

FCC TEST REPORT (15.247)

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MODEL NO.: TX201L

FCC ID: MSQ-TX201L

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ISSUED: Sep. 04, 2013

APPLICANT: ASUSTek COMPUTER INC.

ADDRESS: 4F., No. 150, LI-TE Rd., PEITOU, TAIPEI 112, TAIWAN

ISSUED BY: Bureau Veritas Consumer Products Services
(H.K.) Ltd., Taoyuan Branch

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist.,
New Taipei City, Taiwan (R.O.C)

TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF130729C17-1	Original release	Sep. 04, 2013

1. CERTIFICATION

PRODUCT: Notebook PC
MODEL NO.: TX201L
BRAND: ASUS
APPLICANT: ASUSTek COMPUTER INC.
TESTED: Aug. 02, 2013 ~ Aug. 27, 2013
TEST SAMPLE: Production Unit
STANDARDS: FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10-2009

The above equipment (model: TX201L) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Vera Huang , **DATE** : Sep. 04, 2013
Vera Huang / Specialist
APPROVED BY : Sam chen , **DATE** : Sep. 04, 2013
Sam Chen / Assistant Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -10.46dB at 0.20078MHz.
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -2.81dB at 3864MHz.
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used.

2.1 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	2.44 dB
Radiated emissions	30MHz ~ 200MHz	2.93 dB
	200MHz ~1000MHz	2.95 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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

<Pad>

EUT	Notebook PC
MODEL NO.	TX201L
POWER SUPPLY	5Vdc (adapter or host equipment) 3.75Vdc (battery)
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b:11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to MCS7
OPERATING FREQUENCY	2.4GHz: 2412 ~ 2462MHz 5.0GHz: 5745 ~ 5825MHz
NUMBER OF CHANNEL	2.4GHz: 11 for 802.11b, 802.11g, 802.11n (20MHz) 5.0GHz: 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
OUTPUT POWER	267.301mW for 2412 ~ 2462MHz 179.887mW for 5745 ~ 5825MHz
ANTENNA TYPE	2.4GHz: PIFA antenna with -2.71dBi gain 5GHz: PIFA antenna with 1.04dBi gain
ANTENNA CONNECTOR	NA
DATA CABLE	Refer to Note as below
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Refer to Note as below

<Base>

POWER SUPPLY	19Vdc (adapter) 7.54Vdc (battery)
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to MCS7 802.11ac: up to V9
OPERATING FREQUENCY	2.4GHz: 2412 ~ 2462MHz 5.0GHz: 5745 ~ 5825MHz
NUMBER OF CHANNEL	2.4GHz: 11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz) 5.0GHz: 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 1 for 802.11ac (80MHz)
ANTENNA TYPE	2.4GHz: PIFA antenna with -1.93dBi gain 5GHz: PIFA antenna with 1.37dBi gain
ANTENNA CONNECTOR	NA
DATA CABLE	Refer to Note as below
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Refer to Note as below

NOTE:

1. The EUT has following accessories.

<For Pad>

ITEM	BRAND	MODEL	DESCRIPTION
AC Adapter 1	ASUS	AD83531	I/P: 100-240Vac, 50-60Hz, 0.3A O/P: 5Vdc, 2A
AC Adapter 2	ASUS	AD835M1	I/P: 100-240Vac, 50-60Hz, 0.3A O/P: 5Vdc, 2A
Li-ion Battery	Dynapack International Technology Corp/ Trademark for ASUS	C11N1312	Rating: 3.75Vdc, 19Wh
USB cable	ASUS	N/A	0.9m shielded cable w/o ferrite core
Photo Camera	LITEON	13P2BA515	--
Video Camera	CHICONY	CNFDH3021003870LH	--
WLAN/BT Module	Broadcom	BCM43340	--
CPU	Intel	Z2560	760 Pin
Main Borad	ASUS	TX201LA PAD MAIN BOARD	--
LCD Panel 1	INNOLUX	N116HSE	--
LCD Panel 2	BOE	HN116WX1	--
Flash Memory 1	HYNIX	H9TKNNNBPDARAR- NGM	Co-POP LPDDR2 Memory 2G Support Dual 32-bit channels. 6.4GB/s @ 800MHz, 8.2GB/s @ 1066MHz.
Flash Memory 2	ELPIDA	EDB8164B3PD-1D-F	Co-POP LPDDR2 Memory 1G Support Dual 32-bit channels. 6.4GB/s @ 800MHz, 8.2GB/s @ 1066MHz.
eMMC 1	HYNIX	H26M64003DQR	eMMC 32G
eMMC 2	SANDISK	SDIN8DE4-32G	eMMC 16G

* Adapter 1 and adapter 2 have same design, material, and specification. The difference between them is adapter 2 could change plug type.

<For Base>

ITEM	BRAND	MODEL	DESCRIPTION
AC Adapter	ASUS	AD883J20	I/P: 100-240Vac, 50-60Hz, 1A O/P: 19Vdc, 2.37A 2.2m shielded cable w/o ferrite core
Li-ion Battery	Dynapack International Technology Corp/ Trademark for ASUS	C21N1313	Rating: 7.54Vdc, 33Wh
WLAN/BT Module	AZWAVE	AW-CB161H	--
USB to RJ45 Cable	ASUS	USB Ethernet cable	0.18m shielded cable w/o ferrite core Support 10Mbps and 100Mbps
MDP to VGA Cable	ASUS	N/A	0.12m shielded cable w/o ferrite core
CPU 1	Intel	i5-4200U	1168 Pin, 1.8GHz
CPU 2	Intel	i74500u	1168 Pin, 1.6GHz
Main Borad	ASUS	TX201LA BASE BOARD	--
Flash Memory 1	HYNIX	H5TC4G63AFR-PBA	Onboard 4G (256 x 16 x 8), 8G (512 x 16 x 8) 1600MHz DDR3L SDRAM
Flash Memory 2	ELPIDA	EDJ4216EFBG-GNL-F	Onboard 4G (256 x 16 x 8), 8G (512 x 16 x 8) 1600MHz DDR3L SDRAM
HDD 1	HGST	HTS545050A7E680	7mm HDD 320G/500G/750G 5400RPM
HDD 2	Seagate	ST500LT012	7mm HDD 320G/500G/750G 5400RPM

2. The configurations of the device are as below.

SKU 1 Pad: LCD Panel 1 + Flash Memory 1 + eMMC 1

SKU 2 Pad: LCD Panel 2 + Flash Memory 2 + eMMC 2

SKU 1 Base: CPU 1 + Flash Memory 1 + HDD 1

SKU 2 Base: CPU 2 + Flash Memory 2 + HDD 2

3. The EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
802.11b	1TX
802.11g	1TX
802.11a	1TX
802.11n (20MHz)	1TX
802.11n (40MHz)	1TX
802.11ac (80MHz) (for Base only)	1TX

4. The above EUT information is declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

FOR 2.4GHz:

11 channels are provided for 802.11b, 802.11g and 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

7 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
3	2422MHz	7	2442MHz
4	2427MHz	8	2447MHz
5	2432MHz	9	2452MHz
6	2437MHz		

FOR 5.0GHz:

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

2 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
155	5775MHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

TEST MODE		TX MODULE		TX ANTENNA	
		PAD	BASE	PAD	BASE
1	Pad	V	-	V	-
2	Pad + Base	V	-	V	-
3	Pad + Base	-	V	-	V

Note:

1. The EUT had been pre-tested on the positioned of each 3 axis for mode 1.
2. The above modes had been pre-tested, mode 1 and mode 3 were the worst cases and only these modes were presented in this report.

FOR 2.4GHz:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE $<$ 1G	PLC	APCM	
A	√	√	√	√	SKU 1 Pad
B	√	√	√	-	SKU 2 Pad
C	√	√	√	-	SKU 1 Pad + SKU 1 Base
D	√	√	√	-	SKU 2 Pad + SKU 2 Base

Where **RE $\geq$ 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 **Z-plane** for MODE A and **Y-plane** for MODE B.

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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	MCS0
B	802.11n (20MHz)	1 to 11	11	OFDM	BPSK	MCS0
C, D	802.11n (40MHz)	3 to 9	3	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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11g	1 to 11	6	OFDM	BPSK	6.0
B	802.11n (20MHz)	1 to 11	11	OFDM	BPSK	MCS0
C, D	802.11n (40MHz)	3 to 9	3	OFDM	BPSK	MCS0

POWER LINE CONDUCTED EMISSION TEST:

The EUT was tested with the following mode.

EUT CONFIGURE MODE	TEST CONDITION
A, B	BT Link + WLAN (2.4G) Link + Earphone + Adapter
C, D	BT Link + WLAN (2.4G) Link + Earphone + Adapter + Mouse

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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0
	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
	802.11n (20MHz)	1 to 11	1, 11	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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	MCS0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Anson Lin
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	David Huang
PLC	25deg. C, 65%RH	120Vac, 60Hz	Johnson Liao
APCM	25deg. C, 65%RH	120Vac, 60Hz	Howard Kao

FOR 5.0GHz:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	SKU 1 Pad
B	√	√	√	-	SKU 2 Pad
C	√	√	√	-	SKU 1 Base
D	√	√	√	-	SKU 2 Base

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 **Z-plane** for MODE A and B, **X-plane** for MODE C and D.

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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
	802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
	802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	MCS0
B	802.11n (40MHz)	151 to 159	159	OFDM	BPSK	MCS0
C, D	802.11a	149 to 165	157	OFDM	BPSK	6.0

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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11n (20MHz)	149 to 165	157	OFDM	BPSK	6.0
B	802.11n (40MHz)	151 to 159	159	OFDM	BPSK	MCS0
C, D	802.11a	149 to 165	157	OFDM	BPSK	6.0

POWER LINE CONDUCTED EMISSION TEST:

The EUT was tested with the following mode.

EUT CONFIGURE MODE	TEST CONDITION
A, B	BT Link + WLAN (5G) Link + Earphone + Adapter
C, D	BT Link + WLAN (5G) Link + Earphone + Adapter + Mouse

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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	149 to 165	149, 165	OFDM	BPSK	6.0
	802.11n (20MHz)	149 to 165	149, 165	OFDM	BPSK	MCS0
	802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	MCS0

ANTENNA PORT CONDUCTED 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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
	802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
	802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	MCS0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE $\geq$ 1G	25deg. C, 65%RH	120Vac, 60Hz	Anson Lin
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	David Huang
PLC	25deg. C, 65%RH	120Vac, 60Hz	Johnson Liao
APCM	25deg. C, 65%RH	120Vac, 60Hz	Howard Kao

3.3 DESCRIPTION OF SUPPORT UNITS

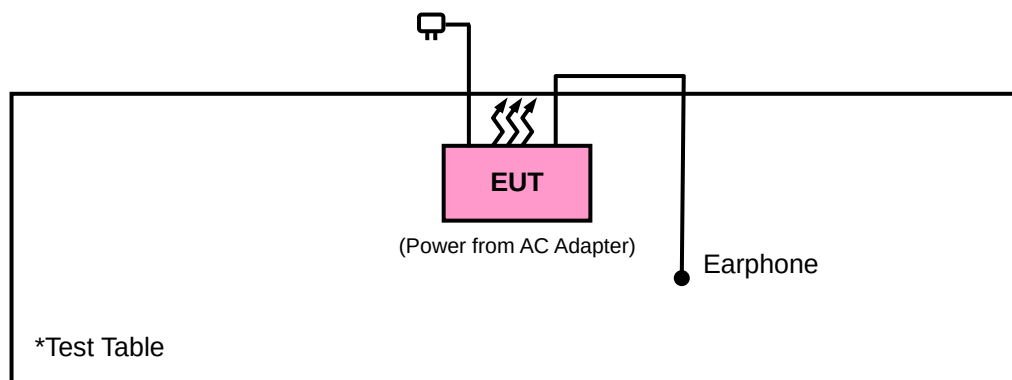
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	EARPHONE	Acon	CW-010M.V	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

NOTE: All power cords of the above support units are non-shielded (1.8m).

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



3.4 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 C (15.247)

ANSI C63.10-2009

KDB 558074 D01 DTS Meas Guidance v02

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. The test report has been issued separately.

4. TEST TYPES AND RESULTS (FOR 2.4GHz BAND)

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. Other emissions shall be at least 20dB below the highest level of the desired power:

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 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100612	Sep. 20, 2012	Sep. 19, 2013
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 17, 2012	Dec. 16, 2013
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Mar. 25, 2013	Mar. 24, 2014
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Jan. 07, 2013	Jan. 06, 2014
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 25, 2012	Dec. 24, 2013
Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
Preamplifier EMCI	EMC 012645	980115	Dec. 28, 2012	Dec. 27, 2013
Preamplifier EMCI	EMC 184045	980116	Dec. 28, 2012	Dec. 27, 2013
Preamplifier EMCI	EMC 330H	980112	Dec. 28, 2012	Dec. 27, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4	Oct. 19, 2012	Oct. 18, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Oct. 19, 2012	Oct. 18, 2013
RF signal cable Worken	RG-213	NA	Dec. 29, 2012	Dec. 28, 2013
Software	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The calibration interval of the loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in HwaYa Chamber 10.
4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
5. The FCC Site Registration No. is 690701.
6. The IC Site Registration No. is IC 7450F-10.

4.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

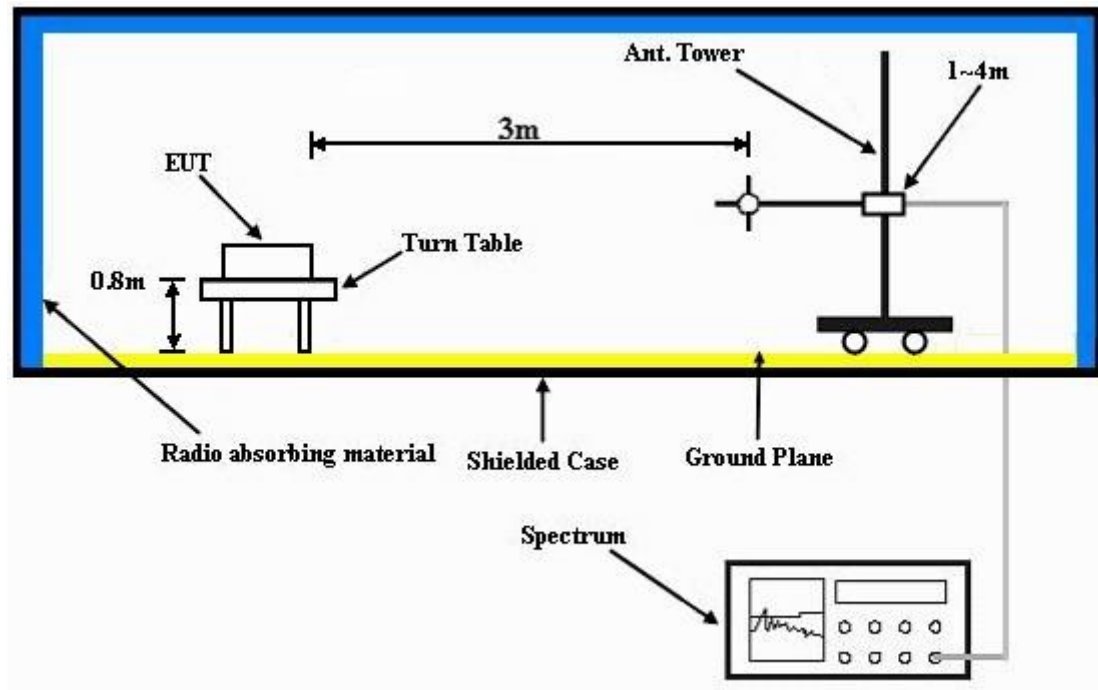
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 TEST SETUP



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

4.1.6 EUT OPERATING CONDITIONS

- Placed the EUT on a testing table.
- Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.1.7 TEST RESULTS

ABOVE 1GHz WORST-CASE DATA

MODE A

802.11b

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	45.36	52.43	54	-8.64	26.91	3.54	37.52	100	334	Average
2390	55.49	62.56	74	-18.51	26.91	3.54	37.52	100	334	Peak
2412	105	112.02			26.96	3.54	37.52	100	334	Average
2412	108.77	115.79			26.96	3.54	37.52	100	334	Peak
2484	37.55	44.12	54	-16.45	27.15	3.6	37.32	100	334	Average
2484	52.2	58.77	74	-21.8	27.15	3.6	37.32	100	334	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	37.49	44.56	54	-16.51	26.91	3.54	37.52	125	20	Average
2390	51.39	58.46	74	-22.61	26.91	3.54	37.52	125	20	Peak
2412	96.96	103.98			26.96	3.54	37.52	125	20	Average
2412	100.76	107.78			26.96	3.54	37.52	125	20	Peak
2484	34.4	40.97	54	-19.6	27.15	3.6	37.32	125	20	Average
2484	51.18	57.75	74	-22.82	27.15	3.6	37.32	125	20	Peak

REMARKS:

- 2412MHz: Fundamental frequency.
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	37.72	44.79	54	-16.28	26.91	3.54	37.52	123	332	Average
2390	51.49	58.56	74	-22.51	26.91	3.54	37.52	123	332	Peak
2437	104.75	111.59			27.06	3.56	37.46	123	332	Average
2437	108.51	115.35			27.06	3.56	37.46	123	332	Peak
2484	38.16	44.73	54	-15.84	27.15	3.6	37.32	123	332	Average
2484	53.63	60.2	74	-20.37	27.15	3.6	37.32	123	332	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	34.5	41.57	54	-19.5	26.91	3.54	37.52	102	30	Average
2390	51.54	58.61	74	-22.46	26.91	3.54	37.52	102	30	Peak
2437	96.79	103.63			27.06	3.56	37.46	102	30	Average
2437	100.55	107.39			27.06	3.56	37.46	102	30	Peak
2484	34.74	41.31	54	-19.26	27.15	3.6	37.32	102	30	Average
2484	51.31	57.88	74	-22.69	27.15	3.6	37.32	102	30	Peak

REMARKS:

- 2437MHz: Fundamental frequency.
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	35.84	42.91	54	-18.16	26.91	3.54	37.52	120	354	Average
2390	50.8	57.87	74	-23.2	26.91	3.54	37.52	120	354	Peak
2462	104.38	111.09			27.1	3.58	37.39	120	354	Average
2462	108.18	114.89			27.1	3.58	37.39	120	354	Peak
2484	45.56	52.13	54	-8.44	27.15	3.6	37.32	120	354	Average
2484	55.51	62.08	74	-18.49	27.15	3.6	37.32	120	354	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	33.85	40.92	54	-20.15	26.91	3.54	37.52	103	351	Average
2390	52.52	59.59	74	-21.48	26.91	3.54	37.52	103	351	Peak
2462	97.21	103.92			27.1	3.58	37.39	103	351	Average
2462	100.86	107.57			27.1	3.58	37.39	103	351	Peak
2484	39.73	46.3	54	-14.27	27.15	3.6	37.32	103	351	Average
2484	53.85	60.42	74	-20.15	27.15	3.6	37.32	103	351	Peak

REMARKS:

- 2462MHz: Fundamental frequency.
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

802.11g

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	50.1	57.17	54	-3.9	26.91	3.54	37.52	100	25	Average
2390	69.64	76.71	74	-4.36	26.91	3.54	37.52	100	25	Peak
2412	98.69	105.71			26.96	3.54	37.52	100	25	Average
2412	108.4	115.42			26.96	3.54	37.52	100	25	Peak
2484	35.17	41.74	54	-18.83	27.15	3.6	37.32	100	25	Average
2484	55.11	61.68	74	-18.89	27.15	3.6	37.32	100	25	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	40.25	47.32	54	-13.75	26.91	3.54	37.52	100	315	Average
2390	62.95	70.02	74	-11.05	26.91	3.54	37.52	100	315	Peak
2412	91.14	98.16			26.96	3.54	37.52	100	315	Average
2412	100.58	107.6			26.96	3.54	37.52	100	315	Peak
2484	34.39	40.96	54	-19.61	27.15	3.6	37.32	100	315	Average
2484	55.64	62.21	74	-18.36	27.15	3.6	37.32	100	315	Peak

REMARKS:

- 2412MHz: Fundamental frequency.
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2386	44.71	51.78	54	-9.29	26.91	3.52	37.5	100	354	Average
2386	60.82	67.89	74	-13.18	26.91	3.52	37.5	100	354	Peak
2437	98.82	105.66			27.06	3.56	37.46	100	354	Average
2437	109.78	116.62			27.06	3.56	37.46	100	354	Peak
2486	44.3	50.87	54	-9.7	27.15	3.6	37.32	100	354	Average
2486	59.37	65.94	74	-14.63	27.15	3.6	37.32	100	354	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	41.24	48.31	54	-12.76	26.91	3.54	37.52	100	317	Average
2390	55.65	62.72	74	-18.35	26.91	3.54	37.52	100	317	Peak
2437	93.98	100.82			27.06	3.56	37.46	100	317	Average
2437	103.17	110.01			27.06	3.56	37.46	100	317	Peak
2490	39.25	45.75	54	-14.75	27.2	3.62	37.32	100	317	Average
2490	53.4	59.9	74	-20.6	27.2	3.62	37.32	100	317	Peak

REMARKS:

- 2437MHz: Fundamental frequency.
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2360	37.75	44.93	54	-16.25	26.81	3.5	37.49	100	330	Average
2360	53.2	60.38	74	-20.8	26.81	3.5	37.49	100	330	Peak
2462	97.33	104.04			27.1	3.58	37.39	100	330	Average
2462	107.43	114.14			27.1	3.58	37.39	100	330	Peak
2486	47.2	53.77	54	-6.8	27.15	3.6	37.32	100	330	Average
2486	70.6	77.17	74	-3.4	27.15	3.6	37.32	100	330	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2386	35.88	42.95	54	-18.12	26.91	3.52	37.5	100	318	Average
2386	53.01	60.08	74	-20.99	26.91	3.52	37.5	100	318	Peak
2462	93.09	99.8			27.1	3.58	37.39	100	318	Average
2462	102.38	109.09			27.1	3.58	37.39	100	318	Peak
2488	42.22	48.72	54	-11.78	27.2	3.62	37.32	100	318	Average
2488	63.99	70.49	74	-10.01	27.2	3.62	37.32	100	318	Peak

REMARKS:

- 2462MHz: Fundamental frequency.
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2388	49.17	56.22	54	-4.83	26.91	3.54	37.5	100	329	Average
2388	70.31	77.36	74	-3.69	26.91	3.54	37.5	100	329	Peak
2412	98.2	105.22			26.96	3.54	37.52	100	329	Average
2412	107.9	114.92			26.96	3.54	37.52	100	329	Peak
2492	38.09	44.52	54	-15.91	27.2	3.62	37.25	100	329	Average
2492	56.3	62.73	74	-17.7	27.2	3.62	37.25	100	329	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2388	44.39	51.44	54	-9.61	26.91	3.54	37.5	100	320	Average
2388	68.59	75.64	74	-5.41	26.91	3.54	37.5	100	320	Peak
2412	92.92	99.94			26.96	3.54	37.52	100	320	Average
2412	102.57	109.59			26.96	3.54	37.52	100	320	Peak
2494	35.11	41.54	54	-18.89	27.2	3.62	37.25	100	320	Average
2494	52.76	59.19	74	-21.24	27.2	3.62	37.25	100	320	Peak

REMARKS:

- 2412MHz: Fundamental frequency.
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	44.71	51.78	54	-9.29	26.91	3.54	37.52	100	331	Average
2390	62	69.07	74	-12	26.91	3.54	37.52	100	331	Peak
2437	98.24	105.08			27.06	3.56	37.46	100	331	Average
2437	107.96	114.8			27.06	3.56	37.46	100	331	Peak
2486	44.12	50.69	54	-9.88	27.15	3.6	37.32	100	331	Average
2486	61.19	67.76	74	-12.81	27.15	3.6	37.32	100	331	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2388	40.07	47.12	54	-13.93	26.91	3.54	37.5	100	317	Average
2388	56.41	63.46	74	-17.59	26.91	3.54	37.5	100	317	Peak
2437	92.71	99.55			27.06	3.56	37.46	100	317	Average
2437	102.27	109.11			27.06	3.56	37.46	100	317	Peak
2488	38.27	44.77	54	-15.73	27.2	3.62	37.32	100	317	Average
2488	53.53	60.03	74	-20.47	27.2	3.62	37.32	100	317	Peak

REMARKS:

- 2437MHz: Fundamental frequency.
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	37.52	44.59	54	-16.48	26.91	3.54	37.52	100	331	Average
2390	55.58	62.65	74	-18.42	26.91	3.54	37.52	100	331	Peak
2462	96.79	103.5			27.1	3.58	37.39	100	331	Average
2462	107.24	113.95			27.1	3.58	37.39	100	331	Peak
2484	47.45	54.02	54	-6.55	27.15	3.6	37.32	100	331	Average
2484	70.87	77.44	74	-3.13	27.15	3.6	37.32	100	331	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2386	35.18	42.25	54	-18.82	26.91	3.52	37.5	100	317	Average
2386	53.4	60.47	74	-20.6	26.91	3.52	37.5	100	317	Peak
2462	91.2	97.91			27.1	3.58	37.39	100	317	Average
2462	100.87	107.58			27.1	3.58	37.39	100	317	Peak
2484	40.93	47.5	54	-13.07	27.15	3.6	37.32	100	317	Average
2484	65.06	71.63	74	-8.94	27.15	3.6	37.32	100	317	Peak

REMARKS:

- 2462MHz: Fundamental frequency.
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value



A D T

MODE B

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2386	35.78	42.85	54	-18.22	26.91	3.52	37.5	103	26	Average
2386	51.11	58.18	74	-22.89	26.91	3.52	37.5	103	26	Peak
2462	92.62	99.33			27.1	3.58	37.39	103	26	Average
2462	102.31	109.02			27.1	3.58	37.39	103	26	Peak
2484	44.03	50.6	54	-9.97	27.15	3.6	37.32	103	26	Average
2484	67.75	74.32	74	-6.25	27.15	3.6	37.32	103	26	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	34.69	41.76	54	-19.31	26.91	3.54	37.52	119	345	Average
2390	51.02	58.09	74	-22.98	26.91	3.54	37.52	119	345	Peak
2462	93.2	99.91			27.1	3.58	37.39	119	345	Average
2462	103.11	109.82			27.1	3.58	37.39	119	345	Peak
2484	44.58	51.15	54	-9.42	27.15	3.6	37.32	119	345	Average
2484	64.63	71.2	74	-9.37	27.15	3.6	37.32	119	345	Peak

REMARKS:

- 2462MHz: Fundamental frequency.
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value



A D T

MODE C

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2382	34.61	41.73	54	-19.39	26.86	3.52	37.5	107	32	Average
2382	47.26	54.38	74	-26.74	26.86	3.52	37.5	107	32	Peak
2422	83.05	89.94			27.01	3.56	37.46	107	32	Average
2422	92.65	99.54			27.01	3.56	37.46	107	32	Peak
2484	32	38.57	54	-22	27.15	3.6	37.32	107	32	Average
2484	47.36	53.93	74	-26.64	27.15	3.6	37.32	107	32	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2388	35.51	42.56	54	-18.49	26.91	3.54	37.5	148	223	Average
2388	47.78	54.83	74	-26.22	26.91	3.54	37.5	148	223	Peak
2422	83.61	90.5			27.01	3.56	37.46	148	223	Average
2422	93.18	100.07			27.01	3.56	37.46	148	223	Peak
2500	35.66	42.09	54	-18.34	27.2	3.62	37.25	148	223	Average
2500	47.77	54.2	74	-26.23	27.2	3.62	37.25	148	223	Peak

REMARKS:

- 2422MHz: Fundamental frequency.
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

MODE D

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	34.47	41.54	54	-19.53	26.91	3.54	37.52	106	43	Average
2390	45.43	52.5	74	-28.57	26.91	3.54	37.52	106	43	Peak
2422	82.06	88.95			27.01	3.56	37.46	106	43	Average
2422	90.43	97.32			27.01	3.56	37.46	106	43	Peak
2484	34.73	41.3	54	-19.27	27.15	3.6	37.32	106	43	Average
2484	45.78	52.35	74	-28.22	27.15	3.6	37.32	106	43	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	34.56	41.63	54	-19.44	26.91	3.54	37.52	168	226	Average
2390	46.83	53.9	74	-27.17	26.91	3.54	37.52	168	226	Peak
2422	83.18	90.07			27.01	3.56	37.46	168	226	Average
2422	91.52	98.41			27.01	3.56	37.46	168	226	Peak
2484	34.99	41.56	54	-19.01	27.15	3.6	37.32	168	226	Average
2484	46.26	52.83	74	-27.74	27.15	3.6	37.32	168	226	Peak

REMARKS:

- 2422MHz: Fundamental frequency.
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

BELOW 1GHz WORST-CASE DATA

MODE A

802.11g

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-Peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.73	31.56	49.85	40	-8.44	12.25	0.81	31.35	100	186	Peak
86.97	28.31	50.87	40	-11.69	8.25	1.01	31.82	100	169	Peak
170.67	26.67	45.29	43.5	-16.83	11.67	1.45	31.74	100	183	Peak
416.2	19.83	33.71	46	-26.17	15.66	2.49	32.03	100	163	Peak
432.3	23.12	36.6	46	-22.88	15.98	2.55	32.01	100	114	Peak
675.9	27.21	35.17	46	-18.79	20.53	3.34	31.83	100	132	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
30.27	33.54	52.13	40	-6.46	11.98	0.57	31.14	100	152	QP
40.26	35.52	52.32	40	-4.48	13.55	0.67	31.02	100	153	Peak
56.73	33.16	51.45	40	-6.84	12.25	0.81	31.35	100	100	Peak
611.5	29.64	38.87	46	-16.36	19.74	3.12	32.09	100	139	Peak
724.2	27.3	34.27	46	-18.7	21.16	3.5	31.63	100	189	Peak
850.9	27.92	33.09	46	-18.08	22.88	3.82	31.87	100	132	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value



A D T

MODE B

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-Peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
54.84	31.91	49.99	40	-8.09	12.45	0.8	31.33	100	151	Peak
173.37	26.98	45.91	43.5	-16.52	11.38	1.46	31.77	100	189	Peak
217.11	25.48	45.38	46	-20.52	10.09	1.68	31.67	100	125	Peak
444.2	20.1	33.29	46	-25.9	16.21	2.59	31.99	100	139	Peak
530.3	22.34	33.13	46	-23.66	18.02	2.88	31.69	100	115	Peak
651.4	27.53	36.06	46	-18.47	20.23	3.25	32.01	100	154	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
30.54	30.7	49.11	40	-9.3	12.14	0.57	31.12	100	162	QP
39.45	33.16	49.96	40	-6.84	13.54	0.65	30.99	100	121	Peak
55.92	31.28	49.47	40	-8.72	12.35	0.8	31.34	100	117	Peak
579.3	28.28	38.25	46	-17.72	19.12	3.03	32.12	100	184	Peak
651.4	31.6	40.13	46	-14.4	20.23	3.25	32.01	100	153	Peak
724.9	26.61	33.58	46	-19.39	21.16	3.5	31.63	100	169	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value



A D T

MODE C

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-Peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
95.88	22.65	44.8	43.5	-20.85	8.76	1.05	31.96	100	195	Peak
192	33.36	53.58	43.5	-10.14	9.91	1.56	31.69	100	232	Peak
282.18	28.1	45.5	46	-17.9	12.42	1.97	31.79	100	119	Peak
360.2	33.7	49.02	46	-12.3	14.38	2.27	31.97	100	195	Peak
600.3	29.52	39.07	46	-16.48	19.61	3.09	32.25	100	265	Peak
916	28.84	33.26	46	-17.16	23.6	4	32.02	100	202	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
54.84	24.62	42.7	40	-15.38	12.45	0.8	31.33	100	139	Peak
183.63	16.95	36.7	43.5	-26.55	10.53	1.51	31.79	100	162	Peak
298.11	24.07	40.96	46	-21.93	12.88	2.04	31.81	100	116	Peak
468	22.83	35.36	46	-23.17	16.7	2.68	31.91	100	241	Peak
624.1	26.4	35.51	46	-19.6	19.89	3.16	32.16	100	139	Peak
933.5	28.45	32.69	46	-17.55	23.69	4.04	31.97	100	275	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value



A D T

MODE D

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-Peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
55.11	24.84	42.92	40	-15.16	12.45	0.8	31.33	100	149	Peak
172.02	19.34	38.07	43.5	-24.16	11.57	1.45	31.75	100	152	Peak
282.18	27	44.4	46	-19	12.42	1.97	31.79	100	269	Peak
344.8	26.41	42	46	-19.59	14.03	2.21	31.83	100	334	Peak
642.3	24.81	33.55	46	-21.19	20.12	3.22	32.08	100	216	Peak
960.1	28.43	32.42	54	-25.57	23.85	4.09	31.93	100	116	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
40.8	26.05	42.85	40	-13.95	13.55	0.67	31.02	100	158	Peak
155.82	18.52	36.2	43.5	-24.98	12.72	1.37	31.77	100	247	Peak
287.85	21.51	38.61	46	-24.49	12.6	2	31.7	100	176	Peak
378.4	25.09	39.87	46	-20.91	14.82	2.34	31.94	100	288	Peak
624.1	25.76	34.87	46	-20.24	19.89	3.16	32.16	100	257	Peak
954.5	28.56	32.54	46	-17.44	23.81	4.08	31.87	100	130	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	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

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Nov. 09, 2012	Nov. 08, 2013
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 28, 2012	Dec. 27, 2013
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Dec. 21, 2012	Dec. 20, 2013
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Jul. 02, 2013	Jul. 01, 2014
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 2.
3. The VCCI Site Registration No. is C-2047.

4.2.3 TEST PROCEDURES

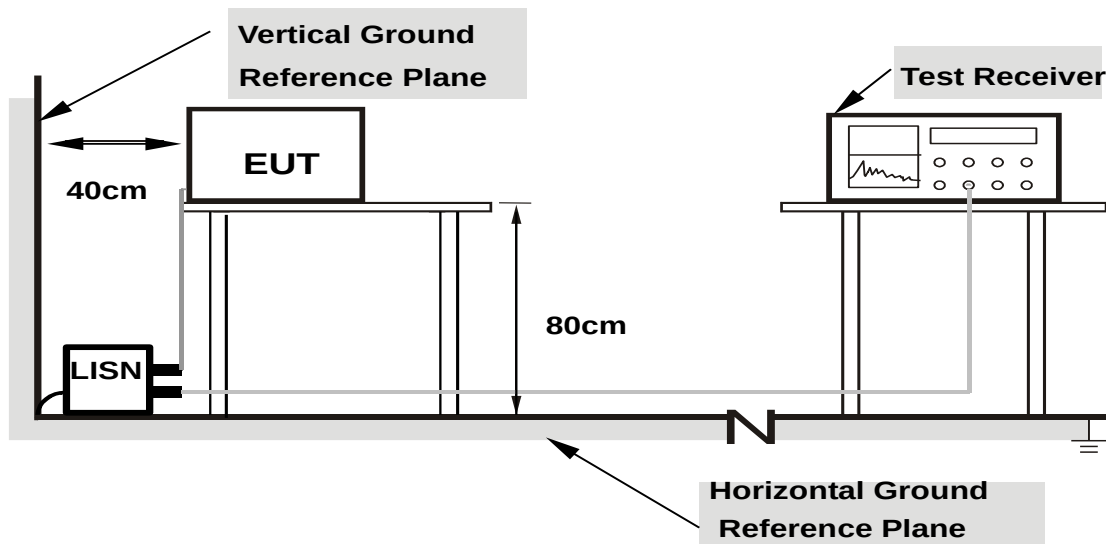
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

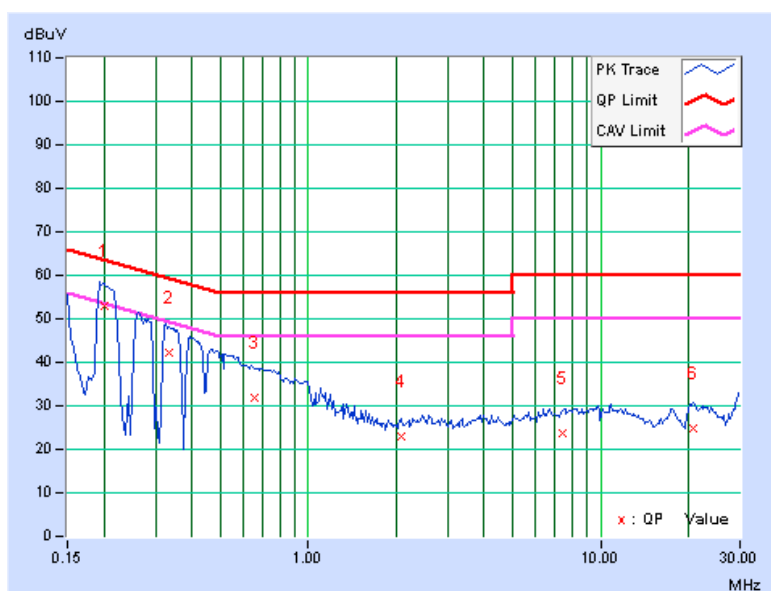
MODE A

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20078	0.17	52.95	38.69	53.12	38.86	63.58	53.58	-10.46	-14.72
2	0.33359	0.20	42.07	25.37	42.27	25.57	59.36	49.36	-17.09	-23.79
3	0.65391	0.24	31.68	14.28	31.92	14.52	56.00	46.00	-24.08	-31.48
4	2.07813	0.28	22.57	11.51	22.85	11.79	56.00	46.00	-33.15	-34.21
5	7.42969	0.40	23.37	18.26	23.77	18.66	60.00	50.00	-36.23	-31.34
6	20.83203	0.63	24.08	17.72	24.71	18.35	60.00	50.00	-35.29	-31.65

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

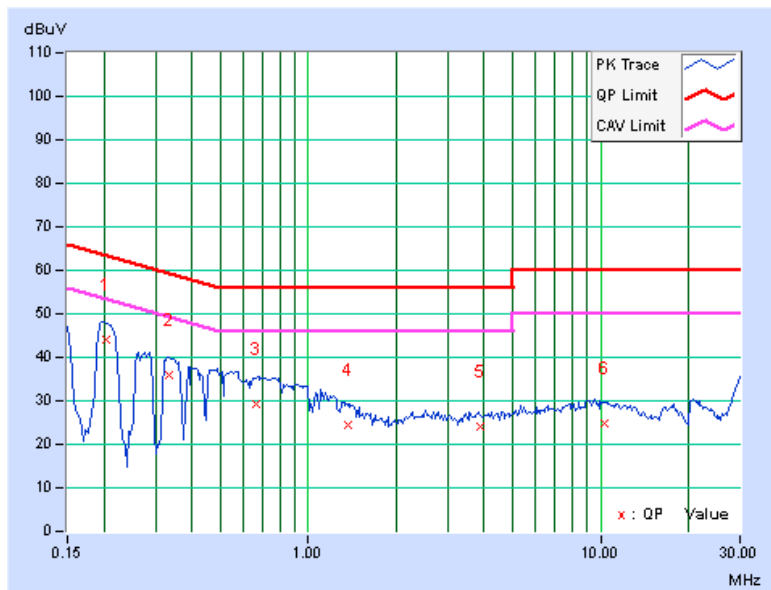


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20469	0.18	44.00	29.23	44.18	29.41	63.42	53.42	-19.24	-24.01
2	0.33359	0.23	35.84	19.66	36.07	19.89	59.36	49.36	-23.29	-29.47
3	0.66563	0.24	29.04	11.84	29.28	12.08	56.00	46.00	-26.72	-33.92
4	1.36328	0.25	24.28	12.52	24.53	12.77	56.00	46.00	-31.47	-33.23
5	3.88281	0.38	23.56	14.07	23.94	14.45	56.00	46.00	-32.06	-31.55
6	10.38281	0.49	24.31	19.63	24.80	20.12	60.00	50.00	-35.20	-29.88

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



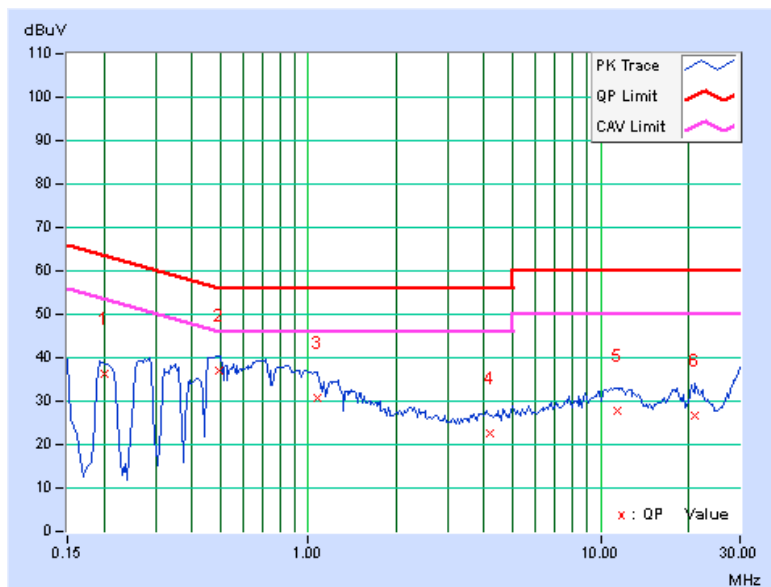
MODE B

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20078	0.17	36.03	22.54	36.20	22.71	63.58	53.58	-27.38	-30.87
2	0.49375	0.22	36.88	17.92	37.10	18.14	56.10	46.10	-19.01	-27.97
3	1.07422	0.27	30.43	13.26	30.70	13.53	56.00	46.00	-25.30	-32.47
4	4.19531	0.37	22.13	13.26	22.50	13.63	56.00	46.00	-33.50	-32.37
5	11.35156	0.46	27.46	22.56	27.92	23.02	60.00	50.00	-32.08	-26.98
6	21.09375	0.63	26.09	18.82	26.72	19.45	60.00	50.00	-33.28	-30.55

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

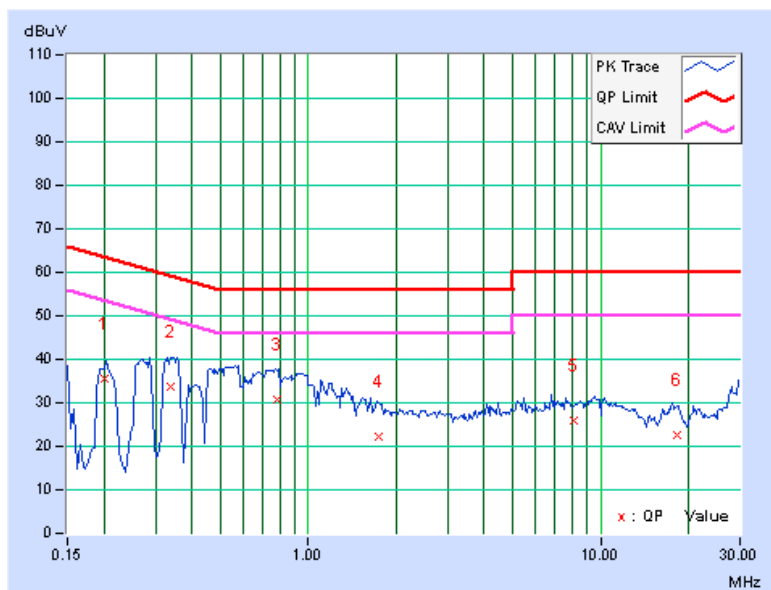


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20078	0.18	35.22	21.01	35.40	21.19	63.58	53.58	-28.18	-32.39
2	0.33750	0.23	33.61	16.27	33.84	16.50	59.26	49.26	-25.43	-32.77
3	0.77891	0.24	30.51	15.30	30.75	15.54	56.00	46.00	-25.25	-30.46
4	1.73438	0.27	22.10	8.22	22.37	8.49	56.00	46.00	-33.63	-37.51
5	8.05859	0.45	25.38	18.74	25.83	19.19	60.00	50.00	-34.17	-30.81
6	18.31641	0.69	21.88	15.65	22.57	16.34	60.00	50.00	-37.43	-33.66

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



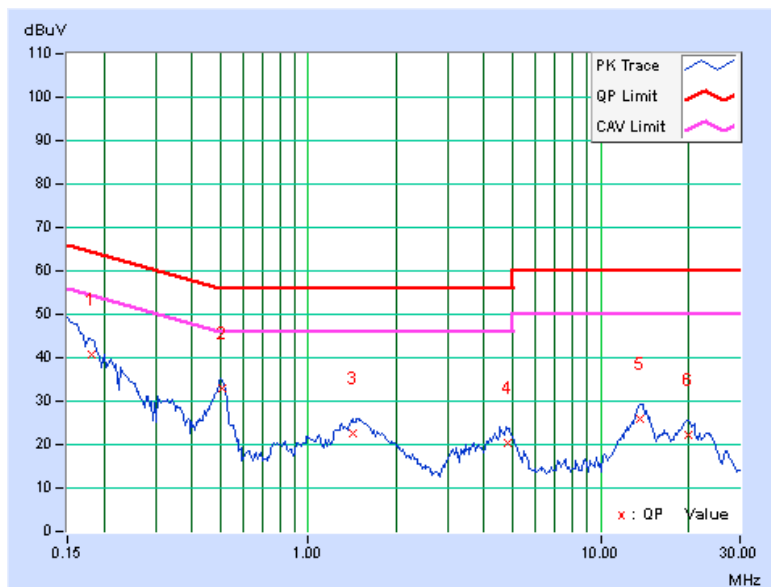
MODE C

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18125	0.17	40.56	25.51	40.73	25.68	64.43	54.43	-23.70	-28.75
2	0.50938	0.22	32.77	27.09	32.99	27.31	56.00	46.00	-23.01	-18.69
3	1.42188	0.27	22.16	16.69	22.43	16.96	56.00	46.00	-33.57	-29.04
4	4.80078	0.38	19.82	11.00	20.20	11.38	56.00	46.00	-35.80	-34.62
5	13.72656	0.51	25.32	17.28	25.83	17.79	60.00	50.00	-34.17	-32.21
6	19.86719	0.64	21.40	17.52	22.04	18.16	60.00	50.00	-37.96	-31.84

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

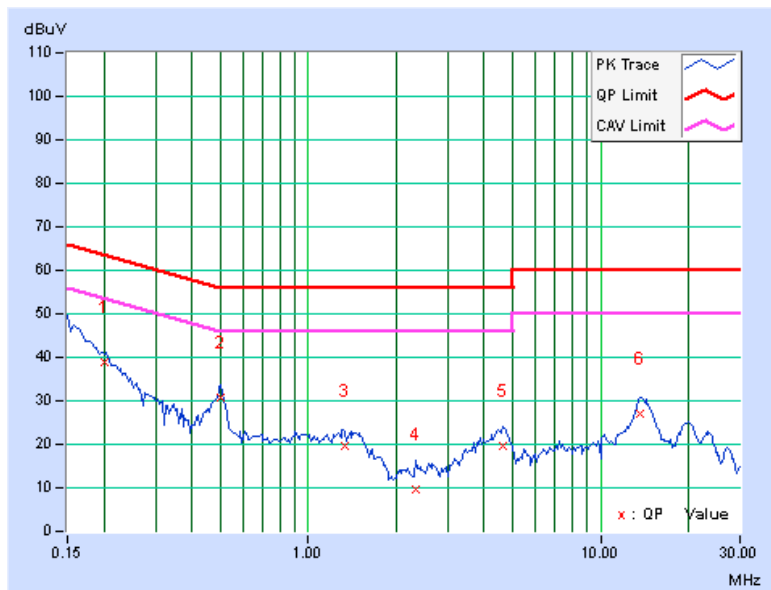


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20078	0.18	38.56	23.69	38.74	23.87	63.58	53.58	-24.84	-29.71
2	0.50156	0.25	30.52	23.49	30.77	23.74	56.00	46.00	-25.23	-22.26
3	1.33203	0.25	19.42	13.04	19.67	13.29	56.00	46.00	-36.33	-32.71
4	2.33203	0.30	9.47	2.33	9.77	2.63	56.00	46.00	-46.23	-43.37
5	4.66016	0.40	19.25	11.49	19.65	11.89	56.00	46.00	-36.35	-34.11
6	13.71875	0.57	26.52	19.14	27.09	19.71	60.00	50.00	-32.91	-30.29

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



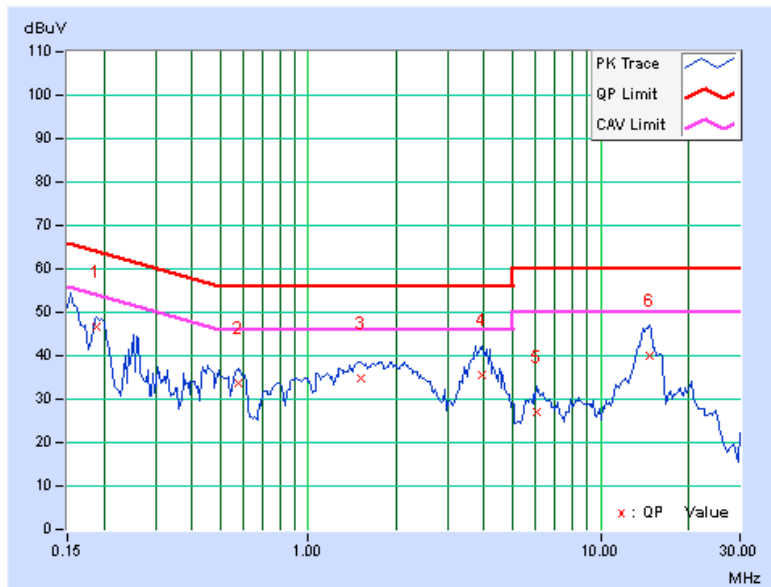
MODE D

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18906	0.17	46.47	34.87	46.64	35.04	64.08	54.08	-17.44	-19.04
2	0.57578	0.23	33.36	21.95	33.59	22.18	56.00	46.00	-22.41	-23.82
3	1.50781	0.28	34.65	24.92	34.93	25.20	56.00	46.00	-21.07	-20.80
4	3.90625	0.37	35.31	26.77	35.68	27.14	56.00	46.00	-20.32	-18.86
5	6.07031	0.39	26.75	21.65	27.14	22.04	60.00	50.00	-32.86	-27.96
6	14.67969	0.53	39.65	29.32	40.18	29.85	60.00	50.00	-19.82	-20.15

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

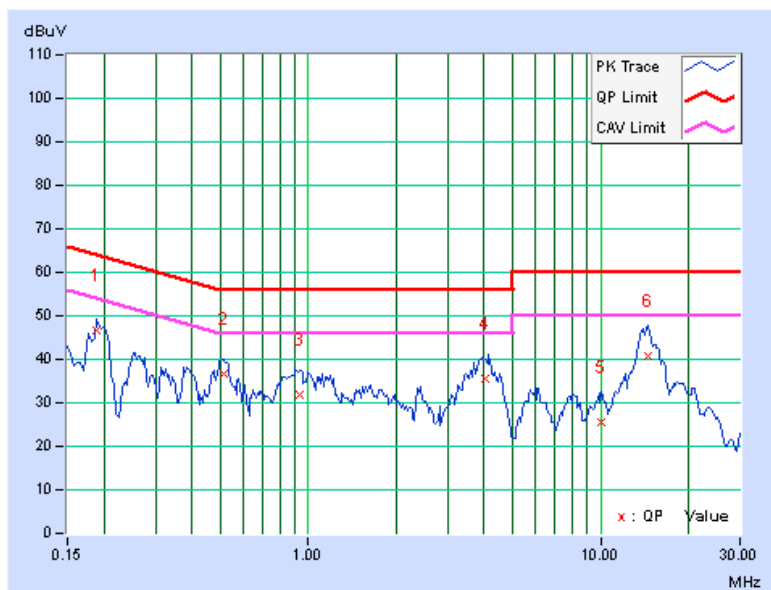


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18906	0.18	46.34	35.56	46.52	35.74	64.08	54.08	-17.56	-18.34
2	0.51328	0.25	36.45	25.87	36.70	26.12	56.00	46.00	-19.30	-19.88
3	0.93906	0.23	31.50	22.86	31.73	23.09	56.00	46.00	-24.27	-22.91
4	4.03906	0.39	35.34	26.34	35.73	26.73	56.00	46.00	-20.27	-19.27
5	10.06250	0.48	25.02	19.57	25.50	20.05	60.00	50.00	-34.50	-29.95
6	14.58594	0.59	40.16	31.85	40.75	32.44	60.00	50.00	-19.25	-17.56

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

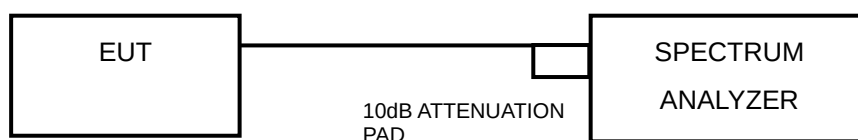


4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST SETUP



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.3.4 TEST PROCEDURE

- Set resolution bandwidth (RBW) = approximately 1% of the emission bandwidth
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) 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 lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

802.11b

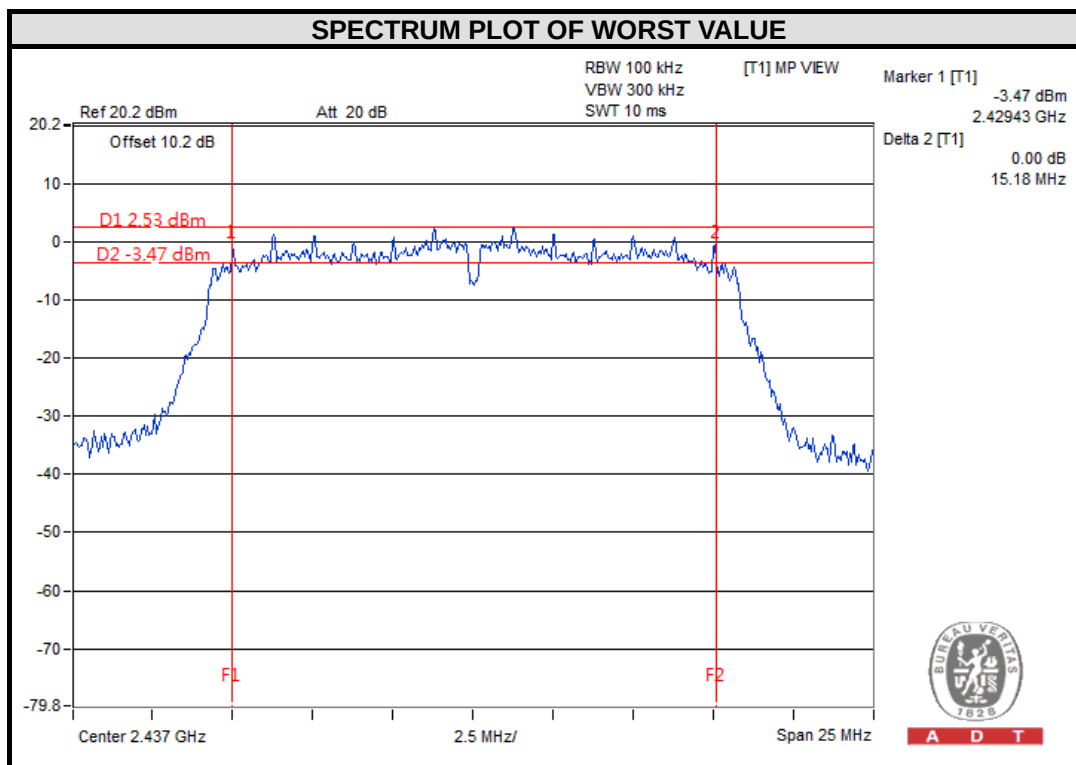
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	8.01	0.5	PASS
6	2437	7.61	0.5	PASS
11	2462	8.09	0.5	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	15.08	0.5	PASS
6	2437	15.18	0.5	PASS
11	2462	15.13	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	15.17	0.5	PASS
6	2437	15.09	0.5	PASS
11	2462	15.12	0.5	PASS

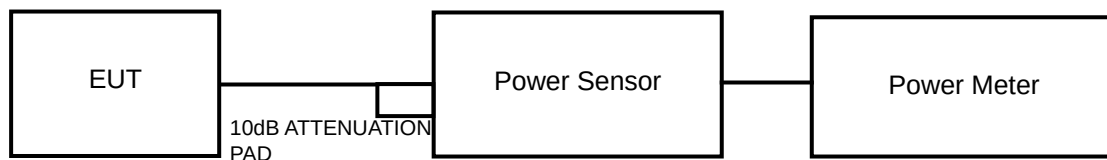


4.4 CONDUCTED OUTPUT POWER

4.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.4.4 TEST PROCEDURES

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the peak power level.

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

4.4.7 TEST RESULTS

802.11b

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	67.920	18.32	30	PASS
6	2437	67.298	18.28	30	PASS
11	2462	66.527	18.23	30	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	253.513	24.04	30	PASS
6	2437	267.301	24.27	30	PASS
11	2462	247.742	23.94	30	PASS

802.11n (20MHz)

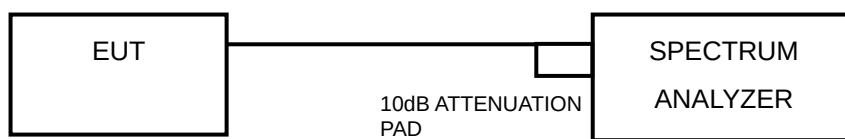
CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	262.422	24.19	30	PASS
6	2437	253.513	24.04	30	PASS
11	2462	236.048	23.73	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.5.4 TEST PROCEDURE

- Set the RBW = 3 kHz, VBW = 10 kHz, Detector = peak.
- Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6

4.5.7 TEST RESULTS

802.11b

Channel	FREQ. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	-7.07	8	PASS
6	2437	-6.67	8	PASS
11	2462	-6.83	8	PASS

802.11g

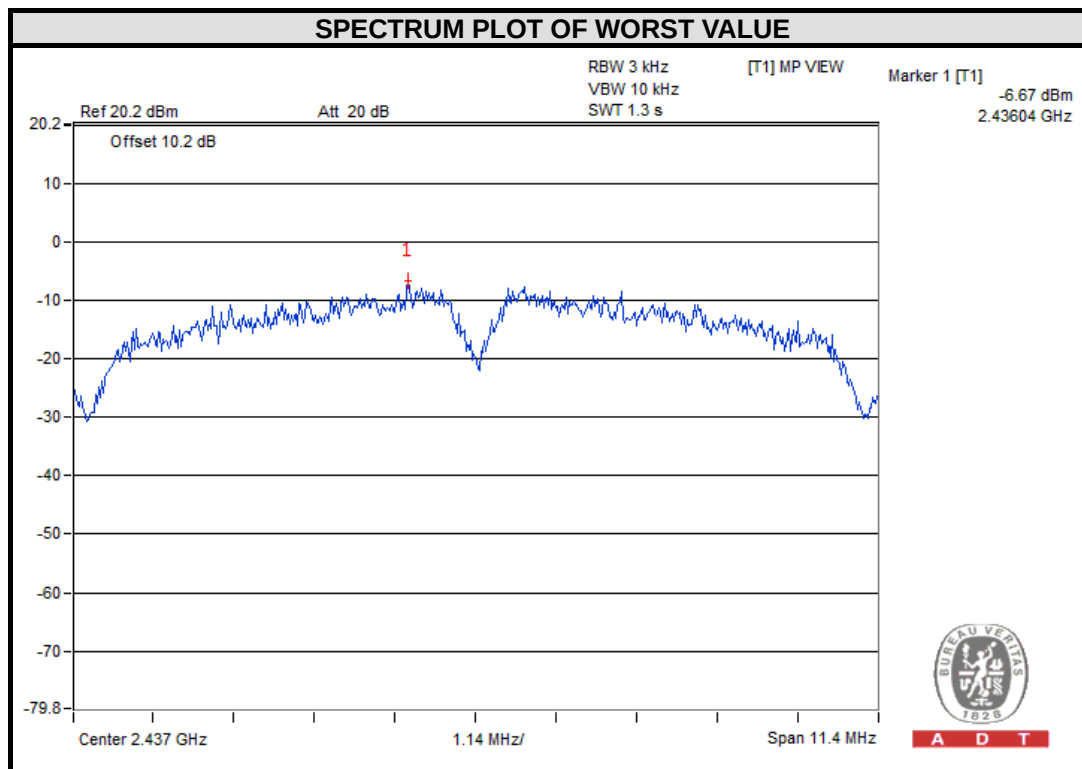
Channel	FREQ. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	-11.26	8	PASS
6	2437	-10.83	8	PASS
11	2462	-12.62	8	PASS

802.11n (20MHz)

Channel	FREQ. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	-11.56	8	PASS
6	2437	-11.86	8	PASS
11	2462	-12.50	8	PASS



A D T

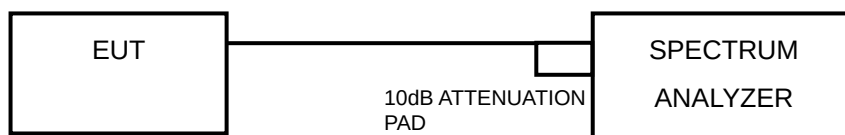


4.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

4.6.1 LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 TEST SETUP



4.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.6.4 TEST PROCEDURE

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW $\geq$ 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW $\geq$ 300 kHz.
3. Set span to encompass the spectrum to be examined.
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

4.6.6 EUT OPERATING CONDITION

Same as Item 4.3.6

4.6.7 TEST RESULTS

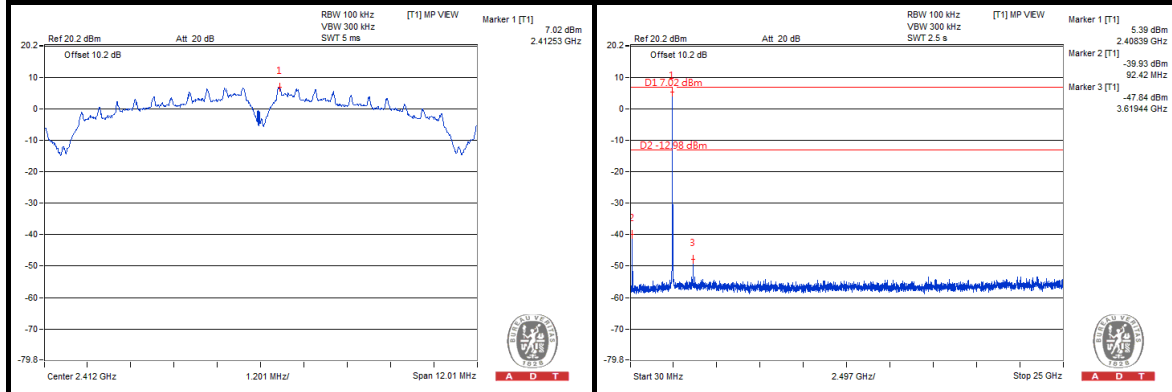
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.



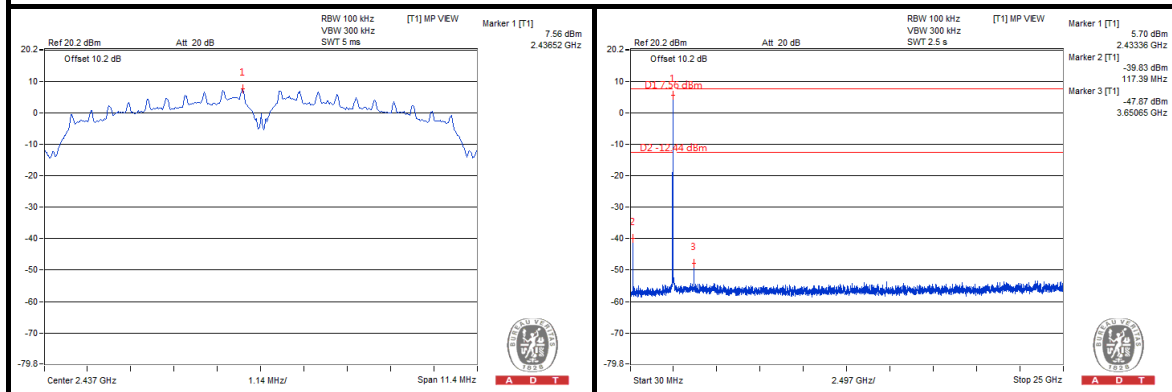
A D T

802.11b

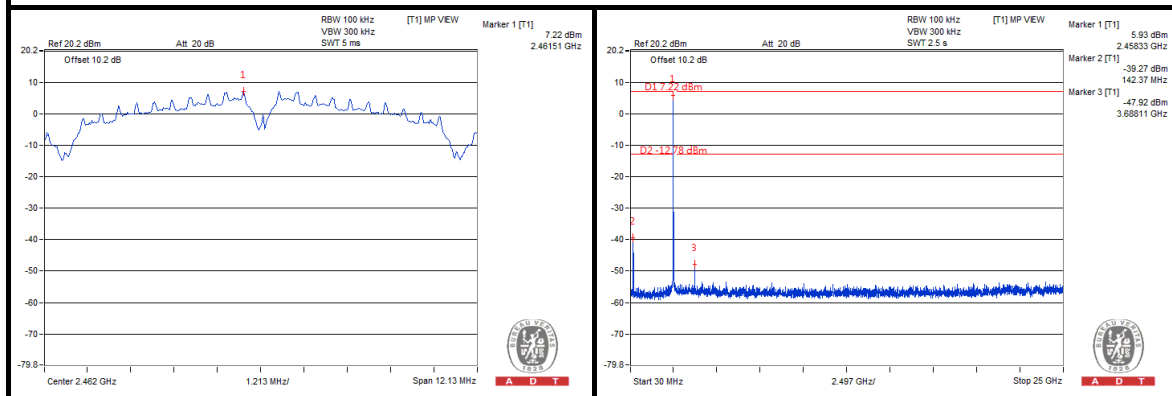
CH 1



CH 6



CH 11

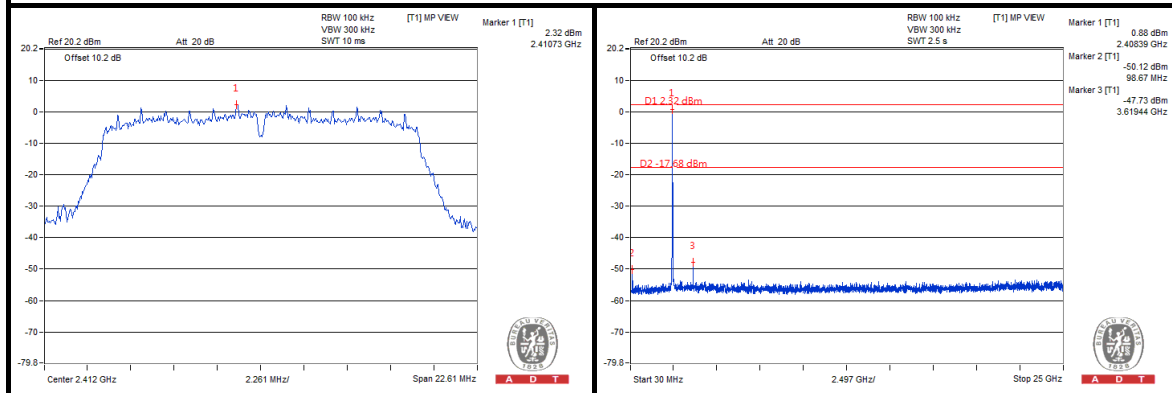




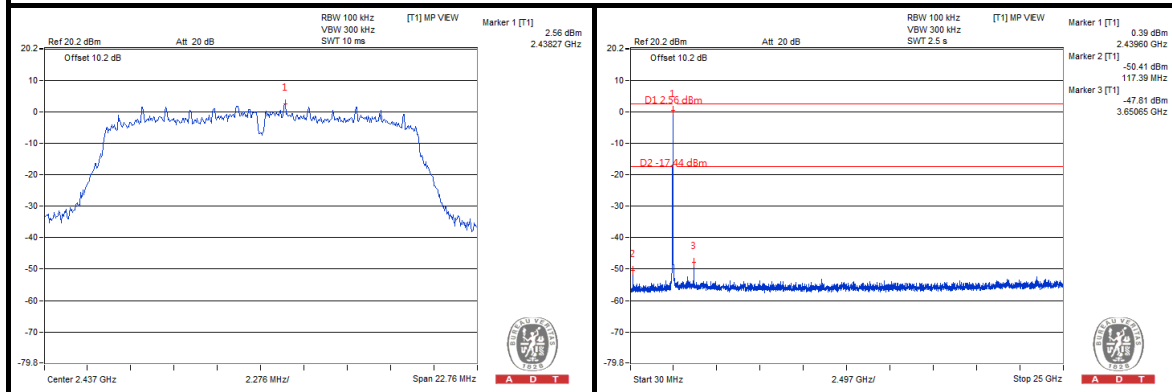
A D T

802.11g

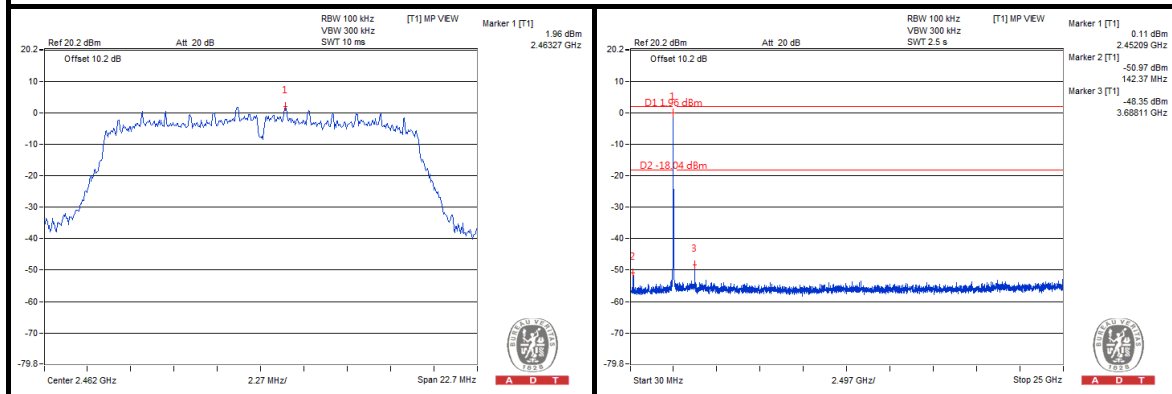
CH 1



CH 6



CH 11

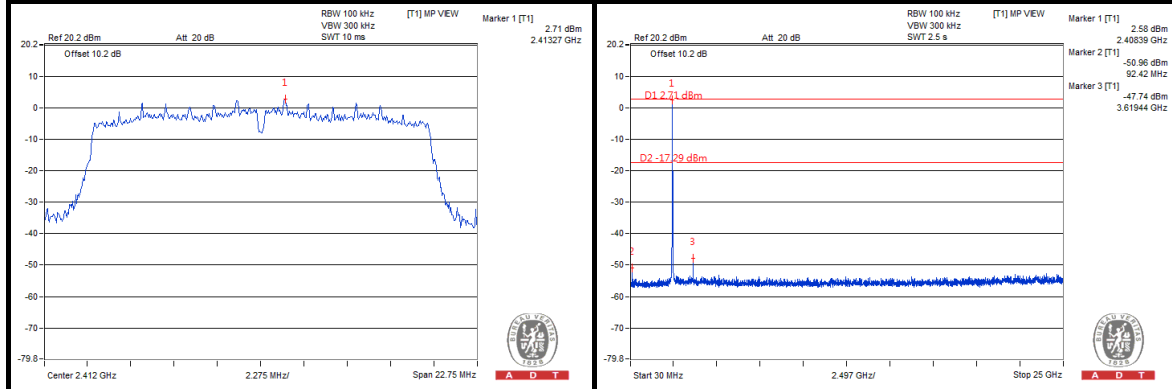




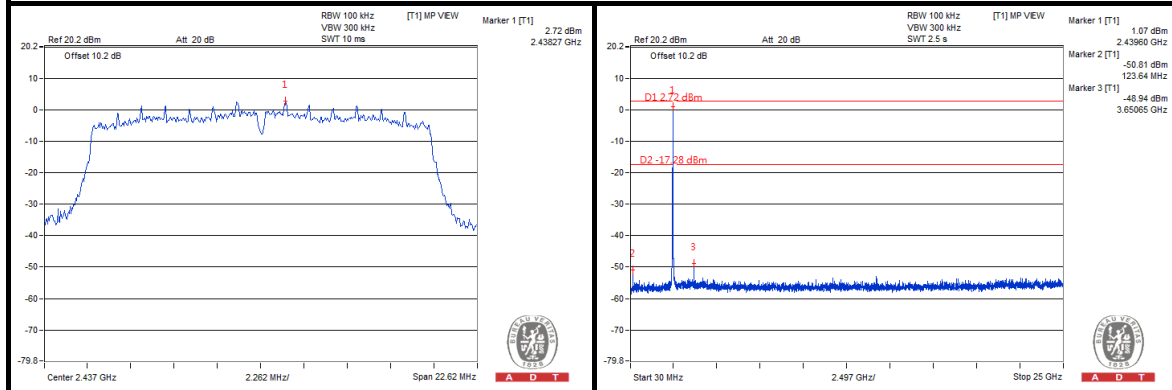
A D T

802.11n (20MHz)

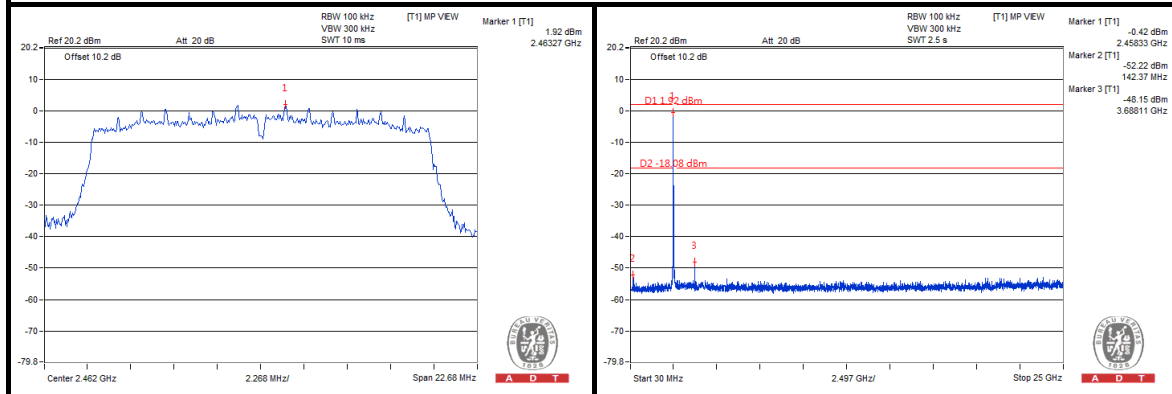
CH 1



CH 6



CH 11



5. TEST TYPES AND RESULTS (FOR 5.0GHz BAND)

5.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

5.1.1 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. Other emissions shall be at least 20dB below the highest level of the desired power:

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.



A D T

5.1.2 TEST INSTRUMENTS

Same as item 4.1.2.

5.1.3 TEST PROCEDURES

Same as item 4.1.3.

5.1.4 DEVIATION FROM TEST STANDARD

No deviation.

5.1.5 TEST SETUP

Same as item 4.1.5.

5.1.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

5.1.7 TEST RESULTS

ABOVE 1GHz WORST-CASE DATA

MODE A

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	65.53	65.41	80.8	-15.27	31.96	5.59	37.43	100	286	Average
5725	76.76	76.64	89.32	-12.56	31.96	5.59	37.43	100	286	Peak
5745	100.8	100.68			31.99	5.6	37.47	100	286	Average
5745	109.32	109.2			31.99	5.6	37.47	100	286	Peak
5850	39.58	39.28	80.8	-41.22	32.15	5.66	37.51	100	286	Average
5850	55.67	55.37	89.32	-33.65	32.15	5.66	37.51	100	286	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	58.23	58.11	72.68	-14.45	31.96	5.59	37.43	104	4	Average
5725	69.7	69.58	82.33	-12.63	31.96	5.59	37.43	104	4	Peak
5745	92.68	92.56			31.99	5.6	37.47	104	4	Average
5745	102.33	102.21			31.99	5.6	37.47	104	4	Peak
5850	38.39	38.09	72.68	-34.29	32.15	5.66	37.51	104	4	Average
5850	55.44	55.14	82.33	-26.89	32.15	5.66	37.51	104	4	Peak

REMARKS:

- 5745MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	47.86	47.74	79.76	-31.9	31.96	5.59	37.43	101	327	Average
5725	62.81	62.69	88.56	-25.75	31.96	5.59	37.43	101	327	Peak
5785	99.76	99.64			32.04	5.62	37.54	101	327	Average
5785	108.56	108.44			32.04	5.62	37.54	101	327	Peak
5850	43.91	43.61	79.76	-35.85	32.15	5.66	37.51	101	327	Average
5850	56.92	56.62	88.56	-31.64	32.15	5.66	37.51	101	327	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	41.9	41.78	72.9	-31	31.96	5.59	37.43	112	351	Average
5725	56.37	56.25	81.99	-25.62	31.96	5.59	37.43	112	351	Peak
5785	92.9	92.78			32.04	5.62	37.54	112	351	Average
5785	101.99	101.87			32.04	5.62	37.54	112	351	Peak
5850	40.22	39.92	72.9	-32.68	32.15	5.66	37.51	112	351	Average
5850	55.85	55.55	81.99	-26.14	32.15	5.66	37.51	112	351	Peak

REMARKS:

- 5785MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	41.84	41.72	80.27	-38.43	31.96	5.59	37.43	100	328	Average
5725	56.66	56.54	88.32	-31.66	31.96	5.59	37.43	100	328	Peak
5825	100.27	100.04			32.12	5.64	37.53	100	328	Average
5825	108.32	108.09			32.12	5.64	37.53	100	328	Peak
5850	55.32	55.02	80.27	-24.95	32.15	5.66	37.51	100	328	Average
5850	73.1	72.8	88.32	-15.22	32.15	5.66	37.51	100	328	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	38.74	38.62	74.88	-36.14	31.96	5.59	37.43	101	350	Average
5725	53.52	53.4	83.59	-30.07	31.96	5.59	37.43	101	350	Peak
5825	94.88	94.65			32.12	5.64	37.53	101	350	Average
5825	103.59	103.36			32.12	5.64	37.53	101	350	Peak
5850	49.84	49.54	74.88	-25.04	32.15	5.66	37.51	101	350	Average
5850	64.3	64	83.59	-19.29	32.15	5.66	37.51	101	350	Peak

REMARKS:

- 5825MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	62.02	61.9	79.69	-17.67	31.96	5.59	37.43	102	328	Average
5725	74.74	74.62	88.2	-13.46	31.96	5.59	37.43	102	328	Peak
5745	99.69	99.57			31.99	5.6	37.47	102	328	Average
5745	108.2	108.08			31.99	5.6	37.47	102	328	Peak
5850	39.24	38.94	79.69	-40.45	32.15	5.66	37.51	102	328	Average
5850	55.58	55.28	88.2	-32.62	32.15	5.66	37.51	102	328	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	52.16	52.04	70.07	-17.91	31.96	5.59	37.43	100	244	Average
5725	70.27	70.15	80	-9.73	31.96	5.59	37.43	100	244	Peak
5745	90.07	89.95			31.99	5.6	37.47	100	244	Average
5745	100	99.88			31.99	5.6	37.47	100	244	Peak
5850	38.04	37.74	70.07	-32.03	32.15	5.66	37.51	100	244	Average
5850	54.57	54.27	80	-25.43	32.15	5.66	37.51	100	244	Peak

REMARKS:

- 5745MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	46.26	46.14	76.49	-30.23	31.96	5.59	37.43	109	286	Average
5725	59.31	59.19	85.83	-26.52	31.96	5.59	37.43	109	286	Peak
5785	96.49	96.37			32.04	5.62	37.54	109	286	Average
5785	105.83	105.71			32.04	5.62	37.54	109	286	Peak
5850	41.55	41.25	76.49	-34.94	32.15	5.66	37.51	109	286	Average
5850	56.46	56.16	85.83	-29.37	32.15	5.66	37.51	109	286	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	40.03	39.91	70.64	-30.61	31.96	5.59	37.43	100	350	Average
5725	56.45	56.33	79.87	-23.42	31.96	5.59	37.43	100	350	Peak
5785	90.64	90.52			32.04	5.62	37.54	100	350	Average
5785	99.87	99.75			32.04	5.62	37.54	100	350	Peak
5850	39.25	38.95	70.64	-31.39	32.15	5.66	37.51	100	350	Average
5850	56.52	56.22	79.87	-23.35	32.15	5.66	37.51	100	350	Peak

REMARKS:

- 5785MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	42.03	41.91	79.68	-37.65	31.96	5.59	37.43	100	327	Average
5725	56.19	56.07	87.68	-31.49	31.96	5.59	37.43	100	327	Peak
5825	99.68	99.45			32.12	5.64	37.53	100	327	Average
5825	107.68	107.45			32.12	5.64	37.53	100	327	Peak
5850	54.93	54.63	79.68	-24.75	32.15	5.66	37.51	100	327	Average
5850	69.26	68.96	87.68	-18.42	32.15	5.66	37.51	100	327	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	38.53	38.41	73.68	-35.15	31.96	5.59	37.43	102	348	Average
5725	55.64	55.52	82.17	-26.53	31.96	5.59	37.43	102	348	Peak
5825	93.68	93.45			32.12	5.64	37.53	102	348	Average
5825	102.17	101.94			32.12	5.64	37.53	102	348	Peak
5850	47.6	47.3	73.68	-26.08	32.15	5.66	37.51	102	348	Average
5850	63.04	62.74	82.17	-19.13	32.15	5.66	37.51	102	348	Peak

REMARKS:

- 5825MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	61.7	61.58	77.71	-16.01	31.96	5.59	37.43	100	327	Average
5725	75.05	74.93	86.41	-11.36	31.96	5.59	37.43	100	327	Peak
5755	97.71	97.57			32.01	5.6	37.47	100	327	Average
5755	106.41	106.27			32.01	5.6	37.47	100	327	Peak
5850	43.19	42.89	77.71	-34.52	32.15	5.66	37.51	100	327	Average
5850	55.88	55.58	86.41	-30.53	32.15	5.66	37.51	100	327	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	54.63	54.51	71.28	-16.65	31.96	5.59	37.43	102	348	Average
5725	67.29	67.17	80.43	-13.14	31.96	5.59	37.43	102	348	Peak
5755	91.28	91.14			32.01	5.6	37.47	102	348	Average
5755	100.43	100.29			32.01	5.6	37.47	102	348	Peak
5850	40.28	39.98	71.28	-31	32.15	5.66	37.51	102	348	Average
5850	55.24	54.94	80.43	-25.19	32.15	5.66	37.51	102	348	Peak

REMARKS:

- 5755MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	48.83	48.71	78.04	-29.21	31.96	5.59	37.43	100	327	Average
5725	62.55	62.43	86.62	-24.07	31.96	5.59	37.43	100	327	Peak
5795	98.04	97.88			32.07	5.63	37.54	100	327	Average
5795	106.62	106.46			32.07	5.63	37.54	100	327	Peak
5825	58.74	58.51	78.04	-19.3	32.12	5.64	37.53	100	327	Average
5825	77.12	76.89	86.62	-9.5	32.12	5.64	37.53	100	327	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	43.49	43.37	72.24	-28.75	31.96	5.59	37.43	102	349	Average
5725	57.7	57.58	80.88	-23.18	31.96	5.59	37.43	102	349	Peak
5795	92.24	92.08			32.07	5.63	37.54	102	349	Average
5795	100.88	100.72			32.07	5.63	37.54	102	349	Peak
5825	53.31	53.08	72.24	-18.93	32.12	5.64	37.53	102	349	Average
5825	68.04	67.81	80.88	-12.84	32.12	5.64	37.53	102	349	Peak

REMARKS:

- 5795MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value



A D T

MODE B

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
3864	50.5	53.62	54	-3.5	29.38	4.53	37.03	100	274	Average
3864	52.74	55.86	74	-21.26	29.38	4.53	37.03	100	274	Peak
5725	49.11	48.99	81.13	-32.02	31.96	5.59	37.43	100	340	Average
5725	63.54	63.42	89.7	-26.16	31.96	5.59	37.43	100	340	Peak
5795	101.13	100.97			32.07	5.63	37.54	100	340	Average
5795	109.7	109.54			32.07	5.63	37.54	100	340	Peak
5850	52.9	52.6	81.13	-28.23	32.15	5.66	37.51	100	340	Average
5850	68.07	67.77	89.7	-21.63	32.15	5.66	37.51	100	340	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
3864	51.19	54.31	54	-2.81	29.38	4.53	37.03	114	356	Average
3864	52.26	55.38	74	-21.74	29.38	4.53	37.03	114	356	Peak
5725	43.01	42.89	74.75	-31.74	31.96	5.59	37.43	112	354	Average
5725	59.41	59.29	83.98	-24.57	31.96	5.59	37.43	112	354	Peak
5795	94.75	94.59			32.07	5.63	37.54	112	354	Average
5795	103.98	103.82			32.07	5.63	37.54	112	354	Peak
5850	46.01	45.71	74.75	-28.74	32.15	5.66	37.51	112	354	Average
5850	60.82	60.52	83.98	-23.16	32.15	5.66	37.51	112	354	Peak

REMARKS:

- 5795MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value



A D T

MODE C

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	37.98	37.86	56.55	-18.57	31.96	5.59	37.43	100	160	Average
5725	55.01	54.89	66.49	-11.48	31.96	5.59	37.43	100	160	Peak
5785	76.55	76.43			32.04	5.62	37.54	100	160	Average
5785	86.49	86.37			32.04	5.62	37.54	100	160	Peak
5850	38.67	38.37	56.55	-17.88	32.15	5.66	37.51	100	160	Average
5850	53.71	53.41	66.49	-12.78	32.15	5.66	37.51	100	160	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	38.25	38.13	64.59	-26.34	31.96	5.59	37.43	100	211	Average
5725	54.33	54.21	73.98	-19.65	31.96	5.59	37.43	100	211	Peak
5785	84.59	84.47			32.04	5.62	37.54	100	211	Average
5785	93.98	93.86			32.04	5.62	37.54	100	211	Peak
5850	38.55	38.25	64.59	-26.04	32.15	5.66	37.51	100	211	Average
5850	53.71	53.41	73.98	-20.27	32.15	5.66	37.51	100	211	Peak

REMARKS:

- 5785MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value



A D T

MODE D

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	37.97	37.85	55.74	-17.77	31.96	5.59	37.43	109	188	Average
5725	47.96	47.84	63.99	-16.03	31.96	5.59	37.43	109	188	Peak
5785	75.74	75.62			32.04	5.62	37.54	109	188	Average
5785	83.99	83.87			32.04	5.62	37.54	109	188	Peak
5850	39.41	39.11	55.74	-16.33	32.15	5.66	37.51	109	188	Average
5850	48.97	48.67	63.99	-15.02	32.15	5.66	37.51	109	188	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	38.04	37.92	62.92	-24.88	31.96	5.59	37.43	100	212	Average
5725	48.86	48.74	70.76	-21.9	31.96	5.59	37.43	100	212	Peak
5785	82.92	82.8			32.04	5.62	37.54	100	212	Average
5785	90.76	90.64			32.04	5.62	37.54	100	212	Peak
5850	38.54	38.24	62.92	-24.38	32.15	5.66	37.51	100	212	Average
5850	48.51	48.21	70.76	-22.25	32.15	5.66	37.51	100	212	Peak

REMARKS:

- 5785MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value



A D T

BELOW 1GHz WORST-CASE DATA

MODE A

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-Peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Johnson Liao

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.19	31.49	49.68	40	-8.51	12.35	0.8	31.34	100	152	Peak
90.75	30.48	53.03	43.5	-13.02	8.38	1.03	31.96	100	147	Peak
171.48	26.07	44.8	43.5	-17.43	11.57	1.45	31.75	100	196	Peak
532.4	22.5	33.25	46	-23.5	18.06	2.89	31.7	100	131	Peak
615	24.36	33.56	46	-21.64	19.79	3.13	32.12	100	132	Peak
675.9	26.49	34.45	46	-19.51	20.53	3.34	31.83	100	195	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
30.27	36.61	55.2	40	-3.39	11.98	0.57	31.14	100	256	QP
39.45	35.76	52.56	40	-4.24	13.54	0.65	30.99	100	189	Peak
56.73	33.18	51.47	40	-6.82	12.25	0.81	31.35	100	195	Peak
614.3	28.58	37.8	46	-17.42	19.77	3.13	32.12	100	154	Peak
677.3	27.99	35.94	46	-18.01	20.54	3.34	31.83	100	115	Peak
799.1	28.67	34.19	46	-17.33	22.22	3.69	31.43	100	123	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

MODE B

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-Peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Johnson Liao

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.19	31.15	49.34	40	-8.85	12.35	0.8	31.34	100	227	Peak
89.4	20.12	42.73	43.5	-23.38	8.28	1.02	31.91	100	315	Peak
174.72	26.51	45.54	43.5	-16.99	11.28	1.47	31.78	100	145	Peak
497.4	20.76	32.38	46	-25.24	17.27	2.77	31.66	100	103	Peak
651.4	27.81	36.34	46	-18.19	20.23	3.25	32.01	100	199	Peak
792.8	26.94	32.55	46	-19.06	22.12	3.68	31.41	100	214	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
30.54	31.11	49.52	40	-8.89	12.14	0.57	31.12	100	132	QP
39.72	32.29	49.09	40	-7.71	13.54	0.65	30.99	100	157	Peak
55.65	31.9	49.98	40	-8.1	12.45	0.8	31.33	100	144	Peak
578.6	25.92	35.89	46	-20.08	19.12	3.03	32.12	100	184	Peak
651.4	31.44	39.97	46	-14.56	20.23	3.25	32.01	100	310	Peak
769.7	26.81	32.68	46	-19.19	21.81	3.62	31.3	100	254	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

MODE C

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-Peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Johnson Liao

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
49.98	21.7	39.27	40	-18.3	12.97	0.77	31.31	100	193	Peak
159.6	21.23	38.99	43.5	-22.27	12.73	1.39	31.88	100	245	Peak
286.23	27.57	44.77	46	-18.43	12.54	1.99	31.73	100	277	Peak
360.2	33.97	49.29	46	-12.03	14.38	2.27	31.97	100	143	Peak
552	30.11	40.63	46	-15.89	18.5	2.95	31.97	100	193	Peak
934.9	28.26	32.47	46	-17.74	23.71	4.04	31.96	100	108	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
40.8	26.22	43.02	40	-13.78	13.55	0.67	31.02	100	167	Peak
155.01	19.14	36.79	43.5	-24.36	12.72	1.37	31.74	100	175	Peak
288.12	21.34	38.44	46	-24.66	12.6	2	31.7	100	155	Peak
401.5	27.23	41.53	46	-18.77	15.37	2.43	32.1	100	176	Peak
624.1	25.69	34.8	46	-20.31	19.89	3.16	32.16	100	188	Peak
960.1	29.09	33.08	54	-24.91	23.85	4.09	31.93	100	109	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value



A D T

MODE D

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-Peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Johnson Liao

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
72.12	26.9	47.46	40	-13.1	10.29	0.91	31.76	100	191	Peak
159.87	19.93	37.69	43.5	-23.57	12.73	1.39	31.88	100	294	Peak
252.75	23.47	41.96	46	-22.53	11.57	1.85	31.91	100	154	Peak
311.9	29.91	46.51	46	-16.09	13.24	2.1	31.94	100	225	Peak
600.3	29.03	38.58	46	-16.97	19.61	3.09	32.25	100	161	Peak
927.9	28.47	32.76	46	-17.53	23.67	4.03	31.99	100	204	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
80.49	23.99	46.4	40	-16.01	8.13	0.97	31.51	100	156	Peak
167.97	17.14	35.51	43.5	-26.36	11.96	1.43	31.76	100	241	Peak
259.5	16.68	34.9	46	-29.32	11.77	1.86	31.85	100	246	Peak
384	27.9	42.57	46	-18.1	14.96	2.36	31.99	100	160	Peak
679.4	25.88	33.81	46	-20.12	20.56	3.35	31.84	100	251	Peak
867.7	35.27	40.29	46	-10.73	23.1	3.87	31.99	100	194	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

5.2 CONDUCTED EMISSION MEASUREMENT

5.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	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.

5.2.2 TEST INSTRUMENTS

Same as item 4.2.2.

5.2.3 TEST PROCEDURES

Same as item 4.2.3.

5.2.4 DEVIATION FROM TEST STANDARD

No deviation.

5.2.5 TEST SETUP

Same as item 4.2.5.

5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

5.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA

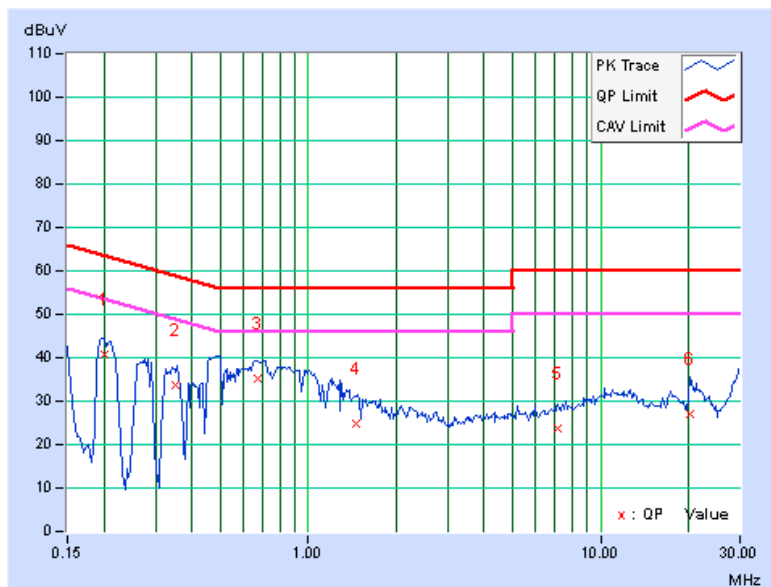
MODE A

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20078	0.17	40.74	26.97	40.91	27.14	63.58	53.58	-22.67	-26.44
2	0.34922	0.20	33.42	19.48	33.62	19.68	58.98	48.98	-25.36	-29.30
3	0.66953	0.24	34.83	15.30	35.07	15.54	56.00	46.00	-20.93	-30.46
4	1.45313	0.27	24.51	8.96	24.78	9.23	56.00	46.00	-31.22	-36.77
5	7.17969	0.40	23.46	18.37	23.86	18.77	60.00	50.00	-36.14	-31.23
6	20.22266	0.64	26.57	17.43	27.21	18.07	60.00	50.00	-32.79	-31.93

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

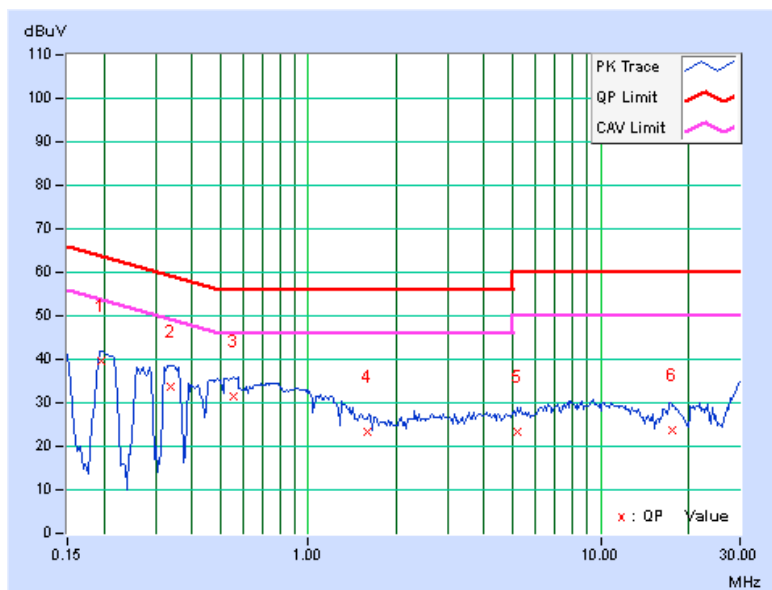


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19687	0.18	39.32	24.45	39.50	24.63	63.74	53.74	-24.24	-29.11
2	0.33750	0.23	33.57	16.59	33.80	16.82	59.26	49.26	-25.47	-32.45
3	0.55625	0.24	31.08	12.39	31.32	12.63	56.00	46.00	-24.68	-33.37
4	1.58594	0.26	22.97	9.64	23.23	9.90	56.00	46.00	-32.77	-36.10
5	5.16797	0.41	22.81	15.33	23.22	15.74	60.00	50.00	-36.78	-34.26
6	17.64453	0.67	22.99	16.09	23.66	16.76	60.00	50.00	-36.34	-33.24

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



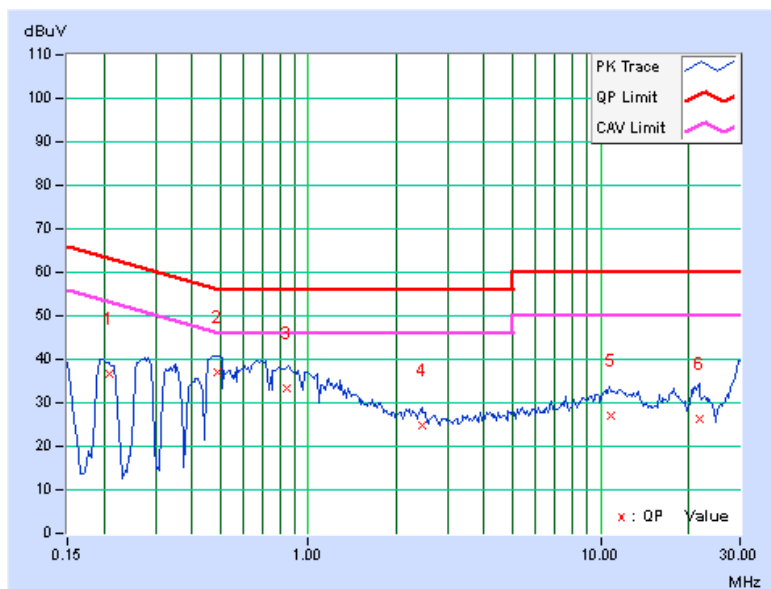
MODE B

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20859	0.17	36.55	21.99	36.72	22.16	63.26	53.26	-26.54	-31.10
2	0.48594	0.22	36.67	17.73	36.89	17.95	56.24	46.24	-19.35	-28.29
3	0.84141	0.25	33.11	17.09	33.36	17.34	56.00	46.00	-22.64	-28.66
4	2.45313	0.30	24.64	12.91	24.94	13.21	56.00	46.00	-31.06	-32.79
5	10.82813	0.45	26.68	22.12	27.13	22.57	60.00	50.00	-32.87	-27.43
6	21.71094	0.63	25.78	18.67	26.41	19.30	60.00	50.00	-33.59	-30.70

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

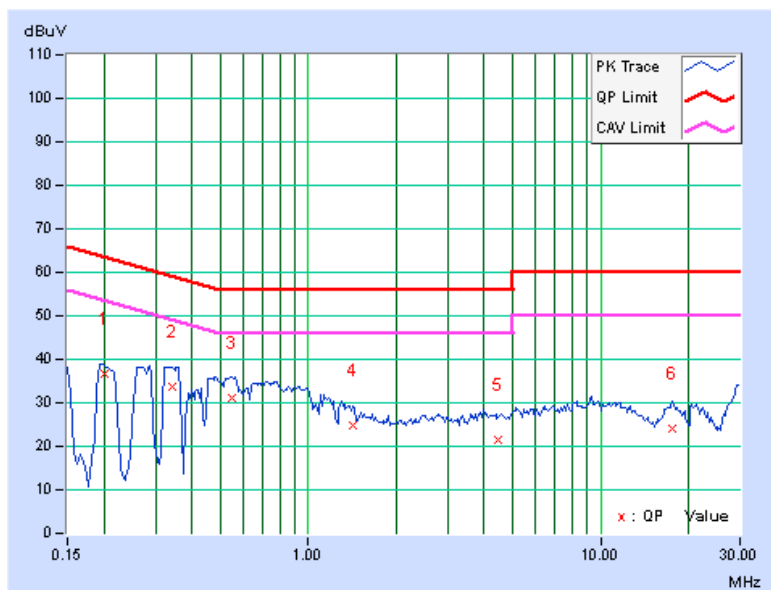


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20078	0.18	36.37	22.05	36.55	22.23	63.58	53.58	-27.03	-31.35
2	0.34141	0.23	33.37	15.95	33.60	16.18	59.17	49.17	-25.57	-32.99
3	0.54844	0.25	31.04	12.33	31.29	12.58	56.00	46.00	-24.71	-33.42
4	1.42188	0.25	24.40	12.13	24.65	12.38	56.00	46.00	-31.35	-33.62
5	4.46875	0.40	21.23	13.43	21.63	13.83	56.00	46.00	-34.37	-32.17
6	17.68359	0.67	23.22	16.05	23.89	16.72	60.00	50.00	-36.11	-33.28

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



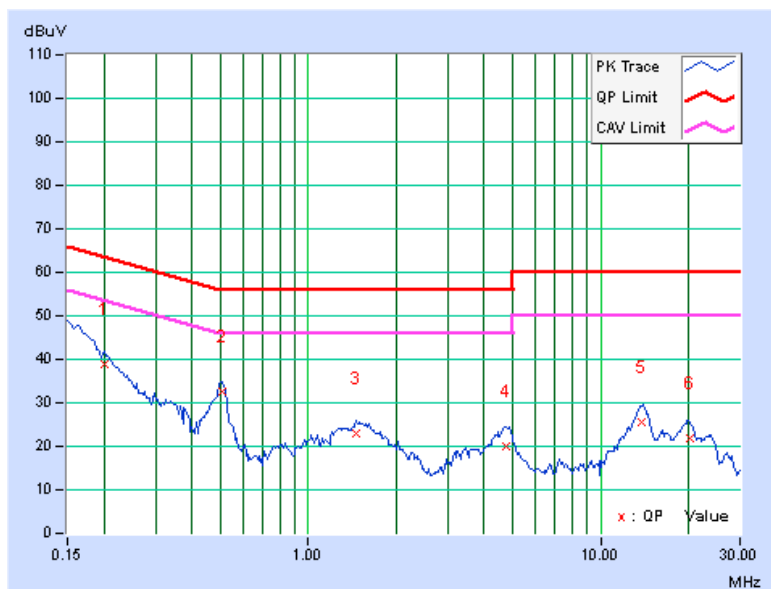
MODE C

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20078	0.17	38.64	22.33	38.81	22.50	63.58	53.58	-24.77	-31.08
2	0.50547	0.22	32.47	26.42	32.69	26.64	56.00	46.00	-23.31	-19.36
3	1.45703	0.27	22.82	17.90	23.09	18.17	56.00	46.00	-32.91	-27.83
4	4.74219	0.38	19.68	11.10	20.06	11.48	56.00	46.00	-35.94	-34.52
5	13.80078	0.51	25.19	17.21	25.70	17.72	60.00	50.00	-34.30	-32.28
6	20.10938	0.64	21.22	17.36	21.86	18.00	60.00	50.00	-38.14	-32.00

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

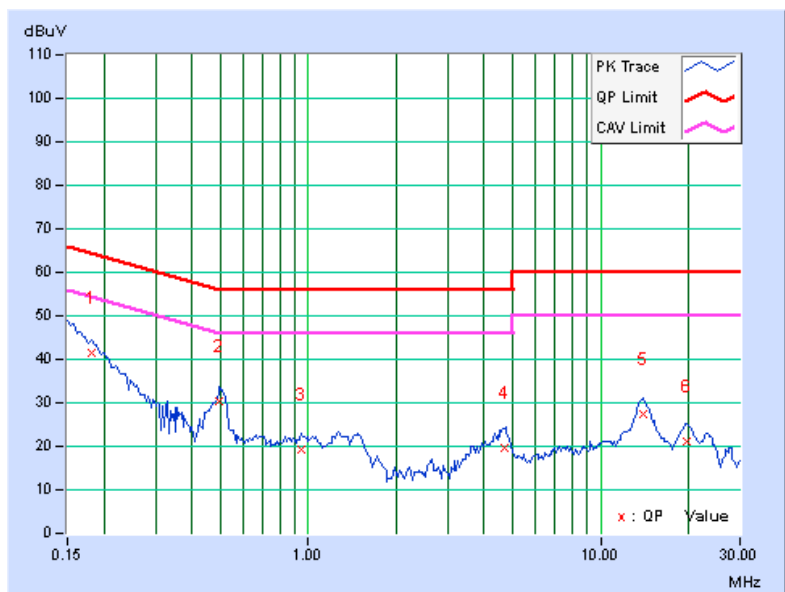


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18125	0.18	41.27	26.69	41.45	26.87	64.43	54.43	-22.98	-27.56
2	0.49375	0.25	30.21	24.03	30.46	24.28	56.10	46.10	-25.65	-21.83
3	0.94688	0.23	18.87	13.41	19.10	13.64	56.00	46.00	-36.90	-32.36
4	4.67969	0.40	19.36	11.44	19.76	11.84	56.00	46.00	-36.24	-34.16
5	13.92578	0.58	26.73	19.57	27.31	20.15	60.00	50.00	-32.69	-29.85
6	19.71875	0.72	20.45	16.67	21.17	17.39	60.00	50.00	-38.83	-32.61

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



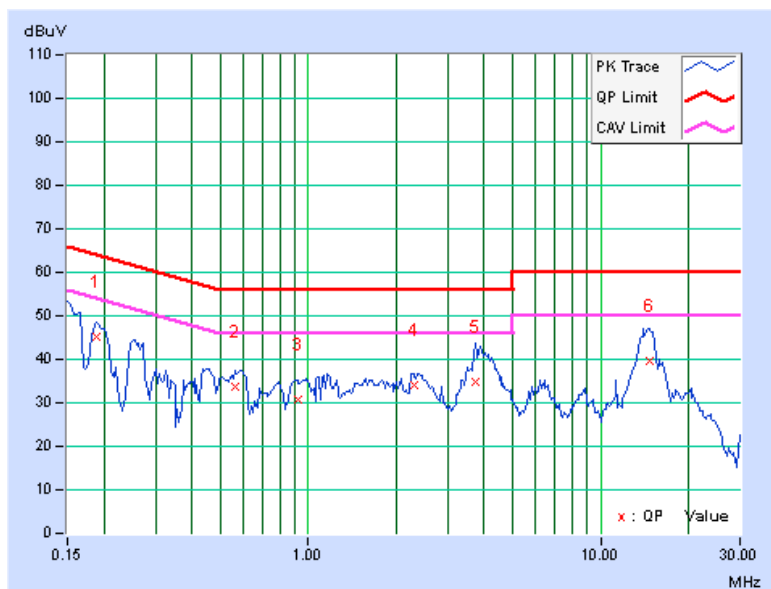
MODE D

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18906	0.17	44.84	31.92	45.01	32.09	64.08	54.08	-19.07	-21.99
2	0.56016	0.23	33.35	22.29	33.58	22.52	56.00	46.00	-22.42	-23.48
3	0.91953	0.26	30.60	18.71	30.86	18.97	56.00	46.00	-25.14	-27.03
4	2.29297	0.29	33.61	25.10	33.90	25.39	56.00	46.00	-22.10	-20.61
5	3.71094	0.36	34.54	25.71	34.90	26.07	56.00	46.00	-21.10	-19.93
6	14.71875	0.53	39.11	29.27	39.64	29.80	60.00	50.00	-20.36	-20.20

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

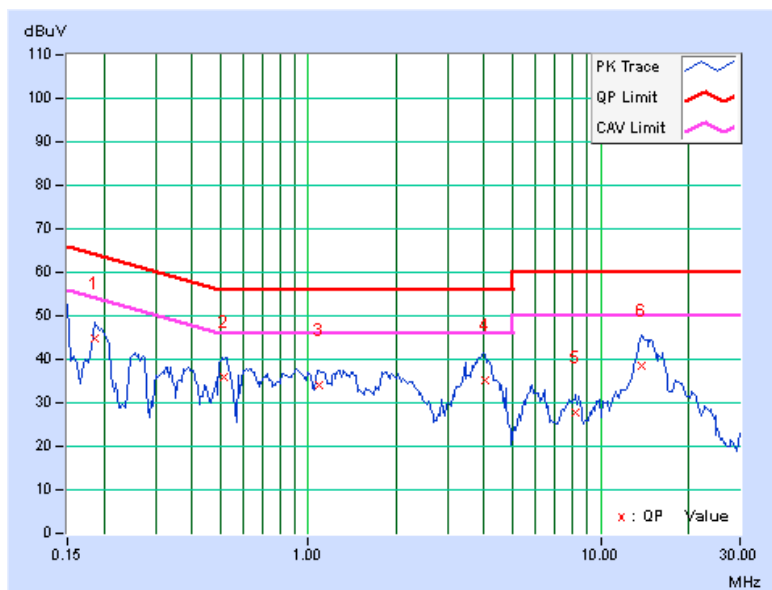


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18516	0.18	44.68	28.74	44.86	28.92	64.25	54.25	-19.39	-25.33
2	0.51719	0.25	35.68	25.65	35.93	25.90	56.00	46.00	-20.07	-20.10
3	1.09375	0.23	33.82	22.10	34.05	22.33	56.00	46.00	-21.95	-23.67
4	4.03906	0.39	34.78	26.46	35.17	26.85	56.00	46.00	-20.83	-19.15
5	8.21875	0.45	27.44	19.63	27.89	20.08	60.00	50.00	-32.11	-29.92
6	13.75781	0.57	38.10	30.07	38.67	30.64	60.00	50.00	-21.33	-19.36

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

5.3.2 TEST SETUP

Same as item 4.3.2.

5.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.3.4 TEST PROCEDURE

Same as item 4.3.4.

5.3.5 DEVIATION FROM TEST STANDARD

No deviation.

5.3.6 EUT OPERATING CONDITIONS

Same as item 4.3.6.

5.3.7 TEST RESULTS

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.14	0.5	PASS
157	5785	15.16	0.5	PASS
165	5825	15.19	0.5	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.14	0.5	PASS
157	5785	15.13	0.5	PASS
165	5825	15.19	0.5	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
151	5755	35.17	0.5	PASS
159	5795	35.19	0.5	PASS

5.4 MAXIMUM OUTPUT POWER

5.4.1 LIMITS OF MAXIMUM OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 5725–5850 MHz bands: 1 Watt (30dBm)

5.4.2 TEST SETUP

Same as Item 4.4.2.

5.4.3 INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.4.4 TEST PROCEDURES

Same as Item 4.4.4.

5.4.5 DEVIATION FROM TEST STANDARD

No deviation.

5.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

5.4.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
149	5745	169.434	22.29	30	PASS
157	5785	175.792	22.45	30	PASS
165	5825	172.584	22.37	30	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
149	5745	164.059	22.15	30	PASS
157	5785	179.887	22.55	30	PASS
165	5825	168.267	22.26	30	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
151	5755	173.380	22.39	30	PASS
159	5795	177.011	22.48	30	PASS

5.5 POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.5.2 TEST SETUP

Same as item 4.5.2.

5.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.5.4 TEST PROCEDURE.

Same as item 4.5.4.

5.5.5 DEVIATION FROM TEST STANDARD

No deviation.

5.5.6 EUT OPERATING CONDITION

Same as item 4.3.6.

5.5.7 TEST RESULTS

802.11a

Channel	FREQ. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
149	5745	-9.56	8	PASS
157	5785	-10.28	8	PASS
165	5825	-10.91	8	PASS

802.11n (20MHz)

Channel	FREQ. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
149	5745	-10.95	8	PASS
157	5785	-10.25	8	PASS
165	5825	-10.15	8	PASS

802.11n (40MHz)

Channel	FREQ. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
151	5755	-13.15	8	PASS
159	5795	-12.78	8	PASS

5.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

5.6.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

5.6.2 TEST SETUP

Same as Item 4.6.2

5.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.6.4 TEST PROCEDURE

Same as Item 4.6.4

5.6.5 DEVIATION FROM TEST STANDARD

No deviation.

5.6.6 EUT OPERATING CONDITION

Same as Item 4.3.6

5.6.7 TEST RESULTS

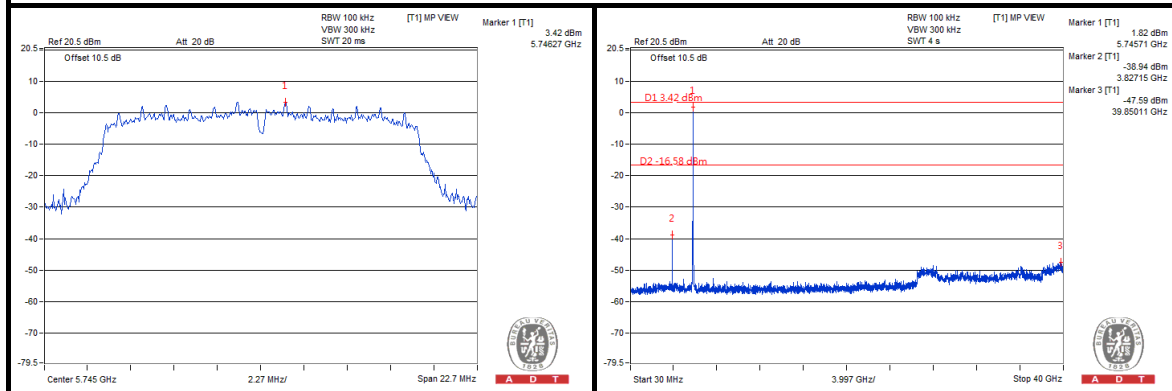
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.



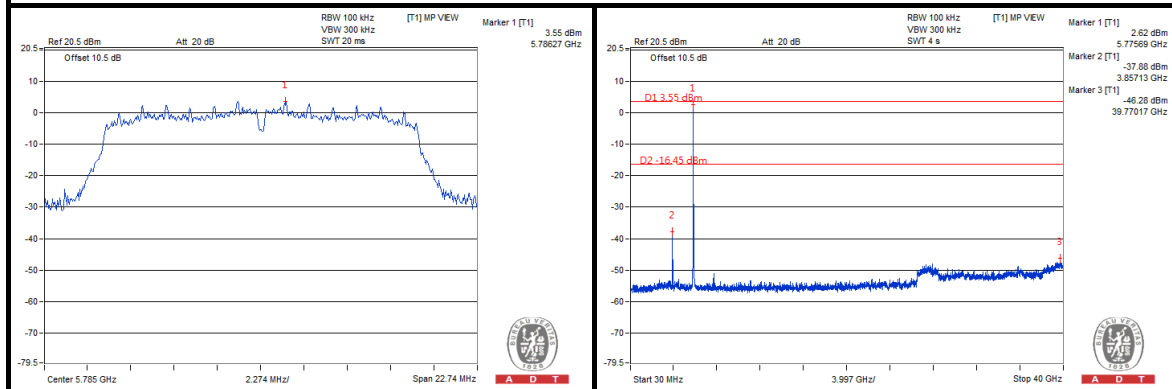
A D T

802.11a

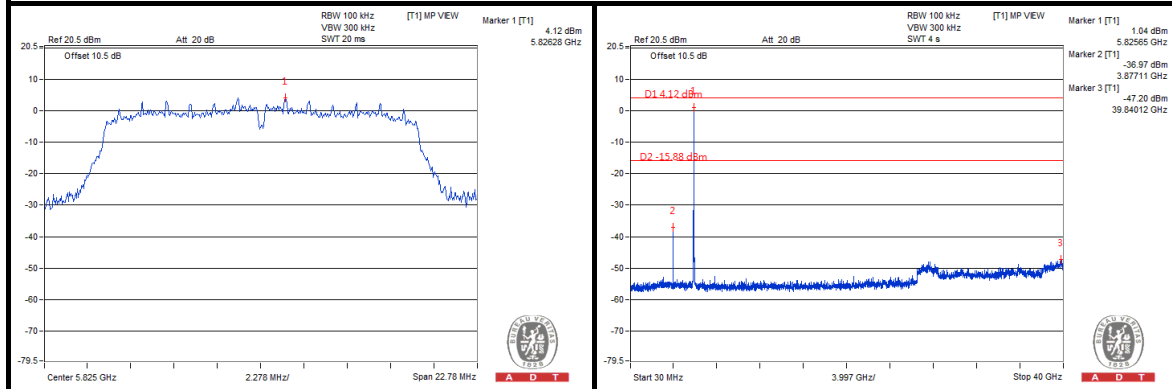
CH 149



CH 157



CH 165

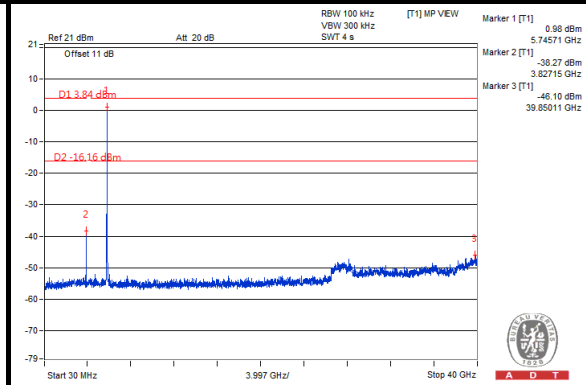
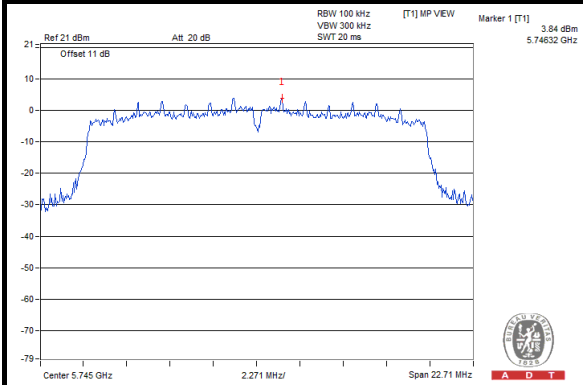




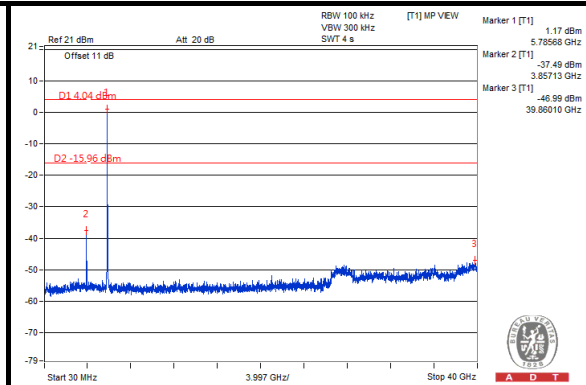
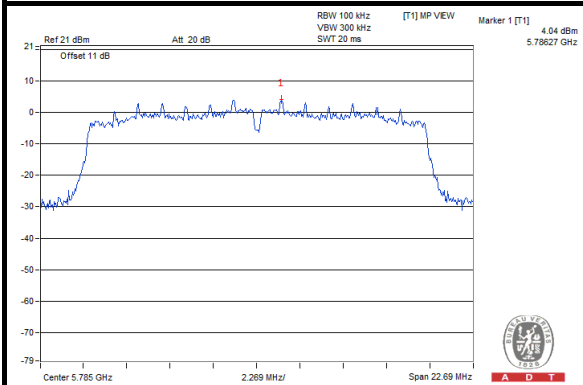
A D T

802.11n (20MHz)

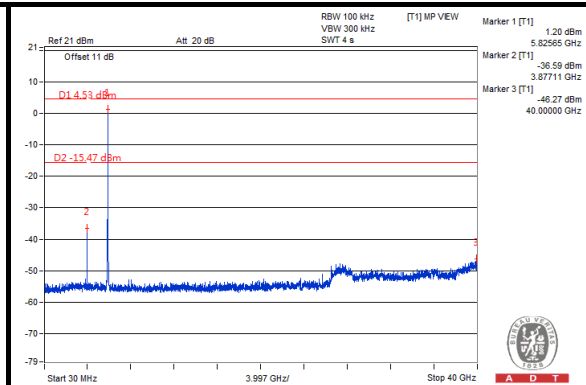
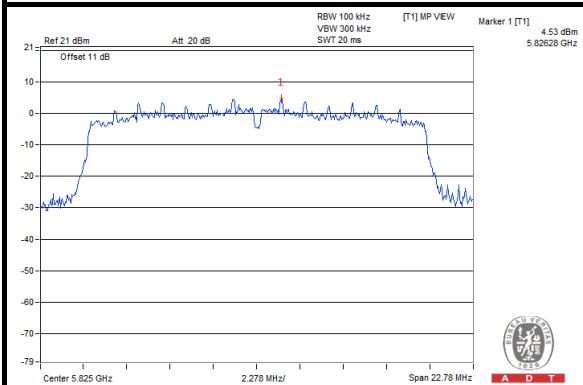
CH 149



CH 157



CH 165

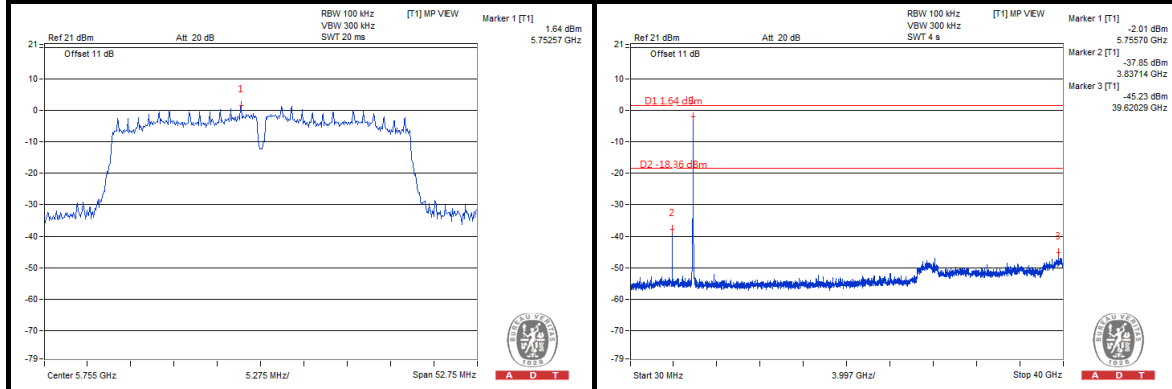




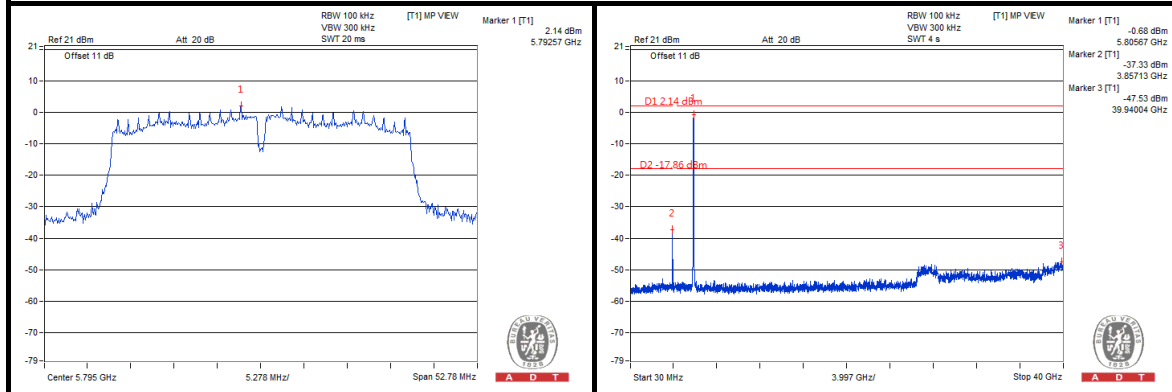
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802.11n (40MHz)

CH 151



CH 159



6. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

7. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.



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8. APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---