Appendix for Bluetooth BLE Mode

Product Name: ConnectBridge Gateway
Model No: Access360

Appendix A: DTS Bandwidth

Test Result

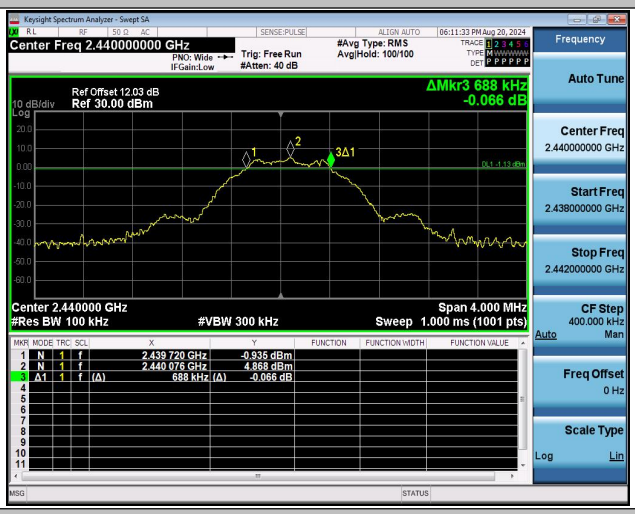
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.684	2401.720	2402.404	0.5	PASS
		2440	0.688	2439.720	2440.408	0.5	PASS
		2480	0.680	2479.724	2480.404	0.5	PASS

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_S8	Ant1	2402	0.712	2401.712	2402.424	0.5	PASS
		2440	0.620	2439.756	2440.376	0.5	PASS
		2480	0.652	2479.744	2480.396	0.5	PASS

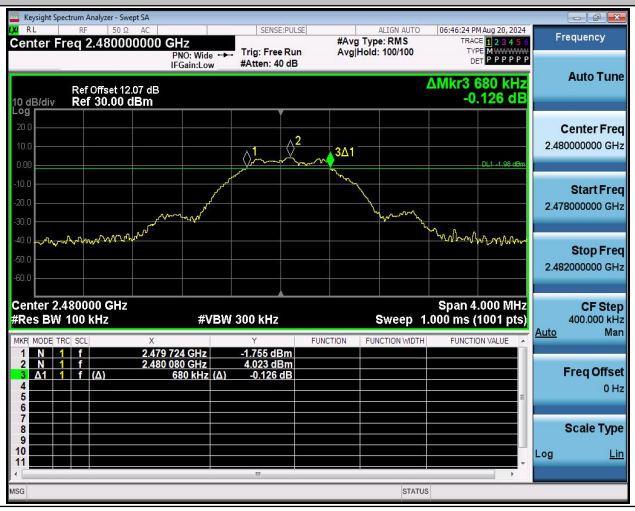
Test Graphs

BLE_1M_Ant1_2402

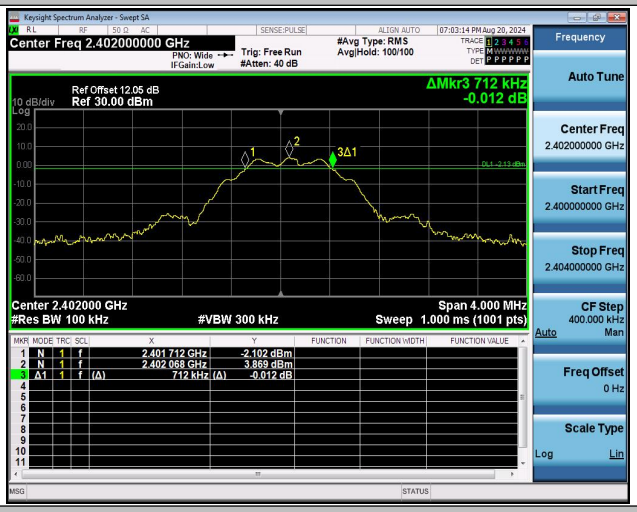
BLE_1M_Ant1_2440



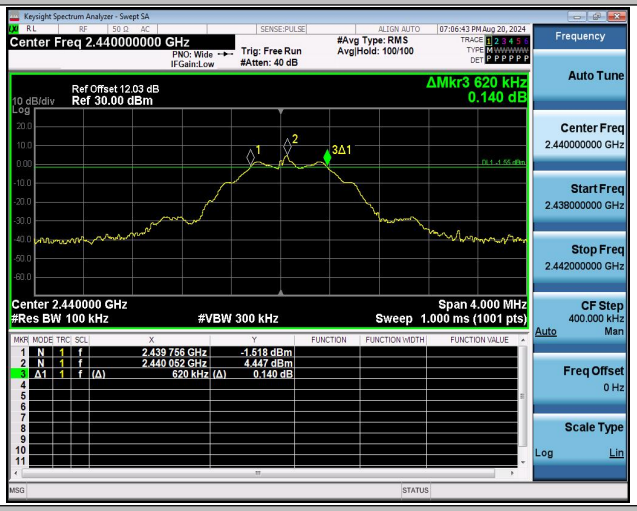
BLE_1M_Ant1_2480



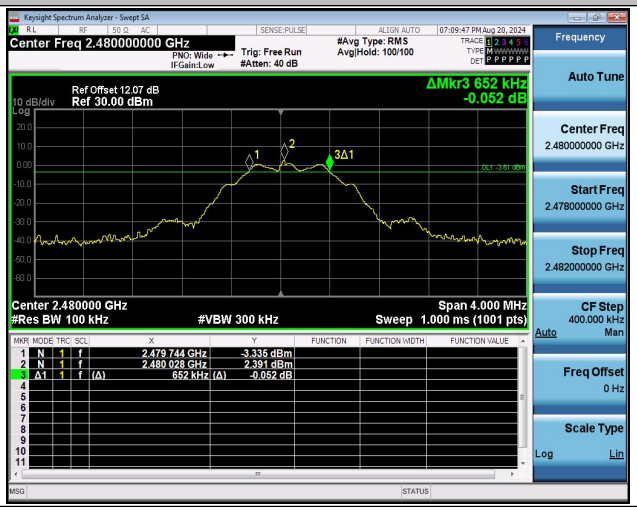
BLE_S8_Ant1_2402



BLE_S8_Ant1_2440



BLE_S8_Ant1_2480



Appendix B: Maximum conducted output power

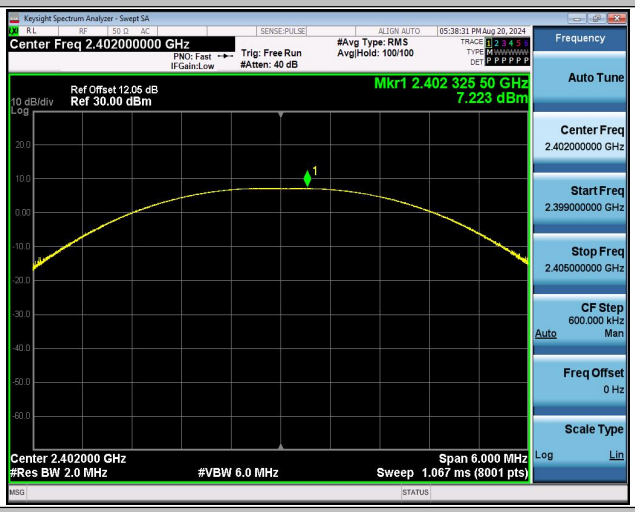
Test Result Peak

TestMode	Antenna	Freq(MHz)	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant1	2402	7.22	≤30	9.22	≤36	PASS
		2440	5.25	≤30	7.25	≤36	PASS
		2480	4.57	≤30	6.57	≤36	PASS

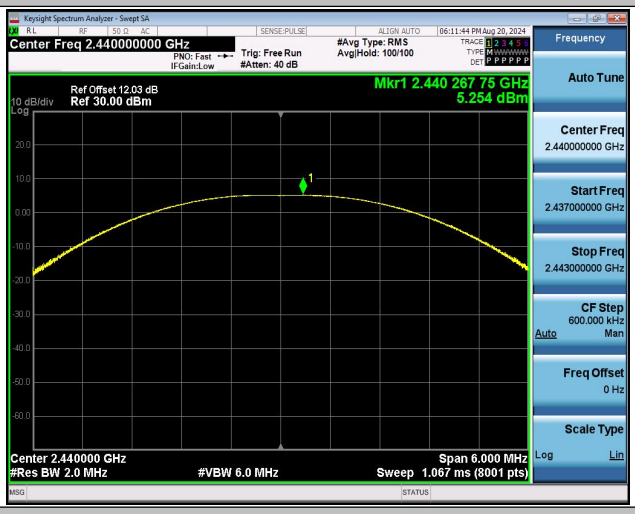
TestMode	Antenna	Freq(MHz)	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_S8	Ant1	2402	7.18	≤30	9.18	≤36	PASS
		2440	5.19	≤30	7.19	≤36	PASS
		2480	4.57	≤30	6.57	≤36	PASS

Test Graphs Peak

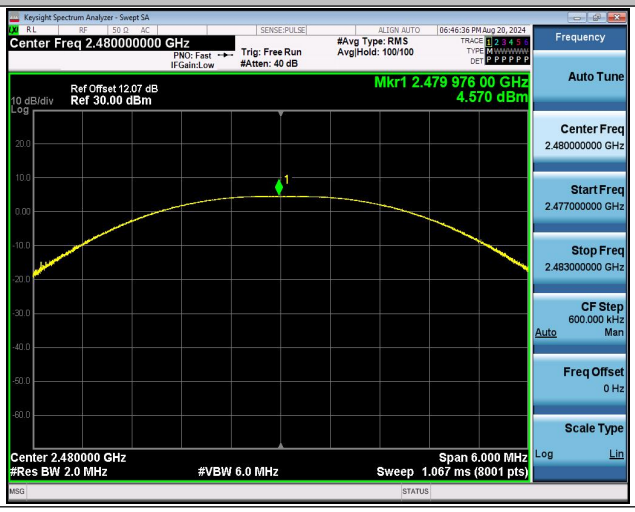
BLE_1M_Ant1_2402



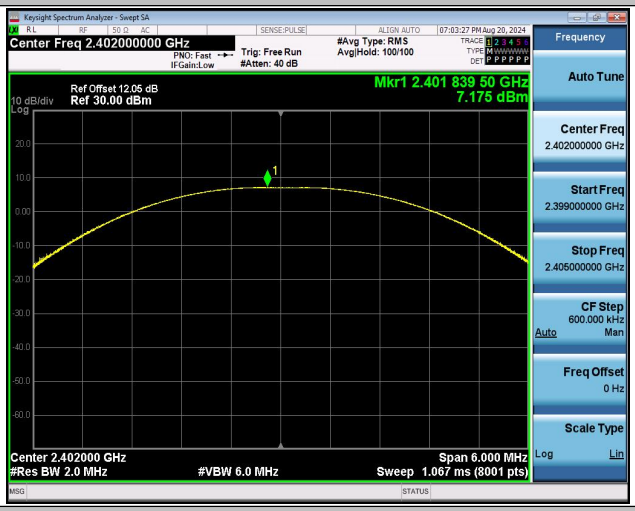
BLE_1M_Ant1_2440



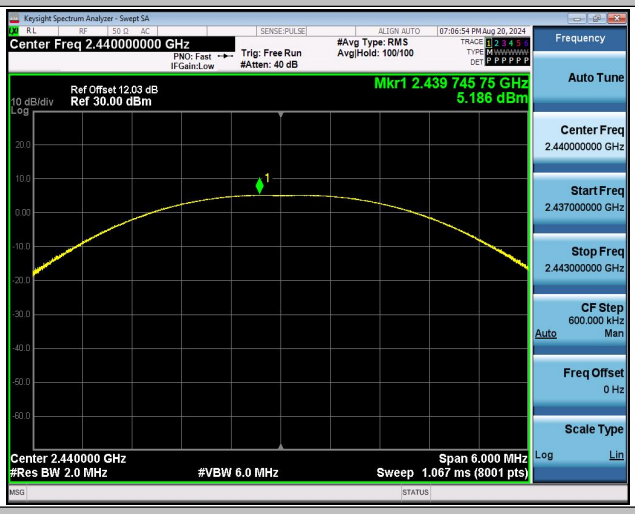
BLE_1M_Ant1_2480



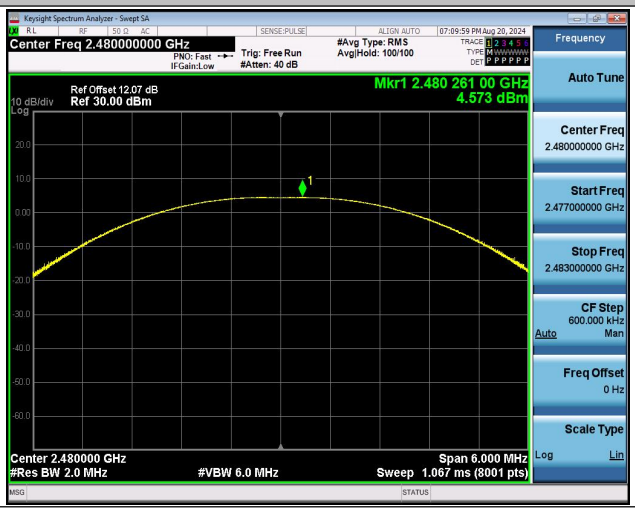
BLE_S8_Ant1_2402



BLE_S8_Ant1_2440



BLE_S8_Ant1_2480



Appendix C: Maximum power spectral density

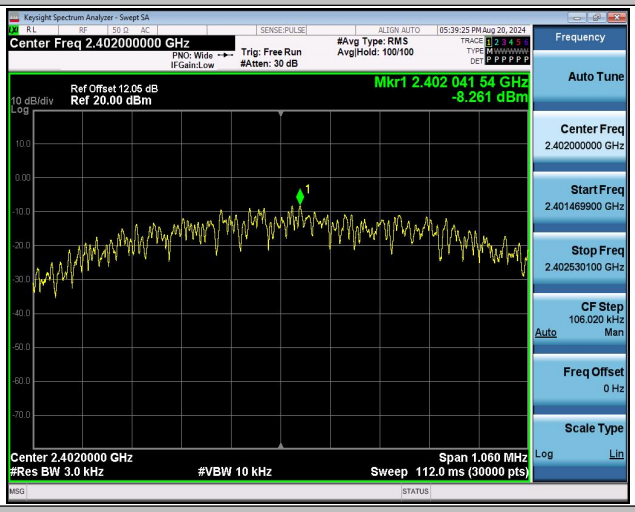
Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-8.26	≤8.00	PASS
		2440	-10.32	≤8.00	PASS
		2480	-10.96	≤8.00	PASS

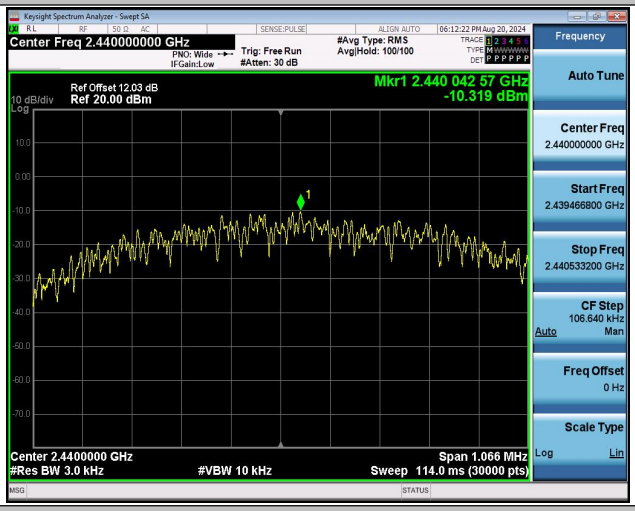
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_S8	Ant1	2402	0.92	≤8.00	PASS
		2440	-1.04	≤8.00	PASS
		2480	-1.73	≤8.00	PASS

Test Graphs

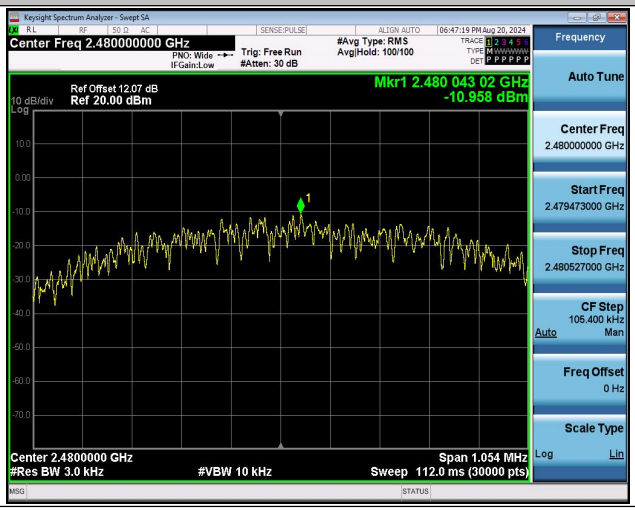
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



BLE_S8_Ant1_2402

BLE_S8_Ant1_2440

BLE_S8_Ant1_2480

Appendix D: Band edge measurements

Reference level measurement

Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_1M	Ant1	2402	2402.07	6.86
		2440	2440.07	4.90
		2480	2480.07	4.18

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_S8	Ant1	2402	2402.03	5.98
		2440	2440.05	4.74
		2480	2480.09	2.86

Test Graphs

BLE_1M_Ant1_2402

BLE_1M_Ant1_2440

BLE_1M_Ant1_2480

BLE_S8_Ant1_2402

BLE_S8_Ant1_2440

BLE_S8_Ant1_2480

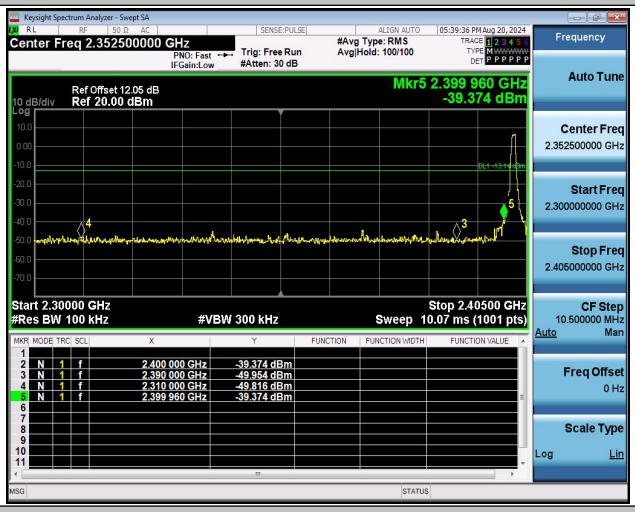
Band edge measurements

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	6.86	-39.37	≤-13.14	PASS
		High	2480	4.18	-46.38	≤-15.82	PASS

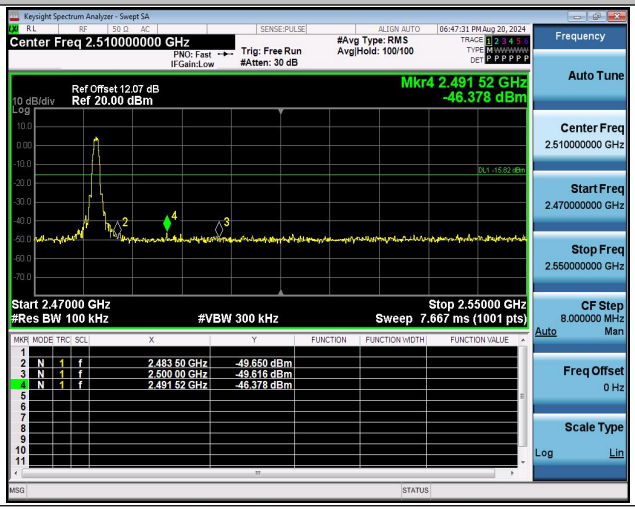
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_S8	Ant1	Low	2402	5.98	-44.2	≤-14.02	PASS
		High	2480	2.86	-46.46	≤-17.14	PASS

Test Graphs

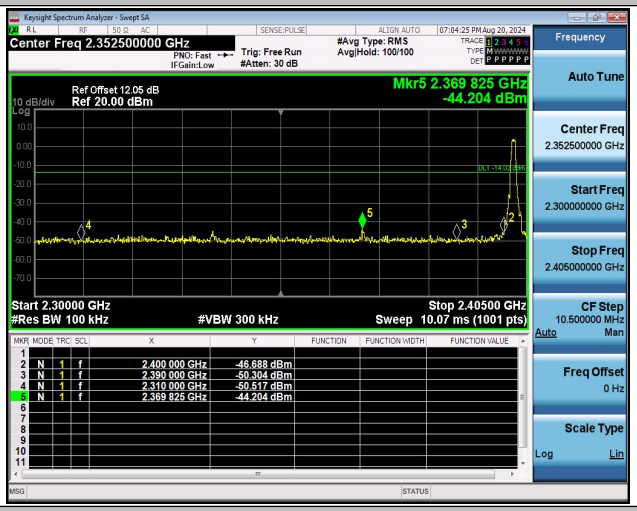
BLE_1M_Ant1_Low_2402



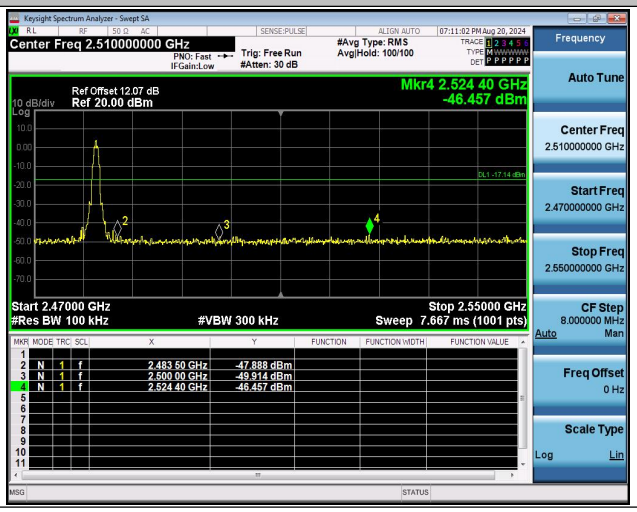
BLE_1M_Ant1_High_2480



BLE_S8_Ant1_Low_2402



BLE_S8_Ant1_High_2480



Appendix E: Conducted Spurious Emission

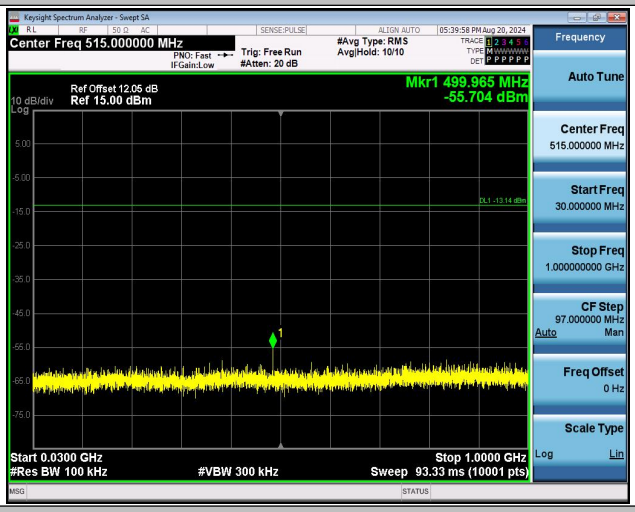
Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~1000	6.86	-55.7	≤-13.14	PASS
			1000~26500	6.86	-44.51	≤-13.14	PASS
		2440	30~1000	4.90	-56.93	≤-15.1	PASS
			1000~26500	4.90	-44.2	≤-15.1	PASS
		2480	30~1000	4.18	-54.57	≤-15.82	PASS
			1000~26500	4.18	-44.59	≤-15.82	PASS

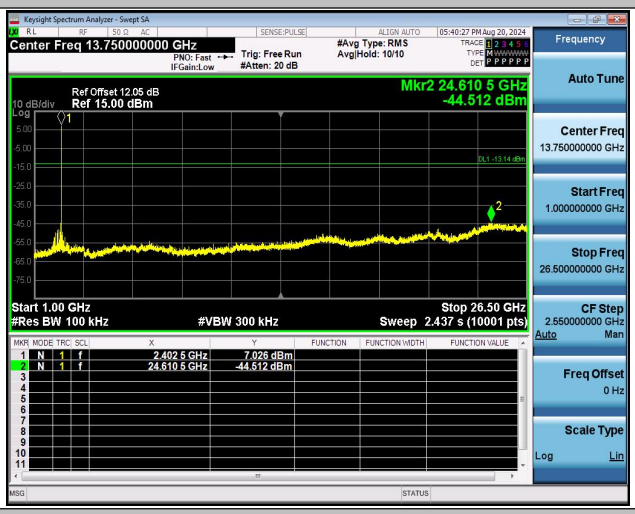
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_S8	Ant1	2402	30~1000	5.98	-57.47	≤-14.02	PASS
			1000~26500	5.98	-43.71	≤-14.02	PASS
		2440	30~1000	4.74	-54.1	≤-15.26	PASS
			1000~26500	4.74	-44.5	≤-15.26	PASS
		2480	30~1000	2.86	-55.81	≤-17.14	PASS
			1000~26500	2.86	-44.03	≤-17.14	PASS

Test Graphs

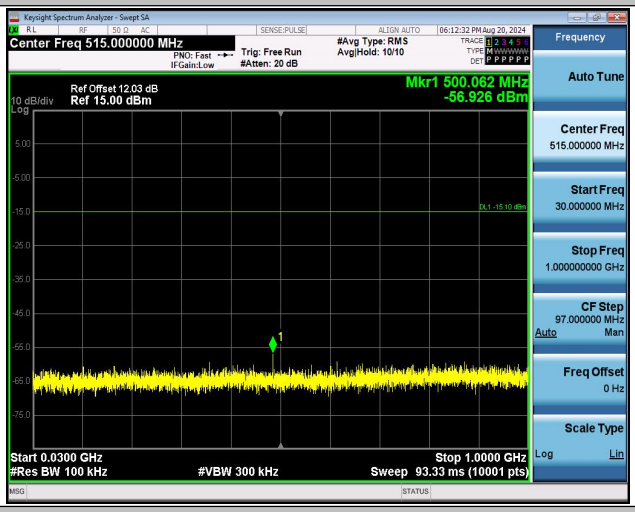
BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500

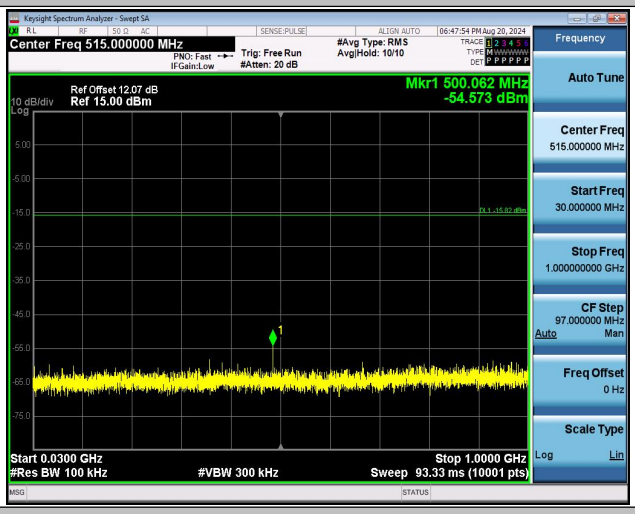


BLE_1M_Ant1_2440_30~1000



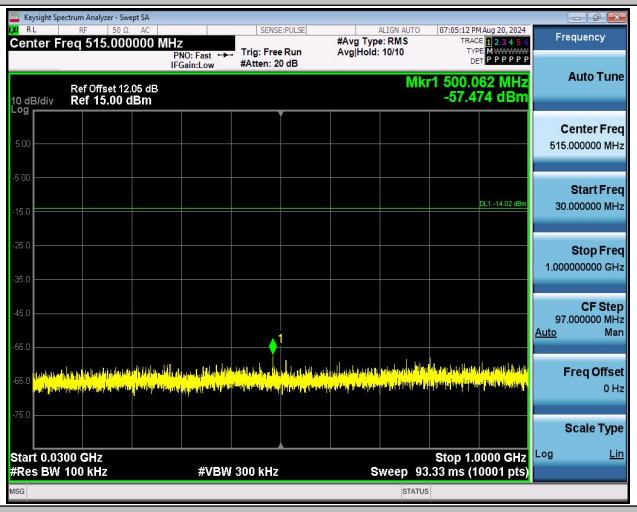
BLE_1M_Ant1_2440_1000~26500

BLE_1M_Ant1_2480_30~1000

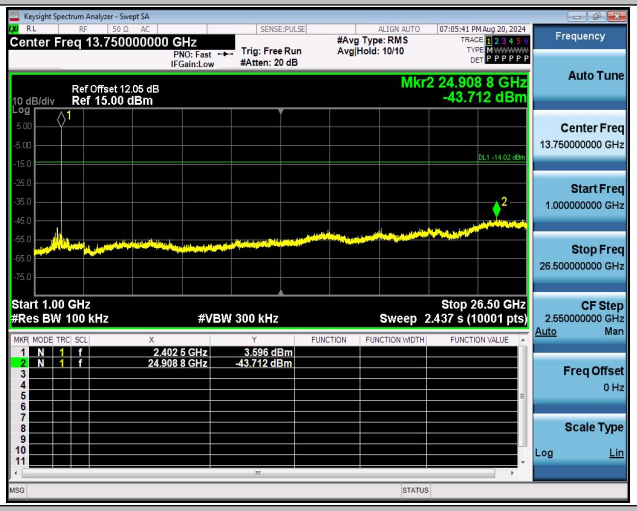


BLE_1M_Ant1_2480_1000~26500

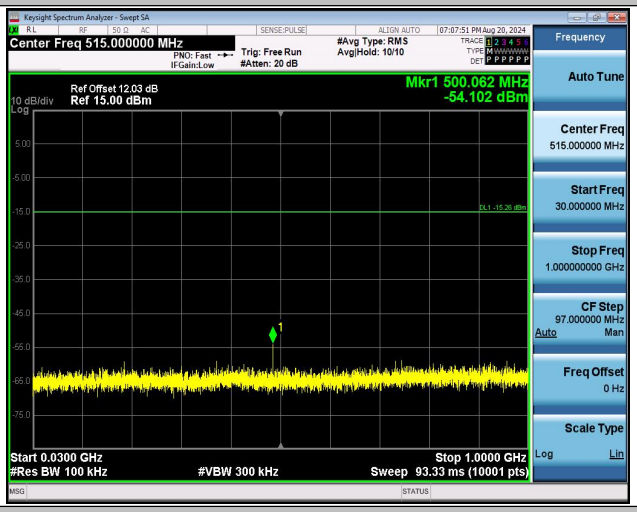
BLE_S8_Ant1_2402_30~1000



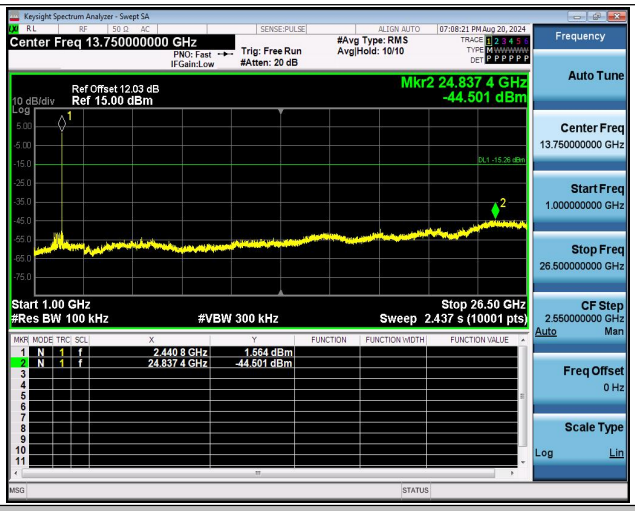
BLE_S8_Ant1_2402_1000~26500



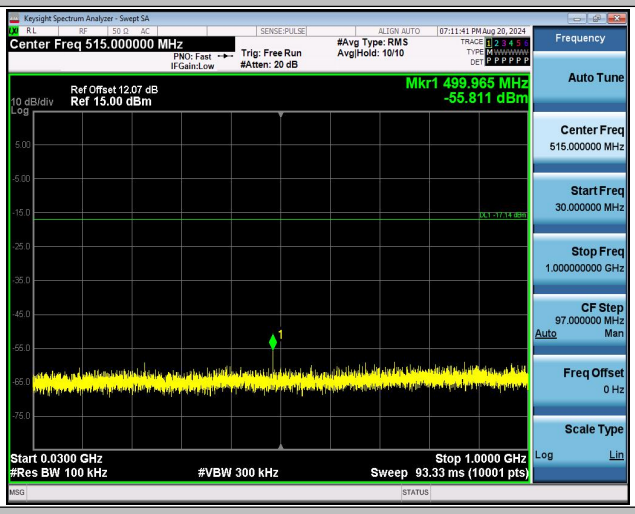
BLE_S8_Ant1_2440_30~1000



BLE_S8_Ant1_2440_1000~26500



BLE_S8_Ant1_2480_30~1000



BLE_S8_Ant1_2480_1000~26500