

Appendix A: OCCUPIED BANDWIDTH

Please refer to following plots:

Cellular Band (Part 22H)

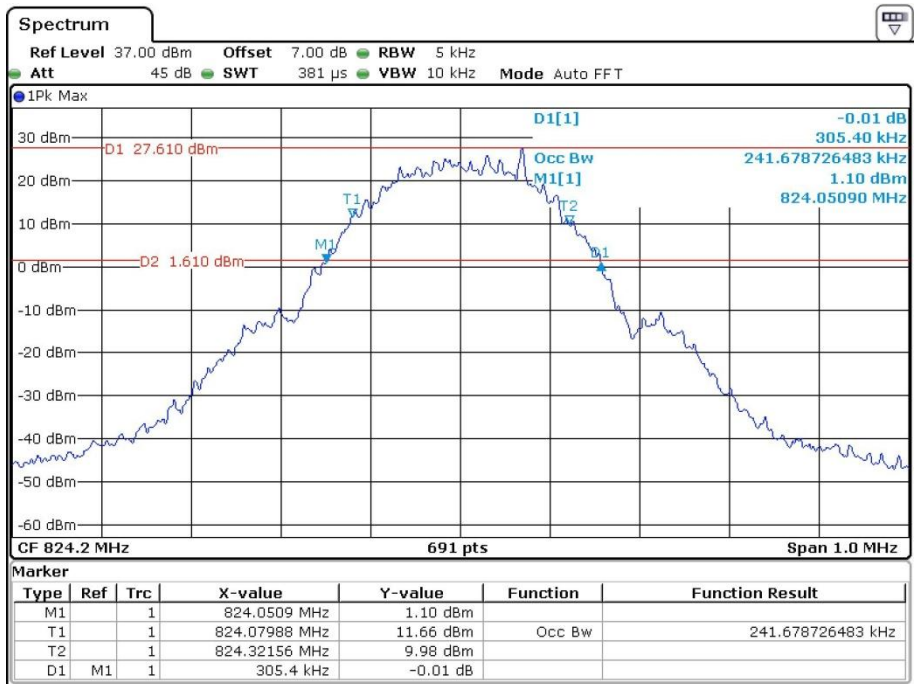
Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	128	824.2	241.68	305.40
	190	836.6	241.68	309.70
	251	848.8	243.13	311.10

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	512	1850.2	241.68	315.50
	661	1880.0	240.23	312.60
	810	1909.8	244.57	311.10

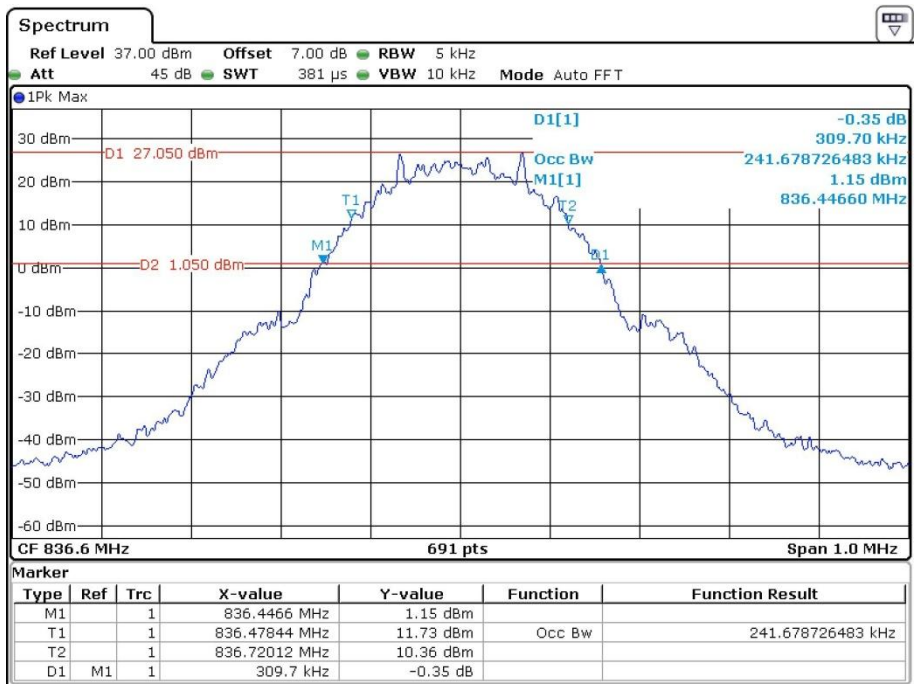
Cellular Band (Part 22H)

26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, Low channel



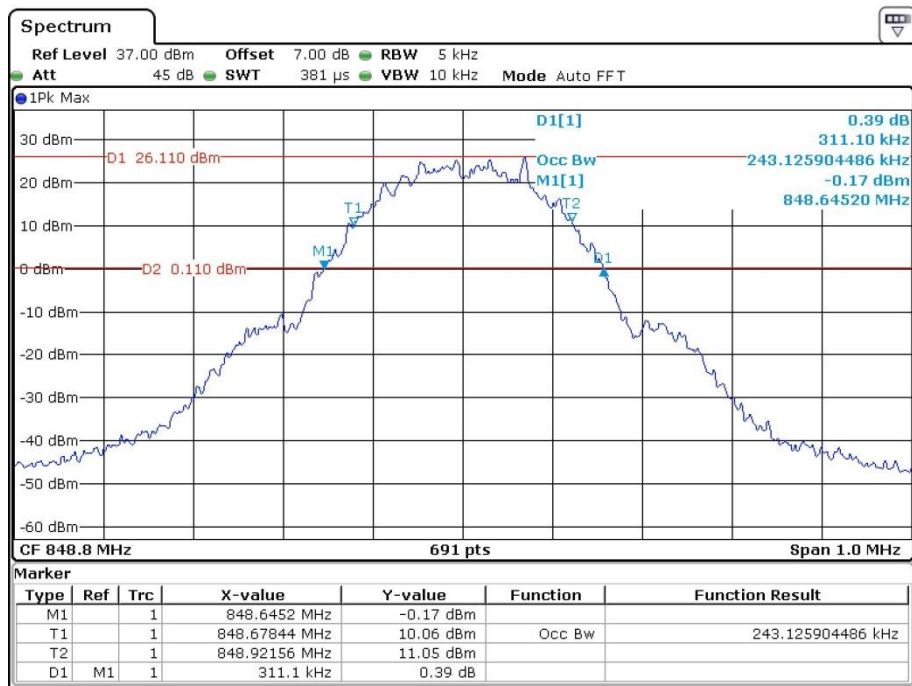
Date: 13.APR.2022 23:26:36

26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, Middle channel



Date: 13.APR.2022 23:27:59

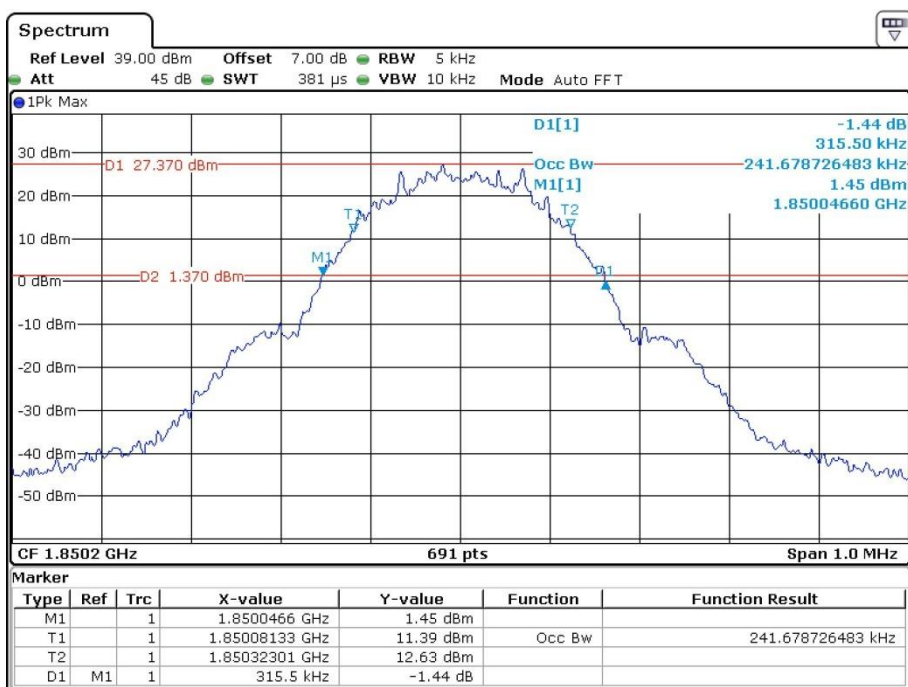
26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, High channel



Date: 13.APR.2022 23:29:00

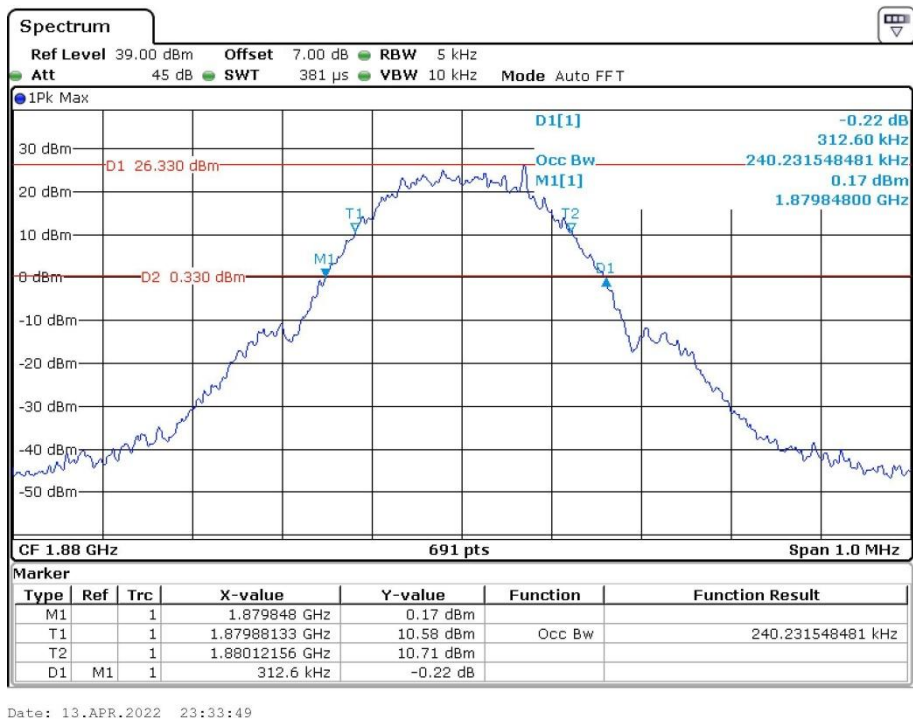
PCS Band (Part 24E)

26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, Low channel

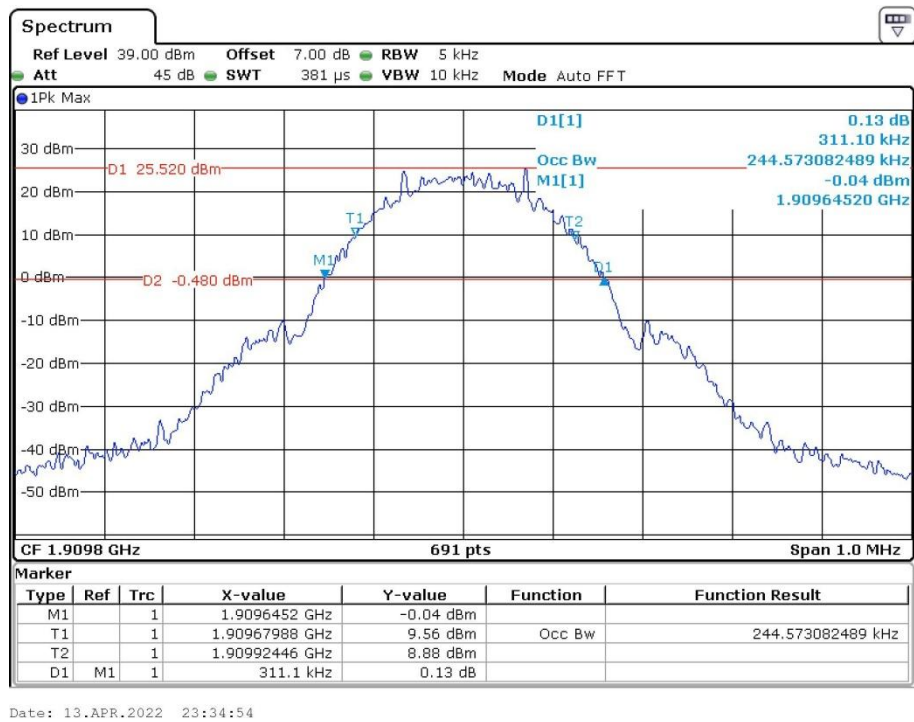


Date: 13.APR.2022 23:32:49

26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, Middle channel



26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, High channel



LTE Band 2:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.108	1.284	1.096	1.302	1.096	1.314
	16QAM	1.096	1.302	1.102	1.314	1.096	1.296
3 MHz	QPSK	2.695	2.952	2.695	2.940	2.683	2.964
	16QAM	2.695	2.964	2.683	2.964	2.683	2.952
5 MHz	QPSK	4.531	5.040	4.511	5.040	4.491	4.980
	16QAM	4.511	5.000	4.531	5.060	4.511	5.060
10 MHz	QPSK	8.942	9.720	8.942	9.680	8.901	9.640
	16QAM	8.942	9.720	8.942	9.720	8.942	9.640
15 MHz	QPSK	13.473	14.700	13.353	14.520	13.353	14.580
	16QAM	13.533	14.640	13.413	14.640	13.413	14.520
20 MHz	QPSK	17.964	19.440	17.804	19.280	17.804	19.120
	16QAM	17.964	19.520	17.804	19.200	17.804	19.200

LTE Band 4:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.096	1.296	1.102	1.314	1.108	1.284
	16QAM	1.102	1.320	1.096	1.296	1.096	1.314
3 MHz	QPSK	2.695	2.940	2.695	2.952	2.695	2.952
	16QAM	2.695	2.952	2.683	2.964	2.695	2.952
5 MHz	QPSK	4.531	5.040	4.511	5.040	4.511	5.020
	16QAM	4.511	5.020	4.531	5.040	4.511	5.040
10 MHz	QPSK	8.942	9.760	8.942	9.680	8.942	9.760
	16QAM	8.942	9.600	8.942	9.720	8.942	9.760
15 MHz	QPSK	13.413	14.700	13.413	14.580	13.473	14.640
	16QAM	13.413	14.580	13.473	14.700	13.473	14.520
20 MHz	QPSK	17.804	19.120	17.884	19.440	17.964	19.680
	16QAM	17.884	19.200	17.884	19.360	17.964	19.520

LTE Band 5:

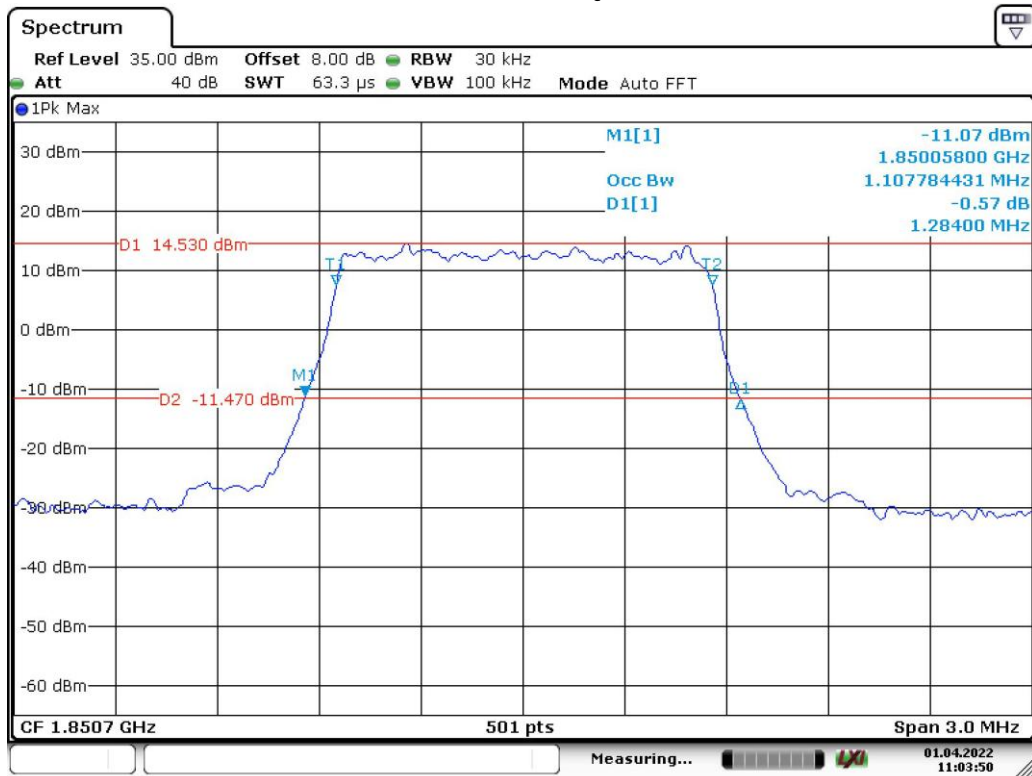
Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.096	1.302	1.102	1.308	1.108	1.284
	16QAM	1.102	1.314	1.096	1.296	1.096	1.308
3 MHz	QPSK	2.695	2.940	2.695	2.940	2.695	2.952
	16QAM	2.683	2.964	2.683	2.952	2.683	2.952
5 MHz	QPSK	4.531	5.020	4.511	5.020	4.491	5.020
	16QAM	4.511	4.980	4.531	5.040	4.531	5.060
10 MHz	QPSK	8.981	9.800	8.942	9.680	8.981	9.800
	16QAM	8.942	9.680	8.942	9.680	8.981	9.800

LTE Band 7:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.511	5.020	4.511	5.020	4.491	5.000
	16QAM	4.511	4.980	4.531	5.040	4.531	5.080
10 MHz	QPSK	8.942	9.760	8.942	9.720	8.942	9.800
	16QAM	8.942	9.720	8.942	9.760	8.942	9.720
15 MHz	QPSK	13.413	14.640	13.473	14.700	13.533	14.700
	16QAM	13.413	14.580	13.533	14.640	13.473	14.580
20 MHz	QPSK	17.884	19.200	17.964	19.440	17.964	19.600
	16QAM	17.884	19.280	17.964	19.440	17.884	19.360

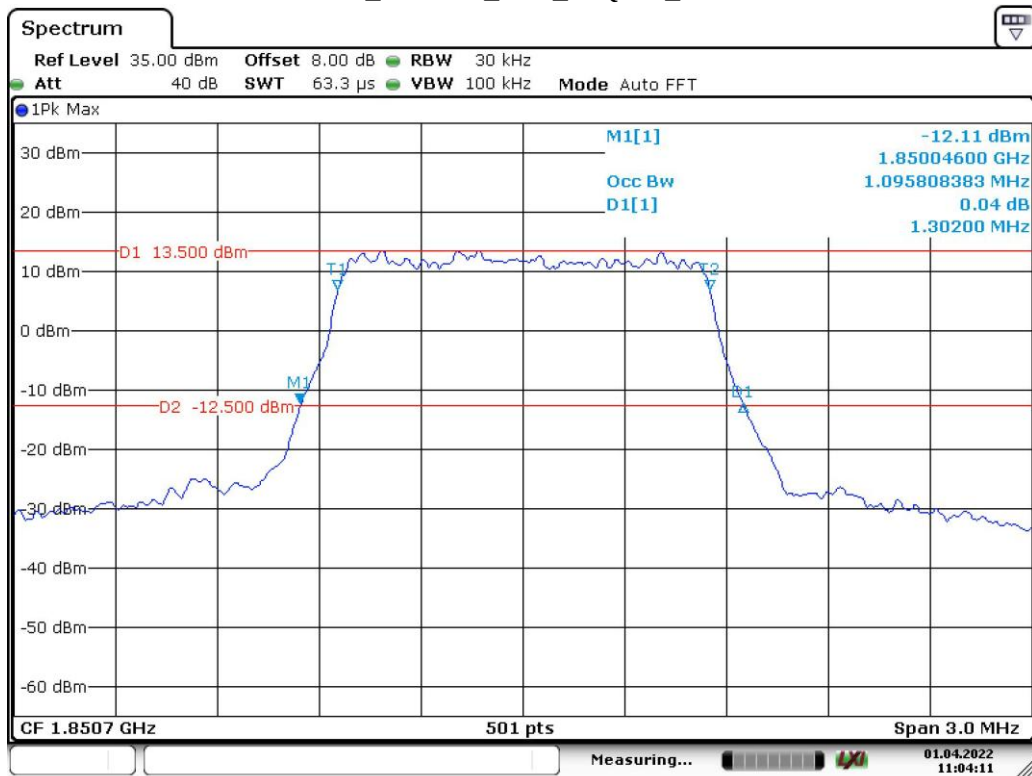
Band 2

Band 2_1.4 MHz_Low_QPSK_RB6#0



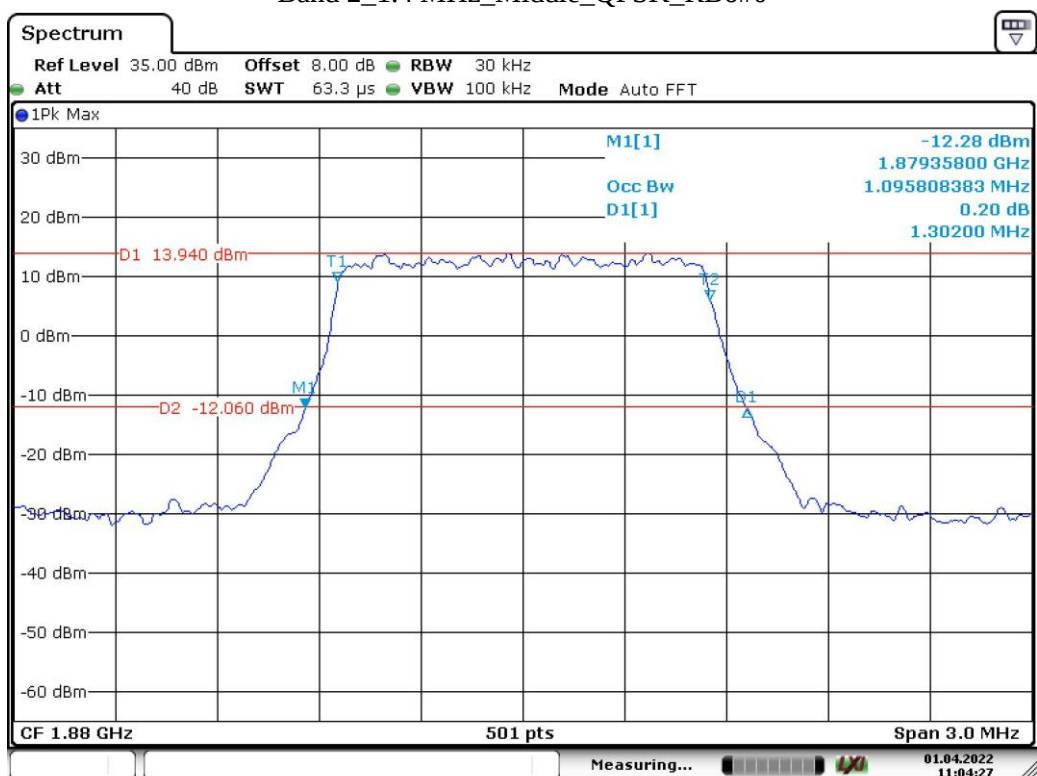
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Band 2_1.4 MHz_Low_16QAM_RB6#0



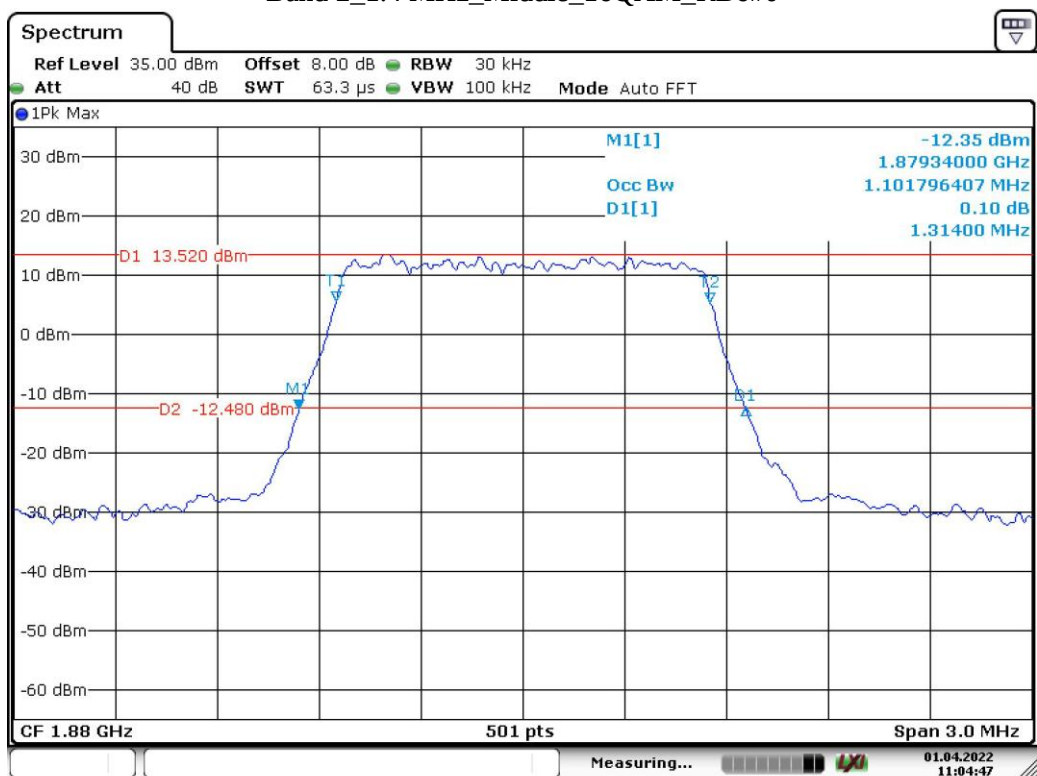
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Band 2_1.4 MHz_Middle_QPSK_RB6#0



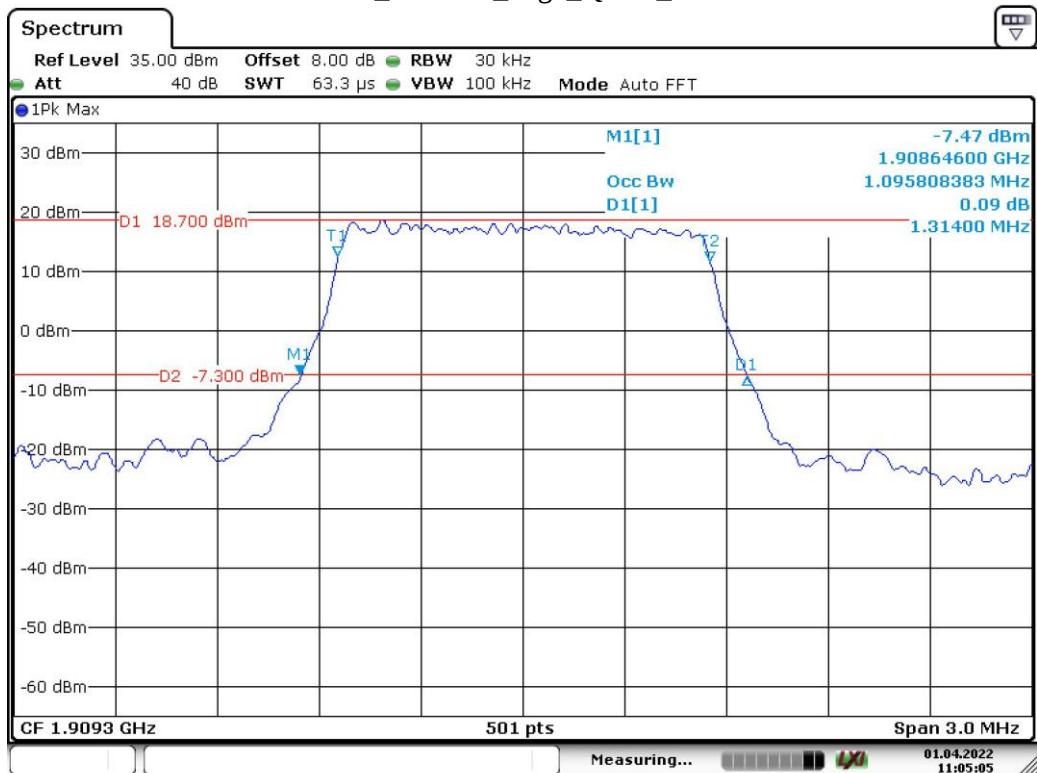
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Band 2_1.4 MHz_Middle_16QAM_RB6#0



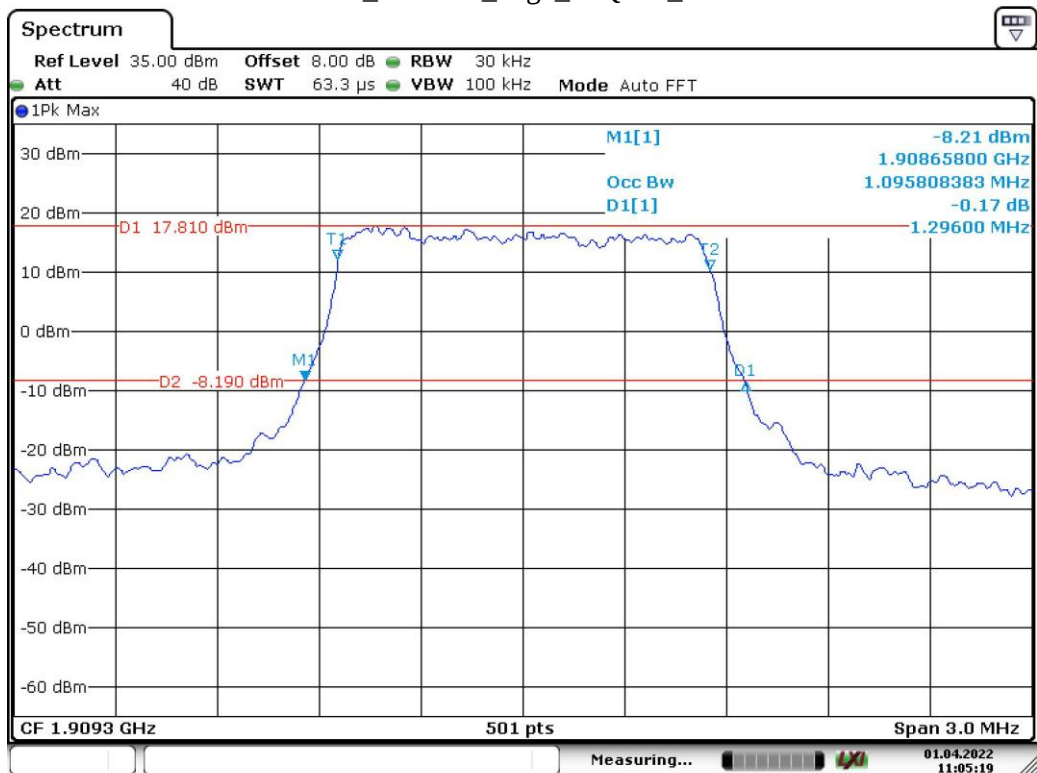
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Band 2_1.4 MHz_High_QPSK_RB6#0



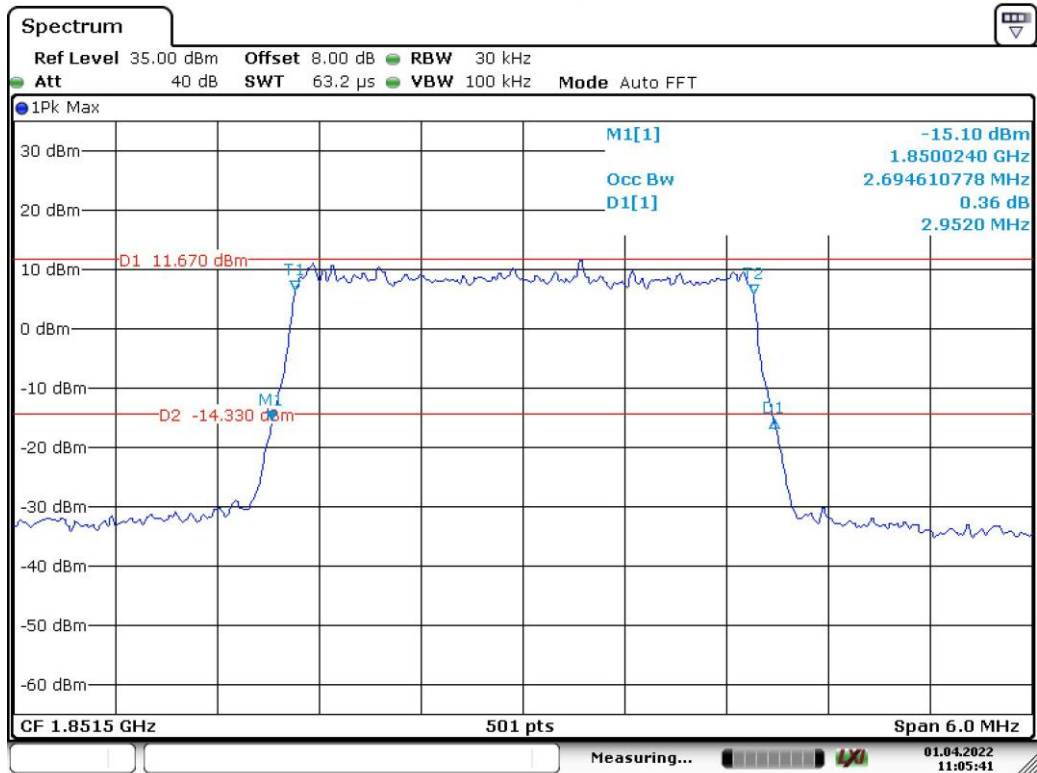
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Band 2_1.4 MHz_High_16QAM_RB6#0



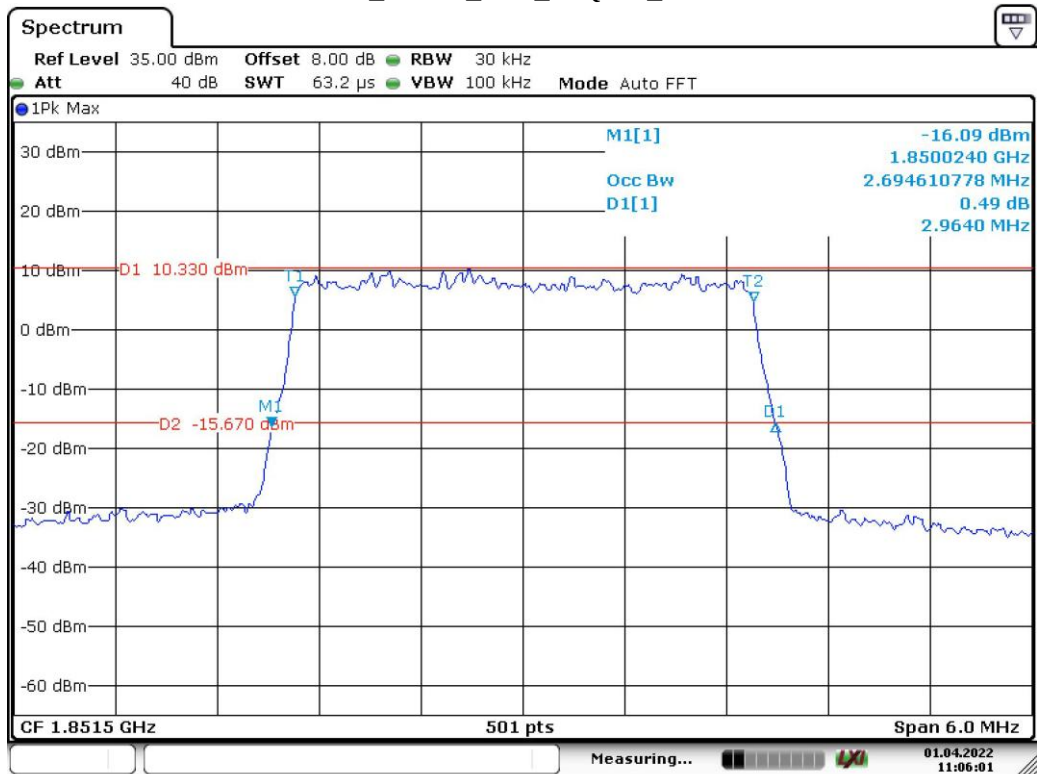
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Band 2_3 MHz_Low_QPSK_RB15#0



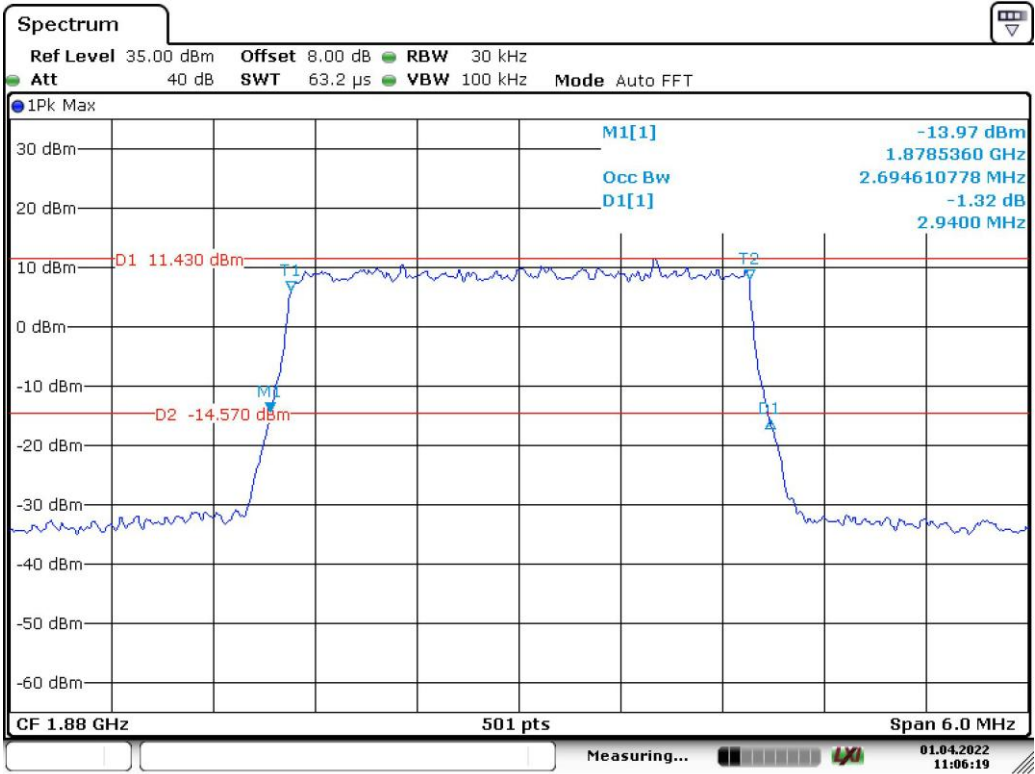
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Band 2_3 MHz_Low_16QAM_RB15#0



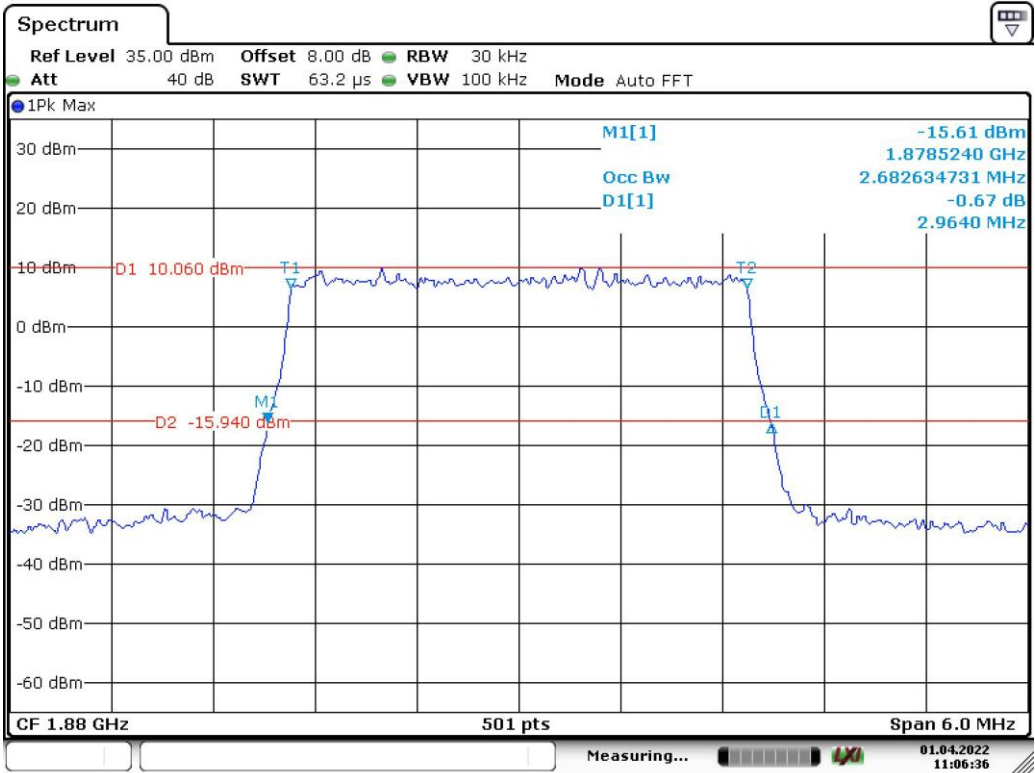
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Band 2_3 MHz_Middle_QPSK_RB15#0



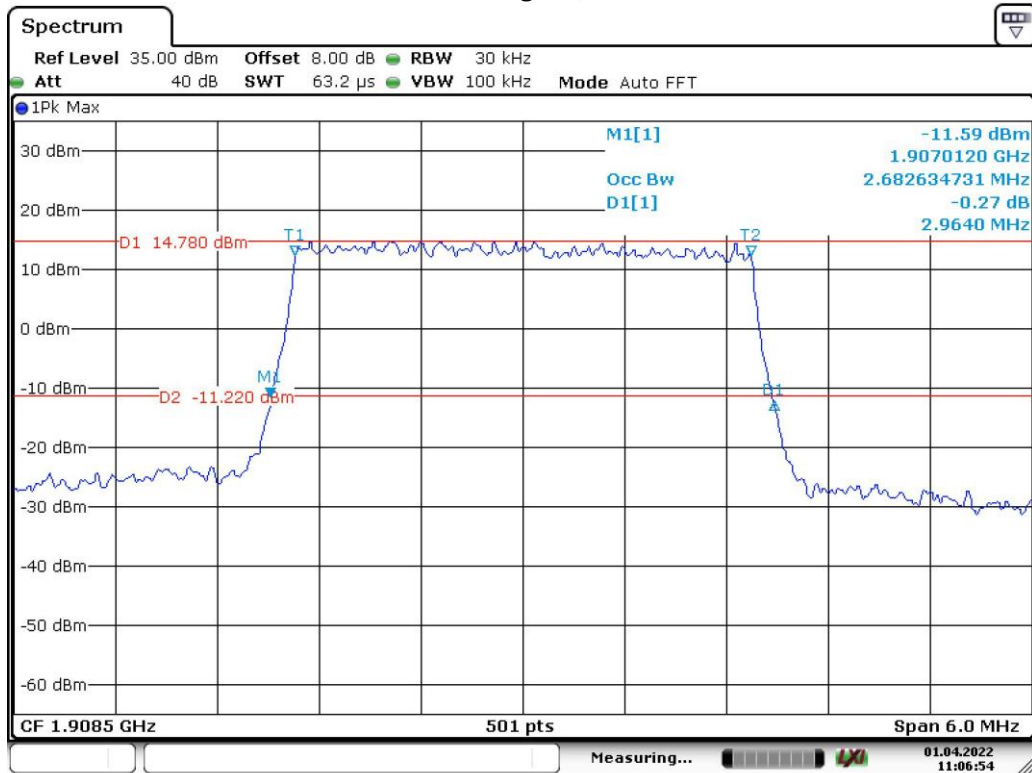
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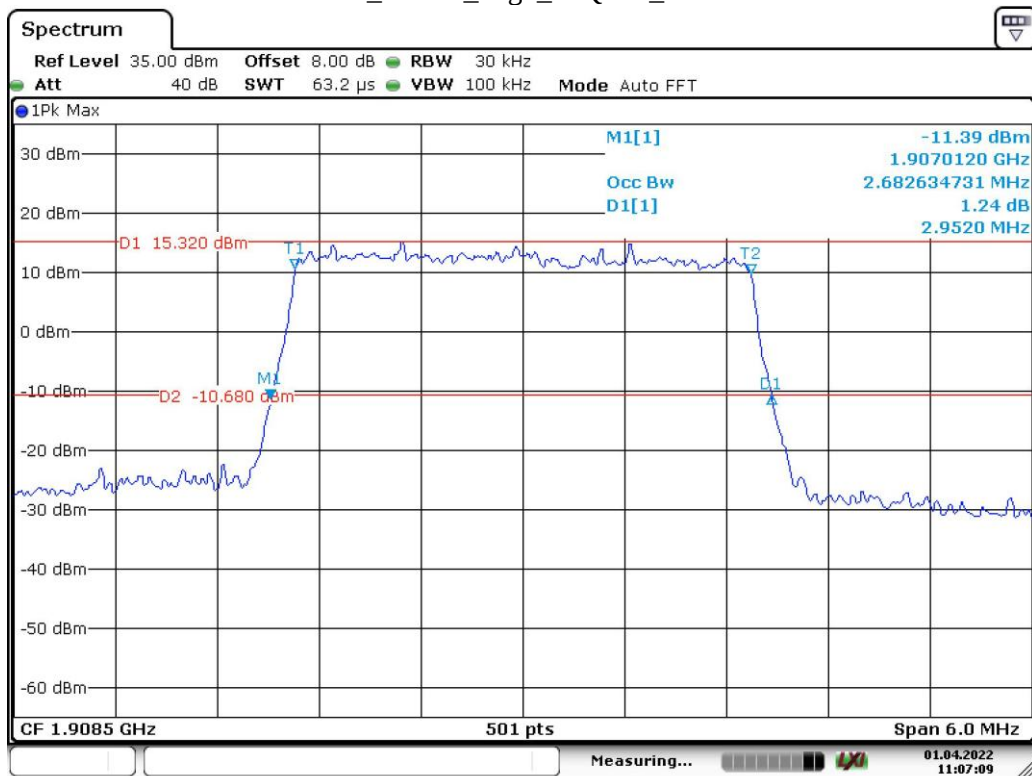
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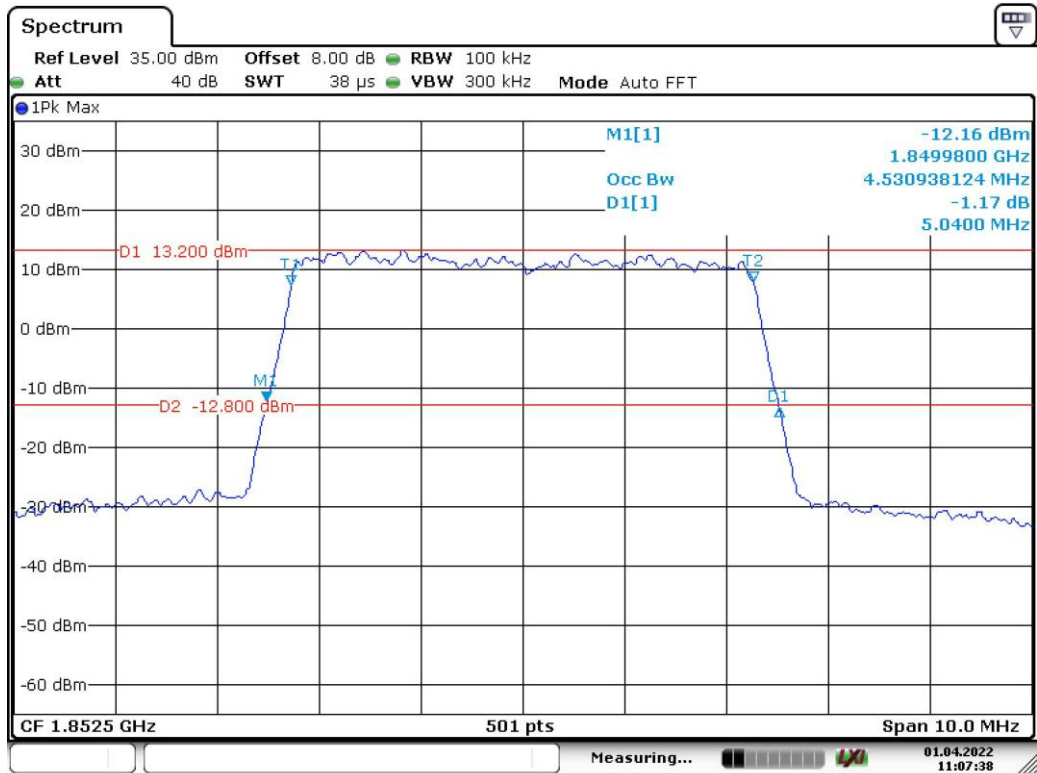
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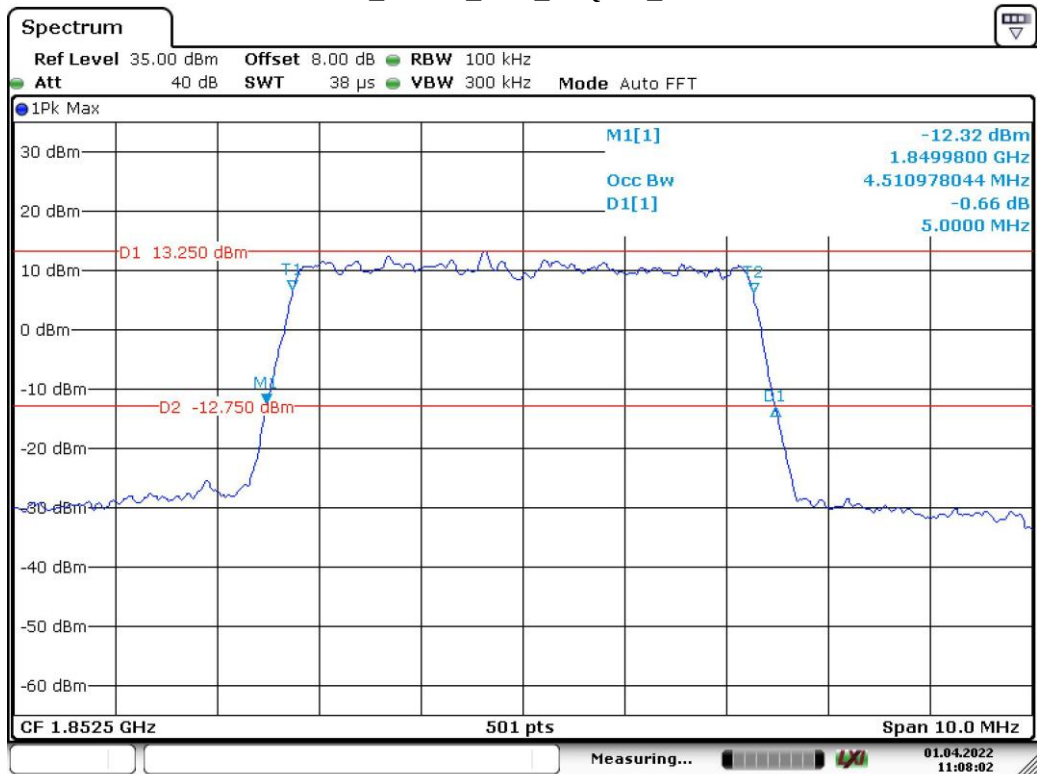
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Band 2_5 MHz_Low_QPSK_RB25#0



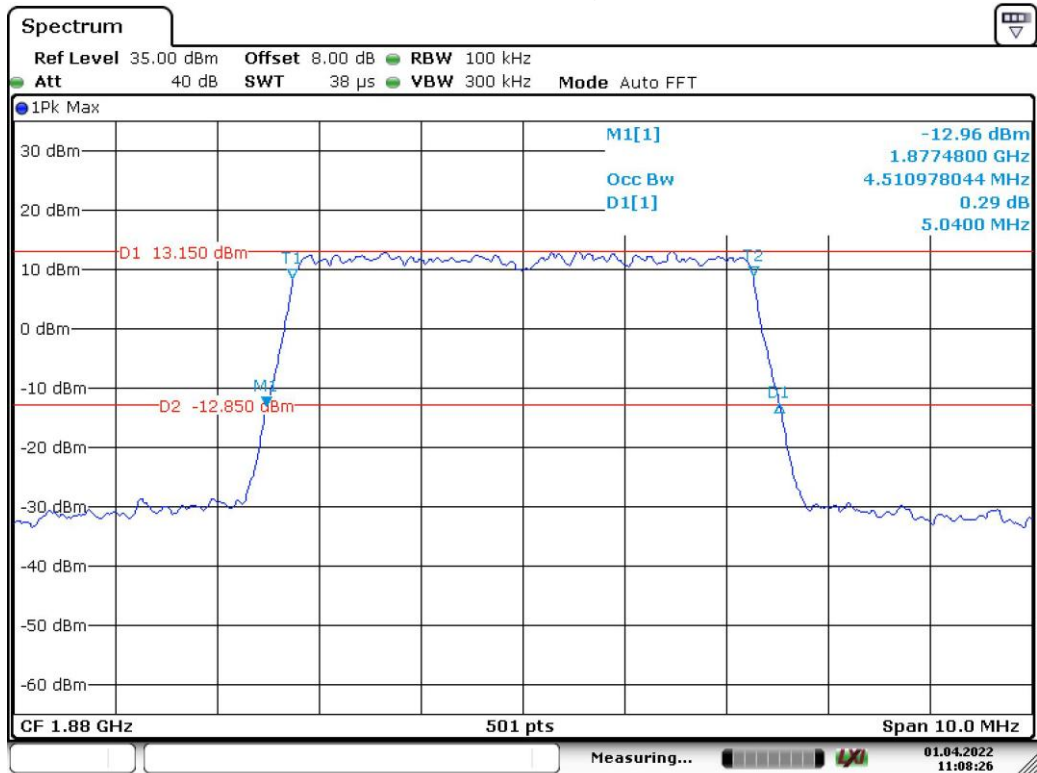
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Band 2_5 MHz_Low_16QAM_RB25#0



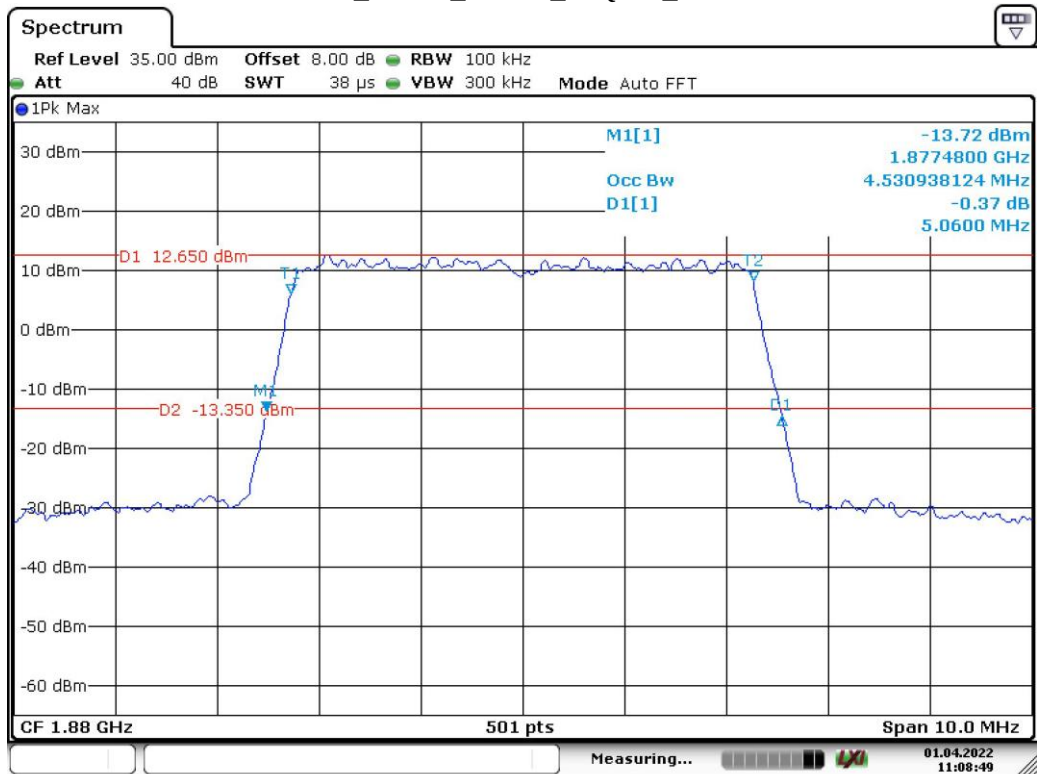
Date: 1.APR.2022 11:08:02

Band 2_5 MHz_Middle_QPSK_RB25#0



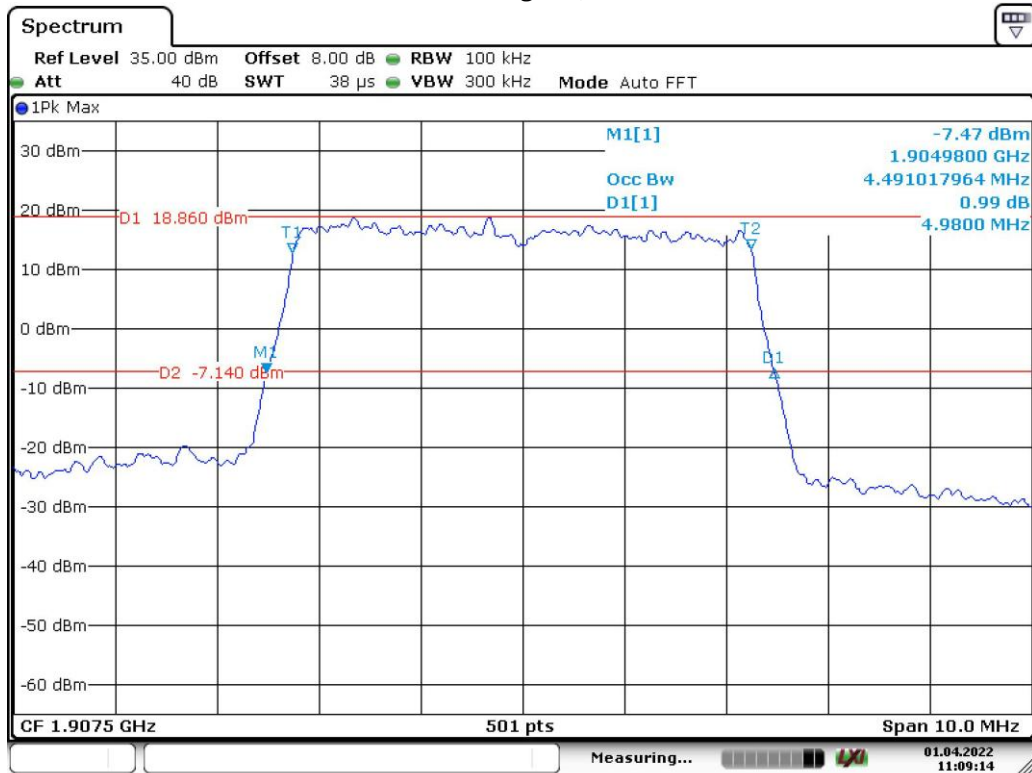
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Band 2_5 MHz_Middle_16QAM_RB25#0



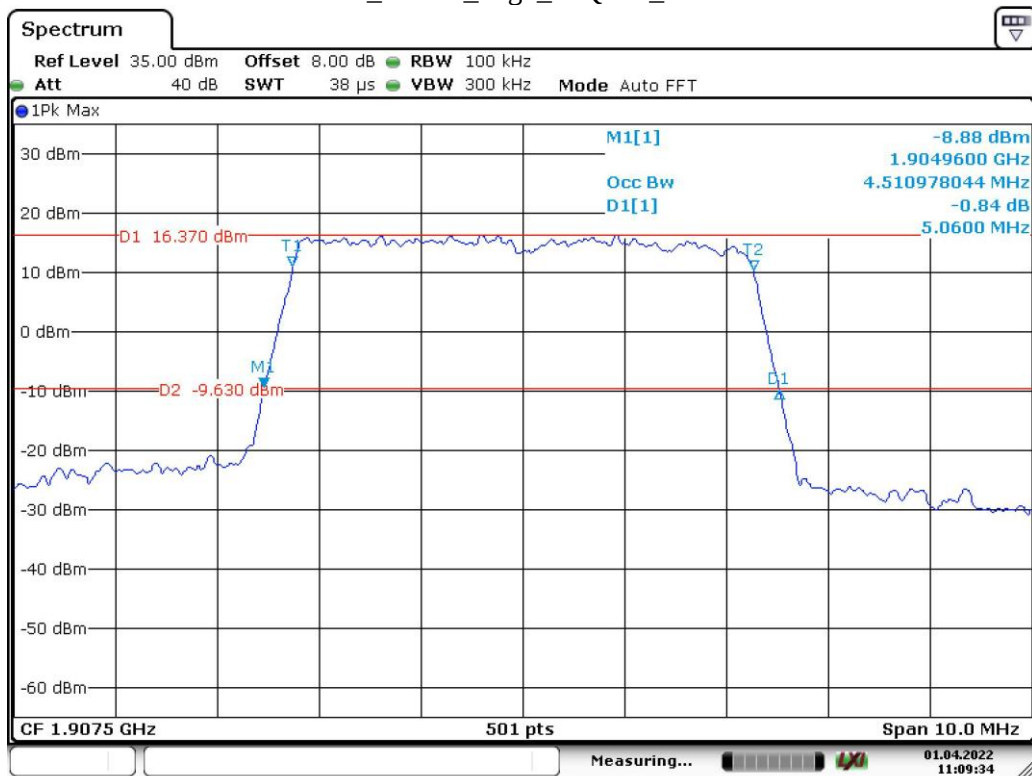
Date: 1.APR.2022 11:08:50

Band 2_5 MHz_High_QPSK_RB25#0



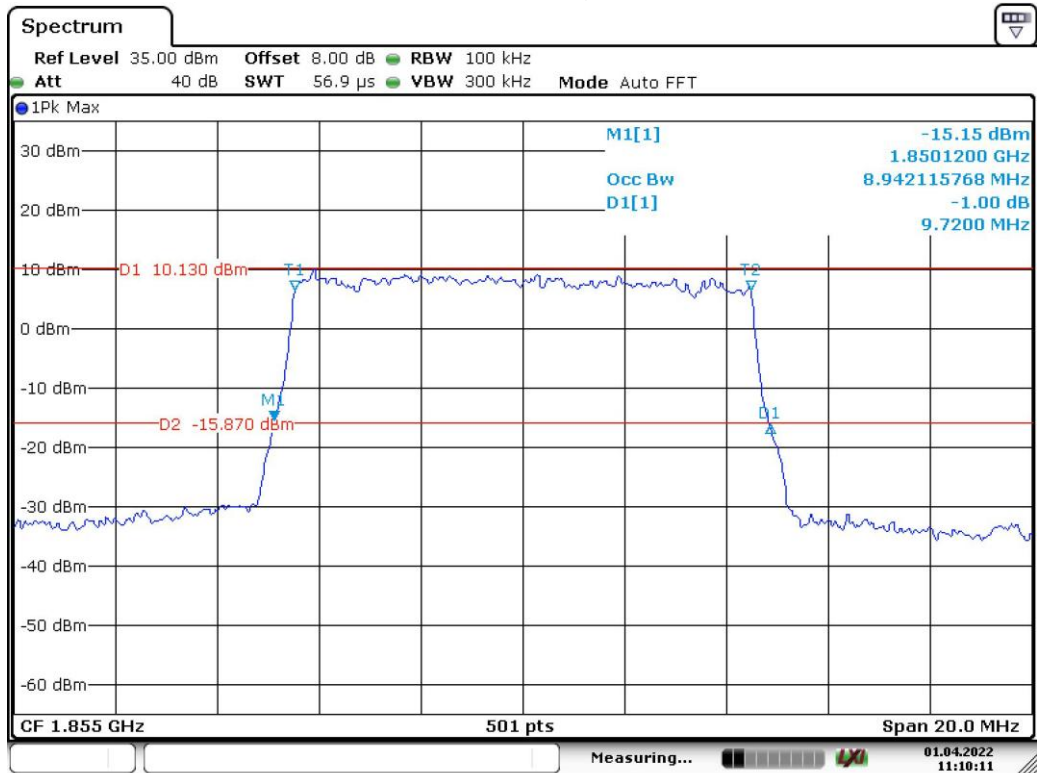
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Band 2_5 MHz_High_16QAM_RB25#0



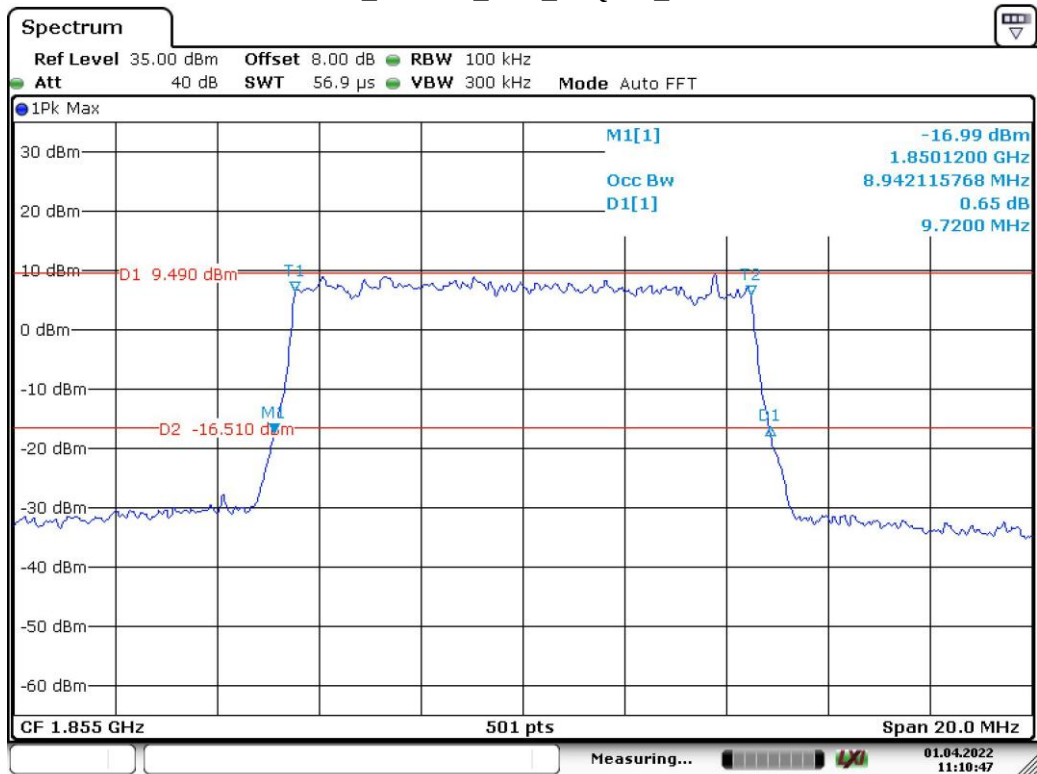
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Band 2_10 MHz_Low_QPSK_RB50#0



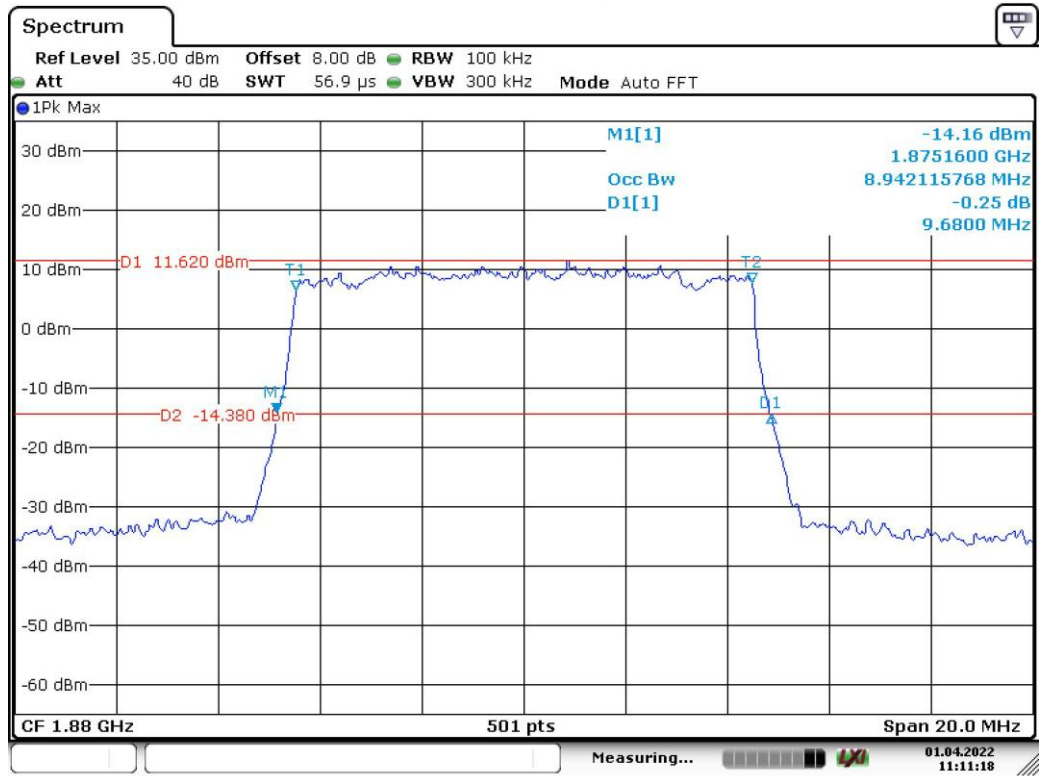
Date: 1.APR.2022 11:10:11

Band 2_10 MHz_Low_16QAM_RB50#0



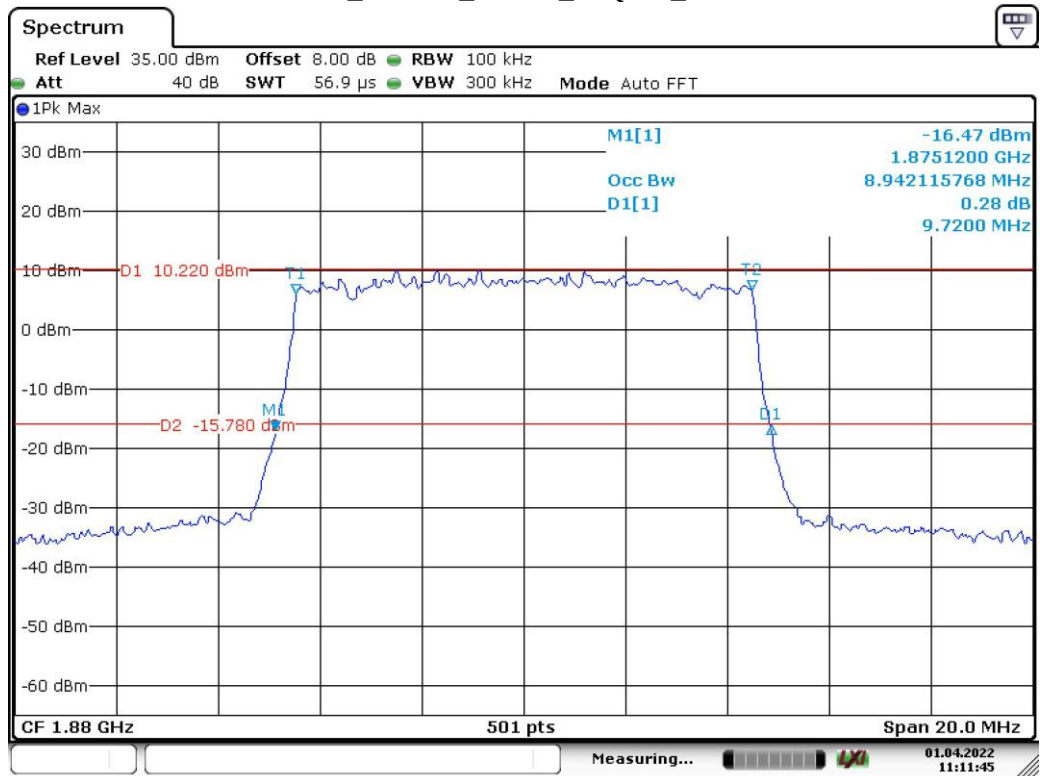
Date: 1.APR.2022 11:10:48

Band 2_10 MHz_Middle_QPSK_RB50#0



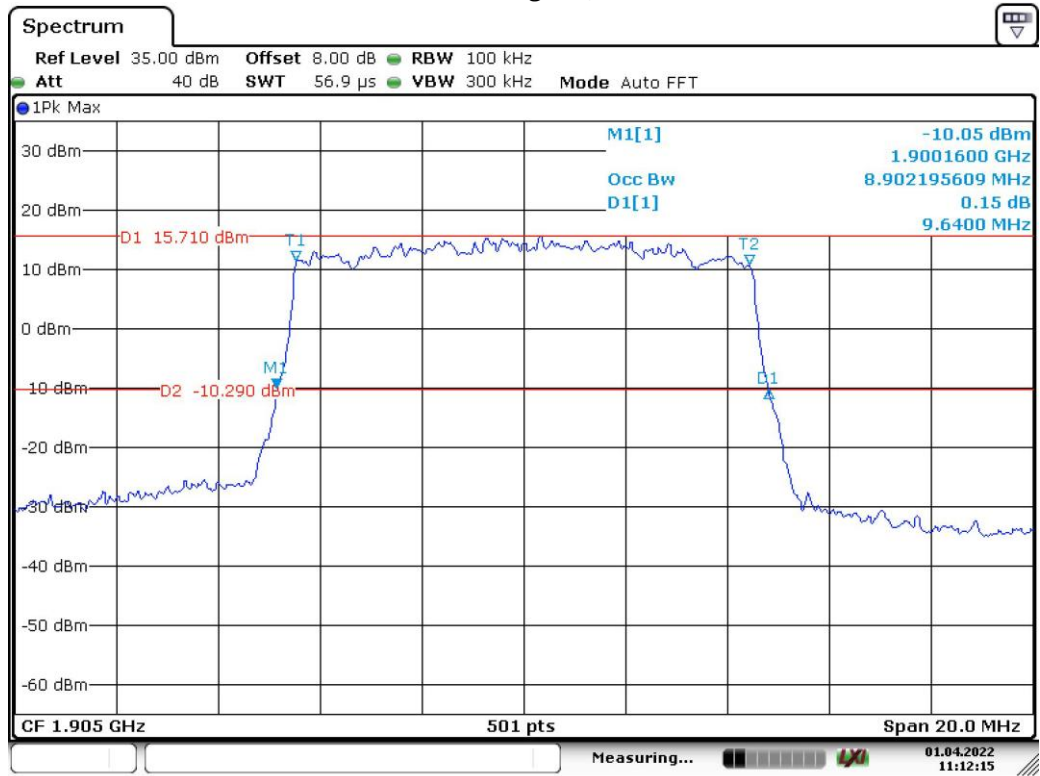
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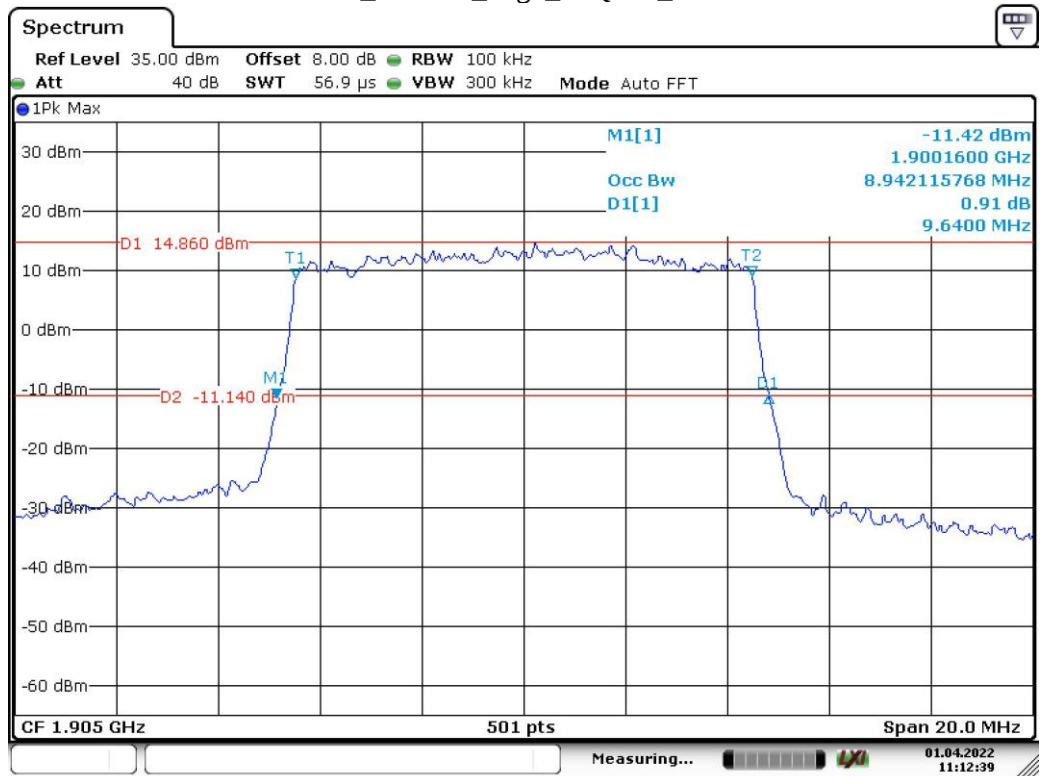
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Band 2_10 MHz_High_QPSK_RB50#0



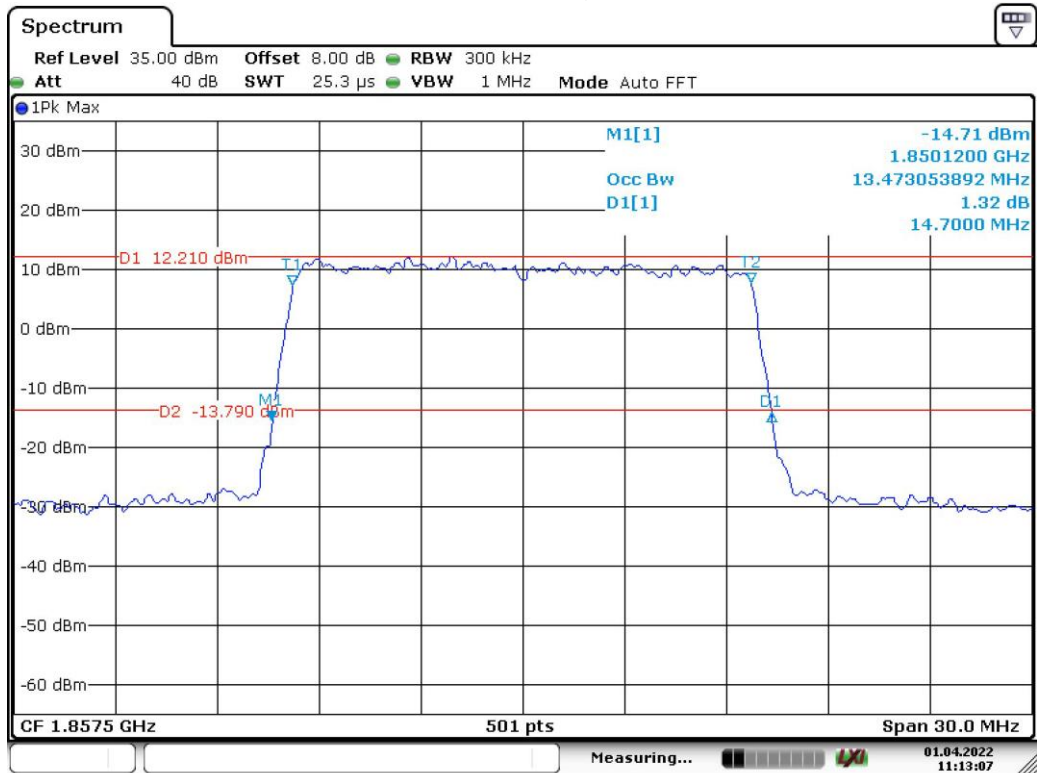
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Band 2_10 MHz_High_16QAM_RB50#0



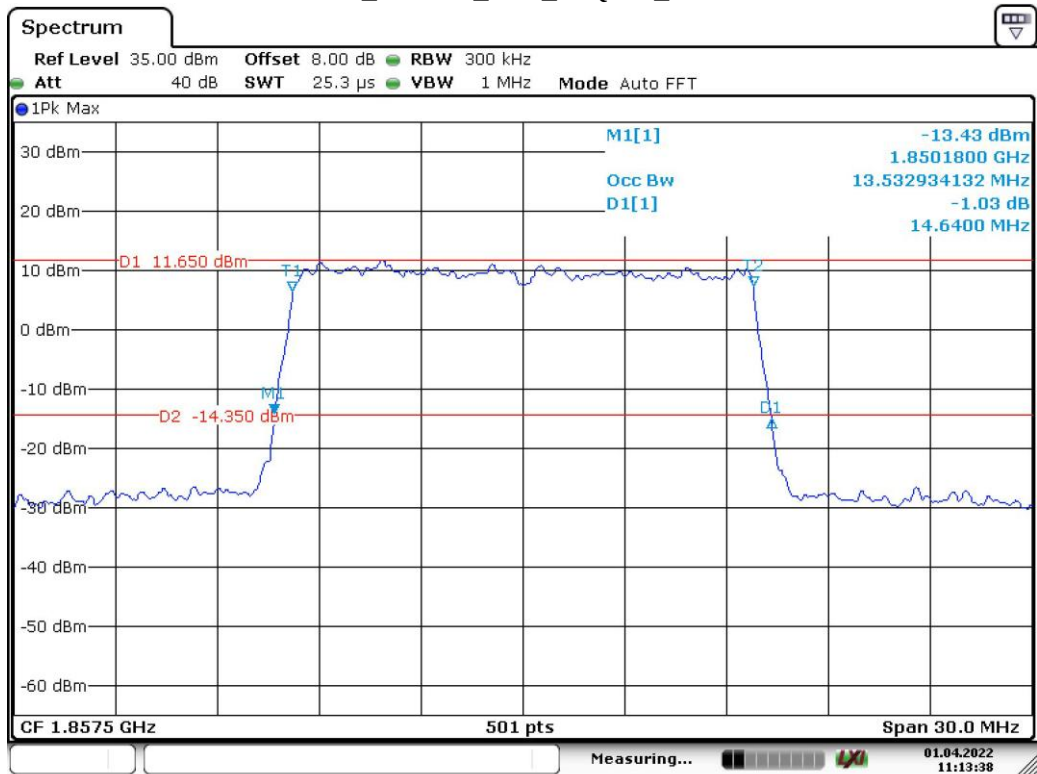
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Band 2_15 MHz_Low_QPSK_RB75#0



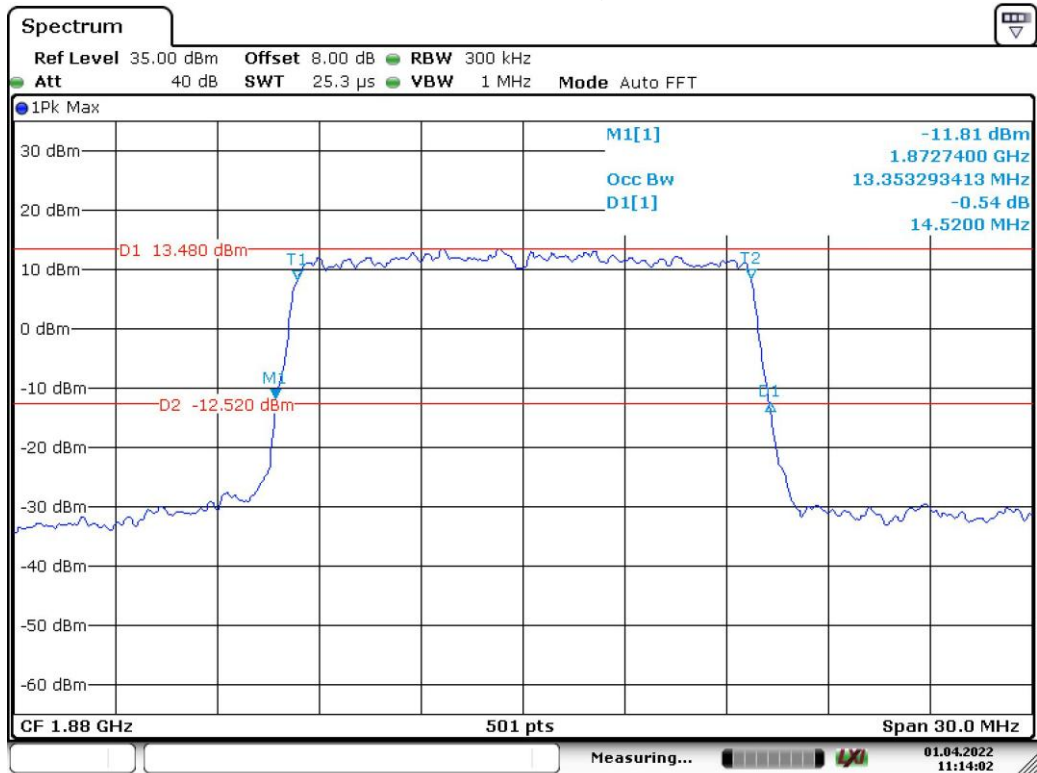
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Band 2_15 MHz_Low_16QAM_RB75#0



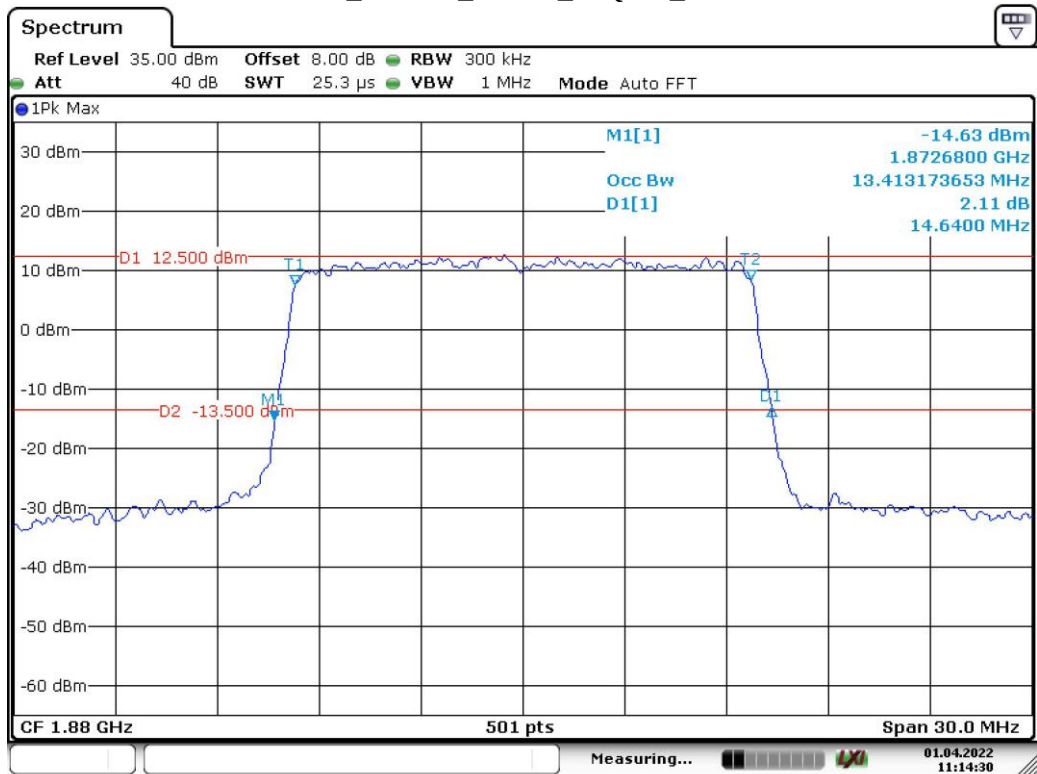
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Band 2_15 MHz_Middle_QPSK_RB75#0



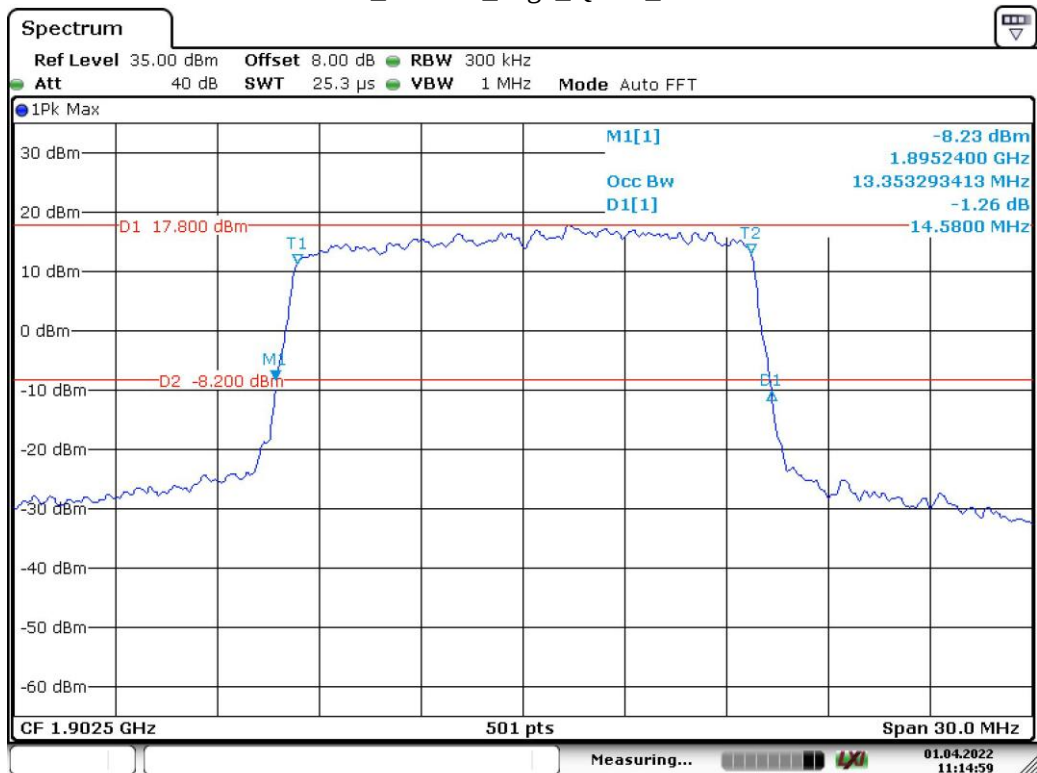
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Band 2_15 MHz_Middle_16QAM_RB75#0



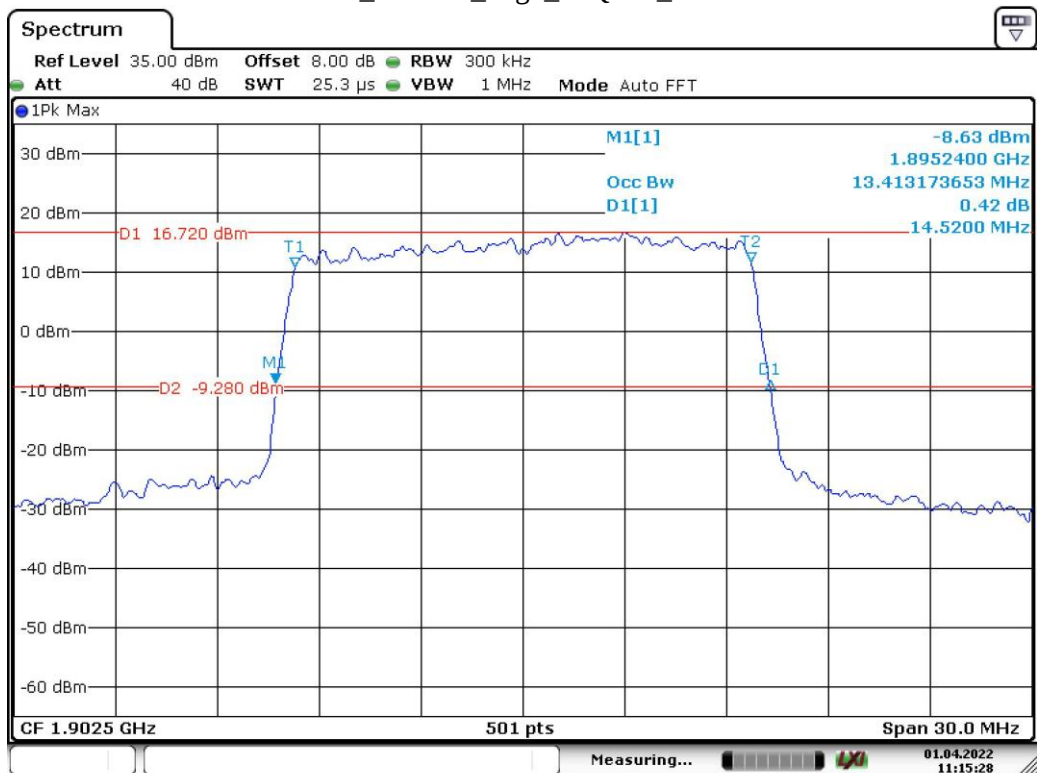
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Band 2_15 MHz_High_QPSK_RB75#0



Date: 1.APR.2022 11:14:59

Band 2_15 MHz_High_16QAM_RB75#0



Date: 1.APR.2022 11:15:28