

Appendix A

RF Test Data for BT(BLE) (Conducted Measurement)

Product Name: SMART PHONE

Trade Mark: IPRO

Test Model: S601

FCC ID: PQ4IPROS601

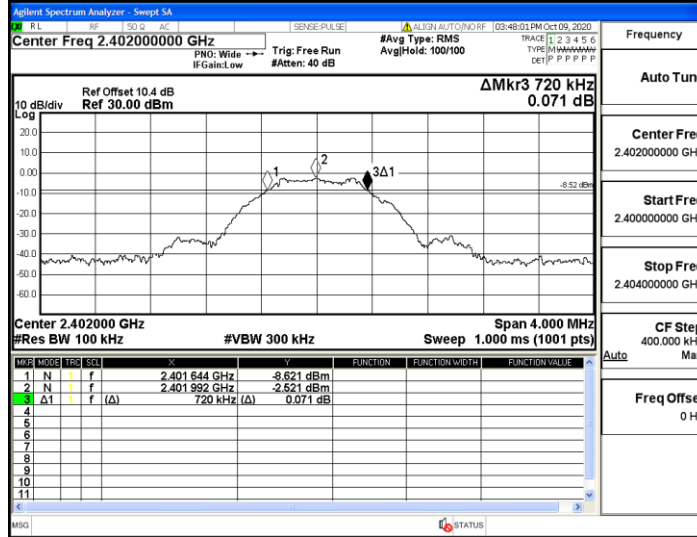
Environmental Conditions

Temperature:	22.8° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

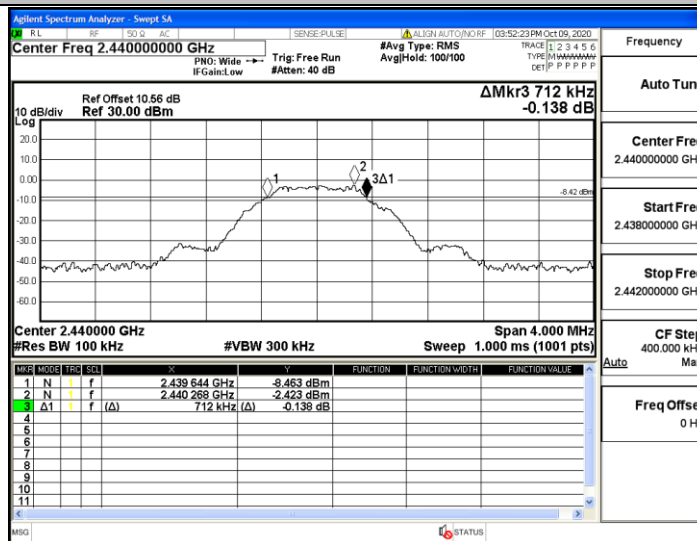
A.1. 6dB Bandwidth

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.720	2401.644	2402.364	0.5	PASS
		2440	0.712	2439.644	2440.356	0.5	PASS
		2480	0.720	2479.644	2480.364	0.5	PASS
BLE_2M	Ant1	2402	1.328	2401.336	2402.664	0.5	PASS
		2440	1.116	2439.456	2440.572	0.5	PASS
		2480	1.128	2479.444	2480.572	0.5	PASS

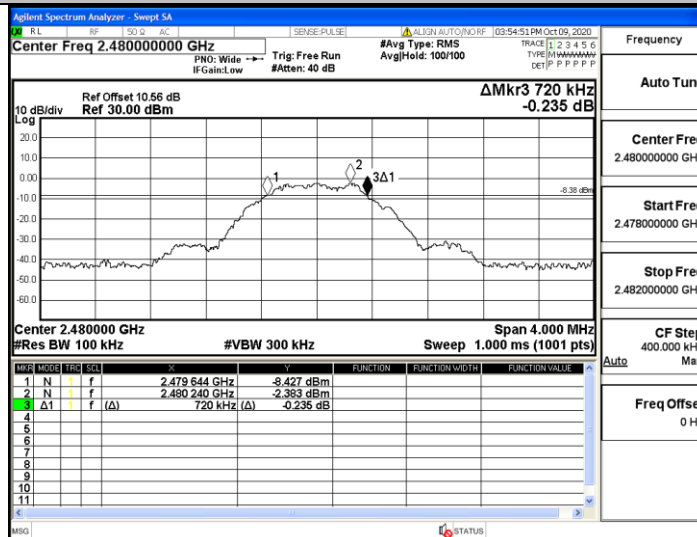
BLE_1M_Ant1_2402



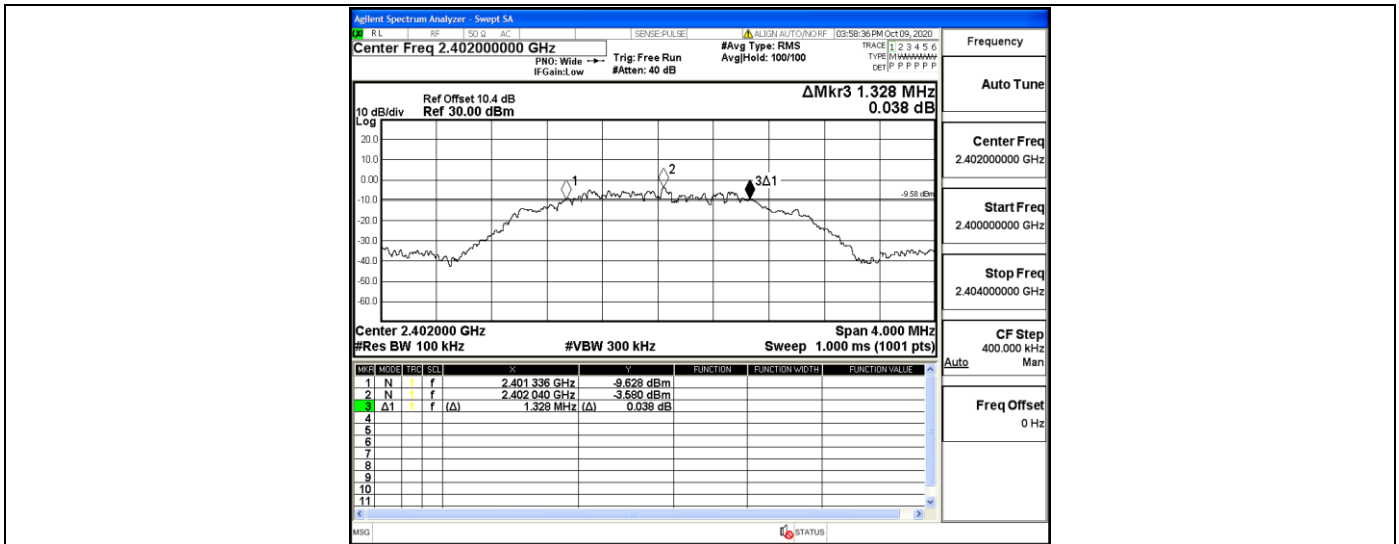
BLE_1M_Ant1_2440



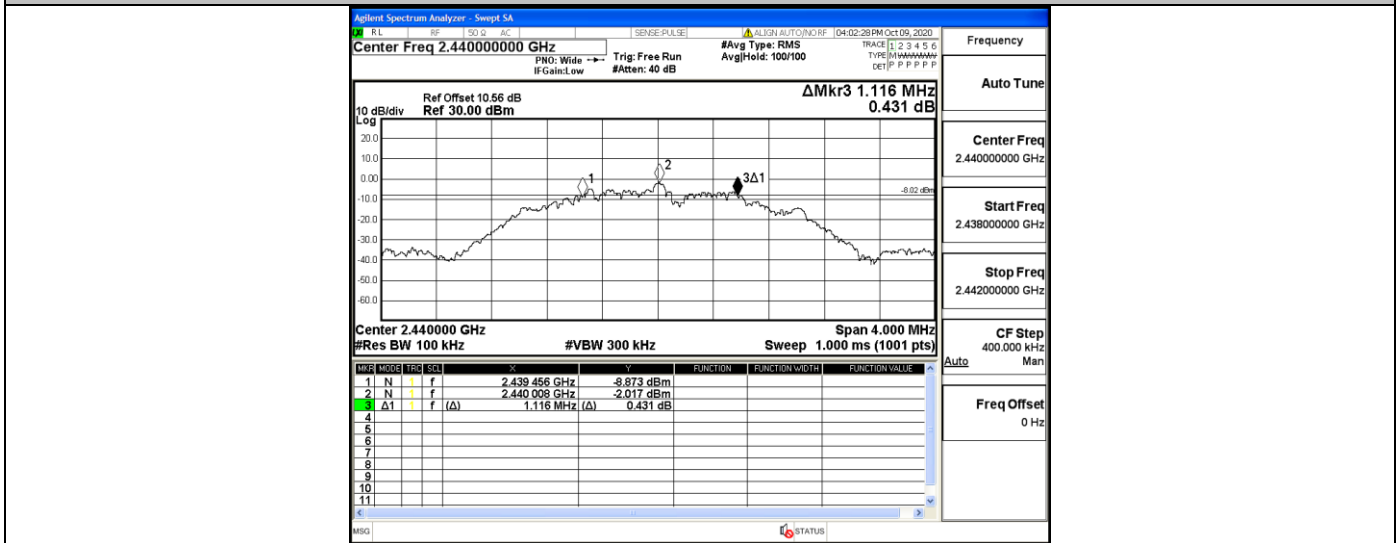
BLE_1M_Ant1_2480



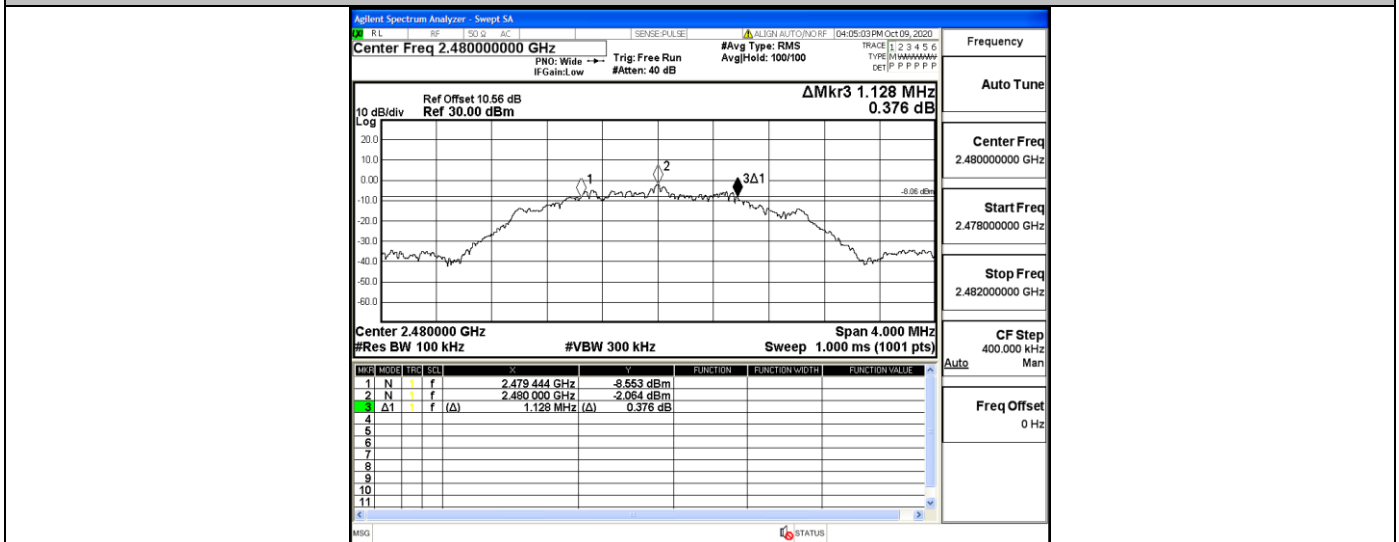
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



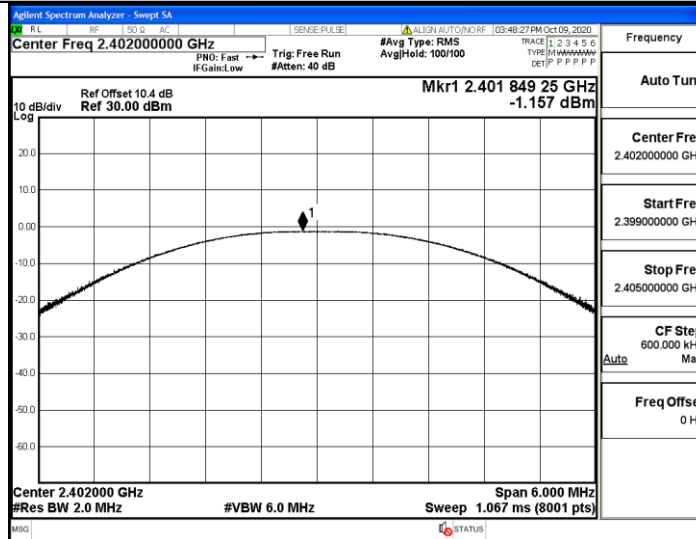
A.2. Occupied Bandwidth

Test Mode	Test Channel	Ant	OBW[MHz]	Limit[MHz]	Verdict
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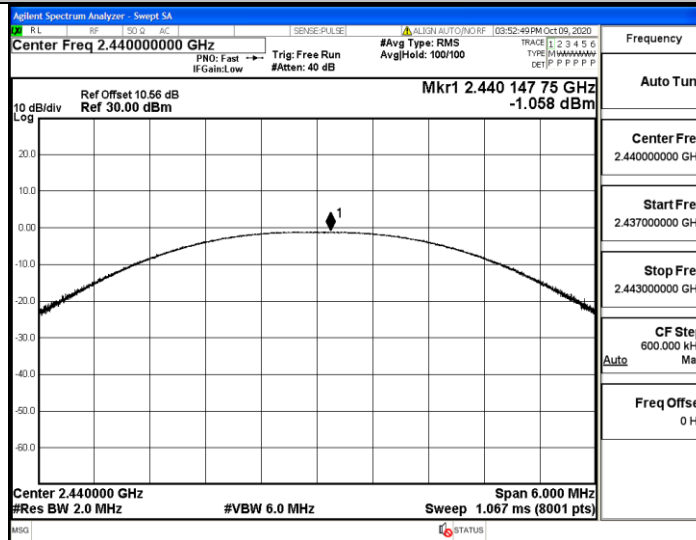
A.3. Maximum peak conducted output power

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-1.16	<=30	PASS
		2440	-1.06	<=30	PASS
		2480	-0.98	<=30	PASS
BLE_2M	Ant1	2402	-1.13	<=30	PASS
		2440	-1.11	<=30	PASS
		2480	-0.9	<=30	PASS

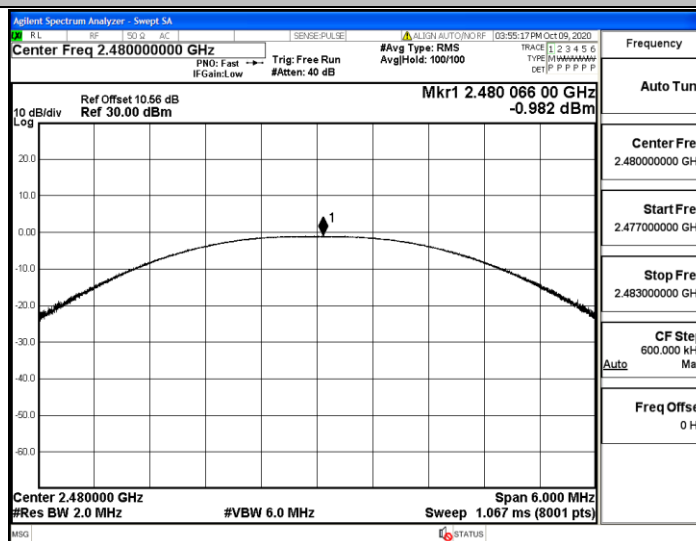
BLE_1M_Ant1_2402



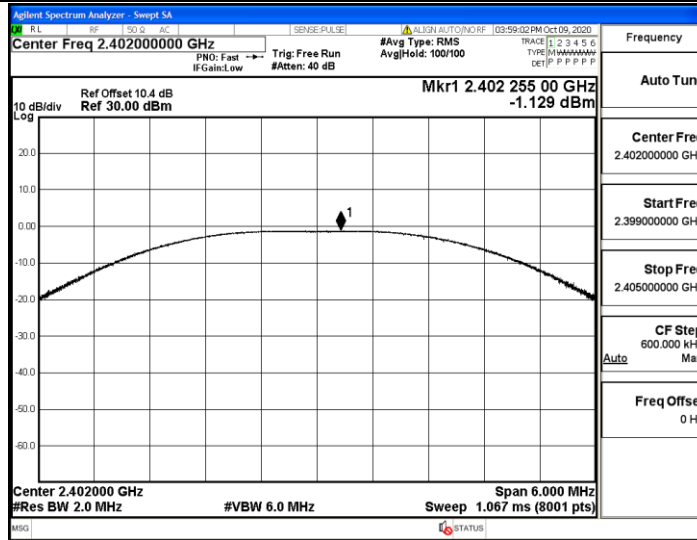
BLE_1M_Ant1_2440



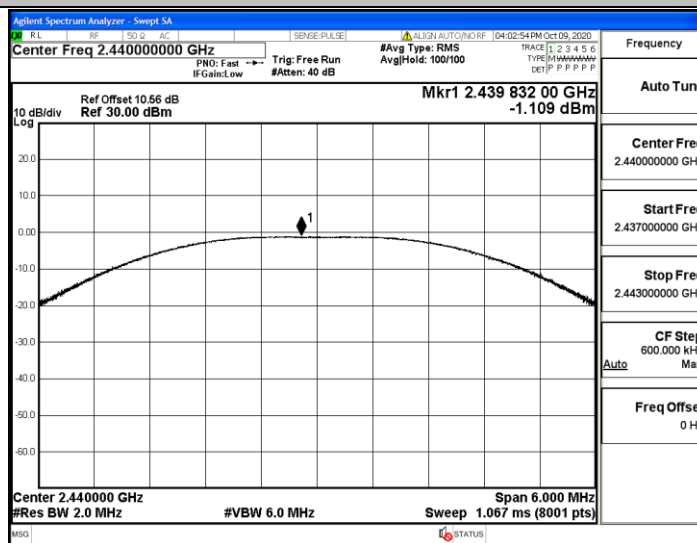
BLE_1M_Ant1_2480



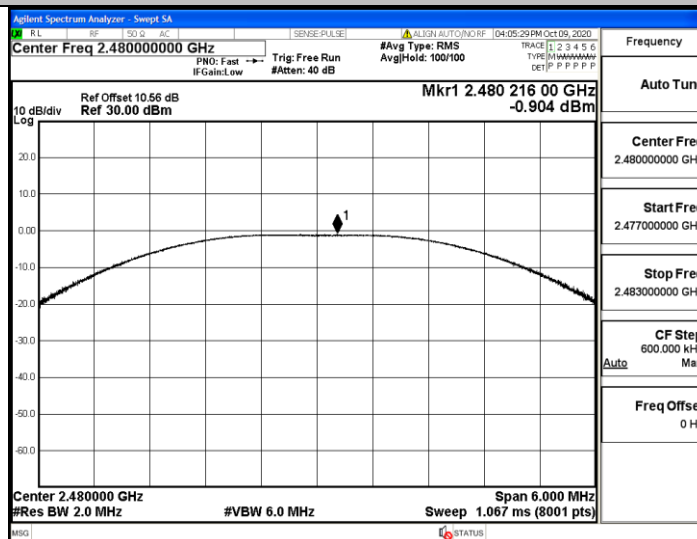
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



A.4. Maximum Peak power spectral density

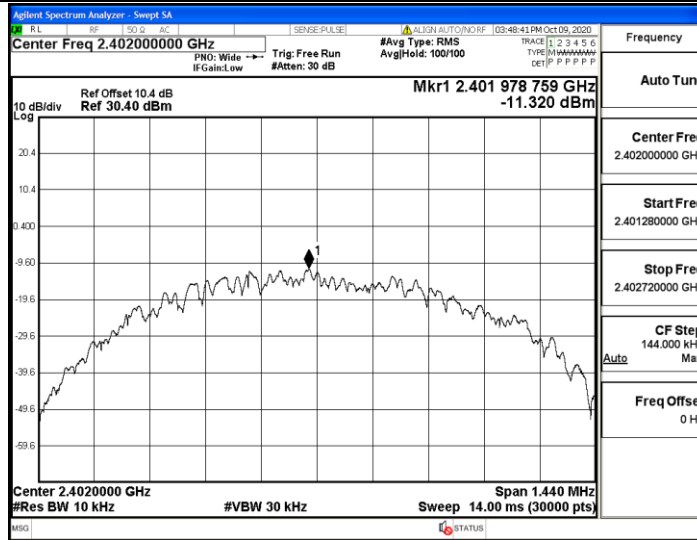
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-11.32	<=8	PASS
		2440	-11.3	<=8	PASS
		2480	-11.12	<=8	PASS
BLE_2M	Ant1	2402	-13.7	<=8	PASS
		2440	-13.58	<=8	PASS
		2480	-13.42	<=8	PASS

Test Mode	Ant	Test	PSD[dBm/10KHz]	Converter Factor [dB]	PSD[dBm/3KHz]	Limit[dBm/3KHz]	Verdict
BLE(1Mbps)	Ant1	2402	-11.32	5.23	-16.55	8.00	PASS
		2440	-11.3	5.23	-16.53	8.00	PASS
		2480	-11.12	5.23	-16.35	8.00	PASS
BLE_2M	Ant1	2402	-13.7	5.23	-18.93	8.00	PASS
		2440	-13.58	5.23	-18.81	8.00	PASS
		2480	-13.42	5.23	-18.65	8.00	PASS

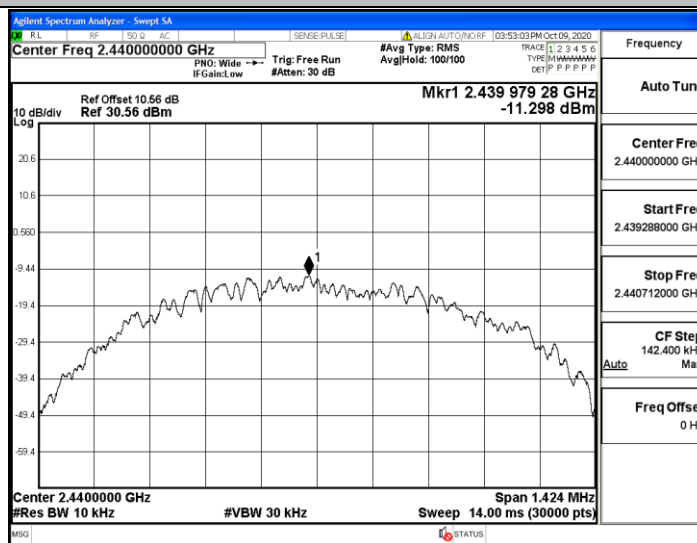
Note:

1, Converter factor = $10 * \lg(\text{RBW}/3 \text{ kHz}) = 5.23 \text{ (dB)}$ 2, $\text{PSD[dBm/3KHz]} = \text{PSD[dBm/10KHz]} - \text{Converter Factor}$

BLE_1M_Ant1_2402



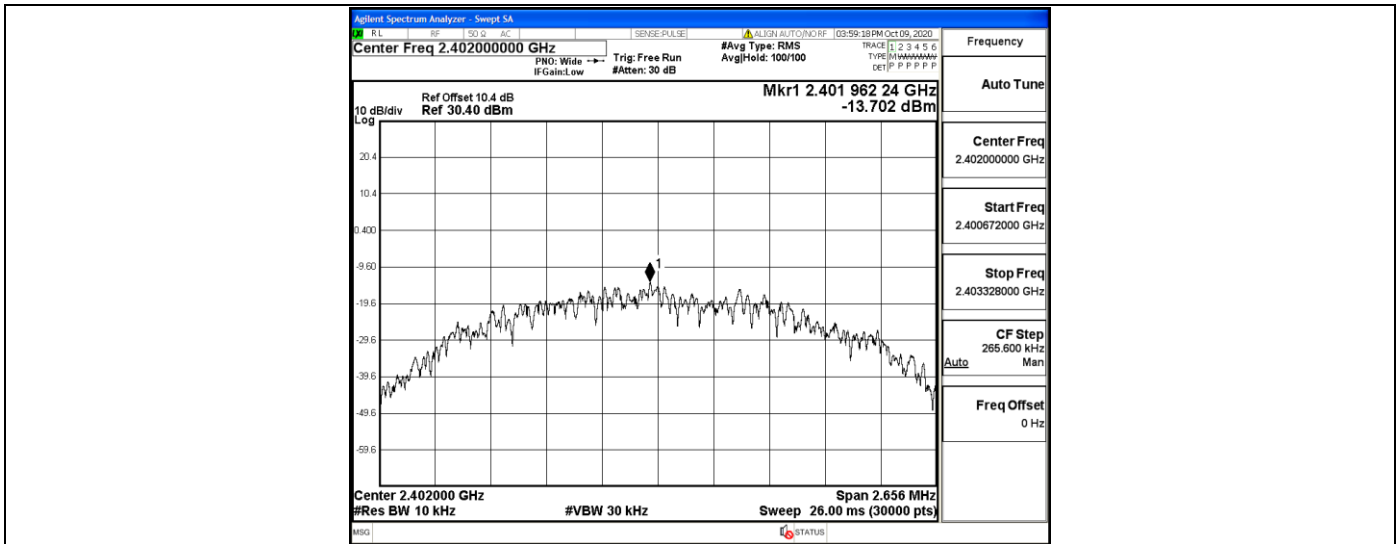
BLE_1M_Ant1_2440



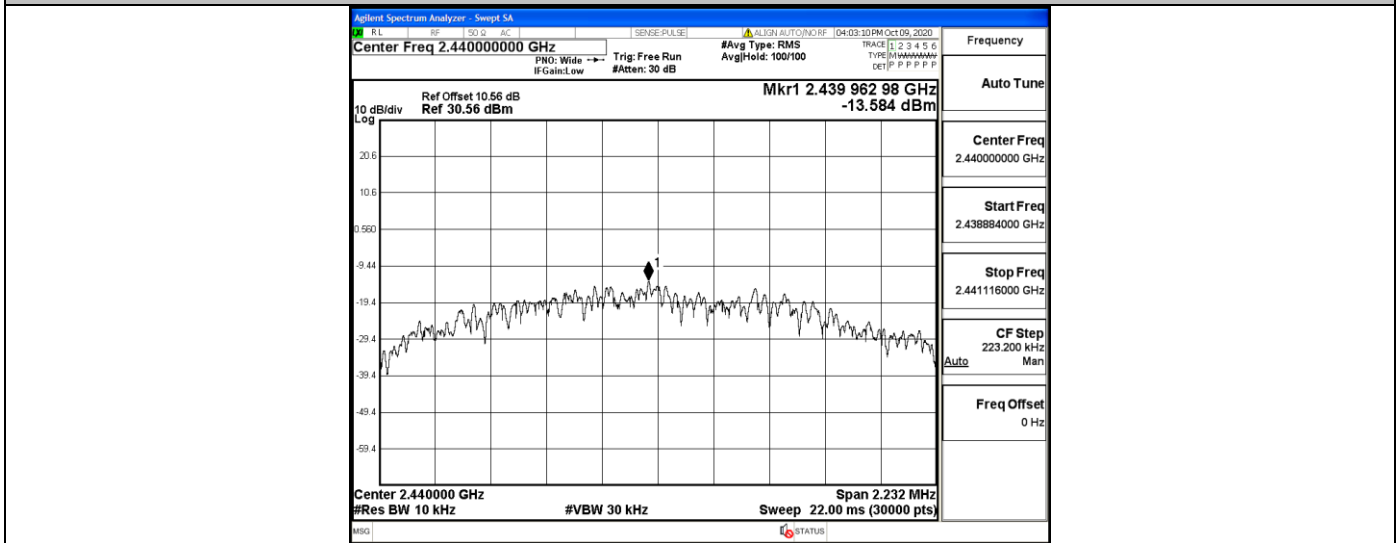
BLE_1M_Ant1_2480



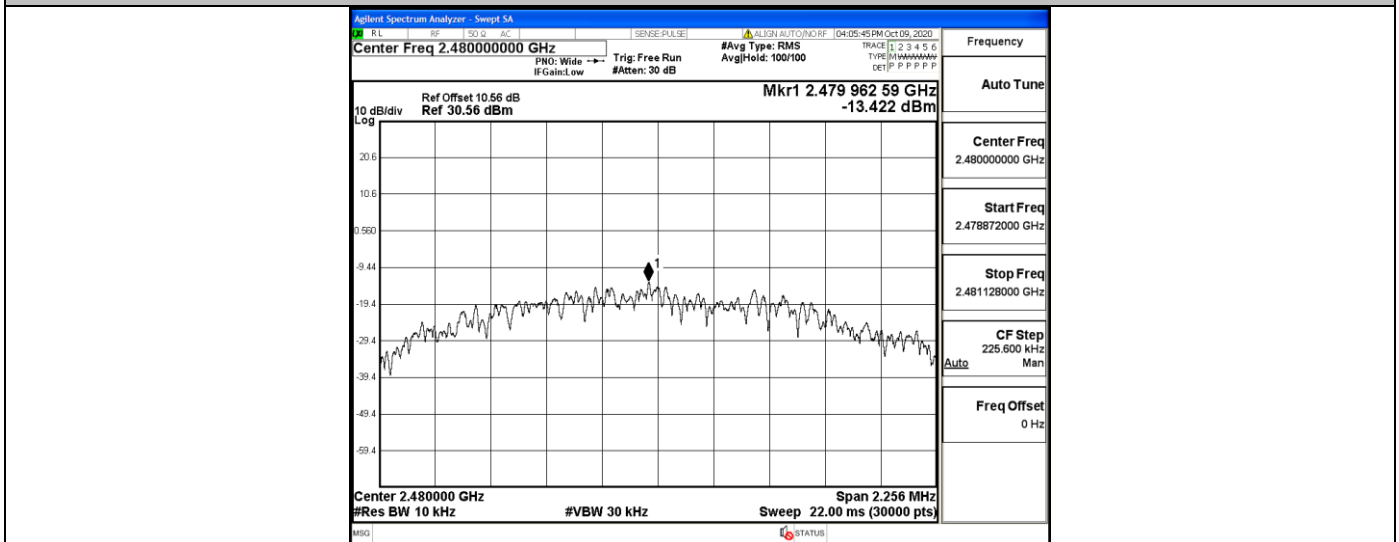
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



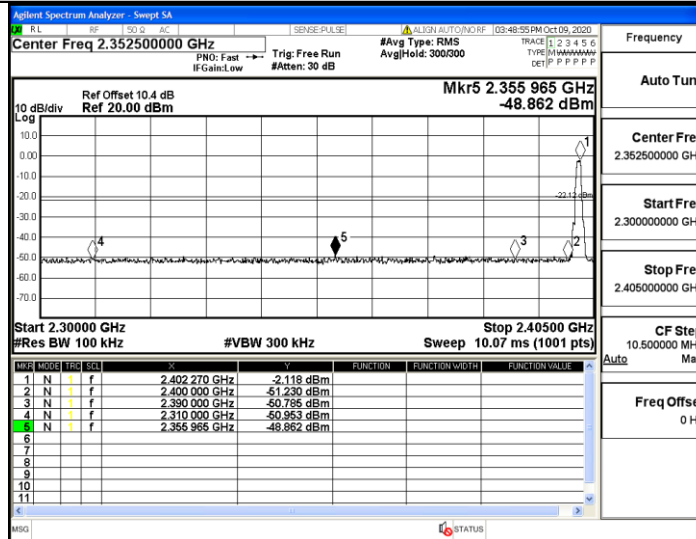
BLE_2M_Ant1_2480



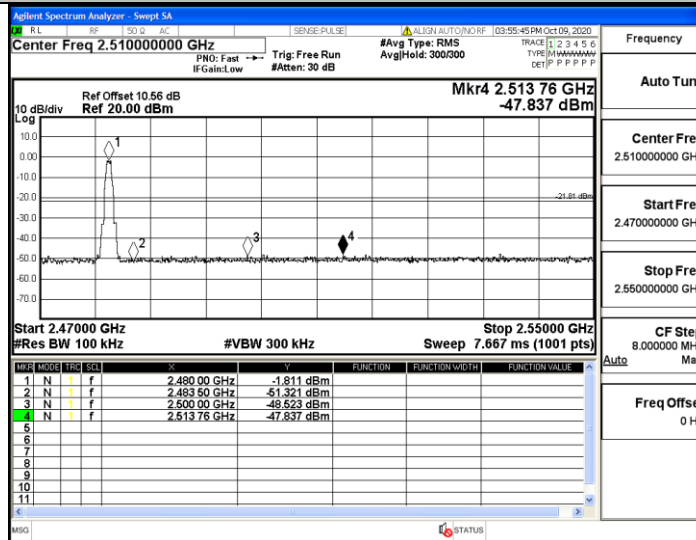
A.5. Band-edge for RF Conducted Emissions

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-2.12	-48.86	<=-22.12	PASS
		High	2480	-1.81	-47.84	<=-21.81	PASS
BLE_2M	Ant1	Low	2402	-2.51	-33.51	<=-22.51	PASS
		High	2480	-1.84	-47.2	<=-21.84	PASS

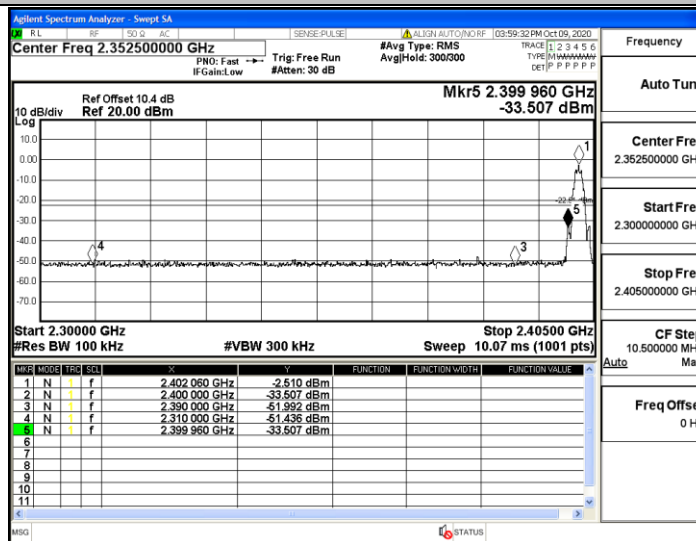
BLE_1M_Ant1_Low_2402



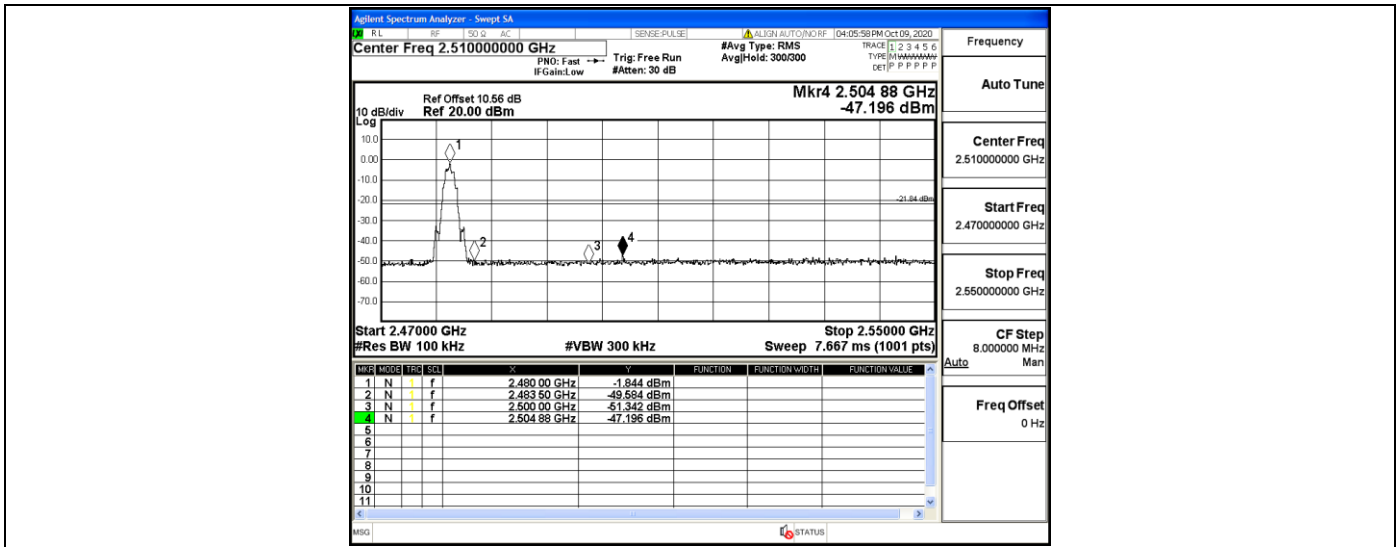
BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402

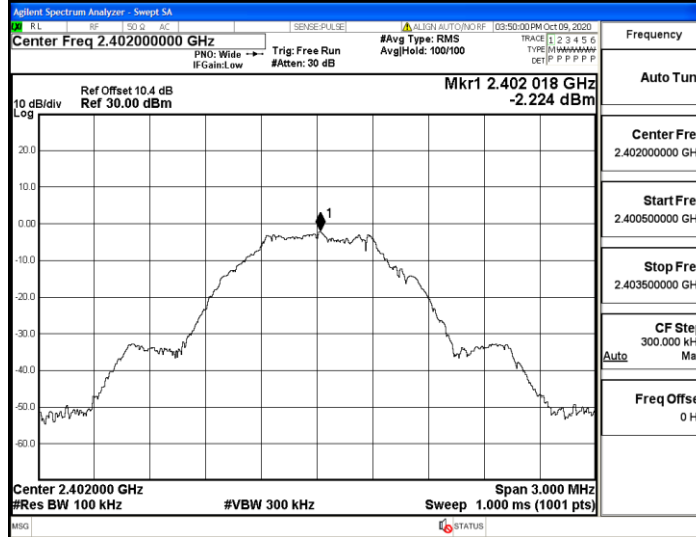


BLE_2M_Ant1_High_2480

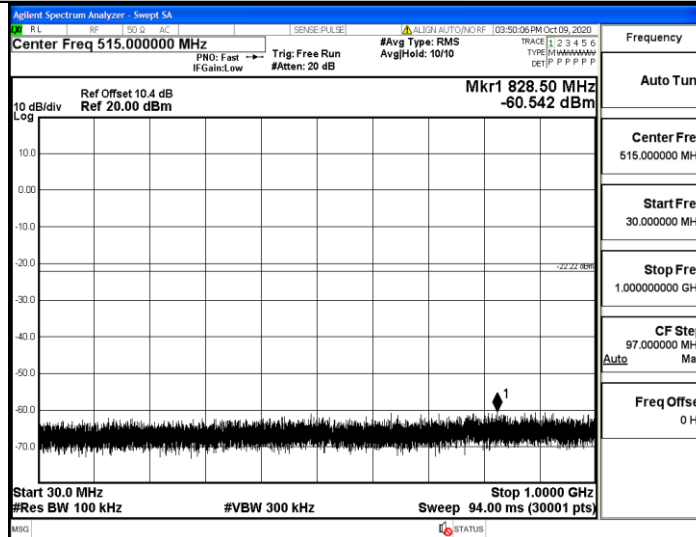


A.6. RF Conducted Spurious Emissions

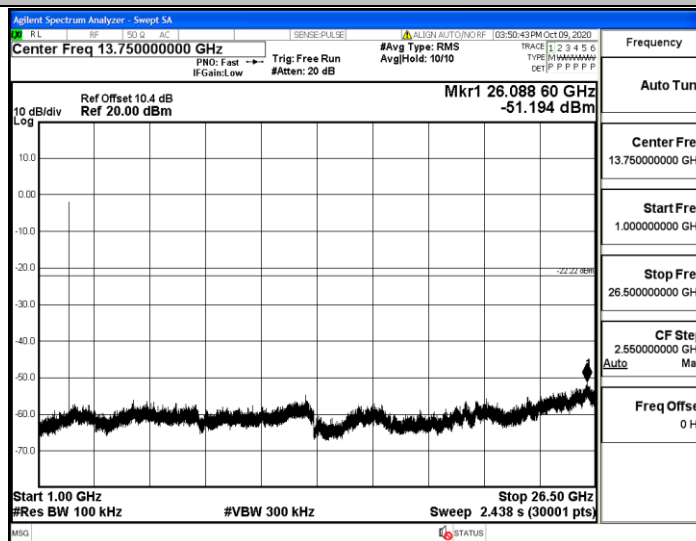
BLE_1M_Ant1_2402_0~Reference



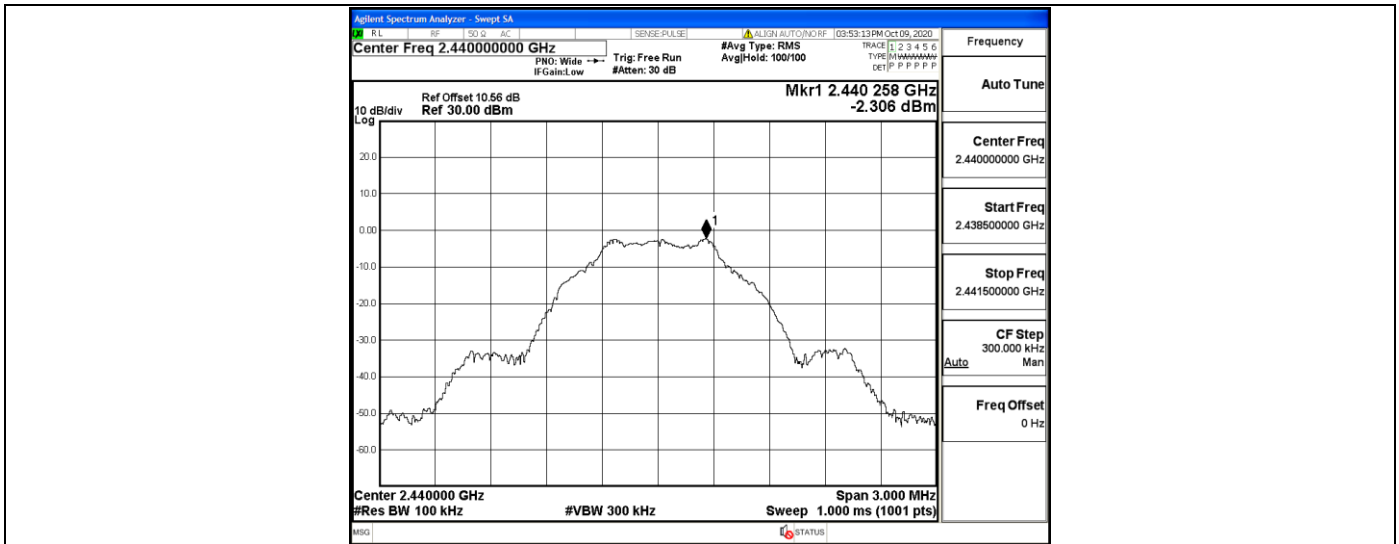
BLE_1M_Ant1_2402_30~1000



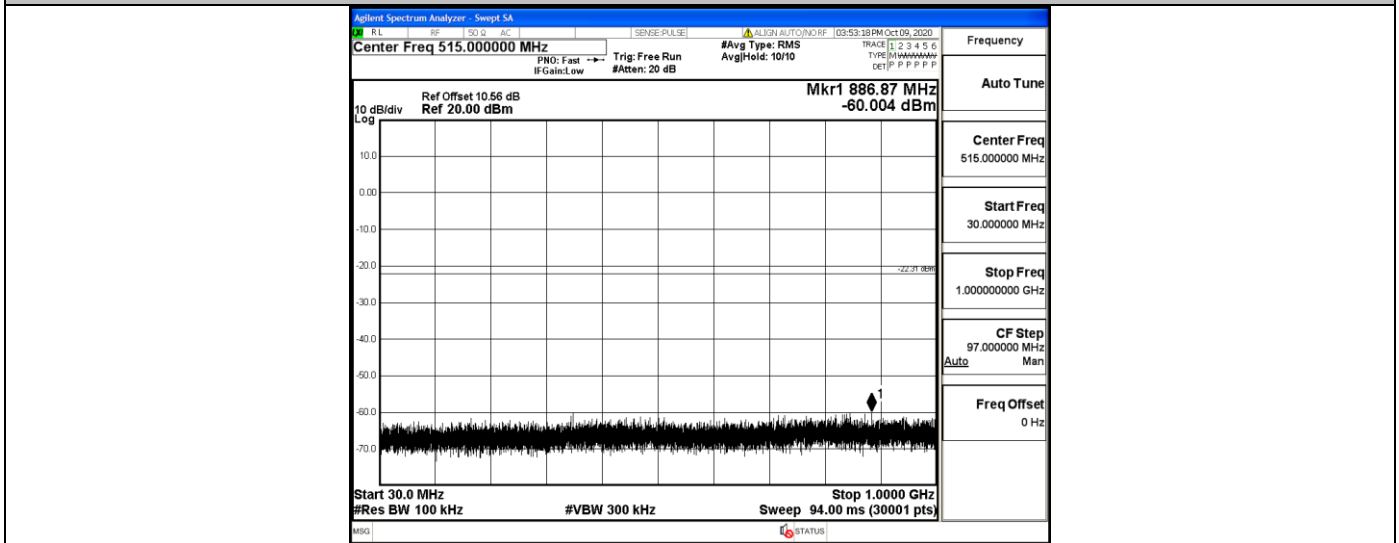
BLE_1M_Ant1_2402_1000~26500



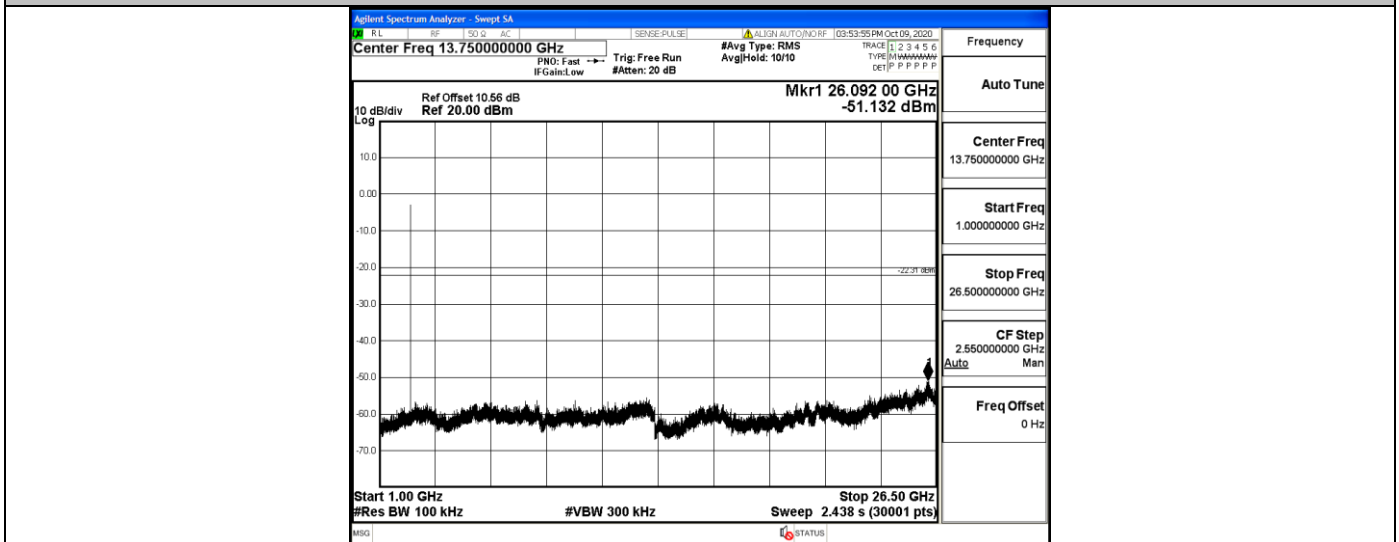
BLE_1M_Ant1_2440_0~Reference



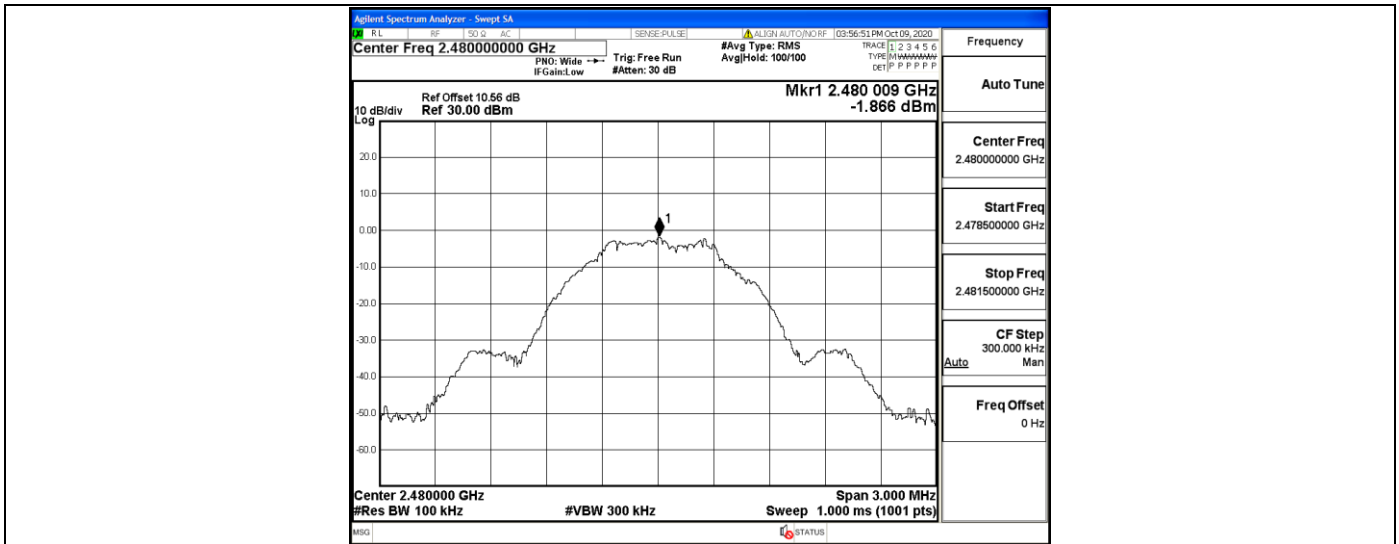
BLE_1M_Ant1_2440_30~1000



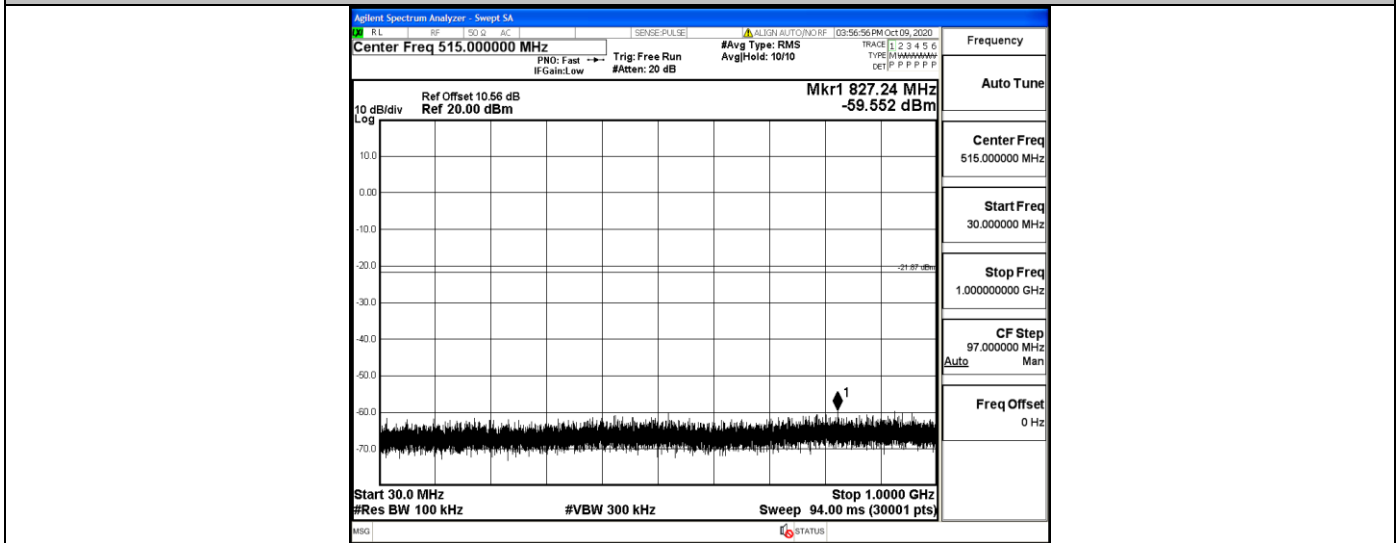
BLE_1M_Ant1_2440_1000~26500



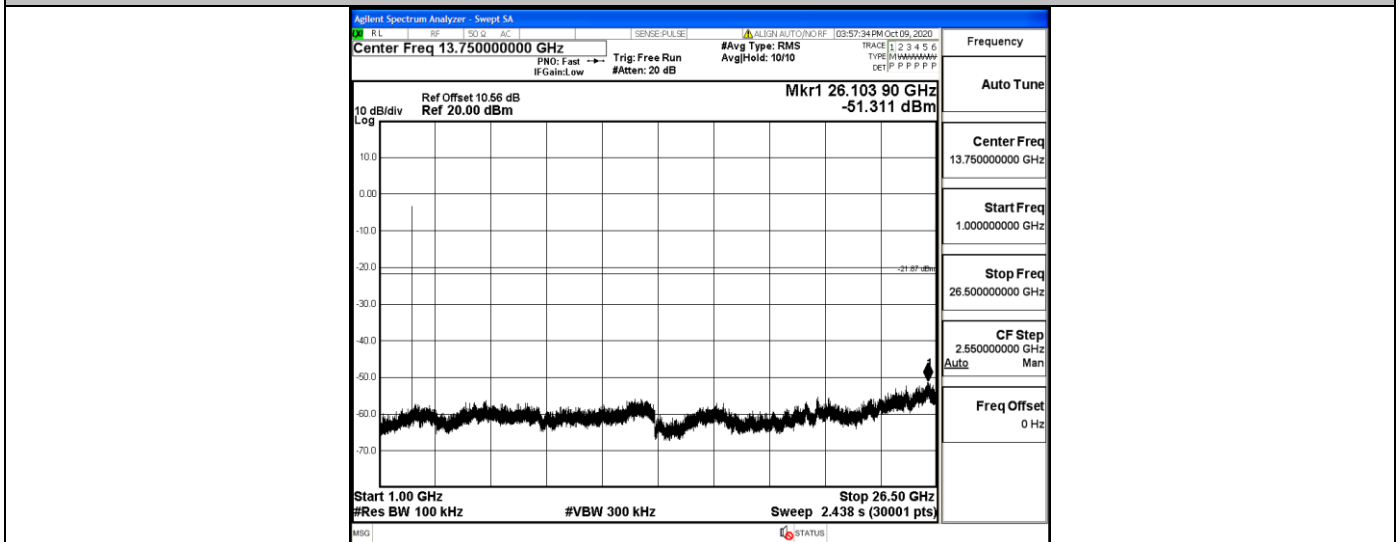
BLE_1M_Ant1_2480_0~Reference



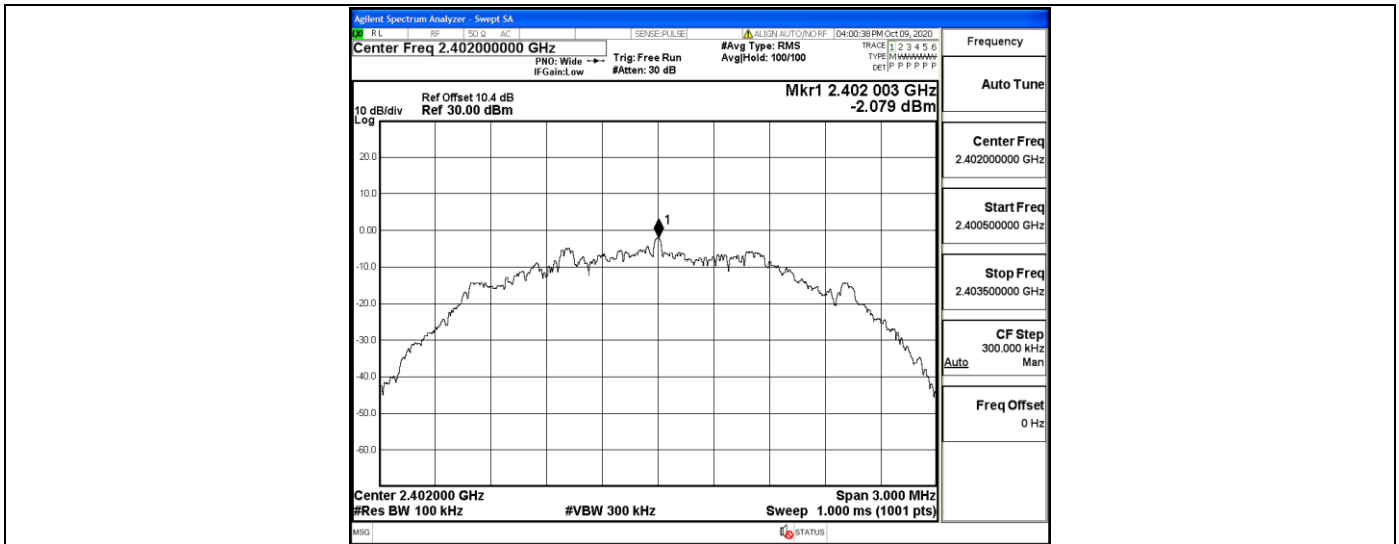
BLE_1M_Ant1_2480_30~1000



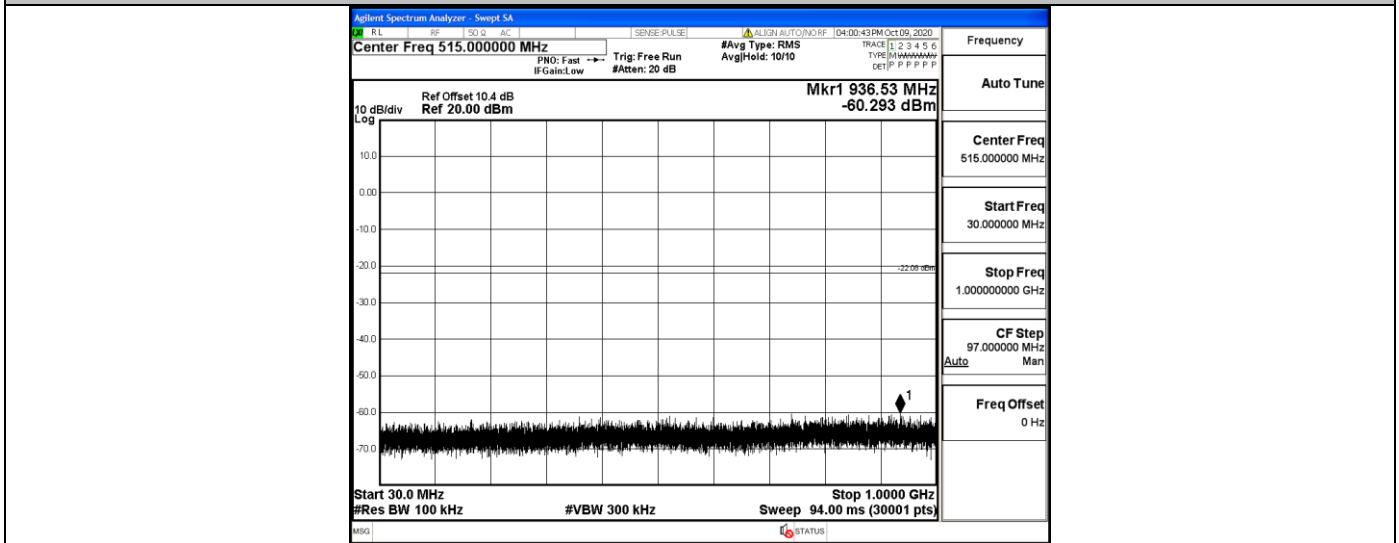
BLE_1M_Ant1_2480_1000~26500



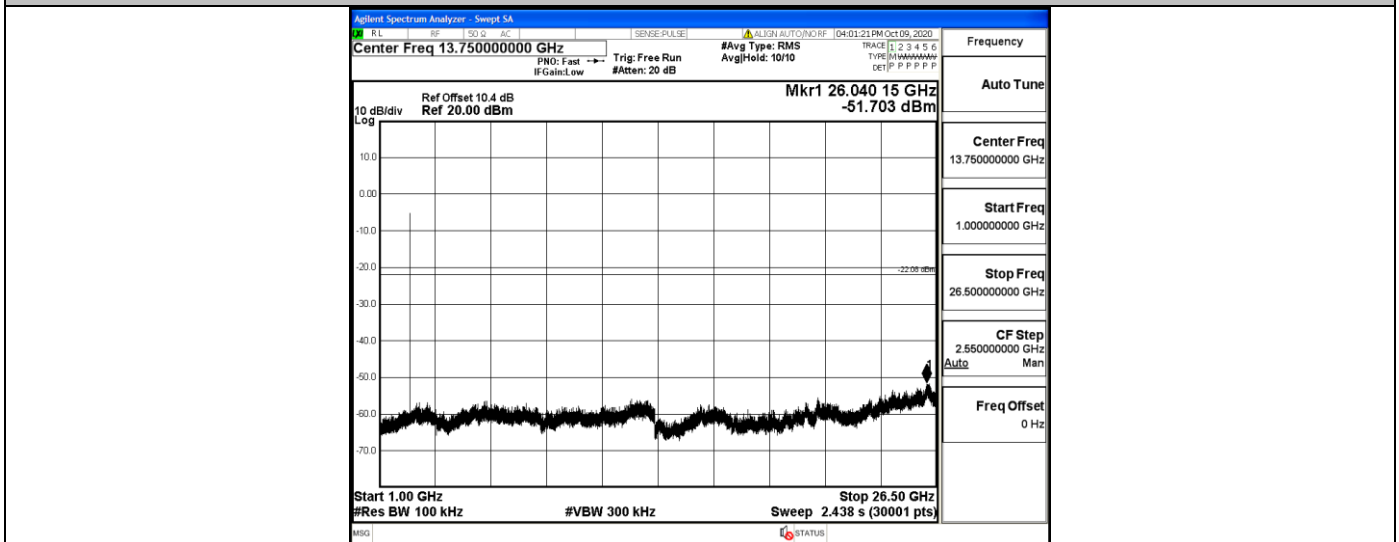
BLE_2M_Ant1_2402_0~Reference



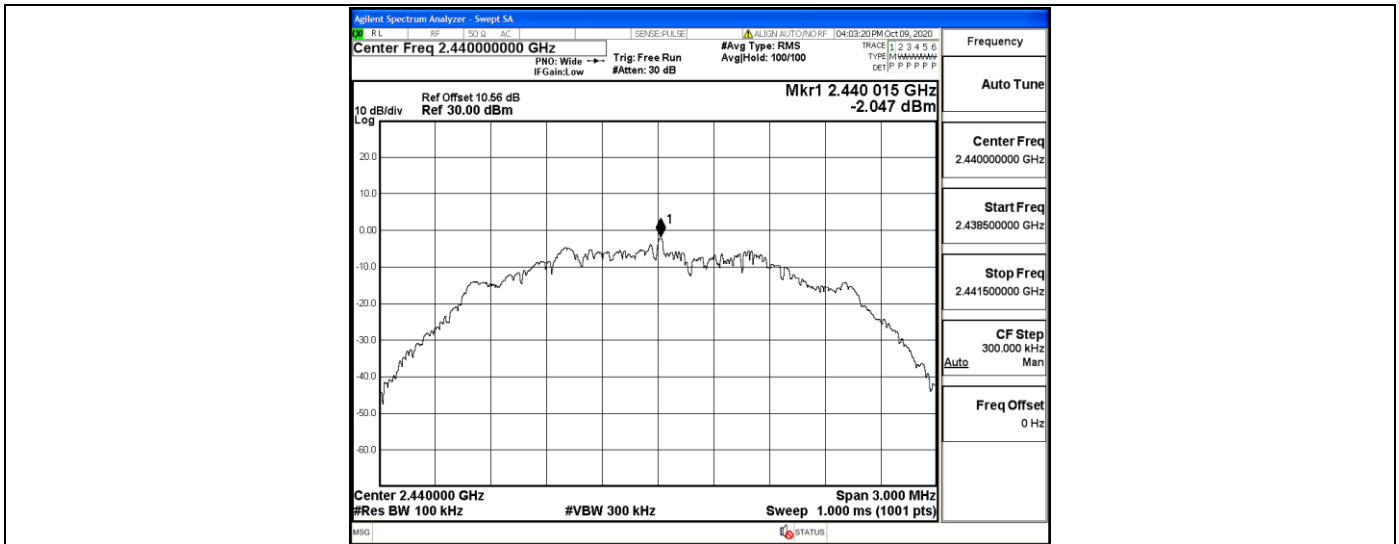
BLE_2M_Ant1_2402_30~1000



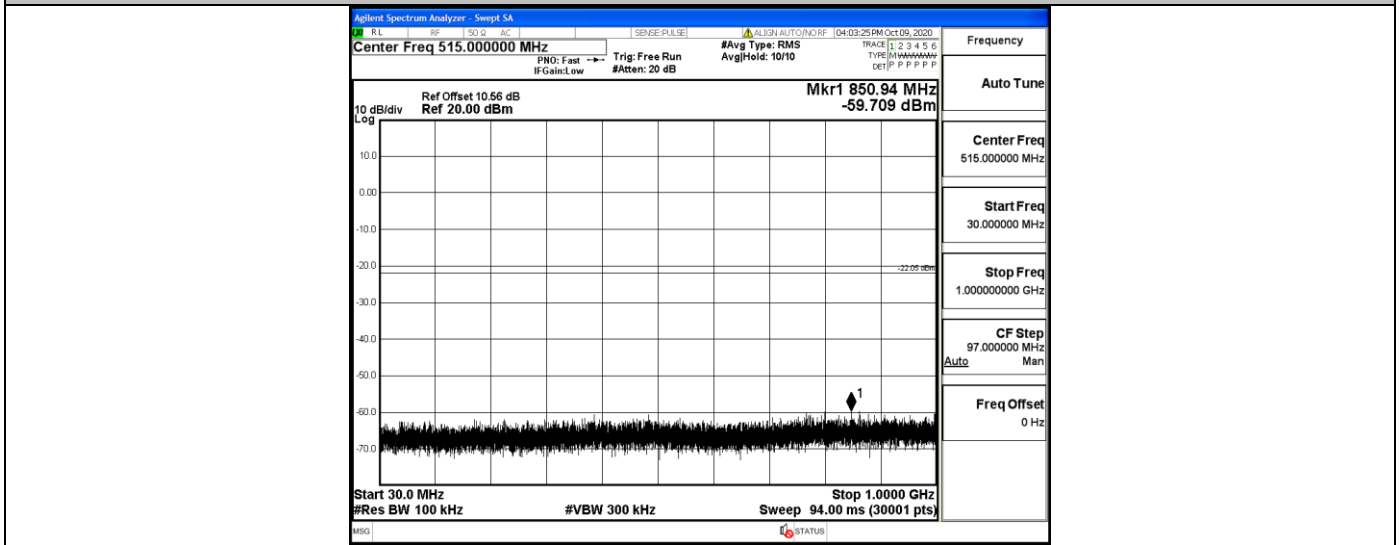
BLE_2M_Ant1_2402_1000~26500



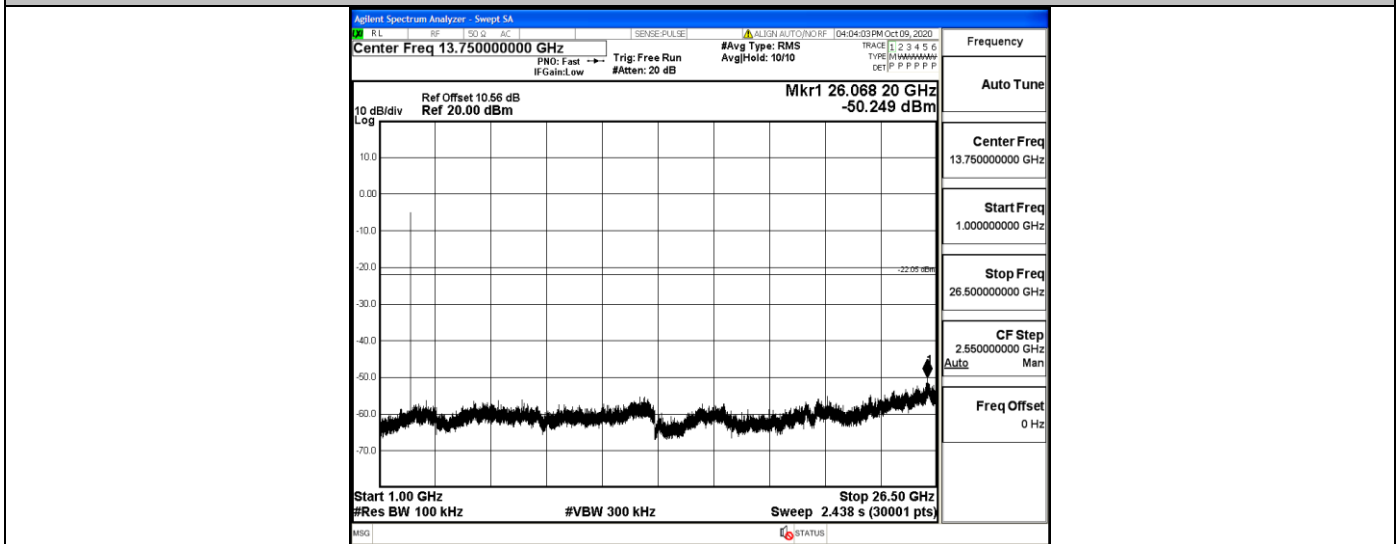
BLE_2M_Ant1_2440_0~Reference



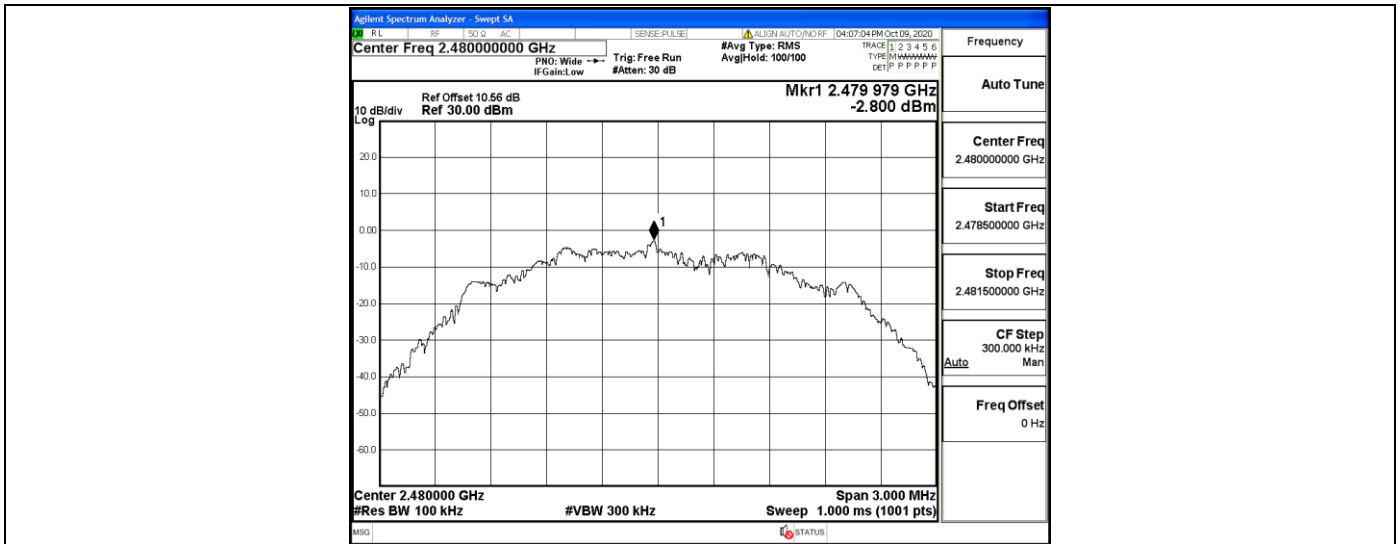
BLE_2M_Ant1_2440_30~1000



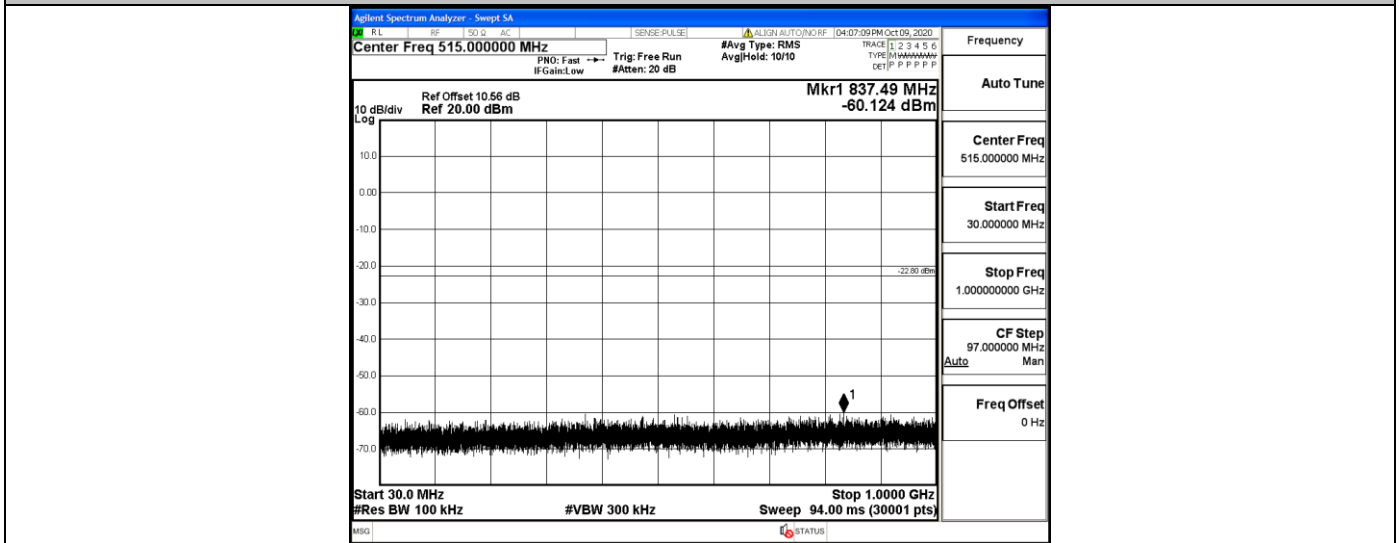
BLE_2M_Ant1_2440_1000~26500



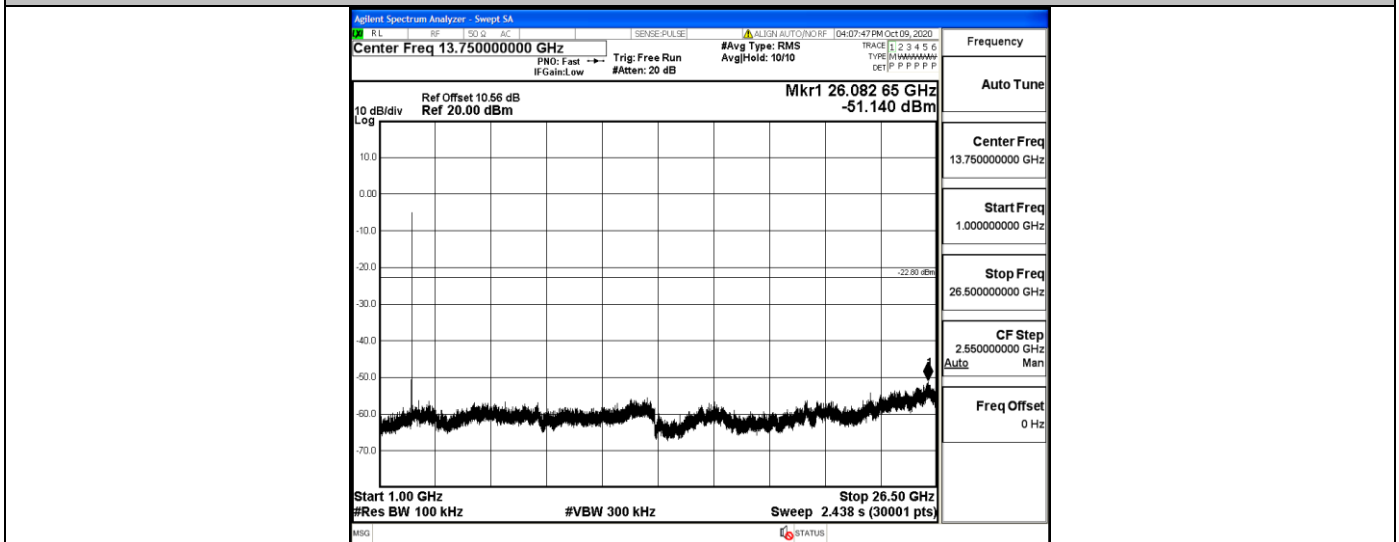
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



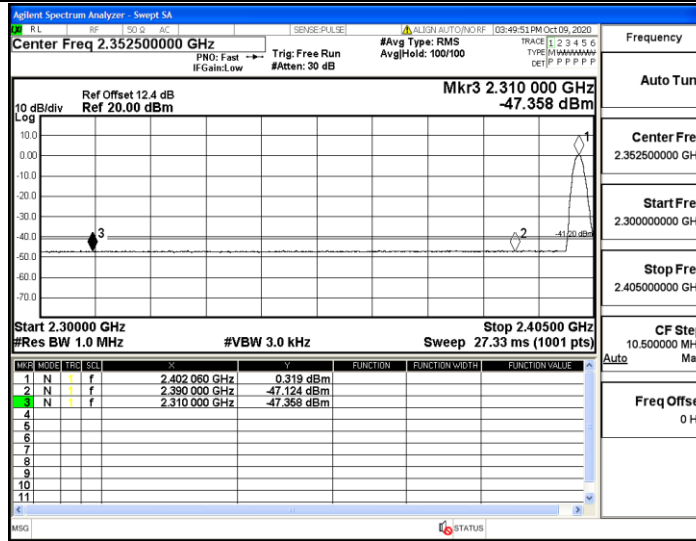
BLE_2M_Ant1_2480_1000~26500



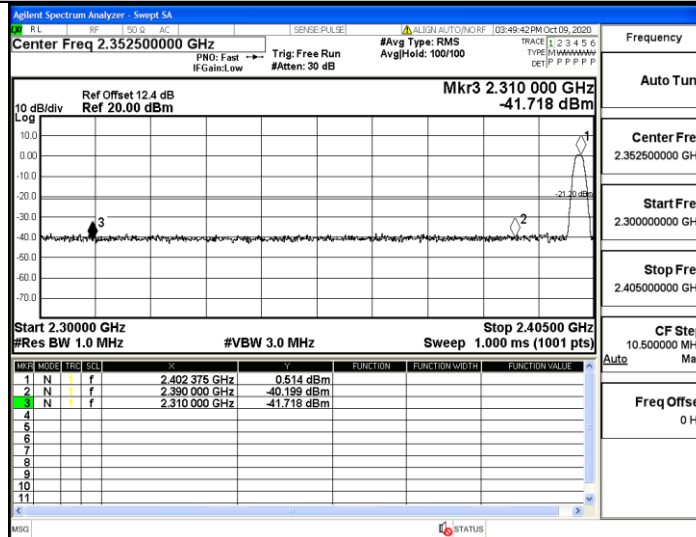
A.7. Restrict-band band-edge measurements

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-47.36	<=-41.20	PASS
				AV	2390.000	-47.12	<=-41.20	PASS
				Peak	2310.000	-41.72	<=-21.20	PASS
				Peak	2390.000	-40.2	<=-21.20	PASS
		High	2480	AV	2483.500	-46.57	<=-41.20	PASS
				AV	2500.000	-46.29	<=-41.20	PASS
				Peak	2483.500	-40.87	<=-21.20	PASS
				Peak	2500.000	-39.8	<=-21.20	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-47.04	<=-41.20	PASS
				AV	2390.000	-46.63	<=-41.20	PASS
				Peak	2310.000	-41.11	<=-21.20	PASS
				Peak	2390.000	-40.17	<=-21.20	PASS
		High	2480	AV	2483.500	-45.4	<=-41.20	PASS
				AV	2500.000	-46	<=-41.20	PASS
				Peak	2483.500	-39.29	<=-21.20	PASS
				Peak	2500.000	-38.73	<=-21.20	PASS

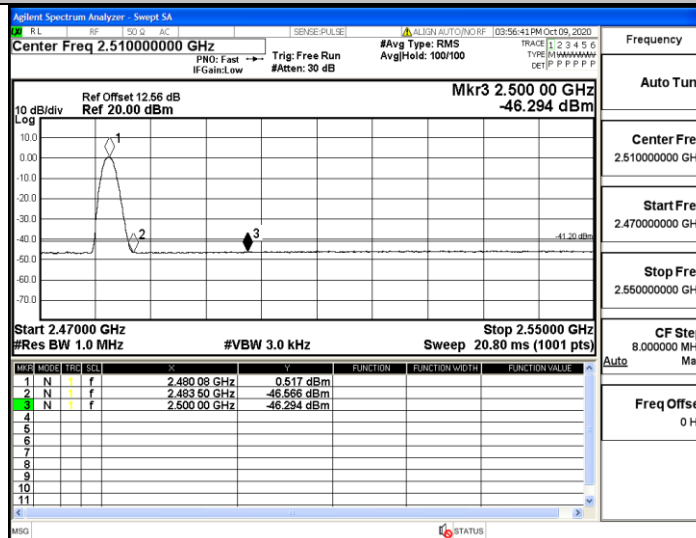
BLE_1M_Ant1_Low_2402_AV



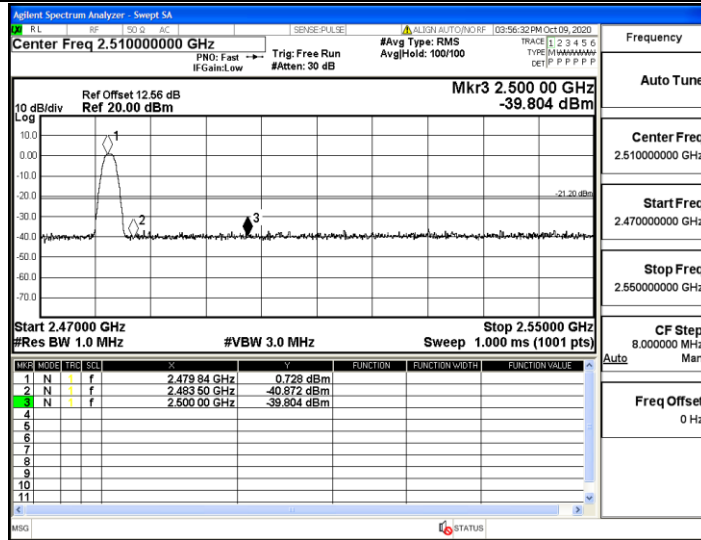
BLE_1M_Ant1_Low_2402_Peak



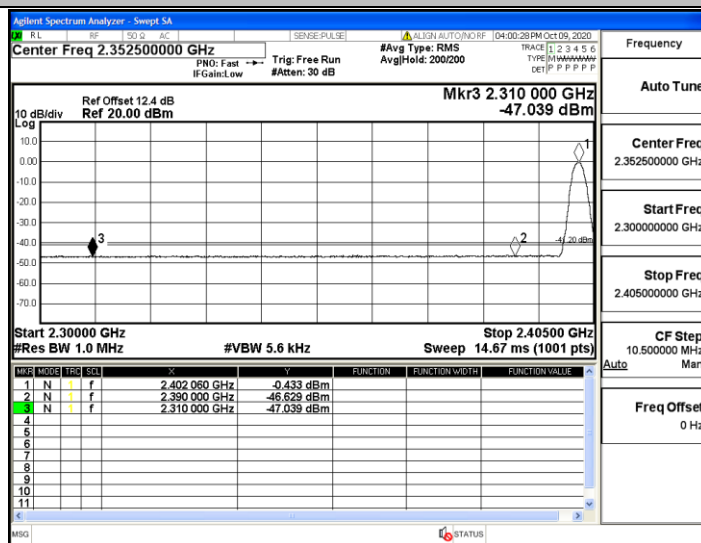
BLE_1M_Ant1_High_2480_AV



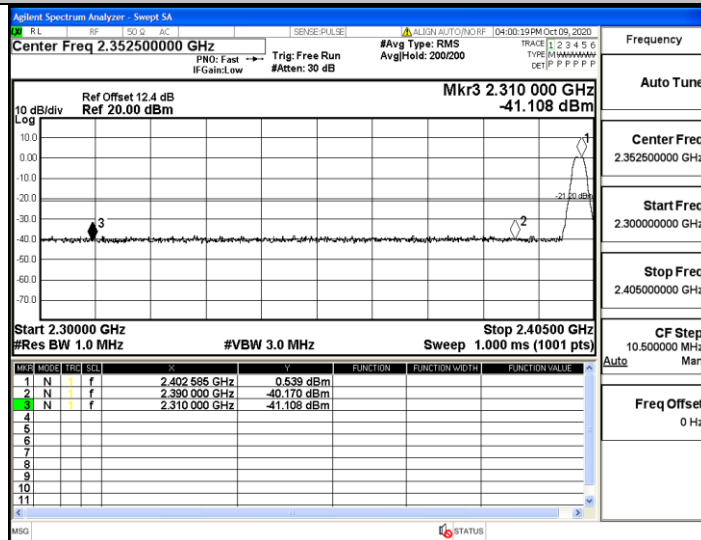
BLE_1M_Ant1_High_2480_Peak



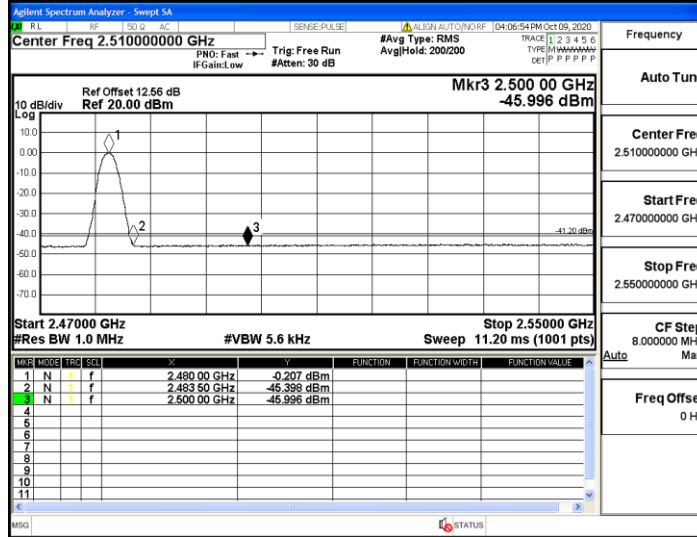
BLE_2M_Ant1_Low_2402_AV



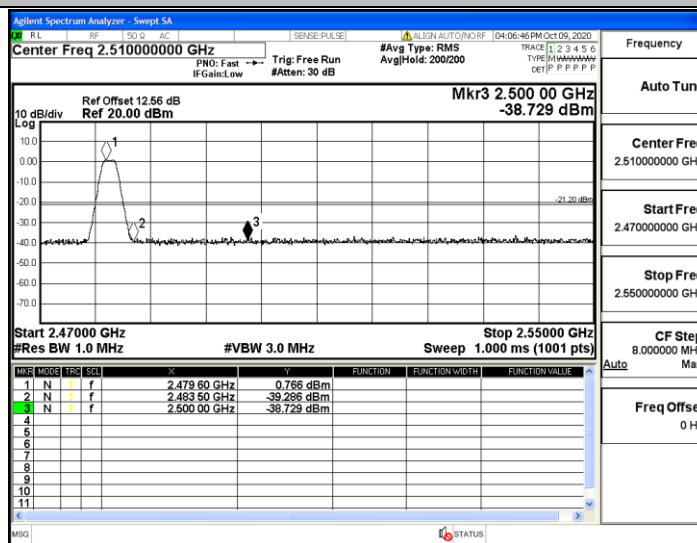
BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak



A.8. Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BLE_1M	2440	Ant1	61.05	PASS
BLE_2M	2440	Ant1	31.58	PASS

