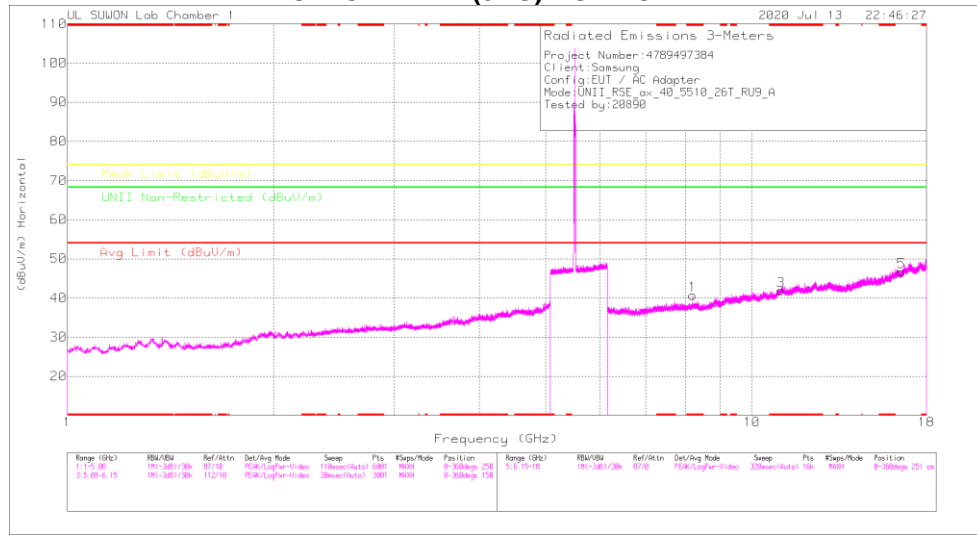
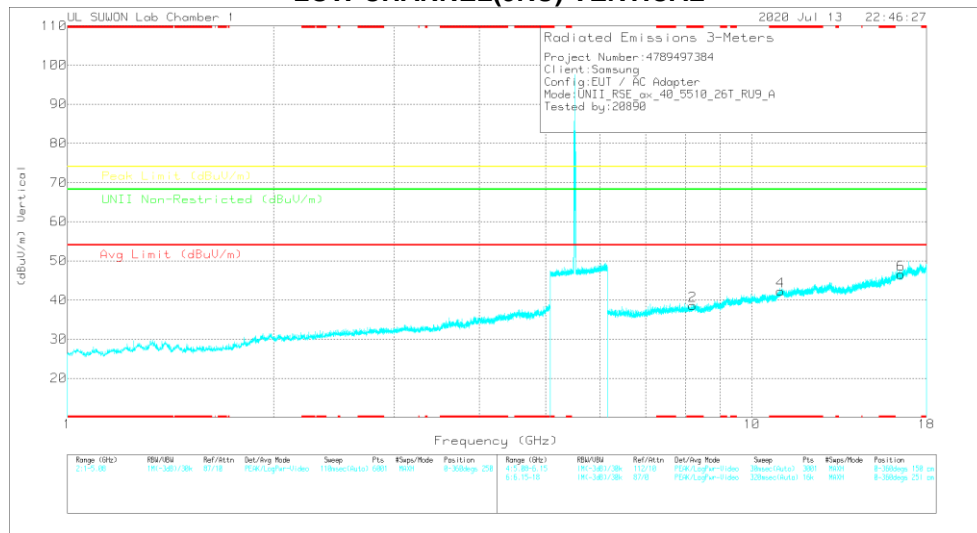


**11.7.2. TX ABOVE 1GHz HE40(RU) MODE IN THE 5.5GHz BAND**  
**HARMONICS AND SPURIOUS EMISSIONS – ANT1+ANT2**  
**LOW CHANNEL(9RU) HORIZONTAL**



**LOW CHANNEL(9RU) VERTICAL**



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL(9RU) DATA**

**Radiated Emissions**

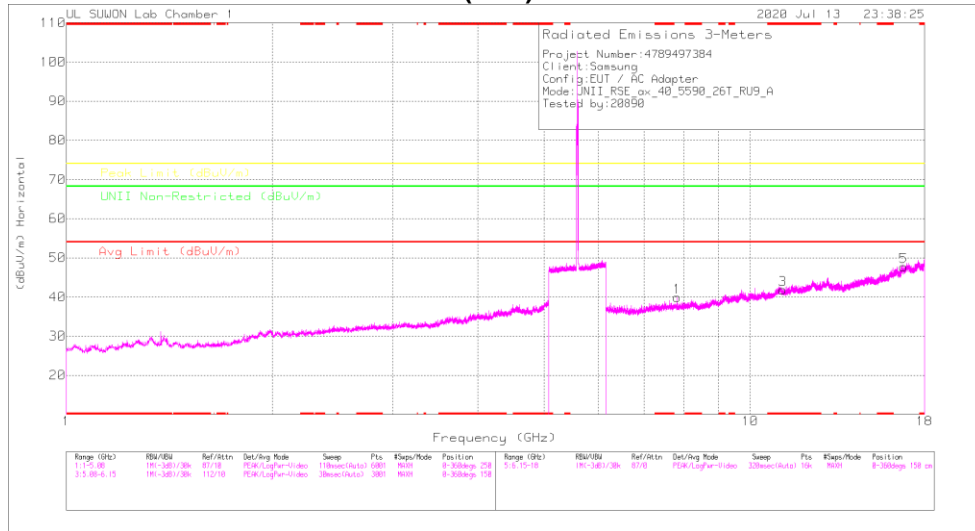
Frequency (GHz)	Max Reading (dBuV)	Det	3117_00180717	@GHz_HF@dB	DC Corr (dB)	Commod Reading (dBuV/m)	Avg Limit (dBuV/m)	Magn (dB)	Peak Limit (dBuV/m)	Magn (dB)	UNII Non-Restricted (dBuV/m)	Magn (dB)	Admitt (Degs)	Height (cm)	Polarity
* 8.1863	38.38	PK-U	38.3	-26	0	48.68	-	-	74	-25.32	-	-	350	173	H
* 8.19796	25.08	ADR	38.3	-26.1	0	36.28	54	-17.72	-	-	-	-	350	173	H
* 8.20174	38.69	PK-U	38.4	-26.1	0	48.99	-	-	74	-25.01	-	-	107	114	V
* 8.19178	26.05	ADR	38.3	-26	0	36.35	54	-17.65	-	-	-	-	107	114	V
* 11.03245	35.79	PK-U	38.2	-21.9	0	52.09	-	-	74	-21.91	-	-	0	100	H
* 11.03719	35.75	PK-U	38.2	-21.9	0	52.05	-	-	74	-21.95	-	-	0	100	V
16.53286	36.02	PK-U	40.9	-19.5	0	57.42	-	-	-	-	68.2	-10.78	0	100	H
16.52536	36.07	PK-U	40.9	-19.5	0	57.47	-	-	-	-	68.2	-10.73	0	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

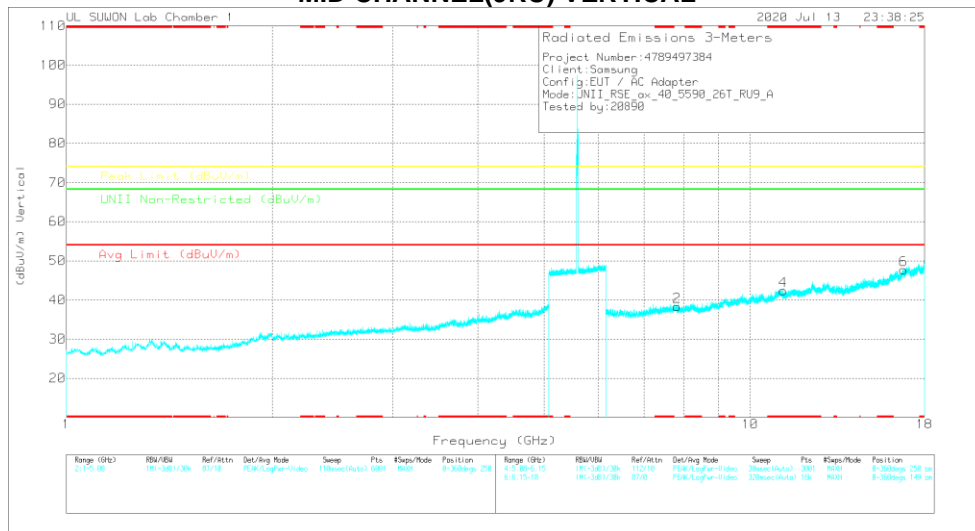
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

**MID CHANNEL(9RU) HORIZONTAL**



**MID CHANNEL(9RU) VERTICAL**



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

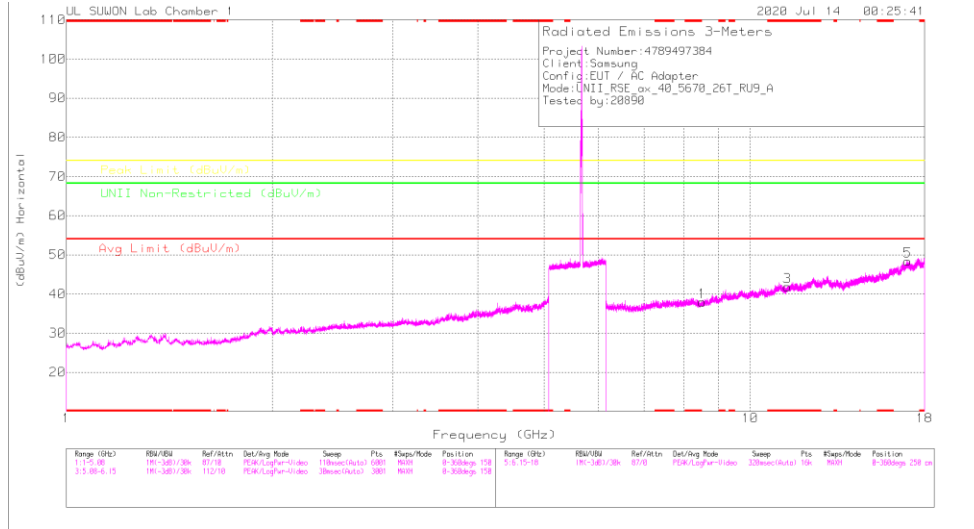
**MID CHANNEL(9RU) DATA**

**Radiated Emissions**

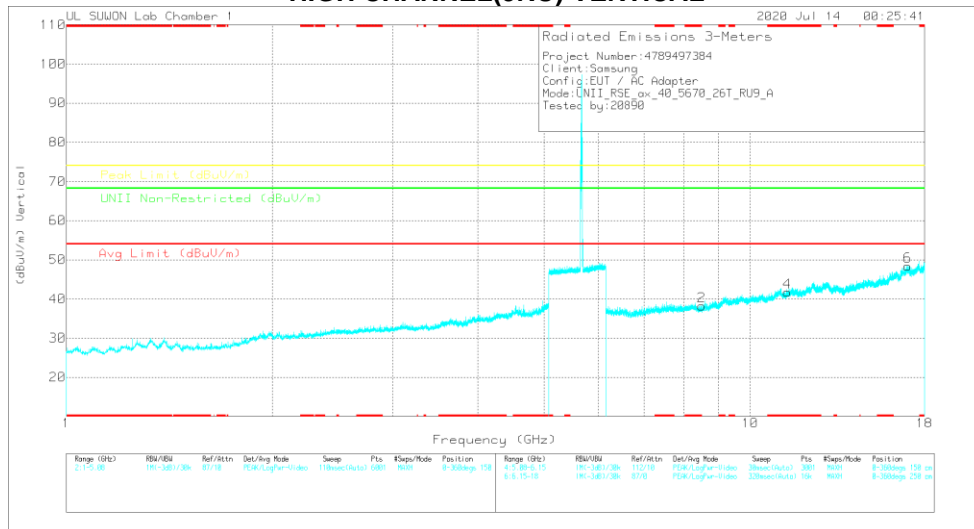
Frequency (GHz)	Meas Reading (dBuV)	Dir	317_50168717	SQL_HF(S)	DC Corr (dB)	Concord Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7.82729	42.48	PK-U	35.9	-26.6	0	51.78	-	-	-	-	68.2	-16.42	110	100	H
7.82707	41.87	PK-U	35.9	-26.6	0	51.17	-	-	-	-	68.2	-17.03	298	103	V
*11.171025	36.78	PK-U	38.3	-22.4	0	52.68	-	-	74	-21.32	-	-	360	100	H
*11.17813	36.6	PK-U	38.3	-22.5	0	52.4	-	-	74	-21.6	-	-	360	100	V
16.76621	34.57	PK-U	41.4	-17.9	0	58.07	-	-	-	-	68.2	-10.13	360	100	H
16.75999	34.75	PK-U	41.4	-18	0	58.15	-	-	-	-	68.2	-10.05	360	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 PK-U - U-NII: Maximum Peak

### HIGH CHANNEL(9RU) HORIZONTAL



### HIGH CHANNEL(9RU) VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

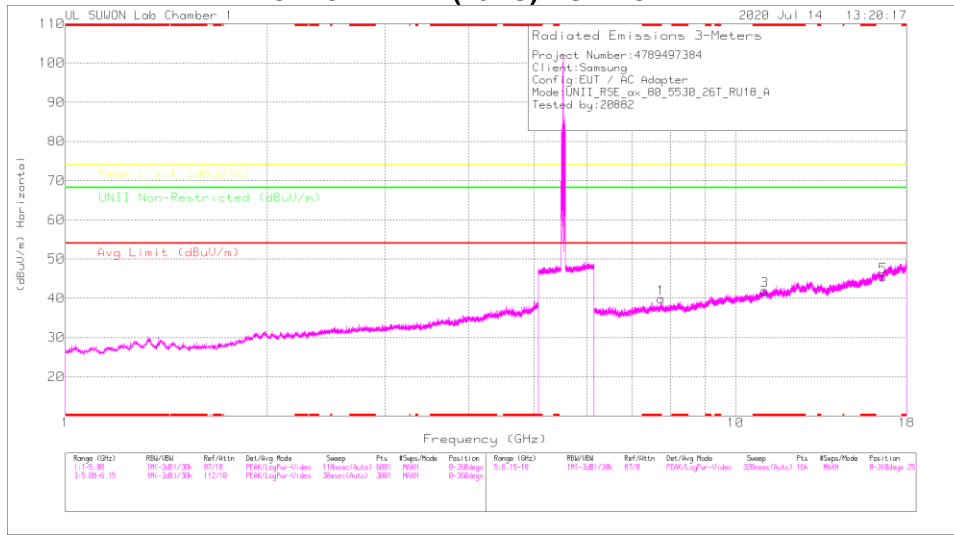
### HIGH CHANNEL(9RU) DATA

#### Radiated Emissions

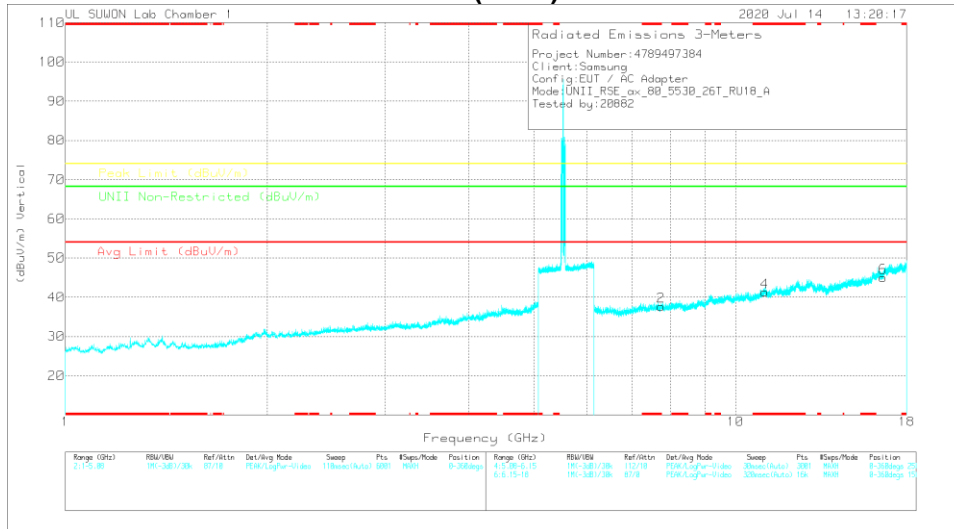
Frequency (GHz)	Max Reading (dBuV)	Det	2197_20160717	@GHz_HF@dB	OC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Meters)	Height (cm)	Polarity
8.50918	37.5	PK-U	36.3	-25.3	0	48.5	-	-	-	-	68.2	-19.7	360	100	H
8.51815	37.23	PK-U	36.3	-25.1	0	48.43	-	-	-	-	68.2	-19.77	360	100	V
*11.35452	36.01	PK-U	38.4	-22.3	0	52.11	-	-	74	-21.89	-	-	360	100	H
*11.35734	36.68	PK-U	38.4	-22.2	0	52.88	-	-	74	-21.12	-	-	360	100	V
17.00861	34.61	PK-U	41.7	-17.6	0	58.71	-	-	-	-	68.2	-9.49	360	100	H
17.00553	35.52	PK-U	41.7	-17.7	0	59.52	-	-	-	-	68.2	-8.68	360	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 PK-U - U-NII: Maximum Peak

**11.7.3. TX ABOVE 1GHz HE80(RU) MODE IN THE 5.5GHz BAND  
 HARMONICS AND SPURIOUS EMISSIONS – ANT1+ANT2  
 LOW CHANNEL(18RU) HORIZONTAL**



**LOW CHANNEL(18RU) VERTICAL**



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL(18RU) DATA**

**Radiated Emissions**

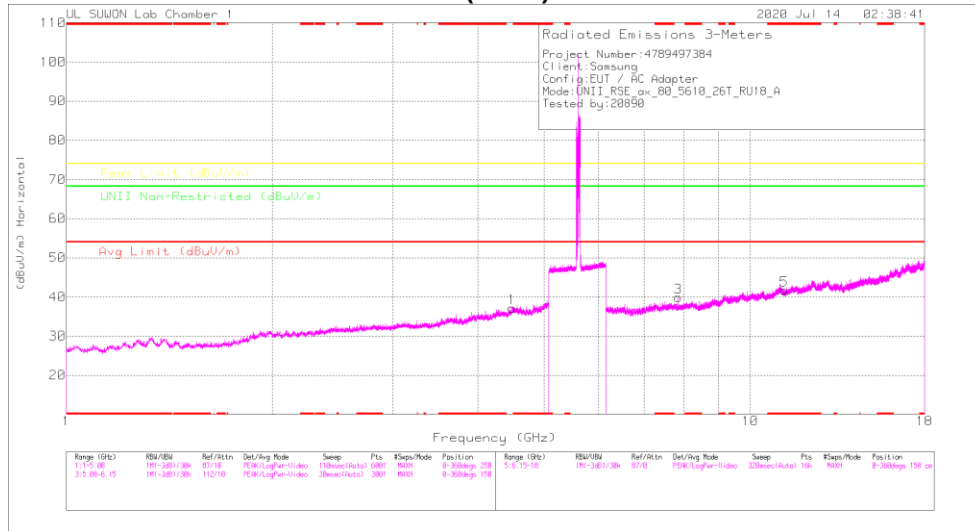
Frequency (GHz)	Max Reading (dBuV)	Det	317_00180717	dBHz_HF(SB)	DC Corr (dB)	Commod Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Admth (Degs)	Height (cm)	Polariz
* 7.74098	41.45	PK-U	35.9	-26.9	0	50.45	-	-	74	-23.55	-	-	130	100	H
* 7.74102	30.11	ADR	35.9	-26.9	0	39.11	54	-14.89	-	-	-	-	130	100	H
* 7.74136	41.5	PK-U	35.9	-26.9	0	50.5	-	-	74	-23.5	-	-	268	100	V
* 7.74112	29.94	ADR	35.9	-26.9	0	39.94	54	-15.06	-	-	-	-	268	100	V
* 11.05912	36.14	PK-U	38.2	-21.8	0	52.54	-	-	74	-21.46	-	-	0	100	H
* 11.05919	36.31	PK-U	38.2	-21.8	0	52.71	-	-	74	-21.29	-	-	0	100	V
16.58907	36	PK-U	41	-19.2	0	57.8	-	-	-	-	68.2	-10.4	0	100	H
16.58951	34.86	PK-U	41	-19.2	0	56.66	-	-	-	-	68.2	-11.54	0	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

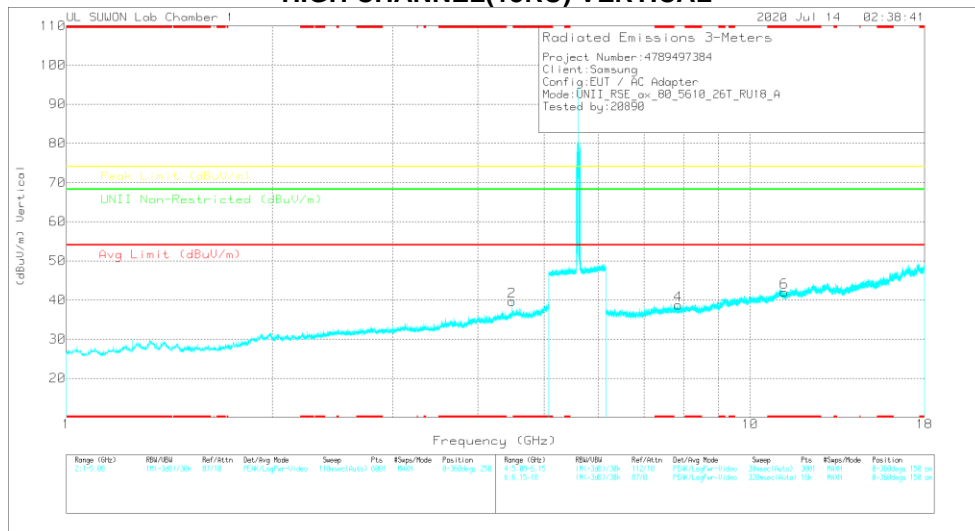
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

### HIGH CHANNEL(18RU) HORIZONTAL



### HIGH CHANNEL(18RU) VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

### HIGH CHANNEL(18RU) DATA

#### Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00168717	6GHz_HPS(B)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4.48812	45.16	PK-U	34.2	-31.4	0	47.96	-	-	-	-	68.2	-20.24	217	139	H
4.48782	45.53	PK-U	34.2	-31.4	0	48.33	-	-	-	-	68.2	-19.87	58	163	V

Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00168717	6GHz_HPS(B)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7.85435	41.77	PK-U	35.9	-26.8	0	50.57	-	-	-	-	68.2	-17.33	112	101	H
7.85393	41.58	PK-U	35.9	-26.7	0	50.78	-	-	-	-	68.2	-17.42	286	100	V
* 11.21816	36.62	PK-U	38.4	-22.4	0	52.62	-	-	74	-21.38	-	-	360	100	H
* 11.22569	36.8	PK-U	38.4	-22.2	0	53	-	-	74	-21	-	-	360	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

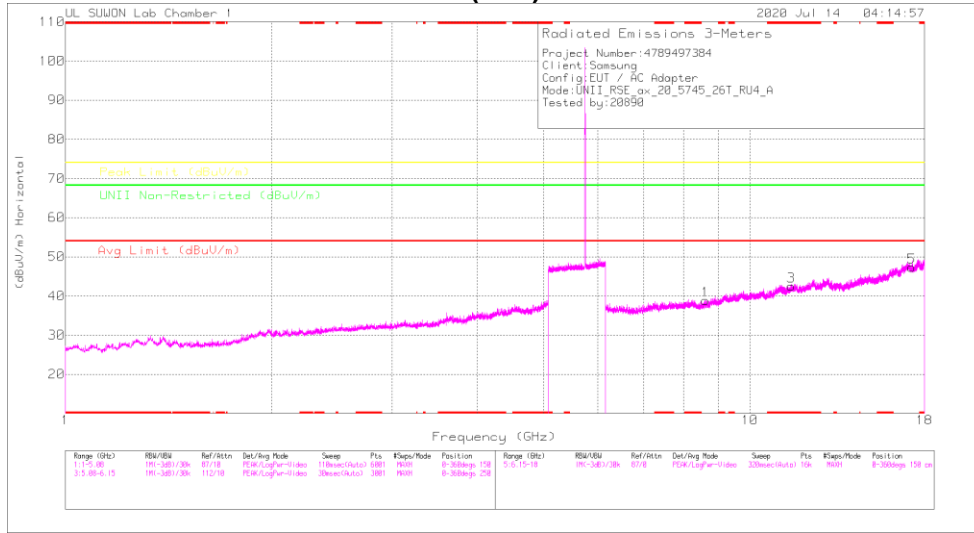
PK-U - U-NII: Maximum Peak

# 11.8. 5.8 GHz(802.11ax RU mode)

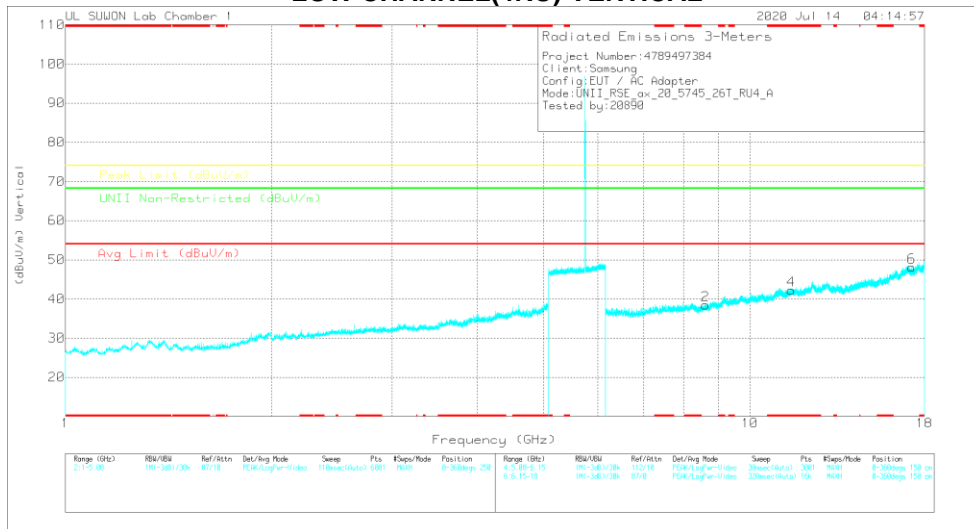
## 11.8.1. TX ABOVE 1GHz HE20(RU) MODE IN THE 5.8GHz BAND

### HARMONICS AND SPURIOUS EMISSIONS – ANT1+ANT2

#### LOW CHANNEL(4RU) HORIZONTAL



#### LOW CHANNEL(4RU) VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

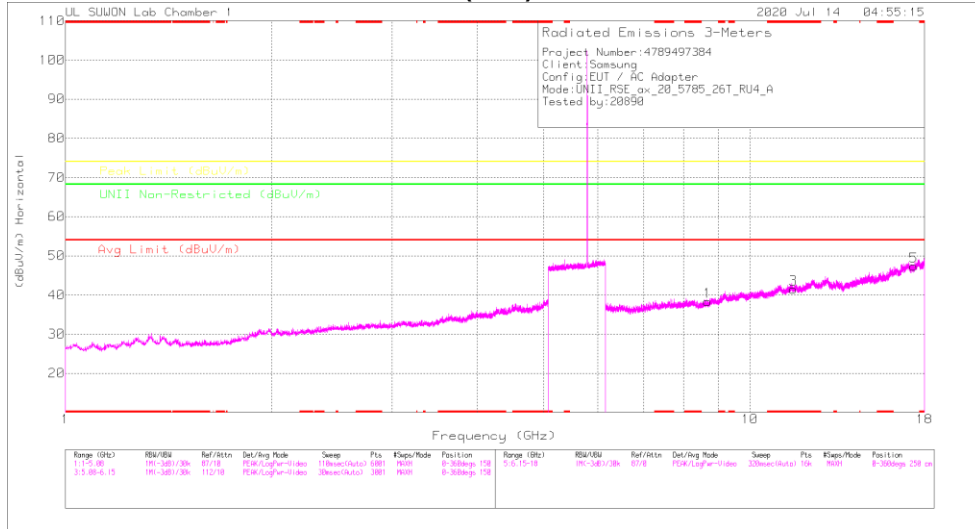
#### LOW CHANNEL(4RU) DATA

##### Radiated Emissions

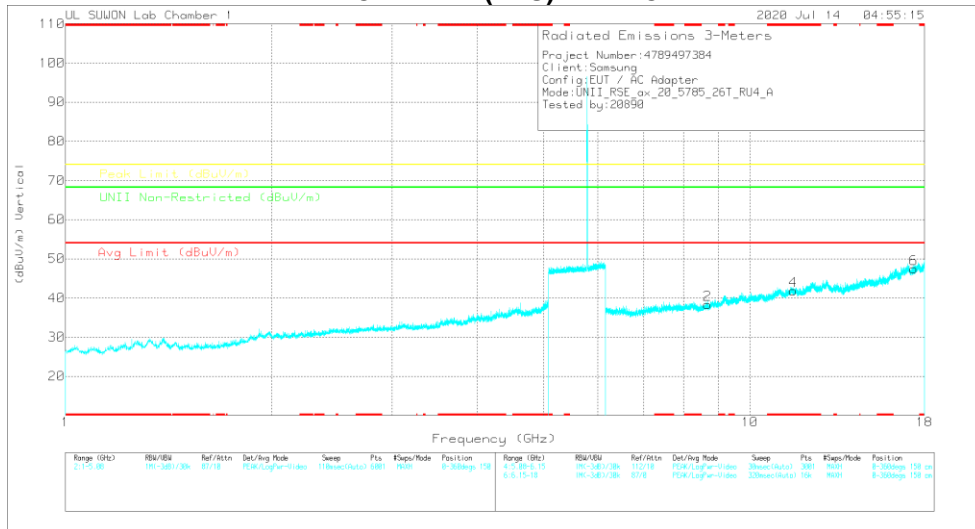
Frequency (GHz)	Max Reading (dBuV)	Det	317_0016B717	6GHz_HPS(B)	DC Corr (dB)	Consolid Reading (dBuV/m)	Avg Limit (dBuV/m)	Magn (dB)	Peak Limit (dBuV/m)	Magn (dB)	UNII Non-Restricted (dBuV/m)	Magn (dB)	Azimuth (Deg)	Height (m)	Polarity
8.61491	36.91	PK-U	36.3	-24.9	0	48.21	-	-	-	-	68.2	-19.89	360	100	H
8.62579	37.07	PK-U	36.3	-24.8	0	48.57	-	-	-	-	68.2	-19.63	360	100	V
* 11.48809	35.92	PK-U	38.5	-22.3	0	52.12	-	-	74	-21.88	-	-	360	100	H
* 11.48373	36.11	PK-U	38.5	-22.2	0	52.41	-	-	74	-21.59	-	-	360	100	V
* 17.23893	35.34	PK-U	41.3	-17.5	0	59.04	-	-	-	-	68.2	-9.16	360	100	H
17.23427	34.85	PK-U	41.3	-17.5	0	58.65	-	-	-	-	68.2	-9.55	360	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 PK-U - U-NII: Maximum Peak

**MID CHANNEL(4RU) HORIZONTAL**



**MID CHANNEL(4RU) VERTICAL**



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

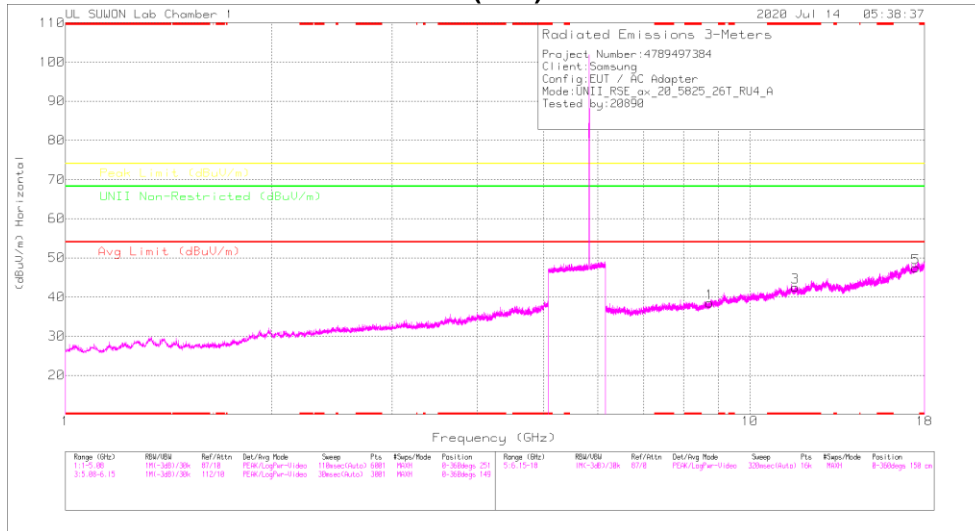
**MID CHANNEL(4RU) DATA**

**Radiated Emissions**

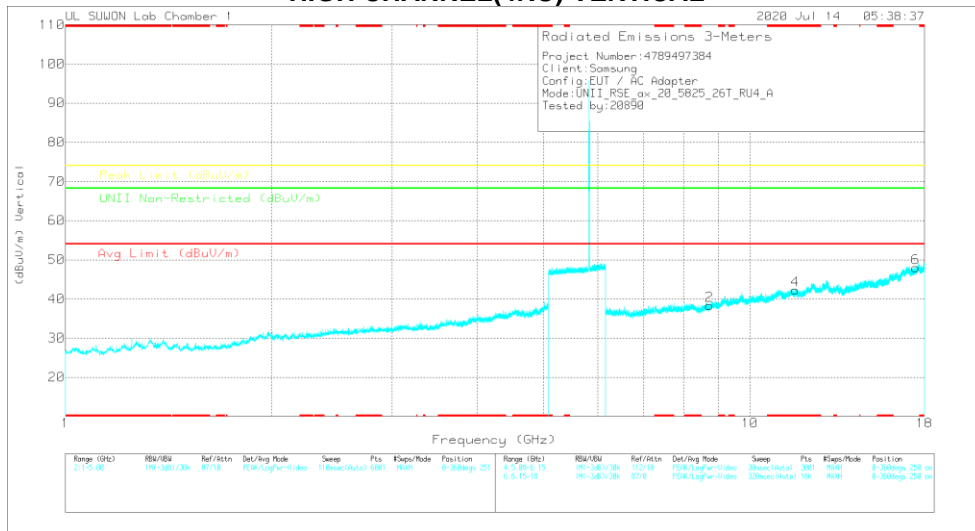
Frequency (GHz)	Meas Reading (dBuV)	Dir	317_50168717	SQL_H(FdB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
8.67503	38.12	PK-U	36.4	-25.5	0	49.02	-	-	-	-	68.2	-19.18	360	100	H
8.96898	37.75	PK-U	36.4	-25.2	0	48.95	-	-	-	-	68.2	-19.25	360	100	V
*11.56103	36.01	PK-U	38.6	-22.3	0	52.31	-	-	74	-21.69	-	-	360	100	H
*11.55919	36.4	PK-U	38.6	-22.4	0	52.6	-	-	74	-21.4	-	-	360	100	V
17.3633	34.31	PK-U	41.2	-17.7	0	57.61	-	-	-	-	68.2	-10.39	360	100	H
17.36933	34.11	PK-U	41.2	-17.7	0	57.61	-	-	-	-	68.2	-10.59	360	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 PK-U - U-NII: Maximum Peak

### HIGH CHANNEL(4RU) HORIZONTAL



### HIGH CHANNEL(4RU) VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

### HIGH CHANNEL(4RU) DATA

#### Radiated Emissions

Frequency (GHz)	Main Reading (dBuV)	Det	317_00168717	6GHz_HF[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Admth (Days)	Height (cm)	Polarity
8.72815	38.62	PK-U	36.4	-25.7	0	49.32	-	-	-	-	68.2	-18.88	360	100	H
8.7308	37.64	PK-U	36.4	-25.7	0	48.34	-	-	-	-	68.2	-19.86	360	100	V
*11.65684	36.59	PK-U	38.7	-21.8	0	53.49	-	74	-20.51	-	-	-	360	100	H
*11.6455	35.91	PK-U	38.7	-21.8	0	52.81	-	74	-21.19	-	-	-	360	100	V
17.47078	34.57	PK-U	41.2	-17.5	0	58.27	-	-	-	-	68.2	-9.93	360	100	H
17.46832	34.4	PK-U	41.2	-17.6	0	58	-	-	-	-	68.2	-10.2	360	100	V

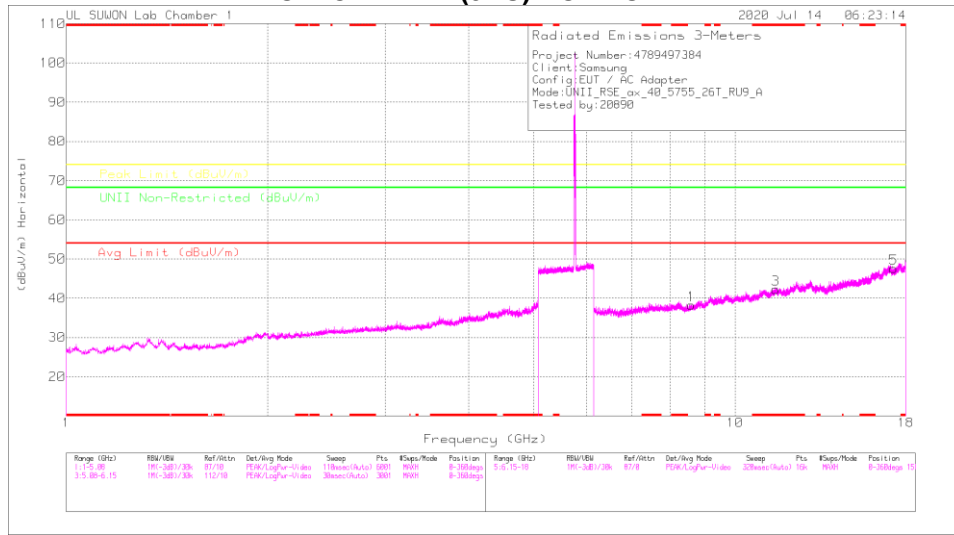
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

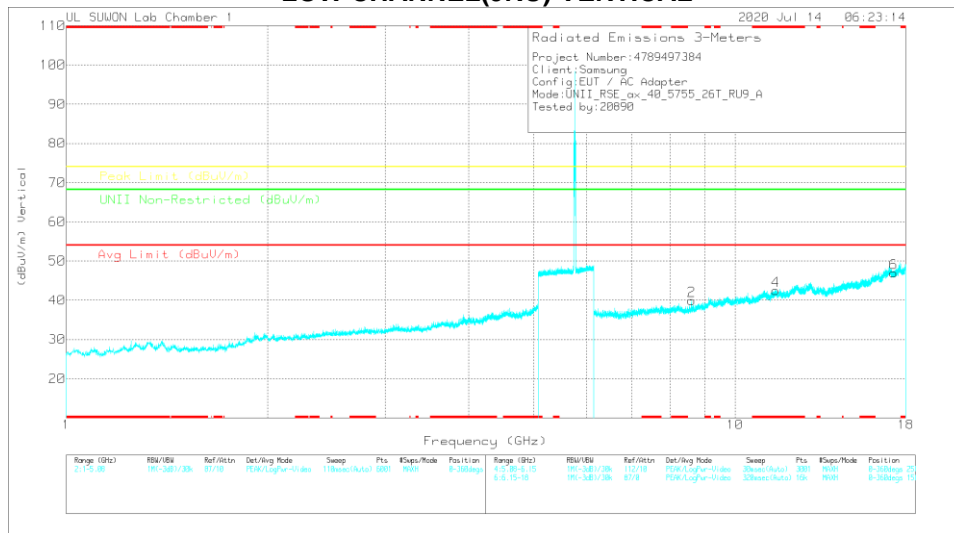


**11.8.2. TX ABOVE 1GHz HE40(RU) MODE IN THE 5.8GHz BAND  
 HARMONICS AND SPURIOUS EMISSIONS – ANT1+ANT2**

**LOW CHANNEL(9RU) HORIZONTAL**



**LOW CHANNEL(9RU) VERTICAL**



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

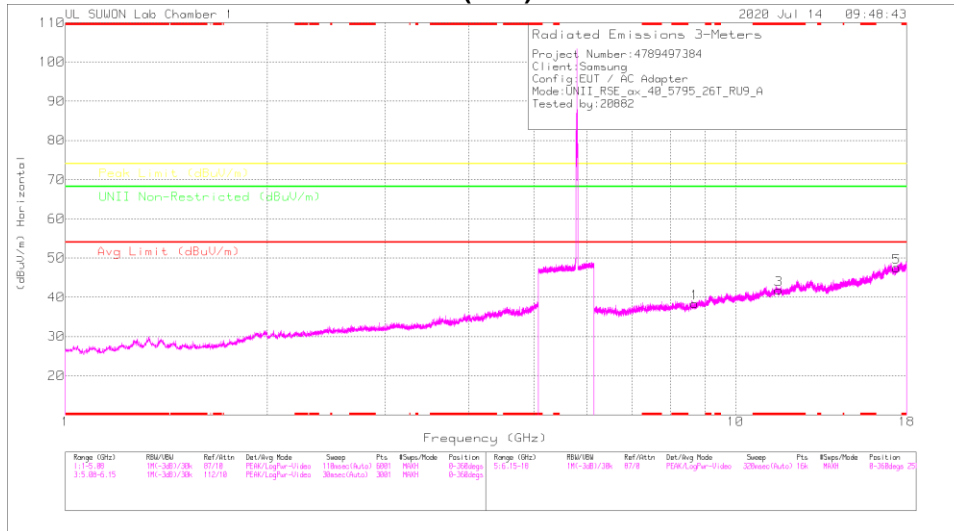
**LOW CHANNEL(9RU) DATA**

**Radiated Emissions**

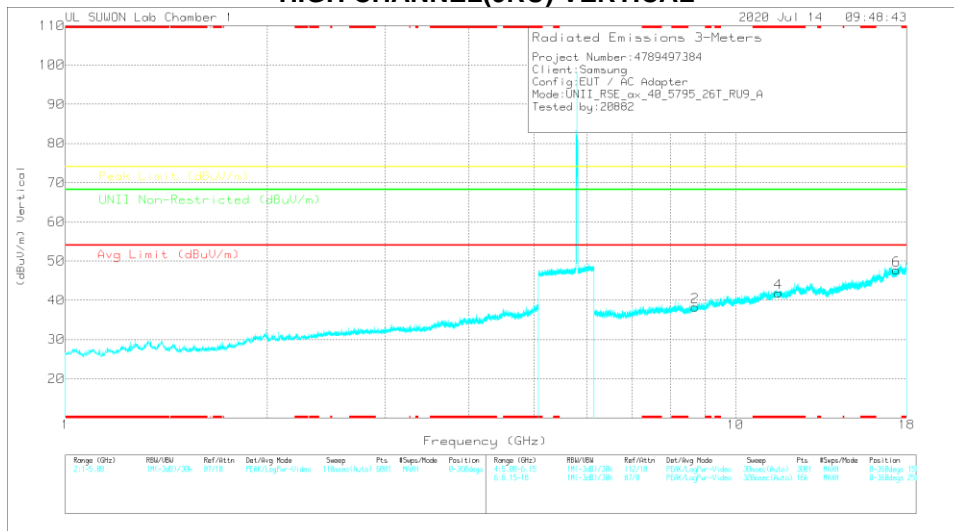
Frequency (GHz)	Max Reading (dBuV)	Det	2117_20160717	@GHz_HFdB	CC Cur (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
8.5926	36.95	PK-U	36.3	-24.5	0	48.75	-	-	-	-	68.2	-19.45	307	182	H
8.5934	37.19	PK-U	36.3	-24.5	0	48.99	-	-	-	-	68.2	-19.21	200	139	V
*11.50837	36.46	PK-U	38.5	-22.4	0	52.56	-	-	74	-21.44	-	-	360	100	H
*11.50826	36.27	PK-U	38.5	-22.4	0	52.37	-	-	74	-21.63	-	-	360	100	V
17.25919	34.29	PK-U	41.3	-17.4	0	58.19	-	-	-	-	68.2	-10.01	360	100	H
17.25704	34.41	PK-U	41.3	-17.4	0	58.31	-	-	-	-	68.2	-9.89	360	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 PK-U - U-NII: Maximum Peak

### HIGH CHANNEL(9RU) HORIZONTAL



### HIGH CHANNEL(9RU) VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

### HIGH CHANNEL(9RU) DATA

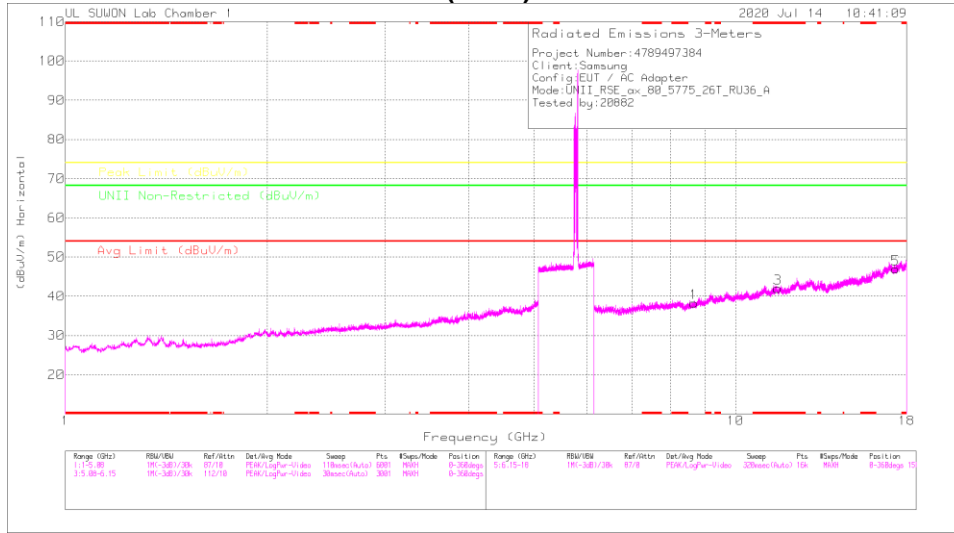
#### Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	317_50168717	SQL_H(FSR)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Height) (cm)	Height (cm)	Polarity
8.68885	37.67	PK-U	36.4	-25.6	0	48.47	-	-	-	-	68.2	-19.73	360	100	H
8.69293	37.68	PK-U	36.4	-25.5	0	48.58	-	-	-	-	68.2	-19.62	360	100	V
*11.58976	36.09	PK-U	38.6	-22.1	0	52.58	-	-	74	-21.42	-	-	360	100	H
*11.59042	36.33	PK-U	38.6	-22.1	0	52.93	-	-	74	-21.17	-	-	360	100	V
17.38575	34.08	PK-U	41.2	-17.7	0	57.58	-	-	-	-	68.2	-10.62	360	100	H
17.38406	34.19	PK-U	41.2	-17.7	0	57.69	-	-	-	-	68.2	-10.51	360	100	V

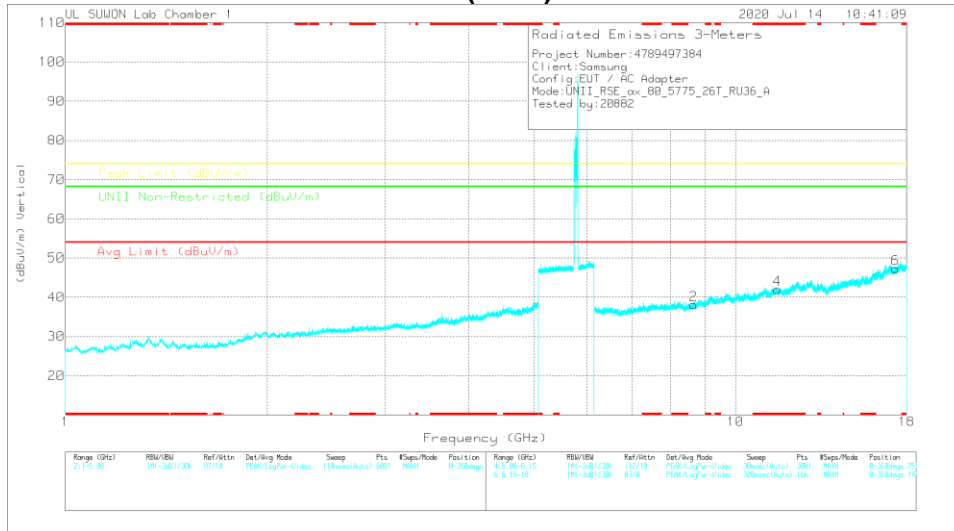
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 PK-U - U-NII: Maximum Peak

**11.8.3. TX ABOVE 1GHz HE80(RU) MODE IN THE 5.8GHz BAND  
 HARMONICS AND SPURIOUS EMISSIONS – ANT1+ANT2**

**MID CHANNEL(36RU) HORIZONTAL**



**MID CHANNEL(36RU) VERTICAL**



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL(36RU) DATA**

**Radiated Emissions**

Frequency (GHz)	Meas Reading (dBuV)	Det	2177_20160717	@GHz_HF@	OC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Meters)	Height (cm)	Polarity
8.66259	37.79	PK-U	36.4	-25.1	0	49.09	-	-	-	-	68.2	-19.11	360	100	H
8.66586	38.73	PK-U	36.4	-25.1	0	50.03	-	-	-	-	68.2	-18.17	360	100	V
*11.54981	38.6	PK-U	38.5	-22.3	0	52.9	-	-	74	-21.2	-	-	360	100	H
*11.552	35.65	PK-U	38.6	-22.3	0	51.98	-	-	74	-22.02	-	-	360	100	V
17.32549	34.18	PK-U	41.2	-17.5	0	57.98	-	-	-	-	68.2	-10.32	360	100	H
17.32384	34.36	PK-U	41.3	-17.6	0	58.06	-	-	-	-	68.2	-10.14	360	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 PK-U - U-NII: Maximum Peak

## 11.9. Spurious Emissions for Simultaneous Transmission

### 11.9.1. Worst test case RSDB condition

Case 1	2.4 GHz WLAN ANT1 + ANT2	5GHz WLAN ANT1 + ANT2
Mode	802.11b	802.11a
Channel	11	140
Frequency[MHz]	2462	5700
Data Rate	1Mbps	6Mbps
Axis (Worst)	X & Z	
Folded condition	Open	

### 11.9.2. Worst test case non-DBS + Bluetooth condition

Case 2	2.4 GHz Bluetooth ANT1	2.4 GHz WLAN ANT2	5GHz WLAN ANT1 + ANT2
Mode	BDR	802.11b	802.11a
Channel	0	11	140
Frequency[MHz]	2402	2462	5700
Data Rate	1 Mbps	1 Mbps	6Mbps
Axis (Worst)	Y & Z		
Folded condition	Open		

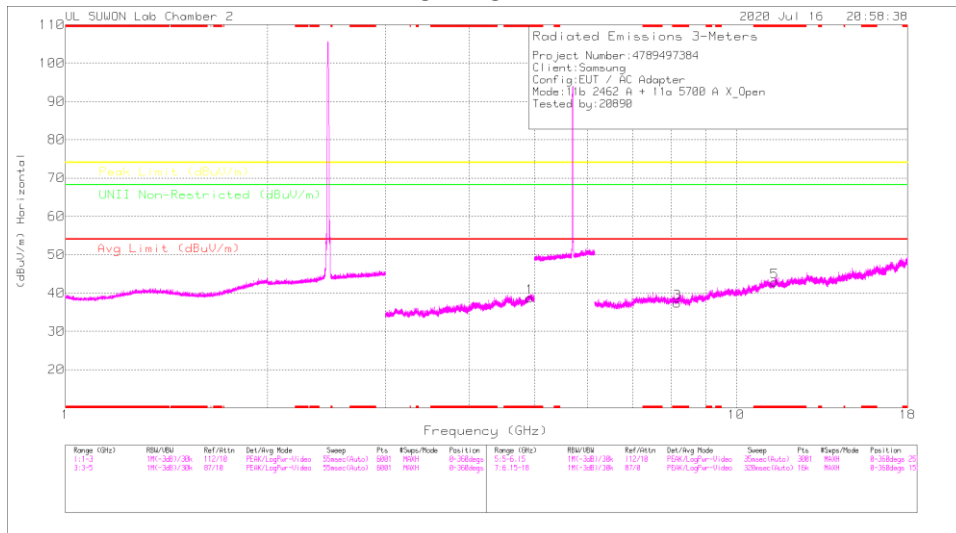
#### **NOTE**

The lowest margin condition among the channels and modes were selected for test. Low, mid, and high channels of 2.4GH WLAN were tested, and the worst case configuration & data were listed in the test report.

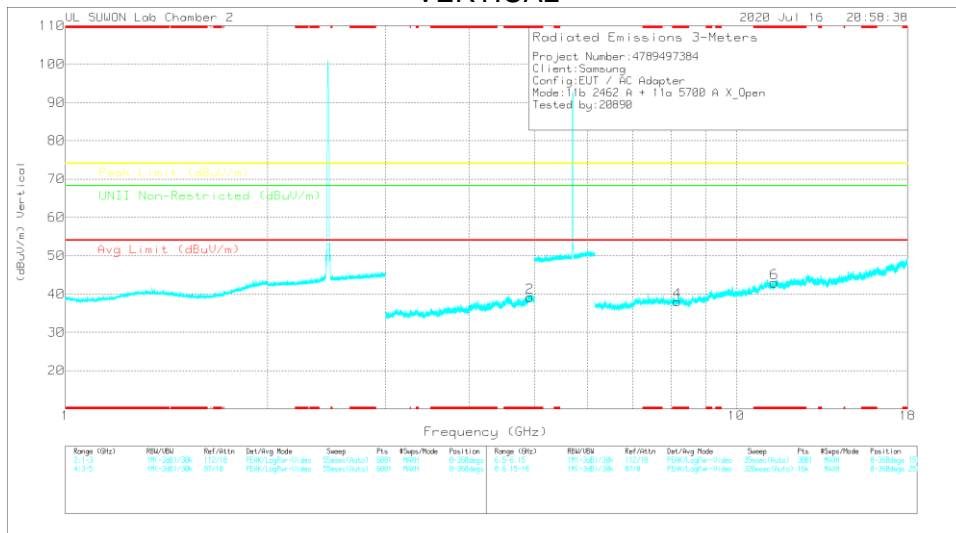
### 11.9.3. Test Results

#### Spurious emission for Simultaneous Transmission Case1. - X axis

#### HORIZONTAL



#### VERTICAL



#### Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	317_00168724	5GHz_LF[dB]	DTS_Noise[dB]	DC Corr [dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.92309	38.78	PK2	34	-26	-4	0	47.18	-	-	74	-25.84	-	-	360	100	H
* 4.92433	38.44	PK2	34	-25.9	-4	0	46.94	-	-	74	-27.06	-	-	360	100	V

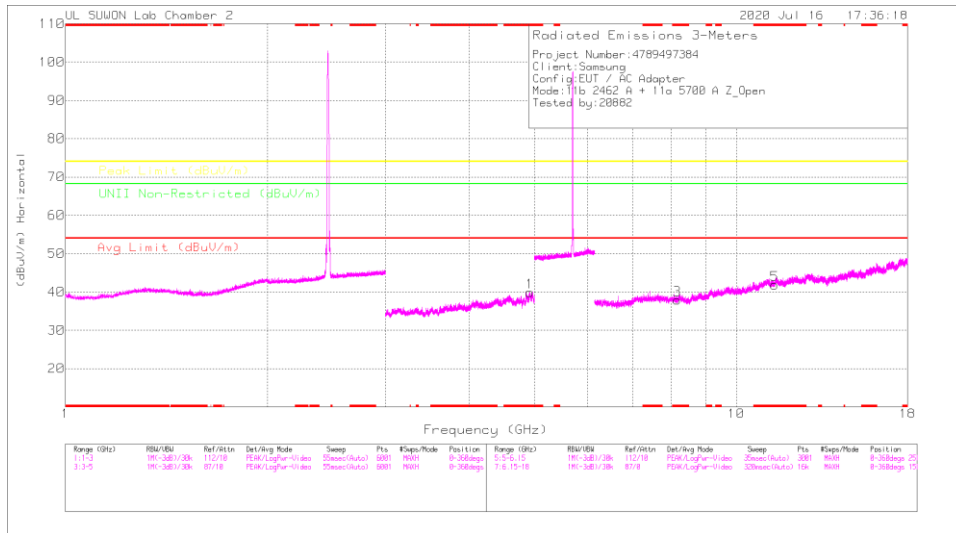
  

Frequency (GHz)	Meter Reading (dBuV)	Det	317_00168724	6GHz_HF[dB]	DC Corr [dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 8.1617	36.65	PK-U	35.9	-23.9	0	48.65	-	-	74	-25.35	-	-	360	100	H
* 8.16102	37.13	PK-U	35.9	-23.9	0	49.13	-	-	74	-24.87	-	-	360	100	V
* 11.3983	34.99	PK-U	38.3	-19.6	0	53.69	-	-	74	-20.31	-	-	360	100	H
* 11.40023	34.02	PK-U	38.3	-19.6	0	52.72	-	-	74	-21.28	-	-	360	100	V

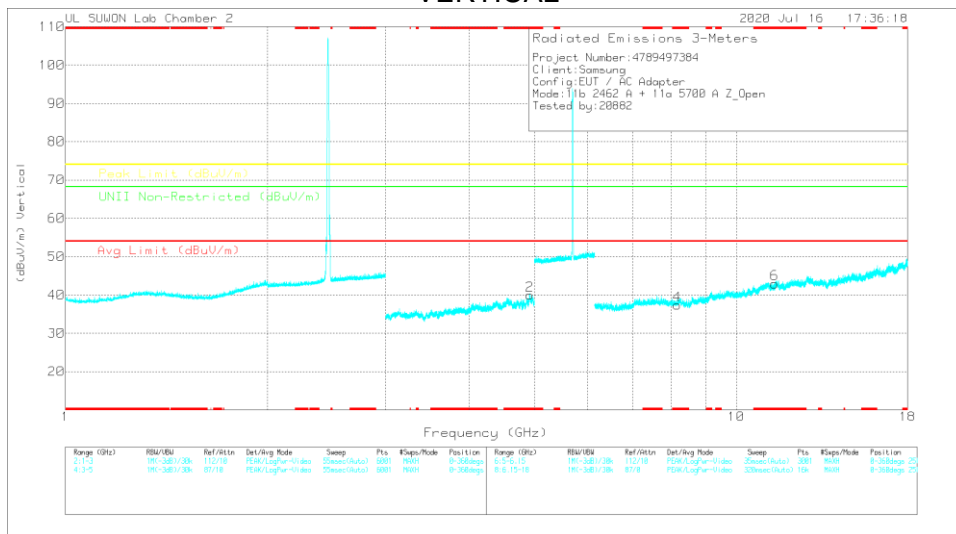
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 PK2 - KDB558074 Method: Maximum Peak  
 PK-U - U-NII: Maximum Peak

**Case1. – Z axis**

**HORIZONTAL**



**VERTICAL**



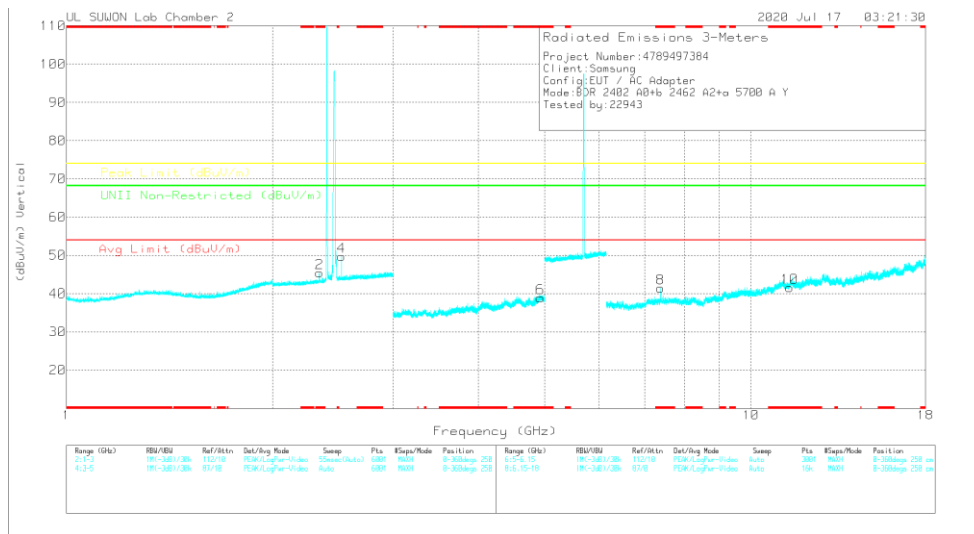
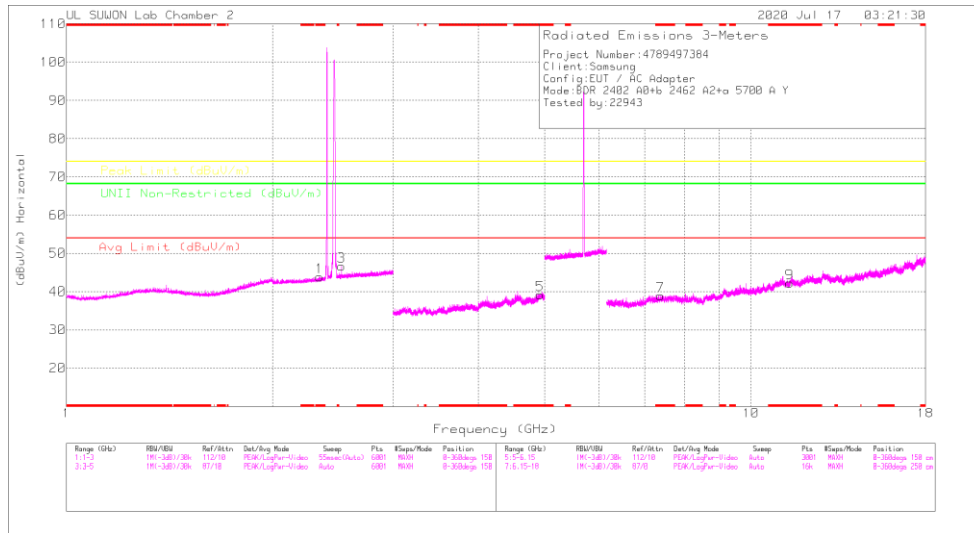
**Radiated Emissions**

Frequency (GHz)	Meas Reading (dBuV)	Det	317_00168724	6GHz_LF1(B)	DC Corr (dB)	Consolid Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.92465	41.55	PK2	34	-25.9	.4	50.05	-	-	74	-23.95	-	-	360	100	V
* 4.92257	42.47	PK2	34	-25.9	.4	50.97	-	-	74	-23.03	-	-	360	100	H

Frequency (GHz)	Meas Reading (dBuV)	Det	317_00168724	6GHz_HP1(B)	DC Corr (dB)	Consolid Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 8.1622	36.76	PK-U	35.9	-23.9	0	48.76	-	-	74	-25.24	-	-	360	100	H
* 8.1628	36.25	PK-U	35.9	-23.9	0	48.25	-	-	74	-25.75	-	-	360	100	V
* 11.40162	34.57	PK-U	38.3	-19.5	0	53.37	-	-	74	-20.63	-	-	360	100	H
* 11.39924	34.04	PK-U	38.3	-19.6	0	52.74	-	-	74	-21.26	-	-	360	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 PK2 - KDB558074 Method: Maximum Peak  
 PK-U - U-NII: Maximum Peak

**Case2. – Y axis**



**Radiated Emissions**

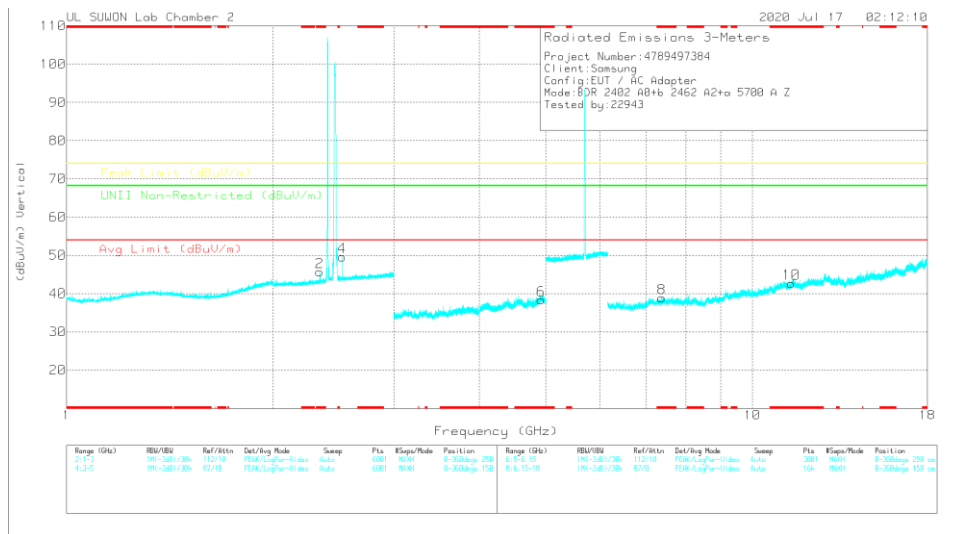
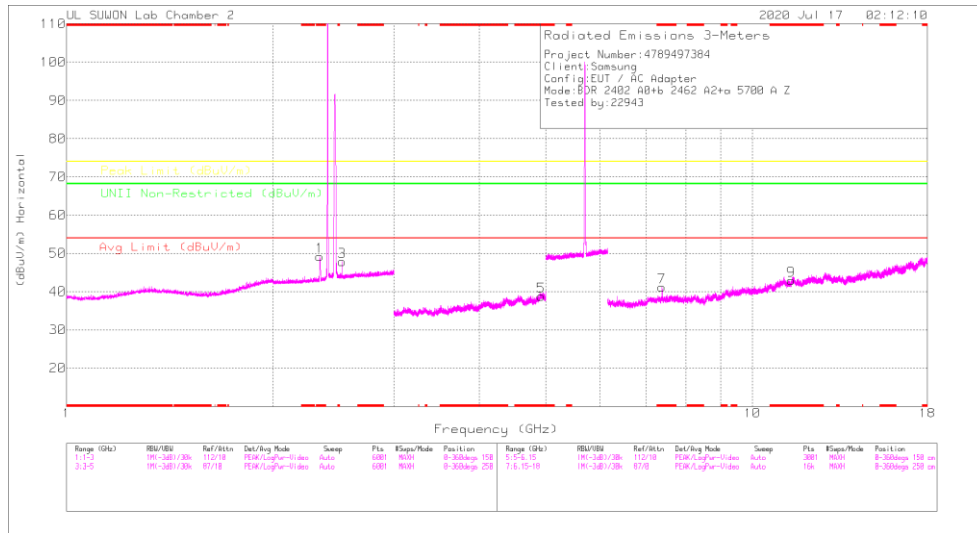
Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	UNII_Noise[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (m)	Polarity	
* 2.34033	41.54	PK2	31.5	-20.6	.5	0	53.34	54	-12.31	74	-20.66	-	-	114	333	H	
* 2.34145	30.29	MAV1	31.5	-20.6	.5	0	41.69	54	-12.31	-	-	-	-	114	333	H	
* 2.34307	43.36	PK2	31.5	-20.6	.5	0	54.76	54	-12.31	74	-19.24	-	-	313	139	V	
* 2.34269	30.42	MAV1	31.5	-20.6	.5	0	41.82	54	-12.18	-	-	-	-	313	139	V	
* 2.52221	45.76	PK2	31.9	-20.3	.5	0	57.96	-	-	-	-	-	-	10.34	48	H	
2.52201	43.64	PK2	31.9	-20.3	.5	0	55.74	-	-	-	-	-	-	88.2	-12.46	304	123

Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00168724	5GHz_LF[dB]	DTB_Noise[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (m)	Polarity
* 4.926	40.97	PK2	34	-25.9	.4	0	49.47	-	-	74	-24.53	-	-	360	100	H
* 4.92534	41.17	PK2	34	-26	.4	0	49.57	-	-	74	-24.43	-	-	360	100	V

Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00168724	5GHz_HF[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (m)	Polarity
* 7.3916	37.47	PK2	36.2	-24.2	0	49.47	-	-	74	-24.53	-	-	69	118	H
* 7.3868	25.17	MAV1	36.2	-24.2	0	37.17	54	-16.83	-	-	-	-	69	118	H
* 7.38505	37.81	PK2	36.2	-24.3	0	49.71	-	-	74	-24.29	-	-	113	127	V
* 7.38851	25.27	MAV1	36.2	-24.2	0	37.27	54	-16.73	-	-	-	-	113	127	V
* 11.40173	34.08	PK-U	38.3	-19.5	0	52.88	-	-	74	-21.12	-	-	0	100	H
* 11.40008	33.89	PK-U	38.3	-19.6	0	52.59	-	-	74	-21.41	-	-	0	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 PK2 - KDB558074 Method: Maximum Peak  
 MAV1 - KDB558074 Option 1 Maximum RMS Average  
 PK-U - U-NII: Maximum Peak

**Case2. - Z axis**



**Radiated Emissions**

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	UNII_Next[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (m)	Polarity
* 2.34059	43.46	PK2	31.5	-20.6	.5	0	54.86	-	-	74	-19.14	-	-	340	173	H
* 2.34143	30.74	MAV1	31.5	-20.6	.5	0	42.14	54	-11.86	-	-	-	-	340	173	H
* 2.34035	44.52	PK2	31.5	-20.6	.5	0	55.92	-	-	74	-18.08	-	-	58	106	V
* 2.34317	30.99	MAV1	31.5	-20.6	.5	0	42.39	54	-11.61	-	-	-	-	58	106	V
2.5225	42.6	PK2	31.9	-20.3	.5	0	54.7	-	-	-	-	68.2	-13.5	232	176	H
2.52198	46.97	PK2	31.9	-20.3	.5	0	59.07	-	-	-	-	68.2	-9.13	86	103	V

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	5GHz_LF[dB]	DTL_Next[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (m)	Polarity
* 4.92331	41.56	PK2	34	-26	.4	0	49.26	-	-	74	-24.04	-	-	360	100	H
* 4.92468	41.35	PK2	34	-25.3	.4	0	49.85	-	-	74	-24.15	-	-	360	100	V

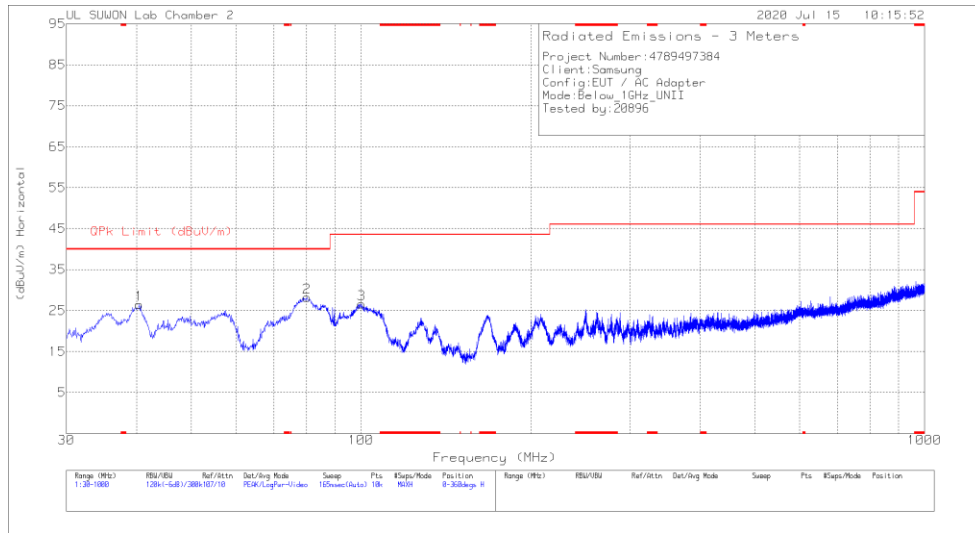
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HF[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (m)	Polarity	
* 7.38809	37.26	PK2	36.2	-24.3	0	49.16	-	-	74	-24.84	-	-	-	57	127	H
* 7.38515	25.03	MAV1	36.2	-24.3	0	36.93	54	-17.07	-	-	-	-	-	57	127	H
* 7.39304	36.87	PK2	36.2	-24.2	0	48.87	-	-	74	-25.13	-	-	-	299	115	V
* 7.38878	24.87	MAV1	36.2	-24.3	0	36.77	54	-17.23	-	-	-	-	-	299	115	V
* 11.39803	34.3	PK-U	38.3	-19.6	0	53	-	-	74	-21	-	-	-	360	100	H
* 11.39937	34.29	PK-U	38.3	-19.6	0	52.99	-	-	74	-21.01	-	-	-	360	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 PK2 - KDB558074 Method: Maximum Peak  
 MAV1 - KDB558074 Option 1 Maximum RMS Average  
 PK-U - U-NII: Maximum Peak

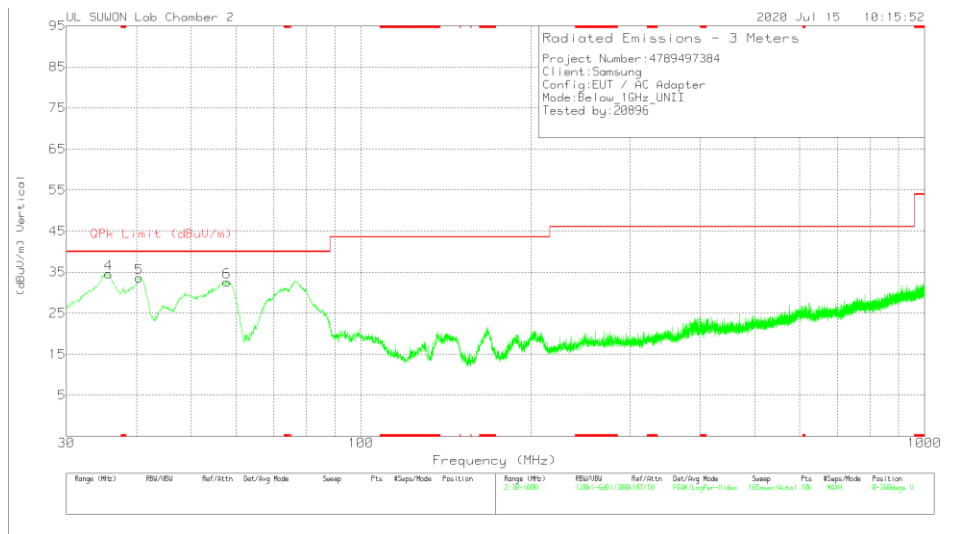


## 12. WORST-CASE BELOW 1 GHz

### SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)



### SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)



### Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.379	39.46	Pk	18.8	-31.8	26.46	40	-13.54	0-360	400	H
2	80.149	47.06	Pk	12.6	-31.4	28.26	40	-11.74	0-360	200	H
3	100.131	40.26	Pk	17.7	-31.4	26.56	43.52	-16.96	0-360	300	H
4	35.626	49.58	Pk	16.9	-31.9	34.58	40	-5.42	0-360	100	V
5	40.379	46.55	Pk	18.8	-31.8	33.55	40	-6.45	0-360	100	V
6	57.839	45.46	Pk	18.9	-31.8	32.56	40	-7.44	0-360	100	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

### 13. AC POWER LINE CONDUCTED EMISSIONS

#### LIMITS

FCC §15.207 (a)  
IC RSS-GEN Clause 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 <sup>*</sup>	56 to 46 <sup>*</sup>
0.5-5	56	46
5-30	60	50

<sup>\*</sup>Decreases with the logarithm of the frequency.

#### TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

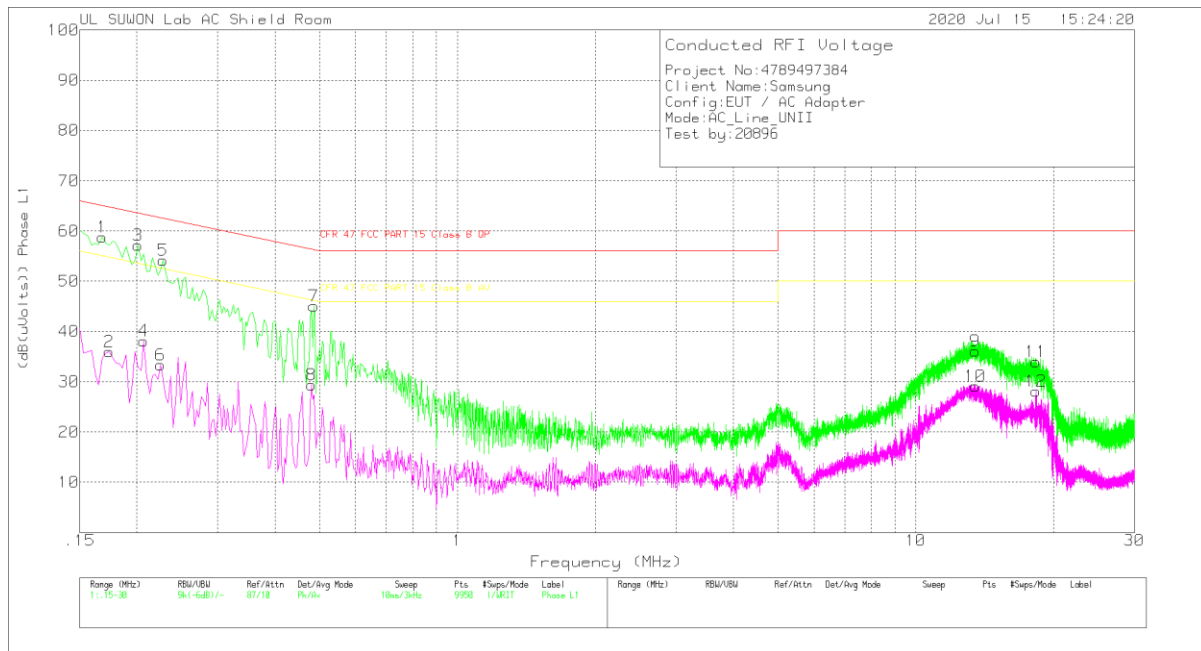
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

#### RESULTS

**WORST EMISSIONS**

**LINE 1 DATA**



**Trace Markers**

Range 1: Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h Ex_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
1	.168	48.67	Pk	10	.1	58.77	65.06	-6.29	-	-
2	.174	25.69	Av	10.1	.2	35.99	-	-	54.77	-18.78
3	.201	47.11	Pk	9.9	.2	57.21	63.57	-6.36	-	-
4	.207	28.05	Av	9.9	.2	38.15	-	-	53.32	-15.17
5	.228	44.17	Pk	9.8	.2	54.17	62.52	-8.35	-	-
6	.225	23.31	Av	9.8	.2	33.31	-	-	52.63	-19.32
7	.486	35.02	Pk	9.9	.2	45.12	56.24	-11.12	-	-
8	.48	19.27	Av	9.9	.2	29.37	-	-	46.34	-16.97
9	13.479	25.6	Pk	10.1	.4	36.1	60	-23.9	-	-
10	13.479	18.6	Av	10.1	.4	29.1	-	-	50	-20.9
11	18.3	23.38	Pk	10.2	.4	33.98	60	-26.02	-	-
12	18.3	17.48	Av	10.2	.4	28.08	-	-	50	-21.92

Pk - Peak detector

Av - Average detection

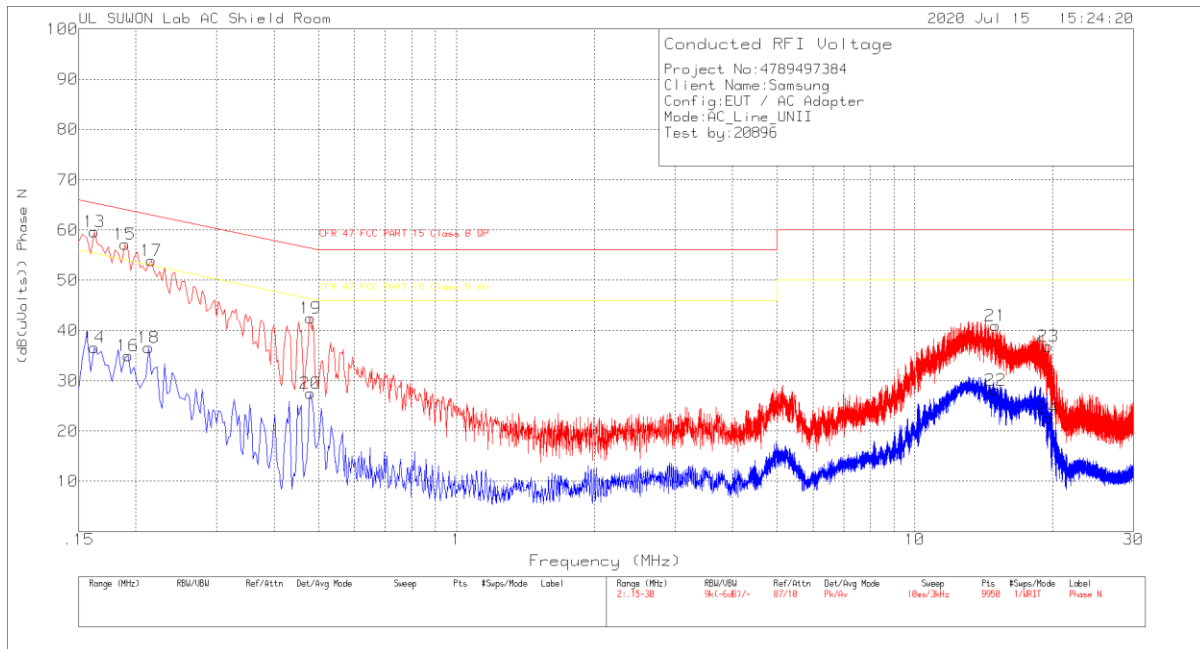
**Quasi-Peak Emissions**

Range 1: Phase L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h Ex_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
.16875	41.13	Qp	10.1	.1	51.33	65.02	-13.69	-	-
.17415	42.98	Qp	10	.2	53.18	64.76	-11.58	-	-
.20025	40.52	Qp	9.9	.2	50.62	63.6	-12.98	-	-
.22815	37.82	Qp	9.8	.2	47.82	62.52	-14.7	-	-

Qp - Quasi-Peak detector

LINE 2 DATA



Trace Markers

Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h EX_N[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
13	.162	49.56	Pk	10	.1	59.66	65.36	-5.7	-	-
14	.162	26.5	Av	10	.1	36.6	-	-	55.36	-18.76
15	.189	47.01	Pk	10	.2	57.21	64.08	-6.87	-	-
16	.192	24.75	Av	10	.2	34.95	-	-	53.95	-19
17	.216	43.91	Pk	9.8	.2	53.91	62.97	-9.06	-	-
18	.213	26.5	Av	9.9	.2	36.6	-	-	53.09	-16.49
19	.48	32.31	Pk	9.9	.2	42.41	56.34	-13.93	-	-
20	.48	17.36	Av	9.9	.2	27.46	-	-	46.34	-18.88
21	15.006	30.45	Pk	10.1	.4	40.95	60	-19.05	-	-
22	15.009	17.63	Av	10.1	.4	28.13	-	-	50	-21.87
23	19.545	26.14	Pk	10.3	.4	36.84	60	-23.16	-	-
24	19.548	11.82	Av	10.3	.4	22.52	-	-	50	-27.48

Pk - Peak detector

Av - Average detection

Quasi-Peak Emissions

Range 2: Phase N .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h EX_N[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
.16125	44.67	Qp	9.9	.1	54.67	65.4	-10.73	-	-
.18825	42.11	Qp	10	.2	52.31	64.11	-11.8	-	-
.19125	39.89	Qp	10	.2	50.09	63.98	-13.89	-	-
.21375	39.46	Qp	9.8	.2	49.46	63.06	-13.6	-	-

Qp - Quasi-Peak detector

## 14. DYNAMIC FREQUENCY SELECTION

### 14.1. OVERVIEW

#### 14.1.1. LIMITS

##### FCC

§15.407 (h), FCC KDB 905462 D02 “COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION” and KDB 905462 D03 “U-NII CLIENT DEVICES WITHOUT RADAR DETECTION CAPABILITY”.

**Table 1: Applicability of DFS requirements prior to use of a channel**

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client (with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

**Table 2: Applicability of DFS requirements during normal operation**

Requirement	Operational Mode		
	Master	Client (without DFS)	Client (with DFS)
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required	Yes

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar DFS	Client (without DFS)
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
<p><b>Note:</b> Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in all 20 MHz channel blocks and a null frequency between the bonded 20 MHz channel blocks.</p>		

**Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring**

Maximum Transmit Power	Value (see notes)
E.I.R.P. $\geq$ 200 mill watt	-64 dBm
E.I.R.P. < 200 mill watt and power spectral density < 10 dBm/MHz	-62 dBm
E.I.R.P. < 200 mill watt that do not meet power spectral density requirement	-64 dBm
<p><b>Note 1:</b> This is the level at the input of the receiver assuming a 0 dBi receive antenna  <b>Note 2:</b> Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.  <b>Note 3:</b> E.I.R.P. is based on the highest antenna gain. For MIMO devices refer to KDB publication 662911 D01.</p>	

**Table 4: DFS Response requirement values**

Parameter	Value
<i>Non-occupancy period</i>	30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds (See Note 1)
<i>Channel Closing Transmission Time</i>	200 milliseconds + approx. 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)
<i>U-NII Detection Bandwidth</i>	Minimum 100% of the U- NII 99% transmission power bandwidth. (See Note 3)
<p><b>Note 1:</b> <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.  <b>Note 2:</b> The <i>Channel Closing Transmission Time</i> is comprised of 200 milliseconds starting at the beginning of the <i>Channel Move Time</i> plus any additional intermittent control signals required to facilitate a <i>Channel move</i> (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.  <b>Note 3:</b> During the <i>U-NII Detection Bandwidth</i> detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.</p>	

**Table 5 – Short Pulse Radar Test Waveforms**

Radar Type	Pulse Width (usec)	PRI (usec)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in table 5a	Roundup: $\{(1/360) \times (19 \times 10^6 \text{ PRI}_{\text{usec}})\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 usec. With a minimum increment of 1 usec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
<b>Note 1:</b> Short Pulse Radar Type 0 should be used for the <i>Detection Bandwidth</i> test, <i>Channel Move Time</i> , and <i>Channel Closing Time</i> tests.					

**Table 6 – Long Pulse Radar Test Signal**

Radar Waveform Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

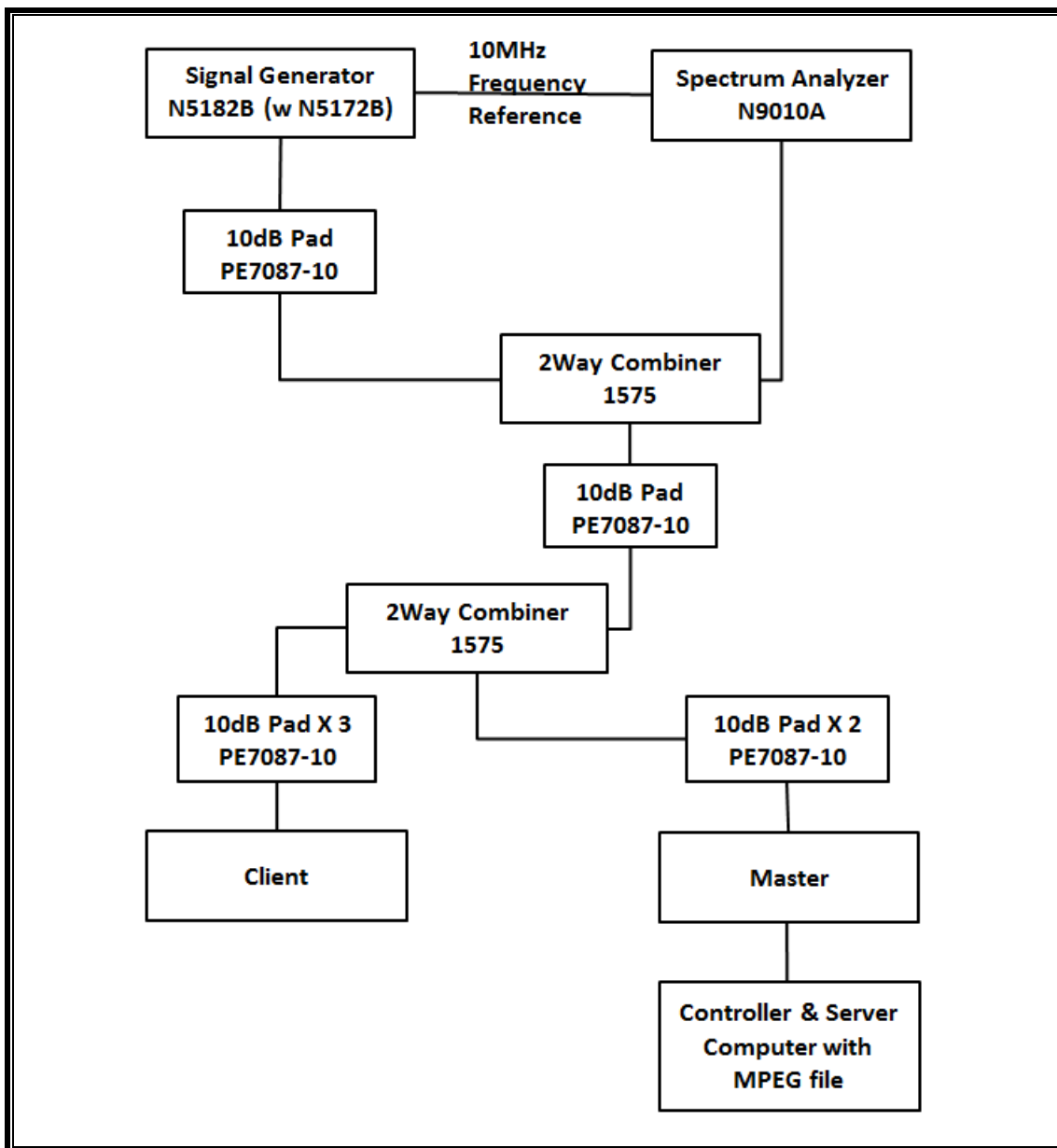
**Table 7 – Frequency Hopping Radar Test Signal**

Radar Waveform Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	9	0.333	300	70%	30



### 14.1.2. TEST AND MEASUREMENT SYSTEM

#### CONDUCTED METHOD SYSTEM BLOCK DIAGRAM



## **SYSTEM OVERVIEW**

The short pulse and long pulse signal generating system utilizes the Keysite Signal Studio for Pulse Building as N5172B. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 1, 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of KDB 905462 D02. The frequency of the signal generator is incremented in 1 MHz steps from  $F_L$  to  $F_H$  for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

## **SYSTEM CALIBRATION**

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of –64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is –64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

**ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL**

A link is established between the Master and Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. The video test file is streamed to generate WLAN traffic. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

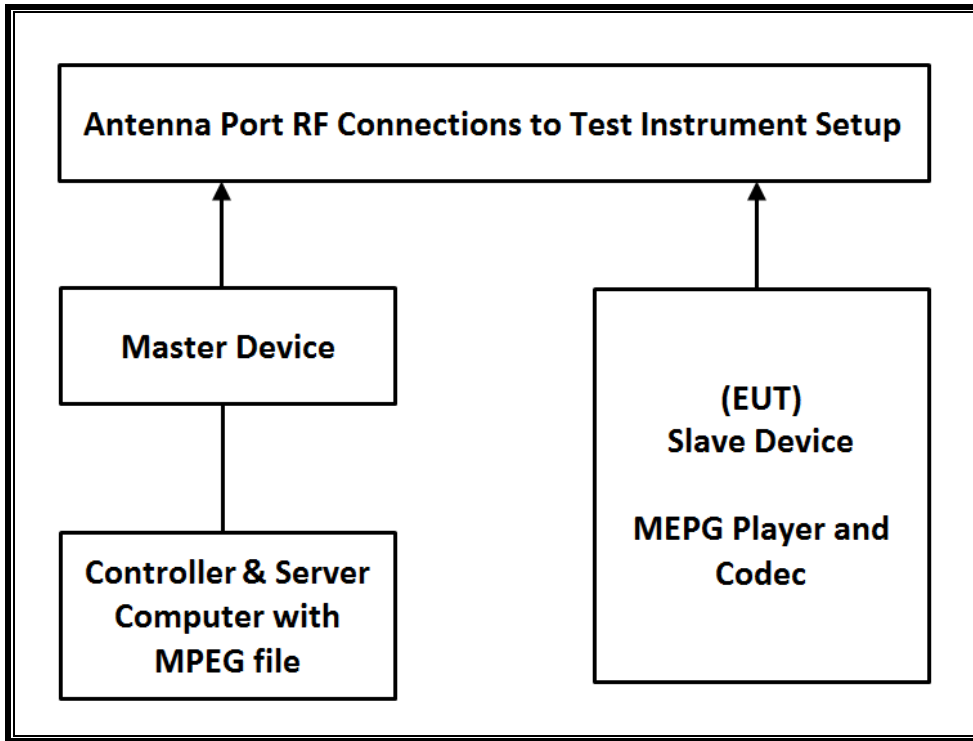
**TEST AND MEASUREMENT EQUIPMENT**

The following test and measurement equipment was utilized for the DFS tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	S/N	Next Cal Due
Spectrum Analyzer, 7 GHz	Agilent / HP	N9010A	MY54200580	08-07-20
Vector Signal Generator, 6GHz	Agilent / HP	N5182B	MY53051241	08-06-20
Combiner	WEINSCHTEL	WA1534	UL001	02-05-21
Combiner	WEINSCHTEL	WA1535	UL002	02-05-21

**14.1.3. SETUP OF EUT**

**CONDUCTED METHOD EUT TEST SETUP**



**SUPPORT EQUIPMENT**

The following support equipment was utilized for the DFS tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Wireless Access Point	Cisco	AIR-CAP3702E-A-K9	FTX182276QX	LDK102087
Notebook PC (Controller/Server)	HP	HP EliteDesk 800 G1 TWR	CZC4125J25	DoC

#### **14.1.4. DESCRIPTION OF EUT**

The EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges.

The EUT is a Slave Device without Radar Detection.

The highest power level of the widest bandwidth (802.11ac VHT80) within these bands is 14.20 dBm in the 5250-5350 MHz band and 15.45 dBm in the 5470-5725 MHz band.

The antenna assembly utilized two antenna.

Gain of ANT1 : -4.82 dBi for UNII 2A and -5.12 dBi for UNII 2C.

Gain of ANT2 : -6.26 dBi for UNII 2A and -5.44 dBi for UNII 2C.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required conducted threshold at the antenna port is  $-64 + 1 = -63$  dBm.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

The EUT uses one transmitter/receiver chain connected to an antenna to perform radiated tests.

WLAN traffic that meets or exceeds the minimum required loading was generated by transferring a data stream from the controller/server PC to the EUT using iPerf version 2.0.5 software package.

TPC is not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11 architecture. Three nominal channel bandwidths are implemented: 20 MHz, 40 MHz and 80 MHz.

The software installed in the access point is 12.4(25d)JA1.

#### **UNIFORM CHANNEL SPREADING**

This requirement is not applicable to Slave radio devices.

#### **OVERVIEW OF MASTER DEVICE WITH RESPECT TO §15.407 (h) REQUIREMENTS**

The Master Device is a Cisco Access Point, FCC ID: LDK102087. The minimum antenna gain for the Master Device is 6 dBi.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is  $-64 + 1 = -63$  dBm.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

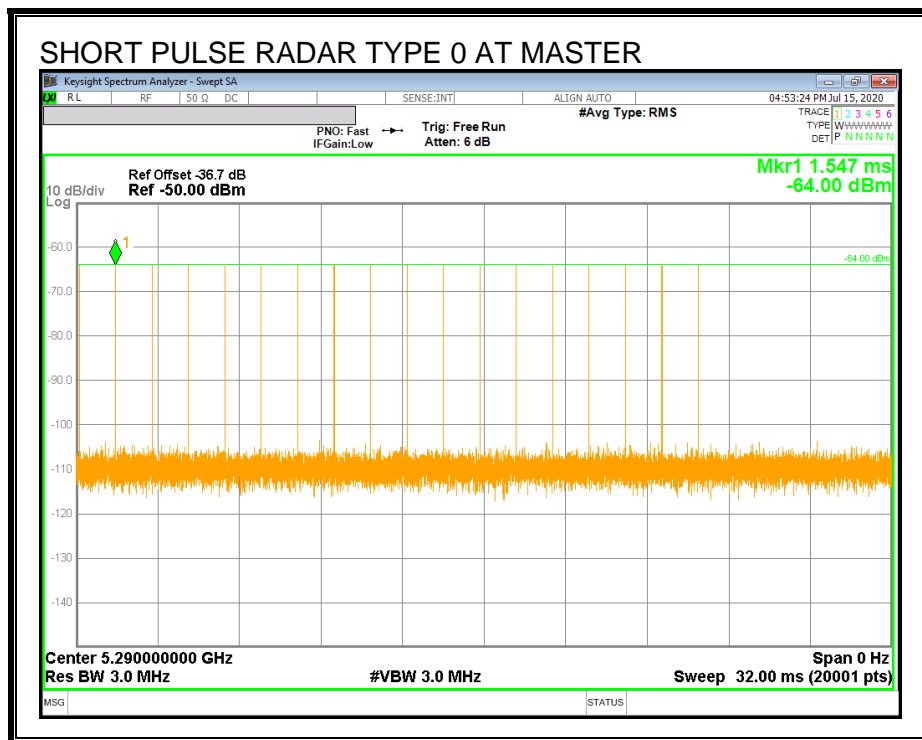
## 14.2. RESULTS FOR 80 MHz BANDWIDTH (UNII-2A BAND)

### 14.2.1. TEST CHANNEL

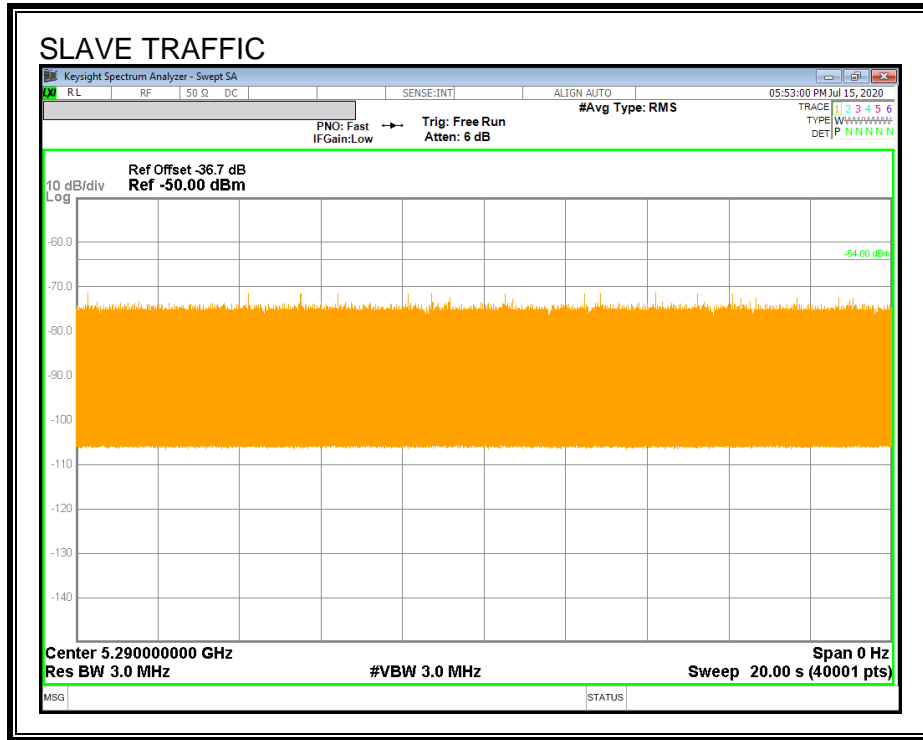
All tests were performed at a channel center frequency of 5290 MHz.

### 14.2.2. RADAR WAVEFORM AND TRAFFIC

#### RADAR WAVEFORM



**TRAFFIC**



### 14.2.3. OVERLAPPING CHANNEL TESTS

#### RESULTS

These tests are not applicable.

### 14.2.4. MOVE AND CLOSING TIME

#### REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =  
(Number of analyzer bins showing transmission) \* (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

#### RESULTS

Channel Move Time (sec)	Limit (sec)
0.720	10

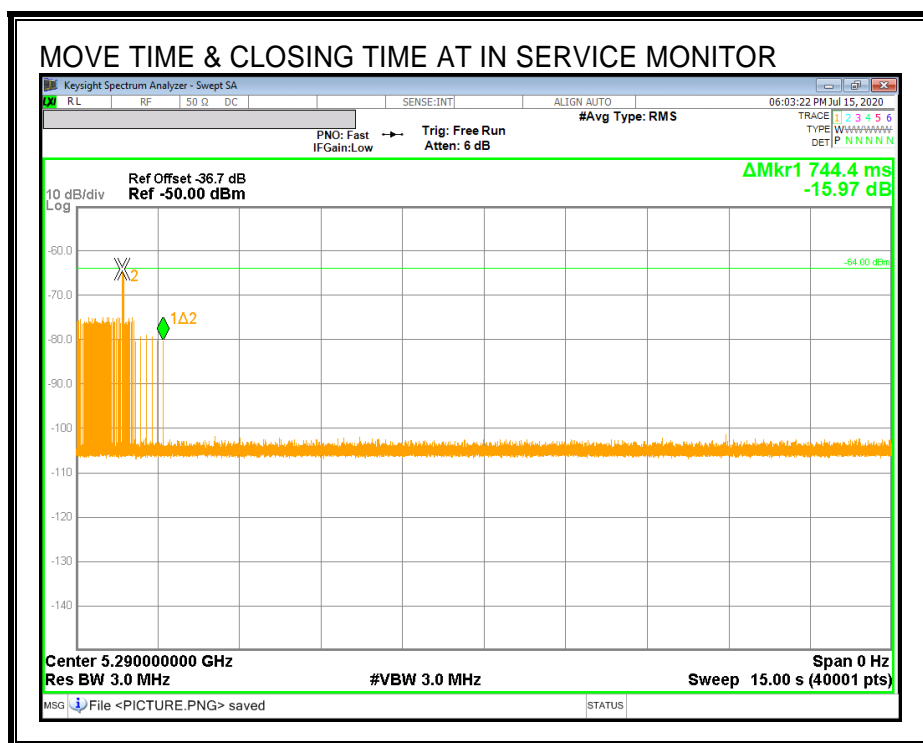
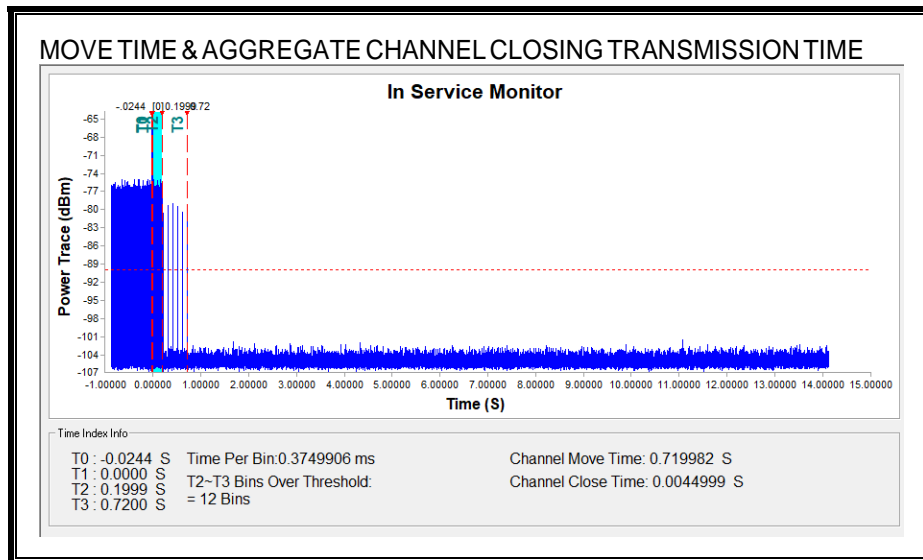
Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
4.500	60



**MOVE TIME & CHANNEL CLOSING TIME**

**AGGREGATE CHANNEL CLOSING TRANSMISSION TIME**

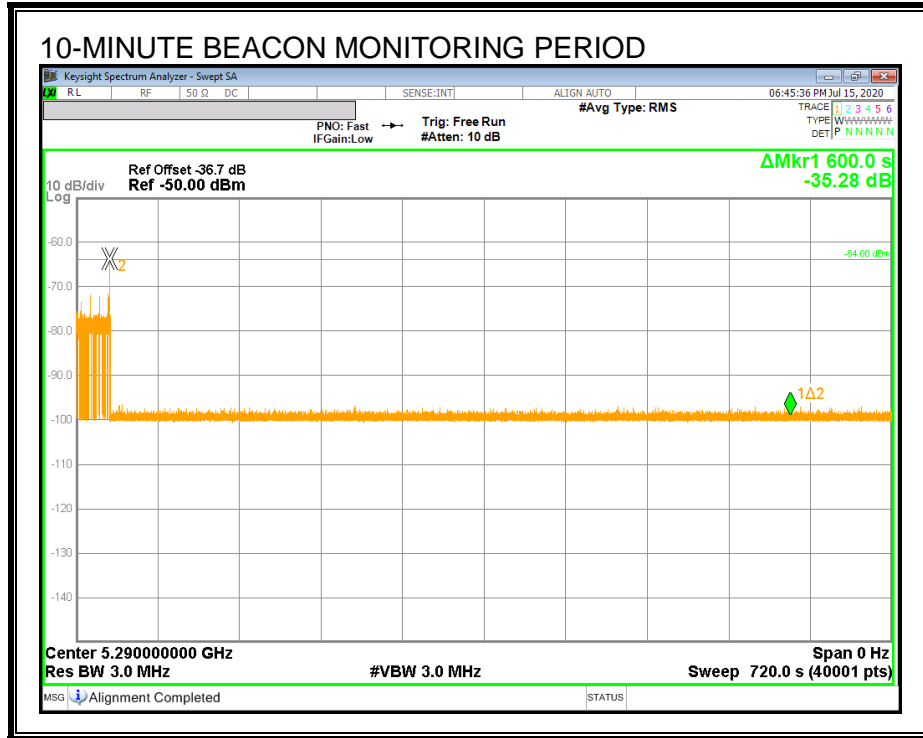
No transmissions are observed during the aggregate monitoring period.



**NON-OCCUPANCY PERIOD**

**RESULTS**

No EUT transmissions were observed on the test channel during the 10-minute observation time.



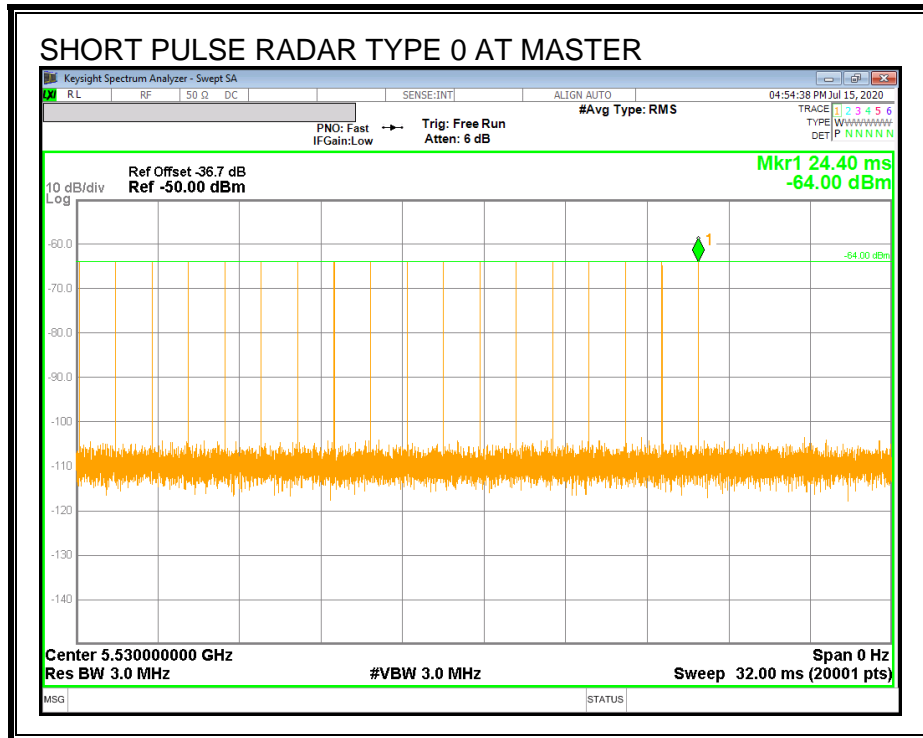
### 14.3. RESULTS FOR 80 MHz BANDWIDTH (UNII-2C BAND)

#### 14.3.1. TEST CHANNEL

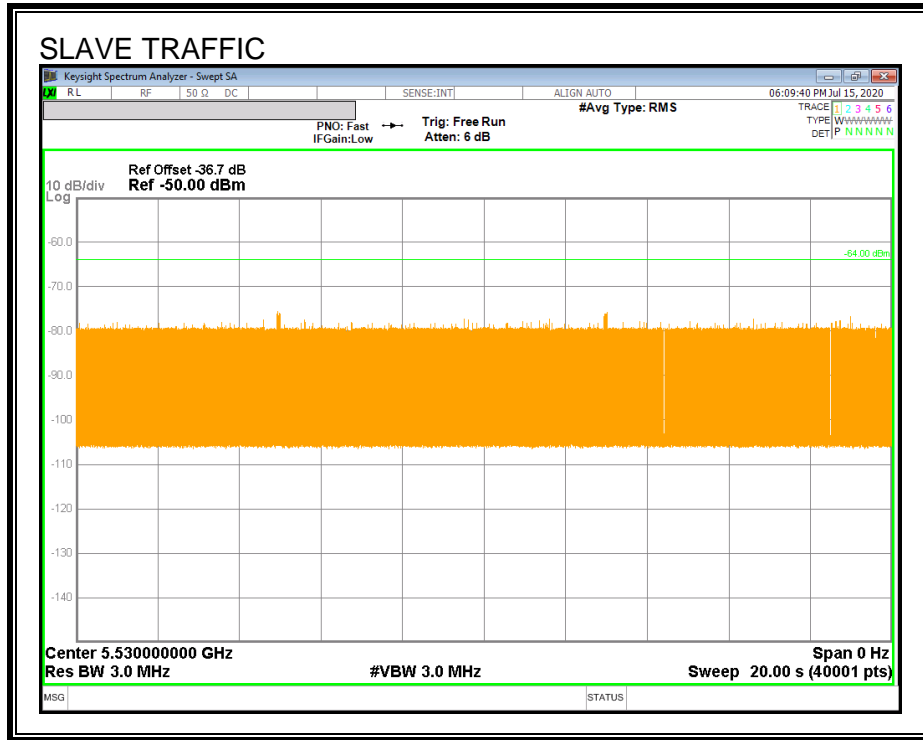
All tests were performed at a channel center frequency of 5530 MHz.

#### 14.3.2. RADAR WAVEFORM AND TRAFFIC

##### RADAR WAVEFORM



**TRAFFIC**



### 14.3.3. OVERLAPPING CHANNEL TESTS

#### RESULTS

These tests are not applicable.

### 14.3.4. MOVE AND CLOSING TIME

#### REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =  
(Number of analyzer bins showing transmission) \* (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

#### RESULTS

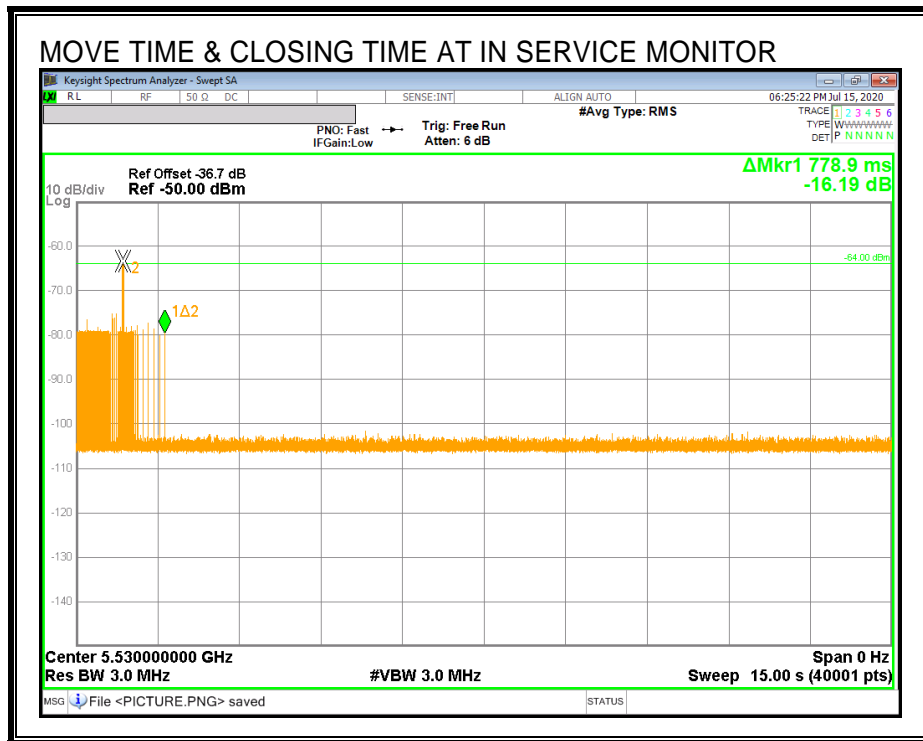
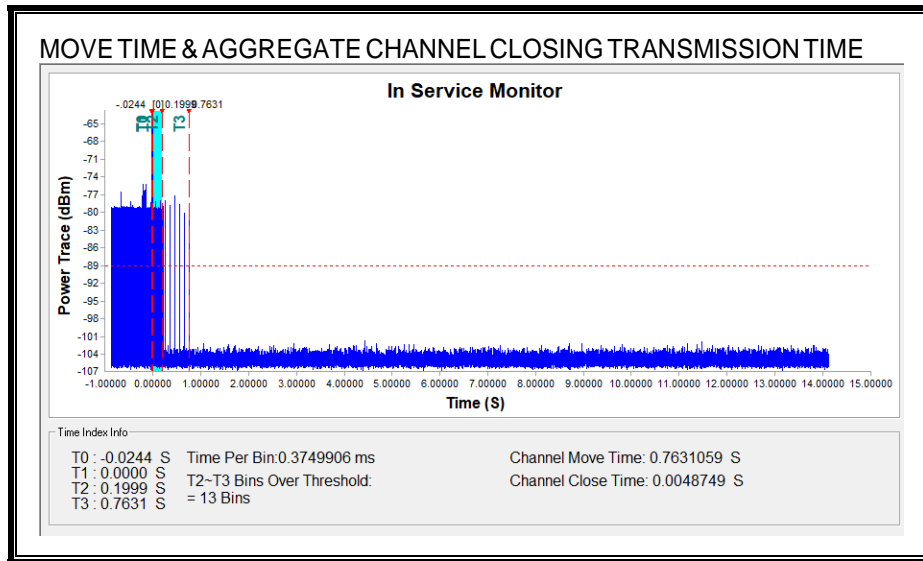
Channel Move Time (sec)	Limit (sec)
0.763	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
4.875	60

**MOVE TIME & CHANNEL CLOSING TIME**

**AGGREGATE CHANNEL CLOSING TRANSMISSION TIME**

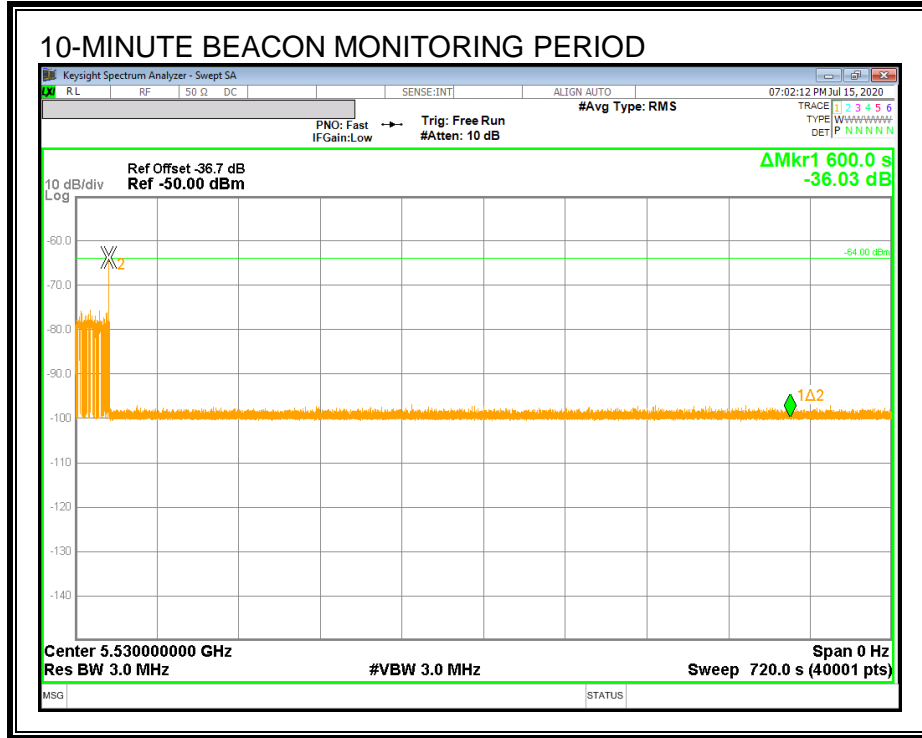
No transmissions are observed during the aggregate monitoring period.



**NON-OCCUPANCY PERIOD**

**RESULTS**

No EUT transmissions were observed on the test channel during the 10-minute observation time.



**END OF TEST REPORT**