

## Radiated Band Edge Result

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

3. Display the measurement of peak values.

Test Procedure:

The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

Let the EUT work in TX (Hopping off, Hopping on) modes measure it.

We select 2402MHz, 2480MHz TX frequency to transmit(Hopping off mode).

We select 2402-2480MHz TX frequency to transmit(Hopping on mode).

During the radiated emission test, the spectrum analyzer was set with the following configurations:

- 1.The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
- 2.The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
- 3.All modes of operation were investigated and the worst-case emissions are reported.

**Non-hopping mode**

Job No.: STAR2016 #1226

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: TX 2402MHz(GFSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

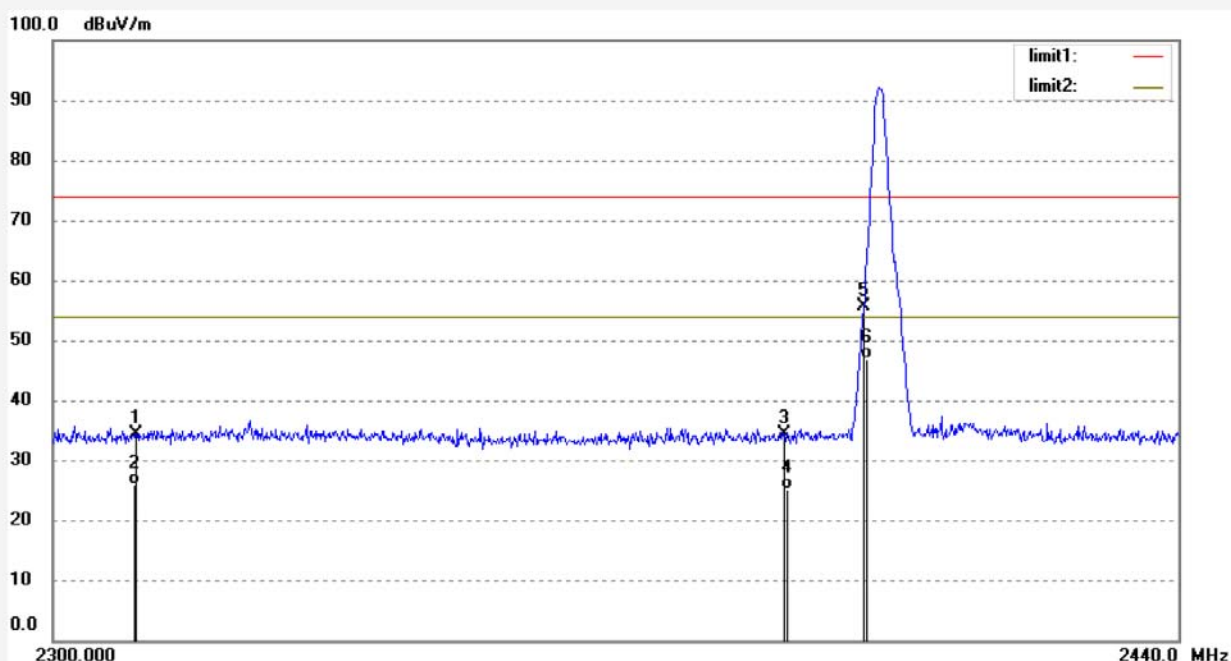
Date: 16/06/15/

Time: 13/30/23

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	42.14	-7.87	34.27	74.00	-39.73	peak			
2	2310.000	33.69	-7.87	25.82	54.00	-28.18	AVG			
3	2390.000	41.90	-7.64	34.26	74.00	-39.74	peak			
4	2390.000	32.71	-7.64	25.07	54.00	-28.93	AVG			
5	2400.000	63.33	-7.61	55.72	74.00	-18.28	peak			
6	2400.000	54.37	-7.61	46.76	54.00	-7.24	AVG			

Note: Average measurement with peak detection at No.2&amp;4&amp;6

Job No.: STAR2016 #1227

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: TX 2402MHz(GFSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

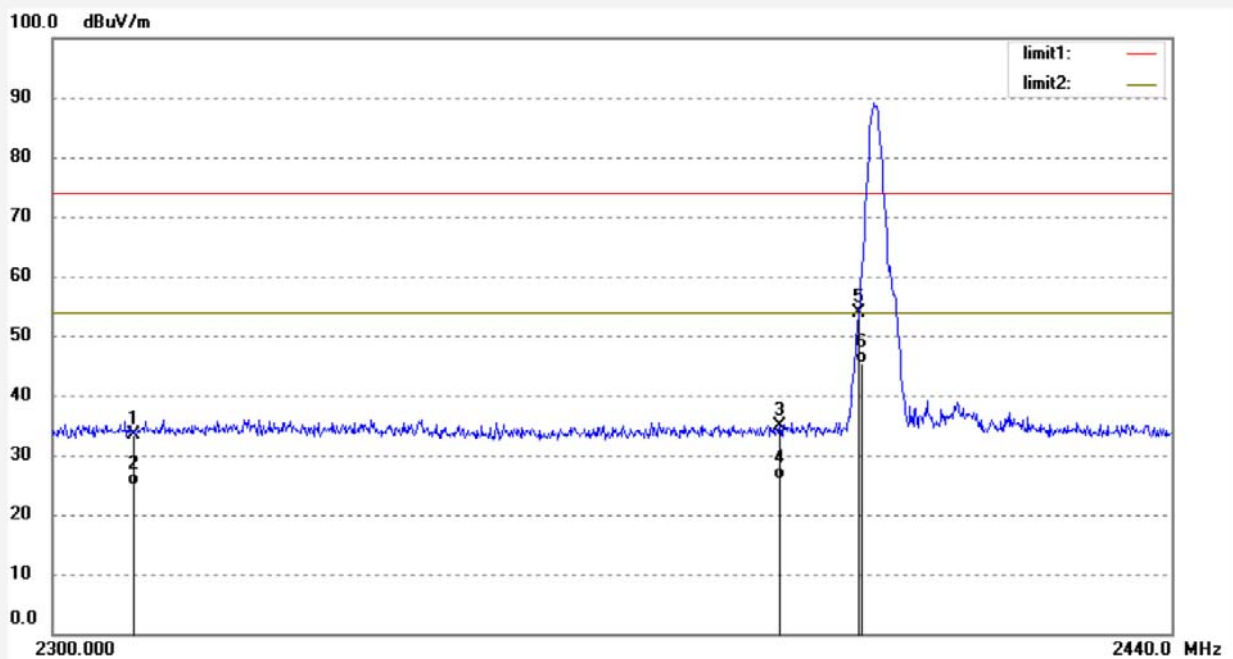
Date: 16/06/15/

Time: 13/31/14

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	41.19	-7.87	33.32	74.00	-40.68	peak			
2	2310.000	32.79	-7.87	24.92	54.00	-29.08	AVG			
3	2390.000	42.55	-7.64	34.91	74.00	-39.09	peak			
4	2390.000	33.60	-7.64	25.96	54.00	-28.04	AVG			
5	2400.000	61.40	-7.61	53.79	74.00	-20.21	peak			
6	2400.000	53.04	-7.61	45.43	54.00	-8.57	AVG			

Note: Average measurement with peak detection at No.2&amp;4&amp;6

Job No.: STAR2016 #1229

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: TX 2480MHz(GFSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

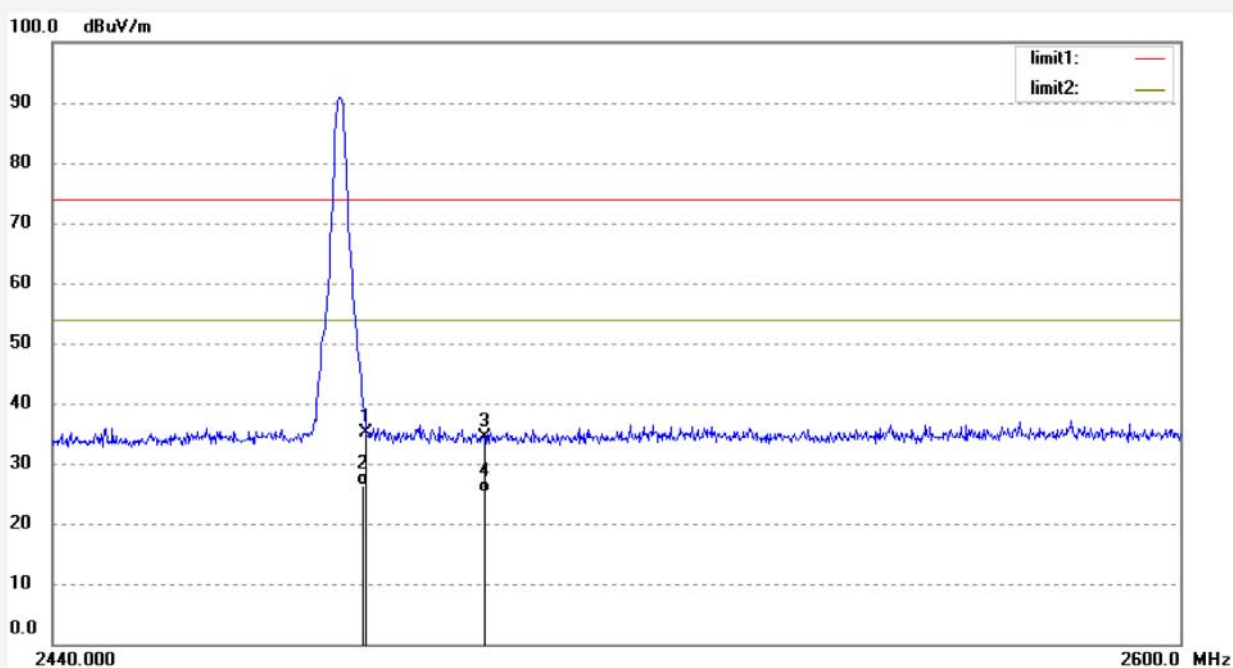
Date: 16/06/15/

Time: 13/33/46

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168

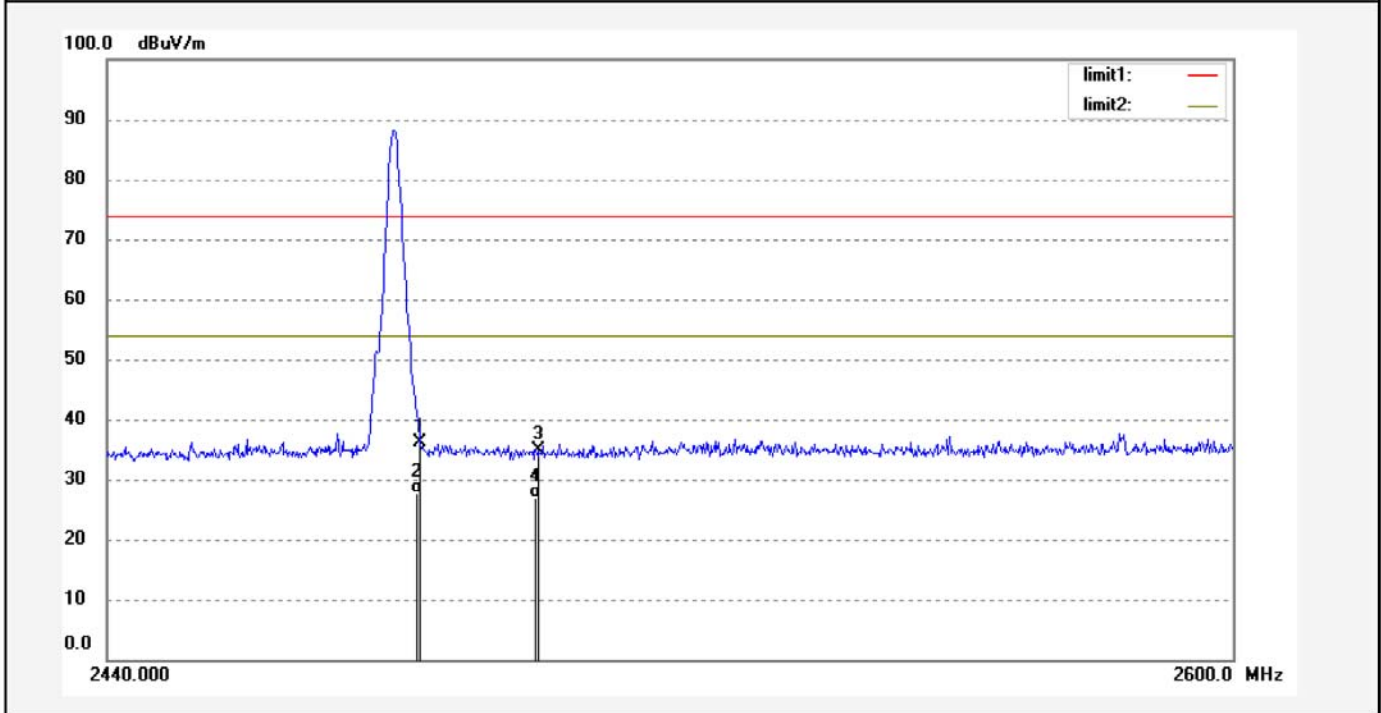


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	42.42	-7.37	35.05	74.00	-38.95	peak			
2	2483.500	33.64	-7.37	26.27	54.00	-27.73	AVG			
3	2500.000	41.70	-7.32	34.38	74.00	-39.62	peak			
4	2500.000	32.56	-7.32	25.24	54.00	-28.76	AVG			

Note: Average measurement with peak detection at No.2&amp;4

Job No.: STAR2016 #1228	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/06/15/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 13/33/04
EUT: Media box	Engineer Signature: star
Mode: TX 2480MHz(GFSK)	Distance: 3m
Model: X9	
Manufacturer: PIPO TECHNOLOGY CO., LTD	

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	43.41	-7.37	36.04	74.00	-37.96	peak			
2	2483.500	35.06	-7.37	27.69	54.00	-26.31	AVG			
3	2500.000	42.25	-7.32	34.93	74.00	-39.07	peak			
4	2500.000	34.19	-7.32	26.87	54.00	-27.13	AVG			

Note: Average measurement with peak detection at No.2&4

Job No.: STAR2016 #1233

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: TX 2402MHz(QPSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

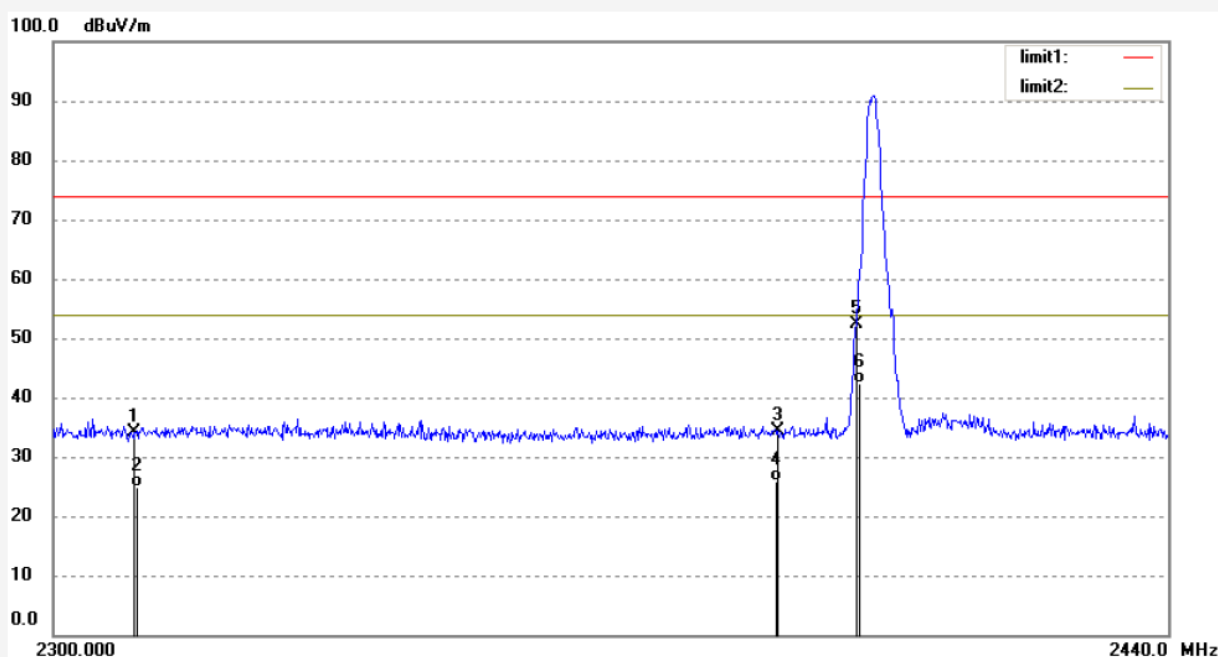
Date: 16/06/15/

Time: 13/38/37

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	41.88	-7.87	34.01	74.00	-39.99	peak			
2	2310.000	32.69	-7.87	24.82	54.00	-29.18	AVG			
3	2390.000	41.96	-7.64	34.32	74.00	-39.68	peak			
4	2390.000	33.40	-7.64	25.76	54.00	-28.24	AVG			
5	2400.000	59.94	-7.61	52.33	74.00	-21.67	peak			
6	2400.000	50.00	-7.61	42.39	54.00	-11.61	AVG			

Note: Average measurement with peak detection at No.2&amp;4&amp;6

Job No.: STAR2016 #1232

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: TX 2402MHz(QPSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

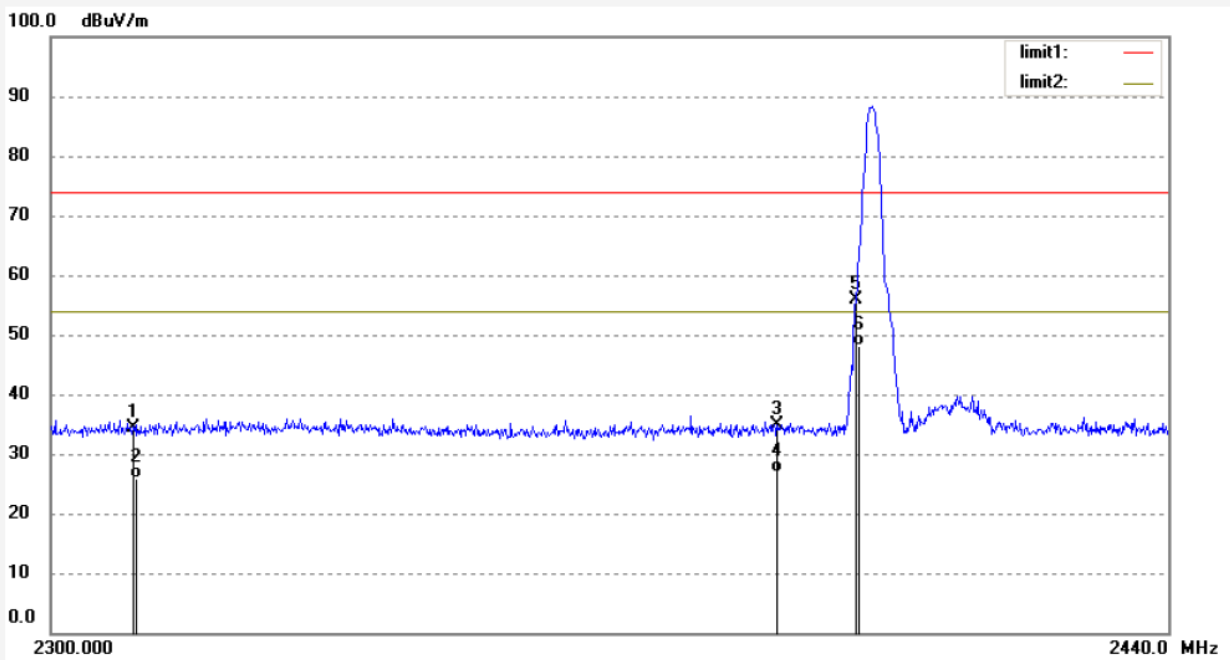
Date: 16/06/15/

Time: 13/37/55

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	42.37	-7.87	34.50	74.00	-39.50	peak			
2	2310.000	33.69	-7.87	25.82	54.00	-28.18	AVG			
3	2390.000	42.62	-7.64	34.98	74.00	-39.02	peak			
4	2390.000	34.47	-7.64	26.83	54.00	-27.17	AVG			
5	2400.000	63.61	-7.61	56.00	74.00	-18.00	peak			
6	2400.000	55.62	-7.61	48.01	54.00	-5.99	AVG			

Note: Average measurement with peak detection at No.2&4&6

Job No.: STAR2016 #1230

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: TX 2480MHz(QPSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

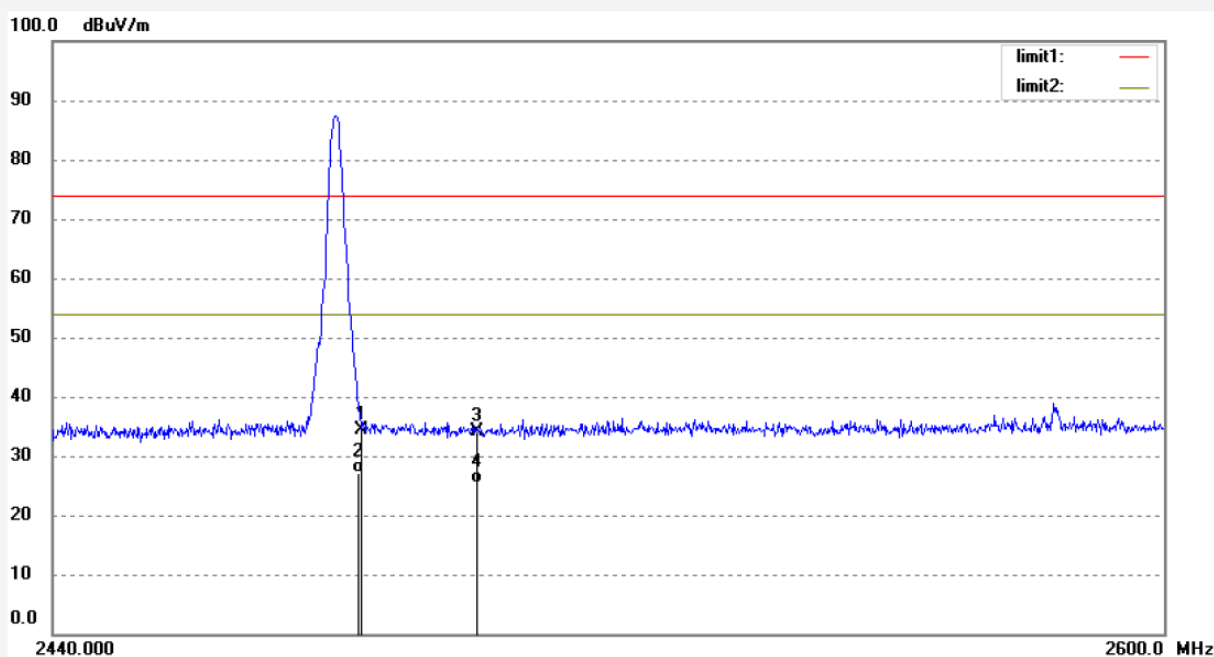
Date: 16/06/15/

Time: 13/35/37

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	41.75	-7.37	34.38	74.00	-39.62	peak			
2	2483.500	34.39	-7.37	27.02	54.00	-26.98	AVG			
3	2500.000	41.57	-7.32	34.25	74.00	-39.75	peak			
4	2500.000	32.82	-7.32	25.50	54.00	-28.50	AVG			

Note: Average measurement with peak detection at No.2&amp;4





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Job No.: STAR2016 #1231

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: TX 2480MHz(QPSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

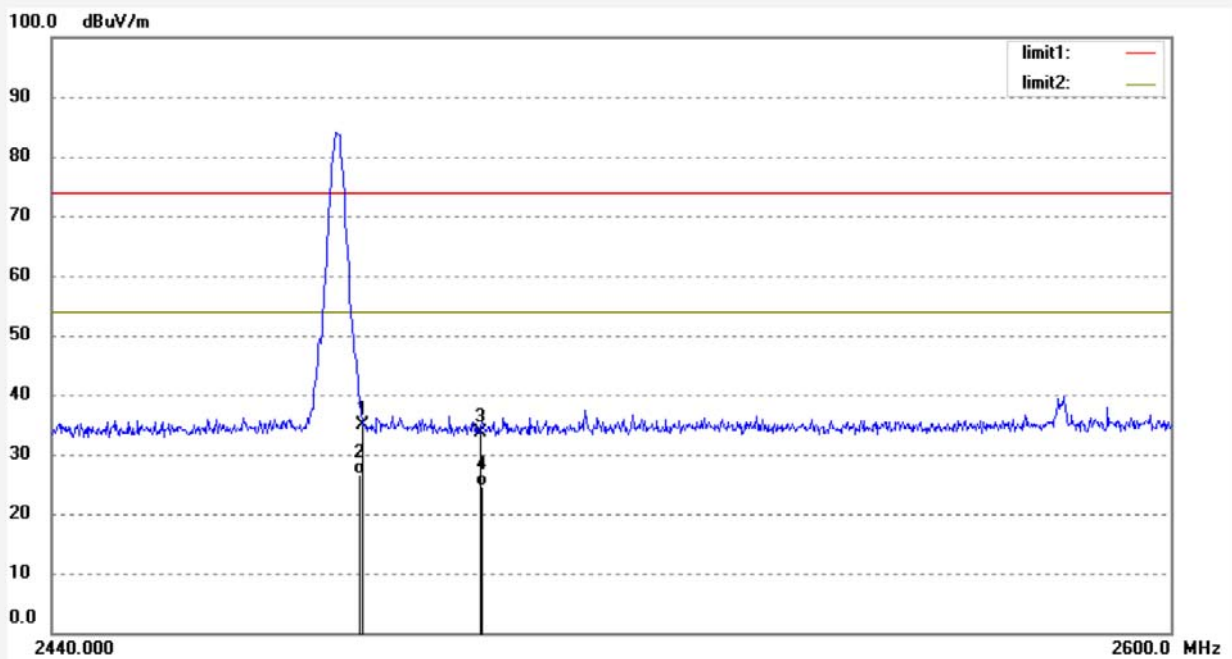
Date: 16/06/15/

Time: 13/36/16

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168



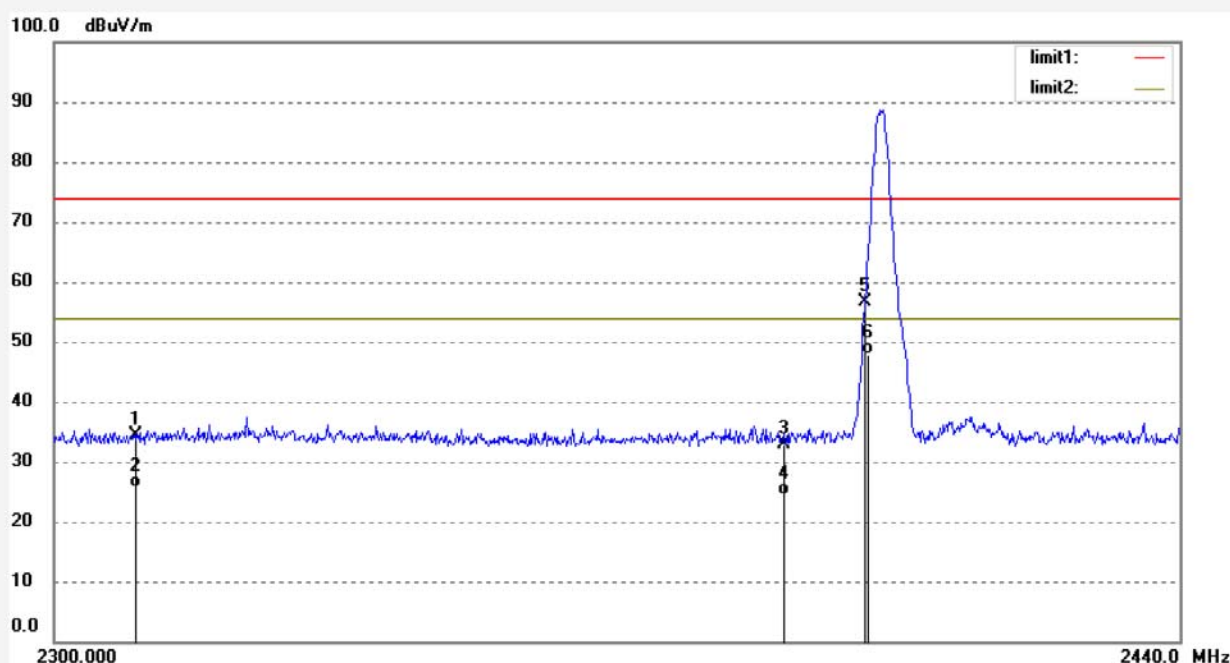
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	42.26	-7.37	34.89	74.00	-39.11	peak			
2	2483.500	33.91	-7.37	26.54	54.00	-27.46	AVG			
3	2500.000	40.98	-7.32	33.66	74.00	-40.34	peak			
4	2500.000	32.06	-7.32	24.74	54.00	-29.26	AVG			

Note: Average measurement with peak detection at No.2&4

Job No.: STAR2016 #1234  
 Standard: FCC PK  
 Test item: Radiation Test  
 Temp.( C)/Hum.(%) 25 C / 55 %  
 EUT: Media box  
 Mode: TX 2402MHz(8DPSK)  
 Model: X9  
 Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Horizontal  
 Power Source: AC 120V/60Hz  
 Date: 16/06/15/  
 Time: 13/40/34  
 Engineer Signature: star  
 Distance: 3m

Note: Report No.:ATE20161168

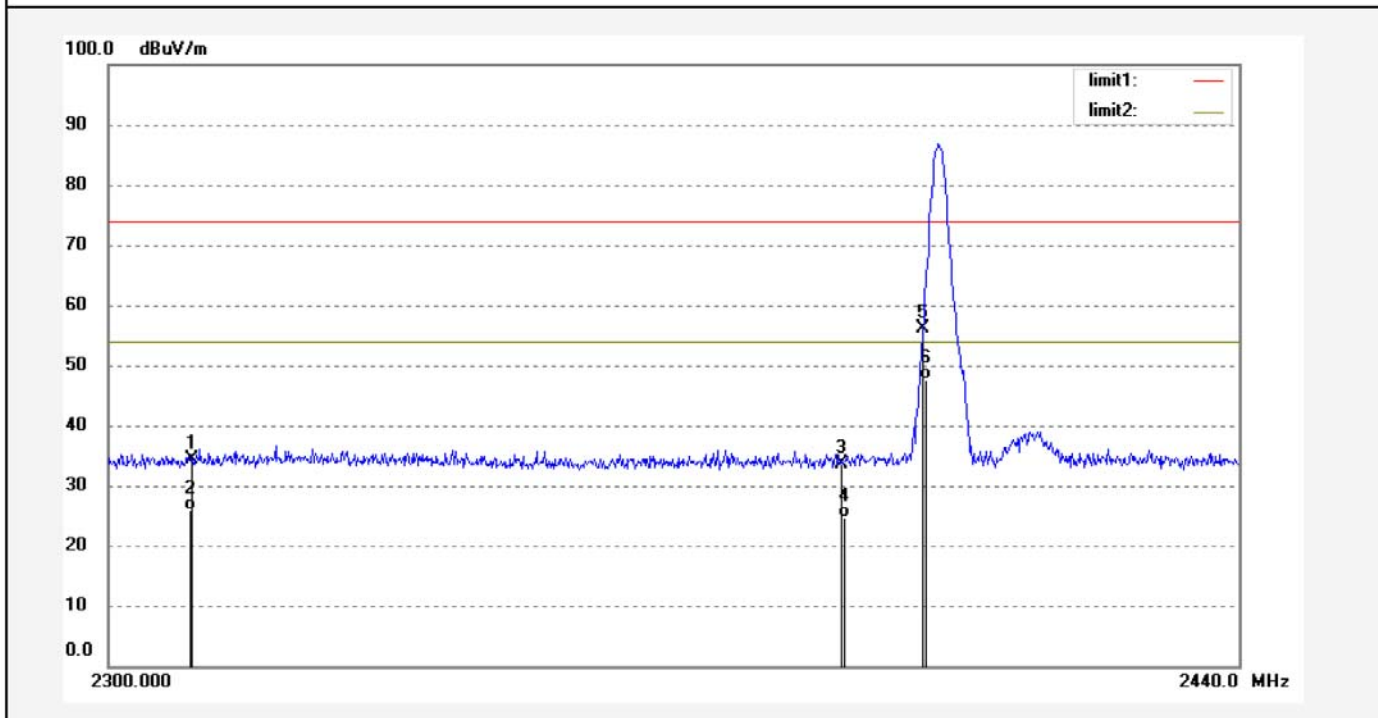


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	42.32	-7.87	34.45	74.00	-39.55	peak			
2	2310.000	33.57	-7.87	25.70	54.00	-28.30	AVG			
3	2390.000	40.52	-7.64	32.88	74.00	-41.12	peak			
4	2390.000	32.07	-7.64	24.43	54.00	-29.57	AVG			
5	2400.000	64.34	-7.61	56.73	74.00	-17.27	peak			
6	2400.000	55.38	-7.61	47.77	54.00	-6.23	AVG			

Note: Average measurement with peak detection at No.2&4&6

Job No.: STAR2016 #1235	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/06/15/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 13/41/22
EUT: Media box	Engineer Signature: star
Mode: TX 2402MHz(8DPSK)	Distance: 3m
Model: X9	
Manufacturer: PIPO TECHNOLOGY CO., LTD	

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	42.27	-7.87	34.40	74.00	-39.60	peak			
2	2310.000	33.84	-7.87	25.97	54.00	-28.03	AVG			
3	2390.000	41.38	-7.64	33.74	74.00	-40.26	peak			
4	2390.000	32.17	-7.64	24.53	54.00	-29.47	AVG			
5	2400.000	63.63	-7.61	56.02	74.00	-17.98	peak			
6	2400.000	55.30	-7.61	47.69	54.00	-6.31	AVG			

Note: Average measurement with peak detection at No.2&4&6

Job No.: STAR2016 #1237

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: TX 2480MHz(8DPSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

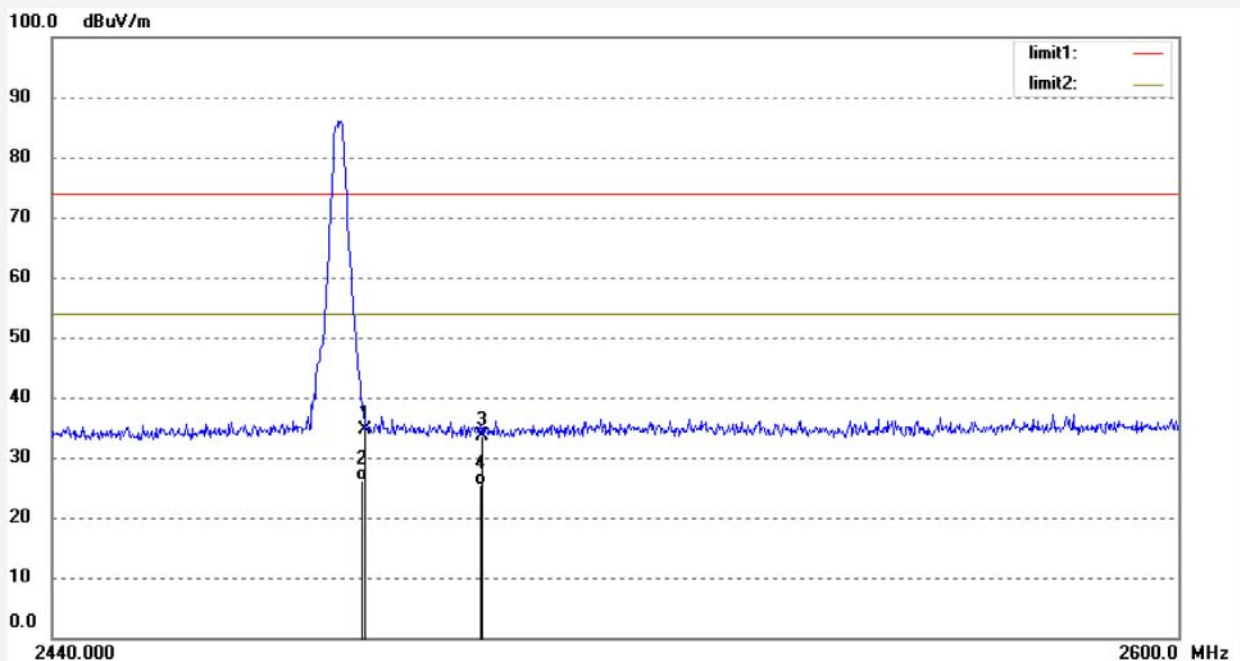
Date: 16/06/15/

Time: 13/43/51

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	42.11	-7.37	34.74	74.00	-39.26	peak			
2	2483.500	33.44	-7.37	26.07	54.00	-27.93	AVG			
3	2500.000	40.86	-7.32	33.54	74.00	-40.46	peak			
4	2500.000	32.62	-7.32	25.30	54.00	-28.70	AVG			

Note: Average measurement with peak detection at No.2&amp;4

Job No.: STAR2016 #1236

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: TX 2480MHz(8DPSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

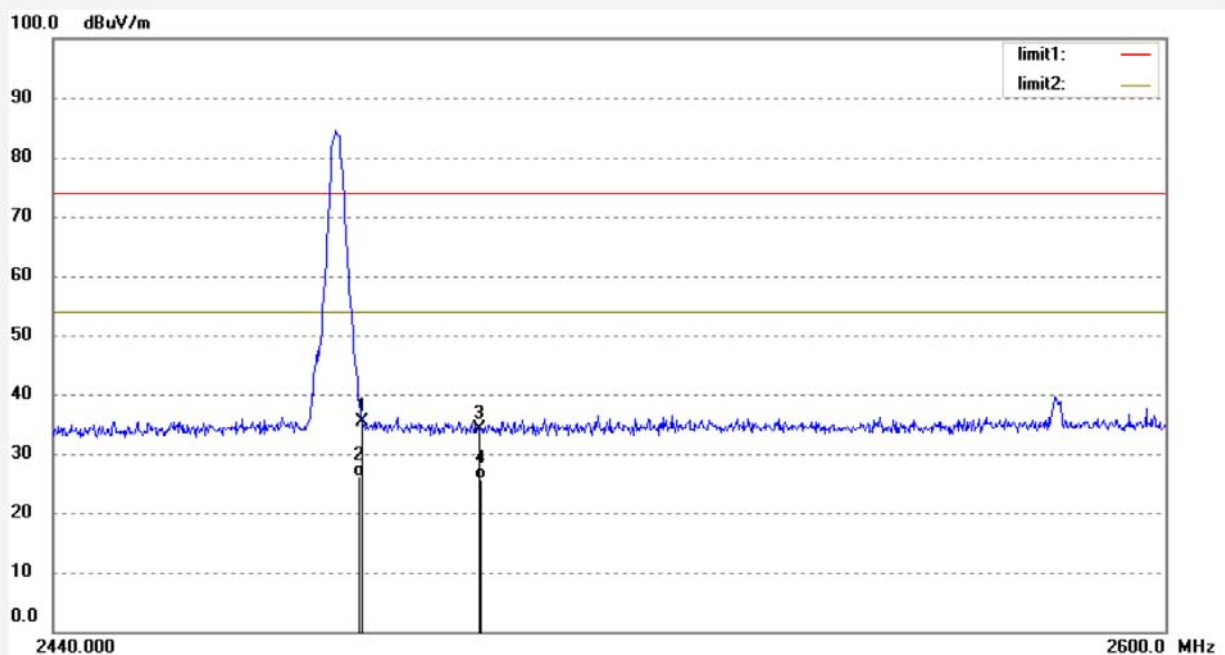
Date: 16/06/15/

Time: 13/43/04

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168



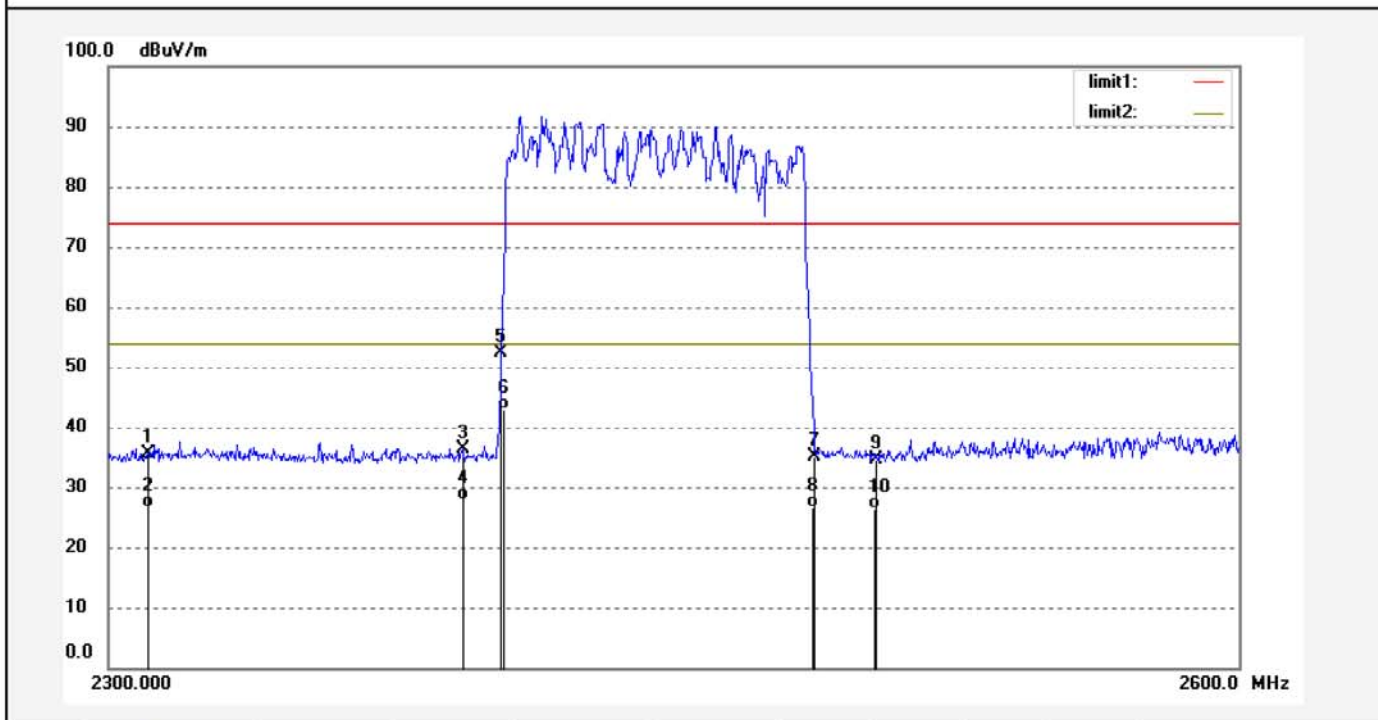
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	42.76	-7.37	35.39	74.00	-38.61	peak			
2	2483.500	33.60	-7.37	26.23	54.00	-27.77	AVG			
3	2500.000	41.45	-7.32	34.13	74.00	-39.87	peak			
4	2500.000	32.87	-7.32	25.55	54.00	-28.45	AVG			

Note: Average measurement with peak detection at No.2&amp;4

### Hopping mode

Job No.: STAR2016 #1244	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/06/15/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 14/28/01
EUT: Media box	Engineer Signature: star
Mode: HOPPING (GFSK)	Distance: 3m
Model: X9	
Manufacturer: PIPO TECHNOLOGY CO., LTD	

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	43.49	-7.87	35.62	74.00	-38.38	peak			
2	2310.000	34.60	-7.87	26.73	54.00	-27.27	AVG			
3	2390.000	44.03	-7.64	36.39	74.00	-37.61	peak			
4	2390.000	35.62	-7.64	27.98	54.00	-26.02	AVG			
5	2400.000	59.97	-7.61	52.36	74.00	-21.64	peak			
6	2400.000	50.47	-7.61	42.86	54.00	-11.14	AVG			
7	2483.500	42.58	-7.37	35.21	74.00	-38.79	peak			
8	2483.500	34.07	-7.37	26.70	54.00	-27.30	AVG			
9	2500.000	42.02	-7.32	34.70	74.00	-39.30	peak			
10	2500.000	33.69	-7.32	26.37	54.00	-27.63	AVG			

Note: Average measurement with peak detection at No.2, 4, 6, 8,10

Job No.: STAR2016 #1243

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: HOPPING (GFSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

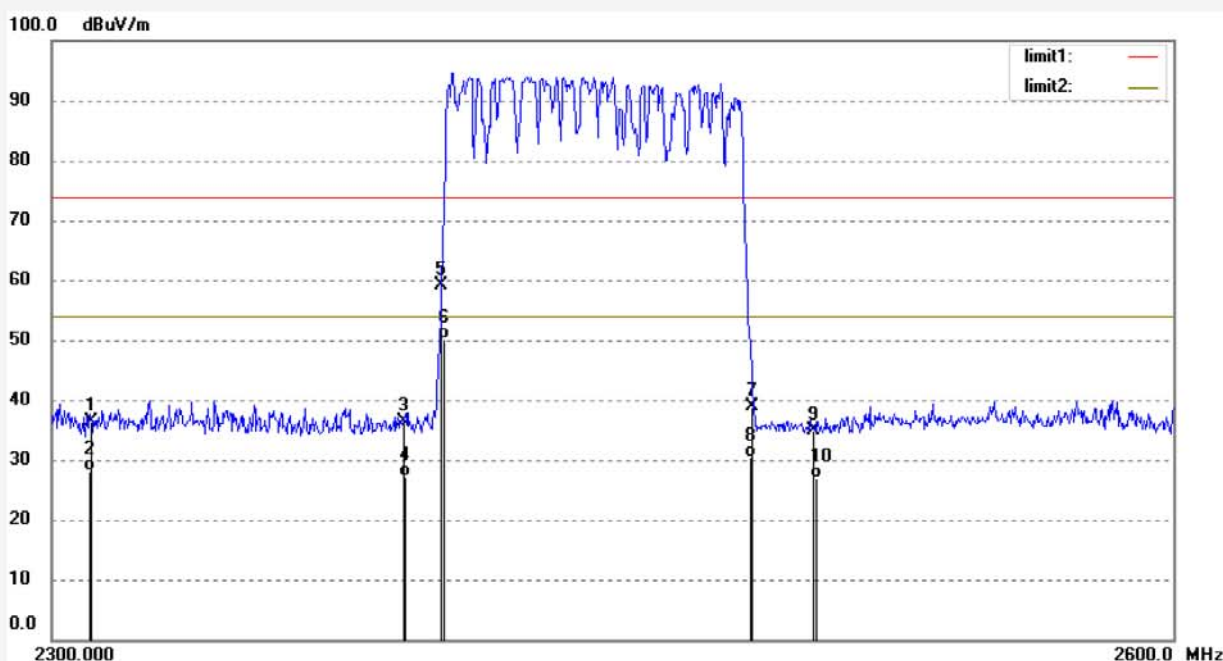
Date: 16/06/15/

Time: 14/20/08

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	44.15	-7.87	36.28	74.00	-37.72	peak			
2	2310.000	36.04	-7.87	28.17	54.00	-25.83	AVG			
3	2390.000	43.95	-7.64	36.31	74.00	-37.69	peak			
4	2390.000	34.81	-7.64	27.17	54.00	-26.83	AVG			
5	2400.000	66.83	-7.61	59.22	74.00	-14.78	peak			
6	2400.000	57.64	-7.61	50.03	54.00	-3.97	AVG			
7	2483.500	46.31	-7.37	38.94	74.00	-35.06	peak			
8	2483.500	37.69	-7.37	30.32	54.00	-23.68	AVG			
9	2500.000	42.25	-7.32	34.93	74.00	-39.07	peak			
10	2500.000	34.31	-7.32	26.99	54.00	-27.01	AVG			

Note: Average measurement with peak detection at No.2, 4, 6, 8,10

Job No.: STAR2016 #1241

Polarization: Horizontal

Standard: FCC PK

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 16/06/15/

Temp.( C)/Hum.(%) 25 C / 55 %

Time: 14/08/29

EUT: Media box

Engineer Signature: star

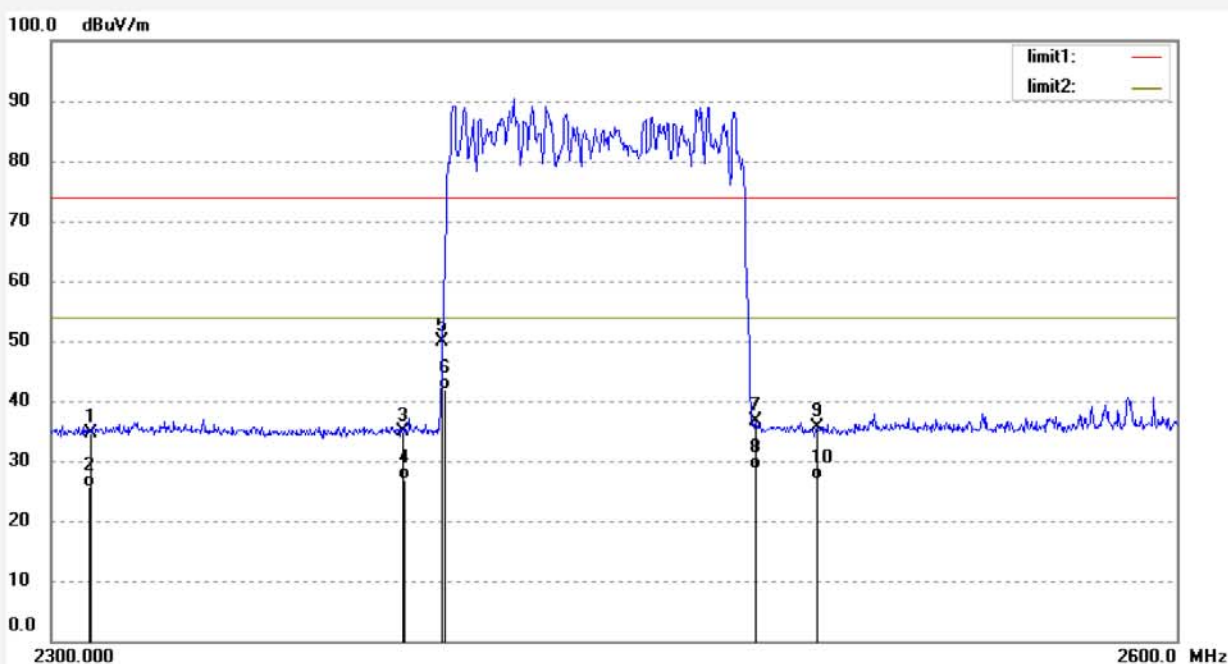
Mode: HOPPING (QPSK)

Distance: 3m

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	42.50	-7.87	34.63	74.00	-39.37	peak			
2	2310.000	33.40	-7.87	25.53	54.00	-28.47	AVG			
3	2390.000	42.55	-7.64	34.91	74.00	-39.09	peak			
4	2390.000	34.61	-7.64	26.97	54.00	-27.03	AVG			
5	2400.000	57.48	-7.61	49.87	74.00	-24.13	peak			
6	2400.000	49.47	-7.61	41.86	54.00	-12.14	AVG			
7	2483.500	43.95	-7.37	36.58	74.00	-37.42	peak			
8	2483.500	35.92	-7.37	28.55	54.00	-25.45	AVG			
9	2500.000	43.01	-7.32	35.69	74.00	-38.31	peak			
10	2500.000	34.22	-7.32	26.90	54.00	-27.10	AVG			

Note: Average measurement with peak detection at No.2, 4, 6, 8,10



Job No.: STAR2016 #1240

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: HOPPING (QPSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

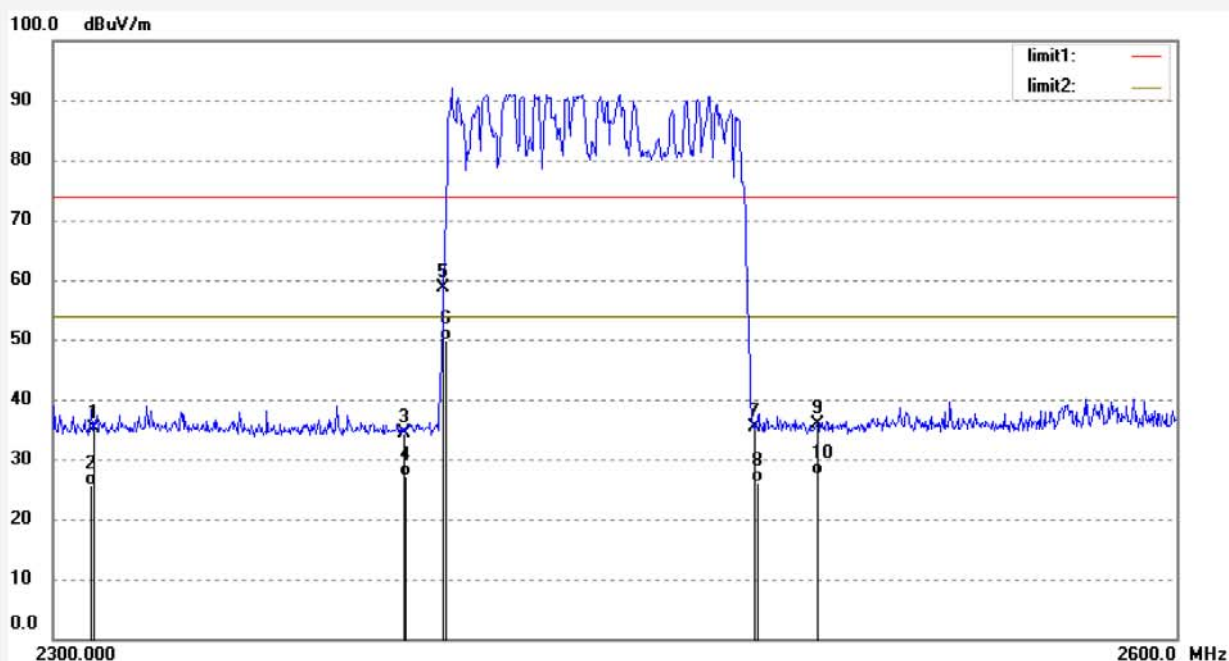
Date: 16/06/15/

Time: 14/01/46

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	42.88	-7.87	35.01	74.00	-38.99	peak			
2	2310.000	33.54	-7.87	25.67	54.00	-28.33	AVG			
3	2390.000	42.06	-7.64	34.42	74.00	-39.58	peak			
4	2390.000	34.67	-7.64	27.03	54.00	-26.97	AVG			
5	2400.000	66.26	-7.61	58.65	74.00	-15.35	peak			
6	2400.000	57.58	-7.61	49.97	54.00	-4.03	AVG			
7	2483.500	42.86	-7.37	35.49	74.00	-38.51	peak			
8	2483.500	33.55	-7.37	26.18	54.00	-27.82	AVG			
9	2500.000	43.22	-7.32	35.90	74.00	-38.10	peak			
10	2500.000	34.67	-7.32	27.35	54.00	-26.65	AVG			

Note: Average measurement with peak detection at No.2, 4, 6, 8,10

Job No.: STAR2016 #1238

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: HOPPING (8DPSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

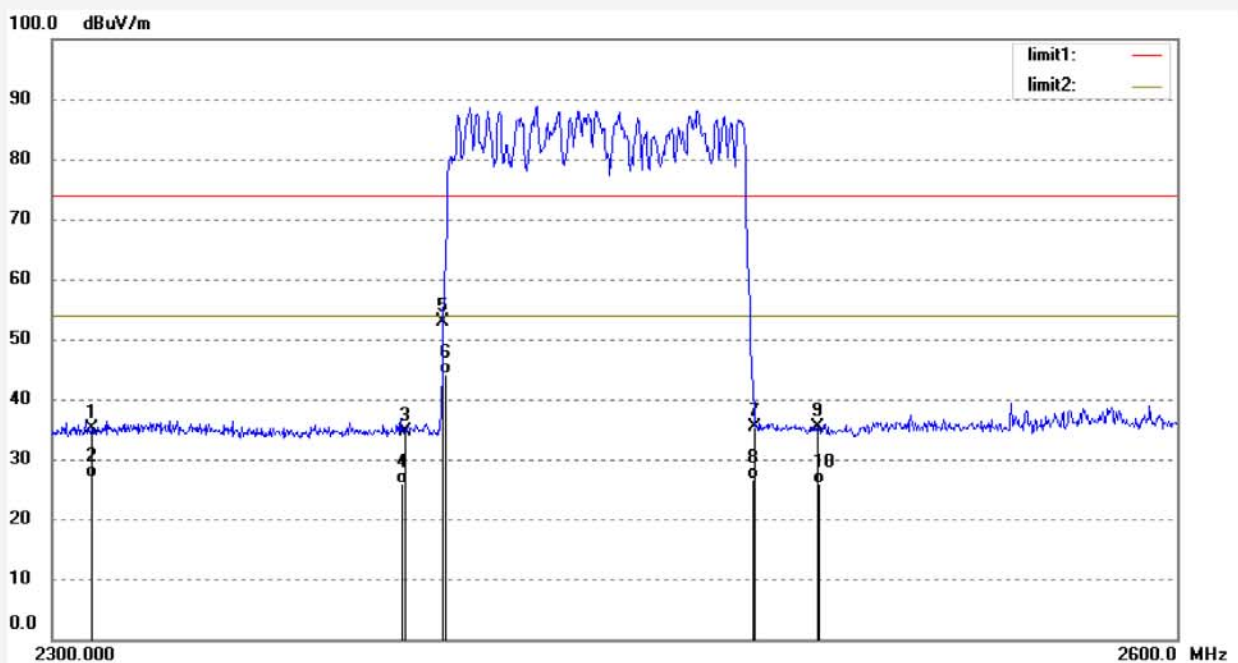
Date: 16/06/15/

Time: 13/48/37

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	43.01	-7.87	35.14	74.00	-38.86	peak			
2	2310.000	34.68	-7.87	26.81	54.00	-27.19	AVG			
3	2390.000	42.16	-7.64	34.52	74.00	-39.48	peak			
4	2390.000	33.58	-7.64	25.94	54.00	-28.06	AVG			
5	2400.000	60.45	-7.61	52.84	74.00	-21.16	peak			
6	2400.000	51.67	-7.61	44.06	54.00	-9.94	AVG			
7	2483.500	42.76	-7.37	35.39	74.00	-38.61	peak			
8	2483.500	34.00	-7.37	26.63	54.00	-27.37	AVG			
9	2500.000	42.66	-7.32	35.34	74.00	-38.66	peak			
10	2500.000	33.22	-7.32	25.90	54.00	-28.10	AVG			

Note: Average measurement with peak detection at No.2, 4, 6, 8,10

Job No.: STAR2016 #1239

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Media box

Mode: HOPPING (8DPSK)

Model: X9

Manufacturer: PIPO TECHNOLOGY CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

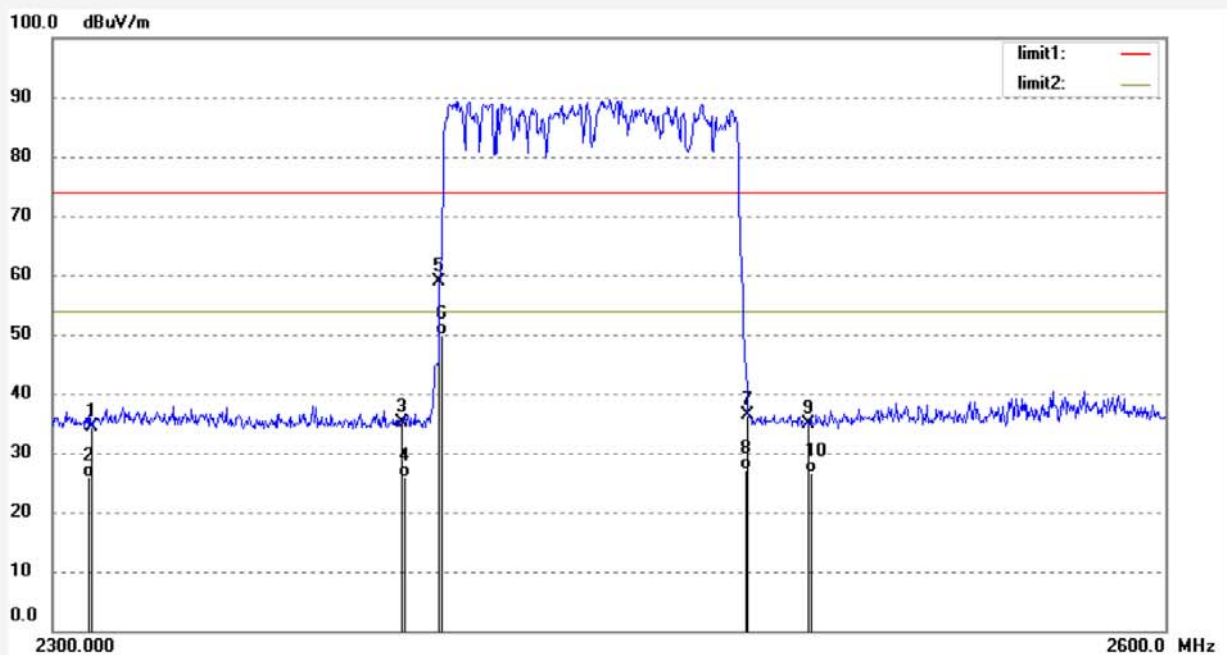
Date: 16/06/15/

Time: 13/54/05

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161168



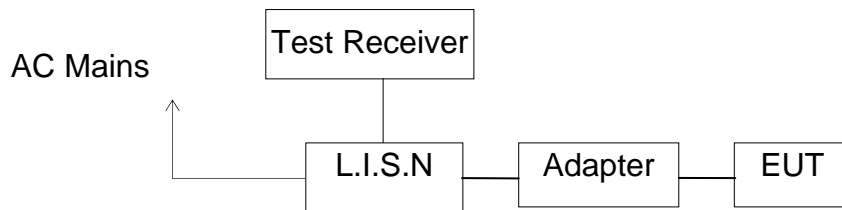
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	42.16	-7.87	34.29	74.00	-39.71	peak			
2	2310.000	33.87	-7.87	26.00	54.00	-28.00	AVG			
3	2390.000	42.76	-7.64	35.12	74.00	-38.88	peak			
4	2390.000	33.40	-7.64	25.76	54.00	-28.24	AVG			
5	2400.000	66.46	-7.61	58.85	74.00	-15.15	peak			
6	2400.000	57.40	-7.61	49.79	54.00	-4.21	AVG			
7	2483.500	43.65	-7.37	36.28	74.00	-37.72	peak			
8	2483.500	34.47	-7.37	27.10	54.00	-26.90	AVG			
9	2500.000	42.23	-7.32	34.91	74.00	-39.09	peak			
10	2500.000	34.05	-7.32	26.73	54.00	-27.27	AVG			

Note: Average measurement with peak detection at No.2, 4, 6, 8,10

## 12.AC POWER LINE CONDUCTED EMISSION FOR FCC PART

### 15 SECTION 15.207(A)

#### 12.1.Block Diagram of Test Setup



(EUT: Media box)

#### 12.2.Power Line Conducted Emission Measurement Limits

Frequency (MHz)	Limit dB(μV)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

NOTE1: The lower limit shall apply at the transition frequencies.  
 NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

#### 12.3.Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

#### 12.4.Operating Condition of EUT

12.4.1.Setup the EUT and simulator as shown as Section 12.1.

12.4.2.Turn on the power of all equipment.

12.4.3.Let the EUT work in test mode and measure it.

### 12.5. Test Procedure

The EUT is put on the plane 0.1m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

### 12.6.Power Line Conducted Emission Measurement Results

**PASS.**

The frequency range from 150kHz to 30MHz is checked.

Test mode : BT communicating(AC 120V/60Hz) EUT mode : X9								
<b>MEASUREMENT RESULT: "PIPO617012_fin"</b>								
6/17/2016 10:06AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBμV	dB	dBμV	dB				
0.555000	41.00	10.7	56	15.0	QP	L1	GND	
1.110000	27.00	10.9	56	29.0	QP	L1	GND	
25.150000	38.10	11.5	60	21.9	QP	L1	GND	
<b>MEASUREMENT RESULT: "PIPO617012_fin2"</b>								
6/17/2016 10:06AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBμV	dB	dBμV	dB				
0.555000	34.90	10.7	46	11.1	AV	L1	GND	
1.080000	19.90	10.9	46	26.1	AV	L1	GND	
24.925000	33.50	11.5	50	16.5	AV	L1	GND	
<b>MEASUREMENT RESULT: "PIPO617011_fin"</b>								
6/17/2016 10:02AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBμV	dB	dBμV	dB				
0.550000	39.00	10.7	56	17.0	QP	N	GND	
1.110000	28.70	10.9	56	27.3	QP	N	GND	
24.940000	35.90	11.5	60	24.1	QP	N	GND	
<b>MEASUREMENT RESULT: "PIPO617011_fin2"</b>								
6/17/2016 10:02AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBμV	dB	dBμV	dB				
0.555000	33.20	10.7	46	12.8	AV	N	GND	
1.130000	20.80	10.9	46	25.2	AV	N	GND	
24.715000	31.20	11.5	50	18.8	AV	N	GND	

Test mode : BT communicating(AC 240V/60Hz)  
EUT mode : X9

**MEASUREMENT RESULT: "PIPO617013\_fin"**

6/17/2016 10:11AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.560000	40.90	10.7	56	15.1	QP	L1	GND
0.900000	32.20	10.8	56	23.8	QP	L1	GND
25.960000	40.00	11.5	60	20.0	QP	L1	GND

**MEASUREMENT RESULT: "PIPO617013\_fin2"**

6/17/2016 10:11AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.570000	33.80	10.7	46	12.2	AV	L1	GND
0.895000	26.30	10.8	46	19.7	AV	L1	GND
25.960000	36.00	11.5	50	14.0	AV	L1	GND

**MEASUREMENT RESULT: "PIPO617014\_fin"**

6/17/2016 10:14AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.555000	38.70	10.7	56	17.3	QP	N	GND
1.065000	30.10	10.9	56	25.9	QP	N	GND
26.590000	37.80	11.5	60	22.2	QP	N	GND

**MEASUREMENT RESULT: "PIPO617014\_fin2"**

6/17/2016 10:14AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.550000	31.20	10.7	46	14.8	AV	N	GND
1.015000	24.10	10.8	46	21.9	AV	N	GND
26.485000	33.60	11.5	50	16.4	AV	N	GND

Emissions attenuated more than 20 dB below the permissible value are not reported.

The spectral diagrams are attached as below.

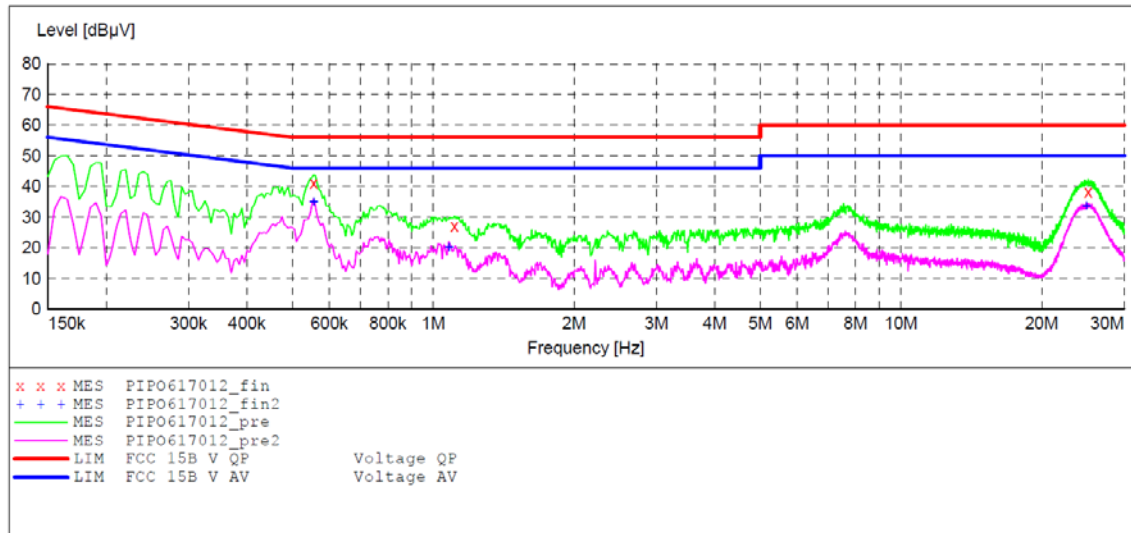
**ACCURATE TECHNOLOGY CO., LTD**

**CONDUCTED EMISSION STANDARD FCC PART 15B**

EUT: Media box M/N:X9  
 Manufacturer: PIPO TECHNOLOGY CO., LTD  
 Operating Condition: BT Communicating  
 Test Site: 1#Shielding Room  
 Operator: STAR  
 Test Specification: L 120V/60Hz  
 Comment: Report No.:ATE20161168  
 Start of Test: 6/17/2016 / 10:03:10AM

**SCAN TABLE: "V 9K-30MHz fin"**

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	Average	1.0 s	9 kHz	NSLK8126 2008



**MEASUREMENT RESULT: "PIPO617012\_fin"**

6/17/2016 10:06AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.555000	41.00	10.7	56	15.0	QP	L1	GND
1.110000	27.00	10.9	56	29.0	QP	L1	GND
25.150000	38.10	11.5	60	21.9	QP	L1	GND

**MEASUREMENT RESULT: "PIPO617012\_fin2"**

6/17/2016 10:06AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.555000	34.90	10.7	46	11.1	AV	L1	GND
1.080000	19.90	10.9	46	26.1	AV	L1	GND
24.925000	33.50	11.5	50	16.5	AV	L1	GND



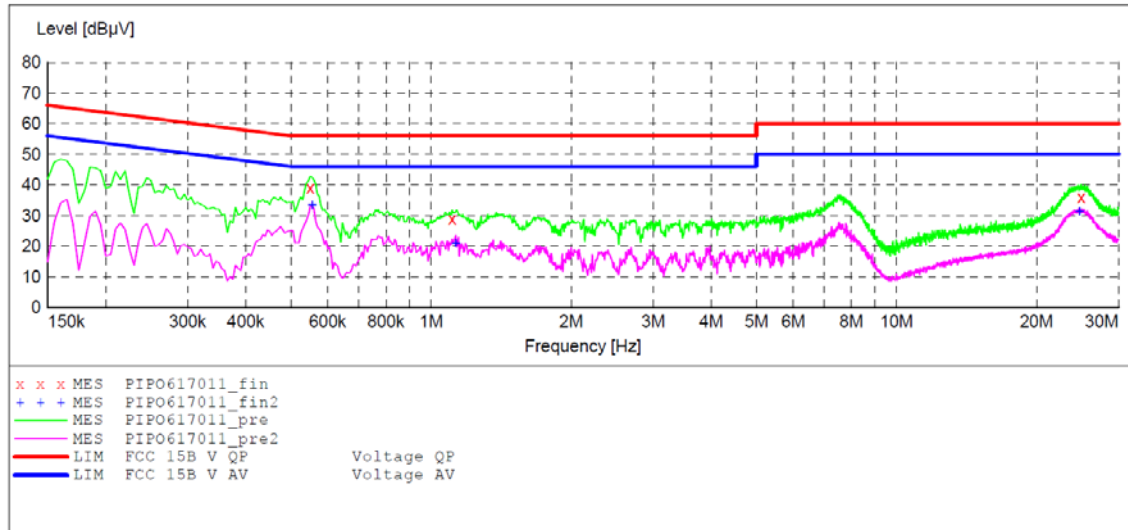
**ACCURATE TECHNOLOGY CO., LTD**

**CONDUCTED EMISSION STANDARD FCC PART 15B**

EUT: Media box M/N:X9  
 Manufacturer: PIPO TECHNOLOGY CO., LTD  
 Operating Condition: BT Communicating  
 Test Site: 1#Shielding Room  
 Operator: STAR  
 Test Specification: N 120V/60Hz  
 Comment: Report No.:ATE20161168  
 Start of Test: 6/17/2016 / 9:58:39AM

**SCAN TABLE: "V 9K-30MHz fin"**

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	Average			
			QuasiPeak	1.0 s	9 kHz	NSLK8126 2008
			Average			



**MEASUREMENT RESULT: "PIPO617011\_fin"**

6/17/2016 10:02AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.555000	39.00	10.7	56	17.0	QP	N	GND
1.110000	28.70	10.9	56	27.3	QP	N	GND
24.940000	35.90	11.5	60	24.1	QP	N	GND

**MEASUREMENT RESULT: "PIPO617011\_fin2"**

6/17/2016 10:02AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.555000	33.20	10.7	46	12.8	AV	N	GND
1.130000	20.80	10.9	46	25.2	AV	N	GND
24.715000	31.20	11.5	50	18.8	AV	N	GND

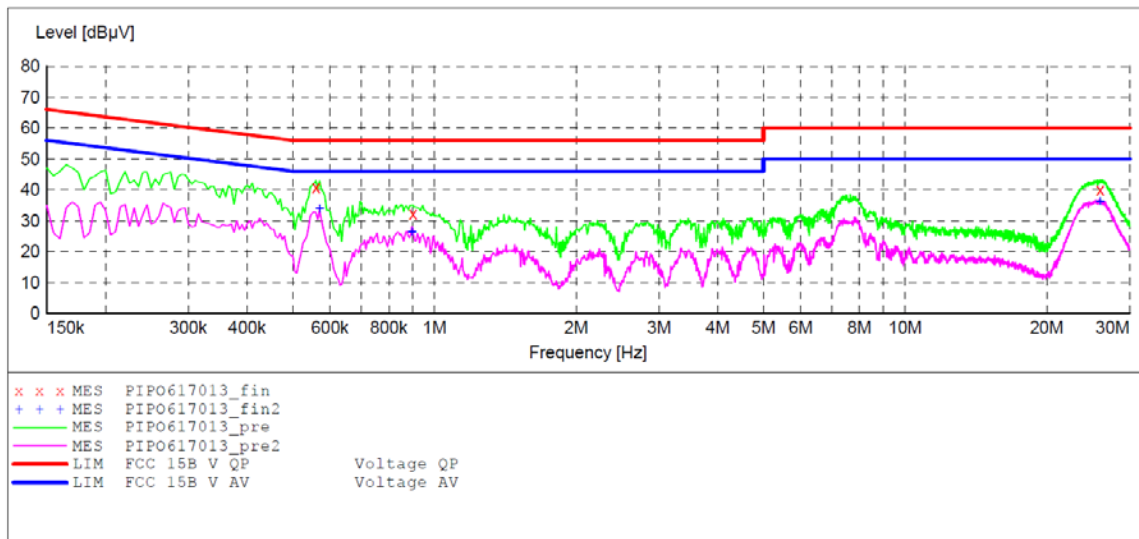
**ACCURATE TECHNOLOGY CO., LTD**

**CONDUCTED EMISSION STANDARD FCC PART 15B**

EUT: Media box M/N:X9  
 Manufacturer: PIPO TECHNOLOGY CO., LTD  
 Operating Condition: BT Communicating  
 Test Site: 1#Shielding Room  
 Operator: STAR  
 Test Specification: L 240V/60Hz  
 Comment: Report No.:ATE20161168  
 Start of Test: 6/17/2016 / 10:07:41AM

**SCAN TABLE: "V 9K-30MHz fin"**

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	Average	1.0 s	9 kHz	NSLK8126 2008



**MEASUREMENT RESULT: "PIPO617013\_fin"**

6/17/2016 10:11AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.560000	40.90	10.7	56	15.1	QP	L1	GND
0.900000	32.20	10.8	56	23.8	QP	L1	GND
25.960000	40.00	11.5	60	20.0	QP	L1	GND

**MEASUREMENT RESULT: "PIPO617013\_fin2"**

6/17/2016 10:11AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.570000	33.80	10.7	46	12.2	AV	L1	GND
0.895000	26.30	10.8	46	19.7	AV	L1	GND
25.960000	36.00	11.5	50	14.0	AV	L1	GND

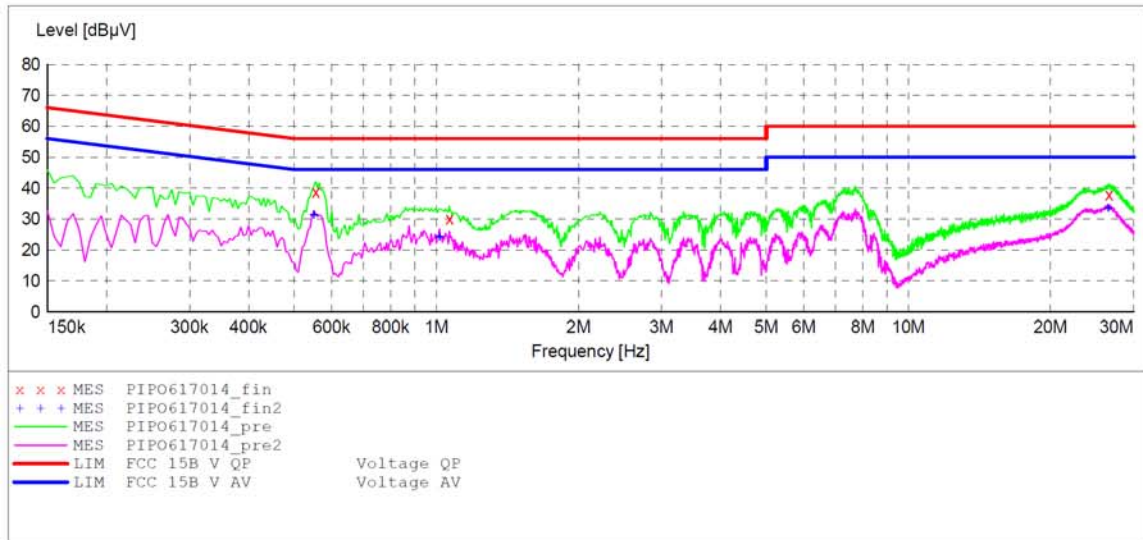
**ACCURATE TECHNOLOGY CO., LTD**

**CONDUCTED EMISSION STANDARD FCC PART 15B**

EUT: Media box M/N:X9  
 Manufacturer: PIPO TECHNOLOGY CO., LTD  
 Operating Condition: BT Communicating  
 Test Site: 1#Shielding Room  
 Operator: STAR  
 Test Specification: N 240V/60Hz  
 Comment: Report No.:ATE20161168  
 Start of Test: 6/17/2016 / 10:11:47AM

**SCAN TABLE: "V 9K-30MHz fin"**

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	Average	1.0 s	9 kHz	NSLK8126 2008



**MEASUREMENT RESULT: "PIPO617014\_fin"**

6/17/2016 10:14AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.555000	38.70	10.7	56	17.3	QP	N	GND
1.065000	30.10	10.9	56	25.9	QP	N	GND
26.590000	37.80	11.5	60	22.2	QP	N	GND

**MEASUREMENT RESULT: "PIPO617014\_fin2"**

6/17/2016 10:14AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.550000	31.20	10.7	46	14.8	AV	N	GND
1.015000	24.10	10.8	46	21.9	AV	N	GND
26.485000	33.60	11.5	50	16.4	AV	N	GND

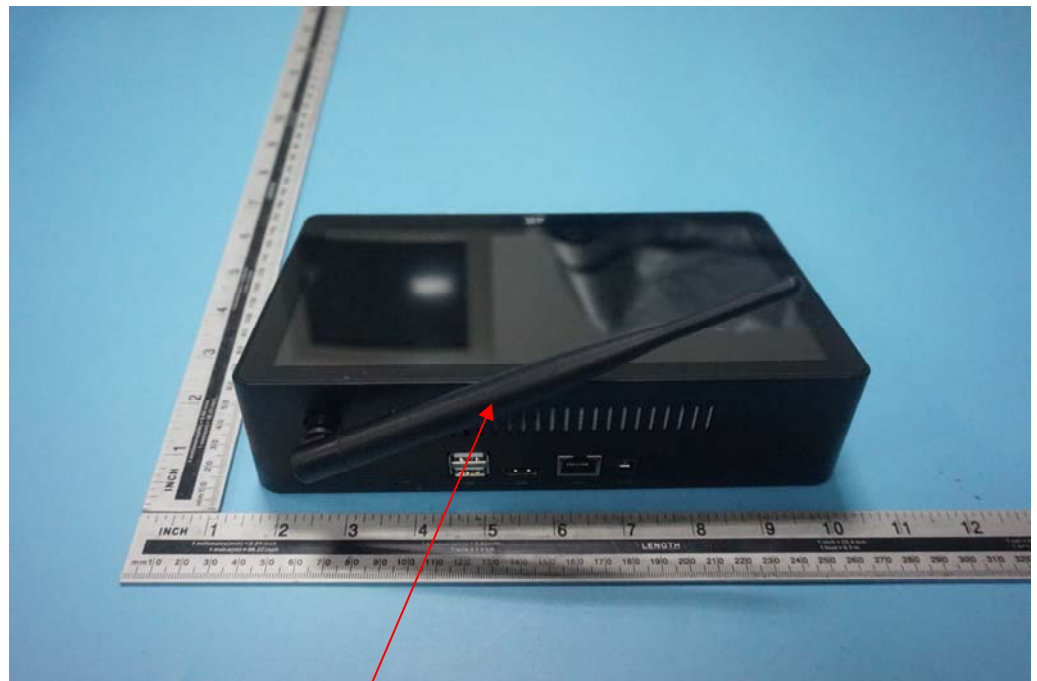
## 13.ANTENNA REQUIREMENT

### 13.1.The Requirement

According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

### 13.2.Antenna Construction

Device is equipped with external antenna, which isn't displaced by other antenna. The Antenna gain of EUT is 2dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



**Antenna**