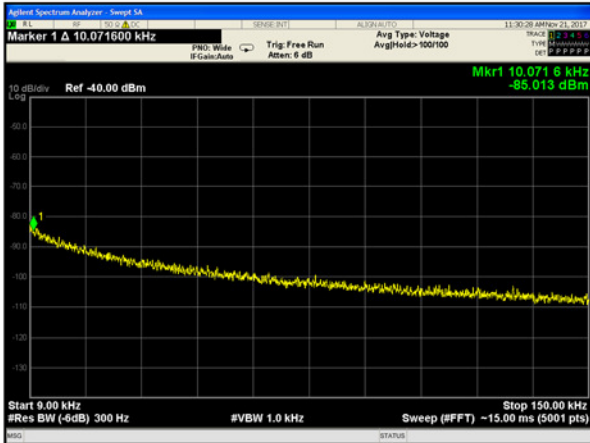




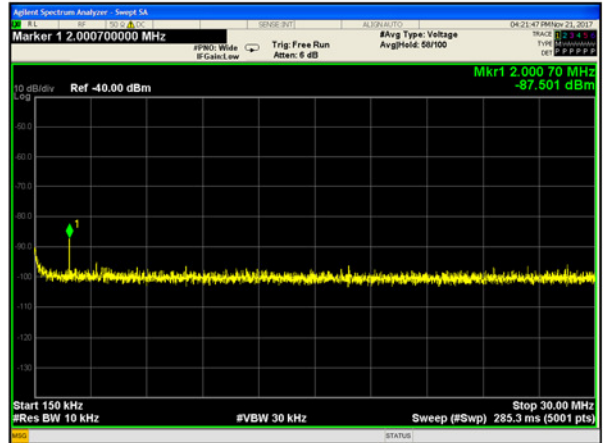
11n-HT20 Ant A

2412MHz

9kHz-150kHz

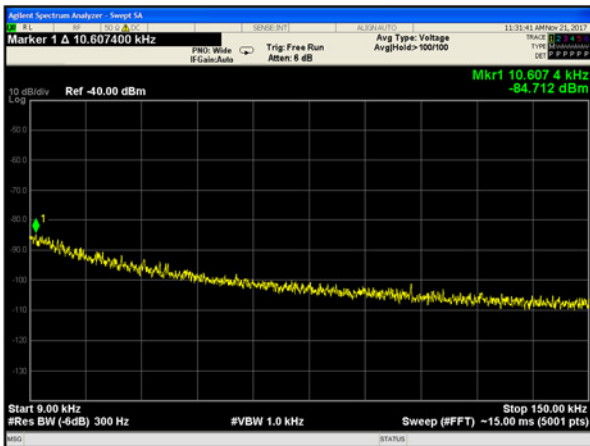


150kHz-30MHz

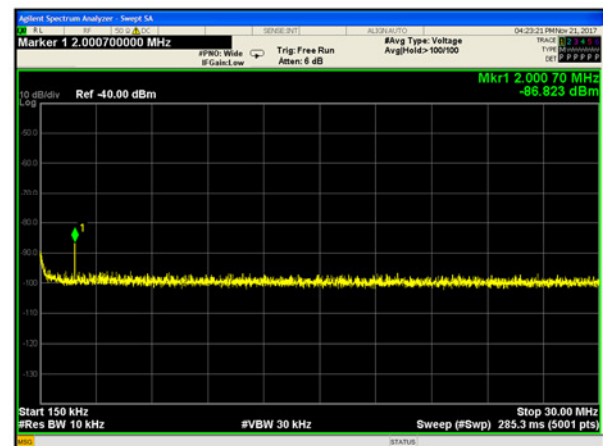


2437MHz

9kHz-150kHz

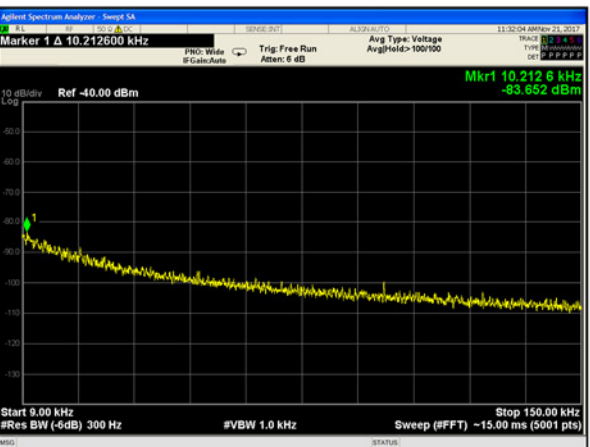


150kHz-30MHz

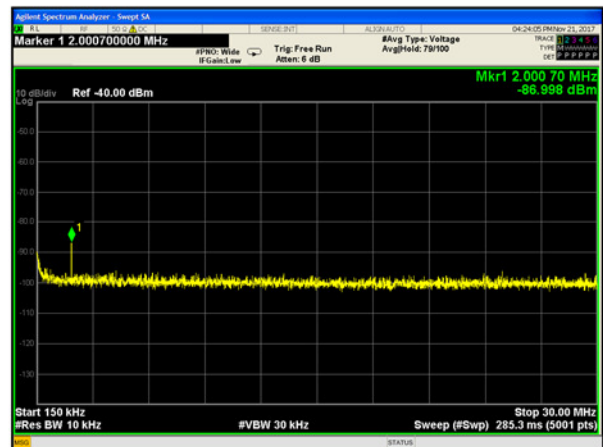


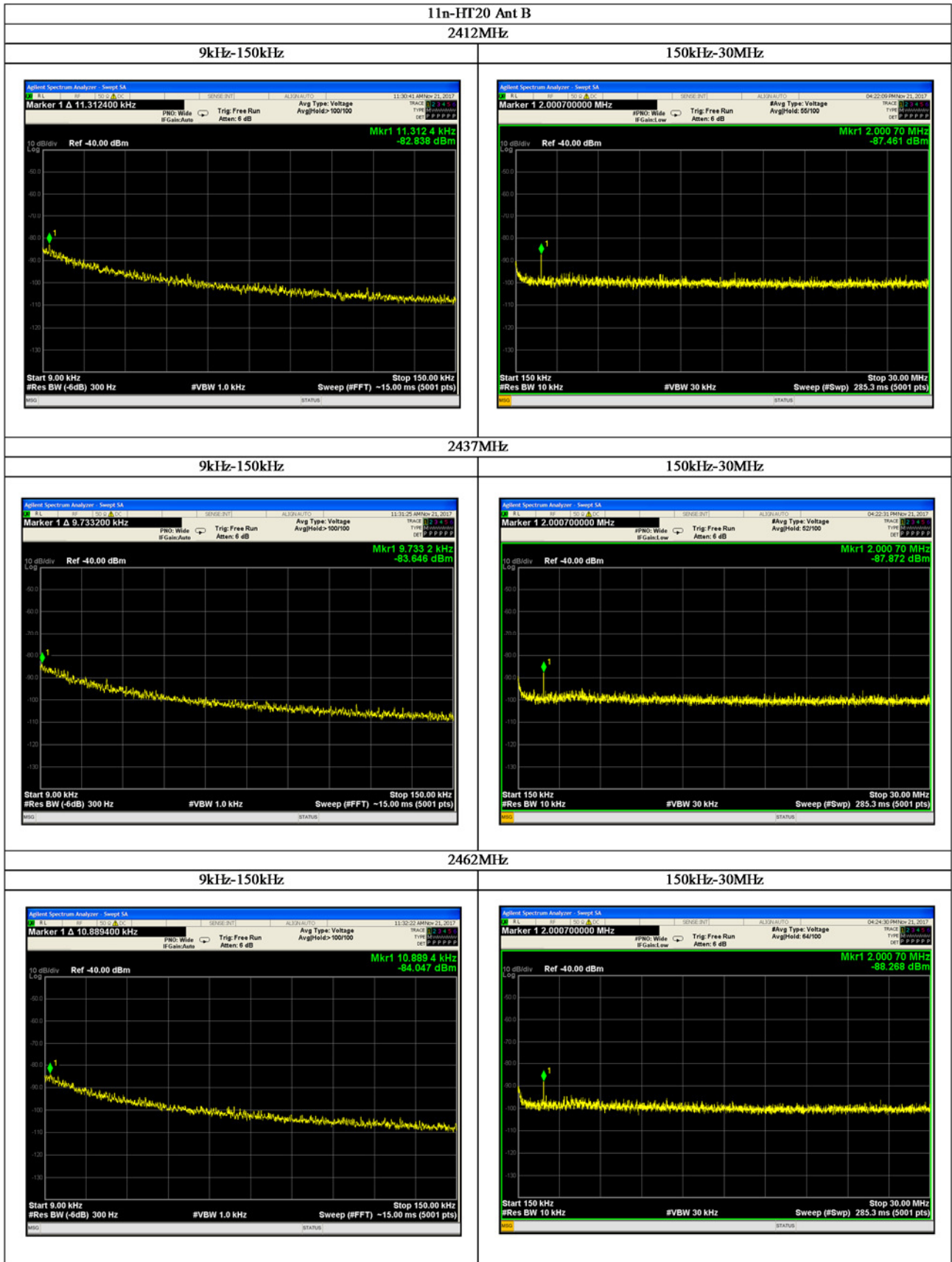
2462MHz

9kHz-150kHz



150kHz-30MHz



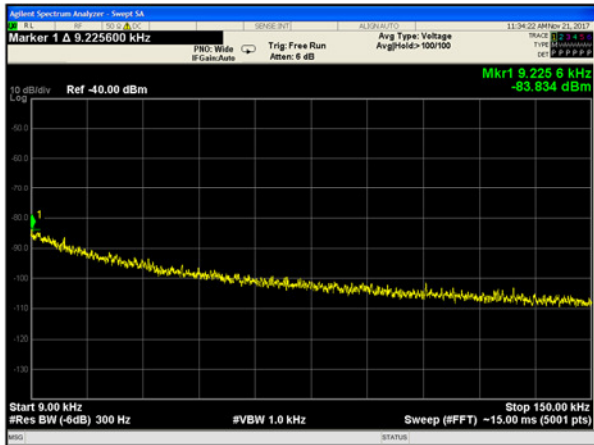




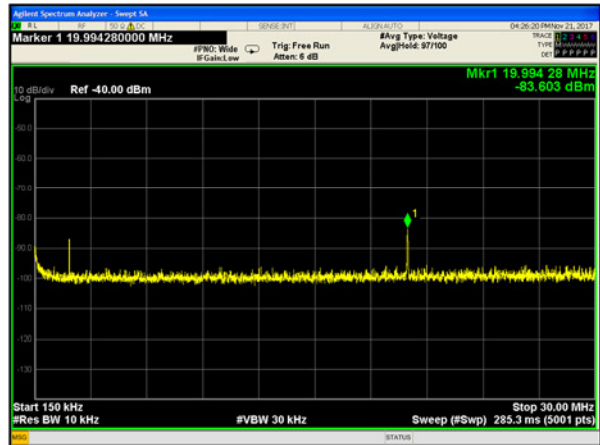
11n-HT40 Ant A

2422MHz

9kHz-150kHz

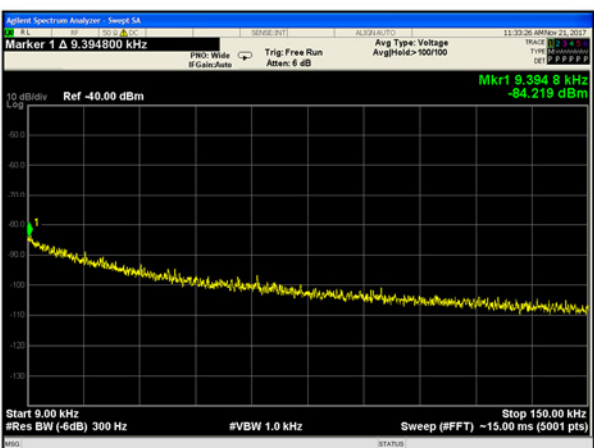


150kHz-30MHz

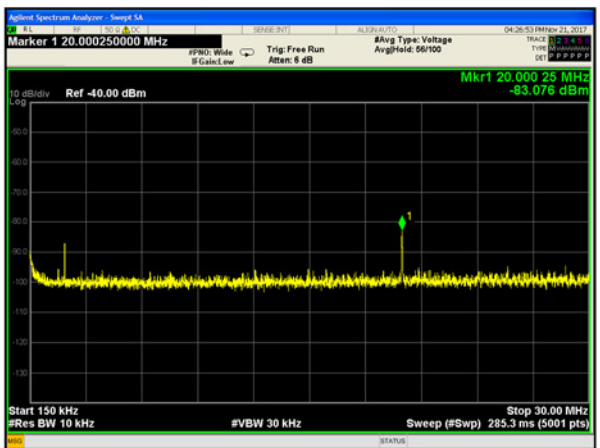


2437MHz

9kHz-150kHz

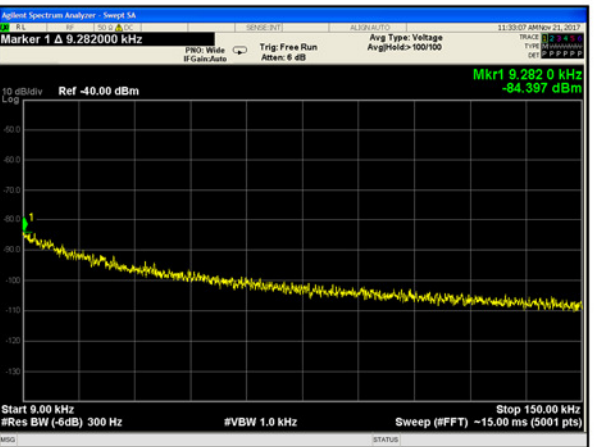


150kHz-30MHz

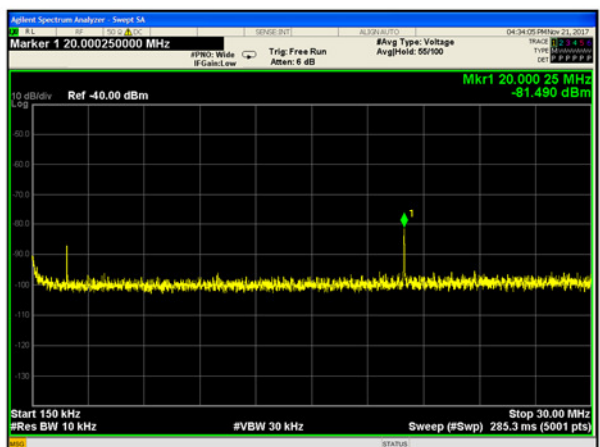


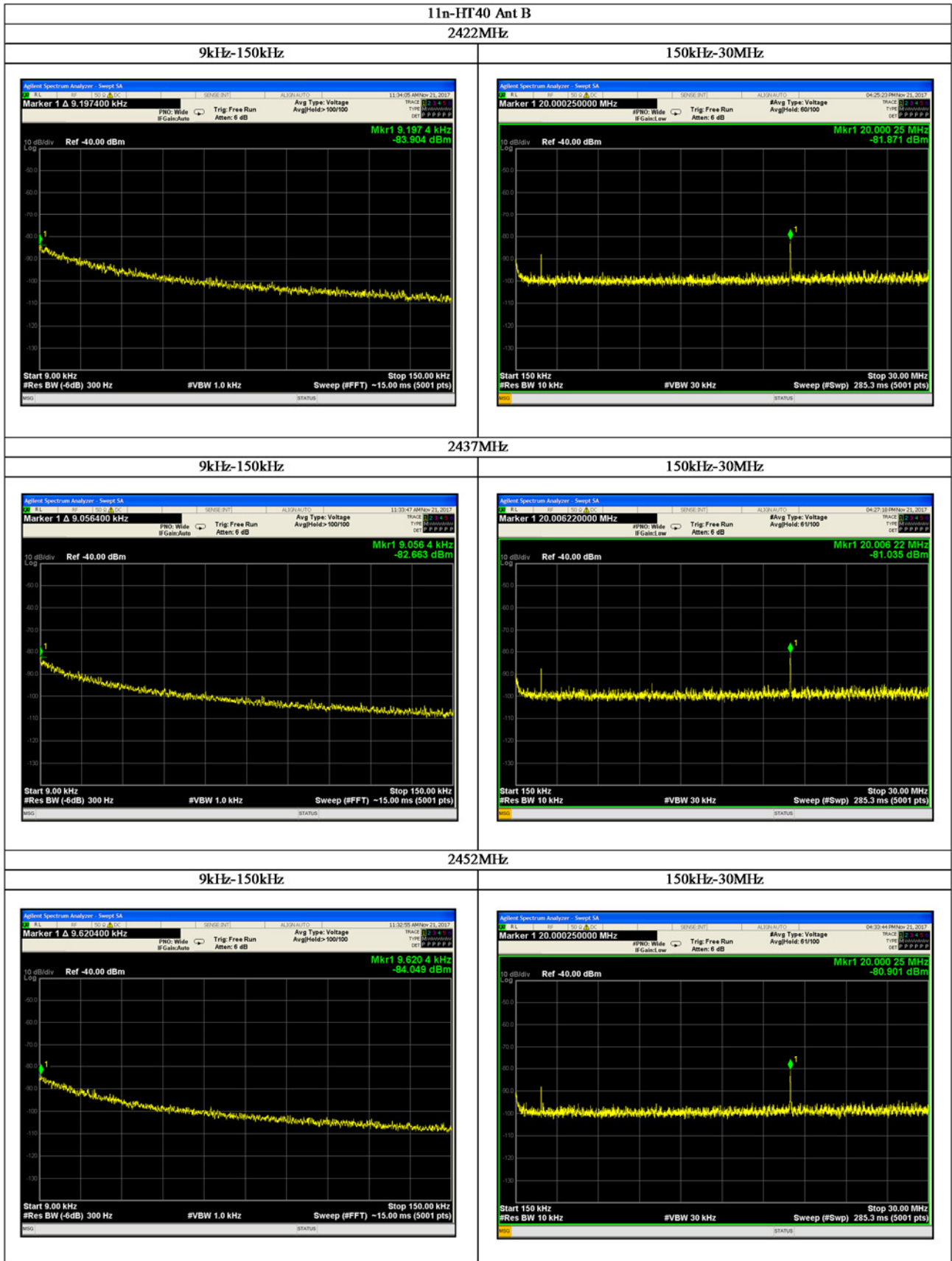
2452MHz

9kHz-150kHz



150kHz-30MHz







10. TEST EQUIPMENT

• Conducted Emission

KEC No.	Equipment	Manufacturer	Model No.	Last Cal.	Next Cal.
AT-144	Low Power Attenuator	HUBER+SUHNER	6810.01.A	2017/06	2018/06
FL-110	LISN	KYORITSU	KNW-242	2017/06	2018/06
MM-252	RF Relay Matrix	TSJ	RFM-E121	2017/06	2018/06
SA-067	Test Receiver	Keysight Technologies	N9038A	2017/09	2018/09

• Emission Bandwidth

• Peak Power Spectral Density

KEC No.	Equipment	Manufacturer	Model No.	Last Cal.	Next Cal.
AT-148	Fixed Attenuator	Anritsu	41KC-10	2017/04	2018/04
SA-065	Signal Analyzer	Agilent	N9030A	2016/12	2017/11

• Maximum Conducted Output Power

KEC No.	Equipment	Manufacturer	Model No.	Last Cal.	Next Cal.
AT-148	Fixed Attenuator	Anritsu	41KC-10	2017/04	2018/04
VV-061	Power Meter	Agilent	N1912A	2017/11	2018/11
VV-061-1	Wideband Power Sensor	Agilent	N1921A	2017/11	2018/11

• Spurious Emission (Radiated) 30-1000MHz

KEC No.	Equipment	Manufacturer	Model No.	Last Cal.	Next Cal.
AM-028	Pre-Amplifier	Anritsu	Anritsu	2017/04	2018/04
AN-094	Biconical Antenna	Schwarzbeck	VHA9103/BBA9106	2017/04	2018/04
AN-250	LPDA Antenna	Schwarzbeck	UHALP9108A	2017/04	2018/04
AT-159	Fixed Attenuator	Anritsu	MP721B	2017/04	2018/04
FS-099	Test Receiver	ROHDE & SCHWARZ	ESS	2017/01	2018/01
MM-530	RF Relay Matrix Unit	TSJ	RFM-E321	2017/04	2018/04
SA-059	Spectrum Analyzer	Agilent	N9010A	2017/07	2018/07

• Spurious Emission (Radiated) Above 1GHz

KEC No.	Equipment	Manufacturer	Model No.	Last Cal.	Next Cal.
AM-053	Pre-Amplifier	HP	8449B	2017/05	2018/05
AM-131	Pre-Amplifier	TOYO	TPA0118-36	2017/03	2018/03
AN-357	DRG Antenna	ETS LINDGREN	3117	2017/04	2018/04
AN-104	Std. Gain Horn Antenna	Scientific-Atlanta	12-5.8	2017/04	2020/04
AN-107	Std. Gain Horn Antenna	Scientific-Atlanta	12A-18	2017/05	2020/05
AN-145	Std. Gain Horn Antenna	Scientific-Atlanta	12-12	2017/04	2020/04
AN-210	Std. Gain Horn Antenna	Scientific-Atlanta	12-8.2	2017/04	2020/04
AN-337	DRG Horn Antenna	ETS LINDGREN	3117	2017/04	2018/04
AT-148	Fixed Attenuator	Anritsu	41KC-10	2017/04	2018/04
FL-222	Band-stop Filter	TOYO	8BRM2442/T300	2017/04	2018/04
FS-111	Test Receiver	ROHDE & SCHWARZ	ESW26	2017/03	2018/03
SA-065	Signal Analyzer	Agilent	N9030A	2016/12	2017/11



• Spurious Emission (Conducted) Below 30MHz

KEC No.	Equipment	Manufacturer	Model No.	Last Cal.	Next Cal.
AT-148	Fixed Attenuator	Anritsu	41KC-10	2017/04	2018/04
SA-067	Test Receiver	Keysight Technologies	N9038A	2017/09	2018/09

Note : (*1) KEC checked the performance, before using this device.

The overall program of calibration and verification of equipment is designed and operated so as to ensure that measurements made by KEC are traceable to the national standards of measurement or equivalent abroad.



APPENDIX A (DECLARATION OF COMPLIANCE TO MAXIMUM PERMISSIBLE EXPOSURE LIMITS FOR HUMANS)

The Model U9W33 with 2400-2483.5MHz transmitter complies with Maximum permissible exposure limits for humans as called out in §1.1310. It is exempt from Maximum Permissible Exposure based on its operating frequency, and power density 0.059mW/cm².

Calculation formula :

$$S = PG / 4\pi D^2$$

S : power density (W/m²)

P : peak output power (W)

G : antenna gain (isotropic)

D : measurement distance (m)

Where :

- Ant A

P = 19.75dBm at 2462 MHz, 11n-HT20 (see 19 page)

G = 1.08dBi

- Ant B

P = 20.41dBm at 2462 MHz, 11n-HT20 (see 19 page)

G = 2.08dBi

- D = 0.2m

Therefore :

$$S(W / m^2) = \frac{(10^{\frac{19.75}{10}} \times 10^{-3} \times 10^{\frac{1.08}{10}}) + (10^{\frac{20.41}{10}} \times 10^{-3} \times 10^{\frac{2.08}{10}})}{4 \times \pi \times 0.2 \times 0.2} = 0.59$$

$$S \doteq 0.059 \text{ (mW/cm}^2\text{)}$$

This would be less than 1mW/cm² when the separation distance between the user and the device's radiating element is no less than 20cm.