

Appendix A

RF Test Data for Zigbee (Conducted Measurement)

Product Name: Fingerbot

Test Model: ADFBZ601

Environmental Conditions

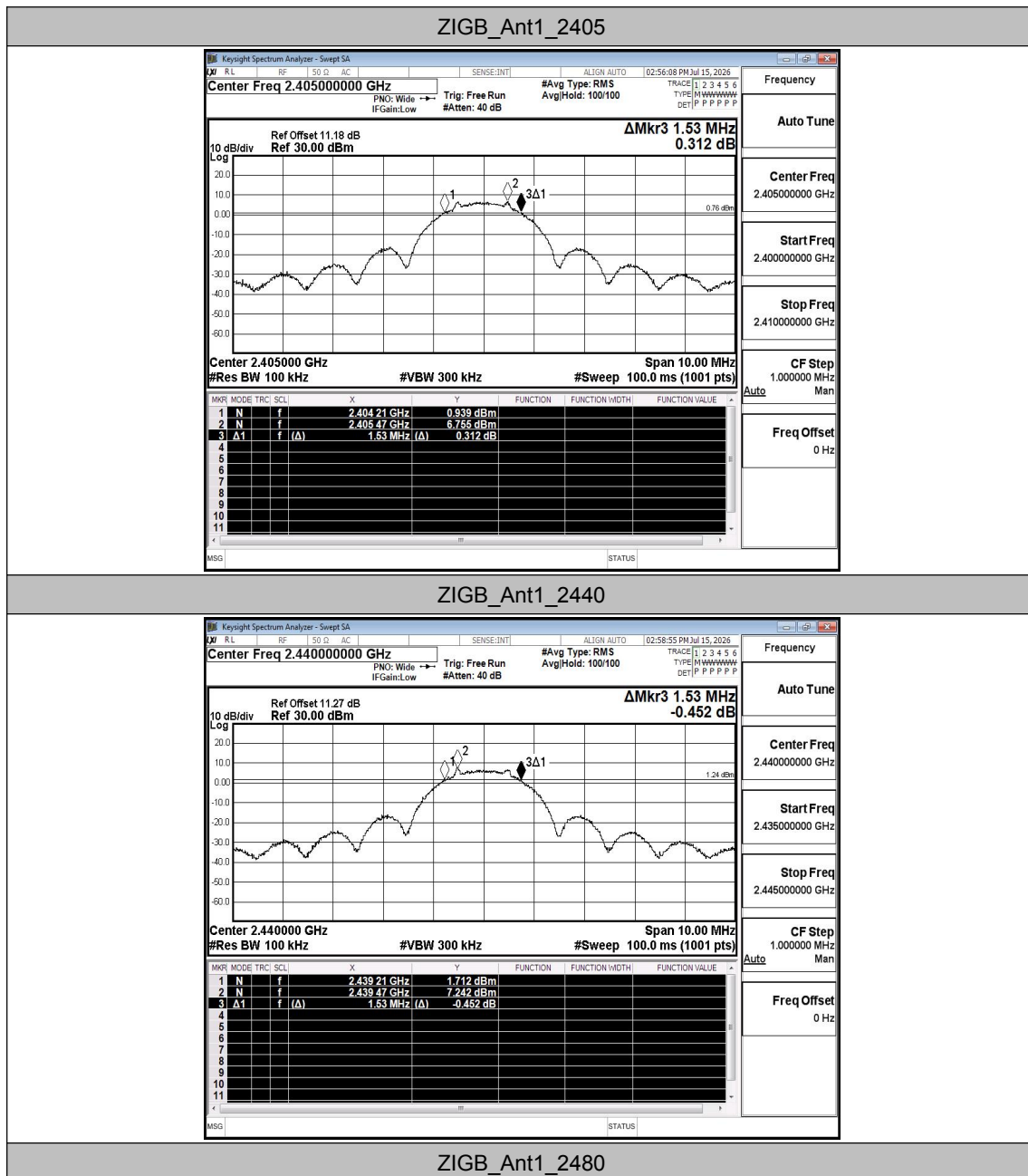
Temperature:	24.3°C
Relative Humidity:	53.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhao Xing Hai
Supervised by:	Fengliu Tang

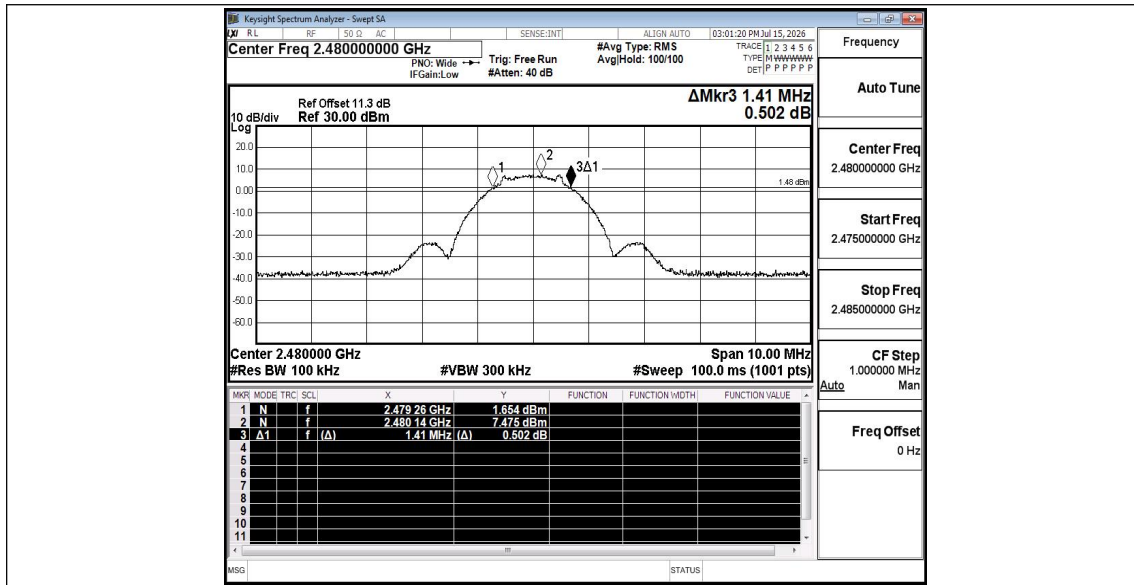
A.1 DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
ZIGB	Ant1	2405	1.530	2404.210	2405.740	0.5	PASS
		2440	1.530	2439.210	2440.740	0.5	PASS
		2480	1.410	2479.260	2480.670	0.5	PASS

Test Graphs



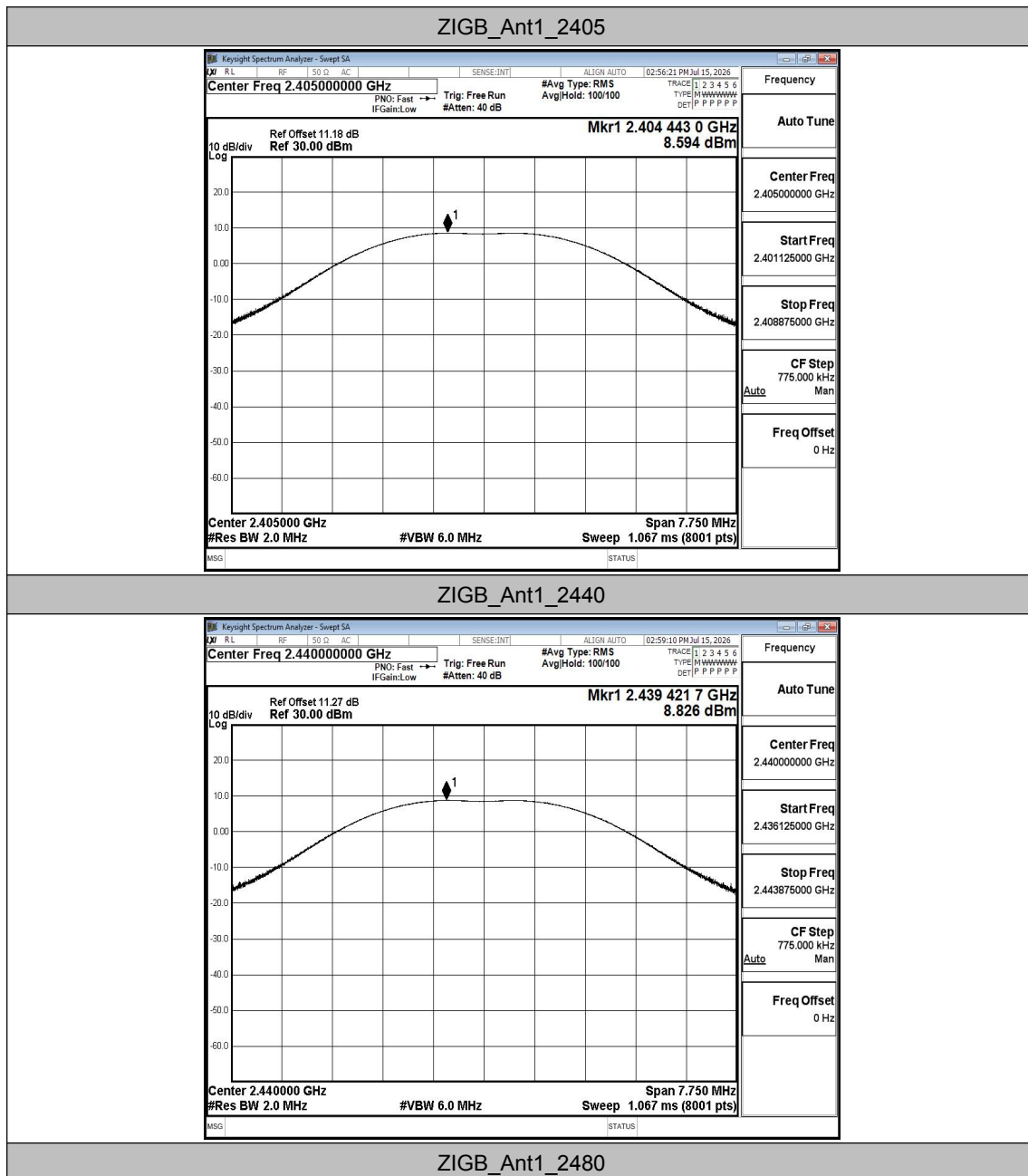


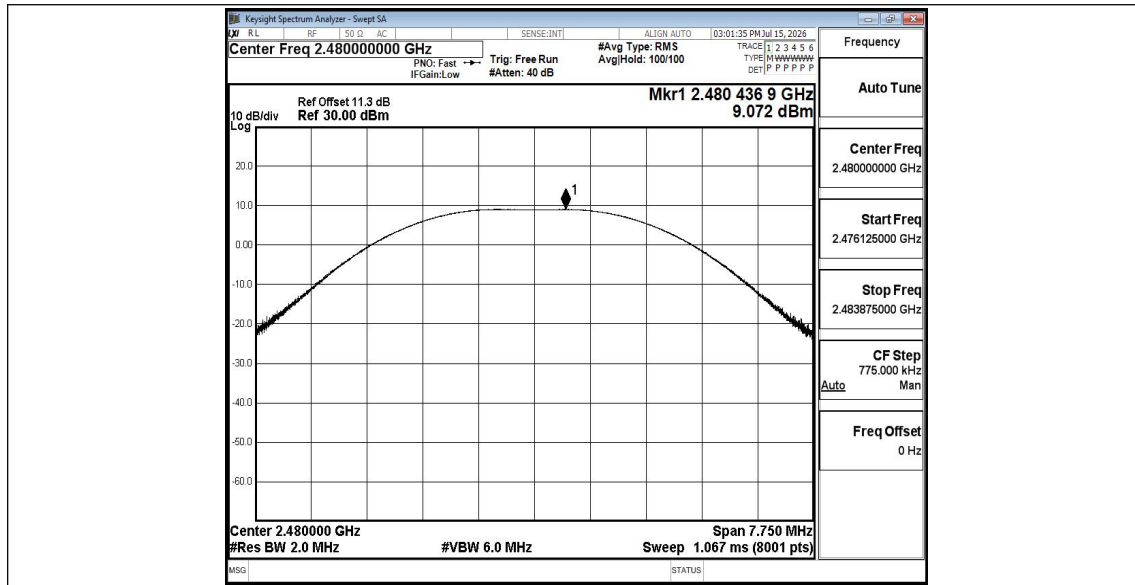
A.2 Maximum Peak Conducted Output Power

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm]	Limit[dBm]	Verdict
ZIGB	Ant1	2405	8.59	≤30	PASS
		2440	8.83	≤30	PASS
		2480	9.07	≤30	PASS

Test Graphs



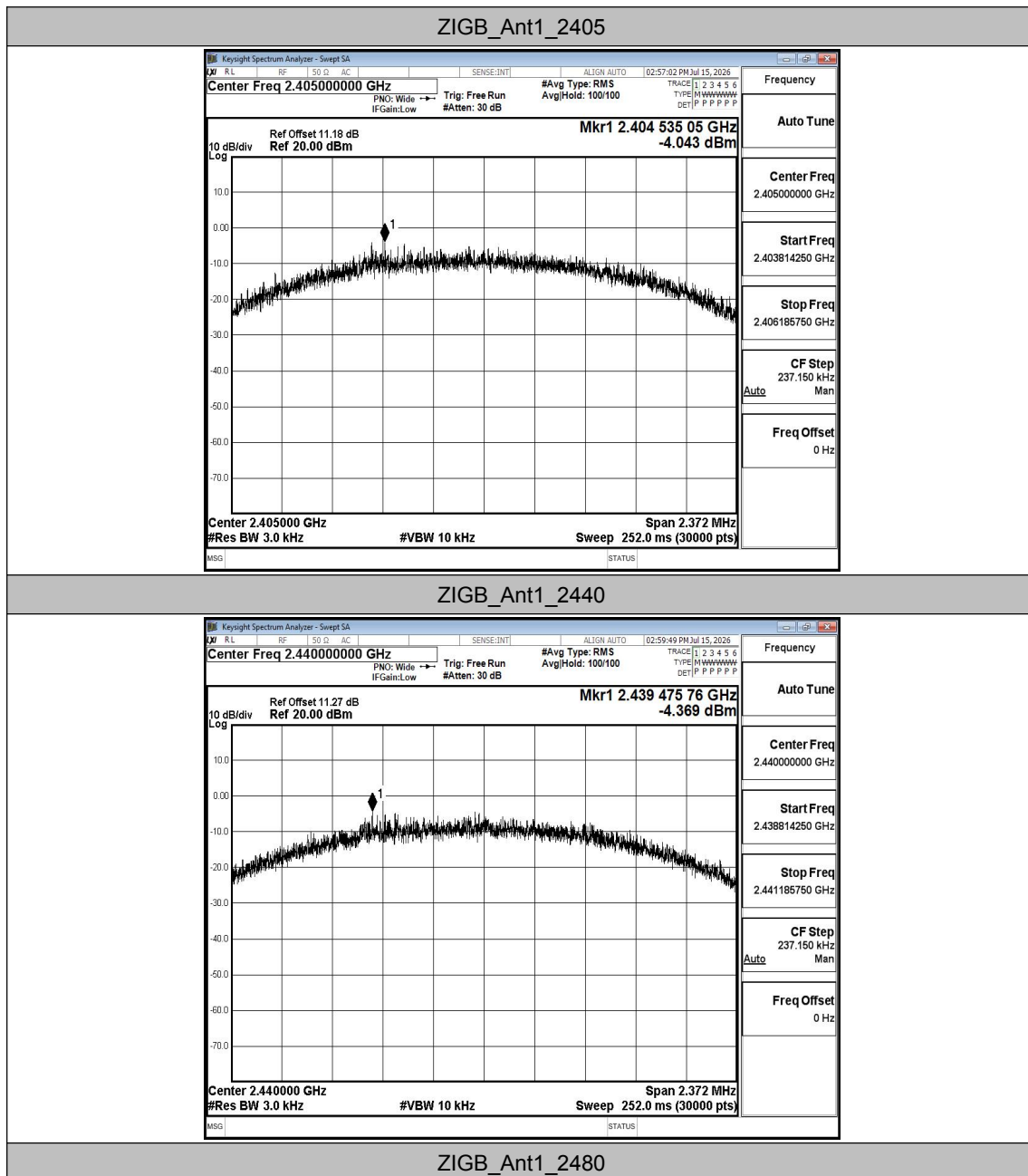


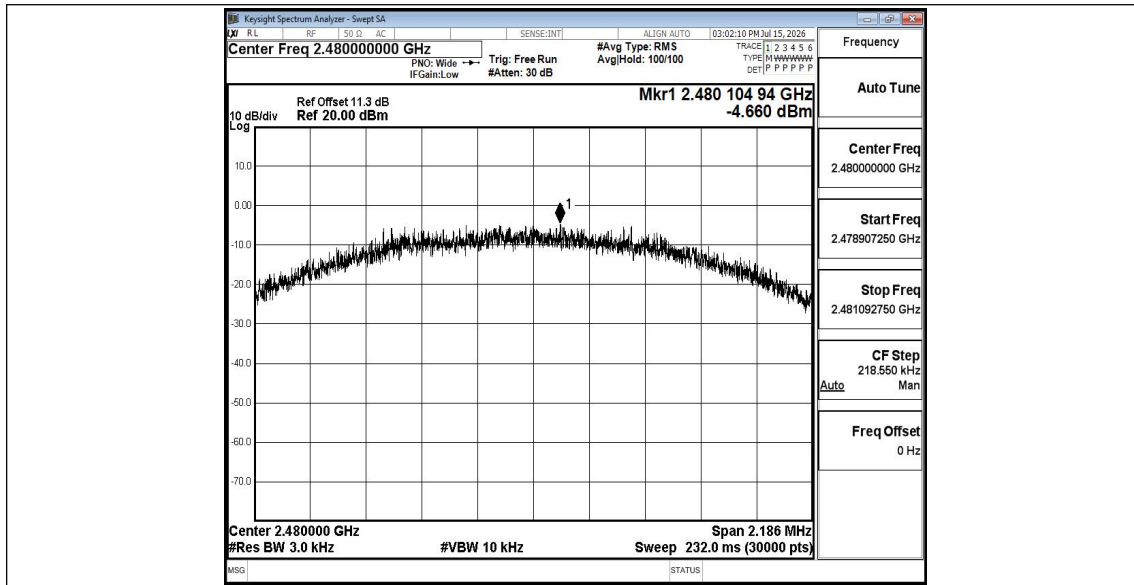
A.3 Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
ZIGB	Ant1	2405	-4.04	≤8.00	PASS
		2440	-4.37	≤8.00	PASS
		2480	-4.66	≤8.00	PASS

Test Graphs



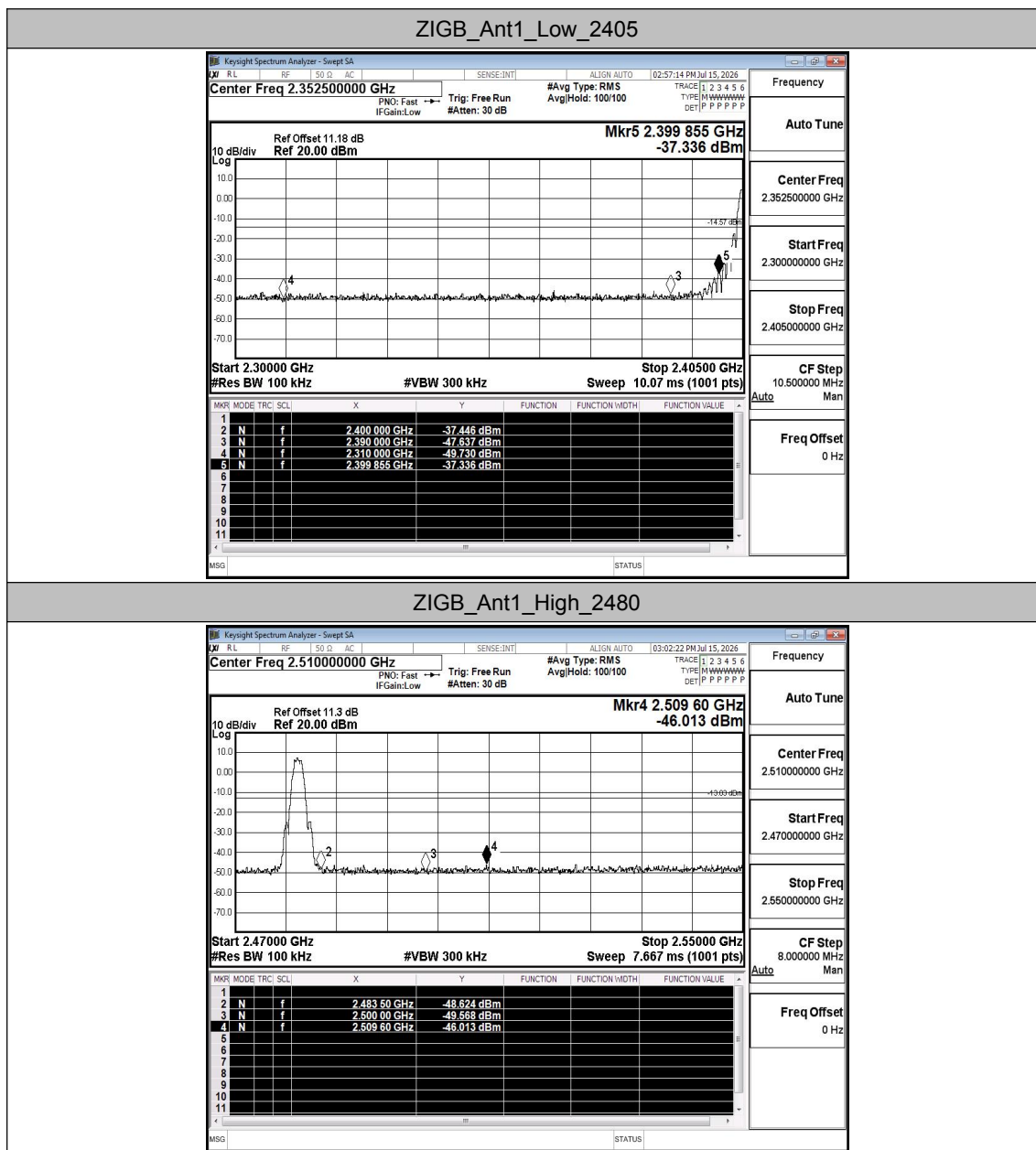


A.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
ZIGB	Ant1	Low	2405	5.43	-37.34	≤-14.57	PASS
		High	2480	6.97	-46.01	≤-13.03	PASS

Test Graphs

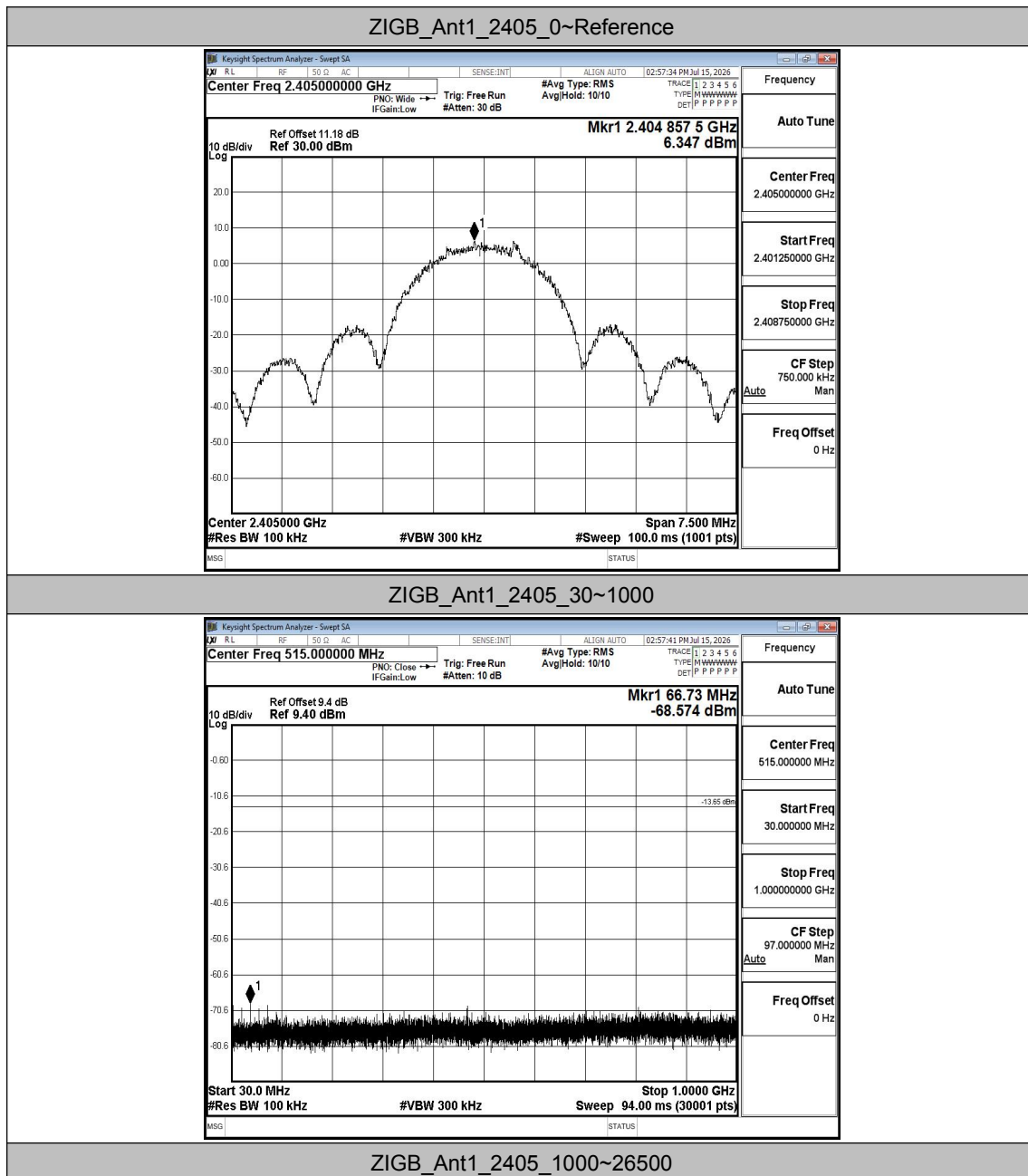


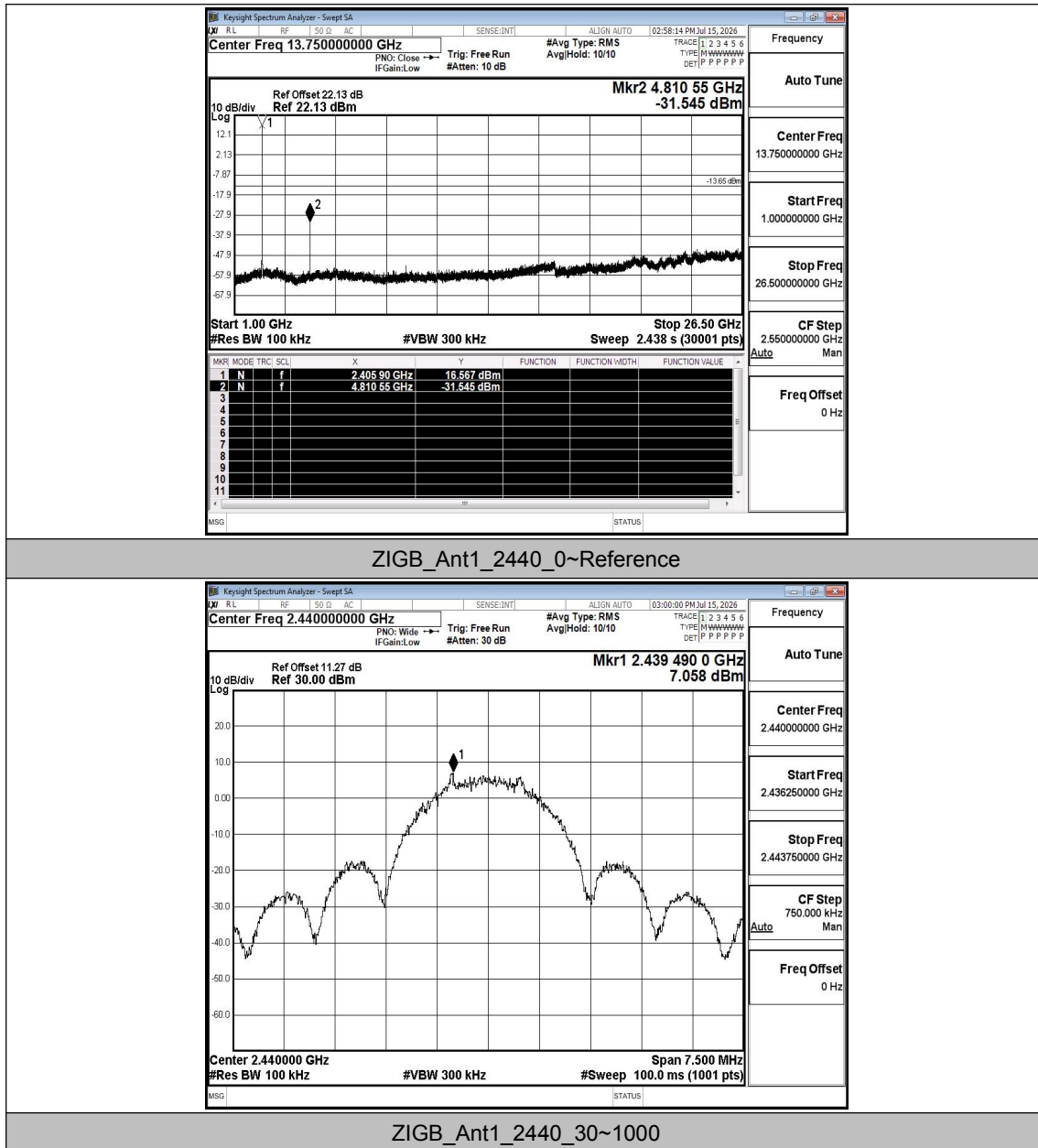
A.5 Conducted Spurious Emission

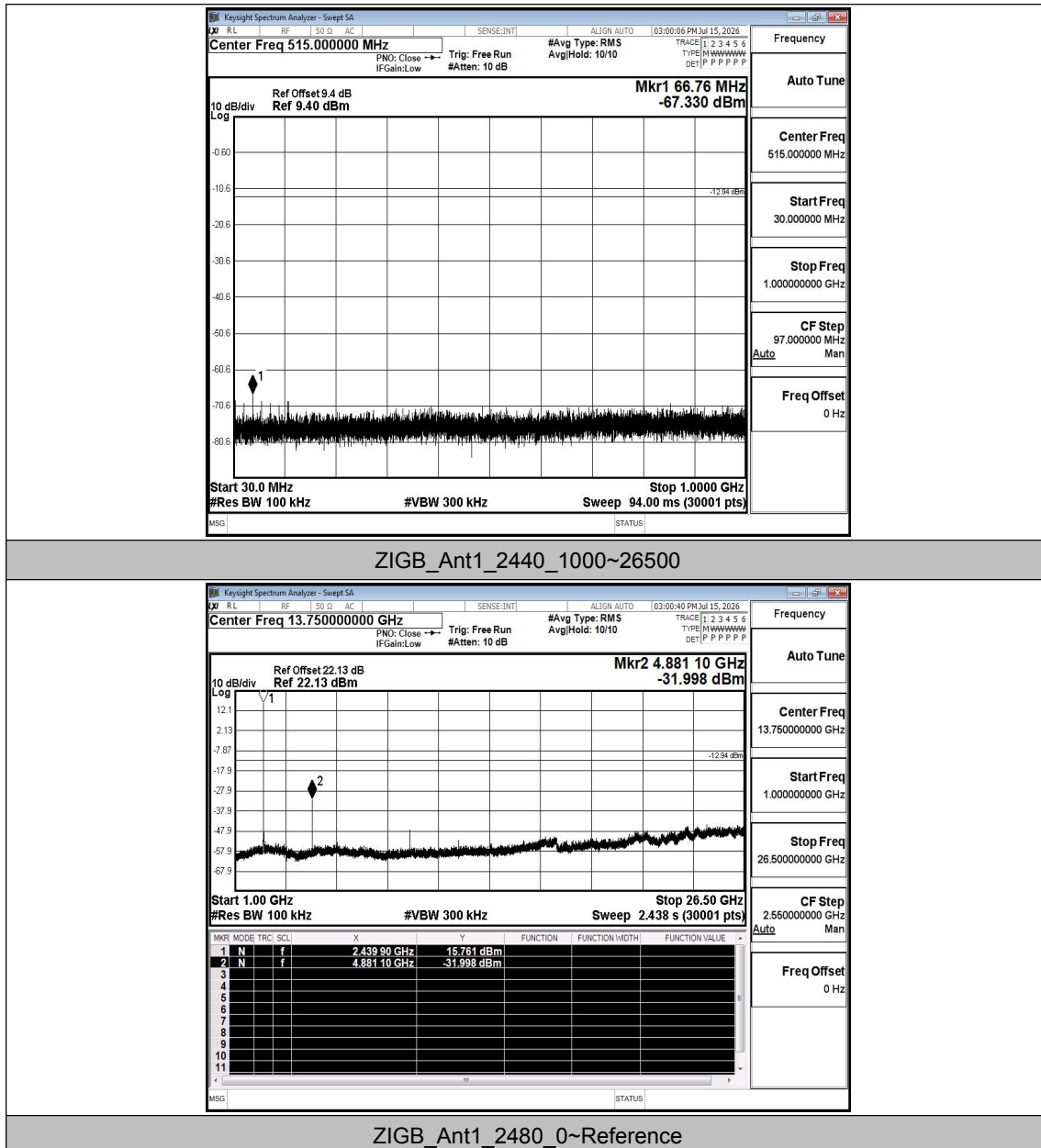
Test Result

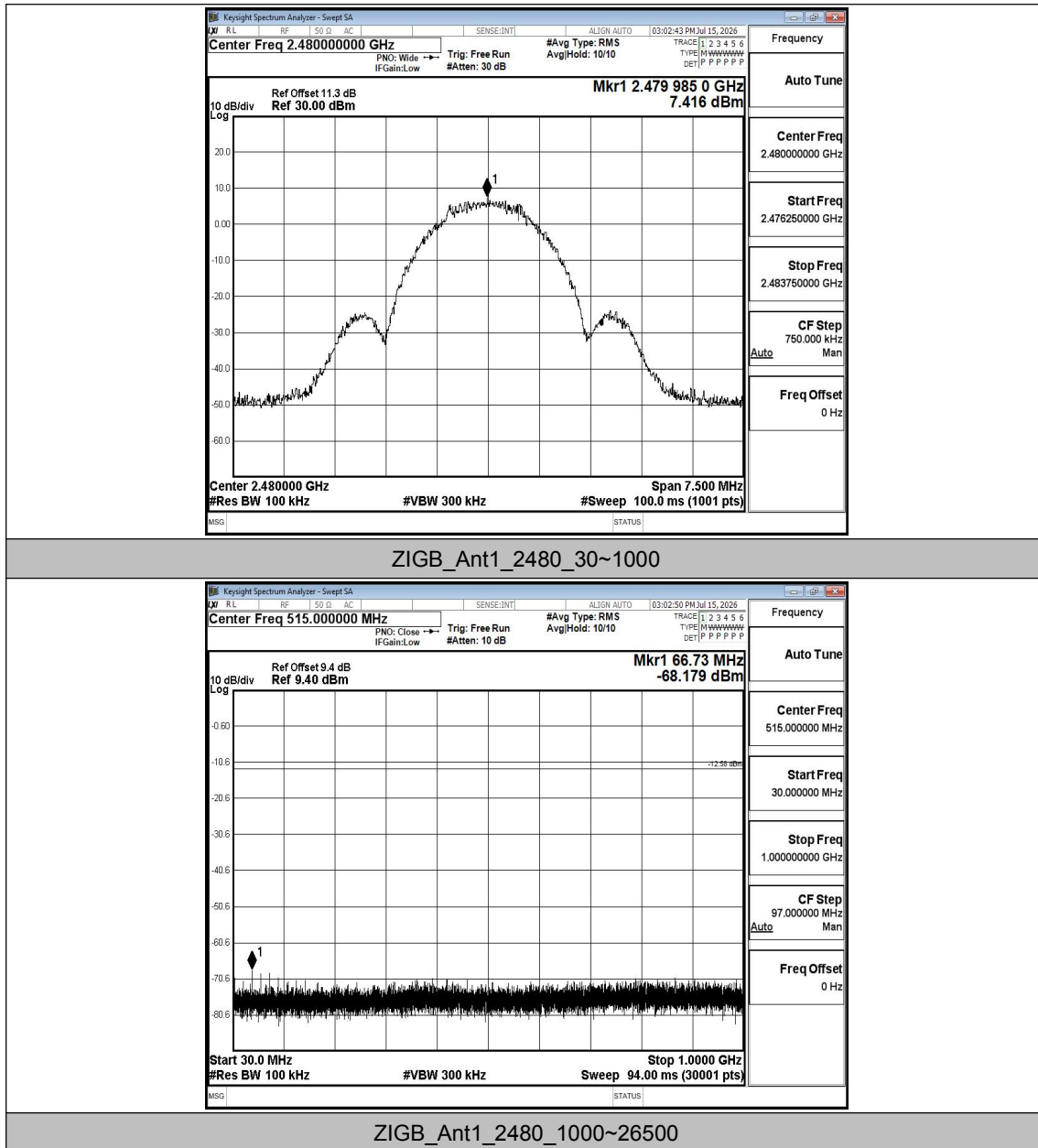
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
ZIGB	Ant1	2405	Reference	6.35	6.35	---	PASS
			30~1000	6.35	-68.57	≤-13.65	PASS
			1000~26500	6.35	-31.55	≤-13.65	PASS
		2440	Reference	7.06	7.06	---	PASS
			30~1000	7.06	-67.33	≤-12.94	PASS
			1000~26500	7.06	-32	≤-12.94	PASS
		2480	Reference	7.42	7.42	---	PASS
			30~1000	7.42	-68.18	≤-12.58	PASS
			1000~26500	7.42	-33	≤-12.58	PASS

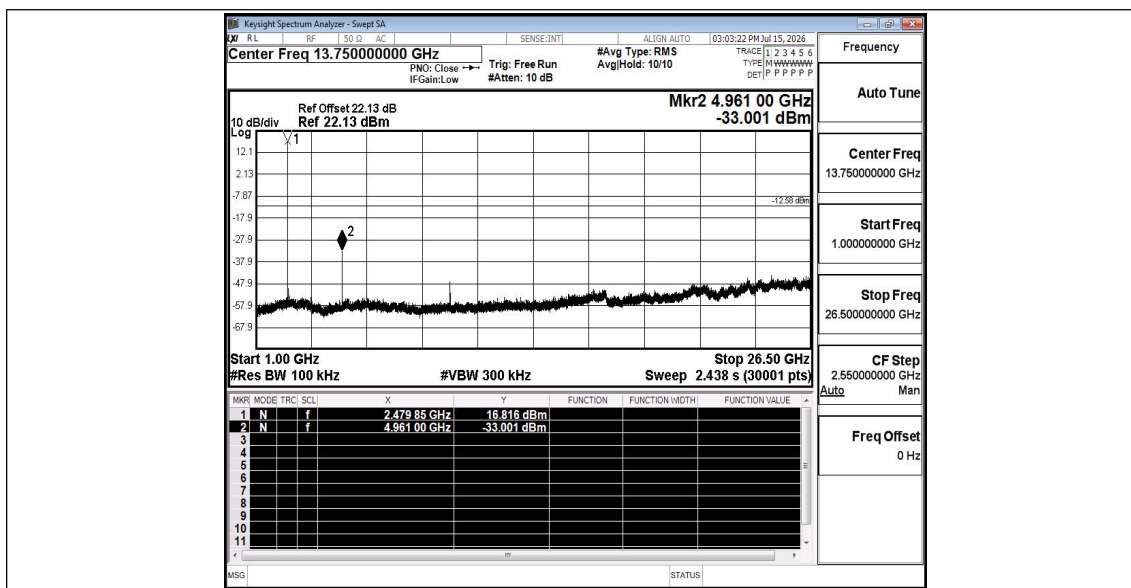
Test Graphs









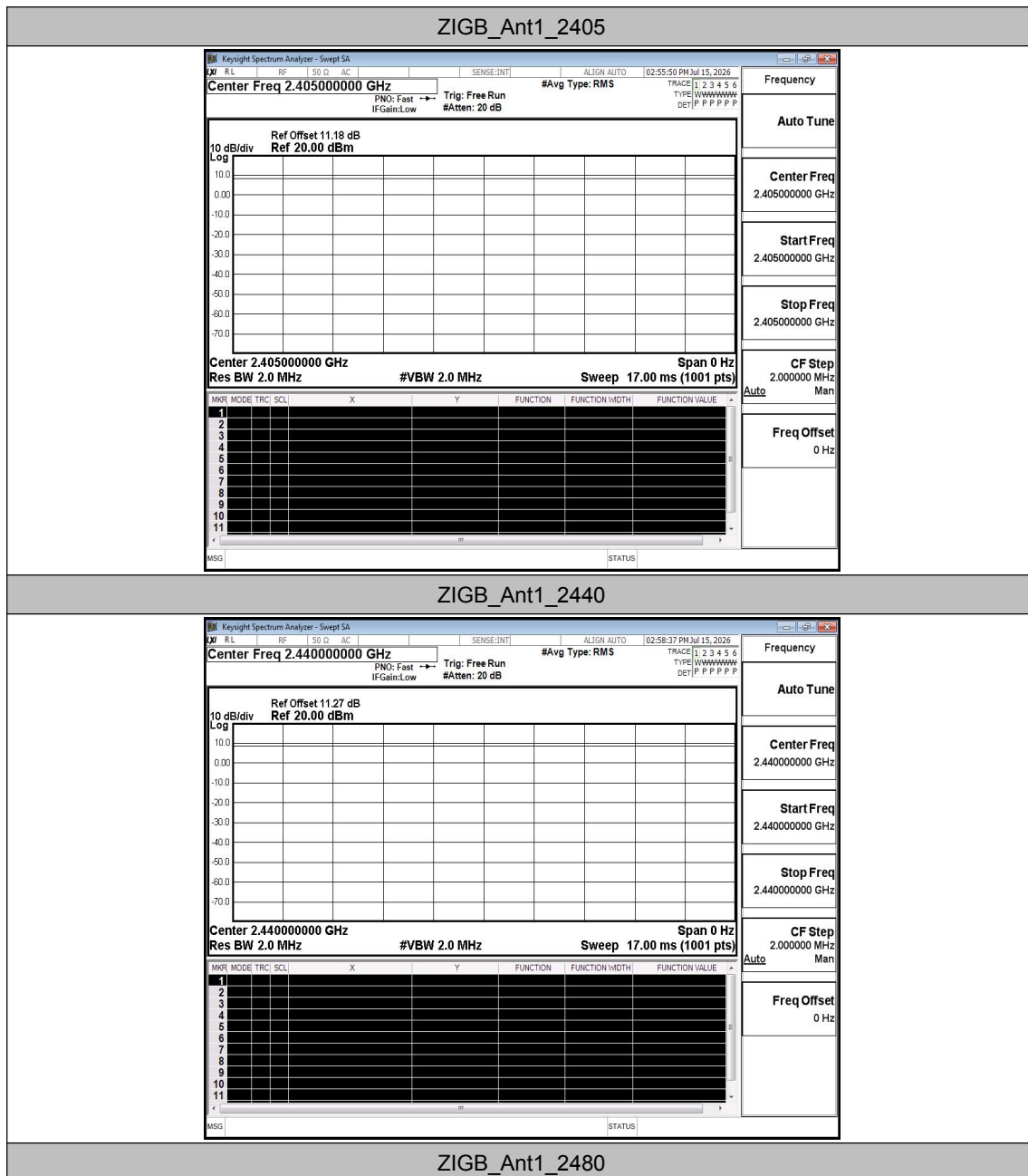


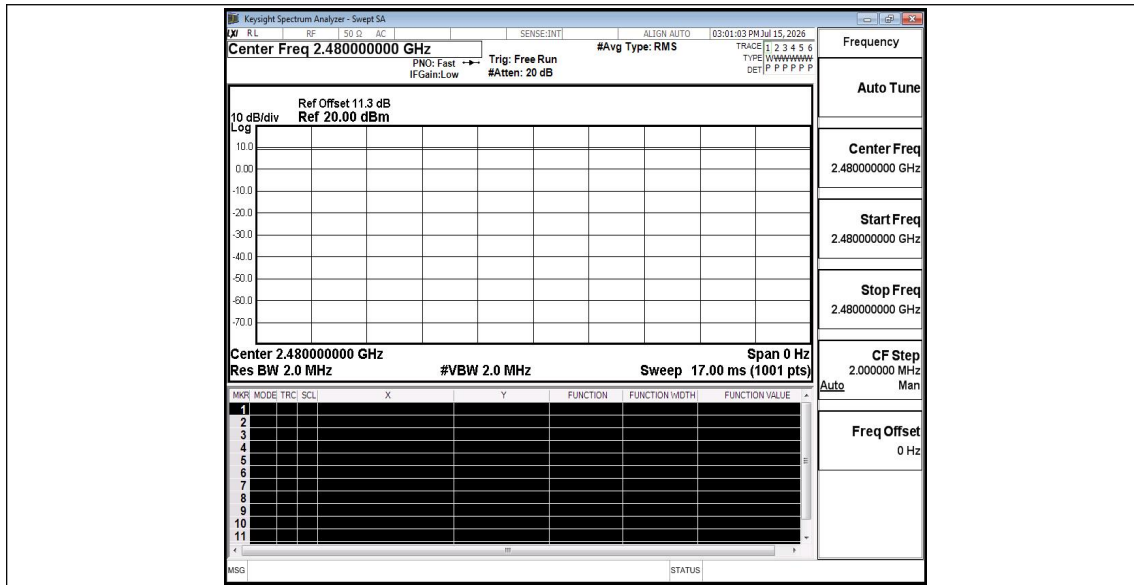
A.6 Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
ZIGB	Ant1	2405	17.00	17.00	1.0000	100.00	0.00	---	---
		2440	17.00	17.00	1.0000	100.00	0.00	---	---
		2480	17.00	17.00	1.0000	100.00	0.00	---	---

Test Graphs





A.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
ZIGB	Ant1	Low	2405	AV	2310.000	-56.53	≤-43.20	2.00	0.00	40.67	≤54	PASS
				AV	2386.205	-55.11	≤-43.20	2.00	0.00	42.09	≤54	PASS
				AV	2390.000	-55.72	≤-43.20	2.00	0.00	41.48	≤54	PASS
				Peak	2310.000	-52.76	≤-23.20	2.00	0.00	44.44	≤74	PASS
				Peak	2346.935	-47.61	≤-23.20	2.00	0.00	49.59	≤74	PASS
				Peak	2390.000	-48.95	≤-23.20	2.00	0.00	48.25	≤74	PASS
		High	2480	AV	2483.500	-51.21	≤-43.20	2.00	0.00	45.99	≤54	PASS
				AV	2483.520	-51.21	≤-43.20	2.00	0.00	45.99	≤54	PASS
				AV	2500.000	-55.48	≤-43.20	2.00	0.00	41.72	≤54	PASS
				Peak	2483.500	-45.62	≤-23.20	2.00	0.00	51.58	≤74	PASS
				Peak	2483.520	-45.62	≤-23.20	2.00	0.00	51.58	≤74	PASS
				Peak	2500.000	-52.32	≤-23.20	2.00	0.00	44.88	≤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

