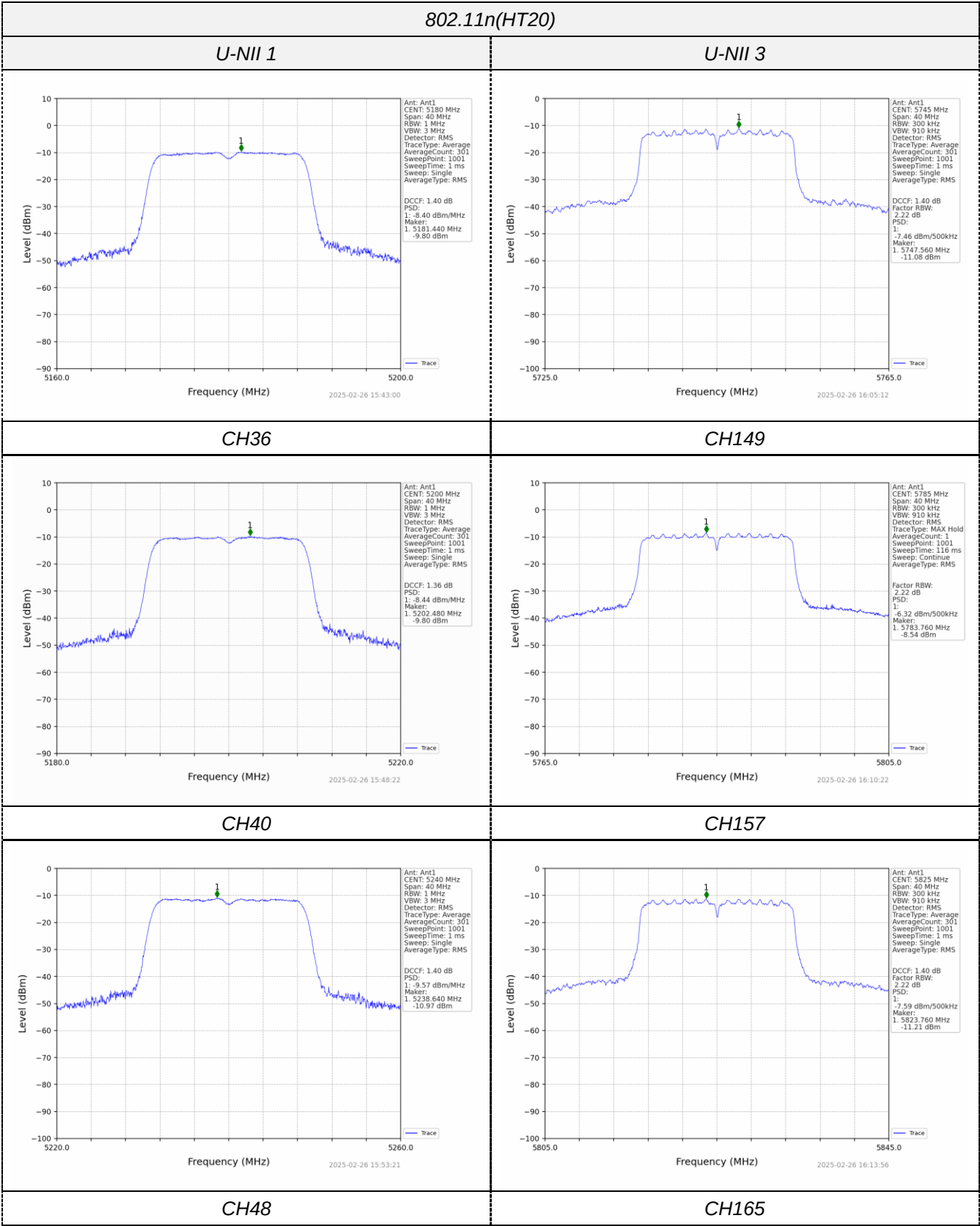




CH36

Ant: Ant1
CENT: 5200 MHz
Span: 40 MHz
RBW: 1 MHz
VBW: 3 MHz
Detector: RMS
TraceType: Average
AverageCount: 301
SweepPoint: 1001
SweepTime: 1 ms
Sweep: Single
AverageType: RMS

DCCF: 1.36 dB
PSD: 1: -8.44 dBm/MHz
Maker: 1: 5202.480 MHz
-9.80 dBm

Level (dBm)

Frequency (MHz)

2025-02-26 15:48:22

CH149

Ant: Ant1
CENT: 5785 MHz
Span: 40 MHz
RBW: 300 kHz
VBW: 910 kHz
Detector: RMS
TraceType: MAX Hold
AverageCount: 301
SweepPoint: 1001
SweepTime: 116 ms
Sweep: Continue
AverageType: RMS

Factor RBW: 2.22 dB
PSD: 1: -6.32 dBm/500kHz
Maker: 1: 5783.760 MHz
-8.54 dBm

Level (dBm)

Frequency (MHz)

2025-02-26 16:10:22

CH40

Ant: Ant1
CENT: 5240 MHz
Span: 40 MHz
RBW: 1 MHz
VBW: 3 MHz
Detector: RMS
TraceType: Average
AverageCount: 301
SweepPoint: 1001
SweepTime: 1 ms
Sweep: Single
AverageType: RMS

DCCF: 1.40 dB
PSD: 1: -9.57 dBm/MHz
Maker: 1: 5238.640 MHz
-10.97 dBm

Level (dBm)

Frequency (MHz)

2025-02-26 15:53:21

CH157

Ant: Ant1
CENT: 5825 MHz
Span: 40 MHz
RBW: 300 kHz
VBW: 910 kHz
Detector: RMS
TraceType: Average
AverageCount: 301
SweepPoint: 1001
SweepTime: 1 ms
Sweep: Single
AverageType: RMS

DCCF: 1.40 dB
Factor RBW: 2.22 dB
PSD: 1: -7.59 dBm/500kHz
Maker: 1: 5823.760 MHz
-11.21 dBm

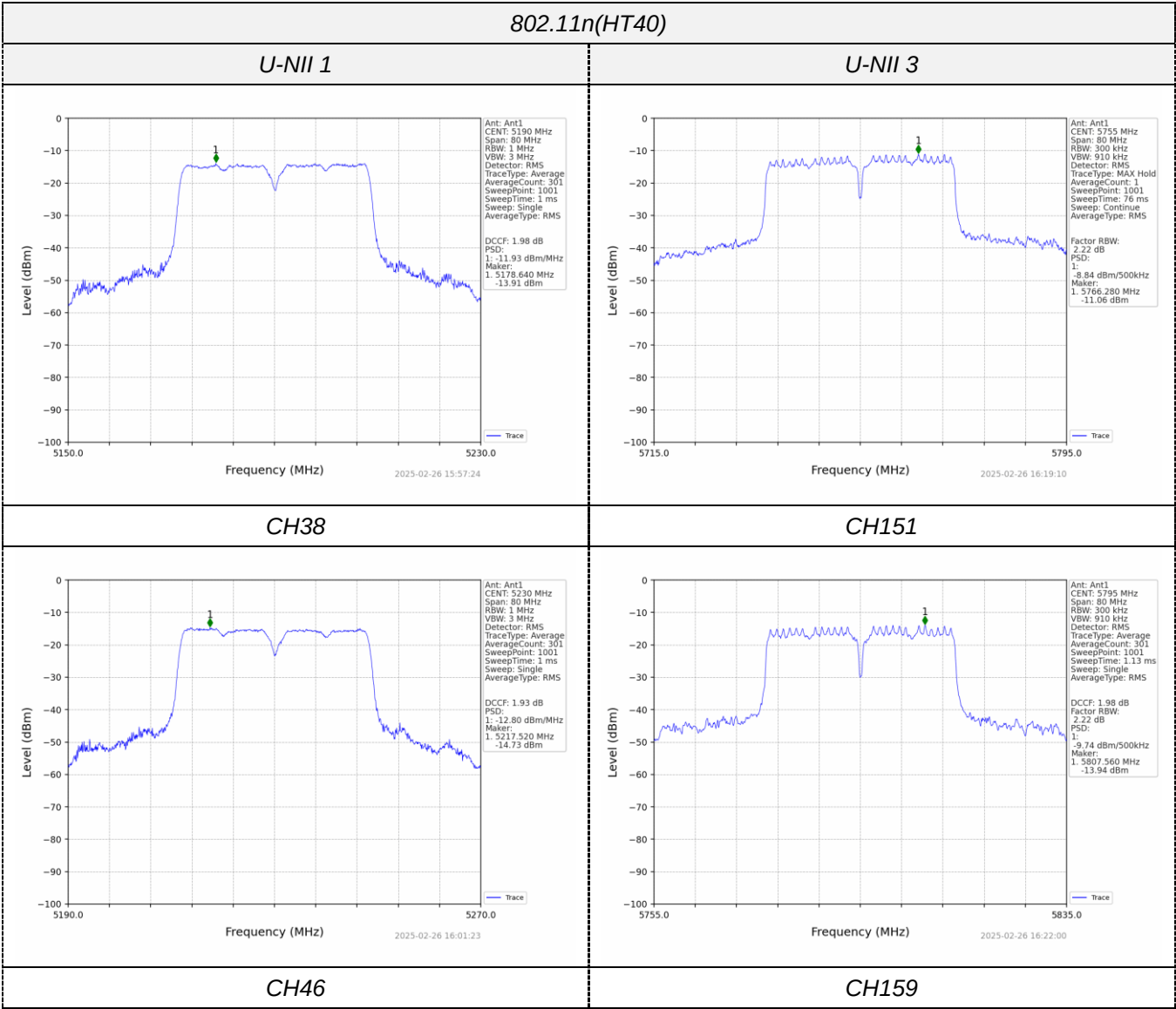
Level (dBm)

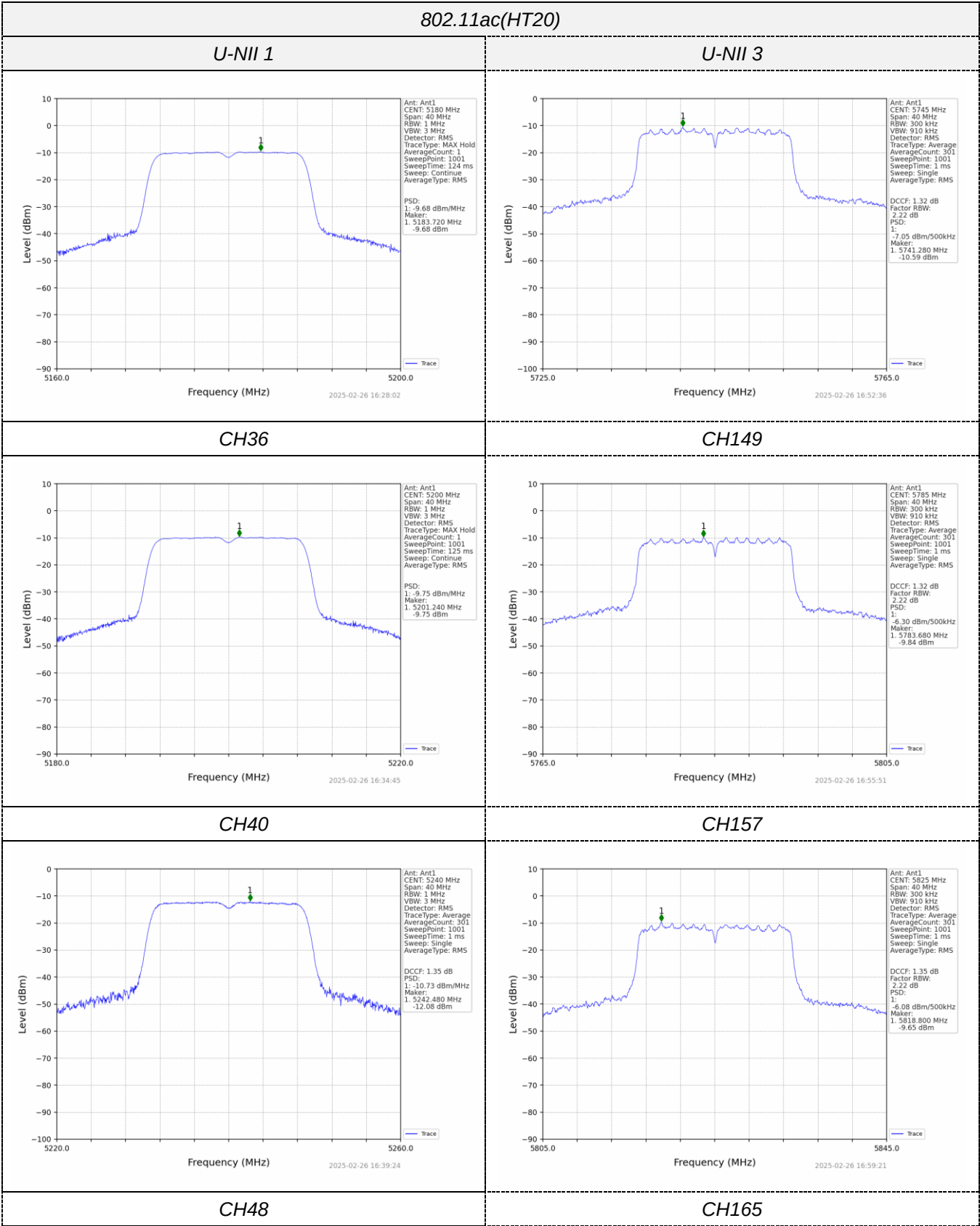
Frequency (MHz)

2025-02-26 16:13:56

CH48

CH165





CH40

Ant: Ant1
CENT: 5240 MHz
Span: 40 MHz
RBW: 1 MHz
VBW: 3 MHz
Detector: RMS
TraceType: Average
AverageCount: 301
SweepPoint: 1001
SweepTime: 1 ms
Sweep: Single
AverageType: RMS

DCCF: 1.35 dB
PSD:
1: -10.73 dBm/MHz
Marker:
1: 5242.480 MHz
-12.08 dBm

Level (dBm)

Frequency (MHz)

2025-02-26 16:39:24

CH157

Ant: Ant1
CENT: 5825 MHz
Span: 40 MHz
RBW: 300 kHz
VBW: 910 kHz
Detector: RMS
TraceType: Average
AverageCount: 301
SweepPoint: 1001
SweepTime: 1 ms
Sweep: Single
AverageType: RMS

DCCF: 1.35 dB
Factor RBW:
2.22 dB
PSD:
1: -6.08 dBm/500kHz
Marker:
1: 5818.800 MHz
-9.65 dBm

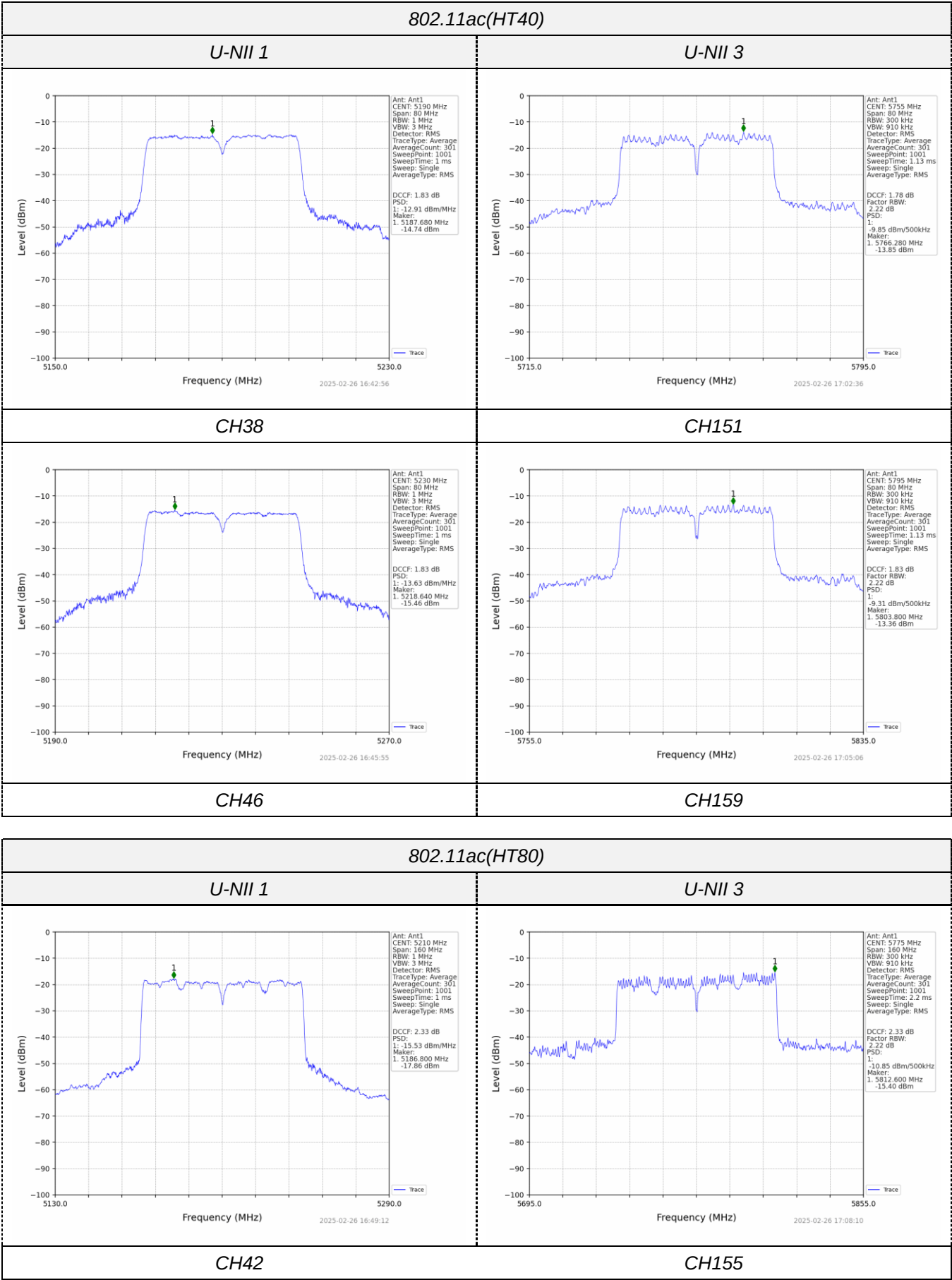
Level (dBm)

Frequency (MHz)

2025-02-26 16:59:21

CH48

CH165



4.5 Emission Bandwidth (26dB Bandwidth)

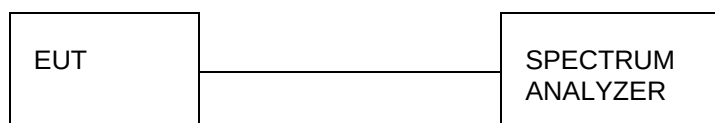
Limit

N/A

Test Procedure

1. Set resolution bandwidth (RBW) = approximately 1 % of the EBW.
2. Set the video bandwidth (VBW) > RBW.
3. Detector = Peak.
4. Trace mode = Max hold.
5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW / EBW ratio is approximately 1 %.

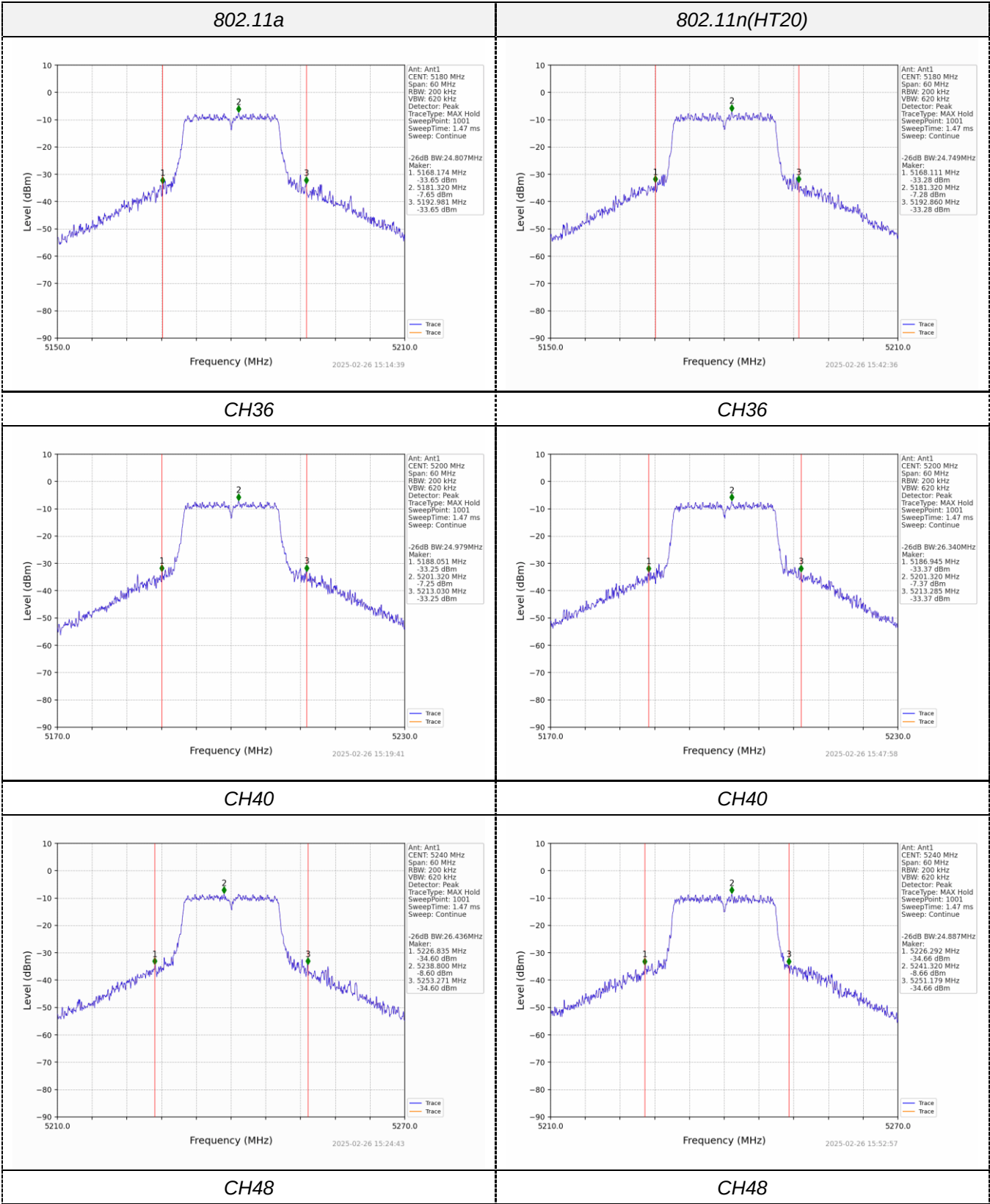
Test Configuration

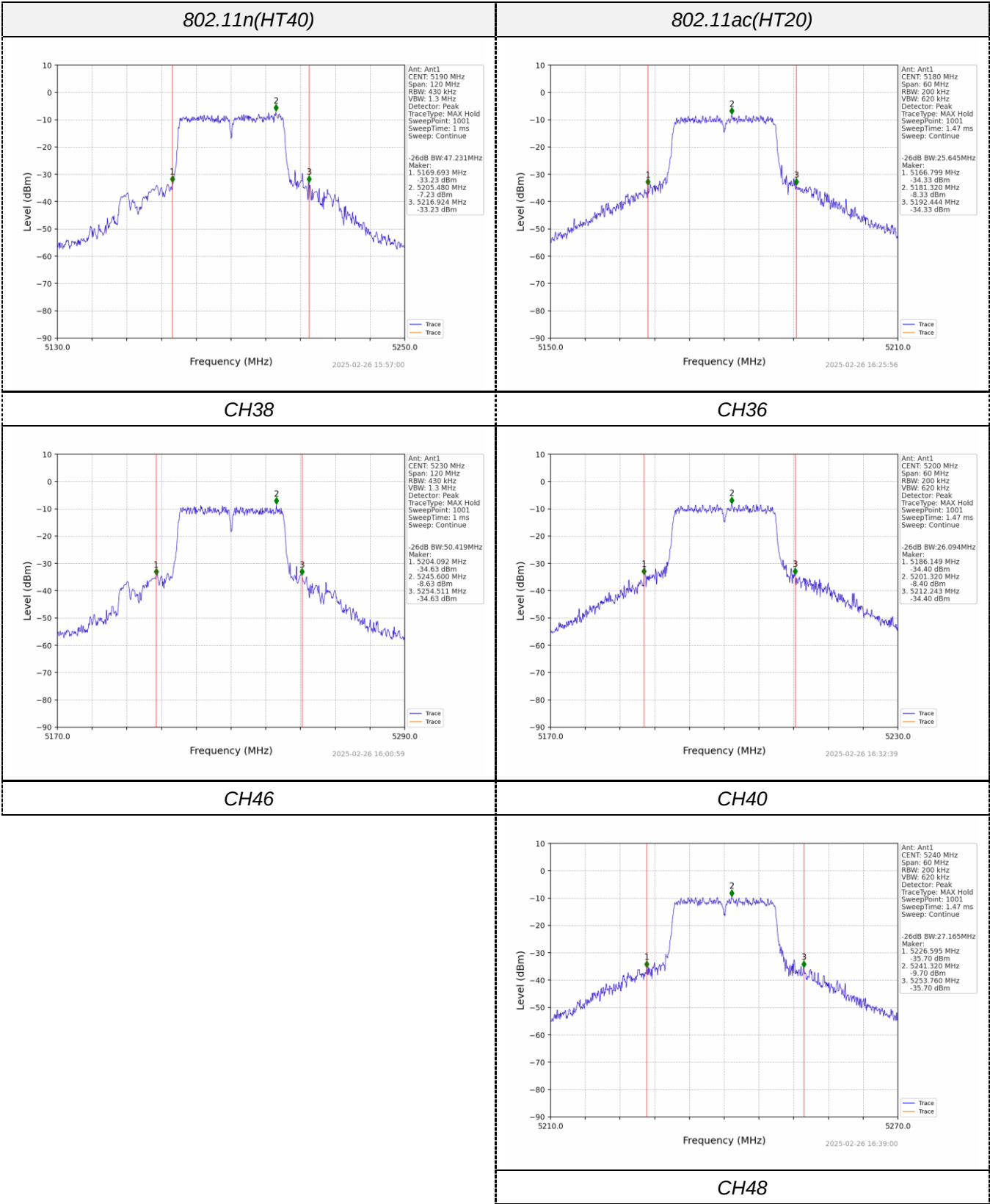


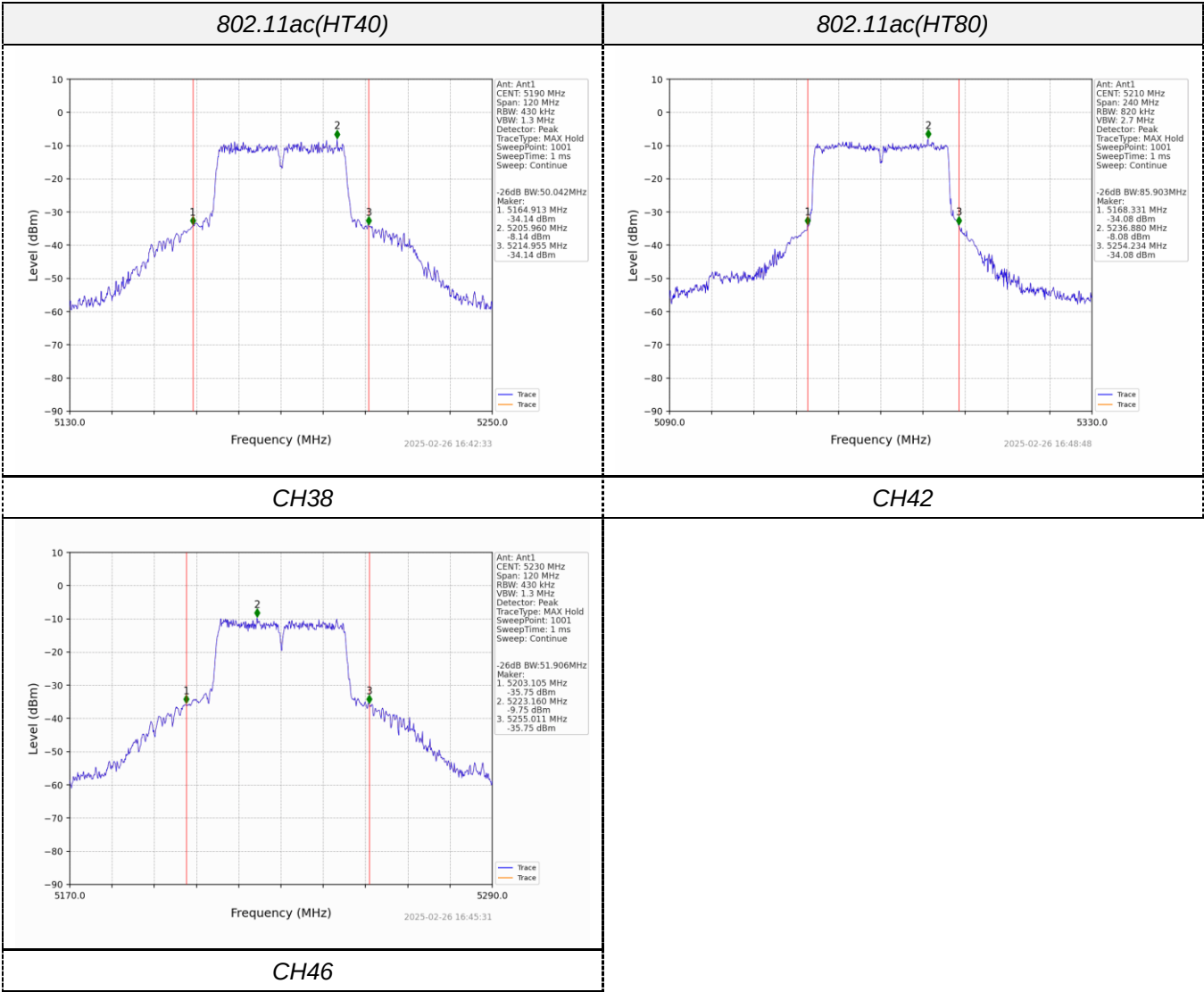
Test Results

Type	Bands	Channel	26dB Bandwidth (MHz)	Limit (MHz)	Result
802.11a	U-NII 1	36	24.807	N/A	Pass
		40	24.979		
		48	26.436		
802.11n(HT20)	U-NII 1	36	24.749		
		40	26.340		
		48	24.887		
802.11n(HT40)	U-NII 1	38	47.231		
		46	50.419		
802.11ac(HT20)	U-NII 1	36	25.645		
		40	26.094		
		48	27.165		
802.11ac(HT40)	U-NII 1	38	50.042		
		46	51.906		
802.11ac(HT80)	U-NII 1	42	85.903		

Test plot as follows:







4.6 Minimum Emission Bandwidth (6dB Bandwidth)

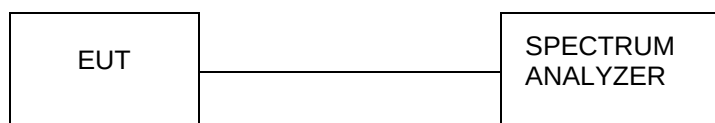
Limit

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

1. Set resolution bandwidth (RBW) = 100 kHz
2. Set the video bandwidth 3 x RBW.
3. Detector = Peak.
4. Trace mode = Max hold.
5. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Test Configuration

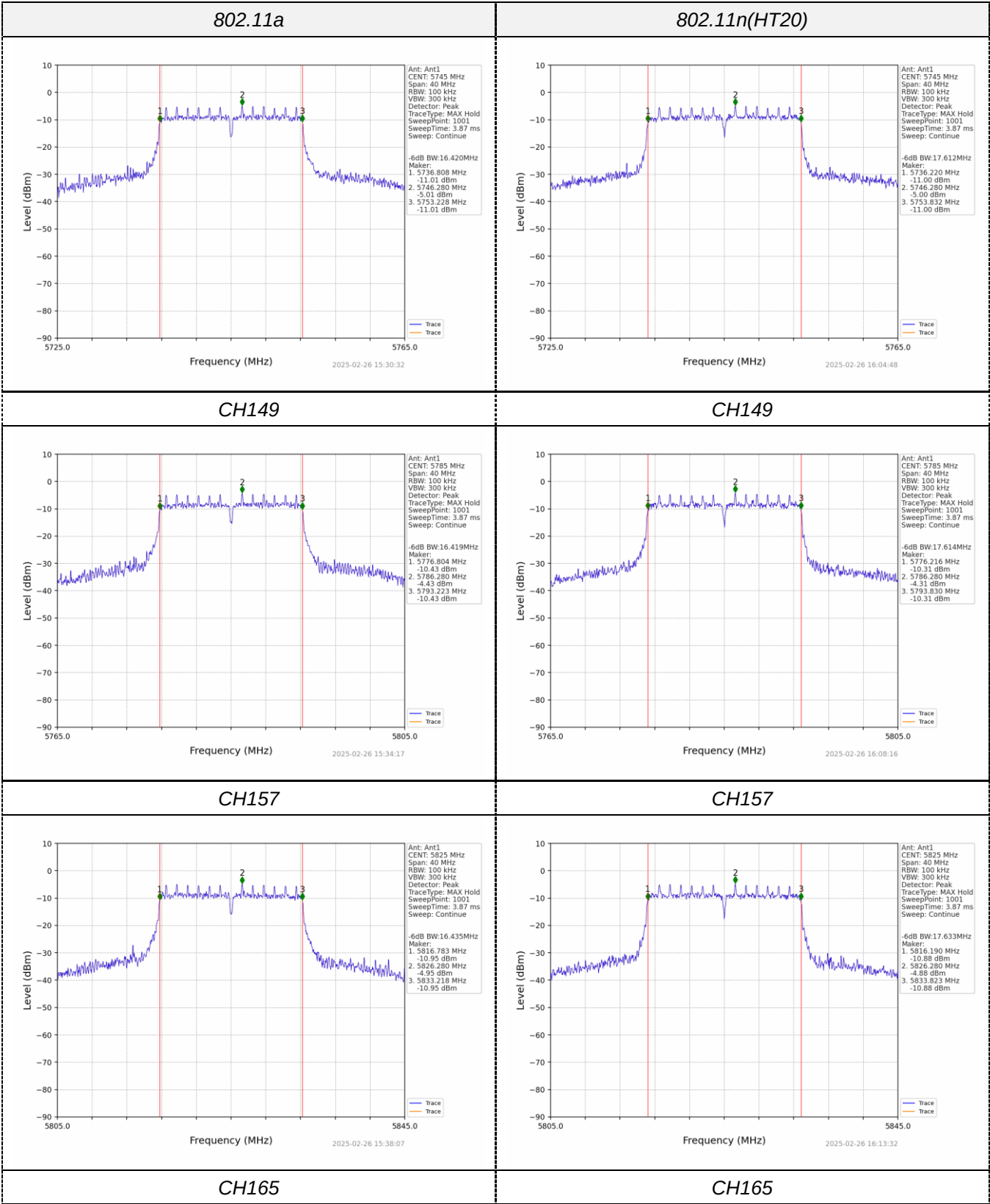


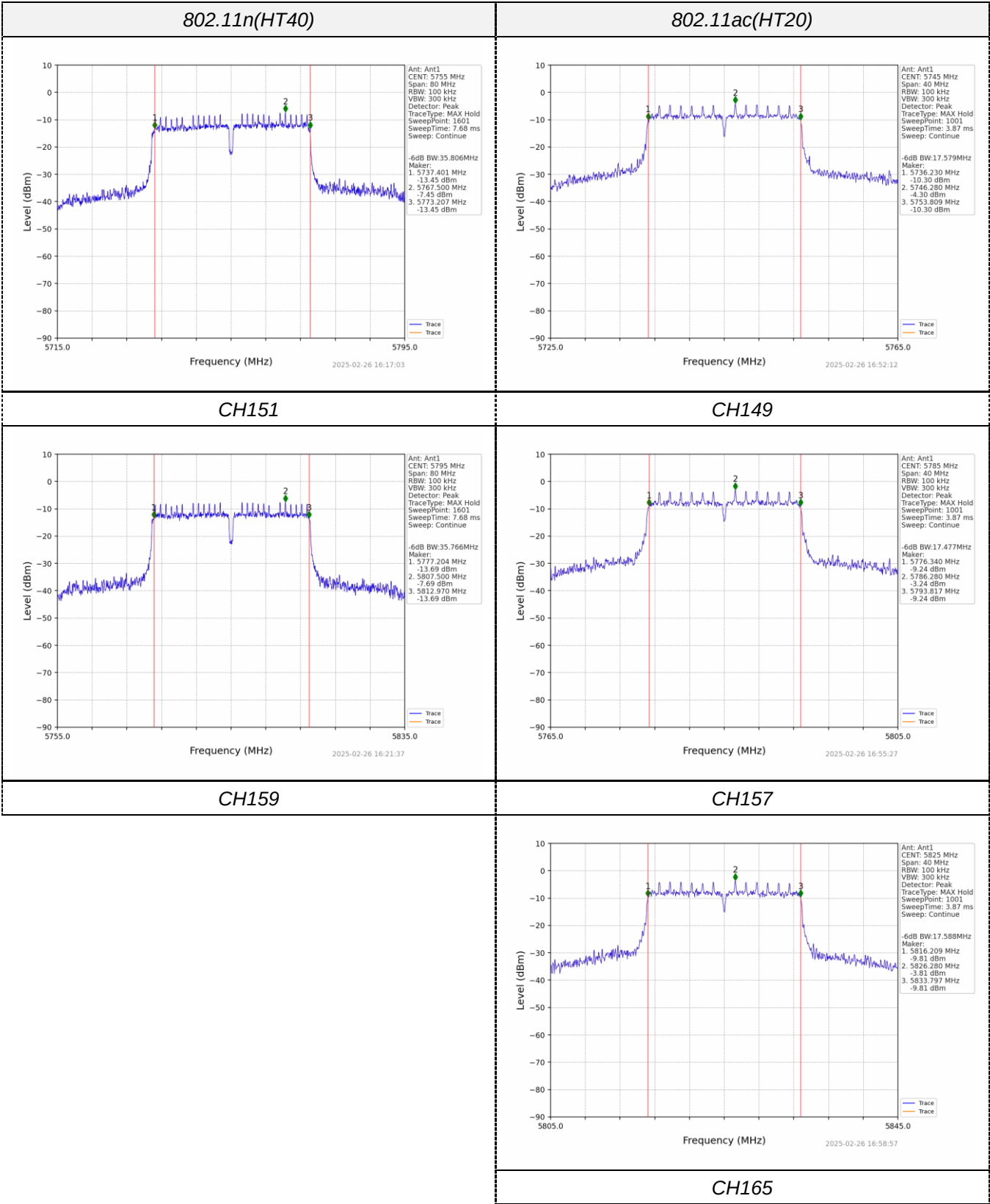
Test Results

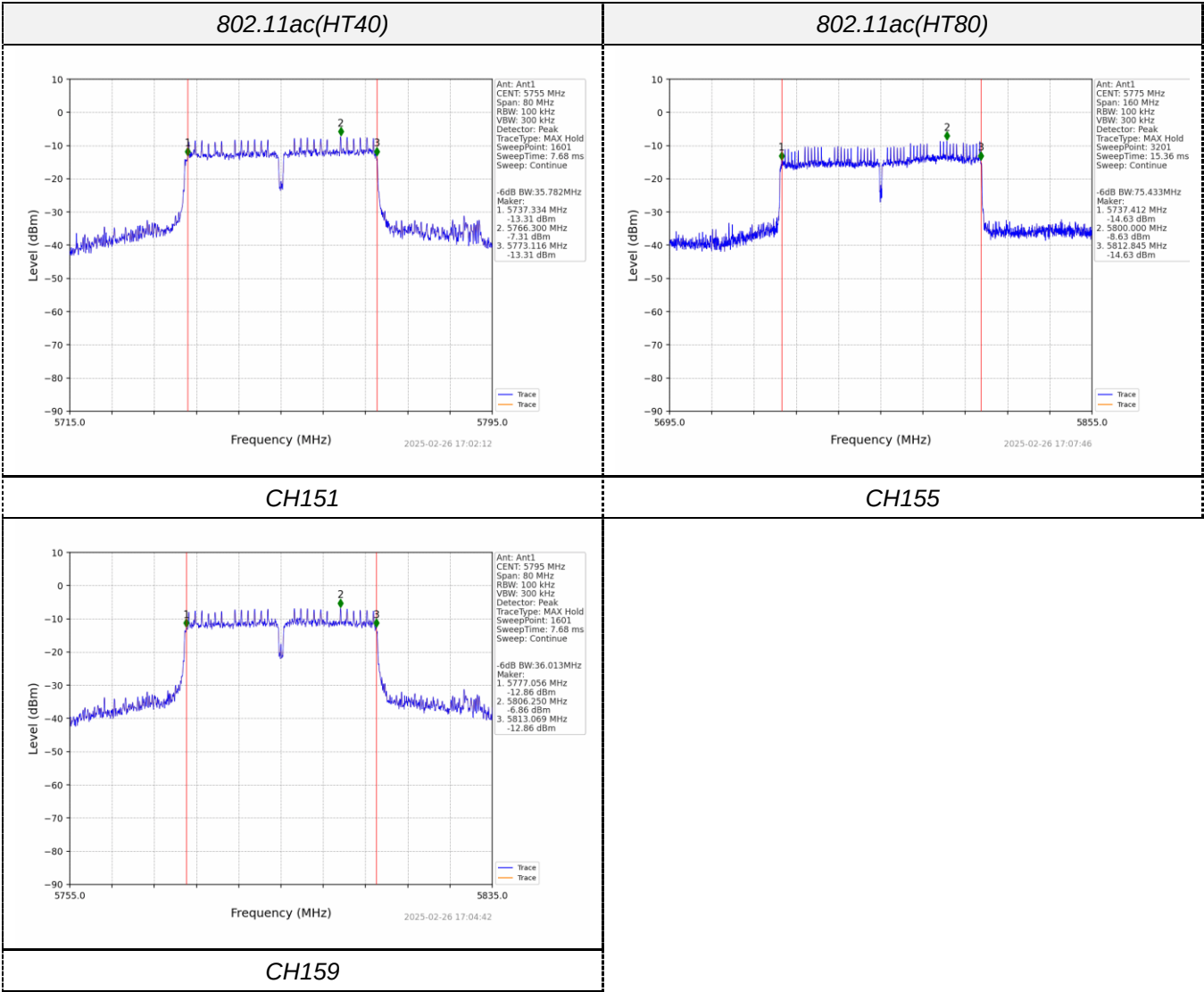
Type	Bands	Channel	6dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	U-NII 3	149	16.420	≥500KHz	Pass
		157	16.419		
		165	16.435		
802.11n(HT20)	U-NII 3	149	17.612		
		157	17.614		
		165	17.633		
802.11n(HT40)	U-NII 3	151	35.806		
		159	35.766		
802.11ac(HT20)	U-NII 3	149	17.579		
		157	17.477		
		165	17.588		
802.11ac(HT40)	U-NII 3	151	35.782		
		159	36.013		
802.11ac(HT80)	U-NII 3	155	75.433		

Test plot as follows:

ANT 1







CH151

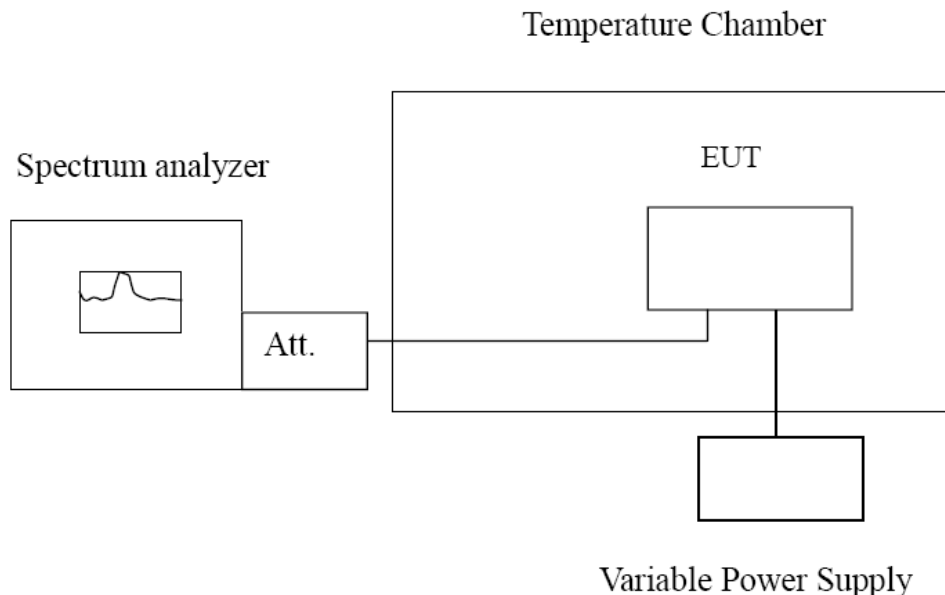
CH155

4.7 Frequency Stability

LIMIT

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

TEST CONFIGURATION



TEST PROCEDURE

Frequency Stability under Temperature Variations:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Frequency Stability under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

TEST RESULTS

Record worst case as below:

Ant1							
Mode	Tx Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
802.11a	SISO	5180	20	102	5180.040	5150 to 5250	Pass
				120	5180.060	5150 to 5250	Pass
				138	5180.080	5150 to 5250	Pass
			-30	120	5180.080	5150 to 5250	Pass
			-20	120	5180.020	5150 to 5250	Pass
			-10	120	5180.060	5150 to 5250	Pass
			0	120	5180.020	5150 to 5250	Pass
			10	120	5180.060	5150 to 5250	Pass
			30	120	5180.080	5150 to 5250	Pass
			40	120	5180.040	5150 to 5250	Pass
			50	120	5180.000	5150 to 5250	Pass
		5200	20	102	5200.020	5150 to 5250	Pass
				120	5200.080	5150 to 5250	Pass
				138	5199.980	5150 to 5250	Pass
			-30	120	5200.060	5150 to 5250	Pass
			-20	120	5200.100	5150 to 5250	Pass
			-10	120	5200.080	5150 to 5250	Pass
			0	120	5200.000	5150 to 5250	Pass
			10	120	5200.080	5150 to 5250	Pass
			30	120	5200.080	5150 to 5250	Pass
			40	120	5200.060	5150 to 5250	Pass
			50	120	5200.080	5150 to 5250	Pass
		5240	20	102	5240.060	5150 to 5250	Pass
				120	5240.020	5150 to 5250	Pass
				138	5240.080	5150 to 5250	Pass
			-30	120	5240.080	5150 to 5250	Pass
			-20	120	5240.040	5150 to 5250	Pass
			-10	120	5240.060	5150 to 5250	Pass
			0	120	5240.040	5150 to 5250	Pass
			10	120	5240.040	5150 to 5250	Pass
			30	120	5240.020	5150 to 5250	Pass
			40	120	5240.040	5150 to 5250	Pass
			50	120	5240.020	5150 to 5250	Pass
		5745	20	102	5745.080	5725 to 5850	Pass
				120	5745.060	5725 to 5850	Pass
				138	5745.060	5725 to 5850	Pass
			-30	120	5745.020	5725 to 5850	Pass
			-20	120	5745.040	5725 to 5850	Pass
			-10	120	5745.020	5725 to 5850	Pass
			0	120	5745.100	5725 to 5850	Pass
			10	120	5745.040	5725 to 5850	Pass
			30	120	5744.980	5725 to 5850	Pass
			40	120	5745.060	5725 to 5850	Pass
			50	120	5745.120	5725 to 5850	Pass
		5785	20	102	5785.060	5725 to 5850	Pass
				120	5785.040	5725 to 5850	Pass
				138	5785.060	5725 to 5850	Pass
			-30	120	5785.120	5725 to 5850	Pass
			-20	120	5785.040	5725 to 5850	Pass
			-10	120	5785.020	5725 to 5850	Pass
			0	120	5785.140	5725 to 5850	Pass
			10	120	5785.060	5725 to 5850	Pass
			30	120	5785.040	5725 to 5850	Pass
			40	120	5785.020	5725 to 5850	Pass
			50	120	5785.080	5725 to 5850	Pass
		5825	20	102	5825.020	5725 to 5850	Pass
				120	5825.020	5725 to 5850	Pass
				138	5825.020	5725 to 5850	Pass
			-30	120	5825.040	5725 to 5850	Pass
			-20	120	5825.100	5725 to 5850	Pass
			-10	120	5825.040	5725 to 5850	Pass
			0	120	5825.060	5725 to 5850	Pass
			10	120	5825.020	5725 to 5850	Pass

802.11n (HT20)	SISO		30	120	5825.020	5725 to 5850	Pass
			40	120	5825.040	5725 to 5850	Pass
			50	120	5825.040	5725 to 5850	Pass
		5180	20	102	5180.020	5150 to 5250	Pass
				120	5180.040	5150 to 5250	Pass
				138	5180.060	5150 to 5250	Pass
			-30	120	5180.040	5150 to 5250	Pass
			-20	120	5180.040	5150 to 5250	Pass
			-10	120	5180.040	5150 to 5250	Pass
			0	120	5180.040	5150 to 5250	Pass
			10	120	5180.020	5150 to 5250	Pass
			30	120	5180.060	5150 to 5250	Pass
			40	120	5180.040	5150 to 5250	Pass
			50	120	5180.060	5150 to 5250	Pass
		5200	20	102	5200.080	5150 to 5250	Pass
				120	5200.080	5150 to 5250	Pass
				138	5200.040	5150 to 5250	Pass
			-30	120	5200.040	5150 to 5250	Pass
			-20	120	5200.060	5150 to 5250	Pass
			-10	120	5200.020	5150 to 5250	Pass
			0	120	5200.020	5150 to 5250	Pass
			10	120	5200.020	5150 to 5250	Pass
			30	120	5200.020	5150 to 5250	Pass
			40	120	5200.000	5150 to 5250	Pass
			50	120	5200.060	5150 to 5250	Pass
		5240	20	102	5240.020	5150 to 5250	Pass
				120	5240.020	5150 to 5250	Pass
				138	5240.040	5150 to 5250	Pass
			-30	120	5240.040	5150 to 5250	Pass
			-20	120	5240.060	5150 to 5250	Pass
			-10	120	5240.020	5150 to 5250	Pass
			0	120	5240.000	5150 to 5250	Pass
			10	120	5240.060	5150 to 5250	Pass
			30	120	5240.040	5150 to 5250	Pass
			40	120	5239.960	5150 to 5250	Pass
			50	120	5240.000	5150 to 5250	Pass
		5745	20	102	5745.080	5725 to 5850	Pass
				120	5745.040	5725 to 5850	Pass
				138	5745.020	5725 to 5850	Pass
			-30	120	5745.060	5725 to 5850	Pass
			-20	120	5745.040	5725 to 5850	Pass
			-10	120	5745.060	5725 to 5850	Pass
			0	120	5745.040	5725 to 5850	Pass
			10	120	5745.060	5725 to 5850	Pass
			30	120	5745.080	5725 to 5850	Pass
			40	120	5745.040	5725 to 5850	Pass
			50	120	5745.060	5725 to 5850	Pass
		5785	20	102	5785.020	5725 to 5850	Pass
				120	5785.020	5725 to 5850	Pass
				138	5785.000	5725 to 5850	Pass
			-30	120	5785.040	5725 to 5850	Pass
			-20	120	5785.040	5725 to 5850	Pass
			-10	120	5785.080	5725 to 5850	Pass
			0	120	5785.020	5725 to 5850	Pass
			10	120	5785.020	5725 to 5850	Pass
			30	120	5785.040	5725 to 5850	Pass
			40	120	5785.060	5725 to 5850	Pass
			50	120	5785.020	5725 to 5850	Pass
		5825	20	102	5825.040	5725 to 5850	Pass
				120	5825.040	5725 to 5850	Pass
				138	5825.060	5725 to 5850	Pass
			-30	120	5825.020	5725 to 5850	Pass
			-20	120	5825.060	5725 to 5850	Pass
			-10	120	5825.040	5725 to 5850	Pass
			0	120	5825.040	5725 to 5850	Pass
			10	120	5824.900	5725 to 5850	Pass
			30	120	5825.000	5725 to 5850	Pass

802.11n (HT40)	SISO		40	120	5825.100	5725 to 5850	Pass
			50	120	5825.020	5725 to 5850	Pass
		5190	20	102	5190.120	5150 to 5250	Pass
				120	5190.120	5150 to 5250	Pass
				138	5190.120	5150 to 5250	Pass
			-30	120	5190.080	5150 to 5250	Pass
			-20	120	5190.080	5150 to 5250	Pass
			-10	120	5190.080	5150 to 5250	Pass
			0	120	5190.040	5150 to 5250	Pass
			10	120	5190.120	5150 to 5250	Pass
			30	120	5190.080	5150 to 5250	Pass
			40	120	5190.120	5150 to 5250	Pass
			50	120	5190.120	5150 to 5250	Pass
		5230	20	102	5230.120	5150 to 5250	Pass
				120	5230.040	5150 to 5250	Pass
				138	5230.080	5150 to 5250	Pass
			-30	120	5230.080	5150 to 5250	Pass
			-20	120	5230.120	5150 to 5250	Pass
			-10	120	5230.040	5150 to 5250	Pass
			0	120	5230.080	5150 to 5250	Pass
			10	120	5230.080	5150 to 5250	Pass
			30	120	5230.080	5150 to 5250	Pass
			40	120	5230.080	5150 to 5250	Pass
			50	120	5230.040	5150 to 5250	Pass
		5755	20	102	5755.120	5725 to 5850	Pass
				120	5755.120	5725 to 5850	Pass
				138	5755.120	5725 to 5850	Pass
			-30	120	5755.160	5725 to 5850	Pass
			-20	120	5755.080	5725 to 5850	Pass
			-10	120	5755.120	5725 to 5850	Pass
			0	120	5755.160	5725 to 5850	Pass
			10	120	5755.120	5725 to 5850	Pass
			30	120	5755.080	5725 to 5850	Pass
			40	120	5755.120	5725 to 5850	Pass
			50	120	5755.120	5725 to 5850	Pass
		5795	20	102	5795.080	5725 to 5850	Pass
				120	5795.080	5725 to 5850	Pass
				138	5795.080	5725 to 5850	Pass
			-30	120	5795.120	5725 to 5850	Pass
			-20	120	5795.120	5725 to 5850	Pass
			-10	120	5795.120	5725 to 5850	Pass
			0	120	5795.120	5725 to 5850	Pass
			10	120	5795.120	5725 to 5850	Pass
			30	120	5795.120	5725 to 5850	Pass
			40	120	5795.080	5725 to 5850	Pass
			50	120	5795.040	5725 to 5850	Pass
802.11ac (VHT20)	SISO	5180	20	102	5180.080	5150 to 5250	Pass
				120	5180.060	5150 to 5250	Pass
				138	5180.080	5150 to 5250	Pass
			-30	120	5180.060	5150 to 5250	Pass
			-20	120	5180.040	5150 to 5250	Pass
			-10	120	5180.060	5150 to 5250	Pass
			0	120	5180.040	5150 to 5250	Pass
			10	120	5180.060	5150 to 5250	Pass
			30	120	5180.040	5150 to 5250	Pass
			40	120	5180.060	5150 to 5250	Pass
			50	120	5180.060	5150 to 5250	Pass
		5200	20	102	5200.000	5150 to 5250	Pass
				120	5200.040	5150 to 5250	Pass
				138	5200.060	5150 to 5250	Pass
			-30	120	5200.020	5150 to 5250	Pass
			-20	120	5200.040	5150 to 5250	Pass
			-10	120	5200.080	5150 to 5250	Pass
			0	120	5200.020	5150 to 5250	Pass
			10	120	5200.040	5150 to 5250	Pass
			30	120	5200.040	5150 to 5250	Pass
			40	120	5200.080	5150 to 5250	Pass

802.11ac (VHT40)	SISO	5240	50	120	5200.020	5150 to 5250	Pass
			20	102	5240.020	5150 to 5250	Pass
				120	5240.040	5150 to 5250	Pass
				138	5240.020	5150 to 5250	Pass
				138	5240.060	5150 to 5250	Pass
			-30	120	5240.060	5150 to 5250	Pass
			-20	120	5240.060	5150 to 5250	Pass
			-10	120	5240.020	5150 to 5250	Pass
			0	120	5240.040	5150 to 5250	Pass
			10	120	5240.020	5150 to 5250	Pass
			30	120	5240.020	5150 to 5250	Pass
			40	120	5240.060	5150 to 5250	Pass
			50	120	5240.040	5150 to 5250	Pass
		5745	20	102	5745.060	5725 to 5850	Pass
				120	5745.040	5725 to 5850	Pass
				138	5745.060	5725 to 5850	Pass
				138	5745.080	5725 to 5850	Pass
			-30	120	5745.080	5725 to 5850	Pass
			-20	120	5745.060	5725 to 5850	Pass
			-10	120	5745.080	5725 to 5850	Pass
			0	120	5745.040	5725 to 5850	Pass
			10	120	5745.040	5725 to 5850	Pass
			30	120	5745.040	5725 to 5850	Pass
			40	120	5744.980	5725 to 5850	Pass
			50	120	5745.040	5725 to 5850	Pass
		5785	20	102	5785.020	5725 to 5850	Pass
				120	5785.060	5725 to 5850	Pass
				138	5785.020	5725 to 5850	Pass
				138	5785.080	5725 to 5850	Pass
			-30	120	5785.080	5725 to 5850	Pass
			-20	120	5785.080	5725 to 5850	Pass
			-10	120	5785.060	5725 to 5850	Pass
			0	120	5785.040	5725 to 5850	Pass
			10	120	5785.020	5725 to 5850	Pass
			30	120	5785.060	5725 to 5850	Pass
			40	120	5785.040	5725 to 5850	Pass
			50	120	5785.040	5725 to 5850	Pass
		5825	20	102	5825.020	5725 to 5850	Pass
				120	5825.040	5725 to 5850	Pass
				138	5825.060	5725 to 5850	Pass
				138	5825.080	5725 to 5850	Pass
			-30	120	5825.060	5725 to 5850	Pass
			-20	120	5825.040	5725 to 5850	Pass
			-10	120	5824.980	5725 to 5850	Pass
			0	120	5825.060	5725 to 5850	Pass
			10	120	5825.080	5725 to 5850	Pass
			30	120	5825.020	5725 to 5850	Pass
			40	120	5825.040	5725 to 5850	Pass
			50	120	5825.080	5725 to 5850	Pass
802.11ac (VHT40)	SISO	5190	20	102	5190.000	5150 to 5250	Pass
				120	5190.000	5150 to 5250	Pass
				138	5190.080	5150 to 5250	Pass
				138	5190.080	5150 to 5250	Pass
			-30	120	5190.080	5150 to 5250	Pass
			-20	120	5190.040	5150 to 5250	Pass
			-10	120	5190.000	5150 to 5250	Pass
			0	120	5190.040	5150 to 5250	Pass
			10	120	5190.040	5150 to 5250	Pass
			30	120	5190.040	5150 to 5250	Pass
			40	120	5190.000	5150 to 5250	Pass
			50	120	5190.040	5150 to 5250	Pass
		5230	20	102	5230.040	5150 to 5250	Pass
				120	5230.040	5150 to 5250	Pass
				138	5230.040	5150 to 5250	Pass
				138	5230.040	5150 to 5250	Pass
			-30	120	5230.040	5150 to 5250	Pass
			-20	120	5230.040	5150 to 5250	Pass
			-10	120	5230.040	5150 to 5250	Pass
			0	120	5230.040	5150 to 5250	Pass
			10	120	5230.040	5150 to 5250	Pass
			30	120	5230.000	5150 to 5250	Pass
			40	120	5230.000	5150 to 5250	Pass
			50	120	5230.000	5150 to 5250	Pass

		5755	20	102	5755.080	5725 to 5850	Pass
				120	5755.040	5725 to 5850	Pass
				138	5755.080	5725 to 5850	Pass
			-30	120	5755.080	5725 to 5850	Pass
			-20	120	5755.080	5725 to 5850	Pass
			-10	120	5755.080	5725 to 5850	Pass
			0	120	5755.080	5725 to 5850	Pass
			10	120	5755.040	5725 to 5850	Pass
			30	120	5755.080	5725 to 5850	Pass
			40	120	5755.080	5725 to 5850	Pass
			50	120	5755.040	5725 to 5850	Pass
		5795	20	102	5795.000	5725 to 5850	Pass
				120	5795.040	5725 to 5850	Pass
				138	5795.040	5725 to 5850	Pass
			-30	120	5795.120	5725 to 5850	Pass
			-20	120	5795.040	5725 to 5850	Pass
			-10	120	5795.040	5725 to 5850	Pass
			0	120	5795.040	5725 to 5850	Pass
			10	120	5795.080	5725 to 5850	Pass
			30	120	5795.040	5725 to 5850	Pass
			40	120	5795.040	5725 to 5850	Pass
			50	120	5795.040	5725 to 5850	Pass
802.11ac (VHT80)	SISO	5210	20	102	5210.075	5150 to 5250	Pass
				120	5210.075	5150 to 5250	Pass
				138	5210.075	5150 to 5250	Pass
			-30	120	5210.075	5150 to 5250	Pass
			-20	120	5210.075	5150 to 5250	Pass
			-10	120	5210.075	5150 to 5250	Pass
			0	120	5210.075	5150 to 5250	Pass
			10	120	5210.150	5150 to 5250	Pass
			30	120	5210.075	5150 to 5250	Pass
			40	120	5210.075	5150 to 5250	Pass
			50	120	5210.075	5150 to 5250	Pass
		5775	20	102	5775.150	5725 to 5850	Pass
				120	5775.075	5725 to 5850	Pass
				138	5775.075	5725 to 5850	Pass
			-30	120	5775.075	5725 to 5850	Pass
			-20	120	5775.225	5725 to 5850	Pass
			-10	120	5775.075	5725 to 5850	Pass
			0	120	5775.150	5725 to 5850	Pass
			10	120	5775.075	5725 to 5850	Pass
			30	120	5775.150	5725 to 5850	Pass
			40	120	5775.225	5725 to 5850	Pass
			50	120	5775.075	5725 to 5850	Pass

5 Test Setup Photos of the EUT

Reference to the **appendix I** for details.

6 Photos of the EUT

Reference to the **appendix II** for details.

******* End of Report *******