Product Name:	DUAL HRM BELT
TRADE MARK:	DECATHLON
Model No.:	ZT26D
Applicant:	USport LLC 2415 3rd Street,Suite 231,San Francisco, CA 94107,United States
Date of Receipt:	Aug. 23, 2016
Finished date of Test:	Feb. 14, 2017
Applicable Standards:	47 CFR Part 15, Subpart C, 15.247 ANSI C63.4: 2014 FCC publication KDB 558074 D01 v03r03 Measurement on Digital Transmission Systems (DTS) Operating under Section 15.247 June 9, 2015

We, **Spectrum Research & Testing Laboratory Inc.**, hereby certify that one sample of the above was tested in our laboratory with positive results according to the above-mentioned standards. The records in the report are an accurate account of the results. Details of the results are given in the subsequent pages of this report.

Tested By : Richard Lin , Date: 2/14/2017

(Richard Lin)

Approved By : , Date: 2/14/2017

(Johnson Ho, Director)

Revisions History

Report No.	Issue Date	Revisions
FCCA16082304	Feb. 14, 2017	Initial issue

Table of Contents

1. DOCUMENT POLICY AND TEST STATEMENT

1.1 DOCUMENT POLICY

- The report shall not be reproduced except in full, without the written approval of SRT Lab, Inc.

1.2 TEST STATEMENT

- The test results in the report apply only to the unit tested by SRT Lab.
- There was no deviation from the requirements of test standards during the test.
- DC power source, 3Vdc of CR2032 battery.
- New DC dry battery (CR2032) was used during testing.

1.3 EUT MODIFICATION

- No modification in SRT Lab.

2. DESCRIPTION OF EUT AND TEST MODE

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	DUAL HRM BELT
TRADE MARK	DECATHLON
MODEL NO.	ZT26D
POWER SUPPLY	DC power source from CR2032 battery：DC 3.0V
CABLE	NA
FREQUENCY BAND	2.4 GHz (Bluetooth V4.0 Low Energy, no BR/EDR)
CARRIER FREQUENCY	2.402 GHz ~ 2.480 GHz
NUMBER OF CHANNEL	40
RATED RF OUTPUT POWER	-4.23 dBm
MODULATION TYPE	GFSK
MODE OF OPERATION	Duplex
ANTENNA TYPE	Chip Antenna
ANTENNA GAIN	1.57 dBi
OPERATING TEMPERATURE RANGE	-20 ~ 55°C

NOTE:
The EUT operates in single mode Bluetooth Low Energy, therefore, no BR/EDR tests were performed. For more detailed information, please refer to the EUT's specification or user's manual provided by manufacturer.

2.2 DESCRIPTION OF EUT INTERNAL DEVICE

DEVICE	BRAND / MAKER	MODEL #	FCC ID / DOC	REMARK

2.3 DESCRIPTION OF TEST MODE

Mode		Frequency
1	Tx-1	2402 MHz
2	Tx-2	2440 MHz
3	Tx-3	2480 MHz
4	Standby	N/A
5	Link	N/A

966 chamber Pre-test result summary:

Axis	Polarizatio	Frequency (MHz)	Result (dBuV/m)
X	**H**	**776.06**	**31.45**
X	**V**	**750.87**	**31.82**
Y	H	667.24	29.55
Y	V	751.39	28.31
Z	H	775.50	28.96
Z	V	750.61	29.04

NOTE: The axis X,Y and Z we evaluate in chamber, the X axis is worst case.

2.4 EUT OPERATING CONDITION

Tx-1, Tx-2, Tx3：

1. For use customer provided continuous transmission EUT.
2. Setup 3V CR2032 Battery to EUT. Turn on the power.
3. Shake one time. Into mode：Tx-1.
4. Shake one time. Into mode：Tx-2.
5. Shake one time. Into mode：Tx-3.

Standby, Link：

1. For use customer provided normal EUT.
2. Setup 3V CR2032 Battery to EUT. Turn on the power.
3. Into mode : Standby.
4. Turn on peripheral devices (iPad) & open Cadence Pod App.
5. Connect & Pair the EUT to iPad App. Into mode：Link.

2.5 DESCRIPTION OF SUPPORT UNIT

The EUT was configured by the requirement of ANSI C63.4:2014. All interface ports were connected to the appropriate support units via specific cables. The support units and cables are listed below.

NO	DEVICE	BRAND	MODEL #	FCC ID/DOC	CABLE
1	iPad Wi-Fi 16G	Apple	A1458	BCGA1458	N/A

NOTE: For the actual test configuration, please refer to the photos of testing.

2.6 CHANNEL AND FREQUENCY TABLE

Channel	Frequency	Channel	Frequency
CH01	2402 MHz	CH21	2442 MHz
CH02	2404 MHz	CH22	2444 MHz
CH03	2406 MHz	CH23	2446 MHz
CH04	2408 MHz	CH24	2448 MHz
CH05	2410 MHz	CH25	2450 MHz
CH06	2412 MHz	CH26	2452 MHz
CH07	2414 MHz	CH27	2454 MHz
CH08	2416 MHz	CH28	2456 MHz
CH09	2418 MHz	CH29	2458 MHz
CH10	2420 MHz	CH30	2460 MHz
CH11	2422 MHz	CH31	2462 MHz
CH12	2424 MHz	CH32	2464 MHz
CH13	2426 MHz	CH33	2466 MHz
CH14	2428 MHz	CH34	2468 MHz
CH15	2420 MHz	CH35	2470 MHz
CH16	2432 MHz	CH36	2472 MHz
CH17	2434 MHz	CH37	2474 MHz
CH18	2436 MHz	CH38	2476 MHz
CH19	2438 MHz	CH39	2478 MHz
CH20	2440 MHz	CH40	2480 MHz

3. DESCRIPTION OF APPLIED STANDARDS

The EUT is a wireless product. According to the specifications provided by the applicant, it must comply with the requirements of the following standards:

47 CFR Part 15, Subpart C, 15.247

ANSI C63.4: 2014

FCC publication KDB 558074 D01 v03r03 Measurement on Digital Transmission Systems (DTS) Operating under Section 15.247 June 9, 2015

All tests have been performed and recorded as the above standards.

3.1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

STANDARD SECTION	TEST TYPE AND LIMIT RESULTS	RESULTS
15.203 15.247(c)(1)(i)	Antenna requirement	PASS
15.207	AC Power Line Conducted Emission	N/A
15.247(a)(2)	6 dB Bandwidth	PASS
15.247(b)	Maximum Peak Conducted Output Power	PASS
15.247(d)	Band Edge Measurement:	PASS
15.247(d)	Transmitter Radiated Emissions Limit: Table 15.209	PASS
15.247(e)	Power Density: Limit: 8dBm/3kHz	PASS

4. TECHNICAL CHARACTERISTICS TEST

4.1 RADIATED EMISSION TEST

4.1.1 LIMIT

FCC Part15, Subpart C Section 15.209 limit of radiated emission for frequency below1000MHz. The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

FREQUENCY (MHz)	FIELD STRENGTH (microvolts/meter)	DISTANCE (m)	FIELD STRENGTH (dBμV/m)
0.009 - 0.490	2400/F(kHz)	300	67.6-20log(kHz)
0.490 - 1.705	24000/F(kHz)	30	87.6-20log(kHz)
1.705 - 30	30	30	30
30 - 88	100	3	40.0
88 - 216	150	3	43.5
216 - 960	200	3	46.0
Above 960	500	3	54.0

NOTE:

1. 30 dBuV (in 30m) = 70 dBuV (in 3m).
2. In the emission tables above , the tighter limit applies at the band edges.
3. Distance refers to the distance between measuring instrument, antemma, and the closest point of any part of the device or system.

FCC Part 15, Section15.35(b) limit of radiated emission for frequency above 1000 MHz

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80.0	60.0	74.0	54.0

4.1.2 TEST EQUIPMENT

Below 1 GHz The following test equipment was used during the radiated emission test:

EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER	FINAL TEST BE USED
EMI TEST RECEIVER	9 kHz ~ 2.75 GHz	ROHDE & SCHWARZ	ESCS30 / 100376	JAN. 02, 2018 ETC	■
SPECTRUM ANALYZER	9 kHz ~ 40GHz	ROHDE & SCHWARZ	FSP40 / 100093	JAN. 02, 2018 ETC	■
LOOP ANTENNA	9 kHz ~ 30 MHz	ROHDE & SCHWARZ	HFH2-Z2 / 860605/002	FEB. 24, 2018 ETC	■
BI-LOG ANTENNA & 6 dB ATTENUATOR	200 MHz ~ 1 GHz	SCHAFFNER	CBL6141A & N-6-06/ 4181 & AT-N0627	MAY 31, 2017 ETC	■
BICONICAL ANTENNA	30 MHz ~ 200 MHz	EMCO	3110/ 11966C	MAY 04, 2017 ETC	■
LOG PERIODIC ANTENNA	200 MHz ~ 1 GHz	EMCO	3146/ 9002-2686	OCT. 27, 2017 ETC	□
OPEN AREA TEST SITE	3 – 10 M MEASUREMENT	SRT	A02 / SRT002	MAR. 17, 2017 SRT	■
COAXIAL CABLE	30 M	TIMES	LMR-400 / #30M(L1TCAB014)	MAY 16, 2017 ETC	■
FILTER	2 LINE, 30 A	FIL.COIL	FC-943 / 869	NCR	■
CDN	0.15 MHz ~ 300 MHz	LUTHI	CDN L-801 M2/M3 / 2790	MAY 15, 2017 ETC	□
PRE-AMPLIFIER	0.1 MHz ~ 1.3 GHz	HP	8447D / 2944A06746	NOV. 14, 2017 ETC	■

NOTE: The Open Area Test Site (SRT-1) is registered by FCC with No. 90957

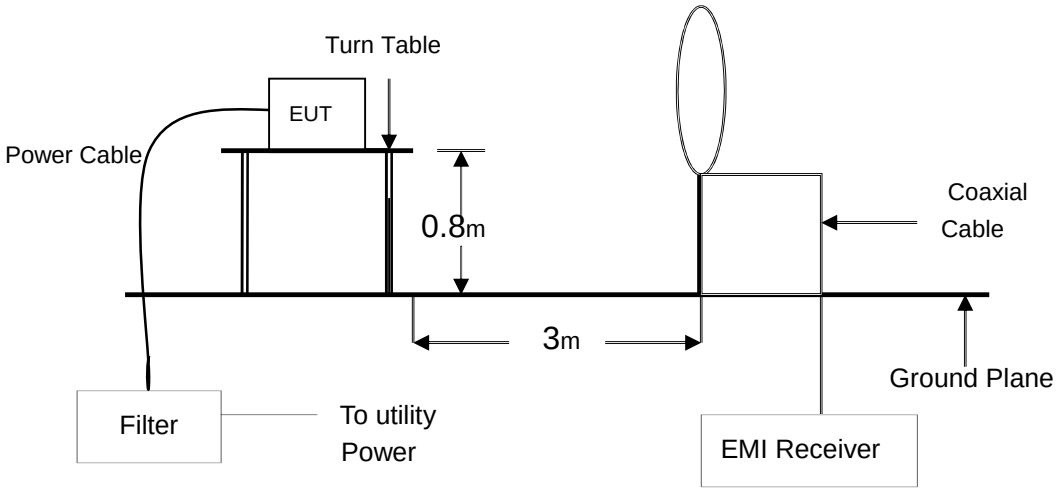
Above 1 GHz The following test equipment was used during the radiated emission test:

EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER	FINAL TEST BE USED
SPECTRUM ANALYZER	9 kHz ~ 40GHz	ROHDE & SCHWARZ	FSP40 / 100093	JAN. 02, 2018 ETC	■
HORN ANTENNA	1 GHz ~ 18 GHz	EMCO	3115/ 9602-4681	NOV. 24, 2017 ETC	■
HORN ANTENNA	18 ~ 40 GHZ	ETS-LINDGREN	3116 /00032255	DEC. 25, 2017 ETC	■
PRE-AMPLIFIER	1 GHz ~ 26.5 GHz	AGILENT	8449B/ 3008A01995	DEC. 29, 2017 ETC	■
OPEN AREA TEST SITE	3 – 10 M MEASUREMENT	SRT	A02 / SRT002	MAR. 17, 2017 SRT	■
K-TYPE CABLE	UP TO 40 GHz 3 m	HUBER+SUHNER	SF102-46/2*11SK252 /MY2611/2	FEB. 28, 2017 ETC	■
K-TYPE CABLE	UP TO 40 GHz, 1 m	HUBER+SUHNER	SF102/2*11SK252 /MY3331/2	OCT. 03, 2017 ETC	■
FILTER	2 LINE, 30 A	FIL.COIL	FC-943/ 869	NCR	■

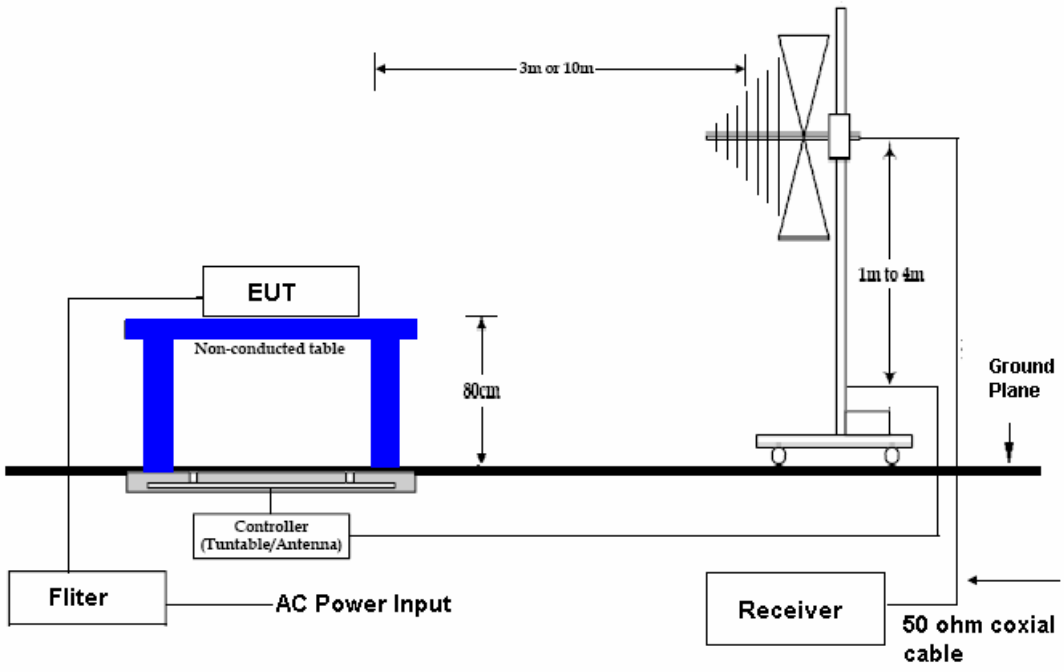
THERMO-HYGRO	15 – 40 ℃, 0- 100% RH	TOP	20-A / 7685	SEP. 20, 2017 ETC	■
TEST SOFTWARE	---	EZ-EMC	SRT-03A1	NCR	■

4.1.3 TEST SET-UP

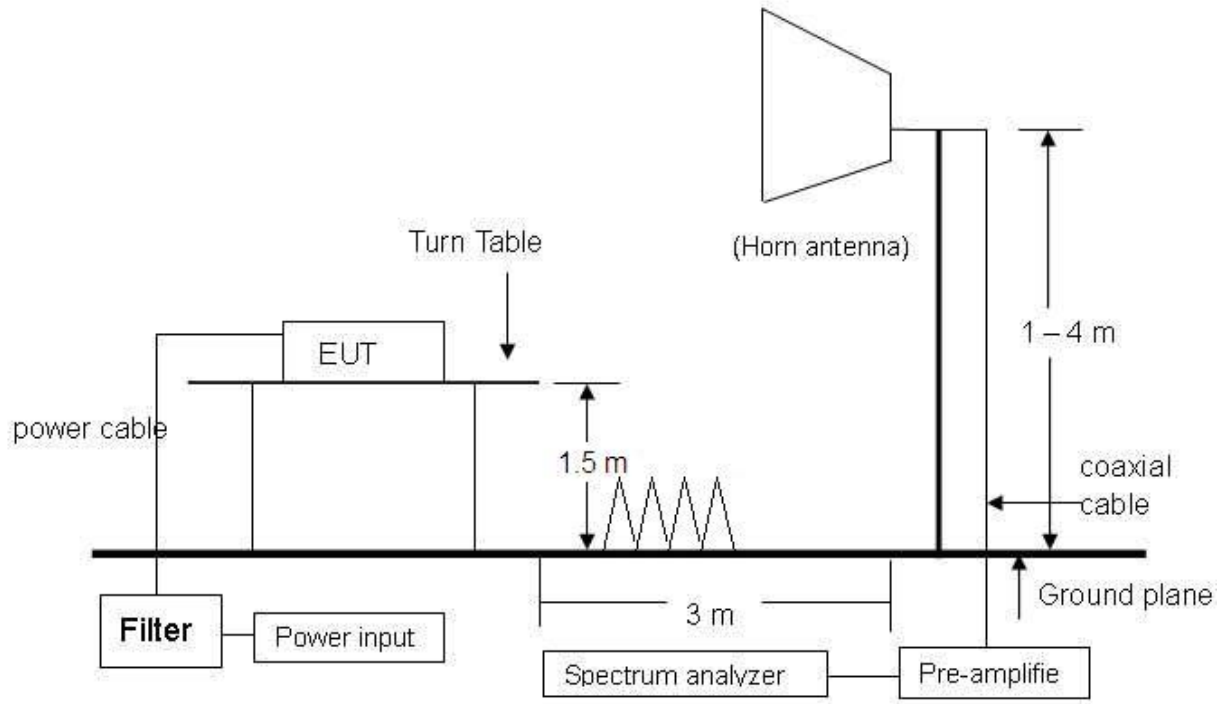
9KHz ~ 30MHz



30 MHz ~ 1 GHz



Above 1 GHz



NOTE: The EUT system was put on a wooden table with 0.8m heights above a ground plane. For the actual test configuration, please refer to the photos of testing.

4.1.4 TEST PROCEDURE

The EUT was tested according to the requirement of ANSI C63.4:2014 and CISPR 22:2003. When the frequency spectrum measured started from 9 kHz to 30 MHz, then use antenna is a loop antenna. The measurements were made at an open area test site with 3 meter measurement distance under 1 GHz and with 3m distance above 1GHz. The frequency spectrum measured started from 9kHz to 30MHz and 30 MHz to 1 GHz, all readings were quasi-peak values with 120 kHz resolution bandwidth of the test receiver. Above 1 GHz, the measurements were made at an open area test site with 3 meter measurement distance and all readings were peak or average values with 1 MHz resolution bandwidth of the test receiver. The EUT system was operated in all typical methods by users. The cables connected to EUT and support units were moved to find the maximum emission levels for each frequency. First, find the margin or higher points at least 6 points by software, then use manual to find the maximum data. The procedure is referred on the test procedure of SRT LAB.

4.1.5 TEST RESULT

Temperature:	22 °C	Humidity:	59 %RH
Frequency Range:	9 kHz – 30 MHz	Measured Distance:	3 m
Receiver Detector:	AV.	Tested Mode:	Tx-1
Tested By:	Richard Lin	Tested Date:	Sep. 27, 2016

Frequency (KHz)	Cable Loss (dB)	Ant. Fac. (dB)	Reading (dBμV)	Emission (dBμV/m)	Limit Line (dBμV/m)	Margin (dB)
8.24	0.62	20.52	7.83	28.97	70.00	-41.03
14.41	0.82	21.19	5.63	27.63	70.00	-42.37
17.75	0.92	21.55	6.25	28.71	70.00	-41.29
19.69	0.97	21.76	6.13	28.86	70.00	-41.14
25.02	1.12	21.85	7.47	30.44	70.00	-39.56
27.13	1.17	21.87	5.41	28.45	70.00	-41.55

Temperature:	22 °C	Humidity:	59 %RH
Frequency Range:	9 kHz – 30 MHz	Measured Distance:	3 m
Receiver Detector:	AV.	Tested Mode:	Tx-2
Tested By:	Richard Lin	Tested Date:	Sep. 27, 2016

Frequency (KHz)	Cable Loss (dB)	Ant. Fac. (dB)	Reading (dBμV)	Emission (dBμV/m)	Limit Line (dBμV/m)	Margin (dB)
8.04	0.61	20.50	8.83	29.94	70.00	-40.06
8.67	0.63	20.57	7.88	29.08	70.00	-40.92
11.48	0.73	20.86	7.06	28.65	70.00	-41.35
22.40	1.05	21.82	7.11	29.98	70.00	-40.02
24.98	1.12	21.85	6.85	29.82	70.00	-40.18
27.52	1.18	21.88	5.55	28.61	70.00	-41.39

Temperature:	22 °C	Humidity:	59 %RH
Frequency Range:	9 kHz – 30 MHz	Measured Distance:	3 m
Receiver Detector:	AV.	Tested Mode:	Tx-3
Tested By:	Richard Lin	Tested Date:	Sep. 27, 2016

Frequency (KHz)	Cable Loss (dB)	Ant. Fac. (dB)	Reading (dBμV)	Emission (dBμV/m)	Limit Line (dBμV/m)	Margin (dB)
8.56	0.63	20.56	7.55	28.73	70.00	-41.27
16.55	0.88	21.42	6.81	29.11	70.00	-40.89
17.16	0.90	21.48	6.37	28.75	70.00	-41.25
22.03	1.04	21.82	5.96	28.82	70.00	-41.18
25.09	1.12	21.85	7.89	30.86	70.00	-39.14
29.17	1.22	21.89	5.26	28.37	70.00	-41.63

Temperature:	22 °C	Humidity:	59 %RH
Frequency Range:	9 kHz – 30 MHz	Measured Distance:	3 m
Receiver Detector:	AV.	Tested Mode:	Standby
Tested By:	Richard Lin	Tested Date:	Sep. 27, 2016

Frequency (KHz)	Cable Loss (dB)	Ant. Fac. (dB)	Reading (dBμV)	Emission (dBμV/m)	Limit Line (dBμV/m)	Margin (dB)
8.57	0.63	20.56	8.05	29.24	70.00	-40.76
14.85	0.83	21.23	6.86	28.92	70.00	-41.08
19.62	0.97	21.75	5.94	28.66	70.00	-41.34
22.77	1.06	21.83	6.10	28.99	70.00	-41.01
23.51	1.08	21.84	6.21	29.12	70.00	-40.88
25.06	1.12	21.85	7.11	30.08	70.00	-39.92

Temperature:	22 °C	Humidity:	59 %RH
Frequency Range:	9 kHz – 30 MHz	Measured Distance:	3 m
Receiver Detector:	AV.	Tested Mode:	Link
Tested By:	Richard Lin	Tested Date:	Sep. 27, 2016

Frequency (KHz)	Cable Loss (dB)	Ant. Fac. (dB)	Reading (dBμV)	Emission (dBμV/m)	Limit Line (dBμV/m)	Margin (dB)
3.01	0.38	19.70	8.80	28.88	70.00	-41.12
8.54	0.63	20.55	8.08	29.26	70.00	-40.74
10.08	0.68	20.71	7.71	29.10	70.00	-40.90
22.19	1.04	21.82	6.61	29.47	70.00	-40.53
25.06	1.12	21.85	7.95	30.92	70.00	-39.08
29.22	1.22	21.89	6.44	29.55	70.00	-40.45

Temperature:	23 °C	Humidity:	63 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	Tx-1
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard Lin	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
52.34	1.41	13.86	3.75	19.02	40	-20.98	209	3.53
415.29	3.71	16.54	4.97	25.22	46	-20.78	145	2.94
499.77	4.16	17.59	3.57	25.32	46	-20.69	257	2.68
521.50	4.28	18.31	4.29	26.89	46	-19.11	37	2.44
679.91	4.99	20.14	4.13	29.26	46	-16.74	178	1.98
804.63	5.62	21.90	3.44	30.95	46	-15.05	64	1.65

Antenna Polarization：Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
74.45	1.53	8.20	10.35	20.08	40	-19.92	231	1.13
411.83	3.68	16.48	4.10	24.26	46	-21.74	305	2.17
495.24	4.14	17.55	4.66	26.35	46	-19.66	158	2.48
517.56	4.26	18.18	3.27	25.71	46	-20.29	270	2.56
704.95	5.10	20.22	4.00	29.32	46	-16.68	182	3.08
772.22	5.48	21.69	3.79	30.95	46	-15.05	51	3.35

NOTE :

1. Measurement uncertainty is 4.20 dB.
2. "*": Measurement does not apply for this frequency.
3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	23 °C	Humidity:	63 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	Tx-2
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard Lin	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
55.71	1.42	12.90	3.35	17.67	40	-22.33	219	3.53
410.59	3.68	16.46	3.90	24.04	46	-21.96	342	2.97
492.84	4.12	17.52	5.61	27.25	46	-18.75	105	2.54
516.34	4.25	18.14	3.79	26.19	46	-19.81	75	2.31
656.06	4.89	20.19	3.97	29.04	46	-16.96	168	2.09
776.95	5.49	21.70	3.81	31.01	46	-14.99	81	1.68

Antenna Polarization：Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
56.17	1.42	12.58	5.08	19.08	40	-20.92	221	1.09
74.68	1.53	8.20	10.33	20.06	40	-19.94	68	1.15
189.39	2.29	10.57	5.33	18.19	44	-25.31	235	1.47
499.76	4.16	17.59	3.42	25.17	46	-20.84	303	2.42
613.66	4.69	19.68	3.37	27.74	46	-18.26	264	2.86
782.28	5.52	21.73	3.89	31.14	46	-14.86	292	3.35

NOTE :
1. Measurement uncertainty is 4.20 dB.
2. "*": Measurement does not apply for this frequency.
3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	23 °C	Humidity:	63 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	Tx-3
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard Lin	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
457.50	3.95	17.17	3.38	24.50	46	-21.51	244	2.69
499.49	4.16	17.59	3.59	25.34	46	-20.67	150	2.51
625.79	4.75	19.85	4.02	28.62	46	-17.39	169	2.17
715.32	5.17	20.55	3.30	29.02	46	-16.98	117	1.89
755.14	5.40	21.62	3.71	30.73	46	-15.27	309	1.67
850.98	5.79	23.00	3.74	32.53	46	-13.47	199	1.45

Antenna Polarization：Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
56.62	1.42	12.58	5.34	19.34	40	-20.66	228	1.04
74.53	1.53	8.20	12.03	21.76	40	-18.24	130	1.15
189.87	2.29	10.57	5.53	18.39	44	-25.11	44	1.47
614.05	4.69	19.70	3.42	27.81	46	-18.19	260	2.65
778.46	5.50	21.71	3.69	30.91	46	-15.09	286	3.02
860.29	5.83	23.16	3.56	32.55	46	-13.45	89	3.38

NOTE :
1. Measurement uncertainty is 4.20 dB.
2. "*": Measurement does not apply for this frequency.
3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	23 °C	Humidity:	63 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	Standby
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard Lin	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
414.90	3.70	16.52	3.74	23.97	46	-22.03	248	2.83
490.48	4.11	17.50	3.52	25.13	46	-20.87	159	2.59
660.22	4.90	20.18	4.17	29.25	46	-16.75	61	2.02
697.74	5.07	20.11	3.62	28.79	46	-17.21	174	1.96
793.15	5.57	21.77	3.79	31.13	46	-14.87	83	1.65
933.88	6.15	24.66	3.80	34.61	46	-11.39	302	1.22

Antenna Polarization：Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
44.69	1.38	17.32	3.58	22.28	40	-17.72	180	1.06
74.18	1.53	8.20	7.87	17.60	40	-22.40	225	1.17
414.02	3.70	16.52	3.64	23.87	46	-22.13	146	2.14
499.73	4.16	17.59	3.72	25.47	46	-20.54	281	2.44
713.12	5.16	20.49	3.63	29.28	46	-16.72	75	3.12
922.35	6.10	24.37	3.51	33.98	46	-12.02	113	3.52

NOTE :
1. Measurement uncertainty is 4.20 dB.
2. "*": Measurement does not apply for this frequency.
3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	23 °C	Humidity:	63 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	Link
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard Lin	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
54.84	1.42	13.22	3.61	18.25	40	-21.75	119	3.52
490.11	4.11	17.50	3.81	25.42	46	-20.58	254	2.79
499.96	4.16	17.59	4.03	25.78	46	-20.23	74	2.51
515.25	4.25	18.11	4.00	26.36	46	-19.64	159	2.36
668.73	4.94	20.16	3.94	29.04	46	-16.96	170	2.01
776.06	5.49	21.70	3.58	30.78	46	-15.22	81	1.67

Antenna Polarization：Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
56.48	1.42	12.58	5.36	19.36	40	-20.64	212	1.06
74.50	1.53	8.20	11.55	21.28	40	-18.72	329	1.15
497.12	4.15	17.57	4.81	26.53	46	-19.48	156	2.45
515.09	4.25	18.11	4.93	27.29	46	-18.71	86	2.68
703.32	5.10	20.19	3.94	29.23	46	-16.77	273	3.12
750.87	5.38	21.60	3.97	30.95	46	-15.05	173	3.31

NOTE :
1. Measurement uncertainty is 4.20 dB.
2. "*": Measurement does not apply for this frequency.
3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	24 °C	Humidity:	65 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	Tx-1
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
VBW:	3 MHz	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1647.38	-31.98	25.83	46.00	35.52	39.85	29.37	74	54	-34.15	-24.63	235	2.33
2314.50	-30.88	27.98	46.99	36.41	44.09	33.51	74	54	-29.91	-20.49	106	2.12
3881.24	-28.53	32.21	43.19	32.67	46.87	36.35	74	54	-27.13	-17.65	78	1.60
4432.59	-27.73	32.50	42.96	32.47	47.73	37.24	74	54	-26.27	-16.76	221	1.48
4587.66	-27.54	32.69	43.04	32.54	48.19	37.69	74	54	-25.81	-16.31	315	1.40
5549.13	-26.11	34.19	40.96	30.49	49.04	38.57	74	54	-24.96	-15.43	72	1.12

Antenna Polarization：Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1843.15	-31.66	26.53	45.28	34.71	40.16	29.59	74	54	-33.84	-24.41	69	1.26
3052.88	-29.93	30.31	44.20	33.82	44.58	34.20	74	54	-29.42	-19.80	217	1.67
3198.47	-29.75	30.64	43.73	33.26	44.62	34.15	74	54	-29.38	-19.85	110	1.75
3790.01	-28.73	32.00	43.29	32.85	46.56	36.12	74	54	-27.44	-17.88	89	1.83
4229.53	-27.99	32.50	43.53	33.01	48.04	37.52	74	54	-25.96	-16.48	201	1.99
5096.49	-26.84	33.72	42.53	32.14	49.41	39.02	74	54	-24.59	-14.98	297	2.25

NOTE:

1. Measurement uncertainty is 3.85 dB.
2. "*": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. Emissiom Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
4. The field strength of other emission frequencies were very low against the limit.
5. (F):The field stregth of fundamental frequency.

Temperature:	24 °C	Humidity:	65 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	Tx-1 (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
VBW:	3 MHz	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2402.00 (F)	-30.73	28.23	84.07	72.19	81.56	69.68	114	94	-32.44	-24.32	90	1.55
4804.00	-27.27	33.17	40.76	30.18	46.66	36.08	74	54	-27.34	-17.92	152	1.49
7206.00	-26.17	35.69	38.51	28.09	48.04	37.62	74	54	-25.96	-16.38	73	1.62
9608.00	-25.21	37.79	37.94	27.46	50.52	40.04	74	54	-23.48	-13.96	275	1.60
12010.0	-23.46	39.19	34.74	24.39	50.48	40.13	74	54	-23.52	-13.87	296	1.58
14412.0	-20.62	41.88	30.98	20.46	52.23	41.71	74	54	-21.77	-12.29	190	1.59

Antenna Polarization：Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2402.00 (F)	-30.73	28.23	80.67	68.30	78.16	65.79	114	94	-35.84	-28.21	115	1.52
4804.00	-27.27	33.17	40.65	30.12	46.55	36.02	74	54	-27.45	-17.98	48	1.47
7206.00	-26.17	35.69	38.54	28.04	48.07	37.57	74	54	-25.93	-16.43	328	1.71
9608.00	-25.21	37.79	37.42	27.02	50.00	39.60	74	54	-24.00	-14.40	66	1.64
12010.0	-23.46	39.19	34.93	24.39	50.67	40.13	74	54	-23.33	-13.87	102	1.58
14412.0	-20.62	41.88	31.25	20.60	52.50	41.85	74	54	-21.50	-12.15	305	1.45

NOTE:

1. Measurement uncertainty is 3.85 dB.
2. "*": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. Emissiom Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
4. The field strength of other emission frequencies were very low against the limit.
5. (F):The field stregth of fundamental frequency.

Temperature:	24 °C	Humidity:	65 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	Tx-2
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
VBW:	3 MHz	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1876.22	-31.60	26.65	46.12	35.67	41.17	30.72	74	54	-32.83	-23.28	322	2.35
3382.13	-29.51	31.04	43.22	32.71	44.75	34.24	74	54	-29.25	-19.76	210	1.93
3859.60	-28.58	32.16	42.96	32.53	46.54	36.11	74	54	-27.46	-17.89	205	1.77
4194.08	-28.03	32.50	43.14	32.65	47.61	37.12	74	54	-26.39	-16.88	106	1.58
5343.55	-26.34	34.01	41.63	31.11	49.30	38.78	74	54	-24.70	-15.22	82	1.24
5834.74	-26.56	34.13	41.46	31.02	49.03	38.59	74	54	-24.97	-15.41	117	1.06

Antenna Polarization：Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1844.13	-31.66	26.54	47.09	36.55	41.97	31.43	74	54	-32.03	-22.57	38	1.26
3158.68	-29.80	30.55	43.32	32.78	44.07	33.53	74	54	-29.93	-20.47	330	1.67
3457.05	-29.42	31.21	42.95	32.60	44.74	34.39	74	54	-29.26	-19.61	256	1.79
3981.25	-28.31	32.45	42.58	32.07	46.72	36.21	74	54	-27.28	-17.79	167	1.82
4612.86	-27.51	32.75	42.40	31.98	47.64	37.22	74	54	-26.36	-16.78	195	2.09
5139.92	-26.75	33.77	41.70	31.24	48.71	38.25	74	54	-25.29	-15.75	299	2.28

NOTE:

1. Measurement uncertainty is 3.85 dB.
2. "*": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. Emissiom Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
4. The field strength of other emission frequencies were very low against the limit.
5. (F):The field stregth of fundamental frequency.

Temperature:	24 °C	Humidity:	65 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	Tx-2 (Fundamental and Harmonics)
Detector:	PK.and AV.	IF Bandwidth:	1 MHz
VBW:	3 MHz	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2440.00 (F)	-30.67	28.33	86.63	74.57	84.29	72.23	114	94	-29.71	-21.77	224	1.62
4880.00	-27.18	33.34	39.51	29.04	45.67	35.20	74	54	-28.33	-18.80	80	1.64
7320.00	-26.11	35.97	37.78	27.23	47.64	37.09	74	54	-26.36	-16.91	97	1.55
9760.00	-25.07	37.91	37.30	26.78	50.14	39.62	74	54	-23.86	-14.38	162	1.57
12200.0	-22.84	39.08	34.25	23.77	50.49	40.01	74	54	-23.51	-13.99	150	1.60
14640.0	-20.65	41.58	29.37	18.85	50.30	39.78	74	54	-23.70	-14.22	273	1.48

Antenna Polarization：Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2440.00 (F)	-30.67	28.33	80.49	68.18	78.15	65.84	114	94	-35.85	-28.16	269	1.67
4880.00	-27.18	33.34	39.65	29.28	45.81	35.44	74	54	-28.19	-18.56	332	1.59
7320.00	-26.11	35.97	37.69	27.23	47.55	37.09	74	54	-26.45	-16.91	70	1.51
9760.00	-25.07	37.91	37.02	26.54	49.86	39.38	74	54	-24.14	-14.62	184	1.49
12200.0	-22.84	39.08	34.07	23.51	50.31	39.75	74	54	-23.69	-14.25	296	1.44
14640.0	-20.65	41.58	29.21	18.62	50.14	39.55	74	54	-23.86	-14.45	91	1.48

NOTE:

1. Measurement uncertainty is 3.85 dB.
2. "*": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. Emissiom Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
4. The field strength of other emission frequencies were very low against the limit.
5. (F):The field stregth of fundamental frequency.

Temperature:	24 °C	Humidity:	65 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	Tx-3
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
VBW:	3 MHz	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1842.97	-31.66	26.53	47.37	36.81	42.24	31.68	74	54	-31.76	-22.32	127	2.31
3048.38	-29.94	30.31	44.68	33.24	45.05	33.61	74	54	-28.95	-20.39	215	1.92
3719.23	-28.88	31.83	43.43	32.87	46.37	35.81	74	54	-27.63	-18.19	109	1.67
4007.79	-28.26	32.50	42.87	32.40	47.11	36.64	74	54	-26.89	-17.36	67	1.58
4553.81	-27.58	32.62	42.22	31.76	47.25	36.79	74	54	-26.75	-17.21	195	1.42
5744.60	-26.42	34.15	41.17	30.69	48.90	38.42	74	54	-25.10	-15.58	63	1.09

Antenna Polarization：Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1844.20	-31.66	26.54	47.18	36.66	42.06	31.54	74	54	-31.94	-22.46	234	1.24
2558.19	-30.50	28.70	45.79	35.21	43.98	33.40	74	54	-30.02	-20.60	170	1.48
3052.36	-29.93	30.31	44.14	33.67	44.52	34.05	74	54	-29.48	-19.95	248	1.63
3693.54	-28.94	31.76	42.72	32.30	45.54	35.12	74	54	-28.46	-18.88	329	1.85
4414.90	-27.76	32.50	42.45	31.85	47.19	36.59	74	54	-26.81	-17.41	192	2.03
5787.67	-26.49	34.14	41.45	31.01	49.10	38.66	74	54	-24.90	-15.34	285	2.45

NOTE:

1. Measurement uncertainty is 3.85 dB.
2. "*": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. Emissiom Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
4. The field strength of other emission frequencies were very low against the limit.
5. (F):The field stregth of fundamental frequency.

Temperature:	24 °C	Humidity:	65 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	Tx-3 (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
VBW:	3 MHz	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2480.00 (F)	-30.60	28.44	85.57	73.25	83.41	71.09	114	94	-30.59	-22.91	134	1.56
4960.00	-27.08	33.51	41.30	30.78	47.73	37.21	74	54	-26.27	-16.79	62	1.60
7440.00	-26.05	36.26	38.25	27.76	48.46	37.97	74	54	-25.54	-16.03	85	1.63
9920.00	-24.92	38.04	37.11	26.64	50.22	39.75	74	54	-23.78	-14.25	302	1.57
12400.0	-22.19	38.96	33.49	23.05	50.26	39.82	74	54	-23.74	-14.18	260	1.52
14880.0	-20.71	40.86	30.82	20.38	50.97	40.53	74	54	-23.03	-13.47	291	1.50

Antenna Polarization：Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2480.00 (F)	-30.60	28.44	80.10	67.84	77.94	65.68	114	94	-36.06	-28.32	183	1.48
4960.00	-27.08	33.51	40.28	29.76	46.71	36.19	74	54	-27.29	-17.81	75	1.45
7440.00	-26.05	36.26	38.31	27.76	48.52	37.97	74	54	-25.48	-16.03	327	1.63
9920.00	-24.92	38.04	36.97	26.54	50.08	39.65	74	54	-23.92	-14.35	129	1.59
12400.0	-22.19	38.96	33.84	23.33	50.61	40.10	74	54	-23.39	-13.90	95	1.55
14880.0	-20.71	40.86	30.87	20.40	51.02	40.55	74	54	-22.98	-13.45	33	1.52

NOTE:

1. Measurement uncertainty is 3.85 dB.
2. "*": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. Emissiom Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
4. The field strength of other emission frequencies were very low against the limit.
5. (F):The field stregth of fundamental frequency.

Temperature:	24 °C	Humidity:	65 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	Standby
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
VBW:	3 MHz	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
3562.88	-29.22	31.45	43.79	33.24	46.01	35.46	74	54	-27.99	-18.54	116	1.95
3619.46	-29.10	31.59	43.59	33.01	46.08	35.50	74	54	-27.92	-18.50	301	1.76
4368.17	-27.81	32.50	42.09	31.59	46.78	36.28	74	54	-27.22	-17.72	88	1.52
4814.02	-27.26	33.19	41.24	30.76	47.17	36.69	74	54	-26.83	-17.31	322	1.33
5174.83	-26.68	33.81	41.20	30.72	48.33	37.85	74	54	-25.67	-16.15	60	1.29
5319.96	-26.39	33.98	41.05	30.57	48.64	38.16	74	54	-25.36	-15.84	132	1.20

Antenna Polarization：Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
3287.93	-29.63	30.83	43.04	32.57	44.24	33.77	74	54	-29.76	-20.23	215	1.68
3549.22	-29.25	31.42	43.43	32.96	45.59	35.12	74	54	-28.41	-18.88	194	1.74
3912.56	-28.46	32.29	42.57	32.01	46.40	35.84	74	54	-27.60	-18.16	255	1.92
4611.85	-27.51	32.74	42.33	31.88	47.56	37.11	74	54	-26.44	-16.89	194	1.98
5214.06	-26.60	33.86	41.57	31.04	48.82	38.29	74	54	-25.18	-15.71	278	2.11
5778.34	-26.47	34.14	40.44	29.95	48.11	37.62	74	54	-25.89	-16.38	314	2.34

NOTE:

1. Measurement uncertainty is 3.85 dB.
2. "*": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. Emissiom Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
4. The field strength of other emission frequencies were very low against the limit.
5. (F):The field stregth of fundamental frequency.

Temperature:	24 °C	Humidity:	65 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	Link
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
VBW:	3 MHz	Tested Date:	Sep. 27, 2016

Antenna Polarization：Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
3607.85	-29.13	31.56	43.46	33.01	45.89	35.44	74	54	-28.11	-18.56	109	1.83
3842.46	-28.61	32.12	43.35	32.84	46.86	36.35	74	54	-27.14	-17.65	55	1.66
4354.70	-27.83	32.50	43.46	32.95	48.13	37.62	74	54	-25.87	-16.38	200	1.47
4676.15	-27.43	32.89	42.39	31.87	47.85	37.33	74	54	-26.15	-16.67	64	1.33
5377.28	-26.28	34.05	41.40	30.96	49.18	38.74	74	54	-24.82	-15.26	247	1.18
5729.96	-26.40	34.15	40.46	30.13	48.22	37.89	74	54	-25.78	-16.11	70	1.07

Antenna Polarization：Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
3093.44	-29.88	30.40	44.63	34.17	45.15	34.69	74	54	-28.85	-19.31	314	1.62
3669.15	-28.99	31.71	44.08	33.54	46.79	36.25	74	54	-27.21	-17.75	209	1.85
4311.84	-27.88	32.50	43.28	32.76	47.90	37.38	74	54	-26.10	-16.62	263	1.96
4657.67	-27.46	32.85	42.68	32.18	48.07	37.57	74	54	-25.93	-16.43	195	2.13
5178.39	-26.67	33.81	41.72	31.24	48.86	38.38	74	54	-25.14	-15.62	281	2.28
5716.94	-26.38	34.16	40.43	29.94	48.21	37.72	74	54	-25.79	-16.28	185	2.43

NOTE:

1. Measurement uncertainty is 3.85 dB.
2. "*": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. Emissiom Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
4. The field strength of other emission frequencies were very low against the limit.
5. (F):The field stregth of fundamental frequency.

4.2 6dB Bandwidth

4.2.1 LIMIT

FCC Part15, Subpart C Section 15.247 (a)(2). The minimum 6dB bandwidth shall be at least 500 kHz.

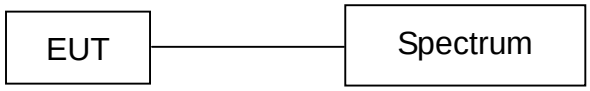
4.2.2 TEST EQUIPMENT

The following test equipment was used during the test：

EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER
EMI TEST RECEIVER (INCLUDE SPECTRUM ANALYZER)	9 KHz ~ 6 GHz	ROHDE & SCHWARZ	ESL /100176	MAY 22, 2017 ETC

NOTE： The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

4.2.3 TEST SET-UP



The EUT was connected to a spectrum through a 50Ω RF cable.

4.2.4 TEST PROCEDURE

The EUT was operated in hopping mode or any specific channel.

Printed out the test result from the spectrum by hard copy function.

4.2.5 EUT OPERATING CONDITION

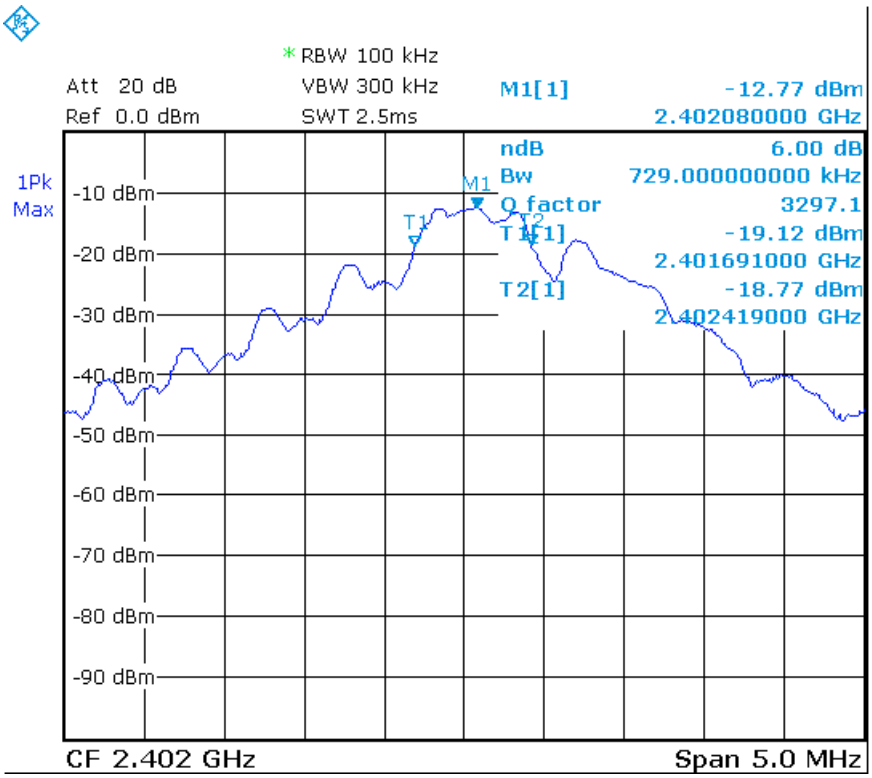
1. Set the EUT under continuous transmission condition.
2. The EUT was set to the highest available power level.

4.2.6 TEST RESULT

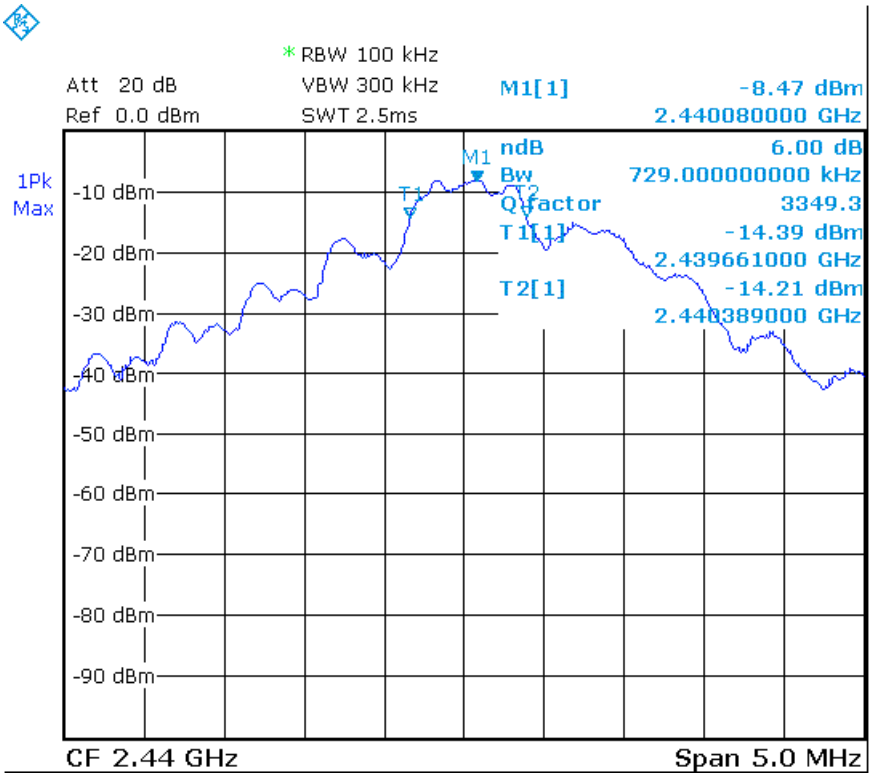
Temperature:	22 °C	Humidity:	60 %RH
Detector:	Peak	Tesr Mode:	Tx-1, Tx-2, Tx-3
RBW:	100 kHz	VBW:	300 kHz
Tested By:	Richard Lin	Tested Date:	Sep. 28, 2016

Channel Number	Channel Frequency (MHz)	6dB Down Bandwidth (kHz)	Limit (kHz)	Pass/Fail
CH01	2402	729	> 500	Pass
CH20	2440	729	> 500	Pass
CH40	2480	798	> 500	Pass

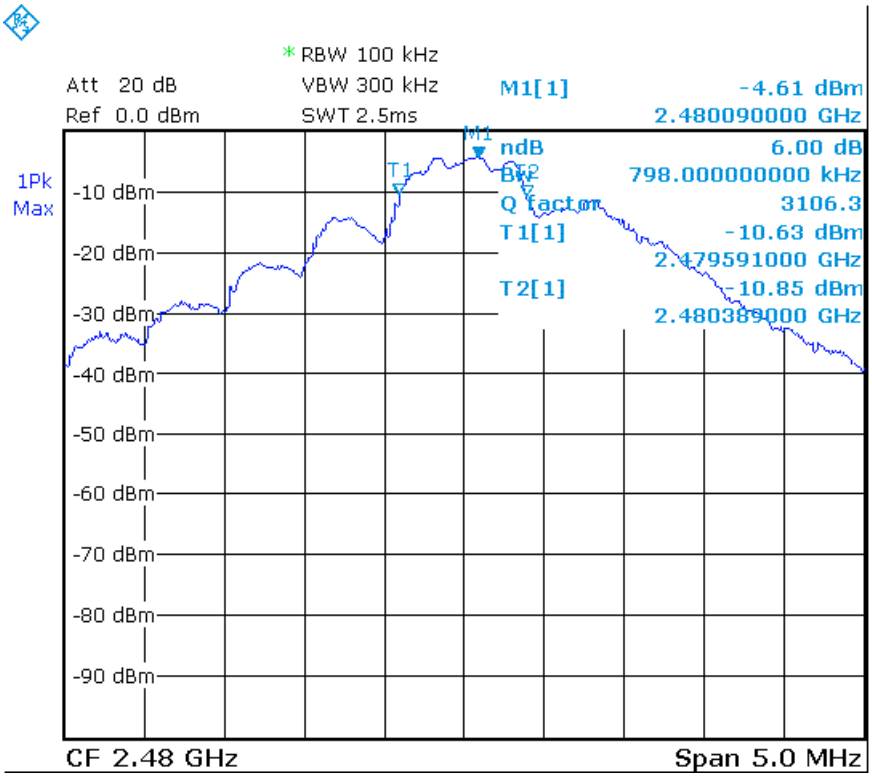
CH01：



CH20：


RBW 100 kHz
Att 20 dB
VBW 300 kHz
M1[1]
-8.47 dBm
Ref 0.0 dBm
SWT 2.5ms
2.440080000 GHz
ndB
6.00 dB
Bw
729.000000000 kHz
Q factor
3349.3
T1[1]
-14.39 dBm
2.439661000 GHz
T2[1]
-14.21 dBm
2.440389000 GHz
1Pk
Max
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.44 GHz
Span 5.0 MHz

CH40：


RBW 100 kHz
Att 20 dB
VBW 300 kHz
M1[1]
-4.61 dBm
Ref 0.0 dBm
SWT 2.5ms
2.480090000 GHz
ndB
6.00 dB
Bw
798.000000000 kHz
Q factor
3106.3
T1[1]
-10.63 dBm
2.479591000 GHz
T2[1]
-10.85 dBm
2.480389000 GHz
1Pk
Max
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.48 GHz
Span 5.0 MHz

4.3 PEAK POWER TEST

4.3.1 LIMIT

FCC Part15, Subpart C Section 15.247(b).

Frequency Range (MHz)	Limit(W)				
	Quantity of Hopping Channel	50	25	15	75
902-928		1(30 dBm)	0.125(21 dBm)	NA	NA
2400-2483.5		NA	NA	0.125(21dBm)	1(30 dBm)
5725-5850		NA	NA	NA	1(30 dBm)

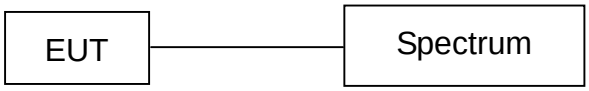
4.3.2 TEST EQUIPMENT

The following test equipment was used during the test：

Equipment/ Facilities	Specifications	Manufacturer	Model#/ Serial#	Due Date of Cal. & Cal. Center
EMI TEST RECEIVER (INCLUDE SPECTRUM ANALYZER)	9 KHz ~ 6 GHz	ROHDE & SCHWARZ	ESL /100176	MAY 22, 2017 ETC

NOTE： The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

4.3.3 TEST SET-UP



The EUT was connected to a spectrum through a 50Ω RF cable.

4.3.4 TEST PROCEDURE

The EUT was operating in hopping mode or could control its channel.

Printed out the test result from the spectrum by hard copy function.

4.3.5 EUT OPERATING CONDITION

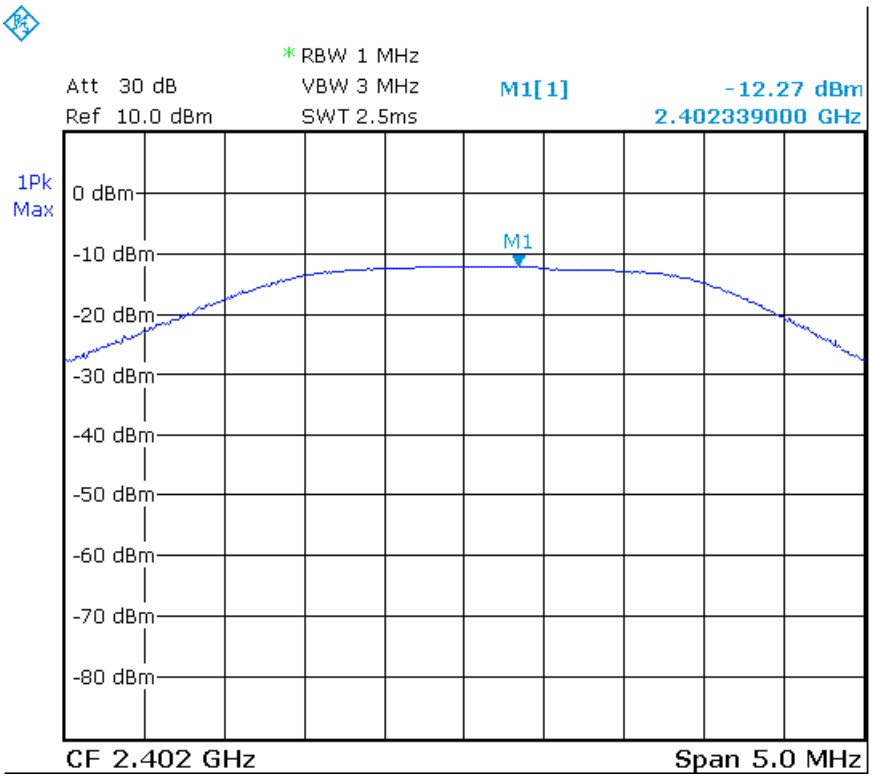
1. Set the EUT under frequency hopping transmission condition.
2. The EUT was set to the highest available power level.

4.3.6 TEST RESULT

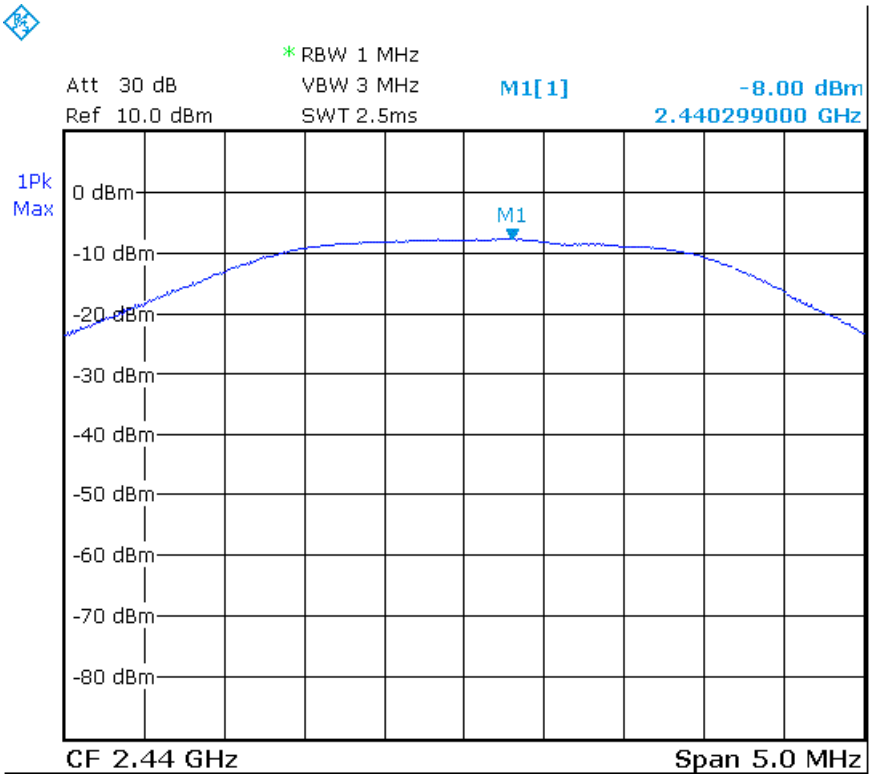
Temperature:	22 °C	Humidity:	60 %RH
Spectrum Detector:	PK.	Tesr Mode:	Tx-1, Tx-2, Tx-3
RBW:	1 MHz	VBW:	3 MHz
Tested By:	Richard Lin	Tested Date:	Sep. 28, 2016

Channel Number	Channel Frequency (MHz)	Peak Output Power (dBm)	Limit (dBm)
CH01	2402	-12.27	21
CH20	2440	-8.00	21
CH40	2480	-4.23	21

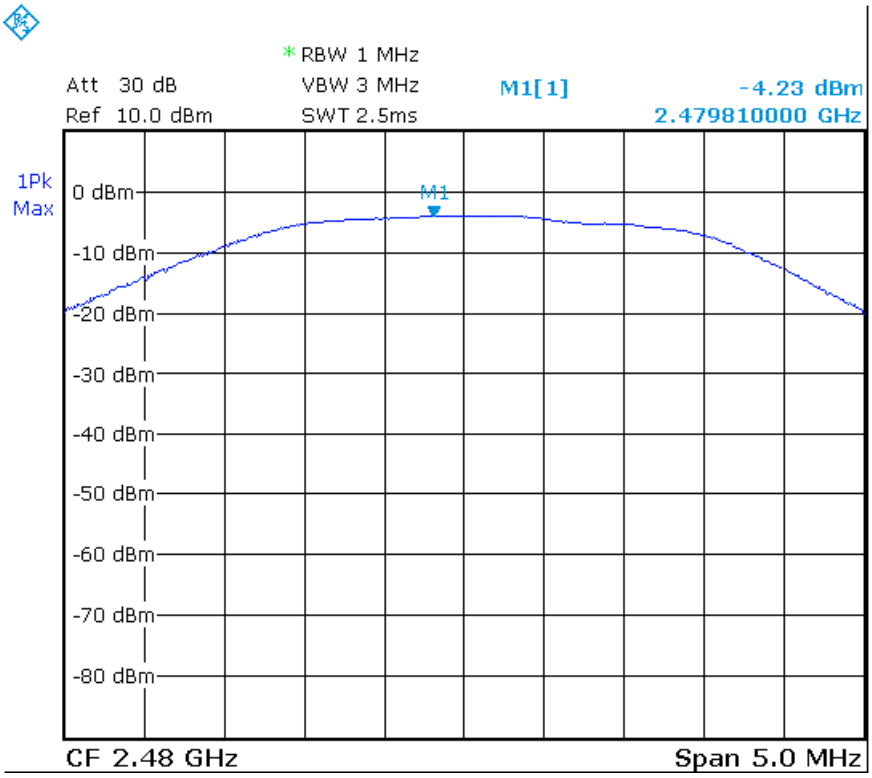
CH01：



CH20：


RBW 1 MHz
Att 30 dB
VBW 3 MHz
M1[1]
-8.00 dBm
Ref 10.0 dBm
SWT 2.5ms
2.440299000 GHz
1Pk
Max
0 dBm
M1
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.44 GHz
Span 5.0 MHz

CH40：


RBW 1 MHz
Att 30 dB
VBW 3 MHz
M1[1]
-4.23 dBm
Ref 10.0 dBm
SWT 2.5ms
2.479810000 GHz
1Pk
Max
0 dBm
M1
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.48 GHz
Span 5.0 MHz

4.4 BAND EDGE TEST

4.4.1 LIMIT

FCC Part15, Subpart C Section 15.247(d). In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

OPERATING FREQUENCY RANGE (MHz)	SPURIOUS EMISSION FREQUENCY (MHz)	LIMIT	
		Peak power ration to emission(dBc)	Emission level(dBuV/m)
902 - 928	< 902	> 20	N/A
	> 928	> 20	N/A
	960-1240	N/A	54
2400 - 2483.5	< 2400	> 20	N/A
	> 2483.5-2500	N/A	54
5725 - 5850	< 5350-5460	N/A	54
	< 5725	> 20	N/A
	> 5850	> 20	N/A

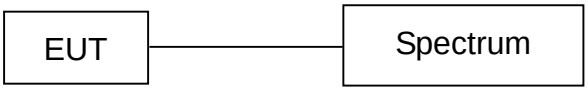
4.4.2 TEST EQUIPMENT

The following test equipment was used during the test:

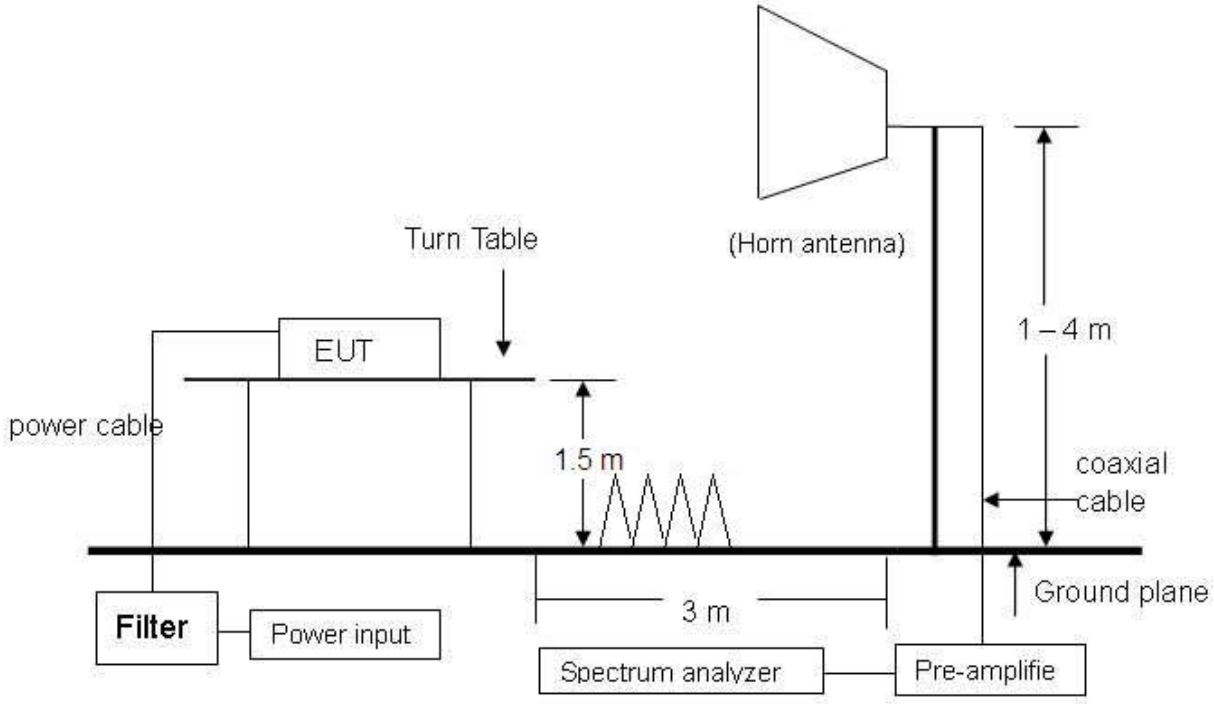
EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER	FINAL TEST BE USED
SPECTRUM ANALYZER	9 kHz ~ 40GHz	ROHDE & SCHWARZ	FSP40 / 100093	DEC. 23, 2016 ETC	■
HORN ANTENNA	1 GHz ~ 18 GHz	EMCO	3115/ 9602-4681	NOV. 30, 2016 ETC	■
PRE-AMPLIFIER	1 GHz ~ 26.5 GHz	AGILENT	8449B/ 3008A01995	DEC. 23, 2016 ETC	■
OPEN AREA TEST SITE	3 – 10 M MEASUREMENT	SRT	A02 / SRT002	MAR. 17, 2017 SRT	■
K-TYPE CABLE	UP TO 40 GHz 3 m	HUBER+SUHNER	SF102-46/2*11SK252 /MY2611/2	FEB. 28, 2017 ETC	■
K-TYPE CABLE	UP TO 40 GHz, 1 m	HUBER+SUHNER	SF102/2*11SK252 /MY3331/2	OCT. 05, 2017 ETC	■
FILTER	2 LINE, 30 A	FIL.COIL	FC-943/ 869	NCR	■

4.4.3 TEST SETUP

FOR RF CONDUCTED TEST (dBc)



The EUT was connected to a spectrum through a 50Ω RF cable.



NOTE: The EUT system was put on a wooden table with 0.8m heights above a ground plane.
For the actual test configuration, please refer to the photos of testing.

4.4.4 TEST PROCEDURE

1. The EUT was operating in continuous transmission mode or could be controlled its channel. Printed out the test result from the spectrum by hard copy function.

2. The EUT was tested according to the requirement of ANSI C63.4:2014 and CISPR 22. The measurements were made at an open area test site with 3 meter measurement distance under 1 GHz and with 3m distance above 1GHz. The frequency spectrum measured started from 30 MHz. Under 1 GHz. All readings were quasi-peak values with 120 kHz resolution bandwidth of the test receiver. Above 1 GHz, the measurements were made at an open area test site with 3 meter measurement distance and all readings were peak and average values with 1 MHz resolution bandwidth of the test receiver. The EUT system was operated in all typical methods by users. The cables connected to EUT and support units were moved to find the maximum emission levels for each frequency.

4.4.5 EUT OPERATING CONDITION

1. Set the EUT under continuous transmission condition.
2. The EUT was set to the highest available power level.

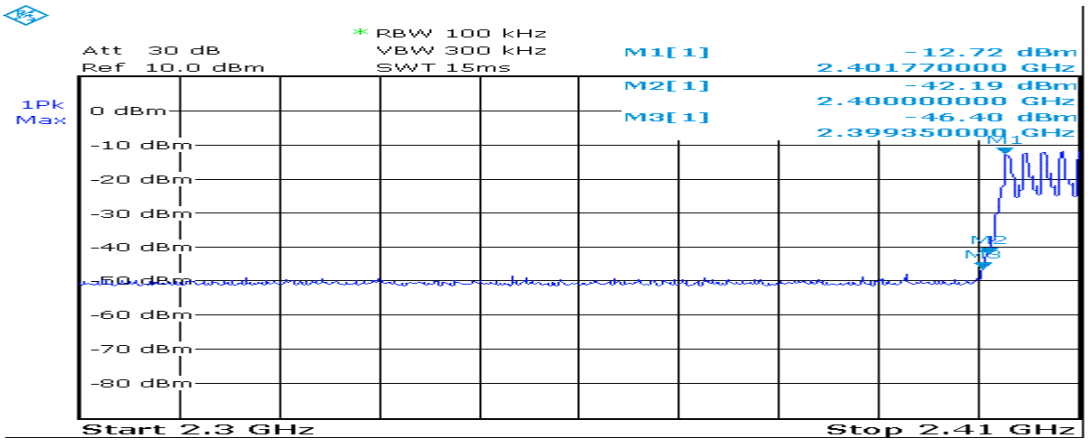
4.4.6 TEST RESULT

Temperature:	22 °C	Humidity:	604 %RH
Spectrum Detector:	PK.	Tesr Mode:	Tx-1, Tx-3
RBW:	100 kHz	VBW:	300 kHz
Tested By:	Richard Lin	Tested Date:	Sep. 28, 2016

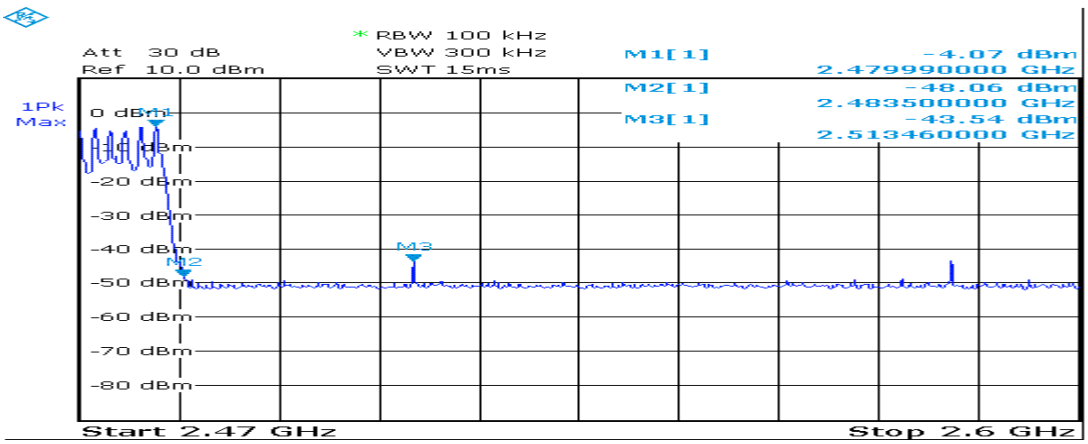
1. Conducted test

Frequency (MHz)	PEAK POWER OUTPUT (dBm)	Emission read Value(dBm)	Result of Band edge (dBc)	Band edge LIMIT (dBc)
< 2400	-12.72	-46.40	33.68	> 20 dBc
> 2483.5	-4.07	-43.54	39.47	> 20 dBc

Below 2400MHz (CH01)：



Above 2483.5 MHz (CH40)：



2. Radiated emission test：

Below 2400MHz (CH01)

Temperature:	24 °C	Humidity:	65 %RH
Frequency Range:	2.3 GHz – 2.41 GHz	Tested Mode:	Tx-1
Receiver Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Sep. 27, 2016

Frequency (MHz)	Correct Factor (dB)	Ant. Fac. (dB)	Ant. Pol. (H/V)	Reading (dBuV)		Emission (dBuV/m)		Limit Line (dBuV/m)		Over Limit (dBuV/m)	
				PK	AV	PK	AV	PK	AV	PK	AV
2399.38	-30.74	28.22	H	47.38	36.82	44.86	34.30	74.00	54.00	-29.14	-19.70
2399.75	-30.74	28.22	V	47.56	35.01	45.04	32.49	74.00	54.00	-28.96	-21.51
2400.00	-30.74	28.22	H	49.69	39.18	47.17	36.66	74.00	54.00	-26.83	-17.34
2400.00	-30.74	28.22	V	48.61	38.24	46.09	35.72	74.00	54.00	-27.91	-18.28

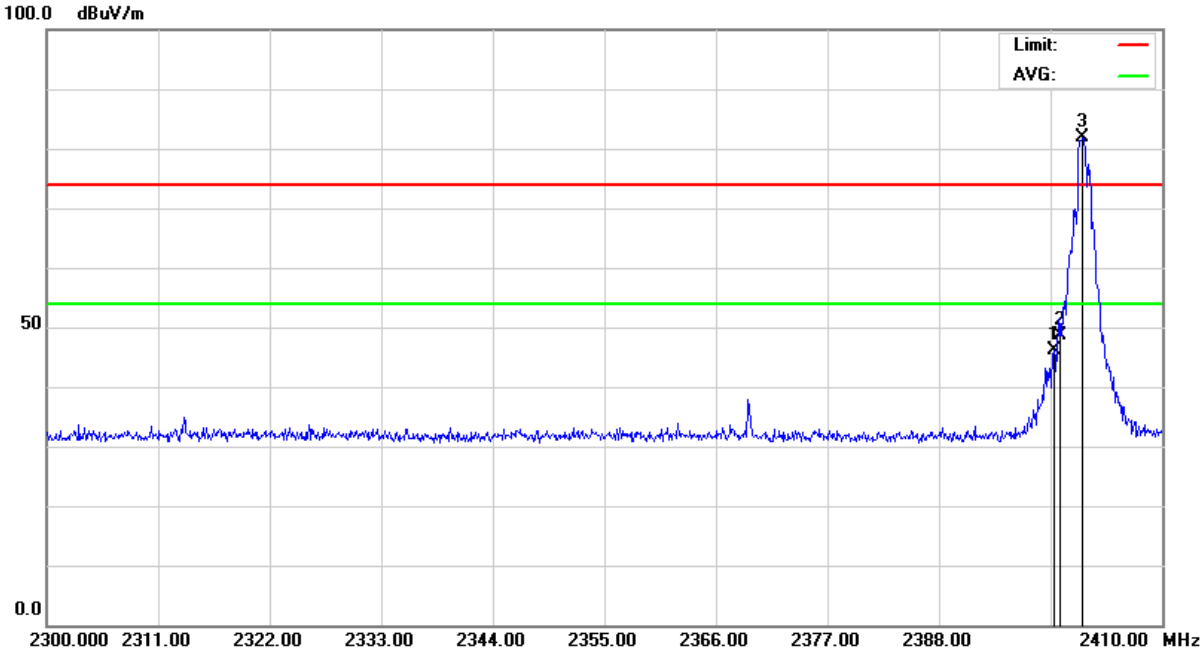
Above 2483.5MHz (CH40)

Temperature:	23 °C	Humidity:	59 %RH
Frequency Range:	2.47 GHz – 2.6 GHz	Tested Mode:	Tx-3
Receiver Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 04, 2014

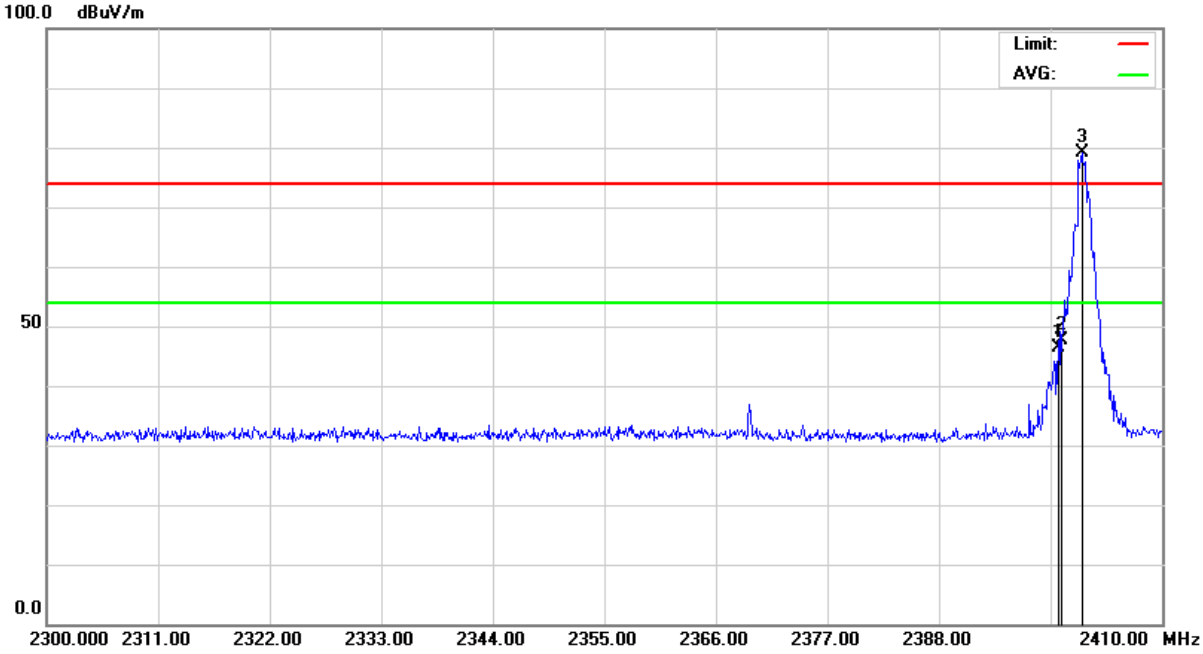
Frequency (MHz)	Correct Factor (dB)	Ant. Fac. (dB)	Ant. Pol. (H/V)	Reading (dBuV)		Emission (dBuV/m)		Limit Line (dBuV/m)		Over Limit (dBuV/m)	
				PK	AV	PK	AV	PK	AV	PK	AV
2483.50	-30.60	28.45	H	40.76	30.25	38.61	28.10	74.00	54.00	-35.39	-25.90
2483.50	-30.60	28.45	V	35.84	25.40	33.69	23.25	74.00	54.00	-40.31	-30.75
2490.03	-30.59	28.47	H	39.78	29.28	37.67	27.17	74.00	54.00	-36.33	-26.83
2490.05	-30.59	28.47	V	38.99	28.47	36.88	26.36	74.00	54.00	-37.12	-27.64

Below 2400MHz (CH01)

Antenna Polarization：Horizontal

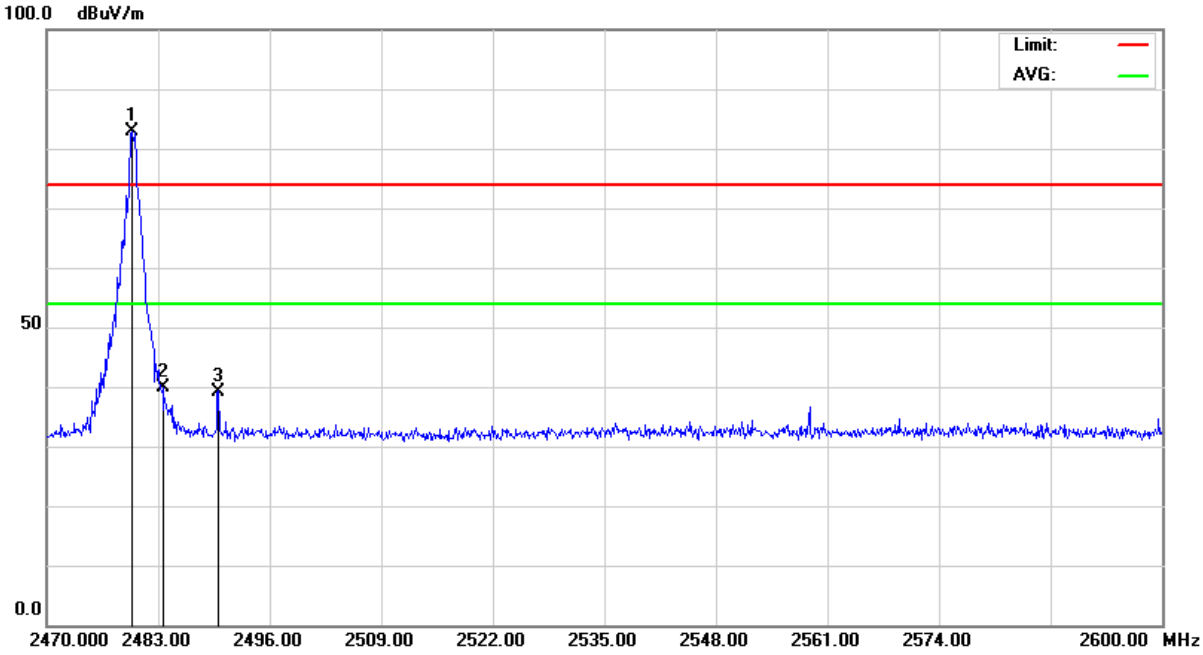


Antenna Polarization：Vertical

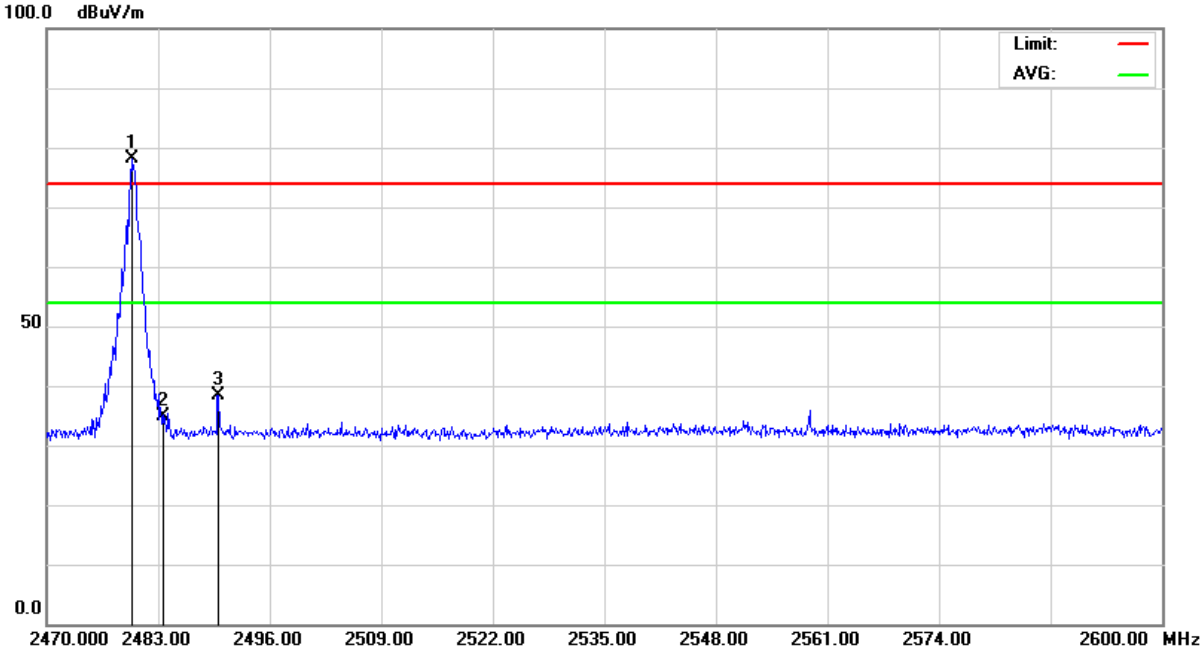


Above 2483.5MHz (CH40)

Antenna Polarization：Horizontal



Antenna Polarization：Vertical



4.5 POWER DENSITY TEST

4.5.1 LIMIT

FCC Part15, Subpart C Section 15.247(e)

FREQUENCY RANGE (MHz)	Limit (dBm / kHz)
902-928	8 dBm / 3 kHz
2400-2483.5	
5725-5850	

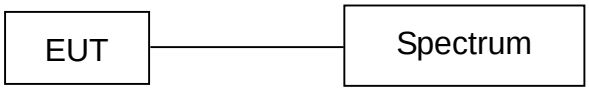
4.5.2 TEST EQUIPMENT

The following test equipment was used during the radiated emission test:

EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER
EMI TEST RECEIVER (INCLUDE SPECTRUM ANALYZER)	9 KHz ~ 6 GHz	ROHDE & SCHWARZ	ESL /100176	MAY 22, 2017 ETC

NOTE: The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

4.5.3 TEST SET-UP



The EUT was connected to a spectrum through a 50Ω RF cable.

4.5.4 TEST PROCEDURE

The EUT was operating in transmitter mode and could be controlled its channel.

Printed out the test result from the spectrum by hard copy function.

4.5.5 EUT OPERATING CONDITION

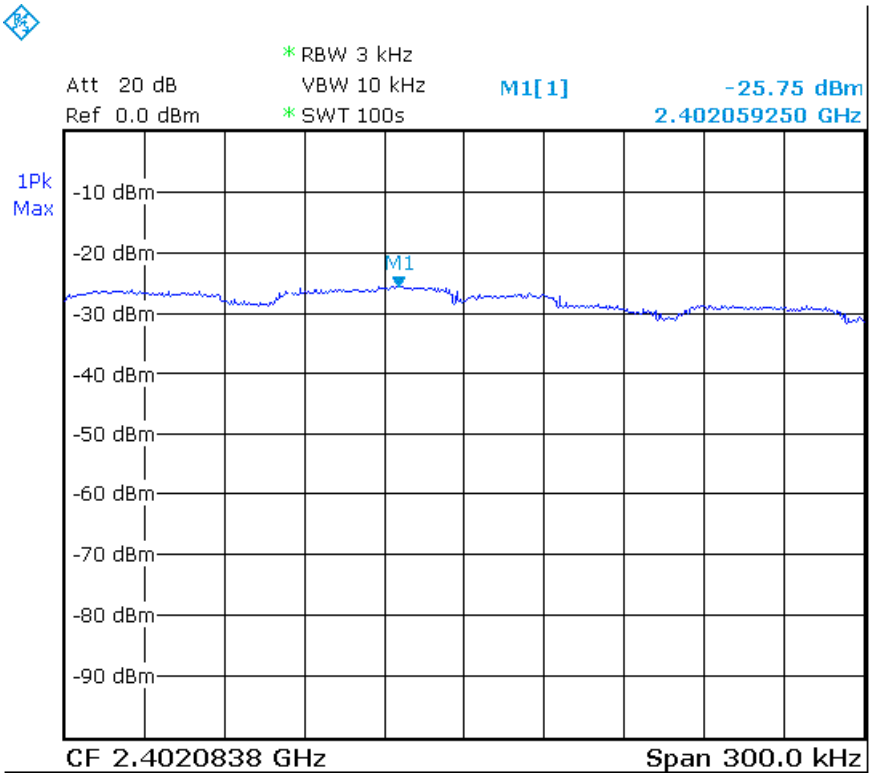
1. Set the EUT under continuous transmission condition.
2. The EUT was set to the highest available power level.

4.5.6 TEST RESULT

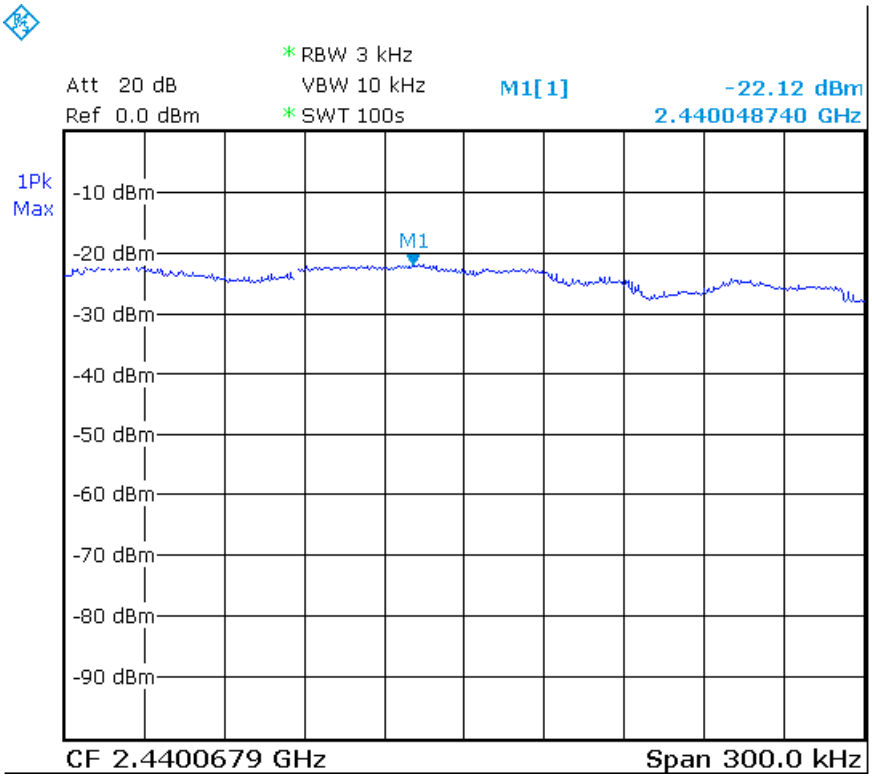
Temperature:	22 °C	Humidity:	60 %RH
Spectrum Detector:	PK.	Tesr Mode:	Tx-1, Tx-2, Tx-3
RBW:	3 kHz	VBW:	10 kHz
Tested By:	Richard Lin	Tested Date:	Sep. 28, 2016

Channel Number	Channel Frequency (MHz)	RF Power Level in 3 KHz BW (dBm/3kHz)	Maximum Limit (dBm/3kHz)
CH01	2402	-25.75	8
CH20	2440	-22.12	8
CH40	2480	-18.52	8

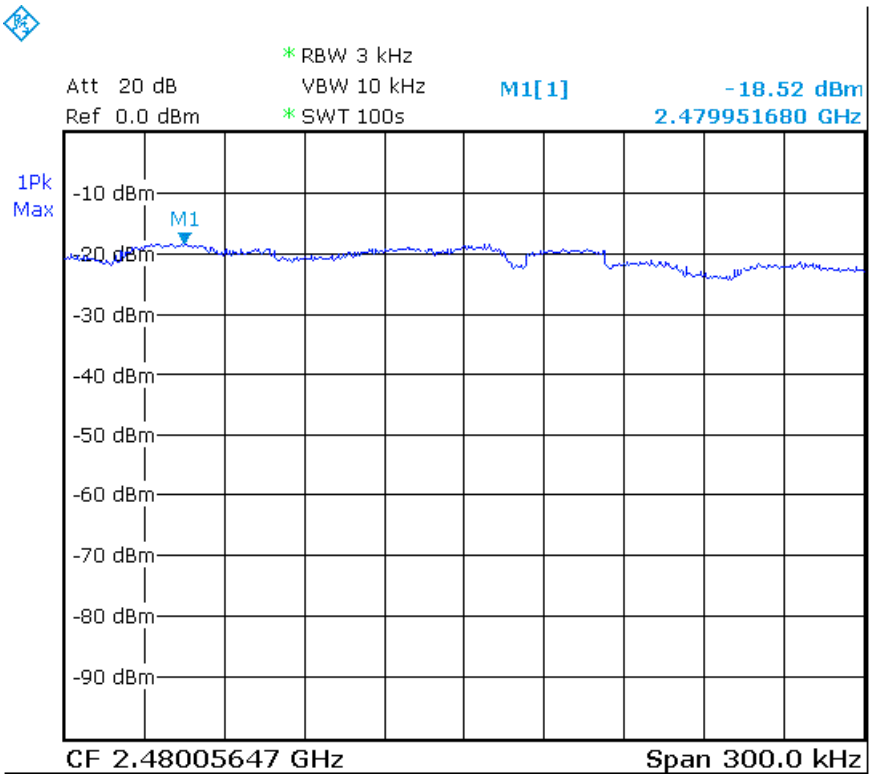
CH01：



CH20：


RBW 3 kHz
Att 20 dB
VBW 10 kHz
M1[1]
-22.12 dBm
Ref 0.0 dBm
SWT 100s
2.440048740 GHz
1Pk
Max
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
M1
CF 2.4400679 GHz
Span 300.0 kHz

CH40：


RBW 3 kHz
Att 20 dB
VBW 10 kHz
M1[1]
-18.52 dBm
Ref 0.0 dBm
SWT 100s
2.479951680 GHz
1Pk
Max
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
M1
CF 2.48005647 GHz
Span 300.0 kHz

5. Antenna application

5.1 Antenna requirement

The EUT's antenna is met the requirement of FCC Part 15C section 15.203.

FCC part15C section15.247 requirement:
Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

5.2 Result

The EUT's antenna used a Chip Antenna. Gain of antenna types is 1.57 dBi that meet the requirement.

6. TERMS OF ABBREVIATION

AV.	Average detection
AZ(º)	Turn table azimuth
Correct.	Correction
EL(m)	Antenna height (meter)
EUT	Equipment Under Test
Horiz.	Horizontal direction
LISN	Line Impedance Stabilization Network
NSA	Normalized Site Attenuation
Q.P.	Quasi-peak detection
SRT Lab	Spectrum Research & Testing Laboratory, Inc.
Vert.	Vertical direction