



FCC TEST REPORT (WLAN 15.247)

REPORT NO.: RF140609E04

MODEL NO.: MC18N0

FCC ID: H9PMC18N0

RECEIVED: June 09, 2014

TESTED: June 26 to July 01, 2014

ISSUED: July 29, 2014

APPLICANT: Symbol Technologies, Inc.

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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF140609E04	Original release	July 29, 2014



1. CERTIFICATION

PRODUCT: MC18 Personal Shopper - Barcode Scanner
BRAND NAME: Symbol
MODEL NO.: MC18N0
TEST SAMPLE: MASS-PRODUCTION
APPLICANT: Symbol Technologies, Inc.
TESTED: June 26 to July 01, 2014
STANDARDS: **FCC Part 15, Subpart C (Section 15.247)**
ANSI C63.10-2009

The above equipment (Model: MC18N0) 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 : Phoenix Huang , **DATE:** July 29, 2014
(Phoenix Huang, Specialist)

APPROVED BY : May Chen , **DATE:** July 29, 2014
(May Chen, Manager)



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2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

For 2.4GHz, 2400~2483.5MHz 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 -17.45dB at 0.59141MHz
15.247(d) 15.209	Radiated Emissions & Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 2390.00MHz & 2483.50MHz
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted Output 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, 5725~5850MHz 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 -17.66dB at 0.59531MHz
15.247(d) 15.209	Radiated Emissions & Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -9.2dB at 11570.00MHz
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted Output 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: For WLAN: The EUT was operating in 2.400 ~ 2.4835GHz, 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 2.400 ~ 2.4835GHz 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.



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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	2.86 dB
Radiated emissions (30MHz-1GHz)	5.37 dB
Radiated emissions (1GHz -6GHz)	3.72 dB
Radiated emissions (6GHz -18GHz)	4.00 dB
Radiated emissions (18GHz -40GHz)	4.11 dB



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT (WLAN)

PRODUCT	MC18 Personal Shopper - Barcode Scanner
MODEL NO.	MC18N0
POWER SUPPLY	DC 3.7V from battery
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: up to 11Mbps 802.11a / g: up to 54Mbps 802.11n: up to 72.2Mbps
OPERATING FREQUENCY	For 15.407 5GHz: 5.18 ~ 5.24GHz, 5.26 ~ 5.32GHz, 5.50 ~ 5.58GHz & 5.66GHz ~ 5.70GHz 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 (HT20) For 15.247 (2.4GHz) 13 for 802.11b, 802.11g, 802.11n (HT20) For 15.247 (5GHz) 5 for 802.11a, 802.11n (HT20)
MAXIMUM OUTPUT POWER	For 15.407 802.11a: 61.802mW 802.11n (HT20): 62.087mW For 15.247 (2.4GHz) 802.11b: 104.713mW 802.11g: 195.434mW 802.11n (HT20): 195.434mW For 15.247 (5GHz) 802.11a: 157.036mW 802.11n (HT20): 132.739mW
ANTENNA TYPE	Please see NOTE
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ASSOCIATED DEVICES	NA

NOTE:

1. There are Bluetooth 4.0 technology and WLAN 802.11 a/b/g/n technology.
2. For WLAN: 2.4GHz and 5GHz technology cannot transmit at same time.
3. 2.4GHz/5GHz WLAN + BT will timely shared at same antenna port
4. The antennas provided to the EUT, please refer to the following table:

Antenna Type	Antenna Gain(dBi)	Frequency range(MHz to MHz)	Connector Type	Cable Length
PIFA	2.7	2412~2483.5	NA	NA
	3	5150~5850		

5. The Version of EUT information are as below:

HW	Terminal	MC18 MB V2.1
SW	System	WinCE
	OS Name	Symbol MC18
	OS version	07.00.2824
	OEM version	99.45.10
Wireless (Fusion)	Part Number	31-FUSION-X2.01
	Fusion version	X_2.01.0.0.074R
	WLAN Firmware	X_2.01.0.0.180
XW2DMT (WLAN RF)	Version	X_2.01.0.0.3
	Symbol version	X_2.01.0.0.171
	WLAN Firmware	X_2.01.0.0.180
BTRegTest (WLAN BT)	Version	4.1

6. The associated devices of EUT information are as below:

Product	P/N
Y Power Cable	P/N : CBL-MC18-Y2MET-01
DC Power Cable	P/N : 25-66420-01R
Interconnect Cable	P/N : 25-66431-01R
Programing Cable	P/N : CBL-MC18-USB1-01
Cold Boot Key	P/N : KT-MC18-RBOOT-05

7. The EUT could be supplied with the a power adapter and/or Li-ion battery as below:

Cradle 1 (1 slot)	
Brand:	Symbol
Model No.:	CRD-MC18-1SL
Part No.:	CRD-MC18-1SL
Input power :	+12V ----- 9A
Associated Devices:	Adapter x 1 (Adapter 1: Part No.: 50-14000-241R)
Cradle 2 (3 slot)	
Brand:	Symbol
Model No.:	CRD-MC18-3SL
Part No.:	CRD-MC18-3SL
Input power :	+12V ----- 9.0A
Associated Devices:	Adapter x 1 (Adapter 1: Part No.: 50-14000-241R)
Power Adapter (for Cradle 1 (1 slot) & Cradle 2 (3 slot), and not for sale together) Brand: Motorola / Symbol Model No.: 50-14000-241R Part No.: PWRS-14000-241R Input power : 100-240V, 50-60Hz, 3.0A Output power : +12V ----- 9.0A Output cable with two type: 1. DC power cable unshielded, 0.5m with two core and Part No. is 25-66420-01R 2. Y power cable : unshielded, 2m with four core and Part No. is CBL-MC18-Y2MET-01	
Li-ion Battery	
Brand:	Symbol
Part No.:	BT000018A01
Rating:	3.7V, 2725mAh, 10.08Wh

From the above cradles, for conducted emission the Cradle 2 (3 slot) was selected as representative cradle for the test and its data was recorded in this report.

8. The EUT incorporates a SISO function.

MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
		TX	RX
802.11a	6 ~ 54Mbps	1TX	1RX
802.11b	1 ~ 11Mbps	1TX	1RX
802.11g	6 ~ 54Mbps	1TX	1RX
802.11n (HT20)	MCS 0~7	1TX	1RX

9. The above EUT information was declared by 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:

13 channels are provided for 802.11b, 802.11g, 802.11n (HT20):

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:

5 channels are provided for 802.11a, 802.11n (HT20):

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

EUT CONFIGURE MODE	APPLICABLE TO					DESCRIPTION
	PLC	RE < 1G	RE ≥ 1G	APCM	OB	
-	√	√	√	√	√	-

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

NOTE: 1. For 2.4GHz: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**
2. For 5GHz: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane** (for below 1GHz) and **X-plane** (for above 1GHz).

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)
802.11g	1 to 13	6	OFDM	BPSK	6
802.11a	149 to 165	157	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)
802.11b	1 to 13	1, 6, 11, 13	DSSS	DBPSK	1
802.11g	1 to 13	1, 6, 11, 13	OFDM	BPSK	6
For 2.4 GHz 802.11n (HT20)	1 to 13	1, 6, 11, 13	OFDM	BPSK	6.5
802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6
For 5 GHz 802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5



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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 (HT20)	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 (HT20)	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 (HT20)	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 (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5



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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 (HT20)	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 (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
PLC	25deg. C, 64%RH	120Vac, 60Hz (SYSTEM)	Ping Liu
RE<1G	25deg. C, 65%RH	DC: 3.7V	Nelson Teng
RE≥1G	26deg. C, 72%RH	DC: 3.7V	Gary Cheng
	26deg. C, 72%RH	DC: 3.7V	Chilin Lee
APCM	25deg. C, 60%RH	DC: 3.7V	Chilin Lee
OB	25deg. C, 60%RH	DC: 3.7V	Chilin Lee

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 v03r02

ANSI C63.10-2009

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

Note: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.



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3.4 DUTY CYCLE OF TEST SIGNAL

Duty cycle of test signal is $\geq 98\%$, duty factor is not required.

802.11b: Duty cycle = 16.787 ms/16.85 ms = 0.996

802.11g: Duty cycle = 5.52 ms/5.575 ms = 0.99

802.11n (HT20): Duty cycle = 4.58 ms/4.635 ms = 0.988



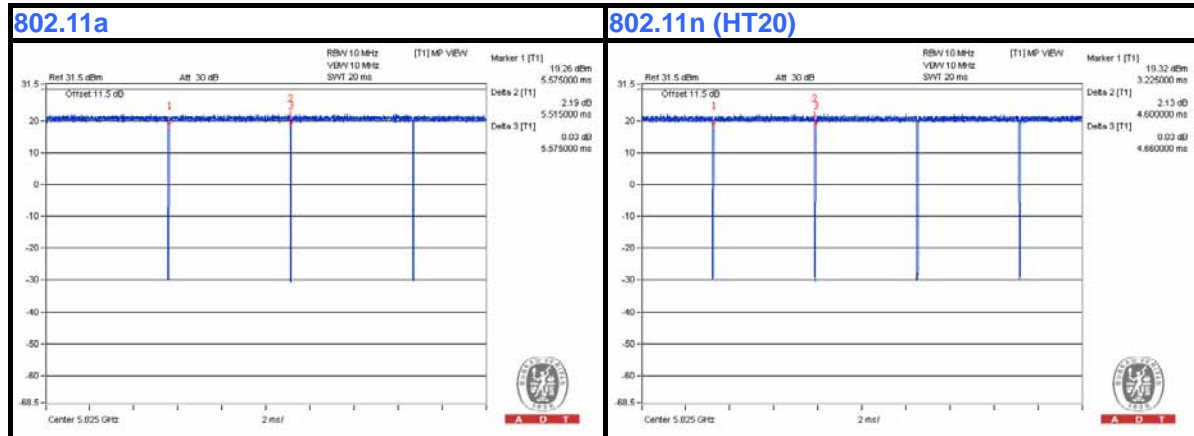


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If duty cycle of test signal is $\geq 98\%$, duty factor is not required.

802.11a: Duty cycle = 5.515 ms/5.575 ms = 0.989

802.11n (HT20): Duty cycle = 4.6 ms/4.66 ms = 0.987





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3.5 DESCRIPTION OF SUPPORT UNITS

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

No.	Product	Brand	Model No.	Serial No.	FCC ID	Remark
A	Cradle (3-slot)	Symbol	CRD-MC18-3 SL	NA	NA	Supplied by client
B	ADAPTER	Motorola / Symbol	50-14000-241 R	NA	NA	Supplied by client

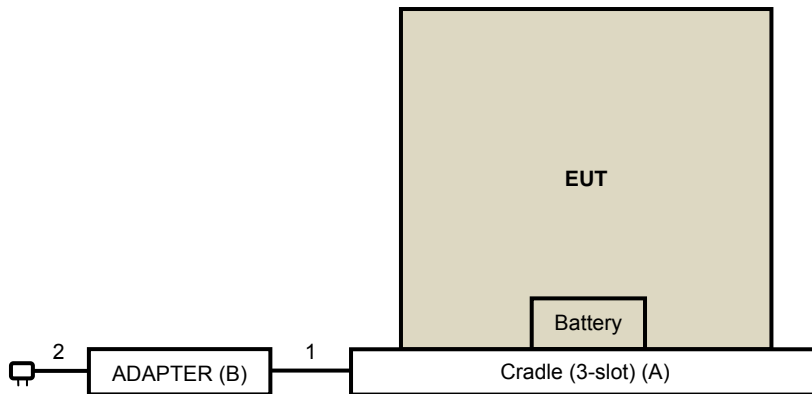
NOTE:

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

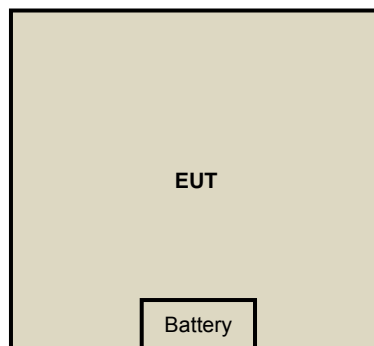
No.	Cable	Qty.	Length (m)	Shielded (Yes/ No)	Cores (Number)	Remark
1	DC	1	0.3	No	0	Supplied by client
2	AC	1	2	No	0	Supplied by client

3.6 CONFIGURATION OF SYSTEM UNDER TEST

For Conducted Emission Test:



For other test items:





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4. TEST TYPES AND RESULTS (FOR 2.4GHz, 2.400 ~ 2.4835GHz 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	100375	Apr. 29, 2014	Apr. 28, 2015
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK8127	8127-522	Sep. 12, 2013	Sep. 11, 2014
Line-Impedance Stabilization Network (for Peripheral)	ENV216	100071	Nov. 13, 2013	Nov. 12, 2014
RF Cable (JYEBAO)	5DFB	COCCAB-001	Mar. 10, 2014	Mar. 09, 2015
50 ohms Terminator	N/A	EMC-03	Sep. 24, 2013	Sep. 23, 2014
50 ohms Terminator	N/A	EMC-02	Oct. 01, 2013	Sep. 30, 2014
Software ADT	BV ADT_Cond_V7.3.7. 3	NA	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. C.
3. The VCCI Con C Registration No. is C-3611.
4. Tested Date: June 26, 2014

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.
- b. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- c. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- d. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

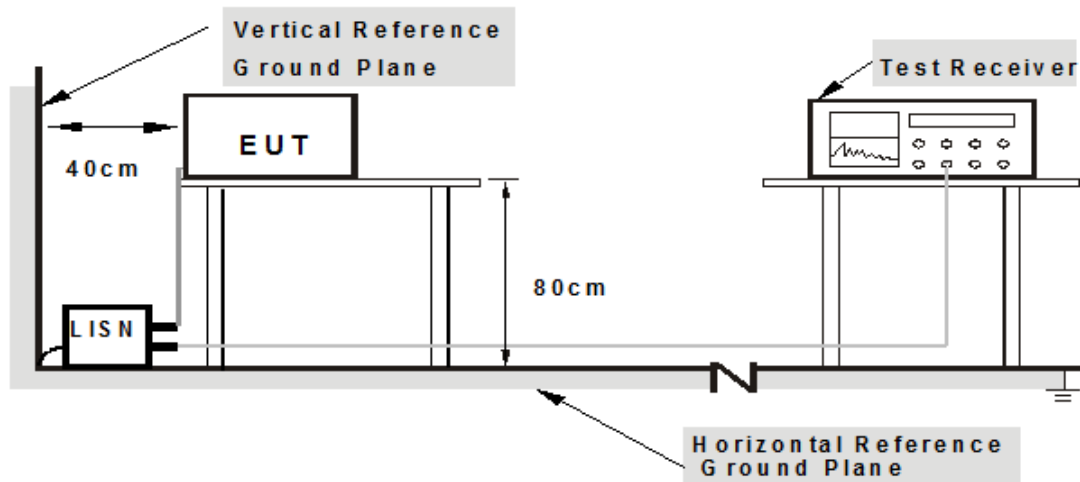
NOTE:

1. The resolution bandwidth of test receiver is 9kHz for Quasi-peak detection (QP) & Average detection (AV).

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



Note: 1. Support units were connected to second LISN.

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

4.1.6 EUT OPERATING CONDITIONS

1. The EUT runs test program “XW2DMT[X_2.01.0.0.3]” to enable EUT under transmission/receiving condition continuously at specific channel frequency.

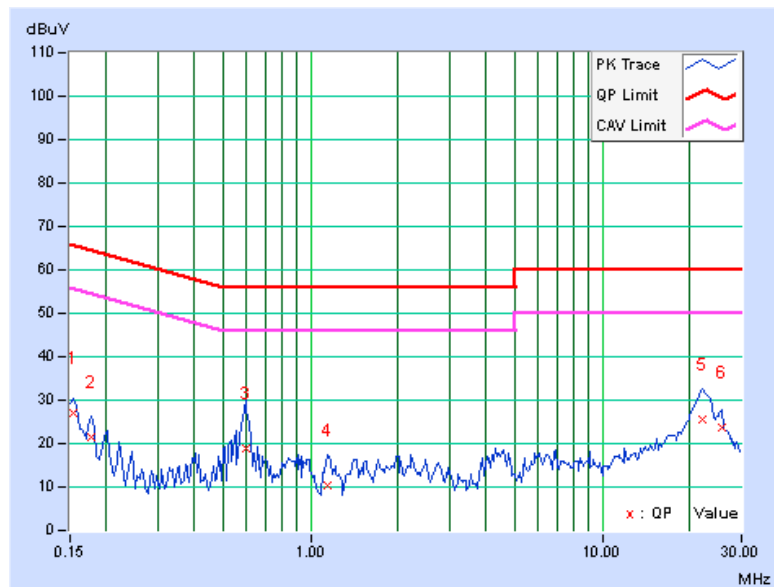
4.1.7 TEST RESULTS

PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)
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No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	0.07	27.13	24.38	27.20	24.45	65.79	55.79	-38.59	-31.34
2	0.17734	0.07	21.39	16.25	21.46	16.32	64.61	54.61	-43.15	-38.29
3	0.59922	0.10	18.70	7.30	18.80	7.40	56.00	46.00	-37.20	-38.60
4	1.14844	0.14	10.29	10.02	10.43	10.16	56.00	46.00	-45.57	-35.84
5	21.90625	0.76	24.64	20.08	25.40	20.84	60.00	50.00	-34.60	-29.16
6	25.60156	0.87	22.74	19.48	23.61	20.35	60.00	50.00	-36.39	-29.65

REMARKS:

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

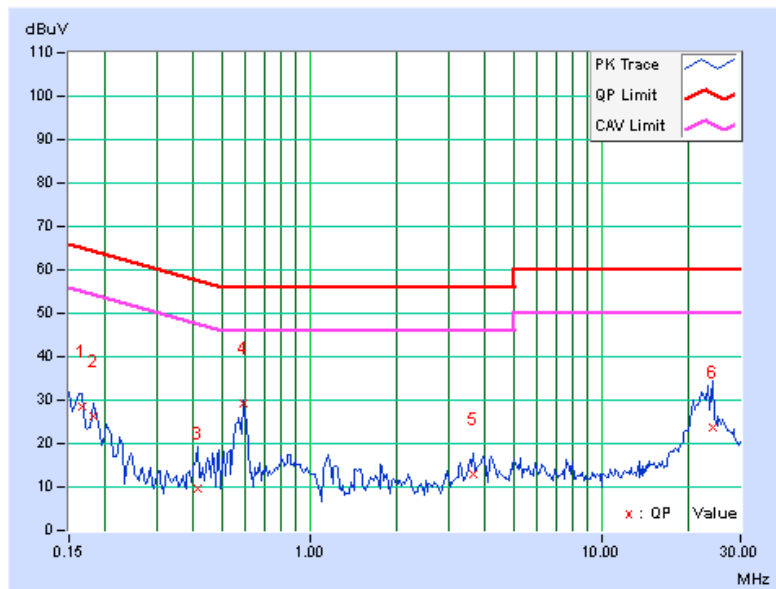


PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	0.07	28.61	28.49	28.68	28.56	65.18	55.18	-36.49	-26.61
2	0.18125	0.07	26.17	25.30	26.24	25.37	64.43	54.43	-38.19	-29.06
3	0.41172	0.09	9.38	-0.90	9.47	-0.81	57.61	47.61	-48.14	-48.42
4	0.59141	0.10	29.01	28.45	29.11	28.55	56.00	46.00	-26.89	-17.45
5	3.63672	0.25	12.80	8.51	13.05	8.76	56.00	46.00	-42.95	-37.24
6	24.01563	0.81	22.72	20.16	23.53	20.97	60.00	50.00	-36.47	-29.03

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





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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.



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4.2.2 TEST INSTRUMENTS

For Below 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
MXE EMI Receiver Agilent	N9038A	MY51210105	Jan. 21, 2014	Jan. 20, 2015
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-03	Nov. 13, 2013	Nov. 12, 2014
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-360	Feb. 26, 2014	Feb. 25, 2015
RF Cable	NA	CHGCAB_001	Oct. 05, 2013	Oct. 04, 2014
Spectrum Analyzer R&S	FSV40	100964	July 15, 2013	July 14, 2014
Horn_Antenna AISi	AIH.8018	0000320091110	Nov. 18, 2013	Nov. 17, 2014
Pre-Amplifier Agilent	8449B	3008A02578	June 24, 2014	June 23, 2015
RF Cable	NA	RF104-201 RF104-203 RF104-204	Dec. 12, 2013	Dec. 11, 2014
Spectrum Analyzer Agilent	E4446A	MY48250253	Aug. 28, 2013	Aug. 27, 2014
Pre-Amplifier SPACEK LABS	SLKka-48-6	9K16	Nov. 13, 2013	Nov. 12, 2014
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Oct. 08, 2013	Oct. 07, 2014
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	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. G.
4. The FCC Site Registration No. is 966073.
5. The VCCI Site Registration No. is G-137.
6. The CANADA Site Registration No. is IC 7450H-2.
7. Tested Date: July 01, 2014

**A D T****For Above 1GHz:**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
MXE EMI Receiver Agilent	N9038A	MY50010156	Jan. 15, 2014	Jan. 14, 2015
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-04	Nov. 13, 2013	Nov. 12, 2014
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Feb. 27, 2014	Feb. 26, 2015
RF Cable	NA	CHHCAB_001	Oct. 06, 2013	Oct. 05, 2014
Spectrum Analyzer R&S	FSV40	100964	July 15, 2013	July 14, 2014
Horn_Antenna AISI	AIH.8018	0000220091110	Dec. 06, 2013	Dec. 05, 2014
Pre-Amplifier Agilent	8449B	3008A01923	Oct. 29, 2013	Oct. 28, 2014
RF Cable	NA	RF104-205 RF104-207 RF104-202	Dec. 12, 2013	Dec. 11, 2014
Spectrum Analyzer Agilent	E4446A	MY48250253	Aug. 28, 2013	Aug. 27, 2014
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Nov. 13, 2013	Nov. 12, 2014
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Oct. 08, 2013	Oct. 07, 2014
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	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 26, 2014

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 meter chamber room for 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:

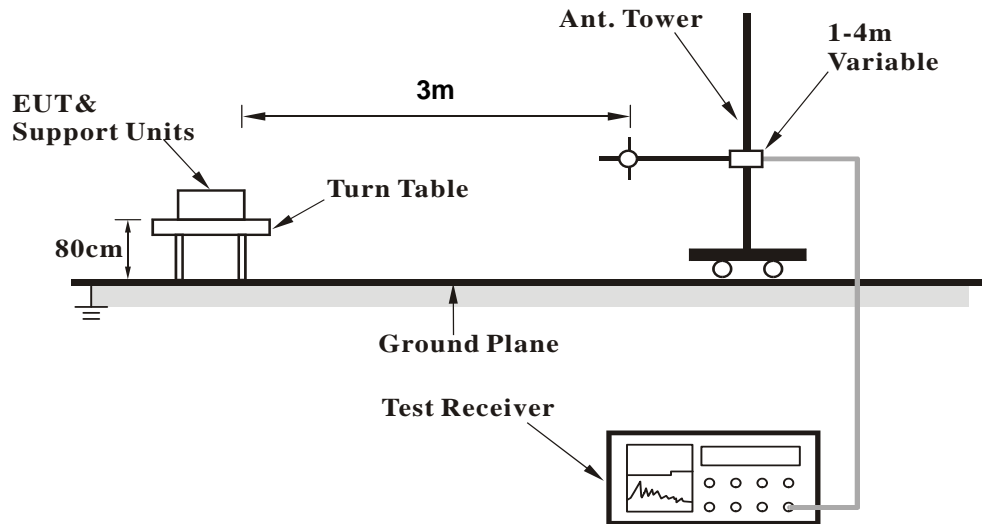
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 DEVIATION FROM TEST STANDARD

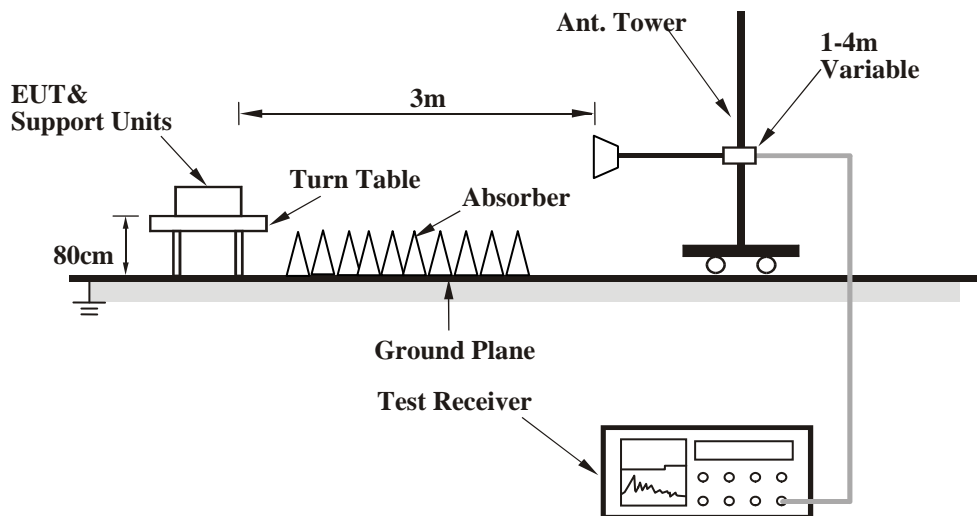
No deviation

4.2.5 TEST SETUP

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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



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4.2.7 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

802.11b

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	435.22	29.0 QP	46.0	-17.0	1.75 H	214	37.52	-8.52
2	486.39	28.6 QP	46.0	-17.5	2.00 H	215	36.18	-7.63
3	588.82	30.3 QP	46.0	-15.7	1.50 H	346	35.65	-5.31
4	614.38	29.9 QP	46.0	-16.1	1.50 H	147	34.33	-4.46
5	691.15	30.1 QP	46.0	-15.9	1.00 H	183	33.76	-3.64
6	716.81	28.5 QP	46.0	-17.5	1.15 H	132	31.82	-3.31

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	435.22	27.5 QP	46.0	-18.5	1.00 V	168	36.03	-8.52
2	486.39	28.6 QP	46.0	-17.4	1.00 V	203	36.26	-7.63
3	588.82	28.6 QP	46.0	-17.4	1.00 V	216	33.88	-5.31
4	614.43	28.7 QP	46.0	-17.3	1.00 V	189	33.13	-4.46
5	691.20	27.8 QP	46.0	-18.2	1.50 V	252	31.43	-3.64
6	940.64	28.9 QP	46.0	-17.1	1.50 V	26	28.02	0.86

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	435.38	29.5 QP	46.0	-16.5	1.79 H	211	38.02	-8.52
2	486.15	28.1 QP	46.0	-17.9	2.00 H	214	35.71	-7.63
3	588.59	29.9 QP	46.0	-16.1	1.50 H	352	35.18	-5.31
4	614.77	30.6 QP	46.0	-15.4	1.44 H	147	35.02	-4.45
5	691.05	29.9 QP	46.0	-16.1	1.04 H	174	33.58	-3.64
6	717.07	28.4 QP	46.0	-17.6	1.11 H	134	31.74	-3.31

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	434.28	26.2 QP	46.0	-19.8	1.05 V	170	34.78	-8.54
2	486.35	28.6 QP	46.0	-17.5	1.01 V	195	36.18	-7.63
3	589.13	28.2 QP	46.0	-17.8	1.00 V	203	33.52	-5.30
4	613.72	28.1 QP	46.0	-17.9	1.03 V	185	32.59	-4.46
5	689.99	26.6 QP	46.0	-19.4	1.44 V	230	30.22	-3.63
6	941.08	29.0 QP	46.0	-17.0	1.42 V	16	28.13	0.88

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	434.93	28.6 QP	46.0	-17.4	1.77 H	230	37.10	-8.52
2	485.68	28.4 QP	46.0	-17.6	1.99 H	197	36.04	-7.64
3	588.74	29.6 QP	46.0	-16.4	1.42 H	344	34.90	-5.31
4	613.76	29.4 QP	46.0	-16.6	1.46 H	140	33.84	-4.46
5	691.25	30.2 QP	46.0	-15.8	1.00 H	170	33.87	-3.64
6	716.76	28.4 QP	46.0	-17.6	1.02 H	117	31.73	-3.31

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	434.83	27.3 QP	46.0	-18.7	1.00 V	173	35.81	-8.53
2	487.05	28.5 QP	46.0	-17.5	1.05 V	187	36.12	-7.60
3	588.39	28.0 QP	46.0	-18.0	1.06 V	213	33.35	-5.32
4	614.24	28.6 QP	46.0	-17.4	1.00 V	175	33.08	-4.46
5	691.06	28.0 QP	46.0	-18.0	1.54 V	262	31.68	-3.64
6	940.83	29.0 QP	46.0	-17.0	1.45 V	7	28.14	0.87

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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CHANNEL	TX Channel 13	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	434.73	28.6 QP	46.0	-17.4	1.76 H	213	37.16	-8.53
2	486.00	27.5 QP	46.0	-18.5	1.94 H	212	35.18	-7.64
3	589.33	30.9 QP	46.0	-15.2	1.53 H	339	36.14	-5.29
4	614.04	30.0 QP	46.0	-16.0	1.52 H	156	34.43	-4.46
5	689.99	29.4 QP	46.0	-16.6	1.00 H	188	33.05	-3.63
6	715.96	27.5 QP	46.0	-18.5	1.10 H	120	30.82	-3.31

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	435.19	27.3 QP	46.0	-18.7	1.00 V	183	35.86	-8.52
2	486.16	28.6 QP	46.0	-17.4	1.00 V	202	36.20	-7.63
3	588.89	28.6 QP	46.0	-17.4	1.04 V	205	33.87	-5.30
4	614.35	28.6 QP	46.0	-17.4	1.00 V	183	33.02	-4.46
5	691.25	28.1 QP	46.0	-17.9	1.49 V	261	31.71	-3.64
6	940.03	28.0 QP	46.0	-18.1	1.46 V	10	27.11	0.84

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	435.34	29.3 QP	46.0	-16.7	1.71 H	201	37.86	-8.52
2	486.85	28.9 QP	46.0	-17.1	2.00 H	196	36.55	-7.61
3	588.60	29.6 QP	46.0	-16.4	1.47 H	342	34.95	-5.31
4	614.54	29.6 QP	46.0	-16.4	1.53 H	136	34.03	-4.45
5	690.86	30.4 QP	46.0	-15.6	1.00 H	160	34.02	-3.63
6	715.99	28.4 QP	46.0	-17.6	1.16 H	145	31.67	-3.31

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	435.16	26.7 QP	46.0	-19.3	1.06 V	163	35.23	-8.53
2	486.90	29.1 QP	46.0	-16.9	1.00 V	201	36.73	-7.61
3	588.05	28.1 QP	46.0	-17.9	1.00 V	198	33.44	-5.33
4	613.62	28.1 QP	46.0	-17.9	1.02 V	158	32.57	-4.46
5	690.86	27.2 QP	46.0	-18.8	1.49 V	257	30.80	-3.63
6	940.55	28.9 QP	46.0	-17.1	1.51 V	31	28.08	0.85

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	434.72	28.9 QP	46.0	-17.1	1.65 H	217	37.41	-8.53
2	485.74	27.3 QP	46.0	-18.7	1.94 H	223	34.97	-7.64
3	589.39	30.5 QP	46.0	-15.5	1.44 H	354	35.82	-5.29
4	614.89	30.4 QP	46.0	-15.7	1.49 H	123	34.80	-4.45
5	691.51	30.1 QP	46.0	-15.9	1.01 H	188	33.72	-3.64
6	717.35	28.4 QP	46.0	-17.6	1.09 H	139	31.74	-3.31

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	434.80	27.0 QP	46.0	-19.0	1.06 V	174	35.51	-8.53
2	486.67	28.7 QP	46.0	-17.3	1.00 V	200	36.35	-7.62
3	589.06	28.5 QP	46.0	-17.5	1.00 V	222	33.83	-5.30
4	614.66	29.0 QP	46.0	-17.0	1.02 V	159	33.48	-4.45
5	690.65	27.0 QP	46.0	-19.1	1.40 V	248	30.58	-3.63
6	940.57	28.6 QP	46.0	-17.4	1.56 V	1	27.75	0.85

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



A D T

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	435.14	29.1 QP	46.0	-16.9	1.79 H	222	37.62	-8.53
2	486.52	28.5 QP	46.0	-17.5	1.95 H	202	36.08	-7.62
3	588.28	29.6 QP	46.0	-16.4	1.50 H	352	34.89	-5.32
4	614.19	29.4 QP	46.0	-16.6	1.47 H	149	33.85	-4.46
5	690.44	29.7 QP	46.0	-16.3	1.04 H	168	33.33	-3.63
6	717.04	29.0 QP	46.0	-17.0	1.11 H	138	32.34	-3.31

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	435.02	26.9 QP	46.0	-19.1	1.00 V	169	35.42	-8.53
2	485.95	28.0 QP	46.0	-18.0	1.00 V	202	35.66	-7.64
3	589.01	28.6 QP	46.0	-17.4	1.00 V	217	33.93	-5.30
4	614.59	28.6 QP	46.0	-17.4	1.06 V	166	33.07	-4.45
5	691.10	27.2 QP	46.0	-18.8	1.50 V	264	30.88	-3.64
6	941.22	29.3 QP	46.0	-16.7	1.53 V	33	28.46	0.88

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



A D T

CHANNEL	TX Channel 13	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	434.98	28.1 QP	46.0	-17.9	1.63 H	208	36.63	-8.52
2	485.72	28.1 QP	46.0	-17.9	1.97 H	200	35.72	-7.64
3	588.16	29.5 QP	46.0	-16.5	1.42 H	355	34.84	-5.33
4	614.58	29.9 QP	46.0	-16.1	1.46 H	153	34.32	-4.45
5	691.31	30.6 QP	46.0	-15.5	1.00 H	195	34.19	-3.64
6	717.10	28.3 QP	46.0	-17.7	1.10 H	144	31.60	-3.31

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	434.79	26.7 QP	46.0	-19.3	1.00 V	154	35.21	-8.53
2	486.55	29.1 QP	46.0	-16.9	1.00 V	203	36.71	-7.62
3	588.25	28.3 QP	46.0	-17.7	1.00 V	225	33.63	-5.32
4	614.66	29.3 QP	46.0	-16.7	1.03 V	184	33.78	-4.45
5	691.33	27.1 QP	46.0	-18.9	1.42 V	228	30.78	-3.64
6	939.99	28.6 QP	46.0	-17.4	1.44 V	16	27.79	0.84

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



A D T

802.11n (HT20)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	435.00	29.3 QP	46.0	-16.7	1.78 H	202	37.79	-8.53
2	486.91	28.8 QP	46.0	-17.2	1.95 H	205	36.39	-7.61
3	588.41	29.7 QP	46.0	-16.3	1.41 H	343	35.06	-5.32
4	613.91	28.8 QP	46.0	-17.2	1.46 H	138	33.26	-4.46
5	691.40	30.0 QP	46.0	-16.0	1.00 H	197	33.68	-3.64
6	716.29	28.0 QP	46.0	-18.0	1.20 H	140	31.31	-3.31

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	434.60	26.9 QP	46.0	-19.1	1.00 V	156	35.46	-8.53
2	485.76	28.1 QP	46.0	-17.9	1.02 V	205	35.79	-7.65
3	588.81	28.9 QP	46.0	-17.1	1.00 V	226	34.23	-5.31
4	613.60	28.1 QP	46.0	-17.9	1.00 V	200	32.58	-4.46
5	690.77	27.6 QP	46.0	-18.4	1.48 V	227	31.19	-3.63
6	940.09	28.1 QP	46.0	-18.0	1.47 V	25	27.21	0.84

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



A D T

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	435.54	29.5 QP	46.0	-16.5	1.75 H	208	38.04	-8.51
2	486.39	28.2 QP	46.0	-17.8	1.97 H	218	35.85	-7.63
3	587.99	29.6 QP	46.0	-16.4	1.46 H	328	34.95	-5.33
4	613.26	29.1 QP	46.0	-16.9	1.55 H	143	33.60	-4.46
5	690.52	29.9 QP	46.0	-16.1	1.00 H	164	33.54	-3.63
6	716.70	28.3 QP	46.0	-17.7	1.16 H	144	31.58	-3.31

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	435.06	27.0 QP	46.0	-19.0	1.00 V	161	35.51	-8.53
2	485.74	27.8 QP	46.0	-18.2	1.01 V	218	35.41	-7.64
3	589.01	29.0 QP	46.0	-17.0	1.00 V	207	34.34	-5.30
4	613.48	28.2 QP	46.0	-17.8	1.00 V	185	32.64	-4.46
5	691.21	27.3 QP	46.0	-18.7	1.47 V	238	30.90	-3.64
6	939.54	27.6 QP	46.0	-18.4	1.49 V	14	26.74	0.85

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



A D T

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	435.27	29.2 QP	46.0	-16.8	1.80 H	187	37.76	-8.52
2	486.67	29.0 QP	46.0	-17.1	1.96 H	194	36.57	-7.62
3	587.79	29.3 QP	46.0	-16.7	1.40 H	353	34.67	-5.34
4	614.64	30.1 QP	46.0	-16.0	1.43 H	128	34.50	-4.45
5	690.90	29.5 QP	46.0	-16.5	1.00 H	198	33.16	-3.63
6	715.95	27.6 QP	46.0	-18.4	1.12 H	100	30.95	-3.31

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	435.40	27.7 QP	46.0	-18.3	1.02 V	130	36.18	-8.52
2	486.07	28.3 QP	46.0	-17.7	1.00 V	200	35.96	-7.64
3	589.03	28.8 QP	46.0	-17.2	1.00 V	219	34.12	-5.30
4	614.12	28.4 QP	46.0	-17.6	1.01 V	183	32.82	-4.46
5	691.57	28.1 QP	46.0	-17.9	1.53 V	250	31.71	-3.64
6	940.62	28.3 QP	46.0	-17.7	1.49 V	3	27.45	0.86

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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CHANNEL	TX Channel 13	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	435.65	29.5 QP	46.0	-16.6	1.79 H	203	37.96	-8.51
2	486.18	27.7 QP	46.0	-18.3	1.94 H	180	35.34	-7.63
3	588.44	30.0 QP	46.0	-16.0	1.40 H	345	35.31	-5.32
4	613.33	29.3 QP	46.0	-16.7	1.51 H	129	33.73	-4.46
5	691.51	30.6 QP	46.0	-15.4	1.00 H	213	34.22	-3.64
6	716.88	28.4 QP	46.0	-17.7	1.18 H	144	31.66	-3.31

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	434.71	26.8 QP	46.0	-19.2	1.00 V	160	35.29	-8.53
2	486.06	27.8 QP	46.0	-18.2	1.00 V	215	35.43	-7.64
3	588.87	28.3 QP	46.0	-17.7	1.00 V	205	33.63	-5.30
4	614.43	28.5 QP	46.0	-17.5	1.00 V	173	32.95	-4.46
5	691.42	27.9 QP	46.0	-18.1	1.54 V	245	31.57	-3.64
6	939.98	28.6 QP	46.0	-17.4	1.39 V	14	27.80	0.84

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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ABOVE 1GHz DATA

802.11b

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	2386.00	54.8 PK	74.0	-19.2	1.08 H	136	60.42	-5.62
2	2386.00	46.5 AV	54.0	-7.5	1.08 H	136	52.12	-5.62
3	*2412.00	108.9 PK			1.08 H	136	114.43	-5.53
4	*2412.00	106.4 AV			1.08 H	136	111.93	-5.53
5	4824.00	45.6 PK	74.0	-28.4	1.69 H	120	41.74	3.86
6	4824.00	34.8 AV	54.0	-19.2	1.69 H	120	30.94	3.86

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	2386.00	52.0 PK	74.0	-22.0	1.00 V	175	57.62	-5.62
2	2386.00	44.3 AV	54.0	-9.7	1.00 V	175	49.92	-5.62
3	*2412.00	106.8 PK			1.00 V	175	112.33	-5.53
4	*2412.00	104.2 AV			1.00 V	175	109.73	-5.53
5	4824.00	45.6 PK	74.0	-28.4	1.00 V	357	41.74	3.86
6	4824.00	34.1 AV	54.0	-19.9	1.00 V	357	30.24	3.86

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) – Pre-Amplifier 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 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	55.2 PK	74.0	-18.8	1.08 H	140	60.80	-5.60
2	2390.00	46.9 AV	54.0	-7.1	1.08 H	140	52.50	-5.60
3	*2417.00	108.4 PK			1.04 H	136	113.92	-5.52
4	*2417.00	106.1 AV			1.04 H	136	111.62	-5.52
5	4834.00	46.2 PK	74.0	-27.8	1.04 H	360	42.35	3.85
6	4834.00	34.9 AV	54.0	-19.1	1.04 H	360	31.05	3.85
7	7251.00	54.6 PK	74.0	-19.4	1.00 H	213	46.59	8.01
8	7251.00	42.8 AV	54.0	-11.2	1.00 H	213	34.79	8.01

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	52.3 PK	74.0	-21.7	1.01 V	165	57.90	-5.60
2	2390.00	44.6 AV	54.0	-9.4	1.01 V	165	50.20	-5.60
3	*2417.00	106.4 PK			1.01 V	165	111.92	-5.52
4	*2417.00	103.7 AV			1.01 V	165	109.22	-5.52
5	4834.00	46.9 PK	74.0	-27.1	1.00 V	178	43.05	3.85
6	4834.00	35.5 AV	54.0	-18.5	1.00 V	178	31.65	3.85
7	7251.00	54.2 PK	74.0	-19.8	1.02 V	57	46.19	8.01
8	7251.00	42.8 AV	54.0	-11.2	1.02 V	57	34.79	8.01

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) – Pre-Amplifier 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 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	55.3 PK	74.0	-18.7	1.13 H	120	60.90	-5.60
2	2390.00	47.2 AV	54.0	-6.8	1.13 H	120	52.80	-5.60
3	*2422.00	108.6 PK			1.13 H	120	114.09	-5.49
4	*2422.00	105.9 AV			1.13 H	120	111.39	-5.49
5	4844.00	46.6 PK	74.0	-27.4	1.00 H	354	42.76	3.84
6	4844.00	35.2 AV	54.0	-18.8	1.00 H	354	31.36	3.84
7	7266.00	54.2 PK	74.0	-19.8	1.05 H	206	46.14	8.06
8	7266.00	42.3 AV	54.0	-11.7	1.05 H	206	34.24	8.06

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	52.6 PK	74.0	-21.4	1.05 V	149	58.20	-5.60
2	2390.00	44.8 AV	54.0	-9.2	1.05 V	149	50.40	-5.60
3	*2422.00	106.3 PK			1.05 V	149	111.79	-5.49
4	*2422.00	103.5 AV			1.05 V	149	108.99	-5.49
5	4844.00	46.9 PK	74.0	-27.1	1.00 V	171	43.06	3.84
6	4844.00	35.4 AV	54.0	-18.6	1.00 V	171	31.56	3.84
7	7266.00	53.8 PK	74.0	-20.2	1.02 V	63	45.74	8.06
8	7266.00	42.1 AV	54.0	-11.9	1.02 V	63	34.04	8.06

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) – Pre-Amplifier 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 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	49.6 PK	74.0	-24.4	1.07 H	135	55.20	-5.60
2	2390.00	36.8 AV	54.0	-17.2	1.07 H	135	42.40	-5.60
3	*2437.00	107.0 PK			1.07 H	135	112.42	-5.42
4	*2437.00	104.2 AV			1.07 H	135	109.62	-5.42
5	2483.50	49.2 PK	74.0	-24.8	1.07 H	135	54.40	-5.20
6	2483.50	37.0 AV	54.0	-17.0	1.07 H	135	42.20	-5.20
7	4874.00	46.6 PK	74.0	-27.4	1.00 H	360	42.79	3.81
8	4874.00	35.3 AV	54.0	-18.7	1.00 H	360	31.49	3.81
9	7311.00	54.1 PK	74.0	-19.9	1.00 H	208	45.87	8.23
10	7311.00	42.5 AV	54.0	-11.5	1.00 H	208	34.27	8.23

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	49.4 PK	74.0	-24.6	1.00 V	185	55.00	-5.60
2	2390.00	36.9 AV	54.0	-17.1	1.00 V	185	42.50	-5.60
3	*2437.00	105.7 PK			1.00 V	185	111.12	-5.42
4	*2437.00	102.8 AV			1.00 V	185	108.22	-5.42
5	2483.50	49.4 PK	74.0	-24.6	1.00 V	185	54.60	-5.20
6	2483.50	37.2 AV	54.0	-16.8	1.00 V	185	42.40	-5.20
7	4874.00	46.9 PK	74.0	-27.1	1.00 V	184	43.09	3.81
8	4874.00	35.2 AV	54.0	-18.8	1.00 V	184	31.39	3.81
9	7311.00	54.2 PK	74.0	-19.8	1.00 V	71	45.97	8.23
10	7311.00	42.5 AV	54.0	-11.5	1.00 V	71	34.27	8.23

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) – Pre-Amplifier 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 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	108.3 PK			1.00 H	144	113.66	-5.36
2	*2452.00	106.1 AV			1.00 H	144	111.46	-5.36
3	2483.50	49.1 PK	74.0	-24.9	1.00 H	144	54.30	-5.20
4	2483.50	37.1 AV	54.0	-16.9	1.00 H	144	42.30	-5.20
5	4904.00	46.4 PK	74.0	-27.6	1.00 H	360	42.61	3.79
6	4904.00	35.0 AV	54.0	-19.0	1.00 H	360	31.21	3.79
7	7356.00	53.9 PK	74.0	-20.1	1.03 H	224	45.47	8.43
8	7356.00	42.3 AV	54.0	-11.7	1.03 H	224	33.87	8.43

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	105.5 PK			1.00 V	187	110.86	-5.36
2	*2452.00	102.5 AV			1.00 V	187	107.86	-5.36
3	2483.50	49.2 PK	74.0	-24.8	1.00 V	187	54.40	-5.20
4	2483.50	36.9 AV	54.0	-17.1	1.00 V	187	42.10	-5.20
5	4904.00	47.6 PK	74.0	-26.4	1.03 V	197	43.81	3.79
6	4904.00	35.7 AV	54.0	-18.3	1.03 V	197	31.91	3.79
7	7356.00	54.4 PK	74.0	-19.6	1.00 V	81	45.97	8.43
8	7356.00	43.0 AV	54.0	-11.0	1.00 V	81	34.57	8.43

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) – Pre-Amplifier 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 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	108.1 PK			1.06 H	123	113.43	-5.33
2	*2457.00	105.7 AV			1.06 H	123	111.03	-5.33
3	2483.50	48.8 PK	74.0	-25.2	1.06 H	137	54.00	-5.20
4	2483.50	36.6 AV	54.0	-17.4	1.06 H	137	41.80	-5.20
5	4914.00	47.1 PK	74.0	-26.9	1.00 H	360	43.31	3.79
6	4914.00	35.5 AV	54.0	-18.5	1.00 H	360	31.71	3.79
7	7371.00	53.9 PK	74.0	-20.1	1.06 H	221	45.42	8.48
8	7371.00	42.0 AV	54.0	-12.0	1.06 H	221	33.52	8.48

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	105.3 PK			1.02 V	185	110.63	-5.33
2	*2457.00	102.3 AV			1.02 V	185	107.63	-5.33
3	2483.50	49.0 PK	74.0	-25.0	1.02 V	185	54.20	-5.20
4	2483.50	36.8 AV	54.0	-17.2	1.02 V	185	42.00	-5.20
5	4914.00	47.2 PK	74.0	-26.8	1.03 V	168	43.41	3.79
6	4914.00	35.6 AV	54.0	-18.4	1.03 V	168	31.81	3.79
7	7371.00	54.0 PK	74.0	-20.0	1.01 V	82	45.52	8.48
8	7371.00	42.3 AV	54.0	-11.7	1.01 V	82	33.82	8.48

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) – Pre-Amplifier 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 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	109.4 PK			1.05 H	145	114.71	-5.31
2	*2462.00	106.5 AV			1.05 H	145	111.81	-5.31
3	2483.50	54.7 PK	74.0	-19.3	1.05 H	145	59.90	-5.20
4	2483.50	47.1 AV	54.0	-6.9	1.05 H	145	52.30	-5.20
5	4924.00	46.9 PK	74.0	-27.1	1.03 H	360	43.10	3.80
6	4924.00	35.6 AV	54.0	-18.4	1.03 H	360	31.80	3.80
7	7386.00	54.3 PK	74.0	-19.7	1.08 H	227	45.75	8.55
8	7386.00	42.3 AV	54.0	-11.7	1.08 H	227	33.75	8.55

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	108.1 PK			1.20 V	160	113.41	-5.31
2	*2462.00	104.5 AV			1.20 V	160	109.81	-5.31
3	2483.50	53.1 PK	74.0	-20.9	1.20 V	160	58.30	-5.20
4	2483.50	44.8 AV	54.0	-9.2	1.20 V	160	50.00	-5.20
5	4924.00	47.5 PK	74.0	-26.5	1.02 V	164	43.70	3.80
6	4924.00	35.9 AV	54.0	-18.1	1.02 V	164	32.10	3.80
7	7386.00	53.9 PK	74.0	-20.1	1.01 V	95	45.35	8.55
8	7386.00	42.0 AV	54.0	-12.0	1.01 V	95	33.45	8.55

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) – Pre-Amplifier 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 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	92.3 PK			1.02 H	273	97.60	-5.30
2	*2467.00	90.2 AV			1.02 H	273	95.50	-5.30
3	2483.50	58.3 PK	74.0	-15.7	1.02 H	273	63.50	-5.20
4	2483.50	40.3 AV	54.0	-13.7	1.02 H	273	45.50	-5.20
5	4934.00	46.3 PK	74.0	-27.7	1.09 H	356	42.49	3.81
6	4934.00	35.3 AV	54.0	-18.7	1.09 H	356	31.49	3.81
7	7401.00	54.0 PK	74.0	-20.0	1.05 H	215	45.39	8.61
8	7401.00	41.9 AV	54.0	-12.1	1.05 H	215	33.29	8.61

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	*2467.00	90.1 PK			1.39 V	226	95.40	-5.30
2	*2467.00	88.3 AV			1.39 V	226	93.60	-5.30
3	2483.50	44.3 PK	74.0	-29.7	1.39 V	226	49.50	-5.20
4	2483.50	36.1 AV	54.0	-17.9	1.39 V	226	41.30	-5.20
5	4934.00	46.8 PK	74.0	-27.2	1.04 V	173	42.99	3.81
6	4934.00	35.4 AV	54.0	-18.6	1.04 V	173	31.59	3.81
7	7401.00	53.1 PK	74.0	-20.9	1.06 V	105	44.49	8.61
8	7401.00	41.5 AV	54.0	-12.5	1.06 V	105	32.89	8.61

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) – Pre-Amplifier 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 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	90.3 PK			1.03 H	266	95.57	-5.27
2	*2472.00	88.2 AV			1.03 H	266	93.47	-5.27
3	2483.50	46.2 PK	74.0	-27.8	1.03 H	266	51.40	-5.20
4	2483.50	40.6 AV	54.0	-13.4	1.03 H	266	45.80	-5.20
5	4944.00	47.1 PK	74.0	-26.9	1.00 H	350	43.28	3.82
6	4944.00	35.6 AV	54.0	-18.4	1.00 H	350	31.78	3.82
7	7416.00	53.8 PK	74.0	-20.2	1.06 H	214	45.16	8.64
8	7416.00	42.1 AV	54.0	-11.9	1.06 H	214	33.46	8.64

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	89.4 PK			1.40 V	222	94.67	-5.27
2	*2472.00	86.7 AV			1.40 V	222	91.97	-5.27
3	2483.50	44.6 PK	74.0	-29.4	1.40 V	222	49.80	-5.20
4	2483.50	38.2 AV	54.0	-15.8	1.40 V	222	43.40	-5.20
5	4944.00	46.1 PK	74.0	-27.9	1.09 V	172	42.28	3.82
6	4944.00	34.9 AV	54.0	-19.1	1.09 V	172	31.08	3.82
7	7416.00	53.8 PK	74.0	-20.2	1.11 V	121	45.16	8.64
8	7416.00	41.9 AV	54.0	-12.1	1.11 V	121	33.26	8.64

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) – Pre-Amplifier 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	73.0 PK	74.0	-1.0	1.05 H	274	78.60	-5.60
2	2390.00	50.2 AV	54.0	-3.8	1.05 H	274	55.80	-5.60
3	*2412.00	110.0 PK			1.05 H	274	115.53	-5.53
4	*2412.00	99.2 AV			1.05 H	274	104.73	-5.53
5	4824.00	46.9 PK	74.0	-27.1	1.00 H	359	43.04	3.86
6	4824.00	35.3 AV	54.0	-18.7	1.00 H	359	31.44	3.86

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	2390.00	68.0 PK	74.0	-6.0	1.10 V	96	73.60	-5.60
2	2390.00	47.6 AV	54.0	-6.4	1.10 V	96	53.20	-5.60
3	*2412.00	108.7 PK			1.43 V	225	114.23	-5.53
4	*2412.00	97.5 AV			1.43 V	225	103.03	-5.53
5	4824.00	46.0 PK	74.0	-28.0	1.12 V	180	42.14	3.86
6	4824.00	34.9 AV	54.0	-19.1	1.12 V	180	31.04	3.86

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) – Pre-Amplifier 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 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	70.1 PK	74.0	-3.9	1.05 H	274	75.70	-5.60
2	2390.00	48.8 AV	54.0	-5.2	1.05 H	274	54.40	-5.60
3	*2417.00	110.7 PK			1.05 H	274	116.22	-5.52
4	*2417.00	100.2 AV			1.05 H	274	105.72	-5.52
5	4834.00	47.3 PK	74.0	-26.7	1.03 H	334	43.45	3.85
6	4834.00	35.6 AV	54.0	-18.4	1.03 H	334	31.75	3.85
7	7251.00	53.8 PK	74.0	-20.2	1.03 H	214	45.79	8.01
8	7251.00	42.3 AV	54.0	-11.7	1.03 H	214	34.29	8.01

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	67.4 PK	74.0	-6.6	1.43 V	220	73.00	-5.60
2	2390.00	46.2 AV	54.0	-7.8	1.43 V	220	51.80	-5.60
3	*2417.00	108.3 PK			1.43 V	220	113.82	-5.52
4	*2417.00	98.4 AV			1.43 V	220	103.92	-5.52
5	4834.00	46.3 PK	74.0	-27.7	1.09 V	178	42.45	3.85
6	4834.00	35.3 AV	54.0	-18.7	1.09 V	178	31.45	3.85
7	7251.00	53.1 PK	74.0	-20.9	1.10 V	106	45.09	8.01
8	7251.00	41.4 AV	54.0	-12.6	1.10 V	106	33.39	8.01

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) – Pre-Amplifier 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 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	68.1 PK	74.0	-5.9	1.08 H	268	73.70	-5.60
2	2390.00	46.2 AV	54.0	-7.8	1.08 H	268	51.80	-5.60
3	*2422.00	110.3 PK			1.08 H	268	115.79	-5.49
4	*2422.00	100.2 AV			1.08 H	268	105.69	-5.49
5	4844.00	47.4 PK	74.0	-26.6	1.01 H	338	43.56	3.84
6	4844.00	35.8 AV	54.0	-18.2	1.01 H	338	31.96	3.84
7	7266.00	53.1 PK	74.0	-20.9	1.07 H	201	45.04	8.06
8	7266.00	41.9 AV	54.0	-12.1	1.07 H	201	33.84	8.06

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	66.1 PK	74.0	-7.9	1.47 V	234	71.70	-5.60
2	2390.00	45.3 AV	54.0	-8.7	1.47 V	234	50.90	-5.60
3	*2422.00	108.7 PK			1.47 V	234	114.19	-5.49
4	*2422.00	98.7 AV			1.47 V	234	104.19	-5.49
5	4844.00	46.8 PK	74.0	-27.2	1.07 V	166	42.96	3.84
6	4844.00	35.7 AV	54.0	-18.3	1.07 V	166	31.86	3.84
7	7266.00	53.4 PK	74.0	-20.6	1.07 V	119	45.34	8.06
8	7266.00	41.4 AV	54.0	-12.6	1.07 V	119	33.34	8.06

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) – Pre-Amplifier 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 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	54.3 PK	74.0	-19.7	1.09 H	284	59.90	-5.60
2	2390.00	35.5 AV	54.0	-18.5	1.09 H	284	41.10	-5.60
3	*2437.00	110.4 PK			1.09 H	284	115.82	-5.42
4	*2437.00	100.7 AV			1.09 H	284	106.12	-5.42
5	2483.50	57.7 PK	74.0	-16.3	1.09 H	284	62.90	-5.20
6	2483.50	36.5 AV	54.0	-17.5	1.09 H	284	41.70	-5.20
7	4874.00	47.2 PK	74.0	-26.8	1.06 H	347	43.39	3.81
8	4874.00	35.7 AV	54.0	-18.3	1.06 H	347	31.89	3.81
9	7311.00	53.2 PK	74.0	-20.8	1.06 H	216	44.97	8.23
10	7311.00	42.0 AV	54.0	-12.0	1.06 H	216	33.77	8.23

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	52.4 PK	74.0	-21.6	1.53 V	229	58.00	-5.60
2	2390.00	33.1 AV	54.0	-20.9	1.53 V	229	38.70	-5.60
3	*2437.00	109.2 PK			1.53 V	229	114.62	-5.42
4	*2437.00	99.1 AV			1.53 V	229	104.52	-5.42
5	2483.50	56.3 PK	74.0	-17.7	1.53 V	229	61.50	-5.20
6	2483.50	35.4 AV	54.0	-18.6	1.53 V	229	40.60	-5.20
7	4874.00	46.5 PK	74.0	-27.5	1.03 V	168	42.69	3.81
8	4874.00	35.3 AV	54.0	-18.7	1.03 V	168	31.49	3.81
9	7311.00	53.4 PK	74.0	-20.6	1.11 V	133	45.17	8.23
10	7311.00	41.6 AV	54.0	-12.4	1.11 V	133	33.37	8.23

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) – Pre-Amplifier 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 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	110.7 PK			1.11 H	253	116.06	-5.36
2	*2452.00	100.3 AV			1.11 H	253	105.66	-5.36
3	2483.50	62.3 PK	74.0	-11.7	1.11 H	253	67.50	-5.20
4	2483.50	42.3 AV	54.0	-11.7	1.11 H	253	47.50	-5.20
5	4904.00	46.9 PK	74.0	-27.1	1.07 H	349	43.11	3.79
6	4904.00	35.5 AV	54.0	-18.5	1.07 H	349	31.71	3.79
7	7356.00	53.0 PK	74.0	-21.0	1.03 H	207	44.57	8.43
8	7356.00	41.8 AV	54.0	-12.2	1.03 H	207	33.37	8.43

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	109.2 PK			1.42 V	249	114.56	-5.36
2	*2452.00	98.9 AV			1.42 V	249	104.26	-5.36
3	2483.50	61.3 PK	74.0	-12.7	1.42 V	249	66.50	-5.20
4	2483.50	41.3 AV	54.0	-12.7	1.42 V	249	46.50	-5.20
5	4904.00	47.5 PK	74.0	-26.5	1.05 V	170	43.71	3.79
6	4904.00	36.1 AV	54.0	-17.9	1.05 V	170	32.31	3.79
7	7356.00	53.1 PK	74.0	-20.9	1.08 V	104	44.67	8.43
8	7356.00	41.3 AV	54.0	-12.7	1.08 V	104	32.87	8.43

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) – Pre-Amplifier 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 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	111.0 PK			1.05 H	268	116.33	-5.33
2	*2457.00	100.3 AV			1.05 H	268	105.63	-5.33
3	2483.50	68.3 PK	74.0	-5.7	1.05 H	268	73.50	-5.20
4	2483.50	49.7 AV	54.0	-4.3	1.05 H	268	54.90	-5.20
5	4914.00	47.1 PK	74.0	-26.9	1.10 H	343	43.31	3.79
6	4914.00	35.5 AV	54.0	-18.5	1.10 H	343	31.71	3.79
7	7371.00	53.3 PK	74.0	-20.7	1.00 H	194	44.82	8.48
8	7371.00	42.0 AV	54.0	-12.0	1.00 H	194	33.52	8.48

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	108.8 PK			1.38 V	235	114.13	-5.33
2	*2457.00	98.5 AV			1.38 V	235	103.83	-5.33
3	2483.50	67.6 PK	74.0	-6.4	1.38 V	235	72.80	-5.20
4	2483.50	47.6 AV	54.0	-6.4	1.38 V	235	52.80	-5.20
5	4914.00	47.1 PK	74.0	-26.9	1.07 V	184	43.31	3.79
6	4914.00	35.9 AV	54.0	-18.1	1.07 V	184	32.11	3.79
7	7371.00	53.2 PK	74.0	-20.8	1.13 V	89	44.72	8.48
8	7371.00	41.2 AV	54.0	-12.8	1.13 V	89	32.72	8.48

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) – Pre-Amplifier 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 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	109.7 PK			1.03 H	268	115.01	-5.31
2	*2462.00	98.9 AV			1.03 H	268	104.21	-5.31
3	2483.50	73.0 PK	74.0	-1.0	1.03 H	268	78.20	-5.20
4	2483.50	50.9 AV	54.0	-3.1	1.03 H	268	56.10	-5.20
5	4924.00	47.2 PK	74.0	-26.8	1.09 H	356	43.40	3.80
6	4924.00	35.5 AV	54.0	-18.5	1.09 H	356	31.70	3.80
7	7386.00	53.9 PK	74.0	-20.1	1.02 H	191	45.35	8.55
8	7386.00	42.3 AV	54.0	-11.7	1.02 H	191	33.75	8.55

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	107.9 PK			1.34 V	230	113.21	-5.31
2	*2462.00	97.1 AV			1.34 V	230	102.41	-5.31
3	2483.50	67.6 PK	74.0	-6.4	1.42 V	233	72.80	-5.20
4	2483.50	47.7 AV	54.0	-6.3	1.42 V	233	52.90	-5.20
5	4924.00	47.1 PK	74.0	-26.9	1.09 V	182	43.30	3.80
6	4924.00	35.6 AV	54.0	-18.4	1.09 V	182	31.80	3.80
7	7386.00	53.4 PK	74.0	-20.6	1.18 V	101	44.85	8.55
8	7386.00	41.2 AV	54.0	-12.8	1.18 V	101	32.65	8.55

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) – Pre-Amplifier 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 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	93.4 PK			1.00 H	273	98.70	-5.30
2	*2467.00	82.1 AV			1.00 H	273	87.40	-5.30
3	2483.50	58.1 PK	74.0	-15.9	1.00 H	273	63.30	-5.20
4	2483.50	41.3 AV	54.0	-12.7	1.00 H	273	46.50	-5.20
5	4934.00	47.5 PK	74.0	-26.5	1.04 H	346	43.69	3.81
6	4934.00	35.8 AV	54.0	-18.2	1.04 H	346	31.99	3.81
7	7401.00	53.6 PK	74.0	-20.4	1.05 H	202	44.99	8.61
8	7401.00	41.8 AV	54.0	-12.2	1.05 H	202	33.19	8.61

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	*2467.00	91.4 PK			1.34 V	233	96.70	-5.30
2	*2467.00	80.6 AV			1.34 V	233	85.90	-5.30
3	2483.50	57.1 PK	74.0	-16.9	1.34 V	233	62.30	-5.20
4	2483.50	40.3 AV	54.0	-13.7	1.34 V	233	45.50	-5.20
5	4934.00	47.3 PK	74.0	-26.7	1.09 V	175	43.49	3.81
6	4934.00	36.0 AV	54.0	-18.0	1.09 V	175	32.19	3.81
7	7401.00	53.2 PK	74.0	-20.8	1.16 V	86	44.59	8.61
8	7401.00	41.1 AV	54.0	-12.9	1.16 V	86	32.49	8.61

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) – Pre-Amplifier 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 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	93.6 PK			1.00 H	269	98.87	-5.27
2	*2472.00	83.3 AV			1.00 H	269	88.57	-5.27
3	2483.50	71.8 PK	74.0	-2.2	1.00 H	269	77.00	-5.20
4	2483.50	43.4 AV	54.0	-10.6	1.00 H	269	48.60	-5.20
5	4944.00	46.8 PK	74.0	-27.2	1.12 H	347	42.98	3.82
6	4944.00	35.3 AV	54.0	-18.7	1.12 H	347	31.48	3.82
7	7416.00	53.8 PK	74.0	-20.2	1.01 H	194	45.16	8.64
8	7416.00	41.9 AV	54.0	-12.1	1.01 H	194	33.26	8.64

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	91.3 PK			1.30 V	230	96.57	-5.27
2	*2472.00	81.1 AV			1.30 V	230	86.37	-5.27
3	2483.50	69.2 PK	74.0	-4.8	1.30 V	230	74.40	-5.20
4	2483.50	41.3 AV	54.0	-12.7	1.30 V	230	46.50	-5.20
5	4944.00	47.5 PK	74.0	-26.5	1.09 V	194	43.68	3.82
6	4944.00	35.8 AV	54.0	-18.2	1.09 V	194	31.98	3.82
7	7416.00	53.6 PK	74.0	-20.4	1.13 V	86	44.96	8.64
8	7416.00	41.4 AV	54.0	-12.6	1.13 V	86	32.76	8.64

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) – Pre-Amplifier 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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802.11n (HT20)

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	73.0 PK	74.0	-1.0	1.04 H	271	41.37	31.63
2	2390.00	50.9 AV	54.0	-3.1	1.04 H	271	19.27	31.63
3	*2412.00	109.8 PK			1.04 H	271	78.12	31.68
4	*2412.00	98.4 AV			1.04 H	271	66.72	31.68
5	4824.00	46.7 PK	74.0	-27.3	1.07 H	360	6.31	40.39
6	4824.00	35.2 AV	54.0	-18.8	1.07 H	360	-5.19	40.39

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	67.7 PK	74.0	-6.3	1.41 V	234	73.30	-5.60
2	2390.00	47.4 AV	54.0	-6.6	1.41 V	234	53.00	-5.60
3	*2412.00	107.3 PK			1.41 V	234	112.83	-5.53
4	*2412.00	96.4 AV			1.41 V	234	101.93	-5.53
5	4824.00	46.1 PK	74.0	-27.9	1.09 V	185	42.24	3.86
6	4824.00	35.0 AV	54.0	-19.0	1.09 V	185	31.14	3.86

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) – Pre-Amplifier 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 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	73.0 PK	74.0	-1.0	1.10 H	274	78.60	-5.60
2	2390.00	49.2 AV	54.0	-4.8	1.10 H	274	54.80	-5.60
3	*2417.00	111.7 PK			1.10 H	274	117.22	-5.52
4	*2417.00	100.1 AV			1.10 H	274	105.62	-5.52
5	4834.00	46.5 PK	74.0	-27.5	1.10 H	348	42.65	3.85
6	4834.00	34.9 AV	54.0	-19.1	1.10 H	348	31.05	3.85
7	7251.00	53.2 PK	74.0	-20.8	1.00 H	181	45.19	8.01
8	7251.00	41.6 AV	54.0	-12.4	1.00 H	181	33.59	8.01

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	67.8 PK	74.0	-6.2	1.44 V	223	73.40	-5.60
2	2390.00	46.5 AV	54.0	-7.5	1.44 V	223	52.10	-5.60
3	*2417.00	108.6 PK			1.44 V	223	114.12	-5.52
4	*2417.00	97.9 AV			1.44 V	223	103.42	-5.52
5	4834.00	46.3 PK	74.0	-27.7	1.09 V	185	42.45	3.85
6	4834.00	35.3 AV	54.0	-18.7	1.09 V	185	31.45	3.85
7	7251.00	53.2 PK	74.0	-20.8	1.08 V	113	45.19	8.01
8	7251.00	41.5 AV	54.0	-12.5	1.08 V	113	33.49	8.01

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) – Pre-Amplifier 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 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	68.1 PK	74.0	-5.9	1.06 H	257	73.70	-5.60
2	2390.00	47.1 AV	54.0	-6.9	1.06 H	257	52.70	-5.60
3	*2422.00	111.8 PK			1.06 H	257	117.29	-5.49
4	*2422.00	100.3 AV			1.06 H	257	105.79	-5.49
5	4844.00	46.5 PK	74.0	-27.5	1.10 H	355	42.66	3.84
6	4844.00	34.8 AV	54.0	-19.2	1.10 H	355	30.96	3.84
7	7266.00	53.5 PK	74.0	-20.5	1.00 H	173	45.44	8.06
8	7266.00	41.9 AV	54.0	-12.1	1.00 H	173	33.84	8.06

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	65.6 PK	74.0	-8.4	1.41 V	231	71.20	-5.60
2	2390.00	44.8 AV	54.0	-9.2	1.41 V	231	50.40	-5.60
3	*2422.00	108.3 PK			1.41 V	231	113.79	-5.49
4	*2422.00	98.1 AV			1.41 V	231	103.59	-5.49
5	4844.00	46.9 PK	74.0	-27.1	1.02 V	176	43.06	3.84
6	4844.00	35.6 AV	54.0	-18.4	1.02 V	176	31.76	3.84
7	7266.00	53.7 PK	74.0	-20.3	1.05 V	130	45.64	8.06
8	7266.00	41.6 AV	54.0	-12.4	1.05 V	130	33.54	8.06

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) – Pre-Amplifier 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 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	54.6 PK	74.0	-19.4	1.11 H	259	60.20	-5.60
2	2390.00	35.8 AV	54.0	-18.2	1.11 H	259	41.40	-5.60
3	*2437.00	111.4 PK			1.11 H	259	116.82	-5.42
4	*2437.00	100.1 AV			1.11 H	259	105.52	-5.42
5	2483.50	56.8 PK	74.0	-17.2	1.11 H	259	62.00	-5.20
6	2483.50	35.8 AV	54.0	-18.2	1.11 H	259	41.00	-5.20
7	4874.00	46.6 PK	74.0	-27.4	1.10 H	359	42.79	3.81
8	4874.00	35.2 AV	54.0	-18.8	1.10 H	359	31.39	3.81
9	7311.00	53.4 PK	74.0	-20.6	1.00 H	158	45.17	8.23
10	7311.00	41.8 AV	54.0	-12.2	1.00 H	158	33.57	8.23

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	54.0 PK	74.0	-20.0	1.37 V	237	59.60	-5.60
2	2390.00	34.3 AV	54.0	-19.7	1.37 V	237	39.90	-5.60
3	*2437.00	107.8 PK			1.37 V	237	113.22	-5.42
4	*2437.00	97.7 AV			1.37 V	237	103.12	-5.42
5	2483.50	55.1 PK	74.0	-18.9	1.37 V	237	60.30	-5.20
6	2483.50	34.0 AV	54.0	-20.0	1.37 V	237	39.20	-5.20
7	4874.00	47.0 PK	74.0	-27.0	1.04 V	186	43.19	3.81
8	4874.00	35.8 AV	54.0	-18.2	1.04 V	186	31.99	3.81
9	7311.00	53.6 PK	74.0	-20.4	1.05 V	121	45.37	8.23
10	7311.00	41.7 AV	54.0	-12.3	1.05 V	121	33.47	8.23

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) – Pre-Amplifier 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 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	111.8 PK			1.09 H	260	117.16	-5.36
2	*2452.00	100.0 AV			1.09 H	260	105.36	-5.36
3	2483.50	61.8 PK	74.0	-12.2	1.05 H	244	67.00	-5.20
4	2483.50	42.1 AV	54.0	-11.9	1.05 H	244	47.30	-5.20
5	4904.00	46.6 PK	74.0	-27.4	1.10 H	360	42.81	3.79
6	4904.00	35.5 AV	54.0	-18.5	1.10 H	360	31.71	3.79
7	7356.00	53.8 PK	74.0	-20.2	1.00 H	144	45.37	8.43
8	7356.00	42.1 AV	54.0	-11.9	1.00 H	144	33.67	8.43

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	108.4 PK			1.33 V	236	113.76	-5.36
2	*2452.00	98.3 AV			1.33 V	236	103.66	-5.36
3	2483.50	60.5 PK	74.0	-13.5	1.33 V	236	65.70	-5.20
4	2483.50	41.3 AV	54.0	-12.7	1.33 V	236	46.50	-5.20
5	4904.00	46.8 PK	74.0	-27.2	1.00 V	187	43.01	3.79
6	4904.00	35.6 AV	54.0	-18.4	1.00 V	187	31.81	3.79
7	7356.00	54.1 PK	74.0	-19.9	1.01 V	132	45.67	8.43
8	7356.00	42.0 AV	54.0	-12.0	1.01 V	132	33.57	8.43

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) – Pre-Amplifier 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 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	111.4 PK			1.11 H	270	116.73	-5.33
2	*2457.00	100.1 AV			1.11 H	270	105.43	-5.33
3	2483.50	68.3 PK	74.0	-5.7	1.02 H	280	73.50	-5.20
4	2483.50	49.7 AV	54.0	-4.3	1.02 H	280	54.90	-5.20
5	4914.00	46.1 PK	74.0	-27.9	1.05 H	360	42.31	3.79
6	4914.00	35.2 AV	54.0	-18.8	1.05 H	360	31.41	3.79
7	7371.00	53.3 PK	74.0	-20.7	1.00 H	154	44.82	8.48
8	7371.00	41.8 AV	54.0	-12.2	1.00 H	154	33.32	8.48

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	108.1 PK			1.31 V	237	113.43	-5.33
2	*2457.00	98.1 AV			1.31 V	237	103.43	-5.33
3	2483.50	60.1 PK	74.0	-13.9	1.31 V	237	65.30	-5.20
4	2483.50	41.0 AV	54.0	-13.0	1.31 V	237	46.20	-5.20
5	4914.00	46.7 PK	74.0	-27.3	1.02 V	197	42.91	3.79
6	4914.00	35.6 AV	54.0	-18.4	1.02 V	197	31.81	3.79
7	7371.00	54.2 PK	74.0	-19.8	1.00 V	146	45.72	8.48
8	7371.00	42.0 AV	54.0	-12.0	1.00 V	146	33.52	8.48

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) – Pre-Amplifier 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 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	108.6 PK			1.09 H	281	113.91	-5.31
2	*2462.00	98.1 AV			1.09 H	281	103.41	-5.31
3	2483.50	72.9 PK	74.0	-1.1	1.09 H	281	78.10	-5.20
4	2483.50	50.4 AV	54.0	-3.6	1.09 H	281	55.60	-5.20
5	4924.00	46.7 PK	74.0	-27.3	1.05 H	360	42.90	3.80
6	4924.00	35.6 AV	54.0	-18.4	1.05 H	360	31.80	3.80
7	7386.00	53.4 PK	74.0	-20.6	1.05 H	158	44.85	8.55
8	7386.00	42.1 AV	54.0	-11.9	1.05 H	158	33.55	8.55

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	106.8 PK			1.31 V	224	112.11	-5.31
2	*2462.00	96.2 AV			1.31 V	224	101.51	-5.31
3	2483.50	71.2 PK	74.0	-2.8	1.31 V	224	76.40	-5.20
4	2483.50	49.3 AV	54.0	-4.7	1.31 V	224	54.50	-5.20
5	4924.00	47.3 PK	74.0	-26.7	1.00 V	203	43.50	3.80
6	4924.00	36.0 AV	54.0	-18.0	1.00 V	203	32.20	3.80
7	7386.00	54.0 PK	74.0	-20.0	1.00 V	150	45.45	8.55
8	7386.00	41.9 AV	54.0	-12.1	1.00 V	150	33.35	8.55

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) – Pre-Amplifier 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 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	94.1 PK			1.00 H	279	99.40	-5.30
2	*2467.00	81.3 AV			1.00 H	279	86.60	-5.30
3	2483.50	57.3 PK	74.0	-16.7	1.00 H	279	62.50	-5.20
4	2483.50	41.7 AV	54.0	-12.3	1.00 H	279	46.90	-5.20
5	4934.00	45.9 PK	74.0	-28.1	1.11 H	360	42.09	3.81
6	4934.00	35.0 AV	54.0	-19.0	1.11 H	360	31.19	3.81
7	7401.00	53.3 PK	74.0	-20.7	1.00 H	138	44.69	8.61
8	7401.00	41.7 AV	54.0	-12.3	1.00 H	138	33.09	8.61

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	*2467.00	92.1 PK			1.36 V	235	97.40	-5.30
2	*2467.00	79.3 AV			1.36 V	235	84.60	-5.30
3	2483.50	56.1 PK	74.0	-17.9	1.36 V	235	61.30	-5.20
4	2483.50	40.2 AV	54.0	-13.8	1.36 V	235	45.40	-5.20
5	4934.00	46.7 PK	74.0	-27.3	1.04 V	197	42.89	3.81
6	4934.00	35.6 AV	54.0	-18.4	1.04 V	197	31.79	3.81
7	7401.00	54.1 PK	74.0	-19.9	1.00 V	137	45.49	8.61
8	7401.00	41.8 AV	54.0	-12.2	1.00 V	137	33.19	8.61

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) – Pre-Amplifier 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 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	95.1 PK			1.02 H	253	100.37	-5.27
2	*2472.00	84.2 AV			1.02 H	253	89.47	-5.27
3	2483.50	71.4 PK	74.0	-2.6	1.02 H	253	76.60	-5.20
4	2483.50	44.3 AV	54.0	-9.7	1.02 H	253	49.50	-5.20
5	4944.00	46.1 PK	74.0	-27.9	1.03 H	360	42.28	3.82
6	4944.00	35.2 AV	54.0	-18.8	1.03 H	360	31.38	3.82
7	7416.00	52.8 PK	74.0	-21.2	1.00 H	153	44.16	8.64
8	7416.00	41.4 AV	54.0	-12.6	1.00 H	153	32.76	8.64

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	94.3 PK			1.29 V	223	99.57	-5.27
2	*2472.00	82.1 AV			1.29 V	223	87.37	-5.27
3	2483.50	70.1 PK	74.0	-3.9	1.29 V	223	75.30	-5.20
4	2483.50	43.1 AV	54.0	-10.9	1.29 V	223	48.30	-5.20
5	4944.00	47.6 PK	74.0	-26.4	1.04 V	190	43.78	3.82
6	4944.00	36.0 AV	54.0	-18.0	1.04 V	190	32.18	3.82
7	7416.00	54.3 PK	74.0	-19.7	1.06 V	164	45.66	8.64
8	7416.00	42.3 AV	54.0	-11.7	1.06 V	164	33.66	8.64

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) – Pre-Amplifier 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
SPECTRUM ANALYZER R&S	FSV 40	100964	July 15, 2013	July 14, 2014

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 29, 2014

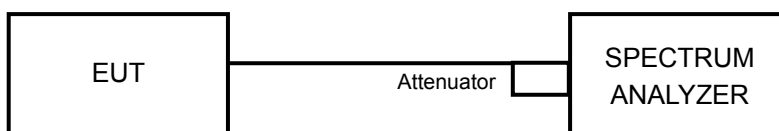
4.3.3 TEST PROCEDURE

1. Set resolution bandwidth (RBW) = 100kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ 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.



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4.3.7 TEST RESULTS

802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	9.09	0.5	PASS
2	2417	9.12	0.5	PASS
3	2422	9.11	0.5	PASS
6	2437	9.10	0.5	PASS
9	2452	9.12	0.5	PASS
10	2457	9.10	0.5	PASS
11	2462	9.12	0.5	PASS
12	2467	9.55	0.5	PASS
13	2472	9.10	0.5	PASS

802.11g

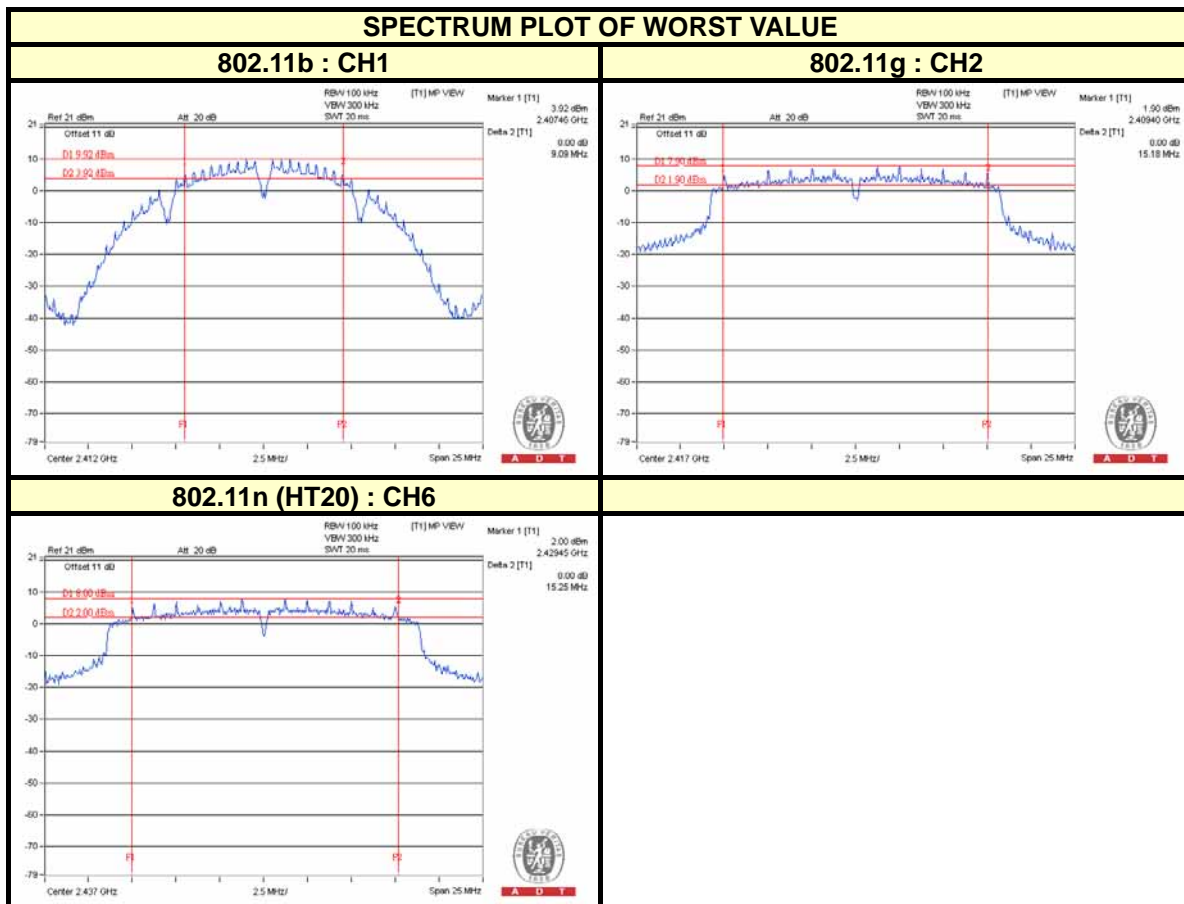
CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	15.55	0.5	PASS
2	2417	15.18	0.5	PASS
3	2422	15.38	0.5	PASS
6	2437	15.45	0.5	PASS
9	2452	15.71	0.5	PASS
10	2457	15.50	0.5	PASS
11	2462	15.18	0.5	PASS
12	2467	15.51	0.5	PASS
13	2472	15.74	0.5	PASS



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802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	15.80	0.5	PASS
2	2417	15.66	0.5	PASS
3	2422	15.41	0.5	PASS
6	2437	15.25	0.5	PASS
9	2452	16.31	0.5	PASS
10	2457	15.95	0.5	PASS
11	2462	16.22	0.5	PASS
12	2467	16.40	0.5	PASS
13	2472	16.54	0.5	PASS





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4.4 CONDUCTED OUTPUT POWER MEASUREMENT

4.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

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

4.4.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power meter Anritsu	ML2495A	1014008	Apr. 30, 2014	Apr. 29, 2015
Power sensor Anritsu	MA2411B	0917122	Apr. 30, 2014	Apr. 29, 2015

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 29, 2014

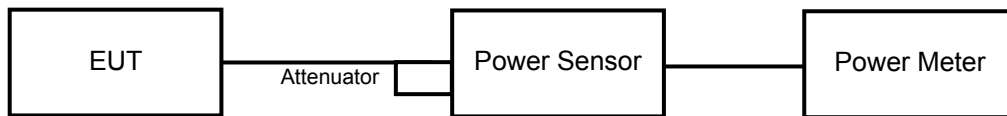
4.4.3 TEST PROCEDURES

The peak / average power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak / average 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

FOR PEAK POWER

802.11b

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	101.625	20.07	30	PASS
2	2417	103.276	20.14	30	PASS
3	2422	104.472	20.19	30	PASS
6	2437	104.713	20.20	30	PASS
9	2452	102.565	20.11	30	PASS
10	2457	104.472	20.19	30	PASS
11	2462	103.753	20.16	30	PASS
12	2467	1.556	1.92	30	PASS
13	2472	1.528	1.84	30	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	134.896	21.30	30	PASS
2	2417	181.552	22.59	30	PASS
3	2422	182.39	22.61	30	PASS
6	2437	191.426	22.82	30	PASS
9	2452	192.752	22.85	30	PASS
10	2457	195.434	22.91	30	PASS
11	2462	120.226	20.80	30	PASS
12	2467	6.081	7.84	30	PASS
13	2472	5.572	7.46	30	PASS



A D T

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	97.724	19.90	30	PASS
2	2417	180.302	22.56	30	PASS
3	2422	183.654	22.64	30	PASS
6	2437	186.638	22.71	30	PASS
9	2452	195.434	22.91	30	PASS
10	2457	191.867	22.83	30	PASS
11	2462	125.314	20.98	30	PASS
12	2467	5.42	7.34	30	PASS
13	2472	5.082	7.06	30	PASS



A D T

※Add test for each data rate output power (require by manufacturer):

802.11b

CHANNEL	FREQUENCY (MHz)	PEAK POWER (dBm)			
		Data rate			
		1Mbps	2Mbps	5.5Mbps	11Mbps
1	2412	20.07	19.68	19.91	19.67
2	2417	20.14	20.09	19.86	19.86
3	2422	20.19	20.09	20.12	20.16
6	2437	20.20	20.08	19.94	19.96
9	2452	20.11	20.02	19.75	19.83
10	2457	20.19	19.87	19.76	19.79
11	2462	20.16	20.08	19.84	20.00
12	2467	1.92	1.88	1.55	1.81
13	2472	1.84	1.78	1.66	1.55

802.11g

CHANNEL	FREQUENCY (MHz)	PEAK POWER (dBm)							
		Data rate							
		6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	2412	21.30	21.01	21.25	21.11	21.01	20.88	20.81	20.8
2	2417	22.59	22.49	22.1	22.25	22.18	22.46	22.41	22.32
3	2422	22.61	22.3	22.51	22.59	22.46	22.58	22.44	22.16
6	2437	22.82	22.81	22.52	22.57	22.78	22.56	22.36	22.63
9	2452	22.85	22.62	22.36	22.42	22.53	22.49	22.35	22.69
10	2457	22.91	22.88	22.61	22.51	22.74	22.63	22.44	22.42
11	2462	20.80	20.34	20.57	20.46	20.63	20.34	20.6	20.63
12	2467	7.84	7.49	7.43	7.74	7.38	7.37	7.62	7.80
13	2472	7.46	7.09	7.45	7.12	7.27	7.37	7.45	7.27



A D T

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (dBm)							
		Data rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
1	2412	19.90	19.81	19.71	19.65	19.66	19.6	19.84	19.48
2	2417	22.56	22.54	22.21	22.09	22.2	22.5	22.28	22.35
3	2422	22.64	22.51	22.43	22.47	22.48	22.52	22.5	22.43
6	2437	22.71	22.57	22.45	22.44	22.26	22.47	22.3	22.32
9	2452	22.91	22.89	22.61	22.57	22.58	22.62	22.63	22.48
10	2457	22.83	22.62	22.53	22.79	22.45	22.47	22.35	22.43
11	2462	20.98	20.56	20.59	20.76	20.9	20.86	20.56	20.81
12	2467	7.34	7.11	7.17	7.15	7.12	6.98	7.10	7.09
13	2472	7.06	6.74	6.87	7.00	6.59	6.62	6.88	6.83



A D T

FOR AVERAGE POWER

802.11b

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)
1	2412	63.826	18.05
2	2417	64.714	18.11
3	2422	65.013	18.13
6	2437	64.714	18.11
9	2452	64.714	18.11
10	2457	65.013	18.13
11	2462	64.121	18.07
12	2467	1.026	0.11
13	2472	1.054	0.23

802.11g

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)
1	2412	33.113	15.20
2	2417	57.810	17.62
3	2422	56.624	17.53
6	2437	59.979	17.78
9	2452	57.943	17.63
10	2457	64.863	18.12
11	2462	38.371	15.84
12	2467	1.057	0.24
13	2472	1.130	0.53



A D T

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)
1	2412	30.200	14.80
2	2417	57.810	17.62
3	2422	67.764	18.31
6	2437	61.235	17.87
9	2452	62.087	17.93
10	2457	61.802	17.91
11	2462	39.719	15.99
12	2467	1.038	0.16
13	2472	1.081	0.34



A D T

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
SPECTRUM ANALYZER R&S	FSV 40	100964	July 15, 2013	July 14, 2014

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 29, 2014

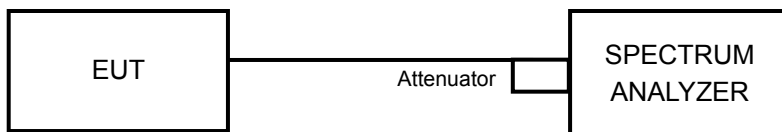
4.5.3 TEST PROCEDURE

1. Set the RBW = 3 kHz, VBW =10 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 amplitude level.

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



A D T

4.5.7 TEST RESULTS

802.11b

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	LIMIT (dBm)	PASS /FAIL
1	2412	-4.12	8	PASS
2	2417	-3.90	8	PASS
3	2422	-3.51	8	PASS
6	2437	-4.58	8	PASS
9	2452	-3.79	8	PASS
10	2457	-3.67	8	PASS
11	2462	-2.86	8	PASS
12	2467	-20.36	8	PASS
13	2472	-20.53	8	PASS

802.11g

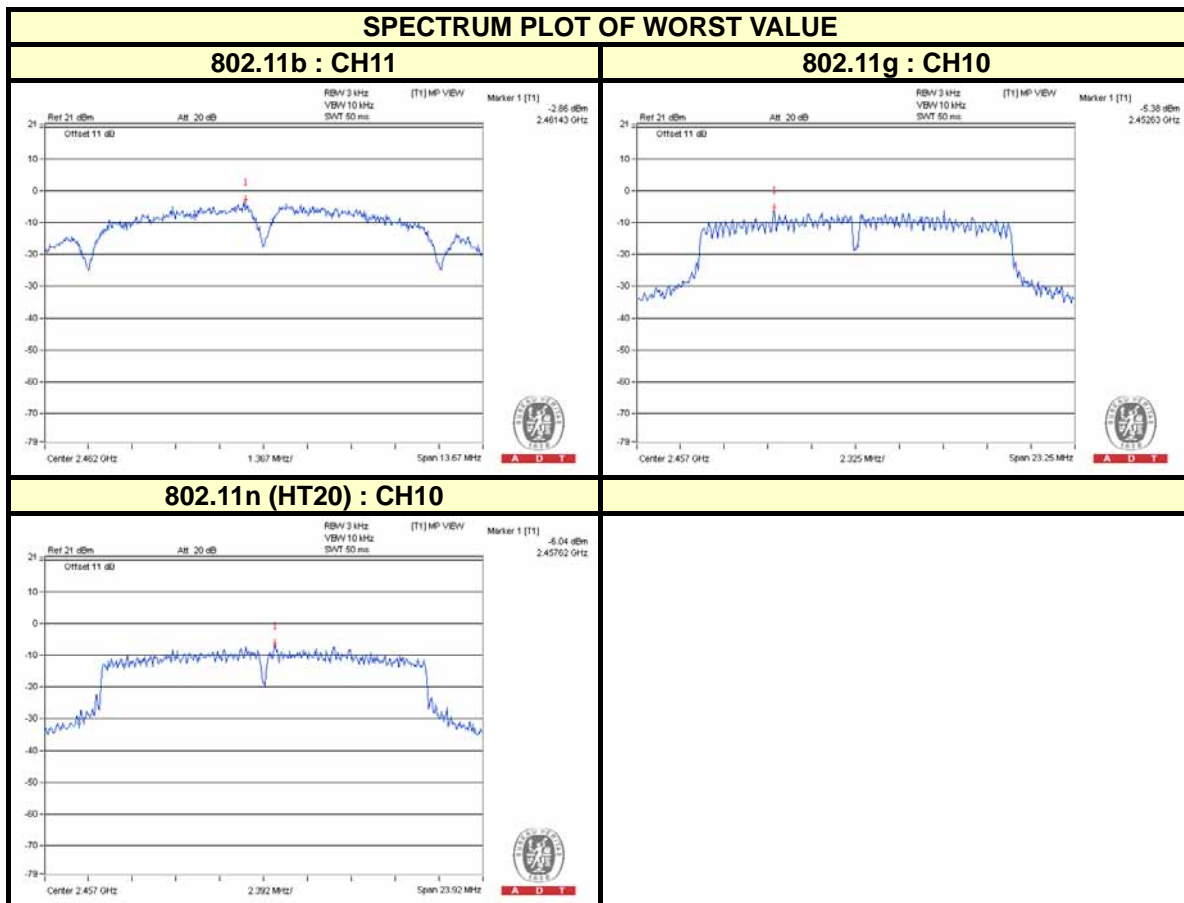
CHANNEL	FREQUENCY (MHz)	PSD (dBm)	LIMIT (dBm)	PASS /FAIL
1	2412	-8.90	8	PASS
2	2417	-7.27	8	PASS
3	2422	-5.90	8	PASS
6	2437	-6.58	8	PASS
9	2452	-6.75	8	PASS
10	2457	-5.38	8	PASS
11	2462	-9.53	8	PASS
12	2467	-23.29	8	PASS
13	2472	-22.73	8	PASS



A D T

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	LIMIT (dBm)	PASS /FAIL
1	2412	-9.74	8	PASS
2	2417	-7.76	8	PASS
3	2422	-7.09	8	PASS
6	2437	-7.36	8	PASS
9	2452	-7.72	8	PASS
10	2457	-6.04	8	PASS
11	2462	-10.90	8	PASS
12	2467	-24.15	8	PASS
13	2472	-23.83	8	PASS





A D T

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
SPECTRUM ANALYZER R&S	FSV 40	100964	July 15, 2013	July 14, 2014

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 29, 2014

4.6.3 TEST PROCEDURE

Measurement Procedure - Reference Level

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

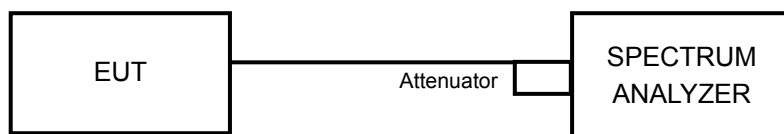
Measurement Procedure –Unwanted Emission Level

1. Set RBW = 100 kHz.
2. Set VBW \geq 300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

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

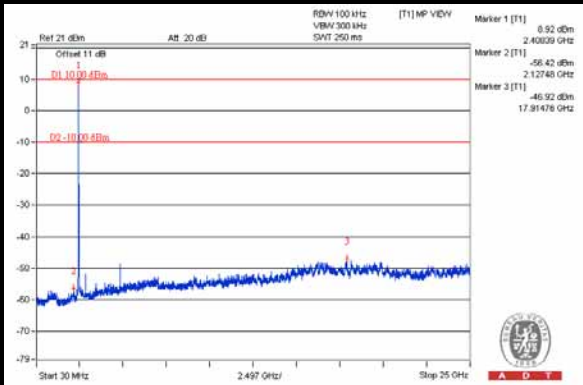
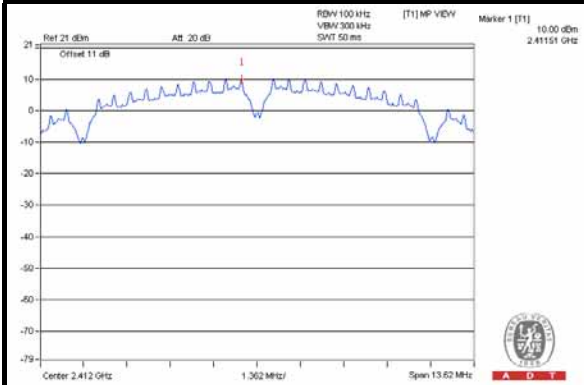
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.



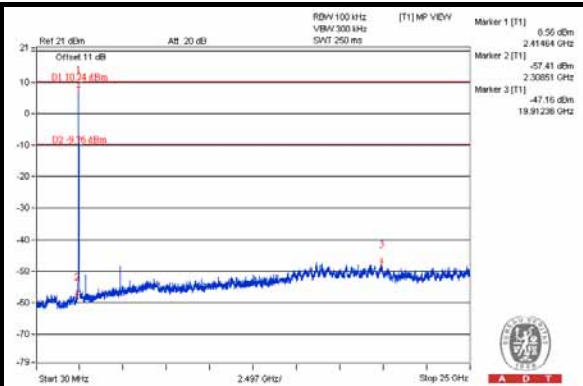
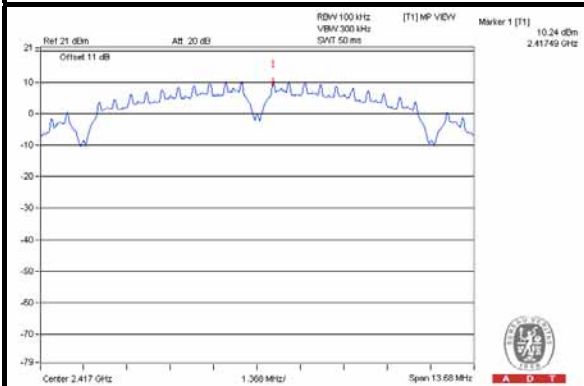
A D T

802.11b

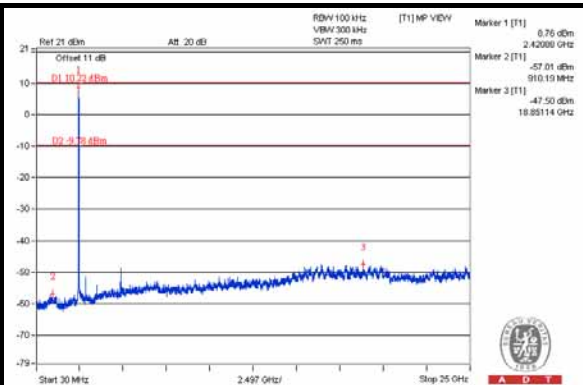
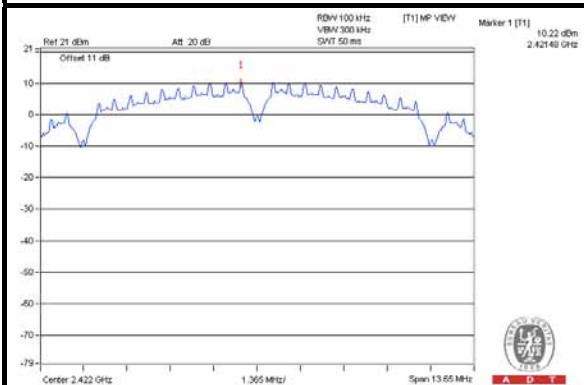
CH 1



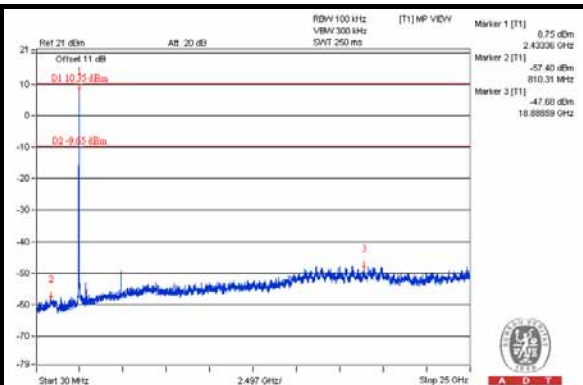
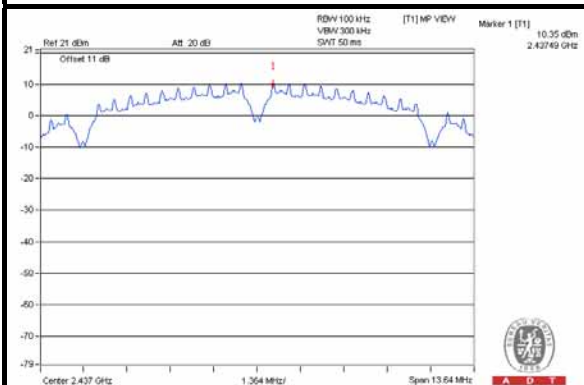
CH 2



CH 3



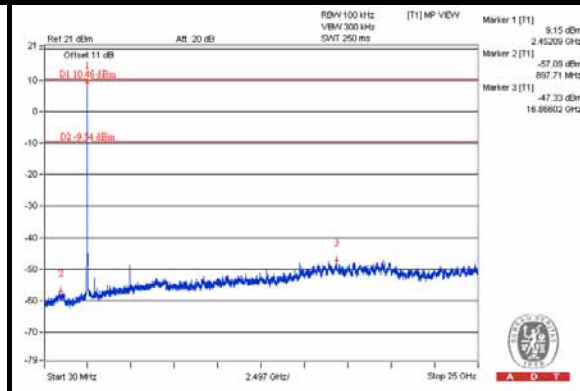
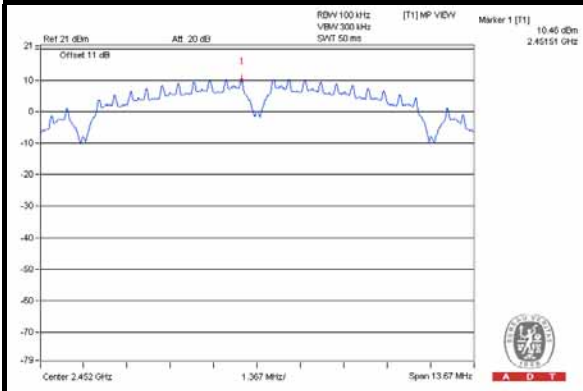
CH 6



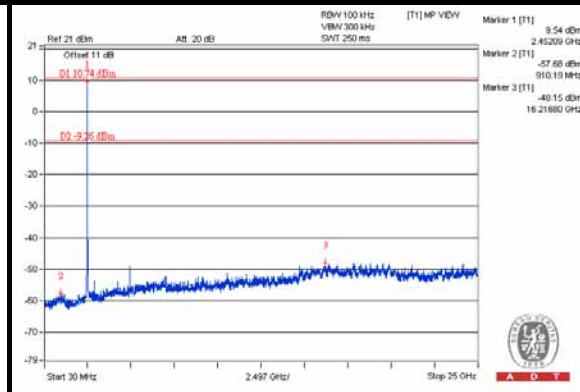
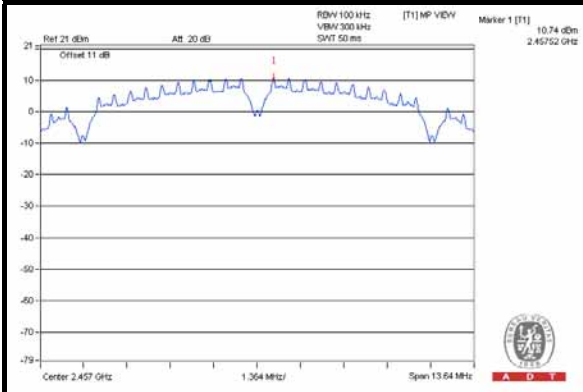


A D T

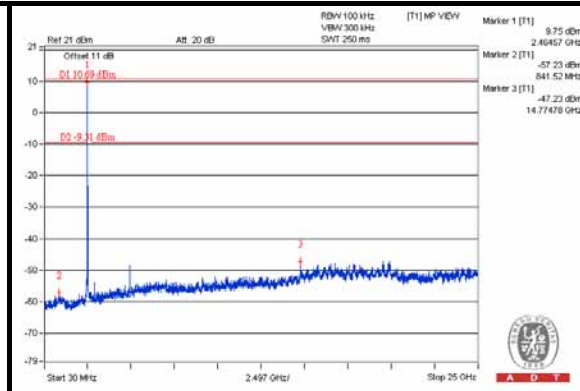
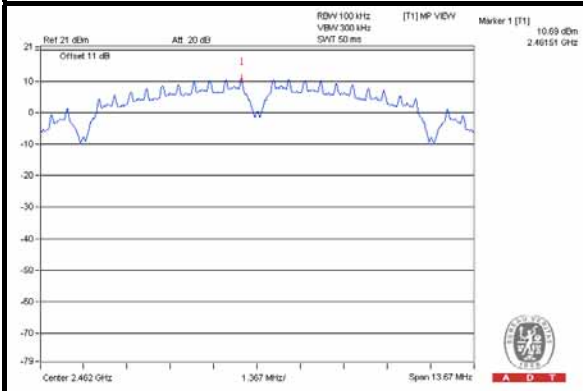
CH 9



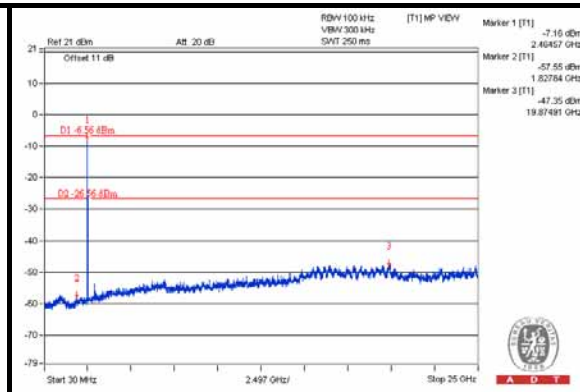
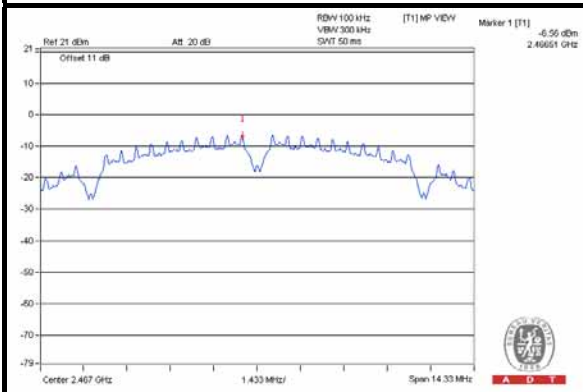
CH 10



CH 11



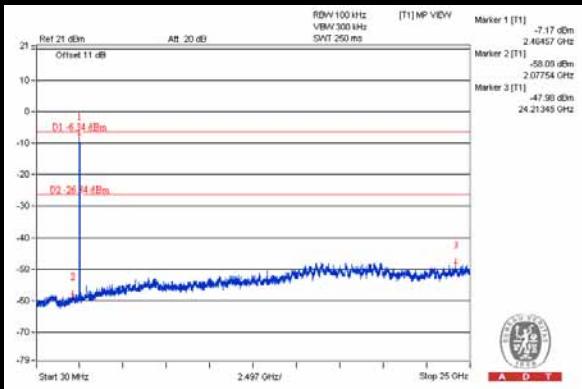
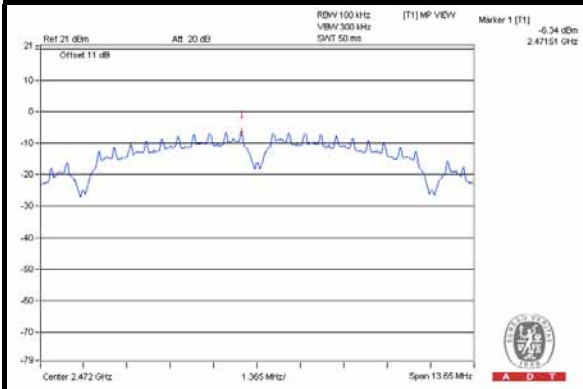
CH 12



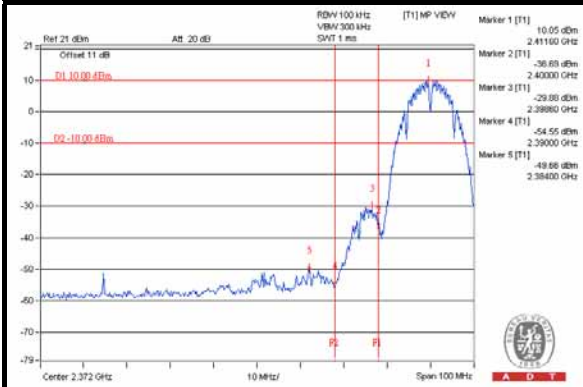


A D T

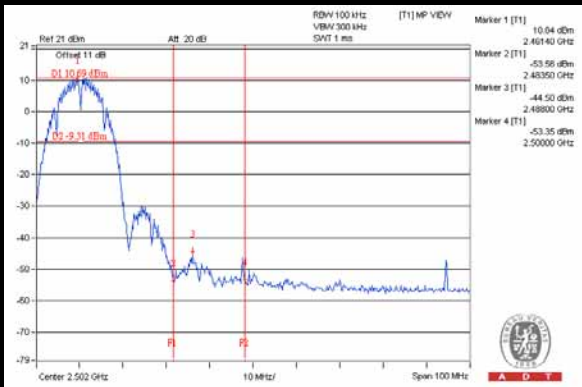
CH 13



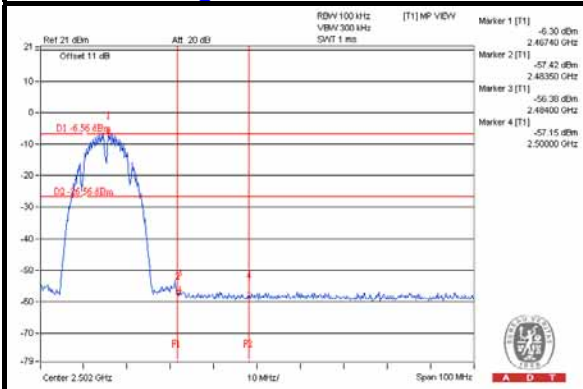
CH 1 Band edge



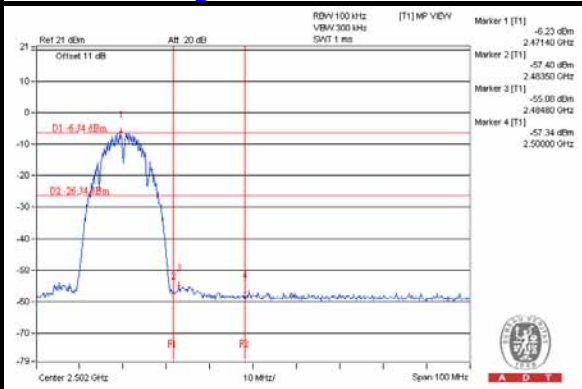
CH 11 Band edge



CH 12 Band edge



CH 13 Band edge

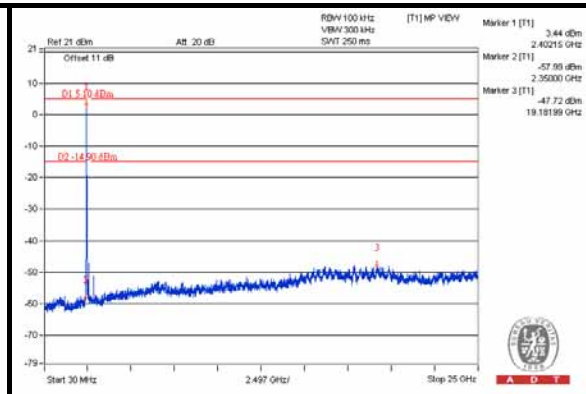
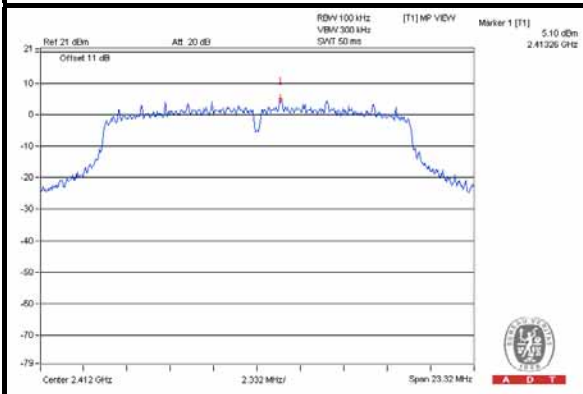




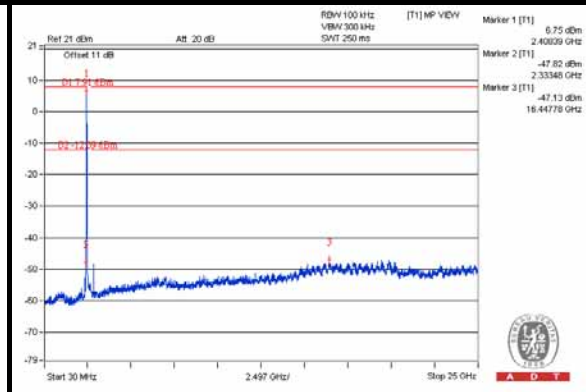
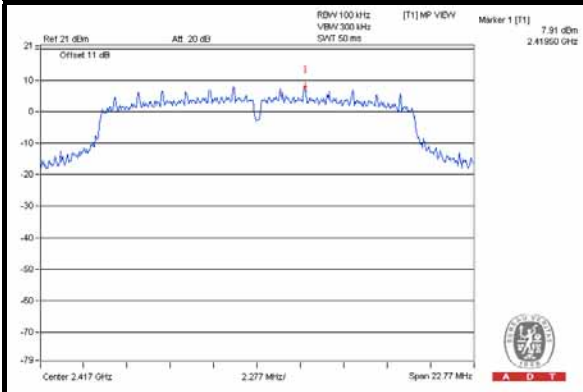
A D T

802.11g

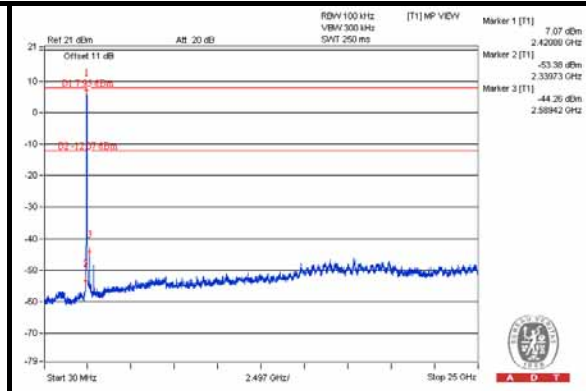
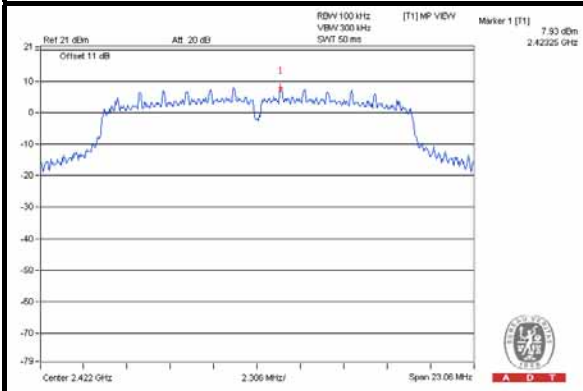
CH 1



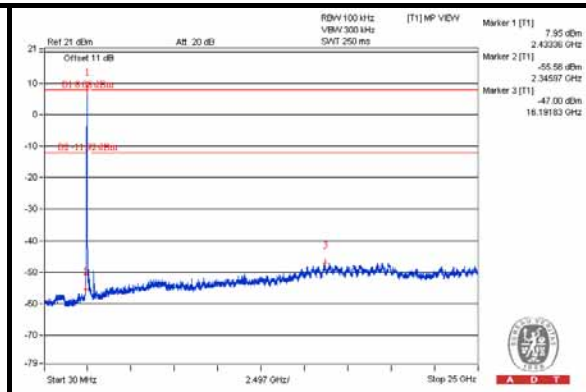
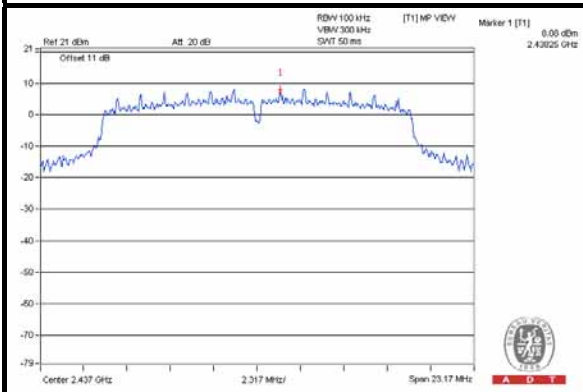
CH 2



CH 3



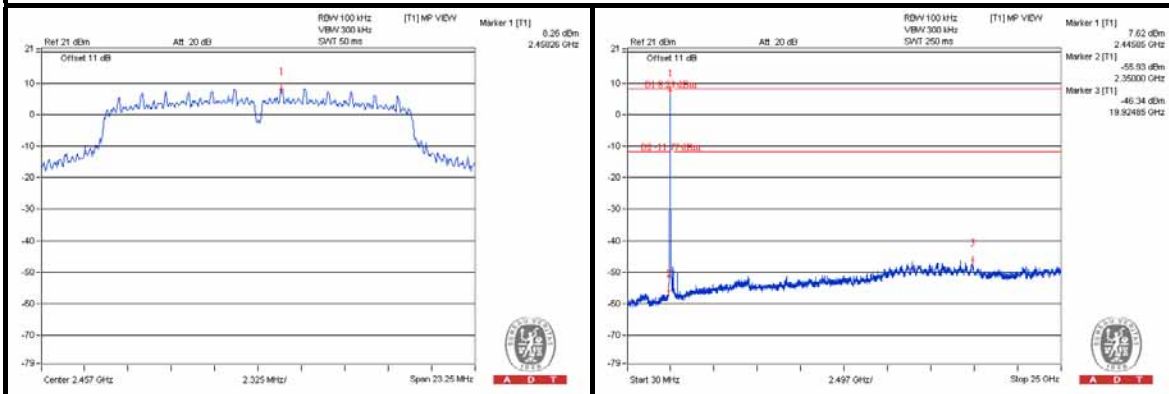
CH 6



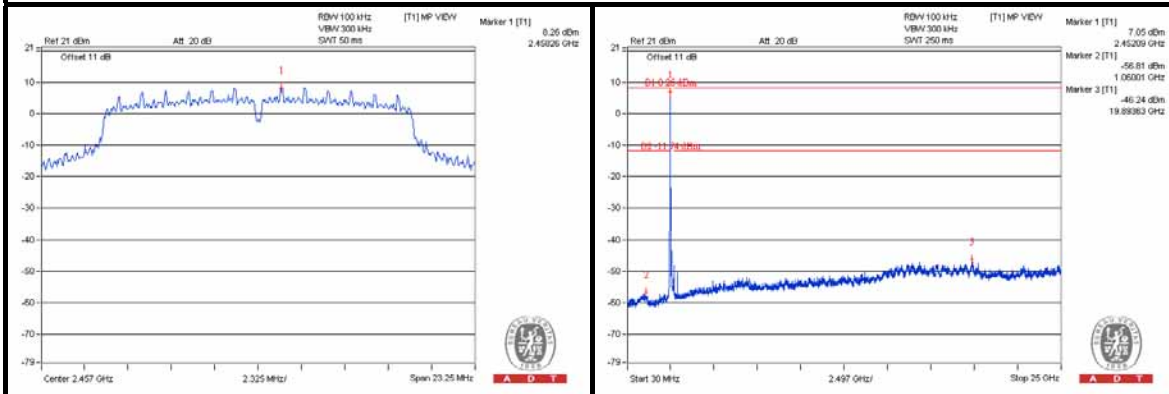


A D T

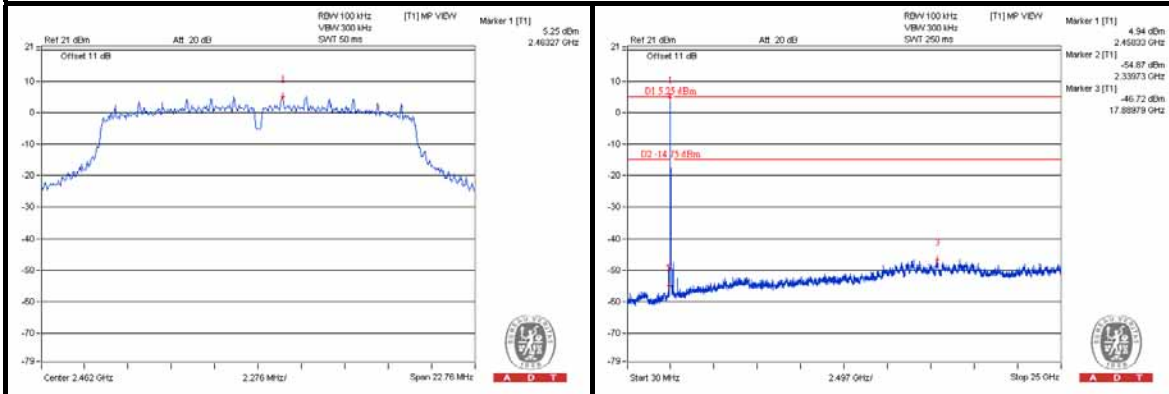
CH 9



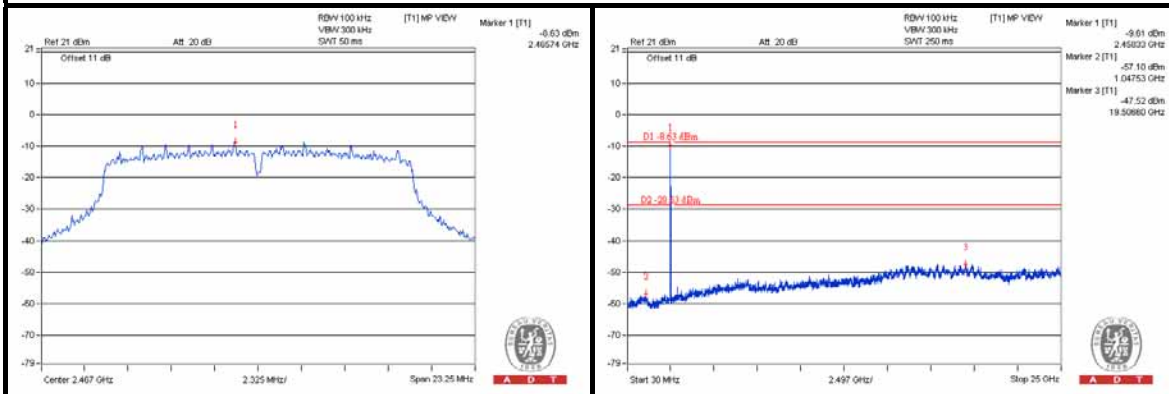
CH 10



CH 11



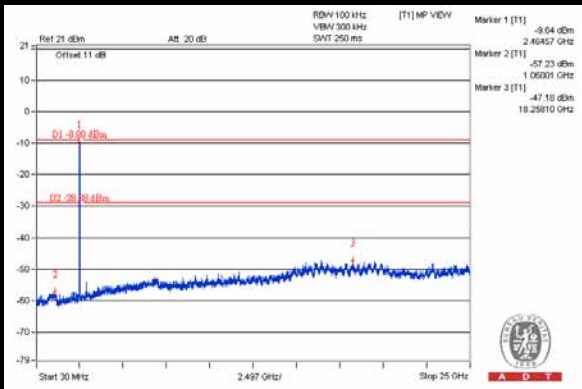
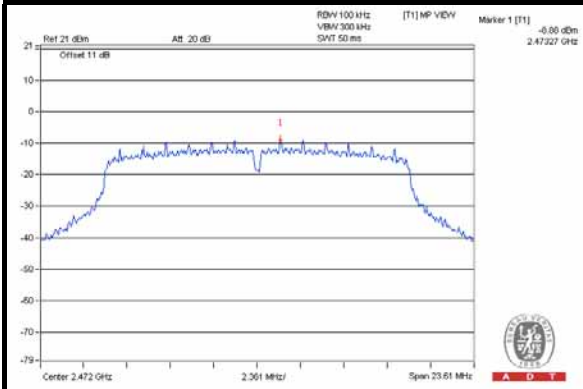
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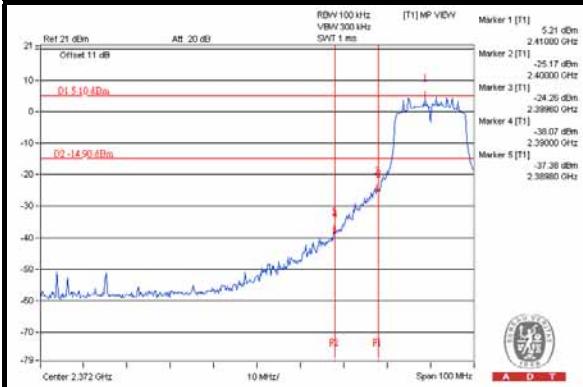


A D T

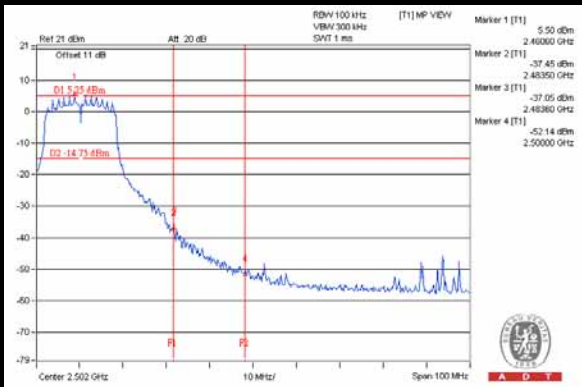
CH 13



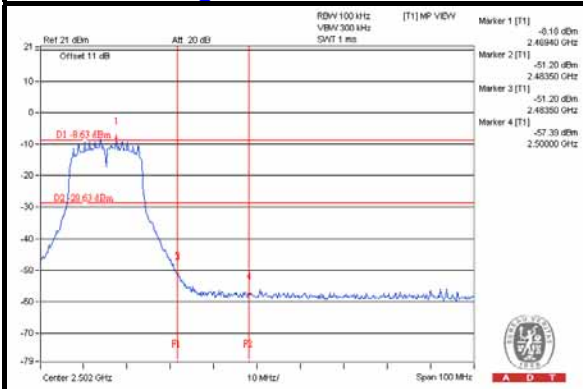
CH 1 Band edge



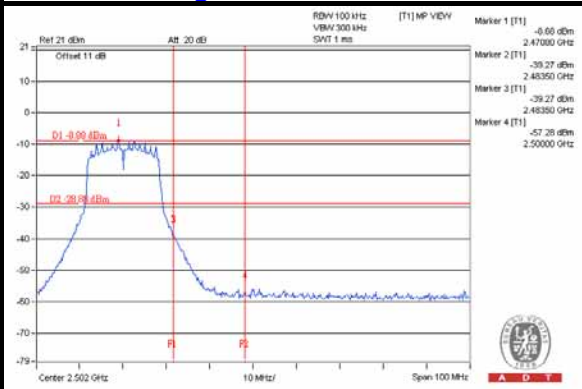
CH 11 Band edge



CH 12 Band edge



CH 13 Band edge

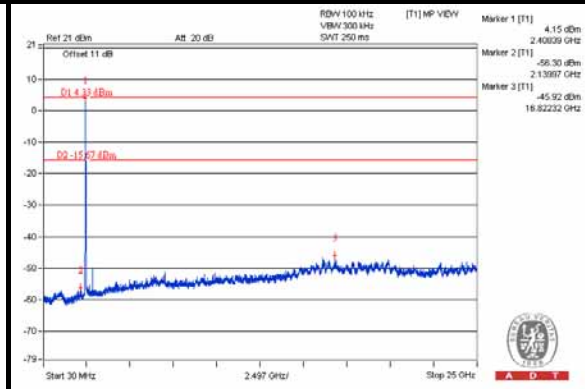
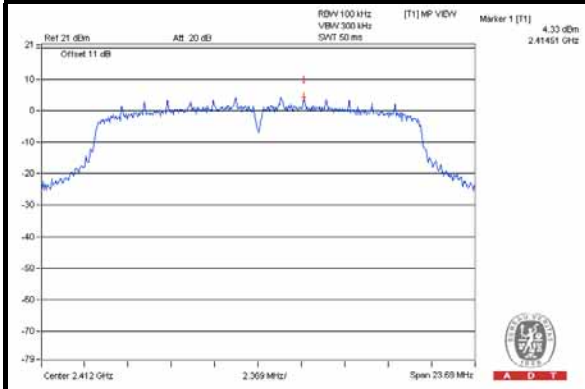




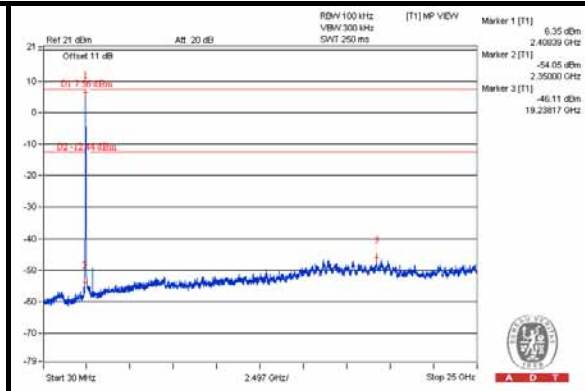
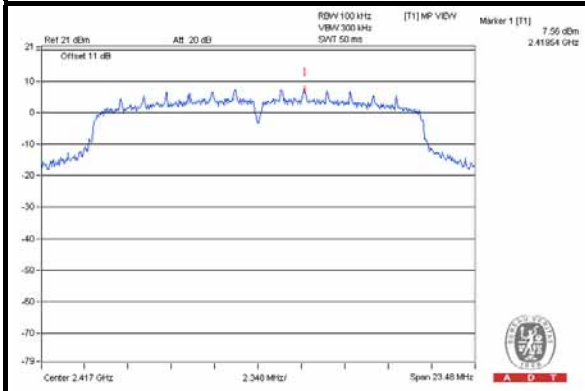
A D T

802.11n (HT20)

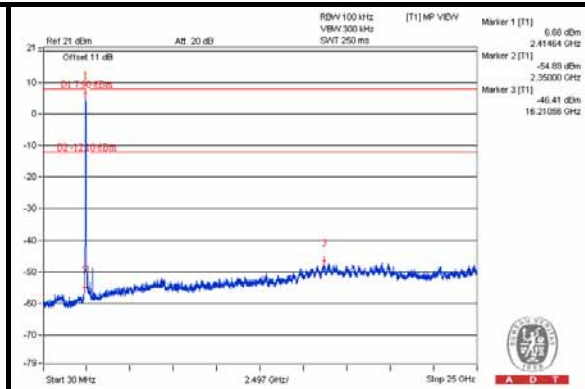
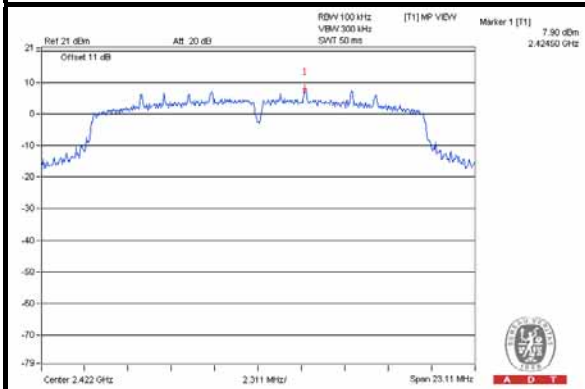
CH 1



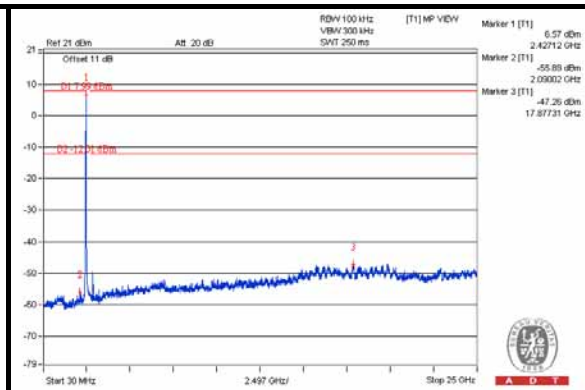
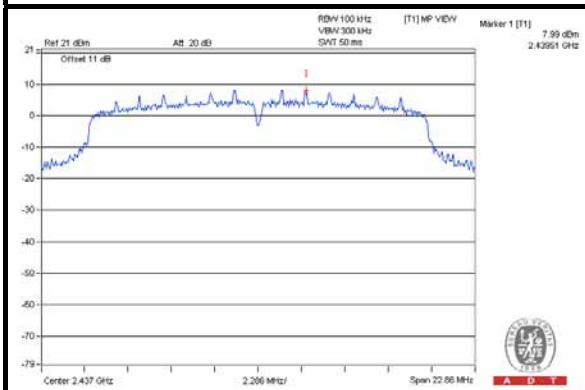
CH 2



CH 3



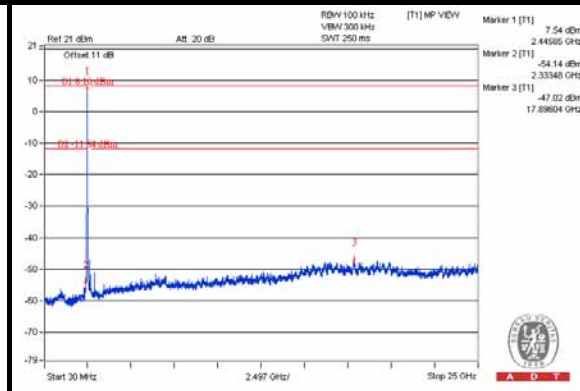
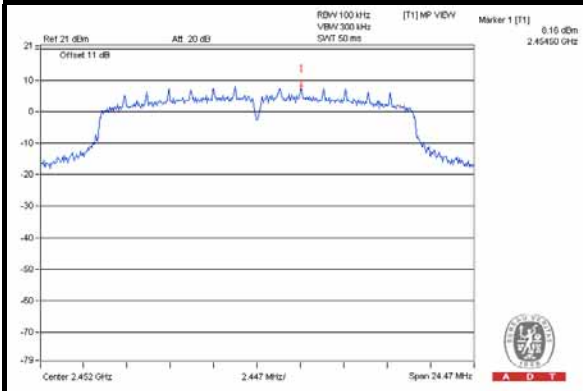
CH 6



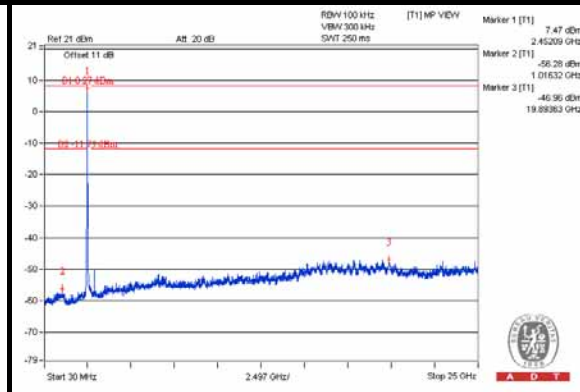
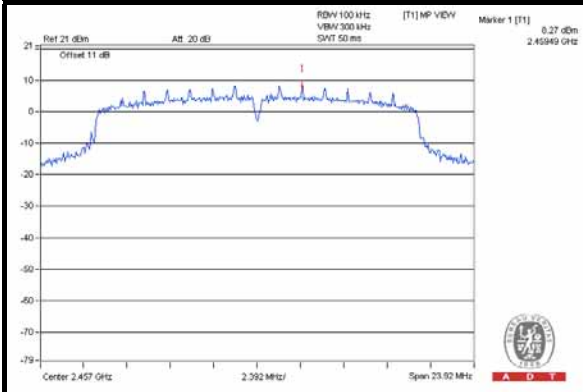


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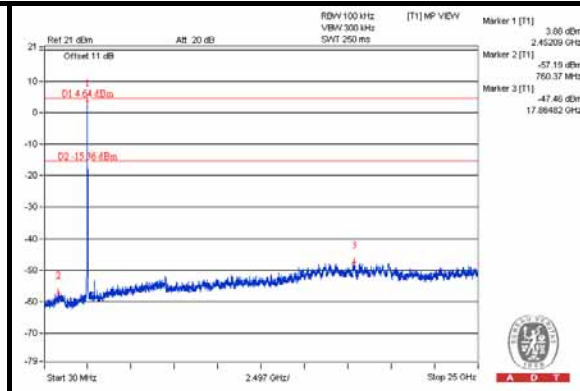
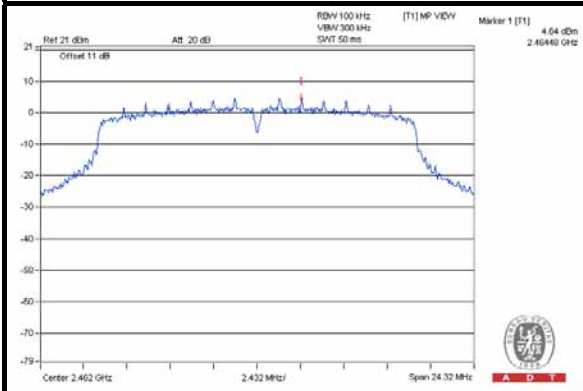
CH 9



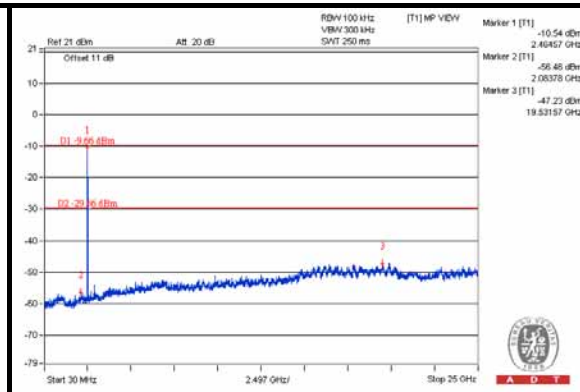
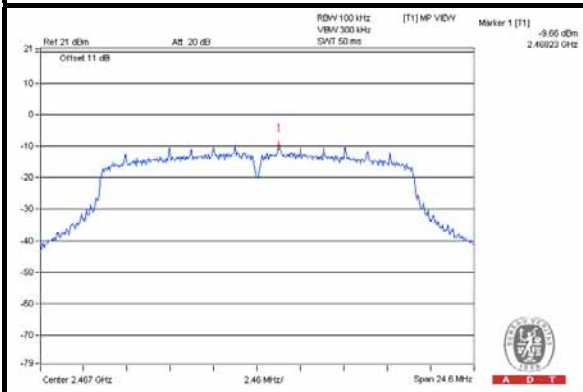
CH 10



CH 11



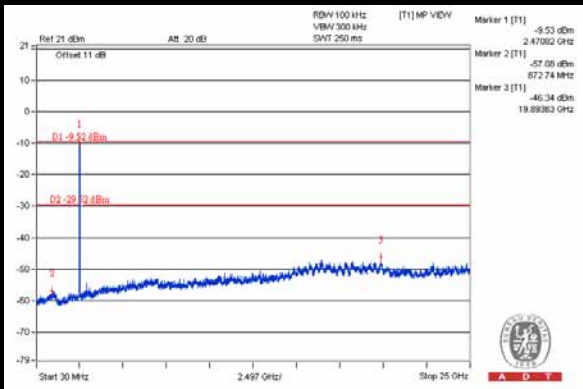
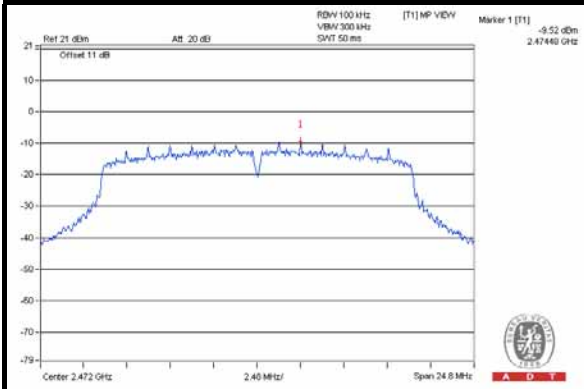
CH 12



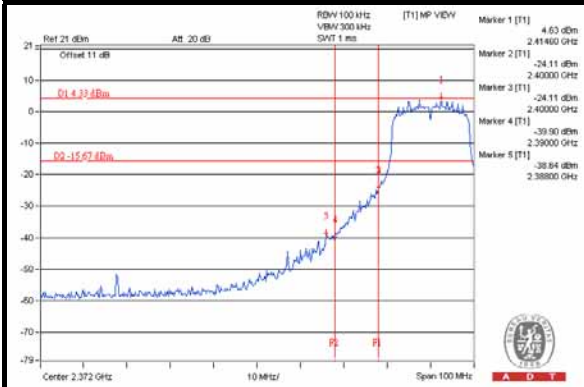


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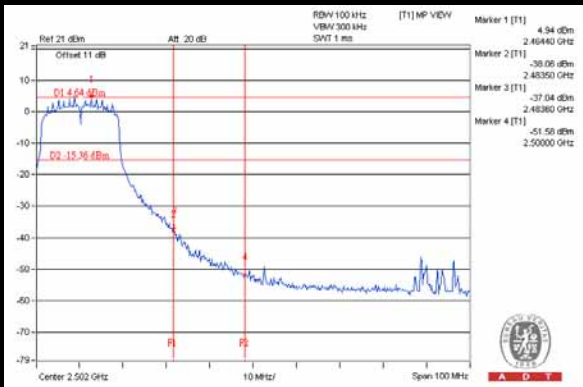
CH 13



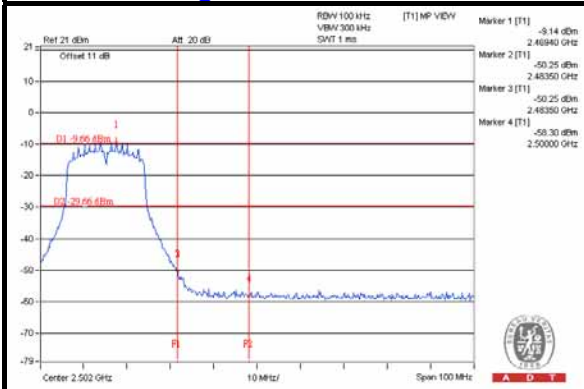
CH 1 Band edge



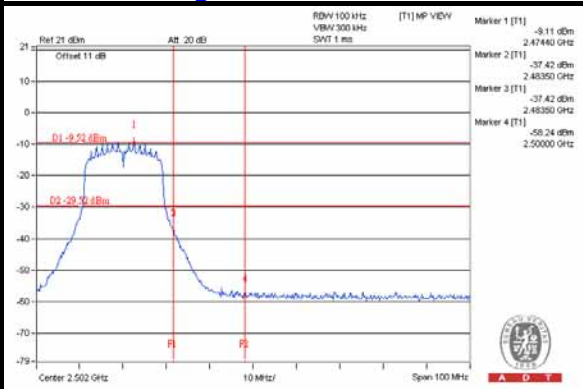
CH 11 Band edge



CH 12 Band edge



CH 13 Band edge





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5. TEST TYPES AND RESULTS (FOR 5GHz, 5.725~5.850GHz 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	100375	Apr. 29, 2014	Apr. 28, 2015
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK8127	8127-522	Sep. 12, 2013	Sep. 11, 2014
Line-Impedance Stabilization Network (for Peripheral)	ENV216	100071	Nov. 13, 2013	Nov. 12, 2014
RF Cable (JYEBAO)	5DFB	COCCAB-001	Mar. 10, 2014	Mar. 09, 2015
50 ohms Terminator	N/A	EMC-03	Sep. 24, 2013	Sep. 23, 2014
50 ohms Terminator	N/A	EMC-02	Oct. 01, 2013	Sep. 30, 2014
Software ADT	BV ADT_Cond_V7.3.7. 3	NA	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. C.
3. The VCCI Con C Registration No. is C-3611.
4. Tested Date: June 26, 2014

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.
- b. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- c. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- d. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit – 20dB) were not recorded.

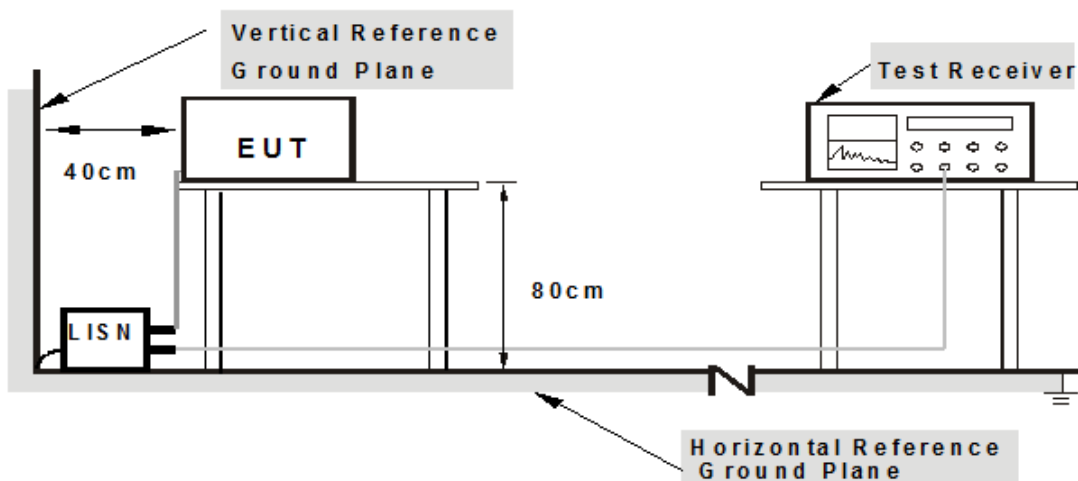
NOTE:

1. The resolution bandwidth of test receiver is 9kHz for Quasi-peak detection (QP) & Average detection (AV).

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 TEST SETUP



Note: 1. Support units were connected to second LISN.

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

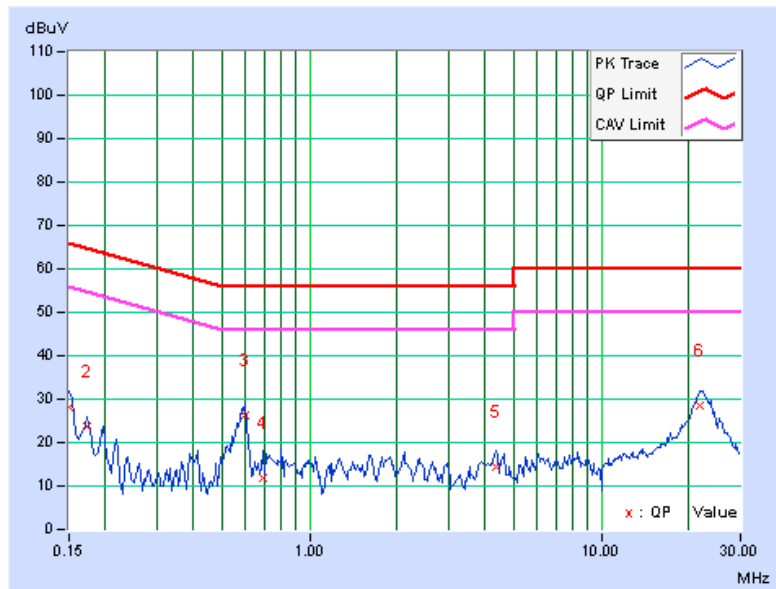
5.1.7 TEST RESULTS

PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)
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No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.07	27.96	25.25	28.03	25.32	66.00	56.00	-37.97	-30.68
2	0.17344	0.07	23.63	18.78	23.70	18.85	64.79	54.79	-41.10	-35.95
3	0.59922	0.10	26.03	24.17	26.13	24.27	56.00	46.00	-29.87	-21.73
4	0.68906	0.11	11.89	11.02	12.00	11.13	56.00	46.00	-44.00	-34.87
5	4.34375	0.27	14.13	7.00	14.40	7.27	56.00	46.00	-41.60	-38.73
6	21.84375	0.76	27.79	23.30	28.55	24.06	60.00	50.00	-31.45	-25.94

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

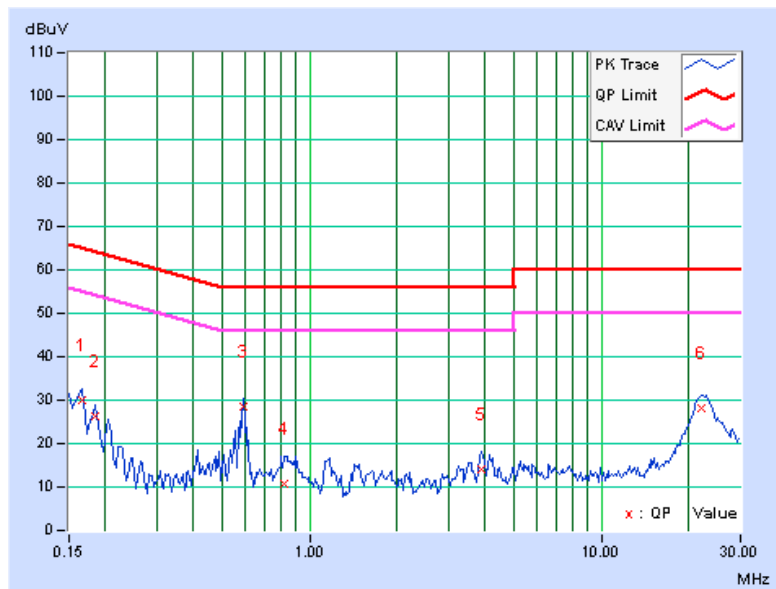


PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	0.07	29.85	29.72	29.92	29.79	65.18	55.18	-35.25	-25.38
2	0.18516	0.07	26.08	26.07	26.15	26.14	64.25	54.25	-38.10	-28.11
3	0.59531	0.10	28.28	28.24	28.38	28.34	56.00	46.00	-27.62	-17.66
4	0.81797	0.12	10.79	9.82	10.91	9.94	56.00	46.00	-45.09	-36.06
5	3.87500	0.26	13.70	7.51	13.96	7.77	56.00	46.00	-42.04	-38.23
6	21.91016	0.75	27.43	22.86	28.18	23.61	60.00	50.00	-31.82	-26.39

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





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5.2 RADIATED AND BANDEGE EMISSION MEASUREMENT

5.2.1 LIMITS OF RADIATED AND BANDEGE 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.



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5.2.2 TEST INSTRUMENTS

For Below 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
MXE EMI Receiver Agilent	N9038A	MY51210105	Jan. 21,2014	Jan. 20,2015
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-03	Nov. 13, 2013	Nov. 12, 2014
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-360	Feb. 26, 2014	Feb. 25, 2015
RF Cable	NA	CHGCAB_001	Oct. 05, 2013	Oct. 04, 2014
Spectrum Analyzer R&S	FSV40	100964	July 15, 2013	July 14, 2014
Horn_Antenna AISl	AIH.8018	0000320091110	Nov. 18, 2013	Nov. 17, 2014
Pre-Amplifier Agilent	8449B	3008A02578	June 24, 2014	June 23, 2015
RF Cable	NA	RF104-201 RF104-203 RF104-204	Dec. 12, 2013	Dec. 11, 2014
Spectrum Analyzer Agilent	E4446A	MY48250253	Aug. 28, 2013	Aug. 27, 2014
Pre-Amplifier SPACEK LABS	SLKka-48-6	9K16	Nov. 13, 2013	Nov. 12, 2014
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Oct. 08, 2013	Oct. 07, 2014
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	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. G.
4. The FCC Site Registration No. is 966073.
5. The VCCI Site Registration No. is G-137.
6. The CANADA Site Registration No. is IC 7450H-2.
7. Tested Date: July 01, 2014



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For Above 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
MXE EMI Receiver Agilent	N9038A	MY50010156	Jan. 15, 2014	Jan. 14, 2015
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-04	Nov. 13, 2013	Nov. 12, 2014
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Feb. 27, 2014	Feb. 26, 2015
RF Cable	NA	CHHCAB_001	Oct. 06, 2013	Oct. 05, 2014
Spectrum Analyzer R&S	FSV40	100964	July 15, 2013	July 14, 2014
Horn_Antenna AISI	AIH.8018	0000220091110	Dec. 06, 2013	Dec. 05, 2014
Pre-Amplifier Agilent	8449B	3008A01923	Oct. 29, 2013	Oct. 28, 2014
RF Cable	NA	RF104-205 RF104-207 RF104-202	Dec. 12, 2013	Dec. 11, 2014
Spectrum Analyzer Agilent	E4446A	MY48250253	Aug. 28, 2013	Aug. 27, 2014
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Nov. 13, 2013	Nov. 12, 2014
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Oct. 08, 2013	Oct. 07, 2014
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	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 26, 2014

5.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for 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:

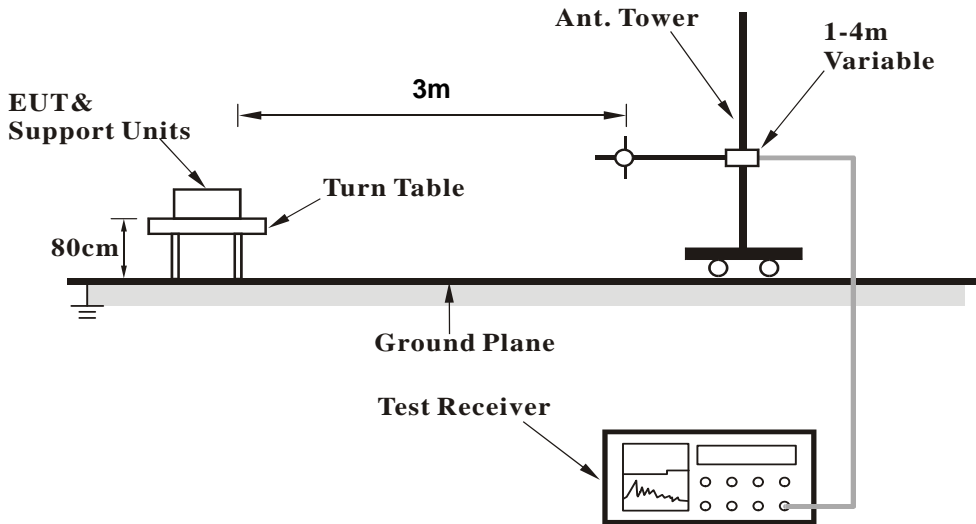
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

5.2.4 DEVIATION FROM TEST STANDARD

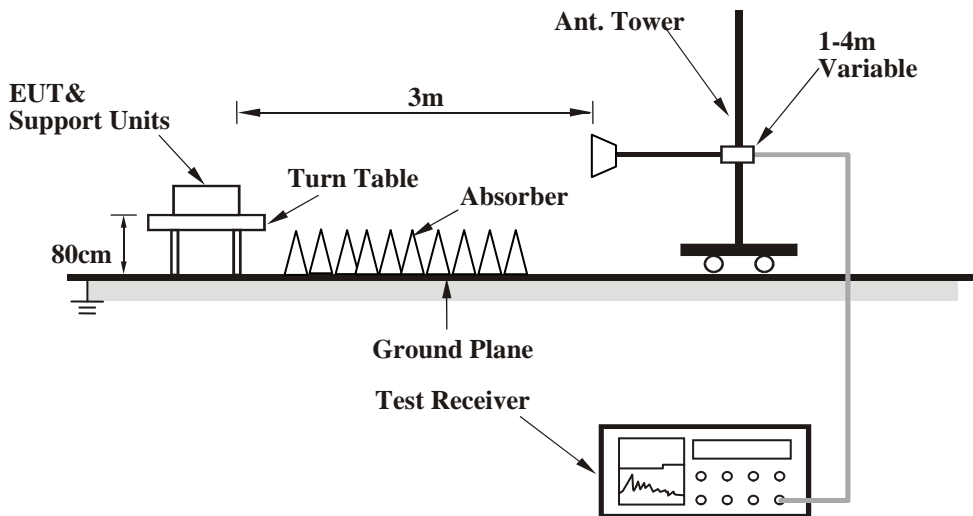
No deviation

5.2.5 TEST SETUP

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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 4.1.6



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5.2.7 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	435.34	29.1 QP	46.0	-16.9	1.76 H	208	37.62	-8.52
2	485.84	27.3 QP	46.0	-18.7	1.53 H	173	34.99	-7.65
3	588.80	29.8 QP	46.0	-16.2	1.43 H	307	35.11	-5.31
4	613.03	28.0 QP	46.0	-18.0	1.52 H	94	32.46	-4.46
5	691.33	29.9 QP	46.0	-16.1	1.17 H	225	33.54	-3.64
6	717.09	27.7 QP	46.0	-18.3	1.06 H	126	31.00	-3.31
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	435.12	26.3 QP	46.0	-19.7	1.45 V	149	34.81	-8.53
2	485.94	29.1 QP	46.0	-16.9	1.32 V	195	36.74	-7.64
3	589.44	28.5 QP	46.0	-17.6	1.07 V	177	33.74	-5.29
4	614.10	28.1 QP	46.0	-17.9	1.67 V	160	32.60	-4.46
5	691.33	27.6 QP	46.0	-18.4	1.46 V	217	31.24	-3.64
6	940.58	28.8 QP	46.0	-17.2	1.49 V	115	27.98	0.85

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	435.34	28.9 QP	46.0	-17.1	1.68 H	203	37.42	-8.52
2	486.88	27.9 QP	46.0	-18.1	1.56 H	176	35.52	-7.61
3	588.88	30.3 QP	46.0	-15.7	1.38 H	329	35.57	-5.30
4	612.76	27.9 QP	46.0	-18.1	1.53 H	54	32.36	-4.46
5	690.62	29.9 QP	46.0	-16.1	1.28 H	187	33.51	-3.63
6	717.30	28.2 QP	46.0	-17.8	1.16 H	144	31.52	-3.31

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	434.47	26.4 QP	46.0	-19.6	1.55 V	157	34.97	-8.54
2	485.02	28.0 QP	46.0	-18.0	1.26 V	212	35.61	-7.63
3	589.23	28.5 QP	46.0	-17.5	1.07 V	180	33.79	-5.29
4	613.65	27.5 QP	46.0	-18.5	1.63 V	169	31.96	-4.46
5	691.01	27.4 QP	46.0	-18.6	1.36 V	235	31.01	-3.64
6	940.56	28.3 QP	46.0	-17.7	1.50 V	124	27.48	0.85

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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CHANNEL	TX Channel 165	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	434.10	28.4 QP	46.0	-17.6	1.68 H	199	36.94	-8.55
2	485.34	26.5 QP	46.0	-19.5	1.52 H	142	34.17	-7.64
3	588.69	30.0 QP	46.0	-16.0	1.45 H	323	35.31	-5.31
4	612.67	27.8 QP	46.0	-18.2	1.54 H	74	32.30	-4.46
5	691.31	30.0 QP	46.0	-16.0	1.23 H	199	33.63	-3.64
6	716.60	27.5 QP	46.0	-18.5	1.12 H	115	30.84	-3.31

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	434.61	26.2 QP	46.0	-19.9	1.49 V	144	34.68	-8.53
2	486.52	29.2 QP	46.0	-16.8	1.39 V	211	36.84	-7.62
3	589.45	29.0 QP	46.0	-17.0	1.06 V	189	34.26	-5.29
4	613.66	28.2 QP	46.0	-17.8	1.63 V	168	32.67	-4.46
5	691.05	27.5 QP	46.0	-18.5	1.33 V	228	31.17	-3.64
6	940.55	27.6 QP	46.0	-18.4	1.40 V	105	26.79	0.85

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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802.11n (HT20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	434.36	28.0 QP	46.0	-18.0	1.75 H	220	36.52	-8.54
2	486.06	27.2 QP	46.0	-18.8	1.60 H	162	34.84	-7.64
3	588.72	30.2 QP	46.0	-15.8	1.42 H	301	35.50	-5.31
4	612.95	27.9 QP	46.0	-18.1	1.49 H	88	32.34	-4.46
5	690.53	29.9 QP	46.0	-16.1	1.26 H	206	33.57	-3.63
6	716.65	27.6 QP	46.0	-18.4	1.18 H	155	30.87	-3.31

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	434.20	25.7 QP	46.0	-20.3	1.54 V	126	34.22	-8.54
2	485.69	28.2 QP	46.0	-17.8	1.29 V	195	35.80	-7.64
3	589.17	28.0 QP	46.0	-18.0	1.12 V	165	33.27	-5.29
4	613.22	27.3 QP	46.0	-18.7	1.67 V	172	31.76	-4.46
5	690.78	26.8 QP	46.0	-19.2	1.46 V	248	30.45	-3.63
6	940.03	27.6 QP	46.0	-18.4	1.49 V	72	26.75	0.84

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	434.58	28.6 QP	46.0	-17.4	1.66 H	208	37.10	-8.53
2	485.60	27.5 QP	46.0	-18.5	1.45 H	160	35.15	-7.64
3	588.51	29.9 QP	46.0	-16.1	1.40 H	326	35.25	-5.31
4	612.96	27.9 QP	46.0	-18.1	1.58 H	80	32.39	-4.46
5	691.02	30.0 QP	46.0	-16.0	1.30 H	212	33.60	-3.64
6	717.11	27.9 QP	46.0	-18.1	1.18 H	143	31.20	-3.31

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	435.42	27.3 QP	46.0	-18.7	1.42 V	116	35.79	-8.52
2	486.29	29.1 QP	46.0	-16.9	1.35 V	213	36.75	-7.63
3	589.30	29.1 QP	46.0	-17.0	1.07 V	171	34.34	-5.29
4	614.16	28.1 QP	46.0	-17.9	1.70 V	172	32.56	-4.46
5	689.49	26.2 QP	46.0	-19.8	1.44 V	225	29.84	-3.63
6	940.64	28.4 QP	46.0	-17.6	1.46 V	92	27.50	0.86

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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CHANNEL	TX Channel 165	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	435.09	28.9 QP	46.0	-17.1	1.70 H	203	37.42	-8.53
2	485.70	27.3 QP	46.0	-18.7	1.53 H	137	34.91	-7.64
3	588.06	29.8 QP	46.0	-16.2	1.43 H	326	35.16	-5.33
4	613.16	28.4 QP	46.0	-17.6	1.52 H	102	32.83	-4.46
5	690.90	30.2 QP	46.0	-15.8	1.28 H	218	33.84	-3.63
6	715.74	27.0 QP	46.0	-19.1	1.15 H	155	30.27	-3.32

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	434.71	26.0 QP	46.0	-20.0	1.35 V	113	34.51	-8.53
2	486.15	28.6 QP	46.0	-17.4	1.20 V	207	36.27	-7.63
3	589.89	28.8 QP	46.0	-17.2	1.06 V	175	34.11	-5.27
4	613.16	27.2 QP	46.0	-18.8	1.67 V	162	31.63	-4.46
5	690.96	27.2 QP	46.0	-18.8	1.45 V	213	30.81	-3.63
6	940.41	27.6 QP	46.0	-18.4	1.50 V	98	26.78	0.85

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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ABOVE 1GHz WORST-CASE DATA

802.11a

CHANNEL	TX Channel 149	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	*5745.00	113.4 PK			1.21 H	9	108.48	4.92
2	*5745.00	103.3 AV			1.21 H	9	98.38	4.92
3	11490.00	58.4 PK	74.0	-15.6	1.00 H	119	47.75	10.65
4	11490.00	44.7 AV	54.0	-9.3	1.00 H	119	34.05	10.65

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	110.4 PK			1.04 V	213	105.48	4.92
2	*5745.00	97.3 AV			1.04 V	213	92.38	4.92
3	11490.00	57.7 PK	74.0	-16.3	1.00 V	145	47.05	10.65
4	11490.00	44.5 AV	54.0	-9.5	1.00 V	145	33.85	10.65

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) – Pre-Amplifier 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 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	113.3 PK			1.32 H	2	108.35	4.95
2	*5785.00	103.0 AV			1.32 H	2	98.05	4.95
3	11570.00	53.8 PK	74.0	-20.2	1.10 H	120	43.12	10.68
4	11570.00	43.2 AV	54.0	-10.8	1.10 H	120	32.52	10.68

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	*5785.00	110.2 PK			1.09 V	208	105.25	4.95
2	*5785.00	97.8 AV			1.09 V	208	92.85	4.95
3	11570.00	58.2 PK	74.0	-15.8	1.02 V	131	47.52	10.68
4	11570.00	44.8 AV	54.0	-9.2	1.02 V	131	34.12	10.68

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) – Pre-Amplifier 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 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	113.5 PK			1.20 H	4	108.52	4.98
2	*5825.00	102.3 AV			1.20 H	4	97.32	4.98
3	11650.00	53.8 PK	74.0	-20.2	1.13 H	114	43.21	10.59
4	11650.00	43.1 AV	54.0	-10.9	1.13 H	114	32.51	10.59

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	109.4 PK			1.07 V	205	104.42	4.98
2	*5825.00	96.4 AV			1.07 V	205	91.42	4.98
3	11650.00	57.3 PK	74.0	-16.7	1.00 V	130	46.71	10.59
4	11650.00	44.4 AV	54.0	-9.6	1.00 V	130	33.81	10.59

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) – Pre-Amplifier 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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802.11n (HT20)

CHANNEL	TX Channel 149	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	*5745.00	113.6 PK			1.22 H	4	108.68	4.92
2	*5745.00	102.5 AV			1.22 H	4	97.58	4.92
3	11490.00	54.0 PK	74.0	-20.0	1.08 H	128	43.35	10.65
4	11490.00	43.2 AV	54.0	-10.8	1.08 H	128	32.55	10.65

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	110.1 PK			1.07 V	195	105.18	4.92
2	*5745.00	96.9 AV			1.07 V	195	91.98	4.92
3	11490.00	57.2 PK	74.0	-16.8	1.03 V	133	46.55	10.65
4	11490.00	44.5 AV	54.0	-9.5	1.03 V	133	33.85	10.65

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) – Pre-Amplifier 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 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	113.6 PK			1.20 H	4	108.65	4.95
2	*5785.00	102.7 AV			1.20 H	4	97.75	4.95
3	11570.00	54.3 PK	74.0	-19.7	1.11 H	134	43.62	10.68
4	11570.00	43.6 AV	54.0	-10.4	1.11 H	134	32.92	10.68
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	*5785.00	109.4 PK			1.06 V	206	104.45	4.95
2	*5785.00	96.4 AV			1.06 V	206	91.45	4.95
3	11570.00	57.2 PK	74.0	-16.8	1.00 V	129	46.52	10.68
4	11570.00	44.1 AV	54.0	-9.9	1.00 V	129	33.42	10.68

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) – Pre-Amplifier 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 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	113.4 PK			1.18 H	4	108.42	4.98
2	*5825.00	102.4 AV			1.18 H	4	97.42	4.98
3	11650.00	54.0 PK	74.0	-20.0	1.15 H	110	43.41	10.59
4	11650.00	43.2 AV	54.0	-10.8	1.15 H	110	32.61	10.59

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	109.7 PK			1.09 V	216	104.72	4.98
2	*5825.00	96.8 AV			1.09 V	216	91.82	4.98
3	11650.00	57.2 PK	74.0	-16.8	1.00 V	144	46.61	10.59
4	11650.00	44.2 AV	54.0	-9.8	1.00 V	144	33.61	10.59

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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
SPECTRUM ANALYZER R&S	FSV 40	100964	July 15, 2013	July 14, 2014

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 29, 2014

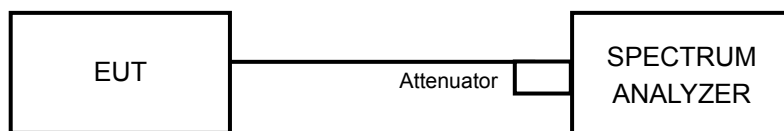
5.3.3 TEST PROCEDURE

1. Set resolution bandwidth (RBW) = 100kHz
2. Set the video bandwidth (VBW) $\geq 3 \times$ 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.



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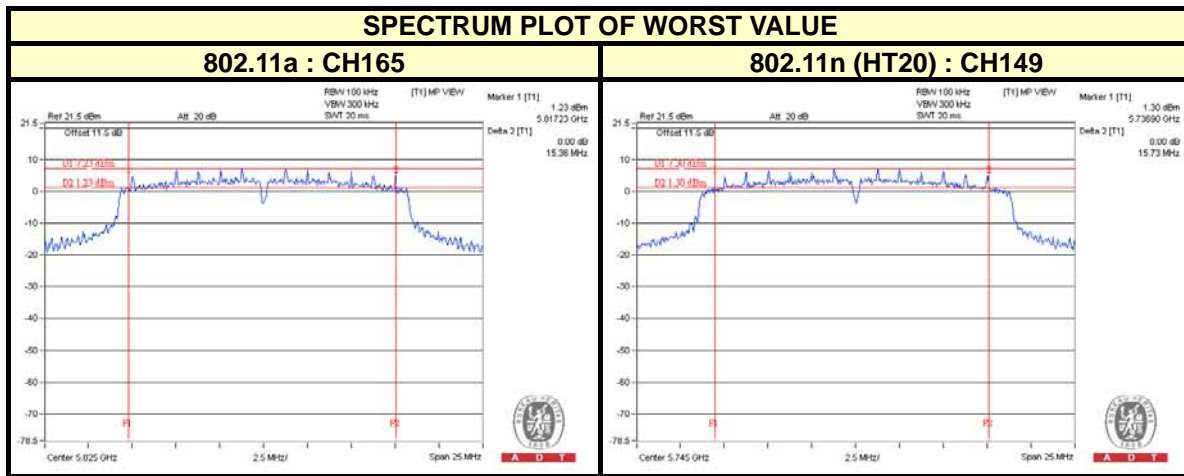
5.3.7 TEST RESULTS

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.49	0.5	PASS
157	5785	15.54	0.5	PASS
165	5825	15.36	0.5	PASS

802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.73	0.5	PASS
157	5785	15.92	0.5	PASS
165	5825	15.84	0.5	PASS





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5.4 CONDUCTED OUTPUT POWER MEASUREMENT

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 Anritsu	ML2495A	1014008	Apr. 30, 2014	Apr. 29, 2015
Power sensor Anritsu	MA2411B	0917122	Apr. 30, 2014	Apr. 29, 2015

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 29, 2014

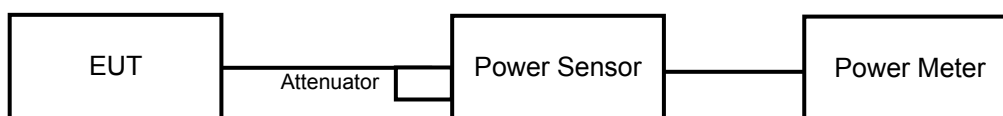
5.4.3 TEST PROCEDURES

The peak / average power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak / average 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 5.3.6



5.4.7 TEST RESULTS

FOR PEAK POWER

802.11a

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
149	5745	152.757	21.84	30	PASS
157	5785	157.036	21.96	30	PASS
165	5825	148.936	21.73	30	PASS

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
149	5745	132.13	21.21	30	PASS
157	5785	127.35	21.05	30	PASS
165	5825	132.739	21.23	30	PASS

※Add test for each data rate output power (require by manufacturer):

802.11a

CHANNEL	FREQUENCY (MHz)	PEAK POWER (dBm)							
		Data rate							
		6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
149	5745	21.84	21.69	21.8	21.48	21.72	21.61	21.68	21.71
157	5785	21.96	21.57	21.82	21.8	21.54	21.53	21.59	21.88
165	5825	21.73	21.33	21.41	21.71	21.72	21.6	21.31	21.63

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (dBm)							
		Data rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
149	5745	21.21	20.88	21.09	20.9	20.78	20.89	21.06	20.84
157	5785	21.05	21.02	20.74	20.6	20.8	20.58	20.94	20.65
165	5825	21.23	20.78	20.86	21.2	21.18	20.93	21.17	20.75



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FOR AVERAGE POWER

802.11a

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)
149	5745	58.614	17.68
157	5785	57.943	17.63
165	5825	53.951	17.32

802.11n (VHT20)

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)
149	5745	57.810	17.62
157	5785	58.076	17.64
165	5825	58.749	17.69

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
SPECTRUM ANALYZER R&S	FSV 40	100964	July 15, 2013	July 14, 2014

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 29, 2014

5.5.3 TEST PROCEDURE

1. Set the RBW = 3 kHz, VBW =10 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 amplitude level.

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



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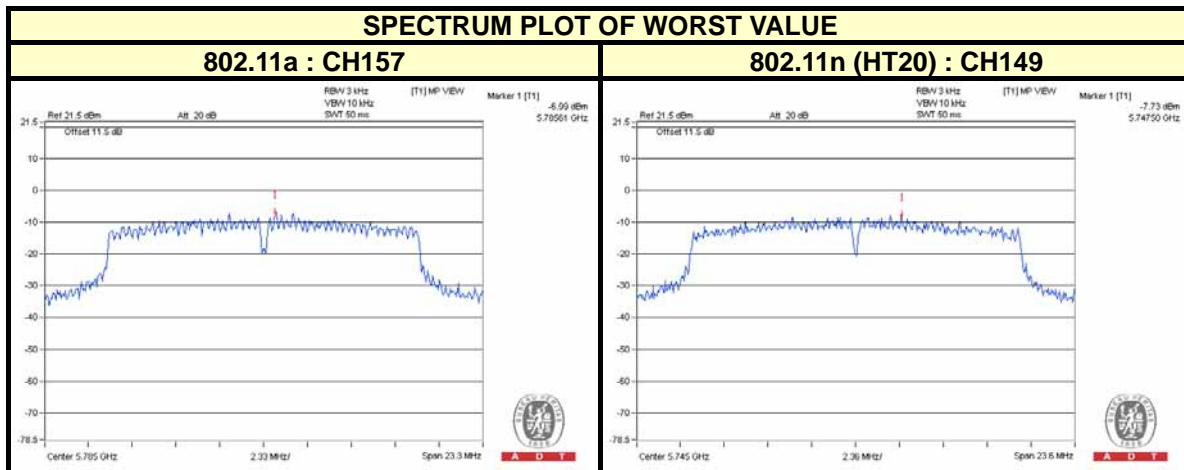
5.5.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	LIMIT (dBm)	PASS /FAIL
149	5745	-7.88	8	PASS
157	5785	-6.99	8	PASS
165	5825	-7.59	8	PASS

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	LIMIT (dBm)	PASS /FAIL
149	5745	-7.73	8	PASS
157	5785	-8.07	8	PASS
165	5825	-8.69	8	PASS





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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
SPECTRUM ANALYZER R&S	FSV 40	100964	July 15, 2013	July 14, 2014

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 29, 2014

5.6.3 TEST PROCEDURE

Measurement Procedure - Reference Level

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

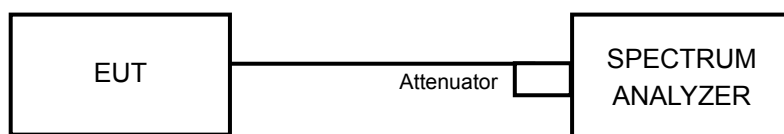
Measurement Procedure –Unwanted Emission Level

1. Set RBW = 100 kHz.
2. Set VBW \geq 300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

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

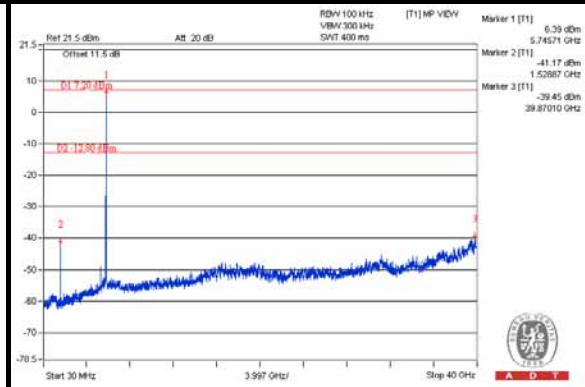
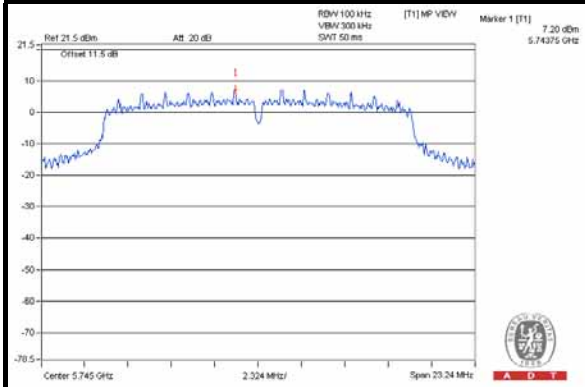
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.



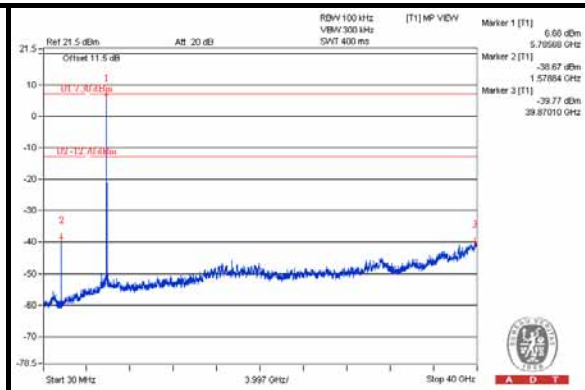
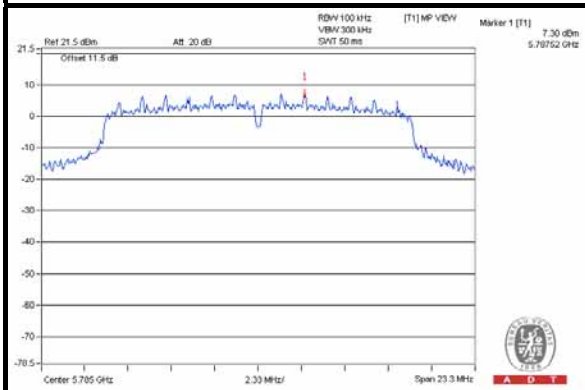
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802.11a

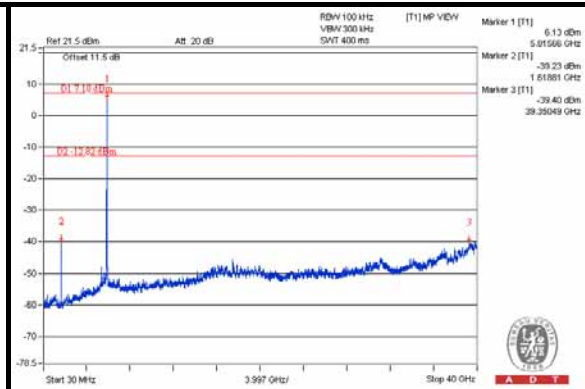
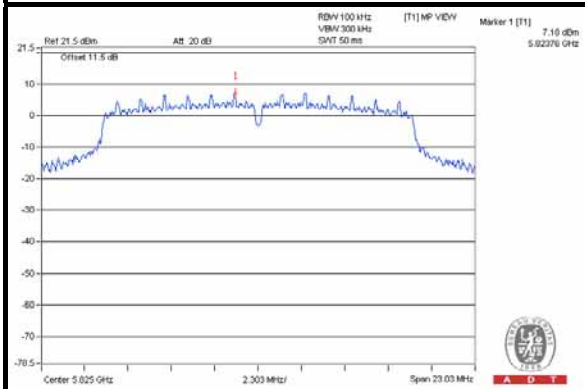
CH 149



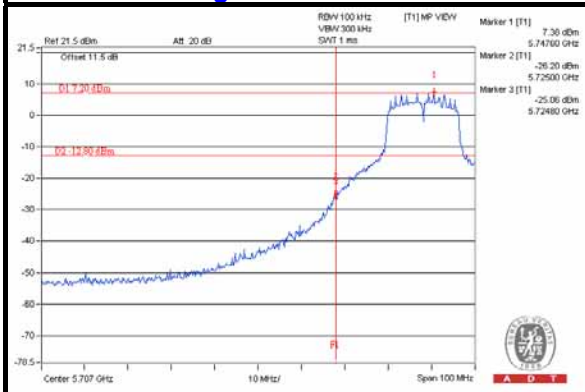
CH 157



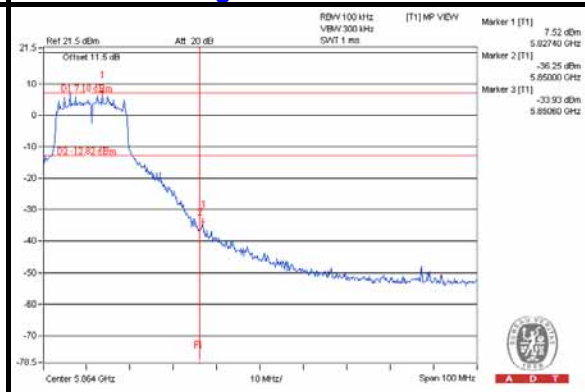
CH 165



CH 149 Band edge



CH 165 Band edge

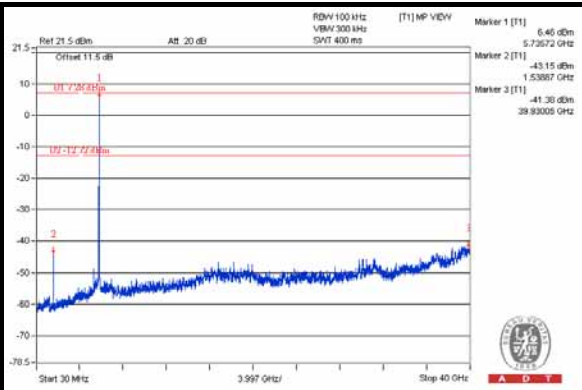
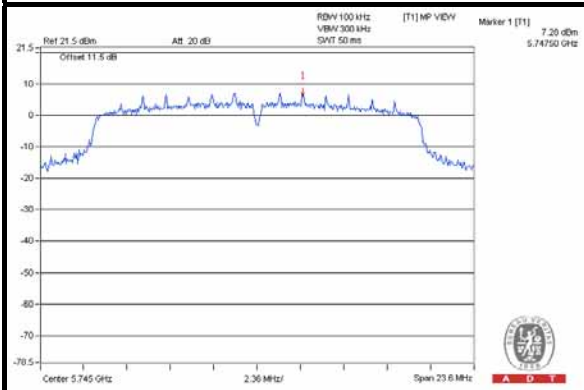




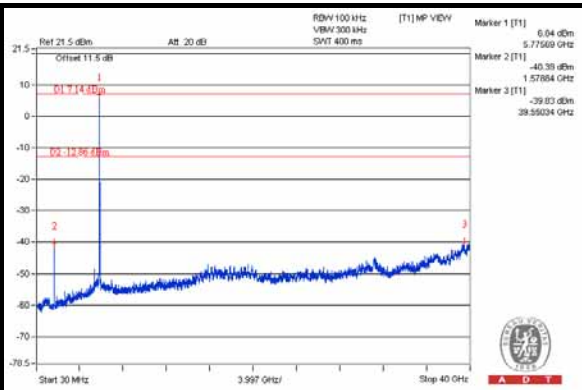
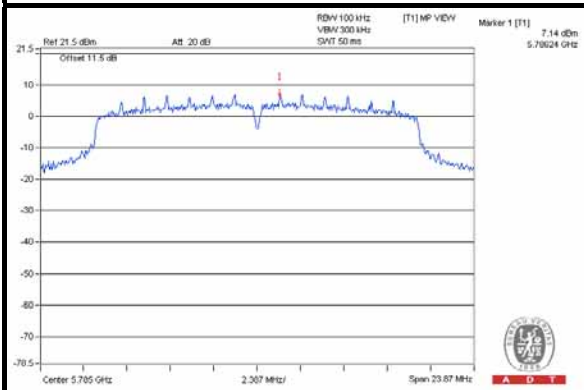
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802.11n (HT20)

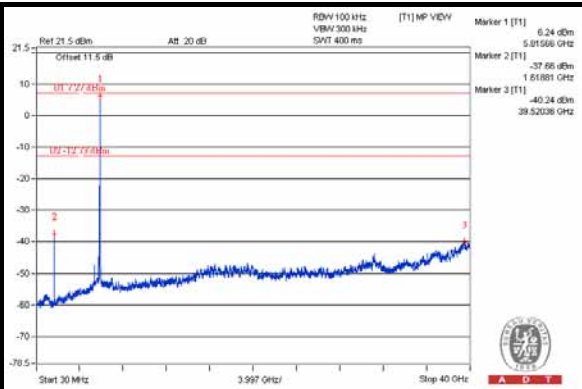
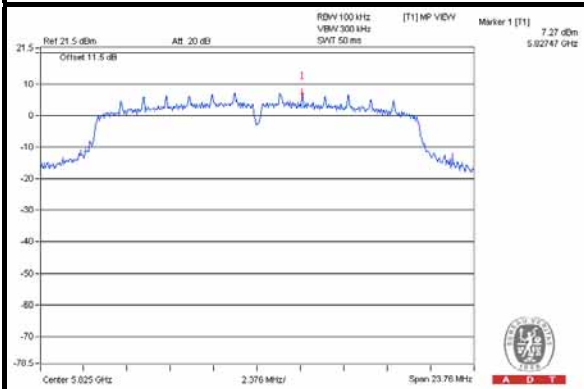
CH 149



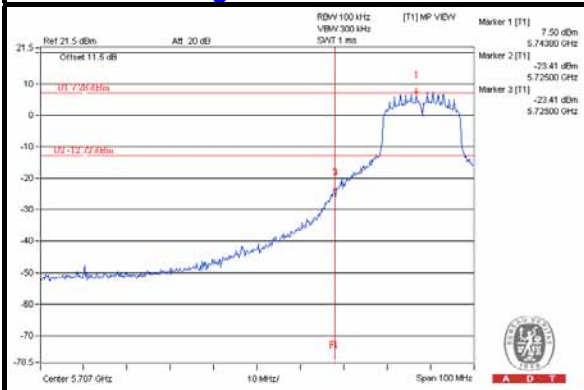
CH 157



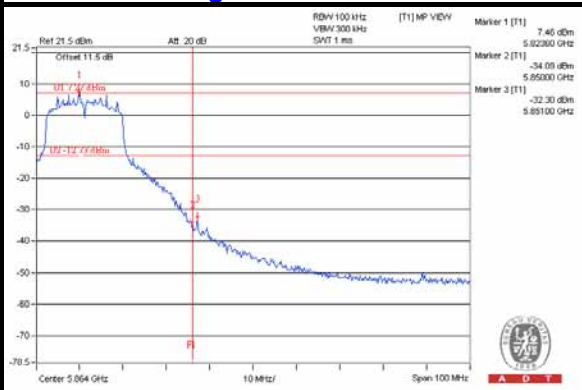
CH 165



CH 149 Band edge



CH 165 Band edge





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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:

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Web Site: www.bureauveritas-adt.com

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



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

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

--- END ---