TEST REPORT No: (5211)239-0015

TEST REPORT

To:	**Jeckson Electric Co., Ltd.**	To:	-
Attn:	Henry Chan	Attn:	-
Address:	18/F, China Aerospace Centre, 143 Hoi Bun Road, Kwun Tong, Kowloon, Hong Kong	Address:	-
Fax:	23430391	Fax:	-
E-mail:	henrychan@casil-jeckson.com	E-mail:	-
Folder No.:	JEC-11AU254ETHP-B-B		
Factory name:	**Jeckson Electric Co,. Ltd. (Huizhou Factory)**		
Location:	China Aerospace Industrial Park, 49 Zhong Kai No. 2 Road, Huizhou, Guangdong, China		
Product:	2.4GHz Midline Remote MODEL: 47-1012E-T		

Sample No:	HK110809/001
Test date:	August 26, 2011
Test Requested:	FCC Part 15 - 2010
Test Method:	ANSI C63.4 - 2003
FCC ID:	ELY547-47-1012E-T

The results given in this report are related to the tested specimen of the described electrical apparatus.

CONCLUSION: The submitted sample was found to COMPLY with requirement of FCC Part 15 Subpart C.

Authorized Signature:

Reviewed by: Keith Yeung	Approved by: Steven Tsang
Date: October 4, 2011	Date: October 4, 2011

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Location of the test laboratory

Radiated and Conducted emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003. An Open Area Test Site and Full Anechoic Chamber (FCC Listed Site, Registration No. 642151) are set up for investigation and located at :

BUREAU VERITAS HONG KONG LIMITED, EMC CENTRE

No. 2106-2107, 21/F., Westin Centre,
26 Hung To Road,
Kwun Tong, Kowloon,
Hong Kong

List of measuring equipment

Radiated Emission

EQUIPMENT	MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATION DUE
EMI TEST RECEIVER	R&S	ESCI	100379	05-SEP-2012
LOOP ANTENNA	ETS-LINDGREN	6502	00102266	12-MAY-2012
BILOG ANTENNA	SCHAFFNER	CBL6112D	25229	16-SEP-2012
OPEN AREA TEST SITE	BVCPS	N/A	N/A	07-JUL-2012
ANECHOIC CHAMBER	ALBATROSS	M-CDC	80374004499B	26-OCT-2011
COAXIAL CABLE	SUHNER	N/A	N/A	18-SEP-2012

Remarks:-
N/A : Not Applicable or Not Available

The measurement instrumentation uncertainty would be taking into consideration on each of the test result

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Equipment Under Test [EUT]
Description of Sample:
Model Name: 2.4GHz Midline Remote
Model Number: 47-1012E-T
Rating: 3Vd.c (“AAA” size battery x 2)

Description of EUT Operation:
The Equipment Under Test (EUT) is a **JECKSON ELECTRIC CO., LTD.** of Remote Control Transmitter. The transmitter is a 12 buttons transmitter and operating at 2402MHz to 2480MHz. The lowest, middle and highest frequencies were tested and the results are shown in the report. The EUT transmit while buttons is being pressed, Modulation by IC, and type is FHSS.
The transmitter has different control:

1. Temperature “+” button – temperature setting - increase
2. Temperature “-“button – temperature setting - decrease
3. Dimmer “+” button – brightness setting - increase
4. Dimmer “-“ button – brightness setting - decrease
5. Flame Speed “+” button – flame speed setting - increase
6. Flame Speed “-” button – flame speed setting - decrease
7. Countdown Timer “+” button – countdown timer setting - increase
8. Countdown Timer “-” button – countdown timer setting - decrease
9. Purifire Speed “+” button – purifire speed setting - increase
10. Purifire Speed “-” button – purifire speed setting - decrease
11. Flame/Heat ON/OFF button – flame/heat function ON/OFF control
12. Purifire ON/OFF button – purifire function ON/OFF control

Antenna Requirement (Section 15.203)
The EUT is use of a permanently antenna. It is PCB trace antenna. The antenna is not replaceable or user serviceable. The requirements of S15.203 are met. There are no deviations or exceptions to the specifications.

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TEST REPORT No: (5211)239-0015

Radiated Emissions (Fundamental)

Test Requirement:	FCC Part 15 Section 15.249
Test Method:	ANSI C63.4
Test Date(s):	2011-08-26
Temperature:	29.0 °C
Humidity:	71.0 %
Atmospheric Pressure:	100.3 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	3Vd.c. ("AAA" size battery x 2)

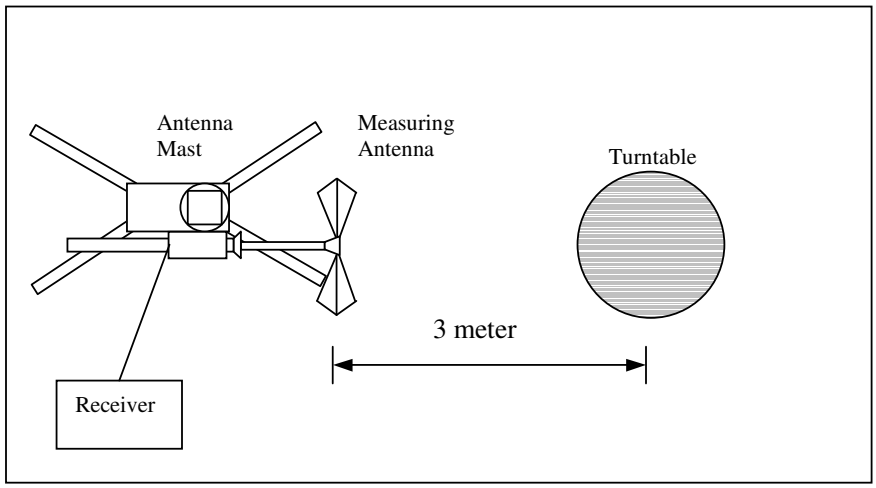
Test Procedure:

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using new battery. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

Location: The Roof, Westin Centre, 26 Hung To Road, Kwun Tong, Kowloon, Hong Kong

Test Setup: Open Area Test Site



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Limits for Field Strength of Fundamental Emissions [FCC 47CFR 15.249]:

Frequency Range of Fundamental [MHz]	Field Strength of Fundamental Emission (Average) [mV/m]	Field Strength of Harmonics Emission (Average) [µV/m]
2400-2483.5	50	500

Measurement Data

Test Result of (Transmission mode, Lowest frequency): PASS

Detection mode: Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
2402.00	H	-3.2	78.0	114.0	-36.0
2402.00	V	-3.2	76.0	114.0	-38.0

Detection mode: # Average

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
2402.00	H	-3.2	**58.0	94.0	-36.0
2402.00	V	-3.2	**56.0	94.0	-38.0

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.092) =-20.6dB. Therefore, -20dB is taken as precedence.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

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Measurement Data

Test Result of (Transmission mode, Middle frequency): PASS

Detection mode: Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
2440.52	H	-3.3	74.1	114.0	-39.9
2440.52	V	-3.3	72.9	114.0	-41.1

Detection mode: # Average

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
2440.52	H	-3.3	**54.1	94.0	-39.9
2440.52	V	-3.3	**52.9	94.0	-41.1

Test Result of (Transmission mode, Highest frequency): PASS

Detection mode: Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
2480.00	H	-3.3	80.3	114.0	-33.7
2480.00	V	-3.3	77.9	114.0	-36.1

Detection mode: # Average

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
2480.00	H	-3.3	**60.3	94.0	-33.7
2480.00	V	-3.3	**57.9	94.0	-36.1

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.092) =-20.6dB. Therefore, -20dB is taken as precedence.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

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Radiated Emissions (Spurious Emission)

Test Requirement:	FCC Part 15 Section 15.249
Test Method:	ANSI C63.4
Test Date(s):	2011-08-26
Temperature:	29.0 °C
Humidity:	71.0 %
Atmospheric Pressure:	100.3 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	3Vd.c. (“AAA” size battery x 2)

Measurement Data

Test Result of (Transmission mode, Lowest frequency): PASS

Detection mode: Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
4804.00	H	2.9	45.3	74.0	-28.7
7206.00	H	10.2	50.5	74.0	-23.5
9608.00	H	11.1	50.9	74.0	-23.1
12010.00	H	16.5	57.0	74.0	-17.0
14412.00	H	23.6	57.9	74.0	-16.1
16814.00	H	21.9	58.7	74.0	-15.3
19216.00	H	23.7	57.7	74.0	-16.3
21618.00	H	25.2	57.7	74.0	-16.3
24020.00	H	26.3	58.5	74.0	-15.5
26422.00	H	27.5	60.0	74.0	-14.0

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 1MHz
VBW = 1MHz

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Measurement Data

Test Result of (Transmission mode, Lowest frequency): PASS

Detection mode: Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
4804.00	V	2.9	44.7	74.0	-29.3
7206.00	V	10.2	51.2	74.0	-22.8
9608.00	V	11.1	51.0	74.0	-23.0
12010.00	V	16.5	57.8	74.0	-16.2
14412.00	V	23.6	57.6	74.0	-16.4
16814.00	V	21.9	58.0	74.0	-16.0
19216.00	V	23.7	57.1	74.0	-16.9
21618.00	V	25.2	58.1	74.0	-15.9
24020.00	V	26.3	57.5	74.0	-16.5
26422.00	V	27.5	60.6	74.0	-13.4

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 1MHz
VBW = 1MHz

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Measurement Data

Test Result of (Transmission mode, Lowest frequency): PASS

Detection mode: #Average

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
4804.00	H	2.9	**25.3	54.0	-28.7
7206.00	H	10.2	**30.5	54.0	-23.5
9608.00	H	11.1	**30.9	54.0	-23.1
12010.00	H	16.5	**37.0	54.0	-17.0
14412.00	H	23.6	**37.9	54.0	-16.1
16814.00	H	21.9	**38.7	54.0	-15.3
19216.00	H	23.7	**37.7	54.0	-16.3
21618.00	H	25.2	**37.7	54.0	-16.3
24020.00	H	26.3	**38.5	54.0	-15.5
26422.00	H	27.5	**40.0	54.0	-14.0

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
4804.00	V	2.9	**24.7	54.0	-29.3
7206.00	V	10.2	**31.2	54.0	-22.8
9608.00	V	11.1	**31.0	54.0	-23.0
12010.00	V	16.5	**37.8	54.0	-16.2
14412.00	V	23.6	**37.6	54.0	-16.4
16814.00	V	21.9	**38.0	54.0	-16.0
19216.00	V	23.7	**37.1	54.0	-16.9
21618.00	V	25.2	**38.1	54.0	-15.9
24020.00	V	26.3	**37.5	54.0	-16.5
26422.00	V	27.5	**40.6	54.0	-13.4

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.092) =-20.6dB. Therefore, -20dB is taken as precedence.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

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Measurement Data

Test Result of (Transmission mode, Middle frequency): PASS

Detection mode: Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
4881.04	H	2.9	47.4	74.0	-26.6
7321.56	H	10.7	51.7	74.0	-22.3
9762.08	H	11.4	50.7	74.0	-23.3
12202.60	H	16.5	56.5	74.0	-17.5
14643.12	H	23.5	57.5	74.0	-16.5
17083.64	H	22.1	58.4	74.0	-15.6
19524.16	H	23.9	58.0	74.0	-16.0
21964.68	H	25.3	58.8	74.0	-15.2
24405.20	H	26.6	58.4	74.0	-15.6
26845.72	H	27.7	58.9	74.0	-15.1

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
4881.04	V	2.9	45.3	74.0	-28.7
7321.56	V	10.7	52.5	74.0	-21.5
9762.08	V	11.4	51.8	74.0	-22.2
12202.60	V	16.5	56.0	74.0	-18.0
14643.12	V	23.5	58.2	74.0	-15.8
17083.64	V	22.1	58.9	74.0	-15.1
19524.16	V	23.9	57.3	74.0	-16.7
21964.68	V	25.3	58.7	74.0	-15.3
24405.20	V	26.6	58.8	74.0	-15.2
26845.72	V	27.7	59.5	74.0	-14.5

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 1MHz
VBW = 1MHz

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Measurement Data

Test Result of (Transmission mode, Middle frequency): PASS

Detection mode: #Average

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
4881.04	H	2.9	**27.4	54.0	-26.6
7321.56	H	10.7	**31.7	54.0	-22.3
9762.08	H	11.4	**30.7	54.0	-23.3
12202.60	H	16.5	**36.5	54.0	-17.5
14643.12	H	23.5	**37.5	54.0	-16.5
17083.64	H	22.1	**38.4	54.0	-15.6
19524.16	H	23.9	**38.0	54.0	-16.0
21964.68	H	25.3	**38.8	54.0	-15.2
24405.20	H	26.6	**38.4	54.0	-15.6
26845.72	H	27.7	**38.9	54.0	-15.1

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
4881.04	V	2.9	**25.3	54.0	-28.7
7321.56	V	10.7	**32.5	54.0	-21.5
9762.08	V	11.4	**31.8	54.0	-22.2
12202.60	V	16.5	**36.0	54.0	-18.0
14643.12	V	23.5	**38.2	54.0	-15.8
17083.64	V	22.1	**38.9	54.0	-15.1
19524.16	V	23.9	**37.3	54.0	-16.7
21964.68	V	25.3	**38.7	54.0	-15.3
24405.20	V	26.6	**38.8	54.0	-15.2
26845.72	V	27.7	**39.5	54.0	-14.5

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.092) =-20.6dB. Therefore, -20dB is taken as precedence.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

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Measurement Data

Test Result of (Transmission mode, Highest frequency): PASS

Detection mode: Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
4960.00	H	3.0	47.3	74.0	-26.7
7440.00	H	10.7	53.2	74.0	-20.8
9920.00	H	11.9	52.2	74.0	-21.8
12400.00	H	15.6	55.0	74.0	-19.0
14880.00	H	23.0	60.3	74.0	-13.7
17360.00	H	23.1	58.1	74.0	-15.9
19840.00	H	24.1	58.6	74.0	-15.4
22320.00	H	25.2	57.8	74.0	-16.2
24800.00	H	27.0	59.4	74.0	-14.6
27000.00	H	28.0	61.5	74.0	-12.5

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
4960.00	V	3.0	46.6	74.0	-27.4
7440.00	V	10.7	54.0	74.0	-20.0
9920.00	V	11.9	52.6	74.0	-21.4
12400.00	V	15.6	56.5	74.0	-17.5
14880.00	V	23.0	59.1	74.0	-14.9
17360.00	V	23.1	58.6	74.0	-15.4
19840.00	V	24.1	57.9	74.0	-16.1
22320.00	V	25.2	57.8	74.0	-16.2
24800.00	V	27.0	59.4	74.0	-14.6
27000.00	V	28.0	60.8	74.0	-13.2

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 1MHz
VBW = 1MHz

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Measurement Data

Test Result of (Transmission mode, Highest frequency): PASS

Detection mode: #Average

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
4960.00	H	3.0	**27.3	54.0	-26.7
7440.00	H	10.7	**33.2	54.0	-20.8
9920.00	H	11.9	**32.2	54.0	-21.8
12400.00	H	15.6	**35.0	54.0	-19.0
14880.00	H	23.0	**40.3	54.0	-13.7
17360.00	H	23.1	**38.1	54.0	-15.9
19840.00	H	24.1	**38.6	54.0	-15.4
22320.00	H	25.2	**37.8	54.0	-16.2
24800.00	H	27.0	**39.4	54.0	-14.6
27000.00	H	28.0	**41.5	54.0	-12.5

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
4960.00	V	3.0	**26.6	54.0	-27.4
7440.00	V	10.7	**34.0	54.0	-20.0
9920.00	V	11.9	**32.6	54.0	-21.4
12400.00	V	15.6	**36.5	54.0	-17.5
14880.00	V	23.0	**39.1	54.0	-14.9
17360.00	V	23.1	**38.6	54.0	-15.4
19840.00	V	24.1	**37.9	54.0	-16.1
22320.00	V	25.2	**37.8	54.0	-16.2
24800.00	V	27.0	**39.4	54.0	-14.6
27000.00	V	28.0	**40.8	54.0	-13.2

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.092) =-20.6dB. Therefore, -20dB is taken as precedence.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

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TEST REPORT No: (5211)239-0015

Radiated Emissions

Test Requirement:	FCC Part 15 Section 15.209
Test Method:	ANSI C63.4
Test Date(s):	2011-08-26
Temperature:	29.0 °C
Humidity:	71.0 %
Atmospheric Pressure:	100.3 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	3Vd.c. (“AAA” size battery x 2)

Limits for Radiated Emissions [FCC 47 CFR 15.209]:

Frequency Range [MHz]	Quasi-Peak Limits [μV/m]
1.705-30	300
30-88	100
88-216	150
216-960	200
Above960	500

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Measurement Data

Test Result of (Transmission mode, Lowest frequency): PASS

Detection mode: Quasi-Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
44.28	H	10.1	23.7	40.0	-16.3
123.68	H	12.9	20.9	43.5	-22.6
222.80	H	10.5	22.3	46.0	-23.7
321.00	H	14.7	25.6	46.0	-20.4
409.96	H	17.7	29.0	46.0	-17.0
649.56	H	21.0	32.3	46.0	-13.7

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
44.28	V	10.1	23.2	40.0	-16.8
123.68	V	12.9	20.6	43.5	-22.9
222.80	V	10.5	22.7	46.0	-23.3
321.00	V	14.7	24.7	46.0	-21.3
409.96	V	17.7	29.2	46.0	-16.8
649.56	V	21.0	32.6	46.0	-13.4

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 120KHz
VBW = 120KHz

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TEST REPORT No: (5211)239-0015

Measurement Data

Test Result of (Transmission mode, Lowest frequency): PASS

Detection mode: Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
2399.99	H	-3.2	58.6	74.0	-15.4
2399.99	V	-3.2	56.1	74.0	-17.9

Detection mode: # Average

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
2399.99	H	-3.2	**38.6	54.0	-15.4
2399.99	V	-3.2	**36.1	54.0	-17.9

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.092) =-20.6dB. Therefore, -20dB is taken as precedence.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

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Measurement Data

Test Result of (Transmission mode, Middle frequency): PASS

Detection mode: Quasi-Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
163.08	H	10.4	21.3	43.5	-22.2
185.84	H	9.9	20.9	43.5	-22.6
265.16	H	13.6	23.4	46.0	-22.6
367.40	H	15.6	24.8	46.0	-21.2
428.96	H	17.7	28.9	46.0	-17.1
532.40	H	19.2	30.2	46.0	-15.8

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
163.08	V	10.4	21.5	43.5	-22.0
185.84	V	9.9	20.2	43.5	-23.3
265.16	V	13.6	23.5	46.0	-22.5
367.40	V	15.6	25.7	46.0	-20.3
428.96	V	17.7	28.1	46.0	-17.9
532.40	V	19.2	30.0	46.0	-16.0

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 120KHz
VBW = 120KHz

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TEST REPORT No: (5211)239-0015

Measurement Data

Test Result of (Transmission mode, Highest frequency): PASS

Detection mode: Quasi-Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
45.56	H	9.9	24.2	40.0	-15.8
254.88	H	13.5	23.6	46.0	-22.4
288.80	H	13.8	23.7	46.0	-22.3
361.08	H	15.4	26.6	46.0	-19.4
439.56	H	17.5	28.0	46.0	-18.0
536.24	H	19.3	29.3	46.0	-16.7

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
45.56	V	9.9	23.2	40.0	-16.8
254.88	V	13.5	23.6	46.0	-22.4
288.80	V	13.8	22.9	46.0	-23.1
361.08	V	15.4	25.8	46.0	-20.2
439.56	V	17.5	28.3	46.0	-17.7
536.24	V	19.3	30.1	46.0	-15.9

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 120KHz
VBW = 120KHz

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TEST REPORT No: (5211)239-0015

Measurement Data

Test Result of (Transmission mode, Highest frequency): PASS

Detection mode: Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
2483.54	H	-3.3	54.5	74.0	-19.5
2483.54	V	-3.3	51.7	74.0	-22.3

Detection mode: # Average

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
2483.54	H	-3.3	**34.5	54.0	-19.5
2483.54	V	-3.3	**31.7	54.0	-22.3

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.092) =-20.6dB. Therefore, -20dB is taken as precedence.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

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TEST REPORT No: (5211)239-0015

Frequency range of Fundamental Emission

Test Requirement:	FCC 47 CFR 15.249
Test Method:	ANSI C63.4:2003 (Section 13.1.7)
Test Date(s):	2011-08-26
Temperature:	29.0 °C
Humidity:	71.0 %
Atmospheric Pressure:	100.3 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	3Vd.c. ("AAA" size battery x 1)

Test Method:

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

Limits for Frequency range of Fundamental Emission:

Frequency [MHz]	FCC Limits [MHz]
2402.00 – 2480.00	2400 – 2483.5

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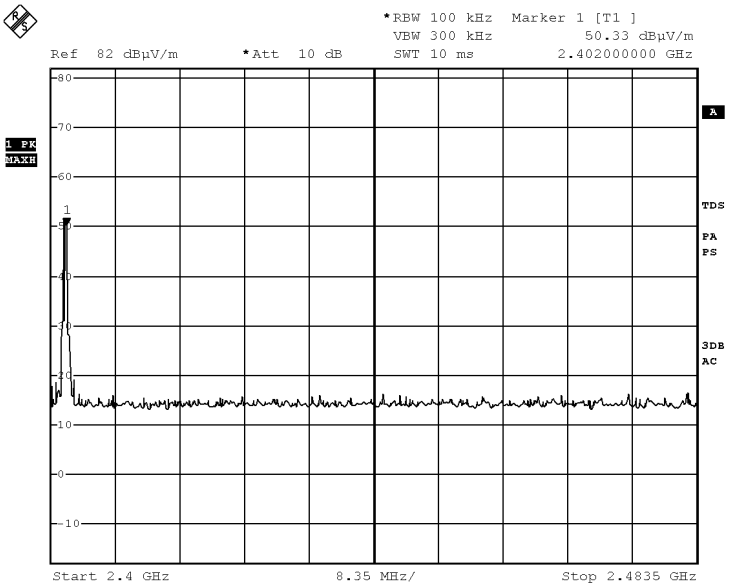
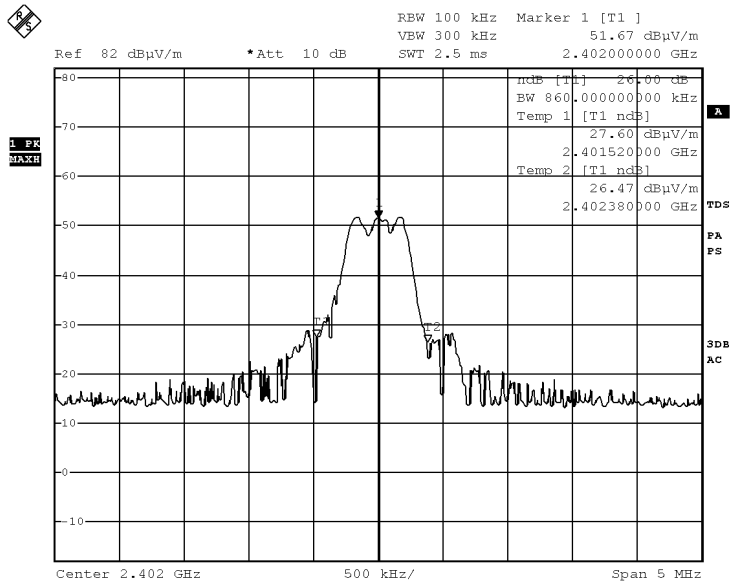
Measurement Data :

Test Result of Frequency Range of Fundamental Emission: PASS
Lowest Frequency – 2402.00MHz



Test Result of 26dB Bandwidth of Fundamental Emission: PASS
Lowest Frequency – 2402.00MHz



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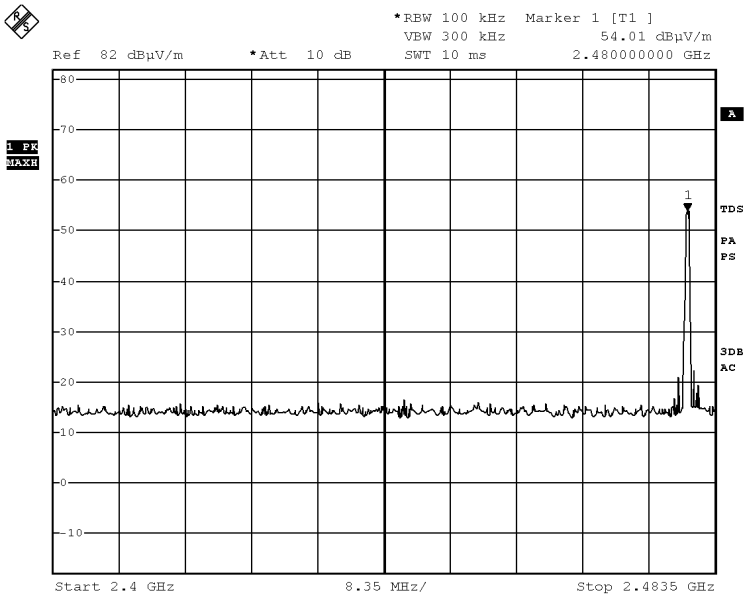
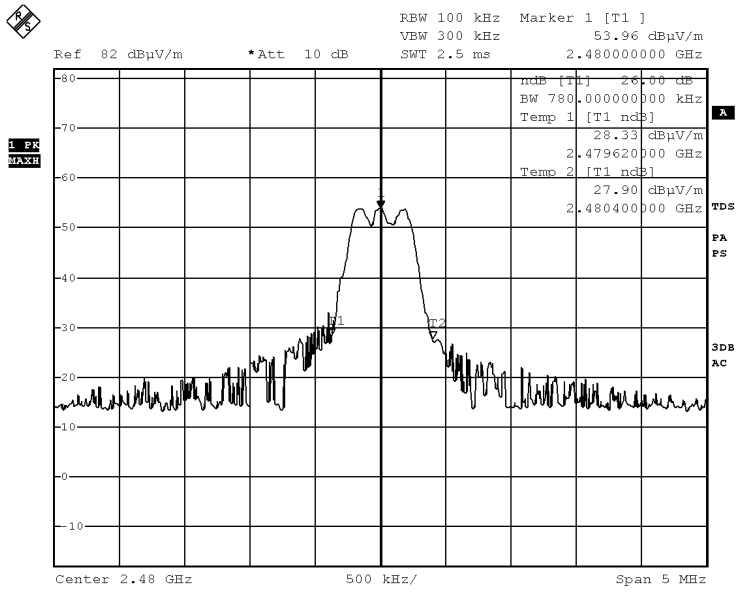
Measurement Data :

Test Result of Frequency Range of Fundamental Emission: PASS
Highest Frequency – 2480.00MHz



Test Result of 26dB Bandwidth of Fundamental Emission: PASS
Highest Frequency – 2480.00MHz



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Duty Cycle Correction During 100msec:

Each function key sends a different series of characters, but each packet period (69msec) never exceeds a series of 16 pulses (0.4msec). Assuming any combination of short or long pulses may be obtained due to encoding the worst case transmit duty cycle would be considered (16 x 0.4msec) per 69msec=9.2% duty cycle. Figure A and B show the characteristics of the pulse train for one of these functions.

Remarks:

Duty Cycle Correction = 20Log(0.092) =-20.6dB
Therefore, -20dB is taken as precedence.

The following figures [Figure A and Figure B] show the characteristics of the pulse train for one of these functions.

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Figure A [Pulse Train]

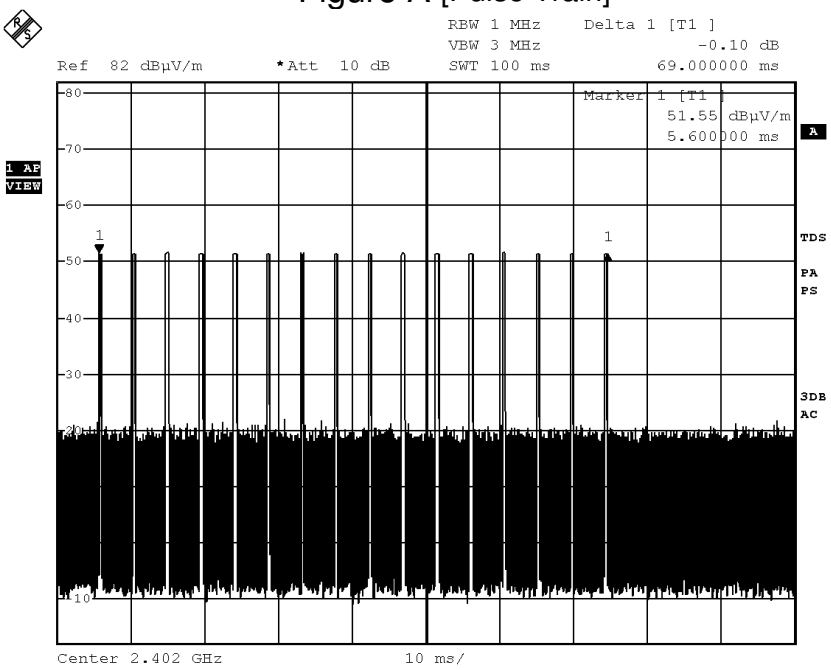
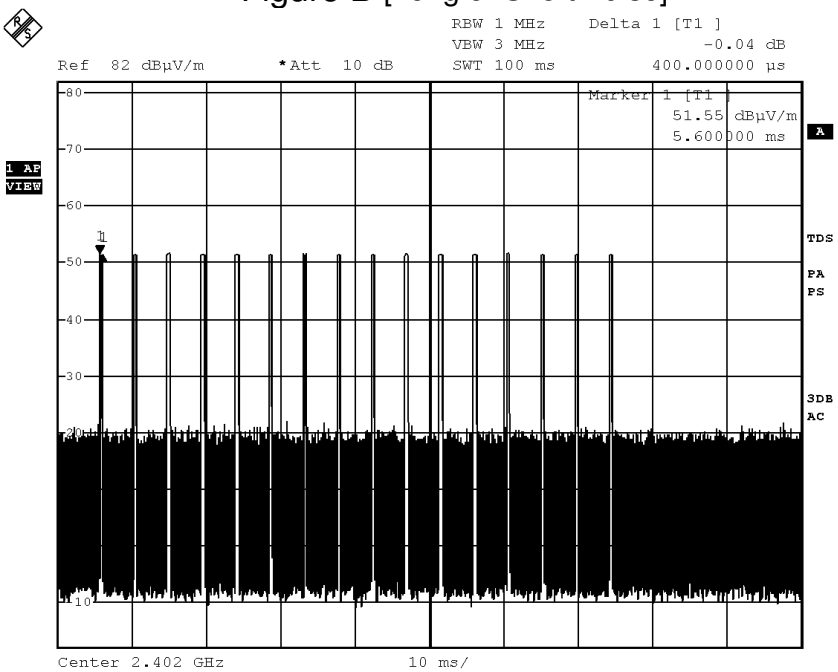


Figure B [Long or Short Pulse]



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Photographs of EUT

Front View of the product

Rear View of the product

Battery compartment

Battery Cover

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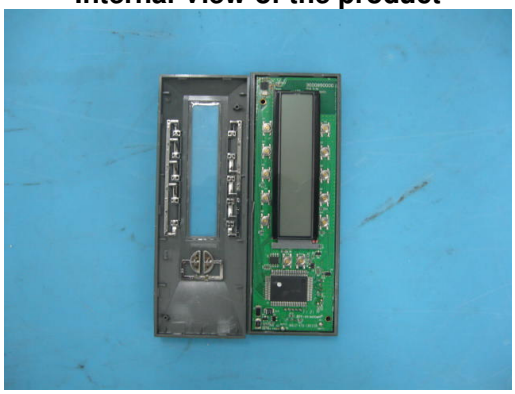
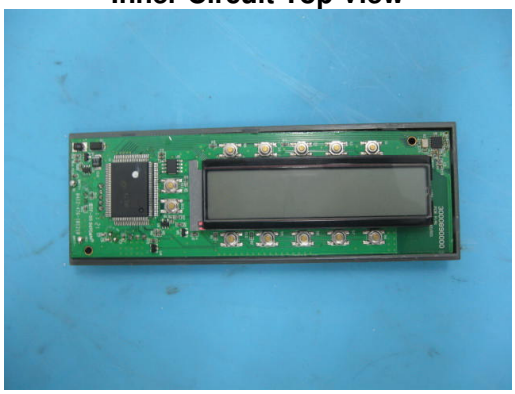
Photographs of EUT

Internal View of the product

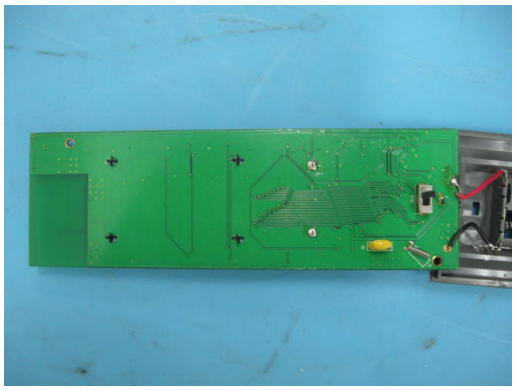


Internal View of the product

Inner Circuit Top View



Inner Circuit Bottom View



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Measurement of Radiated Emission Test Set Up

***** End of Report *****

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