

FCC TEST REPORT (15.247)

REPORT NO.: RF130725E04 R3

MODEL NO.: MR34-HW

FCC ID: UDX-60025010

RECEIVED: July 25, 2013

TESTED: Aug. 01 to Sep. 12, 2013

ISSUED: Sep. 13, 2013

APPLICANT: Cisco Systems, Inc.

ADDRESS: 170 West Tasman Drive, San Jose, CA
95134 USA

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

LAB ADDRESS : No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan,
R.O.C.

TEST LOCATION (1): No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan,
R.O.C.

TEST LOCATION (2): No. 49, Ln. 206, Wende Rd., Shangshan Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan,
R.O.C.

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



This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification



A D T

Table of Contents

RELEASE CONTROL RECORD	5
1. CERTIFICATION	6
2. SUMMARY OF TEST RESULTS	7
2.1 MEASUREMENT UNCERTAINTY	8
3. GENERAL INFORMATION	9
3.1 GENERAL DESCRIPTION OF EUT	9
3.2 DESCRIPTION OF TEST MODES	13
3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL	14
3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS	20
3.4 DUTY CYCLE OF TEST SIGNAL	21
3.5 DESCRIPTION OF SUPPORT UNITS	25
3.6 CONFIGURATION OF SYSTEM UNDER TEST	26
4. TEST TYPES AND RESULTS (FOR 2.4GHZ, 2.400 ~ 2.4835GHZ BAND)	28
4.1 CONDUCTED EMISSION MEASUREMENT	28
4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT	28
4.1.2 TEST INSTRUMENTS	28
4.1.3 TEST PROCEDURES	29
4.1.4 DEVIATION FROM TEST STANDARD	29
4.1.5 TEST SETUP	29
4.1.6 EUT OPERATING CONDITIONS	30
4.1.7 TEST RESULTS (MODE 1)	31
4.1.8 TEST RESULTS (MODE 2)	37
4.1.9 TEST RESULTS (MODE 3)	43
4.1.10 TEST RESULTS (MODE 4)	49
4.2 RADIATED EMISSION AND BANDEDGE MEASUREMENT	55
4.2.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT	55
4.2.2 TEST INSTRUMENTS	56
4.2.3 TEST PROCEDURES	58
4.2.4 DEVIATION FROM TEST STANDARD	58
4.2.5 TEST SETUP	59
4.2.6 EUT OPERATING CONDITIONS	59
4.2.7 TEST RESULTS (MODE 1)	60
4.2.8 TEST RESULTS (MODE 2)	75
4.3 6DB BANDWIDTH MEASUREMENT	90
4.3.1 LIMITS OF 6DB BANDWIDTH MEASUREMENT	90
4.3.2 TEST INSTRUMENTS	90
4.3.3 TEST PROCEDURE	90
4.3.4 DEVIATION FROM TEST STANDARD	90
4.3.5 TEST SETUP	90
4.3.6 EUT OPERATING CONDITIONS	90
4.3.7 TEST RESULTS (MODE 1)	91
4.3.8 TEST RESULTS (MODE 2)	92
4.4 CONDUCTED OUTPUT POWER MEASUREMENT	93
4.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT	93
4.4.2 INSTRUMENTS	93
4.4.3 TEST PROCEDURES	93
4.4.4 DEVIATION FROM TEST STANDARD	94
4.4.5 TEST SETUP	94
4.4.6 EUT OPERATING CONDITIONS	94
4.4.7 TEST RESULTS (MODE 1)	95



4.4.8	TEST RESULTS (MODE 2)	96
4.5	POWER SPECTRAL DENSITY MEASUREMENT	97
4.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	97
4.5.2	TEST INSTRUMENTS	97
4.5.3	TEST PROCEDURE	97
4.5.4	DEVIATION FROM TEST STANDARD	97
4.5.5	TEST SETUP	97
4.5.6	EUT OPERATING CONDITION	97
4.5.7	TEST RESULTS (MODE 1)	98
4.5.8	TEST RESULTS (MODE 2)	99
4.6	CONDUCTED OUT-BAND EMISSION MEASUREMENT	101
4.6.1	LIMITS OF CONDUCTED OUT-BAND EMISSION MEASUREMENT	101
4.6.2	TEST INSTRUMENTS	101
4.6.3	TEST PROCEDURE	101
4.6.4	DEVIATION FROM TEST STANDARD	102
4.6.5	TEST SETUP	102
4.6.6	EUT OPERATING CONDITION	102
4.6.7	TEST RESULTS	102
5.	TEST TYPES AND RESULTS (FOR 5GHZ, 5.725~5.850GHZ BAND)	127
5.1	CONDUCTED EMISSION MEASUREMENT	127
5.1.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	127
5.1.2	TEST INSTRUMENTS	127
5.1.3	TEST PROCEDURES	128
5.1.4	DEVIATION FROM TEST STANDARD	128
5.1.5	TEST SETUP	128
5.1.6	EUT OPERATING CONDITIONS	129
5.1.7	TEST RESULTS (MODE 1)	130
5.1.8	TEST RESULTS (MODE 2)	136
5.1.9	TEST RESULTS (MODE 3)	142
5.1.10	TEST RESULTS (MODE 4)	148
5.2	RADIATED AND BANDEDGE EMISSION MEASUREMENT	154
5.2.1	LIMITS OF RADIATED AND BANDEDGE EMISSION MEASUREMENT	154
5.2.2	TEST INSTRUMENTS	155
5.2.3	TEST PROCEDURES	157
5.2.4	DEVIATION FROM TEST STANDARD	157
5.2.5	TEST SETUP	158
5.2.6	EUT OPERATING CONDITIONS	158
5.2.7	TEST RESULTS (MODE 1)	159
5.2.8	TEST RESULTS (MODE 2)	170
5.3	6DB BANDWIDTH MEASUREMENT	182
5.3.1	LIMITS OF 6DB BANDWIDTH MEASUREMENT	182
5.3.2	TEST INSTRUMENTS	182
5.3.3	TEST PROCEDURE	182
5.3.4	DEVIATION FROM TEST STANDARD	182
5.3.5	TEST SETUP	182
5.3.6	EUT OPERATING CONDITIONS	182
5.3.7	TEST RESULTS (MODE 1)	183
5.3.8	TEST RESULTS (MODE 2)	184
5.4	CONDUCTED OUTPUT POWER MEASUREMENT	185
5.4.1	LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT	185
5.4.2	INSTRUMENTS	185
5.4.3	TEST PROCEDURES	185



A D T

5.4.4	DEVIATION FROM TEST STANDARD	186
5.4.5	TEST SETUP	186
5.4.6	EUT OPERATING CONDITIONS	186
5.4.7	TEST RESULTS (MODE 1)	187
5.4.8	TEST RESULTS (MODE 2)	188
5.5	POWER SPECTRAL DENSITY MEASUREMENT	189
5.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	189
5.5.2	TEST INSTRUMENTS.....	189
5.5.3	TEST PROCEDURE.....	189
5.5.4	DEVIATION FROM TEST STANDARD	189
5.5.5	TEST SETUP	190
5.5.6	EUT OPERATING CONDITION.....	190
5.5.7	TEST RESULTS (MODE 1)	191
5.5.8	TEST RESULTS (MODE 2)	192
5.6	CONDUCTED OUT-BAND EMISSION MEASUREMENT	194
5.6.1	LIMITS OF CONDUCTED OUT-BAND EMISSION MEASUREMENT.....	194
5.6.2	TEST INSTRUMENTS.....	194
5.6.3	TEST PROCEDURE.....	194
5.6.4	DEVIATION FROM TEST STANDARD	195
5.6.5	TEST SETUP	195
5.6.6	EUT OPERATING CONDITION.....	195
5.6.7	TEST RESULTS	195
6.	PHOTOGRAPHS OF THE TEST CONFIGURATION.....	215
7.	INFORMATION ON THE TESTING LABORATORIES	216
8.	APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB	217

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF130725E04	Original release	Aug. 09, 2013
RF130725E04 R1	Modified description of section 3.2.1	Aug. 15, 2013
RF130725E04 R2	Revised the conducted emission & radiated emission (below 1GHz) data.	Sep. 06, 2013
RF130725E04 R3	Revised the band edge measurement and power spectral density data.	Sep. 13, 2013

1. CERTIFICATION

PRODUCT: Cisco Meraki MR34
BRAND NAME: Cisco
MODEL NO.: MR34-HW
TEST SAMPLE: R&D SAMPLE
APPLICANT: Cisco Systems, Inc.
TESTED: Aug. 01 to Sep. 12, 2013
STANDARDS: FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10-2009

The above equipment (Model: MR34-HW) 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:** Sep. 13, 2013
(Phoenix Huang, Specialist)

APPROVED BY : May Chen , **DATE:** Sep. 13, 2013
(May Chen, Manager)

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 -2.30dB at 2.07813MHz
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -0.1dB at 2390.00MHz & 2483.50MHz
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted 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	Antenna connector is IPEX not a standard connector.

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 -6.53dB at 0.50119MHz
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -0.5dB at 5460.00MHz
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted 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	Antenna connector is IPEX not a standard connector.

NOTE: The EUT was operating in 2.400 ~ 2.4835GHz, 5.15~5.25GHz 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 5.15~5.25GHz RF parameters was recorded in another test report.

2.1 MEASUREMENT UNCERTAINTY

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

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

Measurement	Value
Conducted emissions	2.98 dB
Radiated emissions (30MHz-1GHz) -Chamber G	5.63 dB
Radiated emissions (30MHz-1GHz)-Chamber H	5.46 dB
Radiated emissions (1GHz -6GHz)	3.54 dB
Radiated emissions (6GHz -18GHz)	4.08 dB
Radiated emissions (18GHz -40GHz)	4.11 dB

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Cisco Meraki MR34
MODEL NO.	MR34-HW
POWER SUPPLY	DC 12V from power adapter, DC 37~57V _{dc} , 0.5~0.3A from POE
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only.
MODULATION TECHNOLOGY	DSSS,OFDM
TRANSFER RATE	802.11b: up to 11Mbps 802.11a / g: up to 54Mbps 802.11n: up to 450Mbps 802.11ac: up to 1300Mbps
OPERATING FREQUENCY	For 15.407 5GHz: 5.18 ~ 5.24GHz
	For 15.247 2.4GHz: 2.412 ~ 2.462GHz 5GHz: 5.745 ~ 5.825GHz
NUMBER OF CHANNEL	For 15.407 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)
	For 15.247 (2.4GHz) 11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40) For 15.247 (5GHz) 5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)
MAXIMUM OUTPUT POWER	Please see NOTE
ANTENNA TYPE	Please see NOTE
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ASSOCIATED DEVICES	Adapter x1

NOTE:

1. The maximum output power table as below table:

The maximum output power table is below table:

MAXIMUM OUTPUT POWER (mW)					
Radio Card 1					
15.247 (2.4GHz)		15.247 (5GHz)		15.407	
802.11b	158.855	802.11a	76.208	802.11a	9.772
802.11g	68.707	802.11n (HT20)	79.983	802.11n (HT20)	9.727
802.11n (HT20)	77.446	802.11n (HT40)	77.804	802.11n (HT40)	9.750
802.11n (HT40)	10.023				
Radio Card 0					
15.247 (5GHz)			15.407		
802.11a	714.410		802.11a	18.154	
802.11n (HT20)	679.235		802.11n (HT20)	36.543	
802.11n (HT40)	489.847		802.11n (HT40)	38.927	
802.11ac (VHT80)	234.328		802.11ac (VHT80)	38.785	
Radio Card 2					
15.247 (2.4GHz)					
802.11b			256.291		
802.11g			502.244		
802.11n (HT20)			510.234		
802.11n (HT40)			182.636		

2. The EUT is a 2.4GHz & 5GHz WLAN device.
3. The lower channel and higher channel of radio 1 will reduce 3dB from maximum power by software automatically when radio 1 and radio 2 transmit simultaneously at 2.4GHz mode.
4. The EUT must be supplied with a adapter or POE (only for test not for sale) as below information:

Adapter		
Brand	Model No.	Spec.
Powertron Electronics Corp.	PA1015-2HU	AC Input : 100-240V, 0.4A, 50-60Hz DC Output : 12V, 1.5A DC output cable(unshielded ,1.6m)
POE(only for test not for sale)		
Brand	Model No.	Spec.
Power Dsine	PD-9501G/AC	AC Input : 100-240V, 1.5A, 50-60Hz DC Output : 55V, 1.35A
For radiated emission: From above power sources, the worst case was found in Adapter (Model: PA1015-2HU). Therefore only the test data of the mode was recorded in this report.		

5. The three radio cards and antennas provided to the EUT, please refer to the following table:

Radio Card 0 (Single band 3Tx)					
Transmitter Circuit	Gain (dBi) (Include cable loss)	Antenna Type	Connector Type	Frequency range (MHz to MHz)	Cable Length (mm)
Chain (0)	5.6	PIFA	IPEX	5150~5850	185
Chain (1)	5.5	PIFA	IPEX	5150~5850	270
Chain (2)	5.2	PIFA	IPEX	5150~5850	75
Radio Card 1 (Dual band 1Tx)					
Transmitter Circuit	Gain (dBi) (Include cable loss)	Antenna Type	Connector Type	Frequency range (MHz to MHz)	Cable Length (mm)
Chain (0)	4.3	PIFA	IPEX	2400~2500	95
	5.4	PIFA	IPEX	5150~5850	95
Radio Card 2 (Single band 3Tx)					
Transmitter Circuit	Gain (dBi) (Include cable loss)	Antenna Type	Connector Type	Frequency range (MHz to MHz)	Cable Length (mm)
Chain (0)	4.8	PIFA	IPEX	2400~2500	45
Chain (1)	2	PIFA	IPEX	2400~2500	195
Chain (2)	2.3	PIFA	IPEX	2400~2500	165

6. The EUT incorporates a MIMO function without beam forming.

MODULATION MODE	RADIO CARD	TX/RX FUNCTION
802.11b 802.11g 802.11n (HT20) <2.4GHz> 802.11n (HT40) <2.4GHz>	Card 1	1Tx/1Rx
	Card 2	1Tx/1Rx (Diversity) 2Tx/2Rx (Diversity) 3Tx/3Rx
802.11a 802.11n (HT20) <5GHz> 802.11n (HT40) <5GHz>	Card 1	1Tx/1Rx
802.11a 802.11n (HT20) <5GHz> 802.11n (HT40) <5GHz> 802.11ac (VHT20) 802.11ac (VHT40) 802.11ac (VHT80)	Card 0	1Tx/1Rx (Diversity) 2Tx/2Rx (Diversity) 3Tx/3Rx

Note: The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)



A D T

7. When the EUT operating in 802.11n, the software operation, which is defined by manufacturer, MCS (Modulation and Coding Schemes) from 0 to 23.
8. When the EUT operating in 802.11ac, the software operation, which is defined by manufacturer, MCS (Modulation and Coding Schemes) from 0 to 9.
9. The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Operated in 2400 ~ 2483.5MHz band:

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

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

7 channels are provided for 802.11n (HT40):

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

Operated in 5725 ~ 5850MHz band:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

CHANNEL	FREQUENCY
151	5755 MHz
159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

CHANNEL	FREQUENCY
155	5775 MHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO					DESCRIPTION
	PLC	RE < 1G	RE ≥ 1G	APCM	OB	
1	√	√	√	√	√	Radio Card 1 <2.4GHz> with Adapter
						Radio Card 1 <5GHz> with Adapter
2	√	√	√	√	√	Radio Card 2 <2.4GHz> with Adapter
						Radio Card 0 <5GHz> with Adapter
3	√	-	-	-	-	Radio Card 1 <2.4GHz> with POE
						Radio Card 1 <5GHz> with POE
4	√	-	-	-	-	Radio Card 2 <2.4GHz> with POE
						Radio Card 0 <5GHz> with POE

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: The EUT had been pre-tested on the positioned of each 2 axis. The worst case was found when positioned on **X-plane** (for below 1GHz) and **Z-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)
802.11b (Radio Card 1)	1 to 11	1, 6, 11	DSSS	DBPSK	1
For 2.4 GHz 802.11n (HT20) (Radio Card 2)	1 to 11	1, 6, 11	OFDM	BPSK	19.5
For 5 GHz 802.11n (HT20) (Radio Card 1)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11a (Radio Card 0)	149 to 165	149, 157, 165	OFDM	BPSK	6

RADIATED EMISSION TEST (BELOW 1 GHz):

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b (Radio Card 1)	1 to 11	1, 6, 11	DSSS	DBPSK	1
For 2.4 GHz 802.11n (HT20) (Radio Card 2)	1 to 11	1, 6, 11	OFDM	BPSK	19.5
For 5 GHz 802.11n (HT20) (Radio Card 1)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11a (Radio Card 0)	149 to 165	149, 157, 165	OFDM	BPSK	6

RADIATED EMISSION TEST (ABOVE 1 GHz):

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

Radio Card 1					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
For 2.4 GHz 802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
For 2.4 GHz 802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5
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
For 5 GHz 802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5
Radio Card 2 <2.4GHz> & Radio Card 0 <5GHz>					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
For 2.4 GHz 802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	19.5
For 2.4 GHz 802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	40.5
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	19.5
For 5 GHz 802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	40.5
For 5 GHz 802.11ac (VHT80)	155	155	OFDM	BPSK	87.8

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.

Radio Card 1					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
For 2.4 GHz 802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
For 2.4 GHz 802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5
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
For 5 GHz 802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5
Radio Card 2 <2.4GHz> & Radio Card 0 <5GHz>					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
For 2.4 GHz 802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	19.5
For 2.4 GHz 802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	40.5
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	19.5
For 5 GHz 802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	40.5
For 5 GHz 802.11ac (VHT80)	155	155	OFDM	BPSK	87.8

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.

Radio Card 1					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
For 2.4 GHz 802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
For 2.4 GHz 802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5
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
For 5 GHz 802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5
Radio Card 2 <2.4GHz> & Radio Card 0 <5GHz>					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
For 2.4 GHz 802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	19.5
For 2.4 GHz 802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	40.5
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	19.5
For 5 GHz 802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	40.5
For 5 GHz 802.11ac (VHT80)	155	155	OFDM	BPSK	87.8



A D T

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
PLC	26deg. C, 66%RH	120Vac, 60Hz	JyunChun Lin
	25deg. C, 60%RH	120Vac, 60Hz	Barry Lee
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Nelson Teng
RE ³ 1G	23deg. C, 70%RH	120Vac, 60Hz	Tim Ho
	30deg. C, 70%RH	120Vac, 60Hz	Tim Ho
APCM	25deg. C, 60%RH	120Vac, 60Hz	James Chan / Robert Cheng
OB	25deg. C, 60%RH	120Vac, 60Hz	James Chan / Robert Cheng



A D T

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 v03r01

662911 D01 Multiple Transmitter Output v01 r02

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.

3.4 DUTY CYCLE OF TEST SIGNAL

If duty cycle of test signal is > 98 %, duty factor is not required.

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

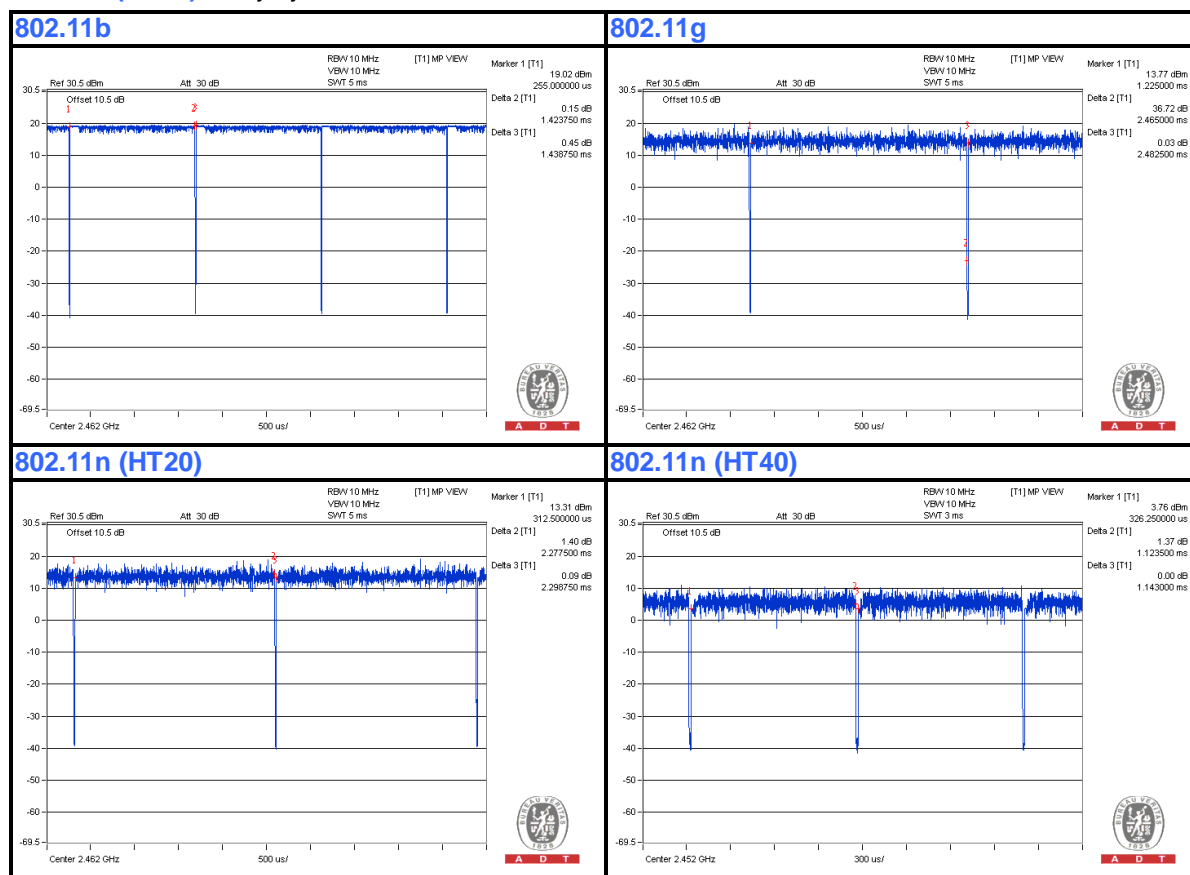
For Radio Card 1 (2.4G)

802.11b: Duty cycle = 1.424 ms/1.439 ms = 0.99

802.11g: Duty cycle = 2.465 ms/2.482 ms = 0.993

802.11n (HT20): Duty cycle = 2.277 ms/2.299 ms = 0.99

802.11n (HT40): Duty cycle = 1.124 ms/1.143 ms = 0.983





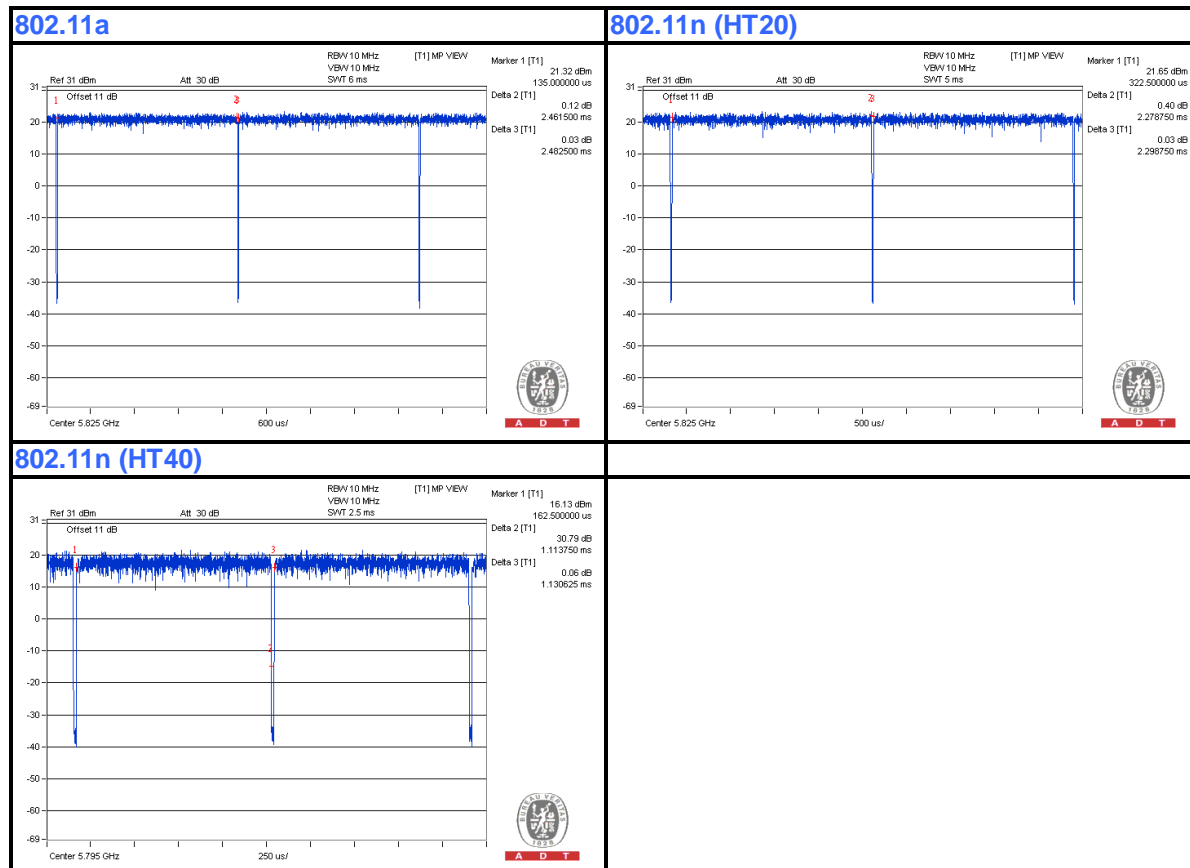
A D T

For Radio Card 1 (5G)

802.11a: Duty cycle = 2.462 ms/2.483 ms = 0.992

802.11n (HT20): Duty cycle = 2.279 ms/2.299 ms = 0.991

802.11n (HT40): Duty cycle = 1.114 ms/1.131 ms = 0.985





A D T

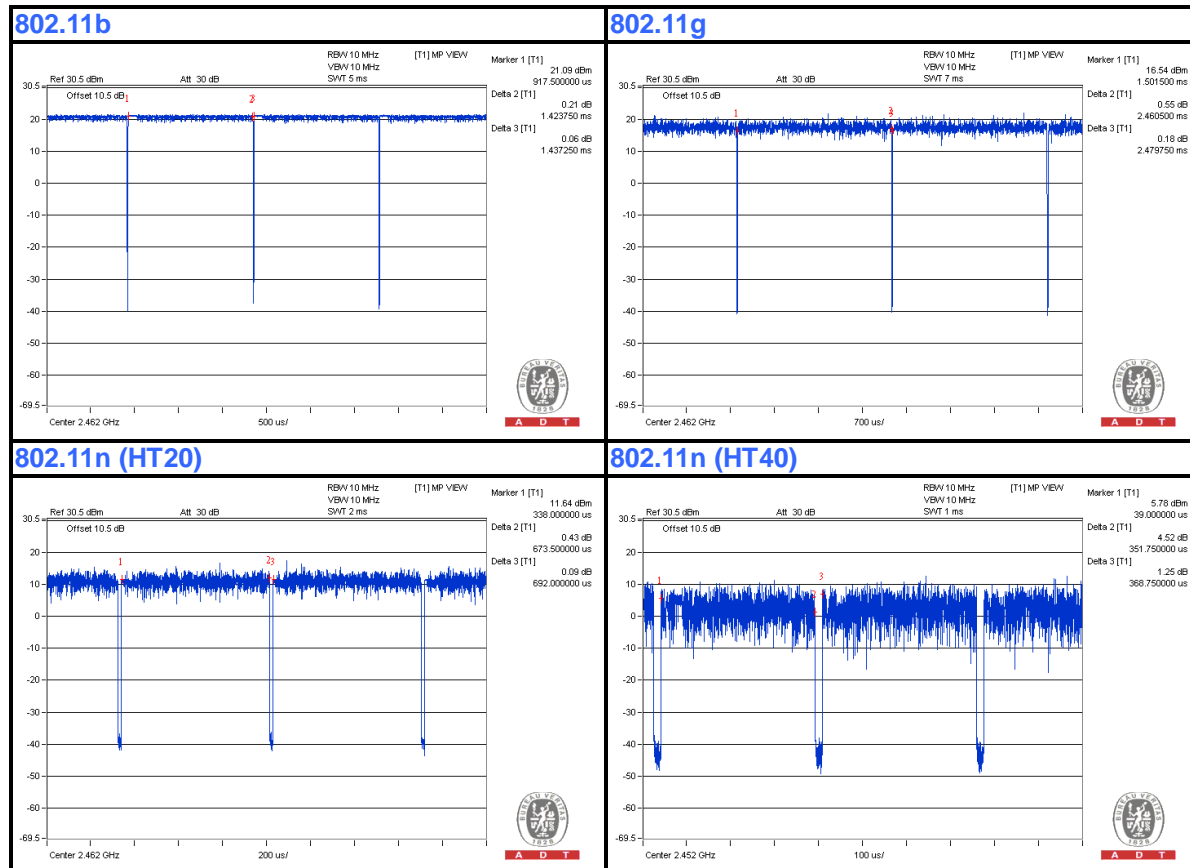
For Radio Card 2

802.11b: Duty cycle = 1.424 ms/1.437 ms = 0.991

802.11g: Duty cycle = 2.461 ms/2.48 ms = 0.992

802.11n (HT20): Duty cycle = 0.637 ms/0.692 ms = 0.923, Duty factor = $10 \cdot \log(1/0.923) = 0.12$

802.11n (HT40): Duty cycle = 0.352 ms/0.369 ms = 0.954, Duty factor = $10 \cdot \log(1/0.954) = 0.2$





A D T

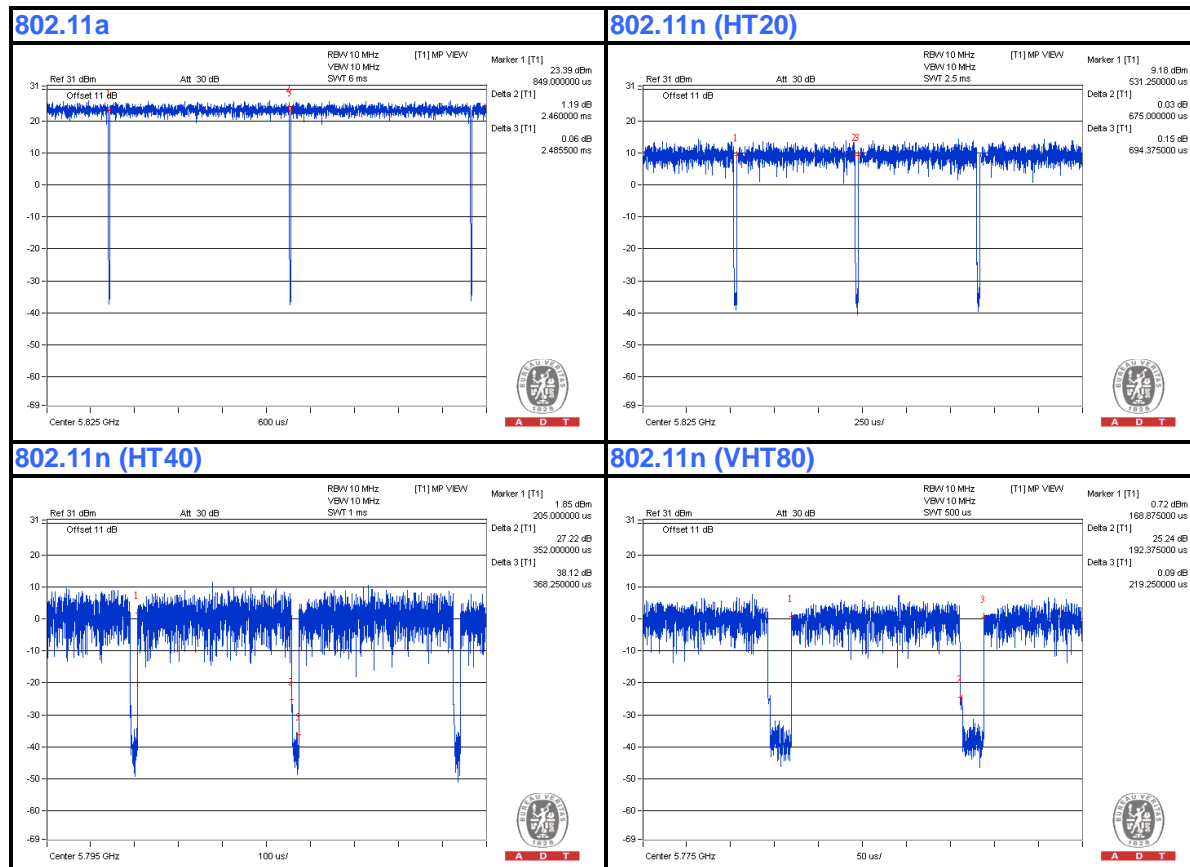
Radio Card 0

802.11a: Duty cycle = $2.46 \text{ ms} / 2.486 \text{ ms} = 0.99$

802.11n (HT20): Duty cycle = $0.675 \text{ ms} / 0.694 \text{ ms} = 0.973$, Duty factor = $10 * \log(1/0.973) = 0.12$

802.11n (HT40): Duty cycle = $0.352 \text{ ms} / 0.368 \text{ ms} = 0.957$, Duty factor = $10 * \log(1/0.957) = 0.19$

802.11ac (VHT80): Duty cycle = $0.192 \text{ ms} / 0.219 \text{ ms} = 0.877$, Duty factor = $10 * \log(1/0.877) = 0.57$





A D T

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.

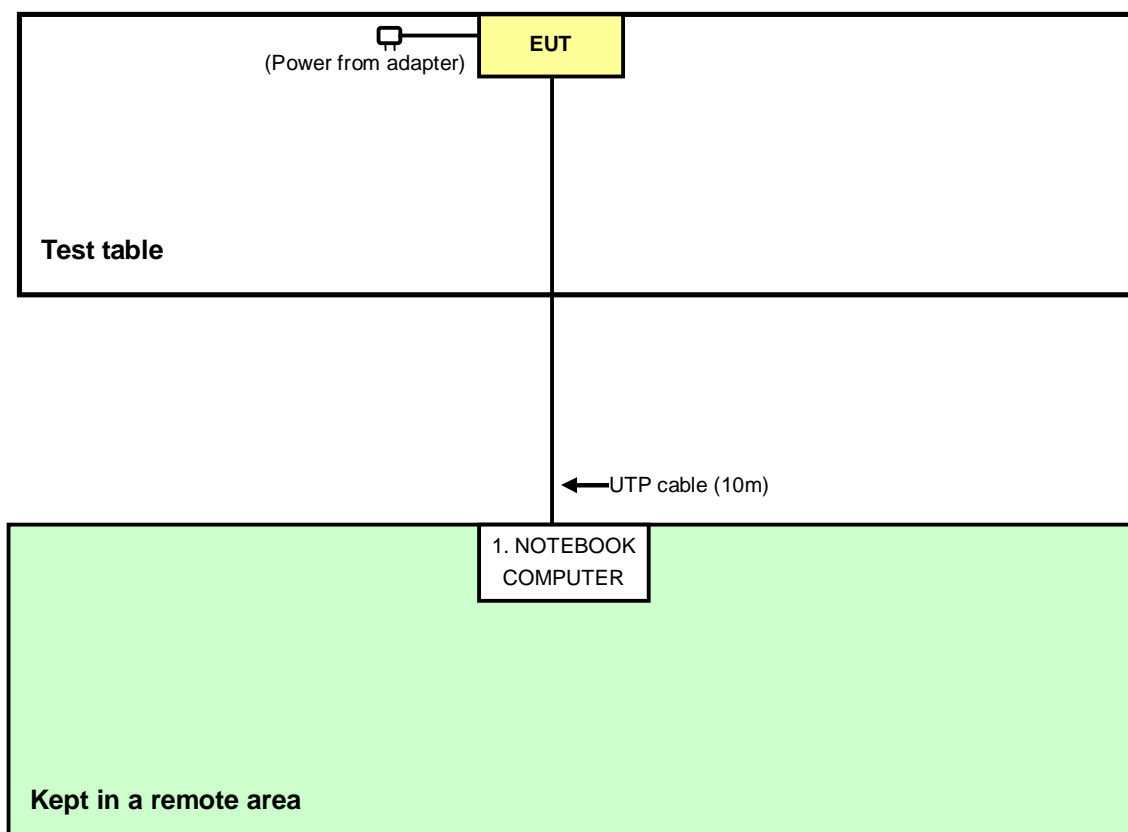
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP32LA	FSLB32S	FCC DoC
2	POE	Power Dsine	PD-9501G/AC	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	UTP cable, 10m
2	UTP cable, 10m

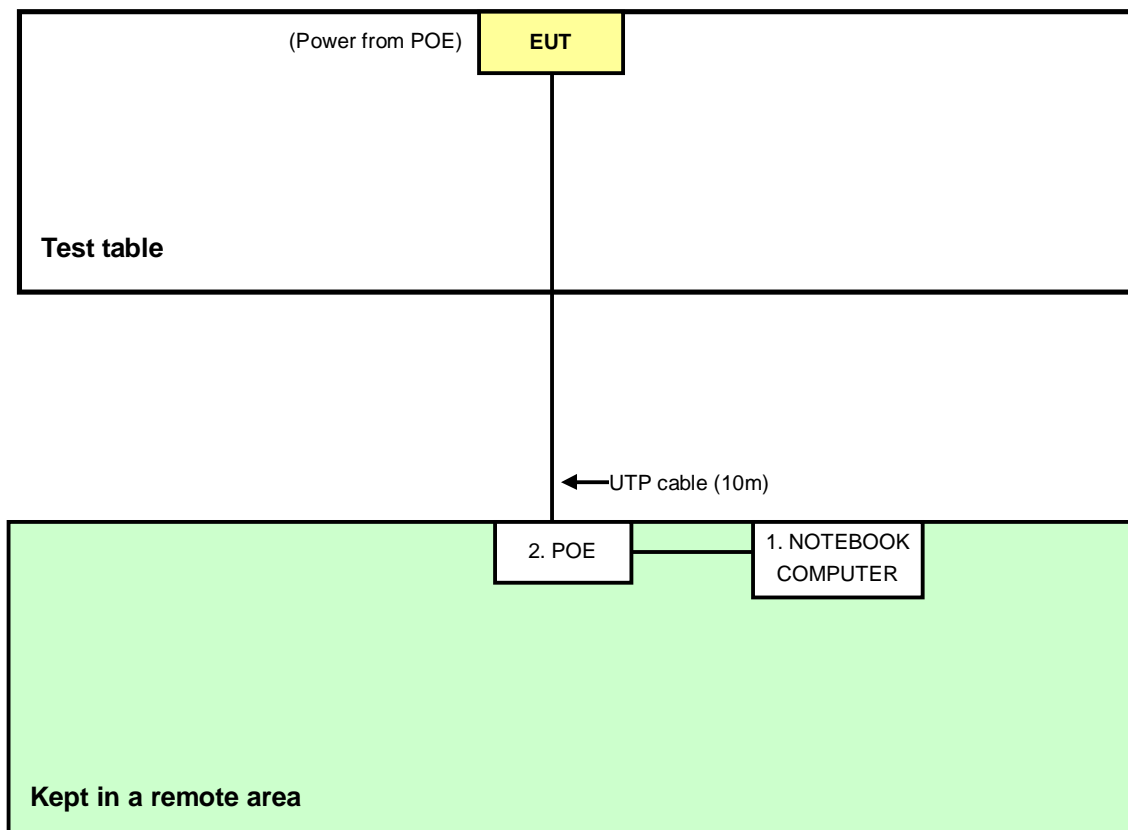
NOTE: All power cords of the above support units are non shielded (1.8m).

3.6 CONFIGURATION OF SYSTEM UNDER TEST

For Conducted Emission (Mode 1~2) / Radiated Emission test:



For Conducted Emission (Mode 3~4) test:



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 (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

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

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS 30	100375	Mar. 08, 2013	Mar. 07, 2014
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK8127	8127-522	Sep. 06, 2012	Sep. 05, 2013
Line-Impedance Stabilization Network (for Peripheral)	ENV216	100072	June 07, 2013	June 06, 2014
RF Cable (JYEBAO)	5DFB	COCCAB-001	Mar. 11, 2013	Mar. 10, 2014
50 ohms Terminator	50	EMC-3	Sep. 25, 2012	Sep. 24, 2013
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: Aug. 02 to Sep. 05, 2013

4.1.3 TEST PROCEDURES

- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN.
- The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

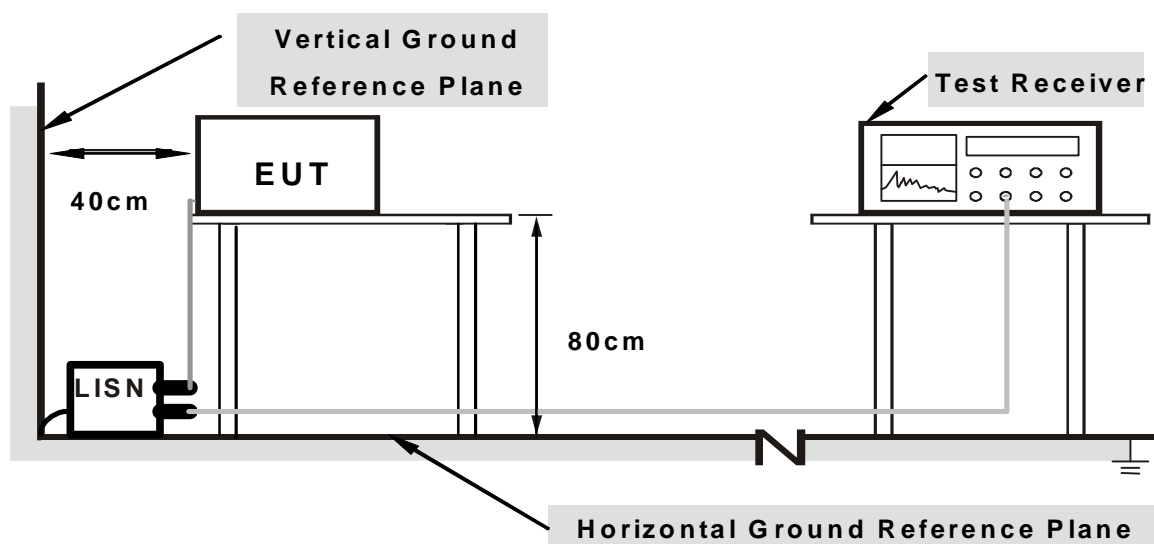
NOTE:

- 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.



A D T

4.1.6 EUT OPERATING CONDITIONS

1. Turn on the power of EUT.
2. The communication partner run test program "MTool V1.0.0.10.exe" to enable EUT under transmission/receiving condition continuously at specific channel frequency.

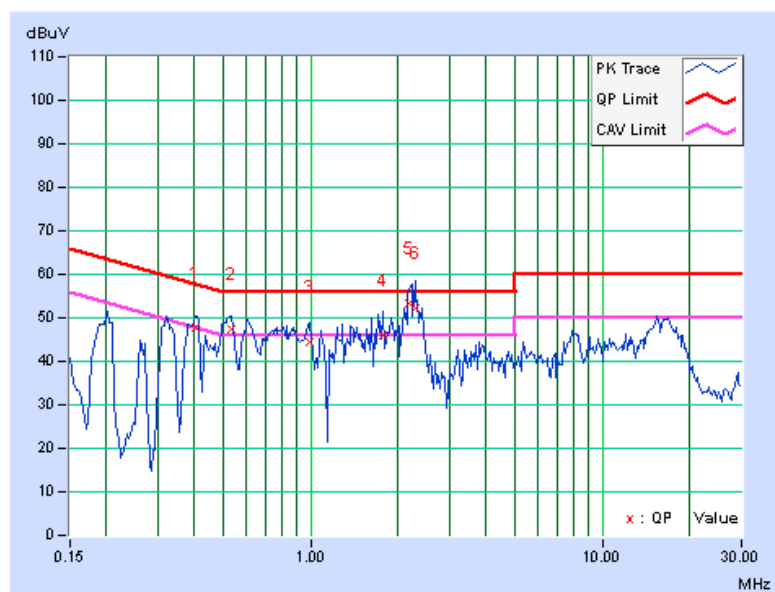
4.1.7 TEST RESULTS (MODE 1)

CHANNEL	Channel 1		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.40391	0.20	47.44	35.82	47.64	36.02	57.77	47.77	-10.13	-11.75
2	0.53281	0.21	47.06	34.03	47.27	34.24	56.00	46.00	-8.73	-11.76
3	0.99375	0.25	44.07	30.30	44.32	30.55	56.00	46.00	-11.68	-15.45
4	1.77344	0.32	45.68	32.24	46.00	32.56	56.00	46.00	-10.00	-13.44
5	2.18359	0.35	52.86	38.60	53.21	38.95	56.00	46.00	-2.79	-7.05
6	2.28906	0.36	51.99	38.60	52.35	38.96	56.00	46.00	-3.65	-7.04

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

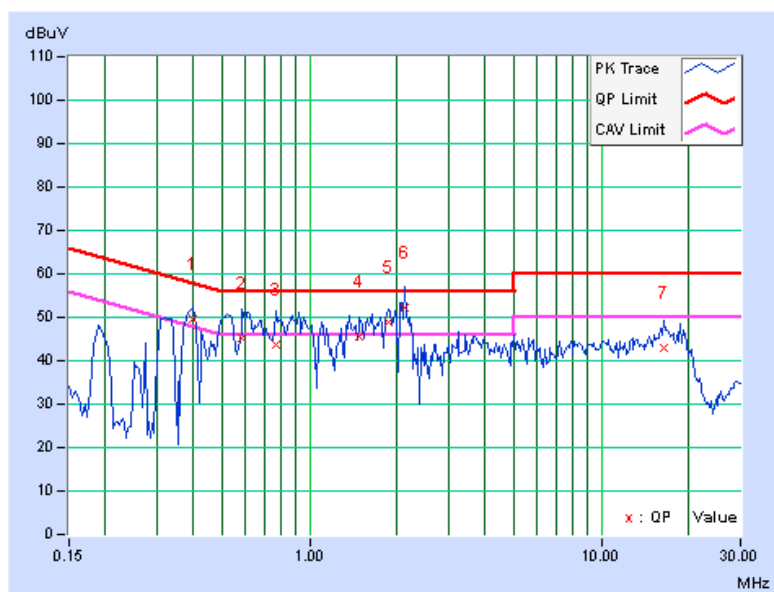


CHANNEL	Channel 1		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.40000	0.19	49.26	38.64	49.45	38.83	57.85	47.85	-8.40	-9.02
2	0.58750	0.20	45.06	32.60	45.26	32.80	56.00	46.00	-10.74	-13.20
3	0.77109	0.21	43.53	28.30	43.74	28.51	56.00	46.00	-12.26	-17.49
4	1.48438	0.26	45.42	33.52	45.68	33.78	56.00	46.00	-10.32	-12.22
5	1.86719	0.29	48.77	35.64	49.06	35.93	56.00	46.00	-6.94	-10.07
6	2.12500	0.31	51.88	37.88	52.19	38.19	56.00	46.00	-3.81	-7.81
7	16.40625	1.01	41.98	34.63	42.99	35.64	60.00	50.00	-17.01	-14.36

REMARKS:

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

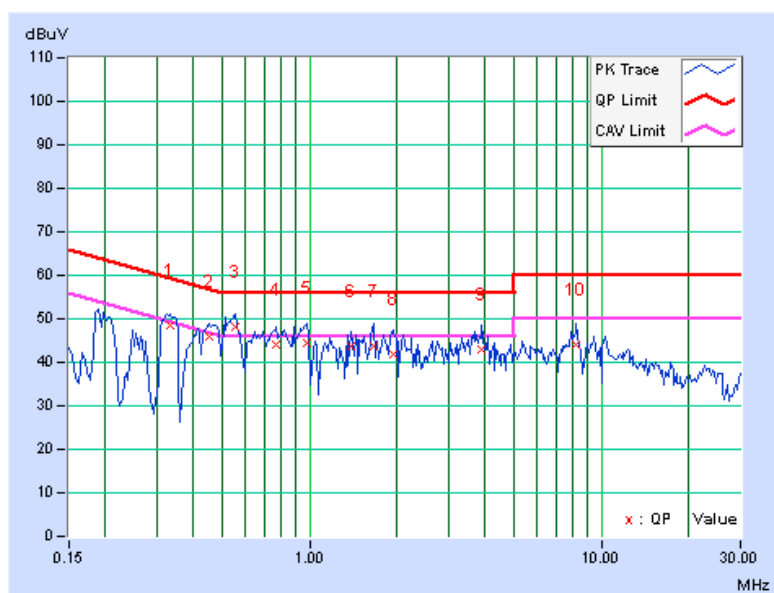


CHANNEL	Channel 6		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.33359	0.18	48.42	37.58	48.60	37.76	59.36	49.36	-10.76	-11.60
2	0.45469	0.20	45.83	33.17	46.03	33.37	56.79	46.79	-10.75	-13.41
3	0.55625	0.21	47.85	33.02	48.06	33.23	56.00	46.00	-7.94	-12.77
4	0.76719	0.23	43.79	30.36	44.02	30.59	56.00	46.00	-11.98	-15.41
5	0.97813	0.25	44.09	28.28	44.34	28.53	56.00	46.00	-11.66	-17.47
6	1.39063	0.29	43.43	30.61	43.72	30.90	56.00	46.00	-12.28	-15.10
7	1.65625	0.31	43.45	30.37	43.76	30.68	56.00	46.00	-12.24	-15.32
8	1.92969	0.33	41.67	30.41	42.00	30.74	56.00	46.00	-14.00	-15.26
9	3.90625	0.46	42.38	30.96	42.84	31.42	56.00	46.00	-13.16	-14.58
10	8.22656	0.77	43.30	34.58	44.07	35.35	60.00	50.00	-15.93	-14.65

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

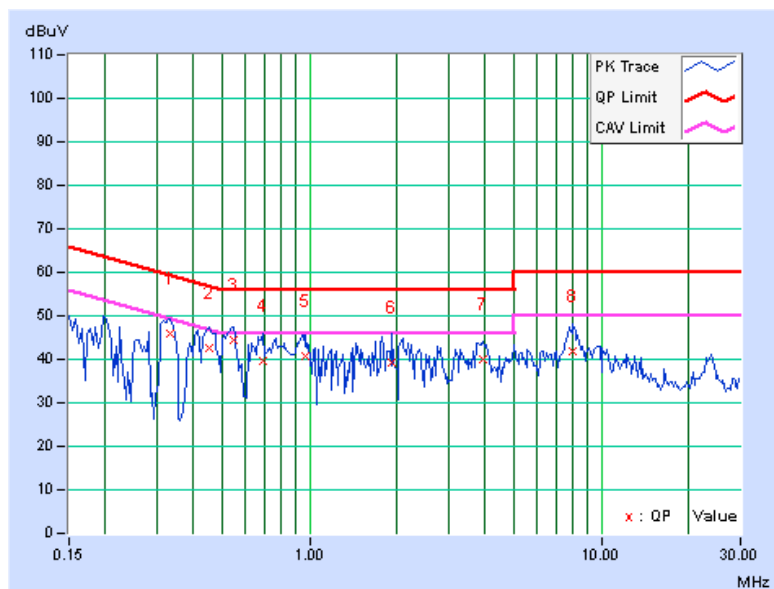


CHANNEL	Channel 6		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.33359	0.17	45.86	34.04	46.03	34.21	59.36	49.36	-13.33	-15.15
2	0.45469	0.19	42.54	29.38	42.73	29.57	56.79	46.79	-14.06	-17.22
3	0.54844	0.20	44.40	30.30	44.60	30.50	56.00	46.00	-11.40	-15.50
4	0.69297	0.20	39.46	26.16	39.66	26.36	56.00	46.00	-16.34	-19.64
5	0.97422	0.22	40.38	25.63	40.60	25.85	56.00	46.00	-15.40	-20.15
6	1.91406	0.29	39.04	26.33	39.33	26.62	56.00	46.00	-16.67	-19.38
7	3.92578	0.43	39.52	27.69	39.95	28.12	56.00	46.00	-16.05	-17.88
8	8.01563	0.64	41.13	32.15	41.77	32.79	60.00	50.00	-18.23	-17.21

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

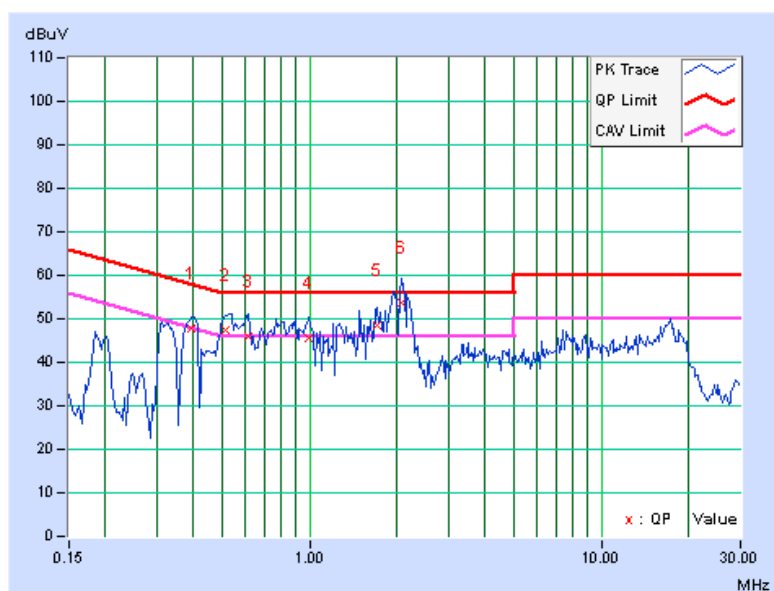


CHANNEL	Channel 11		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.39219	0.20	47.42	37.26	47.62	37.46	58.02	48.02	-10.40	-10.56
2	0.51328	0.21	47.36	34.11	47.57	34.32	56.00	46.00	-8.43	-11.68
3	0.61484	0.22	45.82	31.47	46.04	31.69	56.00	46.00	-9.96	-14.31
4	0.99766	0.25	45.41	32.76	45.66	33.01	56.00	46.00	-10.34	-12.99
5	1.70703	0.31	48.21	33.40	48.52	33.71	56.00	46.00	-7.48	-12.29
6	2.07813	0.35	53.35	39.50	53.70	39.85	56.00	46.00	-2.30	-6.15

REMARKS:

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

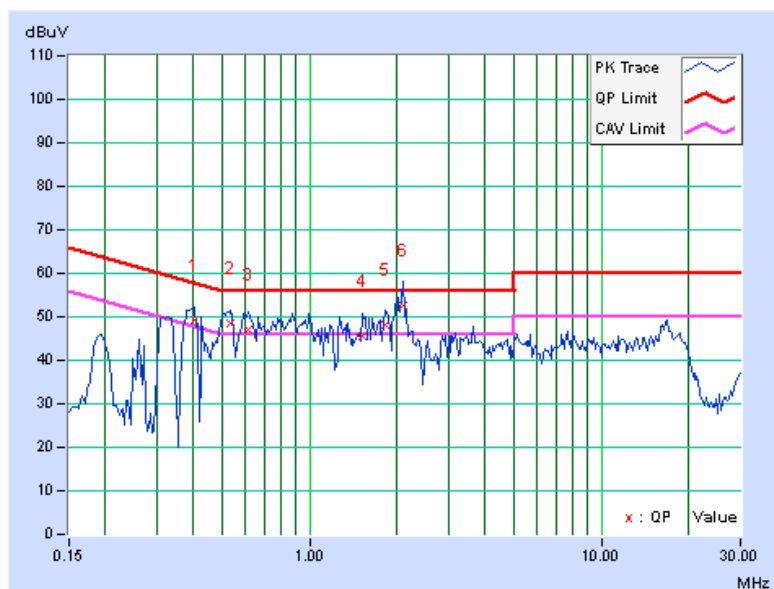


CHANNEL	Channel 11		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.40391	0.19	49.06	36.55	49.25	36.74	57.77	47.77	-8.52	-11.03
2	0.53672	0.20	48.39	35.62	48.59	35.82	56.00	46.00	-7.41	-10.18
3	0.61484	0.20	46.77	32.73	46.97	32.93	56.00	46.00	-9.03	-13.07
4	1.51172	0.26	45.32	32.30	45.58	32.56	56.00	46.00	-10.42	-13.44
5	1.81250	0.28	48.00	34.87	48.28	35.15	56.00	46.00	-7.72	-10.85
6	2.08203	0.31	52.13	38.64	52.44	38.95	56.00	46.00	-3.56	-7.05

REMARKS:

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



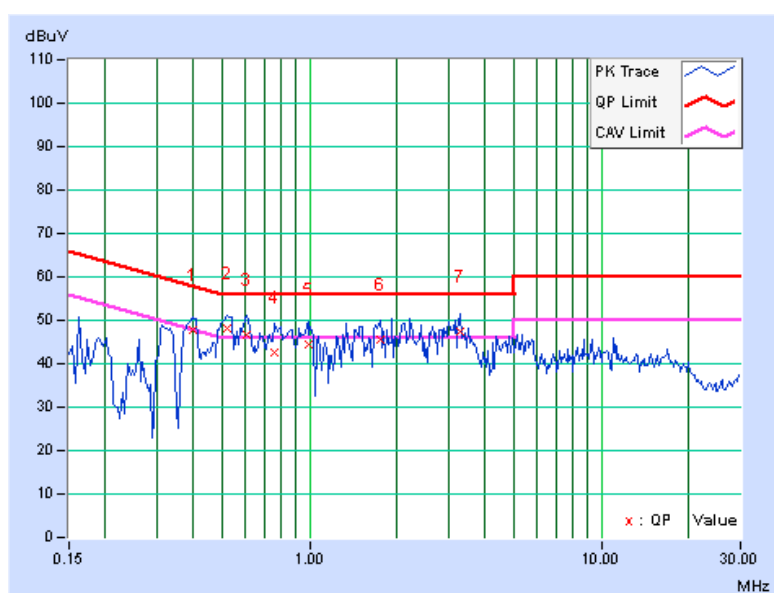
4.1.8 TEST RESULTS (MODE 2)

CHANNEL	Channel 1		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.39609	0.20	47.73	37.95	47.93	38.15	57.93	47.93	-10.01	-9.79
2	0.52500	0.21	47.97	35.44	48.18	35.65	56.00	46.00	-7.82	-10.35
3	0.61094	0.22	46.35	31.63	46.57	31.85	56.00	46.00	-9.43	-14.15
4	0.75938	0.23	42.36	26.72	42.59	26.95	56.00	46.00	-13.41	-19.05
5	0.98984	0.25	44.24	30.83	44.49	31.08	56.00	46.00	-11.51	-14.92
6	1.73828	0.32	45.32	32.54	45.64	32.86	56.00	46.00	-10.36	-13.14
7	3.28906	0.42	46.84	34.85	47.26	35.27	56.00	46.00	-8.74	-10.73

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

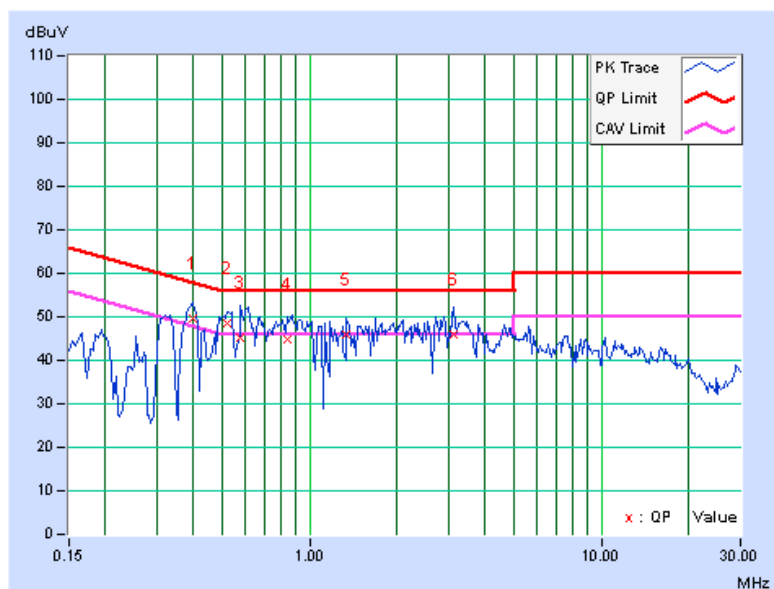


CHANNEL	Channel 1		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.39609	0.19	49.42	39.46	49.61	39.65	57.93	47.93	-8.33	-8.29
2	0.52500	0.20	48.19	36.65	48.39	36.85	56.00	46.00	-7.61	-9.15
3	0.57969	0.20	44.87	32.01	45.07	32.21	56.00	46.00	-10.93	-13.79
4	0.83750	0.21	44.70	30.18	44.91	30.39	56.00	46.00	-11.09	-15.61
5	1.34375	0.25	45.62	32.48	45.87	32.73	56.00	46.00	-10.13	-13.27
6	3.12109	0.37	45.54	33.72	45.91	34.09	56.00	46.00	-10.09	-11.91

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

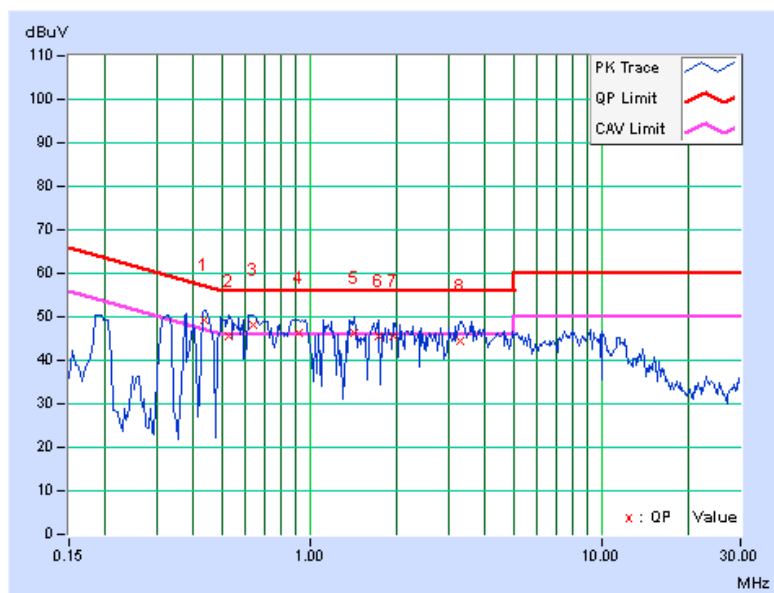


CHANNEL	Channel 6		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.43516	0.20	49.24	38.59	49.44	38.79	57.15	47.15	-7.71	-8.36
2	0.52891	0.21	45.45	32.33	45.66	32.54	56.00	46.00	-10.34	-13.46
3	0.63828	0.22	47.75	36.20	47.97	36.42	56.00	46.00	-8.03	-9.58
4	0.91953	0.24	45.98	33.71	46.22	33.95	56.00	46.00	-9.78	-12.05
5	1.42188	0.29	46.15	34.45	46.44	34.74	56.00	46.00	-9.56	-11.26
6	1.73047	0.32	45.14	32.40	45.46	32.72	56.00	46.00	-10.54	-13.28
7	1.93359	0.33	45.18	33.36	45.51	33.69	56.00	46.00	-10.49	-12.31
8	3.27344	0.42	44.00	32.81	44.42	33.23	56.00	46.00	-11.58	-12.77

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

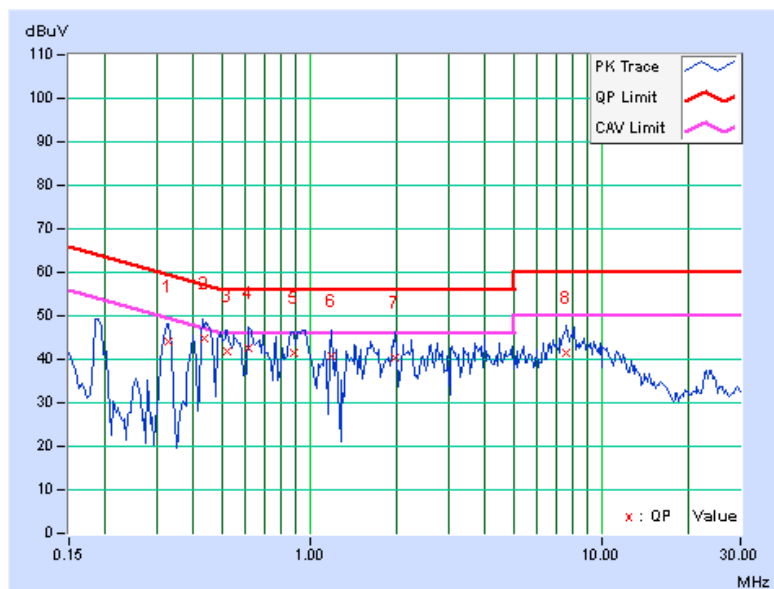


CHANNEL	Channel 6		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

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	0.32969	0.17	43.79	32.74	43.96	32.91	59.46	49.46	-15.50	-16.55
2	0.43450	0.19	44.58	33.18	44.77	33.37	57.17	47.17	-12.39	-13.79
3	0.52109	0.20	41.72	30.52	41.92	30.72	56.00	46.00	-14.08	-15.28
4	0.61759	0.20	42.48	28.81	42.68	29.01	56.00	46.00	-13.32	-16.99
5	0.88438	0.21	41.14	27.81	41.35	28.02	56.00	46.00	-14.65	-17.98
6	1.19531	0.24	40.59	27.83	40.83	28.07	56.00	46.00	-15.17	-17.93
7	1.96094	0.30	39.92	27.49	40.22	27.79	56.00	46.00	-15.78	-18.21
8	7.58984	0.62	40.86	31.14	41.48	31.76	60.00	50.00	-18.52	-18.24

REMARKS:

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

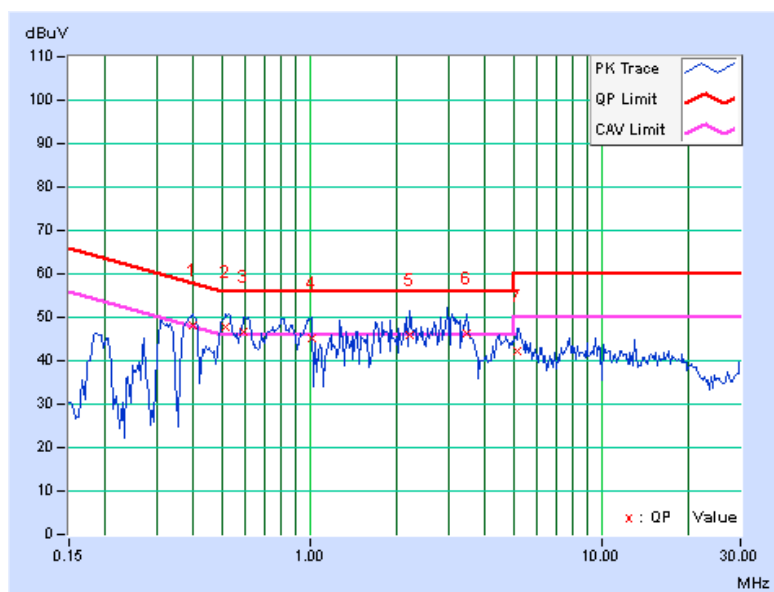


CHANNEL	Channel 11		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.39609	0.20	47.99	37.89	48.19	38.09	57.93	47.93	-9.75	-9.85
2	0.51719	0.21	47.63	34.78	47.84	34.99	56.00	46.00	-8.16	-11.01
3	0.59531	0.22	46.39	33.82	46.61	34.04	56.00	46.00	-9.39	-11.96
4	1.01563	0.25	44.90	30.70	45.15	30.95	56.00	46.00	-10.85	-15.05
5	2.21484	0.35	45.50	32.44	45.85	32.79	56.00	46.00	-10.15	-13.21
6	3.44531	0.43	45.96	33.82	46.39	34.25	56.00	46.00	-9.61	-11.75
7	5.18359	0.55	41.82	31.02	42.37	31.57	60.00	50.00	-17.63	-18.43

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

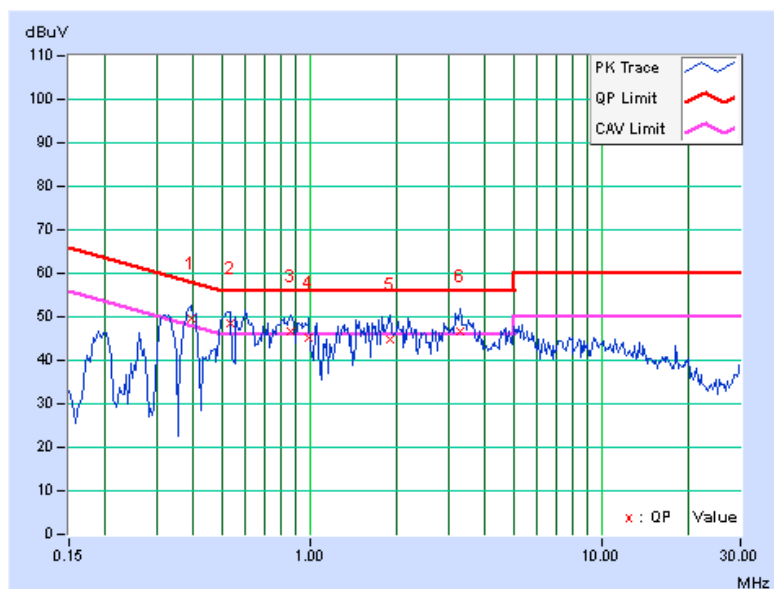


CHANNEL	Channel 11		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.39219	0.19	49.30	39.48	49.49	39.67	58.02	48.02	-8.53	-8.35
2	0.53281	0.20	48.25	36.25	48.45	36.45	56.00	46.00	-7.55	-9.55
3	0.85703	0.21	46.54	34.34	46.75	34.55	56.00	46.00	-9.25	-11.45
4	0.99766	0.22	45.15	33.28	45.37	33.50	56.00	46.00	-10.63	-12.50
5	1.88281	0.29	44.50	32.19	44.79	32.48	56.00	46.00	-11.21	-13.52
6	3.26953	0.38	46.41	34.96	46.79	35.34	56.00	46.00	-9.21	-10.66

REMARKS:

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



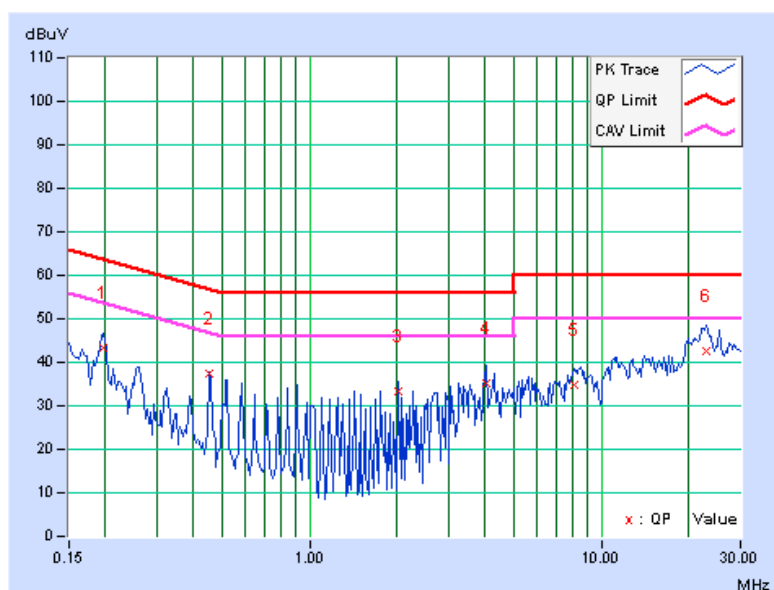
4.1.9 TEST RESULTS (MODE 3)

CHANNEL	Channel 1		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19687	0.12	43.33	34.13	43.45	34.25	63.74	53.74	-20.29	-19.49
2	0.45469	0.16	37.11	36.51	37.27	36.67	56.79	46.79	-19.52	-10.12
3	2.01172	0.23	33.25	31.42	33.48	31.65	56.00	46.00	-22.52	-14.35
4	4.01606	0.31	35.02	34.01	35.33	34.32	56.00	46.00	-20.67	-11.68
5	8.04688	0.48	34.20	29.85	34.68	30.33	60.00	50.00	-25.32	-19.67
6	22.89063	1.11	41.60	35.46	42.71	36.57	60.00	50.00	-17.29	-13.43

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

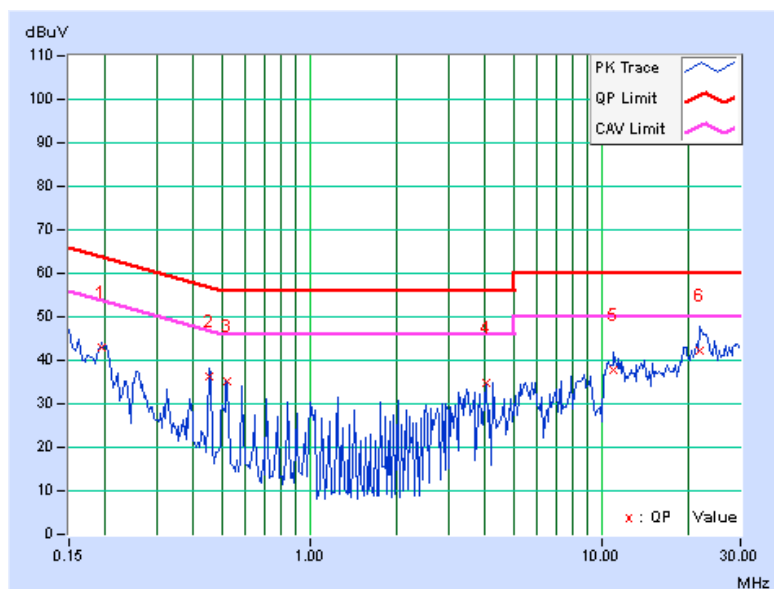


CHANNEL	Channel 1		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19522	0.16	42.91	33.11	43.07	33.27	63.81	53.81	-20.74	-20.54
2	0.45469	0.19	36.28	35.86	36.47	36.05	56.79	46.79	-20.32	-10.74
3	0.52031	0.20	34.83	34.01	35.03	34.21	56.00	46.00	-20.97	-11.79
4	4.01225	0.34	34.61	33.92	34.95	34.26	56.00	46.00	-21.05	-11.74
5	10.95759	0.56	37.13	33.21	37.69	33.77	60.00	50.00	-22.31	-16.23
6	21.85156	0.83	41.51	35.61	42.34	36.44	60.00	50.00	-17.66	-13.56

REMARKS:

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

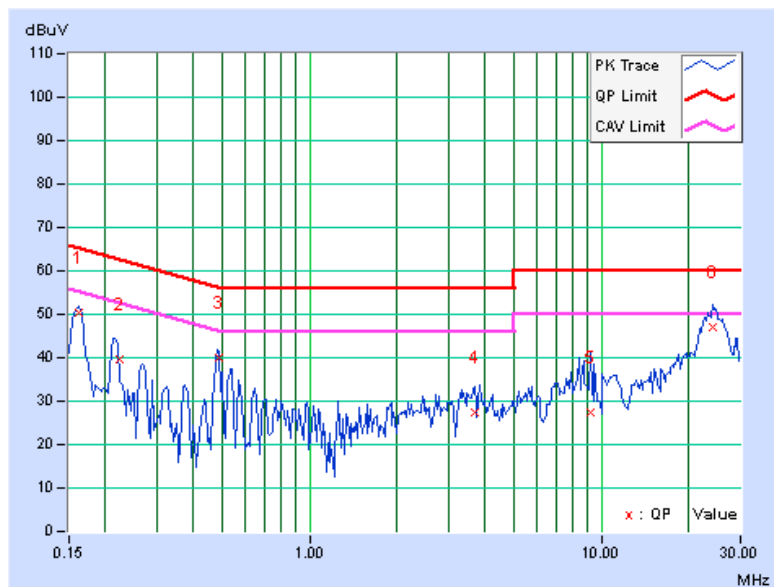


CHANNEL	Channel 6		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	0.12	50.07	40.28	50.19	40.40	65.38	55.38	-15.18	-14.97
2	0.22350	0.14	39.48	28.48	39.62	28.62	62.69	52.69	-23.06	-24.06
3	0.48984	0.19	39.64	36.68	39.83	36.87	56.17	46.17	-16.34	-9.30
4	3.67188	0.35	27.00	19.90	27.35	20.25	56.00	46.00	-28.65	-25.75
5	9.21484	0.62	26.94	21.53	27.56	22.15	60.00	50.00	-32.44	-27.85
6	24.01953	1.15	46.03	40.27	47.18	41.42	60.00	50.00	-12.82	-8.58

REMARKS:

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

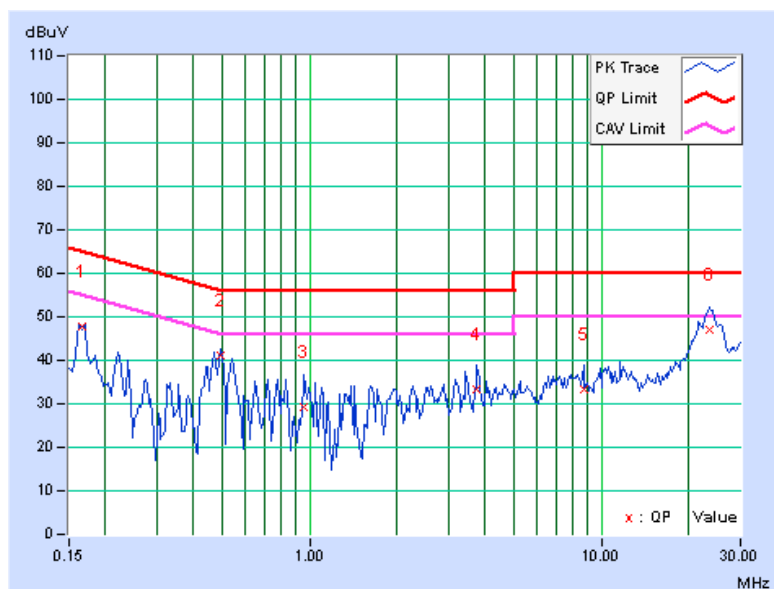


CHANNEL	Channel 6		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16578	0.11	47.83	39.34	47.94	39.45	65.17	55.17	-17.23	-15.72
2	0.49375	0.17	41.03	38.77	41.20	38.94	56.10	46.10	-14.90	-7.16
3	0.95859	0.20	29.09	9.98	29.29	10.18	56.00	46.00	-26.71	-35.82
4	3.75391	0.32	32.87	25.99	33.19	26.31	56.00	46.00	-22.81	-19.69
5	8.67578	0.48	32.78	27.92	33.26	28.40	60.00	50.00	-26.74	-21.60
6	23.34766	0.80	46.39	40.90	47.19	41.70	60.00	50.00	-12.81	-8.30

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

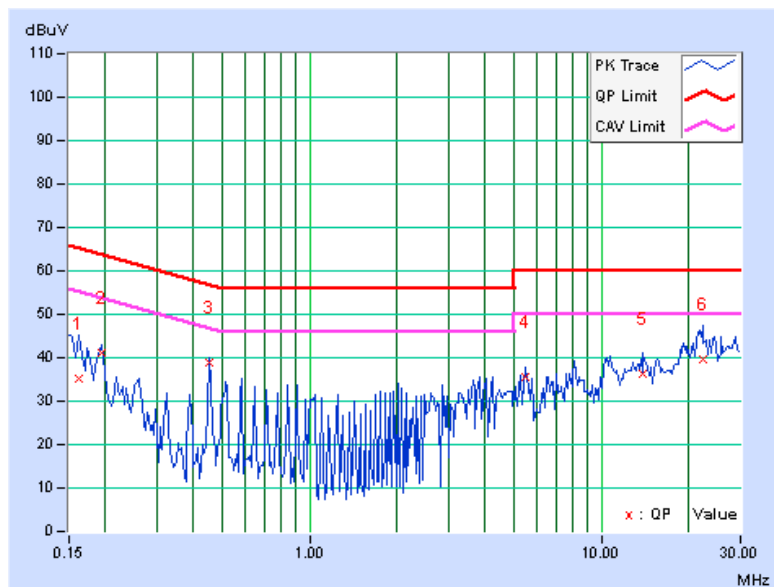


CHANNEL	Channel 11		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	0.10	34.97	7.80	35.07	7.90	65.38	55.38	-30.30	-47.47
2	0.19297	0.12	40.98	32.48	41.10	32.60	63.91	53.91	-22.81	-21.31
3	0.45469	0.16	38.83	37.96	38.99	38.12	56.79	46.79	-17.80	-8.67
4	5.51172	0.37	35.20	30.84	35.57	31.21	60.00	50.00	-24.43	-18.79
5	13.94141	0.75	35.55	29.32	36.30	30.07	60.00	50.00	-23.70	-19.93
6	22.37500	1.08	38.73	32.87	39.81	33.95	60.00	50.00	-20.19	-16.05

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

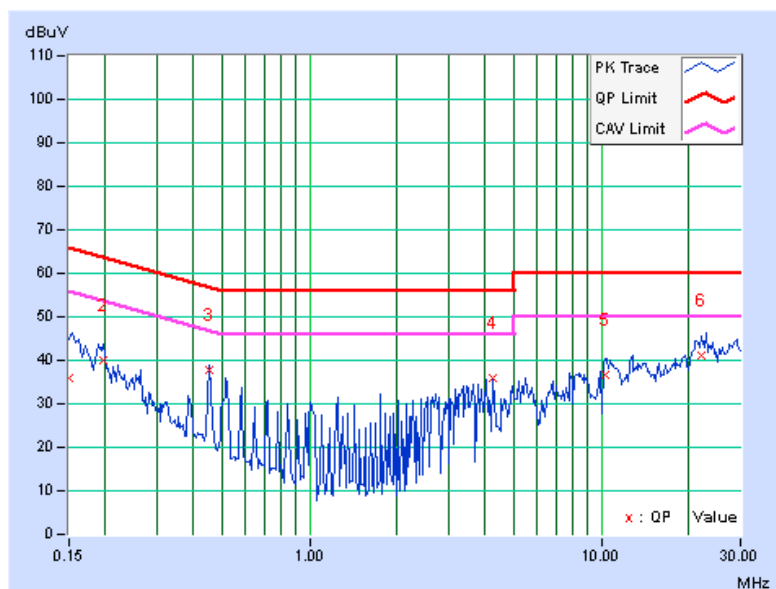


CHANNEL	Channel 11		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.15	35.60	9.39	35.75	9.54	66.00	56.00	-30.25	-46.46
2	0.19687	0.16	39.81	30.44	39.97	30.60	63.74	53.74	-23.77	-23.14
3	0.45469	0.19	37.67	36.78	37.86	36.97	56.79	46.79	-18.93	-9.82
4	4.25781	0.35	35.45	35.01	35.80	35.36	56.00	46.00	-20.20	-10.64
5	10.37109	0.54	36.28	31.03	36.82	31.57	60.00	50.00	-23.18	-18.43
6	21.97041	0.83	40.13	33.99	40.96	34.82	60.00	50.00	-19.04	-15.18

REMARKS:

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



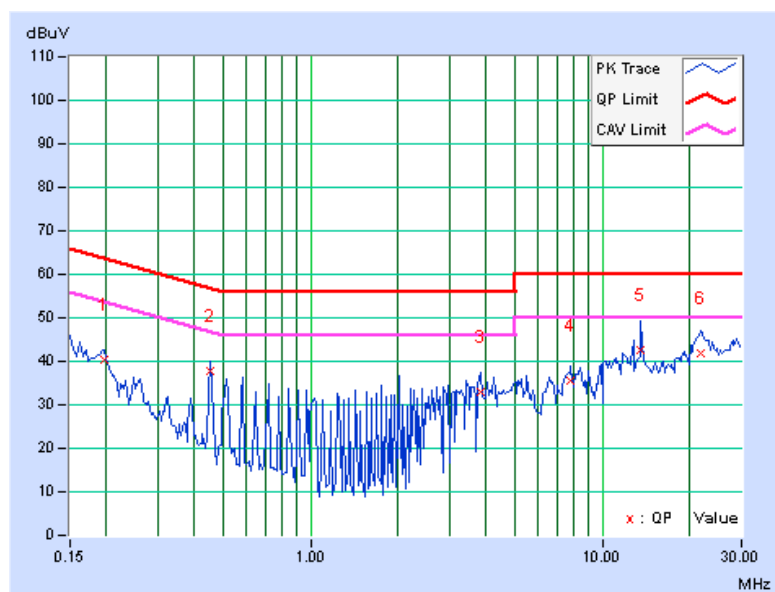
4.1.10 TEST RESULTS (MODE 4)

CHANNEL	Channel 1		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19687	0.12	40.20	32.14	40.32	32.26	63.74	53.74	-23.42	-21.48
2	0.45469	0.16	37.57	38.85	37.73	39.01	56.79	46.79	-19.06	-7.78
3	3.82422	0.30	32.72	28.90	33.02	29.20	56.00	46.00	-22.98	-16.80
4	7.76953	0.47	35.12	29.95	35.59	30.42	60.00	50.00	-24.41	-19.58
5	13.56250	0.73	41.99	37.40	42.72	38.13	60.00	50.00	-17.28	-11.87
6	21.82813	1.06	40.61	35.43	41.67	36.49	60.00	50.00	-18.33	-13.51

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

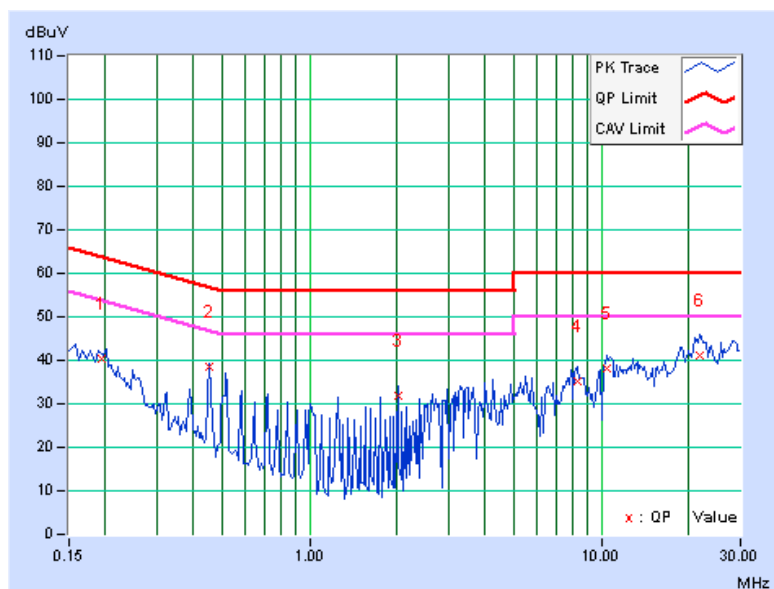


CHANNEL	Channel 1		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.19353	0.16	40.14	31.12	40.30	31.28	63.88	53.88	-23.58	-22.60
2	0.45469	0.19	38.48	37.63	38.67	37.82	56.79	46.79	-18.12	-8.97
3	2.00781	0.27	31.71	28.44	31.98	28.71	56.00	46.00	-24.02	-17.29
4	8.29297	0.48	34.84	31.14	35.32	31.62	60.00	50.00	-24.68	-18.38
5	10.42969	0.54	37.47	33.83	38.01	34.37	60.00	50.00	-21.99	-15.63
6	21.69141	0.82	40.26	34.39	41.08	35.21	60.00	50.00	-18.92	-14.79

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

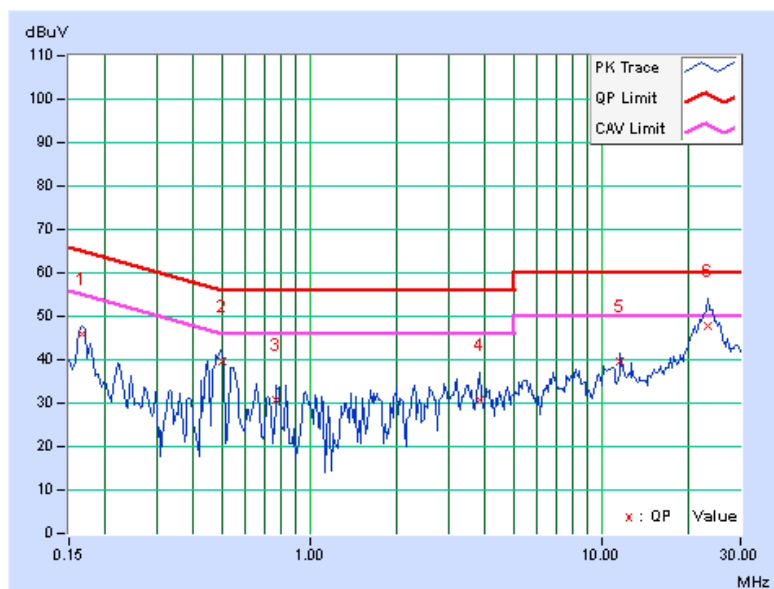


CHANNEL	Channel 6		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	0.13	45.98	37.49	46.11	37.62	65.18	55.18	-19.07	-17.56
2	0.50156	0.19	39.48	37.45	39.67	37.64	56.00	46.00	-16.33	-8.36
3	0.77109	0.20	30.42	26.53	30.62	26.73	56.00	46.00	-25.38	-19.27
4	3.81641	0.35	30.53	23.17	30.88	23.52	56.00	46.00	-25.12	-22.48
5	11.64063	0.73	38.76	36.82	39.49	37.55	60.00	50.00	-20.51	-12.45
6	23.24219	1.13	46.47	40.52	47.60	41.65	60.00	50.00	-12.40	-8.35

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

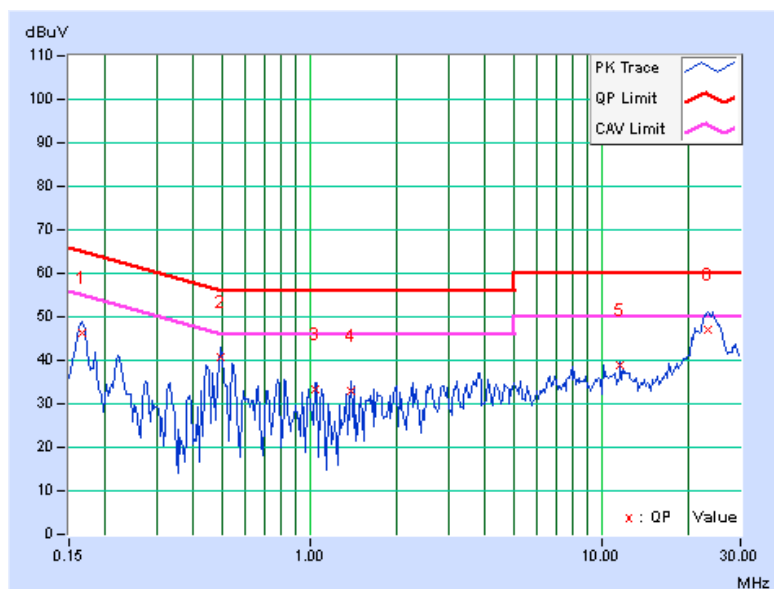


CHANNEL	Channel 6		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.16562	0.11	46.29	38.27	46.40	38.38	65.18	55.18	-18.78	-16.80
2	0.49375	0.17	40.52	37.74	40.69	37.91	56.10	46.10	-15.41	-8.19
3	1.05078	0.20	33.06	29.91	33.26	30.11	56.00	46.00	-22.74	-15.89
4	1.38281	0.22	32.92	28.72	33.14	28.94	56.00	46.00	-22.86	-17.06
5	11.64453	0.56	38.39	36.16	38.95	36.72	60.00	50.00	-21.05	-13.28
6	23.06250	0.79	46.19	40.59	46.98	41.38	60.00	50.00	-13.02	-8.62

REMARKS:

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

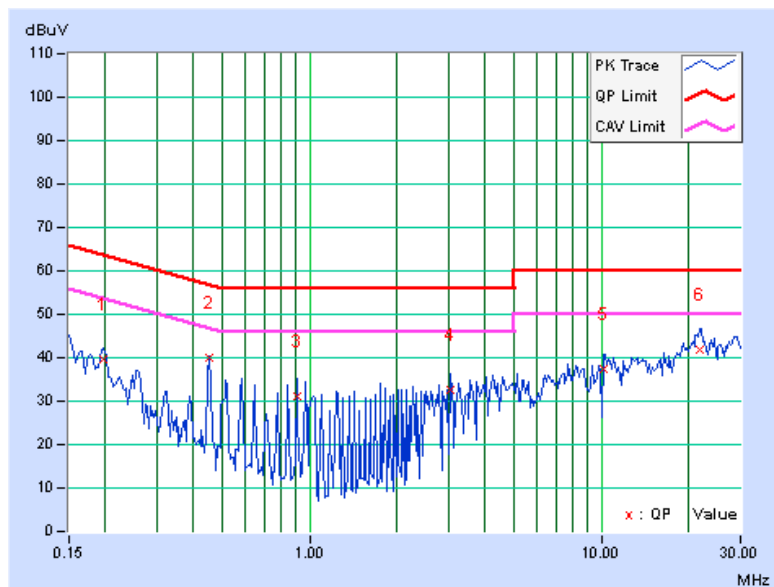


CHANNEL	Channel 11		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19687	0.12	39.68	31.79	39.80	31.91	63.74	53.74	-23.94	-21.83
2	0.45469	0.16	39.78	39.07	39.94	39.23	56.79	46.79	-16.85	-7.56
3	0.90781	0.19	30.93	26.81	31.12	27.00	56.00	46.00	-24.88	-19.00
4	3.04688	0.27	32.27	28.66	32.54	28.93	56.00	46.00	-23.46	-17.07
5	10.23047	0.57	36.93	33.48	37.50	34.05	60.00	50.00	-22.50	-15.95
6	21.82422	1.06	40.82	35.25	41.88	36.31	60.00	50.00	-18.12	-13.69

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

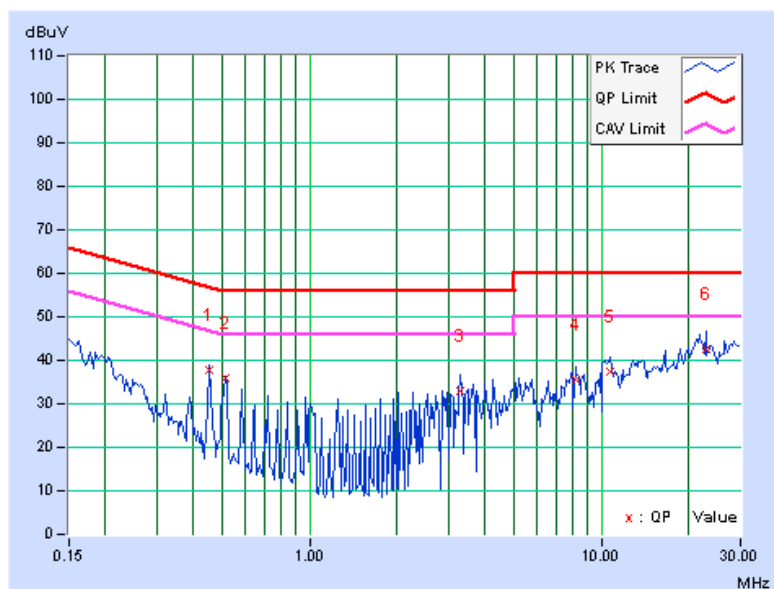


CHANNEL	Channel 11		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.45469	0.19	37.66	37.89	37.85	38.08	56.79	46.79	-18.94	-8.71
2	0.51719	0.20	35.80	34.84	36.00	35.04	56.00	46.00	-20.00	-10.96
3	3.30469	0.32	32.63	28.54	32.95	28.86	56.00	46.00	-23.05	-17.14
4	8.16016	0.47	34.95	31.92	35.42	32.39	60.00	50.00	-24.58	-17.61
5	10.68609	0.55	36.76	33.43	37.31	33.98	60.00	50.00	-22.69	-16.02
6	22.78906	0.85	41.74	38.79	42.59	39.64	60.00	50.00	-17.41	-10.36

REMARKS:

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



4.2 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 30dB below the highest level of the desired power:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

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

4.2.2 TEST INSTRUMENTS

For below 1GHz (CH 1 & CH11)

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer Agilent	E4446A	MY48250253	Aug. 28, 2013	Aug. 27, 2014
MXE EMI Receiver Agilent	N9038A	MY51210105	Jan. 29, 2013	Jan. 28, 2014
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-03	Nov. 14, 2012	Nov. 13, 2013
Pre-Amplifier Agilent	8449B	3008A02578	June 25, 2013	June 24, 2014
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Nov. 14, 2012	Nov. 13, 2013
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-360	Mar. 19, 2013	Mar. 18, 2014
Horn_Antenna AISI	AIH.8018	0000320091110	Nov. 19, 2012	Nov. 18, 2013
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Oct. 12, 2012	Oct. 11, 2013
RF Cable	NA	RF104-201 RF104-203 RF104-204	Dec. 25, 2012	Dec. 24, 2013
RF Cable	NA	CHGCAB_001	Oct. 06, 2012	Oct. 05, 2013
Software	ADT_Radiated _V8.7.05	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: Sep. 05, 2013

**A D T****For other test items**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer Agilent	E4446A	MY48250253	Sep. 03, 2012	Sep. 02, 2013
MXE EMI Receiver Agilent	N9038A	MY50010156	Jan. 16, 2013	Jan. 15, 2014
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-04	Nov. 14, 2012	Nov. 13, 2013
Pre-Amplifier Agilent	8449B	3008A01923	Oct. 30, 2012	Oct. 29, 2013
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Nov. 14, 2012	Nov. 13, 2013
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Mar. 25, 2013	Mar. 24, 2014
Horn_Antenna AISI	AIH.8018	0000220091110	Nov. 27, 2012	Nov. 26, 2013
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Oct. 12, 2012	Oct. 11, 2013
RF Cable	NA	RF104-205 RF104-207 RF104-202	Dec. 26, 2012	Dec. 25, 2013
RF Cable	NA	CHHCAB_001	Oct. 07, 2012	Oct. 06, 2013
Software	ADT_Radiated _V8.7.05	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: Aug. 01 to 02, 2013

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:

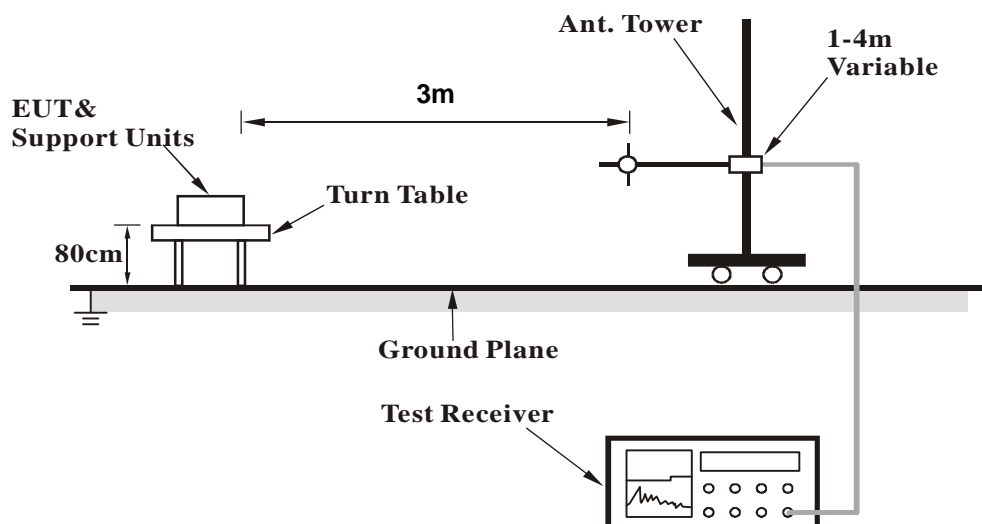
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.2.4 DEVIATION FROM TEST STANDARD

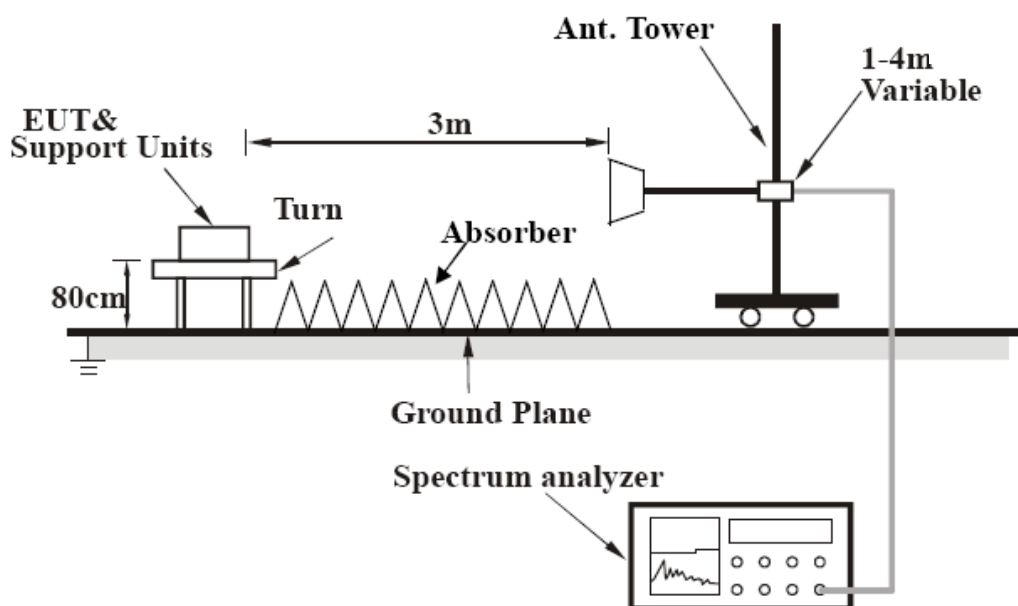
No deviation

4.2.5 TEST SETUP

<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

4.2.7 TEST RESULTS (MODE 1)

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	47.31	34.9 QP	40.0	-5.1	2.00 H	246	48.34	-13.47
2	125.01	34.9 QP	43.5	-8.6	2.00 H	84	49.86	-14.95
3	600.02	41.0 QP	46.0	-5.0	1.50 H	0	46.44	-5.47
4	625.00	40.7 QP	46.0	-5.3	1.50 H	0	45.48	-4.79
5	875.02	42.3 QP	46.0	-3.7	1.50 H	8	43.22	-0.94
6	1000.00	41.9 QP	54.0	-12.1	1.50 H	141	40.93	0.95
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	71.61	36.8 QP	40.0	-3.2	1.00 V	28	52.40	-15.59
2	209.30	30.0 QP	43.5	-13.5	1.00 V	257	46.60	-16.63
3	375.03	27.4 QP	46.0	-18.6	1.50 V	122	38.13	-10.77
4	625.00	40.1 QP	46.0	-5.9	1.50 V	327	44.86	-4.79
5	875.02	41.0 QP	46.0	-5.0	1.50 V	11	41.91	-0.94
6	1000.00	44.3 QP	54.0	-9.7	1.00 V	169	43.32	0.95

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	45.86	32.2 QP	40.0	-7.8	1.50 H	271	45.22	-12.99
2	173.37	37.2 QP	43.5	-6.3	1.50 H	26	51.33	-14.12
3	195.77	36.4 QP	43.5	-7.2	1.00 H	20	52.53	-16.18
4	375.03	35.9 QP	46.0	-10.1	1.00 H	65	46.23	-10.30
5	625.00	36.4 QP	46.0	-9.6	1.50 H	51	41.18	-4.78
6	866.72	41.7 QP	46.0	-4.3	1.50 H	328	42.67	-0.98
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	37.91	34.4 QP	40.0	-5.6	1.00 V	270	48.15	-13.75
2	153.82	32.0 QP	43.5	-11.5	1.00 V	204	44.60	-12.61
3	375.03	35.2 QP	46.0	-10.9	1.50 V	58	45.45	-10.30
4	466.69	36.5 QP	46.0	-9.5	1.00 V	292	44.69	-8.21
5	600.02	36.0 QP	46.0	-10.0	1.00 V	207	41.33	-5.36
6	750.03	39.0 QP	46.0	-7.0	1.50 V	360	41.55	-2.55

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

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	48.04	35.4 QP	40.0	-4.6	1.50 H	295	49.09	-13.67
2	125.01	35.2 QP	43.5	-8.3	1.50 H	73	50.13	-14.95
3	174.63	31.4 QP	43.5	-12.1	1.50 H	263	46.04	-14.60
4	375.03	32.0 QP	46.0	-14.0	1.00 H	261	42.79	-10.77
5	600.02	40.4 QP	46.0	-5.6	1.50 H	0	45.84	-5.47
6	1000.00	43.1 QP	54.0	-10.9	1.50 H	133	42.12	0.95
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	71.86	37.2 QP	40.0	-2.8	1.00 V	49	52.85	-15.64
2	125.01	30.9 QP	43.5	-12.6	1.00 V	24	45.89	-14.95
3	212.17	28.3 QP	43.5	-15.3	1.00 V	223	44.71	-16.46
4	625.00	40.4 QP	46.0	-5.6	1.50 V	329	45.20	-4.79
5	875.02	39.8 QP	46.0	-6.2	1.50 V	359	40.76	-0.94
6	1000.00	42.4 QP	54.0	-11.6	1.00 V	170	41.49	0.95

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

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	2387.28	62.8 PK	74.0	-11.2	1.00 H	265	30.12	32.68
2	2387.28	52.4 AV	54.0	-1.6	1.00 H	265	19.72	32.68
3	*2412.00	111.3 PK			1.00 H	265	78.52	32.78
4	*2412.00	109.1 AV			1.00 H	265	76.32	32.78
5	4824.00	51.6 PK	74.0	-22.4	1.35 H	325	11.19	40.41
6	4824.00	41.2 AV	54.0	-12.8	1.35 H	325	0.79	40.41
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	2387.28	51.2 PK	74.0	-22.8	1.03 V	230	18.52	32.68
2	2387.28	41.6 AV	54.0	-12.4	1.03 V	230	8.92	32.68
3	*2412.00	97.8 PK			1.03 V	230	65.02	32.78
4	*2412.00	94.7 AV			1.03 V	230	61.92	32.78
5	4824.00	51.7 PK	74.0	-22.3	1.28 V	49	11.29	40.41
6	4824.00	39.7 AV	54.0	-14.3	1.28 V	49	-0.71	40.41

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.



A D T

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	62.5 PK	74.0	-11.5	1.00 H	266	29.80	32.70
2	2390.00	51.7 AV	54.0	-2.3	1.00 H	266	19.00	32.70
3	*2437.00	114.3 PK			1.00 H	266	81.44	32.86
4	*2437.00	112.2 AV			1.00 H	266	79.34	32.86
5	2483.50	60.8 PK	74.0	-13.2	1.00 H	266	27.79	33.01
6	2483.50	49.0 AV	54.0	-5.0	1.00 H	266	15.99	33.01
7	4874.00	54.7 PK	74.0	-19.3	1.16 H	240	14.07	40.63
8	4874.00	44.9 AV	54.0	-9.1	1.16 H	240	4.27	40.63
9	7311.00	54.5 PK	74.0	-19.5	1.22 H	257	6.03	48.47
10	7311.00	44.5 AV	54.0	-9.5	1.22 H	257	-3.97	48.47

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	53.8 PK	74.0	-20.2	1.00 V	215	21.10	32.70
2	2390.00	45.0 AV	54.0	-9.0	1.00 V	215	12.30	32.70
3	*2437.00	99.4 PK			1.00 V	215	66.54	32.86
4	*2437.00	96.2 AV			1.00 V	215	63.34	32.86
5	2483.50	50.5 PK	74.0	-23.5	1.00 V	215	17.49	33.01
6	2483.50	39.9 AV	54.0	-14.1	1.00 V	215	6.89	33.01
7	4874.00	55.3 PK	74.0	-18.7	1.24 V	259	14.67	40.63
8	4874.00	45.3 AV	54.0	-8.7	1.24 V	259	4.67	40.63
9	7311.00	55.0 PK	74.0	-19.0	1.25 V	261	6.53	48.47
10	7311.00	45.2 AV	54.0	-8.8	1.25 V	261	-3.27	48.47

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– 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.

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	110.0 PK			1.00 H	265	77.06	32.94
2	*2462.00	107.8 AV			1.00 H	265	74.86	32.94
3	2483.50	60.3 PK	74.0	-13.7	1.00 H	265	27.29	33.01
4	2483.50	53.1 AV	54.0	-0.9	1.00 H	265	20.09	33.01
5	4924.00	54.2 PK	74.0	-19.8	1.26 H	269	13.40	40.80
6	4924.00	44.6 AV	54.0	-9.4	1.26 H	269	3.80	40.80
7	7386.00	54.8 PK	74.0	-19.2	1.21 H	255	6.35	48.45
8	7386.00	45.0 AV	54.0	-9.0	1.21 H	255	-3.45	48.45
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	95.6 PK			1.00 V	214	62.66	32.94
2	*2462.00	92.4 AV			1.00 V	214	59.46	32.94
3	2483.50	51.1 PK	74.0	-22.9	1.00 V	214	18.09	33.01
4	2483.50	41.9 AV	54.0	-12.1	1.00 V	214	8.89	33.01
5	4924.00	54.5 PK	74.0	-19.5	1.18 V	269	13.70	40.80
6	4924.00	44.6 AV	54.0	-9.4	1.18 V	269	3.80	40.80
7	7386.00	55.2 PK	74.0	-18.8	1.24 V	257	6.75	48.45
8	7386.00	45.1 AV	54.0	-8.9	1.24 V	257	-3.35	48.45

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.

802.11g

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	70.3 PK	74.0	-3.7	1.00 H	266	37.60	32.70
2	2390.00	53.4 AV	54.0	-0.6	1.00 H	266	20.70	32.70
3	*2412.00	105.6 PK			1.00 H	266	72.82	32.78
4	*2412.00	97.1 AV			1.00 H	266	64.32	32.78
5	4824.00	54.8 PK	74.0	-19.2	1.18 H	256	14.39	40.41
6	4824.00	44.8 AV	54.0	-9.2	1.18 H	256	4.39	40.41
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	1.04 V	229	19.60	32.70
2	2390.00	40.2 AV	54.0	-13.8	1.04 V	229	7.50	32.70
3	*2412.00	91.9 PK			1.04 V	229	59.12	32.78
4	*2412.00	82.0 AV			1.04 V	229	49.22	32.78
5	4824.00	54.9 PK	74.0	-19.1	1.21 V	258	14.49	40.41
6	4824.00	44.8 AV	54.0	-9.2	1.21 V	258	4.39	40.41

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.



A D T

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	73.6 PK	74.0	-0.4	1.24 H	266	40.90	32.70
2	2390.00	50.9 AV	54.0	-3.1	1.24 H	266	18.20	32.70
3	*2437.00	114.8 PK			1.24 H	266	81.94	32.86
4	*2437.00	106.1 AV			1.24 H	266	73.24	32.86
5	2483.50	64.3 PK	74.0	-9.7	1.24 H	266	31.29	33.01
6	2483.50	45.9 AV	54.0	-8.1	1.24 H	266	12.89	33.01
7	4874.00	53.5 PK	74.0	-20.5	1.09 H	236	12.87	40.63
8	4874.00	44.0 AV	54.0	-10.0	1.09 H	236	3.37	40.63
9	7311.00	54.5 PK	74.0	-19.5	1.22 H	226	6.03	48.47
10	7311.00	44.5 AV	54.0	-9.5	1.22 H	226	-3.97	48.47
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	54.3 PK	74.0	-19.7	1.07 V	215	21.60	32.70
2	2390.00	45.9 AV	54.0	-8.1	1.07 V	215	13.20	32.70
3	*2437.00	99.8 PK			1.07 V	215	66.94	32.86
4	*2437.00	91.2 AV			1.07 V	215	58.34	32.86
5	2483.50	51.0 PK	74.0	-23.0	1.07 V	215	17.99	33.01
6	2483.50	40.6 AV	54.0	-13.4	1.07 V	215	7.59	33.01
7	4874.00	54.4 PK	74.0	-19.6	1.27 V	243	13.77	40.63
8	4874.00	44.7 AV	54.0	-9.3	1.27 V	243	4.07	40.63
9	7311.00	54.2 PK	74.0	-19.8	1.16 V	270	5.73	48.47
10	7311.00	44.2 AV	54.0	-9.8	1.16 V	270	-4.27	48.47

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– 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.

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	111.0 PK			1.22 H	270	78.06	32.94
2	*2462.00	101.3 AV			1.22 H	270	68.36	32.94
3	2483.50	70.0 PK	74.0	-4.0	1.22 H	270	36.99	33.01
4	2483.50	53.8 AV	54.0	-0.2	1.22 H	270	20.79	33.01
5	4924.00	53.9 PK	74.0	-20.1	1.11 H	225	13.10	40.80
6	4924.00	44.5 AV	54.0	-9.5	1.11 H	225	3.70	40.80
7	7386.00	54.8 PK	74.0	-19.2	1.26 H	251	6.35	48.45
8	7386.00	44.8 AV	54.0	-9.2	1.26 H	251	-3.65	48.45
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	96.5 PK			1.00 V	216	63.56	32.94
2	*2462.00	86.1 AV			1.00 V	216	53.16	32.94
3	2483.50	52.9 PK	74.0	-21.1	1.00 V	216	19.89	33.01
4	2483.50	40.1 AV	54.0	-13.9	1.00 V	216	7.09	33.01
5	4924.00	53.3 PK	74.0	-20.7	1.18 V	242	12.50	40.80
6	4924.00	44.1 AV	54.0	-9.9	1.18 V	242	3.30	40.80
7	7386.00	54.4 PK	74.0	-19.6	1.14 V	276	5.95	48.45
8	7386.00	44.6 AV	54.0	-9.4	1.14 V	276	-3.85	48.45

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.

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	68.8 PK	74.0	-5.2	1.24 H	268	36.10	32.70
2	2390.00	53.9 AV	54.0	-0.1	1.24 H	268	21.20	32.70
3	*2412.00	106.0 PK			1.24 H	268	73.22	32.78
4	*2412.00	97.4 AV			1.24 H	268	64.62	32.78
5	4824.00	54.1 PK	74.0	-19.9	1.18 H	243	13.69	40.41
6	4824.00	44.5 AV	54.0	-9.5	1.18 H	243	4.09	40.41
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	50.1 PK	74.0	-23.9	1.03 V	236	17.40	32.70
2	2390.00	38.6 AV	54.0	-15.4	1.03 V	236	5.90	32.70
3	*2412.00	92.3 PK			1.03 V	236	59.52	32.78
4	*2412.00	82.2 AV			1.03 V	236	49.42	32.78
5	4824.00	54.8 PK	74.0	-19.2	1.29 V	255	14.39	40.41
6	4824.00	45.1 AV	54.0	-8.9	1.29 V	255	4.69	40.41

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.



A D T

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	73.2 PK	74.0	-0.8	1.24 H	267	40.50	32.70
2	2390.00	52.2 AV	54.0	-1.8	1.24 H	267	19.50	32.70
3	*2437.00	115.2 PK			1.24 H	267	82.34	32.86
4	*2437.00	106.1 AV			1.24 H	267	73.24	32.86
5	2483.50	64.4 PK	74.0	-9.6	1.24 H	267	31.39	33.01
6	2483.50	46.9 AV	54.0	-7.1	1.24 H	267	13.89	33.01
7	4874.00	54.4 PK	74.0	-19.6	1.17 H	223	13.77	40.63
8	4874.00	45.1 AV	54.0	-8.9	1.17 H	223	4.47	40.63
9	7311.00	53.7 PK	74.0	-20.3	1.14 H	234	5.23	48.47
10	7311.00	44.0 AV	54.0	-10.0	1.14 H	234	-4.47	48.47
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	54.2 PK	74.0	-19.8	1.10 V	227	21.50	32.70
2	2390.00	46.0 AV	54.0	-8.0	1.10 V	227	13.30	32.70
3	*2437.00	99.8 PK			1.10 V	227	66.94	32.86
4	*2437.00	90.8 AV			1.10 V	227	57.94	32.86
5	2483.50	50.6 PK	74.0	-23.4	1.10 V	227	17.59	33.01
6	2483.50	40.2 AV	54.0	-13.8	1.10 V	227	7.19	33.01
7	4874.00	52.9 PK	74.0	-21.1	1.21 V	228	12.27	40.63
8	4874.00	43.4 AV	54.0	-10.6	1.21 V	228	2.77	40.63
9	7311.00	54.1 PK	74.0	-19.9	1.12 V	247	5.63	48.47
10	7311.00	44.4 AV	54.0	-9.6	1.12 V	247	-4.07	48.47

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– 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.

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	109.2 PK			1.19 H	270	76.26	32.94
2	*2462.00	100.0 AV			1.19 H	270	67.06	32.94
3	2483.50	69.0 PK	74.0	-5.0	1.19 H	270	35.99	33.01
4	2483.50	53.4 AV	54.0	-0.6	1.19 H	270	20.39	33.01
5	4924.00	54.3 PK	74.0	-19.7	1.10 H	214	13.50	40.80
6	4924.00	44.7 AV	54.0	-9.3	1.10 H	214	3.90	40.80
7	7386.00	54.5 PK	74.0	-19.5	1.19 H	256	6.05	48.45
8	7386.00	44.7 AV	54.0	-9.3	1.19 H	256	-3.75	48.45
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	95.5 PK			1.00 V	217	62.56	32.94
2	*2462.00	85.2 AV			1.00 V	217	52.26	32.94
3	2483.50	52.9 PK	74.0	-21.1	1.00 V	217	19.89	33.01
4	2483.50	38.4 AV	54.0	-15.6	1.00 V	217	5.39	33.01
5	4924.00	54.5 PK	74.0	-19.5	1.30 V	253	13.70	40.80
6	4924.00	44.7 AV	54.0	-9.3	1.30 V	253	3.90	40.80
7	7386.00	54.4 PK	74.0	-19.6	1.09 V	270	5.95	48.45
8	7386.00	44.2 AV	54.0	-9.8	1.09 V	270	-4.25	48.45

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.

802.11n (HT40)

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	68.0 PK	74.0	-6.0	1.23 H	270	35.30	32.70
2	2390.00	53.8 AV	54.0	-0.2	1.23 H	270	21.10	32.70
3	*2422.00	101.3 PK			1.23 H	270	68.49	32.81
4	*2422.00	91.9 AV			1.23 H	270	59.09	32.81
5	4844.00	54.1 PK	74.0	-19.9	1.15 H	229	13.60	40.50
6	4844.00	44.2 AV	54.0	-9.8	1.15 H	229	3.70	40.50
7	7266.00	54.3 PK	74.0	-19.7	1.25 H	263	5.83	48.47
8	7266.00	44.1 AV	54.0	-9.9	1.25 H	263	-4.37	48.47
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	51.5 PK	74.0	-22.5	1.05 V	217	18.80	32.70
2	2390.00	37.8 AV	54.0	-16.2	1.05 V	217	5.10	32.70
3	*2422.00	90.3 PK			1.05 V	217	57.49	32.81
4	*2422.00	79.2 AV			1.05 V	217	46.39	32.81
5	4844.00	54.2 PK	74.0	-19.8	1.33 V	231	13.70	40.50
6	4844.00	44.5 AV	54.0	-9.5	1.33 V	231	4.00	40.50
7	7266.00	53.1 PK	74.0	-20.9	1.13 V	254	4.63	48.47
8	7266.00	43.3 AV	54.0	-10.7	1.13 V	254	-5.17	48.47

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– 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.



A D T

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	69.5 PK	74.0	-4.5	1.21 H	267	36.80	32.70
2	2390.00	53.9 AV	54.0	-0.1	1.21 H	267	21.20	32.70
3	*2437.00	102.7 PK			1.21 H	267	69.84	32.86
4	*2437.00	93.9 AV			1.21 H	267	61.04	32.86
5	2483.50	66.8 PK	74.0	-7.2	1.21 H	267	33.79	33.01
6	2483.50	52.5 AV	54.0	-1.5	1.21 H	267	19.49	33.01
7	4874.00	54.4 PK	74.0	-19.6	1.14 H	231	13.77	40.63
8	4874.00	44.5 AV	54.0	-9.5	1.14 H	231	3.87	40.63
9	7311.00	54.6 PK	74.0	-19.4	1.17 H	268	6.13	48.47
10	7311.00	44.7 AV	54.0	-9.3	1.17 H	268	-3.77	48.47
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	53.9 PK	74.0	-20.1	1.04 V	202	21.20	32.70
2	2390.00	45.9 AV	54.0	-8.1	1.04 V	202	13.20	32.70
3	*2437.00	90.4 PK			1.04 V	202	57.54	32.86
4	*2437.00	80.8 AV			1.04 V	202	47.94	32.86
5	2483.50	50.3 PK	74.0	-23.7	1.04 V	202	17.29	33.01
6	2483.50	40.0 AV	54.0	-14.0	1.04 V	202	6.99	33.01
7	4874.00	54.6 PK	74.0	-19.4	1.31 V	224	13.97	40.63
8	4874.00	45.0 AV	54.0	-9.0	1.31 V	224	4.37	40.63
9	7311.00	54.1 PK	74.0	-19.9	1.02 V	261	5.63	48.47
10	7311.00	44.0 AV	54.0	-10.0	1.02 V	261	-4.47	48.47

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– 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.

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	101.1 PK			1.21 H	269	68.18	32.92
2	*2452.00	91.6 AV			1.21 H	269	58.68	32.92
3	2483.50	67.7 PK	74.0	-6.3	1.21 H	269	34.69	33.01
4	2483.50	53.9 AV	54.0	-0.1	1.21 H	269	20.89	33.01
5	4904.00	54.2 PK	74.0	-19.8	1.11 H	235	13.44	40.76
6	4904.00	44.4 AV	54.0	-9.6	1.11 H	235	3.64	40.76
7	7356.00	54.3 PK	74.0	-19.7	1.24 H	243	5.85	48.45
8	7356.00	44.5 AV	54.0	-9.5	1.24 H	243	-3.95	48.45
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	88.8 PK			1.08 V	216	55.88	32.92
2	*2452.00	77.8 AV			1.08 V	216	44.88	32.92
3	2483.50	51.3 PK	74.0	-22.7	1.08 V	216	18.29	33.01
4	2483.50	37.7 AV	54.0	-16.3	1.08 V	216	4.69	33.01
5	4904.00	54.8 PK	74.0	-19.2	1.31 V	248	14.04	40.76
6	4904.00	45.2 AV	54.0	-8.8	1.31 V	248	4.44	40.76
7	7356.00	54.1 PK	74.0	-19.9	1.09 V	260	5.65	48.45
8	7356.00	44.5 AV	54.0	-9.5	1.09 V	260	-3.95	48.45

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.

4.2.8 TEST RESULTS (MODE 2)

BELOW 1GHz WORST-CASE DATA

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	48.62	36.6 QP	40.0	-3.4	1.50 H	248	50.27	-13.64
2	125.01	35.3 QP	43.5	-8.2	1.50 H	70	50.23	-14.95
3	250.00	23.9 QP	46.0	-22.1	1.00 H	295	38.34	-14.44
4	375.03	29.4 QP	46.0	-16.6	1.00 H	257	40.19	-10.77
5	533.38	32.9 QP	46.0	-13.1	1.50 H	295	40.15	-7.28
6	899.99	34.9 QP	46.0	-11.1	1.00 H	360	35.18	-0.31
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	62.45	37.6 QP	40.0	-2.4	1.00 V	0	51.59	-14.03
2	125.01	30.7 QP	43.5	-12.8	1.00 V	31	45.66	-14.95
3	250.00	25.2 QP	46.0	-20.9	2.00 V	0	39.59	-14.44
4	375.03	25.8 QP	46.0	-20.2	1.50 V	233	36.54	-10.77
5	533.38	27.6 QP	46.0	-18.4	1.00 V	307	34.89	-7.28
6	875.02	40.8 QP	46.0	-5.2	1.50 V	360	41.74	-0.94

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	89.85	32.4 QP	43.5	-11.1	2.00 H	103	51.56	-19.14
2	153.68	35.3 QP	43.5	-8.2	2.00 H	296	47.96	-12.62
3	400.01	30.1 QP	46.0	-15.9	2.00 H	318	39.99	-9.92
4	625.00	37.9 QP	46.0	-8.2	1.50 H	317	42.63	-4.78
5	866.72	39.7 QP	46.0	-6.3	1.00 H	26	40.71	-0.98
6	1000.00	38.4 QP	54.0	-15.6	1.50 H	130	36.95	1.48
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	37.76	32.4 QP	40.0	-7.6	1.00 V	329	46.15	-13.72
2	400.01	34.5 QP	46.0	-11.5	1.50 V	102	44.38	-9.92
3	466.69	36.7 QP	46.0	-9.3	1.00 V	82	44.92	-8.21
4	600.02	37.5 QP	46.0	-8.5	1.00 V	61	42.82	-5.36
5	875.02	39.4 QP	46.0	-6.6	1.50 V	160	40.26	-0.82
6	1000.00	40.6 QP	54.0	-13.4	1.00 V	233	39.15	1.48

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

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	49.35	36.3 QP	40.0	-3.7	1.50 H	258	49.89	-13.61
2	125.01	34.0 QP	43.5	-9.5	1.50 H	73	48.98	-14.95
3	375.03	29.8 QP	46.0	-16.3	1.00 H	256	40.52	-10.77
4	533.38	31.9 QP	46.0	-14.1	1.50 H	283	39.20	-7.28
5	799.99	35.5 QP	46.0	-10.5	1.00 H	312	37.43	-1.91
6	1000.00	41.6 QP	54.0	-12.4	1.50 H	126	40.62	0.95
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	73.21	34.8 QP	40.0	-5.2	1.00 V	61	51.14	-16.30
2	125.01	30.6 QP	43.5	-12.9	1.00 V	57	45.58	-14.95
3	190.15	28.4 QP	43.5	-15.1	1.00 V	269	44.58	-16.17
4	250.00	23.7 QP	46.0	-22.4	1.50 V	0	38.09	-14.44
5	375.03	25.3 QP	46.0	-20.8	1.00 V	220	36.02	-10.77
6	875.02	40.5 QP	46.0	-5.6	1.50 V	14	41.39	-0.94

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

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	2390.00	59.5 PK	74.0	-14.5	1.05 H	136	26.80	32.70
2	2390.00	49.8 AV	54.0	-4.2	1.05 H	136	17.10	32.70
3	*2412.00	110.7 PK			1.05 H	136	77.92	32.78
4	*2412.00	108.6 AV			1.05 H	136	75.82	32.78
5	4824.00	59.0 PK	74.0	-15.0	1.16 H	88	18.59	40.41
6	4824.00	53.3 AV	54.0	-0.7	1.16 H	88	12.89	40.41

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	58.6 PK	74.0	-15.4	1.71 V	53	25.90	32.70
2	2390.00	47.9 AV	54.0	-6.1	1.71 V	53	15.20	32.70
3	*2412.00	106.2 PK			1.71 V	53	73.42	32.78
4	*2412.00	102.9 AV			1.71 V	53	70.12	32.78
5	4824.00	55.5 PK	74.0	-18.5	1.17 V	104	15.09	40.41
6	4824.00	52.8 AV	54.0	-1.2	1.17 V	104	12.39	40.41

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.



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.7 PK	74.0	-17.3	1.04 H	136	24.00	32.70
2	2390.00	43.8 AV	54.0	-10.2	1.04 H	136	11.10	32.70
3	*2437.00	109.9 PK			1.04 H	136	77.04	32.86
4	*2437.00	107.8 AV			1.04 H	136	74.94	32.86
5	2483.50	54.5 PK	74.0	-19.5	1.04 H	136	21.49	33.01
6	2483.50	41.2 AV	54.0	-12.8	1.04 H	136	8.19	33.01
7	4874.00	56.4 PK	74.0	-17.6	1.13 H	88	15.77	40.63
8	4874.00	53.2 AV	54.0	-0.8	1.13 H	88	12.57	40.63
9	7311.00	56.1 PK	74.0	-17.9	1.00 H	201	7.63	48.47
10	7311.00	44.7 AV	54.0	-9.3	1.00 H	201	-3.77	48.47

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	55.2 PK	74.0	-18.8	1.00 V	244	22.50	32.70
2	2390.00	42.6 AV	54.0	-11.4	1.00 V	244	9.90	32.70
3	*2437.00	107.5 PK			1.00 V	244	74.64	32.86
4	*2437.00	104.9 AV			1.00 V	244	72.04	32.86
5	2483.50	55.5 PK	74.0	-18.5	1.00 V	244	22.49	33.01
6	2483.50	42.6 AV	54.0	-11.4	1.00 V	244	9.59	33.01
7	4874.00	56.1 PK	74.0	-17.9	1.03 V	88	15.47	40.63
8	4874.00	51.7 AV	54.0	-2.3	1.03 V	88	11.07	40.63
9	7311.00	56.5 PK	74.0	-17.5	1.00 V	77	8.03	48.47
10	7311.00	45.4 AV	54.0	-8.6	1.00 V	77	-3.07	48.47

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– 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.

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	111.3 PK			1.06 H	146	78.36	32.94
2	*2462.00	109.4 AV			1.06 H	146	76.46	32.94
3	2483.50	60.0 PK	74.0	-14.0	1.06 H	146	26.99	33.01
4	2483.50	49.6 AV	54.0	-4.4	1.06 H	146	16.59	33.01
5	4924.00	56.2 PK	74.0	-17.8	1.14 H	90	15.40	40.80
6	4924.00	52.6 AV	54.0	-1.4	1.14 H	90	11.80	40.80
7	7386.00	60.4 PK	74.0	-13.6	1.00 H	29	11.95	48.45
8	7386.00	53.4 AV	54.0	-0.6	1.00 H	29	4.95	48.45
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	108.9 PK			1.00 V	230	75.96	32.94
2	*2462.00	106.8 AV			1.00 V	230	73.86	32.94
3	2483.50	55.8 PK	74.0	-18.2	1.00 V	230	22.79	33.01
4	2483.50	45.7 AV	54.0	-8.3	1.00 V	230	12.69	33.01
5	4924.00	54.8 PK	74.0	-19.2	1.00 V	88	14.00	40.80
6	4924.00	51.3 AV	54.0	-2.7	1.00 V	88	10.50	40.80
7	7386.00	58.4 PK	74.0	-15.6	1.00 V	338	9.95	48.45
8	7386.00	51.4 AV	54.0	-2.6	1.00 V	338	2.95	48.45

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.

802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	72.3 PK	74.0	-1.7	1.03 H	38	39.60	32.70
2	2390.00	53.1 AV	54.0	-0.9	1.03 H	38	20.40	32.70
3	*2412.00	109.1 PK			1.03 H	38	76.32	32.78
4	*2412.00	98.1 AV			1.03 H	38	65.32	32.78
5	4824.00	63.8 PK	74.0	-10.2	1.23 H	77	23.39	40.41
6	4824.00	51.6 AV	54.0	-2.4	1.23 H	77	11.19	40.41
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	70.1 PK	74.0	-3.9	1.05 V	231	37.40	32.70
2	2390.00	50.7 AV	54.0	-3.3	1.05 V	231	18.00	32.70
3	*2412.00	107.1 PK			1.05 V	231	74.32	32.78
4	*2412.00	95.9 AV			1.05 V	231	63.12	32.78
5	4824.00	62.2 PK	74.0	-11.8	1.15 V	109	21.79	40.41
6	4824.00	50.5 AV	54.0	-3.5	1.15 V	109	10.09	40.41

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.



A D T

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	68.1 PK	74.0	-5.9	1.00 H	34	35.40	32.70
2	2390.00	53.4 AV	54.0	-0.6	1.00 H	34	20.70	32.70
3	*2437.00	114.3 PK			1.00 H	34	81.44	32.86
4	*2437.00	104.1 AV			1.00 H	34	71.24	32.86
5	2483.50	69.5 PK	74.0	-4.5	1.00 H	34	36.49	33.01
6	2483.50	50.4 AV	54.0	-3.6	1.00 H	34	17.39	33.01
7	4874.00	64.4 PK	74.0	-9.6	1.26 H	90	23.77	40.63
8	4874.00	51.7 AV	54.0	-2.3	1.26 H	90	11.07	40.63
9	7311.00	61.9 PK	74.0	-12.1	1.29 H	67	13.43	48.47
10	7311.00	49.2 AV	54.0	-4.8	1.29 H	67	0.73	48.47
11	12185.00	66.5 PK	74.0	-7.5	1.27 H	43	16.14	50.36
12	12185.00	53.4 AV	54.0	-0.6	1.27 H	43	3.04	50.36

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.5 PK	74.0	-13.5	1.00 V	93	27.80	32.70
2	2390.00	46.8 AV	54.0	-7.2	1.00 V	93	14.10	32.70
3	*2437.00	112.1 PK			1.00 V	93	79.24	32.86
4	*2437.00	101.8 AV			1.00 V	93	68.94	32.86
5	2483.50	59.0 PK	74.0	-15.0	1.00 V	93	25.99	33.01
6	2483.50	44.2 AV	54.0	-9.8	1.00 V	93	11.19	33.01
7	4874.00	62.2 PK	74.0	-11.8	1.14 V	118	21.57	40.63
8	4874.00	50.2 AV	54.0	-3.8	1.14 V	118	9.57	40.63
9	7311.00	57.2 PK	74.0	-16.8	1.00 V	96	8.73	48.47
10	7311.00	43.9 AV	54.0	-10.1	1.00 V	96	-4.57	48.47
11	12185.00	61.9 PK	74.0	-12.1	1.91 V	33	11.54	50.36
12	12185.00	50.1 AV	54.0	-3.9	1.91 V	33	-0.26	50.36

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.

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	107.9 PK			1.00 H	42	74.96	32.94
2	*2462.00	95.9 AV			1.00 H	42	62.96	32.94
3	2483.50	73.4 PK	74.0	-0.6	1.00 H	42	40.39	33.01
4	2483.50	51.9 AV	54.0	-2.1	1.00 H	42	18.89	33.01
5	4924.00	64.4 PK	74.0	-9.6	1.30 H	92	23.60	40.80
6	4924.00	51.8 AV	54.0	-2.2	1.30 H	92	11.00	40.80
7	7386.00	61.3 PK	74.0	-12.7	1.27 H	75	12.85	48.45
8	7386.00	48.8 AV	54.0	-5.2	1.27 H	75	0.35	48.45
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	104.7 PK			1.01 V	78	71.76	32.94
2	*2462.00	92.5 AV			1.01 V	78	59.56	32.94
3	2483.50	69.7 PK	74.0	-4.3	1.01 V	78	36.69	33.01
4	2483.50	48.5 AV	54.0	-5.5	1.01 V	78	15.49	33.01
5	4924.00	62.0 PK	74.0	-12.0	1.10 V	116	21.20	40.80
6	4924.00	50.2 AV	54.0	-3.8	1.10 V	116	9.40	40.80
7	7386.00	57.0 PK	74.0	-17.0	1.03 V	83	8.55	48.45
8	7386.00	43.9 AV	54.0	-10.1	1.03 V	83	-4.55	48.45

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.

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	70.5 PK	74.0	-3.5	1.02 H	38	37.80	32.70
2	2390.00	53.1 AV	54.0	-0.9	1.02 H	38	20.40	32.70
3	*2412.00	108.4 PK			1.02 H	38	75.62	32.78
4	*2412.00	96.3 AV			1.02 H	38	63.52	32.78
5	4824.00	61.1 PK	74.0	-12.9	1.00 H	268	20.69	40.41
6	4824.00	47.2 AV	54.0	-6.8	1.00 H	268	6.79	40.41
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	67.3 PK	74.0	-6.7	1.00 V	80	34.60	32.70
2	2390.00	50.0 AV	54.0	-4.0	1.00 V	80	17.30	32.70
3	*2412.00	104.6 PK			1.00 V	80	71.82	32.78
4	*2412.00	92.7 AV			1.00 V	80	59.92	32.78
5	4824.00	57.3 PK	74.0	-16.7	1.00 V	338	16.89	40.41
6	4824.00	43.9 AV	54.0	-10.1	1.00 V	338	3.49	40.41

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.

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	70.6 PK	74.0	-3.4	1.01 H	36	37.90	32.70
2	2390.00	53.5 AV	54.0	-0.5	1.01 H	36	20.80	32.70
3	*2437.00	113.2 PK			1.01 H	36	80.34	32.86
4	*2437.00	101.7 AV			1.01 H	36	68.84	32.86
5	2483.50	70.1 PK	74.0	-3.9	1.01 H	36	37.09	33.01
6	2483.50	52.1 AV	54.0	-1.9	1.01 H	36	19.09	33.01
7	4874.00	60.5 PK	74.0	-13.5	1.00 H	281	19.87	40.63
8	4874.00	46.9 AV	54.0	-7.1	1.00 H	281	6.27	40.63
9	7311.00	65.1 PK	74.0	-8.9	1.26 H	70	16.63	48.47
10	7311.00	50.8 AV	54.0	-3.2	1.26 H	70	2.33	48.47
11	12185.00	64.7 PK	74.0	-9.3	1.28 H	46	14.34	50.36
12	12185.00	51.6 AV	54.0	-2.4	1.28 H	46	1.24	50.36
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	1.00 V	77	34.70	32.70
2	2390.00	50.3 AV	54.0	-3.7	1.00 V	77	17.60	32.70
3	*2437.00	109.7 PK			1.00 V	77	76.84	32.86
4	*2437.00	98.4 AV			1.00 V	77	65.54	32.86
5	2483.50	66.2 PK	74.0	-7.8	1.00 V	77	33.19	33.01
6	2483.50	48.5 AV	54.0	-5.5	1.00 V	77	15.49	33.01
7	4874.00	58.3 PK	74.0	-15.7	1.00 V	343	17.67	40.63
8	4874.00	44.6 AV	54.0	-9.4	1.00 V	343	3.97	40.63
9	7311.00	60.4 PK	74.0	-13.6	1.11 V	332	11.93	48.47
10	7311.00	47.5 AV	54.0	-6.5	1.11 V	332	-0.97	48.47
11	12185.00	61.9 PK	74.0	-12.1	1.22 V	150	11.54	50.36
12	12185.00	48.7 AV	54.0	-5.3	1.22 V	150	-1.66	50.36

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.

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	107.5 PK			1.00 H	38	74.56	32.94
2	*2462.00	95.5 AV			1.00 H	38	62.56	32.94
3	2483.50	73.4 PK	74.0	-0.6	1.00 H	38	40.39	33.01
4	2483.50	53.3 AV	54.0	-0.7	1.00 H	38	20.29	33.01
5	4924.00	61.0 PK	74.0	-13.0	1.00 H	266	20.20	40.80
6	4924.00	47.4 AV	54.0	-6.6	1.00 H	266	6.60	40.80
7	7386.00	65.1 PK	74.0	-8.9	1.27 H	67	16.65	48.45
8	7386.00	51.0 AV	54.0	-3.0	1.27 H	67	2.55	48.45
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	104.5 PK			1.00 V	65	71.56	32.94
2	*2462.00	92.5 AV			1.00 V	65	59.56	32.94
3	2483.50	69.7 PK	74.0	-4.3	1.00 V	65	36.69	33.01
4	2483.50	50.3 AV	54.0	-3.7	1.00 V	65	17.29	33.01
5	4924.00	57.6 PK	74.0	-16.4	1.00 V	340	16.80	40.80
6	4924.00	44.1 AV	54.0	-9.9	1.00 V	340	3.30	40.80
7	7386.00	59.9 PK	74.0	-14.1	1.14 V	342	11.45	48.45
8	7386.00	47.1 AV	54.0	-6.9	1.14 V	342	-1.35	48.45

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.

802.11n (HT40)

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	73.1 PK	74.0	-0.9	1.03 H	36	40.40	32.70
2	2390.00	53.2 AV	54.0	-0.8	1.03 H	36	20.50	32.70
3	*2422.00	105.1 PK			1.00 H	36	72.29	32.81
4	*2422.00	92.7 AV			1.00 H	36	59.89	32.81
5	4844.00	59.6 PK	74.0	-14.4	1.03 H	267	19.10	40.50
6	4844.00	46.6 AV	54.0	-7.4	1.03 H	267	6.10	40.50
7	7266.00	65.1 PK	74.0	-8.9	1.19 H	78	16.63	48.47
8	7266.00	50.7 AV	54.0	-3.3	1.19 H	78	2.23	48.47
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.1 PK	74.0	-3.9	1.05 V	81	37.40	32.70
2	2390.00	50.2 AV	54.0	-3.8	1.05 V	81	17.50	32.70
3	*2422.00	102.8 PK			1.05 V	81	69.99	32.81
4	*2422.00	90.3 AV			1.05 V	81	57.49	32.81
5	4844.00	58.3 PK	74.0	-15.7	1.00 V	328	17.80	40.50
6	4844.00	44.7 AV	54.0	-9.3	1.00 V	328	4.20	40.50
7	7266.00	59.8 PK	74.0	-14.2	1.03 V	335	11.33	48.47
8	7266.00	47.0 AV	54.0	-7.0	1.03 V	335	-1.47	48.47

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– 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.

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	70.3 PK	74.0	-3.7	1.00 H	42	37.60	32.70
2	2390.00	53.5 AV	54.0	-0.5	1.00 H	42	20.80	32.70
3	*2437.00	107.5 PK			1.00 H	42	74.64	32.86
4	*2437.00	94.4 AV			1.00 H	42	61.54	32.86
5	2483.50	69.3 PK	74.0	-4.7	1.00 H	42	36.29	33.01
6	2483.50	53.2 AV	54.0	-0.8	1.00 H	42	20.19	33.01
7	4874.00	60.1 PK	74.0	-13.9	1.00 H	254	19.47	40.63
8	4874.00	46.4 AV	54.0	-7.6	1.00 H	254	5.77	40.63
9	7311.00	65.3 PK	74.0	-8.7	1.23 H	74	16.83	48.47
10	7311.00	50.8 AV	54.0	-3.2	1.23 H	74	2.33	48.47
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.7 PK	74.0	-6.3	1.01 V	79	35.00	32.70
2	2390.00	51.1 AV	54.0	-2.9	1.01 V	79	18.40	32.70
3	*2437.00	104.8 PK			1.01 V	79	71.94	32.86
4	*2437.00	92.1 AV			1.01 V	79	59.24	32.86
5	2483.50	65.8 PK	74.0	-8.2	1.01 V	79	32.79	33.01
6	2483.50	49.8 AV	54.0	-4.2	1.01 V	79	16.79	33.01
7	4874.00	58.0 PK	74.0	-16.0	1.00 V	348	17.37	40.63
8	4874.00	44.2 AV	54.0	-9.8	1.00 V	348	3.57	40.63
9	7311.00	59.6 PK	74.0	-14.4	1.16 V	312	11.13	48.47
10	7311.00	47.0 AV	54.0	-7.0	1.16 V	312	-1.47	48.47

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– 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.

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	105.5 PK			1.00 H	38	72.58	32.92
2	*2452.00	92.6 AV			1.00 H	38	59.68	32.92
3	2483.50	72.7 PK	74.0	-1.3	1.00 H	38	39.69	33.01
4	2483.50	53.5 AV	54.0	-0.5	1.00 H	38	20.49	33.01
5	4904.00	60.1 PK	74.0	-13.9	1.00 H	284	19.34	40.76
6	4904.00	46.3 AV	54.0	-7.7	1.00 H	284	5.54	40.76
7	7356.00	64.6 PK	74.0	-9.4	1.21 H	81	16.15	48.45
8	7356.00	50.3 AV	54.0	-3.7	1.21 H	81	1.85	48.45
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	101.8 PK			1.01 V	78	68.88	32.92
2	*2452.00	89.3 AV			1.01 V	78	56.38	32.92
3	2483.50	69.8 PK	74.0	-4.2	1.01 V	78	36.79	33.01
4	2483.50	50.6 AV	54.0	-3.4	1.01 V	78	17.59	33.01
5	4904.00	58.7 PK	74.0	-15.3	1.00 V	356	17.94	40.76
6	4904.00	44.8 AV	54.0	-9.2	1.00 V	356	4.04	40.76
7	7356.00	60.4 PK	74.0	-13.6	1.08 V	334	11.95	48.45
8	7356.00	47.3 AV	54.0	-6.7	1.08 V	334	-1.15	48.45

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	FSP 40	100036	Jan. 21, 2013	Jan. 20, 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 : Aug. 02 to 03, 2013

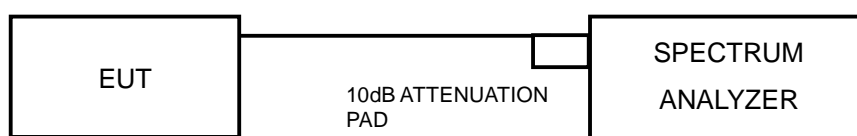
4.3.3 TEST PROCEDURE

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.

4.3.7 TEST RESULTS (MODE 1)

802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	8.30	0.5	PASS
6	2437	8.33	0.5	PASS
11	2462	8.69	0.5	PASS

802.11g

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	15.11	0.5	PASS
6	2437	14.59	0.5	PASS
11	2462	15.15	0.5	PASS

802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.02	0.5	PASS
6	2437	15.15	0.5	PASS
11	2462	15.16	0.5	PASS

802.11n (HT40)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
3	2422	36.45	0.5	PASS
6	2437	36.46	0.5	PASS
9	2452	36.18	0.5	PASS

4.3.8 TEST RESULTS (MODE 2)

802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2412	8.58	8.53	8.50	0.5	PASS
6	2437	8.41	8.57	7.96	0.5	PASS
11	2462	8.23	8.52	8.40	0.5	PASS

802.11g

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2412	16.50	16.55	16.46	0.5	PASS
6	2437	16.43	16.46	16.45	0.5	PASS
11	2462	16.49	16.58	16.48	0.5	PASS

802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2412	17.70	17.73	17.72	0.5	PASS
6	2437	17.68	17.67	17.63	0.5	PASS
11	2462	17.72	17.72	17.69	0.5	PASS

802.11n (HT40)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
3	2422	36.42	36.54	36.46	0.5	PASS
6	2437	36.21	36.48	36.44	0.5	PASS
9	2452	36.45	36.48	36.50	0.5	PASS

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)

Per KDB 662911 D01 Multiple Transmitter Output v01r02 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $NANT \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any NANT;

Array Gain = $5 \log(NANT/NSS)$ dB or 3 dB, whichever is less for 20-MHz channel widths with $NANT \geq 5$.

For power measurements on all other devices: Array Gain = $10 \log(NANT/NSS)$ dB.

4.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power meter Anritsu	ML2495A	0824006	May 20, 2013	May 19, 2014
Power sensor Anritsu	MA2411B	0738172	May 20, 2013	May 19, 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 : Aug. 02 to 03, 2013

4.4.3 TEST PROCEDURES

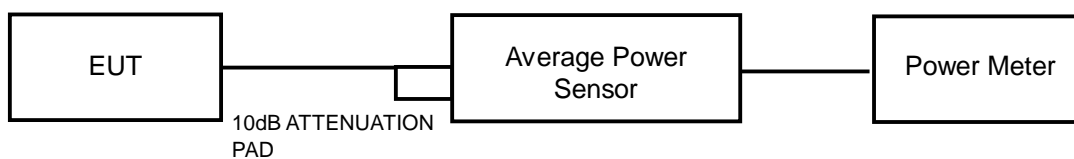
Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

Duty cycle of test signal is < 98 %. Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

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 (MODE 1)

802.11b

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	75.683	18.79	30	PASS
6	2437	158.855	22.01	30	PASS
11	2462	49.317	16.93	30	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	11.967	10.78	30	PASS
6	2437	68.707	18.37	30	PASS
11	2462	20.512	13.12	30	PASS

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	13.032	11.15	30	PASS
6	2437	77.446	18.89	30	PASS
11	2462	17.418	12.41	30	PASS

802.11n (HT40)

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	LIMIT (dBm)	PASS/FAIL
3	2422	6.223	7.94	30	PASS
6	2437	10.023	10.01	30	PASS
9	2452	5.636	7.51	30	PASS

4.4.8 TEST RESULTS (MODE 2)

802.11b

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	18.73	18.05	18.22	204.845	23.11	30	PASS
6	2437	18.66	18.31	18.43	210.878	23.24	30	PASS
11	2462	19.82	18.98	19.10	256.291	24.09	30	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	16.65	15.93	16.12	126.338	21.02	30	PASS
6	2437	22.72	22.02	21.93	502.244	27.01	30	PASS
11	2462	15.89	15.66	15.56	111.603	20.48	30	PASS

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	16.24	16.23	16.25	126.219	21.01	30	PASS
6	2437	22.91	21.99	21.95	510.234	27.08	30	PASS
11	2462	16.67	16.15	15.81	125.769	21.00	30	PASS

802.11n (HT40)

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
3	2422	15.77	15.21	15.93	110.120	20.42	30	PASS
6	2437	18.11	17.63	17.78	182.636	22.62	30	PASS
9	2452	15.73	15.23	15.75	108.338	20.35	30	PASS



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	FSP 40	100036	Jan. 21, 2013	Jan. 20, 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 : Aug. 02 to 03, 2013

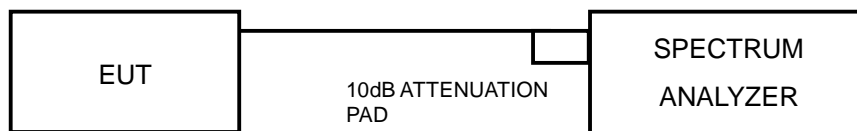
4.5.3 TEST PROCEDURE

1. Set the RBW = 30 kHz, VBW =100 kHz, Detector = power averaging (RMS) .
2. Ensure that the number of measurement points in the sweep $\geq 2 \times$ span/RBW
3. Sweep time = auto couple,
4. Employ trace averaging (RMS) mode over a minimum of 100 traces.
5. 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

4.5.7 TEST RESULTS (MODE 1)

802.11b

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	LIMIT (dBm)	PASS /FAIL
1	2412	-4.79	8	PASS
6	2437	-1.59	8	PASS
11	2462	-7.92	8	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	LIMIT (dBm)	PASS /FAIL
1	2412	-14.55	8	PASS
6	2437	-6.04	8	PASS
11	2462	-12.19	8	PASS

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	LIMIT (dBm)	PASS /FAIL
1	2412	-14.54	8	PASS
6	2437	-6.55	8	PASS
11	2462	-13.57	8	PASS

802.11n (HT40)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	LIMIT (dBm)	PASS /FAIL
3	2422	-20.74	8	PASS
6	2437	-19.49	8	PASS
9	2452	-22.29	8	PASS

4.5.8 TEST RESULTS (MODE 2)

802.11b

TX chain	Channel	FREQ. (MHz)	PSD (dBm)	10 log (N=3) dB	Total PSD (dBm)	Limit (dBm)	PASS /FAIL
0	1	2412	-6.76	4.77	-1.99	6.1	PASS
	6	2437	-5.59	4.77	-0.82	6.1	PASS
	11	2462	-4.96	4.77	-0.19	6.1	PASS
1	1	2412	-6.63	4.77	-1.86	6.1	PASS
	6	2437	-6.36	4.77	-1.59	6.1	PASS
	11	2462	-5.73	4.77	-0.96	6.1	PASS
2	1	2412	-6.81	4.77	-2.04	6.1	PASS
	6	2437	-6.16	4.77	-1.39	6.1	PASS
	11	2462	-5.73	4.77	-0.96	6.1	PASS

NOTE: 1. Directional gain = $10 \log[(10G1/20 + 10G2/20 + 10G3/20)^2 / 3] = 7.9\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8-(7.9-6) = 6.1\text{dBm}$.

802.11g

TX chain	Channel	FREQ. (MHz)	PSD (dBm)	10 log (N=3) dB	Total PSD (dBm)	Limit (dBm)	PASS /FAIL
0	1	2412	-10.04	4.77	-5.27	6.1	PASS
	6	2437	-3.97	4.77	0.80	6.1	PASS
	11	2462	-10.46	4.77	-5.69	6.1	PASS
1	1	2412	-10.39	4.77	-5.62	6.1	PASS
	6	2437	-4.99	4.77	-0.22	6.1	PASS
	11	2462	-11.44	4.77	-6.67	6.1	PASS
2	1	2412	-10.60	4.77	-5.83	6.1	PASS
	6	2437	-4.83	4.77	-0.06	6.1	PASS
	11	2462	-10.79	4.77	-6.02	6.1	PASS

NOTE: 1. Directional gain = $10 \log[(10G1/20 + 10G2/20 + 10G3/20)^2 / 3] = 7.9\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8-(7.9-6) = 6.1\text{dBm}$.

802.11n (HT20)

TX chain	Channel	FREQ. (MHz)	PSD (dBm)	10 log (N=3) dB	Total PSD (dBm)	Limit (dBm)	PASS /FAIL
0	1	2412	-10.34	4.77	-5.45	8	PASS
	6	2437	-4.43	4.77	0.46	8	PASS
	11	2462	-10.10	4.77	-5.21	8	PASS
1	1	2412	-10.87	4.77	-5.98	8	PASS
	6	2437	-5.23	4.77	-0.34	8	PASS
	11	2462	-11.23	4.77	-6.34	8	PASS
2	1	2412	-10.73	4.77	-5.84	8	PASS
	6	2437	-4.82	4.77	0.07	8	PASS
	11	2462	-11.26	4.77	-6.37	8	PASS

NOTE: 1. Refer to section 3.4 for duty cycle spectrum plot.

802.11n (HT40)

TX chain	Channel	FREQ. (MHz)	PSD (dBm)	10 log (N=3) dB	Total PSD (dBm)	Limit (dBm)	PASS /FAIL
0	3	2422	-13.36	4.77	-8.39	8	PASS
	6	2437	-10.39	4.77	-5.42	8	PASS
	9	2452	-13.34	4.77	-8.37	8	PASS
1	3	2422	-13.74	4.77	-8.77	8	PASS
	6	2437	-12.18	4.77	-7.21	8	PASS
	9	2452	-14.17	4.77	-9.20	8	PASS
2	3	2422	-14.32	4.77	-9.35	8	PASS
	6	2437	-11.34	4.77	-6.37	8	PASS
	9	2452	-13.42	4.77	-8.45	8	PASS

NOTE: 1. Refer to section 3.4 for duty cycle spectrum plot.



A D T

4.6 CONDUCTED OUT-BAND EMISSION MEASUREMENT

4.6.1 LIMITS OF CONDUCTED OUT-BAND EMISSION MEASUREMENT

Below 30dB 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	FSP 40	100036	Jan. 21, 2013	Jan. 20, 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 : Aug. 02 to Sep. 13, 2013

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.

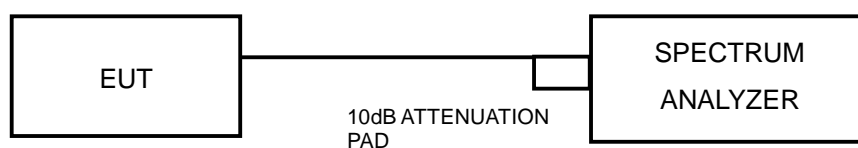
Measurement Procedure –Unwanted Emission Level

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

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 TEST SETUP



4.6.6 EUT OPERATING CONDITION

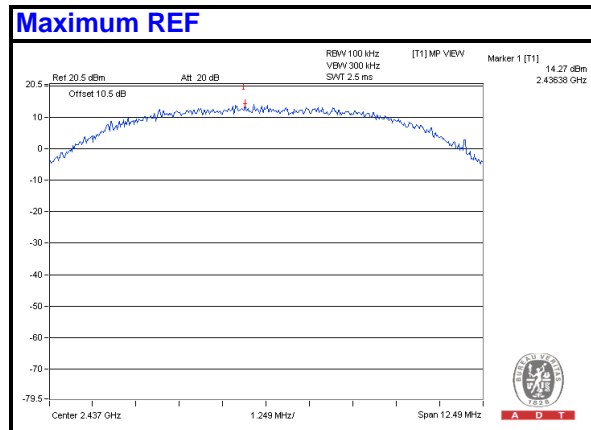
Same as Item 4.3.6

4.6.7 TEST RESULTS

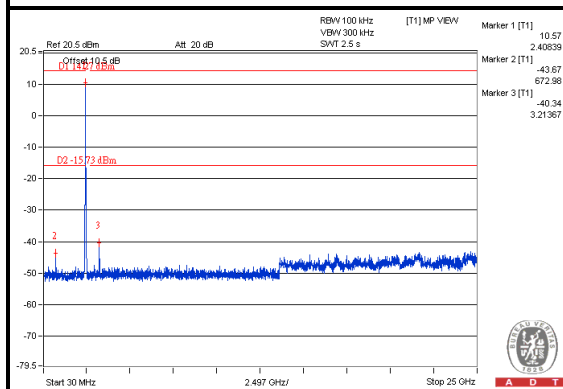
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

For Mode 1 (Radio Card 1)

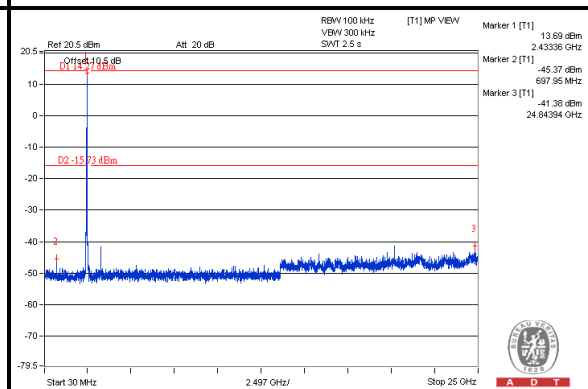
802.11b



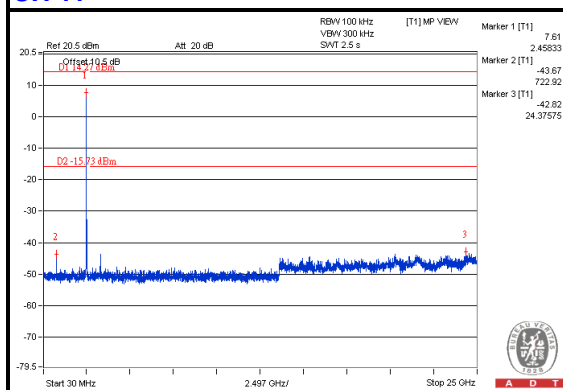
CH 1



CH 6



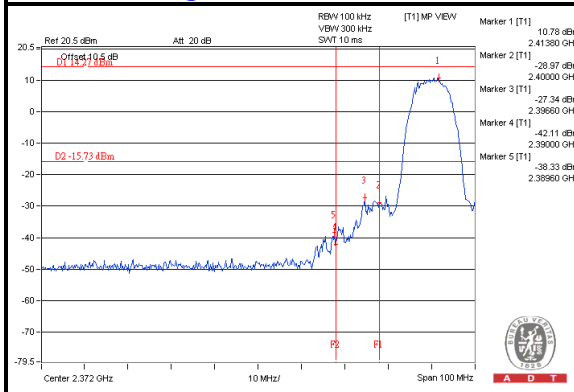
CH 11



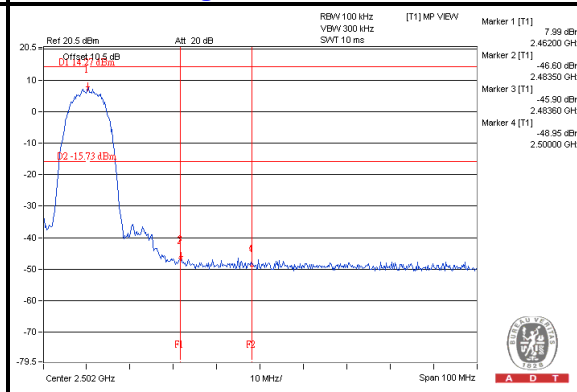


A D T

CH 1 Band edge



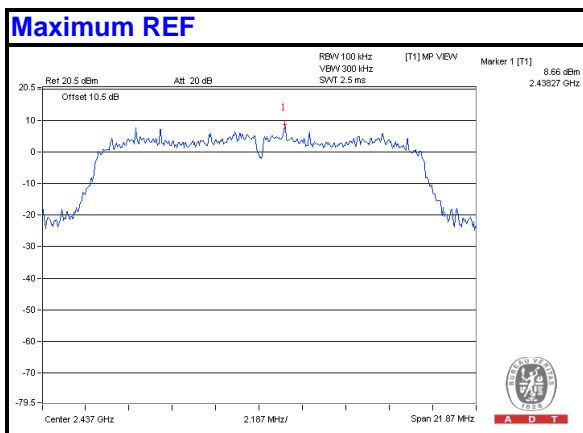
CH 11 Band edge



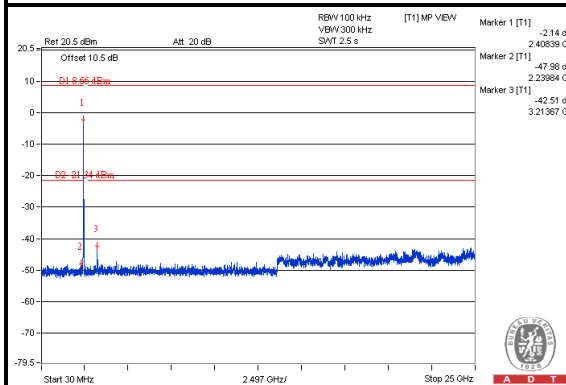


A D T

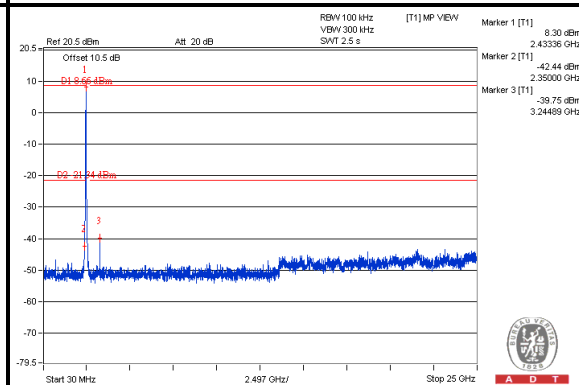
802.11g



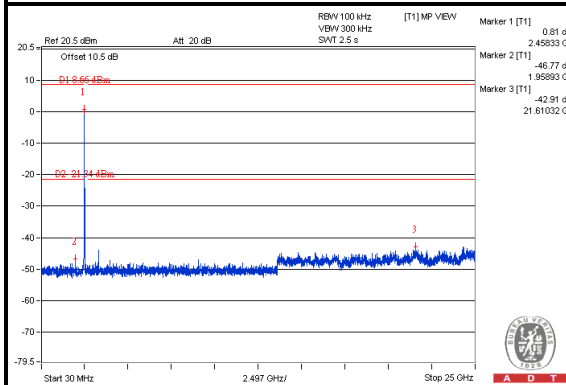
CH 1



CH 6



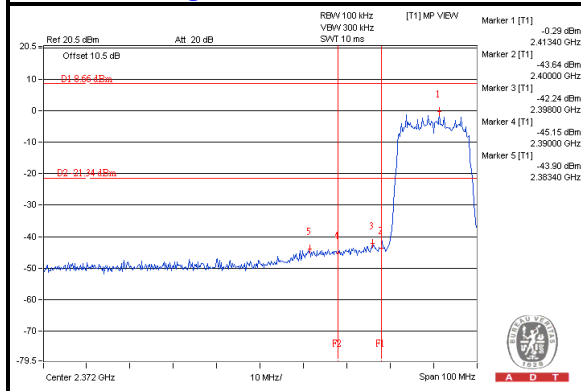
CH 11



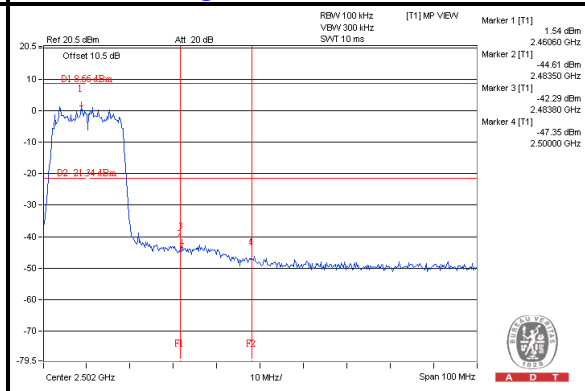


A D T

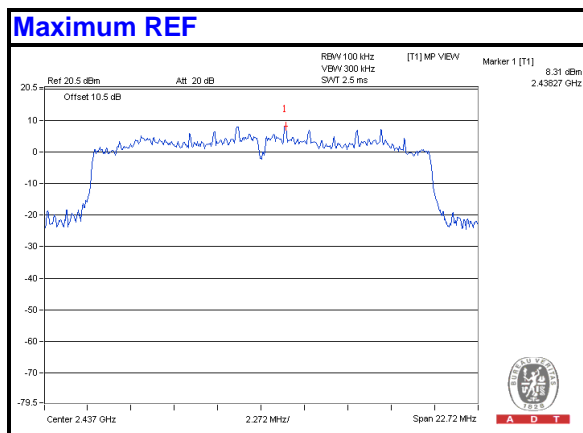
CH 1 Band edge



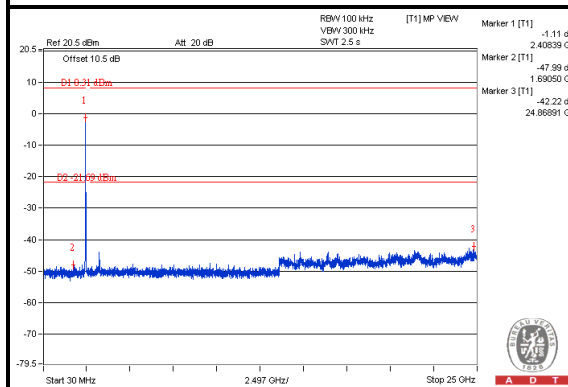
CH 11 Band edge



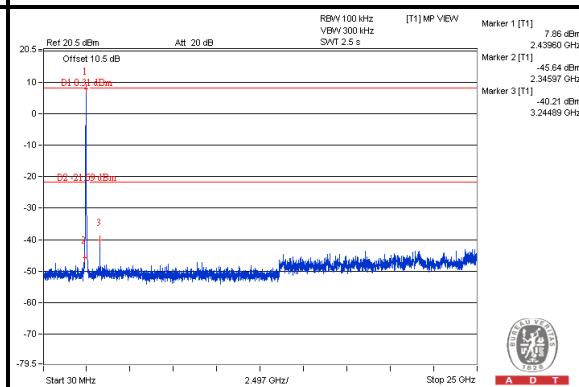
802.11n (HT20)



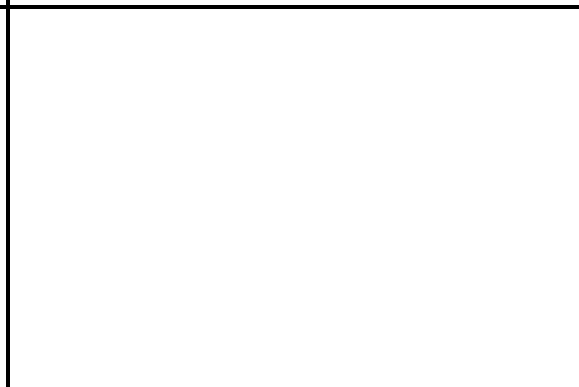
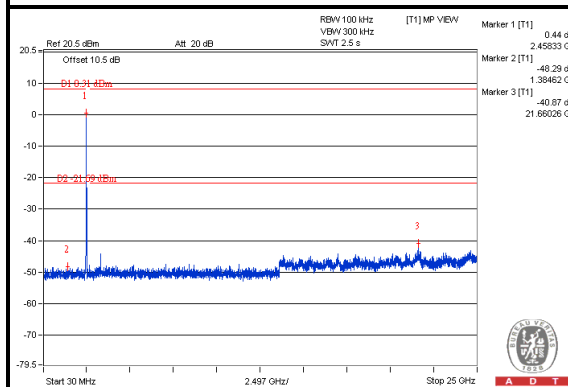
CH 1



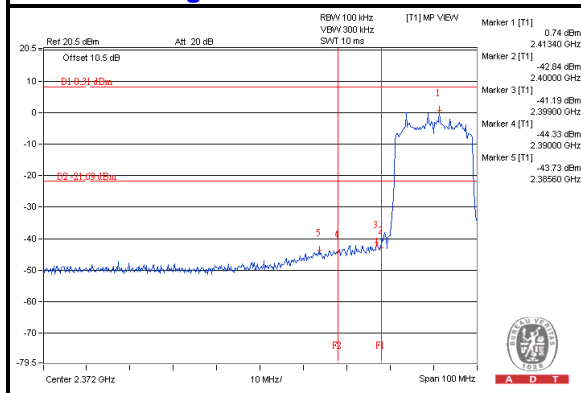
CH 6



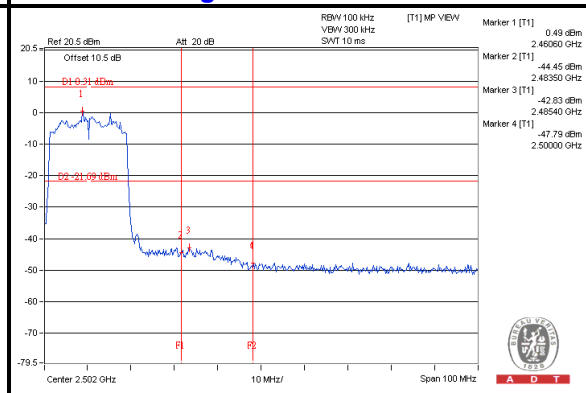
CH 11



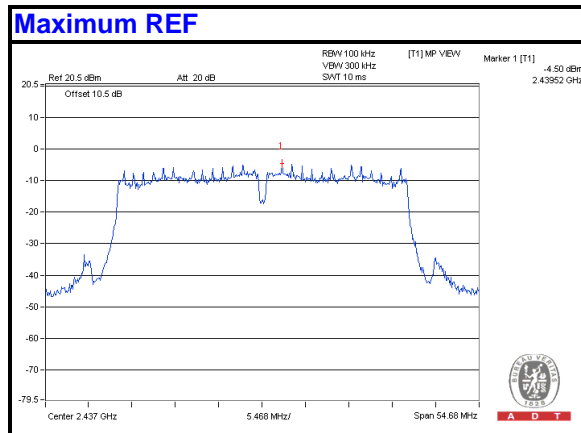
CH 1 Band edge



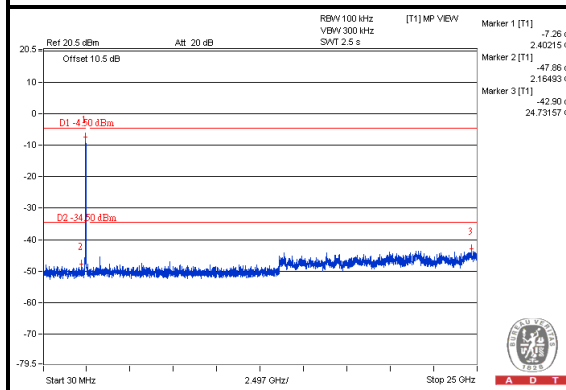
CH 11 Band edge



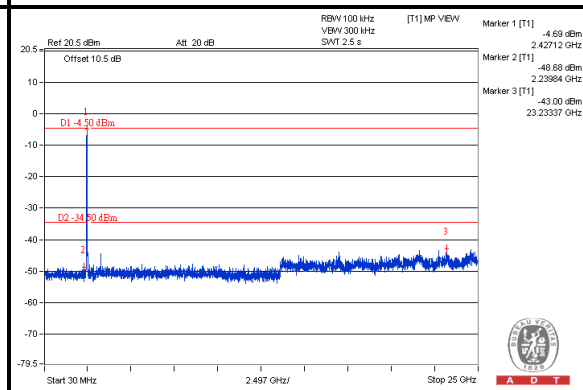
802.11n (HT40)



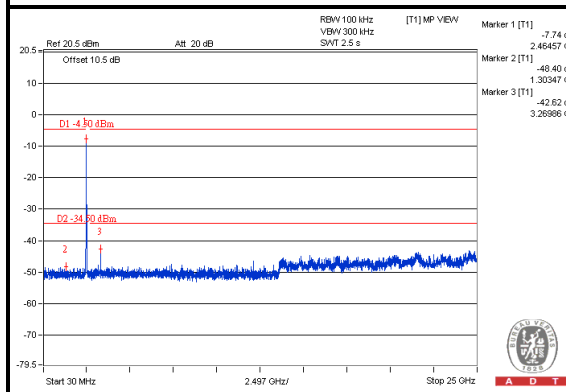
CH 3



CH 6



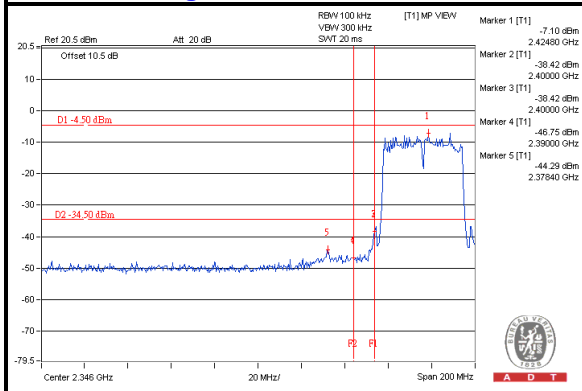
CH 9



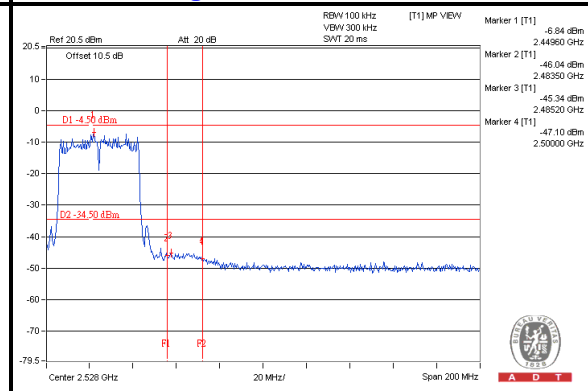


A D T

CH 3 Band edge

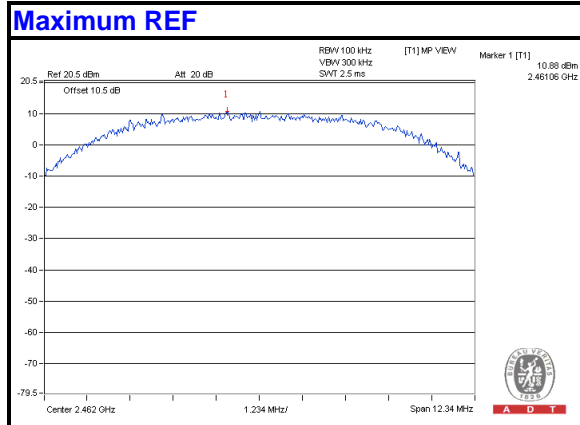


CH 9 Band edge



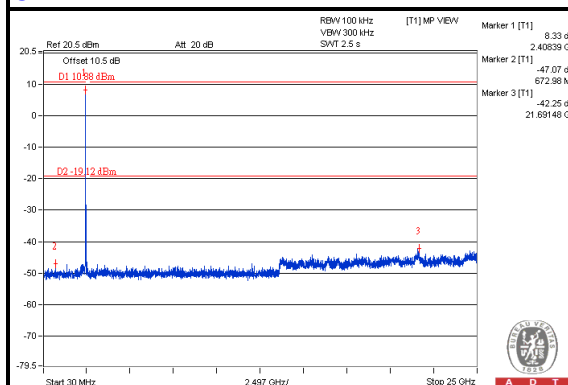
For Mode 2 (Radio Card 2)

802.11b:

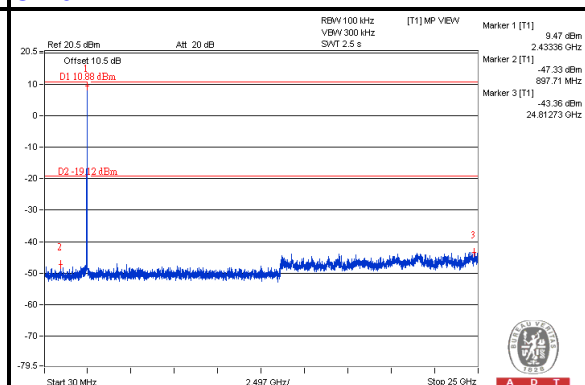


Chain(0)

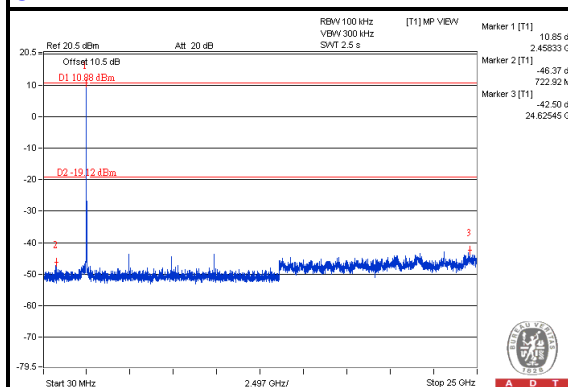
CH 1



CH 6



CH 11

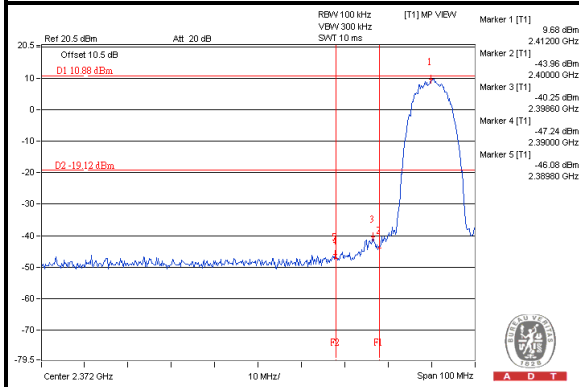




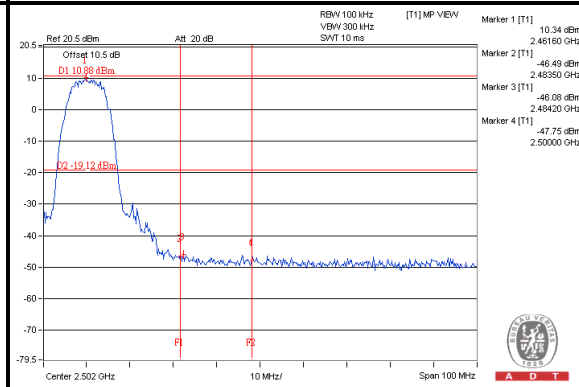
A D T

Chain(0)

CH 1 Band edge



CH 11 Band edge

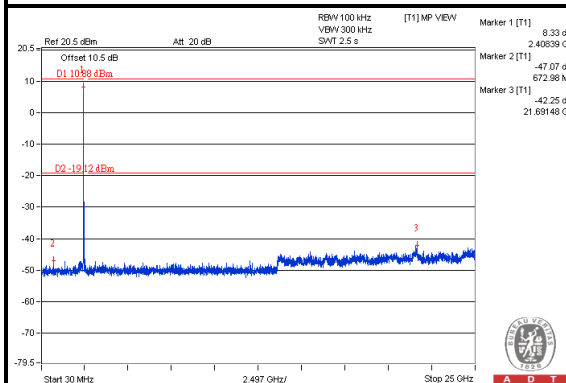




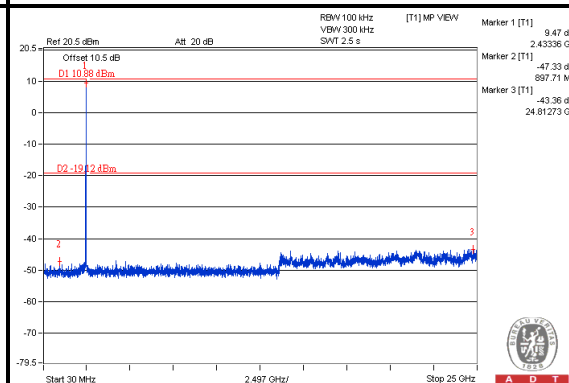
A D T

Chain(1)

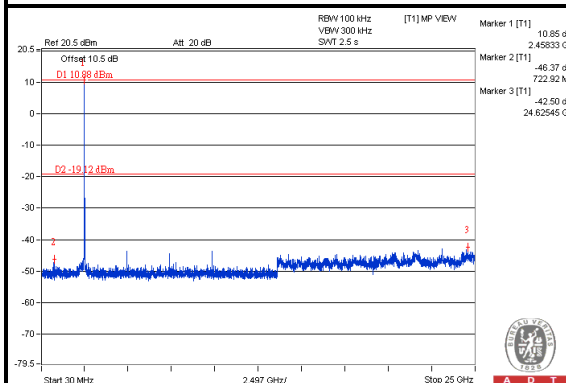
CH 1



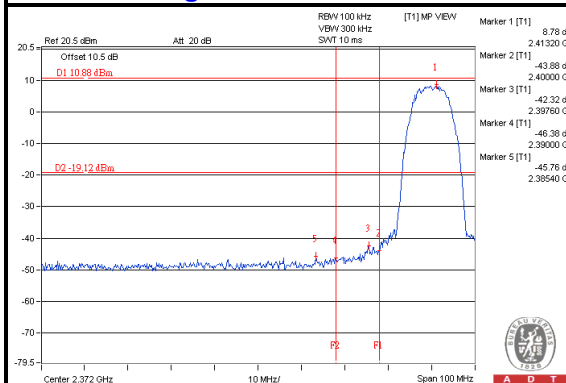
CH 6



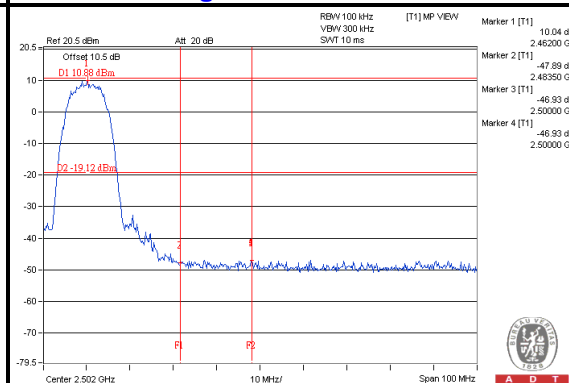
CH 11



CH 1 Band edge



CH 11 Band edge

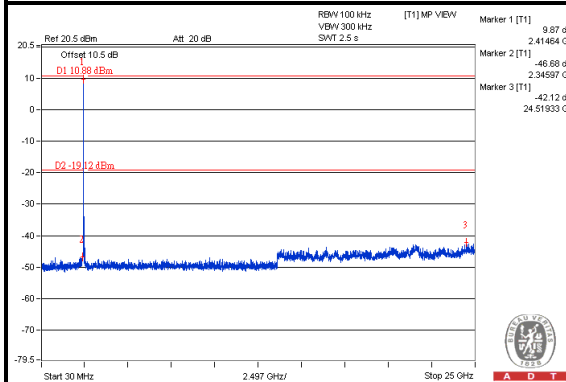




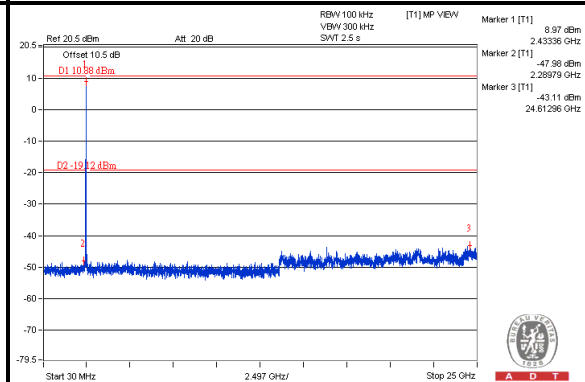
A D T

Chain(2)

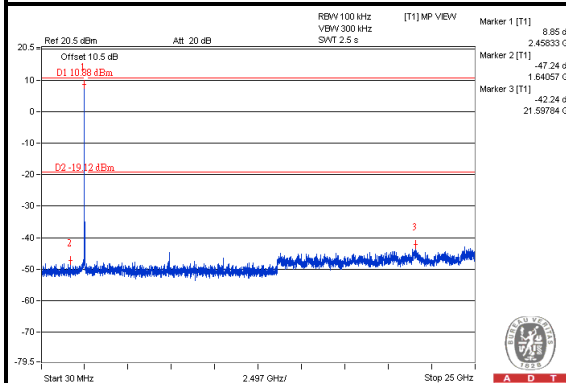
CH 1



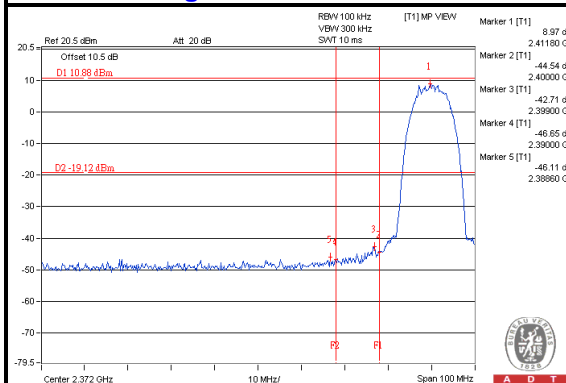
CH 6



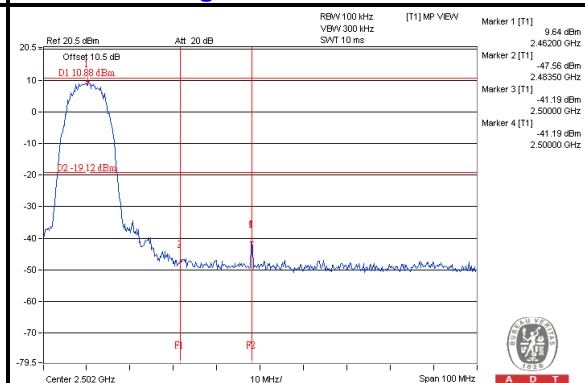
CH 11



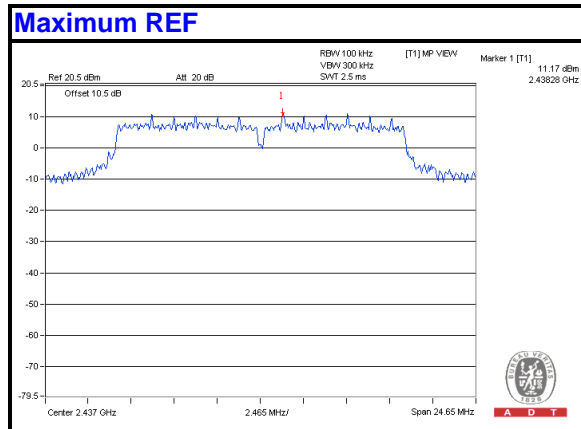
CH 1 Band edge



CH 11 Band edge

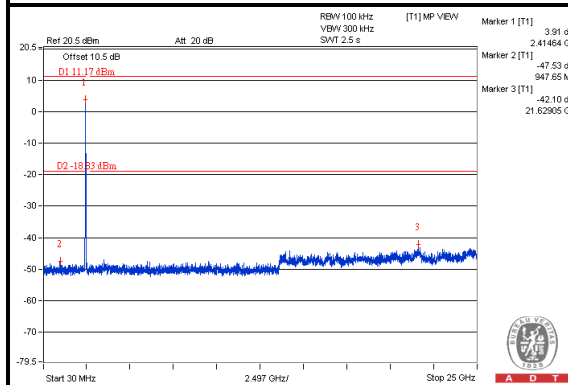


802.11g:

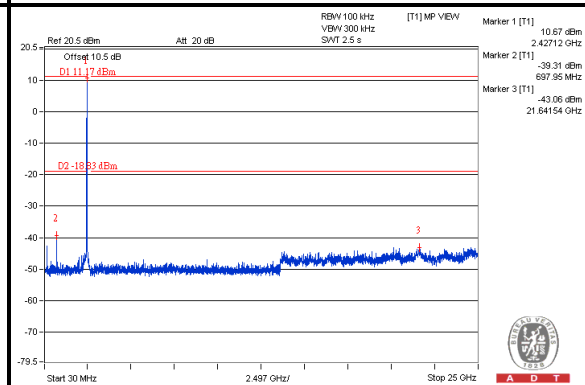


Chain(0)

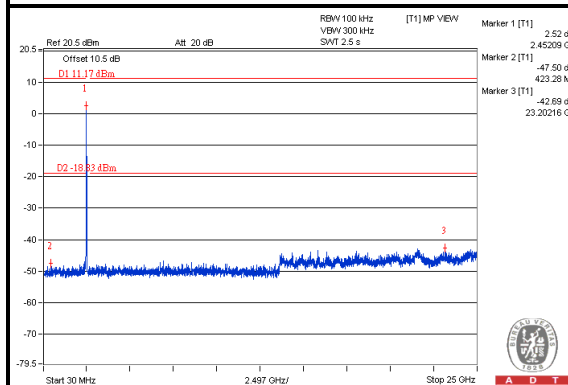
CH 1



CH 6



CH 11

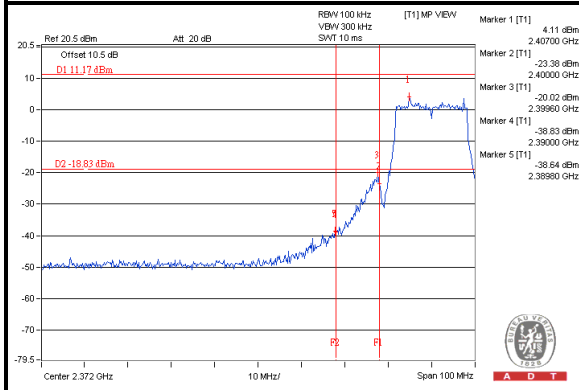




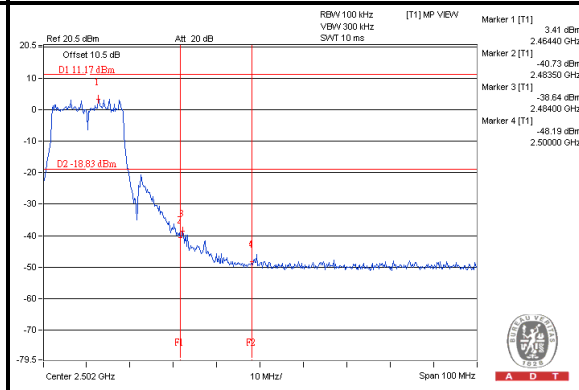
A D T

Chain(0)

CH 1 Band edge



CH 11 Band edge

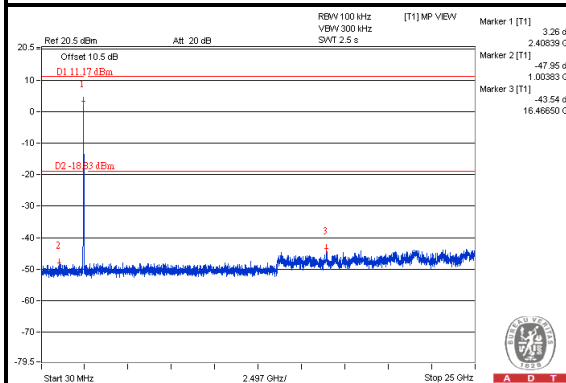




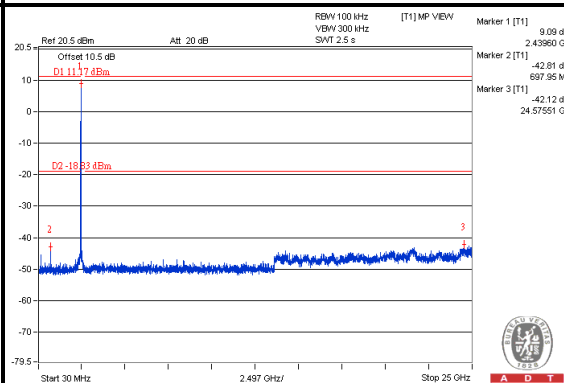
A D T

Chain(1)

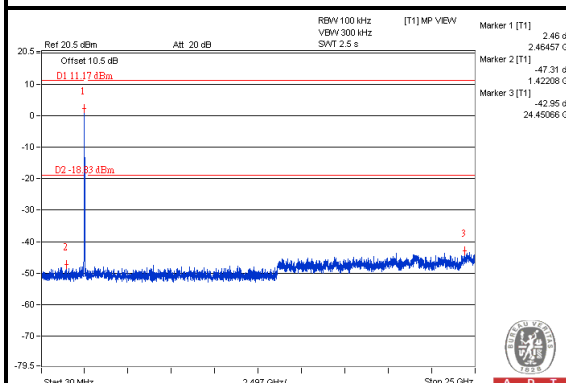
CH 1



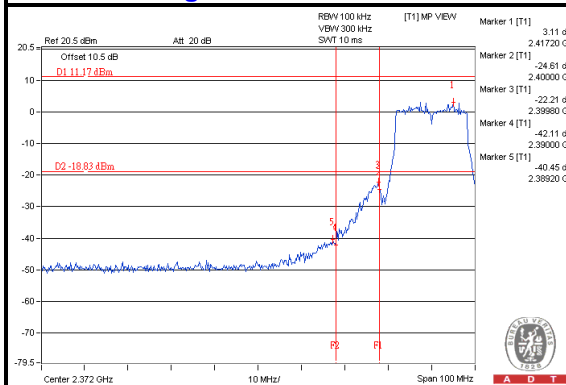
CH 6



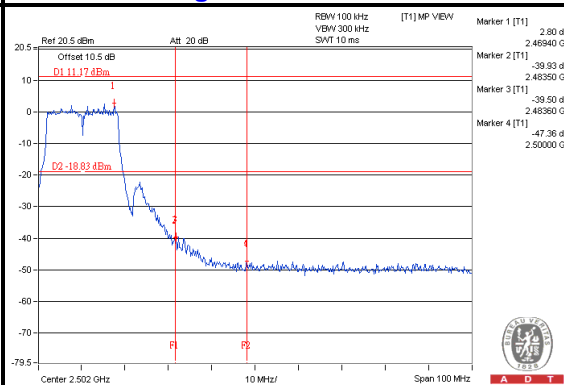
CH 11



CH 1 Band edge

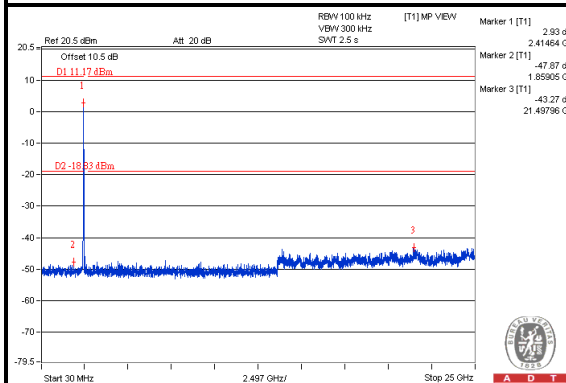
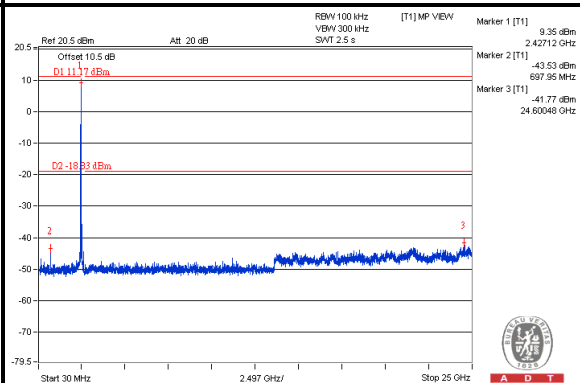
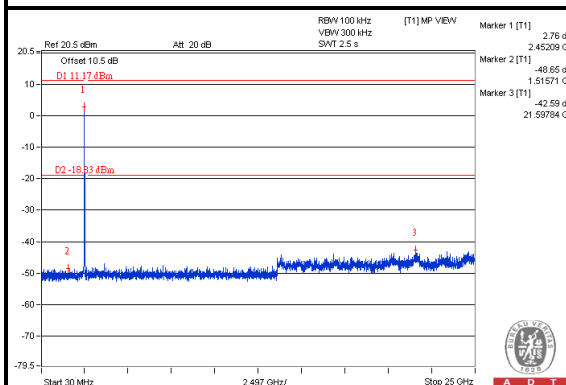
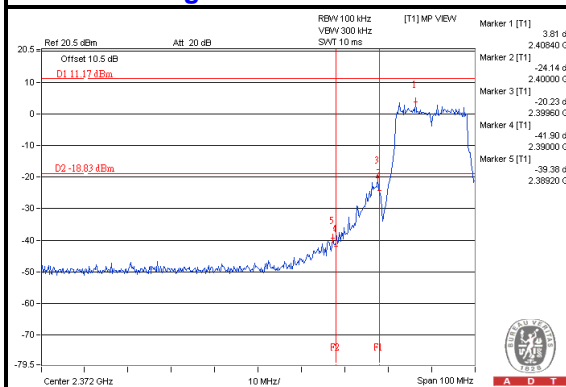
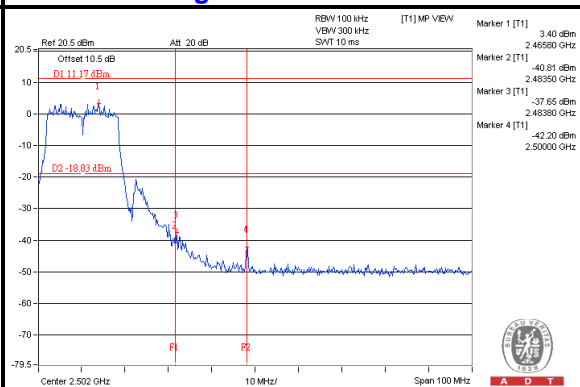


CH 11 Band edge

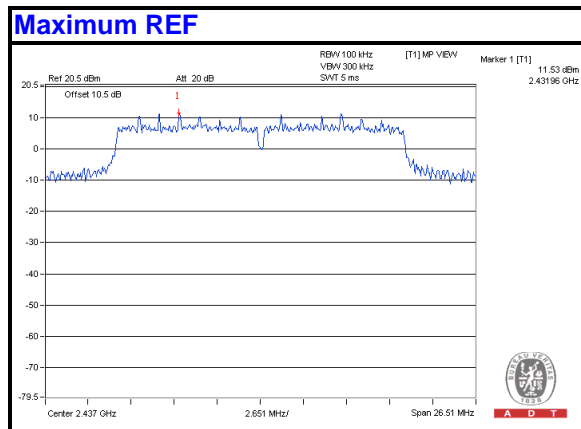




A D T

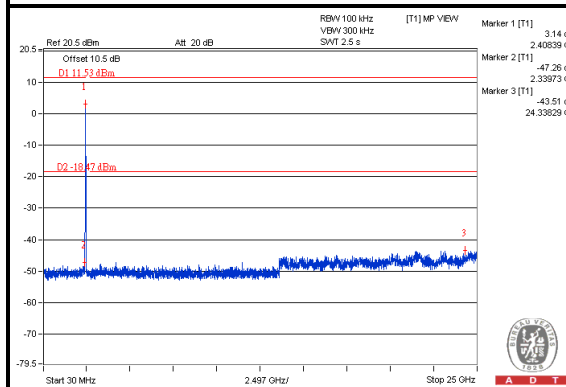
Chain(2)**CH 1****CH 6****CH 11****CH 1 Band edge****CH 11 Band edge**

802.11n (HT20):

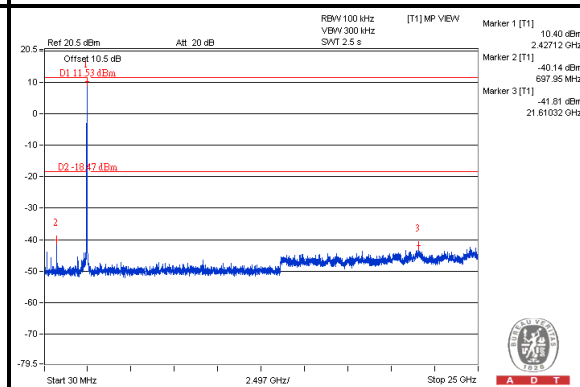


Chain(0)

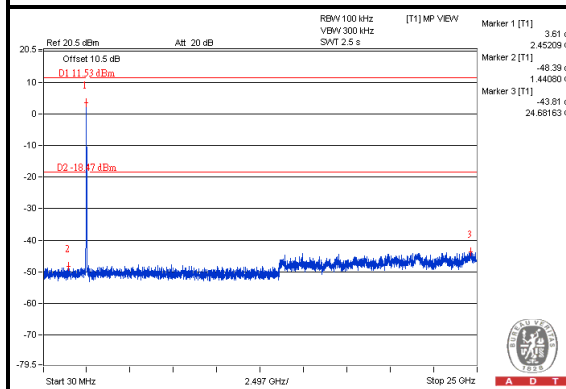
CH 1



CH 6



CH 11

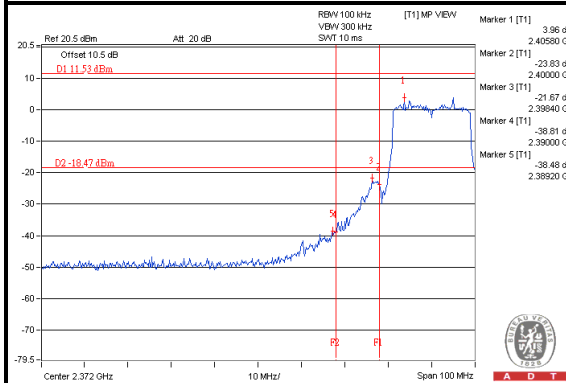




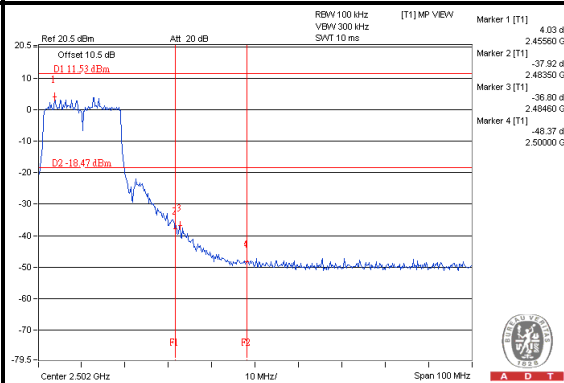
A D T

Chain(0)

CH 1 Band edge

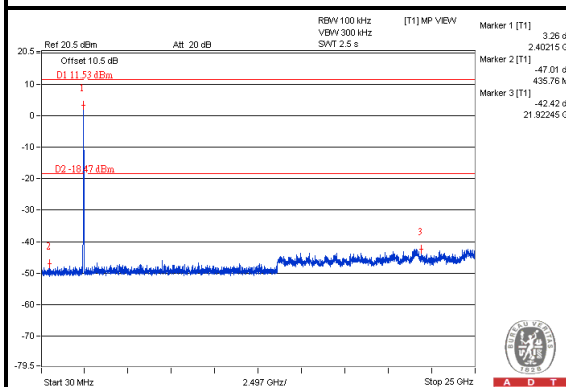
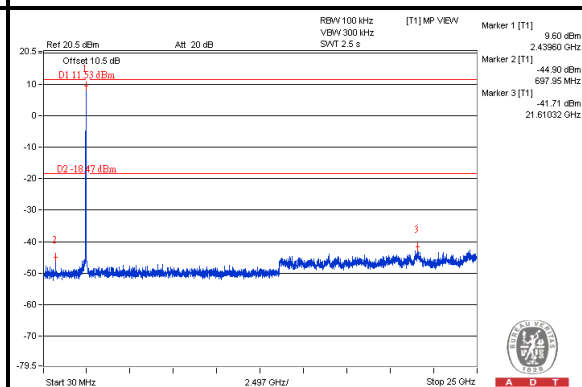
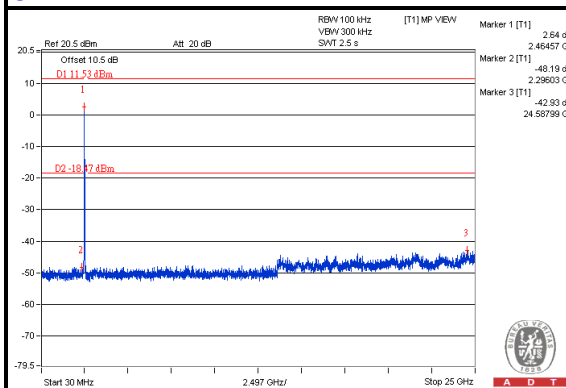
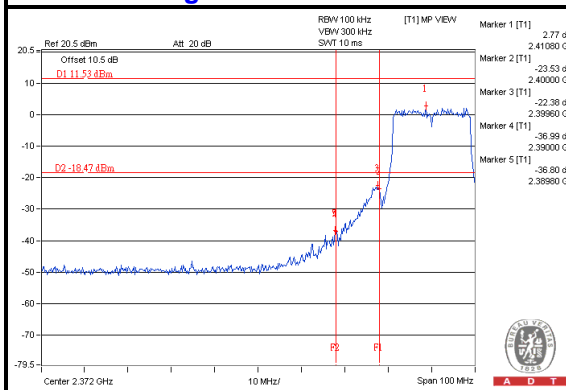
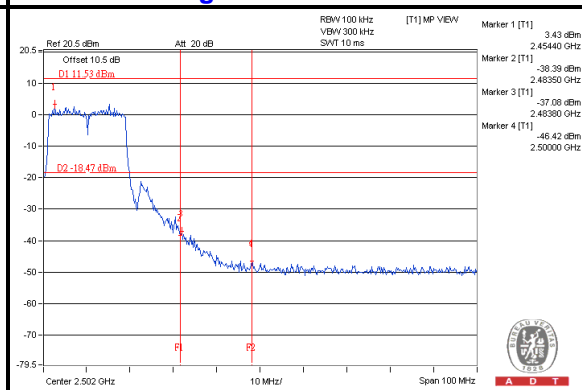


CH 11 Band edge





A D T

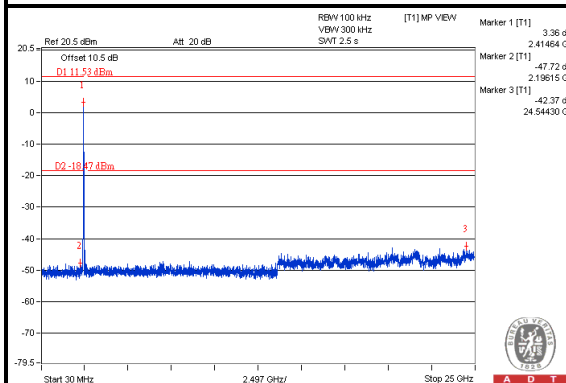
Chain(1)**CH 1****CH 6****CH 11****CH 1 Band edge****CH 11 Band edge**



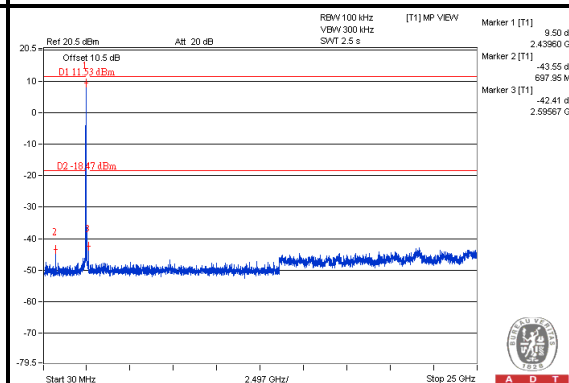
A D T

Chain(2)

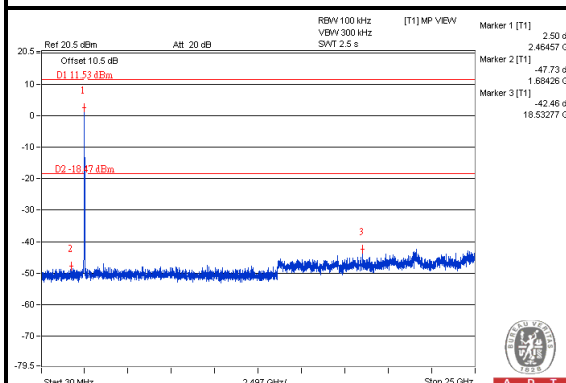
CH 1



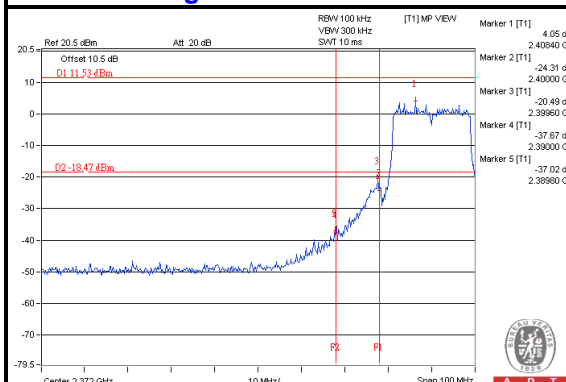
CH 6



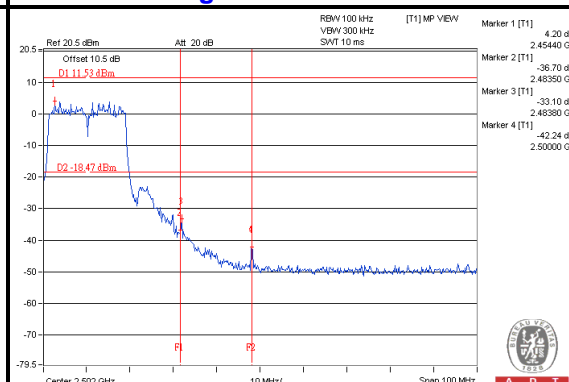
CH 11



CH 1 Band edge



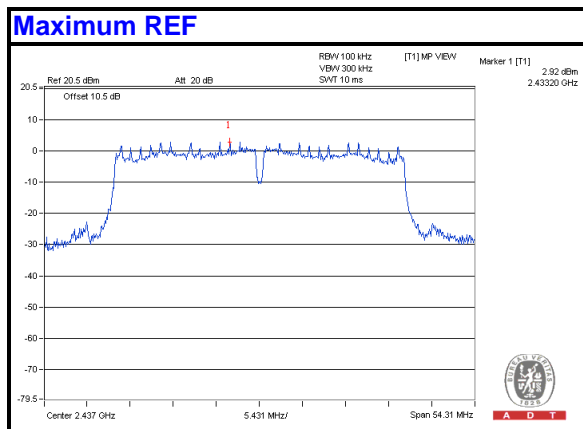
CH 11 Band edge





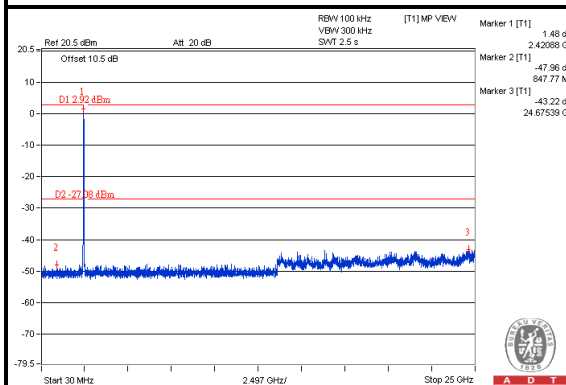
A D T

802.11n (HT40):

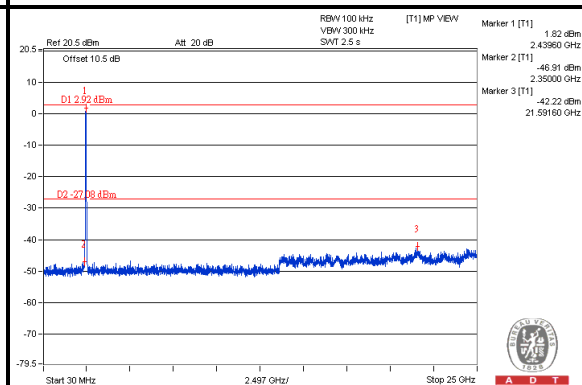


Chain(0)

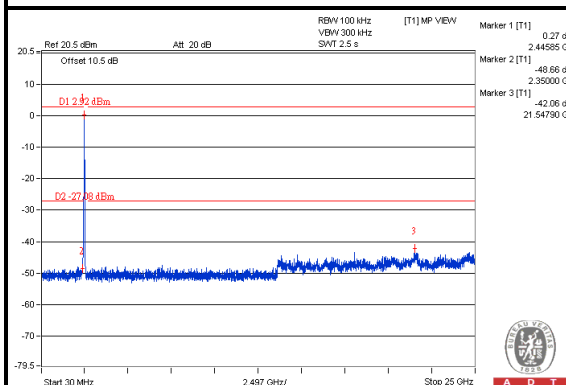
CH 3



CH 6



CH 9

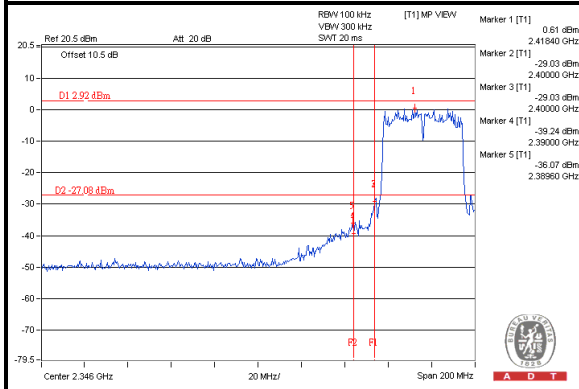




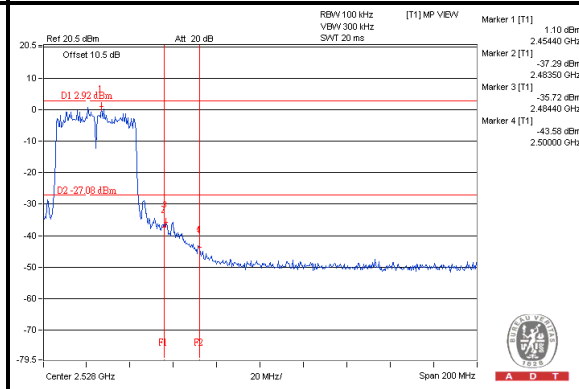
A D T

Chain(0)

CH 3 Band edge



CH 9 Band edge

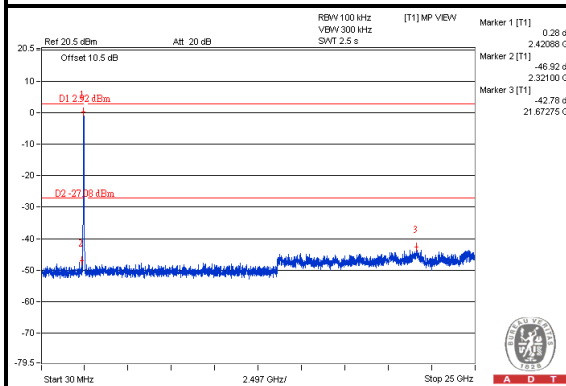




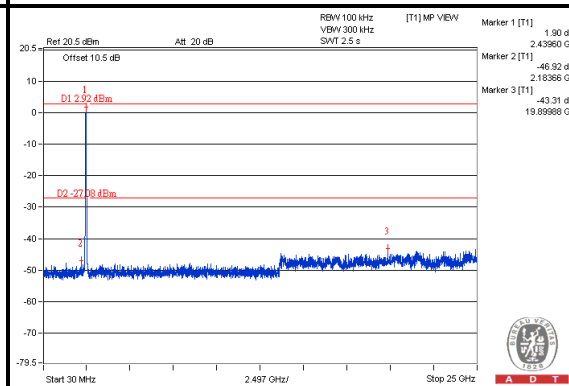
A D T

Chain(1)

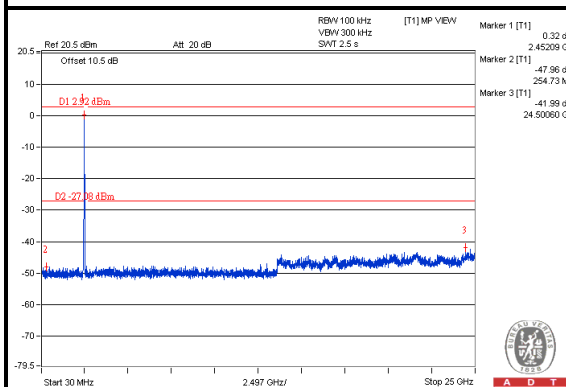
CH 3



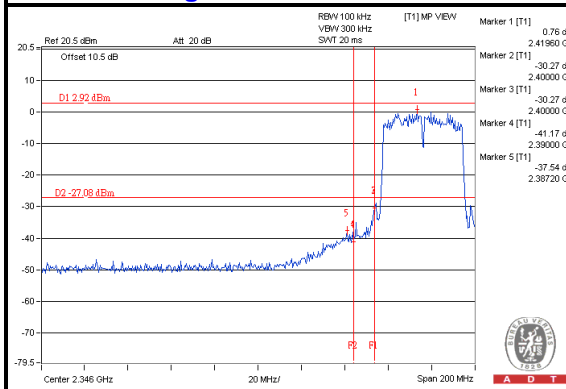
CH 6



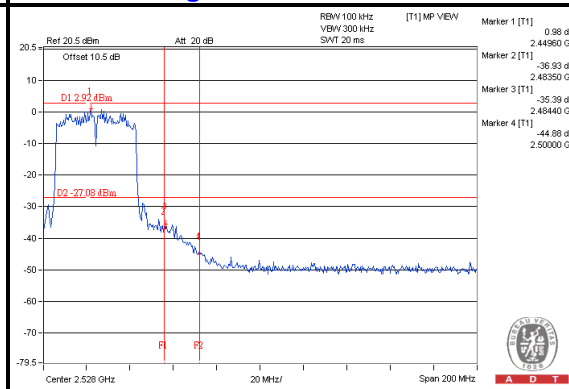
CH 9



CH 3 Band edge

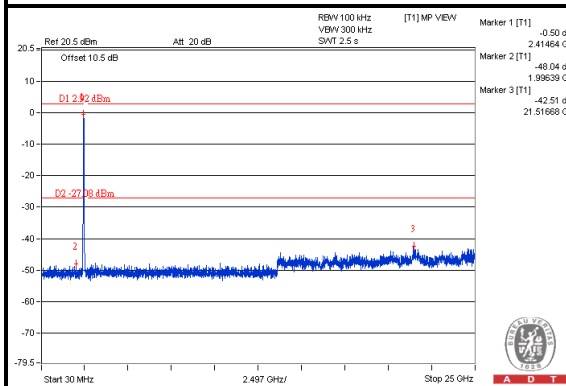
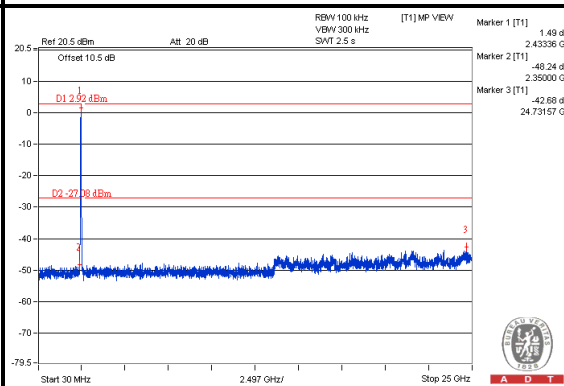
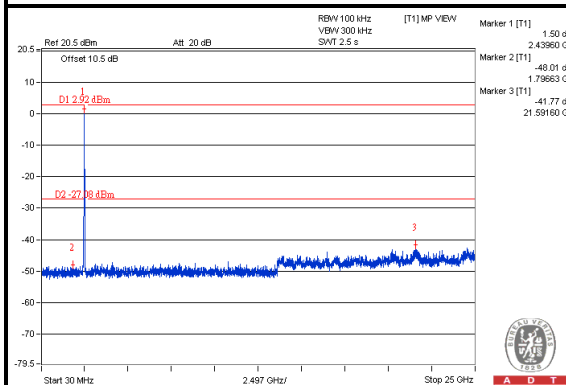
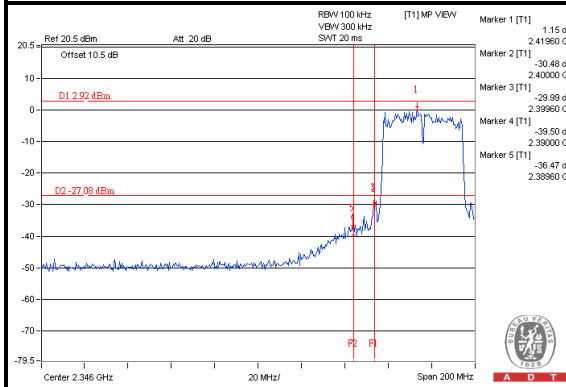
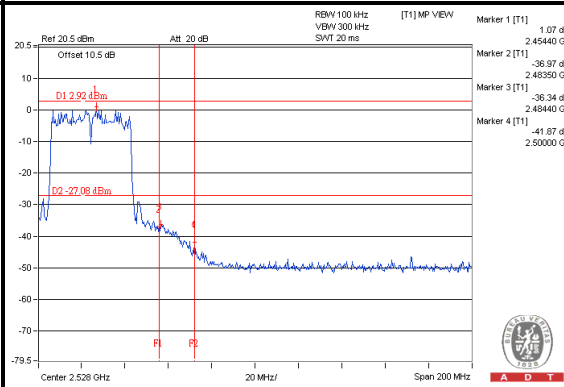


CH 9 Band edge





A D T

Chain(2)**CH 3****CH 6****CH 9****CH 3 Band edge****CH 9 Band edge**

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	Mar. 08, 2013	Mar. 07, 2014
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK8127	8127-522	Sep. 06, 2012	Sep. 05, 2013
Line-Impedance Stabilization Network (for Peripheral)	ENV216	100072	June 07, 2013	June 06, 2014
RF Cable (JYEBAO)	5DFB	COCCAB-001	Mar. 11, 2013	Mar. 10, 2014
50 ohms Terminator	50	EMC-3	Sep. 25, 2012	Sep. 24, 2013
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: Aug. 02 to Sep. 05, 2013

5.1.3 TEST PROCEDURES

- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN.
- The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit – 20dB) were not recorded.

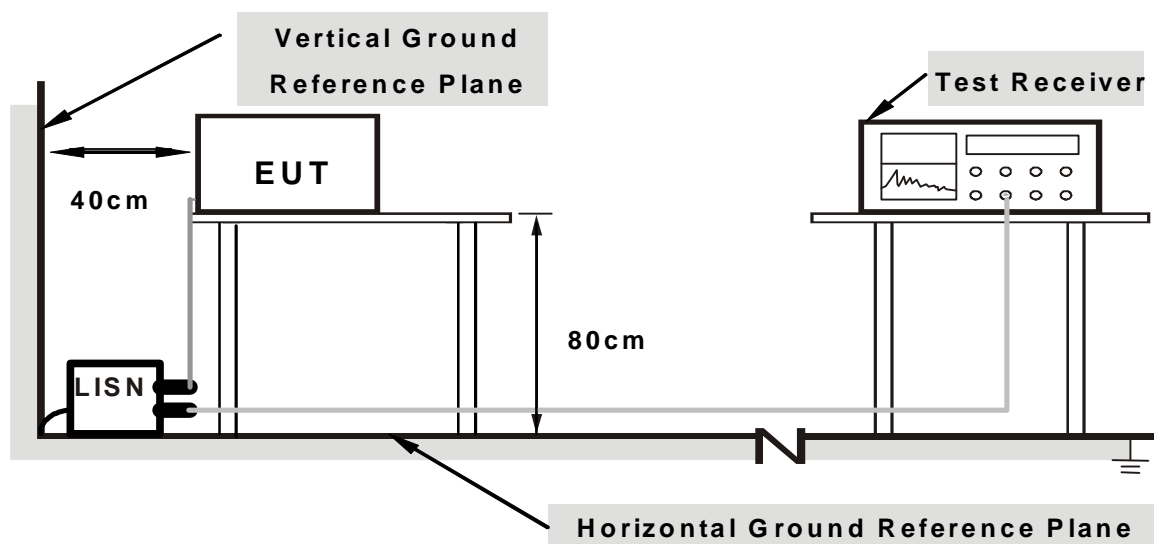
NOTE:

- 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

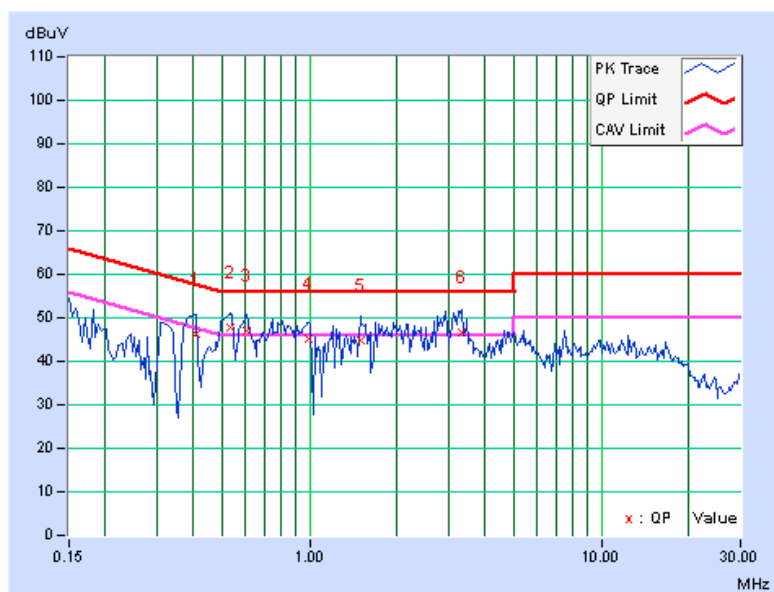
5.1.7 TEST RESULTS (MODE 1)

CHANNEL	Channel 149		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.40781	0.18	46.29	29.22	46.47	29.40	57.69	47.69	-11.22	-18.29
2	0.53672	0.19	47.57	34.09	47.76	34.28	56.00	46.00	-8.24	-11.72
3	0.61094	0.19	46.75	31.16	46.94	31.35	56.00	46.00	-9.06	-14.65
4	0.99766	0.22	45.01	32.11	45.23	32.33	56.00	46.00	-10.77	-13.67
5	1.49609	0.25	44.67	31.39	44.92	31.64	56.00	46.00	-11.08	-14.36
6	3.31641	0.38	46.42	34.64	46.80	35.02	56.00	46.00	-9.20	-10.98

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

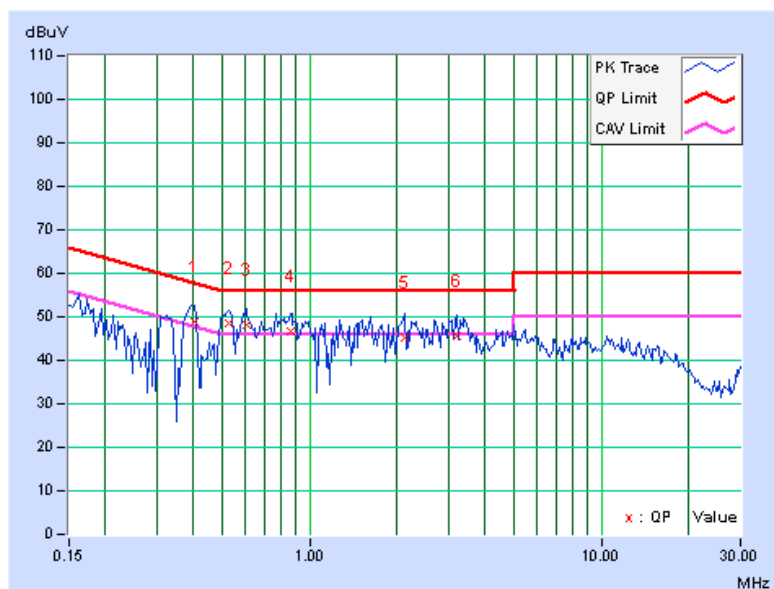


CHANNEL	Channel 149		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.40391	0.21	48.77	35.92	48.98	36.13	57.77	47.77	-8.79	-11.64
2	0.52891	0.22	48.39	36.98	48.61	37.20	56.00	46.00	-7.39	-8.80
3	0.60703	0.22	47.93	33.86	48.15	34.08	56.00	46.00	-7.85	-11.92
4	0.85703	0.24	46.50	33.59	46.74	33.83	56.00	46.00	-9.26	-12.17
5	2.11328	0.32	44.74	32.45	45.06	32.77	56.00	46.00	-10.94	-13.23
6	3.19922	0.39	45.26	33.72	45.65	34.11	56.00	46.00	-10.35	-11.89

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

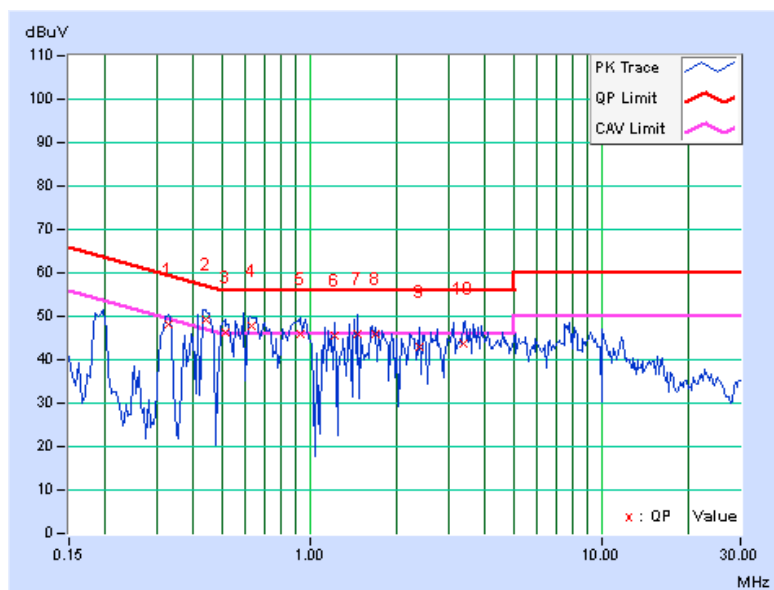


CHANNEL	Channel 157		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.32969	0.18	48.05	38.78	48.23	38.96	59.46	49.46	-11.23	-10.50
2	0.44297	0.20	49.13	39.09	49.33	39.29	57.01	47.01	-7.67	-7.71
3	0.51328	0.21	46.16	35.49	46.37	35.70	56.00	46.00	-9.63	-10.30
4	0.63047	0.22	47.54	35.43	47.76	35.65	56.00	46.00	-8.24	-10.35
5	0.93516	0.24	45.57	33.77	45.81	34.01	56.00	46.00	-10.19	-11.99
6	1.22656	0.27	45.38	31.08	45.65	31.35	56.00	46.00	-10.35	-14.65
7	1.46484	0.29	45.71	32.56	46.00	32.85	56.00	46.00	-10.00	-13.15
8	1.68359	0.31	45.44	33.62	45.75	33.93	56.00	46.00	-10.25	-12.07
9	2.38672	0.37	42.60	30.17	42.97	30.54	56.00	46.00	-13.03	-15.46
10	3.35938	0.43	43.36	32.61	43.79	33.04	56.00	46.00	-12.21	-12.96

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

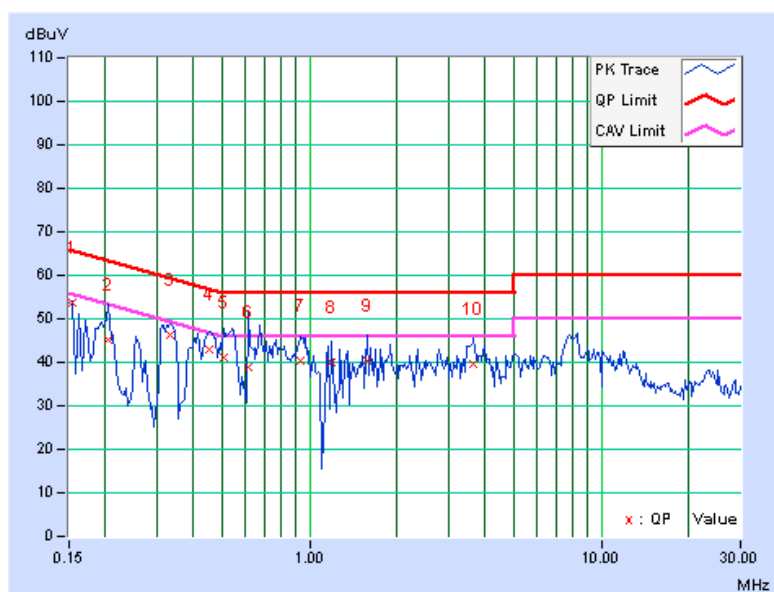


CHANNEL	Channel 157		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	0.11	53.68	25.65	53.79	25.76	65.79	55.79	-11.99	-30.02
2	0.20469	0.13	45.11	33.14	45.24	33.27	63.42	53.42	-18.18	-20.15
3	0.33359	0.17	46.18	34.08	46.35	34.25	59.36	49.36	-13.01	-15.11
4	0.45078	0.19	42.64	29.56	42.83	29.75	56.86	46.86	-14.03	-17.11
5	0.50938	0.20	41.09	26.98	41.29	27.18	56.00	46.00	-14.71	-18.82
6	0.61875	0.20	38.53	23.22	38.73	23.42	56.00	46.00	-17.27	-22.58
7	0.93125	0.22	40.05	25.19	40.27	25.41	56.00	46.00	-15.73	-20.59
8	1.18750	0.23	39.80	26.73	40.03	26.96	56.00	46.00	-15.97	-19.04
9	1.57422	0.27	40.02	27.25	40.29	27.52	56.00	46.00	-15.71	-18.48
10	3.65625	0.41	39.05	28.11	39.46	28.52	56.00	46.00	-16.54	-17.48

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

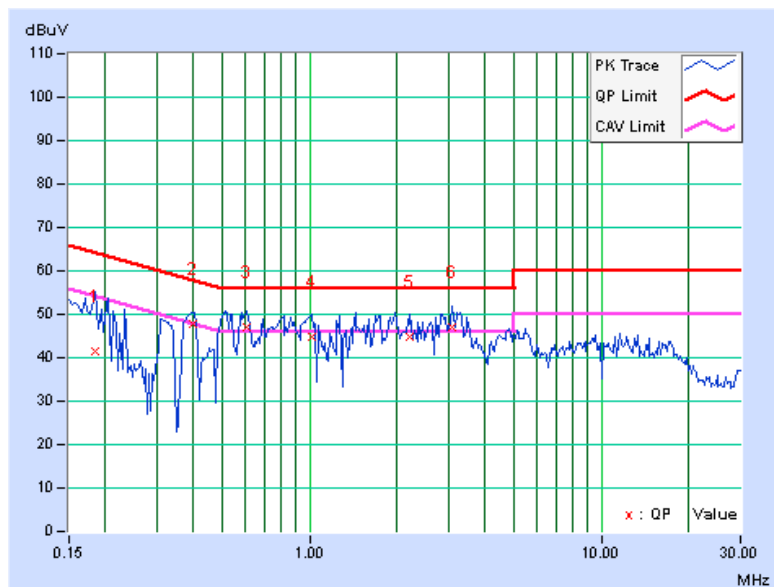


CHANNEL	Channel 165		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18516	0.12	41.21	31.22	41.33	31.34	64.25	54.25	-22.92	-22.91
2	0.39609	0.18	47.75	37.85	47.93	38.03	57.93	47.93	-10.01	-9.91
3	0.61094	0.19	46.73	31.53	46.92	31.72	56.00	46.00	-9.08	-14.28
4	1.01953	0.22	44.77	29.67	44.99	29.89	56.00	46.00	-11.01	-16.11
5	2.21875	0.30	44.65	31.79	44.95	32.09	56.00	46.00	-11.05	-13.91
6	3.08594	0.36	46.54	33.89	46.90	34.25	56.00	46.00	-9.10	-11.75

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

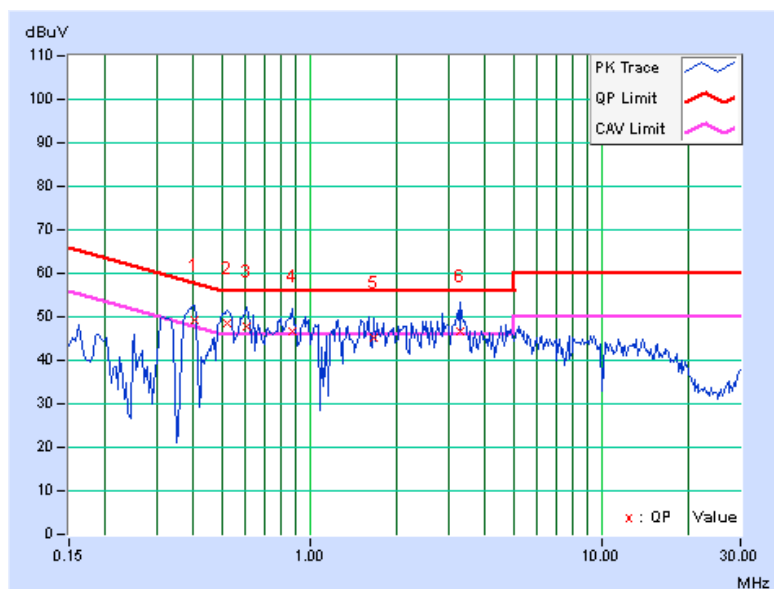


CHANNEL	Channel 165		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.40391	0.21	49.18	36.74	49.39	36.95	57.77	47.77	-8.38	-10.82
2	0.52109	0.22	48.27	36.59	48.49	36.81	56.00	46.00	-7.51	-9.19
3	0.61094	0.22	47.73	32.73	47.95	32.95	56.00	46.00	-8.05	-13.05
4	0.87266	0.24	46.32	34.26	46.56	34.50	56.00	46.00	-9.44	-11.50
5	1.66016	0.29	45.02	32.62	45.31	32.91	56.00	46.00	-10.69	-13.09
6	3.30469	0.39	46.15	34.79	46.54	35.18	56.00	46.00	-9.46	-10.82

REMARKS:

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



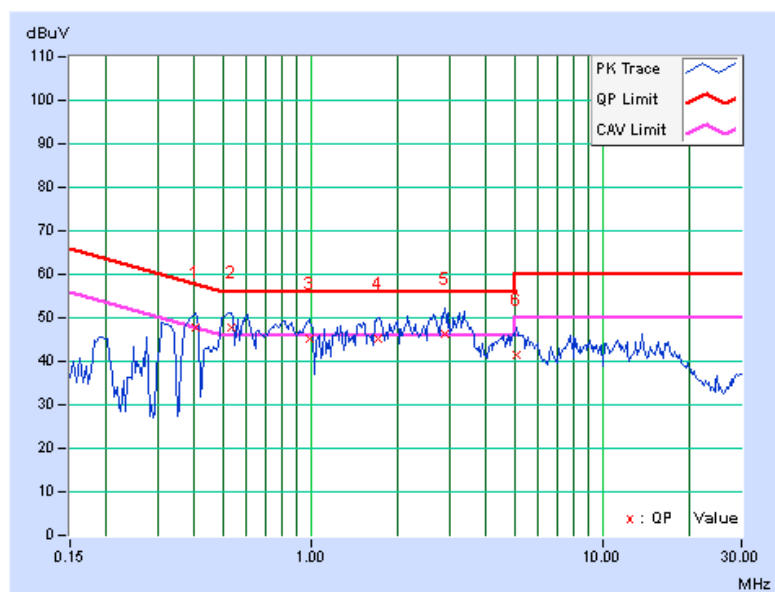
5.1.8 TEST RESULTS (MODE 2)

CHANNEL	Channel 149		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.40391	0.18	47.65	34.80	47.83	34.98	57.77	47.77	-9.94	-12.79
2	0.53672	0.19	47.48	34.03	47.67	34.22	56.00	46.00	-8.33	-11.78
3	0.99375	0.22	44.83	31.76	45.05	31.98	56.00	46.00	-10.95	-14.02
4	1.70703	0.27	45.00	30.76	45.27	31.03	56.00	46.00	-10.73	-14.97
5	2.88672	0.35	45.80	32.95	46.15	33.30	56.00	46.00	-9.85	-12.70
6	5.10156	0.49	41.05	30.80	41.54	31.29	60.00	50.00	-18.46	-18.71

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

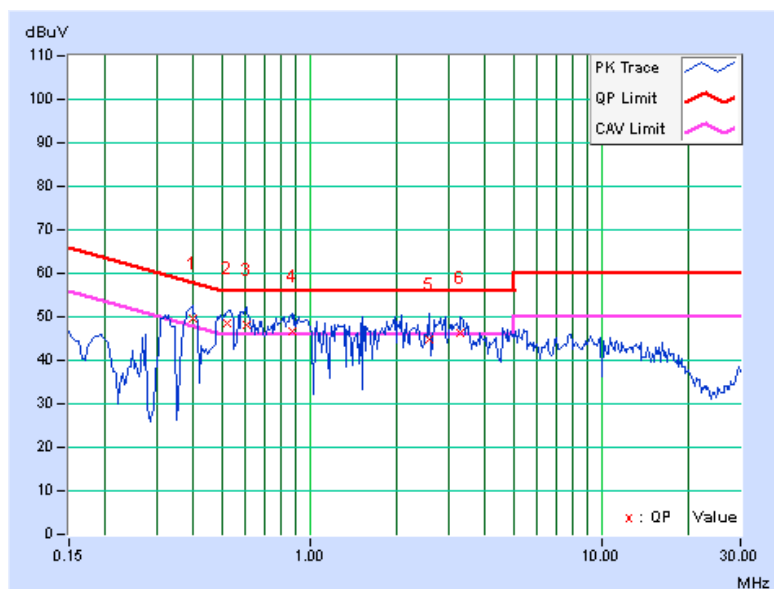


CHANNEL	Channel 149		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.39609	0.21	49.58	39.70	49.79	39.91	57.93	47.93	-8.15	-8.03
2	0.52500	0.22	48.19	36.76	48.41	36.98	56.00	46.00	-7.59	-9.02
3	0.60703	0.22	47.97	33.62	48.19	33.84	56.00	46.00	-7.81	-12.16
4	0.86875	0.24	46.52	35.11	46.76	35.35	56.00	46.00	-9.24	-10.65
5	2.58203	0.35	44.44	32.45	44.79	32.80	56.00	46.00	-11.21	-13.20
6	3.30078	0.39	45.81	34.66	46.20	35.05	56.00	46.00	-9.80	-10.95

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

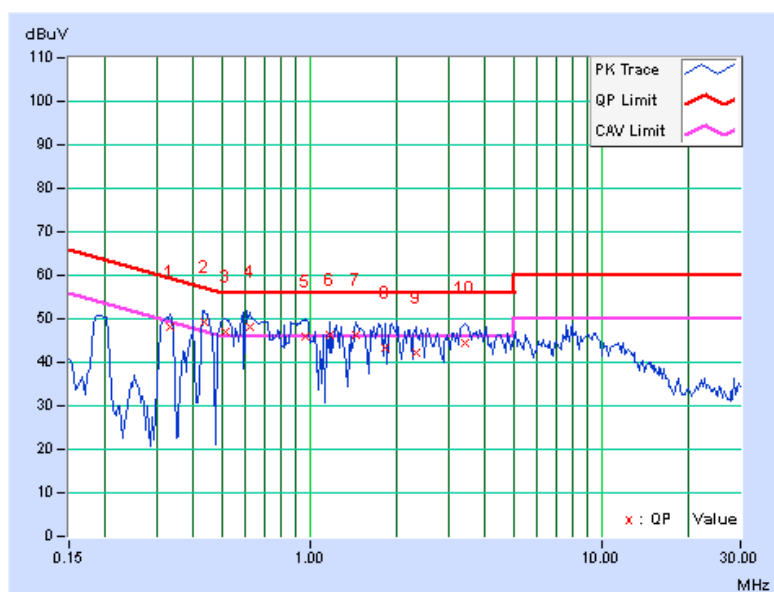


CHANNEL	Channel 157		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

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	0.33359	0.18	47.93	34.12	48.11	34.30	59.36	49.36	-11.25	-15.06
2	0.43516	0.20	48.96	38.09	49.16	38.29	57.15	47.15	-7.99	-8.86
3	0.51719	0.21	46.69	36.38	46.90	36.59	56.00	46.00	-9.10	-9.41
4	0.62266	0.22	48.00	36.09	48.22	36.31	56.00	46.00	-7.78	-9.69
5	0.96250	0.25	45.64	31.13	45.89	31.38	56.00	46.00	-10.11	-14.62
6	1.17969	0.27	46.19	35.38	46.46	35.65	56.00	46.00	-9.54	-10.35
7	1.44922	0.29	46.01	33.96	46.30	34.25	56.00	46.00	-9.70	-11.75
8	1.82031	0.32	42.98	30.75	43.30	31.07	56.00	46.00	-12.70	-14.93
9	2.32422	0.36	42.02	29.61	42.38	29.97	56.00	46.00	-13.62	-16.03
10	3.40625	0.43	44.03	33.33	44.46	33.76	56.00	46.00	-11.54	-12.24

REMARKS:

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

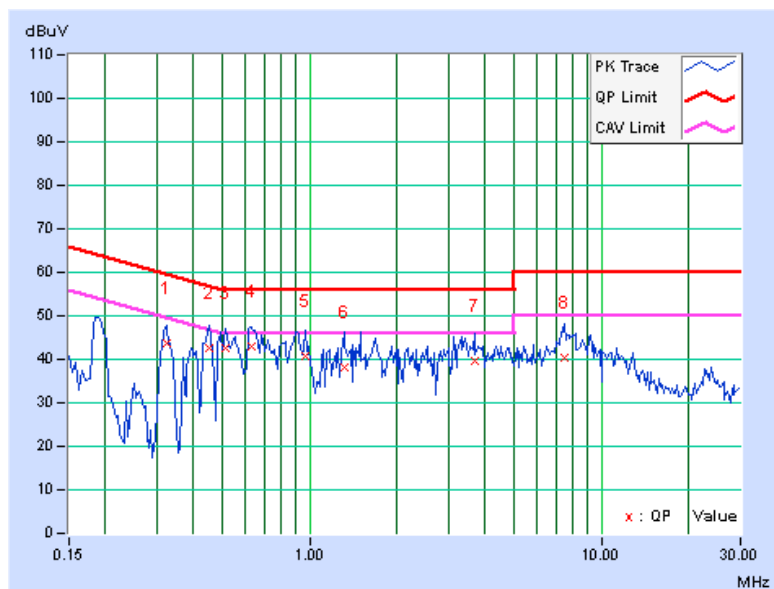


CHANNEL	Channel 157		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.32578	0.17	43.61	34.70	43.78	34.87	59.56	49.56	-15.78	-14.69
2	0.45469	0.19	42.22	31.43	42.41	31.62	56.79	46.79	-14.38	-15.17
3	0.51328	0.20	42.39	31.03	42.59	31.23	56.00	46.00	-13.41	-14.77
4	0.63047	0.20	42.90	30.97	43.10	31.17	56.00	46.00	-12.90	-14.83
5	0.96250	0.22	40.40	25.93	40.62	26.15	56.00	46.00	-15.38	-19.85
6	1.31250	0.24	38.09	25.32	38.33	25.56	56.00	46.00	-17.67	-20.44
7	3.69922	0.41	39.14	28.10	39.55	28.51	56.00	46.00	-16.45	-17.49
8	7.46484	0.61	39.80	30.25	40.41	30.86	60.00	50.00	-19.59	-19.14

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

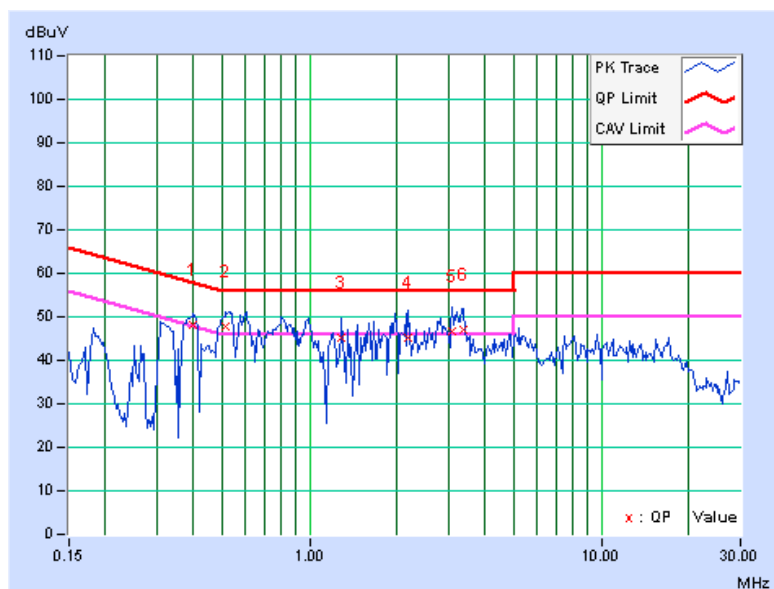


CHANNEL	Channel 165		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.40000	0.18	47.93	37.32	48.11	37.50	57.85	47.85	-9.74	-10.35
2	0.51719	0.19	47.65	34.88	47.84	35.07	56.00	46.00	-8.16	-10.93
3	1.28516	0.24	44.90	31.08	45.14	31.32	56.00	46.00	-10.86	-14.68
4	2.18359	0.30	44.75	31.43	45.05	31.73	56.00	46.00	-10.95	-14.27
5	3.08984	0.36	46.38	33.83	46.74	34.19	56.00	46.00	-9.26	-11.81
6	3.36719	0.38	46.57	34.55	46.95	34.93	56.00	46.00	-9.05	-11.07

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

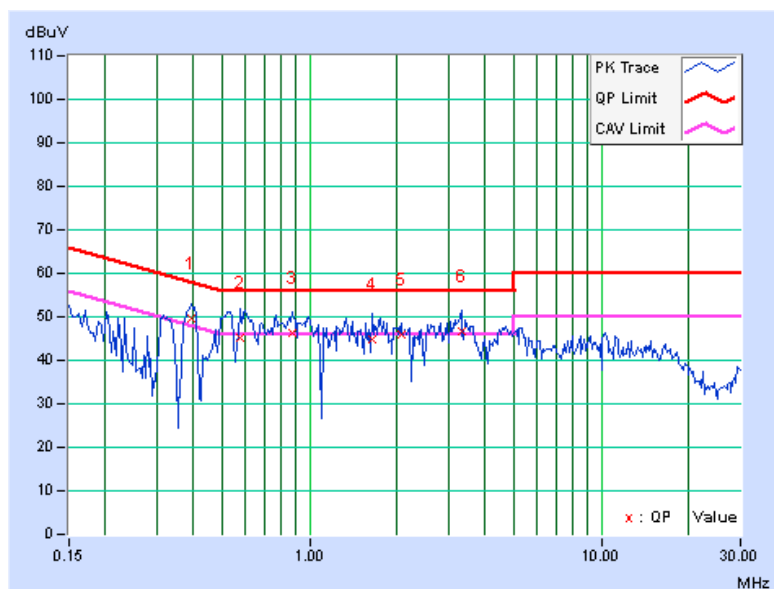


CHANNEL	Channel 165		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
1	0.39219	0.21	49.38	39.31	49.59	39.52	58.02	48.02	-8.43	-8.50
2	0.57578	0.22	44.85	31.74	45.07	31.96	56.00	46.00	-10.93	-14.04
3	0.87266	0.24	46.11	34.08	46.35	34.32	56.00	46.00	-9.65	-11.68
4	1.64453	0.29	44.65	31.37	44.94	31.66	56.00	46.00	-11.06	-14.34
5	2.05859	0.31	45.59	32.88	45.90	33.19	56.00	46.00	-10.10	-12.81
6	3.32422	0.40	46.10	35.00	46.50	35.40	56.00	46.00	-9.50	-10.60

REMARKS:

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



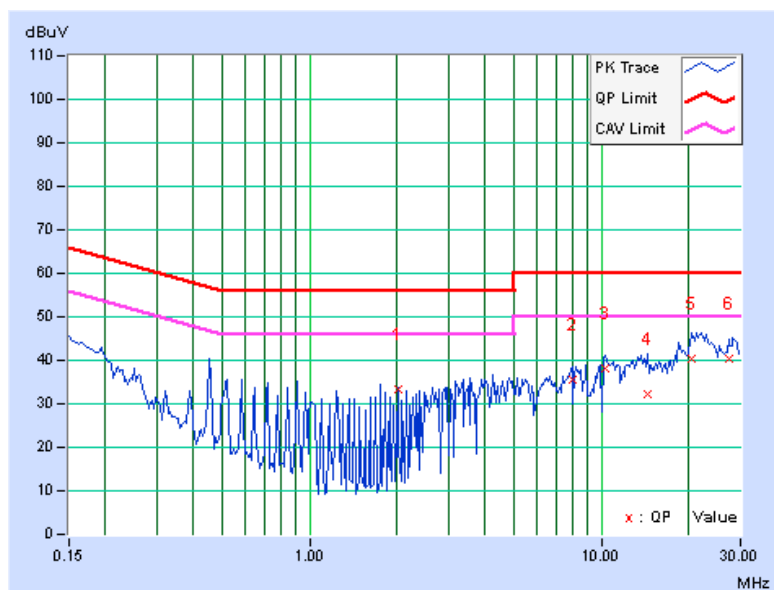
5.1.9 TEST RESULTS (MODE 3)

CHANNEL	Channel 149		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	2.00781	0.23	33.11	30.83	33.34	31.06	56.00	46.00	-22.66	-14.94
2	7.96875	0.48	35.18	30.80	35.66	31.28	60.00	50.00	-24.34	-18.72
3	10.36328	0.58	37.61	33.43	38.19	34.01	60.00	50.00	-21.81	-15.99
4	14.44922	0.77	31.32	25.20	32.09	25.97	60.00	50.00	-27.91	-24.03
5	20.51953	0.99	39.51	33.85	40.50	34.84	60.00	50.00	-19.50	-15.16
6	27.29297	1.32	39.20	35.24	40.52	36.56	60.00	50.00	-19.48	-13.44

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

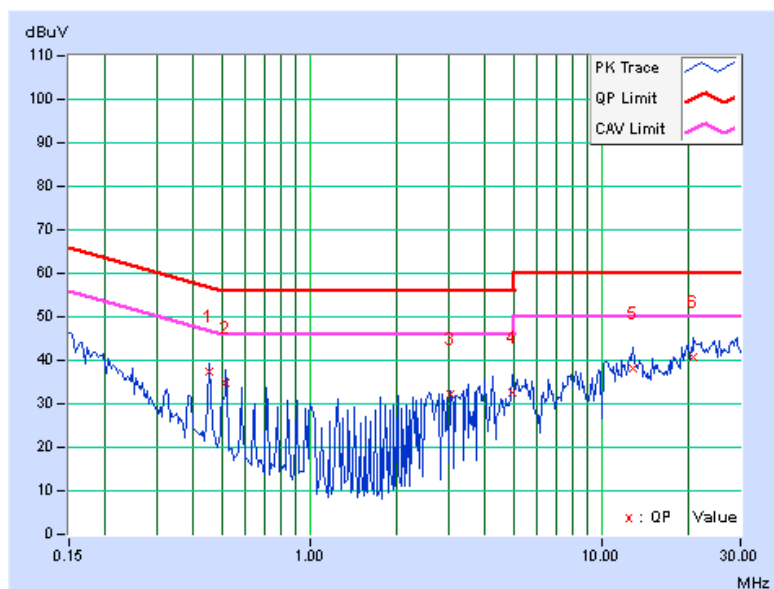


CHANNEL	Channel 149		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.45469	0.19	37.36	37.47	37.55	37.66	56.79	46.79	-19.24	-9.13
2	0.51719	0.20	34.47	34.46	34.67	34.66	56.00	46.00	-21.33	-11.34
3	3.04297	0.31	31.84	28.93	32.15	29.24	56.00	46.00	-23.85	-16.76
4	4.98438	0.37	32.34	29.36	32.71	29.73	56.00	46.00	-23.29	-16.27
5	12.82031	0.62	37.47	32.90	38.09	33.52	60.00	50.00	-21.91	-16.48
6	20.78516	0.80	40.05	34.40	40.85	35.20	60.00	50.00	-19.15	-14.80

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

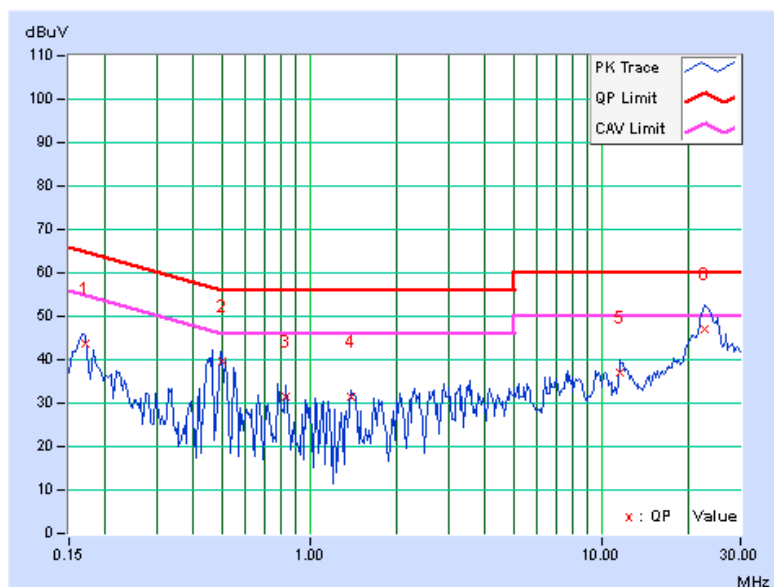


CHANNEL	Channel 157		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16953	0.13	43.41	35.24	43.54	35.37	64.98	54.98	-21.45	-19.62
2	0.50156	0.19	39.50	38.40	39.69	38.59	56.00	46.00	-16.31	-7.41
3	0.82969	0.21	31.45	27.95	31.66	28.16	56.00	46.00	-24.34	-17.84
4	1.38672	0.24	31.28	26.60	31.52	26.84	56.00	46.00	-24.48	-19.16
5	11.61719	0.73	36.38	32.99	37.11	33.72	60.00	50.00	-22.89	-16.28
6	22.65625	1.11	45.78	39.76	46.89	40.87	60.00	50.00	-13.11	-9.13

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

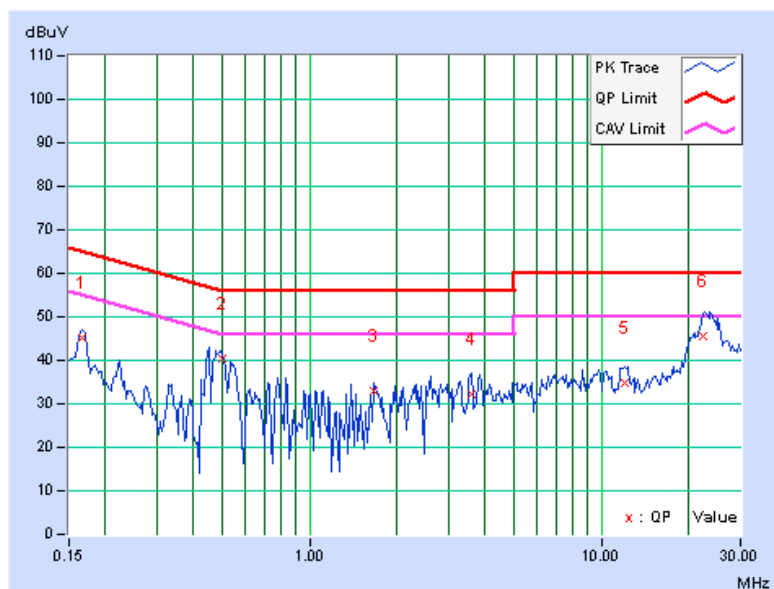


CHANNEL	Channel 157		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	0.11	44.94	37.57	45.05	37.68	65.18	55.18	-20.13	-17.50
2	0.50119	0.18	40.10	39.29	40.28	39.47	56.00	46.00	-15.72	-6.53
3	1.67188	0.24	32.62	26.94	32.86	27.18	56.00	46.00	-23.14	-18.82
4	3.60156	0.32	31.85	23.99	32.17	24.31	56.00	46.00	-23.83	-21.69
5	12.03125	0.57	34.10	28.36	34.67	28.93	60.00	50.00	-25.33	-21.07
6	22.33984	0.78	44.66	38.65	45.44	39.43	60.00	50.00	-14.56	-10.57

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

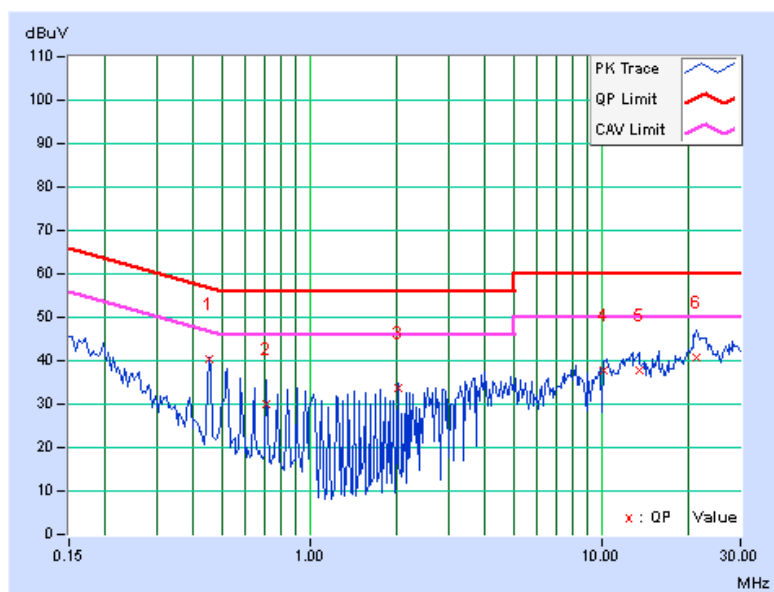


CHANNEL	Channel 165		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor [dB]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB]	AV. [dB]
1	0.45469	0.16	40.06	39.42	40.22	39.58	56.79	46.79	-16.57	-7.21
2	0.71250	0.18	29.69	25.66	29.87	25.84	56.00	46.00	-26.13	-20.16
3	2.00391	0.23	33.50	30.38	33.73	30.61	56.00	46.00	-22.27	-15.39
4	10.16406	0.57	37.30	33.62	37.87	34.19	60.00	50.00	-22.13	-15.81
5	13.53125	0.73	36.99	32.58	37.72	33.31	60.00	50.00	-22.28	-16.69
6	21.31250	1.03	39.87	31.74	40.90	32.77	60.00	50.00	-19.10	-17.23

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

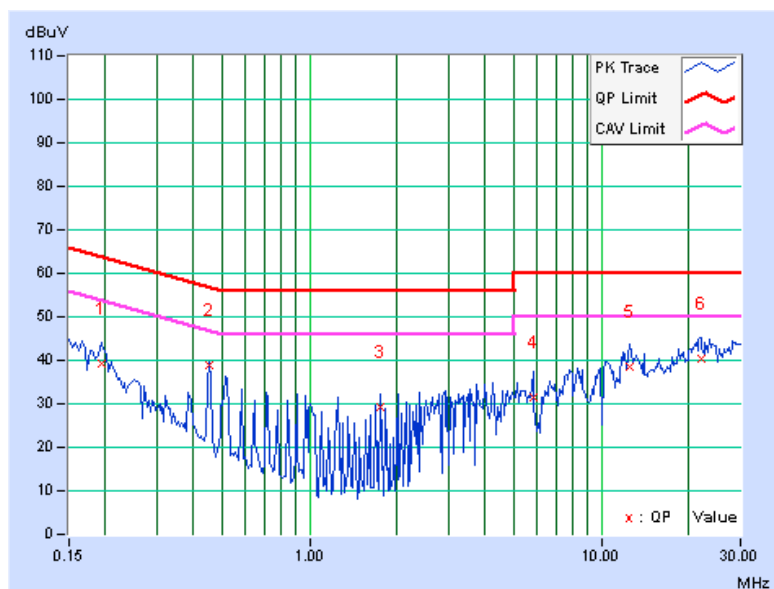


CHANNEL	Channel 165		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]	[dB (uV)]	[dB (uV)]	[dB (uV)]	[dB (uV)]	[dB (uV)]	[dB (uV)]	[dB (uV)]
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19297	0.16	38.96	30.45	39.12	30.61	63.91	53.91	-24.79	-23.30
2	0.45469	0.19	38.80	38.10	38.99	38.29	56.79	46.79	-17.80	-8.50
3	1.75325	0.26	28.95	27.78	29.21	28.04	56.00	46.00	-26.79	-17.96
4	5.82816	0.40	31.02	26.76	31.42	27.16	60.00	50.00	-28.58	-22.84
5	12.48438	0.61	38.07	33.76	38.68	34.37	60.00	50.00	-21.32	-15.63
6	22.01172	0.83	39.46	34.25	40.29	35.08	60.00	50.00	-19.71	-14.92

REMARKS:

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



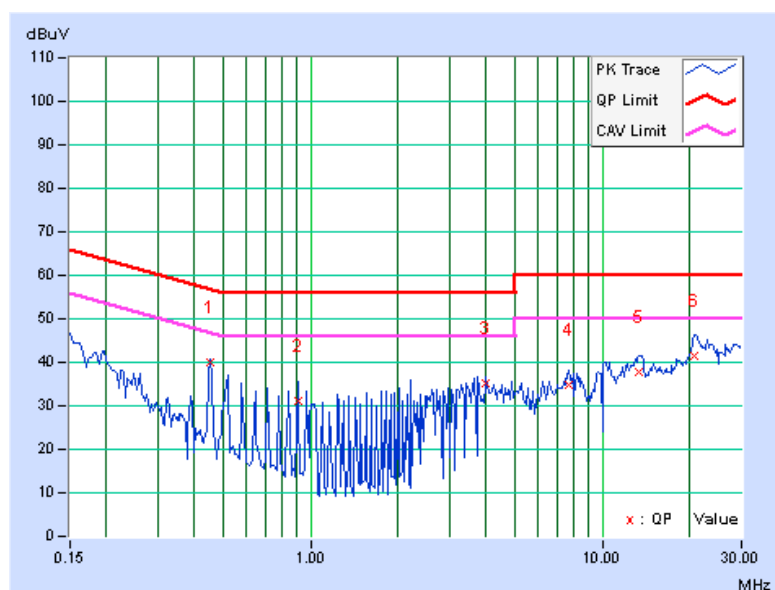
5.1.10 TEST RESULTS (MODE 4)

CHANNEL	Channel 149		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.45469	0.16	40.02	39.33	40.18	39.49	56.79	46.79	-16.61	-7.30
2	0.90781	0.19	30.81	26.89	31.00	27.08	56.00	46.00	-25.00	-18.92
3	4.00781	0.31	34.92	33.46	35.23	33.77	56.00	46.00	-20.77	-12.23
4	7.69922	0.46	34.43	29.52	34.89	29.98	60.00	50.00	-25.11	-20.02
5	13.40234	0.72	36.99	32.22	37.71	32.94	60.00	50.00	-22.29	-17.06
6	20.77734	1.01	40.52	34.84	41.53	35.85	60.00	50.00	-18.47	-14.15

REMARKS:

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

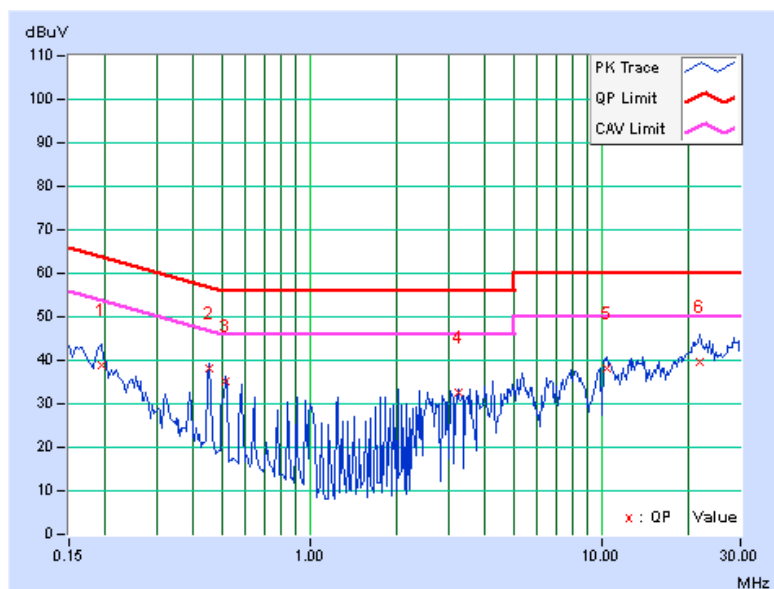


CHANNEL	Channel 149		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19297	0.16	38.72	30.25	38.88	30.41	63.91	53.91	-25.03	-23.50
2	0.45469	0.19	37.86	38.20	38.05	38.39	56.79	46.79	-18.74	-8.40
3	0.51719	0.20	35.12	35.16	35.32	35.36	56.00	46.00	-20.68	-10.64
4	3.23828	0.31	32.26	28.69	32.57	29.00	56.00	46.00	-23.43	-17.00
5	10.42578	0.54	37.49	33.43	38.03	33.97	60.00	50.00	-21.97	-16.03
6	21.69922	0.82	38.64	31.91	39.46	32.73	60.00	50.00	-20.54	-17.27

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

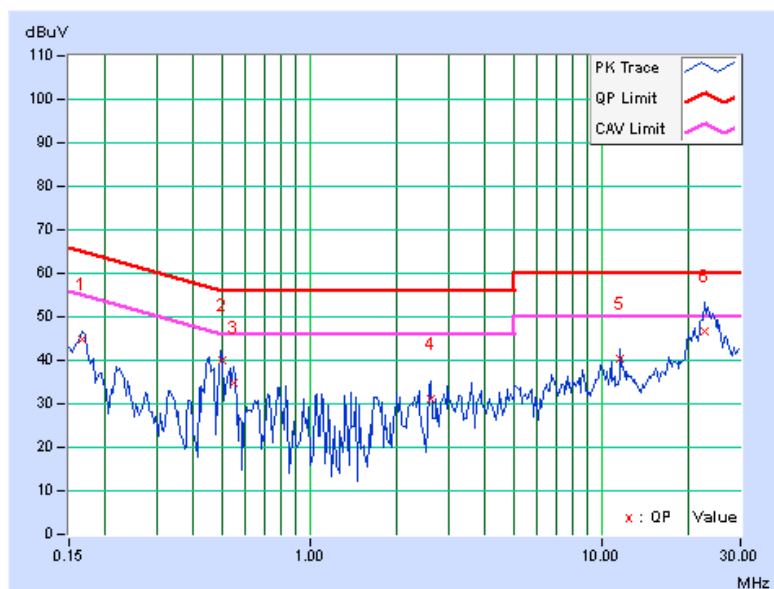


CHANNEL	Channel 157		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	0.13	44.71	36.84	44.84	36.97	65.18	55.18	-20.34	-18.21
2	0.50156	0.19	39.66	37.63	39.85	37.82	56.00	46.00	-16.15	-8.18
3	0.54844	0.19	34.74	29.85	34.93	30.04	56.00	46.00	-21.07	-15.96
4	2.61328	0.30	30.80	23.81	31.10	24.11	56.00	46.00	-24.90	-21.89
5	11.62109	0.73	39.64	37.77	40.37	38.50	60.00	50.00	-19.63	-11.50
6	22.47656	1.11	45.66	39.72	46.77	40.83	60.00	50.00	-13.23	-9.17

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

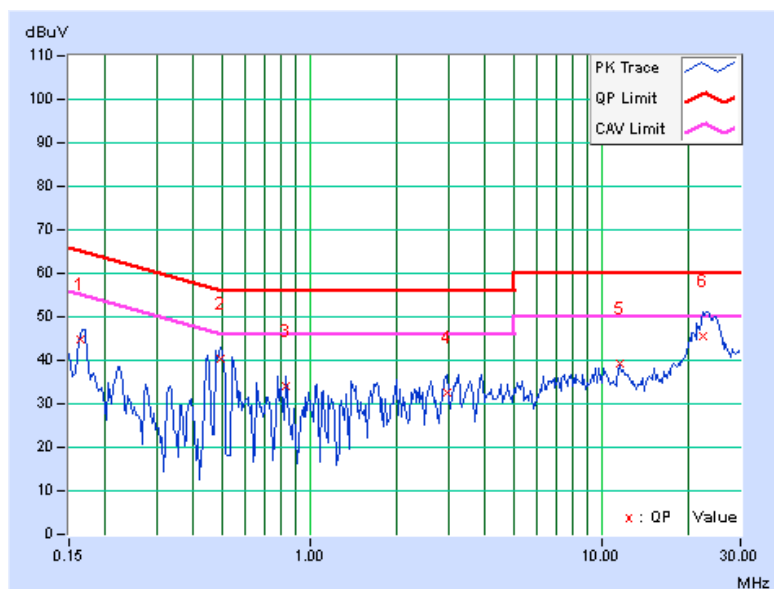


CHANNEL	Channel 157		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16428	0.11	44.65	37.35	44.76	37.46	65.24	55.24	-20.49	-17.79
2	0.49375	0.17	40.24	35.68	40.41	35.85	56.10	46.10	-15.69	-10.25
3	0.82969	0.19	33.94	31.52	34.13	31.71	56.00	46.00	-21.87	-14.29
4	2.94531	0.29	32.32	25.91	32.61	26.20	56.00	46.00	-23.39	-19.80
5	11.62159	0.56	38.53	36.07	39.09	36.63	60.00	50.00	-20.91	-13.37
6	22.36719	0.78	44.82	39.02	45.60	39.80	60.00	50.00	-14.40	-10.20

REMARKS:

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

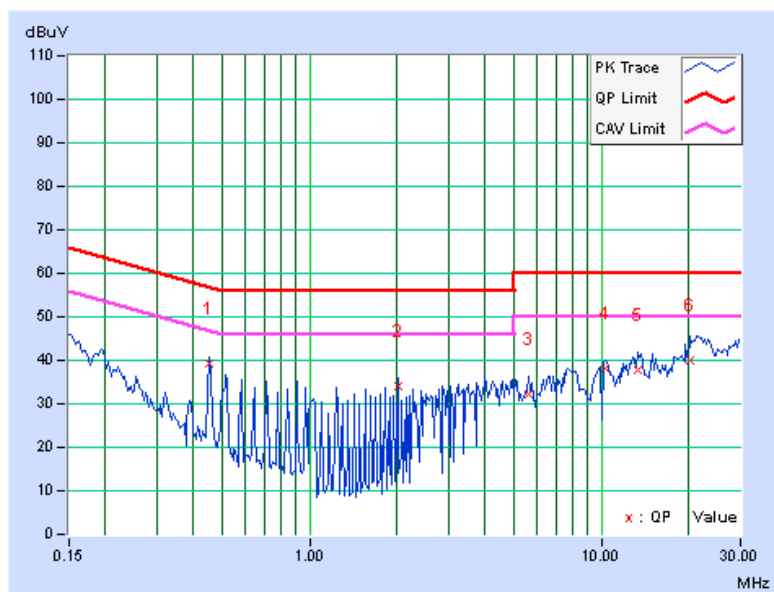


CHANNEL	Channel 165		
PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

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	0.45469	0.16	39.14	39.50	39.30	39.66	56.79	46.79	-17.49	-7.13
2	2.00391	0.23	33.90	30.91	34.13	31.14	56.00	46.00	-21.87	-14.86
3	5.63281	0.38	31.85	26.64	32.23	27.02	60.00	50.00	-27.77	-22.98
4	10.29281	0.57	37.54	33.46	38.11	34.03	60.00	50.00	-21.89	-15.97
5	13.27344	0.71	37.17	31.51	37.88	32.22	60.00	50.00	-22.12	-17.78
6	20.19434	0.98	39.13	33.43	40.11	34.41	60.00	50.00	-19.89	-15.59

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

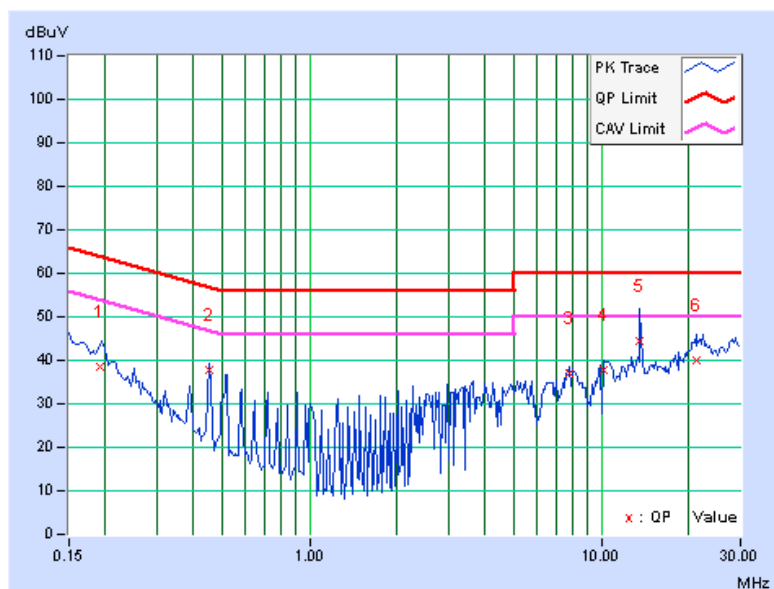


CHANNEL	Channel 165		
PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19234	0.16	38.25	29.91	38.41	30.07	63.93	53.93	-25.53	-23.87
2	0.45469	0.19	37.76	38.08	37.95	38.27	56.79	46.79	-18.84	-8.52
3	7.76172	0.46	36.59	32.05	37.05	32.51	60.00	50.00	-22.95	-17.49
4	10.22266	0.54	37.11	33.90	37.65	34.44	60.00	50.00	-22.35	-15.56
5	13.56250	0.64	43.89	39.59	44.53	40.23	60.00	50.00	-15.47	-9.77
6	21.16797	0.81	39.28	33.17	40.09	33.98	60.00	50.00	-19.91	-16.02

REMARKS:

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



5.2 RADIATED AND BANDEDGE EMISSION MEASUREMENT

5.2.1 LIMITS OF RADIATED AND BANDEDGE EMISSION MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 30dB below the highest level of the desired power:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

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

5.2.2 TEST INSTRUMENTS

For below 1GHz (CH 149 & CH165)

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer Agilent	E4446A	MY48250253	Aug. 28, 2013	Aug. 27, 2014
MXE EMI Receiver Agilent	N9038A	MY51210105	Jan. 29, 2013	Jan. 28, 2014
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-03	Nov. 14, 2012	Nov. 13, 2013
Pre-Amplifier Agilent	8449B	3008A02578	June 25, 2013	June 24, 2014
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Nov. 14, 2012	Nov. 13, 2013
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-360	Mar. 19, 2013	Mar. 18, 2014
Horn_Antenna AISI	AIH.8018	0000320091110	Nov. 19, 2012	Nov. 18, 2013
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Oct. 12, 2012	Oct. 11, 2013
RF Cable	NA	RF104-201 RF104-203 RF104-204	Dec. 25, 2012	Dec. 24, 2013
RF Cable	NA	CHGCAB_001	Oct. 06, 2012	Oct. 05, 2013
Software	ADT_Radiated _V8.7.05	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: Sep. 05, 2013

**A D T****For other test items**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer Agilent	E4446A	MY48250253	Sep. 03, 2012	Sep. 02, 2013
MXE EMI Receiver Agilent	N9038A	MY50010156	Jan. 16, 2013	Jan. 15, 2014
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-04	Nov. 14, 2012	Nov. 13, 2013
Pre-Amplifier Agilent	8449B	3008A01923	Oct. 30, 2012	Oct. 29, 2013
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Nov. 14, 2012	Nov. 13, 2013
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Mar. 25, 2013	Mar. 24, 2014
Horn_Antenna AISI	AIH.8018	0000220091110	Nov. 27, 2012	Nov. 26, 2013
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Oct. 12, 2012	Oct. 11, 2013
RF Cable	NA	RF104-205 RF104-207 RF104-202	Dec. 26, 2012	Dec. 25, 2013
RF Cable	NA	CHHCAB_001	Oct. 07, 2012	Oct. 06, 2013
Software	ADT_Radiated _V8.7.05	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: Aug. 01 to 02, 2013

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:

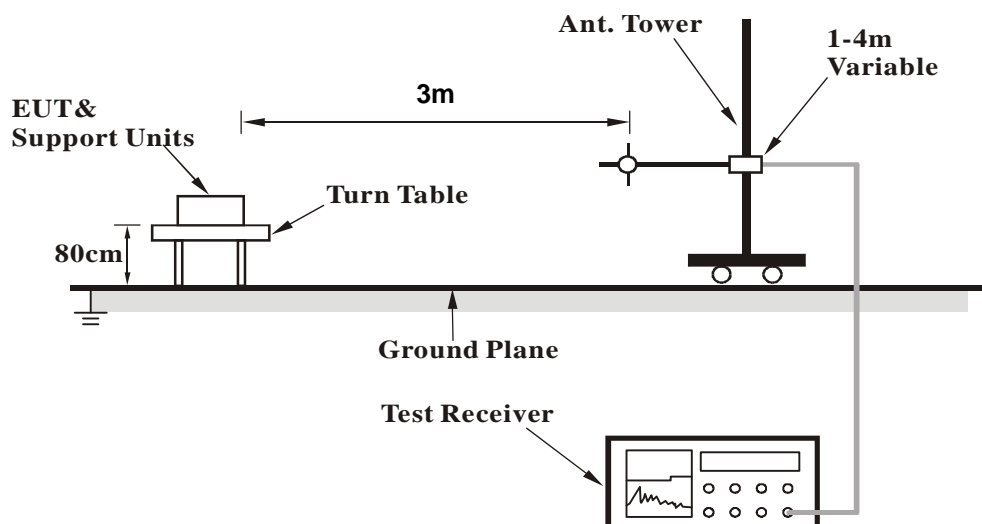
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

5.2.4 DEVIATION FROM TEST STANDARD

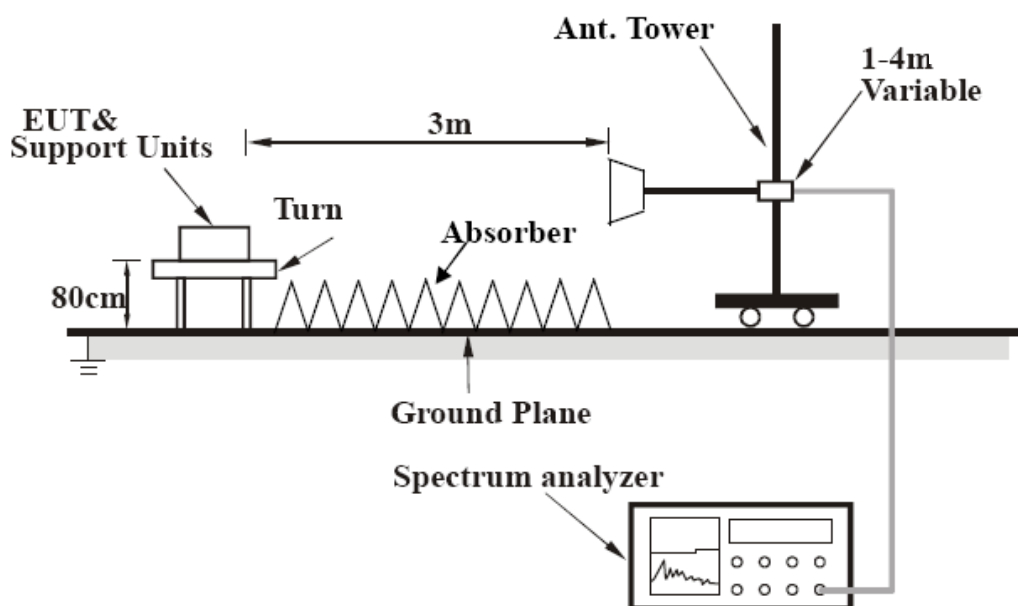
No deviation

5.2.5 TEST SETUP

<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

5.2.7 TEST RESULTS (MODE 1)

BELOW 1GHz WORST-CASE DATA

802.11n (HT20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	125.01	34.7 QP	43.5	-8.8	1.50 H	84	49.63	-14.95
2	250.00	24.8 QP	46.0	-21.2	1.00 H	278	39.22	-14.44
3	374.98	30.5 QP	46.0	-15.5	1.00 H	258	41.29	-10.77
4	466.69	28.9 QP	46.0	-17.1	2.00 H	218	37.41	-8.48
5	875.02	39.8 QP	46.0	-6.2	1.00 H	136	40.78	-0.94
6	1000.00	41.7 QP	54.0	-12.3	1.50 H	129	40.75	0.95
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	84.95	34.3 QP	40.0	-5.7	2.00 V	13	53.70	-19.40
2	125.01	31.0 QP	43.5	-12.5	1.00 V	37	45.92	-14.95
3	172.40	28.2 QP	43.5	-15.3	1.50 V	0	42.26	-14.10
4	250.00	24.7 QP	46.0	-21.4	2.00 V	5	39.09	-14.44
5	799.99	32.8 QP	46.0	-13.2	1.50 V	215	34.71	-1.91
6	875.02	41.7 QP	46.0	-4.4	1.50 V	360	42.59	-0.94

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	96.40	29.8 QP	43.5	-13.7	2.00 H	26	48.26	-18.47
2	176.13	33.5 QP	43.5	-10.0	1.50 H	95	48.10	-14.60
3	375.03	32.7 QP	46.0	-13.3	1.00 H	318	43.03	-10.30
4	625.00	37.2 QP	46.0	-8.8	1.50 H	44	41.95	-4.78
5	750.03	40.2 QP	46.0	-5.9	1.00 H	339	42.70	-2.55
6	1000.00	40.3 QP	54.0	-13.7	1.50 H	137	38.80	1.48
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	37.91	33.2 QP	40.0	-6.8	1.50 V	295	46.98	-13.75
2	225.31	31.9 QP	46.0	-14.1	1.00 V	15	47.73	-15.81
3	333.37	36.4 QP	46.0	-9.7	1.50 V	233	47.41	-11.06
4	466.69	36.4 QP	46.0	-9.6	1.00 V	64	44.58	-8.21
5	750.03	38.1 QP	46.0	-7.9	1.50 V	360	40.67	-2.55
6	875.02	39.7 QP	46.0	-6.3	1.00 V	7	40.51	-0.82

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	49.45	33.3 QP	40.0	-6.7	2.00 H	263	46.90	-13.60
2	90.96	34.1 QP	43.5	-9.4	2.00 H	290	53.27	-19.15
3	173.22	31.0 QP	43.5	-12.5	2.00 H	268	45.36	-14.34
4	250.00	25.7 QP	46.0	-20.3	1.00 H	275	40.17	-14.44
5	374.98	30.8 QP	46.0	-15.3	1.00 H	249	41.52	-10.77
6	799.99	36.5 QP	46.0	-9.5	1.00 H	314	38.41	-1.91
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	84.90	33.1 QP	40.0	-6.9	2.00 V	12	52.52	-19.40
2	125.01	29.9 QP	43.5	-13.6	1.00 V	37	44.86	-14.95
3	250.00	25.6 QP	46.0	-20.4	1.00 V	0	40.01	-14.44
4	533.33	27.4 QP	46.0	-18.6	1.00 V	43	34.70	-7.28
5	799.99	31.4 QP	46.0	-14.6	1.00 V	0	33.30	-1.91
6	875.02	40.8 QP	46.0	-5.2	1.00 V	0	41.74	-0.94

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

ABOVE 1GHz 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	115.4 PK			1.05 H	202	72.20	43.20
2	*5745.00	107.5 AV			1.05 H	202	64.30	43.20
3	11490.00	59.2 PK	74.0	-14.8	1.23 H	264	9.75	49.45
4	11490.00	47.6 AV	54.0	-6.4	1.23 H	264	-1.85	49.45
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	105.9 PK			1.24 V	107	62.70	43.20
2	*5745.00	96.6 AV			1.24 V	107	53.40	43.20
3	11490.00	58.6 PK	74.0	-15.4	1.22 V	273	9.15	49.45
4	11490.00	47.1 AV	54.0	-6.9	1.22 V	273	-2.35	49.45

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.

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	116.1 PK			1.00 H	201	72.80	43.30
2	*5785.00	108.0 AV			1.00 H	201	64.70	43.30
3	11570.00	59.2 PK	74.0	-14.8	1.16 H	255	9.71	49.49
4	11570.00	47.5 AV	54.0	-6.5	1.16 H	255	-1.99	49.49
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	105.5 PK			1.22 V	106	62.20	43.30
2	*5785.00	96.4 AV			1.22 V	106	53.10	43.30
3	11570.00	59.0 PK	74.0	-15.0	1.18 V	258	9.51	49.49
4	11570.00	47.6 AV	54.0	-6.4	1.18 V	258	-1.89	49.49

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.



A D T

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	113.8 PK			1.02 H	177	70.34	43.46
2	*5825.00	106.4 AV			1.02 H	177	62.94	43.46
3	11650.00	59.2 PK	74.0	-14.8	1.23 H	251	9.43	49.77
4	11650.00	47.9 AV	54.0	-6.1	1.23 H	251	-1.87	49.77
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	105.6 PK			1.13 V	115	62.14	43.46
2	*5825.00	96.3 AV			1.13 V	115	52.84	43.46
3	11650.00	58.2 PK	74.0	-15.8	1.26 V	269	8.43	49.77
4	11650.00	46.8 AV	54.0	-7.2	1.26 V	269	-2.97	49.77

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.

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	115.6 PK			1.00 H	205	72.40	43.20
2	*5745.00	107.6 AV			1.00 H	205	64.40	43.20
3	11490.00	58.7 PK	74.0	-15.3	1.20 H	267	9.25	49.45
4	11490.00	47.3 AV	54.0	-6.7	1.20 H	267	-2.15	49.45
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	107.9 PK			1.41 V	118	64.70	43.20
2	*5745.00	98.9 AV			1.41 V	118	55.70	43.20
3	11490.00	59.2 PK	74.0	-14.8	1.25 V	274	9.75	49.45
4	11490.00	47.4 AV	54.0	-6.6	1.25 V	274	-2.05	49.45

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.

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	115.5 PK			1.05 H	207	72.20	43.30
2	*5785.00	107.7 AV			1.05 H	207	64.40	43.30
3	11570.00	58.3 PK	74.0	-15.7	1.24 H	244	8.81	49.49
4	11570.00	46.8 AV	54.0	-7.2	1.24 H	244	-2.69	49.49
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	107.3 PK			1.39 V	97	64.00	43.30
2	*5785.00	98.5 AV			1.39 V	97	55.20	43.30
3	11570.00	59.5 PK	74.0	-14.5	1.13 V	278	10.01	49.49
4	11570.00	47.7 AV	54.0	-6.3	1.13 V	278	-1.79	49.49

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.

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	115.5 PK			1.06 H	196	72.04	43.46
2	*5825.00	107.6 AV			1.06 H	196	64.14	43.46
3	11650.00	59.0 PK	74.0	-15.0	1.26 H	261	9.23	49.77
4	11650.00	47.8 AV	54.0	-6.2	1.26 H	261	-1.97	49.77
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	107.7 PK			1.44 V	125	64.24	43.46
2	*5825.00	98.8 AV			1.44 V	125	55.34	43.46
3	11650.00	58.7 PK	74.0	-15.3	1.26 V	259	8.93	49.77
4	11650.00	47.4 AV	54.0	-6.6	1.26 V	259	-2.37	49.77

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.

802.11n (HT40)

CHANNEL	TX Channel 151	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	*5755.00	112.1 PK			1.05 H	202	68.88	43.22
2	*5755.00	103.3 AV			1.05 H	202	60.08	43.22
3	11510.00	58.4 PK	74.0	-15.6	1.21 H	251	8.96	49.44
4	11510.00	47.0 AV	54.0	-7.0	1.21 H	251	-2.44	49.44
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	*5755.00	104.7 PK			1.43 V	115	61.48	43.22
2	*5755.00	94.8 AV			1.43 V	115	51.58	43.22
3	11510.00	58.5 PK	74.0	-15.5	1.22 V	248	9.06	49.44
4	11510.00	47.0 AV	54.0	-7.0	1.22 V	248	-2.44	49.44

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.

CHANNEL	TX Channel 159	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	*5795.00	112.0 PK			1.06 H	207	68.67	43.33
2	*5795.00	103.1 AV			1.06 H	207	59.77	43.33
3	11590.00	58.3 PK	74.0	-15.7	1.24 H	259	8.79	49.51
4	11590.00	46.6 AV	54.0	-7.4	1.24 H	259	-2.91	49.51
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	104.4 PK			1.32 V	103	61.07	43.33
2	*5795.00	94.2 AV			1.32 V	103	50.87	43.33
3	11590.00	58.5 PK	74.0	-15.5	1.29 V	260	8.99	49.51
4	11590.00	47.4 AV	54.0	-6.6	1.29 V	260	-2.11	49.51

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– 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.

5.2.8 TEST RESULTS (MODE 2)

BELOW 1GHz WORST-CASE DATA

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	48.72	33.6 QP	40.0	-6.4	1.00 H	276	47.23	-13.64
2	99.84	32.3 QP	43.5	-11.2	1.00 H	91	50.22	-17.94
3	125.01	29.6 QP	43.5	-14.0	1.00 H	96	44.50	-14.95
4	250.00	24.6 QP	46.0	-21.4	1.00 H	288	39.01	-14.44
5	875.02	41.0 QP	46.0	-5.0	1.00 H	172	41.96	-0.94
6	1000.00	39.0 QP	54.0	-15.0	1.00 H	129	38.03	0.95
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	99.60	32.3 QP	43.5	-11.3	1.00 V	203	50.34	-18.09
2	124.96	29.9 QP	43.5	-13.6	1.00 V	40	44.85	-14.95
3	211.44	26.6 QP	43.5	-16.9	1.00 V	257	43.08	-16.51
4	250.00	21.5 QP	46.0	-24.5	1.00 V	347	35.93	-14.44
5	375.03	25.3 QP	46.0	-20.7	1.00 V	232	36.04	-10.77
6	1000.00	42.4 QP	54.0	-11.6	1.00 V	166	41.43	0.95

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	48.62	27.3 QP	40.0	-12.7	2.00 H	56	40.83	-13.56
2	99.02	29.5 QP	43.5	-14.0	2.00 H	305	47.35	-17.82
3	157.65	35.1 QP	43.5	-8.4	2.00 H	248	48.45	-13.36
4	375.03	34.2 QP	46.0	-11.8	2.00 H	250	44.47	-10.30
5	625.00	39.2 QP	46.0	-6.8	1.50 H	318	43.97	-4.78
6	1000.00	38.2 QP	54.0	-15.8	1.50 H	69	36.71	1.48
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	37.91	34.6 QP	40.0	-5.5	1.00 V	309	48.30	-13.75
2	89.85	35.2 QP	43.5	-8.3	1.50 V	360	54.35	-19.14
3	375.03	33.8 QP	46.0	-12.2	1.50 V	61	44.13	-10.30
4	625.00	38.8 QP	46.0	-7.2	1.00 V	76	43.61	-4.78
5	875.02	39.6 QP	46.0	-6.4	1.50 V	149	40.43	-0.82
6	1000.00	40.2 QP	54.0	-13.8	1.00 V	307	38.72	1.48

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	125.01	34.0 QP	43.5	-9.5	2.00 H	92	48.96	-14.95
2	173.22	30.8 QP	43.5	-12.7	2.00 H	245	45.18	-14.34
3	250.00	25.2 QP	46.0	-20.8	1.00 H	291	39.65	-14.44
4	374.98	31.2 QP	46.0	-14.8	1.00 H	259	42.01	-10.77
5	600.02	38.4 QP	46.0	-7.6	1.00 H	0	43.84	-5.47
6	875.02	40.4 QP	46.0	-5.6	1.00 H	176	41.38	-0.94
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	84.85	35.6 QP	40.0	-4.5	2.00 V	29	54.95	-19.40
2	125.01	31.0 QP	43.5	-12.5	1.00 V	54	45.94	-14.95
3	172.40	27.7 QP	43.5	-15.8	1.00 V	347	41.80	-14.10
4	375.03	25.5 QP	46.0	-20.5	1.00 V	219	36.26	-10.77
5	875.02	41.4 QP	46.0	-4.7	2.00 V	0	42.29	-0.94
6	1000.00	42.6 QP	54.0	-11.4	1.00 V	164	41.63	0.95

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

ABOVE 1GHz 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	124.7 PK			1.22 H	36	81.50	43.20
2	*5745.00	116.8 AV			1.22 H	36	73.60	43.20
3	11490.00	59.4 PK	74.0	-14.6	1.46 H	163	9.95	49.45
4	11490.00	46.2 AV	54.0	-7.8	1.46 H	163	-3.25	49.45
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	120.2 PK			1.24 V	104	77.00	43.20
2	*5745.00	109.8 AV			1.24 V	104	66.60	43.20
3	11490.00	59.7 PK	74.0	-14.3	1.01 V	103	10.25	49.45
4	11490.00	48.5 AV	54.0	-5.5	1.01 V	103	-0.95	49.45

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.

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	124.4 PK			1.17 H	46	81.10	43.30
2	*5785.00	117.1 AV			1.17 H	46	73.80	43.30
3	11570.00	58.9 PK	74.0	-15.1	1.42 H	152	9.41	49.49
4	11570.00	45.8 AV	54.0	-8.2	1.42 H	152	-3.69	49.49
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	119.4 PK			1.22 V	94	76.10	43.30
2	*5785.00	109.1 AV			1.22 V	94	65.80	43.30
3	11570.00	61.6 PK	74.0	-12.4	1.11 V	103	12.11	49.49
4	11570.00	49.3 AV	54.0	-4.7	1.11 V	103	-0.19	49.49

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.

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	123.9 PK			1.19 H	29	80.44	43.46
2	*5825.00	116.2 AV			1.19 H	29	72.74	43.46
3	11650.00	59.4 PK	74.0	-14.6	1.36 H	169	9.63	49.77
4	11650.00	46.5 AV	54.0	-7.5	1.36 H	169	-3.27	49.77
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	120.3 PK			1.19 V	94	76.84	43.46
2	*5825.00	109.7 AV			1.19 V	94	66.24	43.46
3	11650.00	61.0 PK	74.0	-13.0	1.10 V	103	11.23	49.77
4	11650.00	49.1 AV	54.0	-4.9	1.10 V	103	-0.67	49.77

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.

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	123.7 PK			1.56 H	294	80.50	43.20
2	*5745.00	112.2 AV			1.56 H	294	69.00	43.20
3	11490.00	58.8 PK	74.0	-15.2	1.10 H	73	9.35	49.45
4	11490.00	46.3 AV	54.0	-7.7	1.10 H	73	-3.15	49.45
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	117.3 PK			1.00 V	168	74.10	43.20
2	*5745.00	105.3 AV			1.00 V	168	62.10	43.20
3	11490.00	58.8 PK	74.0	-15.2	1.13 V	81	9.35	49.45
4	11490.00	46.3 AV	54.0	-7.7	1.13 V	81	-3.15	49.45

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.

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	123.5 PK			1.51 H	297	80.20	43.30
2	*5785.00	112.2 AV			1.51 H	297	68.90	43.30
3	11570.00	58.7 PK	74.0	-15.3	1.03 H	70	9.21	49.49
4	11570.00	46.1 AV	54.0	-7.9	1.03 H	70	-3.39	49.49
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	116.4 PK			1.00 V	176	73.10	43.30
2	*5785.00	104.6 AV			1.00 V	176	61.30	43.30
3	11570.00	61.0 PK	74.0	-13.0	1.00 V	82	11.51	49.49
4	11570.00	47.6 AV	54.0	-6.4	1.00 V	82	-1.89	49.49

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.

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	123.9 PK			1.60 H	280	80.44	43.46
2	*5825.00	112.3 AV			1.60 H	280	68.84	43.46
3	11650.00	58.9 PK	74.0	-15.1	1.12 H	56	9.13	49.77
4	11650.00	46.3 AV	54.0	-7.7	1.12 H	56	-3.47	49.77
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	116.8 PK			1.00 V	191	73.34	43.46
2	*5825.00	105.0 AV			1.00 V	191	61.54	43.46
3	11650.00	61.6 PK	74.0	-12.4	1.11 V	82	11.83	49.77
4	11650.00	48.1 AV	54.0	-5.9	1.11 V	82	-1.67	49.77

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.

802.11n (HT40)

CHANNEL	TX Channel 151	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	*5755.00	120.2 PK			1.56 H	261	76.98	43.22
2	*5755.00	109.8 AV			1.56 H	261	66.58	43.22
3	11510.00	59.1 PK	74.0	-14.9	1.07 H	35	9.66	49.44
4	11510.00	46.3 AV	54.0	-7.7	1.07 H	35	-3.14	49.44
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	*5755.00	114.2 PK			1.00 V	189	70.98	43.22
2	*5755.00	102.4 AV			1.00 V	189	59.18	43.22
3	11510.00	59.3 PK	74.0	-14.7	1.13 V	82	9.86	49.44
4	11510.00	44.8 AV	54.0	-9.2	1.13 V	82	-4.64	49.44

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.

CHANNEL	TX Channel 159	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	*5795.00	120.0 PK			1.57 H	233	76.67	43.33
2	*5795.00	109.4 AV			1.57 H	233	66.07	43.33
3	11590.00	58.8 PK	74.0	-15.2	1.11 H	34	9.29	49.51
4	11590.00	46.3 AV	54.0	-7.7	1.11 H	34	-3.21	49.51
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	114.8 PK			1.00 V	204	71.47	43.33
2	*5795.00	102.7 AV			1.00 V	204	59.37	43.33
3	11590.00	58.1 PK	74.0	-15.9	1.12 V	81	8.59	49.51
4	11590.00	43.7 AV	54.0	-10.3	1.12 V	81	-5.81	49.51

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– 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.

802.11ac (VHT80)

CHANNEL	TX Channel 155	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	5460.00	73.5 PK	74.0	-0.5	1.56 H	287	31.14	42.36
2	5460.00	52.2 AV	54.0	-1.8	1.56 H	287	9.84	42.36
3	*5775.00	117.7 PK			1.56 H	288	74.42	43.28
4	*5775.00	106.0 AV			1.56 H	288	62.72	43.28
5	11550.00	58.9 PK	74.0	-15.1	1.07 H	24	9.43	49.47
6	11550.00	46.8 AV	54.0	-7.2	1.07 H	24	-2.67	49.47
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5447.00	68.9 PK	74.0	-5.1	1.00 V	171	26.60	42.30
2	5447.00	53.1 AV	54.0	-0.9	1.00 V	171	10.80	42.30
3	*5775.00	112.8 PK			1.00 V	171	69.52	43.28
4	*5775.00	98.2 AV			1.00 V	171	54.92	43.28
5	11550.00	57.7 PK	74.0	-16.3	1.12 V	84	8.23	49.47
6	11550.00	43.2 AV	54.0	-10.8	1.12 V	84	-6.27	49.47

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– 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	FSP 40	100036	Jan. 21, 2013	Jan. 20, 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 : Aug. 02 to 03, 2013

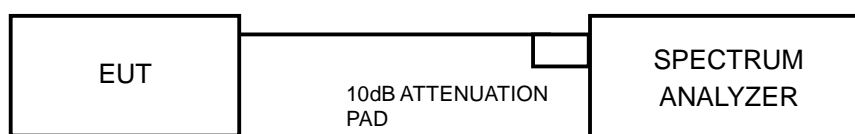
5.3.3 TEST PROCEDURE

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.



A D T

5.3.7 TEST RESULTS (MODE 1)

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.20	0.5	PASS
157	5785	15.17	0.5	PASS
165	5825	15.19	0.5	PASS

802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.13	0.5	PASS
157	5785	15.18	0.5	PASS
165	5825	15.15	0.5	PASS

802.11n (HT40)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
151	5755	36.21	0.5	PASS
159	5795	35.89	0.5	PASS

5.3.8 TEST RESULTS (MODE 2)

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
149	5745	16.36	16.32	16.38	0.5	PASS
157	5785	17.58	17.62	16.45	0.5	PASS
165	5825	16.35	16.08	16.36	0.5	PASS

802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
149	5745	17.58	17.61	17.60	0.5	PASS
157	5785	16.96	17.63	17.25	0.5	PASS
165	5825	17.53	17.64	17.58	0.5	PASS

802.11n (HT40)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
151	5755	36.44	36.43	36.46	0.5	PASS
159	5795	36.45	36.49	36.47	0.5	PASS

802.11ac (VHT80)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
155	5775	75.86	76.14	75.74	0.5	PASS

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)

Per KDB 662911 D01 Multiple Transmitter Output v01r02 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $NANT \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any NANT;

Array Gain = $5 \log(NANT/NSS)$ dB or 3 dB, whichever is less for 20-MHz channel widths with $NANT \geq 5$.

For power measurements on all other devices: Array Gain = $10 \log(NANT/NSS)$ dB.

5.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power meter Anritsu	ML2495A	0824006	May 20, 2013	May 19, 2014
Power sensor Anritsu	MA2411B	0738172	May 20, 2013	May 19, 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 : Aug. 02 to 03, 2013

5.4.3 TEST PROCEDURES

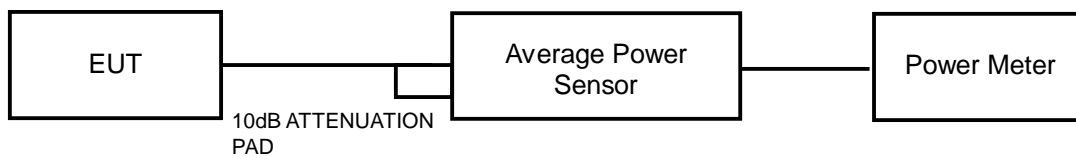
Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

Duty cycle of test signal is $< 98\%$. Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

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 (MODE 1)

802.11a

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	LIMIT (dBm)	PASS/FAIL
149	5745	60.814	17.84	30	PASS
157	5785	76.208	18.82	30	PASS
165	5825	70.958	18.51	30	PASS

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	LIMIT (dBm)	PASS/FAIL
149	5745	55.335	17.43	30	PASS
157	5785	79.983	19.03	30	PASS
165	5825	72.611	18.61	30	PASS

802.11n (HT40)

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	LIMIT (dBm)	PASS/FAIL
151	5755	27.102	14.33	30	PASS
159	5795	77.804	18.91	30	PASS

5.4.8 TEST RESULTS (MODE 2)

802.11a

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
149	5745	21.93	21.54	21.71	446.768	26.50	30	PASS
157	5785	23.30	24.50	23.40	714.410	28.54	30	PASS
165	5825	21.94	21.51	21.59	442.106	26.46	30	PASS

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
149	5745	21.88	21.08	21.15	412.720	26.16	30	PASS
157	5785	23.10	23.50	24.00	679.235	28.32	30	PASS
165	5825	22.83	22.37	22.54	543.924	27.36	30	PASS

802.11n (HT40)

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
151	5755	19.66	19.11	19.41	261.237	24.17	30	PASS
159	5795	22.29	21.92	22.17	489.847	26.90	30	PASS

802.11ac (VHT80)

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
155	5775	19.45	18.43	18.84	234.328	23.70	30	PASS



A D T

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	FSP 40	100036	Jan. 21, 2013	Jan. 20, 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 : Aug. 02 to 03, 2013

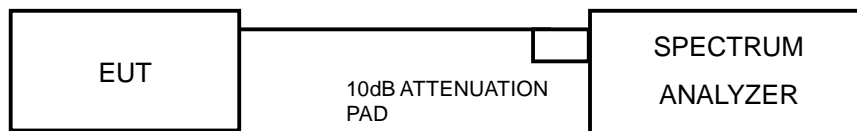
5.5.3 TEST PROCEDURE

1. Set the RBW = 30 kHz, VBW =100 kHz, Detector = power averaging (RMS).
2. Ensure that the number of measurement points in the sweep $\geq 2 \times$ span/RBW
3. Sweep time = auto couple,
4. Employ trace averaging (RMS) mode over a minimum of 100 traces.
5. 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



A D T

5.5.7 TEST RESULTS (MODE 1)

802.11a

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	LIMIT (dBm)	PASS /FAIL
149	5745	-6.16	8	PASS
157	5785	-5.05	8	PASS
165	5825	-5.52	8	PASS

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	LIMIT (dBm)	PASS /FAIL
149	5745	-6.89	8	PASS
157	5785	-4.98	8	PASS
165	5825	-5.68	8	PASS

802.11n (HT40)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	LIMIT (dBm)	PASS /FAIL
151	5755	-14.08	8	PASS
159	5795	-8.16	8	PASS

5.5.8 TEST RESULTS (MODE 2)

802.11a

TX chain	Channel	FREQ. (MHz)	PSD (dBm)	10 log (N=3) dB	Total PSD (dBm)	Limit (dBm)	PASS /FAIL
0	149	5745	-2.24	4.77	2.53	3.79	PASS
	157	5785	-3.18	4.77	1.59	3.79	PASS
	165	5825	-3.13	4.77	1.64	3.79	PASS
1	149	5745	-3.62	4.77	1.15	3.79	PASS
	157	5785	-2.74	4.77	2.03	3.79	PASS
	165	5825	-3.48	4.77	1.29	3.79	PASS
2	149	5745	-2.74	4.77	2.03	3.79	PASS
	157	5785	-2.05	4.77	2.72	3.79	PASS
	165	5825	-3.07	4.77	1.70	3.79	PASS

NOTE: 1. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 3] = 10.21\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8 - (10.21 - 6) = 3.79\text{dBm}$.

802.11n (HT20)

TX chain	CHAN.	FREQ. (MHz)	PSD W/O DUTY FACTOR (dBm)	10 log (N=3) dB	DUTY FACTOR (dB)	Total PSD WITH DUTY FACTOR (dBm)	Limit (dBm)	PASS /FAIL
0	149	5745	-4.38	4.77	0.12	0.51	8	PASS
	157	5785	-2.04	4.77	0.12	2.85	8	PASS
	165	5825	-3.17	4.77	0.12	1.72	8	PASS
1	149	5745	-4.57	4.77	0.12	0.32	8	PASS
	157	5785	-2.08	4.77	0.12	2.81	8	PASS
	165	5825	-3.42	4.77	0.12	1.47	8	PASS
2	149	5745	-4.64	4.77	0.12	0.25	8	PASS
	157	5785	-2.68	4.77	0.12	2.21	8	PASS
	165	5825	-3.09	4.77	0.12	1.80	8	PASS

NOTE: 1. Refer to section 3.4 for duty cycle spectrum plot.



A D T

802.11n (HT40)

TX chain	CHAN.	FREQ. (MHz)	PSD W/O DUTY FACTOR (dBm)	10 log (N=3) dB	DUTY FACTOR (dB)	Total PSD WITH DUTY FACTOR (dBm)	Limit (dBm)	PASS /FAIL
0	151	5755	-12.51	4.77	0.19	-7.55	8	PASS
	159	5795	-5.67	4.77	0.19	-0.71	8	PASS
1	151	5755	-8.67	4.77	0.19	-3.71	8	PASS
	159	5795	-6.75	4.77	0.19	-1.79	8	PASS
2	151	5755	-8.84	4.77	0.19	-3.88	8	PASS
	159	5795	-5.97	4.77	0.19	-1.01	8	PASS

NOTE: 1. Refer to section 3.4 for duty cycle spectrum plot.

802.11ac (VHT80)

TX chain	CHAN.	FREQ. (MHz)	PSD W/O DUTY FACTOR (dBm)	10 log (N=3) dB	DUTY FACTOR (dB)	Total PSD WITH DUTY FACTOR (dBm)	Limit (dBm)	PASS /FAIL
0	155	5775	-11.64	4.77	0.57	-6.30	8	PASS
1	155	5775	-12.05	4.77	0.57	-6.71	8	PASS
2	155	5775	-10.29	4.77	0.57	-4.95	8	PASS

NOTE: 1. Refer to section 3.4 for duty cycle spectrum plot.



A D T

5.6 CONDUCTED OUT-BAND EMISSION MEASUREMENT

5.6.1 LIMITS OF CONDUCTED OUT-BAND EMISSION MEASUREMENT

Below 30dB 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	FSP 40	100036	Jan. 21, 2013	Jan. 20, 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 : Aug. 02 to Sep. 13, 2013

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.

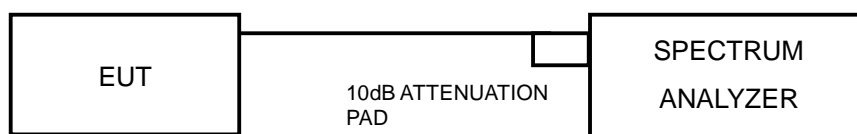
Measurement Procedure –Unwanted Emission Level

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

5.6.4 DEVIATION FROM TEST STANDARD

No deviation

5.6.5 TEST SETUP



5.6.6 EUT OPERATING CONDITION

Same as Item 4.3.6

5.6.7 TEST RESULTS

The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

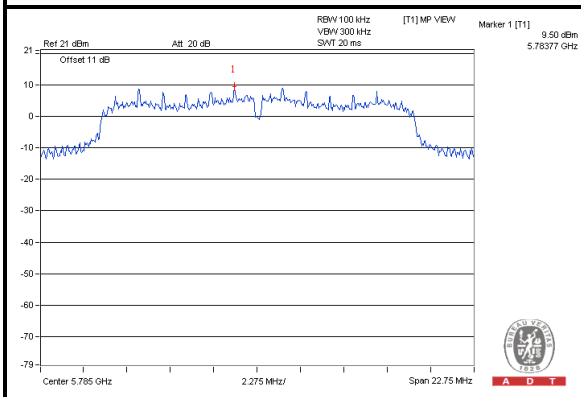


A D T

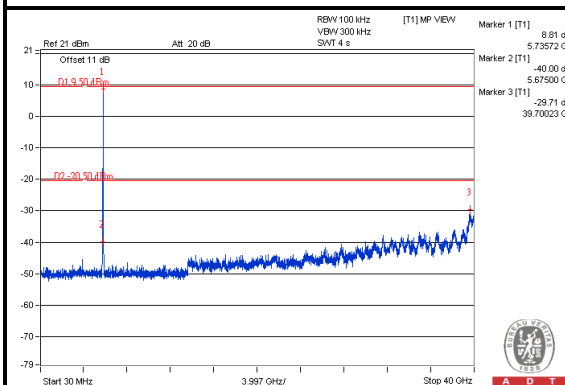
For Mode 1 (Radio Card 1)

802.11a

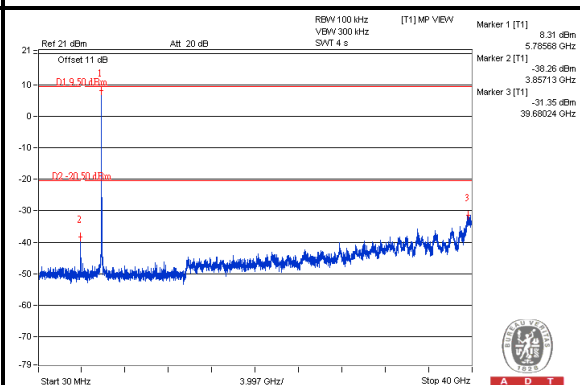
Maximum REF



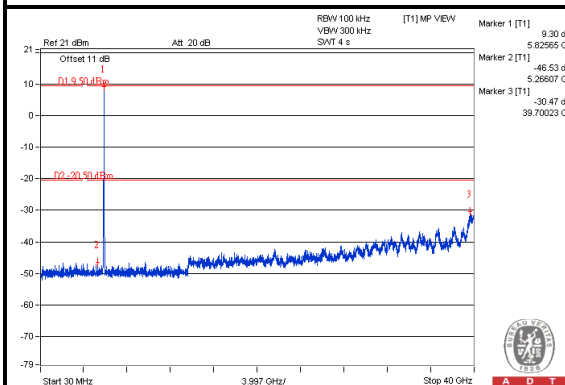
CH 149



CH 157



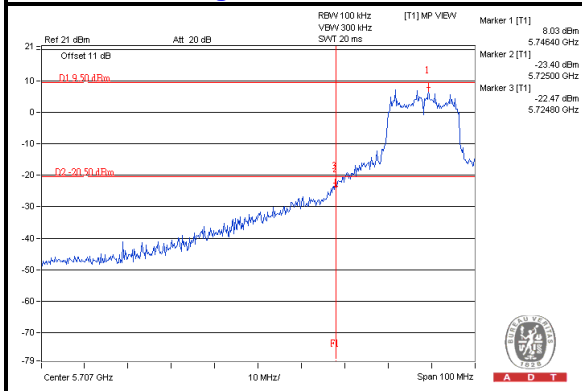
CH 165



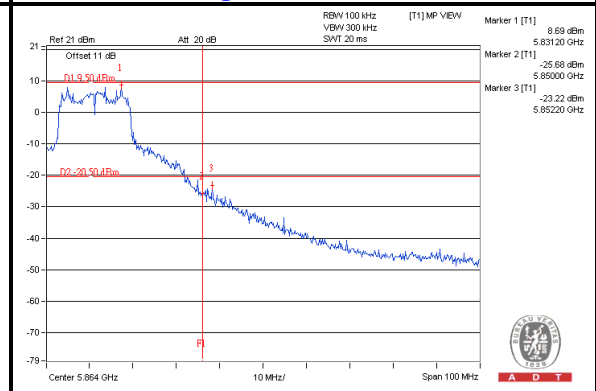


A D T

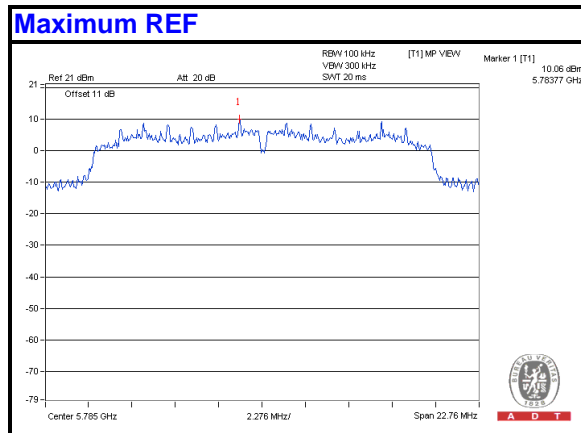
CH 149 Band edge



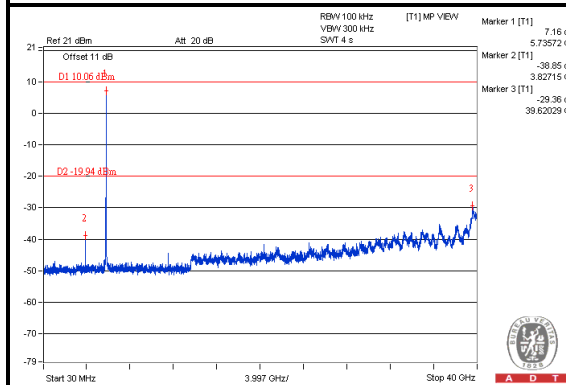
CH 165 Band edge



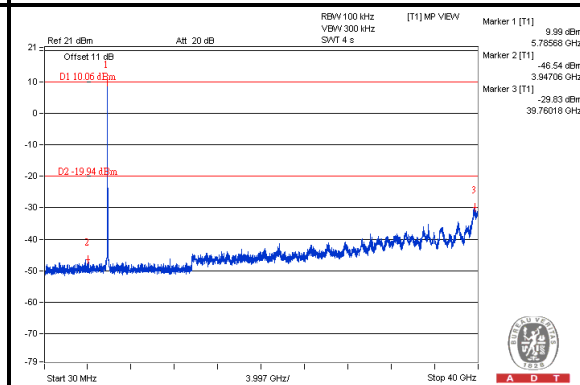
802.11n (HT20)



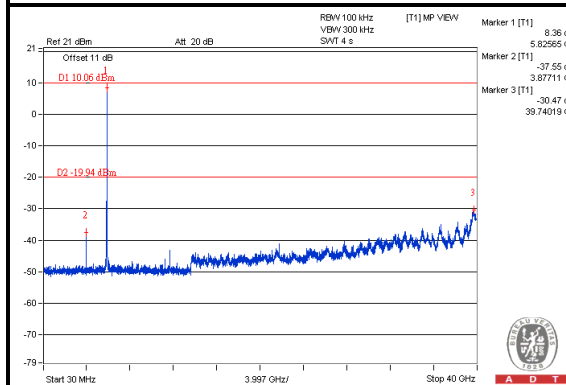
CH 149



CH 157



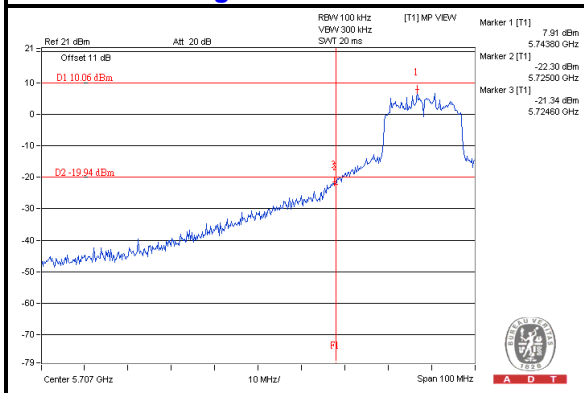
CH 165



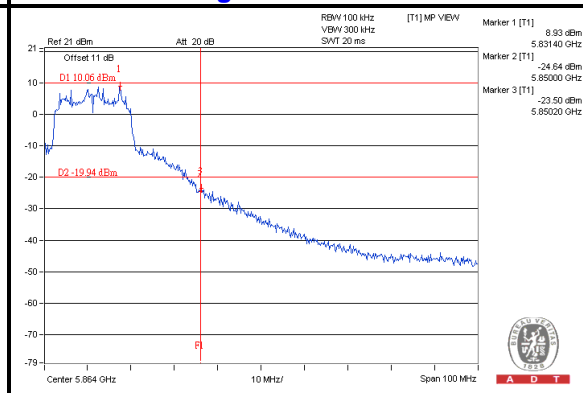


A D T

CH 149 Band edge



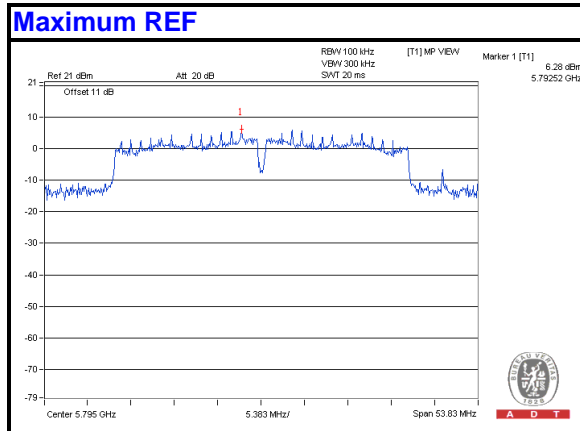
CH 165 Band edge



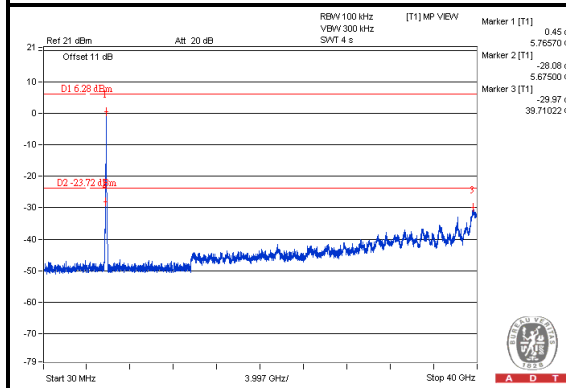


A D T

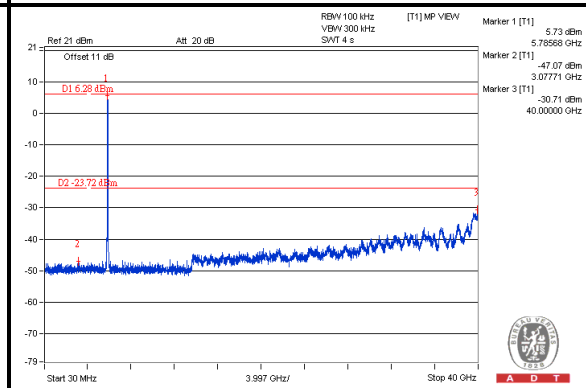
802.11n (HT40)



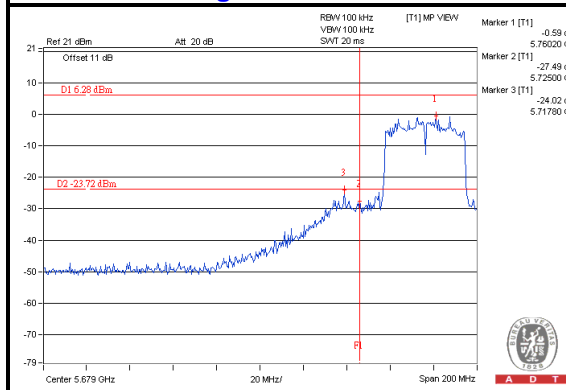
CH 151



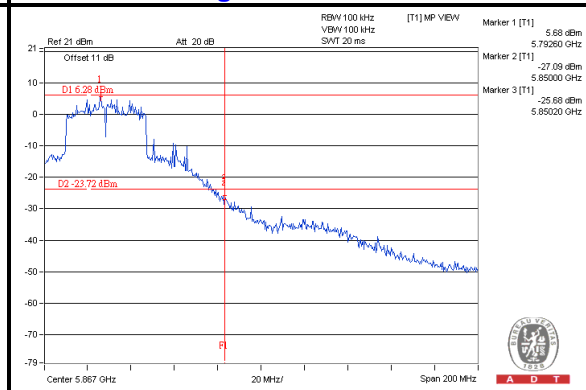
CH 159



CH 151 Band edge

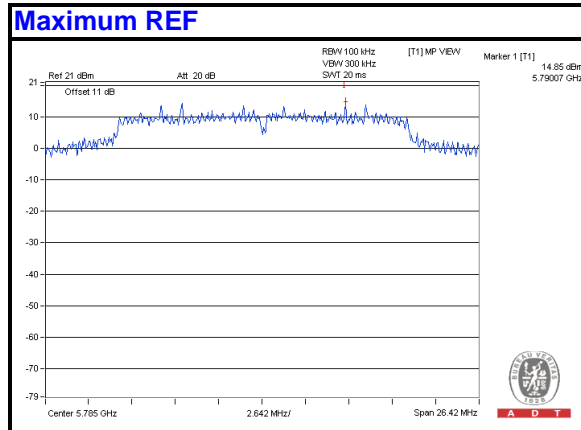


CH 159 Band edge



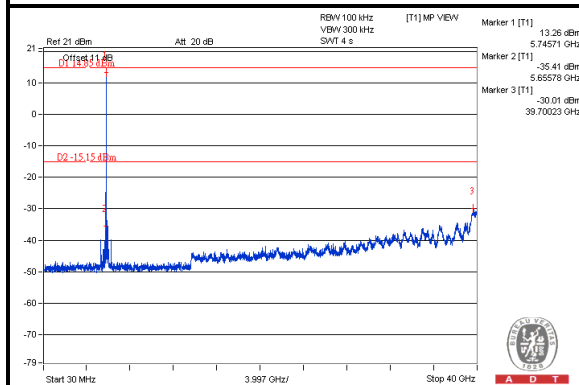
For Mode 2 (Radio Card 0)

802.11a

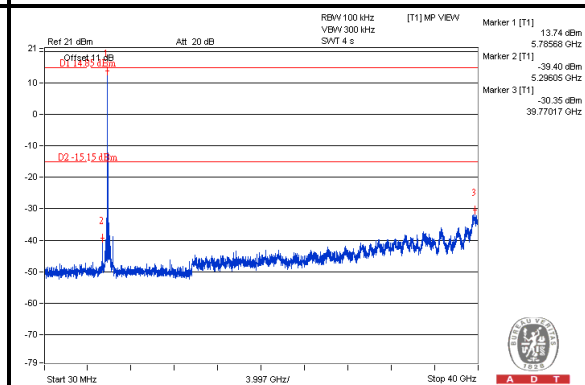


Chain(0)

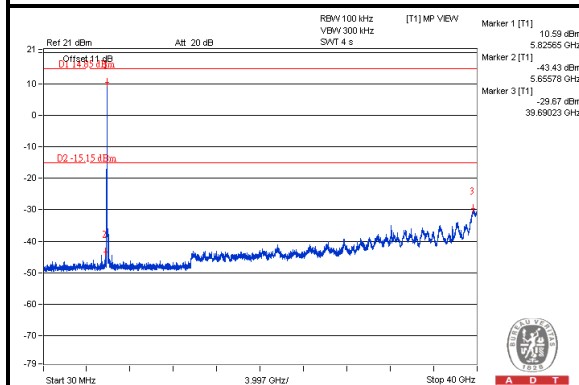
CH 149



CH 157



CH 165

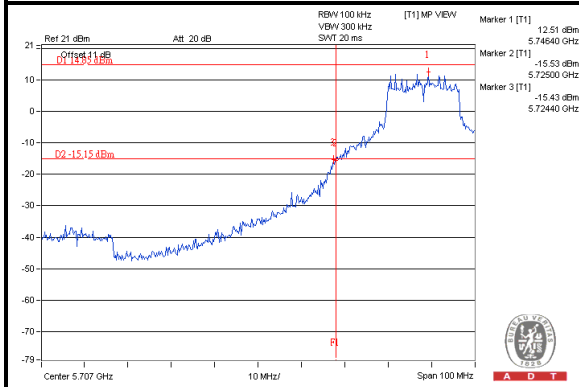




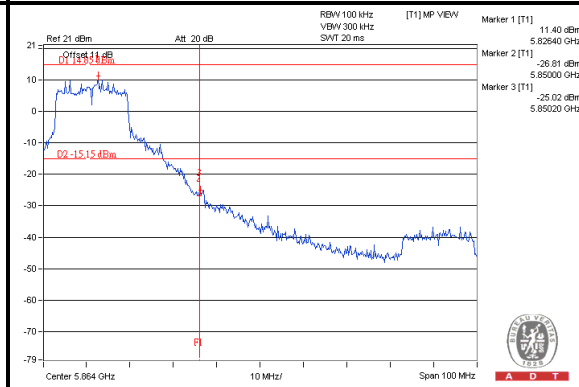
A D T

Chain(0)

CH 149 Band edge



CH 165 Band edge

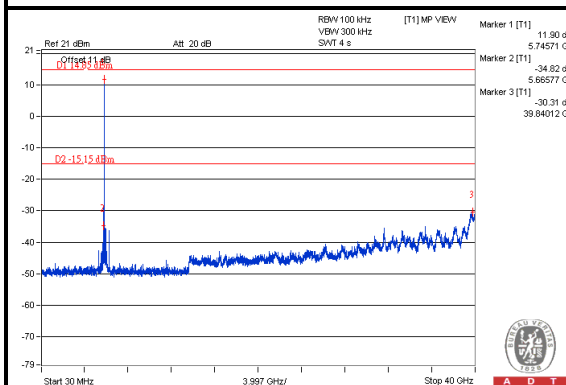




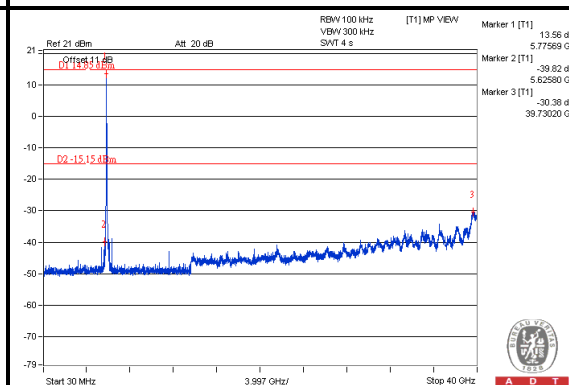
A D T

Chain(1)

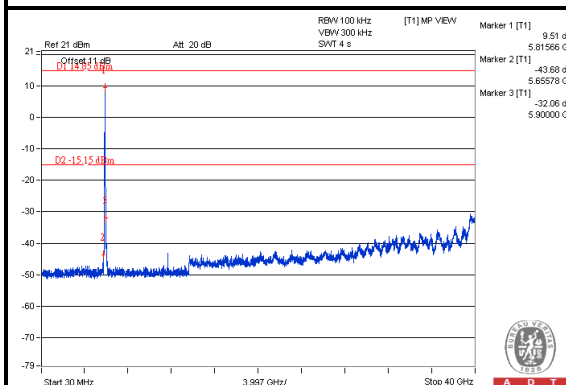
CH 149



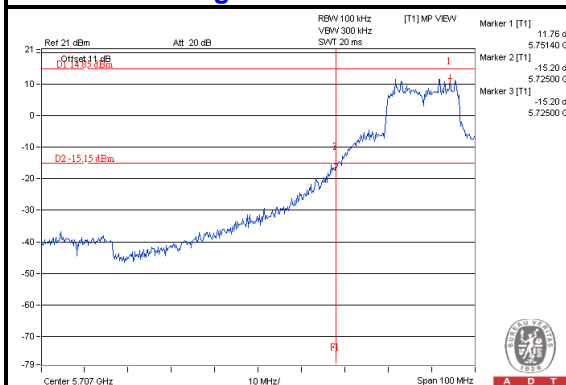
CH 157



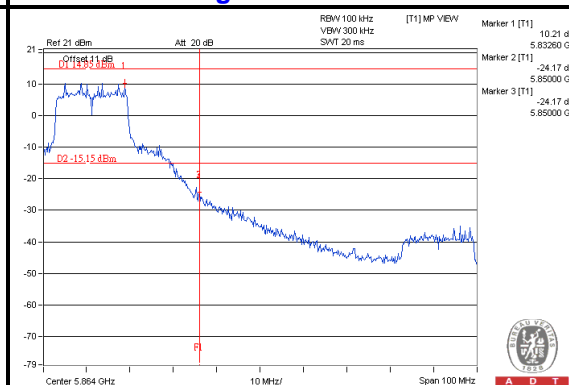
CH 165



CH 149 Band edge



CH 165 Band edge

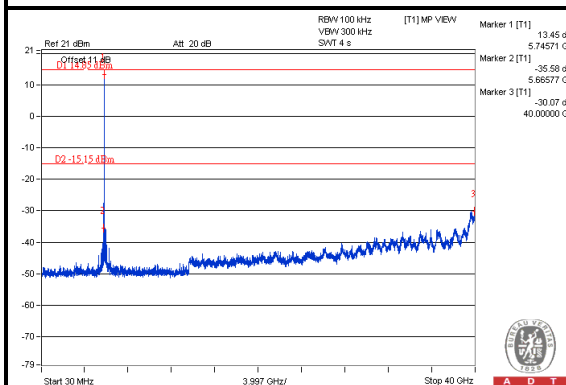




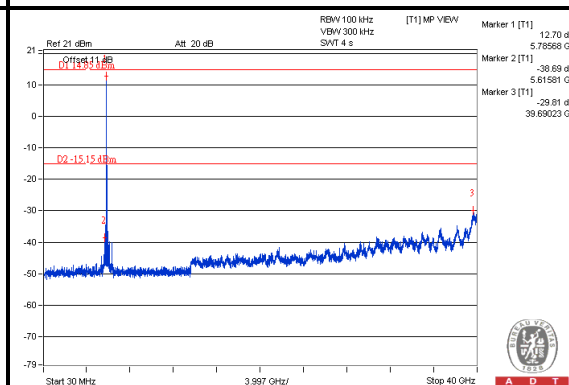
A D T

Chain(2)

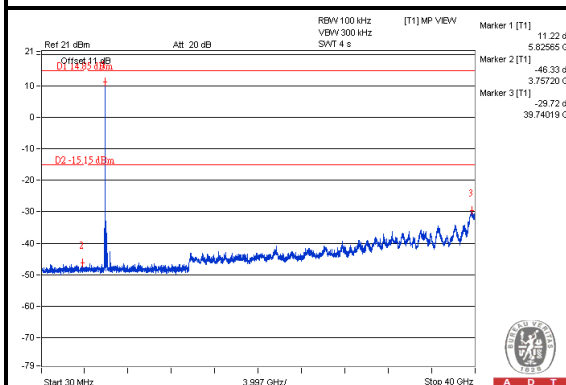
CH 149



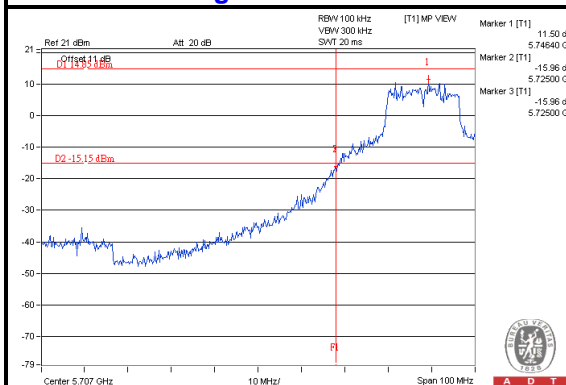
CH 157



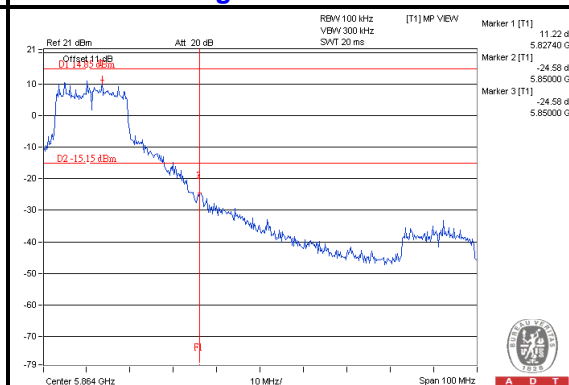
CH 165



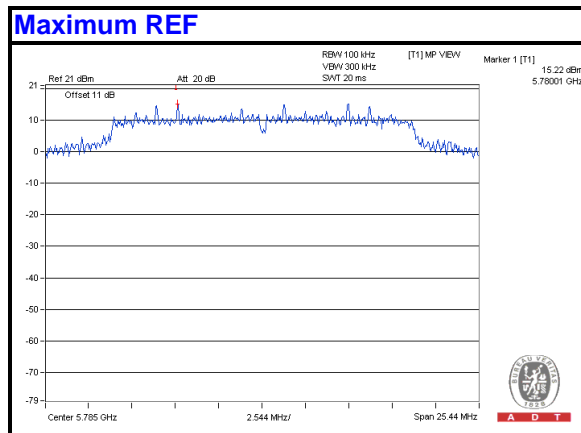
CH 149 Band edge



CH 165 Band edge

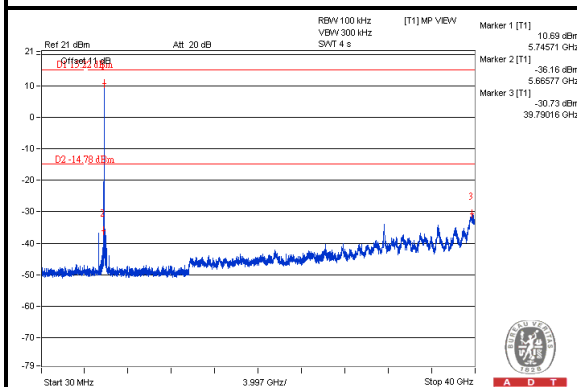


802.11n (HT20)

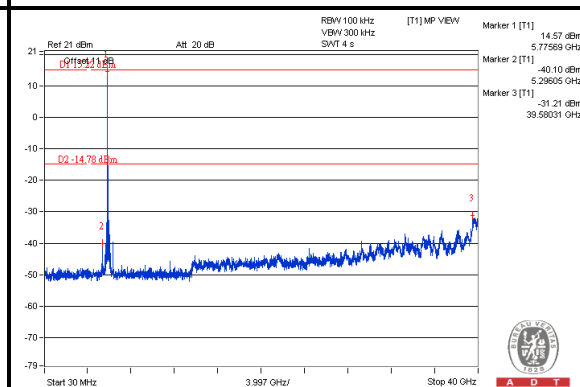


Chain(0)

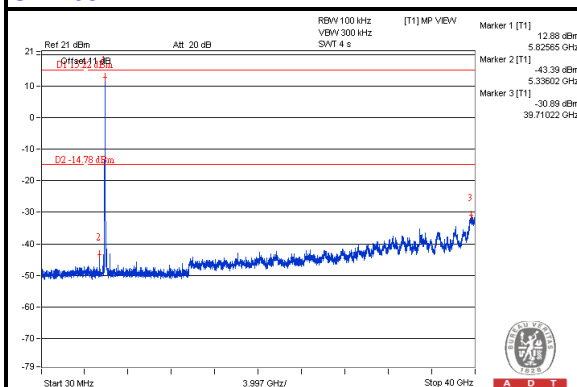
CH 149



CH 157



CH 165

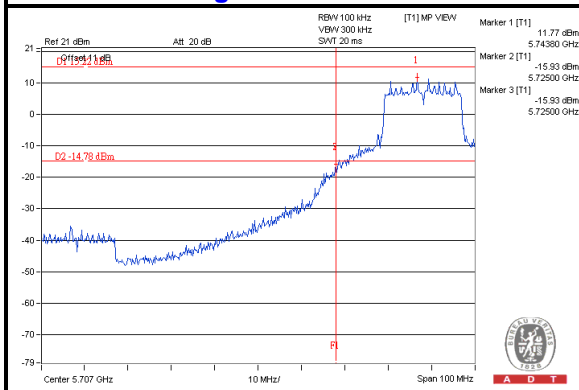




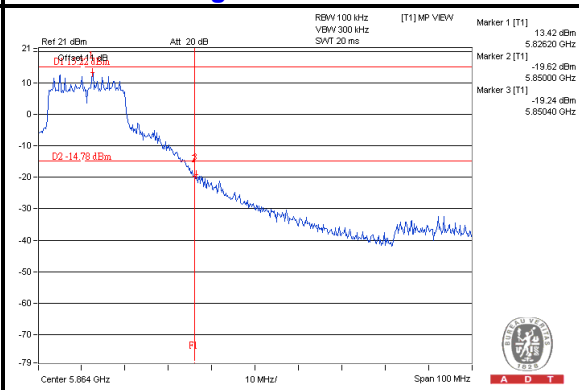
A D T

Chain(0)

CH 149 Band edge

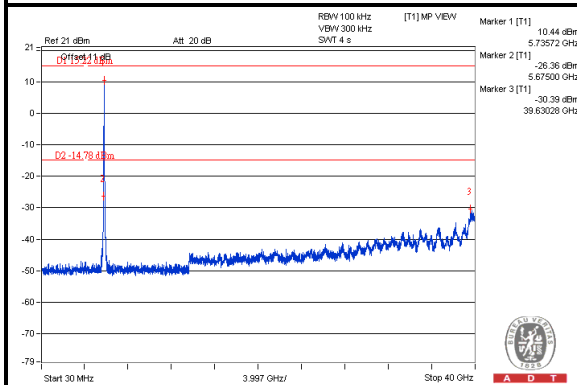
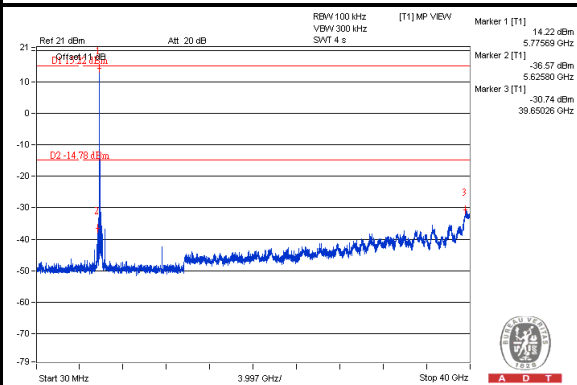
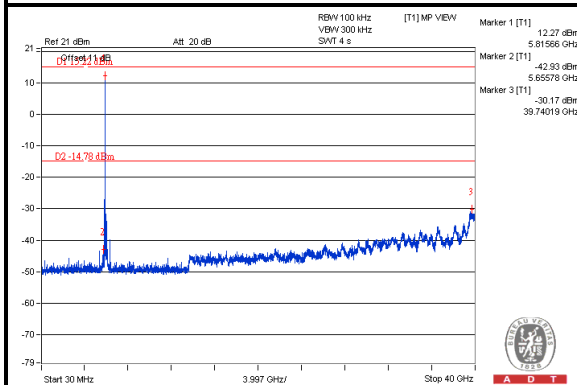
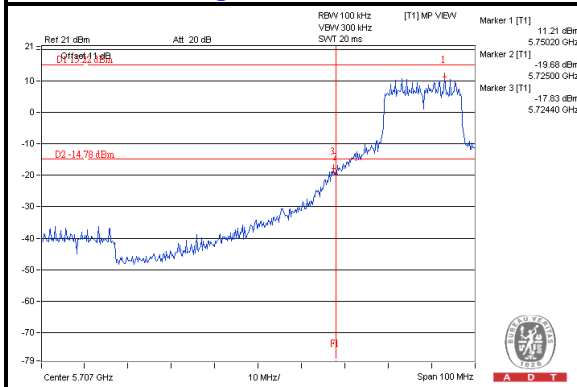
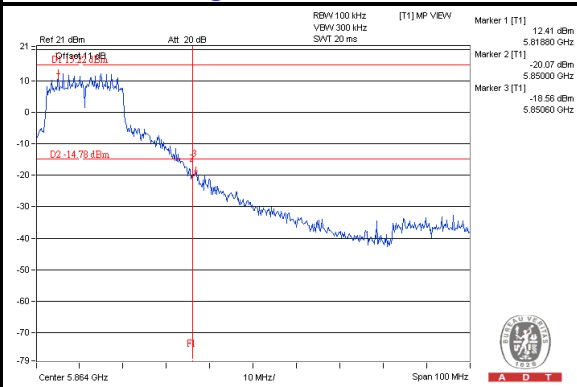


CH 165 Band edge





A D T

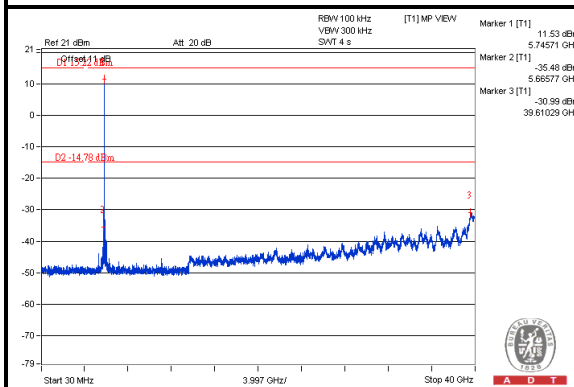
Chain(1)**CH 149****CH 157****CH 165****CH 149 Band edge****CH 165 Band edge**



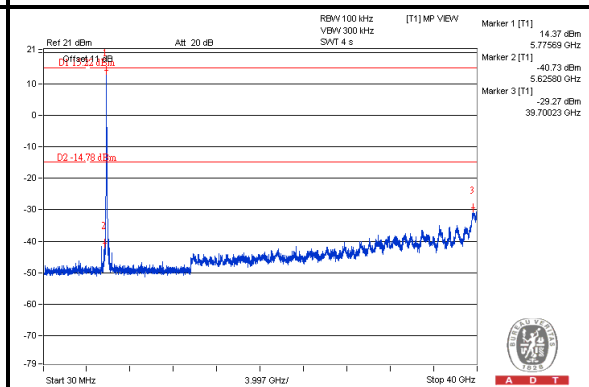
A D T

Chain(2)

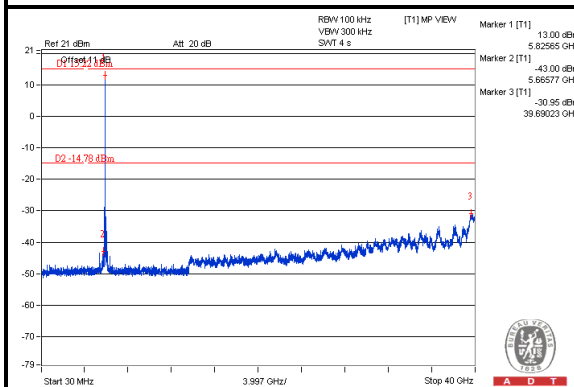
CH 149



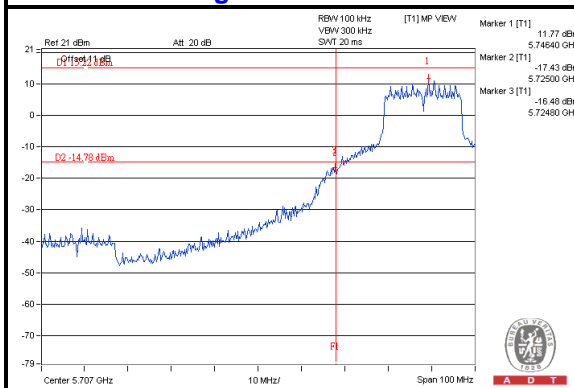
CH 157



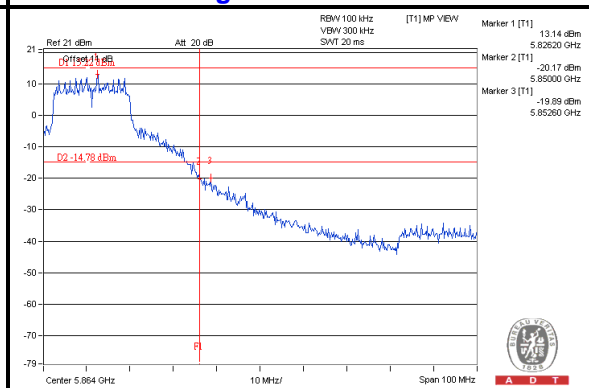
CH 165



CH 149 Band edge



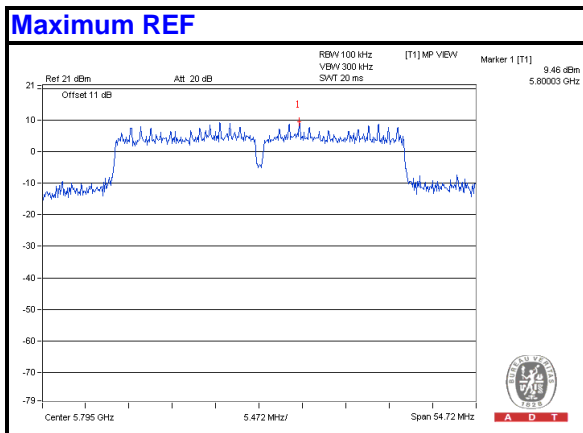
CH 165 Band edge





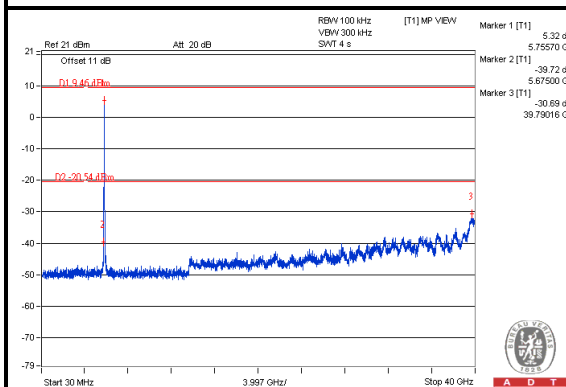
A D T

802.11n (HT40)

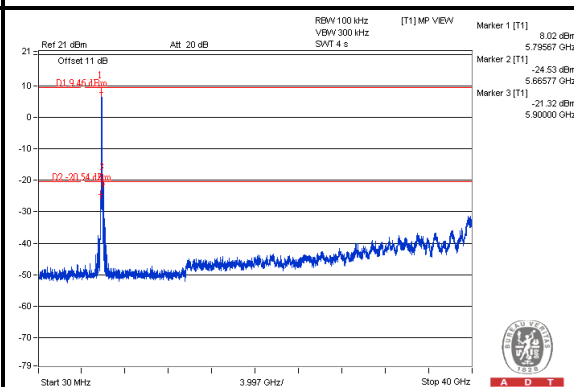


Chain(0)

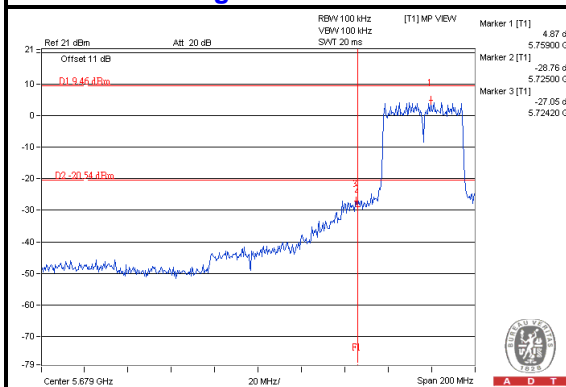
CH 151



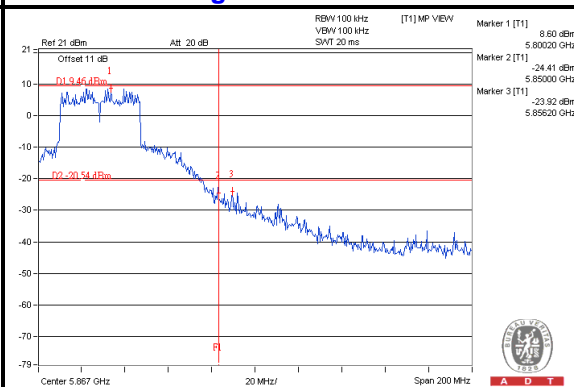
CH 159



CH 151 Band edge



CH 159 Band edge

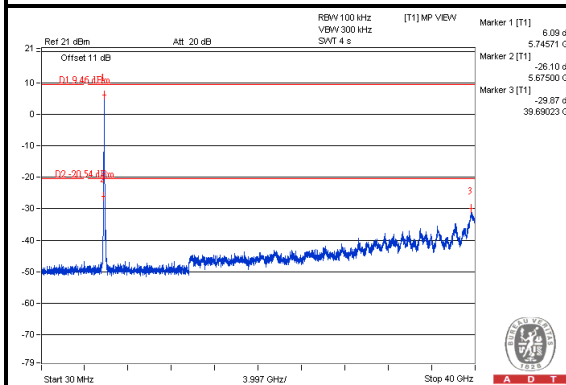




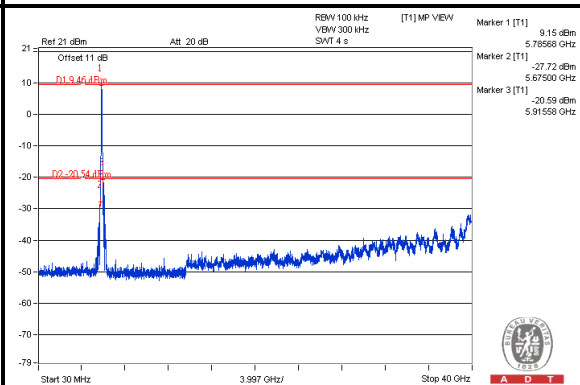
A D T

Chain(1)

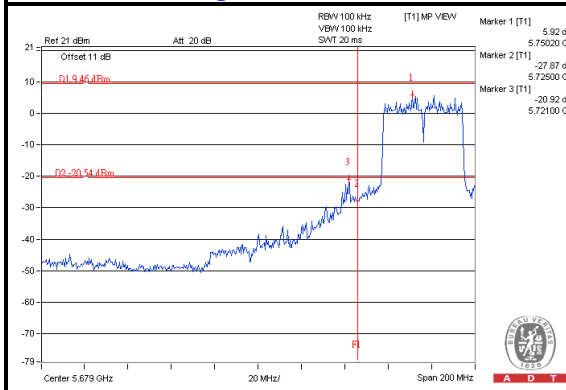
CH 151



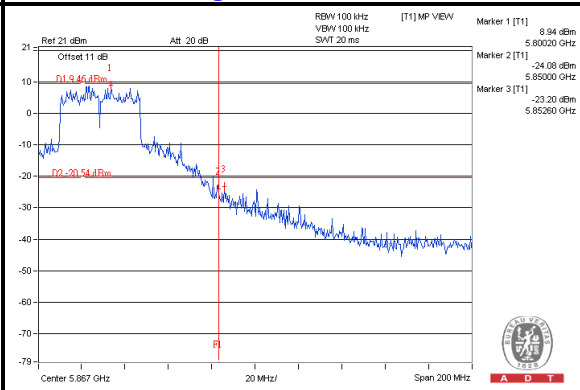
CH 159



CH 151 Band edge



CH 159 Band edge

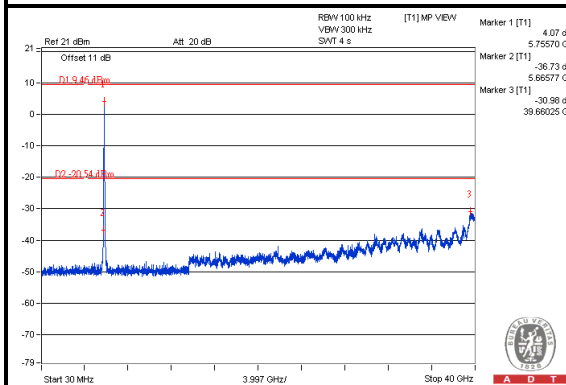




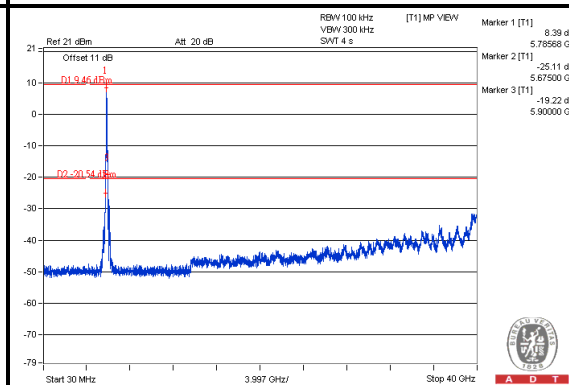
A D T

Chain(2)

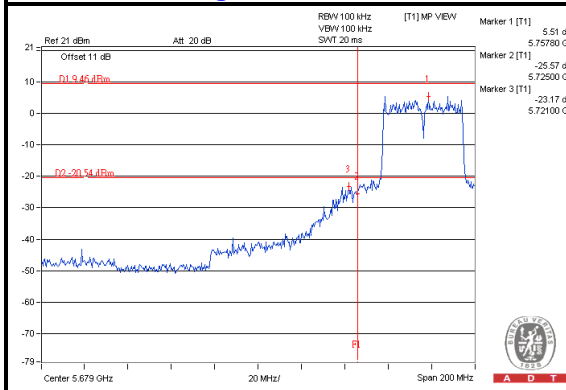
CH 151



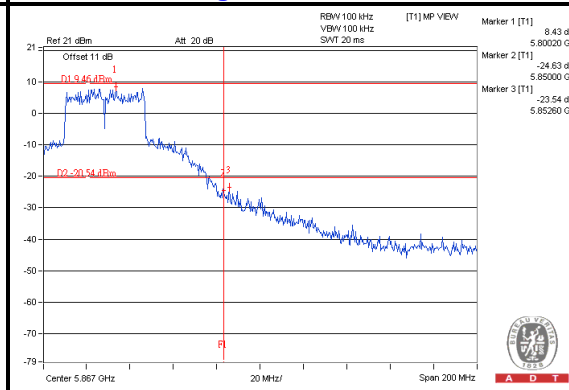
CH 159



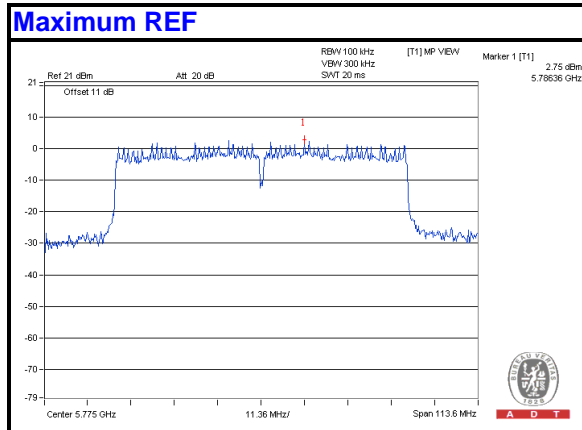
CH 151 Band edge



CH 159 Band edge

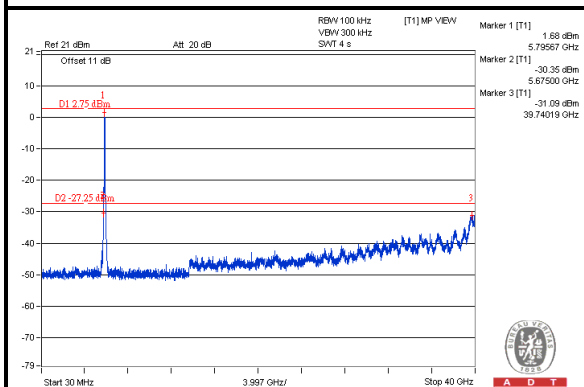


802.11ac (VHT80)

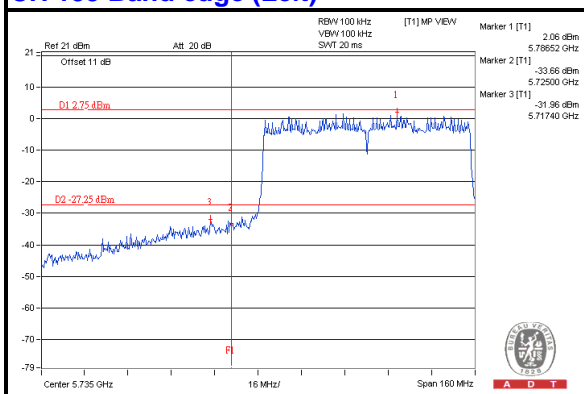


Chain(0)

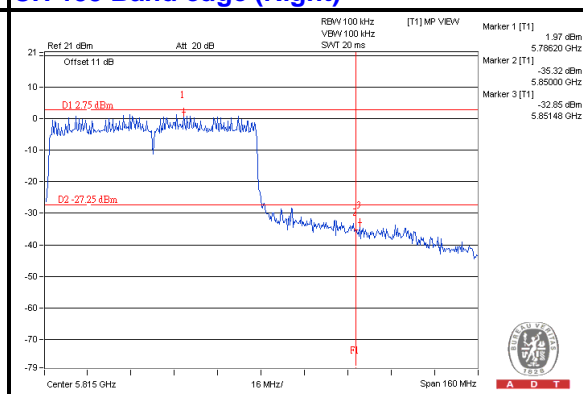
CH 155



CH 155 Band edge (Left)



CH 155 Band edge (Right)

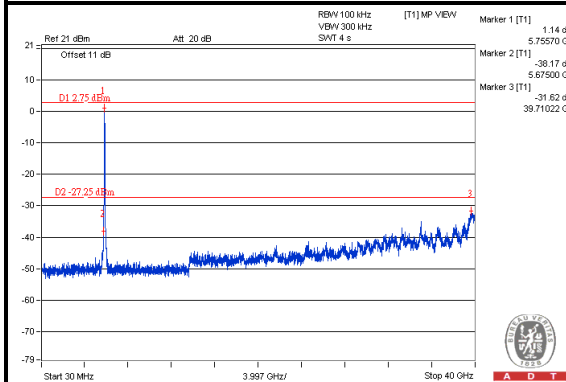




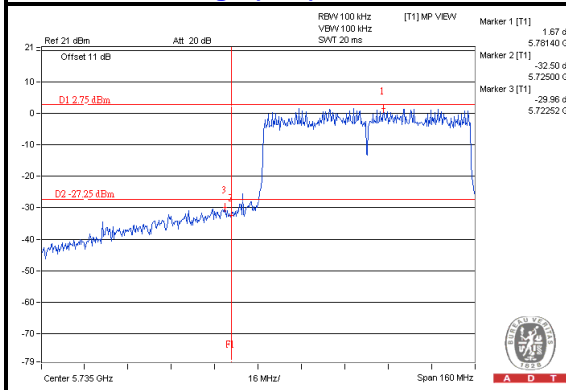
A D T

Chain(1)

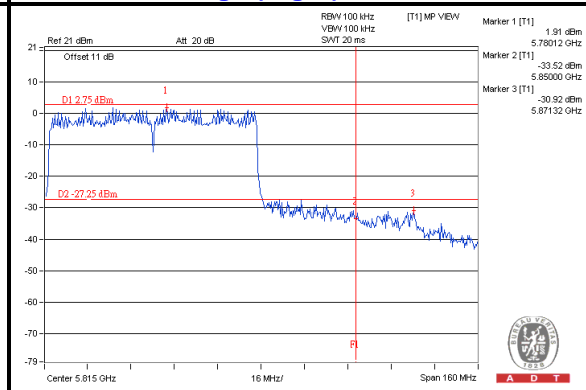
CH 155



CH 155 Band edge (Left)



CH 155 Band edge (Right)

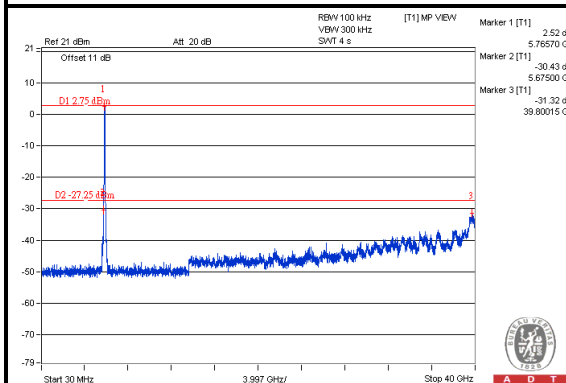




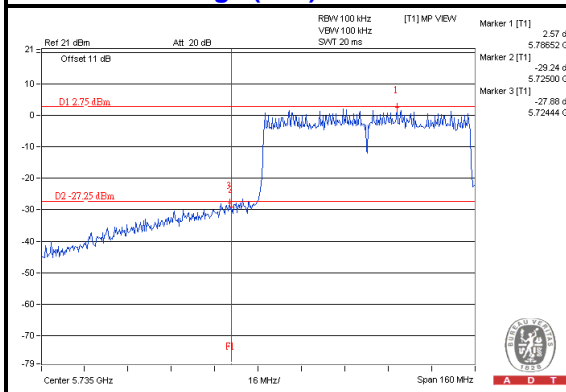
A D T

Chain(2)

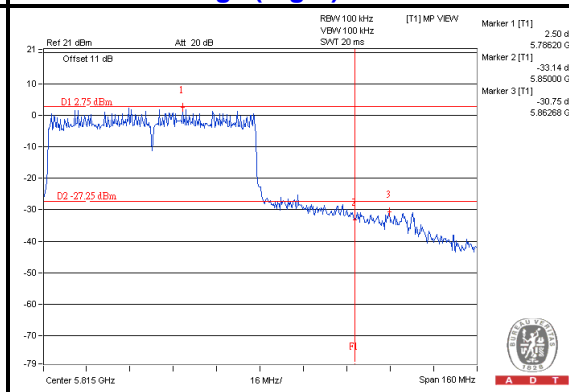
CH 155



CH 155 Band edge (Left)



CH 155 Band edge (Right)



6. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

7. INFORMATION ON THE TESTING LABORATORIES

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

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

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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



A D T

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 ---