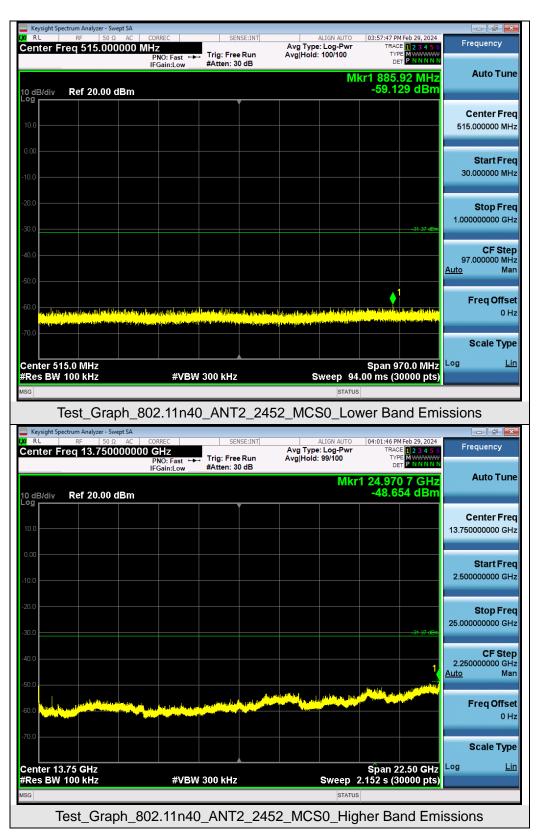
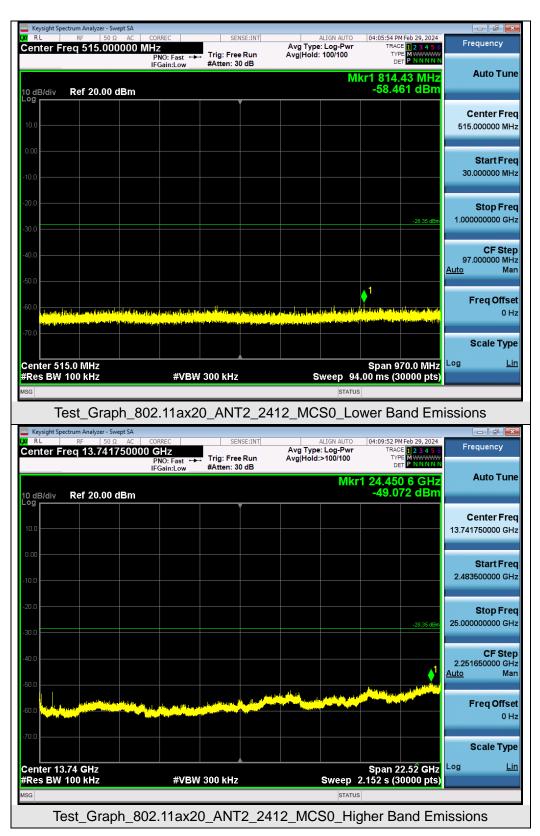
Report No.: AGC16253240201FR03 Page 118 of 168



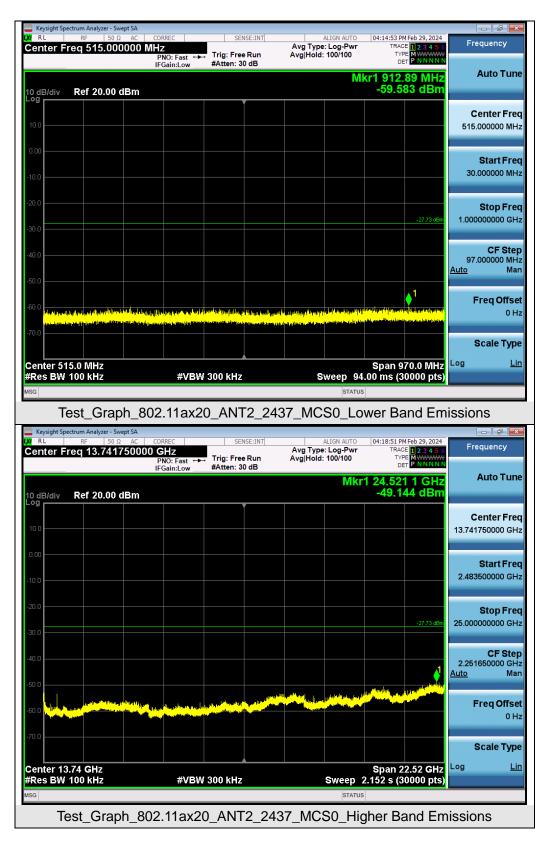


Report No.: AGC16253240201FR03 Page 119 of 168

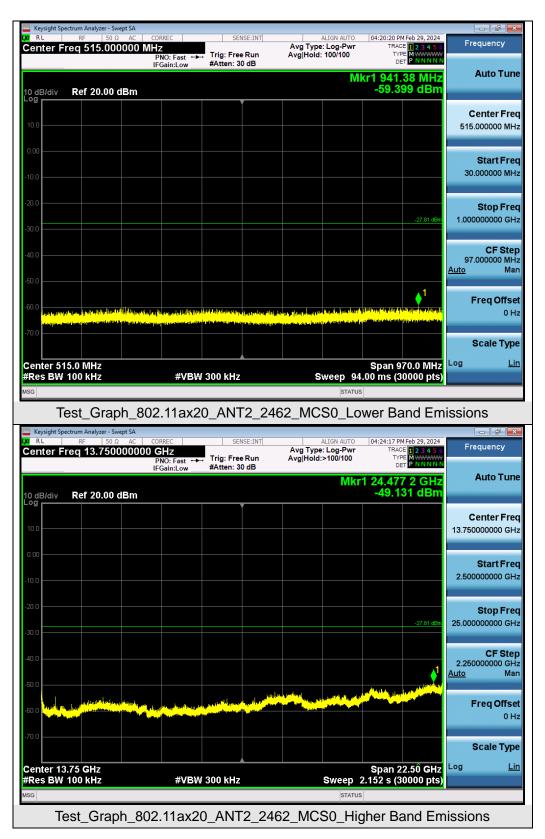




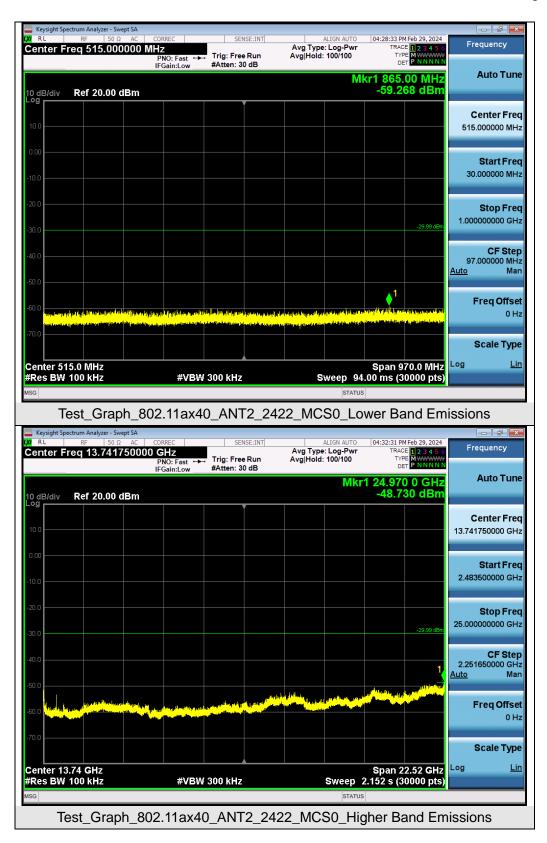




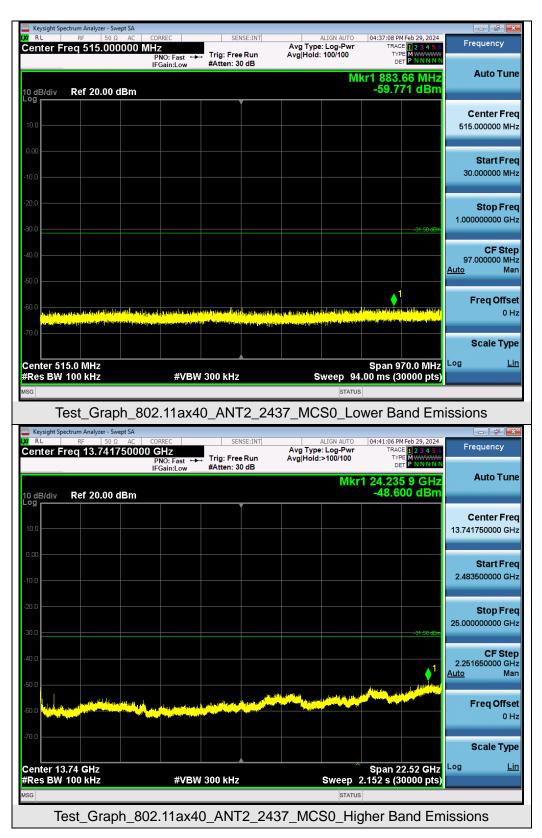




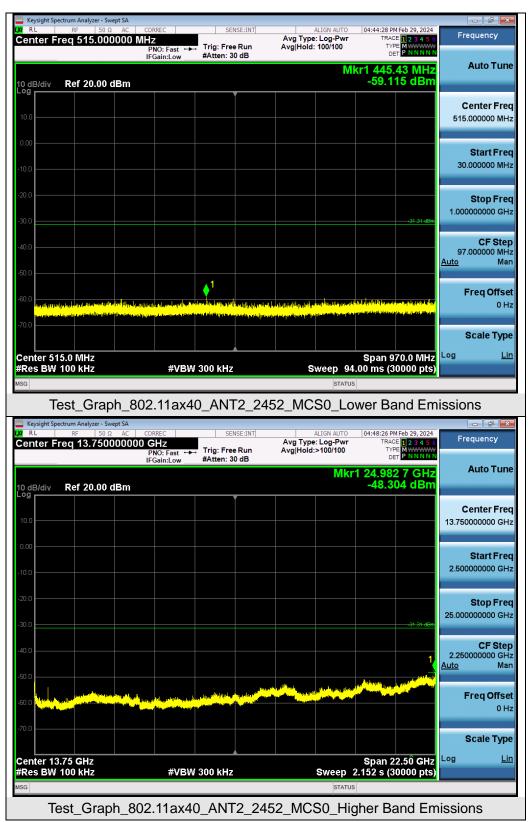






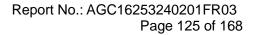






Note: The test data already includes the cable loss and antenna gain, and the margin of each chain is greater

than 3.01dB

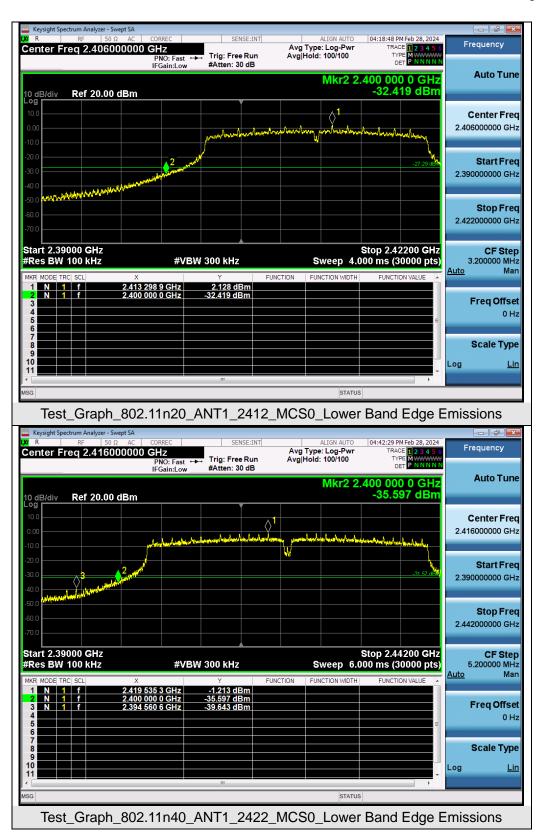




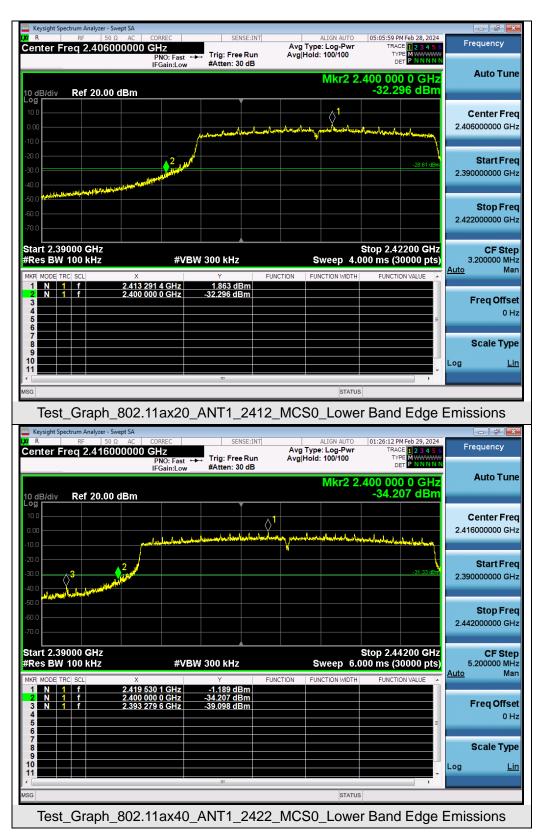


Test Graphs of Band Edge Emissions in Non-Restricted Frequency Bands





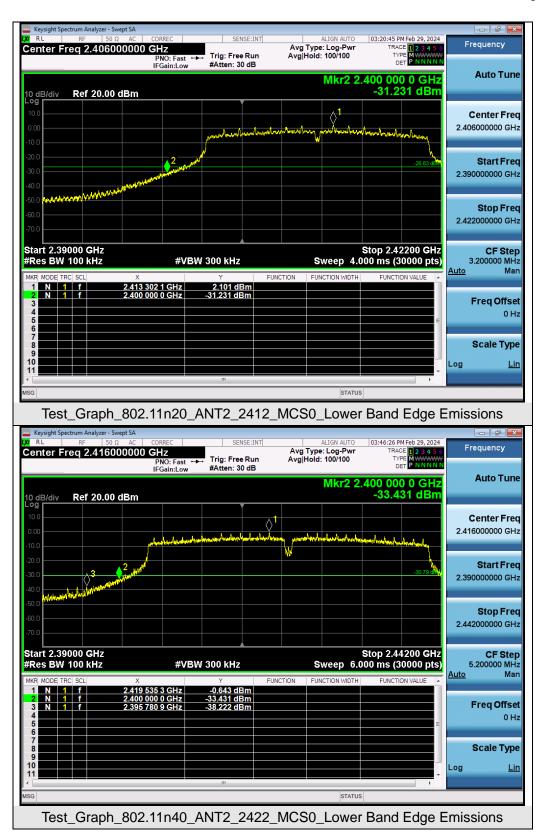




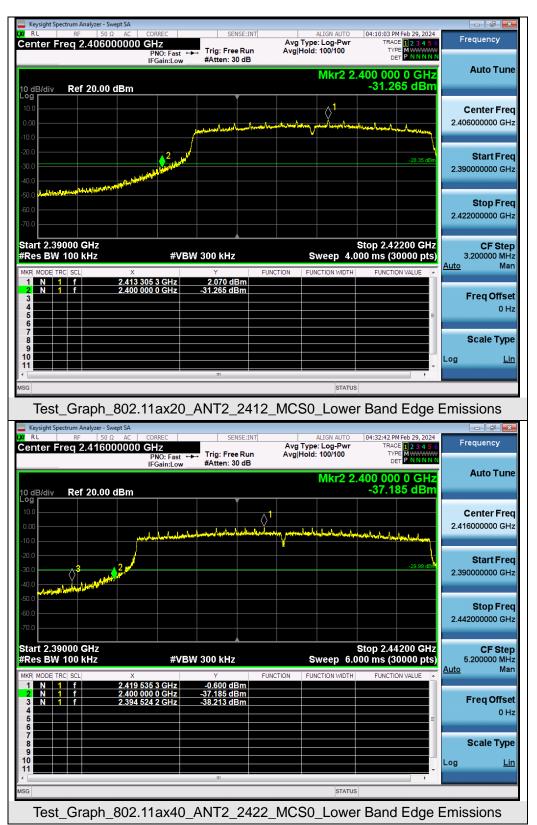




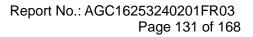








Note: Emissions from 2483.5-2500MHz which fall in the restricted bands had been considered with the radiated emission limits specified.





11. Radiated Spurious Emission

11.1 Measurement Limits

15.209(a) Limit in the below table has to be followed

| Frequencies (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|----------------------|--------------------------------------|----------------------------------|
| 0.009~0.490 | 2400/F(kHz) | 300 |
| 0.490~1.705 | 24000/F(kHz) | 30 |
| 1.705~30.0 | 30 | 30 |
| 30~88 | 100 | 3 |
| 88~216 | 150 | 3 |
| 216~960 | 200 | 3 |
| Above 960 | 500 | 3 |

Note: All modes were tested for restricted band radiated emission, the test records reported below are the worst result compared to other modes.

11.2 Measurement Procedure

- 1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds.
 Any red shan alternative (provided the transmitter operates for longer than 0.1 seconds), or jan cases where the

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pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.

- 8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.
- The following table is the setting of spectrum analyzer and receiver.

| Spectrum Parameter | Setting |
|-----------------------|---|
| Start ~Stop Frequency | 9KHz~150KHz/RB 200Hz for QP |
| Start ~Stop Frequency | 150KHz~30MHz/RB 9KHz for QP |
| Start ~Stop Frequency | 30MHz~1000MHz/RB 120KHz for QP |
| Start ~Stop Frequency | 1GHz~26.5GHz |
| Start ~Stop Trequency | 1MHz/3MHz for Peak, 1MHz/3MHz for Average |

| Receiver Parameter | Setting |
|-----------------------|--------------------------------|
| Start ~Stop Frequency | 9KHz~150KHz/RB 200Hz for QP |
| Start ~Stop Frequency | 150KHz~30MHz/RB 9KHz for QP |
| Start ~Stop Frequency | 30MHz~1000MHz/RB 120KHz for QP |



• Quasi-Peak Measurements below 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. Span was set greater than 1MHz
- 3. RBW = as shown in the table above
- 4. Detector = CISPR quasi-peak
- 5. Sweep time = auto couple
- 6. Trace was allowed to stabilize

• Peak Measurements above 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = peak
- 5. Sweep time = auto couple
- 6. Trace mode = max hold
- 7. Trace was allowed to stabilize

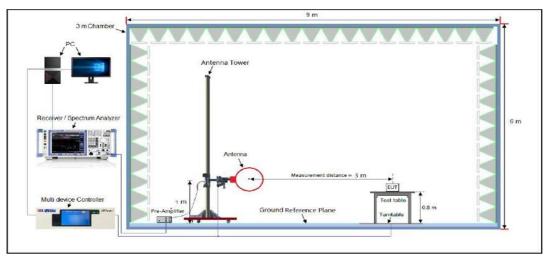
• Average Measurements above 1GHz (Method VB)

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW setting requirements are as follows:
- 4. If the EUT is configured to transmit with duty cycle \ge 98%, set VBW = 10 Hz.
- 5. If the EUT duty cycle is < 98%, set VBW \ge 1/T. T is the minimum transmission duration.
- 6. Detector = Peak
- 7. Sweep time = auto
- 8. Trace mode = max hold

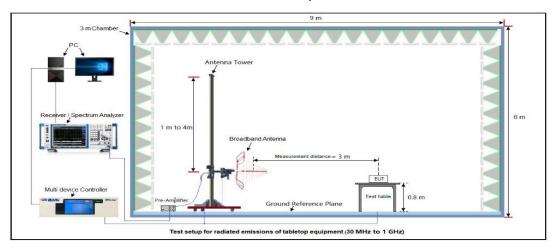


11.3 Measurement Setup (Block Diagram of Configuration)

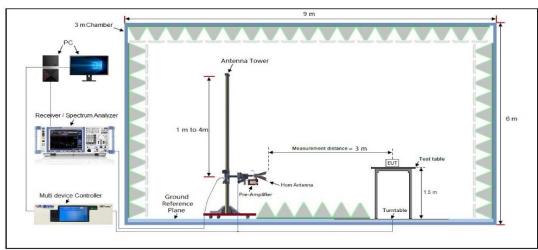




Radiated Emission Test Setup 30MHz-1000MHz



Radiated Emission Test Setup Above 1000MHz



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 Web: http://www.agccert.com/



11.4 Measurement Result

Radiated Emission at 9kHz-30MHz

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

| | | Radia | ted Emissi | on Test R | esults at 3 | 0MHz-1G | θHz | | |
|-------------|---------------|---------|------------------|-------------------|------------------|----------------------|--------|----------|-----------|
| EUT Name | Set Top | Box | Mode | I Name | | SE1800 | AMX | | |
| Temperature | 22.8 ℃ | | | | Relat | Relative Humidity 59 | | 59.2% | |
| Pressure | 960hPa | | | | | Test Voltage Norm | | Norma | l Voltage |
| Test Mode | Mode 16 | | | | | Antenna Polarity | | | ntal |
| 72.0 dB | W/m | | | | | | | | |
| 32 | 1 1 | | | 3 | m the condition | oninseed on ideal | | | |
| -8 | 40 50 | 60 70 | 80 | (MHz) | | 300 40 | 0 500 | 600 700 | 1000.000 |
| - | No. Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | | Over | 000 700 | 1000.000 |
| _ | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | |
| _ | | 48.5016 | 6.80 | 13.30 | 20.10 | 40.00 | -19.90 | peak | |
| - | | 01.2885 | 6.16 | 16.21 | 22.37 | 43.50 | -21.13 | peak | |
| - | | 40.8351 | 8.18 | 15.08 | 23.26 | 43.50 | -20.24 | - | |
| _ | | 41.7426 | 6.20 | 25.04 | 31.24 | | -14.76 | | |
| _ | | 16.3718 | | 25.18 | 31.89 | 46.00 | | · · | |
| - | 6 * 8 | 96.9965 | 5.56 | 31.42 | 36.98 | 46.00 | -9.02 | peak | |
| | | | | | | | | | |



| | | Rau | | ission Test R | esuns at s | | 302 | | |
|----------------------|-------------------|---|--|---|---|---|---|---|-----------|
| EUT Name | Set To | ор Вох | Mod | Model Name | | | SEI800AMX | | |
| Temperature | 22.8 °C | 2 | Rela | Relative Humidity 59.2% | | , D | | | |
| Pressure | 960hPa | | | | Test | Test Voltage Norm | | al Voltage | |
| Test Mode | Mode | 16 | | | Ante | enna Pol | arity | Vertic | al |
| | | | | | | | | | |
| 72.0 dE | 3u₩/m | | | | | | | Limit: Margin: | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | ê |
| | | | | | | | | 5 | |
| 32 | | | | 2 | _ | | \$ | - Junionger | - Aur Mar |
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| | proved the second | igin Missing are survey | Martine | www.t. | M NAM | Marthan and and a second | A Marada Law | | |
| -8 | | | | | WM Jun | | | | |
| 49%) ₁ ,4 | 40 | | D 80 | (MHz) | Measure | 300 40 | | 600 700 | 1000.000 |
| -8 30.000 | | 50 60 70 | 0 80 Readi | мна ng Correct | | 300 40 | | | |
| -8 30.000 | 40 | 50 60 70 | 0 80 Readi | (MHz) ng Correct I Factor | Measure | 300 40 | 0 500 Over | | 1000.000 |
| -8 30.000 | 40 | 50 60 70 | 0 80 Readi Leve dBu\ | (MHz) ng Correct Factor / dB | Measure- ment | 300 40 - Limit | 0 500 Over | 600 700 | 1000.000 |
| -8 30.000 | 40 No. Mk | 50 60 70 Freq. MHz | 0 80 Readi Leve dBuV | (MH2) ng Correct Factor / dB 9 16.93 | Measure- ment dBuV/m | 300 40 Limit dBuV/m | 0 500 Over dB | 600 700 Detector peak | 1000.000 |
| -8 30.000 | 40 No. Mk | 50 60 70 Freq. MHz 43.5057 | 0 80 Readi Leve dBuv 7 8.99 8 10.54 | мна ng Correct Factor / dB 9 16.93 4 18.20 | Measure- ment dBuV/m 25.92 | 300 40 Limit dBuV/m 40.00 43.50 | 0 500 0 500 0 0 Ver dB -14.08 | 600 700 Detector peak peak | 1000.000 |
| -8 30.000 | 40 No. Mk | 50 60 70 . Freq. MHz 43.5057 141.3298 | Readi Leve dBuv 7 8.99 10.54 | (мна) ng Correct Factor / dB 9 16.93 4 18.20 7 17.53 | Measure- ment dBuV/m 25.92 28.74 | 300 40 Limit dBuV/m 40.00 43.50 43.50 | 0 500 Over dB -14.08 -14.76 | Detector peak peak peak | |
| -8 30.000 | 40 No. Mk | 50 60 70 Freq. MHz 43.5057 141.3298 204.9551 | 0 80 Readi Leve dBuv 7 8.99 10.54 10.3 6 6.54 | (MHz) ng Correct Factor / dB 9 16.93 4 18.20 7 17.53 4 26.09 | Measure- ment dBuV/m 25.92 28.74 27.90 | 300 40 Limit dBuV/m 40.00 43.50 43.50 | 0 500 Over dB -14.08 -14.76 -15.60 | Detector peak peak peak peak | |

RESULT: Pass

Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.



| EUT Name | Set Top Box | Set Top Box | | | SEI80 | OAMX | |
|---|---|---|--|---|---|---|--|
| Temperature | 22.8 ℃ | | Rela | Relative Humidity | | 59.2% | |
| Pressure | 960hPa | 960hPa | | Test Voltage | | Normal Voltage | |
| Test Mode | Mode 16 | Mode 16 | | enna Polarity | Horizo | ntal | |
| | | | | | | | |
| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type | |
| (MHz) | (dBµV) | ~ | | (dBµV/m) | (dB) | value Type | |
| 4844.000 | 47.64 | 0.08 | 47.72 | 74 | -26.28 | peak | |
| 4844.000 | 38.49 | 0.08 | 38.57 | 54 | -15.43 | AVG | |
| 7266.000 | 42.13 | 2.21 | 44.34 | 74 | -29.66 | peak | |
| 7266.000 | 33.48 | 2.21 | 35.69 | 54 | -18.31 | AVG | |
| | | | | | | | |
| | | | | | | | |
| EUT Name | Set Top Box | | amplifier. | el Name | SE180 | 0AMX | |
| EUT Name Temperature | | | Mod | el Name tive Humidity | SEI80 | | |
| Temperature | Set Top Box | | Mod Rela | | 59.2% | | |
| Temperature | Set Top Box 22.8℃ | | Mod Rela Test | tive Humidity | 59.2% | I Voltage | |
| Temperature Pressure Test Mode | Set Top Box 22.8°C 960hPa Mode 16 | | Mod Rela Test Ante | tive Humidity Voltage nna Polarity | 59.2% Norma Vertica | I Voltage | |
| Temperature Pressure Test Mode Frequency | Set Top Box 22.8°C 960hPa Mode 16 Meter Reading | Factor | Mod Rela Test Ante Emission Level | tive Humidity Voltage enna Polarity | 59.2% Norma Vertica Margin | I Voltage | |
| Temperature Pressure Test Mode Frequency (MHz) | Set Top Box 22.8°C 960hPa Mode 16 Meter Reading (dBµV) | Factor (dB) | Mod Rela Test Ante Emission Level (dBµV/m) | tive Humidity Voltage enna Polarity Limits (dBµV/m) | 59.2% Norma Vertica Margin (dB) | al Voltage al Value Type | |
| Temperature Pressure Test Mode Frequency (MHz) 4844.000 | Set Top Box 22.8 °C 960hPa Mode 16 Meter Reading (dBµV) 48.91 | Factor (dB) 0.08 | Mod Rela Test Ante Emission Level (dBµV/m) 48.99 | tive Humidity Voltage mna Polarity Limits (dBµV/m) 74 | 59.2% Norma Vertica Margin (dB) -25.01 | al Voltage al Value Type peak | |
| Temperature Pressure Test Mode Frequency (MHz) 4844.000 4844.000 | Set Top Box 22.8℃ 960hPa Mode 16 Meter Reading (dBµV) 48.91 37.54 | Factor (dB) 0.08 0.08 | Mod Rela Test Ante Emission Level (dBµV/m) 48.99 37.62 | tive Humidity Voltage nna Polarity Limits (dBµV/m) 74 54 | 59.2% Norma Vertica Margin (dB) -25.01 -16.38 | al Voltage al Value Type peak AVG | |
| Temperature Pressure Test Mode Frequency (MHz) 4844.000 4844.000 7266.000 | Set Top Box 22.8 °C 960hPa Mode 16 Meter Reading (dBµV) 48.91 37.54 42.22 | Factor (dB) 0.08 0.08 2.21 | Моd Rela Тest Ante Emission Level (dBµV/m) 48.99 37.62 44.43 | tive Humidity Voltage Inna Polarity Limits (dBµV/m) 74 54 74 | 59.2% Norma Vertica Margin (dB) -25.01 -16.38 -29.57 | I Voltage | |
| Temperature Pressure Test Mode Frequency (MHz) 4844.000 4844.000 | Set Top Box 22.8℃ 960hPa Mode 16 Meter Reading (dBµV) 48.91 37.54 | Factor (dB) 0.08 0.08 | Mod Rela Test Ante Emission Level (dBµV/m) 48.99 37.62 | tive Humidity Voltage nna Polarity Limits (dBµV/m) 74 54 | 59.2% Norma Vertica Margin (dB) -25.01 -16.38 | al Voltage al Value Type peak AVG | |
| Temperature Pressure Test Mode Frequency (MHz) 4844.000 4844.000 7266.000 | Set Top Box 22.8 °C 960hPa Mode 16 Meter Reading (dBµV) 48.91 37.54 42.22 | Factor (dB) 0.08 0.08 2.21 | Моd Rela Тest Ante Emission Level (dBµV/m) 48.99 37.62 44.43 | tive Humidity Voltage Inna Polarity Limits (dBµV/m) 74 54 74 | 59.2% Norma Vertica Margin (dB) -25.01 -16.38 -29.57 | I Voltage | |

RESULT: Pass



| Radiated Emissions T | Fest Results above 1GHz |
|----------------------|--------------------------------|
|----------------------|--------------------------------|

| EUT Name | Set Top Box | | N | Nodel Name | SE1800 | DAMX | |
|--|---|--|---|--|---|---|--|
| Temperature | 22.8 ℃ | | F | Relative Humidity | 59.2% | 59.2% | |
| Pressure | 960hPa | 960hPa | | Fest Voltage | Norma | Normal Voltage | |
| Test Mode | Mode 17 | Mode 17 | | Antenna Polarity | Horizo | ntal | |
| | · | | | | · | | |
| Frequency | Meter Reading | Factor Emission | | evel Limits | Margin | Value Type | |
| (MHz) | (dBµV) | (dB) | (dBµV/m |) (dBµV/m) | (dB) | value Type | |
| 4874.000 | 48.61 | 0.14 | 48.75 | 74 | -25.25 | peak | |
| 4874.000 | 38.49 | 0.14 | 38.63 | 54 | -15.37 | AVG | |
| 7311.000 | 42.31 | 2.36 | 44.67 | 74 | -29.33 | peak | |
| 7311.000 | 32.64 | 2.36 | 35 | 54 | -19 | AVG | |
| IFactor = Δntor | na Factor + Cable | | omplition | | | | |
| EUT Name | | LOSS – Pie- | | Nodel Name | SE1800 | | |
| | Set Top Box 22.8°C | 2055 – Pie- | N | Model Name Relative Humidity | SEI800 | | |
| EUT Name | Set Top Box | 2055 – PTe- | N F | | 59.2% | | |
| EUT Name Temperature | Set Top Box 22.8°C | LOSS – PTE- | N F T | Relative Humidity | 59.2% | l Voltage | |
| EUT Name Temperature Pressure | Set Top Box 22.8℃ 960hPa | Factor | N F T | Relative Humidity Fest Voltage Antenna Polarity | 59.2% | I Voltage | |
| EUT Name Temperature Pressure Test Mode | Set Top Box 22.8℃ 960hPa Mode 17 | | N F T | Relative Humidity Test Voltage Antenna Polarity evel Limits | 59.2% Norma Vertica | l Voltage | |
| EUT Name Temperature Pressure Test Mode | Set Top Box 22.8°C 960hPa Mode 17 Meter Reading | Factor | R T A Emission L | Relative Humidity Test Voltage Antenna Polarity evel Limits | 59.2% Norma Vertica Margin | I Voltage | |
| EUT Name Temperature Pressure Test Mode Frequency (MHz) | Set Top Box 22.8°C 960hPa Mode 17 Meter Reading (dBµV) | Factor (dB) | F T Emission L (dBµV/m | Relative Humidity Fest Voltage Antenna Polarity evel Limits) (dBµV/m) | 59.2% Norma Vertica Margin (dB) | I Voltage II Value Type | |
| EUT Name Temperature Pressure Test Mode Frequency (MHz) 4874.000 | Set Top Box 22.8℃ 960hPa Mode 17 Meter Reading (dBµV) 46.29 | Factor (dB) 0.14 | Emission Lu (dBµV/m 46.43 | Relative Humidity Fest Voltage Antenna Polarity evel Limits) (dBµV/m) 74 | 59.2% Norma Vertica Margin (dB) -27.57 | I Voltage I Value Type peak | |
| EUT Name Temperature Pressure Test Mode Frequency (MHz) 4874.000 4874.000 | Set Top Box 22.8 °C 960hPa Mode 17 Meter Reading (dBµV) 46.29 38.42 | Factor (dB) 0.14 0.14 | M F T A Emission Lu (dBµV/m 46.43 38.56 | Relative Humidity Test Voltage Antenna Polarity evel Limits) (dBµV/m) 74 54 | 59.2% Norma Vertica Margin (dB) -27.57 -15.44 | I Voltage I Value Type peak AVG | |
| EUT Name Temperature Pressure Test Mode Frequency (MHz) 4874.000 4874.000 7311.000 | Set Top Box 22.8 °C 960hPa Mode 17 Meter Reading (dBµV) 46.29 38.42 42.16 | Factor (dB) 0.14 0.14 2.36 | Εmission Le (dBμV/m) 46.43 38.56 44.52 | Relative Humidity Fest Voltage Antenna Polarity evel Limits) (dBµV/m) 74 54 74 | 59.2% Norma Vertica Margin (dB) -27.57 -15.44 -29.48 | I Voltage | |

RESULT: Pass



Radiated Emissions Test Results above 1GHz

| EUT Name | Set Top Box | | 1 | Model | Name | SE1800A | MX |
|--|---|--|---|--|--|---|--|
| Temperature | 22.8 ℃ | 22.8 ℃ | | | ive Humidity 59.2% | | |
| Pressure | 960hPa | 960hPa | | Test Voltage | | Normal Voltage | |
| Test Mode | Mode 18 | Mode 18 | | Antenr | na Polarity | Horizont | al |
| | | | | | | | |
| Frequency | Meter Reading | Factor Emissio | | n Level | Limits | Margin | Value Type |
| (MHz) | (dBµV) | (dB) | (dBµV/ | //m) | (dBµV/m) | (dB) | value Type |
| 4904.000 | 48.61 | 0.22 | 48.8 | 3 | 74 | -25.17 | peak |
| 4904.000 | 38.94 | 0.22 | 39.1 | 6 | 54 | -14.84 | AVG |
| 7356.000 | 43.25 | 2.64 | 45.8 | 9 | 74 | -28.11 | peak |
| 7356.000 | 31.57 | 2.64 | 34.2 | 1 | 54 | -19.79 | AVG |
| | | | | | | | |
| | | | | | | | |
| Remark: | | | | | | | |
| | na Factor + Cable | e Loss – Pre- | amplifier. | | | | |
| | nna Factor + Cable | e Loss – Pre- | amplifier. | | | | |
| Factor = Anter | nna Factor + Cable Set Top Box | e Loss – Pre- | | Model | Name | SE1800A | MX |
| Factor = Anter | | e Loss – Pre- | | | Name /e Humidity | SE1800A 59.2% | MX |
| Factor = Anter | Set Top Box | e Loss – Pre- | | | e Humidity | | |
| Factor = Anter EUT Name Temperature Pressure | Set Top Box 22.8℃ | e Loss – Pre- | | Relativ Test Vo | e Humidity | 59.2% | |
| Factor = Anter | Set Top Box 22.8℃ 960hPa Mode 18 | | | Relativ Test Vo Antenr | ve Humidity oltage na Polarity | 59.2% Normal V Vertical | |
| Factor = Anter | Set Top Box 22.8°C 960hPa Mode 18 Meter Reading | Factor | Emission | Relativ Test Vo Antenr | ve Humidity oltage na Polarity Limits | 59.2% Normal Vertical Margin | |
| Factor = Anter | Set Top Box 22.8°C 960hPa Mode 18 Meter Reading (dBµV) | Factor (dB) | Emission (dBµV/ | Relativ Test Vo Antenr | ve Humidity oltage na Polarity Limits (dBµV/m) | 59.2% Normal Vertical Margin (dB) | Voltage Value Type |
| Factor = Anter EUT Name Temperature Pressure Test Mode Frequency (MHz) 4904.000 | Set Top Box 22.8 °C 960hPa Mode 18 Meter Reading (dBµV) 47.94 | Factor (dB) 0.22 | Emission (dBµV/ 48.1 | Relativ Test Vo Antenr | ve Humidity oltage na Polarity Limits (dBµV/m) 74 | 59.2% Normal V Vertical Margin (dB) -25.84 | Voltage Value Type peak |
| Factor = Anter EUT Name Temperature Pressure Test Mode Frequency (MHz) 4904.000 4904.000 | Set Top Box 22.8 °C 960hPa Mode 18 Meter Reading (dBµV) 47.94 38.26 | Factor (dB) 0.22 0.22 | Emission (dBµV/ 48.10 38.4 | Relativ Test Vo Antenr | ve Humidity oltage na Polarity Limits (dBµV/m) 74 54 | 59.2% Normal V Vertical Margin (dB) -25.84 -15.52 | Voltage Value Type peak AVG |
| Factor = Anter EUT Name Temperature Pressure Test Mode Frequency (MHz) 4904.000 7356.000 | Set Top Box 22.8 °C 960hPa Mode 18 Meter Reading (dBµV) 47.94 38.26 42.18 | Factor (dB) 0.22 0.22 2.64 | Emission (dBµV/ 48.10 38.44 44.82 | Relativ Test Vo Antenr Level (/m) 6 .8 .2 | ve Humidity oltage na Polarity Limits (dBµV/m) 74 54 74 | 59.2% Normal V Vertical Margin (dB) -25.84 -15.52 -29.18 | Voltage Value Type peak AVG peak |
| Factor = Anter EUT Name Temperature Pressure Test Mode Frequency (MHz) 4904.000 4904.000 | Set Top Box 22.8 °C 960hPa Mode 18 Meter Reading (dBµV) 47.94 38.26 | Factor (dB) 0.22 0.22 | Emission (dBµV/ 48.10 38.4 | Relativ Test Vo Antenr Level (/m) 6 .8 .2 | ve Humidity oltage na Polarity Limits (dBµV/m) 74 54 | 59.2% Normal V Vertical Margin (dB) -25.84 -15.52 | Voltage Value Type peak AVG |
| Factor = Anter EUT Name Temperature Pressure Test Mode Frequency (MHz) 4904.000 7356.000 | Set Top Box 22.8 °C 960hPa Mode 18 Meter Reading (dBµV) 47.94 38.26 42.18 | Factor (dB) 0.22 0.22 2.64 | Emission (dBµV/ 48.10 38.44 44.82 | Relativ Test Vo Antenr Level (/m) 6 .8 .2 | ve Humidity oltage na Polarity Limits (dBµV/m) 74 54 74 | 59.2% Normal V Vertical Margin (dB) -25.84 -15.52 -29.18 | Voltage Value Type peak AVG peak |
| Factor = Anter EUT Name Temperature Pressure Test Mode Frequency (MHz) 4904.000 7356.000 | Set Top Box 22.8 °C 960hPa Mode 18 Meter Reading (dBµV) 47.94 38.26 42.18 | Factor (dB) 0.22 0.22 2.64 | Emission (dBµV/ 48.10 38.44 44.82 | Relativ Test Vo Antenr Level (/m) 6 .8 .2 | ve Humidity oltage na Polarity Limits (dBµV/m) 74 54 74 | 59.2% Normal V Vertical Margin (dB) -25.84 -15.52 -29.18 | Voltage Value Type peak AVG peak |

RESULT: Pass

Note:

- 1. The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.
- 2. Factor = Antenna Factor + Cable loss Pre-amplifier gain, Margin = Emission Level-Limit.
- 3. The "Factor" value can be calculated automatically by software of measurement system.

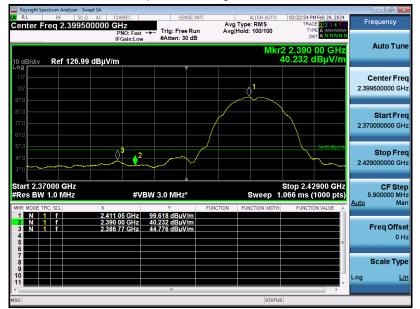


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 1 | Antenna Polarity | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement

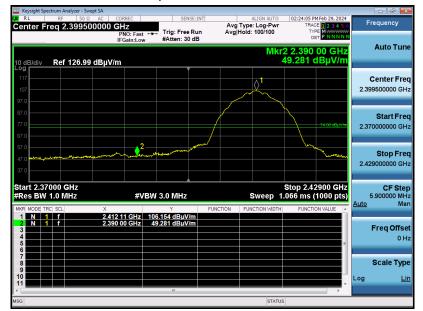


RESULT: Pass

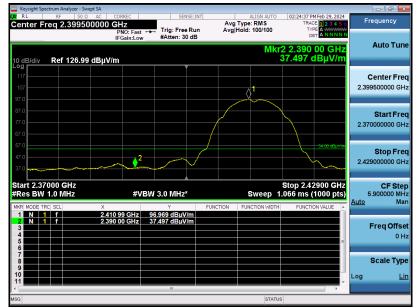


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 1 | Antenna Polarity | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement

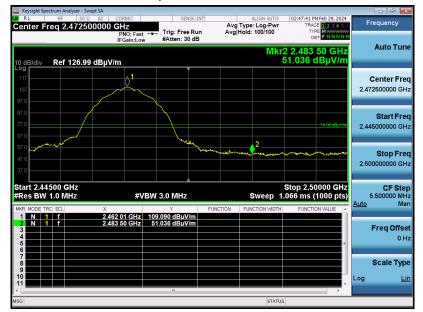


RESULT: Pass

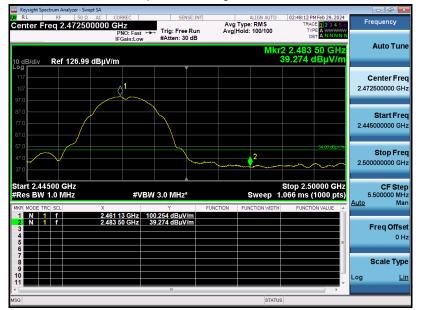


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 3 | Antenna Polarity | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass



| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 3 | Antenna Polarity | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

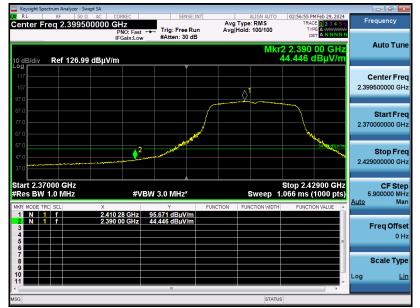


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 4 | Antenna Polarity | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

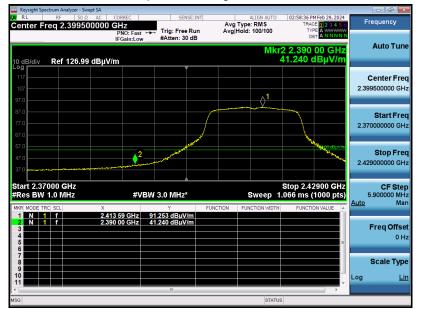


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 4 | Antenna Polarity | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass



| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 6 | Antenna Polarity | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

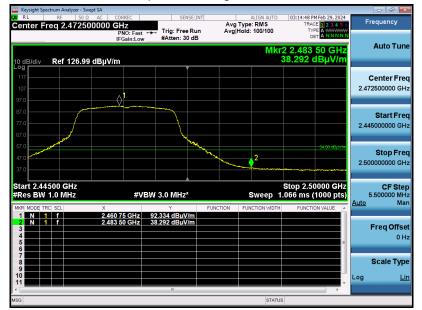


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 6 | Antenna Polarity | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

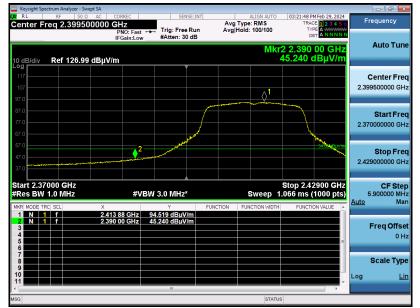


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 7 | Antenna Polarity | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

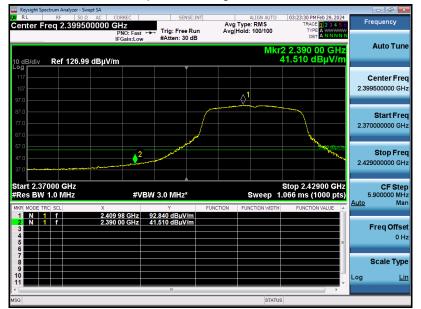


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 7 | Antenna Polarity | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

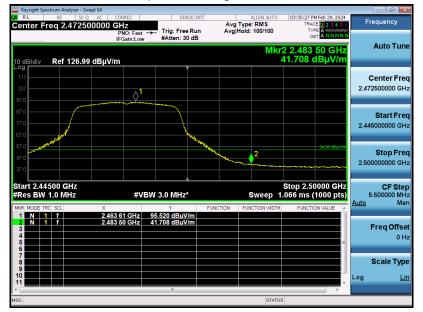


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 9 | Antenna Polarity | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

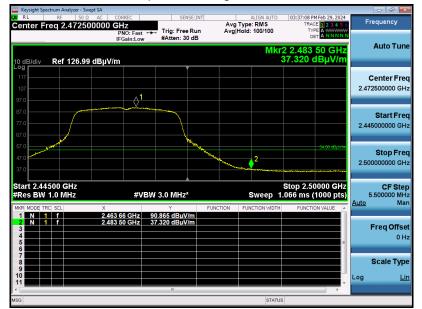


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 9 | Antenna Polarity | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass



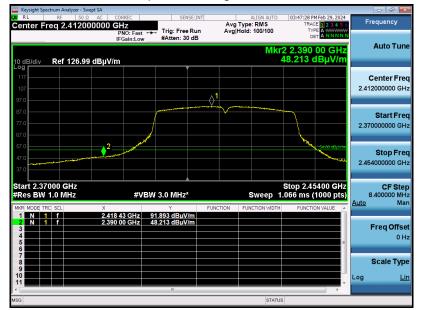
| Band Edge Emission Test Results for Restricted Ban | ds |
|--|----|
|--|----|

| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 10 | Antenna Polarity | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

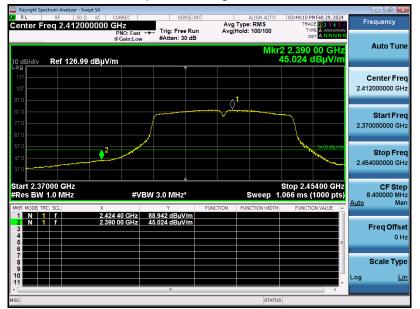


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 10 | Antenna Polarity | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

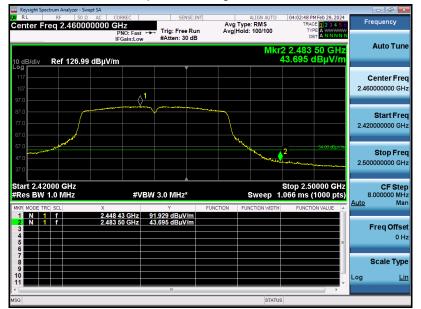


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 12 | Antenna Polarity | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass



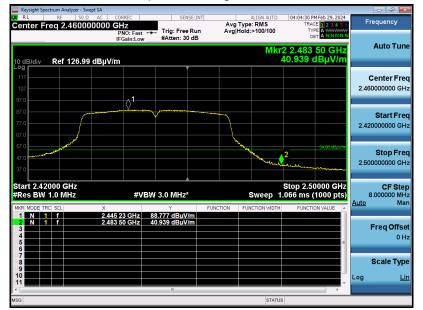
| Band Edge Emission Test Results for Restricted Ban | ds |
|--|----|
|--|----|

| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 12 | Antenna Polarity | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

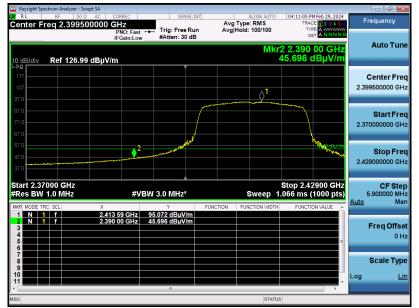


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 13 | Antenna Polarity | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement

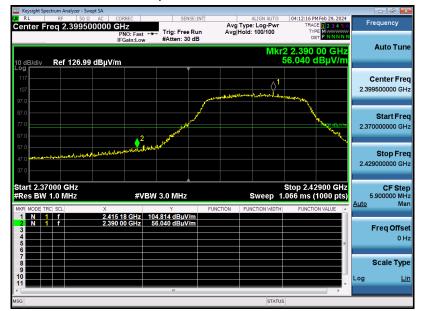


RESULT: Pass

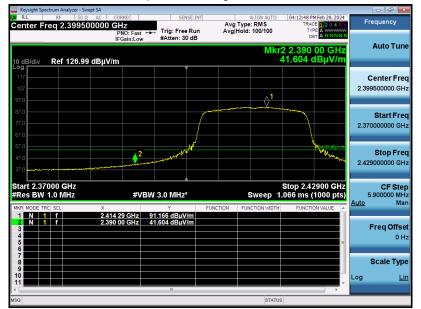


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 13 | Antenna Polarity | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

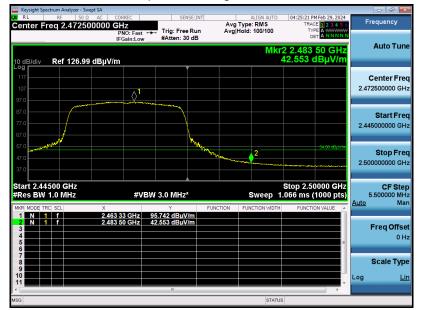


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 15 | Antenna Polarity | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

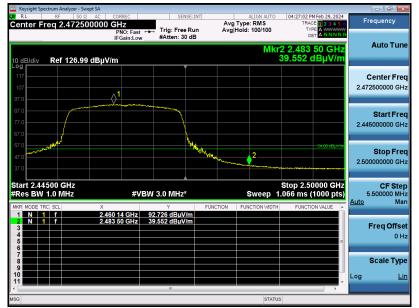


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 15 | Antenna Polarity | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

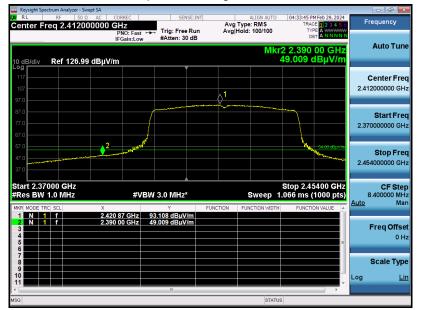


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 16 | Antenna Polarity | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

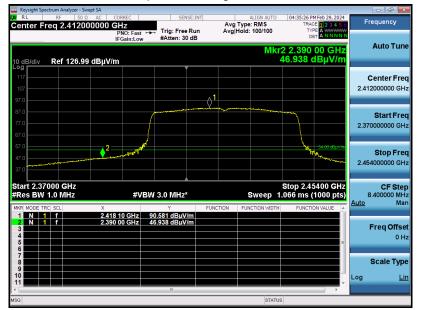


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 16 | Antenna Polarity | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

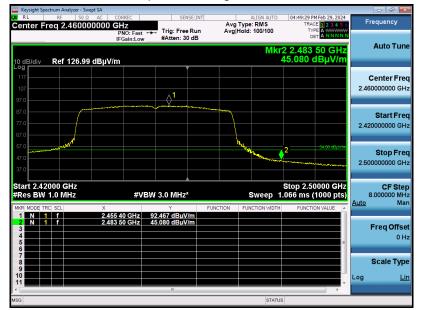


| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 18 | Antenna Polarity | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass



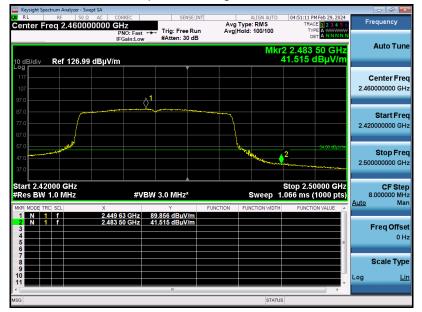
| Band Edge Emission Test Results for Restricted Ban | ds |
|--|----|
|--|----|

| EUT Name | Set Top Box | Model Name | SEI800AMX |
|-------------|-------------|-------------------|----------------|
| Temperature | 25°C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 18 | Antenna Polarity | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

Note: The factor had been edited in the "Input Correction" of the Spectrum Analyzer.



12. AC Power Line Conducted Emission

12.1 Measurement Limits

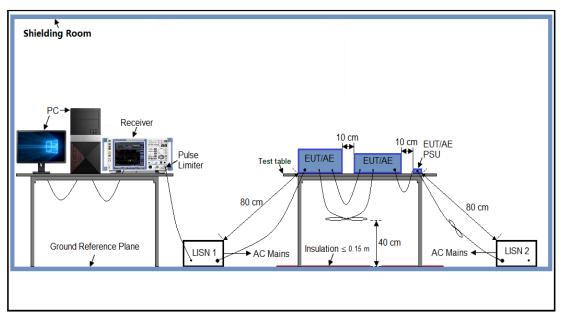
| Frequency | Maximum RF Line Voltage | | |
|---------------|-------------------------|----------------|--|
| Frequency | Q.P (dBµV) | Average (dBµV) | |
| 150kHz~500kHz | 66-56 | 56-46 | |
| 500kHz~5MHz | 56 | 46 | |
| 5MHz~30MHz | 60 | 50 | |

Note:

1. The lower limit shall apply at the transition frequency.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

12.2 Block Diagram of Line Conducted Emission Test





12.3 Preliminary Procedure of Line Conducted Emission Test

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipment received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received DC 12V power from adapter which received AC120V/60Hz power from a LISN.
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 Ohm load; the second scan had Line 1 connected to a 50 Ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

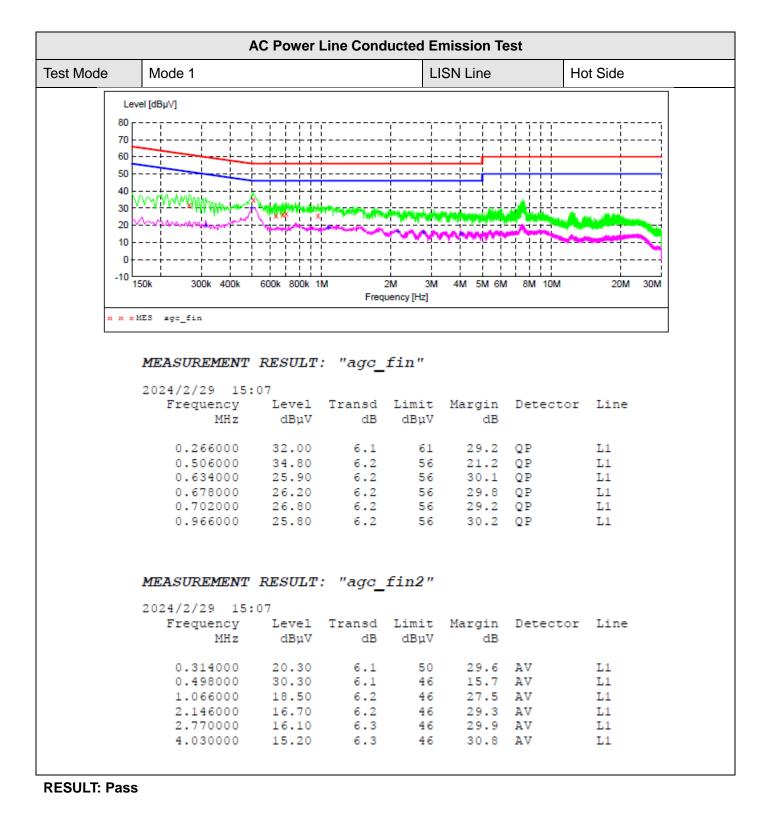
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

12.4 Final Procedure of Line Conducted Emission Test

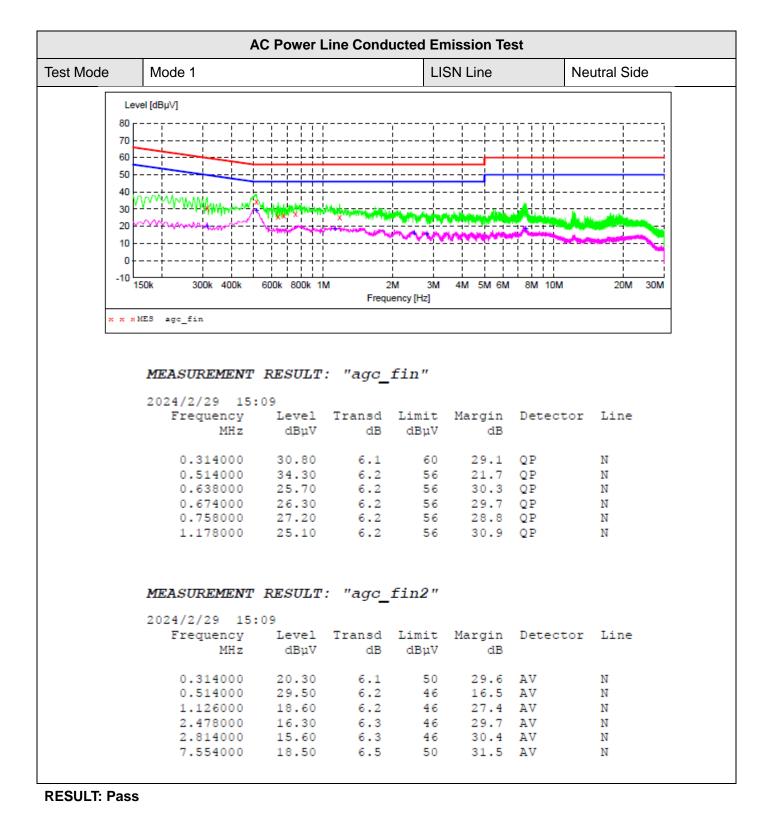
- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less – 2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case was reported on the Summary Data page.

12.5 Test Result of Line Conducted Emission Test











Report No.: AGC16253240201FR03 Page 168 of 168

Appendix I: Photographs of Test Setup

Refer to the Report No.: AGC16253240201AP01

Appendix II: Photographs of Test EUT

Refer to the Report No.: AGC16253240201AP02

-----End of Report-----



Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").

2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.

3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.

4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.

5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.

6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.

7. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.

8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.

9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.