FCC TEST REPORT(WLAN - 15.247)

REPORT NO.:	RF120522E09
MODEL NO.:	MC92N0
FCC ID:	UZ7MC92N0
RECEIVED:	May 22, 2012
TESTED:	June 01 to Aug. 09, 2012
ISSUED:	Aug. 13, 2012

APPLICANT:	Motorola Solutions, Inc.
ADDRESS:	One Motorola Plaza Holtsville NY 11742-1300 USA

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
LAB ADDRESS :	No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan, R.O.C.
TEST LOCATION (1):	No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan, R.O.C.
TEST LOCATION (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan, R.O.C.

This report should not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF120522E09	Original release	Aug. 13, 2012

1. CERTIFICATION

PRODUCT:	Mobile Computer
BRAND NAME:	MOTOROLA
MODEL NO.:	MC92N0
TEST SAMPLE:	ENGINEERING SAMPLE
APPLICANT:	Motorola Solutions, Inc.
TESTED:	June 01 to Aug. 09, 2012
STANDARDS:	**FCC Part 15, Subpart C (Section 15.247)** ANSI C63.10-2009

The above equipment (Model: MC92N0) 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 : _____ **DATE:** *Aug. 13, 2012*
(Midoli Peng, Specialist)

APPROVED BY : _____ , **DATE:** *Aug. 13, 2012*
(May Chen, Deputy Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

For 2.4GHz, 2412~2472MHz Band

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 -9.12dB at 0.47031MHz
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -2.0dB at 2390.00MHz 2483.50MHz
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.

For 5GHz, 5745~5825MHz Band

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 -10.31dB at 0.41563MHz
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -6.8dB at 216.16MHz
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.

NOTE: The EUT was operating in 2400 ~ 2483.5MHz, 5.15~5.35GHz, 5.47~5.6GHz & 5.65~5.725GHz and 5.725~5.850GHz frequencies band. This report was recorded the RF parameters including 2400 ~ 2483.5MHz and 5.725~5.850GHz. For the 5.15~5.35GHz, 5.47~5.6GHz & 5.65~5.725GHz RF parameters was recorded in another test report.

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:

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

Measurement	Value
Conducted emissions	2.98 dB
Radiated emissions (30MHz-1GHz)	5.59 dB
Radiated emissions (1GHz -6GHz)	3.84 dB
Radiated emissions (6GHz -18GHz)	4.09 dB
Radiated emissions (18GHz -40GHz)	4.24 dB

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT(WLAN)

PRODUCT	Mobile Computer
MODEL NO.	MC92N0
POWER SUPPLY	DC 7.4V from battery DC 12V to direct charging adapter
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: up to11Mbps 802.11g / a: up to 54Mbps 802.11n (20MHz, 800ns GI): up to 65Mbps 802.11n (20MHz, 400ns GI): up to 72.2Mbps
OPERATING FREQUENCY	**For 15.407** 5.18 ~ 5.24GHz, 5.26 ~ 5.32GHz, 5.5~5.58GHz & 5.66~5.7GHz
	For 15.247 2.4GHz: 2.412 ~ 2.472GHz 5GHz: 5.745 ~ 5.825GHz
NUMBER OF CHANNEL	**For 15.407** 16 for 802.11a, 802.11n (20MHz)
	For 15.247 (2.4GHz) 13 for 802.11b, 802.11g, 802.11n (20MHz) **For 15.247 (5GHz)** 5 for 802.11a, 802.11n (20MHz)
MAXIMUM OUTPUT POWER	**For 15.407** 802.11a: 66.069mW 802.11n (20MHz): 58.884mW **For 15.247(2.4GHz)** 802.11b: 204.174mW 802.11g: 204.174mW 802.11n (20MHz): 208.930mW **For 15.247(5GHz)** 802.11a: 169.824mW 802.11n (20MHz): 165.959mW
ANTENNA TYPE	Please see NOTE
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ASSOCIATED DEVICES	Battery x 1 (Part No.: 21-65587-03)

NOTE:

1. There are Bluetooth 2.1 + EDR technology and WLAN 802.11 a/b/g/n technology used for the EUT. and the report number corresponds with functions are listed as below:

Function	Report No.
WLAN	RF120522E09 (15.247) RF120522E09-1(15.407) RF120522E09-3(DFS)
Bluetooth	RF120522E09-2

2. The EUT configuration list:

Scanner	With CR	Without CR	Keypad			
			53 key	43 key	33 key	28 key
SE4500	V	-	V	V	V	V
SE4500	-	V	V	V	V	V
SE4600	V	-	V	V	V	V
SE4600	-	V	V	V	V	V
SE965	V	-	V	V	V	V
SE965	-	V	V	V	V	V
SE1524	V	-	V	V	V	V
SE1524		V	V	V	V	V
CR : Condensation Resistant						

3. The Version of EUT information are as below:

Mobile Computer	OS Version	07.00.2806
	OEM Name	MOTOROLA MC92N0G
	OEM Version	00.20.0005
Wireless(Fusion)	Part Number	31-FUSION-X2.00
	Version	X_2.00.0.0.040E
XW2DMT	Version	X_2.00.0.0.28
	Fusion	X_2.00.0.0.040E
BTRegTest Ver4.1	Version	4.1

4. The associated devices(optional) of EUT information are as below:

Product	Brand	Model	S/N
28keypad	NA	KYPD-MC9XMR000-01R	40A11W40H
33keypad	NA	KYPD-MC9XMX000-01R	40B52K50A
43keypad	NA	KYPD-MC9XMT000-01R	40A11R93G
53keypad	NA	KYPD-MC9XMS000-01R	40B63U43F
Product	Brand	Model	P/N
Headset	MOTOROLA	RCH50	RCH50
Headset	VXI	VR10	50-11300-050R
Power adapter (for Direct charging)	HIPRO	HP-A0502R3D	PWRS-14000-148R
Direct charging adapter	SYMBOL	ADP9000-110R	NA
AC Line cord	NA	NA	23844-00-00R
USB cable	NA	NA	25-62166-01R

5. The EUT could be supplied with a direct charging and battery as below table:

Direct charging adapter (not for sale together)	
Brand:	SYMBOL
Part No.:	ADP9000-110R
I/O Ports:	RS232 Port * 1 RJ45 Port *2
Associated Devices:	USB cable (unshielded, 1.8m without core) USB cable (Part No.: 25-62166-01r)
Power Adapter (for Direct charging, and not for sale together) Brand: HIPRO Model No.: HP-A0502R3D Part No.: PWRS-14000-148R Input power : 100-240V, 50-60Hz, 2.4A Output power : +12V , 4.16A AC Line cord (unshielded, 2.2m without core) (Part No.: 23844-00-00R)	
Battery	
Brand:	SYMBOL
Part No.:	21-65587-03
Rating:	7.4V, 2200mAh, 16.3Wh

6. The antennas provided to the EUT, please refer to the following table:

WLAN Antenna Spec.			
Antenna	Type	Connecter	Gain (dBi)
Lant (Aux)	PIFA	NA	4.07 (2.4GHz) 4.96 (5GHz)
Rant (Main)	PIFA	NA	6.03 (2.4GHz) 4.51 (5GHz)
Bluetooth Antenna Spec			
Type	Connecter		Gain (dBi)
Chip	NA		-3.31

Note: This report chose the max. Antenna gain to do final test.

7. The EUT was pre-tested in chamber under following test modes :

Mode	Axis	Scanner	Headset	Keypad	CR	Power
Mode A	X-Y	SE4500	RCH50	53 Key	Without CR	Battery
Mode B	X-Y	SE1524	RCH50	53 Key	Without CR	Battery
Mode C	X-Y	SE965	RCH50	53 Key	Without CR	Battery
Mode D	X-Y	SE4600	RCH50	53 Key	Without CR	Battery
Mode E	X-Z	SE4500	RCH50	53 Key	Without CR	Battery
Mode F	Y-Z	SE4500	RCH50	53 Key	Without CR	Battery
Mode G	X-Y	SE4500	RCH50	53 Key	Without CR	Direct charging
Mode H	X-Y	SE4500	VR10	53 Key	Without CR	Direct charging
Mode I	X-Y	SE4500	VR10	28 Key	Without CR	Direct charging
Mode J	**X-Y**	**SE4500**	**VR10**	**43 Key**	**Without CR**	**Direct charging**
Mode K	X-Y	SE4500	VR10	33 Key	Without CR	Direct charging
Mode L	X-Y	SE4500	VR10	43 Key	With CR	Direct charging
Mode M	**X-Z**	**SE4500**	**VR10**	**43 Key**	**Without CR**	**Direct charging**
Mode N	**Y-Z**	**SE4500**	**VR10**	**43 Key**	**Without CR**	**Direct charging**

The worse radiated emission (Below 1GHz) was found in **Mode J**; the worse radiated emission (Above 1GHz<2.4GHz>) was found in **Mode N** and the worse radiated emission (Above 1GHz<5GHz>) was found in **Mode M**. Therefore only the test data of the modes were recorded in this report.

8. The EUT incorporates a SISO function. Both, main and diversity (aux.) antennas path can transmit but only one can transmit at given time while the other is RX only.

MODULATION MODE	Tx/Rx FUNCTION
802.11b	1Tx/1Rx(Diversity)
802.11g	1Tx/1Rx(Diversity)
802.11a	1Tx/1Rx(Diversity)
802.11n (20MHz)	1Tx/1Rx(Diversity)

9. When the EUT operating in 802.11n, the software operation, which is defined by manufacturer, MCS (Modulation and Coding Schemes) from 0 to 7.

10. The above EUT information was 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

Operated in 2400 ~ 2483.5MHz band:

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412MHz	8	2447MHz
2	2417MHz	9	2452MHz
3	2422MHz	10	2457MHz
4	2427MHz	11	2462MHz
5	2432MHz	12	2467MHz
6	2437MHz	13	2472MHz
7	2442MHz		

Operated in 5725 ~ 5850MHz band:

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

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

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

FOR 2.4GHz

EUT CONFIGURE MODE	APPLICABLE TO					DESCRIPTION
	PLC	RE < 1G	RE ³ 1G	APCM	OB	
-	√	-	-	-	-	EUT(Y-Z) + Scanner (SE1524) + Headset(RCH50) + Keypad(53) + Direct charging & Without CR
-	-	√	-	-	-	EUT(X-Y) + Scanner (SE4500) + Headset(VR10) + Keypad(43) + Direct charging & Without CR
-	-	-	√	√	√	EUT(Y-Z) + Scanner (SE4500) + Headset(VR10) + Keypad(43) + Direct charging & Without CR

FOR 5GHz

EUT CONFIGURE MODE	APPLICABLE TO					DESCRIPTION
	PLC	RE < 1G	RE ³ 1G	APCM	OB	
-	√	-	-	-	-	EUT(Y-Z) + Scanner (SE1524) + Headset(RCH50) + Keypad(53) + Direct charging & Without CR
-	-	√	-	-	-	EUT(X-Y) + Scanner (SE4500) + Headset(VR10) + Keypad(43) + Direct charging & Without CR
-	-	-	√	√	√	EUT(X-Z) + Scanner (SE4500) + Headset(VR10) + Keypad(43) + Direct charging & Without CR

Where **PLC:** Power Line Conducted Emission **RE < 1G:** Radiated Emission below 1GHz

RE ³ 1G: Radiated Emission above 1GHz **APCM:** Antenna Port Conducted Measurement

OB: Conducted Out-Band Emission Measurement

POWER LINE CONDUCTED EMISSION TEST:

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

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
For 2.4 GHz 802.11n (20MHz)	1 to 13	6	OFDM	BPSK	6.5
For 5 GHz 802.11n (20MHz)	149 to 165	165	OFDM	BPSK	6

RADIATED EMISSION TEST (BELOW 1 GHz):

☒ 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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
For 2.4 GHz 802.11n (20MHz)	1 to 13	6	OFDM	BPSK	6.5
For 5 GHz 802.11n (20MHz)	149 to 165	165	OFDM	BPSK	6

RADIATED EMISSION TEST (ABOVE 1 GHz):

☒ 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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	DSSS	DBPSK	1
802.11g	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	OFDM	BPSK	6
For 2.4 GHz 802.11n (20MHz)	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	OFDM	BPSK	6.5
802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6
For 5 GHz 802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	6.5

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	DSSS	DBPSK	1
802.11g	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	OFDM	BPSK	6
For 2.4 GHz 802.11n (20MHz)	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	OFDM	BPSK	6.5
802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6
For 5 GHz 802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	6.5

CONDUCTED OUT-BAND EMISSION 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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	DSSS	DBPSK	1
802.11g	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	OFDM	BPSK	6
For 2.4 GHz 802.11n (20MHz)	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	OFDM	BPSK	6.5
802.11a	149 to 165	149, 165	OFDM	BPSK	6
For 5 GHz 802.11n (20MHz)	149 to 165	149, 165	OFDM	BPSK	6.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
PLC	25deg. C, 61%RH	120Vac, 60Hz	Timmy Hu
RE<1G	24deg. C, 71%RH	120Vac, 60Hz	Robert Cheng
RE≥1G	21deg. C, 67%RH	120Vac, 60Hz	Rex Huang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Rex Huang
OB	25deg. C, 60%RH	120Vac, 60Hz	Rex Huang

3.3 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)
558074 D01 DTS Meas Guidance v01
ANSI C63.10-2009

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

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

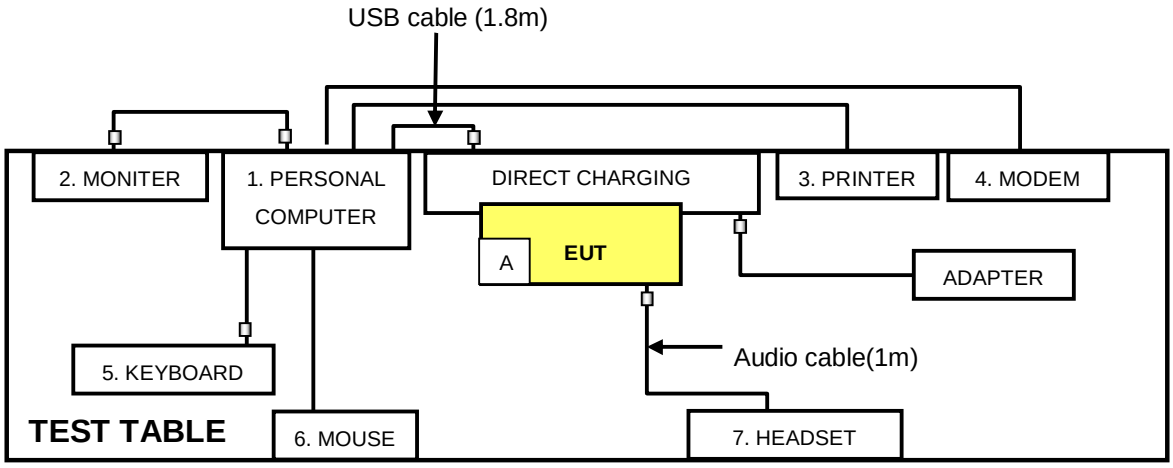
For conducted emission test					
No.	Product	Brand	Model No.	Serial No.	FCC ID
1	PERSONAL COMPUTER	DELL	DCSCMF	9KKB32S	FCC DoC
2	MONITOR	DELL	E2210Hc	CN-OG337R-64180-97S-OQDS	FCC DoC
3	PRINTER	EPSON	LQ-300+II	G88Y074083	FCC DoC
4	MODEM	ACEEX	1414	0206026778	IFAXDM1414
5	KEYBOARD	DELL	SK-8115	MY-0DJ325-71619-99B-0476	FCC DoC
6	MOUSE	DELL	M056UOA	FOROOBF9	FCC DoC
7	HEADSET	Motorola	RCH50	NA	NA
For other test items					
No.	Product	Brand	Model No.	Serial No.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP32LA	FSLB32S	FCC DoC
2	iPod shuffle	Apple	MC749TA/A	CC4DMFJUDFDM	NA
3	HEADSET	VXI	VR10	NA	NA

For conducted emission test	
No.	Signal cable description
1	USB cable (unshielded, 1.8m with one core)
2	VGA cable. (1.8m with two cores)
3	USB cable.(1.8m)
4	RS232 cable.(1.1m)
5	USB cable.(1.8m with one core)
6	USB cable.(1.8m)
7	Audio cable (1m with one core)
For other test items	
No.	Signal cable description
1	USB cable (unshielded, 1.8m with one core)
2	USB cable (shielded, 0.1m)
3	Audio cable (1.1m with one core)

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

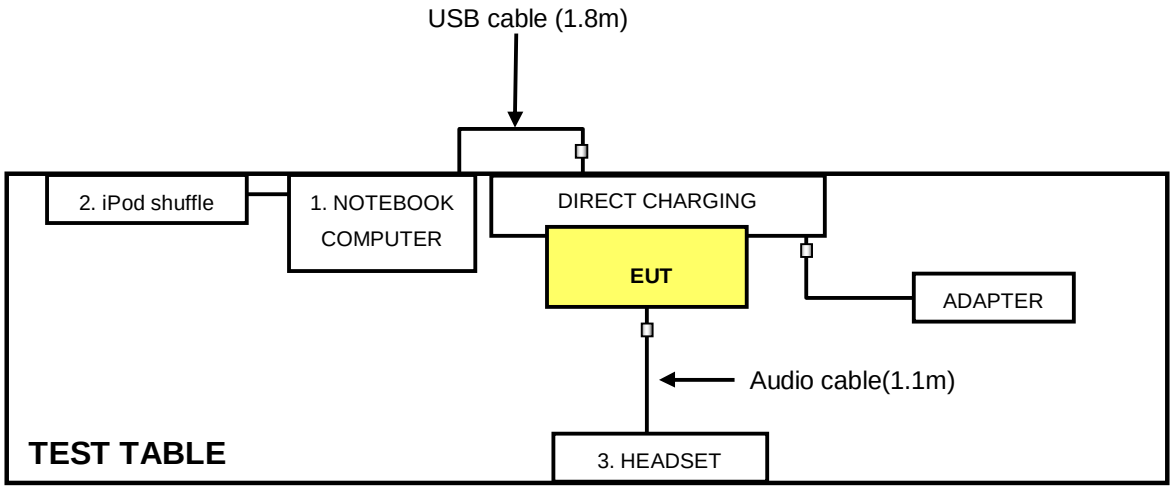
3.5 CONFIGURATION OF SYSTEM UNDER TEST

For Conducted emission test:



NOTE: 1. Item A is the SD Card.

For other test items



4.TEST TYPES AND RESULTS (FOR 2.4GHz, 2412 ~ 2472MHz Band)

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

NOTE: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS 30	100287	Mar. 01, 2012	Feb. 28, 2013
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK 8127	8127-523	Sep. 20, 2011	Sep. 19, 2012
Line-Impedance Stabilization Network (for Peripheral) ROHDE & SCHWARZ	ESH3-Z5	848773/004	Nov. 01, 2011	Oct. 31, 2012
RF Cable (JYEBAO)	5DFB	COACAB-002	Aug. 06, 2011	Aug. 05, 2012
50 ohms Terminator	50	3	Nov. 02, 2011	Nov. 01, 2012
Software ADT	BV ADT_Cond_V7.3.7	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 Shielded Room No. A.
3 The VCCI Con A Registration No. is C-817.
4. Tested Date: June 11, 2012

4.1.3 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.

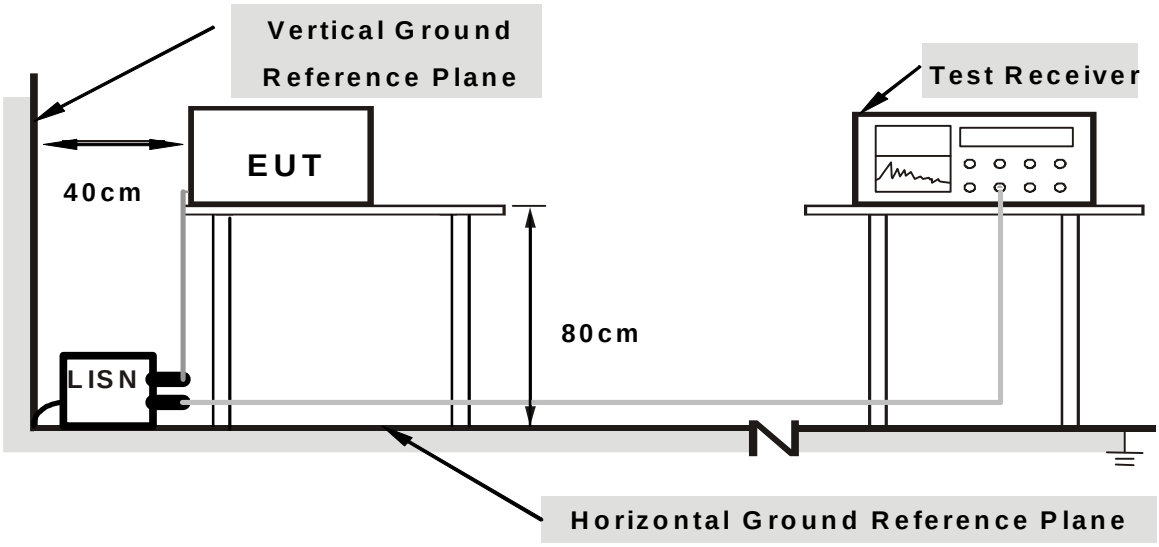
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 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 related item – Photographs of the Test Configuration.

4.1.6 EUT OPERATING CONDITIONS

1. Turn on the power of EUT.
2. The communication partner run test program “XW2DMT.exe” to enable EUT under transmission/receiving condition continuously at specific channel frequency.

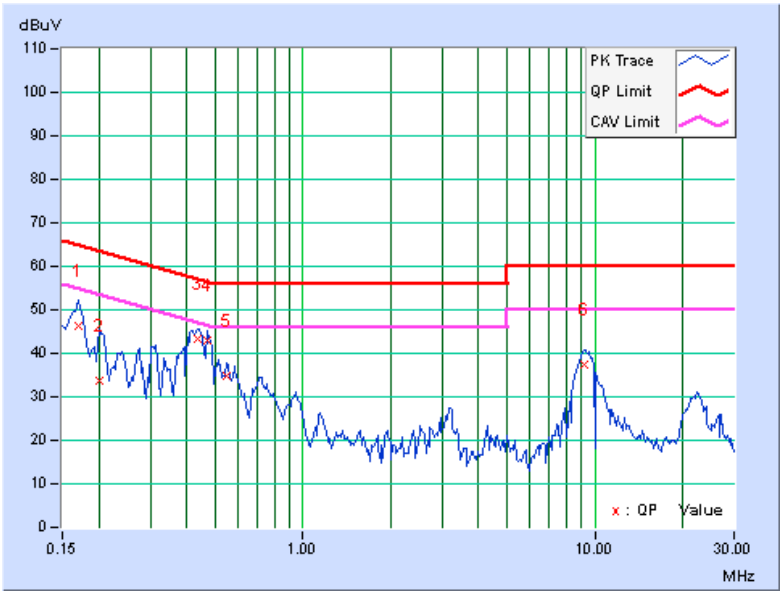
4.1.7 TEST RESULTS

PHASE	Line (L)	6dB BANDWIDTH	9 kHz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16953	0.06	46.34	36.08	46.40	36.14	64.98	54.98	-18.58	-18.84
2	0.20078	0.06	33.80	24.65	33.86	24.71	63.58	53.58	-29.72	-28.87
3	0.43516	0.07	43.28	37.40	43.35	37.47	57.15	47.15	-13.80	-9.68
4	**0.47031**	**0.08**	**42.97**	**37.31**	**43.05**	**37.39**	**56.51**	**46.51**	**-13.46**	**-9.12**
5	0.54844	0.08	34.77	29.90	34.85	29.98	56.00	46.00	-21.15	-16.02
6	9.19141	0.38	37.13	22.04	37.51	22.42	60.00	50.00	-22.49	-27.58

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.

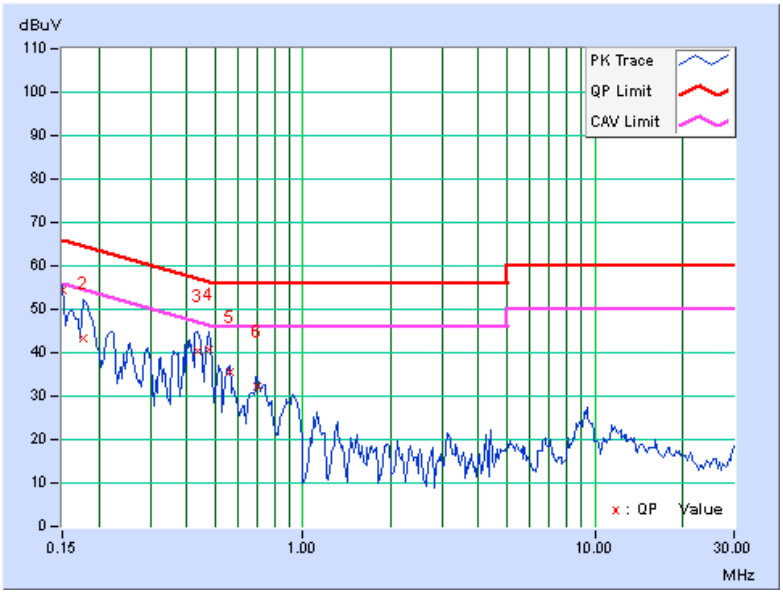


PHASE	Neutral (N)	6dB BANDWIDTH	9 kHz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.07	54.29	43.01	54.36	43.08	66.00	56.00	-11.64	-12.92
2	0.17734	0.07	43.20	26.52	43.27	26.59	64.61	54.61	-21.34	-28.02
3	0.43516	0.08	40.13	30.56	40.21	30.64	57.15	47.15	-16.94	-16.51
4	0.47422	0.08	40.77	34.03	40.85	34.11	56.44	46.44	-15.58	-12.32
5	0.56016	0.09	35.32	30.98	35.41	31.07	56.00	46.00	-20.59	-14.93
6	0.70078	0.10	32.02	26.54	32.12	26.64	56.00	46.00	-23.88	-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.



4.2 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.2.1 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.

4.2.2 TEST INSTRUMENTS

For below 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250254	July 12, 2011	July 11, 2012
Agilent Pre-Selector	N9039A	MY46520311	July 12, 2011	July 11, 2012
Agilent Signal Generator	N5181A	MY49060517	July 12, 2011	July 11, 2012
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-03	Nov. 15, 2011	Nov. 14, 2012
Agilent Pre-Amplifier	8449B	3008A02578	July 04, 2011	July 03, 2012
SPACEK LABS	SLKKa-48-6	9K16	Nov. 15, 2011	Nov. 14, 2012
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-360	Apr. 09, 2012	Apr. 08, 2013
AISI Horn_Antenna	AIH.8018	0000320091110	Nov. 14, 2011	Nov. 13, 2012
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Oct. 07, 2011	Oct. 06, 2012
*R&S Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
RF CABLE	NA	RF104-201 RF104-203 RF104-204	Dec. 26, 2011	Dec. 25, 2012
RF Cable	NA	CHGCAB_001	Oct. 07, 2011	Oct. 06, 2012
Software	ADT_Radiated_ V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	NA	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 above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3 The horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The test was performed in 966 Chamber No. G.
5 The FCC Site Registration No. is 966073.
6 The VCCI Site Registration No. is G-137.
7 The CANADA Site Registration No. is IC 7450H-2.
8 Tested Date: June 01, 2012

For above 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250253	Aug. 29, 2011	Aug. 28, 2012
Agilent Pre-Selector	N9039A	MY46520310	Aug. 29, 2011	Aug. 28, 2012
Agilent Signal Generator	N5181A	MY49060347	July 25, 2011	July 24, 2012
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-04	Nov. 15, 2011	Nov. 14, 2012
Agilent Pre-Amplifier	8449B	3008A02465	Feb. 27, 2012	Feb. 26, 2013
SPACEK LABS	SLKKa-48-6	9K16	Nov. 15, 2011	Nov. 14, 2012
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-361	Apr. 06, 2012	Apr. 05, 2013
AISI Horn_Antenna	AIH.8018	0000220091110	Nov. 23, 2011	Nov. 22, 2012
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Oct. 07, 2011	Oct. 06, 2012
RF CABLE	NA	RF104-205 RF104-207 RF104-202	Dec. 27, 2011	Dec. 26, 2012
RF Cable	NA	CHHCAB_001	Oct. 08, 2011	Oct. 07, 2012
Software	ADT_Radiated_ V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	NA	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 horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3 The test was performed in 966 Chamber No. H.
4. The FCC Site Registration No. is 797305.
5 The CANADA Site Registration No. is IC 7450H-3.
6 Tested Date: June 01, 2012

4.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meters chamber room. 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. The height of 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 quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

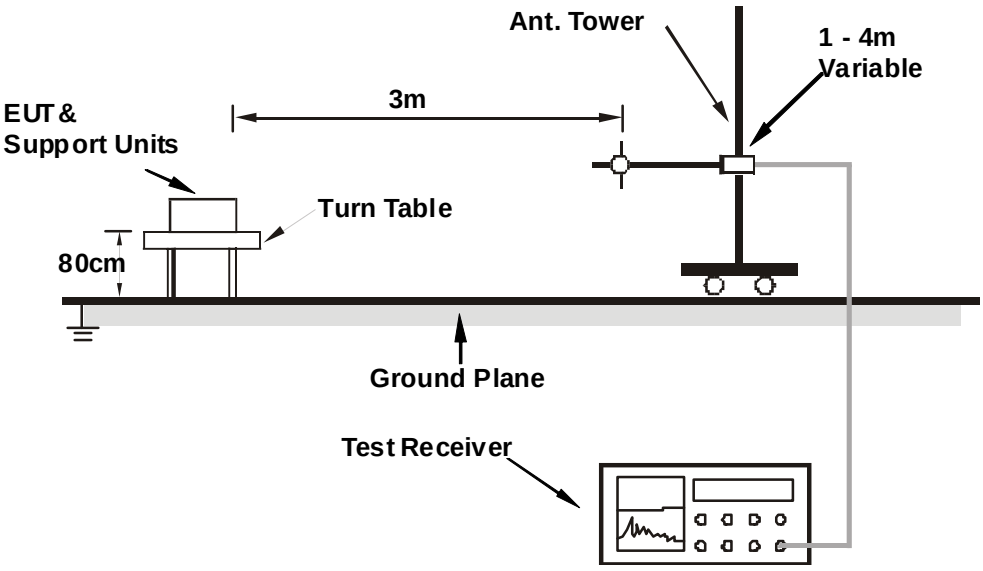
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.
4. 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



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

802.11n (20MHz)

CHANNEL	TX Channel 6	**DETECTOR FUNCTION**	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	150.91	33.4 QP	43.5	-10.1	2.00 H	83	18.49	14.94
2	249.32	39.8 QP	46.0	-6.2	1.00 H	289	26.48	13.32
3	303.44	39.8 QP	46.0	-6.3	1.00 H	257	24.37	15.38
4	475.39	33.6 QP	46.0	-12.4	1.50 H	264	13.82	19.77
5	604.82	34.7 QP	46.0	-11.4	1.00 H	266	11.93	22.72
6	747.76	33.3 QP	46.0	-12.7	1.00 H	317	8.45	24.86
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	242.09	38.5 QP	46.0	-7.6	2.00 V	193	25.45	13.00
2	303.67	39.1 QP	46.0	-6.9	1.50 V	346	23.71	15.38
3	324.04	39.4 QP	46.0	-6.6	1.50 V	180	23.51	15.91
4	475.27	36.0 QP	46.0	-10.1	2.00 V	207	16.18	19.77
5	564.92	33.4 QP	46.0	-12.6	1.50 V	208	11.50	21.89
6	604.94	37.7 QP	46.0	-8.3	1.50 V	268	14.95	22.72

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

ABOVE 1GHz WORST-CASE DATA

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2386.00	57.9 PK	74.0	-16.1	1.31 H	83	26.26	31.64
2	2386.00	47.2 AV	54.0	-6.8	1.31 H	83	15.56	31.64
3	*2412.00	109.3 PK			1.31 H	83	77.57	31.73
4	*2412.00	108.4 AV			1.31 H	83	76.67	31.73
5	4824.00	50.8 PK	74.0	-23.2	1.48 H	261	11.83	38.97
6	4824.00	45.8 AV	54.0	-8.2	1.48 H	261	6.83	38.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2386.00	58.2 PK	74.0	-15.8	1.05 V	185	26.56	31.64
2	2386.00	46.8 AV	54.0	-7.2	1.05 V	185	15.16	31.64
3	*2412.00	106.9 PK			1.05 V	185	75.17	31.73
4	*2412.00	104.3 AV			1.05 V	185	72.57	31.73
5	4824.00	52.5 PK	74.0	-21.5	1.00 V	207	13.53	38.97
6	4824.00	48.3 AV	54.0	-5.7	1.00 V	207	9.33	38.97

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 2	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2388.00	58.0 PK	74.0	-16.0	1.31 H	83	26.35	31.65
2	2388.00	46.3 AV	54.0	-7.7	1.31 H	83	14.65	31.65
3	*2417.00	111.8 PK			1.31 H	83	80.05	31.75
4	*2417.00	109.1 AV			1.31 H	83	77.35	31.75
5	4834.00	51.5 PK	74.0	-22.5	1.45 H	261	12.49	39.01
6	4834.00	45.9 AV	54.0	-8.1	1.45 H	261	6.89	39.01
7	7251.00	55.7 PK	74.0	-18.3	1.00 H	360	9.02	46.68
8	7251.00	42.6 AV	54.0	-11.4	1.00 H	360	-4.08	46.68
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2386.00	58.6 PK	74.0	-15.4	1.05 V	186	26.96	31.64
2	2386.00	45.6 AV	54.0	-8.4	1.05 V	186	13.96	31.64
3	*2417.00	107.1 PK			1.05 V	186	75.35	31.75
4	*2417.00	104.5 AV			1.05 V	186	72.75	31.75
5	4834.00	52.4 PK	74.0	-21.6	1.00 V	205	13.39	39.01
6	4834.00	48.1 AV	54.0	-5.9	1.00 V	205	9.09	39.01
7	7251.00	54.8 PK	74.0	-19.2	1.27 V	20	8.12	46.68
8	7251.00	42.4 AV	54.0	-11.6	1.27 V	20	-4.28	46.68

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 3	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2386.00	58.1 PK	74.0	-15.9	1.30 H	83	26.46	31.64
2	2386.00	45.9 AV	54.0	-8.1	1.30 H	83	14.26	31.64
3	*2422.00	113.0 PK			1.30 H	83	81.24	31.76
4	*2422.00	110.3 AV			1.30 H	83	78.54	31.76
5	4844.00	51.9 PK	74.0	-22.1	1.00 H	152	12.86	39.04
6	4844.00	46.3 AV	54.0	-7.7	1.00 H	152	7.26	39.04
7	7266.00	55.0 PK	74.0	-19.0	1.17 H	59	8.33	46.67
8	7266.00	42.9 AV	54.0	-11.1	1.17 H	59	-3.77	46.67
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2386.00	58.4 PK	74.0	-15.6	1.04 V	188	26.76	31.64
2	2386.00	45.1 AV	54.0	-8.9	1.04 V	188	13.46	31.64
3	*2422.00	107.2 PK			1.04 V	188	75.44	31.76
4	*2422.00	104.7 AV			1.04 V	188	72.94	31.76
5	4844.00	52.6 PK	74.0	-21.4	1.02 V	148	13.56	39.04
6	4844.00	48.7 AV	54.0	-5.3	1.02 V	148	9.66	39.04
7	7266.00	55.6 PK	74.0	-18.4	1.00 V	147	8.93	46.67
8	7266.00	42.8 AV	54.0	-11.2	1.00 V	147	-3.87	46.67

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.0 PK	74.0	-18.0	1.31 H	82	24.34	31.66
2	2390.00	44.7 AV	54.0	-9.3	1.31 H	82	13.04	31.66
3	*2437.00	113.0 PK			1.31 H	82	81.19	31.81
4	*2437.00	110.5 AV			1.31 H	82	78.69	31.81
5	2484.00	57.6 PK	74.0	-16.4	1.31 H	82	25.63	31.97
6	2484.00	45.7 AV	54.0	-8.3	1.31 H	82	13.73	31.97
7	4874.00	52.1 PK	74.0	-21.9	1.44 H	263	12.96	39.14
8	4874.00	45.8 AV	54.0	-8.2	1.44 H	263	6.66	39.14
9	7311.00	55.7 PK	74.0	-18.3	1.00 H	0	9.07	46.63
10	7311.00	42.7 AV	54.0	-11.3	1.00 H	0	-3.93	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2386.00	57.4 PK	74.0	-16.6	1.05 V	190	25.76	31.64
2	2386.00	45.2 AV	54.0	-8.8	1.05 V	190	13.56	31.64
3	2390.00	56.1 PK	74.0	-17.9	1.05 V	190	24.44	31.66
4	2390.00	44.5 AV	54.0	-9.5	1.05 V	190	12.84	31.66
5	*2437.00	108.2 PK			1.05 V	190	76.39	31.81
6	*2437.00	105.1 AV			1.05 V	190	73.29	31.81
7	4874.00	52.7 PK	74.0	-21.3	1.02 V	151	13.56	39.14
8	4874.00	48.8 AV	54.0	-5.2	1.02 V	151	9.66	39.14
9	7311.00	54.4 PK	74.0	-19.6	1.00 V	145	7.77	46.63
10	7311.00	42.5 AV	54.0	-11.5	1.00 V	145	-4.13	46.63

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 9	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	113.3 PK			1.31 H	83	81.44	31.86
2	*2452.00	110.7 AV			1.31 H	83	78.84	31.86
3	2485.00	58.8 PK	74.0	-15.2	1.31 H	83	26.83	31.97
4	2485.00	47.0 AV	54.0	-7.0	1.31 H	83	15.03	31.97
5	4904.00	52.3 PK	74.0	-21.7	1.43 H	261	13.06	39.24
6	4904.00	45.9 AV	54.0	-8.1	1.43 H	261	6.66	39.24
7	7356.00	55.5 PK	74.0	-18.5	1.00 H	11	8.89	46.61
8	7356.00	42.6 AV	54.0	-11.4	1.00 H	11	-4.01	46.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2386.00	58.3 PK	74.0	-15.7	1.05 V	188	26.66	31.64
2	2386.00	47.3 AV	54.0	-6.7	1.05 V	188	15.66	31.64
3	*2452.00	108.4 PK			1.05 V	189	76.54	31.86
4	*2452.00	105.3 AV			1.05 V	189	73.44	31.86
5	4904.00	52.8 PK	74.0	-21.2	1.05 V	159	13.56	39.24
6	4904.00	48.9 AV	54.0	-5.1	1.05 V	159	9.66	39.24
7	7356.00	54.6 PK	74.0	-19.4	1.03 V	154	7.99	46.61
8	7356.00	43.0 AV	54.0	-11.0	1.03 V	154	-3.61	46.61

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 10	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	113.5 PK			1.32 H	83	81.62	31.88
2	*2457.00	111.0 AV			1.32 H	83	79.12	31.88
3	2486.00	61.4 PK	74.0	-12.6	1.32 H	83	29.43	31.97
4	2486.00	51.0 AV	54.0	-3.0	1.32 H	83	19.03	31.97
5	4914.00	52.7 PK	74.0	-21.3	1.45 H	266	13.43	39.27
6	4914.00	45.7 AV	54.0	-8.3	1.45 H	266	6.43	39.27
7	7371.00	55.9 PK	74.0	-18.1	1.00 H	15	9.30	46.60
8	7371.00	42.8 AV	54.0	-11.2	1.00 H	15	-3.80	46.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	108.6 PK			1.09 V	191	76.72	31.88
2	*2457.00	105.7 AV			1.09 V	191	73.82	31.88
3	2486.00	59.3 PK	74.0	-14.7	1.09 V	191	27.33	31.97
4	2486.00	49.4 AV	54.0	-4.6	1.09 V	191	17.43	31.97
5	4914.00	52.7 PK	74.0	-21.3	1.00 V	165	13.43	39.27
6	4914.00	49.1 AV	54.0	-4.9	1.00 V	165	9.83	39.27
7	7371.00	55.8 PK	74.0	-18.2	1.00 V	166	9.20	46.60
8	7371.00	43.6 AV	54.0	-10.4	1.00 V	166	-3.00	46.60

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.4 PK			1.31 H	83	81.51	31.89
2	*2462.00	110.9 AV			1.31 H	83	79.01	31.89
3	2484.50	60.4 PK	74.0	-13.6	1.31 H	83	28.43	31.97
4	2484.50	51.3 AV	54.0	-2.7	1.31 H	83	19.33	31.97
5	4924.00	52.6 PK	74.0	-21.4	1.41 H	263	13.29	39.31
6	4924.00	45.9 AV	54.0	-8.1	1.41 H	263	6.59	39.31
7	7386.00	55.4 PK	74.0	-18.6	1.00 H	12	8.80	46.60
8	7386.00	42.3 AV	54.0	-11.7	1.00 H	12	-4.30	46.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	108.7 PK			1.08 V	183	76.81	31.89
2	*2462.00	105.6 AV			1.08 V	183	73.71	31.89
3	2483.50	59.1 PK	74.0	-14.9	1.08 V	183	27.13	31.97
4	2483.50	49.5 AV	54.0	-4.5	1.08 V	183	17.53	31.97
5	4924.00	52.9 PK	74.0	-21.1	1.00 V	175	13.59	39.31
6	4924.00	48.9 AV	54.0	-5.1	1.00 V	175	9.59	39.31
7	7386.00	55.6 PK	74.0	-18.4	1.00 V	135	9.00	46.60
8	7386.00	43.3 AV	54.0	-10.7	1.00 V	135	-3.30	46.60

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2467.00	96.2 PK			1.27 H	92	64.01	32.19
2	*2467.00	93.4 AV			1.27 H	92	61.21	32.19
3	2483.50	56.7 PK	74.0	-17.3	1.34 H	68	24.46	32.24
4	2483.50	43.7 AV	54.0	-10.3	1.34 H	68	11.46	32.24
5	4934.00	46.5 PK	74.0	-27.5	1.40 H	270	6.63	39.87
6	4934.00	33.8 AV	54.0	-20.2	1.40 H	270	-6.07	39.87
7	7401.00	54.9 PK	74.0	-19.1	1.01 H	4	7.39	47.51
8	7401.00	42.1 AV	54.0	-11.9	1.01 H	4	-5.41	47.51
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2467.00	91.6 PK			1.07 V	181	59.41	32.19
2	*2467.00	89.4 AV			1.07 V	181	57.21	32.19
3	2483.50	57.2 PK	74.0	-16.8	1.03 V	184	24.96	32.24
4	2483.50	43.8 AV	54.0	-10.2	1.03 V	184	11.56	32.24
5	4934.00	47.6 PK	74.0	-26.4	1.02 V	154	7.73	39.87
6	4934.00	35.1 AV	54.0	-18.9	1.02 V	154	-4.77	39.87
7	7401.00	56.3 PK	74.0	-17.7	1.00 V	168	8.79	47.51
8	7401.00	43.2 AV	54.0	-10.8	1.00 V	168	-4.31	47.51

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2472.00	95.5 PK			1.28 H	95	63.29	32.21
2	*2472.00	91.8 AV			1.28 H	95	59.59	32.21
3	2483.50	57.3 PK	74.0	-16.7	1.35 H	80	25.06	32.24
4	2483.50	43.9 AV	54.0	-10.1	1.35 H	80	11.66	32.24
5	4944.00	47.2 PK	74.0	-26.8	1.41 H	268	7.30	39.90
6	4944.00	34.4 AV	54.0	-19.6	1.41 H	268	-5.50	39.90
7	7416.00	56.0 PK	74.0	-18.0	1.00 H	10	8.53	47.47
8	7416.00	42.6 AV	54.0	-11.4	1.00 H	10	-4.87	47.47
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2472.00	90.4 PK			1.02 V	194	58.19	32.21
2	*2472.00	87.0 AV			1.02 V	194	54.79	32.21
3	2483.50	56.4 PK	74.0	-17.6	1.05 V	180	24.16	32.24
4	2483.50	43.6 AV	54.0	-10.4	1.05 V	180	11.36	32.24
5	4944.00	47.5 PK	74.0	-26.5	1.02 V	151	7.60	39.90
6	4944.00	34.5 AV	54.0	-19.5	1.02 V	151	-5.40	39.90
7	7416.00	55.7 PK	74.0	-18.3	1.00 V	163	8.23	47.47
8	7416.00	42.4 AV	54.0	-11.6	1.00 V	163	-5.07	47.47

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	71.5 PK	74.0	-2.5	1.31 H	83	39.84	31.66
2	**2390.00**	**52.0 AV**	**54.0**	**-2.0**	**1.31 H**	**83**	**20.34**	**31.66**
3	*2412.00	112.6 PK			1.31 H	83	80.87	31.73
4	*2412.00	99.8 AV			1.31 H	83	68.07	31.73
5	4824.00	46.9 PK	74.0	-27.1	1.50 H	273	7.93	38.97
6	4824.00	34.3 AV	54.0	-19.7	1.50 H	273	-4.67	38.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.7 PK	74.0	-8.3	1.06 V	188	34.04	31.66
2	2390.00	50.3 AV	54.0	-3.7	1.06 V	188	18.64	31.66
3	*2412.00	108.1 PK			1.06 V	188	76.37	31.73
4	*2412.00	95.3 AV			1.06 V	188	63.57	31.73
5	4824.00	47.5 PK	74.0	-26.5	1.02 V	176	8.53	38.97
6	4824.00	35.2 AV	54.0	-18.8	1.02 V	176	-3.77	38.97

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 2	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.5 PK	74.0	-5.5	1.31 H	83	36.84	31.66
2	2390.00	48.0 AV	54.0	-6.0	1.31 H	83	16.34	31.66
3	*2417.00	112.7 PK			1.31 H	83	80.95	31.75
4	*2417.00	100.5 AV			1.31 H	83	68.75	31.75
5	4834.00	46.7 PK	74.0	-27.3	1.49 H	274	7.69	39.01
6	4834.00	34.4 AV	54.0	-19.6	1.49 H	274	-4.61	39.01
7	7251.00	55.3 PK	74.0	-18.7	1.00 H	21	8.62	46.68
8	7251.00	42.6 AV	54.0	-11.4	1.00 H	21	-4.08	46.68
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.5 PK	74.0	-11.5	1.05 V	183	30.84	31.66
2	2390.00	46.8 AV	54.0	-7.2	1.05 V	183	15.14	31.66
3	*2417.00	108.6 PK			1.05 V	183	76.85	31.75
4	*2417.00	96.1 AV			1.05 V	183	64.35	31.75
5	4834.00	46.7 PK	74.0	-27.3	1.00 V	170	7.69	39.01
6	4834.00	34.4 AV	54.0	-19.6	1.00 V	170	-4.61	39.01
7	7251.00	56.6 PK	74.0	-17.4	1.00 V	200	9.92	46.68
8	7251.00	43.3 AV	54.0	-10.7	1.00 V	200	-3.38	46.68

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 3	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.1 PK	74.0	-6.9	1.31 H	83	35.44	31.66
2	2390.00	45.9 AV	54.0	-8.1	1.31 H	83	14.24	31.66
3	*2422.00	113.1 PK			1.31 H	83	81.34	31.76
4	*2422.00	101.2 AV			1.31 H	83	69.44	31.76
5	4844.00	46.6 PK	74.0	-27.4	1.46 H	271	7.56	39.04
6	4844.00	34.5 AV	54.0	-19.5	1.46 H	271	-4.54	39.04
7	7266.00	55.4 PK	74.0	-18.6	1.00 H	15	8.73	46.67
8	7266.00	42.9 AV	54.0	-11.1	1.00 H	15	-3.77	46.67
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.5 PK	74.0	-13.5	1.06 V	185	28.84	31.66
2	2390.00	44.8 AV	54.0	-9.2	1.06 V	185	13.14	31.66
3	*2422.00	109.1 PK			1.06 V	185	77.34	31.76
4	*2422.00	97.3 AV			1.06 V	185	65.54	31.76
5	4844.00	47.2 PK	74.0	-26.8	1.00 V	160	8.16	39.04
6	4844.00	34.8 AV	54.0	-19.2	1.00 V	160	-4.24	39.04
7	7266.00	56.1 PK	74.0	-17.9	1.00 V	184	9.43	46.67
8	7266.00	43.2 AV	54.0	-10.8	1.00 V	184	-3.47	46.67

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.1 PK	74.0	-15.9	1.31 H	83	26.44	31.66
2	2390.00	44.3 AV	54.0	-9.7	1.31 H	83	12.64	31.66
3	*2437.00	114.5 PK			1.31 H	83	82.69	31.81
4	*2437.00	102.3 AV			1.31 H	83	70.49	31.81
5	2483.50	60.0 PK	74.0	-14.0	1.31 H	83	28.03	31.97
6	2483.50	45.4 AV	54.0	-8.6	1.31 H	83	13.43	31.97
7	4874.00	46.8 PK	74.0	-27.2	1.49 H	261	7.66	39.14
8	4874.00	34.4 AV	54.0	-19.6	1.49 H	261	-4.74	39.14
9	7311.00	55.7 PK	74.0	-18.3	1.05 H	23	9.07	46.63
10	7311.00	43.0 AV	54.0	-11.0	1.05 H	23	-3.63	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.1 PK	74.0	-14.9	1.05 V	192	27.44	31.66
2	2390.00	44.4 AV	54.0	-9.6	1.05 V	192	12.74	31.66
3	*2437.00	109.3 PK			1.05 V	192	77.49	31.81
4	*2437.00	97.6 AV			1.05 V	192	65.79	31.81
5	2483.50	60.2 PK	74.0	-13.8	1.05 V	192	28.23	31.97
6	2483.50	44.9 AV	54.0	-9.1	1.05 V	192	12.93	31.97
7	4874.00	46.5 PK	74.0	-27.5	1.02 V	151	7.36	39.14
8	4874.00	34.5 AV	54.0	-19.5	1.02 V	151	-4.64	39.14
9	7311.00	56.8 PK	74.0	-17.2	1.00 V	175	10.17	46.63
10	7311.00	42.9 AV	54.0	-11.1	1.00 V	175	-3.73	46.63

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 9	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	114.9 PK			1.31 H	83	83.04	31.86
2	*2452.00	102.3 AV			1.31 H	83	70.44	31.86
3	2483.50	69.0 PK	74.0	-5.0	1.31 H	83	37.03	31.97
4	2483.50	49.3 AV	54.0	-4.7	1.31 H	83	17.33	31.97
5	4904.00	45.9 PK	74.0	-28.1	1.46 H	273	6.66	39.24
6	4904.00	33.9 AV	54.0	-20.1	1.46 H	273	-5.34	39.24
7	7356.00	55.4 PK	74.0	-18.6	1.00 H	26	8.79	46.61
8	7356.00	42.9 AV	54.0	-11.1	1.00 H	26	-3.71	46.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	109.5 PK			1.06 V	193	77.64	31.86
2	*2452.00	97.8 AV			1.06 V	193	65.94	31.86
3	2483.50	61.3 PK	74.0	-12.7	1.06 V	193	29.33	31.97
4	2483.50	46.3 AV	54.0	-7.7	1.06 V	193	14.33	31.97
5	4904.00	46.8 PK	74.0	-27.2	1.00 V	148	7.56	39.24
6	4904.00	34.4 AV	54.0	-19.6	1.00 V	148	-4.84	39.24
7	7356.00	56.3 PK	74.0	-17.7	1.00 V	182	9.69	46.61
8	7356.00	43.1 AV	54.0	-10.9	1.00 V	182	-3.51	46.61

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 10	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	115.1 PK			1.32 H	83	83.22	31.88
2	*2457.00	102.7 AV			1.32 H	83	70.82	31.88
3	2483.50	71.9 PK	74.0	-2.1	1.32 H	83	39.93	31.97
4	**2483.50**	**52.0 AV**	**54.0**	**-2.0**	**1.32 H**	**83**	**20.03**	**31.97**
5	4914.00	46.5 PK	74.0	-27.5	1.45 H	276	7.23	39.27
6	4914.00	34.3 AV	54.0	-19.7	1.45 H	276	-4.97	39.27
7	7371.00	55.6 PK	74.0	-18.4	1.04 H	34	9.00	46.60
8	7371.00	42.9 AV	54.0	-11.1	1.04 H	34	-3.70	46.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	109.6 PK			1.07 V	186	77.72	31.88
2	*2457.00	98.1 AV			1.07 V	186	66.22	31.88
3	2483.50	64.3 PK	74.0	-9.7	1.07 V	186	32.33	31.97
4	2483.50	49.8 AV	54.0	-4.2	1.07 V	186	17.83	31.97
5	4914.00	47.5 PK	74.0	-26.5	1.00 V	150	8.23	39.27
6	4914.00	35.3 AV	54.0	-18.7	1.00 V	150	-3.97	39.27
7	7371.00	56.9 PK	74.0	-17.1	1.00 V	188	10.30	46.60
8	7371.00	43.2 AV	54.0	-10.8	1.00 V	188	-3.40	46.60

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.7 PK			1.32 H	82	80.81	31.89
2	*2462.00	100.7 AV			1.32 H	82	68.81	31.89
3	**2483.50**	**72.0 PK**	**74.0**	**-2.0**	**1.32 H**	**82**	**40.03**	**31.97**
4	2483.50	51.3 AV	54.0	-2.7	1.32 H	82	19.33	31.97
5	4924.00	47.2 PK	74.0	-26.8	1.45 H	285	7.89	39.31
6	4924.00	34.7 AV	54.0	-19.3	1.45 H	285	-4.61	39.31
7	7386.00	55.4 PK	74.0	-18.6	1.00 H	27	8.80	46.60
8	7386.00	42.9 AV	54.0	-11.1	1.00 H	27	-3.70	46.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	108.3 PK			1.04 V	192	76.41	31.89
2	*2462.00	96.6 AV			1.04 V	192	64.71	31.89
3	2483.50	63.3 PK	74.0	-10.7	1.04 V	192	31.33	31.97
4	2483.50	48.7 AV	54.0	-5.3	1.04 V	192	16.73	31.97
5	4924.00	46.9 PK	74.0	-27.1	1.02 V	138	7.59	39.31
6	4924.00	35.0 AV	54.0	-19.0	1.02 V	138	-4.31	39.31
7	7386.00	55.9 PK	74.0	-18.1	1.00 V	197	9.30	46.60
8	7386.00	43.0 AV	54.0	-11.0	1.00 V	197	-3.60	46.60

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2467.00	97.8 PK			1.24 H	80	65.61	32.19
2	*2467.00	86.7 AV			1.24 H	80	54.51	32.19
3	2483.50	62.8 PK	74.0	-11.2	1.29 H	76	30.56	32.24
4	2483.50	44.9 AV	54.0	-9.1	1.29 H	76	12.66	32.24
5	4934.00	47.1 PK	74.0	-26.9	1.52 H	268	7.23	39.87
6	4934.00	34.2 AV	54.0	-19.8	1.52 H	268	-5.67	39.87
7	7401.00	55.2 PK	74.0	-18.8	1.00 H	43	7.69	47.51
8	7401.00	42.8 AV	54.0	-11.2	1.00 H	43	-4.71	47.51
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2467.00	94.7 PK			1.05 V	169	62.51	32.19
2	*2467.00	82.9 AV			1.05 V	169	50.71	32.19
3	2483.50	62.2 PK	74.0	-11.8	1.00 V	196	29.96	32.24
4	2483.50	44.1 AV	54.0	-9.9	1.00 V	196	11.86	32.24
5	4934.00	47.8 PK	74.0	-26.2	1.03 V	158	7.93	39.87
6	4934.00	35.7 AV	54.0	-18.3	1.03 V	158	-4.17	39.87
7	7401.00	55.5 PK	74.0	-18.5	1.00 V	189	7.99	47.51
8	7401.00	42.4 AV	54.0	-11.6	1.00 V	189	-5.11	47.51

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2472.00	98.3 PK			1.28 H	70	66.09	32.21
2	*2472.00	87.0 AV			1.28 H	70	54.79	32.21
3	2483.50	70.7 PK	74.0	-3.3	1.27 H	76	38.46	32.24
4	2483.50	49.3 AV	54.0	-4.7	1.27 H	76	17.06	32.24
5	4944.00	46.9 PK	74.0	-27.1	1.49 H	282	7.00	39.90
6	4944.00	34.2 AV	54.0	-19.8	1.49 H	282	-5.70	39.90
7	7416.00	55.2 PK	74.0	-18.8	1.00 H	29	7.73	47.47
8	7416.00	42.7 AV	54.0	-11.3	1.00 H	29	-4.77	47.47
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2472.00	94.4 PK			1.08 V	173	62.19	32.21
2	*2472.00	82.7 AV			1.08 V	173	50.49	32.21
3	2483.50	67.1 PK	74.0	-6.9	1.01 V	189	34.86	32.24
4	2483.50	47.9 AV	54.0	-6.1	1.01 V	189	15.66	32.24
5	4944.00	47.5 PK	74.0	-26.5	1.01 V	162	7.60	39.90
6	4944.00	35.3 AV	54.0	-18.7	1.01 V	162	-4.60	39.90
7	7416.00	56.1 PK	74.0	-17.9	1.00 V	189	8.63	47.47
8	7416.00	42.7 AV	54.0	-11.3	1.00 V	189	-4.77	47.47

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	**2390.00**	**72.0 PK**	**74.0**	**-2.0**	**1.31 H**	**83**	**40.34**	**31.66**
2	2390.00	51.7 AV	54.0	-2.3	1.31 H	83	20.04	31.66
3	*2412.00	112.3 PK			1.31 H	83	80.57	31.73
4	*2412.00	98.7 AV			1.31 H	83	66.97	31.73
5	4824.00	47.0 PK	74.0	-27.0	1.46 H	290	8.03	38.97
6	4824.00	34.3 AV	54.0	-19.7	1.46 H	290	-4.67	38.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.5 PK	74.0	-9.5	1.05 V	183	32.84	31.66
2	2390.00	49.3 AV	54.0	-4.7	1.05 V	183	17.64	31.66
3	*2412.00	106.0 PK			1.05 V	183	74.27	31.73
4	*2412.00	94.6 AV			1.05 V	183	62.87	31.73
5	4824.00	47.7 PK	74.0	-26.3	1.00 V	161	8.73	38.97
6	4824.00	35.2 AV	54.0	-18.8	1.00 V	161	-3.77	38.97

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 2	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.8 PK	74.0	-6.2	1.00 H	94	36.14	31.66
2	2390.00	48.5 AV	54.0	-5.5	1.00 H	94	16.84	31.66
3	*2417.00	113.8 PK			1.31 H	83	82.05	31.75
4	*2417.00	99.8 AV			1.31 H	83	68.05	31.75
5	4834.00	46.5 PK	74.0	-27.5	1.40 H	276	7.49	39.01
6	4834.00	33.9 AV	54.0	-20.1	1.40 H	276	-5.11	39.01
7	7251.00	54.6 PK	74.0	-19.4	1.04 H	19	7.92	46.68
8	7251.00	42.3 AV	54.0	-11.7	1.04 H	19	-4.38	46.68
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.9 PK	74.0	-13.1	1.06 V	188	29.24	31.66
2	2390.00	45.9 AV	54.0	-8.1	1.06 V	188	14.24	31.66
3	*2417.00	107.1 PK			1.06 V	188	75.35	31.75
4	*2417.00	95.3 AV			1.06 V	188	63.55	31.75
5	4834.00	47.4 PK	74.0	-26.6	1.02 V	158	8.39	39.01
6	4834.00	35.0 AV	54.0	-19.0	1.02 V	158	-4.01	39.01
7	7251.00	55.8 PK	74.0	-18.2	1.00 V	212	9.12	46.68
8	7251.00	42.5 AV	54.0	-11.5	1.00 V	212	-4.18	46.68

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 3	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.7 PK	74.0	-9.3	1.32 H	82	33.04	31.66
2	2390.00	45.8 AV	54.0	-8.2	1.32 H	82	14.14	31.66
3	*2422.00	114.0 PK			1.32 H	82	82.24	31.76
4	*2422.00	100.1 AV			1.32 H	82	68.34	31.76
5	4844.00	46.4 PK	74.0	-27.6	1.45 H	282	7.36	39.04
6	4844.00	33.9 AV	54.0	-20.1	1.45 H	282	-5.14	39.04
7	7266.00	55.1 PK	74.0	-18.9	1.05 H	16	8.43	46.67
8	7266.00	42.4 AV	54.0	-11.6	1.05 H	16	-4.27	46.67
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.5 PK	74.0	-13.5	1.04 V	192	28.84	31.66
2	2390.00	44.1 AV	54.0	-9.9	1.04 V	192	12.44	31.66
3	*2422.00	107.3 PK			1.04 V	192	75.54	31.76
4	*2422.00	95.4 AV			1.04 V	192	63.64	31.76
5	4844.00	47.7 PK	74.0	-26.3	1.03 V	158	8.66	39.04
6	4844.00	35.3 AV	54.0	-18.7	1.03 V	158	-3.74	39.04
7	7266.00	55.5 PK	74.0	-18.5	1.00 V	205	8.83	46.67
8	7266.00	42.6 AV	54.0	-11.4	1.00 V	205	-4.07	46.67

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.0 PK	74.0	-17.0	1.31 H	83	25.34	31.66
2	2390.00	44.2 AV	54.0	-9.8	1.31 H	83	12.54	31.66
3	*2437.00	115.6 PK			1.31 H	83	83.79	31.81
4	*2437.00	100.9 AV			1.31 H	83	69.09	31.81
5	2483.50	58.9 PK	74.0	-15.1	1.31 H	83	26.93	31.97
6	2483.50	45.8 AV	54.0	-8.2	1.31 H	83	13.83	31.97
7	4874.00	46.5 PK	74.0	-27.5	1.46 H	274	7.36	39.14
8	4874.00	33.8 AV	54.0	-20.2	1.46 H	274	-5.34	39.14
9	7311.00	54.2 PK	74.0	-19.8	1.00 H	35	7.57	46.63
10	7311.00	42.0 AV	54.0	-12.0	1.00 H	35	-4.63	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.2 PK	74.0	-16.8	1.06 V	195	25.54	31.66
2	2390.00	44.5 AV	54.0	-9.5	1.06 V	195	12.84	31.66
3	*2437.00	107.8 PK			1.06 V	195	75.99	31.81
4	*2437.00	95.9 AV			1.06 V	195	64.09	31.81
5	2483.50	58.1 PK	74.0	-15.9	1.06 V	195	26.13	31.97
6	2483.50	44.8 AV	54.0	-9.2	1.06 V	195	12.83	31.97
7	4874.00	47.3 PK	74.0	-26.7	1.00 V	154	8.16	39.14
8	4874.00	35.0 AV	54.0	-19.0	1.00 V	154	-4.14	39.14
9	7311.00	55.9 PK	74.0	-18.1	1.01 V	213	9.27	46.63
10	7311.00	42.6 AV	54.0	-11.4	1.01 V	213	-4.03	46.63

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 9	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	114.8 PK			1.31 H	82	82.94	31.86
2	*2452.00	101.0 AV			1.31 H	82	69.14	31.86
3	2483.50	67.8 PK	74.0	-6.2	1.31 H	82	35.83	31.97
4	2483.50	48.7 AV	54.0	-5.3	1.31 H	82	16.73	31.97
5	4904.00	47.1 PK	74.0	-26.9	1.39 H	285	7.86	39.24
6	4904.00	34.3 AV	54.0	-19.7	1.39 H	285	-4.94	39.24
7	7356.00	54.6 PK	74.0	-19.4	1.00 H	31	7.99	46.61
8	7356.00	42.3 AV	54.0	-11.7	1.00 H	31	-4.31	46.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	107.9 PK			1.07 V	188	76.04	31.86
2	*2452.00	96.1 AV			1.07 V	188	64.24	31.86
3	2483.50	61.5 PK	74.0	-12.5	1.07 V	188	29.53	31.97
4	2483.50	45.3 AV	54.0	-8.7	1.07 V	188	13.33	31.97
5	4904.00	47.1 PK	74.0	-26.9	1.00 V	161	7.86	39.24
6	4904.00	34.9 AV	54.0	-19.1	1.00 V	161	-4.34	39.24
7	7356.00	56.5 PK	74.0	-17.5	1.04 V	217	9.89	46.61
8	7356.00	42.5 AV	54.0	-11.5	1.04 V	217	-4.11	46.61

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 10	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	114.9 PK			1.32 H	83	83.02	31.88
2	*2457.00	101.1 AV			1.32 H	83	69.22	31.88
3	2483.50	71.3 PK	74.0	-2.7	1.32 H	83	39.33	31.97
4	2483.50	50.4 AV	54.0	-3.6	1.32 H	83	18.43	31.97
5	4914.00	47.2 PK	74.0	-26.8	1.39 H	286	7.93	39.27
6	4914.00	34.5 AV	54.0	-19.5	1.39 H	286	-4.77	39.27
7	7371.00	55.3 PK	74.0	-18.7	1.00 H	41	8.70	46.60
8	7371.00	42.8 AV	54.0	-11.2	1.00 H	41	-3.80	46.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	107.7 PK			1.08 V	180	75.82	31.88
2	*2457.00	96.3 AV			1.08 V	180	64.42	31.88
3	2483.50	62.3 PK	74.0	-11.7	1.08 V	180	30.33	31.97
4	2483.50	46.2 AV	54.0	-7.8	1.08 V	180	14.23	31.97
5	4914.00	47.5 PK	74.0	-26.5	1.00 V	160	8.23	39.27
6	4914.00	35.1 AV	54.0	-18.9	1.00 V	160	-4.17	39.27
7	7371.00	57.1 PK	74.0	-16.9	1.04 V	206	10.50	46.60
8	7371.00	43.3 AV	54.0	-10.7	1.04 V	206	-3.30	46.60

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.6 PK			1.31 H	83	81.71	31.89
2	*2462.00	99.5 AV			1.31 H	83	67.61	31.89
3	2483.50	71.0 PK	74.0	-3.0	1.31 H	83	39.03	31.97
4	**2483.50**	**52.0 AV**	**54.0**	**-2.0**	**1.31 H**	**83**	**20.03**	**31.97**
5	4924.00	47.0 PK	74.0	-27.0	1.49 H	300	7.69	39.31
6	4924.00	34.3 AV	54.0	-19.7	1.49 H	300	-5.01	39.31
7	7386.00	55.1 PK	74.0	-18.9	1.04 H	27	8.50	46.60
8	7386.00	42.7 AV	54.0	-11.3	1.04 H	27	-3.90	46.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	107.5 PK			1.05 V	190	75.61	31.89
2	*2462.00	95.7 AV			1.05 V	190	63.81	31.89
3	2483.50	65.4 PK	74.0	-8.6	1.05 V	190	33.43	31.97
4	2483.50	49.6 AV	54.0	-4.4	1.05 V	190	17.63	31.97
5	4924.00	47.0 PK	74.0	-27.0	1.04 V	155	7.69	39.31
6	4924.00	34.9 AV	54.0	-19.1	1.04 V	155	-4.41	39.31
7	7386.00	57.5 PK	74.0	-16.5	1.01 V	193	10.90	46.60
8	7386.00	43.2 AV	54.0	-10.8	1.01 V	193	-3.40	46.60

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2467.00	98.2 PK			1.26 H	98	66.01	32.19
2	*2467.00	86.1 AV			1.26 H	98	53.91	32.19
3	2483.50	64.3 PK	74.0	-9.7	1.27 H	83	32.06	32.24
4	2483.50	44.6 AV	54.0	-9.4	1.27 H	83	12.36	32.24
5	4934.00	46.6 PK	74.0	-27.4	1.45 H	289	6.73	39.87
6	4934.00	34.0 AV	54.0	-20.0	1.45 H	289	-5.87	39.87
7	7401.00	54.9 PK	74.0	-19.1	1.02 H	21	7.39	47.51
8	7401.00	42.9 AV	54.0	-11.1	1.02 H	21	-4.61	47.51
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2467.00	94.3 PK			1.00 V	176	62.11	32.19
2	*2467.00	82.2 AV			1.00 V	176	50.01	32.19
3	2483.50	61.7 PK	74.0	-12.3	1.09 V	178	29.46	32.24
4	2483.50	44.3 AV	54.0	-9.7	1.09 V	178	12.06	32.24
5	4934.00	48.5 PK	74.0	-25.5	1.01 V	168	8.63	39.87
6	4934.00	35.9 AV	54.0	-18.1	1.01 V	168	-3.97	39.87
7	7401.00	55.3 PK	74.0	-18.7	1.00 V	215	7.79	47.51
8	7401.00	43.1 AV	54.0	-10.9	1.00 V	215	-4.41	47.51

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2472.00	98.1 PK			1.31 H	83	66.17	31.93
2	*2472.00	86.0 AV			1.31 H	83	54.07	31.93
3	**2483.50**	**72.0 PK**	**74.0**	**-2.0**	**1.31 H**	**83**	**40.03**	**31.97**
4	2483.50	51.1 AV	54.0	-2.9	1.31 H	83	19.13	31.97
5	4944.00	46.9 PK	74.0	-27.1	1.38 H	294	7.53	39.37
6	4944.00	34.2 AV	54.0	-19.8	1.38 H	294	-5.17	39.37
7	7416.00	54.7 PK	74.0	-19.3	1.00 H	28	8.12	46.58
8	7416.00	42.5 AV	54.0	-11.5	1.00 H	28	-4.08	46.58
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2472.00	94.6 PK			1.05 V	187	62.67	31.93
2	*2472.00	82.6 AV			1.05 V	187	50.67	31.93
3	2483.50	65.3 PK	74.0	-8.7	1.05 V	187	33.33	31.97
4	2483.50	48.9 AV	54.0	-5.1	1.05 V	187	16.93	31.97
5	4944.00	47.9 PK	74.0	-26.1	1.02 V	169	8.53	39.37
6	4944.00	35.6 AV	54.0	-18.4	1.02 V	169	-3.77	39.37
7	7416.00	55.5 PK	74.0	-18.5	1.00 V	207	8.92	46.58
8	7416.00	42.5 AV	54.0	-11.5	1.00 V	207	-4.08	46.58

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

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 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100036	Dec. 14, 2011	Dec. 13, 2012

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. Tested date : June 05 to Aug. 09, 2012

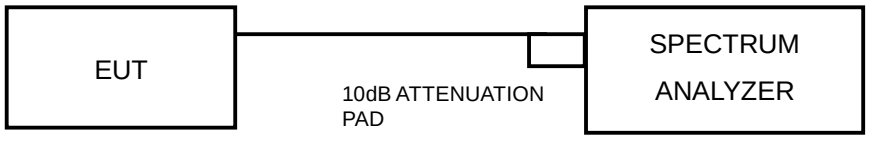
4.3.3 TEST PROCEDURE

1. Set resolution bandwidth (RBW) = approximately 1% of the emission bandwidth
2. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
3. Trace mode = max hold.
4. Sweep = auto couple.
5. 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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



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	10.14	0.5	PASS
2	2417	10.31	0.5	PASS
3	2422	10.30	0.5	PASS
6	2437	10.10	0.5	PASS
9	2452	9.93	0.5	PASS
10	2457	10.11	0.5	PASS
11	2462	10.73	0.5	PASS
12	2467	10.12	0.5	PASS
13	2472	10.01	0.5	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	15.85	0.5	PASS
2	2417	15.99	0.5	PASS
3	2422	15.92	0.5	PASS
6	2437	15.86	0.5	PASS
9	2452	16.02	0.5	PASS
10	2457	16.08	0.5	PASS
11	2462	15.90	0.5	PASS
12	2467	15.94	0.5	PASS
13	2472	15.79	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.08	0.5	PASS
2	2417	16.91	0.5	PASS
3	2422	16.70	0.5	PASS
6	2437	16.93	0.5	PASS
9	2452	17.04	0.5	PASS
10	2457	16.64	0.5	PASS
11	2462	16.85	0.5	PASS
12	2467	16.86	0.5	PASS
13	2472	16.95	0.5	PASS

4.4 CONDUCTED OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

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

4.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power Meter	ML2495A	0824006	May 10, 2012	May 09, 2013
Peak Power Sensor	MA2411B	0738172	May 10, 2012	May 09, 2013

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. Tested date : June 05 to Aug. 09, 2012

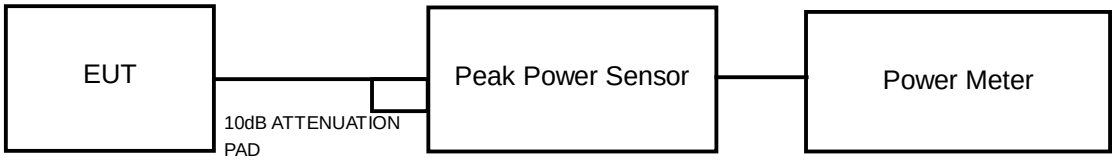
4.4.3 TEST PROCEDURES

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.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



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	177.828	22.5	29.97	PASS
2	2417	181.970	22.6	29.97	PASS
3	2422	186.209	22.7	29.97	PASS
6	2437	204.174	23.1	29.97	PASS
9	2452	199.526	23.0	29.97	PASS
10	2457	147.911	21.7	29.97	PASS
11	2462	128.825	21.1	29.97	PASS
12	2467	2.138	3.3	29.97	PASS
13	2472	1.950	2.9	29.97	PASS

Note: The directional gain is 6.03dBi, therefore the limit needs to reduce.

802.11g

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	177.828	22.5	29.97	PASS
2	2417	190.546	22.8	29.97	PASS
3	2422	199.526	23.0	29.97	PASS
6	2437	204.174	23.1	29.97	PASS
9	2452	186.209	22.7	29.97	PASS
10	2457	199.526	23.0	29.97	PASS
11	2462	190.546	22.8	29.97	PASS
12	2467	7.586	8.80	29.97	PASS
13	2472	6.607	8.20	29.97	PASS

Note: The directional gain is 6.03dBi, therefore the limit needs to reduce.

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	154.882	21.9	29.97	PASS
2	2417	173.780	22.4	29.97	PASS
3	2422	177.828	22.5	29.97	PASS
6	2437	208.930	23.2	29.97	PASS
9	2452	204.174	23.1	29.97	PASS
10	2457	208.930	23.2	29.97	PASS
11	2462	173.780	22.4	29.97	PASS
12	2467	7.762	8.9	29.97	PASS
13	2472	8.128	9.1	29.97	PASS

Note: The directional gain is 6.03dBi, therefore the limit needs to reduce.

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 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S Spectrum Analyzer	FSP40	100036	Dec. 14, 2011	Dec. 13, 2012

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. Tested date : June 05 to Aug. 09, 2012

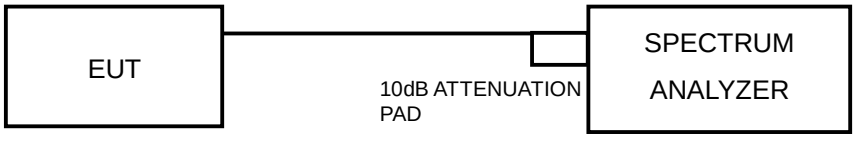
4.5.3 TEST PROCEDURE

1. Set the RBW = 100 kHz, VBW =300 kHz, Detector = peak.
2. Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
3. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(3 kHz/100kHz)

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6

4.5.7 TEST RESULTS

802.11b

Channel	FREQUENCY (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	9.47	-5.76	7.97	PASS
2	2417	9.16	-6.07	7.97	PASS
3	2422	9.38	-5.85	7.97	PASS
6	2437	9.66	-5.57	7.97	PASS
9	2452	9.19	-6.04	7.97	PASS
10	2457	10.02	-5.21	7.97	PASS
11	2462	9.64	-5.59	7.97	PASS
12	2467	-9.00	-24.23	7.97	PASS
13	2472	-9.27	-24.50	7.97	PASS

Note: The directional gain is 6.03dBi, therefore the limit needs to reduce.

802.11g

Channel	FREQUENCY (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	5.86	-9.37	7.97	PASS
2	2417	6.10	-9.13	7.97	PASS
3	2422	6.18	-9.05	7.97	PASS
6	2437	6.74	-8.49	7.97	PASS
9	2452	6.75	-8.48	7.97	PASS
10	2457	7.23	-8.00	7.97	PASS
11	2462	6.95	-8.28	7.97	PASS
12	2467	-10.72	-25.95	7.97	PASS
13	2472	-10.74	-25.97	7.97	PASS

Note: The directional gain is 6.03dBi, therefore the limit needs to reduce.

802.11n (20MHz)

Channel	FREQUENCY (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	5.60	-9.63	7.97	PASS
2	2417	5.96	-9.27	7.97	PASS
3	2422	5.63	-9.60	7.97	PASS
6	2437	6.25	-8.98	7.97	PASS
9	2452	6.09	-9.14	7.97	PASS
10	2457	5.79	-9.44	7.97	PASS
11	2462	5.82	-9.41	7.97	PASS
12	2467	-10.77	-26.00	7.97	PASS
13	2472	-10.61	-25.84	7.97	PASS

Note: The directional gain is 6.03dBi, therefore the limit needs to reduce.

4.6 CONDUCTED OUT-BAND EMISSION MEASUREMENT

4.6.1 LIMITS OF CONDUCTED OUT-BAND EMISSION MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S Spectrum Analyzer	FSP40	100036	Dec. 14, 2011	Dec. 13, 2012

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. Tested date : June 05, 2012

4.6.3 TEST PROCEDURE

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW ≥ 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.

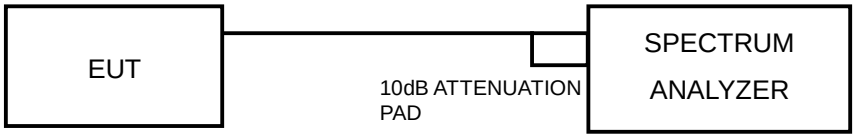
MEASUREMENT PROCEDURE OOBE

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

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 TEST SETUP



4.6.6 EUT OPERATING CONDITION

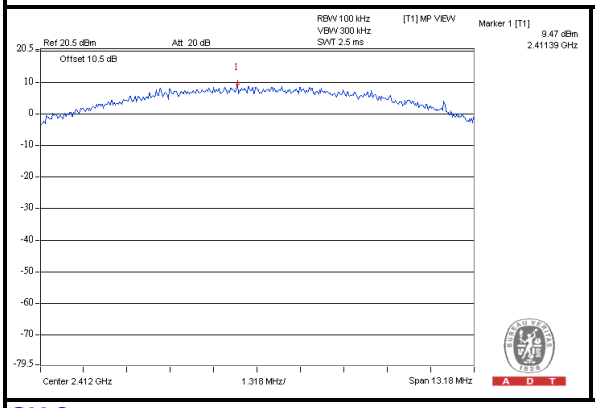
Same as Item 4.3.6

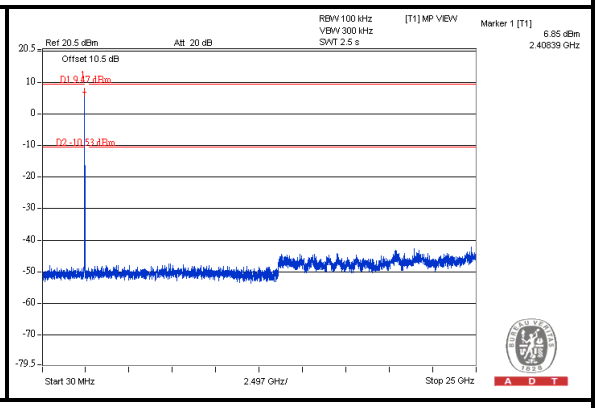
4.6.7 TEST RESULTS

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.

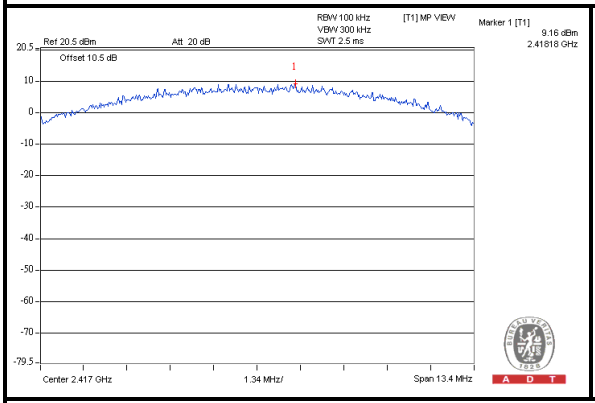
802.11b

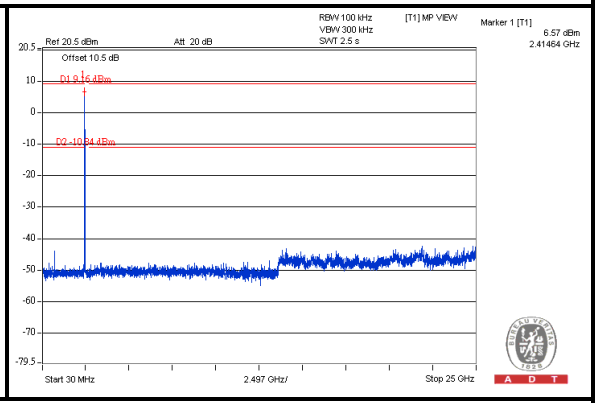
CH 1



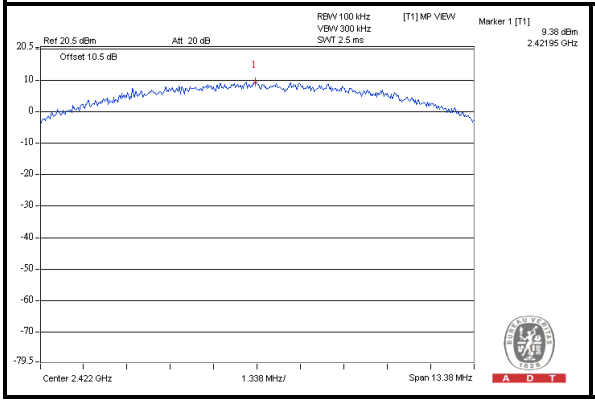


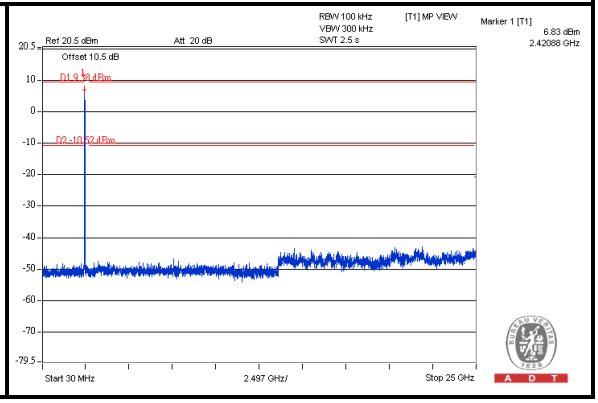
CH 2



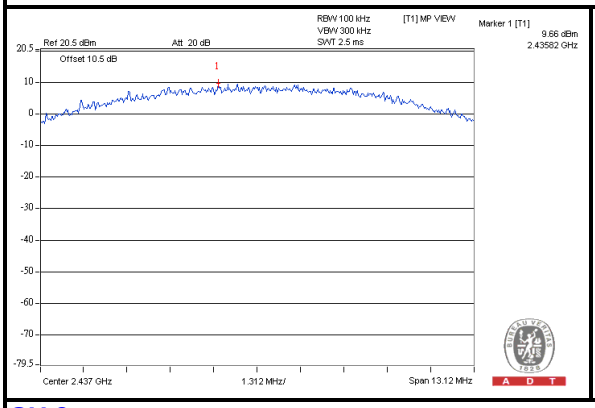


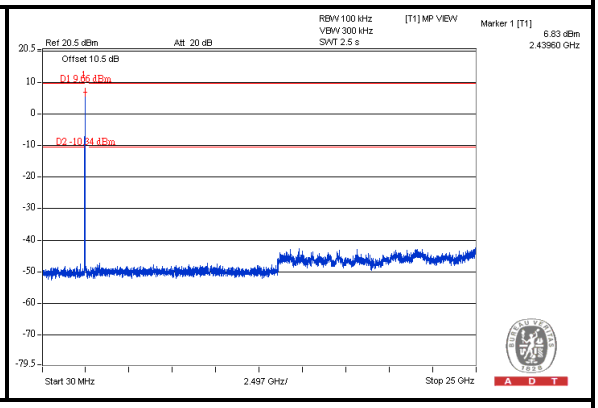
CH 3



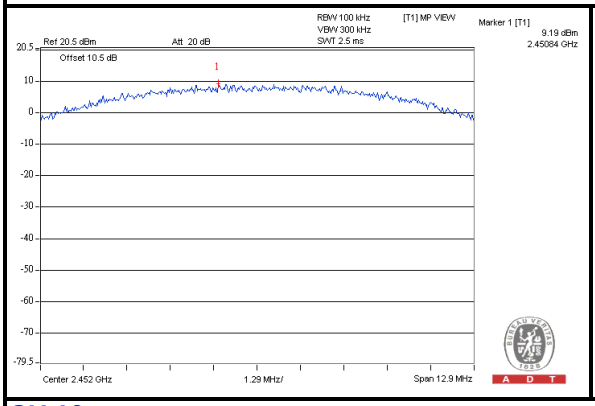


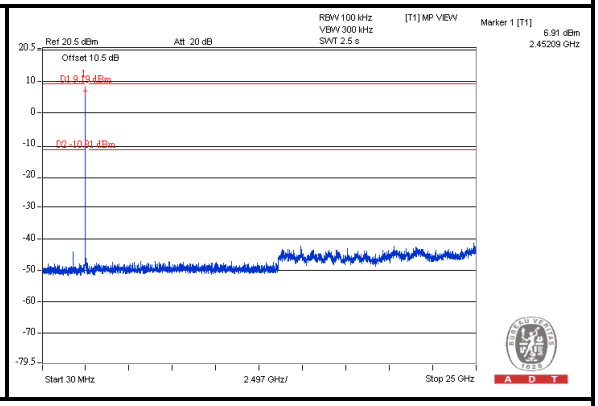
CH 6


RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MP VIEW
Marker 1 [T1]
9.66 dBm
2.43582 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
Center 2.437 GHz
1.312 MHz/
Span 13.12 MHz

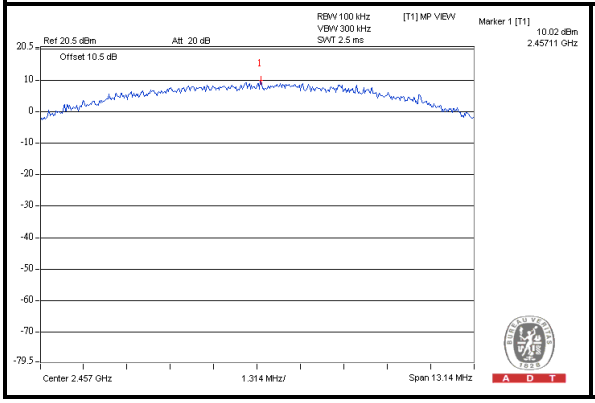

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MP VIEW
Marker 1 [T1]
6.83 dBm
2.43960 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
D1 9.66 dBm
D2 -10.34 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

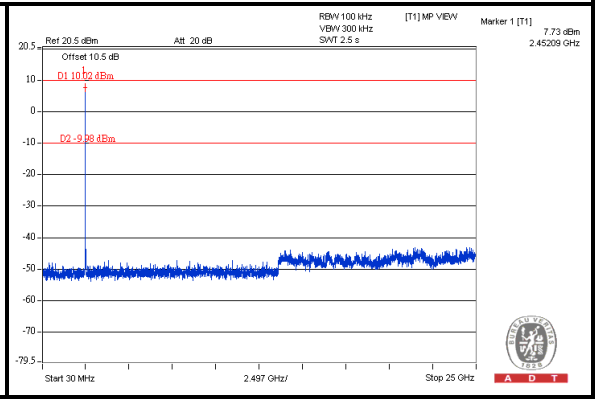
CH 9


RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MP VIEW
Marker 1 [T1]
9.19 dBm
2.45084 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
Center 2.452 GHz
1.29 MHz/
Span 12.9 MHz

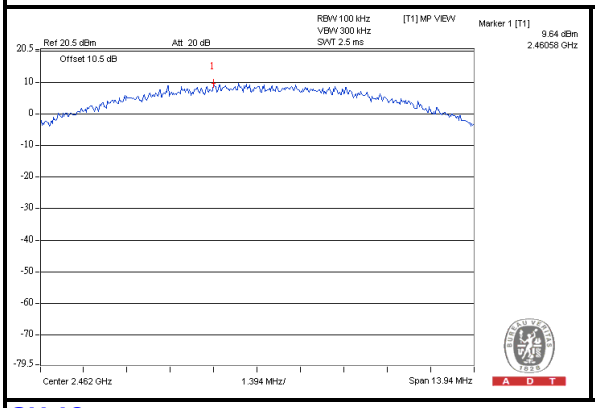

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MP VIEW
Marker 1 [T1]
6.91 dBm
2.45209 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
D1 9.19 dBm
D2 -10.81 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

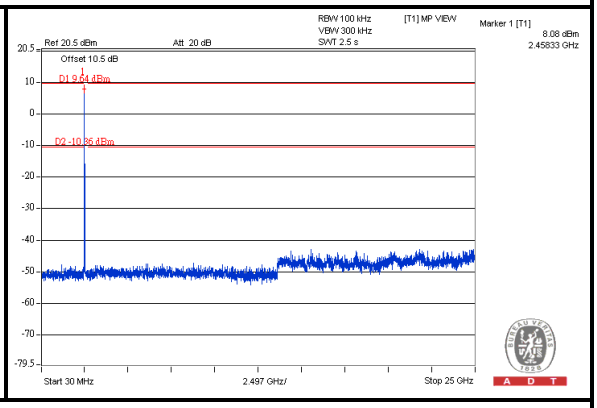
CH 10


RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MP VIEW
Marker 1 [T1]
10.02 dBm
2.45711 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
Center 2.457 GHz
1.314 MHz/
Span 13.14 MHz

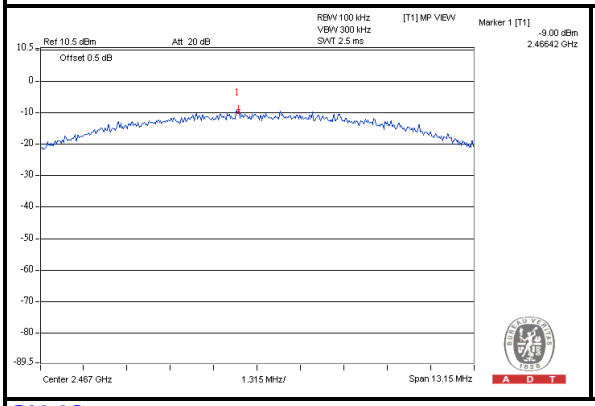

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MP VIEW
Marker 1 [T1]
7.73 dBm
2.45209 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
D1 10.02 dBm
D2 -9.98 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

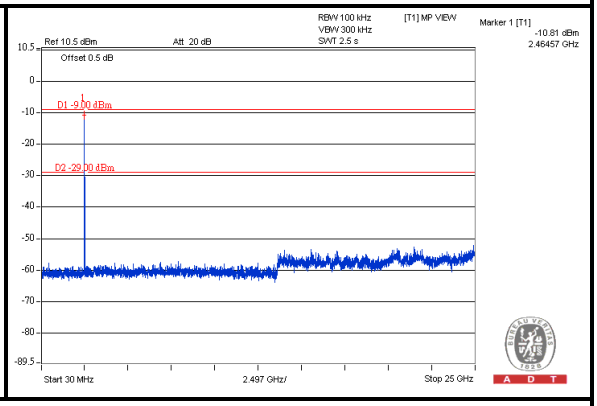
CH 11



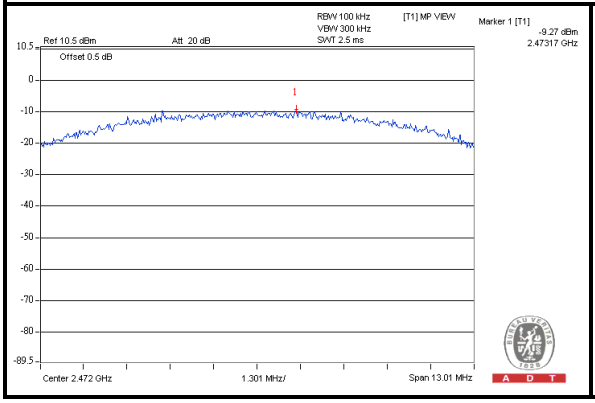


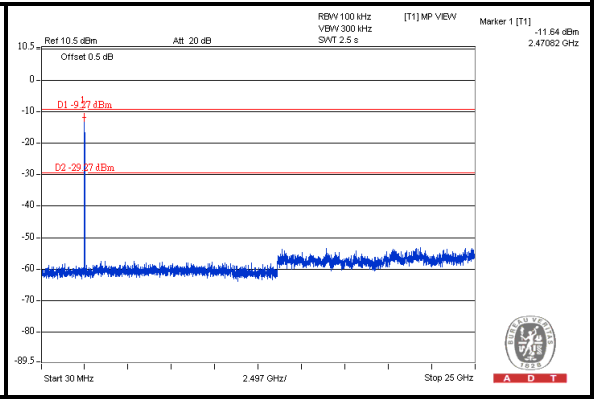
CH 12





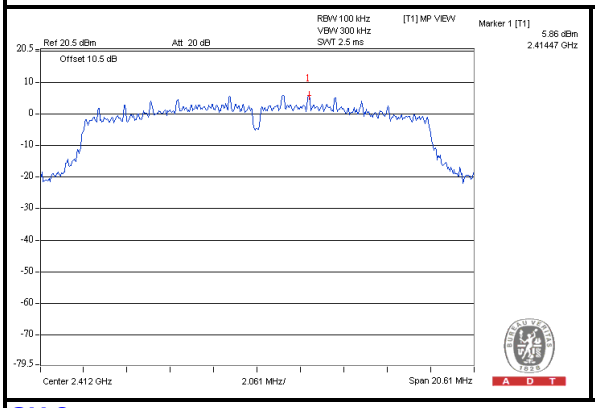
CH 13

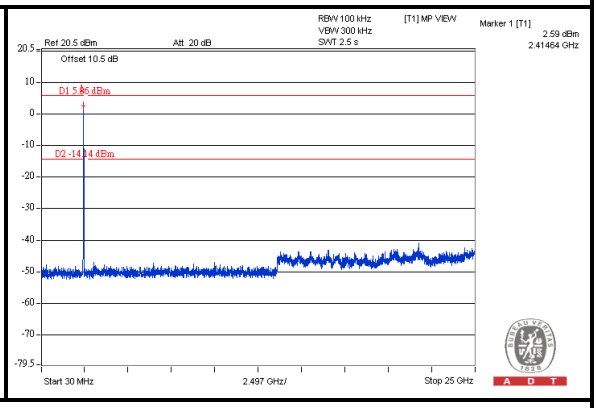




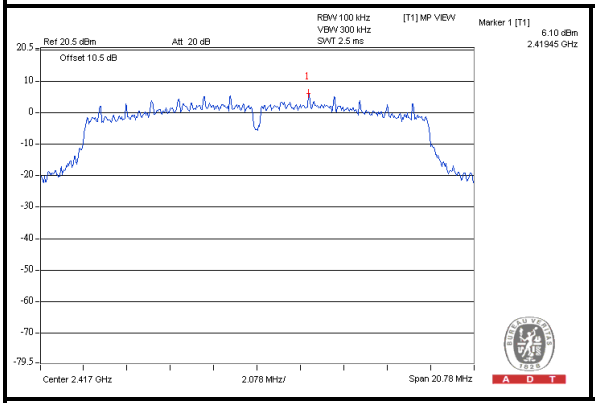
802.11g

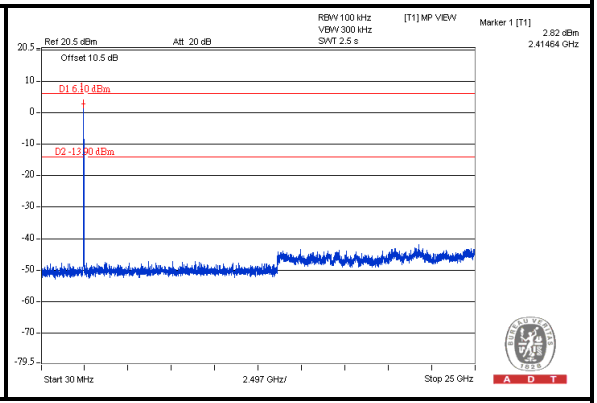
CH 1



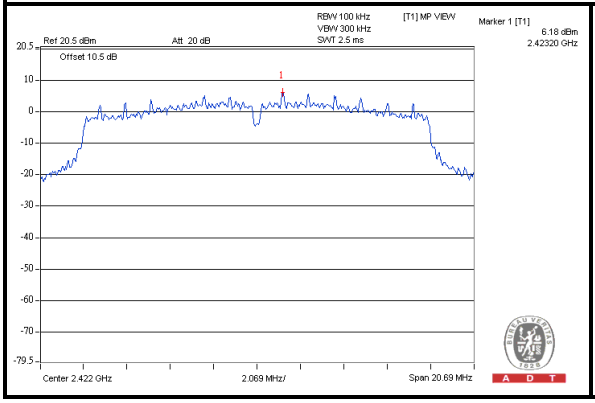


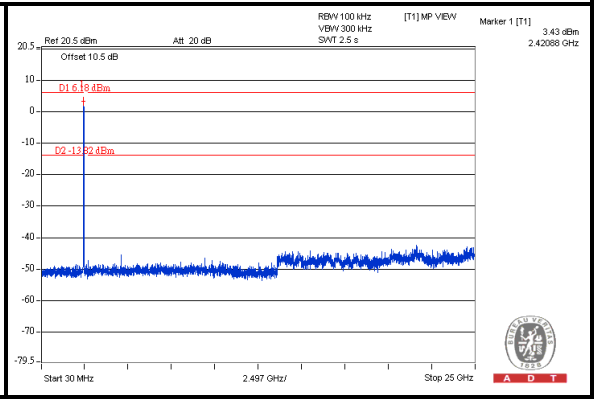
CH 2



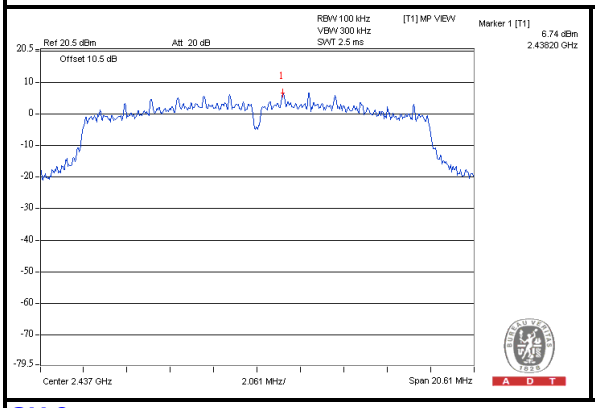


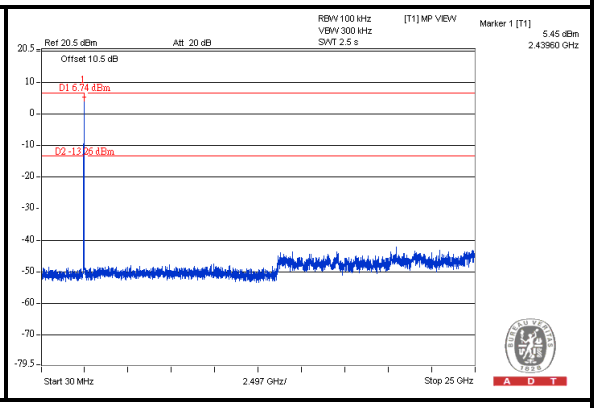
CH 3



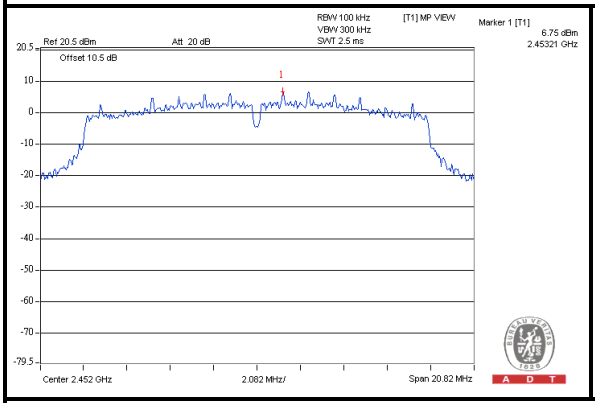


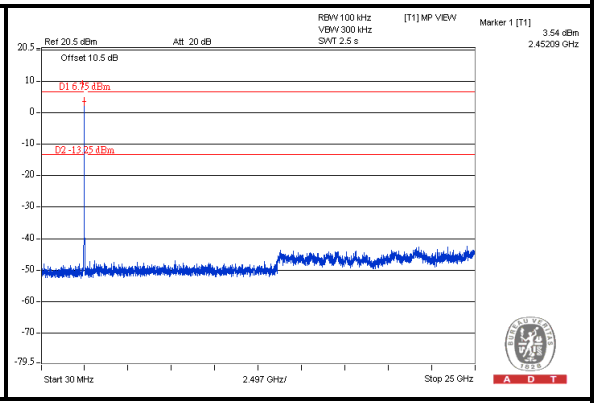
CH 6


RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MP VIEW
Marker 1 [T1]
6.74 dBm
2.43820 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
Center 2.437 GHz
2.061 MHz/
Span 20.61 MHz

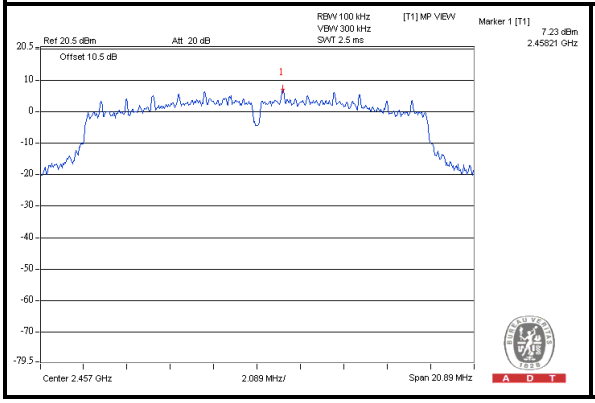

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MP VIEW
Marker 1 [T1]
5.45 dBm
2.43960 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
D1 6.74 dBm
D2 -13.26 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

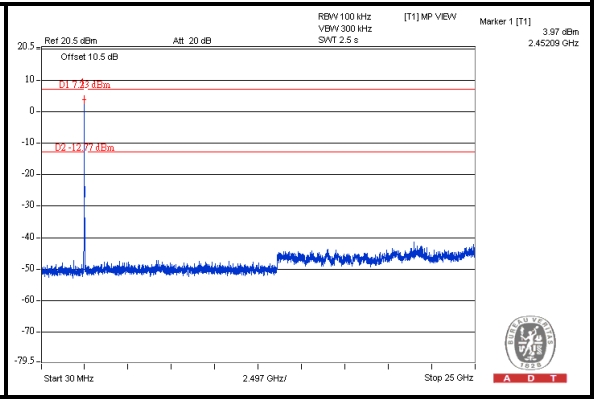
CH 9


RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MP VIEW
Marker 1 [T1]
6.75 dBm
2.45321 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
Center 2.452 GHz
2.082 MHz/
Span 20.82 MHz

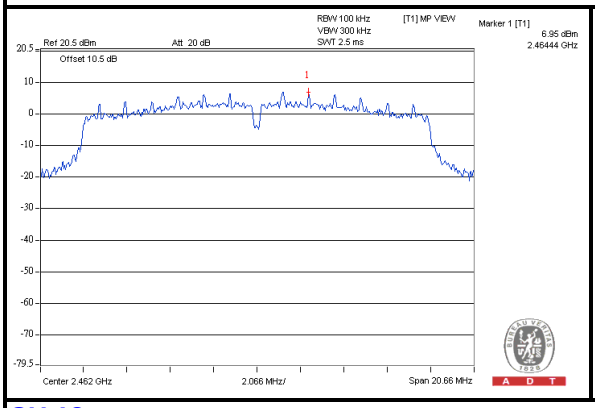

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MP VIEW
Marker 1 [T1]
3.54 dBm
2.45209 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
D1 6.75 dBm
D2 -13.25 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

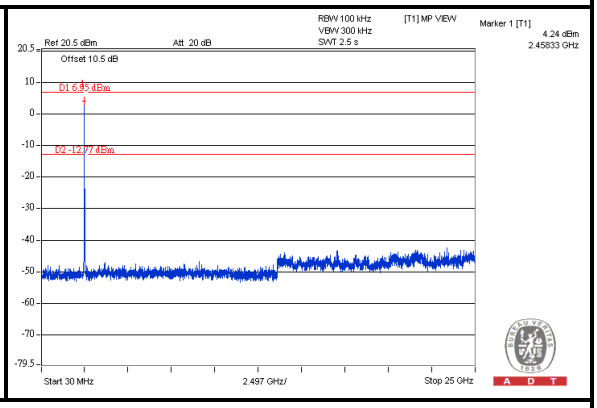
CH 10


RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MP VIEW
Marker 1 [T1]
7.23 dBm
2.45821 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
Center 2.457 GHz
2.089 MHz/
Span 20.89 MHz

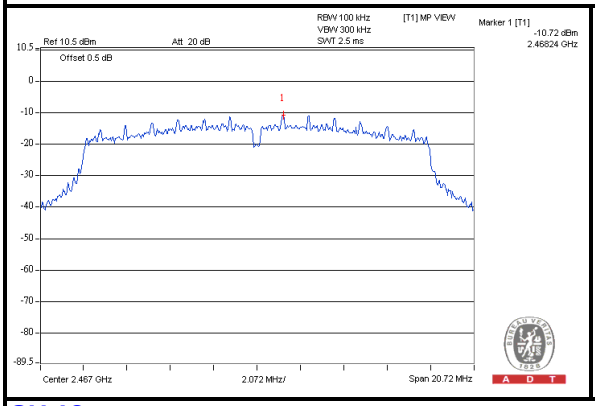

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MP VIEW
Marker 1 [T1]
3.97 dBm
2.45209 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
D1 7.23 dBm
D2 -12.77 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

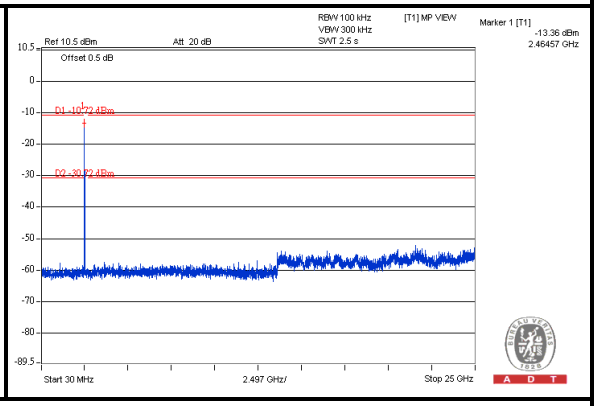
CH 11



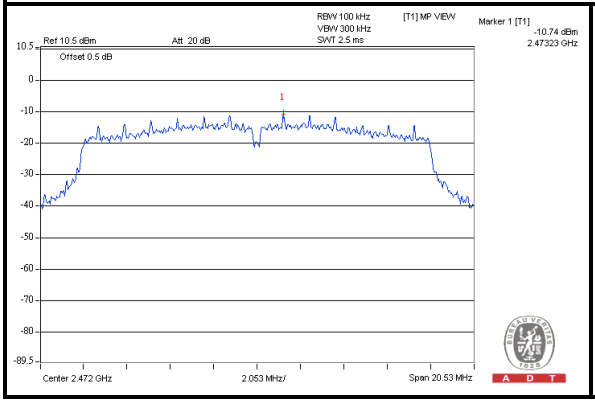


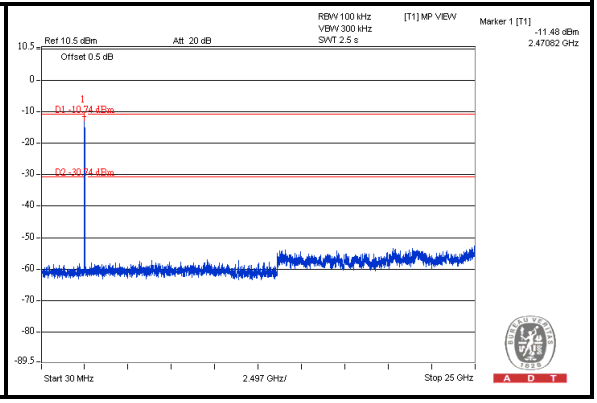
CH 12





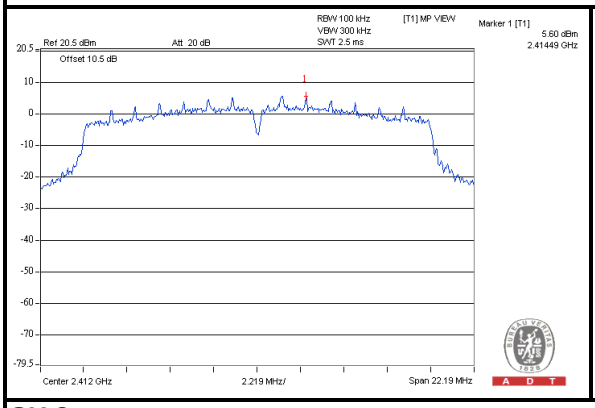
CH 13

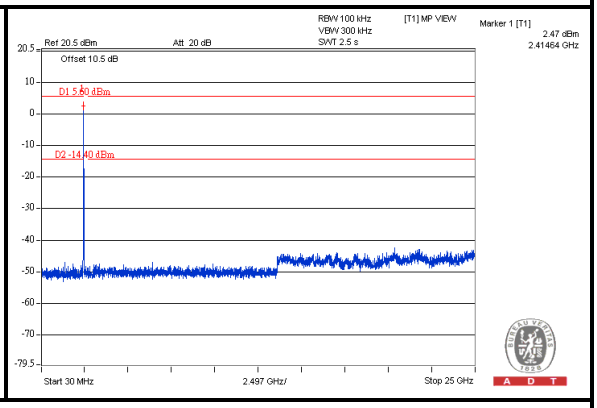




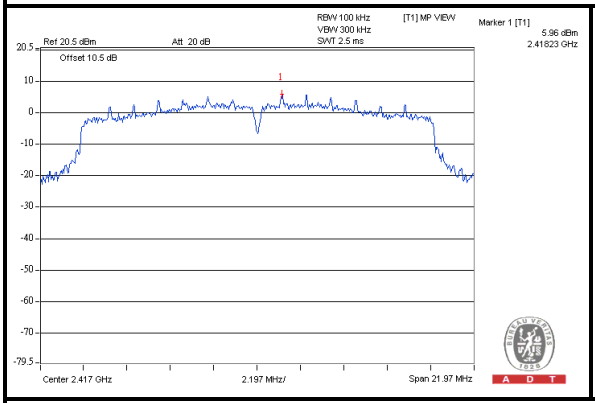
802.11n (20MHz)

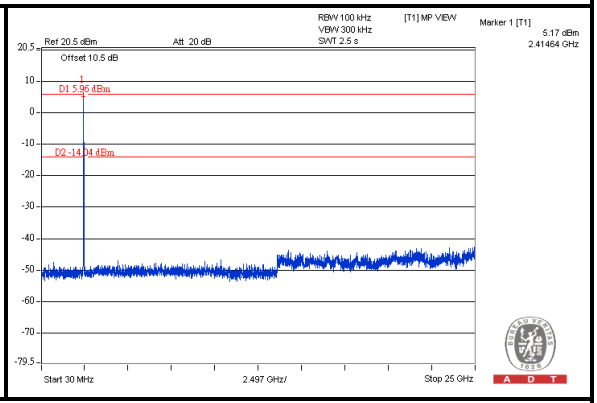
CH 1



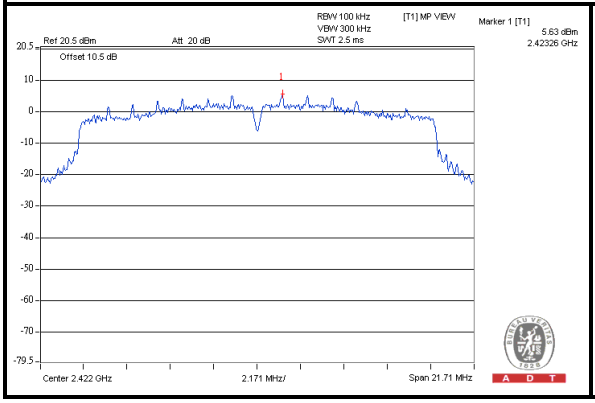


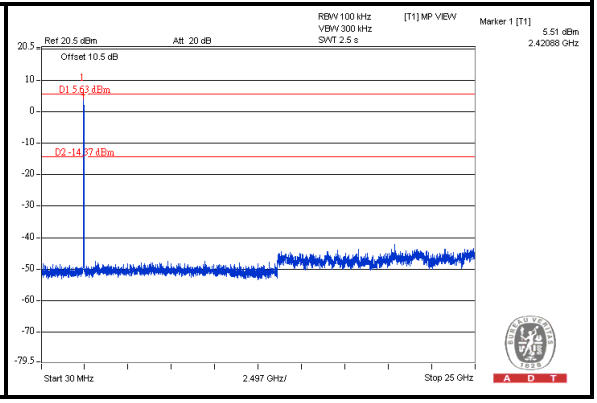
CH 2



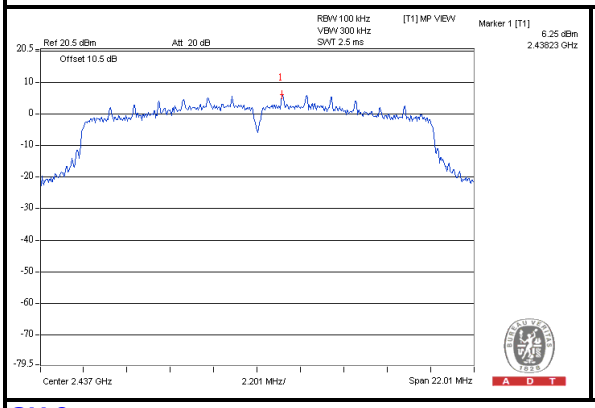


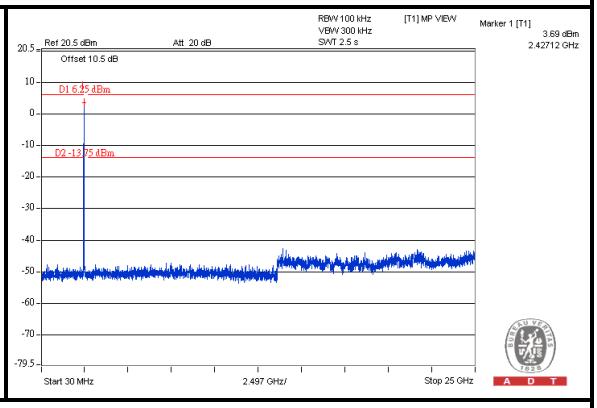
CH 3



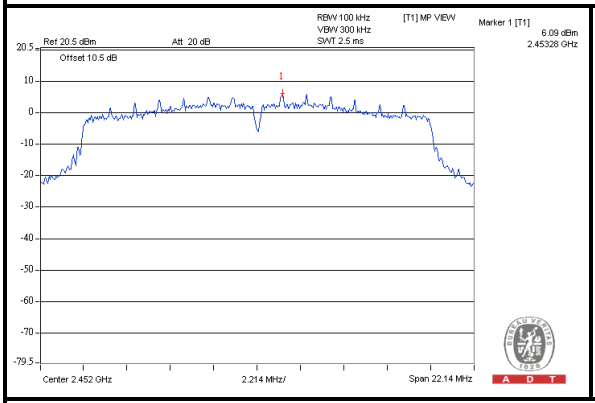


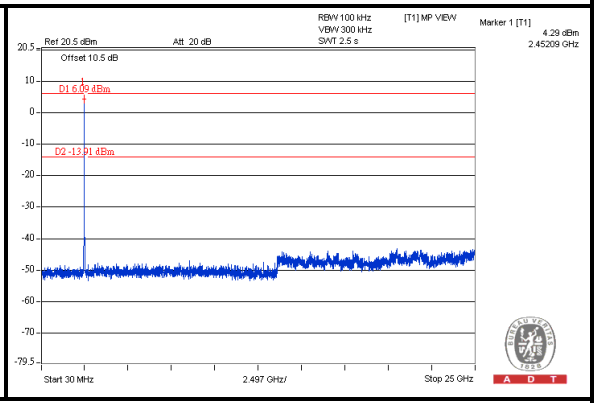
CH 6


RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MP VIEW
Marker 1 [T1]
6.25 dBm
2.43823 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
Center 2.437 GHz
2.201 MHz/
Span 22.01 MHz

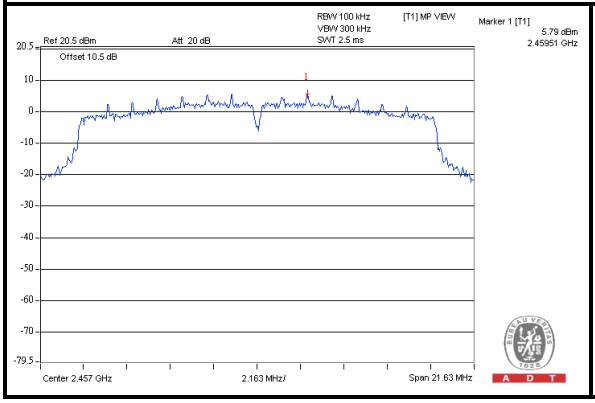

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MP VIEW
Marker 1 [T1]
3.69 dBm
2.42712 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
D1 6.25 dBm
D2 -13.75 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

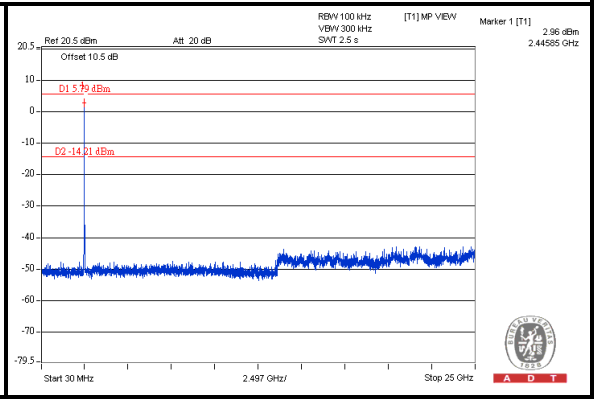
CH 9


RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MP VIEW
Marker 1 [T1]
6.09 dBm
2.45328 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
Center 2.452 GHz
2.214 MHz/
Span 22.14 MHz

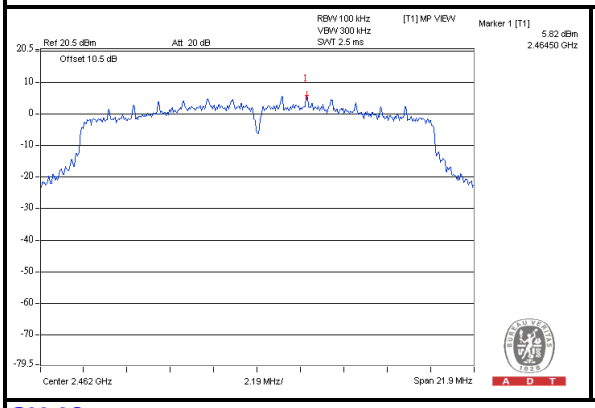

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MP VIEW
Marker 1 [T1]
4.29 dBm
2.45209 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
D1 6.09 dBm
D2 -13.91 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

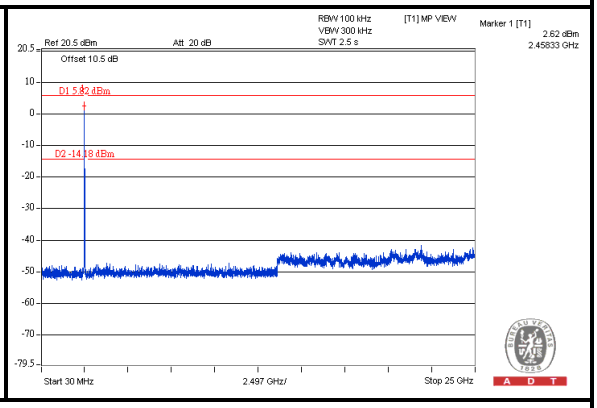
CH 10


RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MP VIEW
Marker 1 [T1]
5.79 dBm
2.45951 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
Center 2.457 GHz
2.163 MHz/
Span 21.63 MHz

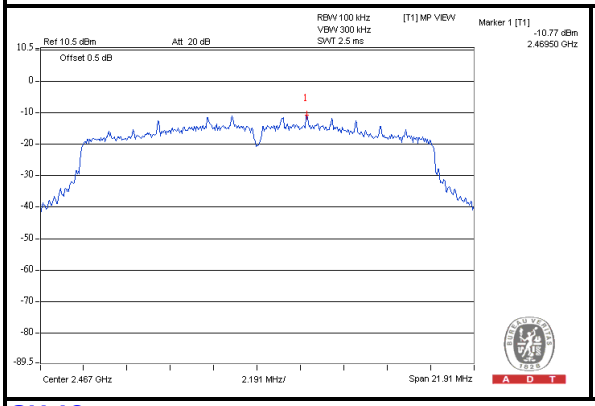

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MP VIEW
Marker 1 [T1]
2.96 dBm
2.44585 GHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
D1 5.79 dBm
D2 -14.21 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

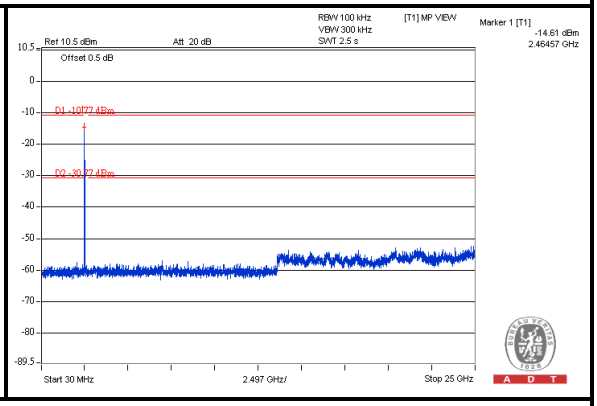
CH 11



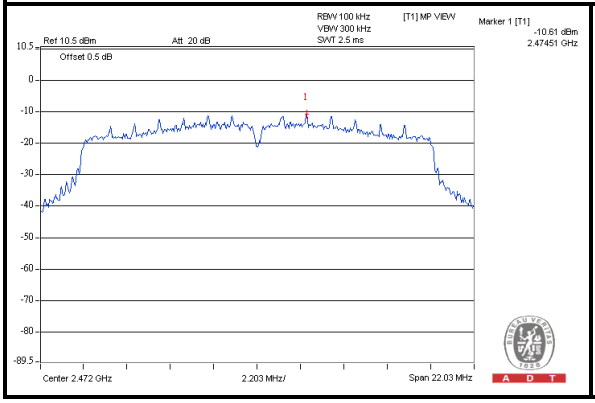


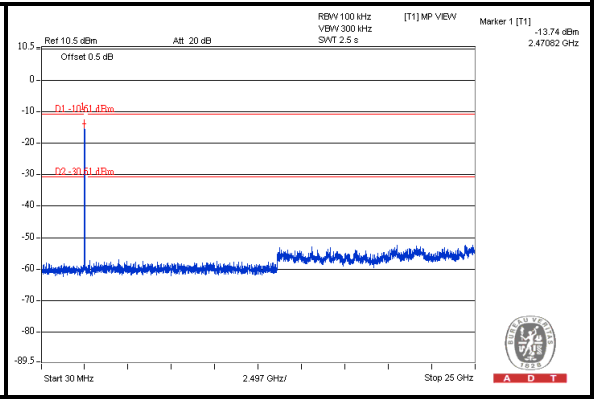
CH 12





CH 13





5. TEST TYPES AND RESULTS (FOR 5GHz, 5725~5850MHz Band)

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

NOTE: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

5.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS 30	100287	Mar. 01, 2012	Feb. 28, 2013
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK 8127	8127-523	Sep. 20, 2011	Sep. 19, 2012
Line-Impedance Stabilization Network (for Peripheral) ROHDE & SCHWARZ	ESH3-Z5	848773/004	Nov. 01, 2011	Oct. 31, 2012
RF Cable (JYEBAO)	5DFB	COACAB-002	Aug. 06, 2011	Aug. 05, 2012
50 ohms Terminator	50	3	Nov. 02, 2011	Nov. 01, 2012
Software ADT	BV ADT_Cond_V7.3.7	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 Shielded Room No. A.
3 The VCCI Con A Registration No. is C-817.
4. Tested Date: June 11, 2012

5.1.3 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.

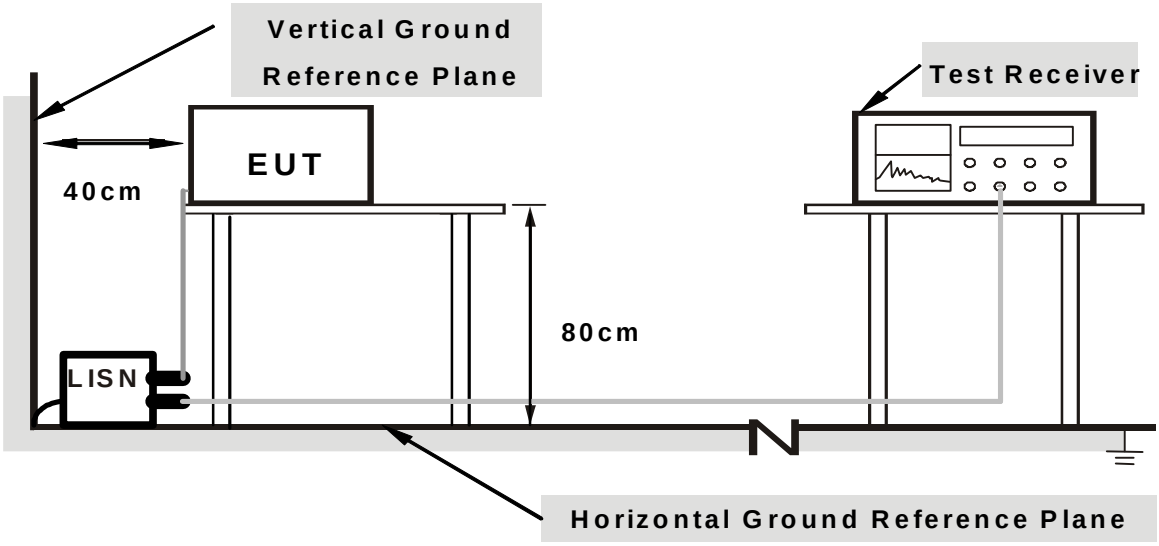
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 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 related item – Photographs of the Test Configuration.

5.1.6 EUT OPERATING CONDITIONS

Same as the 4.1.6

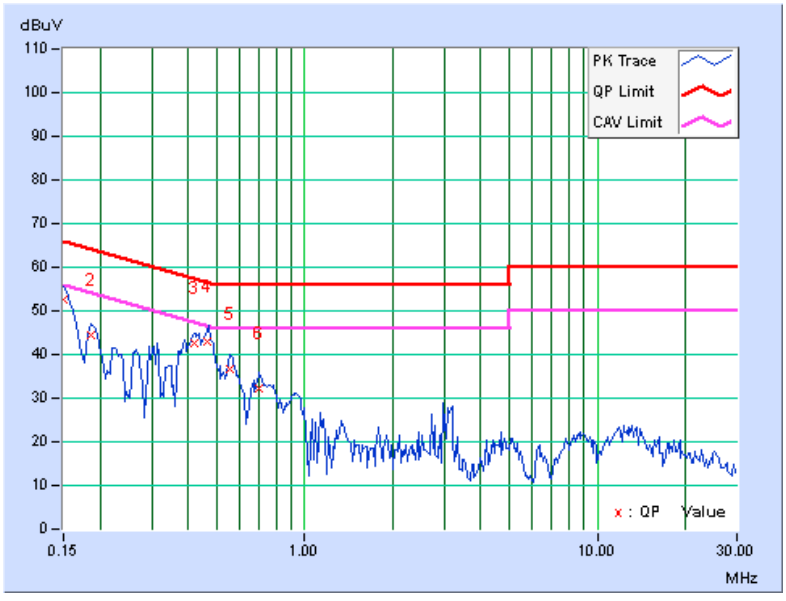
5.1.7 TEST RESULTS

PHASE	Line (L)	6dB BANDWIDTH	9 kHz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.06	52.68	41.51	52.74	41.57	66.00	56.00	-13.26	-14.43
2	0.18516	0.06	44.54	32.18	44.60	32.24	64.25	54.25	-19.65	-22.01
3	0.41953	0.07	42.38	34.83	42.45	34.90	57.46	47.46	-15.01	-12.56
4	0.46641	0.08	42.87	32.59	42.95	32.67	56.58	46.58	-13.63	-13.91
5	0.55625	0.08	36.62	29.32	36.70	29.40	56.00	46.00	-19.30	-16.60
6	0.70078	0.10	32.11	22.28	32.21	22.38	56.00	46.00	-23.79	-23.62

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.

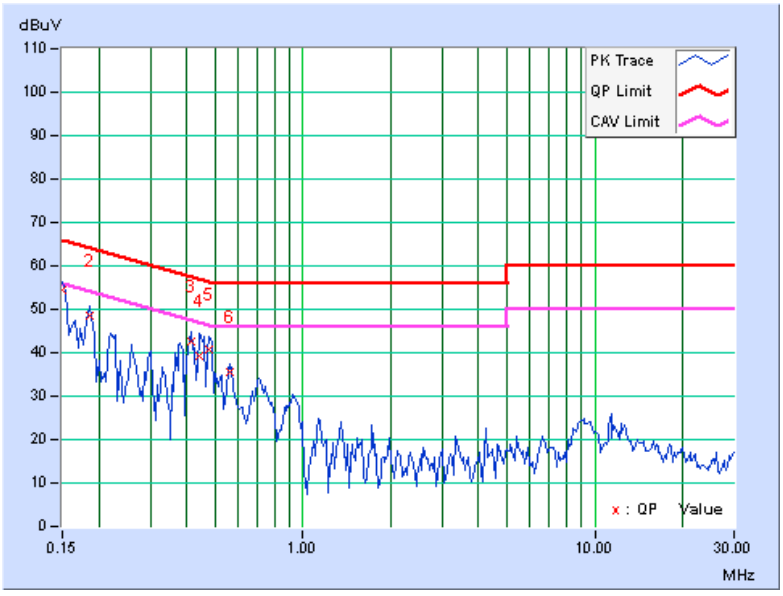


PHASE	Neutral (N)	6dB BANDWIDTH	9 kHz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.07	54.51	43.33	54.58	43.40	66.00	56.00	-11.42	-12.60
2	0.18516	0.07	48.32	35.12	48.39	35.19	64.25	54.25	-15.86	-19.06
3	**0.41563**	**0.08**	**42.41**	**37.14**	**42.49**	**37.22**	**57.54**	**47.54**	**-15.04**	**-10.31**
4	0.43906	0.08	39.24	28.80	39.32	28.88	57.08	47.08	-17.76	-18.20
5	0.47813	0.09	40.53	33.41	40.62	33.50	56.37	46.37	-15.76	-12.88
6	0.56406	0.09	35.30	29.94	35.39	30.03	56.00	46.00	-20.61	-15.97

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.



5.2 RADIATED AND BANDEDGE EMISSION MEASUREMENT

5.2.1 LIMITS OF RADIATED AND BANDEDGE EMISSION 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.

5.2.2 TEST INSTRUMENTS

For below 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250254	July 12, 2011	July 11, 2012
Agilent Pre-Selector	N9039A	MY46520311	July 12, 2011	July 11, 2012
Agilent Signal Generator	N5181A	MY49060517	July 12, 2011	July 11, 2012
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-03	Nov. 15, 2011	Nov. 14, 2012
Agilent Pre-Amplifier	8449B	3008A02578	July 04, 2011	July 03, 2012
SPACEK LABS	SLKKa-48-6	9K16	Nov. 15, 2011	Nov. 14, 2012
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-360	Apr. 09, 2012	Apr. 08, 2013
AISI Horn_Antenna	AIH.8018	0000320091110	Nov. 14, 2011	Nov. 13, 2012
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Oct. 07, 2011	Oct. 06, 2012
*R&S Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
RF CABLE	NA	RF104-201 RF104-203 RF104-204	Dec. 26, 2011	Dec. 25, 2012
RF Cable	NA	CHGCAB_001	Oct. 07, 2011	Oct. 06, 2012
Software	ADT_Radiated_ V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	NA	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 above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3 The horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The test was performed in 966 Chamber No. G.
5 The FCC Site Registration No. is 966073.
6 The VCCI Site Registration No. is G-137.
7 The CANADA Site Registration No. is IC 7450H-2.
8 Tested Date: June 01, 2012

For above 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250253	Aug. 29, 2011	Aug. 28, 2012
Agilent Pre-Selector	N9039A	MY46520310	Aug. 29, 2011	Aug. 28, 2012
Agilent Signal Generator	N5181A	MY49060347	July 25, 2011	July 24, 2012
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-04	Nov. 15, 2011	Nov. 14, 2012
Agilent Pre-Amplifier	8449B	3008A02465	Feb. 27, 2012	Feb. 26, 2013
SPACEK LABS	SLKKa-48-6	9K16	Nov. 15, 2011	Nov. 14, 2012
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-361	Apr. 06, 2012	Apr. 05, 2013
AISI Horn_Antenna	AIH.8018	0000220091110	Nov. 23, 2011	Nov. 22, 2012
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Oct. 07, 2011	Oct. 06, 2012
RF Cable	NA	RF104-205 RF104-207 RF104-202	Dec. 27, 2011	Dec. 26, 2012
RF Cable	NA	CHHCAB_001	Oct. 08, 2011	Oct. 07, 2012
Software	ADT_Radiated_ V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	NA	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 horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3 The test was performed in 966 Chamber No. H.
4. The FCC Site Registration No. is 797305.
5 The CANADA Site Registration No. is IC 7450H-3.
6 Tested Date: June 01, 2012

5.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters chamber room test. 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. The height of 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 quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

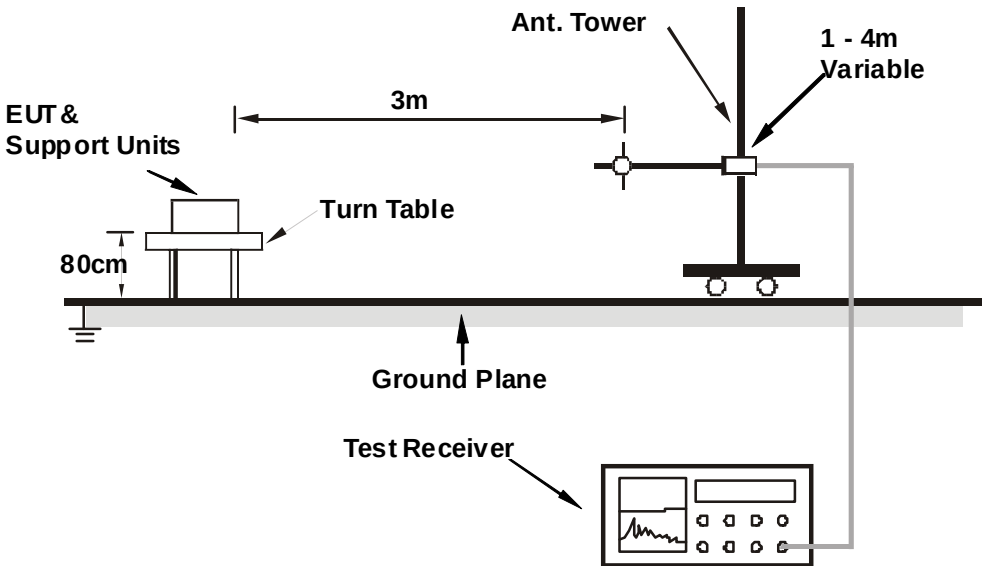
NOTE:

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

5.2.4 DEVIATION FROM TEST STANDARD

No deviation

5.2.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

5.2.6 EUT OPERATING CONDITIONS

Same as the 4.2.6

5.2.7 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

802.11n (20MHz)

CHANNEL	TX Channel 165	**DETECTOR FUNCTION**	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	211.19	35.7 QP	43.5	-7.8	1.50 H	79	24.07	11.65
2	261.04	36.7 QP	46.0	-9.3	1.00 H	287	22.91	13.78
3	304.27	38.9 QP	46.0	-7.1	1.00 H	150	23.51	15.40
4	478.70	33.8 QP	46.0	-12.2	2.00 H	254	13.98	19.86
5	604.82	36.0 QP	46.0	-10.0	1.50 H	251	13.24	22.72
6	751.08	34.1 QP	46.0	-11.9	1.00 H	322	9.16	24.93
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	**216.16**	**39.2 QP**	**46.0**	**-6.8**	**2.00 V**	**259**	**27.37**	**11.87**
2	242.81	39.2 QP	46.0	-6.9	1.00 V	117	26.12	13.03
3	326.53	37.0 QP	46.0	-9.1	1.50 V	236	20.98	15.97
4	520.98	34.6 QP	46.0	-11.4	1.00 V	216	13.69	20.88
5	563.61	34.0 QP	46.0	-12.1	1.50 V	217	12.09	21.86
6	605.06	38.2 QP	46.0	-7.8	1.50 V	209	15.52	22.72

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

ABOVE 1GHz WORST-CASE DATA

802.11a

CHANNEL	TX Channel 149	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*5745.00	114.0 PK			1.16 H	288	72.45	41.55
2	*5745.00	104.2 AV			1.16 H	288	62.65	41.55
3	11490.00	57.9 PK	74.0	-16.1	1.00 H	155	10.19	47.71
4	11490.00	44.7 AV	54.0	-9.3	1.00 H	155	-3.01	47.71
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*5745.00	113.4 PK			1.00 V	71	71.85	41.55
2	*5745.00	103.5 AV			1.00 V	71	61.95	41.55
3	11490.00	57.3 PK	74.0	-16.7	1.00 V	327	9.59	47.71
4	11490.00	43.3 AV	54.0	-10.7	1.00 V	327	-4.41	47.71

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The limit value is defined as per 15.247.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	113.8 PK			1.16 H	285	72.12	41.68
2	*5785.00	104.1 AV			1.16 H	285	62.42	41.68
3	11570.00	57.5 PK	74.0	-16.5	1.00 H	153	9.75	47.75
4	11570.00	44.5 AV	54.0	-9.5	1.00 H	153	-3.25	47.75
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	113.1 PK			1.00 V	78	71.42	41.68
2	*5785.00	103.6 AV			1.00 V	78	61.92	41.68
3	11570.00	57.0 PK	74.0	-17.0	1.00 V	320	9.25	47.75
4	11570.00	43.7 AV	54.0	-10.3	1.00 V	320	-4.05	47.75

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The limit value is defined as per 15.247.

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	114.1 PK			1.16 H	290	72.32	41.78
2	*5825.00	104.3 AV			1.16 H	290	62.52	41.78
3	11650.00	57.6 PK	74.0	-16.4	1.00 H	152	9.77	47.83
4	11650.00	44.3 AV	54.0	-9.7	1.00 H	152	-3.53	47.83
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	113.4 PK			1.00 V	65	71.62	41.78
2	*5825.00	103.7 AV			1.00 V	65	61.92	41.78
3	11650.00	57.4 PK	74.0	-16.6	1.00 V	336	9.57	47.83
4	11650.00	43.2 AV	54.0	-10.8	1.00 V	336	-4.63	47.83

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The limit value is defined as per 15.247.

802.11n (20MHz)

CHANNEL	TX Channel 149	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*5745.00	113.2 PK			1.16 H	289	71.65	41.55
2	*5745.00	103.4 AV			1.16 H	289	61.85	41.55
3	11490.00	57.9 PK	74.0	-16.1	1.00 H	152	10.19	47.71
4	11490.00	44.5 AV	54.0	-9.5	1.00 H	152	-3.21	47.71
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*5745.00	112.4 PK			1.00 V	66	70.85	41.55
2	*5745.00	102.7 AV			1.00 V	66	61.15	41.55
3	11490.00	57.4 PK	74.0	-16.6	1.01 V	342	9.69	47.71
4	11490.00	43.2 AV	54.0	-10.8	1.01 V	342	-4.51	47.71

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The limit value is defined as per 15.247.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	113.0 PK			1.16 H	288	71.32	41.68
2	*5785.00	103.2 AV			1.16 H	288	61.52	41.68
3	11570.00	57.4 PK	74.0	-16.6	1.00 H	155	9.65	47.75
4	11570.00	44.6 AV	54.0	-9.4	1.00 H	155	-3.15	47.75
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	112.1 PK			1.00 V	65	70.42	41.68
2	*5785.00	102.6 AV			1.00 V	65	60.92	41.68
3	11570.00	56.7 PK	74.0	-17.3	1.01 V	340	8.95	47.75
4	11570.00	42.3 AV	54.0	-11.7	1.01 V	340	-5.45	47.75

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The limit value is defined as per 15.247.

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	112.8 PK			1.15 H	288	71.02	41.78
2	*5825.00	102.8 AV			1.15 H	288	61.02	41.78
3	11650.00	57.7 PK	74.0	-16.3	1.00 H	159	9.87	47.83
4	11650.00	44.7 AV	54.0	-9.3	1.00 H	159	-3.13	47.83
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	112.5 PK			1.00 V	64	70.72	41.78
2	*5825.00	102.8 AV			1.00 V	64	61.02	41.78
3	11650.00	56.0 PK	74.0	-18.0	1.00 V	332	8.17	47.83
4	11650.00	42.1 AV	54.0	-11.9	1.00 V	332	-5.73	47.83

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The limit value is defined as per 15.247.

5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

5.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S Spectrum Analyzer	FSP40	100036	Dec. 14, 2011	Dec. 13, 2012

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. Tested date : June 05, 2012

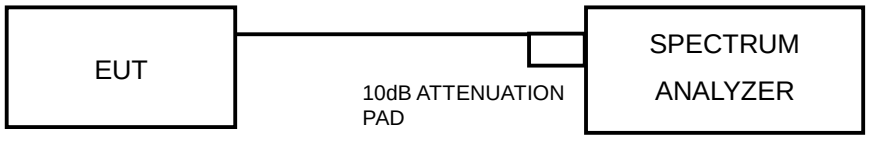
5.3.3 TEST PROCEDURE

1. Set resolution bandwidth (RBW) = approximately 1% of the emission bandwidth
2. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
3. Trace mode = max hold.
4. Sweep = auto couple.
5. 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

5.3.4 DEVIATION FROM TEST STANDARD

No deviation

5.3.5 TEST SETUP



5.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

5.3.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.96	0.5	PASS
157	5785	15.95	0.5	PASS
165	5825	16.00	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	17.03	0.5	PASS
157	5785	16.98	0.5	PASS
165	5825	17.04	0.5	PASS

5.4 CONDUCTED OUTPUT POWER

5.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

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

5.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power Meter	ML2495A	0824006	May 10, 2012	May 09, 2013
Peak Power Sensor	MA2411B	0738172	May 10, 2012	May 09, 2013

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. Tested date : June 05, 2012

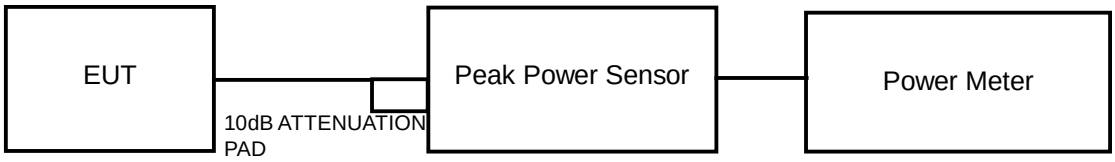
5.4.3 TEST PROCEDURES

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.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP



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	162.181	22.1	30	PASS
157	5785	151.356	21.8	30	PASS
165	5825	169.824	22.3	30	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
149	5745	165.959	22.2	30	PASS
157	5785	158.489	22.0	30	PASS
165	5825	165.959	22.2	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 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S Spectrum Analyzer	FSP40	100036	Dec. 14, 2011	Dec. 13, 2012

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. Tested date : June 05, 2012

5.5.3 TEST PROCEDURE

1. Set the RBW = 100 kHz, VBW =300 kHz, Detector = peak.
2. Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
3. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(3 kHz/100kHz)

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP

5.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6

5.5.7 TEST RESULTS

802.11a

Channel	FREQUENCY (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
149	5745	2.93	-12.30	8	PASS
157	5785	2.09	-13.14	8	PASS
165	5825	1.84	-13.39	8	PASS

802.11n (20MHz)

Channel	FREQUENCY (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
149	5745	2.39	-12.84	8	PASS
157	5785	2.14	-13.09	8	PASS
165	5825	2.46	-12.77	8	PASS

5.6 CONDUCTED OUT-BAND EMISSION MEASUREMENT

5.6.1 LIMITS OF CONDUCTED OUT-BAND EMISSION MEASUREMENT

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

5.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S Spectrum Analyzer	FSP40	100036	Dec. 14, 2011	Dec. 13, 2012

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. Tested date : June 05, 2012

5.6.3 TEST PROCEDURE

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW ≥ 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.

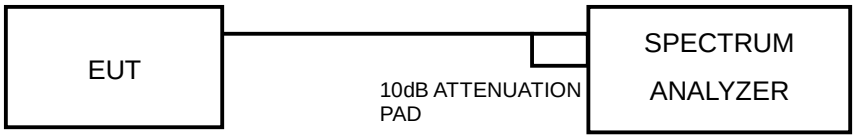
MEASUREMENT PROCEDURE OOBE

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

5.6.4 DEVIATION FROM TEST STANDARD

No deviation

5.6.5 TEST SETUP



5.6.6 EUT OPERATING CONDITION

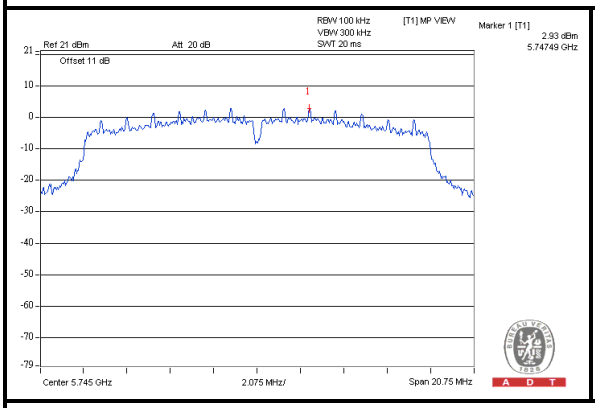
Same as Item 4.3.6

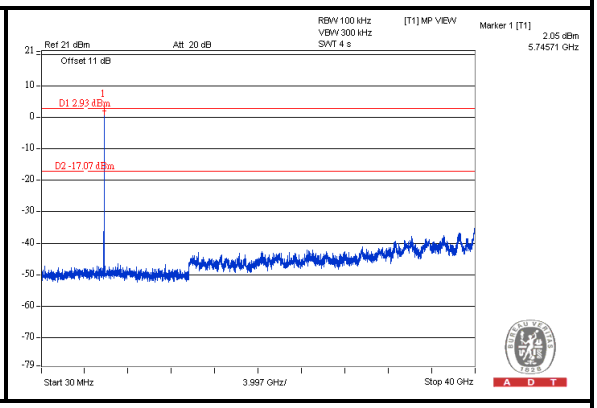
5.6.7 TEST RESULTS

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.

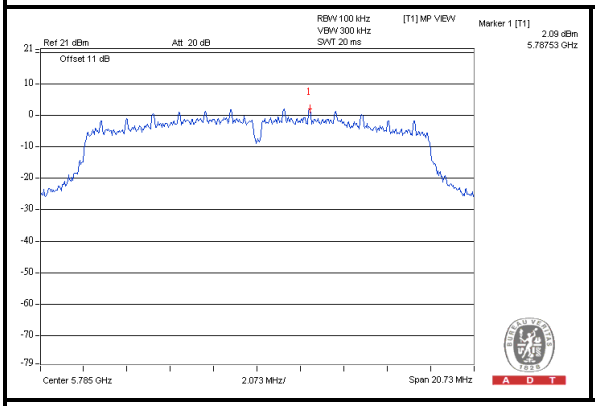
802.11a

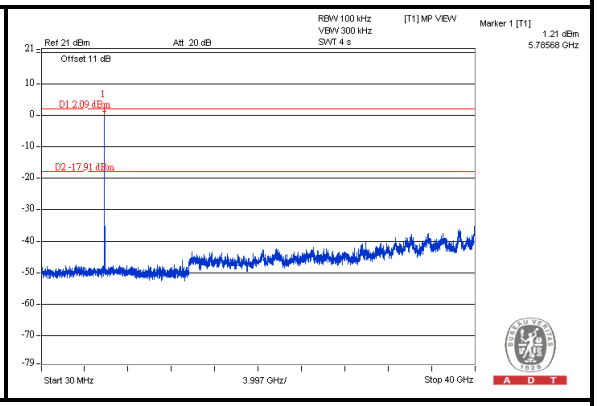
CH 149



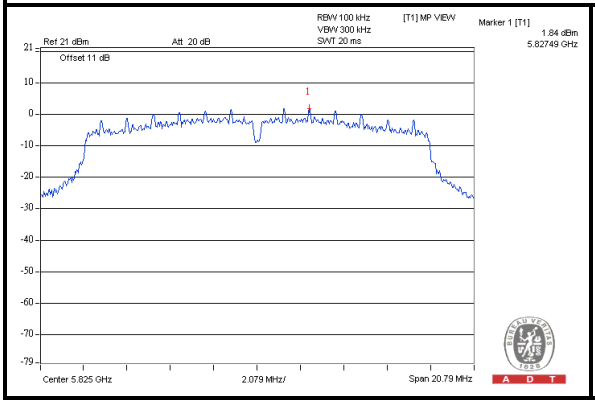


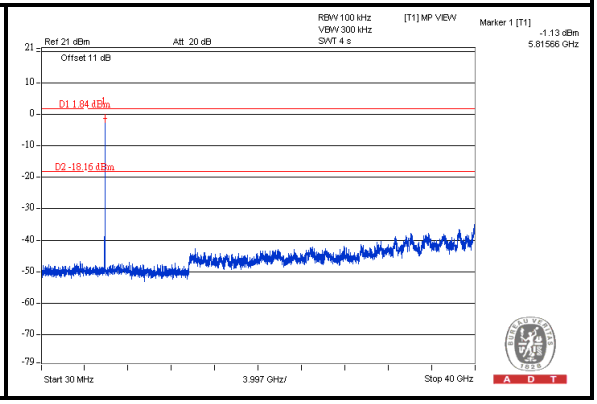
CH 157





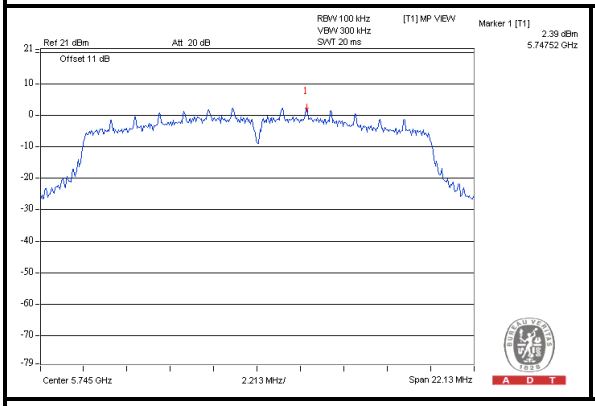
CH 165

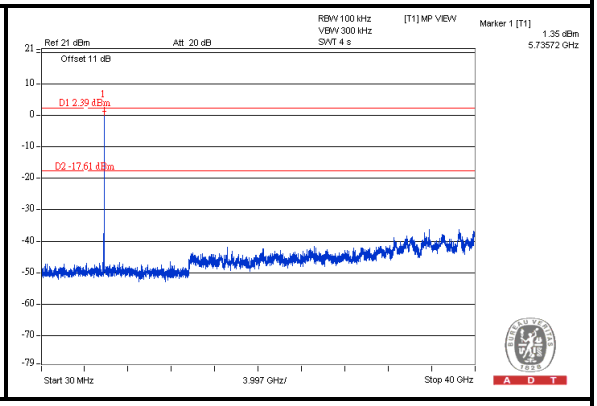




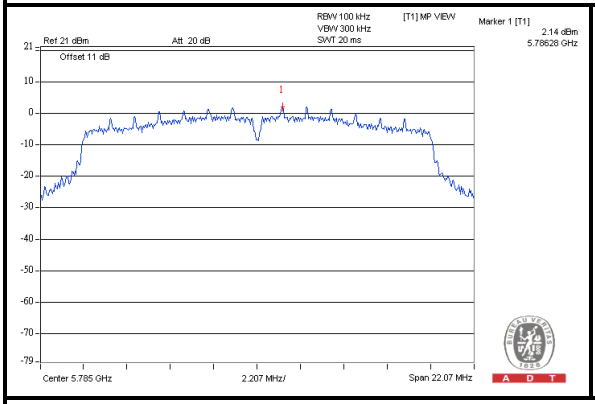
802.11n (20MHz)

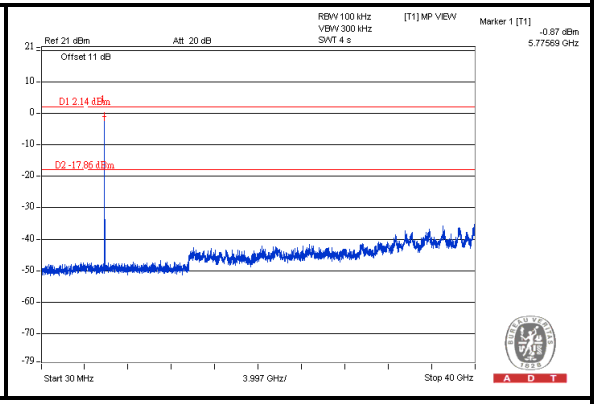
CH 149



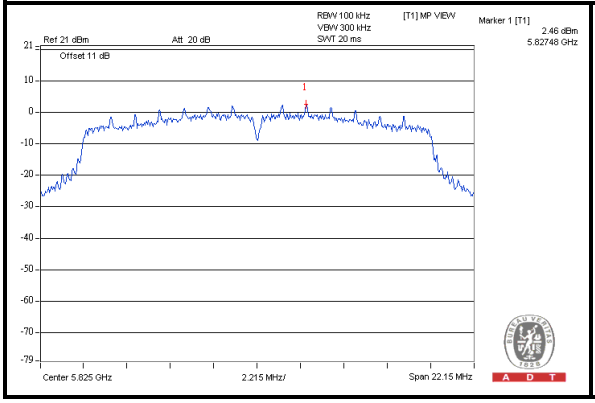


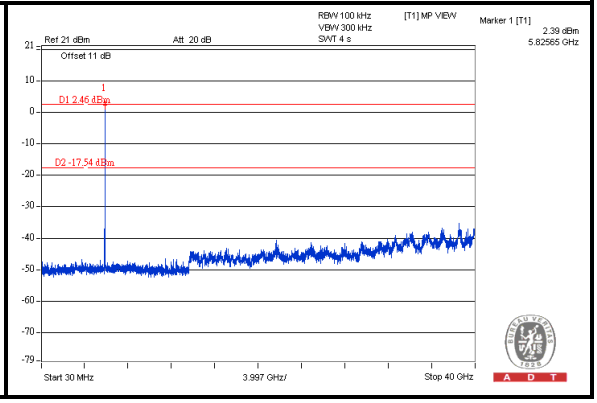
CH 157





CH 165





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: 886-2-26052943

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.adt.com.tw

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

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

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

--- END ---