

FCC TEST REPORT

Test report On Behalf of SHENZHEN TOP FAME ELECTRONICS LTD.

For

Digital wireless rear view system

Model No.: A7, A5, V16, LK7, R12, Y33, Y34, LK9, LK6, R8, DW-4310, DW-5100, DW-7010, DW-7011, DW-7012, DW-7013, DW-7014, DW-7015, DW-7016, DW-8000, DW-9016, DW-1106, PSW-7010, M1, M2, CMD-1001, CMD-1002, CMD-1003, CMD-1004, CMD-900, CMD-930, CMD-921, CA-531, CA731

FCC ID: 2AR9W-A7

Prepared For: SHENZHEN TOP FAME ELECTRONICS LTD.

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China

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Date of Test: Feb. 17, 2022~Feb. 25, 2022

Date of Report: Feb. 25, 2022 Report Number: HK2202220579-E

HUAK



TEST RESULT CERTIFICATION

Applicant's name:	SHENZHEN TOP FAME ELECTRONICS LT	D
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. 201, 8Bldg., the 2nd of Zhugushi industrial area, Longgang

district, Shenzhen, China

Manufacture's Name.....: SHENZHEN TOP FAME ELECTRONICS LTD.

Address 201, 8Bldg., the 2nd of Zhugushi industrial area, Longgang

district, Shenzhen, China

Product description

Trade Mark: N/A

Product name Digital wireless rear view system

A7, A5, V16, LK7, R12, Y33, Y34, LK9, LK6, R8, DW-4310, DW-5100, DW-7010, DW-7011, DW-7012, DW-7013, DW-7014, DW-7015, DW-7016, DW-8000, DW-9016, DW-1106, PSW-7010

Report No.: HK2202220579-E

Model and/or type reference : DW-7015, DW-7016, DW-8000, DW-9016, DW-1106, PSW-7010,

M1, M2, CMD-1001, CMD-1002, CMD-1003, CMD-1004,

CMD-900, CMD-930, CMD-921, CA-531, CA731

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Date of Test

Date (s) of performance of tests Feb. 17, 2022~Feb. 25, 2022

Date of Issue Feb. 25, 2022

Test Result Pass

Testing Engineer :

(Gary Qian)

Gang Dia

Technical Manager

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(Eden Hu)

Authorized Signatory

Jason Www

(Jason Zhou)



	Table of Co	ntents	Page
1 . TEST SUMMARY			5
1.1 . Test Procedures	and Results		5
1.2 . Information of th	e Test Laboratory		5°
1.3 . Measurement U	ncertainty		5
2 . GENERAL INFORM	IATION		6
2.1 . General Descrip	tion of EUT		6
2.2 . Operation of EU	T During Testing		7
2.3 . Description of Te	est Setup		8
2.4 . Measurement In	struments List		9
3. CONDUCTED EM	ISSIONS TEST		10
3.1. Conducted Powe	r Line Emission Li	mit	10
3.2. Test Setup			10
3.3. Test Procedure			10
3.4. Test Result			11
4. RADIATED EMISSION	ON TEST		12
4.1. Radiation Limit			12
4.2. Test Setup			12
4.3. Test Procedure			13
4.4. Test Result			13
5. BAND EDGE			19
5.1. Limits			19
5.2. Test Procedure			19
5.3. Test Result			20
6. OCCUPIED BANDW	IDTH MEASURE	EMENT	22
6.1. Test Setup			22
6.2. Test Procedure			22
6.3. Measurement Eq	uipment Used		22
6.4. Test Result			22
7. ANTENNA REQUIRE	EMENT		24
8. PHOTOGRAPH OF	TEST		25
9. PHOTOS OF THE E	UT		26



Page 4 of 26

Report No.: HK2202220579-E

** Modified History **

-4119"		C11 VS897	- !!</th
Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Feb. 25, 2022	Jason Zhou
	_		

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1. TEST SUMMARY

1.1. Test Procedures and Results

	-110/-	-110
DESCRIPTION OF TEST	SECTION NUMBER	RESULT
CONDUCTED EMISSIONS TEST	15.207	N/A
RADIATED EMISSION TEST	15.249(a)/15.209	COMPLIANT
BAND EDGE	15.249(d)/15.205	COMPLIANT
OCCUPIED BANDWIDTH MEASUREMENT	15.215 (c)	COMPLIANT
ANTENNA REQUIREMENT	15.203	COMPLIANT

1.2. Information of the Test Laboratory

Shenzhen HUAK Testing Technology Co., Ltd.

Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Testing Laboratory Authorization:

A2LA Accreditation Code is 4781.01. FCC Designation Number is CN1229. Canada IC CAB identifier is CN0045. CNAS Registration Number is L9589.

1.3. Measurement Uncertainty

Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.71dB, k=2 Radiated emission expanded uncertainty(9kHz-30MHz) = 3.90dB, k=2 Radiated emission expanded uncertainty(30MHz-1000MHz) = 3.90dB, k=2 Radiated emission expanded uncertainty(Above 1GHz) = 4.28dB, k=2



2. GENERAL INFORMATION

2.1. General Description of EUT

Equipment:	Digital wireless	rear view system	1		
Model Name:	A7	JUAN TESTIN	- JUAK TESTIN	WAK TESTING	
	A5, V16, LK7, I	R12, Y33, Y34, L	K9, LK6, R8, DW	/-4310,	
	DW-5100, DW-	-7010, DW-7011,	DW-7012, DW-7	7013, DW-7014,	
Series Model:	DW-7015, DW-	-7016, DW-8000,	DW-9016, DW-1	106,	
	PSW-7010, M1	, M2, CMD-1001	, CMD-1002, CM	ID-1003,	
	CMD-1004, CN	1D-900, CMD-930	0, CMD-921, CA-	·531, CA731	
	All model's the function, software and electric circuit are the				
Model Difference:	same, only with a product color, appearance and model named				
	different. Test s	sample model: A7	7.		
FCC ID:	2AR9W-A7	e)G	a)G	.alG	
Antenna Type:	External Anten	na	WAK TESTIL	HUAKTESTIL	
Antenna Gain:	3dBi	3	(a)		
Operation frequency:	2408-2475MH	Z	AKTESTING	a)G	
Number of Channels:	18CH	ESTIT	HO	WAKTESTIN	
Modulation Type:	GFSK		CTING (II)		
Power Source:	DC 12V	OKTESTING HUAKT	TESTING	OK TESTING OF	
Power Rating:	DC 12V		MINN.	O HO.	

FICATION





2.1.1. Carrier Frequency of Channels

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
STING	2408	STING 7	2428	13	2455
2	2411	8	2432	HUAKTE 14	2458
3	2415	9	2442	15	2465
4	2418	10	2445	16	2468
5 HUA	2422	11 HUAY	2448	17	2472
6	2425	12	2452	18	2475

2.2. Operation of EUT During Testing

Operating Mode

The mode is used: Transmitting mode

Low Channel: 2408MHz Middle Channel: 2442MHz High Channel: 2475MHz

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LANTES TIME

Operation of EUT during testing:

2.3. Description of Test Setup



The sample was placed (0.8m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. The worst case is X position.



2.4. Measurement Instruments List

	Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.
0	IK TEST	L.I.S.N.	WAKTESI	HUAKTESIN	HUAKT	E51"	KTESI
	1.	Artificial Mains	R&S	ENV216	HKE-002	Dec. 09, 2021	1 Year
E	TING	Network	TESTING		TESTIN	6	
	2.	Receiver	R&S	ESCI 7	HKE-010	Dec. 09, 2021	1 Year
	3.	RF automatic control unit	Tonscend	JS0806-2	HKE-060	Dec. 09, 2021	1 Year
	4.75	Spectrum analyzer	R&S	FSP40	HKE-025	Dec. 09, 2021	1 Year
	5.	Spectrum analyzer	Agilent	N9020A	HKE-048	Dec. 09, 2021	1 Year
	6.	Preamplifier	Schwarzbeck	BBV 9743	HKE-006	Dec. 09, 2021	1 Year
	7.70	EMI Test Receiver	Rohde & Schwarz	ESCI 7	HKE-010	Dec. 09, 2021	1 Year
I)	8.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	HKE-012	Dec. 09, 2021	1 Year
E	9.	Loop Antenna	Schwarzbeck	FMZB 1519 B	HKE-014	Dec. 09, 2021	¹ Year
	10.	Horn Antenna	Schewarzbeck	9120D	HKE-013	Dec. 09, 2021	1 Year
	11.	Pre-amplifier	EMCI	EMC051845S E	HKE-015	Dec. 09, 2021	1 Year
	12.	Pre-amplifier	Agilent	83051A	HKE-016	Dec. 09, 2021	1 Year
	13.	EMI Test Software EZ-EMC	Tonscend	JY3120-B Version	HKE-083	N/A	N/A
	14.	Power Sensor	Agilent	E9300A	HKE-086	Dec. 09, 2021	1 Year
	15.	Spectrum analyzer	Agilent	N9020A	HKE-048	Dec. 09, 2021	1 Year
E	16.	Signal generator	Agilent	N5182A	HKE-029	Dec. 09, 2021	1 Year
ĺ	17.	Signal Generator	Agilent	83630A	HKE-028	Dec. 09, 2021	1 Year
ĺ	18.	Shielded room	Shiel Hong	4*3*3	HKE-039	Dec. 09, 2021	3 Year
	19.	Hight gain antenna	Schwarzbeck	LB-180400KF	HKE-054	Dec. 09, 2021	1 Year

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3. CONDUCTED EMISSIONS TEST

3.1. Conducted Power Line Emission Limit

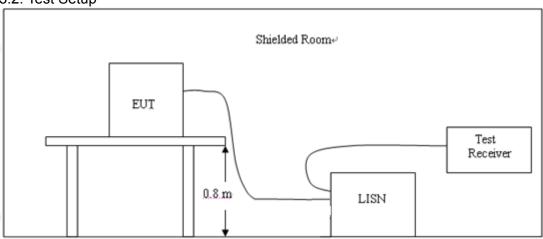
For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following.

F========	Maximum RF Line Voltage (dBμV)					
Frequency (MHz)	CLAS	SS A	CLASS B			
(11112)	Q.P.	Ave.	Q.P.	Ave.		
0.15 - 0.50	79	66	66-56*	56-46*		
0.50 - 5.00	73	60	56	46		
5.00 - 30.0	73	60	60	50		

^{*} Decreasing linearly with the logarithm of the frequency.

For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

3.2. Test Setup



3.3. Test Procedure

- The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5. All support equipments received AC power from a second LISN, if any.
- 6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.



3.4. Test Result

Not applicable. Note: EUT power supply by DC Power, so this test item not applicable.



4. RADIATED EMISSION TEST

4.1. Radiation Limit

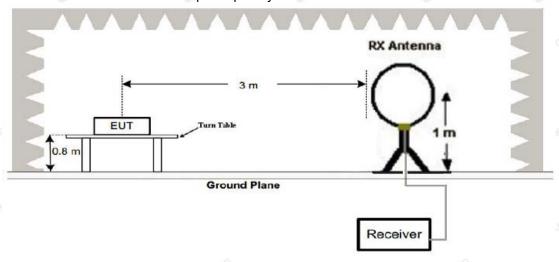
For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

1800.00			
Frequency (MHz)	Distance (Meters)	Radiated (dBµV/m)	Radiated (µV/m)
0.009-0.490	300	20log 2400/F (kHz)	2400/F (kHz)
0.490-1.705	30	20log 24000/F (kHz)	24000/F (kHz)
1.705-30	30	20log 30	30
30-88	3	40	100
88-216	3	43.5	150
216-960	3	46	200
Above 960	HUP 3	54	500

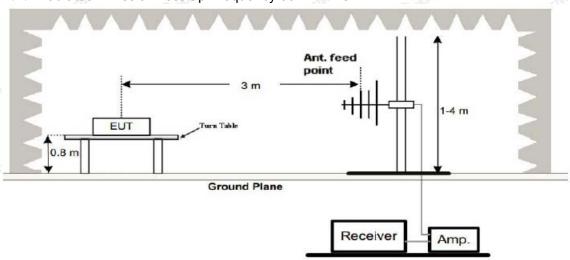
For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

4.2. Test Setup

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



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

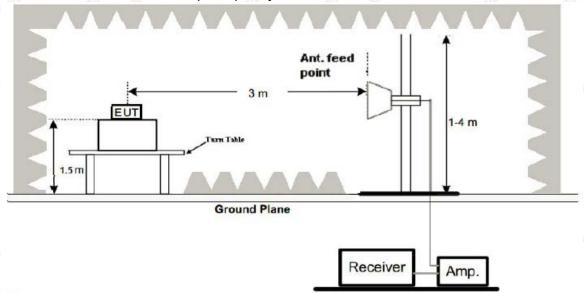


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(3) Radiated Emission Test-Up Frequency Above 1GHz



4.3. Test Procedure

- 1. Below 1GHz measurement the EUT is placed on turntable which is 0.8m above ground plane. And above 1GHz measurement EUT was placed on low permittivity and low tangent turn table which is 1.5m above ground plane.
- 2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 6. Repeat above procedures until the measurements for all frequencies are complete.
- 7. The test frequency range from 9KHz to 25GHz per FCC PART 15.33(a).

Note:

For battery operated equipment, the equipment tests shall be performed using a new battery.

4.4. Test Result

PASS

All the test modes completed for test. The worst case of Radiated Emission is CH 01; the test data of this mode was reported.



Below 1GHz Test Results:

Antenna polarity: H



S	uspe	cted List								
	5	Freq.	Factor	Reading	Level	Limit	Margin	Height	Angle	Delevite
N	Ю.	[MHz]	[dB]	[dBµV/m]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]	Polarity
	1	60.1001	-15.19	43.67	28.48	40.00	11.52	100	358	Horizontal
	2	99.9099	-15.42	45.09	29.67	43.50	13.83	100	116	Horizontal
	3	173.7037	-17.14	47.16	30.02	43.50	13.48	100	143	Horizontal
	4	210.6006	-14.79	48.02	33.23	43.50	10.27	100	360	Horizontal
	5	306.7267	-12.65	51.56	38.91	46.00	7.09	100	163	Horizontal
	6	521.3113	-7.69	47.93	40.24	46.00	5.76	100	33	Horizontal

Remark: Factor = Cable loss + Antenna factor – Preamplifier; Level = Reading + Factor; Margin = Limit – Level

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Antenna polarity: V



	Suspe	cted List								
	NO	Freq.	Factor	Reading	Level	Limit	Margin	Height	Angle	Dalasita
1	NO.	[MHz]	[dB]	[dBµV/m]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]	Polarity
	1	171.7618	-17.22	55.94	38.72	43.50	4.78	100	8	Vertical
	2	243.6136	-13.69	54.61	40.92	46.00	5.08	100	8	Vertical
	3	325.1752	-11.84	52.33	40.49	46.00	5.51	100	91	Vertical
	4	692.2022	-5.18	43.06	37.88	46.00	8.12	100	174	Vertical
	5	840.7608	-2.56	40.16	37.60	46.00	8.40	100	312	Vertical
	6	939.7998	-1.54	39.80	38.26	46.00	7.74	100	213	Vertical

Remark: Factor = Cable loss + Antenna factor – Preamplifier; Level = Reading + Factor; Margin = Limit – Level

Harmonics and Spurious Emissions

Frequency Range (9 kHz-30MHz)

Frequency (MHz)	Level@3m (dBµV/m)	Limit@3m (dBµV/m)		
ag HUANTES	alg my	KTE - NG		
AN TESTINO WHANTESTIN	HAKTESTING WAKTESTIN	TAK TESTING WHAK TESTING		
<u></u>	<u></u>			

Note: 1. Emission Level=Reading+ Cable loss+ Antenna factor-Amp factor.

2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement.



Above 1 GHz Test Results: CH Low (2408MHz)

Horizontal:

/00	VIOLUE .	HUAK	HUAK.	/D. V	Oak	HUPK
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2408	104.58	-5.84	98.74	114	-15.26	peak
2408	84.23	-5.84	78.39	94	-15.61	AVG
4816	55.96	-3.64	52.32	74	-21.68	peak
4816	42.94	-3.64	39.3	54	-14.7	AVG
7224	51.84	-0.95	50.89	74	-23.11	peak
7224	40.54	-0.95	39.59	54	-14.41	AVG
emark: Fact	or = Antenna Fact	or + Cable L	oss – Pre-amplifier.			

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
2408	105.31	-5.84	99.47	114	-14.53	peak
2408	81.89	-5.84	76.05	94	-17.95	AVG
4816	53.38	-3.64	49.74	74	-24.26	peak
4816	42.91	-3.64	39.27	54	-14.73	AVG
7224	54.14	-0.95	53.19	74	-20.81	peak
7224	41.62	-0.95	40.67	54	-13.33	AVG

STING STING

CH Middle (2442MHz)

Horizontal:

requency	Meter Reading	Factor	Emission Level	Limits	Margin	Detecto
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
2442	108.19	-5.71	102.48	114	-11.52	peak
2442	78.78	-5.71	73.07	94	-20.93	AVG
4884	53.50	-3.51	49.99	74	-24.01	peak
4884	42.77	-3.51	39.26	54	-14.74	AVG
7326	52.77	-0.82	51.95	74	-22.05	peak
7326	42.78	-0.82	41.96	54	-12.04	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detecto
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Type
2442	108.4	-5.71	102.69	114	-11.31	peak
2442	80.9	-5.71	75.19	94	-18.81	AVG
4884	56.53	-3.51	53.02	74	-20.98	peak
4884	45.14	-3.51	41.63	54	-12.37	AVG
7326	53.01	-0.82	52.19	74	-21.81	peak
7326	41.01	-0.82	40.19	54	-13.81	AVG



CH High (2475MHz)

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Datastas
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2475	103.13	-5.65	97.48	114	-16.52	peak
2475	81.74	-5.65	76.09	94	-17.91	AVG
4950	56.35	-3.43	52.92	74	-21.08	peak
4950	45.46	-3.43	42.03	54	-11.97	AVG
7425	52.18	-0.75	51.43	74	-22.57	peak
7425	42.89	-0.75	42.14	54	-11.86	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2475	105.65	-5.65	100	114	-14	peak
2475	82.74	-5.65	77.09	94	-16.91	AVG
4950	57.46	-3.43	54.03	74	-19.97	peak
4950	43.02	-3.43	39.59	54	-14.41	AVG
7425	56.66	-0.75	55.91	74	-18.09	peak
7425	39.54	-0.75	38.79	54	-15.21	AVG

Remark

(1) Measuring frequencies from 1 GHz to the 25 GHz.

Remark: Factor = Antenna Factor + Cable Loss - Pre-amplifier.

- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency; "E" denotes band edge frequency.
- (3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) The emissions are attenuated more than 20dB below the permissible limits are not record in the report.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz. 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. 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.
- (6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.
- (7) All modes of operation were investigated and the worst-case emissions are reported.

AFICATION.



5. BAND EDGE

5.1. Limits

FCC PART 15.249(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

5.2. Test Procedure

The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW to 1MHz and VBM to 3MHz to measure the peak field strength and set RBW to 1MHz and VBW to 10Hz to measure the average radiated field strength.

5.3. Test Result

PASS

Radiated Band Edge Test:

Operation Mode: TX CH Low (2408MHz)

Horizontal (Worst case)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
2310	57.15	-5.81	51.34	74 TESTING	-22.66	peak
2310	TESTAG ON	-5.81	STING / TEST	54	1 STING	AVG
2390	56.92	-5.84	51.08	74	-22.92	peak
2390	1	-5.84	1	54	/	AVG
2400	55.33	-5.84	49.49	74	-24.51	peak
2400	HUAL /	-5.84	1 HUAR	54	1	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
2310	57.42	-5.81	51.61	74	-22.39	peak
2310	HAK TE FING	-5.81	STANG / WANTES	54	AK TESTING	AVG
2390	56.93	-5.84	51.09	74	-22.91	peak
2390	TING 1	-5.84	1 I	54 mm	STING /	AVG
2400	55.35	-5.84	49.51	74	-24.49	peak
2400	/	-5.84	1	54 TESTING	1	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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Operation Mode: TX CH High (2475MHz)

Horizontal (Worst case)

Reading Result	Factor	Emission Level	Limits	Margin	D. I. TEST
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
55.29	-5.65	49.64	74	-24.36	peak
KTESTING /	-5.65	JAK TESTING	54	1	AVG
53.42	-5.65	47.77	74	-26.23	peak
THE DAY	-5.65	, I	54	1	AVG
	(dBµV) 55.29	(dBµV) (dB) 55.29 -5.65 / -5.65 53.42 -5.65	(dBμV) (dB) (dBμV/m) 55.29 -5.65 49.64 / -5.65 / 53.42 -5.65 47.77	(dBμV) (dB) (dBμV/m) (dBμV/m) 55.29 -5.65 49.64 74 / -5.65 / 54 53.42 -5.65 47.77 74	(dBμV) (dB) (dBμV/m) (dBμV/m) (dBμV/m) 55.29 -5.65 49.64 74 -24.36 / -5.65 / 54 / 53.42 -5.65 47.77 74 -26.23

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

v.	1.31	- 47/31	4 33 31	- 17/7		- 177.31	- 43/31
	Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
5	(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
	2483.50	56.39	-5.65	50.74	74	-23.26	peak
3	2483.50	1	-5.65	1	54 NATES	1	AVG
	2500.00	55.41	-5.65	49.76	74	-24.24	peak
	2500.00	1	-5.65	9	54	O **/	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.



6. OCCUPIED BANDWIDTH MEASUREMENT

6.1. Test Setup

Same as Radiated Emission Measurement

6.2. Test Procedure

- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. Set EUT as normal operation.
- 3. Based on ANSI C63.10 section 6.9.2: RBW=51KHz. VBW= 150 KHz, Span=8MHz.
- 4. The useful radiated emission from the EUT was detected by the spectrum analyzer with peak detector.

6.3. Measurement Equipment Used

Same as Radiated Emission Measurement

6.4. Test Result

PASS

Frequency	20dB Bandwidth (MHz)	Result
2408 MHz	4.368	PASS
2442 MHz	4.361	PASS
2475 MHz	4.360	PASS

CH: 2408MHz



CH: 2442MHz



CH: 2475MHz





7. ANTENNA REQUIREMENT

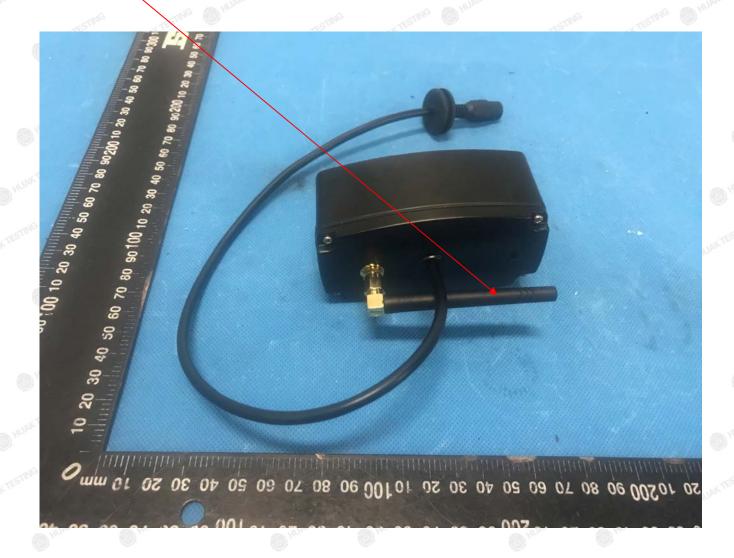
Standard Applicable

For intentional device, according to FCC 47 CFR 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

Antenna Connected Construction

The antenna used in this product is an External Antenna, which have non-standard antenna jack. It conforms to the standard requirements. The directional gains of antenna used for transmitting is 3dBi.

ANTENNA



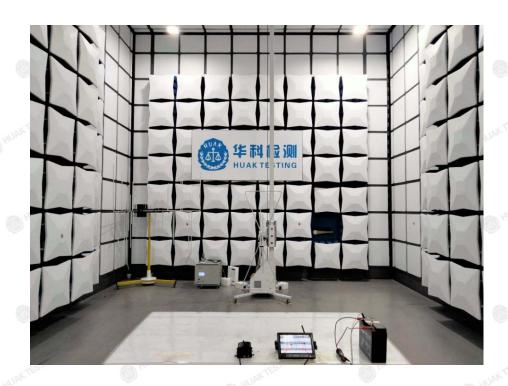
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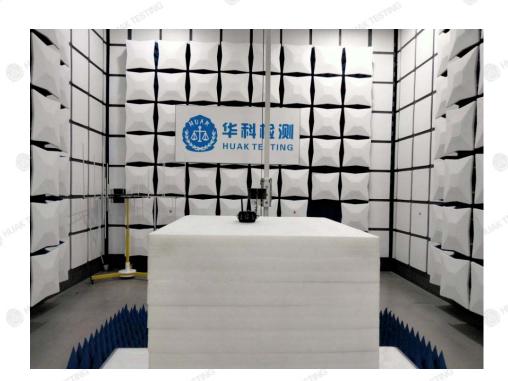
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8. PHOTOGRAPH OF TEST

Radiated Emission





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9. PHOTOS OF THE EUT

Reference to the report: ANNEX A of external photos and ANNEX B of internal photos.

End of test report-