

TEST REPORT

Household appliances, electrical tools & similar apparatus

for

Products Name: Remote control car series

Model No.: 56-2/S-24,H389/S-21,3315A/S-25,3268/S-13,MQ477652
,MQ415499,MQ465485,MQ99158

Report No.: SST2603E180

Issued Date: 2026-3-24

Issued for

MAGGIETOYS GLOBAL (HONG KONG) LIMITED

**1101-1102,BUILDING 1,TIANXIWAN,NO.4,ZHONGSHAN NORTH ROAD,CHENGHAI DISTRICT,SHANTOU
CITY,GUANGDONG PROVINCE,CHINA**

Issued by

Dongguan Qiyang Testing Technology Co., Ltd.

Room 101-1, Building 1, No.19, Tianxin Butterfly 1st Road, Huangjiang, Dongguan, Guangdong, China

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1. Basic Introduction

Applicant's name :	MAGGIETOYS GLOBAL (HONG KONG) LIMITED	
Address	1101-1102,BUILDING 1,TIANXIWAN,NO.4,ZHONGSHAN NORTH ROAD,CHENGHAI DISTRICT,SHANTOU CITY,GUANGDONG PROVINCE,CHINA	
Manufacturer's name	MAGGIETOYS GLOBAL (HONG KONG) LIMITED	
Address	1101-1102,BUILDING 1,TIANXIWAN,NO.4,ZHONGSHAN NORTH ROAD,CHENGHAI DISTRICT,SHANTOU CITY,GUANGDONG PROVINCE,CHINA	
Factory's name	MAGGIETOYS GLOBAL (HONG KONG) LIMITED	
Address	1101-1102,BUILDING 1,TIANXIWAN,NO.4,ZHONGSHAN NORTH ROAD,CHENGHAI DISTRICT,SHANTOU CITY,GUANGDONG PROVINCE,CHINA	
Products Name :	Remote control car series	
Model No. :	56-2/S-24,H389/S-21,3315A/S-25,3268/S-13,MQ477652,MQ415499,MQ465485,MQ99158	
Trade Mark	/	
Rating(s) :	TX : DC 3V, 2*1.5V AA battery RX : DC 4.5V, 3*1.5V AA battery	
Date of sample receipt :	2026/3/12	
Date of Test :	2026/3/12~2026/3/24	
Standard(s)	EN IEC 55014-1:2021 EN IEC 55014-2:2021 EN IEC 61000-3-2:2019+A1:2021+A2:2024 EN 61000-3-3:2013+A1:2019+A2:2021	
Tested by (+signature) :	Connor Ma	
Check by (+signature) :	Davis Zhou	
Approved by (+signature) :	Tiger Chen	



2. General description

2.1. EUT description

Products Name	Remote control car series		
Model No.....	56-2/S-24,H389/S-21,3315A/S-25,3268/S-13,MQ477652,MQ415499,MQ465485,MQ99158		
Rating(s).....	TX : DC 3V, 2*1.5V AA battery RX : DC 4.5V, 3*1.5V AA battery		
Highest internal frequency:	<input checked="" type="checkbox"/>	Fx ≤ 108 MHz	
	<input type="checkbox"/>	108 MHz < Fx ≤ 500 MHz	
	<input type="checkbox"/>	500 MHz < Fx ≤ 1 GHz	
	<input type="checkbox"/>	Fx > 1 GHz	
	<input type="checkbox"/>	Other:	
EUT cable description	Name		Description
	/		<input type="checkbox"/> Shielded <input type="checkbox"/> Unshielded <input type="checkbox"/> Detachable <input type="checkbox"/> Un-detachable <input type="checkbox"/> No applicable <input type="checkbox"/> Length:

2.2. Serial model(s) and model difference

Main model(s)	56-2/S-24
Serial model(s)	H389/S-21,3315A/S-25,3268/S-13,MQ477652,MQ415499,MQ465485,MQ99158
Model difference	All models were in same PCB layout and internal structure, the differences are model name and enclosure colour for commercial purpose

2.3. Auxiliary equipment

Support equipment list			
Description	Manufacturer	Model No.	Serial No.
Support cable list			
Description	Specified length(m)	Shielded	Unshielded
		<input type="checkbox"/>	<input type="checkbox"/>

2.4. Description of test modes

Prescan Operating Mode		
No.	Detailed description of the operating mode	Test voltage
1	Normal Operation	Supply power by internal battery
2		

Final Operating Mode	
Radiated disturbance	Mode 1
Disturbance voltage	/
Voltage changes, voltage fluctuations and flicker	/
Immunity tests	Mode 1
Remark: Above mode(s) as (were) found to be the worst case(s) and selected for the final test.	

2.5. Test environmental conditions

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment.
The climatic conditions during the tests were within the following limits:

Ambient temperature	Relative humidity	Atmospheric pressure
15 °C ~ 35 °C	30 % ~ 60 %	86 kPa ~ 106 kPa

If explicitly required in the basic standard or applied product standard the climatic values are recorded and documented separately in this test report.

2.6. Statement of Measurement Uncertainty

Test Item	Uncertainty
Uncertainty for Mains terminal disturbance voltage	3.31 dB
Uncertainty for Telecommunication terminal disturbance voltage	4.12 dB
Uncertainty for Radiated disturbance (9 kHz to 30 MHz)	3.47 dB
Uncertainty for Radiated disturbance (30 MHz to 1 GHz)	4.53 dB
Uncertainty for Radiated disturbance (1 GHz to 6 GHz)	4.80 dB
Decision rule for statement(s) of conformity is based on measurement uncertainty is not applied when providing statements of conformity in IEC Guide 115:2023, 4.3.3.	

2.7. Report modification record

Report No.	Issue Date	Description
SST2603E180	2026-3-24	Original Report

2.8. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS	Registration No.: L17883
A2LA	Certificate No.:7057.01
Location	Dongguan Qiyang Testing Technology Co., Ltd. Room 101-1, Building 1, No.19, Tianxin Butterfly 1st Road, Huangjiang, Dongguan, Guangdong, China

2.9. Other information

The laboratory responsible for all the information provided in the report, except those information provided by the applicant.

The applicant shall fully responsible for the information they provided.

The report would be invalid without a stamp of test laboratory and the signatures of compiler and approver.

The laboratory has not been responsible for the sampling stage; the test report merely corresponds to the test sample received.

Any objection to the test report shall submitted to the test laboratory within 15 days from the date of receipt of the report.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

3. Verdict summary section

EN IEC 55014-1:2021		
Requirement – Test case	Basic standard	Verdict
Disturbance voltage	CISPR 16-2-1:2014+A1:2017	N/A
Disturbance power	CISPR 16-2-2:2010	N/A
Magnetic field	CISPR 16-2-3:2016+A1:2019	N/A
Radiated disturbances	CISPR 16-2-3:2016+A1:2019	Pass
Discontinuous disturbance (Clicks)	EN IEC 55014-1:2021	N/A
EN IEC 61000-3-2:2019+A1:2021+A2:2024		
Harmonic current emissions	EN 61000-4-7:2002+A1:2009	N/A
EN 61000-3-3:2013+A1:2019+A2:2021		
Voltage changes, voltage fluctuations and flicker	EN 61000-4-15:2011	N/A
EN IEC 55014-2:2021		
Electrostatic discharge immunity	EN 61000-4-2:2009	Pass
Radiated, radio-frequency electromagnetic field immunity	EN IEC 61000-4-3:2020	Pass
Electrical fast transient/burst immunity	EN 61000-4-4:2012	N/A
Surge immunity	EN 61000-4-5:2014+A1:2017	N/A
Immunity to conducted disturbances, induced by radio-frequency fields	EN IEC 61000-4-6:2023	N/A
Voltage dips, short interruptions and voltage variations immunity	EN IEC 61000-4-11:2020	N/A
Supplementary information: --- N/A: Not applicable, dry battery powered devices		

Test case verdicts	
- Test case does not apply to the test object	N/A
- Test object does meet the requirement	P (Pass)
- Test object does not meet the requirement	F (Fail)

4. List of Test Equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal. Due
Disturbance voltage				
EMI Test Receiver	R&S	ESR3	103057	2026/04/16
LISN	R&S	ENV 216	102832	2026/04/16
Voltage Probe	Schwarzbeck	TK 9420	01304	2026/04/16
Current Probe	Teseq	CSP 9160A	81837	2026/04/16
Test Software	Tonscend	TS+	V4.0	/
Radiated disturbance				
Broadband Antenna	Schwarzbeck	VULB 9162	00556	2026/04/18
Horn Antenna	Schwarzbeck	BBHA 9120 D	02783	2026/04/18
EMI Test Receiver	R&S	ESU8	100372	2026/04/16
Amplifier	Schwarzbeck	BBV 9744	00327	2026/04/16
Amplifier	TSTPASS	LNA10180G45	TSAM2303003	2026/04/17
3m Anechoic Chamber	BOST	966	/	2027/01/06
Test Software	Farad	EZ-EMC	3A1.1+	/
Magnetic field				
Loop Antenna	Schwarzbeck	FMZB 1513-60B	1513-60B 044	2026/04/17
EMI Test Receiver	R&S	ESU8	100372	2026/04/16
3m Anechoic Chamber	BOST	966	/	2027/01/06
Test Software	Tonscend	TS+	V5.0	/
Harmonic current emissions & Voltage Fluctuations and Flicker				
Harmonic&Flicker Test System	LI	AC2000A	556570	2026/04/16
Electrostatic discharge immunity (ESD)				
Electrostatic Discharge Generator	M.O	CS230	CS-22001	2026/04/17
Radiated, radio-frequency, electromagnetic field immunity (RS)				
3m Anechoic Chamber	BOST	966	/	2027/01/06
Periodic Antenna	Schwarzbeck	STLP 9129	00240	/
Signal Generator	Agilent	N5181A	MY50141993	2026/04/16
Power Amplifier	MPA	MPA-80-1000-250	MPA2303124	2026/04/16

Power Amplifier	MPA	MPA-1000-6000-10 0	MPA2303150	2026/04/16
Power Meter	Agilent	E4419B	MY50000727	2026/04/16
Power Sensor	keysight	E9300A	MZ42061918	2026/04/16
Power Sensor	keysight	E9300A	MY55050026	2026/04/16
Field Probe	PMM	EP-601	PFC2201-20480	2026/04/17
RF Switch	BOST	RF_SW	/	/
Electrical fast transient/burst immunity (EFT/B)				
EFT generator	M.O	CS4511	N451123005	2026/04/16
Capacitive Coupling Folder	/	/	/	2026/04/16
Surge immunity				
Lightning Surge Generator	M.O	CS5511	N551123006	2026/04/16
Immunity to conducted disturbances, induced by radio-frequency fields (CS)				
RF Conduction Immunity Test Host	M.O	ES-608	230203	2026/04/16
Coupling Decoupling Network	M.O	CDN612M	230202	2026/04/16
Coupling Decoupling Network	M.O	CDN613M	230204	2026/04/16
Coupling Decoupling Network	etest	ES-CDN-T8	6933132501012	2026/02/19
Electromagnetic Injection Clamp	M.O	ES-TS120	230228	2026/04/16
Attenuator	M.O	HA6-100	230209	2026/04/16
Voltage dips, short interruptions and voltage variations immunity (DIPS)				
Voltage Dips Tester	M.O	CS1111	N111123006	2026/04/16

5. Test Conditions and Results (Emission)

5.1. Radiated Emissions

5.1.1. Limits

Limits –OATS or SAC		
Frequency (MHz)	10 m measurement distance	3 m measurement distance
	dB (µV/m)	
30 to 230	30 Quasi-peak	40 Quasi-peak
230 to 1000	37 Quasi-peak	47 Quasi-peak
Limits –OATS or SAC		
Frequency (MHz)	Peak	Average
	dB (µV/m)	
1000 to 3000	70	50
3000 to 6000	74	54

5.1.2. Test method

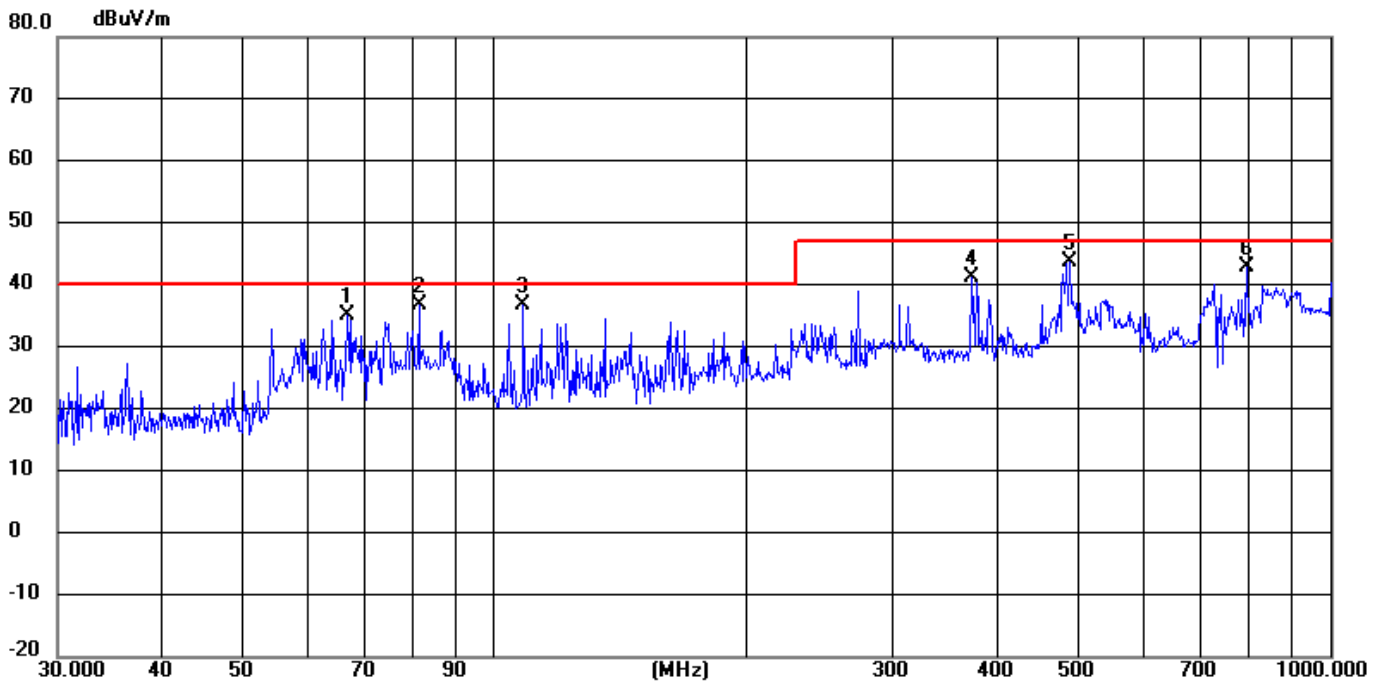
Measurements were made in semi-anechoic chamber or Open Area Test Site that complies to CISPR 16.

Preliminary (peak) measurements. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in horizontal and vertical polarities. Final measurements (quasi-peak detector below 1 GHz and average detector above 1 GHz) were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4 m. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable.

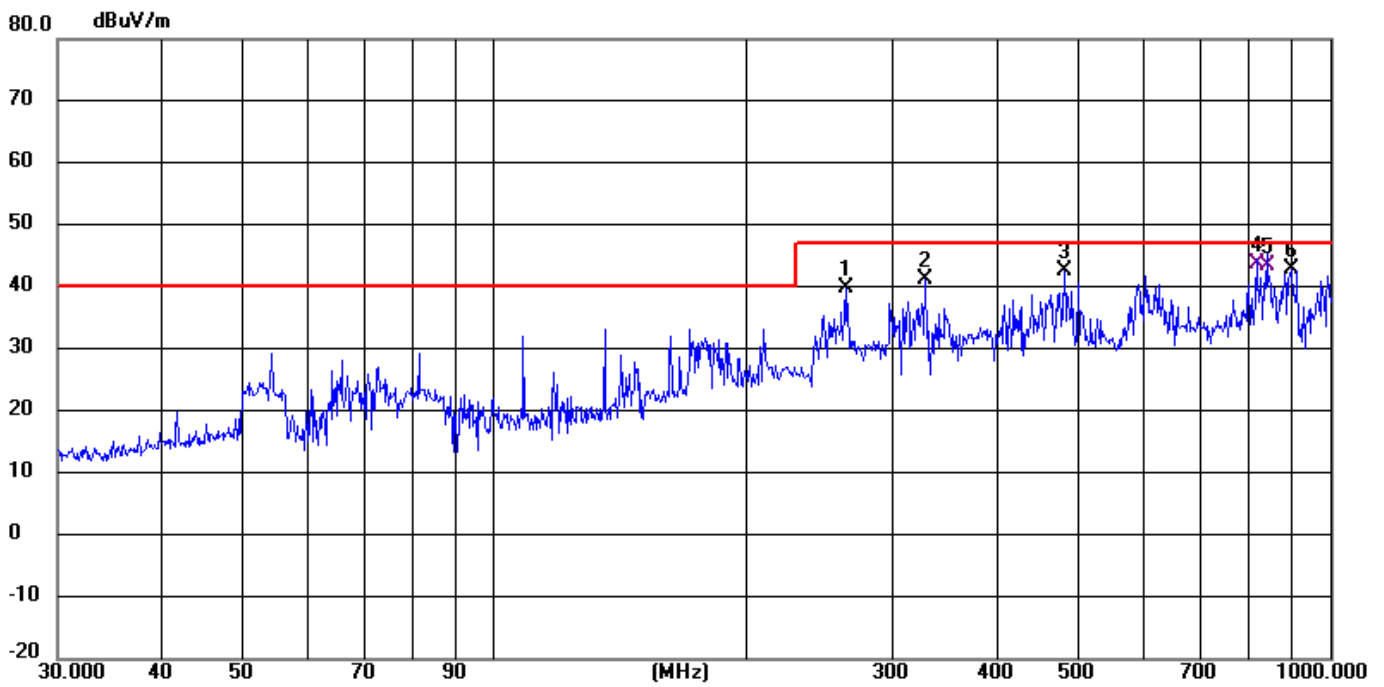
5.1.3. Test information

Ambient temperature:	23.2 °C
Relative humidity:	43 %
Test location:	Room 101-1, Building 1, No.19, Tianxin Butterfly 1st Road, Huangjiang, Dongguan, Guangdong, China
EUT operation mode:	Mode 1
Test results:	Pass
Measurement distance:	<input checked="" type="checkbox"/> 3 m <input type="checkbox"/> 10 m
Remark:	Factor Value = Antenna Factor + Cable Loss - Preamplifier Factor Level Value = Reading Value + Factor Value Margin Value = Level Value - Limit Value

Measurement data and Graphical presentation of the result



No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Measurement(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	66.850	23.10	11.91	35.01	40.00	-4.99	QP	Vertical
2 *	81.319	27.90	9.04	36.94	40.00	-3.06	QP	Vertical
3	108.457	23.67	13.07	36.74	40.00	-3.26	QP	Vertical
4	373.311	24.24	16.90	41.14	47.00	-5.86	QP	Vertical
5	488.384	23.74	19.92	43.66	47.00	-3.34	QP	Vertical
6	795.485	18.54	24.37	42.91	47.00	-4.09	QP	Vertical



No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Measurement(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	263.588	25.35	14.39	39.74	47.00	-7.26	QP	Horizontal
2	328.751	25.21	15.96	41.17	47.00	-5.83	QP	Horizontal
3	482.004	22.76	19.78	42.54	47.00	-4.46	QP	Horizontal
4 *	816.326	18.96	24.70	43.66	47.00	-3.34	QP	Horizontal
5	841.760	18.05	25.36	43.41	47.00	-3.59	QP	Horizontal
6	898.177	17.13	25.70	42.83	47.00	-4.17	QP	Horizontal

6. Test Conditions and Results (Immunity)

6.1. General information

Performance criteria as defined by the standard	
Criterion	Description from standard
A	The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.
B	The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however no change of actual operating state or stored data is allowed to persist after the test. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.
C	Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

6.2. Specific information EN IEC 55014-2

Category of test item acc. EN IEC 55014-2 (7.2)	<input type="checkbox"/>	CAT I (Category I) Equipment containing no electronic control circuitry.
	<input type="checkbox"/>	CAT II (Category II) Mains operated equipment containing electronic control circuitry with no clock frequency higher than 15 MHz.
	<input checked="" type="checkbox"/>	CAT III (Category III) Battery operated equipment not included in Category I.
	<input type="checkbox"/>	CAT IV (Category IV) mains operated equipment containing electronic control circuitry with a highest clock frequency greater than 15 MHz but lower than or equal to 200 MHz.
	<input type="checkbox"/>	CAT V (Category V) Mains operated equipment containing electronic control circuitry with a highest clock frequency greater than 200 MHz.

6.3. Electrostatic discharge immunity

6.3.1. Test specification

Basic standard:	EN 61000-4-2
Applied Level:	Contact discharge: ± 4 kV (Direct & Indirect) Air Discharge: ± 8 kV (Direct)
Storage capacitor:	150 pF
Discharge resistor:	330 Ω
Polarity:	Positive / Negative
Number of discharges:	Min. 10 / 25 per discharge location
Discharge mode:	Single discharge
Discharge interval:	1 second
Performance criteria:	B

6.3.2. Test method

The table-top equipment under test is placed on a wooden table, 0.8 m high, standing on the ground reference plane. A horizontal coupling plane (HCP), 1.6 x 0.8 m, is placed on the table. The EUT and the cables are isolated from the coupling plane by an insulating support 0.5 mm thick. The floor standing equipment is isolated from the ground reference plane by an insulating support about 0.1 m thick. The vertical coupling plane (VCP) of dimensions 0.5 m x 0.5 m is placed parallel to, and positioned at a distance of 0.1 m from the EUT.

6.3.3. Test information

Ambient temperature:	23.9 °C
Relative humidity:	48 %
Atmospheric pressure:	100.9 kPa
Test location:	Room 101-1, Building 1, No.19, Tianxin Butterfly 1st Road, Huangjiang, Dongguan, Guangdong, China
EUT operation mode:	Mode 1
Test results:	Pass
Remark:	---

6.3.4. Test results

Location of discharge	Test Level						Type	Observations
	Positive polarity			Negative polarity				
	2 kV	4 kV	8 kV	2 kV	4 kV	8 kV		
VCP - Four Sides	Pass	Pass	/	Pass	Pass	/	C	Note 1
HCP - Four Sides	Pass	Pass	/	Pass	Pass	/	C	Note 1
Switch /Gap	Pass	Pass	Pass	Pass	Pass	Pass	A	Note 1
HCP = Horizontal coupling plate; VCP = Vertical coupling plate C = Contact discharge; A = Air Discharge								
Observations description								
/ - Not performed or not required.								
Note 1: There was no change compared with initial operation during the test.								
Note 2: During the test, degradation of performance, after the test, but no change of actual operating state or stored data.								
Note 3: The function of EUT is loss during the test, after the test, it can be recovered by itself operation or manually operation.								

6.4. Radiated, radio-frequency electromagnetic field immunity

6.4.1. Test specification

Basic standard:	EN IEC 61000-4-3
Applied Level:	80 MHz to 1 GHz (3 V/m) 1 GHz to 6 GHz (3 V/m)
Modulation:	AM (80 %, 1 kHz, sine wave)
Step size:	1 %
Dwell time:	2 seconds
Polarity of antenna:	Horizontal and Vertical
Antenna height:	1.55 m
Distance antenna to EUT:	3 m
Performance criteria:	A

6.4.2. Test method

Measurements were made in a semi or full anechoic chamber or TEM or reverberation chamber and the indicated field strength was pre-calibrated prior to placement of the system under test. For semi or full anechoic chamber the tests were performed in both the horizontal and vertical polarities, where applicable. The antenna was placed between 1 and 3 meters from the product under test. All sides of the EUT were investigated for anomalies.

6.4.3. Test information

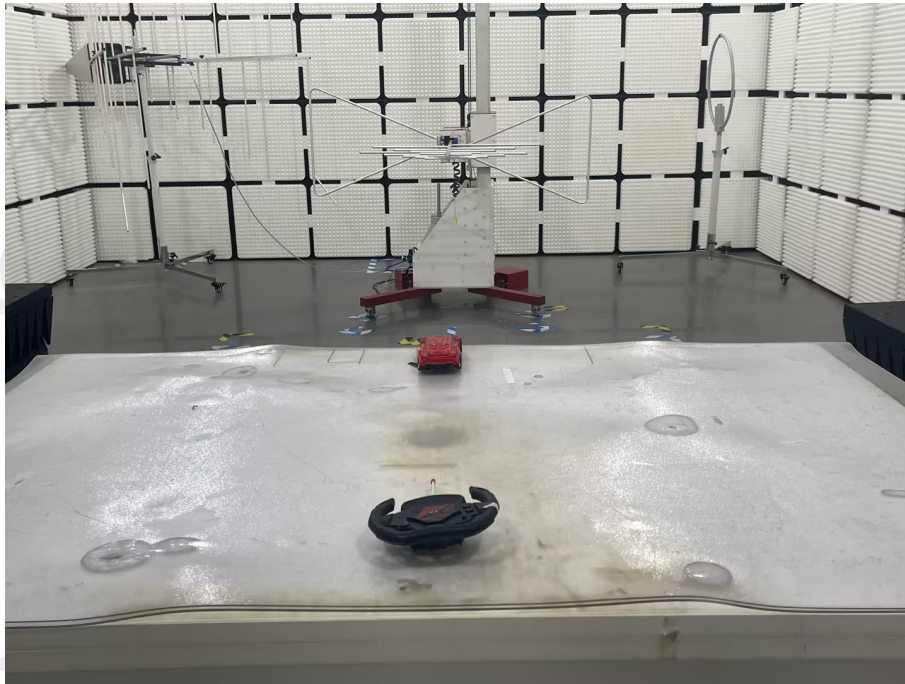
Ambient temperature:	23.2 °C
Relative humidity:	43 %
Test location:	Room 101-1, Building 1, No.19, Tianxin Butterfly 1st Road, Huangjiang, Dongguan, Guangdong, China
EUT operation mode:	Mode 1
Test results:	Pass
Remark:	---

6.4.4. Test results

Frequency	EUT side	Antenna polarity	Field strength	Observations	Results
80 MHz to 1 GHz	Front	Horizontal	3 V/m	Note 1	Pass
	Left Side	Horizontal	3 V/m	Note 1	Pass
	Right Side	Horizontal	3 V/m	Note 1	Pass
	Rear	Horizontal	3 V/m	Note 1	Pass
	Top	Horizontal	3 V/m	Note 1	Pass
	Bottom	Horizontal	3 V/m	Note 1	Pass
	Front	Vertical	3 V/m	Note 1	Pass
	Left Side	Vertical	3 V/m	Note 1	Pass
	Right Side	Vertical	3 V/m	Note 1	Pass
	Rear	Vertical	3 V/m	Note 1	Pass
	Top	Vertical	3 V/m	Note 1	Pass
	Bottom	Vertical	3 V/m	Note 1	Pass
	Observations description				
/ - Not performed or not required.					
Note 1: There was no change compared with initial operation during the test.					
Note 2: During the test, degradation of performance, after the test, but no change of actual operating state or stored data.					
Note 3: The function of EUT is loss during the test, after the test, it can be recovered by itself operation or manually operation.					

7. Test setup photo

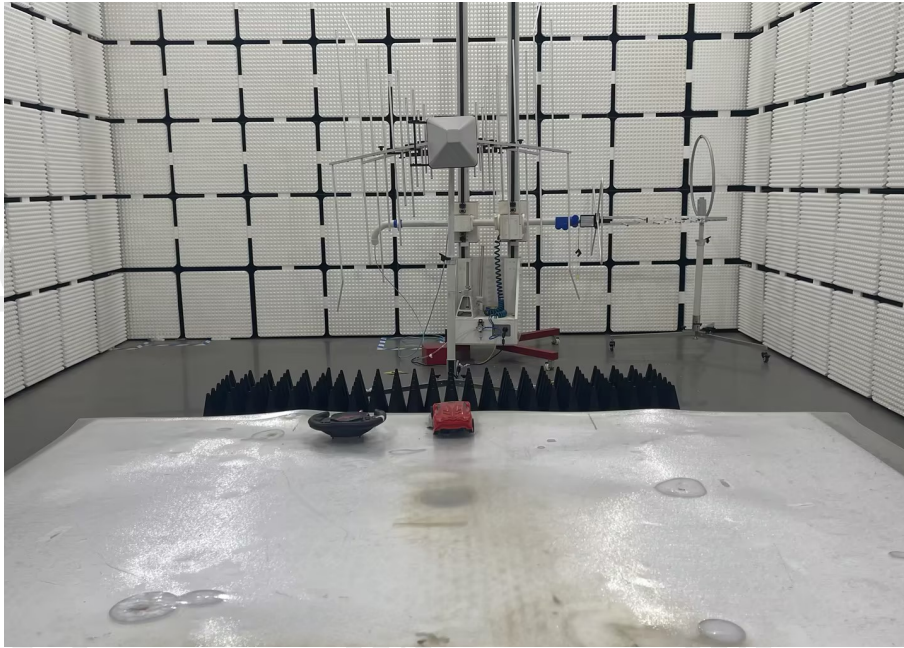
Radiated disturbance 30 MHz to 1 GHz



Electrostatic discharge immunity



Radiated, radio-frequency electromagnetic field immunity

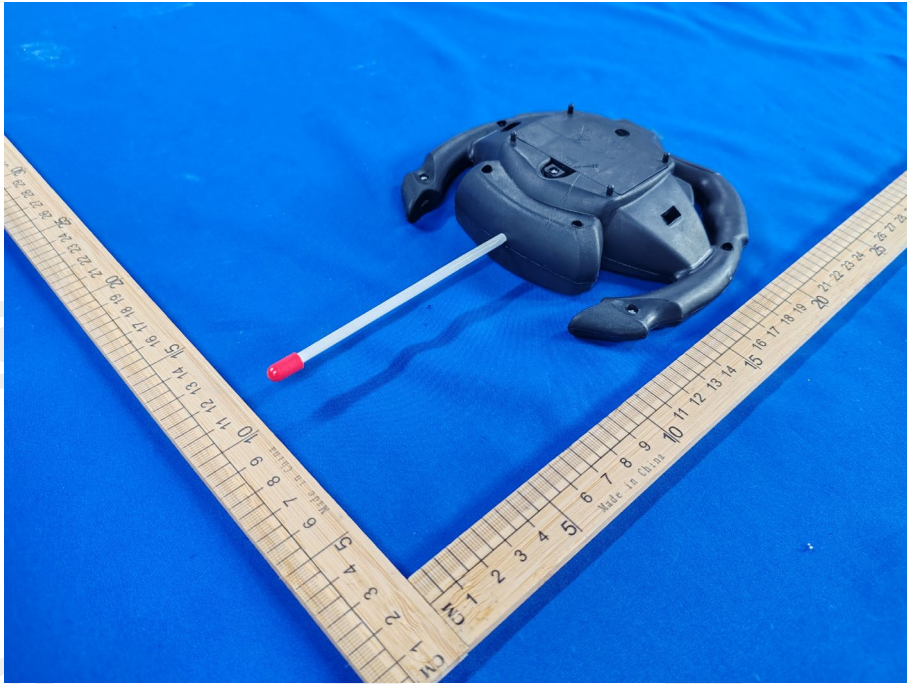


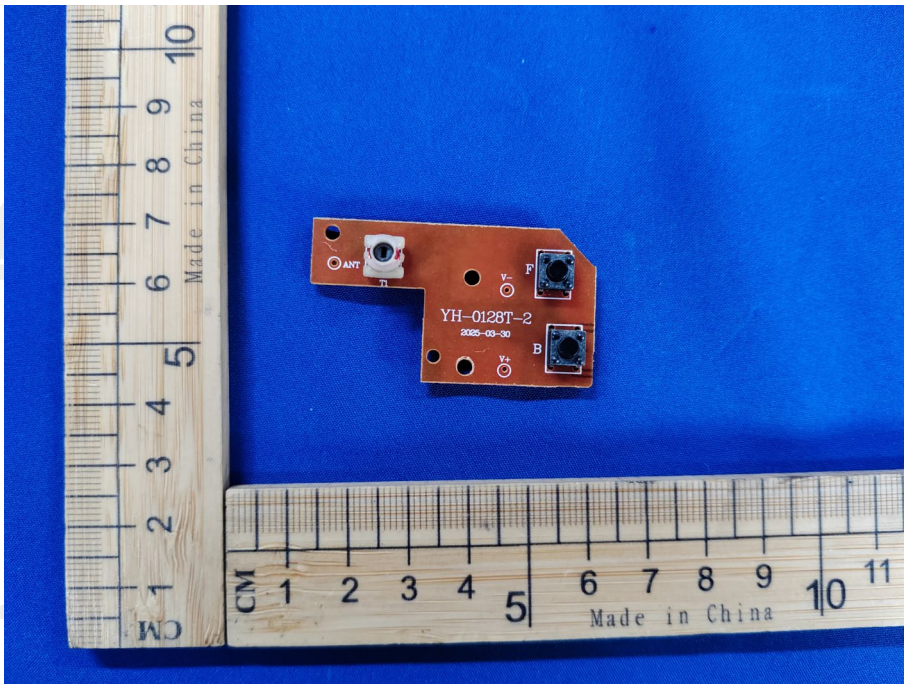
8. Photo of the EUT

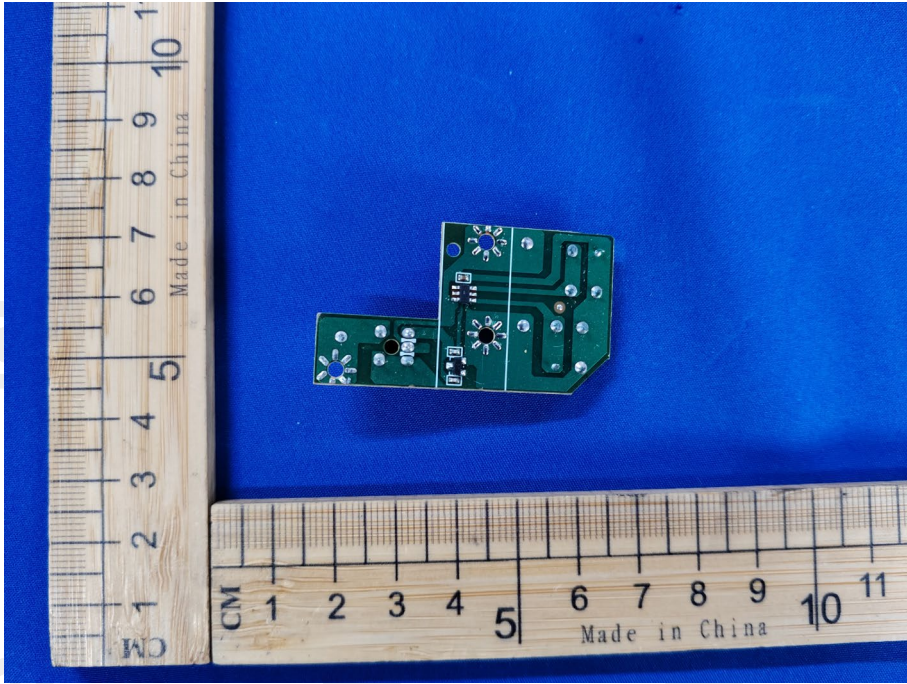


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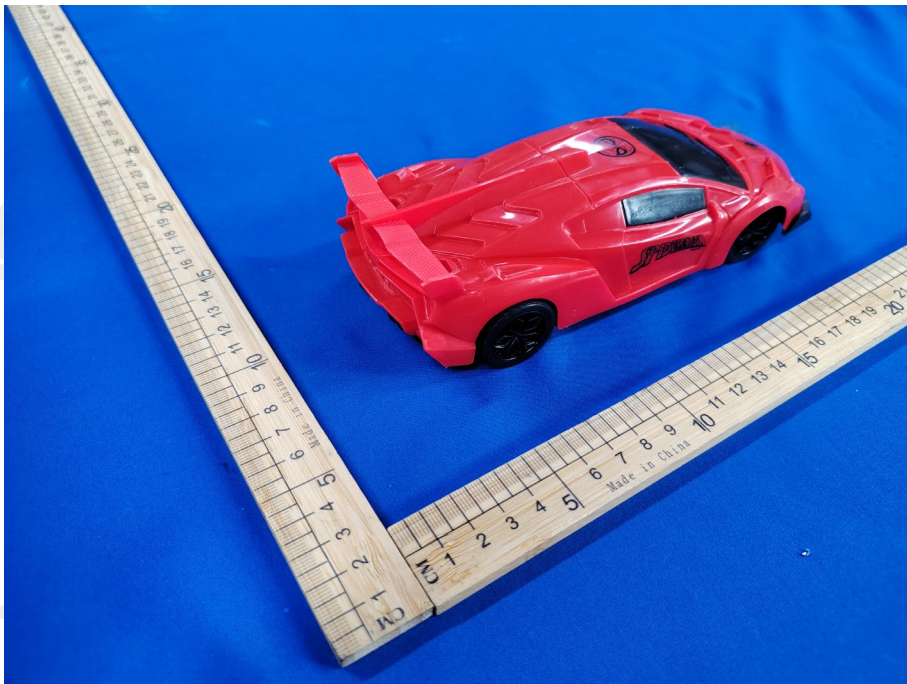


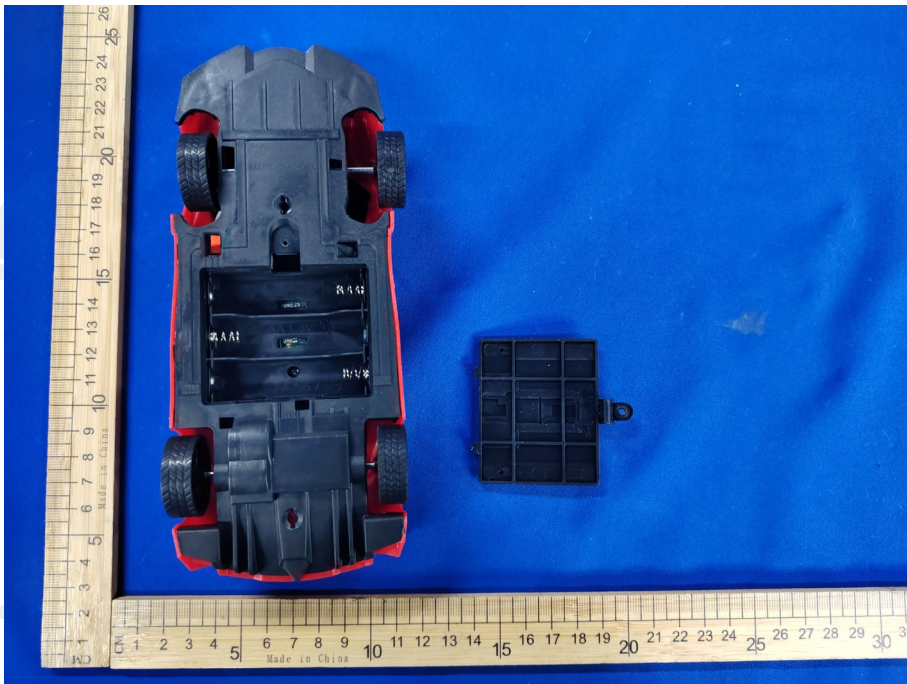
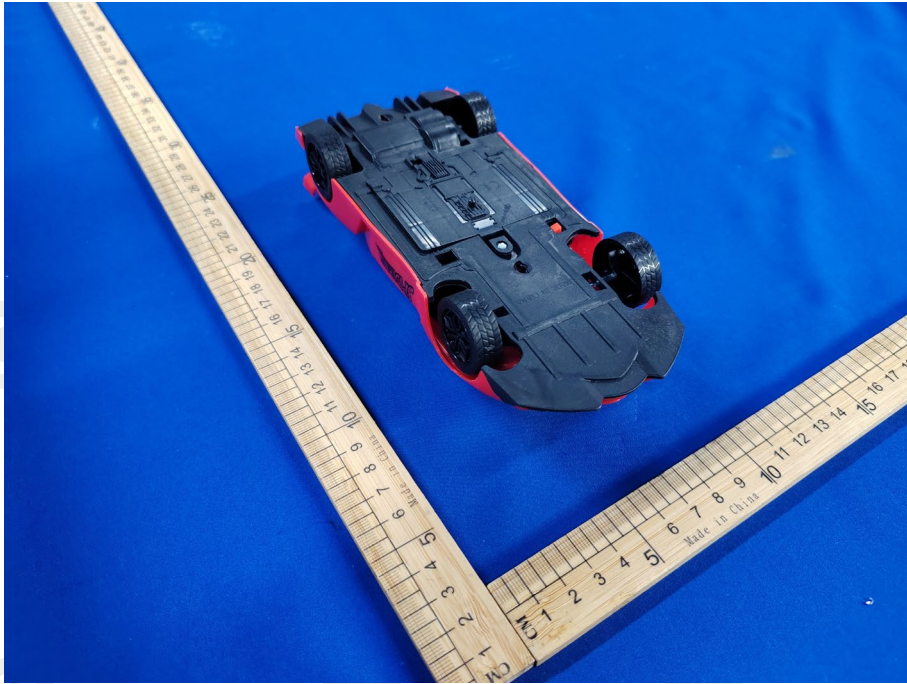


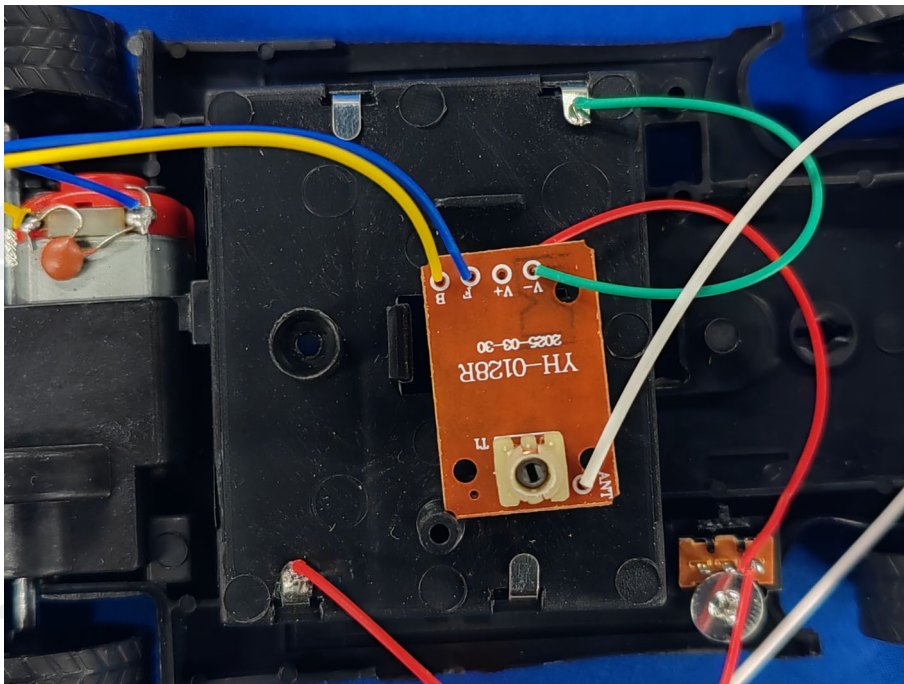
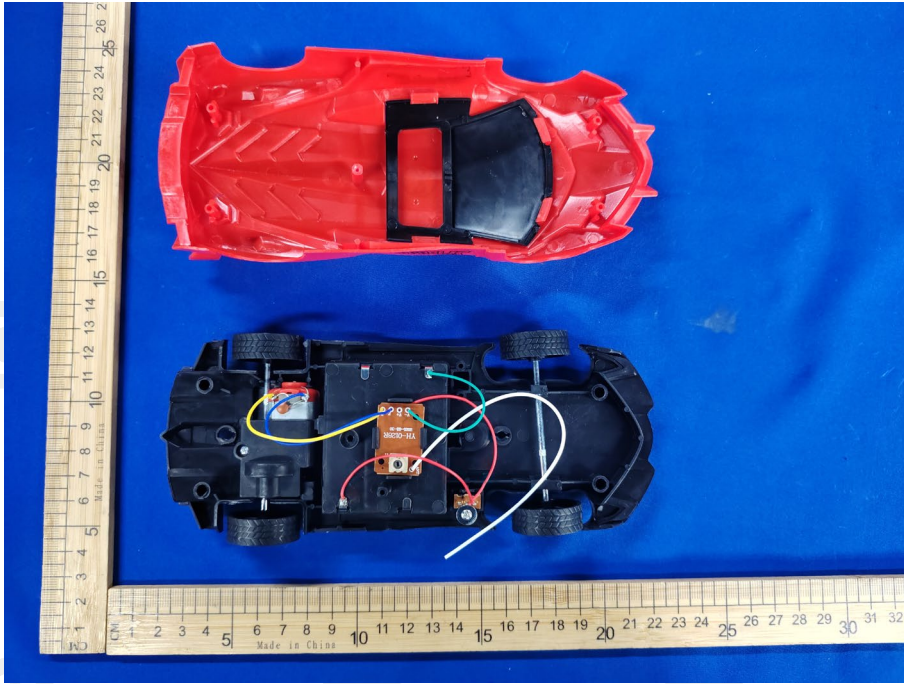


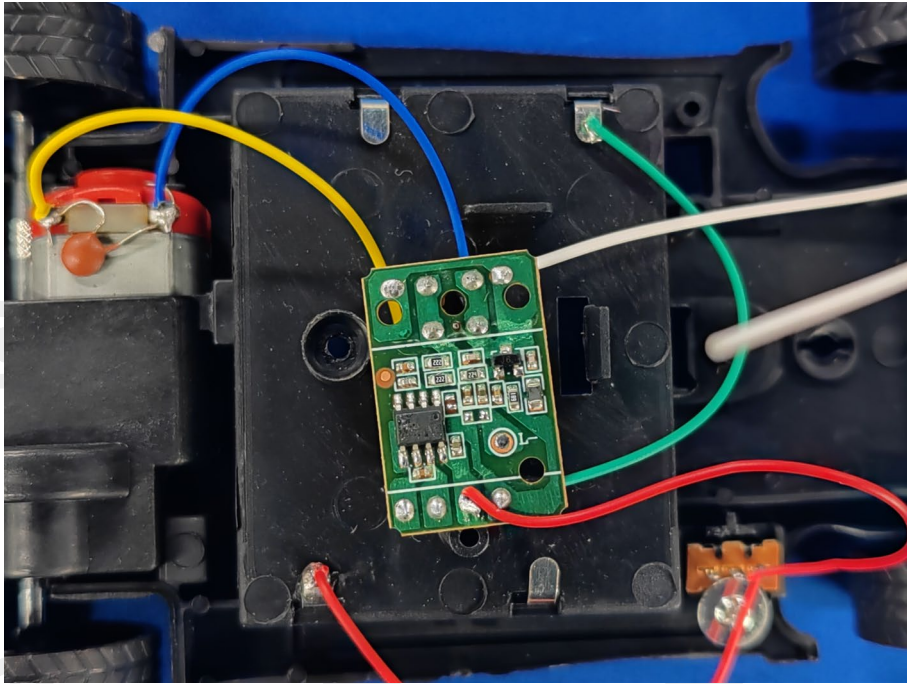


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****End of report****