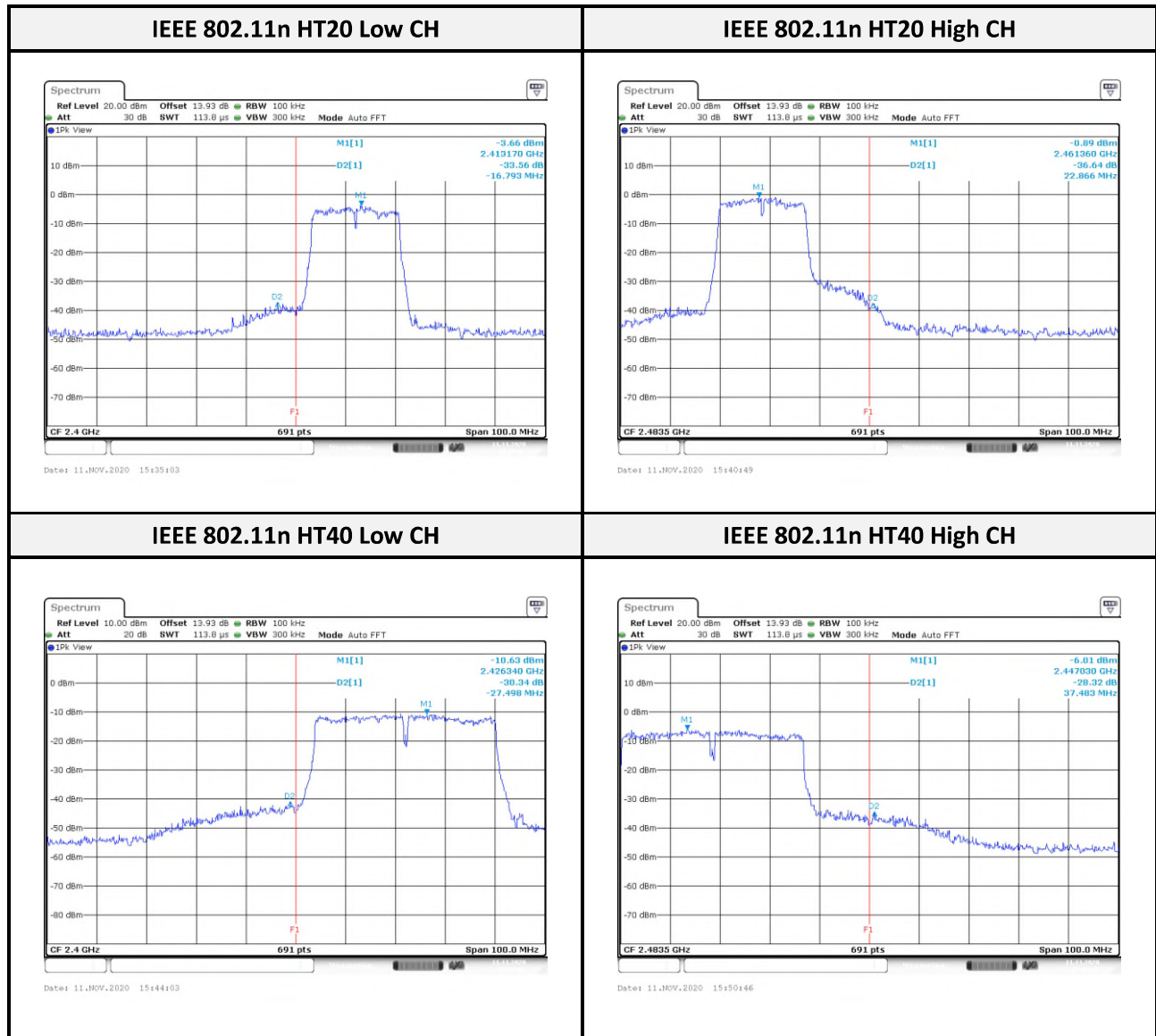
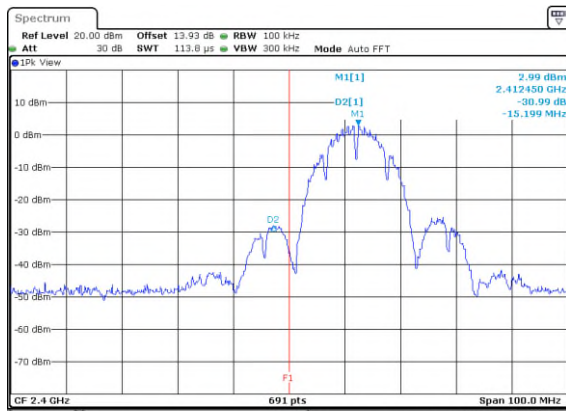




< Dipole Antenna (GW.34.5153) with 1.8V_{dc}>

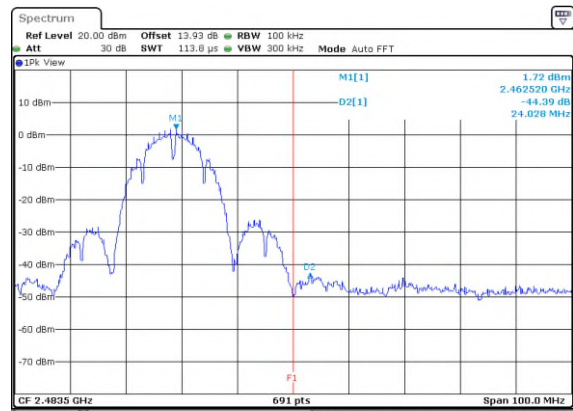
Configuration	Channel	Frequency (MHz)	Delta Peak to Band Emission (dBc)	Limit (dBc)	Result
IEEE 802.11b	Low	2412	30.99	≥ 20	Compliance
	High	2462	44.39	≥ 20	Compliance
BLE-2M IEEE 802.11g	Low	2412	28.77	≥ 20	Compliance
	High	2462	36.35	≥ 20	Compliance
IEEE 802.11n HT20	Low	2412	29.34	≥ 20	Compliance
	High	2462	35.65	≥ 20	Compliance
IEEE 802.11n HT40	Low	2422	27.62	≥ 20	Compliance
	High	2452	25.81	≥ 20	Compliance

IEEE 802.11b Low CH



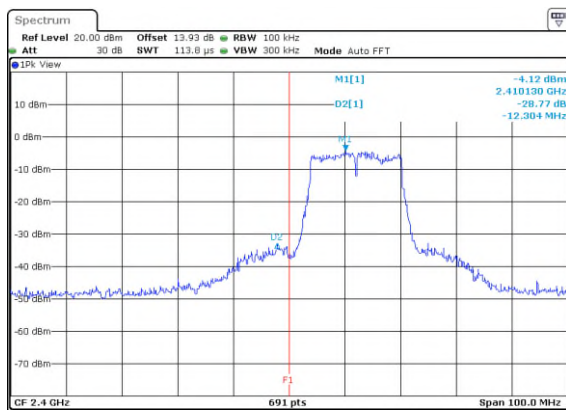
Date: 28.NOV.2020 12:31:21

IEEE 802.11b High CH



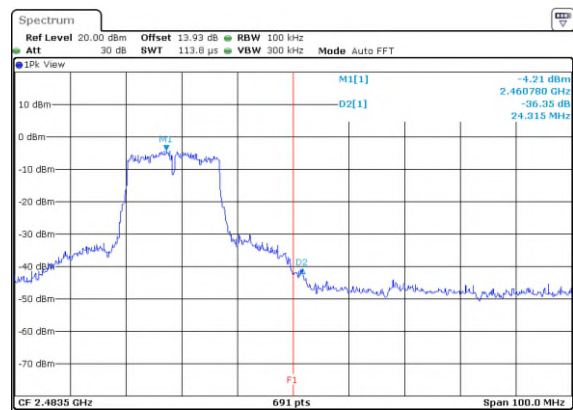
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IEEE 802.11g Low CH

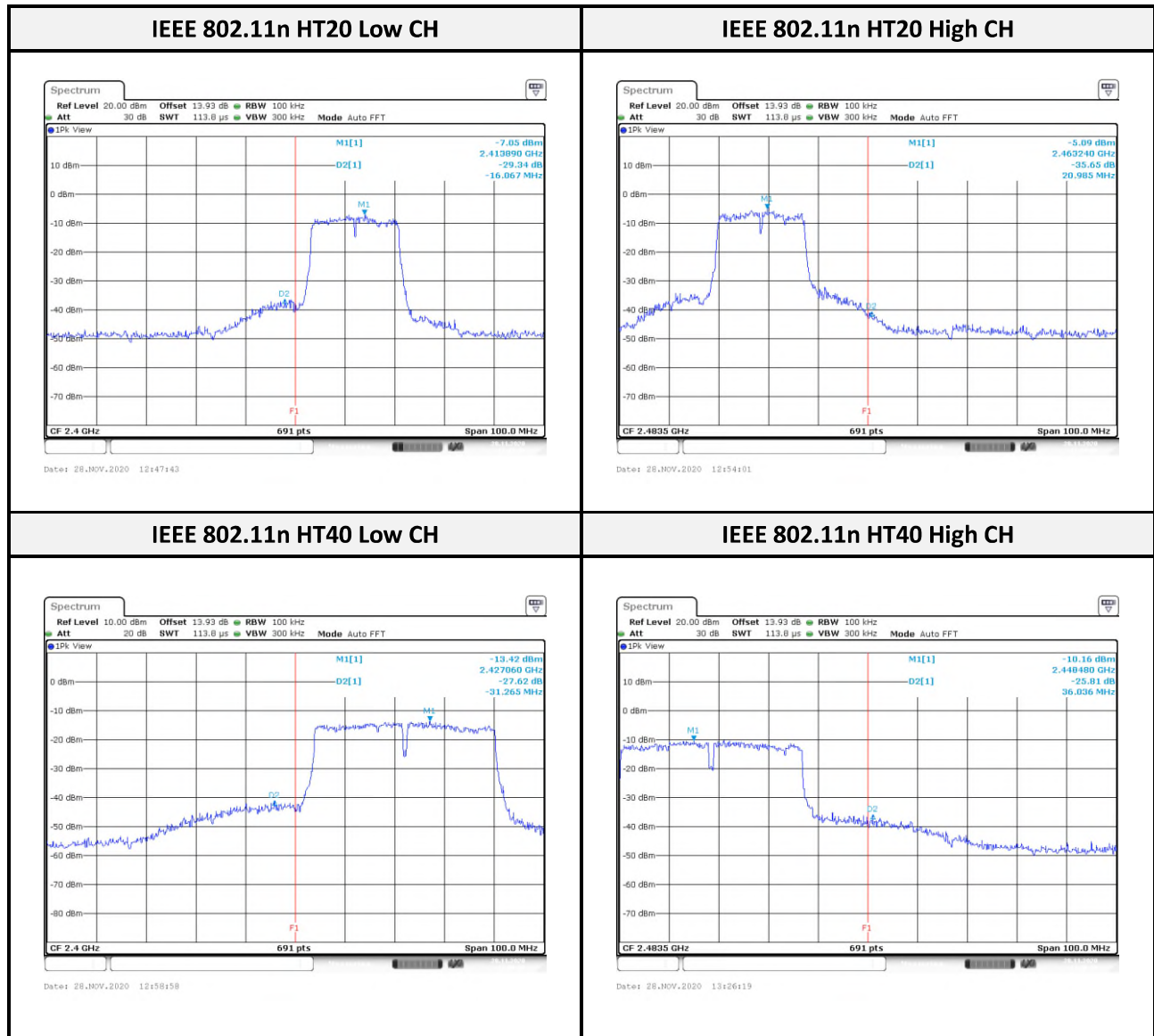


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IEEE 802.11g High CH



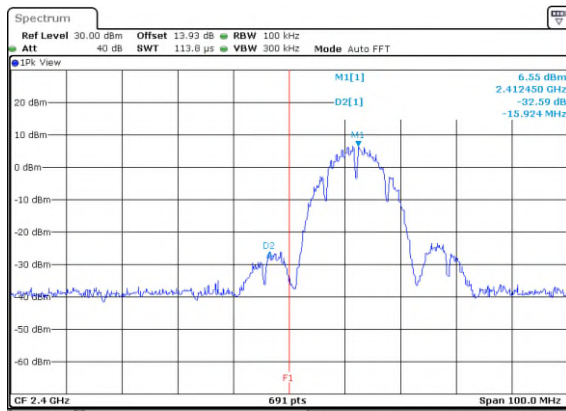
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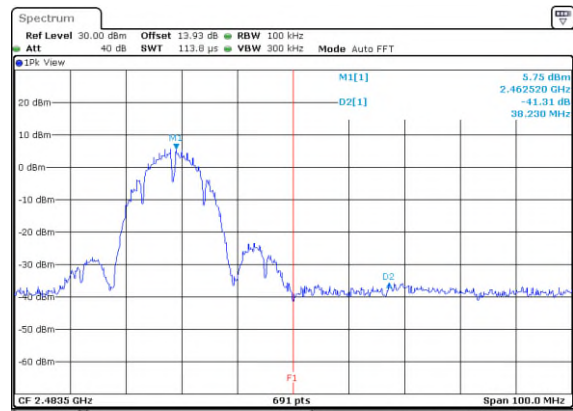
< Dipole Antenna (GW.34.5153) with 3.3V_{dc}>

Configuration	Channel	Frequency (MHz)	Delta Peak to Band Emission (dBc)	Limit (dBc)	Result
IEEE 802.11b	Low	2412	32.59	≥ 20	Compliance
	High	2462	41.31	≥ 20	Compliance
BLE-2M IEEE 802.11g	Low	2412	35.17	≥ 20	Compliance
	High	2462	37.88	≥ 20	Compliance
IEEE 802.11n HT20	Low	2412	35.49	≥ 20	Compliance
	High	2462	37.59	≥ 20	Compliance
IEEE 802.11n HT40	Low	2422	29.15	≥ 20	Compliance
	High	2452	28.74	≥ 20	Compliance

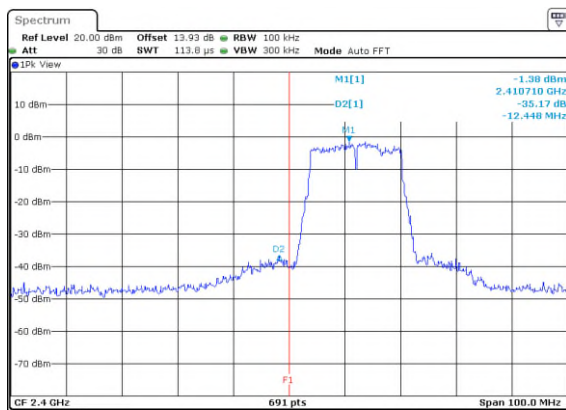
IEEE 802.11b Low CH



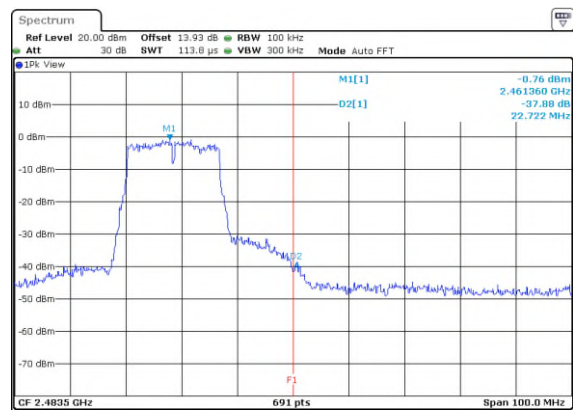
IEEE 802.11b High CH

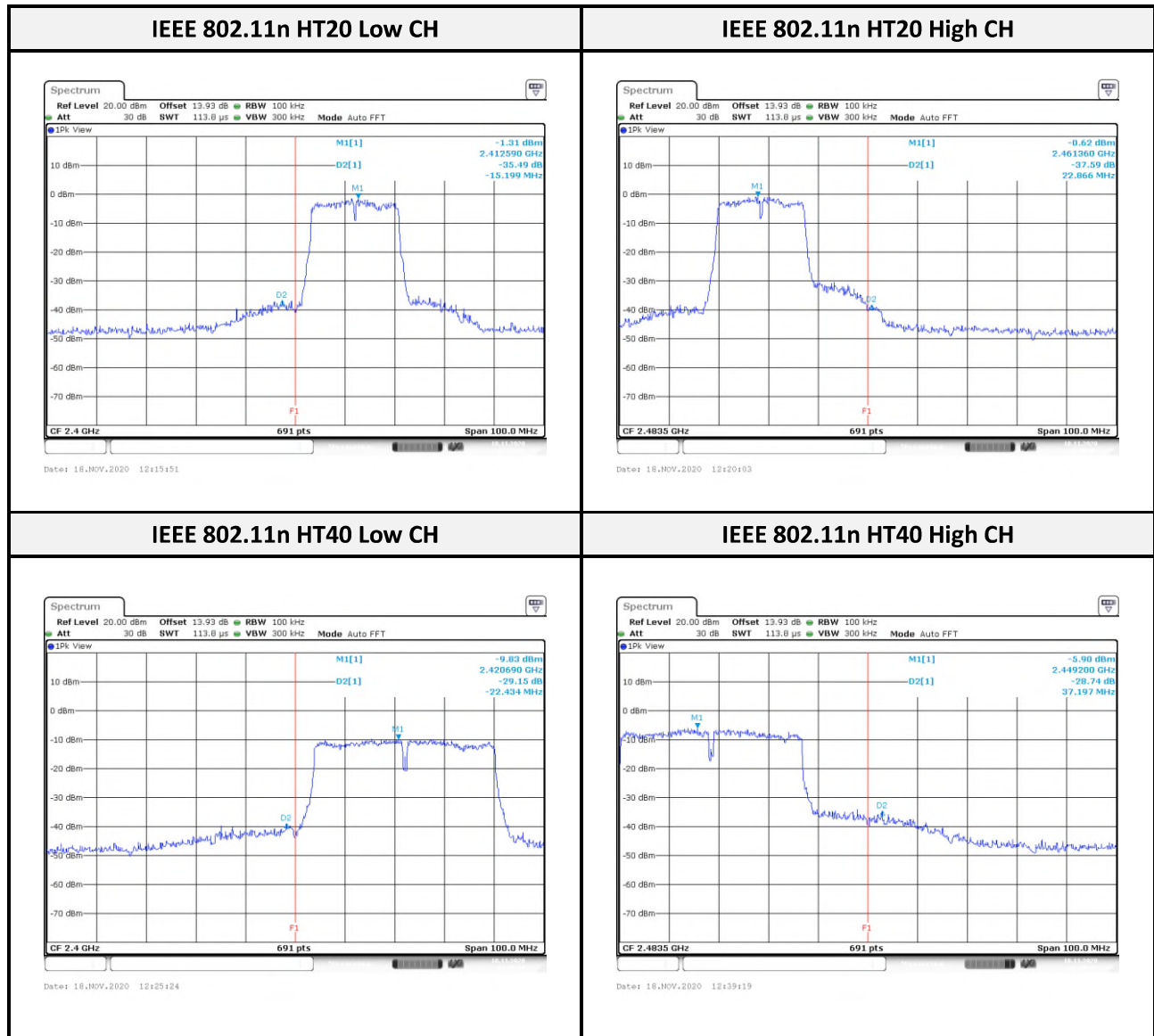


IEEE 802.11g Low CH



IEEE 802.11g High CH





12 FCC §15.247(e) and RSS-247 §5.2(b) – Power Spectral Density

12.1 Applicable Standard

According to FCC §15.247(e),

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

According to RSS-247 §5.2(b).

The transmitter power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of section 5.4(d), (i.e. the power spectral density shall be determined using the same method as is used to determine the conducted output power).

12.2 Test Procedure

According to ANSI C63.10-2013,

- (1) Set analyzer center frequency to DTS channel center frequency.
- (2) Set the span to 1.5 times the DTS bandwidth. (3) Set the RBW to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- (4) Set the VBW $\geq [3 \times \text{RBW}]$. (5) Detector = peak. (6) Sweep time = auto couple.
- (7) Trace mode = max hold. (8) Allow trace to fully stabilize.
- (9) Use the peak marker function to determine the maximum amplitude level within the RBW.
- (10) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

12.3 Test Equipment List and Details

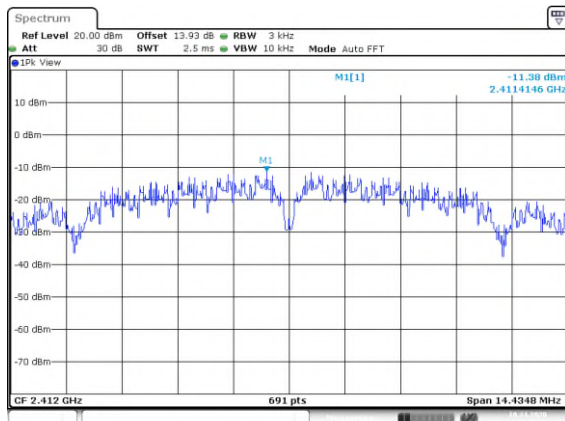
Description	Manufacture	Model	Serial No.	Cal. Date.	Cal. Due.
Conducted Room(TH-02)					
Signal and Spectrum Analyzer	Rohde & Schwarz	FSV40	101434	2020/05/07	2021/05/06
Cable	MTJ	MT40S	620620-MT40S-100	Each Use	-

***Statement of Traceability:** The testing equipment's listed above have finished the calibration by Electronics Testing Center, Taiwan (ETC) or other laboratories which were accredited by TAF or equivalent organizations. The calibration result could be traceable to the International System of Units (SI).

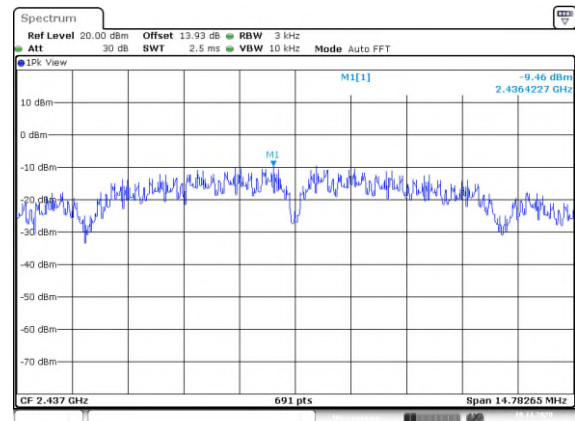
12.4 Test Results**<Chip Antenna (FR05-S1-N-0-102) with 1.8V_{dc}>**

Configuration	Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Result
IEEE 802.11b	Low	2412	-11.38	8	Compliance
	Middle	2437	-9.46	8	Compliance
	High	2462	-10.93	8	Compliance
IEEE 802.11g	Low	2412	-17.67	8	Compliance
	Middle	2437	-10.41	8	Compliance
	High	2462	-16.37	8	Compliance
IEEE 802.11n HT20	Low	2412	-18.50	8	Compliance
	Middle	2437	-9.29	8	Compliance
	High	2462	-16.73	8	Compliance
IEEE 802.11n HT40	Low	2422	-25.06	8	Compliance
	Middle	2437	-20.26	8	Compliance
	High	2452	-21.18	8	Compliance

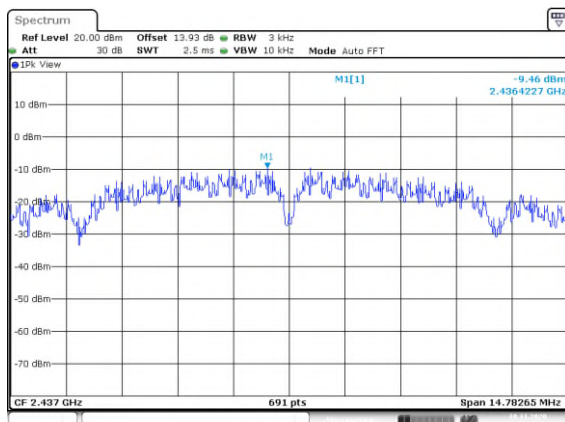
IEEE 802.11b Low CH



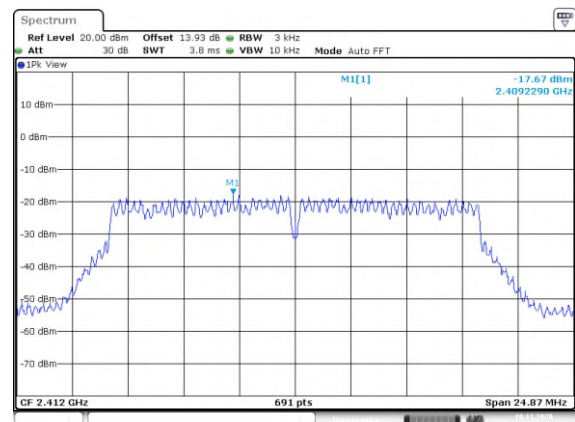
IEEE 802.11b Middle CH



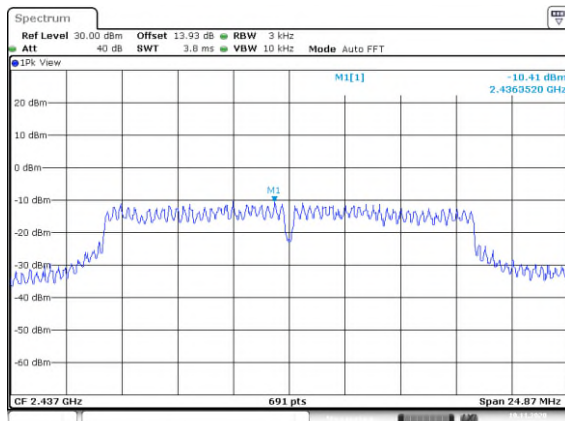
IEEE 802.11b High CH



IEEE 802.11g Low CH



IEEE 802.11g Middle CH



IEEE 802.11g High CH

