China

# FCC/IC- TEST REPORT

| | | | | |
|---|---|---|---|---|
| Report Number | : | **708881779706-00** | Date of Issue: | September 19, 2017 |

| | | |
|---|---|---|
| Model | : | SZU06A1, SZU06A2 |
| Product Type | : | ZigBee wireless communication module |
| FCC ID | : | 2ALOUSZU06A |
| Applicant | : | Chengdu Diyue Technology Co., Ltd. |
| Address | : | Room 408, 4/F, Block A, Gaofa Building, No.6, Jiuxing Avenue, High-tech Zone, Chengdu, Sichuan province, China |
| Production Facility | : | Chengdu Diyue Technology Co., Ltd. |
| Address | : | Room 408, 4/F, Block A, Gaofa Building, No.6, Jiuxing Avenue, High-tech Zone, Chengdu, Sichuan province, China |
| Test Result | : | ■ **Positive** ☐ **Negative** |
| Total pages including Appendices | : | 56 |

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# 1 Table of Contents





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## 2 Details about the Test Laboratory

**Details about the Test Laboratory**

Test Site 1

| | |
|---|---|
| Company name: | TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch<br>No.16 Lane, 1951 Du Hui Road,<br>Shanghai 201108,<br>P.R. China |
| Test Firm Registration Number: | 820234 |
| Telephone: | +86 21 6141 0123 |
| Fax: | +86 21 6140 8600 |

Test Site 2

| | |
|---|---|
| Company name: | MRT Technology (Suzhou) Co., Ltd.<br>D8 Building, Youxin Industrial Park, No. 2 Tina'ed Wuzhong Economic Development Zone, Suzhou, China |
| Test Firm Registration Number: | 893164 |
| Telephone: | +86-512-66308358 |
| Fax: | +86-512-66308368 |

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# 3 Description of the Equipment under Test

**Description of the Equipment Under Test**

| | |
|---|---|
| Product: | ZigBee wireless communication module |
| Model no.: | SZU06A1, SZU06A2 |
| FCC ID: | 2ALOUSZU06A |
| IC: | NA |
| Options and accessories: | NA |
| Rating voltage: | 2.1V~3.9V DC |
| RF Transmission Frequency: | 2405MHz-2480MHz |
| No. of Operated Channel: | 16 |
| Channel Space: | 5MHz |
| Channel list: | Channel 11: 2405MHz<br>Channel 12: 2410MHz<br>Channel 13: 2415MHz<br>…<br>Channel 19: 2445MHz<br>…<br>Channel 26: 2480MHz |
| Radio technology: | IEEE 802.15.4 |
| Modulation: | O-QPSK |
| Hardware version: | SZU06A1V06 for SZU06A1; SZU06A2V06 for SZU06A2 |
| Software version: | SZU06A_GSME01_00000006 |
| Antenna Type: | Snake antenna for SZU06A1<br>Dipole antenna W1010 for SZU06A2 |
| Antenna Gain: | Snake antenna for SZU06A1: 3.66dBi<br>Dipole antenna W1010 for SZU06A2: 2.0dBi |
| Description of the EUT: | The Equipment Under Test (EUT) is ZigBee wireless transceiver module operated at 2.4GHz |



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# 4 Summary of Test Standards

| Test Standards | |
|---|---|
| FCC Part 15 Subpart C | PART 15 - RADIO FREQUENCY DEVICES<br>Subpart C - Intentional Radiators |

All the test methods were according to KDB558074 D01 DTS Measurement Guidance v04 and ANSI C63.10 (2013).



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# 5 Summary of Test Results

| Technical Requirements | | | | | | |
|---|---|---|---|---|---|---|
| **FCC Part 15 Subpart C** | | | | | | |
| Test Condition | | Pages | Test Site | Test Result | | |
| | | | | Pass | Fail | N/A |
| §15.207 | Conducted emission AC power port | --- | --- | ☐ | ☐ | ☒ |
| §15.247 (b) (1) | Conducted peak output power | 10 | Site 2 | ☒ | ☐ | ☐ |
| §15.247(a)(1) | 20dB bandwidth | --- | --- | ☐ | ☐ | ☒ |
| §15.247(a)(1) | Carrier frequency separation | --- | --- | ☐ | ☐ | ☒ |
| §15.247(a)(1)(iii) | Number of hopping frequencies | --- | --- | ☐ | ☐ | ☒ |
| §15.247(a)(1)(iii) | Dwell Time | --- | --- | ☐ | ☐ | ☒ |
| §15.247(e) | Power spectral density | 13 | Site 2 | ☒ | ☐ | ☐ |
| §15.247(a)(2) | 6dB bandwidth and 99% Occupied Bandwidth | 11 | Site 2 | ☒ | ☐ | ☐ |
| §15.247(d) | Spurious RF conducted emissions | 15 | Site 2 | ☒ | ☐ | ☐ |
| §15.247(d) | Band edge | 19 | Site 2 | ☒ | ☐ | ☐ |
| §15.247(d) & §15.209 | Spurious radiated emissions for transmitter | 22 | Site 2 | ☒ | ☐ | ☐ |
| §15.203 | Antenna requirement | See note 1 | | ☒ | ☐ | ☐ |

Remark 1: N/A – Not Applicable.

Note 1: For model: SZU06A1 uses a snake antenna, which gain is 3.3dBi. In accordance to §15.203, It is considered sufficiently to comply with the provisions of this section.

For model: SZU06A2 have a U.FL RF connector and uses a dipole antenna thorough U.FL-RSMA pigtail, which dipole antenna gain is 2.0dBi. In accordance to §15.203, It is considered sufficiently to comply with the provisions of this section.



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## 6 General Remarks

**Remarks**

This submittal(s) (test report) is intended for FCC ID: 2ALOUSZU06A complies with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules.

.

**SUMMARY:**

All tests according to the regulations cited on page 5 were

■ - Performed

☐ - **Not** Performed

The Equipment under Test

■ - **Fulfills** the general approval requirements.

☐ - **Does not** fulfill the general approval requirements.

Sample Received Date: August 12, 2017

Testing Start Date: August 23, 2017

Testing End Date: September 11, 2017

- TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Reviewed by: Prepared by:

Hui TONG
Review Engineer

Wenwen CHENG
Project Engineer

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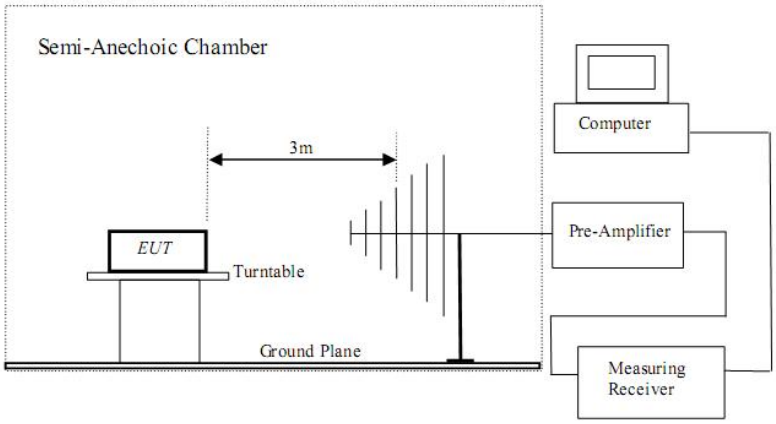
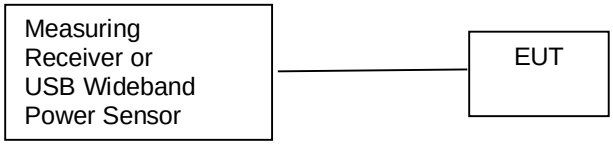
# 7 Test Setups

## 7.1 Radiated test setups




## 7.2 Conducted RF test setups



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# 8 Systems test configuration

Auxiliary Equipment Used during Test:

| DESCRIPTION | MANUFACTURER | MODEL NO.(SHIELD) |
|---|---|---|
| Notebook | Lenove | X240 |

Test channel & mode:
The Zigbee transceiver was configured using a proprietary communication interface procided by the client. The interface allows power level and channel control required to support the evaluation. The power level settings in the table below were used for the evaluation.

| | |
|---|---|
| Test software | CommBox-zbspTool |

| Test mode | Channel | Frequency (MHz) |
|---|---|---|
| Tx | 11 | 2405 |
| Tx | 19 | 2445 |
| Tx | 26 | 2480 |

Additional Comments:
The customer declared two models with the same RF part.
Full Test was performed with DUT2: 2.4GHZ IEEE 802.15.4 Zigbee module with u.FL antenna connector; Model: SZU06A1
Partial test was performed with model name DUT1: 2.4GHz IEEE 802.15.4 Zigbee module with integrated PCB (Snake) antenna; Model: SZU06A2


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# 9 Technical Requirement

## 9.1 Conducted peak output power

**Test Method**

1. Use the following spectrum analyzer settings:
   RBW > the 6 dB bandwidth of the emission being measured, VBW≥3RBW, Span≥3RBW
   Sweep = auto, Detector function = peak, Trace = max hold.
2. Add a correction factor to the display.
3. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power.

**Limits**

| Frequency Range MHz | Limit W | Limit dBm |
|---|---|---|
| 2400-2483.5 | ≤1 | ≤30 |

Test result as below table

| Model | Max Gain (dBi) | Ch. | Freq. (MHz) | Peak Power (dBm) | Average Power (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| Zigbee | 3.66 | 11 | 2405 | 6.10 | 5.96 | 30 |
| | 3.66 | 19 | 2445 | 6.29 | 5.11 | 30 |
| | 3.66 | 26 | 2480 | 6.40 | 6.26 | 30 |


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## 9.2 6dB bandwidth Occupied Bandwidth

**Test Method**

1. Use the following spectrum analyzer settings:
   RBW=100K, VBW≥3RBW, Sweep = auto, Detector function = peak, Trace = max hold
2. Use the automatic bandwidth measurement capability of an instrument, may be employed using the X dB bandwidth mode with X set to 6 dB, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥ 6 dB.
3. Allow the trace to stabilize, record the 6 dB Bandwidth value.

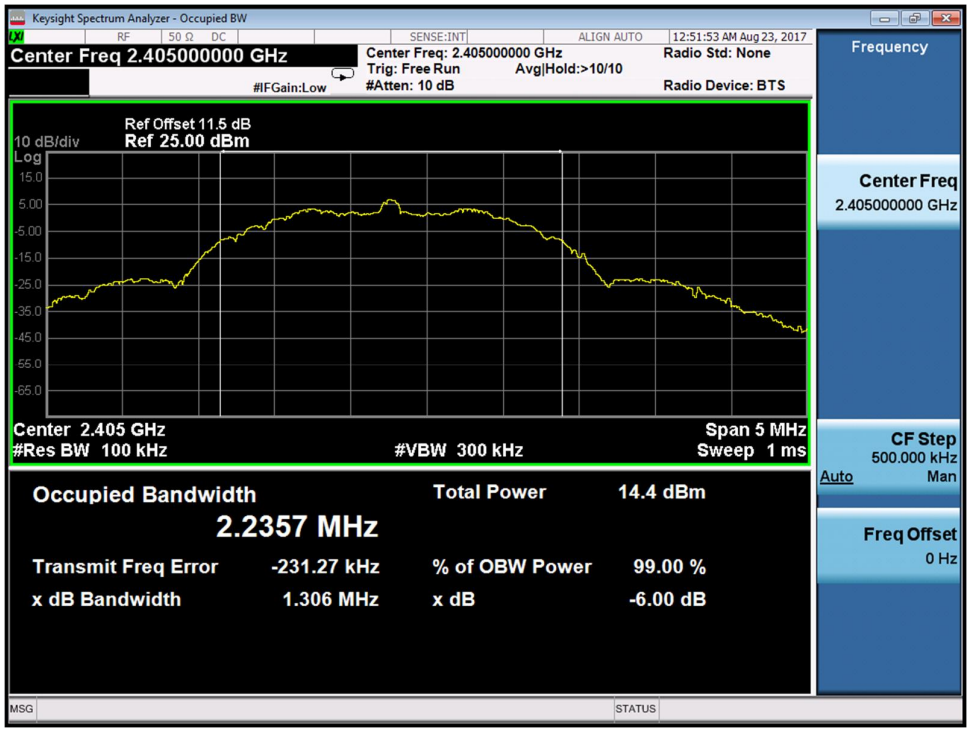
**Limit**

| Limit [kHz] |
|---|
| ≥500 |

Test result

| Frequency MHz | 6dB bandwidth MHz | Result |
|---|---|---|
| Top channel 2405MHz | 1.306 | Pass |
| Middle channel 2445MHz | 1.312 | Pass |
| Bottom channel 2480MHz | 1.447 | Pass |

2405MHz



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2445MHz


2480MHz




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## 9.3 Power spectral density

**Test Method**

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance:

1. Set analyzer center frequency to DTS channel center frequency. RBW=3kHz, VBW≥3RBW, Span=1.5 times DTS bandwidth, Detector=Peak, Sweep=auto, Trace= max hold.
2. Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.
3. Repeat above procedures until other frequencies measured were completed.

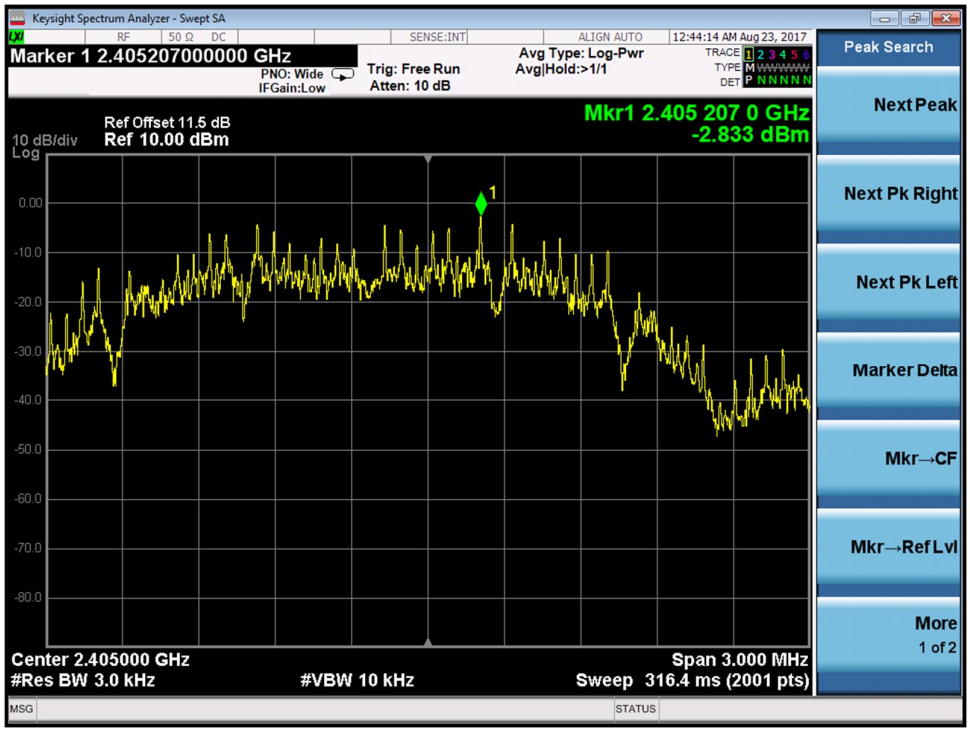
**Limit**

| Limit [dBm] |
|---|
| ≤8 |

Test result

| Frequency<br>**MHz** | Power spectral density<br>**dBm** | Result |
|---|---|---|
| Top channel 2405MHz | -2.833 | Pass |
| Middle channel 2445MHz | -2.589 | Pass |
| Bottom channel 2480MHz | -2.811 | Pass |

2405MHz



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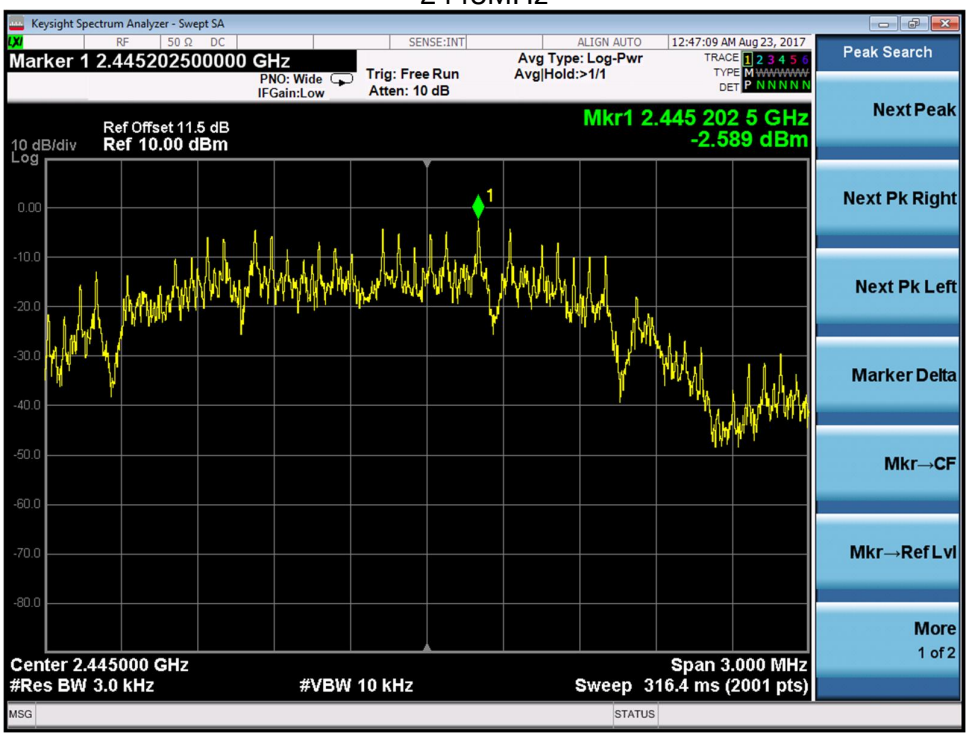
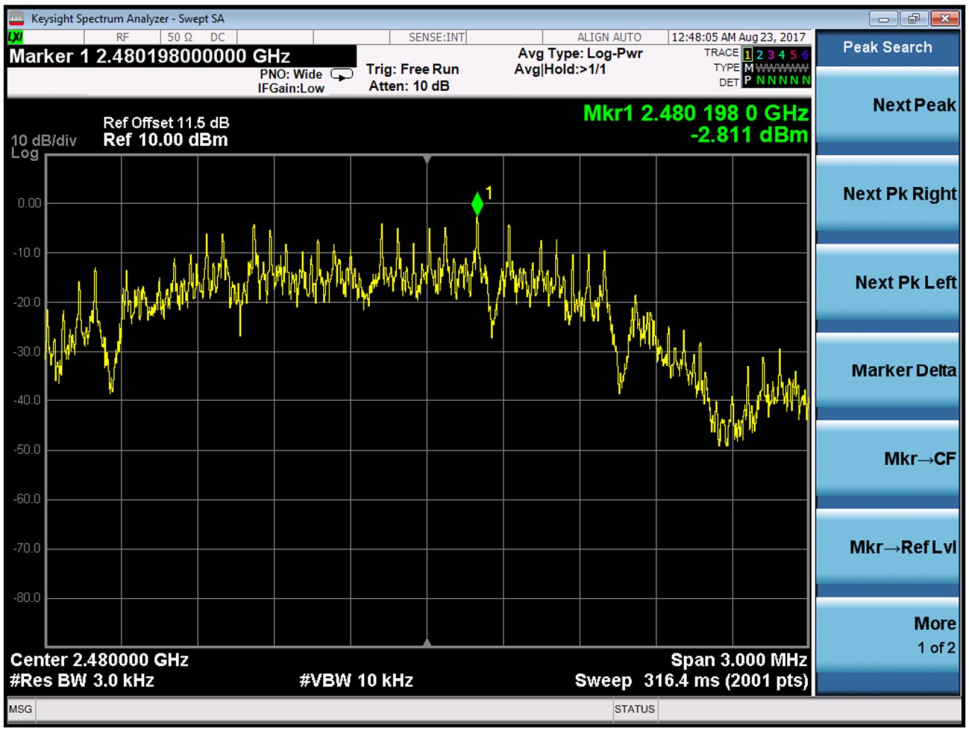
2445MHz




2480MHz



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## 9.4 Spurious RF conducted emissions

**Test Method**

1. Establish a reference level by using the following procedure:
   a. Set RBW=100 kHz. VBW≥3RBW. Detector =peak, Sweep time = auto couple, Trace mode = max hold.
   b. Allow trace to fully stabilize, use the peak marker function to determine the maximum PSD level.
2. Use the maximum PSD level to establish the reference level.
   a. Set the center frequency and span to encompass frequency range to be measured.
   b. Use the peak marker function to determine the maximum amplitude level. Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements, report the three highest emissions relative to the limit.
3. Repeat above procedures until other frequencies measured were completed.

**Limit**

| Frequency Range MHz | Limit (dBc) |
|---|---|
| 30-25000 | -20 |



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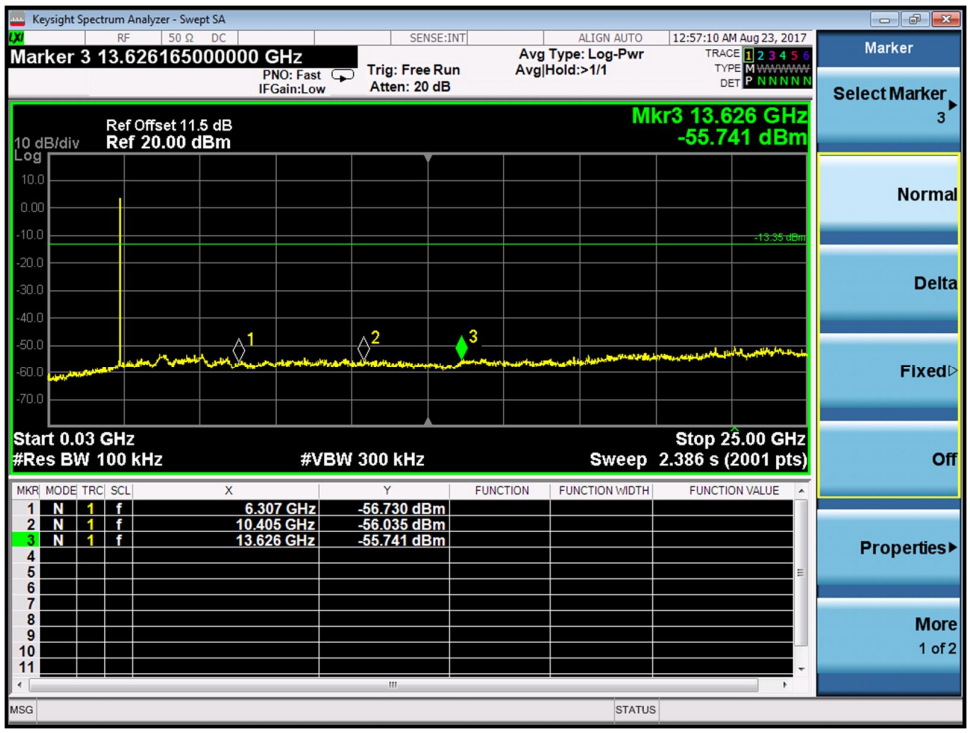
## Spurious RF conducted emissions

2405MHz

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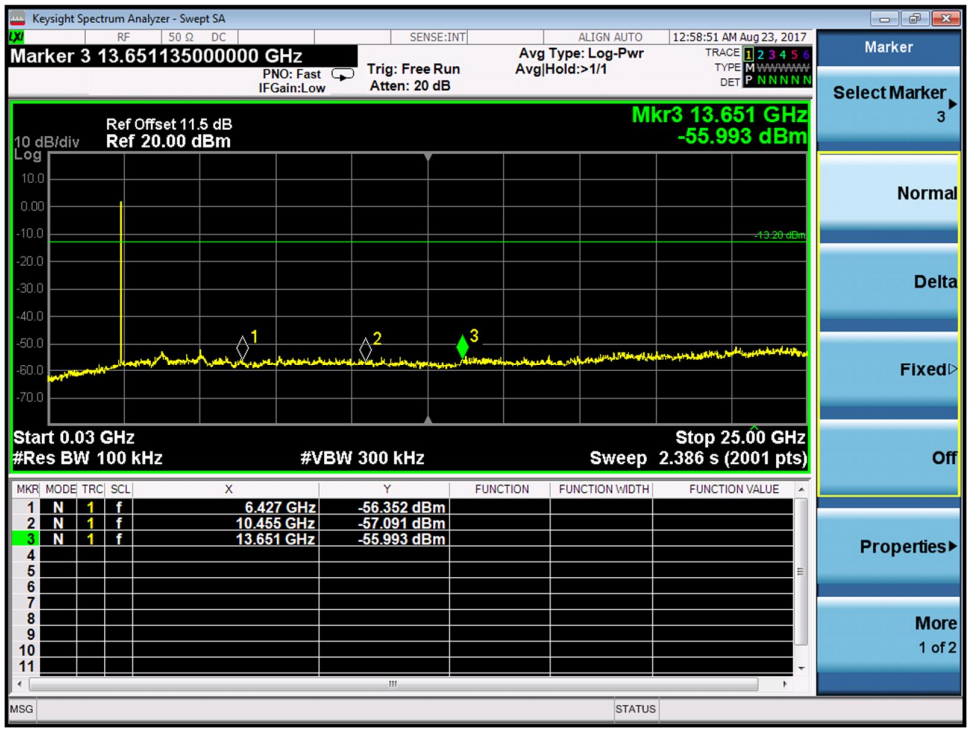
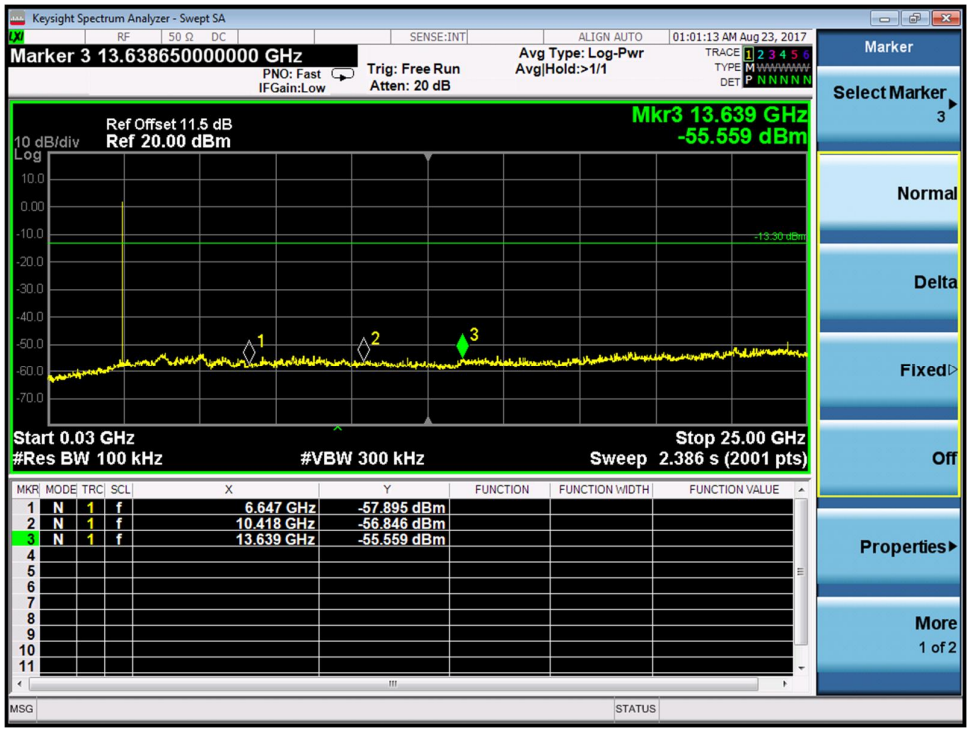
2445MHz

2480MHz


Keysight Spectrum Analyzer - Swept SA
Marker 1 2.479749500000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>1/1
12:59:34 AM Aug 23, 2017
Ref Offset 11.5 dB
10 dB/div
Ref 20.00 dBm
Mkr1 2.479 749 5 GHz
6.967 dBm
Center 2.480000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 3.000 MHz
Sweep 1.067 ms (2001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Keysight Spectrum Analyzer - Swept SA
Marker 3 13.638650000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>1/1
01:01:13 AM Aug 23, 2017
Ref Offset 11.5 dB
10 dB/div
Ref 20.00 dBm
Mkr3 13.639 GHz
-55.559 dBm
-13.30 dBm
Start 0.03 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (2001 pts)
1 N 1 f 6.647 GHz -57.895 dBm
2 N 1 f 10.418 GHz -56.846 dBm
3 N 1 f 13.639 GHz -55.559 dBm
Marker
Select Marker 3
Normal
Delta
Fixed
Off
Properties
More
1 of 2

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## 9.5 Band edge

**Test Method**

1 Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 kHz, VBW≥RBW, Sweep = auto, Detector function = peak, Trace = max hold.
2 Allow the trace to stabilize, use the peak and delta measurement to record the result.
3 The level displayed must comply with the limit specified in this Section.

**Limit**

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in 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, provided the transmitter demonstrates compliance with the peak conducted power limits. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a) and RSS-Gen8.10, must also comply with the radiated emission limits specified in 15.209(a) (see Section 15.205(c)) and RSS-Gen.


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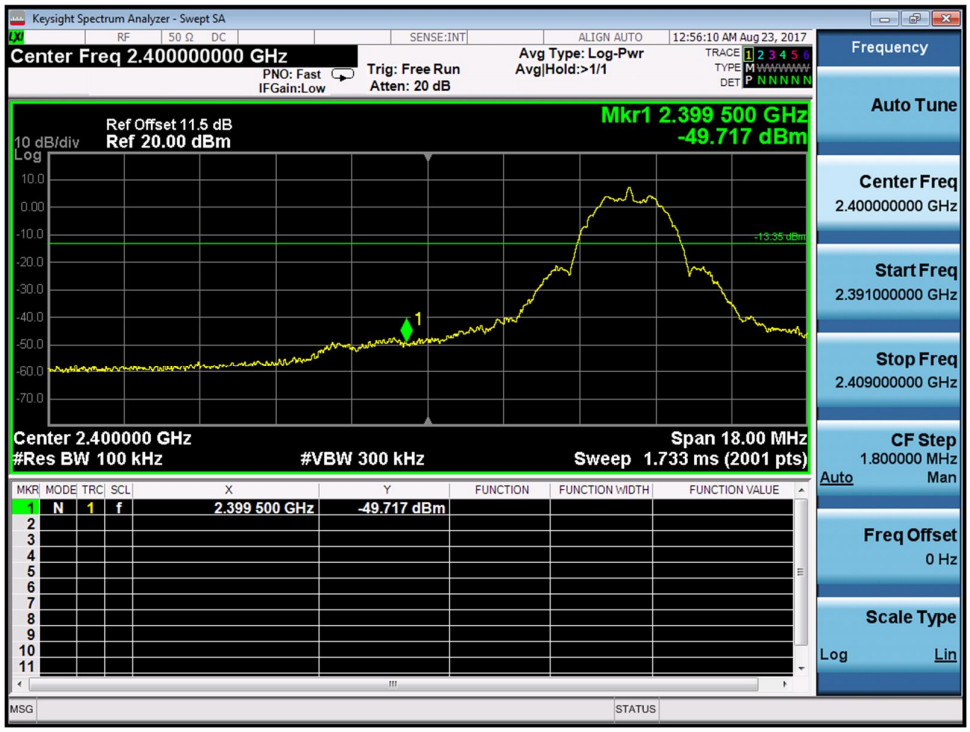
## Test result

2405MHz

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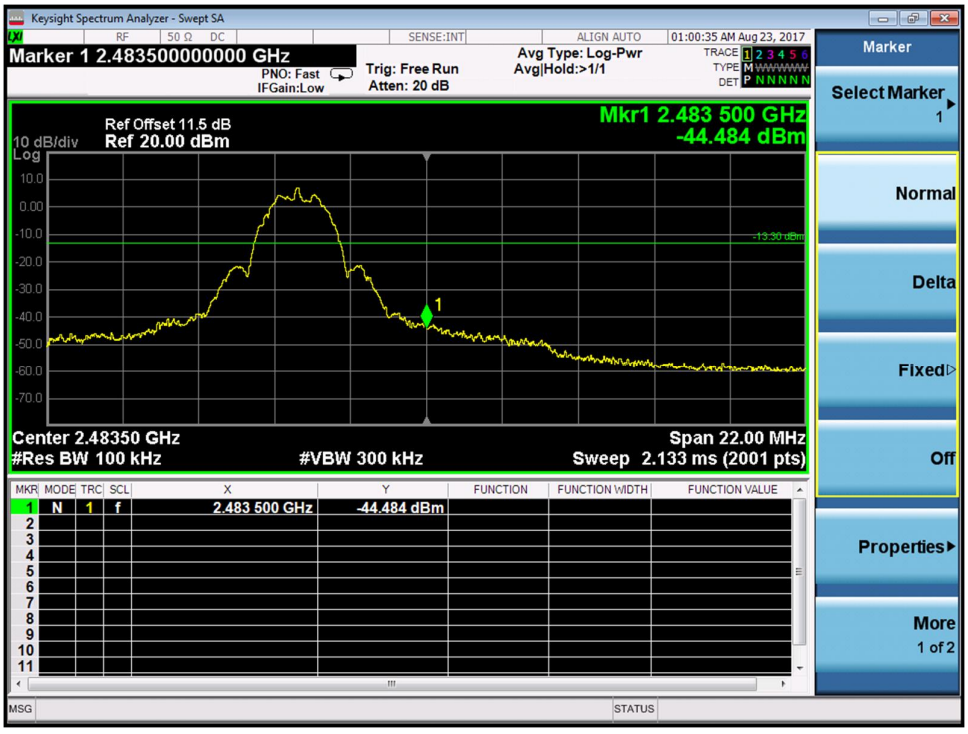
2480MHz

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## 9.6 Spurious radiated emissions for transmitter

**Test Method**

1: The EUT was place on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2: The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
3: The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4: For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5: Use the following spectrum analyzer settings According to C63.10:
For Above 1GHz
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 1MHz, VBW≥RBW for peak measurement and VBW = 10Hz for average measurement,
Sweep = auto, Detector function = peak, Trace = max hold.
For Below 1GHz
Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 KHz, VBW≥RBW for peak measurement, Sweep = auto, Detector function = peak,
Trace = max hold.

**Note:**

1: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Quasi-peak detection (QP) at frequency below 1GHz.
2: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for peak detection (PK) at frequency above 1GHz.
3: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average ((duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (20log(1/duty cycle)).
4: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.


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**Limit**

The radio emission outside the operating frequency band 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. Radiated emissions which fall in the restricted bands, as defined in section15.205, must comply with the radiated emission limits specified in section 15.209.

LIMITS OF RADIATED EMISSION MEASUREMENT (Frequency Range 9kHz-1000MHz)

| Frequency MHz | Field Strength uV/m | Measured Distance Meters |
|---|---|---|
| 0.009~0.490 | 2400/F (kHz) | 300 |
| 0.490~1.705 | 24000/F (kHz) | 30 |
| 1.705~30 | 30 | 30 |
| 30~88 | 100 | 3 |
| 88~216 | 150 | 3 |
| 216~960 | 200 | 3 |
| 960~1000 | 500 | 3 |

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

| Frequency MHz | Field Strength (dBuv/m) (at 3M) | |
|---|---|---|
| | PEAK | AVERAGE |
| Above 1000 | 74 | 54 |

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.
(2) The tighter limit applies at the band edges.
(3) Emission level (dBuV/m)=20logEmission level (uV/m).


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## Spurious radiated emissions for transmitter

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

**Transmitting spurious emission test result as below:**
**Remark 1:** There are the ambient noise within frequency range 9kHz ~ 30MHz and 18GHz ~ 25GHz, the permissible value is not show in the report.
Remark 2: Average measurement was not performed if peak level lower than average limit.
Remark 3: Other frequency was 20dB below limit line with 1-18GHz, there is not show in the report.

For model: SZU06A1

2405MHz

| Frequency | Reading Level | Factor | Measure Level | Limit | Margin | Detector | Polarization |
|---|---|---|---|---|---|---|---|
| MHz | dBuV/m | dB | dBuV/m | dBµV/m | dB | Peak | |
| 4935.50 | 35.52 | 2.79 | 38.31 | 74.00 | -35.69 | PK | Horizontal |
| 10792.00 | 35.05 | 12.63 | 47.67 | 74.00 | -26.33 | PK | Horizontal |
| 14200.50“*” | 35.18 | 15.39 | 50.56 | 74.00 | -23.44 | PK | Horizontal |
| 17320.00“*” | 36.41 | 16.66 | 53.07 | 74.00 | -20.93 | PK | Horizontal |
| 4808.00 | 36.35 | 2.69 | 39.05 | 74.00 | -34.95 | PK | Vertical |
| 11013.00 | 35.37 | 12.99 | 48.36 | 74.00 | -25.64 | PK | Vertical |
| 13988.00“*” | 35.63 | 14.87 | 50.50 | 74.00 | -23.50 | PK | Vertical |
| 17005.50“*” | 37.29 | 15.46 | 52.75 | 74.00 | -21.25 | PK | Vertical |

2445MHz

| Frequency | Reading Level | Factor | Measure Level | Limit | Margin | Detector | Polarization |
|---|---|---|---|---|---|---|---|
| MHz | dBuV/m | dB | dBuV/m | dBµV/m | dB | Peak | |
| 5012.00 | 35.04 | 3.05 | 38.09 | 74.00 | -35.91 | PK | Horizontal |
| 11021.50 | 35.07 | 12.98 | 48.04 | 74.00 | -25.96 | PK | Horizontal |
| 14141.00“*” | 35.43 | 15.29 | 50.72 | 74.00 | -23.28 | PK | Horizontal |
| 16912.00“*” | 37.72 | 15.32 | 53.04 | 74.00 | -20.96 | PK | Horizontal |
| 4842.00 | 34.71 | 2.70 | 37.41 | 74.00 | -36.59 | PK | Vertical |
| 10970.50 | 34.86 | 13.05 | 47.91 | 74.00 | -26.09 | PK | Vertical |
| 14175.00“*” | 35.75 | 15.33 | 51.08 | 74.00 | -22.92 | PK | Vertical |
| 16750.50“*” | 38.00 | 14.60 | 52.60 | 74.00 | -21.40 | PK | Vertical |


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2480MHz

| Frequency MHz | Reading Level dBuV/m | Factor dB | Measure Level dBuV/m | Limit dBµV/m | Margin dB | Detector Peak | Polarization |
|---|---|---|---|---|---|---|---|
| 4935.50 | 35.60 | 2.79 | 38.39 | 74.00 | -35.61 | PK | Horizontal |
| 11038.50 | 35.34 | 12.93 | 48.27 | 74.00 | -25.73 | PK | Horizontal |
| 13979.50"*" | 35.69 | 14.81 | 50.51 | 74.00 | -23.49 | PK | Horizontal |
| 16937.50"*" | 36.62 | 15.42 | 52.04 | 74.00 | -21.96 | PK | Horizontal |
| 4825.00 | 35.03 | 2.70 | 37.73 | 74.00 | -36.27 | PK | Vertical |
| 10979.00 | 34.89 | 13.04 | 47.93 | 74.00 | -26.07 | PK | Vertical |
| 14183.50"*" | 35.96 | 15.35 | 51.31 | 74.00 | -22.69 | PK | Vertical |
| 16784.50"*" | 37.68 | 14.76 | 52.44 | 74.00 | -21.56 | PK | Vertical |

Remark:

(1) Emission level= Original Receiver Reading + Correct Factor
(2) Correct Factor = Antenna Factor + Cable Loss -Amplifier gain
(3) Margin = limit – Corrected Reading
(4) "*" is not in restricted band, its limit is 20dBc of the fundamental emission level or 15.209 which is higher.

For model: SZU06A2

2405MHz

| Frequency MHz | Reading Level dBuV/m | Factor dB | Measure Level dBuV/m | Limit dBµV/m | Margin dB | Detector Peak | Polarization |
|---|---|---|---|---|---|---|---|
| 4765.50 | 36.21 | 2.61 | 38.82 | 74.00 | -35.18 | PK | Horizontal |
| 11659.00 | 36.44 | 12.25 | 48.69 | 74.00 | -25.31 | PK | Horizontal |
| 14209.00"*" | 35.98 | 15.40 | 51.38 | 74.00 | -22.62 | PK | Horizontal |
| 16682.50"*" | 37.60 | 14.41 | 52.00 | 74.00 | -22.00 | PK | Horizontal |
| 4774.00 | 35.58 | 2.64 | 38.23 | 74.00 | -35.77 | PK | Vertical |
| 11081.00 | 35.28 | 12.85 | 48.13 | 74.00 | -25.87 | PK | Vertical |
| 13784.00"*" | 36.55 | 14.34 | 50.89 | 74.00 | -23.11 | PK | Vertical |
| 16869.50"*" | 37.39 | 15.21 | 52.59 | 74.00 | -21.41 | PK | Vertical |

2445MHz

| Frequency MHz | Reading Level dBuV/m | Factor dB | Measure Level dBuV/m | Limit dBµV/m | Margin dB | Detector Peak | Polarization |
|---|---|---|---|---|---|---|---|
| 4961.00 | 35.02 | 2.91 | 37.93 | 74.00 | -36.07 | PK | Horizontal |
| 11650.50 | 36.20 | 12.31 | 48.51 | 74.00 | -25.49 | PK | Horizontal |
| 14141.00"*" | 35.45 | 15.29 | 50.74 | 74.00 | -23.26 | PK | Horizontal |
| 16742.00"*" | 37.57 | 14.58 | 52.15 | 74.00 | -21.85 | PK | Horizontal |
| 4748.50 | 36.70 | 2.54 | 39.25 | 74.00 | -34.76 | PK | Vertical |
| 11064.00 | 36.88 | 12.84 | 49.72 | 74.00 | -24.28 | PK | Vertical |
| 14294.00"*" | 35.61 | 15.52 | 51.13 | 74.00 | -22.87 | PK | Vertical |
| 16810.00"*" | 38.04 | 14.87 | 52.90 | 74.00 | -21.10 | PK | Vertical |


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2480MHz

| Frequency | Reading Level | Factor | Measure Level | Limit | Margin | Detector | Polarization |
|---|---|---|---|---|---|---|---|
| MHz | dBuV/m | dB | dBuV/m | dBµV/m | dB | Peak | |
| 4757.00 | 36.17 | 2.58 | 38.75 | 74.00 | -35.25 | PK | Horizontal |
| 11030.00 | 35.72 | 12.97 | 48.69 | 74.00 | -25.31 | PK | Horizontal |
| 14226.00“*” | 35.80 | 15.45 | 51.24 | 74.00 | -22.76 | PK | Horizontal |
| 16861.00“*” | 38.00 | 15.20 | 53.19 | 74.00 | -20.81 | PK | Horizontal |
| 5029.00 | 36.02 | 3.08 | 39.09 | 74.00 | -34.91 | PK | Vertical |
| 11421.00 | 35.46 | 12.59 | 48.05 | 74.00 | -25.95 | PK | Vertical |
| 14260.00“*” | 35.76 | 15.48 | 51.24 | 74.00 | -22.76 | PK | Vertical |
| 16929.00“*” | 37.49 | 15.41 | 52.90 | 74.00 | -21.10 | PK | Vertical |

Remark:

(1) Emission level= Original Receiver Reading + Correct Factor
(2) Correct Factor = Antenna Factor + Cable Loss -Amplifier gain
(3) Margin = limit – Corrected Reading
(4) “*” is not in restricted band, its limit is 20dBc of the fundamental emission level or 15.209 which is higher.


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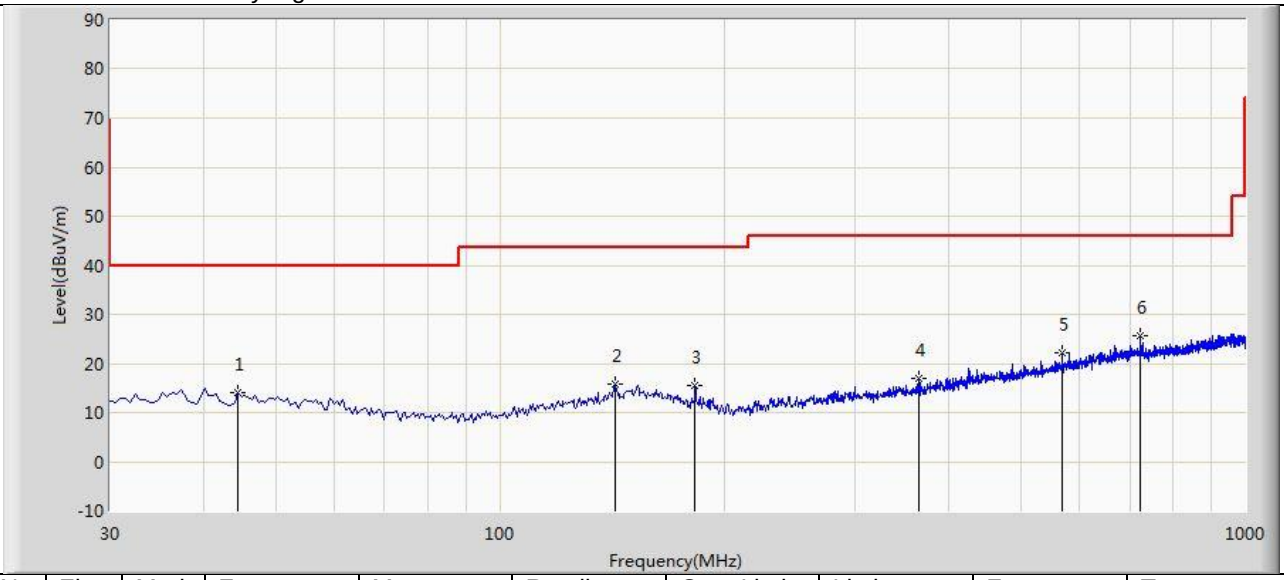
The worst case of Radiated Emission below 1GHz:

| | |
|---|---|
| Site: AC1 | Time: 2017/08/30 - 03:47 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: VULB 9168 _20-2000MHz | Polarity: Horizontal |
| EUT: SZU06A1 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2445MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 44.550 | 14.118 | -0.100 | -25.882 | 40.000 | 14.218 | PK |
| 2 | | | 143.005 | 15.811 | 1.117 | -27.689 | 43.500 | 14.694 | PK |
| 3 | | | 182.775 | 15.612 | 3.136 | -27.888 | 43.500 | 12.477 | PK |
| 4 | | | 365.620 | 16.942 | 1.148 | -29.058 | 46.000 | 15.794 | PK |
| 5 | | | 568.350 | 22.218 | 2.413 | -23.782 | 46.000 | 19.805 | PK |
| 6 | | * | 723.550 | 25.610 | 3.257 | -20.390 | 46.000 | 22.353 | PK |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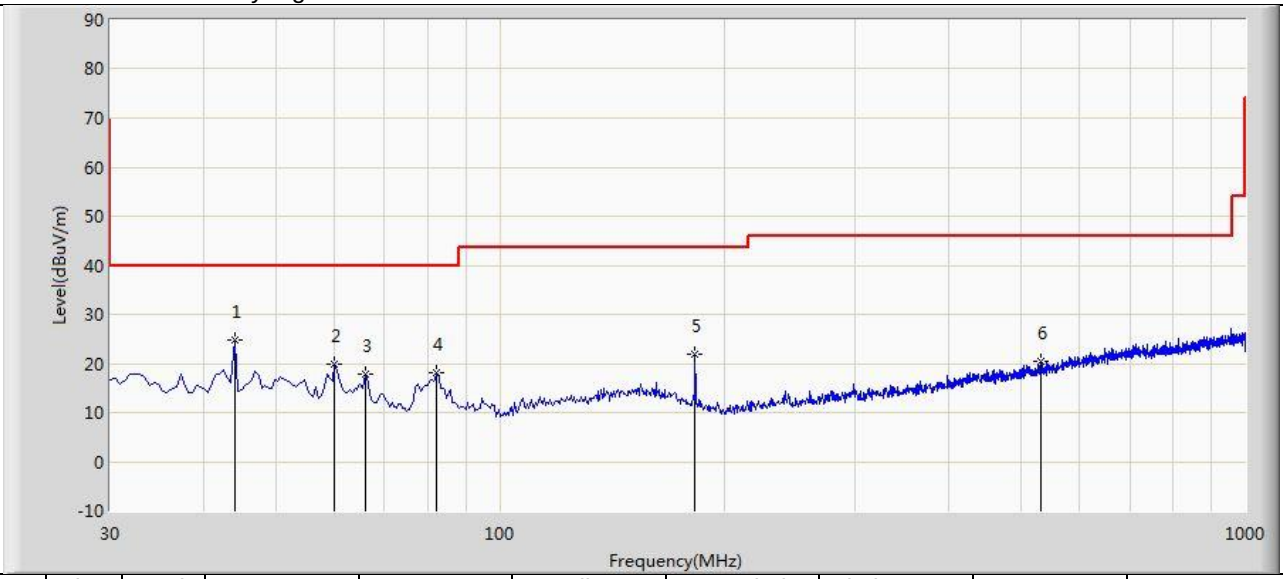
| | |
|---|---|
| Site: AC1 | Time: 2017/08/30 - 03:49 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: VULB 9168 _20-2000MHz | Polarity: Vertical |
| EUT: SZU06A1 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2445MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 44.065 | 24.895 | 10.651 | -15.105 | 40.000 | 14.244 | PK |
| 2 | | | 60.070 | 19.792 | 6.480 | -20.208 | 40.000 | 13.312 | PK |
| 3 | | | 65.890 | 17.963 | 5.698 | -22.037 | 40.000 | 12.265 | PK |
| 4 | | | 82.380 | 18.126 | 8.058 | -21.874 | 40.000 | 10.068 | PK |
| 5 | | | 182.775 | 22.024 | 9.548 | -21.476 | 43.500 | 12.477 | PK |
| 6 | | | 531.975 | 20.350 | 1.228 | -25.650 | 46.000 | 19.122 | PK |



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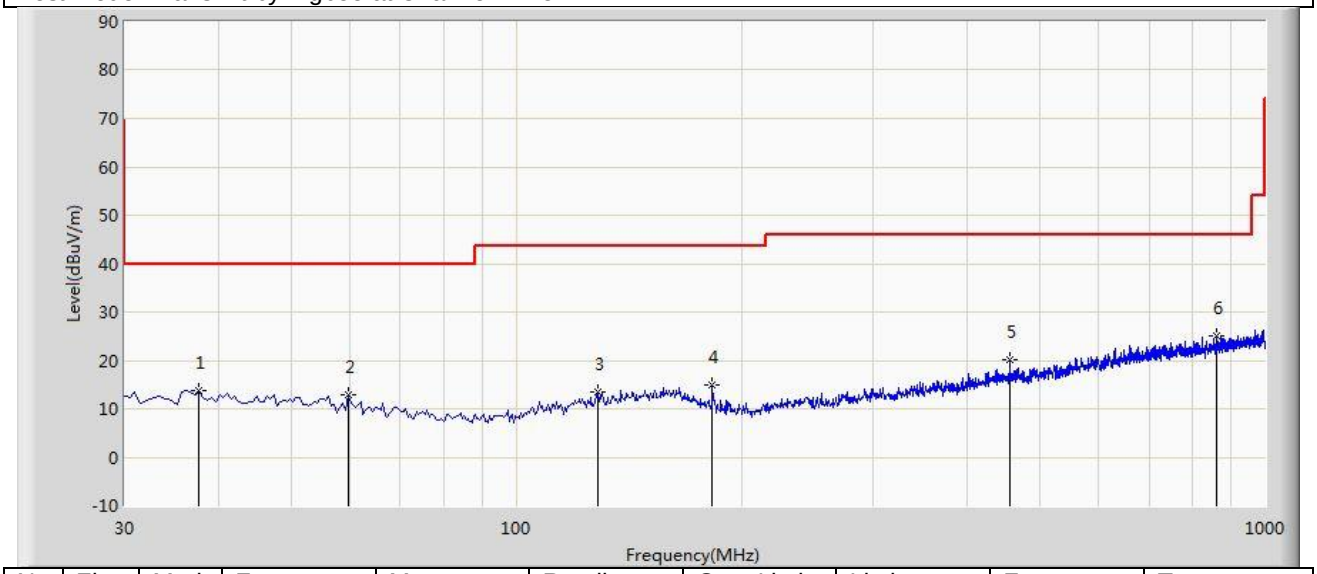
| | |
|---|---|
| Site: AC1 | Time: 2017/08/30 - 04:06 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Flag Yang |
| Probe: VULB 9168 _20-2000MHz | Polarity: Horizontal |
| EUT: SZU06A2 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2445MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 37.760 | 13.812 | -0.419 | -26.188 | 40.000 | 14.231 | PK |
| 2 | | | 59.585 | 12.769 | -0.619 | -27.231 | 40.000 | 13.388 | PK |
| 3 | | | 128.455 | 13.398 | -0.236 | -30.102 | 43.500 | 13.634 | PK |
| 4 | | | 182.775 | 14.951 | 2.475 | -28.549 | 43.500 | 12.477 | PK |
| 5 | | | 455.830 | 20.156 | 2.274 | -25.844 | 46.000 | 17.882 | PK |
| 6 | | * | 861.290 | 24.992 | 1.195 | -21.008 | 46.000 | 23.797 | PK |



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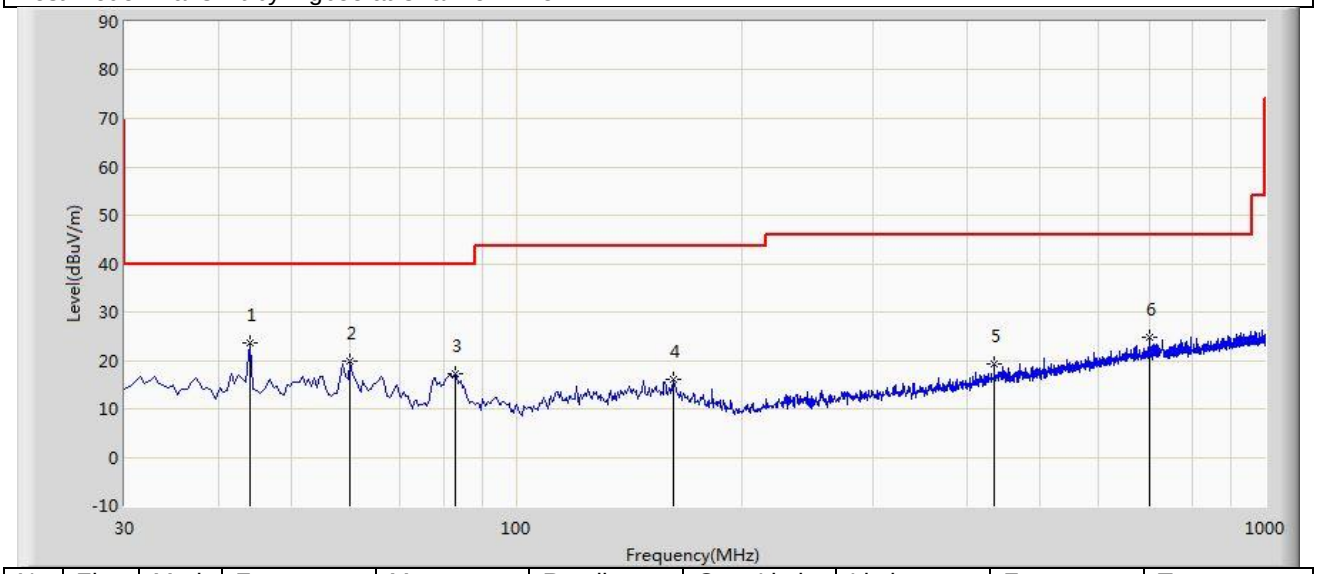
| | |
|---|---|
| Site: AC1 | Time: 2017/08/30 - 04:06 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Flag Yang |
| Probe: VULB 9168 _20-2000MHz | Polarity: Vertical |
| EUT: SZU06A2 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2445MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 44.065 | 23.597 | 9.353 | -16.403 | 40.000 | 14.244 | PK |
| 2 | | | 60.070 | 19.877 | 6.565 | -20.123 | 40.000 | 13.312 | PK |
| 3 | | | 82.865 | 17.194 | 7.118 | -22.806 | 40.000 | 10.077 | PK |
| 4 | | | 161.920 | 16.088 | 1.066 | -27.412 | 43.500 | 15.022 | PK |
| 5 | | | 434.490 | 19.212 | 1.776 | -26.788 | 46.000 | 17.436 | PK |
| 6 | | | 702.210 | 24.761 | 2.732 | -21.239 | 46.000 | 22.029 | PK |



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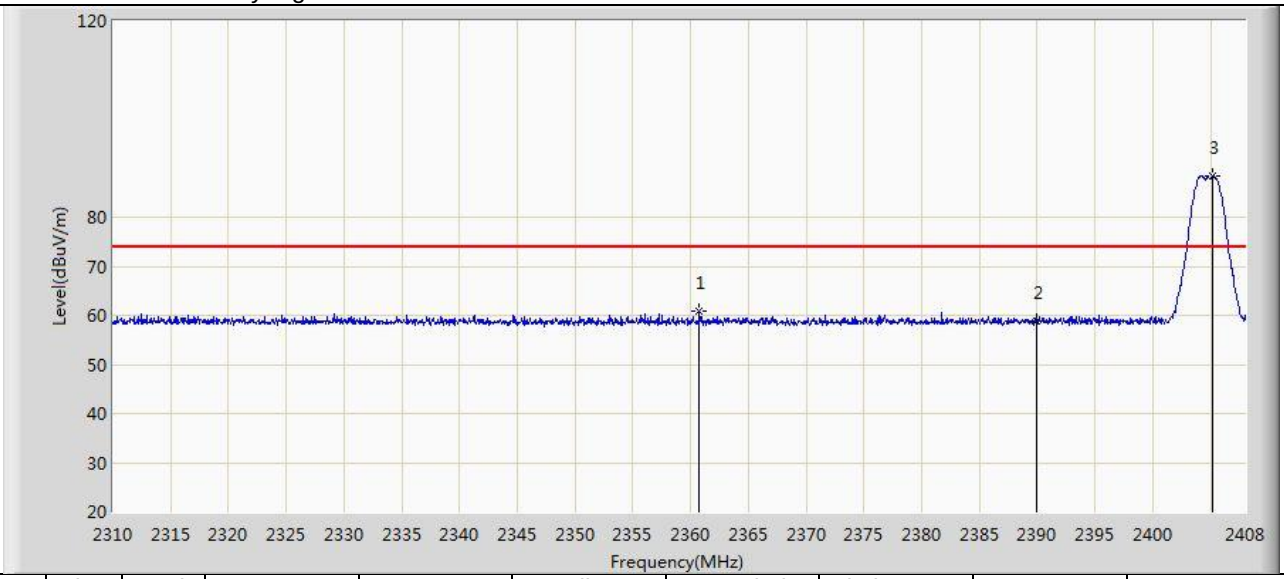
## Radiated Restricted Band Edge Measurement

Test Result:

| | |
|---|---|
| Site: AC1 | Time: 2017/08/22 - 23:22 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: SZU06A1 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2405MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2360.764 | 60.933 | 29.676 | -13.067 | 74.000 | 31.258 | PK |
| 2 | | | 2390.000 | 58.914 | 27.711 | -15.086 | 74.000 | 31.203 | PK |
| 3 | | * | 2405.207 | 88.484 | 57.304 | 14.484 | 74.000 | 31.180 | PK |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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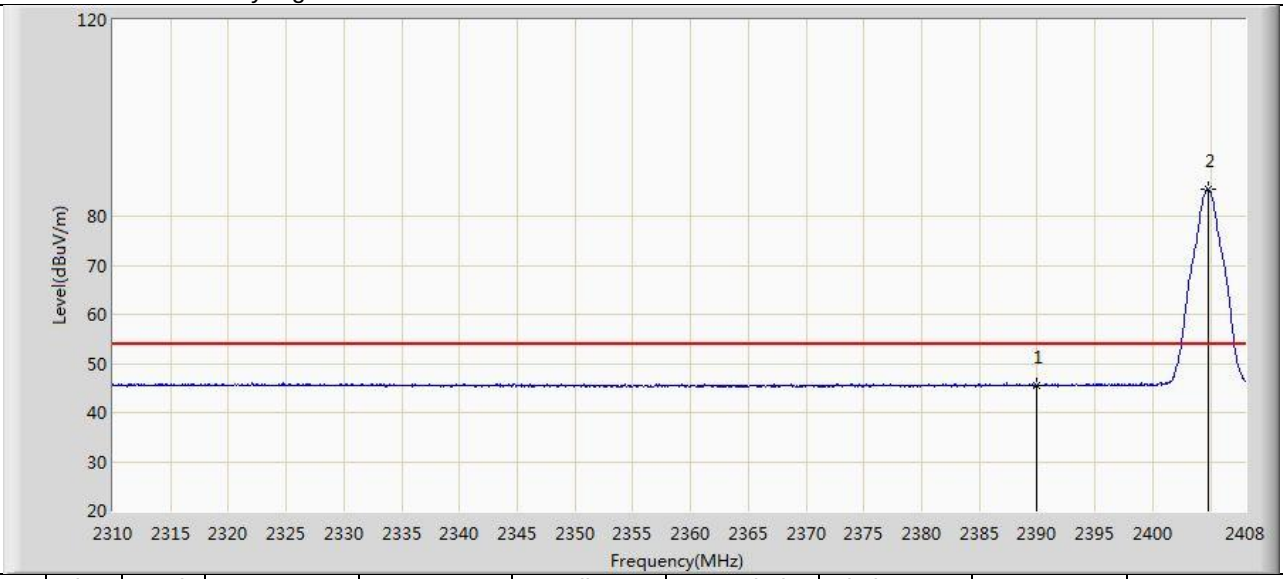
China

| | |
|---|---|
| Site: AC1 | Time: 2017/08/22 - 23:33 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: SZU06A1 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2405MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 45.639 | 14.436 | -8.361 | 54.000 | 31.203 | AV |
| 2 | | * | 2404.766 | 85.467 | 54.287 | 31.467 | 54.000 | 31.180 | AV |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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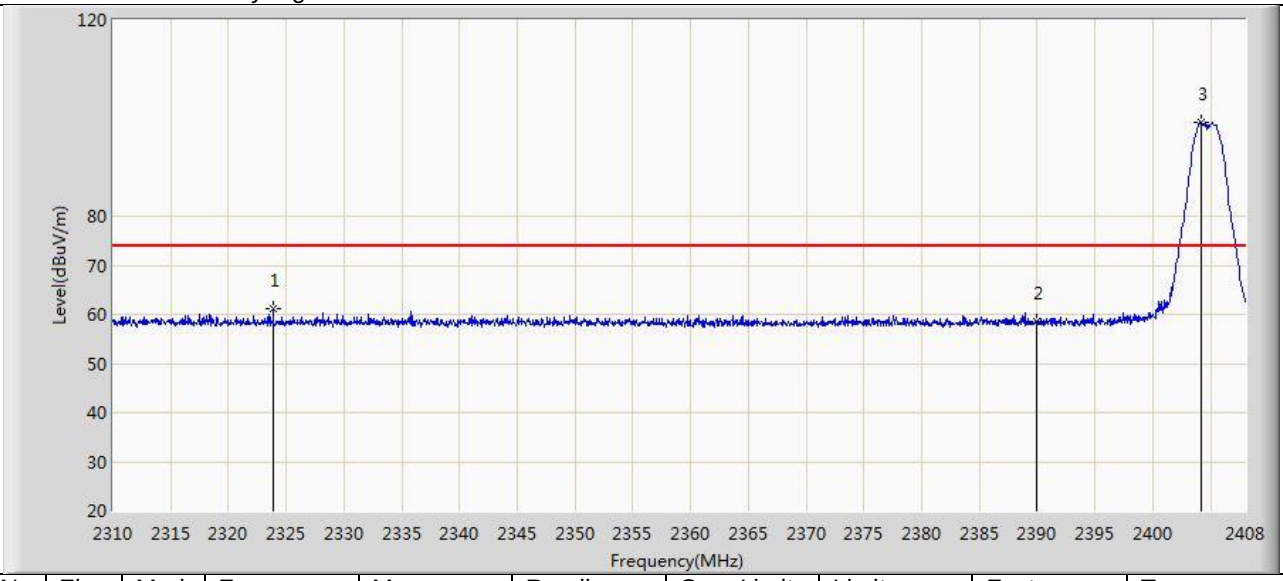
| | |
|---|---|
| Site: AC1 | Time: 2017/08/22 - 23:33 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: SZU06A1 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2405MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2323.867 | 61.245 | 29.842 | -12.755 | 74.000 | 31.403 | PK |
| 2 | | | 2390.000 | 58.511 | 27.308 | -15.489 | 74.000 | 31.203 | PK |
| 3 | | * | 2404.178 | 99.084 | 67.903 | 25.084 | 74.000 | 31.181 | PK |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)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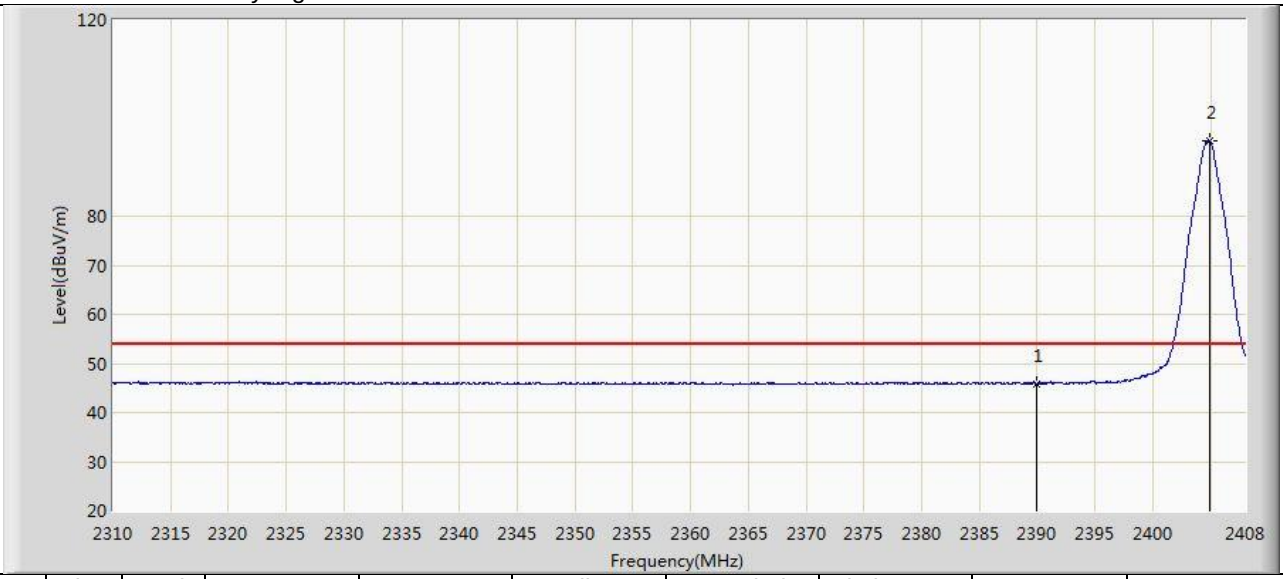
| | |
|---|---|
| Site: AC1 | Time: 2017/08/22 - 23:35 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: SZU06A1 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2405MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 45.878 | 14.675 | -8.122 | 54.000 | 31.203 | AV |
| 2 | | * | 2404.913 | 95.465 | 64.285 | 41.465 | 54.000 | 31.180 | AV |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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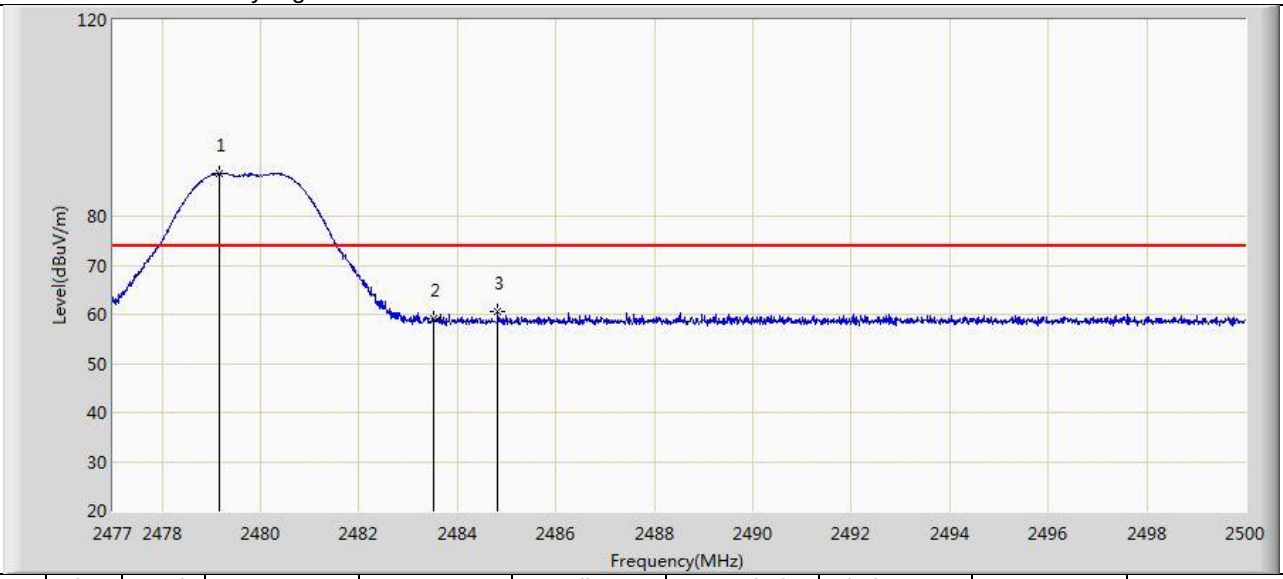
| | |
|---|---|
| Site: AC1 | Time: 2017/08/22 - 23:36 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: SZU06A1 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2480MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2479.174 | 88.761 | 57.579 | 14.761 | 74.000 | 31.182 | PK |
| 2 | | | 2483.500 | 58.987 | 27.794 | -15.013 | 74.000 | 31.194 | PK |
| 3 | | | 2484.809 | 60.696 | 29.499 | -13.304 | 74.000 | 31.197 | PK |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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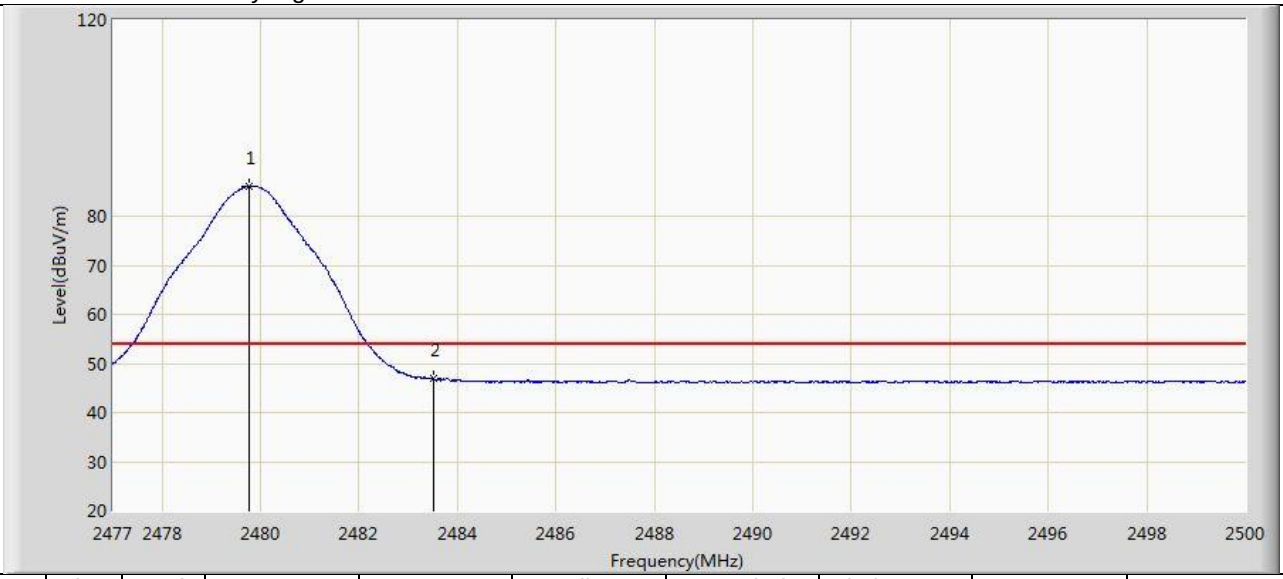
| | |
|---|---|
| Site: AC1 | Time: 2017/08/22 - 23:39 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: SZU06A1 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2480MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2479.760 | 86.099 | 54.916 | 32.099 | 54.000 | 31.184 | AV |
| 2 | | | 2483.500 | 46.886 | 15.693 | -7.114 | 54.000 | 31.194 | AV |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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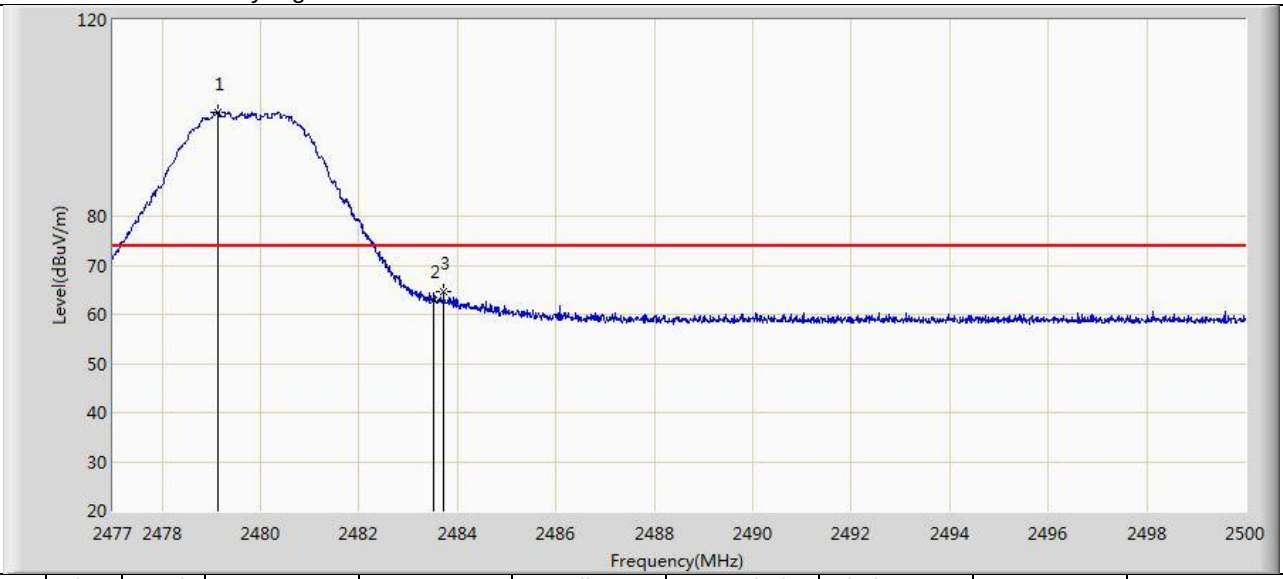
| | |
|---|---|
| Site: AC1 | Time: 2017/08/22 - 23:40 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: SZU06A1 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2480MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2479.139 | 101.118 | 69.936 | 27.118 | 74.000 | 31.182 | PK |
| 2 | | | 2483.500 | 62.869 | 31.676 | -11.131 | 74.000 | 31.194 | PK |
| 3 | | | 2483.716 | 64.507 | 33.313 | -9.493 | 74.000 | 31.194 | PK |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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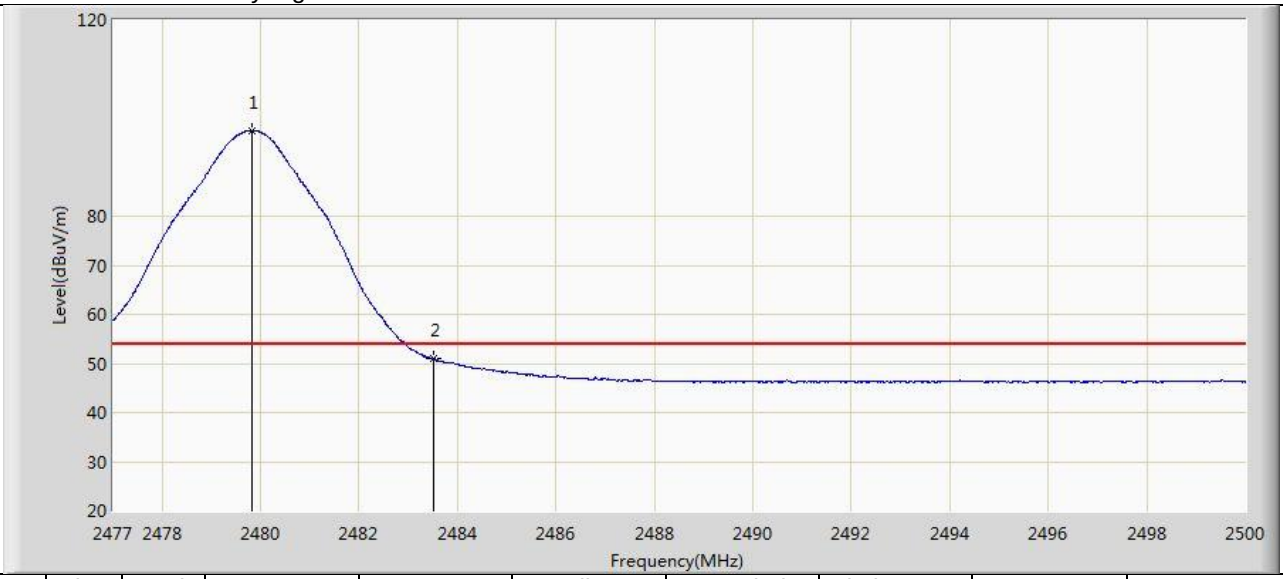
| | |
|---|---|
| Site: AC1 | Time: 2017/08/22 - 23:43 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: SZU06A1 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2480MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2479.829 | 97.450 | 66.266 | 43.450 | 54.000 | 31.184 | AV |
| 2 | | | 2483.500 | 50.871 | 19.678 | -3.129 | 54.000 | 31.194 | AV |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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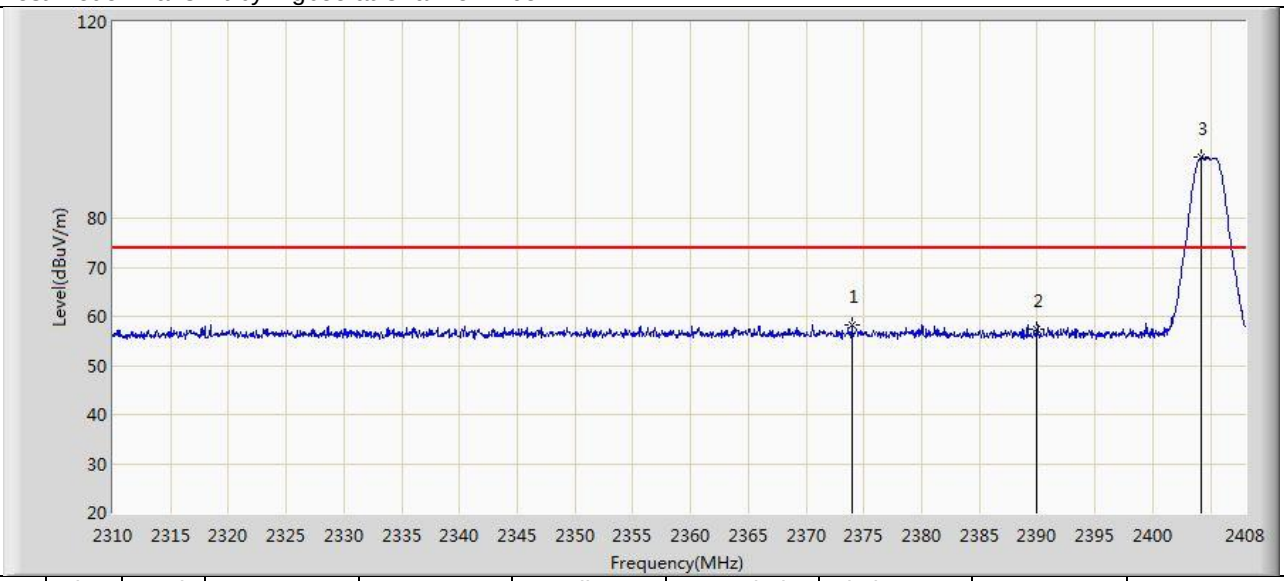
| | |
|---|---|
| Site: AC1 | Time: 2017/08/24 - 23:37 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: SZU06A2 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2405MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2373.994 | 58.155 | 26.923 | -15.845 | 74.000 | 31.232 | PK |
| 2 | | | 2390.000 | 57.350 | 26.147 | -16.650 | 74.000 | 31.203 | PK |
| 3 | | * | 2404.227 | 92.342 | 61.161 | 18.342 | 74.000 | 31.181 | PK |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)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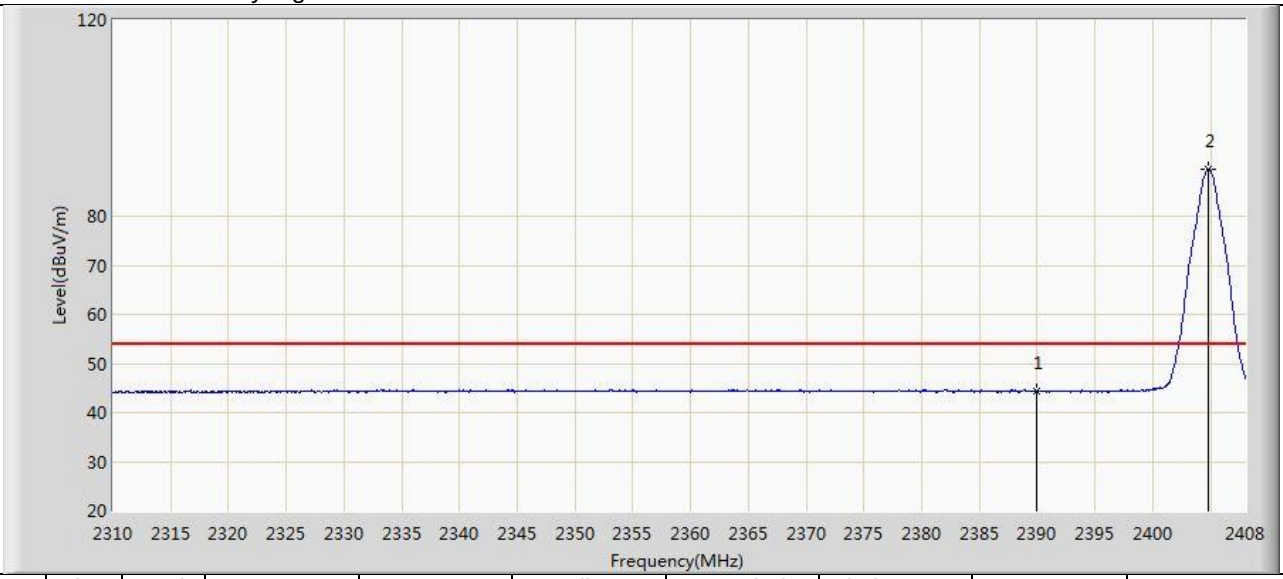
| | |
|---|---|
| Site: AC1 | Time: 2017/08/24 - 23:43 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: SZU06A2 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2405MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 44.360 | 13.157 | -9.640 | 54.000 | 31.203 | AV |
| 2 | | * | 2404.815 | 89.545 | 58.365 | 35.545 | 54.000 | 31.180 | AV |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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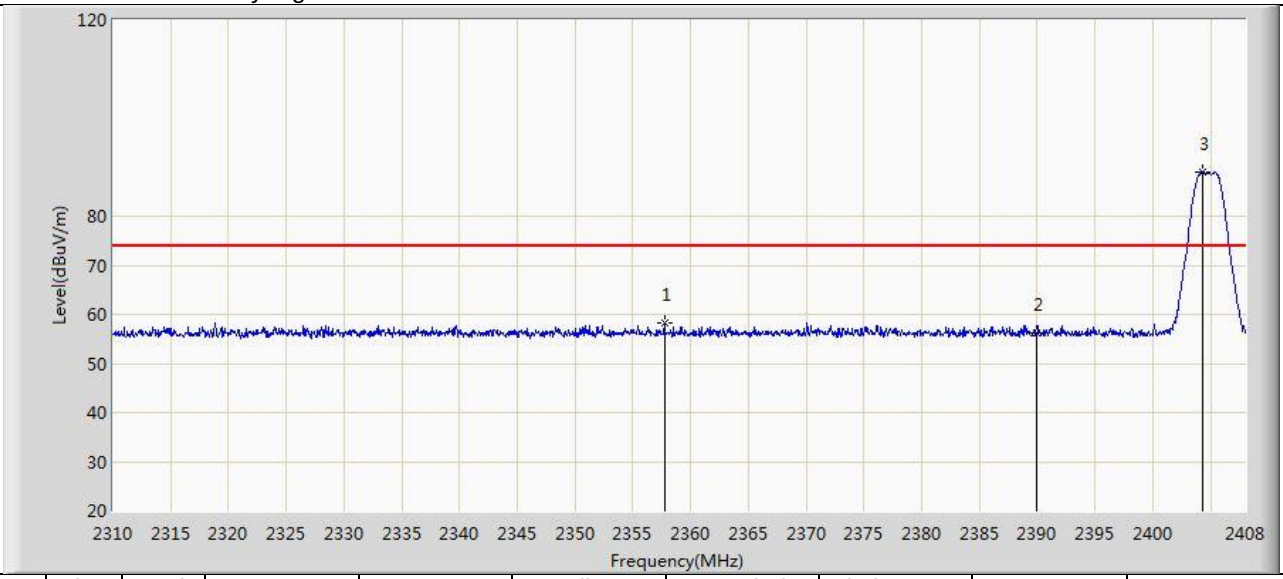
| | |
|---|---|
| Site: AC1 | Time: 2017/08/24 - 23:43 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: SZU06A2 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2405MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2357.726 | 58.134 | 26.870 | -15.866 | 74.000 | 31.264 | PK |
| 2 | | | 2390.000 | 56.209 | 25.006 | -17.791 | 74.000 | 31.203 | PK |
| 3 | | * | 2404.276 | 88.988 | 57.807 | 14.988 | 74.000 | 31.181 | PK |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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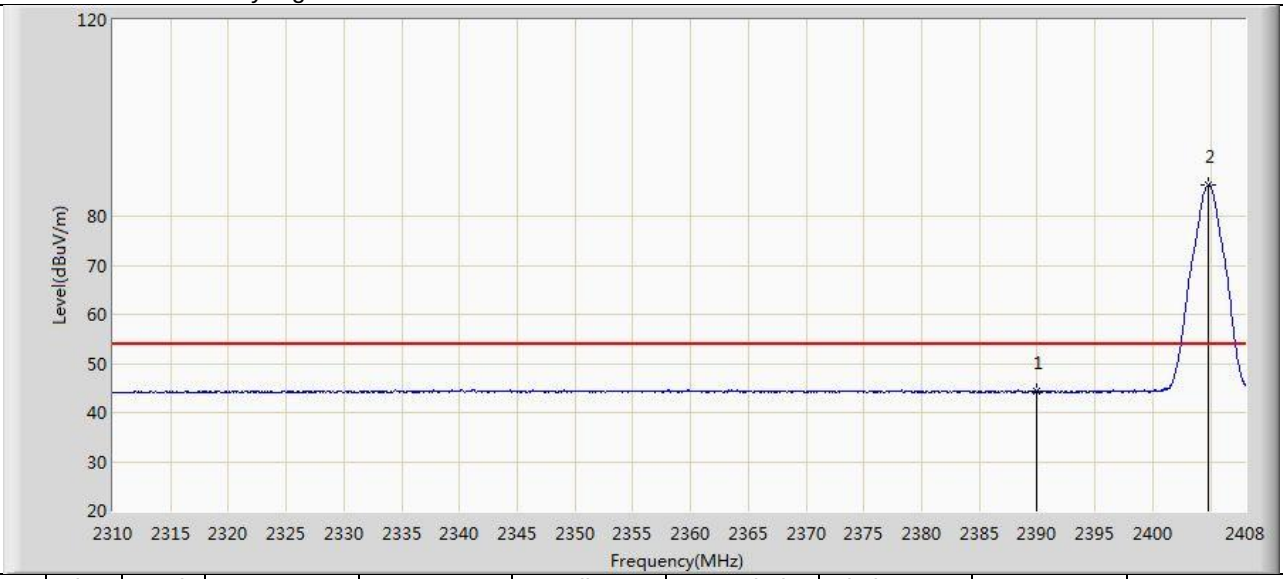
| | |
|---|---|
| Site: AC1 | Time: 2017/08/24 - 23:45 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: SZU06A2 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2405MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 44.376 | 13.173 | -9.624 | 54.000 | 31.203 | AV |
| 2 | | * | 2404.766 | 86.334 | 55.154 | 32.334 | 54.000 | 31.180 | AV |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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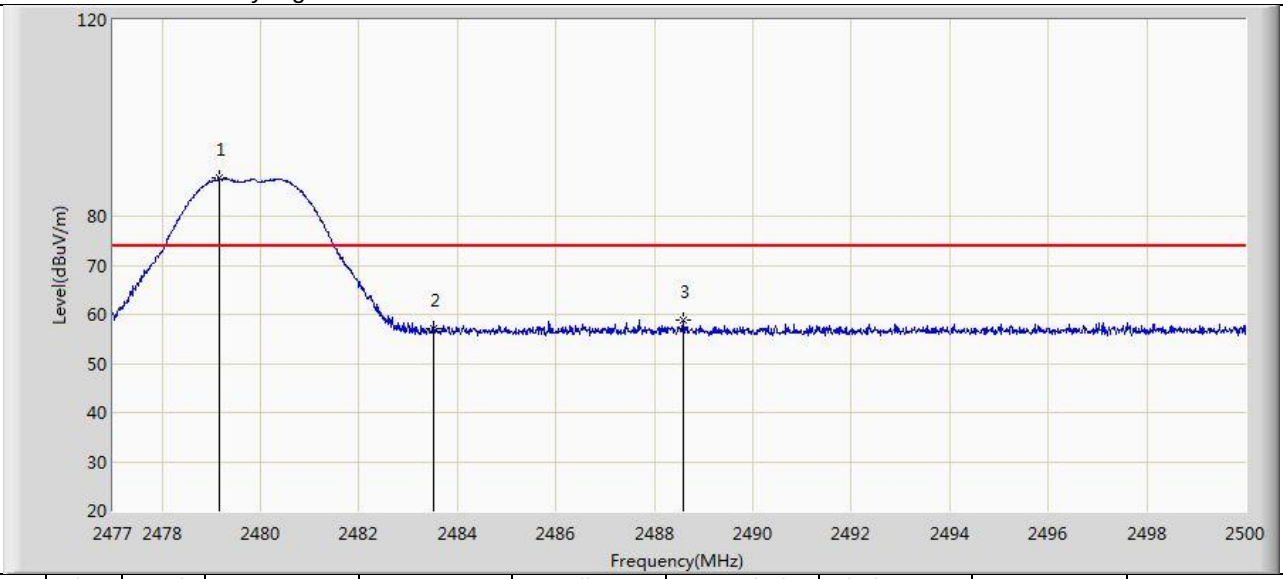
| | |
|---|---|
| Site: AC1 | Time: 2017/08/24 - 23:57 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: SZU06A2 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2480MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2479.151 | 87.716 | 56.534 | 13.716 | 74.000 | 31.182 | PK |
| 2 | | | 2483.500 | 57.088 | 25.895 | -16.912 | 74.000 | 31.194 | PK |
| 3 | | | 2488.592 | 58.844 | 27.637 | -15.156 | 74.000 | 31.207 | PK |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)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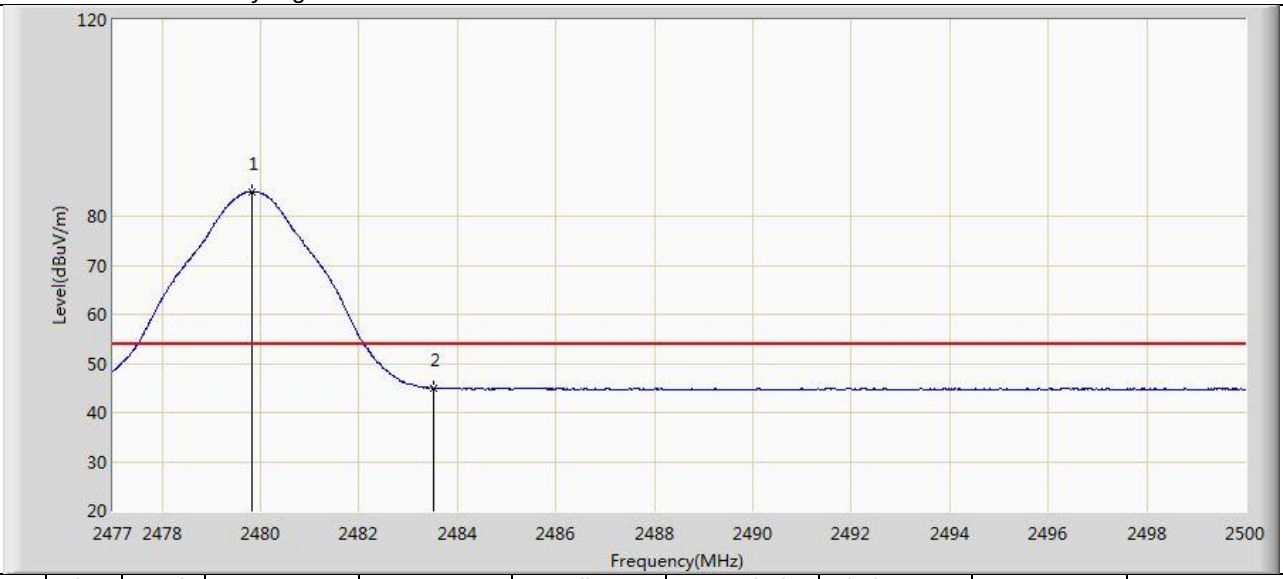
| | |
|---|---|
| Site: AC1 | Time: 2017/08/24 - 23:59 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: SZU06A2 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2480MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2479.829 | 85.065 | 53.881 | 31.065 | 54.000 | 31.184 | AV |
| 2 | | | 2483.500 | 44.962 | 13.769 | -9.038 | 54.000 | 31.194 | AV |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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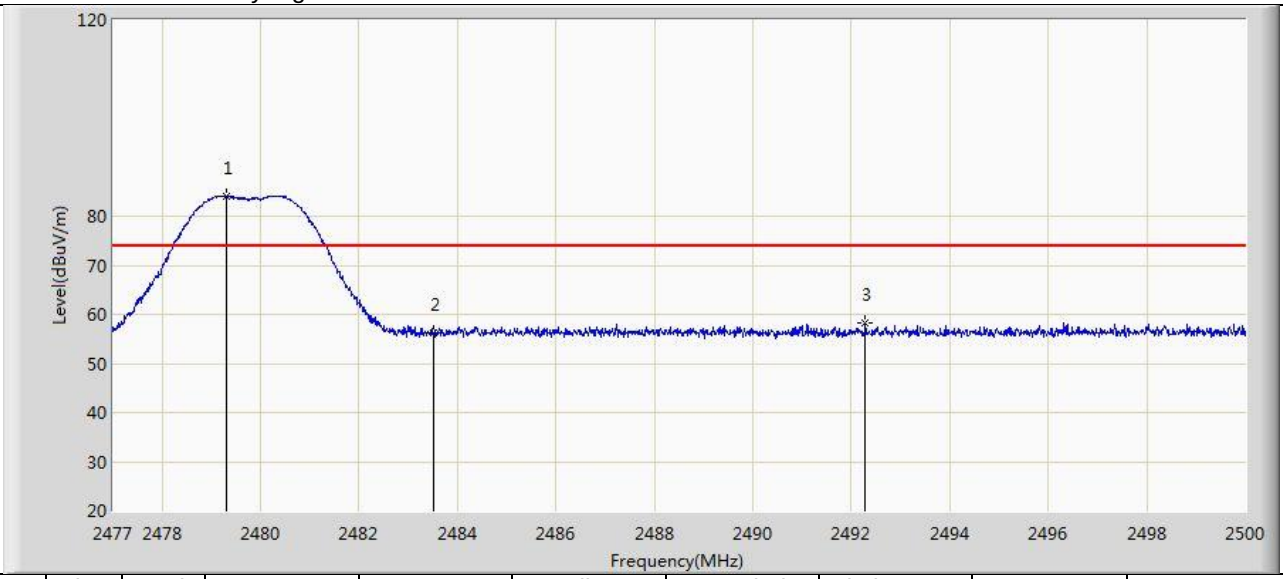
| | |
|---|---|
| Site: AC1 | Time: 2017/08/25 - 00:00 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: SZU06A2 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2480MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2479.300 | 84.198 | 53.016 | 10.198 | 74.000 | 31.182 | PK |
| 2 | | | 2483.500 | 56.142 | 24.949 | -17.858 | 74.000 | 31.194 | PK |
| 3 | | | 2492.283 | 58.342 | 27.126 | -15.658 | 74.000 | 31.216 | PK |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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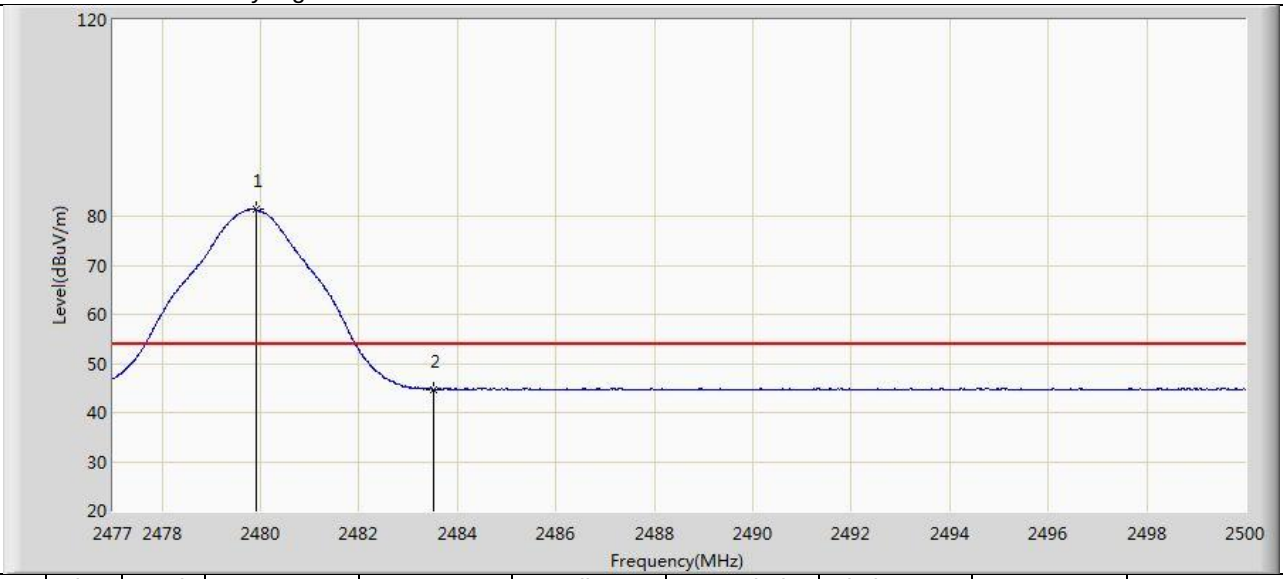
| | |
|---|---|
| Site: AC1 | Time: 2017/08/25 - 00:02 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Bruce Wang |
| Probe: BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: SZU06A2 | Power: By PC |
| Test Mode: Transmit by Zigbee at Channel 2480MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2479.898 | 81.377 | 50.193 | 27.377 | 54.000 | 31.184 | AV |
| 2 | | | 2483.500 | 44.782 | 13.589 | -9.218 | 54.000 | 31.194 | AV |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



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# 10 Test Equipment List

List of Test Instruments
Test Site1

| | DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|---|---|---|---|---|---|
| C | Signal Analyzer | Rohde & Schwarz | FSV40 | 101091 | 2018-8-7 |
| RE | EMI Test Receiver | Rohde & Schwarz | ESR3 | 101906 | 2018-8-7 |
| | Trilog Super Broadband Test Antenna | Schwarzbeck | VULB 9163 | 848 | 2018-9-17 |
| | Horn Antenna | Rohde & Schwarz | HF907 | 102393 | 2018-9-17 |
| | Pre-amplifier | Rohde & Schwarz | SCU-18D | 19006451 | 2018-8-7 |
| | 3m Semi-anechoic chamber | TDK | 9X6X6 | ---- | 2018-5-20 |
| CE | EMI Test Receiver | Rohde & Schwarz | ESR 3 | 101907 | 2018-8-7 |
| | LISN | Rohde & Schwarz | ENV4200 | 100224 | 2018-8-7 |
| | LISN | Rohde & Schwarz | ENV216 | 101924 | 2018-8-7 |

Test Site2

Radiated Disturbance – AC1

| Instrument | Manufacturer | Type No. | Asset No. | Cali. Interval | Cal. Due Date |
|---|---|---|---|---|---|
| MXE EMI Receiver | Agilent | N9038A | MRTSUE06125 | 1 year | 2017/08/03 |
| Loop Antenna | Schwarzbeck | FMZB1519 | MRTSUE06025 | 1 year | 2017/12/21 |
| Microwave System Amplifier | Agilent | 83017A | MRTSUE06076 | 1 year | 2018/03/28 |
| Bilog Period Antenna | Schwarzbeck | VULB 9168 | MRTSUE06172 | 1 year | 2017/11/19 |
| Broad-Band Horn Antenna | Schwarzbeck | BBHA9120D | MRTSUE06023 | 1 year | 2017/10/22 |
| Broadband Horn Antenna | Schwarzbeck | BBHA9170 | MRTSUE06024 | 1 year | 2018/01/04 |
| Temperature/Humidity Meter | Yuhuaze | HTC-2 | MRTSUE06183 | 1 year | 2017/12/20 |
| Anechoic Chamber | TDK | Chamber-AC1 | MRTSUE06212 | 1 year | 2018/05/10 |

Conducted Test Equipment - TR3

| Instrument | Manufacturer | Type No. | Asset No. | Cali. Interval | Cali. Due Date |
|---|---|---|---|---|---|
| Spectrum Analyzer | Agilent | N9020A | MRTSUE06106 | 1 year | 2018/04/25 |
| USB Wideband Power Sensor | Agilent | U2021XA | MRTSUE06030 | 1 year | 2017/12/06 |
| Temperature/Humidity Meter | Yuhuaze | HTC-2 | MRTSUE06184 | 1 year | 2017/12/22 |

C - Conducted RF tests

- Conducted peak output power
- 6dB bandwidth and 99% Occupied Bandwidth
- Power spectral density*
- Spurious RF conducted emissions
- Conducted Band edge


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# 11 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

**Test Site1**

| Items | Extended Uncertainty |
|---|---|
| Conducted Disturbance at Mains Terminals | 150kHz to 30MHz, LISN, ±2.73dB |
| Radiated Disturbance | 30MHz to 1GHz, ±5.03dB (Horizontal)<br>±5.11dB (Vertical)<br>1GHz to 18GHz, ±5.15dB (Horizontal)<br>±5.12dB (Vertical)<br>18GHz to 25GHz, ±4.76dB |

**Test Site2**

AC Conducted Emission Measurement - SR2

Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):

150kHz~30MHz: 3.46dB

Radiated Emission Measurement – AC1

Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):

9kHz ~ 1GHz: 4.18dB

1GHz ~ 25GHz: 4.76dB



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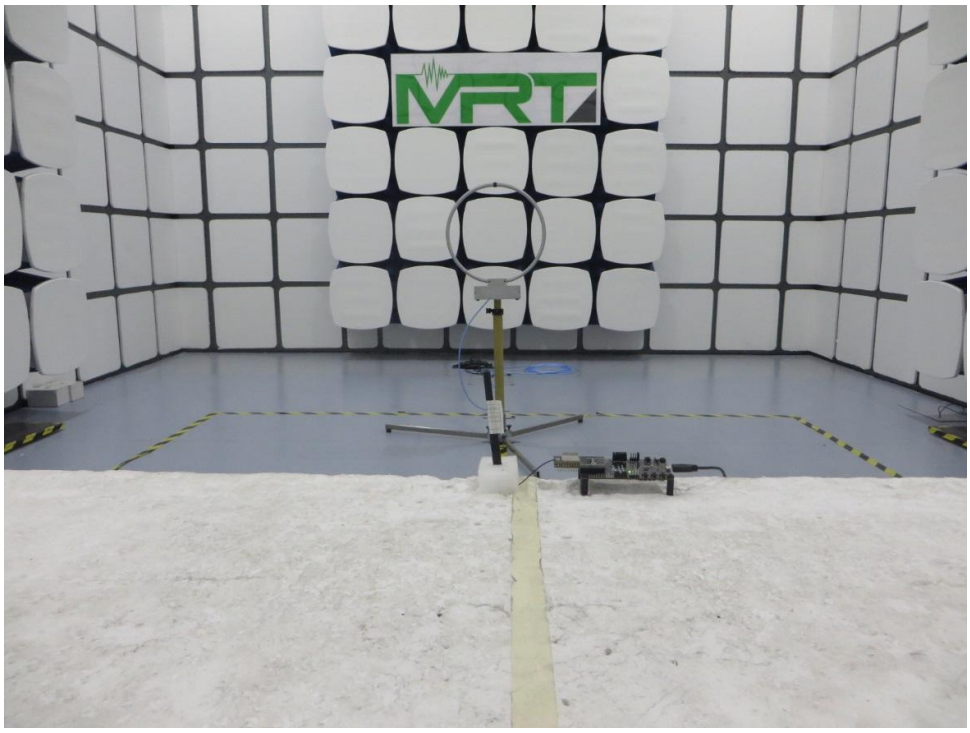
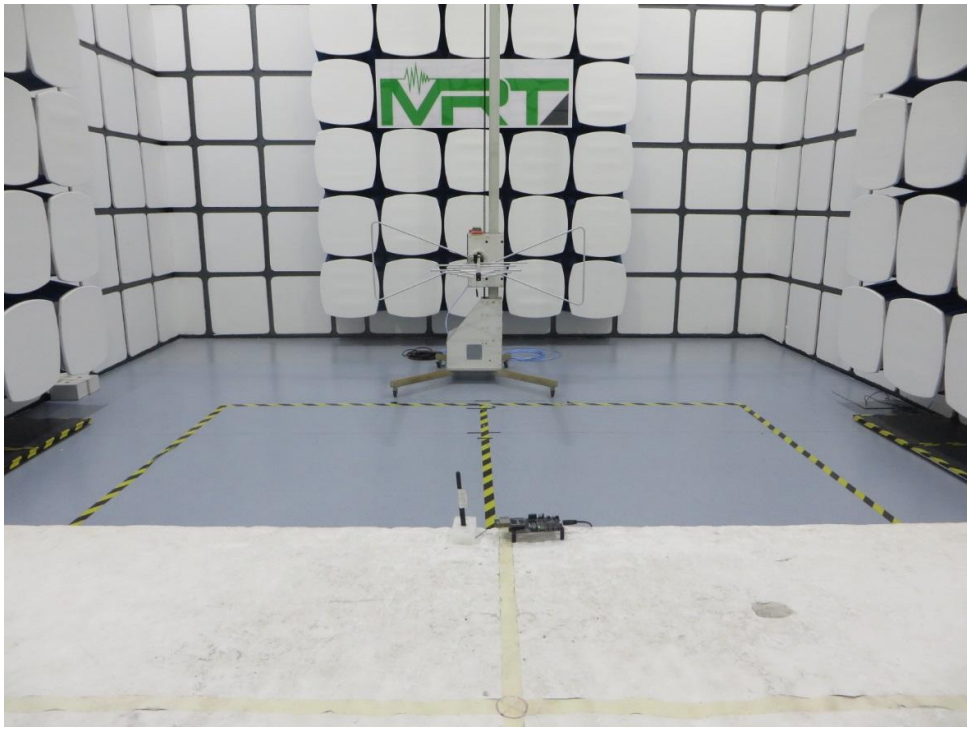
## 12 Photographs of Test Set-ups







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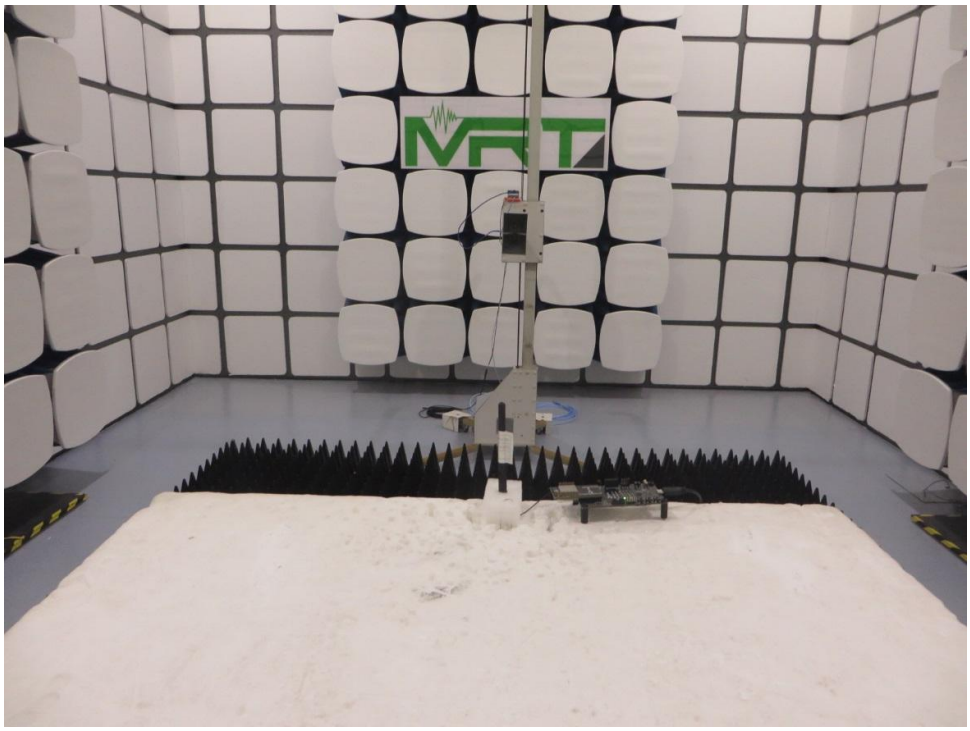
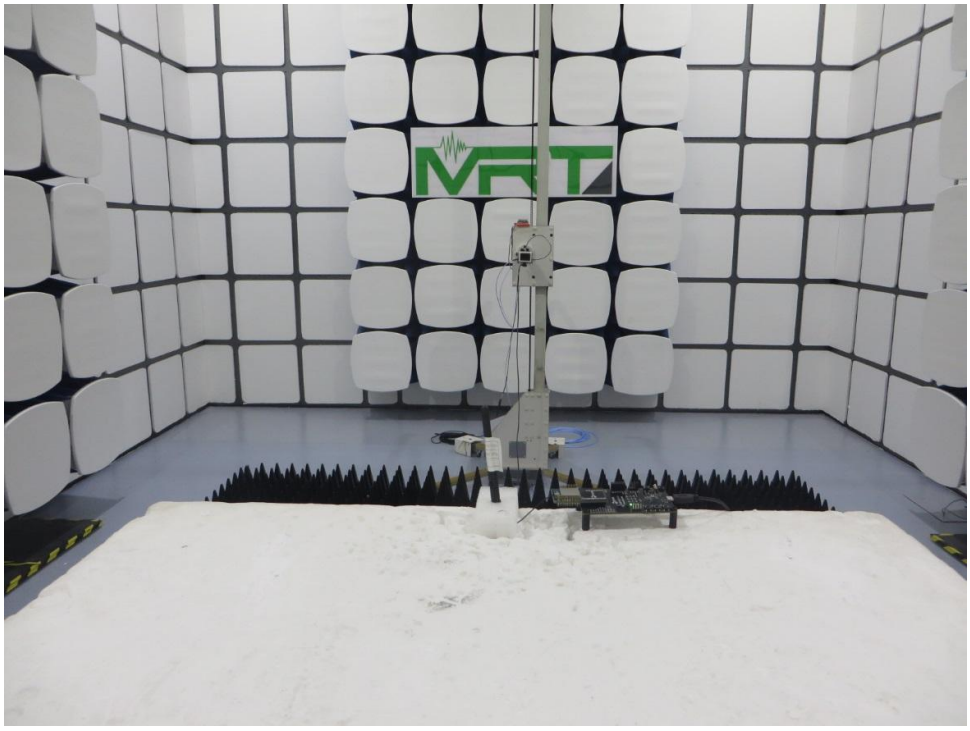
China







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# 13 Photographs of EUT

Photo 1. General view of SZU06A1


Photo 2. General view of SZU06A1 connect with Dipole Antenna

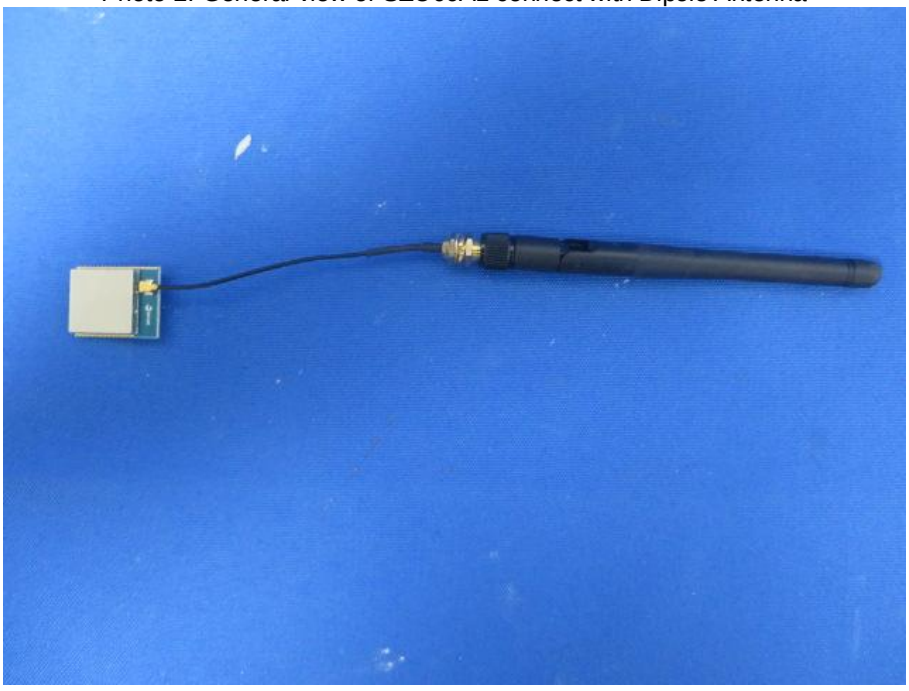



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Photo 3. General view of SZU06A1

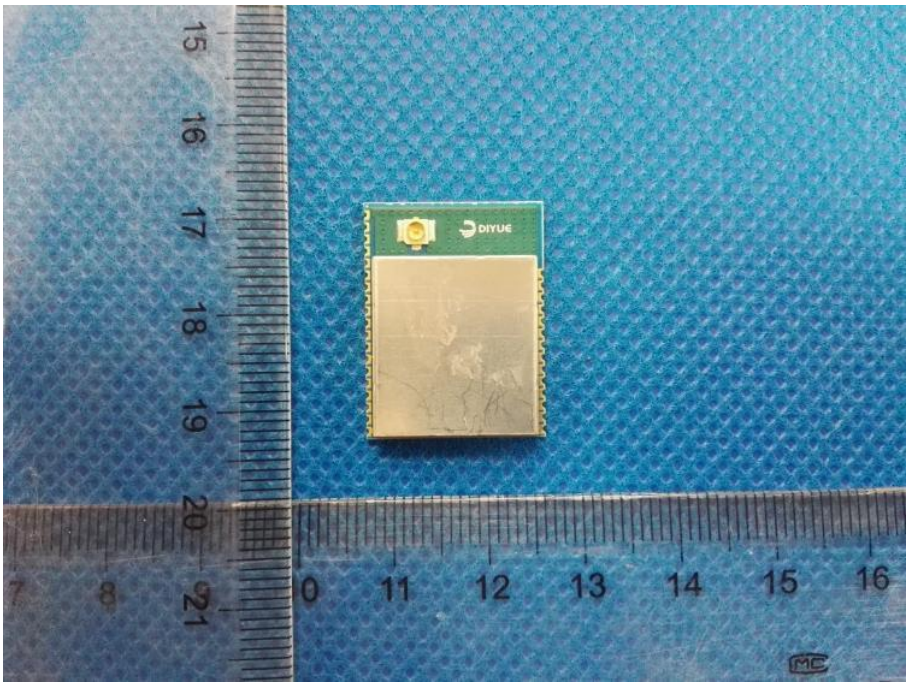


Photo 4. Internal view of SZU06A1

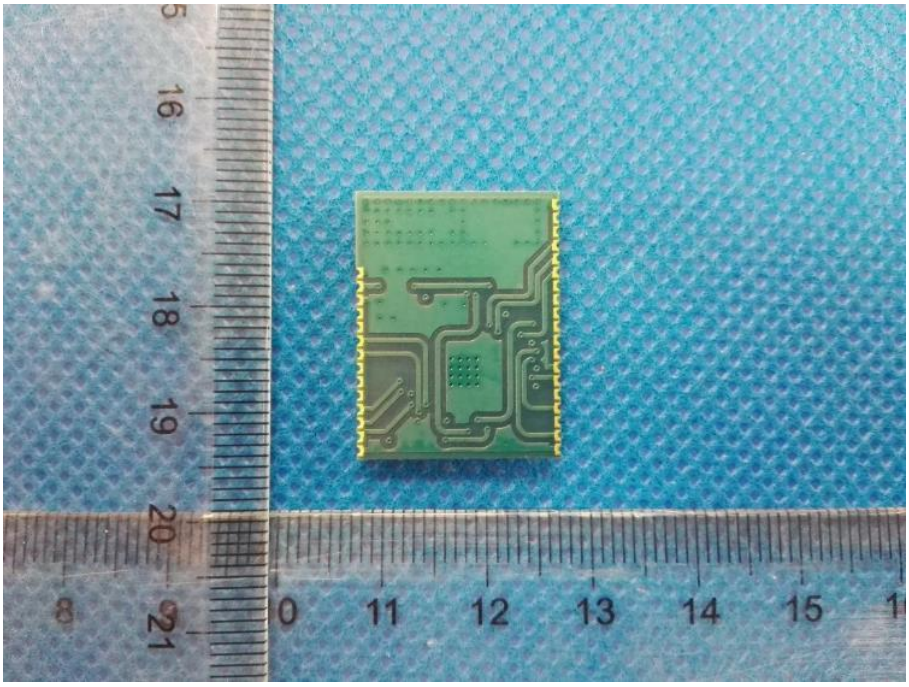



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Photo 5 Internal view of SZU06A1

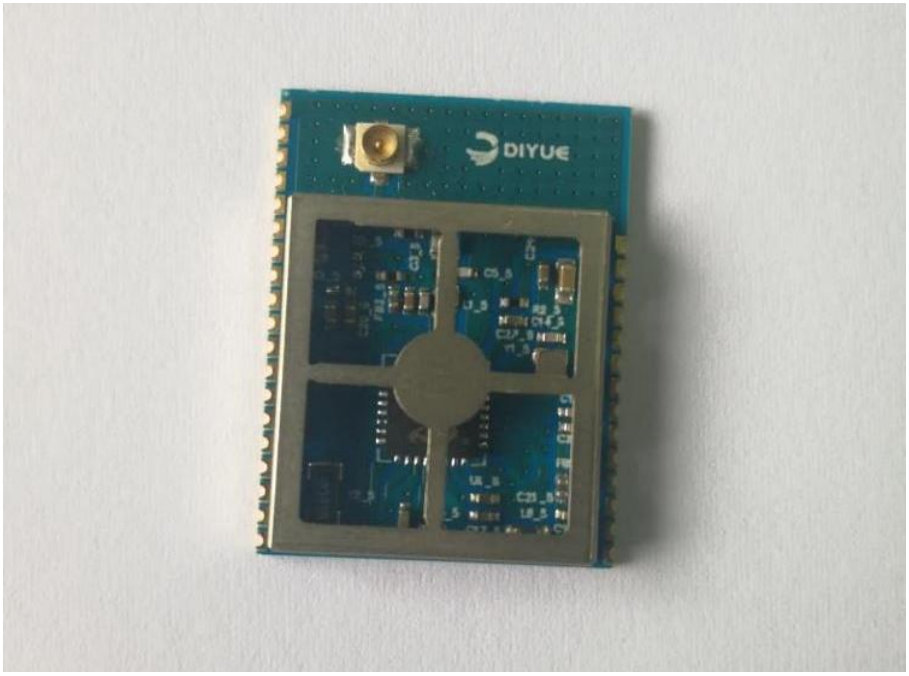


Photo 6. Internal view of SZU06A1




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Photo 7. Internal view of SZU06A1 Dipole antenna W1010

Photo 8. General view of SZU06A2




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Photo 8. General view of SZU06A2

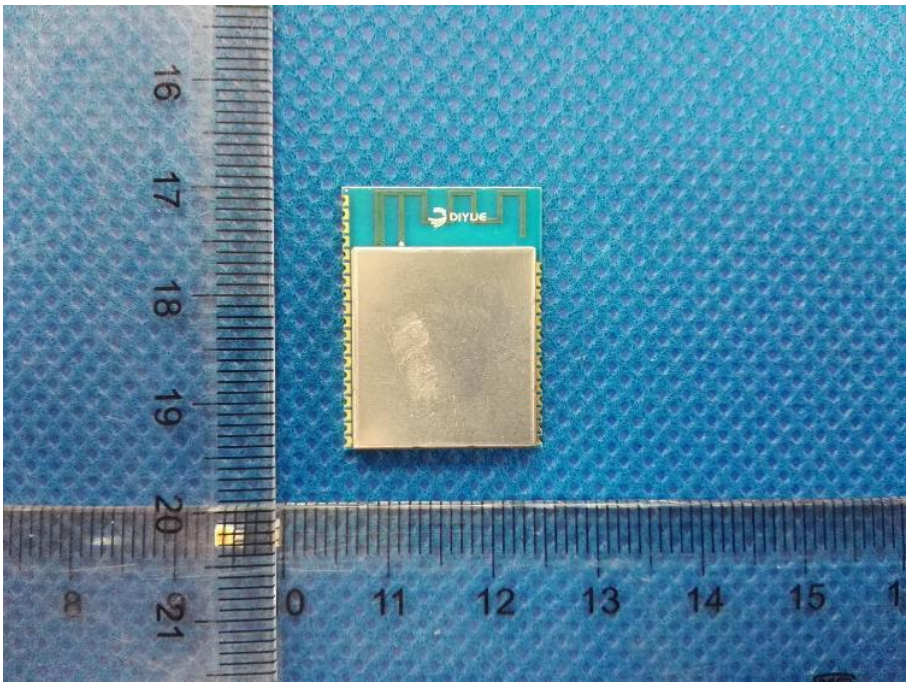


Photo 9. General view of SZU06A2

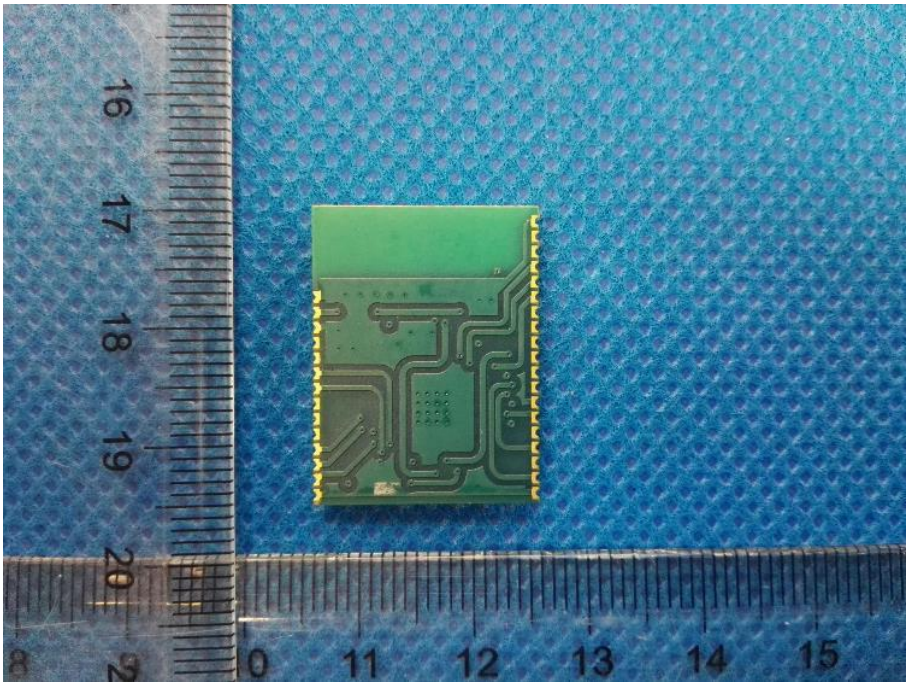



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Photo 10 Internal view of SZU06A2

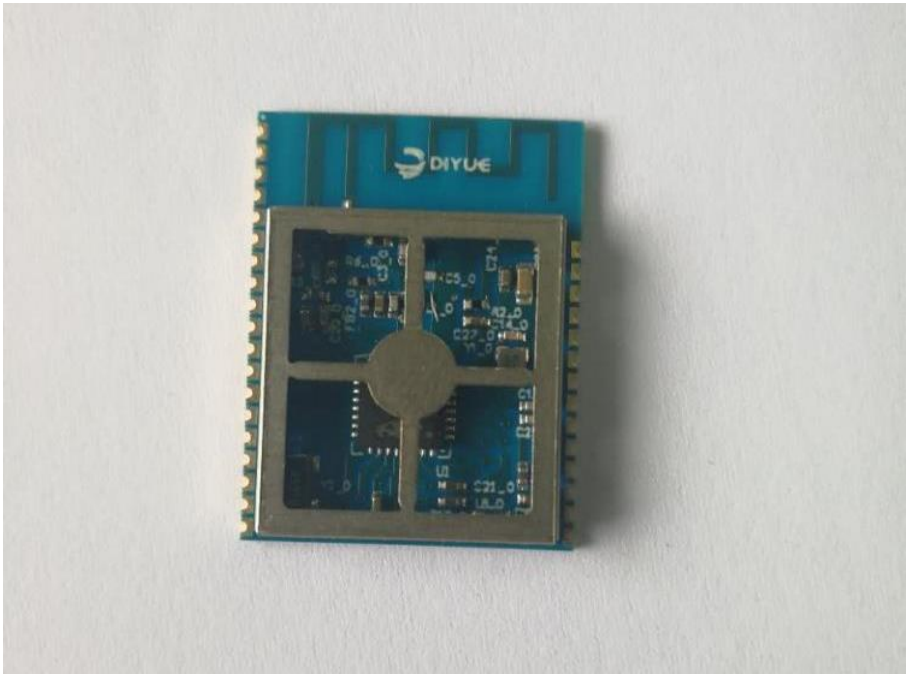
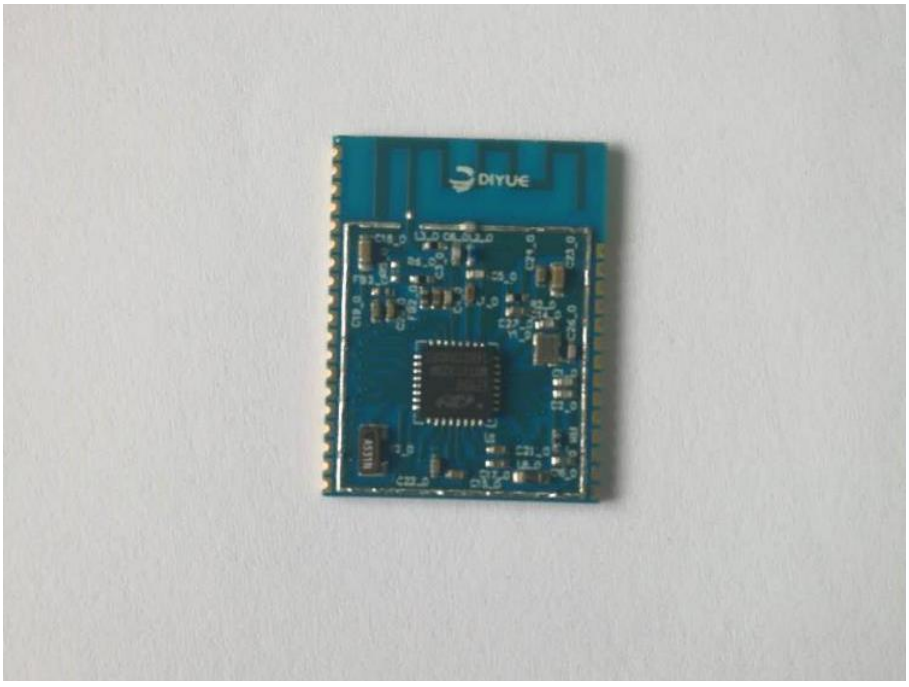



Photo 11 Internal view of SZU06A2



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