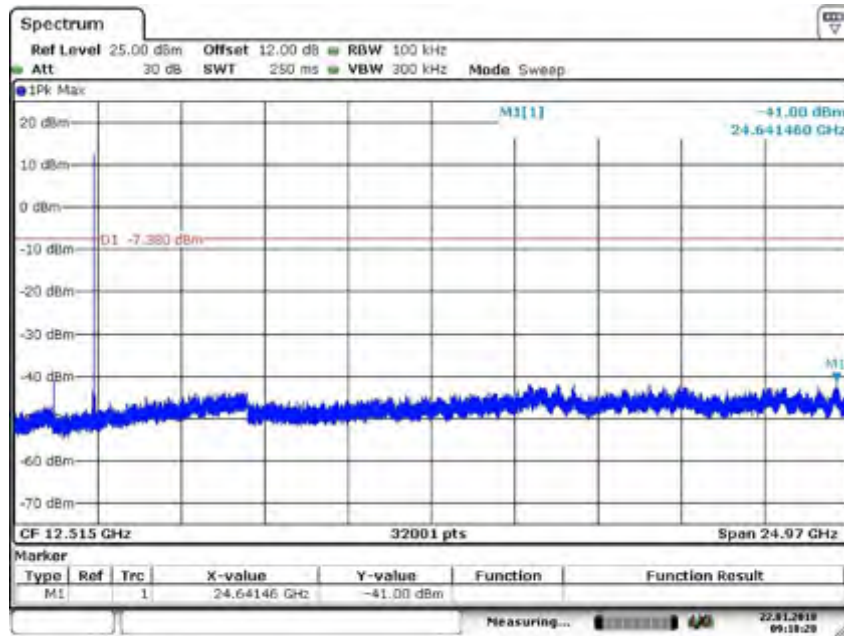


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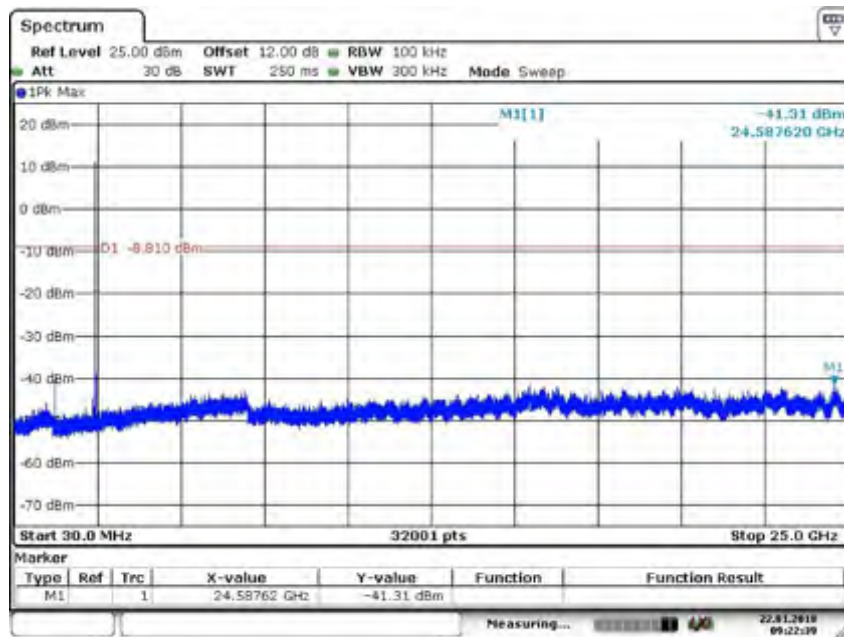
Appendix B.1: Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Low Channel



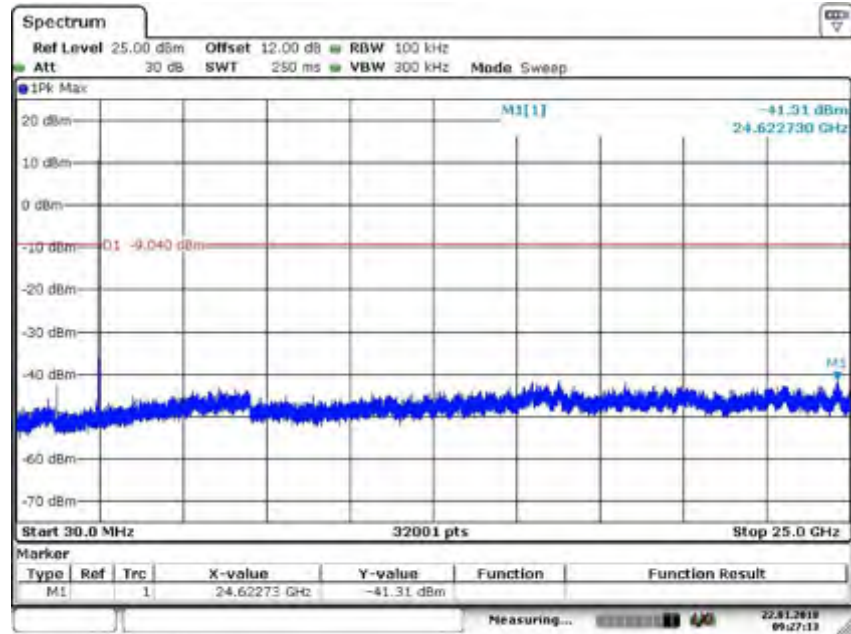
Date: 22 JAN 2018 09:19:28

Middle Channel



Date: 22 JAN 2018 09:22:39

High Channel

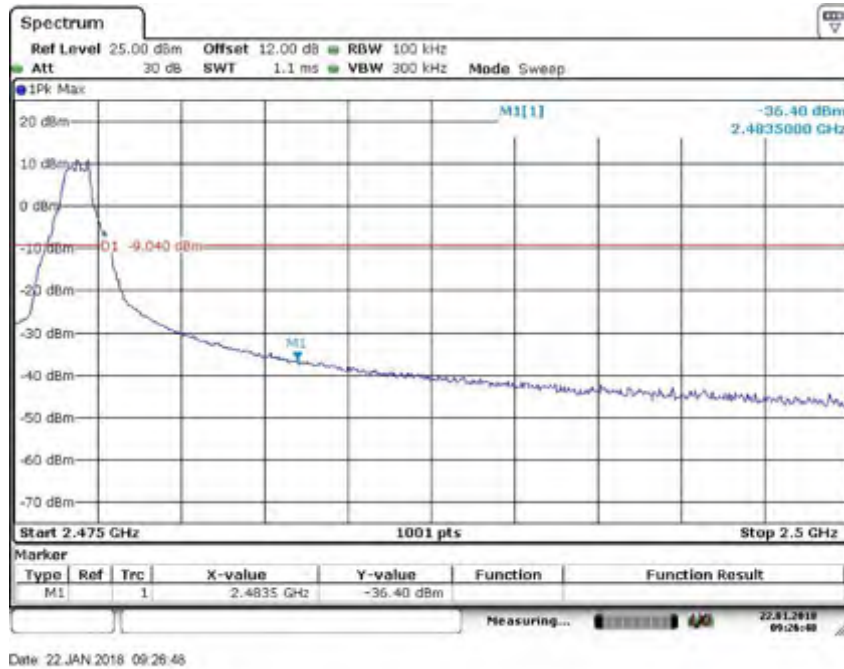


Date 22 JAN 2018 09:27:14

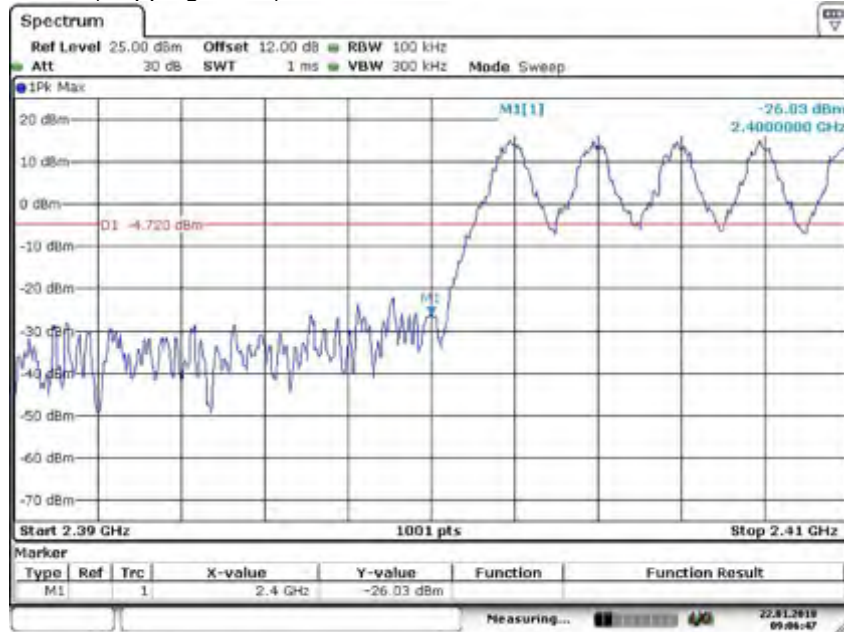
Band Edge, Low Channel



Band Edge, High Channel

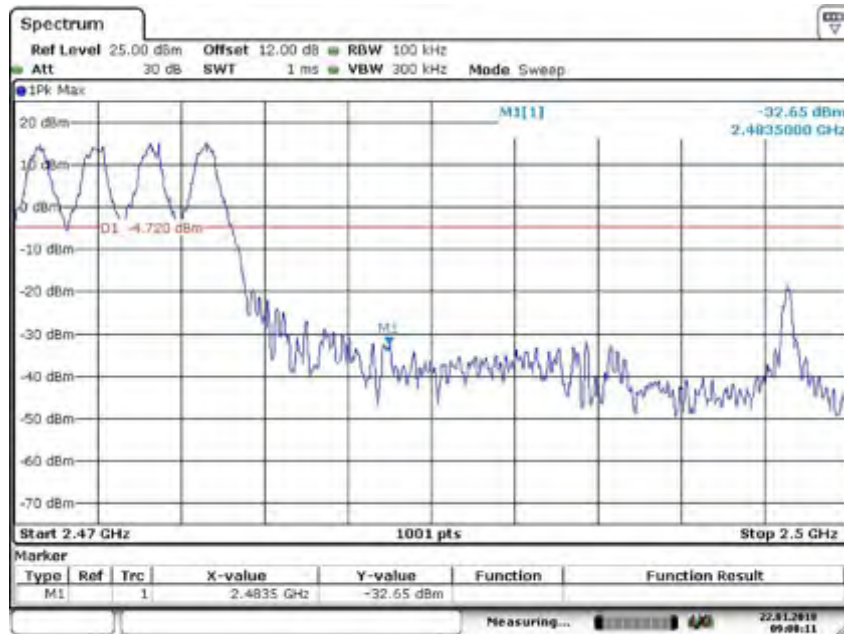


Band Edge, Low Channel (Hopping mode)



Date: 22 JAN 2018 09:06:48

Band Edge, High Channel (Hopping mode)



Date: 22 JAN 2018 09:08:11

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 B.2: Test Results of Radiated Spurious Emissions

30MHz - 1GHz

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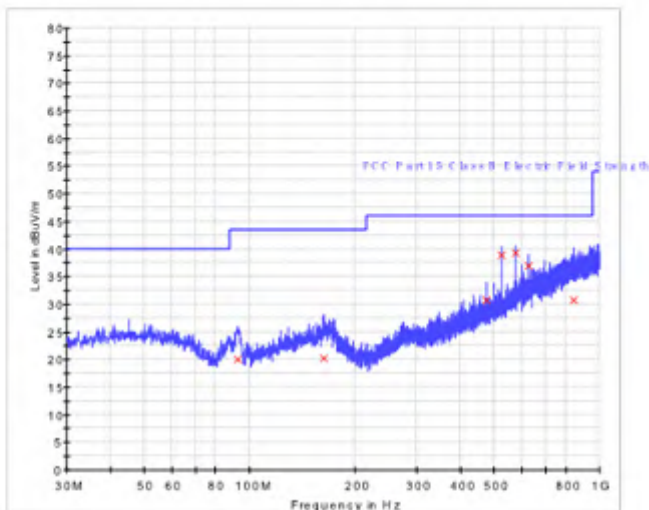
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer: Binatone
 Test Item: MBP944CONNECT(Camera)
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: Transmitting(High)
 Climate Condition: 21 °C, 54 %, 100 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 164117606(174078251)
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

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



Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)	Comment
92.560000	20.1	1000.0	120.000	V	16.7	23.4	43.5	
163.360000	20.2	1000.0	120.000	V	21.2	23.3	43.5	
475.000000	30.7	1000.0	120.000	V	26.2	15.3	46.0	
525.000000	38.9	1000.0	120.000	V	27.2	7.1	46.0	
575.000000	39.4	1000.0	120.000	V	29.1	6.6	46.0	
625.000000	36.9	1000.0	120.000	V	30.2	9.1	46.0	
841.000000	30.7	1000.0	120.000	V	33.9	15.3	46.0	

Tested by:

Jacky Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

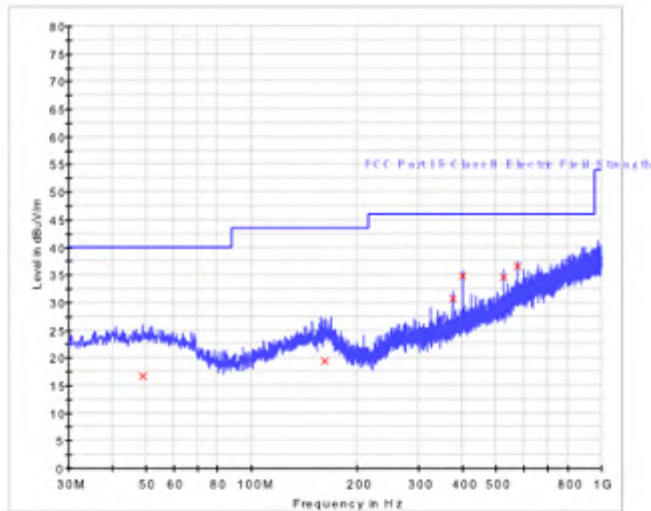
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer: Binatone
 Test Item: MBP944CONNECT(Camera)
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: Transmitting(High)
 Climate Condition: 21 °C, 54 %, 100 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 164117606(174078251)
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

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



Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)	Comment
48.800000	16.8	1000.0	120.000	H	20.7	23.2	40.0	
162.280000	19.5	1000.0	120.000	H	21.3	24.0	43.5	
375.000000	30.7	1000.0	120.000	H	23.6	15.3	46.0	
400.000000	34.8	1000.0	120.000	H	24.5	11.2	46.0	
525.000000	34.7	1000.0	120.000	H	27.2	11.3	46.0	
575.000000	36.7	1000.0	120.000	H	29.1	9.3	46.0	

Tested by: *Jacky Chen*
 20180126
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

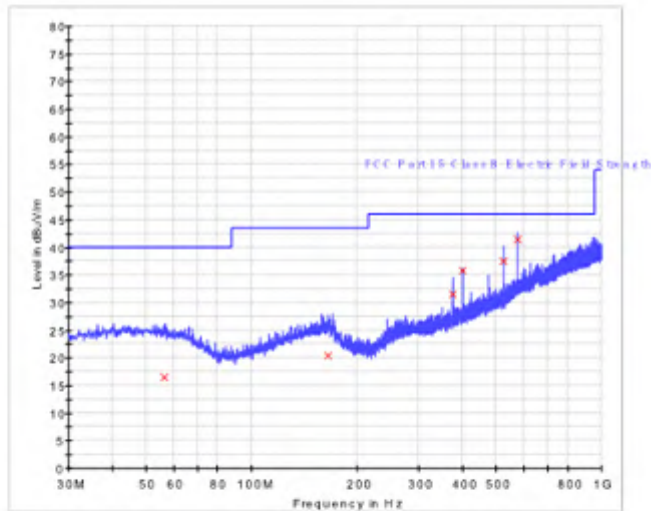
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer: Binatone
 Test Item: MBP944CONNECT(Camera)
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: Transmitting(Low)
 Climate Condition: 21 °C, 54 %, 100 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 164117606(174078251)
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

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



Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)	Comment
56.320000	16.5	1000.0	120.000	H	20.3	23.5	40.0	
165.200000	20.5	1000.0	120.000	H	21.2	23.0	43.5	
375.000000	31.5	1000.0	120.000	H	23.6	14.6	46.0	
400.000000	35.9	1000.0	120.000	H	24.5	10.1	46.0	
525.000000	37.5	1000.0	120.000	H	27.2	8.5	46.0	
575.000000	41.5	1000.0	120.000	H	29.1	4.5	46.0	

Tested by: *Jody Chen*
 20180126

Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

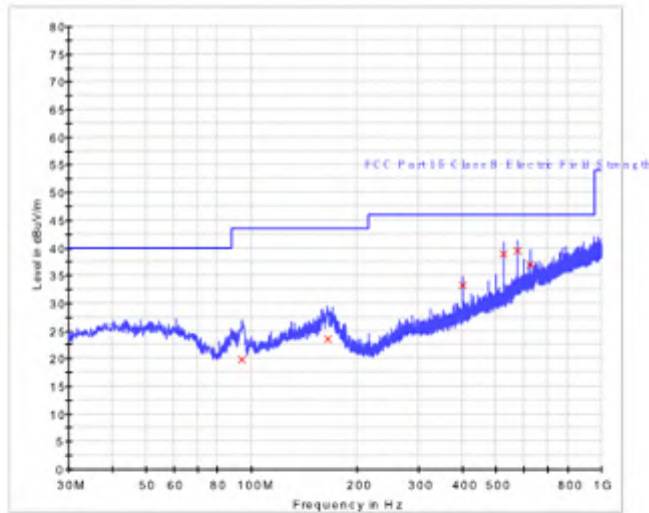
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer: Binatone
 Test Item: MBP944CONNECT(Camera)
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: Transmitting(Low)
 Climate Condition: 21 °C, 54 %, 100 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 164117606(174078251)
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

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



Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)	Comment
93.760000	19.8	1000.0	120.000	V	16.8	23.7	43.5	
165.800000	23.5	1000.0	120.000	V	21.2	20.0	43.5	
400.000000	33.2	1000.0	120.000	V	24.5	12.8	46.0	
525.000000	39.0	1000.0	120.000	V	27.2	7.0	46.0	
575.000000	39.5	1000.0	120.000	V	29.1	6.6	46.0	
625.000000	37.0	1000.0	120.000	V	30.2	9.0	46.0	

Tested by: *Jacky Chen*
 Reviewed by: _____
 20180126

TUV Rheinland (Guangdong) Ltd.

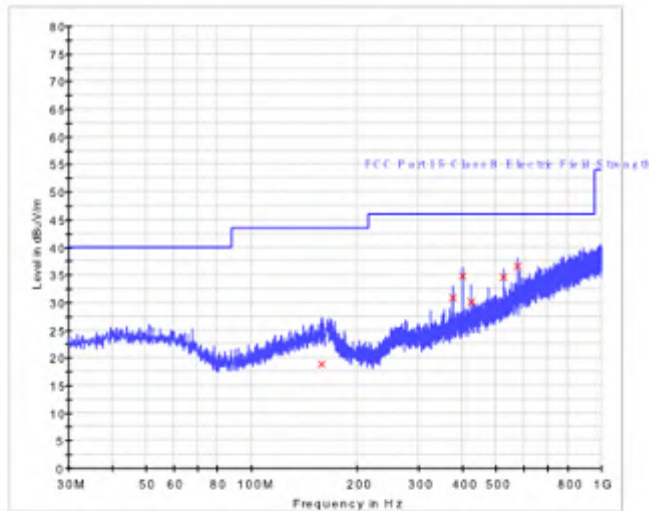
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer: Binatone
 Test Item: MBP944CONNECT(Camera)
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: Transmitting(Mid)
 Climate Condition: 21 °C, 54 %, 100 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 164117606(174078251)
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Horizontal

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



Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)	Comment
158.880000	19.0	1000.0	120.000	H	21.4	24.5	43.5	
375.000000	30.9	1000.0	120.000	H	23.6	15.1	46.0	
400.000000	34.8	1000.0	120.000	H	24.5	11.2	46.0	
425.000000	30.2	1000.0	120.000	H	25.1	15.8	46.0	
525.000000	34.6	1000.0	120.000	H	27.2	11.4	46.0	
575.000000	36.6	1000.0	120.000	H	29.1	9.4	46.0	

Tested by:

Jody Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

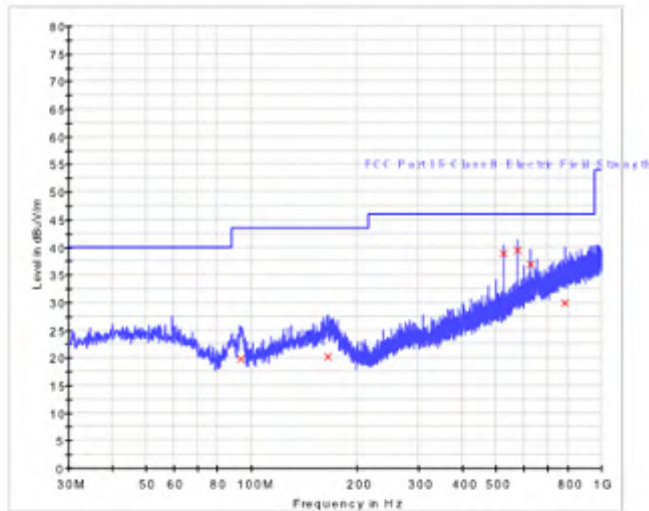
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer: Binatone
 Test Item: MBP944CONNECT(Camera)
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission
 Operation Mode: Transmitting(Mid)
 Climate Condition: 21 °C, 54 %, 100 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 164117606(174078251)
 Report No:
 Result: Pass
 Comment: Test distance is 3m; Vertical

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



Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)	Comment
93.400000	19.9	1000.0	120.000	V	16.7	23.6	43.5	
165.920000	20.2	1000.0	120.000	V	21.2	23.3	43.5	
525.000000	38.9	1000.0	120.000	V	27.2	7.1	46.0	
575.000000	39.5	1000.0	120.000	V	29.1	6.5	46.0	
625.000000	37.0	1000.0	120.000	V	30.2	9.0	46.0	
788.000000	30.1	1000.0	120.000	V	33.3	15.9	46.0	

Tested by:

Jody Chen

Reviewed by: _____

20180126

1GHz - 18GHz

TUV Rheinland (Guangdong) Ltd.

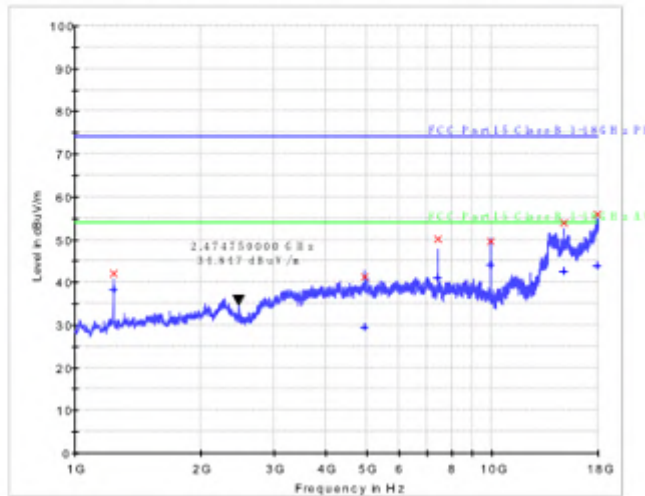
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	Binatone
Test Item:	
Identification:	MBP944CONNECT(Camera)
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(2.4GHz-High)
Climate Condition:	21 °C, 54 %, 100 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	164117606(174078251)
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/Bh PwAMP EXT & Notch filter



Tested by:

Jacky Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Comment
1238.000000	42.1	1000.0	1000.000	H	-19.0	31.9	74.0	
4952.000000	41.2	1000.0	1000.000	H	-7.6	32.8	74.0	
7432.000000	50.2	1000.0	1000.000	H	-5.3	23.8	74.0	
9906.000000	49.6	1000.0	1000.000	H	-3.0	24.4	74.0	
14861.000000	54.0	1000.0	1000.000	H	5.2	20.1	74.0	
17917.000000	56.0	1000.0	1000.000	H	10.2	18.0	74.0	

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)	Comment
1238.000000	38.3	1000.0	1000.000	H	-19.0	15.7	54.0	
4952.000000	29.4	1000.0	1000.000	H	-7.6	24.6	54.0	
7432.000000	41.2	1000.0	1000.000	H	-5.3	12.8	54.0	
9906.000000	44.2	1000.0	1000.000	H	-3.0	9.8	54.0	
14861.000000	42.6	1000.0	1000.000	H	5.2	11.4	54.0	
17917.000000	43.9	1000.0	1000.000	H	10.2	10.1	54.0	

Tested by:

Jacky Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

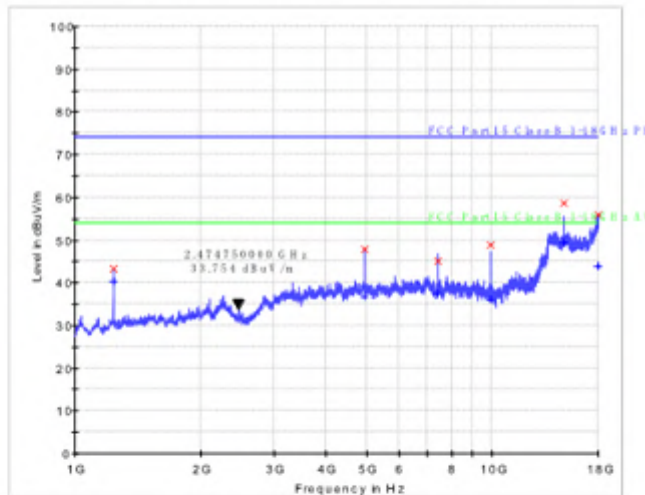
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	Binatone
Test Item:	
Identification:	MBP944CONNECT(Camera)
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(2.4GHz-High)
Climate Condition:	21 °C, 54 %, 100 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	164117606(174078251)
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_Wth PwAMP EXT& Notch filter



Tested by:

Jacky Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Comment
1238.000000	43.4	1000.0	1000.000	V	-19.0	30.6	74.0	
4952.000000	47.8	1000.0	1000.000	V	-7.6	26.2	74.0	
7432.000000	45.1	1000.0	1000.000	V	-5.3	28.9	74.0	
9910.000000	48.8	1000.0	1000.000	V	-3.0	25.2	74.0	
14863.000000	58.7	1000.0	1000.000	V	5.2	15.3	74.0	
17951.000000	56.0	1000.0	1000.000	V	10.4	18.0	74.0	

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)	Comment
1238.000000	40.2	1000.0	1000.000	V	-19.0	13.8	54.0	
4952.000000	36.7	1000.0	1000.000	V	-7.6	17.3	54.0	
7432.000000	37.6	1000.0	1000.000	V	-5.3	16.4	54.0	
9910.000000	36.1	1000.0	1000.000	V	-3.0	17.9	54.0	
14863.000000	49.5	1000.0	1000.000	V	5.2	4.5	54.0	
17951.000000	43.9	1000.0	1000.000	V	10.4	10.1	54.0	

Tested by:

Jacky Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

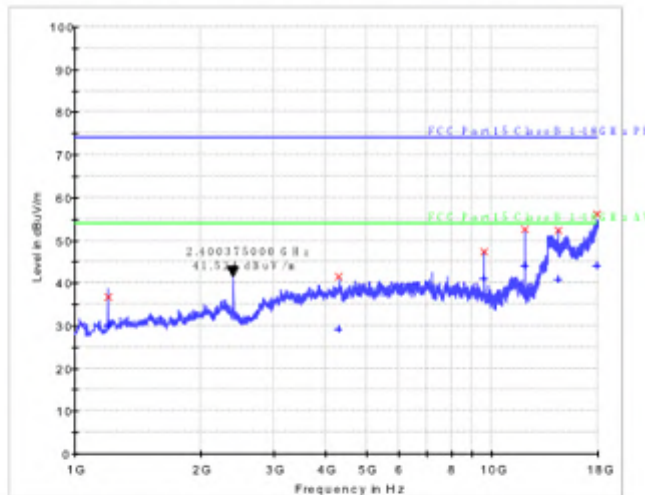
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	Binatone
Test Item:	
Identification:	MBP944CONNECT(Camera)
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(2.4GHz-Low)
Climate Condition:	21 °C, 54 %, 100 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	164117606(174078251)
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 th PreAMP EXT & Notch filter



Tested by:

Jacky Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Comment
1200.000000	36.8	1000.0	1000.000	H	-19.0	37.2	74.0	
4306.000000	41.5	1000.0	1000.000	H	-8.7	32.5	74.0	
9606.000000	47.4	1000.0	1000.000	H	-3.4	26.7	74.0	
12012.000000	52.7	1000.0	1000.000	H	-0.2	21.3	74.0	
14413.000000	52.5	1000.0	1000.000	H	4.9	21.5	74.0	
17943.000000	56.1	1000.0	1000.000	H	10.3	17.9	74.0	

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)	Comment
1200.000000	30.2	1000.0	1000.000	H	-19.0	23.9	54.0	
4306.000000	29.2	1000.0	1000.000	H	-8.7	24.8	54.0	
9606.000000	41.1	1000.0	1000.000	H	-3.4	12.9	54.0	
12012.000000	44.2	1000.0	1000.000	H	-0.2	9.8	54.0	
14413.000000	40.8	1000.0	1000.000	H	4.9	13.2	54.0	
17943.000000	44.1	1000.0	1000.000	H	10.3	9.9	54.0	

Tested by:

Jacky Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

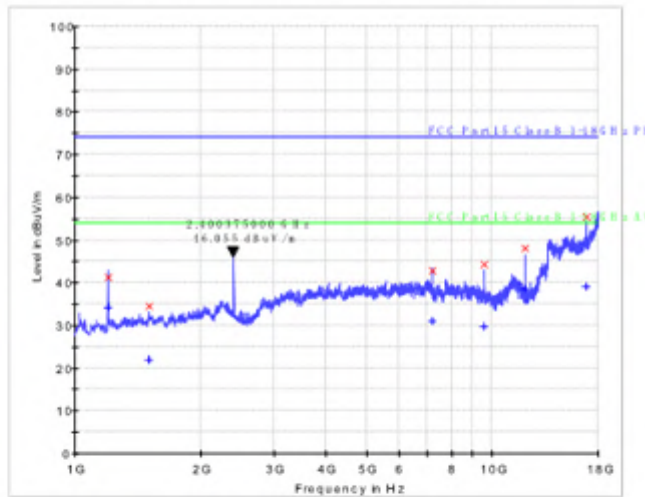
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	Binatone
Test Item:	
Identification:	MBP944CONNECT(Camera)
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(2.4GHz-Low)
Climate Condition:	21 °C, 54 %, 100 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	164117606(174078251)
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_Wth PwAMP EXT& Notch filter



Tested by:

Jacky Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Comment
1200.000000	41.4	1000.0	1000.000	V	-19.0	32.6	74.0	
1506.000000	34.6	1000.0	1000.000	V	-18.0	39.4	74.0	
7207.000000	42.9	1000.0	1000.000	V	-4.9	31.1	74.0	
9608.000000	44.2	1000.0	1000.000	V	-3.4	29.8	74.0	
12010.000000	48.1	1000.0	1000.000	V	-0.1	25.9	74.0	
16816.000000	55.4	1000.0	1000.000	V	6.4	18.6	74.0	

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)	Comment
1200.000000	34.2	1000.0	1000.000	V	-19.0	19.8	54.0	
1506.000000	22.0	1000.0	1000.000	V	-18.0	32.0	54.0	
7207.000000	31.0	1000.0	1000.000	V	-4.9	23.0	54.0	
9608.000000	29.8	1000.0	1000.000	V	-3.4	24.2	54.0	
12010.000000	38.5	1000.0	1000.000	V	-0.1	15.5	54.0	
16816.000000	39.1	1000.0	1000.000	V	6.4	15.0	54.0	

Tested by:

Jacky Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

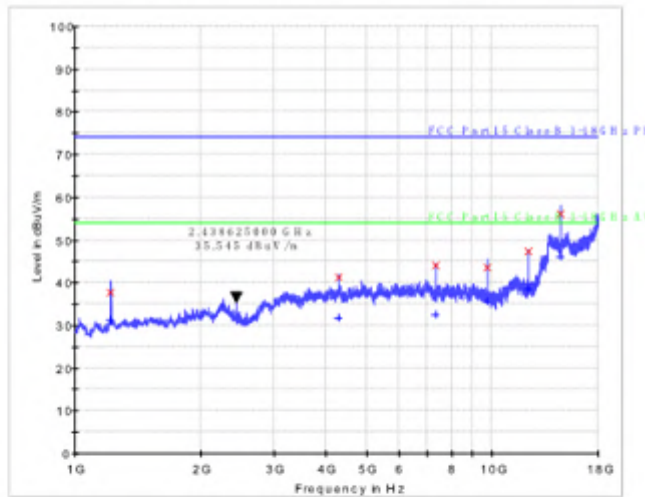
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	Binatone
Test Item:	
Identification:	MBP944CONNECT(Camera)
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(2.4GHz-Mid)
Climate Condition:	21 °C, 54 %, 100 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	164117606(174078251)
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_Wth PwAMP EXT& Notch filter



Tested by:

Jacky Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Comment
1219.000000	37.7	1000.0	1000.000	H	-19.0	36.3	74.0	
4283.000000	41.2	1000.0	1000.000	H	-8.7	32.8	74.0	
7320.000000	44.0	1000.0	1000.000	H	-5.6	30.0	74.0	
9759.000000	43.6	1000.0	1000.000	H	-3.4	30.4	74.0	
12199.000000	47.2	1000.0	1000.000	H	0.0	26.8	74.0	
14642.000000	56.2	1000.0	1000.000	H	5.1	17.8	74.0	

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)	Comment
1219.000000	31.3	1000.0	1000.000	H	-19.0	22.7	54.0	
4283.000000	31.7	1000.0	1000.000	H	-8.7	22.3	54.0	
7320.000000	32.5	1000.0	1000.000	H	-5.6	21.5	54.0	
9759.000000	35.4	1000.0	1000.000	H	-3.4	18.6	54.0	
12199.000000	38.5	1000.0	1000.000	H	0.0	15.5	54.0	
14642.000000	46.1	1000.0	1000.000	H	5.1	7.9	54.0	

Tested by:

Jacky Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

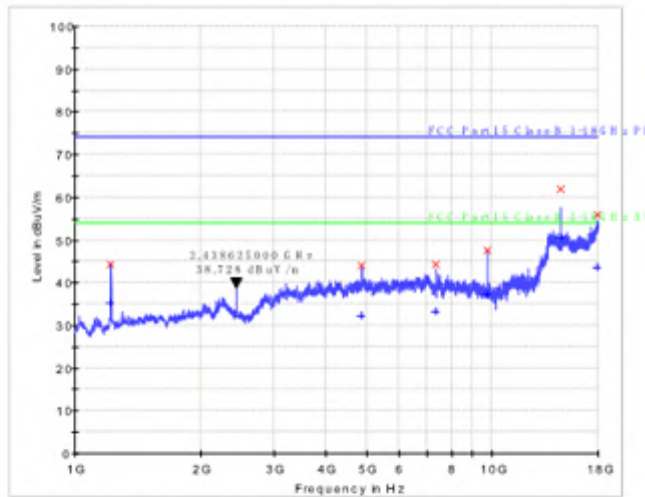
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	Binatone
Test Item:	
Identification:	MBP944CONNECT(Camera)
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(2.4GHz-Mid)
Climate Condition:	21 °C, 54 %, 100 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	164117606(174078251)
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_Wth PwAMP EXT& Notch filter



Tested by:

Jacky Chen

Reviewed by: _____

20180126

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Comment
1219.000000	44.3	1000.0	1000.000	V	-19.0	29.8	74.0	
4878.000000	44.0	1000.0	1000.000	V	-7.4	30.0	74.0	
7322.000000	44.4	1000.0	1000.000	V	-5.6	29.6	74.0	
9759.000000	47.6	1000.0	1000.000	V	-3.4	26.4	74.0	
14642.000000	62.1	1000.0	1000.000	V	5.1	11.9	74.0	
17917.000000	55.9	1000.0	1000.000	V	10.2	18.1	74.0	

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)	Comment
1219.000000	35.4	1000.0	1000.000	V	-19.0	18.6	54.0	
4878.000000	32.3	1000.0	1000.000	V	-7.4	21.7	54.0	
7322.000000	33.4	1000.0	1000.000	V	-5.6	20.6	54.0	
9759.000000	37.2	1000.0	1000.000	V	-3.4	16.8	54.0	
14642.000000	50.7	1000.0	1000.000	V	5.1	3.3	54.0	
17917.000000	43.5	1000.0	1000.000	V	10.2	10.5	54.0	

Tested by:

Jacky Chen

Reviewed by: _____

20180126

Appendix B.3: Test Results of Radiated Emissions in Restricted Bands
Low channel

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

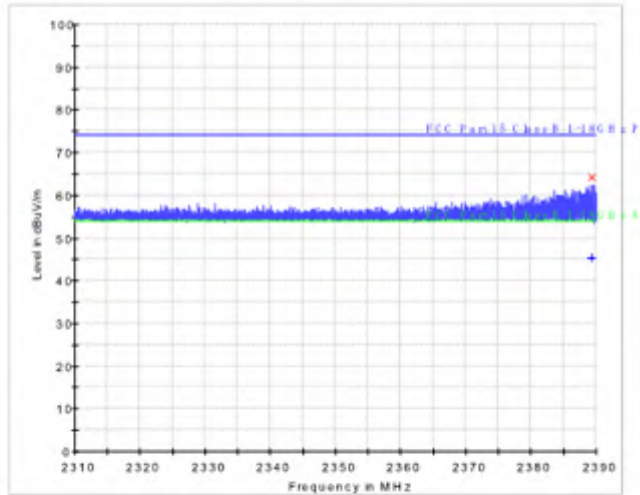
EMC Test Record (Emission)

Common Information

Manufacturer: Binatone
 Test Item:
 Identification: MBP944CONNECT(Camera)
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: Transmitting(2.4GHz-Low)
 Climate Condition: 21 °C, 54 %, 100 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 164117606(174078251)
 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_EREFD11-A02-04_1GHz-18GHz



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Comment
2389.360000	64.1	1000.0	1000.000	H	31.1	9.9	74.0	

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)	Comment
2389.360000	45.3	1000.0	1000.000	H	31.1	8.7	54.0	

Tested by: *Jacky Chen*
 20180126
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

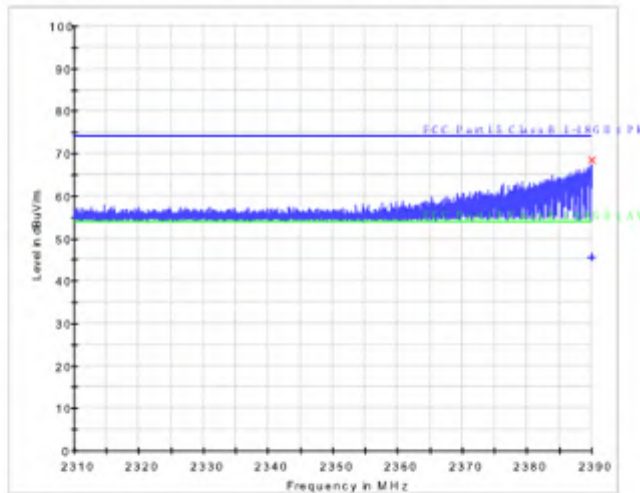
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer: Binatone
 Test Item: MBP944CONNECT(Camera)
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: Transmitting(2.4GHz-Low)
 Climate Condition: 21 °C, 54 %, 100 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 164117606(174078251)
 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 PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Comment
2389.960000	68.4	1000.0	1000.000	V	31.1	5.6	74.0	

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)	Comment
2389.960000	45.6	1000.0	1000.000	V	31.1	8.4	54.0	

Tested by:

Jacky Chen

Reviewed by: _____

20180126

High channel

TUV Rheinland (Guangdong) Ltd.

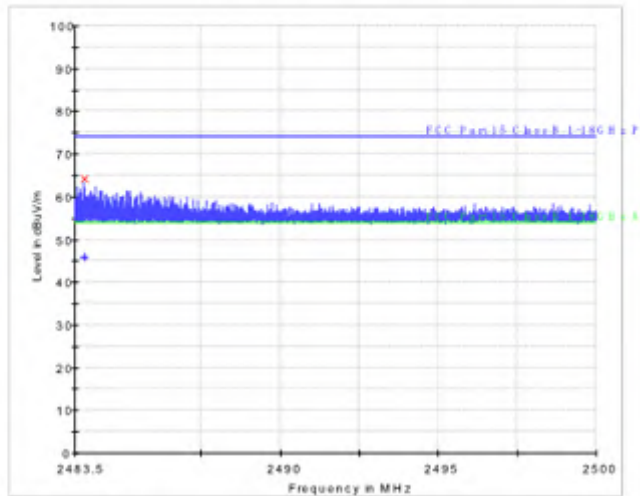
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer: Binatone
 Test Item: MBP944CONNECT(Camera)
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: Transmitting(2.4GHz-High)
 Climate Condition: 21 °C, 54 %, 100 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 164117606(174078251)
 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_EREF011-A02-04_1GHz-18GHz



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Comment
2483.800000	64.3	1000.0	1000.000	H	31.8	9.7	74.0	

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)	Comment
2483.800000	45.9	1000.0	1000.000	H	31.8	8.1	54.0	

Tested by: *Jacky Chen*
 20180126
 Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

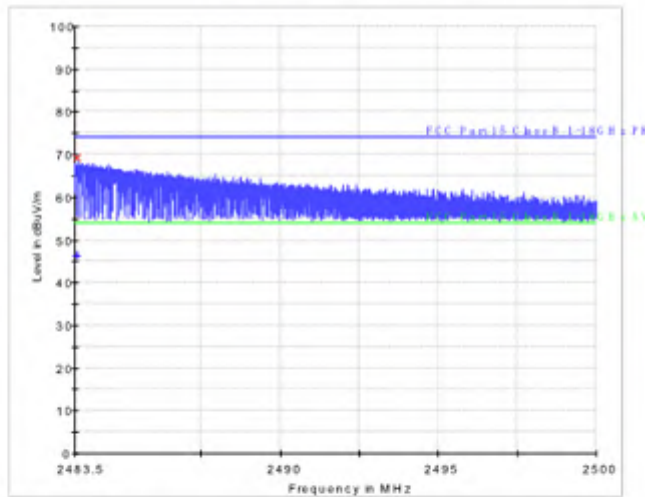
EMC Test Record (Emission)

Common Information

Manufacturer: Binatone
 Test Item: MBP944CONNECT(Camera)
 Test Standard: FCC Part 15
 Test Detail: Radiated Emission(Band-edge)
 Operation Mode: Transmitting(2.4GHz-High)
 Climate Condition: 21 °C, 54 %, 100 kPa
 Test Voltage/ Freq: AC 120 V / 60 Hz
 Receipt No: 164117606(174078251)
 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 PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Comment
2483.560000	69.3	1000.0	1000.000	V	31.8	4.7	74.0	

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)	Comment
2483.560000	46.3	1000.0	1000.000	V	31.8	7.7	54.0	

Tested by:

Jacky Chen

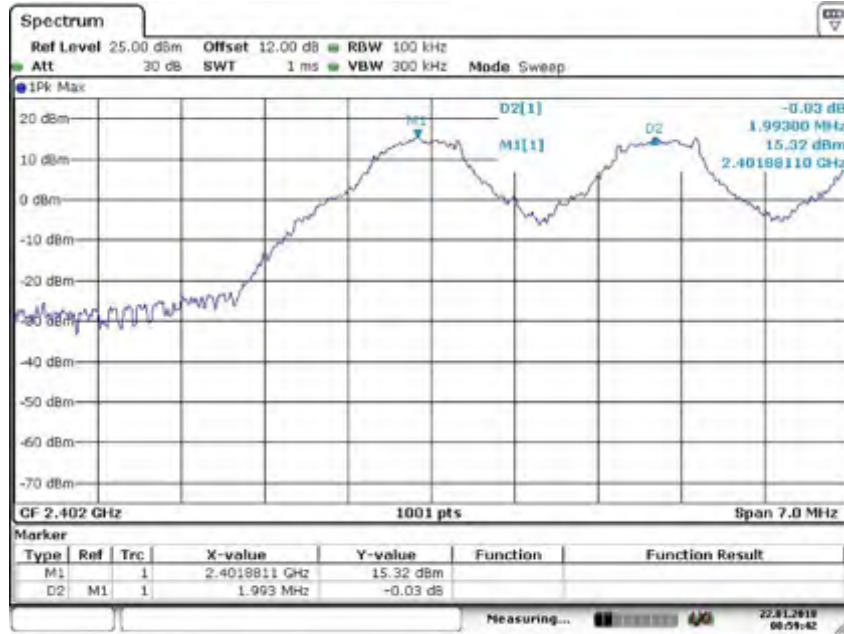
Reviewed by: _____

20180126

Note: Pre-test on single channels and hopping mode, and find out the worse condition for compliance test.

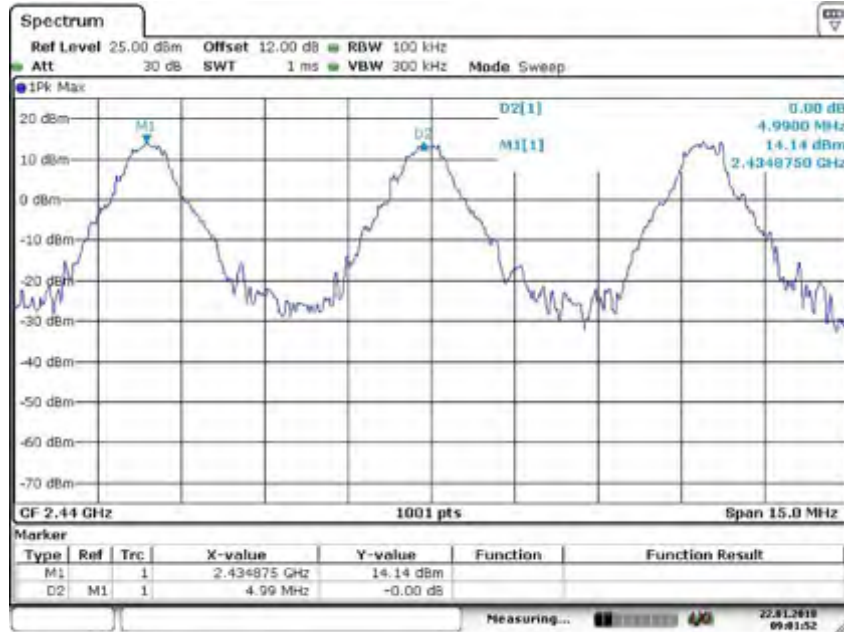
Appendix B.4: Test Results of Carrier Frequency Separation

Low channel



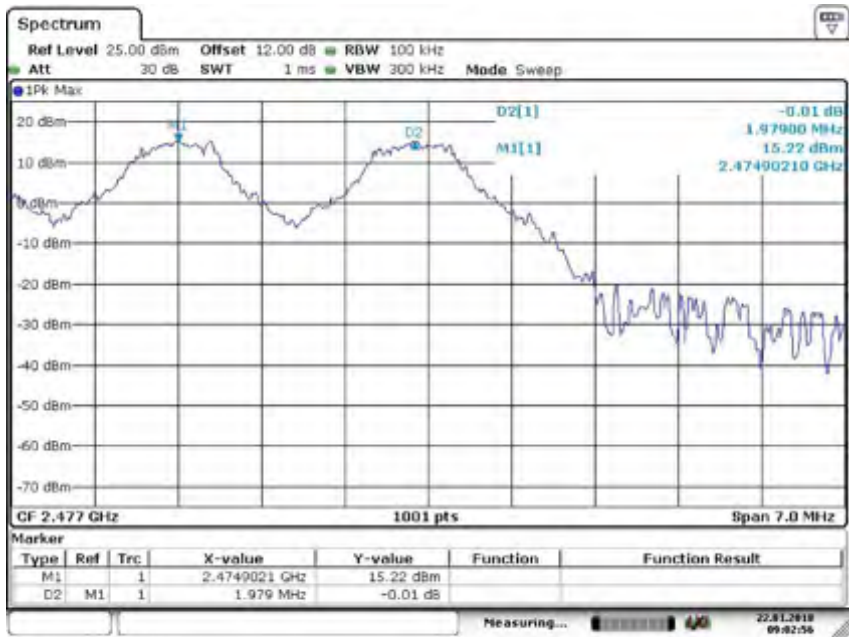
Date 22.JAN.2018 08:59:42

Middle channel



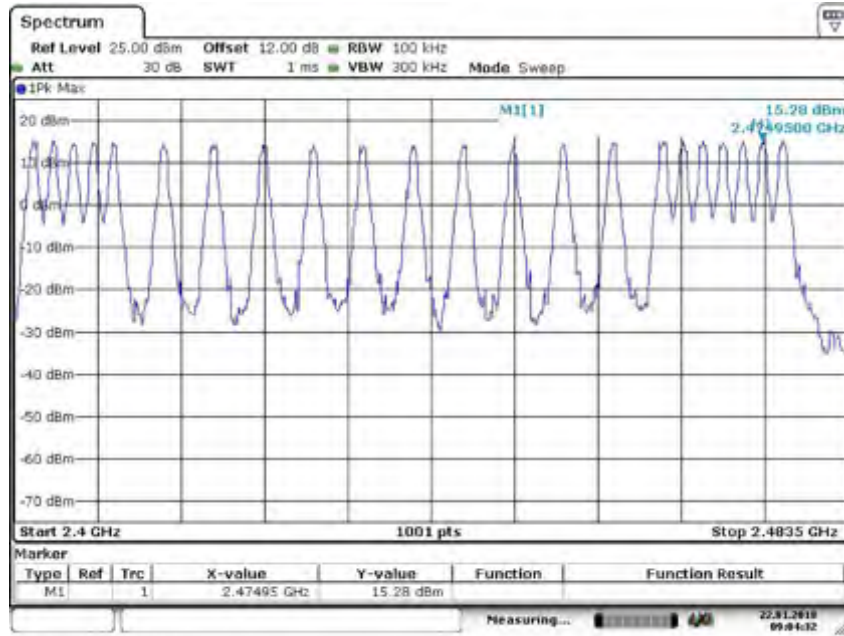
Date 22.JAN.2018 09:01:53

High channel



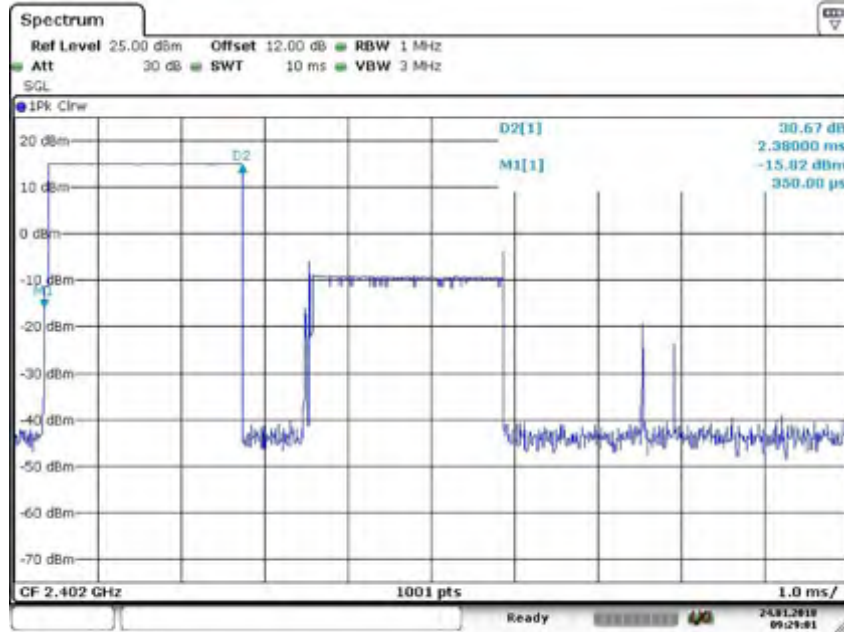
Date: 22.JAN.2018 09:02:56

Appendix B.5: Test Results of Number of Hopping Frequency

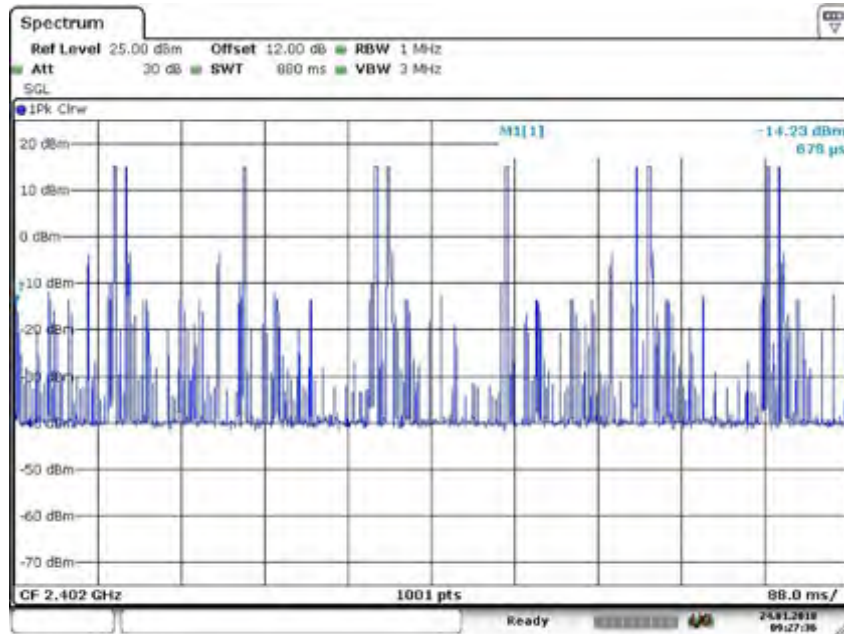


Date: 22.JAN.2018 09:04:31

Appendix B.6: Test Results of Time of Occupancy Low channel

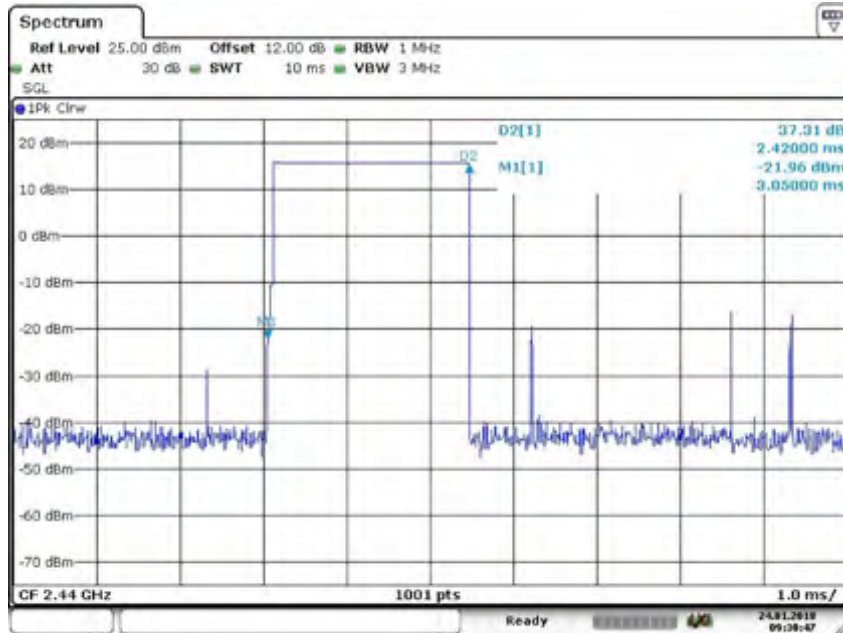


Date: 24. JAN 2018 09:29:01

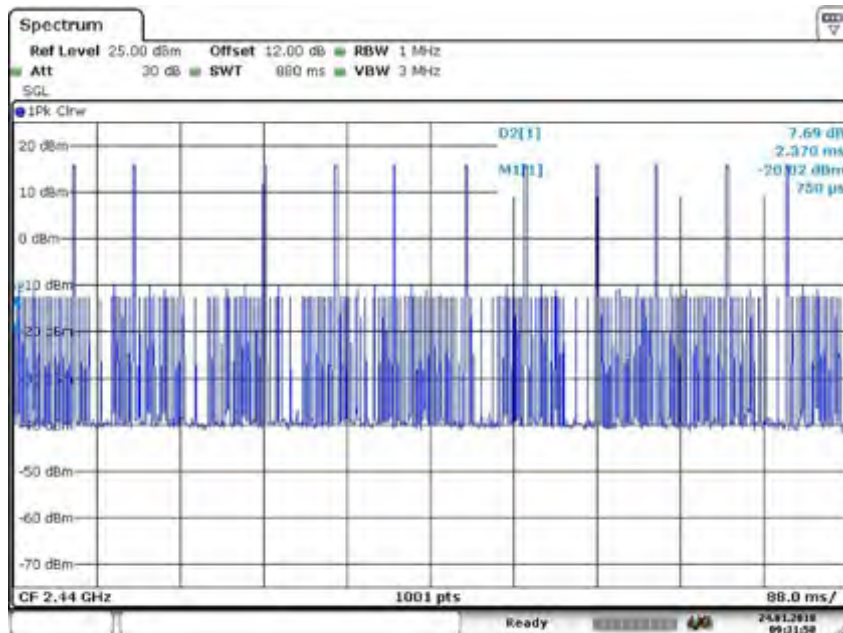


Date: 24. JAN 2018 09:27:36

Middle channel

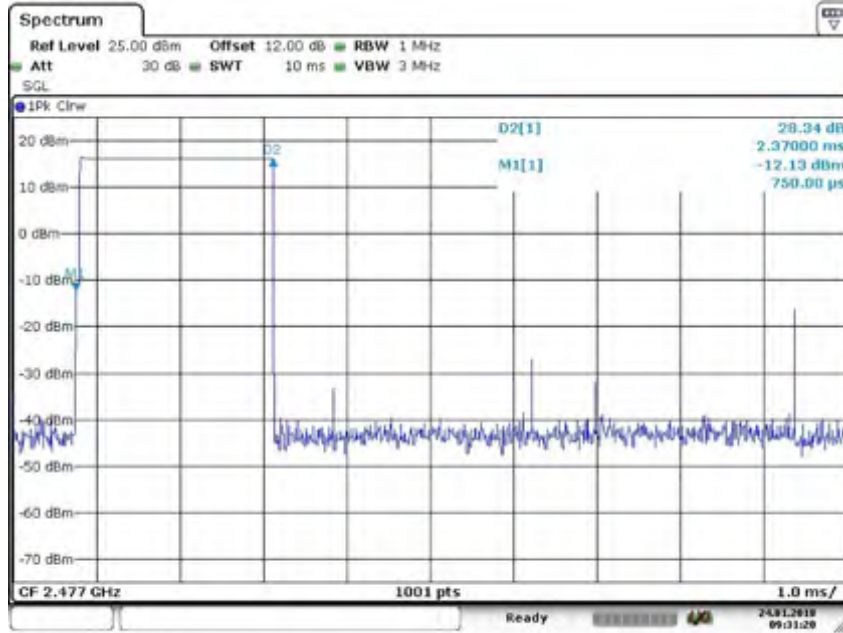


Date 24. JAN 2018 09:30:48

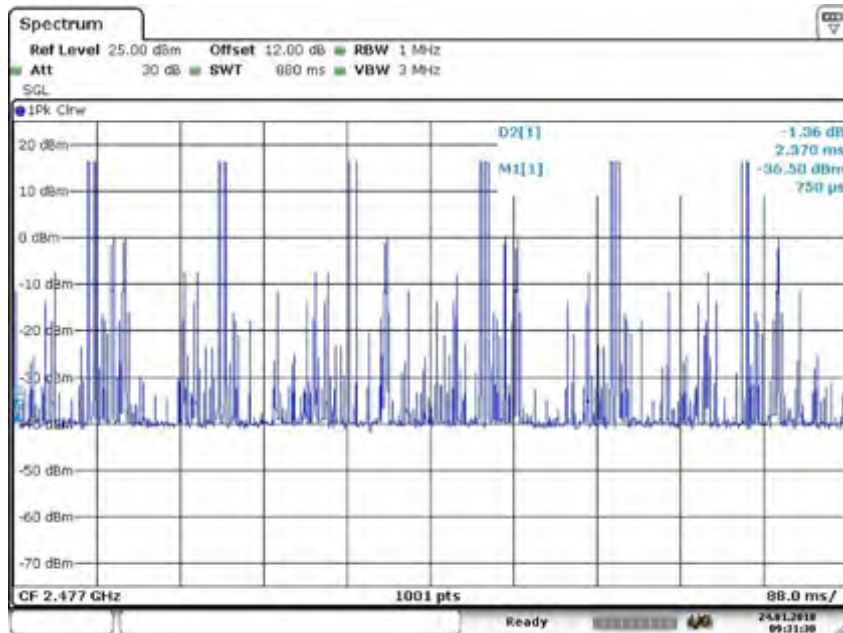


Date 24. JAN 2018 09:31:59

High channel



Date: 24.JAN.2018 09:31:20



Date: 24.JAN.2018 09:31:30

Appendix B.7: Test Results of Conducted Emission on AC Mains

D mode with Adapter #1

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

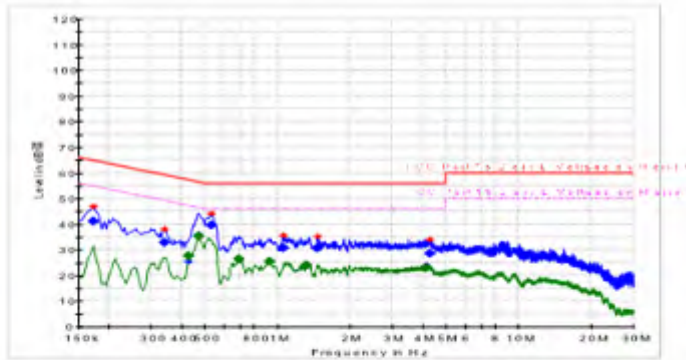
EMC Test Record (EMISSION)

Test Information

Manufacturer: Binatone
 Test Item: MBP944CONNECT(Camera)
 Identification: MBP944CONNECT(Camera)
 Test Standard: FCC Part 15
 Test Detail: Conducted Emission
 Operation Mode: Communication(2.4GHz)
 Climate Condition: 21 °C; 54 %RH; 101 kPa.
 Test Voltage/ Freq.: AC 120 V/ 60 Hz
 Port / Line: AC Mains(L1+N)
 Receipt No.: 164117606(174078251)
 Report No.: /
 Result: Pass
 Comment:

Hardware Setup: 1phase LISN ENV216 to ESCI 3
 Level Unit: dBµV

Subrange: 150kHz - 30MHz
 Detectors: Peak; Average
 IF Bandwidth: 9kHz
 Step Size: 4.5kHz
 Meas. Time: 10ms
 Receiver: ESCI 3



Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.172500	41.24	---	64.84	23.60	1000.	9.000	N	ON	9.8
0.339000	32.95	---	59.23	26.27	1000.	9.000	L1	ON	9.7
0.429000	---	27.50	47.27	19.78	1000.	9.000	N	ON	9.8
0.474000	---	35.37	46.44	11.08	1000.	9.000	N	ON	9.8
0.532500	39.49	---	56.00	16.51	1000.	9.000	N	ON	9.8
0.690000	---	26.41	46.00	19.59	1000.	9.000	N	ON	9.8
0.928500	---	25.60	46.00	20.40	1000.	9.000	N	ON	9.8
1.059000	30.75	---	56.00	25.25	1000.	9.000	N	ON	9.8
1.324500	---	24.08	46.00	21.92	1000.	9.000	N	ON	9.8
1.464000	30.77	---	56.00	25.23	1000.	9.000	N	ON	9.8
4.141500	---	23.00	46.00	23.00	1000.	9.000	N	ON	10.0
4.312500	28.51	---	56.00	27.49	1000.	9.000	N	ON	9.9

Tested by: *Jacky Chen*
 20180126
 Reviewed by: _____

E mode with Adapter #1

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

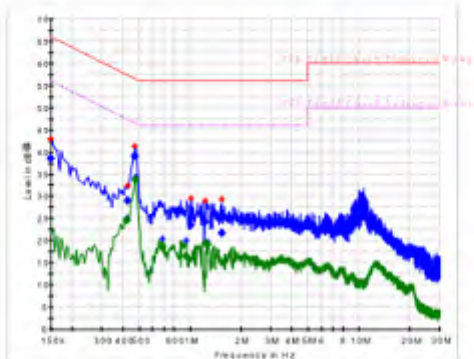
EMC Test Record (EMISSION)

Test Information

Manufacturer: Binatone
 Test Item: MBP944CONNECT(Camera)
 Test Standard: FCC Part 15
 Test Detail: Conducted Emission
 Operation Mode: Normal operation with Wi-Fi mode
 Climate Condition: 21 °C; 54 %RH; 101 kPa.
 Test Voltage/ Freq.: AC 120 V/ 60 Hz
 Port / Line: AC Mains(L1+N)
 Receipt No.: 164117606(174078251)
 Report No.: /
 Result: Pass
 Comment: /

Hardware Setup: 1phase LISN ENV216 to ESCI 3
 Level Unit: dBµV

Subrange 150kHz - 30MHz
 Detectors Peak; Average
 IF Bandwidth 9kHz
 Step Size 4.5kHz
 Meas. Time 10ms
 Receiver ESCI 3



Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.150000	38.47	---	66.00	27.53	1000.	9.000	L1	ON	9.7
0.424500	---	24.55	47.36	22.81	1000.	9.000	L1	ON	9.7
0.429000	29.06	---	57.27	28.21	1000.	9.000	L1	ON	9.7
0.469500	39.12	---	56.52	17.41	1000.	9.000	L1	ON	9.7
0.474000	---	33.71	46.44	12.74	1000.	9.000	L1	ON	9.7
0.685500	---	18.39	46.00	27.61	1000.	9.000	L1	ON	9.8
0.951000	---	16.48	46.00	29.52	1000.	9.000	L1	ON	9.8
1.014000	23.40	---	56.00	32.60	1000.	9.000	L1	ON	9.8
1.225500	24.24	---	56.00	31.76	1000.	9.000	L1	ON	9.8
1.248000	---	19.26	46.00	26.74	1000.	9.000	L1	ON	9.8
1.270500	---	19.24	46.00	26.76	1000.	9.000	L1	ON	9.8
1.540500	21.61	---	56.00	34.39	1000.	9.000	L1	ON	9.8

Tested by: *Jacky Chen*
 20180126
 Reviewed by: _____

D mode with Adapter #2

TUV Rheinland (Guangdong) Ltd.

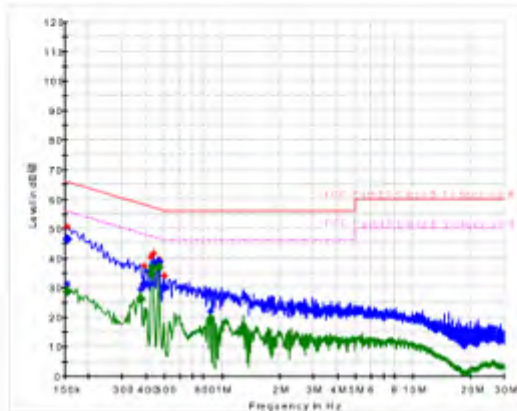
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	Binatone
Test Item:	
Identification:	MBP944CONNECT(Camera)
Test Standard:	FCC Part 15
Test Detail:	Conducted Emission
Operation Mode:	Communication (2.4G)
Climate Condition:	20 °C; 50 %RH; 101 kPa.
Test Voltage/ Freq.:	AC 120 V/ 60 Hz
Port / Line:	AC Mains(L1+N)
Receipt No.:	164117606(174078251)
Report No.:	/
Result:	Pass
Comment:	With CSEC adapter
Hardware Setup:	1phase LISN ENV216 to ESCI 3
Level Unit:	dBµV

Subrange	Detectors	IF Bandwidth	Step Size	Meas.	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCI 3



Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.154500	46.47	---	65.75	19.28	1000.	9.000	N	ON	9.8
0.154500	---	28.68	55.75	27.07	1000.	9.000	N	ON	9.8
0.375000	---	25.98	48.39	22.41	1000.	9.000	L1	ON	9.7
0.393000	30.86	---	58.00	27.14	1000.	9.000	L1	ON	9.8
0.424500	34.95	---	57.36	22.41	1000.	9.000	L1	ON	9.7
0.429000	---	34.77	47.27	12.50	1000.	9.000	L1	ON	9.7
0.433500	---	36.63	47.19	10.55	1000.	9.000	L1	ON	9.7
0.438000	37.59	---	57.10	19.51	1000.	9.000	L1	ON	9.7
0.465000	---	36.74	46.60	9.87	1000.	9.000	L1	ON	9.7
0.465000	38.72	---	56.60	17.88	1000.	9.000	L1	ON	9.7
0.496500	30.05	---	56.06	26.01	1000.	9.000	N	ON	9.8
0.870000	---	18.97	46.00	27.03	1000.	9.000	L1	ON	9.8

Tested by: *Jacky Chen*
20180212

Reviewed by: _____

E mode with Adapter #2

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

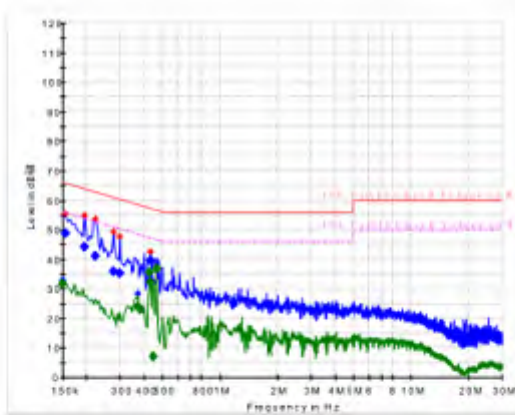
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Binatone
Test Item:	
Identification:	MBP944CONNECT(Camera)
Test Standard:	FCC Part 15
Test Detail:	Conducted Emission
Operation Mode:	Communication (WIFI)
Climate Condition:	20 °C; 50 %RH; 101 kPa.
Test Voltage/ Freq.:	AC 120 V/ 60 Hz
Port / Line:	AC Mains(L1+N)
Receipt No.:	164117606(174078251)
Report No.:	/
Result:	Pass
Comment:	With CSEC adapter

Hardware Setup:	1phase LISN ENV216 to ESCI 3
Level Unit:	dBµV

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCI 3



Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.150000	---	31.60	56.00	24.40	1000.	9.000	L1	ON	9.7
0.154500	48.65	---	65.75	17.10	1000.	9.000	L1	ON	9.8
0.195000	44.19	---	63.82	19.63	1000.	9.000	N	ON	9.8
0.222000	40.97	---	62.74	21.77	1000.	9.000	N	ON	9.8
0.276000	35.82	---	60.94	25.12	1000.	9.000	N	ON	9.8
0.298500	35.25	---	60.28	25.04	1000.	9.000	N	ON	9.8
0.370500	---	23.89	48.49	24.60	1000.	9.000	L1	ON	9.7
0.429000	---	35.59	47.27	11.68	1000.	9.000	L1	ON	9.7
0.433500	---	32.27	47.19	14.91	1000.	9.000	L1	ON	9.7
0.433500	39.44	---	57.19	17.74	1000.	9.000	L1	ON	9.7
0.447000	---	6.97	46.93	39.96	1000.	9.000	N	ON	9.8
0.465000	---	36.70	46.60	9.91	1000.	9.000	L1	ON	9.7

Tested by: *Jacky Chen* Reviewed by: _____
20180212