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TEST REPORT

Product Name	:	Wireless Silent Mouse
Brand Mark	:	TECKNET/TeckNet
Model No.	:	TK-MS008
Report Number	:	BLA-EMC-202304-A1002
FCC ID	:	2AK8Q-TKMS008
Date of Sample Receipt	:	2023/4/6
Date of Test	:	2023/4/7 to 2023/4/27
Date of Issue	:	2023/4/27
Test Standard	:	47 CFR Part 15, Subpart C 15.247
Test Result	:	Pass

Prepared for:

Shenzhen Unichain Technology Co., Ltd 201, 111-3, Huangjinshan District, Bantian Community, Bantian Street, Longgang District, Shenzhen, China

Prepared by:

BlueAsia of Technical Services(Shenzhen) Co.,Ltd. Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District, Shenzhen, Guangdong Province, China TEL: +86-755-23059481

Compiled by: Approved by:

Jozu 13 hue. Theng

Review by: Date:



BlueAsia of Technical Services(Shenzhen) Co., Ltd. Add: Building C. No. 107, Shihuan Road, Shiyan Sub-District

Add: Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District, Shenzhen, Guangdong Province, China Tel: +86-755-23059481 Email: marketing@cblueasia.com www.cblueasia.com





REPORT REVISE RECORD

Version No.	Date Description	
00	2023/4/27	Original



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1 TEST SUMMARY

Test item	Test Requirement	Test Method	Class/Severity	Result
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	N/A
Conducted Band Edges Measurement	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2	47 CFR Part 15, Subpart C 15.247(d)	Pass
Radiated Spurious Emissions	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.4,6.5,6.6	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	Pass
Conducted Spurious Emissions	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 7.8.6 & Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass
Power Spectrum Density	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.10.2	47 CFR Part 15, Subpart C 15.247(e)	Pass
Conducted Peak Output Power	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 7.8.5	47 CFR Part 15, Subpart C 15.247(b)(3)	Pass
Minimum 6dB Bandwidth	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.8.1	47 CFR Part 15, Subpart C 15.247a(2)	Pass
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(c)	Pass



GENERAL INFORMATION 2

Applicant	Shenzhen Unichain Technology Co., Ltd	
Address	201, 111-3, Huangjinshan District, Bantian Community, Bantian Street, Longgang District, Shenzhen, China	
Manufacturer	Shenzhen Unichain Technology Co., Ltd	
Address	201, 111-3, Huangjinshan District, Bantian Community, Bantian Street, Longgang District, Shenzhen, China	
Factory	Shenzhen Unichain Technology Co., Ltd	
Address	201, 111-3, Huangjinshan District, Bantian Community, Bantian Street, Longgang District, Shenzhen, China	
Product Name	Wireless Silent Mouse	
TK-MS008		
3 GENERAL DESCRIPTION OF E.U.T.		

3 **GENERAL DESCRIPTION OF E.U.T.**

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Hardware Version	/A	
Software Version	N/A	
Operation Frequency:	2402MHz-2480MHz	
Modulation Type:	GFSK	
Rate data:	/lbps	
Channel Spacing:	MHz	
Number of Channels:	10	
Antenna Type:	PCB Antenna	
Antenna Gain:	1.8dBi (Provided by the applicant)	



Operation	Operation Frequency each of channel						
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2402MHz	11	2422MHz	21	2442MHz	31	2462MHz
2	2404MHz	12	2424MHz	22	2444MHz	32	2464MHz
: :	: :	: :	: :	: :	: :	: :	: :
9	2418MHz	19	2438MHz	29	2458MHz	39	2478MHz
10	2420MHz	20	2440MHz	30	2460MHz	40	2480MHz

Operation Frequency each of channel

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	2402MHz
The middle channel	2442MHz
The Highest channel	2480MHz



4 TEST ENVIRONMENT

Environment	Temperature	Voltage
Normal	25°C	1.5Vdc

5 TEST MODE

TEST MODE	TEST MODE DESCRIPTION	
Transmitting mode	Keep the EUT in continuously transmitting mode with modulation.	

Remark: Full battery is used during all test except ac conducted emission

6 MEASUREMENT UNCERTAINTY

Parameter	Expanded Uncertainty (Confidence of 95%)
Radiated Emission(9kHz-30MHz)	±4.34dB
Radiated Emission(30Mz-1000MHz)	±4.24dB
Radiated Emission(1GHz-18GHz)	±4.68dB
AC Power Line Conducted Emission(150kHz-30MHz)	±3.45dB



7 DESCRIPTION OF SUPPORT UNIT

Device Type	Manufacturer	Model Name	Serial No.	Remark
PC	PC HASEE		N/A	N/A

8 LABORATORY LOCATION

All tests were performed at:

BlueAsia of Technical Services(Shenzhen) Co.,Ltd.

Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District, Shenzhen, Guangdong Province, China

Telephone: TEL: +86-755-28682673 FAX: +86-755-28682673



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9 TEST INSTRUMENTS LIST

Test Equipment Of RF Conducted Test									
Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due				
Spectrum	R&S	FSP40	100817	2022/09/15	2023/09/14				
Spectrum	Agilent	N9020A	MY49100060	2022/09/07	2023/09/06				
Spectrum	KEYSIGHT	N9030A	MY52350152	2022/07/01	2023/06/30				
Spectrum	KEYSIGHT	N9010A	MY54330814	2022/07/01	2023/06/30				
Signal Generator	Agilent	N5182A	MY47420955	2022/09/07	2023/09/06				
Signal Generator	Agilent	E8257D	MY44320250	2022/07/01	2023/06/30				
Signal Generator	Agilent	N5181A	MY46240904	2022/08/02	2023/08/01				
Signal Generator	R&S	CMW500	132429	2022/09/07	2023/09/06				
BluetoothTester	Anritsu	MT8852B	06262047872	2022/09/07	2023/09/06				
Power probe	DARE	RPR3006W	14100889SN042	2022/09/07	2023/09/06				
DCPowersupply	zhaoxin	KXN-305D	20K305D1221363	2022/09/14	2023/09/13				
DCPowersupply	zhaoxin	RXN-1505D	19R1505D050168	2022/09/14	2023/09/13				

Test Equipn	Test Equipment Of Radiated Spurious Emissions									
Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due					
Chamber 1	SKET	966	N/A	2020/11/10	2023/11/9					
Chamber 2	SKET	966	N/A	2021/07/20	2024/07/19					
Spectrum	R&S	FSP40	100817	2022/09/15	2023/09/14					
Receiver	R&S	ESR7	101199	2022/09/15	2023/09/14					
Receiver	R&S	ESPI7	101477	2022/07/16	2023/07/15					
broadband Antenna	Schwarzbeck	VULB9168	00836 P:00227	2022/09/15	2023/09/14					
Horn Antenna	Schwarzbeck	BBHA9120D	01892 P:00331	2022/09/13	2025/09/12					
Amplifier	SKET	LNPA_30M01G-30	SK2021060801	2022/07/16	2023/07/15					
Amplifier	SKET	PA-000318G-45	N/A	2022/09/13	2023/09/12					
Amplifier	SKET	LNPA_18G40G-50	SK2022071301	2022/07/14	2023/07/13					
Filter group	SKET	2.4G/5G Filter group r	N/A	2022/07/16	2023/07/15					
EMI software	EZ	EZ-EMC	EEMC-3A1	N/A	N/A					
Loop antenna	SCHNARZBECK	FMZB1519B	00102	2022/9/14	2025/9/13					



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					İ
Controller	SKET	N/A	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-02	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-03	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-01	N/A	N/A	N/A



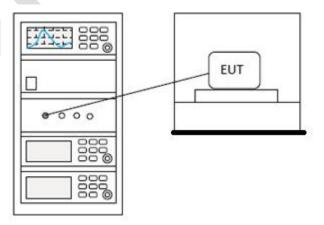
Test Standard	47 CFR Part 15, Subpart C 15.247					
Test Method	ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2					
Test Mode (Pre-Scan)	ТХ					
Test Mode (Final Test)	ТХ					
Tester	Jozu					
Temperature	25°C					
Humidity	60%					

10 CONDUCTED BAND EDGES MEASUREMENT

10.1 LIMITS

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.209(a) (see §15.205(c)).

10.2 BLOCK DIAGRAM OF TEST SETUP





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10.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details



11 RADIATED SPURIOUS EMISSIONS

Test Standard	47 CFR Part 15, Subpart C 15.247						
Test Method	ANSI C63.10 (2013) Section 6.4,6.5,6.6						
Test Mode (Pre-Scan)	ТХ						
Test Mode (Final Test)	ТХ						
Tester	Jozu						
Temperature	25°C						
Humidity	60%						

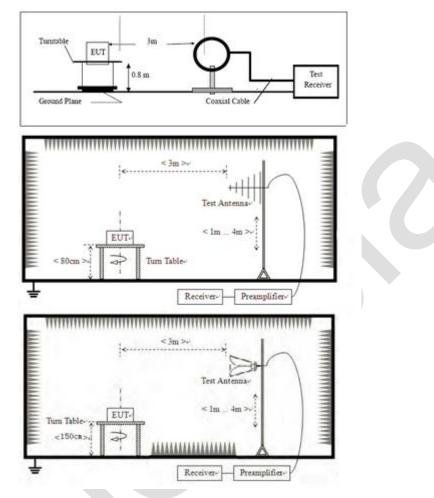
11.1 LIMITS

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.



11.2 BLOCK DIAGRAM OF TEST SETUP



11.3 PROCEDURE

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

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

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.



h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j. Repeat above procedures until all frequencies measured was complete.

Remark:

1) For emission below 1GHz, through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

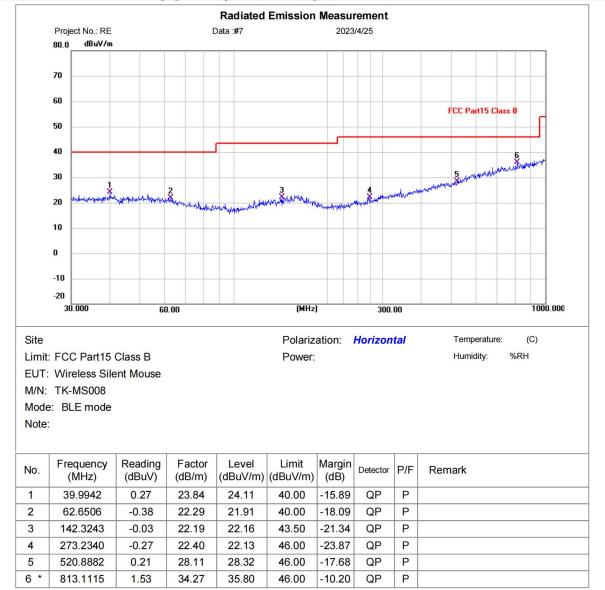
3) Scan from 9kHz to 25GHz, the disturbance above 12.75GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. fundamental frequency is blocked by filter, and only spurious emission is shown.

4) For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.



11.4 TEST DATA

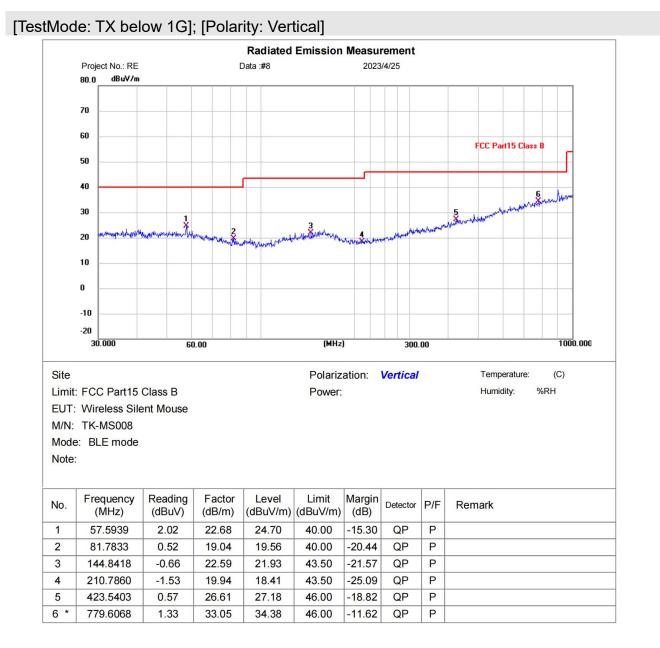




*:Maximum data x:Over limit !:over margin

Test Result: Pass



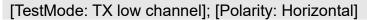


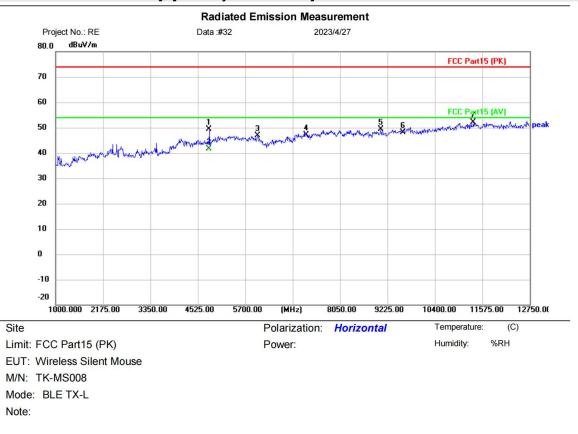
*:Maximum data x:Over limit !:over margin

Test Result: Pass



Above 1GHz:



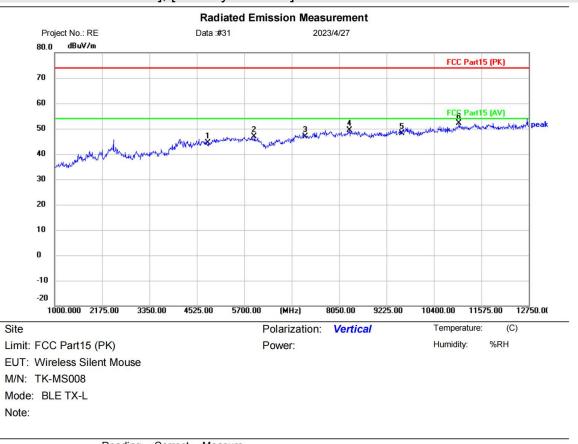


MHz dBuV dB dBuV/m dBuV/m 1 4804.000 45.42 4.05 49.47 74.00 2 * 4804.000 37.60 4.05 41.65 54.00 3 6005.500 42.89 3.92 46.81 74.00 4 7206.000 39.22 7.93 47.15 74.00	
2 * 4804.000 37.60 4.05 41.65 54.00 3 6005.500 42.89 3.92 46.81 74.00	00 -24.53 peak
3 6005.500 42.89 3.92 46.81 74.00	
	00 -12.35 AVG
4 7206.000 39.22 7.93 47.15 74.00	00 -27.19 peak
	00 -26.85 peak
5 9060.500 39.81 9.50 49.31 74.00	00 -24.69 peak
6 9608.000 37.32 10.90 48.22 74.00	00 -25.78 peak
7 11351.75 38.62 13.61 52.23 74.00	

*:Maximum dat	a x:Over limit	!:over margin			(Reference Only
Receiver:	SR_1		Spectrum Analyzer:	FSP40	
Antenna: E	Z 9120D 1G-18G		Engineer Signature		
st Result: P	ass				



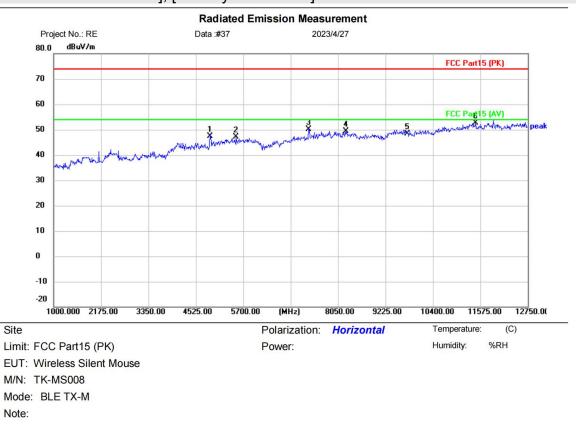
[TestMode: TX low channel]; [Polarity: Vertical]



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4804.000	40.31	4.05	44.36	74.00	-29.64	peak	
2		5946.750	39.86	6.93	46.79	74.00	-27.21	peak	
3		7206.000	38.92	7.93	46.85	74.00	- <mark>27.15</mark>	peak	
4		8308.500	40.27	9.04	49.31	74.00	- <mark>24</mark> .69	peak	
5		9608.000	37.15	10.90	48.05	74.00	-25.95	peak	
6	*	11022.75	38.78	13.46	52.24	74.00	-21.76	peak	
		<u>^</u>							

*:Maximum c	lata	x:Over limit	!:over margin			(Reference Only
Receiver:	ESR	_1		Spectrum Analyzer:	FSP40	
Antenna:	EZ 9	120D 1G-18G		Engineer Signature		
st Result:	Pas	S				





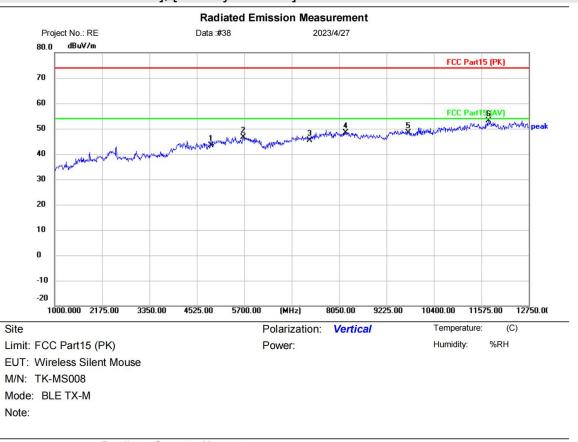
[TestMode: TX mid channel]; [Polarity: Horizontal]

MHz dBuV dB dBuV/m dBuV/m dB Detector Comment 1 4884.000 42.99 4.37 47.36 74.00 -26.64 peak 2 5523.750 40.12 6.91 47.03 74.00 -26.97 peak 3 7326.000 42.01 8.21 50.22 74.00 -23.78 peak 4 8238.000 40.33 9.00 49.33 74.00 -24.67 peak 5 9768.000 37.11 11.31 48.42 74.00 -25.58 peak 6 * 11457.50 38.87 13.66 52.53 74.00 -21.47 peak	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
2 5523.750 40.12 6.91 47.03 74.00 -26.97 peak 3 7326.000 42.01 8.21 50.22 74.00 -23.78 peak 4 8238.000 40.33 9.00 49.33 74.00 -24.67 peak 5 9768.000 37.11 11.31 48.42 74.00 -25.58 peak 6 * 11457.50 38.87 13.66 52.53 74.00 -21.47 peak			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
3 7326.000 42.01 8.21 50.22 74.00 -23.78 peak 4 8238.000 40.33 9.00 49.33 74.00 -24.67 peak 5 9768.000 37.11 11.31 48.42 74.00 -25.58 peak 6 * 11457.50 38.87 13.66 52.53 74.00 -21.47 peak	1		4884.000	42.99	4.37	47.36	74.00	-26.64	peak	
4 8238.000 40.33 9.00 49.33 74.00 -24.67 peak 5 9768.000 37.11 11.31 48.42 74.00 -25.58 peak 6 * 11457.50 38.87 13.66 52.53 74.00 -21.47 peak	2		5523.750	40.12	6.91	47.03	74.00	-26.97	peak	
5 9768.000 37.11 11.31 48.42 74.00 -25.58 peak 6 * 11457.50 38.87 13.66 52.53 74.00 -21.47 peak	3		7326.000	42.01	8.21	50.22	74.00	- <mark>23.78</mark>	peak	
6 * 11457.50 38.87 13.66 52.53 74.00 -21.47 peak	4		8238.000	40.33	9.00	49.33	74.00	- <mark>24</mark> .67	peak	
La stratuag data: latina data latina data Parto	5		9768.000	37.11	11.31	48.42	74.00	-25.58	peak	
	6	*	11457.50	38.87	13.66	52.53	74.00	-21.47	peak	

*:Maximum	data	x:Over limit	:over margin			(Reference Only
Receiver:	ESR	_1		Spectrum Analyzer:	FSP40	
Antenna:	EZ 9	120D 1G-18G		Engineer Signature		
est Result	: Pas	s				



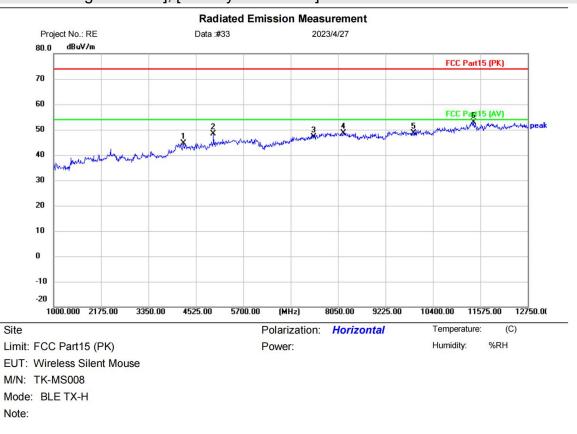
[TestMode: TX mid channel]; [Polarity: Vertical]



/k.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
48	84.000	39.04	4.37	43.41	74.00	-30.59	peak	
56	76.500	39.81	6.79	46.60	74.00	-27.40	peak	
73	26.000	37.19	8.21	45.40	74.00	-28.60	peak	
82	14.500	39.48	9.00	48.48	74.00	-25.52	peak	
97	68.000	36.97	11.31	48.28	74.00	-25.72	peak	
11	751.25	39.30	13.79	53.09	74.00	-20.91	peak	
r	11	11751.25						

*:Maximum	data	x:Over limit	l:over margin			(Reference Only
Receiver:	ESR	_1		Spectrum Analyzer:	FSP40	
Antenna:	EZ 9	120D 1G-18G		Engineer Signature		
est Result:	Pas	S				





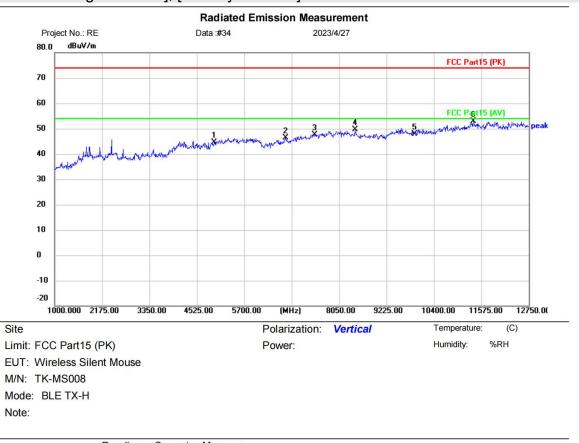
[TestMode: TX high channel]; [Polarity: Horizontal]

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4219.500	39.74	4.81	44.55	74.00	-29.45	peak	
2		4959.750	42.94	5.42	48.36	74.00	-25.64	peak	
3		7440.000	38.58	8.48	47.06	74.00	- <mark>26.94</mark>	peak	
4		8179.250	39.67	8.98	48.65	74.00	-25.35	peak	
5		9920.000	36.88	11.69	48.57	74.00	-25.43	peak	
6	*	11410.50	39.20	13.63	52.83	74.00	- <mark>21.17</mark>	peak	

*:Maximum	data	x:Over limit	!:over margin			(Reference Only
Receiver:	ESR	_1		Spectrum Analyzer:	FSP40	
Antenna:	EZ 9	120D 1G-18G		Engineer Signature		
est Result:	Pas	S				



[TestMode: TX high channel]; [Polarity: Vertical]



Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	4960.000	39.20	5.42	44.62	74.00	-29.38	peak	
	6722.250	39.66	6.62	46.28	74.00	-27.72	peak	
	7440.000	39.18	8.48	47.66	74.00	-26.34	peak	
	8449.500	40.51	9.10	49.61	74.00	-24.39	peak	
	9920.000	36.16	11.69	47.85	74.00	-26.15	peak	
*	11375.25	39.21	13.62	52.83	74.00	-21.17	peak	
		MHz 4960.000 6722.250 7440.000 8449.500 9920.000 * 11375.25	Mk. Freq. Level MHz dBuV 4960.000 39.20 6722.250 39.66 7440.000 39.18 8449.500 40.51 9920.000 36.16 * 11375.25 39.21	Mk. Freq. Level Factor MHz dBuV dB 4960.000 39.20 5.42 6722.250 39.66 6.62 7440.000 39.18 8.48 8449.500 40.51 9.10 9920.000 36.16 11.69 * 11375.25 39.21 13.62	Mk. Freq. Level Factor ment MHz dBuV dB dBuV/m 4960.000 39.20 5.42 44.62 6722.250 39.66 6.62 46.28 7440.000 39.18 8.48 47.66 8449.500 40.51 9.10 49.61 9920.000 36.16 11.69 47.85 * 11375.25 39.21 13.62 52.83	Mk. Freq. Level Factor ment Limit MHz dBuV dB dBuV/m dBuV/m 4960.000 39.20 5.42 44.62 74.00 6722.250 39.66 6.62 46.28 74.00 7440.000 39.18 8.48 47.66 74.00 8449.500 40.51 9.10 49.61 74.00 9920.000 36.16 11.69 47.85 74.00 * 11375.25 39.21 13.62 52.83 74.00	Mk. Freq. Level Factor ment Limit Over MHz dBuV dB dBuV/m dBuV/m dB 4960.000 39.20 5.42 44.62 74.00 -29.38 6722.250 39.66 6.62 46.28 74.00 -27.72 7440.000 39.18 8.48 47.66 74.00 -26.34 8449.500 40.51 9.10 49.61 74.00 -24.39 9920.000 36.16 11.69 47.85 74.00 -26.15 * 11375.25 39.21 13.62 52.83 74.00 -21.17	Mk. Freq. Level Factor ment Limit Over MHz dBuV dB dBuV/m dB dBuV/m dB Detector 4960.000 39.20 5.42 44.62 74.00 -29.38 peak 6722.250 39.66 6.62 46.28 74.00 -27.72 peak 7440.000 39.18 8.48 47.66 74.00 -26.34 peak 8449.500 40.51 9.10 49.61 74.00 -24.39 peak 9920.000 36.16 11.69 47.85 74.00 -26.15 peak * 11375.25 39.21 13.62 52.83 74.00 -21.17 peak

*:Maximum	data	x:Over limit	l:over margin			(Reference Only
Receiver:	ESR	_1		Spectrum Analyzer:	FSP40	
Antenna:	EZ 9	120D 1G-18G		Engineer Signature		
est Result:	Pas	S				



12 RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS

Test Standard	47 CFR Part 15, Subpart C 15.247							
Test Method	Method ANSI C63.10 (2013) Section 6.10.5							
Test Mode (Pre-Scan)	ТХ							
Test Mode (Final Test)	ТХ							
Tester	Jozu							
Temperature	25°C							
Humidity	60%							

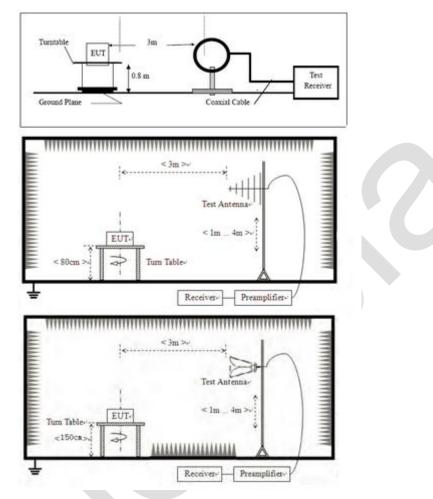
12.1 LIMITS

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.



12.2 BLOCK DIAGRAM OF TEST SETUP



12.3 PROCEDURE

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

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

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.



h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

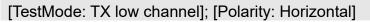
j. Repeat above procedures until all frequencies measured was complete.

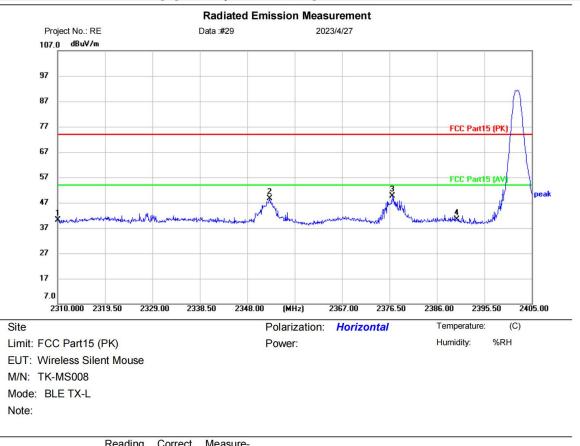
Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.



12.4 TEST DATA





2 2352.465 3 * 2377.070	Level Factor	ment	Limit	Over		
2 2352.465 3 * 2377.070	dBuV dB	dBuV/m dBuV/m	dBuV/m	dB	Detector	Comment
3 * 2377.070	44.42 -4.27	40.15	74.00	-33.85	peak	
	52.56 -4.03	48.53	74.00	-25.47	peak	
4 0000 000	53.47 -3.89	49.58	74.00	-24.42	peak	
4 2390.000	44.32 -3.82	40.50	74.00	-33.50	peak	

*:Ma	laximum dat	a x:Over lim	it !:over margin			(Reference Only
Rece	eiver:	ESR_1		Spectrum Analyzer:	FSP40	
Ante	enna:	EZ 9120D 1G-18G		Engineer Signature		
Test R	esult: P	ass				

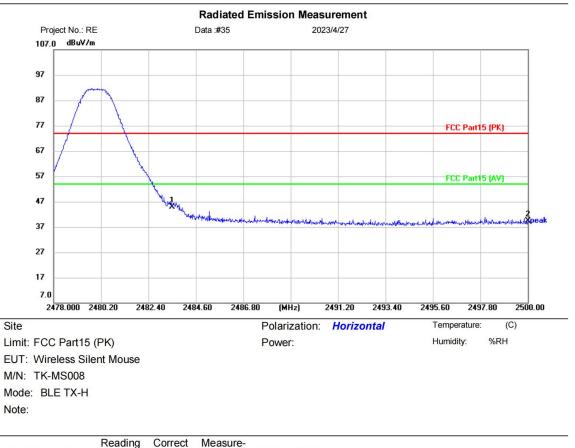


Radiated Emission Measurement Data :#30 2023/4/27 Project No.: RE 107.0 dBuV/m 97 87 77 FCC Part15 (PK) 67 57 FCC Part15 (AV 47 3. Alt 37 27 17 7.0 2310.000 2319.50 2329.00 2338.50 2348.00 (MHz) 2367.00 2376.50 2395.50 2405.00 2386.00 Site Polarization: Vertical Temperature: (C) Humidity: %RH Limit: FCC Part15 (PK) Power: EUT: Wireless Silent Mouse M/N: TK-MS008 Mode: BLE TX-L Note:

No.	M	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2310.000	44.24	-4.27	39.97	74.00	-34.03	peak	
2		2390.000	43.63	-3.82	39.81	74.00	-34.19	peak	







[TestMode: TX high channel]; [Polarity: Horizontal]

No.	M	lk. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2483.500	48.96	-3.96	45.00	74.00	-29.00	peak	
2		2500.000	43.48	-4.00	39.48	74.00	-34.52	peak	

*:Maximum	data	x:Over limit	!:over margin			(Reference Only
Receiver:	ESR	_1		Spectrum Analyzer:	FSP40	
Antenna:	EZ 9	120D 1G-18G		Engineer Signature		
st Result	: Pas	S				