Appendix for Bluetooth BLE Mode

Product Name: ConnectBridge Gateway
Model No: Access360

Appendix A: DTS Bandwidth

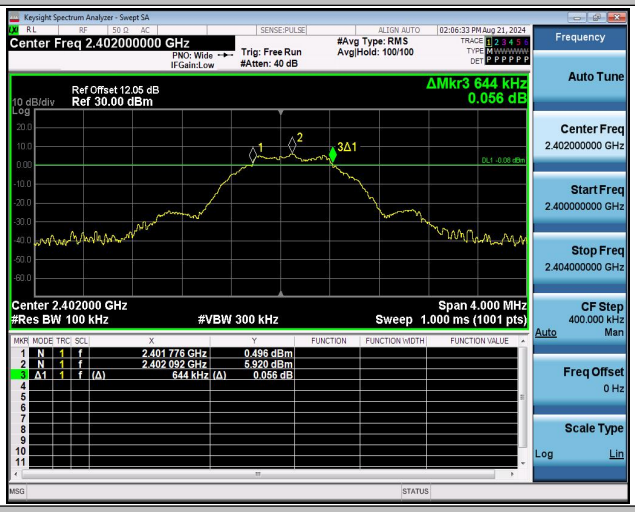
Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant2	2402	0.644	2401.776	2402.420	0.5	PASS
		2440	0.684	2439.740	2440.424	0.5	PASS
		2480	0.684	2479.740	2480.424	0.5	PASS

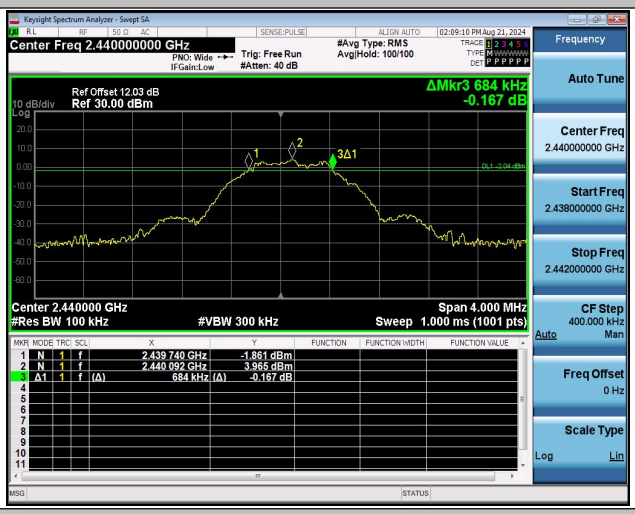
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_S8	Ant2	2402	0.608	2401.780	2402.388	0.5	PASS
		2440	0.620	2439.776	2440.396	0.5	PASS
		2480	0.620	2479.776	2480.396	0.5	PASS

Test Graphs

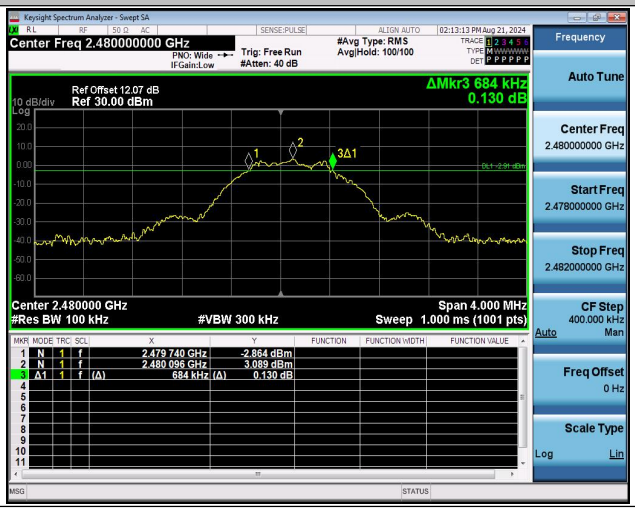
BLE_1M_Ant2_2402



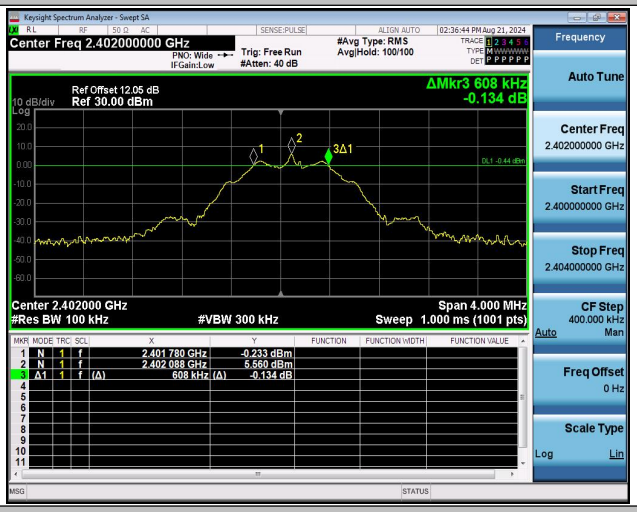
BLE_1M_Ant2_2440



BLE_1M_Ant2_2480

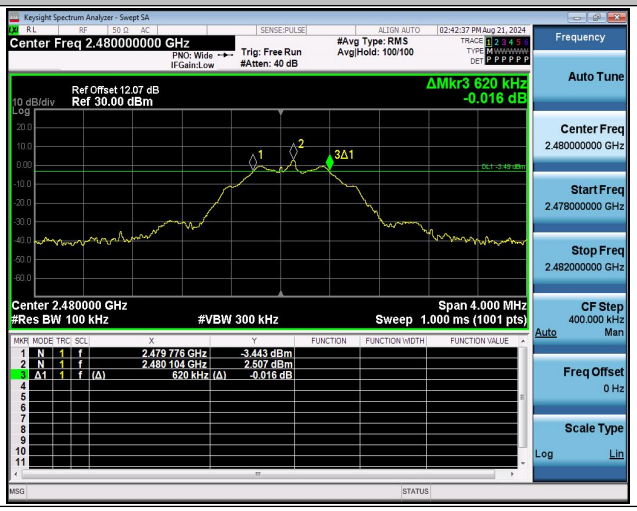


BLE_S8_Ant2_2402



BLE_S8_Ant2_2440

BLE_S8_Ant2_2480



Appendix B: Maximum conducted output power

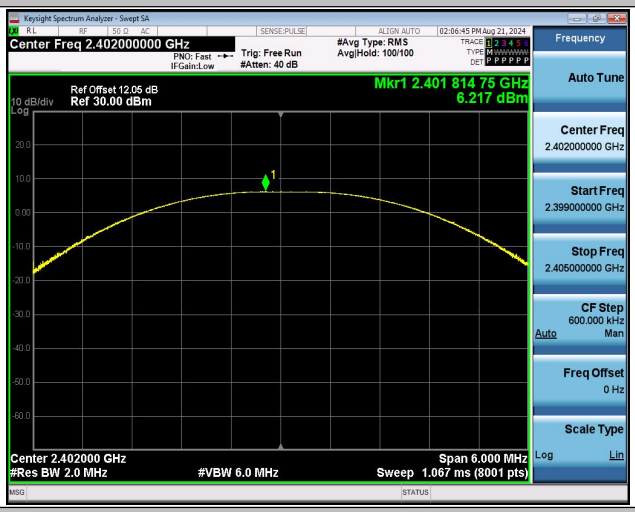
Test Result Peak

TestMode	Antenna	Freq(MHz)	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant2	2402	6.22	≤30	8.22	≤36	PASS
		2440	4.33	≤30	6.33	≤36	PASS
		2480	3.60	≤30	5.60	≤36	PASS

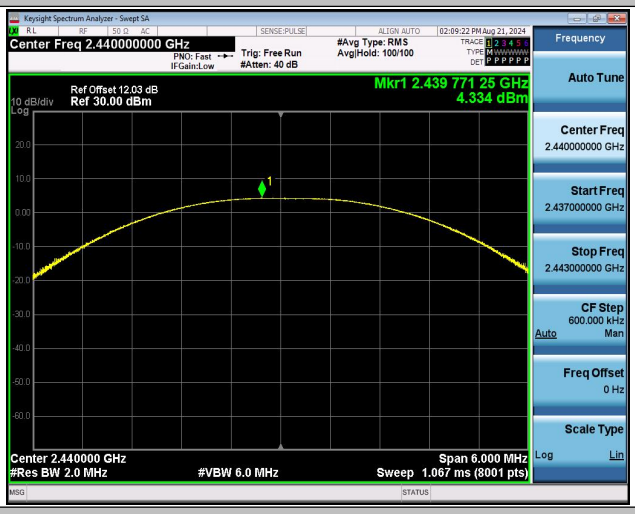
TestMode	Antenna	Freq(MHz)	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_S8	Ant2	2402	6.00	≤30	8.00	≤36	PASS
		2440	4.15	≤30	6.15	≤36	PASS
		2480	3.42	≤30	5.42	≤36	PASS

Test Graphs Peak

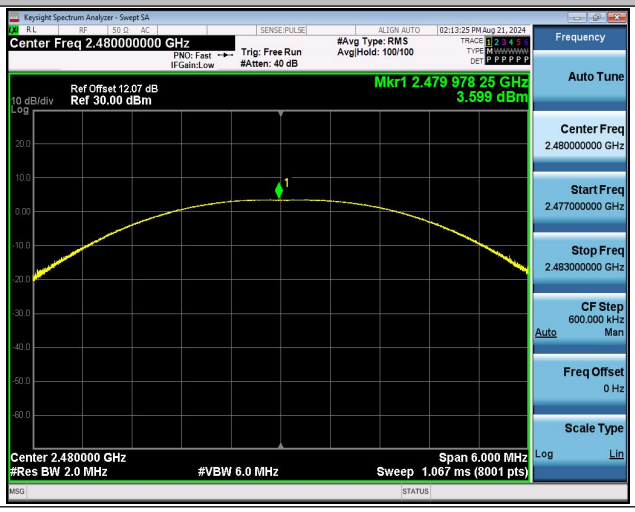
BLE_1M_Ant2_2402



BLE_1M_Ant2_2440

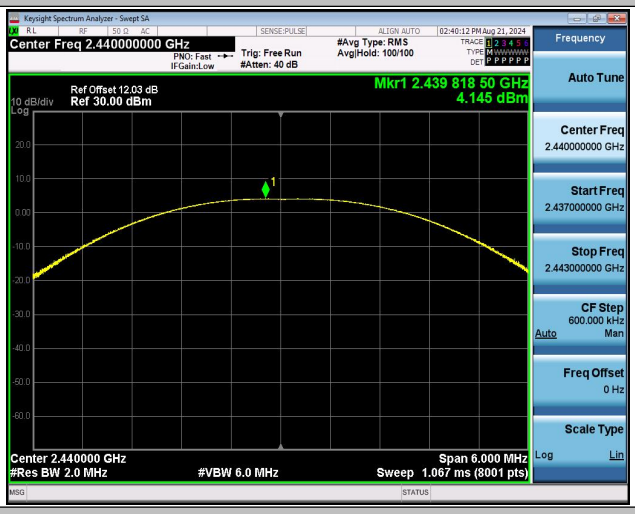


BLE_1M_Ant2_2480

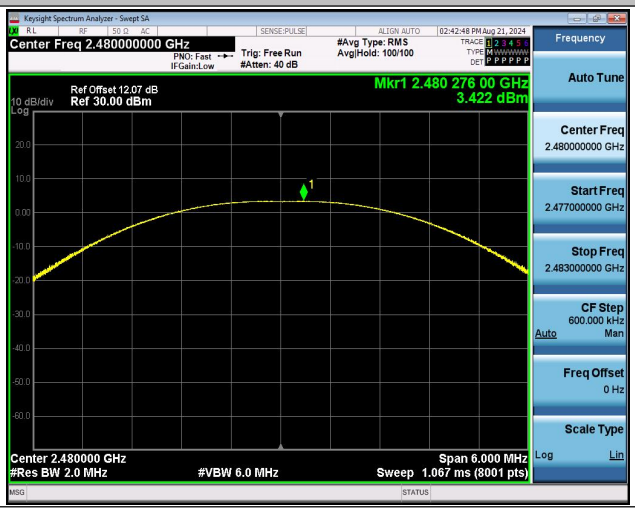


BLE_S8_Ant2_2402

BLE_S8_Ant2_2440



BLE_S8_Ant2_2480



Appendix C: Maximum power spectral density

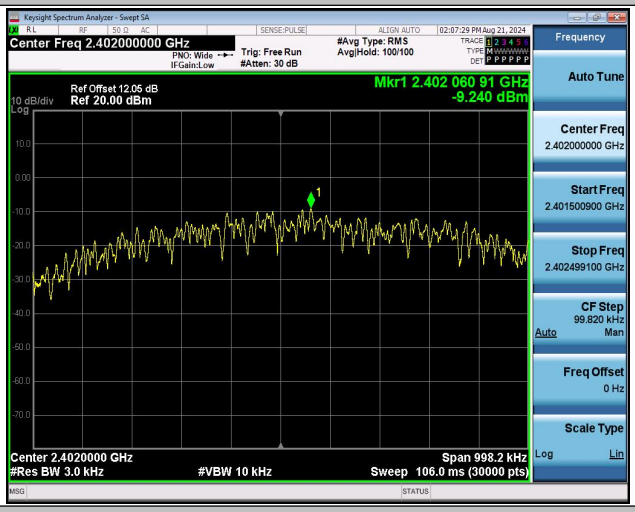
Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant2	2402	-9.24	≤8.00	PASS
		2440	-11.24	≤8.00	PASS
		2480	-11.90	≤8.00	PASS

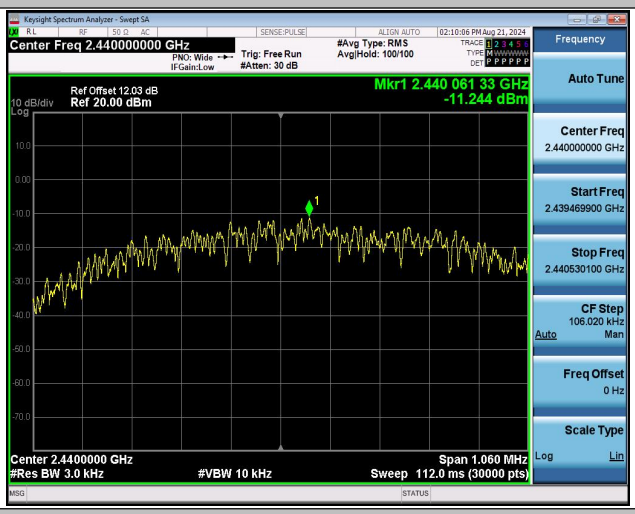
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_S8	Ant2	2402	-0.29	≤8.00	PASS
		2440	-2.14	≤8.00	PASS
		2480	-2.89	≤8.00	PASS

Test Graphs

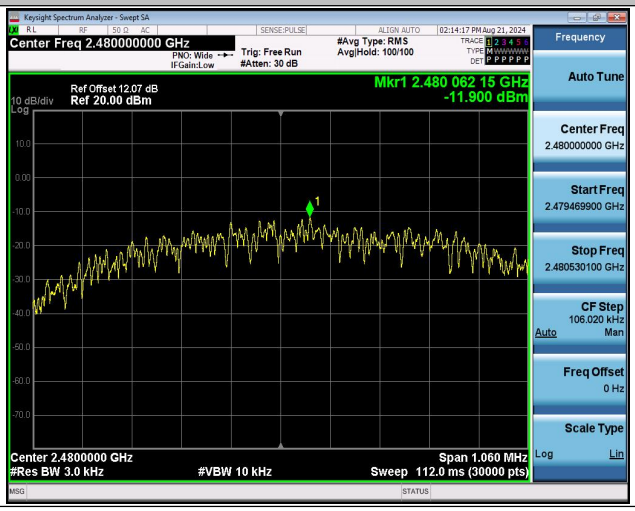
BLE_1M_Ant2_2402



BLE_1M_Ant2_2440



BLE_1M_Ant2_2480



BLE_S8_Ant2_2402

BLE_S8_Ant2_2440

BLE_S8_Ant2_2480

Appendix D: Band edge measurements

Reference level measurement

Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_1M	Ant2	2402	2402.08	5.86
		2440	2440.09	3.89
		2480	2480.09	3.15

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_S8	Ant2	2402	2402.05	4.56
		2440	2440.07	3.55
		2480	2480.05	2.07

BLE_1M_Ant2_2402

BLE_1M_Ant2_2440

BLE_1M_Ant2_2480

BLE_S8_Ant2_2402

BLE_S8_Ant2_2440

BLE_S8_Ant2_2480

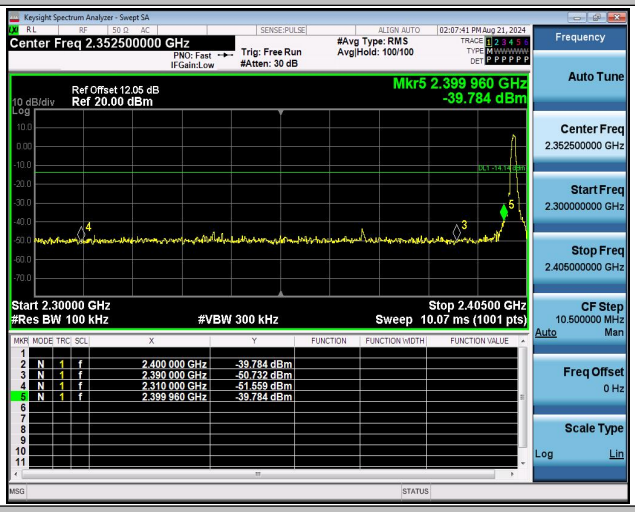
Band edge measurements

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant2	Low	2402	5.86	-39.78	≤-14.14	PASS
		High	2480	3.15	-46.58	≤-16.85	PASS

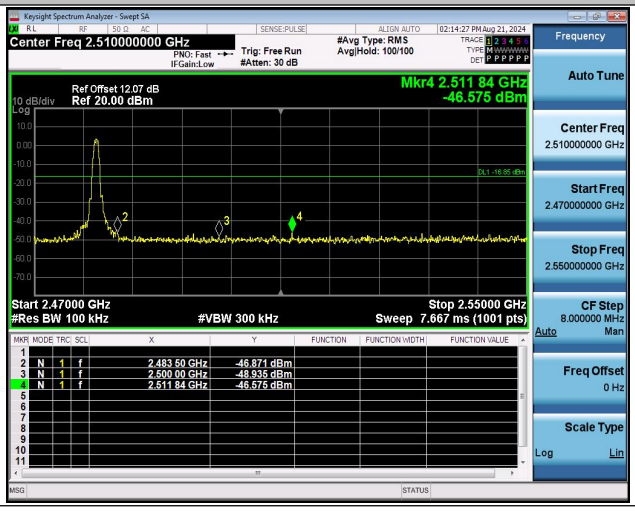
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_S8	Ant2	Low	2402	4.56	-39.53	≤-15.44	PASS
		High	2480	2.07	-47.3	≤-17.93	PASS

Test Graphs

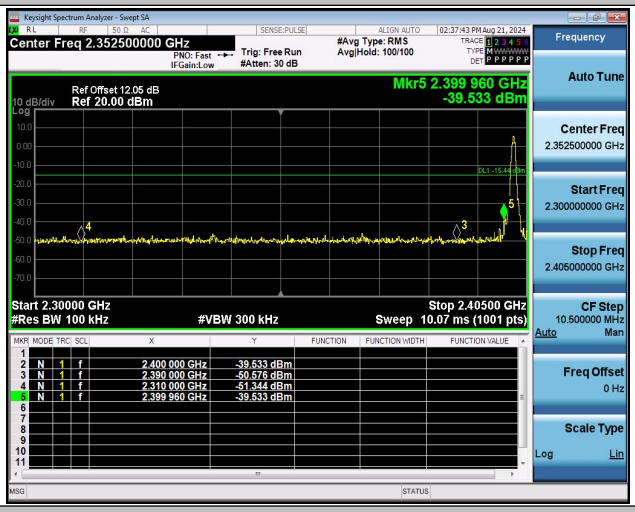
BLE_1M_Ant2_Low_2402



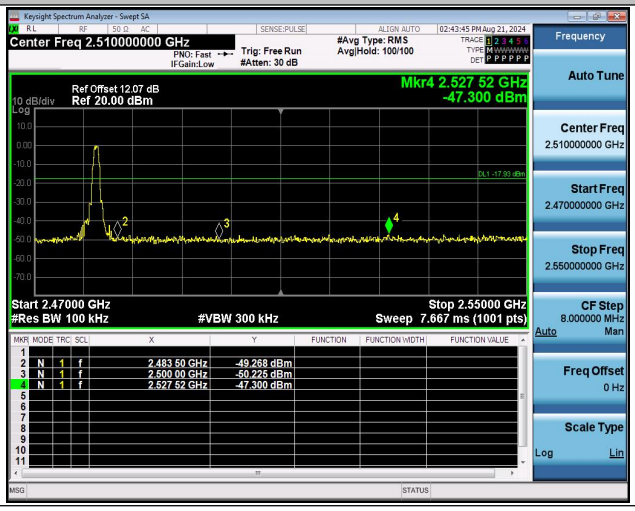
BLE_1M_Ant2_High_2480



BLE_S8_Ant2_Low_2402



BLE_S8_Ant2_High_2480



Appendix E: Conducted Spurious Emission

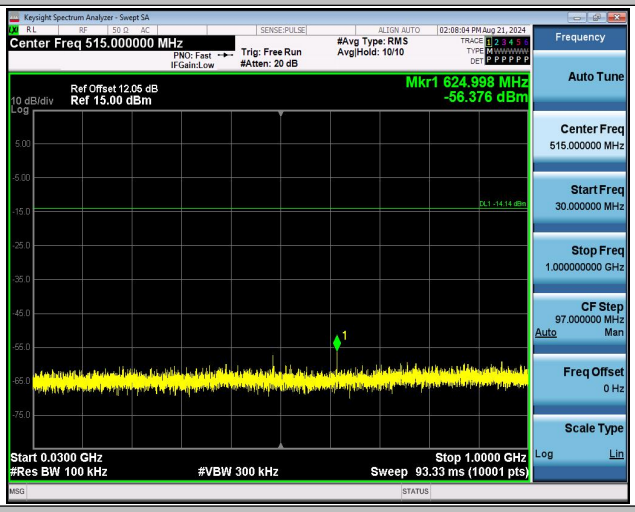
Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant2	2402	30~1000	5.86	-56.38	≤-14.14	PASS
			1000~26500	5.86	-43.92	≤-14.14	PASS
		2440	30~1000	3.89	-54.65	≤-16.11	PASS
			1000~26500	3.89	-44.51	≤-16.11	PASS
		2480	30~1000	3.15	-57.45	≤-16.85	PASS
			1000~26500	3.15	-44.19	≤-16.85	PASS

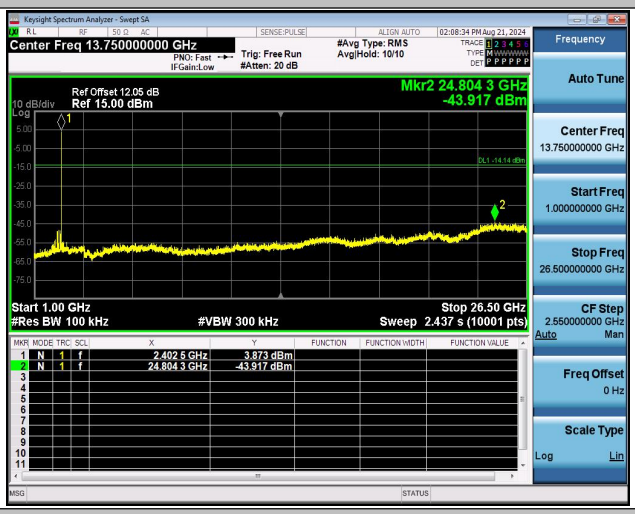
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_S8	Ant2	2402	30~1000	4.56	-56.17	≤-15.44	PASS
			1000~26500	4.56	-44	≤-15.44	PASS
		2440	30~1000	3.55	-57.03	≤-16.45	PASS
			1000~26500	3.55	-43.82	≤-16.45	PASS
		2480	30~1000	2.07	-55.46	≤-17.93	PASS
			1000~26500	2.07	-44.33	≤-17.93	PASS

Test Graphs

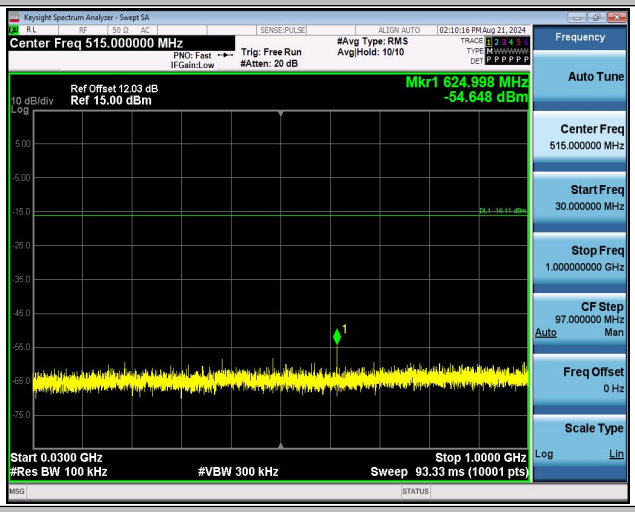
BLE_1M_Ant2_2402_30~1000



BLE_1M_Ant2_2402_1000~26500

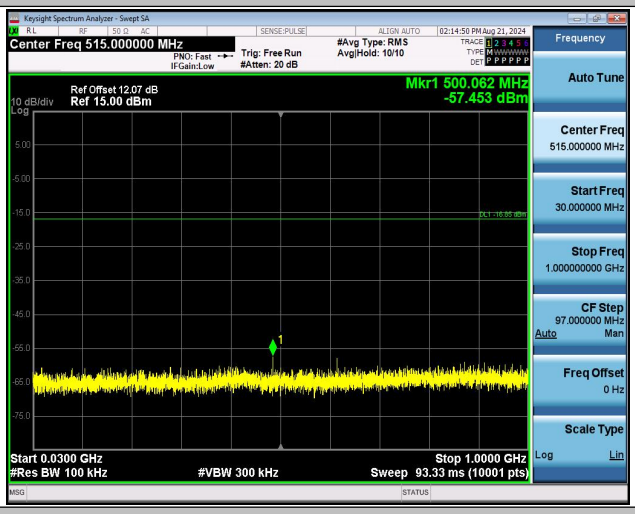


BLE_1M_Ant2_2440_30~1000



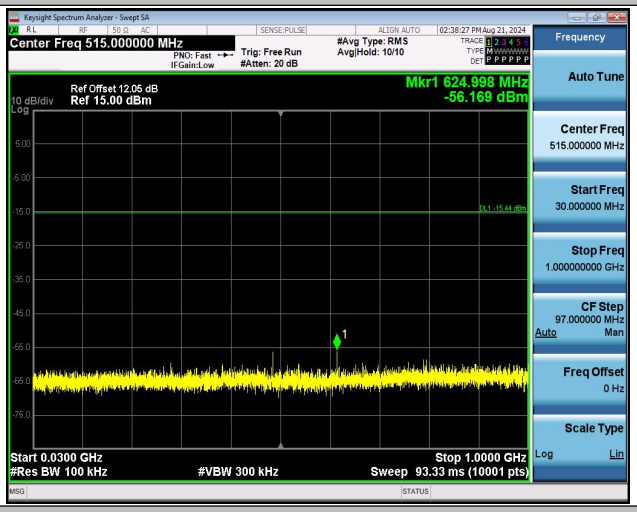
BLE_1M_Ant2_2440_1000~26500

BLE_1M_Ant2_2480_30~1000

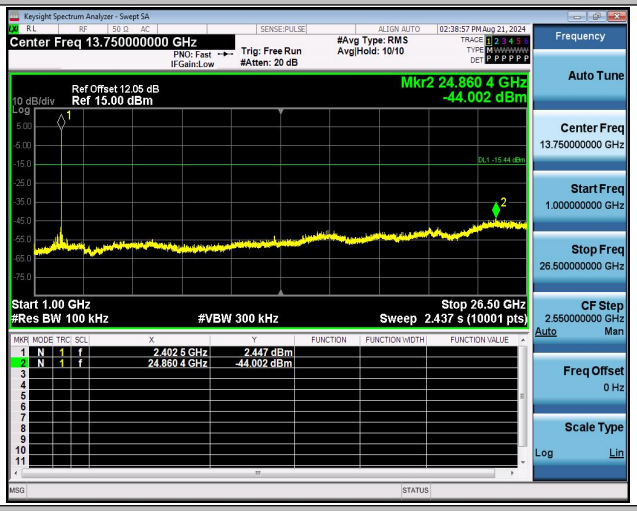


BLE_1M_Ant2_2480_1000~26500

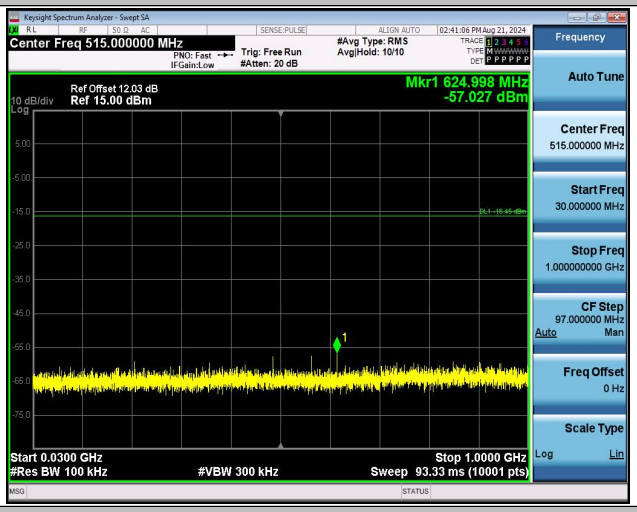
BLE_S8_Ant2_2402_30~1000



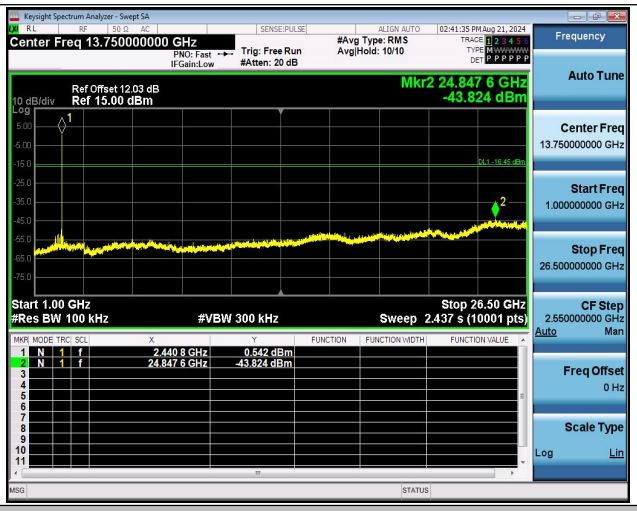
BLE_S8_Ant2_2402_1000~26500



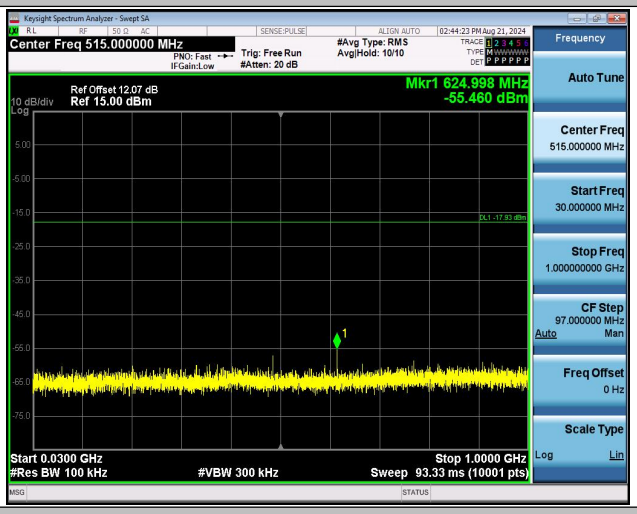
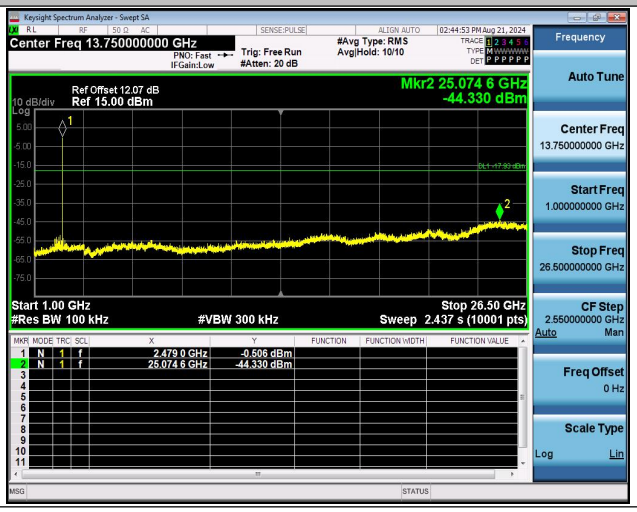
BLE_S8_Ant2_2440_30~1000



BLE_S8_Ant2_2440_1000~26500



BLE_S8_Ant2_2480_30~1000



BLE_S8_Ant2_2480_1000~26500