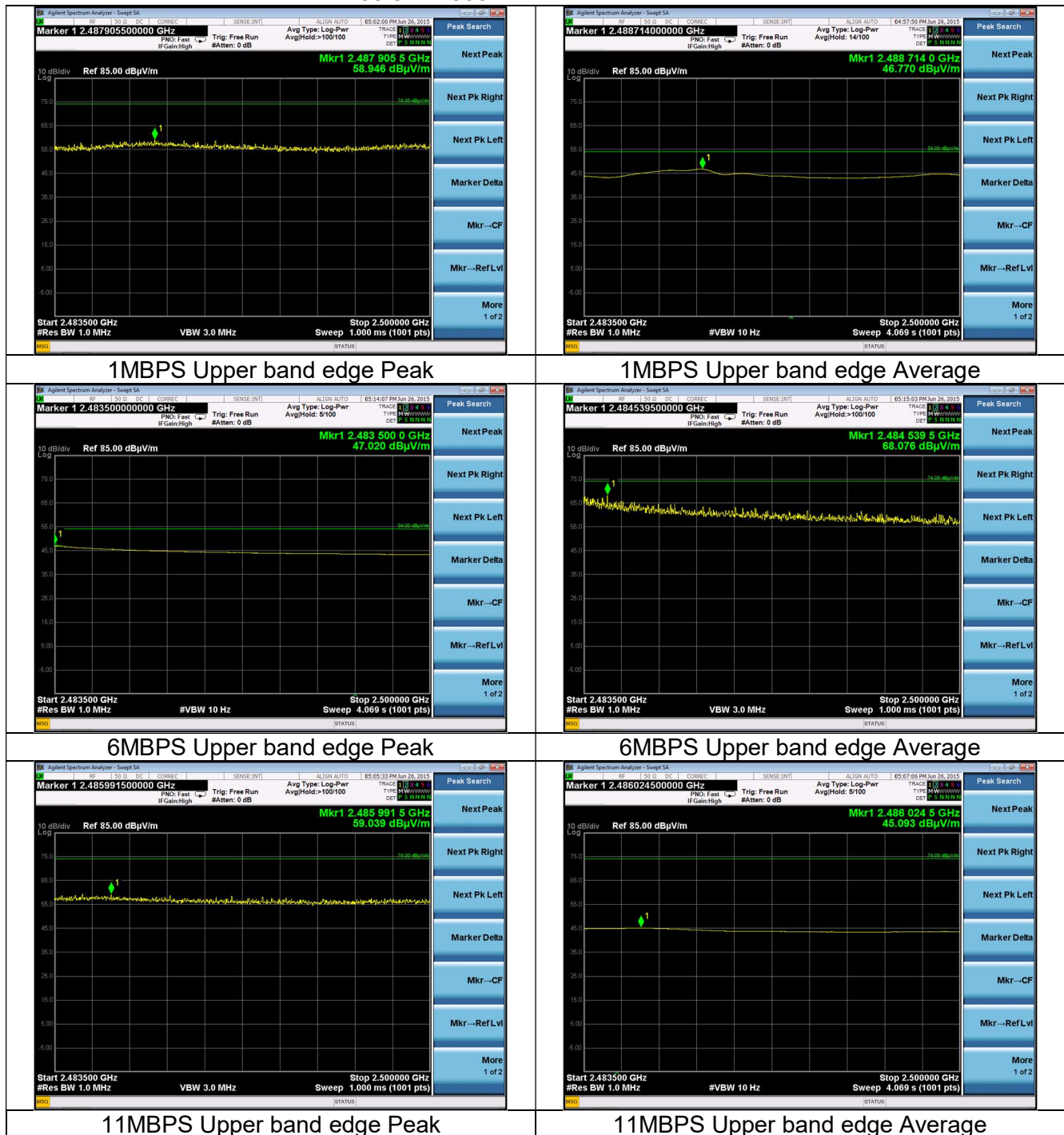
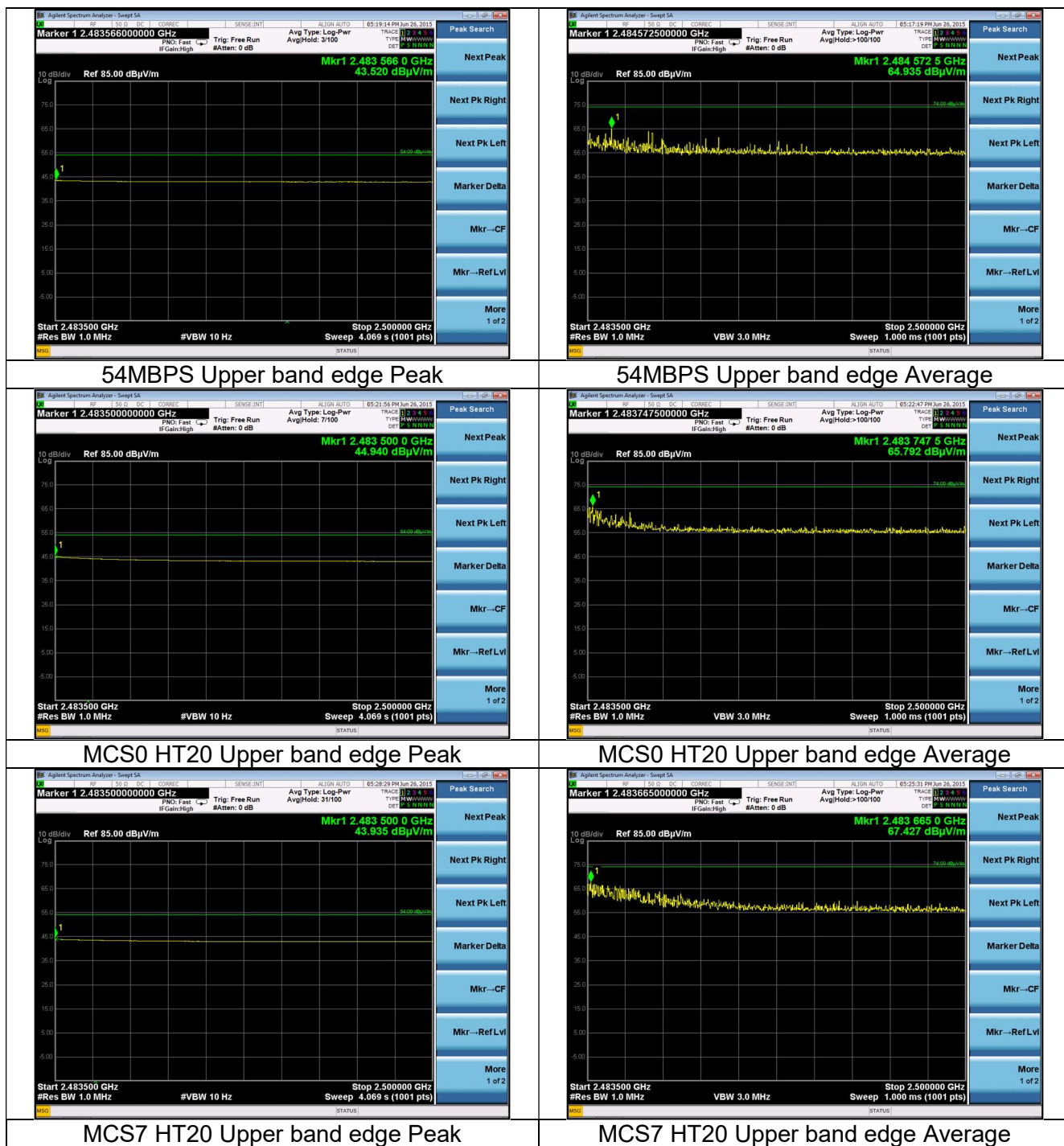


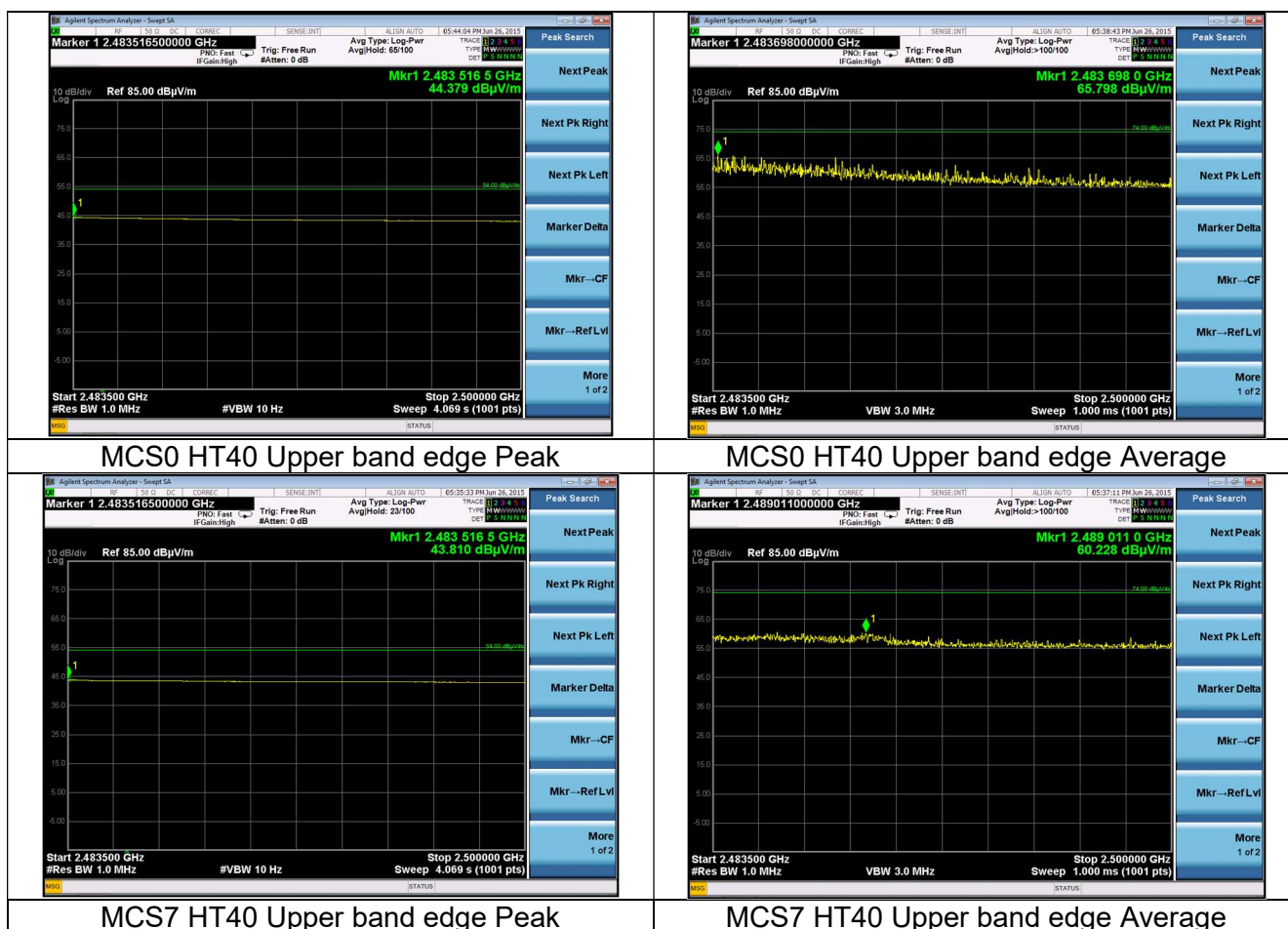
WLAN Radiated Band-edge in Restricted Band:
2483.5 to 2500 MHz Restricted band



Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234



Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234



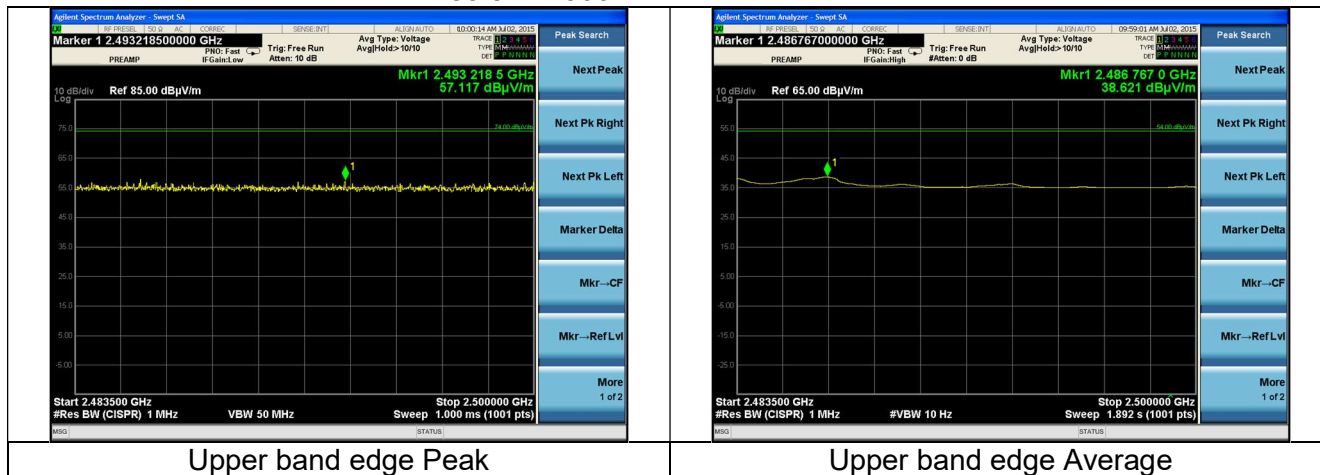
Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

BLE data:

Peak Frequency (MHz)	Peak (dBuV/m)	Peak limit (dBuV/m)	Peak Margin (B)	Average Frequency (MHz)	Average (dBuV/m)	Average limit (dBuV/m)	Average Margin (B)
2493.2	57.1	74.0	16.9	2486.8	38.3	54.0	15.7

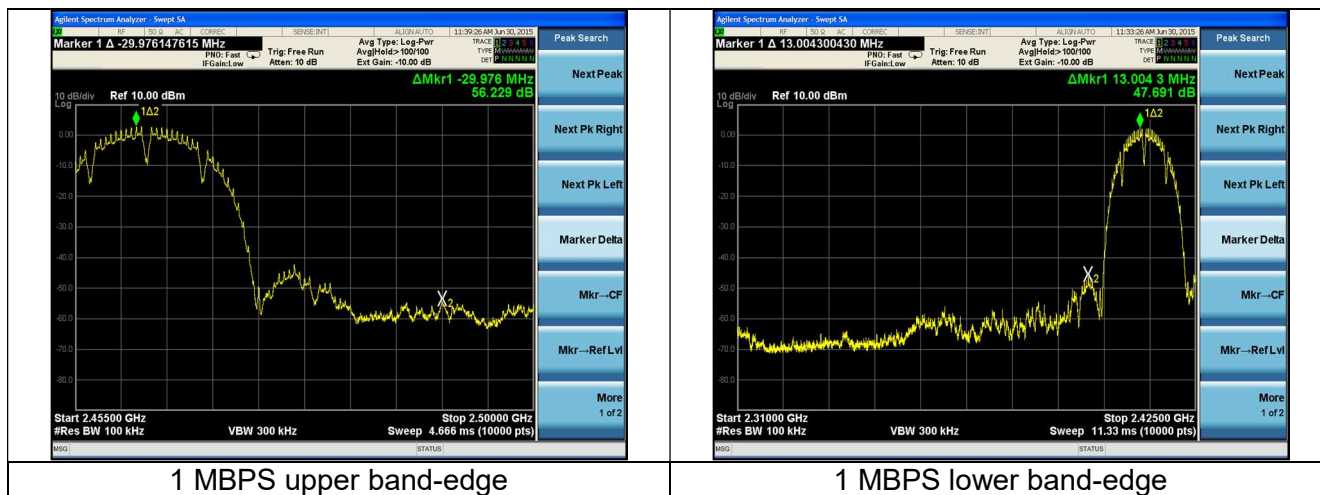
BLE Radiated Band-edge in Restricted Band:

2483.5 to 2500 MHz Restricted band



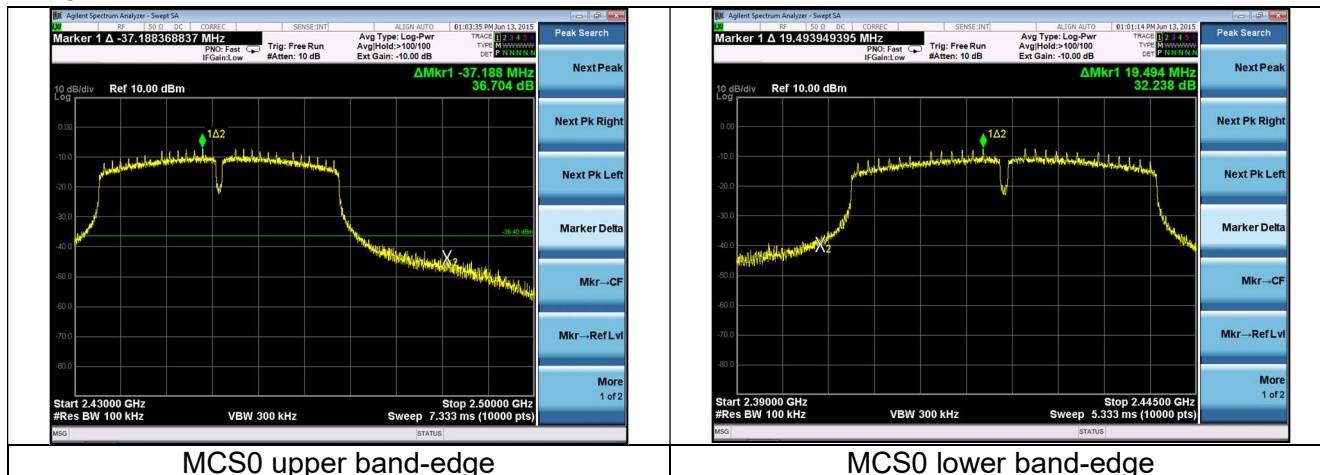
Band-edge in 100kHz bandwidth.

2.4GHz WLAN

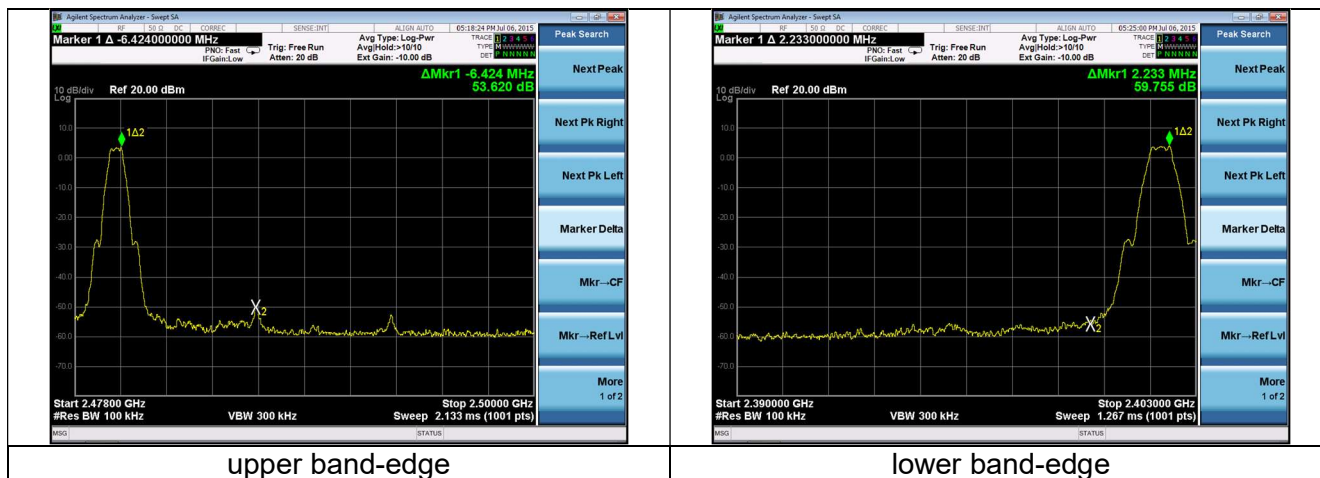


Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

HT40



2.4GHz BLE



Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

EXHIBIT 9. POWER OUTPUT (CONDUCTED): 15.247(b)

Test Engineer(s): Khairul Aidi Zainal

9.1 - Method of Measurements

The conducted RF output power of the EUT was measured at the antenna port using a short RF cable along with an attenuator as protection for the spectrum analyzer. The loss from the cable and the attenuator were added on the analyzer as gain offset settings there by allowing direct measurements without the need for any further corrections. The unit was configured to run in a continuous transmit mode, while being supplied with typical data as a modulation source.

Measurement procedure used was FCC OET KDB 558074 D01 Measurement Guidance v03r03 section 9.2.2.4 for WLAN and 9.1.1 for BLE

9.2 - Test Data

The data reported includes all necessary correction factors. These correction factors are loaded onto the EMI receiver when measurements are performed.

Reported Measurement data = Raw receiver measurement (dBm) + Cable factor (dB) + Miscellaneous factors when applicable (dB).

Generic example of reported data at 2440 MHz:

Reported Measurement data = 8.55 (raw receiver measurement in dBm) + 0.85 (cable factor in dB) = 9.4 (dBm).

Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

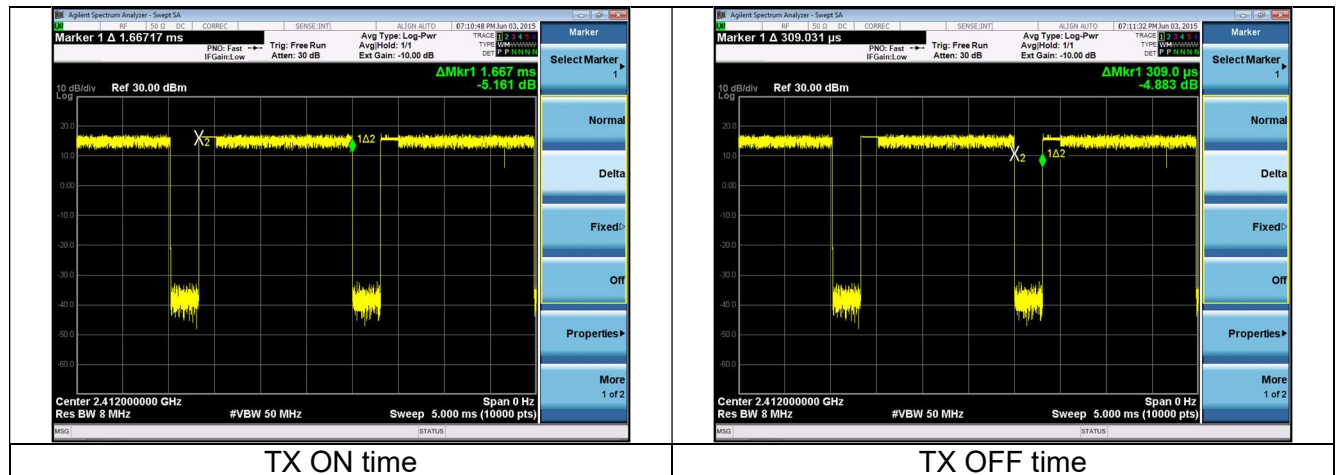
9.2.1. WLAN Maximum conducted average power:

9.2.1.1 Duty cycle:

Measurement procedure: **FCC OET KDB 558074 D01 Measurement Guidance v03r03 section 6**

Modulation	802.11 Standard	Data Rate (Mbps)	TX on time (ms)	TX off time (ms)	Duty Cycle	Duty cycle correction factor (dB)
DBPSK	b	1.0	16.430	0.282	0.98	0.0
DQPSK	b	2.0	8.309	0.310	0.96	0.2
BPSK	a,g	6.0	2.731	0.314	0.90	0.5
8-QPSK	b	11.0	1.667	0.309	0.84	0.7
QPSK	a,g	12.0	1.375	0.314	0.81	0.9
16-QAM	a,g	24.0	0.698	0.315	0.69	1.6
64-QAM	a,g	54.0	0.324	0.314	0.51	2.9
BPSK	n	MCS0	2.289	0.314	0.88	0.6
64-QAM	n	MCS7	0.262	0.313	0.46	3.4
QPSK	n	MCS1	1.161	0.314	0.79	1.0
64-QAM	n	MCS5	0.319	0.314	0.50	3.0
64-QAM	a,g	48.0	0.359	0.315	0.53	2.7
16-QAM	n	MCS3	0.597	0.315	0.65	1.8

Example screen captures:



Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

9.2.1.2 WLAN Maximum conducted (average) output power:

802.11 Standard	Data Rate (Mbps)	Channel	Maximum Conducted Power (dBm)	Duty Cycle correction for average measurement (dB)	Corrected Maximum Conducted Power (dBm)	Power Limit (dBm)	Power margin (dB)
b	1 (DBPSK)	1	11.3	0.0	11.3	30.0	18.7
		6	11.3	0.0	11.3	30.0	18.7
		11	11.7	0.0	11.7	30.0	18.3
b	11 (8QPSK)	1	10.7	0.7	11.4	30.0	18.6
		6	10.9	0.7	11.6	30.0	18.4
		11	11.0	0.7	11.7	30.0	18.3
g	6 (BPSK)	1	8.1	0.5	8.6	30.0	21.4
		6	8.3	0.5	8.8	30.0	21.2
		11	8.7	0.5	9.2	30.0	20.8
g	54 (64QAM)	1	5.5	2.9	8.4	30.0	21.6
		6	5.8	2.9	8.7	30.0	21.3
		11	6.4	2.9	9.3	30.0	20.7
n (HT20)	MCS0 (BPSK)	1	8.2	0.6	8.8	30.0	21.2
		6	8.3	0.6	8.9	30.0	21.1
		11	9.1	0.6	9.7	30.0	20.3
n (HT20)	MCS7 (64QAM)	1	5.2	3.4	8.6	30.0	21.4
		6	5.5	3.4	8.9	30.0	21.1
		11	5.9	3.4	9.3	30.0	20.7
n (HT40)	MCS0 (BPSK)	3	4.8	0.6	5.4	30.0	24.6
		6	5.2	0.6	5.8	30.0	24.2
		9	5.2	0.6	5.8	30.0	24.2
n (HT40)	MCS7 (64QAM)	3	1.5	3.4	4.9	30.0	25.1
		6	1.8	3.4	5.2	30.0	24.8
		9	1.9	3.4	5.3	30.0	24.7

9.2.2. BLE Maximum peak conducted power:

Data Rate (Mbps)	Channel (MHz)	Peak Conducted Power (dBm)	Power Limit (dBm)	Power margin (dB)
1	2402	4.4	30.0	25.6
	2440	4.2	30.0	25.8
	2480	4.0	30.0	26.0

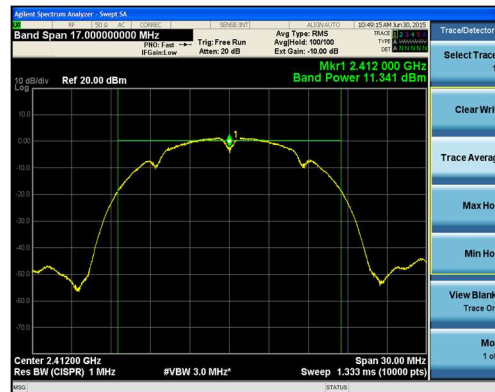
Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

9.3 – Screen Captures.

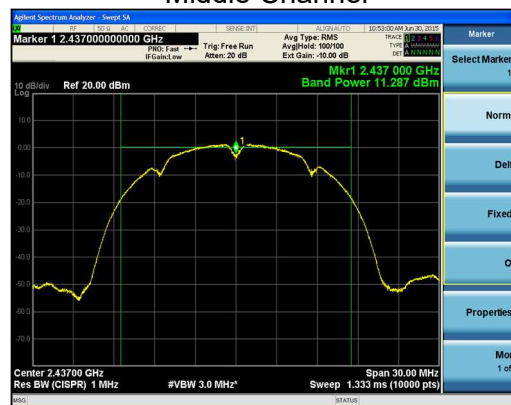
9.3.1 WLAN:

1MBPS

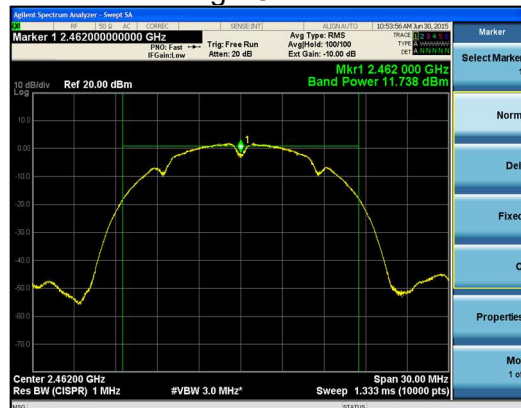
Low Channel



Middle Channel



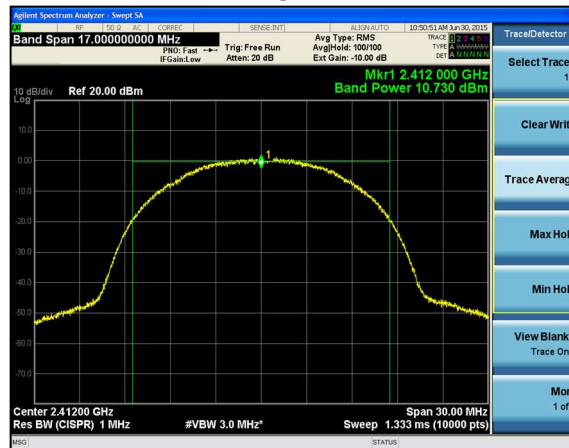
High Channel



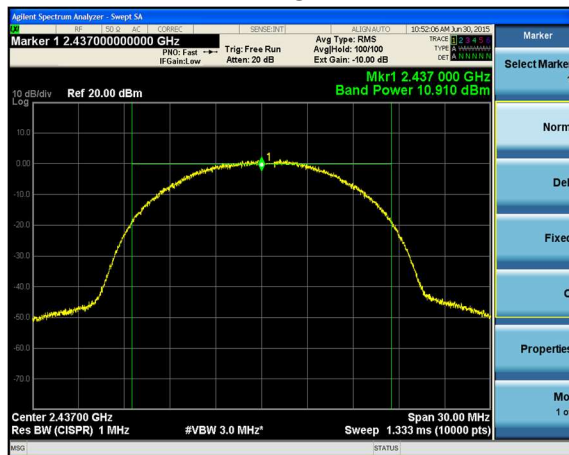
Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

11MBPS

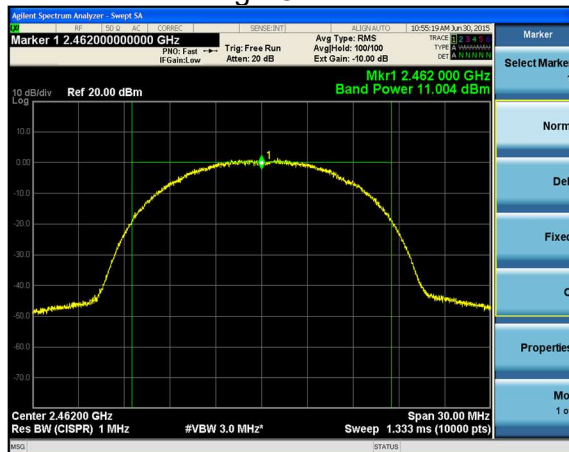
Low Channel



Middle Channel



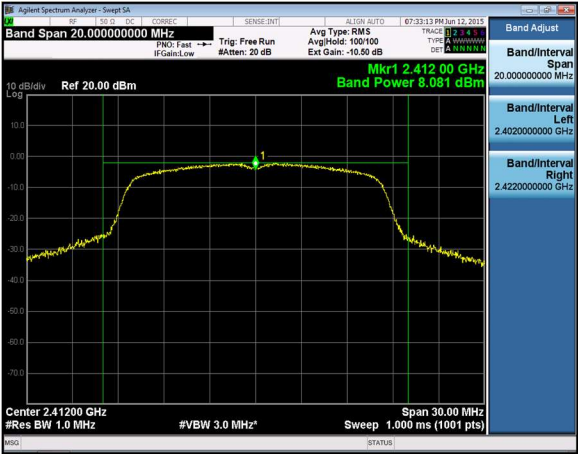
High Channel



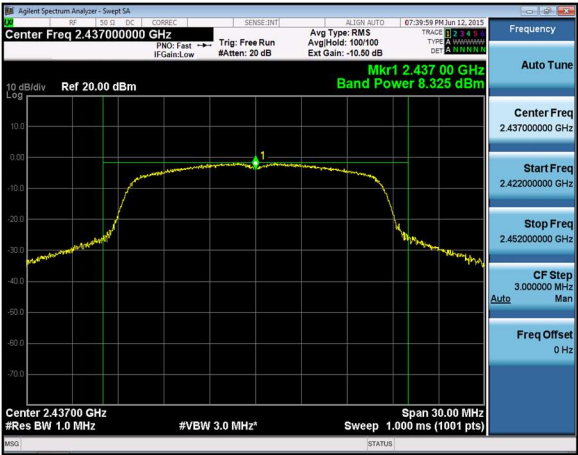
Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

6MBPS

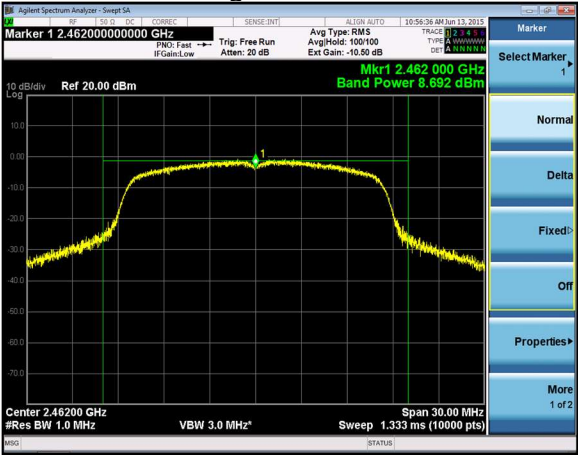
Low Channel



Middle Channel



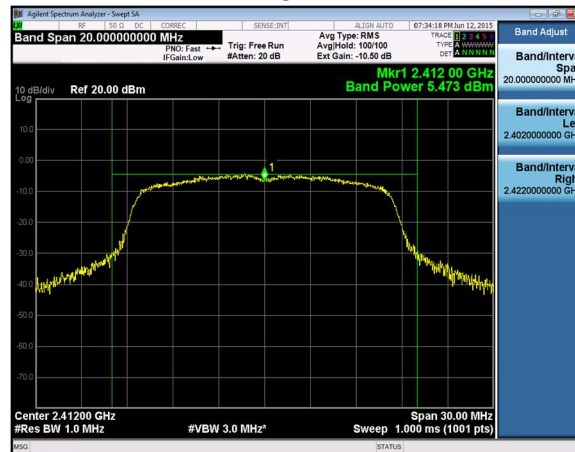
High Channel



Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

54MBPS

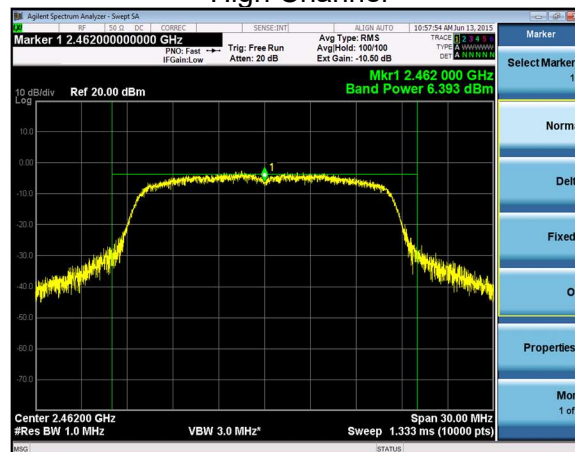
Low Channel



Middle Channel

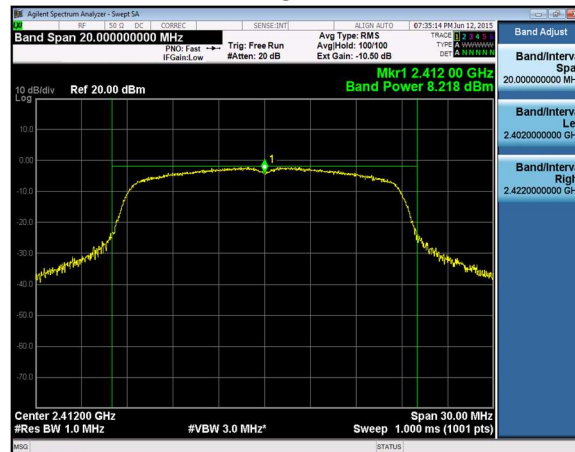


High Channel



Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

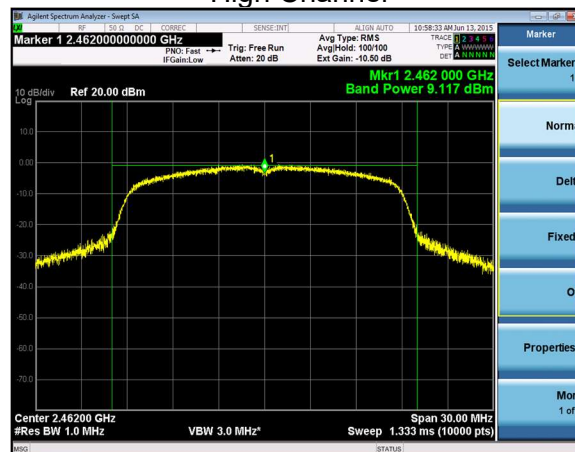
Low Channel



Middle Channel

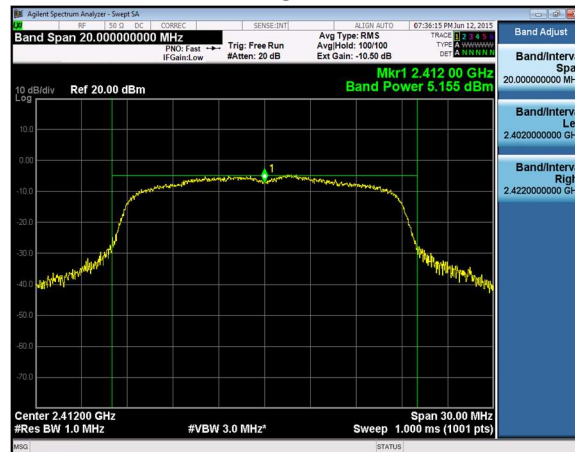


High Channel



Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

Low Channel



Middle Channel

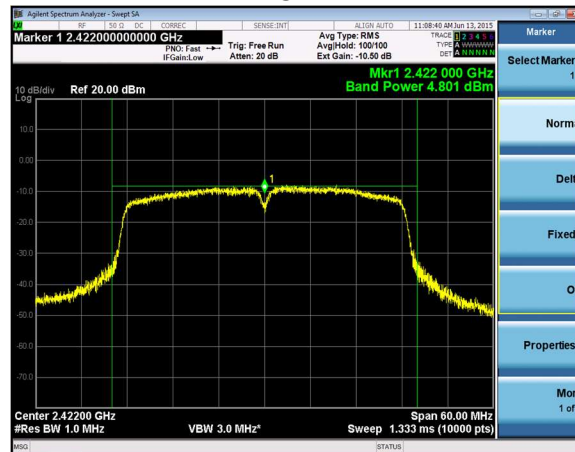


High Channel

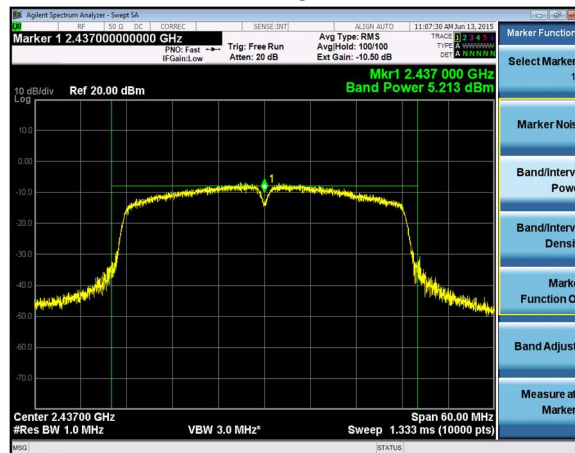


Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

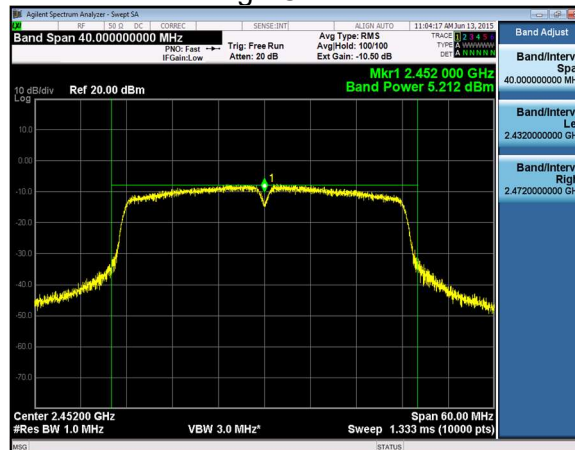
Low Channel



Middle Channel

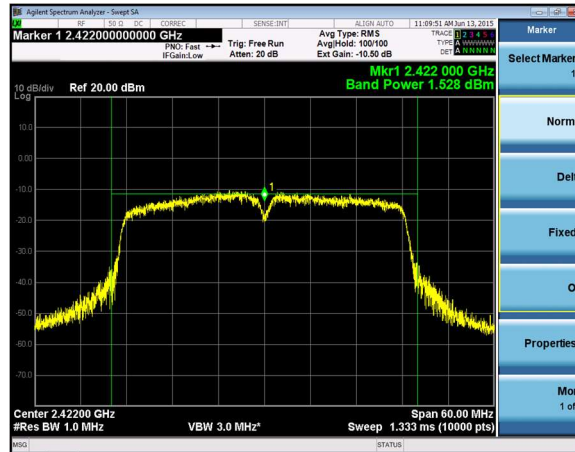


High Channel

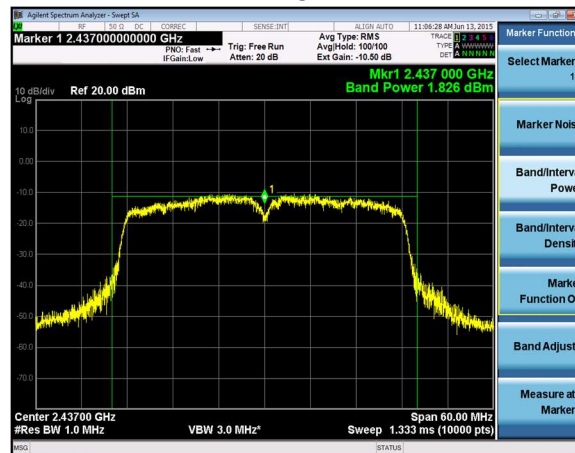


Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

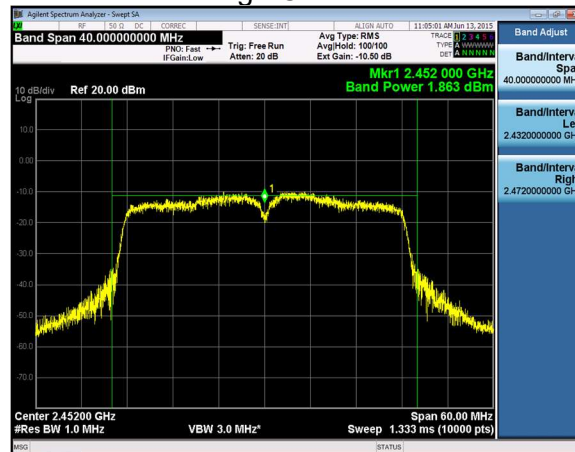
Low Channel



Middle Channel



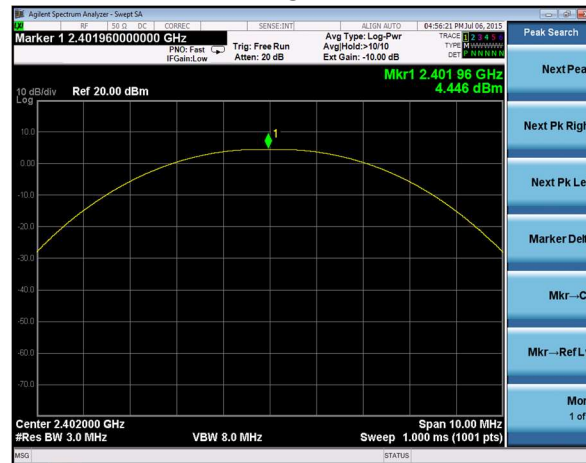
High Channel



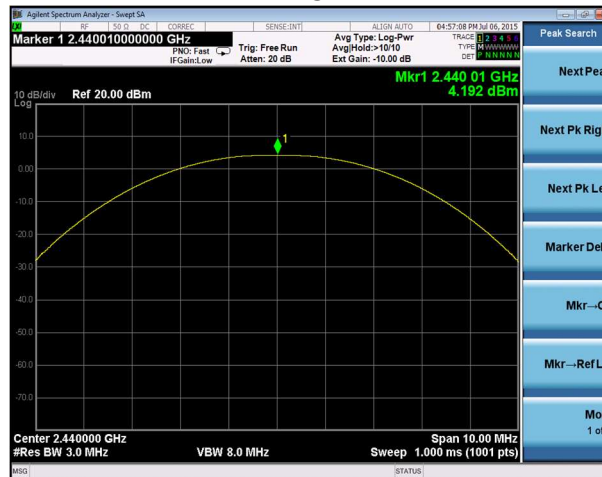
Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

9.3.2 BLE:

Low Channel



Middle Channel



High Channel



Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

EXHIBIT 10. CONDUCTED SPURIOUS EMISSIONS: 15.247(d)

Test Engineer(s): Khairul Aidi Zainal

10.1 - Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 db below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

10.2 - Conducted Harmonic And Spurious RF Measurements

FCC Part 15.247(d) and IC RSS 210 A8.5 both require a measurement of conducted harmonic and spurious RF emission levels, as reference to the carrier level when measured in a 100 kHz bandwidth. For this test, the spurious and harmonic RF emissions from the EUT were measured at the EUT antenna port using a short RF cable along with an attenuator as protection for the spectrum analyzer. The loss from the cable and the attenuator were added on the analyzer as gain offset settings, thereby allowing direct readings of the measurements made without the need for any further corrections. A spectrum analyzer was used with the resolution bandwidth set to 100 kHz for this portion of the tests. The unit was configured to run in a continuous transmit mode, while being supplied with typical data as a modulation source. The spectrum analyzer was used with measurements from a peak detector presented in the chart below. Screen captures were acquired and any noticeable spurious and harmonic signals were identified and measured.

Measurement procedure used was FCC OET KDB 558074 D01 Measurement Guidance v03r03 section 11.

The data reported includes all necessary correction factors. These correction factors are loaded onto the EMI receiver when measurements are performed.

Reported Measurement data = Raw receiver measurement (dBm) + Cable factor (dB) + Miscellaneous factors when applicable (dB).

Generic example of reported data at 2440 MHz:

Reported Measurement data = 8.55 (raw receiver measurement in dBm) + 0.85 (cable factor in dB) = 9.4 (dBm).

Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

10.3 - Test Data

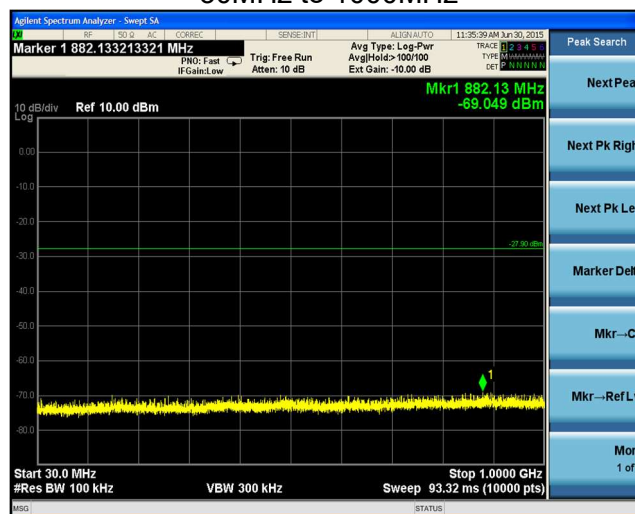
The data presented below are samples selected from the various data rates and channels tested.

10.3.1 2.4GHz WLAN

Low Channel fundamental in 100 kHz:

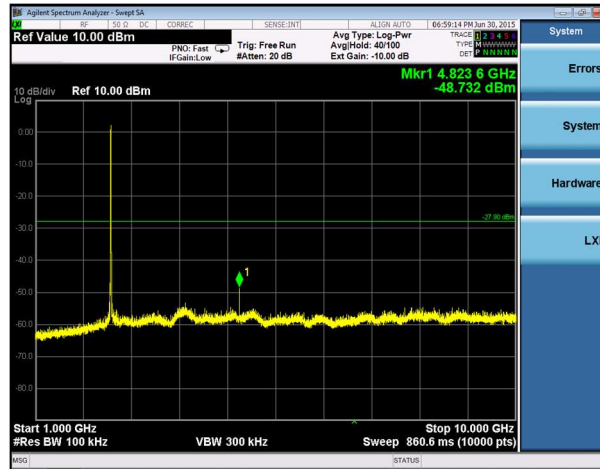


30MHz to 1000MHz

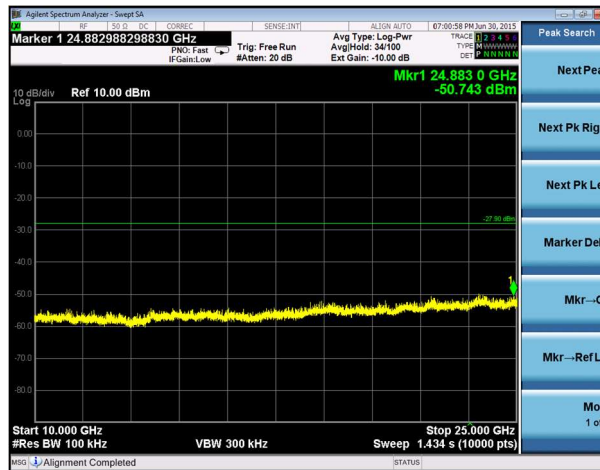


Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

1000MHz to 10000MHz



10000 to 25000MHz

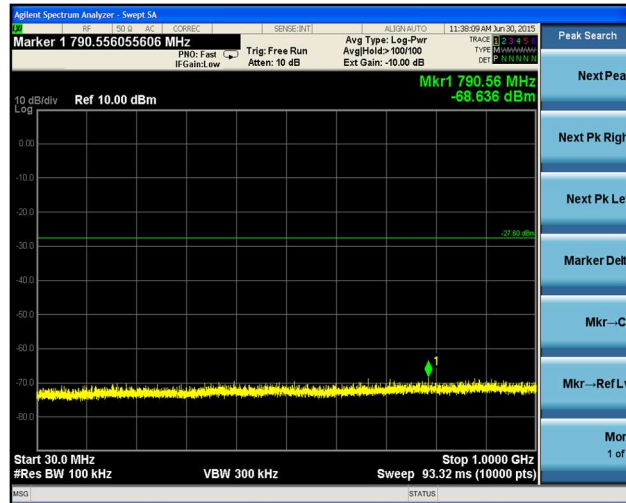


Middle Channel fundamental in 100 kHz:

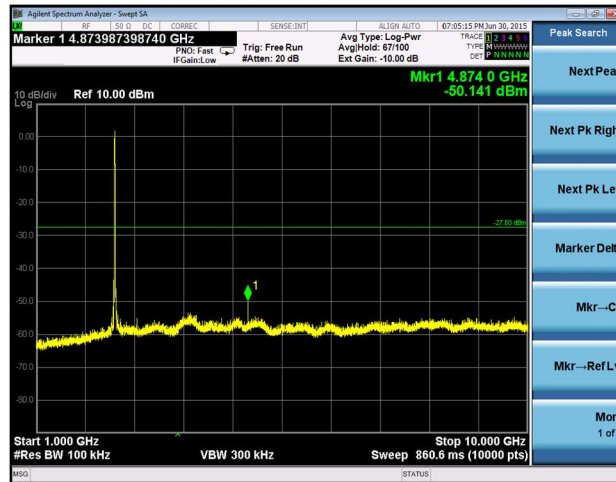


Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234

30MHz to 1000MHz



1000MHz to 10000MHz



10000MHz to 25000MHz



Prepared For: Fluke Corporation	Model #: TiS10-65	Report #: 315160 A
EUT: TiS65	Serial #: Radiated: TiS65-15069005 Conducted: A15050019	LSR Job #: C-2234