



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: Smart phone

Test Model: Smooth 6.0

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan





B.1 DTS Bandwidth

Test Result

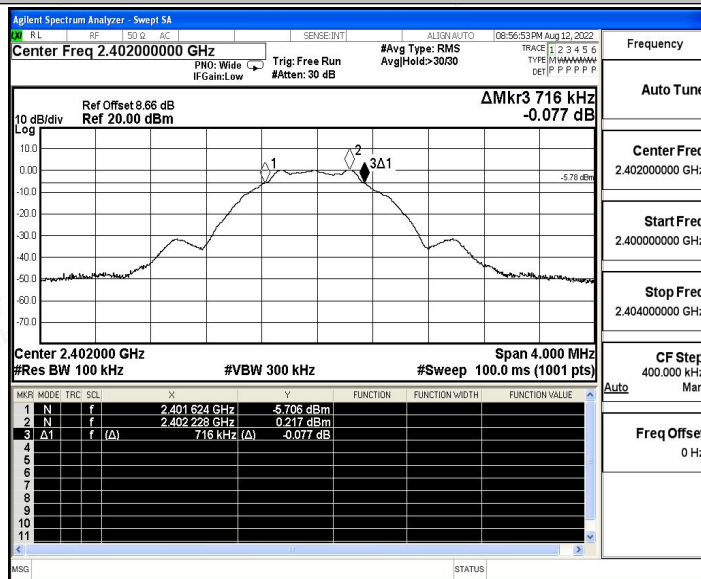
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.716	2401.624	2402.340	0.5	PASS
		2440	0.712	2439.624	2440.336	0.5	PASS
		2480	0.716	2479.624	2480.340	0.5	PASS



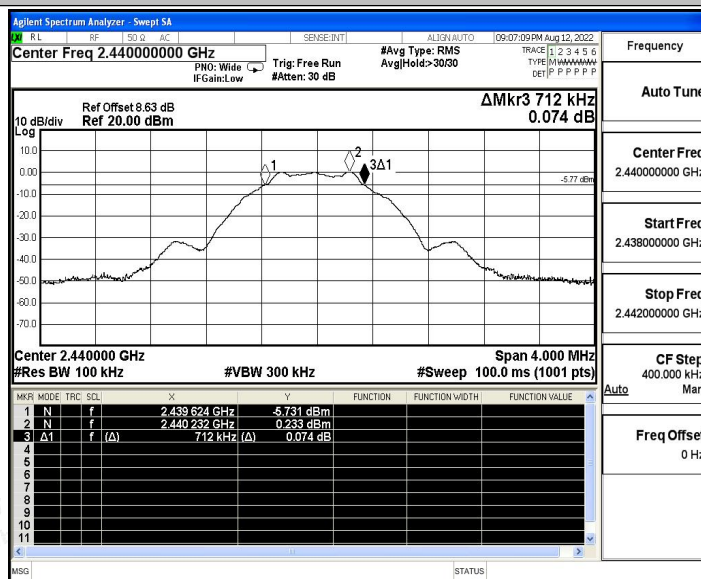


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

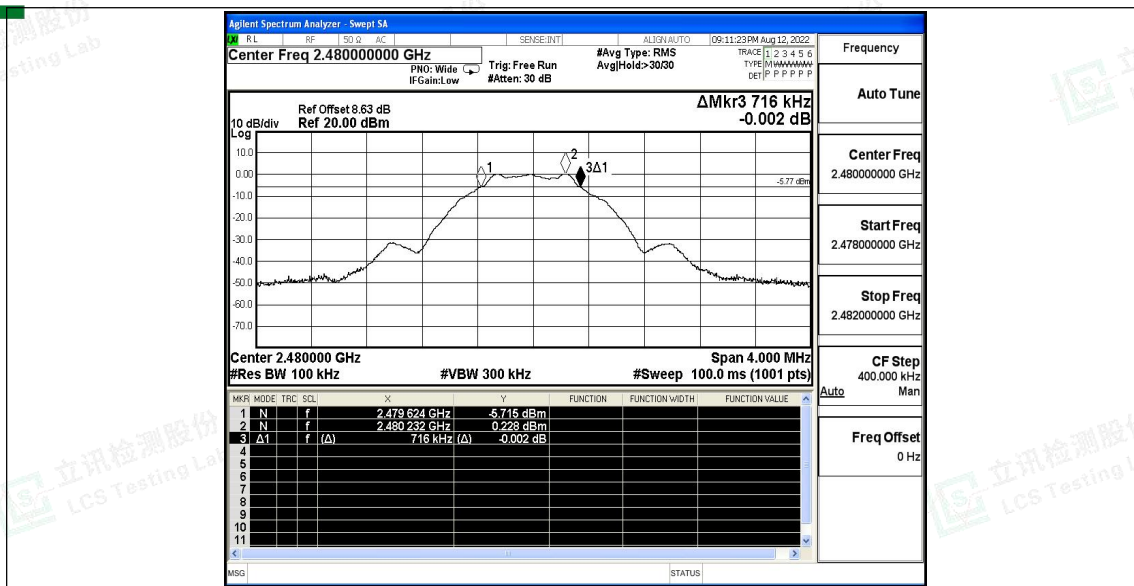


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B.2 Maximum conducted output power

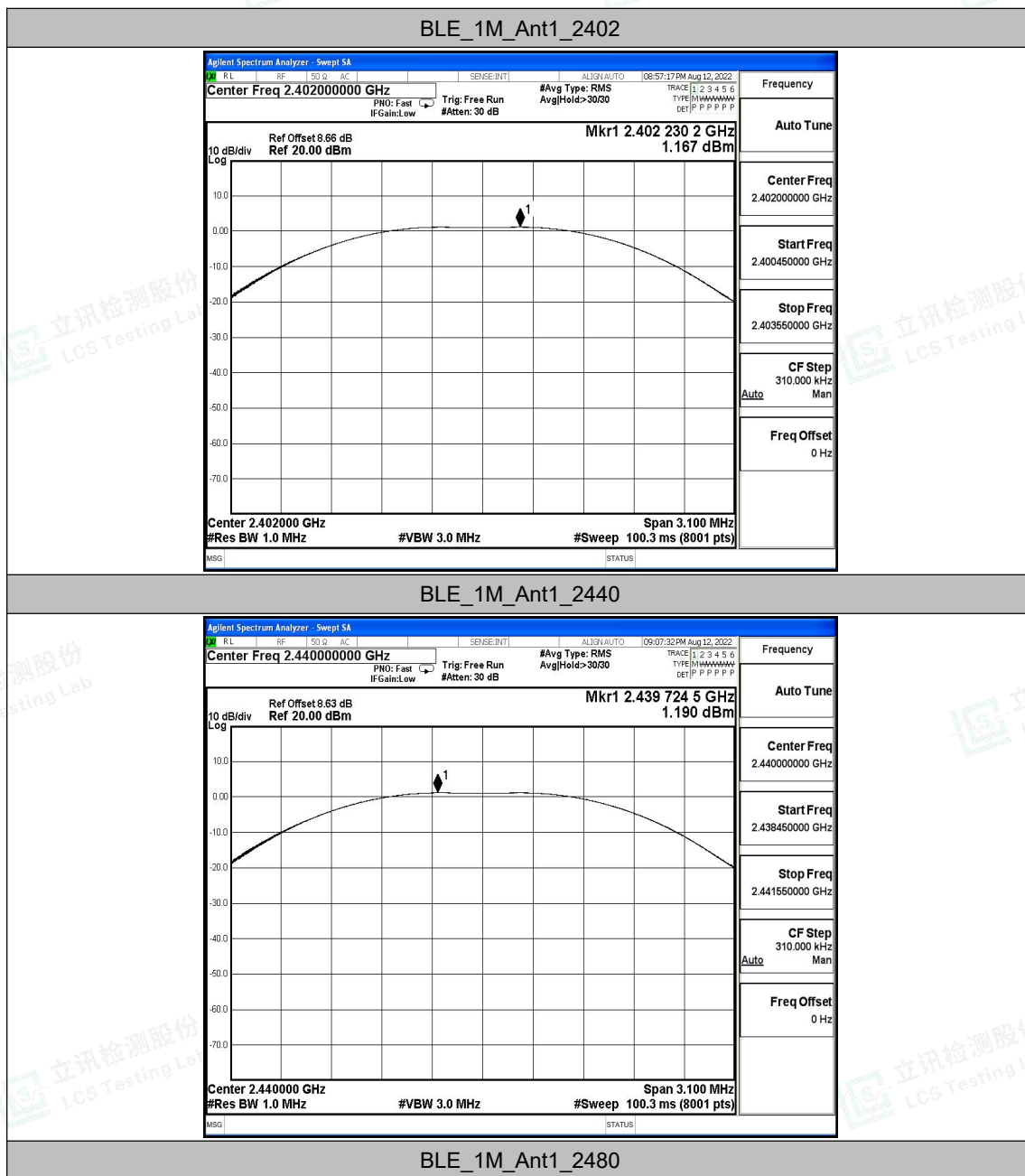
Test Result

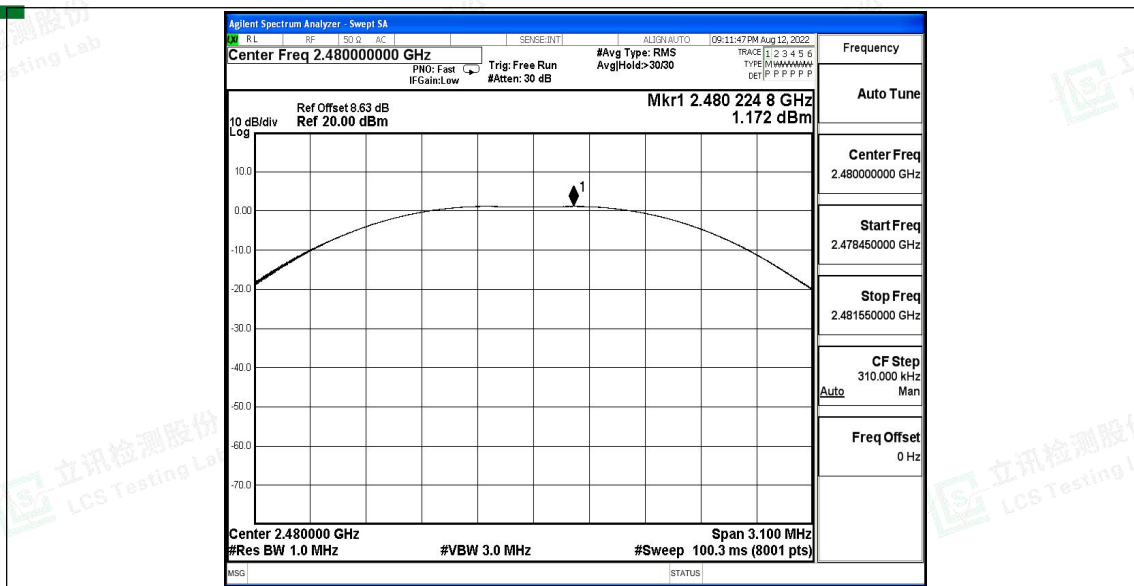
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.17	≤30	PASS
		2440	1.19	≤30	PASS
		2480	1.17	≤30	PASS





Test Graphs







B.3 Maximum power spectral density

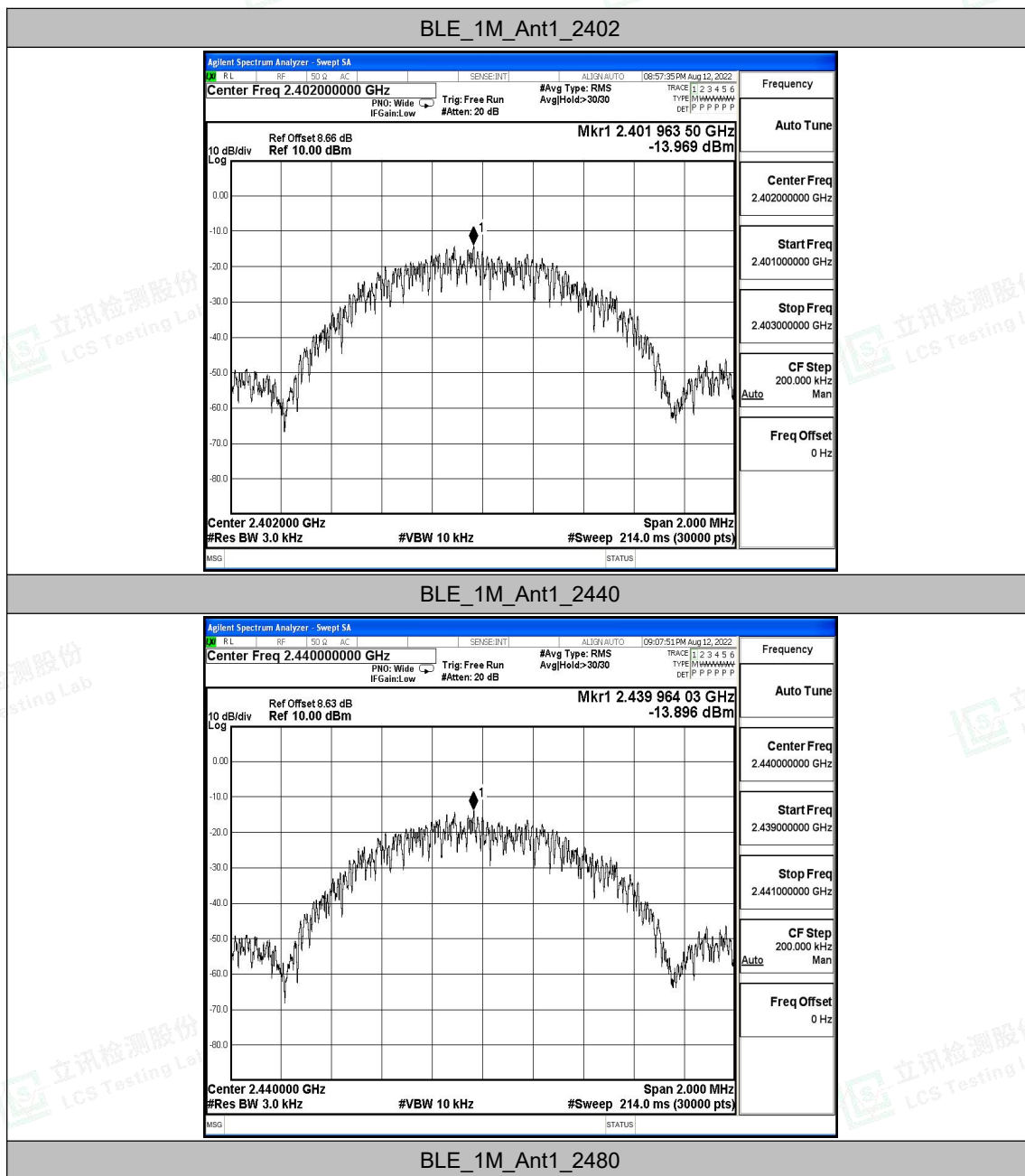
Test Result

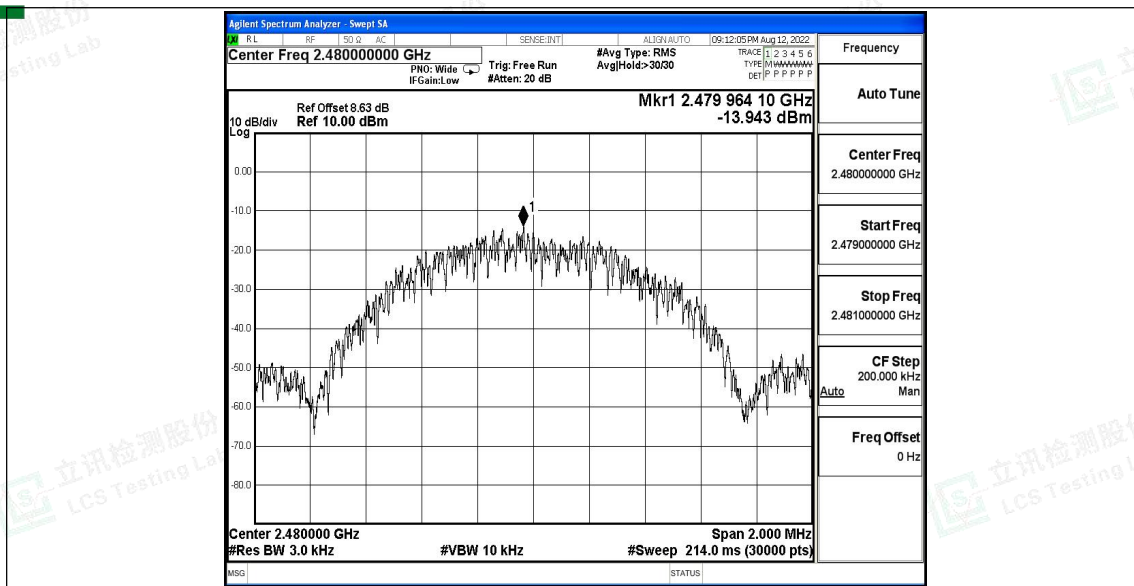
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-13.97	≤8.00	PASS
		2440	-13.9	≤8.00	PASS
		2480	-13.94	≤8.00	PASS





Test Graphs







B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.43	-57.38	≤-19.57	PASS
		High	2480	0.47	-56.89	≤-19.54	PASS





Test Graphs



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B.5 Conducted Spurious Emission

Test Result

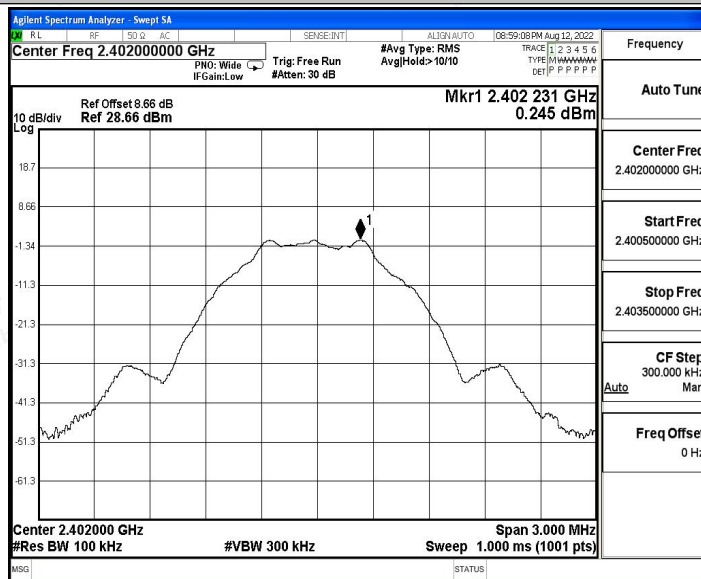
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.25	0.25	---	PASS
			30~1000	0.25	-60.08	≤-19.75	PASS
			1000~26500	0.25	-45.51	≤-19.75	PASS
		2440	Reference	0.19	0.19	---	PASS
			30~1000	0.19	-60.01	≤-19.81	PASS
			1000~26500	0.19	-45.51	≤-19.81	PASS
		2480	Reference	0.25	0.25	---	PASS
			30~1000	0.25	-60.31	≤-19.75	PASS
			1000~26500	0.25	-45.45	≤-19.75	PASS



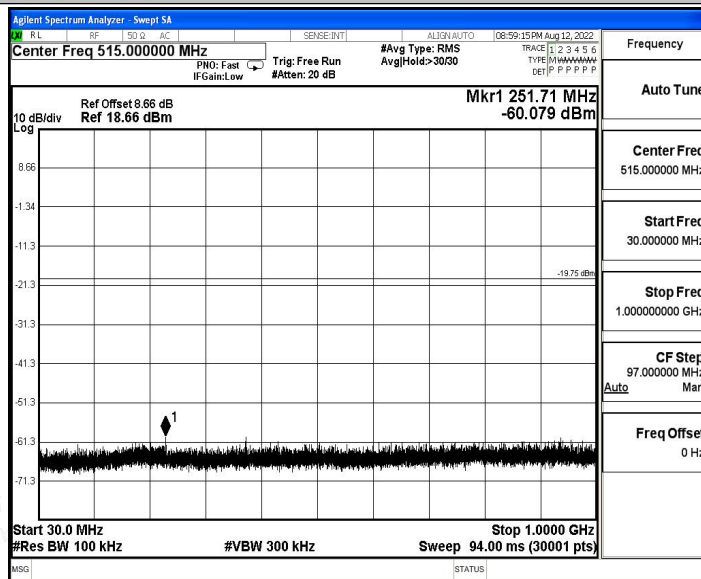


Test Graphs

BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500

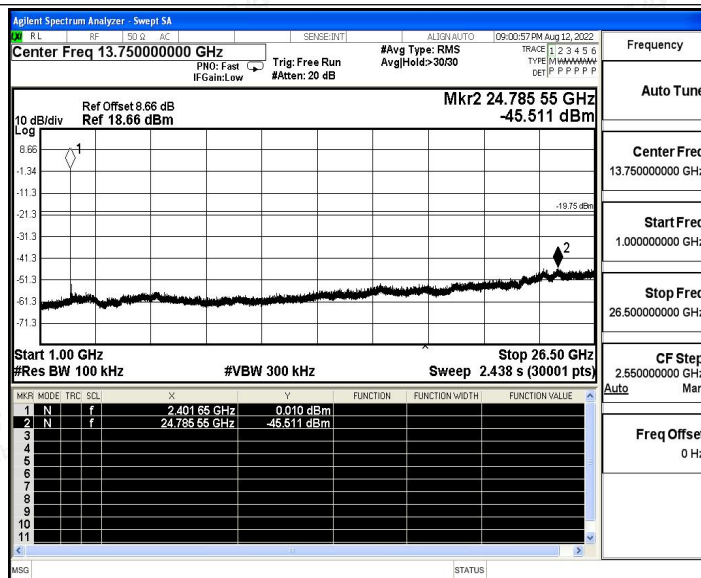


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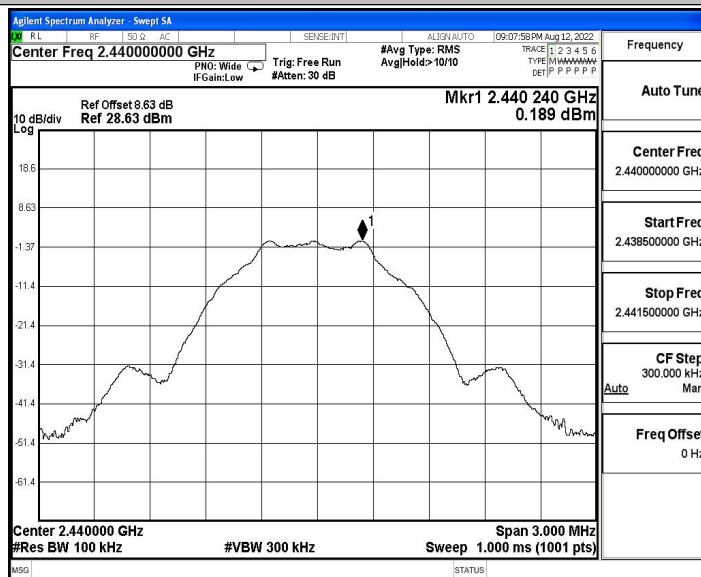
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

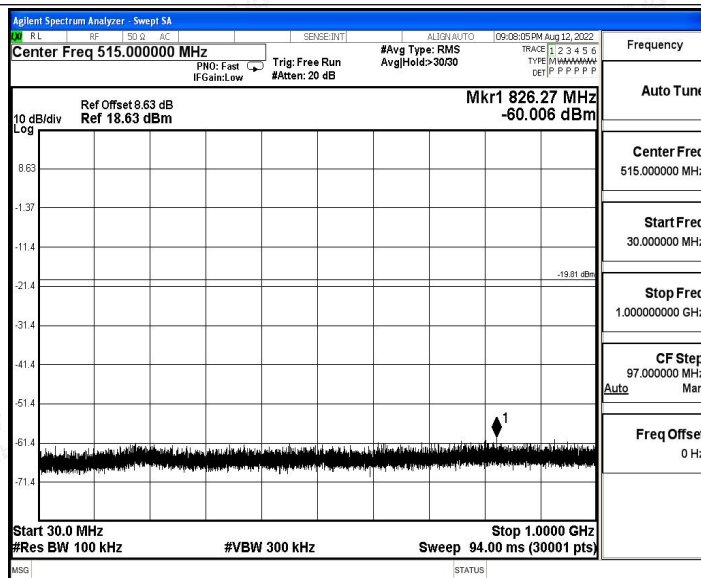


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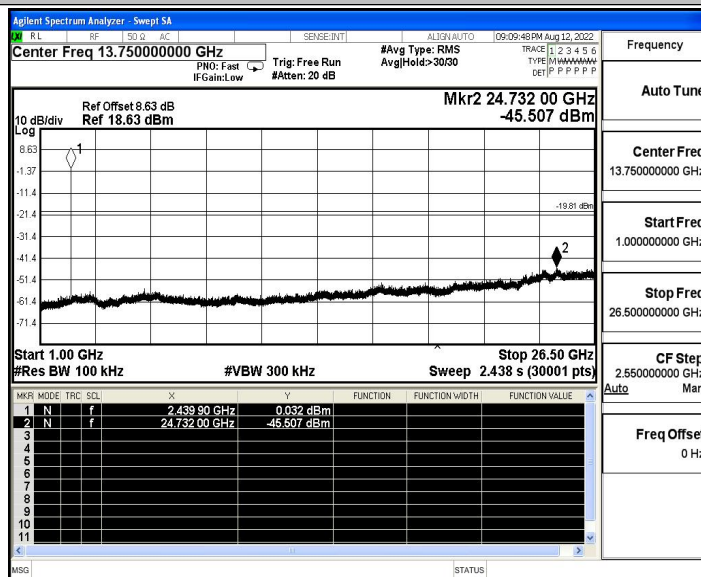
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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference

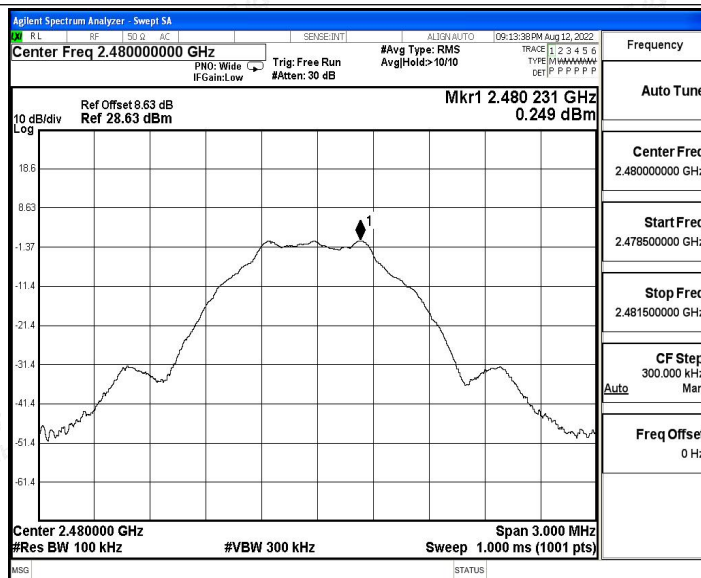


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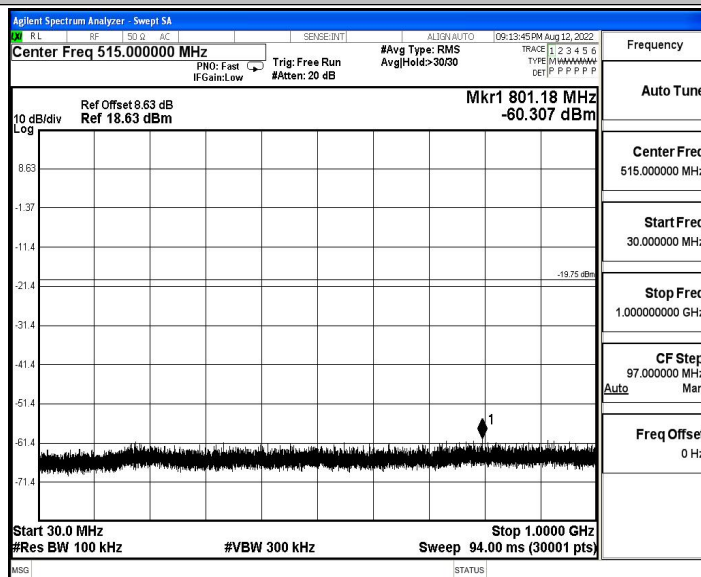
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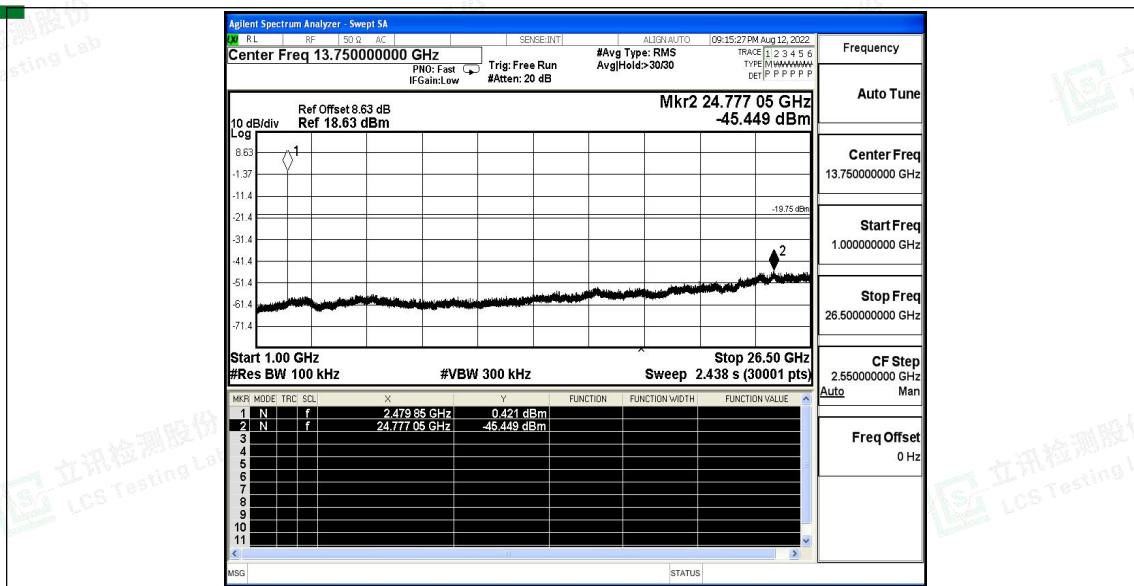


BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500





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B.6 Duty Cycle

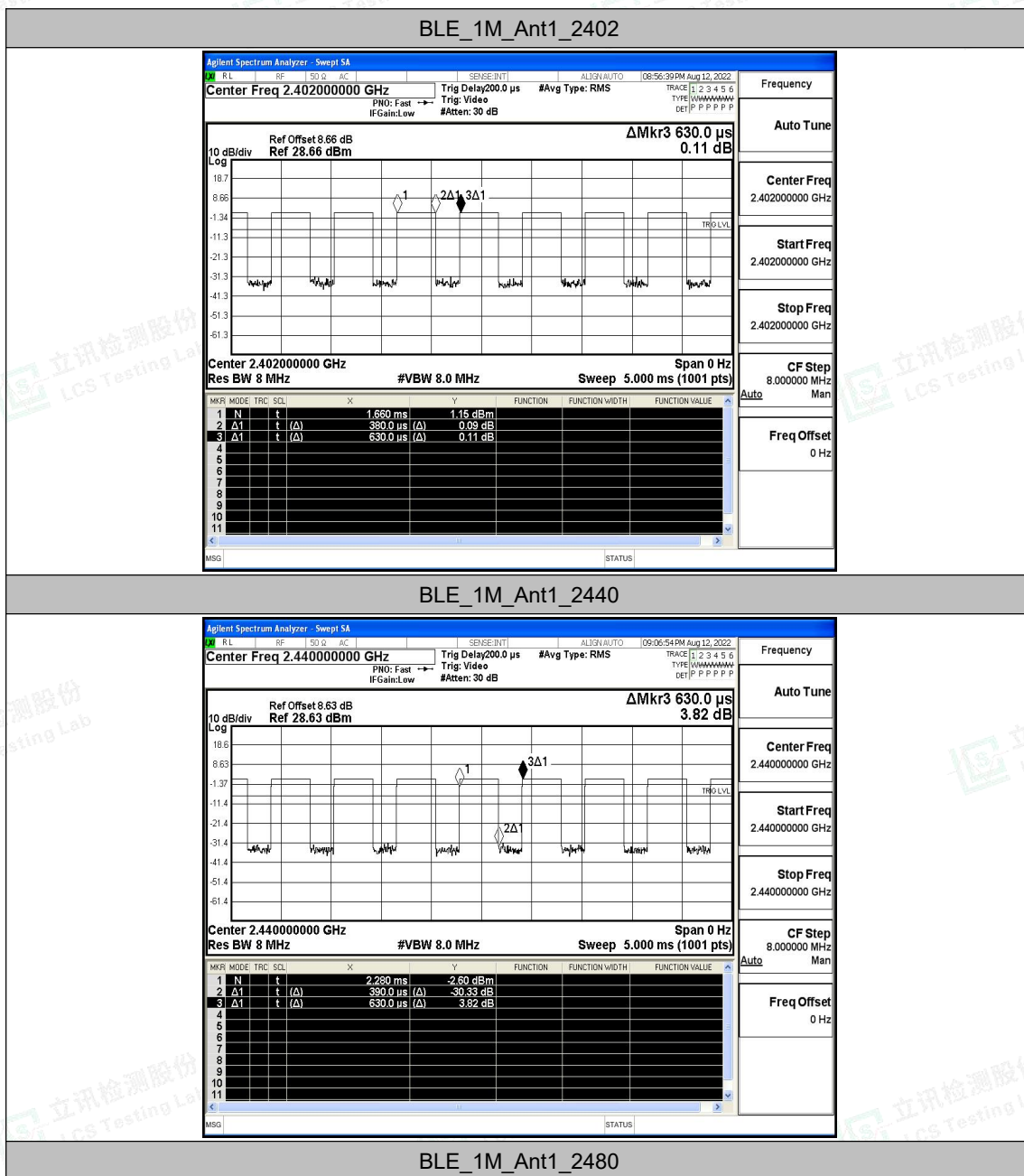
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.38	0.63	0.6032	60.32	2.20	2.63	---	---
		2440	0.39	0.63	0.6190	61.90	2.08	2.56	---	---
		2480	0.38	0.63	0.6032	60.32	2.20	2.63	---	---





Test Graphs

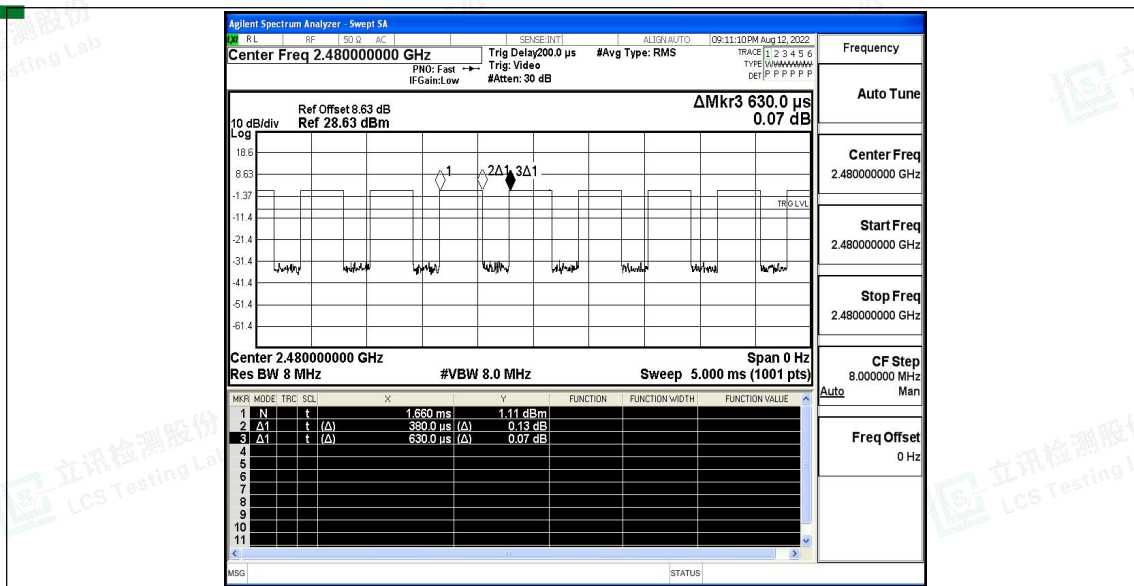


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B.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-57.15	≤-41.20	38.05	≤54	PASS
				AV	2389.460	-56.17	≤-41.20	39.03	≤54	PASS
				AV	2390.000	-56.77	≤-41.20	38.43	≤54	PASS
				Peak	2310.000	-48.61	≤-21.20	46.59	≤74	PASS
				Peak	2353.025	-46.03	≤-21.20	49.17	≤74	PASS
				Peak	2390.000	-48.32	≤-21.20	46.88	≤74	PASS
		High	2480	AV	2483.500	-52.79	≤-41.20	42.41	≤54	PASS
				AV	2483.520	-52.79	≤-41.20	42.41	≤54	PASS
				AV	2500.000	-55.74	≤-41.20	39.46	≤54	PASS
				Peak	2483.500	-46.84	≤-21.20	48.36	≤74	PASS
				Peak	2488.000	-45.25	≤-21.20	49.95	≤74	PASS
				Peak	2500.000	-47.88	≤-21.20	47.32	≤74	PASS

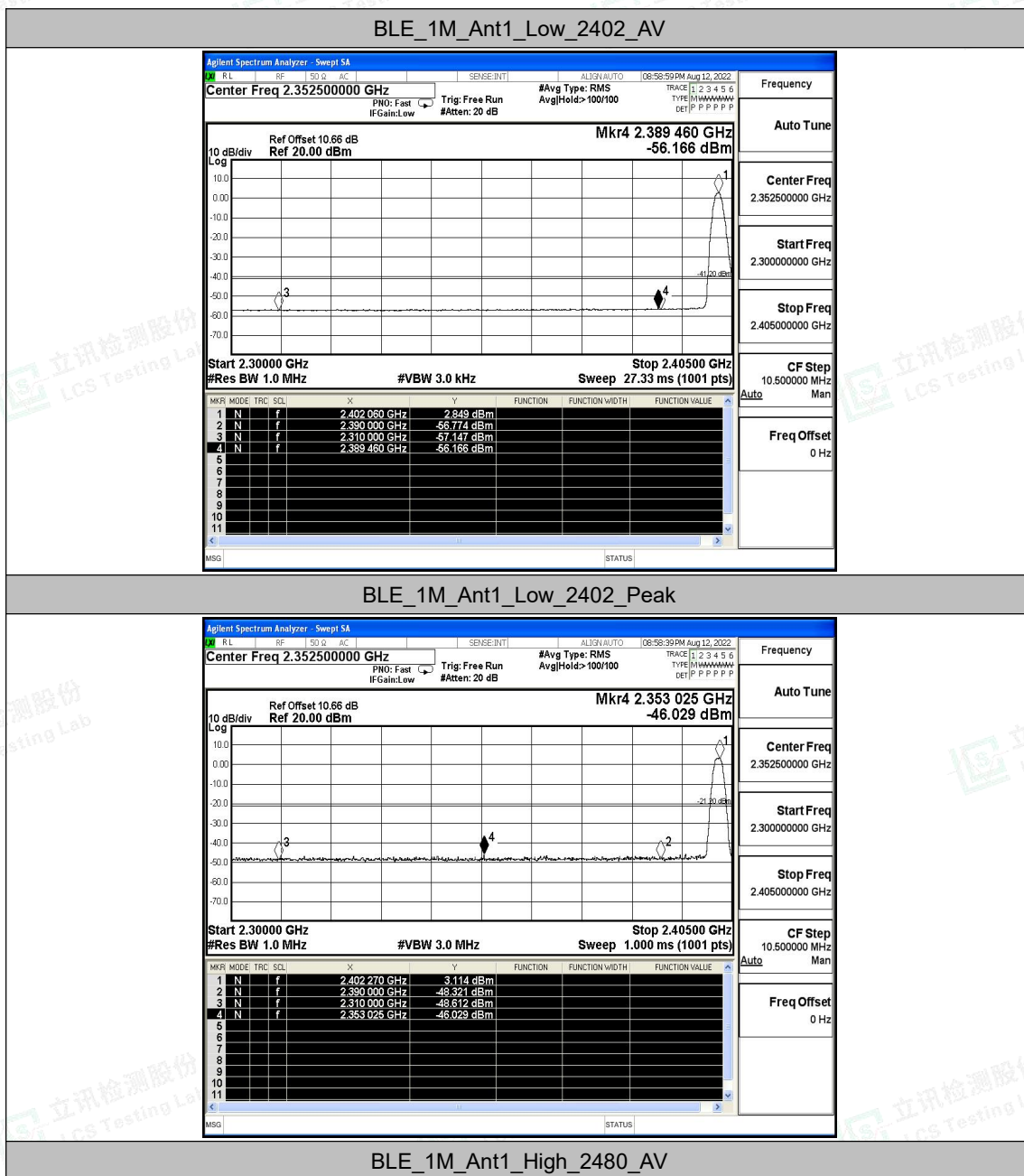
Note:

1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.





Test Graphs

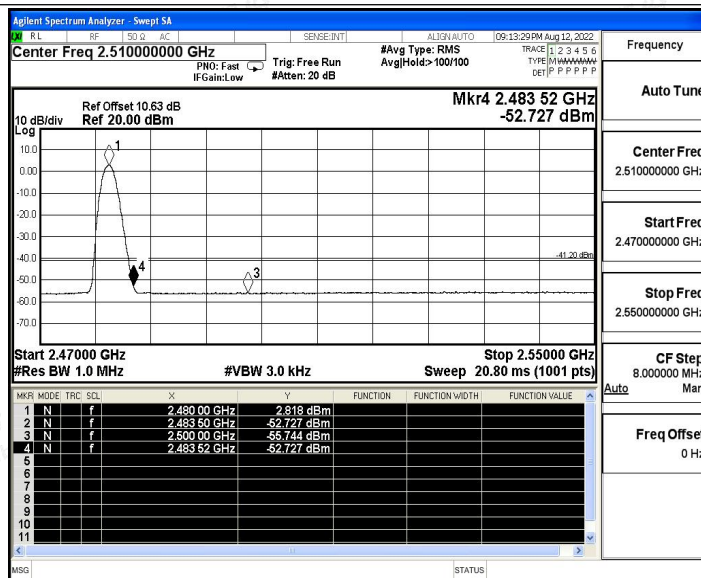


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BLE_1M_Ant1_High_2480_Peak

