

## Appendix A

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

Product Name: NucBox

Trade Mark: GMK

Test Model: KB1

FCC ID: 2AXUD-KB1

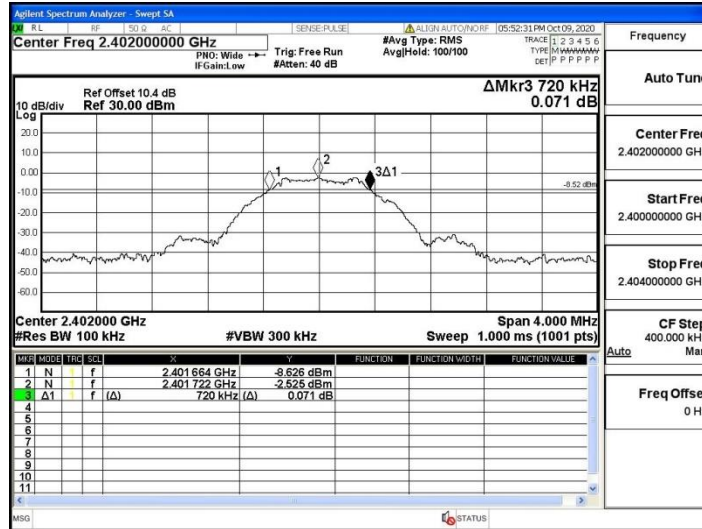
### Environmental Conditions

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

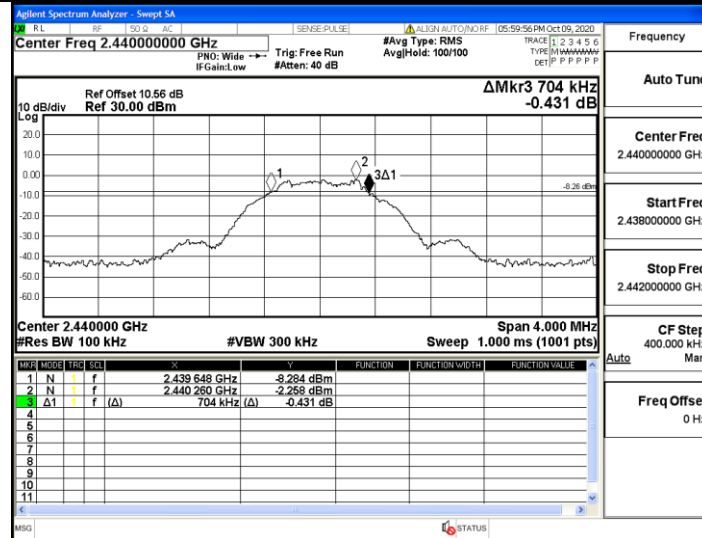
#### A.1. 6dB Bandwidth

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.720	2401.664	2402.384	0.5	PASS
		2440	0.704	2439.648	2440.352	0.5	PASS
		2480	0.672	2479.672	2480.344	0.5	PASS

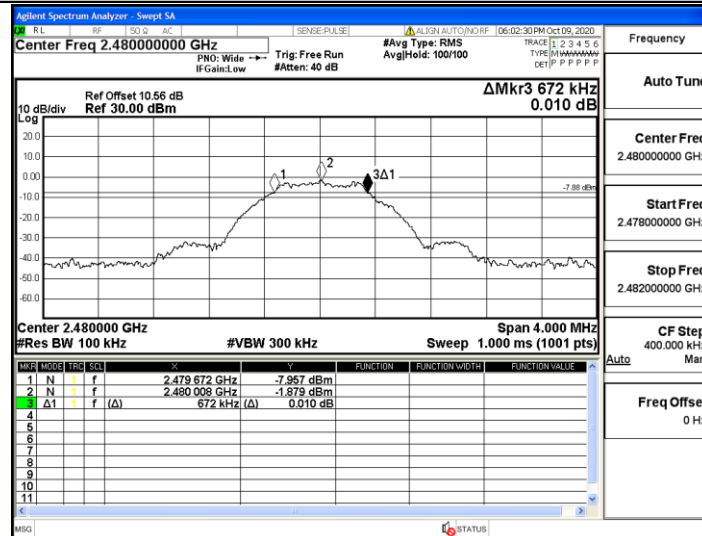
BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480



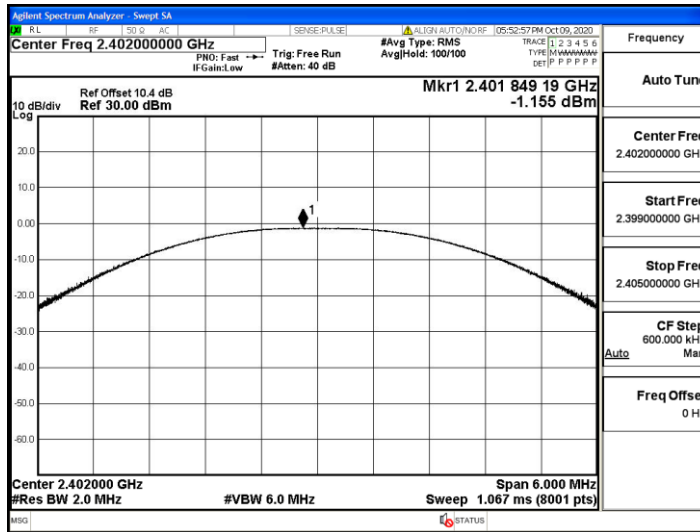
**A.2. Occupied Bandwidth**

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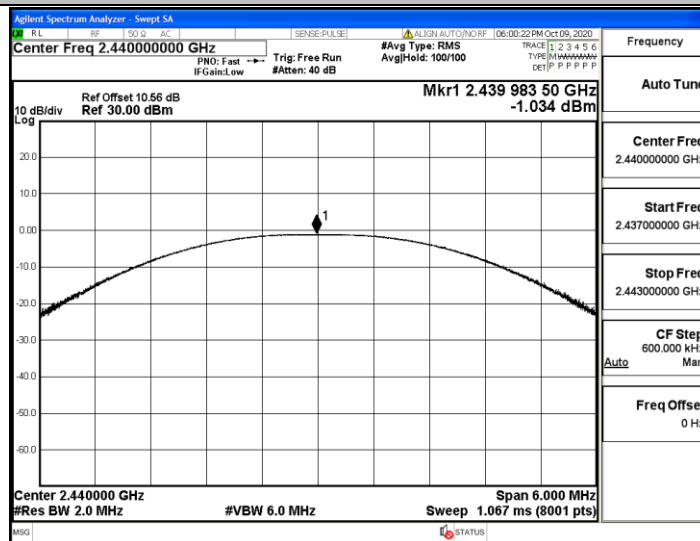
**A.3. Maximum peak conducted output power**

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-1.16	<=30	PASS
		2440	-1.03	<=30	PASS
		2480	-0.9	<=30	PASS

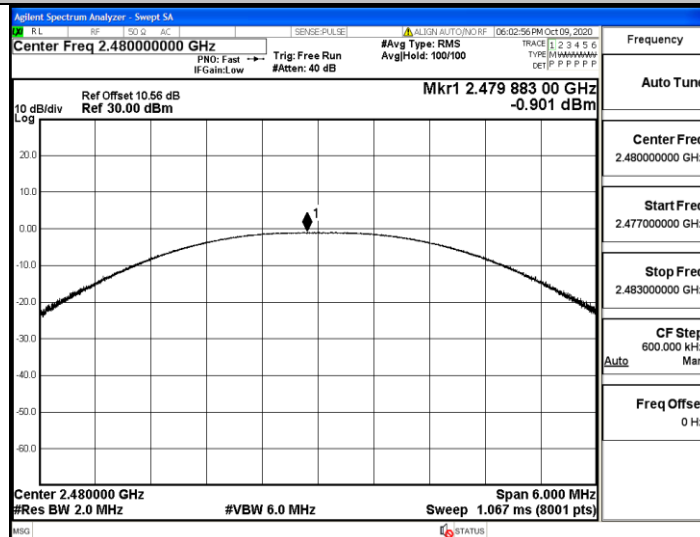
BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480



**A.4. Maximum Peak power spectral density**

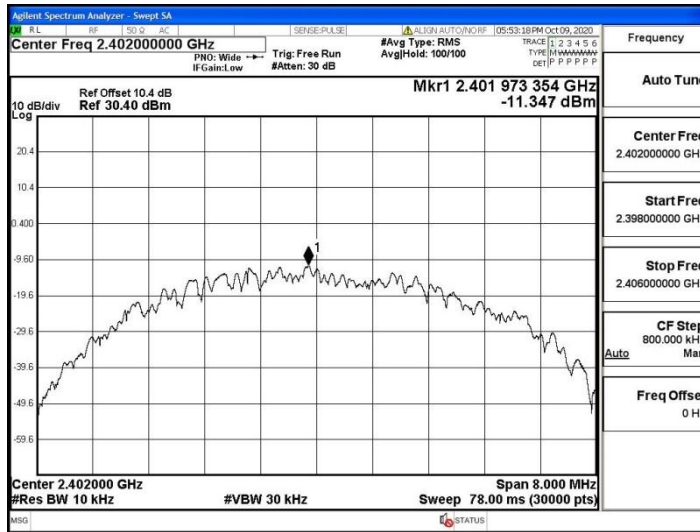
Test Mode	Ant	Test	PSD[dBm/10KHz]	Converter Factor [dB]	PSD[dBm/3KHz]	Limit[dBm/3KHz]	Verdict
BLE(1Mbps)	Ant1	2402	-11.35	5.23	-16.58	8.00	PASS
		2440	-11.21	5.23	-16.44	8.00	PASS
		2480	-11.09	5.23	-16.32	8.00	PASS

Note:

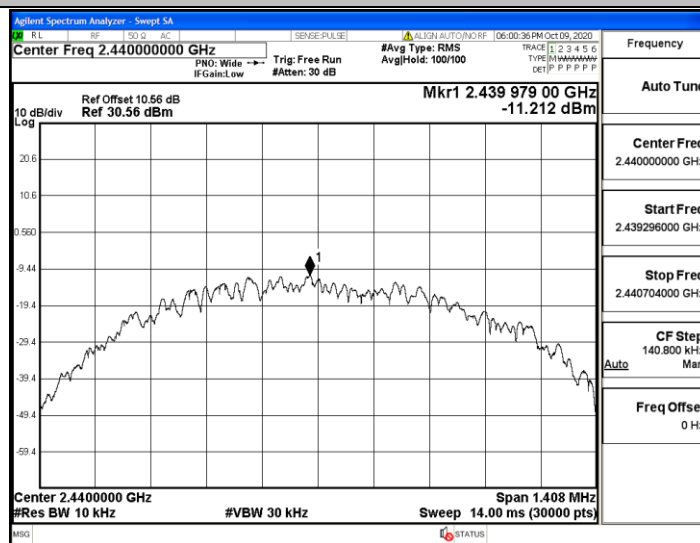
1, Converter factor =  $10 * \lg(\text{RBW}/3 \text{ kHz}) = 5.23 \text{ (dB)}$

2,  $\text{PSD}[\text{dBm}/3\text{KHz}] = \text{PSD}[\text{dBm}/10\text{KHz}] - \text{Converter Factor}$

BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



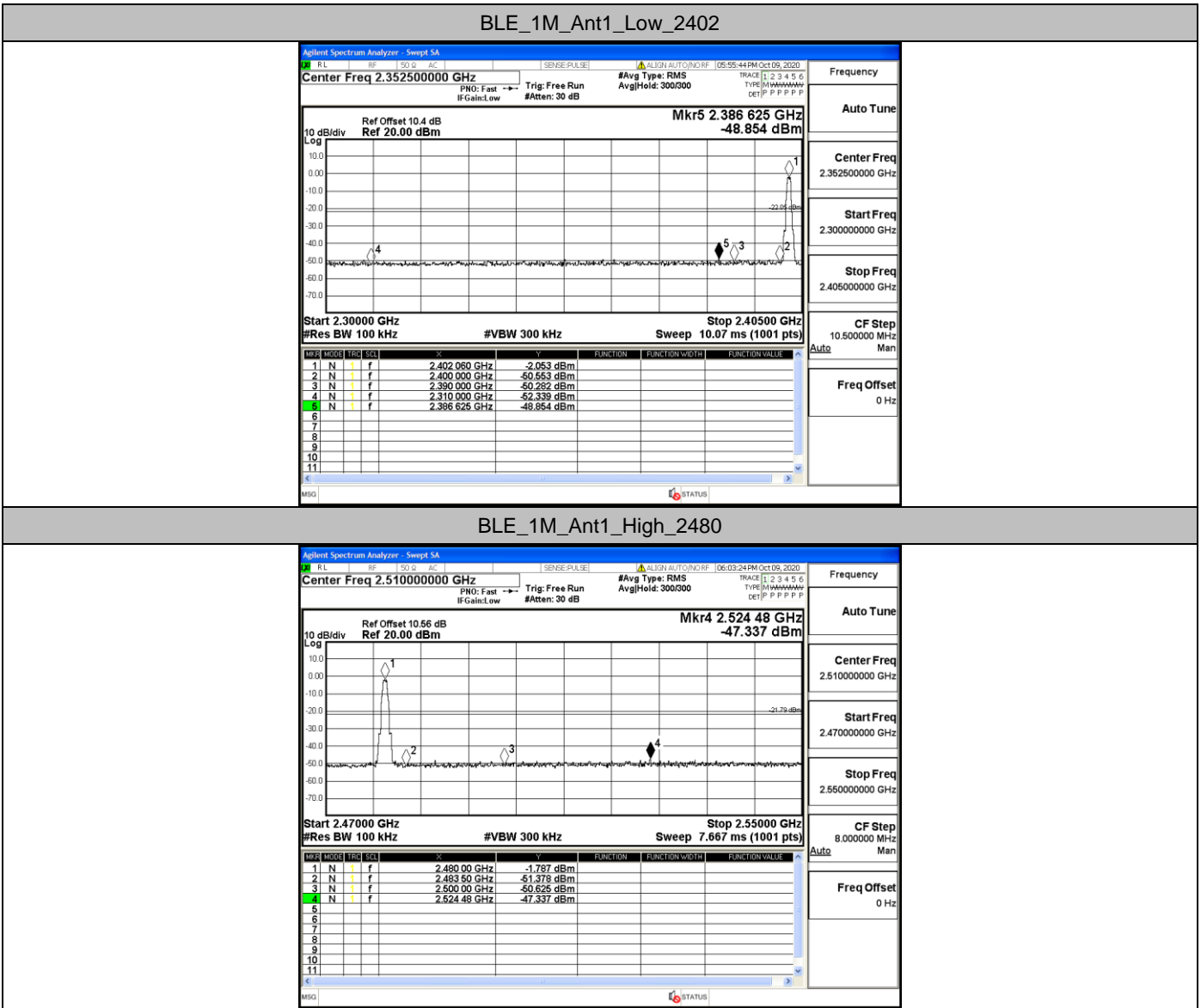
BLE\_1M\_Ant1\_2480



**A.5. Band-edge for RF Conducted Emissions**

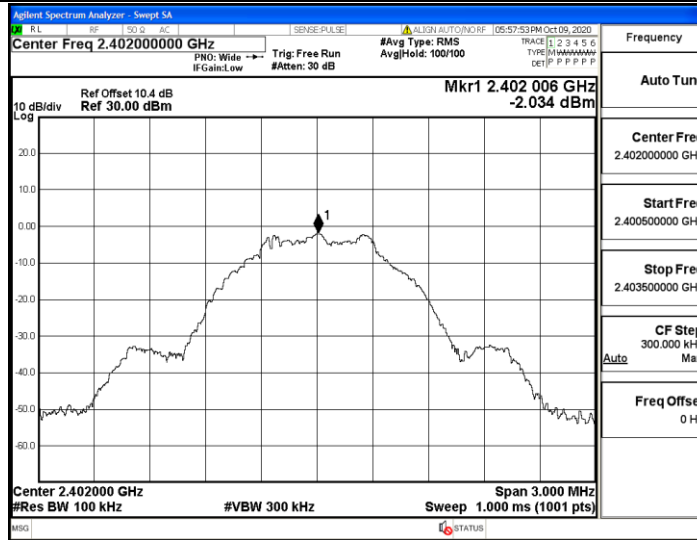
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-2.05	-48.85	<=-22.05	PASS
		High	2480	-1.79	-47.34	<=-21.79	PASS

### A.6. RF Conducted Spurious Emissions

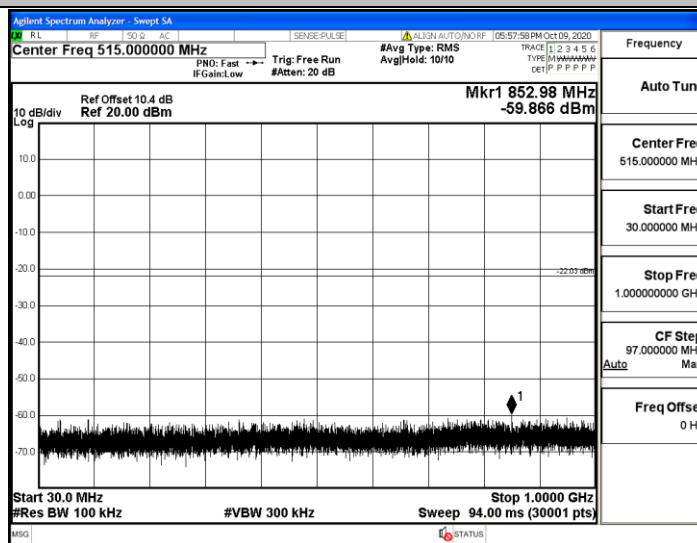




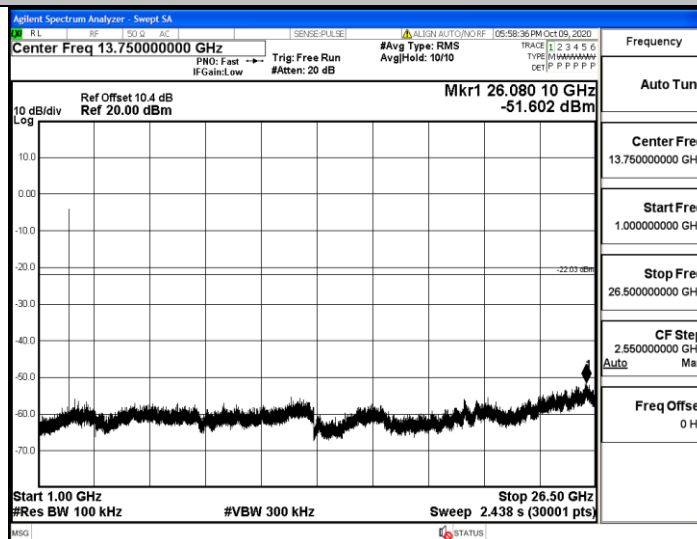
BLE\_1M\_Ant1\_2402\_0~Reference



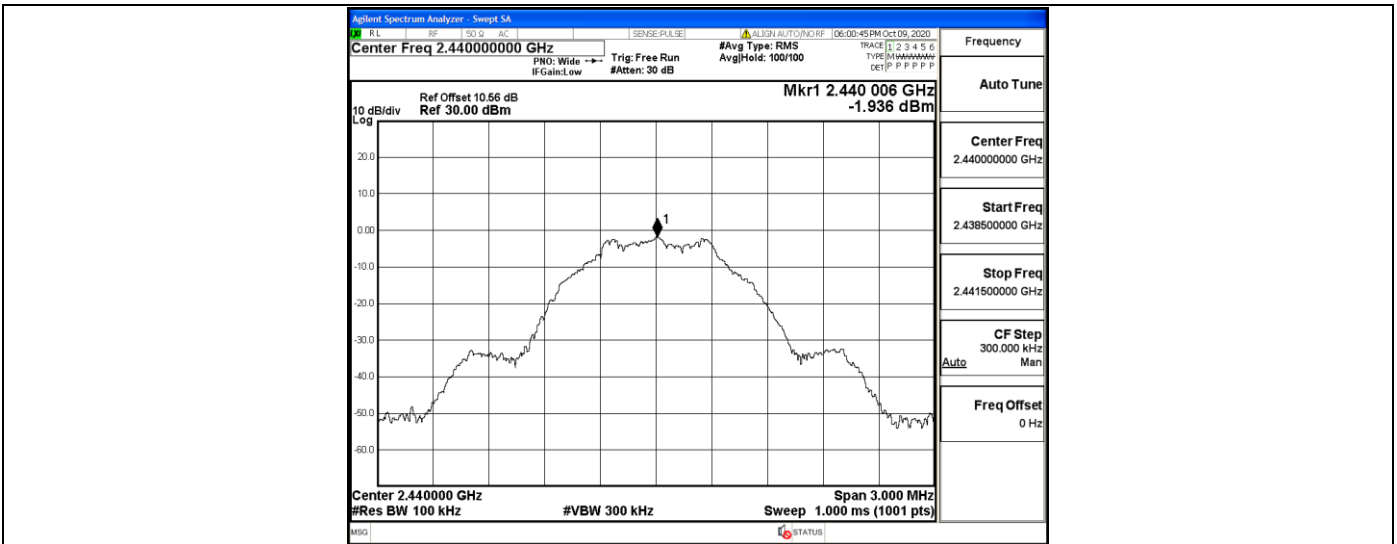
BLE\_1M\_Ant1\_2402\_30~1000



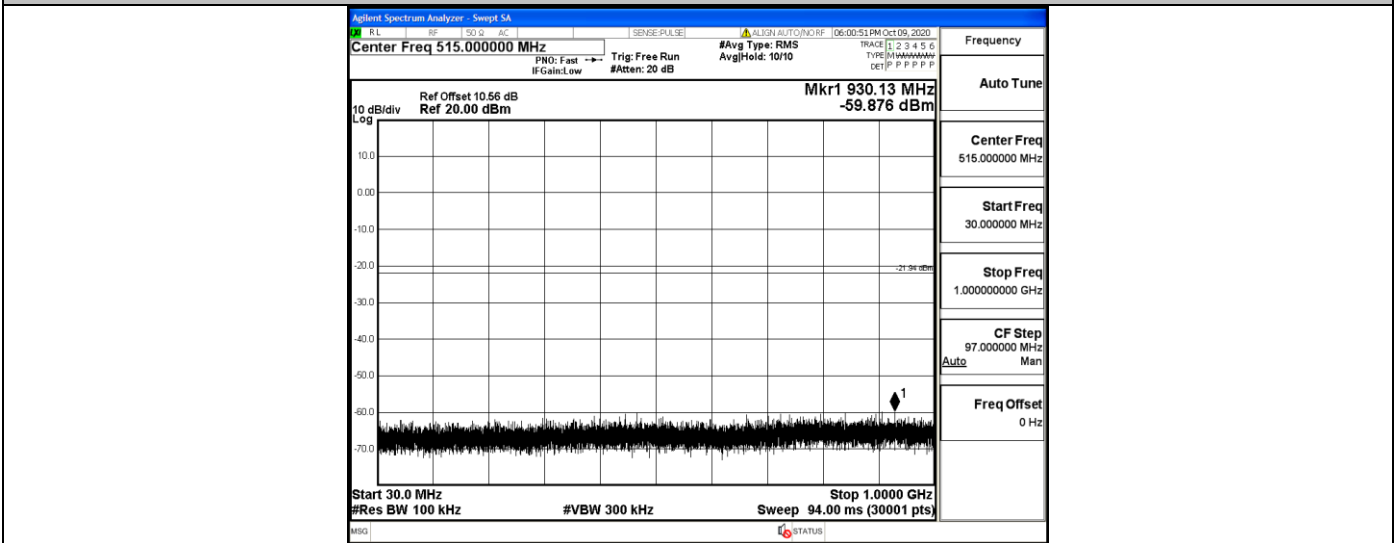
BLE\_1M\_Ant1\_2402\_1000~26500



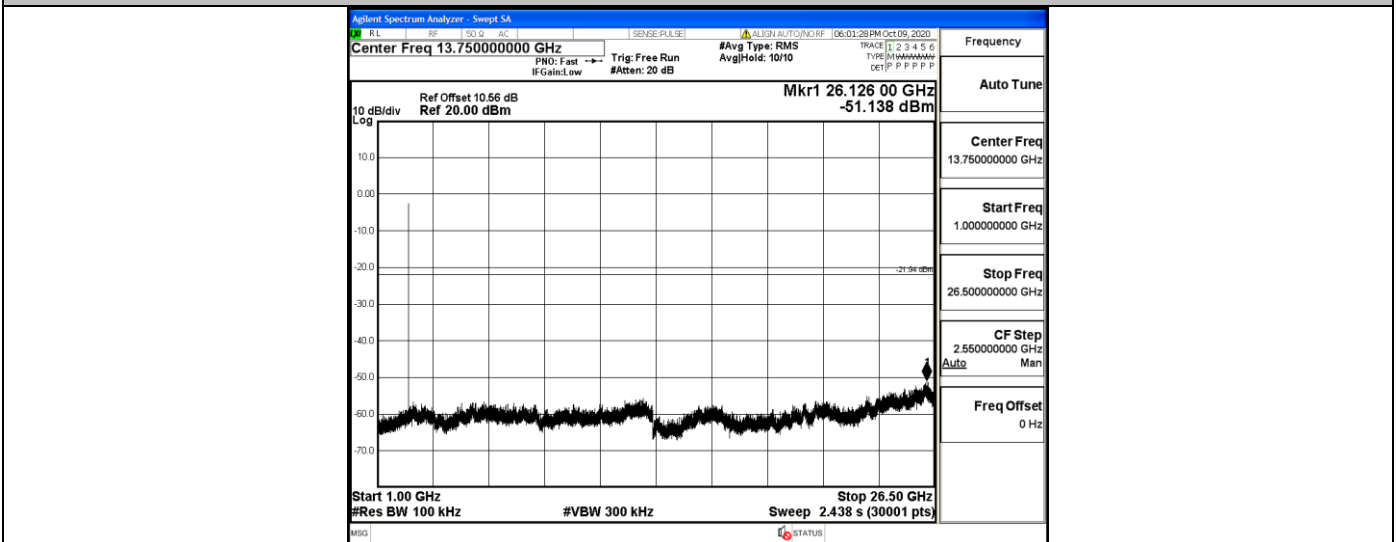
BLE\_1M\_Ant1\_2440\_0~Reference



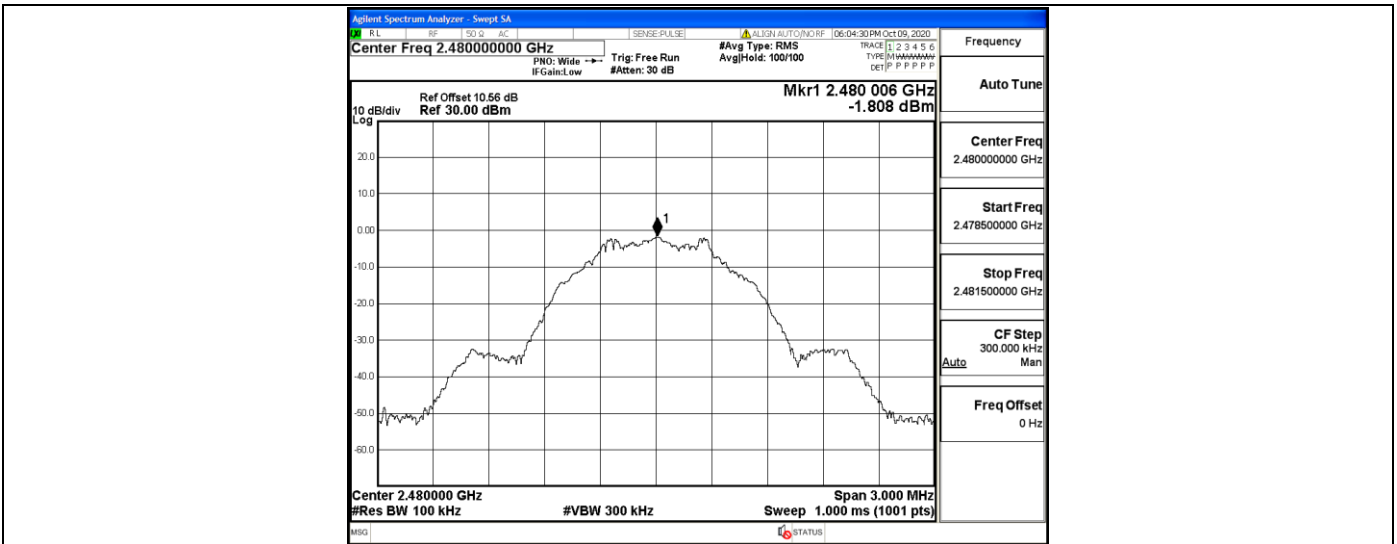
BLE\_1M\_Ant1\_2440\_30~1000



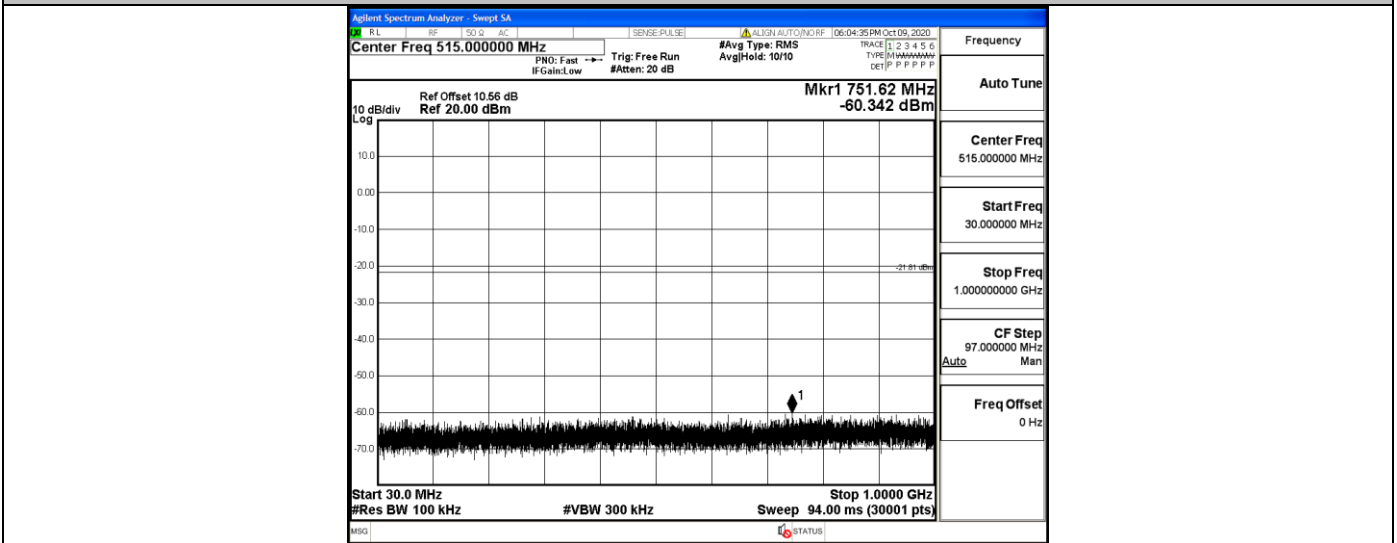
BLE\_1M\_Ant1\_2440\_1000~26500



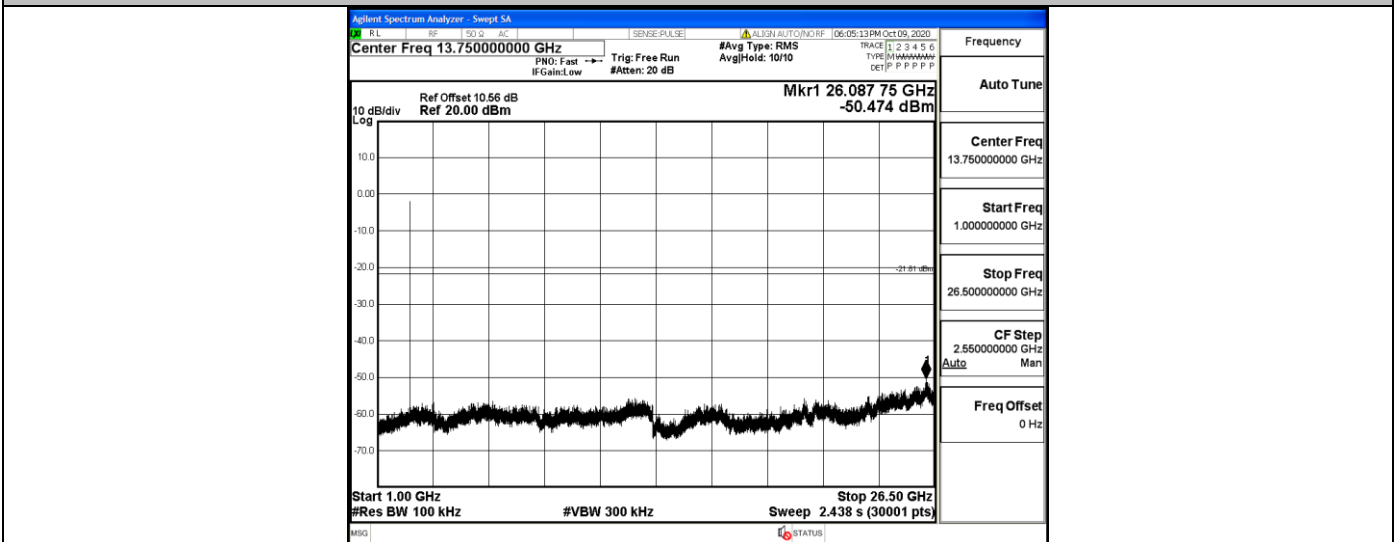
BLE\_1M\_Ant1\_2480\_0~Reference



BLE\_1M\_Ant1\_2480\_30~1000



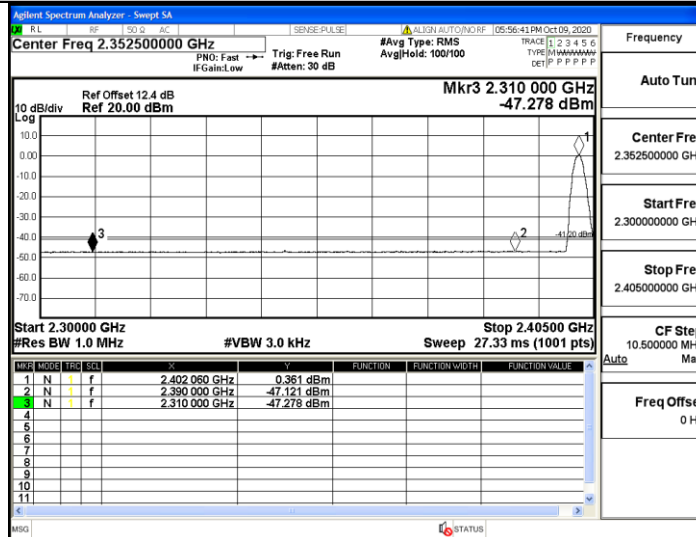
BLE\_1M\_Ant1\_2480\_1000~26500



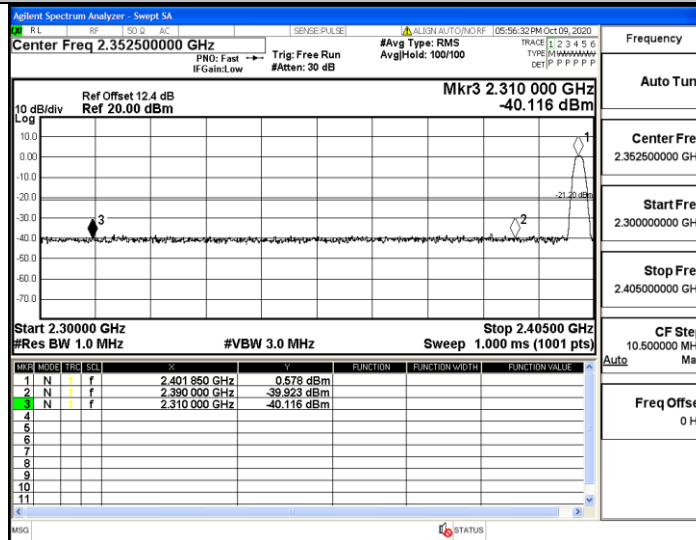
**A.7. Restrict-band band-edge measurements**

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-47.28	<=-41.20	PASS
				AV	2390.000	-47.12	<=-41.20	PASS
				Peak	2310.000	-40.12	<=-21.20	PASS
				Peak	2390.000	-39.92	<=-21.20	PASS
		High	2480	AV	2483.500	-46.15	<=-41.20	PASS
				AV	2500.000	-46.28	<=-41.20	PASS
				Peak	2483.500	-38.82	<=-21.20	PASS
				Peak	2500.000	-39.07	<=-21.20	PASS

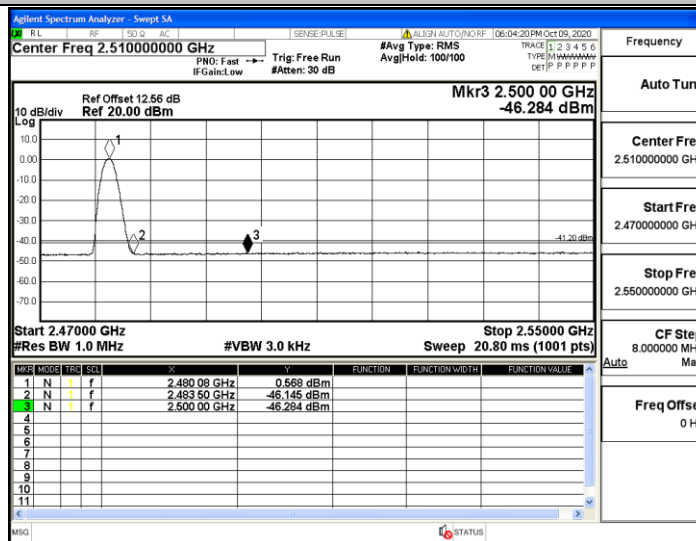
BLE\_1M\_Ant1\_Low\_2402\_AV



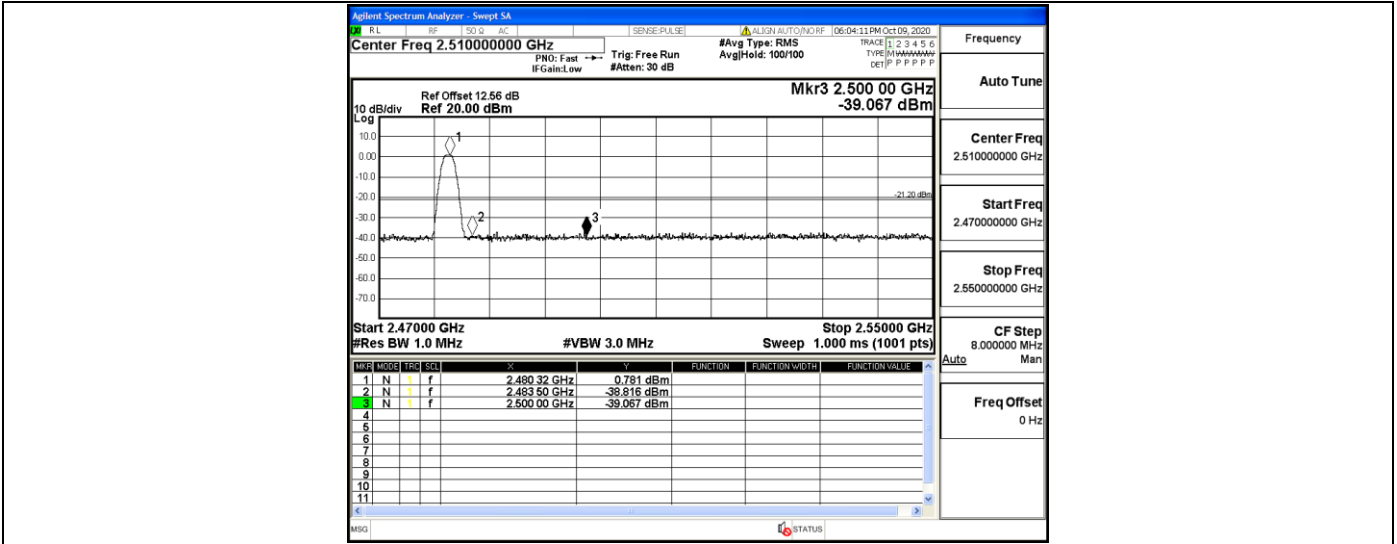
BLE\_1M\_Ant1\_Low\_2402\_Peak



BLE\_1M\_Ant1\_High\_2480\_AV



BLE\_1M\_Ant1\_High\_2480\_Peak



### A.8. Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BLE	2440	Ant1	63.00	PASS

