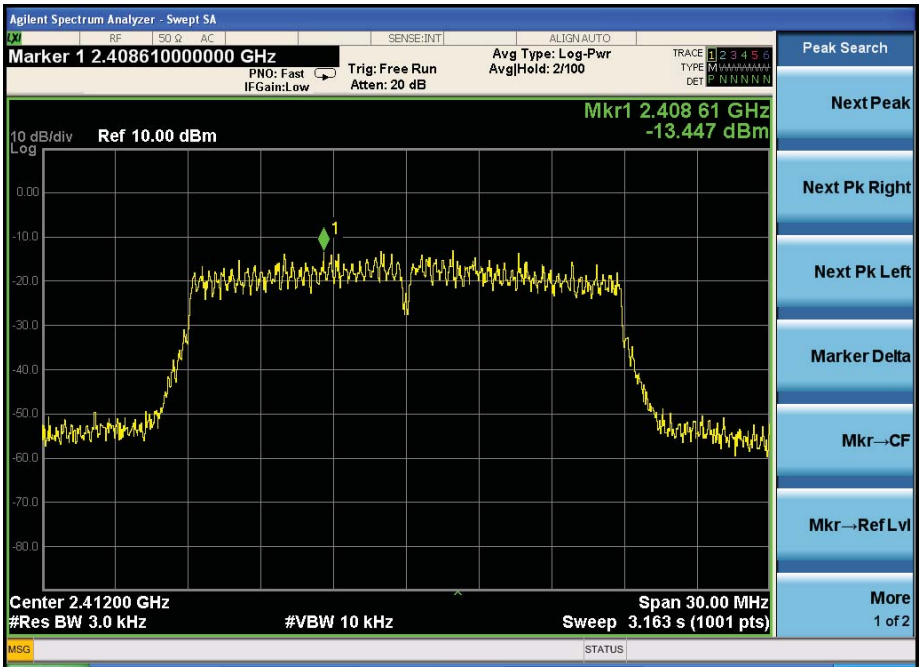
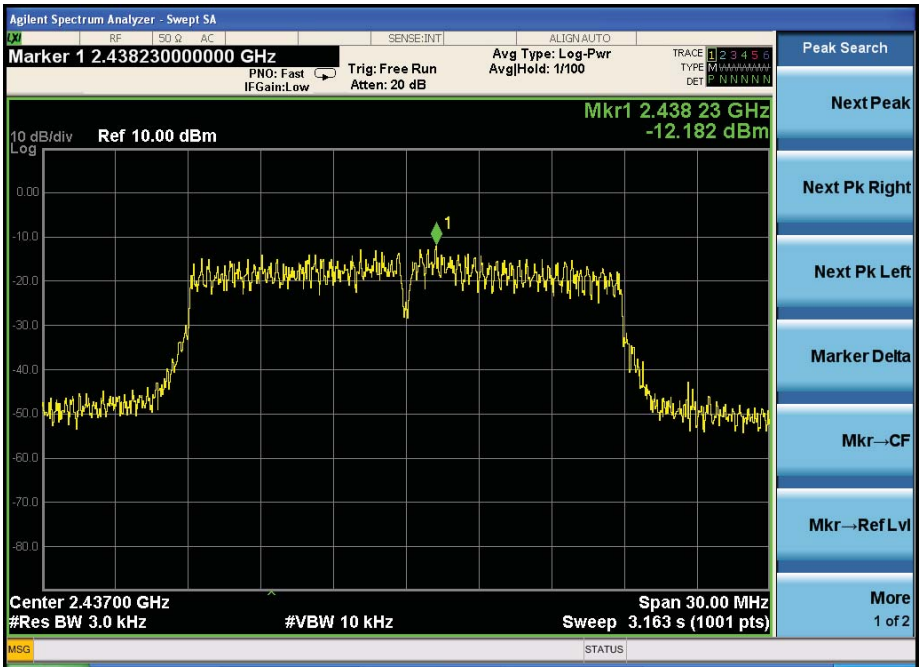
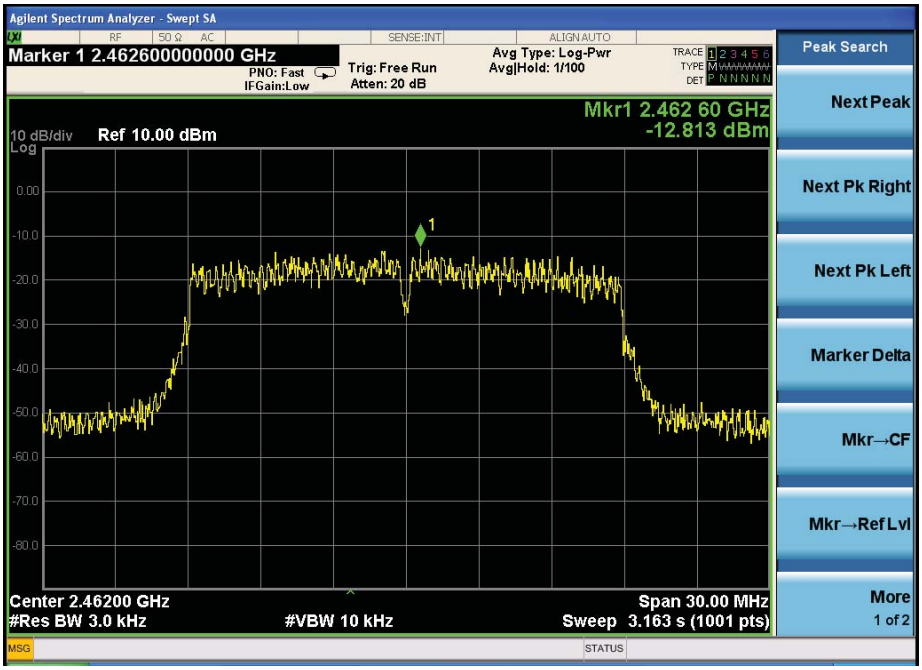
IEEE 802.11n HT20 :
CH Low :



CH Mid:



CH Hig:


Agilent Spectrum Analyzer - Swept SA
Marker 1 2.462600000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 1/100
Mkr1 2.462 60 GHz
-12.813 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Center 2.46200 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 30.00 MHz
Sweep 3.163 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2
MSG
STATUS

9 Bandwidth

9.1 Test limit

Please refer sectionRSS-247 & 15.247

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500 kHz.

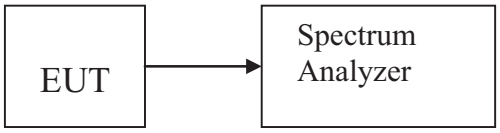
9.2 Method of measurement

Details see the KDB558074 D01 Meas Guidance

a) 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 dB relative to the maximum level measured in the fundamental emission.

b) The test receiver set RBW = 100KHz, VBW≥3RBW, Peak detector, Sweep time set auto, detail see the test plot.

9.3 Test Setup



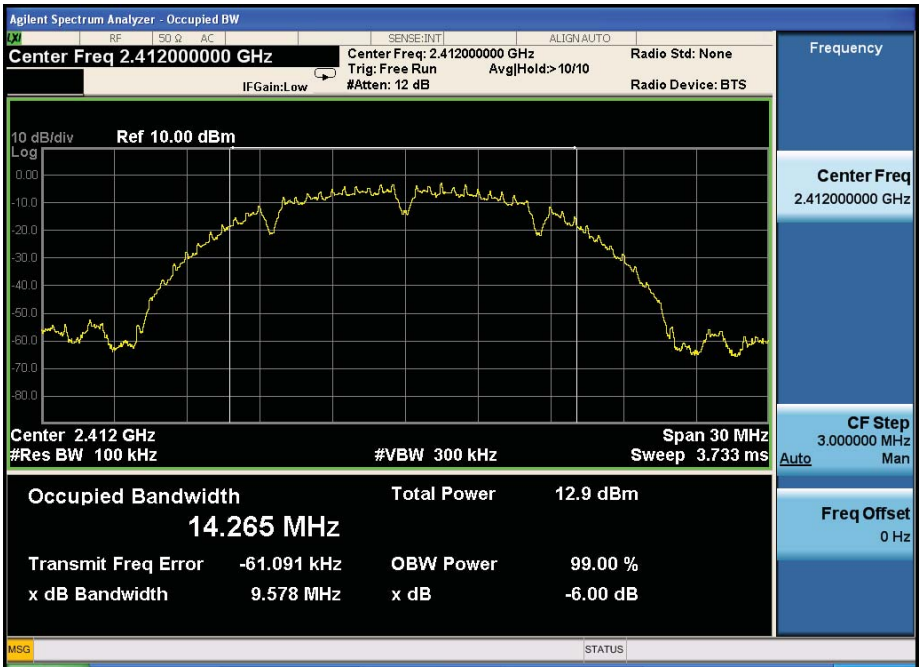
9.4 Test Results

PASS.

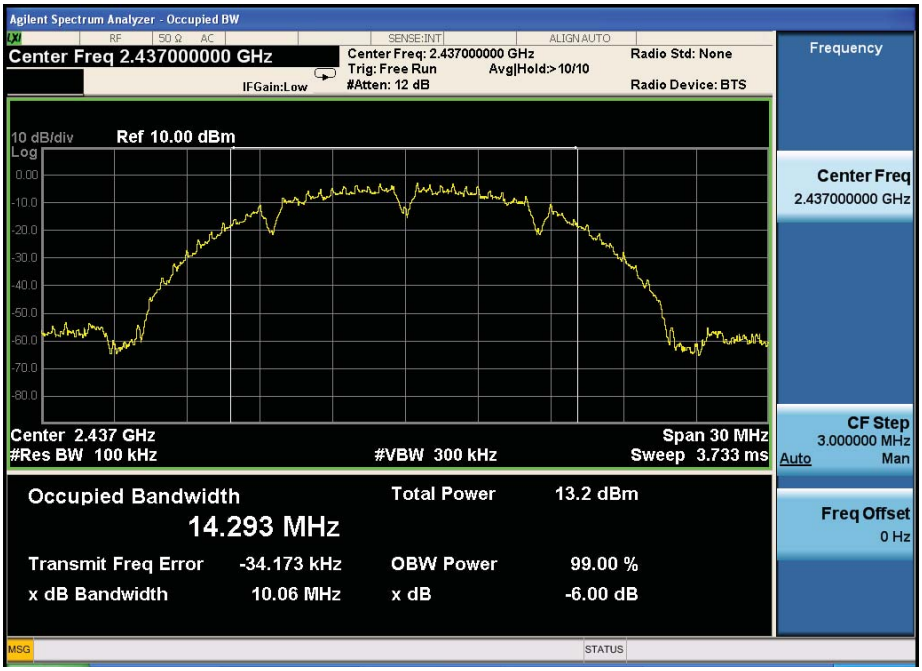
Detailed information please see the following page.

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b:					
Low	2412	9.578	/	0.5	PASS
Mid	2437	10.06	/	0.5	PASS
High	2462	9.551	/	0.5	PASS
IEEE 802.11g					
Low	2412	16.40	/	0.5	PASS
Mid	2437	16.42	/	0.5	PASS
High	2462	17.62	/	0.5	PASS
IEEE 802.11n/HT20:					
Low	2412	17.61	/	0.5	PASS
Mid	2437	17.62	/	0.5	PASS
High	2462	17.60	/	0.5	PASS

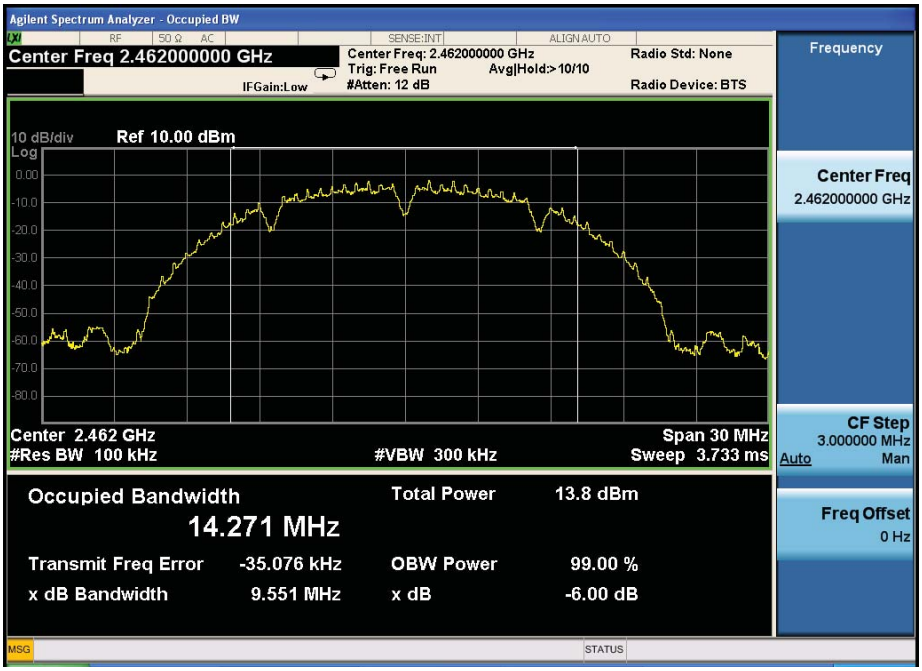
IEEE 802.11b:
CH Low :



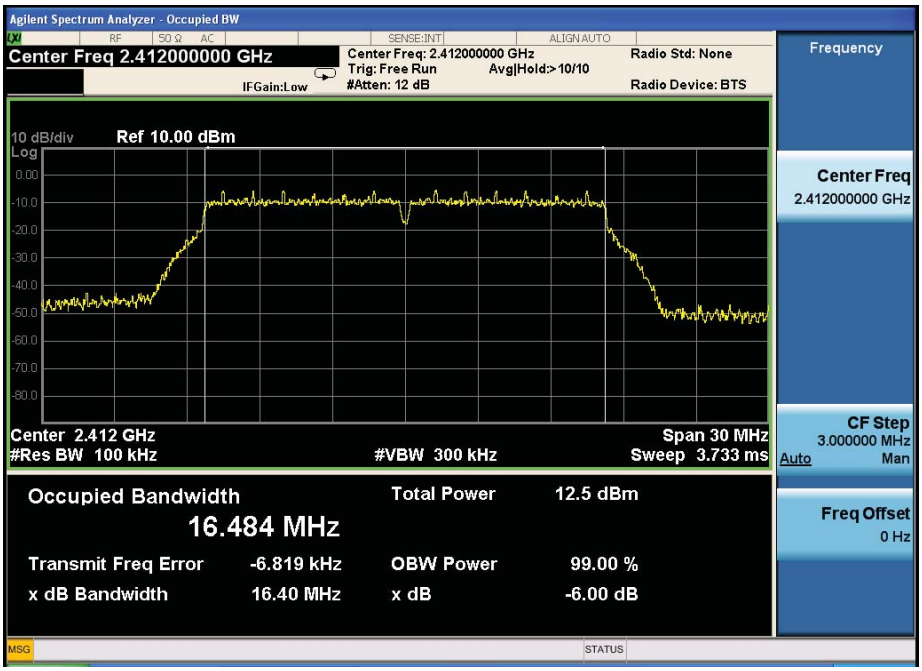
CH Mid :



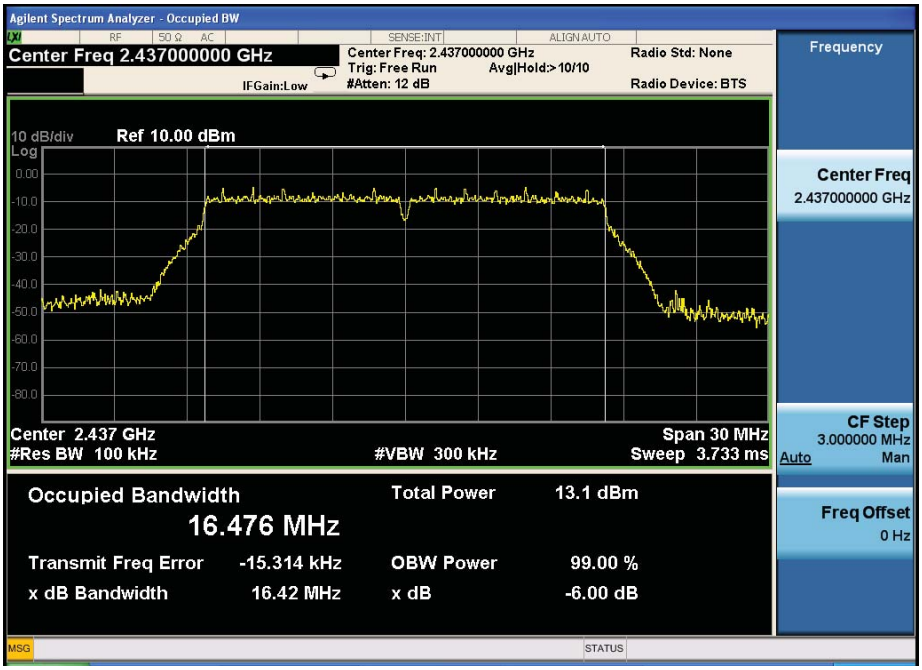
CH High :



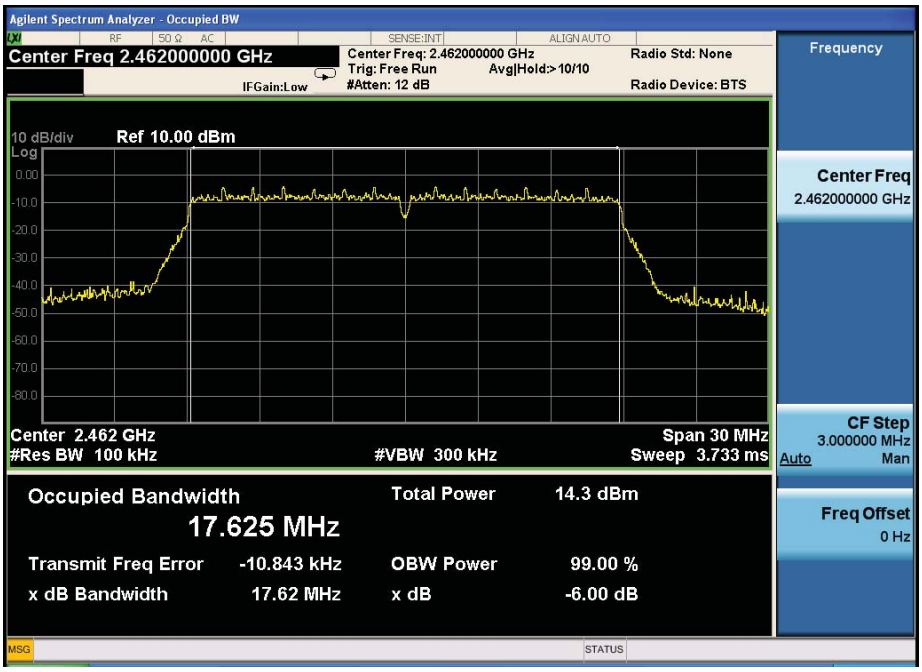
IEEE 802.11g:
CH Low :



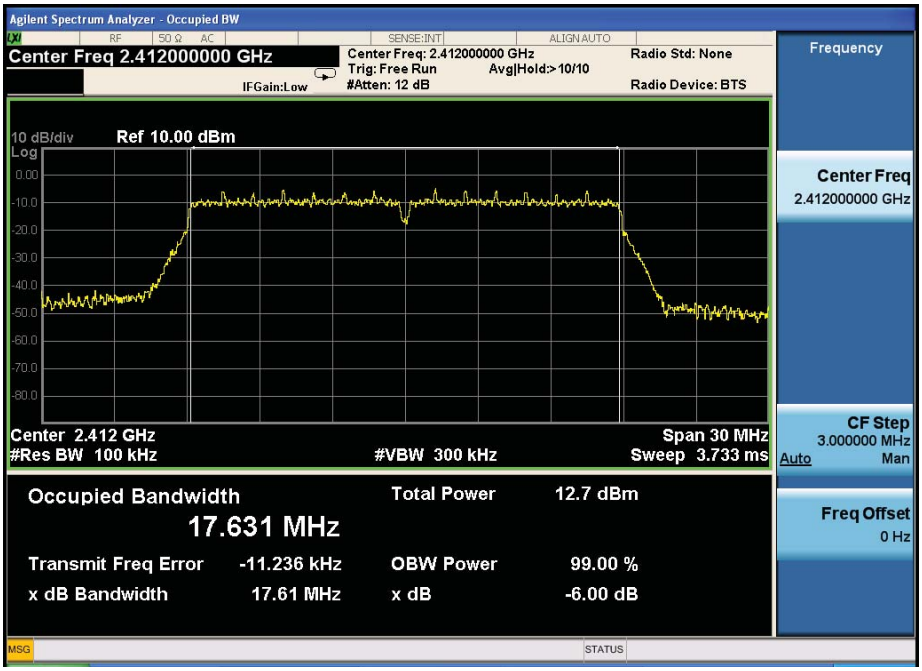
CH Mid:


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 12 dB
Radio Std: None
Radio Device: BTS
IFGain:Low
10 dB/div
Log
Ref 10.00 dBm
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30 MHz
Sweep 3.733 ms
Occupied Bandwidth
16.476 MHz
Total Power 13.1 dBm
Transmit Freq Error -15.314 kHz
OBW Power 99.00 %
x dB Bandwidth 16.42 MHz
x dB -6.00 dB
Frequency
Center Freq
2.437000000 GHz
CF Step
3.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

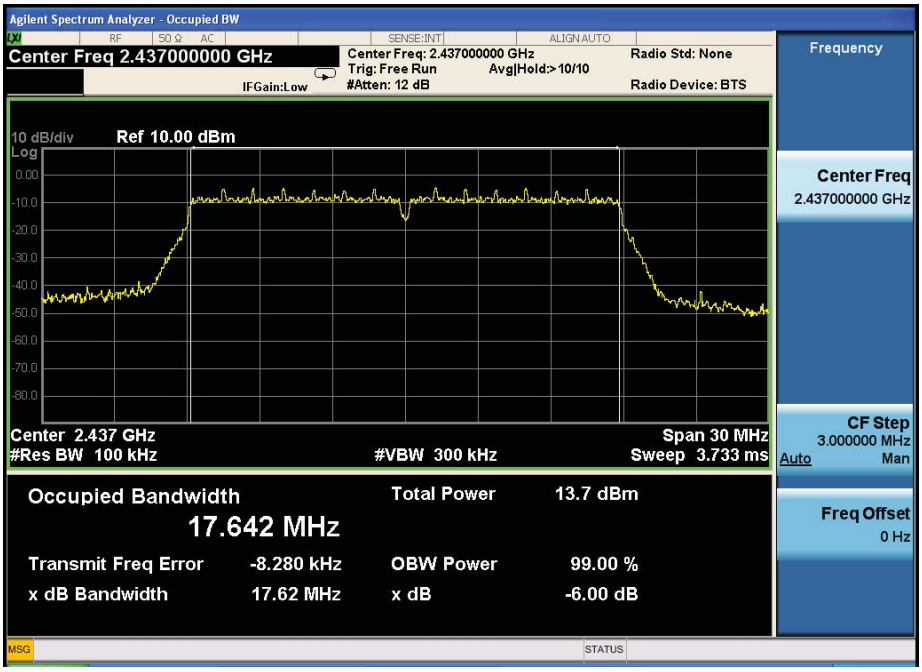
CH Hig:


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 12 dB
Radio Std: None
Radio Device: BTS
IFGain:Low
10 dB/div
Log
Ref 10.00 dBm
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30 MHz
Sweep 3.733 ms
Occupied Bandwidth
17.625 MHz
Total Power 14.3 dBm
Transmit Freq Error -10.843 kHz
OBW Power 99.00 %
x dB Bandwidth 17.62 MHz
x dB -6.00 dB
Frequency
Center Freq
2.462000000 GHz
CF Step
3.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

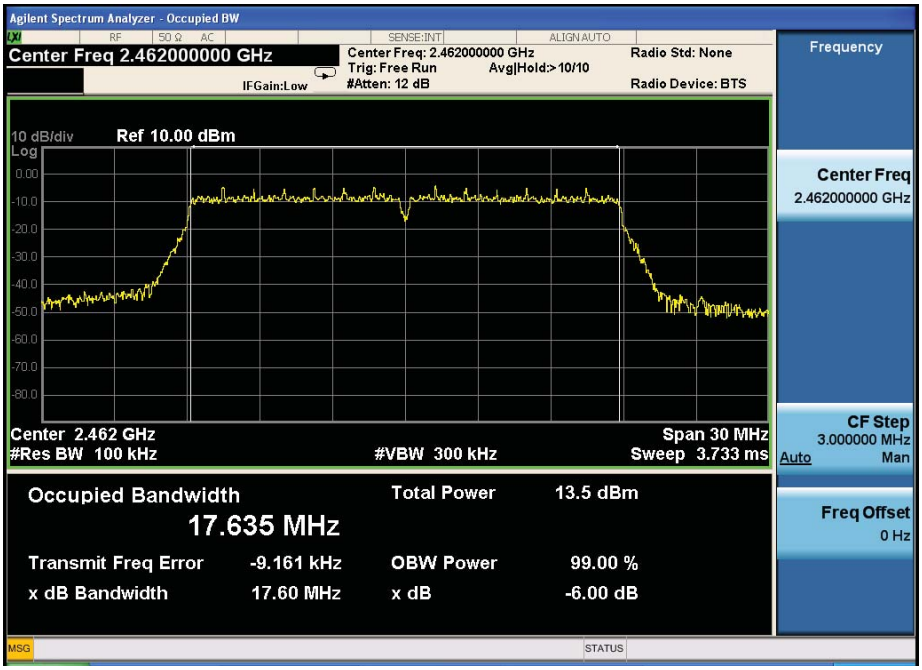
IEEE 802.11n HT20:
CH Low :



CH Mid :



CH High :


Agilent Spectrum Analyzer - Occupied BW
RF
50 Ω
AC
SENSE:INT
ALIGN AUTO
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>10/10
IFGain:Low
#Atten: 12 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Center Freq
2.462000000 GHz
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30 MHz
Sweep 3.733 ms
CF Step
3.000000 MHz
Auto
Man
Occupied Bandwidth
17.635 MHz
Total Power
13.5 dBm
Freq Offset
0 Hz
Transmit Freq Error
-9.161 kHz
OBW Power
99.00 %
x dB Bandwidth
17.60 MHz
x dB
-6.00 dB
MSG
STATUS

10 Band Edge Check

10.1 Test limit

Please refer section RSS-GEN&15.247.

10.2 Test Procedure

12.2.1 Put the EUT on a 0.8m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission

12.2.2 Check the spurious emissions out of band.

12.2.3 RBW 1MHz ,VBW 3MHz ,peak detector for peak value , RBW 1MHz ,VBW 3MHz ,RMS detector for AV value.

10.3 Test Setup

Same as 5.2.2.

10.4 Test Result

PASS.

Detailed information please see the following page.

Radiated Method:
802.11b

Band Edge Test result								
EUT: Tablet PC M/N: O710ULT								
Power: DC 3.7V from battery								
Test date: 2016-07-28 Test site: 3m Chamber Tested by: Eric Huang								
Test mode: Tx Low								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390	44.37	27.62	3.92	34.97	40.94	74	33.06	**PK**
2390	--	27.62	3.92	34.97	--	54	--	AV
Antenna Polarity: Horizontal								
2390	43.14	27.62	3.92	34.97	39.71	74	34.29	**PK**
2390	--	27.62	3.92	34.97	--	54	--	AV
Note: 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK 2, Spectrum Set for AV measure: RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector: RMS 3, Result = Read level + Antenna factor + cable loss-Amp factor 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.								

Band Edge Test result								
EUT: Tablet PC M/N: O710ULT								
Power: DC 3.7V from battery								
Test date: 2016-07-28 Test site: 3m Chamber Tested by: Eric Huang								
Test mode: Tx High								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	44.21	27.89	4	34.97	41.13	74	32.87	**PK**
2483.5	--	27.89	4	34.97	--	54	--	AV
Antenna Polarity: Horizontal								
2483.5	43.41	27.89	4	34.97	40.33	74	33.67	**PK**
2483.5	--	27.89	4	34.97	--	54	--	AV

Note:
1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
2, Spectrum Set for AV measure: RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector: RMS
3, Result = Read level + Antenna factor + cable loss-Amp factor
4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

802.11g

Band Edge Test result								
EUT: Tablet PC M/N: O710ULT								
Power: DC 3.7V from battery								
Test date: 2016-07-28 Test site: 3m Chamber Tested by: Eric Huang								
Test mode: Tx Low								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390	42.87	27.62	3.92	34.97	39.44	74	34.56	**PK**
2390	--	27.62	3.92	34.97	--	54	--	AV
Antenna Polarity: Horizontal								
2390	43.82	27.62	3.92	34.97	40.39	74	33.61	**PK**
2390	--	27.62	3.92	34.97	--	54	--	AV

Note:
1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
2, Spectrum Set for AV measure: RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector: RMS
3, Result = Read level + Antenna factor + cable loss-Amp factor
4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Band Edge Test result								
EUT: Tablet PC M/N: O710ULT								
Power: DC 3.7V from battery								
Test date: 2016-07-28 Test site: 3m Chamber Tested by: Eric Huang								
Test mode: Tx High								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	43.34	27.89	4	34.97	40.26	74	33.74	**PK**
2483.5	--	--	--	--	--	54	--	AV
Antenna Polarity: Horizontal								
2483.5	43.56	27.89	4	34.97	40.48	74	33.52	**PK**
2483.5		--	--	--	--	54	--	AV

Note:
1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
2, Spectrum Set for AV measure: RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector: RMS
3, Result = Read level + Antenna factor + cable loss-Amp factor
4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

802.11n20

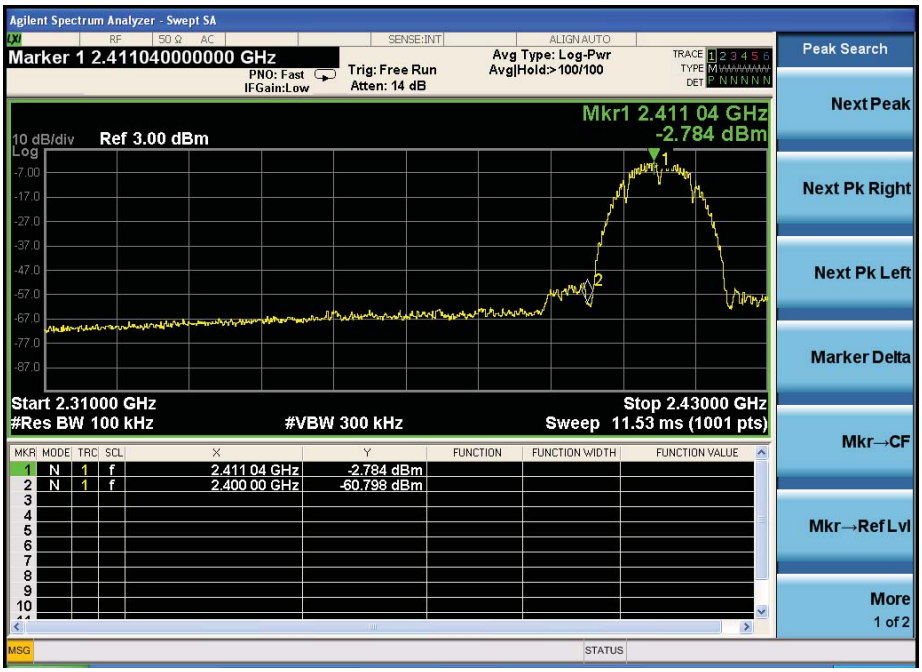
Band Edge Test result								
EUT: Tablet PC M/N: O710ULT								
Power: DC 3.7V from battery								
Test date: 2016-07-28 Test site: 3m Chamber Tested by: Eric Huang								
Test mode: Tx Low								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390	43.64	27.62	3.92	34.97	40.21	74	33.79	**PK**
2390	--	27.62	3.92	34.97	--	54	--	AV
Antenna Polarity: Horizontal								
2390	43.96	27.62	3.92	34.97	40.53	74	33.47	**PK**
2390	--	27.62	3.92	34.97	--	54	--	AV

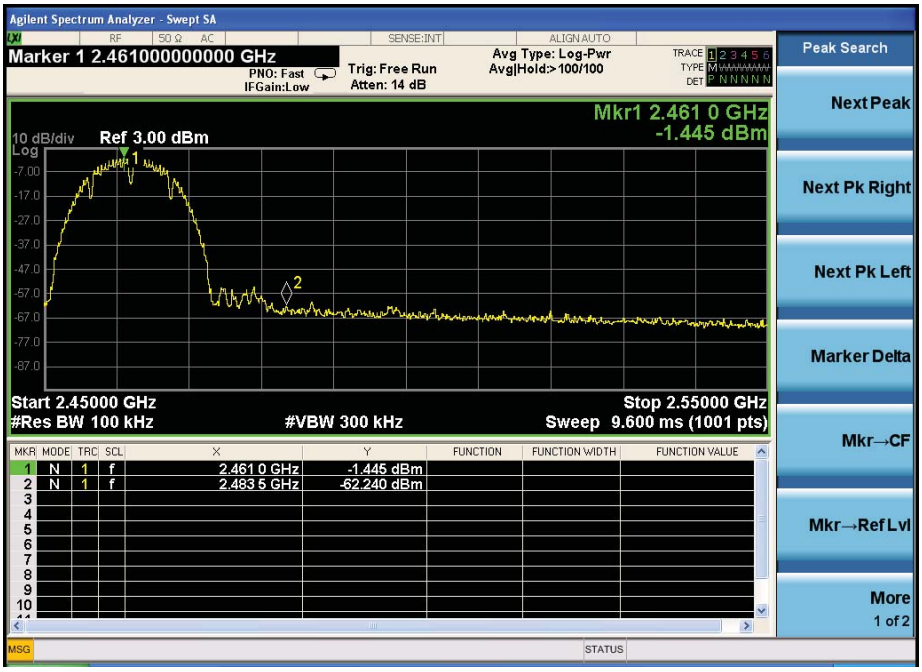
Note:
1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
2, Spectrum Set for AV measure: RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector: RMS
3, Result = Read level + Antenna factor + cable loss-Amp factor
4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Band Edge Test result								
EUT: Tablet PC M/N: O710ULT								
Power: DC 3.7V from battery								
Test date: 2016-07-28 Test site: 3m Chamber Tested by: Eric Huang								
Test mode: Tx High								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	43.05	27.89	4	34.97	39.97	74	34.03	PK
2483.5		--	--	--	--	54	--	AV
Antenna Polarity: Horizontal								
2483.5	43.49	27.89	4	34.97	40.41	74	33.59	PK
2483.5		--	--	--	--	54	--	AV

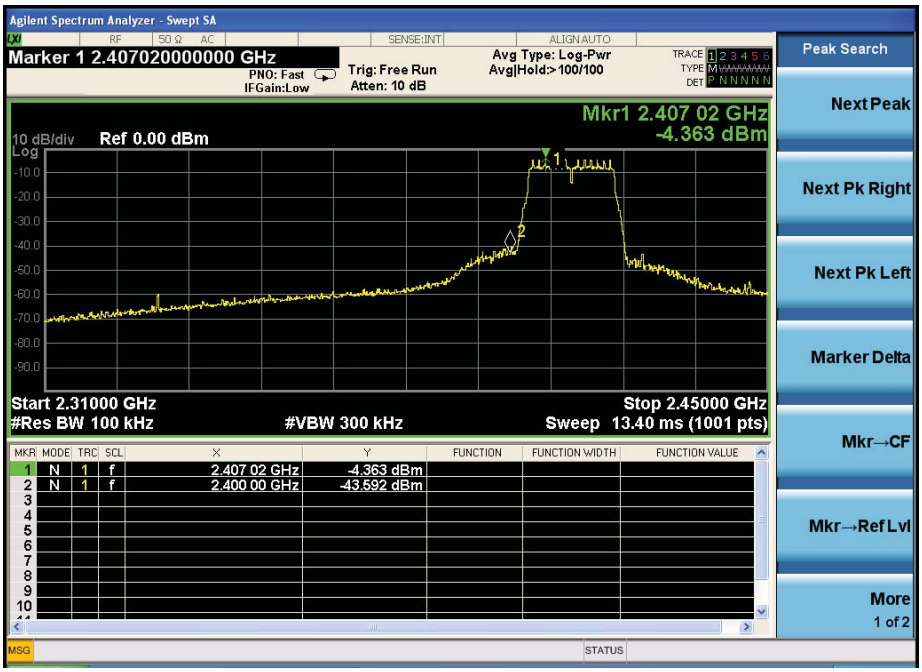
Note:
1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
2, Spectrum Set for AV measure: RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector: RMS
3, Result = Read level + Antenna factor + cable loss-Amp factor
4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

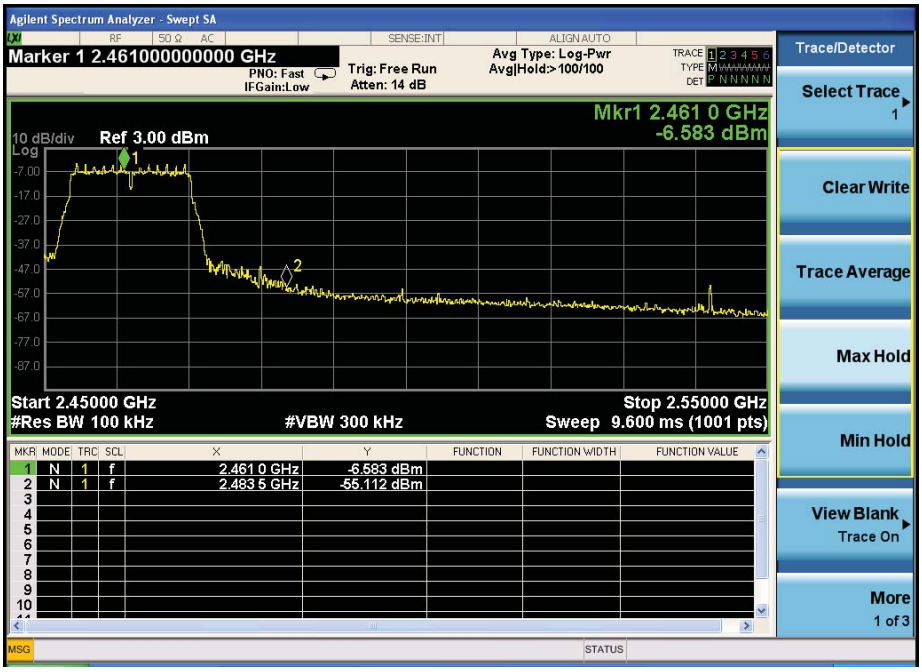
Conducted Method:
802.11b





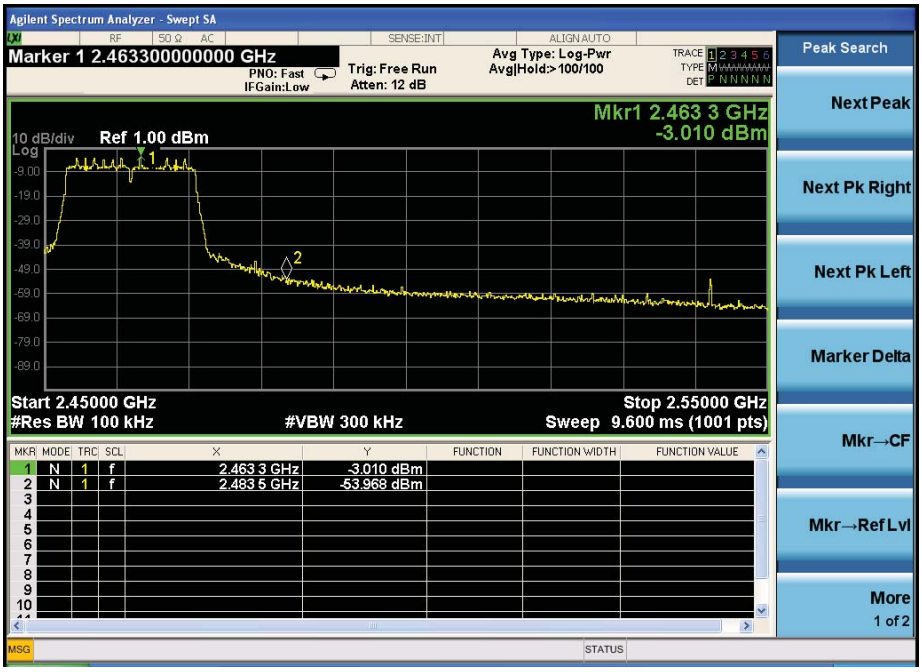
802.11g


Agilent Spectrum Analyzer - Swept SA
Marker 1 2.407020000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 2.407 02 GHz
-4.363 dBm
10 dB/div
Ref 0.00 dBm
Start 2.31000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.45000 GHz
Sweep 13.40 ms (1001 pts)
1 N 1 f 2.407 02 GHz -4.363 dBm
2 N 1 f 2.400 00 GHz -43.592 dBm
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
Marker 1 2.461000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 14 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 2.461 0 GHz
-6.583 dBm
10 dB/div
Ref 3.00 dBm
Start 2.45000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.55000 GHz
Sweep 9.600 ms (1001 pts)
1 N 1 f 2.461 0 GHz -6.583 dBm
2 N 1 f 2.483 5 GHz -55.112 dBm
Trace/Detector
Select Trace 1
Clear Write
Trace Average
Max Hold
Min Hold
View Blank Trace On
More
1 of 3

802.11n HT20


Agilent Spectrum Analyzer - Swept SA
Marker 1 2.413200000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 12 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 2.413 20 GHz
-4.115 dBm
10 dB/div
Ref 1.00 dBm
Start 2.31000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.43000 GHz
Sweep 11.53 ms (1001 pts)
1 N 1 f 2.413 20 GHz -4.115 dBm
2 N 1 f 2.400 00 GHz -43.407 dBm
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
Marker 1 2.463300000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 12 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 2.463 3 GHz
-3.010 dBm
10 dB/div
Ref 1.00 dBm
Start 2.45000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.55000 GHz
Sweep 9.600 ms (1001 pts)
1 N 1 f 2.463 3 GHz -3.010 dBm
2 N 1 f 2.483 5 GHz -53.968 dBm
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

11 Antenna Requirement

11.1 Standard Requirement

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

11.2 Antenna Connected Construction

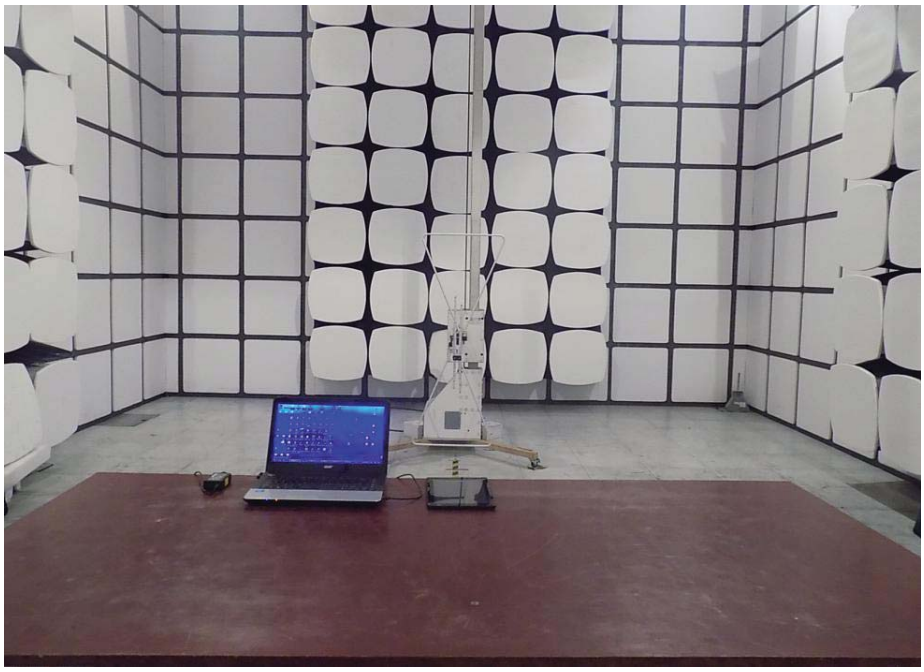
The antenna connector is unique antenna and no consideration of replacement. Please see EUT photo for details.

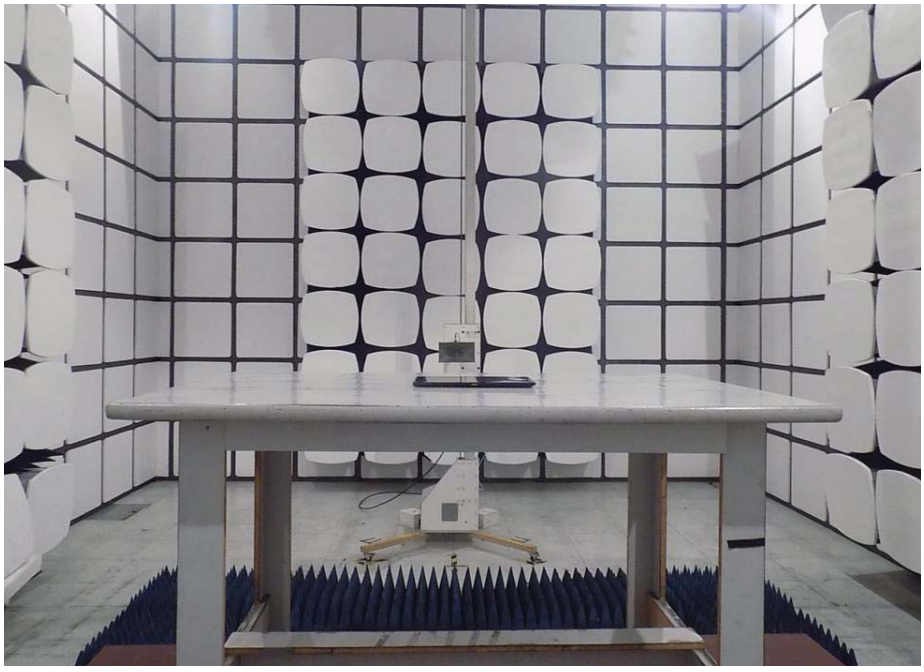
11.3 Result

The EUT antenna is external Antenna. It comply with the standard requirement.

12 Test setup photo

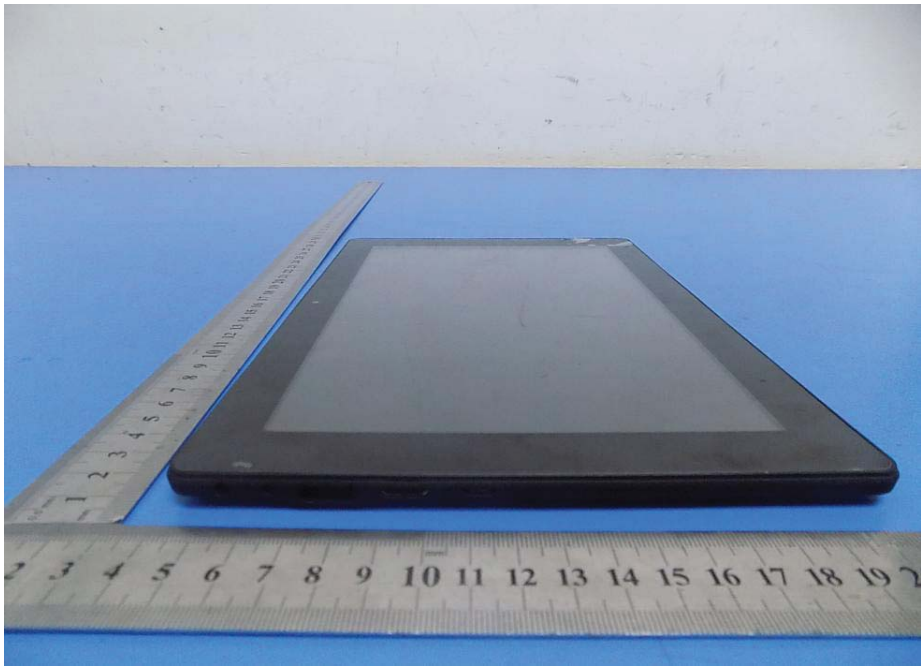
Photographs-Radiated Emission Test Setup in Chamber

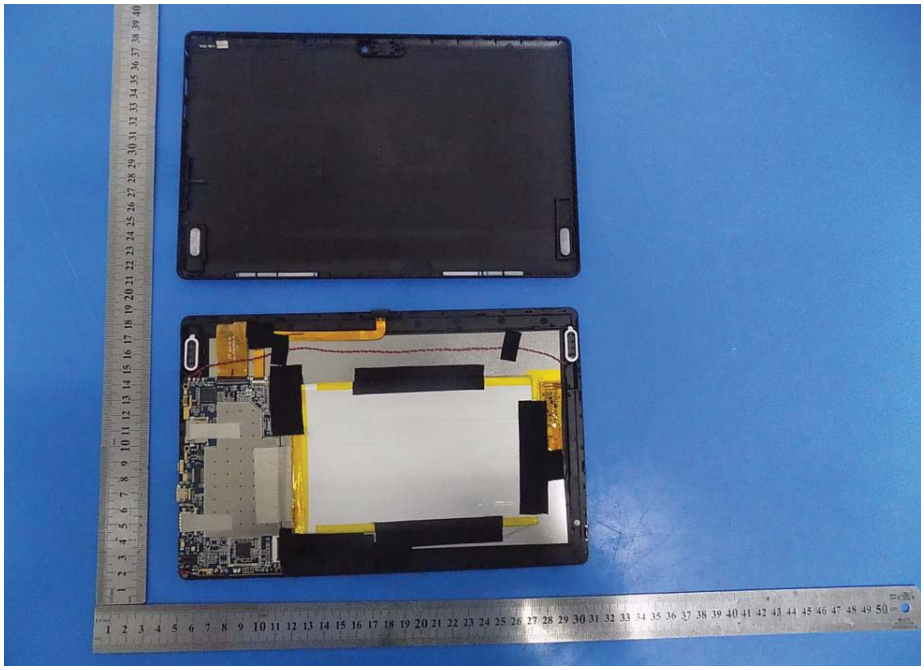


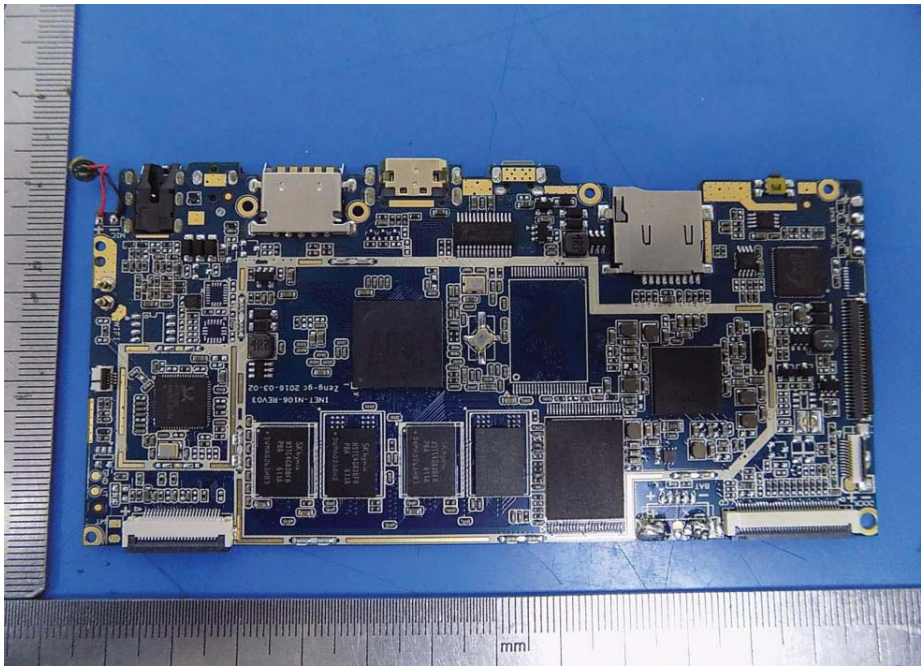


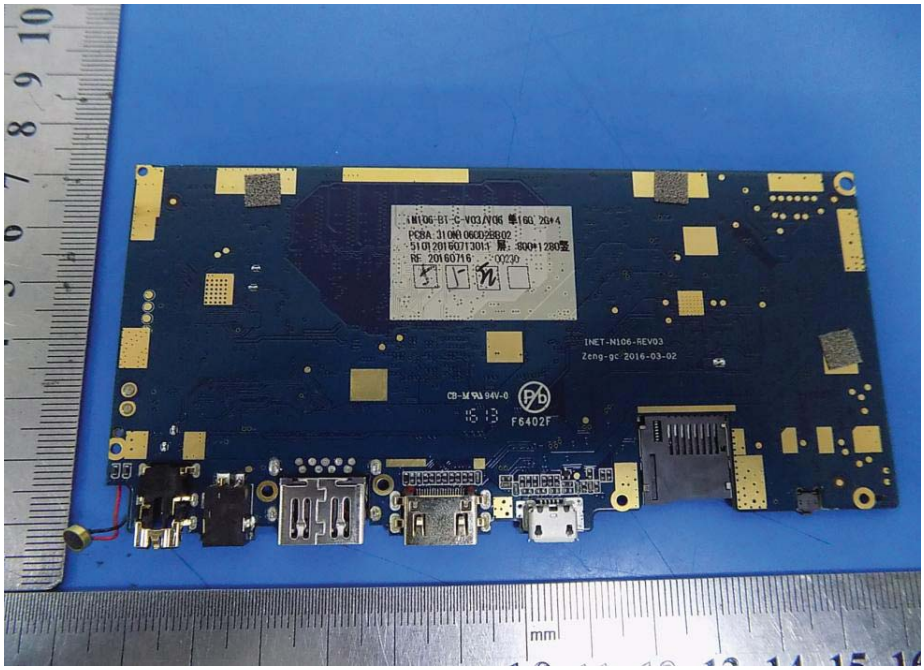
Photos of conducted emission

13 Photos of EUT





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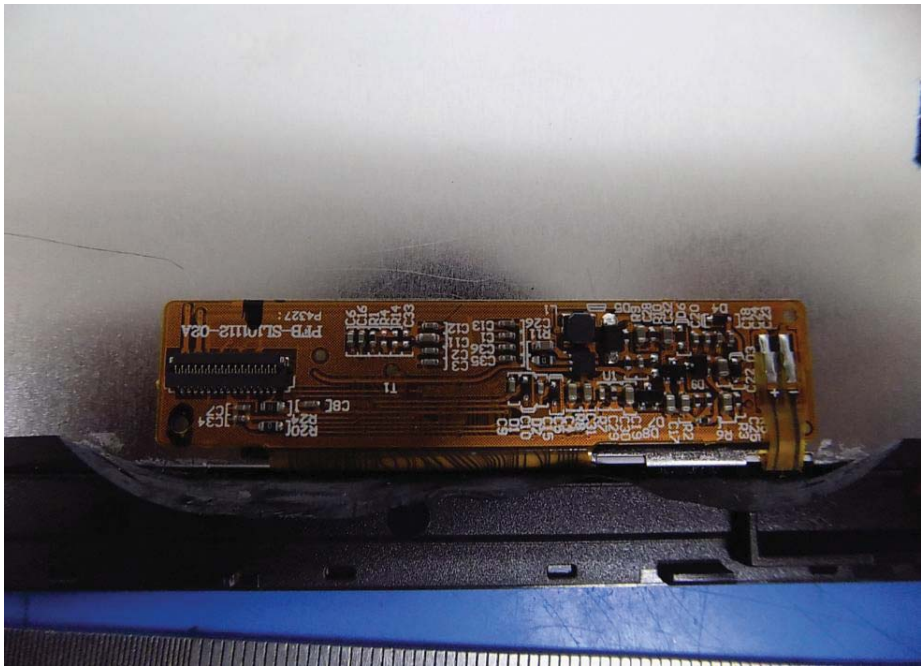

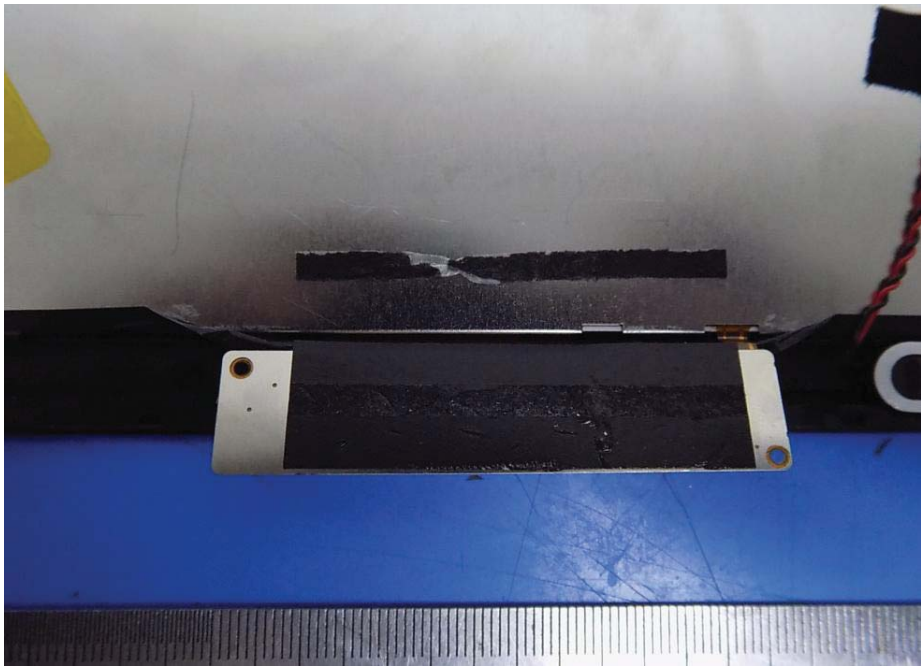

---------END OF THE REPORT-------