

24 May 2000

EMC/R/01548

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FORMAL REPORT ON TESTING IN ACCORDANCE WITH

FCC Part 15B:1997
FCC Part 15C:1997

OF A

BABY MONITOR (TRANSMITTER & RECEIVER)
[Model : 2735B]
[FCC ID : M6Y003020049T & M6Y003020049R]

TEST FACILITY PSB Electrical & Electronics Test Centre
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JOB NUMBER 38T0000019

TEST PERIOD 09 - 23 May 2000

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TEST SUMMARY

The product was tested in accordance with the customer's specifications.

Test Results Summary

Receiver

Test Standard	Description	Pass / Fail
FCC Part 15B:1997	Conducted Emissions (Class B)	Pass
FCC Part 15B:1997	Radiated Emissions (Class B) spurious	Pass

Transmitter

Test Standard	Description	Pass / Fail
FCC Part 15C:1997	Conducted Emissions (Class B)	Pass
FCC Part 15C:1997	Radiated Emissions (Class B) spurious	Pass
FCC Part 15C:1997 Section 15.235a	Transmitter Signal Measurement	Pass
FCC Part 15C:1997 Section 15.235b	Transmitter Signal Bandwidth Measurement	Pass

PRODUCT DESCRIPTION

Description	: The Equipment Under Test (EUT) is a Baby Monitor (Transmitter & Receiver with non detachable antenna)
Manufacturer	: Tru-Tech Electronics (M) Sdn Bhd
Model Number	: 2735B
Serial Number	: Nil
Microprocessor	: Nil
Operating Frequency	: 49.825 MHz (B), 49.845 MHz (A), 49.870 MHz (Y), 49.890 MHz (X)
Clock / Oscillator Frequency	: 49.370 MHz, 49.390 MHz, 49.415 MHz, 49.435 MHz
Port / Connectors	: Nil
Input Power (Transmitter)	: Graco Model# 280901003CT AC/DC adaptor (120Vac/9Vdc)
Input Power (Receiver)	Graco Model# 280901003CT AC/DC adaptor (120Vac/9Vdc)

Modifications

To Comply Radiated Emissions test the receiver has to be modified as follows;

1. The resistor R207 was removed from the receiver board.

TEST RESULTS

FCC Part 15C:1997 Conducted Emission Results (Transmitter)

Channel X

Frequency (MHz)	Q-P Value (dB μ V)	Q-P Margin (dB)	Line
1.7750	20.5	-27.4	Neutral
1.3760	19.9	-28.0	Neutral
1.3170	19.5	-28.4	Neutral
1.3160	18.8	-29.1	Live
1.2600	18.6	-29.3	Live
1.8350	17.3	-30.6	Neutral

Channel Y

Frequency (MHz)	Q-P Value (dB μ V)	Q-P Margin (dB)	Line
16.6200	28.4	-19.5	Live
1.3760	19.9	-28.0	Neutral
1.3170	18.9	-29.0	Live
1.6590	18.7	-29.2	Neutral
1.6650	16.4	-31.5	Live
1.2630	16.2	-31.7	Live

Channel A

Frequency (MHz)	Q-P Value (dB μ V)	Q-P Margin (dB)	Line
1.3760	19.4	-28.5	Neutral
1.3190	17.9	-30.0	Neutral
1.3170	16.3	-31.6	Live
1.6060	16.2	-31.7	Neutral
2.9030	14.9	-33.0	Neutral
1.6510	13.3	-34.6	Neutral

Channel B

Frequency (MHz)	Q-P Value (dB μ V)	Q-P Margin (dB)	Line
1.3760	19.3	-28.6	Neutral
1.6030	16.5	-31.4	Neutral
1.3730	16.4	-31.5	Live
1.4920	15.9	-32.0	Neutral
1.4300	15.5	-32.4	Live
1.5460	15.5	-32.4	Neutral

FCC Part 15B:1997 (Class B) Conducted Emission Results (Receiver)

Channel X

Frequency (MHz)	Q-P Value (dBµV)	Q-P Margin (dB)	Line
1.3760	19.6	-28.3	Live
1.3190	19.2	-28.7	Neutral
1.8350	16.5	-31.4	Live
1.2630	16.3	-31.6	Live
1.6310	14.6	-33.3	Live
1.5660	12.9	-35.0	Live

Channel Y

Frequency (MHz)	Q-P Value (dBµV)	Q-P Margin (dB)	Line
1.3760	19.6	-28.3	Live
1.3190	19.2	-28.7	Neutral
1.4330	18.1	-29.8	Neutral
1.6590	17.5	-30.4	Neutral
1.8350	17.0	-30.9	Live
1.3790	16.7	-31.2	Neutral

Channel A

Frequency (MHz)	Q-P Value (dBµV)	Q-P Margin (dB)	Line
1.3730	18.3	-29.6	Neutral
1.3170	17.6	-30.3	Neutral
1.3190	16.4	-31.5	Live
1.4360	15.5	-32.4	Neutral
1.4350	15.1	-32.8	Live
1.3790	14.8	-33.1	Live

Channel B

Frequency (MHz)	Q-P Value (dBµV)	Q-P Margin (dB)	Line
1.3760	19.0	-28.9	Neutral
1.4330	18.0	-29.9	Neutral
1.3760	17.0	-30.9	Live
1.6050	16.3	-31.6	Neutral
1.4330	16.2	-31.7	Live
1.4860	14.8	-33.1	Neutral

FCC Part 15B & C:1997 (Class B) Radiated Emission Results (Transmitter & Receiver)

Test Distance : 3m (tested Transmitter/Receiver together)

Channel X

Frequency (MHz)	Q-P Value (dBµV/m)	Q-P Margin (dB)	Pol (H/V)	Height (m)	Azimuth (Degrees)
503.8730	34.2	-11.8	H	1.03	258
49.4000	32.0	-8.0	V	1.15	229
372.7770	28.5	-17.4	H	1.66	135
359.1480	28.2	-17.8	V	1.43	007
359.4260	28.2	-17.8	H	1.73	199
120.4130	21.5	-22.0	V	1.48	150

Channel Y

Frequency (MHz)	Q-P Value (dBµV/m)	Q-P Margin (dB)	Pol (H/V)	Height (m)	Azimuth (Degrees)
49.3850	35.3	-4.7	V	1.02	234
503.8730	34.2	-11.8	H	1.03	258
372.7770	28.5	-17.4	H	1.66	135
359.1480	28.2	-17.8	V	1.43	007
359.4260	28.2	-17.8	H	1.73	199
120.4130	21.5	-22.0	V	1.48	150

Channel A

Frequency (MHz)	Q-P Value (dBµV/m)	Q-P Margin (dB)	Pol (H/V)	Height (m)	Azimuth (Degrees)
686.9080	37.6	-8.4	H	1.59	114
49.3700	34.3	-5.7	V	1.01	254
339.9240	27.8	-18.2	H	1.51	136
240.4840	23.9	-22.1	H	2.02	056
131.3770	23.1	-20.4	V	2.05	073
121.0400	21.7	-21.8	V	1.70	194

Channel B

Frequency (MHz)	Q-P Value (dBµV/m)	Q-P Margin (dB)	Pol (H/V)	Height (m)	Azimuth (Degrees)
686.9080	37.6	-8.4	H	1.59	114
49.3350	36.8	-3.2 (Note 4)	V	V	252
339.9240	27.8	-18.2	H	1.51	136
240.4840	23.9	-22.1	H	2.02	056
131.3770	23.1	-20.4	V	2.05	073
121.0400	21.7	-21.8	V	1.70	194

Notes

1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR detectors, are reported. All other emissions were relatively insignificant.
2. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
3. Conducted Emissions Measurement Uncertainty
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95%, with a coverage factor of 2, in the range 9kHz – 30MHz (Average & Quasi-peak) is ± 2.4 dB.
4. Radiated Emissions Measurement Uncertainty
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95%, with a coverage factor of 2, in the range 30MHz – 1GHz (QP only @ 3m & 10m) is ± 4.3 dB (for EUTs < 0.5m X 0.5m X 0.5m).

FCC Part 15C Section 15.235a :1997 Transmitter Signal Measurement

Test Distance : 3m

Channel X

Frequency (MHz)	Ave Value (dB μ V/m)	Ave Margin (dB)	Pol (H/V)	Height (m)	Azimuth (Degrees)
49.8844	68.1	-11.9	V	1.28	243

Channel Y

Frequency (MHz)	Ave Value (dB μ V/m)	Ave Margin (dB)	Pol (H/V)	Height (m)	Azimuth (Degrees)
49.8584	71.9	-8.1	V	1.00	255

Channel A

Frequency (MHz)	Ave Value (dB μ V/m)	Ave Margin (dB)	Pol (H/V)	Height (m)	Azimuth (Degrees)
49.8548	64.3	-15.7	V	1.00	359

Channel B

Frequency (MHz)	Ave Value (dB μ V/m)	Ave Margin (dB)	Pol (H/V)	Height (m)	Azimuth (Degrees)
49.8353	69.5	-10.5	V	1.00	359

FCC Part 15C Section 15.235b :1997 Transmitter Signal Bandwidth measurement

Test Distance : 3m

Channel X

Frequency (MHz)	Q-P Value (dB μ V/m)	Q-P Margin (dB)	Pol (H/V)	Height (m)	Azimuth (Degrees)
49.8200	14.6	-25.4	V	1.28	243
49.9000	36.6	-3.4	V	1.28	243

Channel Y

Frequency (MHz)	Q-P Value (dB μ V/m)	Q-P Margin (dB)	Pol (H/V)	Height (m)	Azimuth (Degrees)
49.8200	16.1	-23.9	V	1.00	255
49.9000	15.6	-24.4	V	1.00	255

Channel A

Frequency (MHz)	Q-P Value (dB μ V/m)	Q-P Margin (dB)	Pol (H/V)	Height (m)	Azimuth (Degrees)
49.8200	15.2	-24.8	V	1.00	359
49.9000	15.7	-24.3	V	1.00	359

Channel B

Frequency (MHz)	Q-P Value (dB μ V/m)	Q-P Margin (dB)	Pol (H/V)	Height (m)	Azimuth (Degrees)
49.8200	39.8	-0.2	V	1.00	359
49.9000	15.6	-24.4	V	1.00	359

Measurement was made at RBW= 10kHz