



Appendix I: Test Data for E-UTRA Band 13

Product Name: GNSS Receiver

Test Model: Mars

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
Supervised by:	Ling Zhu



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I.1 Conducted Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	23.46	PASS
Band13	5MHz	16QAM	23205	1RB#0	22.34	PASS
Band13	5MHz	QPSK	23205	1RB#12	23.63	PASS
Band13	5MHz	16QAM	23205	1RB#12	22.61	PASS
Band13	5MHz	QPSK	23205	1RB#24	23.62	PASS
Band13	5MHz	16QAM	23205	1RB#24	22.68	PASS
Band13	5MHz	QPSK	23205	12RB#0	22.44	PASS
Band13	5MHz	16QAM	23205	12RB#0	21.41	PASS
Band13	5MHz	QPSK	23205	12RB#6	22.43	PASS
Band13	5MHz	16QAM	23205	12RB#6	21.40	PASS
Band13	5MHz	QPSK	23205	12RB#13	22.57	PASS
Band13	5MHz	16QAM	23205	12RB#13	21.61	PASS
Band13	5MHz	QPSK	23205	25RB#0	22.54	PASS
Band13	5MHz	16QAM	23205	25RB#0	21.58	PASS
Band13	5MHz	QPSK	23230	1RB#0	23.54	PASS
Band13	5MHz	16QAM	23230	1RB#0	22.76	PASS
Band13	5MHz	QPSK	23230	1RB#12	23.81	PASS
Band13	5MHz	16QAM	23230	1RB#12	22.97	PASS
Band13	5MHz	QPSK	23230	1RB#24	23.71	PASS
Band13	5MHz	16QAM	23230	1RB#24	22.87	PASS
Band13	5MHz	QPSK	23230	12RB#0	22.71	PASS
Band13	5MHz	16QAM	23230	12RB#0	21.76	PASS
Band13	5MHz	QPSK	23230	12RB#6	22.66	PASS
Band13	5MHz	16QAM	23230	12RB#6	21.72	PASS
Band13	5MHz	QPSK	23230	12RB#13	22.70	PASS
Band13	5MHz	16QAM	23230	12RB#13	21.80	PASS
Band13	5MHz	QPSK	23230	25RB#0	22.69	PASS
Band13	5MHz	16QAM	23230	25RB#0	21.73	PASS
Band13	5MHz	QPSK	23255	1RB#0	23.74	PASS
Band13	5MHz	16QAM	23255	1RB#0	22.74	PASS
Band13	5MHz	QPSK	23255	1RB#12	23.87	PASS
Band13	5MHz	16QAM	23255	1RB#12	22.85	PASS
Band13	5MHz	QPSK	23255	1RB#24	23.77	PASS
Band13	5MHz	16QAM	23255	1RB#24	22.73	PASS
Band13	5MHz	QPSK	23255	12RB#0	22.81	PASS
Band13	5MHz	16QAM	23255	12RB#0	21.80	PASS



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Band13	5MHz	QPSK	23255	12RB#6	22.70	PASS
Band13	5MHz	16QAM	23255	12RB#6	21.84	PASS
Band13	5MHz	QPSK	23255	12RB#13	22.71	PASS
Band13	5MHz	16QAM	23255	12RB#13	21.84	PASS
Band13	5MHz	QPSK	23255	25RB#0	22.75	PASS
Band13	5MHz	16QAM	23255	25RB#0	21.84	PASS
Band13	10MHz	QPSK	23230	1RB#0	23.41	PASS
Band13	10MHz	16QAM	23230	1RB#0	22.57	PASS
Band13	10MHz	QPSK	23230	1RB#24	23.81	PASS
Band13	10MHz	16QAM	23230	1RB#24	22.88	PASS
Band13	10MHz	QPSK	23230	1RB#49	23.68	PASS
Band13	10MHz	16QAM	23230	1RB#49	22.84	PASS
Band13	10MHz	QPSK	23230	25RB#0	22.63	PASS
Band13	10MHz	16QAM	23230	25RB#0	21.68	PASS
Band13	10MHz	QPSK	23230	25RB#12	22.65	PASS
Band13	10MHz	16QAM	23230	25RB#12	21.64	PASS
Band13	10MHz	QPSK	23230	25RB#25	22.70	PASS
Band13	10MHz	16QAM	23230	25RB#25	21.78	PASS
Band13	10MHz	QPSK	23230	50RB#0	22.72	PASS
Band13	10MHz	16QAM	23230	50RB#0	21.66	PASS





I.2 Peak-to-Average Ratio(CCDF)

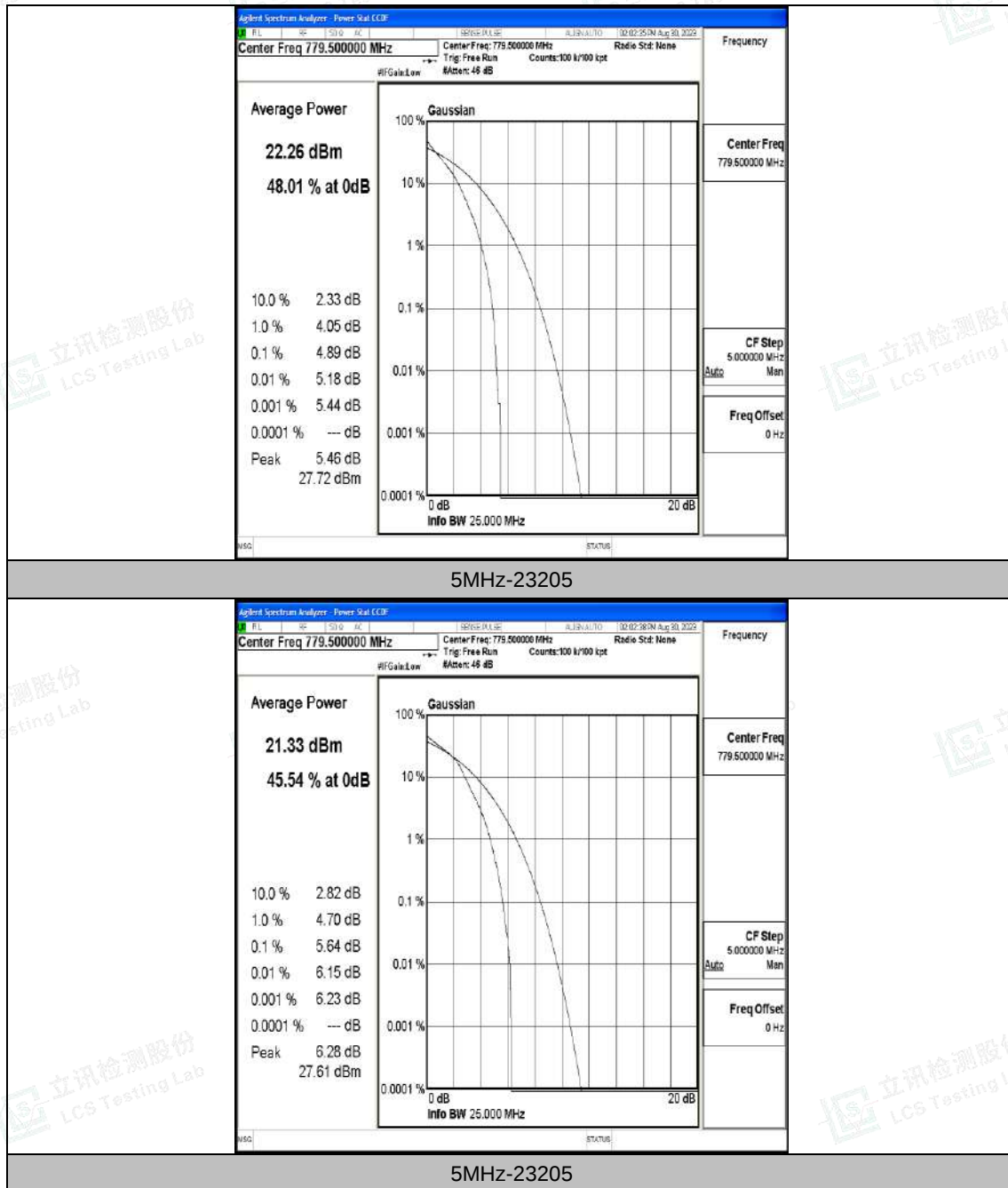
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.89	13	PASS
Band13	5MHz	16QAM	23205	25RB#0	5.64	13	PASS
Band13	5MHz	QPSK	23230	25RB#0	5.28	13	PASS
Band13	5MHz	16QAM	23230	25RB#0	6.00	13	PASS
Band13	5MHz	QPSK	23255	25RB#0	5.51	13	PASS
Band13	5MHz	16QAM	23255	25RB#0	6.22	13	PASS
Band13	10MHz	QPSK	23230	50RB#0	5.11	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	5.90	13	PASS





Test Graphs

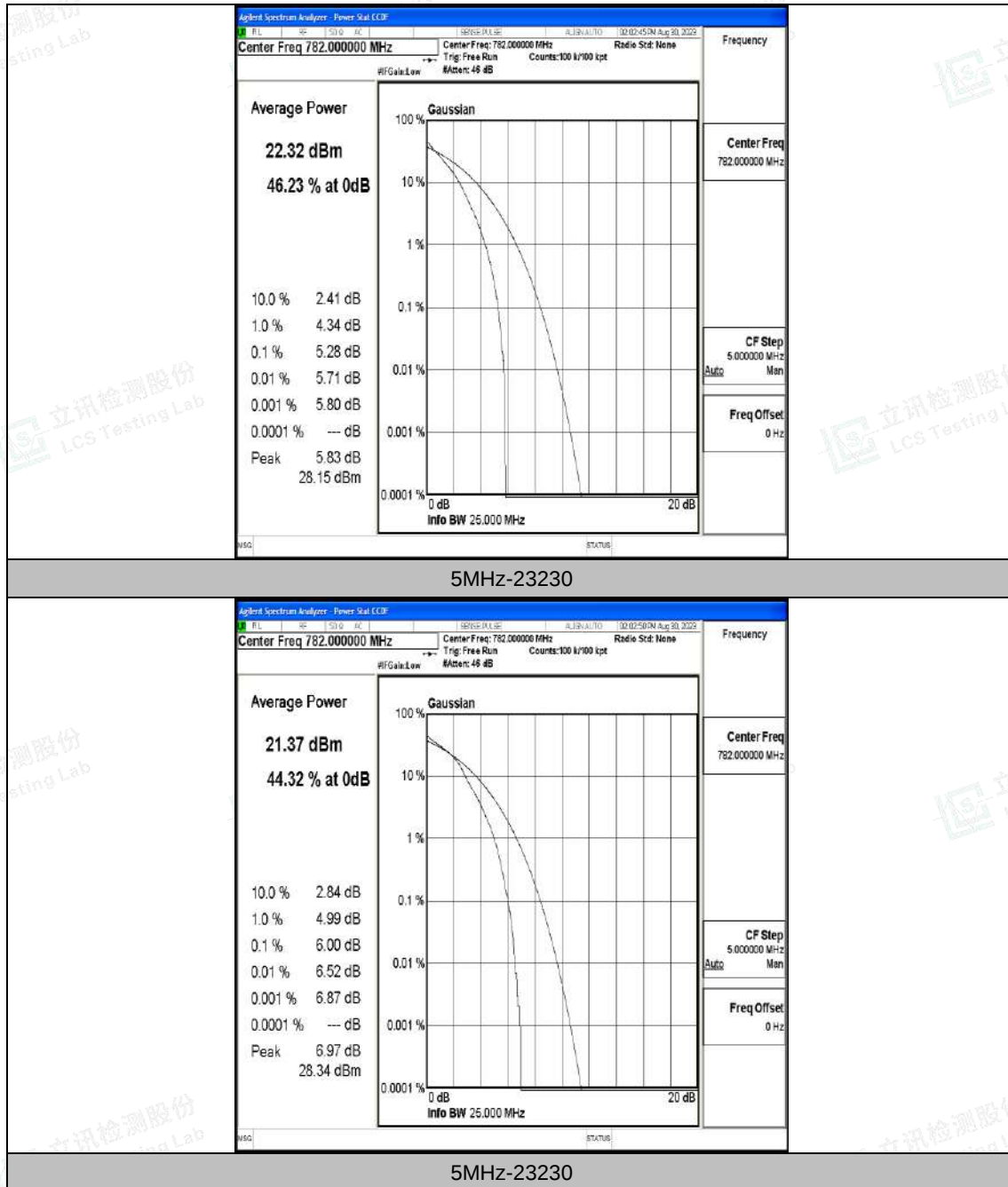


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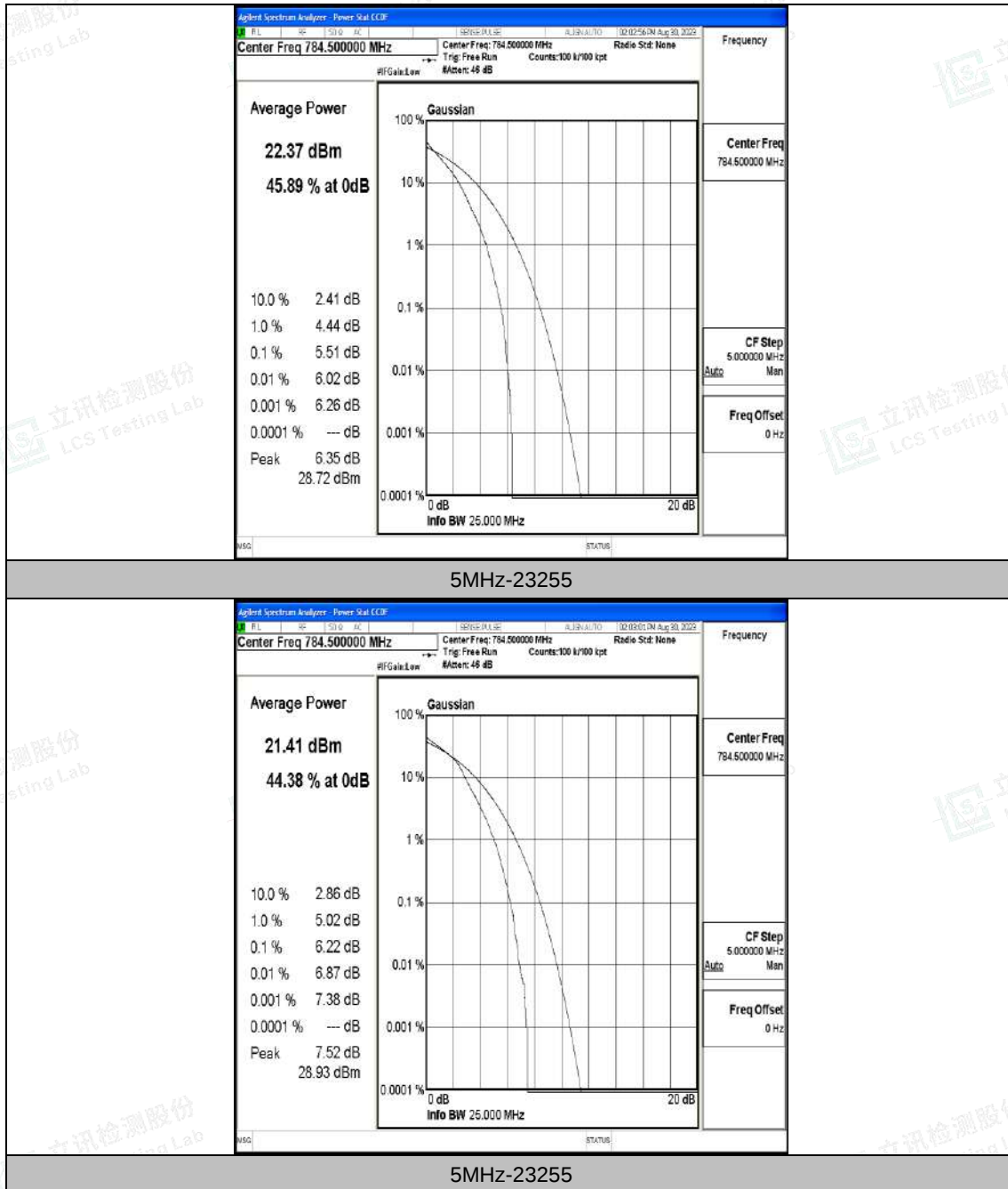


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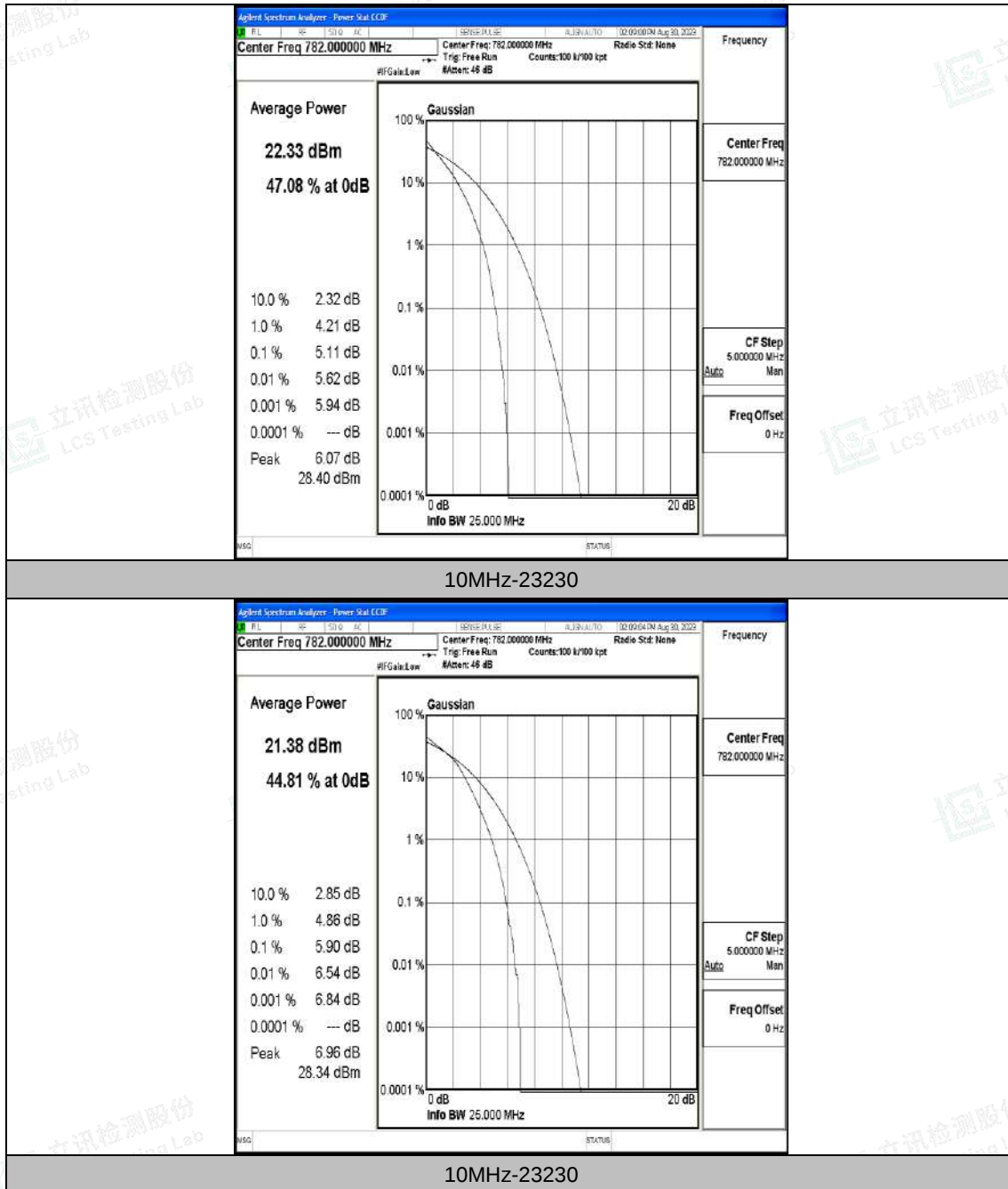


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I.3 26dB Bandwidth and Occupied Bandwidth

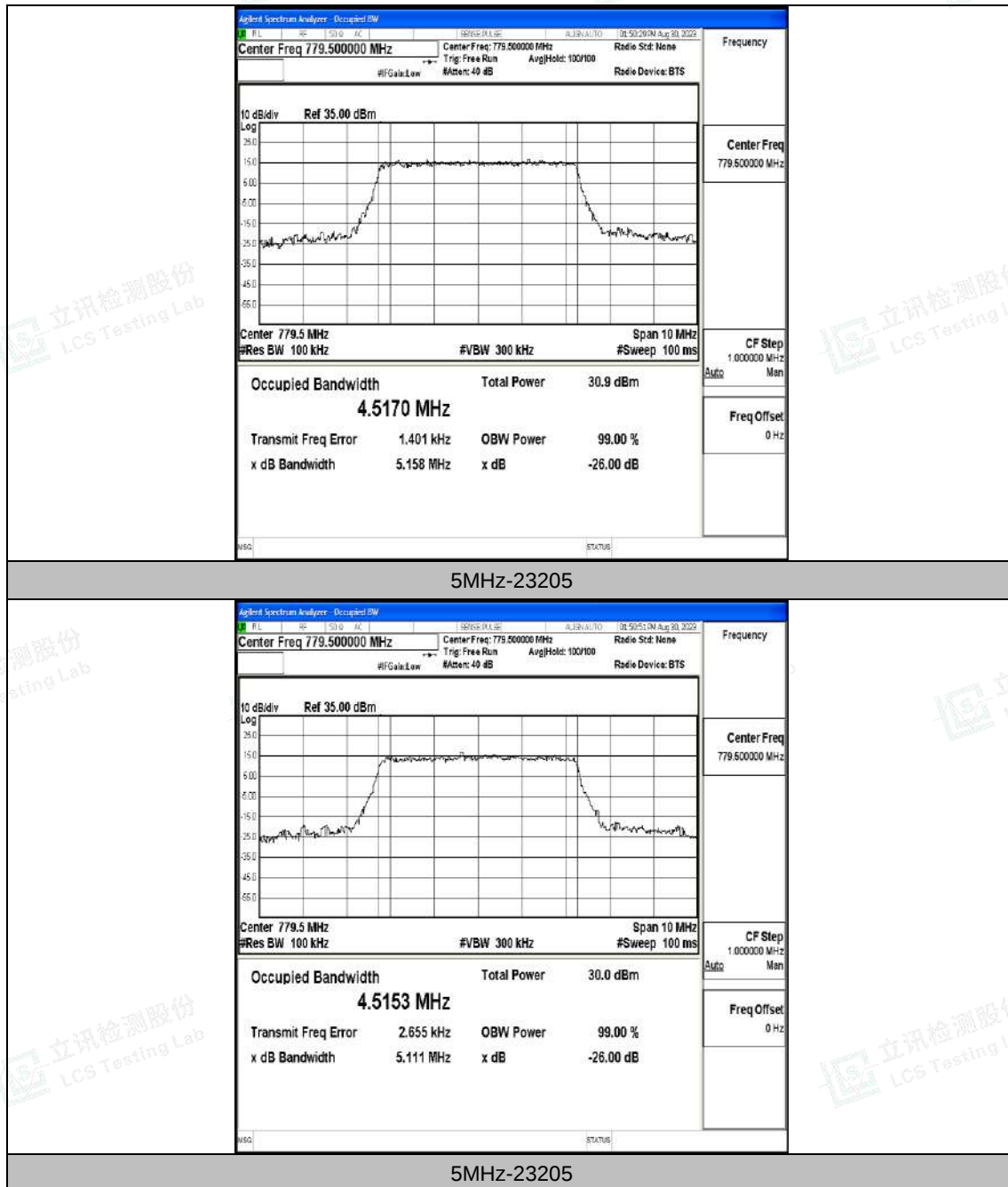
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.5170	5.158	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.5153	5.111	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.5159	5.159	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.5312	5.210	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.5136	5.126	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.5246	5.174	PASS
Band13	10MHz	QPSK	23230	50RB#0	9.0116	10.21	PASS
Band13	10MHz	16QAM	23230	50RB#0	8.9906	9.948	PASS





Test Graphs

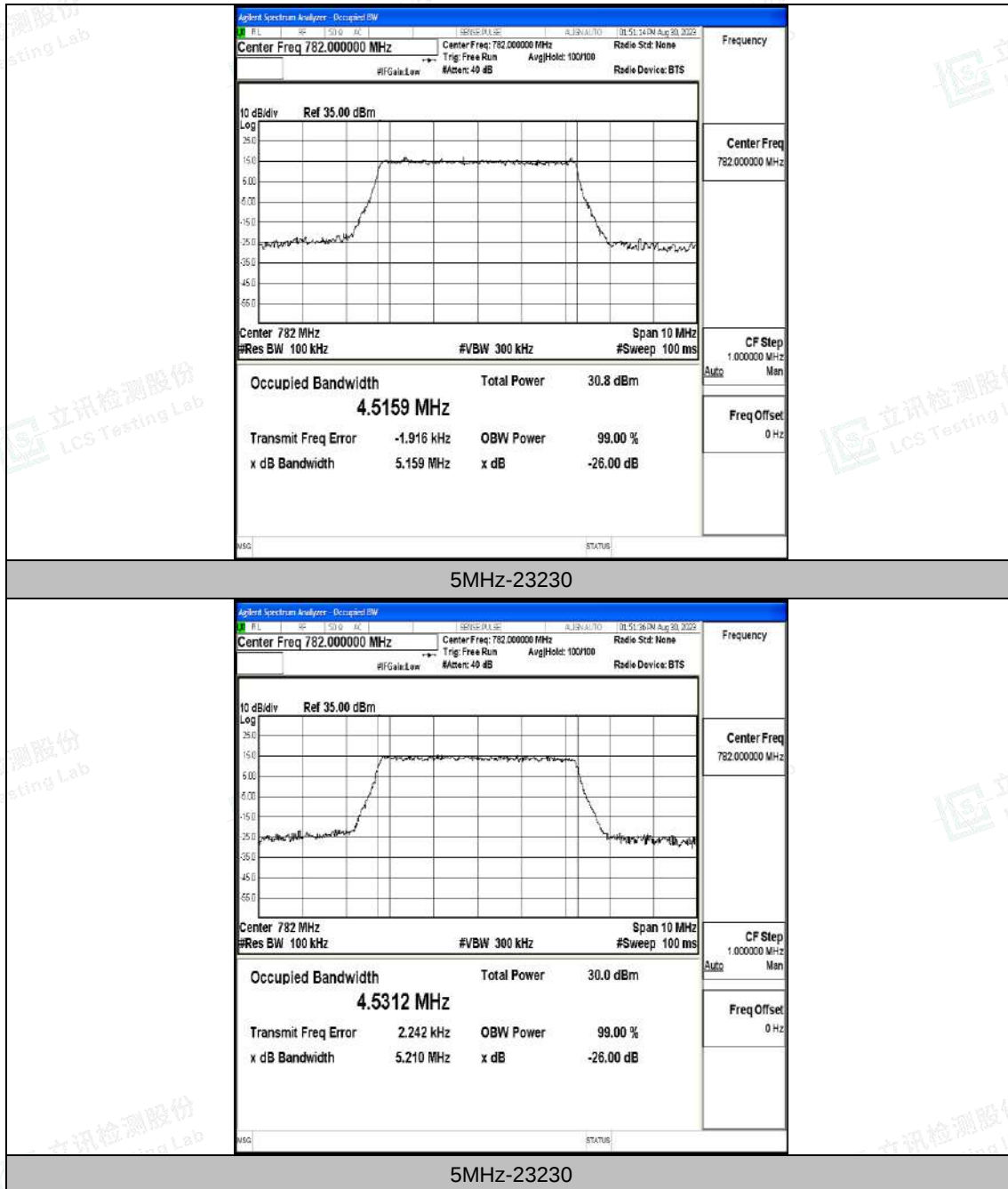


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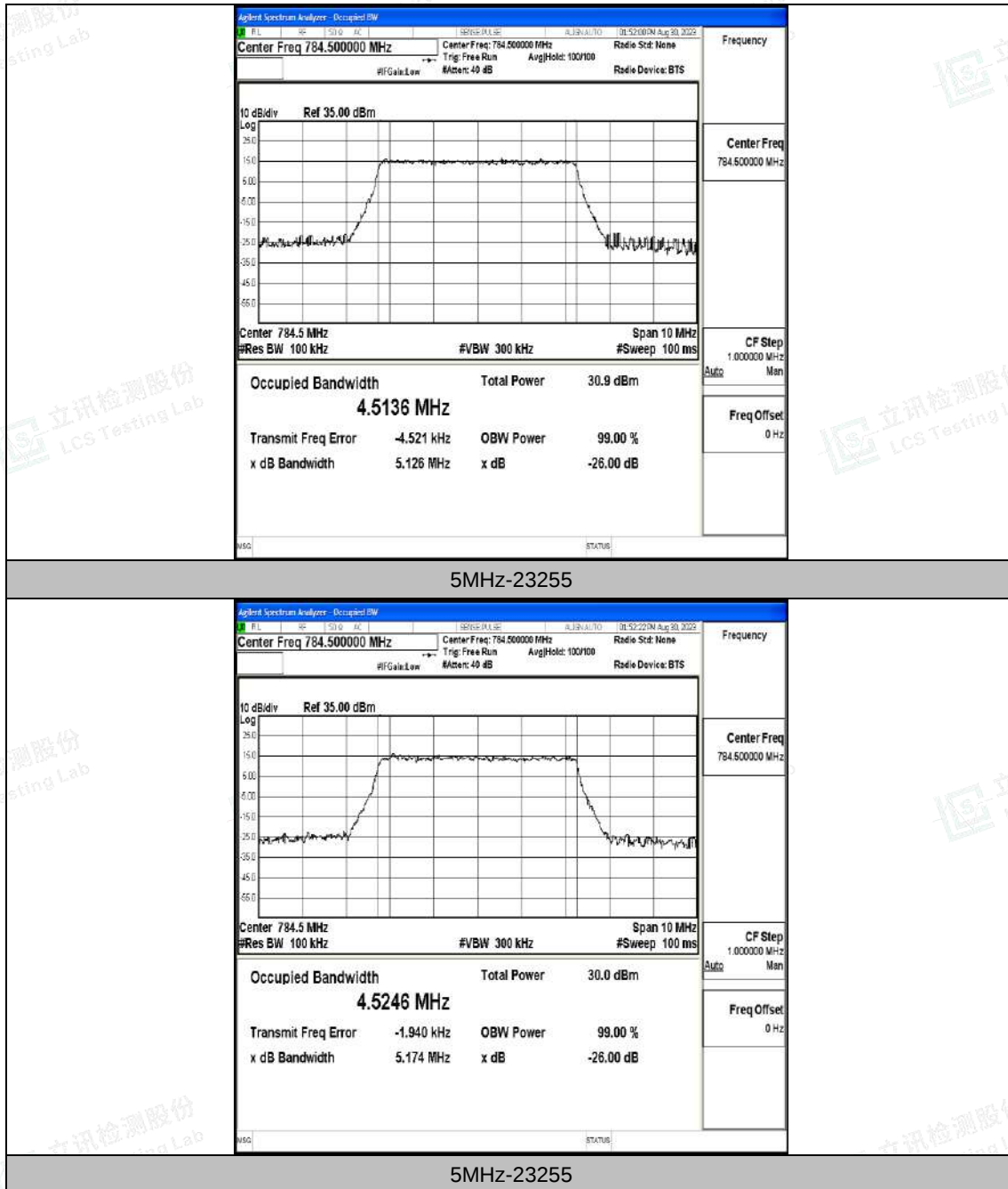


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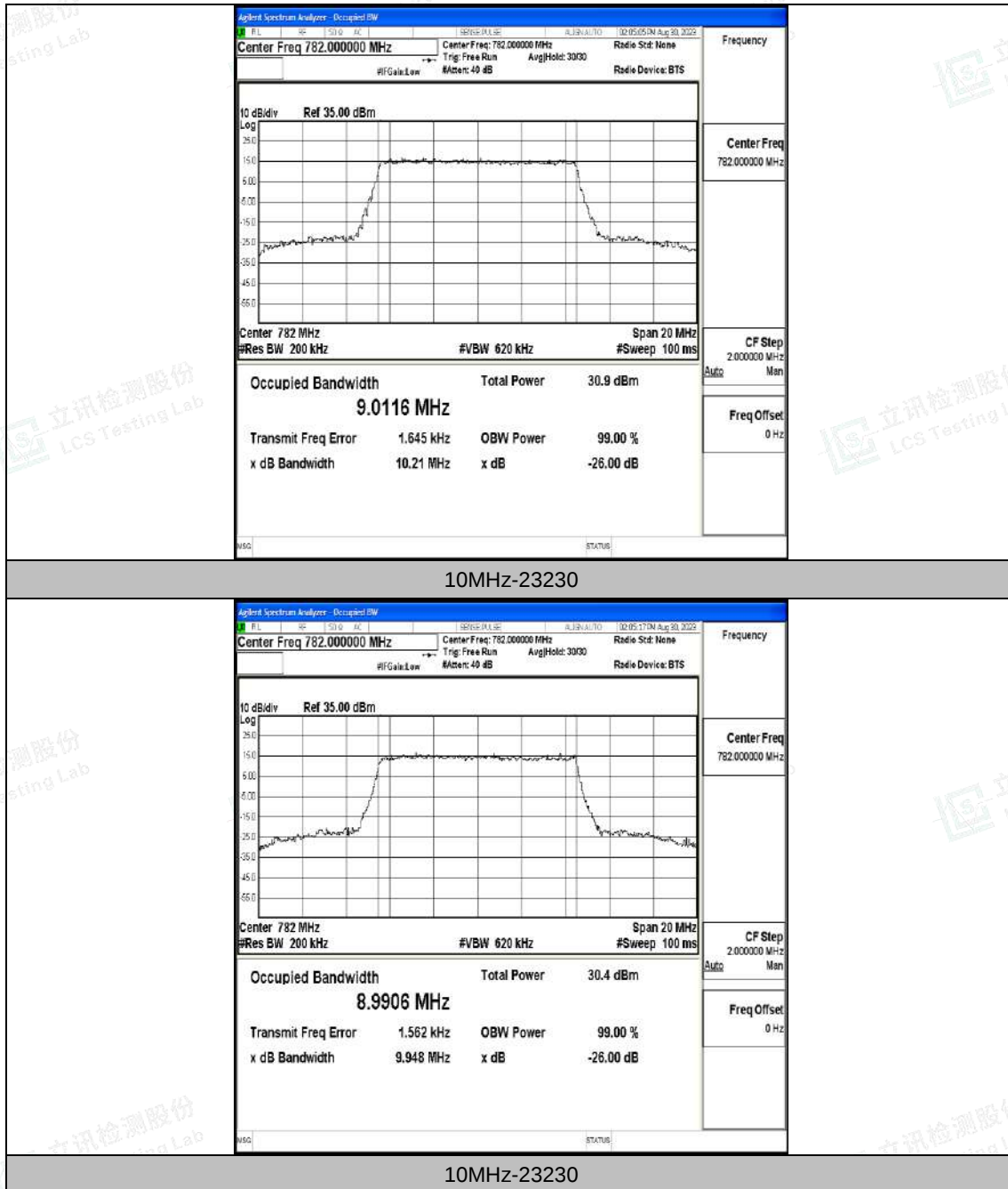


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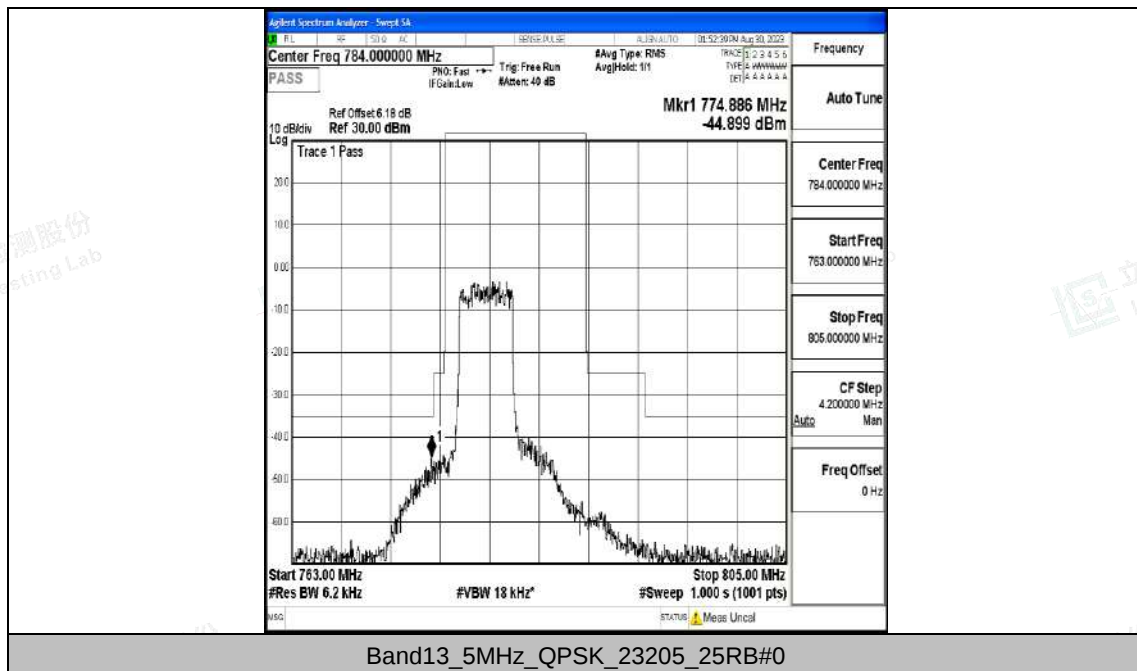


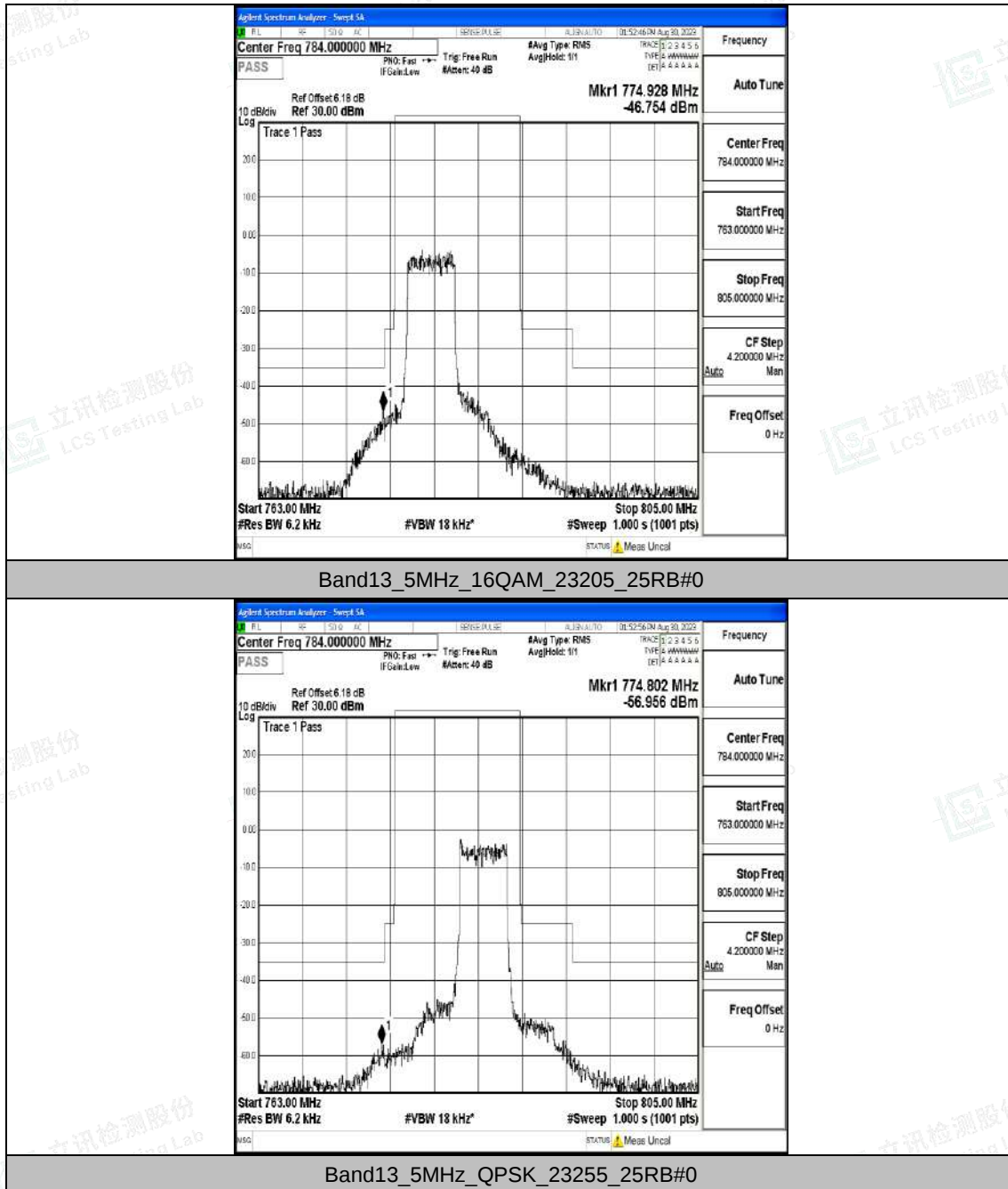
I.4 Band Edge

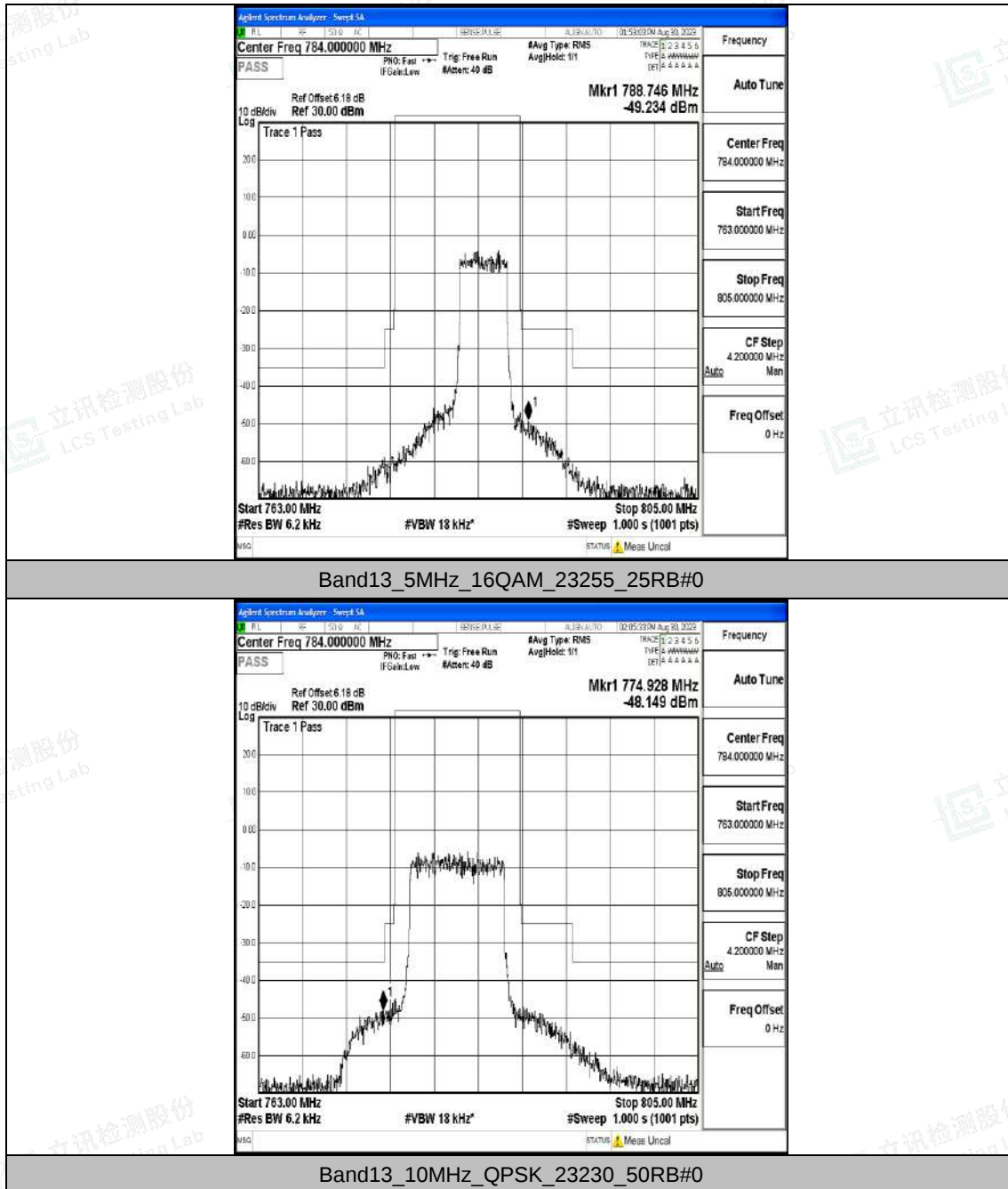
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Peak Frequency	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	774.89	-44.90	PASS
Band13	5MHz	16QAM	23205	25RB#0	774.93	-46.75	PASS
Band13	5MHz	QPSK	23255	25RB#0	774.80	-56.96	PASS
Band13	5MHz	16QAM	23255	25RB#0	788.75	-49.23	PASS
Band13	10MHz	QPSK	23230	50RB#0	774.93	-48.15	PASS
Band13	10MHz	16QAM	23230	50RB#0	774.51	-49.51	PASS

Test Graphs





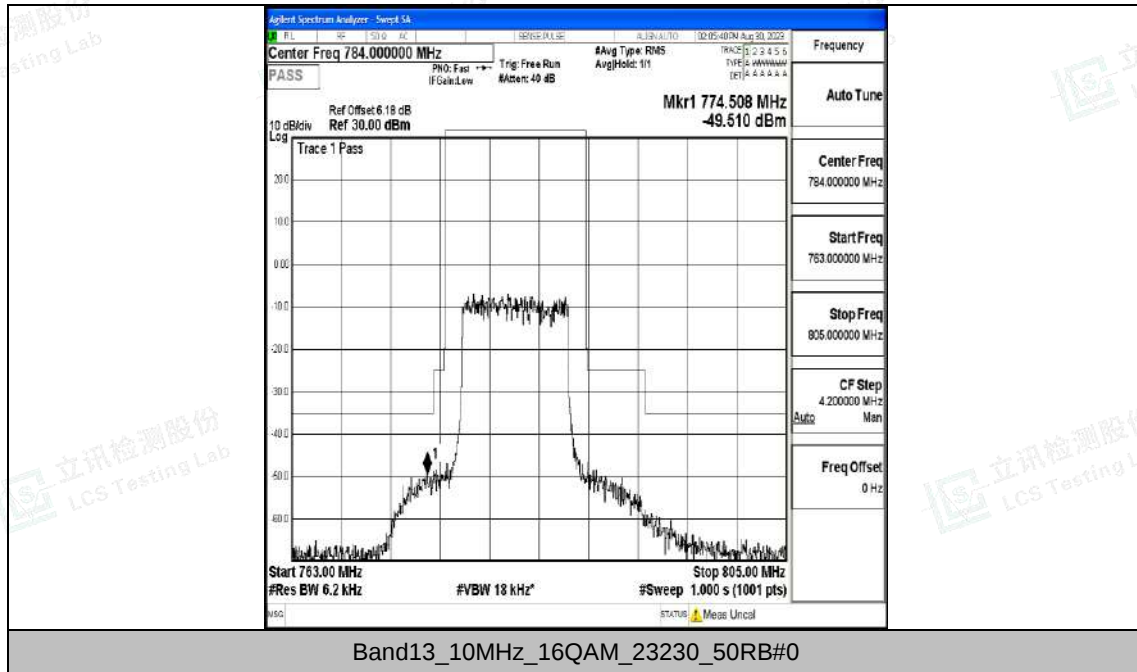


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I.5 Conducted Spurious Emission

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	0.009~0.15	-54.37	PASS
Band13	5MHz	QPSK	23205	1RB#0	0.15~30	-51.73	PASS
Band13	5MHz	QPSK	23205	1RB#0	30~1000	-55.39	PASS
Band13	5MHz	QPSK	23205	1RB#0	1000~3000	-41.92	PASS
Band13	5MHz	QPSK	23205	1RB#0	3000~10000	-44.15	PASS
Band13	5MHz	16QAM	23205	1RB#0	0.009~0.15	-56.89	PASS
Band13	5MHz	16QAM	23205	1RB#0	0.15~30	-53.78	PASS
Band13	5MHz	16QAM	23205	1RB#0	30~1000	-55.04	PASS
Band13	5MHz	16QAM	23205	1RB#0	1000~3000	-41.95	PASS
Band13	5MHz	16QAM	23205	1RB#0	3000~10000	-44.41	PASS
Band13	5MHz	QPSK	23230	1RB#0	0.009~0.15	-53.47	PASS
Band13	5MHz	QPSK	23230	1RB#0	0.15~30	-50.84	PASS
Band13	5MHz	QPSK	23230	1RB#0	30~1000	-62.82	PASS
Band13	5MHz	QPSK	23230	1RB#0	1000~3000	-42.96	PASS
Band13	5MHz	QPSK	23230	1RB#0	3000~10000	-44.22	PASS
Band13	5MHz	16QAM	23230	1RB#0	0.009~0.15	-55.48	PASS
Band13	5MHz	16QAM	23230	1RB#0	0.15~30	-53.71	PASS
Band13	5MHz	16QAM	23230	1RB#0	30~1000	-62.66	PASS
Band13	5MHz	16QAM	23230	1RB#0	1000~3000	-43.62	PASS
Band13	5MHz	16QAM	23230	1RB#0	3000~10000	-44.24	PASS
Band13	5MHz	QPSK	23255	1RB#0	0.009~0.15	-50.53	PASS
Band13	5MHz	QPSK	23255	1RB#0	0.15~30	-53.37	PASS
Band13	5MHz	QPSK	23255	1RB#0	30~1000	-62.82	PASS
Band13	5MHz	QPSK	23255	1RB#0	1000~3000	-42.42	PASS
Band13	5MHz	QPSK	23255	1RB#0	3000~10000	-44.48	PASS
Band13	5MHz	16QAM	23255	1RB#0	0.009~0.15	-54.89	PASS
Band13	5MHz	16QAM	23255	1RB#0	0.15~30	-52.65	PASS
Band13	5MHz	16QAM	23255	1RB#0	30~1000	-62.61	PASS
Band13	5MHz	16QAM	23255	1RB#0	1000~3000	-40.72	PASS
Band13	5MHz	16QAM	23255	1RB#0	3000~10000	-44.35	PASS
Band13	10MHz	QPSK	23230	1RB#0	0.009~0.15	-55.16	PASS
Band13	10MHz	QPSK	23230	1RB#0	0.15~30	-54.04	PASS
Band13	10MHz	QPSK	23230	1RB#0	30~1000	-62.97	PASS
Band13	10MHz	QPSK	23230	1RB#0	1000~3000	-42.41	PASS
Band13	10MHz	QPSK	23230	1RB#0	3000~10000	-44.31	PASS



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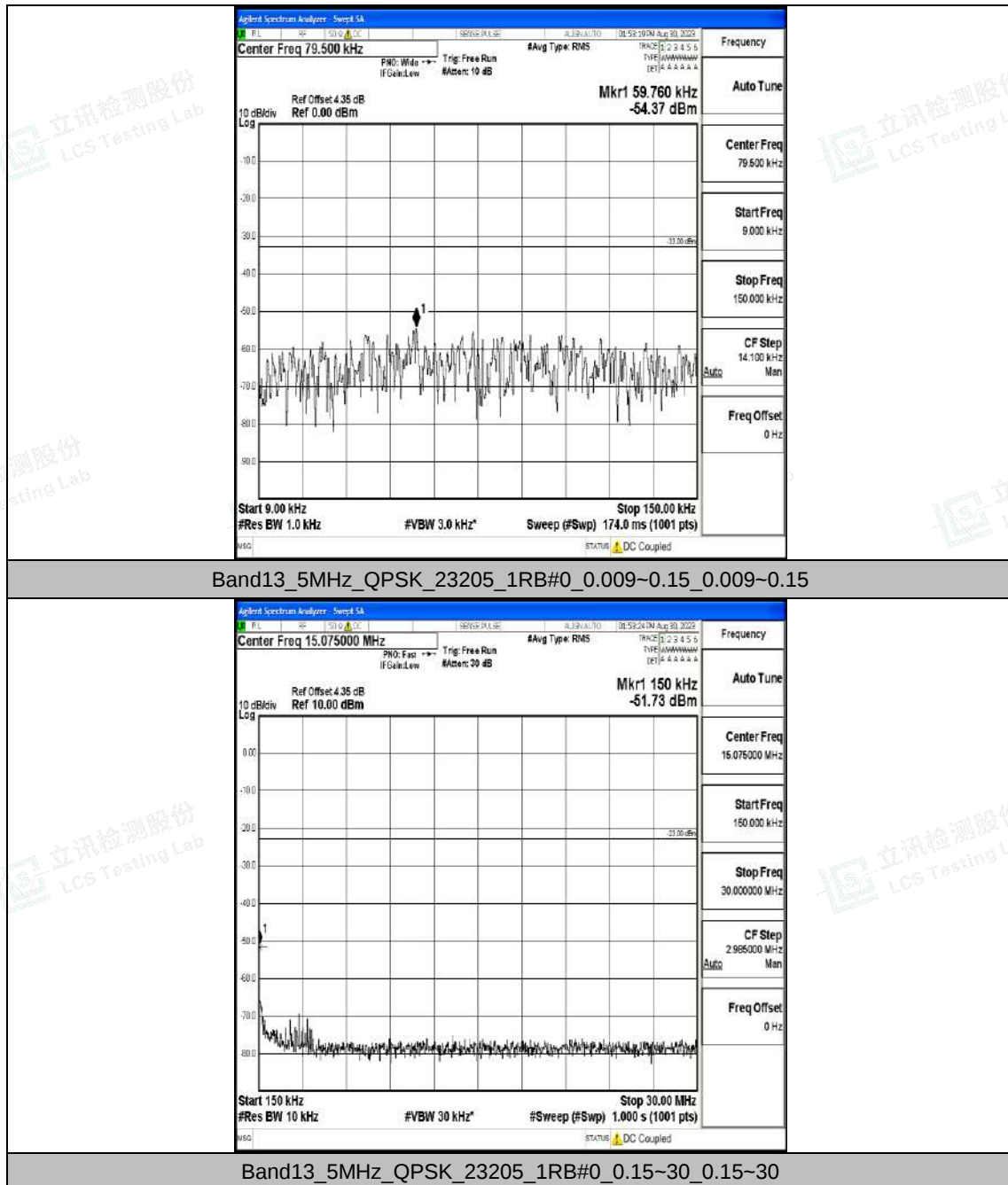
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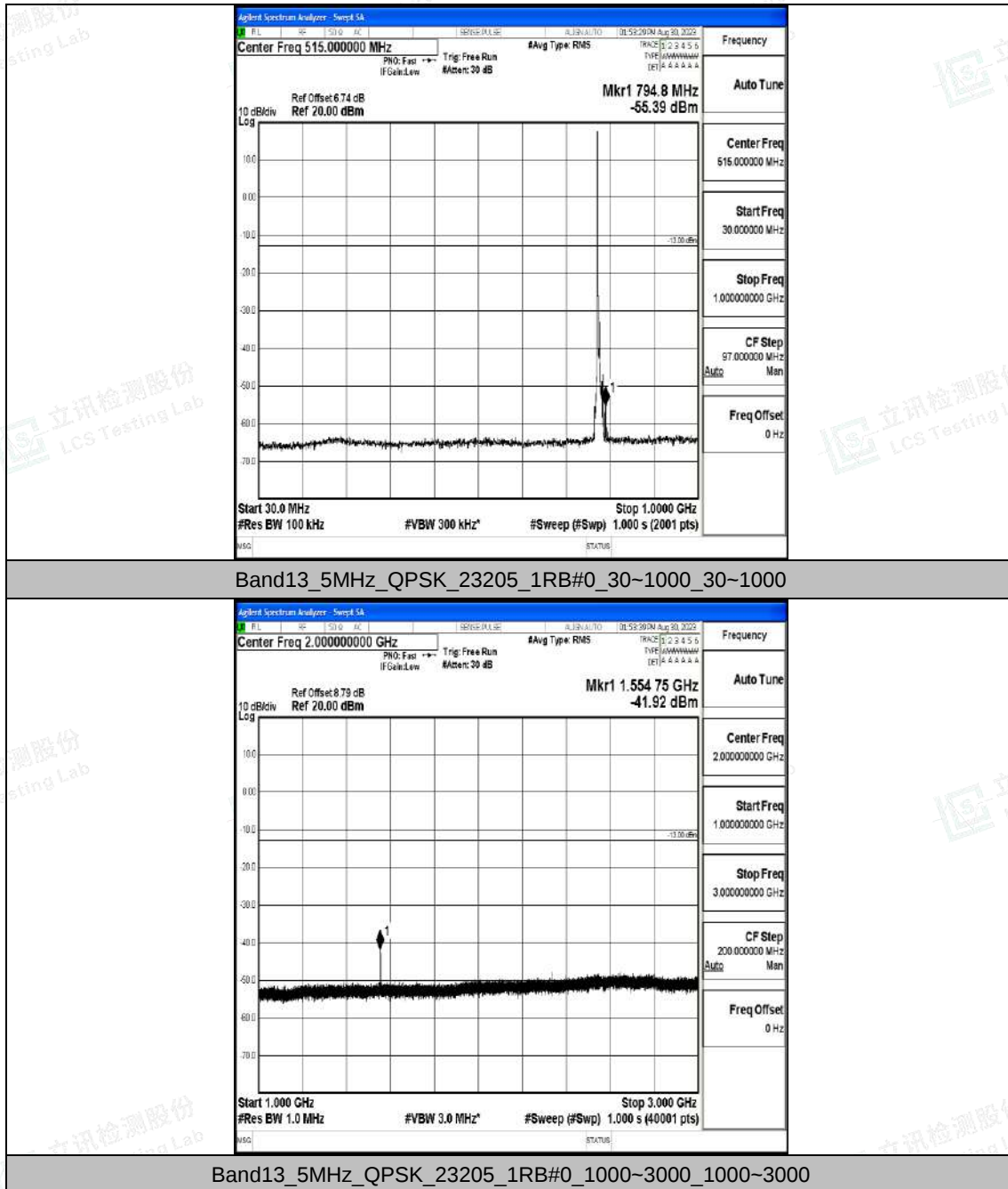
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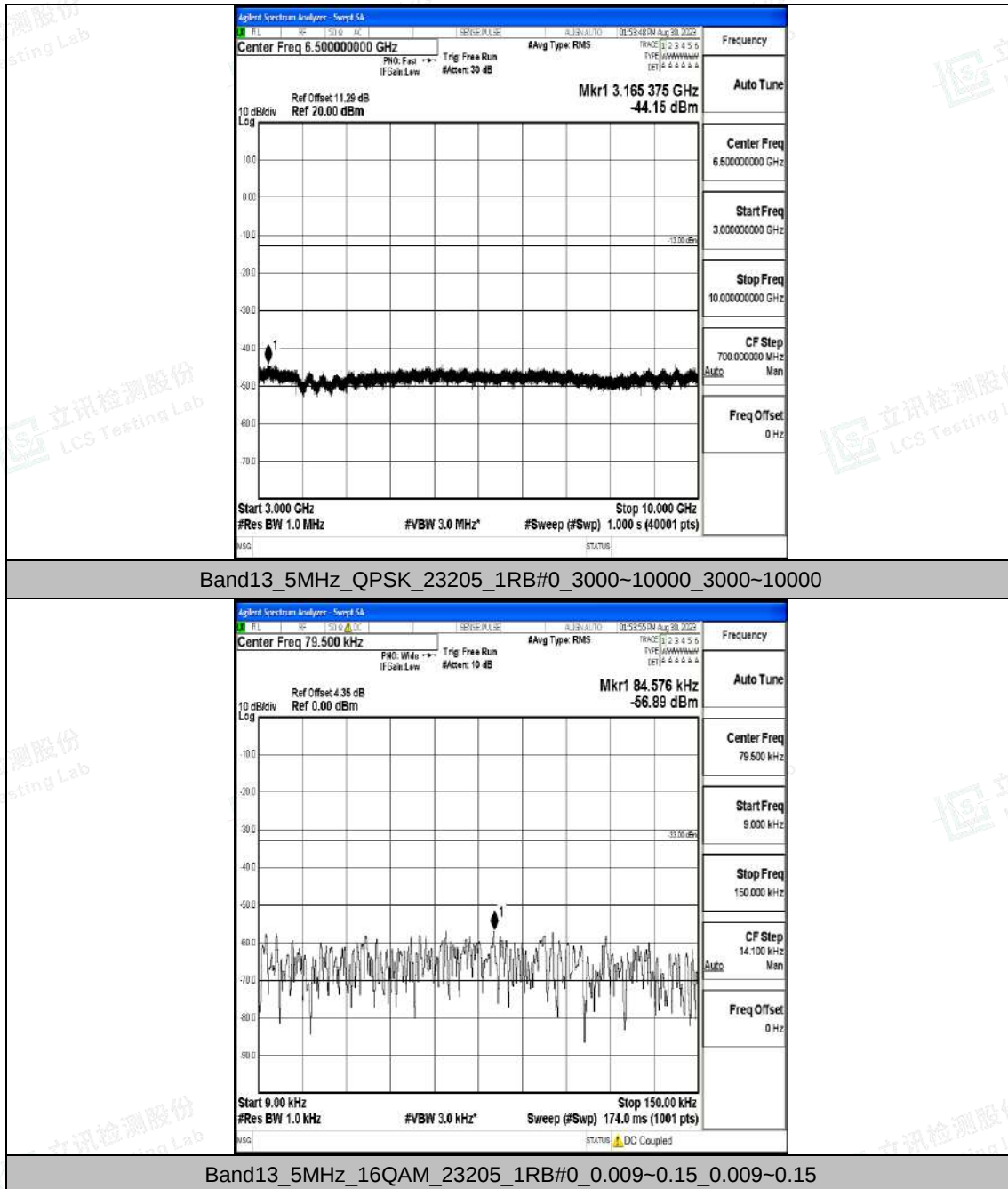


Band13	10MHz	16QAM	23230	1RB#0	0.009~0.15	-56.21	PASS
Band13	10MHz	16QAM	23230	1RB#0	0.15~30	-55.60	PASS
Band13	10MHz	16QAM	23230	1RB#0	30~1000	-62.91	PASS
Band13	10MHz	16QAM	23230	1RB#0	1000~3000	-42.79	PASS
Band13	10MHz	16QAM	23230	1RB#0	3000~10000	-44.45	PASS

Test Graphs





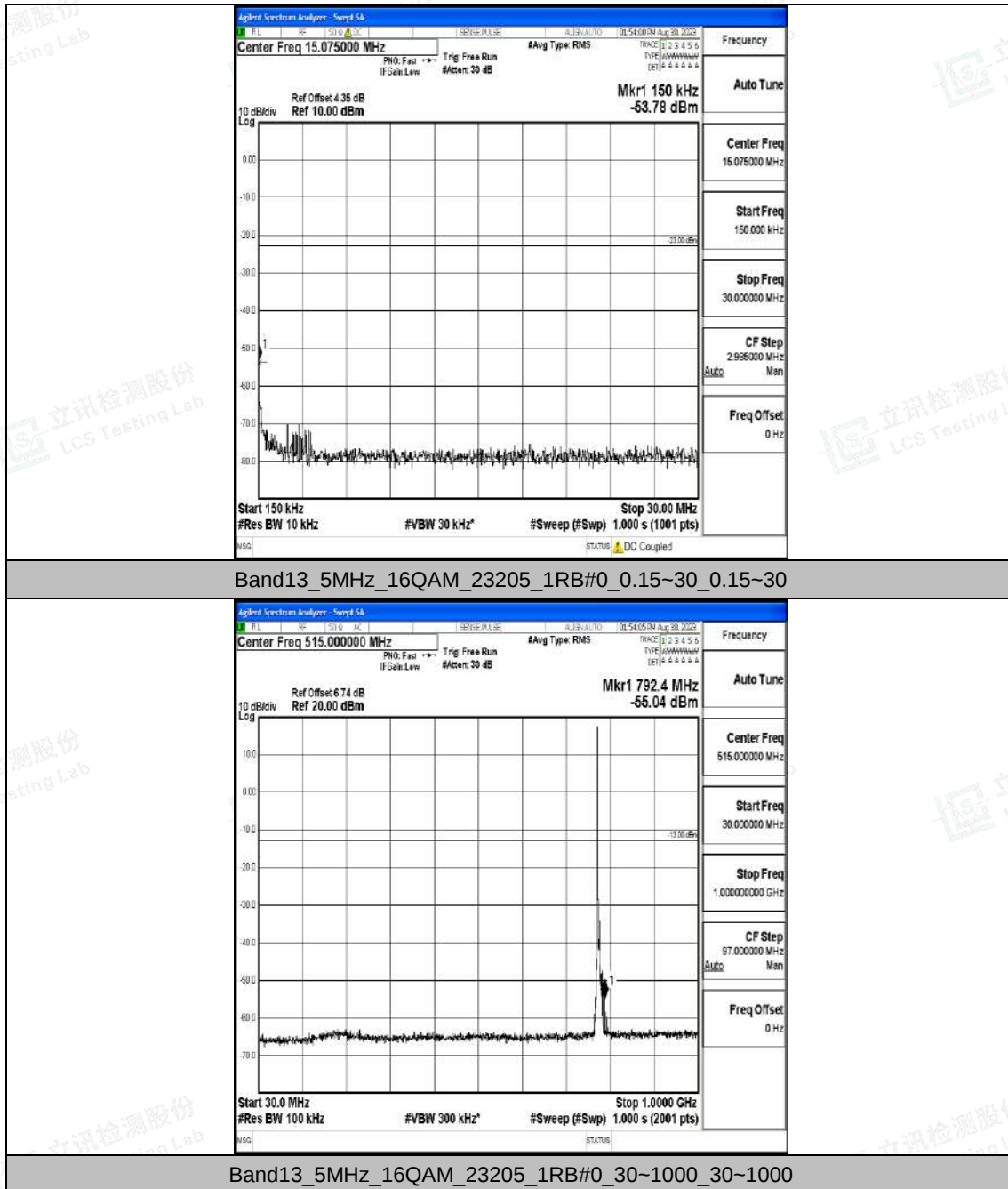


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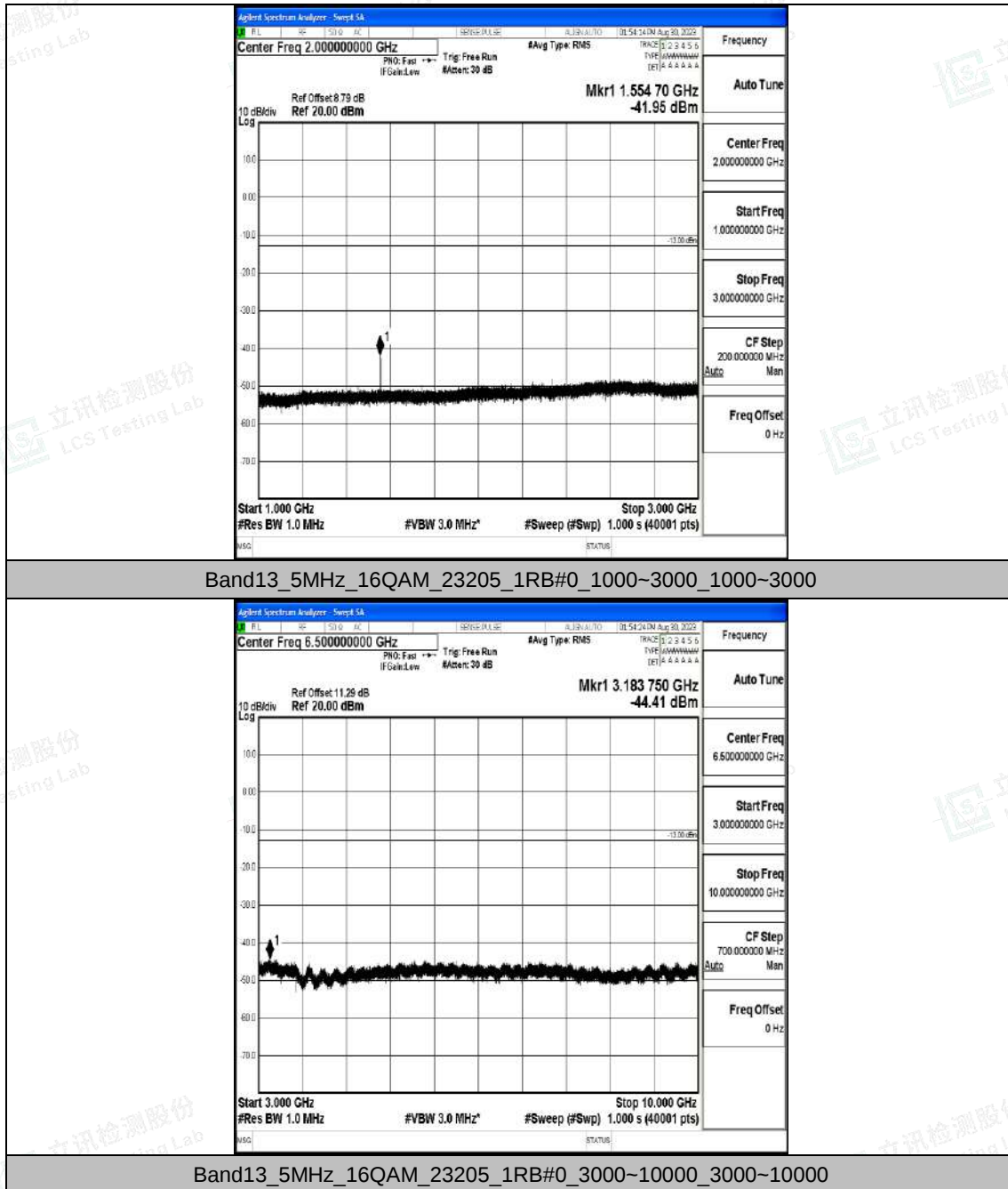


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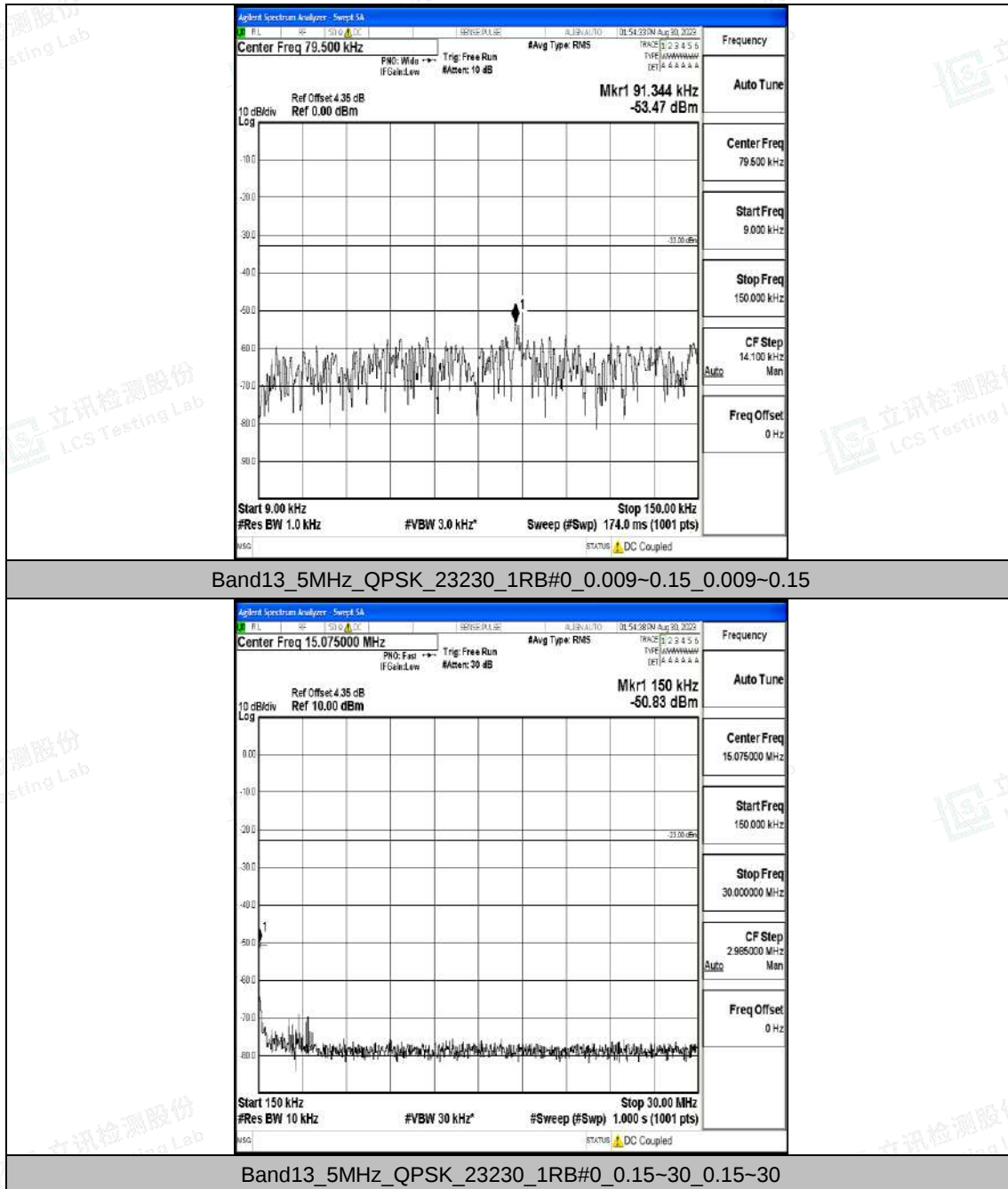


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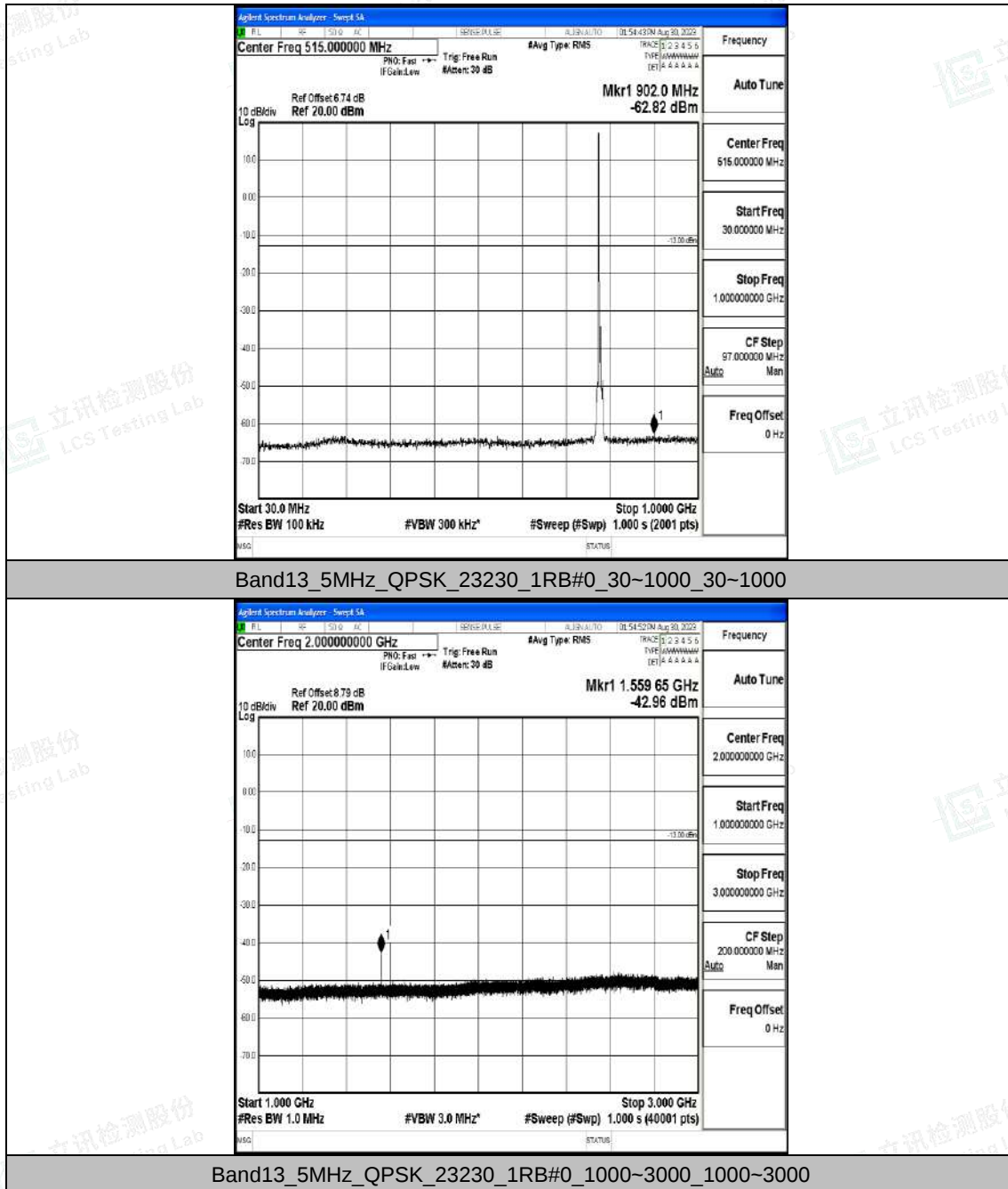


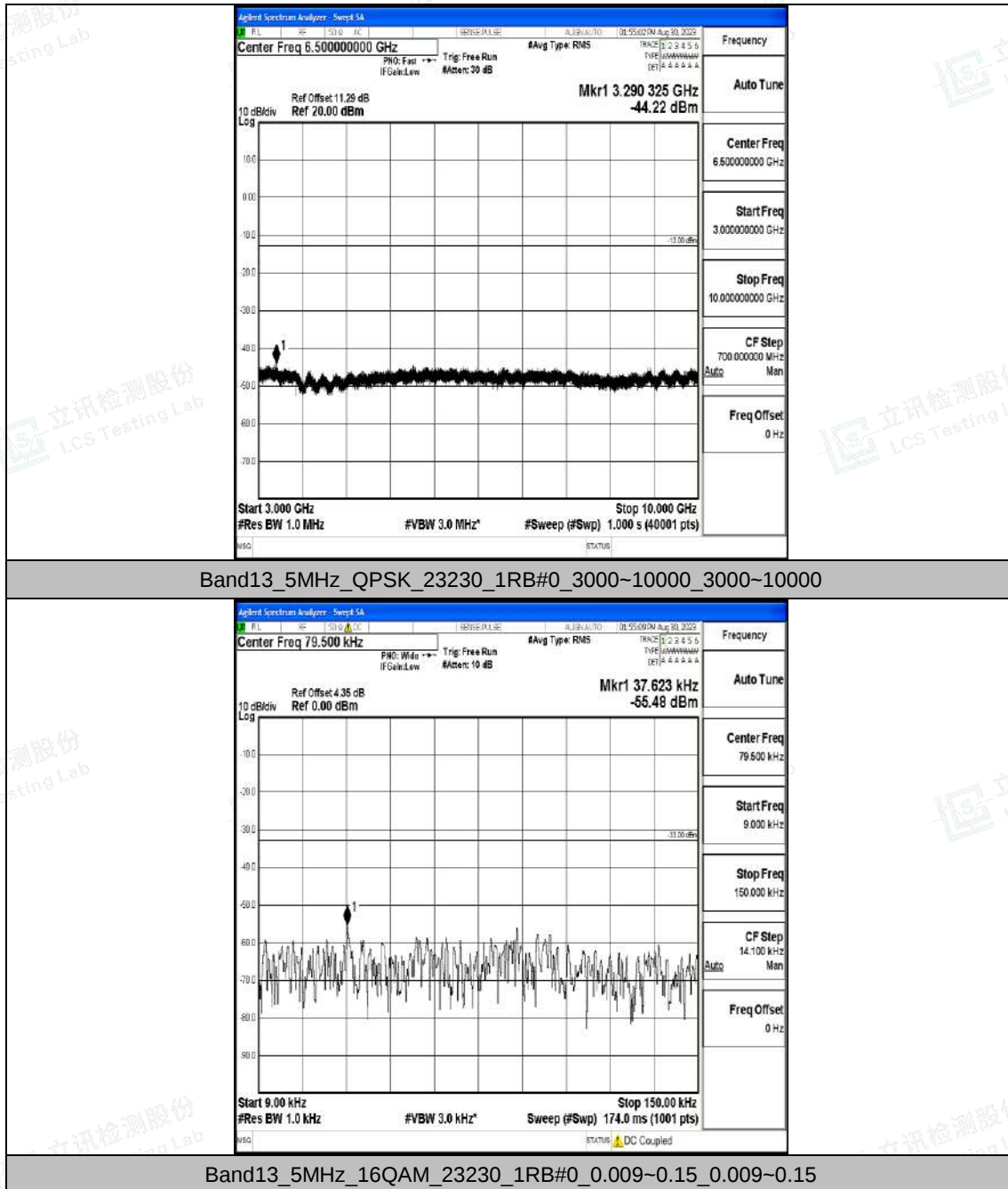
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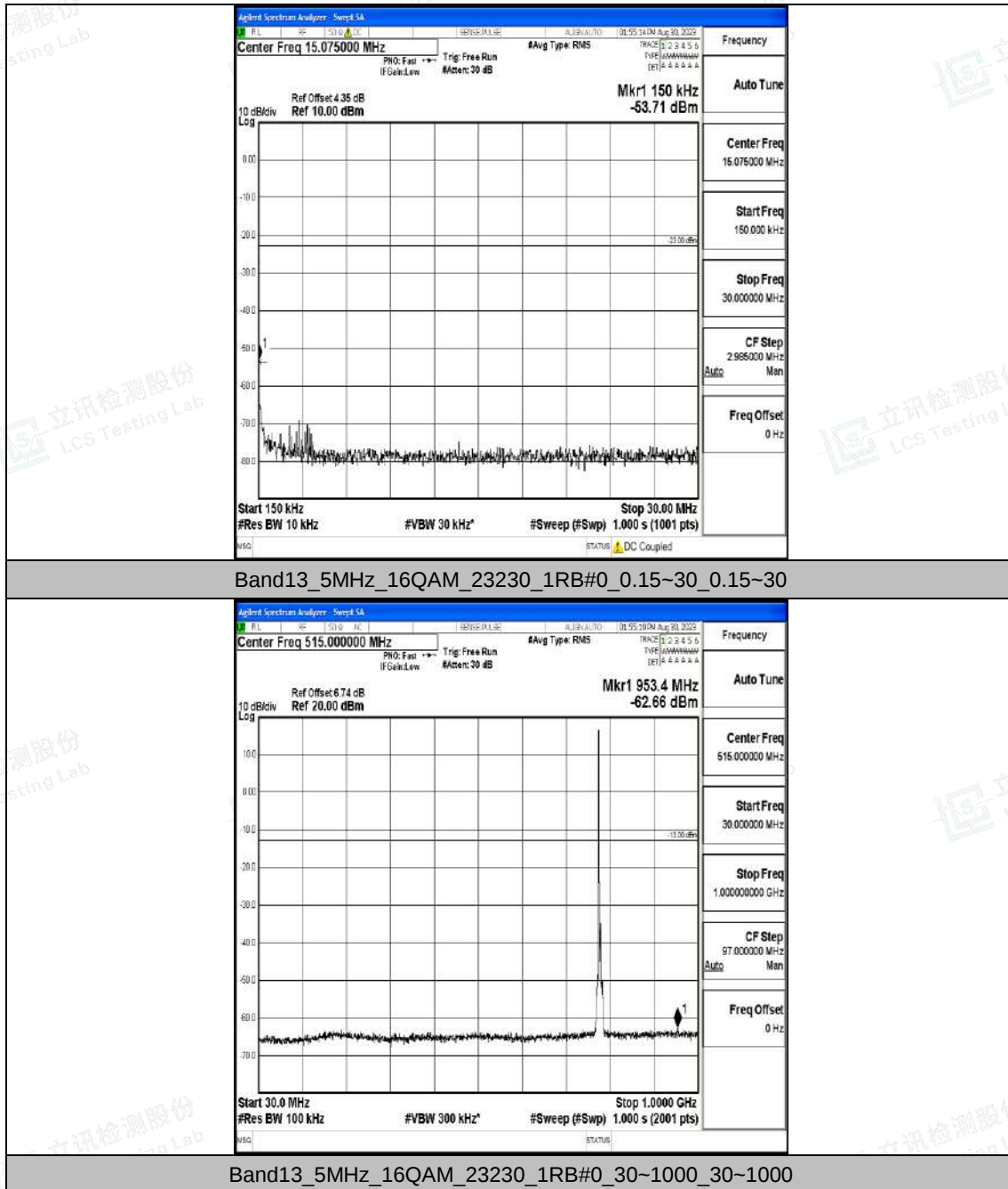
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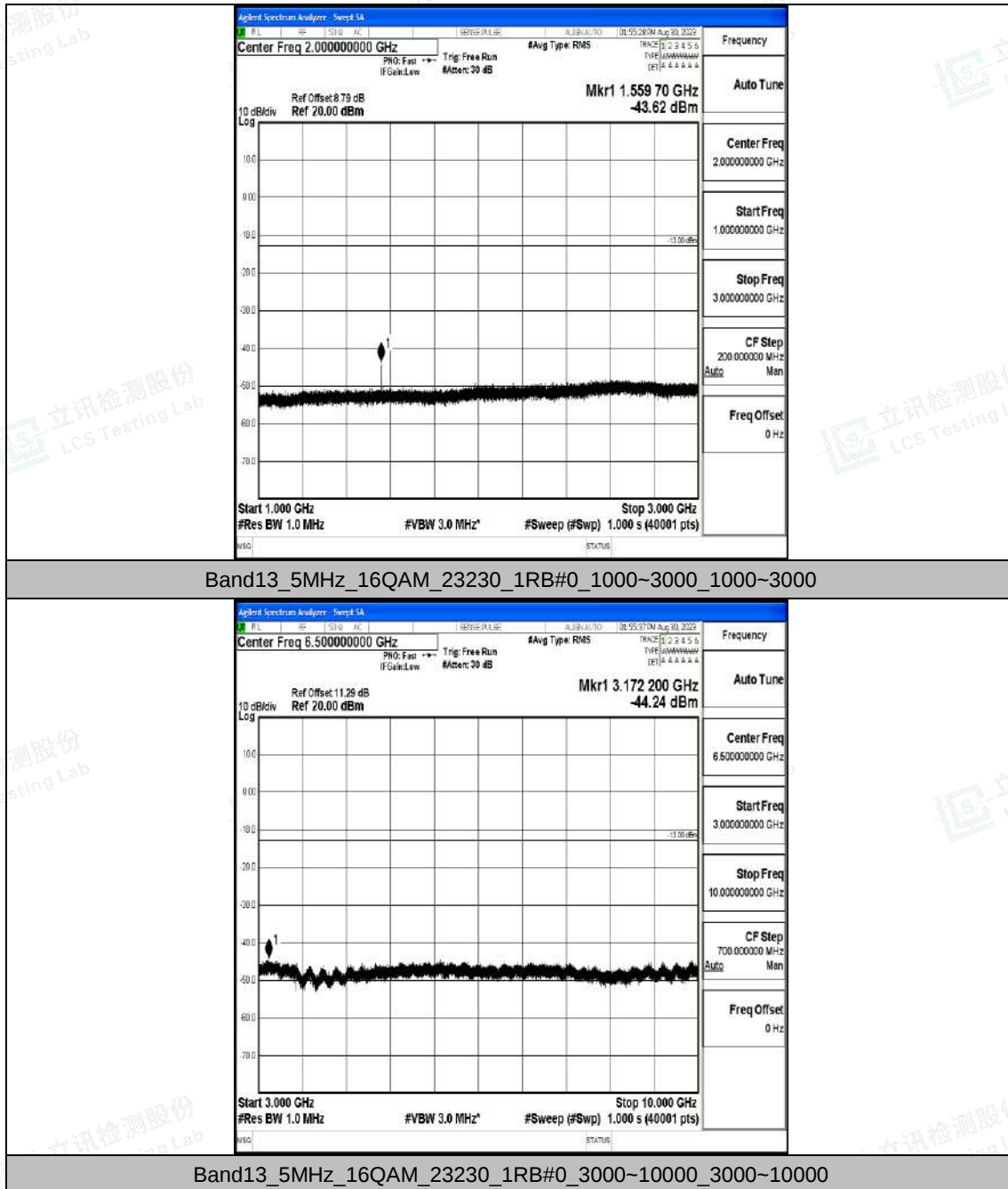


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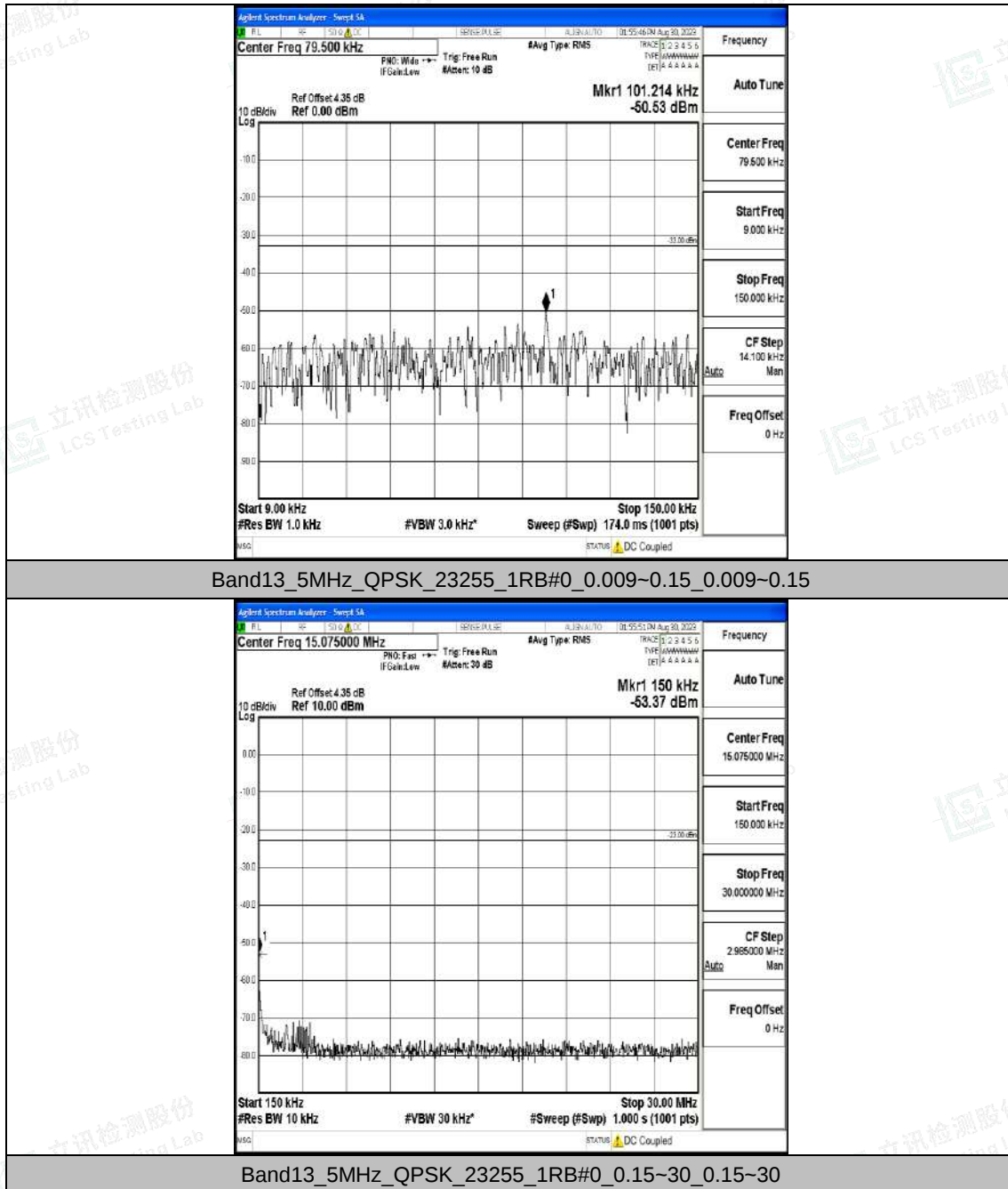


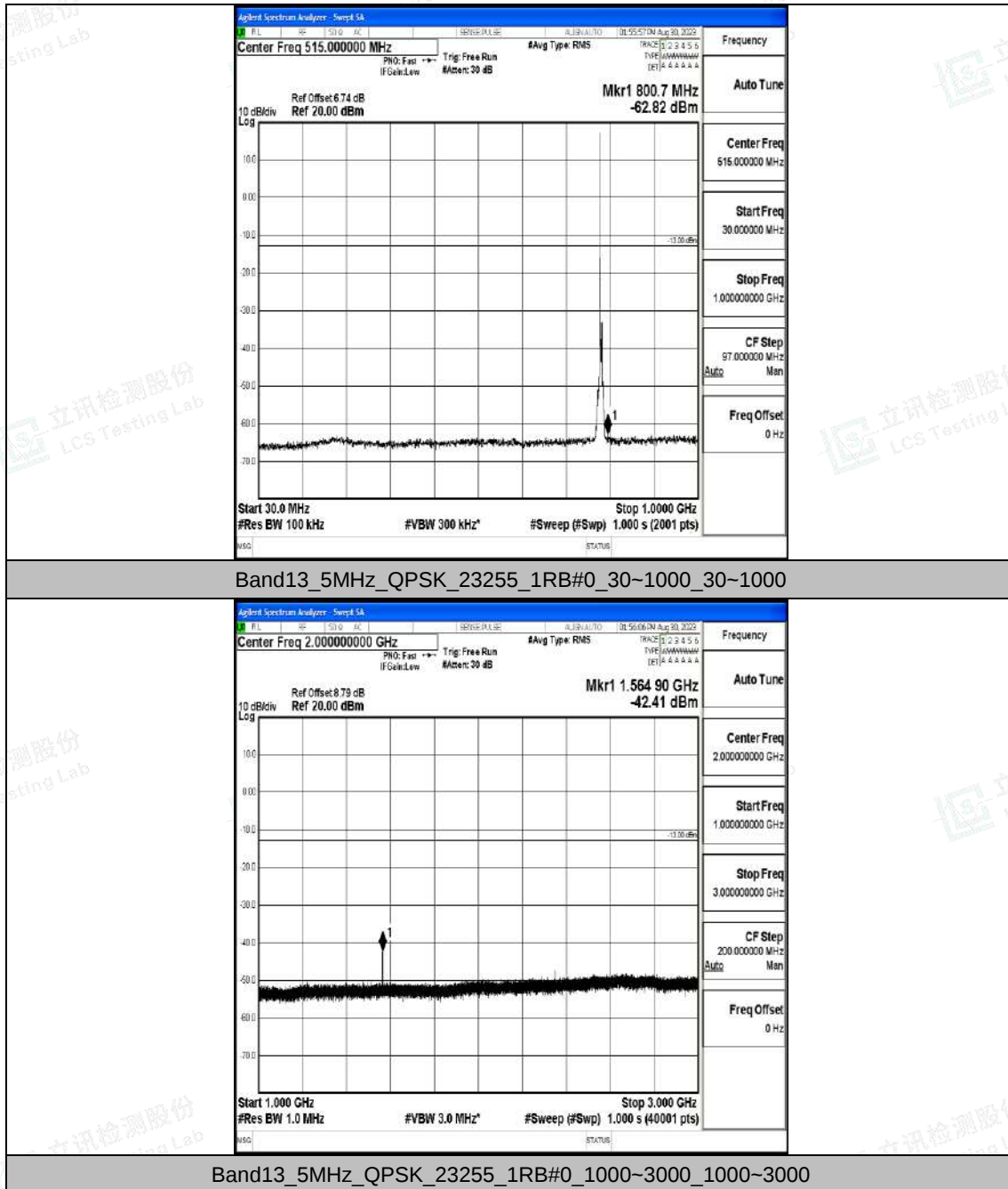
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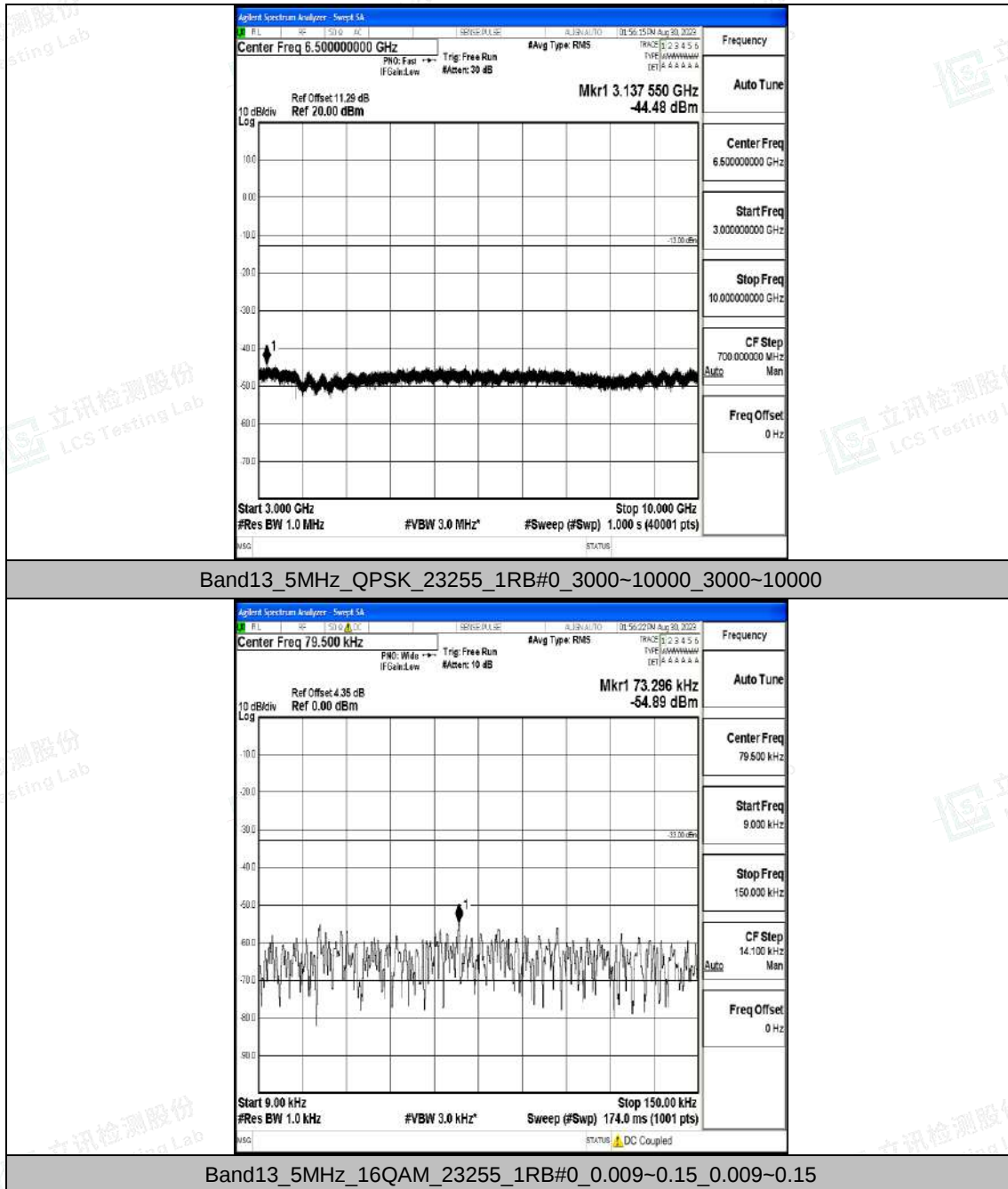


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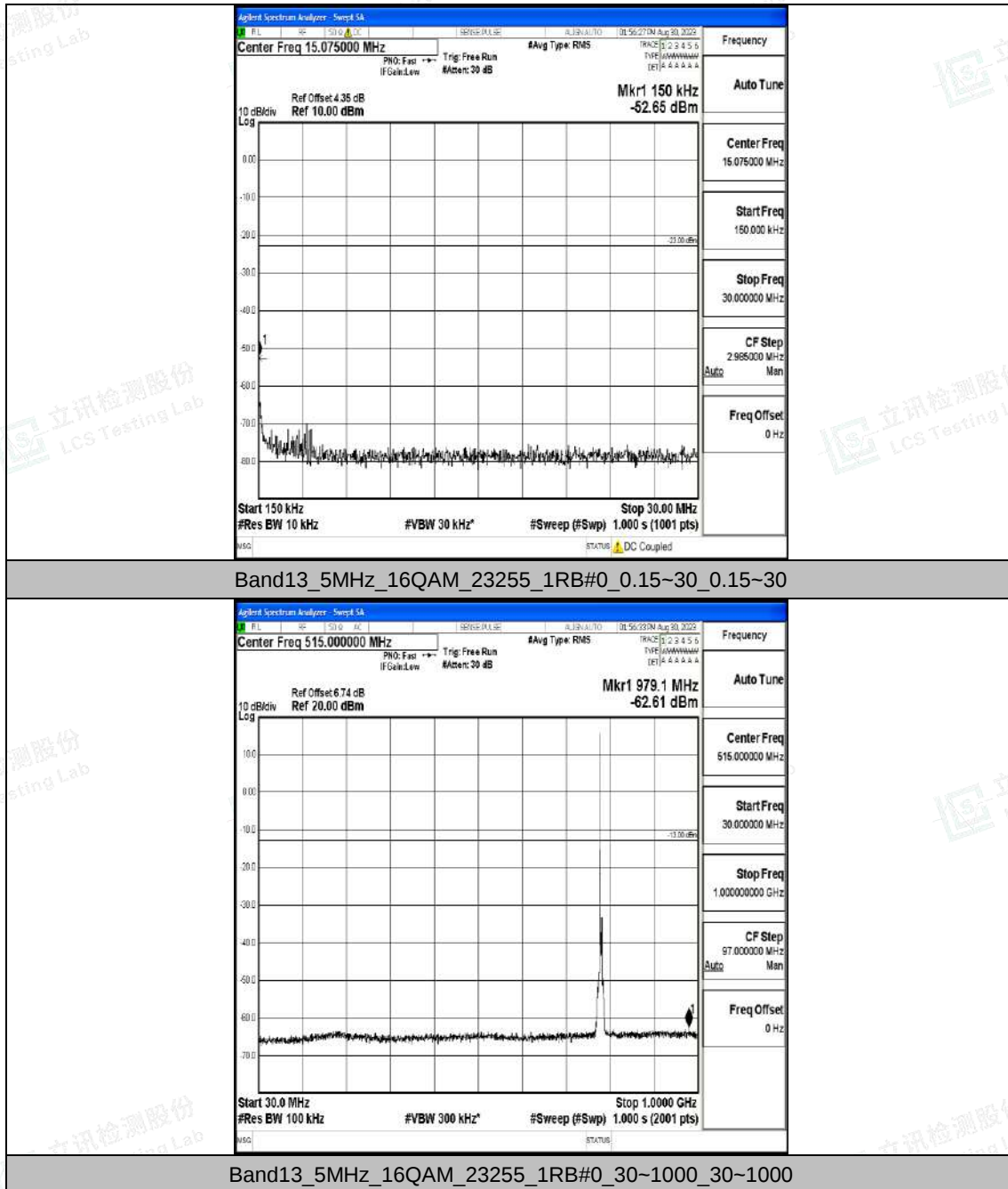


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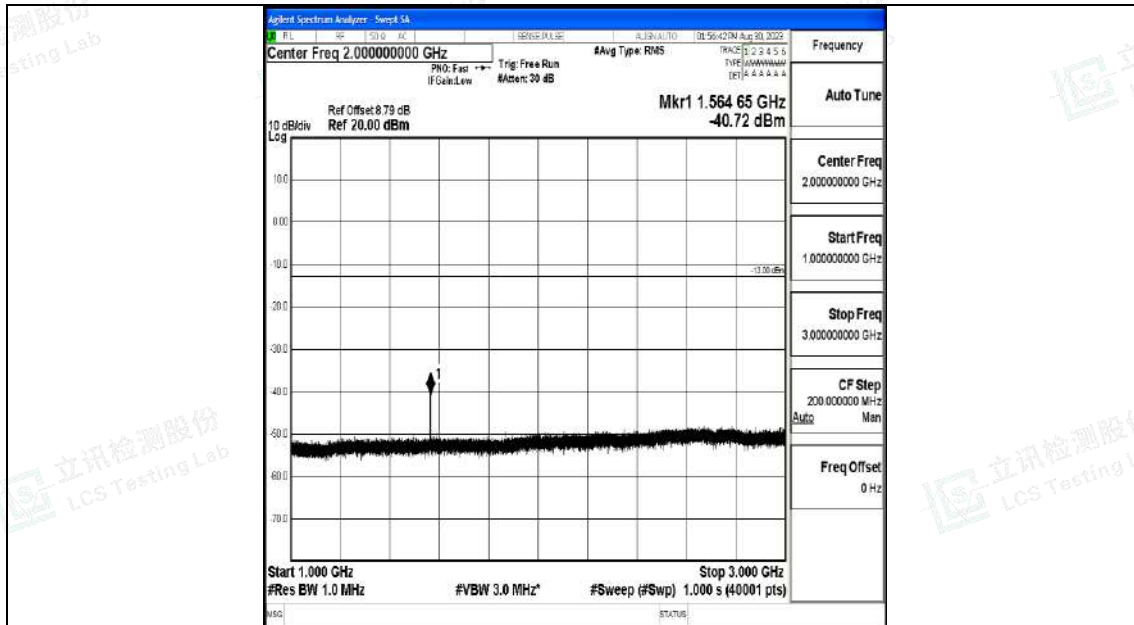


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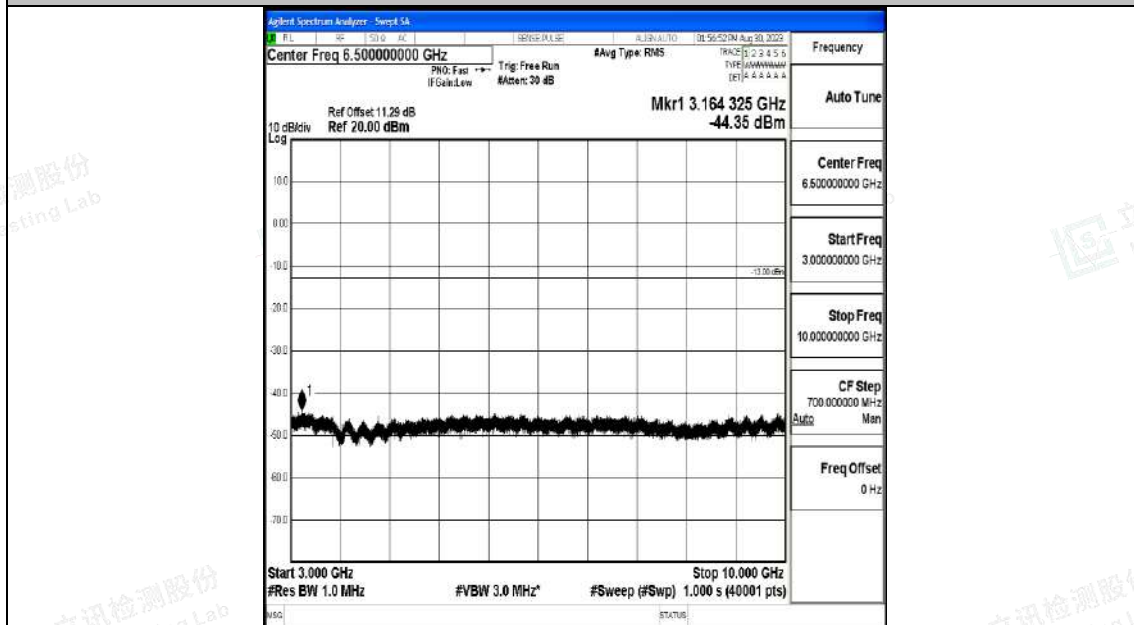
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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Band13_5MHz_16QAM_23255_1RB#0_1000~3000_1000~3000



Band13_5MHz_16QAM_23255_1RB#0_3000~10000_3000~10000

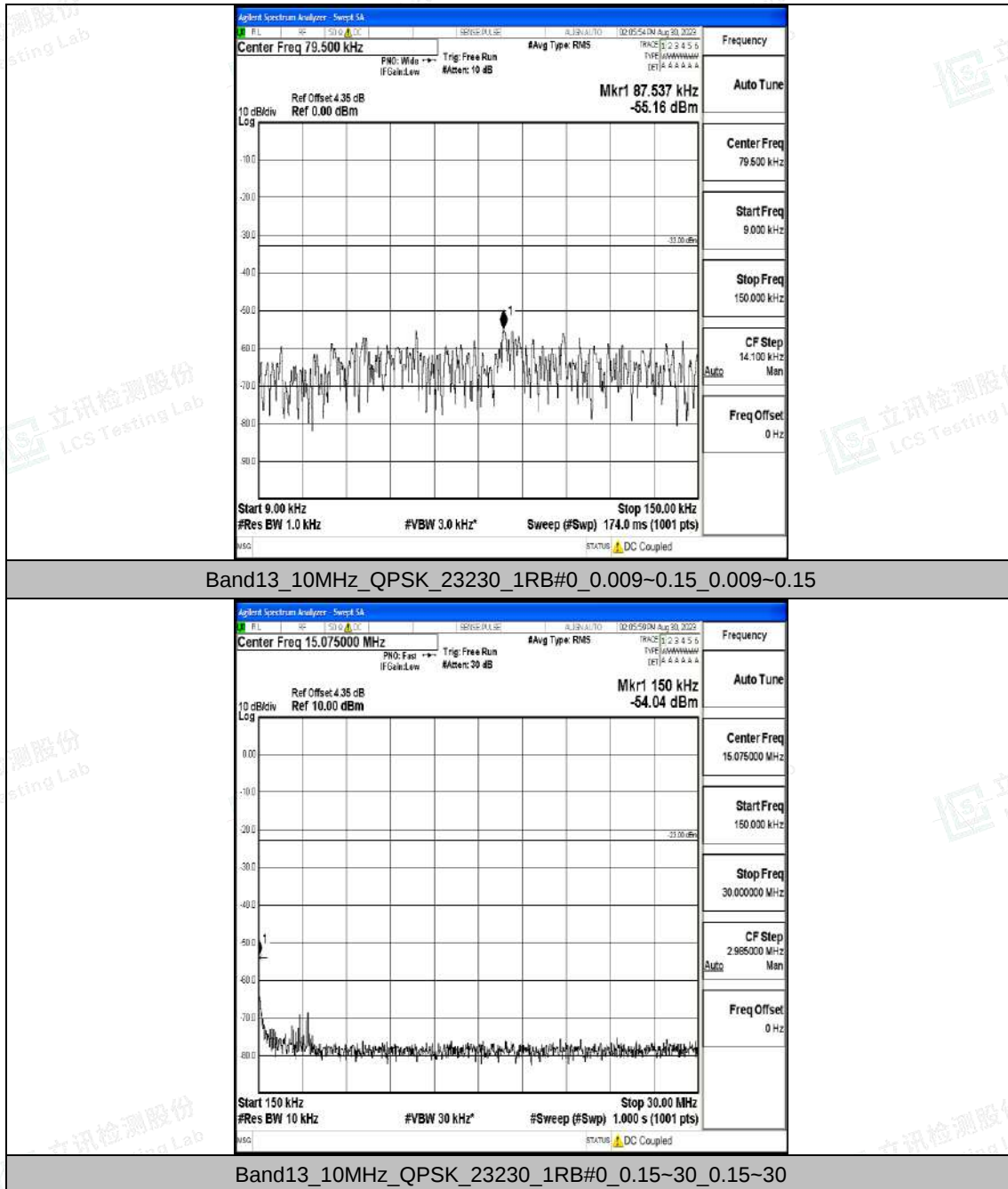


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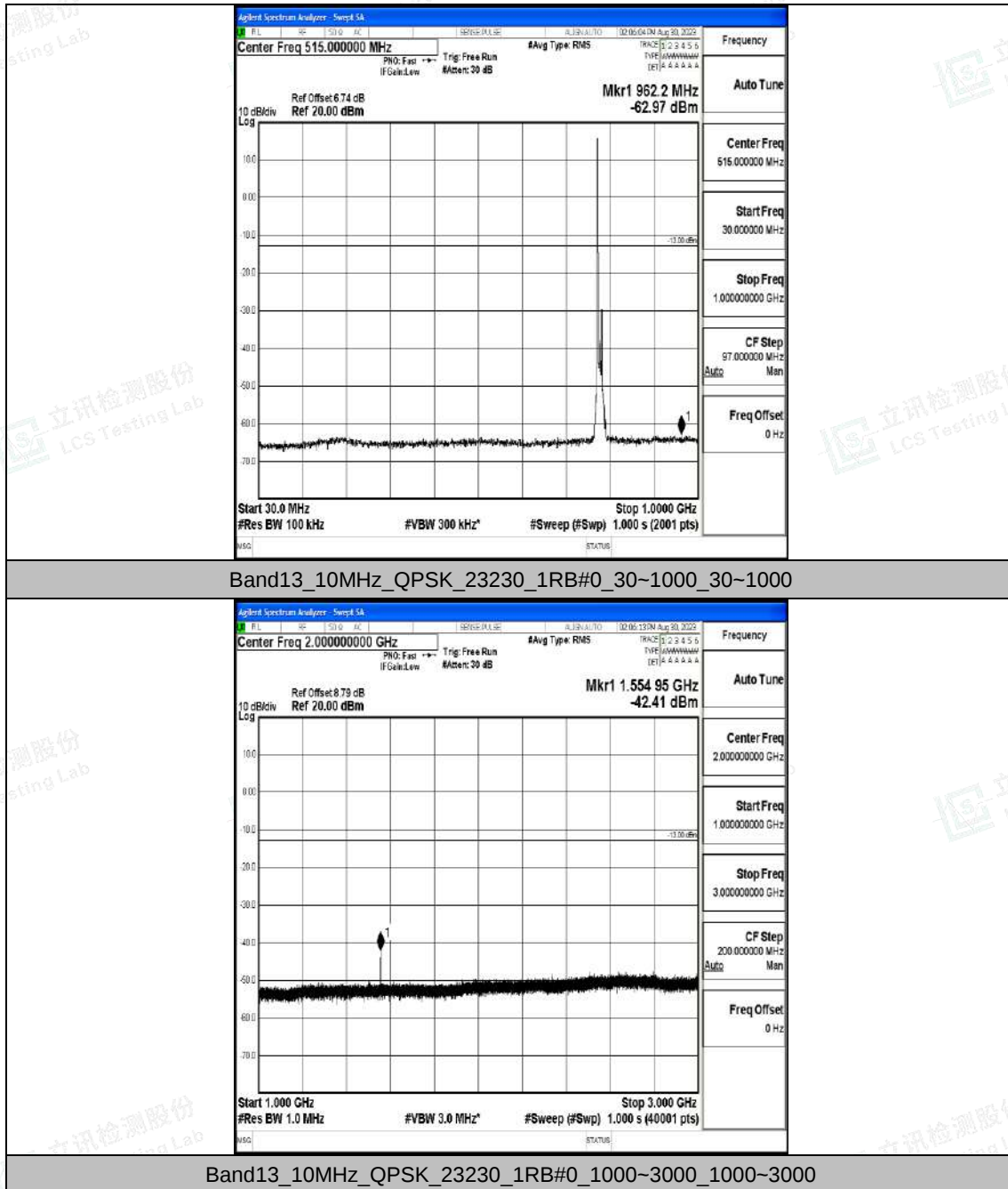


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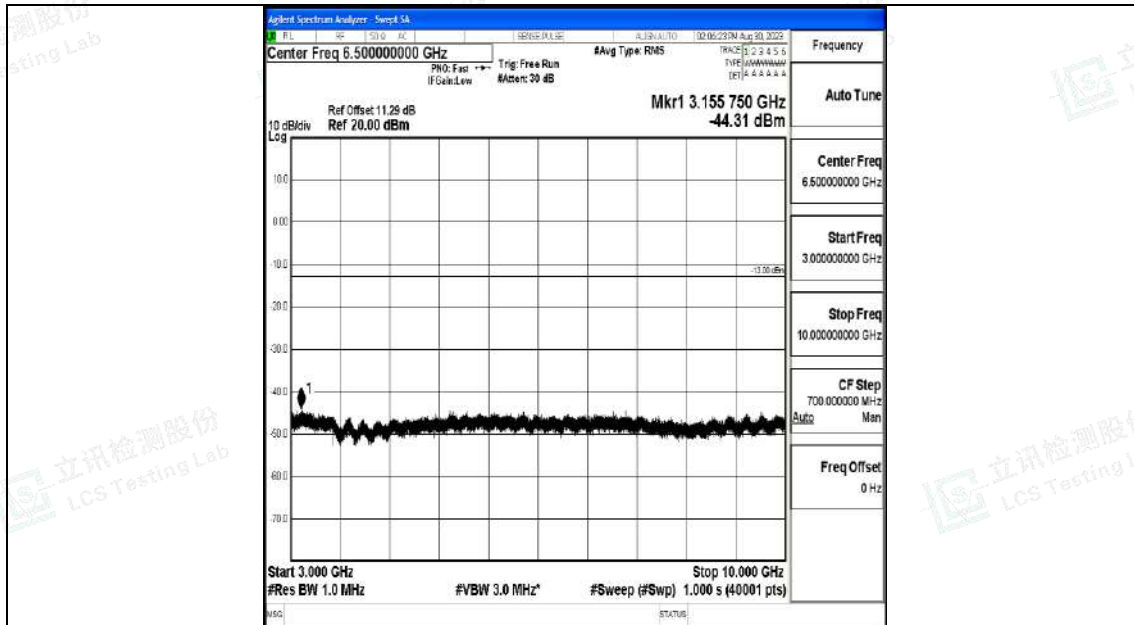


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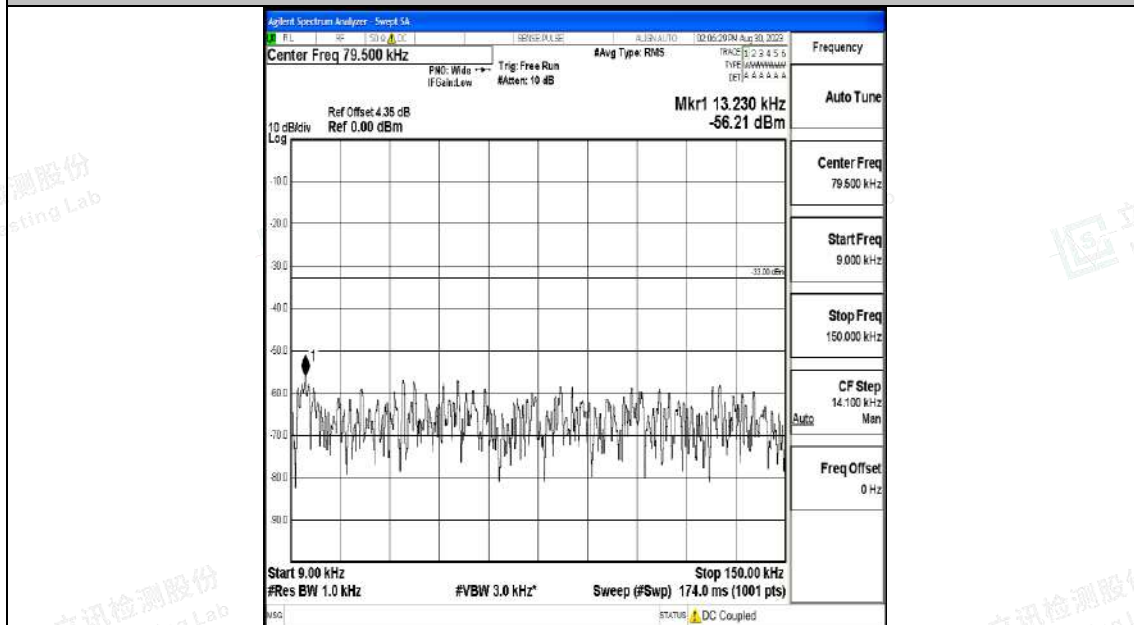
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Band13_10MHz_QPSK_23230_1RB#0_3000~10000_3000~10000



Band13_10MHz_16QAM_23230_1RB#0_0.009~0.15_0.009~0.15

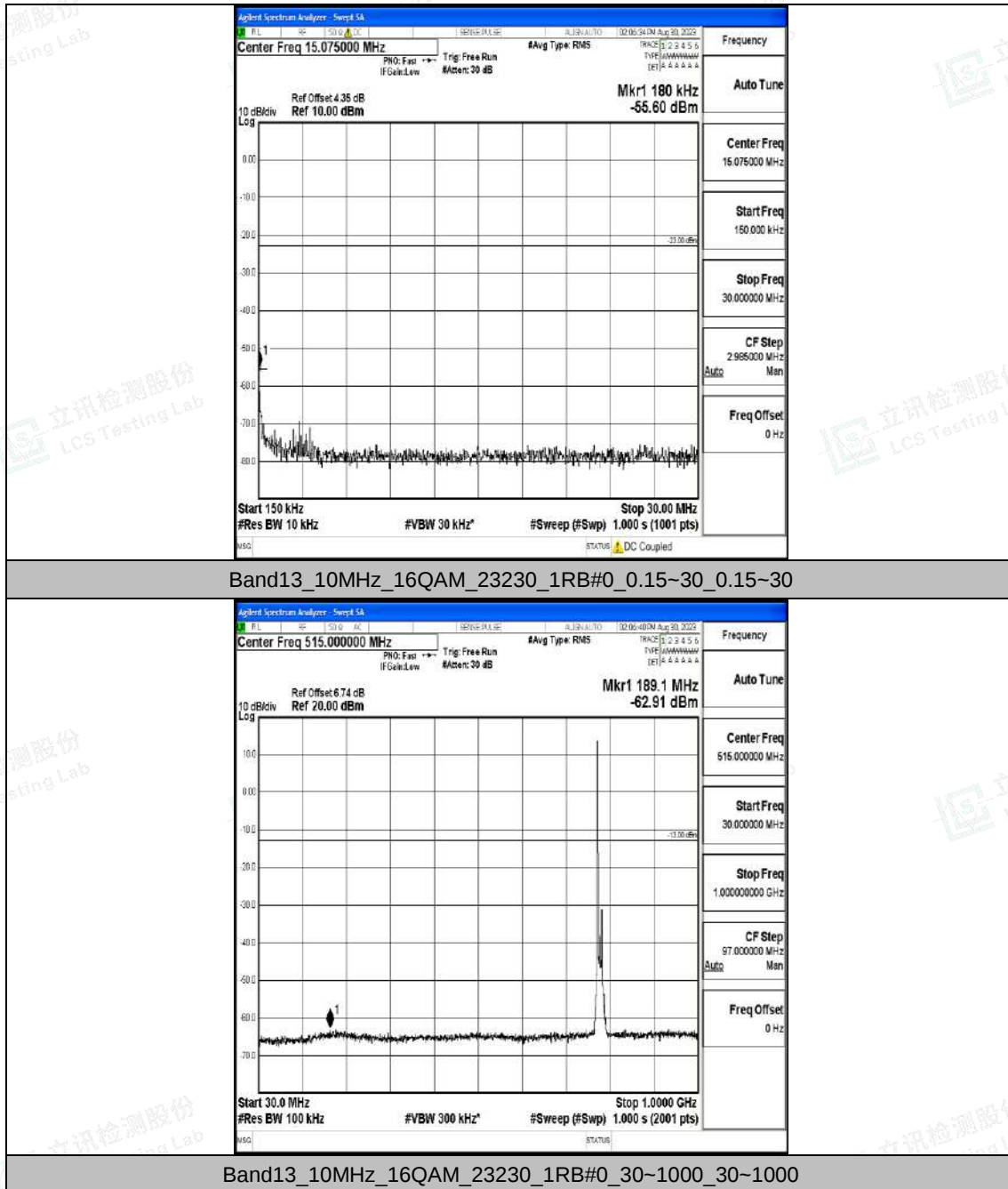


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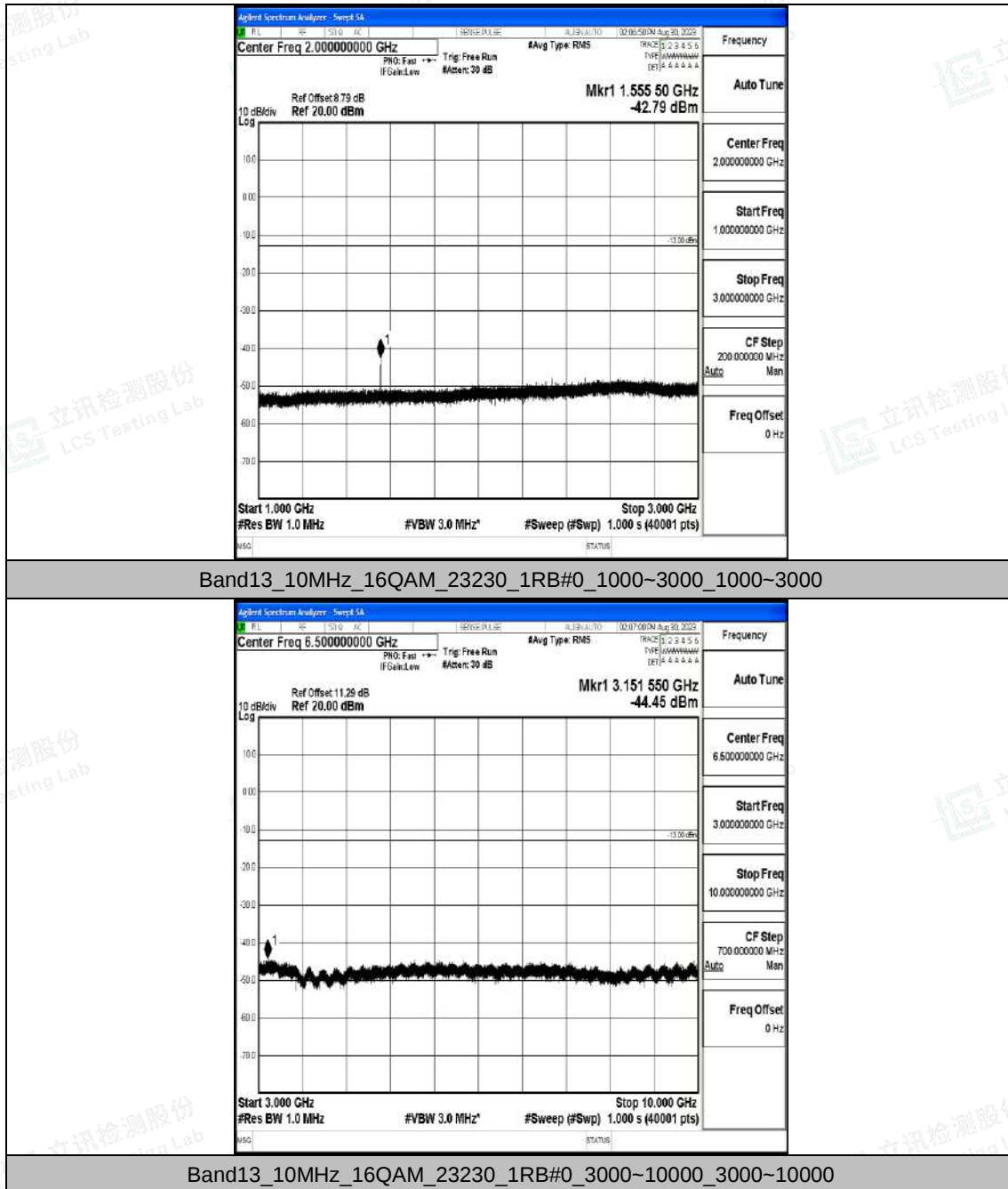


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