



Report No: FCC 1705092-01 File reference No: 2017-07-01

Applicant: GLORY STAR TECHNICS (SHENZHEN) CO., LTD.

Product: Advertising Displayer

Model No: JAR215, JAR141, JAR156, JAR185

Trademark: N/A

Test Standards: FCC Part 15.247

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.10, FCC Part 15.247 for the

evaluation of electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: July 01, 2017

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TESTING LABORATORIES

Room 512-519, 5/F., East Tower, Building 4, Anhua Industrial Zone, Futian District, Shenzhen, Guangdong, China

Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timeway-lab.com

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Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

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The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAL. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAL-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

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Test Report Conclusion

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1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Room 512-519,5/F., East Tower, Building 4, Anhua Industrial Zone, Futian District, Shenzhen,

Guangdong China

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 899988

For 3m & 10 m OATS

Site Listed with Industry Canada of Ottawa, Canada

Registration Number: IC: 5205A-02

For 3m & 10 m OATS

1.2 Applicant Details

Applicant: GLORY STAR TECHNICS (SHENZHEN) CO., LTD.

Address: 4/Floor, west block, Longzhu Road, Xin WuCun Industry Building, NanShan District, ShenZhen

Telephone: (755)-26001808-305 Fax: (755)-26002933

1.3 Description of EUT

Product: Advertising Displayer

Manufacturer: GLORY STAR TECHNICS (SHENZHEN) CO., LTD.

Address: 4/Floor, west block, Longzhu Road, Xin WuCun Industry Building, NanShan

District, Shen Zhen

Brand Name: N/A
Model Number: JAR215

Additional Model Number: JAR141, JAR156, JAR185

Type of Modulation IEEE 802.11b : DSSS (CCK, QPSK, DBPSK)

IEEE 802.11g/n (HT20/HT40) : OFDM(64QAM, 16QAM, QPSK, BPSK)

Frequency range IEEE 802.11b/g/n (HT20): 2412-2462MHz; IEEE 802.11n (HT40): 2422-2452MHz;

Channel Spacing 5MHz for IEEE 802.11b/g/n(HT20/HT40)

Air Data Rate IEEE 802.11b : 11, 5.5, 2, 1 Mbps

IEEE 802.11g: 54, 48,36, 24, 18, 12, 9, 6 Mbps

IEEE 802.11n HT20/HT40 : msc0-msc7

Frequency Selection By software

Channel Number IEEE 802.11b/g/n (HT20): 11 Channels; IEEE 802.11n (HT40): 7 Channels

Antenna: Integral Antenna and the maximum Gain of this antenna is 2.0dBi

Power Adapter Model: SUN-1200500;

Input: 100-240V, 50/60Hz, Max 1.7A; Output: 12V, 5A

The report refers only to the sample tested and does not apply to the bulk.

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1.4 Submitted Sample: 2 Samples

1.5 Test Duration 2017-05-16 to 2017-07-01

1.6 Test UncertaintyConducted Emissions Uncertainty =3.6dBRadiated Emissions Uncertainty =4.7dB

1.7 Test Engineer Terry Tang
The sample tested by

Print Name: Terry Tang

Note: All models JAR215, JAR141, JAR156, JAR185 have been tested, only worse case is reported.

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2.0 Test Equipment					
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	R&S	ESPI 3	100379	2016-08-22	2017-08-21
TWO	R&S	E7112 75	100204	2016-08-22	2017-08-21
Line-V-NETW		EZH3-Z5	100294	2010-08-22	2017-08-21
TWO	R&S	EZH3-Z5	100253	2016-08-22	2017-08-21
Line-V-NETW		EZH3-Z3	100255	2010-08-22	2017-08-21
	R&S				
Ultra Broadband		HL562	100157	2016-08-23	2017-08-22
ANT					
	R&S	ESDV	100008	2016-08-22	2017-08-21
ESDV Test Receiver					
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2016-08-22	2017-08-21
System Controller	CT	SC100	-		
Printer	EPSON	РНОТО ЕХЗ	CFNH234850		
Computer	IBM	8434	1S8434KCE99BLXLO*	-	-
Loop Antenna	EMCO	6502	00042960	2016-08-23	2017-08-22
ESPI Test Receiver	R&S	ESI26	838786/013	2016-08-22	2017-08-21
3m OATS		1	N/A	2016-08-24	2017-08-23
Horn Antenna	R&S	BBHA 9170	BBHA9170265	2016-08-24	2017-08-23
Horn Antenna	R&S	BBHA 9120D	9120D-631	2016-08-24	2017-08-23
Power meter	Anritsu	ML2487A	6K00003613	2016-08-22	2017-08-21
Power sensor	Anritsu	MA2491A	32263	2016-08-22	2017-08-21
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2016-08-23	2017-08-21
LISN	AFJ	LS16C	10010947251	2016-08-22	2017-08-21
LISN (Three Phase)	Schwarebeck	NSLK 8126	8126453	2016-08-23	2017-08-22
9*6*6 Anechoic			N/A	2016-08-24	2017-08-23
EMI Test Receiver	RS	ESCS30	100139	2016-08-22	2017-08-21
RF Cable	SCHWARZBEC			2016-08-23	2017 09 22
KF Cable	K			2010-08-23	2017-08-22
Pre-Amplifier	HP	8447D	2727A05017	2016-08-05	2017-08-04
Pre-Amplifier	EM	EM30265		2016-08-05	2017-08-04

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3. DESCRIPTION OF TEST MODES

IEEE 802.11b, 802.11g, 802.11n (HT20) mode

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2412
Middle	2437
High	2462

IEEE 802.11b mode: 1Mbps data rate (worst case) was chosen for full testing. IEEE 802.11g mode: 6Mbps data rate (worst case) was chosen for full testing. IEEE 802.11n (HT20) mode: msc0 data rate (worst case) were chosen for full testing

IEEE 802.11n (HT40) mode

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2422
Middle	2437
High	2452

IEEE 802.11n (HT40) mode: msc0 data rate (worst case) were chosen for full testing

Dutycycle>98%

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3.0 **Technical Details**

3.1 **Summary of test results**

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.107 & 15.207	Conducted Emission Test	PASS	Complies
FCC Part 15 Subpart C Paragraph 15.247(a)(2) Limit	Spectrum bandwidth of a Orthogonal Frequency Division Multiplex System Limit: 6dB bandwidth>500kHz	PASS	Complies
FCC Part 15, Paragraph 15.247(b)	Maximum peak output power Limit: max. 30dBm	PASS	Complies
FCC Part 15, Paragraph 15.109,15.205 & 15.209	Transmitter Radiated Emission Limit: Table 15.209	PASS	Complies
FCC Part 15, Paragraph 15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Complies
FCC Part 15, Paragraph 15.247(d)	Out of Band Emission and Restricted Band Radiation Limit: 20dB less than peak value of fundamental frequency Restricted band limit: Table 15.209	PASS	Complies

3.2 **Test Standards**

FCC Part 15 Subpart & Subpart C, Paragraph 15.247

EUT Modification 4.0

No modification by SHENZHEN TIMEWAY TESTING LABORATORIES.

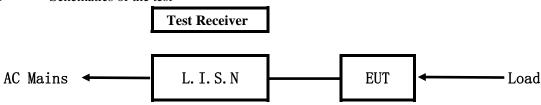
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5.0 Power Line Conducted Emission Test

5.1 Schematics of the test

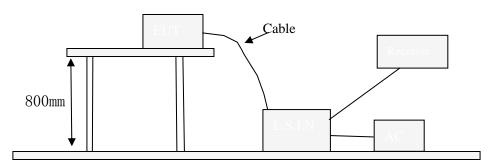


EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2013. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.10-2013.

Test Voltage: 120V~, 60Hz Block diagram of Test setup



5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.10-2013. All interface ports were connected to the Appropriate peripherals. All peripherals and cables are listed below.

A. EUT

Device	Manufacturer	Model	FCC ID	
Advertising	GLORY STAR TECHNICS	JAR215, JAR141,	24 ACC 14D141 215	
Displayer	(SHENZHEN) CO., LTD.	JAR156, JAR185	2AACS-JAR141-215	

B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

C. Peripherals

Device	Manufacturer	Model FCC ID/DOC		Cable

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5.4 EUT Operating Condition

Operating condition is according to ANSI C63.10-2013.

- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207 and 15.107

Frequency	Class A Lim	its (dB \mu V)	Class B Limits (dB µ V)				
(MHz)	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level			
$0.15 \sim 0.50$	79.0	66.0	66.0~56.0*	56.0~46.0*			
$0.50 \sim 5.00$	73.0	60.0	56.0	46.0			
5.00 ~ 30.00	73.0	60.0	60.0	50.0			

Notes:

- 1. *Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

5.6 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

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Conducted Emission on Live Terminal (150kHz to 30MHz) A:

Model: JAR215

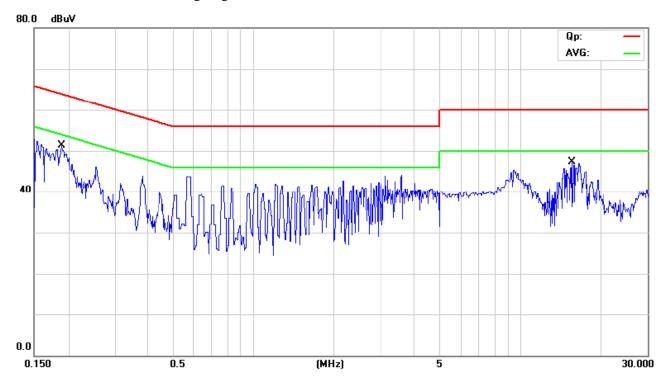
EUT Operating Environment

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep WIFI Transmitting

Equipment Level: Class B

Results: PASS



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBu∀	dB	Detector	Comment
1	*	0.1903	37.50	9.89	47.39	64.02	-16.63	QP	
2		0.1903	25.70	9.89	35.59	54.02	-18.43	AVG	
3		15.5405	18.50	11.28	29.78	60.00	-30.22	QP	
4		15.5405	8.50	11.28	19.78	50.00	-30.22	AVG	

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B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

Model: JAR215

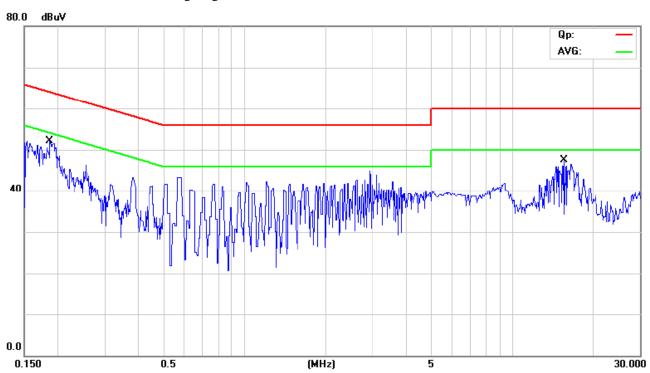
EUT Operating Environment

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep WIFI Transmitting

Equipment Level: Class B

Results: Pass



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1858	32.20	9.88	42.08	64.22	-22.14	QP	
2		0.1858	12.40	9.88	22.28	54.22	-31.94	AVG	
3		15.5475	17.90	11.28	29.18	60.00	-30.82	QP	
4		15.5475	7.10	11.28	18.38	50.00	-31.62	AVG	

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C: Conducted Emission on Live Terminal (150kHz to 30MHz)

Model: JAR141

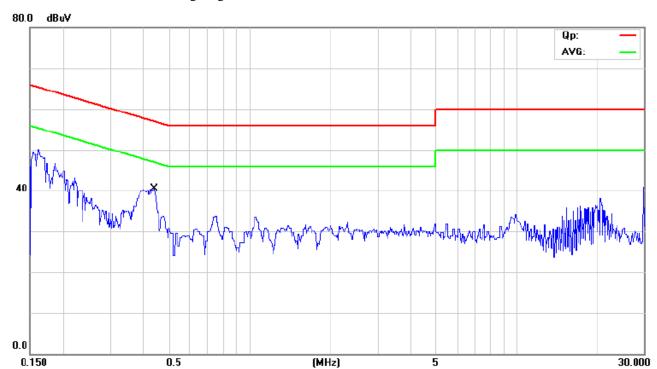
EUT Operating Environment

Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep WIFI Transmitting

Equipment Level: Class B

Results: PASS



No. Mk.	Freq.		Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.4366	27.10	10.20	37.30	57.13	-19.83	QP	
2 *	0.4366	21.50	10.20	31.70	47.13	-15.43	AVG	

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D: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

Model: JAR141

EUT Operating Environment

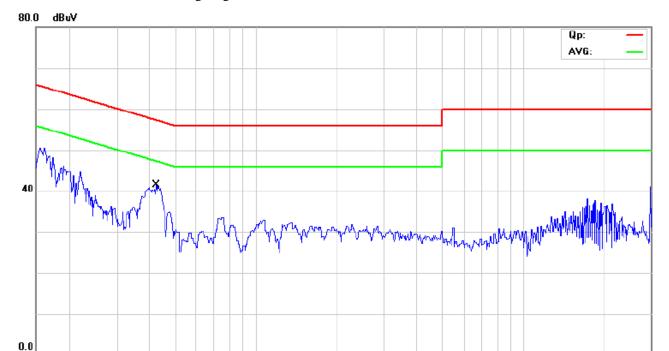
Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep WIFI Transmitting

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



No. Mk.	Freq.		Correct Factor	Measure- ment	Limit	Over		_
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.4208	26.40	10.18	36.58	57.43	-20.85	QP	
2	0.4208	4.90	10.18	15.08	47.43	-32.35	AVG	

(MHz)

5

30.000

0.5

0.150

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E: Conducted Emission on Live Terminal (150kHz to 30MHz)

Model: JAR156

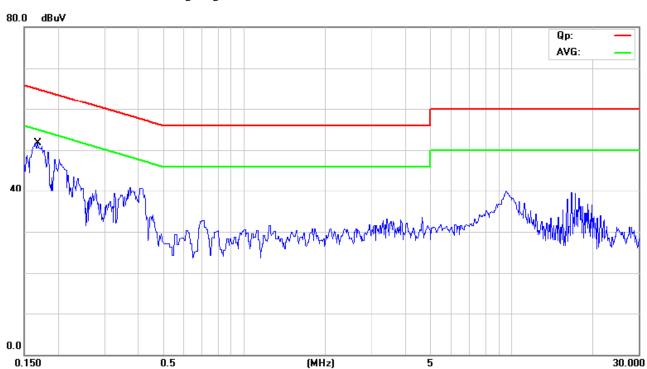
EUT Operating Environment

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep WIFI Transmitting

Equipment Level: Class B

Results: PASS



No. Mk.	Freq.	Reading Level		Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.1684	28.40	9.86	38.26	65.04	-26.78	QP	
2	0.1684	2.20	9.86	12.06	55.04	-42.98	AVG	

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F: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

Model: JAR156

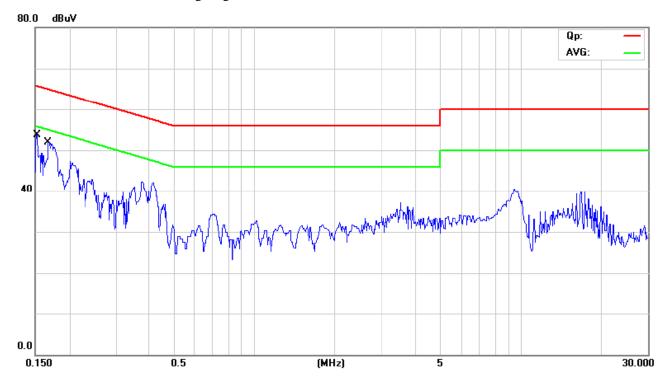
EUT Operating Environment

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep WIFI Transmitting

Equipment Level: Class B

Results: Pass



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBu∀	dB	Detector	Comment
1	0.1527	26.50	9.84	36.34	65.85	-29.51	QP	
2	0.1527	-5.30	9.84	4.54	55.85	-51.31	AVG	
3 *	0.1674	29.50	9.86	39.36	65.09	-25.73	QP	
4	0.1674	8.90	9.86	18.76	55.09	-36.33	AVG	

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G: Conducted Emission on Live Terminal (150kHz to 30MHz)

Model: JAR185

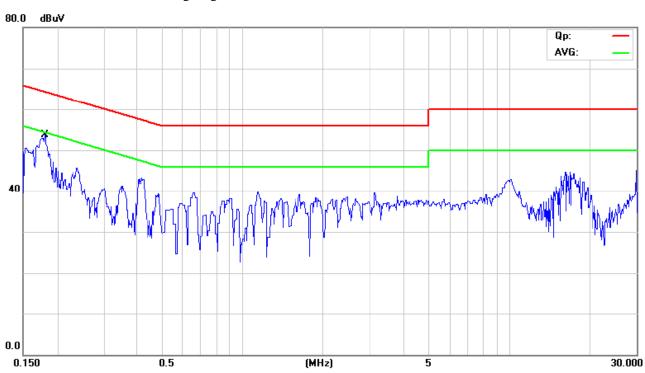
EUT Operating Environment

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep WIFI Transmitting

Equipment Level: Class B

Results: PASS



No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1802	41.20	9.88	51.08	64.48	-13.40	QP	
2		0.1802	26.70	9.88	36.58	54.48	-17.90	AVG	

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H: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

Model: JAR185

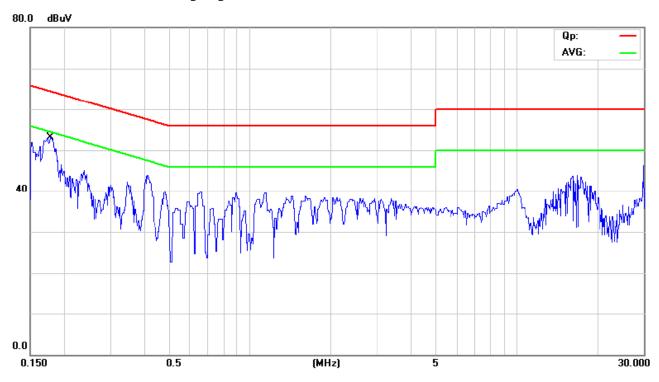
EUT Operating Environment

Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 kPa

EUT set Condition: Keep WIFI Transmitting

Equipment Level: Class B

Results: Pass



No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBu∀	dB	Detector	Comment
1	*	0.1781	41.21	9.87	51.08	64.57	-13.49	QP	
2		0.1781	26.81	9.87	36.68	54.57	-17.89	AVG	

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6 Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 8999988
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are Quasi-peak values with a resolution bandwidth of 120 kHz. For measurement above 1GHz, peak values with RBW=1MHz VBW=3MHz and PK detector. AV value with RBW=1MHz, VBW=3MHz and RMS detector. Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "QP" in the data table.
- (6) The antenna polarization: Vertical polarization and Horizontal polarization.

Block diagram of Test setup Distance = 3m Computer Pre –Amplifier Turn-table Receiver

- 6.2 Configuration of The EUT

 Same as section 5.3 of this report
- 6.3 EUT Operating Condition
 Same as section 5.4 of this report.

The report refers only to the sample tested and does not apply to the bulk.

Ground Plane

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6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

Frequencies in restricted band are complied to limit on Paragraph 15.209 and 15.109 and RSS-210

Frequency Range (MHz)	Distance (m)	Field strength (dB µ V/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2. In the Above Table, the higher limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT

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Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

Model: JAR215

Radiated Emission In Horizontal/Vertical (30MHz----1000MHz)

EUT set Condition: **Keep Transmitting**

Results: Pass

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
432.040	38.57	Н	46.00
673.920	42.93	Н	46.00
375.040	42.18	Н	46.00
792.040	41.62	Н	46.00
720.080	40.34	V	46.00
576.040	43.27	V	46.00
375.040	42.74	V	46.00
864.080	42.31	V	46.00

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Test Figure:

30 MHz

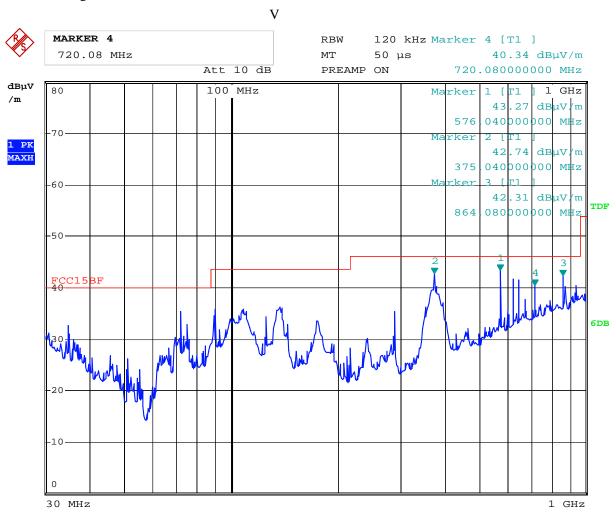
Н MARKER 4 RBW 120 kHz Marker 4 [T1] 432.04 MHz MT 50 µs 38.57 dBuV/m Att 10 dB PREAMP ON 432.040000000 MHz dΒμV 100 MHz /m 39 dBµV/m 920000000 1 PK MAXH 040000000 -60 dΒμV 41 .62 TDF 040000000 792 -50 FCC15BF 6DB -10

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Test Figure:



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Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

Model: JAR141

Radiated Emission In Horizontal/Vertical (30MHz----1000MHz)

EUT set Condition: **Keep Transmitting**

Results: Pass

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
31.400	31.34	Н	40.00
375.040	42.23	Н	46.00
33.240	30.18	V	40.00
625.080	40.93	V	46.00

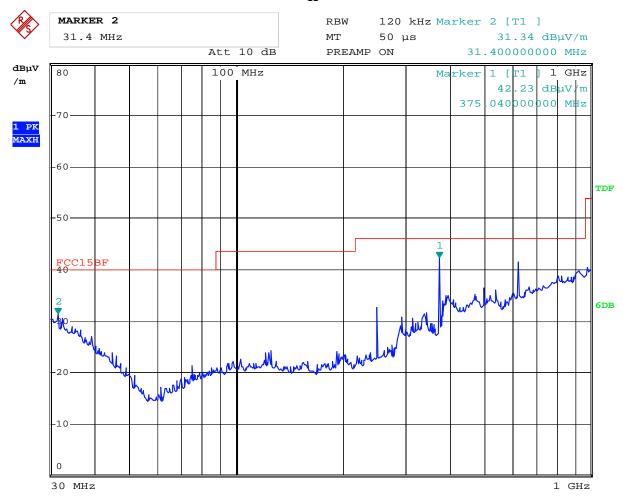
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Test Figure:

Н

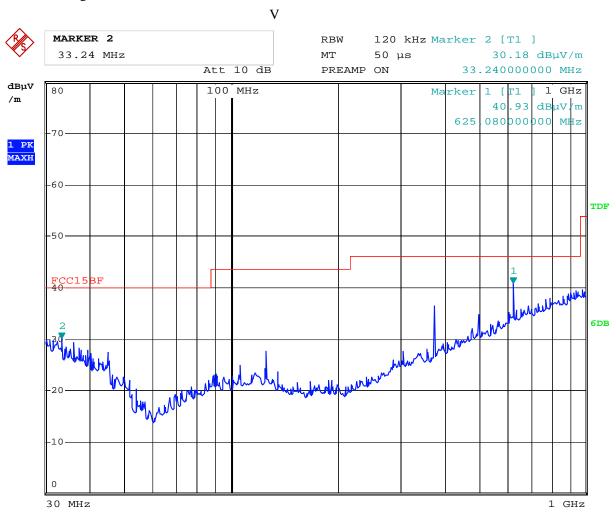


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Test Figure:



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Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

Model: JAR156

Radiated Emission In Horizontal/Vertical (30MHz----1000MHz)

EUT set Condition: **Keep Transmitting**

Results: Pass

Frequency (MHz)	Level@3m (dB \u03bc V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
31.680	31.15	Н	40.00
932.640	41.13	Н	46.00
911.160	40.60	V	46.00
30.040	30.45	V	40.00

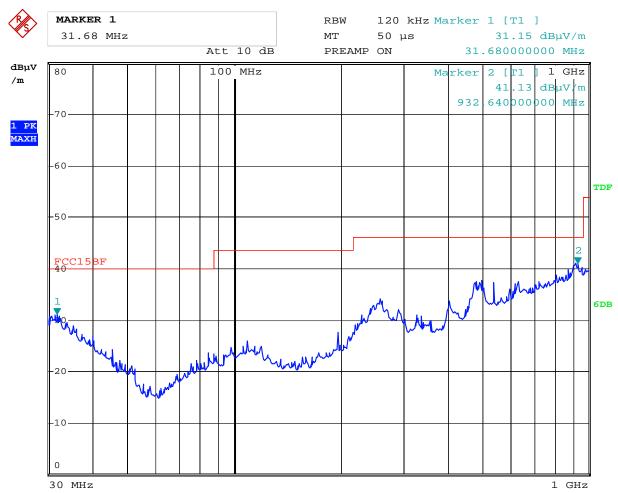
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Test Figure:

Н

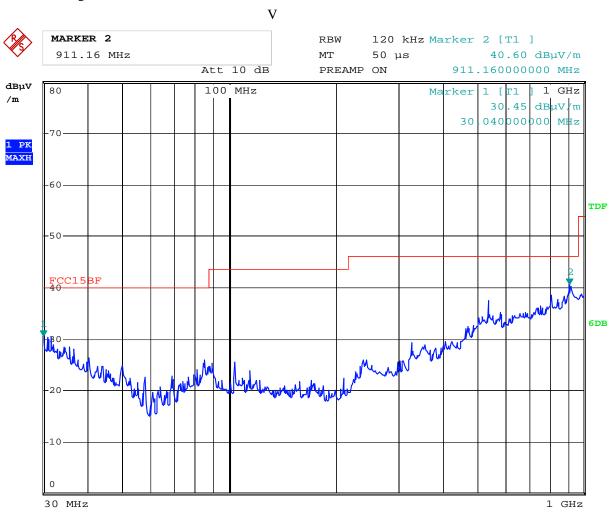


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Test Figure:



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Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

Model: JAR185

Radiated Emission In Horizontal/Vertical (30MHz----1000MHz)

EUT set Condition: **Keep Transmitting**

Results: Pass

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
193.160	32.04	Н	43.50
375.040	42.46	Н	46.00
875.080	41.50	Н	46.00
182.040	34.31	V	43.50
625.040	40.09	V	46.00
304.000	37.70	V	46.00

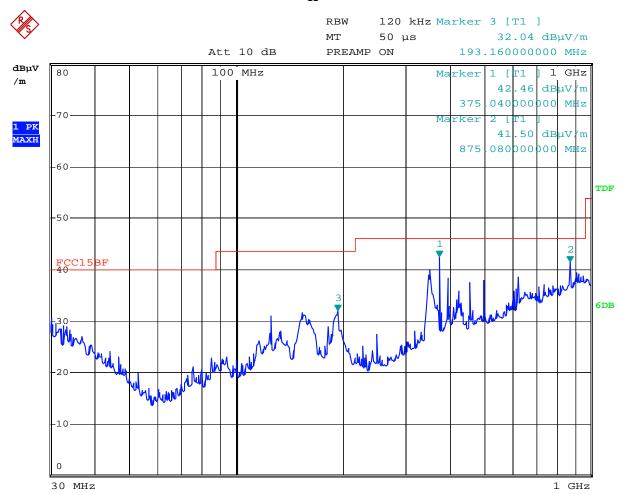
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Test Figure:

Н

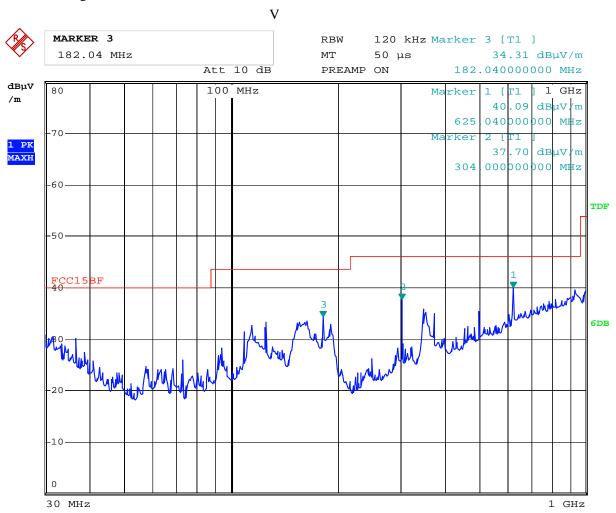


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Test Figure:



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Operation Mode: Transmitting under CH01 for 11b at 1Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)
4824.00	51.32 (PK)	Н	74(Peak)/ 54(AV)
4824.00	51.59 (PK)	V	74(Peak)/ 54(AV)
7236.00		H/V	74(Peak)/ 54(AV)
9648.00		H/V	74(Peak)/ 54(AV)
12060		H/V	74(Peak)/ 54(AV)
14472		H/V	74(Peak)/ 54(AV)
16684		H/V	74(Peak)/ 54(AV)
19296		H/V	74(Peak)/ 54(AV)
21708		H/V	74(Peak)/ 54(AV)
24120		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode 1Mbps

Operation Mode: Transmitting under CH06 for 11b at 1Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
4874.00	50.51 (PK)	Н	74(Peak)/ 54(AV)
4874.00	50.08 (PK)	V	74(Peak)/ 54(AV)
7311.00		H/V	74(Peak)/ 54(AV)
9748.00		H/V	74(Peak)/ 54(AV)
12185	1	H/V	74(Peak)/ 54(AV)
14622	-	H/V	74(Peak)/ 54(AV)
17059		H/V	74(Peak)/ 54(AV)
19496		H/V	74(Peak)/ 54(AV)
21933		H/V	74(Peak)/ 54(AV)
24370		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode 1Mbps

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Operation Mode: Transmitting under CH11 for 11b at 1Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
4924	49.79 (PK)	Н	74(Peak)/ 54(AV)
4924	49.63 (PK)	V	74(Peak)/ 54(AV)
7368		H/V	74(Peak)/ 54(AV)
9848		H/V	74(Peak)/ 54(AV)
12310		H/V	74(Peak)/ 54(AV)
14772		H/V	74(Peak)/ 54(AV)
17234		H/V	74(Peak)/ 54(AV)
19696		H/V	74(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24620		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode at 1Mbps

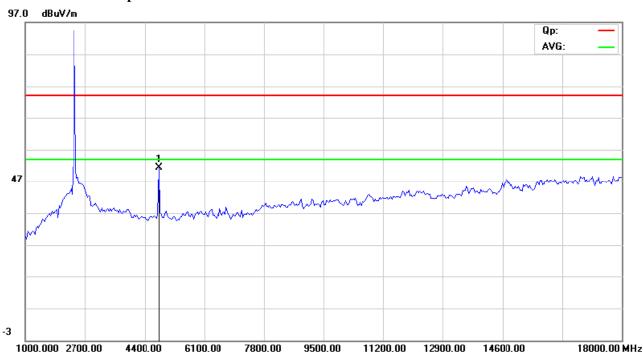
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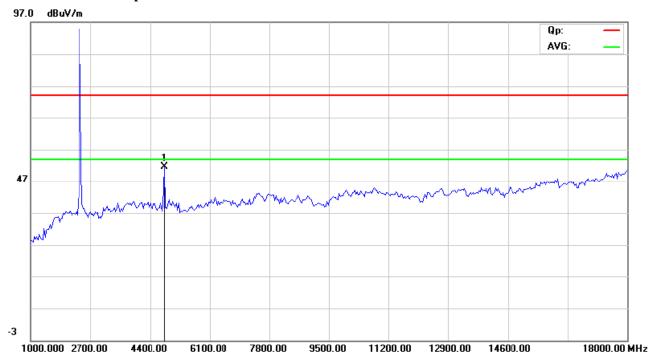


Please refer to the following test plots for details:

CH01 for 11b at 1Mbps: Horizontal



CH01 for 11b at 1Mbps: Vertical



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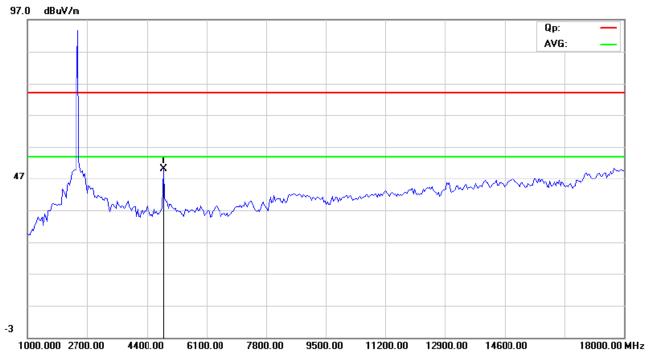
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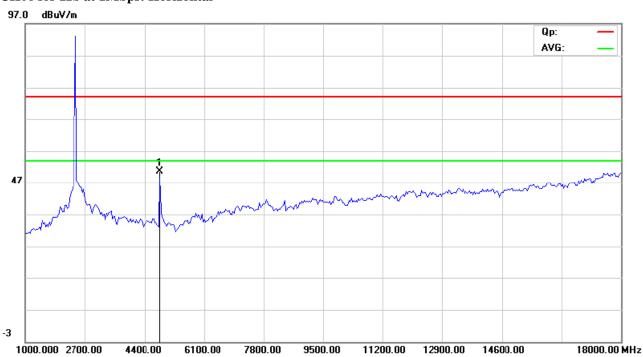
Date: 2017-07-01



CH06 for 11b at 1Mbps: Vertical



CH06 for 11b at 1Mbps: Horizontal



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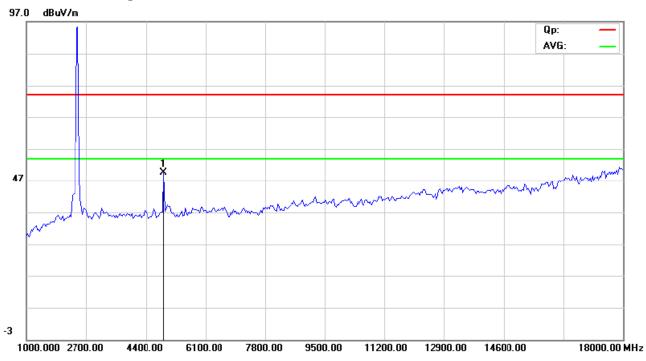
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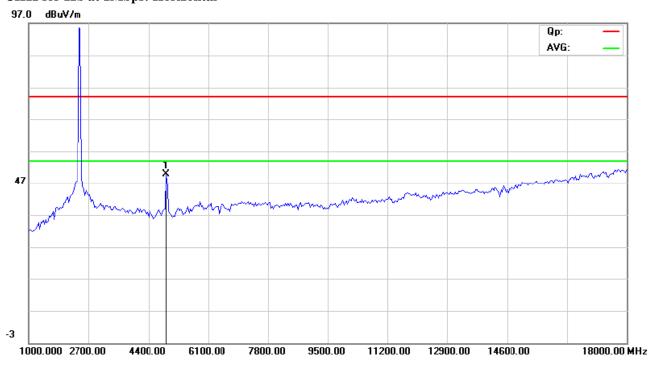
Date: 2017-07-01



CH11 for 11b at 1Mbps: Vertical



CH11 for 11b at 1Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

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Operation Mode: Transmitting under CH01 for 11g at 6Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB μ V/m)	
4824.00	51.28 (PK)	Н	74(Peak)/ 54(AV)	
4824.00	51.82 (PK)	V	74(Peak)/ 54(AV)	
7236.00		H/V	74(Peak)/ 54(AV)	
9648.00		H/V	74(Peak)/ 54(AV)	
12060	12060 H/V		74(Peak)/ 54(AV)	
14472	4472 H/V		74(Peak)/ 54(AV)	
16884	H/V		74(Peak)/ 54(AV)	
19296		H/V	74(Peak)/ 54(AV)	
21708	21708		74(Peak)/ 54(AV)	
24120		H/V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

^{2.} Remark "---" means that the emissions level is too low to be measured

^{3.} For 802.11g mode 6Mbps

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Operation Mode: Transmitting under CH06 for 11g at 6Mbps

Frequency (MHz)	y (MHz) Level@3m (dB μ V/m) Antenna Polarity		Limit@3m (dB \mu V/m)	
4874.00	50.70 (PK)	V	74(Peak)/ 54(AV)	
4874.00	50.65 (PK)	Н	74(Peak)/ 54(AV)	
7311.00		H/V	74(Peak)/ 54(AV)	
9748.00	48.00 H/V		74(Peak)/ 54(AV)	
12185		H/V	74(Peak)/ 54(AV)	
14622	14622 H/V		74(Peak)/ 54(AV)	
17059	7059 H/V		74(Peak)/ 54(AV)	
19496		H/V	74(Peak)/ 54(AV)	
21933		H/V	74(Peak)/ 54(AV)	
24370		H/V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode 6Mbps

Operation Mode: Transmitting under CH11 for 11g at 6Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)	
4924	51.58 (PK)	Н	74(Peak)/ 54(AV)	
4924	51.14 (PK)	V	74(Peak)/ 54(AV)	
7368	1	H/V	74(Peak)/ 54(AV)	
9848	1	H/V	74(Peak)/ 54(AV)	
12310	H/V		74(Peak)/ 54(AV)	
14772	H/V		74(Peak)/ 54(AV)	
17234	H/V		74(Peak)/ 54(AV)	
19696	1	H/V	74(Peak)/ 54(AV)	
22158		H/V	74(Peak)/ 54(AV)	
24620	24620 H/V		74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode at 6Mbps

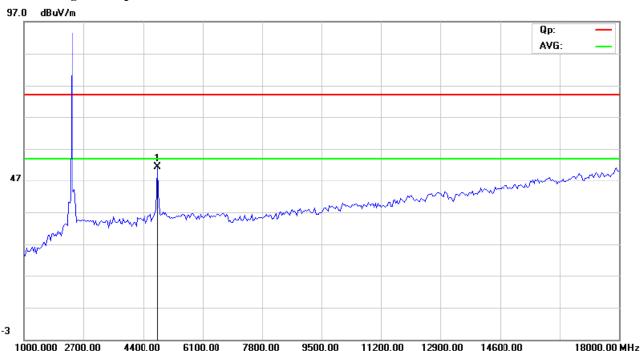
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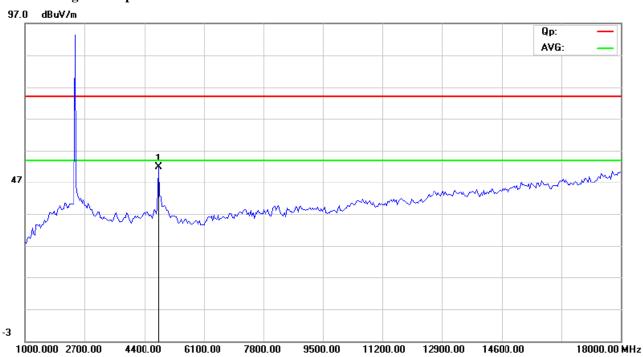


Please refer to the following test plots for details:

CH01 for 11g at 6Mbps: Horizontal



CH01 for 11g at 6Mbps: Vertical



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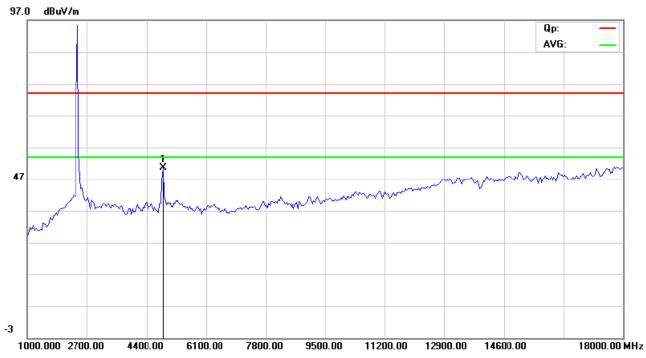
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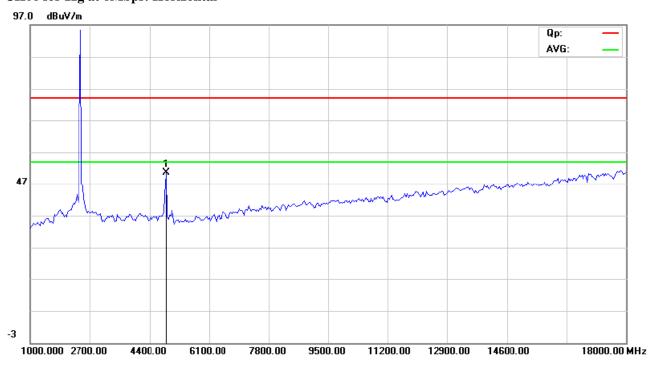
Date: 2017-07-01



CH06 for 11g at 6Mbps: Vertical



CH06 for 11g at 6Mbps: Horizontal



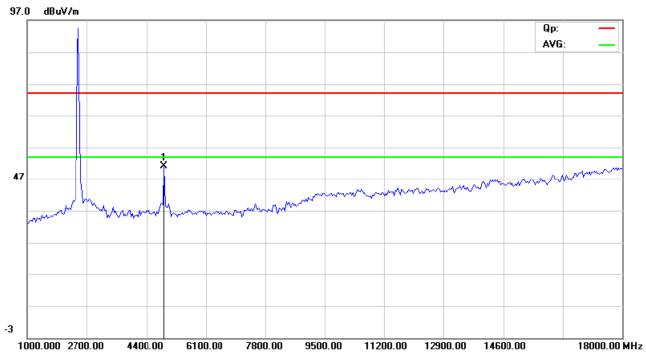
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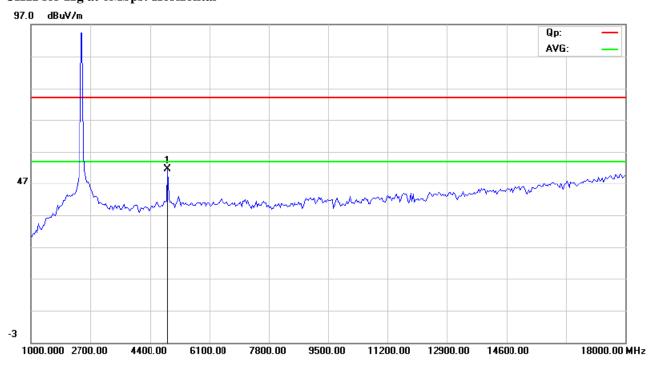
Date: 2017-07-01



CH11 for 11g at 6Mbps: Vertical



CH11 for 11g at 6Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

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Operation Mode: Transmitting under CH01 for 11n HT20 at msc0

Frequency (MHz)	Level@3m (dB \u03bc V/m)	Antenna Polarity	Limit@3m (dB µ V/m)	
4824.00	49.35 (PK)	Н	74(Peak)/ 54(AV)	
4824.00	49.59 (PK)	V	74(Peak)/ 54(AV)	
7236.00	7236.00		74(Peak)/ 54(AV)	
9648.00		H/V	74(Peak)/ 54(AV)	
12060		H/V	74(Peak)/ 54(AV)	
14472	14472		74(Peak)/ 54(AV)	
16684	H/V		74(Peak)/ 54(AV)	
19296		H/V	74(Peak)/ 54(AV)	
21708		H/V	74(Peak)/ 54(AV)	
24120		H/V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT20) mode msc0

Operation Mode: Transmitting under CH06 for 11n HT20 at msc0

Frequency (MHz)	Level@3m (dB \mu V/m) Antenna Polarity		Limit@3m (dB \(\mu \)V/m)	
4874.00	50.54 (PK)	Н	74(Peak)/ 54(AV)	
4874.00	50.69 (PK)	V	74(Peak)/ 54(AV)	
7311.00		H/V	74(Peak)/ 54(AV)	
9748.00		H/V	74(Peak)/ 54(AV)	
12185	85 H/V		74(Peak)/ 54(AV)	
14622	H/V		74(Peak)/ 54(AV)	
17059	17059 H/V		74(Peak)/ 54(AV)	
19496		H/V	74(Peak)/ 54(AV)	
21933		H/V	74(Peak)/ 54(AV)	
24370	24370		74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT20) mode msc0

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Operation Mode: Transmitting under CH11 for 11n HT20 at msc0

	8			
Frequency (MHz)	Level@3m (dB \u03bc V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)	
4924	48.19 (PK)	Н	74(Peak)/ 54(AV)	
4924	48.64 (PK)	V	74(Peak)/ 54(AV)	
7368		H/V	74(Peak)/ 54(AV)	
9848	9848 H/V		74(Peak)/ 54(AV)	
12310	2310 H/V		74(Peak)/ 54(AV)	
14772	4772 H/V		74(Peak)/ 54(AV)	
17234	7234 H/V		74(Peak)/ 54(AV)	
19696		H/V	74(Peak)/ 54(AV)	
22158		H/V	74(Peak)/ 54(AV)	
24620		H/V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

^{2.} Remark "---" means that the emissions level is too low to be measured

^{3.} For 802.11n (HT20) mode msc0

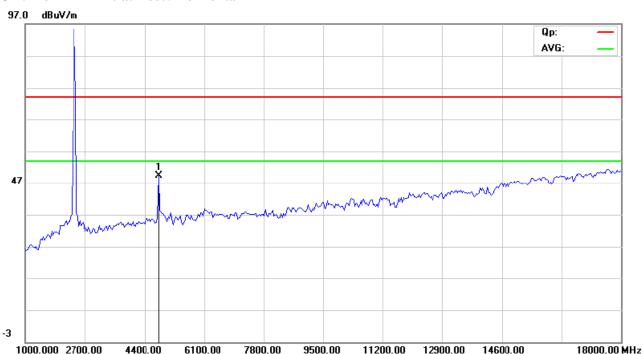
Report No.: FCC1705092-01

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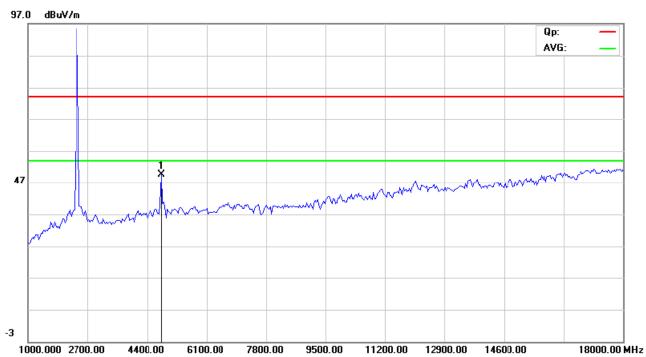


Please refer to the following test plots for details:

CH01 for 11n HT20 at msc0: Horizontal



CH01 for 11n HT20 at msc0: Vertical



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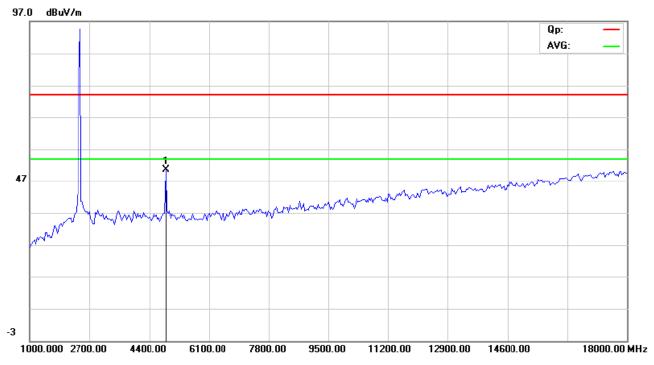
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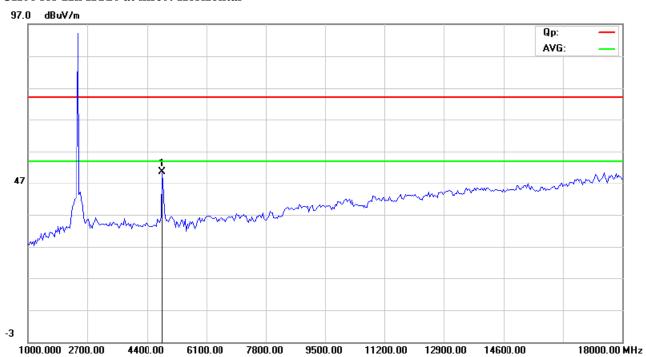
Date: 2017-07-01



CH06 for 11n HT20 at msc0: Vertical



CH06 for 11n HT20 at msc0: Horizontal



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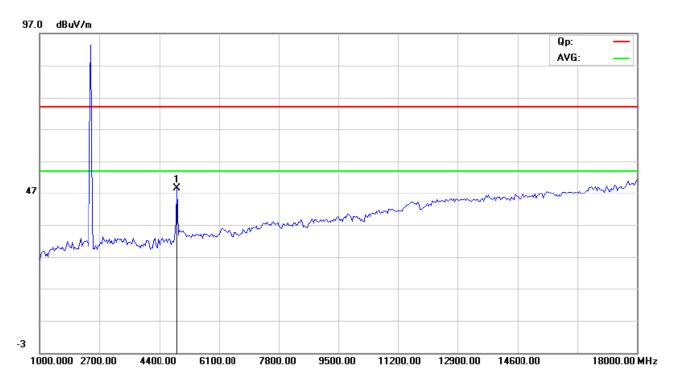
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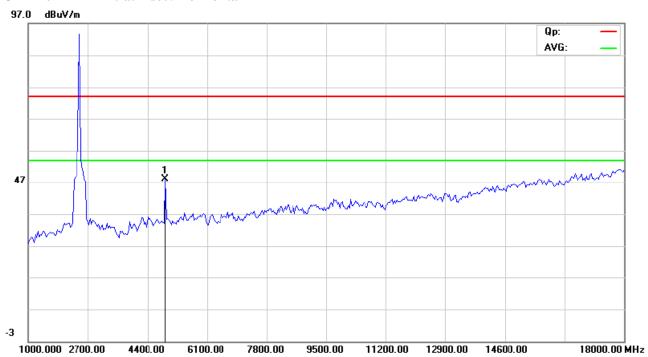
Date: 2017-07-01



CH11 for 11n HT20 at msc0: Vertical



CH11 for 11n HT20 at msc0: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

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Operation Mode: Transmitting under CH01 for 11n HT40 at msc0

Frequency (MHz)	Level@3m (dB \(\mu \)V/m)	Antenna Polarity	Limit@2m (dB u V/m)	
Frequency (MHz)	Level@3III (dB \u03b4 V/III)	Aliteilla Polarity	Limit@3m (dB \mu V/m)	
4844.00	50.51 (PK)	Н	74(Peak)/ 54(AV)	
4844.00	50.27 (PK)	V	74(Peak)/ 54(AV)	
7266.00		H/V	74(Peak)/ 54(AV)	
9688.00		H/V	74(Peak)/ 54(AV)	
12110	12110 H/V		74(Peak)/ 54(AV)	
14532	14532		74(Peak)/ 54(AV)	
16954	H/V		74(Peak)/ 54(AV)	
19376		H/V	74(Peak)/ 54(AV)	
21798	21798		74(Peak)/ 54(AV)	
24220	24220		74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT40) mode msc0

Operation Mode: Transmitting under CH04 for 11n HT40 at msc0

		·		
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB μ V/m)	
4874.00	50.66 (PK)	Н	74(Peak)/ 54(AV)	
4874.00	50.53 (PK)	V	74(Peak)/ 54(AV)	
7311.00		H/V	74(Peak)/ 54(AV)	
9748.00	9748.00		74(Peak)/ 54(AV)	
12185		H/V	74(Peak)/ 54(AV)	
14622	522 H/V		74(Peak)/ 54(AV)	
17059		H/V	74(Peak)/ 54(AV)	
19496	19496		74(Peak)/ 54(AV)	
21933	21933		74(Peak)/ 54(AV)	
24370		H/V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT40) mode msc0

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Operation Mode: Transmitting under CH07 for 11n HT40 at msc0

Frequency (MHz)	Level@3m (dB \(\mu \)V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)	
4904	49.82 (PK)	Н	74(Peak)/ 54(AV)	
4904	49.58 (PK)	V	74(Peak)/ 54(AV)	
7356	7356		74(Peak)/ 54(AV)	
9808		H/V	74(Peak)/ 54(AV)	
12260	12260		74(Peak)/ 54(AV)	
14712		H/V	74(Peak)/ 54(AV)	
17164		H/V	74(Peak)/ 54(AV)	
19616		H/V	74(Peak)/ 54(AV)	
22068		H/V	74(Peak)/ 54(AV)	
24520	24520 H/V		74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

^{2.} Remark "---" means that the emissions level is too low to be measured

^{3.} For 802.11n (HT40) mode msc0

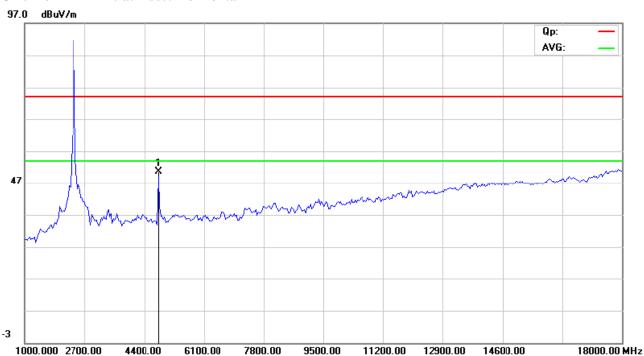
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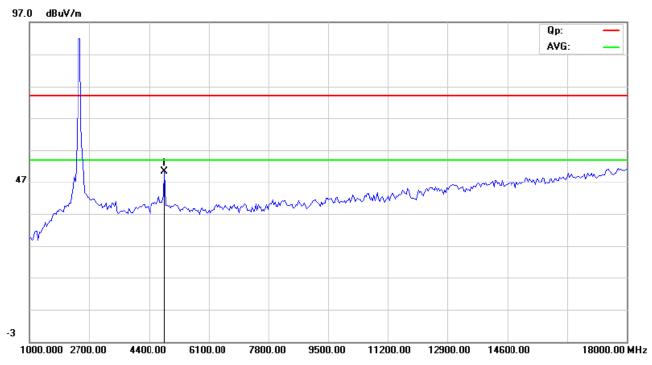


Please refer to the following test plots for details:

CH01 for 11n HT40 at msc0: Horizontal



CH01 for 11n HT40 at msc0: Vertical



The report refers only to the sample tested and does not apply to the bulk.

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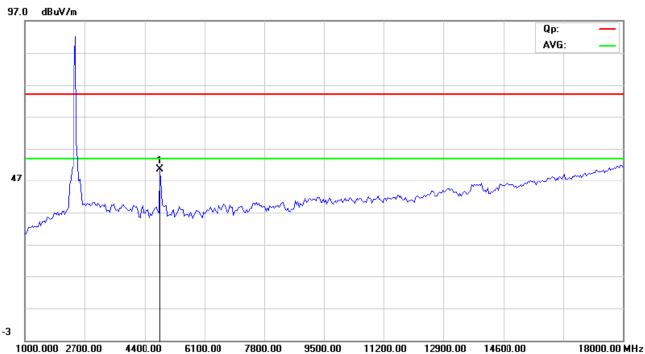
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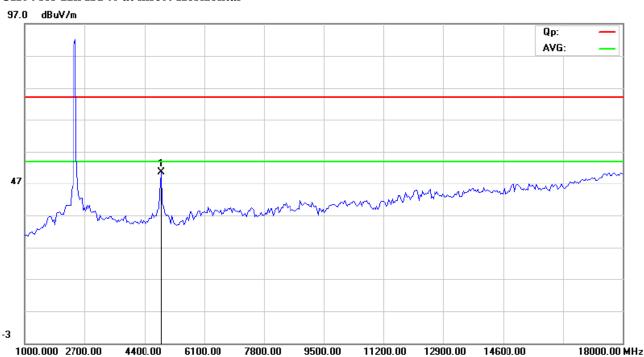
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CH04 for 11n HT40 at msc0: Vertical



CH04 for 11n HT40 at msc0: Horizontal



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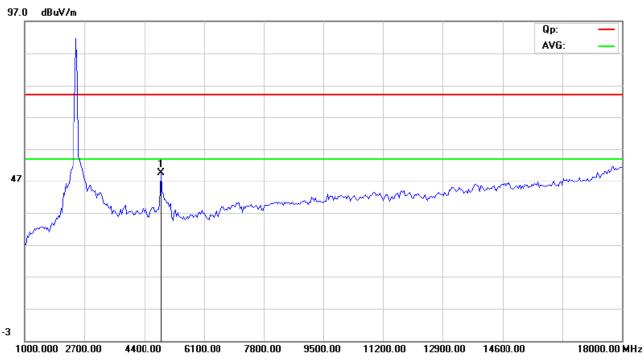
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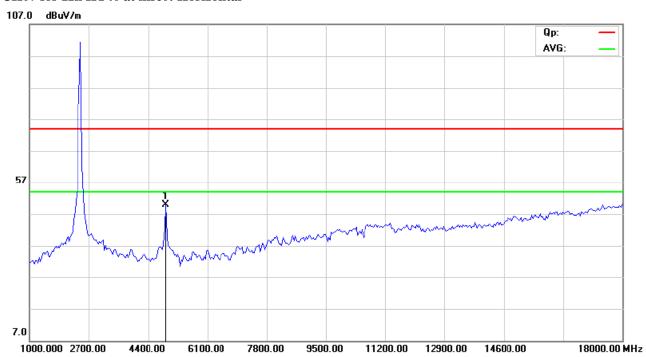
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CH07 for 11n HT40 at msc0: Vertical



CH07 for 11n HT40 at msc0: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

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adopt any other remedies which may be appropriate.

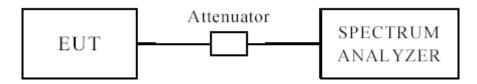
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7.0 6dB Bandwidth Measurement

7.1 Test Setup



7.2 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is >500 kHz

7.3 Test Procedure

- 1. Set resolution bandwidth (RBW) = 100 kHz
- 2. Set the video bandwidth $(VBW) \ge 3 \times RBW$.
- 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) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

7.4 Test Result

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6dB Occupied Bandwidth

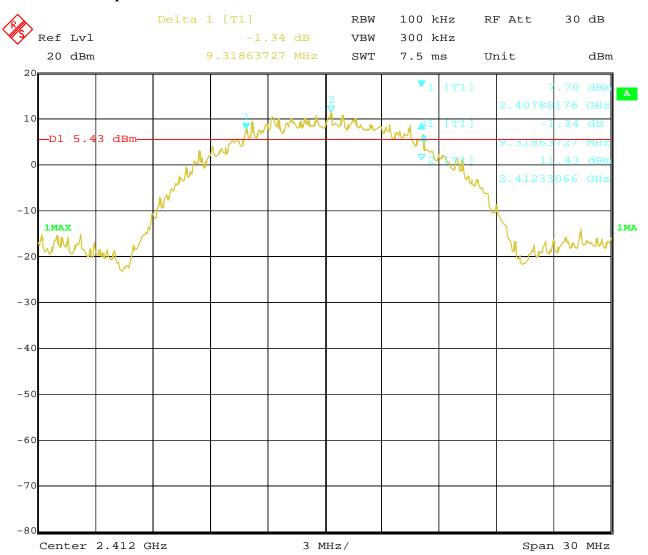
EUT	EUT Advertising Displayer		Model		JAR215			
Mode		8	302.11b		Input Vol	Input Voltage 120		0V~
Temperat	ure	24	4 deg. C,		Humidity	,	56%	6 RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)		Pass/ Fail
1		2412	11	9.32			0.5	Pass
6		2437	11	9.32			0.5	Pass
11		2462	11	9.	9.32		0.5	Pass
1		2412	1	10.04		10.04 0.		Pass
6		2437	1	10.04			0.5	Pass
11		2462	1	10	.04		0.5	Pass

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1. 802.11b at 11Mbps of CH01

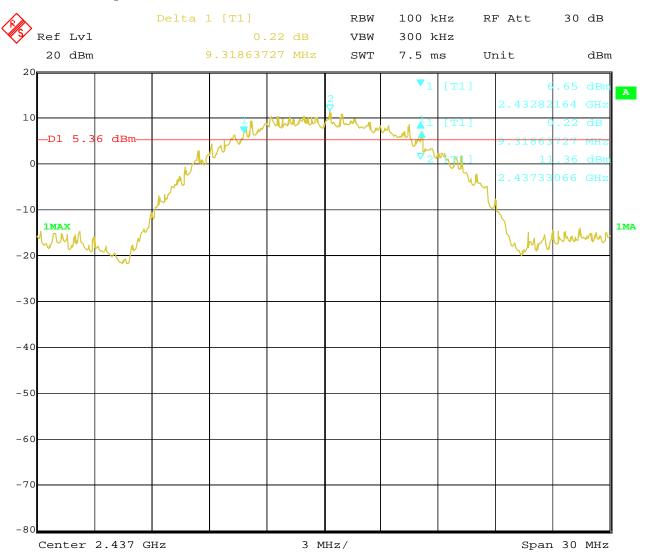


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2. 802.11b at 11Mbps of CH06

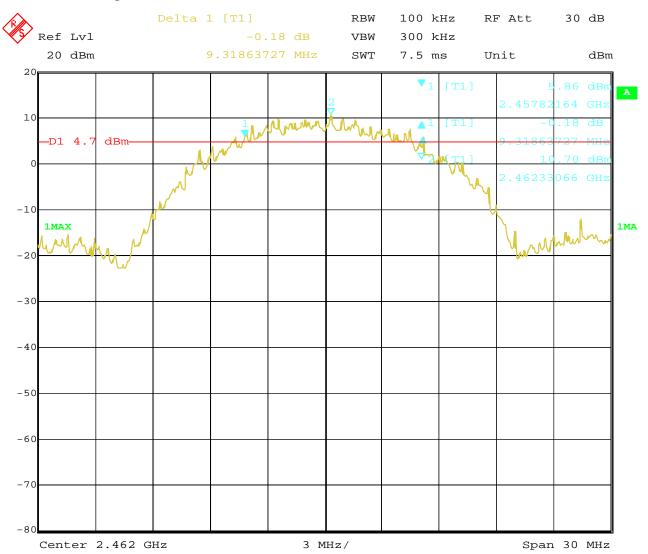


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3. 802.11b at 11Mbps of CH11

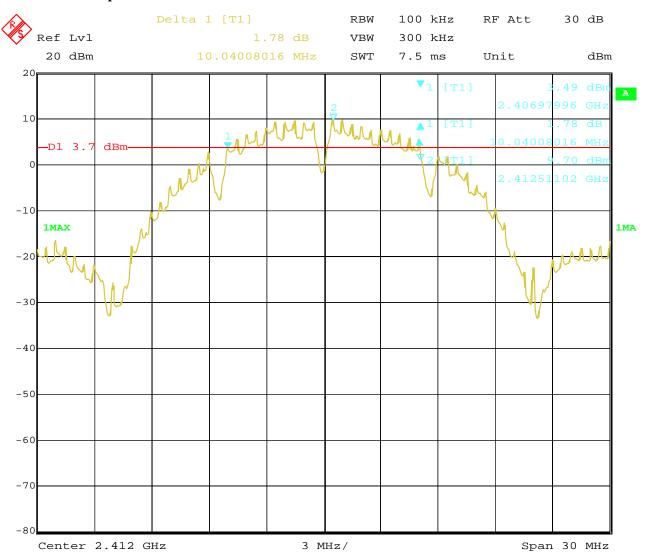


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4. 802.11b at 1Mbps of CH01

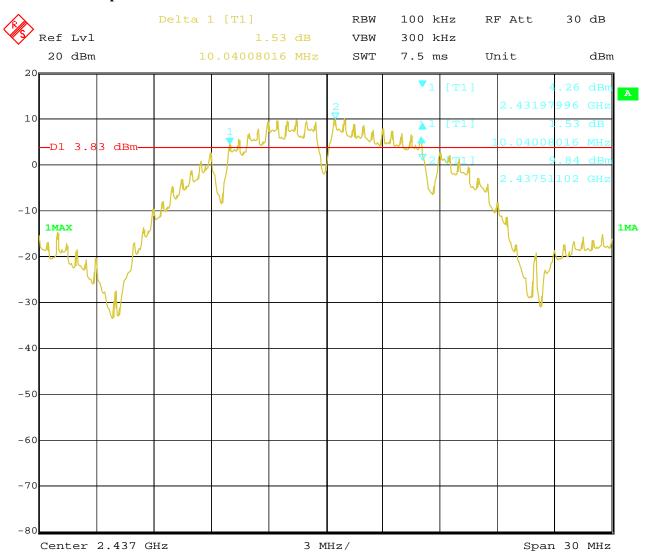


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5. 802.11b at 1Mbps of CH06

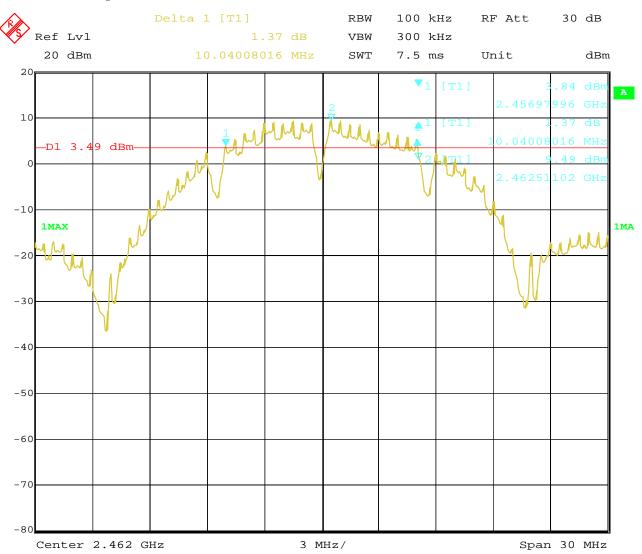


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6. 802.11b at 1Mbps of CH11



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6dB Occupied Bandwidth

EUT		Adverti	Advertising Displayer Model		Model JAR215		AR215	
Mode		8	302.11g		Input Vol	tage		120V~
Temperat	ure	24	4 deg. C,		Humidity	,	5	6% RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		andwidth Hz)	Minimum Limit (MHz) Pass/		Pass/ Fail
1		2412	6	16	5.41	41		Pass
6		2437	6	16.41			0.5	Pass
11		2462	6	16.41			0.5	Pass

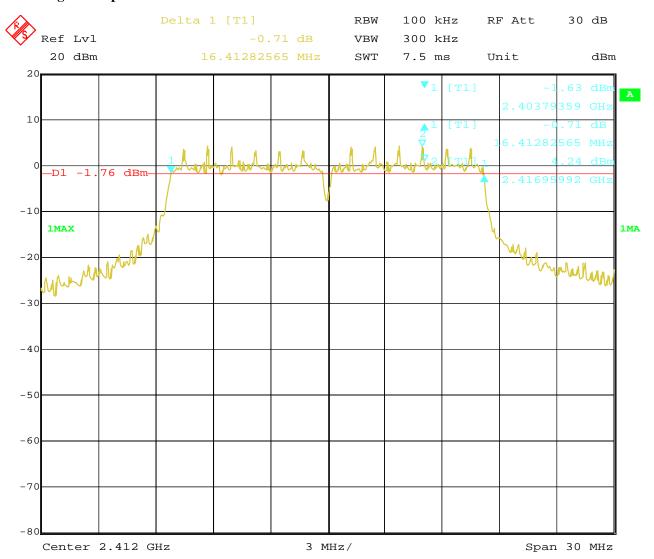
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Test Plots:

1. 802.11g at 6Mbps of CH01

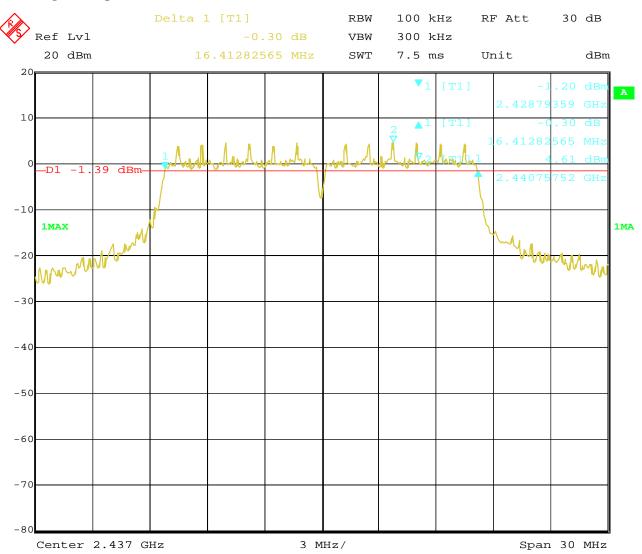


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2. 802.11g at 6Mbps of CH06

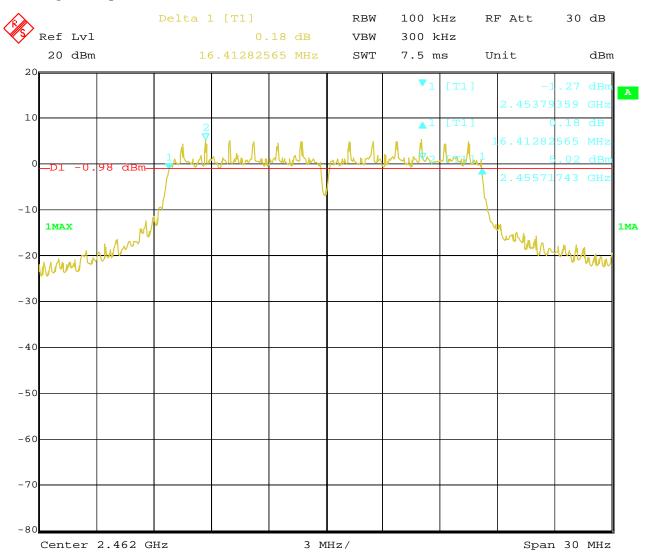


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3. 802.11g at 6Mbps of CH11



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6dB Occupied Bandwidth

EUT	Advertising Displayer Model JAR215		Advertising Displayer Model		R215			
Mode		802	.11n HT20		Input Vol	tage	12	0V~
Temperat	ure	24	4 deg. C,		Humidity		56%	6 RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		ndwidth Hz)			Pass/ Fail
1		2412	mcs0	17	.56		0.5	Pass
6		2437	mcs0	17.56			0.5	Pass
11		2462	mcs0	17	.56		0.5	Pass

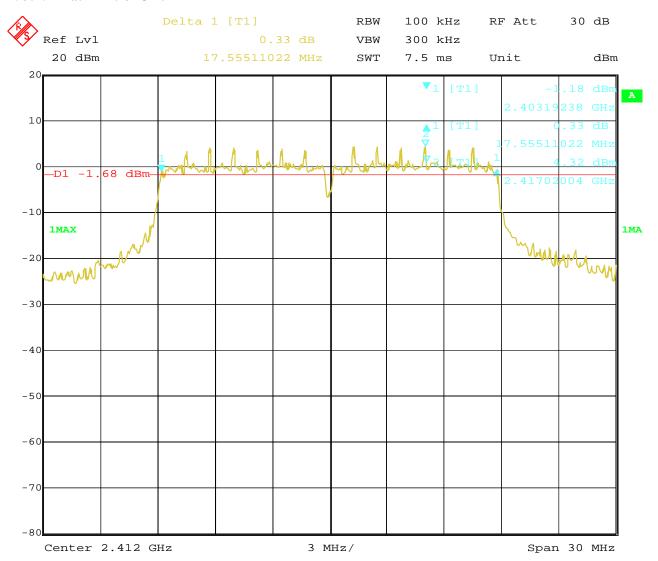
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Test Plots:

1. 802.11n at HT20 of CH01

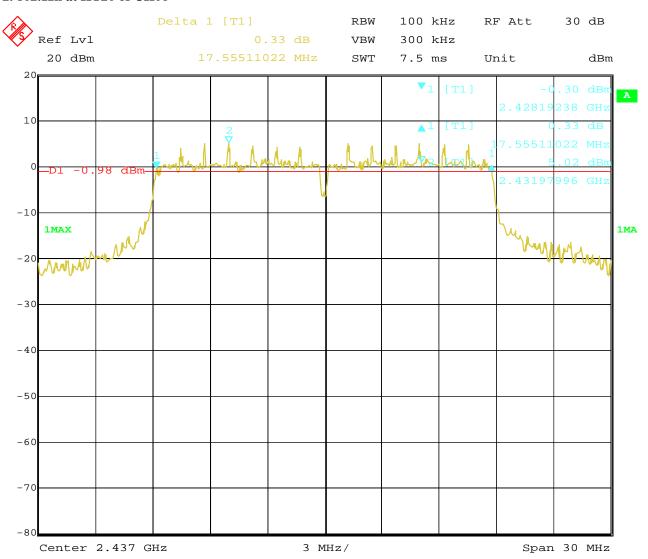


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2. 802.11n at HT20 of CH06

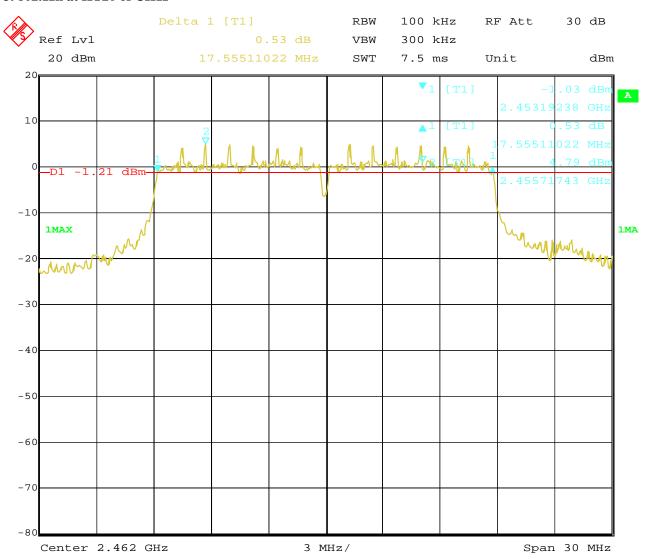


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3. 802.11n at HT20 of CH11



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6dB Occupied Bandwidth

EUT		Advertising Displayer			Model		JAR215	
Mode		802.11n HT40			Input Voltage		120V~	
Temperature		24 deg. C,			Humidity		56% RH	
Channel	Channel Frequency (MHz)		Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)		Pass/ Fail
1	2422		mcs0	35.39		0.5		Pass
4		2437	mcs0	35.39		0.5		Pass
7		2452	mcs0	35.39		0.5		Pass

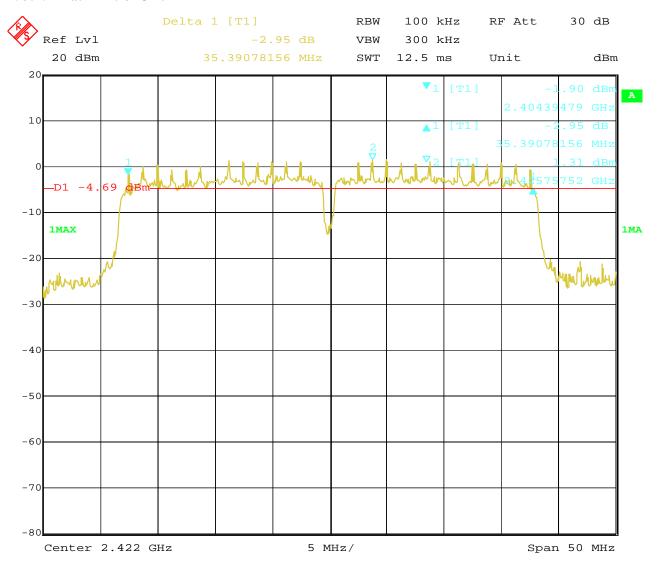
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Test Plots:

1. 802.11n at HT40 of CH01

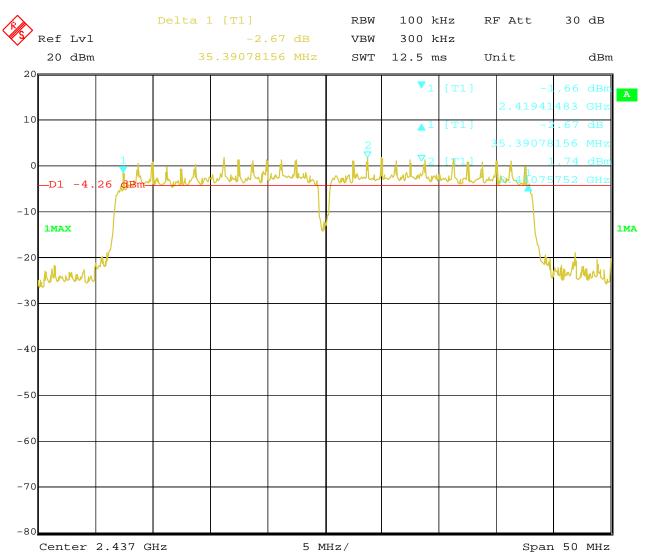


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2. 802.11n at HT40 of CH04

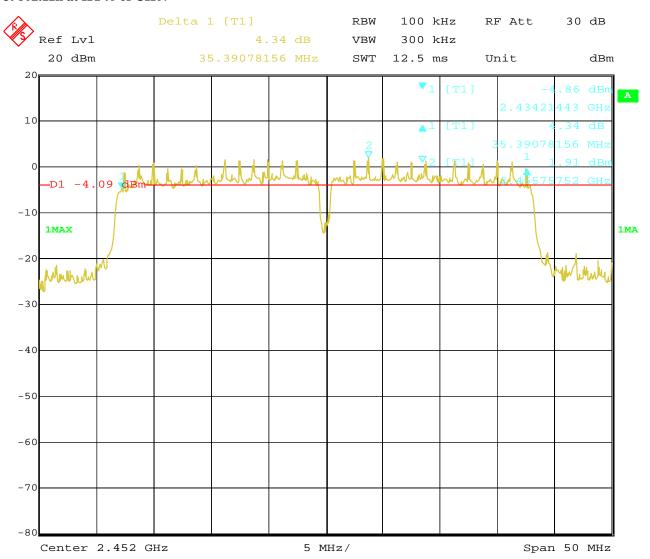


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3. 802.11n at HT40 of CH07



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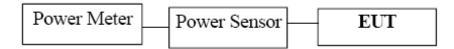
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8. Maximum Output Power

8.1 Test Setup



8.2 Limits of Maximum Output Power

The Maximum Output Power Measurement is 30dBm.

8.3 Test Procedure

The RF power output was measured with a Power meter connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate centre frequency.

Note: Peak power was measured

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8.4Test Results

EUT		Advertising	Displayer	Model		JAR215	
Mode	Mode 802.1		Ilb Input		Voltage		120V~
Temperat	ure	24 deg	24 deg. C, Humidity			56% RH	
Channel	Cha	annel Frequency (MHz)	Max. Power (dBm) Peak	Output	Power Limit (dBm)		Pass/ Fail
1		2412	22.70		30		Pass
6		2437	22.71		30		Pass
11		2462	22.78	•	30		Pass

Note: 1. At finial test to get the worst-case emission at 1Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Max. Power Output = Power Reading + Cable loss + Attenuator

3. The worse case was recorded

EUT		Advertising Displayer		Model		JAR215	
Mode		802.1	1g	Input Voltage		120V~	
Temperat	rature 24 deg. C, Humidity		nidity	56% RH			
Channel	Ch	annel Frequency (MHz)	Max. Power C (dBm) Peak	Output	Power Limit (dBm)		Pass/ Fail
1		2412	20.81		30		Pass
6		2437	20.93		30		Pass
11		2462	21.15		30		Pass

Note: 1. At finial test to get the worst-case emission at 6Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Max. Power Output = Power Reading + Cable loss + Attenuator

3. The worse case was recorded

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EUT		Advertising	Displayer Mo		odel		JAR215	
Mode	Tode 802.11n (HT20)		(HT20)	Input Voltage			120V~	
Temperati	ure	24 deg	g. C,	Hur	nidity		56% RH	
Channel			Max. Power (dBm)	Power			Pass/ Fail	
		(MHz)	Peak		(dBm)			
1		2412 20.71			30		Pass	
6		2437	21.25		30		Pass	
11		2462	21.35		30		Pass	

Note: 1. At finial test to get the worst-case emission at msc0 of 11n HT20 for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Max. Power Output = Power Reading + Cable loss + Attenuator

3. The worse case was recorded

EUT		Advertising	Displayer	Model		JAR215	
Mode	Mode 802.11n (F		(HT40) Input Voltage		Voltage	120V~	
Temperat	perature 24 deg. C, Humidity		56% RH				
Channel	Channel Frequency (MHz)		Max. Power (dBm)	Power (dB		1 455/ 1 411	
		()	Peak		(02111)		
1		2422	20.98	•	30		Pass
4		2437	20.91		30		Pass
7		2452	20.92		30		Pass

Note: 1. At finial test to get the worst-case emission at msc0 of 11n HT40 for CH01, CH04 and CH07

2. The result basic equation calculation as follow:

Max. Power Output = Power Reading + Cable loss + Attenuator

3. The worse case was recorded

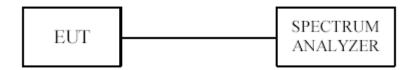
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9. Power Spectral Density Measurement

9.1 Test Setup



9.2 Limits of Power Spectral Density Measurement

The Maximum Power Spectral Density Measurement is 8dBm.

9.3 Test Procedure

- 1. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
- 2. Set the RBW = 10 kHz.
- 3. Set the VBW \geq 30 kHz.
- 4. Set the span to 1.5 times the DTS channel bandwidth.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.
- 11. The resulting peak PSD level must be ≤ 8 dBm.

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9.4Test Result

EUT		Advertising	Displayer Model		JAR215		
Mode	Mode 802.11b 1		1Mbps Input V		Voltage		120V~
Temperati	ure	24 deg	g. C,	Hur	nidity		56% RH
Channel	Cha	annel Frequency	Final RF Po	wer	Maximu	n Limit	Pass/ Fail
Chamici		(MHz)	Level in (dl	3m)	(dB	m)	
11Mbps							
1		2412	0.30		8		Pass
6		2437	0.55		8		Pass
11		2462	0.23		8		Pass
			1Mbps				
1		2412	0.39		8		Pass
6		2437	0.00		8		Pass
11		2462	-0.39		8		Pass

EUT	EUT Advertising I		Displayer Model		odel	JAR215	
Mode	Mode 802.11g 6Mbps		6Mbps	Input Voltage		120V~	
Temperat	ure	24 deg	g. C,	Hur	nidity		56% RH
Channel	Channel Frequency		Final RF Power		Maximum Limit		Pass/ Fail
Chamiei		(MHz)	Level in (dBm)		(dBm)		
			6Mbps				
1		2412	-6.48		8		Pass
6		2437	-6.58		8		Pass
11		2462	-5.30		8		Pass

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EUT	EUT Advertising I		Displayer Model		odel	JAR215	
Mode	Mode 802.11n HT20 ms		720 msc0	Input Voltage		120V~	
Temperat	ure	24 deg. C, Humidity			56% RH		
Channel	Channel Frequency		Final RF Power		Maximum Limit		Pass/ Fail
Channel		(MHz)	Level (dBm)		(dBm)		
			HT20				
1		2412	-4.79		8		Pass
6		2437	-5.21		8		Pass
11		2462 -6.34			8		Pass

EUT	EUT Advertising l		Displayer Mode		odel		JAR215
Mode	Mode 802.11n HT40 msc0 Inp		Input Voltage		120V~		
Temperati	ure	24 deg	g. C,	Hur	midity		56% RH
Channel	Channel Frequency		Final RF Power		Maximum Limit		Pass/ Fail
Chamilei		(MHz)	Level (dBm)		(dBm)		
			HT40				
1		2422	-8.76		8		Pass
4		2437	-8.45		8		Pass
7		2452	-8.06		8		Pass

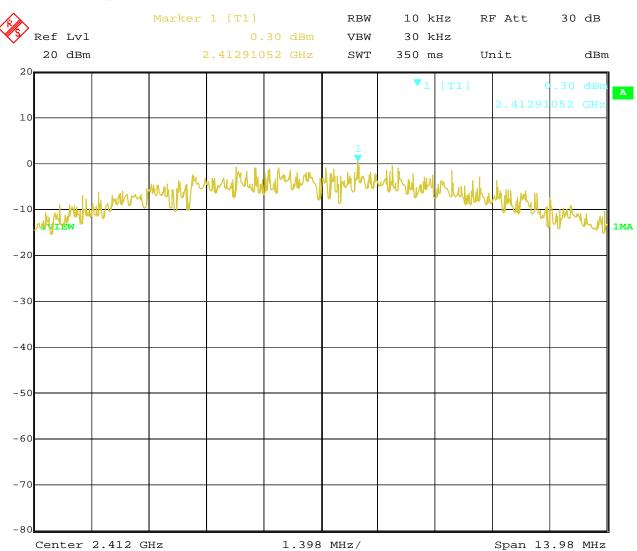
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9.5 Photo of Power Spectral Density Measurement

1. 802.11b at 11Mbps of CH1

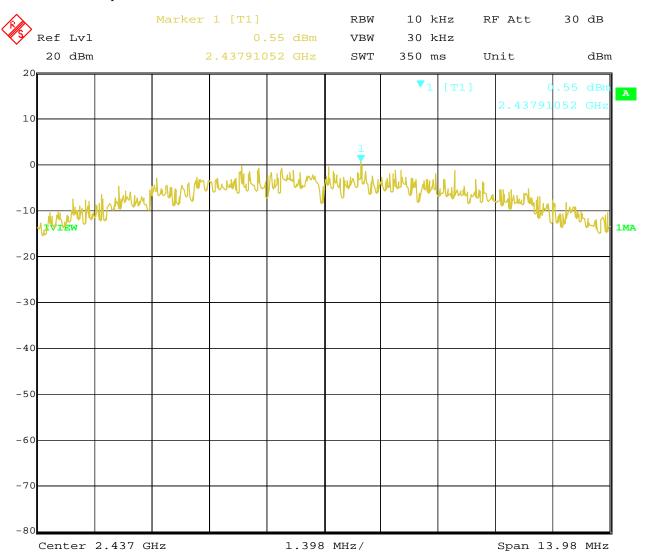


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2. 802.11b at 11Mbps of CH6

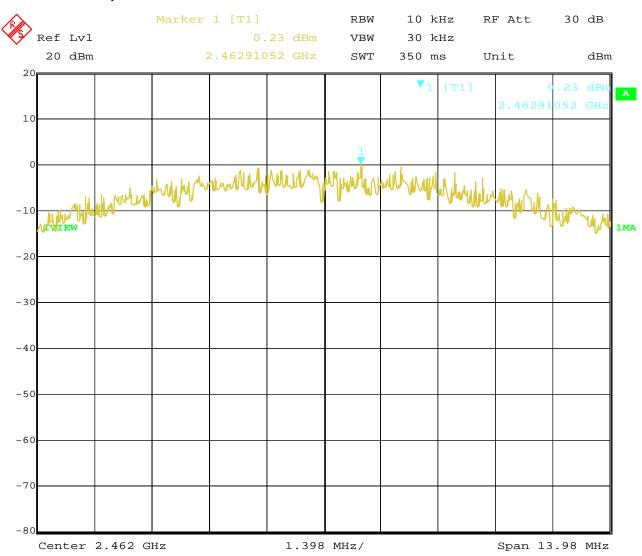


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3. 802.11b at 11Mbps of CH11

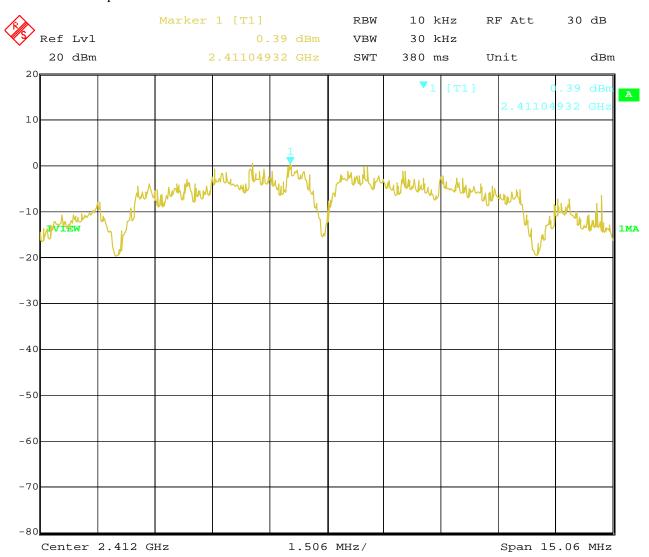


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4. 802.11b at 1Mbps of CH1

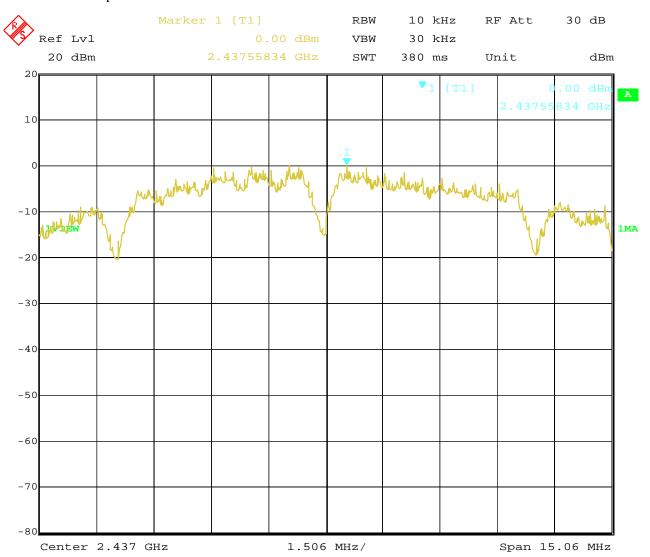


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5. 802.11b at 1Mbps of CH6

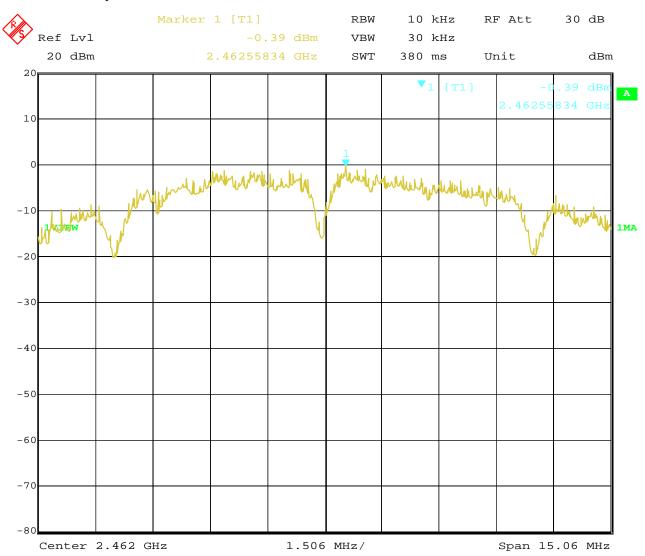


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6. 802.11b at 1Mbps of CH11

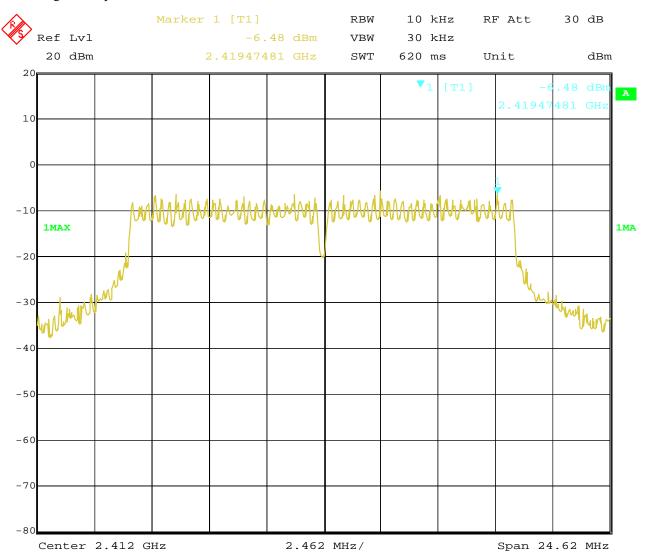


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7. 802.11g at 6Mbps of CH1

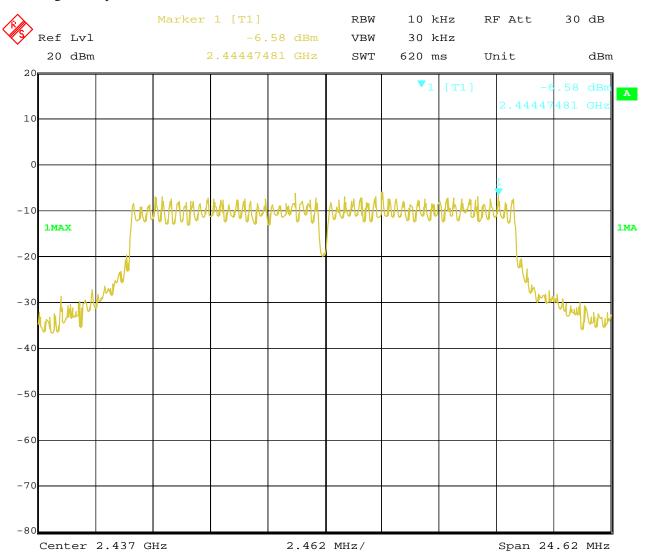


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8. 802.11g at 6Mbps of CH6

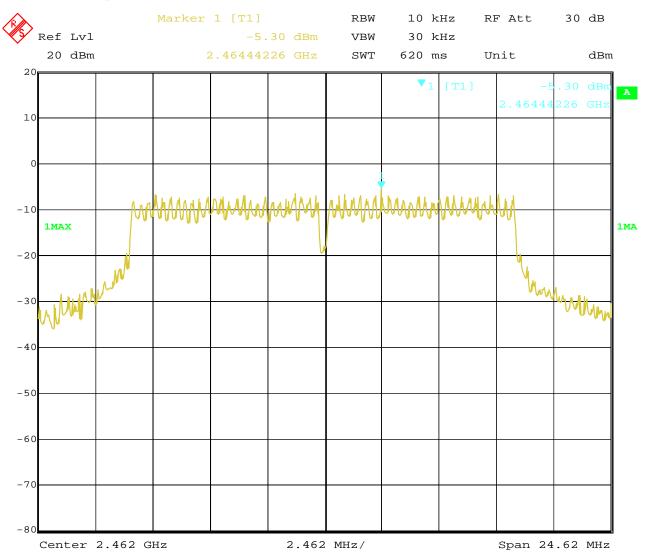


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9. 802.11g at 6Mbps of CH11

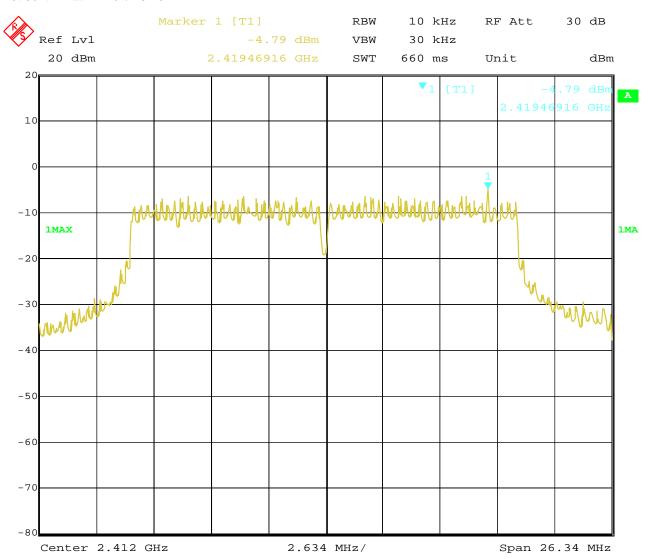


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10. 802.11n at HT20 of CH01

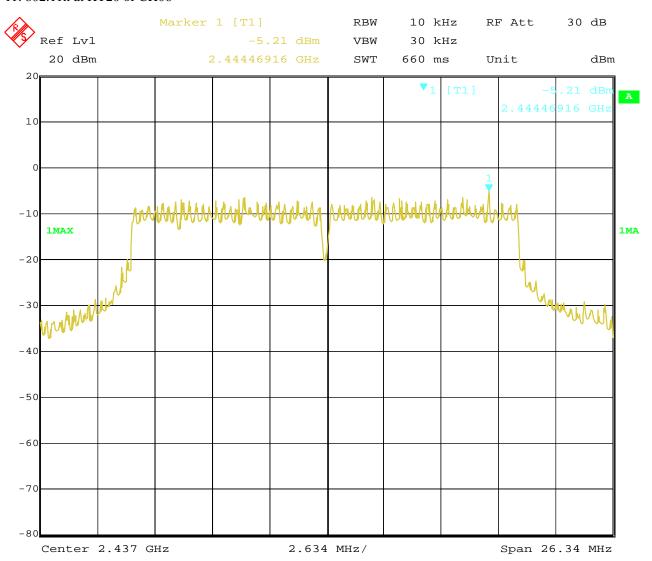


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11. 802.11n at HT20 of CH06

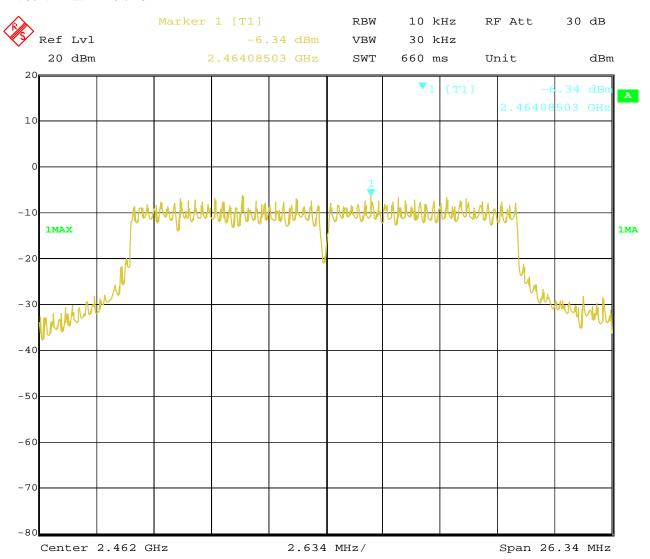


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12. 802.11n at HT20 of CH11

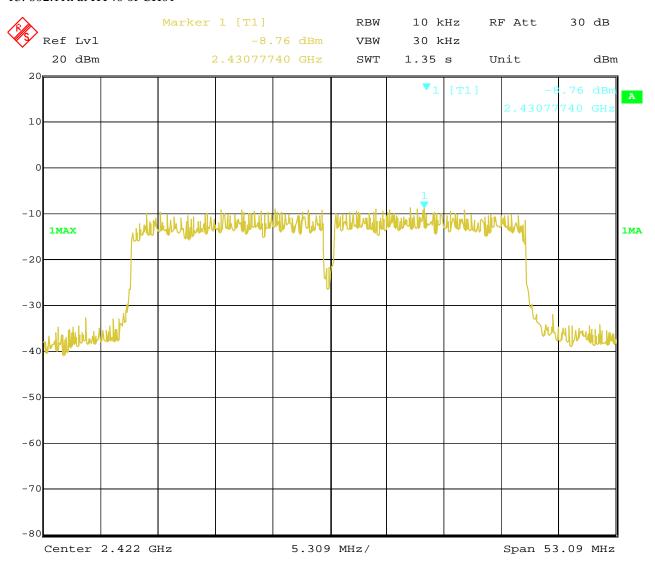


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13. 802.11n at HT40 of CH01

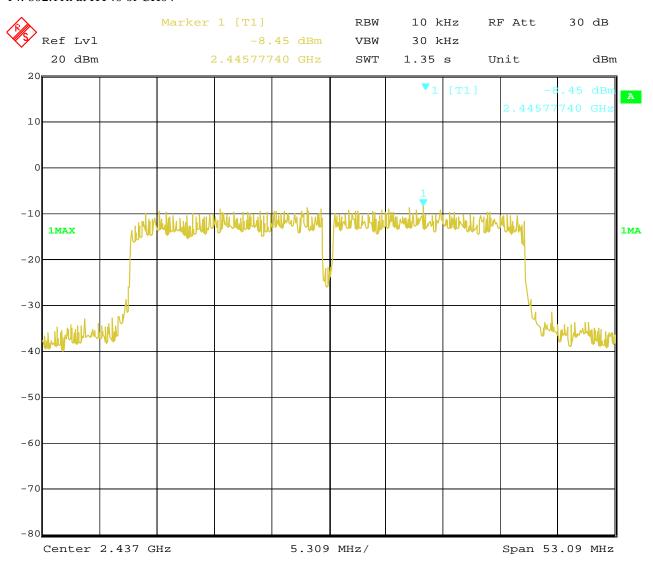


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14. 802.11n at HT40 of CH04

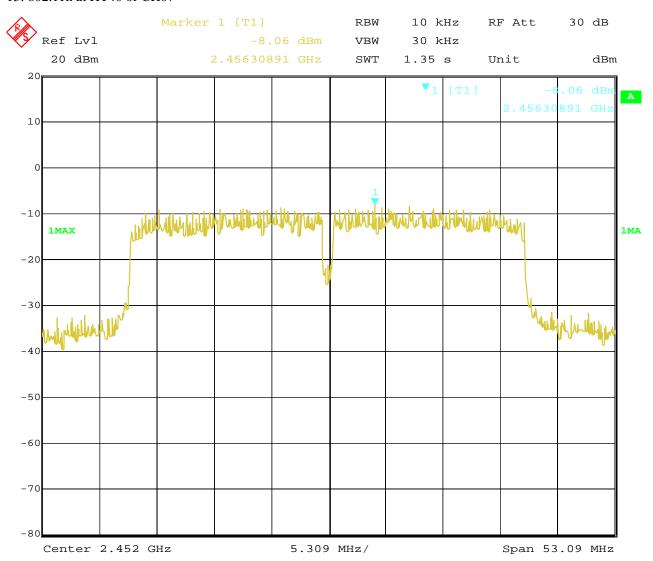


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15. 802.11n at HT40 of CH07



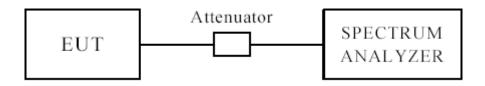
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10 Out of Band Measurement 10.1 Test Setup for band edge



The restricted band requirement based on radiated emission test; please see the clause 6 for the test setup

10.2 Limits of Out of Band Emissions Measurement

- 1. Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).
- 2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

10.3 Test Procedure

For signals in the restricted bands above and below the 2.4-2.483GHz allocated band a measurement was made of radiated emission test.(Peak values with RBW=VBW=1MHz and PK detector. AV value with RMS detector)

For bandage test, the spectrum set as follows: RBW=100 kHz, VBW=300 kHz. A conducted measurement used

10.4 Test Result

Please see next pages

Note: For band-edge measurement, the frequency from 30MHz-25GHz was tested. And It met the FCC rule.

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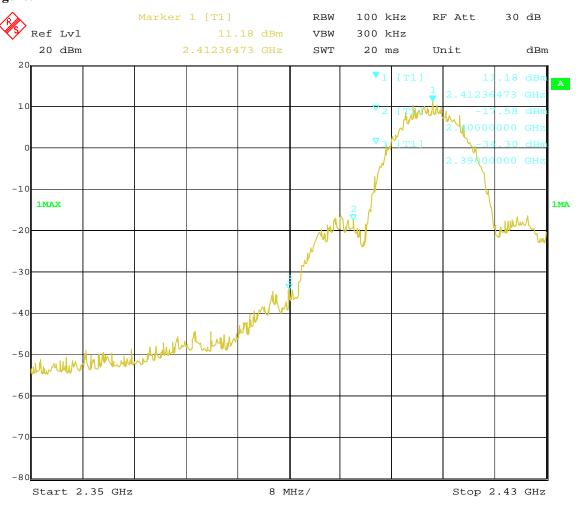
For 802.11b mode

CH01 at 11Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	JAR215
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBµV/m)	67.5	Limit	$74(dB\mu V/m)$
	AV ($dB\mu V/m$)	47.8	Limit	$54(dB\mu V/m)$
2390	PK (dBµV/m)	51.6	Limit	$74(dB\mu V/m)$
	AV ($dB\mu V/m$)	30.8	Lillit	$54(dB\mu V/m)$

Test Figure:



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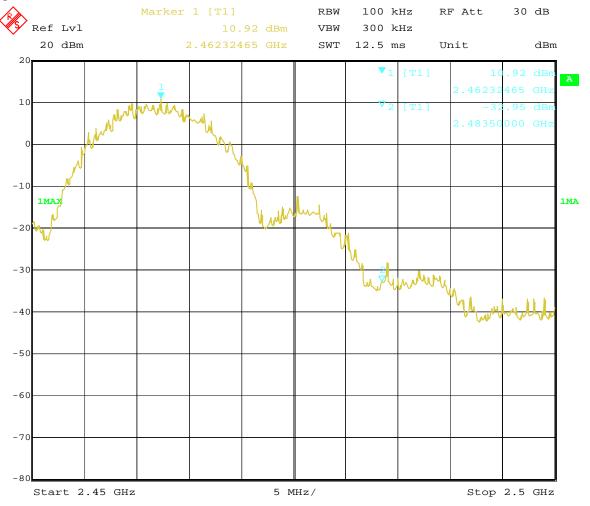


CH11 at 11Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	JAR215
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:		Pass	Detector	PK
2483.5	PK (dBµV/m)	57.2	T,	$74(dB\mu V/m)$
	AV (dBμV/m)	38.0	Limit	54(dBμV/m)

Test Figure:



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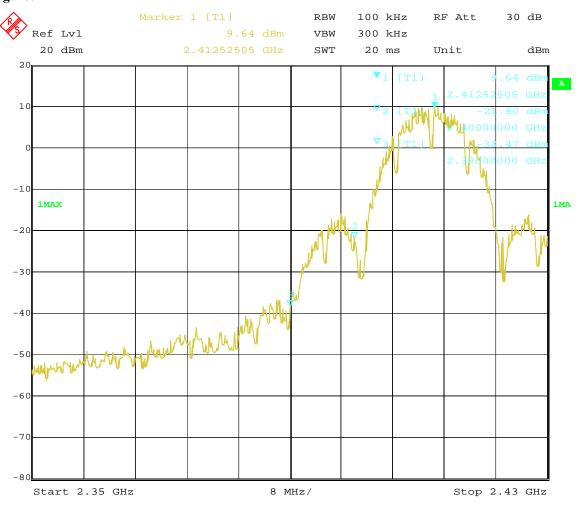
For 802.11b mode

CH01 at 1Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	JAR215
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBµV/m)	65.9	T imais	$74(dB\mu V/m)$
	AV ($dB\mu V/m$)	45.1	Limit	$54(dB\mu V/m)$
2390	PK (dBµV/m)	49.9	Limit	$74(dB\mu V/m)$
	AV $(dB\mu V/m)$		Lillit	$54(dB\mu V/m)$

Test Figure:



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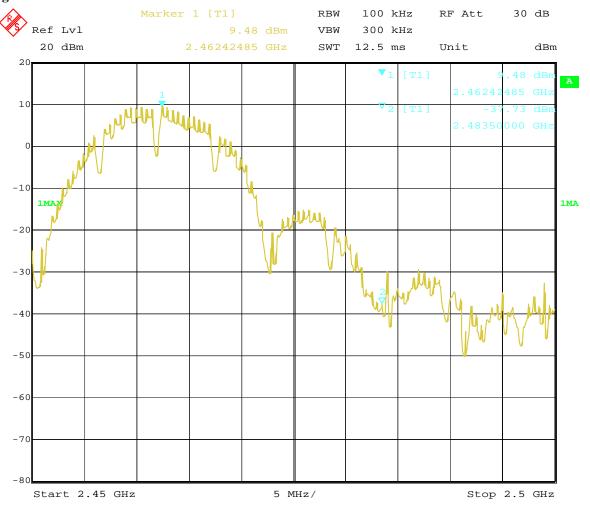


CH11 at 1Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	JAR215
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:		Pass	Detector	PK
2483.5	PK (dBµV/m)	56.7	T * **	$74(dB\mu V/m)$
	AV ($dB\mu V/m$)	37.2	Limit	54(dBμV/m)

Test Figure:



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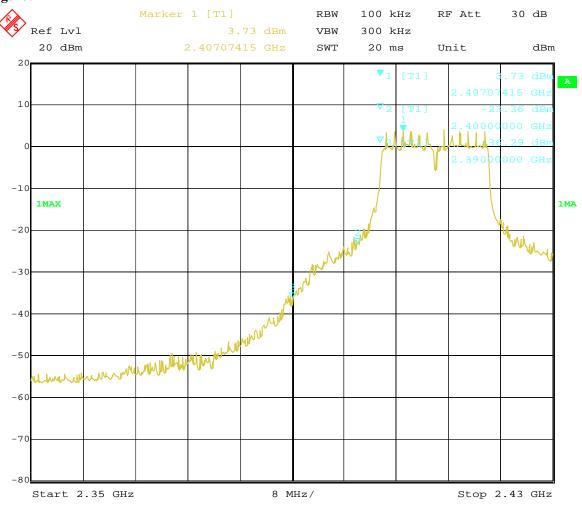
For 802.11g mode

CH01 at 6Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	JAR215
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBμV/m)	69.3	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)	49.5	Lillit	54(dBµV/m)
2390	PK (dBµV/m)	57.8	Limit	74(dBµV/m)
	AV (dBμV/m)	37.6	Lillit	54(dBµV/m)

Test Figure:



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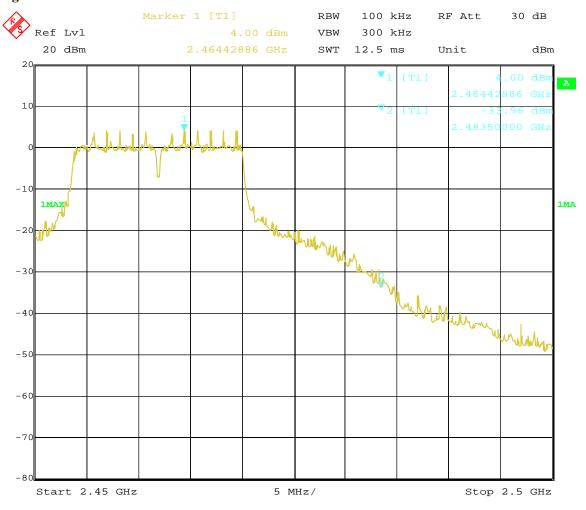


CH11 at 6Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Mod	lel	JAR215
Mode	Keeping Transmitting		Input Vo	oltage	120V~
Temperature	24 deg. C,		Humi	dity	56% RH
Test Result:	Pass		Detec	ctor	PK
2483.5	PK (dBµV/m)	60.5	T ::4	$74(dB\mu V/m)$ $54(dB\mu V/m)$	
	AV (dBμV/m)	40.3	Limit		

Test Figure:



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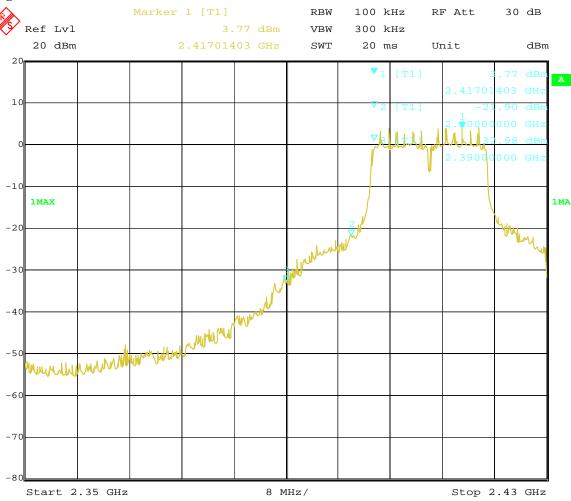
For 802.11n (HT20) mode

CH01 at msc0

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	JAR215
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBµV/m)	68.2	T ::4	$74(dB\mu V/m)$
	AV ($dB\mu V/m$)	48.9	Limit	$54(dB\mu V/m)$
2390	PK (dBµV/m)	60.2	Limit	74(dBμV/m)
	AV (dBμV/m)	39.8	Lillit	54(dBμV/m)

Test Figure:



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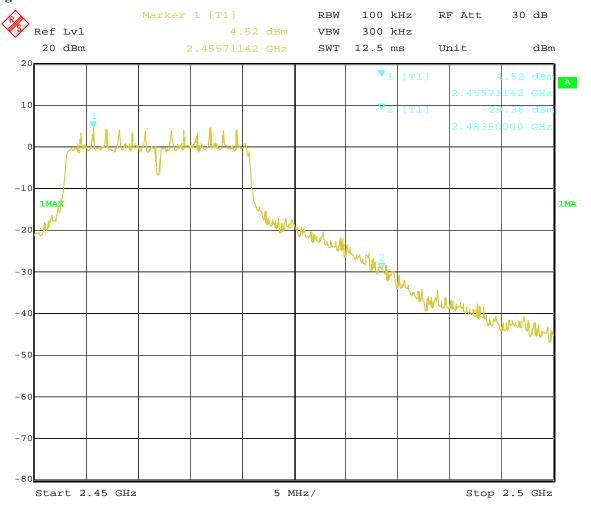


CH11 at msc0

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	JAR215
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBµV/m)	60.6	T * **	$74(dB\mu V/m)$
	AV ($dB\mu V/m$)	40.4	Limit	$54(dB\mu V/m)$

Test Figure:



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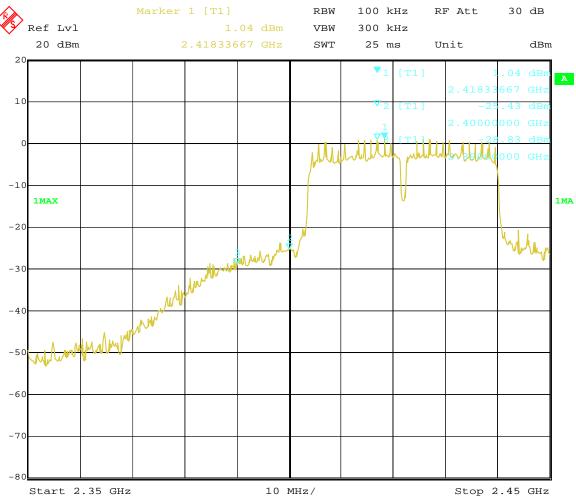
For 802.11n (HT40) mode

CH01 at msc0

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	JAR215
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:		Pass		PK
2400	PK (dBμV/m)	70.7	Timit	$74(dB\mu V/m)$
	AV (dBμV/m)	50.5	Limit	$54(dB\mu V/m)$
2390	PK (dBµV/m)	59.9	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)	40.5	Lillit	$54(dB\mu V/m)$

Test Figure:



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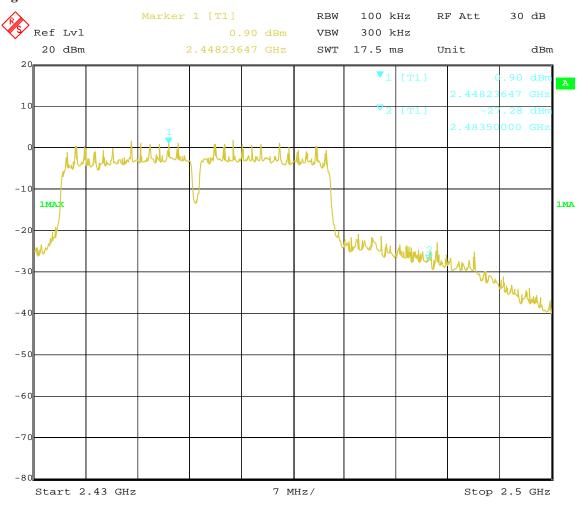


CH7 at msc0

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	JAR215
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBµV/m)	62.5	T * */	$74(dB\mu V/m)$
	AV (dBμV/m)	43.0	Limit	$54(dB\mu V/m)$

Test Figure:



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11.0 Antenna Requirement

11.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitter antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the mount in dB that the directional gain of the antenna exceeds 6 dBi.

11.2 Antenna Connected construction

Integral antenna used. The maximum Gain of the antennas is 2.0dBi.

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12.0 FCC ID Label

FCC ID: 2AACS-JAR141-215

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:



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13.0 Photo of testing

Conducted Emission Test Setup:



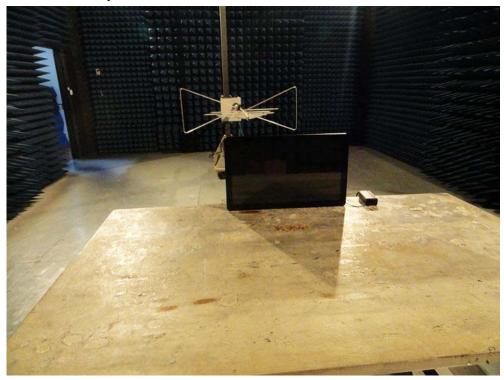
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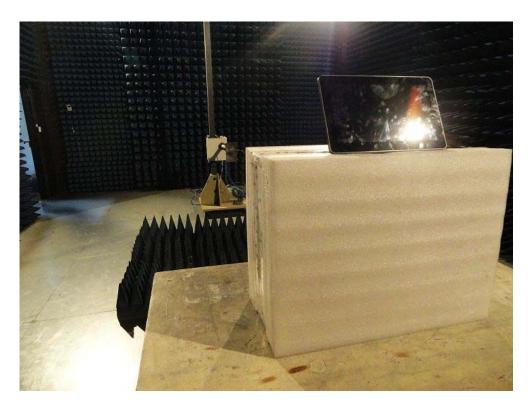
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Radiated Emission Test Setup:





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Photographs – EUT **Model No: JAR215**



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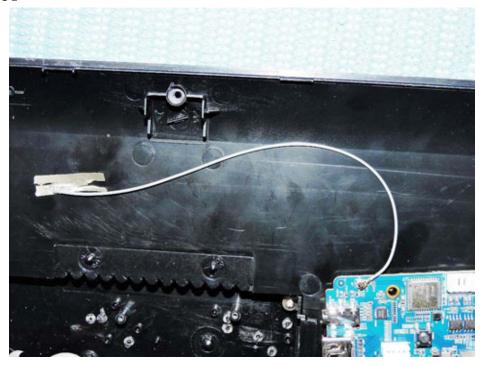
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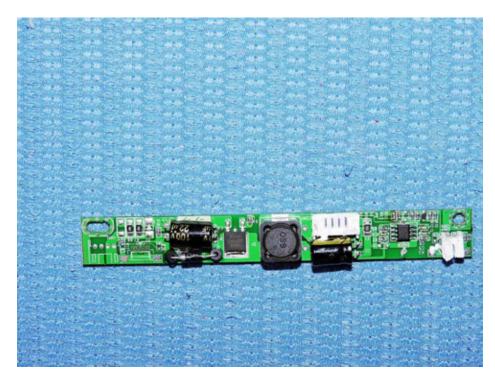
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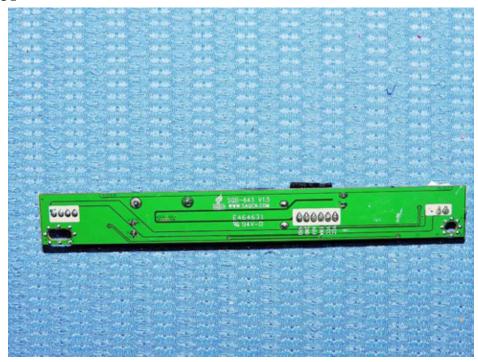
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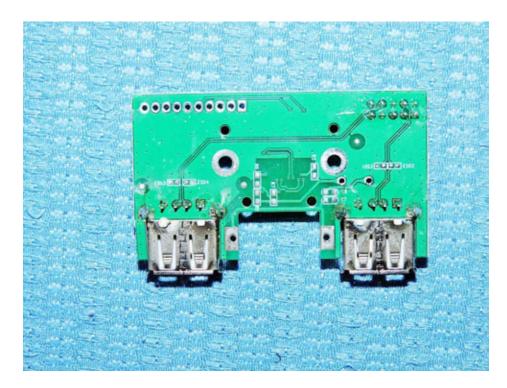
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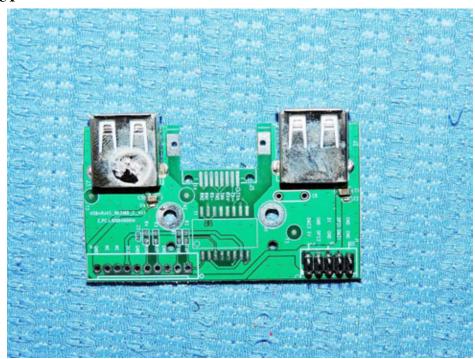
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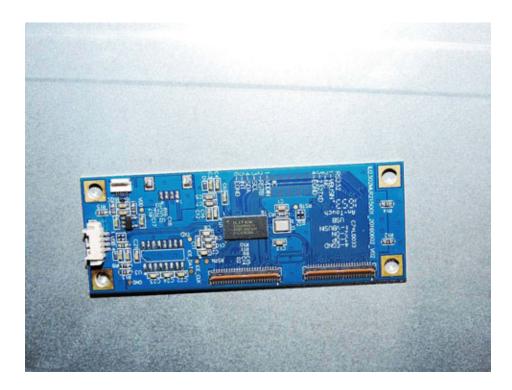
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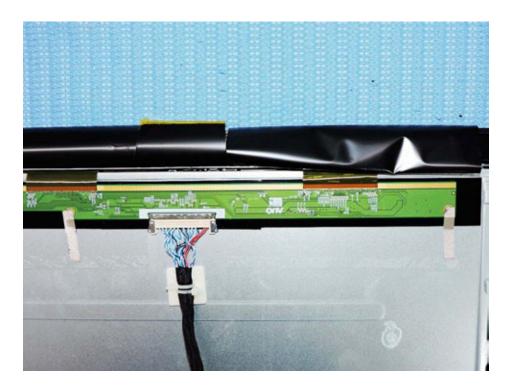
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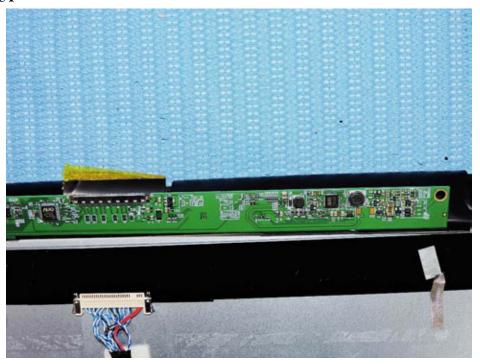
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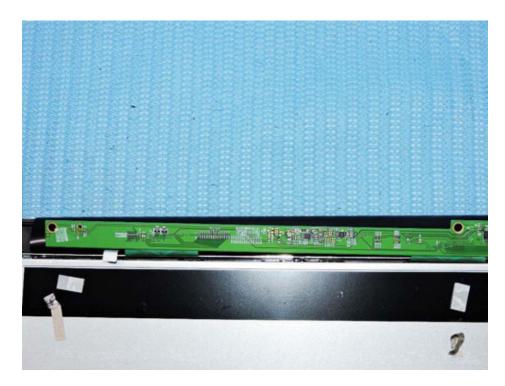
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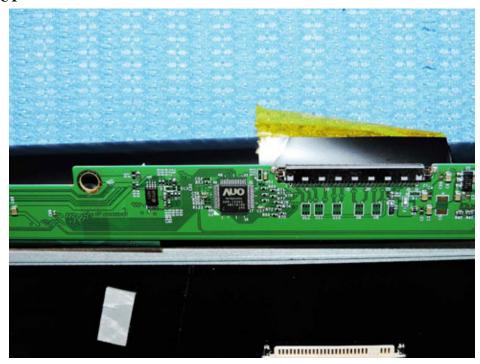
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Photos of EUT Model No: JAR141





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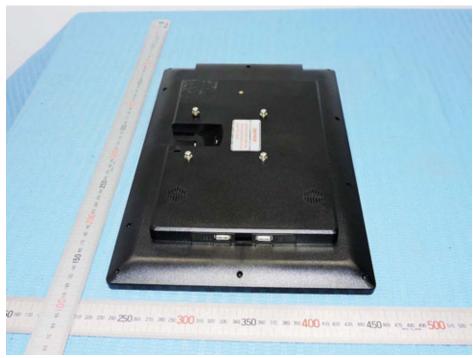
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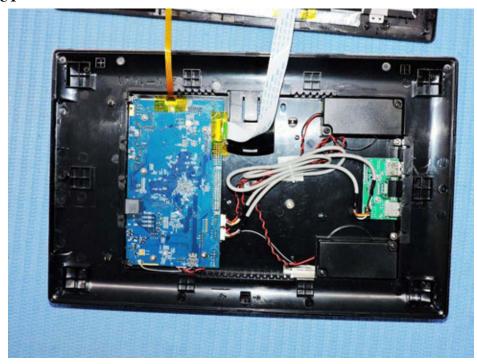


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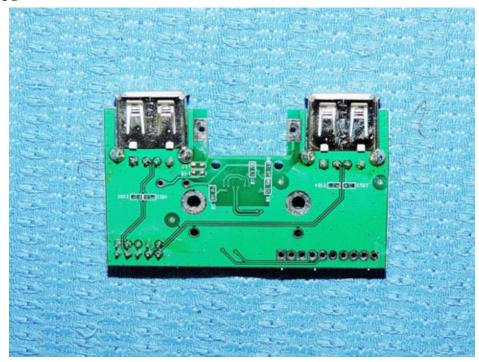
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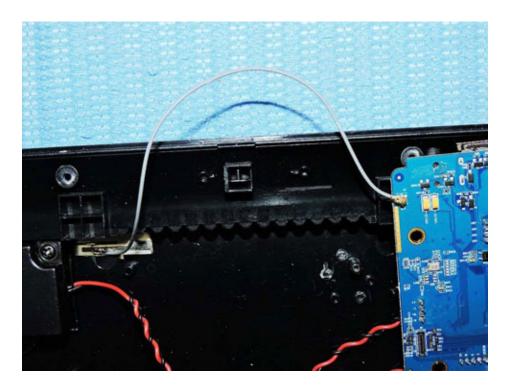
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Photos of EUT Model No: JAR156





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Photos of EUT





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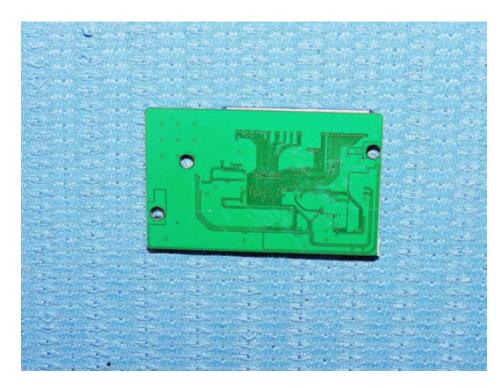
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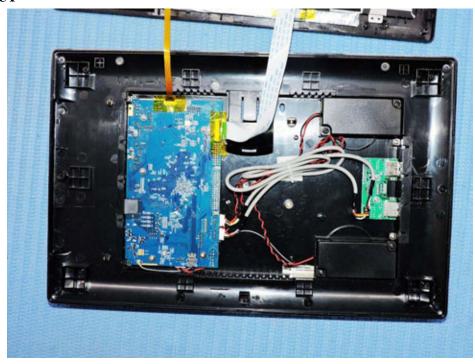
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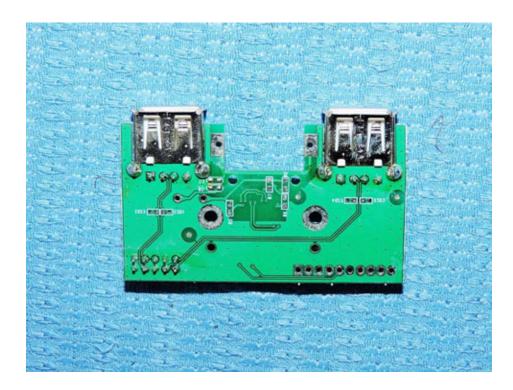
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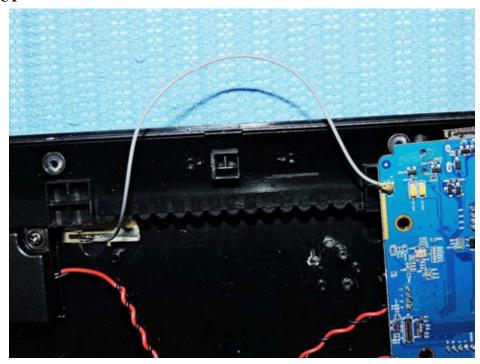




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Photos of EUT Model No: JAR185





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Photos of EUT





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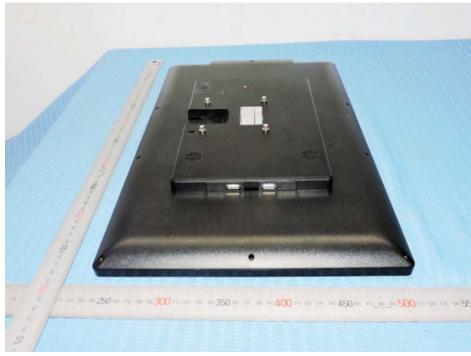
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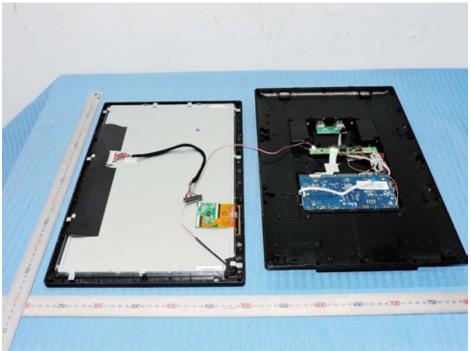
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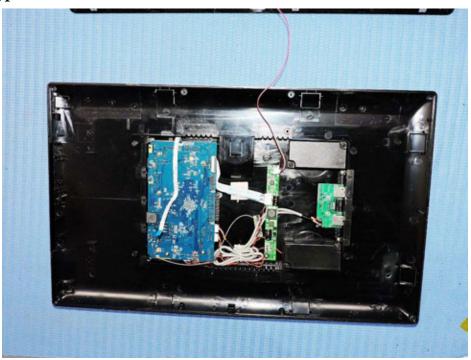


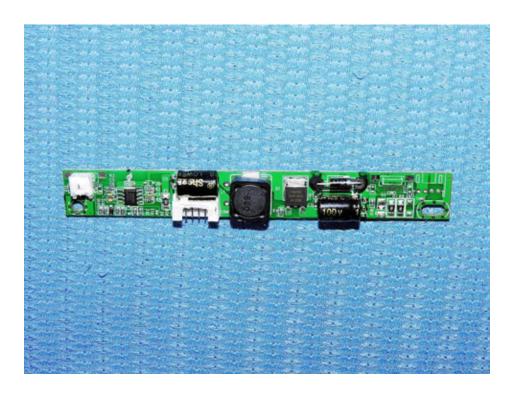
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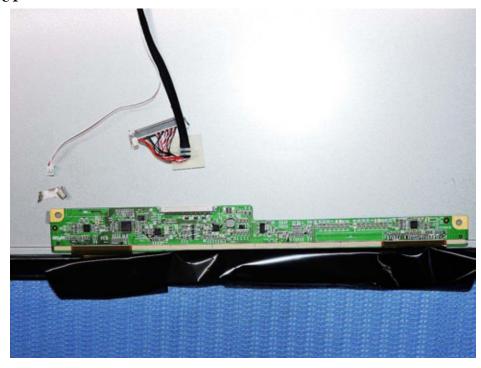
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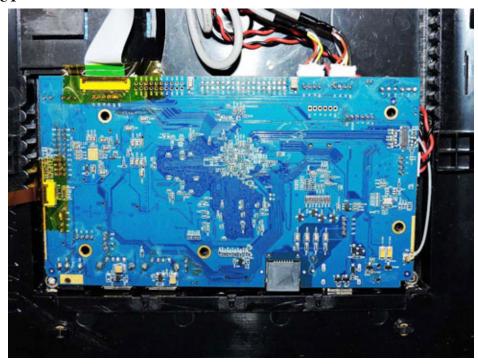
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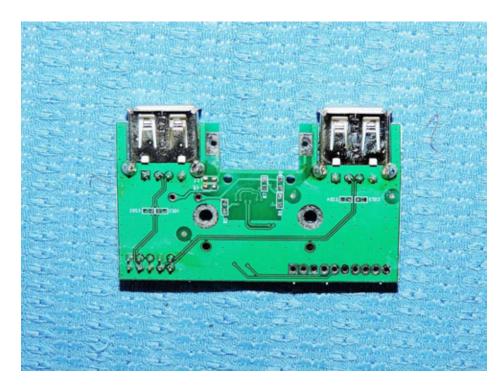
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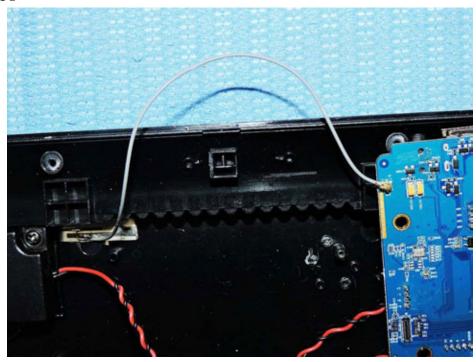
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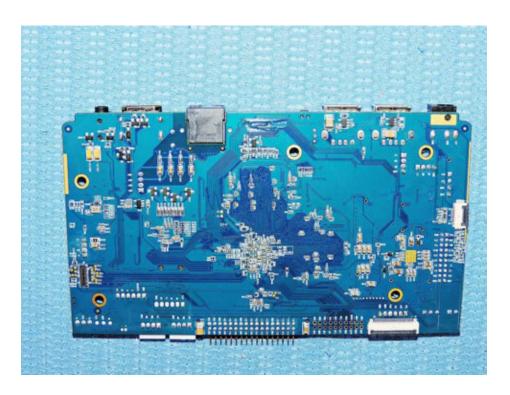
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Main Board





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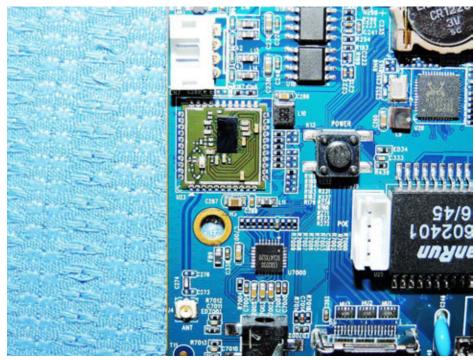
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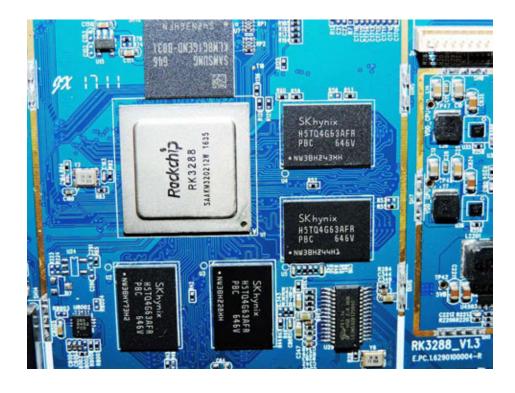
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Main Board





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Power Supply





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End of the report