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FCC PART 15.235 TEST REPORT

Applicant	YICK SHUN ELECT. TOYS MFG. LTD
Address	UNIT 4, 15/F, CORNELL CENTRE 50 WING TAI ROAD CHAI WAN, HONG KONG HONG KONG
FCC ID	J7I-YS212
Product Description	WALKIE TALKIE
Date Sample Received	9/17/2007
Date Tested	9/18/2007
Tested By	NAM NGUYEN
Approved By	NAM NGUYEN
Report Number	3096AUT7TestReport.doc
Test Results	☒ PASS ☐ FAIL

ACCREDITED
Certificate # 0955-01

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GENERAL REMARKS

The attached report shall not be reproduced except in full without the written permission of Timco Engineering Inc.

Summary

The device under test does:
☒ fulfill the general approval requirements as identified in this test report
☐ not fulfill the general approval requirements as identified in this test report

Attestations

This equipment has been tested in accordance with the standards identified in this test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report.

All instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 17025 requirements.

Certificate # 0955-01

I attest that the necessary measurements were made, under my supervision, at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, Fl 32669

Authorized Signatory Name: *Nam Ngueyn*

Nam Nguyen
Engineer Tech.

Date: 9/18/2007

GENERAL INFORMATION

DUT Specification

The test results relate only to the items tested.			
Applicable Standard	Part 15.235		
DUT Description	WALKIE TALKIE		
FCC ID	J7I-YS212		
Operating Frequency	TX: 49.82 – 49.90 MHz	RX: Same	
DUT Power Source	☐ 110–120Vac/50– 60Hz		
	☐ DC Power		
	☒ Battery Operated Exclusively		
Test Item	☐ Prototype	☒ Pre-Production	☐ Production
Type of Equipment	☐ Fixed	☐ Mobile	☒ Portable
Test Facility	Timco Engineering Inc. located at 849 NW State Road 45 Newberry, FL 32669 USA.		
Test Conditions	Temperature: 26°C Relative humidity: 50%		
Test Exercise	The DUT was placed in continuous transmit mode of operation.		
Modifications	None		

Receiver

The receiver portion of this system has been tested and meets all of the FCC requirements per FCC rules Part 15.109. A report was issued and a copy of this report is available upon request.

EMC EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/20/07	3/19/10
3-Meter OATS	TEI	N/A	N/A	Listed 1/11/06	1/10/09
Antenna: Biconnical	Eaton	94455-1	1057	CAL 12/12/05	12/12/07
Antenna: Biconnical	Eaton	94455-1	1096	CAL 10/11/06	10/11/08
Antenna: Biconnical	Electro-Metrics	BIA-25	1171	CAL 7/18/07	7/18/09
Analyzer Blue Tower Quasi-Peak Adapter	HP	85650A	2811A01279	CAL 5/17/07	5/17/09
Analyzer Blue Tower RF Preselector	HP	85685A	2926A00983	CAL 5/17/07	5/17/09
Analyzer Blue Tower Spectrum Analyzer	HP	8568B	2928A04729 2848A18049	CAL 5/17/07	5/17/09
LISN	Electro-Metrics	ANS-25/2	2604	CAL 10/5/06	10/5/08
LISN	Electro-Metrics	EM-7820	2682	CAL 7/23/07	7/23/09
Antenna: Log-Periodic	Eaton	96005	1243	CAL 12/14/05	12/14/07

TEST PROCEDURES

Radiation Interference: ANSI C63.4-2003 using a spectrum analyzer, a preselector, a quasi-peak adapter, and an appropriate antenna. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100 kHz with an appropriate sweep speed. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported.

Formula Of Conversion Factors: The field strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the preselector was accounted for in the spectrum analyzer meter reading.

Example:

Freq (MHz)	Meter Reading	+ ACF	+ CL = FS
33	20 dBuV	+ 10.36 dB	+ 0.5 = 30.86 dBuV/m @ 3m

Power Line Conducted Interference: The procedure used was ANSI C63.4-2003 using a 50uH LISN. Both lines were observed. The bandwidth of the spectrum analyzer was 10kHz with an appropriate sweep speed. The spectrum was scanned from 0.15 to 30 MHz.

Occupied Bandwidth: A small sample of the transmitter output was fed into the spectrum analyzer and the attached plot was printed. The vertical scale is set to -10 dBm per division.

ANSI C63.4-2003 10.1 Measurement Procedures: The DUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The DUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

RADIATION INTERFERENCE

Rules Part No.: 15.249, 15.209

Requirements:

Frequency	Limits
Fundamental	80.0 dBµV/m @ 3 meters
30 – 88	40.0 dBµV/m @ 3 meters
80 – 216	43.5 dBµV/m @ 3 meters
216 – 960	46.0 dBµV/m @ 3 meters
Above 960	54.0 dBµV/m @ 3 meters

Test Data:

Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
49.86	32.3	H	0.97	11.53	44.8	35.2
49.86	39.4	V	0.97	10.63	51	29
99.79	15.2	V	1.4	11.3	27.9	15.6
99.79	16.5	H	1.4	10.7	28.6	14.9
149.58	10.9	H	1.75	16.26	28.91	14.59
149.67	10.1	V	1.75	17.15	29	14.5
199.51	4	V	2.1	18.16	24.26	19.24
199.51	4.9	H	2.1	17.68	24.68	18.82
249.32	14.4	V	2.35	12.46	29.21	16.79
249.32	18	H	2.35	12.37	32.72	13.28
299.17	15.2	V	2.6	14.29	32.09	13.91
299.18	14.5	H	2.6	14.07	31.17	14.83
349.03	9.9	H	2.85	14.88	27.63	18.37
349.04	13.6	V	2.85	14.43	30.88	15.12
398.89	8.6	H	3.09	15.98	27.67	18.33
398.9	14.8	V	3.09	15.78	33.67	12.33
448.74	13.3	H	3.29	17.61	34.2	11.8
448.76	16.1	V	3.3	18.01	37.41	8.59
498.63	11.1	H	3.49	17.96	32.55	13.45
498.63	12.9	V	3.49	18.12	34.51	11.49

OCCUPIED BANDWIDTH

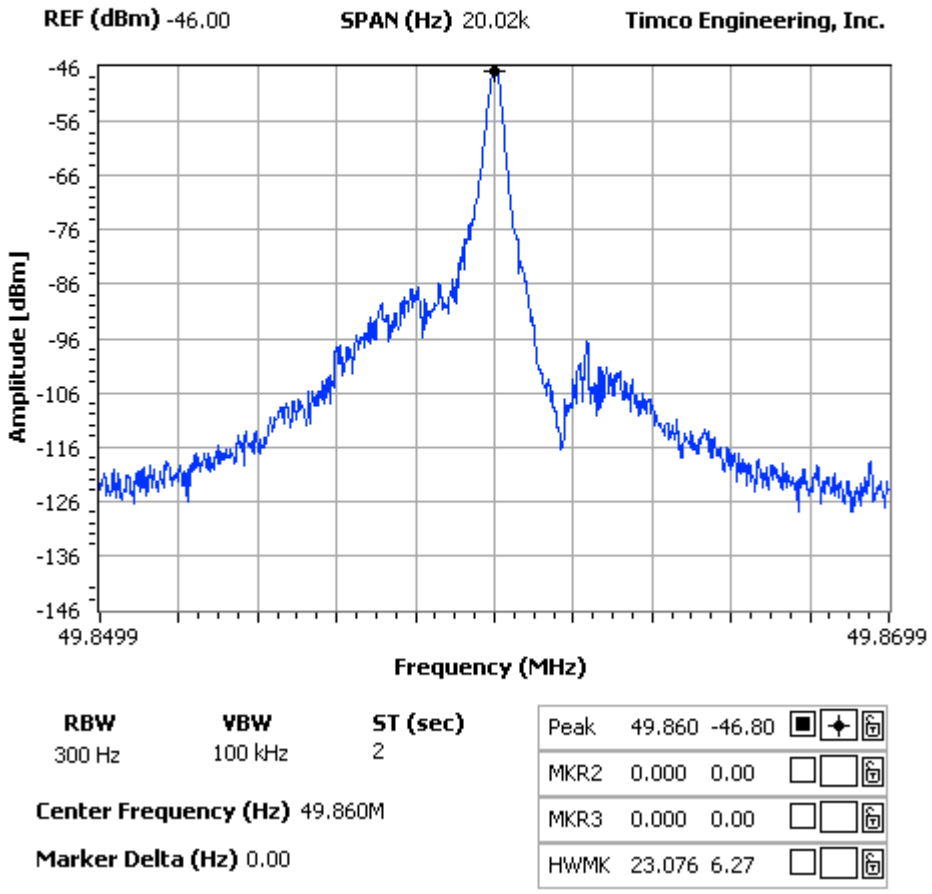
Rules Part No.: 15.235

Requirements: The field strength of any emissions appearing between the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 26 dB below the level of the un-modulated carrier or to the general limits of 15.209, whichever permits the higher emission levels.

Test Data:

NOTES:

YICK SHUN ELECT. TOYS MFG. LTD - FCC ID: J7I-YS212
OCCUPIED BANDWIDTH PLOT



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