CMA Testing and Certification Laboratories
廠商會檢定中心

# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

Application No. : LU030653(6)

Applicant : Camino International Limited
Flat A, 3rd Floor, International Industrial Building
501-503 Castle Peak Road, Cheung Sha Wan, Kowloon, Hong Kong

Sample Description : One(1) item of submitted sample stated to :

| Sample description | Model number |
|---|---|
| FIGURATIVE DECORATIVE BLUETOOTH SPEAKER - 1:1 IRON MAN HEAD SPEAKER | 761074, 761402, 761491 |
| FIGURATIVE DECORATIVE BLUETOOTH SPEAKER - IRON MAN MARK44-HULKBUSTER | 761403, 761492, 761485 |
| WAR MACHINE MARK III LIFE-SIZE FIGURATIVE DECORATIVE BLUETOOTH WIRELESS SPEAKER | 761504 |
| MARK XLVI IRON MAN LIFE-SIZE FIGURATIVE DECORATIVE BLUETOOTH WIRELESS SPEAKER | 761505 |
| IRON MAN MARK XLIII LIFE-SIZE BUST FIGURATIVE DECORATIVE BLUETOOTH HI-FI SYSTEM SPEAKER SET | 761401, 761486 |
| STAR WARS-SEATH TROOPER HELMET BLUETOOTH WIRELESS SPEAKER | 761508 |
| FIGURATIVE DECORATIVE BLUETOOTH SPEAKER - STORM TROOPER | 761478, 761484 |
| FIGURATIVE DECORATIVE BLUETOOTH SPEAKER - DARTH VADER | 761481, 761483 |

Sample registration No. : RU015708-001
Radio Frequency : 2402MHz – 2480 MHz Transceiver
Rating : AC 100-240V to DC 15V
: AC 100-240V to DC 9V
No. of submitted sample : Four (4) set (s)

Date Received : 20 Oct 2016

Test Period : 24 Oct 2016 to 28 Oct 2016.

Test Requested : FCC Permissive Change

Test Method : 47 CFR Part 15 (10-1-15 Edition), ANSI C63.4 – 2014, ANSI C63.10 – 2013
FCC Public Notice DA 00-705

Test Engineer : Mr. LEUNG Shu-kan, Ken

*For and on behalf of*
CMA Industrial Development Foundation Limited

Authorized Signature : _____

Mr. WONG Lap-pong, Andrew
Manager
Electrical Division



FCC ID: ZZX761074



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# TEST REPORT

| | | | | |
|---|---|---|---|---|
| Report No. | : | AU0066450(0) | Date : | 10 Nov 2016 |
| Test Result | : | See attached sheet(s) from page 2 to 104. | | |
| Conclusion | : | The submitted sample was found to comply with requirement of FCC Part 15 Subpart B and C. | | |
| Remark | : | All Fifteen models are the same in circuitry and components and construction, and therefore model 761508 was chosen to be the representative of the test sample. The difference(s) between the tested model and the declared model(s) is/are outlook. | | |

*For and on behalf of*
CMA Industrial Development Foundation Limited

Authorized Signature : _____ Page 2 of 104

Mr. WONG Lap-pong, Andrew
Manager
Electrical Division

FCC ID: ZZX761074

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## 1 General Information

### 1.1 General Description

The equipment under test (EUT) is a Bluetooth wireless speaker. The EUT is power by AC 120-240V to DC 15V / 9V adaptor. The EUT receives digital audio signal from other wireless device and playback the audio signal.

For the Bluetooth mode, it supports standard Bluetooth V3.0+EDR or below revision protocol for data synchronization. After paring with other standard Bluetooth device, it can play the music.

A non standardized Bluetooth protocol or other Gaussian frequency-shift keying (GFSK) digital modulation signal was unable to synchronize the Bluetooth speaker.

A Bluetooth trademark was printed on the speaker enclosure to indicate it communicate with Bluetooth protocol only.

**Pseudorandom frequency hopping sequence**
The channel is represented by a pseudo-random hopping sequence hopping through the 79 RF Channels. The hopping sequence is unique for the piconet and is determined by the Bluetooth device address of the master; the phase in the hopping sequence is determined by the Bluetooth clock of the master. The channel is divided into time slots where each slot corresponds to an RF hop frequency. Consecutive hops correspond to different RF hop frequencies. The nominal hop rate is 1600 hops/s.
Example of a 79 hopping sequence in data mode: 40, 21, 44, 23, 42, 53, 46, 55, 48, 33, 52, 35, 50, 65, 54…

**Equal Hopping Frequency Use**
All Bluetooth units participating in the piconet are time and hop-synchronized to the channel.

**System Receiver Input Bandwidth**
The input bandwidth of the receiver is 1 MHz. In every connection one Bluetooth device is the master and the other one is slave. The aster determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally the type of connection (e.g. single multisport (packet) is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings. Repeating of a packet has no influence on the hopping sequence.. The hopping sequence generated by the master of the connection will be followed in any case. That means, a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.





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**Equipment Description**

15.247(g): In accordance with the Bluetooth Industry Standard, the system is designed to comply With all of The regulations in Section 15.247 when the transmitter is presented with a continuous data (or information) system.

15.247(h): In accordance with the Bluetooth Industry Standard, the system does not coordinate it channels selection/ hopping sequence with other frequency hopping systems for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters.

The brief circuit description is listed as follows:

- M1 and its associated circuit act as RF module
- U1 and its associated circuit act as MCU
- U7, U8 and its associated circuit act as audio amplifier

Antenna type : PCB Antenna
Antenna gain : -5dBi
Modulation technique : GFSK
Number of channel : 79 channels





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**1.2 Location of the test site**

FCC Registered Test Site Number: 416666

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.10 – 2013. A Semi-Anechoic Chamber Testing Site is set up for investigation and located at:

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.10 – 2013. A shielded room is located at :

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
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### 1.3 List of measuring equipment

| Equipment | Manufacturer | Model No. | Serial No. | Calibration Due Date | Calibration Period |
|---|---|---|---|---|---|
| EMI Test Receiver | R&S | ESCS30 | 100001 | 04 Jan 2017 | 1Year |
| Spectrum Analyzer | R&S | FSV40 | 100628 | 09 Feb 2017 | 1Year |
| Broadband Antenna | Schaffner | CBL6112B | 2718 | 15 Mar 2017 | 2Years |
| Loop Antenna | EMCO | 6502 | 00056620 | 25 Jan 2018 | 2Years |
| Horn Antenna | Schwarzbeck | BBHA 9120D | 9120D-531 | 24 Nov 2016 | 2Years |
| Broadband Pre-Amplifier | Schwarzbeck | BBV 9718 | 9718-119 | 24 Nov 2016 | 2Years |
| Horn Antenna | Schwarzbeck | BBHA 9170 | BBHA9170442 | 02 Aug 2017 | 2Years |
| Broadband Pre-Amplifier | Schwarzbeck | BBV 9719 | 9719-010 | 02 Aug 2017 | 2Years |
| Coaxial Cable | Schaffner | RG 213/U | N/A | 18 May 2017 | 1Year |
| Coaxial Cable | Suhner | RG 214/U | N/A | 18 May 2017 | 1Year |
| Coaxial Cable | Suhner | Sucoflex_104 | N/A | 13 Dec 2016 | 1Year |
| LISN | R&S | ENV216 | 101323 | 21 Oct 2016 | 1Year |
| Coaxial Cable | Tyco Electronics | RG 58C/U | N/A | 01 Nov 2016 | 1Year |
| | | | | | |
| **TS8997 Testing System** | | | | | |
| Spectrum Analyzer | R&S | FSV 40 | 101190 | 12 May 2017 | 1Year |
| Vector Generator | R&S | SMBV100A | 262024 | 04 May 2017 | 1Year |
| Generator | R&S | SMB100A | 103230 | 24 May 2017 | 1Year |
| OSP | R&S | OSP | OSP120 V02 | 06 Jun 2017 | 1Year |





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### 1.4 Measurement Uncertainty

The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%.

Radiated emissions

| Frequency | Uncertainty ($U_{lab}$) |
|---|---|
| 30MHz ~ 200MHz (Horizontal) | 4.83dB |
| 30MHz ~ 200MHz (Vertical) | 4.84dB |
| 200MHz ~1000MHz (Horizontal) | 4.87dB |
| 200MHz ~1000MHz (Vertical) | 5.94dB |
| 1GHz ~6GHz | 4.41dB |
| 6GHz ~18GHz | 4.64dB |

Conducted emissions

| Frequency | Uncertainty ($U_{lab}$) |
|---|---|
| 150kHz~30MHz | 2.64dB |





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## 2 Description of the radiated emission test

### 2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.10 – 2013.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground for below 1GHz measurement and 1.5m high above the ground for above 1GHz measurement. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is placed 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1 m above the ground.

For 30MHz to 1GHz, broadband antenna with its vertical and horizontal plane is placed 3m from the EUT and rotated about its vertical and horizontal axis for maximum response at each azimuth about the EUT. And the reference point of antenna shall be 1 m above the ground.

For above 1GHz, horn antenna with its vertical and horizontal plane is placed 3m from the EUT and rotated about its vertical and horizontal axis for maximum response at each azimuth about the EUT. Preamplifier and High Pass filter was used for measurements. The reference point of antenna shall be 1 m above the ground.

The device was rotated through three orthogonal to determine which attitude and configuration produce the highest emission during measurement for Radiated Emission measurement.

The EUT will connect to TS 8997 testing system for direct conducted measurement.





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## 2.2 Test Result

Summary

| Test | Frequency (MHz) | Nominal Power (dBm) | Nominal Bandwidth (MHz) | Result |
|---|---|---|---|---|
| Hopping Frequencies | --- (hopping) | 0.0 | 1.000000 | PASS |
| Band Edge low | --- (hopping) | 0.0 | 1.000000 | PASS |
| Band Edge high | --- (hopping) | 0.0 | 1.000000 | PASS |
| Tx Spurious Emission | --- (hopping) | 0.0 | 1.000000 | PASS |
| Rx Spurious Emission | --- (hopping) | 0.0 | 1.000000 | PASS |
| Carrier Frequency Separation | 2402.000 (hopping) | 0.0 | 1.000000 | PASS |
| Carrier Frequency Separation | 2441.000 (hopping) | 0.0 | 1.000000 | PASS |
| Carrier Frequency Separation | 2479.000 (hopping) | 0.0 | 1.000000 | PASS |
| Time of Channel Occupancy | 2402.000 (hopping) | 0.0 | 1.000000 | PASS |
| Time of Channel Occupancy | 2441.000 (hopping) | 0.0 | 1.000000 | PASS |
| Time of Channel Occupancy | 2480.000 (hopping) | 0.0 | 1.000000 | PASS |
| RF output power | 2402.000 (single) | 0.0 | 1.000000 | PASS |
| Emission Bandwidth 20 dB | 2402.000 (single) | 0.0 | 1.000000 | PASS |
| Band Edge low | 2402.000 (single) | 0.0 | 1.000000 | PASS |
| RF output power | 2441.000 (single) | 0.0 | 1.000000 | PASS |
| Emission Bandwidth 20 dB | 2441.000 (single) | 0.0 | 1.000000 | PASS |
| RF output power | 2480.000 (single) | 0.0 | 1.000000 | PASS |
| Emission Bandwidth 20 dB | 2480.000 (single) | 0.0 | 1.000000 | PASS |
| Band Edge high | 2480.000 (single) | 0.0 | 1.000000 | PASS |





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**Frequencies**

| | | |
|---|---|---|
| BT CH 1 (2402 MHz) | BT CH 2 (2403 MHz) | BT CH 3 (2404 MHz) |
| BT CH 4 (2405 MHz) | BT CH 5 (2406 MHz) | BT CH 6 (2407 MHz) |
| BT CH 7 (2408 MHz) | BT CH 8 (2409 MHz) | BT CH 9 (2410 MHz) |
| BT CH 10 (2411 MHz) | BT CH 11 (2412 MHz) | BT CH 12 (2413 MHz) |
| BT CH 13 (2414 MHz) | BT CH 14 (2415 MHz) | BT CH 15 (2416 MHz) |
| BT CH 16 (2417 MHz) | BT CH 17 (2418 MHz) | BT CH 18 (2419 MHz) |
| BT CH 19 (2420 MHz) | BT CH 20 (2421 MHz) | BT CH 21 (2422 MHz) |
| BT CH 22 (2423 MHz) | BT CH 23 (2424 MHz) | BT CH 24 (2425 MHz) |
| BT CH 25 (2426 MHz) | BT CH 26 (2427 MHz) | BT CH 27 (2428 MHz) |
| BT CH 28 (2429 MHz) | BT CH 29 (2430 MHz) | BT CH 30 (2431 MHz) |
| BT CH 31 (2432 MHz) | BT CH 32 (2433 MHz) | BT CH 33 (2434 MHz) |
| BT CH 34 (2435 MHz) | BT CH 35 (2436 MHz) | BT CH 36 (2437 MHz) |
| BT CH 37 (2438 MHz) | BT CH 38 (2439 MHz) | BT CH 39 (2440 MHz) |
| BT CH 40 (2441 MHz) | BT CH 41 (2442 MHz) | BT CH 42 (2443 MHz) |
| BT CH 43 (2444 MHz) | BT CH 44 (2445 MHz) | BT CH 45 (2446 MHz) |
| BT CH 46 (2447 MHz) | BT CH 47 (2448 MHz) | BT CH 48 (2449 MHz) |
| BT CH 49 (2450 MHz) | BT CH 50 (2451 MHz) | BT CH 51 (2452 MHz) |
| BT CH 52 (2453 MHz) | BT CH 53 (2454 MHz) | BT CH 54 (2455 MHz) |
| BT CH 55 (2456 MHz) | BT CH 56 (2457 MHz) | BT CH 57 (2458 MHz) |
| BT CH 58 (2459 MHz) | BT CH 59 (2460 MHz) | BT CH 60 (2461 MHz) |
| BT CH 61 (2462 MHz) | BT CH 62 (2463 MHz) | BT CH 63 (2464 MHz) |
| BT CH 64 (2465 MHz) | BT CH 65 (2466 MHz) | BT CH 66 (2467 MHz) |
| BT CH 67 (2468 MHz) | BT CH 68 (2469 MHz) | BT CH 69 (2470 MHz) |
| BT CH 70 (2471 MHz) | BT CH 71 (2472 MHz) | BT CH 72 (2473 MHz) |
| BT CH 73 (2474 MHz) | BT CH 74 (2475 MHz) | BT CH 75 (2476 MHz) |
| BT CH 76 (2477 MHz) | BT CH 77 (2478 MHz) | BT CH 78 (2479 MHz) |





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### 2.3 Conducted Emission Measurement Data

Environmental conditions:

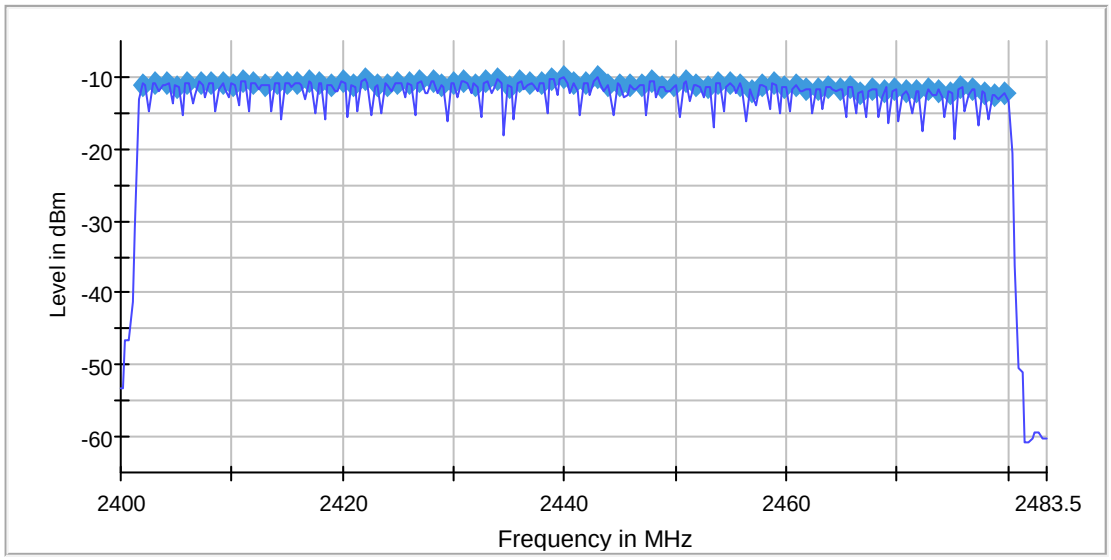
| Parameter | Recorded value | |
|---|---|---|
| Ambient temperature: | 26 | ° C |
| Relative humidity: | 66 | % |

## Hopping Frequencies (frequency independent)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Channels

| Channels | Limit Min | Limit Max | Result |
|---|---|---|---|
| 79 | 15 | --- | PASS |





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## Measurement

| Setting | Instrument Value | Target Value |
|---|---|---|
| Start Frequency | 2.40000 GHz | 2.40000 GHz |
| Stop Frequency | 2.48350 GHz | 2.48350 GHz |
| Span | 83.500 MHz | 83.500 MHz |
| RBW | 300.000 kHz | <= 300.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 278 | ~ 278 |
| Sweeptime | 1.000 ms | AUTO |
| Reference Level | -10.000 dBm | -10.000 dBm |
| Attenuation | 10.000 dB | AUTO |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 100 | 100 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.50 | 0.50 |
| Run | 147 / max. 150 | max. 150 |
| Stable | 3 / 3 | 3 |





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## Band Edge low (frequency independent)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Result |
|---|---|
| hopping | PASS |

## Inband Peak

| Frequency (MHz) | Level (dBm) |
|---|---|
| 2419.063585 | -23.1 |

## Measurements

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|---|---|---|---|---|
| 2397.576346 | -72.6 | 29.5 | -43.1 | PASS |
| 2399.675180 | -73.7 | 30.6 | -43.1 | PASS |
| 2398.525819 | -74.1 | 31.0 | -43.1 | PASS |
| 2399.575236 | -74.5 | 31.4 | -43.1 | PASS |
| 2398.026097 | -74.8 | 31.7 | -43.1 | PASS |
| 2399.425319 | -75.5 | 32.4 | -43.1 | PASS |
| 2396.626874 | -76.3 | 33.2 | -43.1 | PASS |
| 2395.077735 | -76.4 | 33.3 | -43.1 | PASS |
| 2395.627429 | -76.6 | 33.5 | -43.1 | PASS |
| 2397.176569 | -76.6 | 33.5 | -43.1 | PASS |
| 2396.476957 | -76.8 | 33.7 | -43.1 | PASS |
| 2397.726263 | -76.8 | 33.7 | -43.1 | PASS |
| 2398.725708 | -76.9 | 33.8 | -43.1 | PASS |
| 2395.227651 | -77.0 | 33.9 | -43.1 | PASS |
| 2398.176013 | -77.0 | 33.9 | -43.1 | PASS |





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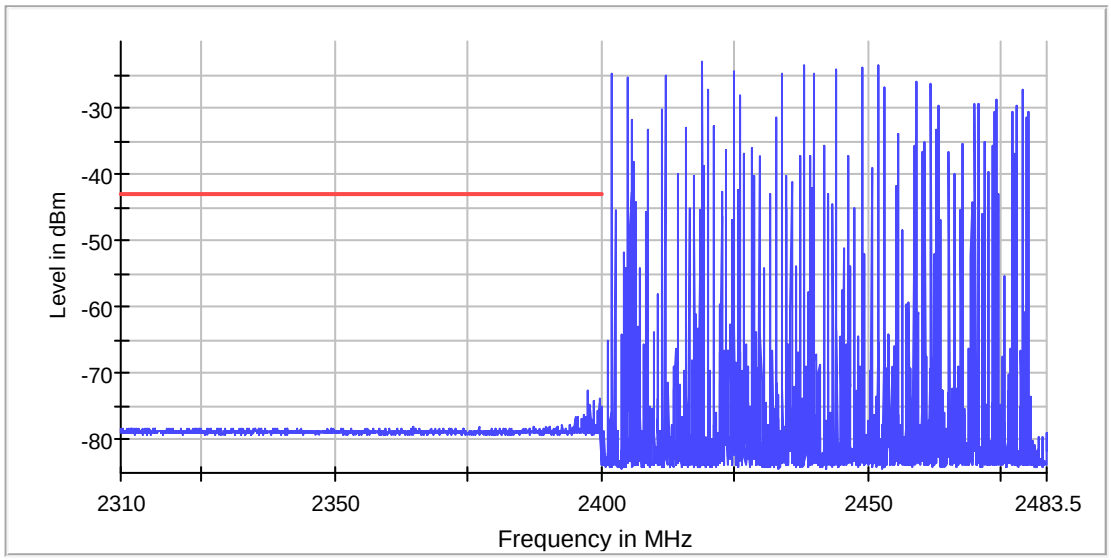


## Measurement 1

| Setting | Instrument Value | Target Value |
|---|---|---|
| RBW | 100.000 kHz | <= 100.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 1670 | ~ 1670 |
| Sweeptime | 1.670 s | 1.670 s |
| Reference Level | -10.000 dBm | -10.000 dBm |
| Attenuation | 10.000 dB | AUTO |
| Detector | RMS | RMS |
| SweepCount | 3 | 3 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 3 / max. 15 | max. 15 |
| Stable | 3 / 3 | 3 |





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## Measurement 2

| Setting | Instrument Value | Target Value |
|---|---|---|
| RBW | 100.000 kHz | <= 100.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 1800 | ~ 1800 |
| Sweeptime | 1.800 s | 1.800 s |
| Reference Level | -10.000 dBm | -10.000 dBm |
| Attenuation | 10.000 dB | AUTO |
| Detector | RMS | RMS |
| SweepCount | 3 | 3 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 3 / max. 15 | max. 15 |
| Stable | 3 / 3 | 3 |





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## Band Edge high (frequency independent)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Result |
|---|---|
| hopping | PASS |

## Inband Peak

| Frequency (MHz) | Level (dBm) |
|---|---|
| 2438.002244 | -23.2 |

## Measurements

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|---|---|---|---|---|
| 2484.372356 | -75.7 | 32.5 | -43.2 | PASS |
| 2485.369335 | -76.3 | 33.1 | -43.2 | PASS |
| 2484.920695 | -76.5 | 33.3 | -43.2 | PASS |
| 2484.322508 | -76.6 | 33.3 | -43.2 | PASS |
| 2490.254532 | -77.1 | 33.8 | -43.2 | PASS |
| 2485.917674 | -77.1 | 33.9 | -43.2 | PASS |
| 2485.319486 | -77.2 | 34.0 | -43.2 | PASS |
| 2486.266616 | -77.3 | 34.1 | -43.2 | PASS |
| 2492.746979 | -77.6 | 34.4 | -43.2 | PASS |
| 2485.967523 | -77.7 | 34.4 | -43.2 | PASS |
| 2485.120091 | -77.7 | 34.5 | -43.2 | PASS |
| 2484.621601 | -77.8 | 34.5 | -43.2 | PASS |
| 2489.357251 | -77.8 | 34.6 | -43.2 | PASS |
| 2488.260574 | -77.8 | 34.6 | -43.2 | PASS |
| 2486.117069 | -77.9 | 34.7 | -43.2 | PASS |





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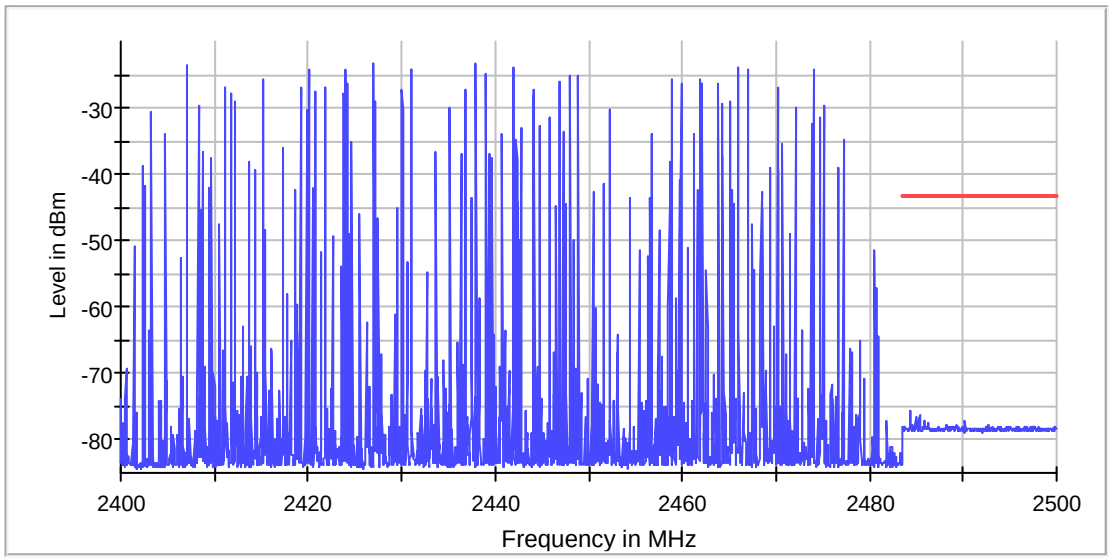
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016




## Measurement 1

| Setting | Instrument Value | Target Value |
|---|---|---|
| RBW | 100.000 kHz | <= 100.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 1670 | ~ 1670 |
| Sweeptime | 1.670 s | 1.670 s |
| Reference Level | -10.000 dBm | -10.000 dBm |
| Attenuation | 10.000 dB | AUTO |
| Detector | RMS | RMS |
| SweepCount | 3 | 3 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 3 / max. 15 | max. 15 |
| Stable | 3 / 3 | 3 |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Measurement 2

| Setting | Instrument Value | Target Value |
|---|---|---|
| RBW | 100.000 kHz | <= 100.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 330 | ~ 330 |
| Sweeptime | 330.000 ms | 330.000 ms |
| Reference Level | -10.000 dBm | -10.000 dBm |
| Attenuation | 10.000 dB | AUTO |
| Detector | RMS | RMS |
| SweepCount | 3 | 3 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 3 / max. 15 | max. 15 |
| Stable | 3 / 3 | 3 |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Tx Spurious Emission (frequency independent)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Result |
|---|---|
| hopping | PASS |

## Final measurements

| Frequency (MHz) | Level Pre Measurement (dBm) | level (dBm) | Limit (dBm) | Margin (dB) | Result |
|---|---|---|---|---|---|
| 2488.249474 | -46.7 | -79.7 | -41.2 | 38.5 | PASS |

## Pre Measurements

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) |
|---|---|---|---|
| 2488.249474 | -46.7 | 5.5 | -41.2 |
| 2488.749419 | -47.2 | 6.0 | -41.2 |
| 2487.249585 | -49.6 | 8.4 | -41.2 |
| 2483.749972 | -50.3 | 9.1 | -41.2 |
| 2487.749530 | -51.4 | 10.2 | -41.2 |
| 2486.749640 | -52.1 | 10.9 | -41.2 |
| 2486.249696 | -52.5 | 11.3 | -41.2 |
| 2485.249806 | -54.2 | 12.9 | -41.2 |
| 2485.749751 | -54.7 | 13.5 | -41.2 |
| 2484.749862 | -58.2 | 16.9 | -41.2 |
| 2384.755444 | -58.5 | 17.2 | -41.2 |
| 2484.249917 | -58.5 | 17.3 | -41.2 |
| 2378.257765 | -59.1 | 17.8 | -41.2 |
| 2379.257408 | -59.7 | 18.5 | -41.2 |
| 2385.755087 | -60.0 | 18.8 | -41.2 |

## Measurement Settings

| Start Frequency (MHz) | Stop Frequency (MHz) | Pre Measurement | Final Measurement |
|---|---|---|---|
| 30.000000 | 1000.000000 | 1 | 1 |
| 1000.000000 | 2400.000000 | 2 | 2 |
| 2400.000000 | 2483.500000 | 2 | 2 |
| 2483.500000 | 7000.000000 | 2 | 2 |
| 7000.000000 | 26000.000000 | 2 | 2 |





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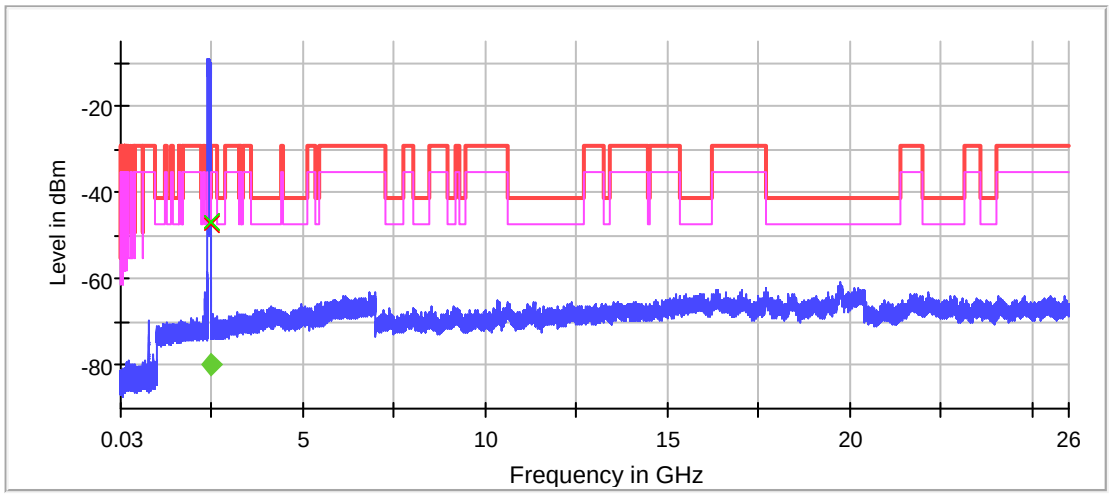
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016




Limit [limit.Result:1]
Threshold [limit 2.Result:1]
Sum Level [trace.Result:1]
Critical [Over Limit.Result:1]

## Pre Measurement 1

| Setting | Instrument Value | Target Value |
|---|---|---|
| RBW | 100.000 kHz | <= 100.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 19400 | ~ 19400 |
| Sweeptime | 19.400 ms | AUTO |
| Reference Level | -30.000 dBm | -30.000 dBm |
| Attenuation | 0.000 dB | AUTO |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 30 | 30 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 3 / max. 150 | max. 150 |
| Stable | 3 / 3 | 3 |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Pre Measurement 2

| Setting | Instrument Value | Target Value |
|---|---|---|
| RBW | 1.000 MHz | <= 1.000 MHz |
| VBW | 3.000 MHz | >= 3.000 MHz |
| SweepPoints | 2800 | ~ 2800 |
| Sweeptime | 2.800 ms | AUTO |
| Reference Level | -30.000 dBm | -30.000 dBm |
| Attenuation | 0.000 dB | AUTO |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 30 | 30 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 3 / max. 150 | max. 150 |
| Stable | 3 / 3 | 3 |

## Final Measurement 2

| Setting | Instrument Value | Target Value |
|---|---|---|
| Span | ZeroSpan | ZeroSpan |
| RBW | 1.000 MHz | ~ 1.000 MHz |
| VBW | 3.000 MHz | ~ 3.000 MHz |
| SweepPoints | 10001 | ~ 10001 |
| Sweeptime | 1.000 s | 1.000 s |
| Reference Level | -30.000 dBm | -30.000 dBm |
| Attenuation | 0.000 dB | 0.000 dB |
| Detector | RMS | RMS |
| SweepCount | 1 | 1 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Clear Write | Clear Write |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Rx Spurious Emission (frequency independent)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Result |
|---|---|
| hopping | PASS |

## Final measurements

| Frequency (MHz) | Level Pre Measurement (dBm) | level (dBm) | Limit (dBm) | Margin (dB) | Result |
|---|---|---|---|---|---|
| --- | --- | --- | --- | --- | --- |

## Pre Measurements

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) |
|---|---|---|---|
| 19758.828483 | -60.2 | 19.0 | -41.2 |
| 19703.831377 | -60.5 | 19.3 | -41.2 |
| 19723.830325 | -60.6 | 19.4 | -41.2 |
| 19716.830693 | -60.7 | 19.5 | -41.2 |
| 19734.829746 | -60.8 | 19.6 | -41.2 |
| 19767.828009 | -60.9 | 19.7 | -41.2 |
| 19766.828062 | -60.9 | 19.7 | -41.2 |
| 20230.803642 | -60.9 | 19.7 | -41.2 |
| 19762.828272 | -61.0 | 19.7 | -41.2 |
| 19727.830114 | -61.0 | 19.8 | -41.2 |
| 19778.827430 | -61.1 | 19.8 | -41.2 |
| 19704.831325 | -61.1 | 19.9 | -41.2 |
| 19777.827483 | -61.1 | 19.9 | -41.2 |
| 19712.830904 | -61.2 | 19.9 | -41.2 |
| 19717.830640 | -61.2 | 19.9 | -41.2 |

## Measurement Settings

| Start Frequency (MHz) | Stop Frequency (MHz) | Pre Measurement | Final Measurement |
|---|---|---|---|
| 30.000000 | 1000.000000 | 1 | 1 |
| 1000.000000 | 7000.000000 | 2 | 2 |
| 7000.000000 | 26000.000000 | 2 | 2 |





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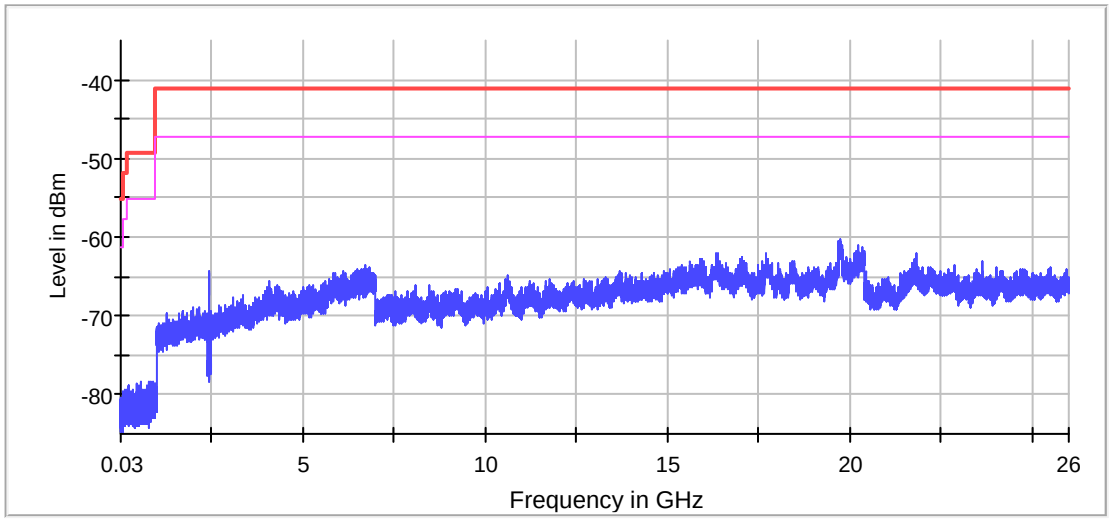
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016




Limit [limit.Result:1] Threshold [limit 2.Result:1]

## Pre Measurement 1

| Setting | Instrument Value | Target Value |
|---|---|---|
| RBW | 100.000 kHz | <= 100.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 9700 | ~ 9700 |
| Sweeptime | 9.700 ms | AUTO |
| Reference Level | -67.000 dBm | -67.000 dBm |
| Attenuation | 0.000 dB | AUTO |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 100 | 100 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 3 / max. 150 | max. 150 |
| Stable | 3 / 3 | 3 |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Pre Measurement 2

| Setting | Instrument Value | Target Value |
|---|---|---|
| RBW | 1.000 MHz | <= 1.000 MHz |
| VBW | 3.000 MHz | >= 3.000 MHz |
| SweepPoints | 6000 | ~ 6000 |
| Sweeptime | 6.000 ms | AUTO |
| Reference Level | -67.000 dBm | -67.000 dBm |
| Attenuation | 0.000 dB | AUTO |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 100 | 100 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 3 / max. 150 | max. 150 |
| Stable | 3 / 3 | 3 |





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# TEST REPORT

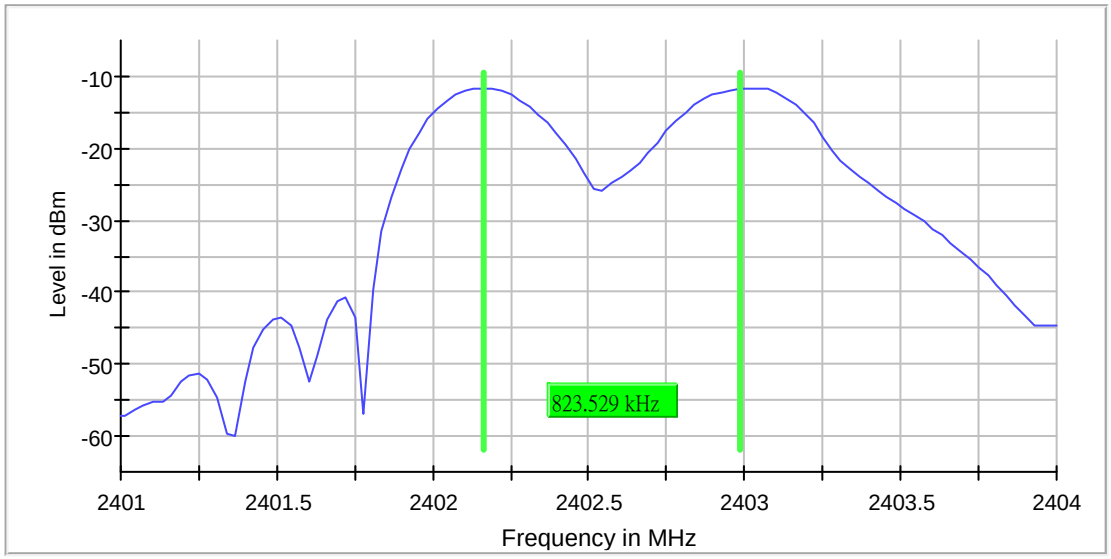
Report No. : AU0066450(0) Date : 10 Nov 2016

## Carrier Frequency Separation (2402 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Frequency Separation (MHz) | Limit Min (MHz) | Limit Max (MHz) | Center Frequency low Channel (MHz) | Center Frequency high Channel (MHz) | Result |
|---|---|---|---|---|---|---|
| 2402.000000 | 0.823529 | 0.666667 | --- | 2402.161765 | 2402.985294 | PASS |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Measurement

| Setting | Instrument Value | Target Value |
|---|---|---|
| Start Frequency | 2.40100 GHz | 2.40100 GHz |
| Stop Frequency | 2.40400 GHz | 2.40400 GHz |
| Span | 3.000 MHz | 3.000 MHz |
| RBW | 300.000 kHz | <= 300.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 101 | ~ 10 |
| Sweeptime | 6.313 µs | AUTO |
| Reference Level | -10.000 dBm | -10.000 dBm |
| Attenuation | 10.000 dB | AUTO |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 200 | 200 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | FFT | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 16 / max. 150 | max. 150 |
| Stable | 10 / 10 | 10 |





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# TEST REPORT

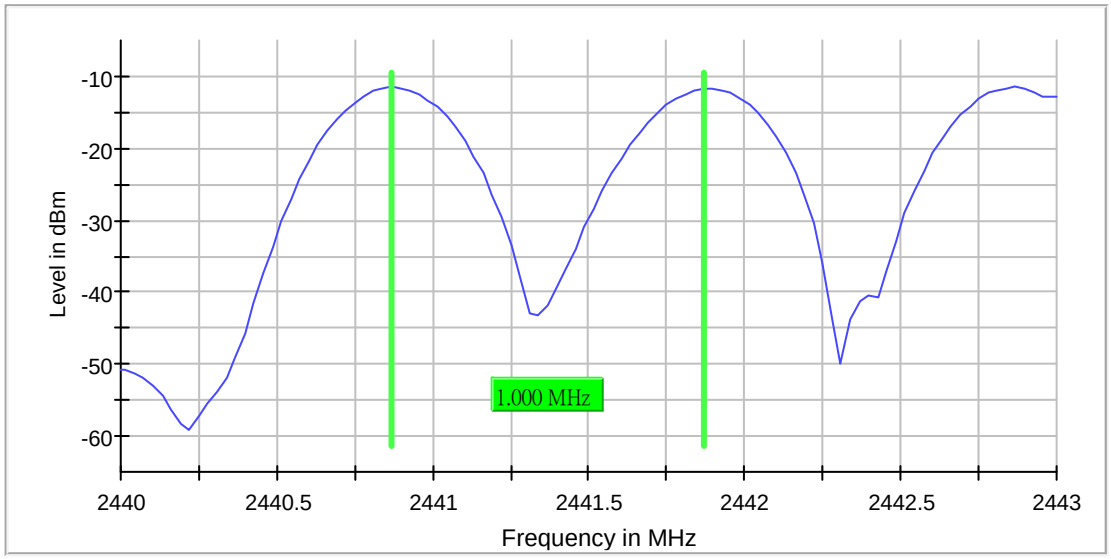
Report No. : AU0066450(0) Date : 10 Nov 2016

## Carrier Frequency Separation (2441 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Frequency Separation (MHz) | Limit Min (MHz) | Limit Max (MHz) | Center Frequency low Channel (MHz) | Center Frequency high Channel (MHz) | Result |
|---|---|---|---|---|---|---|
| 2441.000000 | 1.000000 | 0.666667 | --- | 2440.867647 | 2441.867647 | PASS |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Measurement

| Setting | Instrument Value | Target Value |
|---|---|---|
| Start Frequency | 2.44000 GHz | 2.44000 GHz |
| Stop Frequency | 2.44300 GHz | 2.44300 GHz |
| Span | 3.000 MHz | 3.000 MHz |
| RBW | 300.000 kHz | <= 300.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 101 | ~ 10 |
| Sweeptime | 6.313 µs | AUTO |
| Reference Level | -10.000 dBm | -10.000 dBm |
| Attenuation | 10.000 dB | AUTO |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 200 | 200 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | FFT | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 14 / max. 150 | max. 150 |
| Stable | 10 / 10 | 10 |





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# TEST REPORT

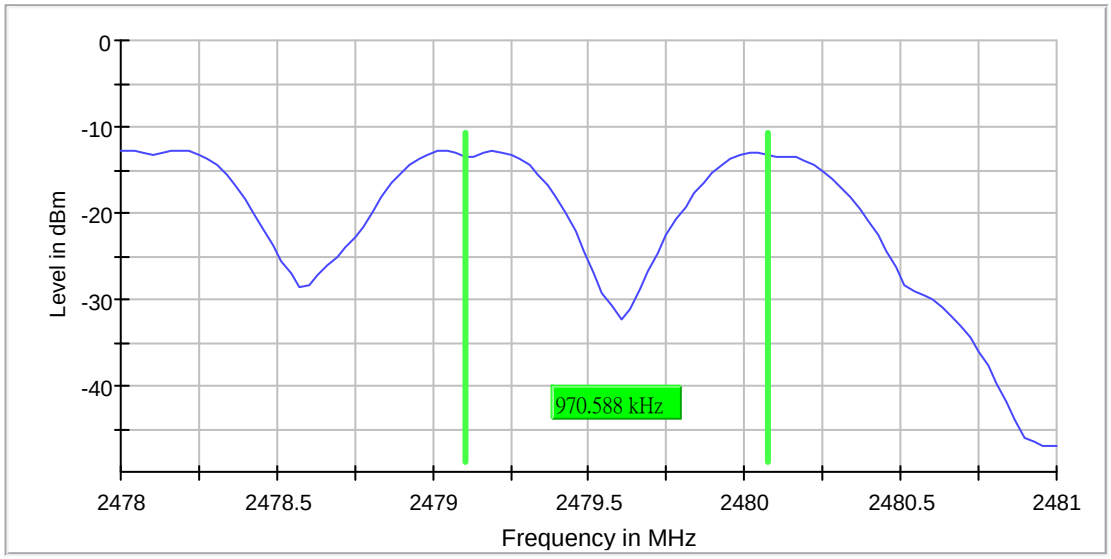
Report No. : AU0066450(0) Date : 10 Nov 2016

## Carrier Frequency Separation (2479 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Frequency Separation (MHz) | Limit Min (MHz) | Limit Max (MHz) | Center Frequency low Channel (MHz) | Center Frequency high Channel (MHz) | Result |
|---|---|---|---|---|---|---|
| 2479.000000 | 0.970588 | 0.666667 | --- | 2479.102941 | 2480.073529 | PASS |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Measurement

| Setting | Instrument Value | Target Value |
|---|---|---|
| Start Frequency | 2.47800 GHz | 2.47800 GHz |
| Stop Frequency | 2.48100 GHz | 2.48100 GHz |
| Span | 3.000 MHz | 3.000 MHz |
| RBW | 300.000 kHz | <= 300.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 101 | ~ 10 |
| Sweeptime | 6.313 µs | AUTO |
| Reference Level | -10.000 dBm | -10.000 dBm |
| Attenuation | 10.000 dB | AUTO |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 200 | 200 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | FFT | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 52 / max. 150 | max. 150 |
| Stable | 10 / 10 | 10 |





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# TEST REPORT

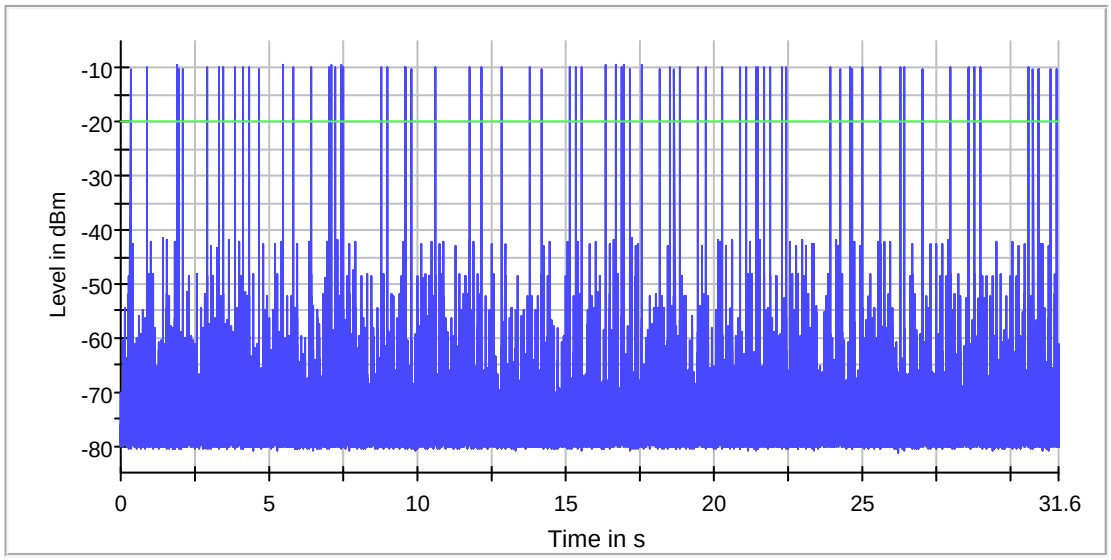
Report No. : AU0066450(0) Date : 10 Nov 2016

## Time of Channel Occupancy (2402 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Time (ms) | Limit Max (ms) | Limit Min (ms) | Threshold (dBm) | Result |
|---|---|---|---|---|---|
| 2402.000000 | 12.030 | --- | 0.000 | -20.0 | PASS |



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Measurement

| Setting | Instrument Value | Target Value |
|---|---|---|
| Center Frequency | 2.40200 GHz | 2.40200 GHz |
| Span | ZeroSpan | ZeroSpan |
| RBW | 500.000 kHz | ~ 500.000 kHz |
| VBW | 1.000 MHz | ~ 1.500 MHz |
| SweepPoints | 30001 | ~ 30001 |
| Sweeptime | 31.600 s | 31.600 s |
| Reference Level | -10.000 dBm | -10.000 dBm |
| Attenuation | 0.000 dB | 0.000 dB |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 1 | 1 |
| Filter | Channel | Channel |
| Trace Mode | Clear Write | Clear Write |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Trigger | Extern | Extern |
| Trigger Offset | 0.000 ms | 0.000 ms |





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# TEST REPORT

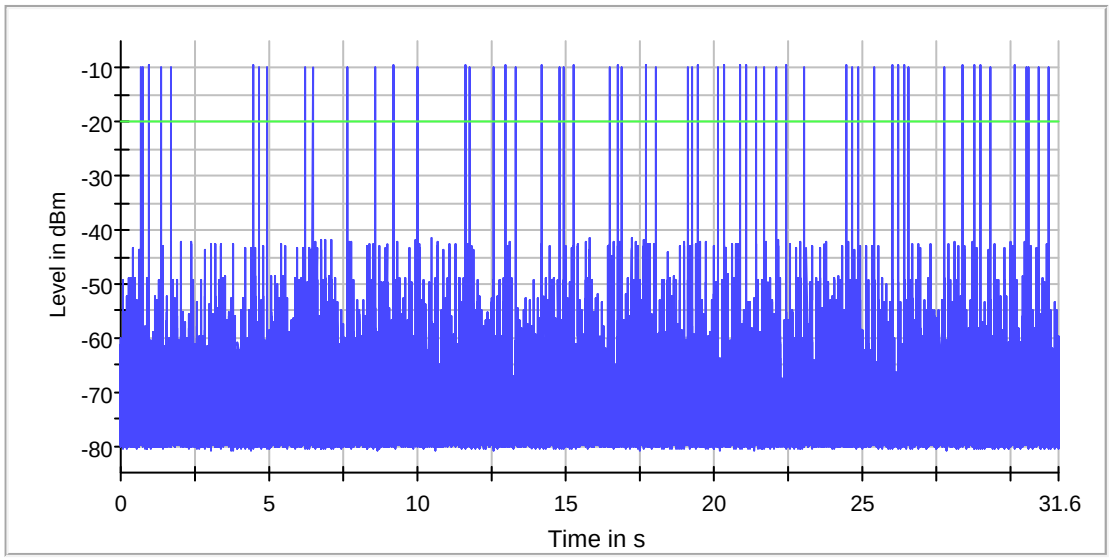
Report No. : AU0066450(0) Date : 10 Nov 2016

## Time of Channel Occupancy (2441 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Time (ms) | Limit Max (ms) | Limit Min (ms) | Threshold (dBm) | Result |
|---|---|---|---|---|---|
| 2441.000000 | 9.880 | --- | 0.000 | -20.0 | PASS |






FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Measurement

| Setting | Instrument Value | Target Value |
|---|---|---|
| Center Frequency | 2.44100 GHz | 2.44100 GHz |
| Span | ZeroSpan | ZeroSpan |
| RBW | 500.000 kHz | ~ 500.000 kHz |
| VBW | 1.000 MHz | ~ 1.500 MHz |
| SweepPoints | 30001 | ~ 30001 |
| Sweeptime | 31.600 s | 31.600 s |
| Reference Level | -10.000 dBm | -10.000 dBm |
| Attenuation | 0.000 dB | 0.000 dB |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 1 | 1 |
| Filter | Channel | Channel |
| Trace Mode | Clear Write | Clear Write |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Trigger | Extern | Extern |
| Trigger Offset | 0.000 ms | 0.000 ms |





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# TEST REPORT

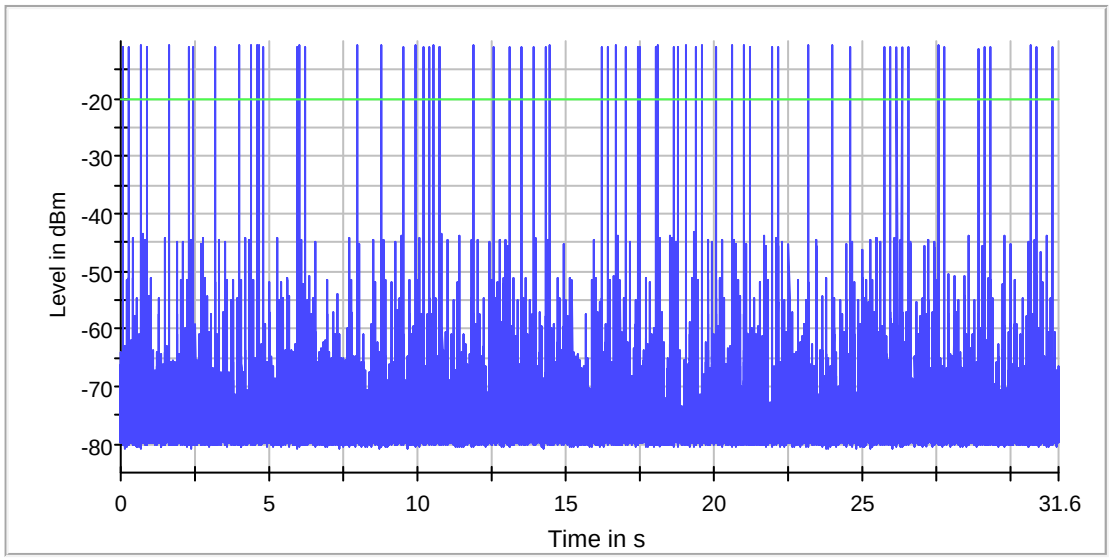
Report No. : AU0066450(0) Date : 10 Nov 2016

## Time of Channel Occupancy (2480 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Time (ms) | Limit Max (ms) | Limit Min (ms) | Threshold (dBm) | Result |
|---|---|---|---|---|---|
| 2480.000000 | 10.780 | --- | 0.000 | -20.0 | PASS |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Measurement

| Setting | Instrument Value | Target Value |
|---|---|---|
| Center Frequency | 2.48000 GHz | 2.48000 GHz |
| Span | ZeroSpan | ZeroSpan |
| RBW | 500.000 kHz | ~ 500.000 kHz |
| VBW | 1.000 MHz | ~ 1.500 MHz |
| SweepPoints | 30001 | ~ 30001 |
| Sweeptime | 31.600 s | 31.600 s |
| Reference Level | -10.000 dBm | -10.000 dBm |
| Attenuation | 0.000 dB | 0.000 dB |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 1 | 1 |
| Filter | Channel | Channel |
| Trace Mode | Clear Write | Clear Write |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Trigger | Extern | Extern |
| Trigger Offset | 0.000 ms | 0.000 ms |





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# TEST REPORT

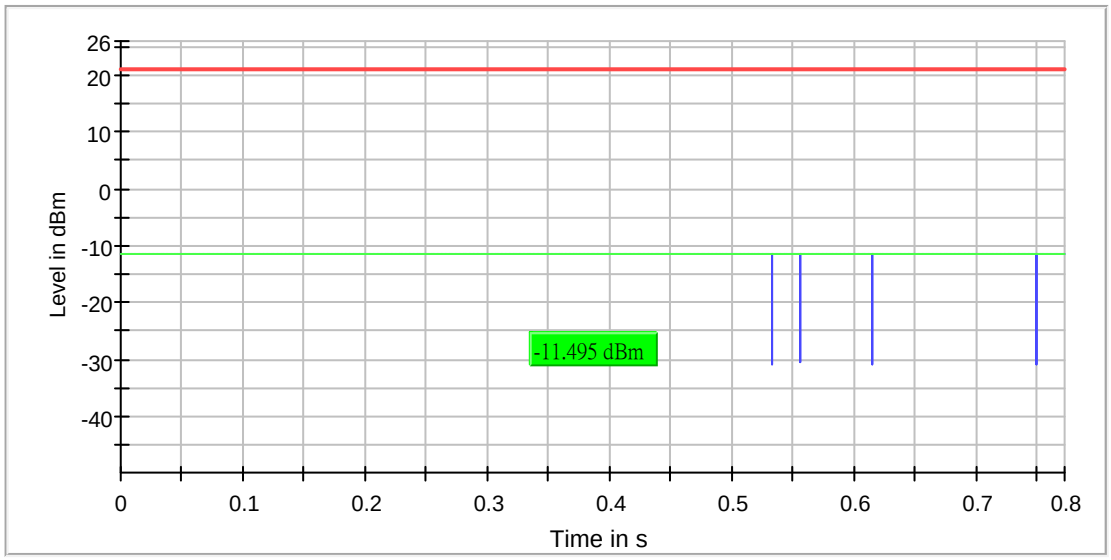
Report No. : AU0066450(0) Date : 10 Nov 2016

## RF output power (2402 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Gated EIRP (dBm) | Limit Max (dBm) | DutyCycle (%) | Result |
|---|---|---|---|---|
| 2402.000000 | -11.5 | 21.0 | 77.783 | PASS |





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# TEST REPORT

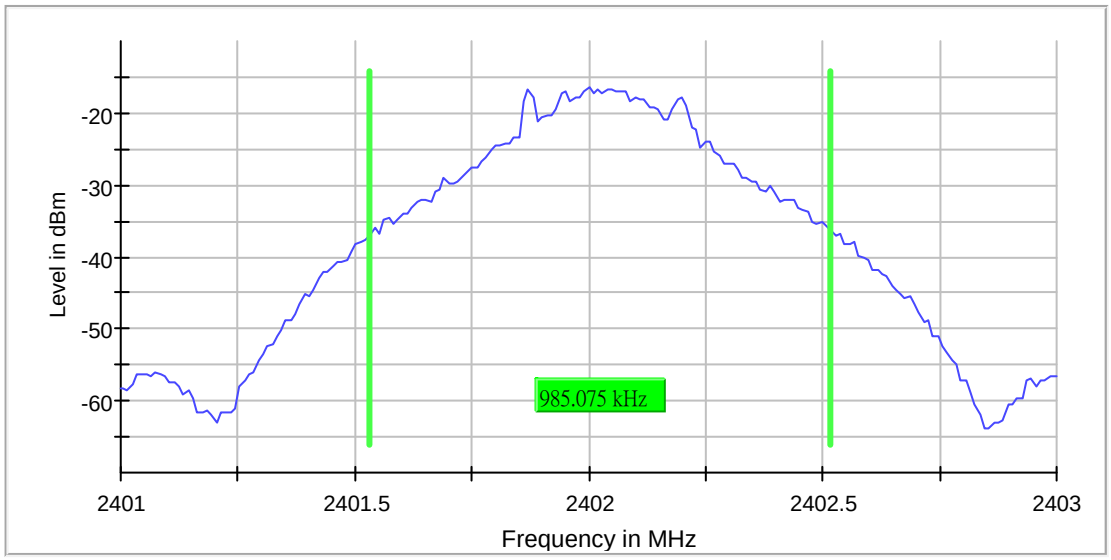
Report No. : AU0066450(0) Date : 10 Nov 2016

## Emission Bandwidth 20 dB (2402 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## 20 dB Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) | Max Level (dBm) | Result |
|---|---|---|---|---|---|---|---|
| 2402.000000 | 0.985075 | --- | --- | 2401.532338 | 2402.517413 | -16.3 | PASS |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Measurement

| Setting | Instrument Value | Target Value |
|---|---|---|
| Start Frequency | 2.40100 GHz | 2.40100 GHz |
| Stop Frequency | 2.40300 GHz | 2.40300 GHz |
| Span | 2.000 MHz | 2.000 MHz |
| RBW | 10.000 kHz | ~ 10.000 kHz |
| VBW | 30.000 kHz | >= 30.000 kHz |
| SweepPoints | 200 | ~ 200 |
| Sweeptime | 189.620 µs | AUTO |
| Reference Level | -20.000 dBm | -20.000 dBm |
| Attenuation | 0.000 dB | AUTO |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 200 | 200 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | FFT | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 41 / max. 150 | max. 150 |
| Stable | 5 / 5 | 5 |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Band Edge low (2402 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Result |
|---|---|
| 2402.000000 | PASS |

## Inband Peak

| Frequency (MHz) | Level (dBm) |
|---|---|
| 2402.023788 | -15.5 |

## Measurements

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|---|---|---|---|---|
| 2399.525264 | -70.7 | 35.2 | -35.5 | PASS |
| 2399.925042 | -71.3 | 35.7 | -35.5 | PASS |
| 2399.575236 | -71.5 | 36.0 | -35.5 | PASS |
| 2399.475292 | -71.6 | 36.1 | -35.5 | PASS |
| 2399.625208 | -72.3 | 36.8 | -35.5 | PASS |
| 2399.025541 | -72.7 | 37.2 | -35.5 | PASS |
| 2399.875069 | -72.8 | 37.2 | -35.5 | PASS |
| 2398.575791 | -72.8 | 37.2 | -35.5 | PASS |
| 2399.075514 | -72.8 | 37.3 | -35.5 | PASS |
| 2399.825097 | -73.3 | 37.7 | -35.5 | PASS |
| 2399.775125 | -73.5 | 37.9 | -35.5 | PASS |
| 2399.125486 | -73.6 | 38.1 | -35.5 | PASS |
| 2399.675180 | -73.6 | 38.1 | -35.5 | PASS |
| 2399.725153 | -73.7 | 38.1 | -35.5 | PASS |
| 2399.425319 | -74.0 | 38.5 | -35.5 | PASS |





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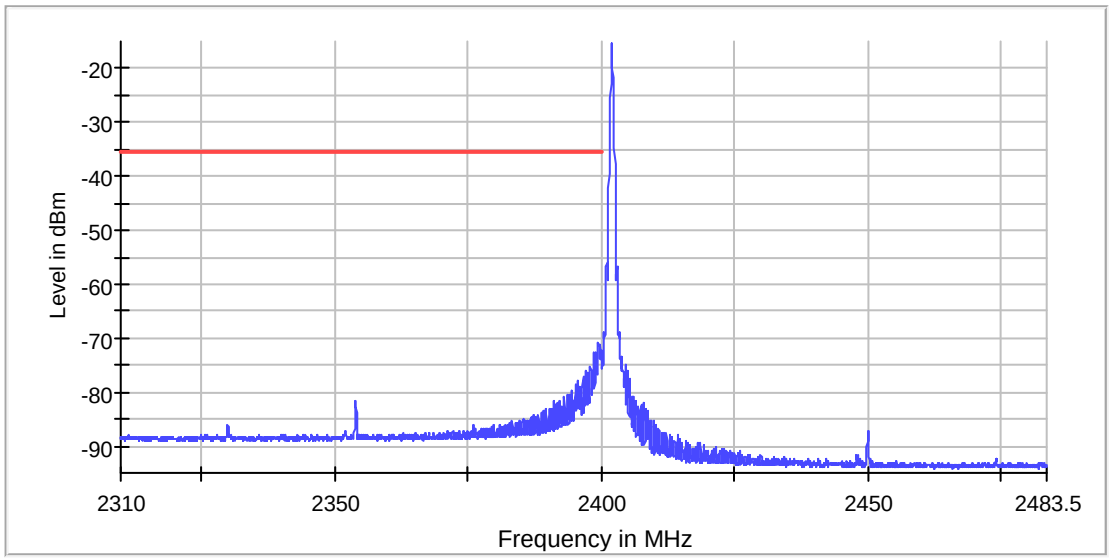
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016




## Measurement 1

| Setting | Instrument Value | Target Value |
|---|---|---|
| RBW | 100.000 kHz | <= 100.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 1670 | ~ 1670 |
| Sweeptime | 1.670 s | 1.670 s |
| Reference Level | -20.000 dBm | -20.000 dBm |
| Attenuation | 0.000 dB | AUTO |
| Detector | RMS | RMS |
| SweepCount | 3 | 3 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 3 / max. 15 | max. 15 |
| Stable | 3 / 3 | 3 |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Measurement 2

| Setting | Instrument Value | Target Value |
|---|---|---|
| RBW | 100.000 kHz | <= 100.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 1800 | ~ 1800 |
| Sweeptime | 1.800 s | 1.800 s |
| Reference Level | -20.000 dBm | -20.000 dBm |
| Attenuation | 0.000 dB | AUTO |
| Detector | RMS | RMS |
| SweepCount | 3 | 3 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 3 / max. 15 | max. 15 |
| Stable | 3 / 3 | 3 |





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# TEST REPORT

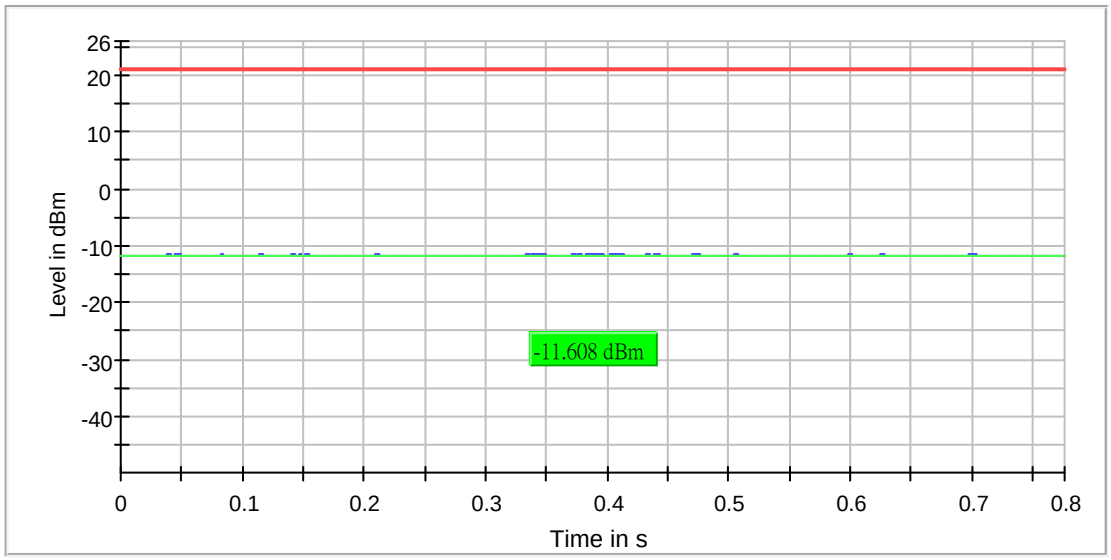
Report No. : AU0066450(0) Date : 10 Nov 2016

## RF output power (2441 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Gated EIRP (dBm) | Limit Max (dBm) | DutyCycle (%) | Result |
|---|---|---|---|---|
| 2441.000000 | -11.6 | 21.0 | 77.838 | PASS |





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# TEST REPORT

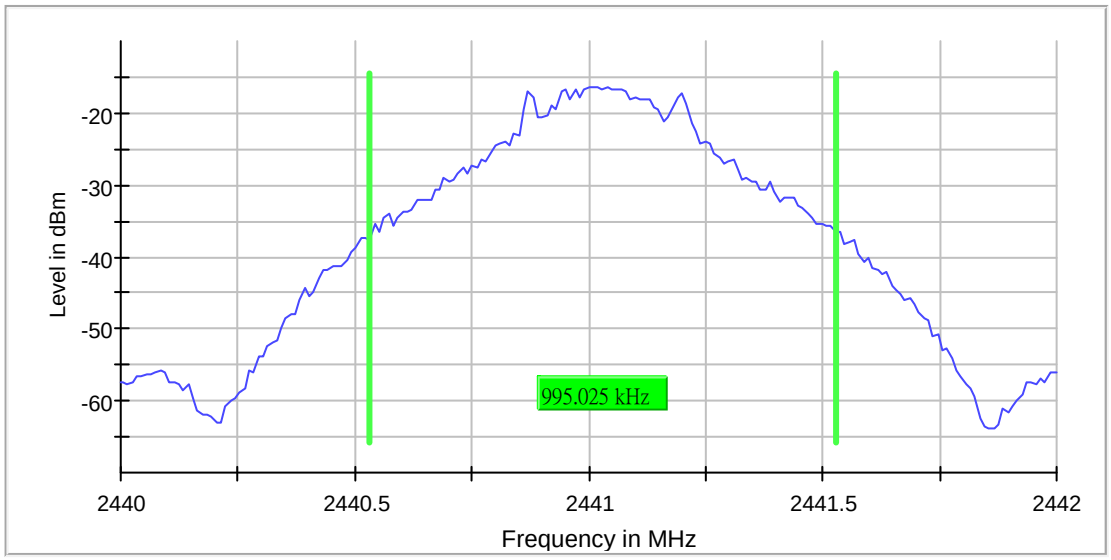
Report No. : AU0066450(0) Date : 10 Nov 2016

## Emission Bandwidth 20 dB (2441 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## 20 dB Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) | Max Level (dBm) | Result |
|---|---|---|---|---|---|---|---|
| 2441.000000 | 0.995025 | --- | --- | 2440.532338 | 2441.527363 | -16.3 | PASS |






FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Measurement

| Setting | Instrument Value | Target Value |
|---|---|---|
| Start Frequency | 2.44000 GHz | 2.44000 GHz |
| Stop Frequency | 2.44200 GHz | 2.44200 GHz |
| Span | 2.000 MHz | 2.000 MHz |
| RBW | 10.000 kHz | ~ 10.000 kHz |
| VBW | 30.000 kHz | >= 30.000 kHz |
| SweepPoints | 200 | ~ 200 |
| Sweeptime | 189.620 µs | AUTO |
| Reference Level | -20.000 dBm | -20.000 dBm |
| Attenuation | 0.000 dB | AUTO |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 200 | 200 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | FFT | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 39 / max. 150 | max. 150 |
| Stable | 5 / 5 | 5 |





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# TEST REPORT

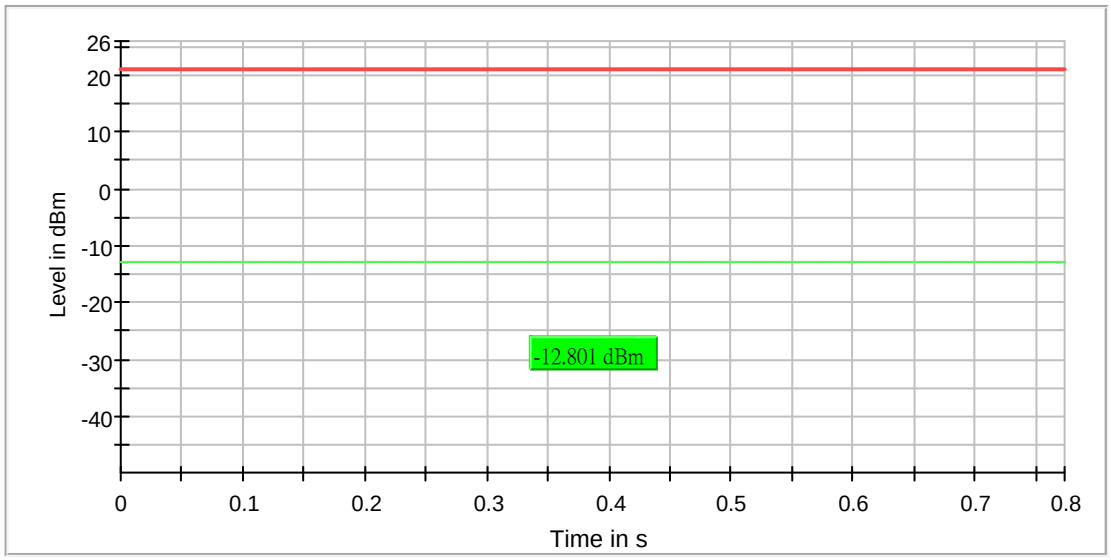
Report No. : AU0066450(0) Date : 10 Nov 2016

## RF output power (2480 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Gated EIRP (dBm) | Limit Max (dBm) | DutyCycle (%) | Result |
|---|---|---|---|---|
| 2480.000000 | -12.8 | 21.0 | 77.842 | PASS |





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# TEST REPORT

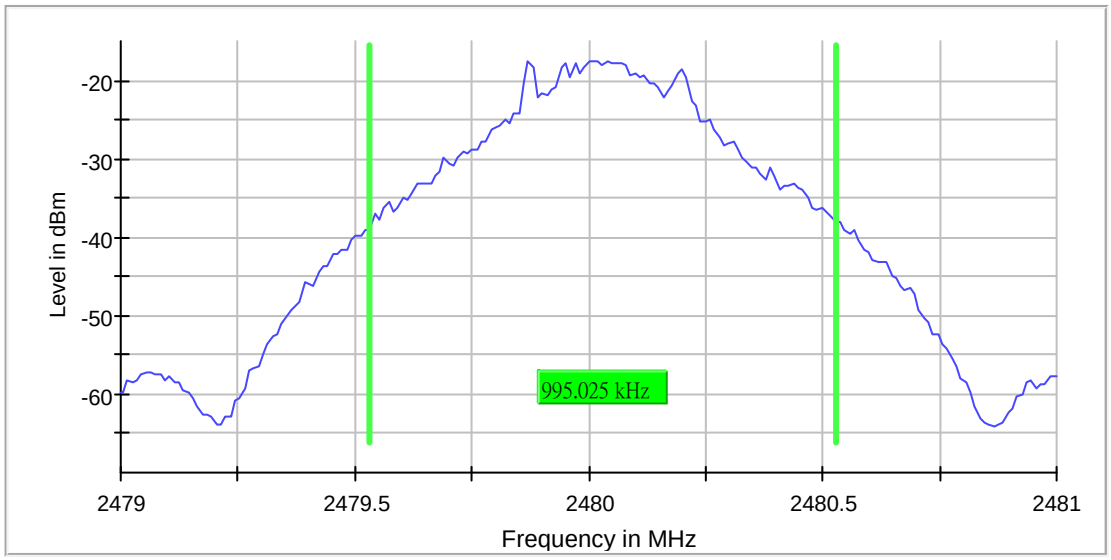
Report No. : AU0066450(0) Date : 10 Nov 2016

## Emission Bandwidth 20 dB (2480 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## 20 dB Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) | Max Level (dBm) | Result |
|---|---|---|---|---|---|---|---|
| 2480.000000 | 0.995025 | --- | --- | 2479.532338 | 2480.527363 | -17.5 | PASS |



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Measurement

| Setting | Instrument Value | Target Value |
|---|---|---|
| Start Frequency | 2.47900 GHz | 2.47900 GHz |
| Stop Frequency | 2.48100 GHz | 2.48100 GHz |
| Span | 2.000 MHz | 2.000 MHz |
| RBW | 10.000 kHz | ~ 10.000 kHz |
| VBW | 30.000 kHz | >= 30.000 kHz |
| SweepPoints | 200 | ~ 200 |
| Sweeptime | 189.620 µs | AUTO |
| Reference Level | -20.000 dBm | -20.000 dBm |
| Attenuation | 0.000 dB | AUTO |
| Detector | MaxPeak | MaxPeak |
| SweepCount | 200 | 200 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | FFT | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 37 / max. 150 | max. 150 |
| Stable | 5 / 5 | 5 |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Band Edge high (2480 MHz)

Test according to FCC title 47 part 15 §15.247(a), FCC Public Notice DA 00-705 and ANSI 63.10-2013

## Result

| DUT Frequency (MHz) | Result |
|---|---|
| 2480.000000 | PASS |

## Inband Peak

| Frequency (MHz) | Level (dBm) |
|---|---|
| 2479.977110 | -16.6 |

## Measurements

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|---|---|---|---|---|
| 2483.973565 | -74.7 | 38.1 | -36.6 | PASS |
| 2483.923716 | -75.7 | 39.2 | -36.6 | PASS |
| 2484.422205 | -76.4 | 39.9 | -36.6 | PASS |
| 2484.472054 | -76.6 | 40.1 | -36.6 | PASS |
| 2483.524924 | -76.9 | 40.3 | -36.6 | PASS |
| 2484.023414 | -77.2 | 40.6 | -36.6 | PASS |
| 2485.419184 | -77.5 | 40.9 | -36.6 | PASS |
| 2484.970544 | -77.8 | 41.2 | -36.6 | PASS |
| 2484.521903 | -78.7 | 42.1 | -36.6 | PASS |
| 2484.920695 | -79.3 | 42.7 | -36.6 | PASS |
| 2484.870846 | -79.4 | 42.8 | -36.6 | PASS |
| 2483.873867 | -79.7 | 43.1 | -36.6 | PASS |
| 2485.020393 | -79.8 | 43.2 | -36.6 | PASS |
| 2483.574773 | -79.9 | 43.3 | -36.6 | PASS |
| 2485.469033 | -80.0 | 43.5 | -36.6 | PASS |





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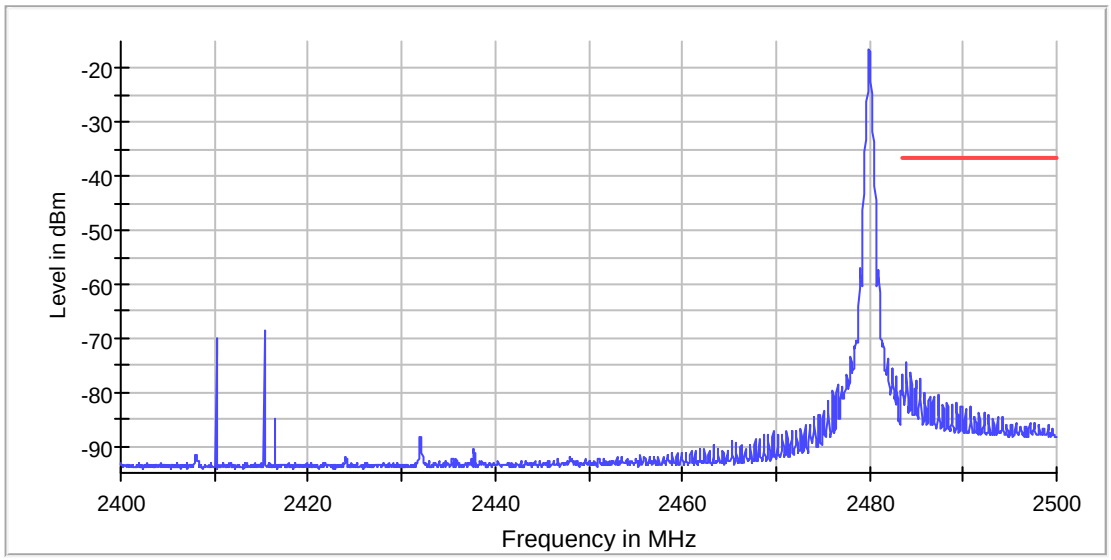
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016




## Measurement 1

| Setting | Instrument Value | Target Value |
|---|---|---|
| RBW | 100.000 kHz | <= 100.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 1670 | ~ 1670 |
| Sweeptime | 1.670 s | 1.670 s |
| Reference Level | -20.000 dBm | -20.000 dBm |
| Attenuation | 0.000 dB | AUTO |
| Detector | RMS | RMS |
| SweepCount | 3 | 3 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 3 / max. 15 | max. 15 |
| Stable | 3 / 3 | 3 |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## Measurement 2

| Setting | Instrument Value | Target Value |
|---|---|---|
| RBW | 100.000 kHz | <= 100.000 kHz |
| VBW | 300.000 kHz | >= 300.000 kHz |
| SweepPoints | 330 | ~ 330 |
| Sweeptime | 330.000 ms | 330.000 ms |
| Reference Level | -20.000 dBm | -20.000 dBm |
| Attenuation | 0.000 dB | AUTO |
| Detector | RMS | RMS |
| SweepCount | 3 | 3 |
| Filter | 3 dB | 3 dB |
| Trace Mode | Max Hold | Max Hold |
| Sweeptype | Sweep | AUTO |
| Preamp | off | off |
| Stablemode | Trace | Trace |
| Stablevalue | 0.30 | 0.30 |
| Run | 3 / max. 15 | max. 15 |
| Stable | 3 / 3 | 3 |





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## 2.4 Radiated Emission Measurement Data

Environmental conditions:

| Parameter | Recorded value | |
|---|---|---|
| Ambient temperature: | 26 | ° C |
| Relative humidity: | 66 | % |

Testing frequency range: 9kHz to 26GHz Mode: Transmission
Measurement: Quasi-peak (9kHz – 1GHz), Peak (above 1GHz)
RBW: 9kHz (below 30MHz), 120KHz (30MHz – 1GHz), 1MHz (above 1GHz)
VBW: 30kHz (below 30MHz), 300kHz (30MHz – 1GHz), 3MHz (above 1GHz)

| Frequency (MHz) | Polarity (H/V) | Reading at 3m (dBµV) | Transducer Factor (dB/m) | Field Strength at 3m (dBµV/m) | Limit at 3m (dBµV/m) | Margin (dB) |
|---|---|---|---|---|---|---|
| 2402.030 | H | 87.0 | - 4.2 | 82.8 | 114.0 | - 31.2 |
| 2402.014 | V | 89.0 | - 4.2 | 84.8 | 114.0 | - 29.2 |
| 2441.032 | H | 91.1 | - 4.2 | 86.9 | 114.0 | - 27.1 |
| 2441.039 | V | 89.1 | - 4.2 | 84.9 | 114.0 | - 29.1 |
| 2480.032 | H | 89.3 | - 4.3 | 85.0 | 114.0 | - 29.0 |
| 2480.040 | V | 88.9 | - 4.3 | 84.6 | 114.0 | - 29.4 |

Remark: Other emissions more than 20dB below the limit are not reported.
Peak measurement values are lower than average limit, therefore average measurement is not necessary.





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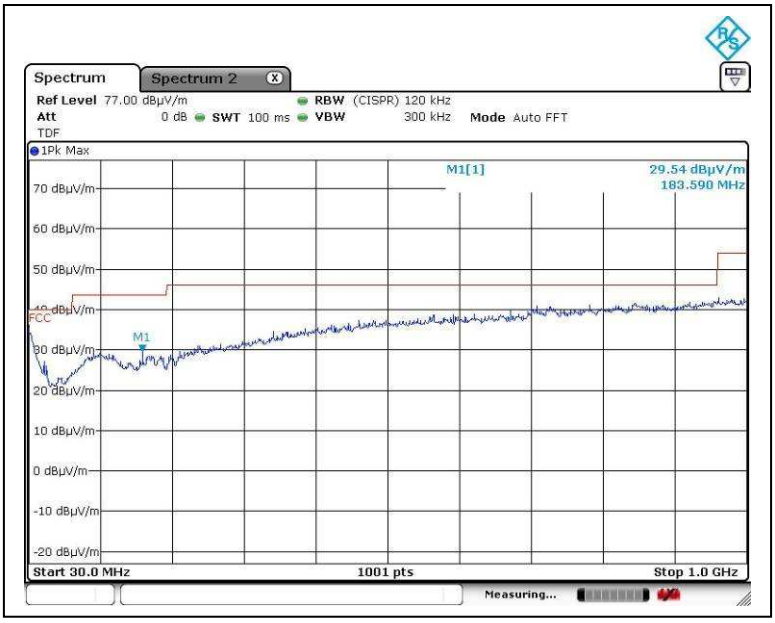
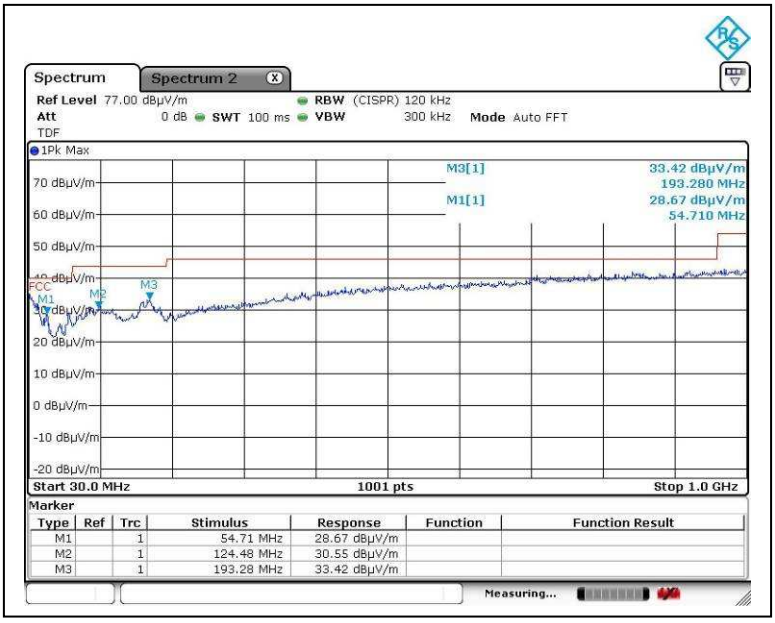
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## 2.4 Radiated Emission Measurement Data (Con't)




Transmission mode, 30MHz – 1GHz, Horizontal




Transmission mode, 30MHz – 1GHz, Vertical





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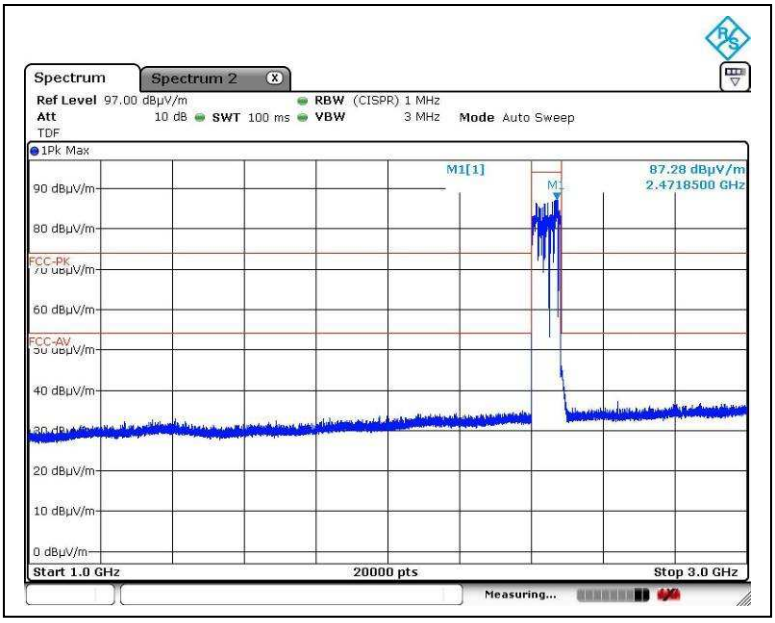
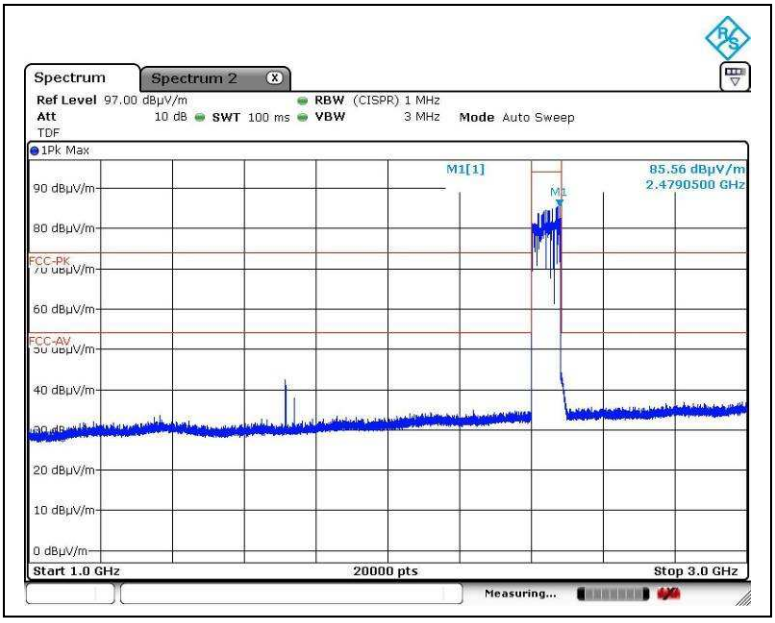
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## 2.4 Radiated Emission Measurement Data (Con't)




Transmission mode, 1GHz – 3GHz, Horizontal




Transmission mode, 1GHz – 3GHz, Vertical





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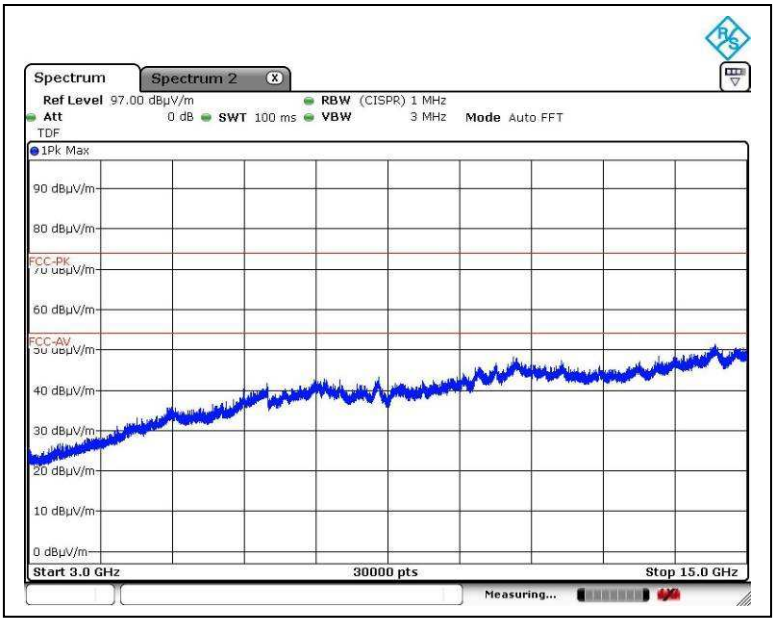
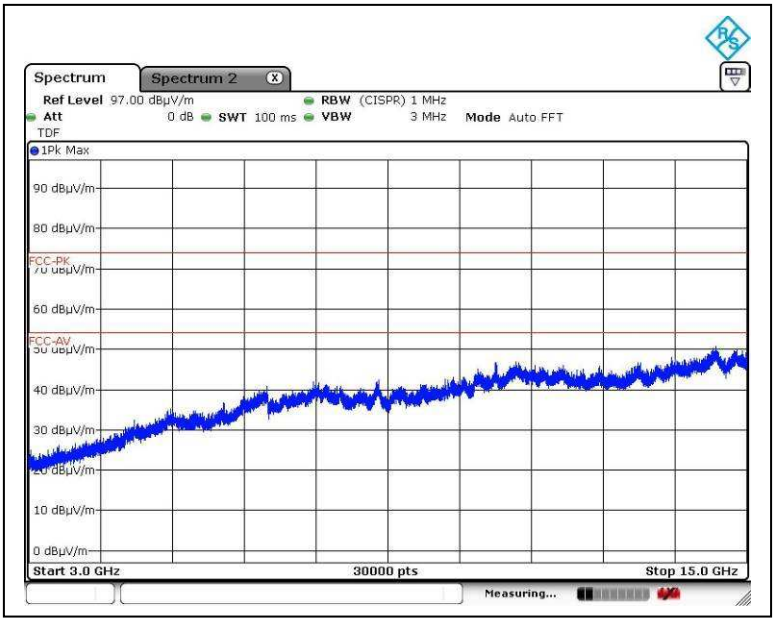
**2.4 Radiated Emission Measurement Data (Con't)**




Transmission mode, 3GHz – 15GHz, Horizontal




Transmission mode, 3GHz – 15GHz, Vertical





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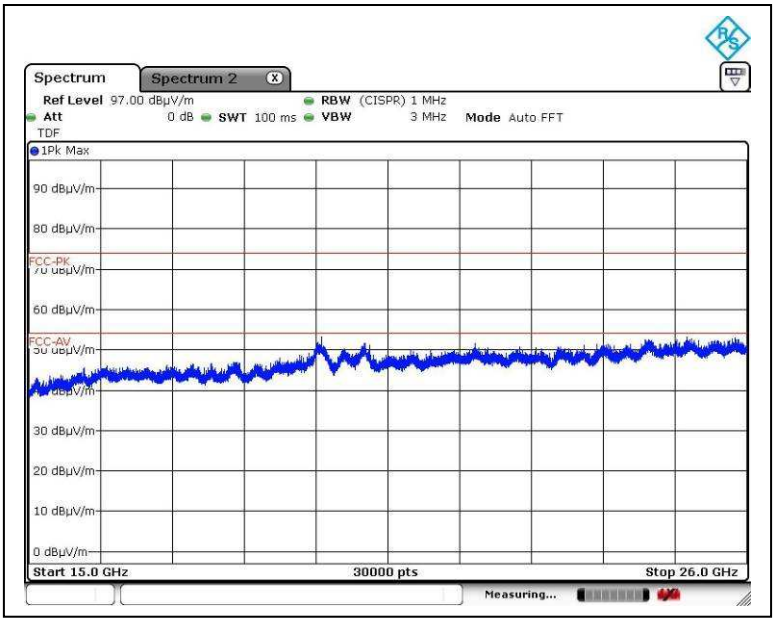
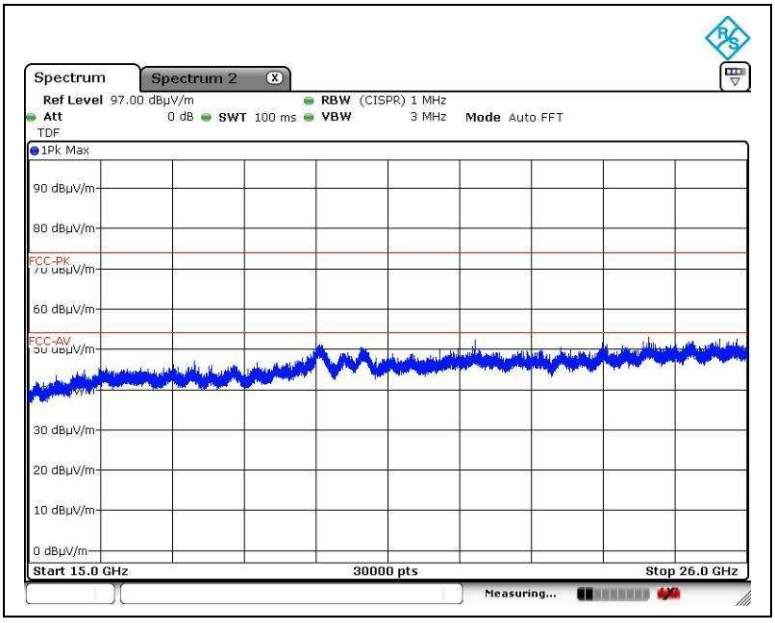
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## 2.4 Radiated Emission Measurement Data (Con't)




Transmission mode, 15GHz – 26GHz, Horizontal




Transmission mode, 15GHz – 26GHz, Vertical





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## 2.4 Radiated Emission Measurement Data (Con't)

Environmental conditions:

| Parameter | Recorded value | |
|---|---|---|
| Ambient temperature: | 26 | ° C |
| Relative humidity: | 66 | % |

Testing frequency range: 9kHz to 26GHz Mode: Receiving
Measurement: Quasi-peak (9kHz – 1GHz), Peak (above 1GHz)
RBW: 9kHz (below 30MHz), 120KHz (30MHz – 1GHz), 1MHz (above 1GHz)
VBW: 30kHz (below 30MHz), 300kHz (30MHz – 1GHz), 3MHz (above 1GHz)

| Frequency (MHz) | Polarity (H/V) | Reading at 3m (dBμV) | Transducer Factor (dB/m) | Field Strength at 3m (dBμV/m) | Limit at 3m (dBμV/m) | Margin (dB) |
|---|---|---|---|---|---|---|
| | | | | | | |

Remark: No specified emission found





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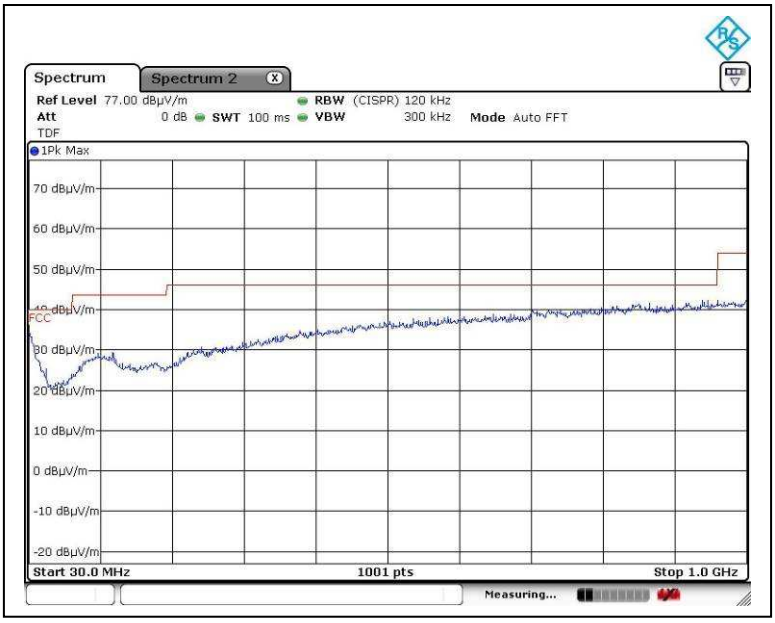
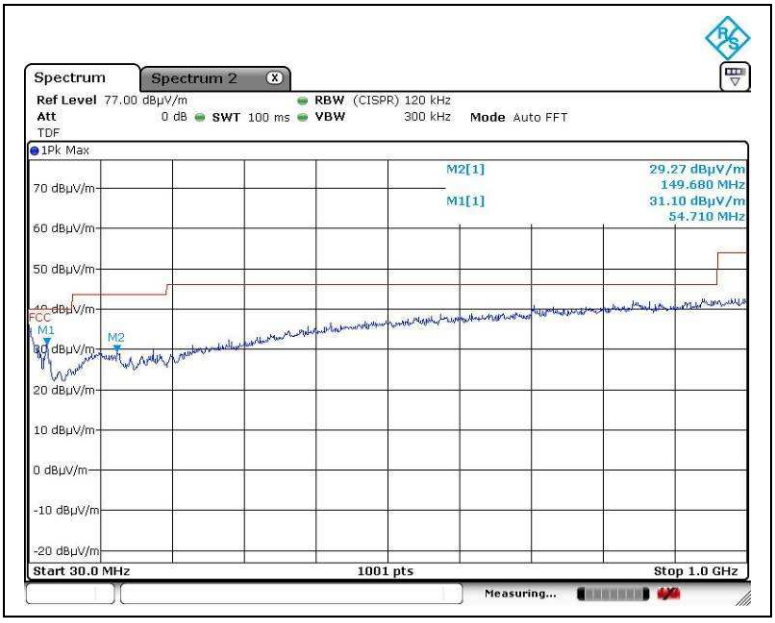
## 2.4 Radiated Emission Measurement Data (Con't)




Receiving mode, 30MHz – 1GHz, Horizontal




Receiving mode, 30MHz – 1GHz, Vertical





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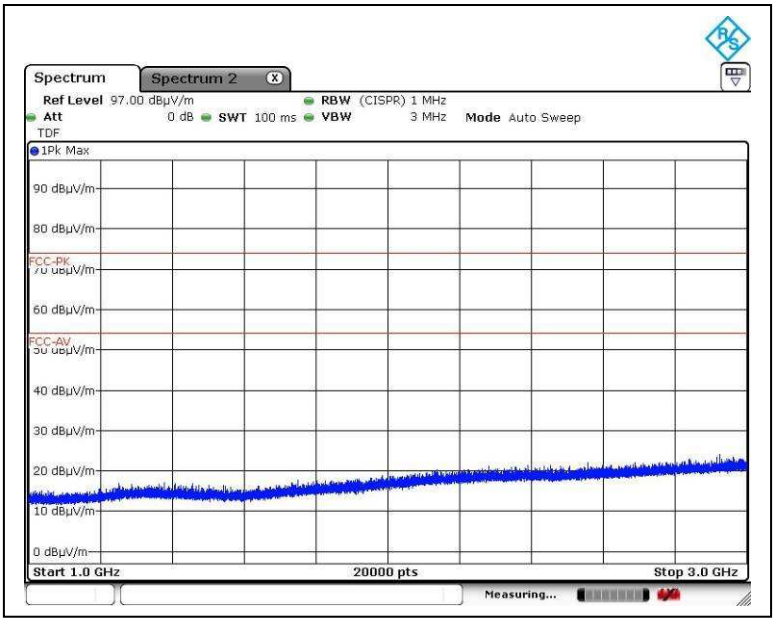
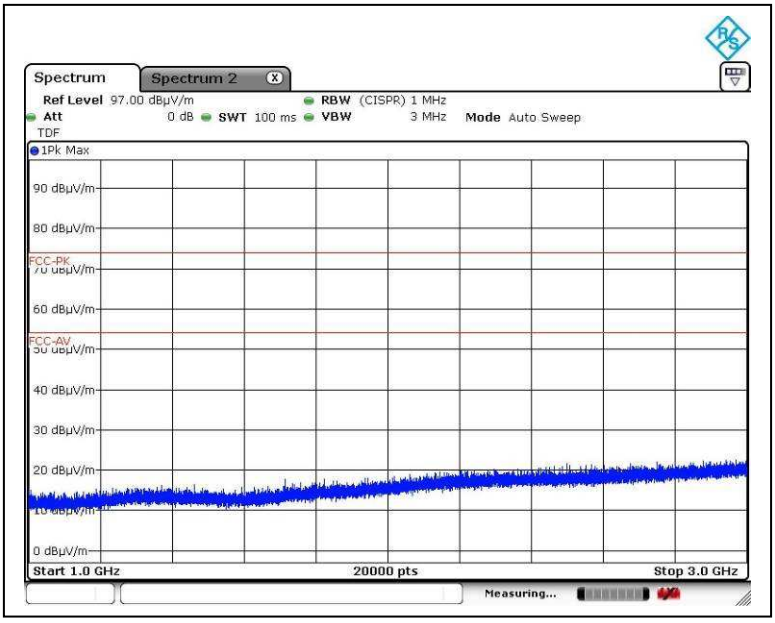
**2.4 Radiated Emission Measurement Data (Con't)**




Receiving mode, 1GHz – 3GHz, Horizontal




Receiving mode, 1GHz – 3GHz, Vertical





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# TEST REPORT

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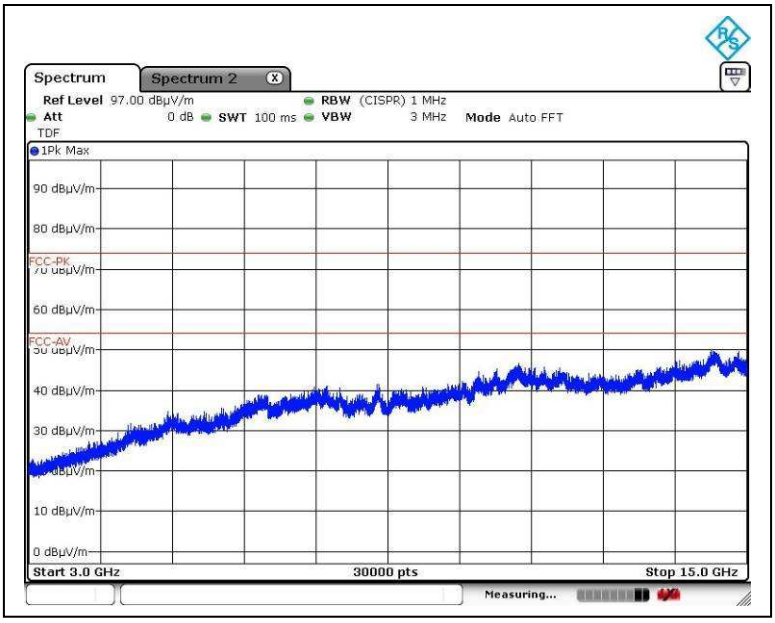
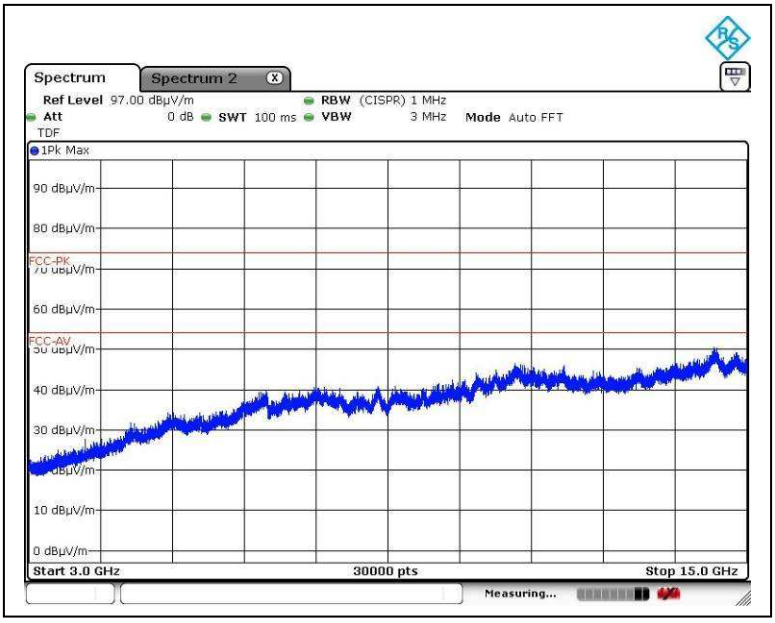
## 2.4 Radiated Emission Measurement Data (Con't)




Receiving mode, 3GHz – 15GHz, Horizontal




Receiving mode, 3GHz – 15GHz, Vertical





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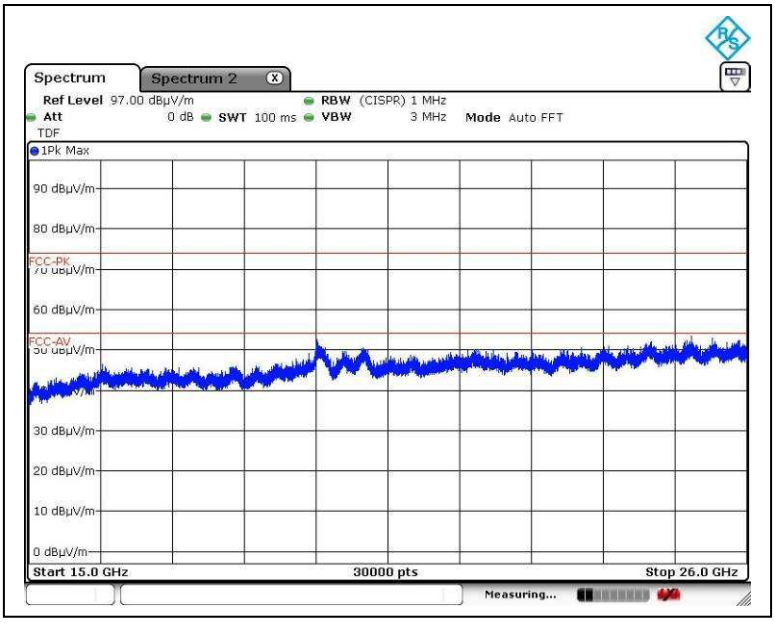
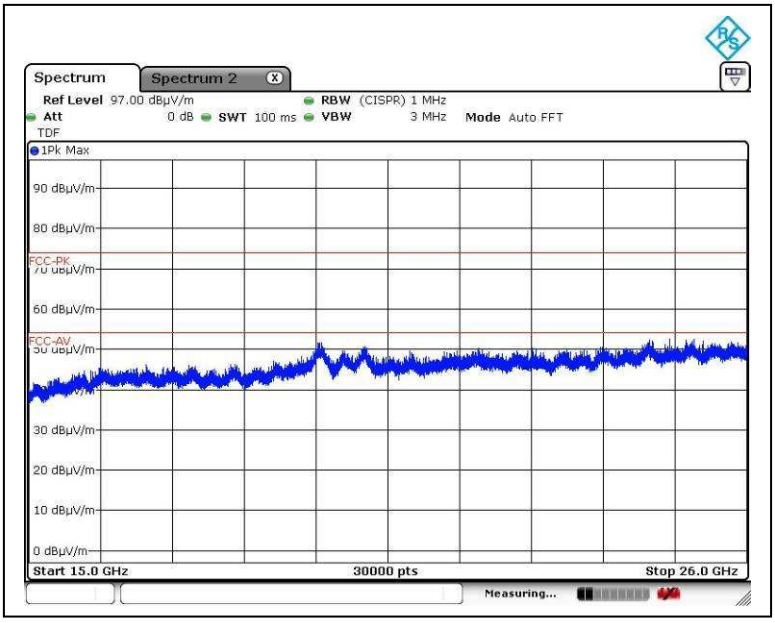
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## 2.4 Radiated Emission Measurement Data (Con't)




Receiving mode, 15GHz – 26GHz, Horizontal




Receiving mode, 15GHz – 26GHz, Vertical





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

**2.4 Radiated Emission Measurement Data (Con't)**

Environmental conditions:

| Parameter | Recorded value | |
|---|---|---|
| Ambient temperature: | 26 | ° C |
| Relative humidity: | 66 | % |

Testing frequency range: 9kHz to 26GHz Mode: Aux-in + Charging
Measurement: Quasi-peak (9kHz – 1GHz), Peak (above 1GHz)
RBW: 9kHz (below 30MHz), 120KHz (30MHz – 1GHz), 1MHz (above 1GHz)
VBW: 30kHz (below 30MHz), 300kHz (30MHz – 1GHz), 3MHz (above 1GHz)

| Frequency (MHz) | Polarity (H/V) | Reading at 3m (dBµV) | Antenna Factor and Cable Loss (dB/m) | Field Strength at 3m (dBµV/m) | Limit at 3m (dBµV/m) | Margin (dB) |
|---|---|---|---|---|---|---|
| 70.561 | V | 11.3 | 8.0 | 19.3 | 40.0 | - 20.7 |
| 82.021 | V | 10.1 | 8.5 | 18.6 | 40.0 | - 21.4 |
| 82.303 | H | 9.0 | 8.5 | 17.5 | 40.0 | - 22.5 |
| 109.810 | V | 11.3 | 12.2 | 23.5 | 43.5 | - 20.0 |
| 133.632 | H | 8.3 | 14.4 | 22.7 | 43.5 | - 20.8 |
| 192.861 | V | 11.6 | 11.2 | 22.8 | 43.5 | - 20.7 |
| 204.534 | H | 8.5 | 12.0 | 20.5 | 43.0 | - 22.5 |

Remark: Other emissions more than 20dB below the limit are not reported.





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# TEST REPORT

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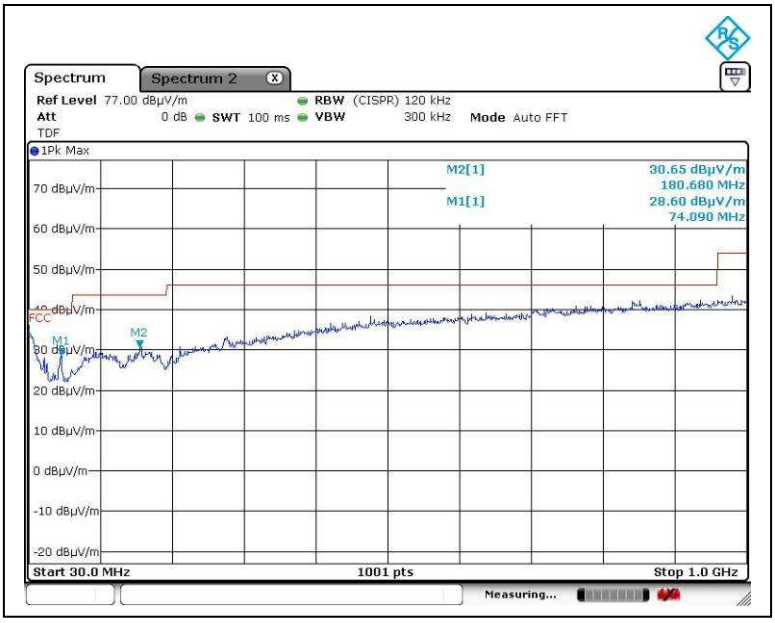
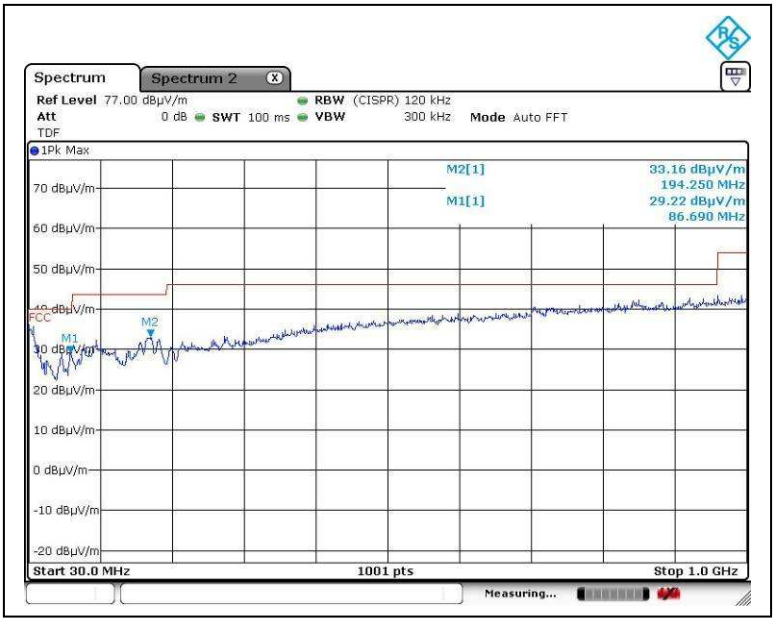
## 2.4 Radiated Emission Measurement Data (Con't)




Aux-in and charging mode, 30MHz – 1GHz, Horizontal




Aux-in and charging mode, 30MHz – 1GHz, Vertical





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# TEST REPORT

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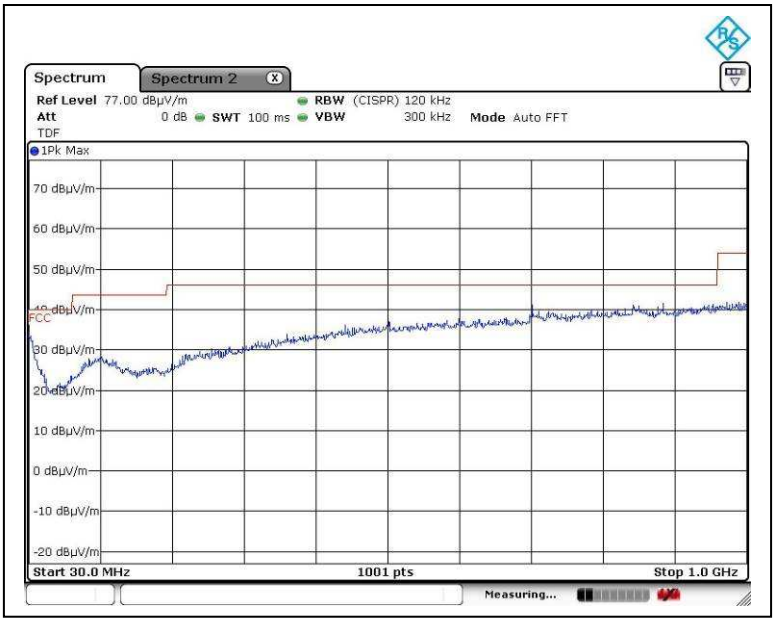
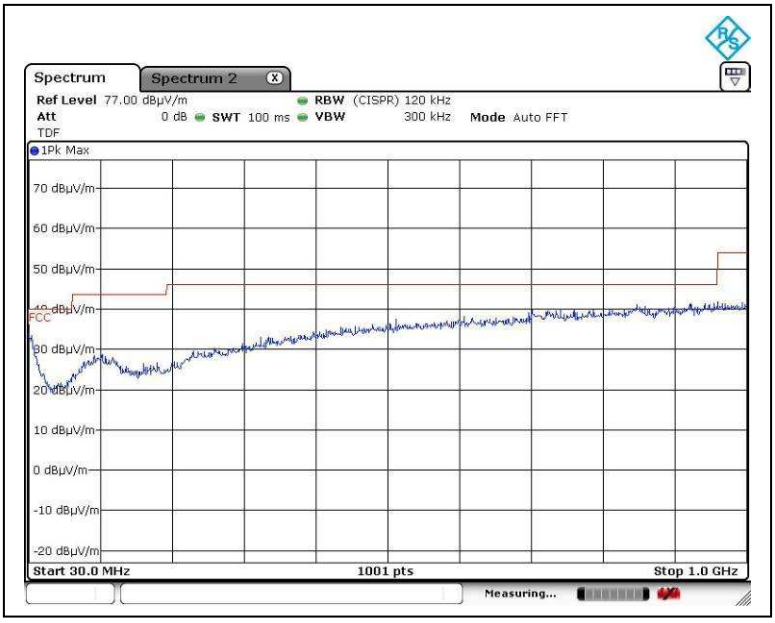
## 2.4 Radiated Emission Measurement Data (Con't)




LED on, 30MHz – 1GHz, Horizontal




LED on, 30MHz – 1GHz, Vertical





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## 3 Description of the Line-conducted Test

### 3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.10 – 2013. The EUT was setup as described in the procedures, and both lines were measured.

### 3.2 Test Result

The EUT connected to an adaptor for operating





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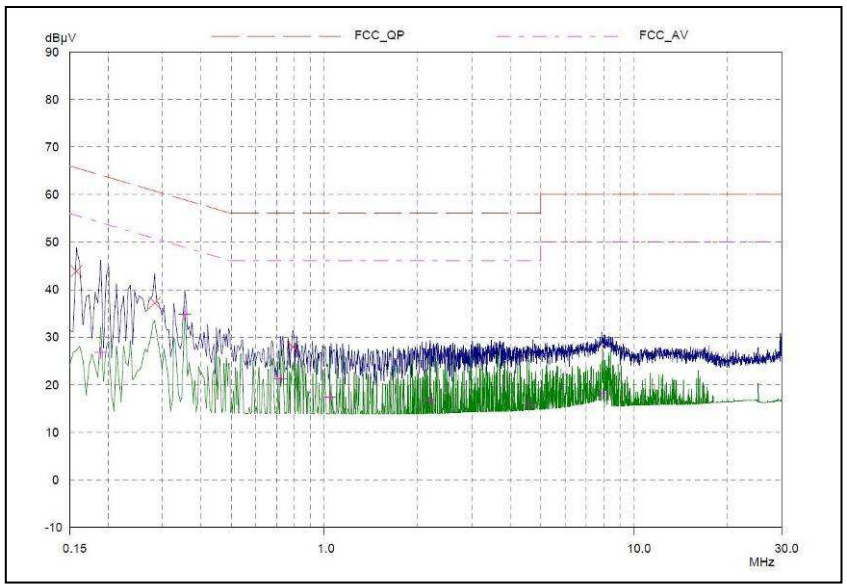
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

### 3.3 Graph and Table of Conducted Emission Measurement Data




Plot of 15V output adaptor

Final Measurement Results

| Frequency MHz | QP Level dBµV | QP Limit dBµV | QP Delta dB | Phase - | PE - |
|---|---|---|---|---|---|
| 0.15781 | 43.87 | 65.58 | 21.71 | N | gnd |
| 0.28281 | 37.19 | 60.73 | 23.54 | L1 | gnd |
| 0.78906 | 27.93 | 56.00 | 28.07 | N | gnd |

| Frequency MHz | AV Level dBµV | AV Limit dBµV | AV Delta dB | Phase - | PE - |
|---|---|---|---|---|---|
| 0.18906 | 26.75 | 54.08 | 27.33 | L1 | gnd |
| 0.35312 | 34.82 | 48.89 | 14.07 | N | gnd |
| 0.71875 | 21.24 | 46.00 | 24.76 | N | gnd |
| 1.03906 | 17.32 | 46.00 | 28.68 | N | gnd |
| 2.1914 | 16.65 | 46.00 | 29.35 | N | gnd |
| 4.59375 | 15.72 | 46.00 | 30.28 | N | gnd |
| 7.92187 | 18.09 | 50.00 | 31.91 | N | gnd |

Data of 15V output adaptor





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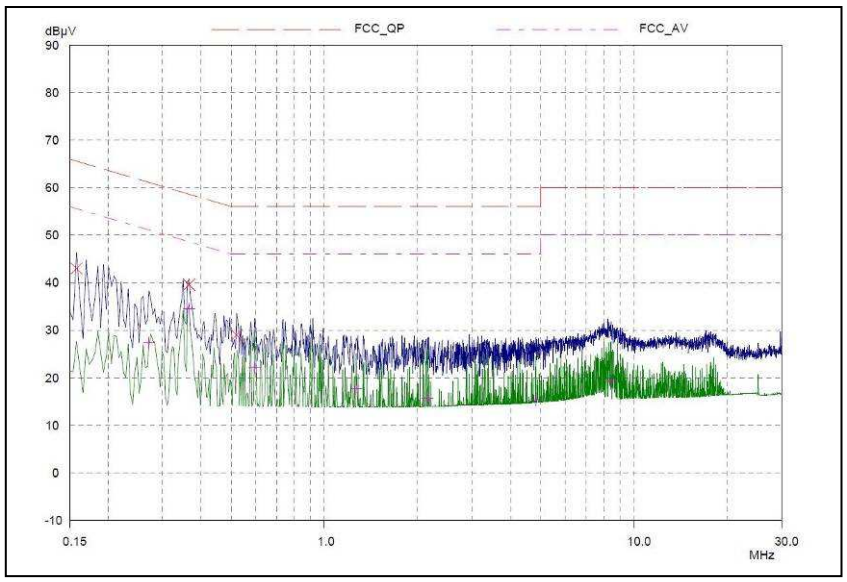
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

### 3.3 Graph and Table of Conducted Emission Measurement Data




Plot of 9V output adaptor

Final Measurement Results

| Frequency MHz | QP Level dBµV | QP Limit dBµV | QP Delta dB | Phase - | PE - |
|---|---|---|---|---|---|
| 0.15781 | 42.98 | 65.58 | 22.60 | N | gnd |
| 0.36484 | 39.59 | 58.62 | 19.03 | N | gnd |
| 0.51953 | 28.95 | 56.00 | 27.05 | N | gnd |

| Frequency MHz | AV Level dBµV | AV Limit dBµV | AV Delta dB | Phase - | PE - |
|---|---|---|---|---|---|
| 0.27109 | 27.36 | 51.08 | 23.72 | N | gnd |
| 0.36484 | 34.48 | 48.62 | 14.14 | L1 | gnd |
| 0.59375 | 22.11 | 46.00 | 23.89 | N | gnd |
| 1.26562 | 17.68 | 46.00 | 28.32 | L1 | gnd |
| 2.14843 | 15.73 | 46.00 | 30.27 | L1 | gnd |
| 4.8164 | 15.37 | 46.00 | 30.63 | N | gnd |
| 8.4375 | 19.34 | 50.00 | 30.66 | N | gnd |

Data of 9V output adaptor





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# TEST REPORT

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## 4 Photograph

### 4.1 Photographs of the Test Setup for Radiated Emission and Conducted Emission

For electronic filing, the photos are saved with filename ZZX761074 TSup.pdf.

### 4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename ZZX761074 ExPho.pdf and ZZX761074 InPho.pdf.

### 4.3 Antenna requirement

Appendices A5 shows the antenna is permanently attached and cannot be changed. Therefore it fulfils the section 15.203 requirement





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# TEST REPORT

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## 5 Appendices

| | | | |
|---|---|---|---|
| A1 | Photos of the set-up of Radiated Emissions | 5 | pages |
| A2 | Photos of the set-up of Conducted Emissions | 1 | page |
| A3 | Photos of the set-up of Line-conducted Emissions | 1 | page |
| A4 | Photos of External Configurations | 21 | pages |
| A5 | Photos of Internal Configurations | 5 | pages |
| A6 | ID Label/Location | 1 | page |





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# TEST REPORT

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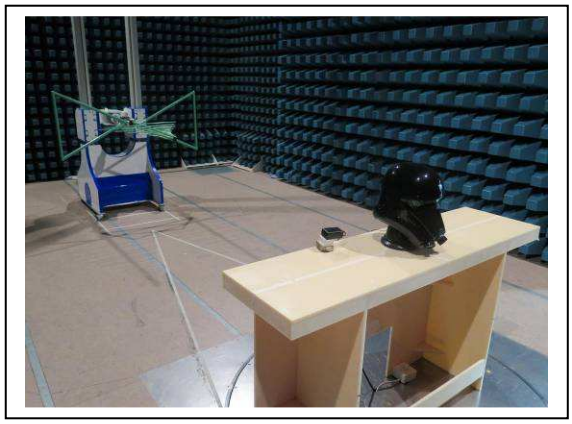
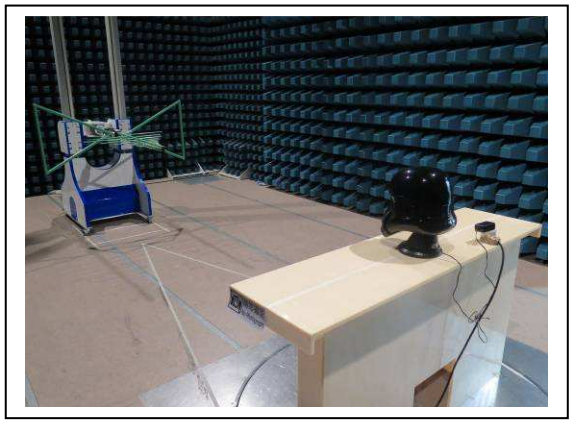
## A1. Photos of the set-up of Radiated Emissions



Front view, 30MHz – 1GHz



Rear view, 30MHz – 1GHz

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew





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# TEST REPORT

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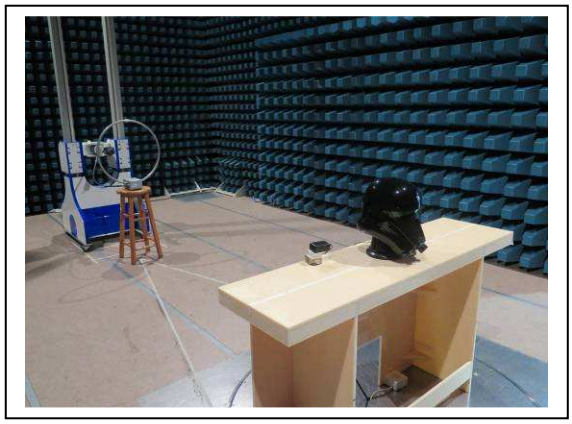
## A1. Photos of the set-up of Radiated Emissions



Front view, 9kHz – 30MHz

Rear view, 9kHz – 30MHz

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew





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# TEST REPORT

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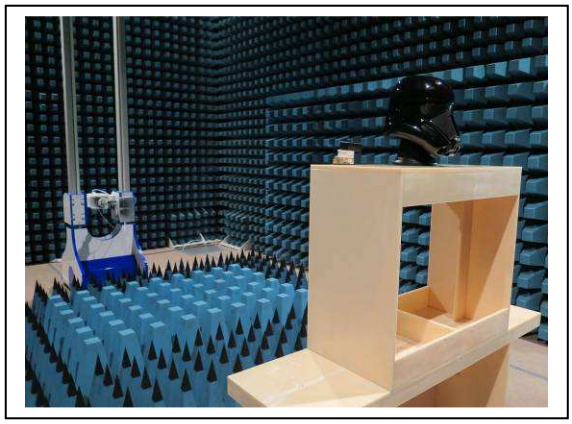
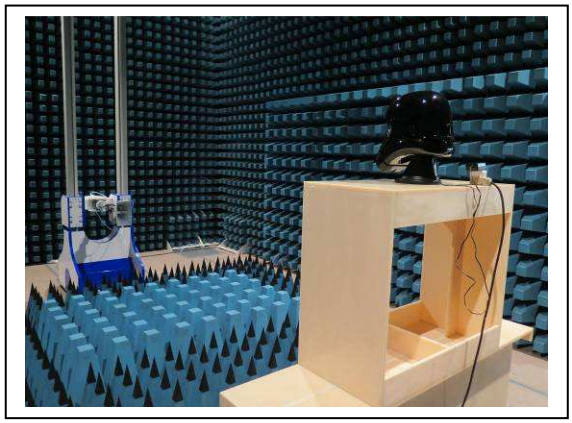
## A1. Photos of the set-up of Radiated Emissions



Front view, 1GHz – 25GHz



Rear view, 1GHz – 25GMHz

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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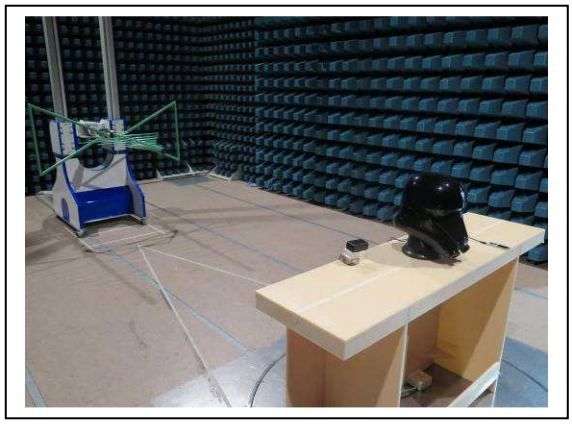
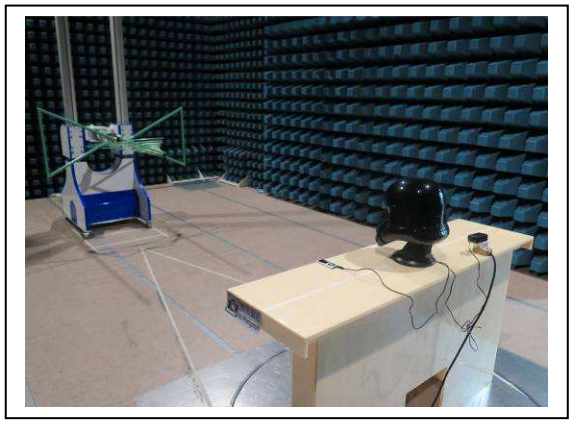
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A1. Photos of the set-up of Radiated Emissions



Front view, Aux-in + Charging



Rear view, Aux-in + Charging

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A1. Photos of the set-up of Radiated Emissions

LED on

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A2. Photos of the set-up of Conducted Emissions


Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A3. Photos of the set-up of Line-conducted Emissions

Front view

Side view

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 1
(IRON MAN HEADER SPEAKER)

External Configuration 2
(IRON MAN HEADER SPEAKER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew





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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 3
(IRON MAN HEADER SPEAKER)

External Configuration 4
(IRON MAN HEADER SPEAKER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 5
(IRON MAN HEADER SPEAKER)

External Configuration 6
(IRON MAN MARK44-HULKBUSTER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 7
(IRON MAN MARK44-HULKBUSTER)


External Configuration 8
(IRON MAN MARK44-HULKBUSTER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 9
(WAR MACHINE MARK III)

External Configuration 10
(WAR MACHINE MARK III)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 11
(WAR MACHINE MARK III)

External Configuration 12
(WAR MACHINE MARK III)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations


External Configuration 13
(WAR MACHINE MARK III)

External Configuration 14
(MARK XLVI IRON MAN)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 15
(MARK XLVI IRON MAN)

External Configuration 16
(MARK XLVI IRON MAN)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 17
(MARK XLVI IRON MAN)

External Configuration 18
(MARK XLVI IRON MAN)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 19
(IRON MAN MARK XLIII HI-FI SYSTEM SET)

External Configuration 20
(SEATH TROOPER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 21
(SEATH TROOPER)

External Configuration 22
(SEATH TROOPER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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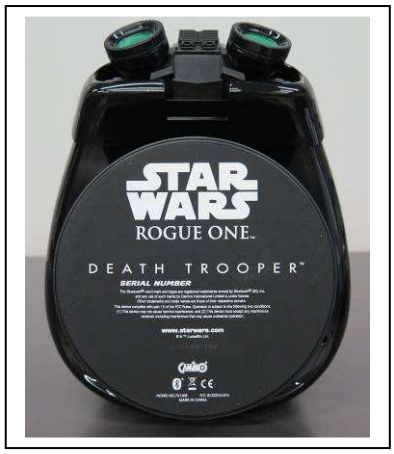
Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 23
(SEATH TROOPER)




External Configuration 24
(SEATH TROOPER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 25
(SEATH TROOPER with LED)

External Configuration 26
(SEATH TROOPER with LED)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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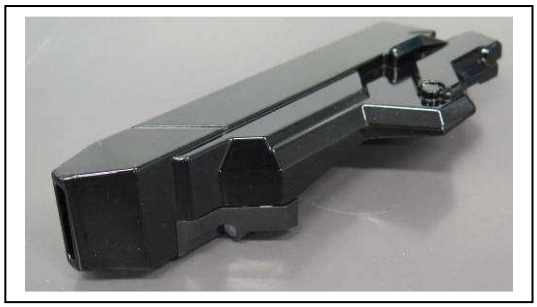
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 27
(LED for SEATH TROOPER)



External Configuration 28
(LED for SEATH TROOPER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 29
(STORM TROOPER)

External Configuration 30
(STORM TROOPER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 31
(STORM TROOPER)

External Configuration 32
(STORM TROOPER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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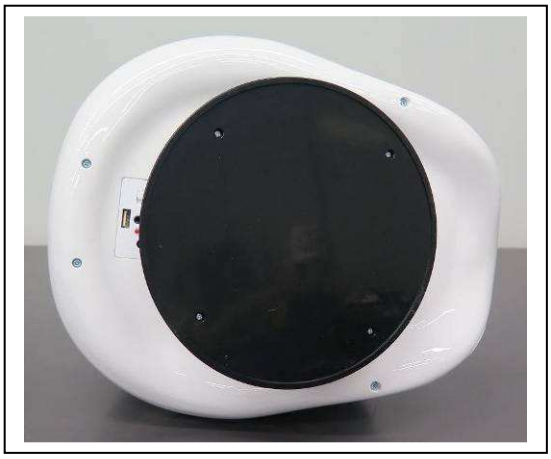
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations



External Configuration 33
(STORM TROOPER)

External Configuration 34
(DARTH VADER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 35
(DARTH VADER)

External Configuration 36
(DARTH VADER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 37
(DARTH VADER)


External Configuration 38
(DARTH VADER)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 39


External Configuration 40
(15V adaptor with US plug)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A4 Photos of External Configurations

External Configuration 41
(15V adaptor with Interchangeable plug)

External Configuration 42
(9V adaptor with Interchangeable plug)

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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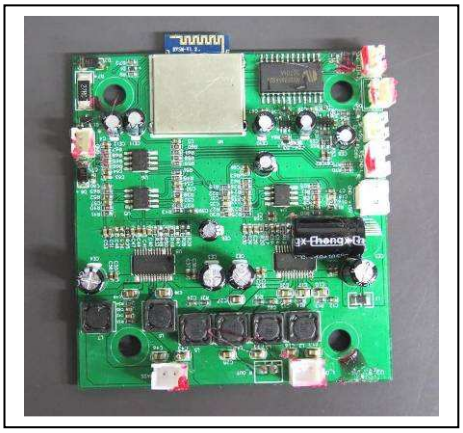
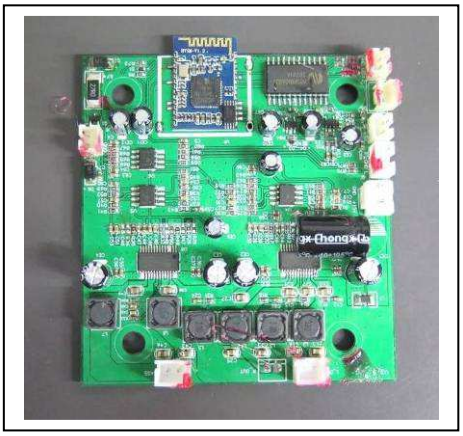
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A5 Photos of Internal Configurations



Internal Configuration 1



Internal Configuration 2

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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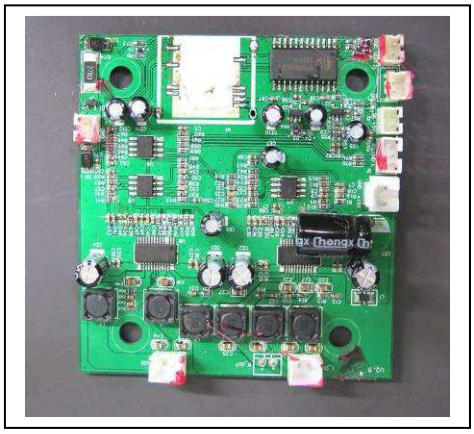
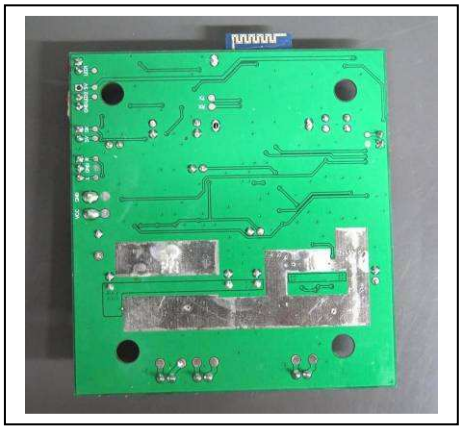
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A5 Photos of Internal Configurations



Internal Configuration 3



Internal Configuration 4

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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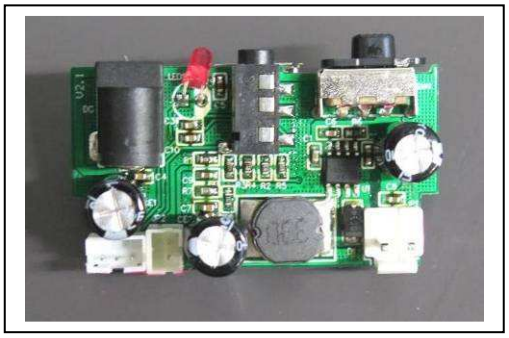
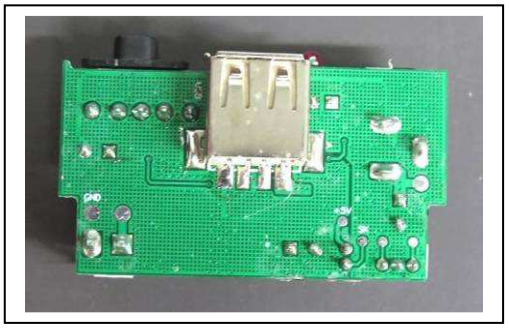
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A5 Photos of Internal Configurations



Internal Configuration 5



Internal Configuration 6

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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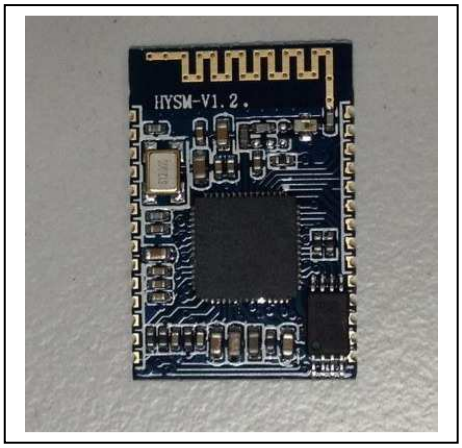
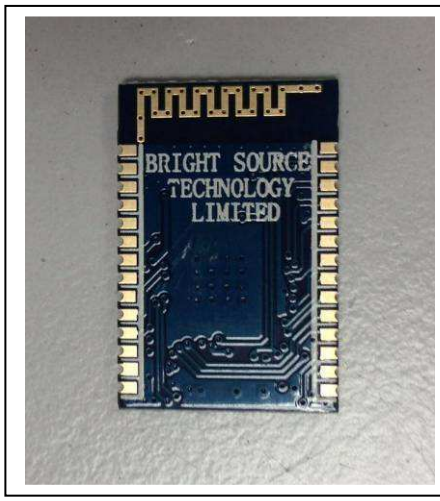
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A5 Photos of Internal Configurations




Internal Configuration 7




Internal Configuration 8

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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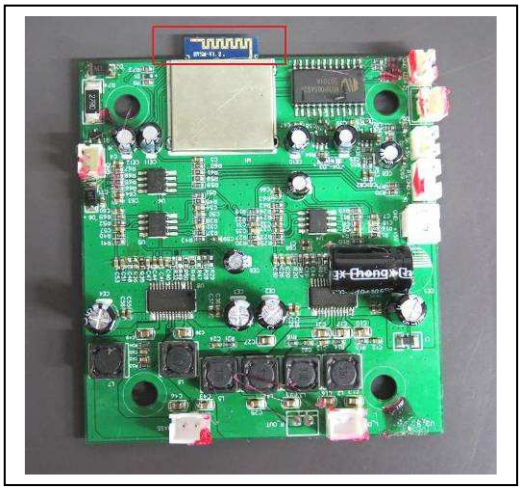
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

## A5 Photos of Internal Configurations



EUT antenna

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew



FCC ID: ZZX761074



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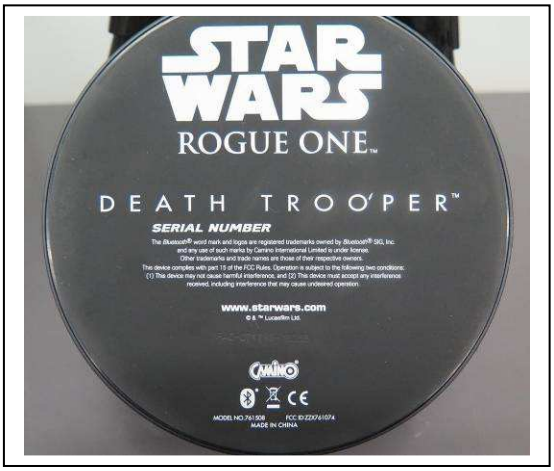
# TEST REPORT

Report No. : AU0066450(0) Date : 10 Nov 2016

**A6 ID Label / Location**




ID Label 1

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

Tested by: Mr. LEUNG Shu-kan, Ken

Reviewed by: Mr. WONG Lap-pong, Andrew





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