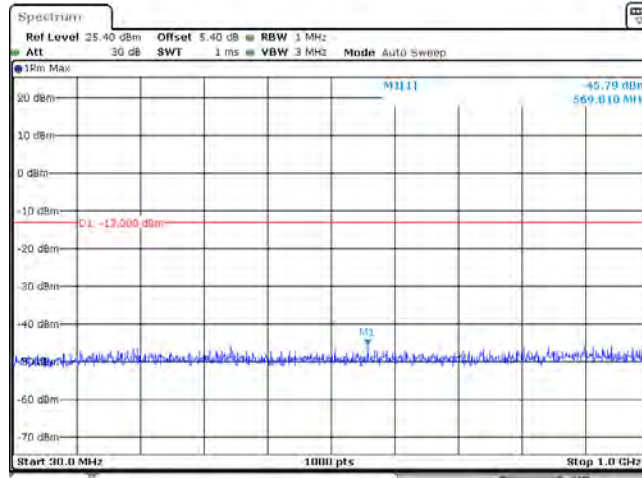
Band II_9538



Band II_9538

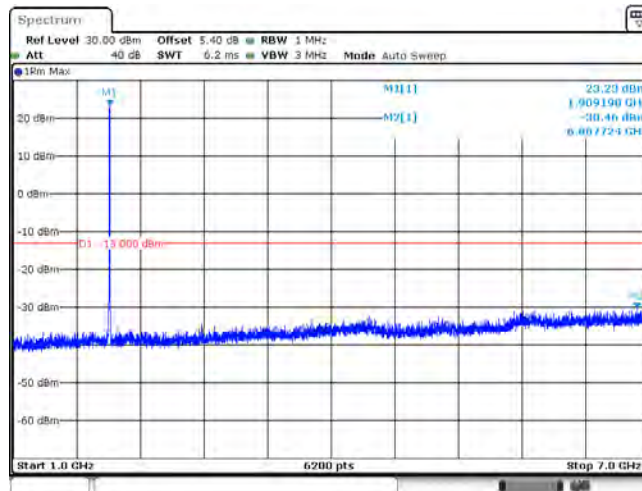


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Date: 20 NOV 2019 04:36:44

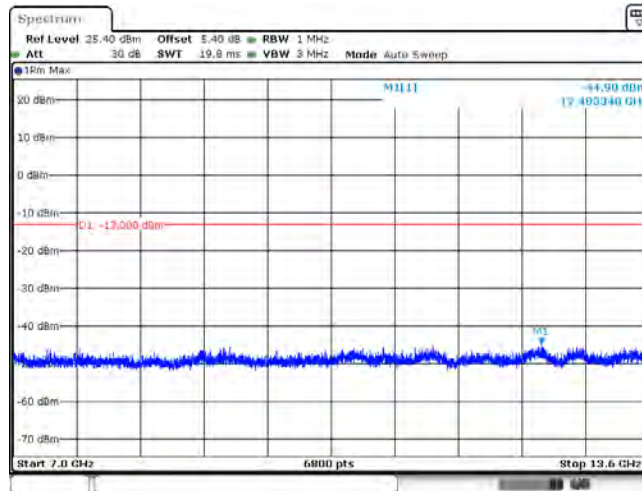
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Date: 20 NOV 2019 04:36:56

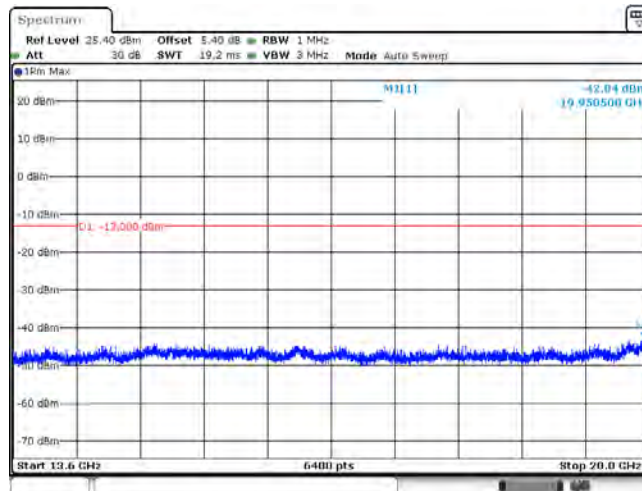
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Date: 20 NOV 2019 04:17:07

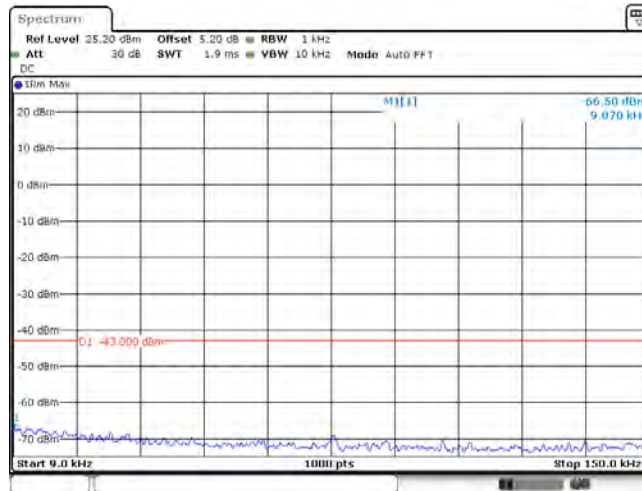
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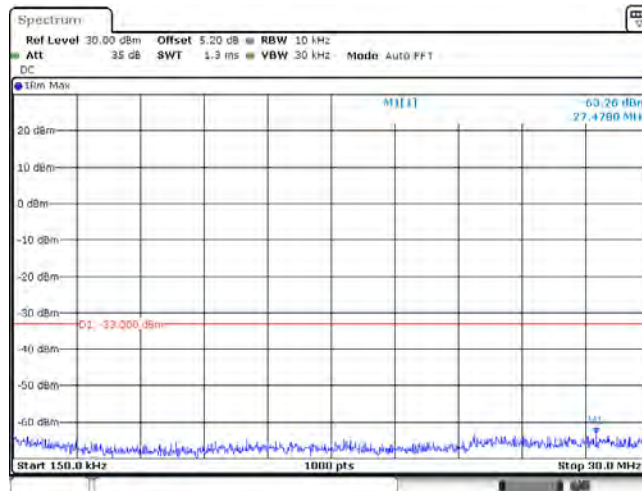
Band II_9538





Date: 20 NOV 2019 04:20:18

Band IV_1312

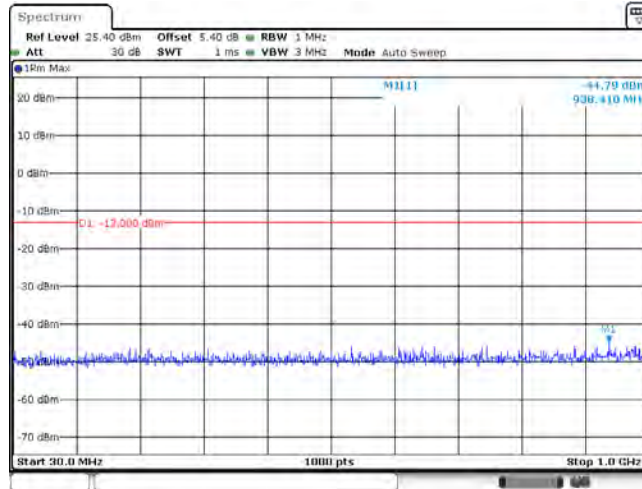


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Band IV_1312

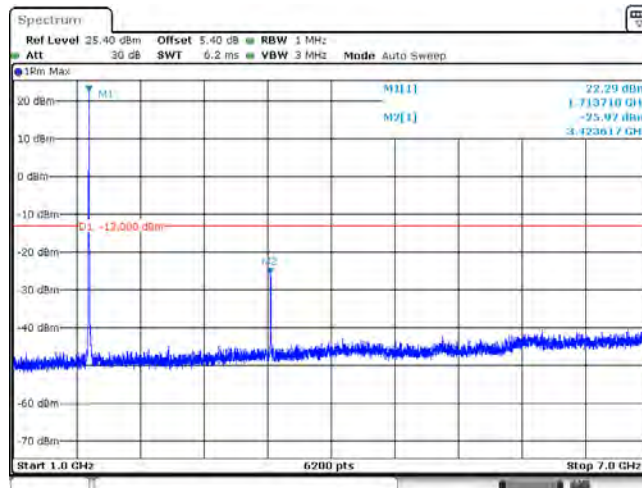


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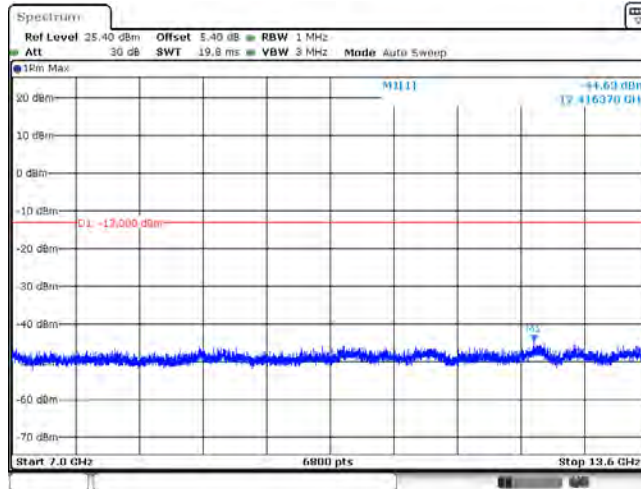
Date: 20 NOV 2019 04:20:58

Band IV_1312



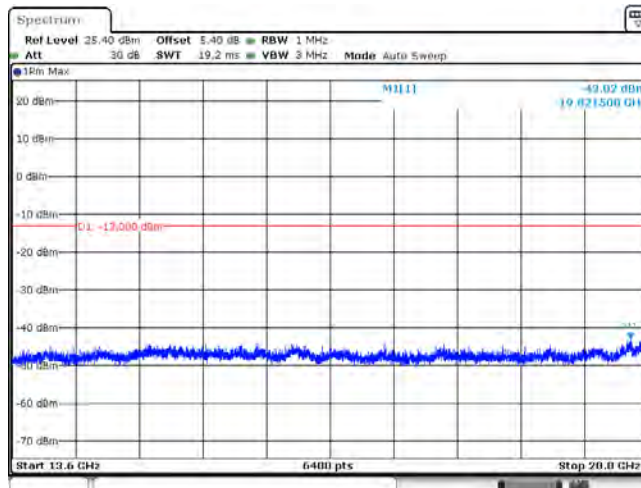
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Date: 20 NOV 2019 04:21:09

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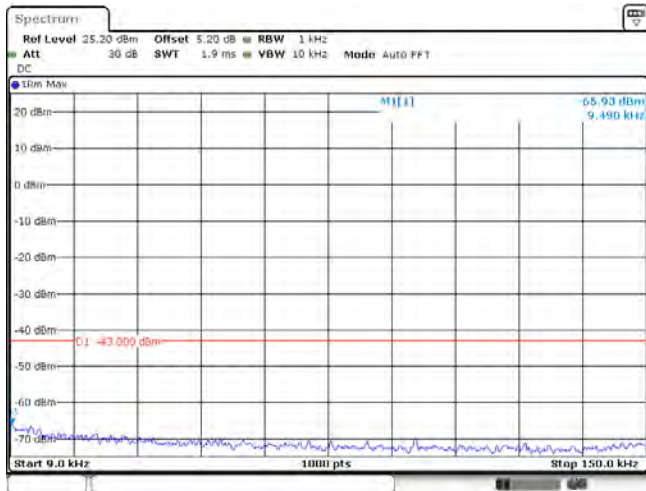


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Band IV_1312

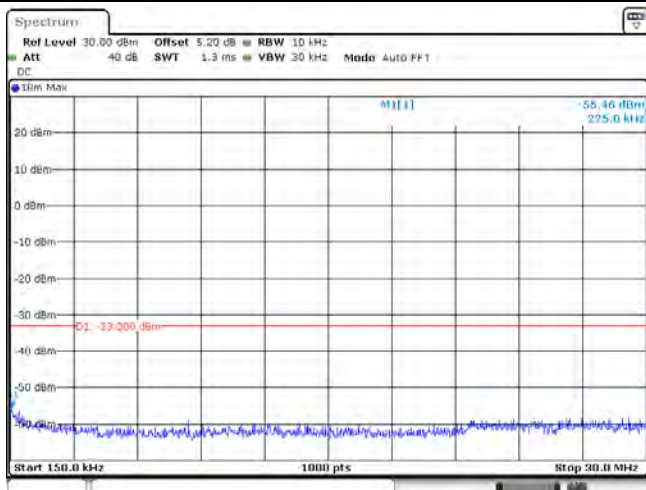


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Band IV_1413

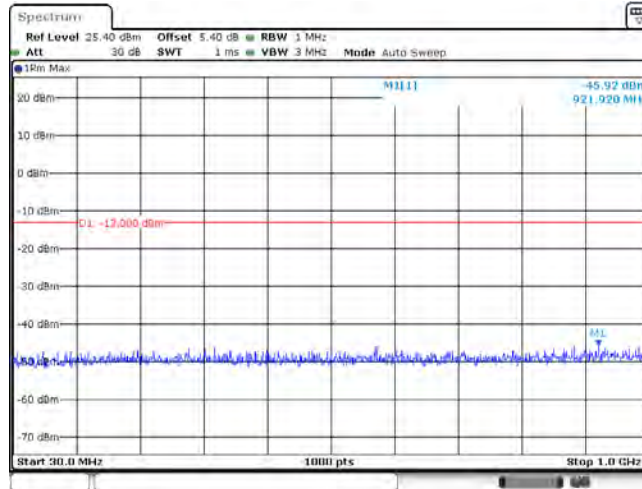


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Band IV_1413

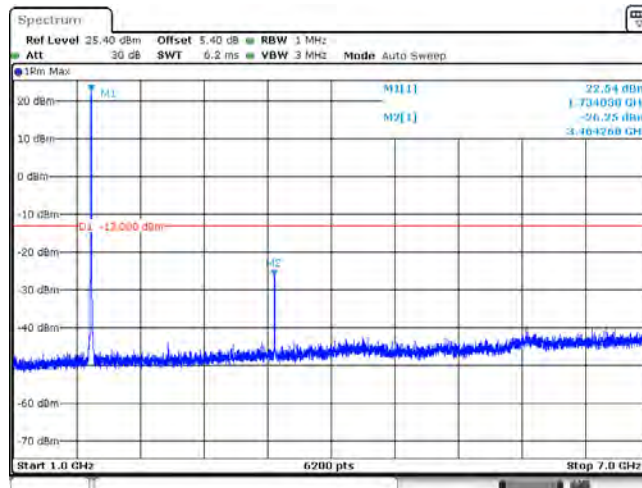


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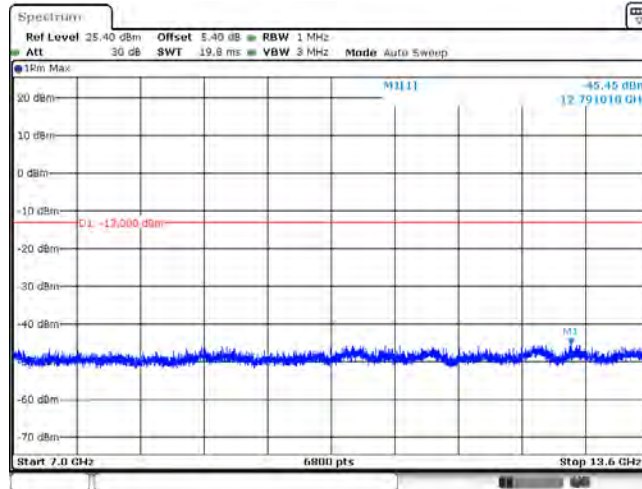
Date: 20 NOV 2019 04:22:20

Band IV_1413



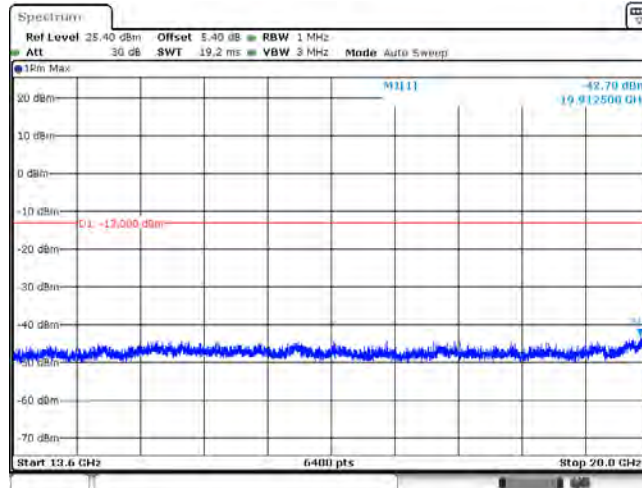
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Date: 20 NOV 2019 04:22:30

Band IV_1413

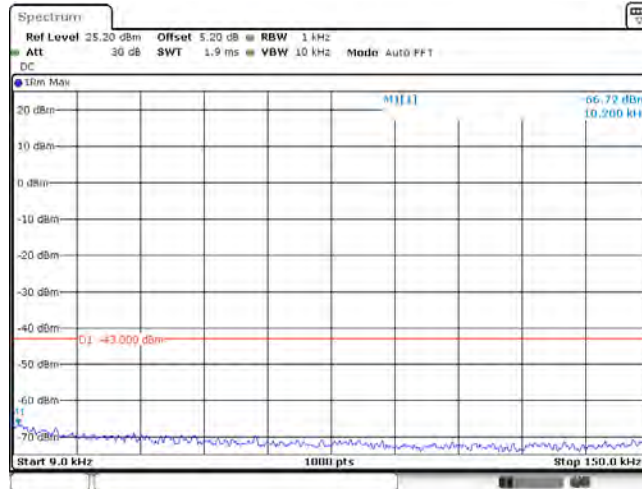


Date: 20 NOV 2019 04:22:41

Band IV_1413

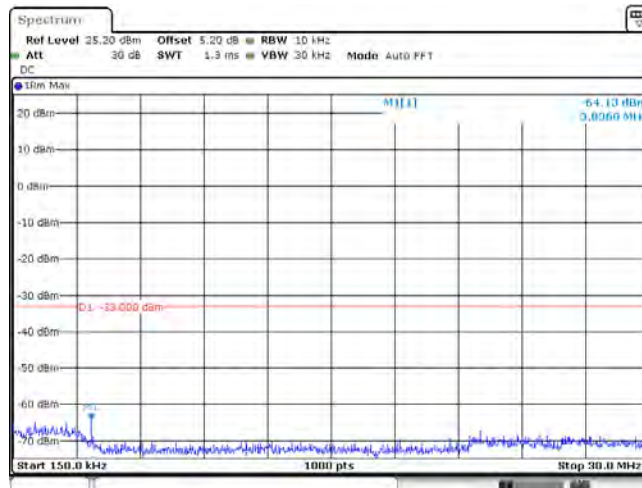


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Date: 20 NOV 2019 04:22:54

Band IV_1513

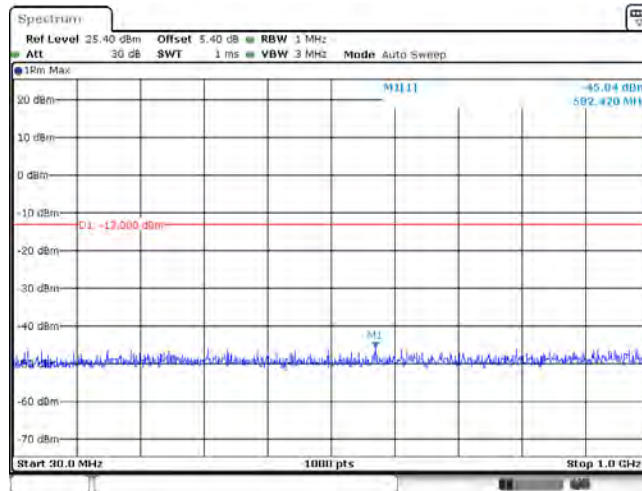


Date: 20 NOV 2019 04:23:05

Band IV_1513

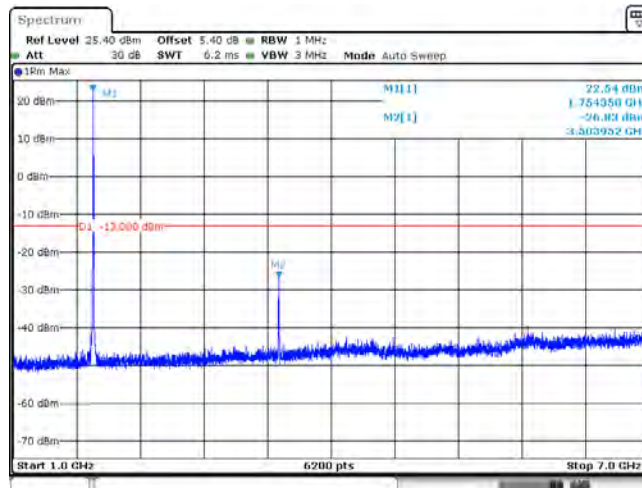


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Date: 20 NOV 2019 04:23:16

Band IV_1513



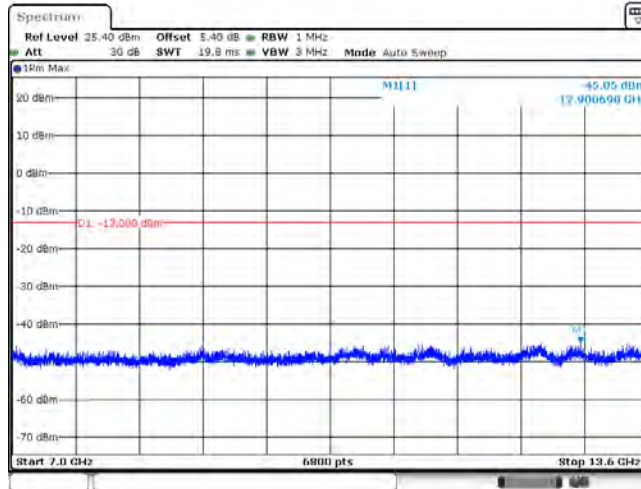
Date: 20 NOV 2019 04:23:28

Band IV_1513



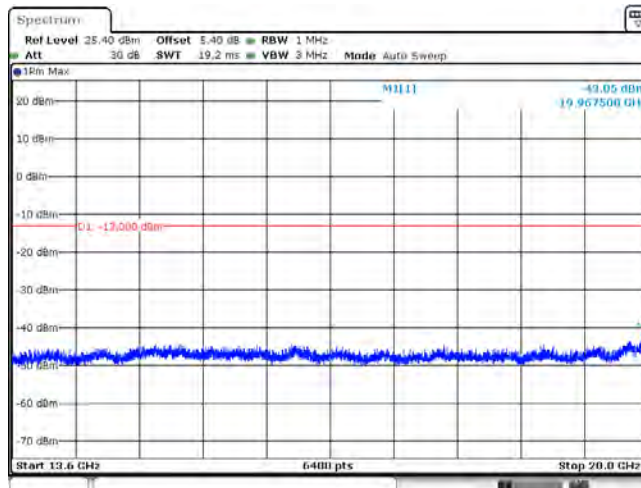
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Date: 20 NOV 2019 04:23:39

Band IV_1513

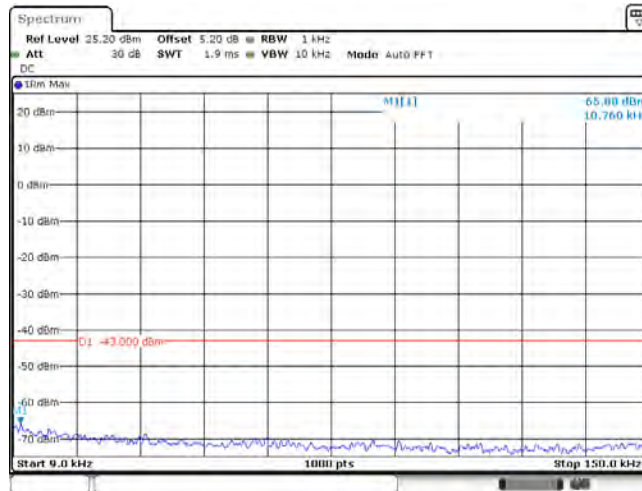


Date: 20 NOV 2019 04:23:50

Band IV_1513

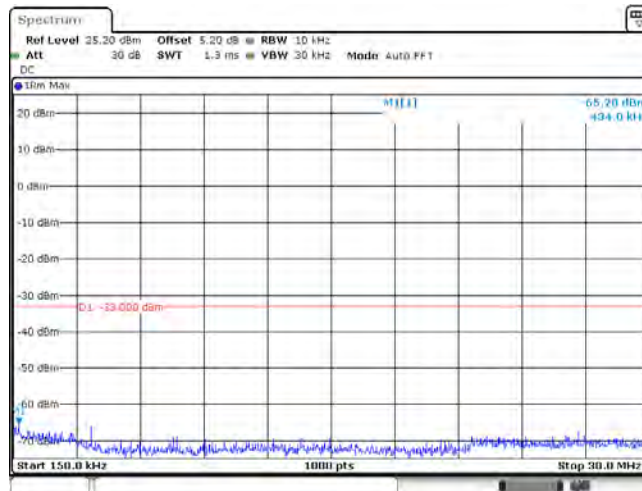


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Date: 20 NOV 2019 05:22:55

Band V_4132



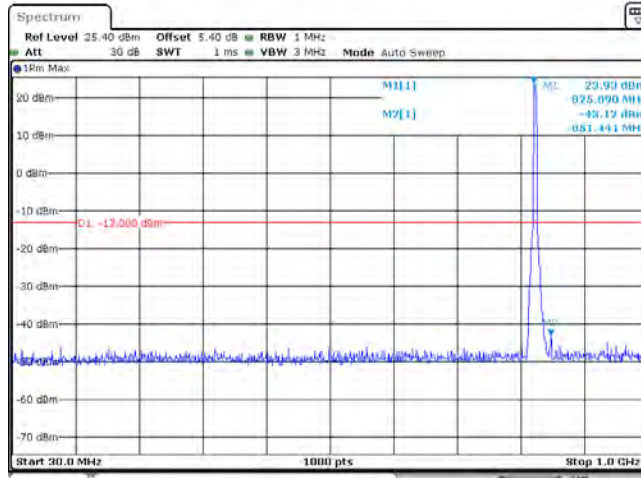
Date: 20 NOV 2019 05:23:06

Band V_4132



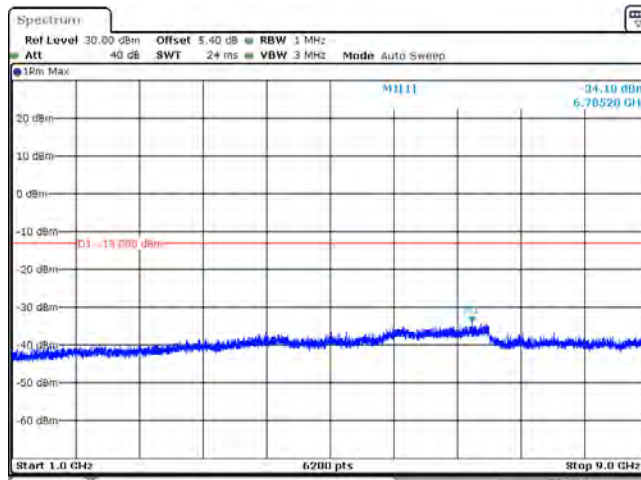
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Date: 20 NOV 2019 05:23:18

Band V_4132

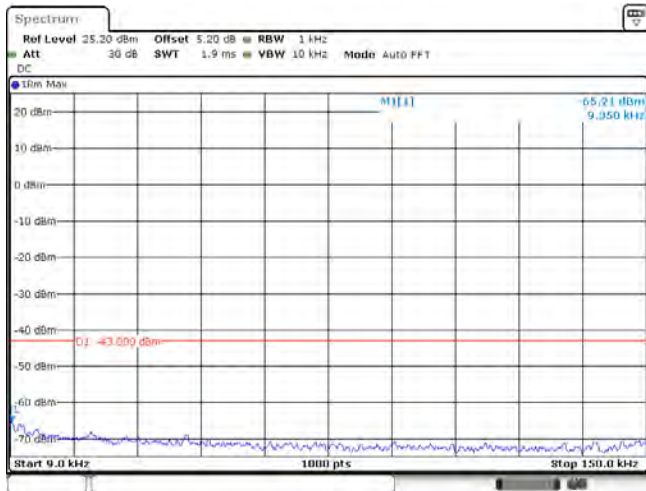


Date: 20 NOV 2019 05:23:29

Band V_4132

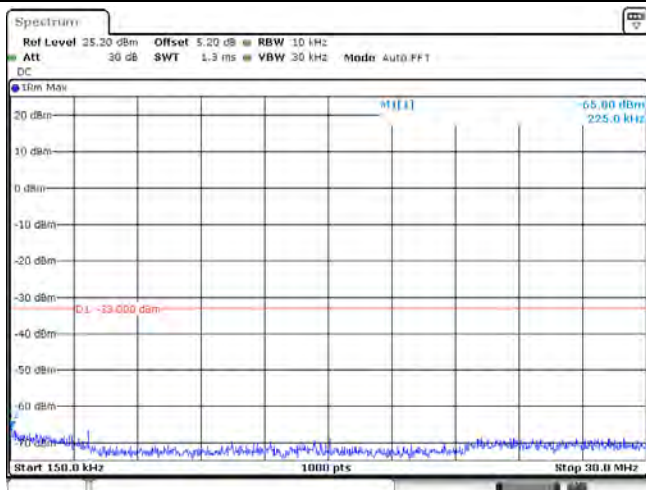


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Date: 20 NOV 2019 05:23:42

Band V_4182

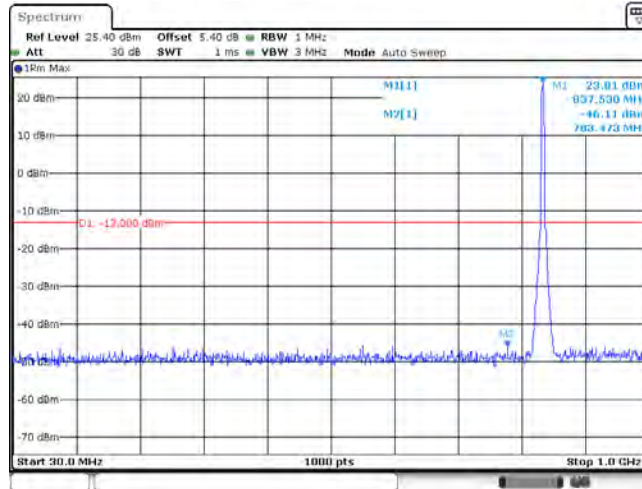


Date: 20 NOV 2019 05:23:52

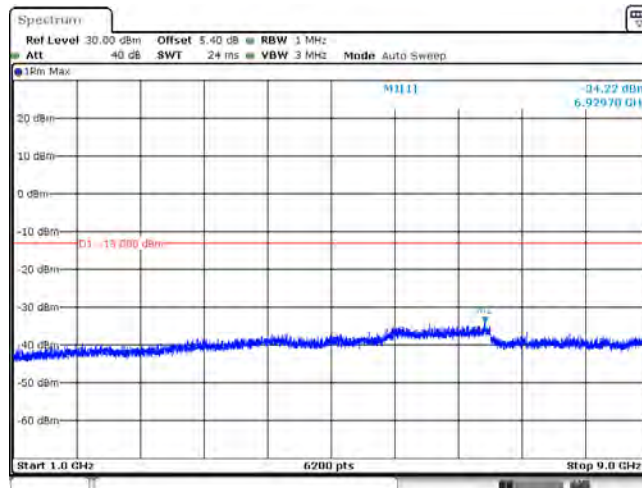
Band V_4182



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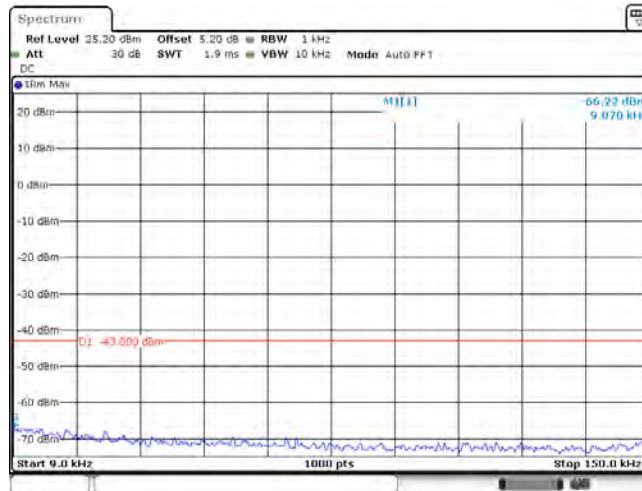
Band V_4182



Band V_4182

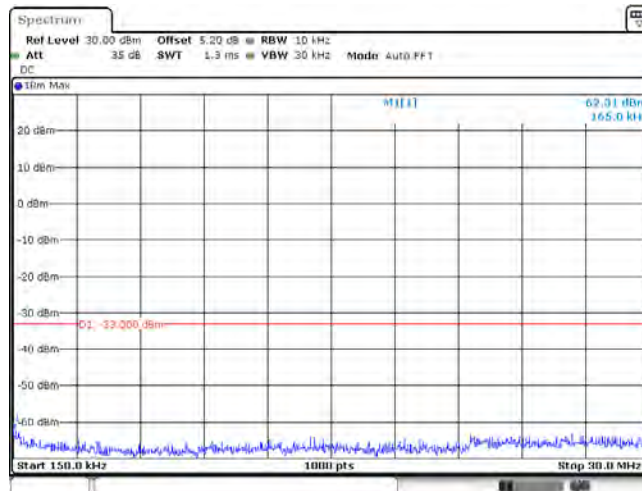


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Date: 20 NOV 2019 05:24:28

Band V_4233

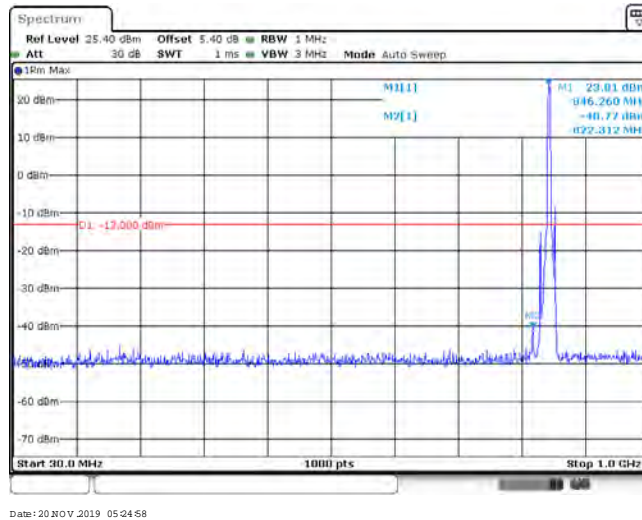


Date: 20 NOV 2019 05:24:46

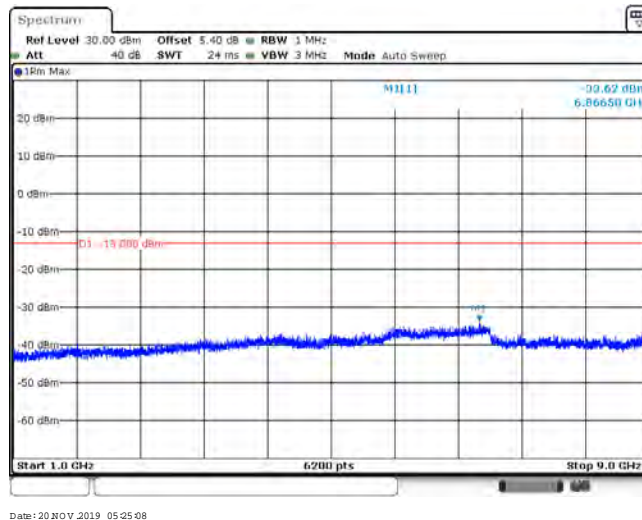
Band V_4233



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Band V_4233

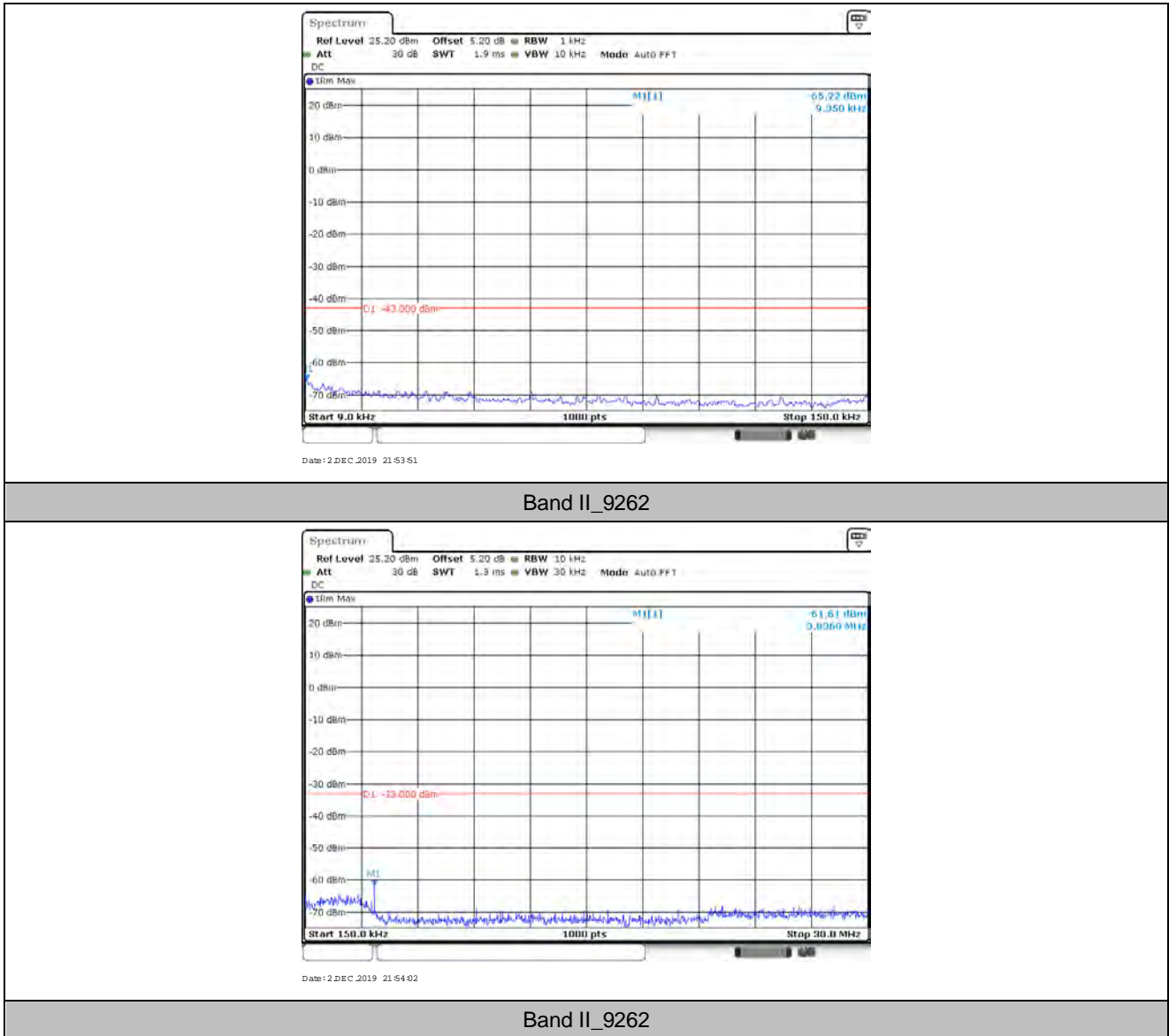


Band V_4233

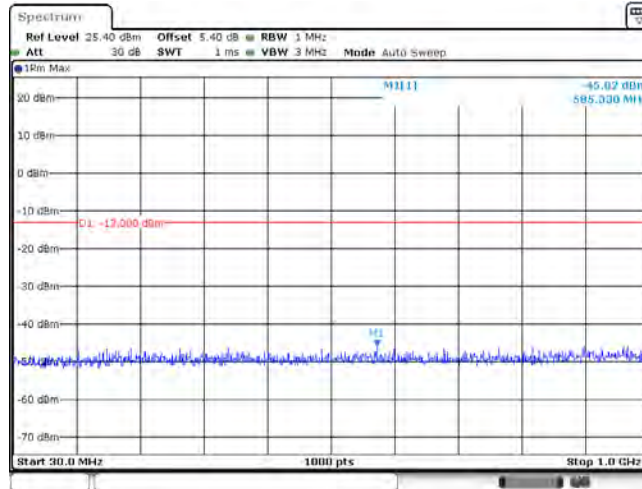


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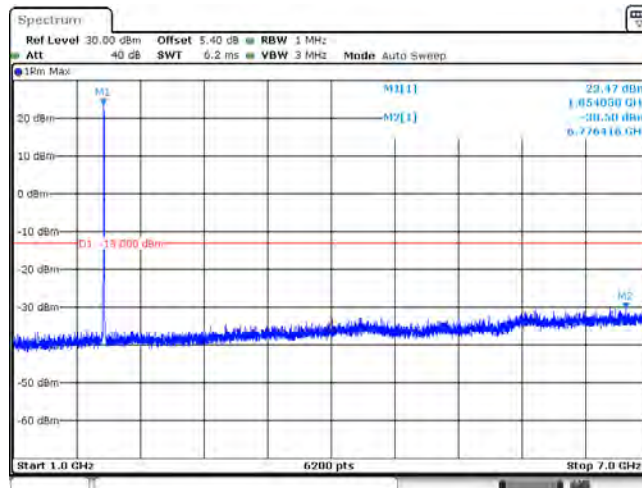


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Date: 2 DEC 2019 21:54:13

Band II_9262



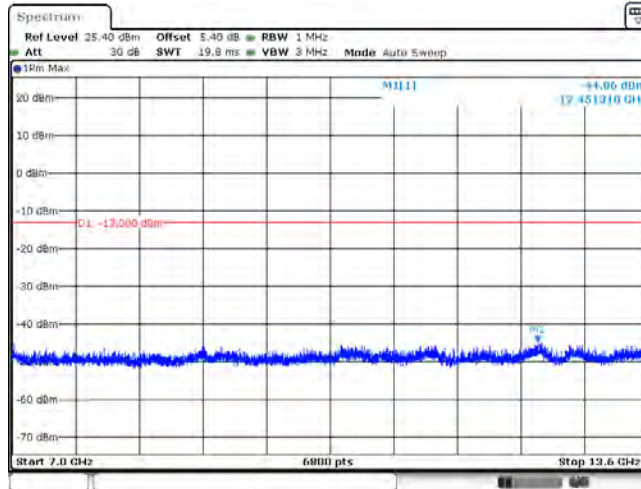
Date: 2 DEC 2019 21:54:25

Band II_9262



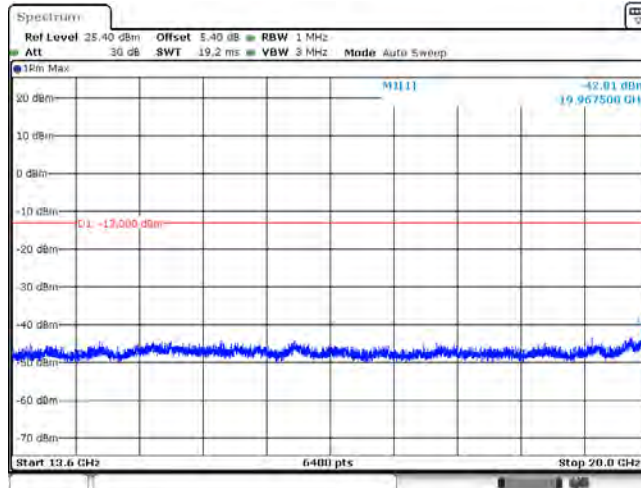
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Date: 2 DEC 2019 21:54:36

Band II_9262

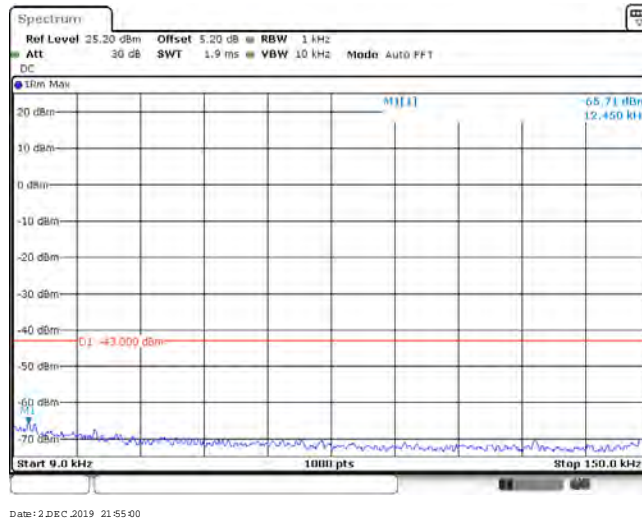


Date: 2 DEC 2019 21:54:46

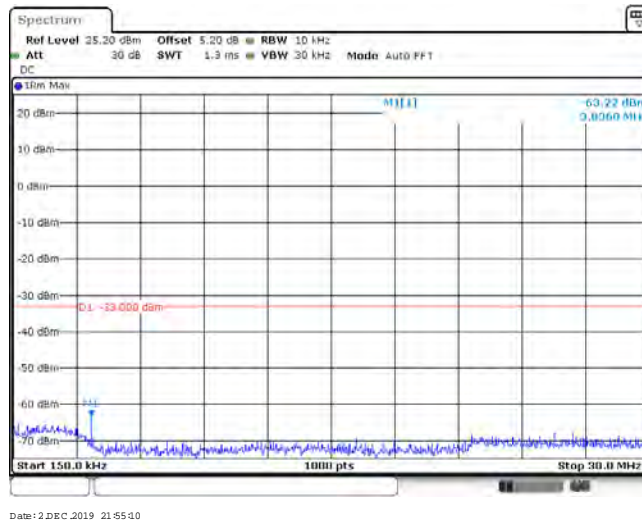
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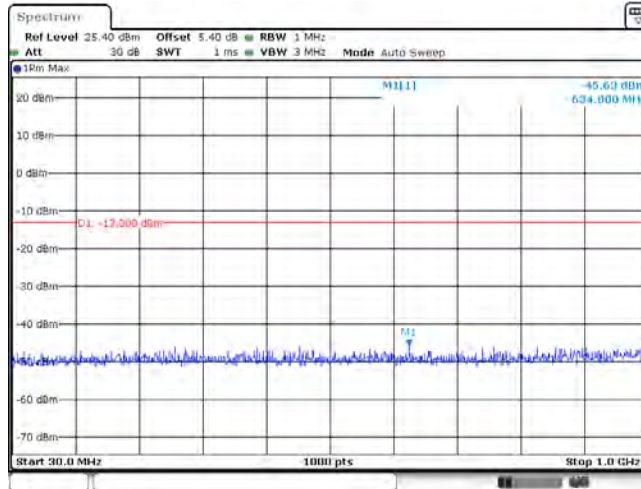
Band II_9400



Band II_9400

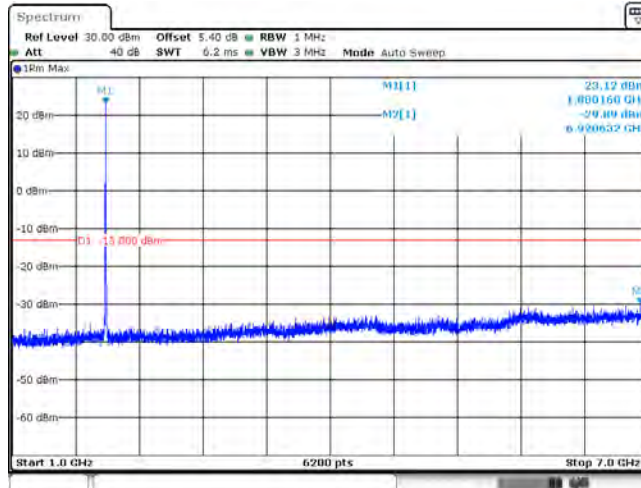


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Date: 2 DEC 2019 21:55:21

Band II_9400

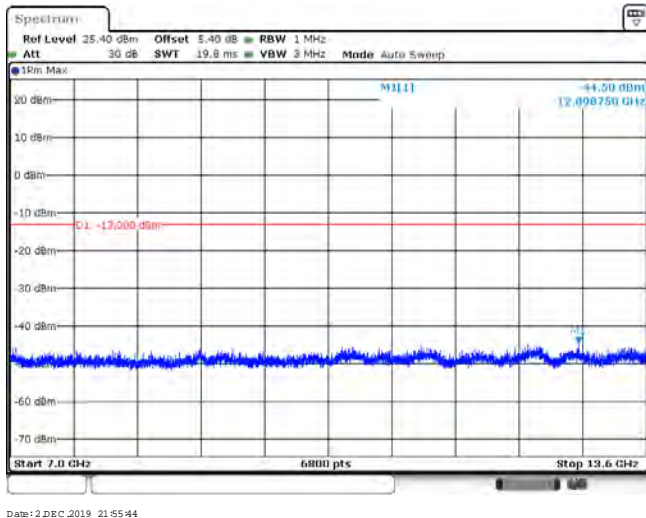


Date: 2 DEC 2019 21:55:33

Band II_9400

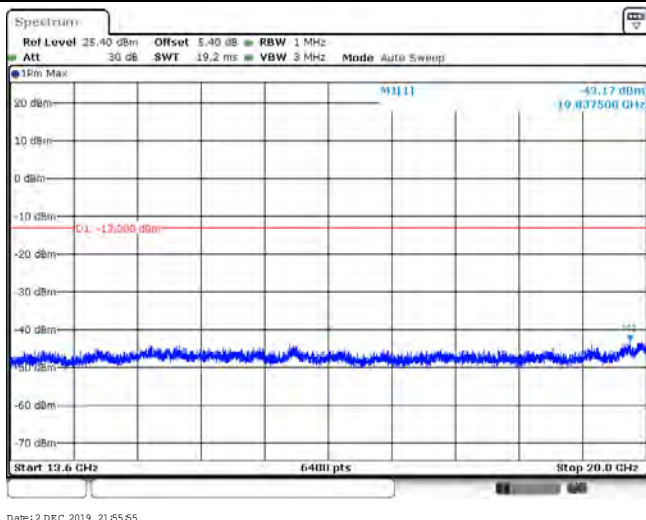


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Band II_9400

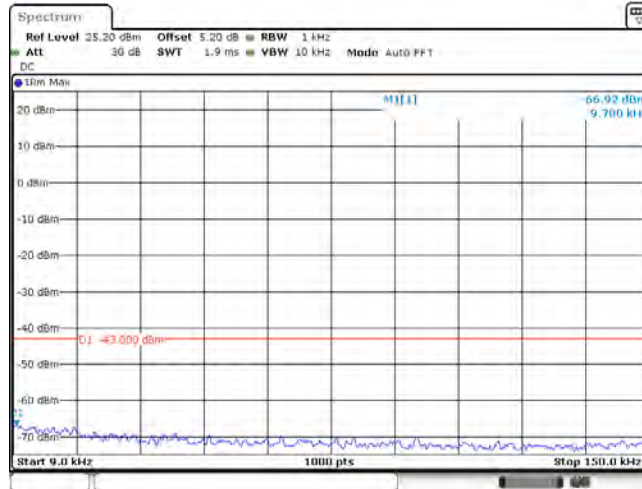


Date: 2 DEC 2019 21:55:55

Band II_9400

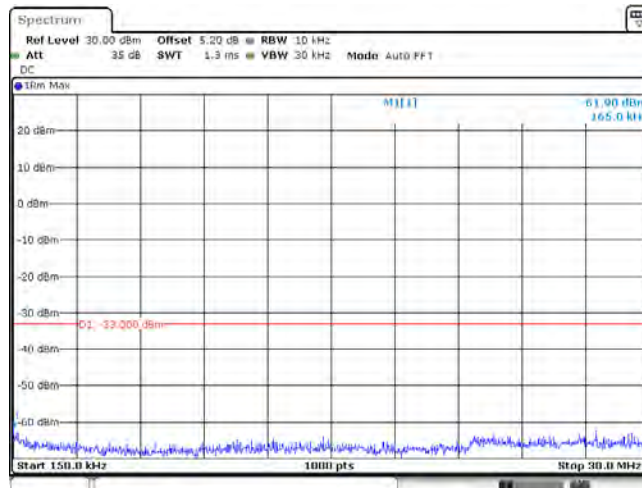


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Date: 2 DEC 2019 21:56:08

Band II_9538



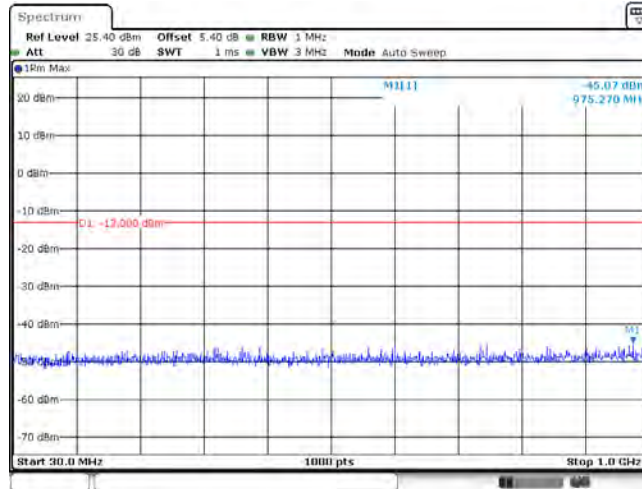
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Band II_9538



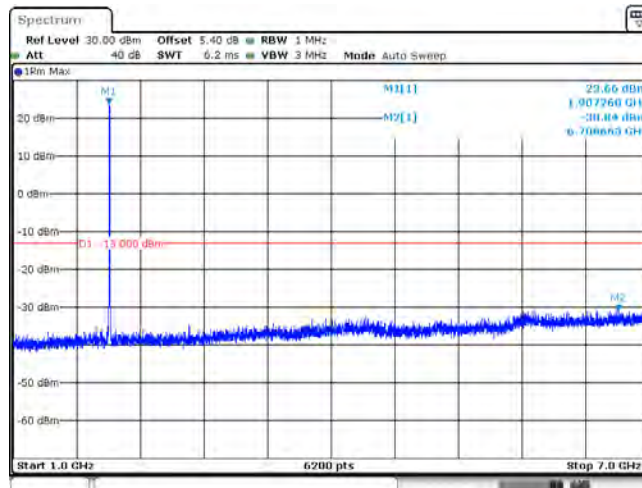
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Date: 2 DEC 2019 21:56:36

Band II_9538



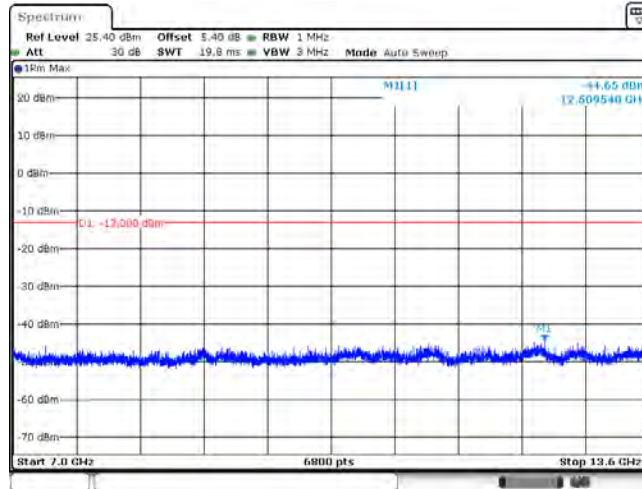
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Band II_9538



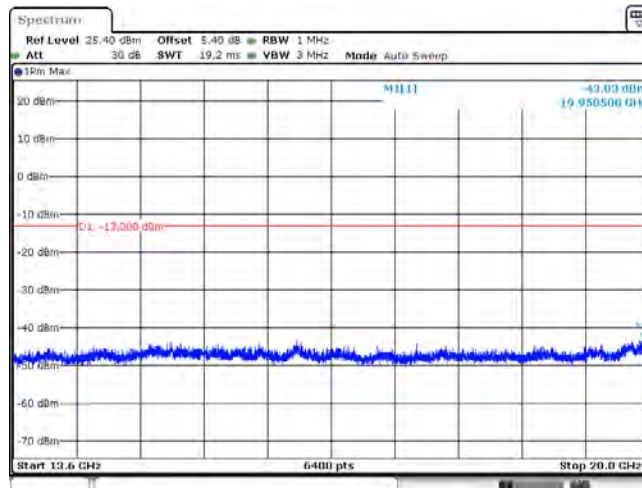
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Date: 2 DEC 2019 21:56:59

Band II_9538



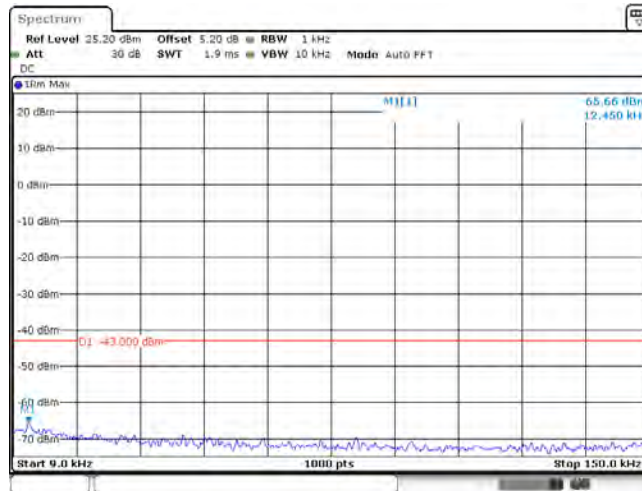
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Band II_9538



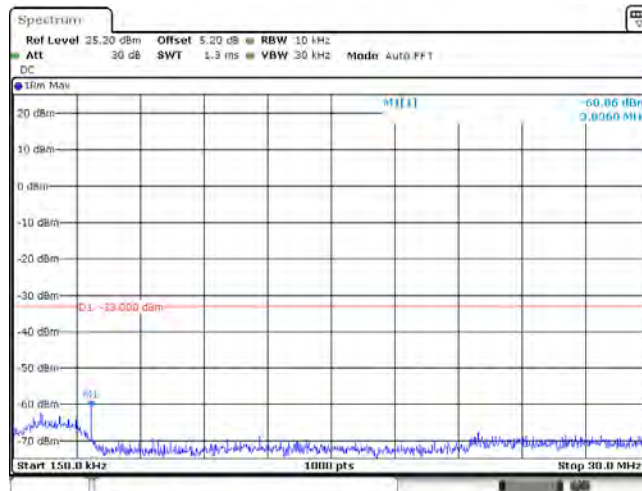
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Date: 2 DEC 2019 22:27:28

Band IV_1312

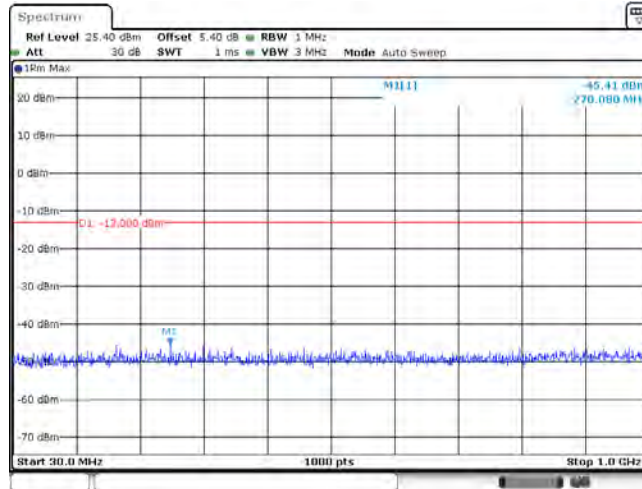


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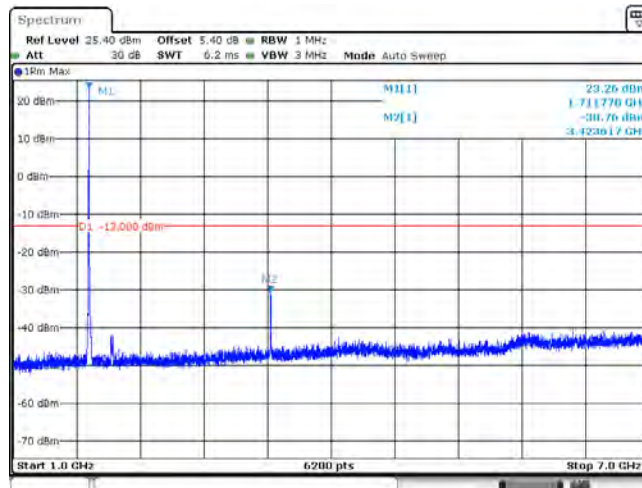
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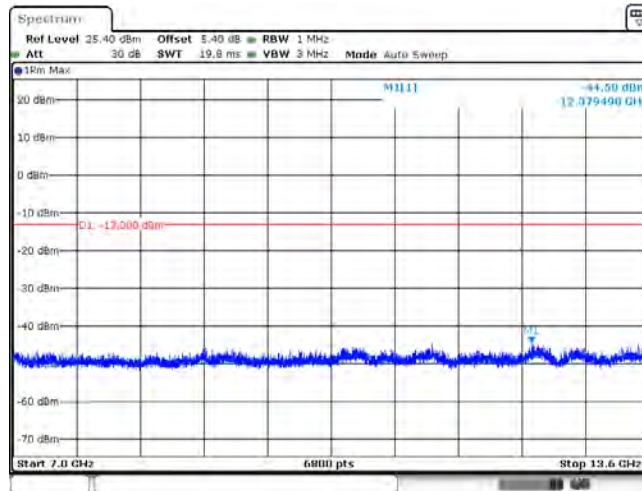
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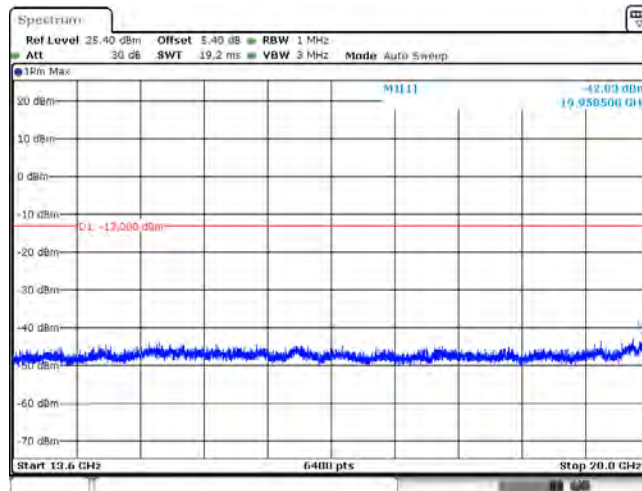


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Date: 2 DEC 2019 22:28:43

Band IV_1312

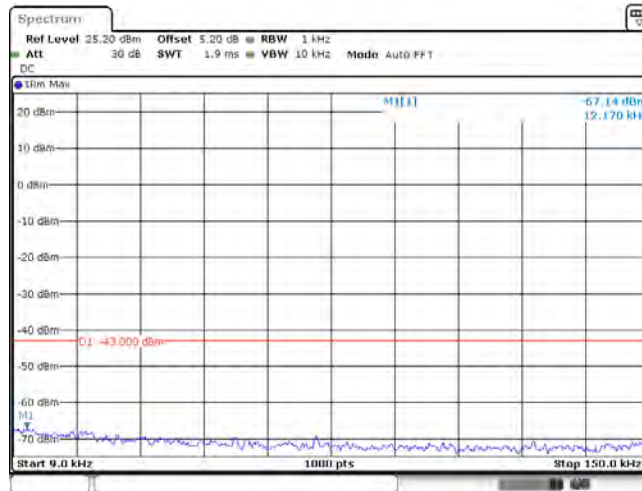


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Band IV_1312

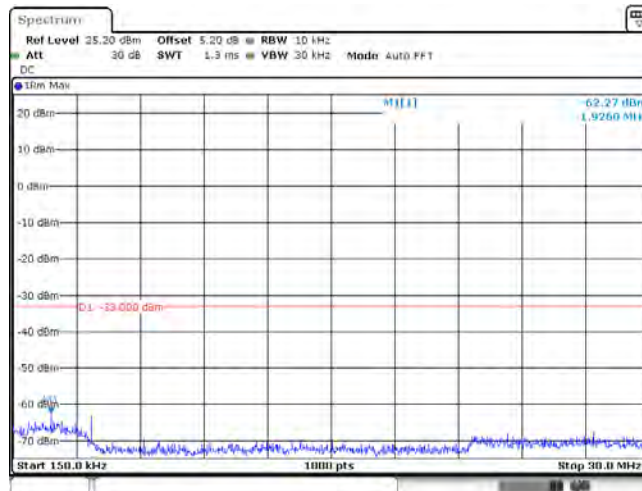


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Date: 2 DEC 2019 22:28:37

Band IV_1413

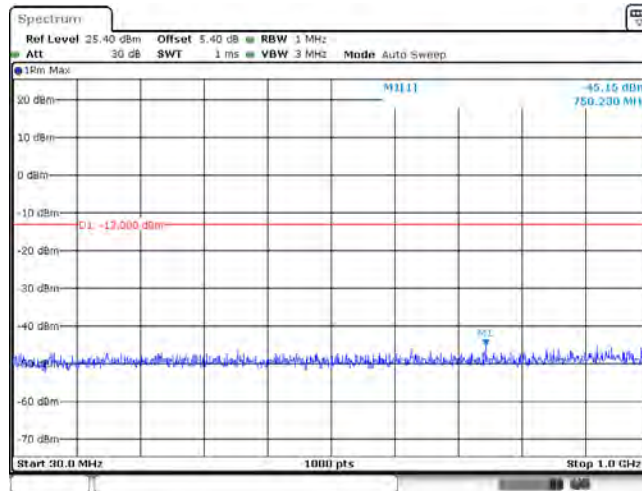


Date: 2 DEC 2019 22:28:48

Band IV_1413

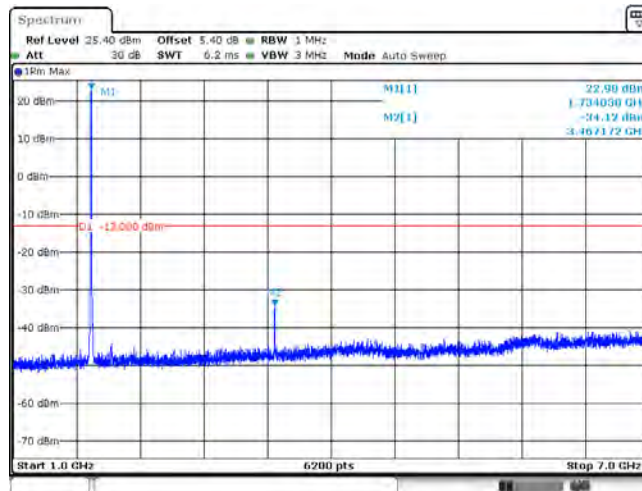


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Band IV_1413

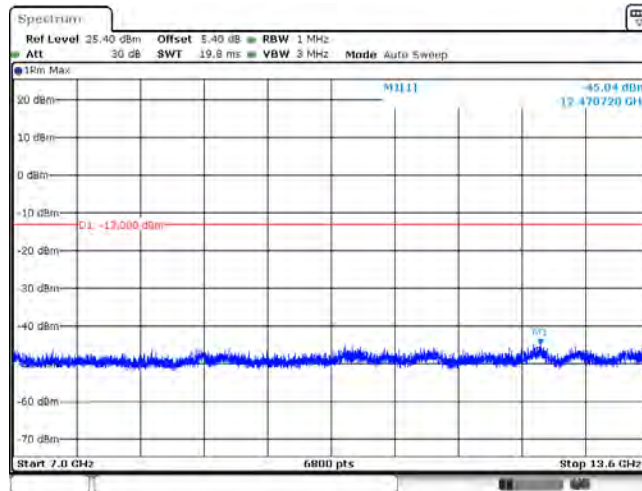


Date: 2 DEC 2019 22:29:11

Band IV_1413

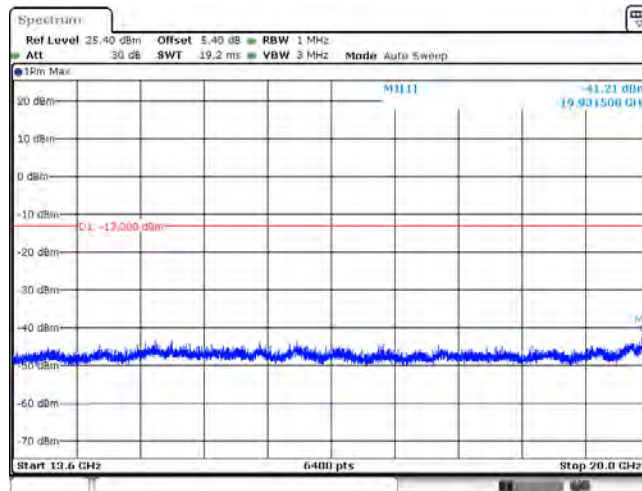


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Date: 2 DEC 2019 22:29:21

Band IV_1413

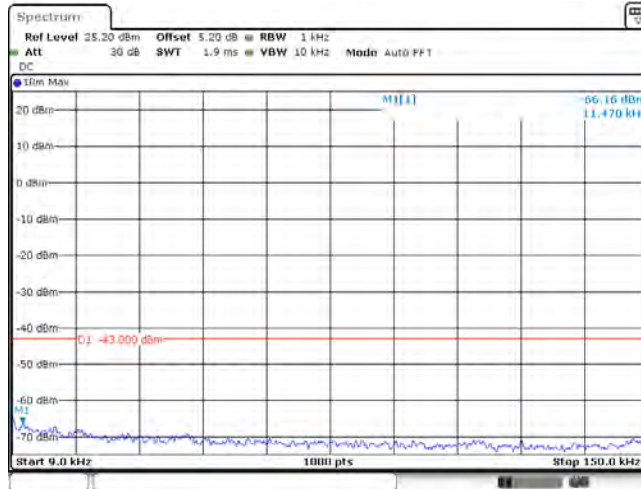


Date: 2 DEC 2019 22:29:32

Band IV_1413

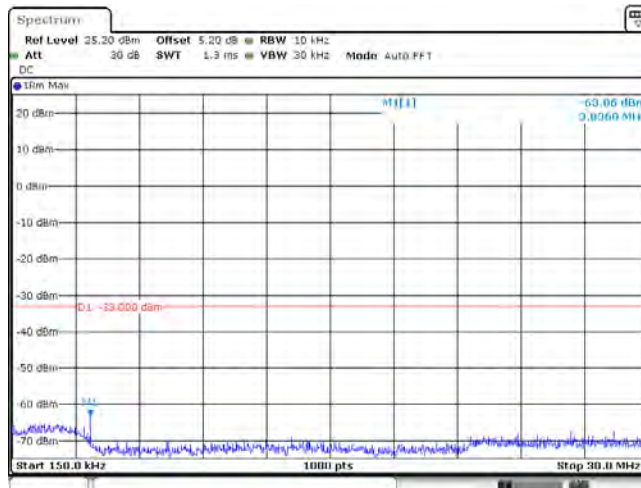


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Date: 2 DEC 2019 22:29:45

Band IV_1513

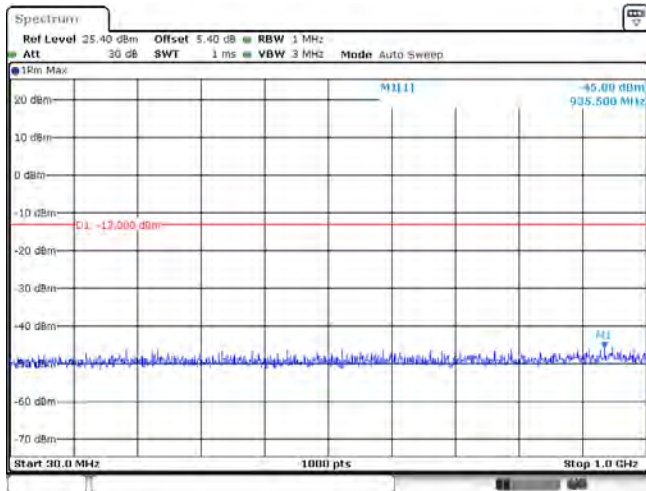


Date: 2 DEC 2019 22:29:56

Band IV_1513

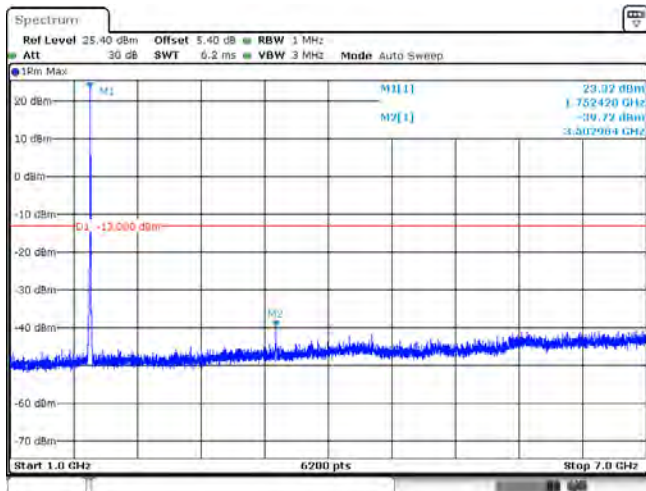


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Date: 2 DEC 2019 22:30:07

Band IV_1513

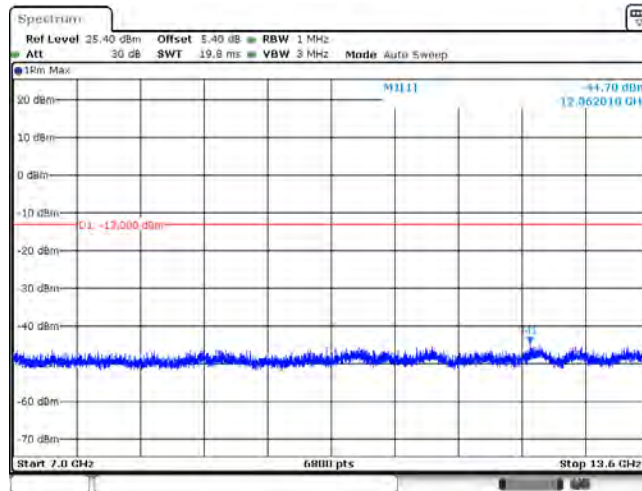


Date: 2 DEC 2019 22:30:19

Band IV_1513

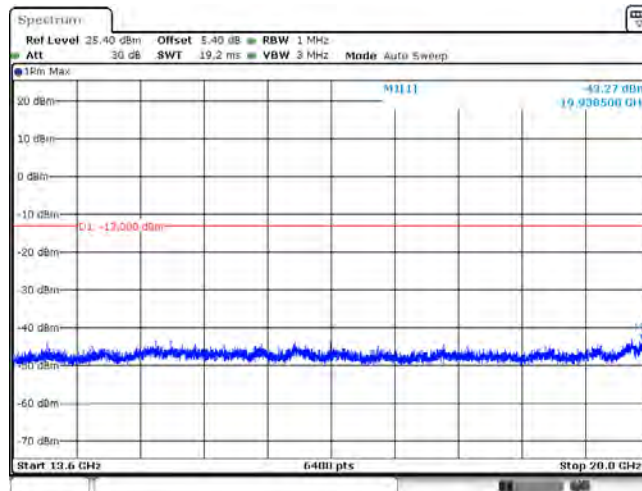


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Date: 2 DEC 2019 22:30:30

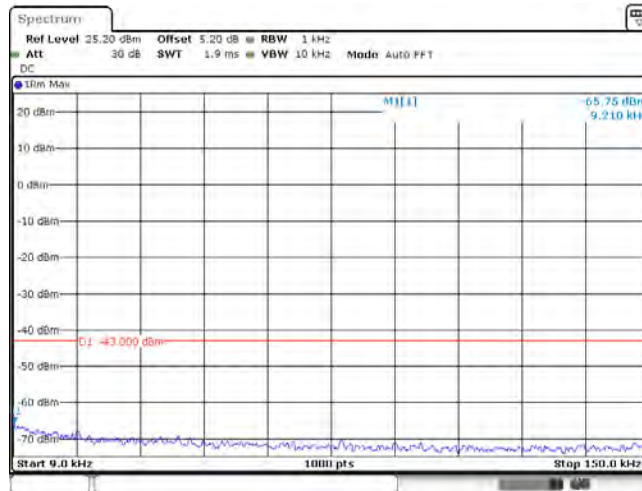
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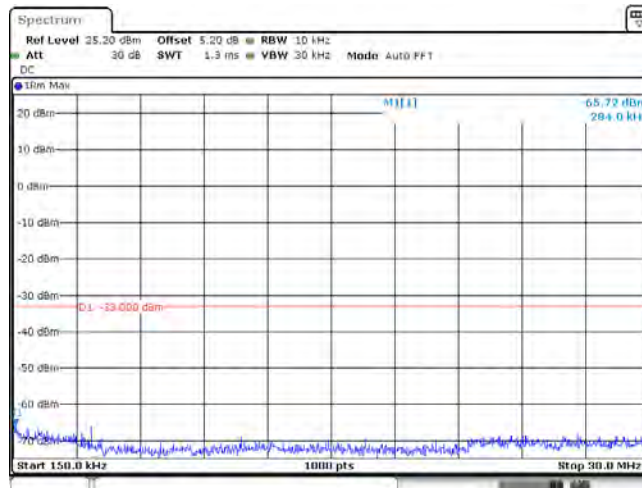
Band IV_1513





Date: 2 DEC 2019 22:13:02

Band V_4132



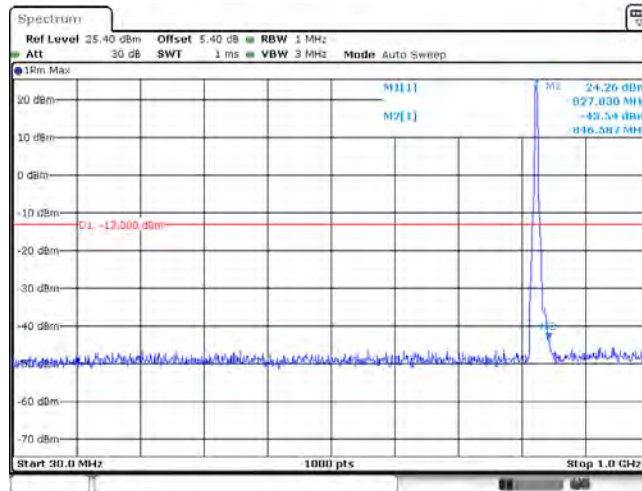
Date: 2 DEC 2019 22:13:12

Band V_4132



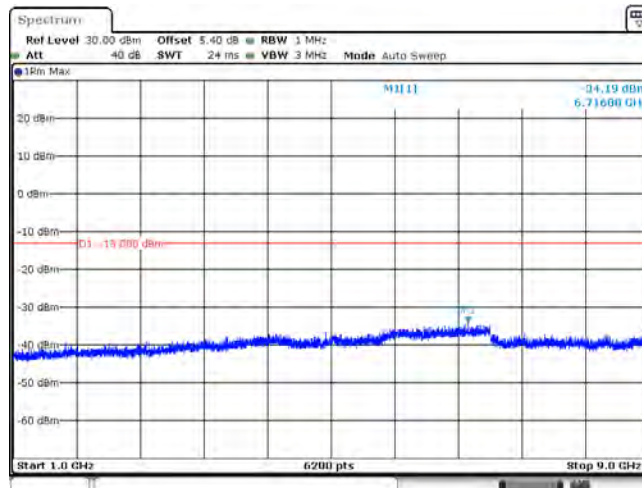
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Date: 2 DEC 2019 22:13:25

Band V_4132

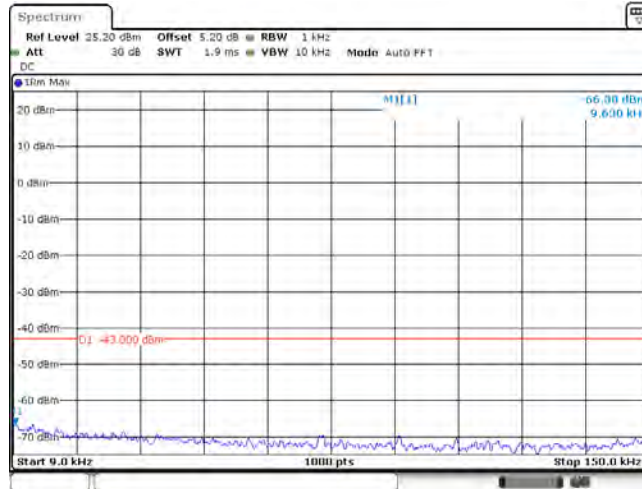


Date: 2 DEC 2019 22:13:35

Band V_4132

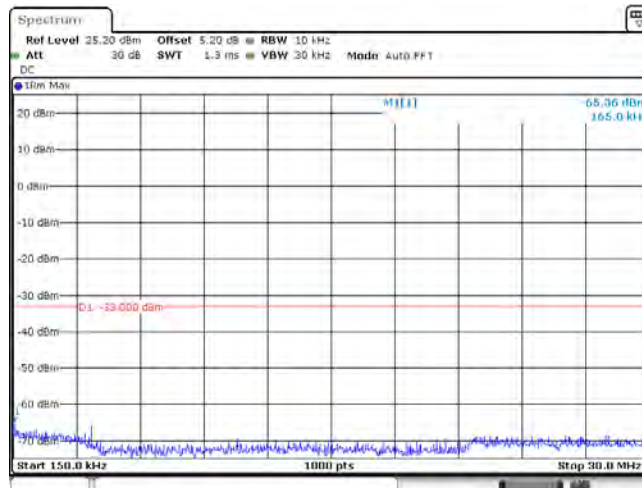


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Date: 2 DEC 2019 22:13:49

Band V_4182



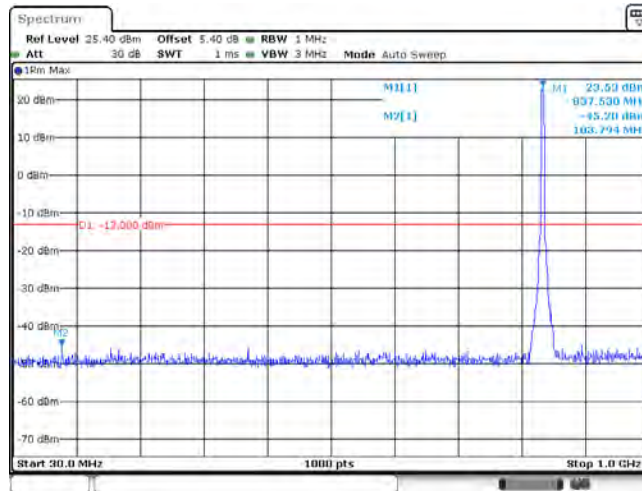
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Band V_4182



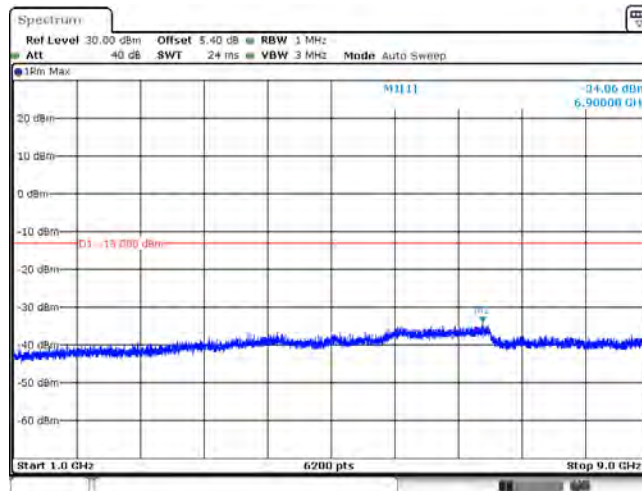
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Date: 2 DEC 2019 22:44:12

Band V_4182

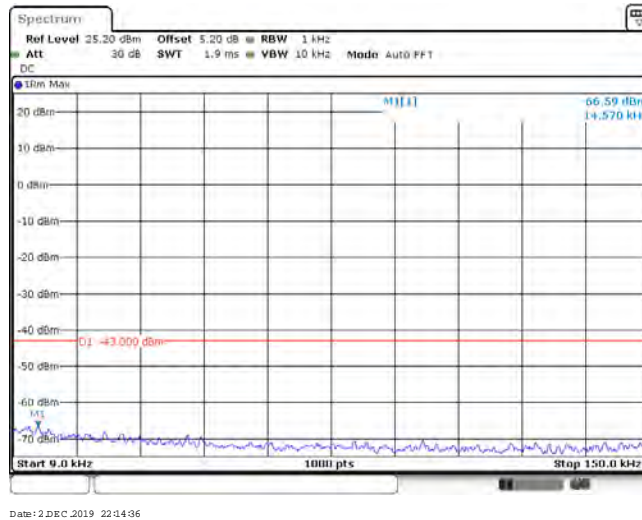


Date: 2 DEC 2019 22:44:22

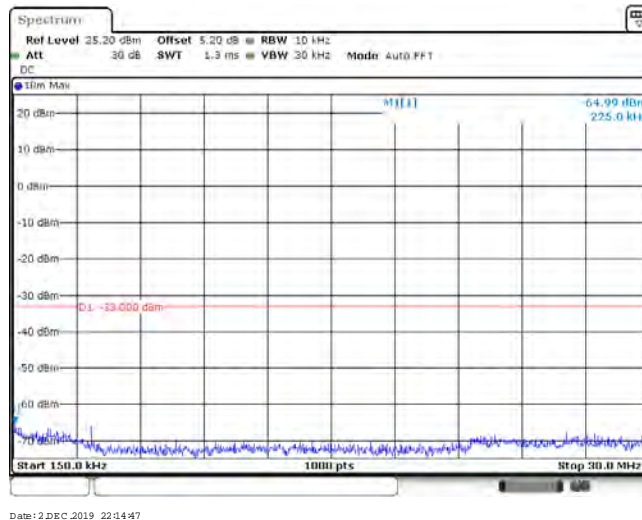
Band V_4182



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Band V_4233

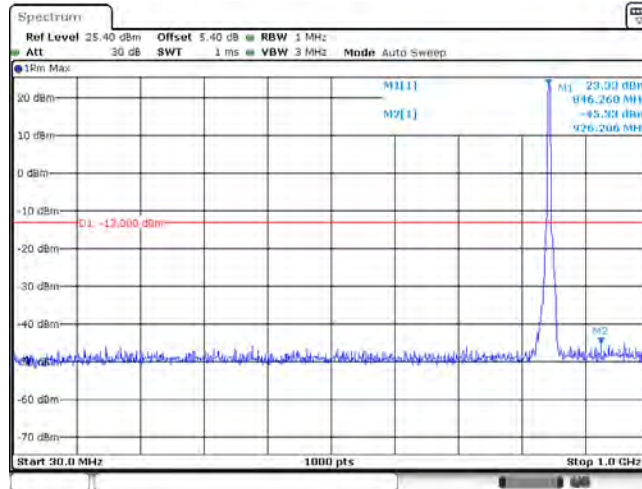


Band V_4233



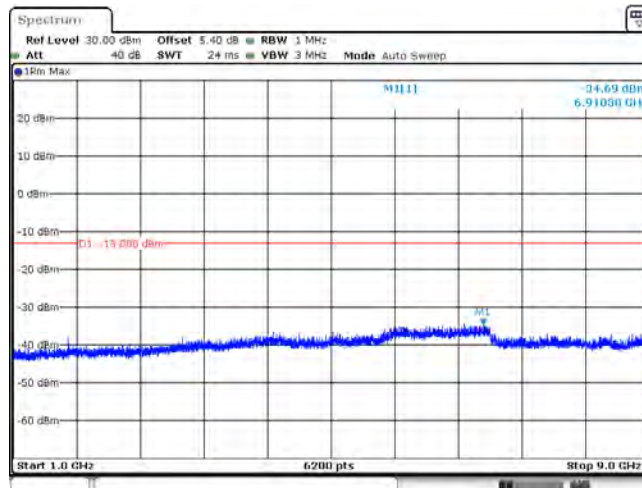
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Date: 2 DEC 2019 22:44:59

Band V_4233



Date: 2 DEC 2019 22:45:09

Band V_4233



7. Field Strength of Spurious Radiation

7.1. Test Band = WCDMA Band II

7.1.1. Test Mode = WCDMA/TM1

7.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
59.5865	-67.14	-13.00	54.14	Vertical
71.4696	-64.69	-13.00	51.69	Vertical
791.8276	-62.25	-13.00	49.25	Vertical
3706.0235	-40.43	-13.00	27.43	Vertical
7413.6471	-48.63	-13.00	35.63	Vertical
17984.9995	-33.52	-13.00	20.52	Vertical
41.6891	-64.60	-13.00	51.60	Horizontal
778.4894	-62.39	-13.00	49.39	Horizontal
2700.7401	-36.04	-13.00	23.04	Horizontal
3706.0235	-43.00	-13.00	30.00	Horizontal
9294.2098	-48.46	-13.00	35.46	Horizontal
16398.4466	-37.69	-13.00	24.69	Horizontal

7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
111.4356	-65.36	-13.00	52.36	Vertical
727.3679	-62.63	-13.00	49.63	Vertical
3761.5254	-40.47	-13.00	27.47	Vertical
7515.1505	-47.80	-13.00	34.80	Vertical
9398.2133	-45.26	-13.00	32.26	Vertical
17995.9999	-33.75	-13.00	20.75	Vertical
44.0172	-64.68	-13.00	51.68	Horizontal
622.0206	-63.61	-13.00	50.61	Horizontal



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2700.7401	-35.66	-13.00	22.66	Horizontal
3761.5254	-41.48	-13.00	28.48	Horizontal
7523.6508	-51.32	-13.00	38.32	Horizontal
16384.4461	-37.13	-13.00	24.13	Horizontal

7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
115.4128	-65.31	-13.00	52.31	Vertical
3817.0272	-37.89	-13.00	24.89	Vertical
5719.5907	-48.91	-13.00	35.91	Vertical
7626.1542	-45.11	-13.00	32.11	Vertical
9532.7178	-43.66	-13.00	30.66	Vertical
17996.4999	-33.39	-13.00	20.39	Vertical
43.8232	-64.63	-13.00	51.63	Horizontal
768.0129	-55.91	-13.00	42.91	Horizontal
3817.0272	-40.41	-13.00	27.41	Horizontal
5719.5907	-48.01	-13.00	35.01	Horizontal
7626.6542	-50.78	-13.00	37.78	Horizontal
16393.9465	-37.62	-13.00	24.62	Horizontal

7.2. Test Band = WCDMA Band IV

7.2.1. Test Mode = WCDMA/TM1

7.2.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
113.9092	-65.05	-13.00	52.05	Vertical
625.1733	-64.03	-13.00	51.03	Vertical
2111.8224	-36.65	-13.00	23.65	Vertical
3422.5141	-36.69	-13.00	23.69	Vertical
6845.6282	-51.09	-13.00	38.09	Vertical
17971.9991	-33.62	-13.00	20.62	Vertical



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46.0058	-64.52	-13.00	51.52	Horizontal
768.0129	-58.76	-13.00	45.76	Horizontal
2701.1402	-35.95	-13.00	22.95	Horizontal
3423.5141	-29.95	-13.00	16.95	Horizontal
6849.6283	-50.47	-13.00	37.47	Horizontal
16401.4467	-37.78	-13.00	24.78	Horizontal

7.2.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
111.6781	-65.27	-13.00	52.27	Vertical
791.4396	-62.06	-13.00	49.06	Vertical
2131.8264	-36.27	-13.00	23.27	Vertical
3467.0156	-37.64	-13.00	24.64	Vertical
6933.1311	-50.09	-13.00	37.09	Vertical
17997.4999	-33.48	-13.00	20.48	Vertical
45.7633	-64.69	-13.00	51.69	Horizontal
768.0129	-62.26	-13.00	49.26	Horizontal
2701.5403	-35.74	-13.00	22.74	Horizontal
3467.0156	-31.91	-13.00	18.91	Horizontal
6934.6312	-49.82	-13.00	36.82	Horizontal
16395.4465	-37.69	-13.00	24.69	Horizontal

7.2.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
117.1104	-64.92	-13.00	51.92	Vertical
733.0912	-63.32	-13.00	50.32	Vertical
2151.8304	-36.85	-13.00	23.85	Vertical
3503.0168	-37.92	-13.00	24.92	Vertical
7014.6338	-50.35	-13.00	37.35	Vertical
17989.9997	-33.16	-13.00	20.16	Vertical
41.3011	-64.11	-13.00	51.11	Horizontal



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232.9826	-68.76	-13.00	55.76	Horizontal
751.7161	-62.40	-13.00	49.40	Horizontal
2701.5403	-35.92	-13.00	22.92	Horizontal
3507.0169	-30.75	-13.00	17.75	Horizontal
16399.9467	-37.41	-13.00	24.41	Horizontal

7.3. Test Band = WCDMA Band V

7.3.1. Test Mode = WCDMA/TM1

7.3.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
111.2901	-63.80	-13.00	50.80	Vertical
1650.9302	-56.84	-13.00	43.84	Vertical
3302.5101	-53.51	-13.00	40.51	Vertical
4127.0376	-47.93	-13.00	34.93	Vertical
4953.0651	-46.96	-13.00	33.96	Vertical
17907.9969	-33.06	-13.00	20.06	Vertical
40.3795	-63.83	-13.00	50.83	Horizontal
1651.3303	-52.61	-13.00	39.61	Horizontal
3301.5101	-51.60	-13.00	38.60	Horizontal
4128.0376	-48.13	-13.00	35.13	Horizontal
4953.0651	-47.37	-13.00	34.37	Horizontal
16399.9467	-36.69	-13.00	23.69	Horizontal

7.3.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
116.8678	-64.27	-13.00	51.27	Vertical
1674.1348	-56.40	-13.00	43.40	Vertical
3349.5117	-52.45	-13.00	39.45	Vertical
4187.0396	-47.66	-13.00	34.66	Vertical
5024.5675	-46.00	-13.00	33.00	Vertical



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17987.4996	-32.92	-13.00	19.92	Vertical
43.2412	-64.71	-13.00	51.71	Horizontal
238.2209	-68.37	-13.00	55.37	Horizontal
1674.5349	-52.92	-13.00	39.92	Horizontal
3341.5114	-52.21	-13.00	39.21	Horizontal
4186.5396	-46.23	-13.00	33.23	Horizontal
16397.4466	-37.17	-13.00	24.17	Horizontal

7.3.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
107.5554	-64.78	-13.00	51.78	Vertical
1694.9390	-56.29	-13.00	43.29	Vertical
3390.5130	-54.47	-13.00	41.47	Vertical
4227.5409	-49.07	-13.00	36.07	Vertical
5074.0691	-46.18	-13.00	33.18	Vertical
17993.4998	-33.28	-13.00	20.28	Vertical
40.1855	-63.44	-13.00	50.44	Horizontal
1691.7383	-55.39	-13.00	42.39	Horizontal
3382.5128	-53.74	-13.00	40.74	Horizontal
4228.0409	-47.29	-13.00	34.29	Horizontal
5073.5691	-47.69	-13.00	34.69	Horizontal
16394.9465	-36.61	-13.00	23.61	Horizontal

Remark:

- 1 According to 971168 D01 Power Meas License Digital Systems, The amplitudes of unwanted emissions that are attenuated more than 20 dB below the applicable limit are not required to be reported.
- 2 The disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data had been displayed.



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8. Frequency Stability

8.1. Frequency Vs Voltage

Band	Modulation	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band II	QPSK	9262	VL	TN	-15.61	-0.008425	±2.5	PASS
Band II	QPSK	9262	VN	TN	-11.12	-0.006000	±2.5	PASS
Band II	QPSK	9262	VH	TN	-12.33	-0.006657	±2.5	PASS
Band II	QPSK	9400	VL	TN	-9.93	-0.005285	±2.5	PASS
Band II	QPSK	9400	VN	TN	-16.52	-0.008789	±2.5	PASS
Band II	QPSK	9400	VH	TN	-10.54	-0.005608	±2.5	PASS
Band II	QPSK	9538	VL	TN	-16.08	-0.008429	±2.5	PASS
Band II	QPSK	9538	VN	TN	-7.76	-0.004068	±2.5	PASS
Band II	QPSK	9538	VH	TN	-13.38	-0.007015	±2.5	PASS
Band II	16QAM	9262	VL	TN	-6.78	-0.003661	±2.5	PASS
Band II	16QAM	9262	VN	TN	-10.49	-0.005665	±2.5	PASS
Band II	16QAM	9262	VH	TN	1.13	0.000612	±2.5	PASS
Band II	16QAM	9400	VL	TN	-3.11	-0.001652	±2.5	PASS
Band II	16QAM	9400	VN	TN	-10.46	-0.005566	±2.5	PASS
Band II	16QAM	9400	VH	TN	-1.86	-0.000991	±2.5	PASS
Band II	16QAM	9538	VL	TN	2.19	0.001149	±2.5	PASS
Band II	16QAM	9538	VN	TN	14.04	0.007362	±2.5	PASS
Band II	16QAM	9538	VH	TN	-9.42	-0.004940	±2.5	PASS
Band IV	QPSK	1312	VL	TN	-10.66	-0.006224	±2.5	PASS
Band IV	QPSK	1312	VN	TN	-11.84	-0.006917	±2.5	PASS
Band IV	QPSK	1312	VH	TN	-15.03	-0.008780	±2.5	PASS
Band IV	QPSK	1413	VL	TN	-9.05	-0.005222	±2.5	PASS
Band IV	QPSK	1413	VN	TN	-6.99	-0.004033	±2.5	PASS
Band IV	QPSK	1413	VH	TN	-11.04	-0.006370	±2.5	PASS
Band IV	QPSK	1513	VL	TN	-4.36	-0.002489	±2.5	PASS
Band IV	QPSK	1513	VN	TN	-7.73	-0.004412	±2.5	PASS
Band IV	QPSK	1513	VH	TN	-4.23	-0.002412	±2.5	PASS
Band IV	16QAM	1312	VL	TN	-6.14	-0.003585	±2.5	PASS
Band IV	16QAM	1312	VN	TN	-13.77	-0.008041	±2.5	PASS
Band IV	16QAM	1312	VH	TN	2.27	0.001324	±2.5	PASS
Band IV	16QAM	1413	VL	TN	2.03	0.001174	±2.5	PASS
Band IV	16QAM	1413	VN	TN	2.64	0.001525	±2.5	PASS
Band IV	16QAM	1413	VH	TN	-3.72	-0.002146	±2.5	PASS
Band IV	16QAM	1513	VL	TN	-11.97	-0.006830	±2.5	PASS
Band IV	16QAM	1513	VN	TN	1.12	0.000641	±2.5	PASS
Band IV	16QAM	1513	VH	TN	-12.06	-0.006882	±2.5	PASS
Band V	QPSK	4132	VL	TN	-10.16	-0.012290	±2.5	PASS
Band V	QPSK	4132	VN	TN	-7.32	-0.008854	±2.5	PASS
Band V	QPSK	4132	VH	TN	-8.38	-0.010135	±2.5	PASS



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Band V	QPSK	4182	VL	TN	-10.74	-0.012845	±2.5	PASS
Band V	QPSK	4182	VN	TN	-10.21	-0.012203	±2.5	PASS
Band V	QPSK	4182	VH	TN	-8.08	-0.009655	±2.5	PASS
Band V	QPSK	4233	VL	TN	-13.25	-0.015647	±2.5	PASS
Band V	QPSK	4233	VN	TN	-11.75	-0.013881	±2.5	PASS
Band V	QPSK	4233	VH	TN	-4.22	-0.004985	±2.5	PASS
Band V	16QAM	4132	VL	TN	3.31	0.004009	±2.5	PASS
Band V	16QAM	4132	VN	TN	-13.34	-0.016145	±2.5	PASS
Band V	16QAM	4132	VH	TN	2.51	0.003035	±2.5	PASS
Band V	16QAM	4182	VL	TN	0.05	0.000061	±2.5	PASS
Band V	16QAM	4182	VN	TN	-9.44	-0.011288	±2.5	PASS
Band V	16QAM	4182	VH	TN	-12.27	-0.014671	±2.5	PASS
Band V	16QAM	4233	VL	TN	4.27	0.005042	±2.5	PASS
Band V	16QAM	4233	VN	TN	-3.27	-0.003862	±2.5	PASS
Band V	16QAM	4233	VH	TN	-12.98	-0.015332	±2.5	PASS

8.2. Frequency Vs Temperature

Band	Modulation	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band II	QPSK	9262	VN	-30	-13.00	-0.007020	±2.5	PASS
Band II	QPSK	9262	VN	-20	-11.15	-0.006020	±2.5	PASS
Band II	QPSK	9262	VN	-10	-13.85	-0.007475	±2.5	PASS
Band II	QPSK	9262	VN	0	-12.30	-0.006641	±2.5	PASS
Band II	QPSK	9262	VN	10	-9.78	-0.005278	±2.5	PASS
Band II	QPSK	9262	VN	20	-15.00	-0.008097	±2.5	PASS
Band II	QPSK	9262	VN	30	-8.63	-0.004657	±2.5	PASS
Band II	QPSK	9262	VN	40	-11.20	-0.006047	±2.5	PASS
Band II	QPSK	9262	VN	50	-7.36	-0.003973	±2.5	PASS
Band II	QPSK	9400	VN	-30	-9.33	-0.004961	±2.5	PASS
Band II	QPSK	9400	VN	-20	-16.59	-0.008827	±2.5	PASS
Band II	QPSK	9400	VN	-10	-16.49	-0.008769	±2.5	PASS
Band II	QPSK	9400	VN	0	-11.23	-0.005973	±2.5	PASS
Band II	QPSK	9400	VN	10	-11.79	-0.006274	±2.5	PASS
Band II	QPSK	9400	VN	20	-15.21	-0.008092	±2.5	PASS
Band II	QPSK	9400	VN	30	-15.16	-0.008062	±2.5	PASS
Band II	QPSK	9400	VN	40	-9.67	-0.005144	±2.5	PASS
Band II	QPSK	9400	VN	50	-9.71	-0.005167	±2.5	PASS
Band II	QPSK	9538	VN	-30	-8.58	-0.004496	±2.5	PASS
Band II	QPSK	9538	VN	-20	-17.27	-0.009055	±2.5	PASS
Band II	QPSK	9538	VN	-10	-10.99	-0.005759	±2.5	PASS
Band II	QPSK	9538	VN	0	-11.69	-0.006130	±2.5	PASS
Band II	QPSK	9538	VN	10	-12.35	-0.006475	±2.5	PASS
Band II	QPSK	9538	VN	20	-9.82	-0.005148	±2.5	PASS
Band II	QPSK	9538	VN	30	-13.90	-0.007285	±2.5	PASS
Band II	QPSK	9538	VN	40	-14.64	-0.007675	±2.5	PASS



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Band II	QPSK	9538	VN	50	-5.41	-0.002838	±2.5	PASS
Band II	16QAM	9262	VN	-30	12.84	0.006931	±2.5	PASS
Band II	16QAM	9262	VN	-20	5.61	0.003026	±2.5	PASS
Band II	16QAM	9262	VN	-10	-0.24	-0.000131	±2.5	PASS
Band II	16QAM	9262	VN	0	-10.31	-0.005566	±2.5	PASS
Band II	16QAM	9262	VN	10	-10.15	-0.005478	±2.5	PASS
Band II	16QAM	9262	VN	20	13.86	0.007481	±2.5	PASS
Band II	16QAM	9262	VN	30	-12.39	-0.006687	±2.5	PASS
Band II	16QAM	9262	VN	40	4.56	0.002459	±2.5	PASS
Band II	16QAM	9262	VN	50	-1.28	-0.000693	±2.5	PASS
Band II	16QAM	9400	VN	-30	2.37	0.001261	±2.5	PASS
Band II	16QAM	9400	VN	-20	1.18	0.000629	±2.5	PASS
Band II	16QAM	9400	VN	-10	9.46	0.005033	±2.5	PASS
Band II	16QAM	9400	VN	0	14.08	0.007490	±2.5	PASS
Band II	16QAM	9400	VN	10	8.08	0.004298	±2.5	PASS
Band II	16QAM	9400	VN	20	-1.36	-0.000725	±2.5	PASS
Band II	16QAM	9400	VN	30	-3.23	-0.001717	±2.5	PASS
Band II	16QAM	9400	VN	40	10.04	0.005342	±2.5	PASS
Band II	16QAM	9400	VN	50	-4.01	-0.002135	±2.5	PASS
Band II	16QAM	9538	VN	-30	11.59	0.006073	±2.5	PASS
Band II	16QAM	9538	VN	-20	-8.53	-0.004470	±2.5	PASS
Band II	16QAM	9538	VN	-10	-1.75	-0.000915	±2.5	PASS
Band II	16QAM	9538	VN	0	12.56	0.006585	±2.5	PASS
Band II	16QAM	9538	VN	10	-12.29	-0.006440	±2.5	PASS
Band II	16QAM	9538	VN	20	-7.17	-0.003761	±2.5	PASS
Band II	16QAM	9538	VN	30	-11.31	-0.005928	±2.5	PASS
Band II	16QAM	9538	VN	40	-1.09	-0.000570	±2.5	PASS
Band II	16QAM	9538	VN	50	-11.70	-0.006132	±2.5	PASS
Band IV	QPSK	1312	VN	-30	-10.98	-0.006412	±2.5	PASS
Band IV	QPSK	1312	VN	-20	-10.31	-0.006023	±2.5	PASS
Band IV	QPSK	1312	VN	-10	-13.00	-0.007594	±2.5	PASS
Band IV	QPSK	1312	VN	0	-10.58	-0.006178	±2.5	PASS
Band IV	QPSK	1312	VN	10	-13.57	-0.007924	±2.5	PASS
Band IV	QPSK	1312	VN	20	-12.19	-0.007117	±2.5	PASS
Band IV	QPSK	1312	VN	30	-5.03	-0.002936	±2.5	PASS
Band IV	QPSK	1312	VN	40	-5.46	-0.003187	±2.5	PASS
Band IV	QPSK	1312	VN	50	-7.20	-0.004202	±2.5	PASS
Band IV	QPSK	1413	VN	-30	-8.97	-0.005177	±2.5	PASS
Band IV	QPSK	1413	VN	-20	-8.88	-0.005123	±2.5	PASS
Band IV	QPSK	1413	VN	-10	-8.97	-0.005177	±2.5	PASS
Band IV	QPSK	1413	VN	0	-9.95	-0.005742	±2.5	PASS
Band IV	QPSK	1413	VN	10	-9.87	-0.005697	±2.5	PASS
Band IV	QPSK	1413	VN	20	-13.92	-0.008034	±2.5	PASS
Band IV	QPSK	1413	VN	30	-10.70	-0.006176	±2.5	PASS
Band IV	QPSK	1413	VN	40	-9.33	-0.005383	±2.5	PASS
Band IV	QPSK	1413	VN	50	-5.94	-0.003426	±2.5	PASS
Band IV	QPSK	1513	VN	-30	-7.06	-0.004028	±2.5	PASS



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Band IV	QPSK	1513	VN	-20	-10.02	-0.005718	±2.5	PASS
Band IV	QPSK	1513	VN	-10	-11.16	-0.006367	±2.5	PASS
Band IV	QPSK	1513	VN	0	-13.35	-0.007619	±2.5	PASS
Band IV	QPSK	1513	VN	10	-9.35	-0.005334	±2.5	PASS
Band IV	QPSK	1513	VN	20	-12.78	-0.007293	±2.5	PASS
Band IV	QPSK	1513	VN	30	-14.67	-0.008370	±2.5	PASS
Band IV	QPSK	1513	VN	40	-6.33	-0.003612	±2.5	PASS
Band IV	QPSK	1513	VN	50	-6.98	-0.003983	±2.5	PASS
Band IV	16QAM	1312	VN	-30	-10.89	-0.006357	±2.5	PASS
Band IV	16QAM	1312	VN	-20	-10.16	-0.005933	±2.5	PASS
Band IV	16QAM	1312	VN	-10	5.65	0.003299	±2.5	PASS
Band IV	16QAM	1312	VN	0	5.17	0.003017	±2.5	PASS
Band IV	16QAM	1312	VN	10	-6.00	-0.003504	±2.5	PASS
Band IV	16QAM	1312	VN	20	10.83	0.006325	±2.5	PASS
Band IV	16QAM	1312	VN	30	-1.43	-0.000836	±2.5	PASS
Band IV	16QAM	1312	VN	40	7.75	0.004524	±2.5	PASS
Band IV	16QAM	1312	VN	50	0.57	0.000332	±2.5	PASS
Band IV	16QAM	1413	VN	-30	2.80	0.001618	±2.5	PASS
Band IV	16QAM	1413	VN	-20	-13.68	-0.007894	±2.5	PASS
Band IV	16QAM	1413	VN	-10	-13.84	-0.007987	±2.5	PASS
Band IV	16QAM	1413	VN	0	13.83	0.007980	±2.5	PASS
Band IV	16QAM	1413	VN	10	-7.74	-0.004467	±2.5	PASS
Band IV	16QAM	1413	VN	20	0.45	0.000261	±2.5	PASS
Band IV	16QAM	1413	VN	30	11.14	0.006429	±2.5	PASS
Band IV	16QAM	1413	VN	40	2.11	0.001216	±2.5	PASS
Band IV	16QAM	1413	VN	50	8.12	0.004684	±2.5	PASS
Band IV	16QAM	1513	VN	-30	13.64	0.007785	±2.5	PASS
Band IV	16QAM	1513	VN	-20	-10.89	-0.006212	±2.5	PASS
Band IV	16QAM	1513	VN	-10	10.34	0.005900	±2.5	PASS
Band IV	16QAM	1513	VN	0	-8.19	-0.004672	±2.5	PASS
Band IV	16QAM	1513	VN	10	-12.53	-0.007151	±2.5	PASS
Band IV	16QAM	1513	VN	20	1.42	0.000808	±2.5	PASS
Band IV	16QAM	1513	VN	30	9.45	0.005391	±2.5	PASS
Band IV	16QAM	1513	VN	40	9.89	0.005644	±2.5	PASS
Band IV	16QAM	1513	VN	50	4.71	0.002689	±2.5	PASS
Band V	QPSK	4132	VN	-30	-11.29	-0.013658	±2.5	PASS
Band V	QPSK	4132	VN	-20	-9.91	-0.011987	±2.5	PASS
Band V	QPSK	4132	VN	-10	-6.13	-0.007417	±2.5	PASS
Band V	QPSK	4132	VN	0	-13.14	-0.015899	±2.5	PASS
Band V	QPSK	4132	VN	10	-10.31	-0.012472	±2.5	PASS
Band V	QPSK	4132	VN	20	-5.86	-0.007089	±2.5	PASS
Band V	QPSK	4132	VN	30	-8.54	-0.010334	±2.5	PASS
Band V	QPSK	4132	VN	40	-12.97	-0.015700	±2.5	PASS
Band V	QPSK	4132	VN	50	-8.51	-0.010300	±2.5	PASS
Band V	QPSK	4182	VN	-30	-2.35	-0.002813	±2.5	PASS
Band V	QPSK	4182	VN	-20	-14.46	-0.017291	±2.5	PASS
Band V	QPSK	4182	VN	-10	-9.41	-0.011254	±2.5	PASS



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Band V	QPSK	4182	VN	0	-9.53	-0.011399	±2.5	PASS
Band V	QPSK	4182	VN	10	-11.13	-0.013306	±2.5	PASS
Band V	QPSK	4182	VN	20	-8.61	-0.010296	±2.5	PASS
Band V	QPSK	4182	VN	30	-14.10	-0.016864	±2.5	PASS
Band V	QPSK	4182	VN	40	-7.70	-0.009210	±2.5	PASS
Band V	QPSK	4182	VN	50	-12.82	-0.015333	±2.5	PASS
Band V	QPSK	4233	VN	-30	-8.11	-0.009581	±2.5	PASS
Band V	QPSK	4233	VN	-20	-5.24	-0.006193	±2.5	PASS
Band V	QPSK	4233	VN	-10	-12.29	-0.014515	±2.5	PASS
Band V	QPSK	4233	VN	0	-12.61	-0.014895	±2.5	PASS
Band V	QPSK	4233	VN	10	-9.76	-0.011532	±2.5	PASS
Band V	QPSK	4233	VN	20	-11.14	-0.013163	±2.5	PASS
Band V	QPSK	4233	VN	30	-7.25	-0.008558	±2.5	PASS
Band V	QPSK	4233	VN	40	-5.97	-0.007055	±2.5	PASS
Band V	QPSK	4233	VN	50	-13.08	-0.015452	±2.5	PASS
Band V	16QAM	4132	VN	-30	0.57	0.000685	±2.5	PASS
Band V	16QAM	4132	VN	-20	5.29	0.006397	±2.5	PASS
Band V	16QAM	4132	VN	-10	3.73	0.004516	±2.5	PASS
Band V	16QAM	4132	VN	0	13.80	0.016694	±2.5	PASS
Band V	16QAM	4132	VN	10	-11.05	-0.013369	±2.5	PASS
Band V	16QAM	4132	VN	20	-7.23	-0.008752	±2.5	PASS
Band V	16QAM	4132	VN	30	-0.75	-0.000910	±2.5	PASS
Band V	16QAM	4132	VN	40	-8.29	-0.010030	±2.5	PASS
Band V	16QAM	4132	VN	50	-4.35	-0.005263	±2.5	PASS
Band V	16QAM	4182	VN	-30	-14.91	-0.017825	±2.5	PASS
Band V	16QAM	4182	VN	-20	13.90	0.016620	±2.5	PASS
Band V	16QAM	4182	VN	-10	-13.00	-0.015548	±2.5	PASS
Band V	16QAM	4182	VN	0	3.91	0.004674	±2.5	PASS
Band V	16QAM	4182	VN	10	9.41	0.011255	±2.5	PASS
Band V	16QAM	4182	VN	20	-0.60	-0.000721	±2.5	PASS
Band V	16QAM	4182	VN	30	-14.68	-0.017553	±2.5	PASS
Band V	16QAM	4182	VN	40	-2.85	-0.003403	±2.5	PASS
Band V	16QAM	4182	VN	50	-12.86	-0.015377	±2.5	PASS
Band V	16QAM	4233	VN	-30	4.29	0.005066	±2.5	PASS
Band V	16QAM	4233	VN	-20	-2.75	-0.003254	±2.5	PASS
Band V	16QAM	4233	VN	-10	5.01	0.005915	±2.5	PASS
Band V	16QAM	4233	VN	0	-0.76	-0.000898	±2.5	PASS
Band V	16QAM	4233	VN	10	-8.91	-0.010521	±2.5	PASS
Band V	16QAM	4233	VN	20	12.22	0.014433	±2.5	PASS
Band V	16QAM	4233	VN	30	3.21	0.003793	±2.5	PASS
Band V	16QAM	4233	VN	40	2.13	0.002515	±2.5	PASS
Band V	16QAM	4233	VN	50	-3.30	-0.003897	±2.5	PASS

The End



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