

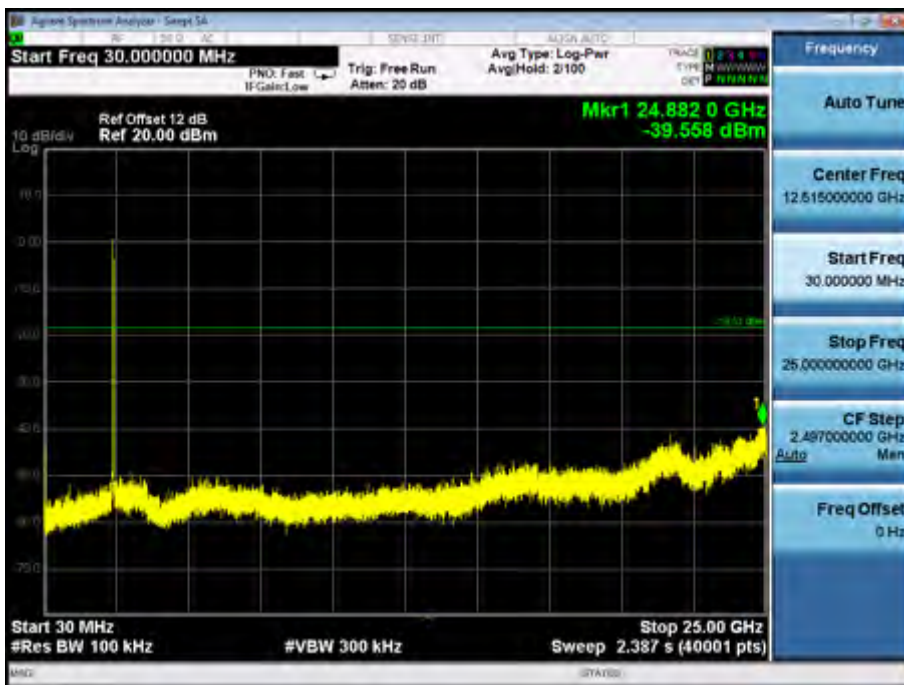
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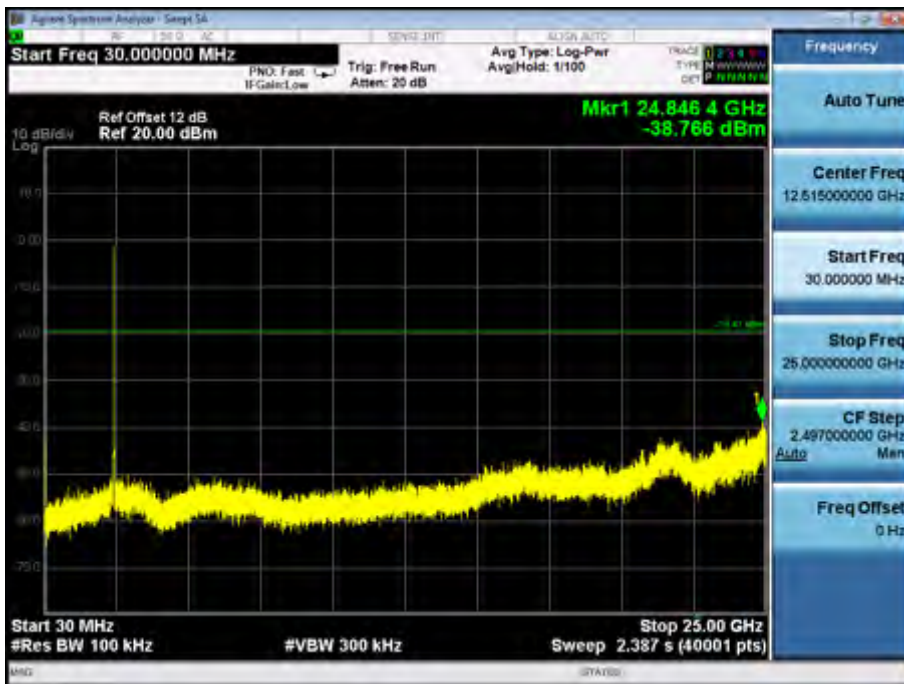
Appendix C.1: Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Wi-Fi 802.11 b mode, 1 Mbps

Low Channel



Middle Channel



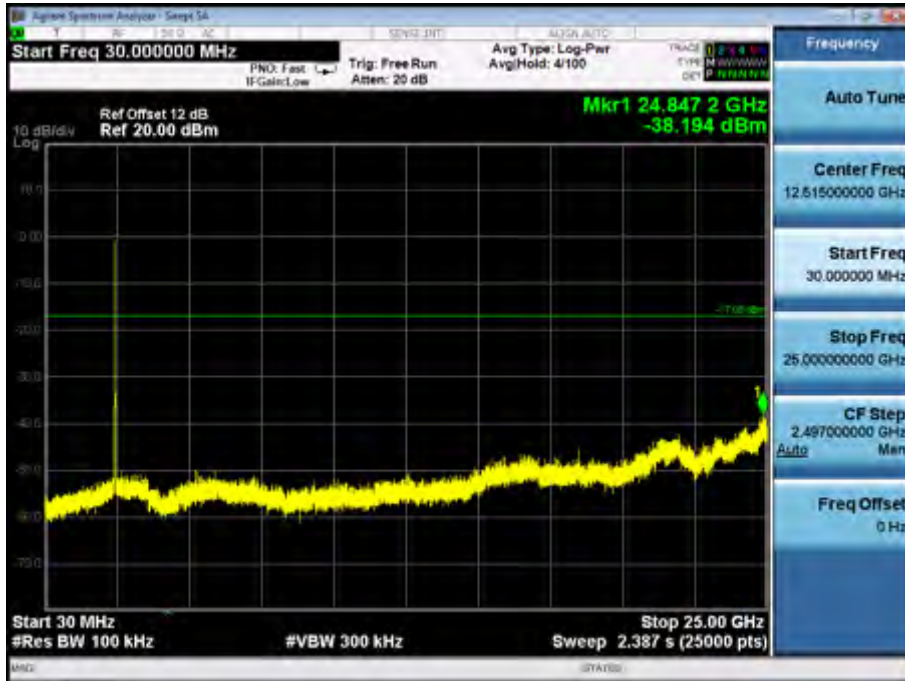
High Channel



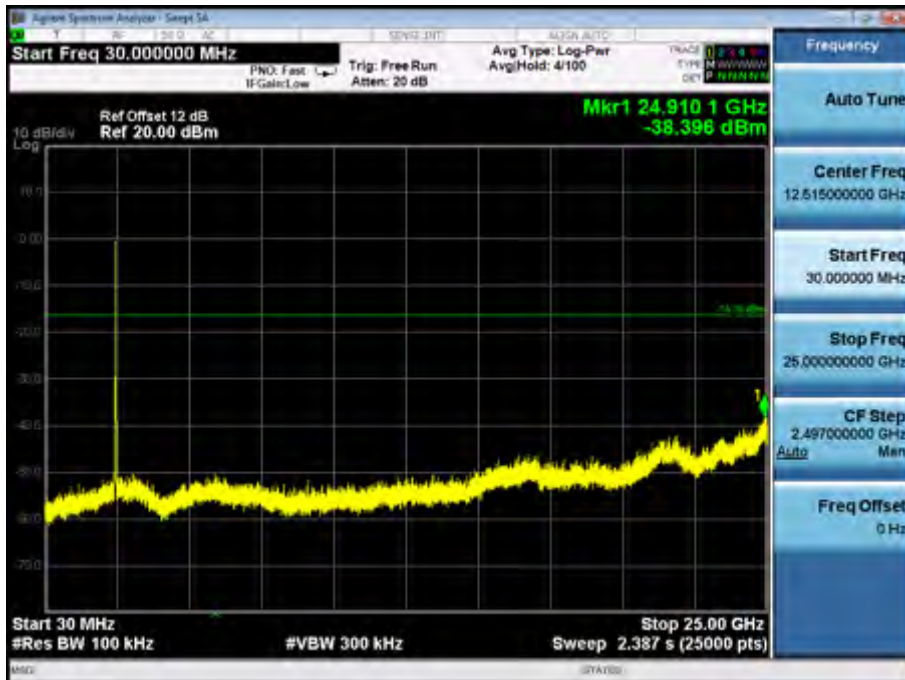
Wi-Fi 802.11 g mode, 6 Mbps
Low Channel



Middle Channel



High Channel



Wi-Fi 802.11 n(HT20) mode, MCS0
Low Channel



Middle Channel



High Channel



Wi-Fi 802.11 n(HT40) mode, MCS0
Low Channel



Middle Channel



High Channel

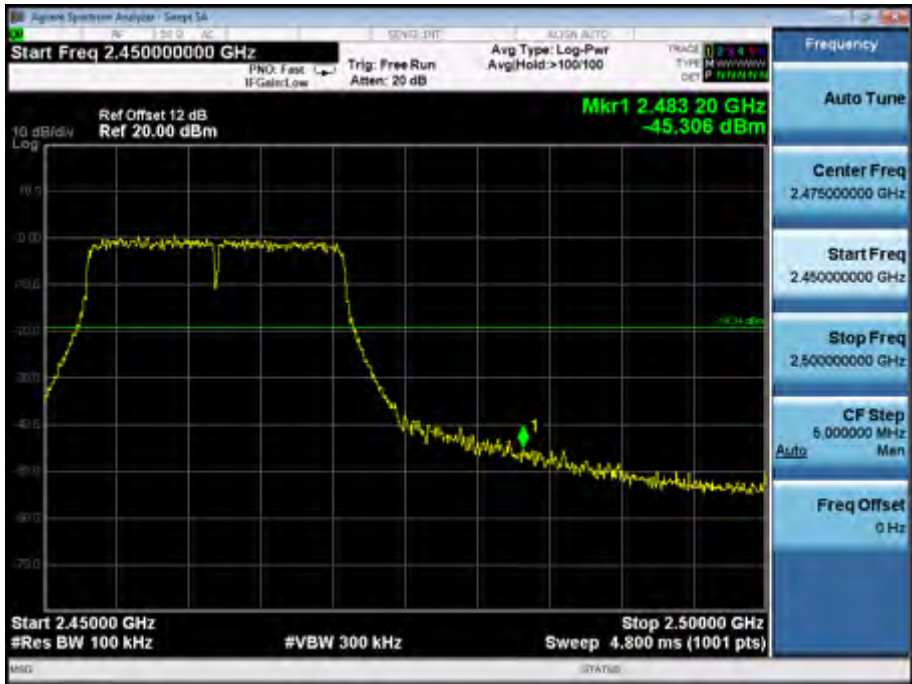


Produkte
Products

Wi-Fi 802.11 b mode, Band Edge
Low Channel

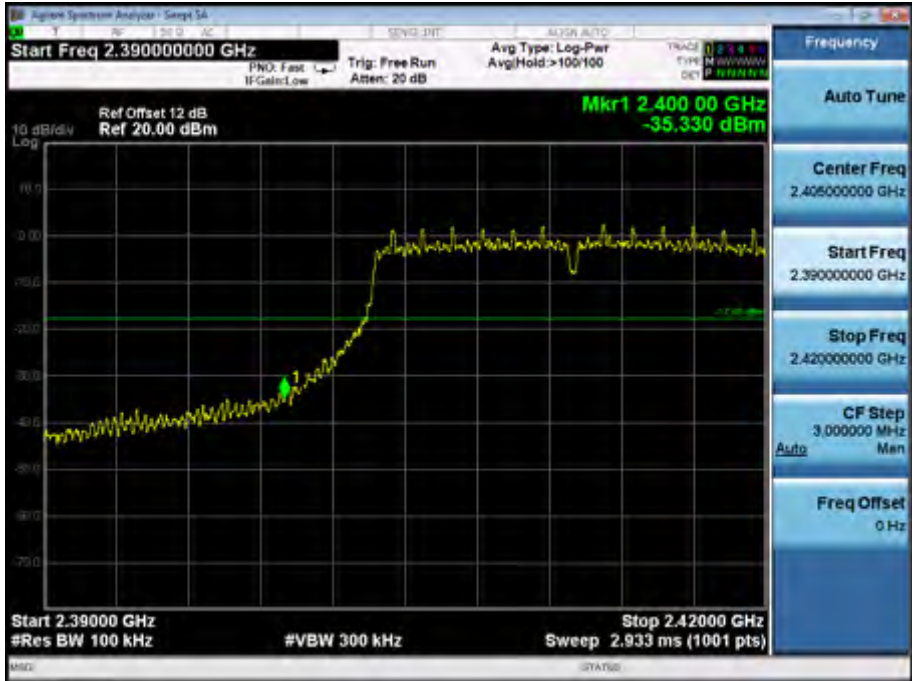


High Channel

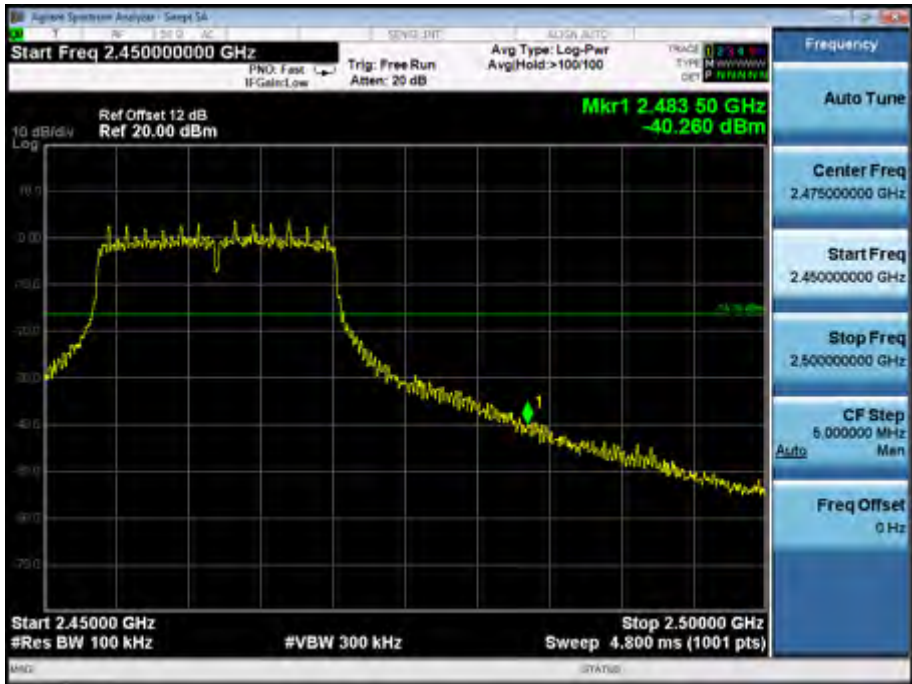


Produkte
Products

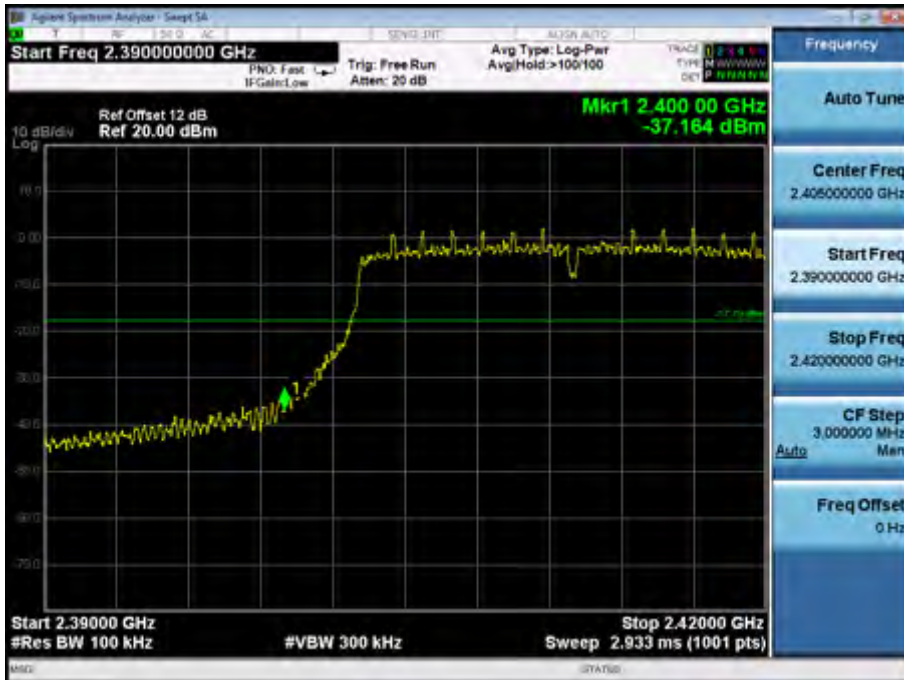
Wi-Fi 802.11 g mode, Band Edge
Low Channel



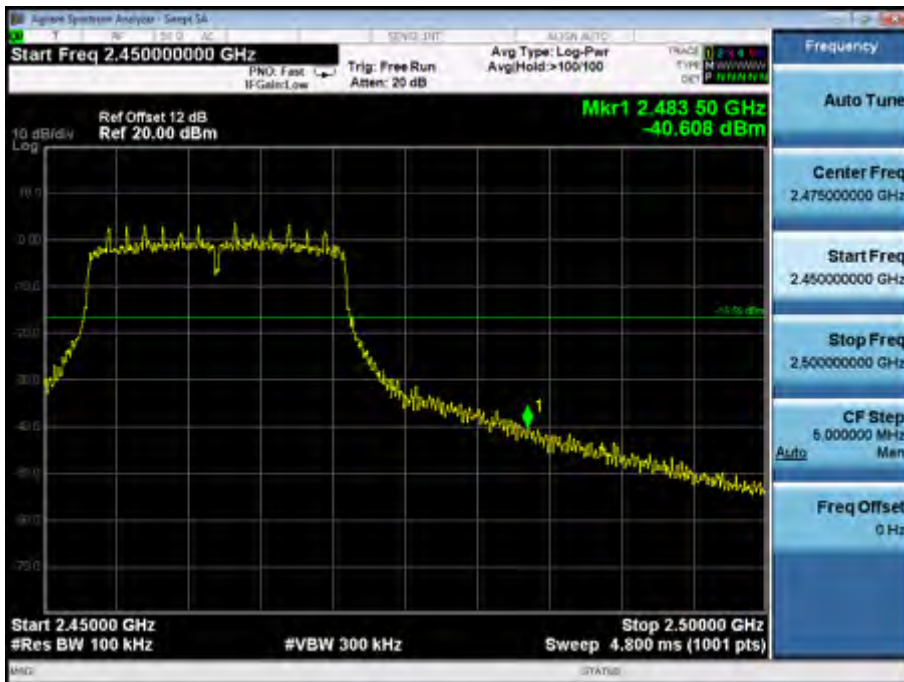
High Channel



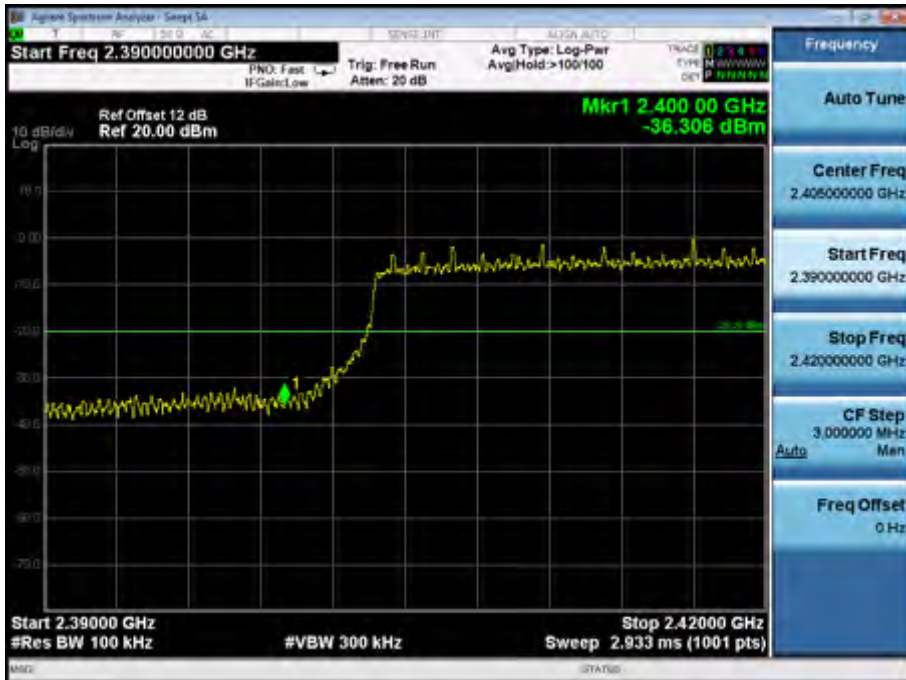
Wi-Fi 802.11 n(HT20) mode, Band Edge
Low Channel



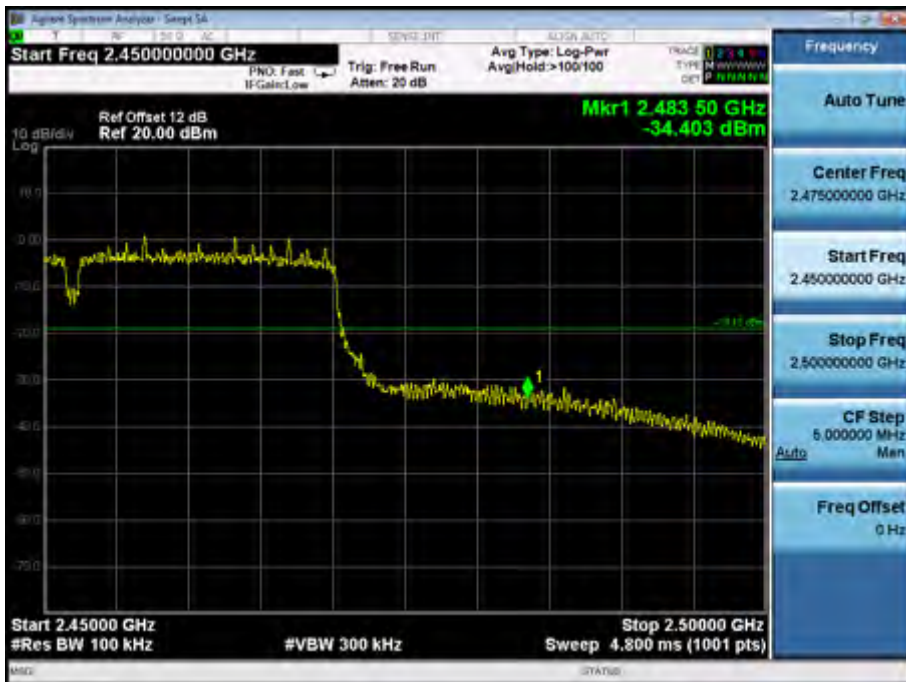
High Channel



Wi-Fi 802.11 n(HT40) mode, Band Edge
Low Channel



High Channel



Note: Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz -26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

Appendix C.2: Test Results of Radiated Spurious Emissions 30MHz - 1GHz

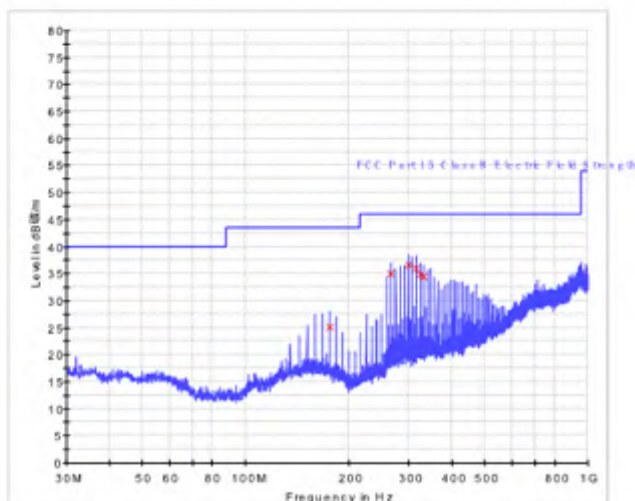
TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(B mode -low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal
 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
176.120000	25.1	1000.0	120.000	H	14.3	18.4	43.5	
266.200000	35.0	1000.0	120.000	H	15.0	11.0	46.0	
299.040000	36.6	1000.0	120.000	H	16.2	9.4	46.0	
315.440000	35.9	1000.0	120.000	H	16.6	10.1	46.0	
323.560000	34.8	1000.0	120.000	H	16.9	11.3	46.0	
331.800000	34.5	1000.0	120.000	H	17.3	11.5	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

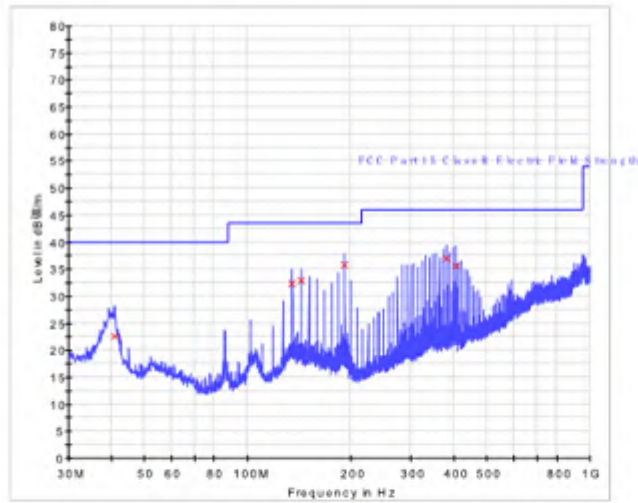
TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(B mode -low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical
 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
40.920000	22.5	1000.0	120.000	V	13.3	17.5	40.0	
135.120000	32.4	1000.0	120.000	V	14.5	11.1	43.5	
143.360000	33.0	1000.0	120.000	V	14.8	10.5	43.5	
192.480000	35.8	1000.0	120.000	V	13.1	7.7	43.5	
380.880000	36.9	1000.0	120.000	V	18.1	9.1	46.0	
405.520000	35.7	1000.0	120.000	V	18.9	10.3	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

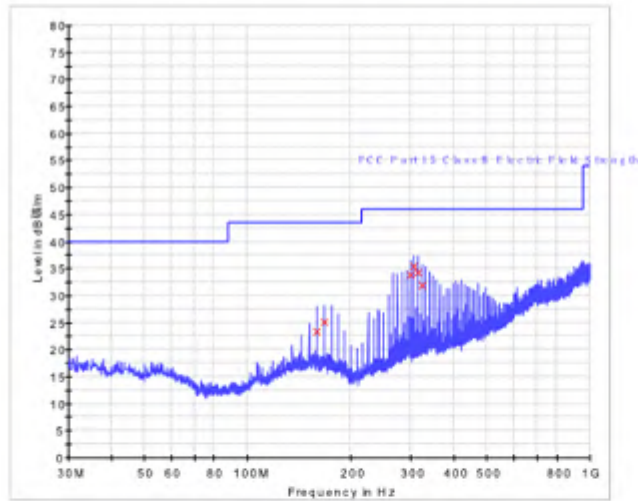
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(B mode -mid)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
159.640000	23.3	1000.0	120.000	H	15.0	20.2	43.5	
168.000000	25.0	1000.0	120.000	H	14.7	18.5	43.5	
298.920000	34.0	1000.0	120.000	H	16.2	12.1	46.0	
307.160000	35.4	1000.0	120.000	H	16.4	10.6	46.0	
315.440000	34.2	1000.0	120.000	H	16.6	11.8	46.0	
323.560000	32.0	1000.0	120.000	H	16.9	14.0	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

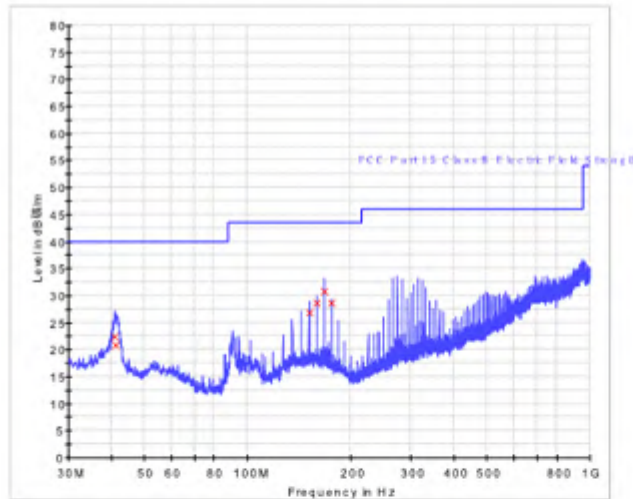
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(B mode -mid)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
40.920000	22.4	1000.0	120.000	V	13.3	17.6	40.0	
41.400000	20.8	1000.0	120.000	V	13.3	19.3	40.0	
151.520000	26.8	1000.0	120.000	V	14.9	16.7	43.5	
159.680000	28.7	1000.0	120.000	V	15.0	14.8	43.5	
167.880000	30.7	1000.0	120.000	V	14.7	12.8	43.5	
176.120000	28.6	1000.0	120.000	V	14.3	14.9	43.5	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

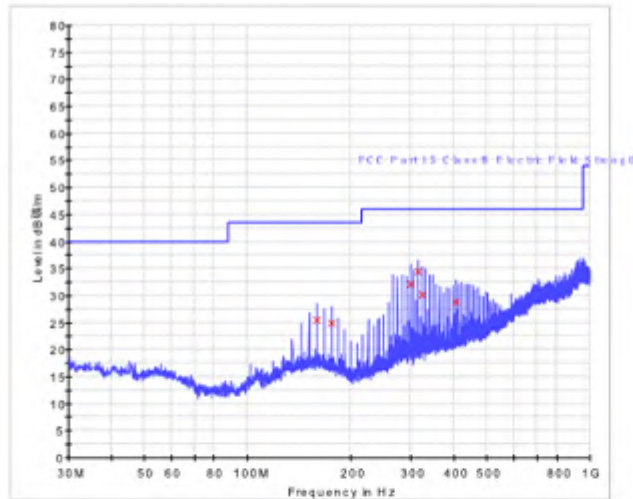
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(B mode -high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
159.720000	25.6	1000.0	120.000	H	15.0	17.9	43.5	
176.120000	25.0	1000.0	120.000	H	14.3	18.6	43.5	
298.920000	32.1	1000.0	120.000	H	16.2	13.9	46.0	
315.440000	34.4	1000.0	120.000	H	16.6	11.6	46.0	
323.560000	30.1	1000.0	120.000	H	16.9	15.9	46.0	
405.520000	28.8	1000.0	120.000	H	18.9	17.2	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

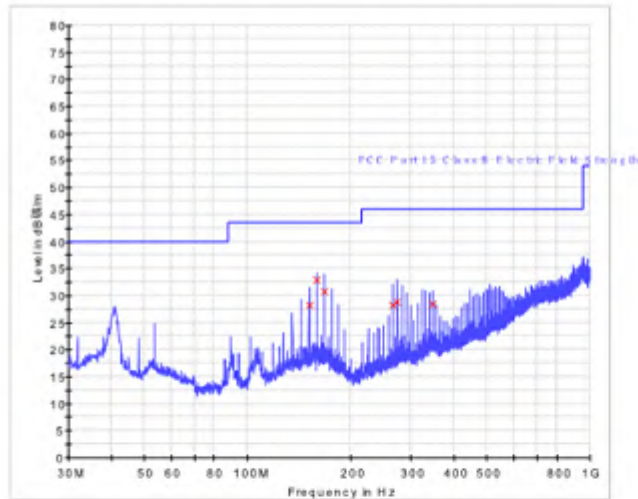
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(B mode -high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
151.480000	28.2	1000.0	120.000	V	14.9	15.3	43.5	
159.720000	32.8	1000.0	120.000	V	15.0	10.7	43.5	
168.000000	30.7	1000.0	120.000	V	14.7	12.8	43.5	
266.200000	28.2	1000.0	120.000	V	15.0	17.8	46.0	
274.440000	28.9	1000.0	120.000	V	15.4	17.1	46.0	
348.160000	28.4	1000.0	120.000	V	18.2	17.6	46.0	

Tested by: *Jacky Chen*
 20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

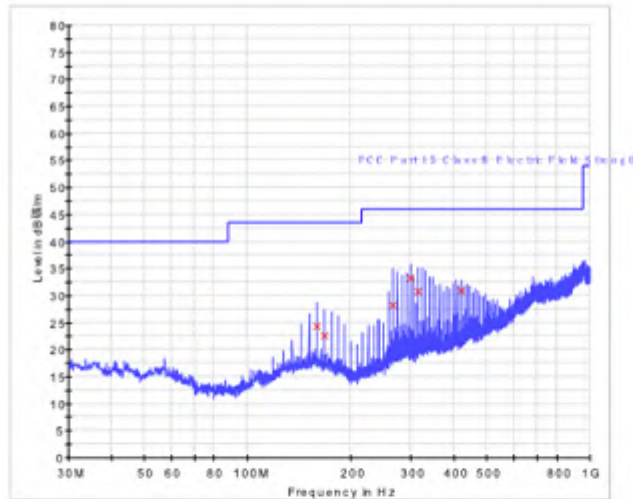
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(G mode -low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
159.720000	24.4	1000.0	120.000	H	15.0	19.1	43.5	
167.880000	22.6	1000.0	120.000	H	14.7	20.9	43.5	
266.200000	28.2	1000.0	120.000	H	15.0	17.8	46.0	
298.920000	33.2	1000.0	120.000	H	16.2	12.8	46.0	
315.440000	30.7	1000.0	120.000	H	16.6	15.3	46.0	
421.880000	31.0	1000.0	120.000	H	19.0	15.0	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

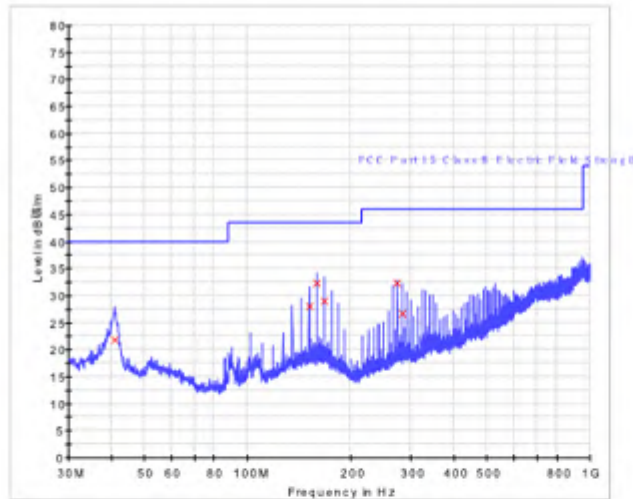
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(G mode -low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
40.920000	21.9	1000.0	120.000	V	13.3	18.1	40.0	
151.600000	28.0	1000.0	120.000	V	14.9	15.5	43.5	
159.720000	32.4	1000.0	120.000	V	15.0	11.1	43.5	
168.000000	29.1	1000.0	120.000	V	14.7	14.4	43.5	
274.440000	32.3	1000.0	120.000	V	15.4	13.7	46.0	
282.560000	26.6	1000.0	120.000	V	15.7	19.4	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

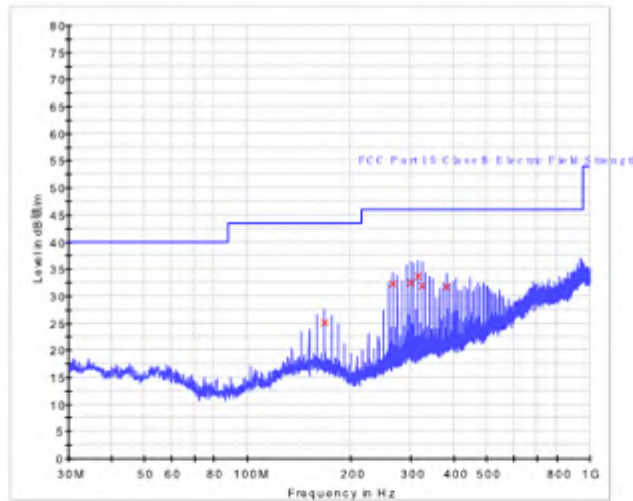
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(G mode -mid)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
167.880000	25.2	1000.0	120.000	H	14.7	18.3	43.5	
266.200000	32.2	1000.0	120.000	H	15.0	13.8	46.0	
298.920000	32.4	1000.0	120.000	H	16.2	13.6	46.0	
315.440000	33.7	1000.0	120.000	H	16.6	12.3	46.0	
323.560000	32.0	1000.0	120.000	H	16.9	14.0	46.0	
380.880000	31.8	1000.0	120.000	H	18.1	14.2	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

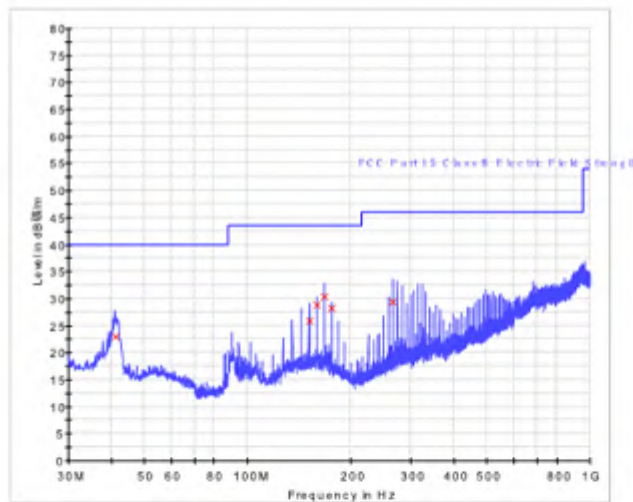
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(G mode -mid)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
41.280000	23.0	1000.0	120.000	V	13.3	17.0	40.0	
151.480000	25.8	1000.0	120.000	V	14.9	17.7	43.5	
159.600000	28.8	1000.0	120.000	V	15.0	14.7	43.5	
167.880000	30.3	1000.0	120.000	V	14.7	13.2	43.5	
176.120000	28.3	1000.0	120.000	V	14.3	15.2	43.5	
266.200000	29.4	1000.0	120.000	V	15.0	16.6	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

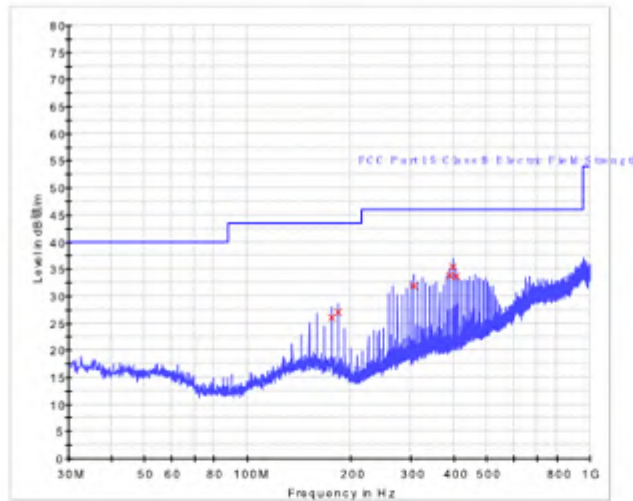
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(G mode -high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
176.120000	26.1	1000.0	120.000	H	14.3	17.4	43.5	
184.240000	27.0	1000.0	120.000	H	13.4	16.5	43.5	
307.160000	31.9	1000.0	120.000	H	16.4	14.1	46.0	
389.160000	33.9	1000.0	120.000	H	18.3	12.1	46.0	
397.280000	35.5	1000.0	120.000	H	18.7	10.5	46.0	
405.520000	33.7	1000.0	120.000	H	18.9	12.3	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

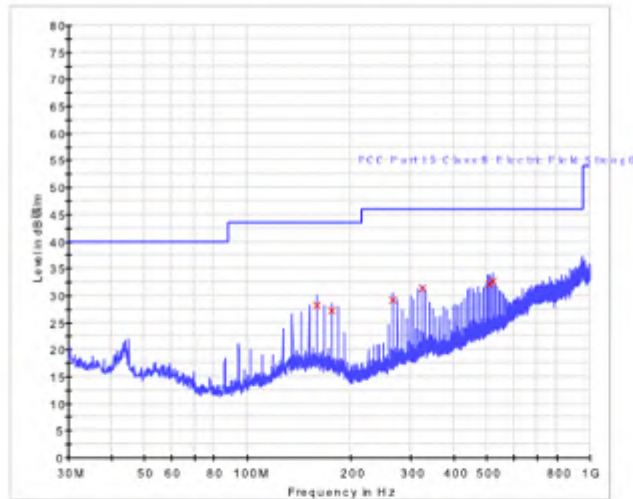
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(G mode -high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
159.720000	28.2	1000.0	120.000	V	15.0	15.3	43.5	
176.120000	27.3	1000.0	120.000	V	14.3	16.2	43.5	
266.200000	29.3	1000.0	120.000	V	15.0	16.7	46.0	
323.560000	31.3	1000.0	120.000	V	16.9	14.7	46.0	
511.960000	32.2	1000.0	120.000	V	21.5	13.8	46.0	
520.200000	32.7	1000.0	120.000	V	21.6	13.3	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

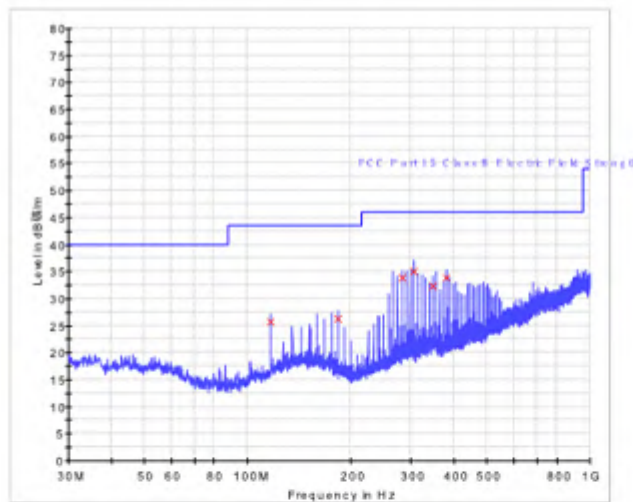
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(N20 mode -low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin qp

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
117.160000	25.6	1000.0	120.000	H	12.7	17.9	43.5	
184.240000	26.3	1000.0	120.000	H	13.4	17.2	43.5	
282.560000	33.9	1000.0	120.000	H	15.7	12.2	46.0	
307.160000	35.1	1000.0	120.000	H	16.4	10.9	46.0	
348.160000	32.3	1000.0	120.000	H	18.2	13.7	46.0	
380.880000	33.8	1000.0	120.000	H	18.1	12.2	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

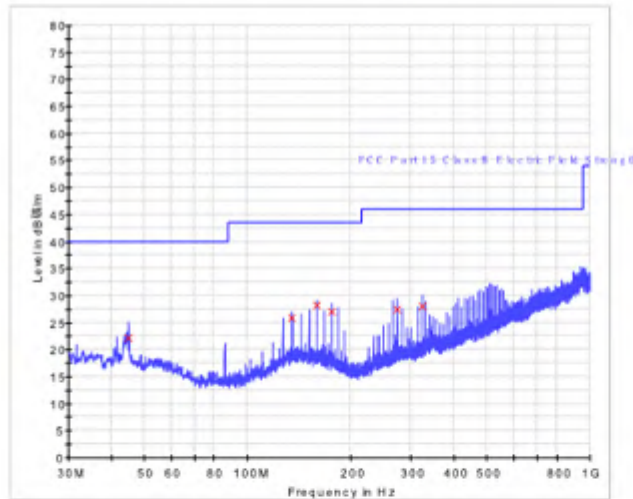
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(N20 mode -low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
45.040000	22.2	1000.0	120.000	V	13.9	17.8	40.0	
135.120000	25.8	1000.0	120.000	V	14.5	17.7	43.5	
159.720000	28.3	1000.0	120.000	V	15.0	15.2	43.5	
176.120000	27.2	1000.0	120.000	V	14.3	16.4	43.5	
274.440000	27.4	1000.0	120.000	V	15.4	18.6	46.0	
323.560000	28.1	1000.0	120.000	V	16.9	17.9	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

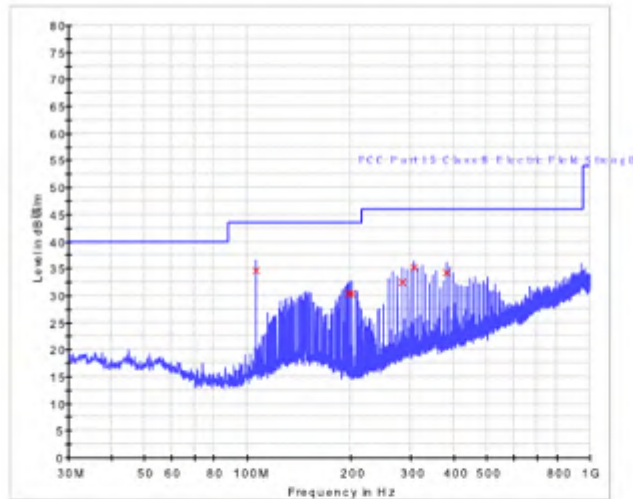
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(N20 mode -mid)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
105.800000	34.7	1000.0	120.000	H	12.1	8.8	43.5	
197.800000	30.4	1000.0	120.000	H	12.7	13.1	43.5	
202.160000	30.3	1000.0	120.000	H	12.4	13.2	43.5	
282.560000	32.6	1000.0	120.000	H	15.7	13.4	46.0	
307.160000	35.2	1000.0	120.000	H	16.4	10.8	46.0	
381.000000	34.2	1000.0	120.000	H	18.1	11.8	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

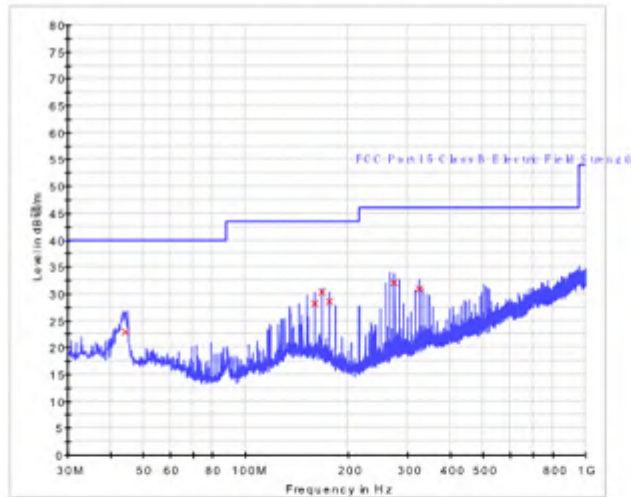
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(N20 mode -mid)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
44.200000	23.0	1000.0	120.000	V	14.0	17.0	40.0	
159.720000	28.1	1000.0	120.000	V	15.0	15.4	43.5	
168.000000	30.3	1000.0	120.000	V	14.7	13.2	43.5	
176.120000	28.6	1000.0	120.000	V	14.3	14.9	43.5	
274.440000	32.1	1000.0	120.000	V	15.4	13.9	46.0	
323.560000	30.9	1000.0	120.000	V	16.9	15.1	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

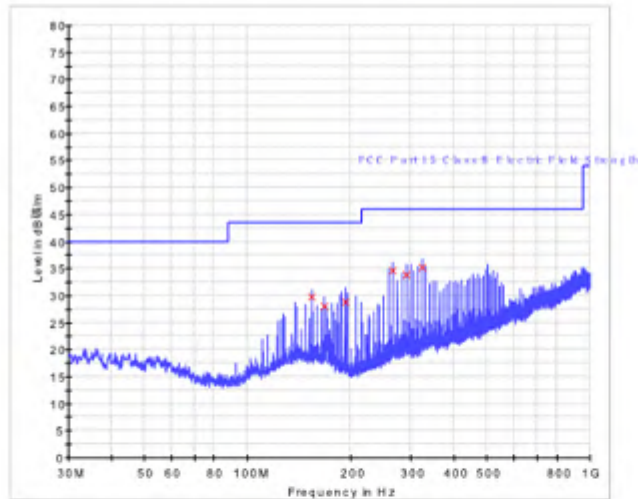
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(N20 mode -high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
154.400000	29.8	1000.0	120.000	H	15.1	13.7	43.5	
168.000000	28.1	1000.0	120.000	H	14.7	15.4	43.5	
193.080000	28.9	1000.0	120.000	H	13.1	14.6	43.5	
266.200000	34.6	1000.0	120.000	H	15.0	11.4	46.0	
290.800000	33.8	1000.0	120.000	H	16.1	12.2	46.0	
323.560000	35.2	1000.0	120.000	H	16.9	10.8	46.0	

Tested by: *Jacky Chen*
 20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

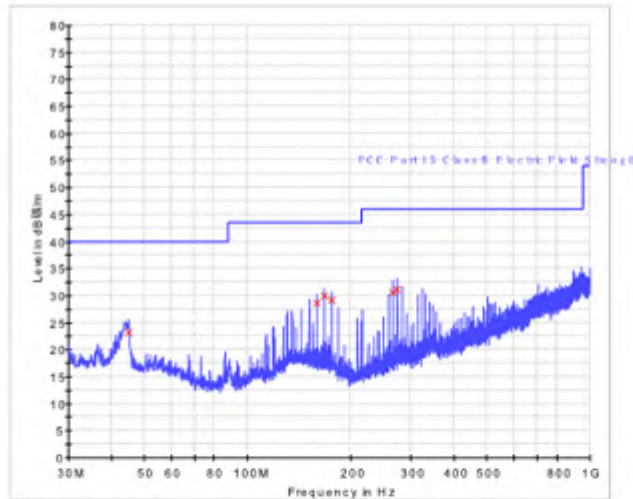
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(N20 mode -high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
44.920000	23.2	1000.0	120.000	V	13.9	16.9	40.0	
159.720000	28.6	1000.0	120.000	V	15.0	14.9	43.5	
167.880000	30.1	1000.0	120.000	V	14.7	13.4	43.5	
176.120000	29.2	1000.0	120.000	V	14.3	14.3	43.5	
266.200000	30.6	1000.0	120.000	V	15.0	15.4	46.0	
274.440000	31.2	1000.0	120.000	V	15.4	14.8	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

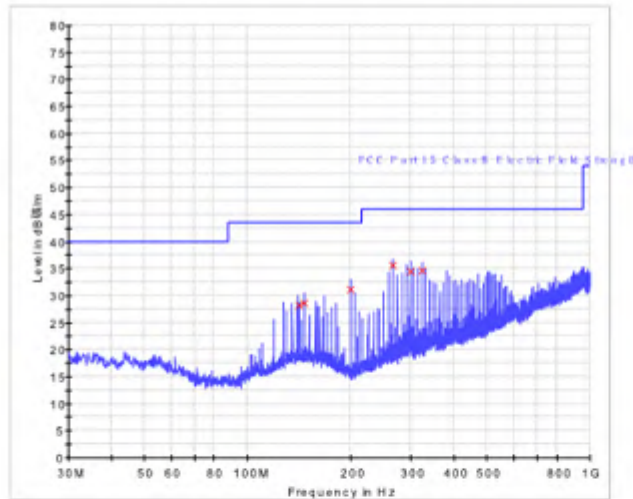
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(N40 mode -low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
141.560000	28.2	1000.0	120.000	H	14.8	15.3	43.5	
147.000000	28.6	1000.0	120.000	H	14.8	14.9	43.5	
200.720000	31.1	1000.0	120.000	H	12.4	12.5	43.5	
266.200000	35.6	1000.0	120.000	H	15.0	10.4	46.0	
298.920000	34.5	1000.0	120.000	H	16.2	11.5	46.0	
323.560000	34.7	1000.0	120.000	H	16.9	11.3	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

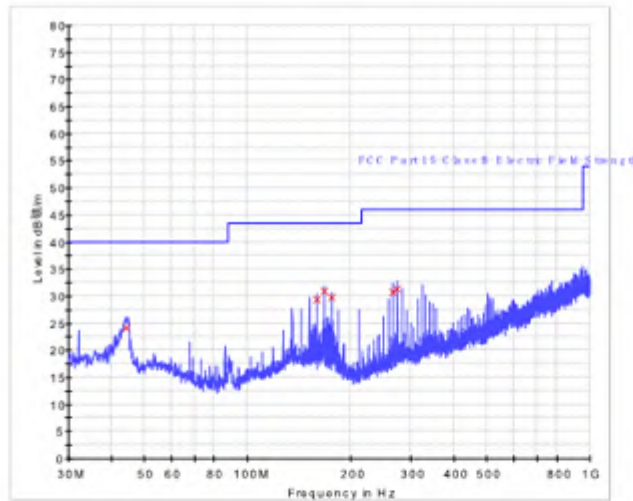
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(N40 mode -low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)	Comment
44.200000	24.1	1000.0	120.000	V	14.0	15.9	40.0	
159.720000	29.4	1000.0	120.000	V	15.0	14.2	43.5	
167.880000	30.9	1000.0	120.000	V	14.7	12.6	43.5	
176.120000	29.7	1000.0	120.000	V	14.3	13.8	43.5	
266.200000	30.7	1000.0	120.000	V	15.0	15.3	46.0	
274.440000	31.3	1000.0	120.000	V	15.4	14.7	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

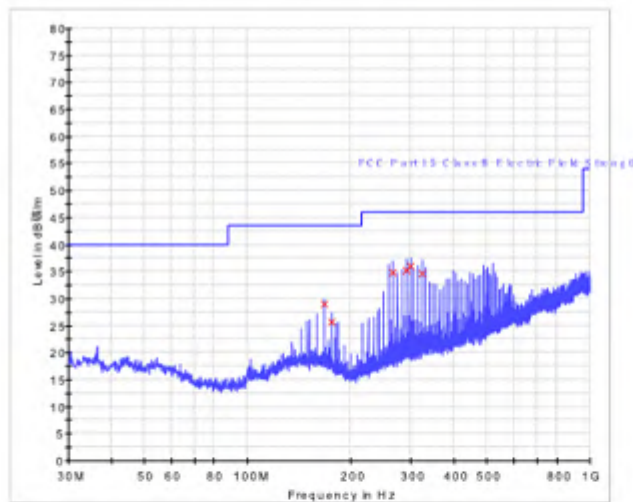
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(N40 mode -mid)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
168.000000	29.0	1000.0	120.000	H	14.7	14.5	43.5	
176.120000	25.6	1000.0	120.000	H	14.3	17.9	43.5	
266.200000	34.8	1000.0	120.000	H	15.0	11.2	46.0	
290.800000	35.3	1000.0	120.000	H	16.1	10.7	46.0	
299.040000	36.1	1000.0	120.000	H	16.2	9.9	46.0	
323.560000	34.6	1000.0	120.000	H	16.9	11.4	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

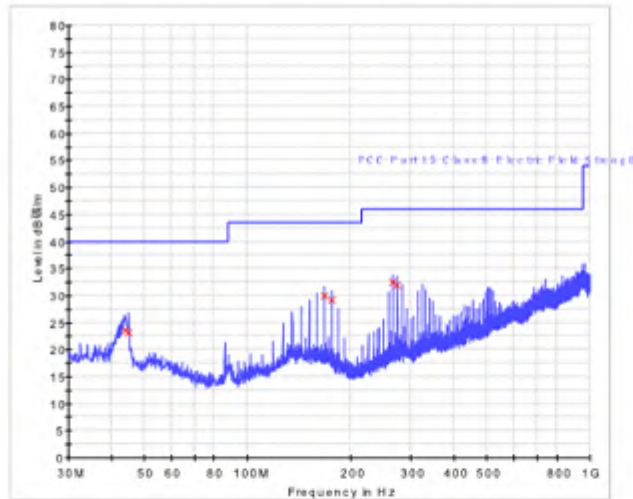
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(N40 mode -mid)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
43.840000	23.5	1000.0	120.000	V	13.9	16.5	40.0	
45.040000	23.1	1000.0	120.000	V	13.9	16.9	40.0	
167.880000	30.0	1000.0	120.000	V	14.7	13.5	43.5	
176.120000	29.1	1000.0	120.000	V	14.3	14.4	43.5	
266.200000	32.5	1000.0	120.000	V	15.0	13.5	46.0	
274.440000	31.9	1000.0	120.000	V	15.4	14.1	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

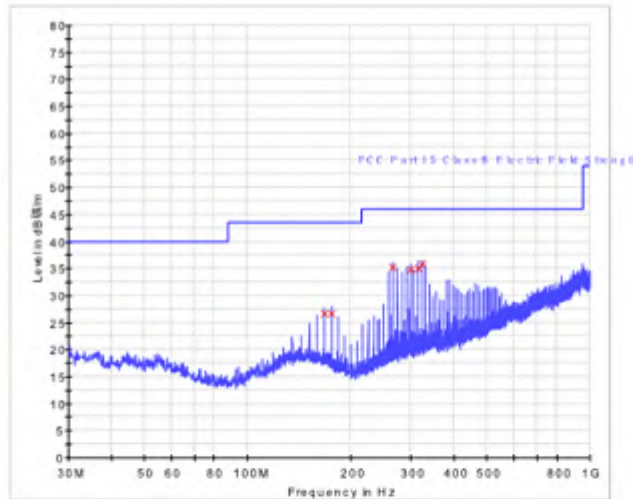
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(N40 mode -high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
167.880000	26.6	1000.0	120.000	H	14.7	16.9	43.5	
176.120000	26.7	1000.0	120.000	H	14.3	16.8	43.5	
266.200000	35.3	1000.0	120.000	H	15.0	10.8	46.0	
298.920000	34.8	1000.0	120.000	H	16.2	11.3	46.0	
315.440000	35.0	1000.0	120.000	H	16.6	11.0	46.0	
323.560000	35.9	1000.0	120.000	H	16.9	10.1	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

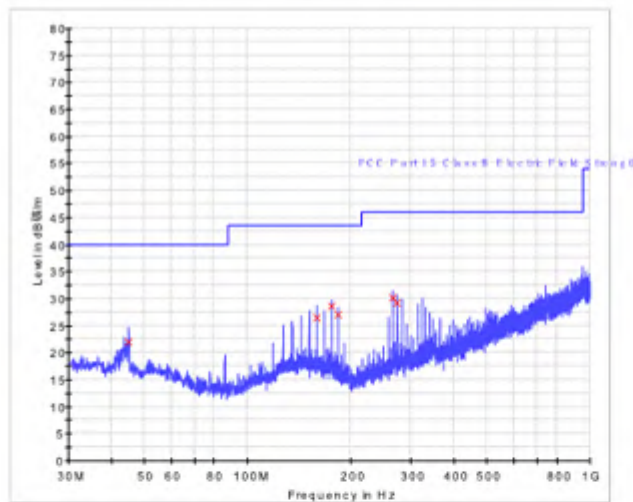
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: WIFI(N40 mode -high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency range: 30M-1000MHz
 Receiver: ESCI 3
 Transducer: VULB9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
45.040000	22.0	1000.0	120.000	V	13.9	18.0	40.0	
159.720000	26.5	1000.0	120.000	V	15.0	17.0	43.5	
176.120000	28.6	1000.0	120.000	V	14.3	14.9	43.5	
184.240000	27.1	1000.0	120.000	V	13.4	16.5	43.5	
266.200000	30.1	1000.0	120.000	V	15.0	15.9	46.0	
274.440000	29.2	1000.0	120.000	V	15.4	16.8	46.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

1GHz - 18GHz

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

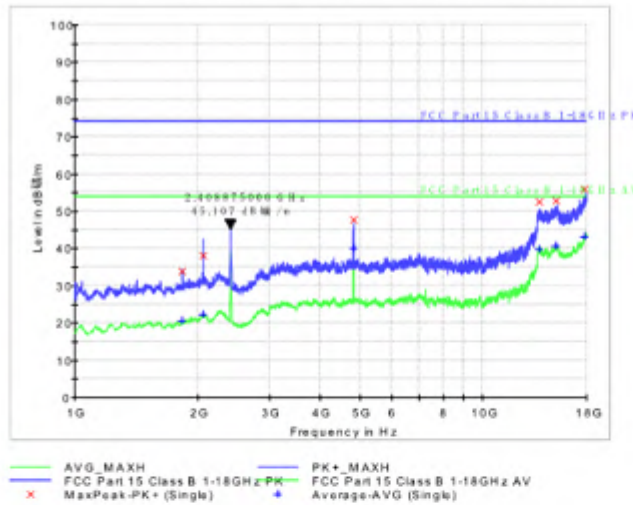
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(B mode -low)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_WiFi PA AMP EXT & Notch Filter



Tested by: *Jacky Chen*
20171203
Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1839.000000	20.5	1000.0	1000.000	H	-16.6	33.5	54.0	
2069.000000	22.2	1000.0	1000.000	H	-15.1	31.8	54.0	
4823.000000	40.2	1000.0	1000.000	H	-7.7	13.8	54.0	
13733.000000	39.9	1000.0	1000.000	H	3.4	14.1	54.0	
15138.000000	40.7	1000.0	1000.000	H	5.6	13.3	54.0	
17809.000000	43.3	1000.0	1000.000	H	9.6	10.7	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1839.000000	33.9	1000.0	1000.000	H	-16.6	40.1	74.0	
2069.000000	38.2	1000.0	1000.000	H	-15.1	35.8	74.0	
4823.000000	47.7	1000.0	1000.000	H	-7.7	26.3	74.0	
13733.000000	52.7	1000.0	1000.000	H	3.4	21.3	74.0	
15138.000000	52.9	1000.0	1000.000	H	5.6	21.1	74.0	
17809.000000	55.8	1000.0	1000.000	H	9.6	18.2	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

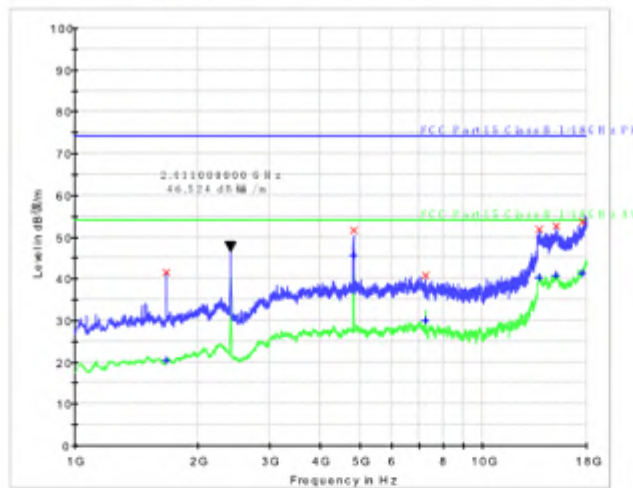
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(B mode-low)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP_EXT& Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1678.000000	20.4	1000.0	1000.000	V	-17.3	33.7	54.0	
4823.000000	45.5	1000.0	1000.000	V	-7.7	8.5	54.0	
7235.000000	30.1	1000.0	1000.000	V	-5.0	23.9	54.0	
13741.000000	40.3	1000.0	1000.000	V	3.4	13.7	54.0	
15144.000000	40.8	1000.0	1000.000	V	5.7	13.2	54.0	
17554.000000	41.4	1000.0	1000.000	V	9.1	12.6	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1678.000000	41.7	1000.0	1000.000	V	-17.3	32.3	74.0	
4823.000000	51.6	1000.0	1000.000	V	-7.7	22.4	74.0	
7235.000000	40.7	1000.0	1000.000	V	-5.0	33.3	74.0	
13741.000000	51.9	1000.0	1000.000	V	3.4	22.1	74.0	
15144.000000	52.8	1000.0	1000.000	V	5.7	21.2	74.0	
17554.000000	53.8	1000.0	1000.000	V	9.1	20.2	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

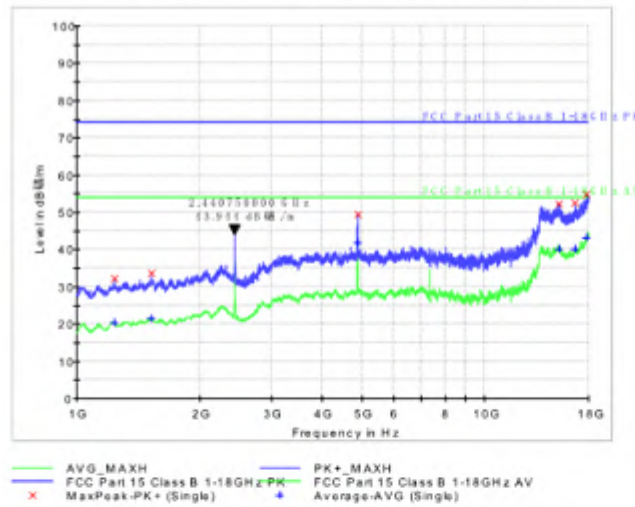
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(B mode -mid)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_Wifi PnAMP EXT& Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1238.000000	20.2	1000.0	1000.000	H	-19.0	33.8	54.0	
1523.000000	21.5	1000.0	1000.000	H	-17.9	32.5	54.0	
4882.000000	41.9	1000.0	1000.000	H	-7.4	12.1	54.0	
15267.000000	40.2	1000.0	1000.000	H	5.4	13.8	54.0	
16697.000000	40.1	1000.0	1000.000	H	5.9	13.9	54.0	
17798.000000	43.2	1000.0	1000.000	H	9.6	10.8	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1238.000000	32.3	1000.0	1000.000	H	-19.0	41.7	74.0	
1523.000000	33.8	1000.0	1000.000	H	-17.9	40.3	74.0	
4882.000000	49.3	1000.0	1000.000	H	-7.4	24.7	74.0	
15267.000000	52.3	1000.0	1000.000	H	5.4	21.7	74.0	
16697.000000	52.5	1000.0	1000.000	H	5.9	21.5	74.0	
17798.000000	54.8	1000.0	1000.000	H	9.6	19.2	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

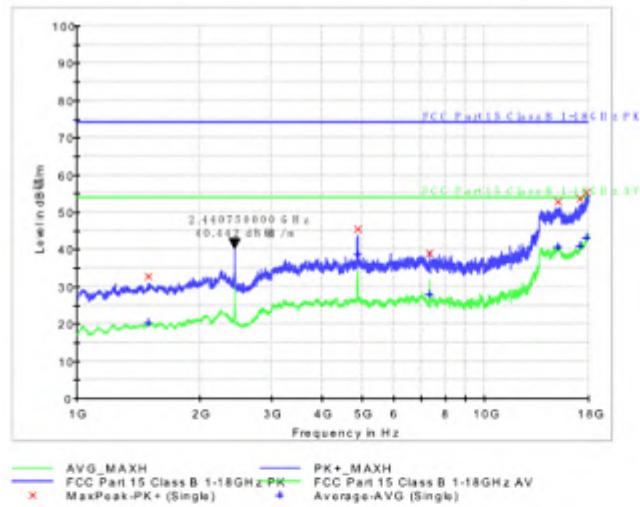
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(B mode -mid)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP EXT & Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1495.000000	20.2	1000.0	1000.000	V	-18.1	53.8	74.0	
4882.000000	38.6	1000.0	1000.000	V	-7.4	35.4	74.0	
7328.000000	28.0	1000.0	1000.000	V	-5.6	46.0	74.0	
15146.000000	40.6	1000.0	1000.000	V	5.7	33.4	74.0	
17180.000000	41.1	1000.0	1000.000	V	7.7	33.0	74.0	
17781.000000	43.2	1000.0	1000.000	V	9.3	30.8	74.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1495.000000	32.8	1000.0	1000.000	V	-18.1	41.2	74.0	
4882.000000	45.4	1000.0	1000.000	V	-7.4	28.6	74.0	
7328.000000	39.1	1000.0	1000.000	V	-5.6	34.9	74.0	
15146.000000	52.9	1000.0	1000.000	V	5.7	21.1	74.0	
17180.000000	53.6	1000.0	1000.000	V	7.7	20.4	74.0	
17781.000000	55.3	1000.0	1000.000	V	9.3	18.7	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

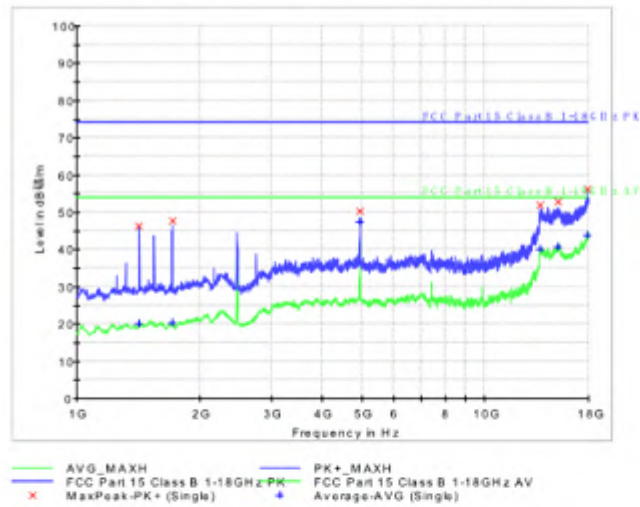
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(B mode -high)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP EXT & Notch filter



Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1423.000000	20.1	1000.0	1000.000	H	-18.9	33.9	54.0	
1714.000000	20.3	1000.0	1000.000	H	-17.2	33.7	54.0	
4944.000000	47.4	1000.0	1000.000	H	-7.5	6.6	54.0	
13716.000000	40.0	1000.0	1000.000	H	3.4	14.0	54.0	
15180.000000	40.6	1000.0	1000.000	H	5.6	13.4	54.0	
17926.000000	43.8	1000.0	1000.000	H	10.2	10.2	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1423.000000	46.4	1000.0	1000.000	H	-18.9	27.6	74.0	
1714.000000	47.8	1000.0	1000.000	H	-17.2	26.2	74.0	
4944.000000	50.3	1000.0	1000.000	H	-7.5	23.7	74.0	
13716.000000	52.0	1000.0	1000.000	H	3.4	22.0	74.0	
15180.000000	52.9	1000.0	1000.000	H	5.6	21.1	74.0	
17926.000000	56.3	1000.0	1000.000	H	10.2	17.7	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

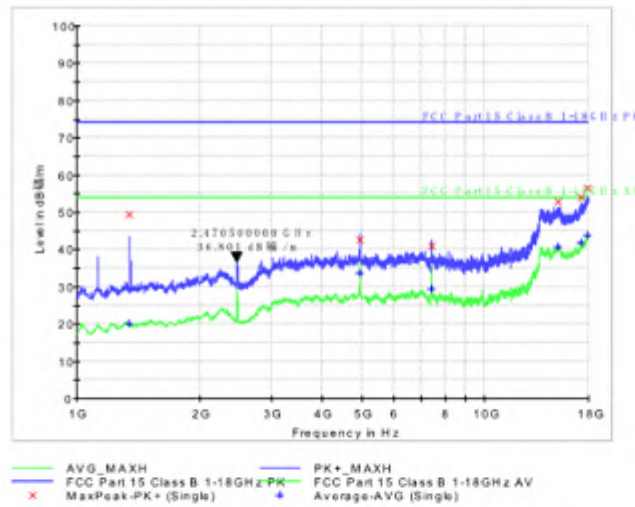
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(B mode -high)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP EXT & Notch filter



Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1346.000000	20.1	1000.0	1000.000	V	-19.0	34.0	54.0	
4942.000000	33.7	1000.0	1000.000	V	-7.5	20.3	54.0	
7413.000000	29.3	1000.0	1000.000	V	-5.4	24.7	54.0	
15189.000000	40.6	1000.0	1000.000	V	5.6	13.4	54.0	
17265.000000	41.7	1000.0	1000.000	V	8.4	12.3	54.0	
17902.000000	43.8	1000.0	1000.000	V	10.0	10.2	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1346.000000	49.5	1000.0	1000.000	V	-19.0	24.5	74.0	
4942.000000	42.7	1000.0	1000.000	V	-7.5	31.3	74.0	
7413.000000	41.0	1000.0	1000.000	V	-5.4	33.0	74.0	
15189.000000	52.9	1000.0	1000.000	V	5.6	21.1	74.0	
17265.000000	53.9	1000.0	1000.000	V	8.4	20.1	74.0	
17902.000000	56.4	1000.0	1000.000	V	10.0	17.6	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

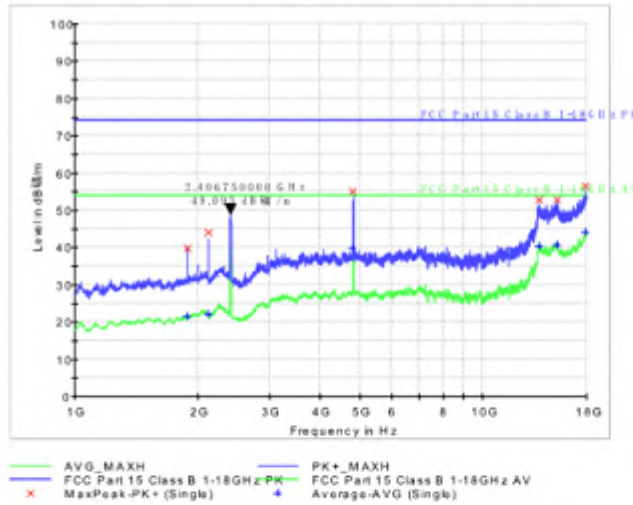
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(G mode -low)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP EXT & Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1890.000000	21.6	1000.0	1000.000	H	-16.4	32.4	54.0	
2126.000000	22.1	1000.0	1000.000	H	-15.4	31.9	54.0	
4821.000000	39.9	1000.0	1000.000	H	-7.8	14.1	54.0	
13733.000000	40.4	1000.0	1000.000	H	3.4	13.6	54.0	
15206.000000	40.7	1000.0	1000.000	H	5.6	13.3	54.0	
17926.000000	44.0	1000.0	1000.000	H	10.2	10.0	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1890.000000	39.7	1000.0	1000.000	H	-16.4	34.3	74.0	
2126.000000	44.0	1000.0	1000.000	H	-15.4	30.0	74.0	
4821.000000	55.2	1000.0	1000.000	H	-7.8	18.8	74.0	
13733.000000	52.8	1000.0	1000.000	H	3.4	21.2	74.0	
15206.000000	52.8	1000.0	1000.000	H	5.6	21.2	74.0	
17926.000000	56.4	1000.0	1000.000	H	10.2	17.6	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

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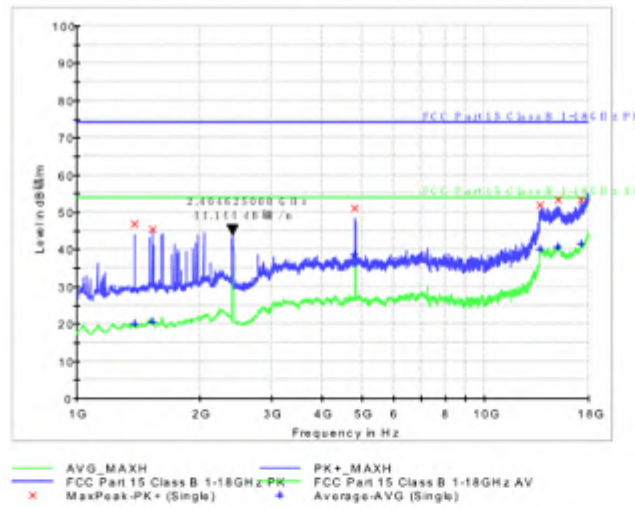
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(G mode -low)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMC TT_EREFO11-A02-07_1GHz-18GHz_W 8h Pn AMP EXT & Notch filter



Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1389.000000	20.0	1000.0	1000.000	V	-19.0	34.0	54.0	
1531.000000	20.6	1000.0	1000.000	V	-17.8	33.4	54.0	
4819.000000	38.7	1000.0	1000.000	V	-7.8	15.3	54.0	
13714.000000	40.0	1000.0	1000.000	V	3.4	14.0	54.0	
15167.000000	40.8	1000.0	1000.000	V	5.7	13.2	54.0	
17286.000000	41.4	1000.0	1000.000	V	8.3	12.6	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1389.000000	47.0	1000.0	1000.000	V	-19.0	27.0	74.0	
1531.000000	45.5	1000.0	1000.000	V	-17.8	28.5	74.0	
4819.000000	51.0	1000.0	1000.000	V	-7.8	23.0	74.0	
13714.000000	51.9	1000.0	1000.000	V	3.4	22.1	74.0	
15167.000000	53.3	1000.0	1000.000	V	5.7	20.7	74.0	
17286.000000	53.5	1000.0	1000.000	V	8.3	20.5	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

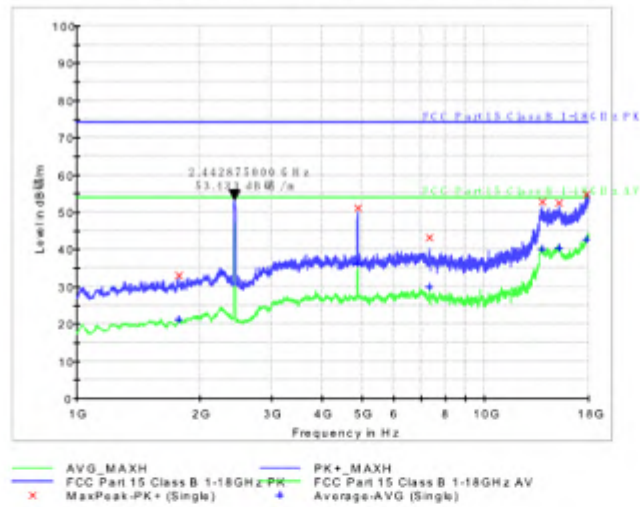
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(G mode -mid)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP EXT& Notch filter



Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1782.000000	21.1	1000.0	1000.000	H	-16.9	33.0	54.0	
4880.000000	36.1	1000.0	1000.000	H	-7.4	17.9	54.0	
7324.000000	30.1	1000.0	1000.000	H	-5.6	24.0	54.0	
13846.000000	40.2	1000.0	1000.000	H	3.6	13.8	54.0	
15195.000000	40.5	1000.0	1000.000	H	5.6	13.5	54.0	
17751.000000	42.7	1000.0	1000.000	H	9.0	11.3	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1782.000000	33.2	1000.0	1000.000	H	-16.9	40.9	74.0	
4880.000000	51.3	1000.0	1000.000	H	-7.4	22.7	74.0	
7324.000000	43.3	1000.0	1000.000	H	-5.6	30.8	74.0	
13846.000000	52.7	1000.0	1000.000	H	3.6	21.3	74.0	
15195.000000	52.5	1000.0	1000.000	H	5.6	21.5	74.0	
17751.000000	54.9	1000.0	1000.000	H	9.0	19.1	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

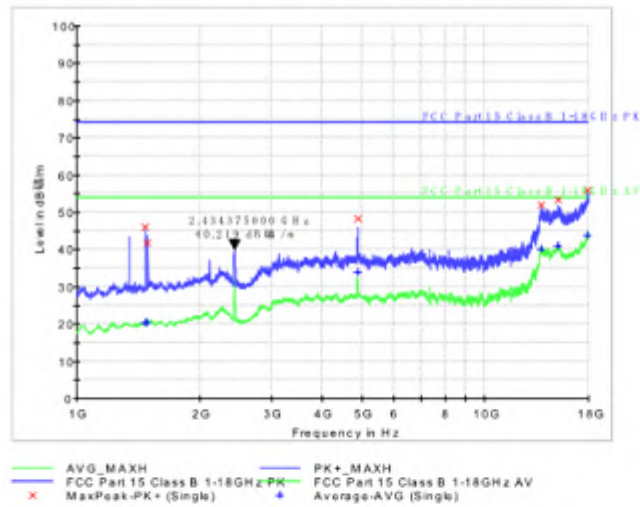
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(G mode -mid)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP EXT& Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1472.000000	20.2	1000.0	1000.000	V	-18.4	33.8	54.0	
1493.000000	20.4	1000.0	1000.000	V	-18.2	33.6	54.0	
4884.000000	33.9	1000.0	1000.000	V	-7.4	20.1	54.0	
13754.000000	40.1	1000.0	1000.000	V	3.4	13.9	54.0	
15152.000000	40.9	1000.0	1000.000	V	5.7	13.1	54.0	
17913.000000	43.9	1000.0	1000.000	V	10.1	10.2	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1472.000000	45.9	1000.0	1000.000	V	-18.4	28.1	74.0	
1493.000000	41.8	1000.0	1000.000	V	-18.2	32.2	74.0	
4884.000000	48.4	1000.0	1000.000	V	-7.4	25.6	74.0	
13754.000000	52.1	1000.0	1000.000	V	3.4	21.9	74.0	
15152.000000	53.4	1000.0	1000.000	V	5.7	20.6	74.0	
17913.000000	56.0	1000.0	1000.000	V	10.1	18.0	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

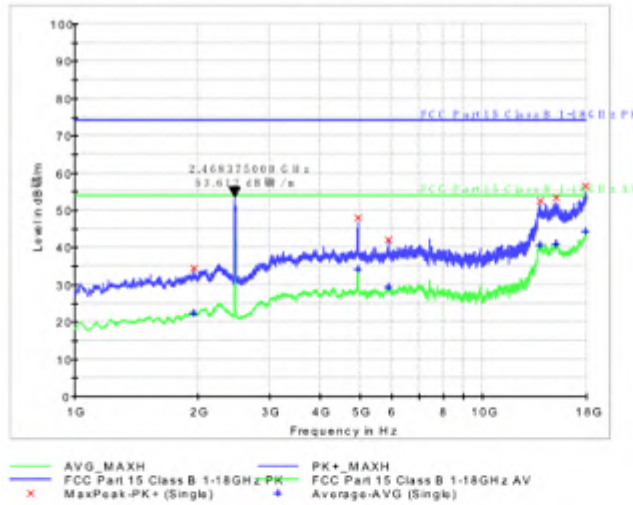
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(G mode -high)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMC TT_EREFO11-A02-07_1GHz-18GHz_W 8h PnAMP EXT & Notch filter



Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1954.000000	22.3	1000.0	1000.000	H	-15.8	31.7	54.0	
4940.000000	34.2	1000.0	1000.000	H	-7.5	19.8	54.0	
5873.000000	29.3	1000.0	1000.000	H	-6.9	24.7	54.0	
13824.000000	40.6	1000.0	1000.000	H	3.6	13.4	54.0	
15159.000000	41.0	1000.0	1000.000	H	5.7	13.1	54.0	
17934.000000	44.3	1000.0	1000.000	H	10.3	9.7	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1954.000000	34.5	1000.0	1000.000	H	-15.8	39.5	74.0	
4940.000000	48.0	1000.0	1000.000	H	-7.5	26.1	74.0	
5873.000000	42.1	1000.0	1000.000	H	-6.9	31.9	74.0	
13824.000000	52.6	1000.0	1000.000	H	3.6	21.4	74.0	
15159.000000	53.3	1000.0	1000.000	H	5.7	20.8	74.0	
17934.000000	56.4	1000.0	1000.000	H	10.3	17.6	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

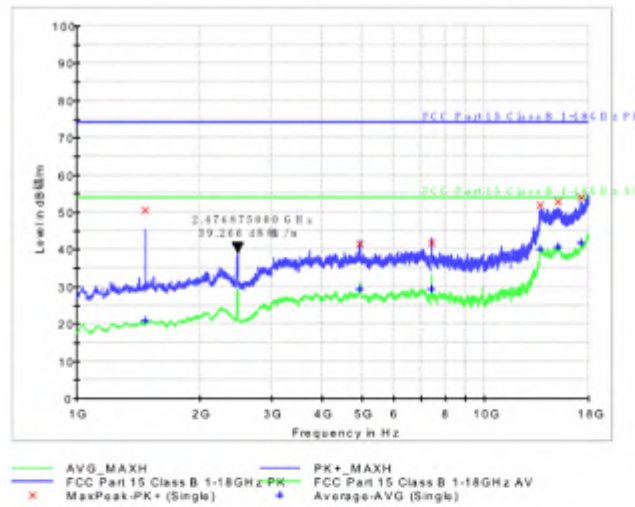
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(G mode -high)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMC TT_EREFO11-A02-07_1GHz-18GHz_W 8h PnAMP EXT& Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dB μ V/m)	Comment
1474.000000	20.8	1000.0	1000.000	V	-18.4	33.2	54.0	
4940.000000	29.3	1000.0	1000.000	V	-7.5	24.7	54.0	
7415.000000	29.3	1000.0	1000.000	V	-5.4	24.7	54.0	
13703.000000	40.1	1000.0	1000.000	V	3.3	13.9	54.0	
15142.000000	40.7	1000.0	1000.000	V	5.7	13.3	54.0	
17271.000000	41.7	1000.0	1000.000	V	8.4	12.3	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dB μ V/m)	Comment
1474.000000	50.7	1000.0	1000.000	V	-18.4	23.4	74.0	
4940.000000	41.6	1000.0	1000.000	V	-7.5	32.5	74.0	
7415.000000	41.9	1000.0	1000.000	V	-5.4	32.1	74.0	
13703.000000	52.0	1000.0	1000.000	V	3.3	22.0	74.0	
15142.000000	52.9	1000.0	1000.000	V	5.7	21.1	74.0	
17271.000000	53.9	1000.0	1000.000	V	8.4	20.1	74.0	

Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

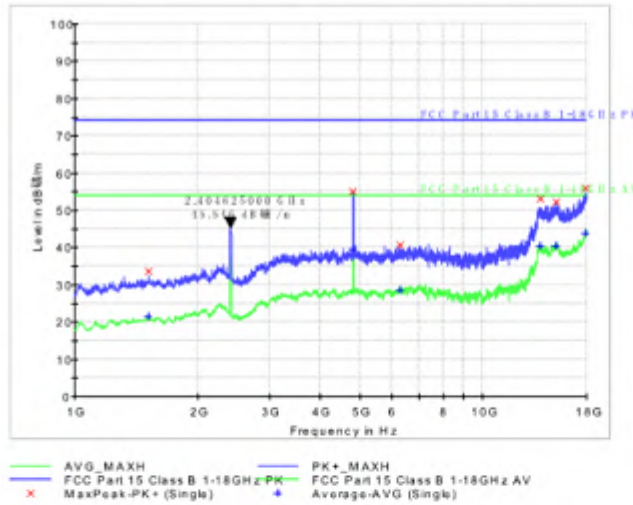
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(N20 mode -low)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP EXT & Notch filter



Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1518.000000	21.4	1000.0	1000.000	H	-17.9	32.6	54.0	
4821.000000	39.5	1000.0	1000.000	H	-7.8	14.5	54.0	
6293.000000	28.7	1000.0	1000.000	H	-6.5	25.3	54.0	
13858.000000	40.5	1000.0	1000.000	H	3.6	13.5	54.0	
15108.000000	40.3	1000.0	1000.000	H	5.6	13.7	54.0	
17917.000000	43.7	1000.0	1000.000	H	10.2	10.3	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1518.000000	33.7	1000.0	1000.000	H	-17.9	40.4	74.0	
4821.000000	55.0	1000.0	1000.000	H	-7.8	19.0	74.0	
6293.000000	40.6	1000.0	1000.000	H	-6.5	33.4	74.0	
13858.000000	53.0	1000.0	1000.000	H	3.6	21.0	74.0	
15108.000000	52.3	1000.0	1000.000	H	5.6	21.7	74.0	
17917.000000	56.0	1000.0	1000.000	H	10.2	18.0	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

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EMC Test Service Hotline: +86-20-28391188

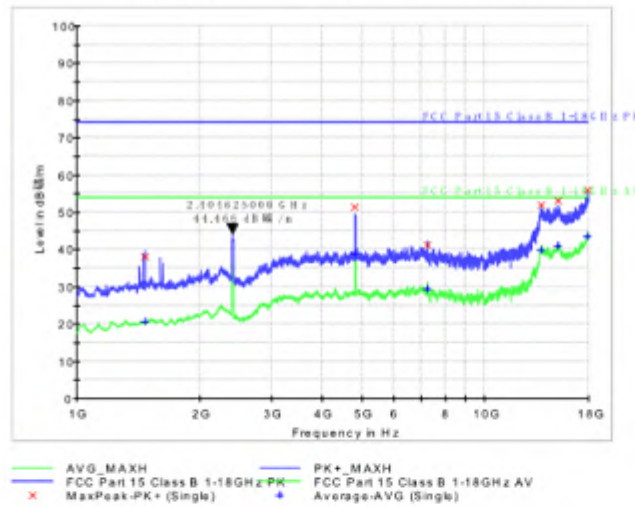
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(N20 mode -low)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP EXT& Notch filter



Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1474.000000	20.7	1000.0	1000.000	V	-18.4	33.3	54.0	
4819.000000	38.9	1000.0	1000.000	V	-7.8	15.1	54.0	
7239.000000	29.3	1000.0	1000.000	V	-5.0	24.7	54.0	
13775.000000	39.9	1000.0	1000.000	V	3.5	14.1	54.0	
15157.000000	40.9	1000.0	1000.000	V	5.7	13.1	54.0	
17887.000000	43.5	1000.0	1000.000	V	9.9	10.5	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1474.000000	38.1	1000.0	1000.000	V	-18.4	35.9	74.0	
4819.000000	51.4	1000.0	1000.000	V	-7.8	22.6	74.0	
7239.000000	41.2	1000.0	1000.000	V	-5.0	32.8	74.0	
13775.000000	51.9	1000.0	1000.000	V	3.5	22.1	74.0	
15157.000000	53.1	1000.0	1000.000	V	5.7	20.9	74.0	
17887.000000	56.0	1000.0	1000.000	V	9.9	18.0	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

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EMC Test Service Hotline: +86-20-28391188

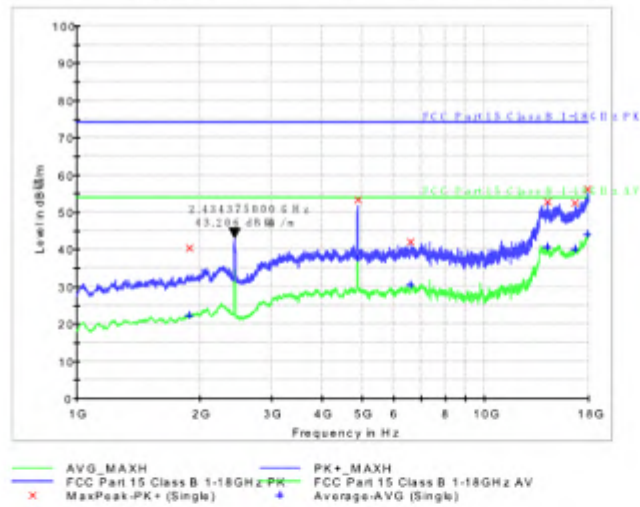
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(N20 mode -mid)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP EXT & Notch filter



Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1886.000000	22.2	1000.0	1000.000	H	-16.4	31.8	54.0	
4882.000000	37.7	1000.0	1000.000	H	-7.4	16.3	54.0	
6582.000000	30.5	1000.0	1000.000	H	-5.9	23.5	54.0	
14305.000000	40.6	1000.0	1000.000	H	4.9	13.4	54.0	
16695.000000	40.2	1000.0	1000.000	H	5.9	13.8	54.0	
17911.000000	43.9	1000.0	1000.000	H	10.1	10.1	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1886.000000	40.4	1000.0	1000.000	H	-16.4	33.6	74.0	
4882.000000	53.4	1000.0	1000.000	H	-7.4	20.6	74.0	
6582.000000	42.2	1000.0	1000.000	H	-5.9	31.8	74.0	
14305.000000	52.9	1000.0	1000.000	H	4.9	21.1	74.0	
16695.000000	52.5	1000.0	1000.000	H	5.9	21.5	74.0	
17911.000000	56.1	1000.0	1000.000	H	10.1	17.9	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

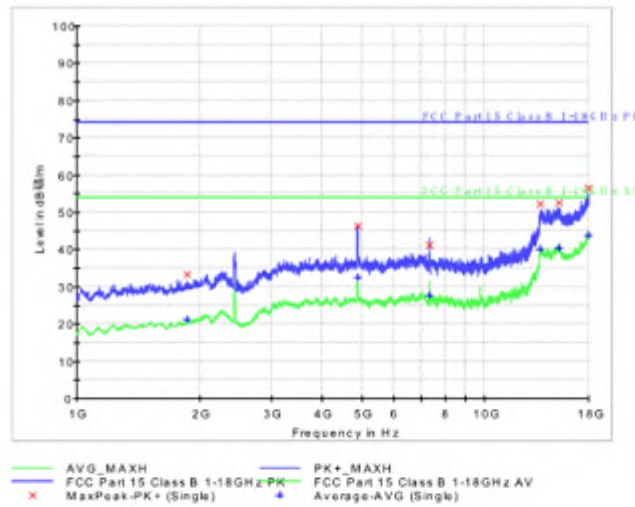
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(N20 mode -mid)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP EXT & Notch filter



Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1867.000000	21.2	1000.0	1000.000	V	-16.4	32.8	54.0	
4880.000000	32.6	1000.0	1000.000	V	-7.4	21.4	54.0	
7315.000000	27.8	1000.0	1000.000	V	-5.5	26.2	54.0	
13729.000000	40.2	1000.0	1000.000	V	3.4	13.8	54.0	
15201.000000	40.4	1000.0	1000.000	V	5.6	13.6	54.0	
17966.000000	43.9	1000.0	1000.000	V	10.4	10.1	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1867.000000	33.3	1000.0	1000.000	V	-16.4	40.7	74.0	
4880.000000	46.3	1000.0	1000.000	V	-7.4	27.7	74.0	
7315.000000	41.4	1000.0	1000.000	V	-5.5	32.6	74.0	
13729.000000	52.4	1000.0	1000.000	V	3.4	21.6	74.0	
15201.000000	52.6	1000.0	1000.000	V	5.6	21.4	74.0	
17966.000000	56.6	1000.0	1000.000	V	10.4	17.4	74.0	

Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

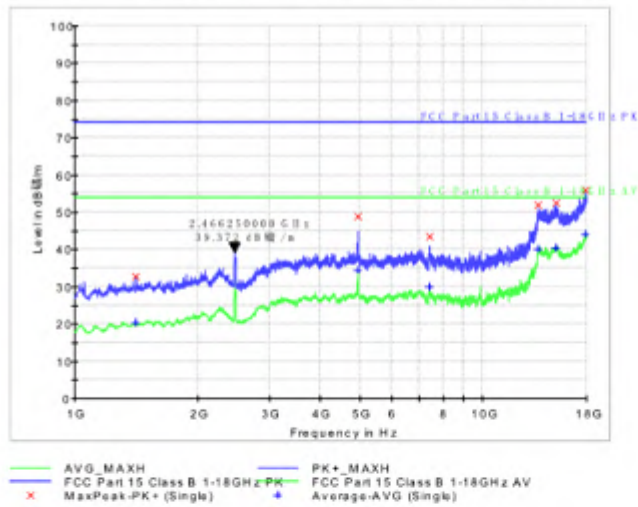
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(N20 mode -high)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_W 8h PnAMP EXT & Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1414.000000	20.3	1000.0	1000.000	H	-18.9	33.7	54.0	
4942.000000	34.5	1000.0	1000.000	H	-7.5	19.5	54.0	
7405.000000	30.0	1000.0	1000.000	H	-5.4	24.0	54.0	
13705.000000	40.0	1000.0	1000.000	H	3.3	14.0	54.0	
15133.000000	40.5	1000.0	1000.000	H	5.6	13.5	54.0	
17919.000000	44.0	1000.0	1000.000	H	10.2	10.0	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1414.000000	32.8	1000.0	1000.000	H	-18.9	41.2	74.0	
4942.000000	48.9	1000.0	1000.000	H	-7.5	25.1	74.0	
7405.000000	43.6	1000.0	1000.000	H	-5.4	30.4	74.0	
13705.000000	52.1	1000.0	1000.000	H	3.3	21.9	74.0	
15133.000000	52.5	1000.0	1000.000	H	5.6	21.5	74.0	
17919.000000	55.9	1000.0	1000.000	H	10.2	18.1	74.0	

Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

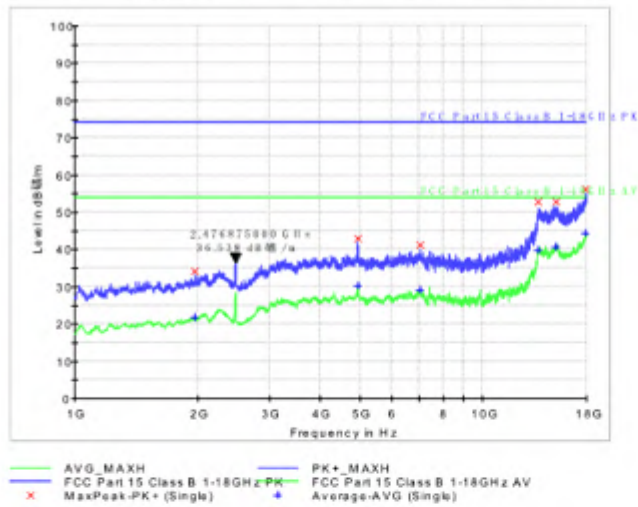
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(N20 mode -high)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMC TT_EREF011-A02-07_1GHz-18GHz_W 8h PnAMP EXT& Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1967.000000	21.7	1000.0	1000.000	V	-15.7	32.3	54.0	
4950.000000	30.1	1000.0	1000.000	V	-7.6	23.9	54.0	
7033.000000	29.0	1000.0	1000.000	V	-5.1	25.0	54.0	
13707.000000	39.9	1000.0	1000.000	V	3.3	14.1	54.0	
15174.000000	40.6	1000.0	1000.000	V	5.7	13.4	54.0	
17930.000000	44.3	1000.0	1000.000	V	10.3	9.7	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1967.000000	34.2	1000.0	1000.000	V	-15.7	39.9	74.0	
4950.000000	42.9	1000.0	1000.000	V	-7.6	31.1	74.0	
7033.000000	41.1	1000.0	1000.000	V	-5.1	32.9	74.0	
13707.000000	52.8	1000.0	1000.000	V	3.3	21.2	74.0	
15174.000000	52.8	1000.0	1000.000	V	5.7	21.2	74.0	
17930.000000	56.3	1000.0	1000.000	V	10.3	17.7	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

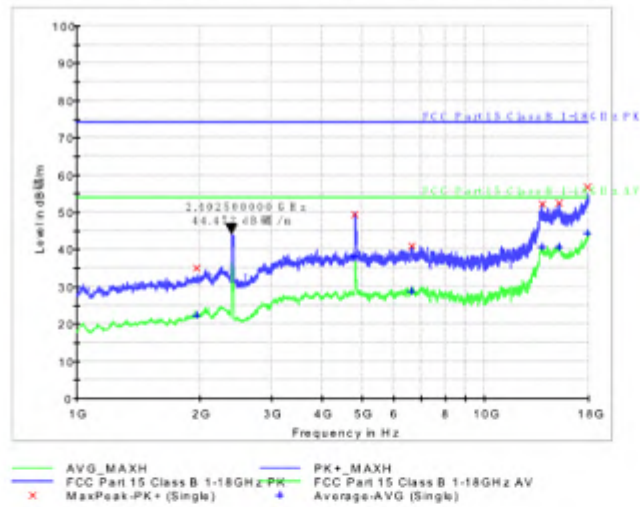
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(N40 mode -low)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP EXT & Notch filter



Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1973.000000	22.5	1000.0	1000.000	H	-15.6	31.6	54.0	
4821.000000	38.0	1000.0	1000.000	H	-7.8	16.0	54.0	
6627.000000	28.8	1000.0	1000.000	H	-5.9	25.3	54.0	
13858.000000	40.7	1000.0	1000.000	H	3.6	13.4	54.0	
15208.000000	40.7	1000.0	1000.000	H	5.6	13.3	54.0	
17934.000000	44.4	1000.0	1000.000	H	10.3	9.6	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1973.000000	35.0	1000.0	1000.000	H	-15.6	39.1	74.0	
4821.000000	49.6	1000.0	1000.000	H	-7.8	24.4	74.0	
6627.000000	41.0	1000.0	1000.000	H	-5.9	33.0	74.0	
13858.000000	52.3	1000.0	1000.000	H	3.6	21.7	74.0	
15208.000000	52.7	1000.0	1000.000	H	5.6	21.4	74.0	
17934.000000	56.8	1000.0	1000.000	H	10.3	17.2	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

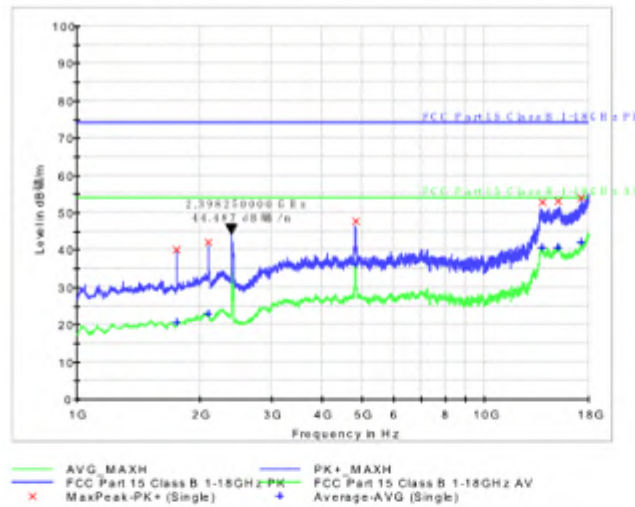
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(N40 mode -low)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMC TT_ERE F011-A02-07_1GHz-18GHz_W 8h Pw AMP EXT & Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1761.000000	20.6	1000.0	1000.000	V	-17.0	13.9	54.0	
2103.000000	22.8	1000.0	1000.000	V	-15.3	11.9	54.0	
4823.000000	36.1	1000.0	1000.000	V	-7.7	6.4	54.0	
13841.000000	40.6	1000.0	1000.000	V	3.6	1.1	54.0	
15169.000000	40.7	1000.0	1000.000	V	5.7	0.9	54.0	
17258.000000	42.0	1000.0	1000.000	V	8.4	-0.1	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1761.000000	40.2	1000.0	1000.000	V	-17.0	33.9	74.0	
2103.000000	42.1	1000.0	1000.000	V	-15.3	31.9	74.0	
4823.000000	47.6	1000.0	1000.000	V	-7.7	26.4	74.0	
13841.000000	52.9	1000.0	1000.000	V	3.6	21.1	74.0	
15169.000000	53.1	1000.0	1000.000	V	5.7	20.9	74.0	
17258.000000	54.1	1000.0	1000.000	V	8.4	19.9	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

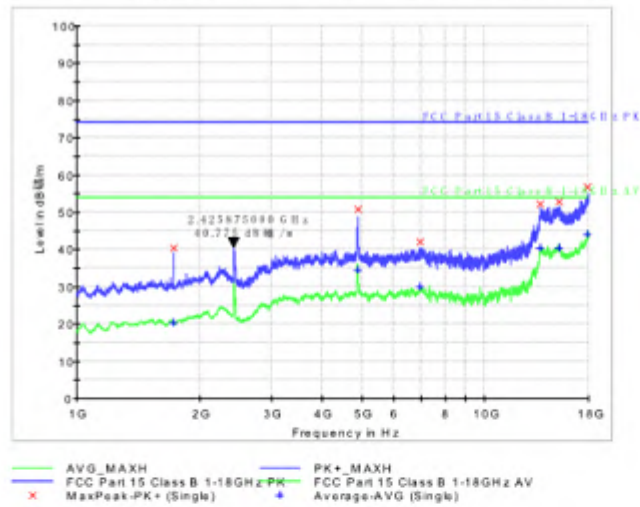
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(N40 mode -mid)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-07_1GHz-18GHz_W 8h PnAMP EXT & Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1729.000000	20.4	1000.0	1000.000	H	-17.2	33.6	54.0	
4884.000000	34.5	1000.0	1000.000	H	-7.4	19.5	54.0	
6948.000000	30.0	1000.0	1000.000	H	-5.6	24.0	54.0	
13720.000000	40.3	1000.0	1000.000	H	3.4	13.7	54.0	
15248.000000	40.3	1000.0	1000.000	H	5.5	13.7	54.0	
17928.000000	44.1	1000.0	1000.000	H	10.2	9.9	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1729.000000	40.3	1000.0	1000.000	H	-17.2	33.7	74.0	
4884.000000	50.8	1000.0	1000.000	H	-7.4	23.2	74.0	
6948.000000	42.1	1000.0	1000.000	H	-5.6	31.9	74.0	
13720.000000	52.2	1000.0	1000.000	H	3.4	21.8	74.0	
15248.000000	52.9	1000.0	1000.000	H	5.5	21.1	74.0	
17928.000000	56.8	1000.0	1000.000	H	10.2	17.2	74.0	

Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

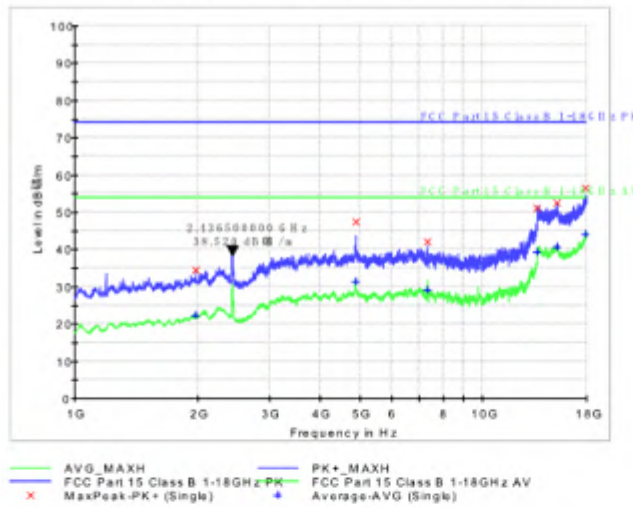
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(N40 mode -mid)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMC TT_EREFO11-A02-07_1GHz-18GHz_W 8h Pn AMP EXT & Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1982.000000	22.2	1000.0	1000.000	V	-15.5	31.8	54.0	
4884.000000	31.4	1000.0	1000.000	V	-7.4	22.7	54.0	
7320.000000	29.1	1000.0	1000.000	V	-5.6	24.9	54.0	
13610.000000	39.2	1000.0	1000.000	V	2.9	14.8	54.0	
15229.000000	40.7	1000.0	1000.000	V	5.5	13.3	54.0	
17928.000000	44.1	1000.0	1000.000	V	10.2	9.9	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1982.000000	34.6	1000.0	1000.000	V	-15.5	39.4	74.0	
4884.000000	47.4	1000.0	1000.000	V	-7.4	26.6	74.0	
7320.000000	42.1	1000.0	1000.000	V	-5.6	31.9	74.0	
13610.000000	51.3	1000.0	1000.000	V	2.9	22.7	74.0	
15229.000000	52.7	1000.0	1000.000	V	5.5	21.4	74.0	
17928.000000	56.5	1000.0	1000.000	V	10.2	17.5	74.0	

Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

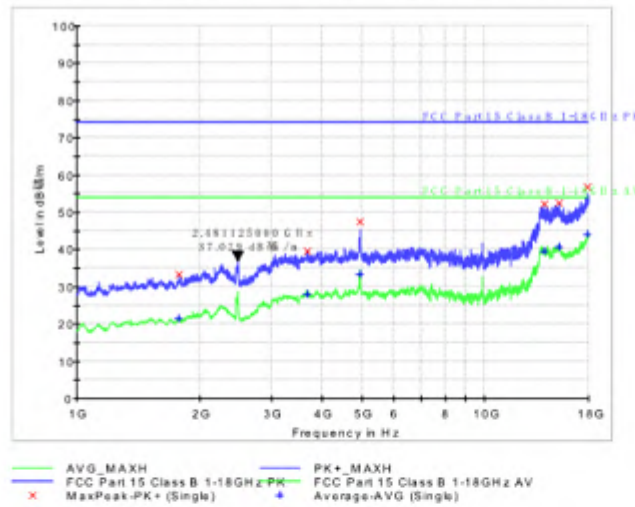
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(N40 mode -high)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_W 8h PnAMP EXT & Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
1780.000000	21.4	1000.0	1000.000	H	-16.9	32.6	54.0	
3671.000000	27.9	1000.0	1000.000	H	-10.4	26.2	54.0	
4944.000000	33.5	1000.0	1000.000	H	-7.5	20.5	54.0	
14013.000000	39.5	1000.0	1000.000	H	4.2	14.5	54.0	
15223.000000	40.6	1000.0	1000.000	H	5.5	13.4	54.0	
17930.000000	44.1	1000.0	1000.000	H	10.3	9.9	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
1780.000000	33.3	1000.0	1000.000	H	-16.9	40.7	74.0	
3671.000000	39.6	1000.0	1000.000	H	-10.4	34.4	74.0	
4944.000000	47.5	1000.0	1000.000	H	-7.5	26.5	74.0	
14013.000000	52.2	1000.0	1000.000	H	4.2	21.8	74.0	
15223.000000	52.6	1000.0	1000.000	H	5.5	21.4	74.0	
17930.000000	56.7	1000.0	1000.000	H	10.3	17.3	74.0	

Tested by: *Jacky Chen* Reviewed by: _____
20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

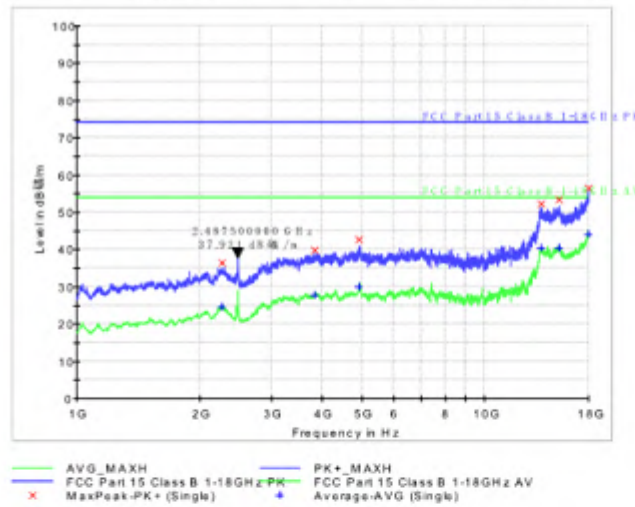
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: WIFI(N40 mode -high)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_W 8h PnAMP EXT& Notch filter



Tested by: *Jacky Chen*
20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2266.000000	24.5	1000.0	1000.000	V	-15.2	49.5	74.0	
3826.000000	27.8	1000.0	1000.000	V	-9.8	46.2	74.0	
4929.000000	29.9	1000.0	1000.000	V	-7.4	44.1	74.0	
13797.000000	40.5	1000.0	1000.000	V	3.6	33.5	74.0	
15199.000000	40.5	1000.0	1000.000	V	5.6	33.5	74.0	
17947.000000	44.1	1000.0	1000.000	V	10.4	29.9	74.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2266.000000	36.6	1000.0	1000.000	V	-15.2	37.4	74.0	
3826.000000	39.9	1000.0	1000.000	V	-9.8	34.1	74.0	
4929.000000	42.7	1000.0	1000.000	V	-7.4	31.3	74.0	
13797.000000	52.3	1000.0	1000.000	V	3.6	21.7	74.0	
15199.000000	53.4	1000.0	1000.000	V	5.6	20.6	74.0	
17947.000000	56.6	1000.0	1000.000	V	10.4	17.4	74.0	

Tested by: *Jacky Chen* Reviewed by: _____
20171203

Appendix C.3: Test Results of Radiated Emissions in Restricted Bands
Wi-Fi 802.11 b mode, 11 Mbps
Low channel

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

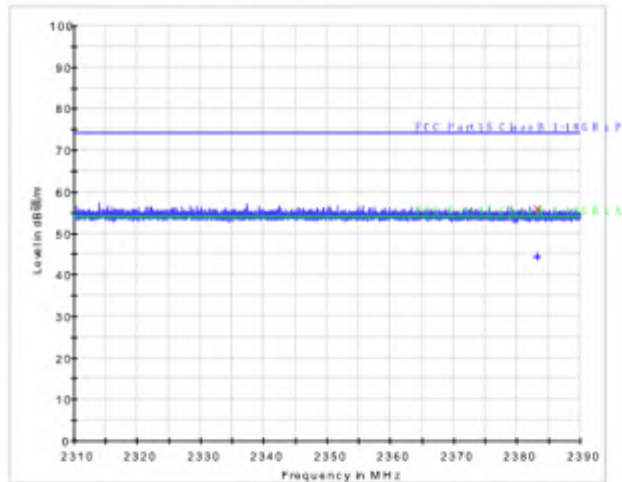
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(B mode-low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMC TT_ERE F011-A02-04_1GHz-18GHz



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2383.240000	55.9	1000.0	1000.000	H	31.1	18.1	74.0	

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2383.240000	44.4	1000.0	1000.000	H	31.1	9.6	54.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

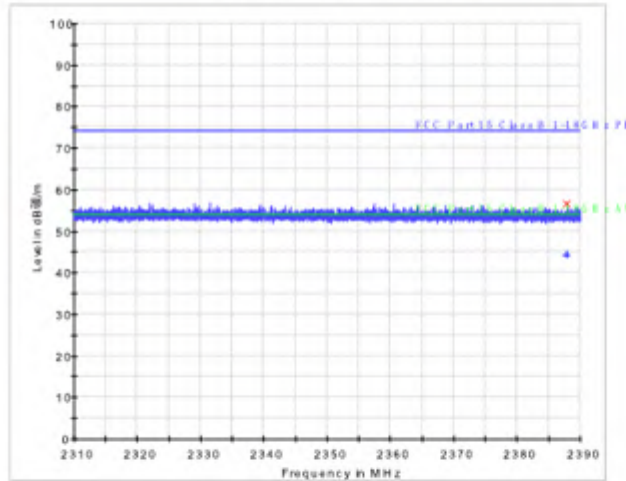
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(B mode-low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2387.920000	44.5	1000.0	1000.000	V	31.1	9.6	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2387.920000	56.7	1000.0	1000.000	V	31.1	17.4	74.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

High channel

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

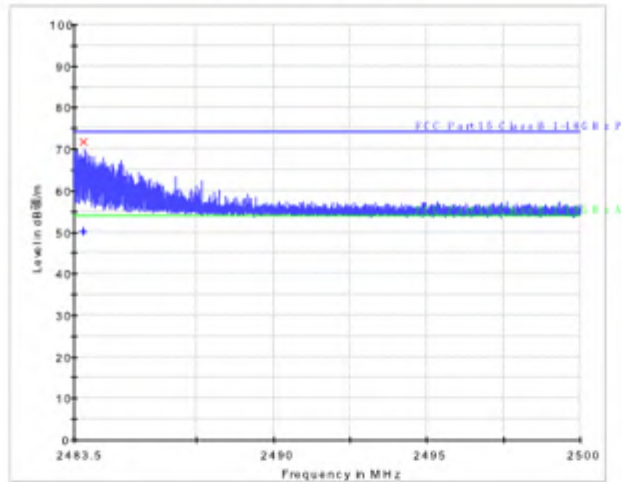
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(B mode-high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2483.800000	50.0	1000.0	1000.000	H	31.8	4.0	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2483.800000	71.8	1000.0	1000.000	H	31.8	2.2	74.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

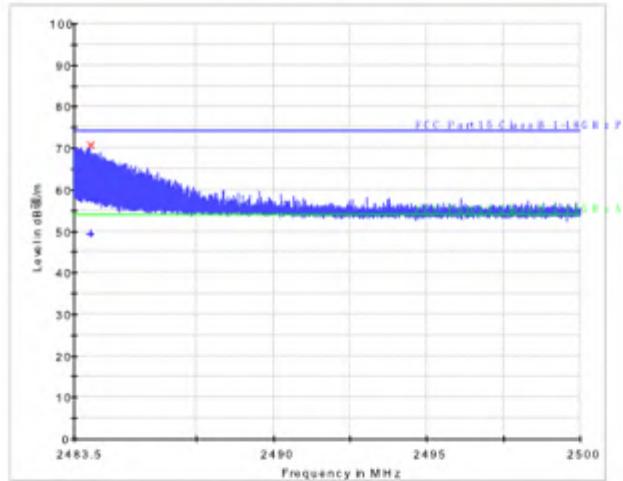
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(B mode-high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2484.040000	49.3	1000.0	1000.000	V	31.8	4.7	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2484.040000	70.9	1000.0	1000.000	V	31.8	3.2	74.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

Wi-Fi 802.11 g mode, 54 Mbps
Low channel

TUV Rheinland (Guangdong) Ltd.

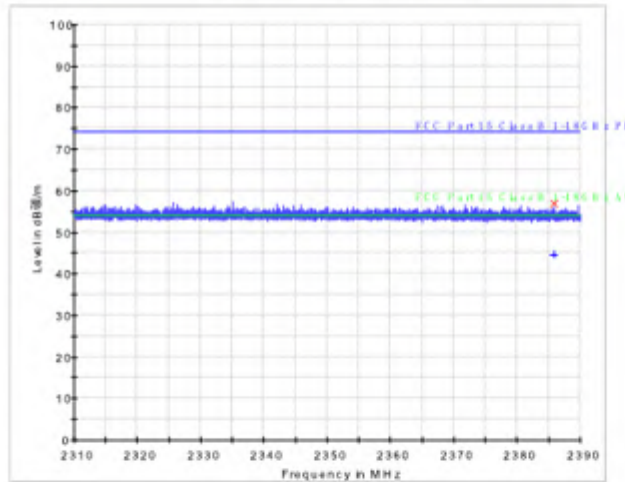
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(G mode-low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal
 Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2385.880000	44.5	1000.0	1000.000	H	31.1	9.5	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2385.880000	56.9	1000.0	1000.000	H	31.1	17.1	74.0	

Tested by:

Jacky Chen

20171203

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

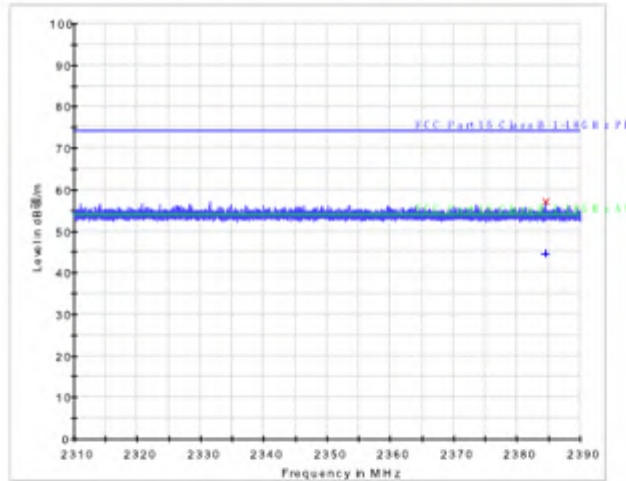
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(G mode-low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2384.560000	44.5	1000.0	1000.000	V	31.1	9.5	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2384.560000	57.3	1000.0	1000.000	V	31.1	16.7	74.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

High channel

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

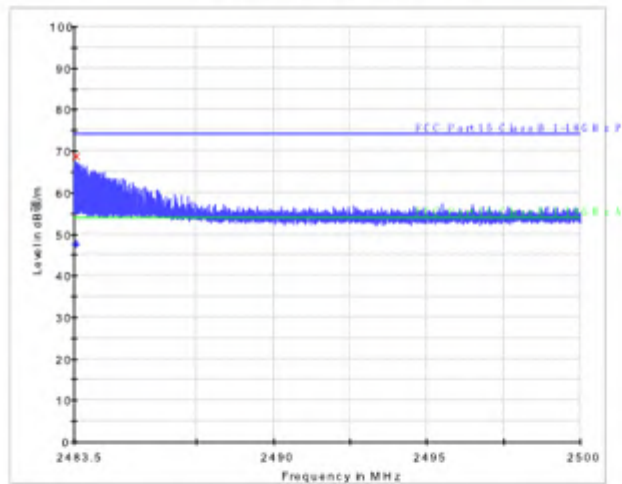
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(G mode-high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2483.560000	47.6	1000.0	1000.000	H	31.8	6.5	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2483.560000	68.9	1000.0	1000.000	H	31.8	5.1	74.0	

Date: 12/1/2017 - Time: 17:53:48

Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

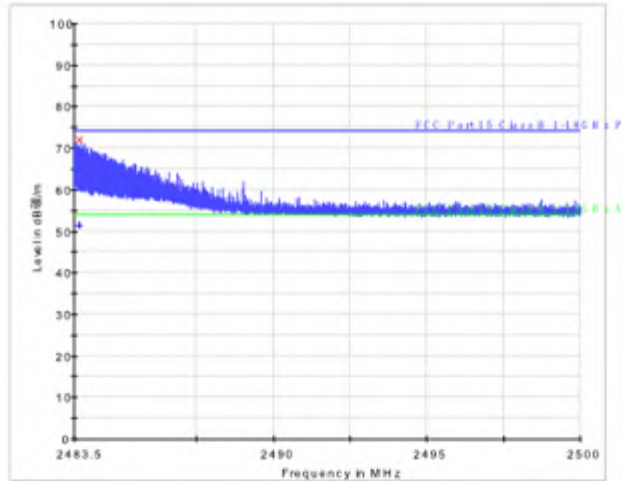
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(G mode-high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2483.680000	51.3	1000.0	1000.000	V	31.8	2.7	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2483.680000	72.0	1000.0	1000.000	V	31.8	2.0	74.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

Wi-Fi 802.11 n(HT20) mode, MCS0
Low channel

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

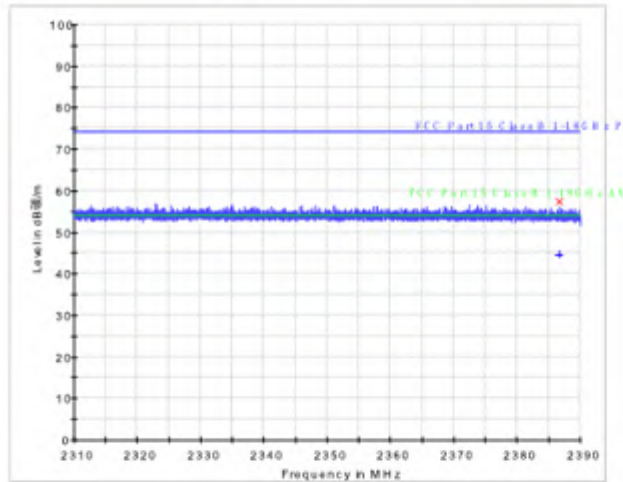
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission(Band-edge)
Operation Mode: WIFI(N20 mode-low)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_ERE011-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2386.720000	44.5	1000.0	1000.000	H	31.1	9.5	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2386.720000	57.4	1000.0	1000.000	H	31.1	16.6	74.0	

Tested by:

Jacky Chen

Reviewed by: _____

20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

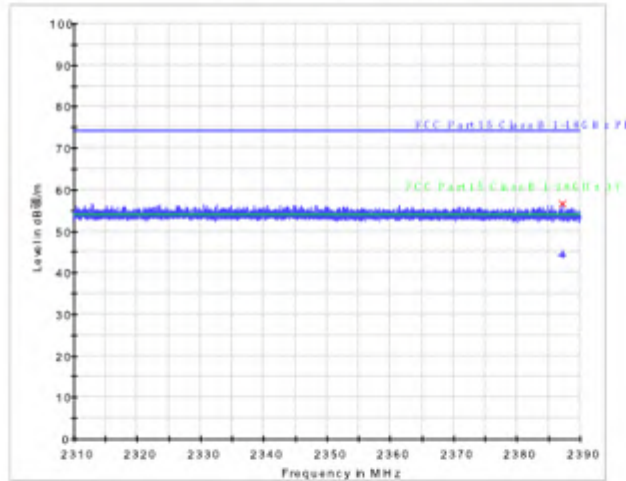
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(N20 mode-low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2387.200000	44.4	1000.0	1000.000	V	31.1	9.6	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2387.200000	56.7	1000.0	1000.000	V	31.1	17.3	74.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

High channel

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

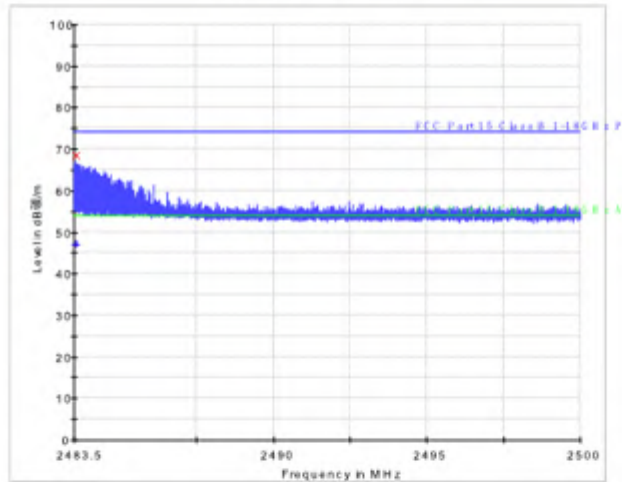
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(N20 mode-high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

 Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2483.560000	47.2	1000.0	1000.000	H	31.8	6.8	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2483.560000	68.4	1000.0	1000.000	H	31.8	5.6	74.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

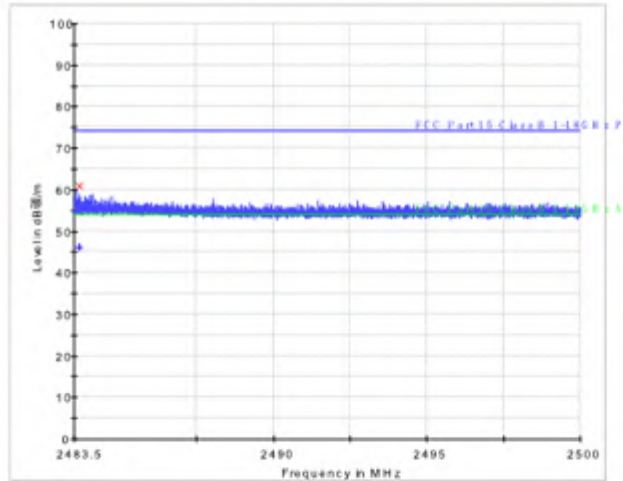
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(N20 mode-high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

 Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2483.680000	46.2	1000.0	1000.000	V	31.8	7.8	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2483.680000	61.0	1000.0	1000.000	V	31.8	13.0	74.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

Wi-Fi 802.11 n(HT40) mode, MCS0
Low channel

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

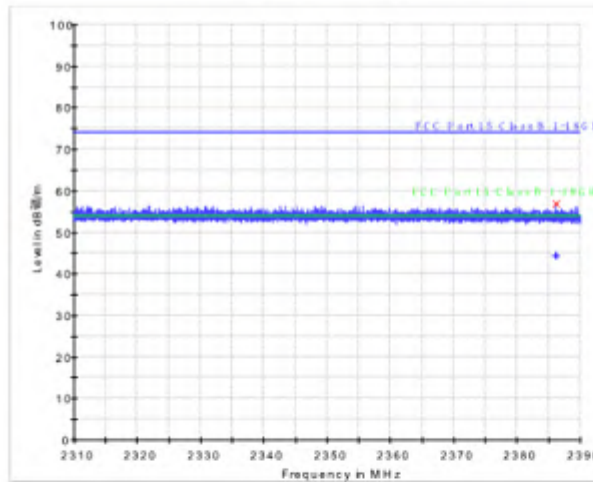
EMC Test Record (Emission)

Common Information

Manufacturer:
Test Item:
Identification: MBP163
Test Standard: FCC Part 15
Test Detail: Radiated Emission(Band-edge)
Operation Mode: WIFI(N40 mode-low)
Climate Condition: 21 °C, 52 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174075292
Report No:
Result: Pass
Comment: Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30
Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2386.240000	44.4	1000.0	1000.000	H	31.1	9.6	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2386.240000	57.0	1000.0	1000.000	H	31.1	17.0	74.0	

Tested by:

Jacky Chen

Reviewed by: _____

20171203

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

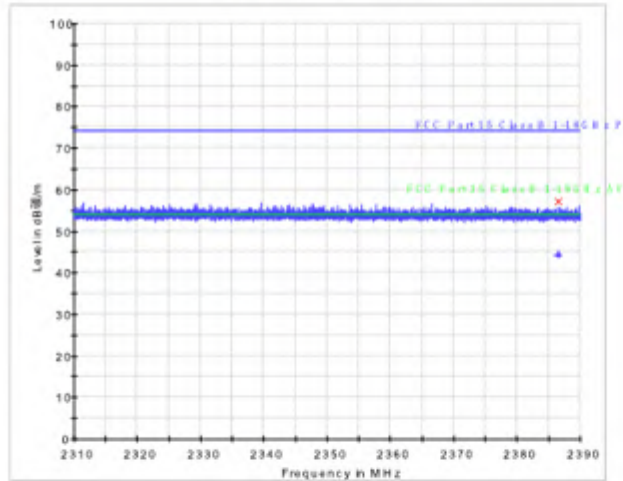
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(N40 mode-low)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2386.600000	44.3	1000.0	1000.000	V	31.1	9.7	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2386.600000	57.2	1000.0	1000.000	V	31.1	16.8	74.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

High channel

TUV Rheinland (Guangdong) Ltd.

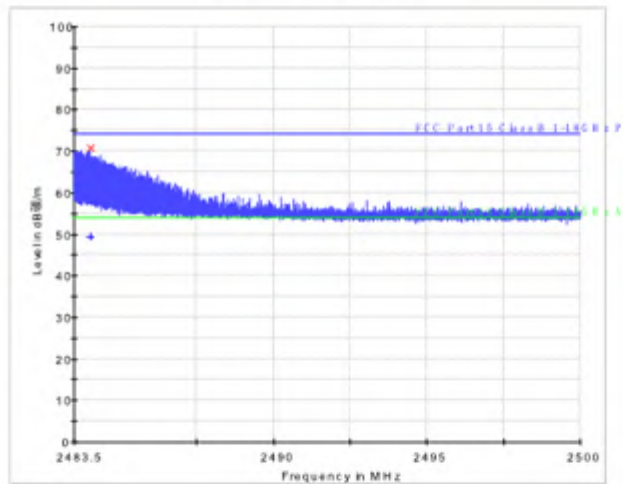
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(N40 mode-high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result:
 Comment: Test distance is 3m; Horizontal
 Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margi AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2483.680000	51.8	1000.0	1000.000	V	31.8	2.2	54.0	

Limit and Margi PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2483.680000	71.9	1000.0	1000.000	V	31.8	2.1	74.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

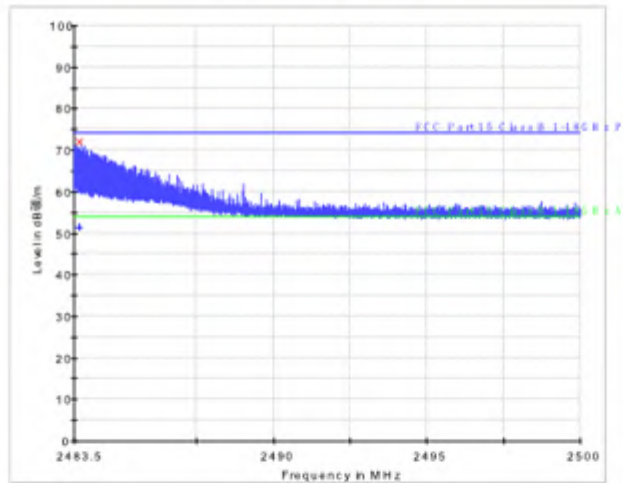
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item:
 Identification: MBP163
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: WIFI(N40 mode-high)
 Climate Condition: 21 °C, 52 %, 101 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 174075292
 Report No:
 Result:
 Comment: Test distance is 3m; Vertical
 Subrange 1
 Frequency Range: 1GHz-18GHz
 Receiver: TUV FSP30
 Transducer: TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2484.040000	51.5	1000.0	1000.000	V	31.8	2.5	54.0	

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)	Comment
2484.040000	72.1	1000.0	1000.000	V	31.8	1.9	74.0	

Tested by: *Jacky Chen*
 20171203
 Reviewed by: _____