FCC Test Report

(Co-Located)

Report No.:	RF170609C20-4
FCC ID:	QXO-AP3915E
Test Model:	AP3915e
Series Model:	AP7632 (refer to item 3.1 for more details)
Received Date:	Jun. 09, 2017
Test Date:	Sep. 14 ~ Sep. 15, 2017
Issued Date:	Sep. 15, 2017
Applicant:	Extreme Networks, Inc.
Address:	6480 VIA DEL ORO SAN JOSE CA 95119 USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RF170609C20-4	Original release.	Sep. 15, 2017

1 Certificate of Conformity

Product:	Wireless 802.11 a/ac+b/g/n Indoor Access Point
Brand:	Extreme Networks
Test Model:	AP3915e
Series Model:	AP7632 (refer to item 3.1 for more details)
Sample Status:	Engineering sample
Applicant:	Extreme Networks, Inc.
Test Date:	Sep. 14 ~ Sep. 15, 2017
Standards:	47 CFR FCC Part 15, Subpart C (Section 15.247) 47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10-2013

The above equipment 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 : Celine Chou , **Date:** Sep. 15, 2017

Celine Chou / Specialist

Approved by : Ken Liu , **Date:** Sep. 15, 2017

Ken Liu / Senior Manager

2 Summary of Test Results

Applied Standard:	47 CFR FCC Part 15, Subpart C (Section 15.247) 47 CFR FCC Part 15, Subpart E (Section 15.407)		
FCC Clause	Test Item	Result	Remarks
15.205 / 15.209 / 15.247(d) 15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -0.1dB at 2390.00MHz.

*For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.86 dB
	200MHz ~1000MHz	3.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Wireless 802.11 a/ac+b/g/n Indoor Access Point	
Brand	Extreme Networks	
Test Model	AP3915e	
Series Model	AP7632	
Model Difference	Refer to note for more details	
Status of EUT	Engineering sample	
Power Supply Rating	12Vdc from adapter 54Vdc from POE	
Modulation Type	WLAN	CCK, DQPSK, DBPSK for DSSS 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM
	Bluetooth LE	GFSK
	Zigbee	O-QPSK
Modulation Technology	WLAN	DSSS, OFDM
Transfer Rate	WLAN	802.11b:11/5.5/2/1Mbps 802.11a/g: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps 802.11ac: up to 867Mbps
	Bluetooth LE	1Mbps
	Zigbee	250kbps
Operating Frequency	WLAN	2.4GHz: 2412 ~ 2462MHz 5.0GHz: 5180 ~ 5240MHz, 5745 ~ 5825MHz
	Bluetooth LE	2402 ~ 2480MHz
	Zigbee	2405 ~ 2480MHz
Number of Channel	WLAN	2412 ~ 2462MHz: 11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40) 5180 ~ 5240MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5745 ~ 5825MHz: 5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)
	Bluetooth LE	40
	Zigbee	16

Output Power	WLAN	ML-2452-APA2-01, ML-2452-APA2-02 and ML-2452-HPA5-036 Ant.: CDD Mode: 2412~2462MHz: 347.575mW 5180~5240MHz: 355.022mW 5745~5825MHz: 382.663mW Beamforming Mode: 2412~2462MHz: 167.880mW 5180~5240MHz: 177.419mW 5745~5825MHz: 191.426Mw ML-2452-HPAG4A6-01 Ant.: CDD Mode: 2412~2462MHz: 337.824mW 5180~5240MHz: 374.495mW 5745~5825MHz: 371.702mW Beamforming Mode: 2412~2462MHz: 167.494mW 5180~5240MHz: 187.068mW 5745~5825MHz: 185.780mW ML-2452-HPA6M4-S36 Ant.: CDD Mode: 2412~2462MHz: 337.824mW 5180~5240MHz: 374.495mW 5745~5825MHz: 371.702mW Beamforming Mode: 2412~2462MHz: 167.494mW 5180~5240MHz: 187.068mW 5745~5825MHz: 185.780mW ML-2452-PNL9M3-036 Ant.: CDD Mode: 2412~2462MHz: 305.978mW 5180~5240MHz: 320.793mW 5745~5825MHz: 335.324mW Beamforming Mode: 2412~2462MHz: 296.189mW 5180~5240MHz: 320.793mW 5745~5825MHz: 335.324mW

Output Power	WLAN	ML-2452-PNL6M3-N36, ML-2452-PNA5-01R and ML-2452-PNA7-01R Ant.: CDD Mode: 2412~2462MHz: 330.856mW 5180~5240MHz: 245.252mW 5745~5825MHz: 333.341mW Beamforming Mode: 2412~2462MHz: 161.436mW 5180~5240MHz: 122.744mW 5745~5825MHz: 162.930mW ML-2452-PTA2M2-036 and ML-2452-PTA4M4-036 Ant.: CDD Mode: 2412~2462MHz: 360.481mW 5180~5240MHz: 374.632mW 5745~5825MHz: 382.259mW Beamforming Mode: 2412~2462MHz: 169.434mW 5180~5240MHz: 187.499mW 5745~5825MHz: 190.985mW
	Bluetooth LE	ML-2499-HPA8-01 and ML-2452-PNA7-01R Ant.: 1.259mW
	Zigbee	ML-2499-HPA8-01 and ML-2452-PNA7-01R Ant.: 1.622mW
Antenna Type	Refer to Note	
Antenna Connector	Refer to Note	
Accessory Device	NA	
Data Cable Supplied	NA	

Note:

1. The EUT incorporates a MIMO function. Physically, the EUT provides 2 completed transmitters and 2 receivers.

Modulation Mode	TX Function	Beamforming
802.11b	2TX	Not Support
802.11g	2TX	Not Support
802.11a	2TX	Not Support
802.11n (HT20)	2TX	Support
802.11n (HT40)	2TX	Support
802.11ac (VHT20)	2TX	Support
802.11ac (VHT40)	2TX	Support
802.11ac (VHT80)	2TX	Support

* 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)

* For 802.11n, CDD mode is the worst case for final radiated emission and power line conducted emission tests after pretesting CDD mode and beamforming mode.

2. All models are listed as below. Model: AP3915e was chosen for final test.

Brand	Model	Difference
Extreme Networks	AP3915e	All models are electrically identical, only the cover printing is different.
	AP7632	

3. The EUT consumes power from the following adapter and POE. (Support unit only)

Adapter	
Brand	Powertron Electronics Corp.
Model	PA1024-120IB200
Input Power	100-240Vac, 50-60Hz, 0.6A.
Output Power	12Vdc, 2A, 24W Max
Power Line	1.5m power cable with one core attached on adapter

POE	
Brand	EnGenius
Model	EPA5006GP
Input Power	100-240Vac, 50-60Hz, 0.8A
Output Power	54Vdc, 0.6A Pin 4, 5: 54Vdc Pin 7, 8: Return

4. The following antennas were provided to the EUT.

No.	Function	Type	Manufacturer/ Vendor	Model	Gain (dBi)		Connector
					2.4GHz Band	5GHz Band	
1	WLAN	Dipole	Wha Yu	ML-2452-APA2-01	3.17	4.85	RP-SMA Male
2	WLAN	Dipole	Wha Yu	ML-2452-APA2-02	3	5	RP-SMA Male
3	WLAN	Dipole	Laird	ML-2452-HPA5-036	3	5	RP-SMA Male
4	WLAN	Dipole	Laird	ML-2452-HPAG4A6-01	4	7.3	N Male
5	WLAN	Dipole	Ventev	ML-2452-HPA6M4-S36	6.0	6.0	RP-SMA
6	WLAN	Panel	Laird	ML-2452-PNL9M3-036	11.0	10.7	RP-SMA Male
7	WLAN	Panel	Laird	ML-2452-PNL6M3-N36	6	6	N Male
8	WLAN	Panel	Laird	ML-2452-PNA5-01R	5.5	6	N Male
9	WLAN & BT LE & Zigbee	Panel	Laird	ML-2452-PNA7-01R	7.8	10.7	N Male
10	WLAN	Patch	Laird	ML-2452-PTA2M2-036	4	5	RP-SMA Male
11	WLAN	Patch	Laird	ML-2452-PTA4M4-036	5	6.6	RP-SMA Male
12	BT LE & Zigbee	Omni	Laird	ML-2499-HPA8-01	8	-	Fixed N-Male Std polarity

* ML-2452-PNL9M3-036 Ant. was cross-polarized antenna.

3.2 Description of Test Modes

For 2.4GHz

11 channels are provided for 802.11b, 802.11g and 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		

For 5180~5240MHz:

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

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

5745~5825MHz:

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

Channel	Frequency	Channel	Frequency
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

For Bluetooth LE:

40 channels are provided to this EUT:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

For Zigbee:

16 channels are provided to this EUT:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
11	2405	15	2425	19	2445	23	2465
12	2410	16	2430	20	2450	24	2470
13	2415	17	2435	21	2455	25	2475
14	2420	18	2440	22	2460	26	2480

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to			Description
	RE≥1G	RE<1G	OB	
A	-	√	-	Power from adapter
B	√	√	√	Power from POE

Where **RE≥1G:** Radiated Emission above 1GHz & Bandedge Measurement
RE<1G: Radiated Emission below 1GHz
OB: Conducted Out-Band Emission Measurement

Radiated Emission Test (Above 1GHz):

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

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

EUT Configure Mode	Ant.	Mode	Freq. Range (MHz)	Available Channel	Tested Channel	Modulation Technology
B	ML-2452-APA2-01	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 48 + CH 39	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2452-PNA7-01R	BT LE	2402~2480	0 to 39		GFSK
B	ML-2452-APA2-01	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 48 + CH 11	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2452-PNA7-01R	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-APA2-01	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 48 + CH 39	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2499-HPA8-01	BT LE	2402~2480	0 to 39		GFSK
B	ML-2452-APA2-01	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 48 + CH 11	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2499-HPA8-01	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-APA2-02	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 48 + CH 39	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2452-PNA7-01R	BT LE	2402~2480	0 to 39		GFSK
B	ML-2452-APA2-02	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 48 + CH 11	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2452-PNA7-01R	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-APA2-02	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 48 + CH 39	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2499-HPA8-01	BT LE	2402~2480	0 to 39		GFSK
B	ML-2452-APA2-02	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 48 + CH 11	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2499-HPA8-01	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-HPAG4A6-01	802.11g	2412~2462	1 to 11	CH 6 + CH 157 + CH 39	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2452-PNA7-01R	BT LE	2402~2480	0 to 39		GFSK

EUT Configure Mode	Ant.	Mode	Freq. Range (MHz)	Available Channel	Tested Channel	Modulation Technology
B	ML-2452-HPAG4A6-01	802.11g	2412~2462	1 to 11	CH 6 + CH 157 + CH 11	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2452-PNA7-01R	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-HPAG4A6-01	802.11g	2412~2462	1 to 11	CH 6 + CH 157 + CH 39	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2499-HPA8-01	BT LE	2402~2480	0 to 39		GFSK
B	ML-2452-HPAG4A6-01	802.11g	2412~2462	1 to 11	CH 6 + CH 157 + CH 11	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2499-HPA8-01	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-HPA6M4-S36	802.11g	2412~2462	1 to 11	CH 6 + CH 157 + CH 39	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2452-PNA7-01R	BT LE	2402~2480	0 to 39		GFSK
B	ML-2452-HPA6M4-S36	802.11g	2412~2462	1 to 11	CH 6 + CH 157 + CH 11	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2452-PNA7-01R	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-HPA6M4-S36	802.11g	2412~2462	1 to 11	CH 6 + CH 157 + CH 39	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2499-HPA8-01	BT LE	2402~2480	0 to 39		GFSK
B	ML-2452-HPA6M4-S36	802.11g	2412~2462	1 to 11	CH 6 + CH 157 + CH 11	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2499-HPA8-01	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-PNL9M3-036	802.11g	2412~2462	1 to 11	CH 6 + CH 40 + CH 39	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2452-PNA7-01R	BT LE	2402~2480	0 to 39		GFSK
B	ML-2452-PNL9M3-036	802.11g	2412~2462	1 to 11	CH 6 + CH 40 + CH 11	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2452-PNA7-01R	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-PNL9M3-036	802.11g	2412~2462	1 to 11	CH 6 + CH 40 + CH 39	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2499-HPA8-01	BT LE	2402~2480	0 to 39		GFSK
B	ML-2452-PNL9M3-036	802.11g	2412~2462	1 to 11	CH 6 + CH 40 + CH 11	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2499-HPA8-01	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-PNA7-01R	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 149 + CH 39	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2452-PNA7-01R	BT LE	2402~2480	0 to 39		GFSK
B	ML-2452-PNA7-01R	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 149 + CH 11	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2452-PNA7-01R	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-PNA7-01R	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 149 + CH 39	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2499-HPA8-01	BT LE	2402~2480	0 to 39		GFSK

EUT Configure Mode	Ant.	Mode	Freq. Range (MHz)	Available Channel	Tested Channel	Modulation Technology
B	ML-2452-PNA7-01R	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 149 + CH 11	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2499-HPA8-01	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-PTA4M4-036	802.11g	2412~2462	1 to 11	CH 6 + CH 40 + CH 39	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2452-PNA7-01R	BT LE	2402~2480	0 to 39		GFSK
B	ML-2452-PTA4M4-036	802.11g	2412~2462	1 to 11	CH 6 + CH 40 + CH 11	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2452-PNA7-01R	Zigbee	2405~2480	11 to 26		O-QPSK
B	ML-2452-PTA4M4-036	802.11g	2412~2462	1 to 11	CH 6 + CH 40 + CH 39	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2499-HPA8-01	BT LE	2402~2480	0 to 39		GFSK
B	ML-2452-PTA4M4-036	802.11g	2412~2462	1 to 11	CH 6 + CH 40 + CH 11	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2499-HPA8-01	Zigbee	2405~2480	11 to 26		O-QPSK

Radiated Emission Test (Below 1GHz):

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

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

EUT Configure Mode	Ant.	Mode	Freq. Range (MHz)	Available Channel	Tested Channel	Modulation Technology
A, B	ML-2452-APA2-01	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 48 + CH 39	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2452-PNA7-01R	BT LE	2402~2480	0 to 39		GFSK
A, B	ML-2452-APA2-01	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 48 + CH 11	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2452-PNA7-01R	Zigbee	2405~2480	11 to 26		O-QPSK
A, B	ML-2452-APA2-01	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 48 + CH 39	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2499-HPA8-01	BT LE	2402~2480	0 to 39		GFSK
A, B	ML-2452-APA2-01	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 48 + CH 11	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2499-HPA8-01	Zigbee	2405~2480	11 to 26		O-QPSK
A, B	ML-2452-PNA7-01R	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 149 + CH 39	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2452-PNA7-01R	BT LE	2402~2480	0 to 39		GFSK
A, B	ML-2452-PNA7-01R	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 149 + CH 11	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2452-PNA7-01R	Zigbee	2405~2480	11 to 26		O-QPSK

EUT Configure Mode	Ant.	Mode	Freq. Range (MHz)	Available Channel	Tested Channel	Modulation Technology
A, B	ML-2452-PNA7-01R	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 149 + CH 39	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2499-HPA8-01	BT LE	2402~2480	0 to 39		GFSK
A, B	ML-2452-PNA7-01R	802.11n (HT20)	2412~2462	1 to 11	CH 6 + CH 149 + CH 11	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
	ML-2499-HPA8-01	Zigbee	2405~2480	11 to 26		O-QPSK
A, B	ML-2452-PTA4M4-036	802.11g	2412~2462	1 to 11	CH 6 + CH 40 + CH 39	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2452-PNA7-01R	BT LE	2402~2480	0 to 39		GFSK
A, B	ML-2452-PTA4M4-036	802.11g	2412~2462	1 to 11	CH 6 + CH 40 + CH 11	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2452-PNA7-01R	Zigbee	2405~2480	11 to 26		O-QPSK
A, B	ML-2452-PTA4M4-036	802.11g	2412~2462	1 to 11	CH 6 + CH 40 + CH 39	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2499-HPA8-01	BT LE	2402~2480	0 to 39		GFSK
A, B	ML-2452-PTA4M4-036	802.11g	2412~2462	1 to 11	CH 6 + CH 40 + CH 11	BPSK
		802.11n (HT20)	5180~5240	36 to 48		OFDM
	ML-2499-HPA8-01	Zigbee	2405~2480	11 to 26		O-QPSK

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.

EUT Configure Mode	Ant.	Mode	Freq. Range (MHz)	Available Channel	Tested Channel	Modulation Technology
B	ML-2452-APA2-01	802.11b	2412~2462	1 to 11	CH 11 + CH 151	BPSK
		802.11n (HT40)	5745~5825	151 to 159		OFDM
B	ML-2452-APA2-02	802.11b	2412~2462	1 to 11	CH 11 + CH 151	BPSK
		802.11n (HT40)	5745~5825	151 to 159		OFDM
B	ML-2452-HPAG4A6-01	802.11b	2412~2462	1 to 11	CH 6 + CH 46	BPSK
		802.11n (HT40)	5180~5240	38 to 46		OFDM
B	ML-2452-HPA6M4-S36	802.11b	2412~2462	1 to 11	CH 6 + CH 46	BPSK
		802.11n (HT40)	5180~5240	38 to 46		OFDM
B	ML-2452-PNL9M3-036	802.11b	2412~2462	1 to 11	CH 1 + CH 157	BPSK
		802.11n (HT20)	5745~5825	149 to 165		OFDM
B	ML-2452-PNA7-01R	802.11b	2412~2462	1 to 11	CH 6 + CH 149	BPSK
		802.11a	5745~5825	149 to 165		OFDM
B	ML-2452-PTA4M4-036	802.11b	2412~2462	1 to 11	CH 11 + CH 151	BPSK
		802.11n (HT40)	5745~5825	151 to 159		OFDM

Test Condition:

Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	27 deg. C, 66% RH	120Vac, 60Hz	Jones Chang
RE<1G	27 deg. C, 66% RH	120Vac, 60Hz	Jones Chang
OB	25 deg. C, 70% RH	120Vac, 60Hz	Edward Lin

3.3 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	USB Flash	HP	v250W	10	FCC DoC Approved	-
C.	Adapter	Powertron Electronics Corp.	PA1024-120IB200	NA	NA	Provided by manufacturer
D.	POE	EnGenius	EPA5006GP	NA	NA	Provided by manufacturer

Note:

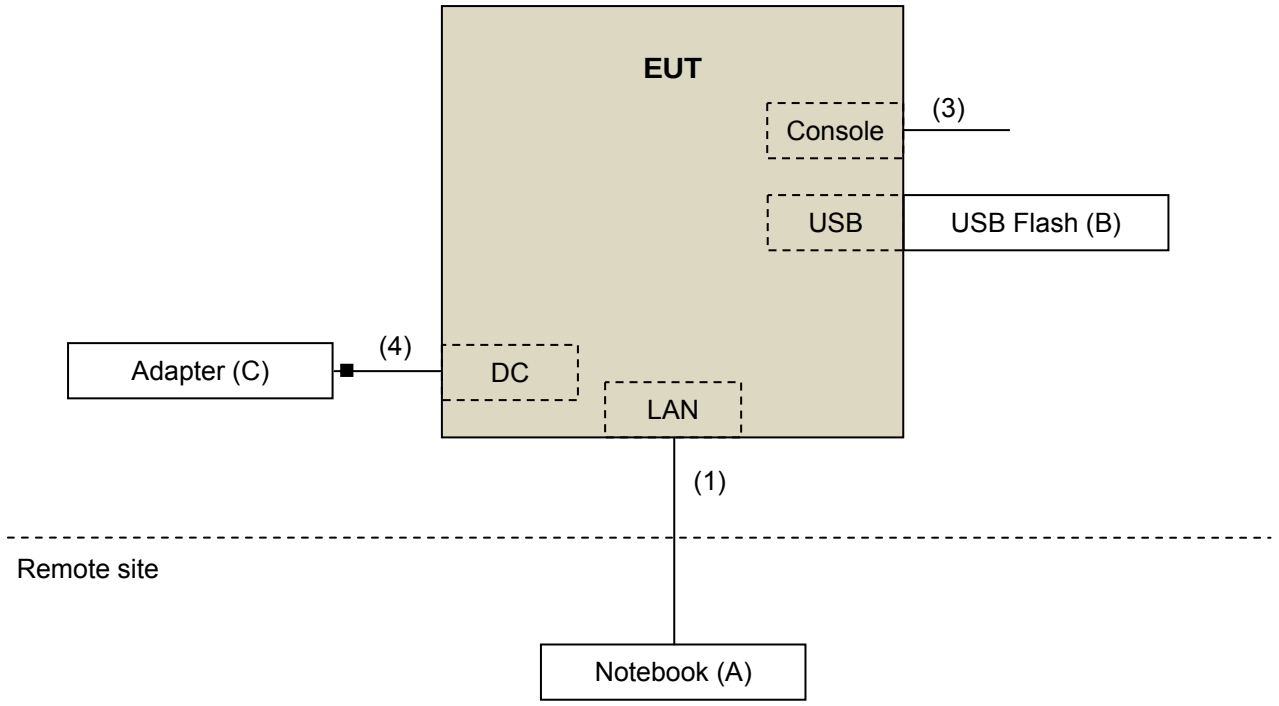
1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45, Cat5e	1	3	N	0	-
2.	RJ45, Cat5e	1	1.8	N	0	-
3.	Console cable	1	1	N	0	Provided by manufacturer
4.	Power cable	1	1.5	N	1	Provided by manufacturer

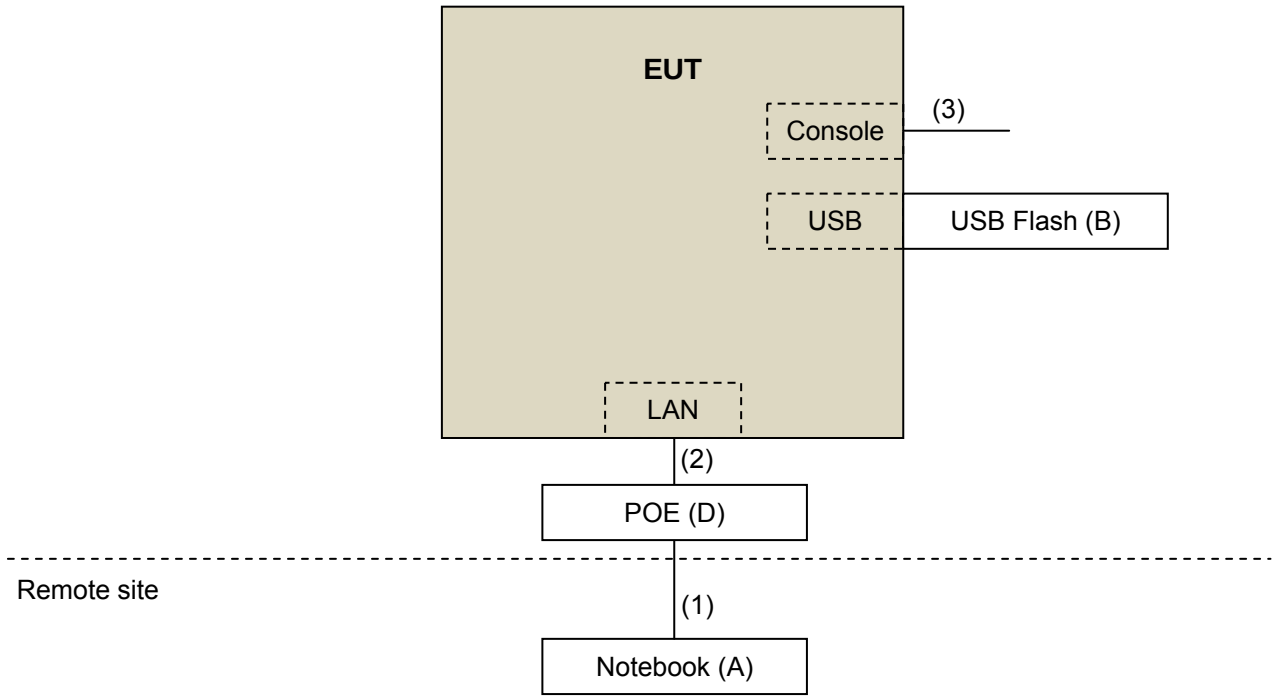
Note: The core(s) is(are) originally attached to the cable(s).

3.3.1 Configuration of System under Test

Adapter Mode



POE Mode



3.4 General Description of Applied Standards

The EUT is a RF Product. According to the specification of the EUT declared by the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C (15.247)

FCC Part 15, Subpart E (15.407)

ANSI C63.10-2013

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.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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

NOTE:

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

Limits of unwanted emission out of the restricted bands

<table>
<tr><td colspan="3">Applicable To</td><td colspan="2">Limit</td></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedure New Rules v01r04</td><td colspan="2">Field Strength at 3m</td></tr>
<tr><td>PK: 74 (dBμV/m)</td><td>AV: 54 (dBμV/m)</td></tr>
<tr><td>Frequency Band</td><td colspan="2">Applicable To</td><td>EIRP Limit</td><td>Equivalent Field Strength at 3m</td></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK: -27 (dBm/MHz)</td><td rowspan="3">PK: 68.2(dBμV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK: -27 (dBm/MHz) *1
PK: 10 (dBm/MHz) *2
PK: 15.6 (dBm/MHz) *3
PK: 27 (dBm/MHz) *4</td><td>PK: 68.2(dBμV/m) *1
PK: 105.2 (dBμV/m) *2
PK: 110.8(dBμV/m) *3
PK: 122.2 (dBμV/m) *4</td></tr>
<tr><td>☐</td><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="5">*1 beyond 75 MHz or more above of the band edge.
*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.
*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.
*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</td></tr>
</table>

Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts).

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	May 02, 2017	May 01, 2018
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Nov. 16, 2016	Nov. 15, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Dec. 28, 2016	Dec. 27, 2017
HORN Antenna SCHWARZBECK	9120D	209	Dec. 27, 2016	Dec. 26, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 14, 2016	Dec. 13, 2017
Loop Antenna EMCI	EM-6879	269	Aug. 11, 2017	Aug. 10, 2018
Preamplifier Agilent	8447D	2944A10738	Aug. 21, 2017	Aug. 20, 2018
Preamplifier Agilent	8449B	3008A01922	Sep. 18, 2016	Sep. 17, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 21, 2017	Aug. 20, 2018
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-SM-8 000	Cable-CH3-03 (309224+170907)	Sep.11, 2017	Sep. 10, 2018
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 17, 2016	Oct. 16, 2017

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.
3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
5. The IC Site Registration No. is IC 7450F-3.

4.1.3 Test Procedures

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Both X and Y axes of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case 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.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

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

Note:

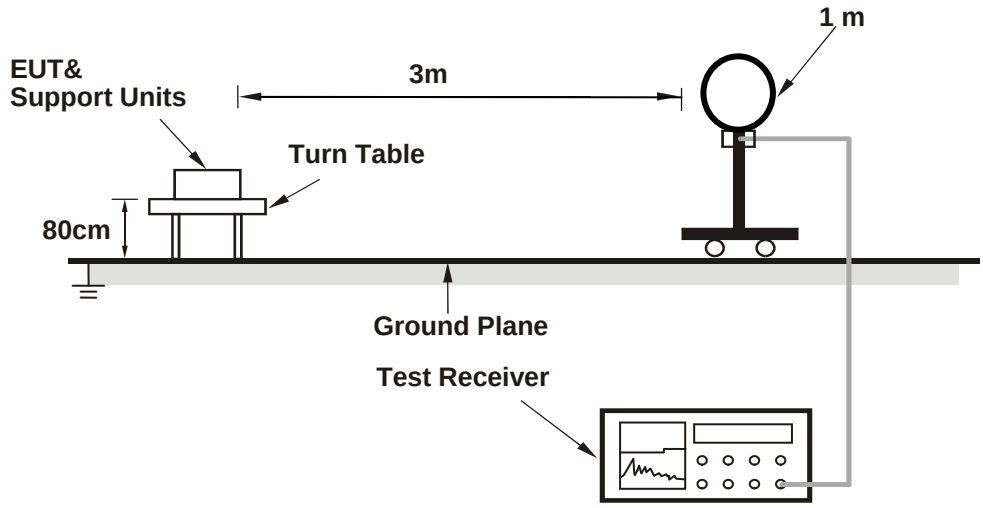
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

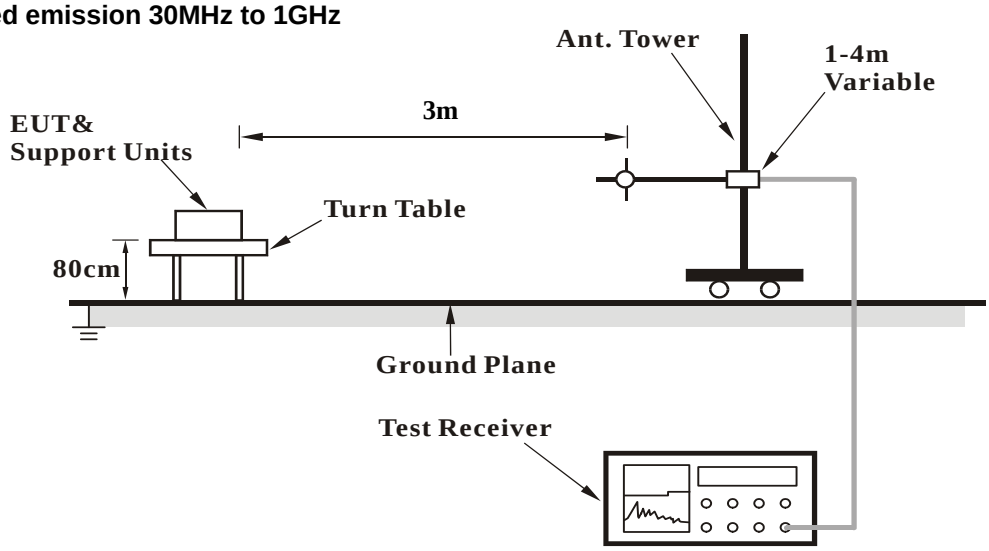
No deviation.

4.1.5 Test Setup

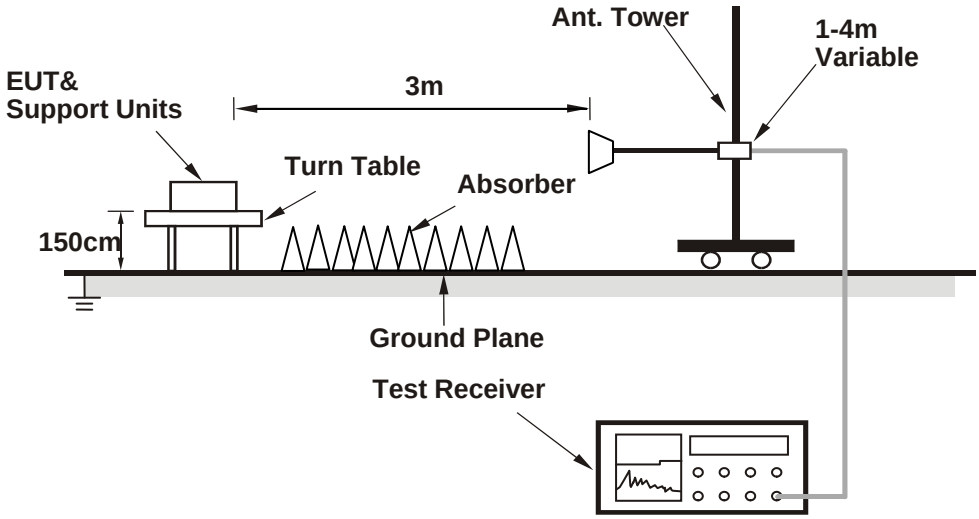
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

a. Placed the EUT on the testing table.
b. Prepared a notebook to act as a communication partner and placed it outside of testing area.
c. The communication partner connected with EUT via a RJ45 cable and ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
d. The communication partner sent data to EUT by command "PING".

4.1.7 Test Results

Above 1GHz Data:

ML-2452-APA2-01 Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20) + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 48 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	111.6 PK			1.45 H	299	78.4	33.2
2	*2437.00	101.2 AV			1.45 H	299	68.0	33.2
3	*2480.00	105.2 PK			1.35 H	0	71.8	33.4
4	*2480.00	100.9 AV			1.35 H	0	67.5	33.4
5	2483.50	72.7 PK	74.0	-1.3	1.35 H	0	39.3	33.4
6	2483.50	50.1 AV	54.0	-3.9	1.35 H	0	16.7	33.4
7	4874.00	59.6 PK	74.0	-14.4	1.89 H	166	56.0	3.6
8	4874.00	46.9 AV	54.0	-7.1	1.89 H	166	43.3	3.6
9	4960.00	51.6 PK	74.0	-22.4	1.43 H	339	47.9	3.7
10	4960.00	39.7 AV	54.0	-14.3	1.43 H	339	36.0	3.7
11	*5240.00	104.4 PK			1.40 H	296	64.9	39.5
12	*5240.00	93.7 AV			1.40 H	296	54.2	39.5
13	5350.00	59.0 PK	74.0	-15.0	1.57 H	237	55.1	3.9
14	5350.00	46.1 AV	54.0	-7.9	1.57 H	237	42.2	3.9
15	#10480.00	61.4 PK	74.0	-12.6	1.68 H	240	44.6	16.8
16	#10480.00	47.2 AV	54.0	-6.8	1.68 H	240	30.4	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 48 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*2437.00	119.5 PK			1.93 V	193	86.3	33.2
2	*2437.00	108.2 AV			1.93 V	193	75.0	33.2
3	*2480.00	94.0 PK			1.98 V	270	60.6	33.4
4	*2480.00	90.0 AV			1.98 V	270	56.6	33.4
5	2483.50	62.7 PK	74.0	-11.3	1.98 V	270	29.3	33.4
6	2483.50	46.9 AV	54.0	-7.1	1.98 V	270	13.5	33.4
7	4874.00	60.7 PK	74.0	-13.3	1.97 V	222	57.1	3.6
8	4874.00	45.7 AV	54.0	-8.3	1.97 V	222	42.1	3.6
9	4960.00	50.3 PK	74.0	-23.7	2.42 V	93	46.6	3.7
10	4960.00	37.3 AV	54.0	-16.7	2.42 V	93	33.6	3.7
11	*5240.00	124.0 PK			1.70 V	132	84.5	39.5
12	*5240.00	113.3 AV			1.70 V	132	73.8	39.5
13	5350.00	61.4 PK	74.0	-12.6	2.06 V	300	57.5	3.9
14	5350.00	49.6 AV	54.0	-4.4	2.06 V	300	45.7	3.9
15	#10480.00	61.8 PK	74.0	-12.2	1.77 V	258	45.0	16.8
16	#10480.00	48.0 AV	54.0	-6.0	1.77 V	258	31.2	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-APA2-01 Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20) + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 48 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.4 PK	74.0	-11.6	1.30 H	359	29.5	32.9
2	2390.00	49.8 AV	54.0	-4.2	1.30 H	359	16.9	32.9
3	*2405.00	92.0 PK			1.30 H	359	59.0	33.0
4	*2405.00	88.5 AV			1.30 H	359	55.5	33.0
5	*2437.00	111.8 PK			1.47 H	294	78.6	33.2
6	*2437.00	101.4 AV			1.47 H	294	68.2	33.2
7	4810.00	51.7 PK	74.0	-22.3	1.40 H	330	48.1	3.6
8	4810.00	39.9 AV	54.0	-14.1	1.40 H	330	36.3	3.6
9	4874.00	59.7 PK	74.0	-14.3	1.82 H	169	56.1	3.6
10	4874.00	47.2 AV	54.0	-6.8	1.82 H	169	43.6	3.6
11	*5240.00	104.6 PK			1.50 H	299	65.1	39.5
12	*5240.00	93.9 AV			1.50 H	299	54.4	39.5
13	5350.00	59.2 PK	74.0	-14.8	1.55 H	242	55.3	3.9
14	5350.00	46.9 AV	54.0	-7.1	1.55 H	242	43.0	3.9
15	#10480.00	61.6 PK	74.0	-12.4	1.72 H	244	44.8	16.8
16	#10480.00	47.6 AV	54.0	-6.4	1.72 H	244	30.8	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 48 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.3 PK	74.0	-11.7	2.00 V	273	29.4	32.9
2	2390.00	46.9 AV	54.0	-7.1	2.00 V	273	14.0	32.9
3	*2405.00	103.7 PK			2.01 V	273	70.7	33.0
4	*2405.00	99.9 AV			2.01 V	273	66.9	33.0
5	*2437.00	119.7 PK			1.92 V	200	86.5	33.2
6	*2437.00	108.4 AV			1.92 V	200	75.2	33.2
7	4810.00	50.5 PK	74.0	-23.5	2.37 V	90	46.9	3.6
8	4810.00	37.5 AV	54.0	-16.5	2.37 V	90	33.9	3.6
9	4874.00	60.9 PK	74.0	-13.1	1.87 V	202	57.3	3.6
10	4874.00	45.9 AV	54.0	-8.1	1.87 V	202	42.3	3.6
11	*5240.00	88.3 PK			1.74 V	100	84.6	3.7
12	*5240.00	77.8 AV			1.74 V	100	74.1	3.7
13	5350.00	61.7 PK	74.0	-12.3	2.09 V	305	57.8	3.9
14	5350.00	50.1 AV	54.0	-3.9	2.09 V	305	46.2	3.9
15	#10480.00	62.1 PK	74.0	-11.9	1.80 V	260	45.3	16.8
16	#10480.00	48.2 AV	54.0	-5.8	1.80 V	260	31.4	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-APA2-01 Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20) + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 48 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.1 PK	74.0	-16.9	1.50 H	42	24.2	32.9
2	2390.00	46.0 AV	54.0	-8.0	1.50 H	42	13.1	32.9
3	*2437.00	111.5 PK			1.42 H	301	78.3	33.2
4	*2437.00	101.1 AV			1.42 H	301	67.9	33.2
5	*2480.00	92.0 PK			1.63 H	321	58.6	33.4
6	*2480.00	88.1 AV			1.63 H	321	54.7	33.4
7	2483.50	58.7 PK	74.0	-15.3	1.50 H	0	25.3	33.4
8	2483.50	48.4 AV	54.0	-5.6	1.50 H	0	15.0	33.4
9	4874.00	51.5 PK	74.0	-22.5	1.82 H	166	47.9	3.6
10	4874.00	42.2 AV	54.0	-11.8	1.82 H	166	38.6	3.6
11	4960.00	45.5 PK	74.0	-28.5	1.83 H	120	41.8	3.7
12	4960.00	33.3 AV	54.0	-20.7	1.83 H	120	29.6	3.7
13	*5240.00	104.7 PK			1.29 H	299	65.2	39.5
14	*5240.00	94.0 AV			1.29 H	299	54.5	39.5
15	5350.00	59.3 PK	74.0	-14.7	1.44 H	202	55.4	3.9
16	5350.00	49.3 AV	54.0	-4.7	1.44 H	202	45.4	3.9
17	#10480.00	59.6 PK	74.0	-14.4	1.88 H	218	42.8	16.8
18	#10480.00	46.5 AV	54.0	-7.5	1.88 H	218	29.7	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 48 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	1.44 V	16	34.5	32.9
2	2390.00	52.6 AV	54.0	-1.4	1.44 V	16	19.7	32.9
3	*2437.00	121.6 PK			2.11 V	10	88.4	33.2
4	*2437.00	110.9 AV			2.11 V	10	77.7	33.2
5	*2480.00	101.9 PK			1.85 V	295	68.5	33.4
6	*2480.00	97.8 AV			1.85 V	295	64.4	33.4
7	2483.50	73.1 PK	74.0	-0.9	1.64 V	137	39.7	33.4
8	2483.50	53.6 AV	54.0	-0.4	1.64 V	137	20.2	33.4
9	4874.00	60.7 PK	74.0	-13.3	1.77 V	72	57.1	3.6
10	4874.00	46.7 AV	54.0	-7.3	1.77 V	72	43.1	3.6
11	4960.00	50.6 PK	74.0	-23.4	2.40 V	97	46.9	3.7
12	4960.00	37.6 AV	54.0	-16.4	2.40 V	97	33.9	3.7
13	*5240.00	124.6 PK			1.66 V	291	85.1	39.5
14	*5240.00	113.8 AV			1.66 V	291	74.3	39.5
15	5350.00	61.8 PK	74.0	-12.2	2.02 V	303	57.9	3.9
16	5350.00	52.0 AV	54.0	-2.0	2.02 V	303	48.1	3.9
17	#10480.00	60.0 PK	74.0	-14.0	1.73 V	241	43.2	16.8
18	#10480.00	47.2 AV	54.0	-6.8	1.73 V	241	30.4	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-APA2-01 Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20) + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 48 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.3 PK	74.0	-15.7	1.47 H	78	25.4	32.9
2	2390.00	47.6 AV	54.0	-6.4	1.47 H	78	14.7	32.9
3	*2405.00	92.0 PK			1.55 H	60	59.0	33.0
4	*2405.00	88.6 AV			1.55 H	60	55.6	33.0
5	*2437.00	111.6 PK			1.46 H	306	78.4	33.2
6	*2437.00	101.5 AV			1.46 H	306	68.3	33.2
7	4810.00	49.8 PK	74.0	-24.2	1.77 H	144	46.2	3.6
8	4810.00	37.1 AV	54.0	-16.9	1.77 H	144	33.5	3.6
9	4874.00	51.7 PK	74.0	-22.3	1.85 H	160	48.1	3.6
10	4874.00	42.6 AV	54.0	-11.4	1.85 H	160	39.0	3.6
11	*5240.00	105.0 PK			1.38 H	287	65.5	39.5
12	*5240.00	94.3 AV			1.38 H	287	54.8	39.5
13	5350.00	59.4 PK	74.0	-14.6	1.49 H	200	55.5	3.9
14	5350.00	49.5 AV	54.0	-4.5	1.49 H	200	45.6	3.9
15	#10480.00	59.7 PK	74.0	-14.3	1.90 H	222	42.9	16.8
16	#10480.00	46.8 AV	54.0	-7.2	1.90 H	222	30.0	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 48 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.8 PK	74.0	-8.2	1.47 V	309	32.9	32.9
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**1.47 V**	**309**	**21.0**	**32.9**
3	*2405.00	104.5 PK			1.40 V	358	71.5	33.0
4	*2405.00	100.6 AV			1.40 V	358	67.6	33.0
5	*2437.00	122.0 PK			2.15 V	18	88.8	33.2
6	*2437.00	111.2 AV			2.15 V	18	78.0	33.2
7	4810.00	50.2 PK	74.0	-23.8	2.05 V	37	46.6	3.6
8	4810.00	36.9 AV	54.0	-17.1	2.05 V	37	33.3	3.6
9	4874.00	61.1 PK	74.0	-12.9	2.19 V	90	57.5	3.6
10	4874.00	49.7 AV	54.0	-4.3	2.19 V	90	46.1	3.6
11	*5240.00	125.1 PK			1.79 V	288	85.6	39.5
12	*5240.00	114.1 AV			1.79 V	288	74.6	39.5
13	5350.00	62.0 PK	74.0	-12.0	2.04 V	300	58.1	3.9
14	5350.00	52.2 AV	54.0	-1.8	2.04 V	300	48.3	3.9
15	#10480.00	60.3 PK	74.0	-13.7	1.70 V	235	43.5	16.8
16	#10480.00	47.4 AV	54.0	-6.6	1.70 V	235	30.6	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-APA2-02 Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20) + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 48 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	112.6 PK			1.69 H	280	79.4	33.2
2	*2437.00	103.5 AV			1.69 H	280	70.3	33.2
3	*2480.00	105.2 PK			1.68 H	269	71.8	33.4
4	*2480.00	100.6 AV			1.68 H	269	67.2	33.4
5	2483.50	61.1 PK	74.0	-12.9	1.29 H	22	27.7	33.4
6	2483.50	50.1 AV	54.0	-3.9	1.29 H	22	16.7	33.4
7	4874.00	62.3 PK	74.0	-11.7	1.19 H	196	58.7	3.6
8	4874.00	49.3 AV	54.0	-4.7	1.19 H	196	45.7	3.6
9	4960.00	50.9 PK	74.0	-23.1	1.34 H	345	47.2	3.7
10	4960.00	39.8 AV	54.0	-14.2	1.34 H	345	36.1	3.7
11	*5240.00	105.1 PK			1.44 H	259	65.6	39.5
12	*5240.00	94.6 AV			1.44 H	259	55.1	39.5
13	5350.00	59.7 PK	74.0	-14.3	1.69 H	249	55.8	3.9
14	5350.00	48.6 AV	54.0	-5.4	1.69 H	249	44.7	3.9
15	#10480.00	62.3 PK	74.0	-11.7	1.80 H	256	45.5	16.8
16	#10480.00	48.9 AV	54.0	-5.1	1.80 H	256	32.1	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 48 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*2437.00	119.4 PK			1.82 V	181	86.2	33.2
2	*2437.00	108.3 AV			1.82 V	181	75.1	33.2
3	*2480.00	93.0 PK			1.99 V	277	59.6	33.4
4	*2480.00	90.0 AV			1.99 V	277	56.6	33.4
5	2483.50	62.4 PK	74.0	-11.6	1.99 V	277	29.0	33.4
6	2483.50	46.8 AV	54.0	-7.2	1.99 V	277	13.4	33.4
7	4874.00	61.9 PK	74.0	-12.1	1.50 V	300	58.3	3.6
8	4874.00	46.5 AV	54.0	-7.5	1.50 V	300	42.9	3.6
9	4960.00	50.8 PK	74.0	-23.2	2.54 V	98	47.1	3.7
10	4960.00	37.7 AV	54.0	-16.3	2.54 V	98	34.0	3.7
11	*5240.00	88.9 PK			1.70 V	120	85.2	3.7
12	*5240.00	79.1 AV			1.70 V	120	75.4	3.7
13	5350.00	63.1 PK	74.0	-10.9	2.07 V	302	59.2	3.9
14	5350.00	51.4 AV	54.0	-2.6	2.07 V	302	47.5	3.9
15	#10480.00	63.4 PK	74.0	-10.6	1.91 V	255	46.6	16.8
16	#10480.00	49.6 AV	54.0	-4.4	1.91 V	255	32.8	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-APA2-02 Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20) + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 48 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.0 PK	74.0	-18.0	1.49 H	52	23.1	32.9
2	2390.00	45.9 AV	54.0	-8.1	1.49 H	52	13.0	32.9
3	*2405.00	92.3 PK			1.49 H	52	59.3	33.0
4	*2405.00	88.2 AV			1.49 H	52	55.2	33.0
5	*2437.00	112.2 PK			1.53 H	299	79.0	33.2
6	*2437.00	102.8 AV			1.53 H	299	69.6	33.2
7	4810.00	50.3 PK	74.0	-23.7	2.32 H	170	46.7	3.6
8	4810.00	37.5 AV	54.0	-16.5	2.32 H	170	33.9	3.6
9	4874.00	61.2 PK	74.0	-12.8	1.79 H	180	57.6	3.6
10	4874.00	48.5 AV	54.0	-5.5	1.79 H	180	44.9	3.6
11	*5240.00	104.9 PK			1.47 H	279	65.4	39.5
12	*5240.00	94.5 AV			1.47 H	279	55.0	39.5
13	5350.00	59.4 PK	74.0	-14.6	1.63 H	247	55.5	3.9
14	5350.00	48.3 AV	54.0	-5.7	1.63 H	247	44.4	3.9
15	#10480.00	62.0 PK	74.0	-12.0	1.83 H	250	45.2	16.8
16	#10480.00	48.8 AV	54.0	-5.2	1.83 H	250	32.0	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 48 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.0 PK	74.0	-15.0	1.36 V	3	26.1	32.9
2	2390.00	46.3 AV	54.0	-7.7	1.36 V	3	13.4	32.9
3	*2405.00	103.7 PK			1.36 V	3	70.7	33.0
4	*2405.00	99.8 AV			1.36 V	3	66.8	33.0
5	*2437.00	119.8 PK			1.88 V	189	86.6	33.2
6	*2437.00	108.6 AV			1.88 V	189	75.4	33.2
7	4810.00	49.9 PK	74.0	-24.1	1.93 V	35	46.3	3.6
8	4810.00	36.9 AV	54.0	-17.1	1.93 V	35	33.3	3.6
9	4874.00	61.1 PK	74.0	-12.9	1.89 V	204	57.5	3.6
10	4874.00	46.2 AV	54.0	-7.8	1.89 V	204	42.6	3.6
11	*5240.00	88.6 PK			1.77 V	110	84.9	3.7
12	*5240.00	78.1 AV			1.77 V	110	74.4	3.7
13	5350.00	62.1 PK	74.0	-11.9	2.05 V	300	58.2	3.9
14	5350.00	50.4 AV	54.0	-3.6	2.05 V	300	46.5	3.9
15	#10480.00	62.4 PK	74.0	-11.6	1.90 V	254	45.6	16.8
16	#10480.00	48.6 AV	54.0	-5.4	1.90 V	254	31.8	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-APA2-02 Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20) + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 48 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.4 PK	74.0	-16.6	1.53 H	39	24.5	32.9
2	2390.00	47.1 AV	54.0	-6.9	1.53 H	39	14.2	32.9
3	*2437.00	111.9 PK			1.62 H	305	78.7	33.2
4	*2437.00	101.4 AV			1.62 H	305	68.2	33.2
5	*2480.00	92.2 PK			1.65 H	325	58.8	33.4
6	*2480.00	88.4 AV			1.65 H	325	55.0	33.4
7	2483.50	59.7 PK	74.0	-14.3	1.49 H	1	26.3	33.4
8	2483.50	49.4 AV	54.0	-4.6	1.49 H	1	16.0	33.4
9	4874.00	51.8 PK	74.0	-22.2	1.81 H	167	48.2	3.6
10	4874.00	42.5 AV	54.0	-11.5	1.81 H	167	38.9	3.6
11	4960.00	45.6 PK	74.0	-28.4	1.91 H	129	41.9	3.7
12	4960.00	33.6 AV	54.0	-20.4	1.91 H	129	29.9	3.7
13	*5240.00	106.4 PK			1.33 H	291	66.9	39.5
14	*5240.00	95.3 AV			1.33 H	291	55.8	39.5
15	5350.00	61.4 PK	74.0	-12.6	1.58 H	205	57.5	3.9
16	5350.00	50.8 AV	54.0	-3.2	1.58 H	205	46.9	3.9
17	#10480.00	61.7 PK	74.0	-12.3	2.02 H	262	44.9	16.8
18	#10480.00	48.2 AV	54.0	-5.8	2.02 H	262	31.4	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 48 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.7 PK	74.0	-6.3	1.41 V	19	34.8	32.9
2	2390.00	52.8 AV	54.0	-1.2	1.41 V	19	19.9	32.9
3	*2437.00	122.0 PK			2.10 V	17	88.8	33.2
4	*2437.00	111.1 AV			2.10 V	17	77.9	33.2
5	*2480.00	102.2 PK			1.82 V	293	68.8	33.4
6	*2480.00	98.2 AV			1.82 V	293	64.8	33.4
7	2483.50	73.2 PK	74.0	-0.8	1.60 V	138	39.8	33.4
8	2483.50	53.7 AV	54.0	-0.3	1.60 V	138	20.3	33.4
9	4874.00	61.0 PK	74.0	-13.0	1.79 V	75	57.4	3.6
10	4874.00	47.1 AV	54.0	-6.9	1.79 V	75	43.5	3.6
11	4960.00	51.6 PK	74.0	-22.4	2.40 V	99	47.9	3.7
12	4960.00	38.6 AV	54.0	-15.4	2.40 V	99	34.9	3.7
13	*5240.00	125.4 PK			1.80 V	293	85.9	39.5
14	*5240.00	114.7 AV			1.80 V	293	75.2	39.5
15	5350.00	62.7 PK	74.0	-11.3	2.08 V	306	58.8	3.9
16	5350.00	52.8 AV	54.0	-1.2	2.08 V	306	48.9	3.9
17	#10480.00	61.6 PK	74.0	-12.4	1.79 V	240	44.8	16.8
18	#10480.00	49.7 AV	54.0	-4.3	1.79 V	240	32.9	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-APA2-02 Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20) + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 48 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.3 PK	74.0	-14.7	1.49 H	76	26.4	32.9
2	2390.00	48.6 AV	54.0	-5.4	1.49 H	76	15.7	32.9
3	*2405.00	92.3 PK			1.55 H	59	59.3	33.0
4	*2405.00	88.8 AV			1.55 H	59	55.8	33.0
5	*2437.00	111.8 PK			1.48 H	309	78.6	33.2
6	*2437.00	101.7 AV			1.48 H	309	68.5	33.2
7	4810.00	50.0 PK	74.0	-24.0	1.75 H	145	46.4	3.6
8	4810.00	37.3 AV	54.0	-16.7	1.75 H	145	33.7	3.6
9	4874.00	52.1 PK	74.0	-21.9	1.85 H	159	48.5	3.6
10	4874.00	42.9 AV	54.0	-11.1	1.85 H	159	39.3	3.6
11	*5240.00	105.4 PK			1.37 H	280	65.9	39.5
12	*5240.00	94.7 AV			1.37 H	280	55.2	39.5
13	5350.00	60.4 PK	74.0	-13.6	1.50 H	201	56.5	3.9
14	5350.00	50.5 AV	54.0	-3.5	1.50 H	201	46.6	3.9
15	#10480.00	60.7 PK	74.0	-13.3	1.92 H	242	43.9	16.8
16	#10480.00	47.2 AV	54.0	-6.8	1.92 H	242	30.4	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 48 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.9 PK	74.0	-8.1	1.47 V	220	33.0	32.9
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**1.47 V**	**220**	**21.0**	**32.9**
3	*2405.00	104.8 PK			1.39 V	359	71.8	33.0
4	*2405.00	100.9 AV			1.39 V	359	67.9	33.0
5	*2437.00	122.2 PK			2.16 V	20	89.0	33.2
6	*2437.00	111.4 AV			2.16 V	20	78.2	33.2
7	4810.00	50.5 PK	74.0	-23.5	2.06 V	40	46.9	3.6
8	4810.00	37.1 AV	54.0	-16.9	2.06 V	40	33.5	3.6
9	4874.00	61.3 PK	74.0	-12.7	2.21 V	93	57.7	3.6
10	4874.00	50.0 AV	54.0	-4.0	2.21 V	93	46.4	3.6
11	*5240.00	125.3 PK			1.82 V	291	85.8	39.5
12	*5240.00	114.3 AV			1.82 V	291	74.8	39.5
13	5350.00	62.4 PK	74.0	-11.6	2.06 V	303	58.5	3.9
14	5350.00	52.5 AV	54.0	-1.5	2.06 V	303	48.6	3.9
15	#10480.00	60.6 PK	74.0	-13.4	1.71 V	239	43.8	16.8
16	#10480.00	47.7 AV	54.0	-6.3	1.71 V	239	30.9	16.8

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-HPAG4A6-01 Ant. + ML-2452-PNA7-01R Ant.

802.11g + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 157 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	121.3 PK			1.25 H	250	88.1	33.2
2	*2437.00	110.9 AV			1.25 H	250	77.7	33.2
3	*2480.00	102.5 PK			1.71 H	21	69.1	33.4
4	*2480.00	97.6 AV			1.71 H	21	64.2	33.4
5	2483.50	60.7 PK	74.0	-13.3	1.53 H	212	27.3	33.4
6	2483.50	47.3 AV	54.0	-6.7	1.53 H	212	13.9	33.4
7	4874.00	60.1 PK	74.0	-13.9	2.20 H	140	56.5	3.6
8	4874.00	51.8 AV	54.0	-2.2	2.20 H	140	48.2	3.6
9	4960.00	47.5 PK	74.0	-26.5	1.88 H	40	43.8	3.7
10	4960.00	37.2 AV	54.0	-16.8	1.88 H	40	33.5	3.7
11	#5606.40	54.0 PK	68.2	-14.2	1.62 H	99	52.3	1.7
12	*5785.00	110.0 PK			1.43 H	38	69.9	40.1
13	*5785.00	100.0 AV			1.43 H	39	59.9	40.1
14	#5927.20	55.2 PK	68.2	-13.0	1.62 H	99	52.6	2.6
15	11570.00	57.5 PK	74.0	-16.5	1.74 H	198	43.2	14.3
16	11570.00	44.9 AV	54.0	-9.1	1.74 H	198	30.6	14.3

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 157 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*2437.00	122.2 PK			1.08 V	266	89.0	33.2
2	*2437.00	111.2 AV			1.08 V	266	78.0	33.2
3	*2480.00	90.2 PK			2.44 V	253	56.8	33.4
4	*2480.00	86.1 AV			2.44 V	253	52.7	33.4
5	2483.50	57.2 PK	74.0	-16.8	2.44 V	253	23.8	33.4
6	2483.50	46.1 AV	54.0	-7.9	2.44 V	253	12.7	33.4
7	4874.00	56.8 PK	74.0	-17.2	2.13 V	123	53.2	3.6
8	4874.00	51.6 AV	54.0	-2.4	2.13 V	123	48.0	3.6
9	4960.00	47.3 PK	74.0	-26.7	1.89 V	25	43.6	3.7
10	4960.00	36.2 AV	54.0	-17.8	1.89 V	25	32.5	3.7
11	#5644.80	54.7 PK	68.2	-13.5	1.75 V	41	53.0	1.7
12	*5785.00	122.2 PK			1.65 V	298	81.7	40.5
13	*5785.00	111.3 AV			1.65 V	298	70.8	40.5
14	#5936.80	54.4 PK	68.2	-13.8	1.75 V	41	51.8	2.6
15	11570.00	58.0 PK	74.0	-16.0	2.08 V	36	39.7	18.3
16	11570.00	48.4 AV	54.0	-5.6	2.08 V	36	30.1	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-HPAG4A6-01 Ant. + ML-2452-PNA7-01R Ant.

802.11g + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 157 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.4 PK	74.0	-16.6	1.00 H	55	24.5	32.9
2	2390.00	46.5 AV	54.0	-7.5	1.00 H	55	13.6	32.9
3	*2405.00	93.5 PK			1.00 H	55	60.5	33.0
4	*2405.00	89.5 AV			1.00 H	55	56.5	33.0
5	*2437.00	117.7 PK			1.95 H	233	84.5	33.2
6	*2437.00	107.7 AV			1.95 H	233	74.5	33.2
7	4810.00	49.5 PK	74.0	-24.5	2.34 H	163	45.9	3.6
8	4810.00	37.4 AV	54.0	-16.6	2.34 H	163	33.8	3.6
9	4874.00	47.3 PK	74.0	-26.7	1.88 H	177	43.7	3.6
10	4874.00	40.4 AV	54.0	-13.6	1.88 H	177	36.8	3.6
11	#5606.40	54.0 PK	68.2	-14.2	1.59 H	94	52.3	1.7
12	*5785.00	110.2 PK			1.59 H	94	70.1	40.1
13	*5785.00	100.1 AV			1.59 H	94	60.0	40.1
14	#5961.60	55.1 PK	68.2	-13.1	1.59 H	94	52.5	2.6
15	11570.00	57.9 PK	74.0	-16.1	1.67 H	223	43.6	14.3
16	11570.00	45.2 AV	54.0	-8.8	1.67 H	223	30.9	14.3

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 157 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.2 PK	74.0	-14.8	1.33 V	12	26.3	32.9
2	2390.00	45.8 AV	54.0	-8.2	1.33 V	12	12.9	32.9
3	*2405.00	104.5 PK			1.33 V	12	71.5	33.0
4	*2405.00	100.2 AV			1.33 V	12	67.2	33.0
5	*2437.00	121.3 PK			1.25 V	250	88.1	33.2
6	*2437.00	110.9 AV			1.25 V	250	77.7	33.2
7	4810.00	50.4 PK	74.0	-23.6	2.08 V	30	46.8	3.6
8	4810.00	37.4 AV	54.0	-16.6	2.08 V	30	33.8	3.6
9	4874.00	60.1 PK	74.0	-13.9	2.20 V	140	56.5	3.6
10	4874.00	51.8 AV	54.0	-2.2	2.20 V	140	48.2	3.6
11	#5644.80	54.7 PK	68.2	-13.5	1.76 V	44	53.0	1.7
12	*5785.00	122.0 PK			1.76 V	44	81.9	40.1
13	*5785.00	111.0 AV			1.76 V	44	70.9	40.1
14	#5934.40	56.0 PK	68.2	-12.2	1.76 V	44	53.4	2.6
15	11570.00	56.4 PK	74.0	-17.6	2.09 V	40	42.1	14.3
16	11570.00	43.6 AV	54.0	-10.4	2.09 V	40	29.3	14.3

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-HPAG4A6-01 Ant. + ML-2499-HPA8-01 Ant.

802.11g + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 157 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	102.3 PK			1.66 H	43	69.1	33.2
2	*2437.00	91.9 AV			1.66 H	43	58.7	33.2
3	*2480.00	89.5 PK			2.20 H	124	56.1	33.4
4	*2480.00	85.7 AV			2.20 H	124	52.3	33.4
5	2483.50	59.6 PK	74.0	-14.4	1.12 H	333	26.2	33.4
6	2483.50	45.6 AV	54.0	-8.4	1.12 H	333	12.2	33.4
7	4874.00	55.0 PK	74.0	-19.0	2.21 H	180	51.4	3.6
8	4874.00	40.7 AV	54.0	-13.3	2.21 H	180	37.1	3.6
9	4960.00	45.8 PK	74.0	-28.2	1.98 H	177	42.1	3.7
10	4960.00	32.3 AV	54.0	-21.7	1.98 H	177	28.6	3.7
11	#5644.80	54.8 PK	68.2	-13.4	1.61 H	205	50.5	4.3
12	*5785.00	109.1 PK			1.61 H	205	68.6	40.5
13	*5785.00	99.3 AV			1.61 H	205	58.8	40.5
14	#5975.20	56.8 PK	68.2	-11.4	1.61 H	205	51.6	5.2
15	11570.00	60.5 PK	74.0	-13.5	1.77 H	201	42.2	18.3
16	11570.00	47.8 AV	54.0	-6.2	1.77 H	201	29.5	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 157 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*2437.00	119.4 PK			1.47 V	318	86.2	33.2
2	*2437.00	108.6 AV			1.47 V	318	75.4	33.2
3	*2480.00	101.4 PK			1.67 V	201	68.0	33.4
4	*2480.00	97.4 AV			1.67 V	201	64.0	33.4
5	2483.50	70.4 PK	74.0	-3.6	1.70 V	131	37.0	33.4
6	2483.50	51.0 AV	54.0	-3.0	1.70 V	131	17.6	33.4
7	4874.00	66.6 PK	74.0	-7.4	1.68 V	93	63.0	3.6
8	4874.00	52.7 AV	54.0	-1.3	1.68 V	93	49.1	3.6
9	4960.00	44.7 PK	74.0	-29.3	1.89 V	332	41.0	3.7
10	4960.00	32.7 AV	54.0	-21.3	1.89 V	332	29.0	3.7
11	#5641.60	55.1 PK	68.2	-13.1	1.81 V	320	50.8	4.3
12	*5785.00	122.9 PK			1.81 V	320	82.4	40.5
13	*5785.00	112.3 AV			1.81 V	320	71.8	40.5
14	#5927.20	56.6 PK	68.2	-11.6	1.81 V	320	51.7	4.9
15	11570.00	61.9 PK	74.0	-12.1	2.09 V	50	43.6	18.3
16	11570.00	48.6 AV	54.0	-5.4	2.09 V	50	30.3	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-HPAG4A6-01 Ant. + ML-2499-HPA8-01 Ant.

802.11g + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 157 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	55.0 PK	74.0	-19.0	1.54 H	333	22.1	32.9
2	2390.00	46.0 AV	54.0	-8.0	1.54 H	333	13.1	32.9
3	*2405.00	99.6 PK			1.44 H	258	66.6	33.0
4	*2405.00	94.5 AV			1.44 H	258	61.5	33.0
5	*2437.00	117.8 PK			2.20 H	230	84.6	33.2
6	*2437.00	107.7 AV			2.20 H	230	74.5	33.2
7	4810.00	43.7 PK	74.0	-30.3	1.68 H	302	40.1	3.6
8	4810.00	30.7 AV	54.0	-23.3	1.68 H	302	27.1	3.6
9	4874.00	65.7 PK	74.0	-8.3	1.54 H	222	62.1	3.6
10	4874.00	51.1 AV	54.0	-2.9	1.54 H	222	47.5	3.6
11	#5640.00	55.2 PK	68.2	-13.0	1.59 H	202	50.9	4.3
12	*5785.00	109.1 PK			1.59 H	202	68.6	40.5
13	*5785.00	100.3 AV			1.59 H	202	59.8	40.5
14	#5941.60	56.6 PK	68.2	-11.6	1.59 H	202	51.6	5.0
15	11570.00	61.6 PK	74.0	-12.4	1.79 H	200	43.3	18.3
16	11570.00	47.0 AV	54.0	-7.0	1.79 H	200	28.7	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 157 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.9 PK	74.0	-13.1	1.77 V	301	28.0	32.9
2	2390.00	52.2 AV	54.0	-1.8	1.77 V	301	19.3	32.9
3	*2405.00	102.2 PK			1.24 V	245	69.2	33.0
4	*2405.00	97.9 AV			1.24 V	245	64.9	33.0
5	*2437.00	119.8 PK			1.45 V	314	86.6	33.2
6	*2437.00	109.4 AV			1.45 V	314	76.2	33.2
7	4810.00	46.2 PK	74.0	-27.8	1.66 V	322	42.6	3.6
8	4810.00	32.7 AV	54.0	-21.3	1.66 V	322	29.1	3.6
9	4874.00	66.6 PK	74.0	-7.4	1.30 V	298	63.0	3.6
10	4874.00	52.9 AV	54.0	-1.1	1.30 V	298	49.3	3.6
11	#5645.60	55.9 PK	68.2	-12.3	1.78 V	319	51.6	4.3
12	*5785.00	123.9 PK			1.78 V	319	83.4	40.5
13	*5785.00	113.3 AV			1.78 V	319	72.8	40.5
14	#5946.40	57.7 PK	68.2	-10.5	1.78 V	319	52.6	5.1
15	11570.00	62.9 PK	74.0	-11.1	2.12 V	52	44.6	18.3
16	11570.00	49.6 AV	54.0	-4.4	2.12 V	52	31.3	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-HPA6M4-S36 Ant. + ML-2452-PNA7-01R Ant.

802.11g + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 157 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	119.1 PK			1.87 H	236	85.9	33.2
2	*2437.00	110.2 AV			1.87 H	236	77.0	33.2
3	*2480.00	105.4 PK			1.46 H	357	72.0	33.4
4	*2480.00	100.0 AV			1.46 H	357	66.6	33.4
5	2483.50	62.0 PK	74.0	-12.0	1.40 H	357	28.6	33.4
6	2483.50	50.7 AV	54.0	-3.3	1.40 H	357	17.3	33.4
7	4874.00	51.9 PK	74.0	-22.1	1.77 H	70	48.3	3.6
8	4874.00	39.2 AV	54.0	-14.8	1.77 H	70	35.6	3.6
9	4960.00	51.7 PK	74.0	-22.3	1.53 H	40	48.0	3.7
10	4960.00	39.6 AV	54.0	-14.4	1.53 H	40	35.9	3.7
11	#5618.40	55.7 PK	68.2	-12.5	1.48 H	203	51.4	4.3
12	*5785.00	109.2 PK			1.48 H	203	68.7	40.5
13	*5785.00	99.2 AV			1.48 H	203	58.7	40.5
14	#5944.80	58.0 PK	68.2	-10.2	1.48 H	203	52.9	5.1
15	11570.00	61.3 PK	74.0	-12.7	1.28 H	280	43.0	18.3
16	11570.00	48.3 AV	54.0	-5.7	1.28 H	280	30.0	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 157 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*2437.00	123.3 PK			1.89 V	231	90.1	33.2
2	*2437.00	113.6 AV			1.89 V	231	80.4	33.2
3	*2480.00	93.0 PK			2.02 V	277	59.6	33.4
4	*2480.00	91.0 AV			2.02 V	277	57.6	33.4
5	2483.50	60.9 PK	74.0	-13.1	1.89 V	231	27.5	33.4
6	2483.50	46.9 AV	54.0	-7.1	1.89 V	231	13.5	33.4
7	4874.00	56.9 PK	74.0	-17.1	1.77 V	182	53.3	3.6
8	4874.00	45.2 AV	54.0	-8.8	1.77 V	182	41.6	3.6
9	4960.00	49.5 PK	74.0	-24.5	2.44 V	89	45.8	3.7
10	4960.00	37.3 AV	54.0	-16.7	2.44 V	89	33.6	3.7
11	#5602.40	55.5 PK	68.2	-12.7	1.87 V	206	51.3	4.2
12	*5785.00	121.9 PK			1.87 V	206	81.4	40.5
13	*5785.00	112.0 AV			1.87 V	206	71.5	40.5
14	#5948.00	56.0 PK	68.2	-12.2	1.87 V	206	50.9	5.1
15	11570.00	62.2 PK	74.0	-11.8	2.00 V	186	43.9	18.3
16	11570.00	49.2 AV	54.0	-4.8	2.00 V	186	30.9	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-HPA6M4-S36 Ant. + ML-2452-PNA7-01R Ant.

802.11g + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 157 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.7 PK	74.0	-13.3	1.39 H	9	27.8	32.9
2	2390.00	49.7 AV	54.0	-4.3	1.39 H	9	16.8	32.9
3	*2405.00	104.9 PK			1.39 H	9	71.9	33.0
4	*2405.00	100.1 AV			1.39 H	9	67.1	33.0
5	*2437.00	118.1 PK			1.85 H	226	84.9	33.2
6	*2437.00	108.4 AV			1.85 H	226	75.2	33.2
7	4810.00	49.4 PK	74.0	-24.6	1.39 H	34	45.8	3.6
8	4810.00	38.0 AV	54.0	-16.0	1.39 H	34	34.4	3.6
9	4874.00	51.2 PK	74.0	-22.8	1.82 H	170	47.6	3.6
10	4874.00	38.1 AV	54.0	-15.9	1.82 H	170	34.5	3.6
11	#5650.40	55.5 PK	68.5	-13.0	1.53 H	200	51.2	4.3
12	*5785.00	109.5 PK			1.53 H	200	69.0	40.5
13	*5785.00	99.4 AV			1.53 H	200	58.9	40.5
14	#5992.00	56.5 PK	68.2	-11.7	1.53 H	200	51.3	5.2
15	11570.00	61.0 PK	74.0	-13.0	1.30 H	320	42.7	18.3
16	11570.00	48.2 AV	54.0	-5.8	1.30 H	320	29.9	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 157 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	58.2 PK	74.0	-15.8	1.95 V	266	25.3	32.9
2	2390.00	46.9 AV	54.0	-7.1	1.95 V	266	14.0	32.9
3	*2405.00	93.3 PK			1.95 V	266	60.3	33.0
4	*2405.00	90.1 AV			1.95 V	266	57.1	33.0
5	*2437.00	123.2 PK			1.93 V	235	90.0	33.2
6	*2437.00	113.3 AV			1.93 V	235	80.1	33.2
7	4810.00	50.7 PK	74.0	-23.3	2.33 V	84	47.1	3.6
8	4810.00	37.8 AV	54.0	-16.2	2.33 V	84	34.2	3.6
9	4874.00	56.5 PK	74.0	-17.5	1.80 V	188	52.9	3.6
10	4874.00	44.7 AV	54.0	-9.3	1.80 V	188	41.1	3.6
11	#5618.40	56.1 PK	68.2	-12.1	1.85 V	211	51.8	4.3
12	*5785.00	109.8 PK			1.85 V	211	69.3	40.5
13	*5785.00	98.9 AV			1.85 V	211	58.4	40.5
14	#5996.80	56.4 PK	68.2	-11.8	1.85 V	211	51.2	5.2
15	11570.00	62.1 PK	74.0	-11.9	1.71 V	170	43.8	18.3
16	11570.00	48.9 AV	54.0	-5.1	1.71 V	170	30.6	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-HPA6M4-S36 Ant. + ML-2499-HPA8-01 Ant.

802.11g + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 157 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	118.1 PK			1.92 H	244	84.9	33.2
2	*2437.00	108.4 AV			1.92 H	244	75.2	33.2
3	*2480.00	91.0 PK			1.55 H	55	57.6	33.4
4	*2480.00	87.0 AV			1.55 H	55	53.6	33.4
5	2483.50	60.8 PK	74.0	-13.2	1.55 H	55	27.4	33.4
6	2483.50	45.9 AV	54.0	-8.1	1.55 H	55	12.5	33.4
7	4874.00	51.1 PK	74.0	-22.9	1.77 H	181	47.5	3.6
8	4874.00	37.5 AV	54.0	-16.5	1.77 H	181	33.9	3.6
9	4960.00	47.0 PK	74.0	-27.0	1.67 H	126	43.3	3.7
10	4960.00	34.5 AV	54.0	-19.5	1.67 H	126	30.8	3.7
11	#5650.40	55.0 PK	68.5	-13.5	1.49 H	205	50.7	4.3
12	*5785.00	109.3 PK			1.49 H	205	68.8	40.5
13	*5785.00	99.2 AV			1.49 H	205	58.7	40.5
14	#5992.00	56.1 PK	68.2	-12.1	1.49 H	205	50.9	5.2
15	11570.00	60.9 PK	74.0	-13.1	1.34 H	311	42.6	18.3
16	11570.00	48.1 AV	54.0	-5.9	1.34 H	311	29.8	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 157 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*2437.00	122.0 PK			1.43 V	258	88.8	33.2
2	*2437.00	111.9 AV			1.43 V	258	78.7	33.2
3	*2480.00	103.3 PK			1.59 V	350	69.9	33.4
4	*2480.00	98.4 AV			1.59 V	350	65.0	33.4
5	2483.50	70.9 PK	74.0	-3.1	1.59 V	350	37.5	33.4
6	2483.50	47.3 AV	54.0	-6.7	1.59 V	350	13.9	33.4
7	4874.00	52.5 PK	74.0	-21.5	2.12 V	136	48.9	3.6
8	4874.00	43.2 AV	54.0	-10.8	2.12 V	136	39.6	3.6
9	4960.00	48.3 PK	74.0	-25.7	1.96 V	244	44.6	3.7
10	4960.00	35.7 AV	54.0	-18.3	1.96 V	244	32.0	3.7
11	#5624.80	56.2 PK	68.2	-12.0	1.88 V	205	51.9	4.3
12	*5785.00	121.4 PK			1.88 V	205	80.9	40.5
13	*5785.00	111.2 AV			1.88 V	205	70.7	40.5
14	#5959.20	57.8 PK	68.2	-10.4	1.88 V	205	52.7	5.1
15	11570.00	61.8 PK	74.0	-12.2	1.80 V	178	43.5	18.3
16	11570.00	48.6 AV	54.0	-5.4	1.80 V	178	30.3	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-HPA6M4-S36 Ant. + ML-2499-HPA8-01 Ant.

802.11g + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 157 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	55.9 PK	74.0	-18.1	1.48 H	50	23.0	32.9
2	2390.00	45.8 AV	54.0	-8.2	1.48 H	50	12.9	32.9
3	*2405.00	91.4 PK			1.50 H	50	58.4	33.0
4	*2405.00	87.3 AV			1.50 H	50	54.3	33.0
5	*2437.00	118.5 PK			1.59 H	246	85.3	33.2
6	*2437.00	108.7 AV			1.59 H	246	75.5	33.2
7	4810.00	49.6 PK	74.0	-24.4	2.20 H	164	46.0	3.6
8	4810.00	36.4 AV	54.0	-17.6	2.20 H	164	32.8	3.6
9	4874.00	51.4 PK	74.0	-22.6	1.65 H	199	47.8	3.6
10	4874.00	38.5 AV	54.0	-15.5	1.65 H	199	34.9	3.6
11	#5624.00	55.1 PK	68.2	-13.1	1.50 H	206	50.8	4.3
12	*5785.00	109.3 PK			1.50 H	206	68.8	40.5
13	*5785.00	99.1 AV			1.50 H	206	58.6	40.5
14	#5965.60	56.4 PK	68.2	-11.8	1.50 H	206	51.2	5.2
15	11570.00	61.1 PK	74.0	-12.9	1.33 H	301	42.8	18.3
16	11570.00	48.0 AV	54.0	-6.0	1.33 H	301	29.7	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 157 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.1 PK	74.0	-14.9	1.36 V	0	26.2	32.9
2	2390.00	46.4 AV	54.0	-7.6	1.36 V	0	13.5	32.9
3	*2405.00	103.8 PK			1.36 V	0	70.8	33.0
4	*2405.00	100.0 AV			1.36 V	0	67.0	33.0
5	*2437.00	122.5 PK			1.98 V	241	89.3	33.2
6	*2437.00	112.7 AV			1.98 V	241	79.5	33.2
7	4810.00	50.6 PK	74.0	-23.4	2.02 V	40	47.0	3.6
8	4810.00	36.9 AV	54.0	-17.1	2.02 V	40	33.3	3.6
9	4874.00	56.4 PK	74.0	-17.6	1.77 V	184	52.8	3.6
10	4874.00	44.5 AV	54.0	-9.5	1.77 V	184	40.9	3.6
11	#5635.20	57.2 PK	68.2	-11.0	1.90 V	208	52.9	4.3
12	*5785.00	121.5 PK			1.90 V	208	81.0	40.5
13	*5785.00	111.4 AV			1.90 V	208	70.9	40.5
14	#5929.60	57.4 PK	68.2	-10.8	1.90 V	207	52.4	5.0
15	11570.00	61.9 PK	74.0	-12.1	1.88 V	175	43.6	18.3
16	11570.00	48.9 AV	54.0	-5.1	1.88 V	175	30.6	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-PNL9M3-036 Ant. + ML-2452-PNA7-01R Ant.

802.11g + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 40 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2352.00	62.9 PK	74.0	-11.1	1.80 H	100	29.4	33.5
2	2352.00	53.7 AV	54.0	-0.3	1.80 H	100	20.2	33.5
3	*2437.00	120.7 PK			1.48 H	355	86.7	34.0
4	*2437.00	111.3 AV			1.48 H	355	77.3	34.0
5	*2480.00	94.2 PK			1.65 H	56	60.0	34.2
6	*2480.00	90.1 AV			1.65 H	56	55.9	34.2
7	2483.50	59.8 PK	74.0	-14.2	1.65 H	56	25.6	34.2
8	2483.50	48.6 AV	54.0	-5.4	1.65 H	56	14.4	34.2
9	4874.00	54.8 PK	74.0	-19.2	1.11 H	53	51.8	3.0
10	4874.00	40.7 AV	54.0	-13.3	1.11 H	53	37.7	3.0
11	4960.00	49.0 PK	74.0	-25.0	1.80 H	120	45.9	3.1
12	4960.00	36.6 AV	54.0	-17.4	1.80 H	120	33.5	3.1
13	*5200.00	122.6 PK			1.25 H	345	83.1	39.5
14	*5200.00	112.0 AV			1.25 H	345	72.5	39.5
15	#10400.00	61.0 PK	74.0	-13.0	1.04 H	248	45.4	15.6
16	#10400.00	47.5 AV	54.0	-6.5	1.04 H	248	31.9	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 40 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*2437.00	121.6 PK			1.33 V	54	87.6	34.0
2	*2437.00	111.3 AV			1.33 V	54	77.3	34.0
3	*2480.00	105.7 PK			1.49 V	0	71.5	34.2
4	*2480.00	100.1 AV			1.49 V	0	65.9	34.2
5	2483.50	60.4 PK	74.0	-13.6	1.49 V	0	26.2	34.2
6	2483.50	49.0 AV	54.0	-5.0	1.49 V	0	14.8	34.2
7	4874.00	51.9 PK	74.0	-22.1	1.50 V	34	48.9	3.0
8	4874.00	39.1 AV	54.0	-14.9	1.50 V	34	36.1	3.0
9	4960.00	49.6 PK	74.0	-24.4	1.96 V	220	46.5	3.1
10	4960.00	37.4 AV	54.0	-16.6	1.96 V	220	34.3	3.1
11	*5200.00	124.4 PK			1.10 V	348	84.9	39.5
12	*5200.00	114.0 AV			1.10 V	348	74.5	39.5
13	#10400.00	62.6 PK	74.0	-11.4	1.60 V	238	47.0	15.6
14	#10400.00	48.5 AV	54.0	-5.5	1.60 V	238	32.9	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-PNL9M3-036 Ant. + ML-2452-PNA7-01R Ant.

802.11g + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 40 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2352.00	61.2 PK	74.0	-12.8	1.76 H	5	28.5	32.7
2	2352.00	53.0 AV	54.0	-1.0	1.76 H	5	20.3	32.7
3	2390.00	57.8 PK	74.0	-16.2	1.45 H	50	24.9	32.9
4	2390.00	47.4 AV	54.0	-6.6	1.45 H	50	14.5	32.9
5	*2405.00	93.8 PK			1.50 H	50	60.8	33.0
6	*2405.00	88.8 AV			1.50 H	50	55.8	33.0
7	*2437.00	118.7 PK			1.57 H	350	85.5	33.2
8	*2437.00	108.7 AV			1.57 H	350	75.5	33.2
9	4810.00	51.3 PK	74.0	-22.7	2.34 H	158	47.7	3.6
10	4810.00	40.1 AV	54.0	-13.9	2.34 H	159	36.5	3.6
11	4874.00	52.3 PK	74.0	-21.7	1.25 H	324	48.7	3.6
12	4874.00	39.0 AV	54.0	-15.0	1.25 H	324	35.4	3.6
13	*5200.00	123.6 PK			1.28 H	348	84.1	39.5
14	*5200.00	113.0 AV			1.28 H	348	73.5	39.5
15	#10400.00	61.4 PK	74.0	-12.6	1.14 H	250	45.8	15.6
16	#10400.00	48.5 AV	54.0	-5.5	1.14 H	250	32.9	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 40 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	60.8 PK	74.0	-13.2	1.36 V	27	27.9	32.9
2	2390.00	48.1 AV	54.0	-5.9	1.36 V	27	15.2	32.9
3	*2405.00	102.9 PK			1.25 V	359	69.9	33.0
4	*2405.00	99.2 AV			1.25 V	359	66.2	33.0
5	*2437.00	120.9 PK			1.50 V	0	87.7	33.2
6	*2437.00	110.4 AV			1.50 V	0	77.2	33.2
7	4810.00	47.4 PK	74.0	-26.6	1.94 V	5	43.8	3.6
8	4810.00	35.3 AV	54.0	-18.7	1.94 V	5	31.7	3.6
9	4874.00	53.9 PK	74.0	-20.1	1.70 V	139	50.3	3.6
10	4874.00	41.8 AV	54.0	-12.2	1.70 V	139	38.2	3.6
11	*5200.00	125.4 PK			1.20 V	18	85.9	39.5
12	*5200.00	115.0 AV			1.20 V	18	75.5	39.5
13	#10400.00	63.1 PK	74.0	-10.9	1.59 V	230	47.5	15.6
14	#10400.00	49.5 AV	54.0	-4.5	1.59 V	230	33.9	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-PNL9M3-036 Ant. + ML-2499-HPA8-01 Ant.

802.11g + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 40 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2352.00	61.3 PK	74.0	-12.7	1.78 H	1	27.8	33.5
2	2352.00	53.6 AV	54.0	-0.4	1.78 H	1	20.1	33.5
3	*2437.00	119.3 PK			1.62 H	355	85.3	34.0
4	*2437.00	108.9 AV			1.62 H	355	74.9	34.0
5	*2480.00	94.5 PK			1.55 H	50	60.3	34.2
6	*2480.00	89.4 AV			1.55 H	50	55.2	34.2
7	2483.50	59.1 PK	74.0	-14.9	1.55 H	50	24.9	34.2
8	2483.50	48.4 AV	54.0	-5.6	1.55 H	50	14.2	34.2
9	4874.00	51.6 PK	74.0	-22.4	1.00 H	6	48.6	3.0
10	4874.00	38.6 AV	54.0	-15.4	1.00 H	6	35.6	3.0
11	4960.00	50.1 PK	74.0	-23.9	2.20 H	147	47.0	3.1
12	4960.00	36.9 AV	54.0	-17.1	2.20 H	147	33.8	3.1
13	*5200.00	121.6 PK			1.22 H	342	82.1	39.5
14	*5200.00	111.0 AV			1.22 H	342	71.5	39.5
15	#10400.00	60.0 PK	74.0	-14.0	1.01 H	251	44.4	15.6
16	#10400.00	46.5 AV	54.0	-7.5	1.01 H	251	30.9	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 40 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*2437.00	121.2 PK			1.20 V	358	87.2	34.0
2	*2437.00	110.7 AV			1.20 V	358	76.7	34.0
3	*2480.00	106.0 PK			1.46 V	17	71.8	34.2
4	*2480.00	100.8 AV			1.46 V	17	66.6	34.2
5	2483.50	62.3 PK	74.0	-11.7	1.46 V	17	28.1	34.2
6	2483.50	50.2 AV	54.0	-3.8	1.46 V	17	16.0	34.2
7	4874.00	53.2 PK	74.0	-20.8	1.20 V	45	50.2	3.0
8	4874.00	40.2 AV	54.0	-13.8	1.20 V	45	37.2	3.0
9	4960.00	51.1 PK	74.0	-22.9	1.50 V	339	48.0	3.1
10	4960.00	38.4 AV	54.0	-15.6	1.50 V	339	35.3	3.1
11	*5200.00	124.0 PK			1.06 V	346	84.5	39.5
12	*5200.00	113.5 AV			1.06 V	346	74.0	39.5
13	#10400.00	62.5 PK	74.0	-11.5	1.58 V	236	46.9	15.6
14	#10400.00	48.0 AV	54.0	-6.0	1.58 V	236	32.4	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-PNL9M3-036 Ant. + ML-2499-HPA8-01 Ant.

802.11g + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 40 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2352.00	60.2 PK	74.0	-13.8	1.75 H	0	27.5	32.7
2	2352.00	52.7 AV	54.0	-1.3	1.75 H	0	20.0	32.7
3	2390.00	56.8 PK	74.0	-17.2	1.48 H	48	23.9	32.9
4	2390.00	45.4 AV	54.0	-8.6	1.48 H	48	12.5	32.9
5	*2405.00	93.0 PK			1.48 H	48	60.0	33.0
6	*2405.00	87.8 AV			1.48 H	48	54.8	33.0
7	*2437.00	118.0 PK			1.59 H	354	84.8	33.2
8	*2437.00	107.7 AV			1.59 H	354	74.5	33.2
9	4810.00	50.3 PK	74.0	-23.7	2.32 H	157	46.7	3.6
10	4810.00	37.1 AV	54.0	-16.9	2.32 H	157	33.5	3.6
11	4874.00	52.0 PK	74.0	-22.0	1.05 H	354	48.4	3.6
12	4874.00	38.5 AV	54.0	-15.5	1.05 H	354	34.9	3.6
13	*5200.00	120.6 PK			1.20 H	340	81.1	39.5
14	*5200.00	110.0 AV			1.20 H	340	70.5	39.5
15	#10400.00	59.0 PK	74.0	-15.0	1.00 H	250	43.4	15.6
16	#10400.00	45.5 AV	54.0	-8.5	1.00 H	250	29.9	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 40 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.8 PK	74.0	-16.2	1.33 V	359	24.9	32.9
2	2390.00	46.1 AV	54.0	-7.9	1.33 V	359	13.2	32.9
3	*2405.00	102.7 PK			1.35 V	359	69.7	33.0
4	*2405.00	98.8 AV			1.35 V	359	65.8	33.0
5	*2437.00	120.0 PK			1.30 V	0	86.8	33.2
6	*2437.00	109.7 AV			1.30 V	0	76.5	33.2
7	4810.00	47.0 PK	74.0	-27.0	2.00 V	25	43.4	3.6
8	4810.00	33.3 AV	54.0	-20.7	2.00 V	25	29.7	3.6
9	4874.00	53.2 PK	74.0	-20.8	1.30 V	39	49.6	3.6
10	4874.00	40.1 AV	54.0	-13.9	1.30 V	39	36.5	3.6
11	*5200.00	123.0 PK			1.05 V	345	83.5	39.5
12	*5200.00	112.5 AV			1.05 V	345	73.0	39.5
13	#10400.00	61.5 PK	74.0	-12.5	1.55 V	233	45.9	15.6
14	#10400.00	47.0 AV	54.0	-7.0	1.55 V	233	31.4	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-PNA7-01R Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20) + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 149 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	59.1 PK	74.0	-14.9	1.63 H	9	26.4	32.7
2	2351.00	50.7 AV	54.0	-3.3	1.63 H	9	18.0	32.7
3	*2437.00	124.0 PK			1.67 H	359	90.8	33.2
4	*2437.00	113.4 AV			1.67 H	359	80.2	33.2
5	*2480.00	106.2 PK			1.39 H	8	72.8	33.4
6	*2480.00	102.3 AV			1.39 H	8	68.9	33.4
7	2483.50	60.6 PK	74.0	-13.4	1.55 H	30	27.2	33.4
8	2483.50	51.3 AV	54.0	-2.7	1.55 H	30	17.9	33.4
9	4874.00	65.9 PK	74.0	-8.1	2.00 H	79	62.3	3.6
10	4874.00	51.9 AV	54.0	-2.1	2.00 H	79	48.3	3.6
11	4960.00	52.0 PK	74.0	-22.0	1.44 H	344	48.3	3.7
12	4960.00	40.0 AV	54.0	-14.0	1.44 H	344	36.3	3.7
13	#5637.60	62.1 PK	68.2	-6.1	1.71 H	351	57.8	4.3
14	*5745.00	124.2 PK			1.71 H	351	83.8	40.4
15	*5745.00	114.4 AV			1.71 H	351	74.0	40.4
16	#5968.00	62.0 PK	68.2	-6.2	1.71 H	351	56.8	5.2
17	11490.00	61.6 PK	74.0	-12.4	1.70 H	288	43.4	18.2
18	11490.00	48.8 AV	54.0	-5.2	1.70 H	288	30.6	18.2

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 149 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	2351.00	59.0 PK	74.0	-15.0	1.47 V	13	26.3	32.7
2	2351.00	47.8 AV	54.0	-6.2	1.47 V	13	15.1	32.7
3	*2437.00	112.8 PK			3.05 V	343	79.6	33.2
4	*2437.00	102.4 AV			3.05 V	343	69.2	33.2
5	*2480.00	93.2 PK			2.00 V	278	59.8	33.4
6	*2480.00	89.4 AV			2.00 V	278	56.0	33.4
7	2483.50	57.5 PK	74.0	-16.5	2.00 V	278	24.1	33.4
8	2483.50	46.7 AV	54.0	-7.3	2.00 V	278	13.3	33.4
9	4874.00	60.5 PK	74.0	-13.5	2.69 V	38	56.9	3.6
10	4874.00	46.3 AV	54.0	-7.7	2.69 V	38	42.7	3.6
11	4960.00	50.1 PK	74.0	-23.9	2.40 V	99	46.4	3.7
12	4960.00	36.7 AV	54.0	-17.3	2.40 V	99	33.0	3.7
13	#5628.80	55.1 PK	68.2	-13.1	3.03 V	19	50.8	4.3
14	*5745.00	113.2 PK			3.03 V	19	72.8	40.4
15	*5745.00	102.1 AV			3.03 V	19	61.7	40.4
16	#5952.80	56.6 PK	68.2	-11.6	3.03 V	19	51.5	5.1
17	11490.00	60.0 PK	74.0	-14.0	2.78 V	105	41.8	18.2
18	11490.00	47.2 AV	54.0	-6.8	2.78 V	105	29.0	18.2

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-PNA7-01R Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20) + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 149 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	58.9 PK	74.0	-15.1	1.61 H	4	26.2	32.7
2	2351.00	50.5 AV	54.0	-3.5	1.61 H	4	17.8	32.7
3	2390.00	57.5 PK	74.0	-16.5	1.56 H	0	24.6	32.9
4	2390.00	52.0 AV	54.0	-2.0	1.56 H	0	19.1	32.9
5	*2405.00	103.7 PK			1.58 H	0	70.7	33.0
6	*2405.00	99.7 AV			1.58 H	0	66.7	33.0
7	*2437.00	123.7 PK			1.65 H	358	90.5	33.2
8	*2437.00	113.1 AV			1.65 H	358	79.9	33.2
9	4810.00	49.7 PK	74.0	-24.3	2.08 H	123	46.1	3.6
10	4810.00	36.9 AV	54.0	-17.1	2.08 H	123	33.3	3.6
11	4874.00	65.5 PK	74.0	-8.5	2.00 H	77	61.9	3.6
12	4874.00	51.4 AV	54.0	-2.6	2.00 H	77	47.8	3.6
1	#5641.60	62.1 PK	68.2	-6.1	1.36 H	359	57.8	4.3
2	*5745.00	124.3 PK			1.36 H	359	83.9	40.4
3	*5745.00	113.1 AV			1.36 H	359	72.7	40.4
4	#5935.20	63.1 PK	68.2	-5.1	1.36 H	359	58.1	5.0
5	11490.00	61.3 PK	74.0	-12.7	1.53 H	299	43.1	18.2
6	11490.00	48.5 AV	54.0	-5.5	1.53 H	299	30.3	18.2

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 149 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	2351.00	56.9 PK	74.0	-17.1	1.49 V	3	26.1	30.8
2	2351.00	45.2 AV	54.0	-8.8	1.49 V	3	14.4	30.8
3	2390.00	55.8 PK	74.0	-18.2	1.69 V	340	24.8	31.0
4	2390.00	45.2 AV	54.0	-8.8	1.69 V	340	14.2	31.0
5	*2405.00	102.1 PK			1.40 V	0	70.9	31.2
6	*2405.00	98.3 AV			1.40 V	0	67.1	31.2
7	*2437.00	110.6 PK			3.49 V	333	79.3	31.3
8	*2437.00	100.2 AV			3.49 V	333	68.9	31.3
9	4810.00	46.4 PK	74.0	-27.6	2.11 V	33	46.0	0.4
10	4810.00	33.0 AV	54.0	-21.0	2.11 V	33	32.6	0.4
11	4874.00	51.5 PK	74.0	-22.5	1.39 V	104	50.9	0.6
12	4874.00	37.5 AV	54.0	-16.5	1.39 V	104	36.9	0.6
1	#5646.40	55.8 PK	68.2	-12.4	3.43 V	20	51.5	4.3
2	*5745.00	112.3 PK			3.43 V	20	71.9	40.4
3	*5745.00	101.6 AV			3.43 V	20	61.2	40.4
4	#5944.00	56.6 PK	68.2	-11.6	3.43 V	20	51.5	5.1
5	11490.00	59.7 PK	74.0	-14.3	2.90 V	100	41.5	18.2
6	11490.00	46.7 AV	54.0	-7.3	2.90 V	100	28.5	18.2

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-PNA7-01R Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20) + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 149 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	124.1 PK			1.59 H	355	90.9	33.2
2	*2437.00	113.6 AV			1.59 H	355	80.4	33.2
3	*2480.00	106.3 PK			1.41 H	11	72.9	33.4
4	*2480.00	102.4 AV			1.41 H	11	69.0	33.4
5	2483.50	60.5 PK	74.0	-13.5	1.45 H	5	27.1	33.4
6	2483.50	50.0 AV	54.0	-4.0	1.45 H	5	16.6	33.4
7	4874.00	66.1 PK	74.0	-7.9	2.02 H	82	62.5	3.6
8	4874.00	52.1 AV	54.0	-1.9	2.02 H	82	48.5	3.6
9	4960.00	52.3 PK	74.0	-21.7	1.50 H	340	48.6	3.7
10	4960.00	40.2 AV	54.0	-13.8	1.50 H	340	36.5	3.7
11	#5622.40	63.3 PK	68.2	-4.9	1.65 H	354	58.5	4.8
12	*5745.00	125.0 PK			1.65 H	354	84.0	41.0
13	*5745.00	115.2 AV			1.65 H	354	74.2	41.0
14	#5968.80	63.4 PK	68.2	-4.8	1.65 H	354	57.6	5.8
15	11490.00	61.0 PK	74.0	-13.0	1.80 H	290	43.6	17.4
16	11490.00	48.2 AV	54.0	-5.8	1.80 H	290	30.8	17.4

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 149 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*2437.00	113.0 PK			3.06 V	344	79.8	33.2
2	*2437.00	102.6 AV			3.06 V	344	69.4	33.2
3	*2480.00	93.5 PK			1.99 V	267	60.1	33.4
4	*2480.00	89.7 AV			1.99 V	267	56.3	33.4
5	2483.50	57.7 PK	74.0	-16.3	1.99 V	267	24.3	33.4
6	2483.50	47.0 AV	54.0	-7.0	1.99 V	267	13.6	33.4
7	4874.00	60.7 PK	74.0	-13.3	2.66 V	45	57.1	3.6
8	4874.00	46.6 AV	54.0	-7.4	2.66 V	45	43.0	3.6
9	4960.00	50.4 PK	74.0	-23.6	2.36 V	97	46.7	3.7
10	4960.00	37.1 AV	54.0	-16.9	2.36 V	97	33.4	3.7
11	#5633.60	56.1 PK	68.2	-12.1	3.06 V	18	51.3	4.8
12	*5745.00	113.9 PK			3.06 V	19	72.9	41.0
13	*5745.00	102.8 AV			3.06 V	19	61.8	41.0
14	#5967.20	57.2 PK	68.2	-11.0	3.06 V	18	51.4	5.8
15	11490.00	59.4 PK	74.0	-14.6	2.70 V	111	42.0	17.4
16	11490.00	46.7 AV	54.0	-7.3	2.70 V	111	29.3	17.4

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-PNA7-01R Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20) + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 149 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.7 PK	74.0	-16.3	1.55 H	41	24.8	32.9
2	2390.00	52.2 AV	54.0	-1.8	1.55 H	41	19.3	32.9
3	*2405.00	103.9 PK			1.60 H	1	70.9	33.0
4	*2405.00	99.8 AV			1.60 H	1	66.8	33.0
5	*2437.00	124.3 PK			1.64 H	36	91.1	33.2
6	*2437.00	113.7 AV			1.64 H	36	80.5	33.2
7	4810.00	50.2 PK	74.0	-23.8	2.11 H	120	46.6	3.6
8	4810.00	37.2 AV	54.0	-16.8	2.11 H	120	33.6	3.6
9	4874.00	66.6 PK	74.0	-7.4	1.97 H	90	63.0	3.6
10	4874.00	52.2 AV	54.0	-1.8	1.97 H	90	48.6	3.6
11	#5611.20	63.0 PK	68.2	-5.2	1.64 H	350	58.7	4.3
12	*5745.00	125.1 PK			1.64 H	350	84.7	40.4
13	*5745.00	115.1 AV			1.64 H	350	74.7	40.4
14	#5941.60	63.8 PK	68.2	-4.4	1.64 H	350	58.8	5.0
15	11490.00	61.2 PK	74.0	-12.8	1.90 H	284	43.0	18.2
16	11490.00	48.7 AV	54.0	-5.3	1.90 H	284	30.5	18.2

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 149 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	58.2 PK	74.0	-15.8	1.67 V	338	25.3	32.9
2	2390.00	47.4 AV	54.0	-6.6	1.67 V	338	14.5	32.9
3	*2405.00	104.3 PK			1.33 V	10	71.3	33.0
4	*2405.00	100.3 AV			1.33 V	10	67.3	33.0
5	*2437.00	113.1 PK			3.40 V	325	79.9	33.2
6	*2437.00	102.8 AV			3.40 V	325	69.6	33.2
7	4810.00	50.0 PK	74.0	-24.0	2.15 V	50	46.4	3.6
8	4810.00	36.5 AV	54.0	-17.5	2.15 V	50	32.9	3.6
9	4874.00	58.4 PK	74.0	-15.6	1.35 V	109	54.8	3.6
10	4874.00	44.4 AV	54.0	-9.6	1.35 V	109	40.8	3.6
11	#5637.60	56.2 PK	68.2	-12.0	3.08 V	21	51.9	4.3
12	*5745.00	114.0 PK			3.08 V	21	73.6	40.4
13	*5745.00	102.9 AV			3.08 V	21	62.5	40.4
14	#5956.80	56.9 PK	68.2	-11.3	3.08 V	21	51.8	5.1
15	11490.00	59.5 PK	74.0	-14.5	2.71 V	115	41.3	18.2
16	11490.00	46.8 AV	54.0	-7.2	2.70 V	115	28.6	18.2

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-PTA4M4-036 Ant. + ML-2452-PNA7-01R Ant.

802.11g + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 40 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.4 PK	74.0	-16.6	1.93 H	110	24.5	32.9
2	2390.00	47.4 AV	54.0	-6.6	1.93 H	110	14.5	32.9
3	*2437.00	119.7 PK			1.97 H	43	86.5	33.2
4	*2437.00	108.7 AV			1.97 H	43	75.5	33.2
5	*2480.00	91.8 PK			2.56 H	52	58.4	33.4
6	*2480.00	87.8 AV			2.56 H	52	54.4	33.4
7	4874.00	51.1 PK	74.0	-22.9	1.78 H	165	47.5	3.6
8	4874.00	39.5 AV	54.0	-14.5	1.78 H	165	35.9	3.6
9	4960.00	45.9 PK	74.0	-28.1	1.95 H	218	42.2	3.7
10	4960.00	33.0 AV	54.0	-21.0	1.95 H	218	29.3	3.7
11	*5200.00	122.0 PK			2.04 H	46	82.5	39.5
12	*5200.00	111.5 AV			2.04 H	46	72.0	39.5
13	#10400.00	59.0 PK	74.0	-15.0	2.00 H	151	43.4	15.6
14	#10400.00	46.0 AV	54.0	-8.0	2.00 H	151	30.4	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 40 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	55.8 PK	74.0	-18.2	2.11 V	202	22.9	32.9
2	2390.00	47.7 AV	54.0	-6.3	2.11 V	202	14.8	32.9
3	*2437.00	117.0 PK			2.42 V	349	83.8	33.2
4	*2437.00	106.9 AV			2.42 V	349	73.7	33.2
5	*2480.00	89.9 PK			2.30 V	159	56.5	33.4
6	*2480.00	87.2 AV			2.30 V	159	53.8	33.4
7	4874.00	50.3 PK	74.0	-23.7	1.81 V	301	46.7	3.6
8	4874.00	37.6 AV	54.0	-16.4	1.81 V	301	34.0	3.6
9	4960.00	46.0 PK	74.0	-28.0	1.57 V	166	42.3	3.7
10	4960.00	35.0 AV	54.0	-19.0	1.57 V	166	31.3	3.7
11	*5200.00	116.0 PK			2.20 V	119	76.5	39.5
12	*5200.00	106.0 AV			2.20 V	119	66.5	39.5
13	#10400.00	58.6 PK	74.0	-15.4	1.84 V	144	43.0	15.6
14	#10400.00	45.6 AV	54.0	-8.4	1.84 V	144	30.0	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-PTA4M4-036 Ant. + ML-2452-PNA7-01R Ant.

802.11g + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 40 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.4 PK	74.0	-17.6	1.89 H	130	23.5	32.9
2	2390.00	46.4 AV	54.0	-7.6	1.89 H	130	13.5	32.9
3	*2405.00	90.4 PK			2.51 H	54	57.4	33.0
4	*2405.00	87.2 AV			2.51 H	54	54.2	33.0
5	*2437.00	119.4 PK			1.99 H	45	86.2	33.2
6	*2437.00	108.5 AV			1.99 H	45	75.3	33.2
7	4810.00	45.6 PK	74.0	-28.4	1.96 H	219	42.0	3.6
8	4810.00	32.7 AV	54.0	-21.3	1.96 H	219	29.1	3.6
9	4874.00	50.9 PK	74.0	-23.1	1.77 H	164	47.3	3.6
10	4874.00	38.5 AV	54.0	-15.5	1.77 H	164	34.9	3.6
11	*5200.00	121.7 PK			2.06 H	49	82.2	39.5
12	*5200.00	111.2 AV			2.06 H	49	71.7	39.5
13	#10400.00	58.7 PK	74.0	-15.3	1.99 H	152	43.1	15.6
14	#10400.00	45.6 AV	54.0	-8.4	1.99 H	152	30.0	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 40 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	54.8 PK	74.0	-19.2	2.01 V	212	21.9	32.9
2	2390.00	45.7 AV	54.0	-8.3	2.01 V	212	12.8	32.9
3	*2405.00	88.5 PK			2.26 V	157	55.5	33.0
4	*2405.00	85.8 AV			2.26 V	157	52.8	33.0
5	*2437.00	116.0 PK			2.32 V	339	82.8	33.2
6	*2437.00	105.9 AV			2.32 V	339	72.7	33.2
7	4810.00	44.9 PK	74.0	-29.1	1.67 V	176	41.3	3.6
8	4810.00	33.9 AV	54.0	-20.1	1.67 V	176	30.3	3.6
9	4874.00	50.0 PK	74.0	-24.0	1.91 V	303	46.4	3.6
10	4874.00	37.5 AV	54.0	-16.5	1.91 V	303	33.9	3.6
11	*5200.00	115.5 PK			2.22 V	120	76.0	39.5
12	*5200.00	105.5 AV			2.22 V	120	66.0	39.5
13	#10400.00	58.5 PK	74.0	-15.5	1.85 V	145	42.9	15.6
14	#10400.00	45.0 AV	54.0	-9.0	1.85 V	145	29.4	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-PTA4M4-036 Ant. + ML-2499-HPA8-01 Ant.

802.11g + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 40 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	118.2 PK			2.12 H	42	85.0	33.2
2	*2437.00	107.9 AV			2.12 H	42	74.7	33.2
3	*2480.00	89.5 PK			2.12 H	295	56.1	33.4
4	*2480.00	86.9 AV			2.12 H	295	53.5	33.4
5	2483.50	56.4 PK	74.0	-17.6	1.77 H	122	23.0	33.4
6	2483.50	46.1 AV	54.0	-7.9	1.77 H	122	12.7	33.4
7	4874.00	60.8 PK	74.0	-13.2	2.14 H	299	57.2	3.6
8	4874.00	47.8 AV	54.0	-6.2	2.14 H	299	44.2	3.6
9	4960.00	45.1 PK	74.0	-28.9	1.77 H	222	41.4	3.7
10	4960.00	32.7 AV	54.0	-21.3	1.77 H	222	29.0	3.7
11	*5200.00	120.2 PK			2.10 H	46	80.7	39.5
12	*5200.00	109.9 AV			2.10 H	46	70.4	39.5
13	#10400.00	58.1 PK	74.0	-15.9	1.87 H	59	42.5	15.6
14	#10400.00	44.3 AV	54.0	-9.7	1.87 H	59	28.7	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 40 + CH 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*2437.00	115.5 PK			1.77 V	155	82.3	33.2
2	*2437.00	105.4 AV			1.77 V	155	72.2	33.2
3	*2480.00	88.9 PK			1.89 V	222	55.5	33.4
4	*2480.00	85.6 AV			1.89 V	222	52.2	33.4
5	2483.50	55.5 PK	74.0	-18.5	1.77 V	333	22.1	33.4
6	2483.50	45.5 AV	54.0	-8.5	1.77 V	333	12.1	33.4
7	4874.00	59.9 PK	74.0	-14.1	2.33 V	322	56.3	3.6
8	4874.00	45.8 AV	54.0	-8.2	2.33 V	322	42.2	3.6
9	4960.00	43.9 PK	74.0	-30.1	1.99 V	188	40.2	3.7
10	4960.00	31.2 AV	54.0	-22.8	1.99 V	188	27.5	3.7
11	*5200.00	117.2 PK			1.89 V	122	77.7	39.5
12	*5200.00	106.3 AV			1.89 V	122	66.8	39.5
13	#10400.00	58.5 PK	74.0	-15.5	2.21 V	129	42.9	15.6
14	#10400.00	44.5 AV	54.0	-9.5	2.21 V	129	28.9	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

ML-2452-PTA4M4-036 Ant. + ML-2499-HPA8-01 Ant.

802.11g + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 40 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	55.4 PK	74.0	-18.6	1.88 H	129	22.5	32.9
2	2390.00	45.4 AV	54.0	-8.6	1.88 H	129	12.5	32.9
3	*2405.00	89.4 PK			2.53 H	51	56.4	33.0
4	*2405.00	86.2 AV			2.53 H	51	53.2	33.0
5	*2437.00	118.4 PK			2.01 H	55	85.2	33.2
6	*2437.00	107.5 AV			2.01 H	55	74.3	33.2
7	4810.00	44.6 PK	74.0	-29.4	1.98 H	222	41.0	3.6
8	4810.00	31.7 AV	54.0	-22.3	1.98 H	222	28.1	3.6
9	4874.00	49.9 PK	74.0	-24.1	1.79 H	166	46.3	3.6
10	4874.00	37.5 AV	54.0	-16.5	1.79 H	166	33.9	3.6
11	*5200.00	120.7 PK			2.04 H	47	81.2	39.5
12	*5200.00	110.2 AV			2.04 H	47	70.7	39.5
13	#10400.00	57.7 PK	74.0	-16.3	1.98 H	155	42.1	15.6
14	#10400.00	44.6 AV	54.0	-9.4	1.98 H	155	29.0	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	CH 6 + CH 40 + CH 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	54.6 PK	74.0	-19.4	1.99 V	222	21.7	32.9
2	2390.00	44.7 AV	54.0	-9.3	1.99 V	222	11.8	32.9
3	*2405.00	87.5 PK			2.23 V	155	54.5	33.0
4	*2405.00	84.8 AV			2.23 V	155	51.8	33.0
5	*2437.00	115.7 PK			2.29 V	333	82.5	33.2
6	*2437.00	105.3 AV			2.29 V	333	72.1	33.2
7	4810.00	43.9 PK	74.0	-30.1	1.65 V	178	40.3	3.6
8	4810.00	29.9 AV	54.0	-24.1	1.65 V	178	26.3	3.6
9	4874.00	49.0 PK	74.0	-25.0	1.89 V	333	45.4	3.6
10	4874.00	36.5 AV	54.0	-17.5	1.89 V	333	32.9	3.6
11	*5200.00	114.5 PK			2.20 V	123	75.0	39.5
12	*5200.00	104.5 AV			2.20 V	123	65.0	39.5
13	#10400.00	57.5 PK	74.0	-16.5	1.88 V	147	41.9	15.6
14	#10400.00	44.0 AV	54.0	-10.0	1.88 V	147	28.4	15.6

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.
6. " # ": The radiated frequency is out of the restricted band.

Below 1GHz data

ML-2452-APA2-01 Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20) + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 48 + CH 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

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	70.73	29.2 QP	40.0	-10.8	1.51 H	285	45.6	-16.4
2	109.62	34.3 QP	43.5	-9.2	1.51 H	66	51.7	-17.4
3	206.83	34.5 QP	43.5	-9.0	1.00 H	264	51.3	-16.8
4	284.60	35.9 QP	46.0	-10.1	1.00 H	309	48.9	-13.0
5	364.32	33.6 QP	46.0	-12.4	1.00 H	196	45.4	-11.8
6	471.25	30.0 QP	46.0	-16.0	2.00 H	111	39.9	-9.9
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	47.40	37.8 QP	40.0	-2.2	1.02 V	315	52.3	-14.5
2	57.12	38.2 QP	40.0	-1.8	1.50 V	21	52.8	-14.6
3	111.56	32.3 QP	43.5	-11.2	1.02 V	276	49.5	-17.2
4	208.77	30.2 QP	43.5	-13.3	1.02 V	23	46.8	-16.6
5	288.49	33.8 QP	46.0	-12.2	1.50 V	135	46.8	-13.0
6	397.37	31.1 QP	46.0	-14.9	1.50 V	13	42.4	-11.3

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	CH 6 + CH 48 + CH 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

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	70.73	35.6 QP	40.0	-4.4	1.01 H	219	52.0	-16.4
2	103.78	31.6 QP	43.5	-11.9	1.49 H	65	49.7	-18.1
3	154.33	32.5 QP	43.5	-11.0	1.49 H	142	46.4	-13.9
4	307.93	28.1 QP	46.0	-17.9	2.00 H	14	40.7	-12.6
5	375.98	32.9 QP	46.0	-13.1	1.01 H	99	44.5	-11.6
6	463.48	28.0 QP	46.0	-18.0	1.49 H	125	38.0	-10.0
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	33.79	36.0 QP	40.0	-4.0	1.00 V	9	52.0	-16.0
2	61.01	38.5 QP	40.0	-1.5	1.00 V	330	53.5	-15.0
3	70.73	39.5 QP	40.0	-0.5	1.00 V	321	55.9	-16.4
4	90.17	34.8 QP	43.5	-8.7	1.00 V	96	54.4	-19.6
5	152.39	32.7 QP	43.5	-10.8	1.50 V	71	46.7	-14.0
6	453.75	29.2 QP	46.0	-16.8	2.00 V	161	39.3	-10.1

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

ML-2452-APA2-01 Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20) + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 48 + CH 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

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	57.12	28.6 QP	40.0	-11.4	2.00 H	189	43.2	-14.6
2	138.78	32.5 QP	43.5	-11.0	2.00 H	89	47.0	-14.5
3	216.55	33.8 QP	46.0	-12.2	1.51 H	249	49.9	-16.1
4	274.88	35.2 QP	46.0	-10.8	1.51 H	342	48.5	-13.3
5	459.59	28.5 QP	46.0	-17.5	2.00 H	105	38.6	-10.1
6	747.34	31.5 QP	46.0	-14.5	1.00 H	14	36.4	-4.9
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	35.73	36.7 QP	40.0	-3.3	1.50 V	144	52.7	-16.0
2	62.95	36.9 QP	40.0	-3.1	1.50 V	50	52.1	-15.2
3	125.17	31.7 QP	43.5	-11.8	1.02 V	283	47.5	-15.8
4	156.28	29.9 QP	43.5	-13.6	1.02 V	57	43.8	-13.9
5	307.93	33.0 QP	46.0	-13.0	1.50 V	112	45.6	-12.6
6	426.53	29.7 QP	46.0	-16.3	1.02 V	213	40.3	-10.6

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	CH 6 + CH 48 + CH 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

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	70.73	36.0 QP	40.0	-4.0	1.50 H	211	52.4	-16.4
2	125.17	31.6 QP	43.5	-11.9	1.50 H	9	47.4	-15.8
3	154.33	30.5 QP	43.5	-13.0	1.50 H	110	44.4	-13.9
4	210.72	28.6 QP	43.5	-14.9	1.00 H	239	45.1	-16.5
5	377.93	34.0 QP	46.0	-12.0	2.00 H	101	45.6	-11.6
6	453.75	28.2 QP	46.0	-17.8	1.50 H	105	38.3	-10.1
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	33.79	36.2 QP	40.0	-3.8	1.00 V	113	52.2	-16.0
2	61.01	39.5 QP	40.0	-0.5	1.00 V	321	54.5	-15.0
3	70.73	38.8 QP	40.0	-1.2	1.00 V	304	55.2	-16.4
4	125.17	33.4 QP	43.5	-10.1	1.00 V	181	49.2	-15.8
5	453.75	29.8 QP	46.0	-16.2	1.00 V	165	39.9	-10.1
6	512.08	30.5 QP	46.0	-15.5	1.00 V	172	39.7	-9.2

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

ML-2452-APA2-01 Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20) + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 48 + CH 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

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	57.12	26.6 QP	40.0	-13.4	1.49 H	75	41.2	-14.6
2	152.39	31.9 QP	43.5	-11.6	1.00 H	84	45.9	-14.0
3	204.89	34.1 QP	43.5	-9.4	1.00 H	247	50.9	-16.8
4	327.38	34.1 QP	46.0	-11.9	1.00 H	328	46.2	-12.1
5	374.04	31.4 QP	46.0	-14.6	1.00 H	220	43.0	-11.6
6	784.28	26.2 QP	46.0	-19.8	1.00 H	61	30.7	-4.5
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	37.68	37.5 QP	40.0	-2.5	1.00 V	196	53.0	-15.5
2	125.17	31.3 QP	43.5	-12.2	1.00 V	338	47.1	-15.8
3	214.61	29.4 QP	43.5	-14.1	1.00 V	36	45.6	-16.2
4	267.10	32.4 QP	46.0	-13.6	1.00 V	56	46.2	-13.8
5	412.92	28.7 QP	46.0	-17.3	1.00 V	170	39.8	-11.1
6	480.97	30.0 QP	46.0	-16.0	1.00 V	128	39.8	-9.8

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	CH 6 + CH 48 + CH 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

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	70.73	35.9 QP	40.0	-4.1	1.50 H	213	52.3	-16.4
2	152.39	31.3 QP	43.5	-12.2	1.50 H	120	45.3	-14.0
3	208.77	29.6 QP	43.5	-13.9	1.50 H	98	46.2	-16.6
4	307.93	28.5 QP	46.0	-17.5	1.00 H	61	41.1	-12.6
5	377.93	34.4 QP	46.0	-11.6	2.00 H	106	46.0	-11.6
6	453.75	28.5 QP	46.0	-17.5	1.50 H	118	38.6	-10.1
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	33.79	38.1 QP	40.0	-1.9	1.00 V	49	54.1	-16.0
2	62.51	36.5 QP	40.0	-3.5	1.00 V	15	51.8	-15.3
3	70.73	38.9 QP	40.0	-1.1	1.00 V	300	55.3	-16.4
4	88.23	34.6 QP	43.5	-8.9	1.00 V	121	54.4	-19.8
5	152.39	35.8 QP	43.5	-7.7	1.00 V	273	49.8	-14.0
6	453.75	30.6 QP	46.0	-15.4	1.00 V	136	40.7	-10.1

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

ML-2452-APA2-01 Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20) + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 48 + CH 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

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	68.79	27.8 QP	40.0	-12.2	1.49 H	139	43.9	-16.1
2	109.62	34.0 QP	43.5	-9.5	1.49 H	248	51.4	-17.4
3	214.61	35.5 QP	43.5	-8.0	1.49 H	238	51.7	-16.2
4	280.71	35.9 QP	46.0	-10.1	2.00 H	319	49.0	-13.1
5	364.32	33.5 QP	46.0	-12.5	1.00 H	209	45.3	-11.8
6	467.36	28.1 QP	46.0	-17.9	1.49 H	119	38.0	-9.9
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	55.18	38.0 QP	40.0	-2.0	1.00 V	15	52.5	-14.5
2	107.67	32.3 QP	43.5	-11.2	1.00 V	315	49.9	-17.6
3	152.39	30.1 QP	43.5	-13.4	1.00 V	302	44.1	-14.0
4	300.16	33.2 QP	46.0	-12.8	1.50 V	118	45.9	-12.7
5	389.59	30.5 QP	46.0	-15.5	1.50 V	17	41.9	-11.4
6	467.36	32.9 QP	46.0	-13.1	1.00 V	140	42.8	-9.9

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	CH 6 + CH 48 + CH 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

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	70.73	35.9 QP	40.0	-4.1	1.50 H	220	52.3	-16.4
2	125.17	31.0 QP	43.5	-12.5	1.50 H	10	46.8	-15.8
3	208.77	28.4 QP	43.5	-15.1	1.50 H	254	45.0	-16.6
4	377.93	33.8 QP	46.0	-12.2	2.00 H	116	45.4	-11.6
5	453.75	28.9 QP	46.0	-17.1	1.50 H	105	39.0	-10.1
6	939.83	29.8 QP	46.0	-16.2	1.50 H	5	32.2	-2.4
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	33.79	36.7 QP	40.0	-3.3	2.00 V	194	52.7	-16.0
2	62.51	37.2 QP	40.0	-2.8	1.00 V	276	52.5	-15.3
3	70.73	37.9 QP	40.0	-2.1	1.50 V	341	54.3	-16.4
4	97.95	36.3 QP	43.5	-7.2	1.00 V	73	55.1	-18.8
5	125.17	33.2 QP	43.5	-10.3	1.00 V	173	49.0	-15.8
6	453.75	30.0 QP	46.0	-16.0	1.00 V	166	40.1	-10.1

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

ML-2452-PNA7-01R Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20) + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 149 + CH 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

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	57.12	27.7 QP	40.0	-12.3	2.00 H	59	42.3	-14.6
2	109.62	32.3 QP	43.5	-11.2	1.50 H	14	49.7	-17.4
3	210.72	35.2 QP	43.5	-8.3	1.01 H	240	51.7	-16.5
4	284.60	36.1 QP	46.0	-9.9	1.01 H	313	49.1	-13.0
5	463.48	28.5 QP	46.0	-17.5	2.00 H	149	38.5	-10.0
6	731.79	30.6 QP	46.0	-15.4	1.50 H	29	35.8	-5.2
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	33.79	37.3 QP	40.0	-2.7	1.00 V	44	53.3	-16.0
2	61.01	37.9 QP	40.0	-2.1	1.49 V	6	52.9	-15.0
3	111.56	31.2 QP	43.5	-12.3	1.00 V	290	48.4	-17.2
4	307.93	33.6 QP	46.0	-12.4	1.49 V	230	46.2	-12.6
5	420.70	29.3 QP	46.0	-16.7	1.00 V	116	40.2	-10.9
6	747.34	33.2 QP	46.0	-12.8	1.49 V	6	38.1	-4.9

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	CH 6 + CH 149 + CH 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

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	70.73	35.0 QP	40.0	-5.0	1.50 H	206	51.4	-16.4
2	125.17	33.7 QP	43.5	-9.8	1.50 H	54	49.5	-15.8
3	169.89	32.2 QP	43.5	-11.3	1.50 H	78	46.4	-14.2
4	294.32	32.3 QP	46.0	-13.7	1.00 H	19	45.2	-12.9
5	372.09	31.6 QP	46.0	-14.4	1.00 H	205	43.3	-11.7
6	461.53	30.7 QP	46.0	-15.3	1.99 H	131	40.8	-10.1
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	33.79	37.1 QP	40.0	-2.9	1.00 V	297	53.1	-16.0
2	62.49	37.0 QP	40.0	-3.0	1.00 V	301	52.3	-15.3
3	70.73	38.7 QP	40.0	-1.3	1.99 V	156	55.1	-16.4
4	88.23	34.2 QP	43.5	-9.3	1.00 V	102	54.0	-19.8
5	162.11	31.3 QP	43.5	-12.2	1.00 V	8	45.2	-13.9
6	451.81	33.1 QP	46.0	-12.9	1.00 V	170	43.3	-10.2

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

ML-2452-PNA7-01R Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20) + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 149 + CH 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

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	125.17	31.4 QP	43.5	-12.1	1.50 H	217	47.2	-15.8
2	146.56	31.0 QP	43.5	-12.5	1.01 H	215	45.1	-14.1
3	224.33	33.2 QP	46.0	-12.8	1.50 H	93	49.4	-16.2
4	358.48	32.3 QP	46.0	-13.7	1.01 H	114	44.3	-12.0
5	562.64	24.9 QP	46.0	-21.1	1.50 H	103	33.3	-8.4
6	747.34	29.3 QP	46.0	-16.7	1.50 H	27	34.2	-4.9
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	55.18	37.3 QP	40.0	-2.7	1.00 V	23	51.8	-14.5
2	125.17	30.6 QP	43.5	-12.9	1.00 V	342	46.4	-15.8
3	212.66	30.5 QP	43.5	-13.0	1.00 V	28	46.8	-16.3
4	259.33	31.8 QP	46.0	-14.2	1.00 V	137	45.9	-14.1
5	463.48	28.5 QP	46.0	-17.5	1.00 V	122	38.5	-10.0
6	729.84	27.6 QP	46.0	-18.4	1.49 V	233	33.0	-5.4

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	CH 6 + CH 149 + CH 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

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	70.73	34.2 QP	40.0	-5.8	1.50 H	213	50.6	-16.4
2	125.17	33.9 QP	43.5	-9.6	1.50 H	62	49.7	-15.8
3	169.89	31.0 QP	43.5	-12.5	1.50 H	96	45.2	-14.2
4	294.32	32.1 QP	46.0	-13.9	1.01 H	15	45.0	-12.9
5	379.87	32.0 QP	46.0	-14.0	1.01 H	207	43.5	-11.5
6	459.59	28.2 QP	46.0	-17.8	2.00 H	111	38.3	-10.1
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	33.79	37.8 QP	40.0	-2.2	1.00 V	306	53.8	-16.0
2	62.47	37.8 QP	40.0	-2.2	1.00 V	316	53.1	-15.3
3	70.61	35.7 QP	40.0	-4.3	1.50 V	303	52.0	-16.3
4	97.95	34.7 QP	43.5	-8.8	1.00 V	43	53.5	-18.8
5	152.39	33.3 QP	43.5	-10.2	1.00 V	91	47.3	-14.0
6	459.59	33.3 QP	46.0	-12.7	1.00 V	157	43.4	-10.1

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

ML-2452-PNA7-01R Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20) + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 149 + CH 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

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	57.12	27.2 QP	40.0	-12.8	1.50 H	204	41.8	-14.6
2	152.39	31.7 QP	43.5	-11.8	1.00 H	72	45.7	-14.0
3	197.11	33.3 QP	43.5	-10.2	1.50 H	276	49.9	-16.6
4	286.55	34.7 QP	46.0	-11.3	1.00 H	1	47.7	-13.0
5	383.76	30.5 QP	46.0	-15.5	1.00 H	112	42.0	-11.5
6	477.09	27.1 QP	46.0	-18.9	1.50 H	140	36.9	-9.8
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	61.01	36.9 QP	40.0	-3.1	1.49 V	10	51.9	-15.0
2	150.45	30.1 QP	43.5	-13.4	1.00 V	337	44.2	-14.1
3	265.16	32.3 QP	46.0	-13.7	1.00 V	67	46.2	-13.9
4	479.03	29.1 QP	46.0	-16.9	1.49 V	10	38.9	-9.8
5	570.41	24.9 QP	46.0	-21.1	1.00 V	307	33.2	-8.3
6	729.84	26.4 QP	46.0	-19.6	1.49 V	290	31.8	-5.4

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	CH 6 + CH 149 + CH 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

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	70.73	34.8 QP	40.0	-5.2	1.50 H	217	51.2	-16.4
2	125.17	33.9 QP	43.5	-9.6	1.50 H	50	49.7	-15.8
3	171.83	31.7 QP	43.5	-11.8	1.50 H	72	46.1	-14.4
4	292.38	31.3 QP	46.0	-14.7	1.01 H	33	44.2	-12.9
5	377.93	32.5 QP	46.0	-13.5	1.01 H	220	44.1	-11.6
6	939.83	30.7 QP	46.0	-15.3	2.00 H	193	33.1	-2.4
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	33.79	37.9 QP	40.0	-2.1	1.00 V	185	53.9	-16.0
2	61.01	38.8 QP	40.0	-1.2	1.00 V	13	53.8	-15.0
3	71.98	38.9 QP	40.0	-1.1	1.00 V	310	55.5	-16.6
4	96.01	35.9 QP	43.5	-7.6	1.00 V	90	54.9	-19.0
5	164.06	32.0 QP	43.5	-11.5	2.00 V	78	45.9	-13.9
6	453.75	32.0 QP	46.0	-14.0	1.50 V	162	42.1	-10.1

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

ML-2452-PNA7-01R Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20) + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 149 + CH 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

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	66.84	27.8 QP	40.0	-12.2	1.50 H	155	43.7	-15.9
2	109.62	33.1 QP	43.5	-10.4	1.50 H	250	50.5	-17.4
3	142.67	31.7 QP	43.5	-11.8	1.00 H	97	45.9	-14.2
4	212.66	35.2 QP	43.5	-8.3	1.00 H	239	51.5	-16.3
5	265.16	35.1 QP	46.0	-10.9	1.00 H	163	49.0	-13.9
6	366.26	32.8 QP	46.0	-13.2	2.00 H	212	44.5	-11.7
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	33.79	36.8 QP	40.0	-3.2	1.00 V	146	52.8	-16.0
2	55.18	37.3 QP	40.0	-2.7	1.00 V	12	51.8	-14.5
3	107.67	31.3 QP	43.5	-12.2	1.00 V	294	48.9	-17.6
4	212.66	31.2 QP	43.5	-12.3	1.00 V	44	47.5	-16.3
5	300.16	32.7 QP	46.0	-13.3	1.49 V	117	45.4	-12.7
6	465.42	30.1 QP	46.0	-15.9	2.00 V	131	40.1	-10.0

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	CH 6 + CH 149 + CH 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

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	70.73	34.3 QP	40.0	-5.7	1.50 H	57	50.7	-16.4
2	125.17	34.3 QP	43.5	-9.2	1.50 H	40	50.1	-15.8
3	171.83	30.7 QP	43.5	-12.8	1.50 H	249	45.1	-14.4
4	296.27	32.0 QP	46.0	-14.0	1.00 H	24	44.8	-12.8
5	377.93	31.4 QP	46.0	-14.6	2.00 H	217	43.0	-11.6
6	467.36	29.9 QP	46.0	-16.1	1.50 H	113	39.8	-9.9
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	33.79	36.6 QP	40.0	-3.4	1.00 V	63	52.6	-16.0
2	61.01	39.4 QP	40.0	-0.6	1.00 V	15	54.4	-15.0
3	70.73	38.6 QP	40.0	-1.4	1.00 V	316	55.0	-16.4
4	97.95	36.3 QP	43.5	-7.2	1.00 V	93	55.1	-18.8
5	162.11	32.8 QP	43.5	-10.7	1.00 V	296	46.7	-13.9
6	455.70	33.3 QP	46.0	-12.7	1.00 V	177	43.5	-10.2

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

ML-2452-PTA4M4-036 Ant. + ML-2452-PNA7-01R Ant.

802.11g + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 40 + CH 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

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	107.67	32.9 QP	43.5	-10.6	1.50 H	221	50.5	-17.6
2	212.66	36.2 QP	43.5	-7.3	1.50 H	258	52.5	-16.3
3	284.60	36.5 QP	46.0	-9.5	1.00 H	311	49.5	-13.0
4	333.21	33.6 QP	46.0	-12.4	1.00 H	319	45.6	-12.0
5	366.26	32.7 QP	46.0	-13.3	1.00 H	213	44.4	-11.7
6	455.70	27.6 QP	46.0	-18.4	2.00 H	108	37.8	-10.2
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	33.79	35.8 QP	40.0	-4.2	1.00 V	169	51.8	-16.0
2	59.06	38.0 QP	40.0	-2.0	1.00 V	56	52.7	-14.7
3	105.73	31.3 QP	43.5	-12.2	1.00 V	9	49.1	-17.8
4	307.93	32.5 QP	46.0	-13.5	1.50 V	111	45.1	-12.6
5	463.48	28.7 QP	46.0	-17.3	1.00 V	116	38.7	-10.0
6	747.34	36.8 QP	46.0	-9.2	1.00 V	43	41.7	-4.9

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	CH 6 + CH 40 + CH 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

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	70.73	35.9 QP	40.0	-4.1	1.50 H	200	52.3	-16.4
2	105.73	31.9 QP	43.5	-11.6	1.50 H	236	49.7	-17.8
3	125.17	31.7 QP	43.5	-11.8	1.50 H	8	47.5	-15.8
4	154.33	30.4 QP	43.5	-13.1	1.00 H	136	44.3	-13.9
5	206.83	28.8 QP	43.5	-14.7	1.00 H	101	45.6	-16.8
6	377.93	34.4 QP	46.0	-11.6	2.00 H	96	46.0	-11.6
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	33.79	36.5 QP	40.0	-3.5	1.00 V	202	52.5	-16.0
2	61.01	38.7 QP	40.0	-1.3	1.00 V	320	53.7	-15.0
3	70.73	38.8 QP	40.0	-1.2	1.00 V	308	55.2	-16.4
4	97.95	35.7 QP	43.5	-7.8	1.00 V	58	54.5	-18.8
5	125.17	33.3 QP	43.5	-10.2	1.00 V	193	49.1	-15.8
6	152.39	33.5 QP	43.5	-10.0	2.00 V	271	47.5	-14.0

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

ML-2452-PTA4M4-036 Ant. + ML-2452-PNA7-01R Ant.

802.11g + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 40 + CH 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

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	57.12	26.6 QP	40.0	-13.4	1.50 H	109	41.2	-14.6
2	125.17	32.3 QP	43.5	-11.2	1.50 H	202	48.1	-15.8
3	270.99	35.4 QP	46.0	-10.6	1.50 H	321	48.9	-13.5
4	381.82	31.4 QP	46.0	-14.6	1.00 H	116	43.0	-11.6
5	500.42	25.6 QP	46.0	-20.4	1.50 H	126	35.1	-9.5
6	648.18	24.8 QP	46.0	-21.2	1.50 H	307	31.6	-6.8
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	47.40	36.7 QP	40.0	-3.3	1.00 V	9	51.2	-14.5
2	125.17	30.4 QP	43.5	-13.1	1.00 V	305	46.2	-15.8
3	150.45	28.8 QP	43.5	-14.7	1.00 V	302	42.9	-14.1
4	212.66	29.8 QP	43.5	-13.7	1.00 V	47	46.1	-16.3
5	265.16	32.4 QP	46.0	-13.6	1.00 V	69	46.3	-13.9
6	412.92	28.4 QP	46.0	-17.6	1.00 V	173	39.5	-11.1

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	CH 6 + CH 40 + CH 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

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	70.73	35.3 QP	40.0	-4.7	1.50 H	211	51.7	-16.4
2	105.73	29.7 QP	43.5	-13.8	1.00 H	223	47.5	-17.8
3	144.61	30.2 QP	43.5	-13.3	1.00 H	127	44.3	-14.1
4	189.33	28.5 QP	43.5	-15.0	1.00 H	119	44.7	-16.2
5	309.88	28.2 QP	46.0	-17.8	1.00 H	66	40.8	-12.6
6	374.04	35.1 QP	46.0	-10.9	2.00 H	109	46.7	-11.6
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	33.79	36.4 QP	40.0	-3.6	1.50 V	191	52.4	-16.0
2	61.01	39.2 QP	40.0	-0.8	1.00 V	328	54.2	-15.0
3	68.79	38.2 QP	40.0	-1.8	1.00 V	328	54.3	-16.1
4	97.95	35.0 QP	43.5	-8.5	1.00 V	90	53.8	-18.8
5	125.17	33.6 QP	43.5	-9.9	1.00 V	191	49.4	-15.8
6	152.39	33.3 QP	43.5	-10.2	2.00 V	298	47.3	-14.0

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

ML-2452-PTA4M4-036 Ant. + ML-2499-HPA8-01 Ant.

802.11g + 802.11n (HT20) + BT LE

CHANNEL	CH 6 + CH 40 + CH 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

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	66.84	27.2 QP	40.0	-12.8	1.49 H	154	43.1	-15.9
2	109.62	34.0 QP	43.5	-9.5	1.49 H	241	51.4	-17.4
3	214.61	34.6 QP	43.5	-8.9	1.00 H	257	50.8	-16.2
4	265.16	35.6 QP	46.0	-10.4	1.00 H	172	49.5	-13.9
5	354.60	33.6 QP	46.0	-12.4	1.00 H	226	45.6	-12.0
6	475.14	27.7 QP	46.0	-18.3	2.00 H	101	37.6	-9.9
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	37.68	35.8 QP	40.0	-4.2	1.00 V	211	51.3	-15.5
2	55.18	37.8 QP	40.0	-2.2	1.00 V	15	52.3	-14.5
3	107.67	32.6 QP	43.5	-10.9	1.00 V	15	50.2	-17.6
4	212.66	31.5 QP	43.5	-12.0	1.00 V	42	47.8	-16.3
5	300.16	33.3 QP	46.0	-12.7	1.50 V	122	46.0	-12.7
6	465.42	30.6 QP	46.0	-15.4	2.00 V	126	40.6	-10.0

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	CH 6 + CH 40 + CH 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

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	70.73	36.3 QP	40.0	-3.7	1.00 H	208	52.7	-16.4
2	103.78	29.4 QP	43.5	-14.1	1.00 H	239	47.5	-18.1
3	144.61	29.7 QP	43.5	-13.8	1.00 H	127	43.8	-14.1
4	208.77	28.6 QP	43.5	-14.9	1.50 H	229	45.2	-16.6
5	311.82	28.5 QP	46.0	-17.5	1.00 H	62	41.0	-12.5
6	374.04	33.7 QP	46.0	-12.3	2.00 H	96	45.3	-11.6
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	61.01	39.2 QP	40.0	-0.8	2.00 V	300	54.2	-15.0
2	70.73	39.5 QP	40.0	-0.5	1.00 V	305	55.9	-16.4
3	97.95	35.5 QP	43.5	-8.0	1.00 V	68	54.3	-18.8
4	125.17	33.8 QP	43.5	-9.7	1.00 V	206	49.6	-15.8
5	142.67	33.0 QP	43.5	-10.5	1.00 V	256	47.2	-14.2
6	304.04	28.0 QP	46.0	-18.0	1.50 V	258	40.7	-12.7

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

ML-2452-PTA4M4-036 Ant. + ML-2499-HPA8-01 Ant.

802.11g + 802.11n (HT20) + Zigbee

CHANNEL	CH 6 + CH 40 + CH 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

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	57.12	27.0 QP	40.0	-13.0	1.49 H	19	41.6	-14.6
2	150.45	32.5 QP	43.5	-11.0	1.00 H	90	46.6	-14.1
3	197.11	32.8 QP	43.5	-10.7	1.49 H	258	49.4	-16.6
4	370.15	32.9 QP	46.0	-13.1	1.00 H	197	44.6	-11.7
5	395.43	30.5 QP	46.0	-15.5	1.00 H	139	41.8	-11.3
6	922.33	28.2 QP	46.0	-17.8	1.00 H	6	30.7	-2.5
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	150.45	29.5 QP	43.5	-14.0	1.00 V	332	43.6	-14.1
2	263.21	32.4 QP	46.0	-13.6	1.00 V	61	46.4	-14.0
3	383.76	30.6 QP	46.0	-15.4	1.00 V	15	42.1	-11.5
4	475.14	29.4 QP	46.0	-16.6	1.00 V	126	39.3	-9.9
5	564.58	25.0 QP	46.0	-21.0	1.00 V	327	33.4	-8.4
6	747.34	28.1 QP	46.0	-17.9	1.50 V	193	33.0	-4.9

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	CH 6 + CH 40 + CH 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

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	70.73	36.6 QP	40.0	-3.4	1.00 H	212	53.0	-16.4
2	107.67	29.4 QP	43.5	-14.1	1.00 H	215	47.0	-17.6
3	142.67	29.7 QP	43.5	-13.8	1.00 H	109	43.9	-14.2
4	208.77	28.6 QP	43.5	-14.9	1.50 H	227	45.2	-16.6
5	374.04	34.2 QP	46.0	-11.8	1.00 H	109	45.8	-11.6
6	939.83	30.6 QP	46.0	-15.4	2.00 H	184	33.0	-2.4
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	33.79	37.3 QP	40.0	-2.7	1.50 V	136	53.3	-16.0
2	61.01	39.6 QP	40.0	-0.4	1.00 V	10	54.6	-15.0
3	70.73	39.3 QP	40.0	-0.7	1.00 V	10	55.7	-16.4
4	97.95	35.2 QP	43.5	-8.3	1.00 V	59	54.0	-18.8
5	374.04	27.3 QP	46.0	-18.7	2.00 V	203	38.9	-11.6
6	457.64	30.0 QP	46.0	-16.0	1.50 V	168	40.1	-10.1

Remarks:

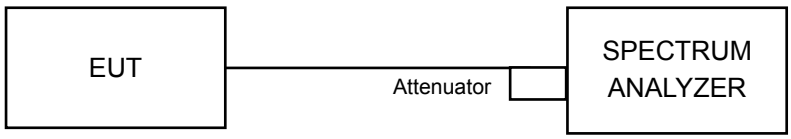
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.2 Conducted Out of Band Emission Measurement

4.2.1 Limits of Conducted Out of Band Emission Measurement

Below 30dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.2.2 Test Setup



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedure

MEASUREMENT PROCEDURE REF

a. Set the RBW = 100 kHz.
b. Set the VBW ≥ 300 kHz.
c. Detector = average.
d. Sweep time = auto couple.
e. Trace mode = max hold.
f. Allow trace to fully stabilize.
g. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

a. Set RBW = 100 kHz.
b. Set VBW ≥ 300 kHz.
c. Detector = average.
d. Sweep = auto couple.
e. Trace Mode = max hold.
f. Allow trace to fully stabilize.
g. Use the peak marker function to determine the maximum amplitude level.

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Condition

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

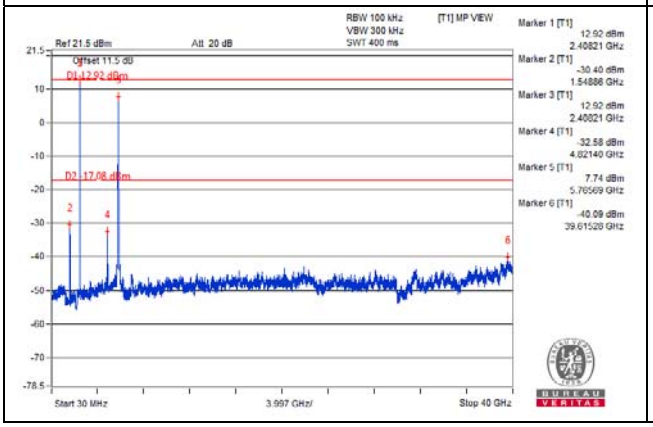
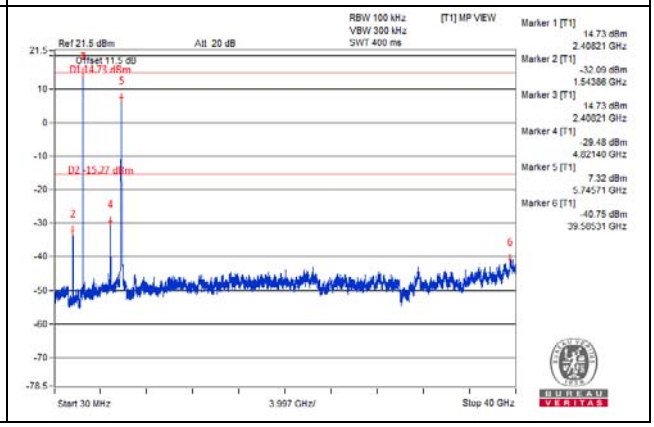
4.2.7 Test Results

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.

ML-2452-APA2-01

802.11b + 802.11n (HT40)

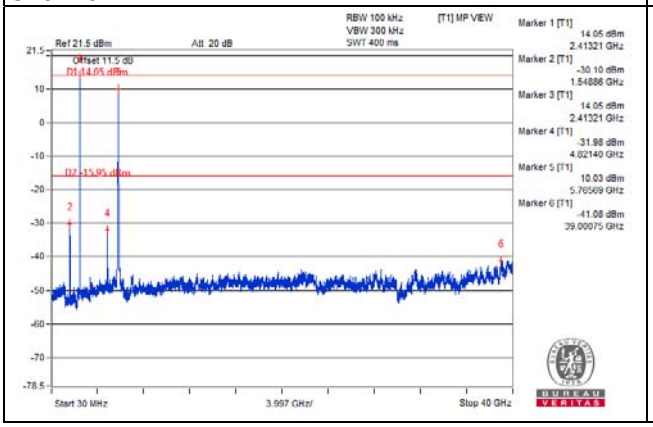
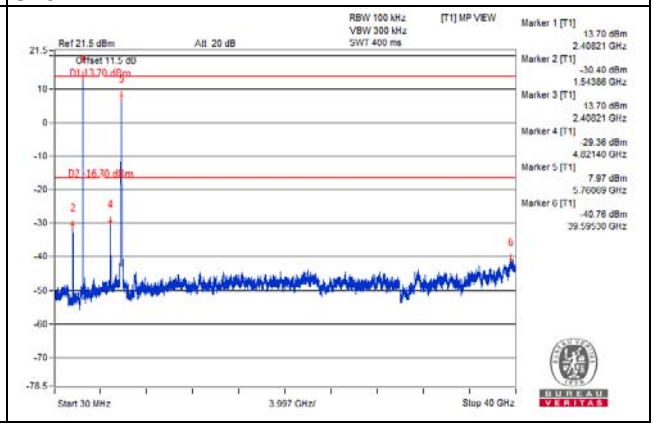
CH 11 + CH 151

Chain 0	Chain 1
	

ML-2452-APA2-02

802.11b + 802.11n (HT40)

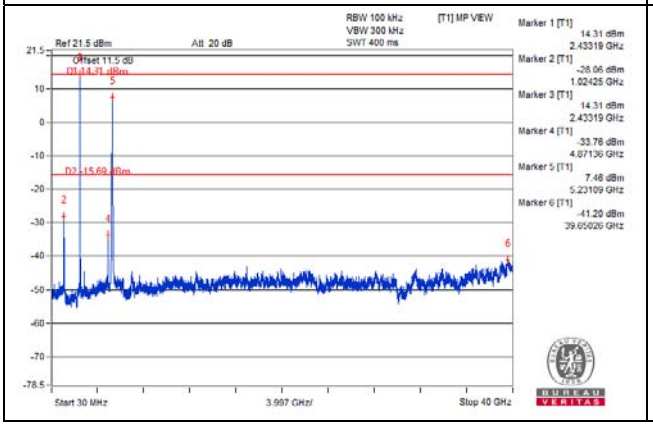
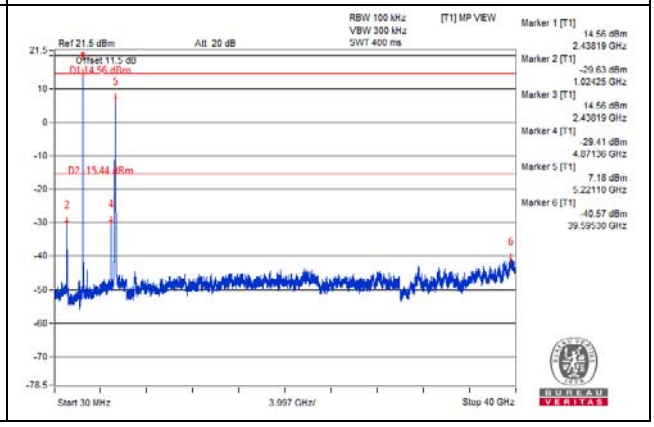
CH 11 + CH 151

Chain 0	Chain 1
	

ML-2452-HPAG4A6-01

802.11b + 802.11n (HT40)

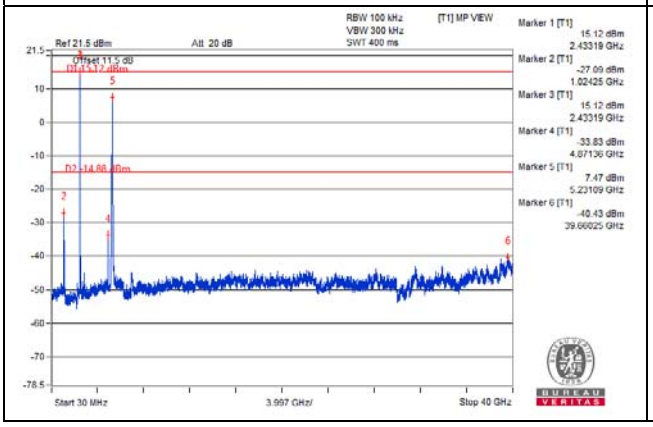
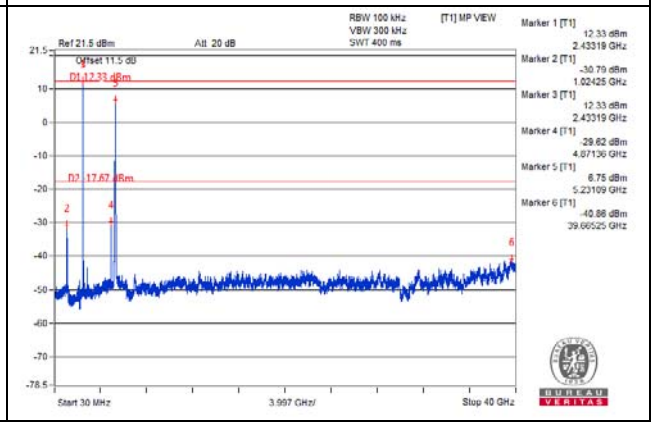
CH 6 + CH 46

Chain 0	Chain 1
	

ML-2452-HPA6M4-S36

802.11b + 802.11n (HT40)

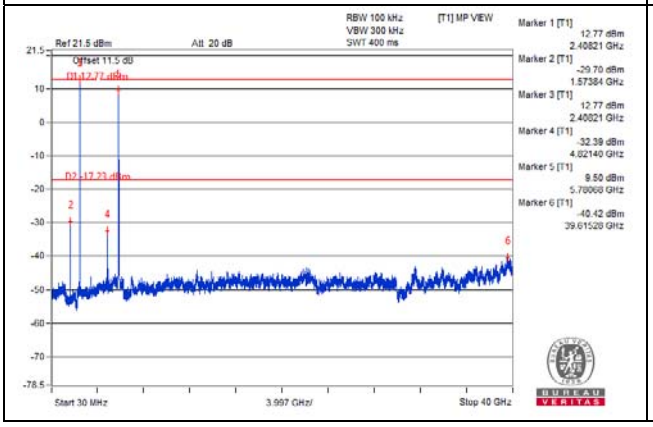
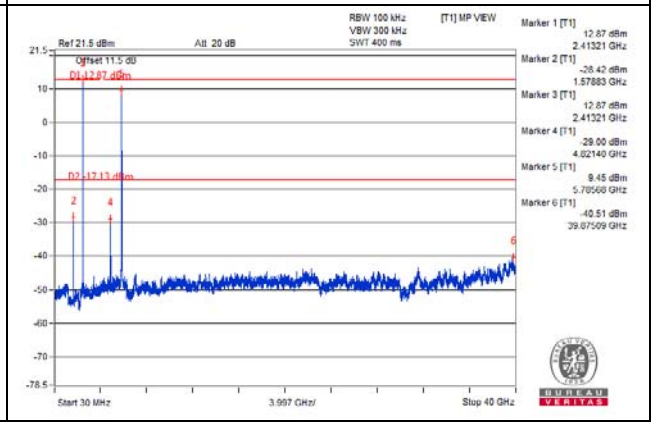
CH 6 + CH 46

Chain 0	Chain 1
	

ML-2452-PNL9M3-036

802.11b + 802.11n (HT20)

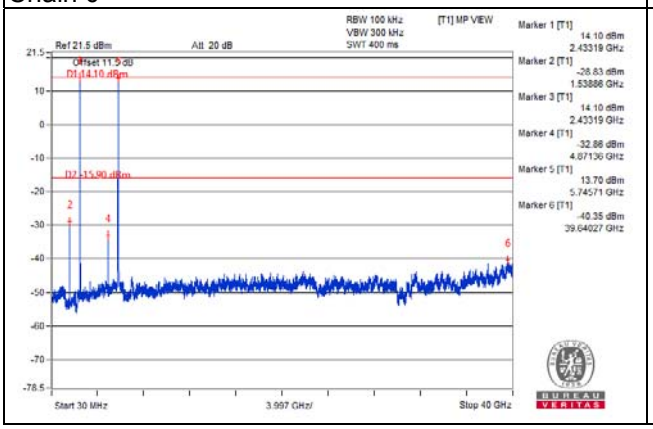
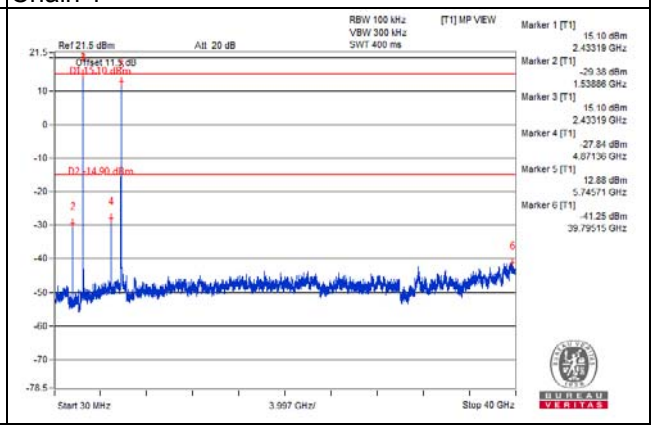
CH 1 + CH 157

Chain 0	Chain 1
	

ML-2452-PNA7-01R

802.11b + 802.11a

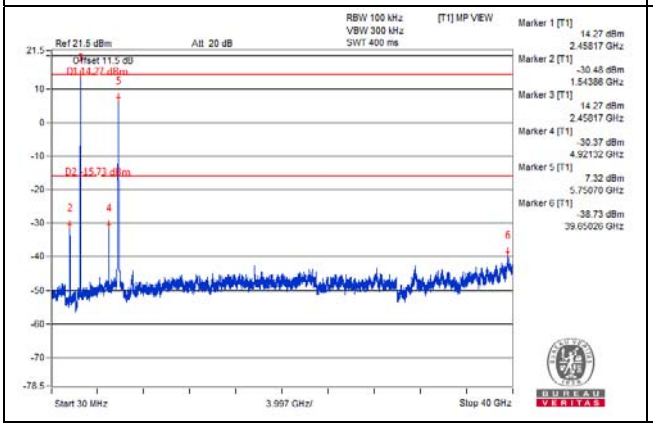
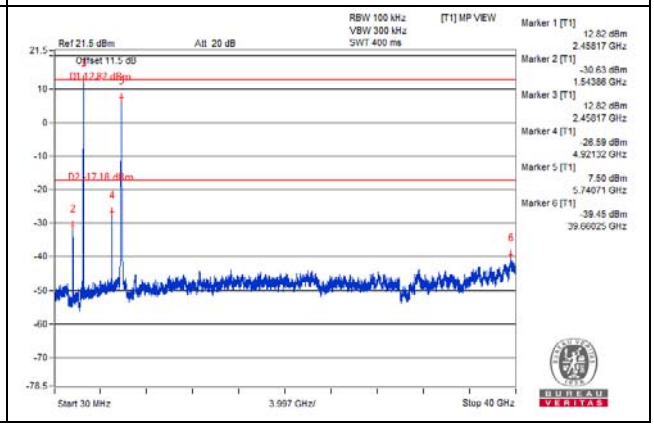
CH 6 + CH 149

Chain 0	Chain 1
	

ML-2452-PTA4M4-036

802.11b + 802.11n (HT40)

CH 11 + CH 151

Chain 0	Chain 1
	

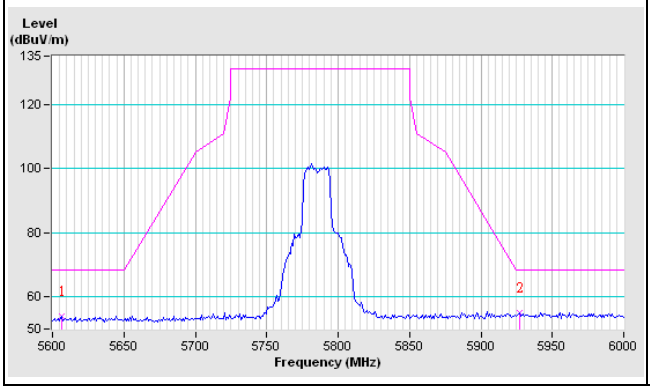
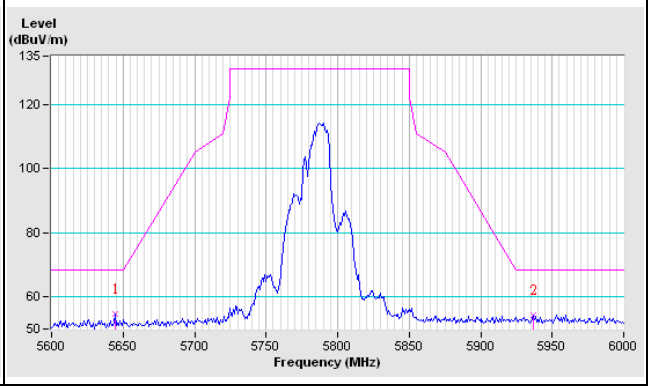
5 Pictures of Test Arrangements

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

Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

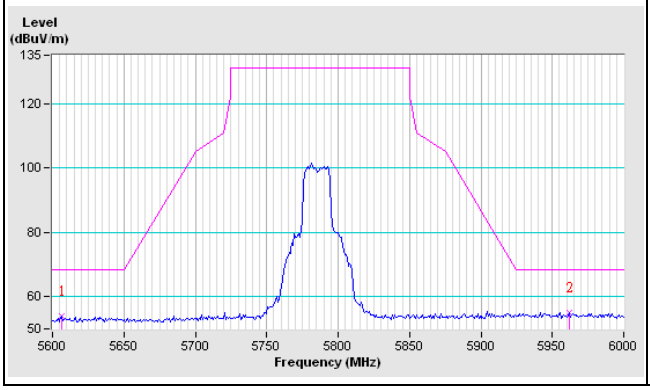
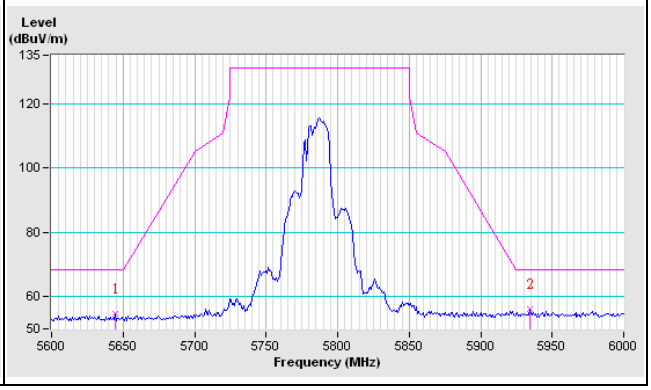
ML-2452-HPAG4A6-01 Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20)

CH157	
Horizontal	Vertical
	

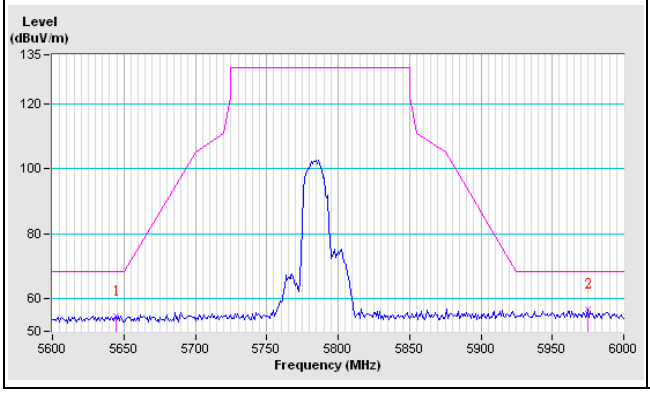
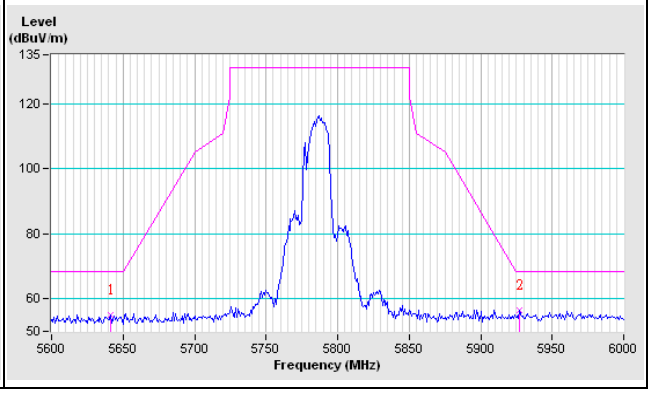
ML-2452-HPAG4A6-01 Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20)

CH157	
Horizontal	Vertical
	

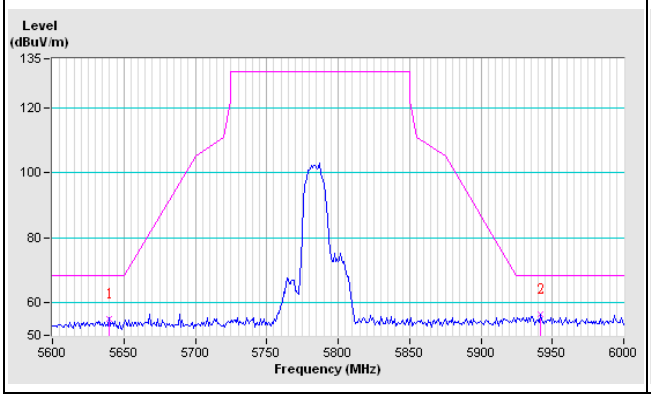
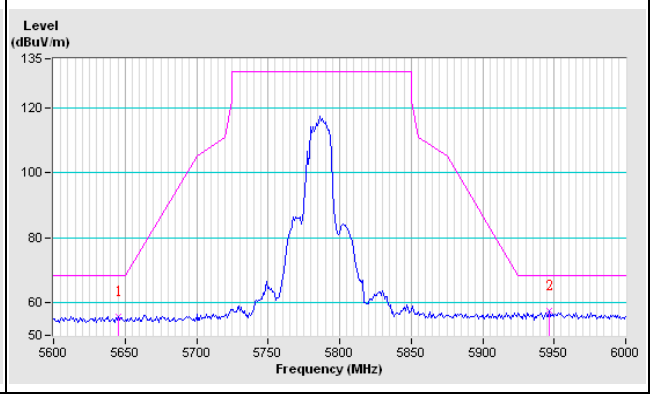
ML-2452-HPAG4A6-01 Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20)

CH157	
Horizontal	Vertical
	

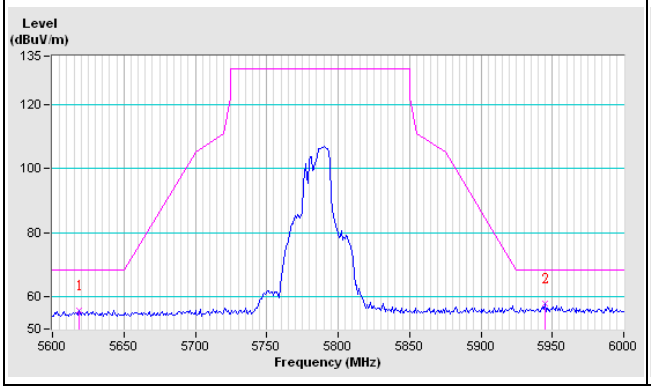
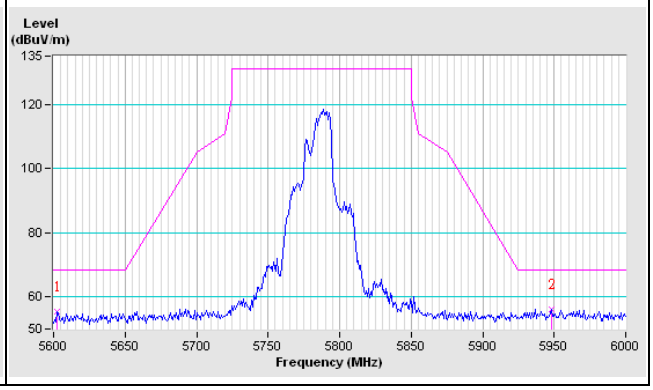
ML-2452-HPAG4A6-01 Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20)

CH157	
Horizontal	Vertical
	

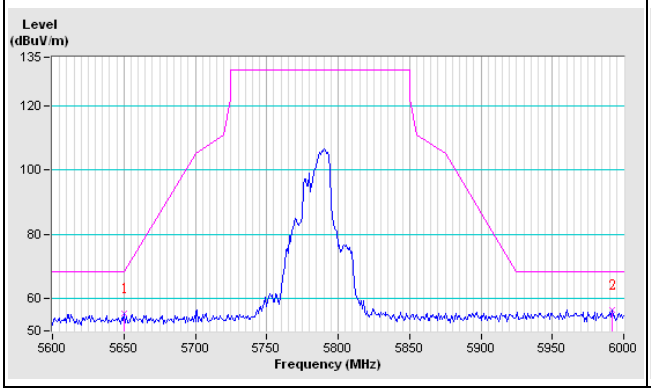
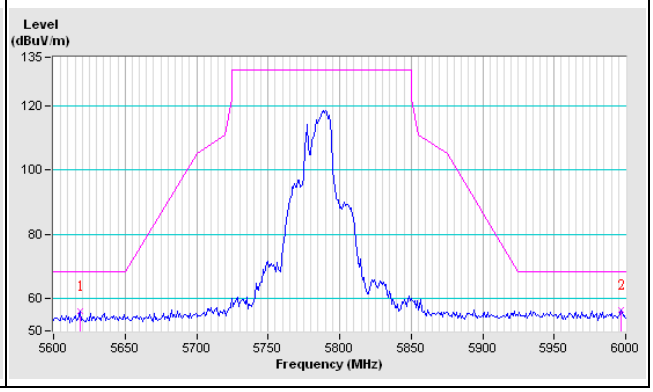
ML-2452-HPA6M4-S36 Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20)

CH157	
Horizontal	Vertical
	

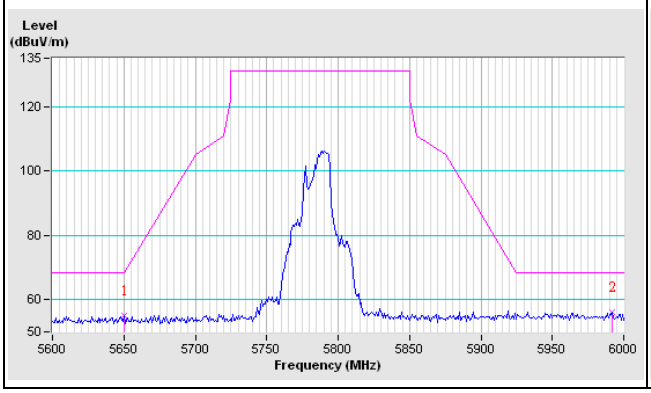
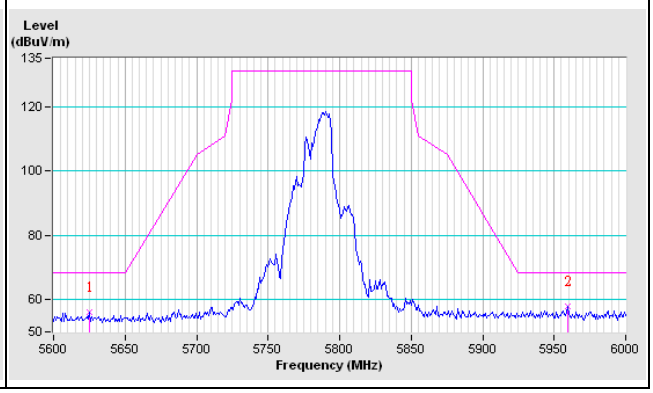
ML-2452-HPA6M4-S36 Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20)

CH157	
Horizontal	Vertical
	

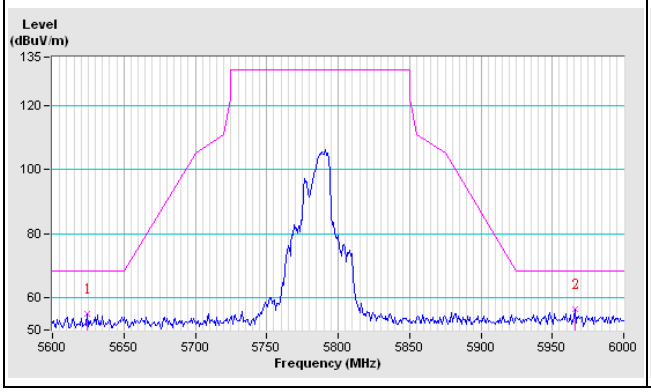
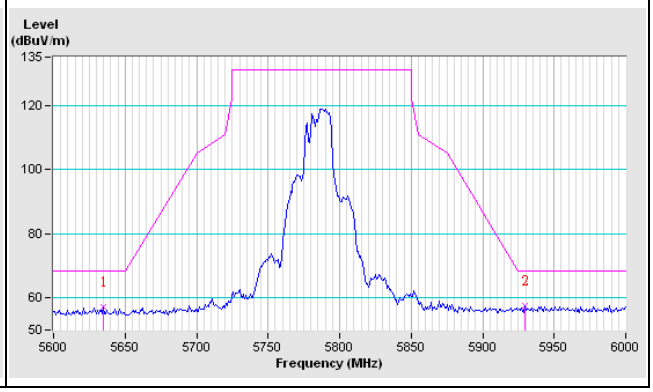
ML-2452-HPA6M4-S36 Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20)

CH157	
Horizontal	Vertical
	

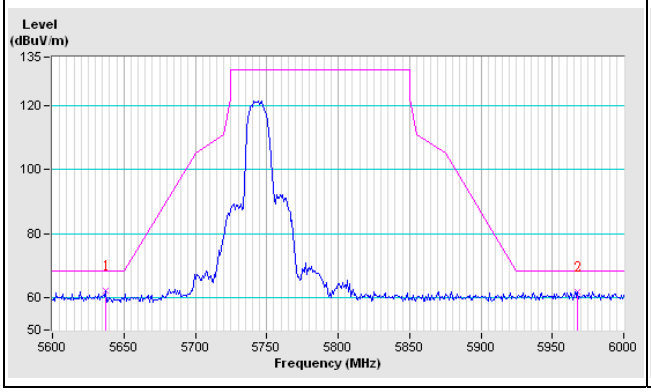
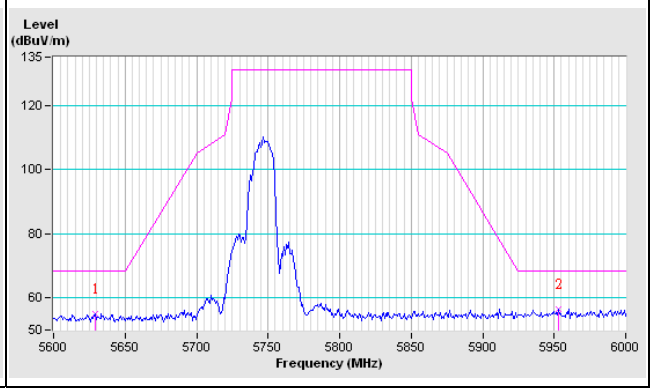
ML-2452-HPA6M4-S36 Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20)

CH157	
Horizontal	Vertical
	

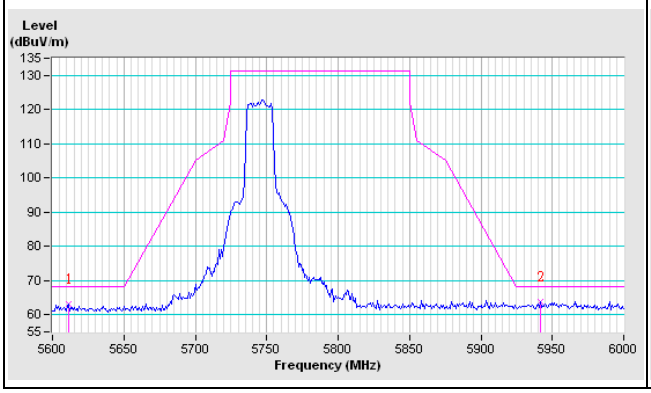
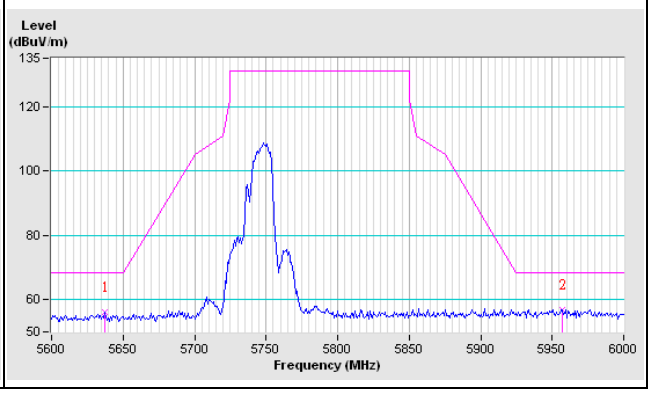
ML-2452-PNA7-01R Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20)

CH149	
Horizontal	Vertical
	

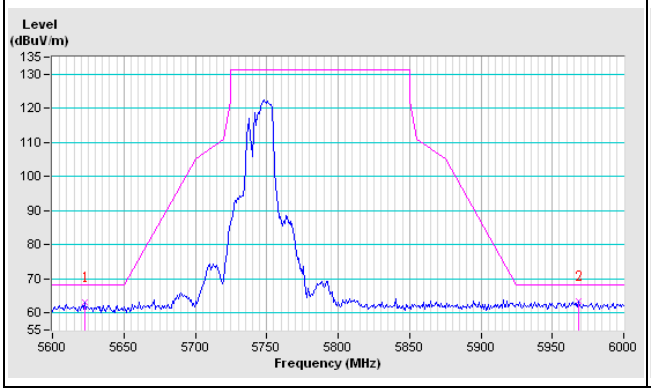
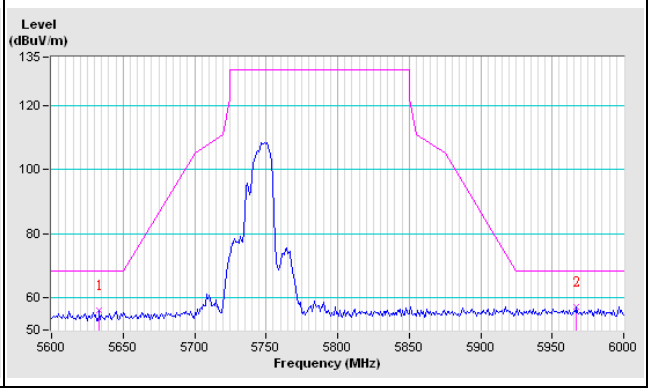
ML-2452-PNA7-01R Ant. + ML-2452-PNA7-01R Ant.

802.11n (HT20)

CH149	
Horizontal	Vertical
	

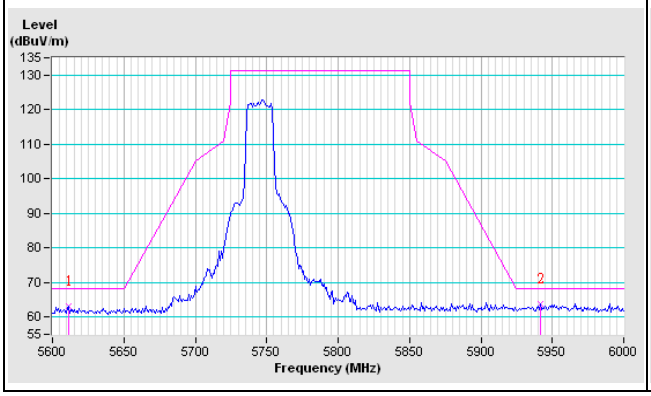
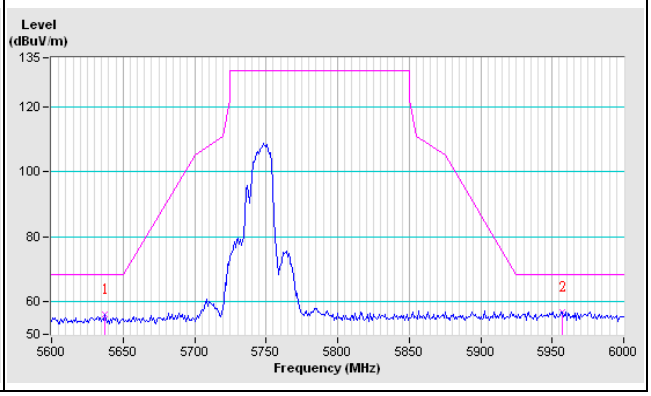
ML-2452-PNA7-01R Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20)

CH149	
Horizontal	Vertical
	

ML-2452-PNA7-01R Ant. + ML-2499-HPA8-01 Ant.

802.11n (HT20)

CH149	
Horizontal	Vertical
	

Appendix – 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 FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

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

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Web Site: www.bureauveritas-adt.com

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

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