# FCC RADIO TEST REPORT
# FCC ID: 2AC3FTS400

**Product：** Car DVR

**Trade Name：** To›world be'stime 水木年华

**Model Name：** TS400

**Serial Model：** TS400S

**Report No.：** BZT-2014NT0814160F

## Prepared for

Shenzhen Toworld Technology Co. LTD.

3rd. FL, 70th Building, No.162 Nan Huan Road, Wan Feng Industry Park, Sha Jing Town, Bao An District, Shenzhen City, Guangdong Province, China

## Prepared by

BZT Testing Technology Co., Ltd

Add. : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.

# TEST RESULT CERTIFICATION

| | |
|---|---|
| **Applicant's name** | Shenzhen Toworld Technology Co. LTD. |
| Address | 3rd. FL, 70th Building, No.162 Nan Huan Road, Wan Feng Industry Park, Sha Jing Town, Bao An District, Shenzhen City, Guangdong Province, China |
| **Manufacture's Name** | Shenzhen Toworld Technology Co. LTD. |
| Address | 3rd. FL, 70th Building, No.162 Nan Huan Road, Wan Feng Industry Park, Sha Jing Town, Bao An District, Shenzhen City, Guangdong Province, China |
| **Product description** | |
| Product name | Car DVR |
| Model and/or type reference | TS400 |
| Serial Model | TS400S |
| DIFF | All model's the function, software and electric circuit are the same , only with a product color and model named different. The test mode is TS400. |
| **Standards** | FCC Part15.247 |
| Test procedure | ANSI C63.4-2003 |

This device described above has been tested by BZT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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| | |
|---|---|
| **Date of Test** | |
| Date (s) of performance of tests | 12 August. 2014 ~17 August. 2014 |
| Date of Issue | 18 August. 2014 |
| Test Result | **Pass** |

Testing Engineer : Lynn Chen

(Lynn Chen)

Technical Manager : Carlen Liu

(Carlen Liu)

Authorized Signatory : Tommy zhang

(Tommy zhang)

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## 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

| FCC Part15 (15.247) , Subpart C | | | |
|---|---|---|---|
| Standard Section | Test Item | Judgment | Remark |
| 15.207 | Conducted Emission | PASS | |
| 15.247 (a)(2) | 6dB Bandwidth | PASS | |
| 15.247 (b) | Peak Output Power | PASS | |
| 15.247 (c) | Radiated Spurious Emission | PASS | |
| 15.247 (d) | Power Spectral Density | PASS | |
| 15.205 | Band Edge Emission | PASS | |
| 15.203 | Antenna Requirement | PASS | |

NOTE:

(1)” N/A” denotes test is not applicable in this Test Report

## 1.1 TEST FACILITY

BZT Testing Technology Co., Ltd
Add.:1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.
FCC Registration No.: 701733

## 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

| No. | Item | Uncertainty |
|---|---|---|
| 1 | Conducted Emission Test | ±1.38dB |
| 2 | RF power,conducted | ±0.16dB |
| 3 | Spurious emissions,conducted | ±0.21dB |
| 4 | All emissions,radiated(<1G) | ±4.68dB |
| 5 | All emissions,radiated(>1G) | ±4.89dB |
| 6 | Temperature | ±0.5°C |
| 7 | Humidity | ±2% |

# 2. GENERAL INFORMATION

## 2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>Car DVR</td></tr>
<tr><td>Trade Name</td><td>To world be'stime 水木年华</td></tr>
<tr><td>Model Name</td><td>TS400</td></tr>
<tr><td>Serial Model</td><td>TS400S</td></tr>
<tr><td>Model Difference</td><td>All model’s the function, software and electric circuit are the same , only with a product color and model named different. The test mode is TS400.</td></tr>
<tr><td>Product Description</td><td>The EUT is a Car DVR
<table>
<tr><td>Operation Frequency:</td><td>802.11b/g/n 20:2412~2462 MHz<br>802.11n 40: 2422~2452MHz</td></tr>
<tr><td>Modulation Type:</td><td>CCK/OFDM/DBPSK/DAPSK</td></tr>
<tr><td>Bit Rate of Transmitter</td><td>802.11b:11/5.5/2/1 Mbps<br>802.11g:54/48/36/24/18/12/9/6Mbps<br>802.11n(20/40MHz):300/150/144.44/130/117/115.56/104/86.67/78/52/6.5 Mbps</td></tr>
<tr><td>Number Of Channel</td><td>802.11b/g/n20: 11CH<br>802.11n 40: 7CH</td></tr>
<tr><td>Antenna Designation:</td><td>Please see Note 3.</td></tr>
<tr><td>Peak Output Power(Conducted):</td><td>802.11b: 9.79 dBm (Max.)<br>802.11g: 8.86 dBm (Max.)<br>802.11n(20MHz): 8.54 dBm (Max.)<br>802.11n(40MHz): 7.71 dBm (Max.)</td></tr>
<tr><td>Antenna Gain (dBi)</td><td>0 dbi</td></tr>
</table>
Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.</td></tr>
<tr><td>Channel List</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Ratings</td><td>DC 5V for PC with AC 120V/60Hz or DC 3.7V from battery</td></tr>
<tr><td>Adapter</td><td>N/A</td></tr>
<tr><td>Battery</td><td>DC 3.7V from battery</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.

2.

| Channel List for 802.11b/g/n(20MHz) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 01 | 2412 | 04 | 2427 | 07 | 2442 | 10 | 2457 |
| 02 | 2417 | 05 | 2432 | 08 | 2447 | 11 | 2462 |
| 03 | 2422 | 06 | 2437 | 09 | 2452 | | |

| Channel List for 802.11n(40MHz) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 03 | 2422 | 06 | 2437 | 09 | 2452 | | |
| 04 | 2427 | 07 | 2442 | | | | |
| 05 | 2432 | 08 | 2447 | | | | |

3.

Table for Filed Antenna

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) | NOTE |
|---|---|---|---|---|---|---|
| A | N/A | N/A | Integral Antenna | N/A | 0 | N/A |

## 2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Pretest Mode | Description |
|---|---|
| Mode 1 | 802.11b CH1/ CH6/ CH11 |
| Mode 2 | 802.11g CH1/ CH6/ CH11 |
| Mode 3 | 802.11n(20)CH1/ CH6/ CH11 |
| Mode 4 | 802.11n(40) CH3/ CH6/ CH9 |
| Mode 5 | Link Mode |

| **For Conducted Emission** | |
|---|---|
| Final Test Mode | Description |
| Mode 5 | Link Mode |

| **For Radiated Emission** | |
|---|---|
| Final Test Mode | Description |
| Mode 1 | 802.11b CH1/ CH6/ CH11 |
| Mode 2 | 802.11g CH1/ CH6/ CH11 |
| Mode 3 | 802.11n CH1/ CH6/ CH11 |
| Mode 4 | 802.11n(40) CH3/ CH6/ CH9 |
| Mode 5 | Link Mode |

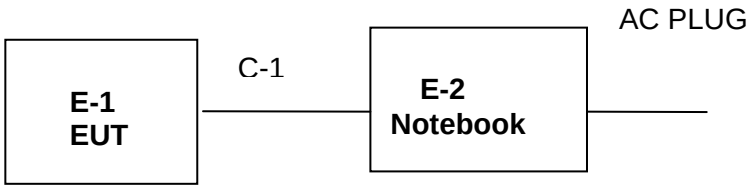
Note:

(1) The measurements are performed at the highest, middle, lowest available channels.

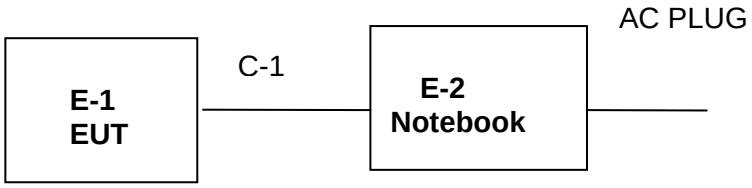
(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

## 2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Measurement:




Radiated Measurement:



## 2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment | Mfr/Brand | Model/Type No. | Series No. | Note |
|---|---|---|---|---|---|
| E-1 | Car DVR | Axess | TS400 | N/A | EUT |
| E-2 | Notebook | Acer | 4552G | N/A | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| Item | Shielded Type | Ferrite Core | Length | Note |
|---|---|---|---|---|
| C-1 | NO | NO | N/A | USB port |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

## 2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

**Radiation Test equipment**

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Last calibration | Calibrated until | Calibration period |
|---|---|---|---|---|---|---|---|
| 1 | Spectrum Analyzer | Agilent | E4407B | MY45108040 | 2014.07.05 | 2015.07.04 | 1 year |
| 2 | Test Receiver | R&S | ESPI | 101318 | 2014.07.05 | 2015.07.04 | 1 year |
| 3 | Bilog Antenna | TESEQ | CBL6111D | 31216 | 2014.07.22 | 2015.07.21 | 1 year |
| 4 | 50Ω Coaxial Switch | Anritsu | MP59B | 6200264416 | 2014.07.05 | 2015.07.04 | 1 year |
| 5 | Spectrum Analyzer | ADVANTEST | R3132 | 150900201 | 2014.07.05 | 2015.07.04 | 1 year |
| 6 | Horn Antenna | EM | EM-AH-10180 | 2011071402 | 2014.07.22 | 2015.07.21 | 1 year |
| 7 | Horn Ant | Schwarzbeck | BBHA 9170 | 9170-181 | 2014.07.22 | 2015.07.21 | 1 year |
| 8 | Amplifier | EM | EM-30180 | 060538 | 2014.07.05 | 2015.07.04 | 1 year |
| 9 | Loop Antenna | ARA | PLA-1030/B | 1029 | 2014.07.22 | 2015.07.21 | 1 year |
| 10 | Power Meter | R&S | NRVS | 100696 | 2014.07.05 | 2015.07.04 | 1 year |
| 11 | Power Sensor | R&S | URV5-Z4 | 0395.1619.05 | 2014.06.20 | 2015.06.19 | 1 year |

**Conduction Test equipment**

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Last calibration | Calibrated until | Calibration period |
|---|---|---|---|---|---|---|---|
| 1 | Test Receiver | R&S | ESCI | 101160 | 2014.07.05 | 2015.07.04 | 1 year |
| 2 | LISN | R&S | ENV216 | 101313 | 2014.07.05 | 2015.07.04 | 1 year |
| 3 | LISN | EMCO | 3816/2 | 00042990 | 2014.07.05 | 2015.07.04 | 1 year |
| 4 | 50Ω Coaxial Switch | Anritsu | MP59B | 6200264417 | 2014.07.05 | 2015.07.04 | 1 year |
| 5 | Passive Voltage Probe | R&S | ESH2-Z3 | 100196 | 2014.07.05 | 2015.07.04 | 1 year |
| 6 | Absorbing clamp | R&S | MOS-21 | 100423 | 2014.07.05 | 2015.07.04 | 1 year |

# 3. EMC EMISSION TEST

## 3.1 CONDUCTED EMISSION MEASUREMENT

### 3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

| FREQUENCY (MHz) | Class A (dBuV) | | Class B (dBuV) | | Standard |
|---|---|---|---|---|---|
| | Quasi-peak | Average | Quasi-peak | Average | |
| 0.15 -0.5 | 79.00 | 66.00 | 66 - 56 * | 56 - 46 * | CISPR |
| 0.50 -5.0 | 73.00 | 60.00 | 56.00 | 46.00 | CISPR |
| 5.0 -30.0 | 73.00 | 60.00 | 60.00 | 50.00 | CISPR |

| | | | | | |
|---|---|---|---|---|---|
| 0.15 -0.5 | 79.00 | 66.00 | 66 - 56 * | 56 - 46 * | FCC |
| 0.50 -5.0 | 73.00 | 60.00 | 56.00 | 46.00 | FCC |
| 5.0 -30.0 | 73.00 | 60.00 | 60.00 | 50.00 | FCC |

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

| Receiver Parameters | Setting |
|---|---|
| Attenuation | 10 dB |
| Start Frequency | 0.15 MHz |
| Stop Frequency | 30 MHz |
| IF Bandwidth | 9 kHz |

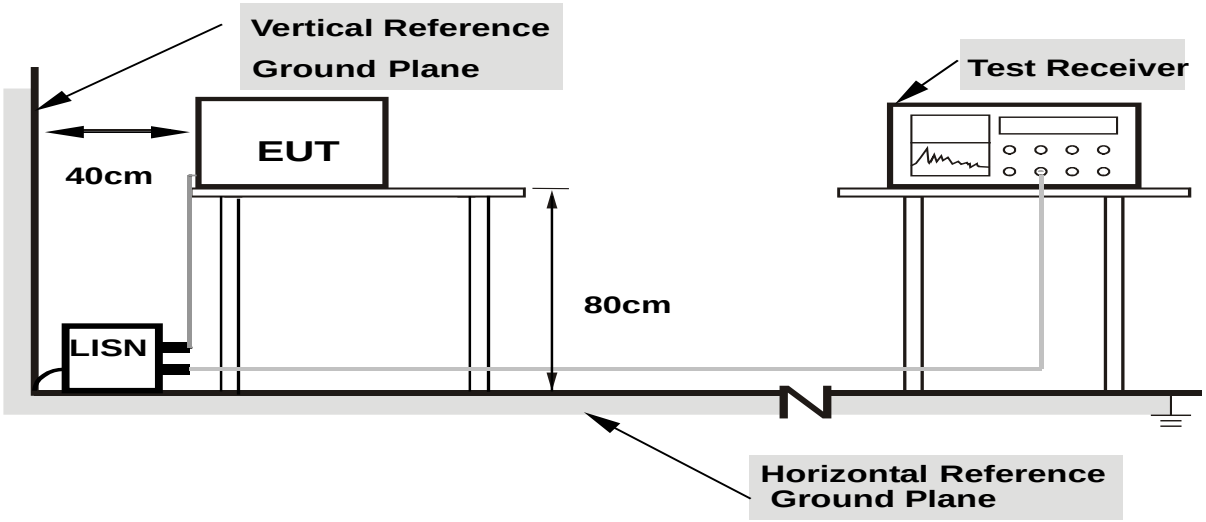
### 3.1.2 TEST PROCEDURE

a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

### 3.1.3 DEVIATION FROM TEST STANDARD

No deviation

### 3.1.4 TEST SETUP



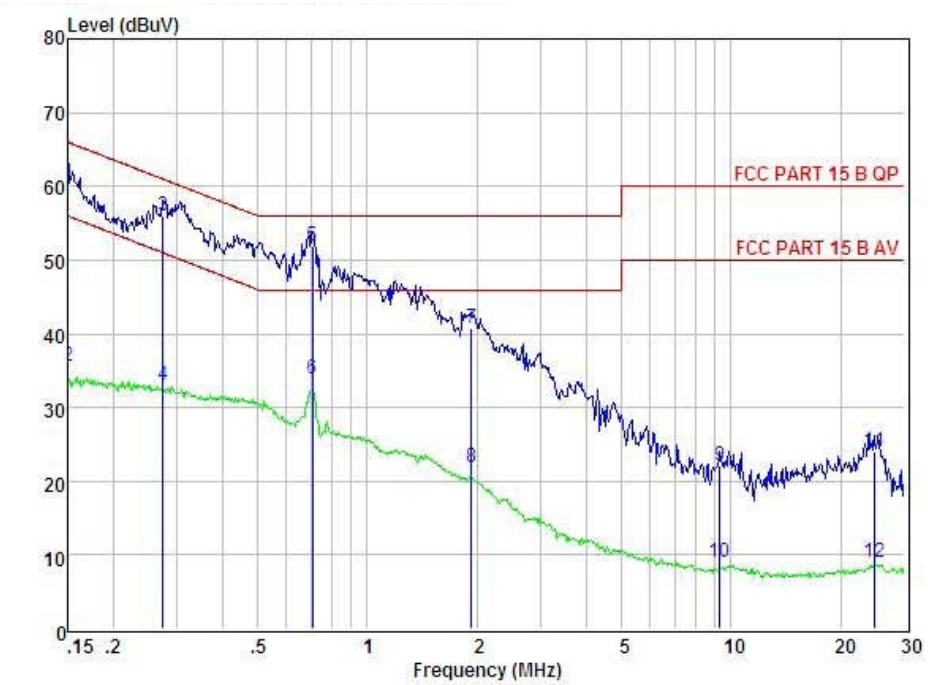

**Note: 1.Support units were connected to second LISN.**
**2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes**

### 3.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

### 3.1.6 TEST RESULTS

| EUT： | Car DVR | Model Name. ： | TS400 |
|---|---|---|---|
| Temperature： | 26 ℃ | Relative Humidity： | 54% |
| Pressure： | 1010hPa | Phase： | L |
| Test Voltage ： | DC 5V for PC with AC 120V/60Hz | Test Mode： | Mode 5 |

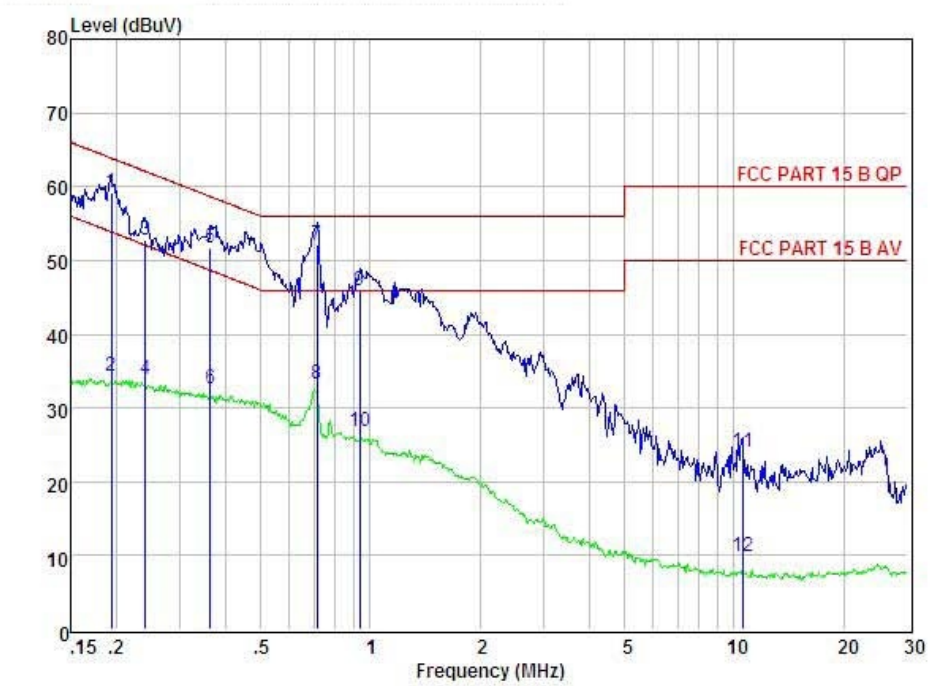



Condition : FCC PART 15 B QP POL: LINE Temp:24 ℃ Hum:56 %

| Item | Freq | Read | LISN Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 0.150 | 50.69 | 0.03 | -9.72 | 0.10 | 60.54 | 66.00 | -5.46 | QP |
| 2 | 0.150 | 25.69 | 0.03 | -9.72 | 0.10 | 35.54 | 56.00 | -20.46 | Average |
| 3 | 0.274 | 46.20 | 0.03 | -9.72 | 0.10 | 56.05 | 61.00 | -4.95 | QP |
| 4 | 0.274 | 23.20 | 0.03 | -9.72 | 0.10 | 33.05 | 51.00 | -17.95 | Average |
| 5 | 0.708 | 41.97 | 0.04 | -9.72 | 0.10 | 51.83 | 56.00 | -4.17 | QP |
| 6 | 0.708 | 23.97 | 0.04 | -9.72 | 0.10 | 33.83 | 46.00 | -12.17 | Average |
| 7 | 1.929 | 31.00 | 0.05 | -9.70 | 0.10 | 40.85 | 56.00 | -15.15 | QP |
| 8 | 1.929 | 12.00 | 0.05 | -9.70 | 0.10 | 21.85 | 46.00 | -24.15 | Average |
| 9 | 9.296 | 12.33 | 0.17 | -9.39 | 0.19 | 22.08 | 60.00 | -37.92 | QP |
| 10 | 9.296 | -0.67 | 0.17 | -9.39 | 0.19 | 9.08 | 50.00 | -40.92 | Average |
| 11 | 24.807 | 13.58 | 0.46 | -9.59 | 0.47 | 24.10 | 60.00 | -35.90 | QP |
| 12 | 24.807 | -1.42 | 0.46 | -9.59 | 0.47 | 9.10 | 50.00 | -40.90 | Average |

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss

| EUT： | Car DVR | Model Name. ： | TS400 |
|---|---|---|---|
| Temperature： | 26 ℃ | Relative Humidity： | 54% |
| Pressure： | 1010hPa | Phase： | N |
| Test Voltage ： | DC 5V for PC with AC 120V/60Hz | Test Mode： | Mode 5 |




Condition : FCC PART 15 B QP POL: NEUTRAL Temp:24 ℃ Hum:56 %

| Item | Freq | Read | LISN Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 0.194 | 49.42 | 0.03 | -9.72 | 0.10 | 59.27 | 63.84 | -4.57 | QP |
| 2 | 0.194 | 24.42 | 0.03 | -9.72 | 0.10 | 34.27 | 53.84 | -19.57 | Average |
| 3 | 0.240 | 42.94 | 0.03 | -9.72 | 0.10 | 52.79 | 62.08 | -9.29 | QP |
| 4 | 0.240 | 23.94 | 0.03 | -9.72 | 0.10 | 33.79 | 52.08 | -18.29 | Average |
| 5 | 0.363 | 41.78 | 0.03 | -9.72 | 0.10 | 51.63 | 58.65 | -7.02 | QP |
| 6 | 0.363 | 22.78 | 0.03 | -9.72 | 0.10 | 32.63 | 48.65 | -16.02 | Average |
| 7 | 0.712 | 42.36 | 0.04 | -9.72 | 0.10 | 52.22 | 56.00 | -3.78 | QP |
| 8 | 0.712 | 23.36 | 0.04 | -9.72 | 0.10 | 33.22 | 46.00 | -12.78 | Average |
| 9 | 0.933 | 35.95 | 0.04 | -9.71 | 0.10 | 45.80 | 56.00 | -10.20 | QP |
| 10 | 0.933 | 16.95 | 0.04 | -9.71 | 0.10 | 26.80 | 46.00 | -19.20 | Average |
| 11 | 10.564 | 13.99 | 0.21 | -9.50 | 0.22 | 23.92 | 60.00 | -36.08 | QP |
| 12 | 10.564 | -0.01 | 0.21 | -9.50 | 0.22 | 9.92 | 50.00 | -40.08 | Average |

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss

## 3.2 RADIATED EMISSION MEASUREMENT

### 3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

| Frequencies (MHz) | Field Strength (micorvolts/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 |

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

| FREQUENCY (MHz) | Class A (dBuV/m) (at 3M) | | Class B (dBuV/m) (at 3M) | |
|---|---|---|---|---|
| | PEAK | AVERAGE | PEAK | AVERAGE |
| Above 1000 | 80 | 60 | 74 | 54 |

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Start Frequency | 1000 MHz |
| Stop Frequency | 10th carrier harmonic |
| RB / VB (emission in restricted band) | 1 MHz / 1 MHz for Peak, 1 MHz / *10Hz* for Average |

| Receiver Parameter | Setting |
|---|---|
| Attenuation | Auto |
| 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 |

### 3.2.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

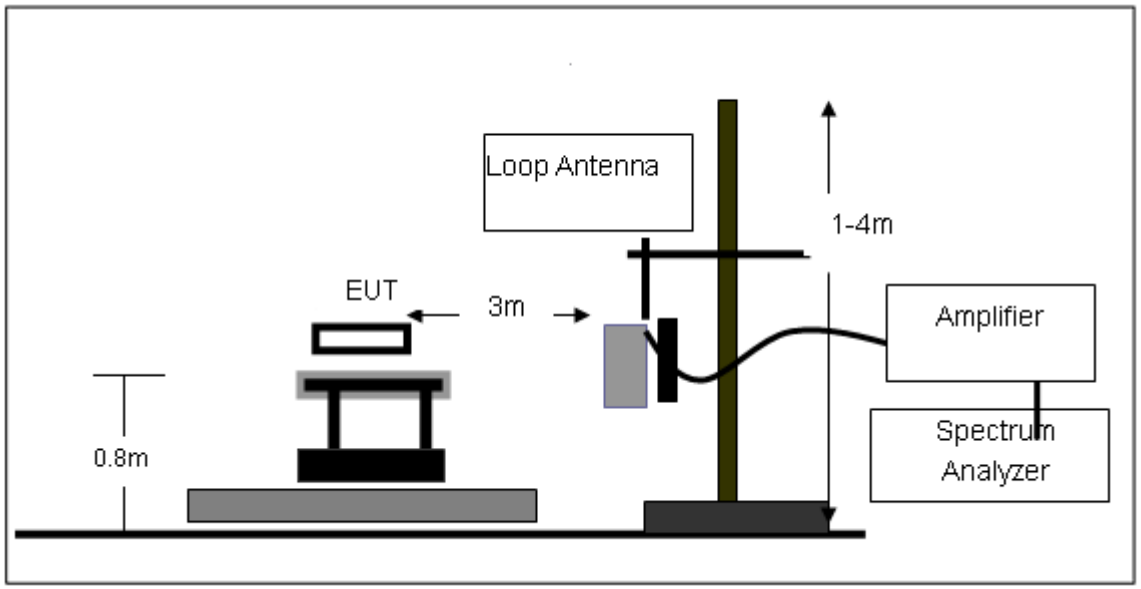
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

### 3.2.3 DEVIATION FROM TEST STANDARD

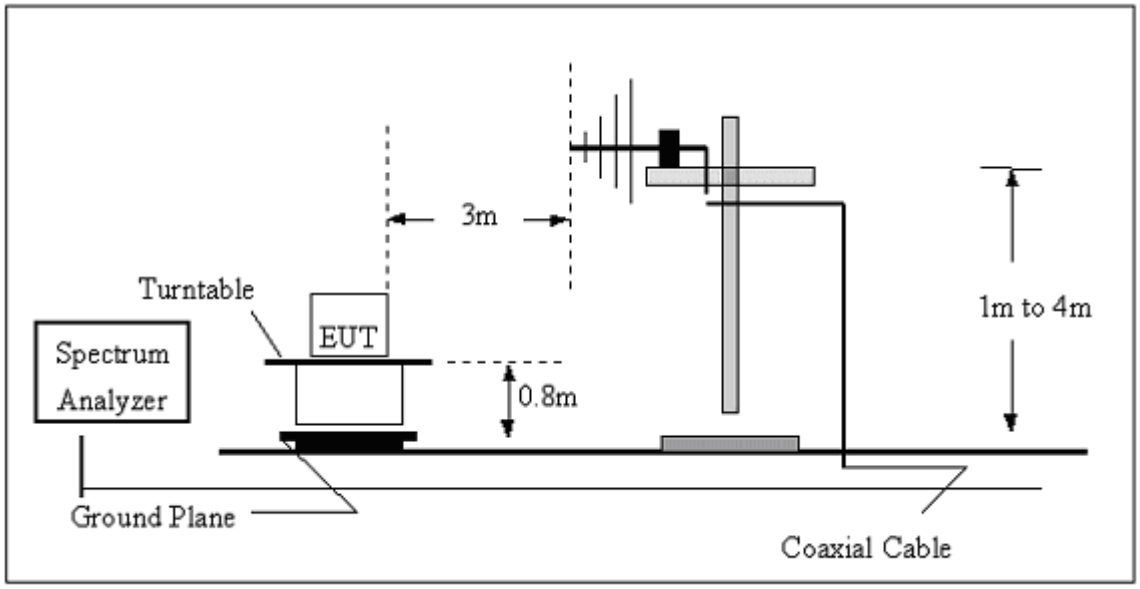
No deviation

### 3.2.4 TEST SETUP

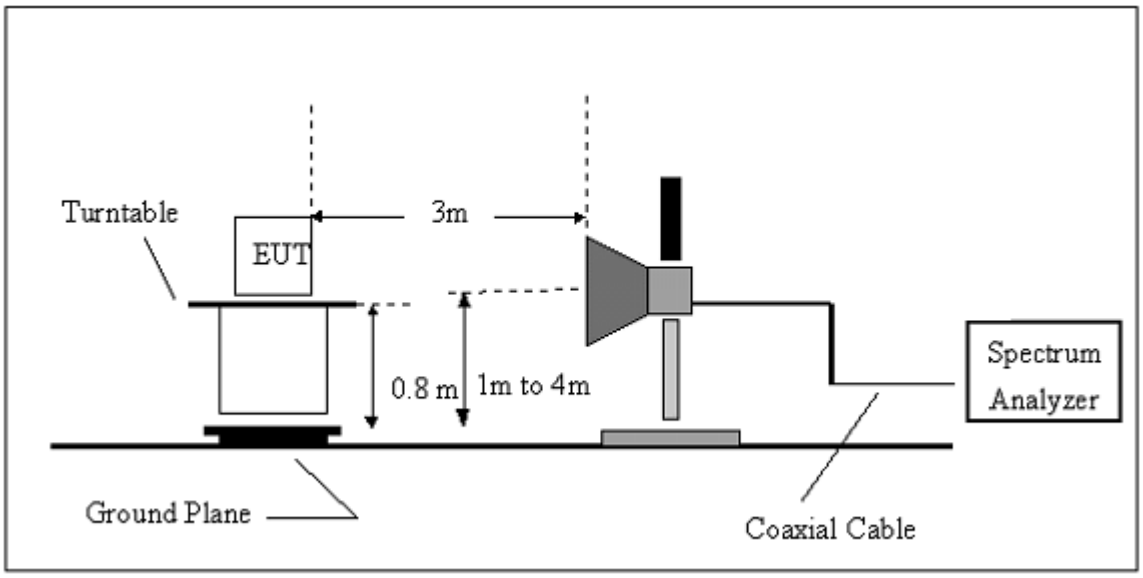
（A）Radiated Emission Test-Up Frequency Below 30MHz




（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz




### 3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

### 3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)

| | | | |
|---|---|---|---|
| EUT： | Car DVR | Model Name. ： | TS400 |
| Temperature： | 20 ℃ | Relative Humidtity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | Link mode | Polarization : | -- |

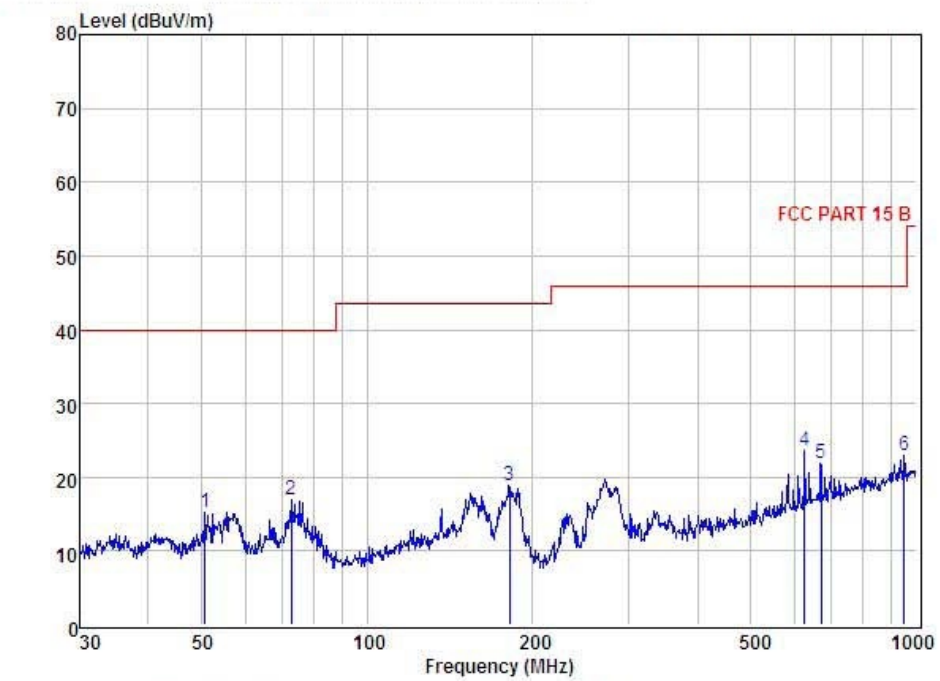
| Freq. | Reading | Limit | Margin | State |
|---|---|---|---|---|
| (MHz) | (dBuV/m) | (dBuV/m) | (dB) | P/F |
| -- | -- | -- | -- | PASS |
| -- | -- | -- | -- | PASS |

**NOTE:**

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

### 3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | Link mode | Polarization : | Horizontal |

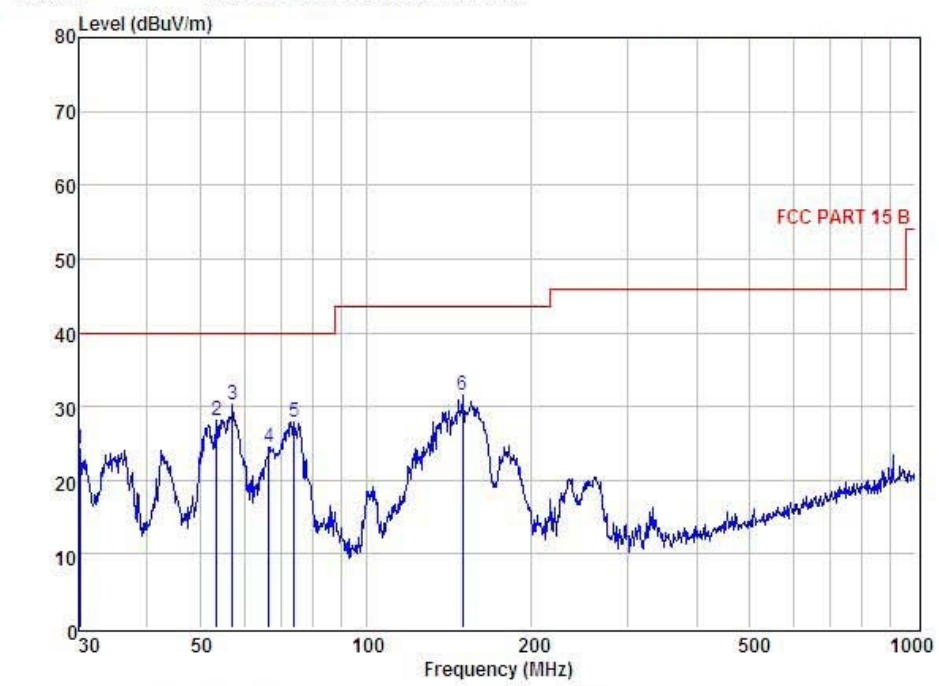



Condition : FCC PART 15 B 3m POL: HORIZONTAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 50.76 | 29.69 | 13.38 | 27.83 | 0.00 | 15.24 | 40.00 | -24.76 | QP |
| 2 | 72.91 | 33.46 | 10.21 | 26.77 | 0.00 | 16.90 | 40.00 | -23.10 | QP |
| 3 | 181.55 | 34.45 | 11.44 | 26.93 | 0.00 | 18.96 | 43.50 | -24.54 | QP |
| 4 | 624.95 | 32.53 | 18.80 | 27.82 | 0.00 | 23.51 | 46.00 | -22.49 | QP |
| 5 | 670.03 | 30.24 | 19.33 | 27.78 | 0.00 | 21.79 | 46.00 | -24.21 | QP |
| 6 | 949.11 | 28.39 | 22.13 | 27.62 | 0.00 | 22.90 | 46.00 | -23.10 | QP |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| | | | |
|---|---|---|---|
| EUT： | Car DVR | Model Name ： | TS400 |
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | Link mode | Polarization : | Vertical |




Condition : FCC PART 15 B 3m POL: VERTICAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 30.11 | 38.42 | 13.22 | 27.43 | 0.00 | 24.21 | 40.00 | -15.79 | QP |
| 2 | 53.47 | 42.72 | 13.22 | 27.84 | 0.00 | 28.10 | 40.00 | -11.90 | QP |
| 3 | 57.15 | 45.27 | 12.91 | 27.86 | 0.00 | 30.32 | 40.00 | -9.68 | QP |
| 4 | 66.68 | 40.33 | 11.21 | 26.98 | 0.00 | 24.56 | 40.00 | -15.44 | QP |
| 5 | 74.07 | 44.53 | 10.21 | 26.77 | 0.00 | 27.97 | 40.00 | -12.03 | QP |
| 6 | 149.77 | 44.28 | 14.16 | 26.91 | 0.00 | 31.53 | 43.50 | -11.97 | QP |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

### 3.2.8 TEST RESULTS (ABOVE 1000 MHZ)

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH1 (802.11b Mode)/2412 | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4824.15 | 44.15 | 10.44 | 54.59 | 74 | -19.41 | peak |
| 4824.15 | 29.99 | 10.44 | 40.43 | 54 | -13.57 | AVG |
| 7236.149 | 42.83 | 12.39 | 55.22 | 74 | -18.78 | peak |
| 7236.149 | 28.92 | 12.39 | 41.31 | 54 | -12.69 | AVG |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH1 (802.11b Mode)/2412 | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4874.145 | 46.06 | 10.4 | 56.46 | 74 | -17.54 | peak |
| 4874.145 | 31.39 | 10.4 | 41.79 | 54 | -12.21 | AVG |
| 7311.163 | 43.56 | 12.75 | 56.31 | 74 | -17.69 | peak |
| 7311.163 | 29.3 | 12.75 | 42.05 | 54 | -11.95 | AVG |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH6 (802.11b Mode)/2437 | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4874.159 | 44.06 | 10.4 | 54.46 | 74 | -19.54 | peak |
| 4874.159 | 29.78 | 10.4 | 40.18 | 54 | -13.82 | AVG |
| 7311.136 | 44.16 | 12.75 | 56.91 | 74 | -17.09 | peak |
| 7311.136 | 31.67 | 12.75 | 44.42 | 54 | -9.58 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH6 (802.11b Mode)/2437 | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4924.146 | 43.14 | 10.39 | 53.53 | 74 | -20.47 | peak |
| 4934.146 | 31.61 | 10.44 | 42.05 | 54 | -11.95 | AVG |
| 7386.143 | 42.75 | 12.68 | 55.43 | 74 | -18.57 | peak |
| 7386.143 | 30.68 | 12.68 | 43.36 | 54 | -10.64 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH11 (802.11b Mode)/2462 | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4924.145 | 43.93 | 10.39 | 54.32 | 74 | -19.68 | peak |
| 4924.145 | 30.40 | 10.39 | 40.79 | 54 | -13.21 | AVG |
| 7386.142 | 44.05 | 12.68 | 56.73 | 74 | -17.27 | peak |
| 7386.142 | 28.91 | 12.68 | 41.59 | 54 | -12.41 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH11 (802.11b Mode)/2462 | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4924.122 | 42.78 | 10.39 | 53.17 | 74 | -20.83 | peak |
| 4924.122 | 30.7 | 10.39 | 41.09 | 54 | -12.91 | AVG |
| 7386.143 | 42.9 | 12.68 | 55.58 | 74 | -18.42 | peak |
| 7386.143 | 29.93 | 12.68 | 42.61 | 54 | -11.39 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH1 (802.11g Mode)/2412 | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4824.17 | 43.94 | 10.44 | 54.38 | 74 | -19.62 | peak |
| 4824.17 | 30.81 | 10.44 | 41.25 | 54 | -12.75 | AVG |
| 7236.224 | 43.08 | 12.39 | 55.47 | 74 | -18.53 | peak |
| 7236.224 | 29.42 | 12.39 | 41.81 | 54 | -12.19 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH1 (802.11g Mode)/2412 | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4824.155 | 44.08 | 10.44 | 54.52 | 74 | -19.48 | peak |
| 4824.155 | 30.3 | 10.44 | 40.74 | 54 | -13.26 | AVG |
| 7236.142 | 43.92 | 12.39 | 56.31 | 74 | -17.69 | peak |
| 7236.142 | 29.88 | 12.39 | 42.27 | 54 | -11.73 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH6 (802.11g Mode)/2437 | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4874.14 | 42.04 | 10.4 | 52.44 | 74 | -21.56 | peak |
| 4874.14 | 29.68 | 10.4 | 40.08 | 54 | -13.92 | AVG |
| 7311.17 | 41.82 | 12.75 | 54.57 | 74 | -19.43 | peak |
| 7311.17 | 28.50 | 12.75 | 41.25 | 54 | -12.75 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH6 (802.11g Mode)/2437 | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4874.158 | 43.83 | 10.4 | 54.23 | 74 | -19.77 | peak |
| 4874.158 | 30.34 | 10.4 | 40.74 | 54 | -13.26 | AVG |
| 7311.137 | 42.66 | 12.75 | 55.41 | 74 | -18.59 | peak |
| 7311.137 | 29.57 | 12.75 | 42.32 | 54 | -11.68 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH11 (802.11g Mode)/2462 | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4924.138 | 44.18 | 10.39 | 54.57 | 74 | -19.43 | peak |
| 4924.138 | 31.79 | 10.39 | 42.18 | 54 | -11.82 | AVG |
| 7386.149 | 42.75 | 12.68 | 55.43 | 74 | -18.57 | peak |
| 7386.149 | 29.03 | 12.68 | 41.71 | 54 | -12.29 | AVG |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH11(802.11g Mode)/2462 | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4924.148 | 41.97 | 10.39 | 52.36 | 74 | -21.64 | peak |
| 4924.148 | 29.52 | 10.39 | 39.91 | 54 | -14.09 | AVG |
| 7386.13 | 42.59 | 12.68 | 55.27 | 74 | -18.73 | peak |
| 7386.13 | 28.53 | 12.68 | 41.21 | 54 | -12.79 | AVG |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH1(802.11n Mode)/20MHz | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4824.14 | 43.4 | 10.44 | 53.84 | 74 | -20.16 | peak |
| 4824.14 | 32.13 | 10.44 | 42.57 | 54 | -11.43 | AVG |
| 7236.122 | 41.79 | 12.39 | 54.18 | 74 | -19.82 | peak |
| 7236.122 | 28.87 | 12.39 | 41.26 | 54 | -12.74 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH1(802.11n Mode)/20MHz | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4824.141 | 43.03 | 10.44 | 53.47 | 74 | -20.53 | peak |
| 4824.141 | 31.69 | 10.44 | 42.13 | 54 | -11.87 | AVG |
| 7236.145 | 42.67 | 12.39 | 55.06 | 74 | -18.94 | peak |
| 7236.145 | 28.96 | 12.39 | 41.35 | 54 | -12.65 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH6(802.11n Mode)/20MHz | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4874.16 | 42.26 | 10.4 | 52.66 | 74 | -21.34 | peak |
| 4874.16 | 30.12 | 10.4 | 40.52 | 54 | -13.48 | AVG |
| 7311.128 | 42.02 | 12.75 | 54.77 | 74 | -19.23 | peak |
| 7311.128 | 29.29 | 12.75 | 42.04 | 54 | -11.96 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH6(802.11n Mode)/20MHz | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4874.161 | 42.28 | 10.4 | 52.68 | 74 | -21.32 | peak |
| 4874.161 | 30.03 | 10.4 | 40.43 | 54 | -13.57 | AVG |
| 7311.166 | 41.57 | 12.75 | 54.32 | 74 | -19.68 | peak |
| 7311.166 | 29.69 | 12.75 | 42.44 | 54 | -11.56 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH11(802.11n Mode)/20MHz | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4924.14 | 42.2 | 10.39 | 52.59 | 74 | -21.41 | peak |
| 4924.14 | 30.09 | 10.39 | 40.48 | 54 | -13.52 | AVG |
| 7386.183 | 42.39 | 12.68 | 55.07 | 74 | -18.93 | peak |
| 7386.183 | 28.75 | 12.68 | 41.43 | 54 | -12.57 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH11(802.11n Mode)/20MHz | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4924.15 | 44.13 | 10.39 | 54.52 | 74 | -19.48 | peak |
| 4924.15 | 32.45 | 10.39 | 42.84 | 54 | -11.16 | AVG |
| 7386.167 | 43.9 | 12.68 | 56.58 | 74 | -17.42 | peak |
| 7386.167 | 31.24 | 12.68 | 43.92 | 54 | -10.08 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH3(802.11n Mode)/40MHz | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4844.156 | 43.88 | 10.5 | 54.38 | 74 | -19.62 | peak |
| 4844.156 | 31.03 | 10.5 | 41.53 | 54 | -12.47 | AVG |
| 7266.319 | 42.12 | 12.5 | 54.62 | 74 | -19.38 | peak |
| 7266.319 | 30.04 | 12.5 | 42.54 | 54 | -11.46 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH3(802.11n Mode)/40MHz | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4844.325 | 43.25 | 10.5 | 53.75 | 74 | -20.25 | peak |
| 4844.325 | 30.36 | 10.5 | 40.86 | 54 | -13.14 | AVG |
| 7266.258 | 45.23 | 12.5 | 57.73 | 74 | -16.27 | peak |
| 7266.258 | 32.14 | 12.5 | 44.64 | 54 | -9.36 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH6(802.11n Mode)/40MHz | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4874.238 | 43.18 | 10.4 | 53.58 | 74 | -20.42 | peak |
| 4874.238 | 30.97 | 10.4 | 41.37 | 54 | -12.63 | AVG |
| 7311.159 | 42.29 | 12.75 | 55.04 | 74 | -18.96 | peak |
| 7311.159 | 29.51 | 12.75 | 42.26 | 54 | -11.74 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH6(802.11n Mode)/40MHz | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4874.535 | 42.02 | 10.4 | 52.42 | 74 | -21.58 | peak |
| 4874.535 | 30.85 | 10.4 | 41.25 | 54 | -12.75 | AVG |
| 7311.633 | 41.88 | 12.75 | 54.63 | 74 | -19.37 | peak |
| 7311.633 | 29.40 | 12.75 | 42.15 | 54 | -11.85 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH9(802.11n Mode)/40MHz | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4904.345 | 44.25 | 10.29 | 54.54 | 74 | -19.46 | peak |
| 4904.345 | 31.92 | 10.29 | 42.21 | 54 | -11.79 | AVG |
| 7356.247 | 44.18 | 12.79 | 56.97 | 74 | -17.03 | peak |
| 7356.247 | 31.59 | 12.79 | 44.38 | 54 | -9.62 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

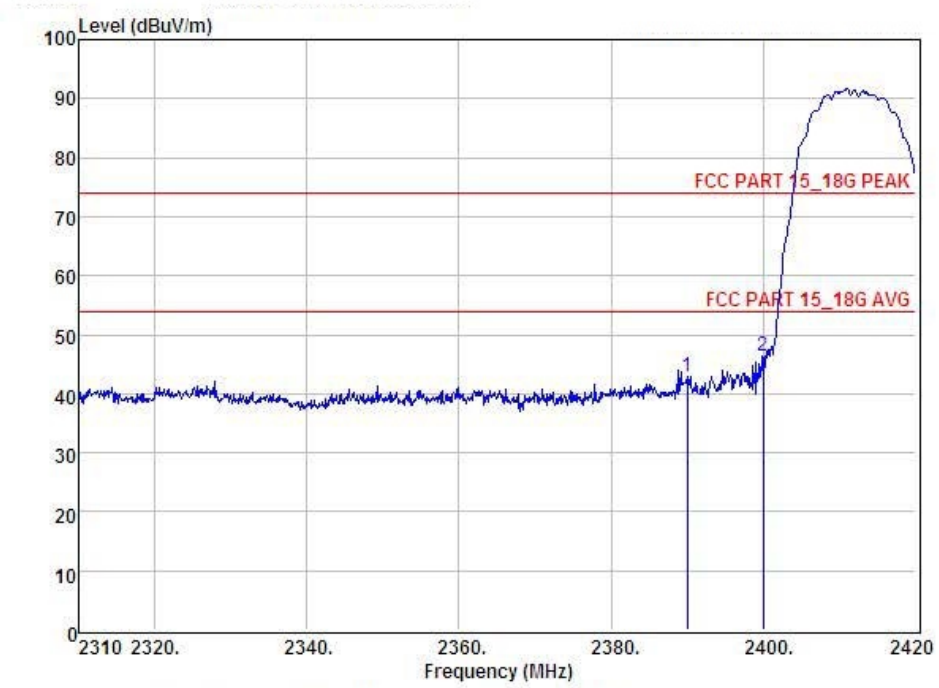
| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | CH9(802.11n Mode)/40MHz | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV) | (dB) | (dBμV/m) | (dBμV/m) | (dB) | |
| 4904.16 | 44.35 | 10.29 | 54.64 | 74 | -19.36 | peak |
| 4904.16 | 31.46 | 10.29 | 41.75 | 54 | -12.25 | AVG |
| 7356.423 | 43.28 | 12.79 | 56.07 | 74 | -17.93 | peak |
| 7356.423 | 30.94 | 12.79 | 43.73 | 54 | -10.27 | AVG |
| | | | | | | |
| | | | | | | |

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

### 3.2.9 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH1(802.11b Mode) | Polarization : | Horizontal |

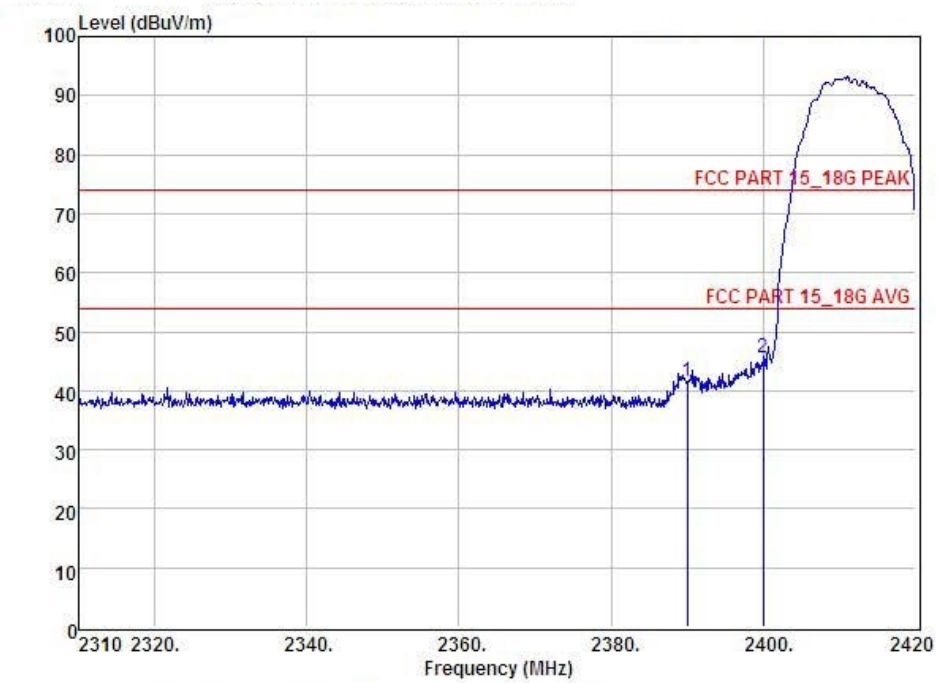



Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2390.00 | 46.25 | 27.62 | 34.97 | 3.92 | 42.82 | 74.00 | -31.18 | Peak |
| 2 | 2400.00 | 49.82 | 27.62 | 34.97 | 3.94 | 46.41 | 74.00 | -27.59 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH1(802.11b Mode) | Polarization : | Vertical |

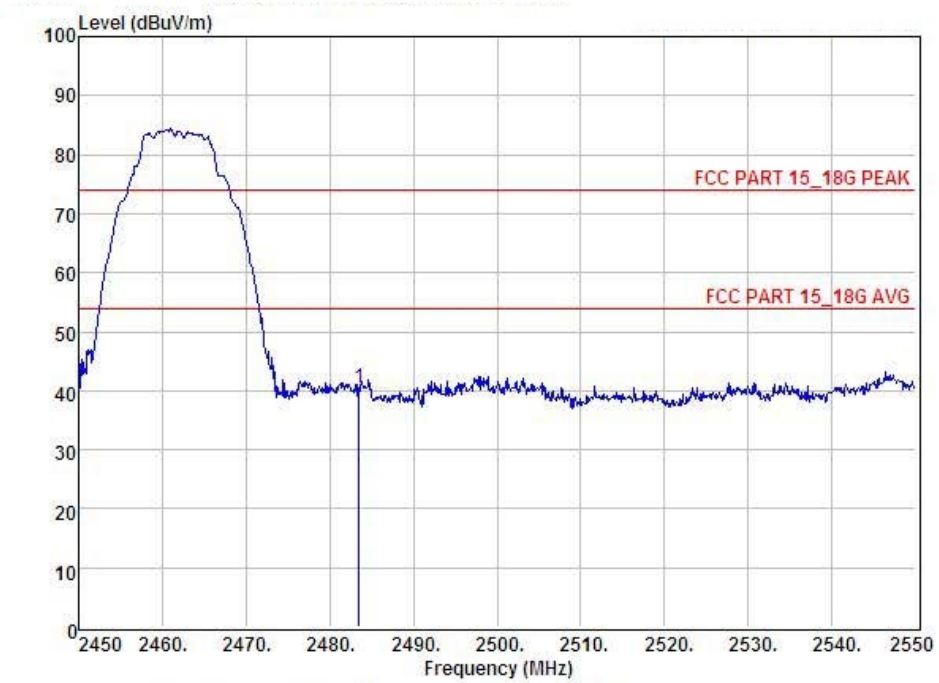



Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2390.00 | 44.94 | 27.62 | 34.97 | 3.92 | 41.51 | 74.00 | -32.49 | |
| 2 | 2400.00 | 48.98 | 27.62 | 34.97 | 3.94 | 45.57 | 74.00 | -28.43 | |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| | | | |
|---|---|---|---|
| EUT： | Car DVR | Model Name ： | TS400 |
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH11(802.11b Mode) | Polarization : | Horizontal |

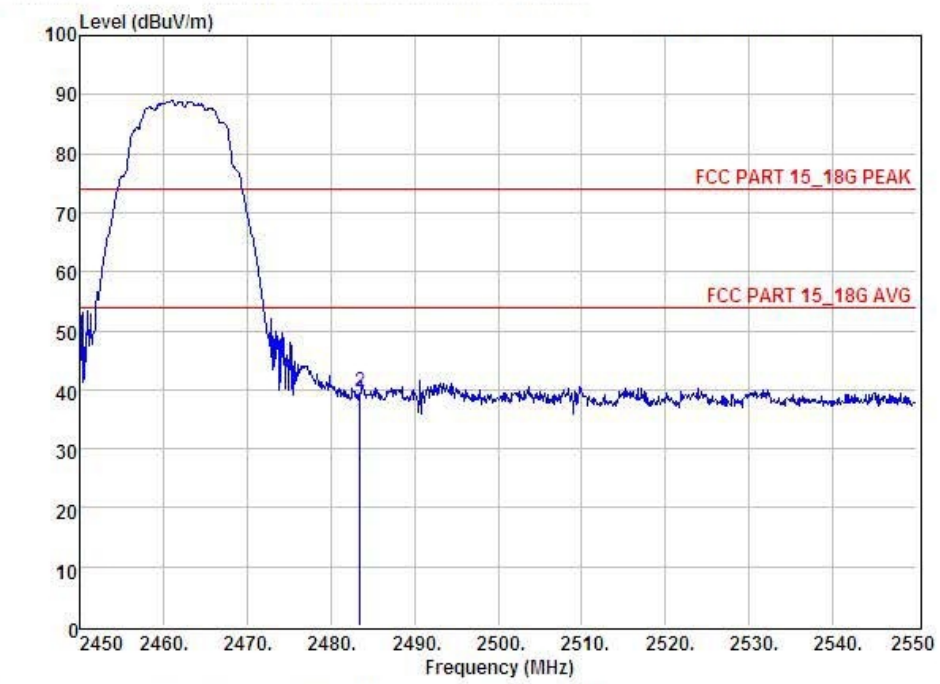



Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2483.50 | 43.83 | 27.59 | 34.97 | 4.00 | 40.45 | 74.00 | -33.55 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH11(802.11b Mode) | Polarization : | Vertical |

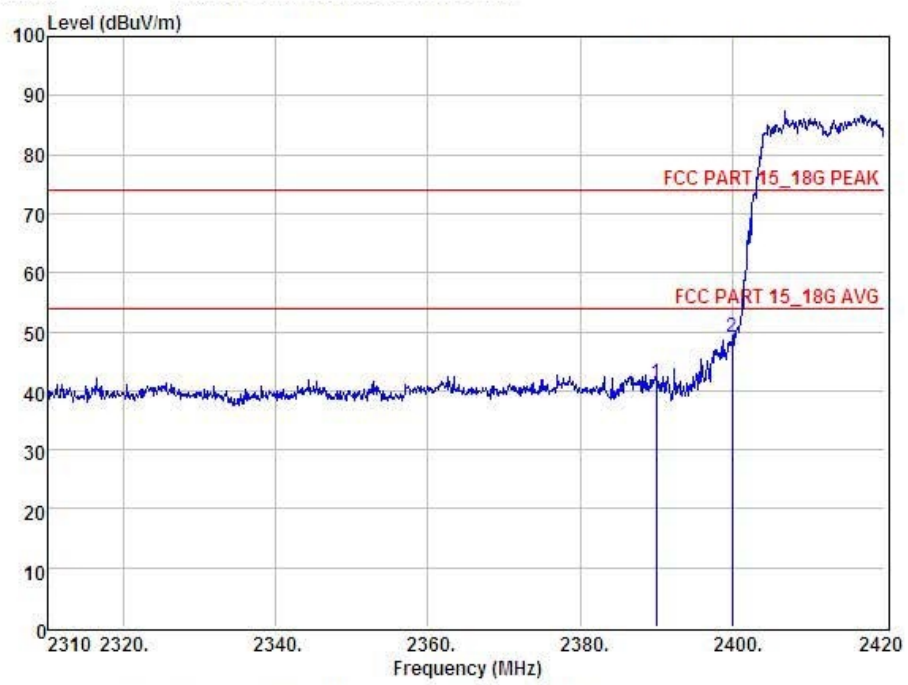



Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2483.50 | 41.73 | 27.59 | 34.97 | 4.00 | 38.35 | 74.00 | -35.65 | Peak |
| 2 | 2483.50 | 42.98 | 27.59 | 34.97 | 4.00 | 39.60 | 74.00 | -34.40 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH1(802.11g Mode) | Polarization : | Horizontal |

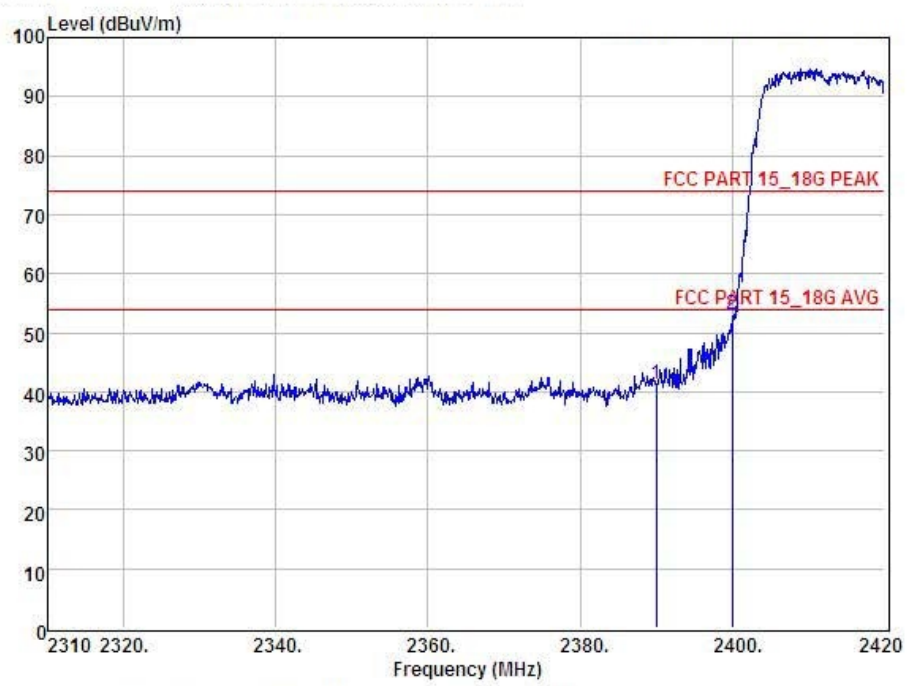



Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2390.00 | 44.79 | 27.62 | 34.97 | 3.92 | 41.36 | 74.00 | -32.64 | Peak |
| 2 | 2400.00 | 52.47 | 27.62 | 34.97 | 3.94 | 49.06 | 74.00 | -24.94 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH1(802.11gMode) | Polarization : | Vertical |

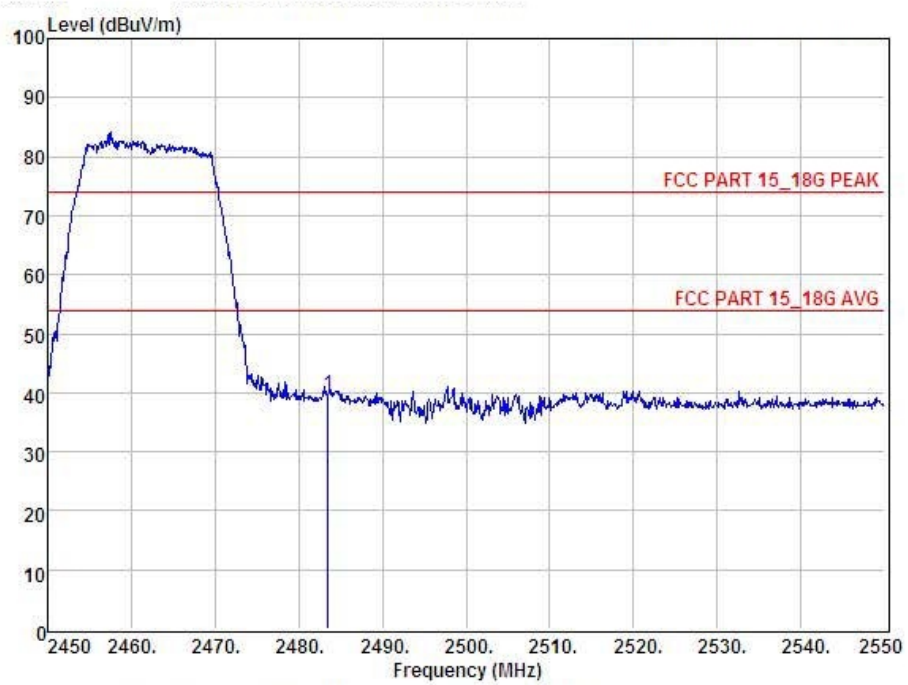



Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2390.00 | 44.69 | 27.62 | 34.97 | 3.92 | 41.26 | 74.00 | -32.74 | Peak |
| 2 | 2400.00 | 56.40 | 27.62 | 34.97 | 3.94 | 52.99 | 74.00 | -21.01 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH11(802.11g Mode) | Polarization : | Horizontal |

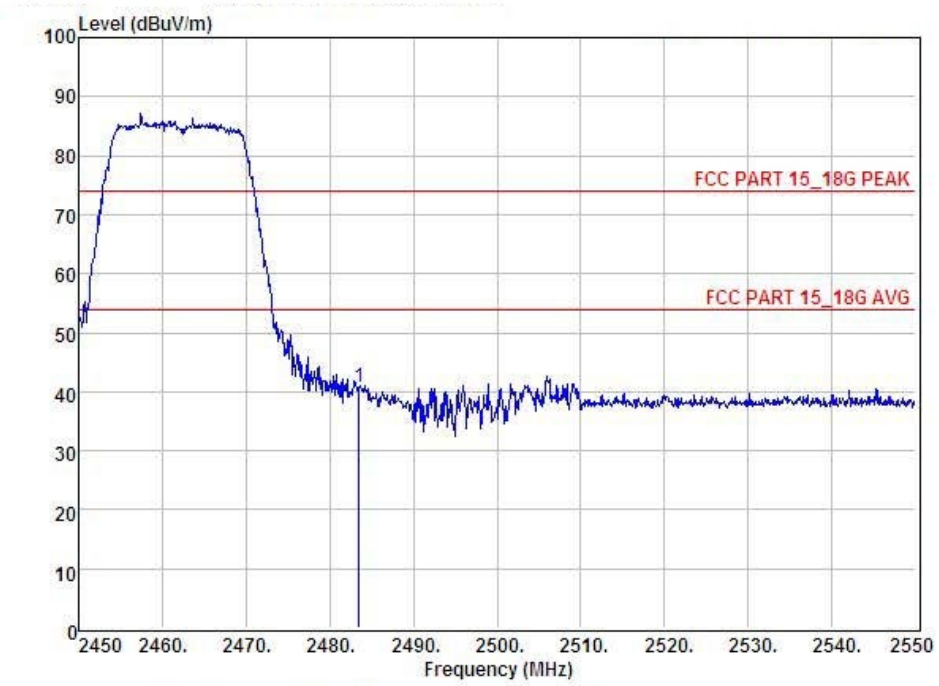



Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2483.50 | 43.19 | 27.59 | 34.97 | 4.00 | 39.81 | 74.00 | -34.19 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH11(802.11g Mode) | Polarization : | Vertical |

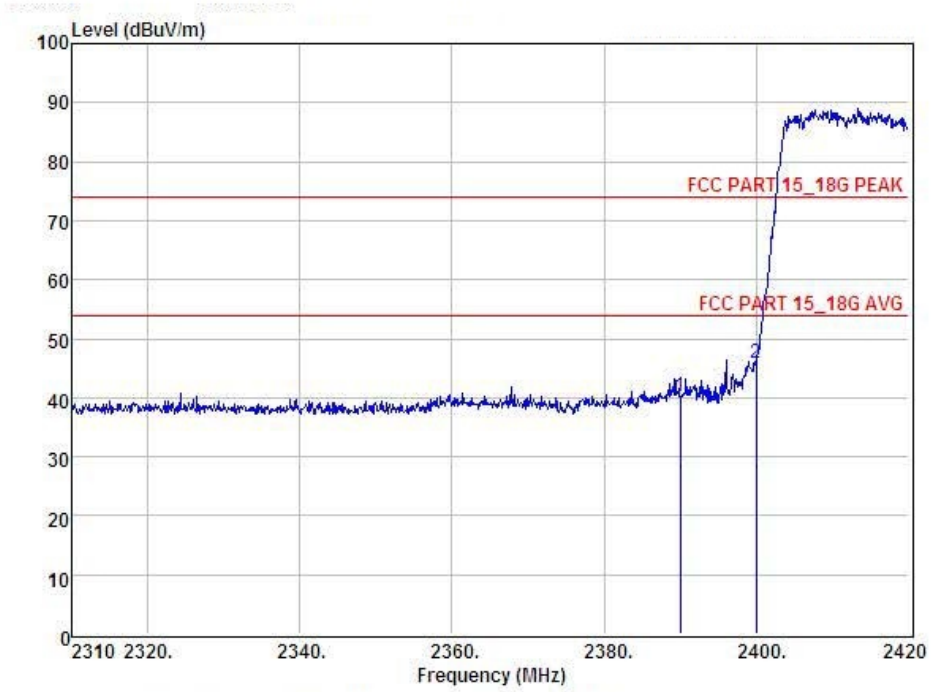



Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2483.50 | 44.14 | 27.69 | 34.97 | 4.00 | 40.76 | 74.00 | -33.24 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH1(802.11n Mode)/20MHz | Polarization : | Horizontal |

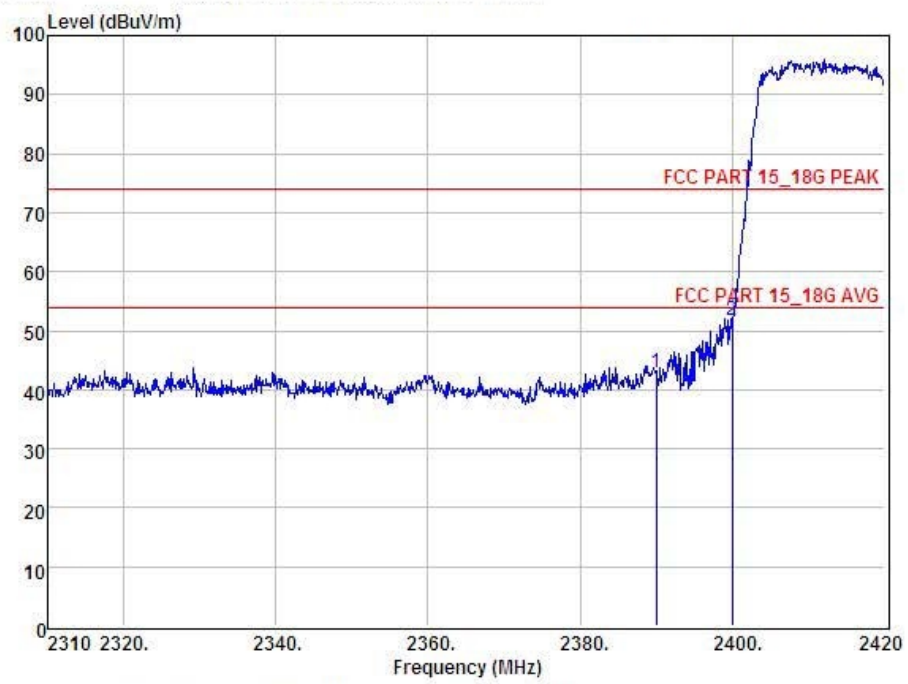



Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2390.00 | 43.76 | 27.62 | 34.97 | 3.92 | 40.33 | 74.00 | -33.67 | Peak |
| 2 | 2400.00 | 49.13 | 27.62 | 34.97 | 3.94 | 45.72 | 74.00 | -28.28 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH1(802.11n Mode)/20M | Polarization : | Vertical |

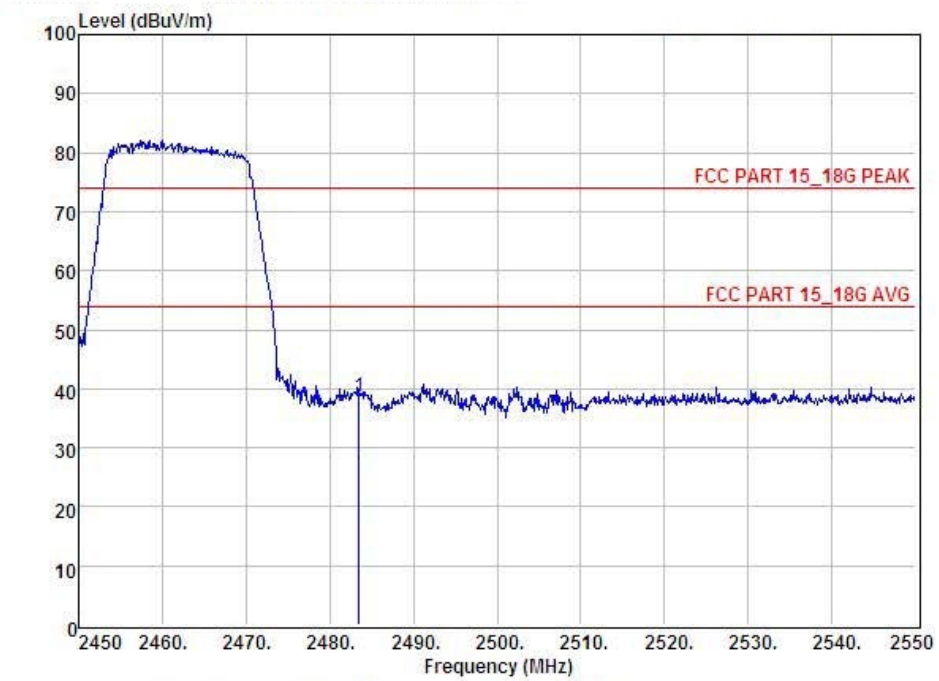



Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2390.00 | 46.39 | 27.62 | 34.97 | 3.92 | 42.96 | 74.00 | -31.04 | Peak |
| 2 | 2400.00 | 55.25 | 27.62 | 34.97 | 3.94 | 51.84 | 74.00 | -22.16 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH11(802.11n Mode)/20MHz | Polarization : | Horizontal |

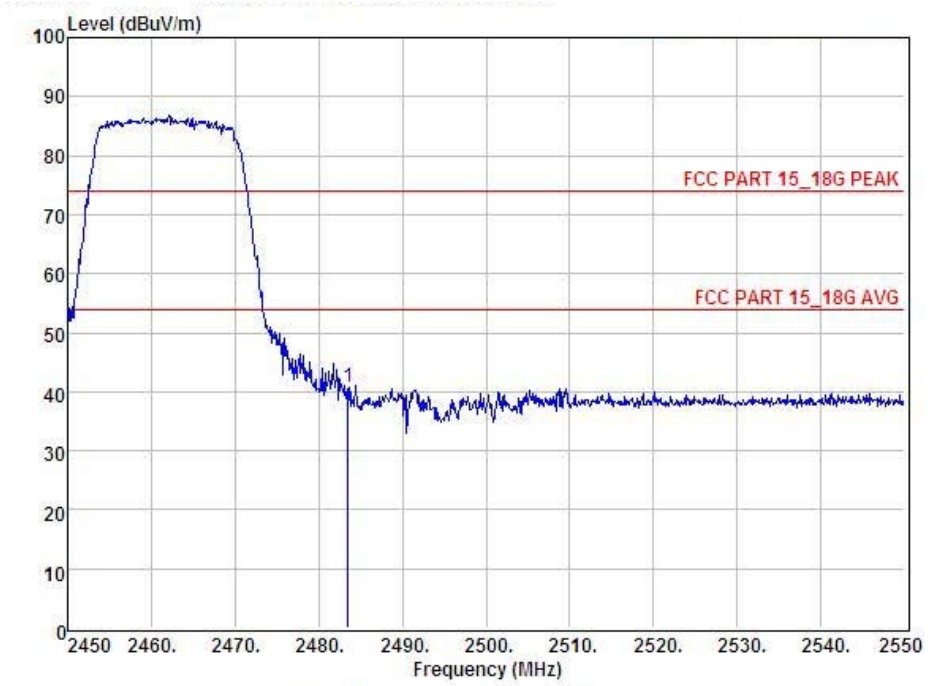



Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2483.50 | 42.12 | 27.59 | 34.97 | 4.00 | 38.74 | 74.00 | -35.26 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| | | | |
|---|---|---|---|
| EUT： | Car DVR | Model Name ： | TS400 |
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH11(802.11n Mode)/20MHz | Polarization : | Vertical |

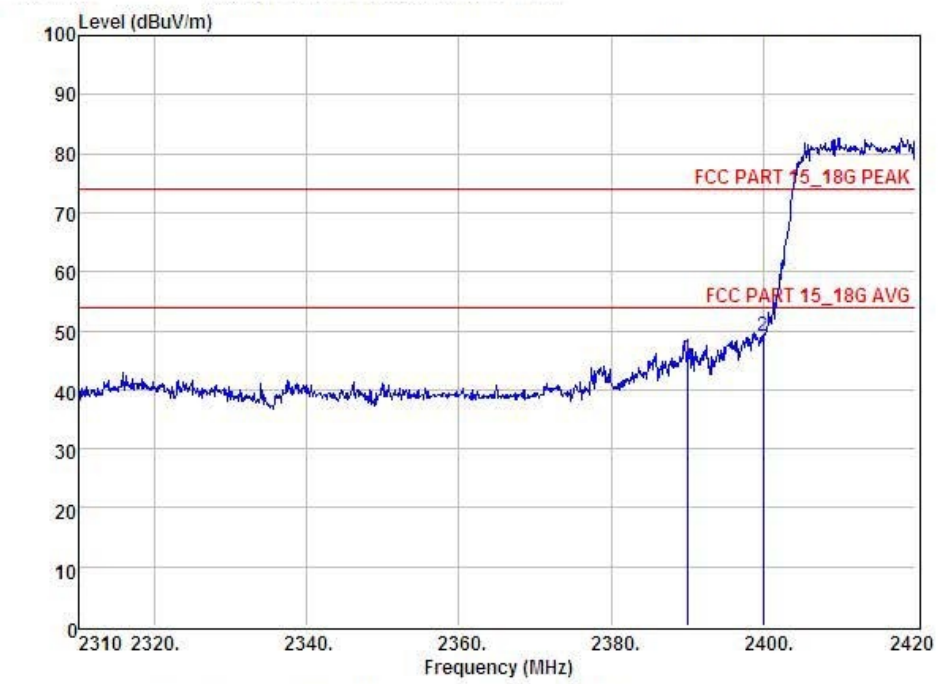



Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2483.50 | 44.11 | 27.59 | 34.97 | 4.00 | 40.73 | 74.00 | -33.27 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH3(802.11n Mode)/40M | Polarization : | Horizontal |

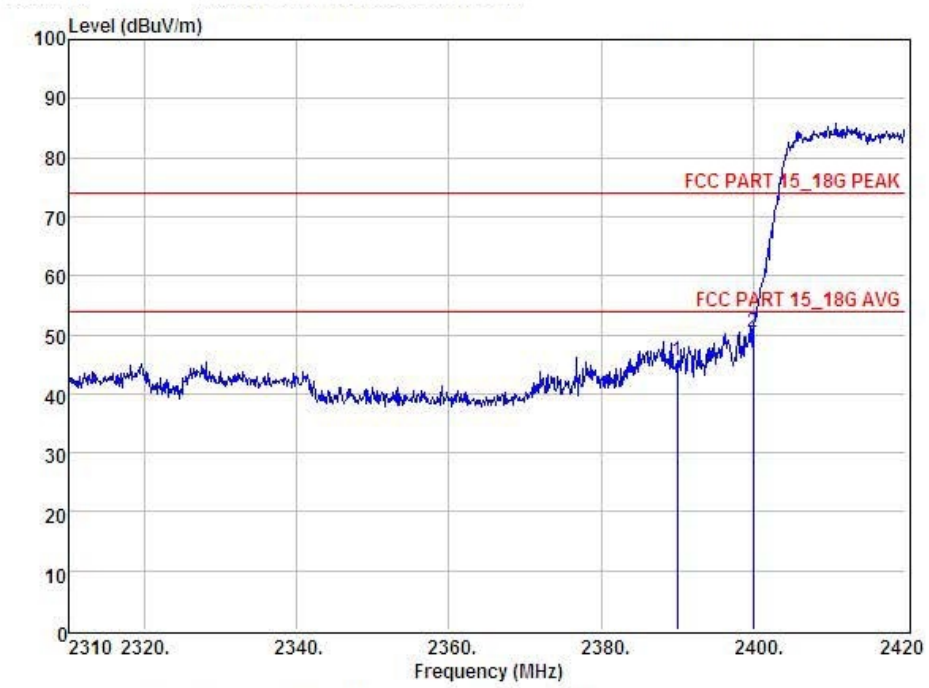



Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2390.00 | 48.71 | 27.62 | 34.97 | 3.92 | 45.28 | 74.00 | -28.72 | Peak |
| 2 | 2400.00 | 52.56 | 27.62 | 34.97 | 3.94 | 49.15 | 74.00 | -24.85 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH3(802.11n Mode)/40MHz | Polarization : | Vertical |

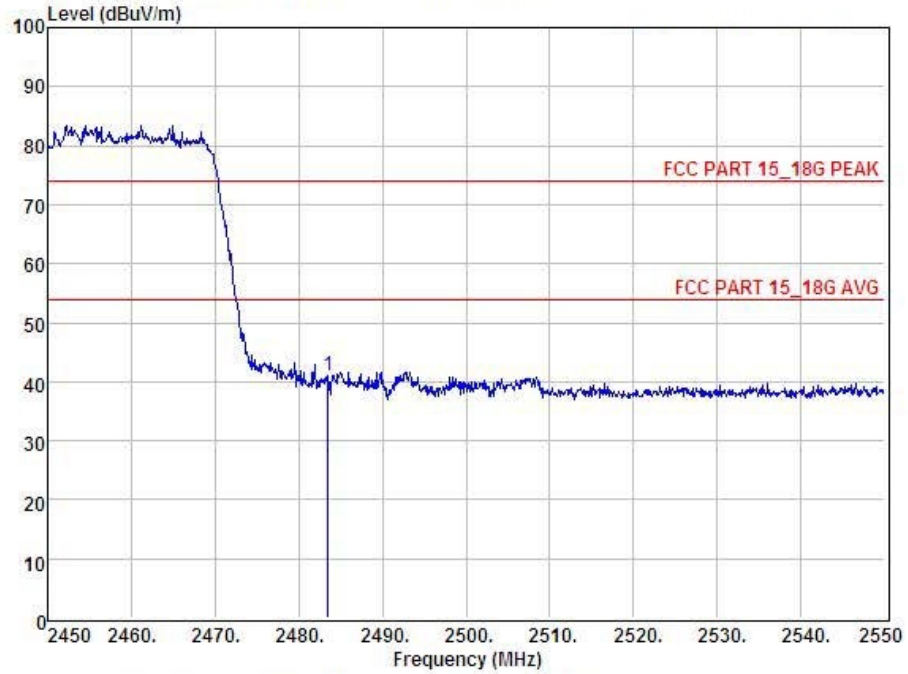



Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2390.00 | 48.98 | 27.62 | 34.97 | 3.92 | 45.55 | 74.00 | -28.45 | Peak |
| 2 | 2400.00 | 53.80 | 27.62 | 34.97 | 3.94 | 50.39 | 74.00 | -23.61 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| | | | |
|---|---|---|---|
| EUT： | Car DVR | Model Name ： | TS400 |
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH9(802.11n Mode)/40MHz | Polarization : | Horizontal |

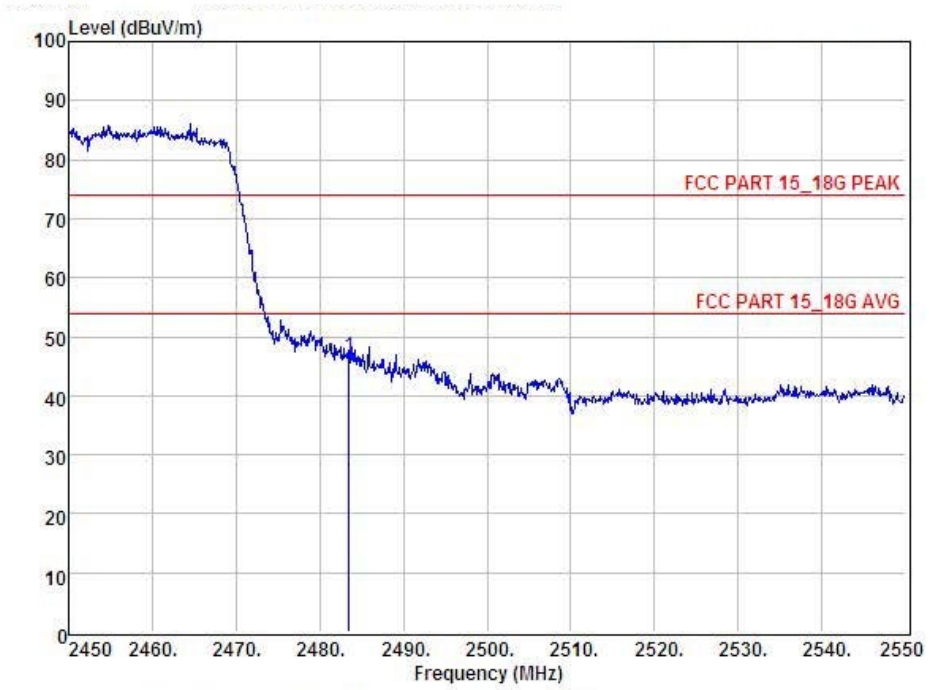



Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2483.50 | 44.31 | 27.59 | 34.97 | 4.00 | 40.93 | 74.00 | -33.07 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 20 ℃ | Relative Humidity： | 48% |
| Pressure： | 1010 hPa | Test Voltage ： | DC 5V FOR PC WITH AC 120V/60HZ |
| Test Mode ： | CH9(802.11n Mode)/40MHz | Polarization : | Vertical |




Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2483.50 | 49.91 | 27.59 | 34.97 | 4.00 | 46.53 | 74.00 | -27.47 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

# 4. POWER SPECTRAL DENSITY TEST

## 4.1 APPLIED PROCEDURES / LIMIT

| FCC Part15 (15.247) , Subpart C | | | | |
|---|---|---|---|---|
| Section | Test Item | Limit | Frequency Range (MHz) | Result |
| 15.247 | Power Spectral Density | 8 dBm (in any 3KHz) | 2400-2483.5 | PASS |

### 4.1.1 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW ≥ 3 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

### 4.1.2 DEVIATION FROM STANDARD

No deviation.

### 4.1.3 TEST SETUP


### 4.1.4 EUT OPERATION CONDITIONS

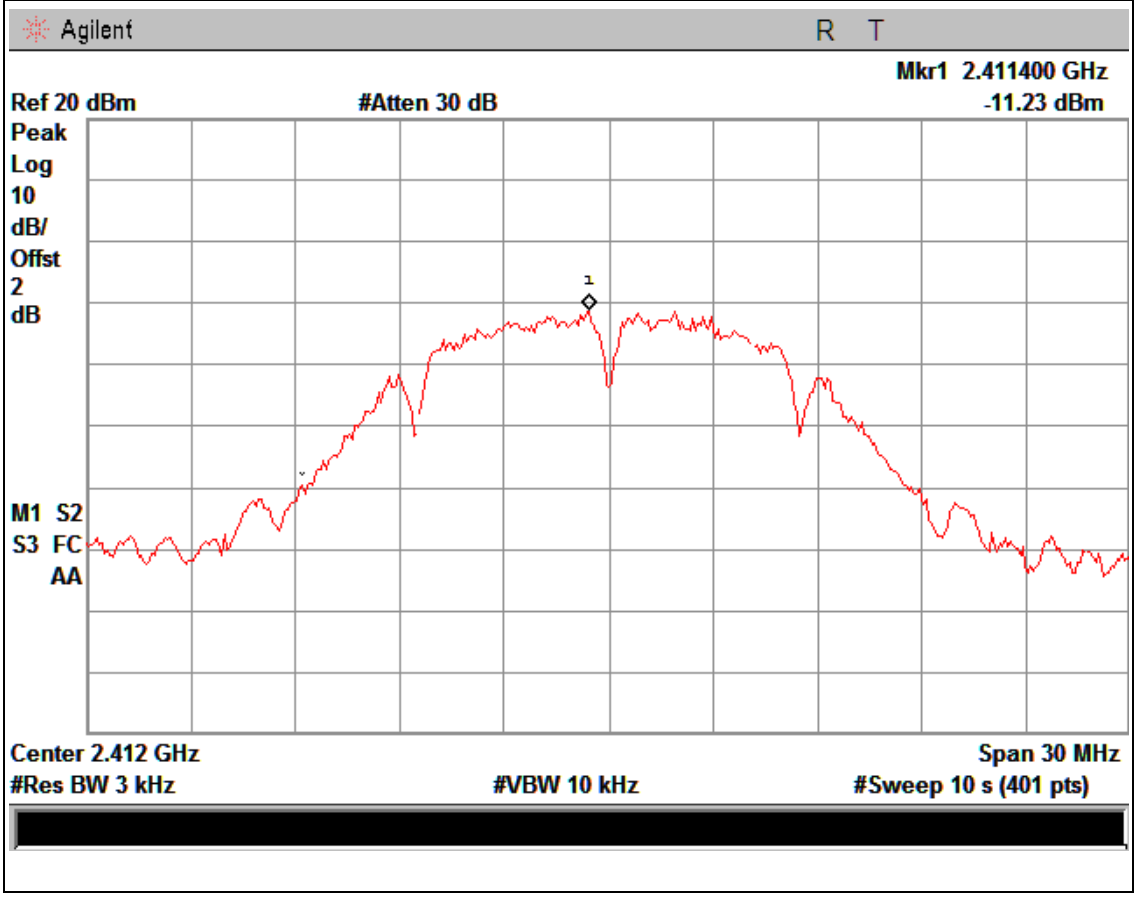
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

### 4.1.5 TEST RESULTS

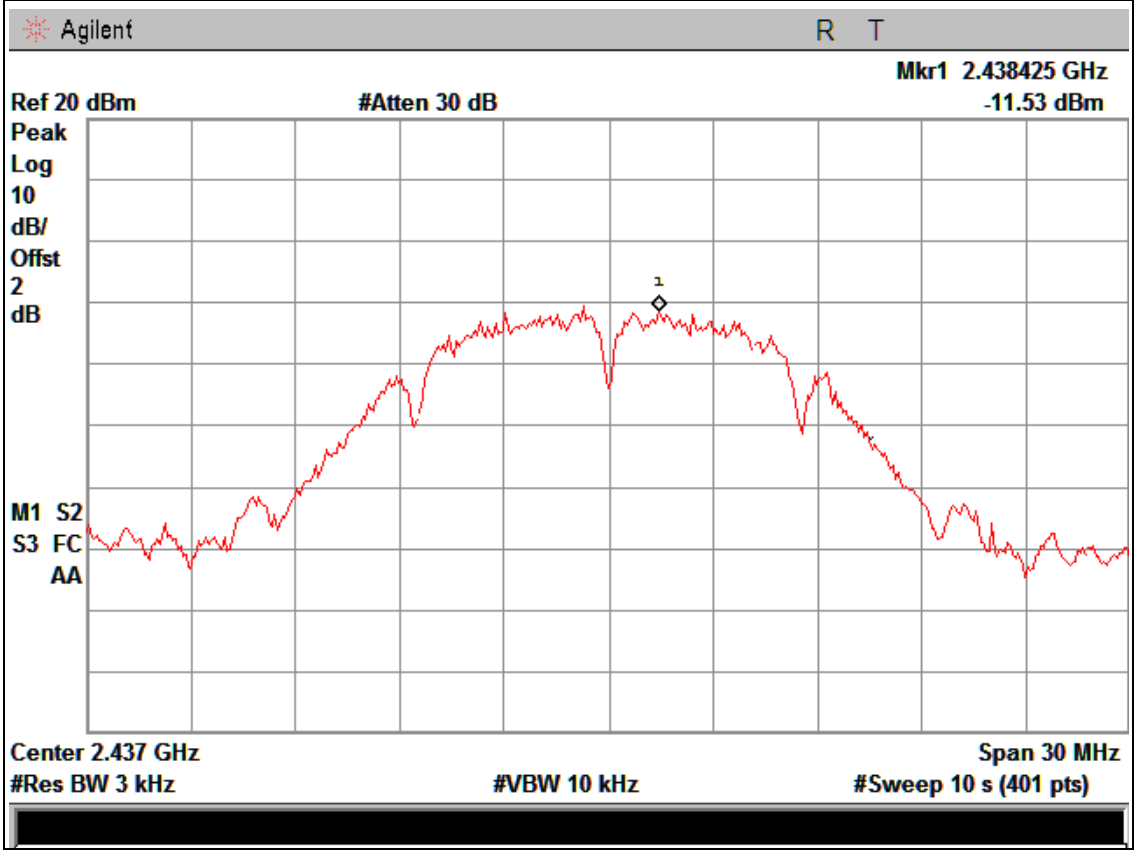
| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 25 ℃ | Relative Humidity： | 60% |
| Pressure： | 1015 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | TX b Mode /CH01, CH06, CH11 | | |

| Frequency | Power Density (dBm) | Limit (dBm) | Result |
|---|---|---|---|
| 2412 MHz | -11.23 | 8 | **PASS** |
| 2437 MHz | -11.53 | 8 | **PASS** |
| 2462 MHz | -11.35 | 8 | **PASS** |

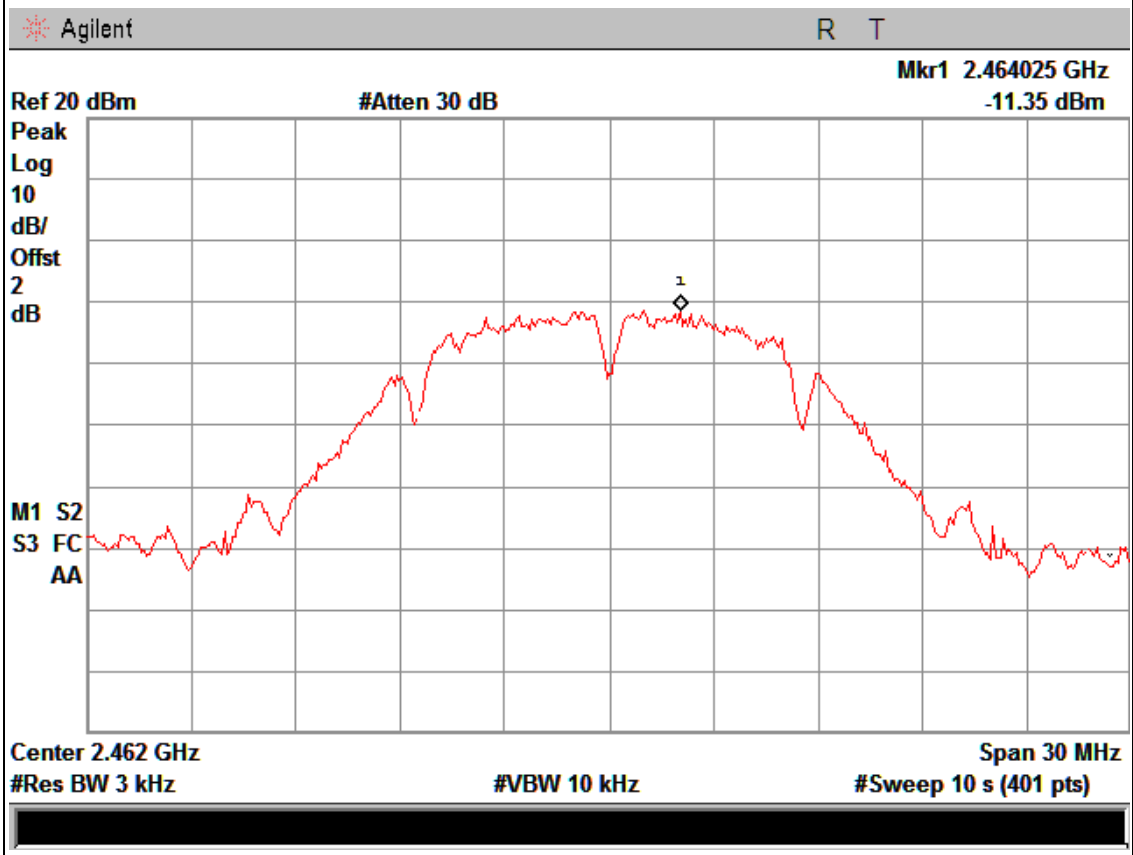
**TX CH01**



**TX CH06**



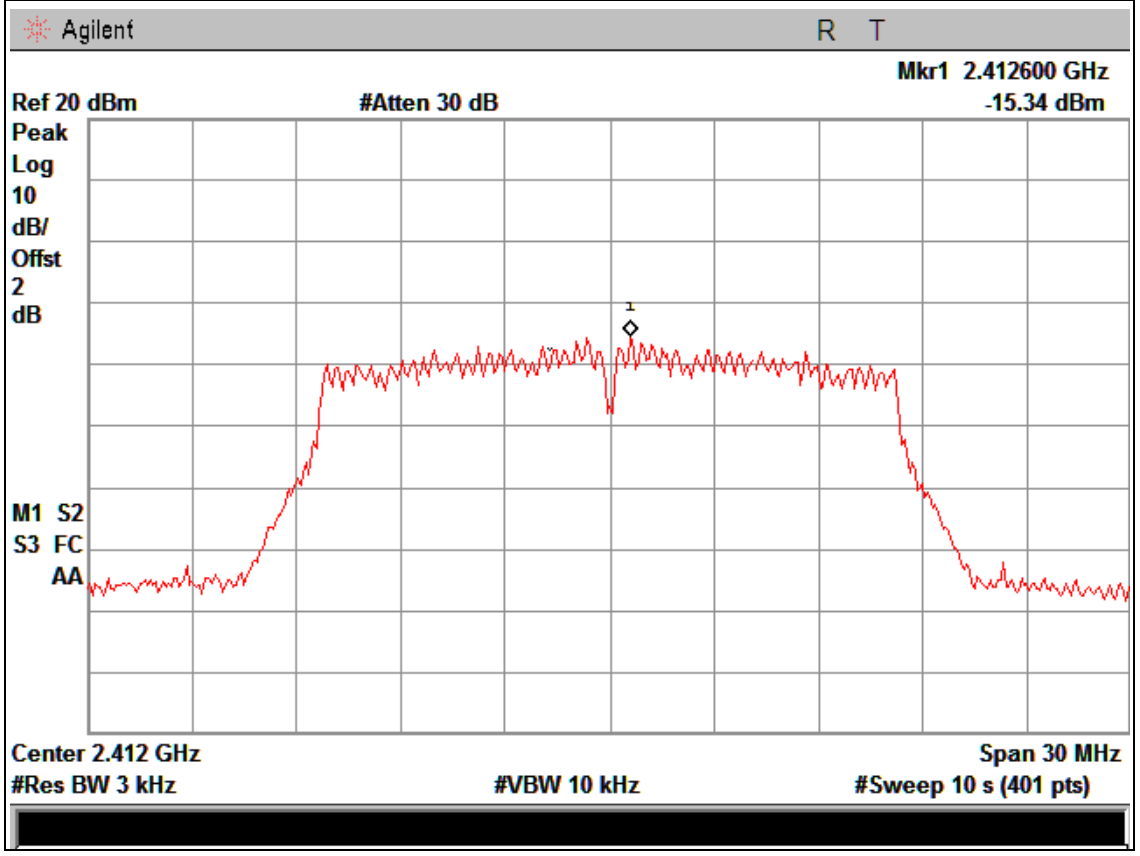

**TX CH11**



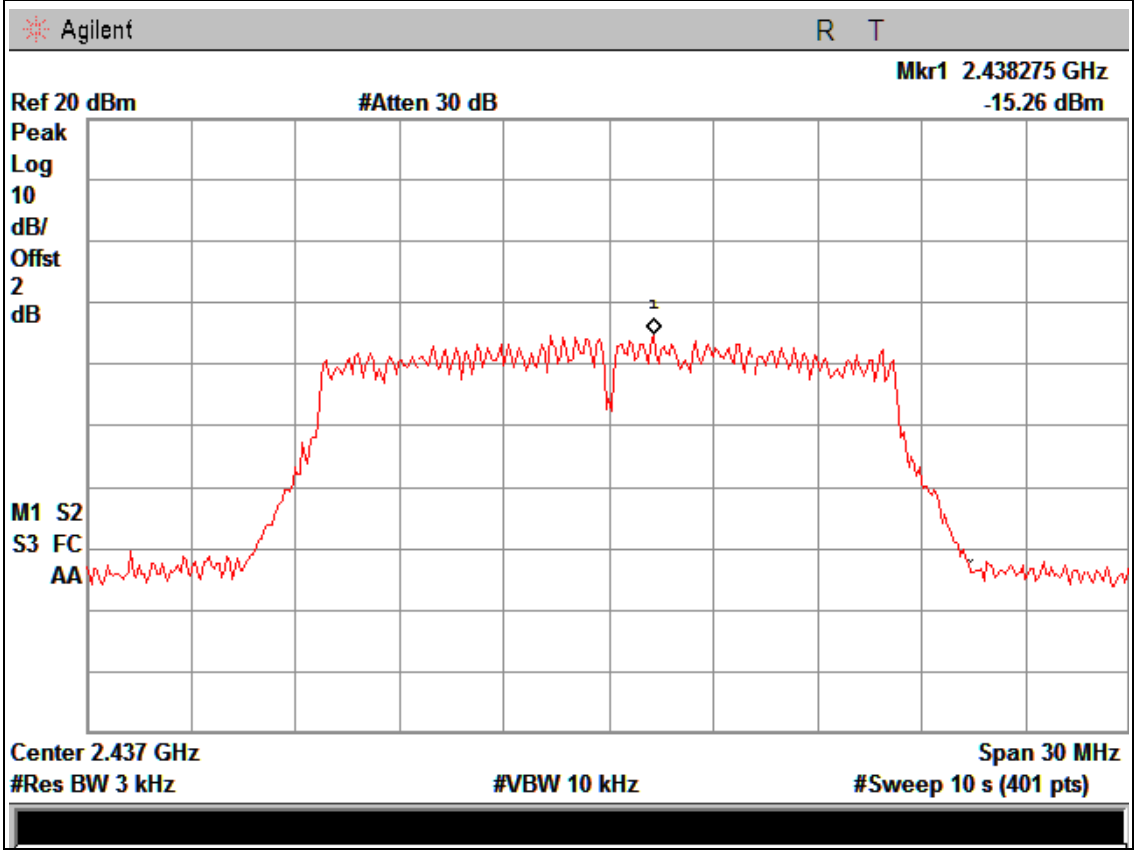
| | | | |
|---|---|---|---|
| EUT： | Car DVR | Model Name ： | TS400 |
| Temperature： | 25 ℃ | Relative Humidity： | 60% |
| Pressure： | 1015 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | TX g Mode /CH01, CH06, CH11 | | |

| Frequency | Power Density (dBm) | Limit (dBm) | Result |
|---|---|---|---|
| 2412 MHz | -15.34 | **8** | **PASS** |
| 2437 MHz | -15.26 | 8 | **PASS** |
| 2462 MHz | -16.00 | 8 | **PASS** |

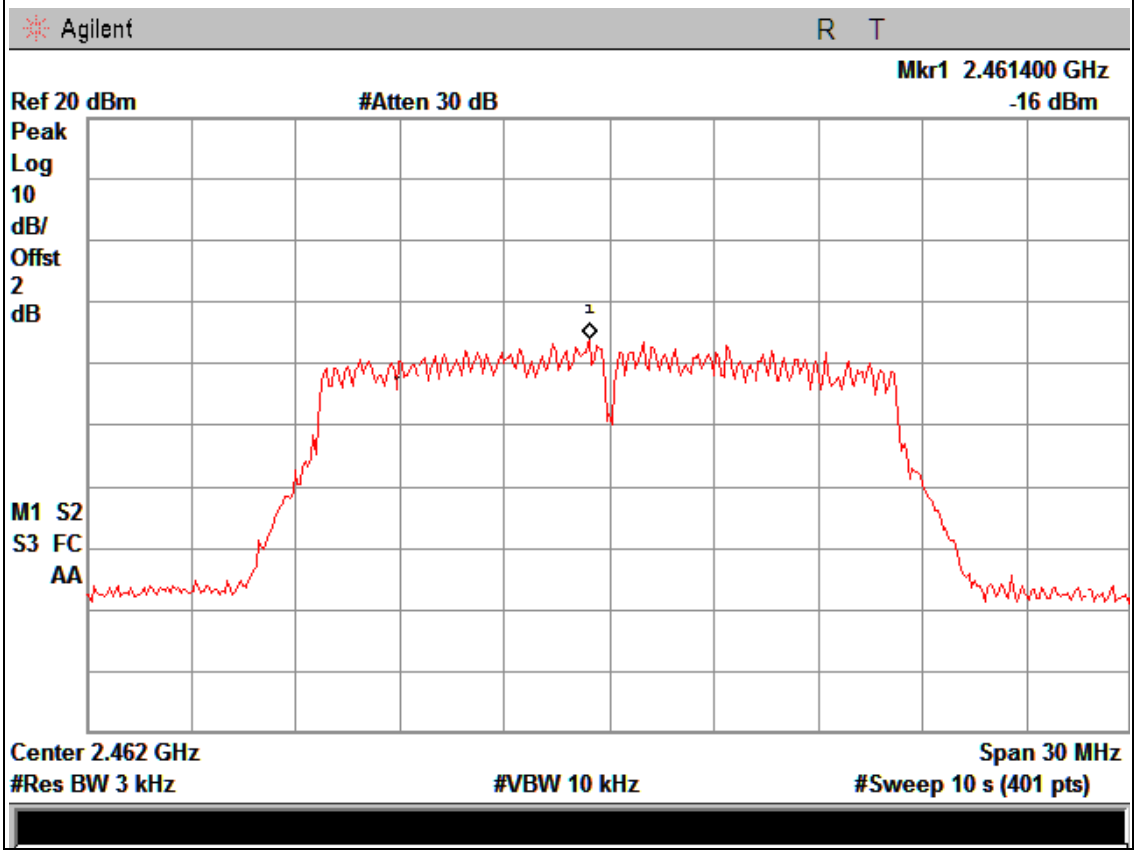
**TX CH01**



**TX CH06**



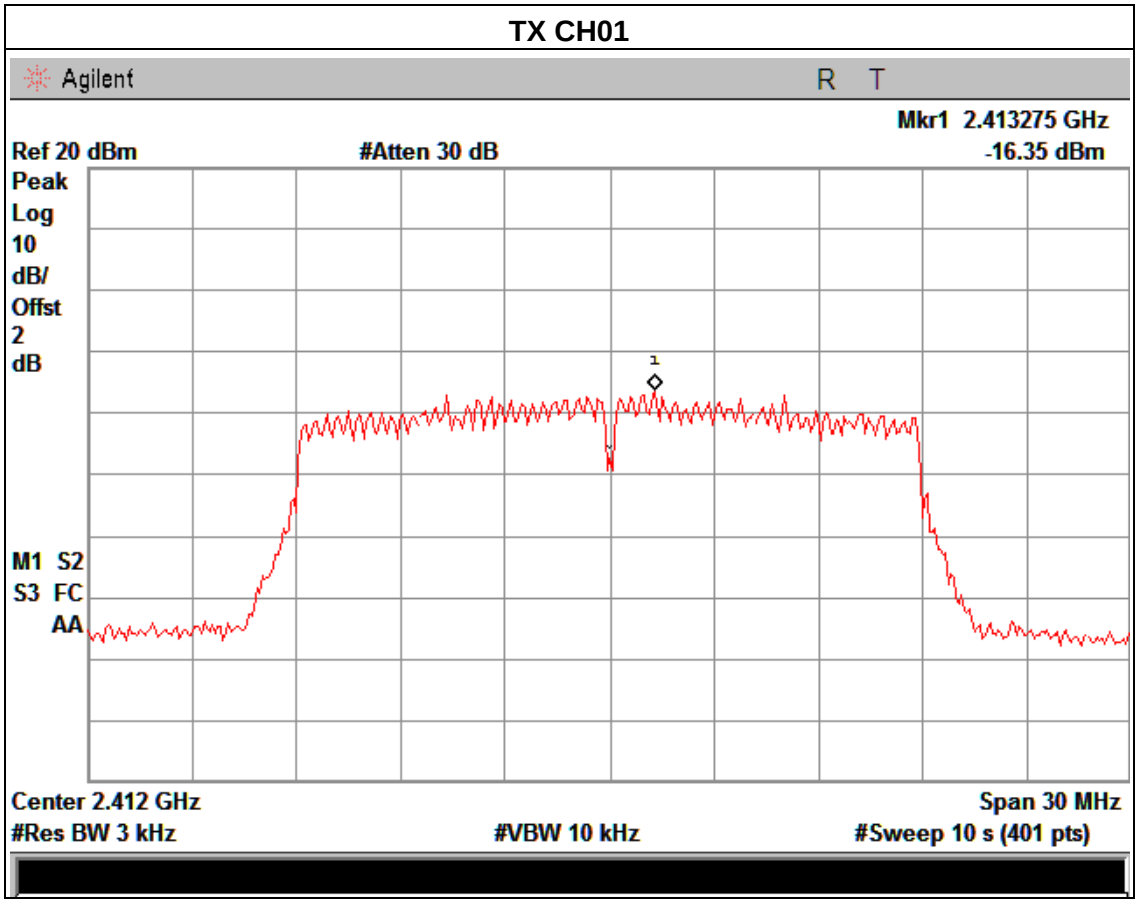

**TX CH11**



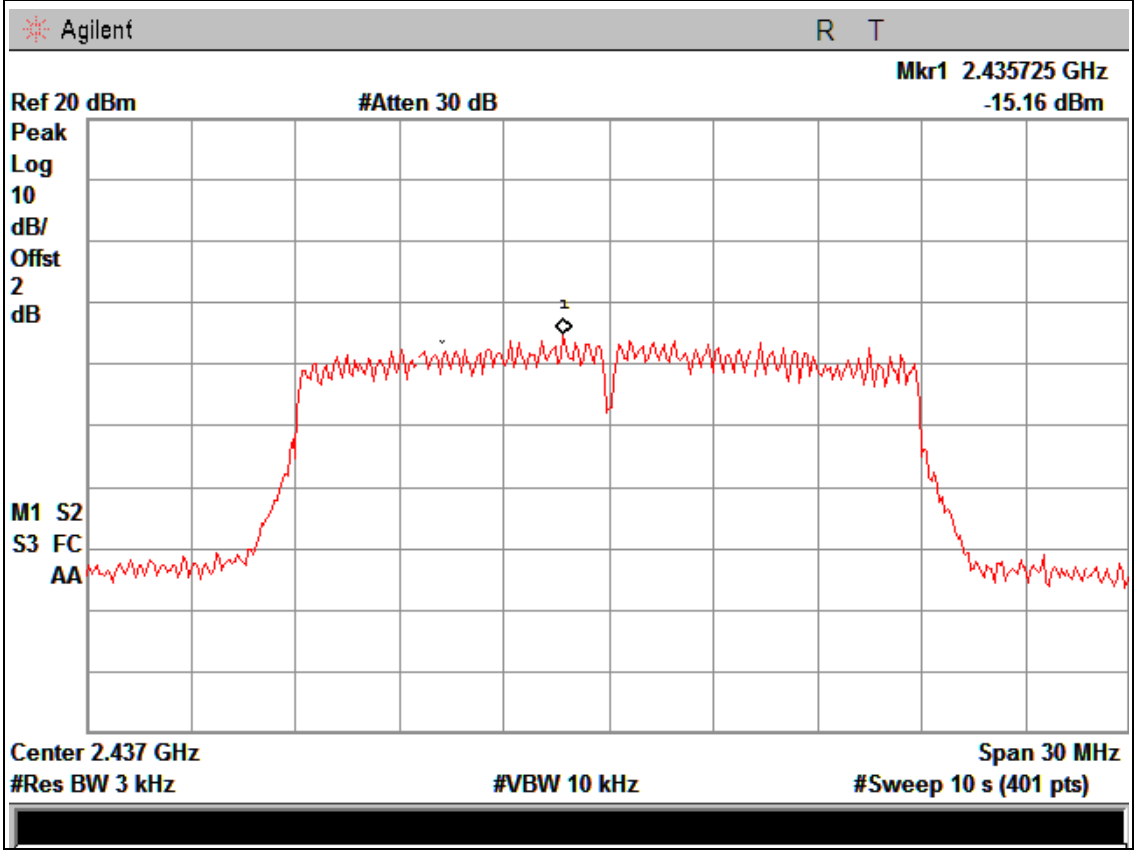
| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 25 ℃ | Relative Humidity： | 60% |
| Pressure： | 1015 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | TX n Mode(20M) /CH01, CH06, CH11 | | |

| Frequency | Power Density (dBm) | Limit (dBm) | Result |
|---|---|---|---|
| 2412 MHz | -16.35 | **8** | **PASS** |
| 2437 MHz | -15.16 | 8 | **PASS** |
| 2462 MHz | -16.99 | 8 | **PASS** |

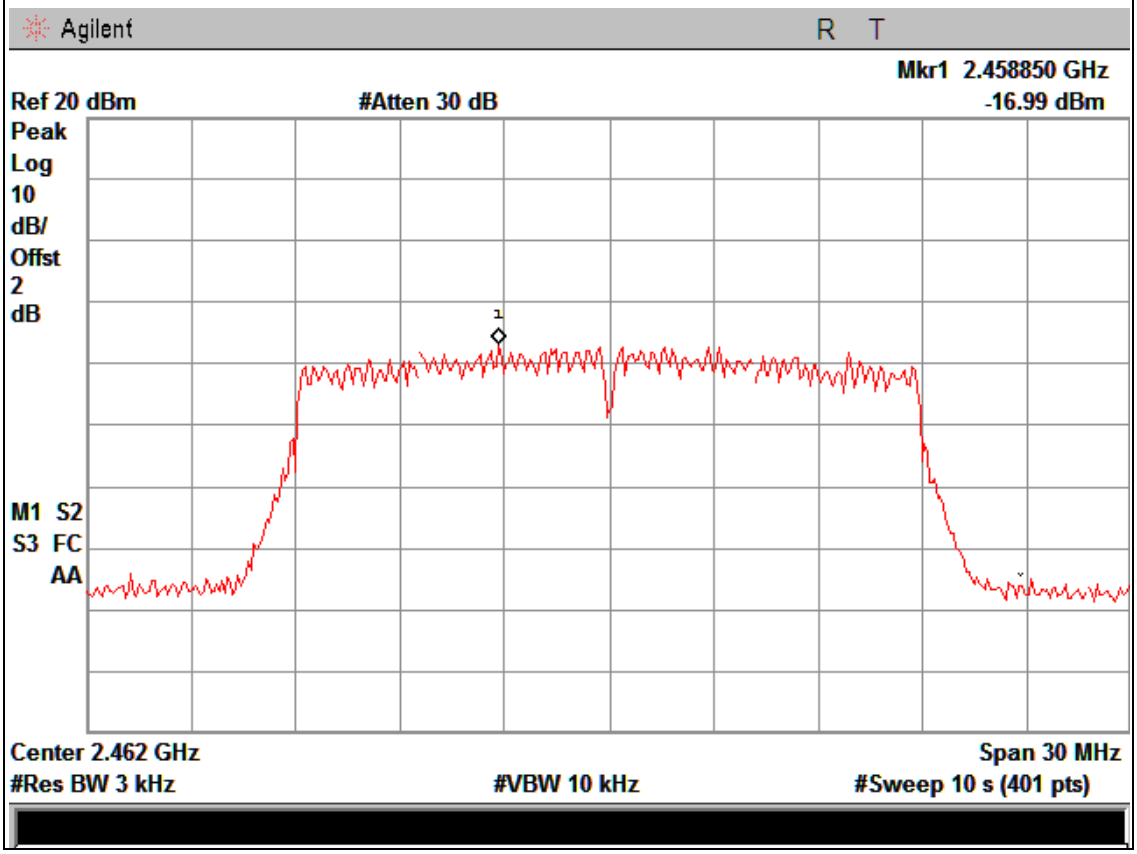
**TX CH01**



**TX CH06**



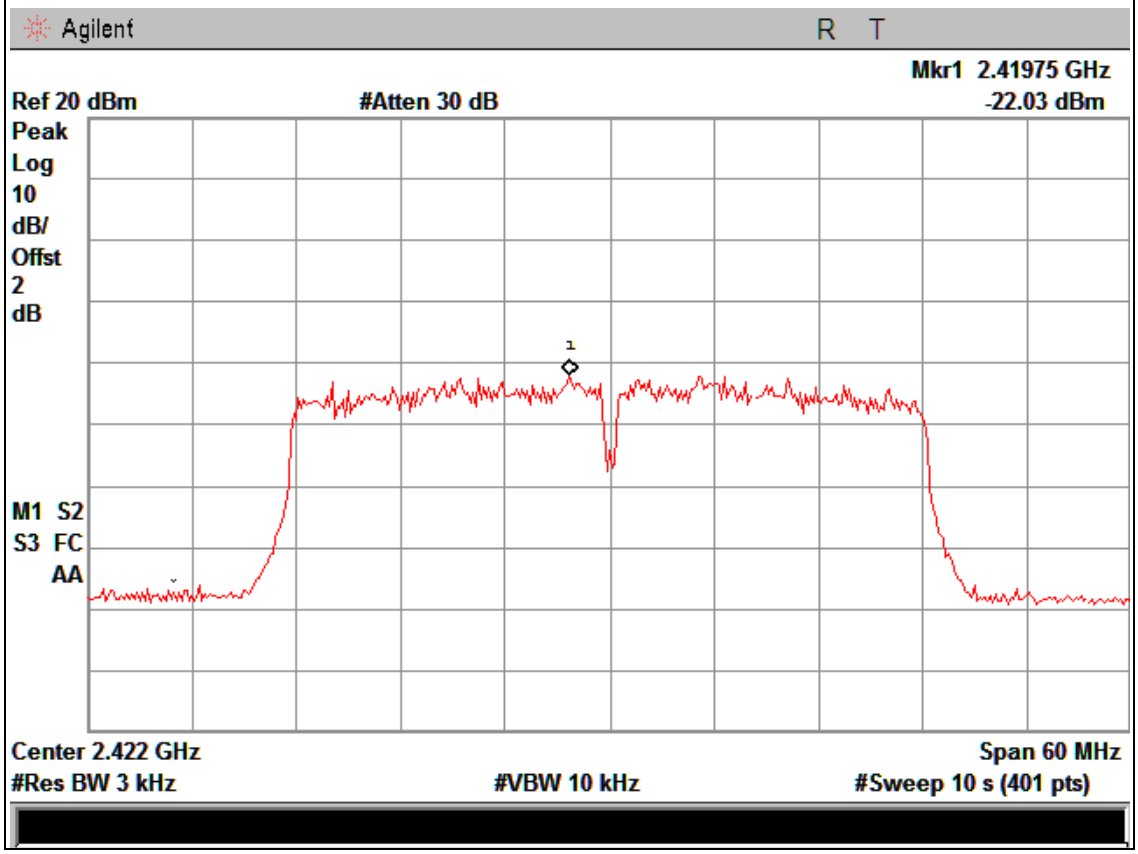

**TX CH11**



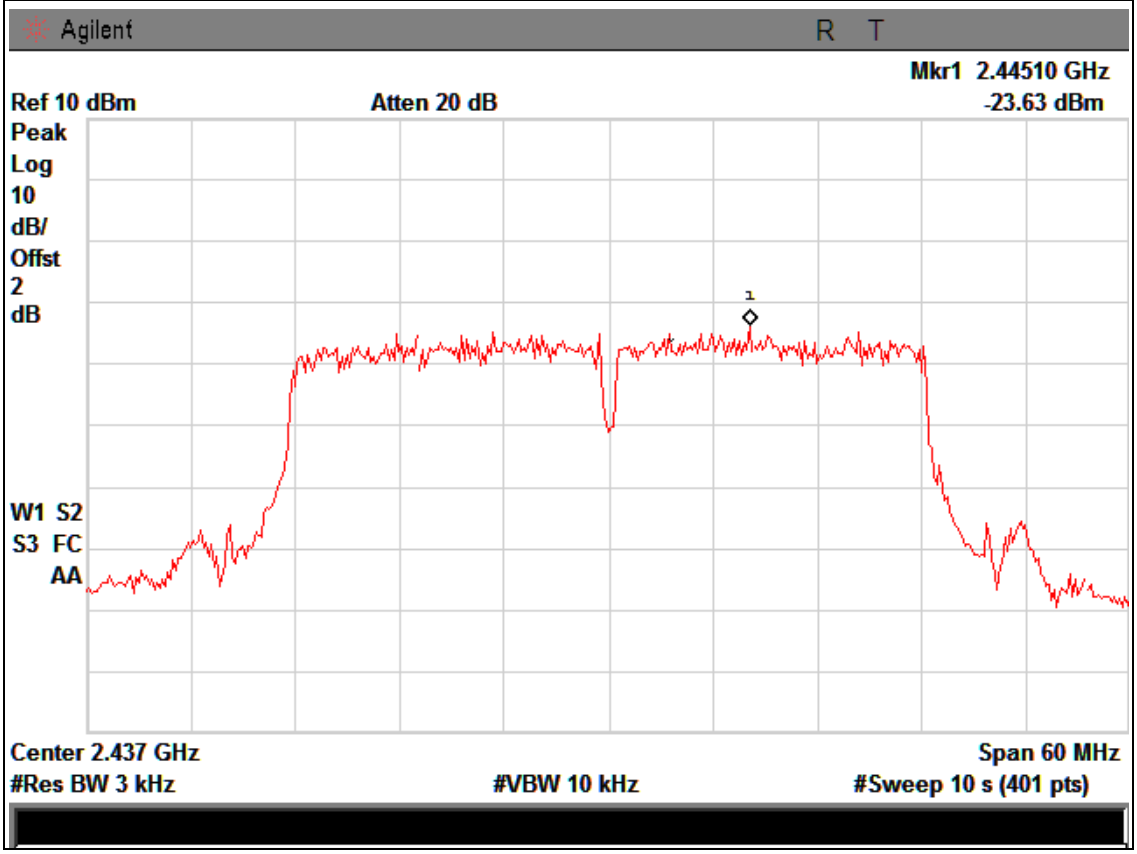
| | | | |
|---|---|---|---|
| EUT： | Car DVR | Model Name ： | TS400 |
| Temperature： | 25 ℃ | Relative Humidity： | 60% |
| Pressure： | 1015 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | TX n Mode(40M) /CH03, CH06, CH09 | | |

| Frequency | Power Density (dBm) | Limit (dBm) | Result |
|---|---|---|---|
| 2422 MHz | -22.03 | 8 | PASS |
| 2437 MHz | -23.63 | 8 | PASS |
| 2452 MHz | -20.78 | 8 | PASS |

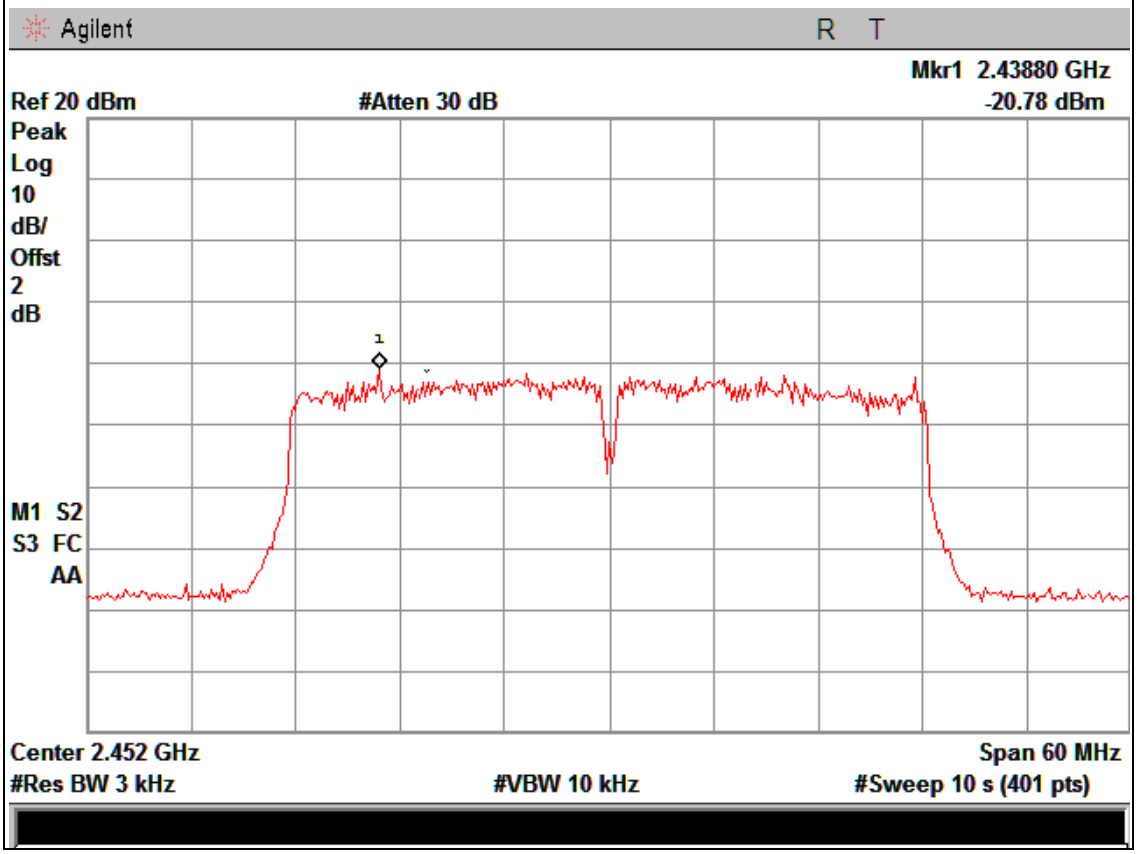
**TX CH03**



**TX CH06**




**TX CH09**



# 5. BANDWIDTH TEST

## 5.1 APPLIED PROCEDURES / LIMIT

| FCC Part15 (15.247) , Subpart C | | | | |
|---|---|---|---|---|
| Section | Test Item | Limit | Frequency Range (MHz) | Result |
| 15.247(a)(2) | Bandwidth | >= 500KHz (6dB bandwidth) | 2400-2483.5 | PASS |

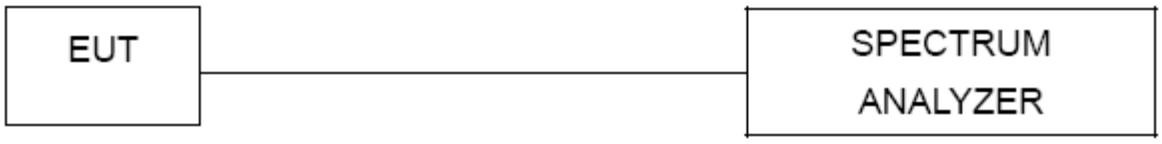
### 5.1.1 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 ´ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7.Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 d B relative to the maximum level measured in the fundamental emission.

### 5.1.2 DEVIATION FROM STANDARD

No deviation.

### 5.1.3 TEST SETUP




### 5.1.4 EUT OPERATION CONDITIONS

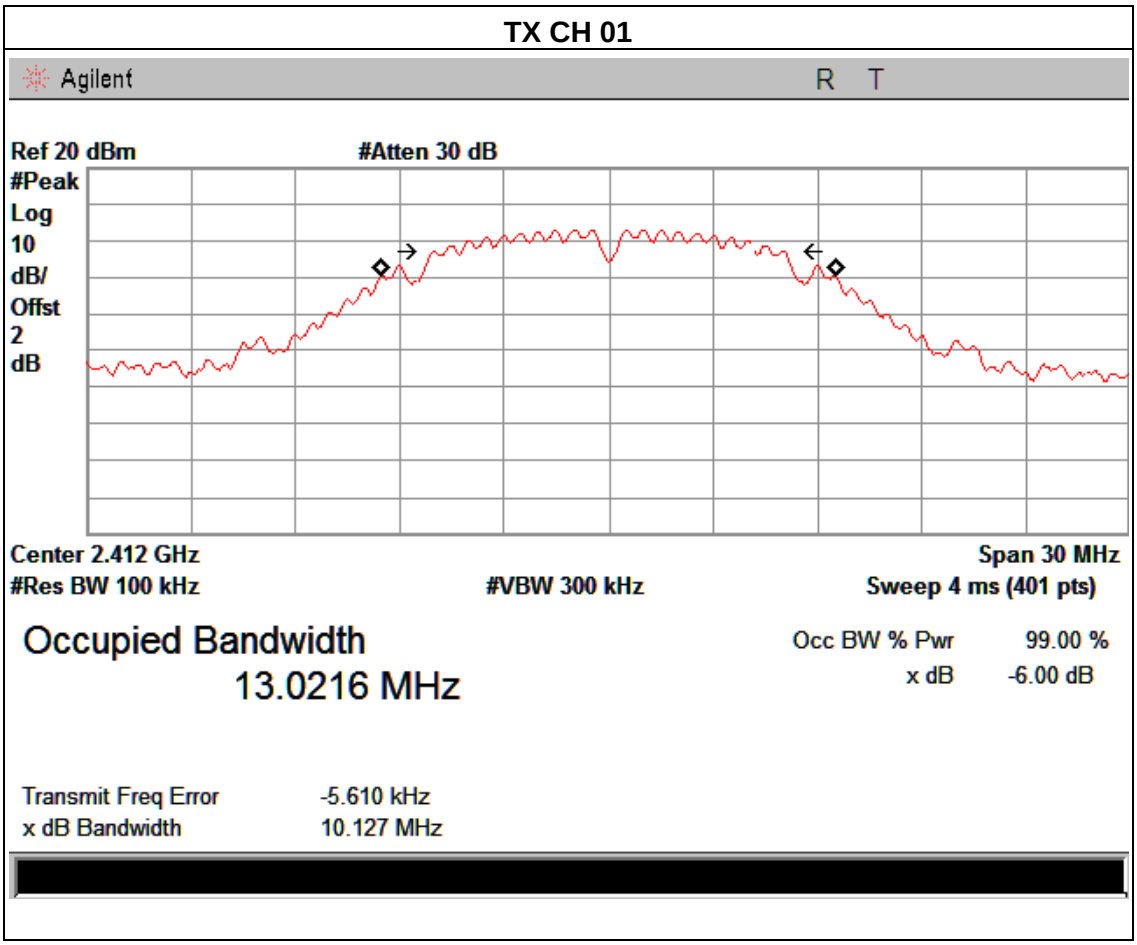
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

### 5.1.5 TEST RESULTS

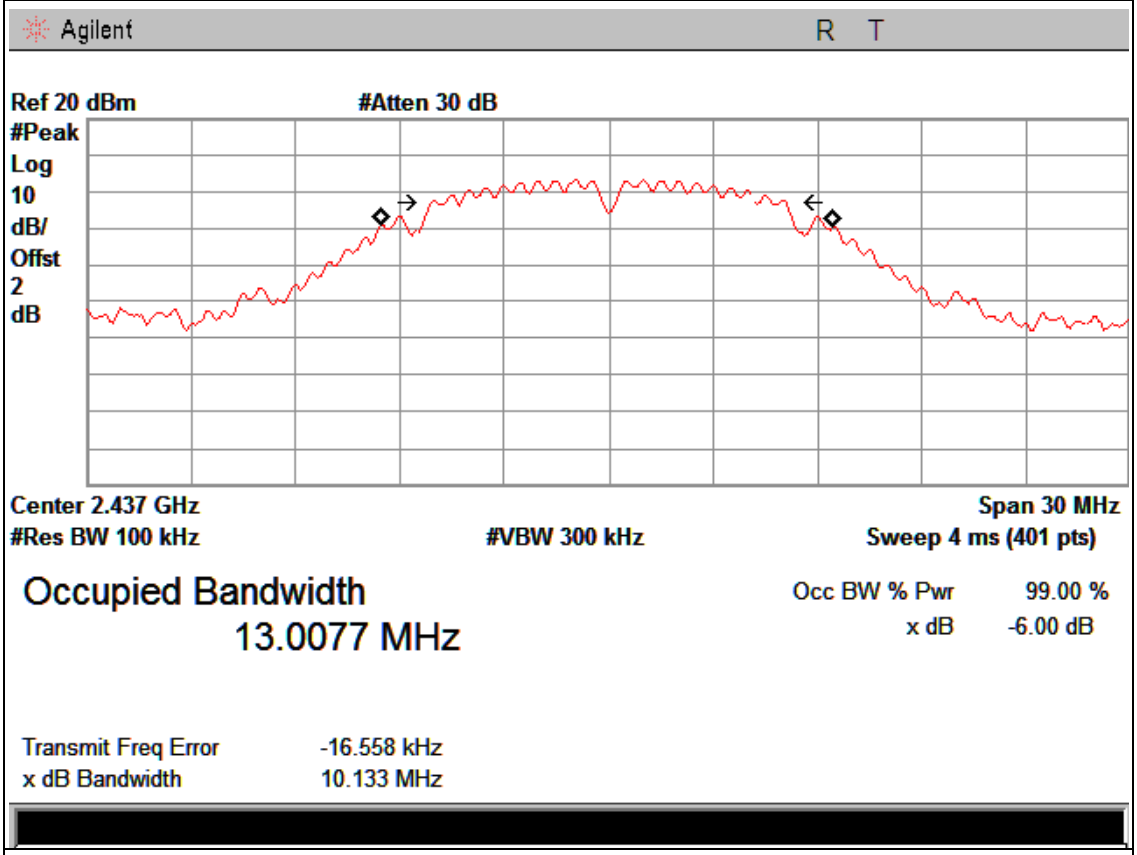
| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 25 ℃ | Relative Humidity： | 60% |
| Pressure： | 1012 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | TX b Mode /CH01, CH06, CH11 | | |

| Frequency | 6dB Bandwidth (MHz) | Channel Separation (MHz) | Result |
|---|---|---|---|
| 2412 MHz | 10.127 | >=500KHz | **PASS** |
| 2437 MHz | 10.133 | >=500KHz | **PASS** |
| 2462 MHz | 10.120 | >=500KHz | **PASS** |

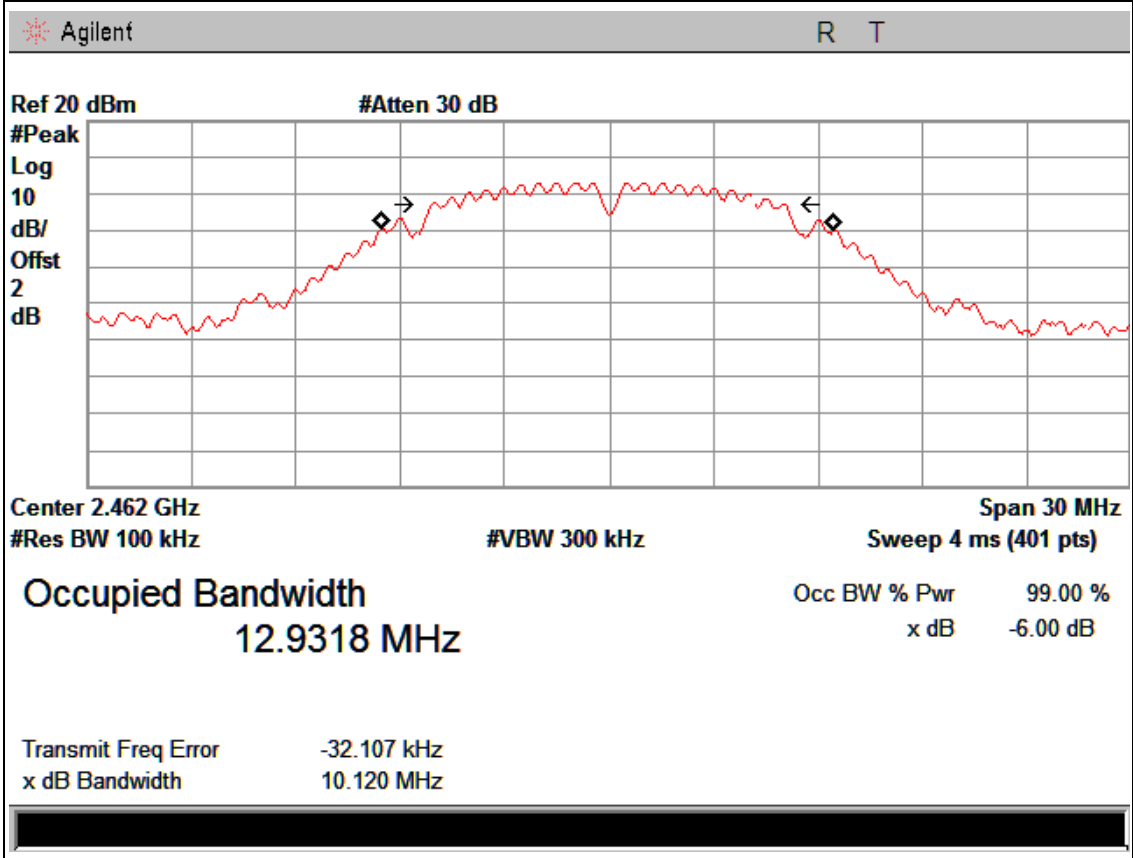
**TX CH 01**



**TX CH 06**



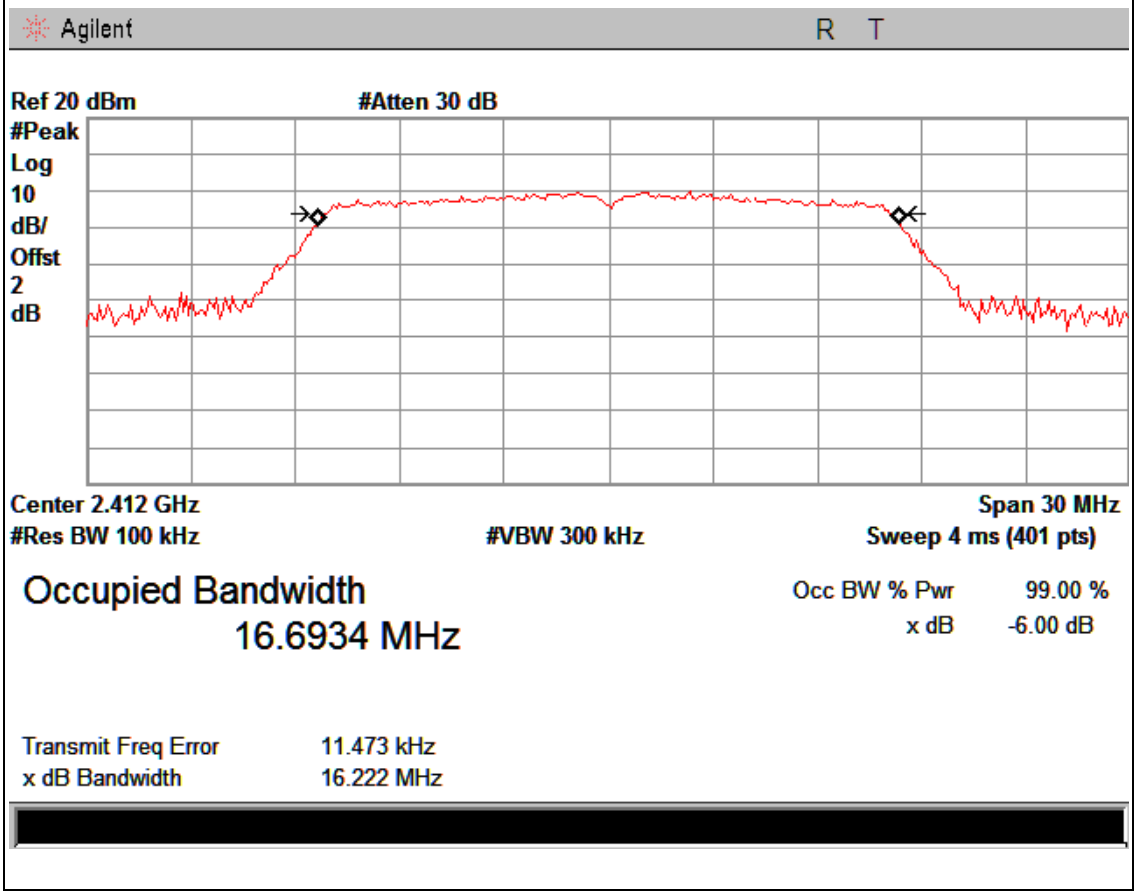

**TX CH 11**



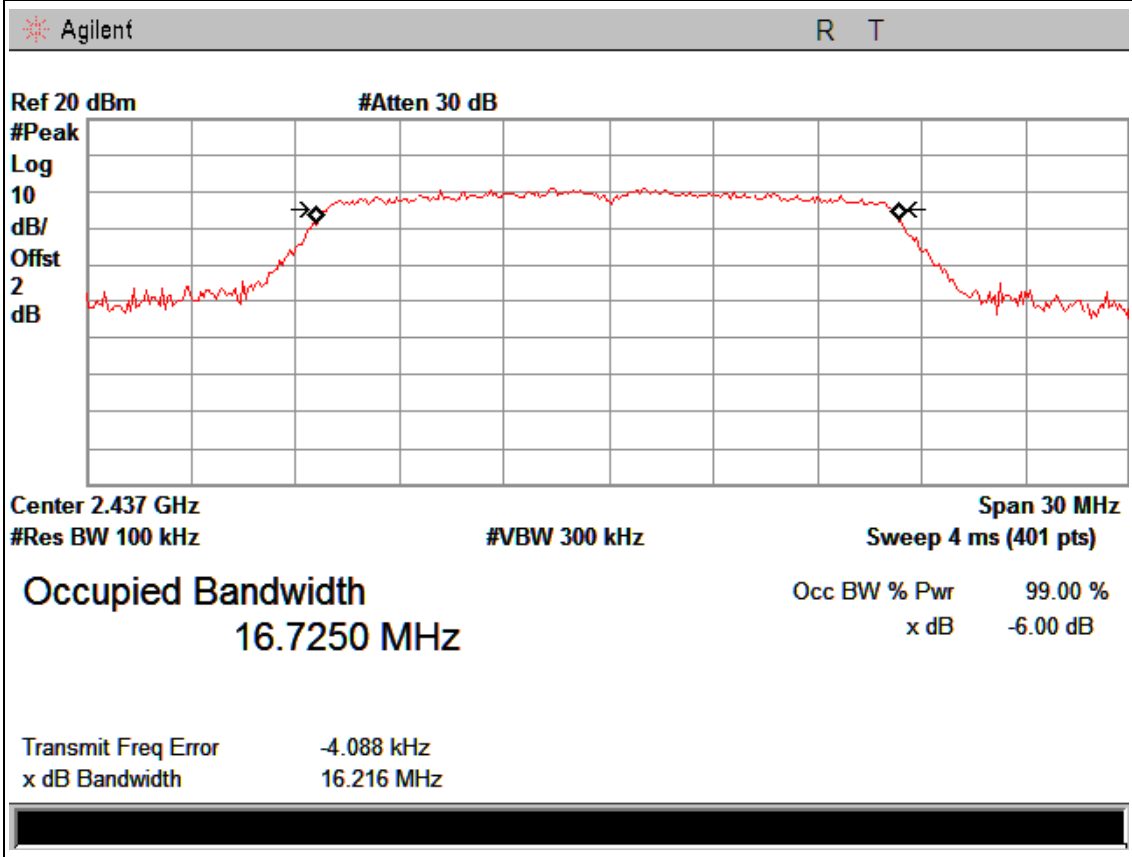
| | | | |
|---|---|---|---|
| EUT： | Car DVR | Model Name ： | TS400 |
| Temperature： | 25 ℃ | Relative Humidity： | 60% |
| Pressure： | 1012 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | TX g Mode /CH01, CH06, CH11 | | |

| Frequency | 6dB Bandwidth (MHz) | Channel Separation (MHz) | Result |
|---|---|---|---|
| 2412 MHz | 16.222 | >=500KHz | **PASS** |
| 2437 MHz | 16.216 | >=500KHz | **PASS** |
| 2462 MHz | 16.280 | >=500KHz | **PASS** |

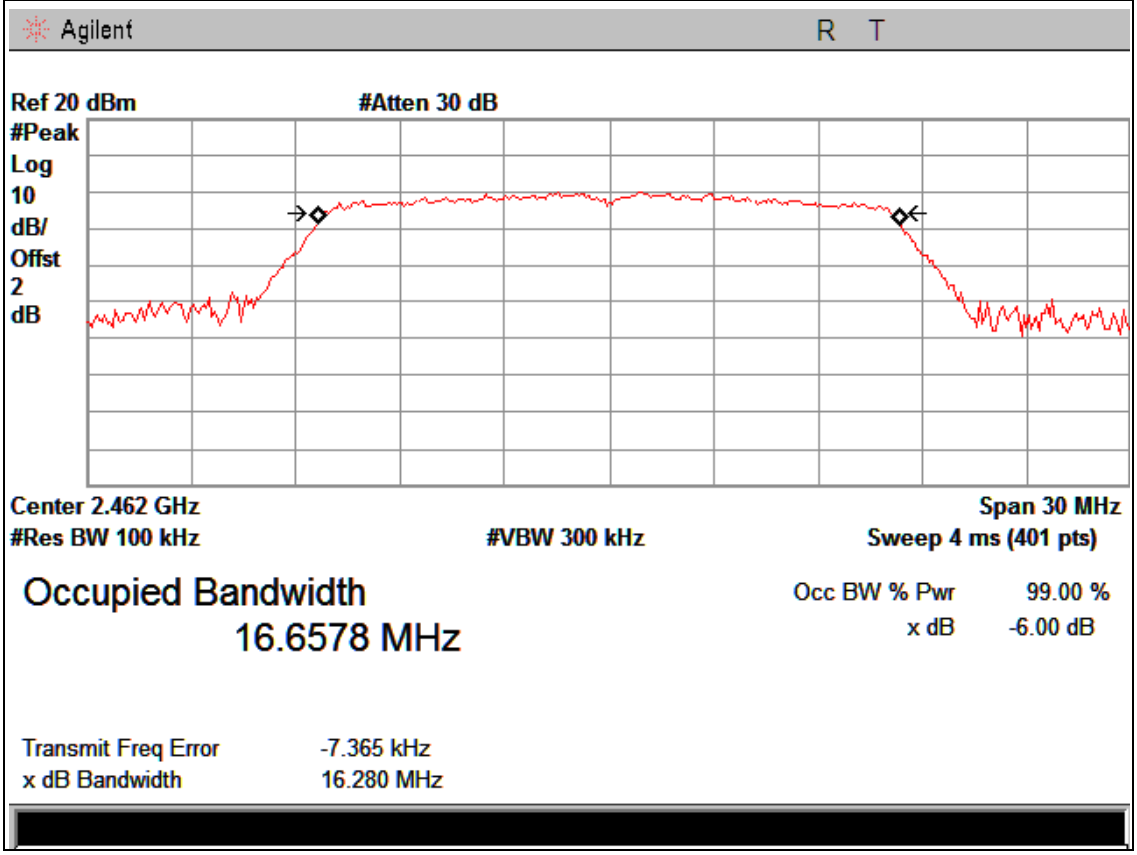
**TX CH 01**



**TX CH 06**



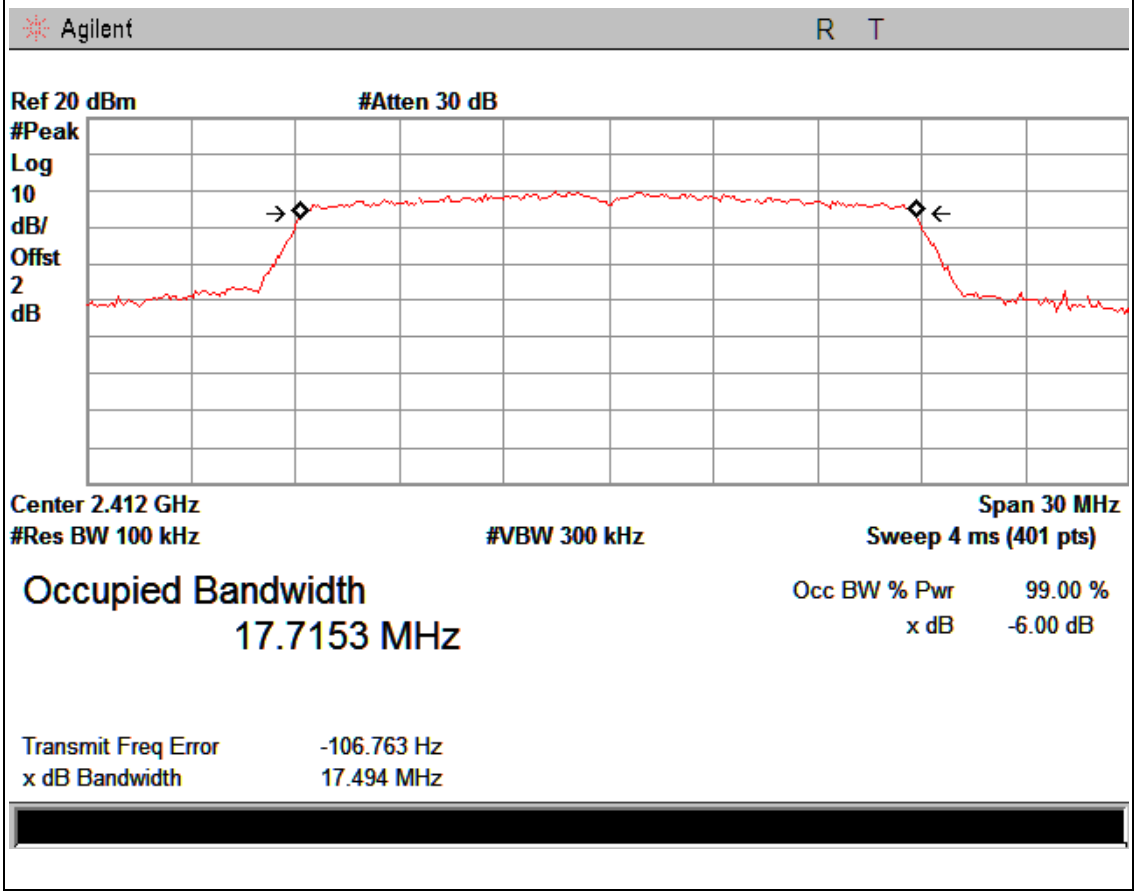

**TX CH 11**



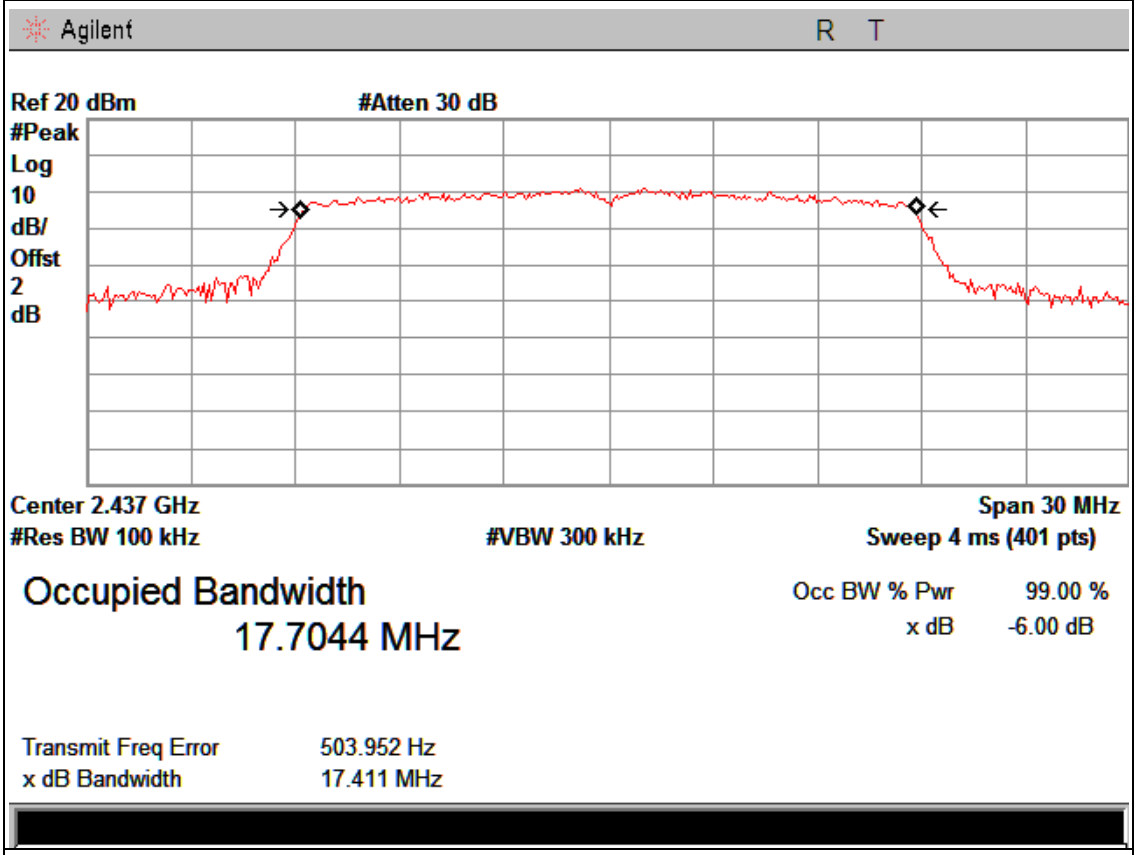
| EUT： | Car DVR | Model Name ： | TS400 |
|---|---|---|---|
| Temperature： | 25 ℃ | Relative Humidity： | 60% |
| Pressure： | 1012 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | TX n Mode(20M) /CH01, CH06, CH11 | | |

| Frequency | 6dB Bandwidth (MHz) | Channel Separation (MHz) | Result |
|---|---|---|---|
| 2412 MHz | 17.494 | >=500KHz | **PASS** |
| 2437 MHz | 17.411 | >=500KHz | **PASS** |
| 2462 MHz | 17.479 | >=500KHz | **PASS** |

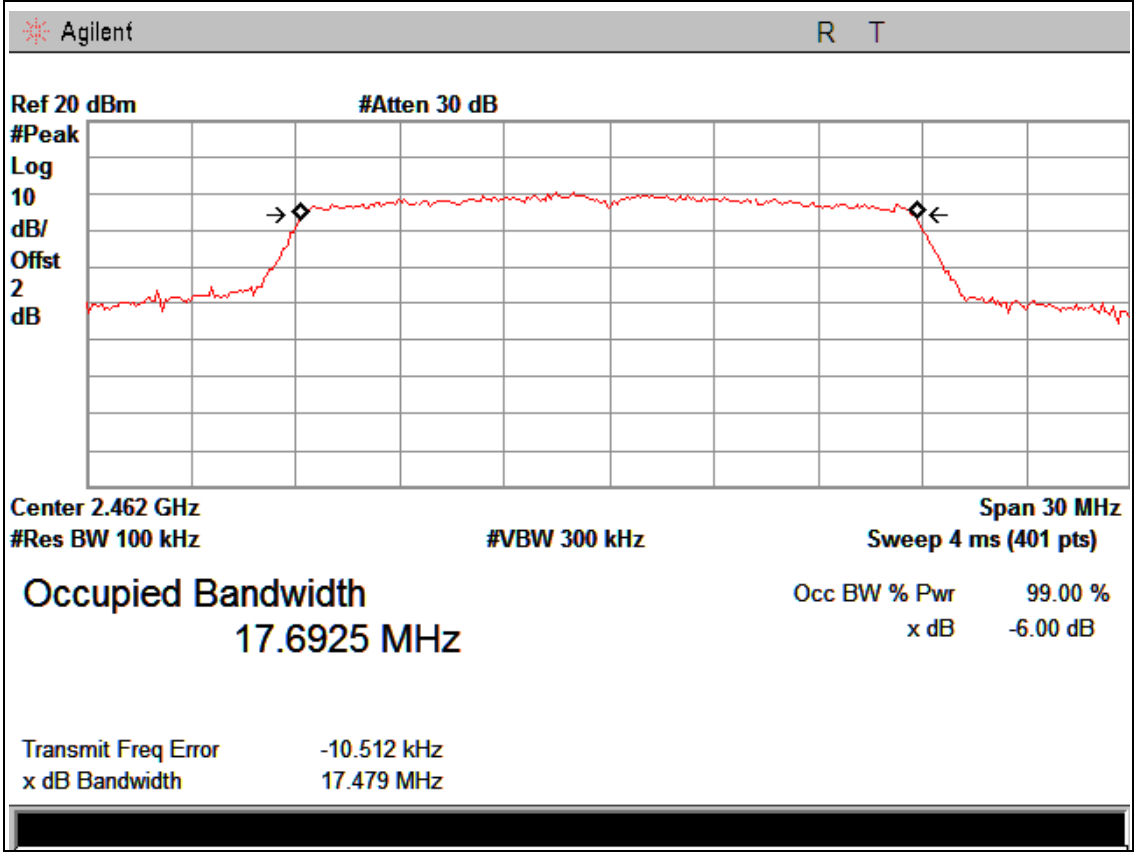
**TX CH 01**



**TX CH 06**



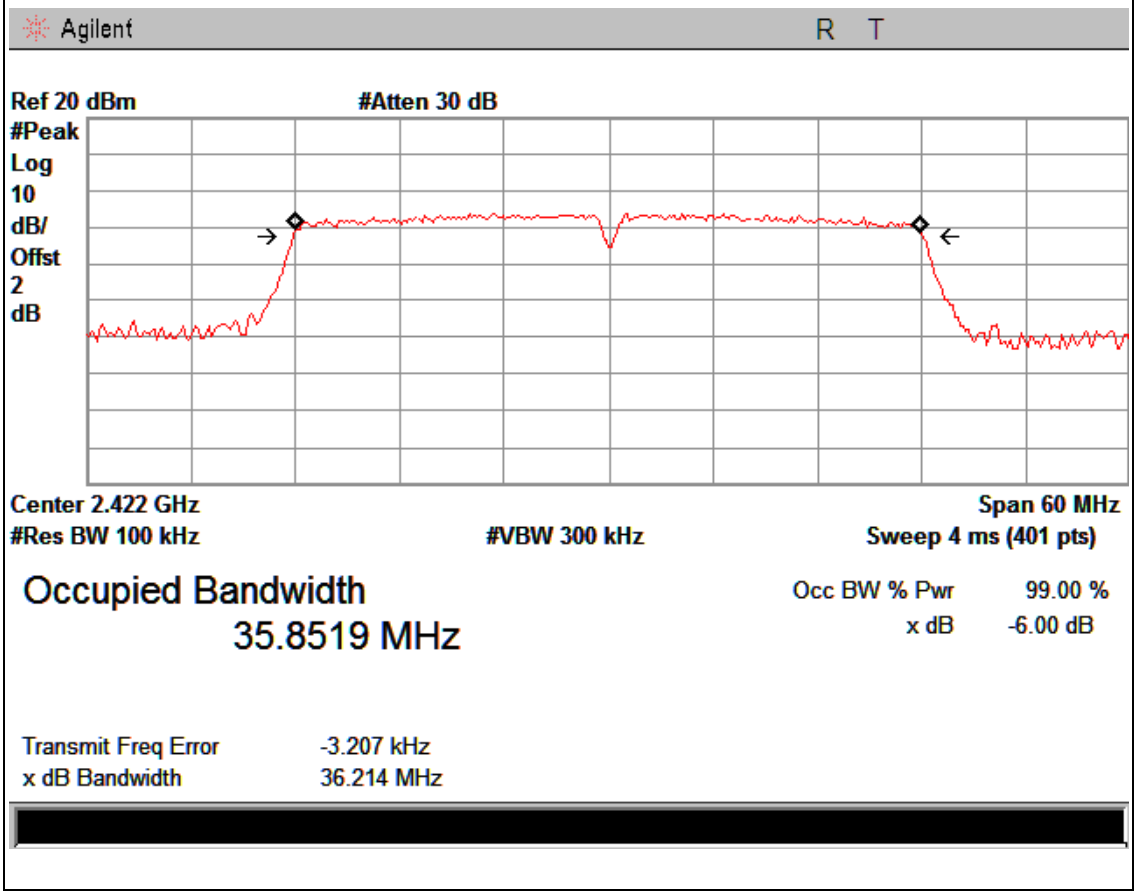

**TX CH 11**



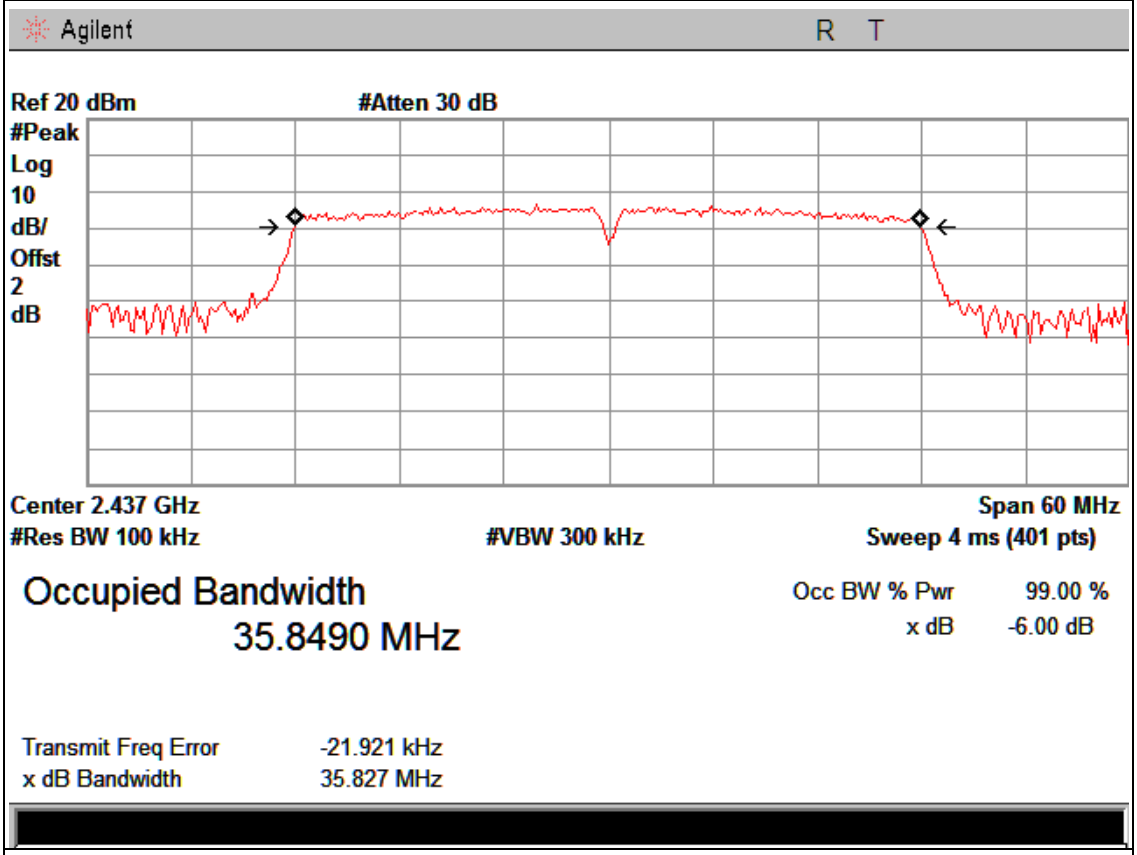
| | | | |
|---|---|---|---|
| EUT： | Car DVR | Model Name ： | TS400 |
| Temperature： | 25 ℃ | Relative Humidity： | 60% |
| Pressure： | 1012 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | TX n Mode(40M) /CH03, CH06, CH09 | | |

| Frequency | 6dB Bandwidth (MHz) | Channel Separation (MHz) | Result |
|---|---|---|---|
| 2422 MHz | 36.214 | >=500KHz | **PASS** |
| 2437 MHz | 35.827 | >=500KHz | **PASS** |
| 2452 MHz | 36.079 | >=500KHz | **PASS** |

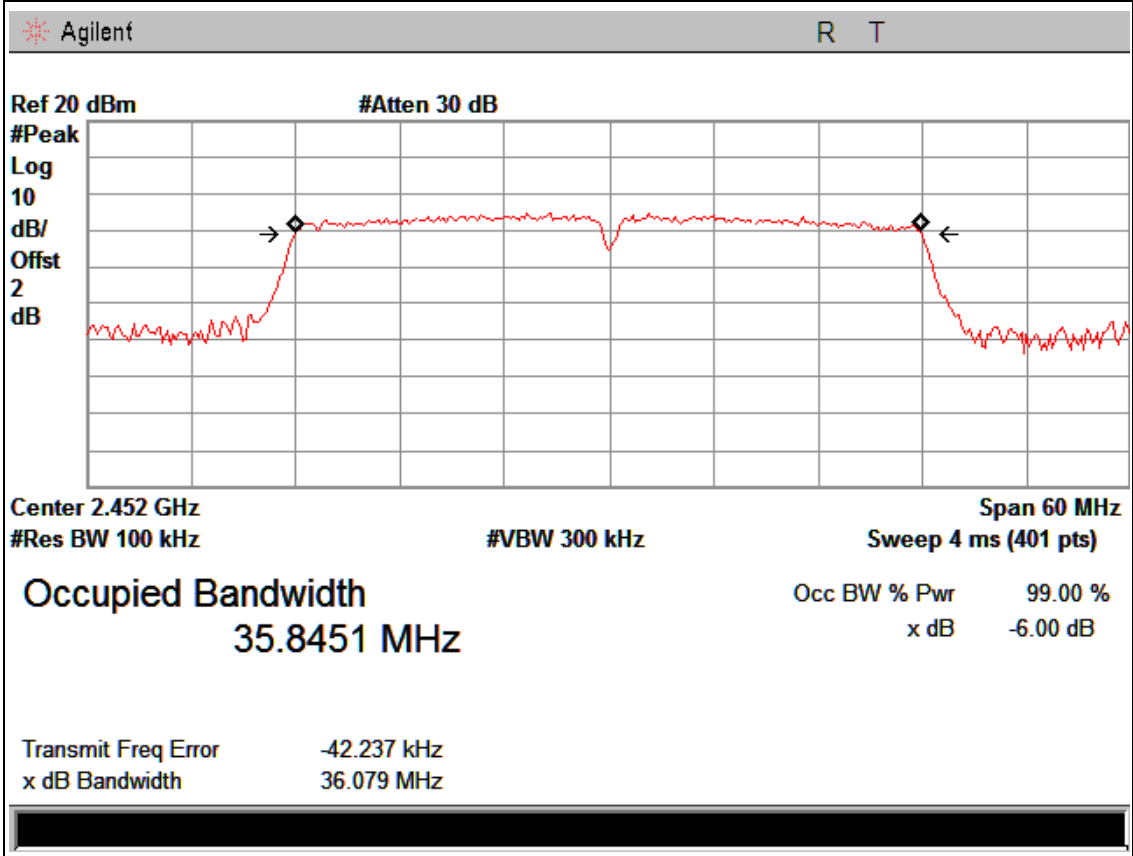
**TX CH 03**



**TX CH 06**




**TX CH 09**



# 6. PEAK OUTPUT POWER TEST

## 6.1 APPLIED PROCEDURES / LIMIT

| FCC Part15 (15.247) , Subpart C | | | | |
|---|---|---|---|---|
| Section | Test Item | Limit | Frequency Range (MHz) | Result |
| 15.247(b)(3) | Peak Output Power | 1 watt or 30dBm | 2400-2483.5 | PASS |

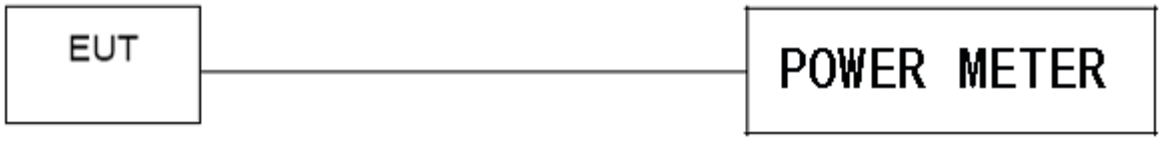
### 6.1.1 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

### 6.1.2 DEVIATION FROM STANDARD

No deviation.

### 6.1.3 TEST SETUP




### 6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

### 6.1.5 TEST RESULTS

| | | | |
|---|---|---|---|
| EUT： | Car DVR | Model Name ： | TS400 |
| Temperature： | 25 ℃ | Relative Humidity： | 60% |
| Pressure： | 1012 hPa | Test Voltage ： | DC 5V for PC with AC 120V/60Hz |
| Test Mode ： | TX b/g/n(20M,40M) Mode /CH01, CH06, CH11 | | |

| **TX 802.11b Mode** | | | |
|---|---|---|---|
| Test Channe | Frequency (MHz) | Peak Conducted Output Power (dBm) | LIMIT dBm |
| CH01 | 2412 | 9.79 | 30 |
| CH06 | 2437 | 9.68 | 30 |
| CH11 | 2462 | 9.53 | 30 |
| **TX 802.11g Mode** | | | |
| CH01 | 2412 | 8.86 | 30 |
| CH06 | 2437 | 8.81 | 30 |
| CH11 | 2462 | 8.75 | 30 |
| **TX 802.11n20 Mode** | | | |
| CH01 | 2412 | 8.54 | 30 |
| CH06 | 2437 | 8.49 | 30 |
| CH11 | 2462 | 8.46 | 30 |
| **TX 802.11n40 Mode** | | | |
| CH03 | 2422 | 7.71 | 30 |
| CH06 | 2437 | 7.64 | 30 |
| CH09 | 2452 | 7.62 | 30 |

# 7. ANTENNA REQUIREMENT

## 7.1 STANDARD REQUIREMENT

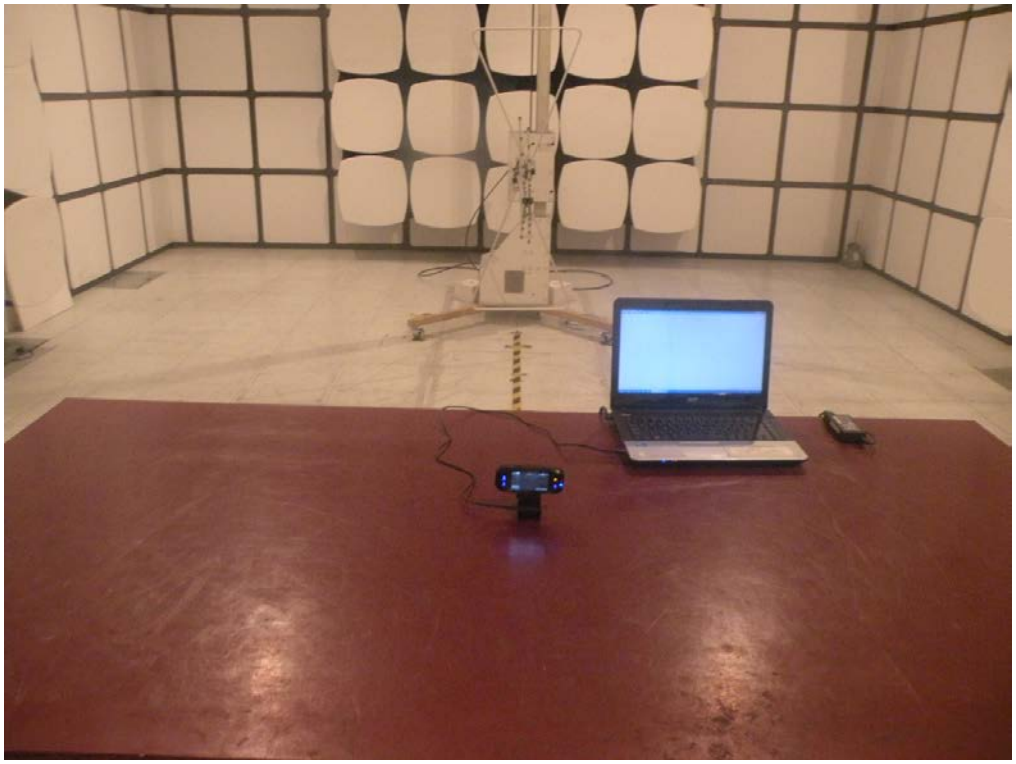
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

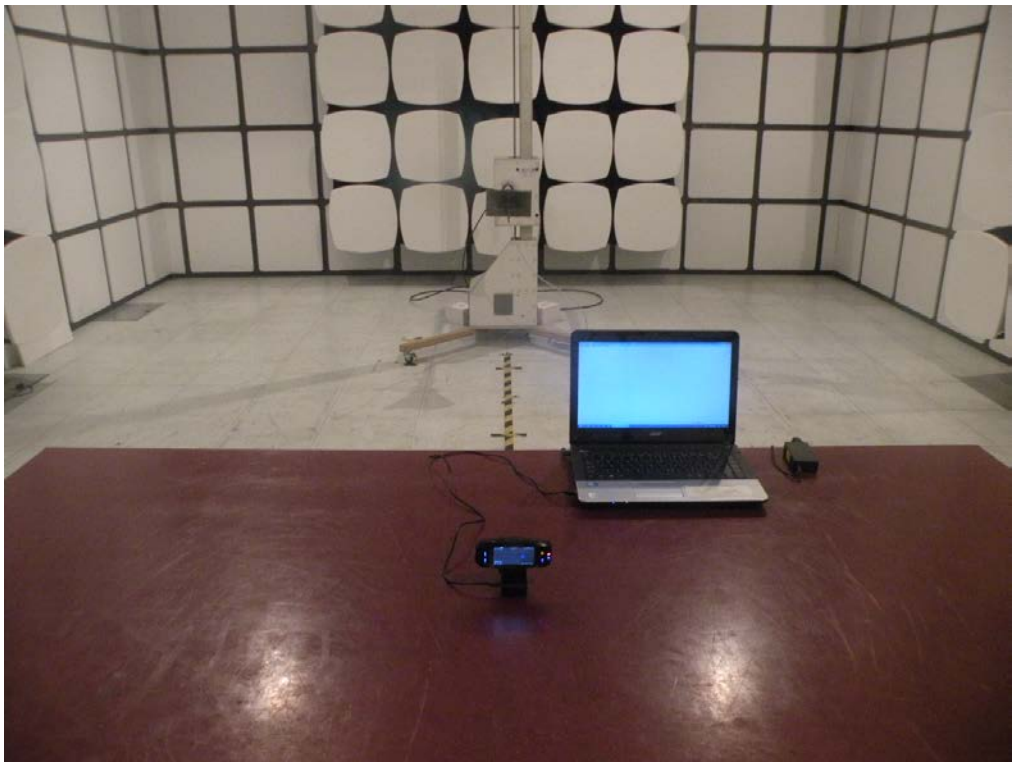
## 7.2 EUT ANTENNA

The EUT antenna is Integral antenna . It comply with the standard requirement.

## 8. EUT TEST PHOTO

**Radiated Measurement Photos**





## Conducted Measurement Photos