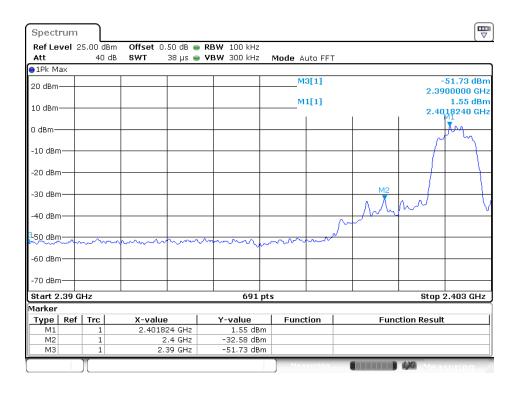
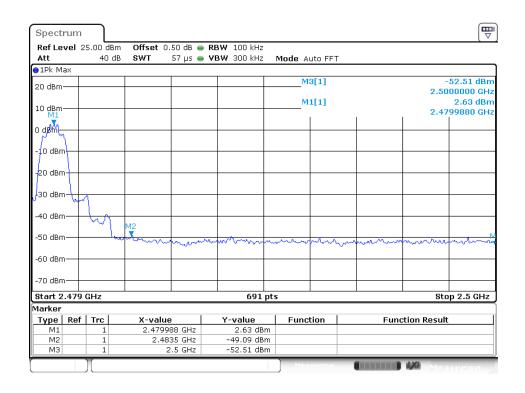


### 8DPSK







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#### **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 0.1 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.



Site: 1# Chamber

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#### Non-hopping mode



### ACCURATE TECHNOLOGY CO., LTD.

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Polarization: Vertical

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 15:41:35

Engineer Signature: Frank

Distance: 3m

Job No.: frank2018 #232 Standard: FCC PK

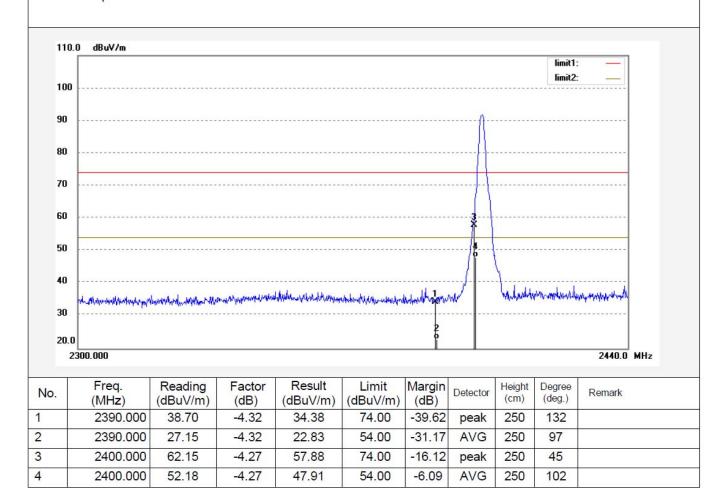
Test item: Radiation Test
Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair
Mode: TX2402MHz(GFSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091





Site: 1# Chamber

Tel:+86-0755-26503290

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### ACCURATE TECHNOLOGY CO., LTD.

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n,P.R.China Fax:+86-0755-26503396
Polarization: Horizontal

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 15:42:28

Engineer Signature: Frank

Distance: 3m

Job No.: frank2018 #233 Standard: FCC PK

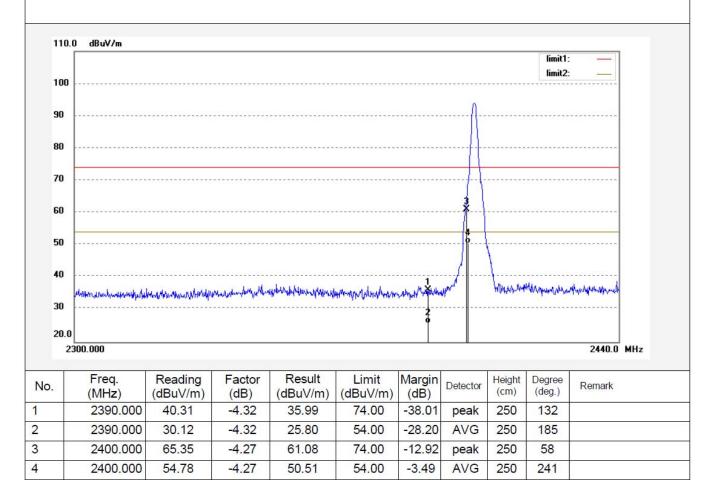
Test item: Radiation Test
Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: TX2402MHz(GFSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091





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# ACCURATE TECHNOLOGY CO., LTD.

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Site: 1# Chamber

Job No.: frank2018 #234 Polarization: Horizontal

Standard: FCC PK Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 15:43:51

Engineer Signature: Frank

Distance: 3m

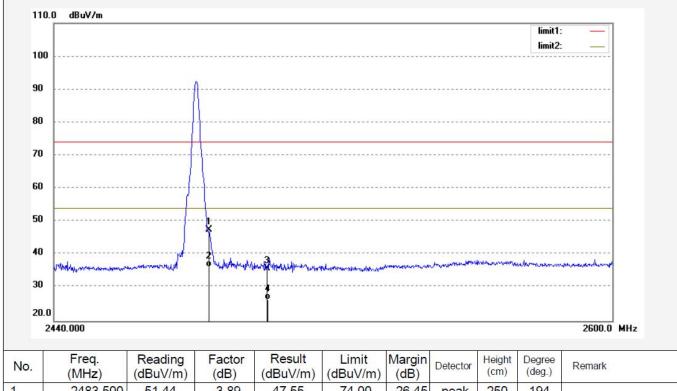
Test item: Radiation Test
Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: TX2480MHz(GFSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091



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	51.44	-3.89	47.55	74.00	-26.45	peak	250	194	
2	2483.500	40.30	-3.89	36.41	54.00	-17.59	AVG	250	259	
3	2500.000	39.66	-3.81	35.85	74.00	-38.15	peak	250	94	
4	2500.000	30.12	-3.81	26.31	54.00	-27.69	AVG	250	267	



Site: 1# Chamber

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# ACCURATE TECHNOLOGY CO., LTD.

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> Polarization: Vertical

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 15:44:56

Engineer Signature: Frank

Distance: 3m

Job No.: frank2018 #235 Standard: FCC PK Test item: Radiation Test

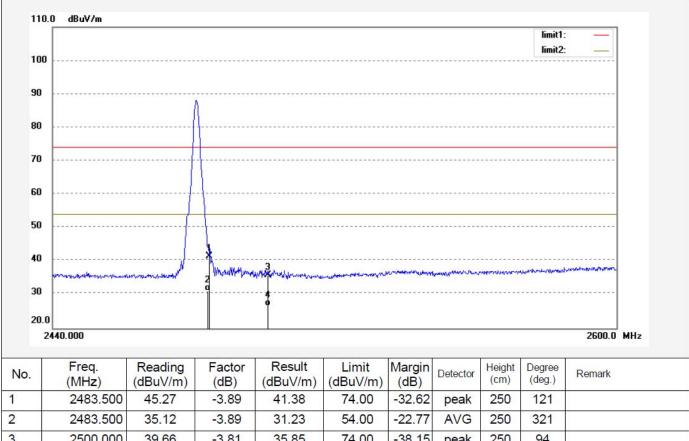
Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: TX2480MHz(GFSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091



3 2500.000 39.66 -3.8135.85 74.00 -38.15 250 94 peak 4 2500.000 30.45 -3.81 26.64 54.00 -27.36AVG 250 204



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# ACCURATE TECHNOLOGY CO., LTD.

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Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: frank2018 #230 Polarization: Horizontal

Standard: FCC PK Power Source: AC 120V; 60Hz Test item: Radiation Test

Date: 2018/03/29 Time: 15:38:58

Engineer Signature: Frank

Distance: 3m

EUT: Massage Chair

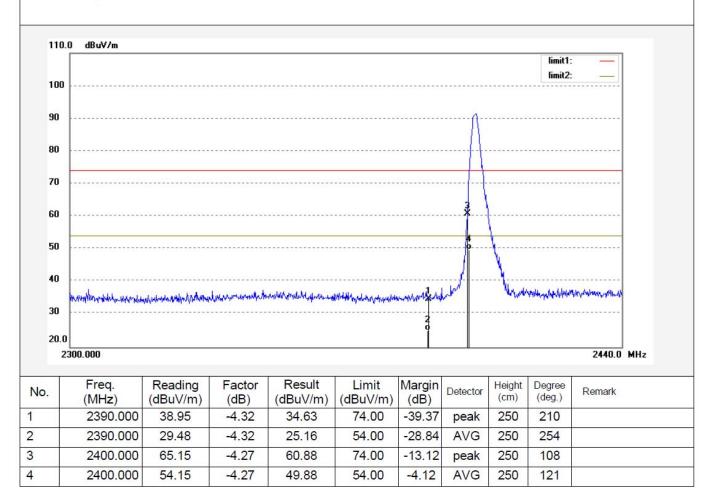
Mode: TX2402MHz(∏/4-DQPSK)

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

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091





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# ACCURATE TECHNOLOGY CO., LTD.

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Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Vertical

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 15:39:52

Engineer Signature: Frank

Distance: 3m

Job No.: frank2018 #231 Standard: FCC PK Test item: Radiation Test

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

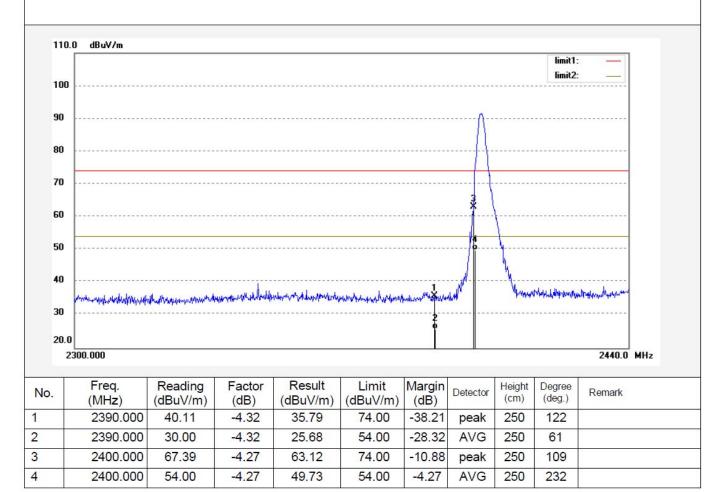
EUT: Massage Chair

Mode: TX2402MHz(∏/4-DQPSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091





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Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Vertical

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 15:46:19

Engineer Signature: Frank

Distance: 3m

Job No.: frank2018 #236 Standard: FCC PK

Test item: Radiation Test
Temp.( C)/Hum.(%) 25 C / 55 %

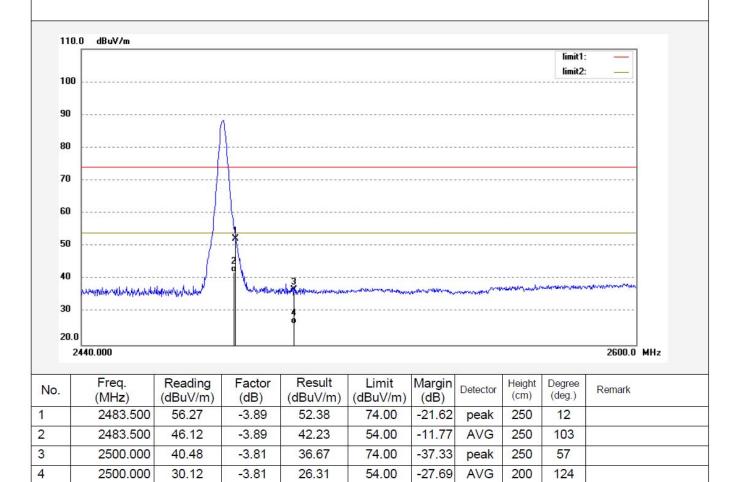
EUT: Massage Chair

Mode: TX2480MHz(∏/4-DQPSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091





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# ACCURATE TECHNOLOGY CO., LTD.

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Site: 1# Chamber

Polarization: Horizontal

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 15:47:14

Engineer Signature: Frank

Distance: 3m

Standard: FCC PK
Test item: Radiation Test

Job No.: frank2018 #237

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

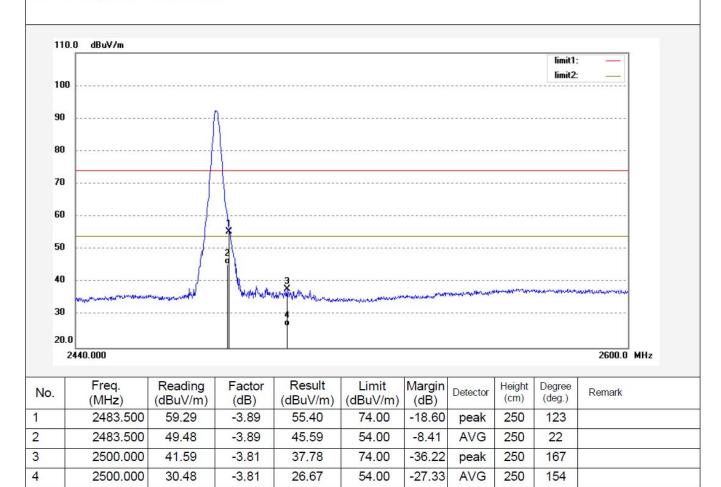
EUT: Massage Chair

Mode: TX2480MHz(∏/4-DQPSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091





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# ACCURATE TECHNOLOGY CO., LTD.

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Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: frank2018 #228 Polarization: Vertical

Standard: FCC PK Power Source: AC 120V; 60Hz

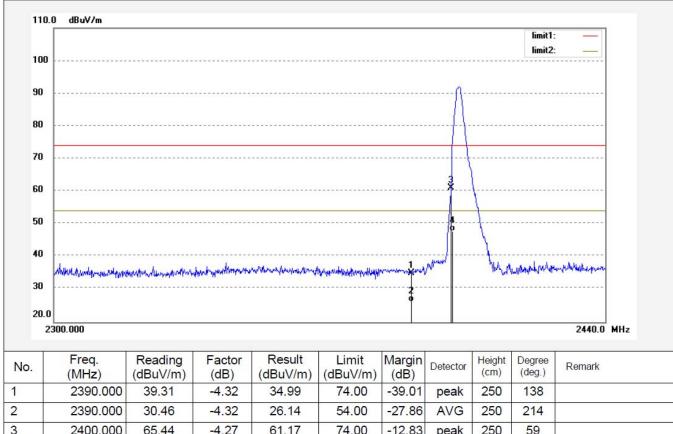
Test item: Radiation Test Date: 2018/03/29 Temp.( C)/Hum.(%) 25 C / 55 % Time: 15:36:28

EUT: Massage Chair Engineer Signature: Frank

Mode: TX2402MHz(8DPSK) Distance: 3m

Model: EC-528H Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	39.31	-4.32	34.99	74.00	-39.01	peak	250	138	
2	2390.000	30.46	-4.32	26.14	54.00	-27.86	AVG	250	214	
3	2400.000	65.44	-4.27	61.17	74.00	-12.83	peak	250	59	
4	2400.000	52.12	-4.27	47.85	54.00	-6.15	AVG	250	211	



Site: 1# Chamber

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# ACCURATE TECHNOLOGY CO., LTD.

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Job No.: frank2018 #229 Polarization: Horizontal

Standard: FCC PK Power Source: AC 120V; 60Hz

 Test item:
 Radiation Test
 Date: 2018/03/29

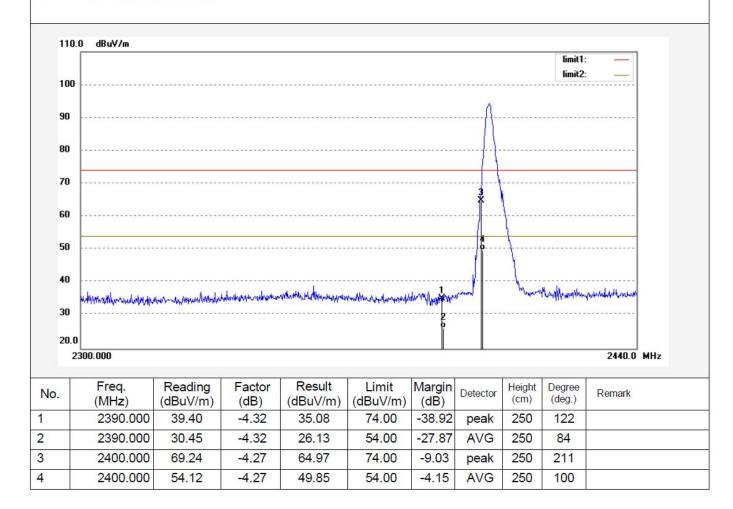
 Temp.( C)/Hum.(%)
 25 C / 55 %
 Time: 15:37:54

EUT: Massage Chair Engineer Signature: Frank
Mode: TX2402MHz(8DPSK) Distance: 3m

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091





Site: 1# Chamber Tel:+86-0755-26503290

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# ACCURATE TECHNOLOGY CO., LTD.

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Polarization: Horizontal

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 15:48:28

Engineer Signature: Frank

Distance: 3m

Job No.: frank2018 #238 Polarizati
Standard: FCC PK Power Sc

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

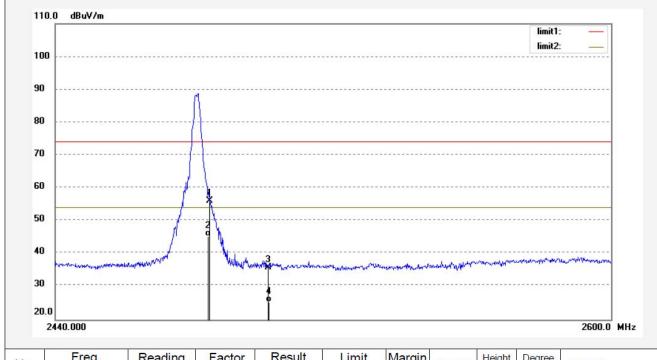
Test item: Radiation Test

EUT: Massage Chair Mode: TX2480MHz(8DPSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091



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	59.97	-3.89	56.08	74.00	-17.92	peak	250	184	
2	2483.500	49.15	-3.89	45.26	54.00	-8.74	AVG	250	19	
3	2500.000	39.62	-3.81	35.81	74.00	-38.19	peak	250	201	
4	2500.000	29.15	-3.81	25.34	54.00	-28.66	AVG	250	215	



Site: 1# Chamber

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Fax:+86-0755-26503396 Polarization: Vertical

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 15:49:32

Engineer Signature: Frank

Distance: 3m

Job No.: frank2018 #239 Standard: FCC PK

Test item: Radiation Test

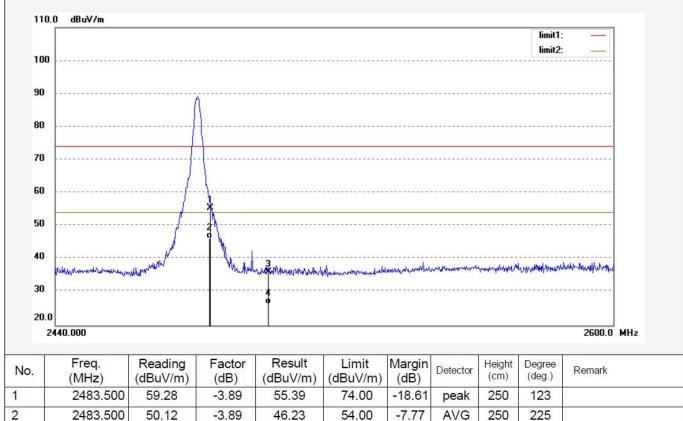
Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: TX2480MHz(8DPSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091



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	59.28	-3.89	55.39	74.00	-18.61	peak	250	123	
2	2483.500	50.12	-3.89	46.23	54.00	-7.77	AVG	250	225	
3	2500.000	39.96	-3.81	36.15	74.00	-37.85	peak	250	164	
4	2500.000	30.15	-3.81	26.34	54.00	-27.66	AVG	250	92	



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### Hopping mode



# ACCURATE TECHNOLOGY CO., LTD.

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Polarization: Vertical

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 15:52:55

Engineer Signature: Frank

Distance: 3m

Job No.: frank2018 #240 Standard: FCC PK Test item: Radiation Test

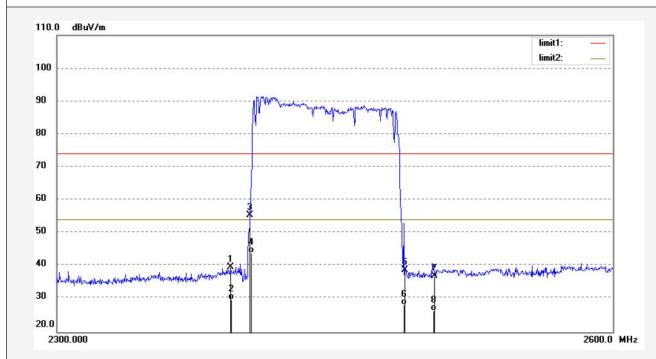
Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: HOPPING(GFSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	43.95	-4.32	39.63	74.00	-34.37	peak	250	121	
2	2390.000	34.12	-4.32	29.80	54.00	-24.20	AVG	250	13	
3	2400.000	59.68	-4.27	55.41	74.00	-18.59	peak	250	101	
4	2400.000	48.15	-4.27	43.88	54.00	-10.12	AVG	200	127	
5	2483.500	42.62	-3.89	38.73	74.00	-35.27	peak	200	195	
6	2483.500	32.15	-3.89	28.26	54.00	-25.74	AVG	200	125	
7	2500.000	40.83	-3.81	37.02	74.00	-36.98	peak	200	111	
8	2500.000	30.12	-3.81	26.31	54.00	-27.69	AVG	250	320	



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# ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: frank2018 #241 Polarization: Horizontal
Standard: FCC PK Power Source: AC 120V; 60Hz

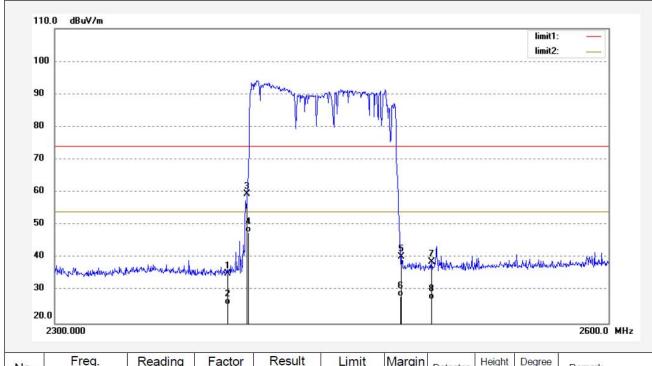
Test item: Radiation Test Date: 2018/03/29
Temp.( C)/Hum.(%) 25 C / 55 % Time: 15:55:13

EUT: Massage Chair Engineer Signature: Frank
Mode: HOPPING(GFSK) Distance: 3m

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	39.40	-4.32	35.08	74.00	-38.92	peak	200	138	
2	2390.000	30.12	-4.32	25.80	54.00	-28.20	AVG	200	94	
3	2400.000	63.70	-4.27	59.43	74.00	-14.57	peak	200	251	
4	2400.000	52.12	-4.27	47.85	54.00	-6.15	AVG	200	103	
5	2483.500	44.19	-3.89	40.30	74.00	-33.70	peak	250	158	
6	2483.500	32.12	-3.89	28.23	54.00	-25.77	AVG	250	149	
7	2500.000	42.57	-3.81	38.76	74.00	-35.24	peak	250	201	
8	2500.000	31.15	-3.81	27.34	54.00	-26.66	AVG	200	321	



ACCURATE TECHNOLOGY CO., LTD.

Site: 1# Chamber
Tel:+86-0755-26503290

Report No.: ATE20172091

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F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China frank/2018 #242

Fax:+86-0755-26503396

Job No.: frank2018 #242 Standard: FCC PK Test item: Radiation Test

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

EUT: Massage Chair

Mode: HOPPING(∏/4-DQPSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091

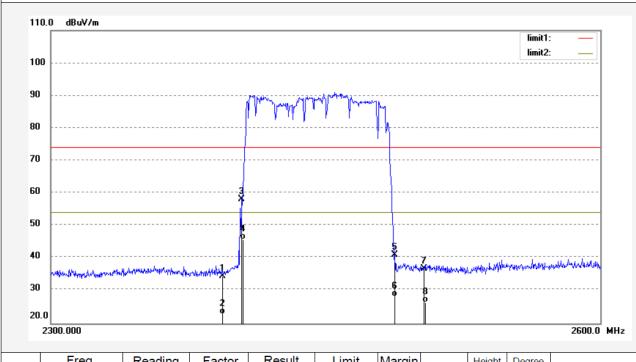
Polarization: Horizontal

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 15:57:29

Engineer Signature: Frank

Distance: 3m



No.         Freq. (MHz)         Reading (dBuV/m)         Factor (dB)         Result (dBuV/m)         Limit (dBuV/m)         Margin (dB)         Detector (cm)         Height (cm)         Degree (deg.)         Remark           1         2390.000         38.87         -4.32         34.55         74.00         -39.45         peak         250         132           2         2390.000         27.13         -4.32         22.81         54.00         -31.19         AVG         300         195           3         2400.000         62.30         -4.27         58.03         74.00         -15.97         peak         300         28           4         2400.000         50.12         -4.27         45.85         54.00         -8.15         AVG         250         312           5         2483.500         44.90         -3.89         41.01         74.00         -32.99         peak         200         182           6         2483.500         32.15         -3.89         28.26         54.00         -25.74         AVG         250         97           7         2500.000         40.61         -3.81         36.80         74.00         -37.20         peak         250         83											
2     2390.000     27.13     -4.32     22.81     54.00     -31.19     AVG     300     195       3     2400.000     62.30     -4.27     58.03     74.00     -15.97     peak     300     28       4     2400.000     50.12     -4.27     45.85     54.00     -8.15     AVG     250     312       5     2483.500     44.90     -3.89     41.01     74.00     -32.99     peak     200     182       6     2483.500     32.15     -3.89     28.26     54.00     -25.74     AVG     250     97       7     2500.000     40.61     -3.81     36.80     74.00     -37.20     peak     250     83	No.		_					Detector			Remark
3     2400.000     62.30     -4.27     58.03     74.00     -15.97     peak     300     28       4     2400.000     50.12     -4.27     45.85     54.00     -8.15     AVG     250     312       5     2483.500     44.90     -3.89     41.01     74.00     -32.99     peak     200     182       6     2483.500     32.15     -3.89     28.26     54.00     -25.74     AVG     250     97       7     2500.000     40.61     -3.81     36.80     74.00     -37.20     peak     250     83	1	2390.000	38.87	-4.32	34.55	74.00	-39.45	peak	250	132	
4     2400.000     50.12     -4.27     45.85     54.00     -8.15     AVG     250     312       5     2483.500     44.90     -3.89     41.01     74.00     -32.99     peak     200     182       6     2483.500     32.15     -3.89     28.26     54.00     -25.74     AVG     250     97       7     2500.000     40.61     -3.81     36.80     74.00     -37.20     peak     250     83	2	2390.000	27.13	-4.32	22.81	54.00	-31.19	AVG	300	195	
5     2483.500     44.90     -3.89     41.01     74.00     -32.99     peak     200     182       6     2483.500     32.15     -3.89     28.26     54.00     -25.74     AVG     250     97       7     2500.000     40.61     -3.81     36.80     74.00     -37.20     peak     250     83	3	2400.000	62.30	-4.27	58.03	74.00	-15.97	peak	300	28	
6 2483.500 32.15 -3.89 28.26 54.00 -25.74 AVG 250 97 7 2500.000 40.61 -3.81 36.80 74.00 -37.20 peak 250 83	4	2400.000	50.12	-4.27	45.85	54.00	-8.15	AVG	250	312	
7 2500.000 40.61 -3.81 36.80 74.00 -37.20 peak 250 83	5	2483.500	44.90	-3.89	41.01	74.00	-32.99	peak	200	182	
	6	2483.500	32.15	-3.89	28.26	54.00	-25.74	AVG	250	97	
8 2500.000 30.18 -3.81 26.37 54.00 -27.63 AVG 250 156	7	2500.000	40.61	-3.81	36.80	74.00	-37.20	peak	250	83	
	8	2500.000	30.18	-3.81	26.37	54.00	-27.63	AVG	250	156	



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# ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Vertical

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 16:19:32

Engineer Signature: Frank

Distance: 3m

Job No.: frank2018 #245 Standard: FCC PK

Test item: Radiation Test

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

EUT: Massage Chair

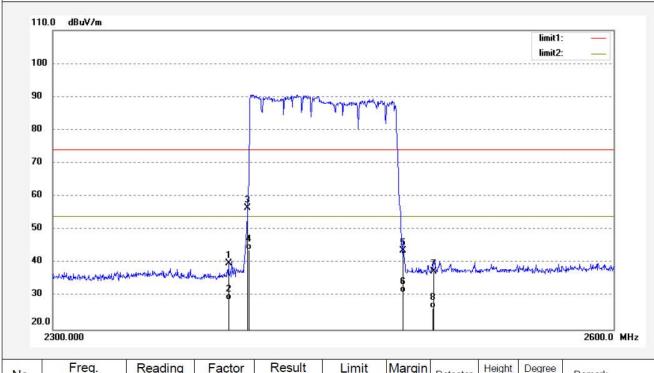
Mode: HOPPING(∏/4-DQPSK)

Model: EC-528H

Note:

Manufacturer: Cozzia USA LLC.

Report NO.:ATE20172091



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	44.19	-4.32	39.87	74.00	-34.13	peak	150	270	
2	2390.000	33.15	-4.32	28.83	54.00	-25.17	AVG	150	351	
3	2400.000	60.83	-4.27	56.56	74.00	-17.44	peak	250	75	
4	2400.000	48.15	-4.27	43.88	54.00	-10.12	AVG	250	130	
5	2483.500	47.57	-3.89	43.68	74.00	-30.32	peak	250	91	
6	2483.500	35.12	-3.89	31.23	54.00	-22.77	AVG	250	156	
7	2500.000	41.15	-3.81	37.34	74.00	-36.66	peak	250	150	
8	2500.000	30.15	-3.81	26.34	54.00	-27.66	AVG	250	122	



Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

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### ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China

Polarization: Vertical

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 16:02:12

Engineer Signature: Frank

Distance: 3m

peak

**AVG** 

250

-27.66

Job No.: frank2018 #243 Standard: FCC PK Test item: Radiation Test

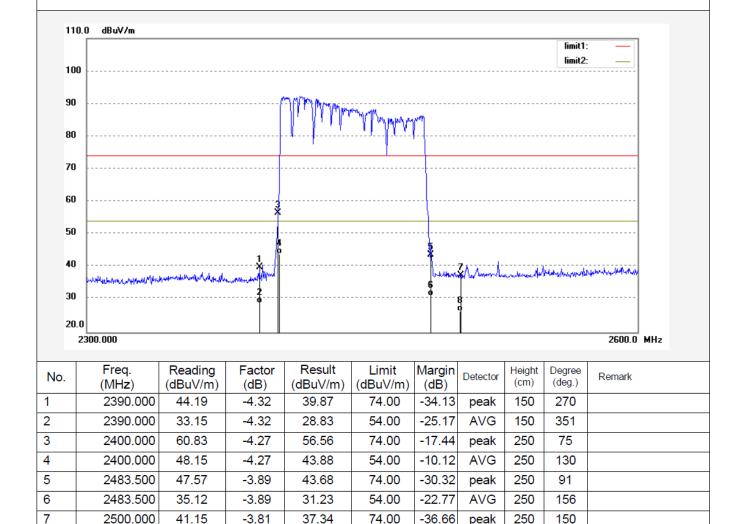
Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: HOPPING(8DPSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091



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

-3.81

26.34

54.00

30.15

2500.000

8

122



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### ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Horizontal

Power Source: AC 120V; 60Hz

Date: 2018/03/29 Time: 16:15:03

Engineer Signature: Frank

Distance: 3m

Job No.: frank2018 #244 Standard: FCC PK Test item: Radiation Test

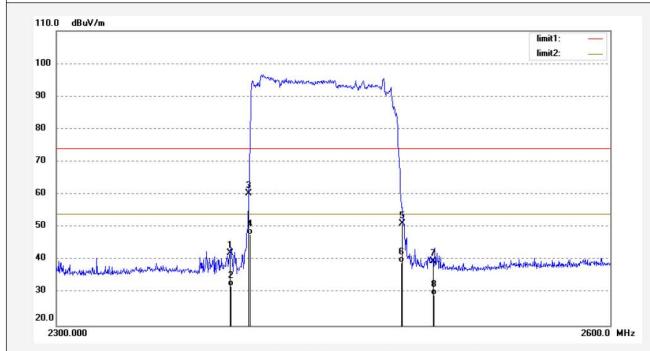
Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: HOPPING(8DPSK)

Model: EC-528H

Manufacturer: MARUTAKATECHNO CO., LTD

Note: Report NO.:ATE20172091



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	46.50	-4.32	42.18	74.00	-31.82	peak	250	91	
2	2390.000	36.45	-4.32	32.13	54.00	-21.87	AVG	300	147	
3	2400.000	64.65	-4.27	60.38	74.00	-13.62	peak	300	132	
4	2400.000	52.12	-4.27	47.85	54.00	-6.15	AVG	250	154	
5	2483.500	55.07	-3.89	51.18	74.00	-22.82	peak	250	56	
6	2483.500	43.12	-3.89	39.23	54.00	-14.77	AVG	250	54	
7	2500.000	43.54	-3.81	39.73	74.00	-34.27	peak	250	125	
8	2500.000	33.12	-3.81	29.31	54.00	-24.69	AVG	250	214	



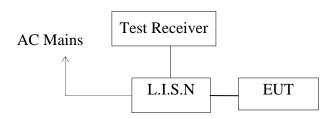


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# 12.AC POWER LINE CONDUCTED EMISSION FOR FCC PART 15 SECTION 15.207(A)

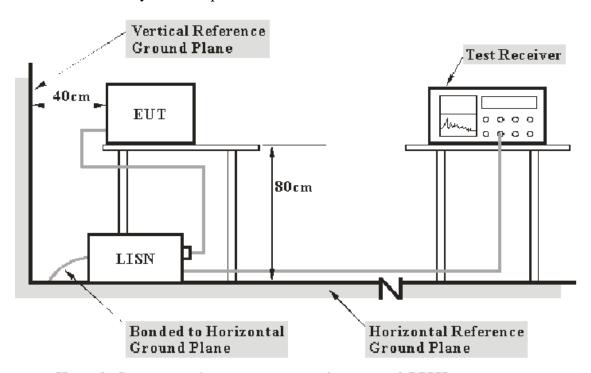
# 12.1.Block Diagram of Test Setup

12.1.1.Block diagram of connection between the EUT and simulators



(EUT: Massage Chair)

### 12.1.2.Test System Setup



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMIN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.



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### 12.2. Power Line Conducted Emission Measurement Limits

Frequency	Limit d	$B(\mu V)$
(MHz)	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 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.



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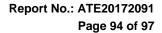
# 12.6.Data Sample

Frequency	Transducer	QuasiPeak	Average	QuasiPeak	Average	QuasiPeak	Average	Remark
(MHz)	value	Level	Level	Limit	Limit	Margin	Margin	(Pass/Fail)
	(dB)	(dBµV)	(dBµV)	(dBµV)	(dBµV)	(dB)	(dB)	
XX.XXXX	11.6	42.60	27.90	60.0	50.0	-17.4	-22.1	Pass

 $\label{eq:frequency} Frequency(MHz) = Emission frequency in MHz \\ Transducer value(dB) = Insertion loss of LISN + Cable Loss \\ Level(dB\mu V) = Quasi-peak Reading/Average Reading + Transducer value \\ Limit (dB\mu V) = Limit stated in standard \\ Margin = Limit (dB\mu V) - Level (dB\mu V) \\$ 

Calculation Formula:

 $Margin = Limit (dB\mu V) - Level (dB\mu V)$ 





# 12.7. Power Line Conducted Emission Measurement Results

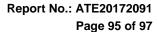
### PASS.

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

UT mode : E		: "2091	-2 fin	1 "	· 		
018-3-5 14:0	1		_				
Frequency MHz	_	Transd dB	Limit dBµV	_	Detector	Line	PI
0.150000 0.624000 1.128000 2.495000 11.840000 21.975000	31.20 30.10 21.30 18.70 25.30 24.40	10.8 11.0 11.2 11.3 11.6	56 56 60	34.7 37.3 34.7	QР	L1 L1 L1 L1 L1	GNI GNI GNI GNI GNI
MEASUREMENT	RESULT	: "2091	-2_fir	n2"			
018-3-5 14:0 Frequency	1 Level	Transd	Limit	Margin	Detector	Line	PI
MHz	dBµV		dBµV		Detectol	птие	PI
0.150000	25.60	10.8	56	30.4	AV	L1	GN
0.624000	26.60	11.0	46			L1	GN:
1.870000 2.495000	16.50 11.70	11.3 11.3	46 46	29.5 34.3		L1 L1	GN GN
11.840000	16.20	11.6	50	33.8	AV	L1	GN
22.250000	6.90	11.7	50	43.1	AV	L1	GN
EASUREMENT	RESULT	: "2091	-1_fir	1 "			
018-3-5 13:5		Tuanad	Timi+	Mangin	Datagtan	Tino	ים
Frequency MHz	dBµV	Transd dB	dBµV	Margin dB	Detector	Line	P
0.150000	31.20	10.8	66		QP	N	GN
0.620000 1.338000	30.10 22.00	11.0 11.2	56 56	25.9 34.0	QP QP	N N	GN GN
3.100000	23.60	11.3	56	32.4	QP	N	GN
8.220000 25.560000	17.40 29.20	11.5 11.7	60 60	42.6 30.8	~	N	GN
25.500000	29.20	11./	60	30.8	QP	N	GN
<b>IEASUREMENT</b>	RESULT	: "2091	-1_fin	n2"			
018-3-5 13:5	_	m	Timela	Managaria	Dahasts	т 2	F-1
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	P
		10.8	56	30.3	AV	N	GN
0.150000	25.70	10.0	00				
0.620000	29.20	11.0	46	16.8	AV	N	GN
0.620000 1.858000	29.20 17.70	11.0 11.2	46 46	16.8 28.3	AV AV	N N	GN
0.620000	29.20	11.0	46	16.8	AV	N	GN GN GN GN

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: Massage Chair M/N:EC-528H Manufacturer: MARUTAKATECHNO CO., LTD

Operating Condition: BT communicating 1#Shielding Room Test Site:

Operator: Frank

Test Specification: L 120V/60Hz

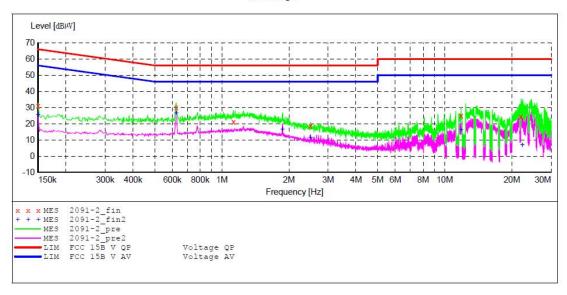
Report NO.:ATE20172091 2018-3-5 / 14:00:04 Comment: Start of Test:

SCAN TABLE: "V 150K-30MHz fin"
Short Description: \_SUB S \_\_\_\_\_SUB\_STD\_VTERM2 1.70

Detector Meas. Start Stop Step IF Transducer

Frequency Frequency Width 150.0 kHz 30.0 MHz 4.5 kH Bandw. Time 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008

Average



#### MEASUREMENT RESULT: "2091-2 fin"

2018-3-5 14:03	1						
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	31.20	10.8	66	34.8	QP	L1	GND
0.624000	30.10	11.0	56	25.9	QP	L1	GND
1.128000	21.30	11.2	56	34.7	QP	L1	GND
2.495000	18.70	11.3	56	37.3	QP	L1	GND
11.840000	25.30	11.6	60	34.7	QP	L1	GND
21.975000	24.40	11.7	60	35.6	QP	L1	GND

#### MEASUREMENT RESULT: "2091-2 fin2"

2018-3-5 14:01 Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	25.60	10.8	56	30.4	AV	L1	GND
0.624000	26.60	11.0	46	19.4	AV	L1	GND
1.870000	16.50	11.3	46	29.5	AV	L1	GND
2.495000	11.70	11.3	46	34.3	AV	L1	GND
11.840000	16.20	11.6	50	33.8	AV	L1	GND
22.250000	6.90	11.7	50	43.1	AV	L1	GND





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#### ACCURATE TECHNOLOGY CO., LTD

#### CONDUCTED EMISSION STANDARD FCC PART 15B

Massage Chair M/N:EC-528H MARUTAKATECHNO CO., LTD Manufacturer:

Operating Condition: BT communicating Test Sité: 1#Shielding Room

Operator: Frank Test Specification: N 120V/60Hz

Report NO.:ATE20172091 Comment: 2018-3-5 / 13:57:19 Start of Test:

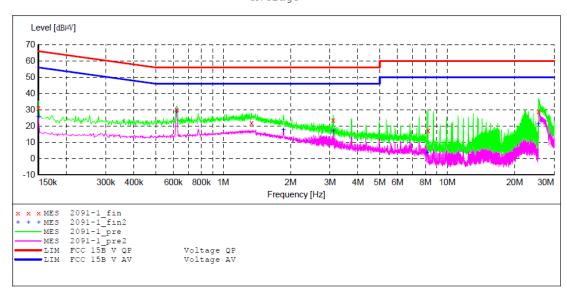
#### SCAN TABLE: "V 150K-30MHz fin"

\_SUB\_STD\_VTERM2 1.70 Short Description:

Detector Meas. Start Stop Step IF Transducer

Frequency Frequency Width 150.0 kHz 30.0 MHz 4.5 kHz  ${\tt Bandw.}$ Time NSLK8126 2008 4.5 kHz QuasiPeak 1.0 s 9 kHz

Average



### MEASUREMENT RESULT: "2091-1 fin"

20	18-3-5 13:59 Frequency MHz		Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.150000	31.20	10.8	66	34.8	QP	N	GND
	0.620000	30.10	11.0	56	25.9	QP	N	GND
	1.338000	22.00	11.2	56	34.0	QP	N	GND
	3.100000	23.60	11.3	56	32.4	QP	N	GND
	8.220000	17.40	11.5	60	42.6	QP	N	GND
	25.560000	29.20	11.7	60	30.8	QP	N	GND

#### MEASUREMENT RESULT: "2091-1 fin2"

2018-3-5 13:59 Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	25.70	10.8	56	30.3	AV	N	GND
0.620000	29.20	11.0	46	16.8	AV	N	GND
1.858000	17.70	11.2	46	28.3	AV	N	GND
3.100000	16.80	11.3	46	29.2	AV	N	GND
8.115000	3.90	11.5	50	46.1	AV	N	GND
25.545000	21.40	11.7	50	28.6	AV	N	GND



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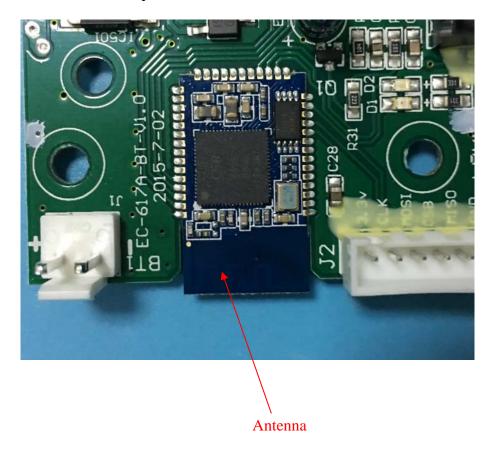
# 13.ANTENNA REQUIREMENT

# 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 permanent attached antenna, which isn't displaced by other antenna. The Max Antenna gain of EUT is 2.5dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



\*\*\*\*\* End of Test Report \*\*\*\*\*