

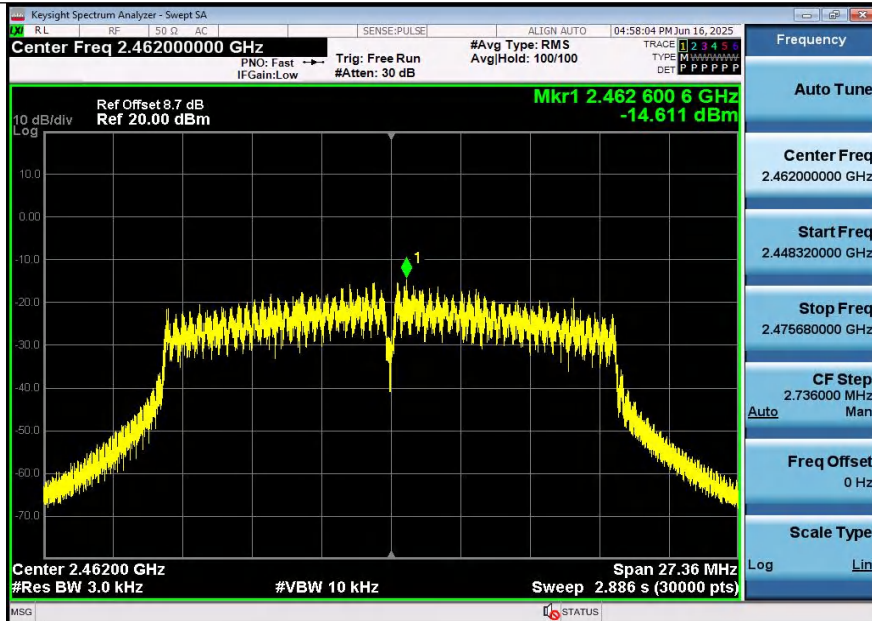


Shenzhen GUOREN Certification Technology Service Co., Ltd.

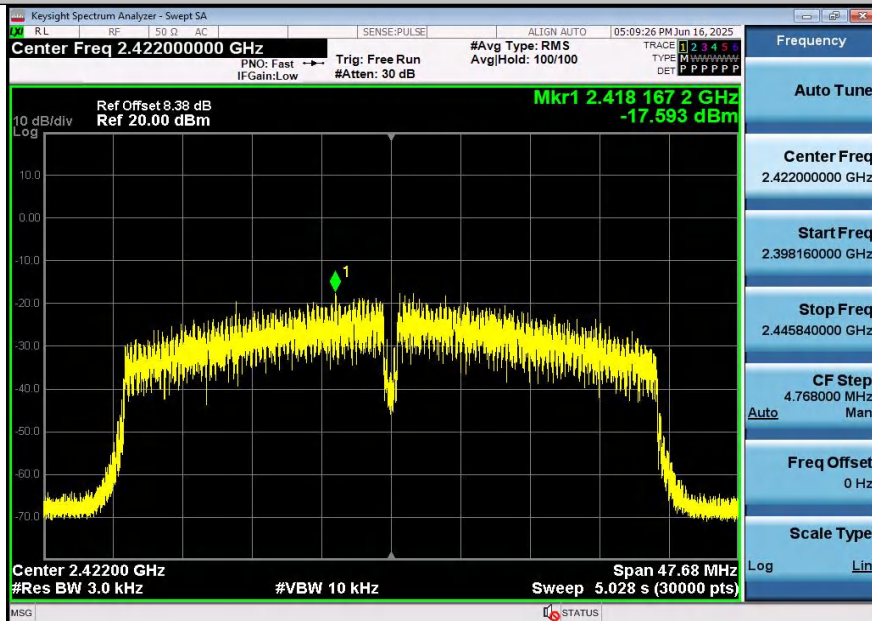
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11N20SISO-Ant2-2462-PASS



11N40SISO-Ant2-2422-PASS

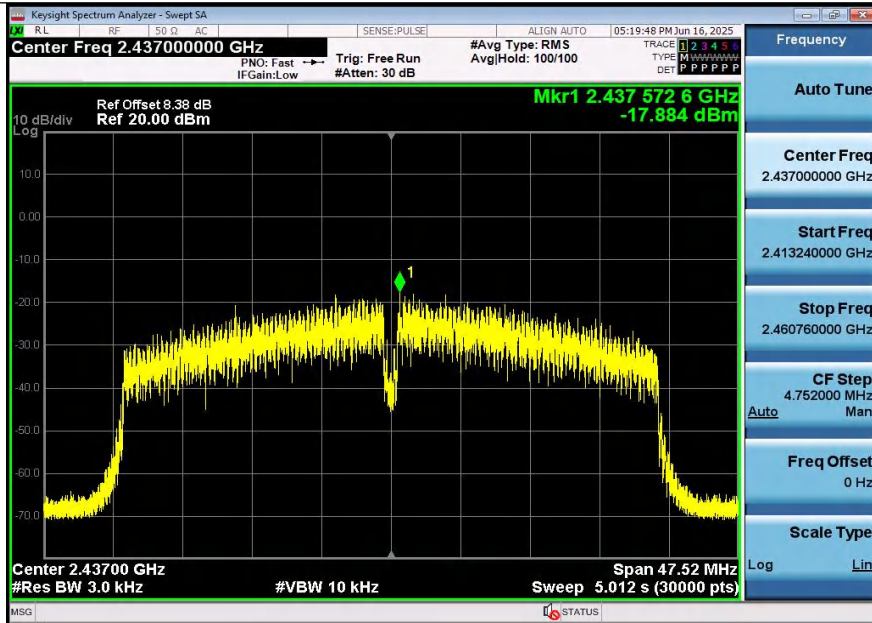


Shenzhen GUOREN Certification Technology Service Co., Ltd.

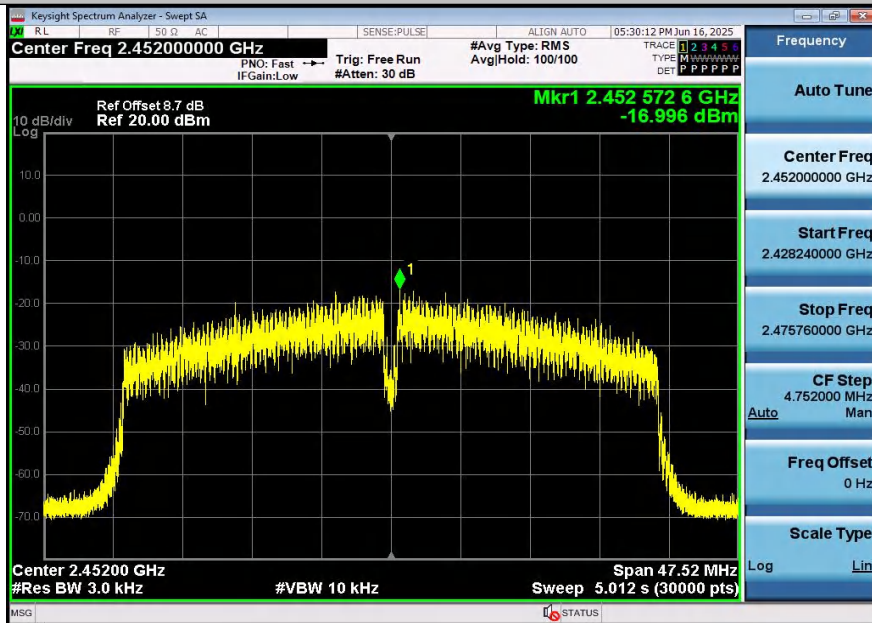
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11N40SISO-Ant2-2437-PASS



11N40SISO-Ant2-2452-PASS

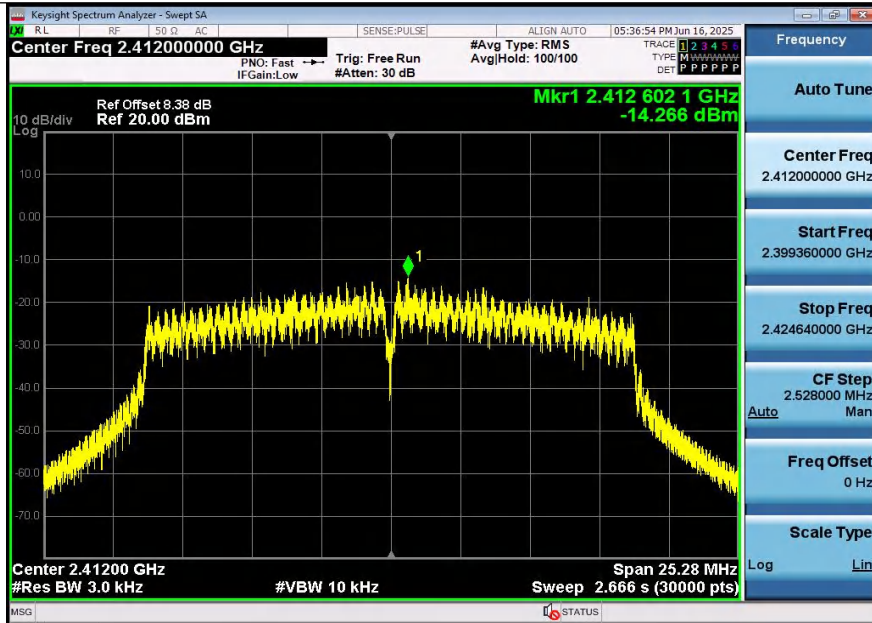


Shenzhen GUOREN Certification Technology Service Co., Ltd.

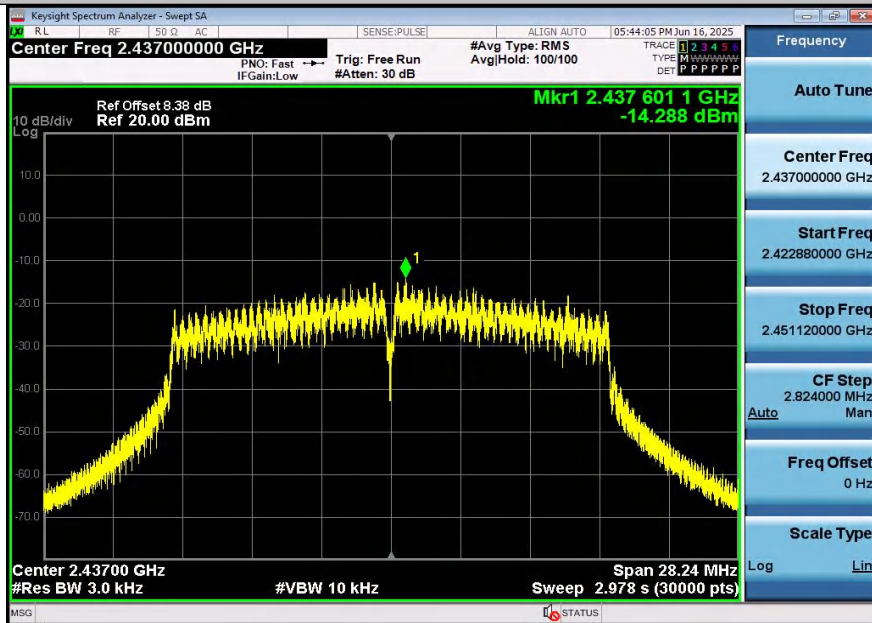
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11AX20SISO-Ant2-2412-PASS



11AX20SISO-Ant2-2437-PASS

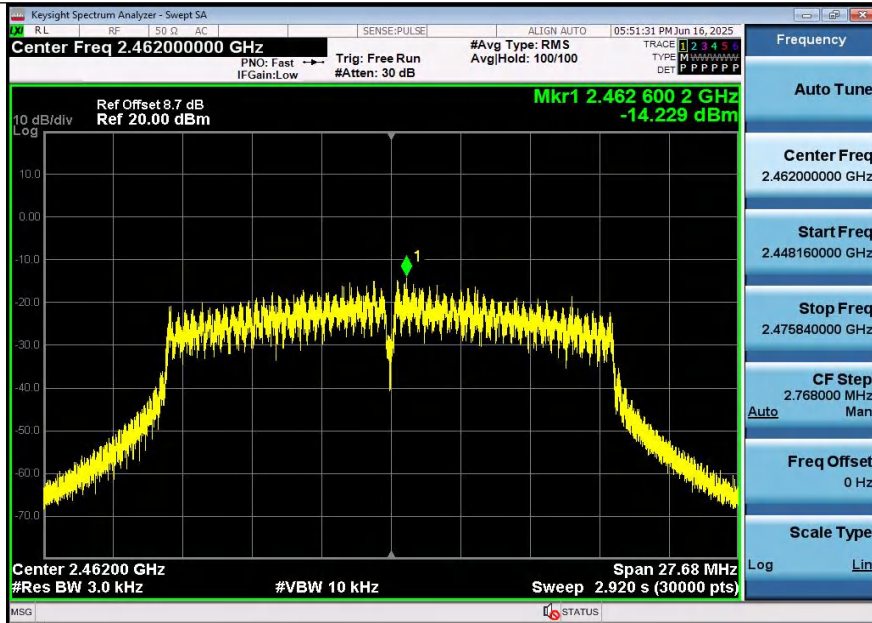


Shenzhen GUOREN Certification Technology Service Co., Ltd.

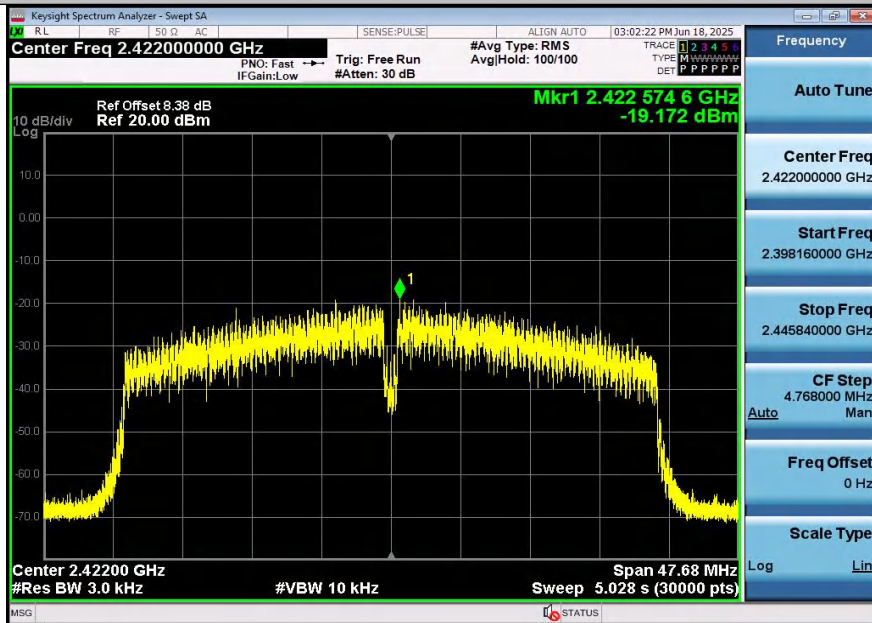
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11AX20SISO-Ant2-2462-PASS



11AX40SISO-Ant2-2422-PASS

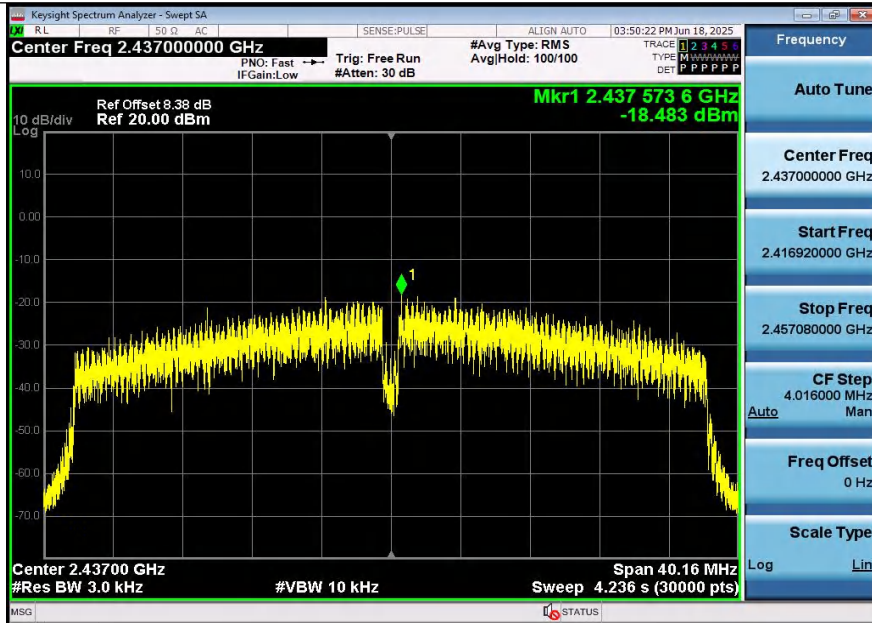


Shenzhen GUOREN Certification Technology Service Co., Ltd.

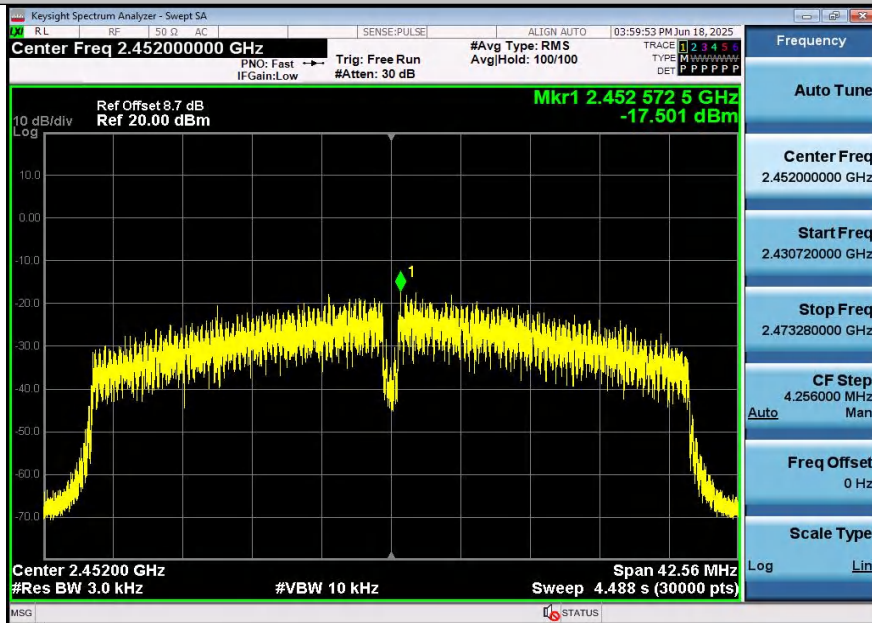
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11AX40SISO-Ant2-2437-PASS



11AX40SISO-Ant2-2452-PASS

**Shenzhen GUOREN Certification Technology Service Co., Ltd.**

101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01

MIMO

Type	Channel	Power Spectral Density (dBm/3KHz) ANT1	Power Spectral Density (dBm/3KHz) ANT2	Power Spectral Density (dBm/3KHz) MIMO	Limit (dBm/3KHz)	Result
802.11n HT20	01	-15.45	-15.57	-12.50	6.01	Pass
	06	-14.87	-15.46	-12.14		
	11	-15.57	-14.61	-12.05		
802.11n HT40	03	-18.59	-17.59	-15.05	6.01	Pass
	06	-17.90	-17.88	-14.88		
	09	-17.36	-17.00	-14.17		
802.11ax HE20	01	-16.00	-14.27	-12.04	6.01	Pass
	06	-15.36	-14.29	-11.78		
	11	-14.85	-14.23	-11.52		
802.11ax HE40	03	-18.40	-19.17	-15.76	6.01	Pass
	06	-17.71	-18.48	-15.07		
	09	-17.06	-17.50	-14.26		



Shenzhen GUOREN Certification Technology Service Co., Ltd.
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01

Appendix D: Band edge measurements

Ant 1

Test Result

Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	0.58	-50.78	≤ -19.42	PASS
11B	Ant1	High	2462	1.70	-49.2	≤ -18.3	PASS
11G	Ant1	Low	2412	-2.06	-41.76	≤ -22.06	PASS
11G	Ant1	High	2462	-0.62	-49.75	≤ -20.62	PASS
11N20SISO	Ant1	Low	2412	-1.66	-39.94	≤ -21.66	PASS
11N20SISO	Ant1	High	2462	-1.69	-49.73	≤ -21.69	PASS
11N40SISO	Ant1	Low	2422	-4.43	-50.54	≤ -24.43	PASS
11N40SISO	Ant1	High	2452	-3.72	-50.31	≤ -23.72	PASS
11AX20SISO	Ant1	Low	2412	-2.93	-42.48	≤ -22.93	PASS
11AX20SISO	Ant1	High	2462	-1.55	-49.94	≤ -21.55	PASS
11AX40SISO	Ant1	Low	2422	-4.80	-50.56	≤ -24.8	PASS
11AX40SISO	Ant1	High	2452	-2.55	-49.85	≤ -22.55	PASS

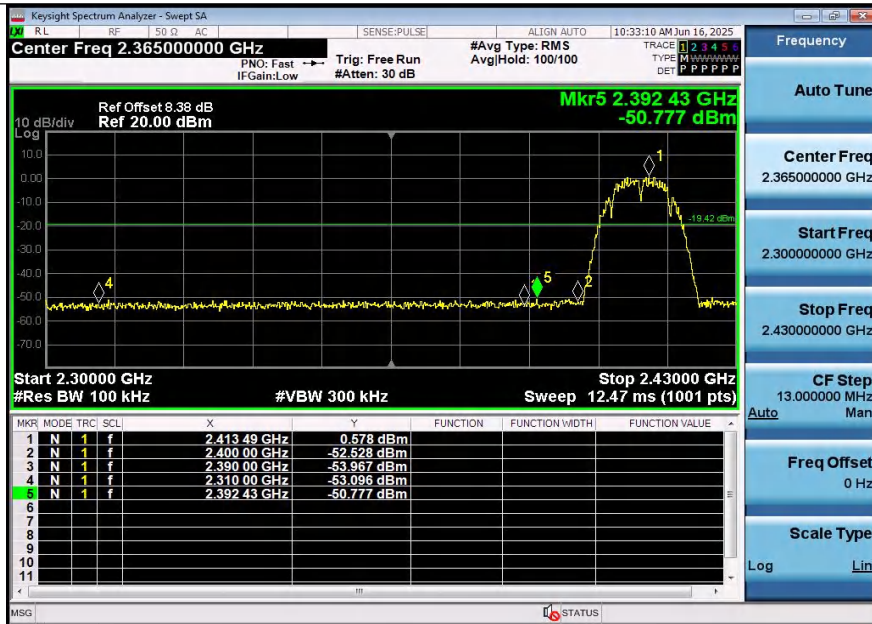


Shenzhen GUOREN Certification Technology Service Co., Ltd.
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

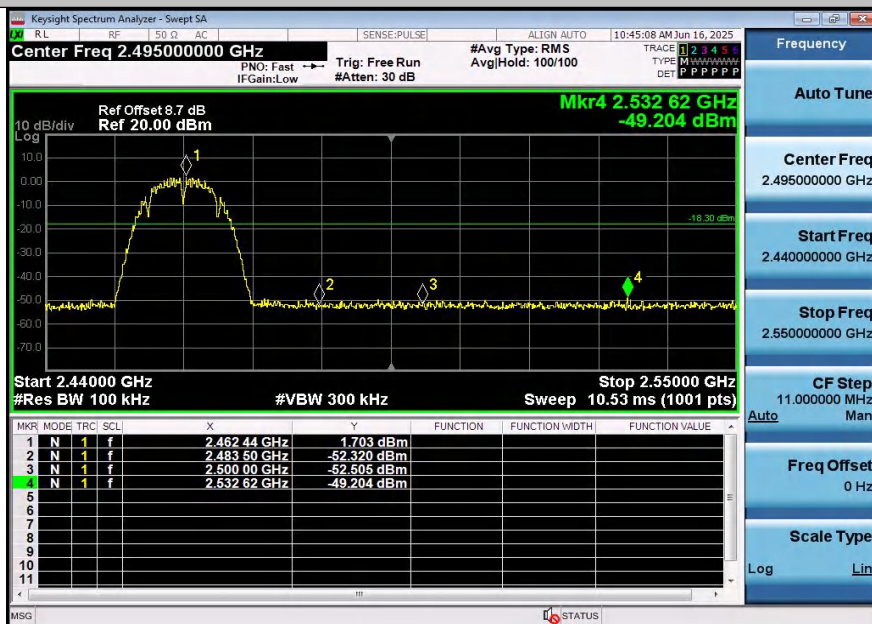
FCC ID:2BK77-R-W52506

GRCTR250502041-01

Test Graphs



11B-Ant1-2412-PASS



11B-Ant1-2462-PASS

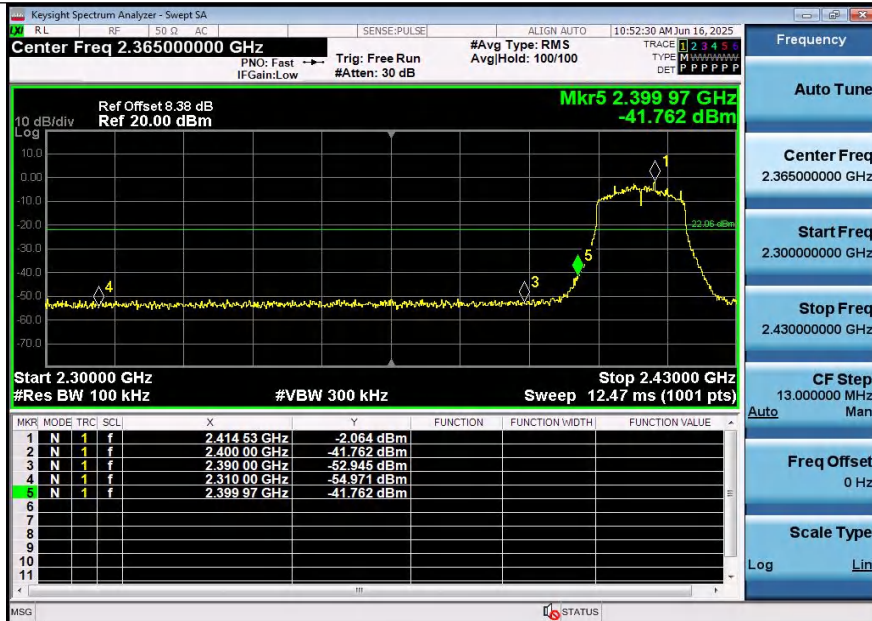


Shenzhen GUOREN Certification Technology Service Co., Ltd.

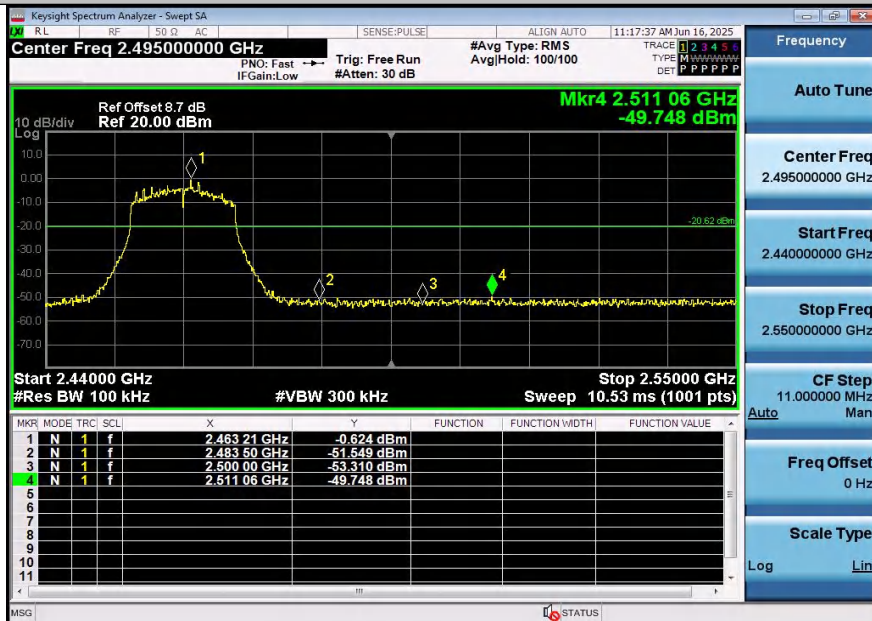
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11G-Ant1-2412-PASS



11G-Ant1-2462-PASS

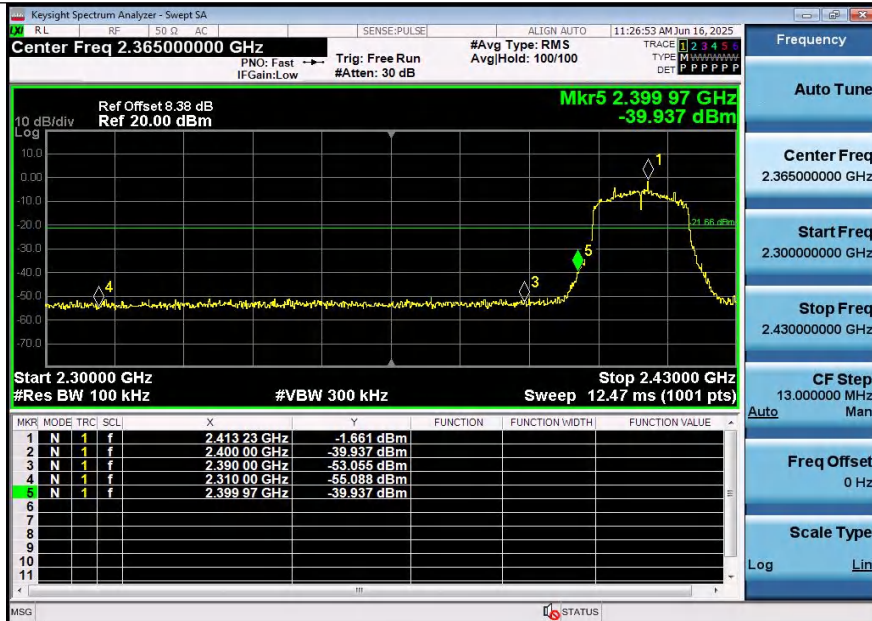


Shenzhen GUOREN Certification Technology Service Co., Ltd.

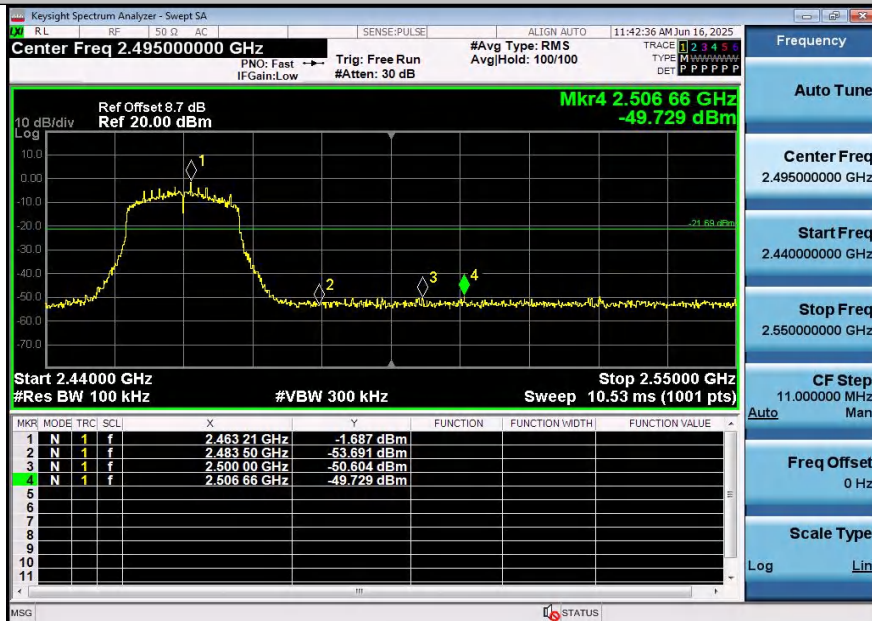
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2462-PASS

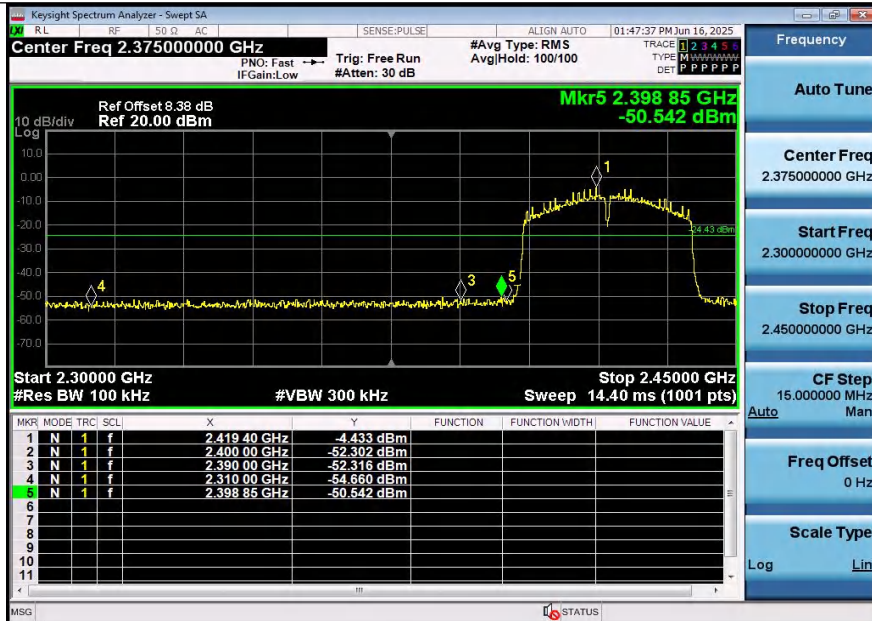


Shenzhen GUOREN Certification Technology Service Co., Ltd.

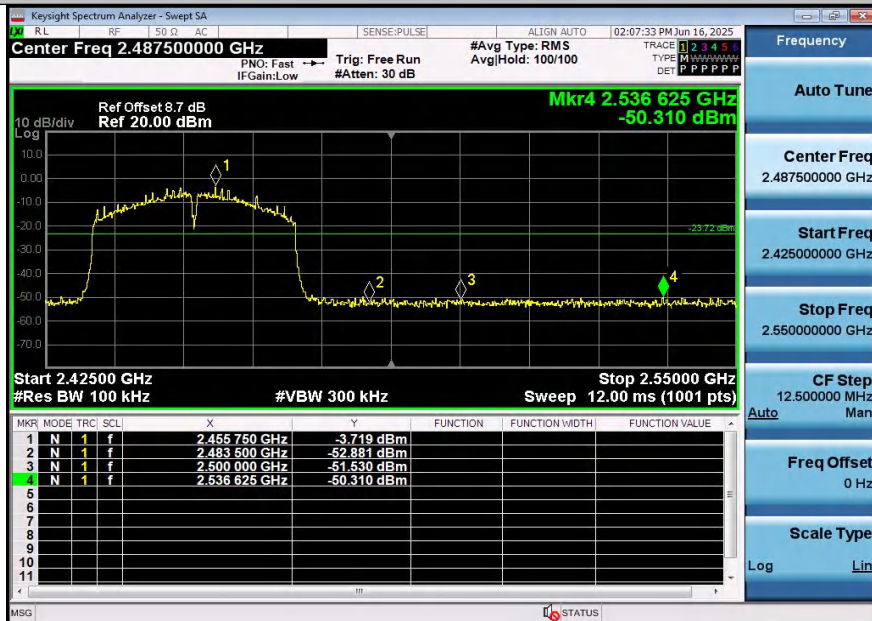
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11N40SISO-Ant1-2422-PASS



11N40SISO-Ant1-2452-PASS

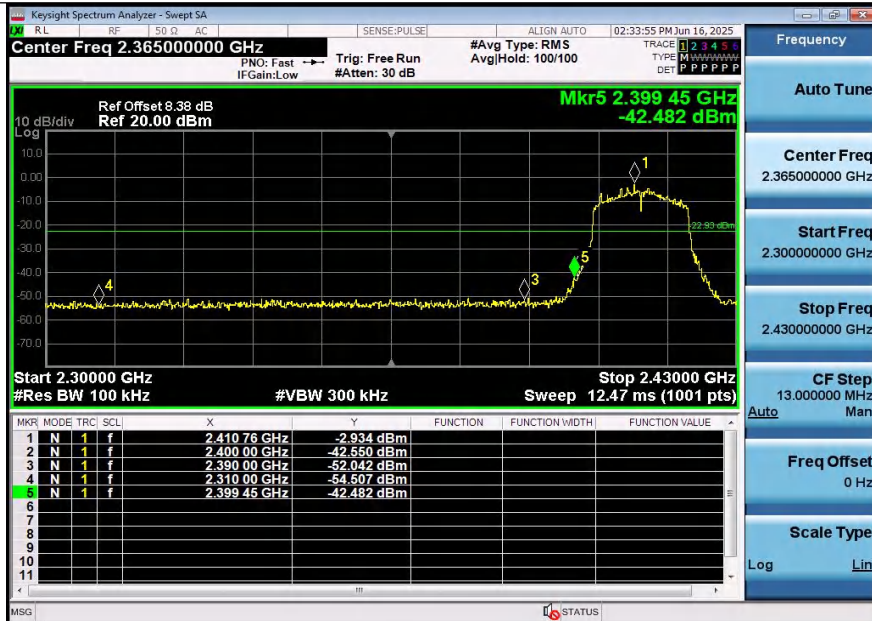


Shenzhen GUOREN Certification Technology Service Co., Ltd.

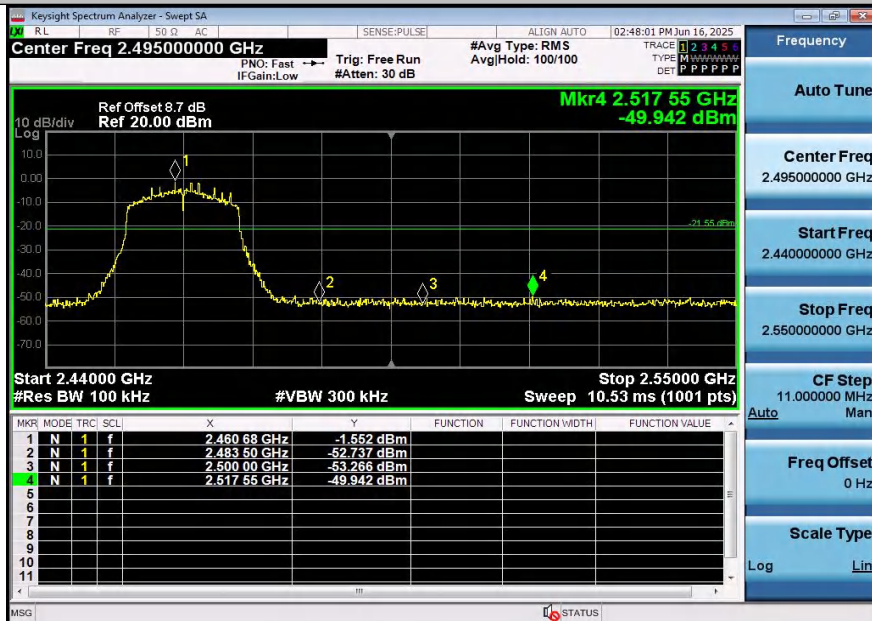
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11AX20SISO-Ant1-2412-PASS



11AX20SISO-Ant1-2462-PASS

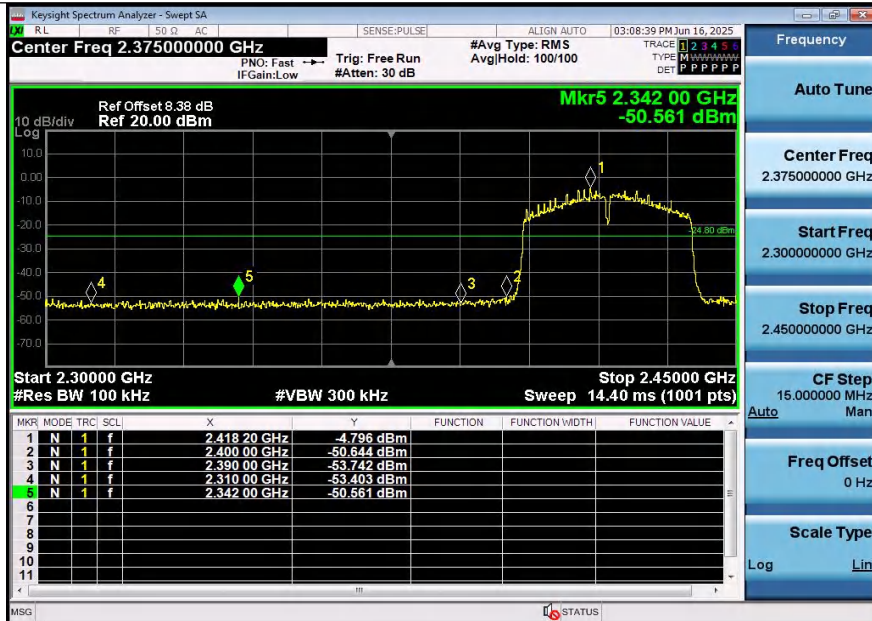


Shenzhen GUOREN Certification Technology Service Co., Ltd.

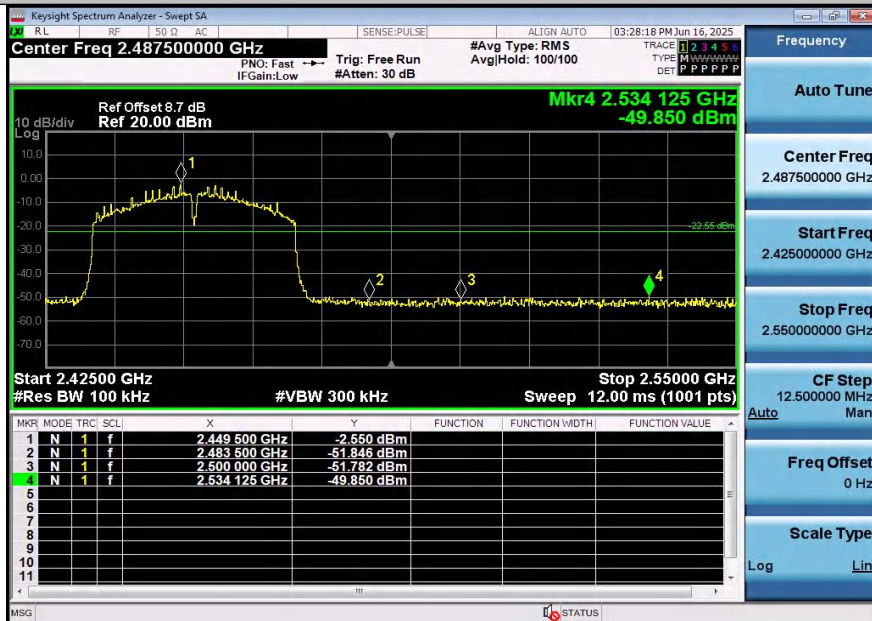
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11AX40SISO-Ant1-2422-PASS



11AX40SISO-Ant1-2452-PASS



Shenzhen GUOREN Certification Technology Service Co., Ltd.

101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01

Ant 2

Test Result

Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant2	Low	2412	2.15	-50.45	≤ -17.85	PASS
11B	Ant2	High	2462	3.09	-49.13	≤ -16.91	PASS
11G	Ant2	Low	2412	-1.78	-44.16	≤ -21.78	PASS
11G	Ant2	High	2462	-1.14	-49.81	≤ -21.14	PASS
11N20SISO	Ant2	Low	2412	-3.35	-41.62	≤ -23.35	PASS
11N20SISO	Ant2	High	2462	-0.82	-48.84	≤ -20.82	PASS
11N40SISO	Ant2	Low	2422	-3.73	-49.34	≤ -23.73	PASS
11N40SISO	Ant2	High	2452	-2.67	-50.1	≤ -22.67	PASS
11AX20SISO	Ant2	Low	2412	-2.00	-42.22	≤ -22	PASS
11AX20SISO	Ant2	High	2462	-0.96	-49.36	≤ -20.96	PASS
11AX40SISO	Ant2	Low	2422	-4.74	-50.75	≤ -24.74	PASS
11AX40SISO	Ant2	High	2452	-4.93	-49.67	≤ -24.93	PASS

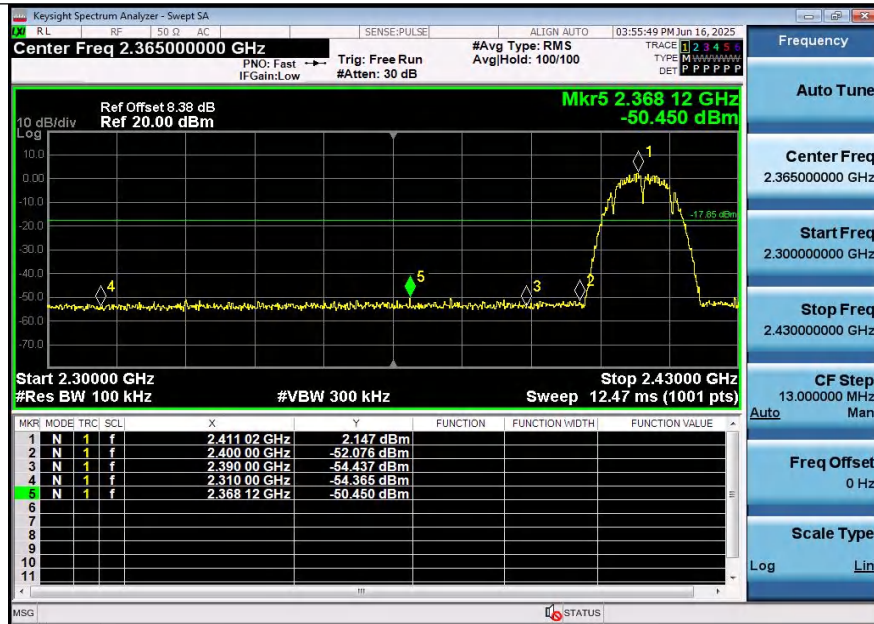


Shenzhen GUOREN Certification Technology Service Co., Ltd.
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

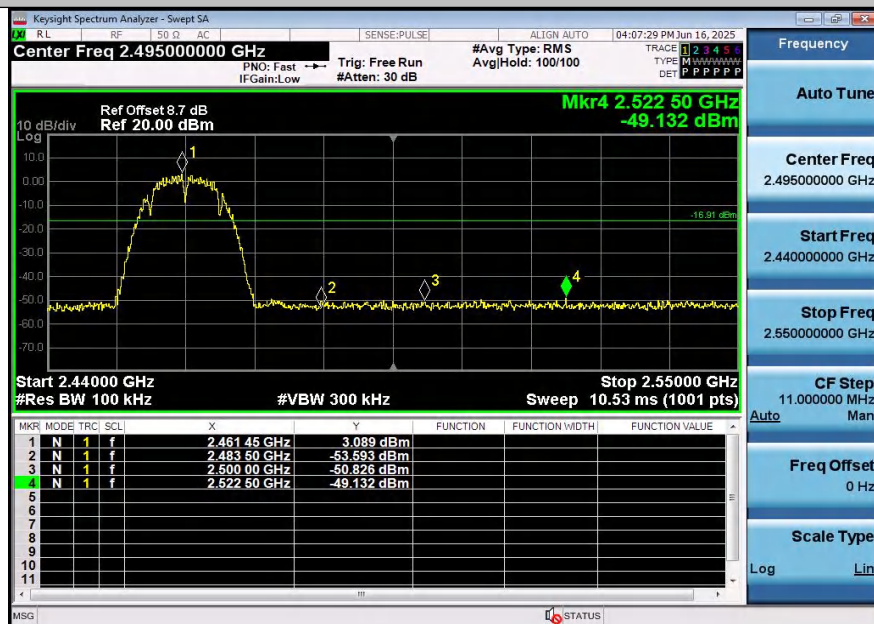
FCC ID:2BK77-R-W52506

GRCTR250502041-01

Test Graphs



11B-Ant2-2412-PASS



11B-Ant2-2462-PASS

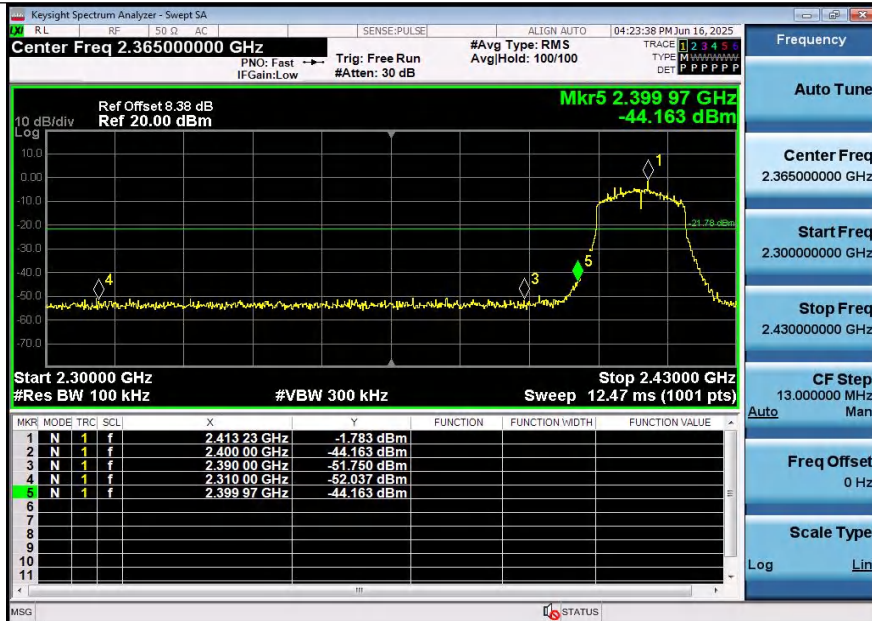


Shenzhen GUOREN Certification Technology Service Co., Ltd.

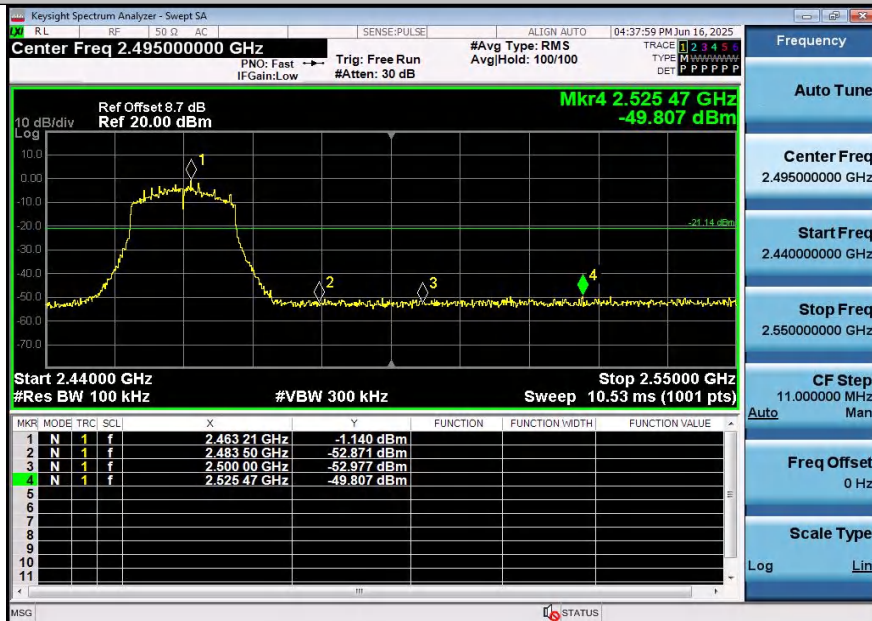
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11G-Ant2-2412-PASS



11G-Ant2-2462-PASS

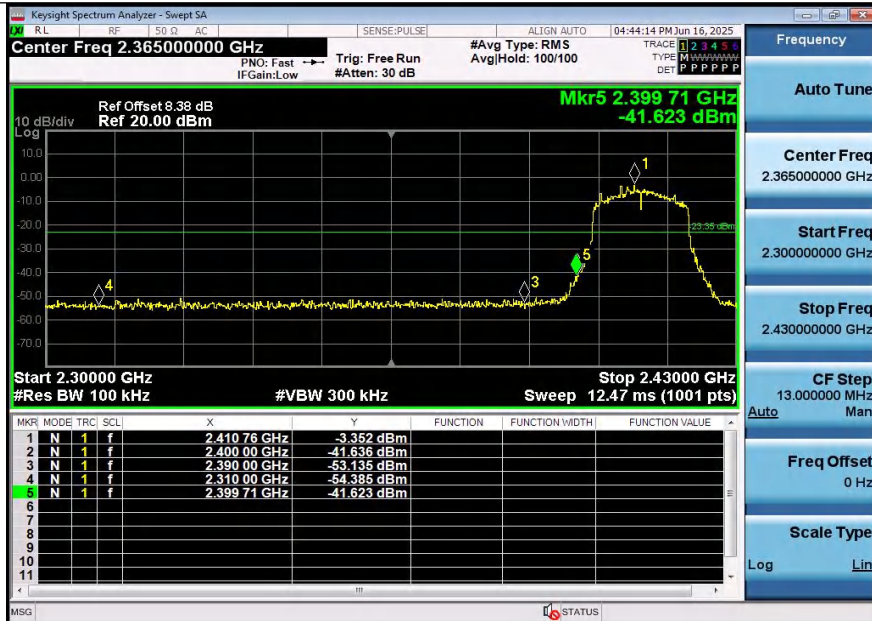


Shenzhen GUOREN Certification Technology Service Co., Ltd.

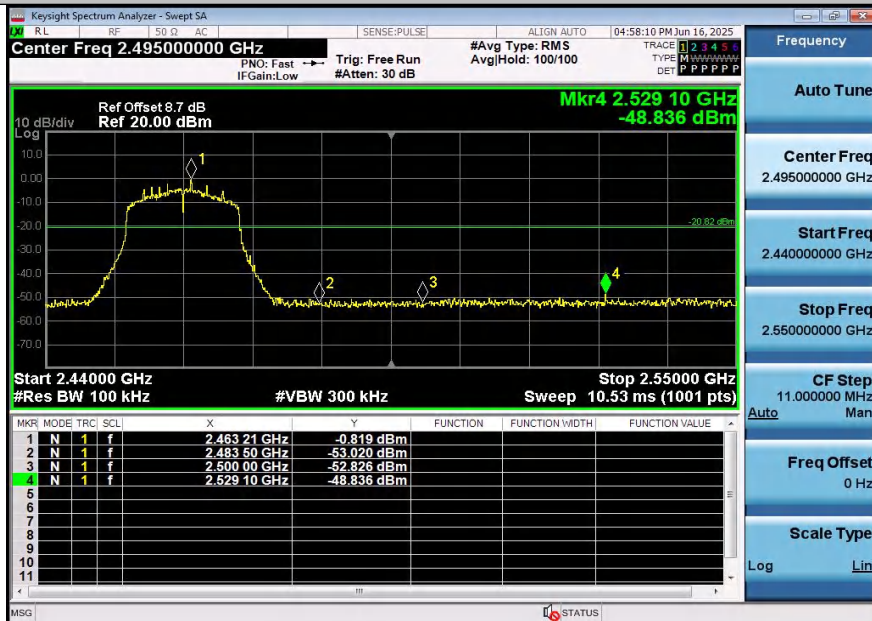
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11N20SISO-Ant2-2412-PASS



11N20SISO-Ant2-2462-PASS

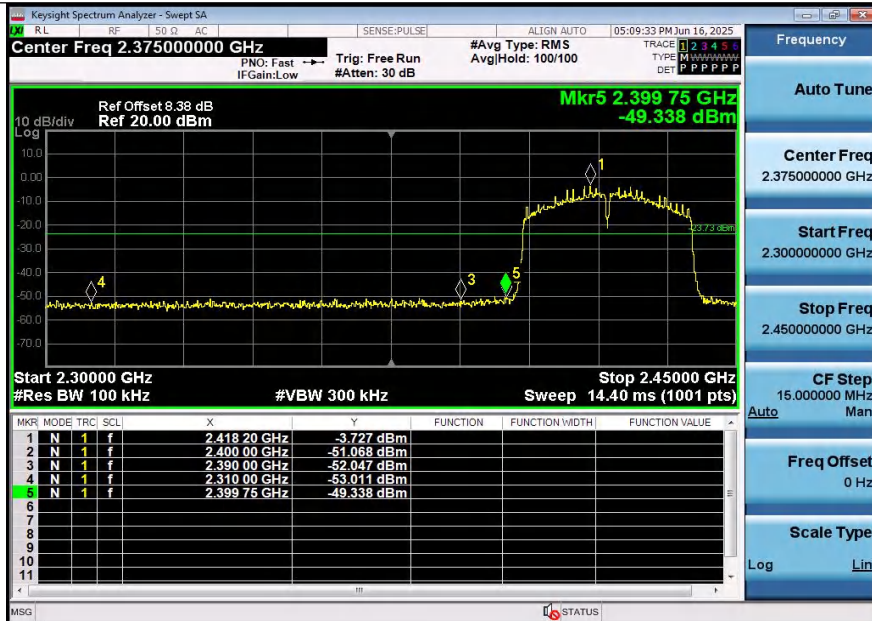


Shenzhen GUOREN Certification Technology Service Co., Ltd.

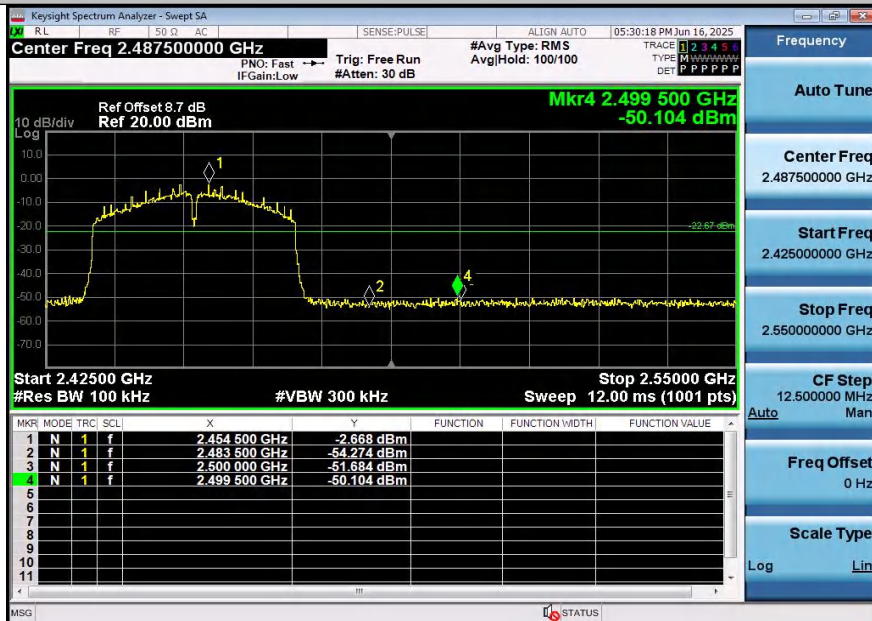
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11N40SISO-Ant2-2422-PASS



11N40SISO-Ant2-2452-PASS

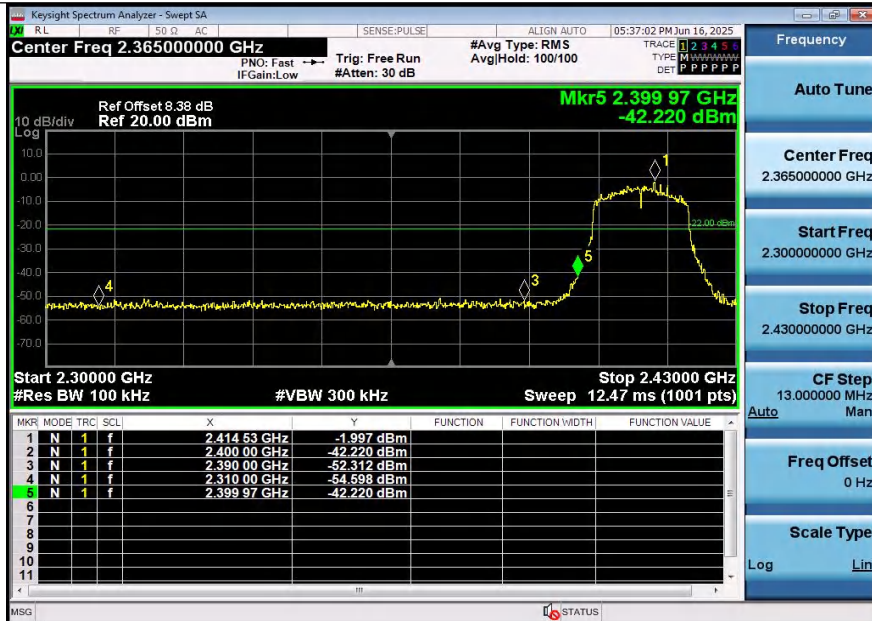


Shenzhen GUOREN Certification Technology Service Co., Ltd.

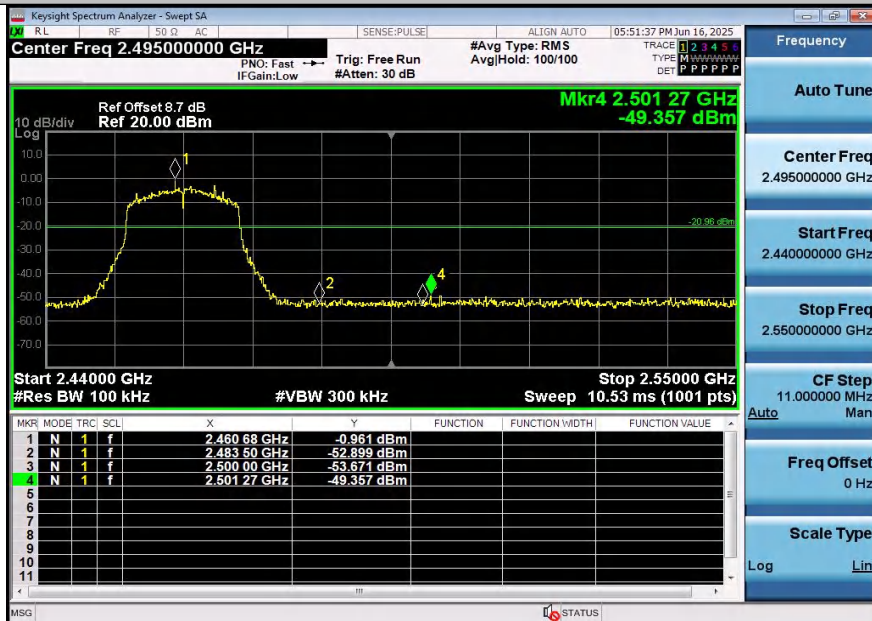
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11AX20SISO-Ant2-2412-PASS



11AX20SISO-Ant2-2462-PASS

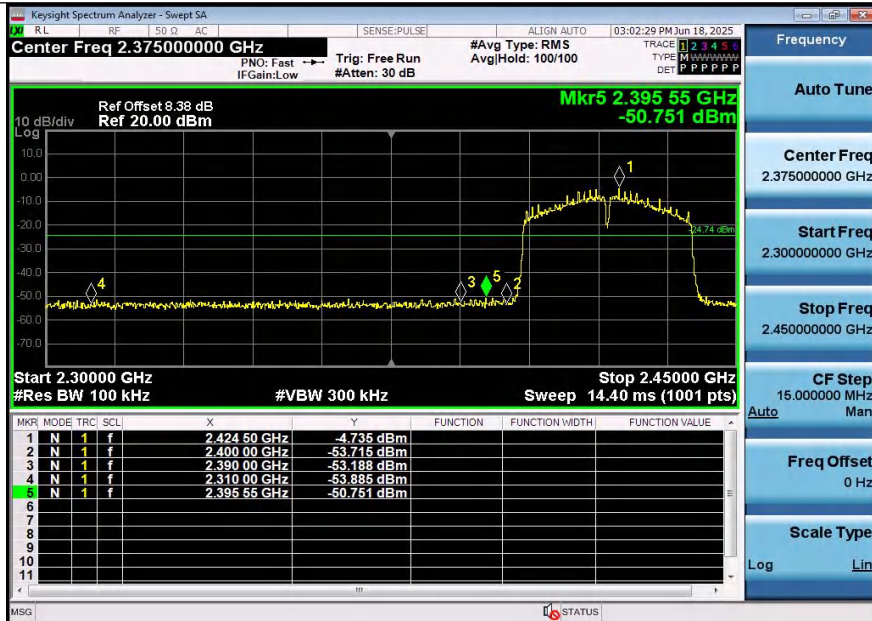


Shenzhen GUOREN Certification Technology Service Co., Ltd.

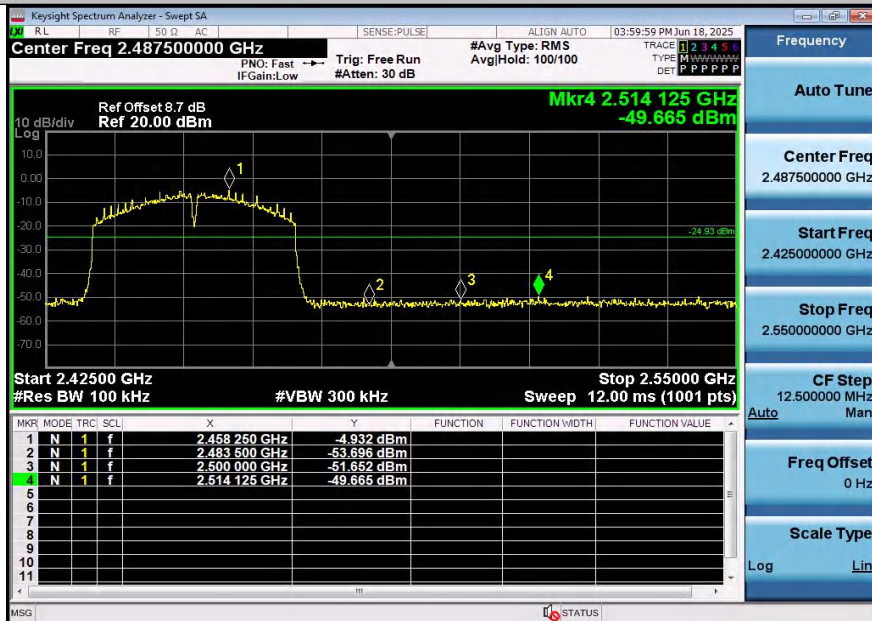
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11AX40SISO-Ant2-2422-PASS



11AX40SISO-Ant2-2452-PASS



Shenzhen GUOREN Certification Technology Service Co., Ltd.

101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01

Appendix E: Conducted Spurious Emission

Ant 1

Test Result

Test Mode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	0~Reference	-0.20	-0.20	---	PASS
11B	Ant1	2412	30~1000	-0.20	-54.31	≤ -20.2	PASS
11B	Ant1	2412	1000~25000	-0.20	-46.11	≤ -20.2	PASS
11B	Ant1	2437	0~Reference	1.05	1.05	---	PASS
11B	Ant1	2437	30~1000	1.05	-53.95	≤ -18.95	PASS
11B	Ant1	2437	1000~25000	1.05	-47.46	≤ -18.95	PASS
11B	Ant1	2462	0~Reference	1.75	1.75	---	PASS
11B	Ant1	2462	30~1000	1.75	-53.98	≤ -18.25	PASS
11B	Ant1	2462	1000~25000	1.75	-46.24	≤ -18.25	PASS
11G	Ant1	2412	0~Reference	-0.71	-0.71	---	PASS
11G	Ant1	2412	30~1000	-0.71	-54.38	≤ -20.71	PASS
11G	Ant1	2412	1000~25000	-0.71	-46.5	≤ -20.71	PASS
11G	Ant1	2437	0~Reference	-2.74	-2.74	---	PASS
11G	Ant1	2437	30~1000	-2.74	-54.79	≤ -22.74	PASS
11G	Ant1	2437	1000~25000	-2.74	-46.38	≤ -22.74	PASS
11G	Ant1	2462	0~Reference	-2.84	-2.84	---	PASS
11G	Ant1	2462	30~1000	-2.84	-54.89	≤ -22.84	PASS
11G	Ant1	2462	1000~25000	-2.84	-46.97	≤ -22.84	PASS
11N20SISO	Ant1	2412	0~Reference	-2.41	-2.41	---	PASS
11N20SISO	Ant1	2412	30~1000	-2.41	-54.33	≤ -22.41	PASS
11N20SISO	Ant1	2412	1000~25000	-2.41	-46.83	≤ -22.41	PASS
11N20SISO	Ant1	2437	0~Reference	-0.98	-0.98	---	PASS
11N20SISO	Ant1	2437	30~1000	-0.98	-53.8	≤ -20.98	PASS
11N20SISO	Ant1	2437	1000~25000	-0.98	-47.13	≤ -20.98	PASS
11N20SISO	Ant1	2462	0~Reference	-1.99	-1.99	---	PASS
11N20SISO	Ant1	2462	30~1000	-1.99	-59.18	≤ -21.99	PASS
11N20SISO	Ant1	2462	1000~25000	-1.99	-47.1	≤ -21.99	PASS
11N40SISO	Ant1	2422	0~Reference	-4.10	-4.10	---	PASS
11N40SISO	Ant1	2422	30~1000	-4.10	-54.28	≤ -24.1	PASS
11N40SISO	Ant1	2422	1000~25000	-4.10	-47.38	≤ -24.1	PASS
11N40SISO	Ant1	2437	0~Reference	-3.61	-3.61	---	PASS
11N40SISO	Ant1	2437	30~1000	-3.61	-54.61	≤ -23.61	PASS
11N40SISO	Ant1	2437	1000~25000	-3.61	-46.06	≤ -23.61	PASS

**Shenzhen GUOREN Certification Technology Service Co., Ltd.**

101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01

11N40SISO	Ant1	2452	0~Reference	-3.22	-3.22	---	PASS
11N40SISO	Ant1	2452	30~1000	-3.22	-54.84	≤ -23.22	PASS
11N40SISO	Ant1	2452	1000~25000	-3.22	-46.93	≤ -23.22	PASS
11AX20SISO	Ant1	2412	0~Reference	-3.35	-3.35	---	PASS
11AX20SISO	Ant1	2412	30~1000	-3.35	-54.47	≤ -23.35	PASS
11AX20SISO	Ant1	2412	1000~25000	-3.35	-46.65	≤ -23.35	PASS
11AX20SISO	Ant1	2437	0~Reference	-2.12	-2.12	---	PASS
11AX20SISO	Ant1	2437	30~1000	-2.12	-55.09	≤ -22.12	PASS
11AX20SISO	Ant1	2437	1000~25000	-2.12	-46.94	≤ -22.12	PASS
11AX20SISO	Ant1	2462	0~Reference	-3.08	-3.08	---	PASS
11AX20SISO	Ant1	2462	30~1000	-3.08	-54.74	≤ -23.08	PASS
11AX20SISO	Ant1	2462	1000~25000	-3.08	-46.66	≤ -23.08	PASS
11AX40SISO	Ant1	2422	0~Reference	-4.64	-4.64	---	PASS
11AX40SISO	Ant1	2422	30~1000	-4.64	-53.97	≤ -24.64	PASS
11AX40SISO	Ant1	2422	1000~25000	-4.64	-46.79	≤ -24.64	PASS
11AX40SISO	Ant1	2437	0~Reference	-3.22	-3.22	---	PASS
11AX40SISO	Ant1	2437	30~1000	-3.22	-54.15	≤ -23.22	PASS
11AX40SISO	Ant1	2437	1000~25000	-3.22	-44.46	≤ -23.22	PASS
11AX40SISO	Ant1	2452	0~Reference	-2.40	-2.40	---	PASS
11AX40SISO	Ant1	2452	30~1000	-2.40	-54.64	≤ -22.4	PASS
11AX40SISO	Ant1	2452	1000~25000	-2.40	-46.74	≤ -22.4	PASS

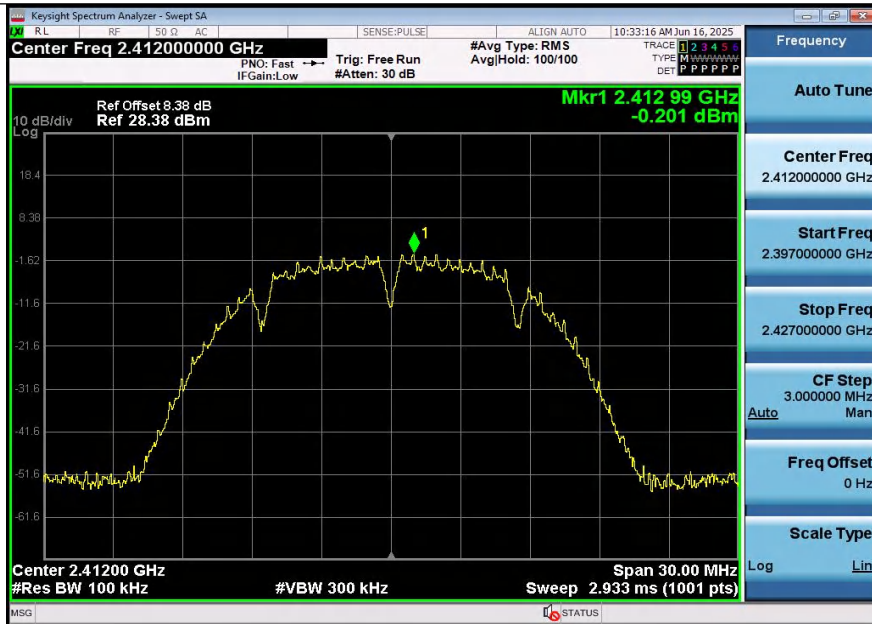


Shenzhen GUOREN Certification Technology Service Co., Ltd.
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

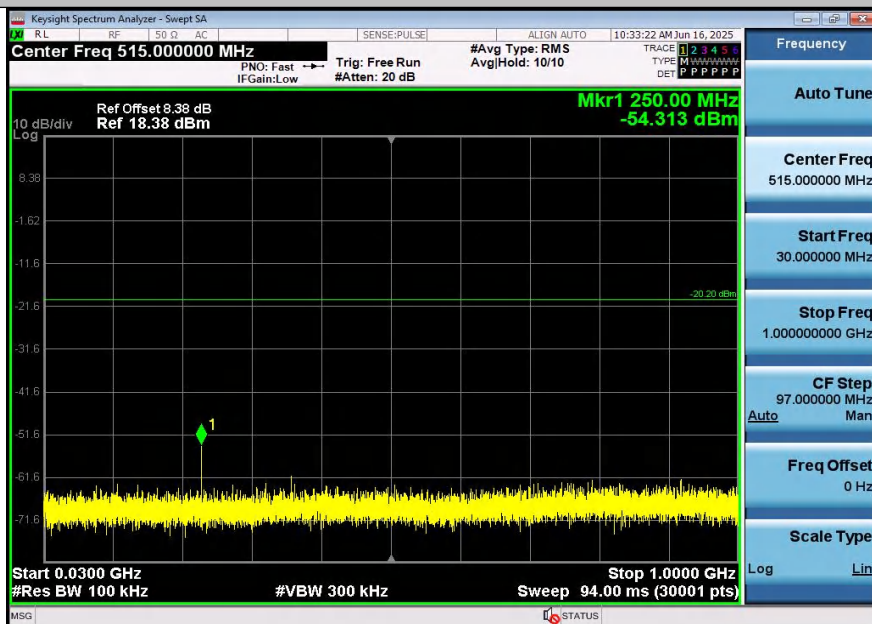
FCC ID:2BK77-R-W52506

GRCTR250502041-01

Test Graphs



11B-Ant1-2412-0~Reference-PASS



11B-Ant1-2412-30~1000-PASS

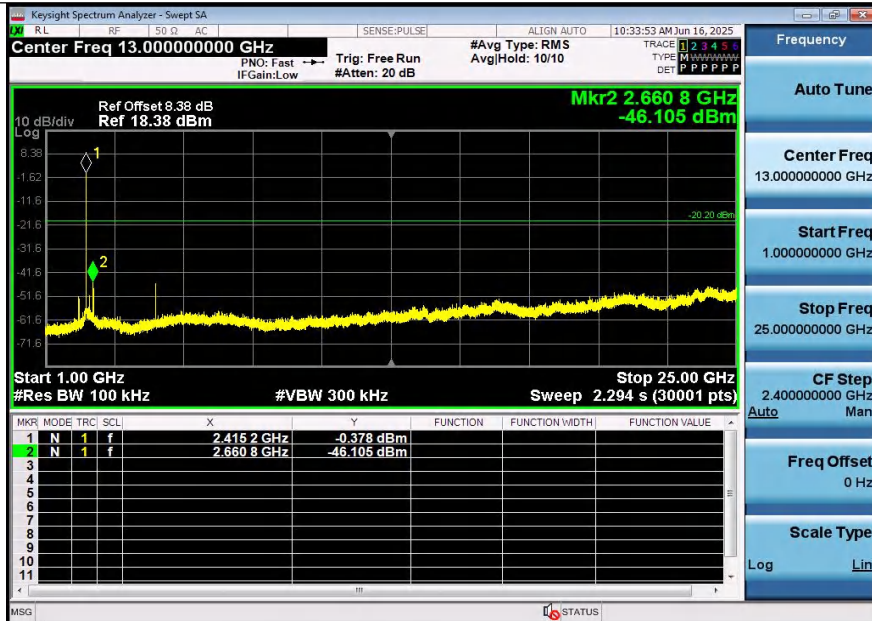


Shenzhen GUOREN Certification Technology Service Co., Ltd.

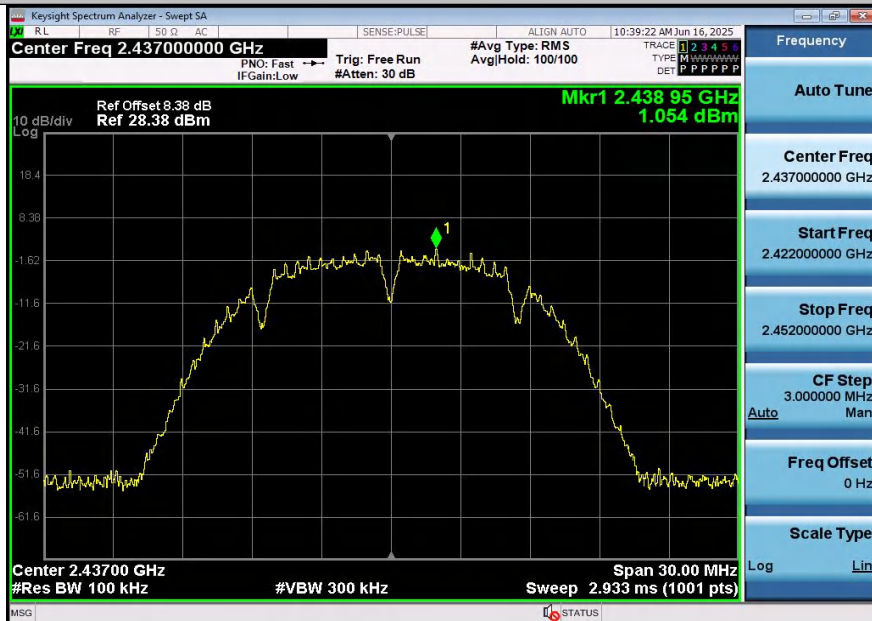
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11B-Ant1-2412-1000~25000-PASS



11B-Ant1-2437-0~Reference-PASS

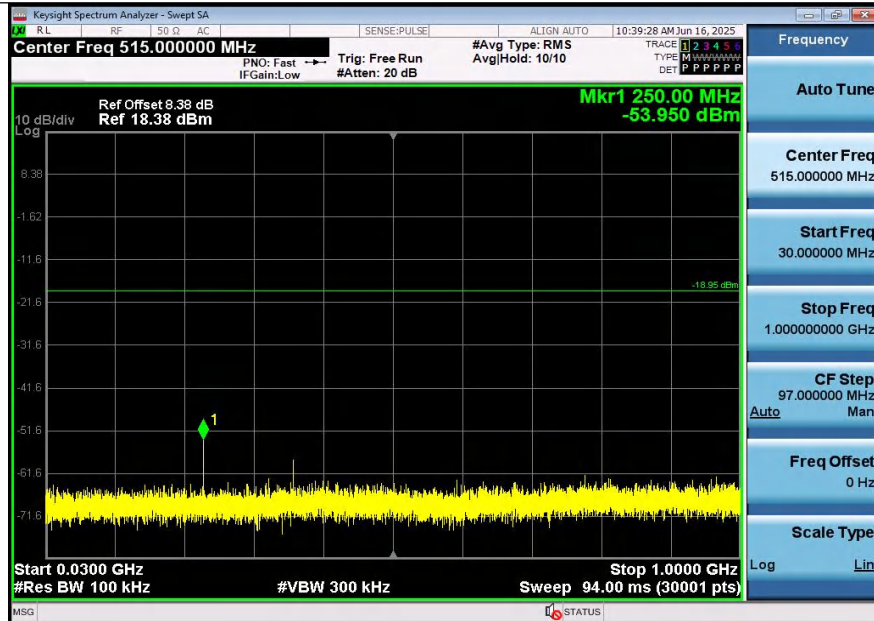


Shenzhen GUOREN Certification Technology Service Co., Ltd.

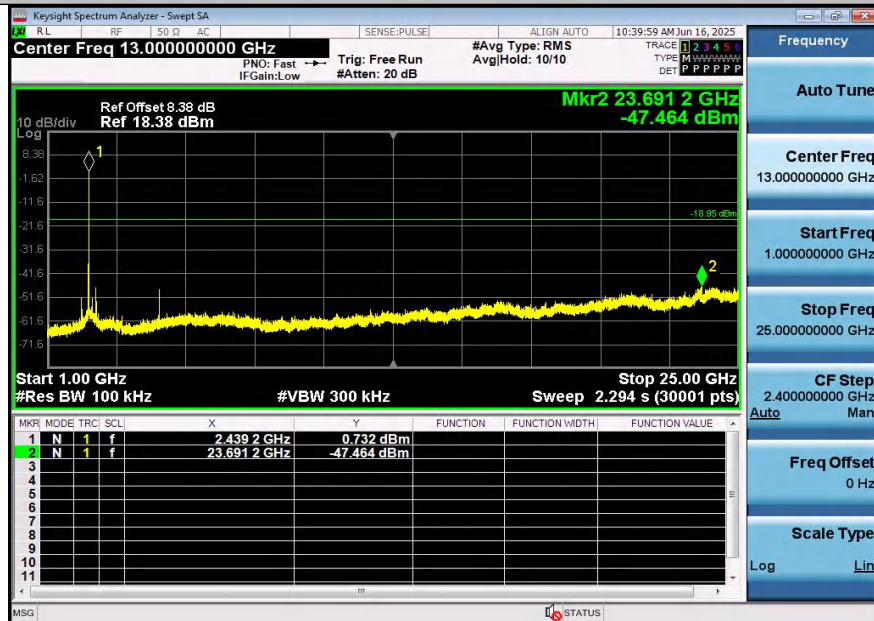
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11B-Ant1-2437-30~1000-PASS



11B-Ant1-2437-1000~25000-PASS

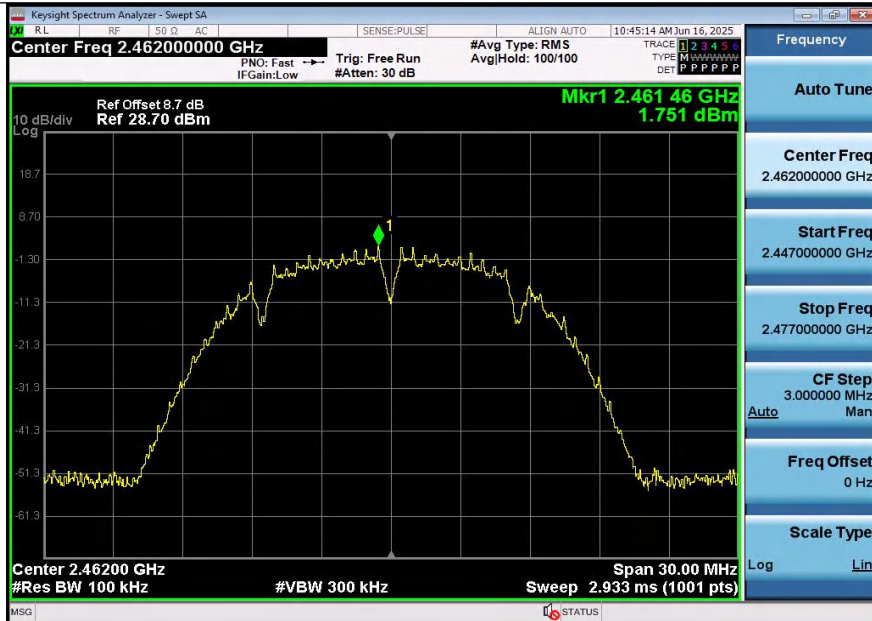


Shenzhen GUOREN Certification Technology Service Co., Ltd.

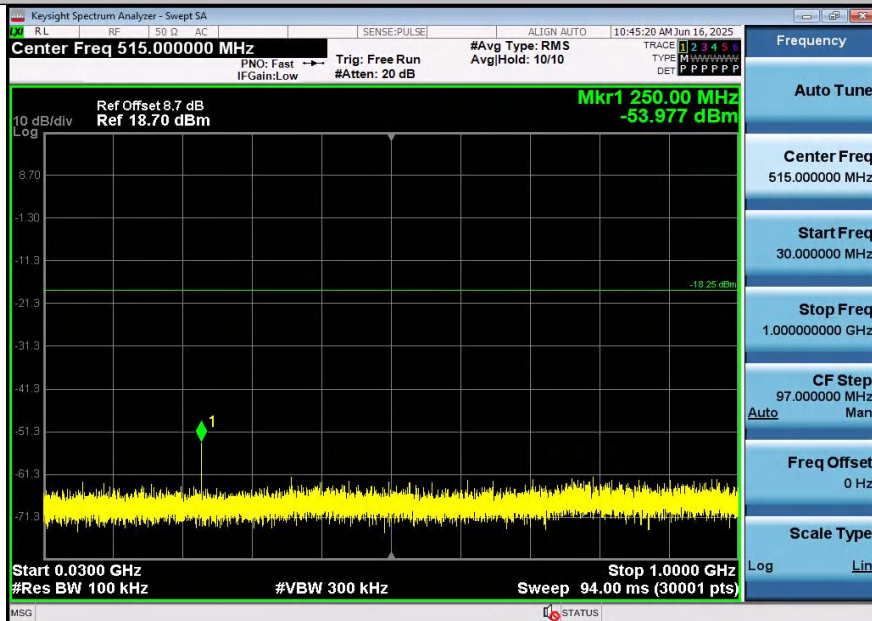
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11B-Ant1-2462-0~Reference-PASS



11B-Ant1-2462-30~1000-PASS

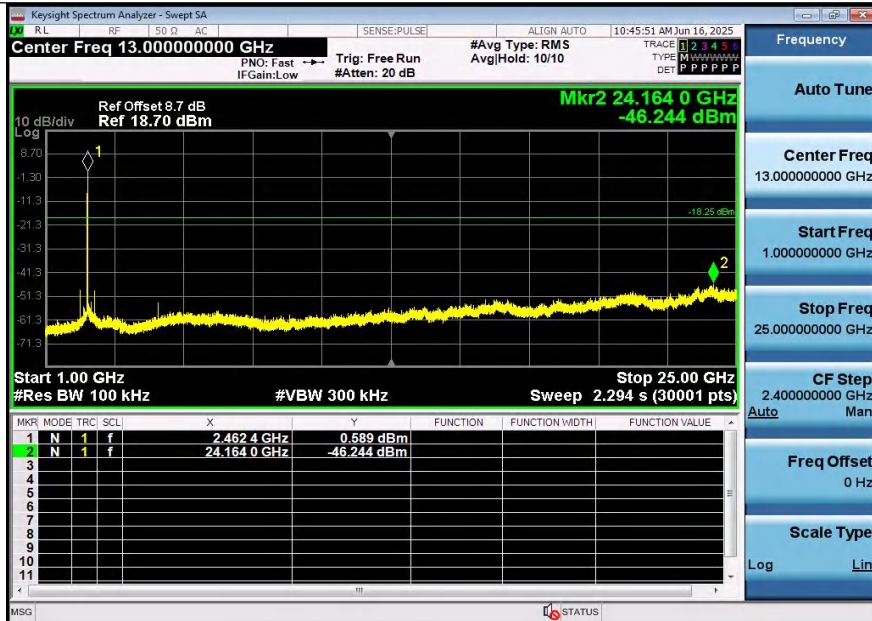


Shenzhen GUOREN Certification Technology Service Co., Ltd.

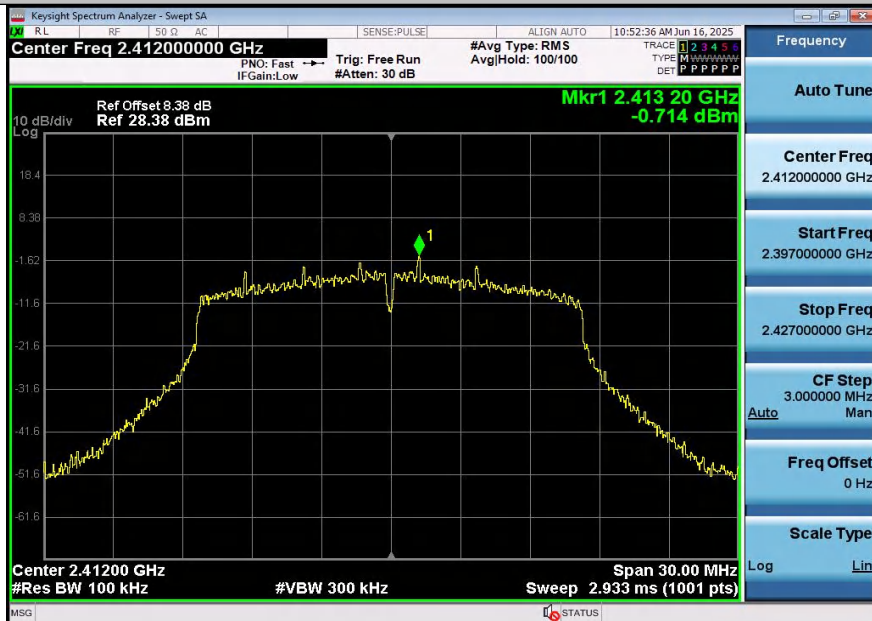
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11B-Ant1-2462-1000~25000-PASS



11G-Ant1-2412-0~Reference-PASS

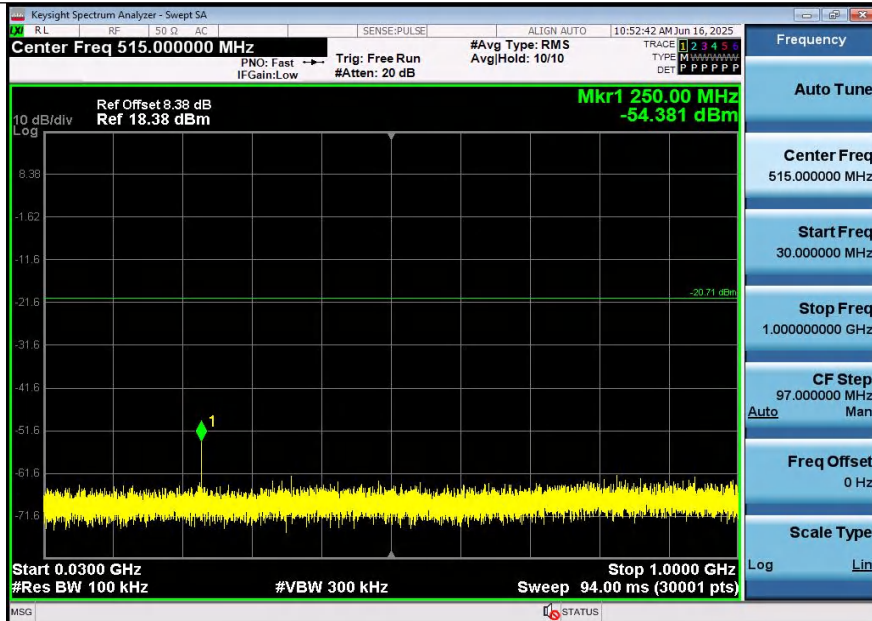


Shenzhen GUOREN Certification Technology Service Co., Ltd.

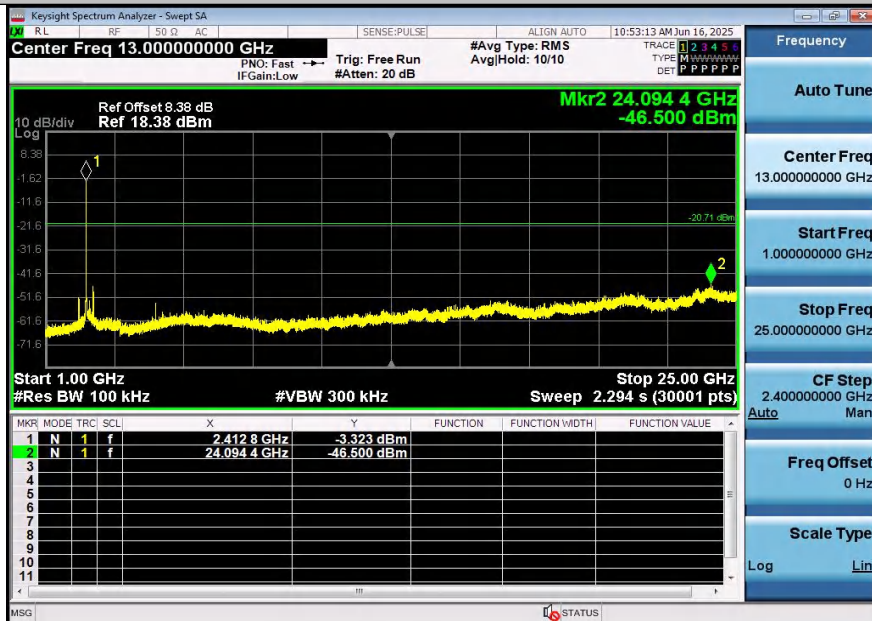
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11G-Ant1-2412-30~1000-PASS



11G-Ant1-2412-1000~25000-PASS

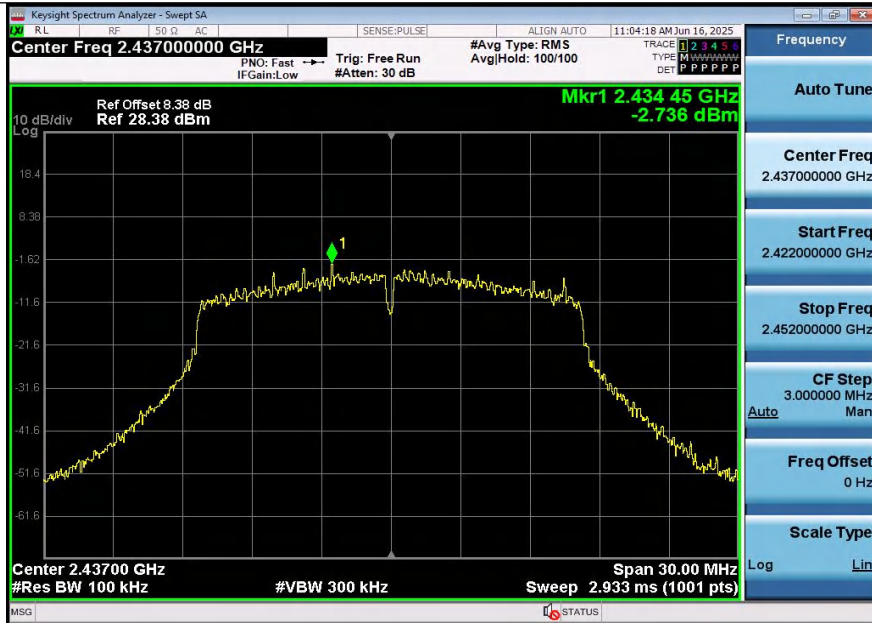


Shenzhen GUOREN Certification Technology Service Co., Ltd.

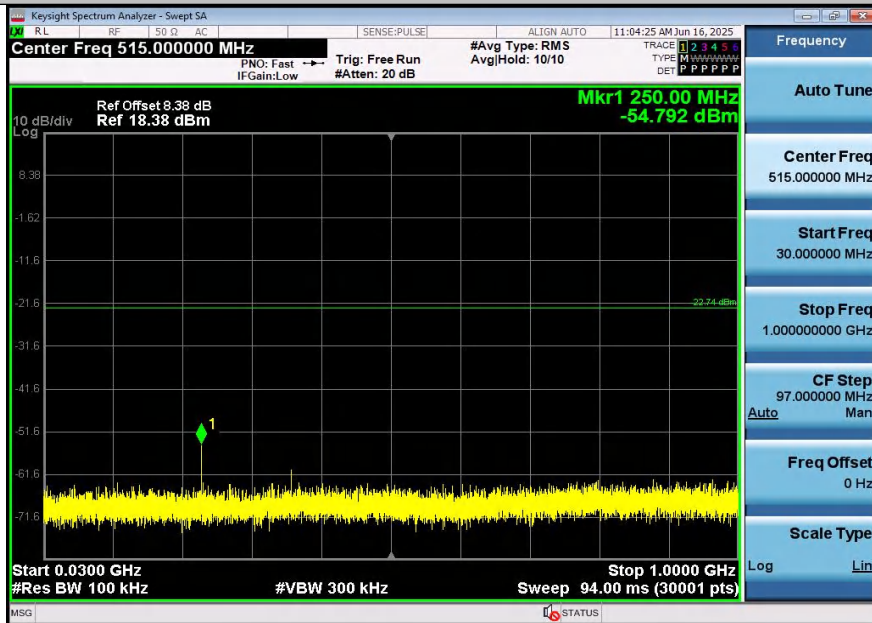
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11G-Ant1-2437-0~Reference-PASS



11G-Ant1-2437-30~1000-PASS

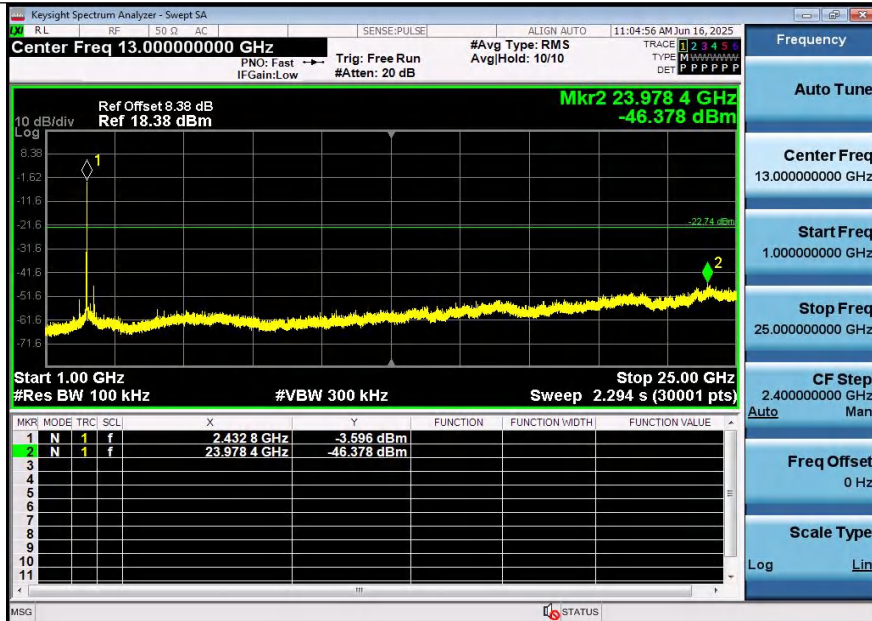


Shenzhen GUOREN Certification Technology Service Co., Ltd.

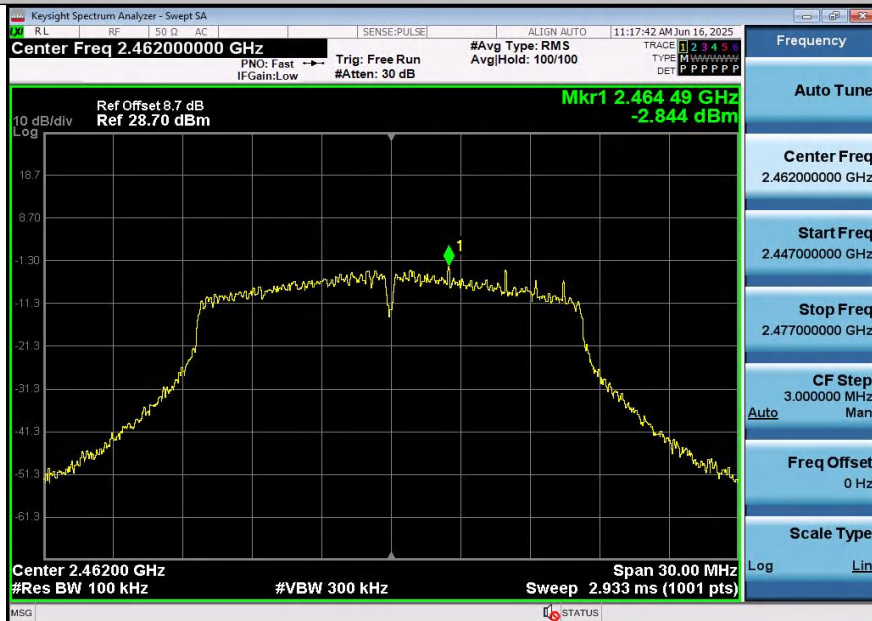
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11G-Ant1-2437-1000~25000-PASS



11G-Ant1-2462-0~Reference-PASS

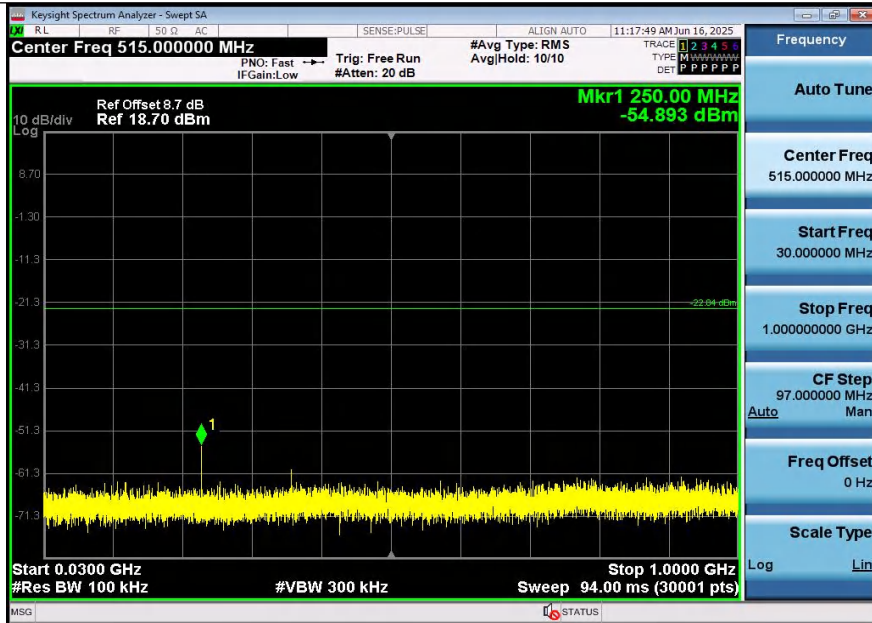


Shenzhen GUOREN Certification Technology Service Co., Ltd.

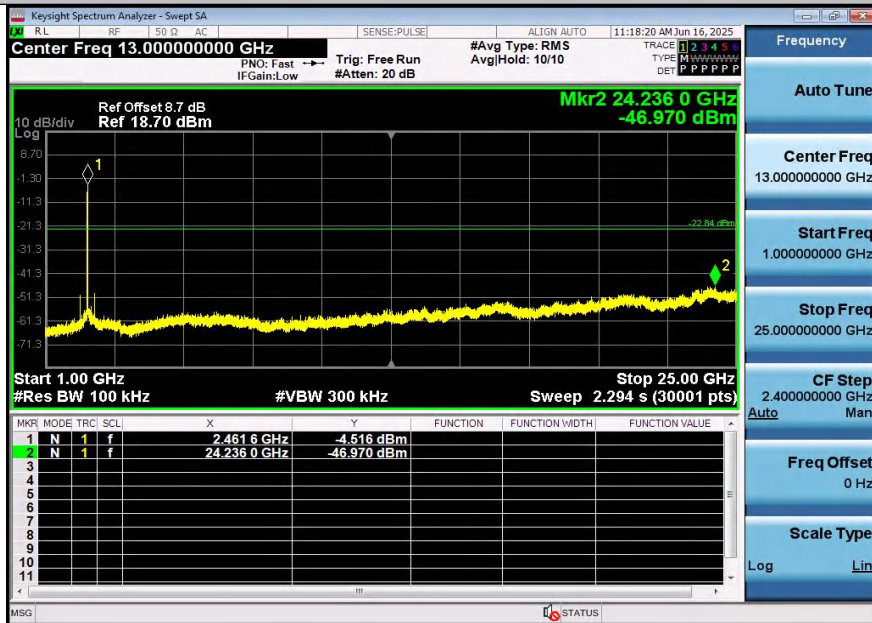
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11G-Ant1-2462-30~1000-PASS



11G-Ant1-2462-1000~25000-PASS

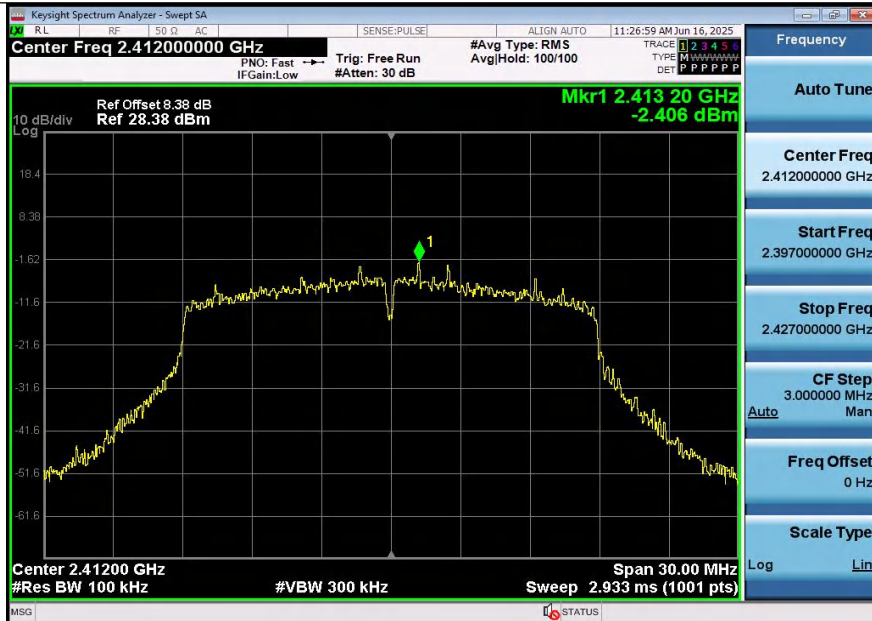


Shenzhen GUOREN Certification Technology Service Co., Ltd.

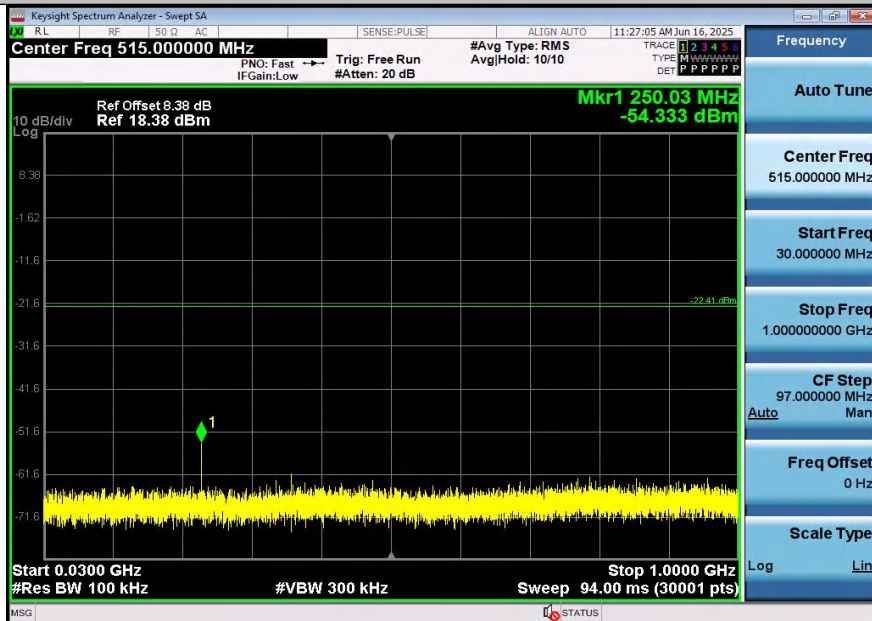
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11N20SISO-Ant1-2412-0~Reference-PASS



11N20SISO-Ant1-2412-30~1000-PASS

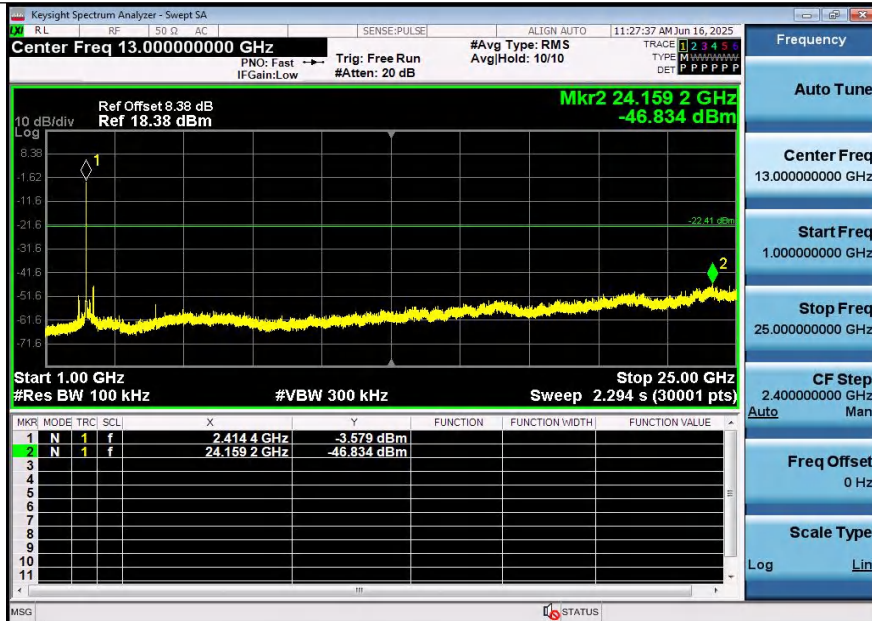


Shenzhen GUOREN Certification Technology Service Co., Ltd.

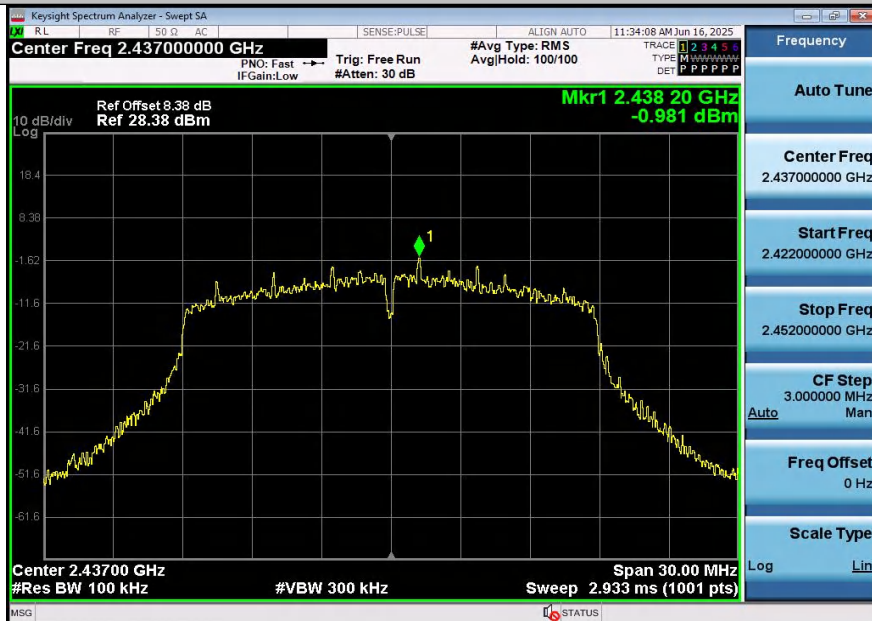
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11N20SISO-Ant1-2412-1000~25000-PASS



11N20SISO-Ant1-2437-0~Reference-PASS

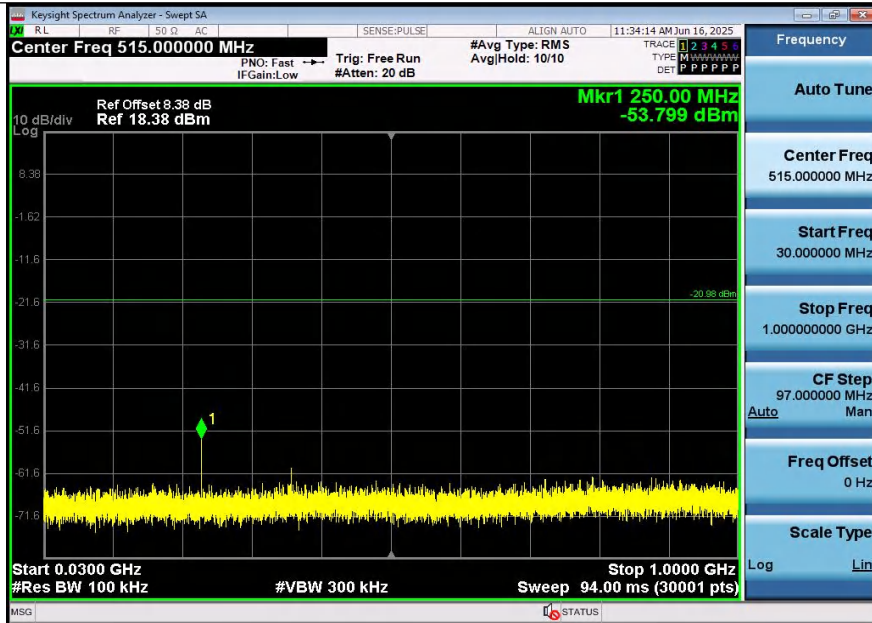


Shenzhen GUOREN Certification Technology Service Co., Ltd.

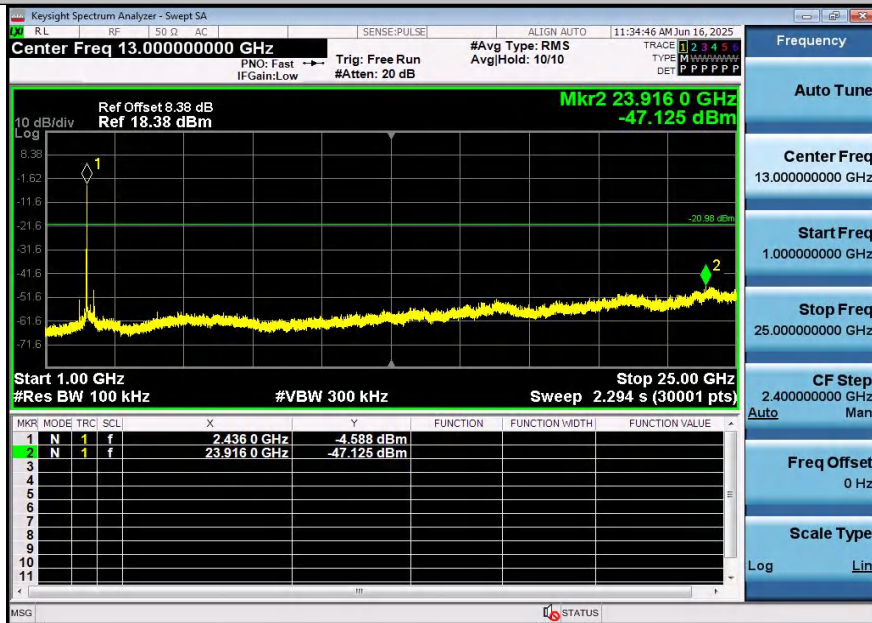
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11N20SISO-Ant1-2437-30~1000-PASS



11N20SISO-Ant1-2437-1000~25000-PASS

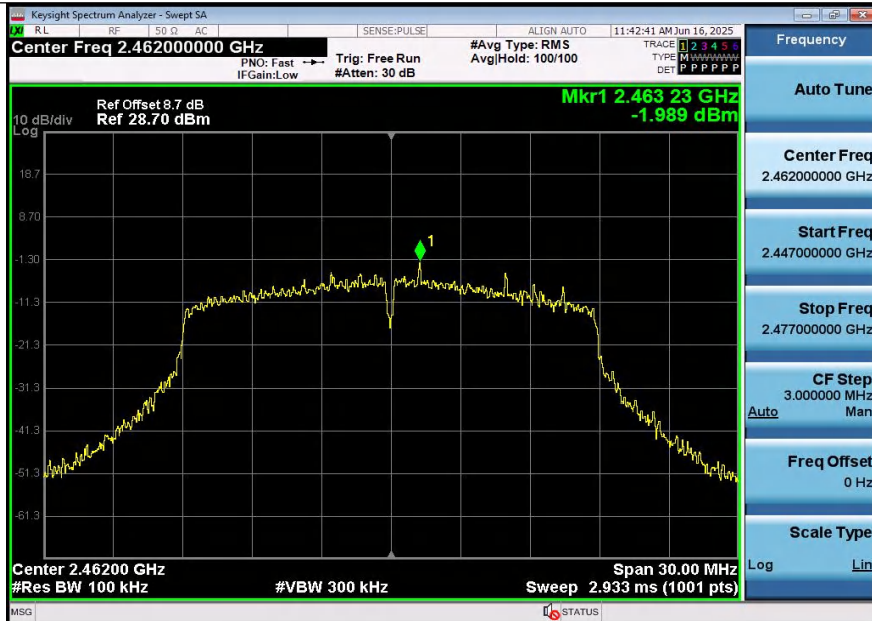


Shenzhen GUOREN Certification Technology Service Co., Ltd.

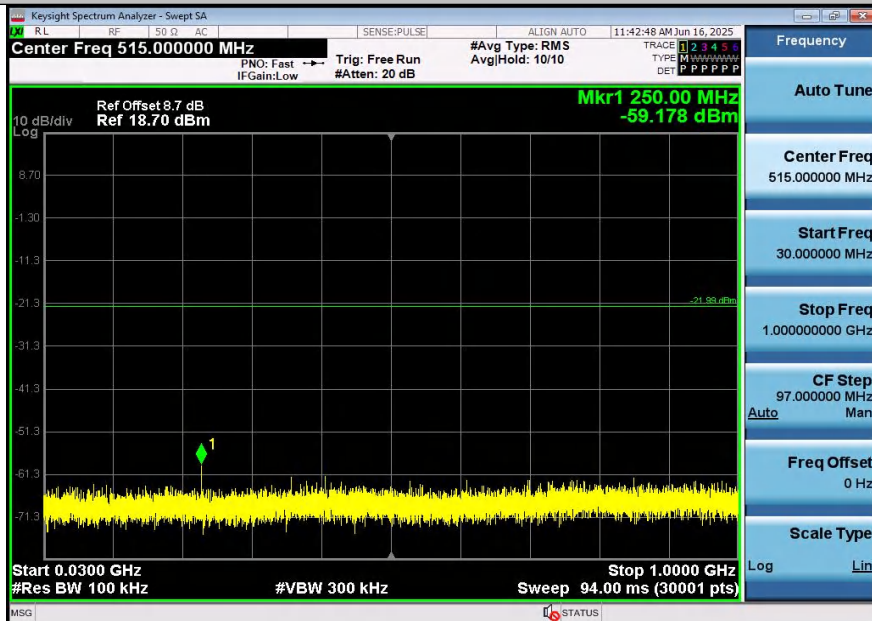
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11N20SISO-Ant1-2462-0~Reference-PASS



11N20SISO-Ant1-2462-30~1000-PASS

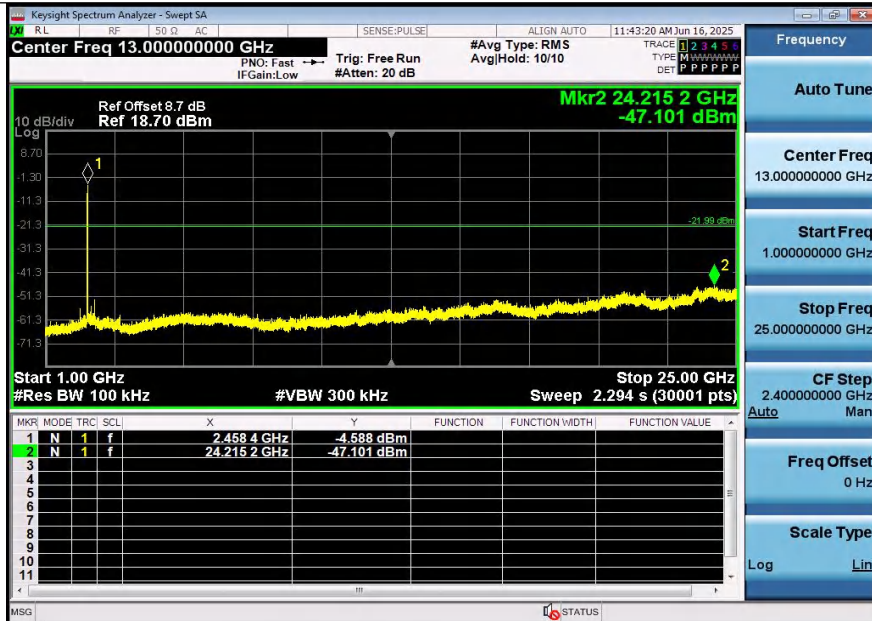


Shenzhen GUOREN Certification Technology Service Co., Ltd.

101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community,
Fenghuang Street, Guangming District, Shenzhen, China

FCC ID:2BK77-R-W52506

GRCTR250502041-01



11N20SISO-Ant1-2462-1000~25000-PASS



11N40SISO-Ant1-2422-0~Reference-PASS