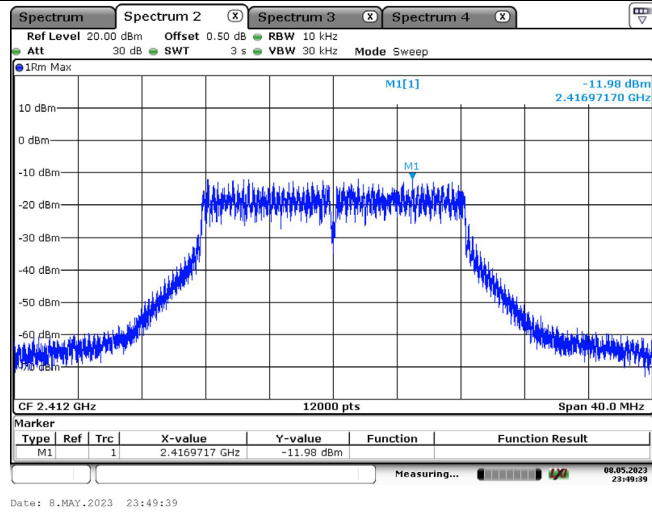
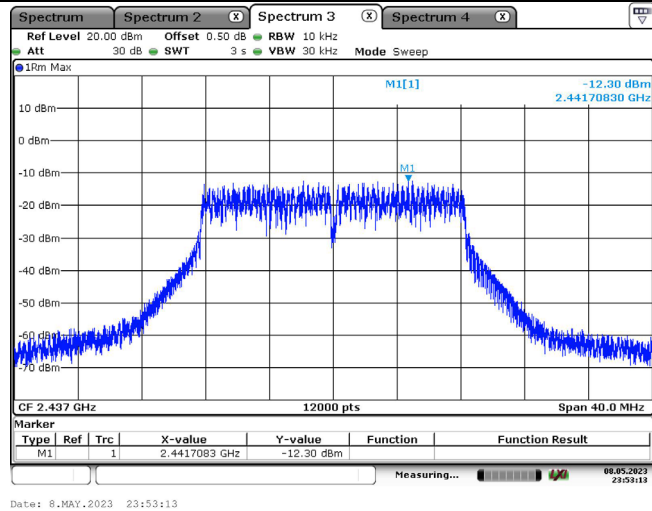
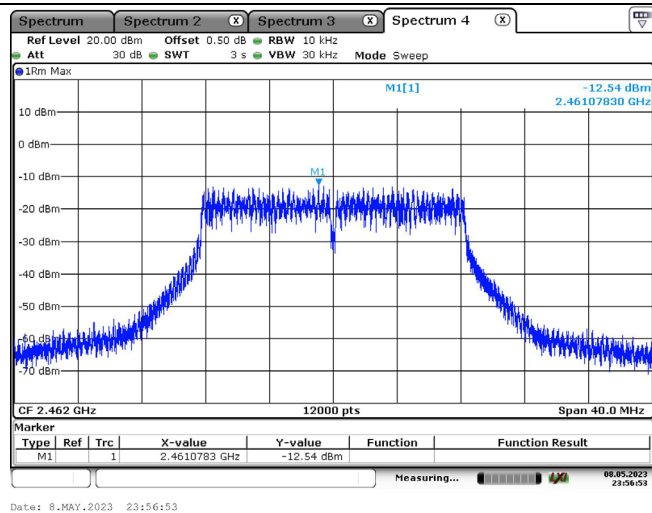
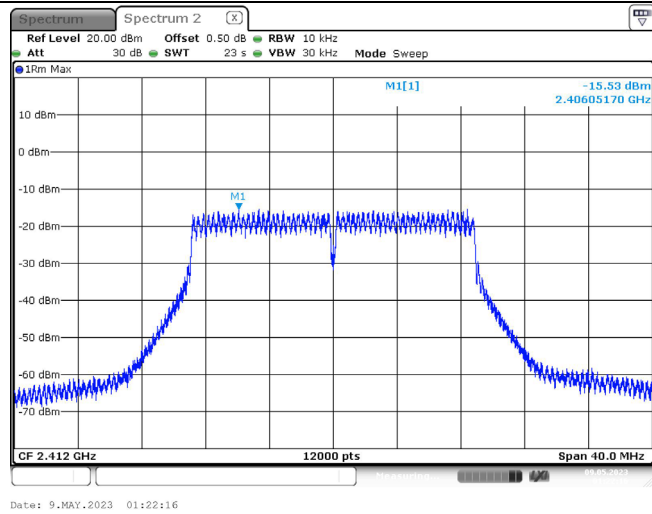
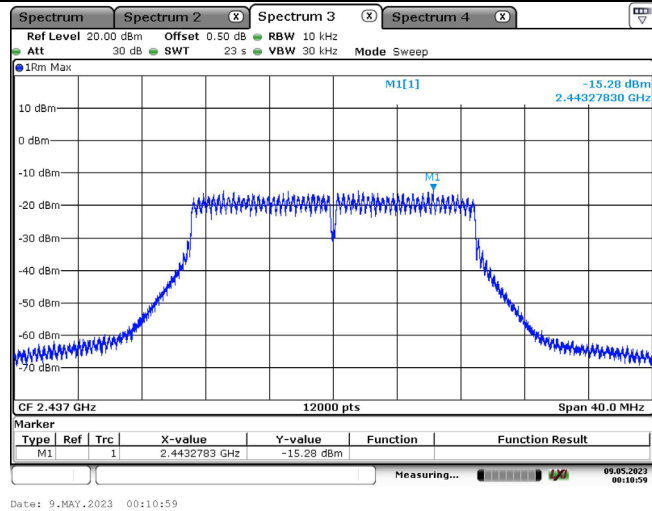
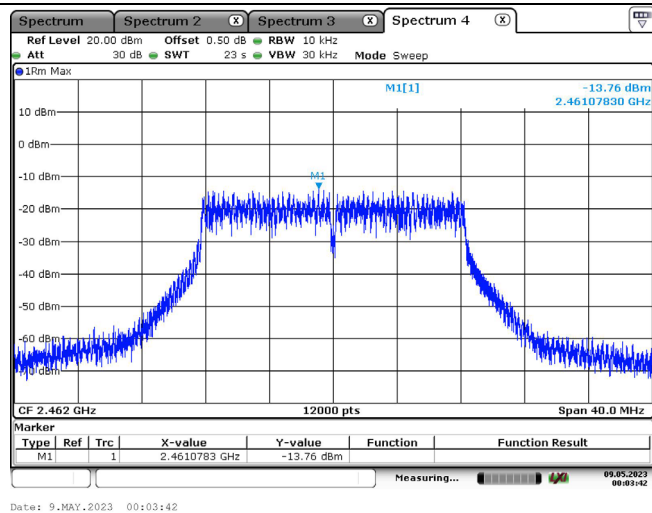


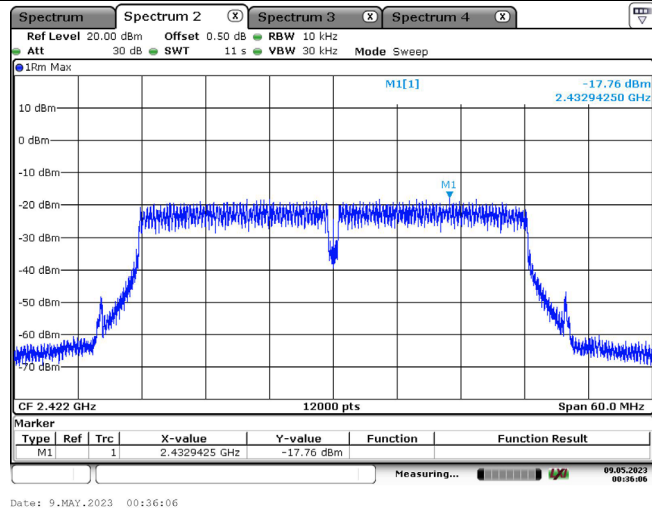
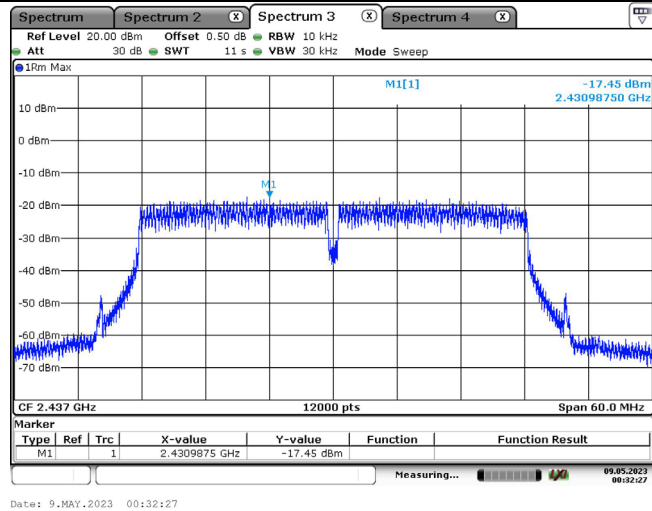
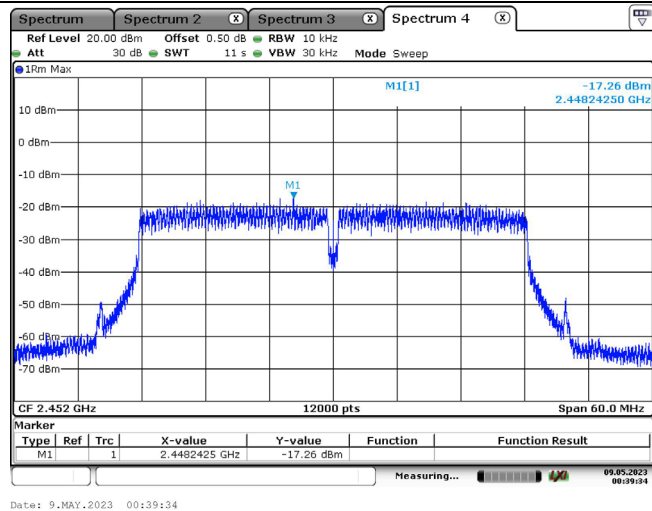
Maximum power spectral density

802.11g
Lowest Channel802.11g
Middle Channel802.11g
Highest Channel

Maximum power spectral density

802.11n ht20
Lowest Channel802.11n ht20
Middle Channel802.11n ht20
Highest Channel

Maximum power spectral density

802.11n ht40
Lowest Channel802.11n ht40
Middle Channel802.11n ht40
Highest Channel

4.7 100 kHz Bandwidth of Frequency Band Edge:

Serial Number:	24G1_1	Test Date:	2023/04/29-2023/05/05
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jim Wei	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	23.6-25.9	Relative Humidity: (%)	63-68	ATM Pressure: (kPa)	100.5-100.8
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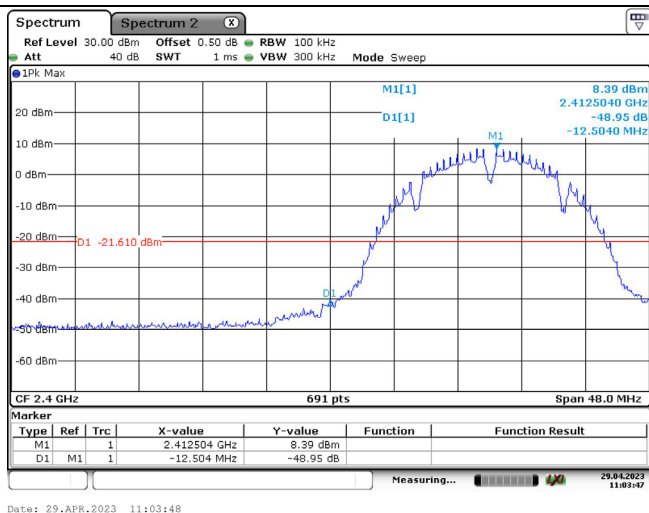
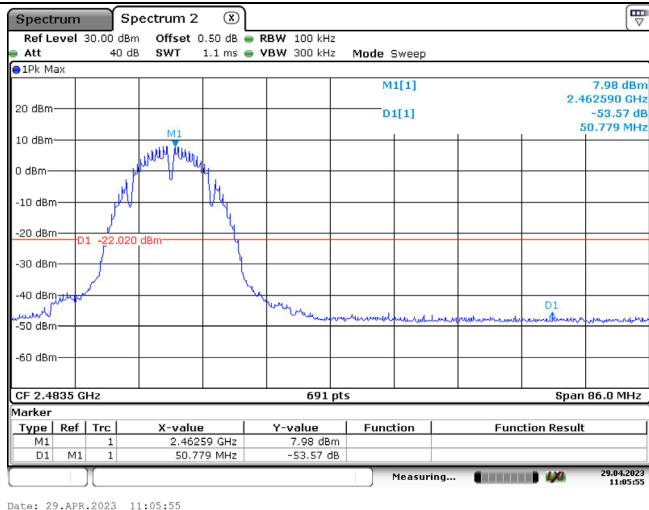
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101943	2022/07/25	2023/07/24
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A

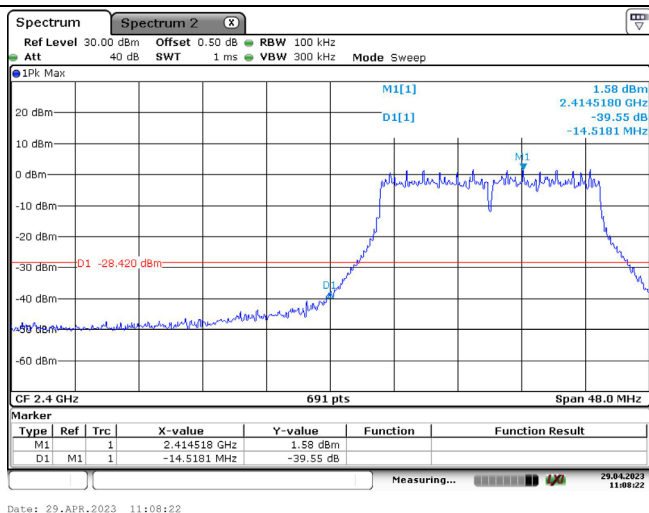
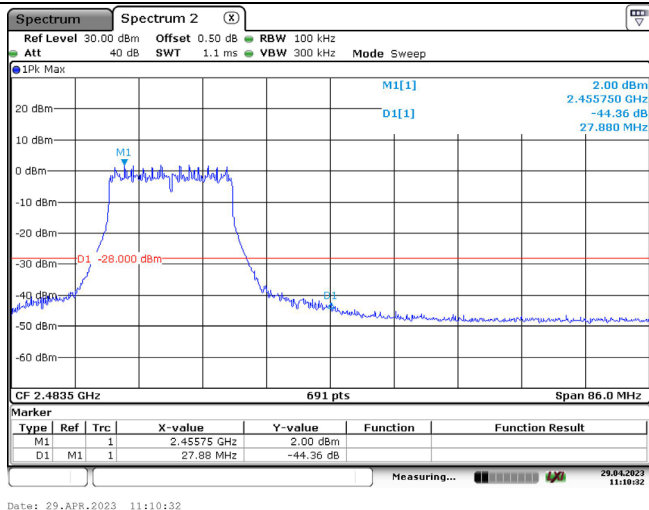
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

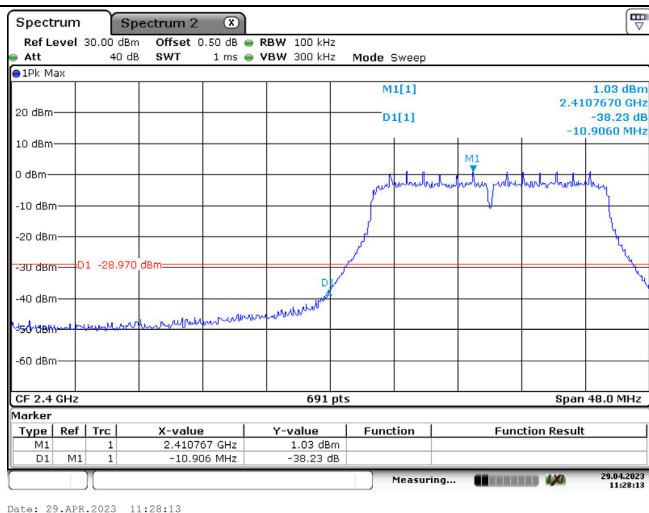
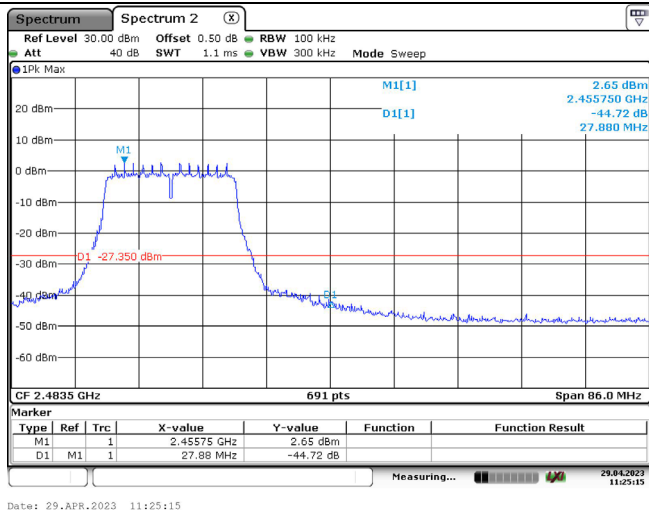
100 kHz Bandwidth of Frequency Band Edge

802.11b
Lowest Band edge802.11b
Highest Band edge

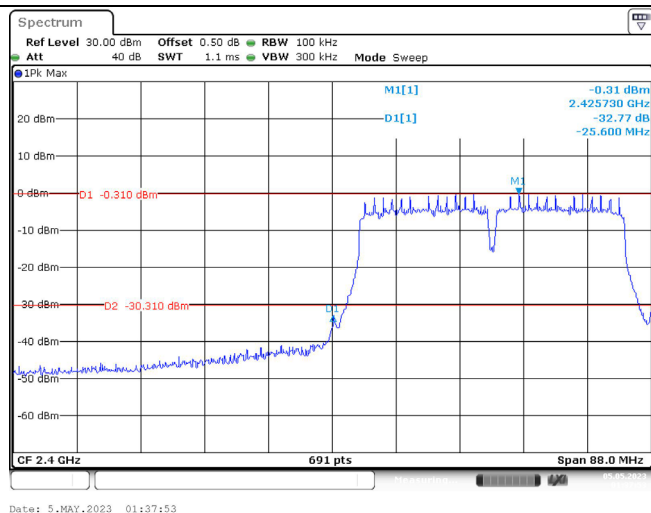
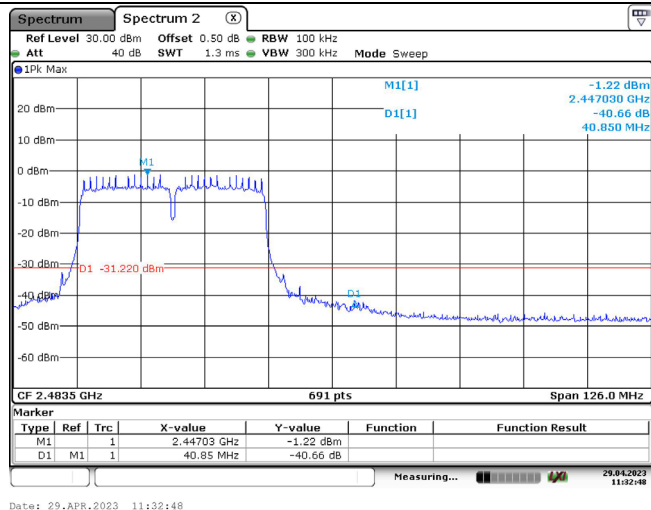
100 kHz Bandwidth of Frequency Band Edge

802.11g
Lowest Band edge802.11g
Highest Band edge

100 kHz Bandwidth of Frequency Band Edge

802.11n ht20
Lowest Band edge802.11n ht20
Highest Band edge

100 kHz Bandwidth of Frequency Band Edge

802.11n ht40
Lowest Band edge802.11n ht40
Highest Band edge

4.8 Duty Cycle:

Serial Number:	24G1_1	Test Date:	2023/04/29
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jim Wei	Test Result:	N/A

Environmental Conditions:

Temperature: (°C)	23.6	Relative Humidity: (%)	63	ATM Pressure: (kPa)	100.5
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101943	2022/07/25	2023/07/24
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A

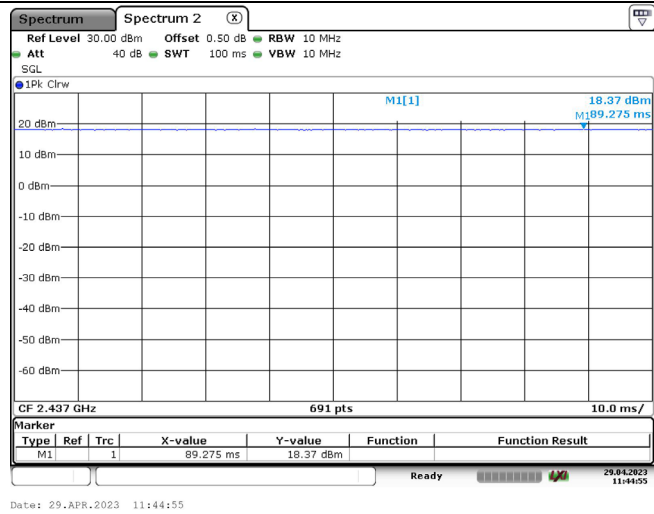
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

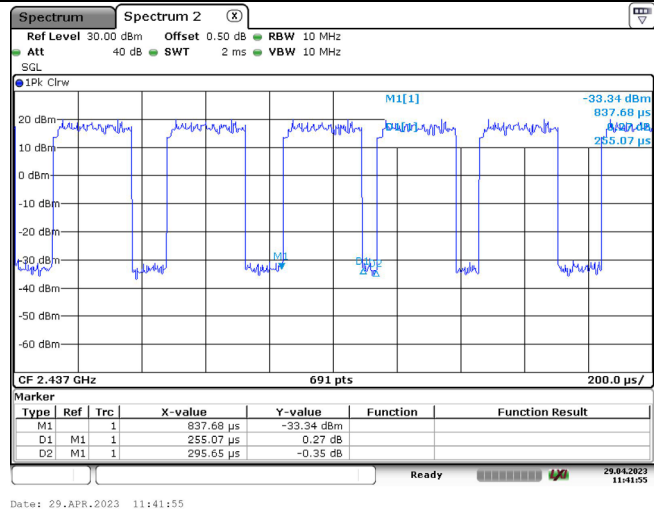
Test Modes	Ton (ms)	Ton+off (ms)	Duty cycle (%)	1/T (Hz)	Duty Factor (dB)
802.11b	100	100	100.00	10	/
802.11g	0.255	/	Not constant	3922	/
802.11n ht20	1.925	/	Not constant	519	/
802.11n ht40	0.962	/	Not constant	1040	/

Duty Cycle

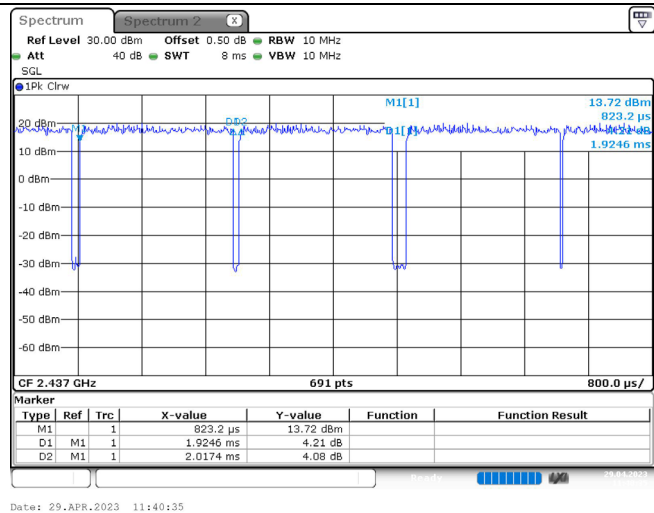
802.11b

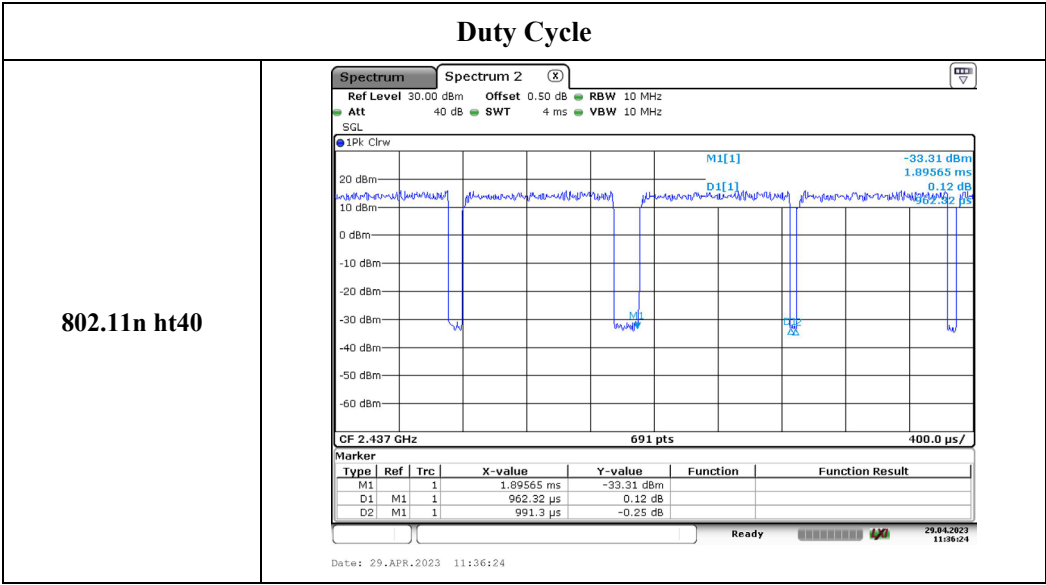


802.11g



802.11n ht20





5. RF EXPOSURE EVALUATION

5.1 Applicable Standard

FCC §15.247 (i) and subpart §1.1307

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

5.2 Procedure

According to §1.1307(b)(3)(i)

(C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1,920 R^2$.
1.34-30	$3,450 R^2/f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.

5.3 Measurement Result

Operation Modes	Frequency (MHz)	$\lambda/2\pi$ (mm)	Distance (mm)	Exemption ERP		Maximum Conducted Power including Tune-up Tolerance (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	MPE-Based Exemption
				(mW)	(dBm)					
Lora-FHSS	902.3-927.6	52.94	200	462	26.65	6	-1.74	2.11	1.63	Compliant
Lora-DTS	903-926.9	52.90	200	462	26.65	6	-1.74	2.11	1.63	Compliant
WiFi	2412-2462	19.80	200	768	28.85	18	-0.64	15.21	33.19	Compliant

Note: The Maximum Conducted Power including Tune-up Tolerance was declared by manufacturer.

Simultaneous transmission:

The Lora-FHSS and Lora-DTS can't transmit simultaneously. WiFi and Lora can transmit simultaneously:

$$\sum_{i=1}^a \left(\frac{P_i}{P_{th_i}} \right) + \sum_{j=1}^b \left(\frac{ERP_j}{ERP_{th_j}} \right) + \sum_{k=1}^c \left(\frac{Evaluated_k}{Exposure Limit_k} \right)$$

$$= ERP_{\text{-WiFi}}/RRP_{\text{th-WiFi}} + ERP_{\text{-Lora}}/ERP_{\text{th-Lora}}$$

$$= 33.19/768 + 1.63/462$$

$$= 0.05$$

Result: The device compliant the MPE-Based Exemption at 20cm distances.

===== END OF REPORT =====