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FCC PART 15.235 TYPE APPROVAL TEST REPORT

APPLICANT	200 Toy (HK) Ltd.
	Room 1009, 10/F, Houston Centre,
	63 Mody Road Kowloon Hong Kong
FCC ID	O4Y10048
MODEL NUMBER	10048
PRODUCT DESCRIPTION	49 MHZ WALKIE TALKIE
DATE SAMPLE RECEIVED	April 4, 2006
DATE TESTED	April 10, 2006
TESTED BY	Nam Nyguen
APPROVED BY	Mario R. de Aranzeta C.E.T.
TIMCO REPORT NO.	691AHT6TestReport
TEST RESULTS	☒ PASS ☐ FAIL

THE ATTACHED REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE
WRITTEN APPROVAL OF TIMCO ENGINEERING, INC.

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GENERAL INFORMATION

DUT specification

The test results relate only to the items tested.		
FCC ID	O4Y10048	
Model Number	10048	
Serial Number	N/A	
Product Description	49 MHz Walkie Talkie	
Operating Frequency	49.9 MHz	
Max. output power	N/A	
Type of Modulation	N/A	
EUT Power	<i>Primary Power</i>	Battery Exclusively
	<i>Secondary Power</i>	N/A
Test Item	☒ Prototype	
	☐ Pre-Production	
	☐ Production	
Type of Equipment	☐ Fixed	
	☐ Mobile	
	☒ Portable	

Rational for selecting test configuration(s)

No deviation from technical specifications.

Modification to the DUT

No modification was made to the DUT during testing.

Test exercise (e.g software description, test signal, etc.)

The EUT was set in continuous transmit mode of operation.

Test standards

FCC Part 15, Subparts B and C, ANSI C63.4 - 2003

EMC EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/27/04	3/26/07
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 8/17/04	8/17/06
Antenna: Biconnical	Electro-Metrics	BIA-25	1171	CAL 4/29/05	4/29/07
Analyzer Blue Tower Quasi-Peak Adapter	HP	85650A	2811A01279	CAL 4/13/05	4/13/07
Analyzer Blue Tower RF Preselector	HP	85685A	2926A00983	CAL 9/5/05	9/5/07
Analyzer Blue Tower Spectrum Analyzer	HP	8568B	2928A04729 2848A18049	CAL 4/13/05	4/13/07
LISN	Electro-Metrics	ANS-25/2	2604	CAL 8/27/04	8/27/06
LISN	Electro-Metrics	EM-7820	2682	CAL 4/28/05	4/28/07
Antenna: Log- Periodic	Eaton	96005	1243	CAL 12/14/05	12/14/07

Statement of Traceability: All calibrations have been performed in accordance with ISO/IEC 17025 requirements.

TEST PROCEDURE

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Radiation interference: The test procedure used was ANSI STANDARD C63.4-2003 using a HEWLETT PACKARD spectrum analyzer with a pre-selector. The bandwidth of the spectrum analyzer was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz. The ambient temperature of the UUT was 80°C with a humidity of 76%.

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 Pre-selector was accounted for in the Spectrum Analyzer Meter Reading.

Example:

Freq (MHz) METER READING + ACF = FS
33 20 dBuV + 10.36 dB = 30.36 dBuV/m @ 3m

ANSI standard C63.4-2003 10.1.7 measurement procedures: The unit under test was placed on a table 80 cm high and with dimensions of 1m by 1.5m. 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.: 15.235

Requirements: CARRIER FREQUENCY WILL NOT EXCEEDS 80 dBuV/m AT 3M.
OUT-OF-BAND EMISSIONS SHALL NOT EXCEED:

30 - 88 MHz	40.0 dBuV/M MEASURED AT 3 METERS
88 - 216 MHz	43.5 dBuV/M
216 - 960 MHz	46.0 dBuV/M
ABOVE 960 MHz	54.0 dBuV/M

Test procedure: The procedure used was ANSI STANDARD C63.4-2003. The spectrum was scanned from 30 MHz to 1000 MHz. 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. The UUT was tested in 3 orthogonal planes

Test data:

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
49.9	49.86	43.0	V	0.50	11.07	54.57	25.43
49.9	49.86	37.3	H	0.50	11.20	49.00	31.00
49.9	199.44	4.5	H	0.90	17.32	22.72	20.78
49.9	199.44	3.6	V	0.90	17.22	21.72	21.78
49.9	448.73	4.3	V	1.25	16.56	22.11	23.89
49.9	149.58	4.6	V	0.70	14.11	19.41	24.09
49.9	99.72	6.5	V	0.65	11.55	18.70	24.80
49.9	149.58	3.1	H	0.70	14.32	18.12	25.38
49.9	299.04	4.7	H	1.10	14.36	20.16	25.84
49.9	299.16	3.1	V	1.10	14.36	18.56	27.44
49.9	99.72	3.9	H	0.65	11.38	15.93	27.57
49.9	249.28	4.6	V	1.00	12.46	18.06	27.94
49.9	249.26	3.8	H	1.00	12.46	17.26	28.74

SAMPLE CALCULATION: FSdBuV/m = MR (dBuV) + ACFdB.

OCCUPIED BANDWIDTH

Rules part No.: 15.235

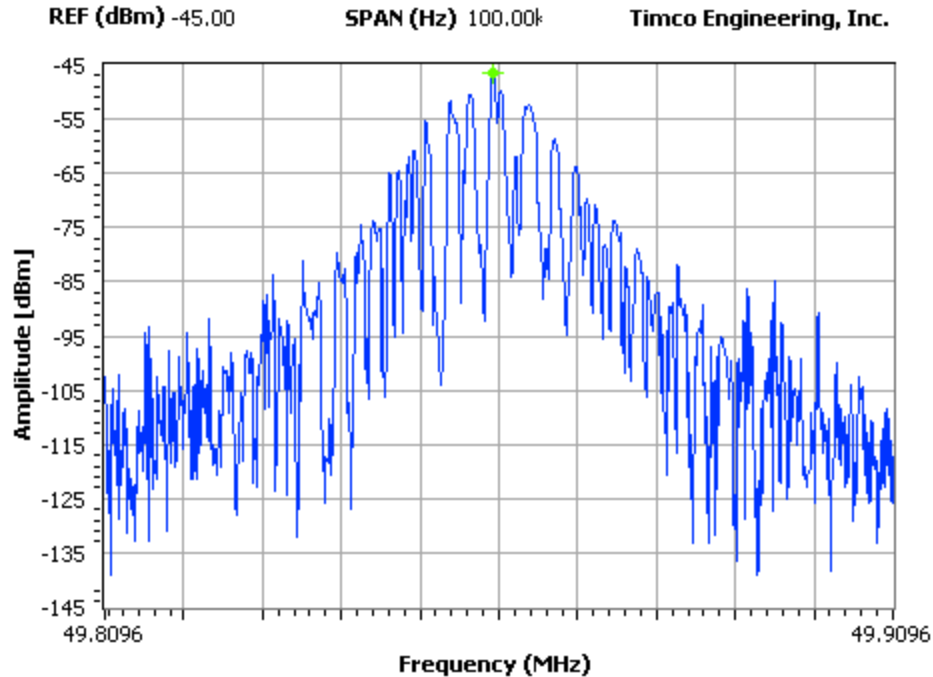
Requirements: The field strength of any emissions appearing between the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 26 dB below the level of the un-modulated carrier or to the general limits of 15.209, whichever permits the higher emission levels.

Method of measurement: A small sample of the transmitter output was fed into the spectrum analyzer and the attached plot was taken. The vertical scale is set to 10 dB per division.

Test Data: THE GRAPH ON THE NEXT PAGE REPRESENTS THE EMISSIONS TAKEN FOR THE DEVICE.

NOTES:

200 TOY (HK) LTD. - FCC ID: O4Y10048
OCCUPIED BANDWIDTH PLOT



RBW **VBW** **ST (sec)**
10 kHz 30 kHz 48m

Center Frequency (Hz) 49.860M

Marker Delta (Hz) 0.00

Peak	49.859	-46.50	☒	☒	☒
MKR2	0.000	0.00	☐	☐	☐
MKR3	0.000	0.00	☐	☐	☐
HWMK	23.076	6.27	☐	☐	☐

TEST SET UP PHOTO

