

TEST REPORT

Report No...... : **ATA2512064E**
FCC ID..... : **2BTX2-REXRMINI4CH**
Applicant..... : **Shenzhen Leilaluo Innovation Technology Co., Ltd.**
Address..... : 4th Floor, Building 9, No. 796 Jihua Road, Yousong Community, Longhua Street, Longhua District, Shenzhen, China
Manufacturer..... : **Shenzhen Leilaluo Innovation Technology Co., Ltd.**
Address..... : 4th Floor, Building 9, No. 796 Jihua Road, Yousong Community, Longhua Street, Longhua District, Shenzhen, China
Product Name..... : **Tyrannosaurus remote control**
Trade Mark..... : N/A
Test Model..... : T-rexRC mini4CH
Series Model(s)..... : N/A
Standard..... : **FCC CFR Title 47 Part 15 Subpart C Section 15.249**
Test procedure..... : **IEEE/ANSI C63.10-2020**
Date of Receipt..... : Jan. 26, 2026
Date of Test Date..... : Jan. 26, 2026~Apr. 21, 2026
Date of issue..... : Apr. 21, 2026
Test result..... : **Pass**

Compiled by:

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Testing Laboratory Name..... : **Shenzhen ATA Testing Lab. Inc**

Address..... : 4th Floor, Building 10, No. 60 Nanchang Road, Nanchang Community, Xixiang Street, Bao'an District, Shenzhen City, China

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1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.249: Operation within the bands of regulates intentional radiators operating in the 902–928 MHz, 2.4–2.4835 GHz, 5.725–5.875 GHz, and 24.0–24.25 GHz bands, specifying field strength limits, operational conditions, and antenna requirements.

ANSI C63.10-2020: American National Standard for Testing Unlicensed Wireless Devices.

1.2. Report version

Revised No.	Date of issue	Description
01	Apr. 21, 2026	Original

1.3. Test Description

FCC Part 15 Subpart C(15.249)			
Test Item	Standard Section	Result	Remark
	FCC		
Antenna Requirement	15.203	Pass	
Conducted Emission	15.207	Pass	
Radiated spurious emission	15.249(d)	Pass	
20dB and 99% Bandwidth	15.215	Pass	

Note:(1) "N/A" denotes test is not applicable to this device.

1.4. Test Facility

Test Site	Shenzhen ATA Testing Lab. Inc
Test Site Location	4th Floor, Building 10, No. 60 Nanchang Road, Nanchang Community, Xixiang Street, Bao'an District, Shenzhen City, China
Telephone:	+86 0755-2783-0095
Fax:	+86 0755-2783-0095

The test facility is recognized, certified, or accredited by the following organizations:	A2LA Accreditation Lab Certificate Number: 839205
	FCC Accredited Lab Designation Number: CN1455

1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the Shenzhen ATA Testing Lab. Inc. system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device. Below is the best measurement capability for Shenzhen ATA Testing Lab. Inc.

Test Items	Measurement Uncertainty	U(k=2)
Radiated Emissions 9K-30MHz	± 2.70 dB	1.96
Radiated Emissions 30~1000MHz	± 5.432 dB	1.96
Radiated Emissions 1~18GHz	± 3.88 dB	1.96
Radiated Emissions 18~40GHz	± 5.32 dB	1.96
Conducted Emissions 9kHz~150KHz	± 3.90 dB	1.96
Conducted Emissions 150Hz~30MHz	± 3.52 dB	1.96
Conducted spurious emissions	± 1.60 dB	1.96
Occupied Bandwidth	$\pm 0.463\%$	1.96
Humidity uncertainty	$\pm 2.0\%$ RH	1.96
Temperature uncertainty	$\pm 0.6^{\circ}\text{C}$	1.96
Barometric pressure uncertainty	0.5hPa	1.96

Note (1): This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=1.96$.

1.6. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

2. GENERAL INFORMATION

2.1. General Description of EUT

Product Name:	Tyrannosaurus remote control
Trade Mark:	N/A
Test Model:	T-rexRC mini4CH
Series Model(s):	N/A
Model Difference:	N/A
Power Source:	Input Voltage: DC 5V from USB Port AC 120V/60Hz1A
Adpater	Input:110-240V 50/60Hz 1A Output:5.0V 1.0A
Battery	DC 4*1.5V=DC 6V
Hardware version:	V1.0
Software version:	V1.0
2.4G	
Modulation type:	GFSK
Operation frequency:	2402MHz~2480MHz
Channel number:	40
Bit Rate of transmitter:	1 Mbps
Antenna type:	Internal Dipole Antenna
Antenna gain:	1.15dBi
Note:(1)All antenna information is provided by the manufacturer, test laboratory will not be responsible if any error. (2) The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity. (3) "N/A" Indicates inapplicability	

2.2. DESCRIPTION OF THE TEST MODES

Operation Frequency List: The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing. 2.4G, 40 channels are provided to the EUT. Channels 00/19/39 were selected for testing.

Operation Frequency List:

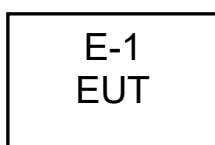
Channel	Frequency (MHz)
00	2402
01	2404
⋮	⋮
19	2440
20	2442
21	2444
⋮	⋮
38	2478
39	2480

Following channel(s) was (were) selected for the test as listed below.

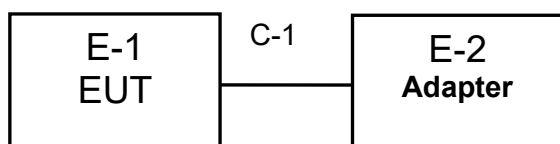
TESTED CHANNEL	TESTED FREQUENCY
Low	2402
Middle	2440
High	2480

2.3. BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

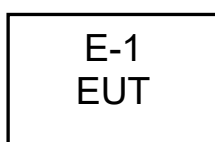
Radiated Spurious Emission Test



AC Conducted Emission Test



RF Conducted Test



2.4. DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Mode/Type	Note
E-2	Adapter	ShenzhenBeiShi DaElectronics Co.,Ltd	K01	N/A

Item	Equipment	Mfr/Brand	Length	Note
C-1	line	N/A	1m	Test use

Note : (1) For detachable type VO cables should be specified the length in cm in Length column.

(2) "YES" is means "with core"; "NO" is means "without core".

2.5. Measurement Instruments List

Radiation emission							
Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	ATA-E-001	966 chamber	CRT	9*6*6M	CRTNDCR966	2025-03-21	2028-03-20
2	ATA-E-011	AC Power Source	XINOUEHUA	APW-1300N	202504292663	2025-05-08	2026-05-07
3	ATA-E-013	DC Power Source	XINOUEHUA	ADC250-32D	202504292667	2025-05-08	2026-05-07
4	ATA-E-033	Receiver	R&S	ESPI7	100092	2025-05-08	2026-05-07
5	ATA-E-034	Broadband antenna	Schwarzbeck	VULB9168	01839	2025-07-17	2026-07-17
6	ATA-E-035	High Frequency Horn Antenna	Schwarzbeck	BBHA 9120D	03169	2025-07-17	2026-07-17
7	ATA-E-038	Cable	Times	0-18GHz	/	2025-05-08	2026-05-07
9	ATA-E-040	6dB attenuator	Zhengchang Liubo	6dB	/	2025-05-08	2026-05-07
10	ATA-E-039	Cable	Times	0-1GHz	/	2025-05-08	2026-05-07
11	ATA-E-041	Preamplifier	COM MV	DLNA8-1-18G-2705	10241234	2025-05-08	2026-05-07
12	ATA-E-042	Preamplifier	COM MV	DLNA8-0.009-1000-1034	5252881	2025-05-08	2026-05-07
13	ATA-E-044	Filter	MWRFTesT	ZHPF6-C3000-18000-3129	08252098	2025-05-08	2026-05-07
14	ATA-E-045	Filter	MWRFTesT	ZHPF6-C6500-18000-175	08252097	2025-05-08	2026-05-07
15	ATA-E-046	Filter	MWRFTesT	ZBSF6-C2400-2483.5-543	08252096	2025-05-08	2026-05-07
16	ATA-E-047	Filter	MWRFTesT	ZBSF6-C5100-5900-5713	08252095	2025-05-08	2026-05-07
17	ATA-E-051	Spectrum Analyzer	R&S	FSV40-N	101779	2025-07-29	2026-07-28
18	ATA-E-052	Cable	HELPLIGHT	2.92J/2.92J 10M	/	2026-01-19	2027-01-18
19	ATA-E-054	Cable	HELPLIGHT	2.92J/2.92J 0.8M	/	2026-01-19	2027-01-18
20	ATA-E-059	Antenna Tower	CRT	AT-1	/	/	/
21	ATA-E-005	Temperature and humidity meter	deli	LE502-WH	/	2025-05-08	2026-05-07
22	ATA-E-064	Barometer	Qingping	CGP23W	/	2026-01-28	2027-01-27
23	ATA-E-048	Loop Antenna	ZHINA	ZN30900C	21104CCUT SE019	2025-05-08	2026-05-07
24	ATA-E-049	Horn Antenna	ECHO MICrowave.,Ltd.	OBH100400	12221225	2025-05-08	2026-05-07
25	ATA-E-051	Spectrum Analyzer	R&S	FSV40-N	101779	2025-05-08	2026-05-07

Conduction emission							
Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	ATA-E-032	EMI TEST RECEIVER	Schwarzbeck	ESCI3	1009300	2025-05-08	2026-05-08
2	ATA-E-037	Pulse Limiter	Schwarzbeck	VTSD 9561 F-N	/	2025-05-08	2026-05-08
3	ATA-E-069	Conductive test cable	Schwarzbeck	2.5m	N/A	2026-01-28	2027-01-27
4	ATA-E-036	Artificial Mains Network	Schwarzbeck	NSLK 8127	01169	2025-05-08	2026-05-08
5	ATA-E-072	Three-Line V-Network	ZHINAN	2N33770A	13003	2026-01-26	2026-01-27
6	ATA-E-009	Temperature and humidity meter	deli	LE502-WH	/	2025-05-08	2026-05-08
7	ATA-E-010	Barometer	Qingping	CGP23W	/	2025-05-08	2026-05-08

RF Conducted Test							
Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
	ATA-E-029	Spectrum Analyzer	Keysight	N9020A	MY50530404	2025-05-08	2026-05-07
1	ATA-E-030	MXG AnaioG Signal Generator	Agilent	N5181A	MY47420598	2025-05-08	2026-05-07
2	ATA-E-031	WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW500	161163	2025-05-08	2026-05-07
3	ATA-E-043	Radio Control Unit	MWRFTest	MW100-RFCB	MW250428A TA-55	2025-05-08	2026-05-07

Note:

1)The Cal. Interval was one year.

2)The cable loss has calculated in test result which connection between each test instruments.

2.5. Test Software

Software name	Model	Version
Conducted emission Measurement Software	EZ-EMC	FARAD-3A1.1+
Radiated emission Measurement Software	EZ-EMC	FARAD-3A1.1+
Bluetooth and WIFI Test System	MWRF8310	2.0.0.0

3. TEST ITEM AND RESULTS

3.1. Antenna requirement

Requirement

FCC CFR Title 47 Part 15 Subpart C 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Antenna Information

The maximum gain of antenna was 1.15dBi.

Note: The antenna gain is provided by the customer , if the data provided by the customer is not accurate, **Shenzhen ATA Testing Lab. Inc** does not assume any responsibility.

3.2. Conducted Emission

Limit

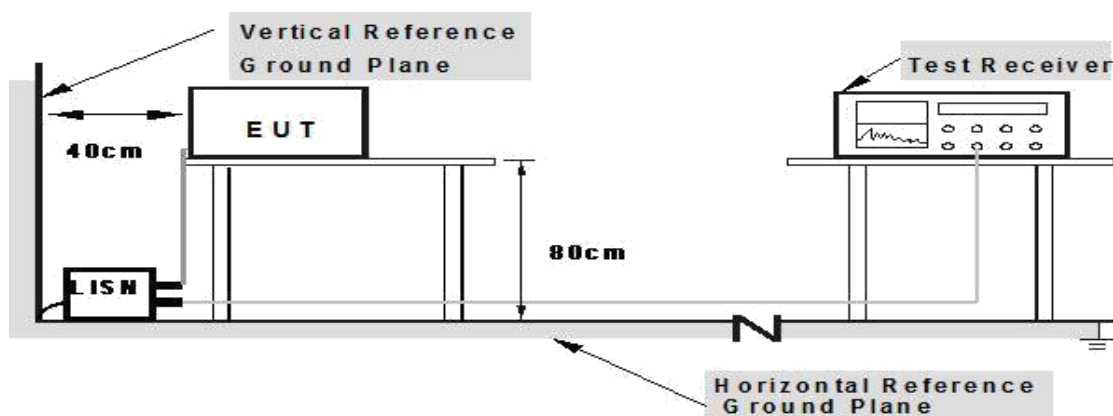
Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Notes:

- (1) *Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

Test Configuration



Test Procedure

1. The EUT was setup according to ANSI C63.10:2020 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 0.8m above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 0.8m from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
7. During the above scans, the emissions were maximized by cable manipulation.

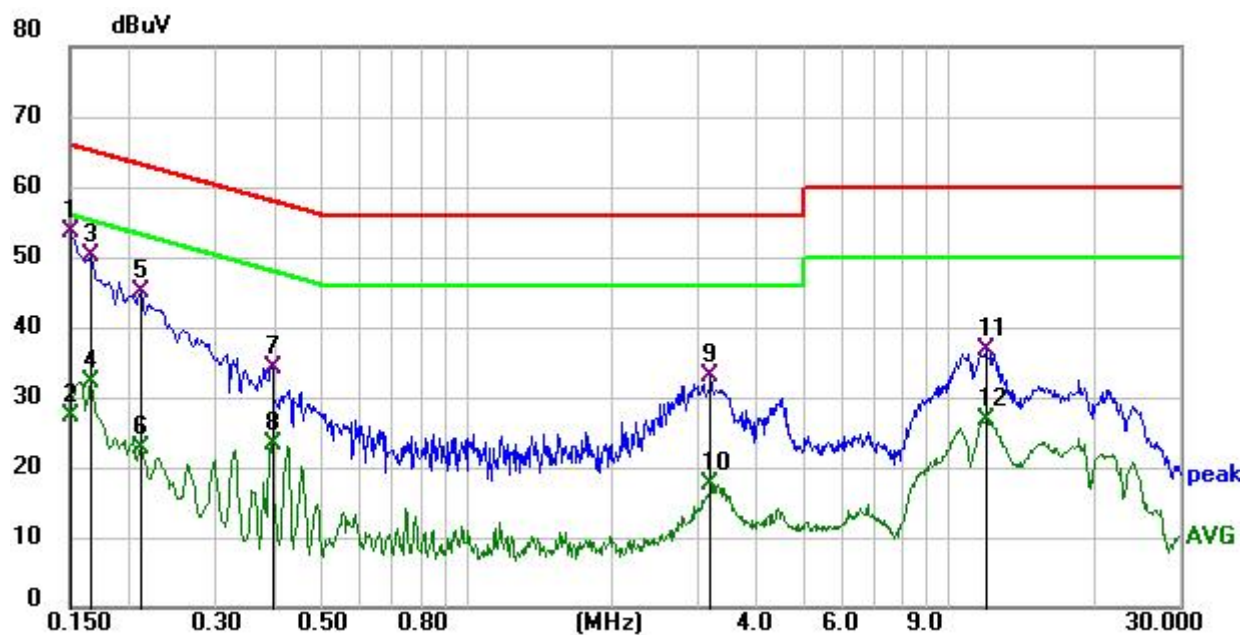
Test Mode:

N/A

Test Results

Pre-scan CH00, CH19 and CH39 channel, and found CH00 channel which it is worse case, so only show the test data for worse case.

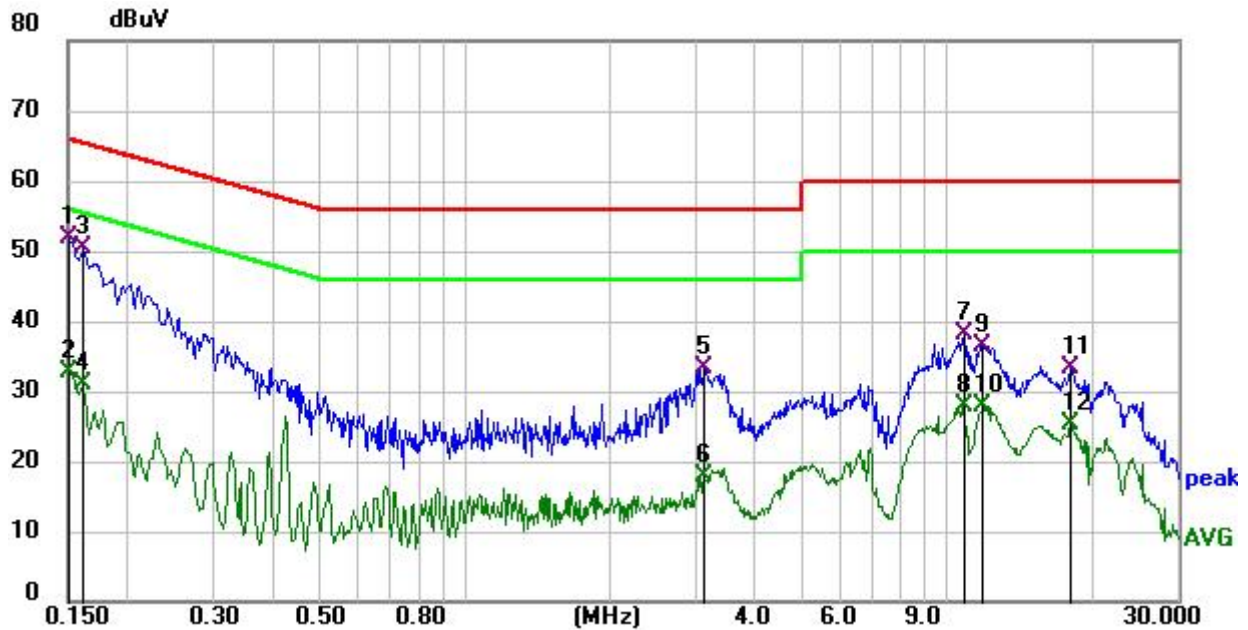
EUT:	Tyrannosaurus remote control	Model Name:	T-rexRC mini4CH
Pressure:	1010 hPa	Phase:	L
Temperature	24.8°C	Humidity	52.1%
Test Mode:	Charging+TX	Test Voltage:	DC 5V from USB Port AC 120V/60Hz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	43.42	10.11	53.53	66.00	-12.47	QP
2	0.1500	17.24	10.11	27.35	56.00	-28.65	AVG
3	0.1660	40.06	10.11	50.17	65.16	-14.99	QP
4	0.1660	22.09	10.11	32.20	55.16	-22.96	AVG
5*	0.2100	34.82	10.10	44.92	63.21	-18.29	QP
6	0.2100	12.50	10.10	22.60	53.21	-30.61	AVG
7	0.3940	24.10	10.12	34.22	57.98	-23.76	QP
8	0.3940	13.05	10.12	23.17	47.98	-24.81	AVG
9	3.2020	22.90	10.21	33.11	56.00	-22.89	QP
10	3.2020	7.42	10.21	17.63	46.00	-28.37	AVG
11	11.8700	26.41	10.28	36.69	60.00	-23.31	QP
12	11.8700	16.37	10.28	26.65	50.00	-23.35	AVG

Remark: 1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result = Reading + Factor) - Limit
3. Factor = LISN factor + Cable loss + Limiter (10dB)

EUT:	Tyrannosaurus remote control	Model Name:	T-rexRC mini4CH
Pressure:	1010 hPa	Phase:	N
Temperature:	24.8°C	Humidity:	52.1%
Test Mode:	Charging+TX	Test Voltage:	DC 5V from USB Port AC 120V/60Hz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	41.88	10.11	51.99	66.00	-14.01	QP
2	0.1500	22.71	10.11	32.82	56.00	-23.18	AVG
3	0.1620	40.21	10.11	50.32	65.36	-15.04	QP
4	0.1620	20.97	10.11	31.08	55.36	-24.28	AVG
5*	3.1540	23.04	10.21	33.25	56.00	-22.75	QP
6	3.1540	7.67	10.21	17.88	46.00	-28.12	AVG
7	10.8500	27.90	10.25	38.15	60.00	-21.85	QP
8	10.8500	17.49	10.25	27.74	50.00	-22.26	AVG
9	11.8220	26.26	10.28	36.54	60.00	-23.46	QP
10	11.8220	17.58	10.28	27.86	50.00	-22.14	AVG
11	18.1259	23.02	10.35	33.37	60.00	-26.63	QP
12	18.1259	14.86	10.35	25.21	50.00	-24.79	AVG

Remark: 1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result = Reading + Factor) - Limit
3. Factor = LISN factor + Cable loss + Limiter (10dB)

3.3. Band Edge Emissions(Radiated)

Limit

Add: 4th Floor, Building 10, No. 60 Nanchang Road, Nanchang Community, Xixiang Street, Bao'an District, Shenzhen City, Guangdong, People's Republic of China

Tel: +86 0755-82828582

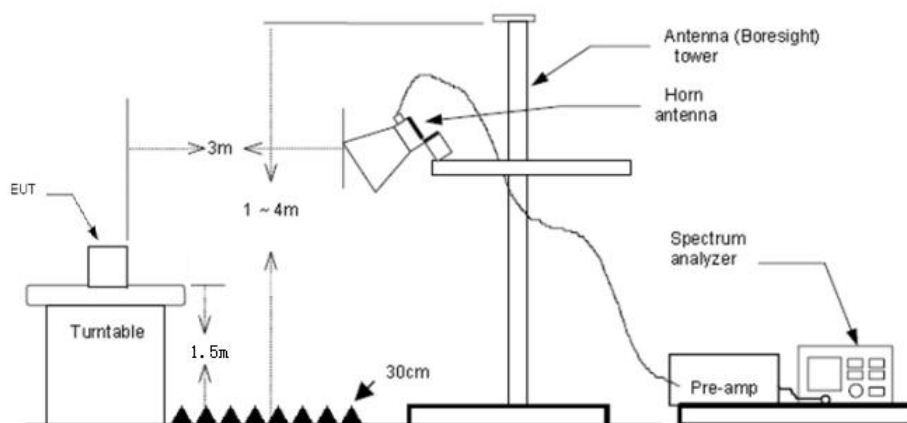
Mobile phone: +86 13728818899

E-mail: ata@certata.com

Web: www.certata.com

Restricted Frequency Band (MHz)	(dBuV/m)(at 3m)	
	Peak	Average
2310 ~2390	74	54
2483.5 ~2500	74	54
Note: All restriction bands have been tested, only the worst case is reported.		

Test Configuration



Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2020 requirements.
2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2020 on radiated measurement.
5. The receiver set as follow:
 RBW=1MHz, VBW=3MHz PEAK detector for Peak value.
 RBW=1MHz, VBW=10Hz with PEAK Detector for Average Value.

Test Mode

Please refer to the clause 2.3.

Test Results

Note:

Measurement = Reading level + Correct Factor

Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor

Band edge-radiated

EUT:	Tyrannosaurus remote control	Model Name:	T-rexRC mini4CH
Pressure:	1010 hPa	Phase:	L
Temperature	24.8℃	Humidity	52.1%
Test Mode:	TX	Test Voltage:	DC 6V

Frequency (MHz)	Meter Reading (dBμV)	Cable Loss (dB)	Antenna Factor dB/m	Preamplifier Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detection Type	Comment
GFSK									
2310.00	61.84	2.40	27.70	40.40	51.54	74	-22.46	Pk	Horizontal
2310.00	42.08	2.40	27.70	40.40	31.78	54	-22.22	AV	Horizontal
2310.00	61.83	2.40	27.70	40.40	51.53	74	-22.47	Pk	Vertical
2310.00	40.67	2.40	27.70	40.40	30.37	54	-23.63	AV	Vertical
2390.00	64.05	2.44	28.30	40.10	54.69	74	-19.31	Pk	Vertical
2390.00	42.08	2.44	28.30	40.10	32.72	54	-21.28	AV	Vertical
2390.00	62.89	2.44	28.30	40.10	53.53	74	-20.47	Pk	Horizontal
2390.00	42.21	2.44	28.30	40.10	32.85	54	-21.15	AV	Horizontal
2483.50	61.77	2.48	28.70	39.80	53.15	74	-20.85	Pk	Vertical
2483.50	43.33	2.48	28.70	39.80	34.71	54	-19.29	AV	Vertical
2483.50	64.45	2.48	28.70	39.80	55.83	74	-18.17	Pk	Horizontal
2483.50	42.44	2.48	28.70	39.80	33.82	54	-20.18	AV	Horizontal
2500.00	44.58	3.49	29.20	32.66	44.61	74	-29.39	Pk	Vertical
2500.00	33.13	3.49	29.20	32.66	33.16	54	-20.84	AV	Vertical
2500.00	44.74	3.49	29.20	32.66	44.77	74	-29.23	Pk	Horizontal
2500.00	33.06	3.49	29.20	32.66	33.09	54	-20.91	AV	Horizontal

Field strength of fundamental

EUT:	Tyrannosaurus remote control	Model Name:	T-rexRC mini4CH
Pressure:	1010 hPa	Phase:	L
Temperature	24.8℃	Humidity	52.1%
Test Mode:	TX	Test Voltage:	DC 6V

Frequency	Ant. Polarization	Emission level	Limits	Detector	Result
(MHz)	H / V	dBμV/m	dBμV/m		
2402	H	94.13	114	PK	PASS
2402	H	78.22	94	AV	PASS
2402	V	72.99	114	PK	PASS
2402	V	62.02	94	AV	PASS

Frequency	Ant. Polarization	Emission level	Limits	Detector	Result
(MHz)	H / V	dBμV/m	dBμV/m		
2440	H	93.15	114	PK	PASS
2440	H	78.16	94	AV	PASS
2440	V	75.03	114	PK	PASS
2440	V	62.27	94	AV	PASS

Frequency	Ant. Polarization	Emission level	Limits	Detector	Result
(MHz)	H / V	dBμV/m	dBμV/m		
2480	H	93.76	114	PK	PASS
2480	H	78.22	94	AV	PASS
2480	V	78.43	114	PK	PASS
2480	V	66.12	94	AV	PASS

3.4. Spurious Emission (Radiated)

Limit

Radiated Emission Limits (9 kHz~1000 MHz)

Frequency (MHz)	Field Strength (microvolt/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

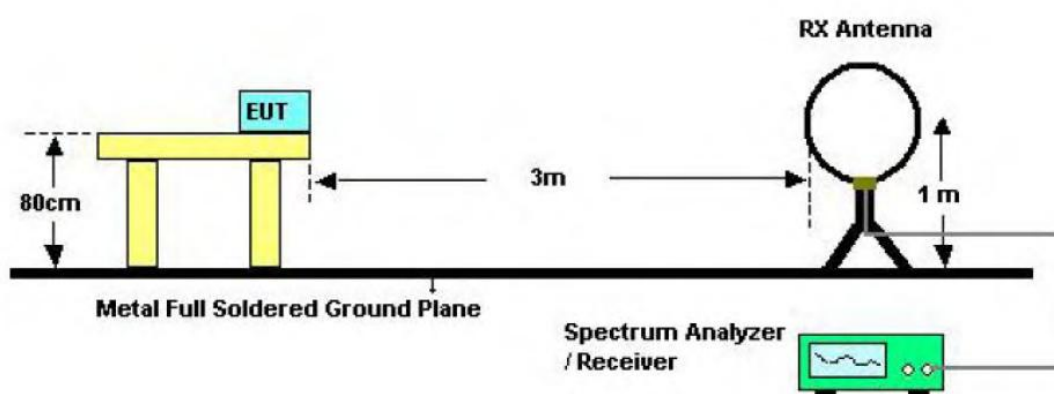
Radiated Emission Limit (Above 1000MHz)

Frequency (MHz)	Distance Meters(at 3m)	
	Peak	Average
Above 1000	74	54

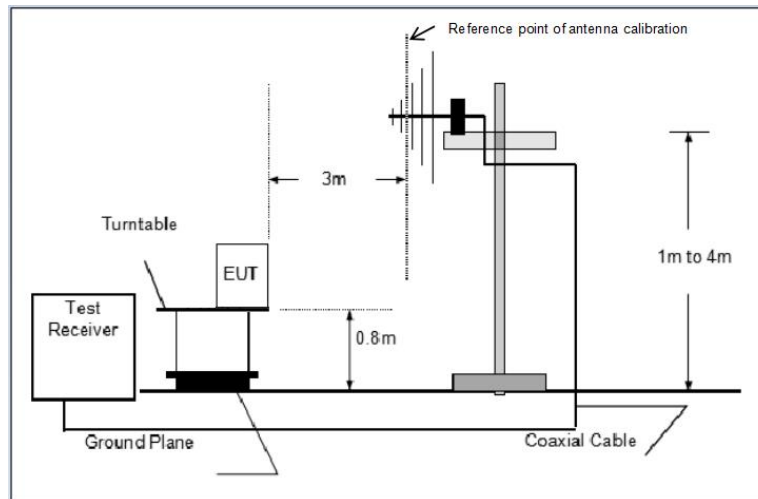
Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission Level (dBuV/m)=20log Emission Level (uV/m).

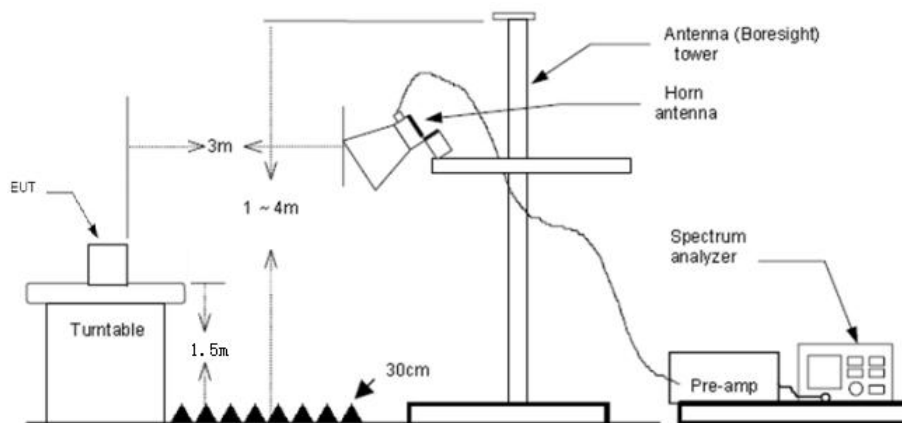
Test Configuration



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2020
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Below 1 GHz:
RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;
If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
 - (3) From 1 GHz to 10th harmonic:
RBW=1MHz, VBW=3MHz Peak detector for Peak value.
RBW=1MHz, VBW=10Hz RMS detector for Average value.

Test Mode

Please refer to the clause 2.2.

Test Result**9 KHz~30 MHz and 18GHz~25GHz**

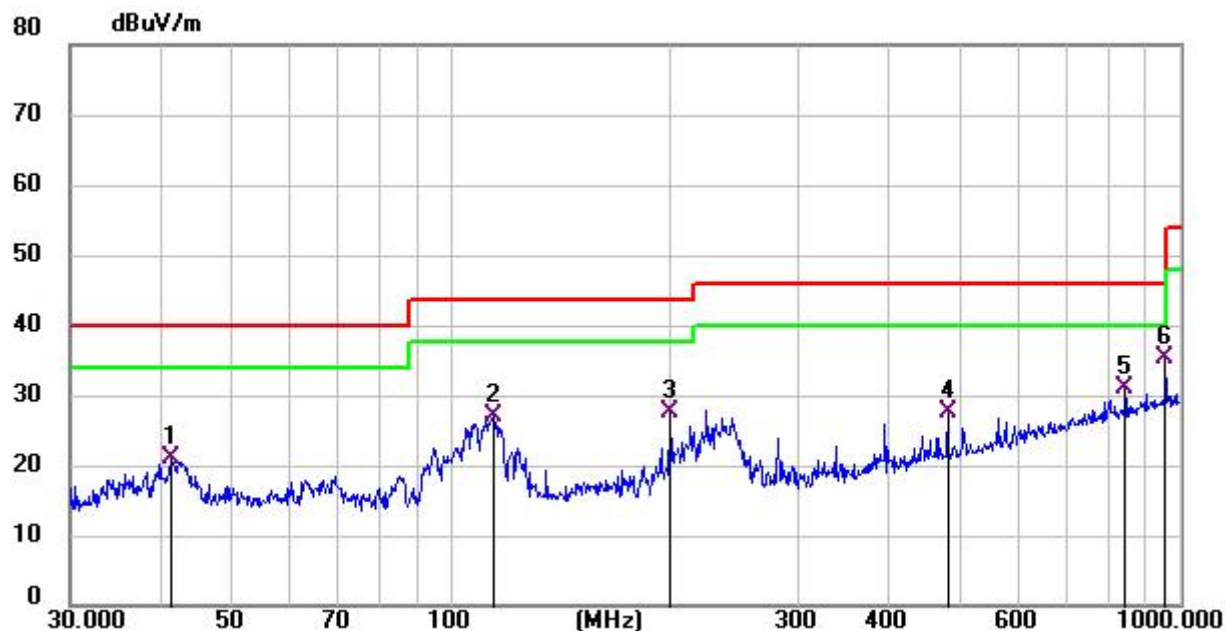
From 9 KHz~30 MHz and 18GHz~25GHz: Conclusion: PASS

Note:

- 1) Measurement = Reading level + Correct Factor
Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor
- 2) The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
- 3) The emission levels of other frequencies are very lower than the limit and not show in test report.
- 4) The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
- 5) Pre-scan CH00, CH19 and CH39 modulation, and found the CH39 which it is worse case for 30MHz-1GHz , so only show the test data for worse case.

Results of Radiated Emissions (30MHz~ 1000MHz)

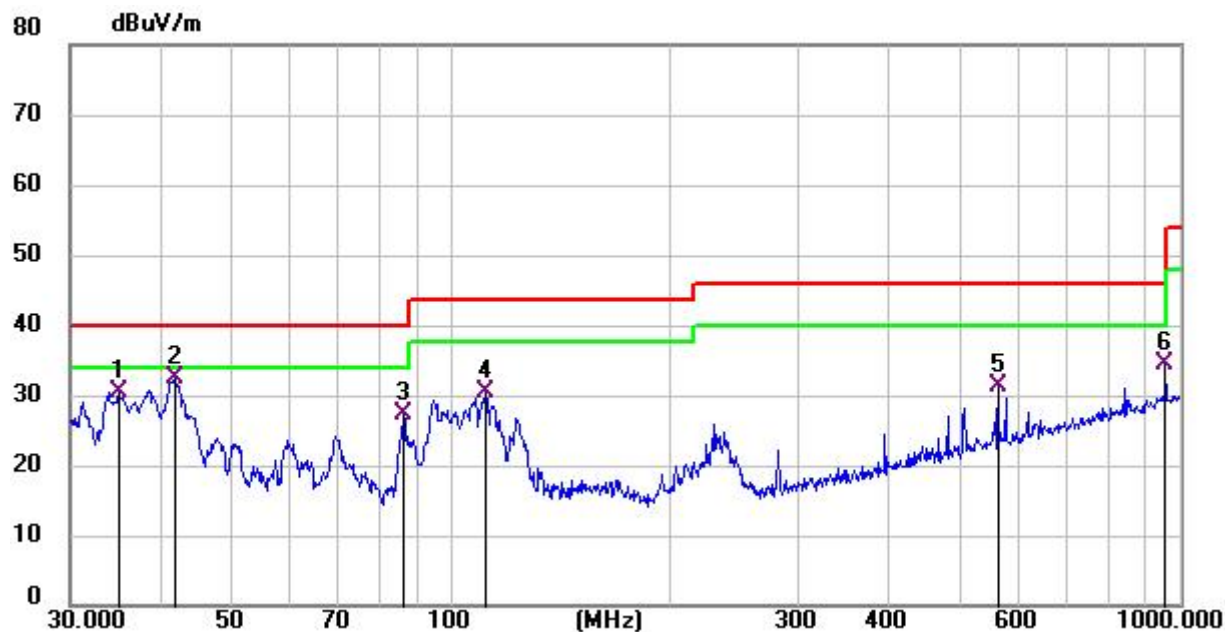
EUT:	Tyrannosaurus remote control	Model Name:	T-rexRC mini4CH
Pressure:	1010 hPa	Phase:	Horizontal
Temperature	24.8℃	Humidity	52.1%
Test Mode:	TX	Test Voltage:	DC 6V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	41.4215	33.53	-12.66	20.87	40.00	-19.13	QP
2	114.1137	41.36	-14.23	27.13	43.50	-16.37	QP
3	199.9855	42.99	-15.34	27.65	43.50	-15.85	QP
4	480.5276	34.96	-7.32	27.64	46.00	-18.36	QP
5	842.1296	31.91	-0.84	31.07	46.00	-14.93	QP
6*	955.4381	34.49	0.68	35.17	46.00	-10.83	QP

Emission Level= Read Level+ Correct Factor

EUT:	Tyrannosaurus remote control	Model Name:	T-rexRC mini4CH
Pressure:	1010 hPa	Phase:	Horizontal
Temperature	24.8°C	Humidity	52.1%
Test Mode:	TX	Test Voltage:	DC 6V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	35.0048	43.72	-13.28	30.44	40.00	-9.56	QP
2	41.7129	45.04	-12.69	32.35	40.00	-7.65	QP
3	86.2000	43.97	-16.80	27.17	40.00	-12.83	QP
4	111.7380	45.10	-14.57	30.53	43.50	-12.97	QP
5	562.6623	36.84	-5.45	31.39	46.00	-14.61	QP
6*	955.4381	33.74	0.68	34.42	46.00	-11.58	QP

Emission Level= Read Level+ Correct Factor

Results of Radiated Emissions (Above 1GHz)

Frequency (MHz)	Reading Level (dBμV)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
Low Channel (2402 MHz)(GFSK)--Above 1G									
4804.319	60.66	4.36	32.92	45.53	52.41	74.00	-21.59	Pk	Vertical
4804.319	39.27	4.36	32.92	45.53	31.02	54.00	-22.98	AV	Vertical
7206.247	59.42	5.02	37.63	45.56	56.51	74.00	-17.49	Pk	Horizontal
7206.247	38.51	5.02	37.63	45.56	35.6	54.00	-18.40	AV	Horizontal
4804.166	60.31	4.36	32.92	45.53	52.06	74.00	-21.94	Pk	Vertical
4804.166	40.49	4.36	32.92	45.53	32.24	54.00	-21.76	AV	Vertical
7206.328	60.09	5.02	37.63	45.56	57.18	74.00	-16.82	Pk	Horizontal
7206.328	39.03	5.02	37.63	45.56	36.12	54.00	-17.88	AV	Horizontal
Mid Channel (2440 MHz)(GFSK)--Above 1G									
4880.416	61.23	4.41	33.01	45.76	52.89	74.00	-21.11	Pk	Vertical
4880.416	41.08	4.41	33.01	45.76	32.74	54.00	-21.26	AV	Vertical
7320.251	62.16	5.02	37.68	45.59	59.27	74.00	-14.73	Pk	Horizontal
7320.251	38.81	5.02	37.68	45.59	35.92	54.00	-18.08	AV	Horizontal
4880.322	60.75	4.41	33.01	45.76	52.41	74.00	-21.59	Pk	Vertical
4880.322	38.55	4.41	33.01	45.76	30.21	54.00	-23.79	AV	Vertical
7320.213	59.09	5.02	37.68	45.59	56.20	74.00	-17.8	Pk	Horizontal
7320.213	42.23	5.02	37.68	45.59	39.34	54.00	-14.66	AV	Horizontal
High Channel (2480 MHz)(GFSK)-- Above 1G									
4960.424	61.86	4.50	33.26	46.07	53.55	74.00	-20.45	Pk	Vertical
4960.424	40.13	4.50	33.26	46.07	31.82	54.00	-22.18	AV	Vertical
7440.169	62.87	5.02	37.78	45.77	59.9	74.00	-14.1	Pk	Horizontal
7440.169	46.37	5.02	37.78	45.77	43.4	54.00	-10.60	AV	Horizontal
4960.531	61.11	4.50	33.26	46.07	52.8	74.00	-21.20	Pk	Vertical
4960.531	43.50	4.50	33.26	46.07	35.19	54.00	-18.81	AV	Vertical
7440.219	63.61	5.02	37.78	45.77	60.64	74.00	-13.36	Pk	Horizontal
7440.219	43.95	5.02	37.78	45.77	40.98	54.00	-13.02	AV	Horizontal

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. All the modulation modes have been tested, and only the worst results are reflected in the report.

4. 20dB and 99% Bandwidth

Limit

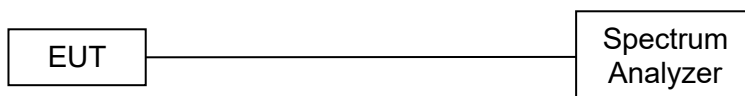
FCC §15.215(c)

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

Test Procedure

1. Use the following spectrum analyzer settings:
2. For 20 dB bandwidth
3. Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel
4. RBW $\geq 1\%$ of the 20 dB bandwidth
5. VBW $\geq$ RBW
6. Sweep = auto
7. Detector function = peak
8. Trace = max hold
9. The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth and 99% occupied bandwidth of the emission

Test Setup



Test Results:

See APPENDIX (RF TEST RESULTS) for details.

5. APPENDIX (RF TEST RESULTS)

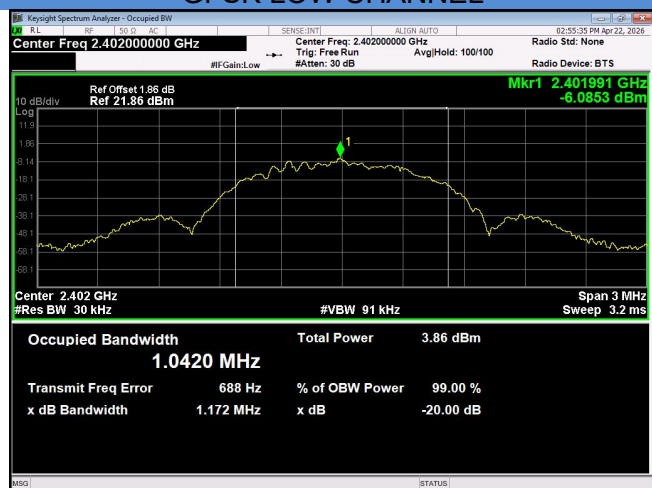
5.1. 20dB and 99% Bandwidth

EUT:	Tyrannosaurus remote control	Model Name:	T-rexRC mini4CH
Pressure:	1010 hPa	Phase:	L
Temperature	24.8°C	Humidity	52.1%
Test Mode:	TX	Test Voltage:	DC 6V

Channel	20dB Bandwidth (KHz)
Low	1.172
Middle	1.185
High	1.179

Test Graphs:

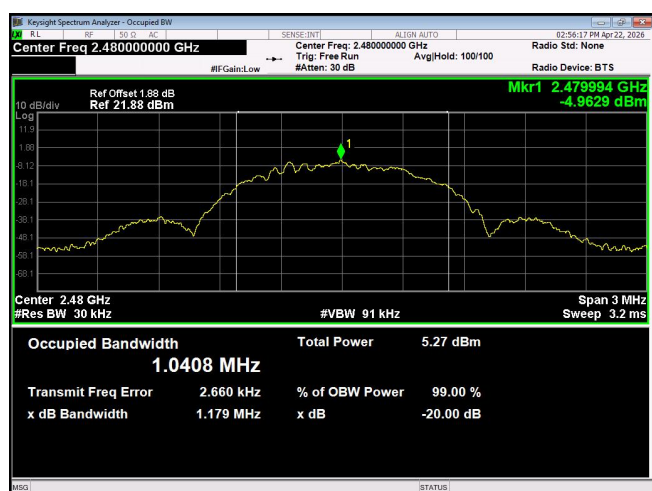
GFSK LOW CHANNEL



GFSK MIDDLE CHANNEL



GFSK HIGH CHANNEL



6. EUT TEST PHOTOS

Note: Refer to the attached test photos

7. PHOTOGRAPHS OF EUT CONSTRUCTIONAL

Note: Refer to the attached exterior and interior photos

*****THE END*****