Test Lab
Cert 2951.01

TEST REPORT

Applicant	PEGATRON CORPORATION
Address	5F., NO. 76, LIGONG ST., BEITOU DISTRICT, TAIPEI CITY, Taiwan

Manufacturer or Supplier	PEGATRON CORPORATION
Address	5F., NO. 76, LIGONG ST., BEITOU DISTRICT, TAIPEI CITY, Taiwan
Product	Tablet PC
Brand Name	Q00Q/SQ00L
Model	MT10UWA116
Additional Model & Model Difference	N/A
Date of tests	Oct. 23, 2015 ~ Nov. 3, 2015 Apr 10, 2016 ~ May 17, 2016

the tests have been carried out according to the requirements of the following standard:

☒ **FCC Part 15, Subpart E, Section 15.407**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Breeze Jiang Project Engineer / EMC Department	Approved by Chris Chen Assistant Manager / EMC Department
	 May 17, 2016

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF151008N004-3R1	Original release	May 17, 2016

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407 Under New/ Old Rule)			
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**	**REMARK**
15.407(b)(6)	AC Power Conducted Emission	PASS	Meet the requirement of limit.
15.407 (b)(1/2/3/4/6)	Radiated Emissions: 30MHz ~ 40000MHz	PASS	Meet the requirement of limit.
15.407 (b)(1/2/3/4/6)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Conducted output Power	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used

2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.66dB
Radiated emissions	9KHz ~ 30MHz	2.74dB
	30MHz ~ 1GMHz	3.55dB
	1GHz ~ 18GHz	4.84dB
	18GHz ~ 40GHz	4.84dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Tablet PC
MODEL NO.	MT10UWA116
ADDITIONAL MODELS	N/A
FCC ID	VUI-MT10UW
POWER SUPPLY	DC 3.8V by Li-ion Battery, DC5.0V by Adaptor or USB Host Unit
MODULATION TYPE	64QAM, 16QAM, QPSK, BPSK
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 135Mbps
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz 5500 ~ 5700MHz, 5745 ~ 5825MHz
NUMBER OF CHANNEL	5180 ~ 5240MHz: 3 for 802.11a, 802.11n (20MHz) 5260 ~ 5320MHz: 3 for 802.11a, 802.11n (20MHz) 5500 ~ 5700MHz: 3 for 802.11a, 802.11n (20MHz) 5745 ~ 5825MHz: 3 for 802.11a, 802.11n (20MHz)
OUTPUT POWER	8.78 dBm for 5180 ~ 5240MHz (Maximum Peak Power) 9.01 dBm for 5260 ~ 5320MHz (Maximum Peak Power) 8.39 dBm for 5500 ~ 5700MHz (Maximum Peak Power) 8.86 dBm for 5745 ~ 5825MHz (Maximum Peak Power)
ANTENNA TYPE	5180 ~ 5240MHz: Monopole antenna with 3.51dBi gain 5260 ~ 5320MHz: Monopole antenna with 3.51dBi gain 5500 ~ 5700MHz: Monopole antenna with 3.51dBi gain 5745 ~ 5825MHz: Monopole antenna with 3.51dBi gain
DATA CABLE	USB Cable : Shielded, detachable, 1.0m
I/O PORTS	Refer to user's manual

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
3. Please refer to the EUT photo document (Reference No.: 151008N004) for detailed product photo.
4. Please refer to the EUT photo document (Reference No.: 150612N055) for detailed product photo.

5. The EUT was powered by the following adapters:

ADAPTER 1	
BRAND:	N/A
MODEL:	SA69-050200V
INPUT:	AC 100-240V, 50/60HZ, 300MA
OUTPUT:	DC 5V, 2000MA
ADAPTER 2	
BRAND:	N/A
MODEL:	ASSA55e-050200
INPUT:	AC 100-240V, 50/60HZ, 0.45A
OUTPUT:	DC 5V, 2A

3.2 DESCRIPTION OF TEST MODES

FOR 5150 ~ 5250MHz

3 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	44	5220 MHz
48	5240 MHz		

FOR 5250 ~ 5350MHz

3 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
52	5260 MHz	60	5300MHz
64	5320 MHz		

FOR 5470 ~ 5725MHz

3 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	116	5580 MHz
140	5700 MHz		

FOR 5725 ~ 5850MHz

3 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745MHz	157	5785MHz
161	5805MHz		

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	**-**	**Powered by Adapter with wifi(5G) link**
B	-	-	-	√	Powered by Battery with wifi(5G) link
C	-	-	-	-	Powered by USB with wifi(5G) link

Where **RE≥1G:** Radiated Emission above 1GHz **RE<1G:** Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

NOTE:
The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane.**
NOTE: "-"means no effect.

RADIATED EMISSION TEST (ABOVE 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36, 44, 48	OFDM	BPSK	6.0
A	802.11n (20MHz)		36 to 48	36, 44, 48	OFDM	BPSK	MCS0
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
A	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	MCS0
A	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
A	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	MCS0
A	802.11a	5725-5825	149 to 165	149, 157, 161	OFDM	BPSK	6.0
A	802.11n (20MHz)		149 to 165	149, 157, 161	OFDM	BPSK	MCS0

RADIATED EMISSION TEST (BELOW 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5180-5320	36 to 64	36	OFDM	BPSK	6.0

POWER LINE CONDUCTED EMISSION TEST:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5180-5320	36 to 64	36	OFDM	BPSK	6.0

BANDEDGE MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36	OFDM	BPSK	6.0
A	802.11n (20MHz)		36 to 48	36	OFDM	BPSK	MCS0
A	802.11a	5260-5320	52 to 64	64	OFDM	BPSK	6.0
A	802.11n (20MHz)		52 to 64	64	OFDM	BPSK	MCS0
A	802.11a	5500-5700	100 to 140	100	OFDM	BPSK	6.0
A	802.11n (20MHz)		100 to 140	100	OFDM	BPSK	MCS0

ANTENNA PORT CONDUCTED MEASUREMENT:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
B	802.11a	5180-5240	36 to 48	36, 44, 48	OFDM	BPSK	6.0
B	802.11n (20MHz)		36 to 48	36, 44, 48	OFDM	BPSK	MCS0
B	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
B	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	MCS0
B	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
B	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	MCS0
B	802.11a	5725-5825	149 to 165	149, 157, 161	OFDM	BPSK	6.0
B	802.11n (20MHz)		149 to 165	149, 157, 161	OFDM	BPSK	MCS0

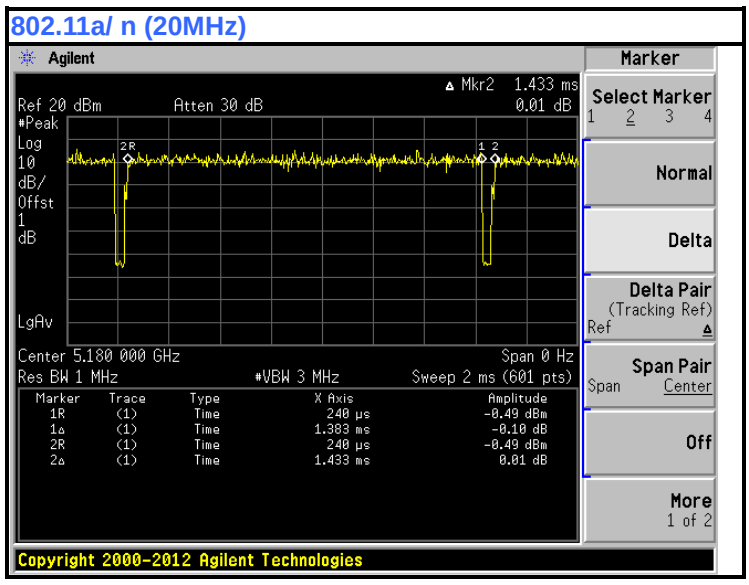
TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE<1G	26deg. C, 67%RH	DC 5.0V from Adapter	Sen He
RE≥1G	26deg. C, 67%RH	DC 5.0V from Adapter	Sen He
PLC	20deg. C, 56%RH	DC 5.0V from Adapter	Sen He
APCM	20deg. C, 55%RH	DC 3.8V from Battery	Blue Zheng

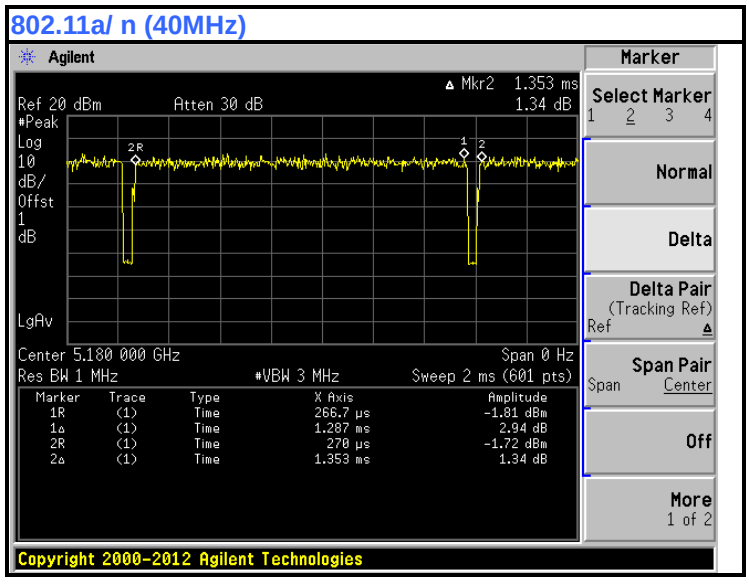
3.3 DUTY CYCLE OF TEST SIGNAL

Duty cycle of test signal is < 98%, duty factor shall be considered.

802.11a/ n (20MHz) Duty cycle = 0.965, Duty factor = 10 * log(0.965) = -0.154



802.11a/ n (40MHz) Duty cycle = 0.951, Duty factor = 10 * log(0.951) = -0.217



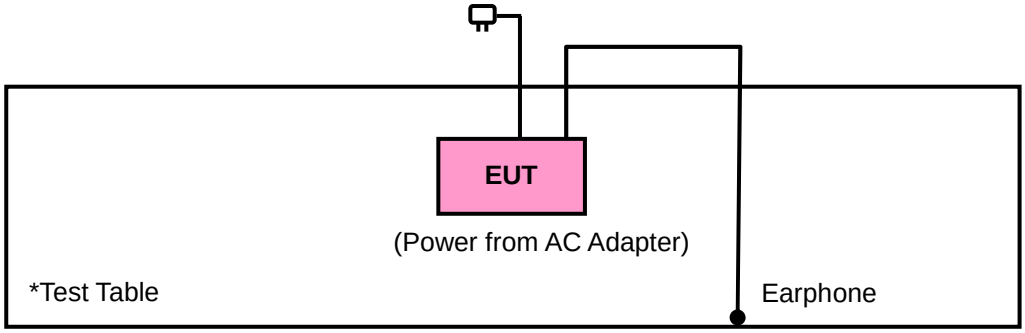
3.4 DESCRIPTION OF SUPPORT UNITS

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.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	DC source	REC	N/A	N/A	N/A

NO.	DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	AC Line;unshielded, detachable 1.0m.

3.4.1 CONFIGURATION OF SYSTEM UNDER TEST



3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart E (15.407)

789033 D02 General UNII Test Procedures New Rules v01r02

ANSI C63.10-2014

All test items have been performed and recorded as per the above standards.

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

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:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
	FIELD STRENGTH AT 3m (dBμV/m)	
	PK	AV
	74	54
	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m)
√	PK	PK
	-27	68.3
	-17	78.3

NOTE: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts).

4.1.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR7	101494	Apr 27,16	Apr 26,17
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV40	101094	Apr 23,16	Apr 22,17
Bilog Antenna	Teseq	CBL 6111D	30643	Jul. 16, 15	Jul. 15, 16
Horn Antenna	ETS-Lindgren	3117	00062558	May 30,16	May. 29,18
Amplifier (9kHz-1GHz)	SONOMA	310D	186955	Mar. 04,16	Mar. 03, 17
Pre-Amplifier (0.5~18GHz)	SCHWARZBECK	BBV 9718	9718-266	Mar 26,16	Mar 25,18
GPS Generator+ Antenna	TOJOIN	GNSS-5000A	E1-010119	Aug. 08, 15	Aug. 07, 16
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	April. 19,16	April. 18,18
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in 966 Chamber.
3. The FCC Site Registration No. is 502831.

4.1.4 TEST PROCEDURES

Since the emission limits are specified in terms of radiated field strength levels, measurements performed to demonstrate compliance have traditionally relied on a radiated test configuration. Radiated measurements remain the principal method for demonstrating compliance to the specified limits; however antenna-port conducted measurements are also now acceptable to demonstrate compliance (see below for details). When radiated measurements are utilized, test site requirements and procedures for maximizing and measuring radiated emissions that are described in ANSI C63.10 shall be followed.

Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

General Procedure for conducted measurements in restricted bands

a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).

b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see guidance on determining the applicable antenna gain)

c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies $\leqslant$ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).

d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).

e) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$E = EIRP - 20\log D + 104.8$

where:

E = electric field strength in dBμV/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

f) Compare the resultant electric field strength level to the applicable limit.

g) Perform radiated spurious emission test.

Quasi-Peak measurement procedure

The specifications for measurements using the CISPR quasi-peak detector can be found in Publication 16 of the International Special Committee on Radio Frequency Interference (CISPR) of the International Electrotechnical Commission.

As an alternative to CISPR quasi-peak measurement, compliance can be demonstrated to the applicable emission limits using a peak detector.

Peak power measurement procedure

Peak emission levels are measured by setting the instrument as follows:

a) RBW = as specified in Table 1.

b) VBW ≥ 3 x RBW.

c) Detector = Peak.

d) Sweep time = auto.

e) Trace mode = max hold.

f) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be longer for low duty cycle applications).

Table 1—RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

Trace averaging across on and off times of the EUT transmissions followed by duty cycle correction

If continuous transmission of the EUT (i.e., duty cycle ≥ 98 percent) cannot be achieved and the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent), then the following procedure shall be used:

a) The EUT shall be configured to operate at the maximum achievable duty cycle.

b) Measure the duty cycle, x, of the transmitter output signal as described in section 6.0.

c) RBW = 1 MHz (unless otherwise specified).

d) VBW ≥ 3 x RBW.

e) Detector = RMS, if span/(# of points in sweep) ≤ (RBW/2). Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.

f) Averaging type = power (i.e., RMS).

1) As an alternative, the detector and averaging type may be set for linear voltage averaging.

2) Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.

g) Sweep time = auto.

h) Perform a trace average of at least 100 traces.

i) A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:

1) If power averaging (RMS) mode was used in step f), then the applicable correction factor is 10 log(1/x), where x is the duty cycle.

2) If linear voltage averaging mode was used in step f), then the applicable correction factor is 20 log(1/x), where x is the duty cycle.

3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

NOTE: Reduction of the measured emission amplitude levels to account for operational duty factor is not permitted. Compliance is based on emission levels occurring during transmission - not on an average across on and off times of the transmitter.

Determining the applicable transmit antenna gain

A conducted power measurement will determine the maximum output power associated with a restricted band emission; however, in order to determine the associated EIRP level, the gain of the transmitting antenna (in dBi) must be added to the measured output power (in dBm).

Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater. However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no

case shall a value less than 2 dBi be used.

See KDB 662911 for guidance on calculating the additional array gain term when determining the effective antenna gain for a EUT with multiple outputs occupying the same or overlapping frequency ranges in the same band.

Radiated spurious emission test

An additional consideration when performing conducted measurements of restricted band emissions is that unwanted emissions radiating from the EUT cabinet, control circuits, power leads, or intermediate circuit elements will likely go undetected in a conducted measurement configuration. To address this concern, a radiated test shall be performed to ensure that emissions emanating from the EUT cabinet (rather than the antenna port) also comply with the applicable limits.

For these cabinet radiated spurious emission measurements the EUT transmit antenna may be replaced with a termination matching the nominal impedance of the antenna. Procedures for performing radiated measurements are specified in ANSI C63.10. All detected emissions shall comply with the applicable limits.

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for f $\geqslant$ 1 GHz, 100 kHz for f < 1 GHz

VBW $\geqslant$ RBW

Sweep = auto

Detector function = peak

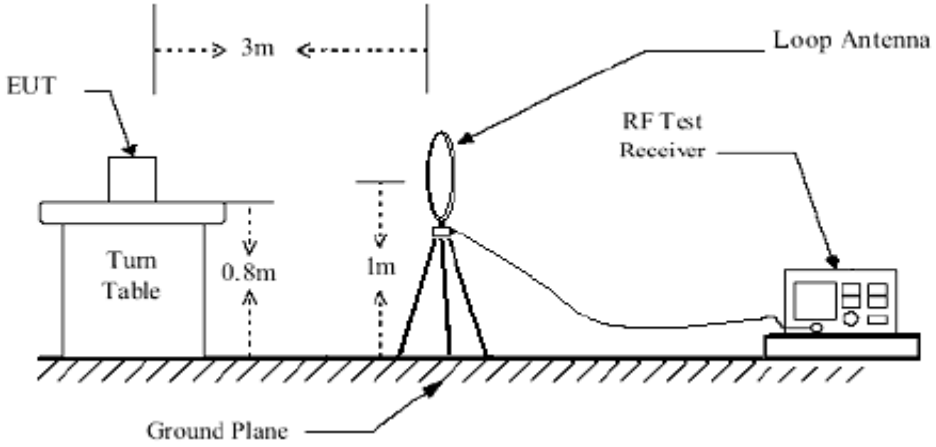
Trace = max hold

4.1.5 DEVIATION FROM TEST STANDARD

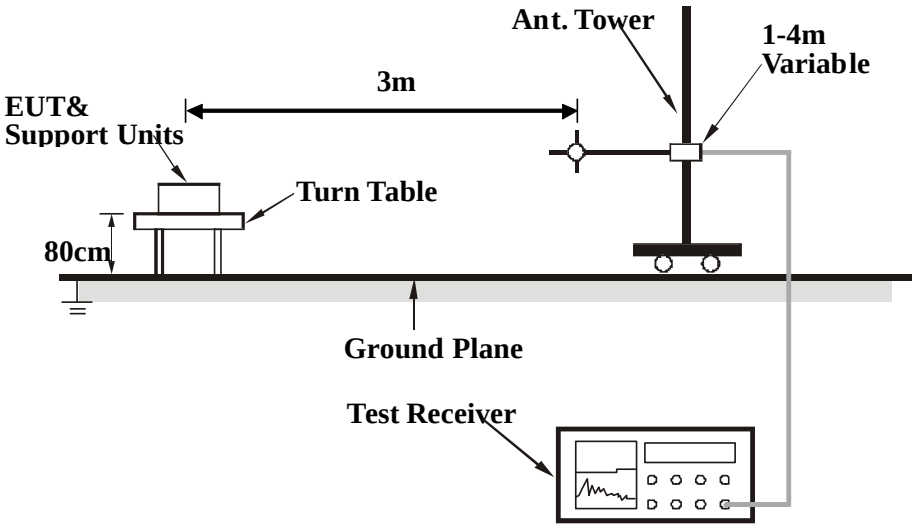
No deviation.

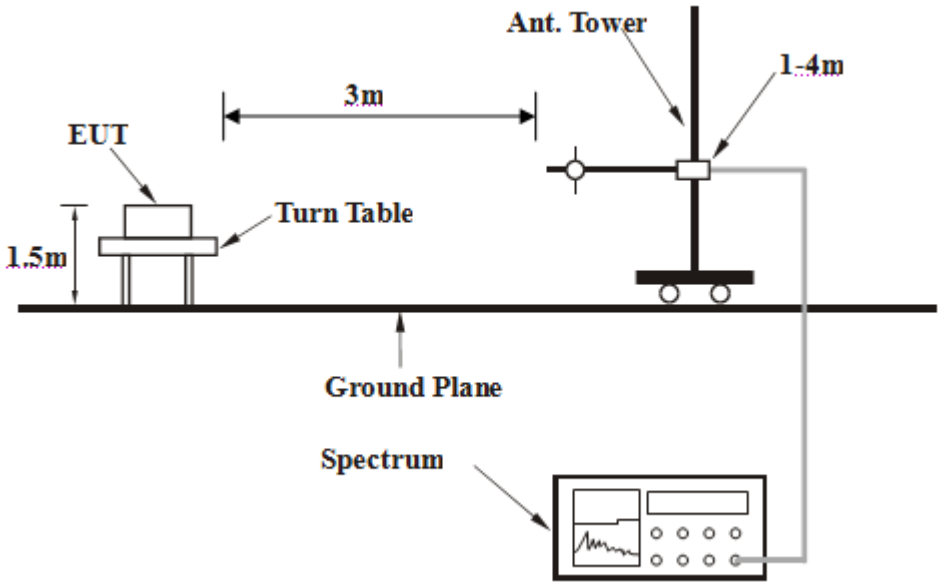
4.1.6 TEST SETUP

Below 30MHz

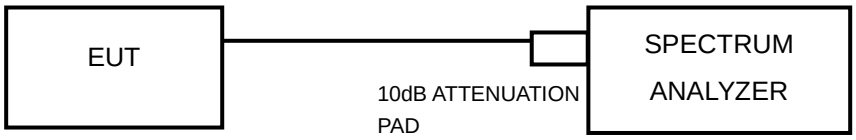


30MHz~1GHz





RADIATED TEST



CONDUCTED TEST

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.7 EUT OPERATING CONDITION

a. Set the EUT under full load condition and placed them on a testing table.
b. Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
c. The necessary accessories enable the EUT in full functions.

4.1.8 TEST RESULTS

Antenna-port Conducted test data

Note: Below the 1GHz, all configurations have been tested, only the worst configuration (Band I 802.11a CH36) show here

E = EIRP – 20log D + 104.8

where:

E = electric field strength in dBμV/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

EIRP= Measure Conducted output power Value (dBm) + Maximum transmit antenna gain (dBi) + the appropriate maximum ground reflection factor (dB)

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

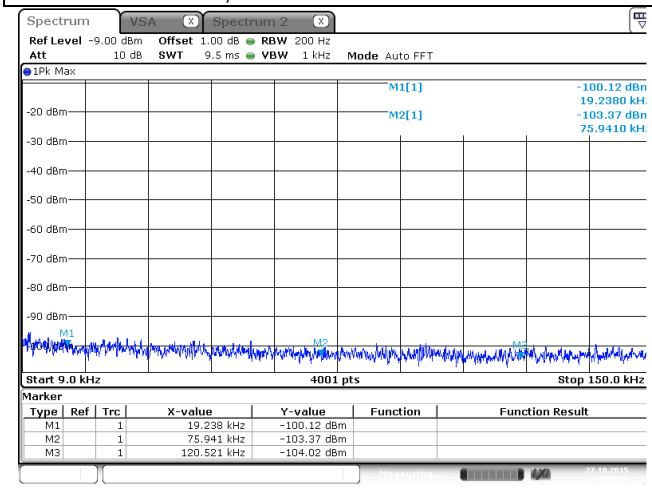
Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (3th ,4th, 5th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
0.019238	-100.12	6	3	2	QP	3.14	-20.00	-23.14	Note 2	PASS
1.2504	-79.74	6	3	2	QP	23.52	-20.00	-43.52	Note 2	PASS
599.37	-80.02	4.7	3	2	QP	21.94	-20.00	-41.94	Note 2	PASS
833.81	-80.96	4.7	3	2	QP	21.00	-20.00	-41.00	Note 2	PASS

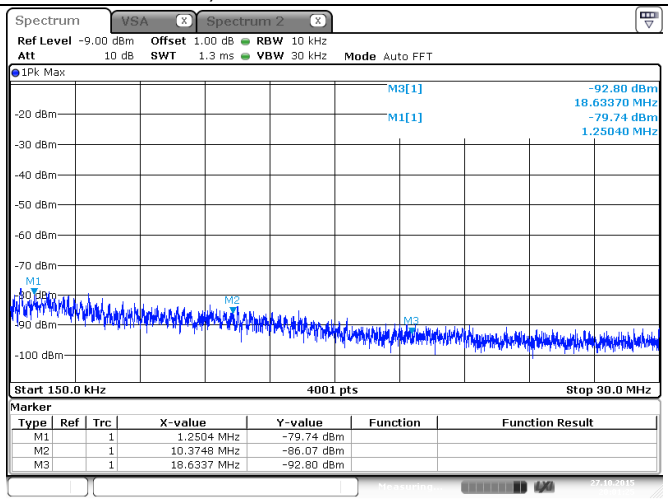
Test Plots

LOW CHANNEL, SPURIOUS 9 kHz ~ 150 kHz



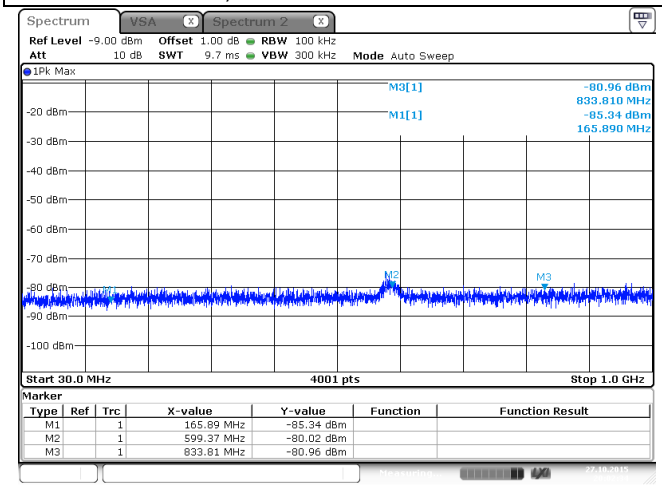
Date: 27.OCT.2015 19:59:48

LOW CHANNEL, SPURIOUS 150 kHz ~ 30 MHz



Date: 27.OCT.2015 20:01:25

LOW CHANNEL, SPURIOUS 30 MHz ~ 1 GHz



Date: 27.OCT.2015 20:02:34

Band 1

802.11a

CHANNEL	TX Channel 36	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

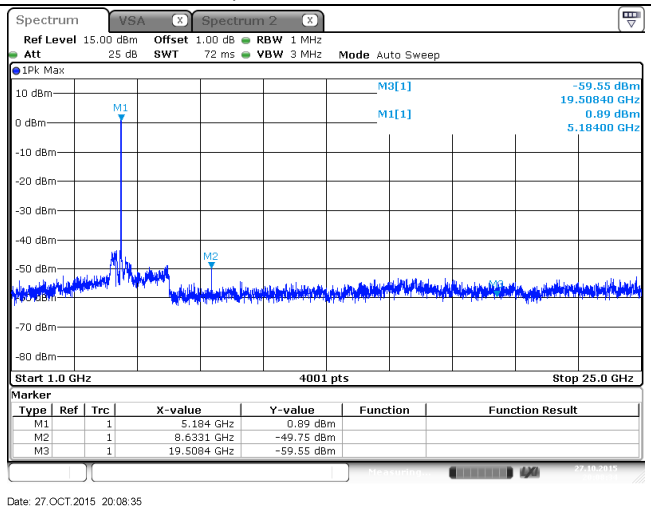
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8633.1	-49.75	0	3	3.51	PK	49.02	79.66	30.64	Note 2	PASS
	N/A		3	3.51	AV	N/A	59.66	N/A	Note 3	PASS
19508.4	-59.55	0	3	3.51	PK	39.22	74.00	34.78	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
5184	0.89	0	3	3.51	PK	99.66	N/A	N/A	Note 1	N/A
	0.44		3	3.51	AV	74.81	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 44	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

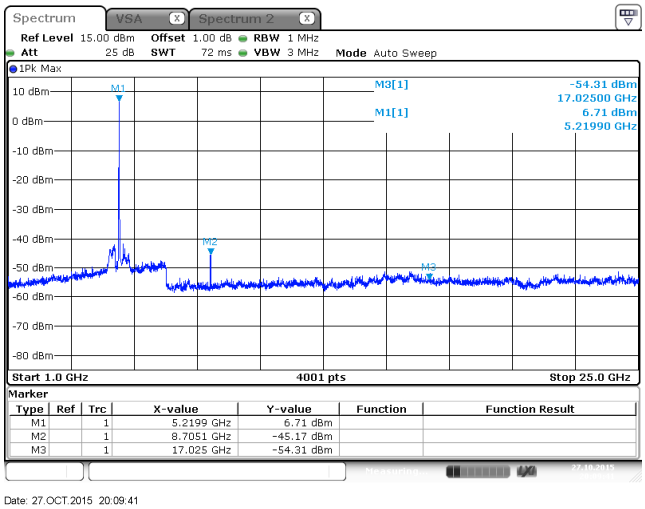
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8705.1	-45.17	0	3	3.51	PK	53.60	85.48	31.88	Note 2	PASS
	N/A		3	3.51	AV	N/A	65.48	N/A	Note 3	PASS
1702.5	-54.31	0	3	3.51	PK	44.46	74.00	29.54	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
5219.9	6.71	0	3	3.51	PK	105.48	N/A	N/A	Note 1	N/A
	6.26		3	3.51	AV	80.63	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

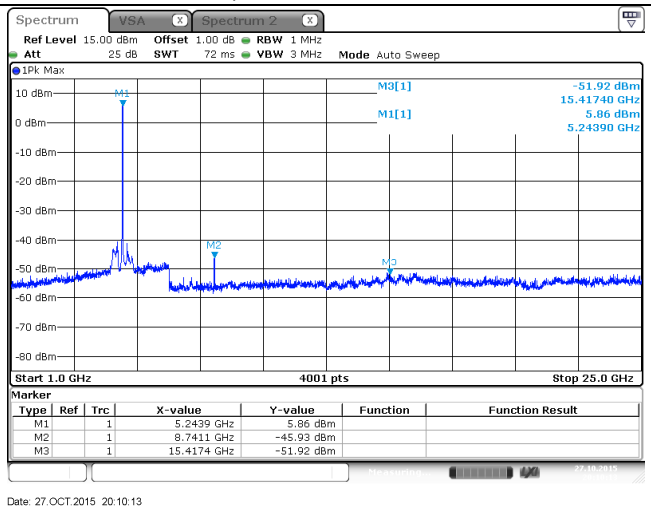
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8741.1	-45.93	0	3	3.51	PK	52.84	84.63	31.79	Note 2	PASS
	N/A		3	3.51	AV	N/A	64.63	N/A	Note 3	PASS
15417.4	-51.92	0	3	3.51	PK	46.85	74.00	27.15	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
5243.9	5.86	0	3	3.51	PK	104.63	N/A	N/A	Note 1	N/A
	5.41		3	3.51	AV	79.78	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



802.11n (20MHz)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.76 dBi

Note 1: The frequency is fundamental signal which can be ignored.

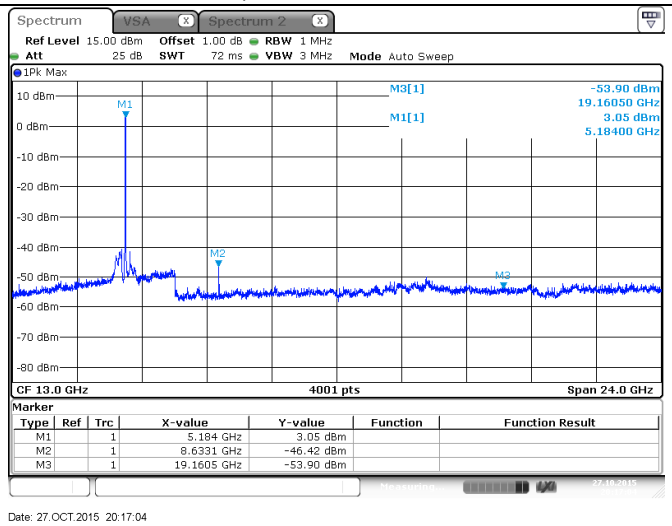
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8633.1	-46.42	0	3	3.51	PK	52.35	81.82	29.47	Note 2	PASS
	N/A		3	3.51	AV	N/A	61.82	N/A	Note 3	PASS
19160.5	-53.9	0	3	3.51	PK	44.87	74.00	29.13	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
5184	3.05	0	3	3.51	PK	101.82	N/A	N/A	Note 1	N/A
	2.60		3	3.51	AV	76.97	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 44	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

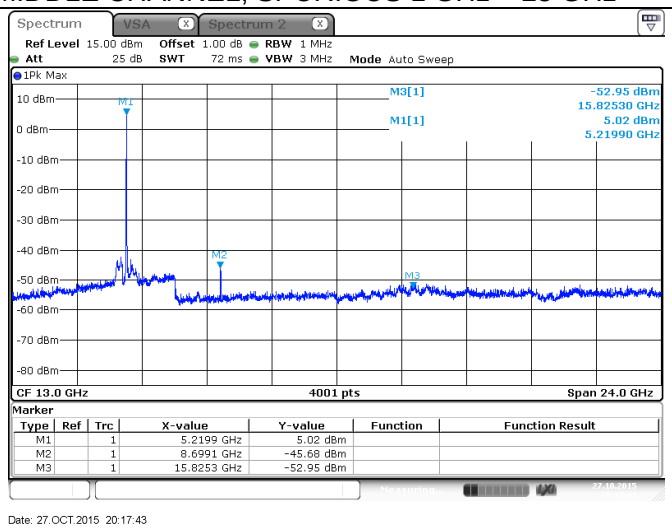
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8699.1	-45.68	0	3	3.51	PK	53.09	83.79	30.70	Note 2	PASS
	N/A		3	3.51	AV	N/A	63.79	N/A	Note 3	PASS
15825.3	-52.95	0	3	3.51	PK	45.82	83.79	37.97	Note 2	PASS
	N/A		3	3.51	AV	N/A	63.79	N/A	Note 3	PASS
5219.9	5.02	0	3	3.51	PK	103.79	N/A	N/A	Note 1	N/A
	4.57		3	3.51	AV	78.94	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

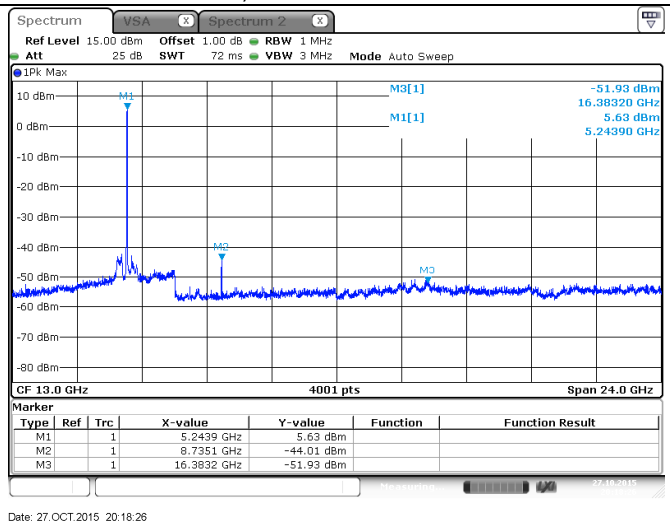
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8735.1	-44.01	0	3	3.51	PK	54.76	84.40	29.64	Note 2	PASS
	N/A		3	3.51	AV	N/A	64.40	N/A	Note 3	PASS
16383.2	-51.93	0	3	3.51	PK	46.84	84.40	37.56	Note 2	PASS
	N/A		3	3.51	AV	N/A	64.40	N/A	Note 3	PASS
5243.9	5.63	0	3	3.51	PK	104.40	N/A	N/A	Note 1	N/A
	5.18		3	3.51	AV	79.55	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



ABOVE 1GHz WORST-CASE DATA: Band 2

802.11a

CHANNEL	TX Channel 52	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

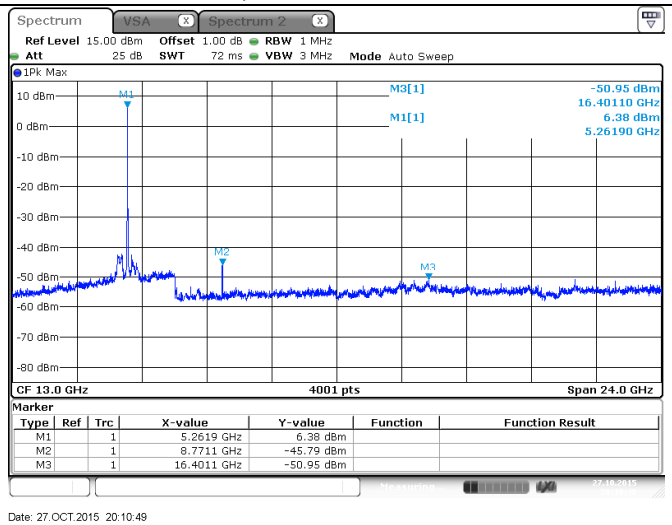
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8771.1	-45.27	0	3	3.51	PK	53.50	89.64	36.14	Note 2	PASS
	N/A		3	3.51	AV	N/A	69.64	N/A	Note 3	PASS
19076.5	-54.2	0	3	3.51	PK	44.57	74.00	29.43	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
5.2559	4.87	6	3	3.51	PK	109.64	N/A	N/A	Note 1	N/A
	4.42		3	3.51	AV	78.79	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

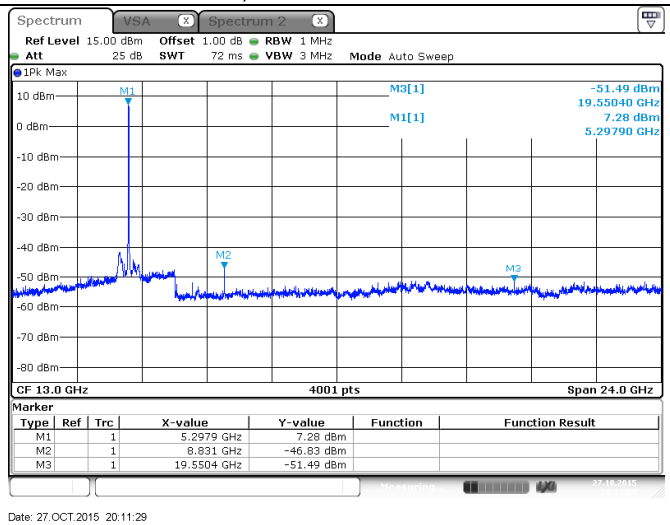
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8831	-46.83	0	3	3.51	PK	51.94	86.05	34.11	Note 2	PASS
	N/A		3	3.51	AV	N/A	66.05	N/A	Note 3	PASS
19550.4	-51.49	0	3	3.51	PK	47.28	74.00	26.72	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
5297.9	7.28	0	3	3.51	PK	106.05	N/A	N/A	Note 1	N/A
	6.83		3	3.51	AV	81.20	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

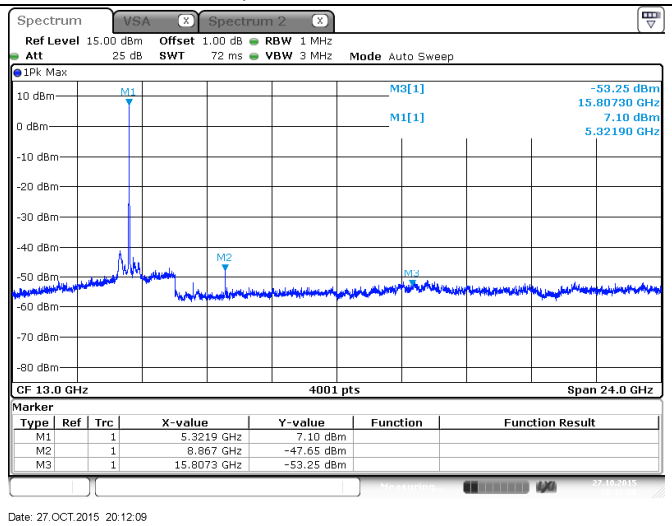
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8867	-47.65	0	3	3.51	PK	51.12	85.87	34.75	Note 2	PASS
	N/A		3	3.51	AV	N/A	65.87	N/A	Note 3	PASS
15807.3	-53.25	0	3	3.51	PK	45.52	74.00	28.48	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
5321.9	7.1	0	3	3.51	PK	105.87	N/A	N/A	Note 1	N/A
	6.65		3	3.51	AV	81.02	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



802.11n (20MHz)

CHANNEL	TX Channel 52	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

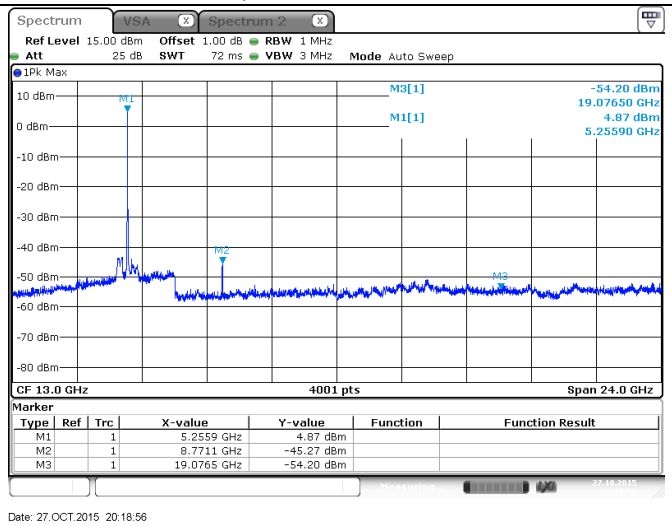
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8771.1	-45.27	0	3	3.51	PK	53.50	83.64	30.14	Note 2	PASS
	N/A		3	3.51	AV	N/A	63.64	N/A	Note 3	PASS
19076.5	-54.2	0	3	3.51	PK	44.57	74.00	29.43	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
5255.9	4.87	0	3	3.51	PK	103.64	N/A	N/A	Note 1	N/A
	4.42		3	3.51	AV	78.79	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

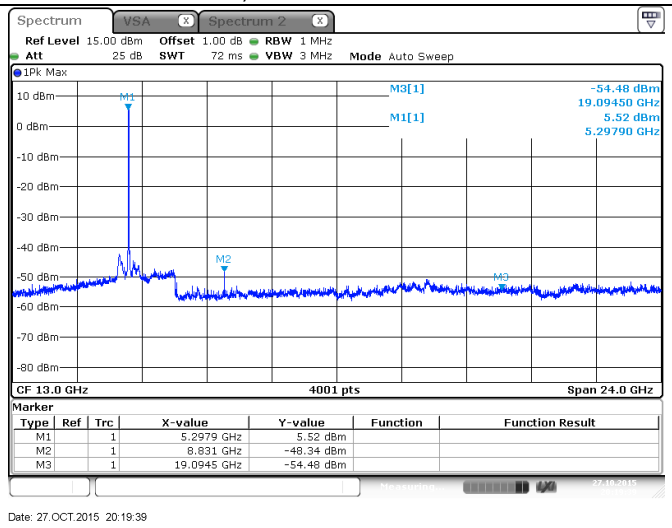
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8831	-48.34	0	3	3.51	PK	50.43	84.29	33.86	Note 2	PASS
	N/A		3	3.51	AV	N/A	64.29	N/A	Note 3	PASS
19094.5	-54.48	0	3	3.51	PK	44.29	74.00	29.71	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
5297.9	5.52	0	3	3.51	PK	104.29	N/A	N/A	Note 1	N/A
	5.07		3	3.51	AV	79.44	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

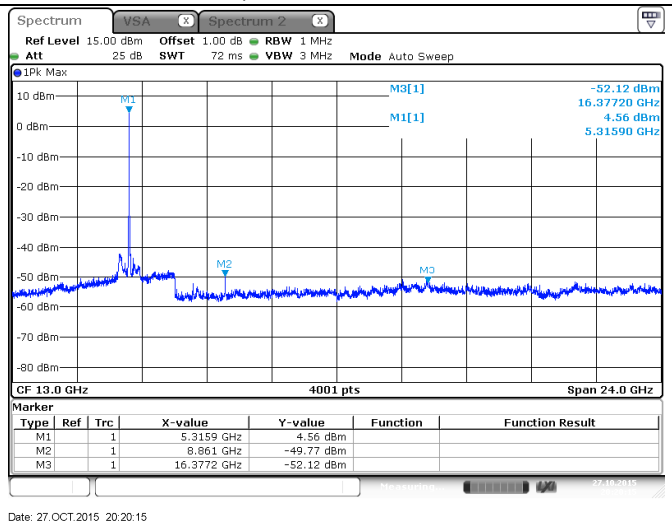
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8861	-49.77	0	3	3.51	PK	49.00	83.33	34.33	Note 2	PASS
	N/A		3	3.51	AV	N/A	63.33	N/A	Note 3	PASS
16377.2	-52.12	0	3	3.51	PK	46.65	83.33	36.68	Note 2	PASS
	N/A		3	3.51	AV	N/A	63.33	N/A	Note 3	PASS
5315.9	4.56	0	3	3.51	PK	103.33	N/A	N/A	Note 1	N/A
	4.11		3	3.51	AV	78.48	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



ABOVE 1GHz WORST-CASE DATA: Band 3

802.11a

CHANNEL	TX Channel 100	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

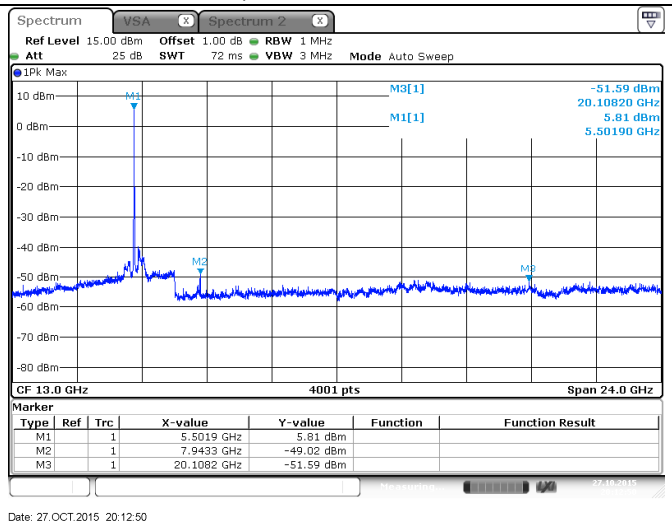
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
7943.3	-49.02	0	3	3.51	PK	49.75	84.58	34.83	Note 2	PASS
	N/A		3	3.51	AV	N/A	64.58	N/A	Note 3	PASS
20108.2	-51.59	0	3	3.51	PK	47.18	74.00	26.82	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
5501.9	5.81	0	3	3.51	PK	104.58	N/A	N/A	Note 1	N/A
	5.36		3	3.51	AV	79.73	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

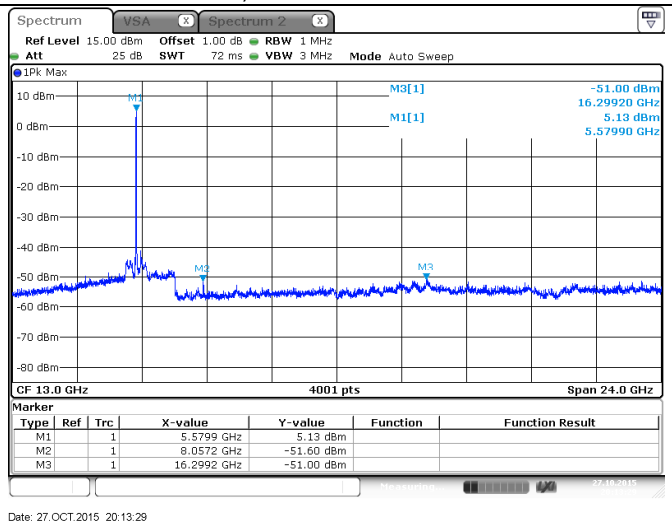
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8057.2	-51.6	0	3	3.51	PK	47.17	74.00	26.83	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
16299.2	-51	0	3	3.51	PK	47.77	83.90	36.13	Note 2	PASS
	N/A		3	3.51	AV	N/A	63.90	N/A	Note 3	PASS
5579.9	5.13	0	3	3.51	PK	103.90	N/A	N/A	Note 1	N/A
	4.68		3	3.51	AV	79.05	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

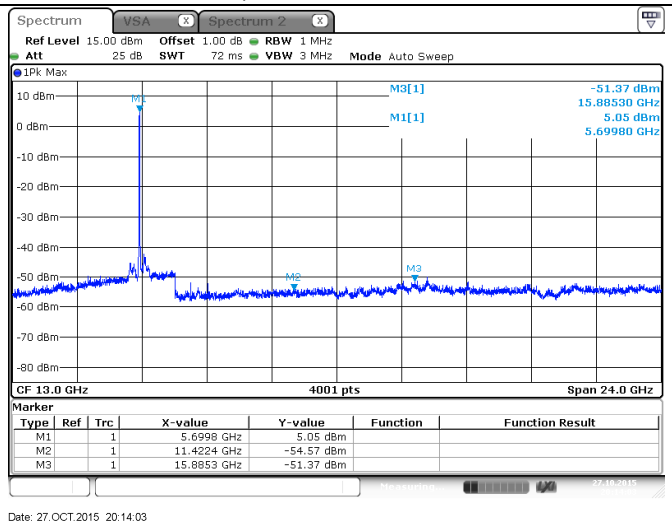
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
11422.4	-54.57	0	3	3.51	PK	44.20	74.00	29.80	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
15885.3	-51.37	0	3	3.51	PK	47.40	83.82	36.42	Note 2	PASS
	N/A		3	3.51	AV	N/A	63.82	N/A	Note 3	PASS
5699.8	5.05	0	3	3.51	PK	103.82	N/A	N/A	Note 1	N/A
	4.60		3	3.51	AV	78.97	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



802.11n (20MHz)

CHANNEL	TX Channel 100	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

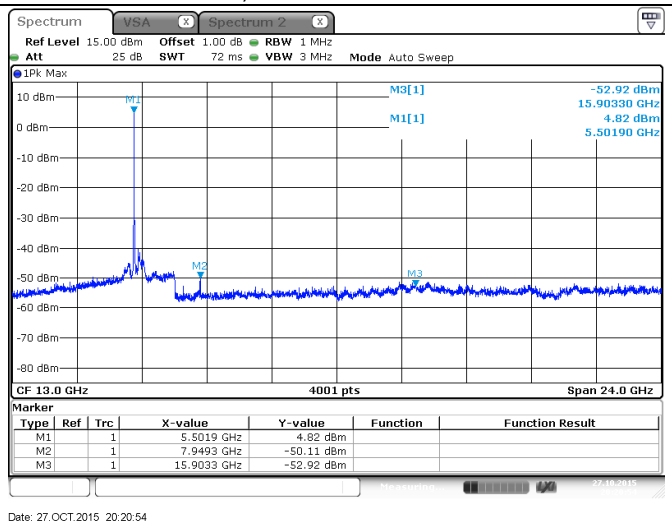
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
7949.3	-50.11	0	3	3.51	PK	48.66	83.59	34.93	Note 2	PASS
	N/A		3	3.51	AV	N/A	63.59	N/A	Note 3	PASS
15903.3	-52.92	0	3	3.51	PK	45.85	83.59	37.74	Note 2	PASS
	N/A		3	3.51	AV	N/A	63.59	N/A	Note 3	PASS
5501.9	4.82	0	3	3.51	PK	103.59	N/A	N/A	Note 1	N/A
	4.37		3	3.51	AV	78.74	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

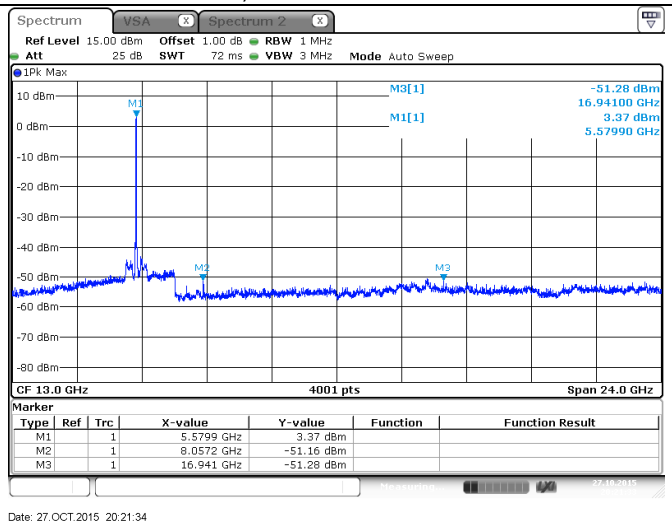
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8057.2	-51.16	0	3	3.51	PK	47.61	74.00	26.39	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
16941	-51.28	0	3	3.51	PK	47.49	82.14	34.65	Note 2	PASS
	N/A		3	3.51	AV	N/A	62.14	N/A	Note 3	PASS
5579.9	3.37	0	3	3.51	PK	102.14	N/A	N/A	Note 1	N/A
	2.92		3	3.51	AV	77.29	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

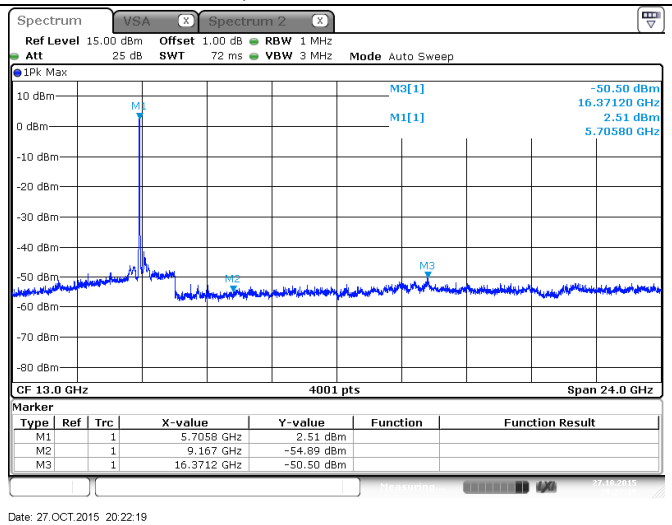
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
9167	-54.89	0	3	3.51	PK	43.88	74.00	30.12	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
16371.2	-50.5	0	3	3.51	PK	48.27	81.28	33.01	Note 2	PASS
	N/A		3	3.51	AV	N/A	61.28	N/A	Note 3	PASS
5705.8	2.51	0	3	3.51	PK	101.28	N/A	N/A	Note 1	N/A
	2.06		3	3.51	AV	76.43	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



Date: 27.OCT.2015 20:22:19

ABOVE 1GHz WORST-CASE DATA: Band 4

802.11a

CHANNEL	TX Channel 149	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.
And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

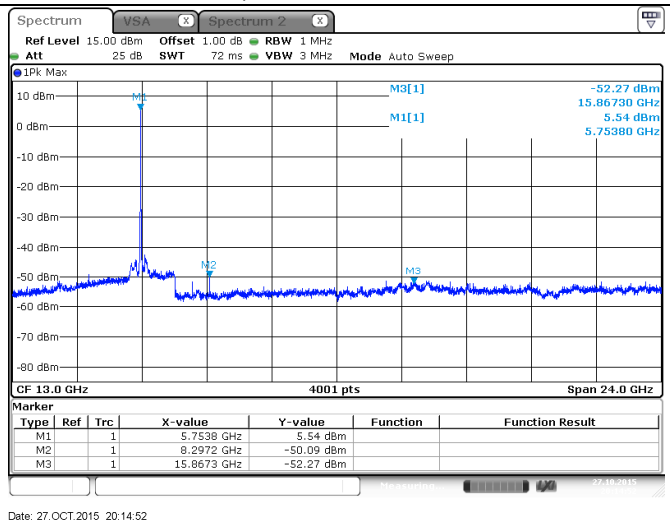
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8297.2	-50.09	0	3	3.51	PK	48.68	74.00	25.32	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
15867.3	-52.27	0	3	3.51	PK	46.50	84.31	37.81	Note 2	PASS
	N/A		3	3.51	AV	N/A	64.31	N/A	Note 3	PASS
5753.8	5.54	0	3	3.51	PK	104.31	N/A	N/A	Note 1	N/A
	5.09		3	3.51	AV	79.46	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

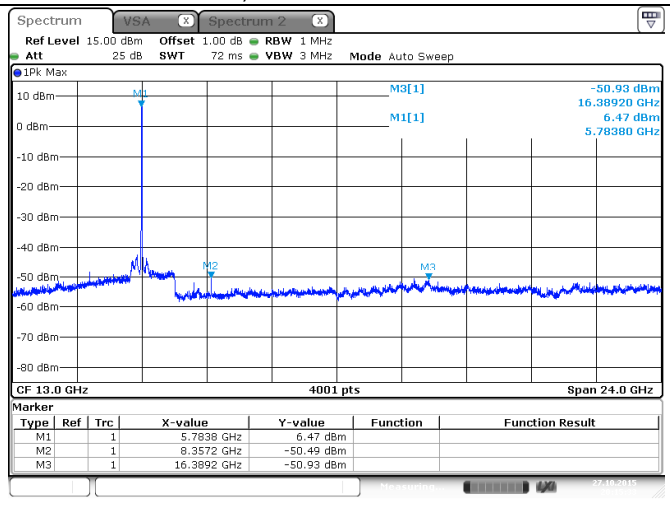
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8357.2	-50.49	0	3	3.51	PK	48.28	74.00	25.72	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
16389.2	-50.93	0	3	3.51	PK	47.84	85.24	37.40	Note 2	PASS
	N/A		3	3.51	AV	N/A	65.24	N/A	Note 3	PASS
5783.8	6.47	0	3	3.51	PK	105.24	N/A	N/A	Note 1	N/A
	6.02		3	3.51	AV	80.39	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 161	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

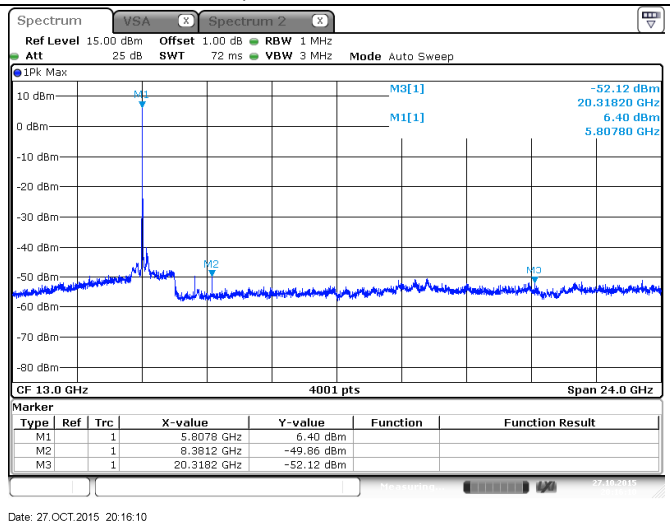
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8381.2	-49.86	0	3	3.51	PK	48.91	74.00	25.09	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
20318.2	-52.12	0	3	3.51	PK	46.65	85.17	38.52	Note 2	PASS
	N/A		3	3.51	AV	N/A	65.17	N/A	Note 3	PASS
5807.8	6.4	0	3	3.51	PK	105.17	N/A	N/A	Note 1	N/A
	5.95		3	3.51	AV	80.32	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



802.11n (20MHz)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

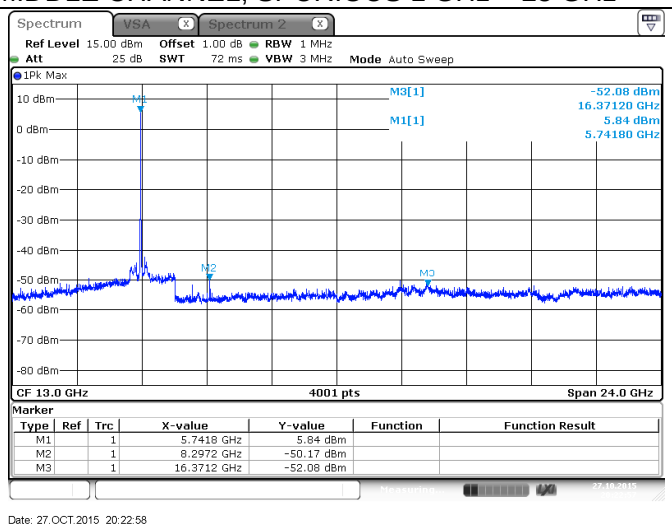
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8297.2	-50.17	0	3	3.51	PK	48.60	74.00	25.40	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
16371.2	-52.08	0	3	3.51	PK	46.69	84.61	37.92	Note 2	PASS
	N/A		3	3.51	AV	N/A	64.61	N/A	Note 3	PASS
5741.8	5.84	0	3	3.51	PK	104.61	N/A	N/A	Note 1	N/A
	5.39		3	3.51	AV	79.76	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

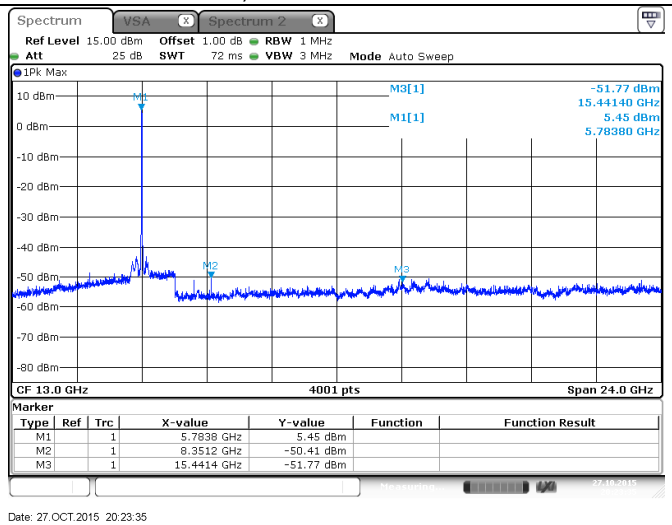
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8351.2	-50.41	0	3	3.51	PK	48.36	74.00	25.64	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
15441.4	-51.77	0	3	3.51	PK	47.00	84.22	37.22	Note 2	PASS
	N/A		3	3.51	AV	N/A	64.22	N/A	Note 3	PASS
5783.8	5.45	0	3	3.51	PK	104.22	N/A	N/A	Note 1	N/A
	5.00		3	3.51	AV	79.37	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



CHANNEL	TX Channel 161	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

The EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2dBi, whichever is greater.

And the maximum in-band gain of the antenna is 3.51 dBi

Note 1: The frequency is fundamental signal which can be ignored.

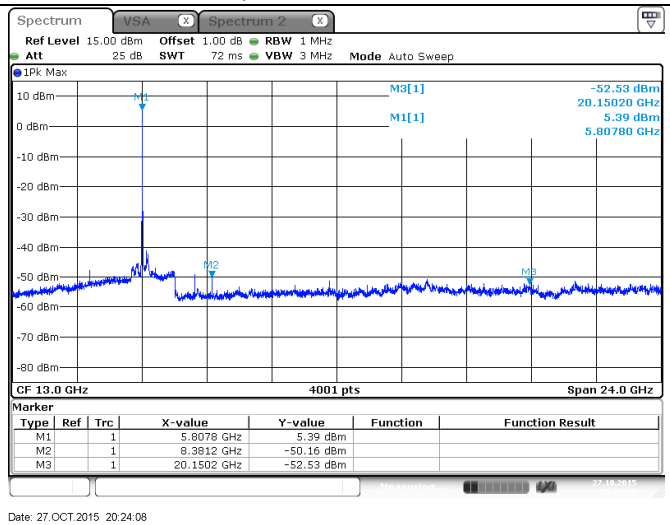
Note 2: Which frequency is not within a restricted band, and its limit line is 20dB below the highest emission level.

Note 3: Average measurement was not performed if peak level went lower than the average limit.

Note 4: The harmonic (2th ,3th, 4th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise

Frequency (MHz)	Value (dBm)	Ground Reflection Factor (dB)	D(m)	Max gain(dBi)	Detector	E (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark	Verdict
8381.2	-50.16	0	3	3.51	PK	48.61	74.00	25.39	--	PASS
	N/A		3	3.51	AV	N/A	54.00	N/A	Note 3	PASS
20150.2	-52.53	0	3	3.51	PK	46.24	84.16	37.92	Note 2	PASS
	N/A		3	3.51	AV	N/A	64.16	N/A	Note 3	PASS
5807.8	5.39	0	3	3.51	PK	104.16	N/A	N/A	Note 1	N/A
	4.94		3	3.51	AV	79.31	N/A	N/A		N/A

MIDDLE CHANNEL, SPURIOUS 1 GHz ~ 25 GHz



Cabinet Radiated spurious emission test

Note 1: The symbol of "--" in the table which means not application.

Note 2: For the test data above 1 GHz, according the ANSI C63.4, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Note 4: All configurations have been tested, only the worst configuration (Band I 802.11a CH36) show here

802.11a

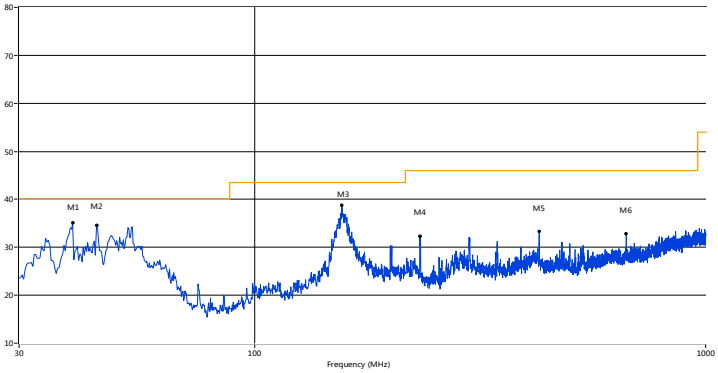
CHANNEL	Channel 36	**DETECTOR FUNCTION**	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**Frequency (MHz)**	**Results (dBuV/m)**	**Factor (dB)**	**Limit (dBuV/m)**	**Margin (dB)**	**Detector**	**Table (o)**	**Height (cm)**
1	35.58	26.98	-21.22	40.0	-13.02	Peak	233.20	100
2	58.85	31.08	-19.94	40.0	-8.92	Peak	0.40	100
3	108.79	26.31	-20.24	43.5	-17.19	Peak	111.10	100
4	341.78	31.13	-16.31	46.0	-14.87	Peak	344.40	100
5	427.36	35.30	-14.62	46.0	-10.70	Peak	38.70	100
6	512.94	32.32	-13.01	46.0	-13.68	Peak	99.90	100

REMARKS:

1. The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.3. The other emission levels were very low against the limit.
2. According the ANSI C63.4, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

3. Margin value = Results– Limit.



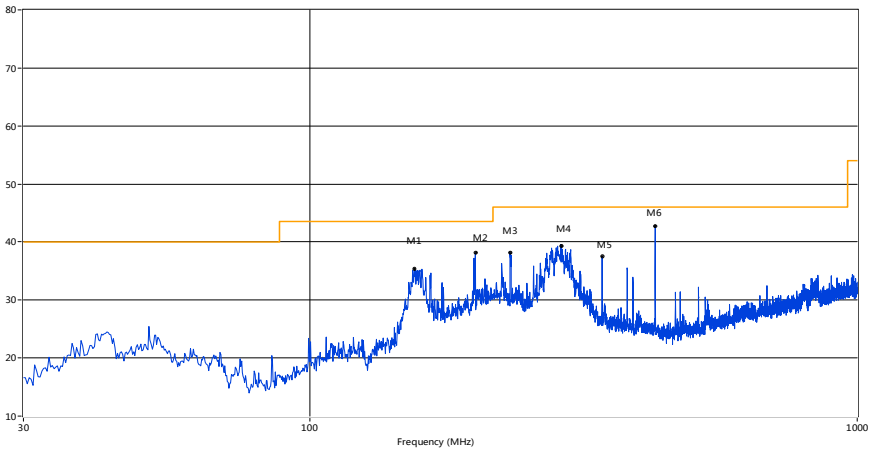
CHANNEL	Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)
1	70.49	27.14	-22.93	40.0	-12.86	Peak	42.50	100
2	108.31	28.11	-20.20	43.5	-15.39	Peak	-0.00	100
3	170.86	28.10	-22.62	43.5	-15.40	Peak	227.40	100
4	256.44	40.97	-18.74	46.0	-5.03	Peak	53.60	100
5	341.78	36.83	-16.31	46.0	-9.17	Peak	155.00	100
6	427.36	39.90	-14.62	46.0	-6.10	Peak	277.30	100

REMARKS:

1. The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.3. The other emission levels were very low against the limit.
2. According the ANSI C63.4, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

3. Margin value = Results– Limit.

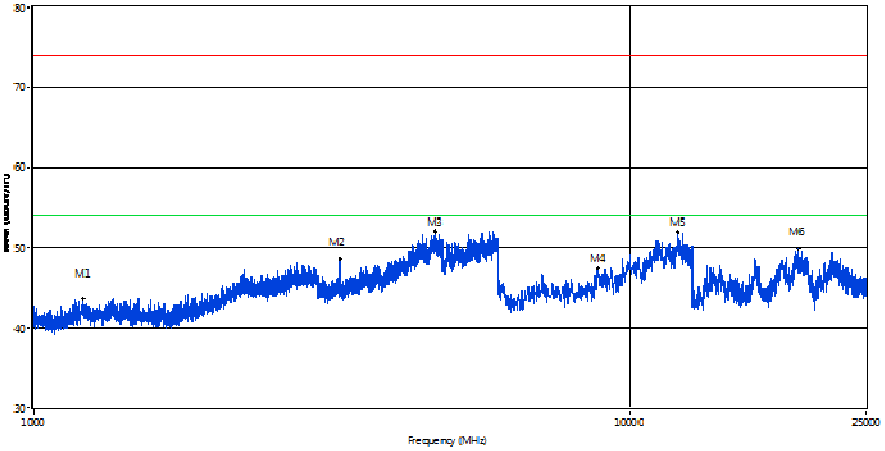


CHANNEL	Channel 36	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)
1	1215.95	43.63	-5.09	74.0	-30.37	Peak	208.80	100
2	3263.93	48.67	9.06	74.0	-25.33	Peak	129.20	100
3	4728.32	51.99	13.62	74.0	-22.01	Peak	178.10	100
4	8841.51	47.33	16.58	74.0	-26.67	Peak	121.20	100
5	12042.43	51.83	20.83	74.0	-22.17	Peak	0.30	100
6	19179.70	49.84	14.04	74.0	-24.16	Peak	66.70	100

REMARKS:

1. According the ANSI C63.4, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.
2. Margin value = Results– Limit.

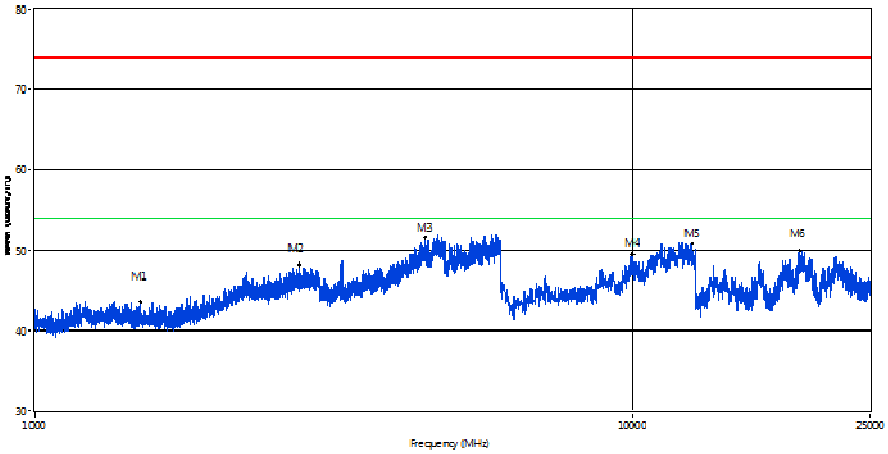


CHANNEL	Channel 36	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)
1	1505.87	43.63	-4.33	74.0	-30.37	Peak	57.80	100
2	2770.56	48.17	1.53	74.0	-25.83	Peak	10.10	100
3	4510.87	51.55	12.74	74.0	-22.45	Peak	110.00	100
4	10009.57	49.46	19.33	74.0	-24.54	Peak	281.00	100
5	12559.07	50.75	19.96	74.0	-23.25	Peak	157.90	100
6	19009.98	49.93	13.42	74.0	-24.07	Peak	189.80	100

REMARKS:

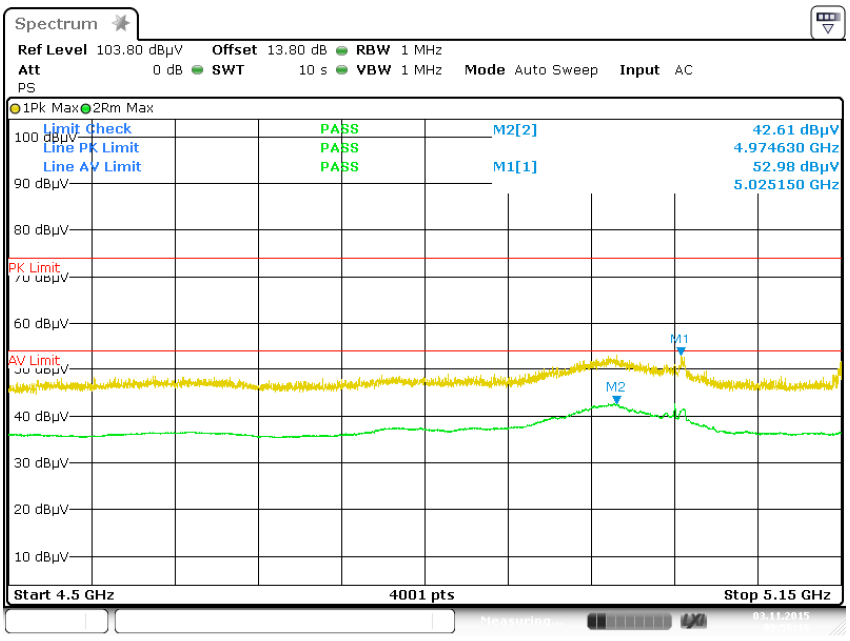
1. According the ANSI C63.4, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.
2. Margin value = Results– Limit.



Bandage

802.11a

CH36



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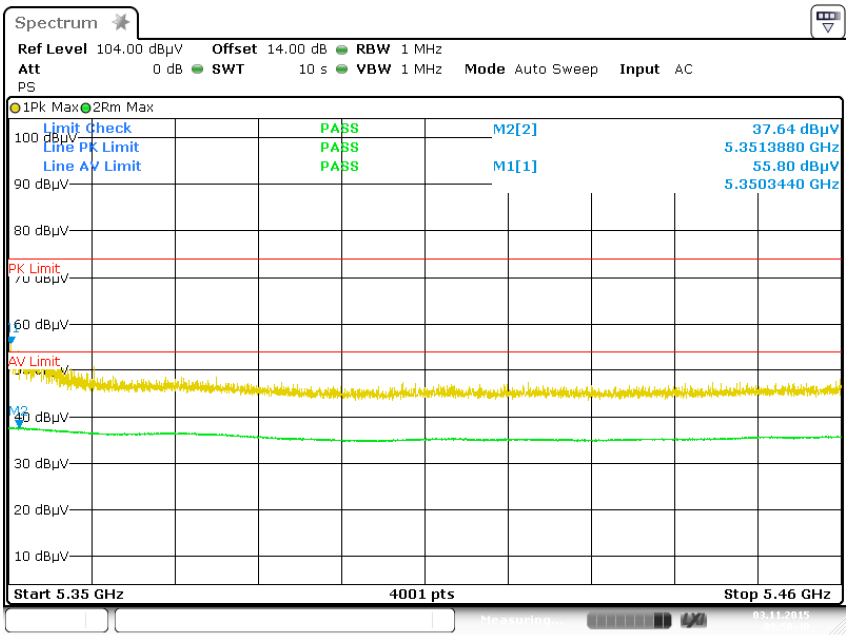
CH64



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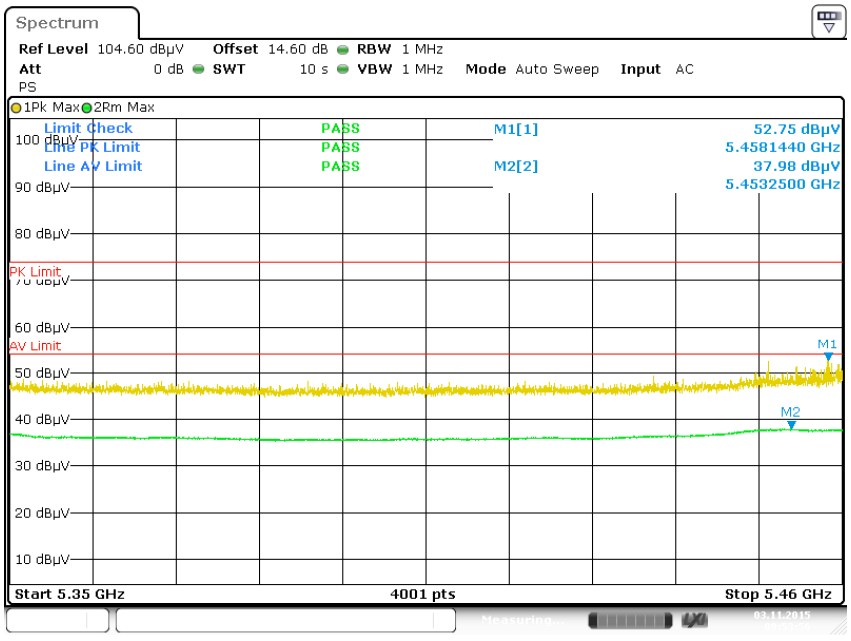
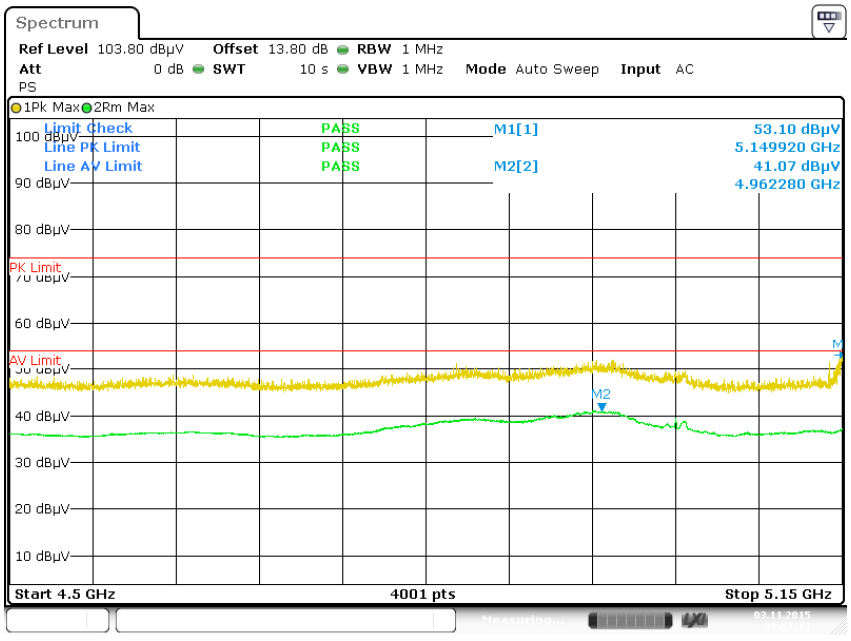
CH100


Spectrum
Ref Level 104.60 dBµV Offset 14.60 dB RBW 1 MHz
Att 0 dB SWT 10 s VBW 1 MHz Mode Auto Sweep Input AC
PS
1Pk Max 2Rm Max
Limit Check PASS M1[1] 52.75 dBµV
Line PK Limit PASS 5.4581440 GHz
Line AV Limit PASS M2[2] 37.98 dBµV
5.4532500 GHz
100 dBµV
90 dBµV
80 dBµV
PK Limit
60 dBµV
AV Limit
50 dBµV
40 dBµV
30 dBµV
20 dBµV
10 dBµV
M1
M2
Start 5.35 GHz
4001 pts
Stop 5.46 GHz
Measuring...
Date: 3.NOV.2015 09:53:56

802.11n20

CH36



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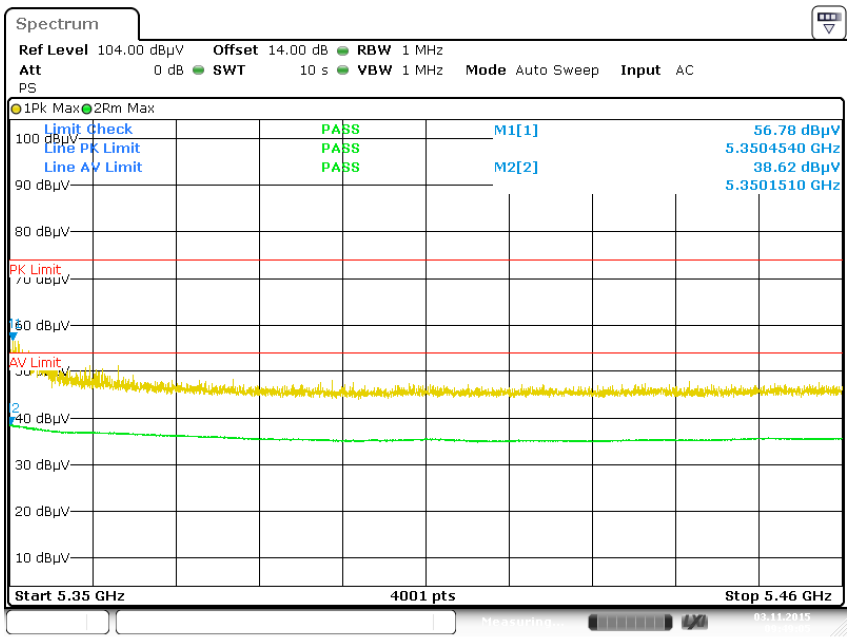
CH64



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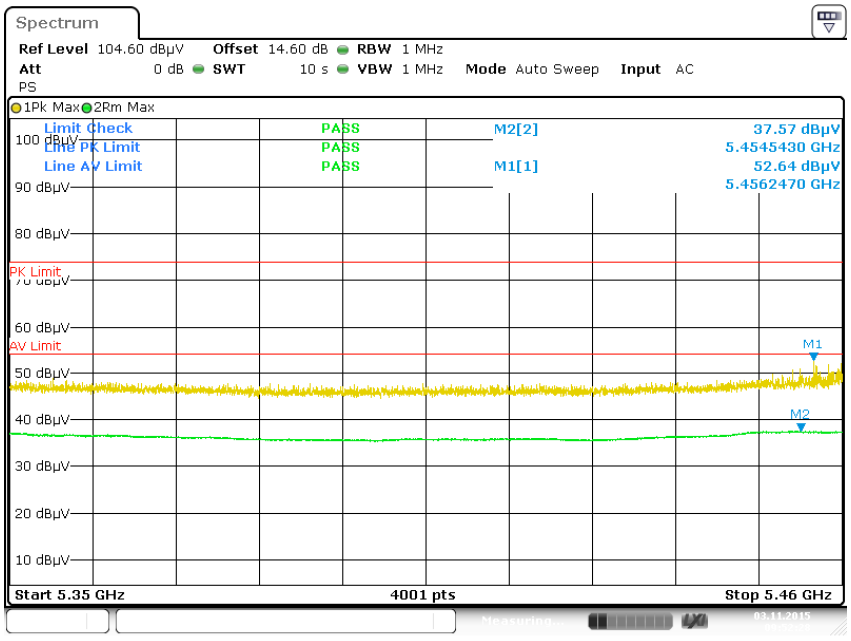
CH100


Spectrum
Ref Level 104.60 dBµV Offset 14.60 dB RBW 1 MHz
Att 0 dB SWT 10 s VBW 1 MHz Mode Auto Sweep Input AC
PS
1Pk Max 2Rm Max
Limit Check PASS M2[2] 37.57 dBµV
Line PK Limit PASS 5.4545430 GHz
Line AV Limit PASS M1[1] 52.64 dBµV
5.4562470 GHz
100 dBµV
90 dBµV
80 dBµV
PK Limit
60 dBµV
AV Limit
50 dBµV
40 dBµV
30 dBµV
20 dBµV
10 dBµV
M1
M2
Start 5.35 GHz
4001 pts
Stop 5.46 GHz
Measuring...
03.11.2015
Date: 3.NOV.2015 09:52:28

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE: 1. The lower limit shall apply at the transition frequencies.

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

3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESU 26	100005	Apr. 25,15	Apr. 24,16
Artificial Mains Network	Rohde&Schwarz	ENV216	101173	Apr. 25,15	Apr. 24,16
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	100317	Apr. 25,15	Apr. 24,16
Test software	ADT	ADT_Cond_V7.3.7	N/A	N/A	N/A

NOTE:

1. The test was performed in shielded room 553.
2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

4.2.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

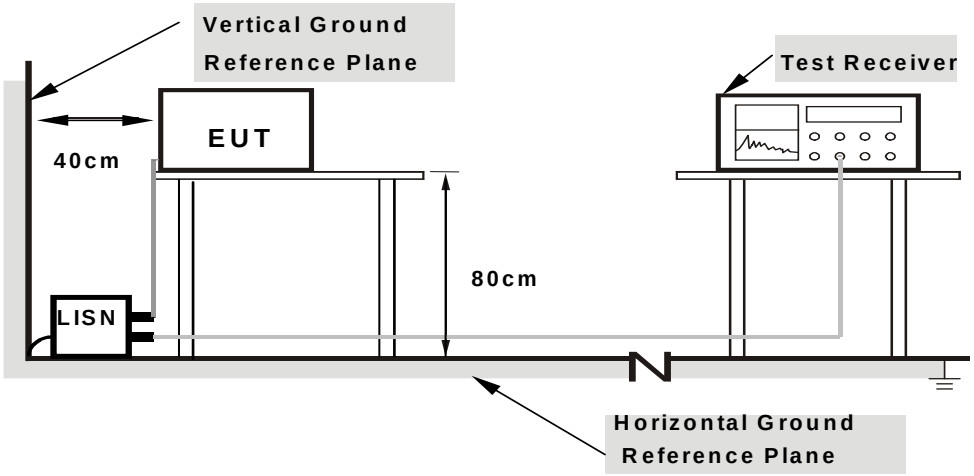
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 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

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA：802.11a

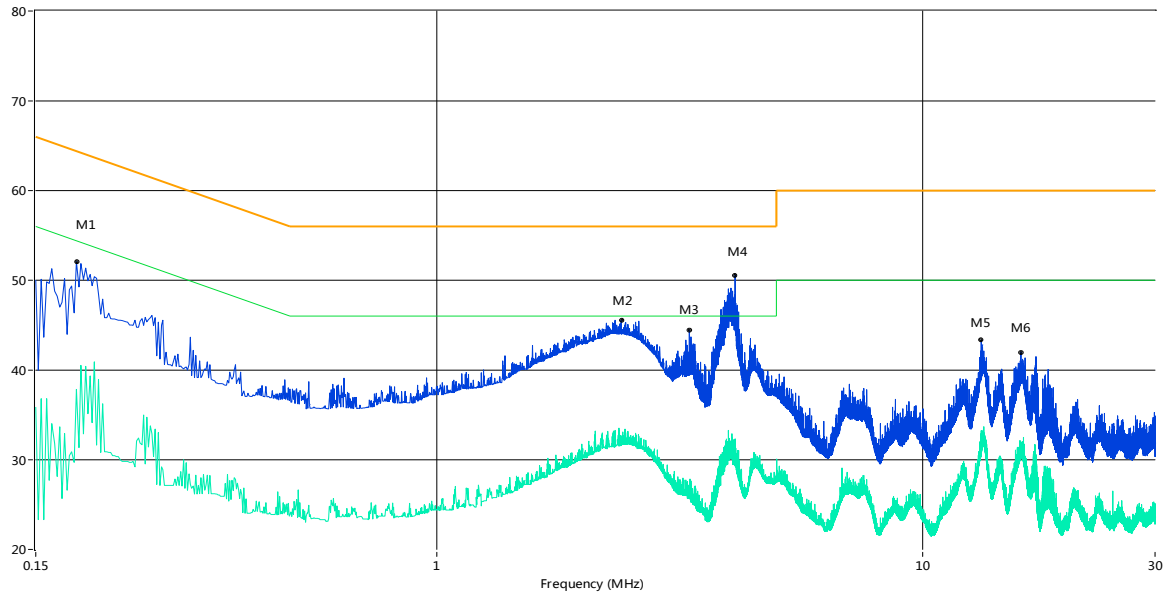
PHASE	Line	6dB BANDWIDTH	9kHz
CHANNEL	Channel 36		

No	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector
1	0.18	52.1	13.00	65.1	-13.00	Peak
1**	0.18	37.8	13.00	55.1	-17.30	AV
2	2.40	45.5	13.00	56.0	-10.50	Peak
2**	2.40	32.6	13.00	46.0	-13.40	AV
3	3.31	44.4	13.00	56.0	-11.60	Peak
3**	3.31	26.7	13.00	46.0	-19.30	AV
4	**4.11**	**50.6**	**13.00**	**56.0**	**-5.40**	**Peak**
4**	4.11	32.3	13.00	46.0	-13.70	AV
5	13.18	43.3	13.00	60.0	-16.70	Peak
5**	13.18	33.3	13.00	50.0	-16.70	AV
6	15.89	42.0	13.00	60.0	-18.00	Peak
6**	15.89	30.2	13.00	50.0	-19.80	AV

REMARKS:

1. The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors.

2. Margin value = Results - Limit



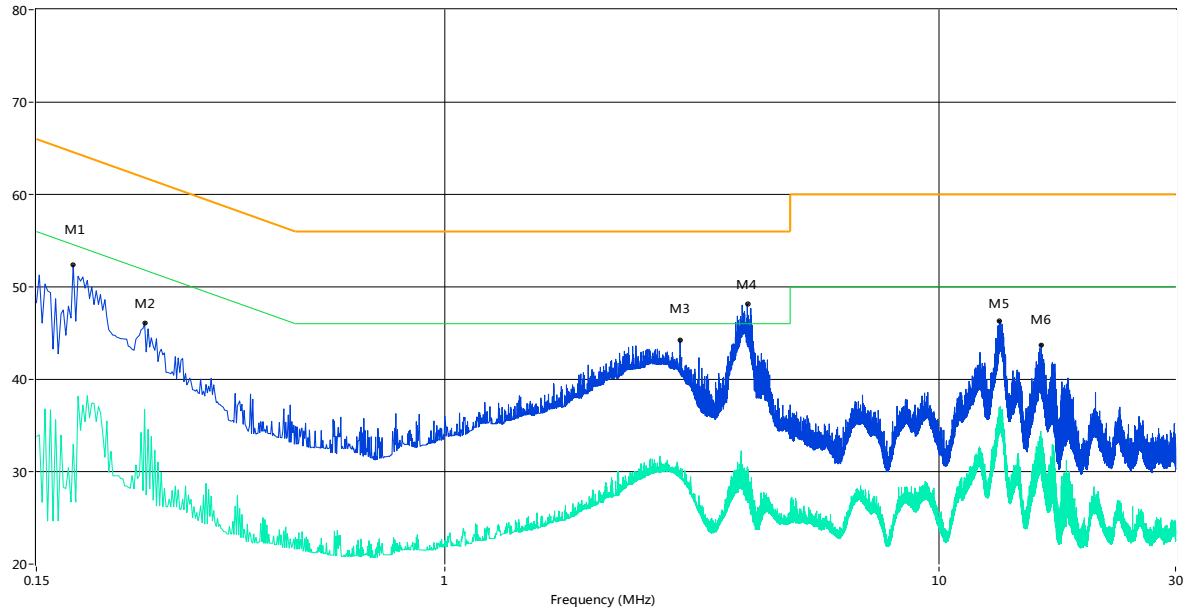
PHASE	Neutral	6dB BANDWIDTH	9kHz
CHANNEL	Channel 36		

No	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector
1	0.18	52.4	13.00	65.2	-12.80	Peak
1**	0.18	32.9	13.00	55.2	-22.30	AV
2	0.25	46.0	13.00	63.2	-17.20	Peak
2**	0.25	36.7	13.00	53.2	-16.50	AV
3	2.99	44.2	13.00	56.0	-11.80	Peak
3**	2.99	29.3	13.00	46.0	-16.70	AV
4	4.09	48.1	13.00	56.0	-7.90	Peak
4**	4.09	30.5	13.00	46.0	-15.50	AV
5	13.23	46.3	13.00	60.0	-13.70	Peak
5**	13.23	33.8	13.00	50.0	-16.20	AV
6	16.08	43.7	13.00	60.0	-16.30	Peak
6**	16.08	33.7	13.00	50.0	-16.30	AV

REMARKS:

1. The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors.

2. Margin value = Results - Limit



Charger ASSA55e-050200

CONDUCTED WORST-CASE DATA：802.11a

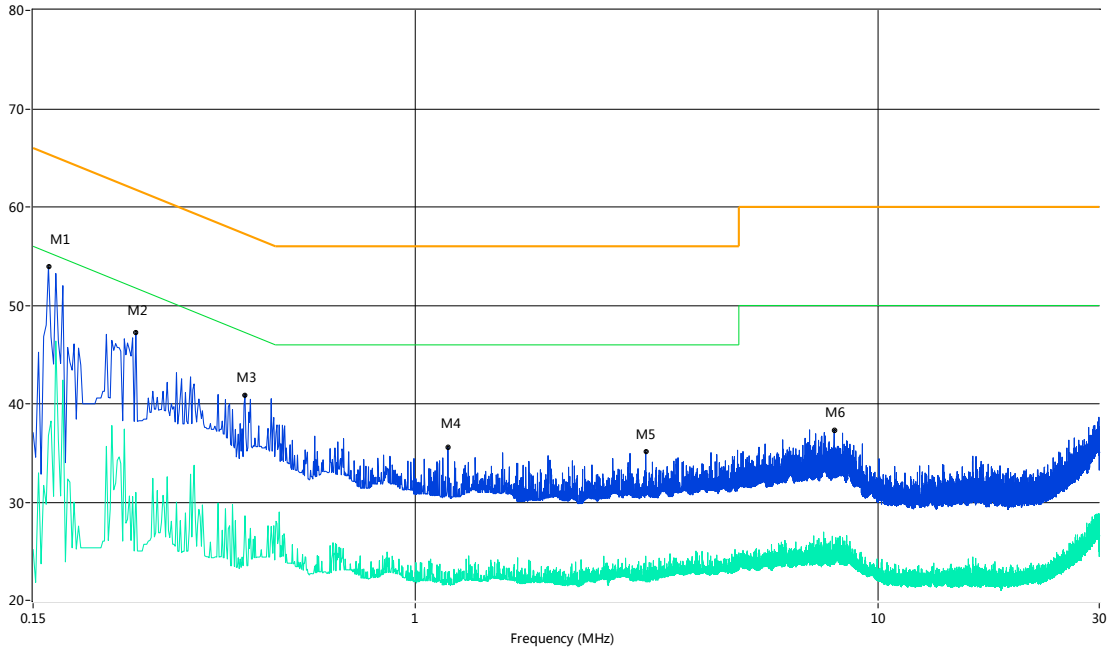
PHASE	Line	6dB BANDWIDTH	9kHz
CHANNEL	Channel 36		

No	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector
1	0.16	54.0	13.00	65.7	-11.7	Peak
1**	0.16	36.8	13.00	55.7	-18.9	AV
2	0.25	47.2	13.00	63.1	-15.9	Peak
2**	0.25	31.0	13.00	53.1	-22.1	AV
3	0.43	40.9	13.00	58.0	-17.1	Peak
3**	0.43	28.6	13.00	48.0	-19.4	AV
4	1.18	35.6	13.00	56.0	-20.4	Peak
4**	1.18	22.8	13.00	46.0	-23.2	AV
5	3.15	35.2	13.00	56.0	-20.8	Peak
5**	3.15	24.5	13.00	46.0	-21.5	AV
6	8.03	37.3	13.00	60.0	-22.7	Peak
6**	8.03	23.7	13.00	50.0	-26.3	AV

REMARKS:

1. The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors.

2. Margin value = Results - Limit



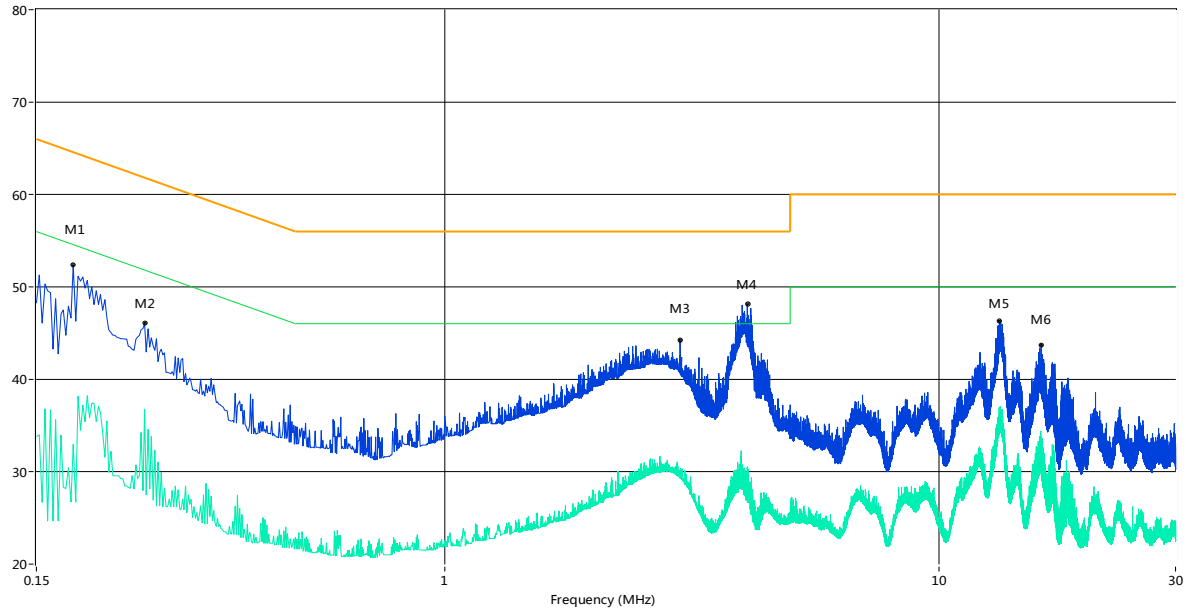
PHASE	Neutral	6dB BANDWIDTH	9kHz
CHANNEL	Channel 36		

No	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector
1	0.17	51.6	13.00	65.5	-13.9	Peak
1**	0.17	37.5	13.00	55.5	-18.0	AV
2	0.24	46.2	13.00	63.5	-17.3	Peak
2**	0.24	30.7	13.00	53.5	-22.8	AV
3	0.49	40.7	13.00	56.2	-15.5	Peak
3**	0.49	26.1	13.00	46.2	-20.1	AV
4	0.69	39.5	13.00	56.0	-16.5	Peak
4**	0.69	23.3	13.00	46.0	-22.7	AV
5	2.54	37.9	13.00	56.0	-18.1	Peak
5**	2.54	21.9	13.00	46.0	-24.1	AV
6	5.05	38.0	13.00	60.0	-22.0	Peak
6**	5.05	24.2	13.00	50.0	-25.8	AV

REMARKS:

1. The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors.

2. Margin value = Results - Limit



4.3 CONDUCTED OUTPUT POWER MEASUREMENT

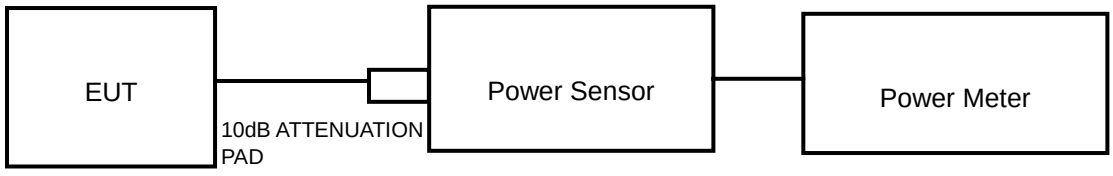
4.3.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	√		250mW(24dBm) or 11 dBm+10LogB*
U-NII-2C	√		250mW(24dBm) or 11 dBm+10LogB*
U-NII-3	√		1 Watt (30 dBm)

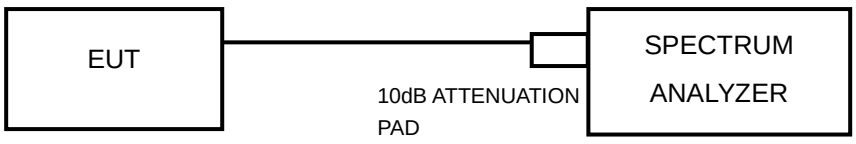
NOTE: 1. Where B is the 26dB emission bandwidth in MHz.

4.3.2 TEST SETUP

FOR POWER OUTPUT MEASUREMENT



FOR 6/26dB BANDWIDTH



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.3.4 TEST PROCEDURE

FOR AVERAGE POWER MEASUREMENT

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

FOR 26dB BANDWIDTH

1) Set RBW = approximately 1% of the emission bandwidth.
2) Set the VBW > RBW.
3) Detector = RMS.
4) Trace mode = max hold.
5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

FOR 6dB BANDWIDTH

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

4.3.5 DEVIATION FROM TEST STANDARD

No deviation.

4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.3.7 TEST RESULTS

OUTPUT POWER:

Band I

Mode	CHANNEL	CHANNEL FREQUENCY (MHz)	MAX. OUTPUT POWER (mW)	MAX. OUTPUT POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
11a	36	5180	5.1286	7.10	24	PASS
11a	44	5220	7.0469	8.48	24	PASS
11a	48	5240	7.5509	8.78	24	PASS
11n (HT20)	36	5180	4.9545	6.95	24	PASS
11n (HT20)	44	5220	5.5719	7.46	24	PASS
11n (HT20)	48	5240	5.3088	7.25	24	PASS

Band II

Mode	CHANNEL	CHANNEL FREQUENCY (MHz)	MAX. OUTPUT POWER (mW)	MAX. OUTPUT POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
11a	52	5260	7.8886	8.97	24	PASS
11a	60	5300	7.9616	9.01	24	PASS
11a	64	5320	7.8886	8.97	24	PASS
11n (HT20)	52	5260	5.0699	7.05	24	PASS
11n (HT20)	60	5280	6.4863	8.12	24	PASS
11n (HT20)	64	5320	6.0814	7.84	24	PASS

Band III

Mode	CHANNEL	CHANNEL FREQUENCY (MHz)	MAX. OUTPUT POWER (mW)	MAX. OUTPUT POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
11a	100	5500	6.9024	8.39	24	PASS
11a	116	5580	5.4576	7.37	24	PASS
11a	140	5700	5.1050	7.08	24	PASS
11n (HT20)	100	5500	4.6881	6.71	24	PASS
11n (HT20)	116	5580	4.4157	6.45	24	PASS
11n (HT20)	140	5700	4.5290	6.56	24	PASS

Band IV

Mode	CHANNEL	CHANNEL FREQUENCY (MHz)	MAX. OUTPUT POWER (mW)	MAX. OUTPUT POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
11a	149	5745	7.5509	8.78	24	PASS
11a	157	5785	7.6913	8.86	24	PASS
11a	161	5805	7.6033	8.81	24	PASS
11n (HT20)	149	5745	6.6988	8.26	24	PASS
11n (HT20)	157	5785	5.6885	7.55	24	PASS
11n (HT20)	161	5805	5.4828	7.39	24	PASS

26dB BANDWIDTH & 6dB BANDWIDTH:

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	19.04	PASS
44	5220	19.16	PASS
48	5240	19.62	PASS
52	5260	19.00	PASS
60	5300	19.56	PASS
64	5320	19.07	PASS
100	5500	19.11	PASS
116	5580	19.05	PASS
140	5700	19.23	PASS
CHANNEL	**CHANNEL FREQUENCY (MHz)**	**6dBc BANDWIDTH (MHz)**	**PASS / FAIL**
149	5745	15.16	PASS
157	5785	15.15	PASS
161	5805	15.16	PASS

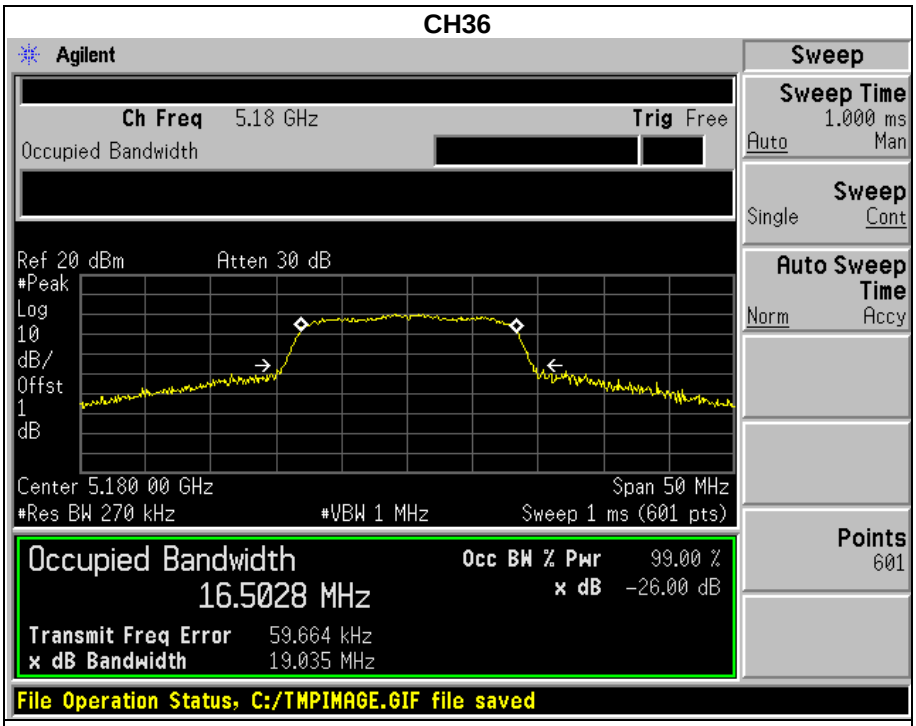
802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	19.26	PASS
44	5220	19.37	PASS
48	5240	19.39	PASS
52	5260	19.36	PASS
60	5300	19.35	PASS
64	5320	19.36	PASS
100	5500	19.35	PASS
116	5580	19.38	PASS
140	5700	19.33	PASS
CHANNEL	**CHANNEL FREQUENCY (MHz)**	**6dBc BANDWIDTH (MHz)**	**PASS / FAIL**
149	5745	15.98	PASS
157	5785	15.16	PASS
161	5805	15.13	PASS

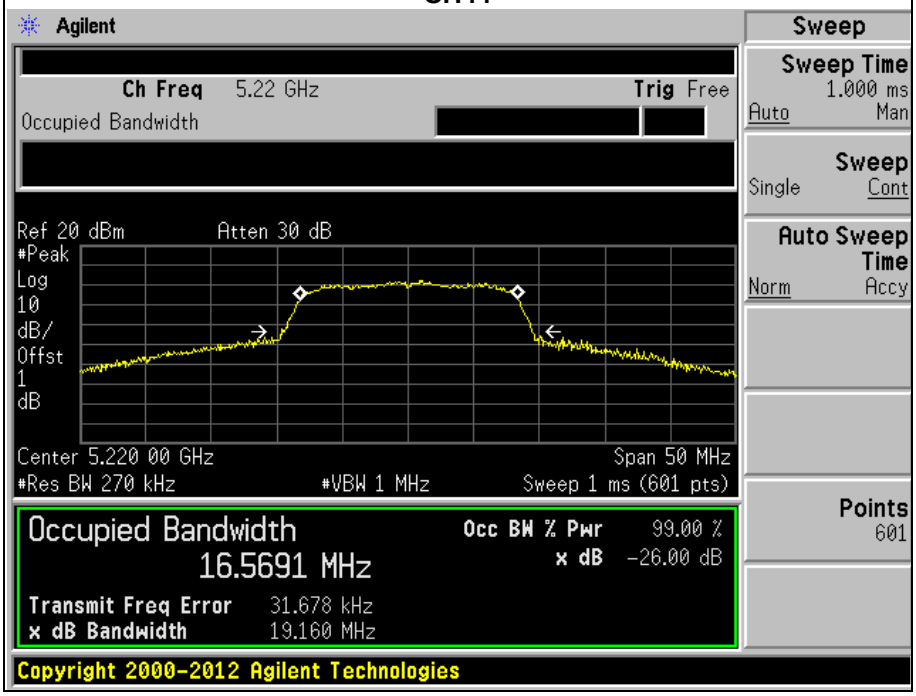
26dB bandwidth Test Plot

802.11a

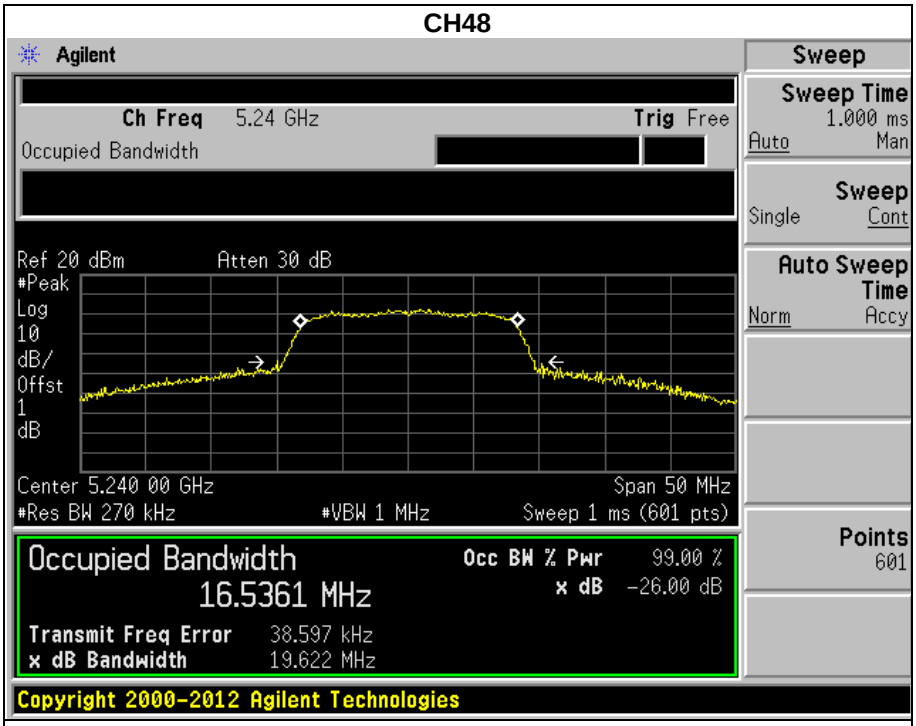
CH36



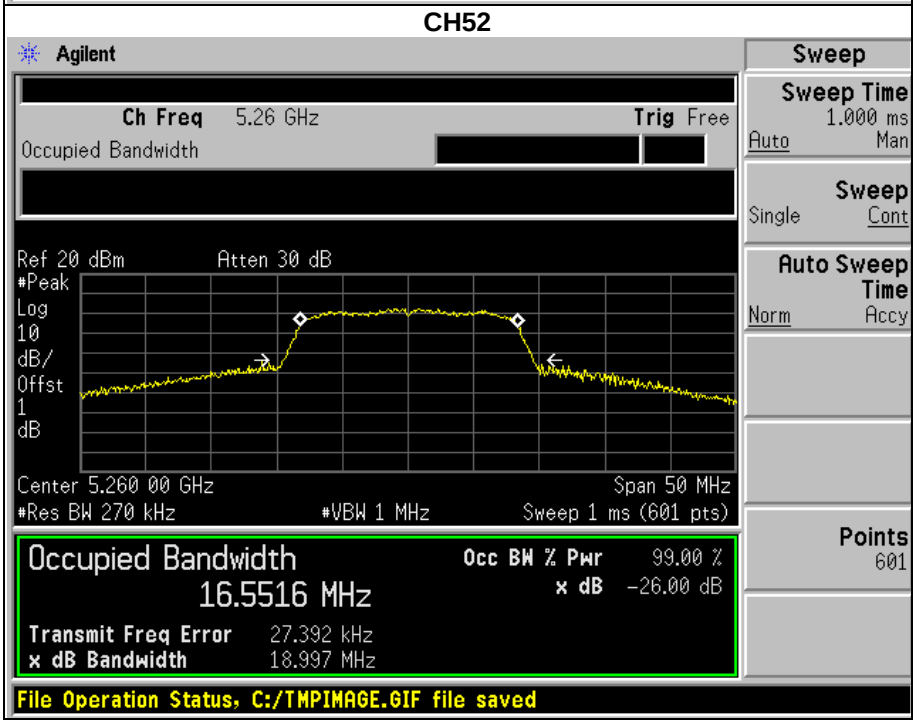
CH44



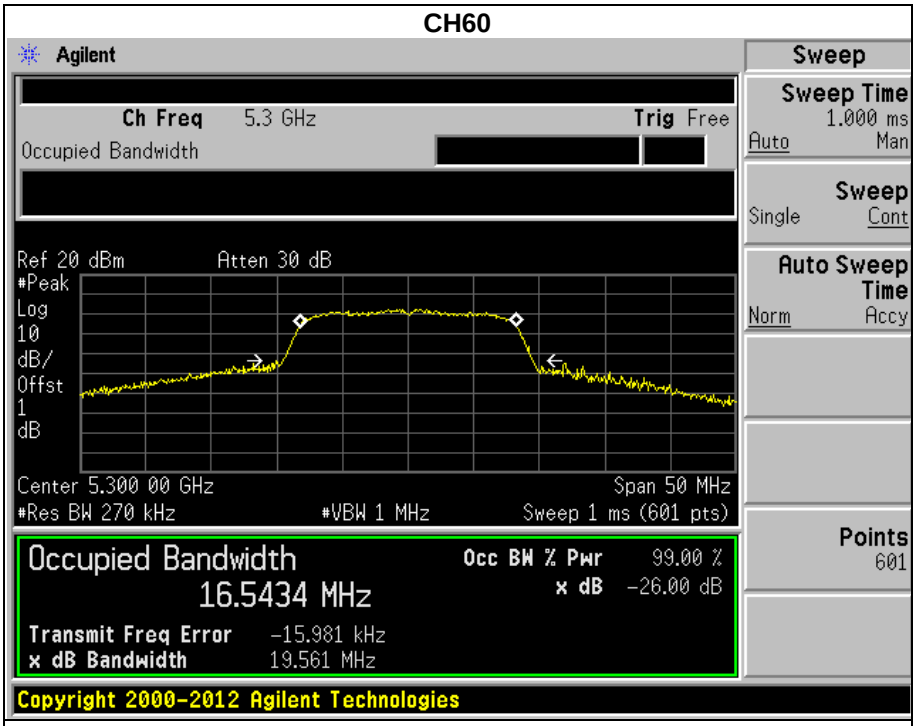
CH48


Agilent
Sweep
Ch Freq 5.24 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.240 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
16.5361 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 38.597 kHz
x dB Bandwidth 19.622 MHz
Copyright 2000-2012 Agilent Technologies

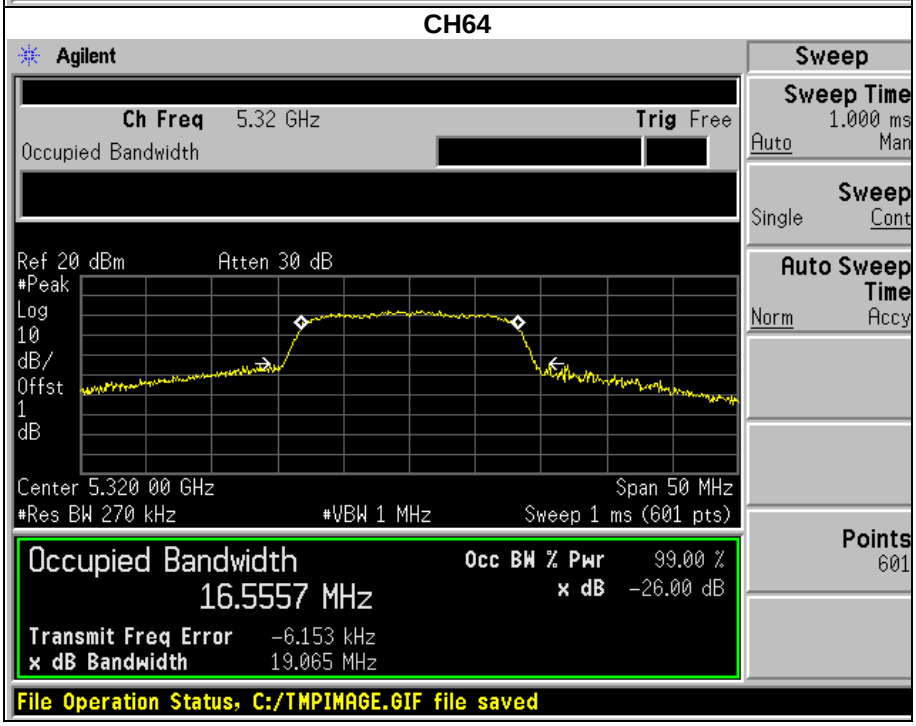
CH52


Agilent
Sweep
Ch Freq 5.26 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.260 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
16.5516 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 27.392 kHz
x dB Bandwidth 18.997 MHz
File Operation Status, C:/TMPIMAGE.GIF file saved

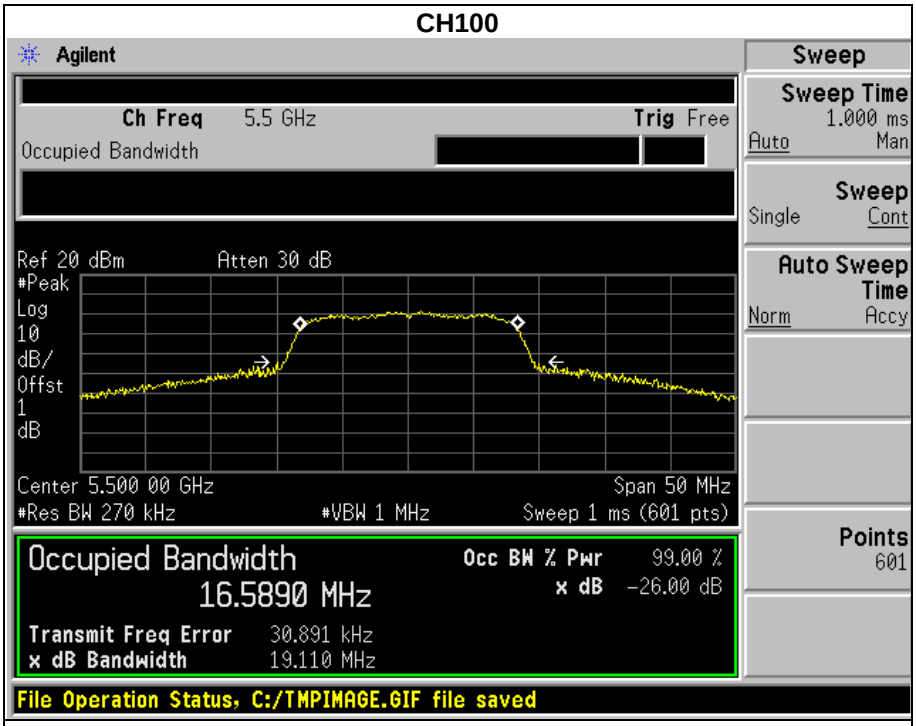
CH60


Agilent
Sweep
Ch Freq 5.3 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.300 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
16.5434 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -15.981 kHz
x dB Bandwidth 19.561 MHz
Copyright 2000-2012 Agilent Technologies

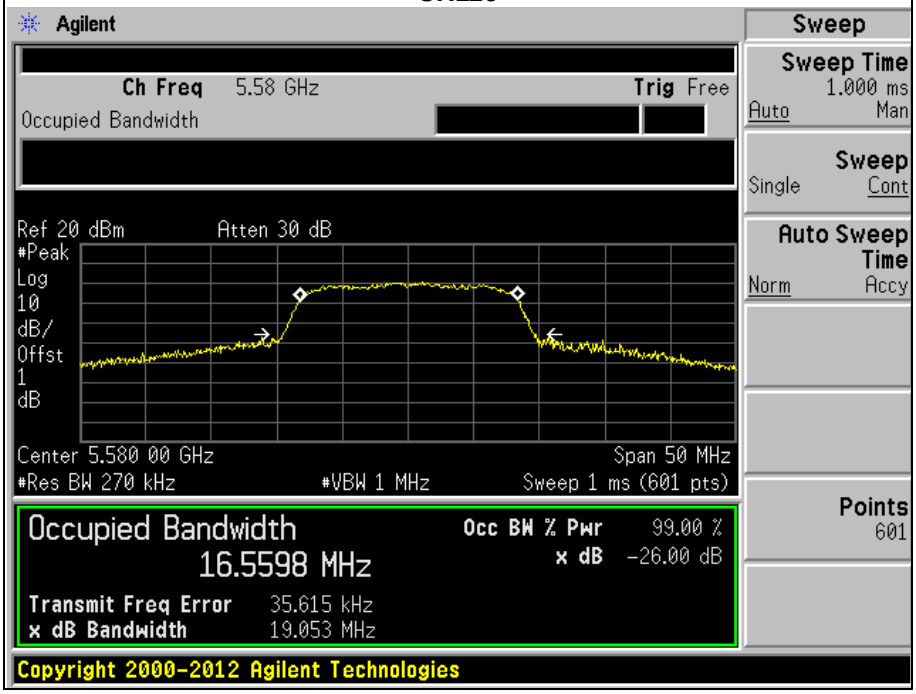
CH64


Agilent
Sweep
Ch Freq 5.32 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.320 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
16.5557 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -6.153 kHz
x dB Bandwidth 19.065 MHz
File Operation Status. C:/TMPIMAGE.GIF file saved

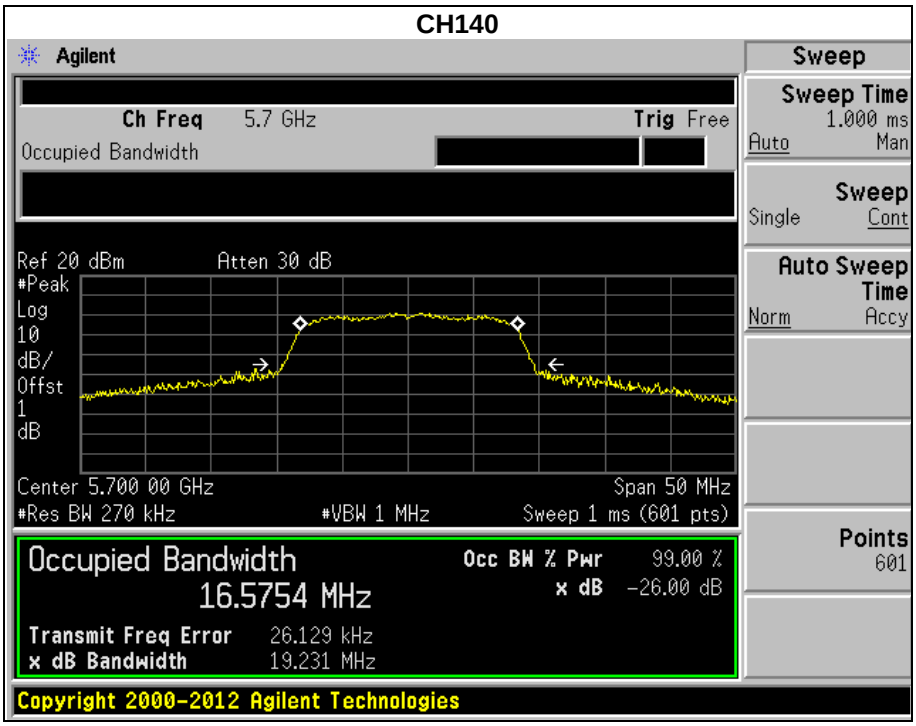
CH100


Agilent
Sweep
Ch Freq 5.5 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.500 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
16.5890 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 30.891 kHz
x dB Bandwidth 19.110 MHz
File Operation Status, C:/TMPIMAGE.GIF file saved

CH116


Agilent
Sweep
Ch Freq 5.58 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.580 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
16.5598 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 35.615 kHz
x dB Bandwidth 19.053 MHz
Copyright 2000-2012 Agilent Technologies

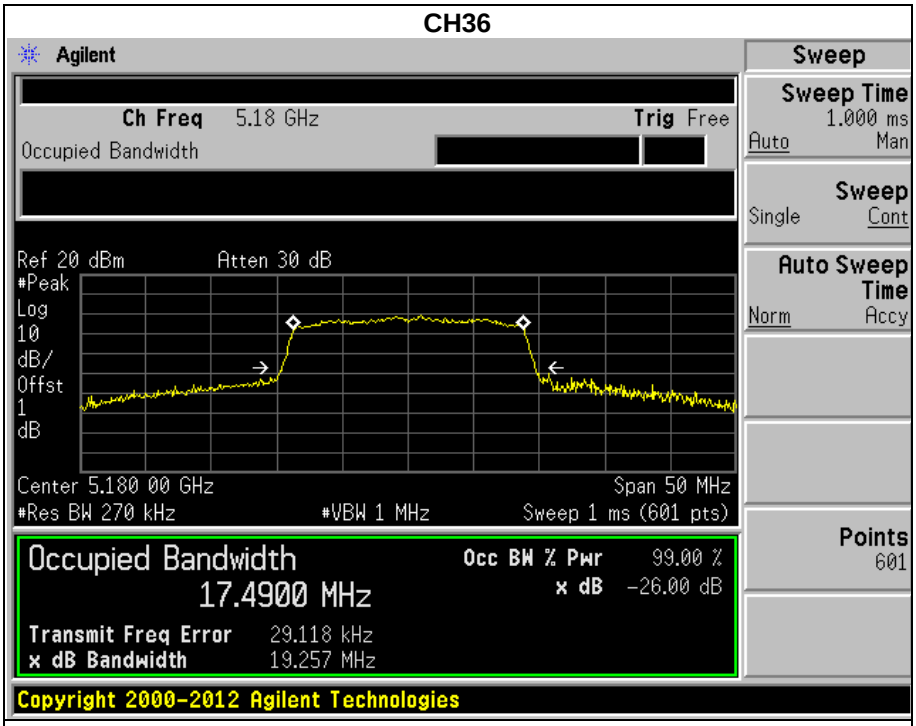
CH140


Agilent
Sweep
Ch Freq 5.7 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.700 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
16.5754 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 26.129 kHz
x dB Bandwidth 19.231 MHz
Copyright 2000-2012 Agilent Technologies

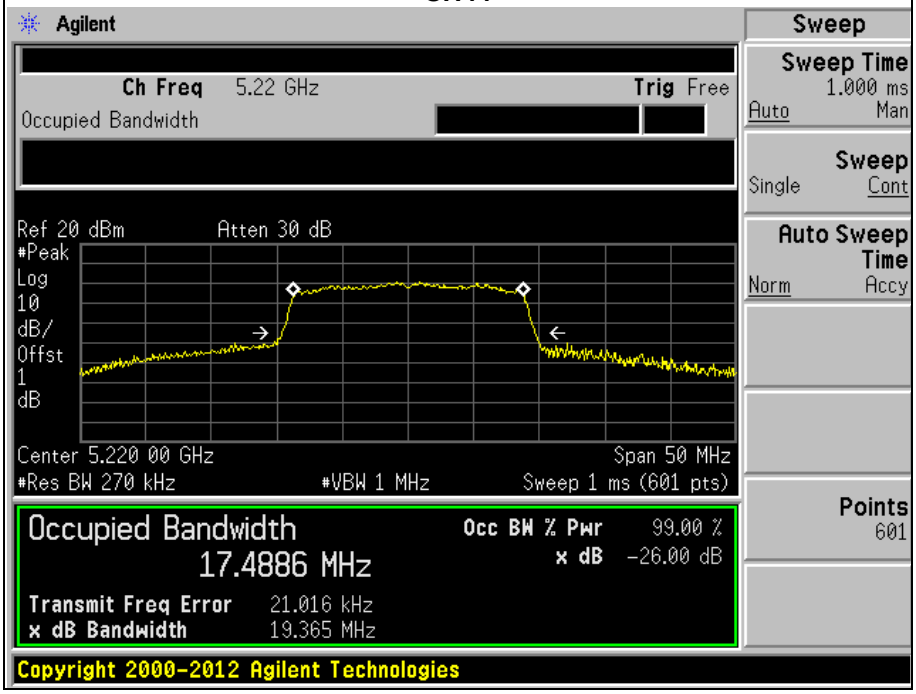
26dB bandwidth Test Plot

802.11n(20MHz)

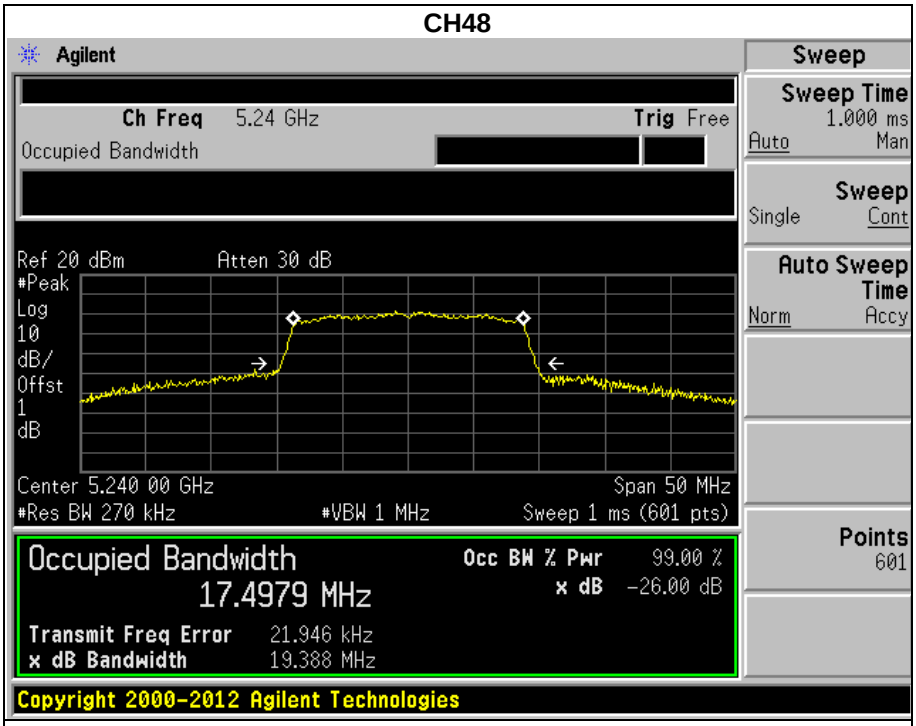
CH36



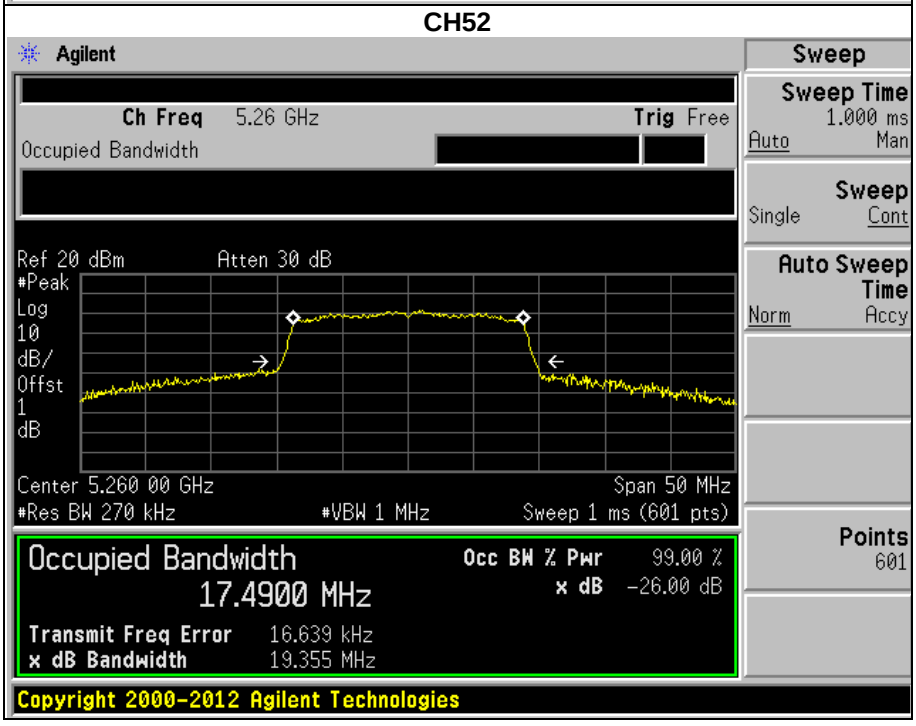
CH44



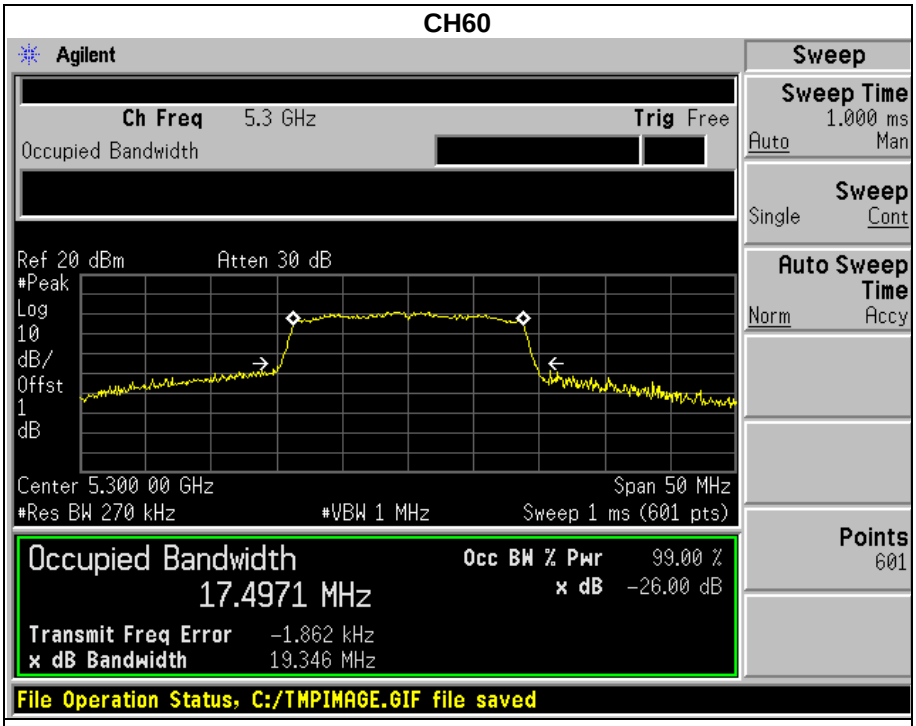
CH48


Agilent
Sweep
Ch Freq 5.24 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.240 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
17.4979 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 21.946 kHz
x dB Bandwidth 19.388 MHz
Copyright 2000-2012 Agilent Technologies

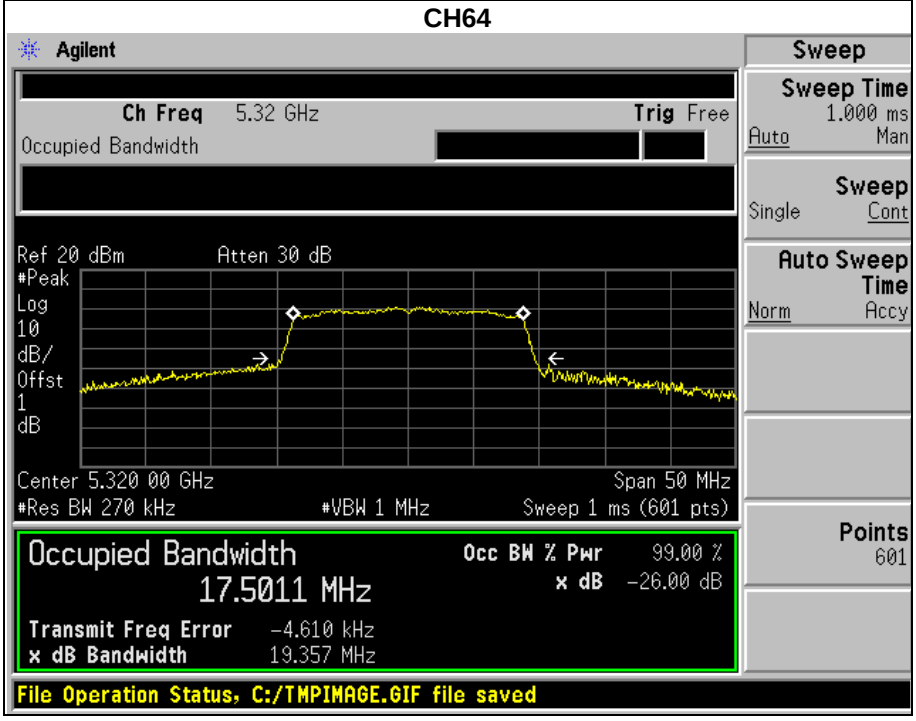
CH52


Agilent
Sweep
Ch Freq 5.26 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.260 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
17.4900 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 16.639 kHz
x dB Bandwidth 19.355 MHz
Copyright 2000-2012 Agilent Technologies

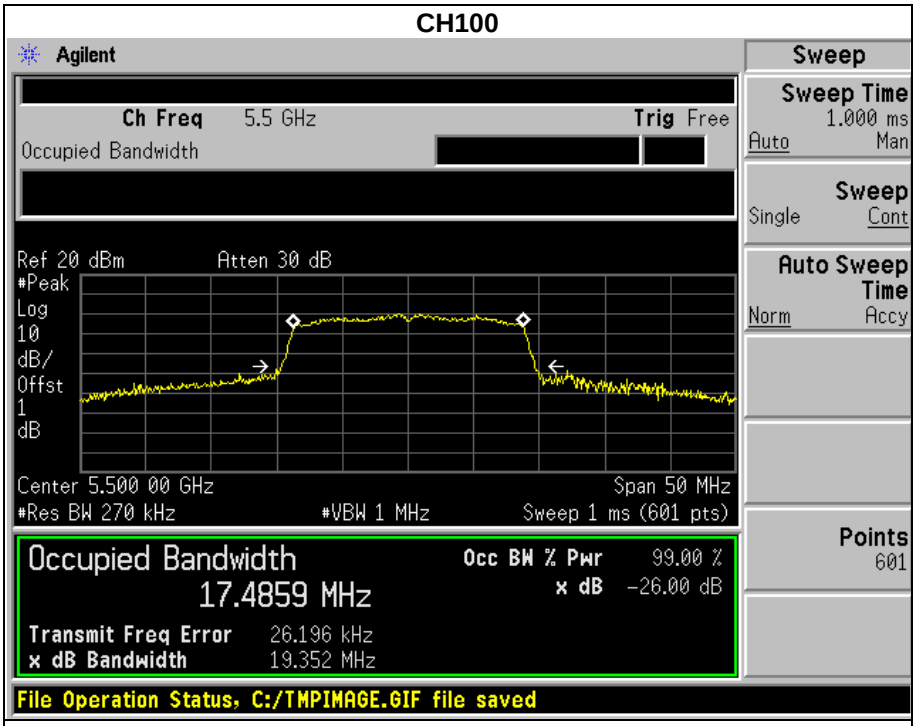
CH60


Agilent
Sweep
Ch Freq 5.3 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.300 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
17.4971 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -1.862 kHz
x dB Bandwidth 19.346 MHz
File Operation Status, C:/TMPIMAGE.GIF file saved

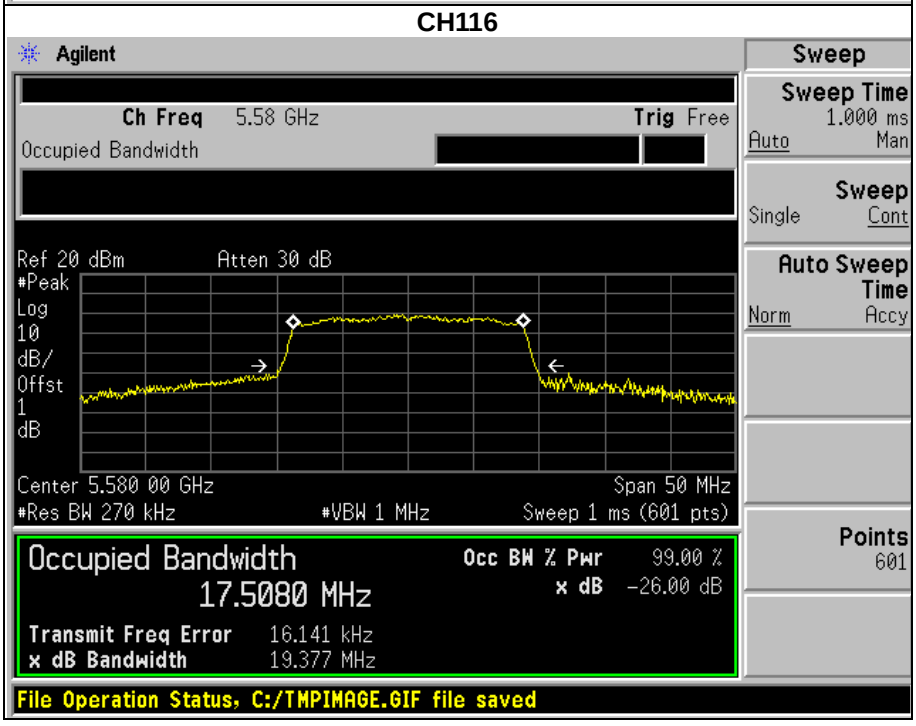
CH64


Agilent
Sweep
Ch Freq 5.32 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.320 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
17.5011 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -4.610 kHz
x dB Bandwidth 19.357 MHz
File Operation Status, C:/TMPIMAGE.GIF file saved

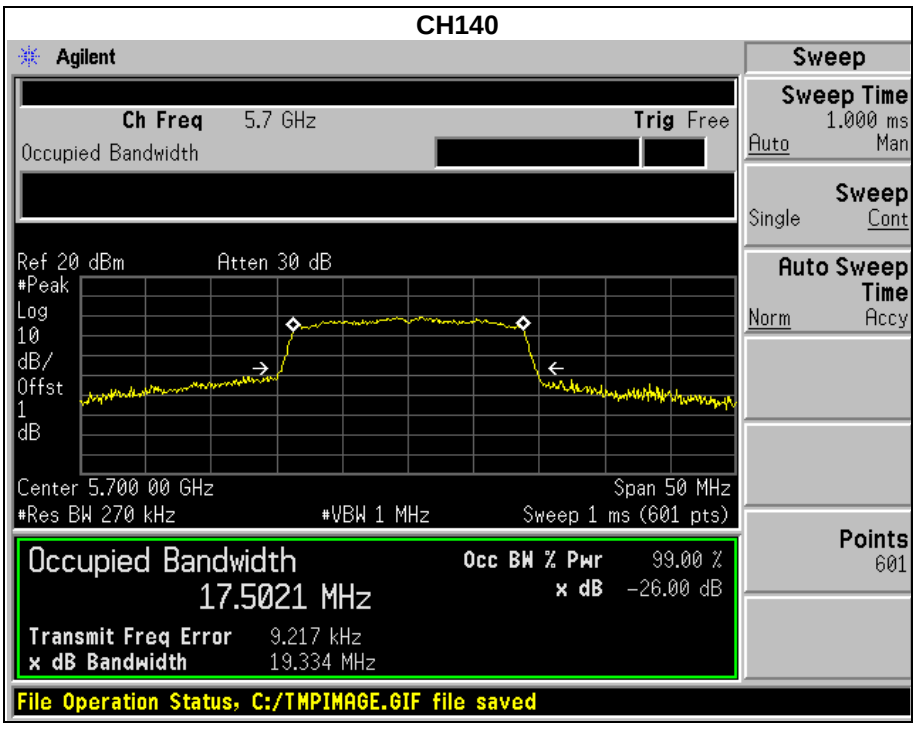
CH100


Agilent
Sweep
Ch Freq 5.5 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.500 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
17.4859 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 26.196 kHz
x dB Bandwidth 19.352 MHz
File Operation Status, C:/TMPIMAGE.GIF file saved

CH116


Agilent
Sweep
Ch Freq 5.58 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.580 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
17.5080 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 16.141 kHz
x dB Bandwidth 19.377 MHz
File Operation Status, C:/TMPIMAGE.GIF file saved

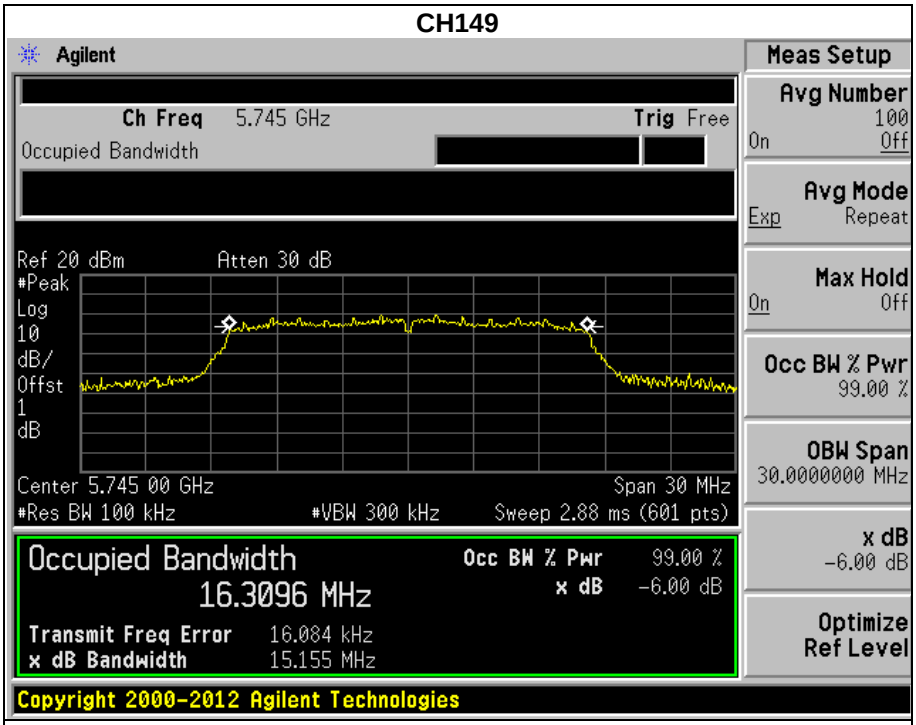
CH140


Agilent
Sweep
Ch Freq 5.7 GHz
Trig Free
Occupied Bandwidth
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.700 00 GHz
Span 50 MHz
#Res BW 270 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Points
601
Occupied Bandwidth
17.5021 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 9.217 kHz
x dB Bandwidth 19.334 MHz
File Operation Status, C:/TMPIMAGE.GIF file saved

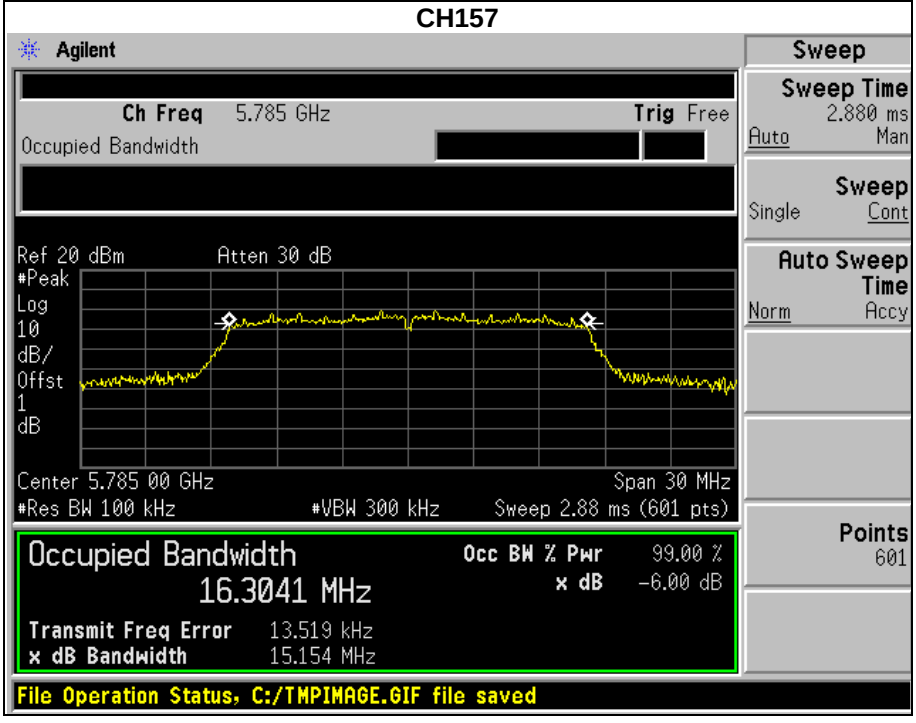
6dB bandwidth Test Plot

802.11a

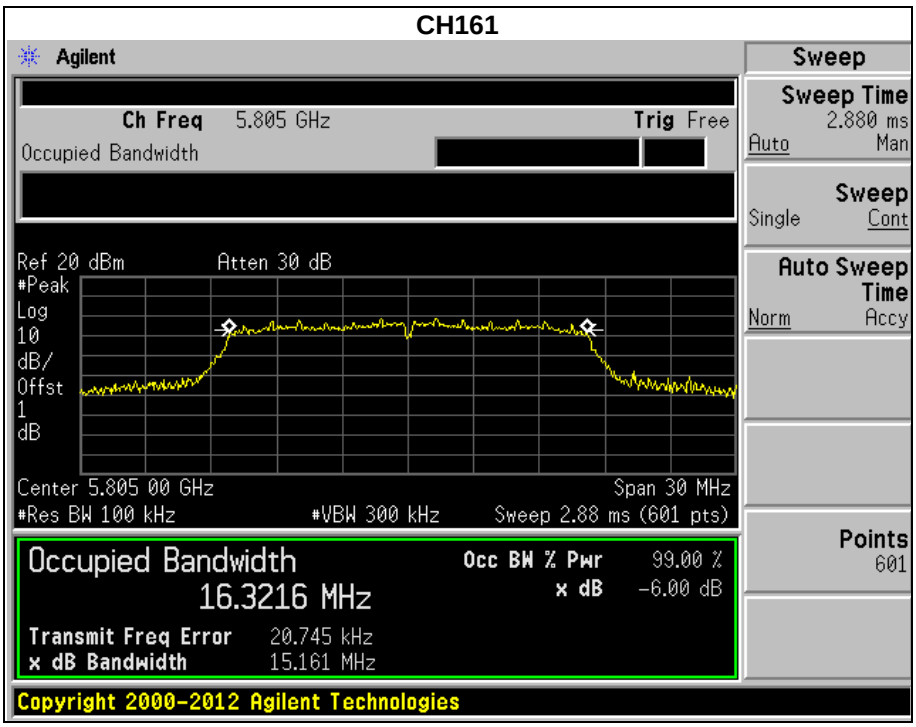
CH149



CH157



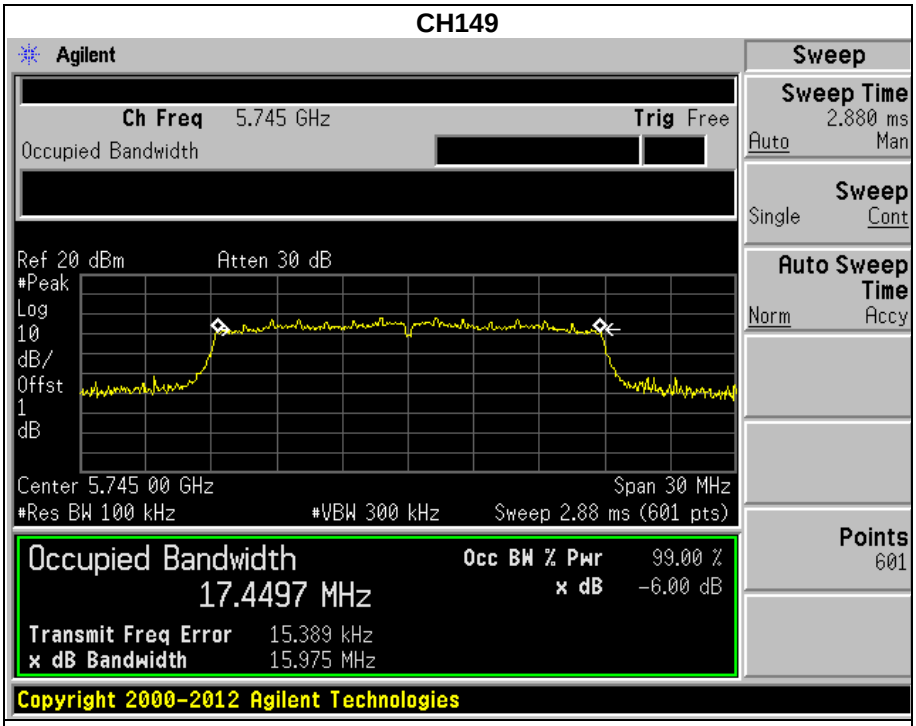
CH161


Agilent
Sweep
Ch Freq 5.805 GHz
Trig Free
Occupied Bandwidth
Sweep Time
2.880 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.805 00 GHz
Span 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.88 ms (601 pts)
Points
601
Occupied Bandwidth
16.3216 MHz
Occ BW % Pwr 99.00 %
x dB -6.00 dB
Transmit Freq Error 20.745 kHz
x dB Bandwidth 15.161 MHz
Copyright 2000-2012 Agilent Technologies

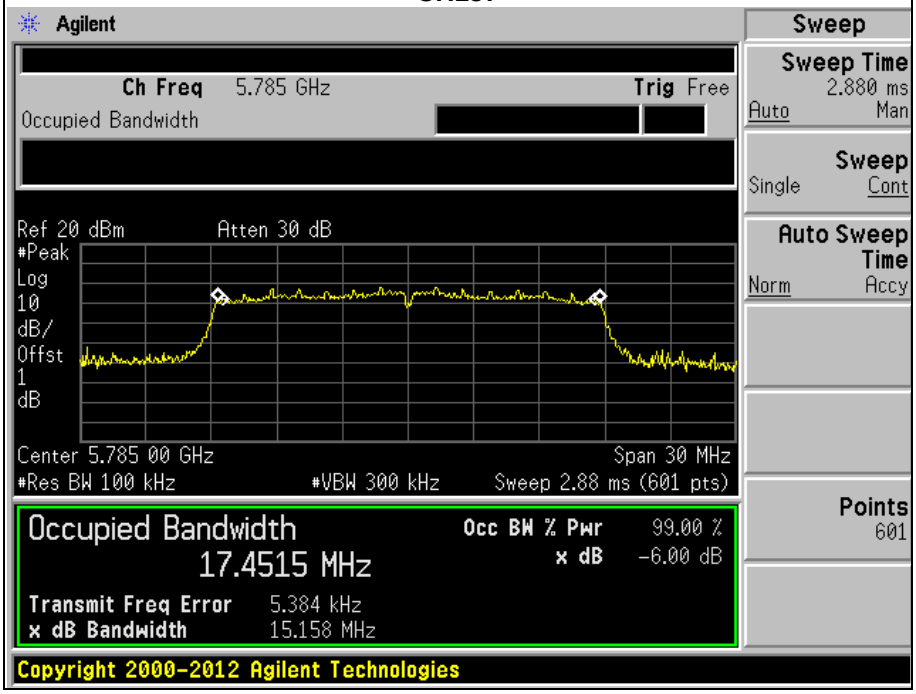
6dB bandwidth Test Plot

802.11n(20MHz)

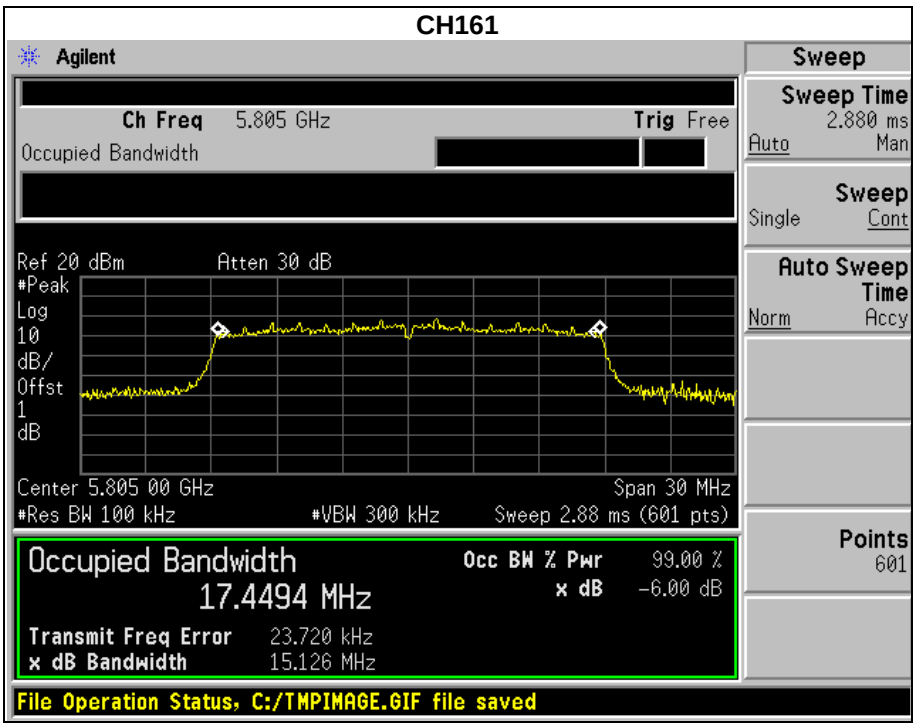
CH149



CH157



CH161

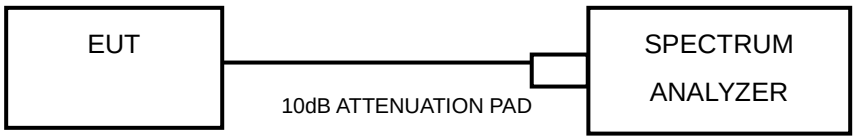

Agilent
Sweep
Ch Freq 5.805 GHz
Trig Free
Occupied Bandwidth
Sweep Time
2.880 ms
Auto Man
Sweep
Single Cont
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1
dB
Auto Sweep Time
Norm Accy
Center 5.805 00 GHz
Span 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.88 ms (601 pts)
Points
601
Occupied Bandwidth
17.4494 MHz
Occ BW % Pwr 99.00 %
x dB -6.00 dB
Transmit Freq Error 23.720 kHz
x dB Bandwidth 15.126 MHz
File Operation Status, C:/TMPIMAGE.GIF file saved

4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11dBm/ MHz
U-NII-2A	√		11dBm/ 500kHz
U-NII-2C	√		11dBm/ 500kHz
U-NII-3	√		30dBm/ 500kHz

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.4.4 TEST PROCEDURES

Using method SA-1

1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 30 KHz, Set VBW ≥ 1 MHz, Detector = RMS for U-NII-1
   Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS for U-NII-3
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Record the max value

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

4.4.7 TEST RESULTS

For U-NII-1, U-NII-2A & U-NII-2C:
802.11a

CHANNEL	FREQUENCY (MHz)	PSD (dBm/MHz)	MAXIMUM LIMIT (dBm/MHz)	PASS/FAIL
36	5180	7.40	11	PASS
44	5220	9.22	11	PASS
48	5240	9.81	11	PASS
52	5260	10.47	11	PASS
60	5300	10.48	11	PASS
64	5320	9.79	11	PASS
100	5500	8.35	11	PASS
116	5580	8.14	11	PASS
140	5700	8.57	11	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD with Duty Factor (dBm/MHz)	MAXIMUM LIMIT (dBm/MHz)	PASS/FAIL
36	5180	5.70	11	PASS
44	5220	7.45	11	PASS
48	5240	7.26	11	PASS
52	5260	7.57	11	PASS
60	5300	7.83	11	PASS
64	5320	7.87	11	PASS
100	5500	6.66	11	PASS
116	5580	6.51	11	PASS
140	5700	6.64	11	PASS

For U-NII-3:

802.11a

CHANNEL	FREQUENCY (MHz)	PSD with (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
149	5745	10.51	30	PASS
157	5785	9.59	30	PASS
161	5805	9.28	30	PASS

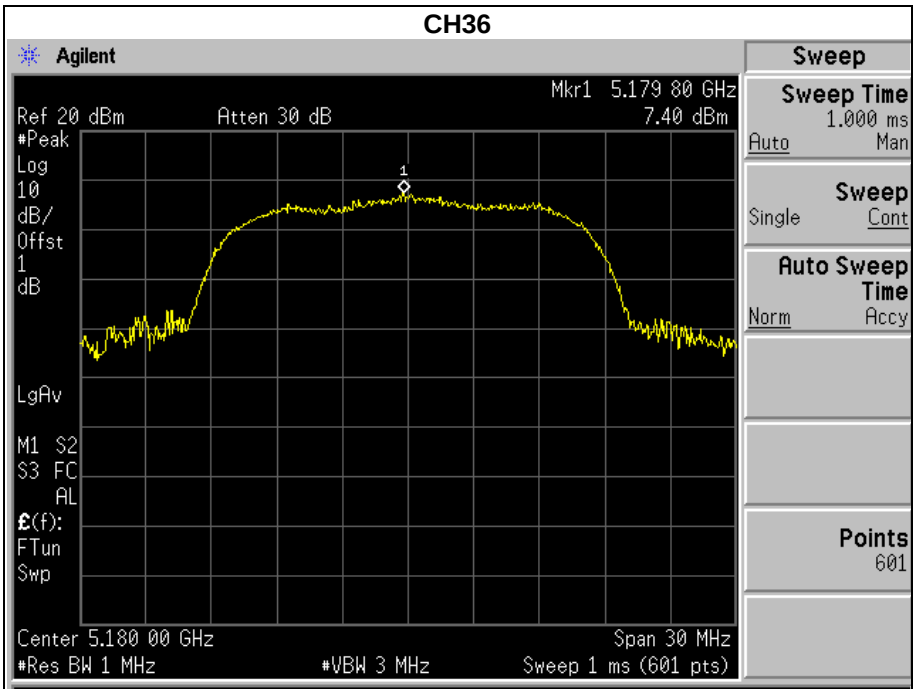
802.11n (20M)

CHANNEL	FREQUENCY (MHz)	PSD with (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
149	5745	8.39	30	PASS
157	5785	7.79	30	PASS
161	5805	7.51	30	PASS

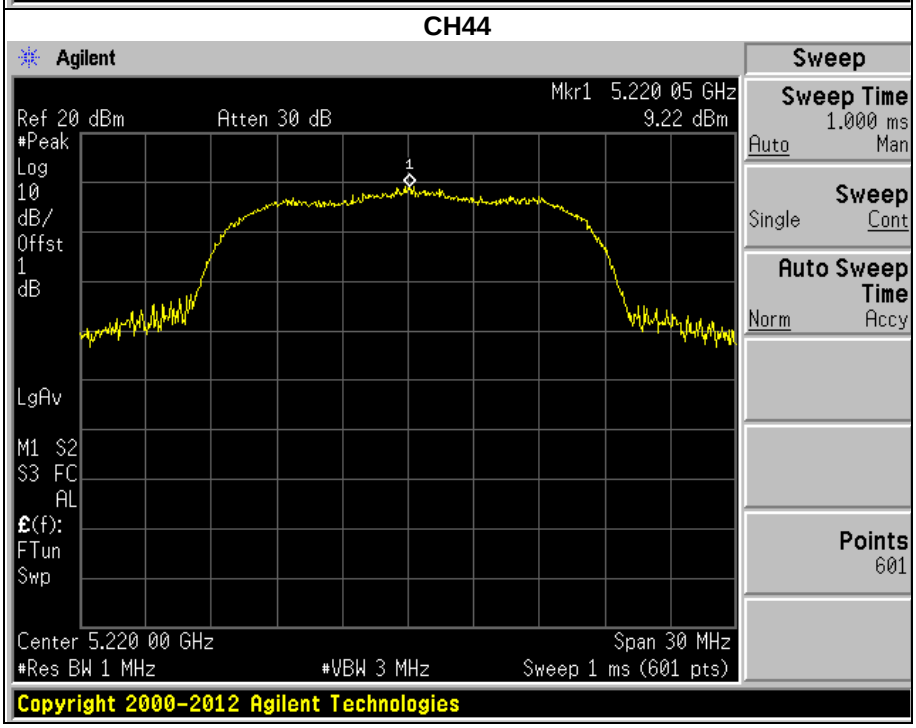
PSD Test Plot

802.11a

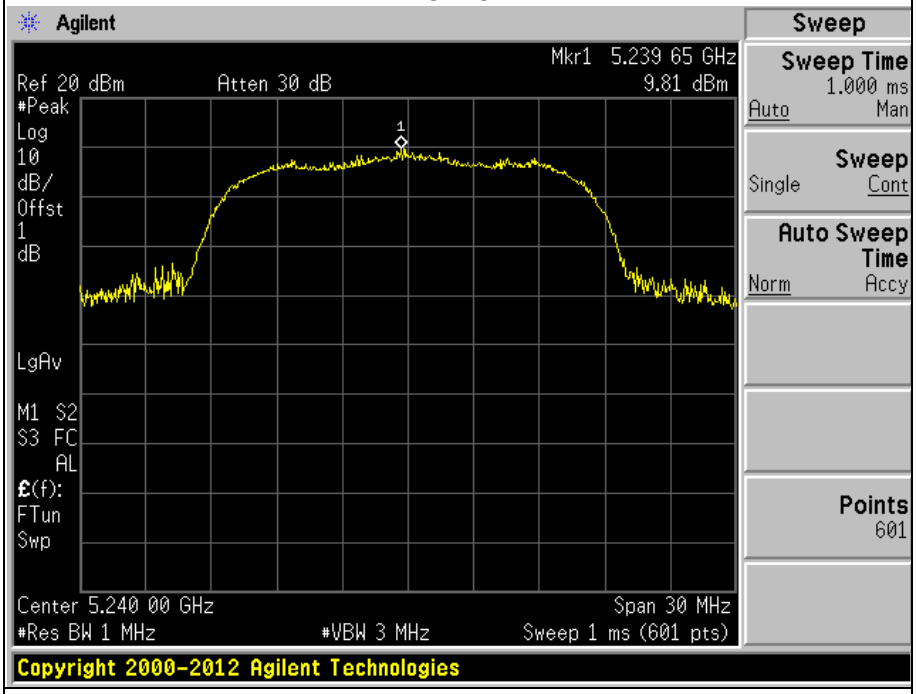
CH36



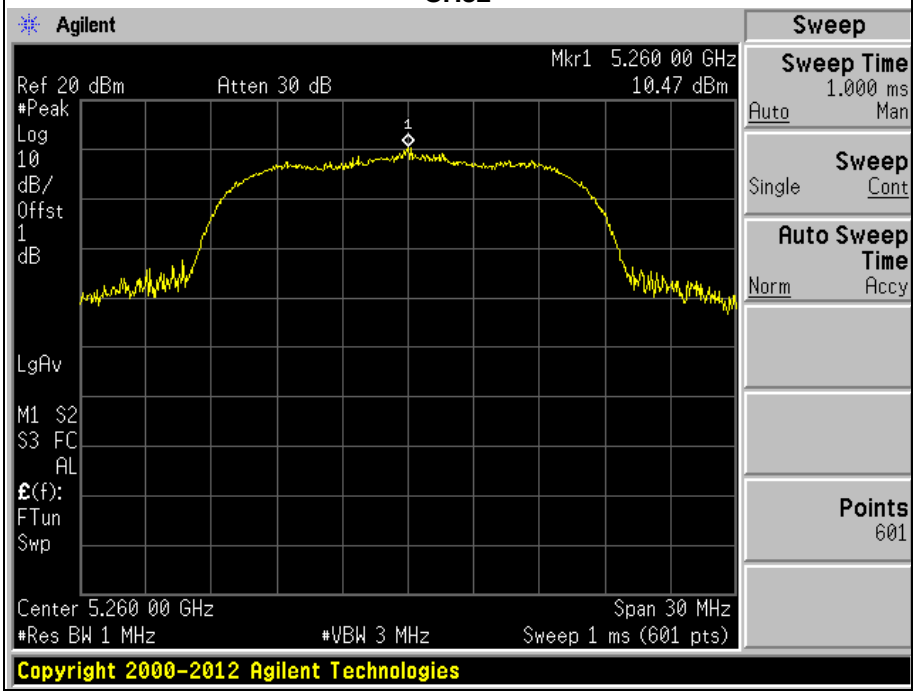
CH44



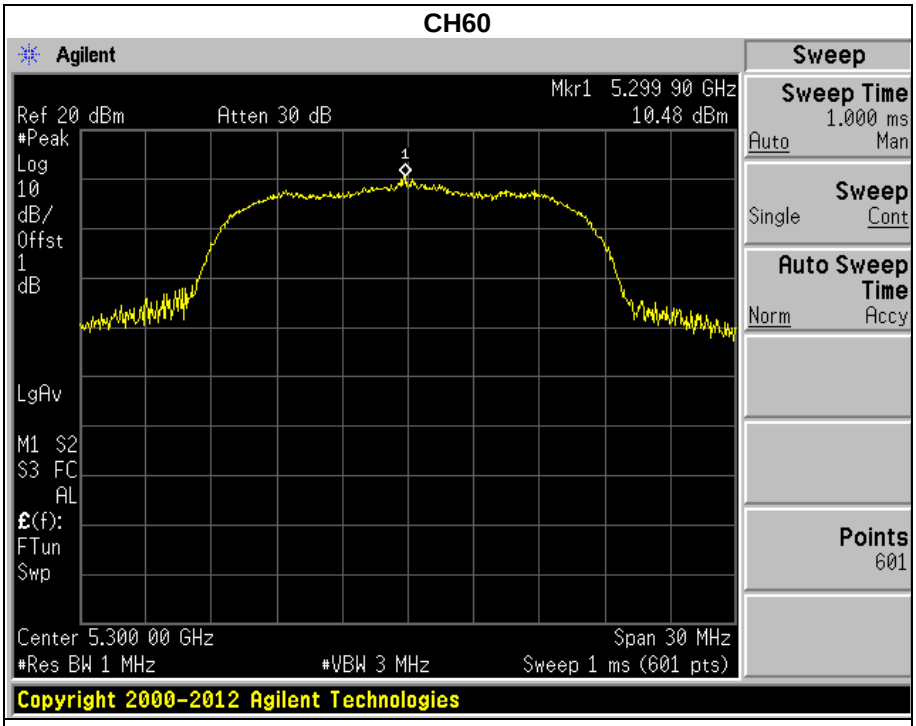
CH48


Agilent
Sweep
Mkr1 5.239 65 GHz
Ref 20 dBm
Atten 30 dB
9.81 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Auto Sweep Time
Norm Accy
Points
601
Center 5.240 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

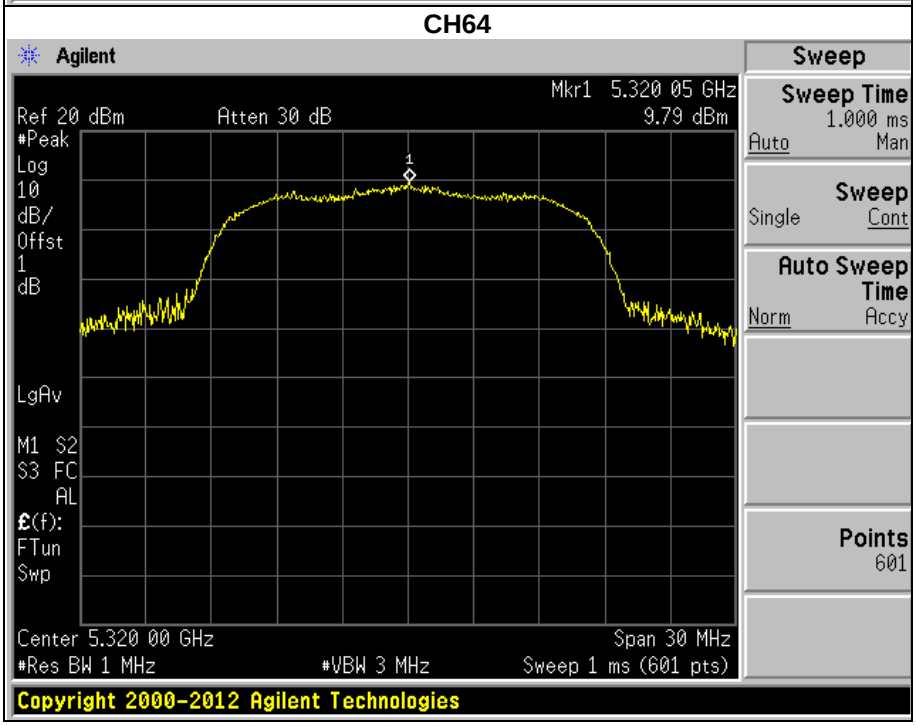
CH52


Agilent
Sweep
Mkr1 5.260 00 GHz
Ref 20 dBm
Atten 30 dB
10.47 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Auto Sweep Time
Norm Accy
Points
601
Center 5.260 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

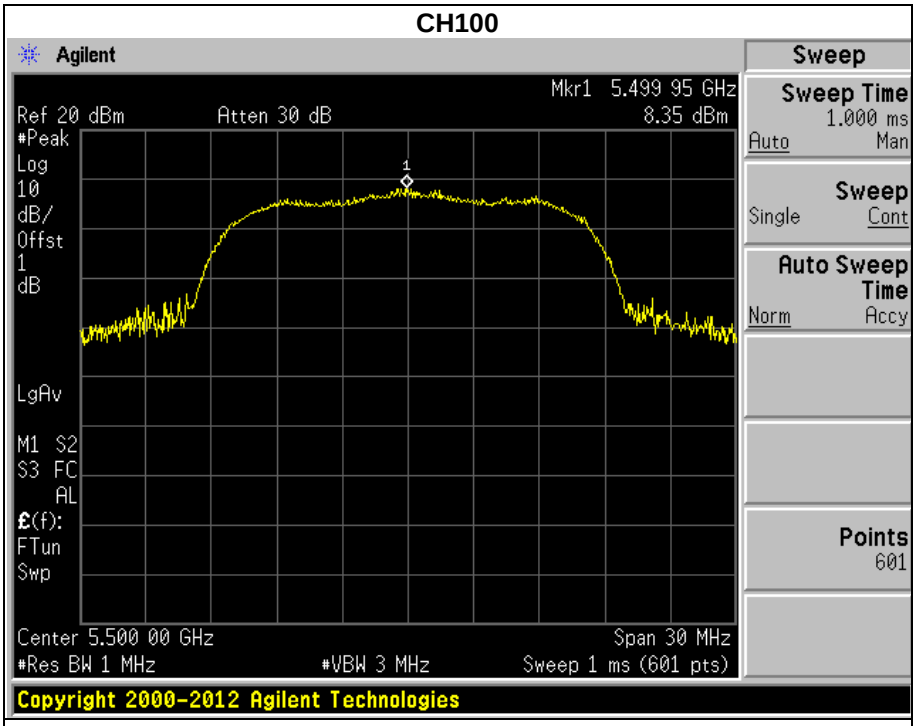
CH60


Agilent
Sweep
Mkr1 5.299 90 GHz
Ref 20 dBm
Atten 30 dB
10.48 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Auto Sweep Time
Norm Accy
Points
601
Center 5.300 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

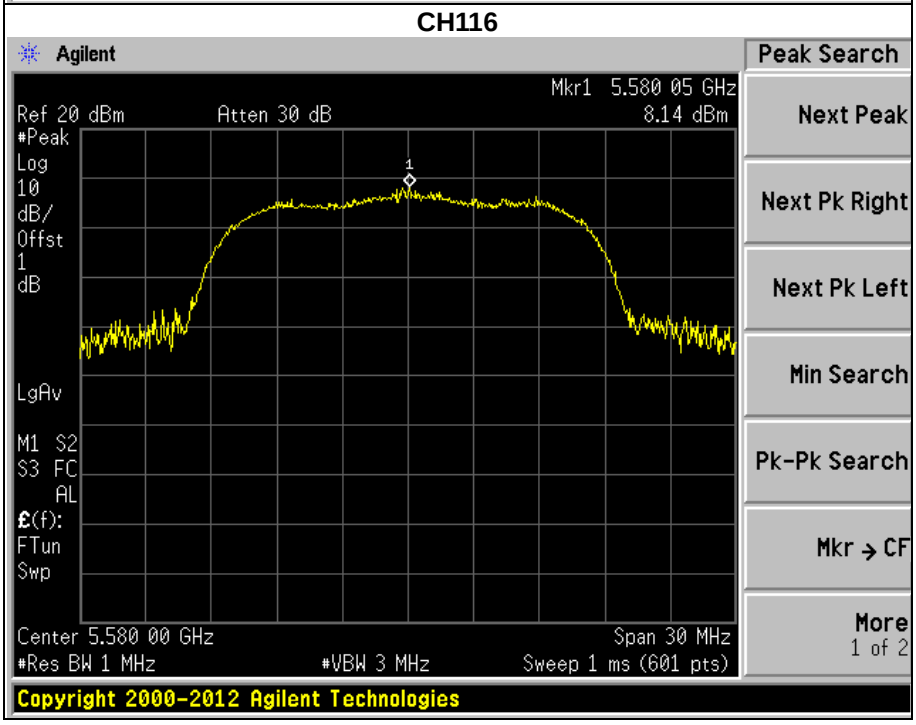
CH64


Agilent
Sweep
Mkr1 5.320 05 GHz
Ref 20 dBm
Atten 30 dB
9.79 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Auto Sweep Time
Norm Accy
Points
601
Center 5.320 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

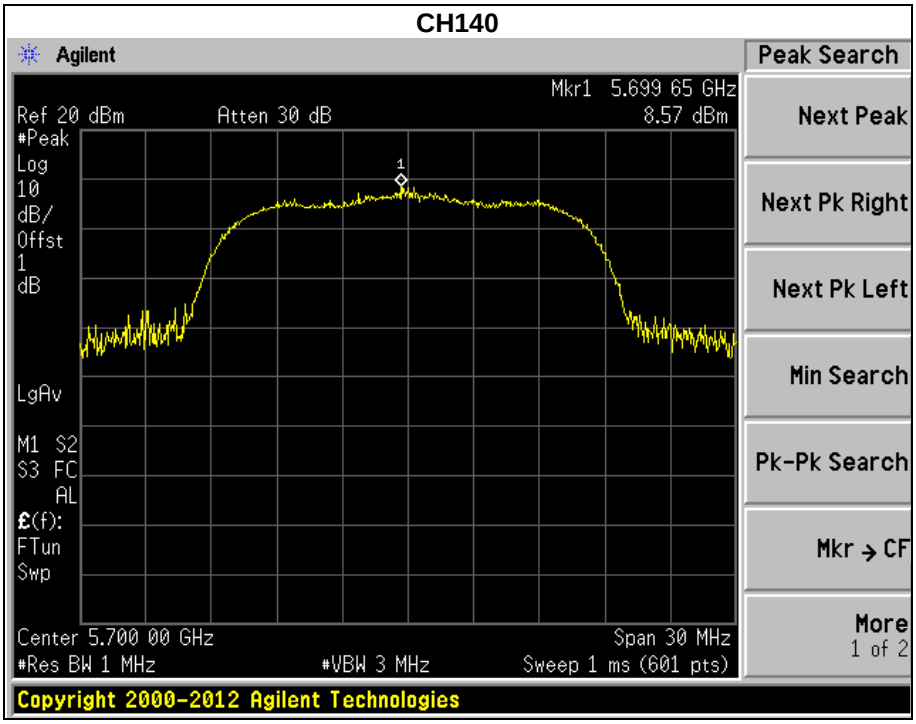
CH100


Agilent
Sweep
Mkr1 5.499 95 GHz
Ref 20 dBm
Atten 30 dB
8.35 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Auto Sweep Time
Norm Accy
Points
601
Center 5.500 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

CH116

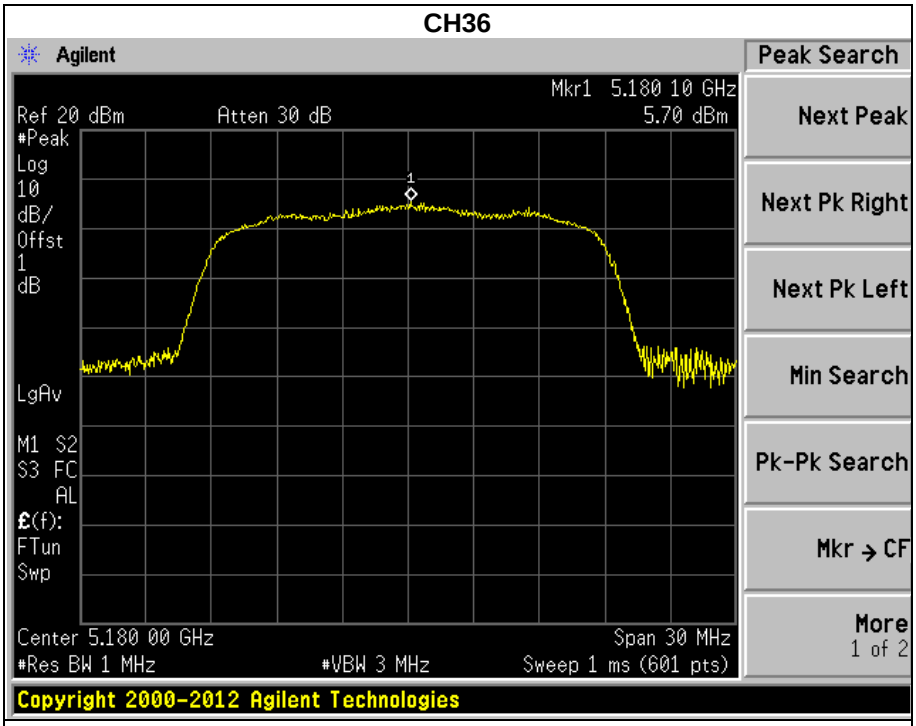

Agilent
Peak Search
Mkr1 5.580 05 GHz
Ref 20 dBm
Atten 30 dB
8.14 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 5.580 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

CH140

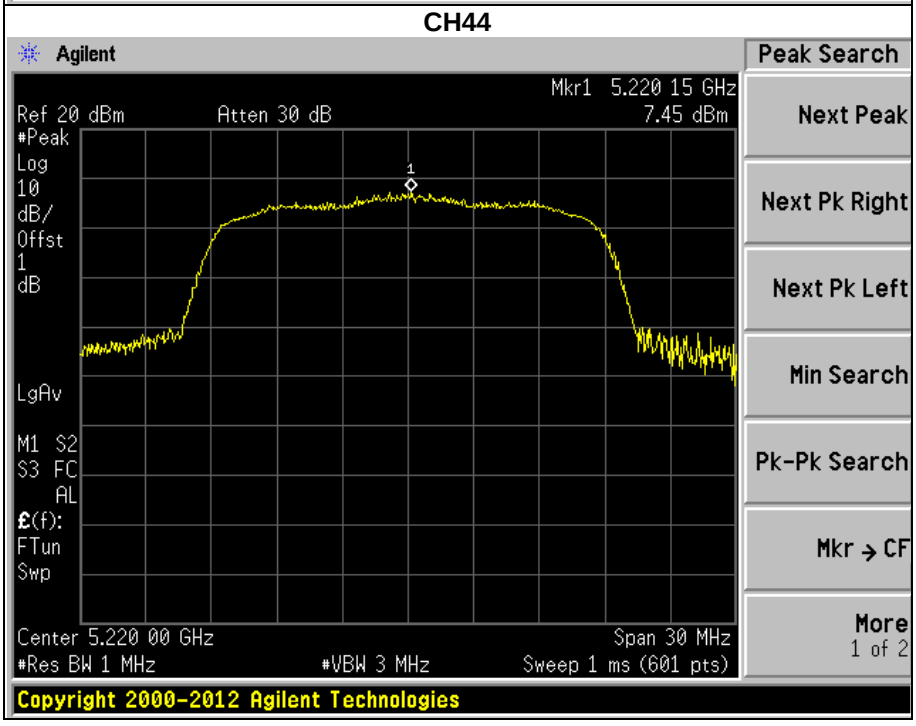

Agilent
Peak Search
Mkr1 5.699 65 GHz
Ref 20 dBm
Atten 30 dB
8.57 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 5.700 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

802.11n(20MHz)

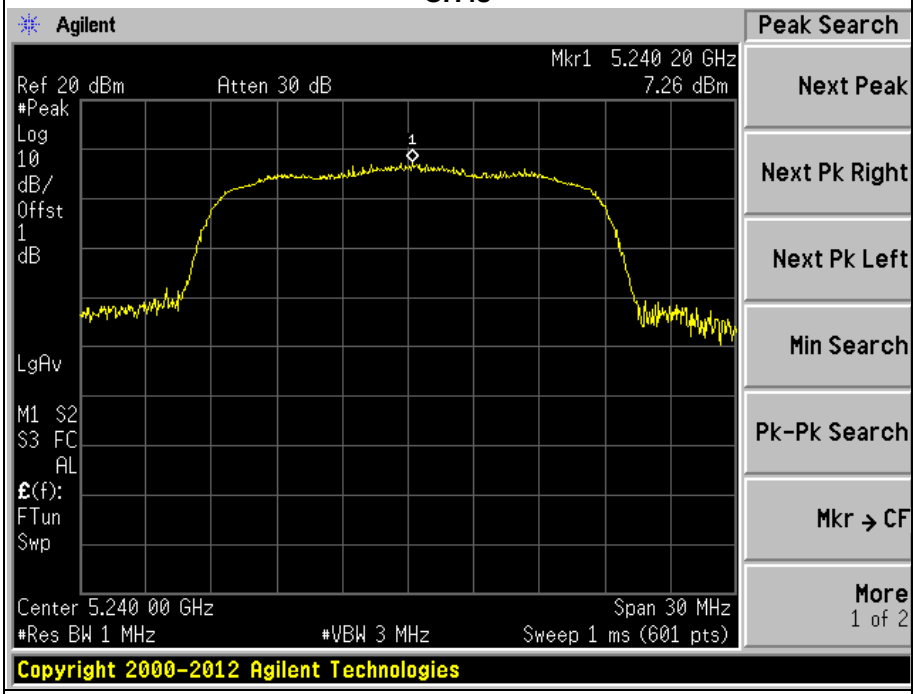
CH36



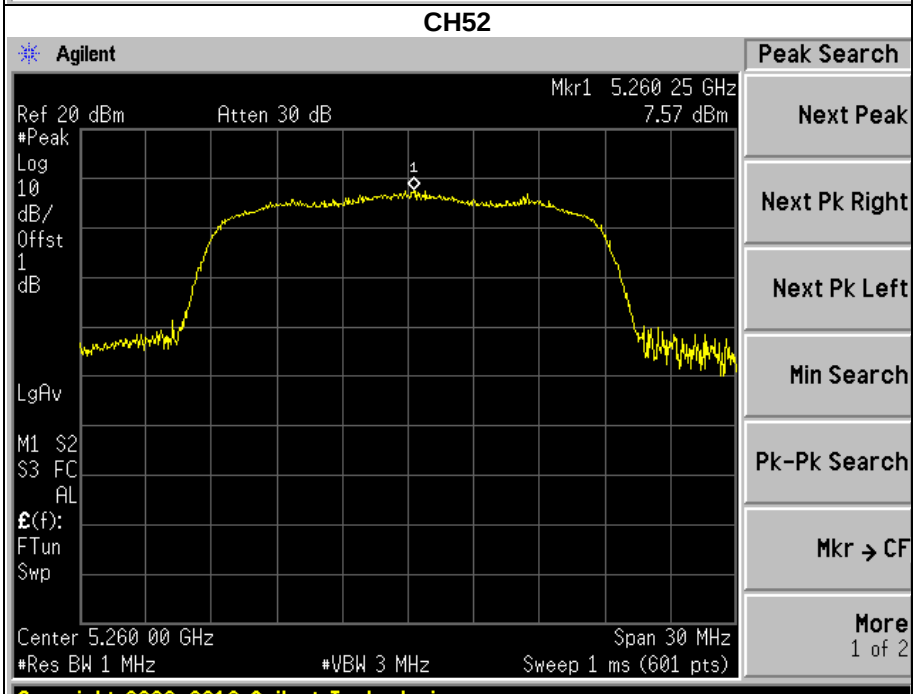
CH44



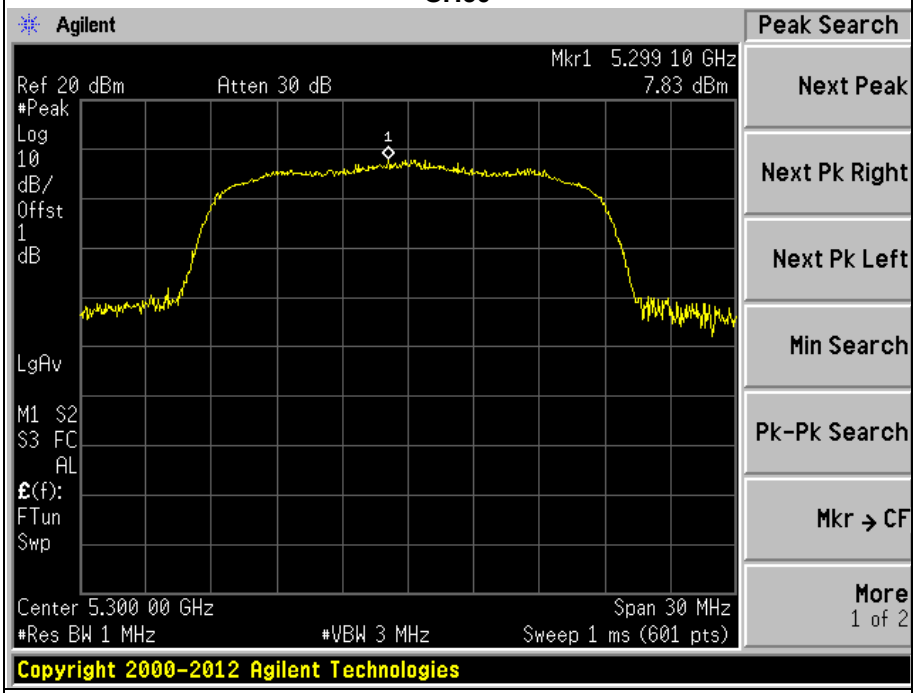
CH48


Agilent
Peak Search
Mkr1 5.240 20 GHz
Ref 20 dBm
Atten 30 dB
7.26 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 5.240 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

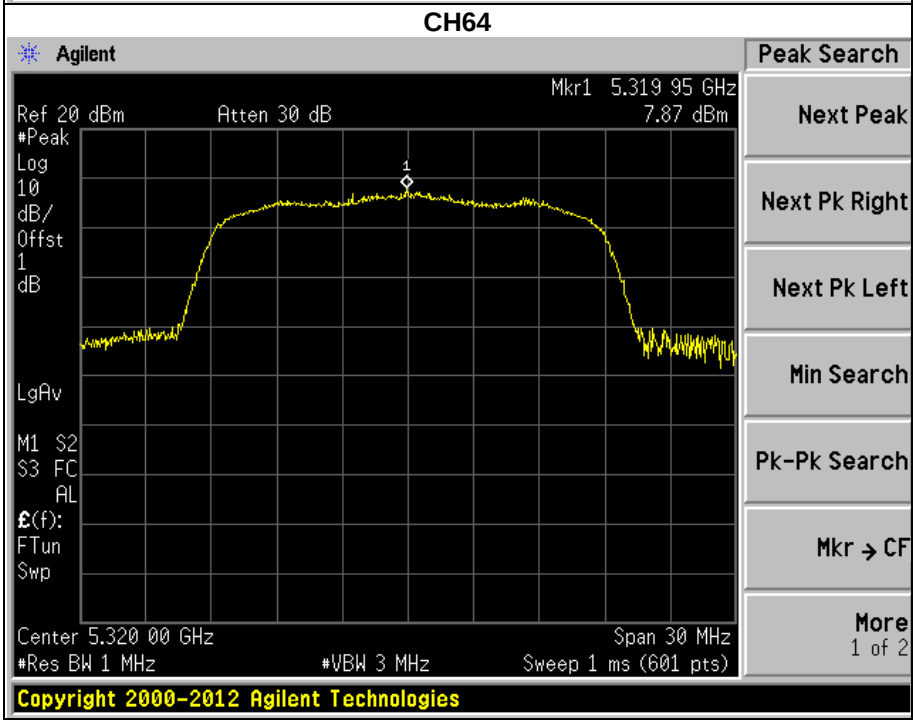
CH52


Agilent
Peak Search
Mkr1 5.260 25 GHz
Ref 20 dBm
Atten 30 dB
7.57 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 5.260 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

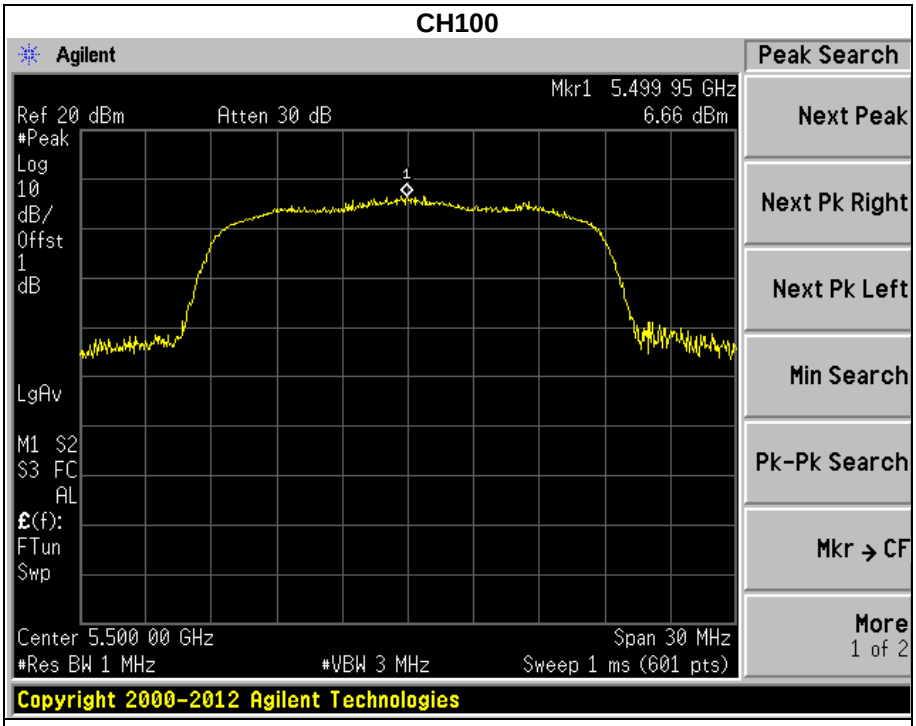
CH60


Agilent
Peak Search
Mkr1 5.299 10 GHz
Ref 20 dBm
Atten 30 dB
7.83 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 5.300 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

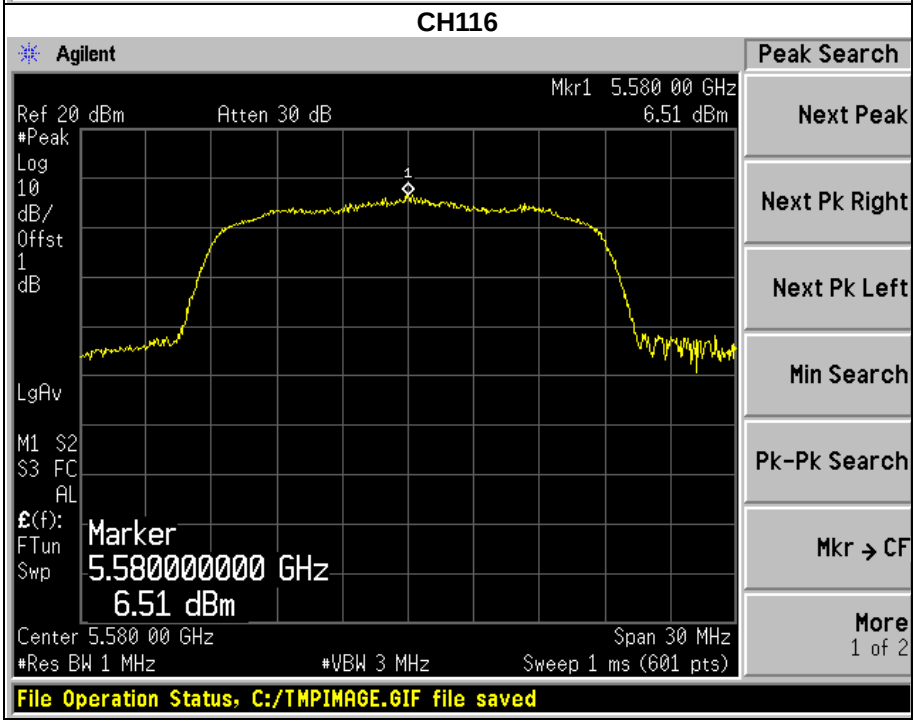
CH64


Agilent
Peak Search
Mkr1 5.319 95 GHz
Ref 20 dBm
Atten 30 dB
7.87 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 5.320 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

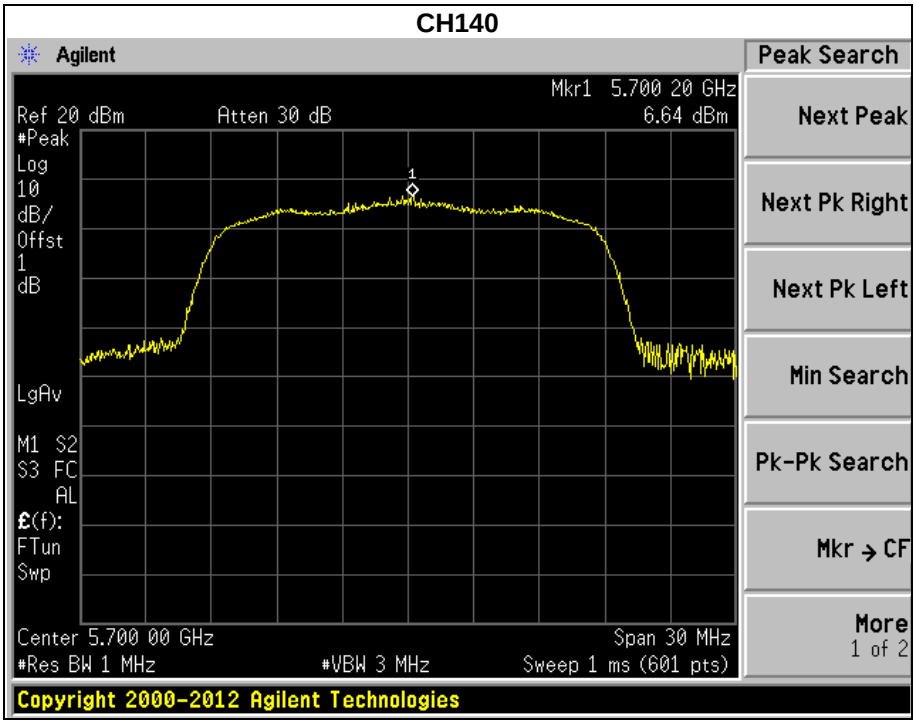
CH100


Agilent
Peak Search
Mkr1 5.499 95 GHz
Ref 20 dBm
Atten 30 dB
6.66 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 5.500 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

CH116

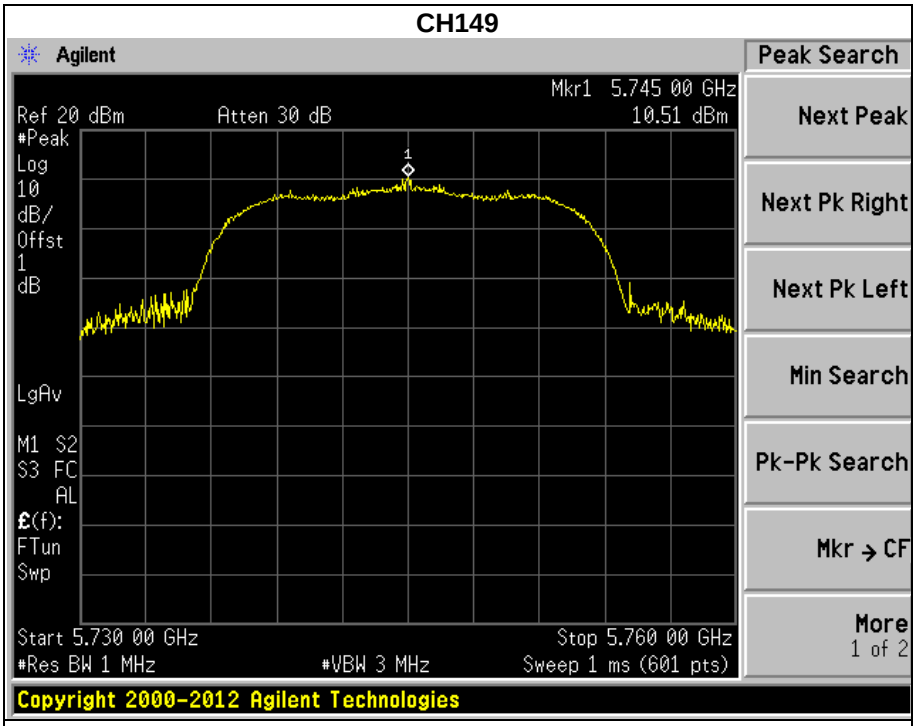

Agilent
Peak Search
Mkr1 5.580 00 GHz
Ref 20 dBm
Atten 30 dB
6.51 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Marker
5.580000000 GHz
6.51 dBm
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 5.580 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
File Operation Status, C:/TMPIMAGE.GIF file saved

CH140

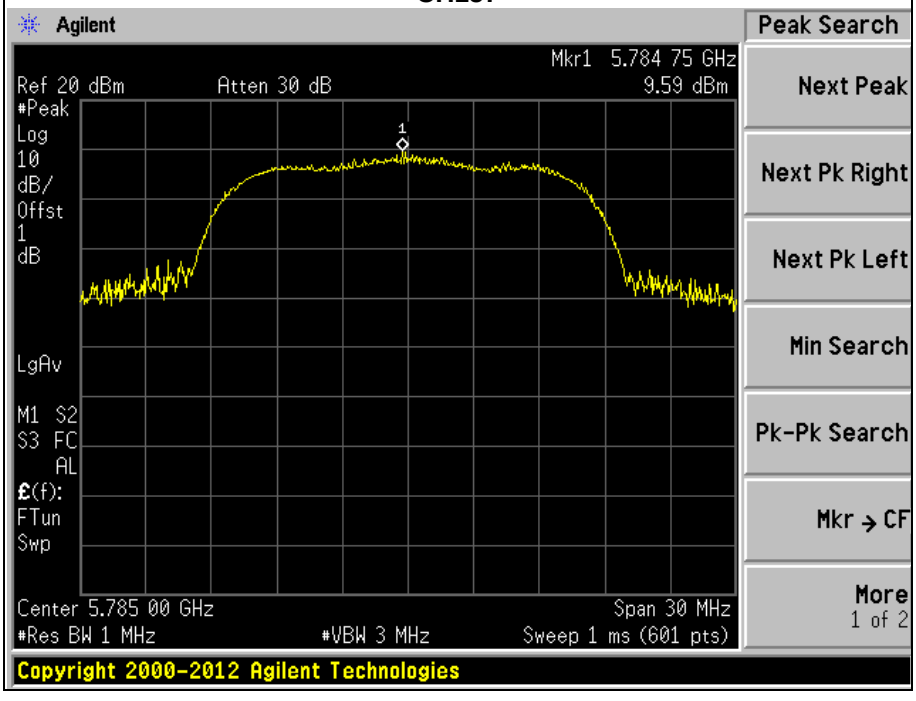

Agilent
Peak Search
Mkr1 5.700 20 GHz
Ref 20 dBm
Atten 30 dB
6.64 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 5.700 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

For U-NII-3:
802.11a

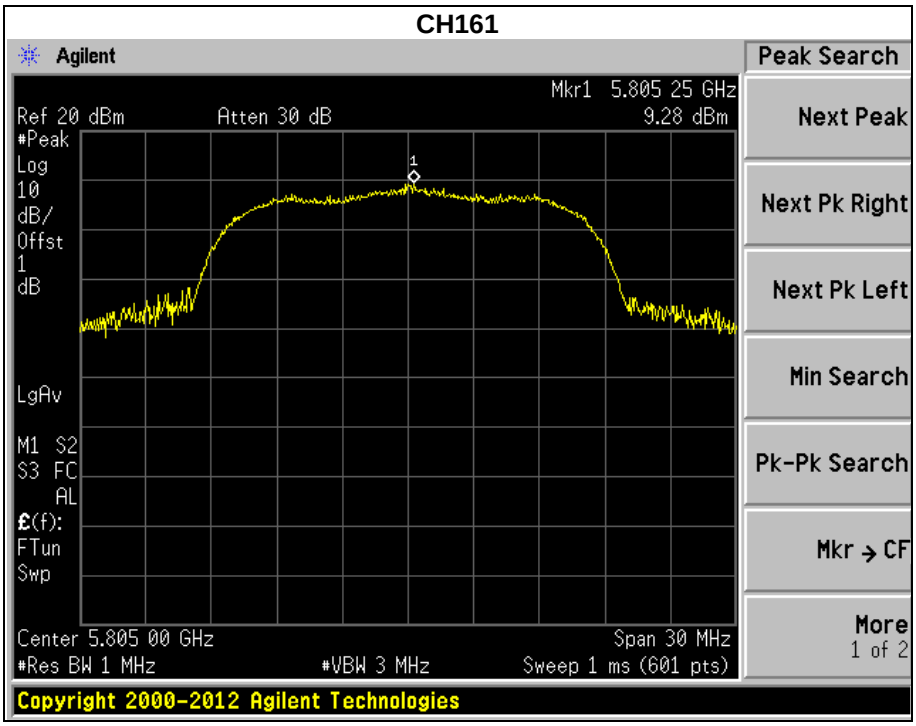
CH149



CH157

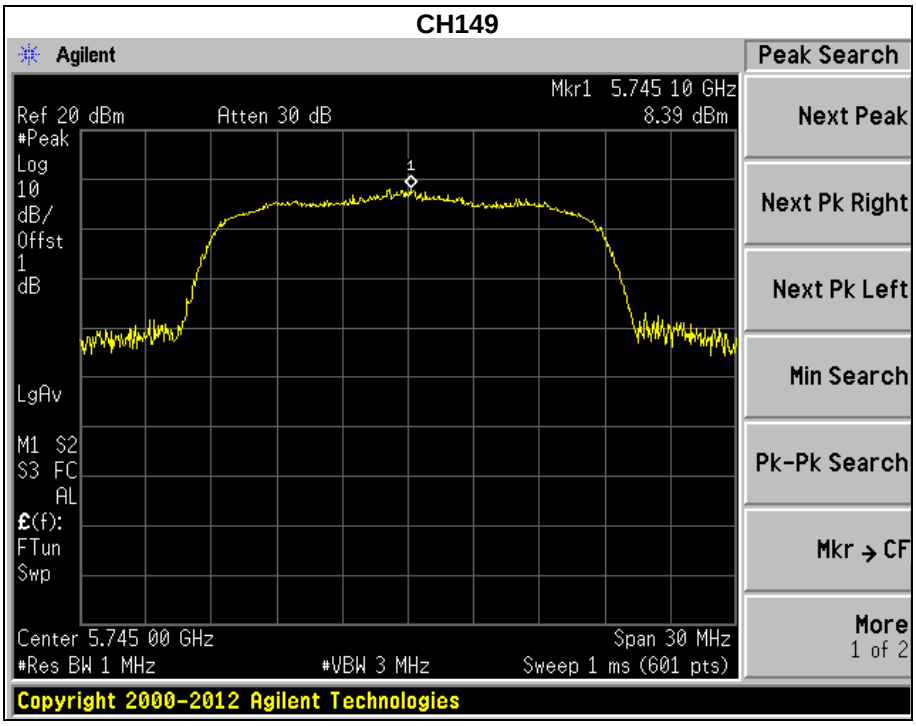


CH161

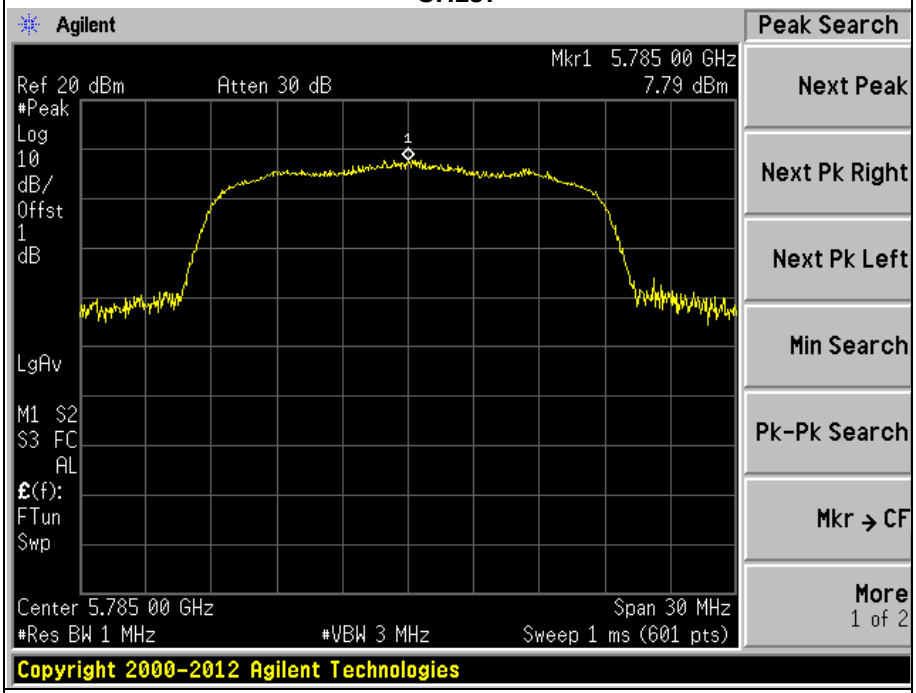


802.11n(20MHz)

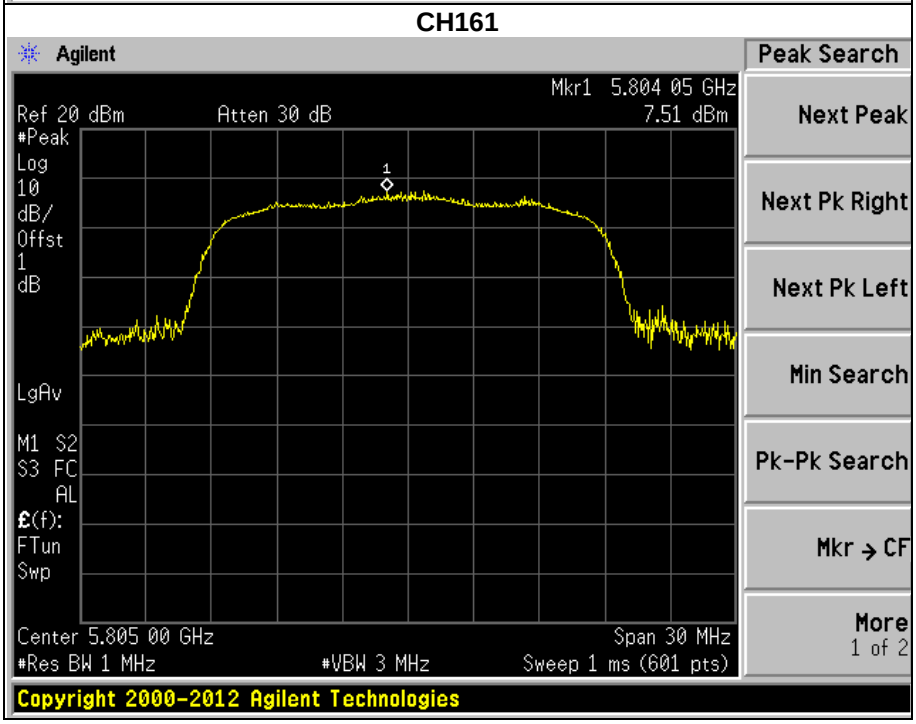
CH149



CH157


Agilent
Peak Search
Mkr1 5.785 00 GHz
Ref 20 dBm
Atten 30 dB
7.79 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 5.785 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

CH161

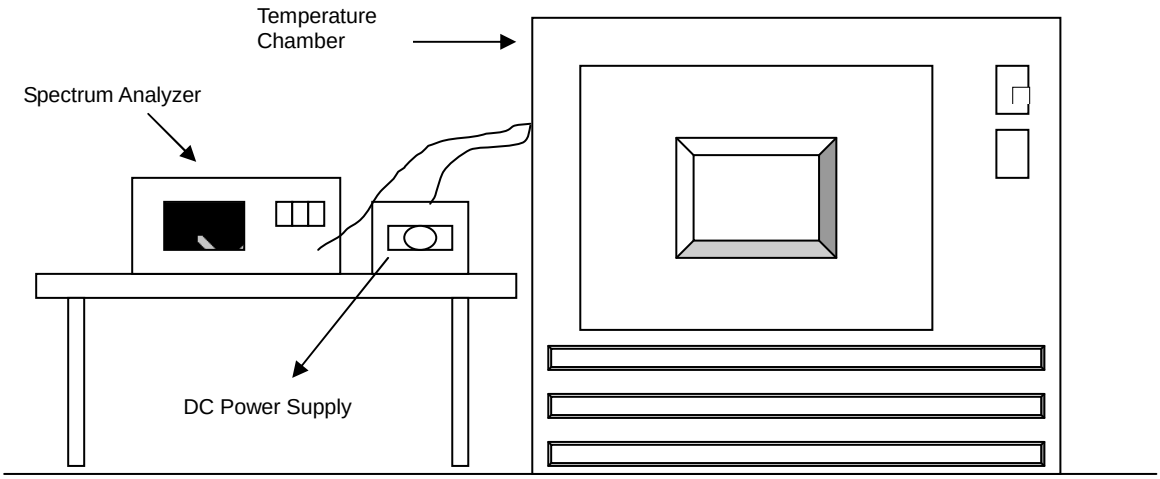

Agilent
Peak Search
Mkr1 5.804 05 GHz
Ref 20 dBm
Atten 30 dB
7.51 dBm
#Peak
Log
10
dB/
Offst
1
dB
LgAv
M1 S2
S3 FC
AL
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 5.805 00 GHz
Span 30 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Copyright 2000-2012 Agilent Technologies

4.5 FREQUENCY STABILITY

4.5.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency of the carrier signal shall be maintained within band of operation

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.5.4 TEST PROCEDURE

The EUT is installed in an environment test chamber with external power source.

Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.

A sufficient stabilization period at each temperatures is used prior to each frequency measurement.

When temperature is stabled, measure the frequency stability.

The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage.

Change setting of chamber and external power source to complete all conditions.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITION

Set the EUT transmit at un-modulation mode to test frequency stability.

4.5.7 TEST RESULTS

Band I:

Voltage vs. Frequency Stability (11a CH44)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Temperature (℃)	Voltage (VDC)			
20	4.2	5220	5219.978633	-4.093295019
	3.8	5220	5219.978455	-4.127394636
	3.4	5220	5219.978128	-4.190038314

Temperature vs. Frequency Stability (11a CH44)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Voltage (VDC)	Temperature (℃)			
3.8	5	5220	5219.978145	-4.186781609
	10	5220	5219.978745	-4.07183908
	15	5220	5219.978463	-4.125862069
	20	5220	5219.978477	-4.123180077
	25	5220	5219.978536	-4.111877395
	30	5220	5219.978498	-4.119157088
	35	5220	5219.978475	-4.123563218

Voltage vs. Frequency Stability (11a CH44)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Temperature (℃)	Voltage (VDC)			
20	4.2	5220	5219.978482	-4.122222222
	3.8	5220	5219.978756	-4.069731801
	3.4	5220	5219.978389	-4.140038314

Temperature vs. Frequency Stability (11a(HT20) CH44)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Voltage (VDC)	Temperature (℃)			
3.8	5	5220	5219.978489	-4.120881226
	10	5220	5219.978567	-4.105938697
	15	5220	5219.978351	-4.147318008
	20	5220	5219.978462	-4.12605364
	25	5220	5219.978736	-4.073563218
	30	5220	5219.978447	-4.128927203
	35	5220	5219.978768	-4.06743295

Band II:

Voltage vs. Frequency Stability (11a CH60)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Temperature (℃)	Voltage (VDC)			
20	4.2	5300	5299.986745	-2.500943396
	3.8	5300	5299.986396	-2.566792453
	3.4	5300	5299.986416	-2.563018868

Temperature vs. Frequency Stability (11a CH60)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Voltage (VDC)	Temperature (℃)			
3.8	5	5300	5299.986865	-2.478301887
	10	5300	5299.986795	-2.491509434
	15	5300	5299.986258	-2.592830189
	20	5300	5299.986489	-2.549245283
	25	5300	5299.986632	-2.522264151
	30	5300	5299.986726	-2.504528302
	35	5300	5299.986463	-2.554150943

Voltage vs. Frequency Stability (11a(HT20) CH60)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Temperature (℃)	Voltage (VDC)			
20	4.2	5300	5299.986896	-2.47245283
	3.8	5300	5299.986269	-2.590754717
	3.4	5300	5299.986681	-2.513018868

Temperature vs. Frequency Stability (11a(HT20) CH60)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Voltage (VDC)	Temperature (℃)			
3.8	5	5300	5299.986389	-2.568113208
	10	5300	5299.986419	-2.56245283
	15	5300	5299.986596	-2.529056604
	20	5300	5299.986387	-2.568490566
	25	5300	5299.986569	-2.534150943
	30	5300	5299.986476	-2.551698113
	35	5300	5299.986759	-2.498301887

Band III:

Voltage vs. Frequency Stability (11a CH116)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Temperature (℃)	Voltage (VDC)			
20	4.2	5580	5579.988729	-2.019892473
	3.8	5580	5579.988469	-2.066487455
	3.4	5580	5579.988598	-2.043369176

Temperature vs. Frequency Stability (11a CH116)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Voltage (VDC)	Temperature (℃)			
3.8	5	5580	5579.988389	-2.080824373
	10	5580	5579.988781	-2.010573477
	15	5580	5579.988569	-2.048566308
	20	5580	5579.988697	-2.02562724
	25	5580	5579.988369	-2.084408602
	30	5580	5579.988746	-2.016845878
	35	5580	5579.988643	-2.03530466

Voltage vs. Frequency Stability (11a(HT20) CH116)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Temperature (℃)	Voltage (VDC)			
20	4.2	5580	5579.988685	-2.027777778
	3.8	5580	5579.988542	-2.053405018
	3.4	5580	5579.988396	-2.079569893

Temperature vs. Frequency Stability (11a(HT20) CH116)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Voltage (VDC)	Temperature (℃)			
3.8	5	5580	5579.988791	-2.008781362
	10	5580	5579.988469	-2.066487455
	15	5580	5579.988387	-2.081182796
	20	5580	5579.988591	-2.044623656
	25	5580	5579.988543	-2.053225806
	30	5580	5579.988759	-2.014516129
	35	5580	5579.988618	-2.039784946

Band IV:

Voltage vs. Frequency Stability (11a CH157)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Temperature (℃)	Voltage (VDC)			
20	4.2	5785	5784.988492	-1.989282627
	3.8	5785	5784.988567	-1.976318064
	3.4	5785	5784.988746	-1.945375972

Temperature vs. Frequency Stability (11a CH157)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Voltage (VDC)	Temperature (℃)			
3.8	5	5785	5784.988385	-2.007778738
	10	5785	5784.988429	-2.000172861
	15	5785	5784.988651	-1.961797753
	20	5785	5784.988742	-1.946067416
	25	5785	5784.988359	-2.01227312
	30	5785	5784.988651	-1.961797753
	35	5785	5784.988459	-1.994987035

Voltage vs. Frequency Stability (11a(HT20) CH157)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Temperature (℃)	Voltage (VDC)			
20	4.2	5785	5784.988554	-1.978565255
	3.8	5785	5784.988386	-2.007605877
	3.4	5785	5784.988476	-1.992048401

Temperature vs. Frequency Stability (11a(HT20) CH157)

Test Conditions		Test Frequency (MHz)	Measurement Frequency (MHz)	Max. Deviation (ppm)
Voltage (VDC)	Temperature (℃)			
3.8	5	5785	5784.988582	-1.973725151
	10	5785	5784.988394	-2.00622299
	15	5785	5784.988741	-1.946240277
	20	5785	5784.988634	-1.964736387
	25	5785	5784.988941	-1.911668107
	30	5785	5784.988726	-1.948833189
	35	5785	5784.988449	-1.996715644

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

6. APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

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