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|---|--|---|---|--|---|
| Prüfbericht-Nr.: <i>Test Report No.:</i> | 50049995 001 | Auftrags-Nr.: <i>Order No.:</i> | 164063589 | Seite 1 von 33 <i>Page 1 of 33</i> | |
| Kunden-Referenz-Nr.: <i>Client Reference No.:</i> | 429028 | Auftragsdatum: <i>Order date:</i> | 17.05.2016 | | |
| Auftraggeber: <i>Client:</i> | Compupal (Group) Corporation. No.1555 Jiashan Avenue, Jiashan 314113, Zhejiang, China | | | | |
| Prüfgegenstand: <i>Test item:</i> | Sound Bar with Bluetooth | | | | |
| Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i> | SB20 | | | | |
| Auftrags-Inhalt: <i>Order content:</i> | FCC Certification and Verification | | | | |
| Prüfgrundlage: <i>Test specification:</i> | CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 FCC KDB Publication 447498 v06 CFR47 FCC Part 15: Subpart B Section 15.107 CFR47 FCC Part 15: Subpart B Section 15.109 RSS-247 Issue 1 May 2015 RSS-102 Issue 5 March 2015 RSS-Gen Issue 4 November 2014 | | | | |
| Wareneingangsdatum: <i>Date of receipt:</i> | 17.05.2016 |  | | | |
| Prüfmuster-Nr.: <i>Test sample No.:</i> | A000360740-009, 014 | | | | |
| Prüfzeitraum: <i>Testing period:</i> | 21.05.2016 - 18.06.2016 | | | | |
| Ort der Prüfung: <i>Place of testing:</i> | Shenzhen Accurate Technology Co., Ltd. | | | | |
| Prüflaboratorium: <i>Testing laboratory:</i> | TÜV Rheinland (Shenzhen) Co., Ltd. | | | | |
| Prüfergebnis*: <i>Test result*:</i> | Pass | | | | |
| geprüft von / tested by: | <i>Winnie Hou</i> | | kontrolliert von / reviewed by: | <i>Owen Tian</i> | |
| 11.07.2016 | Winnie Hou / Senior Project Manager | | 13.07.2016 | Owen Tian / Technical Certifier | |
| Datum <i>Date</i> | Name / Stellung <i>Name / Position</i> | Unterschrift <i>Signature</i> | Datum <i>Date</i> | Name / Stellung <i>Name / Position</i> | Unterschrift <i>Signature</i> |
| Sonstiges / Other: | FCC ID: Z5Y-SB20, IC: 10828A-SB20 | | | | |
| Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i> | Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i> | | | | |
| * Legende: | 1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n) | 2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n) | 3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n) | 4 = ausreichend N/A = nicht anwendbar | 5 = mangelhaft N/T = nicht getestet |
| Legend: | 1 = very good P(ass) = passed a.m. test specification(s) | 2 = good F(ail) = failed a.m. test specification(s) | 3 = satisfactory F(ail) = failed a.m. test specification(s) | 4 = sufficient N/A = not applicable | 5 = poor N/T = not tested |
| <p>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p> | | | | | |

v04

TEST SUMMARY

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1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:
Appendix 1: Test Result

2. Test Sites

2.1 Test Facilities

Shenzhen Accurate Technology Co., Ltd.

F1, Bldg. A, Changyuan New Material Port, Keyuan Rd., Science & Industry Park Nanshan District, Shenzhen 518057, P.R. China

FCC Registration No.: 752051

Test site Industry Canada No.: 5077A-2

The tests at the test site have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

| Kind of Equipment | Manufacturer | Type | S/N | Calibrated until |
|--|----------------------|--------------------|------------|------------------|
| Spurious emission and Radiated emission | | | | |
| Spectrum Analyzer | Rohde&Schwarz | FSV40 | 101495 | 2017-01-01 |
| Test Receiver | Rohde&Schwarz | ESCS30 | 100307 | 2017-01-01 |
| Bilog Antenna | Schwarzbeck | VULB9163 | 9163-323 | 2017-01-01 |
| Loop Antenna | Schwarzbeck | FMZB1516 | 1516131 | 2017-01-01 |
| Horn Antenna | Schwarzbeck | BBHA9120D | 9120D-655 | 2017-01-01 |
| Horn Antenna | Schwarzbeck | BBHA9170 | 9170-359 | 2017-01-01 |
| RF Switching Unit+PreAMP | Compliance Direction | RSU-M2 | 38322 | 2017-01-01 |
| Pre-Amplifier | Rohde&Schwarz | CBLU11835 40-01 | 3791 | 2017-01-01 |
| Radio Spectrum Test | | | | |
| Spectrum Analyzer | Rohde & Schwarz | ESPI3 | 100396/003 | 2017-01-09 |
| Spectrum Analyzer | Agilent | E7405A | MY45115511 | 2017-01-09 |
| Conducted Emission | | | | |
| Test Receiver | Rohde & Schwarz | ESCS30 | 100307 | 2017-01-09 |
| L.I.S.N. | Schwarzbeck | NLSK8126 | 8126431 | 2017-01-09 |
| Pulse Limiter | Rohde & Schwarz | ESH3-Z2 | 100815 | 2017-01-09 |
| 50Ω Coaxial Switch | Anritsu Corp | MP59B | 6200283933 | 2017-01-09 |

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements are $\pm 3\text{dB}$.

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix 1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The Shenzhen Accurate Technology Co., Ltd. test facility located at F1, Bldg. A, Changyuan New Material Port, Keyuan Rd., Science & Industry Park Nanshan District, Shenzhen 518057, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. General Product Information

3.1 Product Function and Intended Use

The EUT is sound bar with Bluetooth function.
For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Rating of EUT

| | |
|--------------------|--------------------------|
| Kind of Equipment: | Sound Bar with Bluetooth |
| Type Designation: | SB20 |
| FCC ID | Z5Y-SB20 |
| IC | 10828A-SB20 |

Table 3: Technical Specification of Bluetooth (BDR & EDR)

| Technical Specification | Value |
|---------------------------|--|
| Operating Frequency band | 2402 – 2480 MHz |
| Bluetooth Core Version | 2.1+EDR |
| Channel Number | 79 channels |
| Channel separation | 1MHz |
| Extreme Temperature Range | -20°C to +80°C |
| Operation Voltage | DC18V via AC/DC Adapter |
| Modulation | GFSK, 8DPSK, $\pi/4$ DQPSK |
| Antenna Type | Internal Antenna, Non-User Replaceable |
| Antenna Gain | -2dBi |
| RF Output Power | 0.00108W (0.32dBm) |

Table 4: RF channel and frequency of Bluetooth (BDR & EDR mode)

| RF Channel | Frequency (MHz) |
|------------|-----------------|------------|-----------------|------------|-----------------|------------|-----------------|
| 0 | 2402.00 | 20 | 2422.00 | 40 | 2442.00 | 60 | 2462.00 |
| 1 | 2403.00 | 21 | 2423.00 | 41 | 2443.00 | 61 | 2463.00 |
| 2 | 2404.00 | 22 | 2424.00 | 42 | 2444.00 | 62 | 2464.00 |
| 3 | 2405.00 | 23 | 2425.00 | 43 | 2445.00 | 63 | 2465.00 |
| 4 | 2406.00 | 24 | 2426.00 | 44 | 2446.00 | 64 | 2466.00 |
| 5 | 2407.00 | 25 | 2427.00 | 45 | 2447.00 | 65 | 2467.00 |
| 6 | 2408.00 | 26 | 2428.00 | 46 | 2448.00 | 66 | 2468.00 |
| 7 | 2409.00 | 27 | 2429.00 | 47 | 2449.00 | 67 | 2469.00 |
| 8 | 2410.00 | 28 | 2430.00 | 48 | 2450.00 | 68 | 2470.00 |
| 9 | 2411.00 | 29 | 2431.00 | 49 | 2451.00 | 69 | 2471.00 |
| 10 | 2412.00 | 30 | 2432.00 | 50 | 2452.00 | 70 | 2472.00 |
| 11 | 2413.00 | 31 | 2433.00 | 51 | 2453.00 | 71 | 2473.00 |
| 12 | 2414.00 | 32 | 2434.00 | 52 | 2454.00 | 72 | 2474.00 |
| 13 | 2415.00 | 33 | 2435.00 | 53 | 2455.00 | 73 | 2475.00 |
| 14 | 2416.00 | 34 | 2436.00 | 54 | 2456.00 | 74 | 2476.00 |
| 15 | 2417.00 | 35 | 2437.00 | 55 | 2457.00 | 75 | 2477.00 |
| 16 | 2418.00 | 36 | 2438.00 | 56 | 2458.00 | 76 | 2478.00 |
| 17 | 2419.00 | 37 | 2439.00 | 57 | 2459.00 | 77 | 2479.00 |
| 18 | 2420.00 | 38 | 2440.00 | 58 | 2460.00 | 78 | 2480.00 |
| 19 | 2421.00 | 39 | 2441.00 | 59 | 2461.00 | | |

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Bluetooth mode (BDR & EDR)
 - 1. Transmitting on low channel
 - 2. Transmitting on middle channel
 - 3. Transmitting on high channel
- B. On, Bluetooth hopping mode
- C. Play with AUX IN
- D. Play with RCA IN
- E. Play with OPTICAL IN
- F. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Bill of Material
- PCB Layout
- Photo Document
- Technical Description
- Circuit Diagram
- Instruction Manual
- Rating Label

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.4: 2014 and ANSI C63.10: 2013.

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested with following accessories:

| Description | Manufacturer | Type | S/N |
|-------------------|--------------|---------------|--------------|
| iPhone6S PLUS | Apple | ML6D2 CH/A | C35QJ76JGRWM |
| Notebook | LENOVO | ThinkPad X240 | N/A |
| Printer | HP | 1015 | CNFG030424 |
| Multimedia Player | TOSHIBA | STOR.E TV+ | N/A |
| DVD Player | KENUO | 966T1 | N/A |

4.4 Countermeasures to achieve EMC Compliance

The test sample, which has been tested, contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

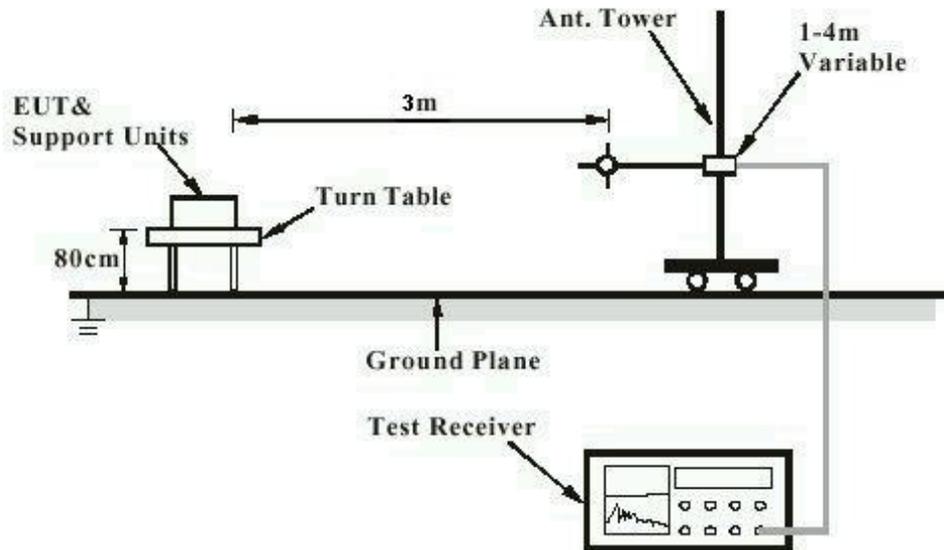


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

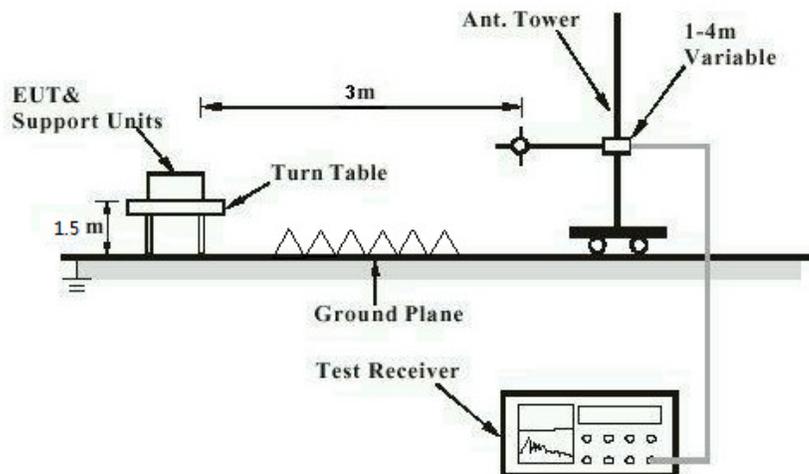


Diagram of Measurement Equipment Configuration for Mains Conduction Measurement

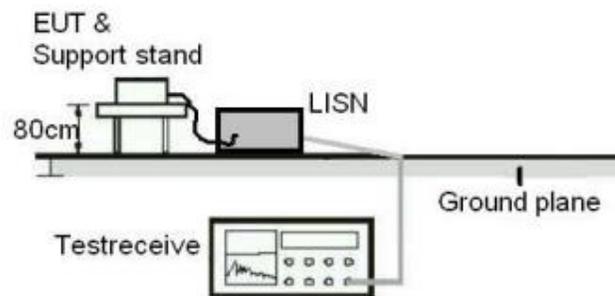
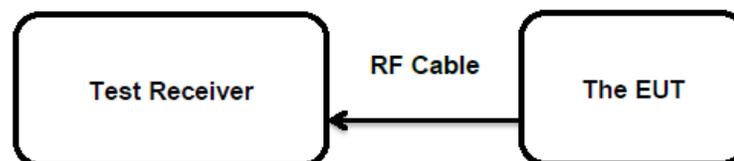


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:**Passed**

Test standard : FCC Part 15.247(b)(4) and Part 15.203
RSS-Gen 6.7
Limit : the use of antennas with directional gains that do
not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is -2dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT photo for details.

5.1.2 Peak Output Power

RESULT:
Passed

Test date : 2016-06-18
 Test standard : FCC Part 15.247(b)(1)
 : RSS-247 Clause 5.4(2)
 Basic standard : ANSI C63.10: 2013
 Limit : FHSS < 0.125 Watts
 Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
 Operation Mode : A
 Ambient temperature : 25°C
 Relative humidity : 55%
 Atmospheric pressure : 101 kPa

Table 5: Test result of Peak Output Power

| Test Mode | Channel Frequency (MHz) | Measured Peak Output Power | | Limit (W) |
|-----------|-------------------------|----------------------------|---------|-----------|
| | | (dBm) | (W) | |
| BDR | 2402 | 0.12 | 0.00103 | < 0.125 |
| | 2441 | 0.08 | 0.00102 | |
| | 2480 | 0.05 | 0.00101 | |
| EDR | 2402 | 0.32 | 0.00108 | < 0.125 |
| | 2441 | 0.30 | 0.00107 | |
| | 2480 | 0.30 | 0.00107 | |

Note: The cable loss is taken into account in results.

5.1.3 99% Bandwidth

RESULT:
Passed

Date of testing : 2016-06-18
 Test standard : RSS-Gen clause 6.6
 Basic standard : ANSI C63.10: 2013
 Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
 Operation Mode : A
 Ambient temperature : 25°C
 Relative humidity : 55%
 Atmospheric pressure : 101 kPa

Table 6: Test result of 99% Bandwidth

| Test Mode | Channel Frequency (MHz) | 99% Bandwidth (kHz) | Limit (kHz) |
|-----------|-------------------------|---------------------|-------------|
| BDR | 2402 | 929.09 | / |
| | 2441 | 929.09 | |
| | 2480 | 929.09 | |
| EDR | 2402 | 1107.09 | / |
| | 2441 | 1107.09 | |
| | 2480 | 1102.75 | |

Note: The cable loss is taken into account in results.

5.1.4 Conducted spurious emissions measured in 100kHz Bandwidth

RESULT:**Passed**

| | | |
|-------------------|---|--|
| Date of testing | : | 2016-06-18 |
| Test standard | : | FCC part 15.247(d) RSS-247 Clause 5.5 |
| Basic standard | : | ANSI C63.10: 2013 |
| Limit | : | 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a) |
| Kind of test site | : | Shield room |

Test setup

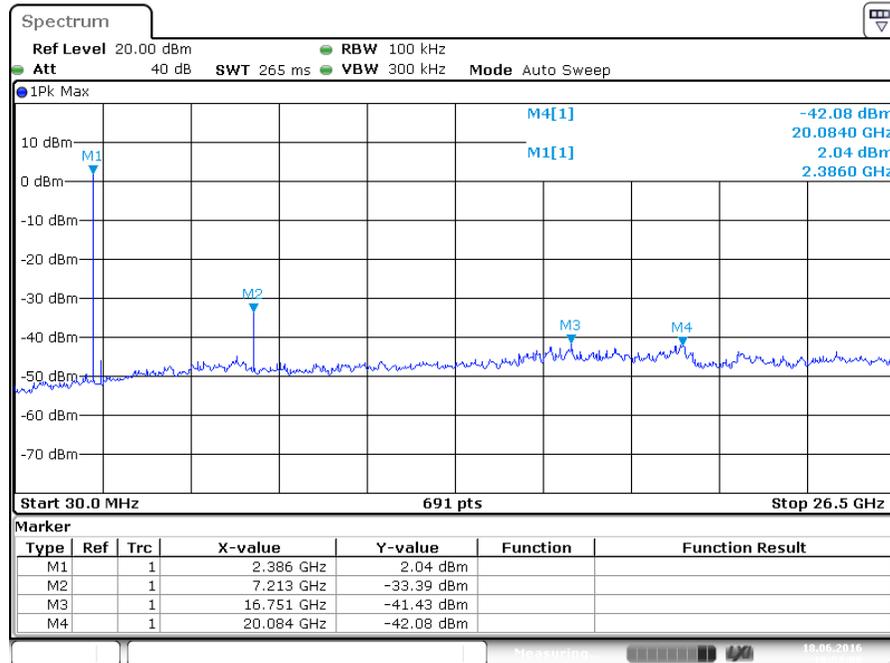
| | | |
|----------------------|---|-----------|
| Test Channel | : | Low/ High |
| Operation mode | : | A |
| Ambient temperature | : | 25°C |
| Relative humidity | : | 55% |
| Atmospheric pressure | : | 101 kPa |

All emissions are more than 20dB below fundamental, details refer to following test plot, and compliance is achieved as well.

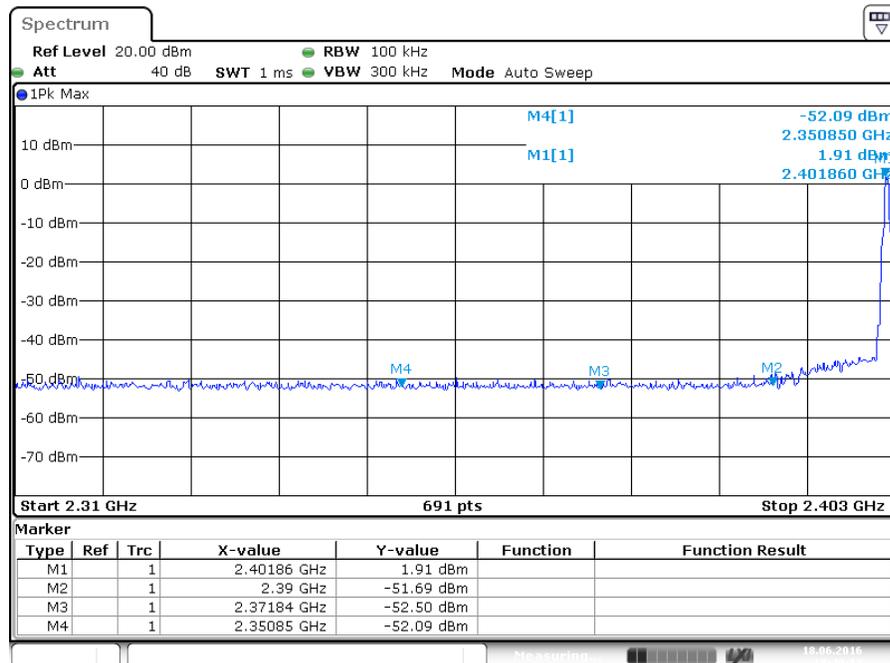
Test Plot of 100kHz Bandwidth of Frequency Band Edge

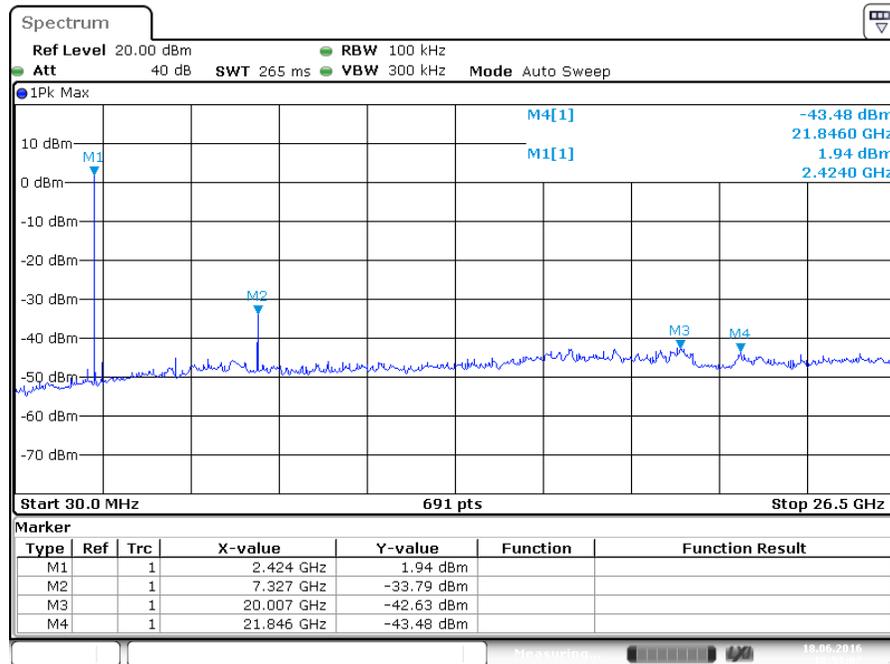
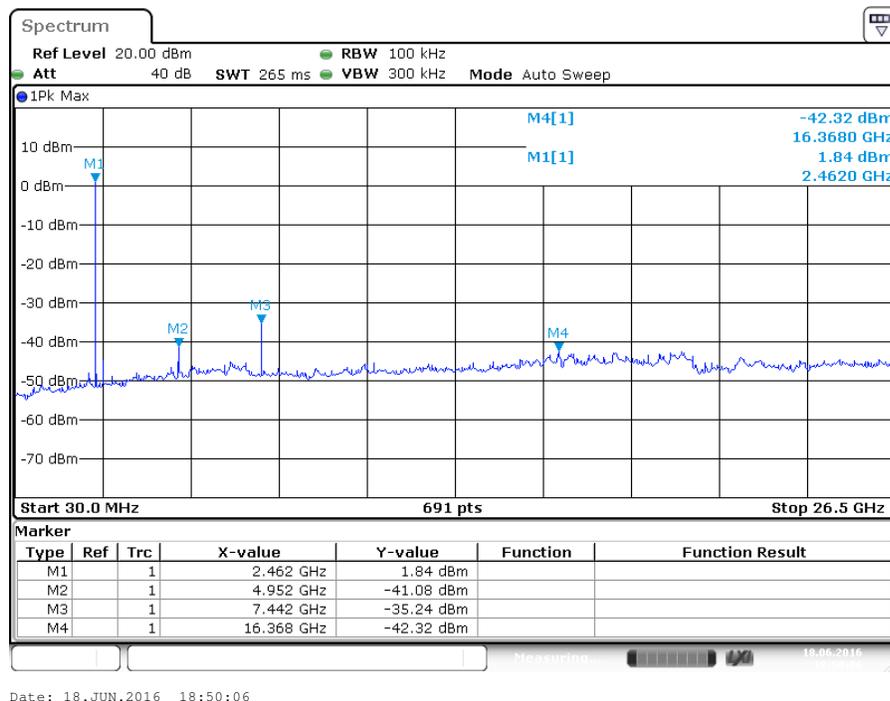
BDR mode

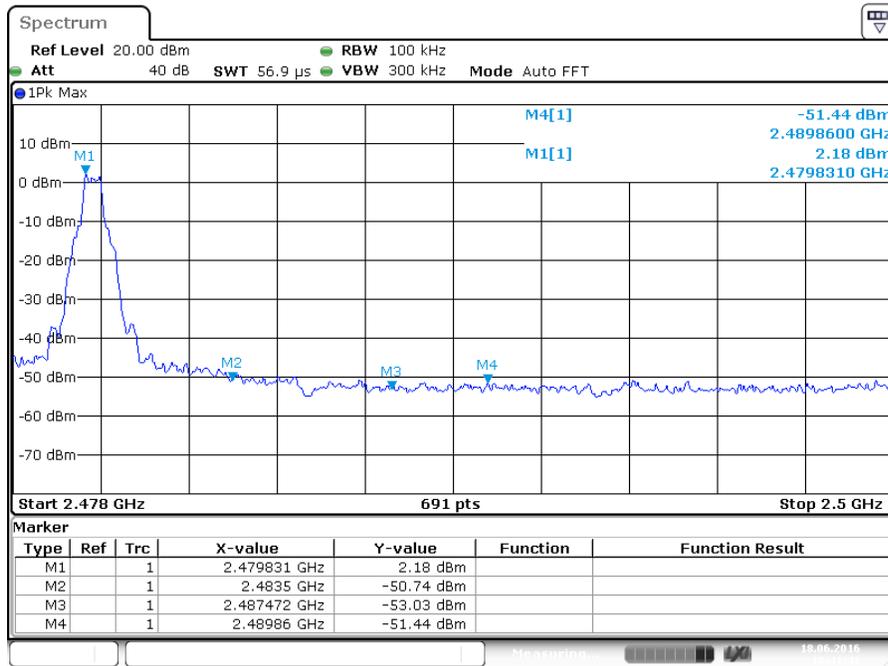
Low Channel



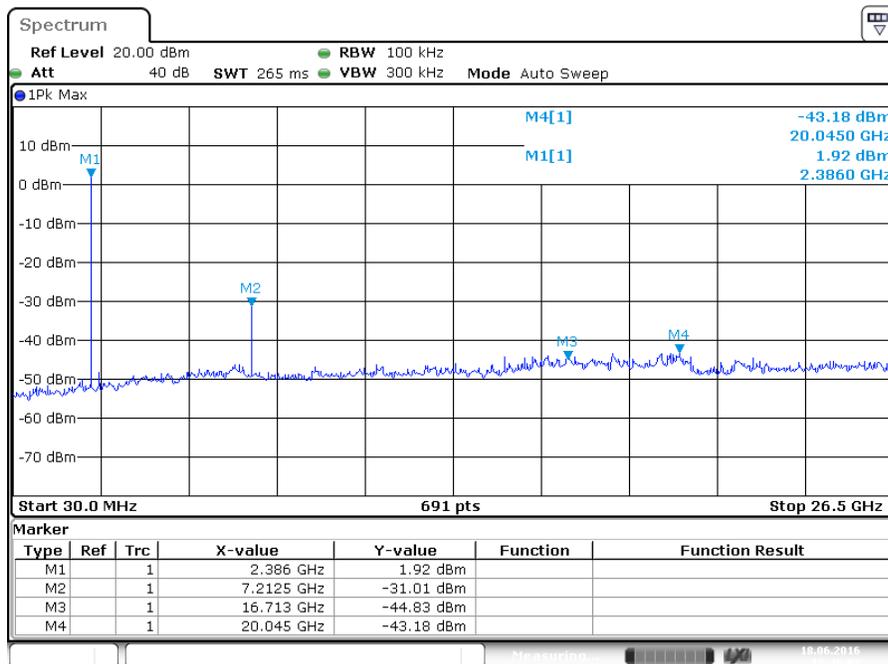
Low Channel, Band Edge



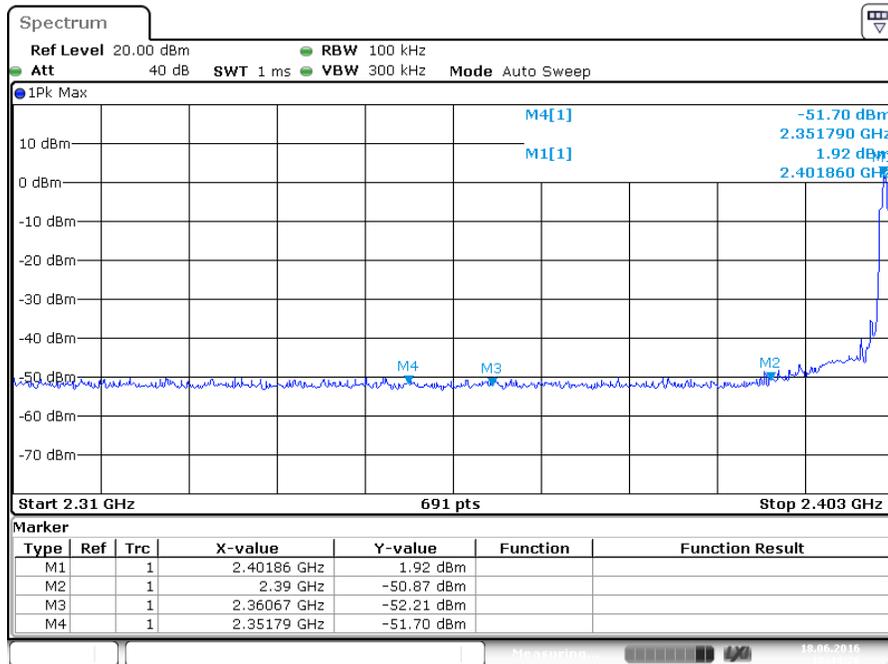
Middle Channel

High Channel


High Channel, Band Edge


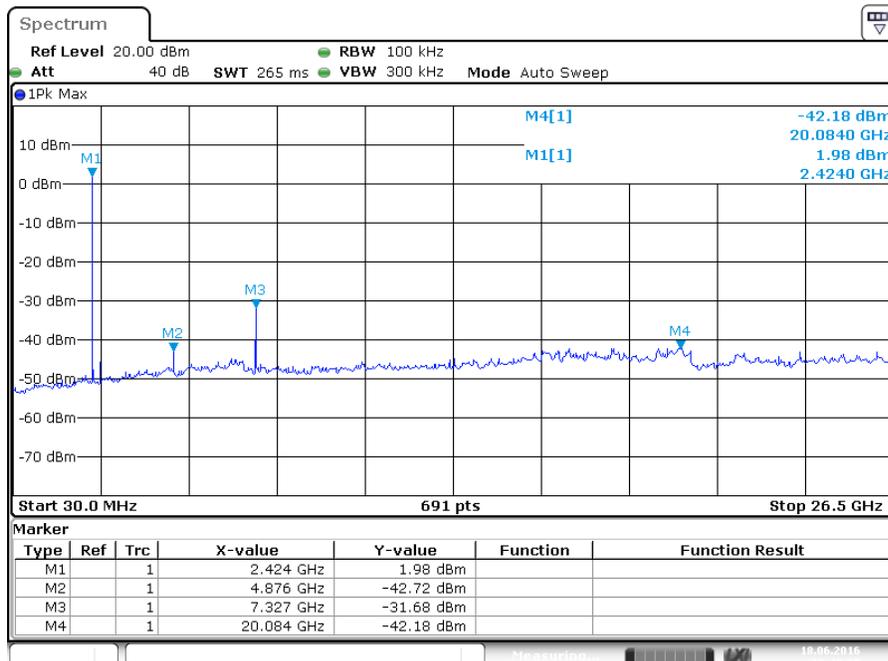
Date: 18.JUN.2016 18:41:41

EDR mode
Low Channel


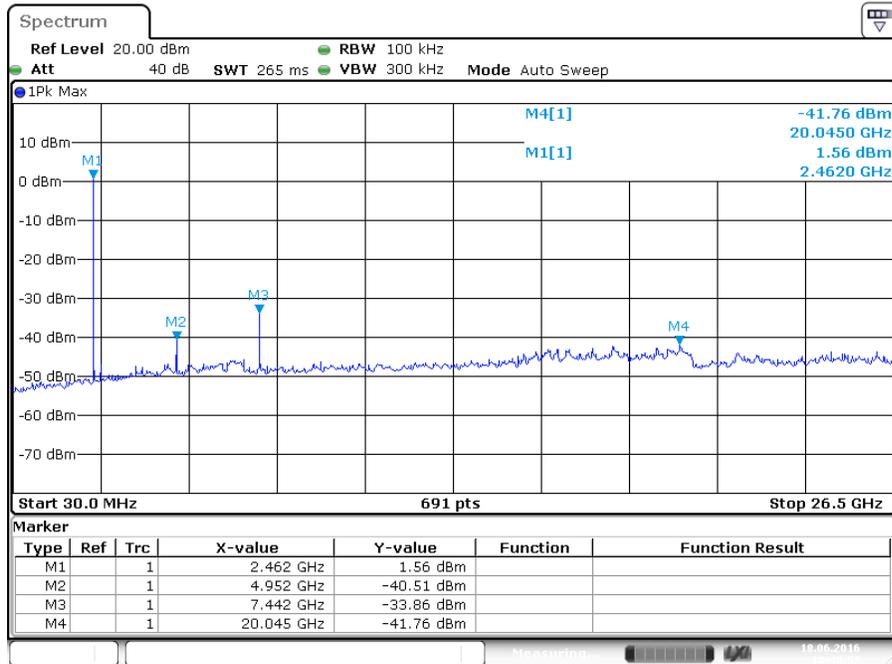
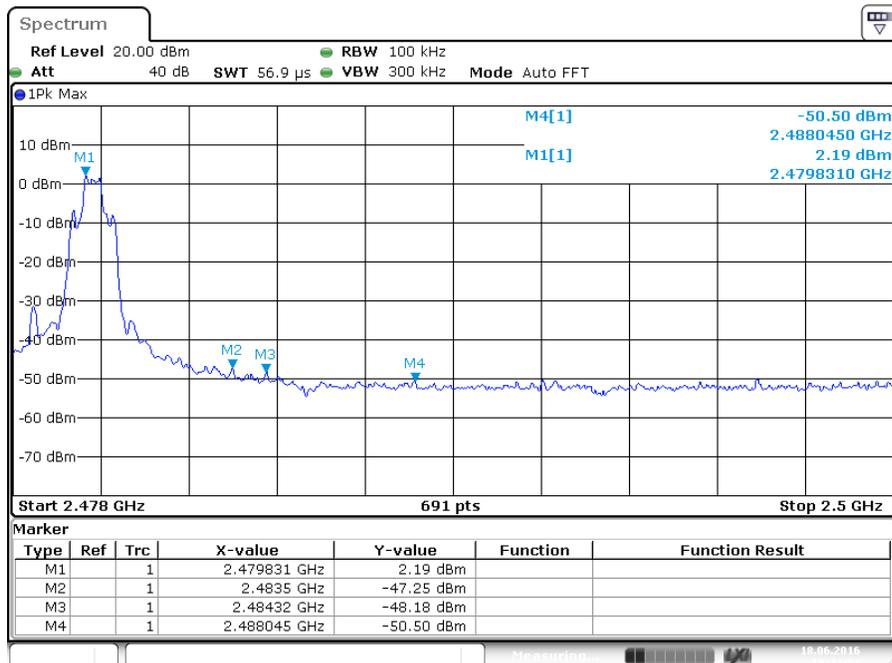
Date: 18.JUN.2016 18:46:03

Low Channel, Band Edge


Date: 18.JUN.2016 18:44:26

Middle Channel


Date: 18.JUN.2016 18:48:00

High Channel

High Channel, Band Edge


5.1.5 Spurious Emission

RESULT:**Passed**

| | | |
|-------------------|---|---|
| Date of testing | : | 2016-06-17 to 2016-06-18 |
| Test standard | : | FCC part 15.247(d) FCC Part 15.205 RSS-247 Clause 3.3 |
| Basic standard | : | ANSI C63.10: 2013 |
| Limits | : | Refer to 15.209(a) of FCC part 15.247(d) RSS-Gen Table 4 & Table 5 |
| Kind of test site | : | 3m Semi-Anechoic Chamber |

Test setup

| | | |
|----------------------|---|-------------------|
| Test Channel | : | Low/ Middle/ High |
| Operation mode | : | A |
| Ambient temperature | : | 25°C |
| Relative humidity | : | 55% |
| Atmospheric pressure | : | 101 kPa |

Remark:

During the pretest the EUT was rotated through three orthogonal axes to determine the attitude that maximizes the emissions. After that the EUT was manually handled to find the orientation that has the maximum emission, which is the orientation shown in the test setup photos.

Testing was carried out within frequency range 9kHz to the tenth harmonics.

For details refer to Appendix 1.

5.1.6 20dB Bandwidth

RESULT:
Passed

Date of testing : 2016-06-18
 Test standard : FCC Part 15.247(a)(1)
 : RSS-247 Clause 5.1(1)
 Basic standard : ANSI C63.10: 2013
 Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
 Operation Mode : A
 Ambient temperature : 25°C
 Relative humidity : 55%
 Atmospheric pressure : 101 kPa

Table 7: Test result of 20dB Bandwidth

| Test Mode | Channel Frequency (MHz) | 20dB Bandwidth (kHz) | 2/3 of 20dB Bandwidth (kHz) | Limit (MHz) |
|-----------|-------------------------|----------------------|-----------------------------|-------------|
| BDR | 2402 | 525.3 | 350.200 | / |
| | 2441 | 521.0 | 347.333 | |
| | 2480 | 525.3 | 350.200 | |
| EDR | 2402 | 890.0 | 593.333 | / |
| | 2441 | 890.0 | 593.333 | |
| | 2480 | 894.3 | 596.200 | |

5.1.8 Number of hopping frequency

RESULT:**Passed**

Date of testing : 2016-06-18
Test standard : FCC part 15.247(a)(1)(iii)
RSS-247 Clause 5.1(4)
Basic standard : ANSI C63.10: 2013
Limits : ≥ 15 non-overlapping channels
Kind of test site : Shield room

Test setup

Test Channel : Low/ Middle/ High
Operation Mode : B
Ambient temperature : 25°C
Relative humidity : 55%
Atmospheric pressure : 101 kPa

Table 9: Test result of Number of hopping frequency

| Frequency Range | Measured Quantity of Hopping Channel | Limit | Result |
|----------------------------------|--------------------------------------|-----------|--------|
| <u>2400</u> to <u>2483.5</u> MHz | 79 | ≥ 15 | Pass |

5.1.9 Time of Occupancy

RESULT:
Passed

Date of testing : 2016-06-18
 Test standard : FCC part 15.247(a)(1)(iii)
 : RSS-247 Clause 5.1(4)
 Basic standard : ANSI C63.10: 2013
 Limits : <0.4s
 Kind of test site : Shield room

Test setup

Test Channel : Low/ Middle/ High
 Operation Mode : A
 Ambient temperature : 25°C
 Relative humidity : 55%
 Atmospheric pressure : 101 kPa

Table 10: Test result of Time of Occupancy

| Test Mode | Channel | Data Packet | Pulse width (ms) | Measured Dwell time(s) | Limit (s) |
|-----------|---------|-------------|------------------|------------------------|-----------|
| BDR mode | 2402 | DH1 | 0.428 | 0.137 | < 0.4s |
| | | DH3 | 1.710 | 0.274 | |
| | | DH5 | 2.978 | 0.318 | |
| | 2441 | DH1 | 0.428 | 0.137 | |
| | | DH3 | 1.725 | 0.276 | |
| | | DH5 | 2.978 | 0.318 | |
| | 2480 | DH1 | 0.428 | 0.137 | |
| | | DH3 | 1.739 | 0.278 | |
| | | DH5 | 2.978 | 0.318 | |
| EDR mode | 2402 | 3DH1 | 0.428 | 0.137 | |
| | | 3DH3 | 1.732 | 0.277 | |
| | | 3DH5 | 2.993 | 0.319 | |
| | 2441 | 3DH1 | 0.435 | 0.139 | |
| | | 3DH3 | 1.732 | 0.277 | |
| | | 3DH5 | 2.993 | 0.319 | |
| | 2480 | 3DH1 | 0.428 | 0.137 | |
| | | 3DH3 | 1.703 | 0.272 | |
| | | 3DH5 | 2.993 | 0.319 | |

Note:

Dwell time = Pulse width x (Hopping rate / Number of channels) x Period

Period = 0.4 (seconds/ channel) x 79 (channel) = 31.6 seconds

5.1.10 Conducted emissions

RESULT:**Passed**

Date of testing : 2016-05-21
Test standard : FCC Part 15.107(a) & FCC Part 15.207(a)
RSS-Gen Clause 8.8
Basic standard : ANSI C63.10: 2013 & ANSI C63.4: 2014
Frequency range : 0.15 – 30MHz
Limits : FCC Part 15.207(a) & FCC Part 15.207(a)
RSS-Gen Table 3
Kind of test site : Shield room

Test setup

Input Voltage : AC 120V, 60Hz via AC/DC Adapter
Operation Mode : B, C, D, E
Earthing : Not connected
Ambient temperature : 25°C
Relative humidity : 55%
Atmospheric pressure : 101 kPa

For details refer to Appendix 1.

5.1.11 Radiated Emission

RESULT:**Passed**

Date of testing : 2016-06-03
Test standard : FCC Part 15.109(a) & FCC Part 15.209(a)
RSS-Gen 8.9
Basic standard : ANSI C63.4: 2014
Frequency range : 30 - 6000MHz
Classification : Class B
Limit : FCC Part 15.109(a) & FCC Part 15.209(a)
RSS-Gen Table 4
Kind of test site : 3m Semi-Anechoic Chamber

Test setup

Input Voltage : AC 120V, 60Hz via AC/DC Adapter
Operation mode : C, D, E
Earthing : Not connected
Ambient temperature : Refer to Appendix 1
Relative humidity : Refer to Appendix 1
Atmospheric pressure : Refer to Appendix 1

Test data refer to Appendix 1.

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Figure 1: Test figure of spurious emissions, mode A.1, Horizontal polarity (9kHz – 30MHz)

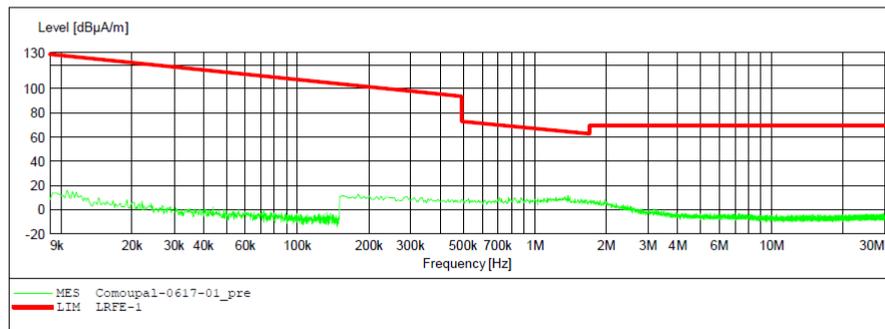
ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3m Radiated

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
Manufacturer: Comoupal (Group) Corporation
Operating Condition: TX 2402MHz
Test Site: 2# Chamber
Operator: LGWADE
Test Specification: AC 120V/60Hz
Comment: X
Start of Test: 2016-6-17 /

SCAN TABLE: "LFRE Fin"

| Start | Stop | Step | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------|-----------|----------|-----------|------------|-----------|------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | 1516M |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | QuasiPeak | 1.0 s | 9 kHz | 1516M |



**Figure 2: Test figure of spurious emissions, mode A.1, Vertical polarity
(9kHz – 30MHz)**

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FCC Class B 3m Radiated

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
Manufacturer: Comoupal (Group) Corporation
Operating Condition: TX 2402MHz
Test Site: 2# Chamber
Operator: LGWADE
Test Specification: AC 120V/60Hz
Comment: Y
Start of Test: 2016-6-17 /

SCAN TABLE: "LFRE Fin"

| Start | Stop | Step | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------|-----------|----------|-----------|------------|-----------|------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | 1516M |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | QuasiPeak | 1.0 s | 9 kHz | 1516M |

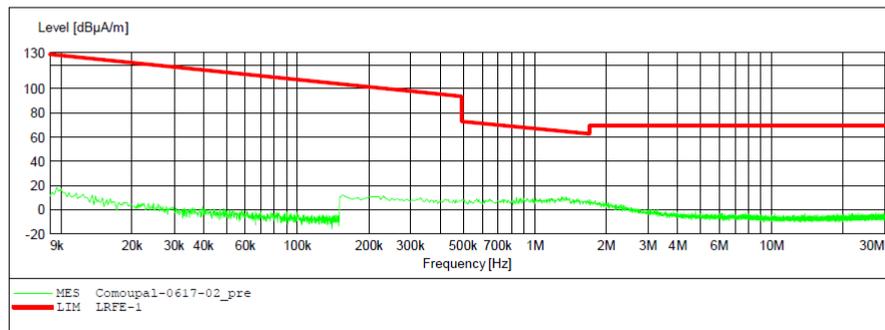


Figure 3: Test figure of spurious emissions, mode A.1, Horizontal polarity (30MHz – 1GHz)

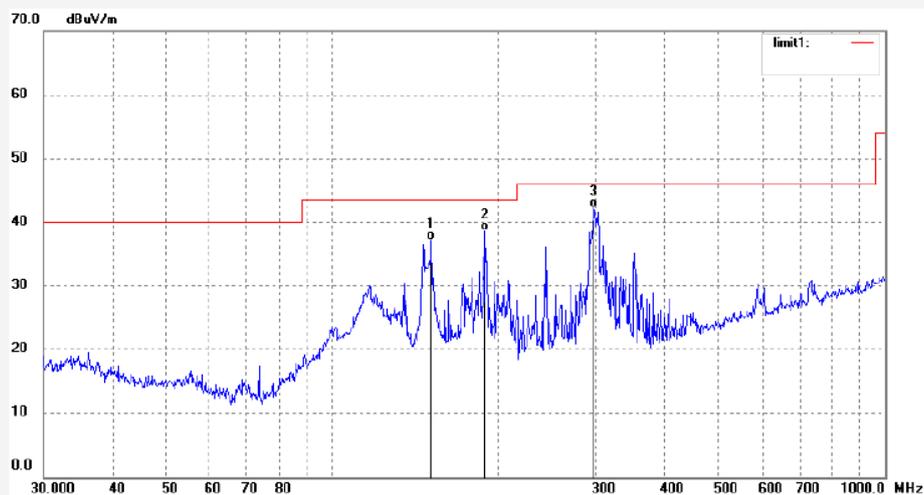


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Site: 2# Chamber
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| | |
|--|----------------------------|
| Job No.: TUV2015 #3532 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2402MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 151.0665 | 52.37 | -15.14 | 37.23 | 43.50 | -6.27 | QP | | | |
| 2 | 189.0742 | 51.32 | -12.66 | 38.66 | 43.50 | -4.84 | QP | | | |
| 3 | 297.2241 | 51.68 | -9.34 | 42.34 | 46.00 | -3.66 | QP | | | |

Figure 4: Test figure of spurious emissions, mode A.1, Vertical polarity (30MHz – 1GHz)

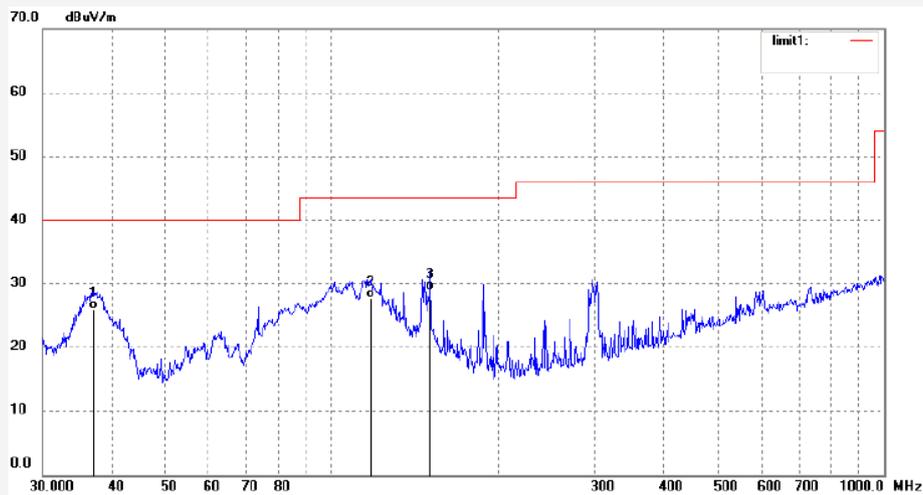


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3533 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2402MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 37.1550 | 36.88 | -10.90 | 25.98 | 40.00 | -14.02 | QP | | | |
| 2 | 117.7724 | 40.90 | -13.14 | 27.76 | 43.50 | -15.74 | QP | | | |
| 3 | 151.0665 | 44.02 | -15.14 | 28.88 | 43.50 | -14.62 | QP | | | |

Figure 5: Test figure of spurious emissions, mode A.1, Horizontal polarity (1GHz –18GHz)

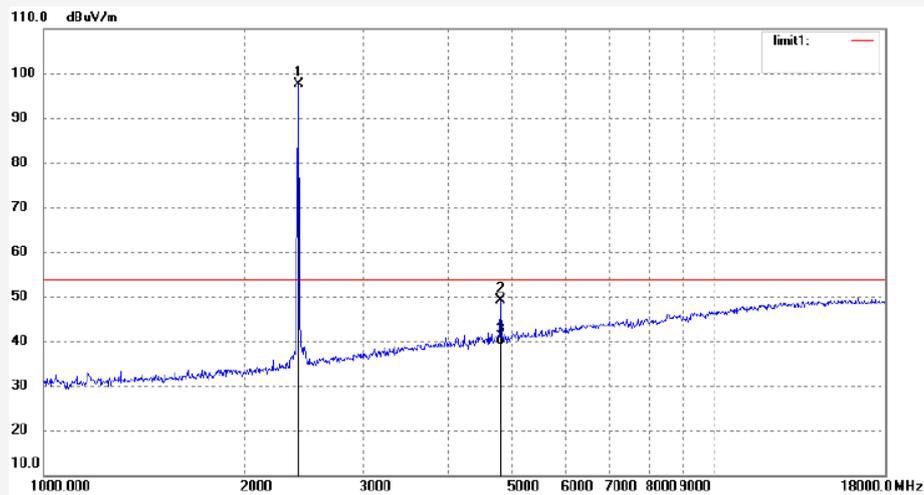


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3516 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2402MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 2402.000 | 105.20 | -7.45 | 97.75 | / | / | peak | | | |
| 2 | 4804.027 | 49.36 | -0.30 | 49.06 | 74.00 | -24.94 | peak | | | |
| 3 | 4804.027 | 39.53 | -0.30 | 39.23 | 54.00 | -14.77 | AVG | | | |

Figure 6: Test figure of spurious emissions, mode A.1, Vertical polarity (1GHz – 18GHz)

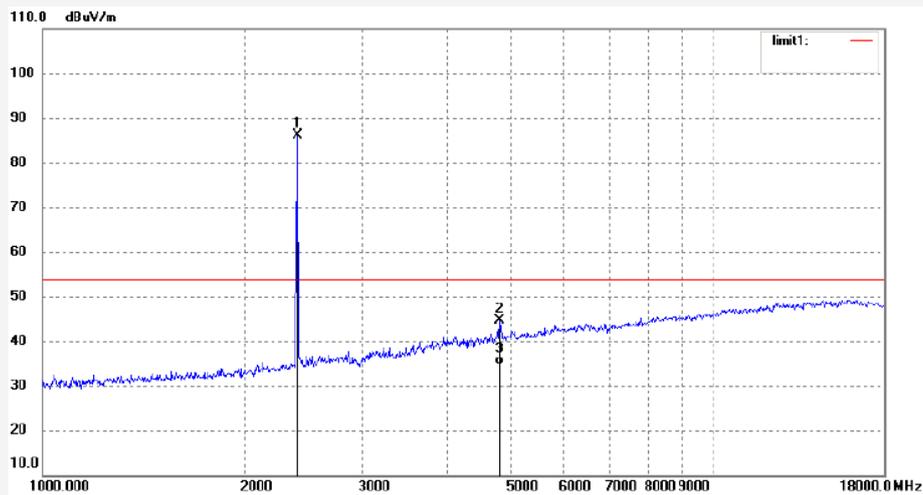


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3517 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2402MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 2402.000 | 93.59 | -7.45 | 86.14 | / | / | peak | | | |
| 2 | 4804.028 | 44.97 | -0.30 | 44.67 | 74.00 | -29.33 | peak | | | |
| 3 | 4804.028 | 34.86 | -0.30 | 34.56 | 54.00 | -19.44 | AVG | | | |

Figure 7: Test figure of spurious emissions, mode A.1, Horizontal polarity (18GHz –25GHz)

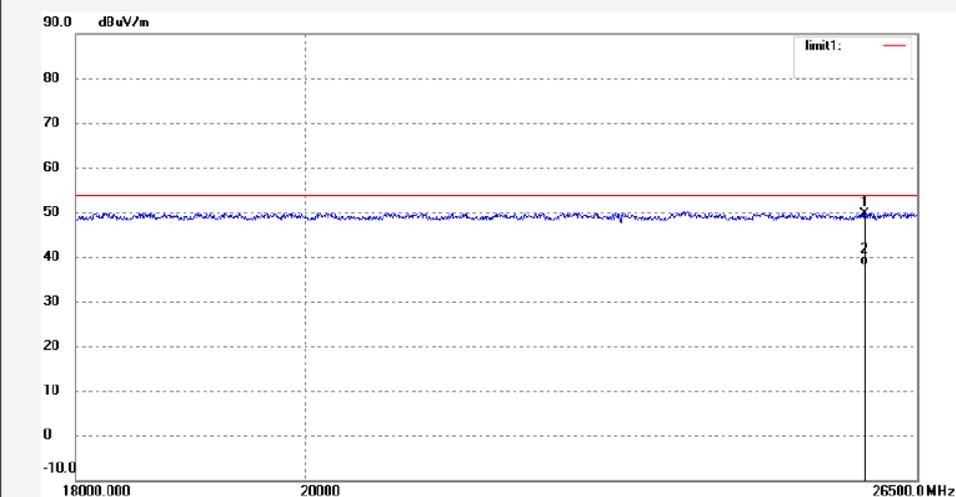


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 Fax:+86-0755-26503396

| | |
|--|----------------------------|
| Job No.: TUV2015 #3527 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2402MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 25872.091 | 33.25 | 16.50 | 49.75 | 74.00 | -24.25 | peak | | | |
| 2 | 25872.091 | 21.73 | 16.50 | 38.23 | 54.00 | -15.77 | AVG | | | |

Figure 8: Test figure of spurious emissions, mode A.1, Vertical polarity (18GHz – 25GHz)

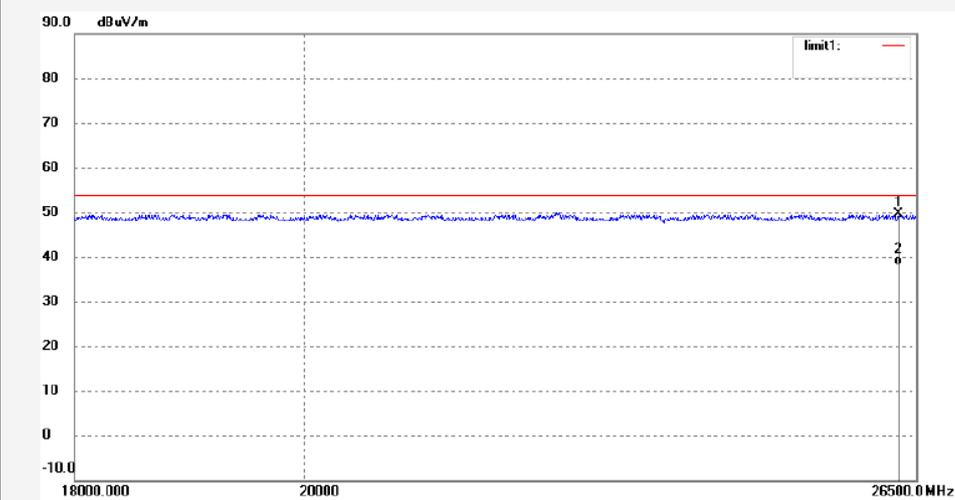


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 Fax:+86-0755-26503396

| | |
|--|----------------------------|
| Job No.: TUV2015 #3526 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2402MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 26285.633 | 32.58 | 17.04 | 49.62 | 74.00 | -24.38 | peak | | | |
| 2 | 26285.633 | 21.19 | 17.04 | 38.23 | 54.00 | -15.77 | AVG | | | |

Figure 9: Test figure of spurious emissions, mode A.2, Horizontal polarity (9kHz – 30MHz)

ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3m Radiated

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
Manufacturer: Comoupal (Group) Corporation
Operating Condition: TX 2441MHz
Test Site: 2# Chamber
Operator: LGWADE
Test Specification: AC 120V/60Hz
Comment: X
Start of Test: 2016-6-17 /

SCAN TABLE: "LFRE Fin"

| Start | Stop | Step | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------|-----------|----------|-----------|------------|-----------|------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | 1516M |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | QuasiPeak | 1.0 s | 9 kHz | 1516M |

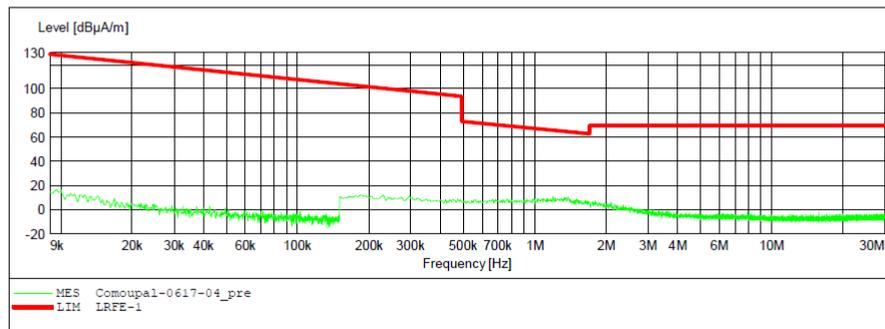


Figure 10: Test figure of spurious emissions, mode A.2, Vertical polarity (9kHz – 30MHz)

ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3m Radiated

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
Manufacturer: Comoupal (Group) Corporation
Operating Condition: TX 2441MHz
Test Site: 2# Chamber
Operator: LGWADE
Test Specification: AC 120V/60Hz
Comment: Y
Start of Test: 2016-6-17 /

SCAN TABLE: "LFRE Fin"

| Start | Stop | Step | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------|-----------|----------|-----------|------------|-----------|------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | 1516M |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | QuasiPeak | 1.0 s | 9 kHz | 1516M |

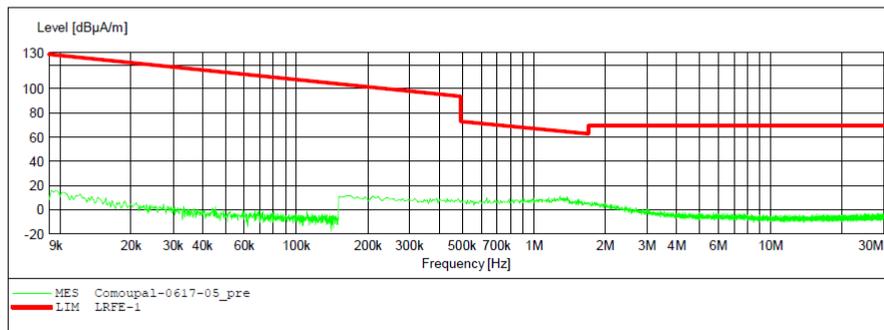


Figure 11: Test figure of spurious emissions, mode A.2, Horizontal polarity (30MHz – 1GHz)

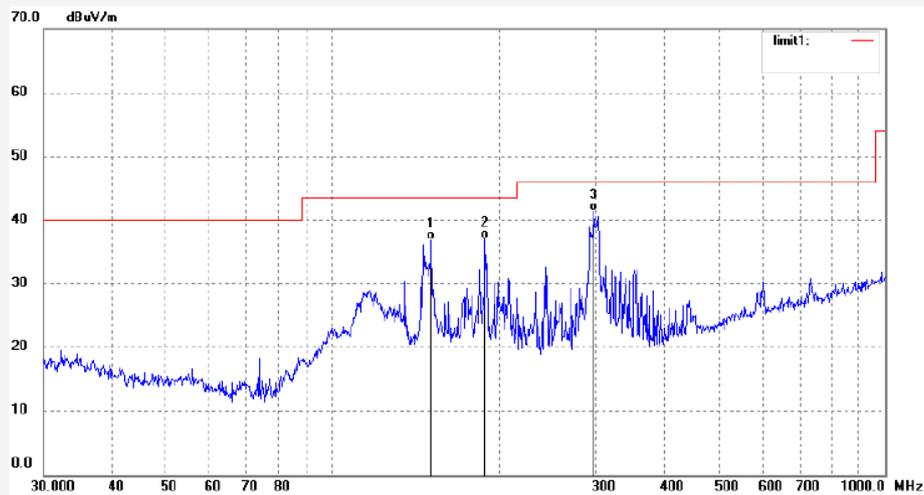


ACCURATE TECHNOLOGY CO., LTD.
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Site: 2# Chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

| | |
|--|----------------------------|
| Job No.: TUV2015 #3535 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2441MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 151.0665 | 52.01 | -15.14 | 36.87 | 43.50 | -6.63 | QP | | | |
| 2 | 189.0742 | 49.67 | -12.66 | 37.01 | 43.50 | -6.49 | QP | | | |
| 3 | 297.2241 | 50.75 | -9.34 | 41.41 | 46.00 | -4.59 | QP | | | |

Figure 12: Test figure of spurious emissions, mode A.2, Vertical polarity (30MHz – 1GHz)

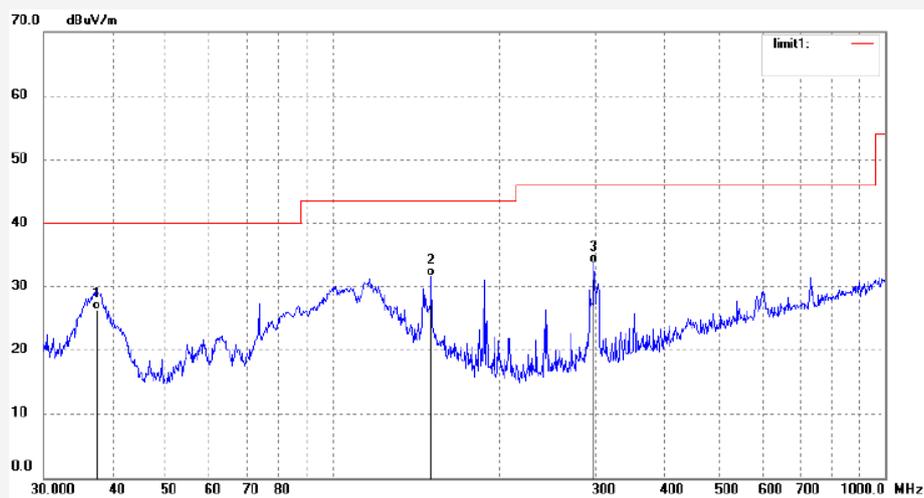


ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
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Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

| | |
|--|----------------------------|
| Job No.: TUV2015 #3534 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2441MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 37.4164 | 37.36 | -10.96 | 26.40 | 40.00 | -13.60 | QP | | | |
| 2 | 151.0665 | 46.79 | -15.14 | 31.65 | 43.50 | -11.85 | QP | | | |
| 3 | 297.2241 | 42.96 | -9.34 | 33.62 | 46.00 | -12.38 | QP | | | |

Figure 13: Test figure of spurious emissions, mode A.2, Horizontal polarity (1GHz – 18GHz)

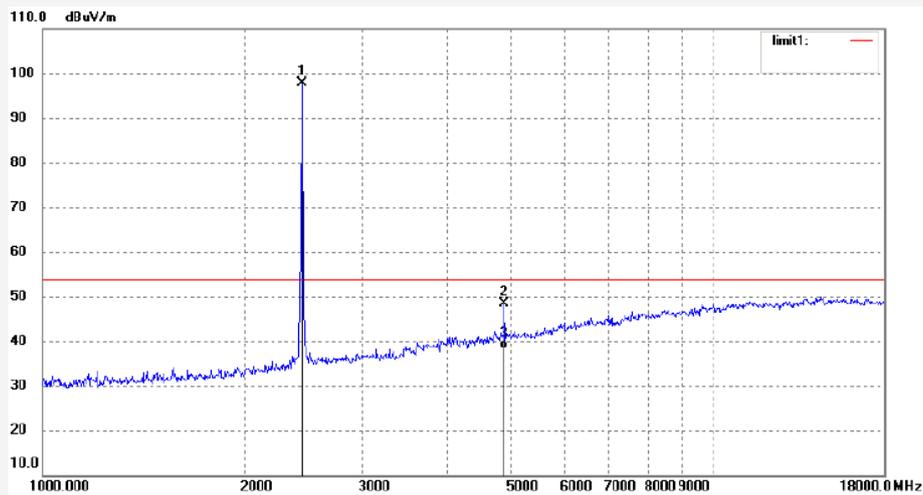


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3520 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2441MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 2441.000 | 105.18 | -7.35 | 97.83 | / | / | peak | | | |
| 2 | 4882.025 | 48.36 | 0.14 | 48.50 | 74.00 | -25.50 | peak | | | |
| 3 | 4882.025 | 38.07 | 0.14 | 38.21 | 54.00 | -15.79 | AVG | | | |

Figure 14: Test figure of spurious emissions, mode A.2, Vertical polarity (1GHz – 18GHz)

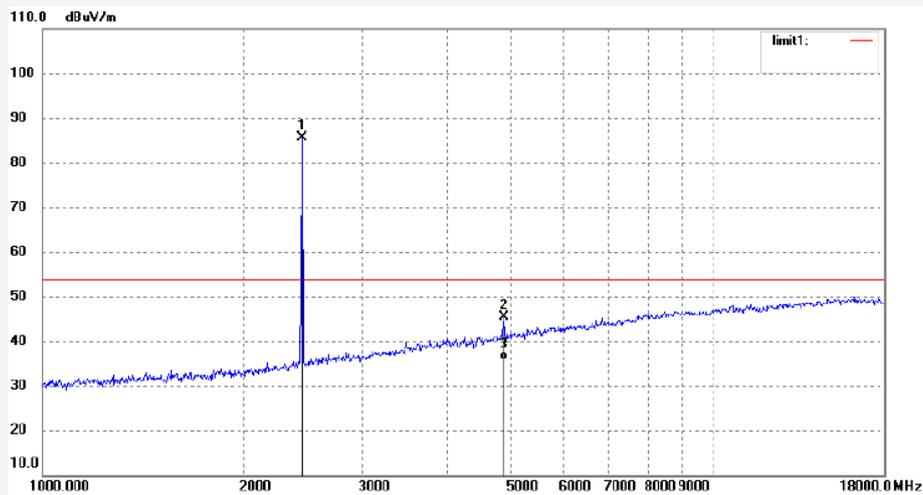


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3521 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2441MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 2441.000 | 93.07 | -7.35 | 85.72 | / | / | peak | | | |
| 2 | 4882.030 | 45.21 | 0.14 | 45.35 | 74.00 | -28.65 | peak | | | |
| 3 | 4882.030 | 35.54 | 0.14 | 35.68 | 54.00 | -18.32 | AVG | | | |

Figure 15: Test figure of spurious emissions, mode A.2, Horizontal polarity (18GHz – 25GHz)

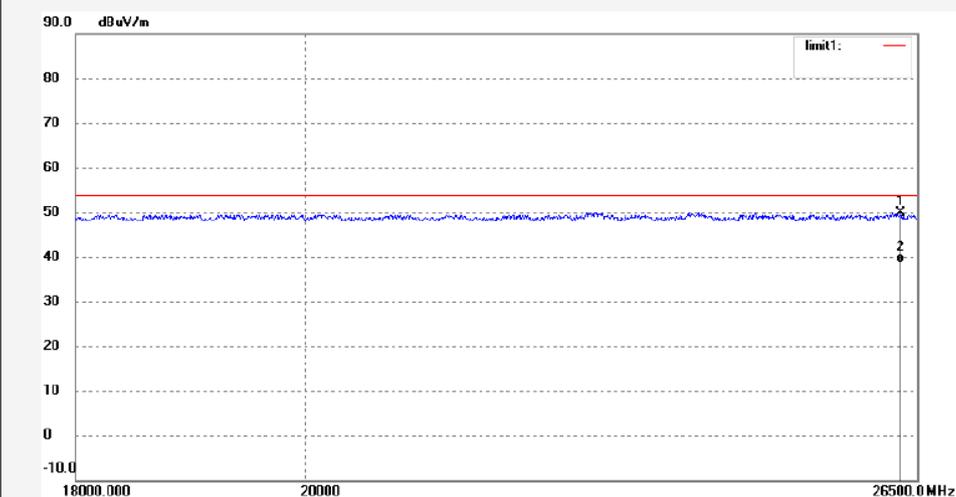


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3528 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2441MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 26305.974 | 33.45 | 16.50 | 49.95 | 74.00 | -24.05 | peak | | | |
| 2 | 26305.974 | 22.06 | 16.50 | 38.56 | 54.00 | -15.44 | AVG | | | |

Figure 16: Test figure of spurious emissions, mode A.2, Vertical polarity (18GHz – 25GHz)

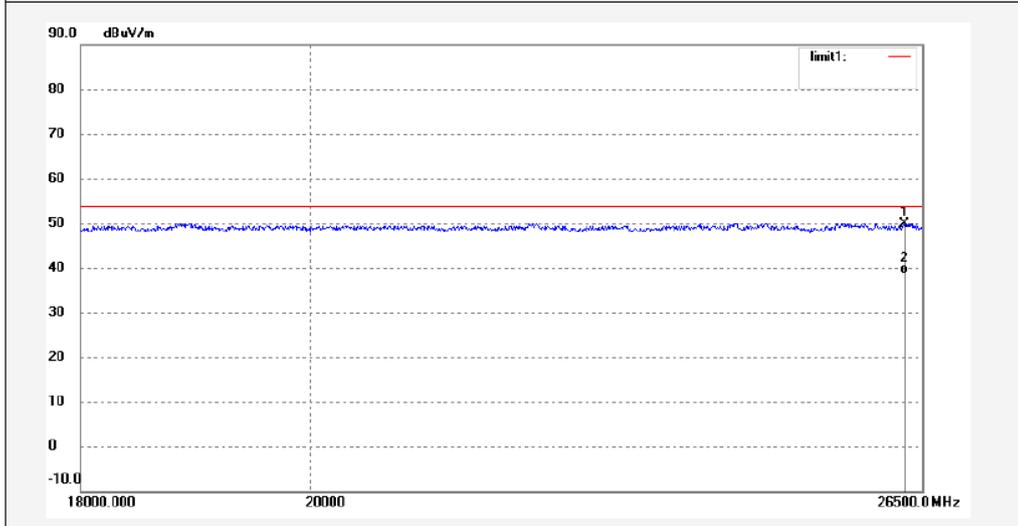


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3529 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2441MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 26285.633 | 32.93 | 17.04 | 49.97 | 74.00 | -24.03 | peak | | | |
| 2 | 26285.633 | 21.54 | 17.04 | 38.58 | 54.00 | -15.42 | AVG | | | |

Figure 17: Test figure of spurious emissions, mode A.3, Horizontal polarity (9kHz – 30MHz)

ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3m Radiated

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
 Manufacturer: Comoupal (Group) Corporation
 Operating Condition: TX 2480MHz
 Test Site: 2# Chamber
 Operator: LGWADE
 Test Specification: AC 120V/60Hz
 Comment: X
 Start of Test: 2016-6-17 /

SCAN TABLE: "LFRE Fin"

| Short Description: | | | _SUB_STD_VTERM2 1.70 | | | |
|--------------------|-----------|----------|----------------------|------------|-----------|------------|
| Start | Stop | Step | Detector | Meas. Time | IF Bandw. | Transducer |
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | 1516M |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | QuasiPeak | 1.0 s | 9 kHz | 1516M |

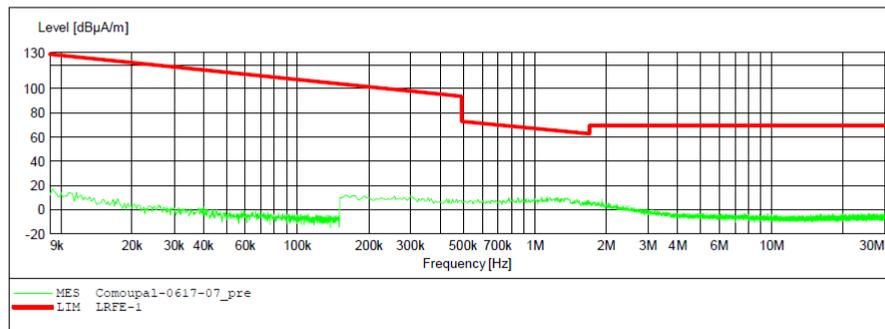


Figure 18: Test figure of spurious emissions, mode A.3, Vertical polarity (9kHz – 30MHz)

ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3m Radiated

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
Manufacturer: Comoupal (Group) Corporation
Operating Condition: TX 2480MHz
Test Site: 2# Chamber
Operator: LGWADE
Test Specification: AC 120V/60Hz
Comment: Y
Start of Test: 2016-6-17 /

SCAN TABLE: "LFRE Fin"

| Start | Stop | Step | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------|-----------|----------|-----------|------------|-----------|------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | 1516M |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | QuasiPeak | 1.0 s | 9 kHz | 1516M |

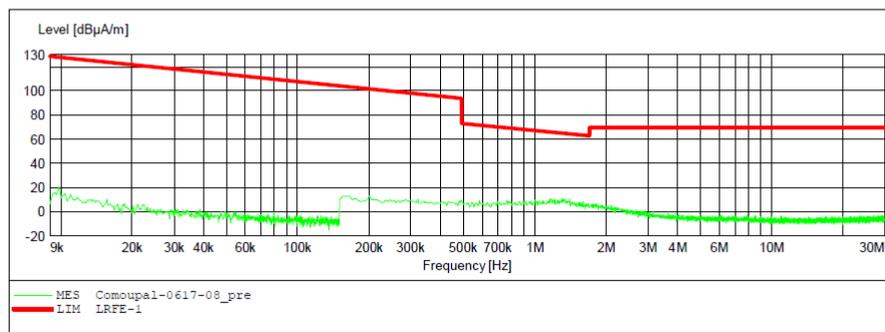


Figure 19: Test figure of spurious emissions, mode A.3, Horizontal polarity (30MHz – 1GHz)

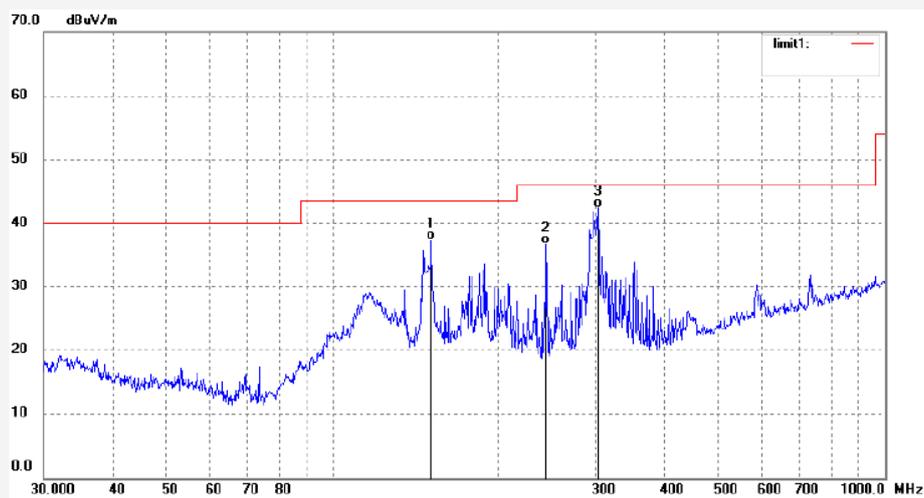


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3536 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2480MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 151.0665 | 52.53 | -15.14 | 37.39 | 43.50 | -6.11 | QP | | | |
| 2 | 243.3771 | 47.56 | -10.82 | 36.74 | 46.00 | -9.26 | QP | | | |
| 3 | 302.4812 | 51.72 | -9.24 | 42.48 | 46.00 | -3.52 | QP | | | |

Figure 20: Test figure of spurious emissions, mode A.3, Vertical polarity (30MHz – 1GHz)

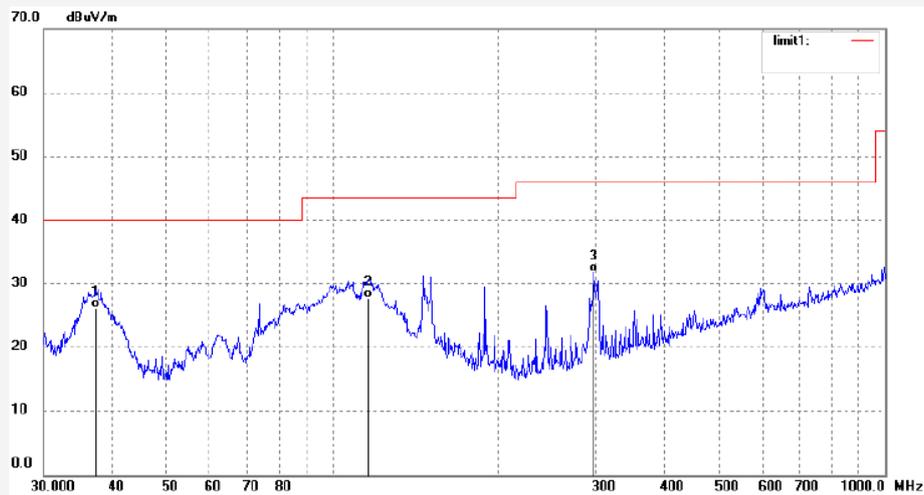


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3537 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2480MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 37.2854 | 37.11 | -10.93 | 26.18 | 40.00 | -13.82 | QP | | | |
| 2 | 116.1320 | 40.82 | -13.15 | 27.67 | 43.50 | -15.83 | QP | | | |
| 3 | 297.2241 | 41.17 | -9.34 | 31.83 | 46.00 | -14.17 | QP | | | |

Figure 21: Test figure of spurious emissions, mode A.3, Horizontal polarity (1GHz –18GHz)

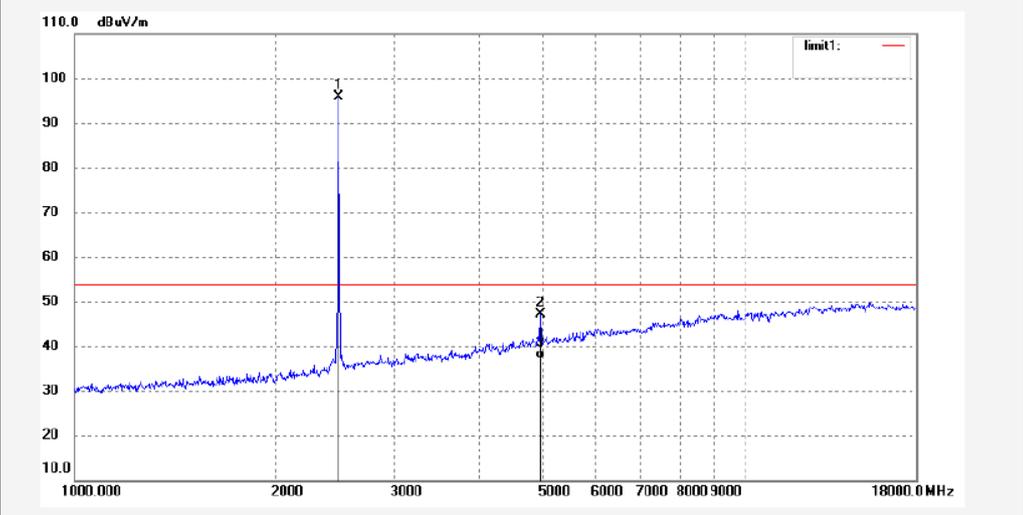


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3523 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2480MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 2480.000 | 103.34 | -7.37 | 95.97 | / | / | peak | | | |
| 2 | 4960.024 | 46.64 | 0.52 | 47.16 | 74.00 | -26.84 | peak | | | |
| 3 | 4960.024 | 36.73 | 0.52 | 37.25 | 54.00 | -16.75 | AVG | | | |

Figure 22: Test figure of spurious emissions, mode A.3, Vertical polarity (1GHz – 18GHz)

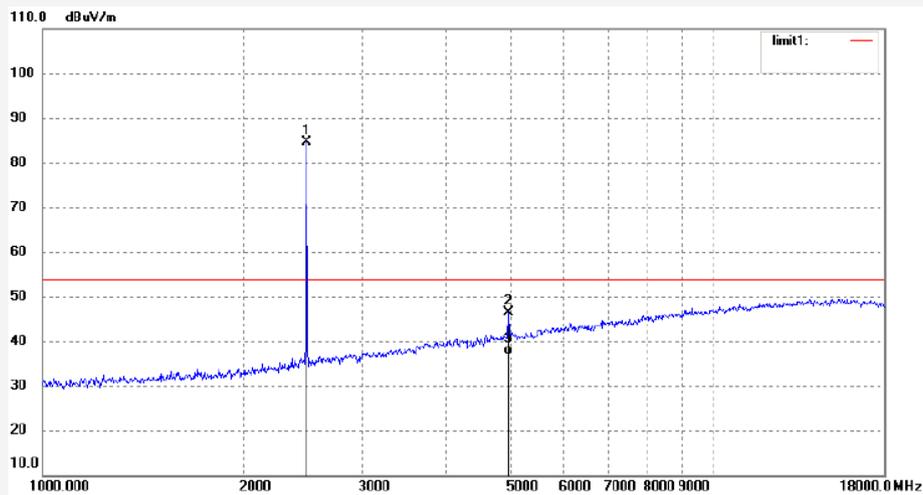


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3522 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2480MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 2480.000 | 92.00 | -7.37 | 84.63 | / | / | peak | | | |
| 2 | 4960.023 | 45.81 | 0.52 | 46.33 | 74.00 | -27.67 | peak | | | |
| 3 | 4960.023 | 36.42 | 0.52 | 36.94 | 54.00 | -17.06 | AVG | | | |

Figure 23: Test figure of spurious emissions, mode A.3, Horizontal polarity (18GHz –25GHz)

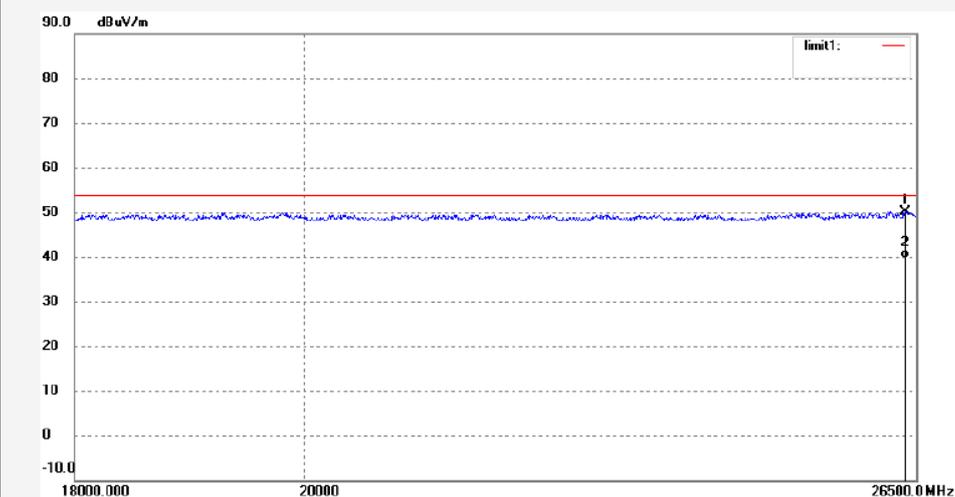


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3531 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2480MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 26367.091 | 33.69 | 16.50 | 50.19 | 74.00 | -23.81 | peak | | | |
| 2 | 26367.091 | 23.06 | 16.50 | 39.56 | 54.00 | -14.44 | AVG | | | |

Figure 24: Test figure of spurious emissions, mode A.3, Vertical polarity (18GHz – 25GHz)

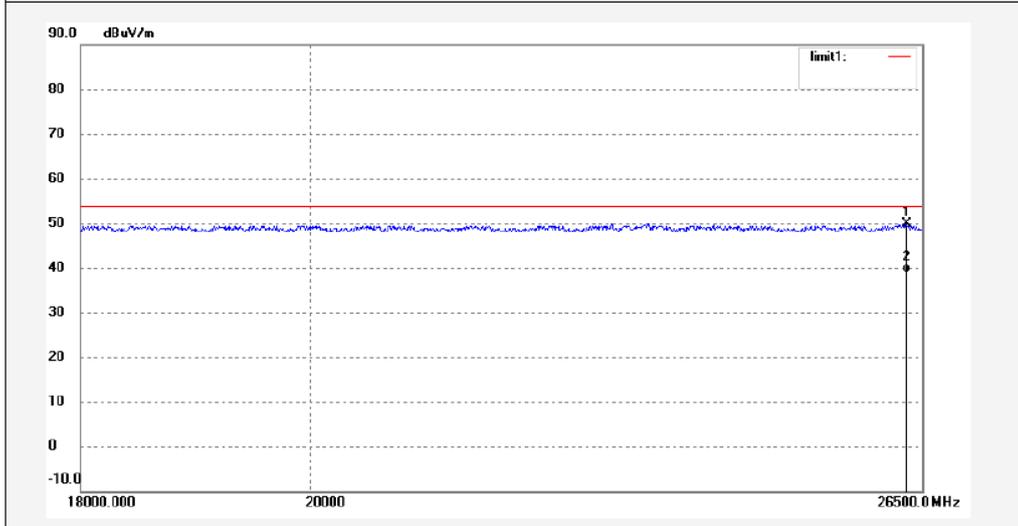


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3530 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2480MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 26316.150 | 32.95 | 17.02 | 49.97 | 74.00 | -24.03 | peak | | | |
| 2 | 26316.150 | 21.89 | 17.02 | 38.91 | 54.00 | -15.09 | AVG | | | |

Figure 25: Test figure of Radiated emissions in restricted bands, Mode A.1, Horizontal

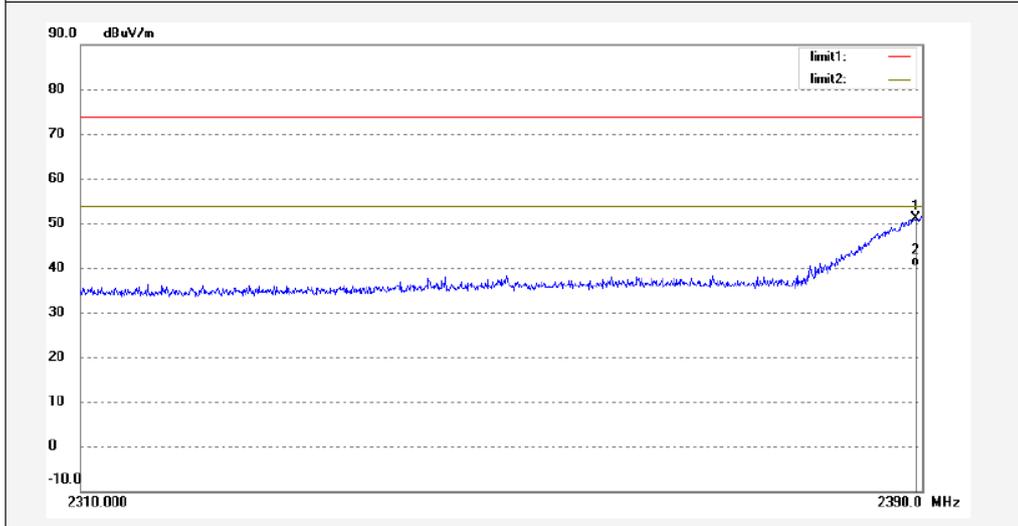


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3519 | Polarization: Horizontal |
| Standard: FCC (Band Edge) | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2402MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 2389.360 | 58.54 | -7.53 | 51.01 | 74.00 | -22.99 | peak | | | |
| 2 | 2389.360 | 47.91 | -7.53 | 40.38 | 54.00 | -13.62 | AVG | | | |

Figure 26: Test figure of Radiated emissions in restricted bands, Mode A.1, Vertical

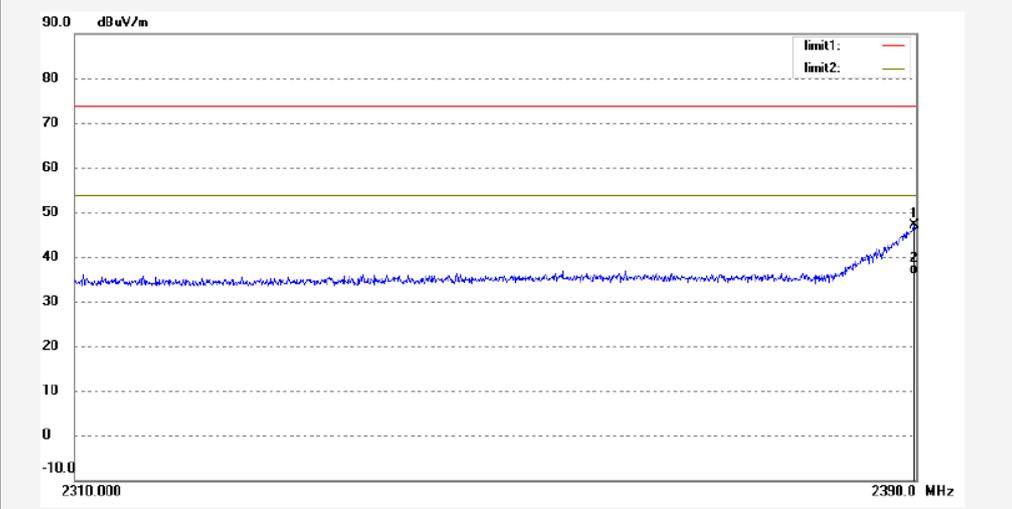


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3518 | Polarization: Vertical |
| Standard: FCC (Band Edge) | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2402MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 2389.840 | 54.62 | -7.53 | 47.09 | 74.00 | -26.91 | peak | | | |
| 2 | 2389.840 | 43.74 | -7.53 | 36.21 | 54.00 | -17.79 | AVG | | | |

Figure 27: Test figure of Radiated emissions in restricted bands, Mode A.3, Horizontal

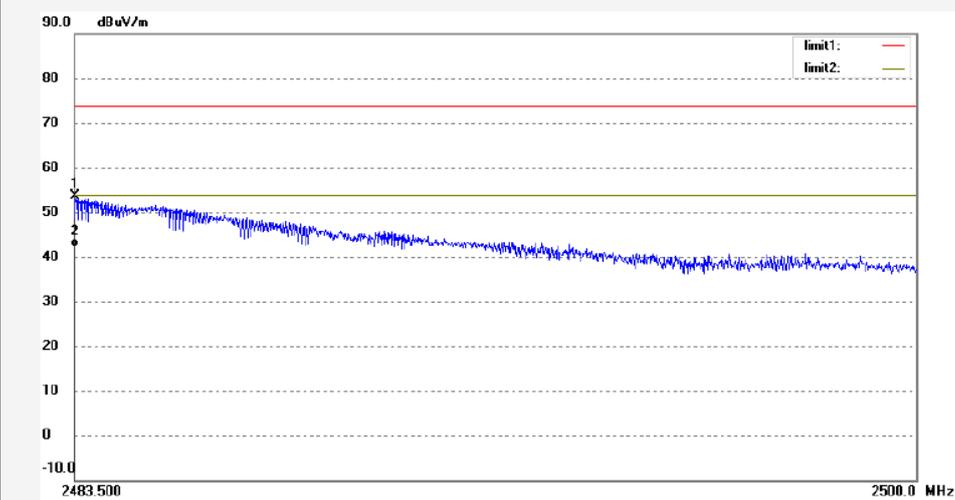


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3524 | Polarization: Horizontal |
| Standard: FCC (Band Edge) | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2480MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 2483.517 | 60.89 | -7.37 | 53.52 | 74.00 | -20.48 | peak | | | |
| 2 | 2483.517 | 49.60 | -7.37 | 42.23 | 54.00 | -11.77 | AVG | | | |

Figure 28: Test figure of Radiated emissions in restricted bands, Mode A.3, Vertical

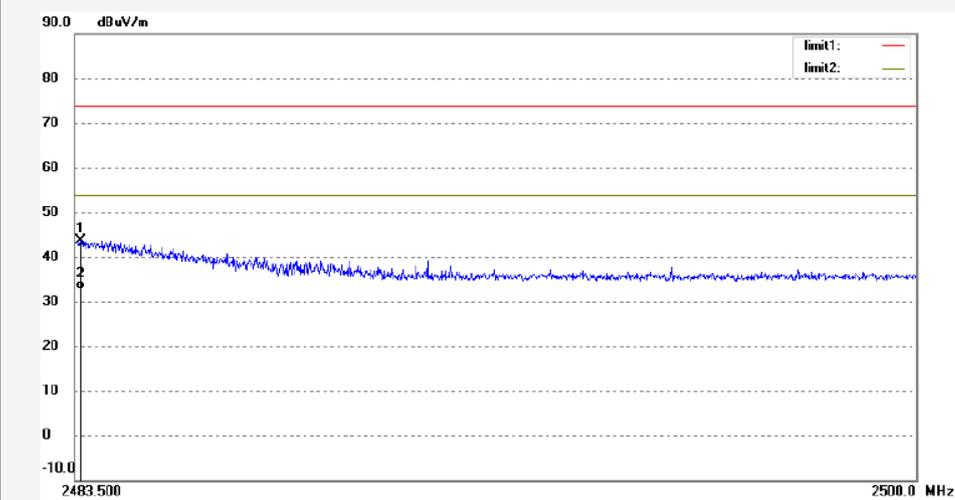


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3525 | Polarization: Vertical |
| Standard: FCC (Band Edge) | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/18/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: TX 2480MHz | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 2483.615 | 51.08 | -7.37 | 43.71 | 74.00 | -30.29 | peak | | | |
| 2 | 2483.615 | 39.97 | -7.37 | 32.60 | 54.00 | -21.40 | AVG | | | |

Figure 29: Test figure of Conducted emissions, Mode B, line live

ACCURATE TECHNOLOGY CO., LTD

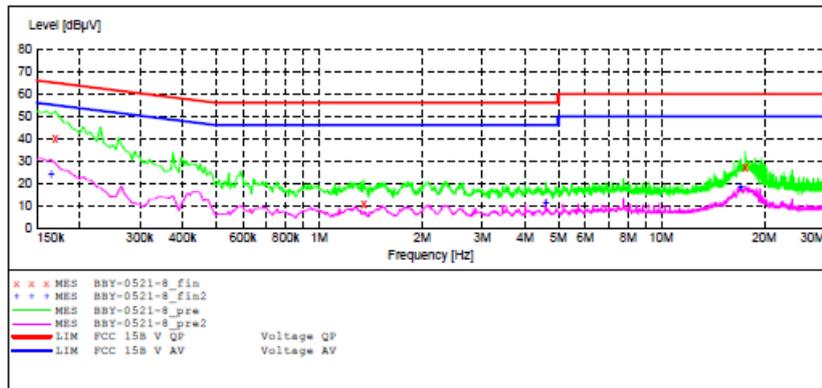
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
 Manufacturer: Comoupal (Group) Corporation
 Operating Condition: On With Bluetooth
 Test Site: 1#Shielding Room
 Operator: LGNADE
 Test Specification: L 120V/60Hz
 Comment: Mains Port
 Start of Test: 5/21/2016 /

SCAN TABLE: "V 9K-30MHz fin"

Short Description: _SUB STD_VTERM2 1.70

| Start Frequency | Stop Frequency | Step Width | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|------------|-----------|------------|-----------|---------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | NSLK8126 2008 |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | Average | | | |
| | | | QuasiPeak | 1.0 s | 9 kHz | NSLK8126 2008 |
| | | | Average | | | |



MEASUREMENT RESULT: "BBY-0521-8_fin"

5/21/2016

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.170000 | 39.90 | 10.5 | 65 | 25.1 | QP | L1 | GND |
| 1.350000 | 10.80 | 10.9 | 56 | 45.2 | QP | L1 | GND |
| 17.575000 | 27.30 | 11.4 | 60 | 32.7 | QP | L1 | GND |

MEASUREMENT RESULT: "BBY-0521-8_fin2"

5/21/2016

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.165000 | 24.30 | 10.5 | 55 | 30.9 | AV | L1 | GND |
| 4.590000 | 11.40 | 11.1 | 46 | 34.6 | AV | L1 | GND |
| 17.035000 | 18.10 | 11.4 | 50 | 31.9 | AV | L1 | GND |

Figure 30: Test figure of Conducted emissions, Mode B, line neutral

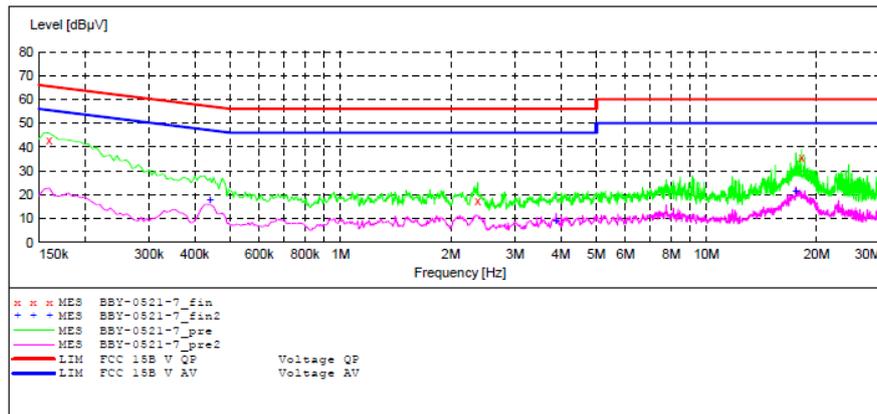
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
 Manufacturer: Comcupal (Group) Corporation
 Operating Condition: On With Bluetooth
 Test Site: 1#Shielding Room
 Operator: LGWADE
 Test Specification: N 120V/60Hz
 Comment: Mains Port
 Start of Test: 5/21/2016 /

SCAN TABLE: "V 9K-30MHz fin"

| Start | Stop | Step | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------|-----------|----------|-----------|------------|-----------|---------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | NSLR8126 2008 |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | Average | QuasiPeak | 9 kHz | NSLR8126 2008 |
| | | | Average | | | |



MEASUREMENT RESULT: "BBY-0521-7_fin"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.160000 | 42.70 | 10.5 | 66 | 22.8 | QP | N | GND |
| 2.370000 | 17.50 | 11.0 | 56 | 38.5 | QP | N | GND |
| 18.175000 | 35.40 | 11.4 | 60 | 24.6 | QP | N | GND |

Figure 31: Test figure of Conducted emissions, Mode C, line live

ACCURATE TECHNOLOGY CO., LTD

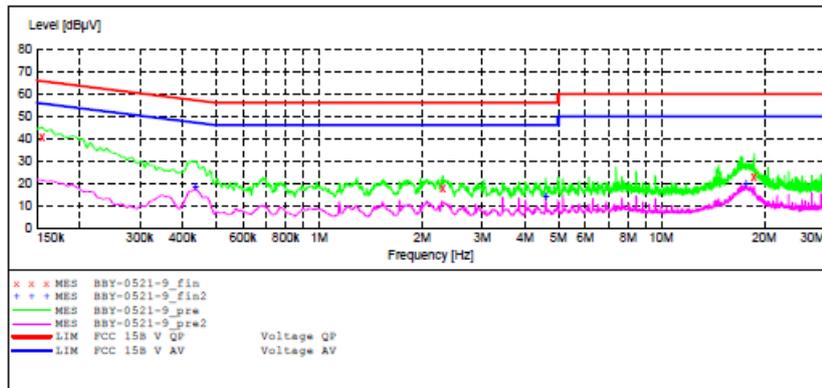
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
 Manufacturer: Comoupal (Group) Corporation
 Operating Condition: Aux in
 Test Site: 1#Shielding Room
 Operator: LGNADE
 Test Specification: L 120V/60Hz
 Comment: Mains Port
 Start of Test: 5/21/2016 /

SCAN TABLE: "V 9K-30MHz fin"

Short Description: _SUB STD_VTERM2 1.70

| Start Frequency | Stop Frequency | Step Width | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|------------|-----------|------------|-----------|---------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | NSLK8126 2008 |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | Average | | | |
| | | | QuasiPeak | 1.0 s | 9 kHz | NSLK8126 2008 |
| | | | Average | | | |



MEASUREMENT RESULT: "BBY-0521-9_fin"

5/21/2016

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.155000 | 41.00 | 10.5 | 66 | 24.7 | QP | L1 | GND |
| 2.300000 | 17.60 | 11.0 | 56 | 38.4 | QP | L1 | GND |
| 18.670000 | 22.90 | 11.4 | 60 | 37.1 | QP | L1 | GND |

MEASUREMENT RESULT: "BBY-0521-9_fin2"

5/21/2016

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.435000 | 18.70 | 10.7 | 47 | 28.5 | AV | L1 | GND |
| 4.590000 | 14.00 | 11.1 | 46 | 32.0 | AV | L1 | GND |
| 17.680000 | 19.90 | 11.4 | 50 | 30.1 | AV | L1 | GND |

Figure 32: Test figure of Conducted emissions, Mode C, line neutral

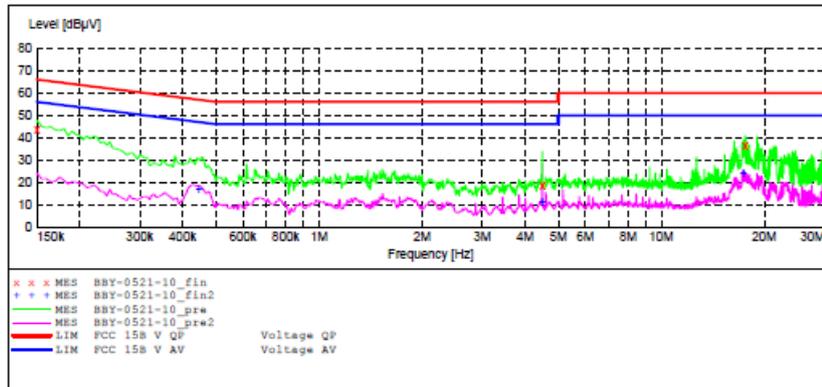
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
 Manufacturer: Comoupal (Group) Corporation
 Operating Condition: Aux in
 Test Site: 1#Shielding Room
 Operator: LGNADE
 Test Specification: N 120V/60Hz
 Comment: Mains Port
 Start of Test: 5/21/2016 /

SCAN TABLE: "V 9K-30MHz fin"

| Start Frequency | Stop Frequency | Step Width | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|------------|-----------|------------|-----------|---------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | NSLK8126 2008 |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | QuasiPeak | 1.0 s | 9 kHz | NSLK8126 2008 |



MEASUREMENT RESULT: "BBY-0521-10_fin"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.150000 | 43.50 | 10.5 | 66 | 22.5 | QP | N | GND |
| 4.490000 | 18.30 | 11.1 | 56 | 37.7 | QP | N | GND |
| 17.575000 | 36.10 | 11.4 | 60 | 23.9 | QP | N | GND |

MEASUREMENT RESULT: "BBY-0521-10_fin2"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.445000 | 17.20 | 10.7 | 47 | 29.8 | AV | N | GND |
| 4.490000 | 11.50 | 11.1 | 46 | 34.5 | AV | N | GND |
| 17.320000 | 23.80 | 11.4 | 50 | 26.2 | AV | N | GND |

Figure 33: Test figure of Conducted emissions, Mode D, line live

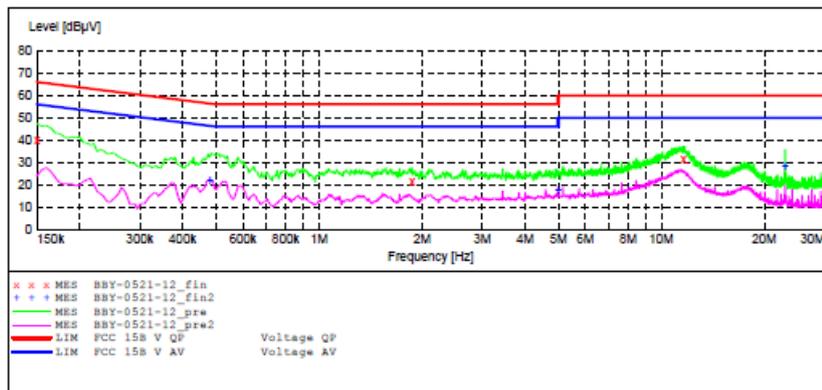
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
 Manufacturer: Comoupal (Group) Corporation
 Operating Condition: RCA in
 Test Site: 1#Shielding Room
 Operator: LGWADE
 Test Specification: L 120V/60Hz
 Comment: Mains Port
 Start of Test: 5/21/2016 /

SCAN TABLE: "V 9K-30MHz fin"

| Start Frequency | Stop Frequency | Step Width | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|------------|-----------|------------|-----------|---------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | NSLK8126 2008 |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | QuasiPeak | 1.0 s | 9 kHz | NSLK8126 2008 |



MEASUREMENT RESULT: "BBY-0521-12_fin"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.150000 | 39.80 | 10.5 | 66 | 26.2 | QP | L1 | GND |
| 1.870000 | 21.00 | 11.0 | 56 | 35.0 | QP | L1 | GND |
| 11.620000 | 31.40 | 11.3 | 60 | 28.6 | QP | L1 | GND |

MEASUREMENT RESULT: "BBY-0521-12_fin2"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.480000 | 22.30 | 10.7 | 46 | 24.0 | AV | L1 | GND |
| 4.990000 | 17.60 | 11.2 | 46 | 28.4 | AV | L1 | GND |
| 22.990000 | 28.40 | 11.4 | 50 | 21.6 | AV | L1 | GND |

Figure 34: Test figure of Conducted emissions, Mode D, line neutral

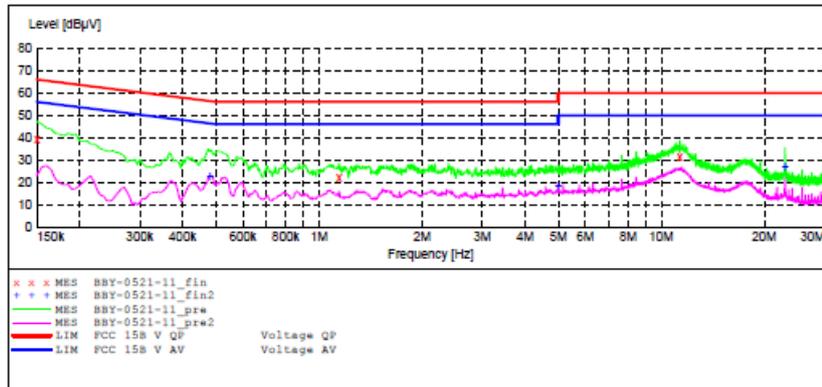
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
 Manufacturer: Comoupal (Group) Corporation
 Operating Condition: RCA in
 Test Site: 1#Shielding Room
 Operator: LGNADE
 Test Specification: N 120V/60Hz
 Comment: Mains Port
 Start of Test: 5/21/2016 /

SCAN TABLE: "V 9K-30MHz fin"

| Start | Stop | Step | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------|-----------|----------|-----------|------------|-----------|---------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | NSLK8126 2008 |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | QuasiPeak | 1.0 s | 9 kHz | NSLK8126 2008 |



MEASUREMENT RESULT: "BBY-0521-11_fin"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.150000 | 39.20 | 10.5 | 66 | 26.8 | QP | N | GND |
| 1.145000 | 22.30 | 10.9 | 56 | 33.7 | QP | N | GND |
| 11.335000 | 31.40 | 11.3 | 60 | 28.6 | QP | N | GND |

MEASUREMENT RESULT: "BBY-0521-11_fin2"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.480000 | 22.50 | 10.7 | 46 | 23.8 | AV | N | GND |
| 4.990000 | 18.30 | 11.2 | 46 | 27.7 | AV | N | GND |
| 22.975000 | 27.00 | 11.4 | 50 | 23.0 | AV | N | GND |

Figure 35: Test figure of Conducted emissions, Mode E, line live

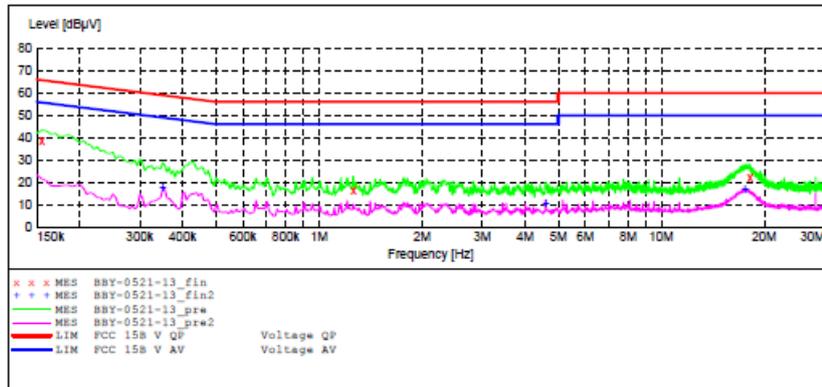
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
 Manufacturer: Comoupal (Group) Corporation
 Operating Condition: Optical in
 Test Site: 1#Shielding Room
 Operator: LGNADE
 Test Specification: L 120V/60Hz
 Comment: Mains Port
 Start of Test: 5/21/2016 /

SCAN TABLE: "V 9K-30MHz fin"

| Start Frequency | Stop Frequency | Step Width | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|------------|-----------|------------|-----------|---------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | NSLK8126 2008 |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | QuasiPeak | 1.0 s | 9 kHz | NSLK8126 2008 |
| | | | Average | | | |



MEASUREMENT RESULT: "BBY-0521-13_fin"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.155000 | 38.40 | 10.5 | 66 | 27.3 | QP | L1 | GND |
| 1.260000 | 16.00 | 10.9 | 56 | 40.0 | QP | L1 | GND |
| 18.145000 | 22.00 | 11.4 | 60 | 38.0 | QP | L1 | GND |

MEASUREMENT RESULT: "BBY-0521-13_fin2"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.350000 | 17.40 | 10.6 | 49 | 31.6 | AV | L1 | GND |
| 4.590000 | 10.70 | 11.1 | 46 | 35.3 | AV | L1 | GND |
| 17.560000 | 17.10 | 11.4 | 50 | 32.9 | AV | L1 | GND |

Figure 36: Test figure of Conducted emissions, Mode E, line neutral

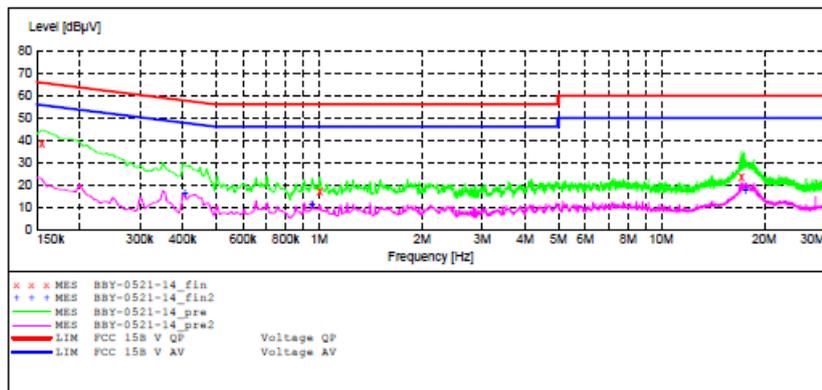
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: 2.0 Channel Bluetooth Sound Bar M/N:SB20
 Manufacturer: Comoupal (Group) Corporation
 Operating Condition: Optical in
 Test Site: 1#Shielding Room
 Operator: LGWADE
 Test Specification: N 120V/60Hz
 Comment: Mains Port
 Start of Test: 5/21/2016 /

SCAN TABLE: "V 9K-30MHz fin"

| Start Frequency | Stop Frequency | Step Width | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|------------|-----------|------------|-----------|---------------|
| 9.0 kHz | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | NSLK8126 2008 |
| 150.0 kHz | 30.0 MHz | 5.0 kHz | Average | | | |
| | | | QuasiPeak | 1.0 s | 9 kHz | NSLK8126 2008 |
| | | | Average | | | |



MEASUREMENT RESULT: "BBY-0521-14_fin"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.155000 | 38.30 | 10.5 | 66 | 27.4 | QP | N | GND |
| 1.005000 | 16.90 | 10.8 | 56 | 39.1 | QP | N | GND |
| 17.170000 | 23.30 | 11.4 | 60 | 36.7 | QP | N | GND |

MEASUREMENT RESULT: "BBY-0521-14_fin2"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---------------|------------|-----------|------------|-----------|----------|------|-----|
| 0.405000 | 16.00 | 10.7 | 48 | 31.8 | AV | N | GND |
| 0.955000 | 11.40 | 10.8 | 46 | 34.6 | AV | N | GND |
| 17.605000 | 18.00 | 11.4 | 50 | 32.0 | AV | N | GND |

Figure 37: Test figure of Radiated emissions, Mode C, Below 1GHz, Horizontal

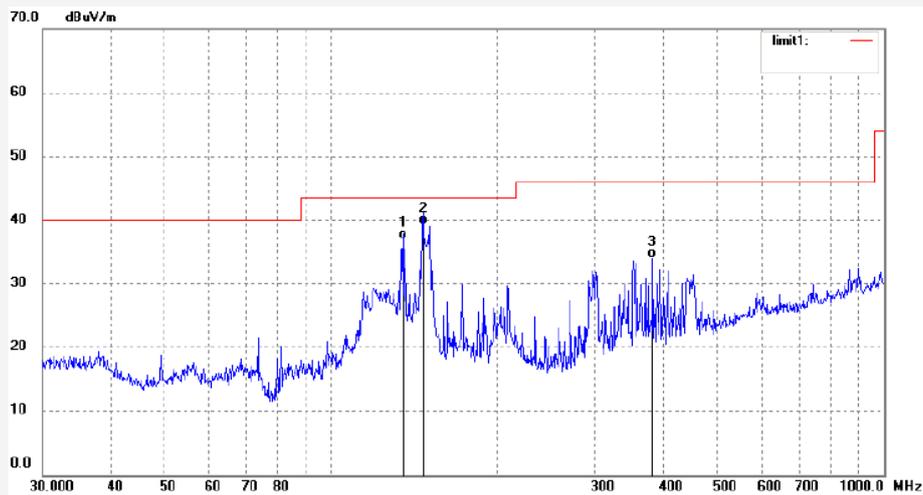


ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

| | |
|--|----------------------------|
| Job No.: TUV2015 #3349 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 2016-6-2 |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: Aux in | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 135.0319 | 51.04 | -14.08 | 36.96 | 43.50 | -6.54 | QP | | | |
| 2 | 146.3735 | 54.48 | -15.21 | 39.27 | 43.50 | -4.23 | QP | | | |
| 3 | 381.2485 | 41.33 | -7.32 | 34.01 | 46.00 | -11.99 | QP | | | |

Figure 38: Test figure of Radiated emissions, Mode C, Below 1GHz, Vertical

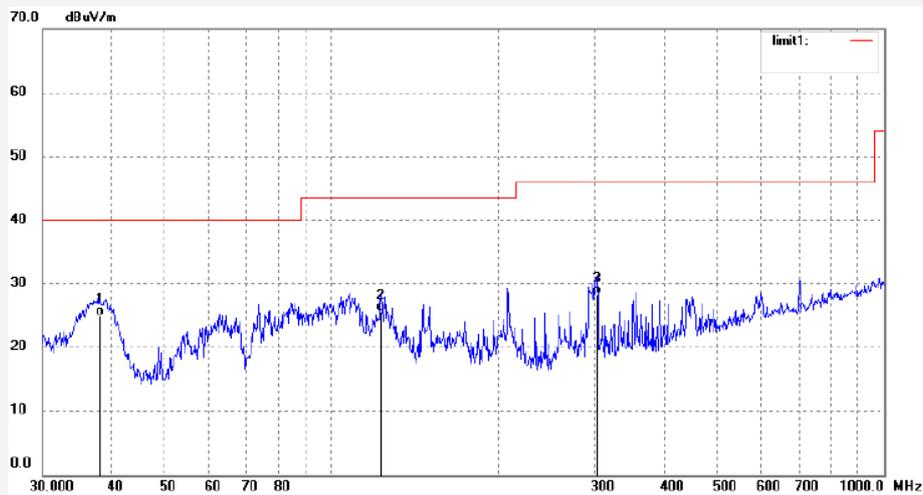


ACCURATE TECHNOLOGY CO., LTD.
 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

| | |
|--|----------------------------|
| Job No.: TUV2015 #3350 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 2016-6-2 |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: Aux in | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 38.0782 | 35.99 | -11.11 | 24.88 | 40.00 | -15.12 | QP | | | |
| 2 | 122.8340 | 39.12 | -13.47 | 25.65 | 43.50 | -17.85 | QP | | | |
| 3 | 302.4812 | 37.56 | -9.24 | 28.32 | 46.00 | -17.68 | QP | | | |

Figure 39: Test figure of Radiated emissions, Mode C, Above 1GHz, Horizontal

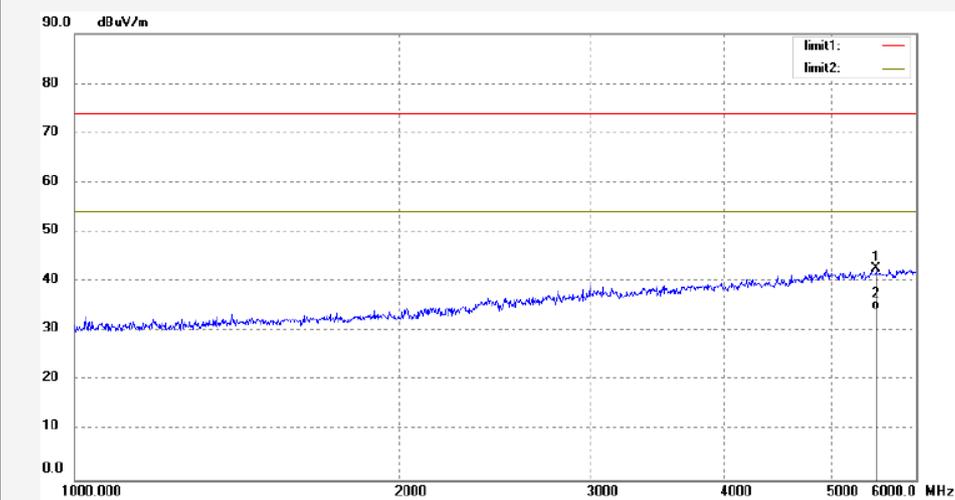


ACCURATE TECHNOLOGY CO., LTD.
 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

| | |
|--|----------------------------|
| Job No.: TUV2015 #3361 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/03/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: Aux in | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 5515.414 | 41.35 | 1.24 | 42.59 | 74.00 | -31.41 | peak | | | |
| 2 | 5515.414 | 33.02 | 1.24 | 34.26 | 54.00 | -19.74 | AVG | | | |

Figure 40: Test figure of Radiated emissions, Mode C, Above 1GHz, Vertical

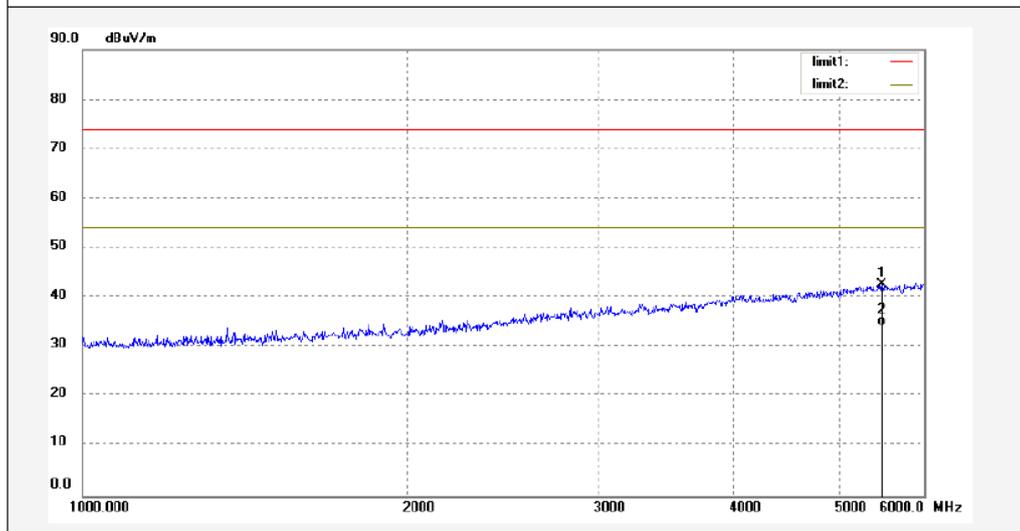


ACCURATE TECHNOLOGY CO., LTD.
 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

| | |
|--|----------------------------|
| Job No.: TUV2015 #3362 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/03/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: Aux in | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 5485.847 | 41.49 | 1.13 | 42.62 | 74.00 | -31.38 | peak | | | |
| 2 | 5485.847 | 33.10 | 1.13 | 34.23 | 54.00 | -19.77 | AVG | | | |

Figure 41: Test figure of Radiated emissions, Mode D, Below 1GHz, Horizontal



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

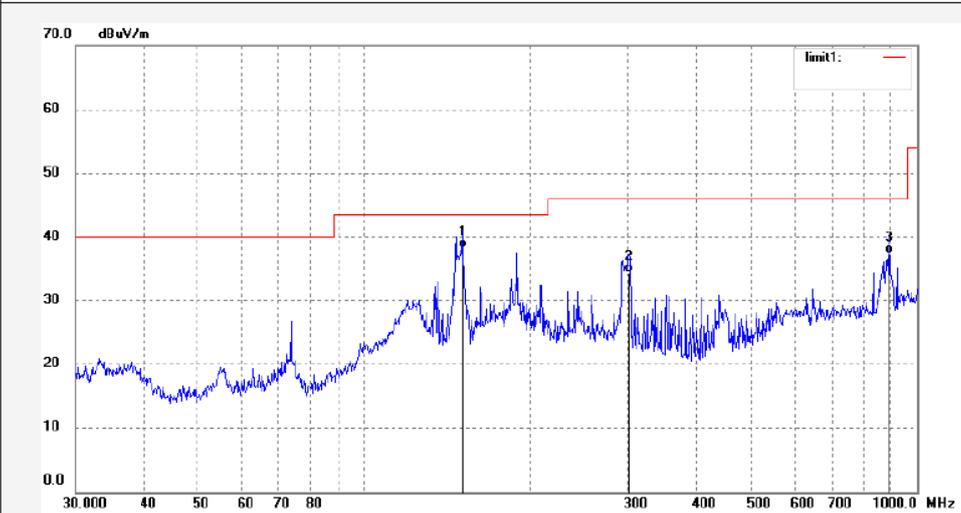
Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

| | |
|--|----------------------------|
| Job No.: TUV2015 #3355 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 2016-6-2 |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: RCA in | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 150.5378 | 53.33 | -15.16 | 38.17 | 43.50 | -5.33 | QP | | | |
| 2 | 301.4223 | 43.67 | -9.26 | 34.41 | 46.00 | -11.59 | QP | | | |
| 3 | 890.7278 | 36.08 | 1.27 | 37.35 | 46.00 | -8.65 | QP | | | |

Figure 42: Test figure of Radiated emissions, Mode D, Below 1GHz, Vertical

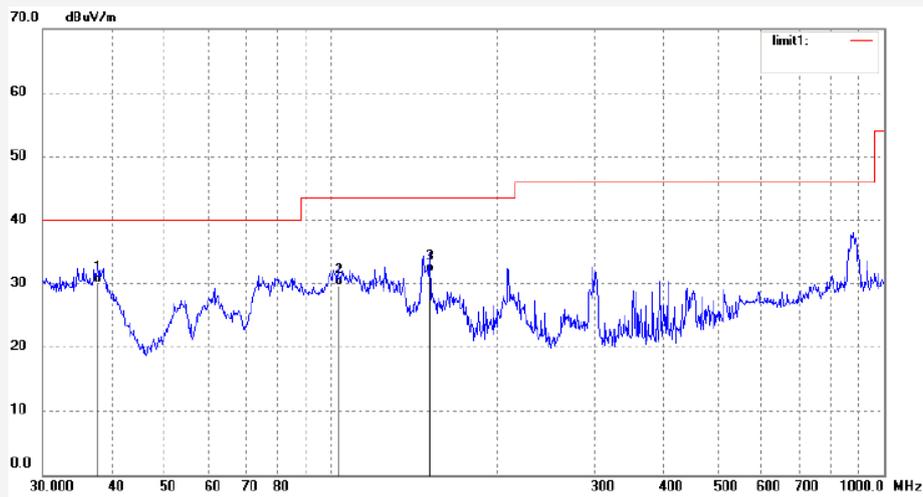


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3354 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 2016-6-2 |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: RCA in | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 37.8121 | 41.01 | -11.05 | 29.96 | 40.00 | -10.04 | QP | | | |
| 2 | 103.0799 | 43.38 | -13.63 | 29.75 | 43.50 | -13.75 | QP | | | |
| 3 | 150.5378 | 46.99 | -15.16 | 31.83 | 43.50 | -11.67 | QP | | | |

Figure 43: Test figure of Radiated emissions, Mode D, Above 1GHz, Horizontal

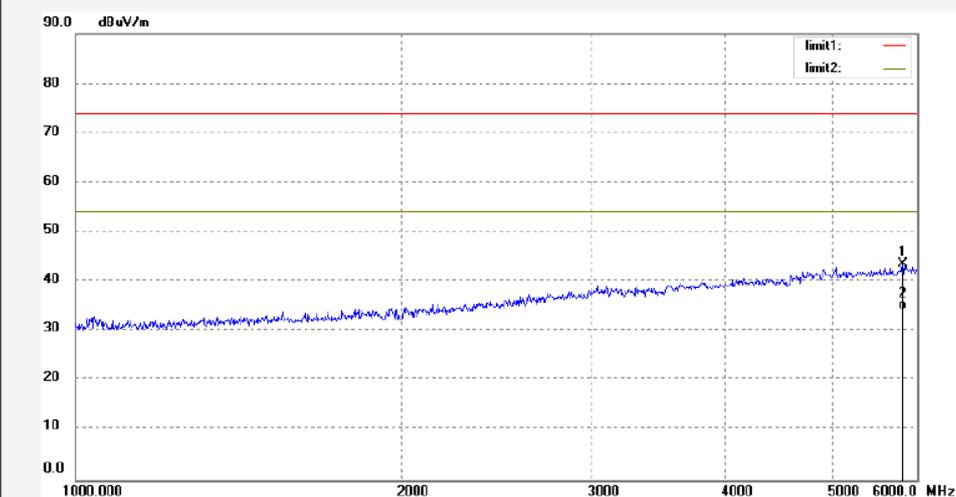


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3357 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/03/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: RCA in | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 5819.996 | 41.48 | 1.97 | 43.45 | 74.00 | -30.55 | peak | | | |
| 2 | 5819.996 | 32.26 | 1.97 | 34.23 | 54.00 | -19.77 | AVG | | | |

Figure 44: Test figure of Radiated emissions, Mode D, Above 1GHz, Vertical

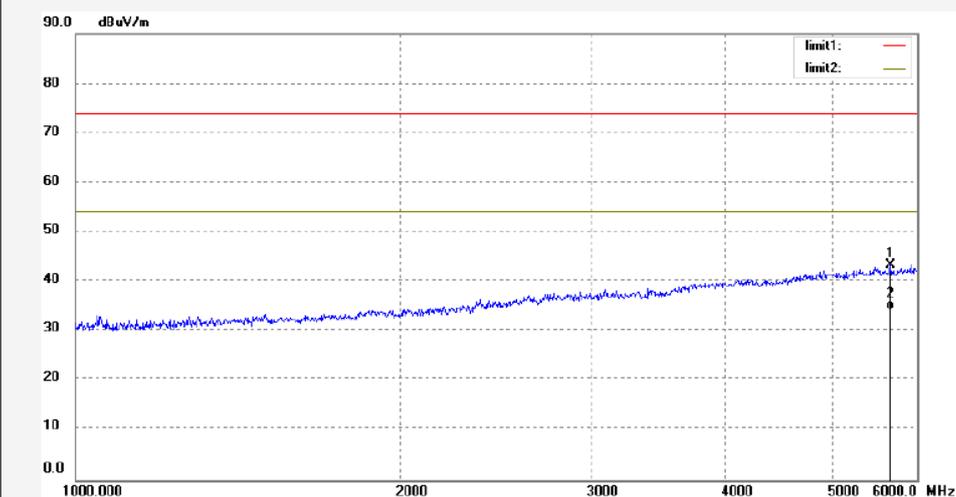


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3358 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/03/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: RCA in | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 5675.819 | 42.04 | 1.20 | 43.24 | 74.00 | -30.76 | peak | | | |
| 2 | 5675.819 | 33.06 | 1.20 | 34.26 | 54.00 | -19.74 | AVG | | | |

Figure 45: Test figure of Radiated emissions, Mode E, Below 1GHz, Horizontal

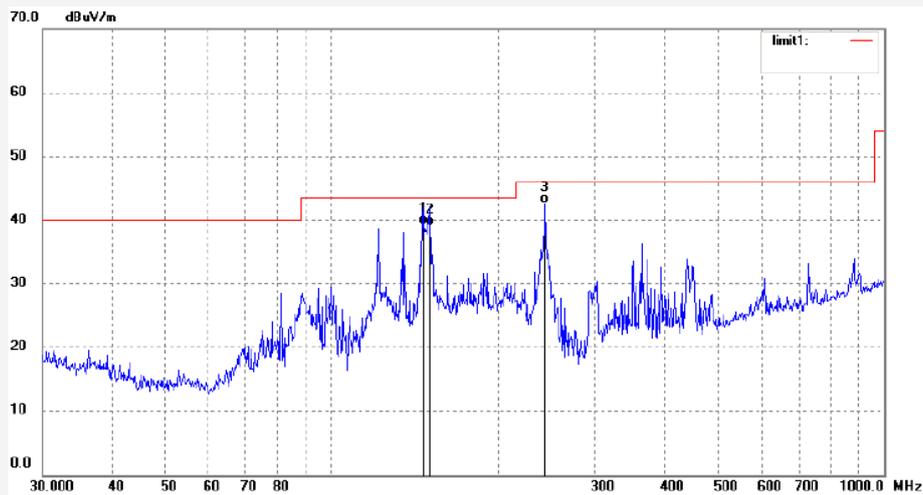


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3352 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 2016-6-2 |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: Optical in | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 146.3735 | 54.44 | -15.21 | 39.23 | 43.50 | -4.27 | QP | | | |
| 2 | 150.5378 | 54.32 | -15.15 | 39.17 | 43.50 | -4.33 | QP | | | |
| 3 | 243.3771 | 53.44 | -10.82 | 42.62 | 46.00 | -3.38 | QP | | | |

Figure 46: Test figure of Radiated emissions, Mode E, Below 1GHz, Vertical

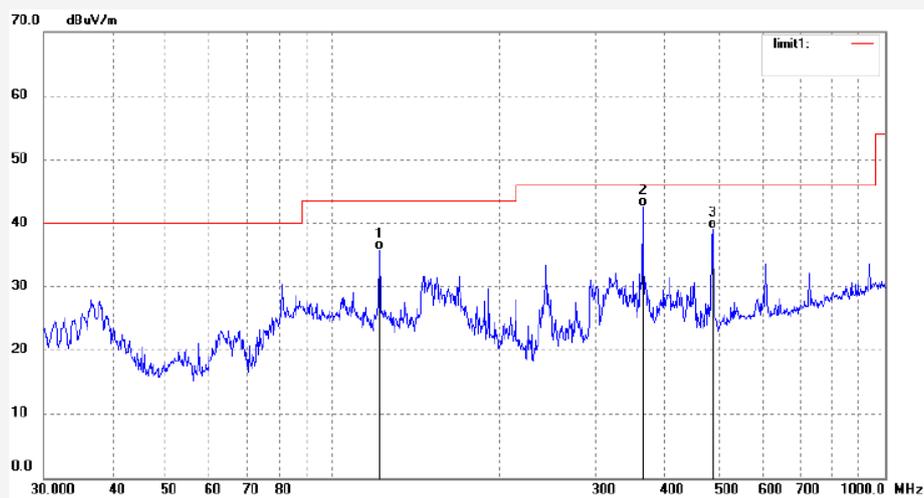


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3351 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 2016-6-2 |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: Optical in | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 121.5485 | 49.10 | -13.32 | 35.78 | 43.50 | -7.72 | QP | | | |
| 2 | 364.2595 | 50.11 | -7.57 | 42.54 | 46.00 | -3.46 | QP | | | |
| 3 | 487.3150 | 44.27 | -5.23 | 39.04 | 46.00 | -6.96 | QP | | | |

Figure 47: Test figure of Radiated emissions, Mode E, Above 1GHz, Horizontal

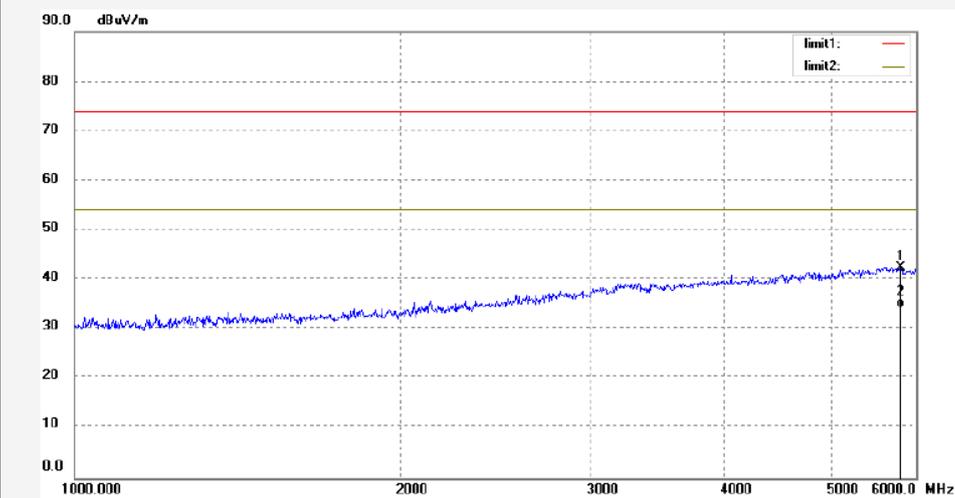


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3360 | Polarization: Horizontal |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/03/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: Optical in | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 5809.577 | 40.53 | 1.98 | 42.51 | 74.00 | -31.49 | peak | | | |
| 2 | 5809.577 | 32.28 | 1.98 | 34.26 | 54.00 | -19.74 | AVG | | | |

Figure 48: Test figure of Radiated emissions, Mode E, Above 1GHz, Vertical

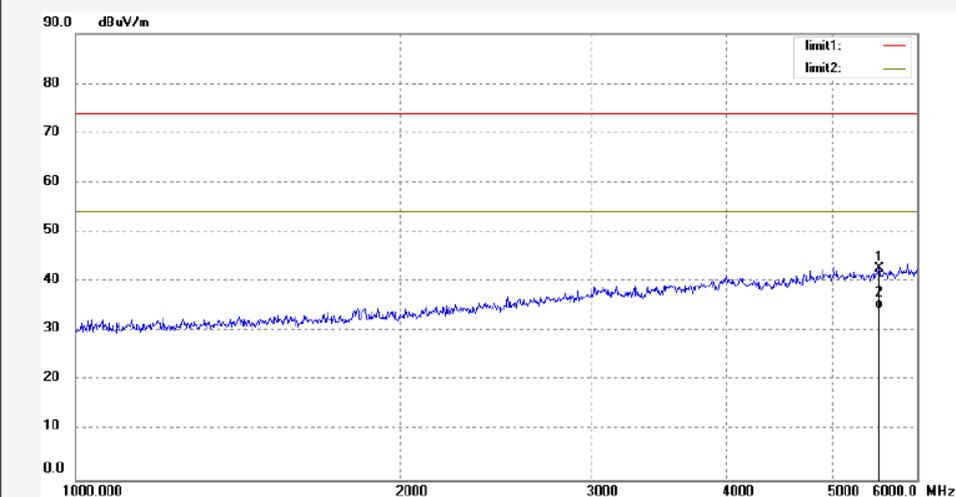


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| | |
|--|----------------------------|
| Job No.: TUV2015 #3359 | Polarization: Vertical |
| Standard: FCC Class B 3M Radiated | Power Source: AC 120V/60Hz |
| Test item: Radiation Test | Date: 16/06/03/ |
| Temp.(C)/Hum.(%) 23 C / 48 % | Time: |
| EUT: 2.0 Channel Bluetooth Sound Bar | Engineer Signature: LGWADE |
| Mode: Optical in | Distance: 3m |
| Model: SB20 | |
| Manufacturer: Comoupal (Group) Corporation | |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1 | 5535.214 | 41.35 | 1.30 | 42.65 | 74.00 | -31.35 | peak | | | |
| 2 | 5535.214 | 33.27 | 1.30 | 34.57 | 54.00 | -19.43 | AVG | | | |