

TEST REPORT

Report No.: BCTC2212507283E

Applicant: Summer Wind International Ltd

Product Name: RF Remote

Model/Type Ref.: SW-T0001-02

Tested Date: 2022-12-12 to 2023-01-10

Issued Date: 2023-01-10

Shenzhen BCTC Testing Co., Ltd.



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FCC ID:2A767-SWT0001

Product Name: RF Remote

Trademark: N/A

Model/Type Ref.: SW-T0001-02 SW-T0001-01

Prepared For: Summer Wind International Ltd

Address: No.39, Jinou Road, Jianghai District, Jiangmen City, Guangdong Province,

China.

Manufacturer: Summer Wind International Ltd

Address: No.39, Jinou Road, Jianghai District, Jiangmen City, Guangdong Province,

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Prepared By: Shenzhen BCTC Testing Co., Ltd.

Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road,

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Sample Received Date: 2022-12-12

Sample tested Date: 2022-12-12 to 2023-01-10

Issue Date: 2023-01-10

Report No.: BCTC2212507283E

Test Standards: FCC Part15.231 ANSI C63.10-2013

Test Results: PASS

Tested by:

Jeff.Fu/Project Handler

Approved by:

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

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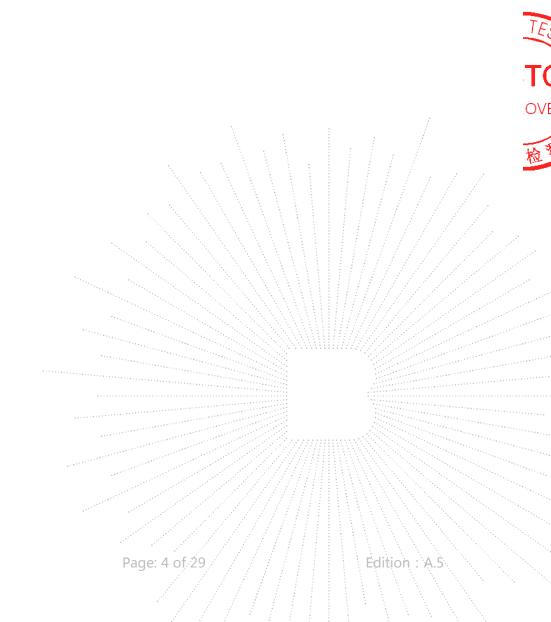
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(Note: N/A Means Not Applicable)



1. Version

Report No.	Issue Date	Description	Approved
BCTC2212507283E	2023-01-10	Original	Valid



No.: BCTC/RF-EMC-005

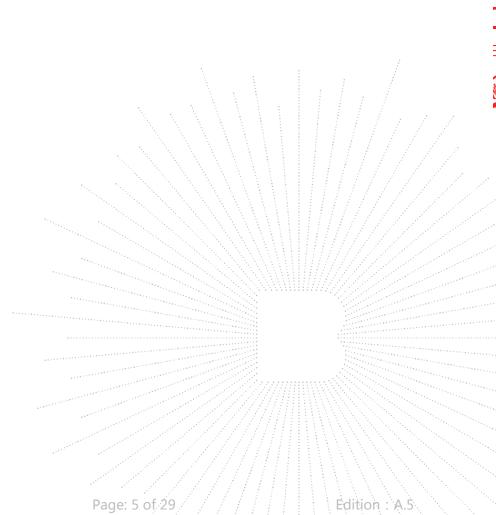


2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No	Results
1	Conducted Emission	§15.207	N/A*
2	Fundamental &Radiated Spurious Emission Measurement	15.209,15.231b	PASS
3	Occupy Bandwidth	15.231c	PASS
4	Dwell time	15.231a	PASS
5	Antenna Requirement	15.203	PASS

Note*: The EUT is powered by the DC only, the test item is not applicable.



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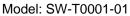


3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(9kHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission(150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	Ü=0.59℃

Remark: There are differences in appearance between the two models, the RF chip and pcb layout remains unchanged.







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4. Product Information And Test Setup

4.1 Product Information

Model/Type Ref.: SW-T0001-02 SW-T0001-01

Model differences:

There are differences in appearance between the two models, the RF chip and pcb

layout remains unchanged.

Hardware Version: remote11-A

Software Version: Checksum: 0x56C27

Operation Frequency: 303.875 MHz

Type of Modulation: ASK Number Of Channel 1CH

Antenna installation: PCB antenna

Antenna Gain: 0dBi

Ratings: DC 3V From Battery

Remark: The antenna gain of the product is provided by the customer, and the test data is

affected by the customer information

4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Radiated Spurious Emission

E-1 EUT

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	RF Remote	N/A	SW-T0001-02	SW-T0001-01	//EÚT

Notes:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

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4.4 Channel List

СН	Frequency (MHz)
1	303.875

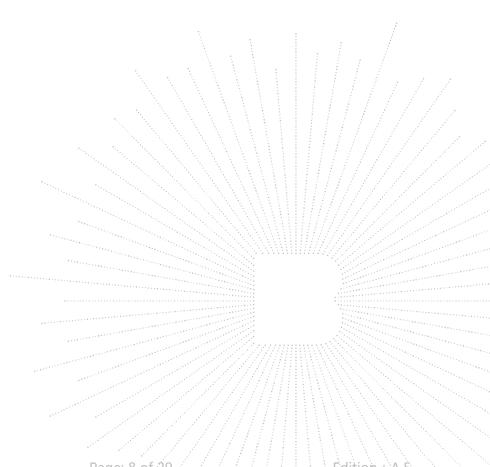
4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Final Test Mode	Description
Mode 1	TX Mode

Note:

- (1) Fully-charged battery is used during the test
- (2) Tests were performed manually, and no special test software was used. Put the EUT is in continuous emission mode and operates in "test mode" for testing.



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Test Facility And Test Instrument Used 5.

Test Facility 5.1

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards. FCC Test Firm Registration Number: 712850

IC Registered No.: 23583

5.2 Test Instrument Used

RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power Metter	Keysight	E4419	\	May 24, 2022	May 23, 2023
Power Sensor (AV)	Keysight	E9300A	\	May 24, 2022	May 23, 2023
Signal Analyzer20kH z-26.5GHz	Keysight	N9020A	MY49100060	May 24, 2022	May 23, 2023
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	\	May 24, 2022	May 23, 2023

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Radiated Emissions Test (966 Chamber01)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	Jun. 06. 2020	Jun. 05, 2023
Receiver	R&S	ESR3	102075	May 24, 2022	May 23, 2023
Receiver	R&S	ESRP	101154	May 24, 2022	May 23, 2023
Amplifier	SKET	LAPA_01G18 G-45dB	\	May 24, 2022	May 23, 2023
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 24, 2022	May 23, 2023
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 26, 2022	May 25, 2023
Horn Antenna	Schwarzbeck	BBHA9120D	1541	Jun. 06, 2022	Jun. 05, 2023
Horn Antenna(18G Hz-40GHz)	Schwarzbeck	BBHA9170	00822	Jun. 06, 2022	Jun. 05, 2023
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35- HG	2034381	May 26, 2022	May 25, 2023
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 26, 2022	May 25, 2023
Power Metter	Keysight	E4419	\	May 26, 2022	May 25, 2023
Power Sensor (AV)	Keysight	E9300A	1	May 26, 2022	May 25, 2023
Signal Analyzer20kH z-26.5GHz	Keysight	N9020A	MY49100060	May 26, 2022	May 25, 2023
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40		May 26, 2022	May 25, 2023
Software	Frad	EZ-EMC	FA-03A2 RE	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	

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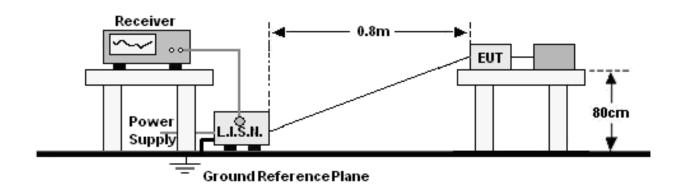






6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

FREQUENCY (MHz)	Limit (dBuV)
FREQUENCY (WITZ)	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Notes

- 1. *Decreasing linearly with logarithm of frequency.
- 2. The lower limit shall apply at the transition frequencies.

6.3 Test Procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).

6.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

6.5 Test Result

The EUT is powered by the DC only, the test item is not applicable.

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b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.

c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

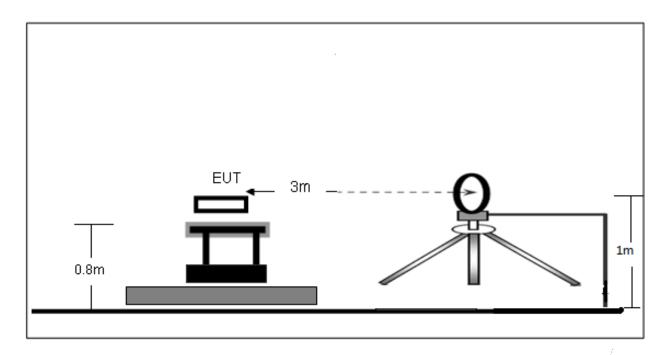




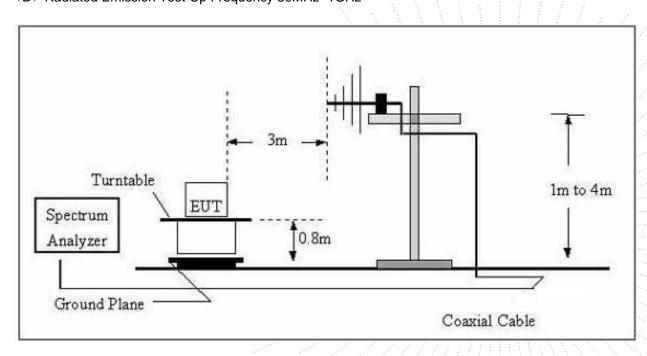
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

(A) Radiated Emission Test-Up Frequency Below 30MHz



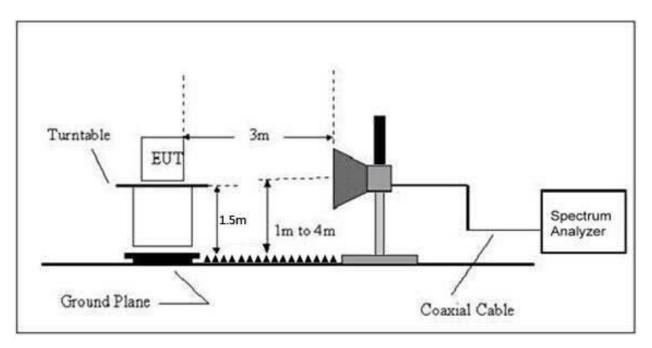
(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



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(C) Radiated Emission Test-Up Frequency Above 1GHz



7.2 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency	Field Strength	Distance	Field Strength Limit at 3m Distance		
(MHz)	uV/m	(m)	uV/m	dBuV/m	
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	20log ^{(2400/F(kHz))} + 80	
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	20log ^{(24000/F(kHz))} + 40	
1.705 ~ 30	30	30	100 * 30	20log ⁽³⁰⁾ + 40	
30 ~ 88	100	3	100	20log ⁽¹⁰⁰⁾	
88 ~ 216	150	-3	150	20log ⁽¹⁵⁰⁾	
216 ~ 960	200	3	200	20log ⁽²⁰⁰⁾	
Above 960	500	3	500	20log ⁽⁵⁰⁰⁾	

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LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)			
FREQUENCY (WINZ)	PEAK	AVERAGE		
Above 1000	74	54		

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

7.3 Test Procedure

Receiver Parameter	Setting
Attenuation	A A A Auto
9kHz~150kHz	RBW 200Hz for QP
150kHz~30MHz	RBW 9kHz for QP
30MHz~1000MHz	RBW 120kHz for QP

Spectrum Parameter	Setting
1-6GHz	RBW 1 MHz /VBW 1 MHz for Peak,
1-00112	RBW 1 MHz / VBW 10Hz for Average

Below 1GHz test procedure as below:

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

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

Above 1GHz test procedure as below:

- g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).
- h. Test the EUT in the lowest channel, the middle channel ,the Highest channel. Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

Above 1GHz test procedure as below:

- a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. 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.
- d. 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 and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. 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.
- g. Test the EUT in the lowest channel, the Highest channel.

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

7.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

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7.5 Test Result

Below 30MHz

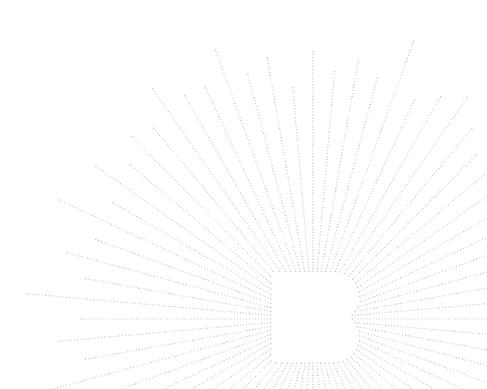
Temperature:	26℃	Relative Humidity:	24%
Pressure:	101 kPa	Test Voltage:	DC 3V
Test Mode:	Mode 1	Polarization :	

Freq.	Reading	Reading Limit Margin		State	
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F	
				PASS	
				PASS	

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =40 log (specific distance/test distance)(dB); Limit line = specific limits(dBuv) + distance extrapolation factor.

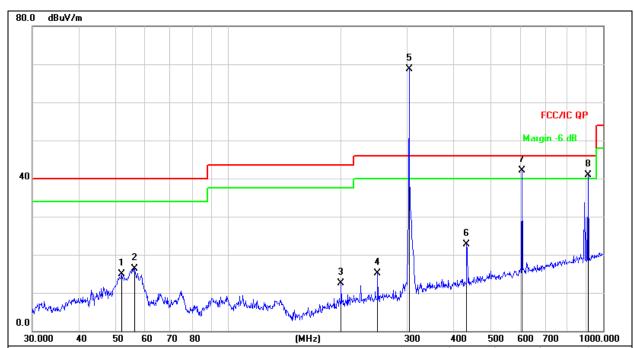


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Between 30MHz - 1GHz

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Mode:	Mode1	Remark:	N/A



Remark:

- 1.Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 2. Measurement=Reading Level+ Correct Factor
- 3. Over= Measurement-Limit

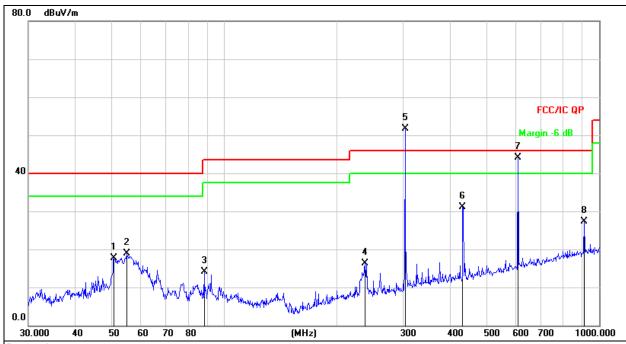
of over infectorion Emili								
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		51.8430	30.73	-15.87	14.86	40.00	-25.14	QP
2		56.1974	32.77	-16.52	16.25	40.00	-23.75	QP
3		199.9856	29.84	-17.37	12.47	43.50	-31.03	QP
4		250.3011	30.89	-15.82	15.07	46.00	-30.93	QP
5	*	303.5437	83.11	-14.45	68.66	94.93	-26.27	peak
6		432.5457	34.47	-11.74	22.73	46.00	-23.27	QP
7	İ	607.7867	50.30	-8.29	42.01	74.93	-32.92	peak
8	İ	912.8620	45.40	-4.45	40.95	74.93	-33.98	peak

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Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Vertical
Test Mode:	Mode1	Remark:	N/A



Remark:

- 1.Factor = Antenna Factor + Cable Loss Pre-amplifier.
 2. Measurement=Reading Level+ Correct Factor
 3. Over= Measurement-Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		50.7637	33.39	-15.70	17.69	40.00	-22.31	QP
2		54.8348	35.19	-16.32	18.87	40.00	-21.13	QP
3		88.3421	33.74	-19.62	14.12	43.50	-29.38	QP
4		237.4759	32.52	-16.22	16.30	46.00	-29.70	QP
5	*	303.5437	66.13	-14.45	51.68	94.93	-43.25	peak
6		432.5457	42.88	-11.74	31.14	46.00	-14.86	QP
7	İ	607.7867	52.47	-8.29	44.18	74.93	-30.75	peak
8		912.8619	31.83	-4.45	27.38	74.93	-47.55	peak

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For average Emission

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Frequency MHz	Peak Level dBuV/m	Duty cycle factor	Average Level dBuV/m	Limit AV	Margin	Polarization
303	68.66	-11.96	56.70	74.93	-18.23	Horizontal
607	42.01	-11.96	30.05	54.93	-24.88	Horizontal
912	40.95	-11.96	28.99	54.93	-25.94	Horizontal

Notes: 1. Average emission Level = Peak Level + Duty cycle factor 2. Duty cycle level please see clause 5.

Frequency MHz	Peak Level dBuV/m	Duty cycle factor	Average Level dBuV/m	Limit AV	Margin	Polarization
303	51.68	-11.96	39.72	74.93	-35.21	Vertical
607	44.18	-11.96	32.22	54.93	-22.71	Vertical
912	27.38	-11.96	15.42	54.93	-39.51	Vertical

Notes: 1. Average emission Level = Peak Level + Duty cycle factor

2. Duty cycle level please see clause 5.

Radiated Spurious Emission (1GHz to 10th harmonics)

Frequency	Peak	Duty	Average	Liı	mit	Margi	n dB	
MHz	Level dBuV/m	cycle factor	Level dBuV/m	PK	AV	PK	AV	Polarization
1215.53	52.15	-11.96	40.19	74.00	54.00	-21.85	-13.81	Vertical
1519.37	51.36	-11.96	39.4	74.00	54.00	-22.64	-14.60	Vertical
1823.25	50.55	-11.96	38.59	74.93	54.93	-24.38	-16.34	Vertical
2127.13	56.12	-11.96	44.16	74.93	54.93	-18.81	10.77	Vertical
2431.12	50.95	-11.96	38.99	74.93	54.93	-23.98	-15.94	Vertical
2734.89	46.55	-11.96	34.59	74.00	54.00	-27.45	-19.41	Vertical
1215.53	45.85	-11.96	33.89	74.00	54.00	-28.15	-20.11	Horizontal
1519.37	43.69	-11.96	31.73	74.00	54.00	-30.31	-22.27	Horizontal
1823.25	49.65	-11.96	37.69	74.93	54.93	-25.28	-17.24	Horizontal
2127.13	49.62	-11.96	37.66	74.93	54.93	-25.31	-17.27	Horizontal
2431.12	47.85	-11.96	35.89	74.93	54.93	-27.08	-19.04	Horizontal
2734.89	48.75	-11.96	36.79	74.00	54.00	-25.25	-17.21	Horizontal

Notes: 1.Average emission Level = Peak Level + Duty cycle factor

- 2. Duty cycle level please see clause 5.
- 3. Pulse Desensitization Correction Factor

Pulse Width (PW) =24.20ms

RBW=1 MHz

PW(24.20 ms) > 1/RBW (1us)

Therefore PDCF is not needed

4. Other harmonics emissions are lower than 20dB below the allowable limit.

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8. Bandwidth Test

8.1 Block Diagram Of Test Setup

EUT	SPECTRUM
	ANALYZER

8.2 Limit

According to FCC 15.231(c) requirement:

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating between 70 MHz to 900 MHz. Those devices operating above 900 MHz, the emission spurious shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

B.W (20dBc) Limit = 0.25% * f(MHz) = 0.25% * 303.875MHz = 0.7597MHz

Spectrum Parameter	Setting		
Attenuation	Auto		
Span Frequency	> Measurement Bandwidth or Channel Separation		
RB	30kHz		
VB	≥RBW		
Detector	Peak		
Trace	Max Hold		
Sweep Time	Auto		

8.3 Test Procedure

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 30kHz, VBW≥ RBW, Sweep time = Auto.

8.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

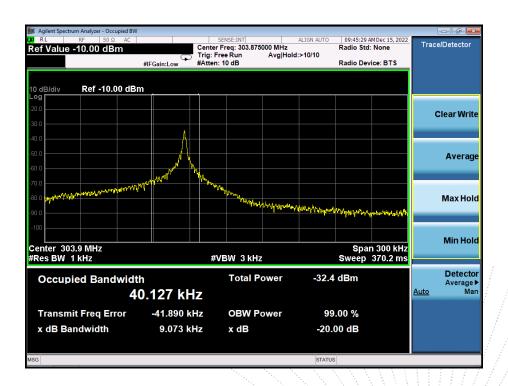
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8.5 Test Result

Temperature :	26 ℃	Relative Humidity:	54%
Pressure :	101kPa	Test Voltage :	DC 3V
Test Mode :	Mode 1		

Frequency	-20dB Bandwidth (kHz)	Limit (MHz)	Result
303.875MHz	9.07	0.7597	PASS



,TC

3C







1 of 2

Sweep 100.0 ms (1001 pts)

9. Calculation Of Average Factor

The output field strengths of specification in accordance with the FCC rules specify measurements with an average detector. During the test, a spectrum analyzer incorporating a peak detector was used. Therefore, a reduction factor can be applied to the resultant peak signal level and compared to the limit for measurement instrumentation incorporating an average detector.

The duty cycle is measured in 100 ms or the repetition cycle period, whichever is a shorter time frame. The duty cycle is measured by placing the spectrum analyzer to set zero span at 100kHz resolution bandwidth.

Averaging factor in dB =20log (duty cycle)

Averaging factor in dB =20log (duty cycle)

Res BW 100 kHz

The duration of one cycle =24.20 ms

The duty cycle is simply the on-time divided the duration of one cycle

Duty Cycle = (0.352ms*8+0.610ms*5)/24.20ms

=9.784 ms/24.20 ms

=0.252

Therefore, the averaging factor is found by 20log0.252=-11.96 dB

Test plot as follows:

Note: During the 100ms, the amount of pulse and on-time of pulse are the same for every pulse train.

Cycle

| Agilent Spectrum Analyzer - Swept SA | SENSE:INT | ALIGN AUTO | 09:51:01 AM Dec 15, 2022 | Marker 1 Δ 24.2000 ms | PNO: Wide → IF Gain:Low | Trig: Free Run Atten: 10 dB | Avg Type: Log-Pwr | TARCE | 12.3.4.5.5 | TYPE | WARNING NOTE | NNINNN | Select Marker 1 0 dB | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Normal | Nor

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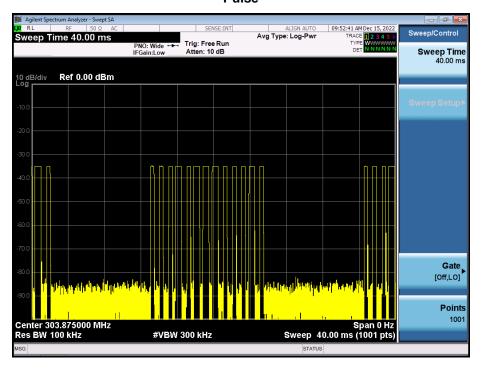
#VBW 300 kHz

TE

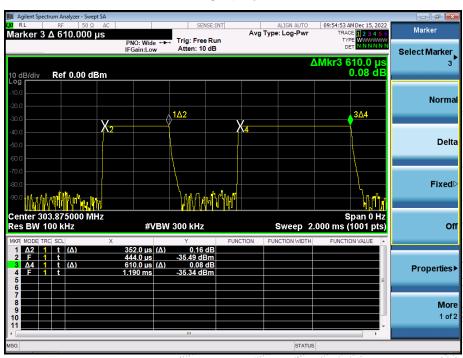
.OV



Pulse



On-time



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10. Dwell Time

10.1 Block Diagram Of Test Setup

EUT	SPECTRUM
	ANALYZER

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10.2 Limit

According to FCC 15.231(a) requirement:

A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

10.3 Test Procedure

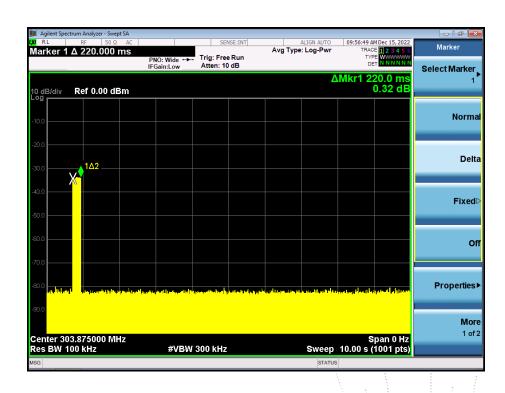
- a) Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- b) Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- c) Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
- d) Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- e) Repeat above procedures until all measured frequencies were complete.

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10.4 Test Result

Dwell time (second)	Limit (second)	Result
220 ms	<5s	Pass



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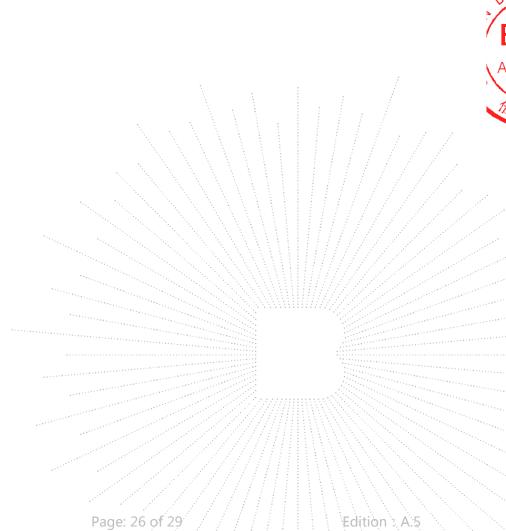
11. Antenna Requirement

Standard Requirement 11.1

15.203 requirement: For intentional device, according to 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.

11.2 EUT Antenna

The EUT antenna is the PCB antenna. It comply with the standard requirement.

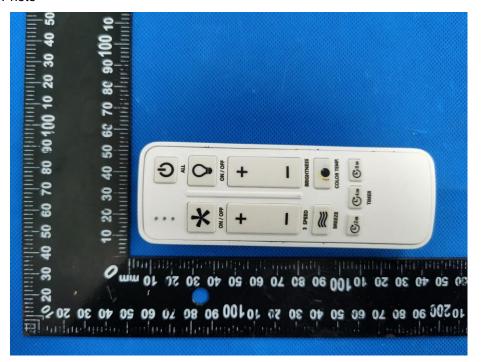


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12. EUT Photographs

EUT Photo



NOTE: Appendix-Photographs Of EUT Constructional Details

C 7

CI

PRC



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13. EUT Test Setup Photographs

Radiated Measurement Photos





C ED

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STATEMENT

- 1. The equipment lists are traceable to the national reference standards.
- 2. The test report can not be partially copied unless prior written approval is issued from our lab.
- 3. The test report is invalid without the "special seal for inspection and testing".
- 4. The test report is invalid without the signature of the approver.
- 5. The test process and test result is only related to the Unit Under Test.
- 6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
- 7. The test report without CMA mark is only used for scientific research, teaching, enterprise product development and internal quality control purposes.
- 8. The quality system of our laboratory is in accordance with ISO/IEC17025.
- 9. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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**** END ****

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