TEST REPORT

Your Ref:

Date: 06 December 2004

Our Ref: 56S040843/02

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FORMAL REPORT ON TESTING IN ACCORDANCE WITH
FCC Parts 15B & C : 2004
OF A
AWOX RF DONGLE AND RF REMOTE CONTROLLER
[Model : RCZ 160MBLM1]
[FCC ID : SKORC11602004A]

TEST FACILITY	Telecoms & EMC, Testing Group, PSB Corporation 1 Science Park Drive, Singapore 118221
FCC REG. NO.	90937 (3m & 10m OATS) 99142 (10m Anechoic Chamber) 871638 (5m Anechoic Chamber)
IND. CANADA REG. NO.	IC 4257 (10m Anechoic Chamber)
PREPARED FOR	Mr Lim Chee Wan Thomson Asia Pacific Holdings Pte Ltd 8 Jurong Town Hall Road #26-01/03 The JTC Summit Singapore 609434 Tel : +65 6379 1389 Fax : +65 6379 1636
JOB NUMBER	56S040843
TEST PERIOD	21 Sep 2004 – 11 Nov 2004

PREPARED BY

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Engineer

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The product was tested in accordance with the client's specifications

Test Results Summary

Test Standard	Description	Pass / Fail
FCC Parts 15B & C: 2004		
15.107 & 15.207	Conducted Emissions	Pass
15.109, 15.209	Radiated Emissions	Pass
15.205	Radiated Emissions (Restricted Band Requirements)	Pass
15.231 (b)	Radiated Emissions (Fundamental and Harmonics)	Pass
15.231 (c)	20dB Bandwidth	Pass
15.35 (c)	Duty Cycle Factor	Pass

Modifications

No modifications were done.

Notes:

1. The Equipment Under Test (EUT) consists of following:
   a. RF dongle (receiver)
   b. RF remote controller (transmitter)
2. The EUT is a Class B device when operates in IrDA mode and meets the FCC Part15B Class B requirements.
3. The RF dongle and RF remote controller which carries model numbers RCT 160MBLM1 and RCR 160MBLM1 are identical to tested model number RCZ 160MBLM1 in term of circuit design, components used and PCB routing. The use of difference models are mainly on marketing purposes.

Description	:	The Equipment Under Test (EUT) is a **RF Dongle and RF Remote Controller**. The former is a receiver while the later is a transmitter. Both units also an IrDA receiver and transmitter.
Manufacturer	:	PT. Thomson Batam Blok 2 Kawasan Industri Batamindo Mukakuning Batam 29433 Indonesia
Model Number	:	RCZ 160MBLM1
FCC ID	:	SKORC11602004A (remote controller)
Serial Number	:	Nil
Microprocessor	:	ST26233 (dongle) Z86L81 (remote controller)
Operating Frequency	:	433.92MHz
Clock / Oscillator Frequency	:	13.22563MHz (dongle and remote controller) 6MHz Resonator (dongle)
Port / Connectors	:	USB port (receiver) Nil (remote controller)
Rated Input Power	:	Powered via USB port of the connected host (receiver) 2 x AA batteries (remote controller)
Accessories	:	Nil

Equipment Description (Including Brand Name)	**Model, Serial & FCC ID Number**	**Cable Description** (List Length, Type & Purpose)
Dell Notebook	M/N: PP05L S/N: 3Y220-REV A00 FCC ID: CXSM507BR01-D480	Nil
Dell AC/DC Adapter	M/N: PA-1650-05D S/N: CN-05U092-71615-1001 FCC ID: Nil	2.0m unshielded power cable
Smart Label Printer	M/N: SLP-220 S/N: B011439700 FCC ID: DoC	2.0m unshielded power cable 2.0m shielded printer (parallel) cable
Smart Label Printer	M/N: SLP-220 S/N: B011439300 FCC ID: DoC	2.0m unshielded power cable 2.0m shielded serial (RS232) cable

EUT OPERATING CONDITIONS

The dongle was powered via a USB connection from the host which was connected to a 110V, 60Hz supply. The remote controller was powered from 2 new AA batteries.

The EUT was exercised in following conditions during the tests:

RF Mode
The remote controller was set to transmit RF signal continuously with maximum output power while the dongle was receiving this signal continuously.

IrDA Mode
The remote controller was set to transmit IrDA signal continuously with maximum output power while the dongle was receiving this signal continuously.

FCC Part 15 (15.107 & 15.207) Conducted Emission Results

RF Mode (Worst Case Operating Mode)

Frequency (MHz)	Q-P Value (dBμV)	Q-P Margin (dB)	AV Value (dBμV)	AV Margin (dB)	Line
0.1576	49.1	-16.7	21.6	-34.2	Live
0.2058	40.7	-23.7	16.2	-38.2	Live
1.7689	27.7	-28.3	14.7	-31.3	Live
1.8543	30.0	-26.0	18.5	-27.5	Neutral
4.0652	26.1	-29.9	17.1	-28.9	Neutral
10.1052	33.0	-27.0	25.7	-24.3	Live

Tested by: TWL

Notes :

1. Environmental Conditions — Temperature: 23°C; Relative Humidity: 55%; Atmospheric Pressure: 1030mbar
2. This test is applicable to dongle only.
3. Both RF and IrDA modes were investigated from 150kHz to 30MHz and RF mode was found to be the worst case operating mode. The above reported results were based on the worst case operating mode (RF mode), using the correct CISPR detectors.
4. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
5. EMI receiver Resolution Bandwidth (RBW) and Video Bandwidth (VBW) settings:
   9kHz - 30MHz
   RBW: 10kHz VBW: 30kHz
6. 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 ±2.4dB.

Conducted Emission Setup (Front View)

Conducted Emission Setup (Rear View)

FCC Part 15 (15.109 & 15.209) Radiated Emission (Spurious Emissions) Results

Test Distance : 3m

Spurious Emissions ranging from 30MHz – 1GHz

Frequency (MHz)	Q-P Value (dBμV/m)	Q-P Margin (dB)	Azimuth (Degrees)	Height (cm)	Polarisation (H/V)
47.9854	30.6	-9.4	179	100	V
66.7028	34.8	-5.2	75	100	V
95.9790	27.6	-15.9	221	100	V
172.3378	32.8	-6.2	228	100	V
--	--	--	--	--	--
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Spurious Emissions above 1GHz

Frequency (MHz)	Peak Value (dBμV/m)	Average Value (dBμV/m)	Average Margin (dB)	Azimuth (Degrees)	Height (cm)	Pol (H/V)
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--	--	--	--	--	--	--
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Tested by: CCM

Notes :

1. Environmental Conditions — Temperature 24°C; Relative Humidity 58%; Atmospheric Pressure 1030mbar
2. Both RF and IrDA modes were investigated from 30MHz to 5GHz and RF mode was found to be the worst case operating mode. The above reported results were based on the worst case operating mode (RF mode), using the correct CISPR detectors.
3. "--" indicates no emissions were found and shows compliance to the limits as specified in sections 15.109 and 15.209. The emissions were merely the noise floor.
4. Quasi-peak measurement was used for frequency measurement up to 1GHz. Average and peak measurements were used for emissions above 1GHz. The average measurement was done by averaging over a complete cycle of the pulse train, including the blanking interval as the pulse train duration does not exceed 0.1 second, i.e:
   Average value = Peak value + duty cycle factor (refer to duty cycle factor results for details)
5. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
6. EMI receiver Resolution Bandwidth (RBW) and Video Bandwidth (VBW) settings:
   30MHz - 1GHz
   RBW: 120kHz VBW: 1MHz
   >1GHz
   RBW: 1MHz VBW: 1MHz

7. The upper frequency of radiated emission investigations were according to requirements stated in Section 15.33 (a) for intentional radiators & Section 15.33 (b) for unintentional radiators.

8. 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 – 5GHz (QP only @ 3m & 10m) is ±4.3dB (for EUTs < 0.5m X 0.5m X 0.5m).

FCC Part 15 (15.205) Radiated Emissions (Restricted Band Requirements) Results

Test Distance : 3m

Spurious Emissions ranging from 30MHz – 1GHz

Frequency (MHz)	Q-P Value (dBμV/m)	Q-P Margin (dB)	Azimuth (Degrees)	Height (cm)	Polarisation (H/V)
609.6812	34.6	-11.4	220	100	V
--	--	--	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--

Spurious Emissions above 1GHz

Frequency (MHz)	Peak Value (dBμV/m)	Average Value (dBμV/m) See Note 2	Average Margin (dB) See Note 3	Azimuth (Degrees)	Height (cm)	Pol (H/V)
1103.5856	33.0	--	-21.0	213	105	H
--	--	--	--	--	--	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--

Tested by: CCM

Notes :

1. Environmental Conditions — Temperature 24°C; Relative Humidity 58%; Atmospheric Pressure 1030mbar
2. Both RF and IrDA modes were investigated from 30MHz to 5GHz and RF mode was found to be the worst case operating mode. The above reported results were based on the worst case operating mode (RF mode), using the correct CISPR detectors.
3. As the measured peak shows compliance to the average limit, as such no average measurement was required.
4. The average margin indicates the margin of the measured peak value below the average limit.
5. "--" indicates no emissions were found and shows compliance to the limits as specified in sections 15.209. The emissions were merely the noise floor.
6. Quasi-peak measurement was used for frequency measurement up to 1GHz. Average and peak measurements were used for emissions above 1GHz. The average measurement was done by averaging over a complete cycle of the pulse train, including the blanking interval as the pulse train duration does not exceed 0.1 second, i.e:
   Average value = Peak value + duty cycle factor (refer to duty cycle factor results for details)
7. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.

8. EMI receiver Resolution Bandwidth (RBW) and Video Bandwidth (VBW) settings:
   30MHz - 1GHz
   RBW: 120kHz VBW: 1MHz
   >1GHz
   RBW: 1MHz VBW: 1MHz
9. The peak emissions above 1GHz show compliance to the requirement stated in Section 15.35 (b).
10. The upper frequency of radiated emission investigations were according to requirements stated in Section 15.33 (a) for intentional radiators & Section 15.33 (b) for unintentional radiators.
11. 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 – 5GHz (QP only @ 3m & 10m) is ±4.3dB (for EUTs < 0.5m X 0.5m X 0.5m).

FCC Part 15 (15.231(b)) Radiated Emissions (Fundamental and Harmonics) Results

Test Distance : 3m

Frequency (MHz)	Peak Value (dBμV/m)	Average Value (dBμV/m)	Average Margin (dB)	Azimuth (Degrees)	Height (cm)	Pol (H/V)
433.9230	97.2	77.2	-3.6	90	100	H
867.9482	53.0	33.0	-27.8	300	100	H
1299.9241	44.9	24.9	-35.7	117	100	H
1735.7514	41.0	21.0	-39.6	20	101	H
2169.8125	43.0	23.0	-37.6	0	100	H
2603.5478	45.0	25.0	-35.6	0	100	H

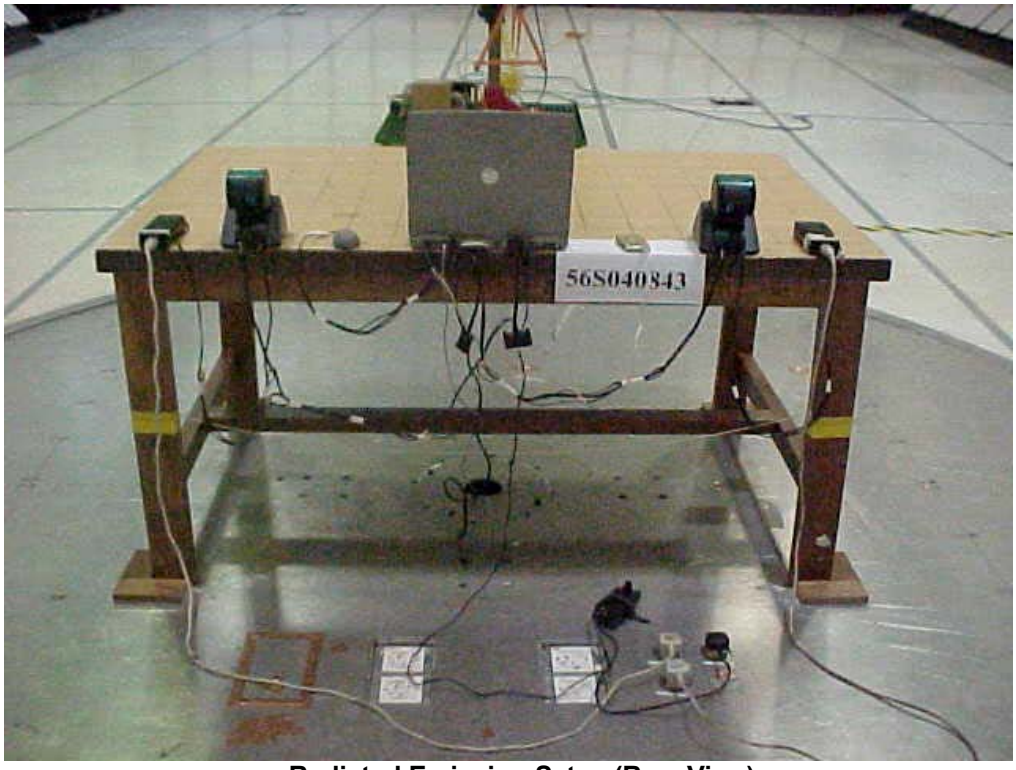
Tested by: ATH

Notes :

1. Environmental Conditions — Temperature 24°C; Relative Humidity 58%; Atmospheric Pressure 1030mbar
2. This test is applicable to remote controller only.
3. Average measurement was employed. The average measurement was done by averaging over a complete cycle of the pulse train, including the blanking interval as the pulse train duration does not exceed 0.1 second, i.e:
   Average value = Peak value + duty cycle factor (refer to duty cycle factor results for details)
4. Fundamental field strength limit @ 3m = 20 log [41.6667(F) – 7083.3333] dBμV/m
   where F = RF carrier in MHz (433.92MHz)
5. Harmonics field strength limit @ 3m = Fundamental filed strength limit (dBμV/m) – 20dB
6. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
7. EMI receiver Resolution Bandwidth (RBW) and Video Bandwidth (VBW) settings:
   13MHz – 30MHz
   RBW: 9kHz VBW: 30kHz

   30MHz - 1GHz
   RBW: 120kHz VBW: 1MHz
8. The upper frequency of radiated emission investigations were according to requirements stated in Section 15.33 (a) for intentional radiators & Section 15.33 (b) for unintentional radiators.
9. 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 – 5GHz (QP only @ 3m & 10m) is ±4.3dB (for EUTs < 0.5m X 0.5m X 0.5m).

Radiated Emission Setup (Front View)



Radiated Emission Setup (Rear View)

FCC Part 15 (15.231 (c)) 20dB Bandwidth Results

The EUT shows compliance to the requirements of this section, which states the 20dB bandwidth of the emissions shall no wider than 0.25% of the center frequency for the device operating above 70MHz and below 900MHz.

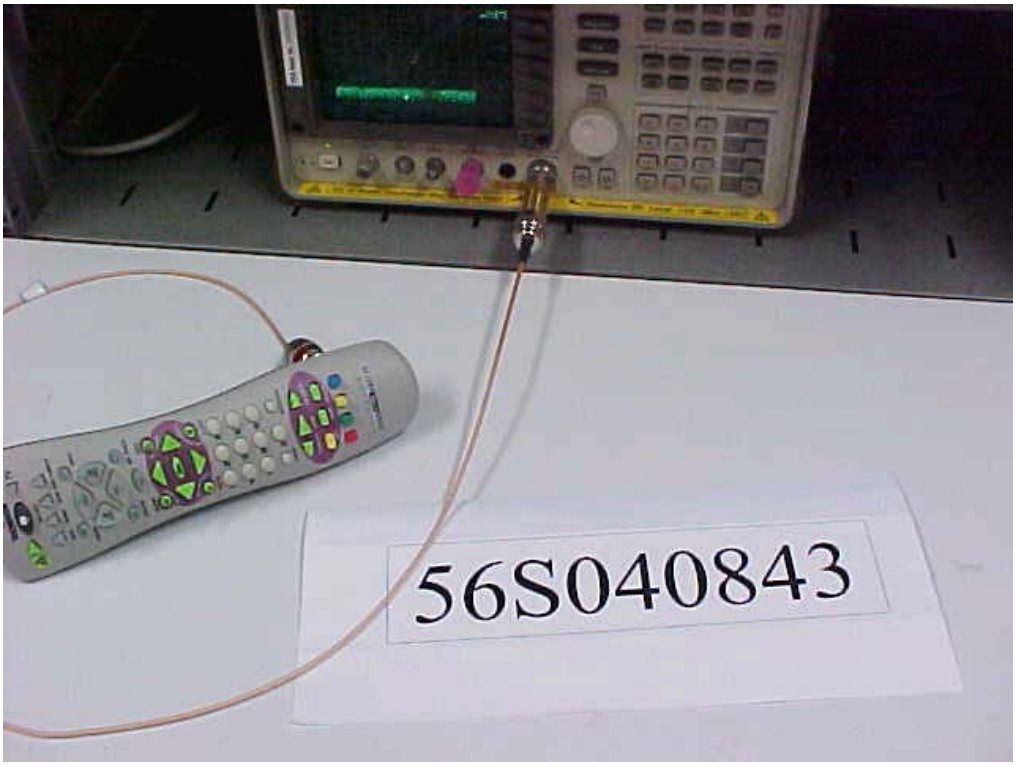
Carrier Frequency (MHz)	20dB Bandwidth (MHz)	20dB Bandwidth Limit (MHz)	Results
433.9200	0.9470	1.0848MHz	Pass

Please refer to attached Plot 1 for details.

Tested by: LCH

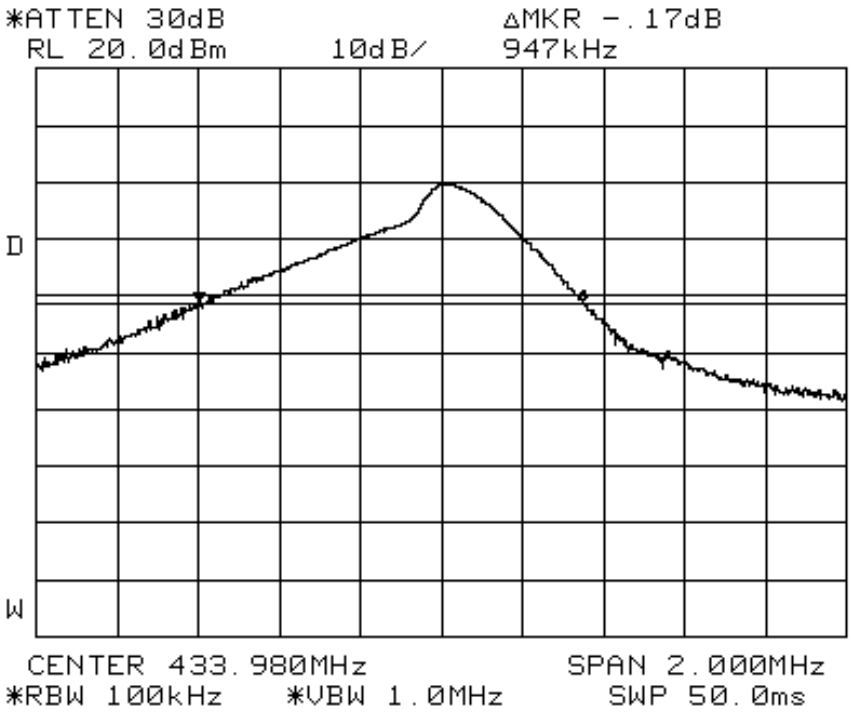
Notes :

1. This test is applicable to remote controller only.
2. The maximum allowable 20dB Bandwidth was computed as shown below:
   Maximum 20dB Bandwidth = 0.25% x Carrier Frequency
   = 0.25% x 433.92MHz
   = 1.0848MHz
3. Environmental Conditions — Temperature 24°C; Relative Humidity 60%; Atmospheric Pressure 1030mbar



20dB Bandwidth Measurement Test Setup

20dB BANDWIDTH PLOT



Plot 1 – 20dB Bandwidth

FCC Part 15 (15.35 (c)) Duty Cycle Factor Results

The FCC 15.35(c) states for pulse operation which the pulse train does not exceed 0.1s, the average field strength of the radiated emissions shall be determined by averaging over the one complete pulse train, including the blanking interval.

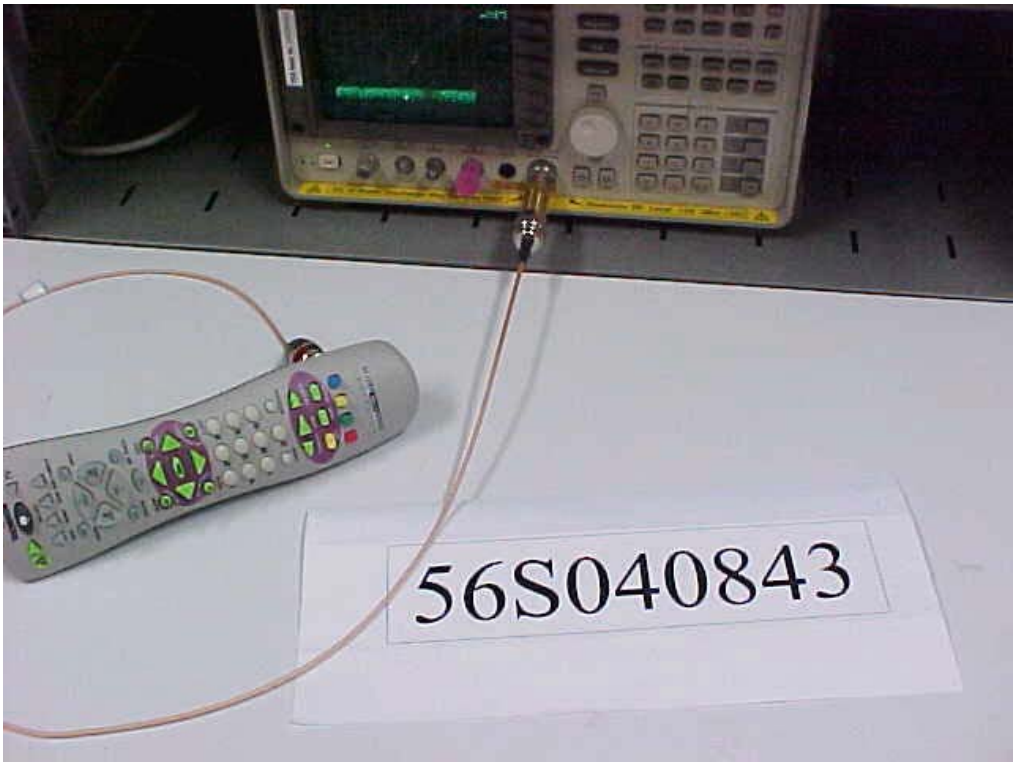
The duty cycle factor was computed as shown below:

Period	=	12.6ms (refer to plot 2)
Total On Time (Longest)	=	(25 x Pulse Width 1) + (1 x Pulse Width 2)
	=	(25 x 0.050ms) + (1 x 0.1067ms)
	=	1.26067ms (refer to plots 3 and 4)
Duty Cycle Factor (Worst case)	=	20 log [Total On Time / Period] dB
	=	20 log [1.26067ms / 12.6ms] dB
	=	-20.0dB

Tested by: LCH

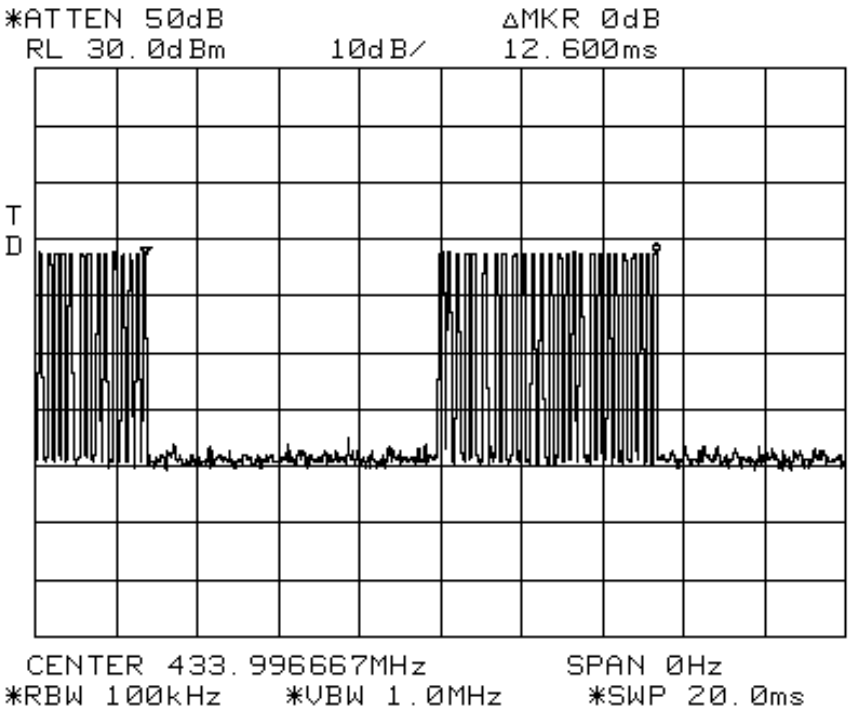
Notes :

1. This test is applicable to remote controller only.
2. Environmental Conditions — Temperature: 24°C; Relative Humidity: 60%; Atmospheric Pressure: 1030mbar

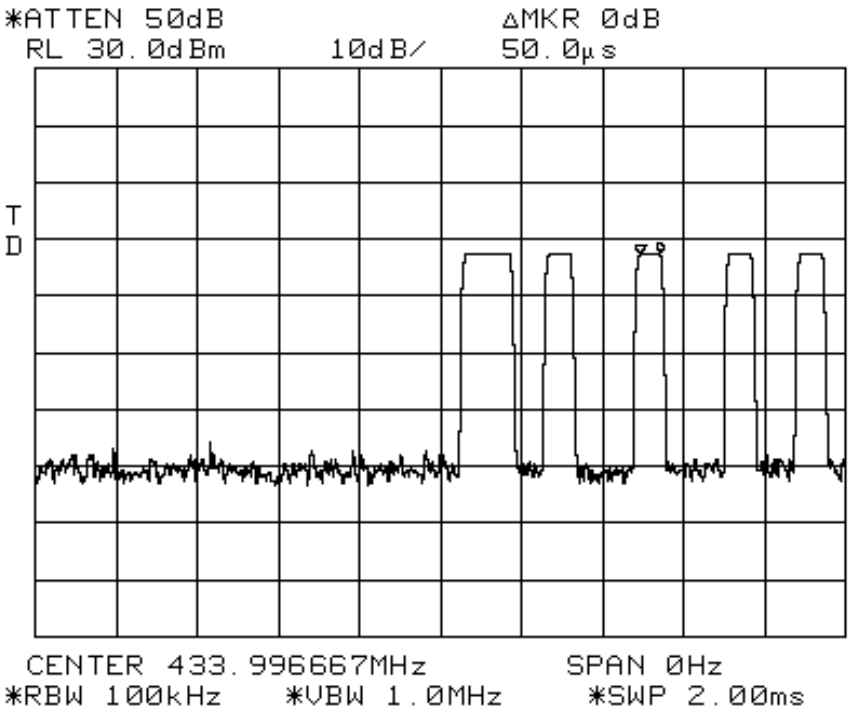


Duty Cycle Factor Measurement Test Setup

DUTY CYCLE PLOT

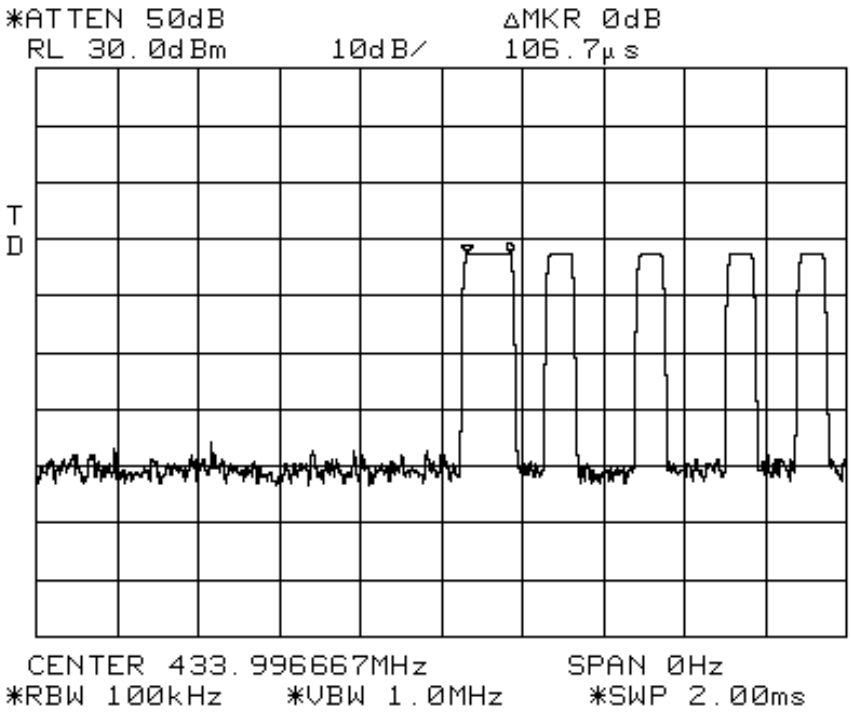


Plot 2 - Period



Plot 3 - Pulse Width 1

DUTY CYCLE PLOT



Plot 4 - Pulse Width 2

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June 2004

ANNEX A

TEST INSTRUMENTATION & GENERAL PROCEDURES

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3m OATS Test Instrumentation
(Conducted Emissions)

Instrument	Model	S/No	Cal Due Date	
R&S Test Receiver (9kHz-30MHz)	ESH3	862301/005	24 Jun 2005	x
Schaffner Pulse Limiter – PL5	CFL 9206	1720	01 Apr 2005	x
EMCO LISN (for EUT) – LISN6	3825/2	9309-2127	20 May 2005	x

10m Anechoic Chamber Test Instrumentation
(Radiated Emissions)

Instrument	Model	S/No	Cal Due Date	
R&S Test Receiver (20Hz-26.5GHz) – ESMI3	ESMI	829214/005 829550/004	01 Sep 2005	x
HP Preamplifier (0.01-3GHz) – PA5	87405A	3950M00352	01 Apr 2005	x
HP Preamplifier (for ESMI3, 0.01-3GHz) – PA6	87405A	3950M00353	01 Apr 2005	x
MITEQ Preamplifier (0.1-26.5GHz) – PA11	NSP2650-N	728231	01 Apr 2005	x
Schaffner Bilog Antenna – BL5	CBL6143	5041	19 May 2005	x
EMCO Horn Antenna – H14	3115	0003-6087	22 Jun 2005	x

20dB Bandwidth and Duty Cycle Factor Test Instrumentation

Instrument	Model	S/No	Cal Due Date	
HP Spectrum Analyzer	8563E	3846A09953	16 Dec 2004	x

TEST INSTRUMENTATION & GENERAL PROCEDURES ANNEX A

CONDUCTED EMISSIONS TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.

2. The power supply for the EUT (in this case the host unit of the dongle where it connected to) was fed through a 50Ω/50μH EUT LISN, connected to filtered mains.

3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.

4. All other supporting equipment were powered separately from another LISN.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition.

2. A scan was made on the NEUTRAL line over the required frequency range using an EMI test receiver.

3. High peaks, relative to the limit line, were then selected.

4. The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10kHz. Both Quasi-peak and Average measurements were made.

5. Steps 2 to 4 were then repeated for the LIVE line.

Sample Calculation Example

At 20 MHz	limit = 250 μV = 47.96 dBμV
Transducer factor of LISN, pulse limiter & cable loss at 20 MHz = 11.2 dB	
Q-P reading obtained directly from EMI Receiver = 40 dBμV (Calibrated for system losses)	
Therefore, Q-P margin = 40 - 47.96 = -7.96	i.e. **7.96 dB below limit**

TEST INSTRUMENTATION & GENERAL PROCEDURES ANNEX A

RADIATED EMISSIONS TEST DESCRIPTION (10m ANC)

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m X 1.0m X 0.8m high, non-metallic table.

2. The filtered power supply for the EUT and supporting equipment were tapped from the appropriate power sockets located on the turntable.

3. The relevant broadband antenna was set at the required test distance away from the EUT and supporting equipment boundary.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition.

2. A prescan was carried out to find out the EUT highest emissions relative to the limit. For the dongle, rotating the dongle which lied on the table was done. For the remote controller, rotating the EUT in three orthogonal axes were conducted to determine which attitude and arrangement produced such emissions.

3. The final measurement was then carried out at the selected frequency points based on the highest emissions arrangement found from step 2. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner:

   a. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen.
   b. The EUT was then rotated to the direction that gave the maximum emission.
   c. Finally, the antenna height was adjusted to the height that gave the maximum emission.

4. For non-carrier and non-harmonic components, a Quasi-peak measurement was made for that frequency point if it was less than or equal to 1GHz. For frequency point that above 1GHz, both Peak and Average measurements were carried out.

5. For carrier and harmonic components, average and peak measurements were made.

6. Steps 3 and 4 were repeated for the next frequency point, until all selected frequency points were measured.

7. The frequency range covered was from 30MHz to 25GHz, using the Bi-log antenna for frequencies from 30MHz up to 3GHz, and the Horn antenna above 3GHz.

Sample Calculation Example

At 300 MHz limit = 200 μV/m = 46 dBμV/m
Log-periodic antenna factor & cable loss at 300 MHz = 18.511 dB
Q-P reading obtained directly from EMI Receiver = 40 dBμV/m (Calibrated level including antenna factors & cable losses)
Therefore, Q-P margin = 40 - 46 = -6 i.e. **6 dB below limit**

20dB BANDWIDTH TEST DESCRIPTION

Test Set-up

1. The EUT (remote controller) was set up as shown in the setup photo.

2. The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.

3. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 100kHz and 1MHz.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to transmit continuously at maximum power.

2. The center frequency of the spectrum analyser was set to the transmitting frequency with the frequency span wide enough to capture the 20dB bandwidth of the transmitting frequency.

3. The spectrum analyser was set to max hold to capture the transmitting frequency. The signal capturing was continuous until no further changes were observed.

4. The peak of the transmitting frequency was detected with the marker peak function of the spectrum analyser. The frequencies below the 20dB peak frequency at lower (f_L) and upper (f_H) sides of the transmitting frequency were marked and measured by using the marker-delta function of the spectrum analyser.

5. The 20dB bandwidth of the transmitting frequency is the frequency difference between the marked lower and upper frequencies, $| f_H – f_L |$.

DUTY CYCLE FACTOR TEST DESCRIPTION

Test Set-up

1. The EUT (remote controller) was set up as shown in the setup photo.

2. The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.

3. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 100kHz and 1MHz.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition.

2. Capture the maximum turn on time of the EUT (by pressing the EUT button which produces maximum on time) with spectrum analyser in max hold mode with span of zero.

3. Record the total on time and off time of the EUT before the EUT is transmitting again.

4. The duty cycle factor is computed as shown below:

   Duty Cycle Factor (Worst case) = 20 log [Total On Time / Period] dB

ANNEX B

EUT PHOTOGRAPHS / DIAGRAMS

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

EUT PHOTOGRAPHS

Front View – RF Dongle

Rear View – RF Dongle

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

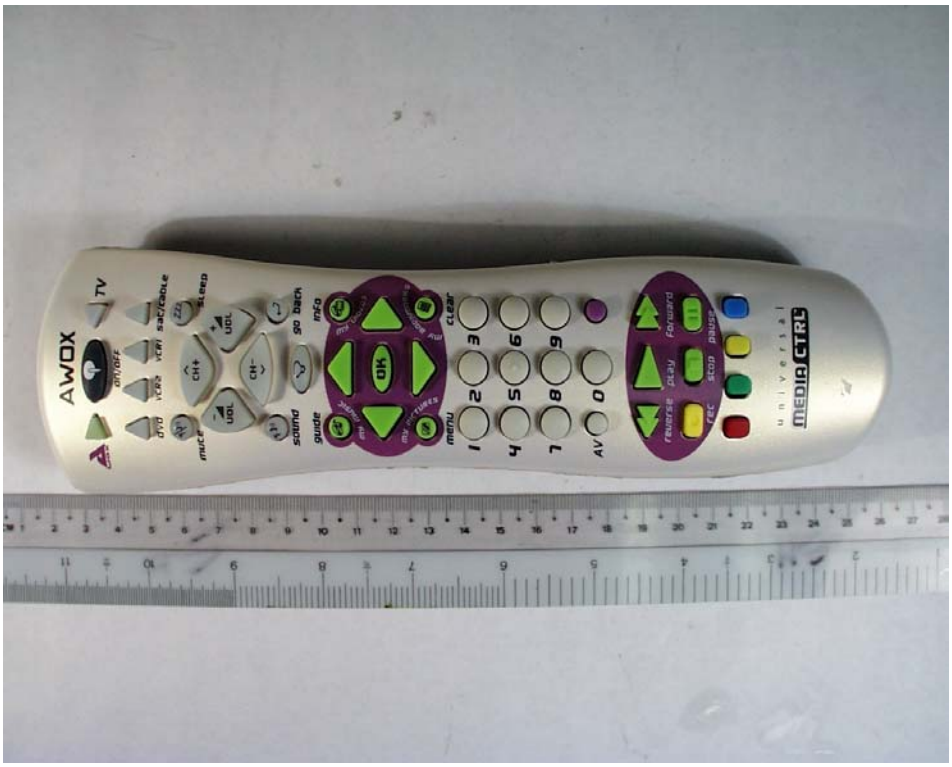
EUT PHOTOGRAPHS

Right View – RF Dongle

Left View – RF Dongle

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

EUT PHOTOGRAPHS



Front View – RF Remote Controller

Rear View – RF Remote Controller

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

EUT PHOTOGRAPHS

Rigth View – RF Remote Controller

Left View – RF Remote Controller

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

EUT PHOTOGRAPHS

Top Housing External View – RF Dongle

Top Housing Internal View – RF Dongle

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

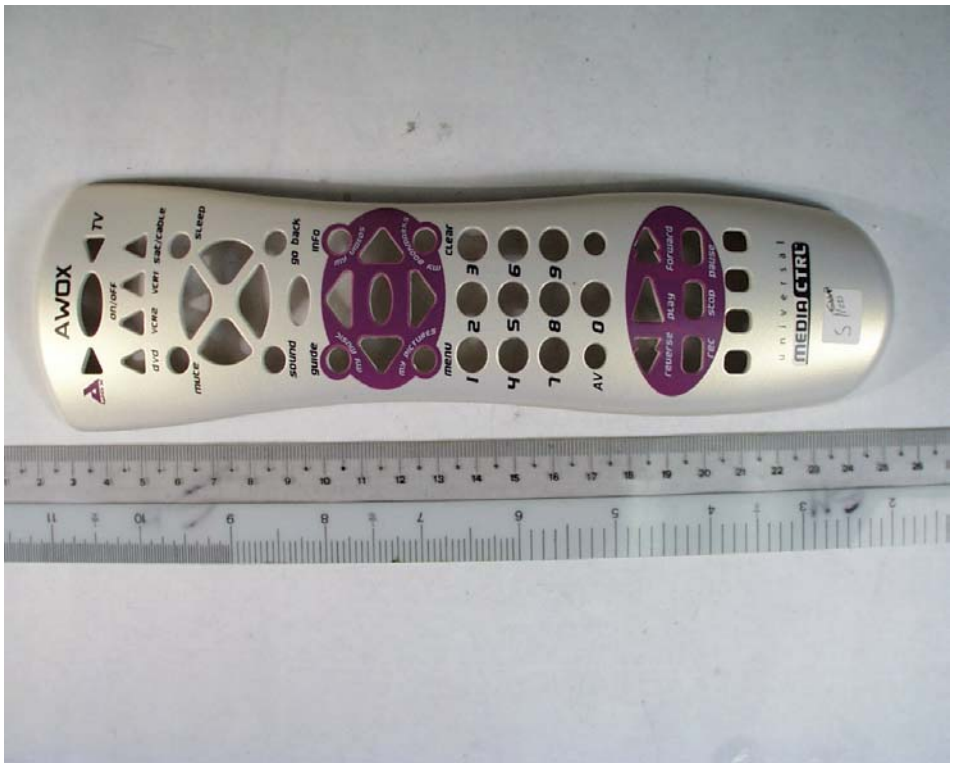
EUT PHOTOGRAPHS

Bottom Housing External View – RF Dongle

Bottom Housing Internal View – RF Dongle

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

EUT PHOTOGRAPHS



Top Housing External View – RF Remote Controller

Top Housing Internal View – RF Remote Controller

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

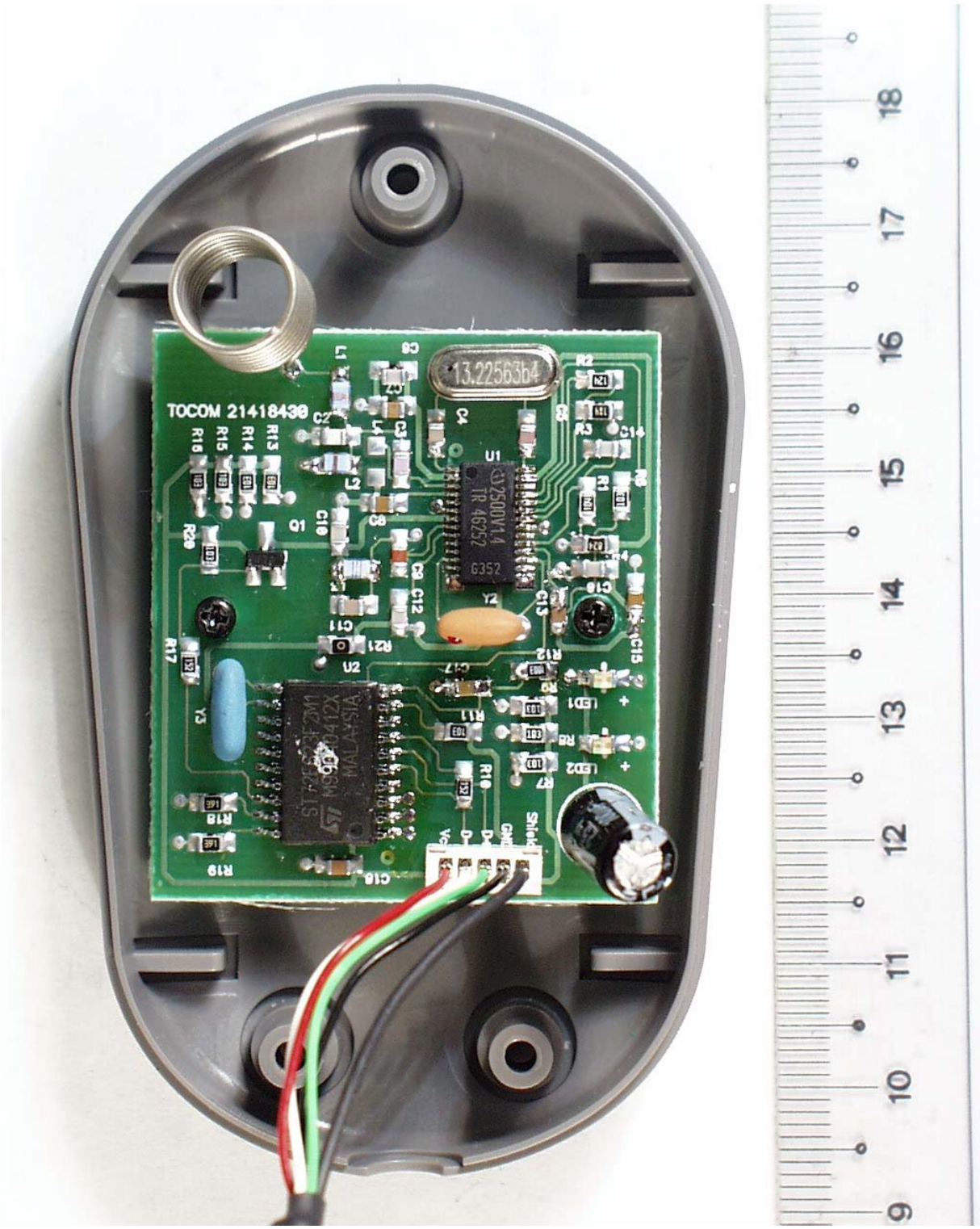
EUT PHOTOGRAPHS

Bottom Housing External View – RF Remote Controller

Bottom Housing Internal View – RF Remote Controller

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

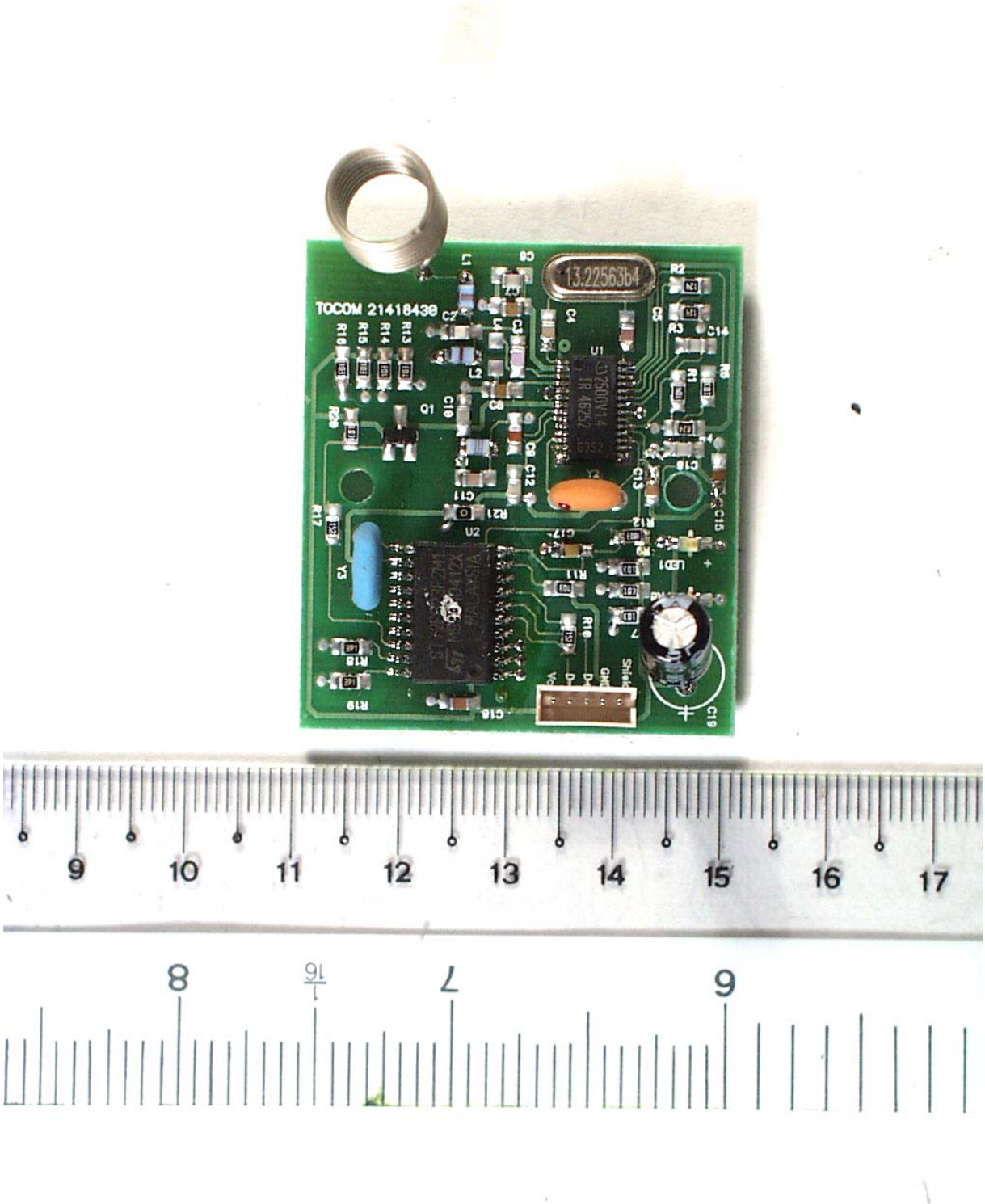
PCB PHOTOGRAPHS



Overall Internal View – RF Dongle

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

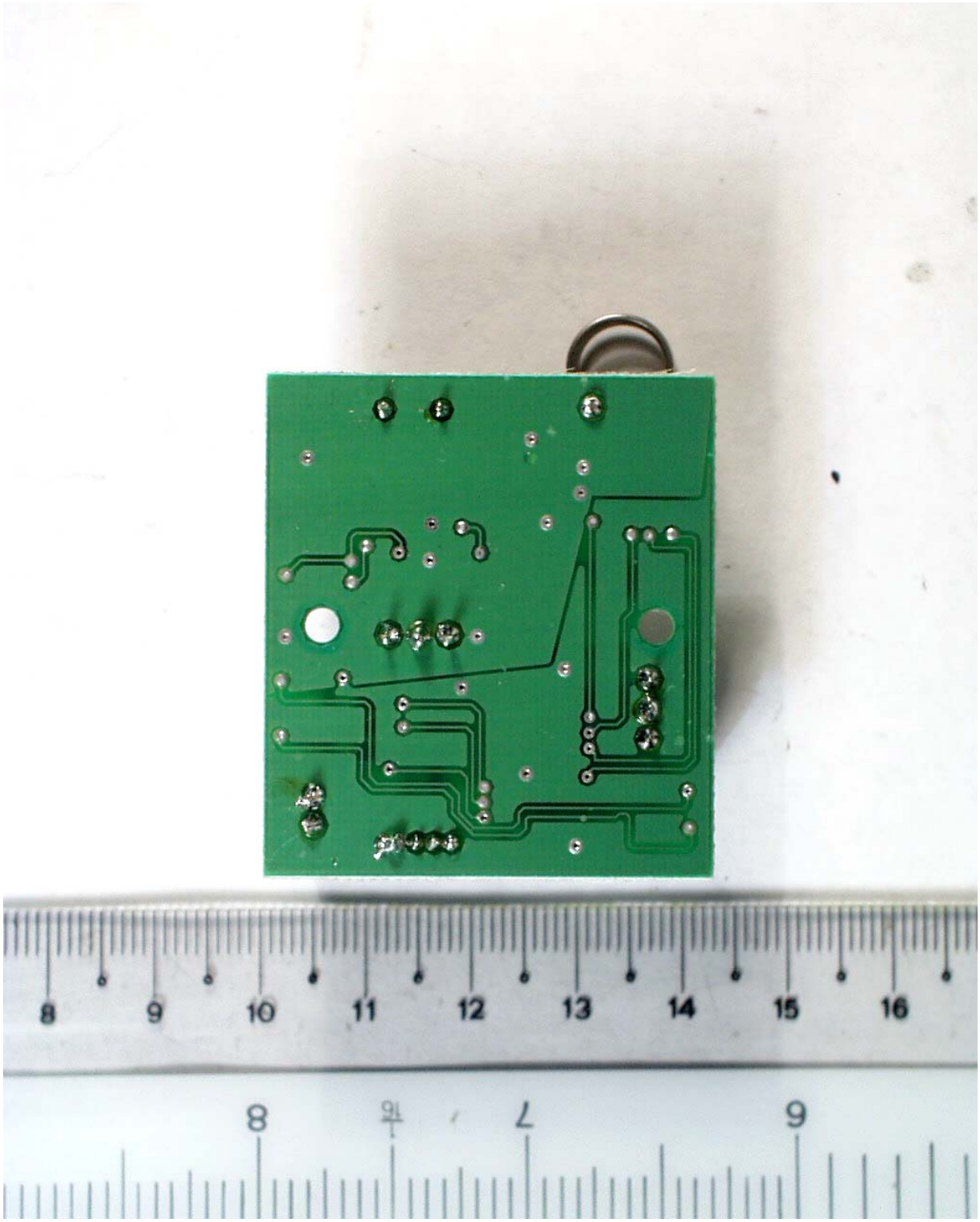
PCB PHOTOGRAPHS



Component Side – RF Dongle

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

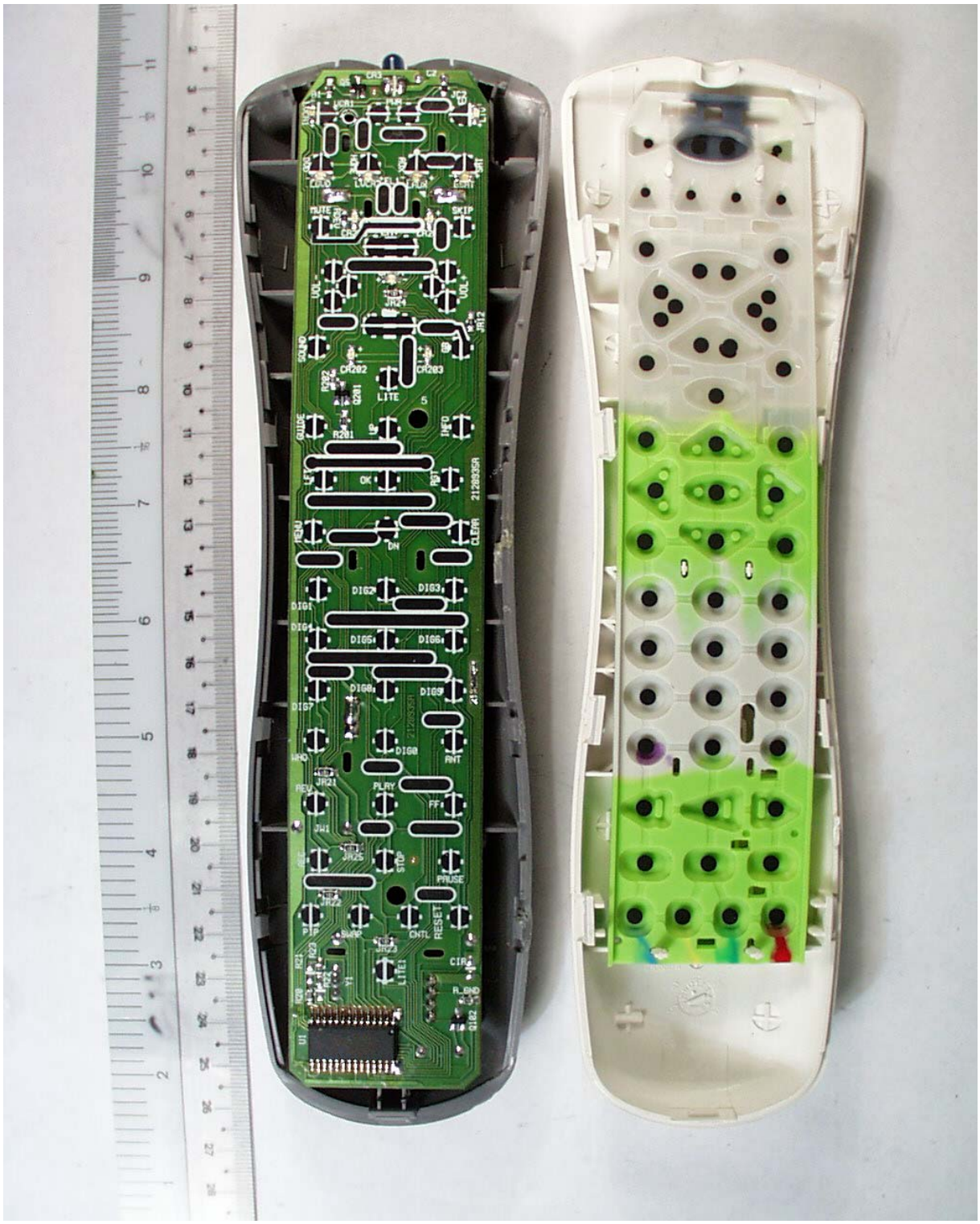
PCB PHOTOGRAPHS



Trace Side – RF Dongle

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

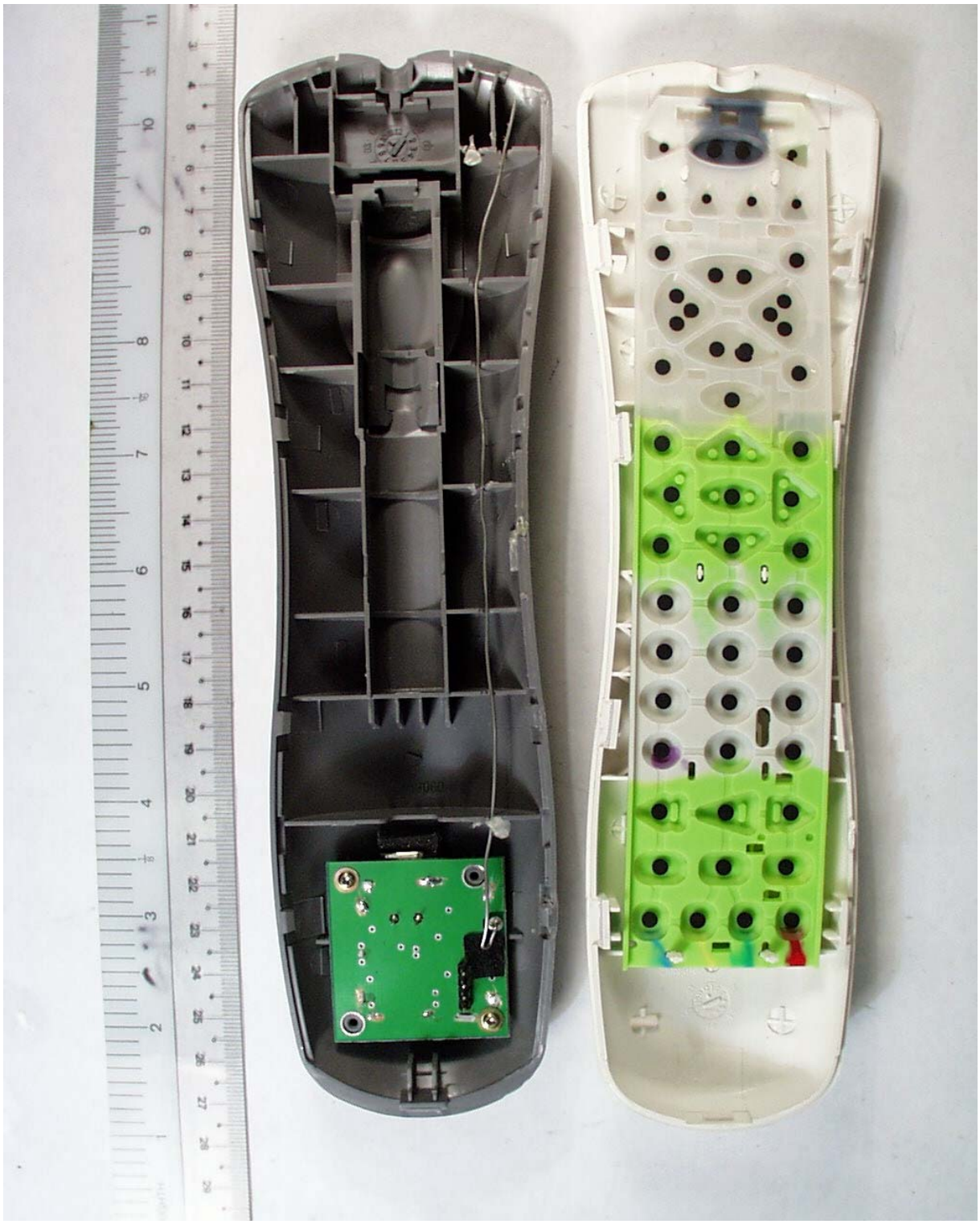
PCB PHOTOGRAPHS



Overall Internal View (Main PCB) – RF Remote Controller

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

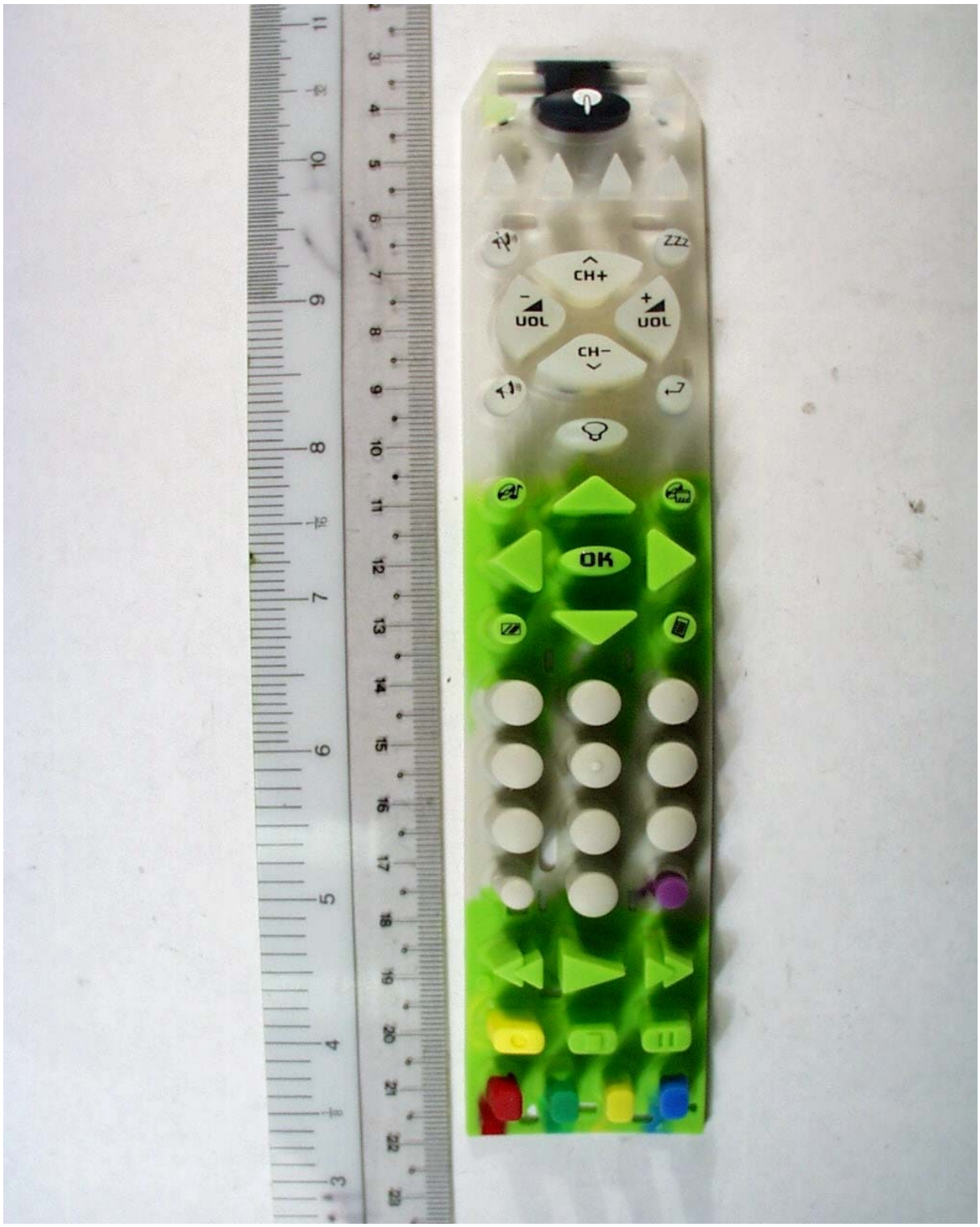
PCB PHOTOGRAPHS



Overall Internal View (RF Module) – RF Remote Controller

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

PCB PHOTOGRAPHS



Keypad Top View – RF Remote Controller

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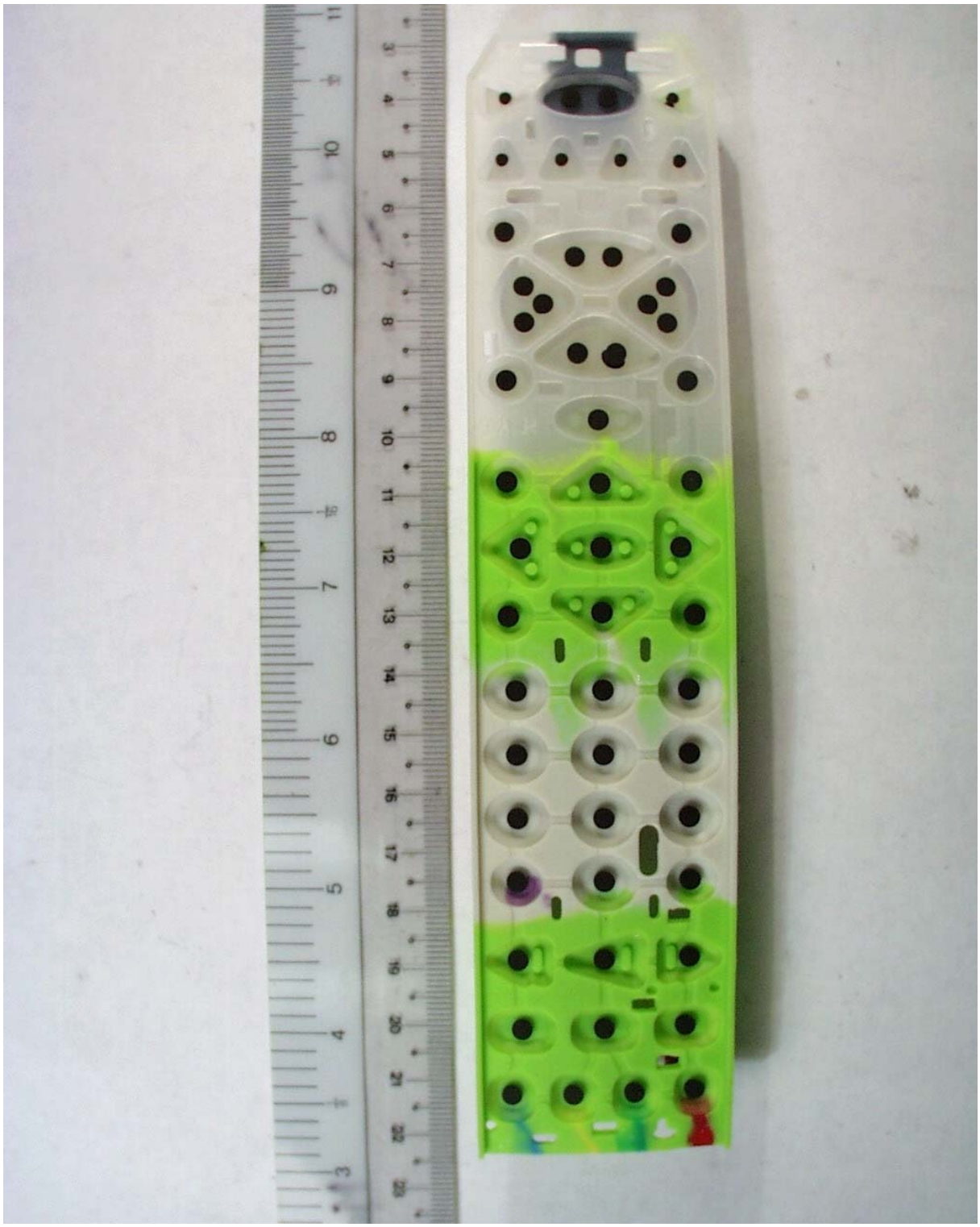
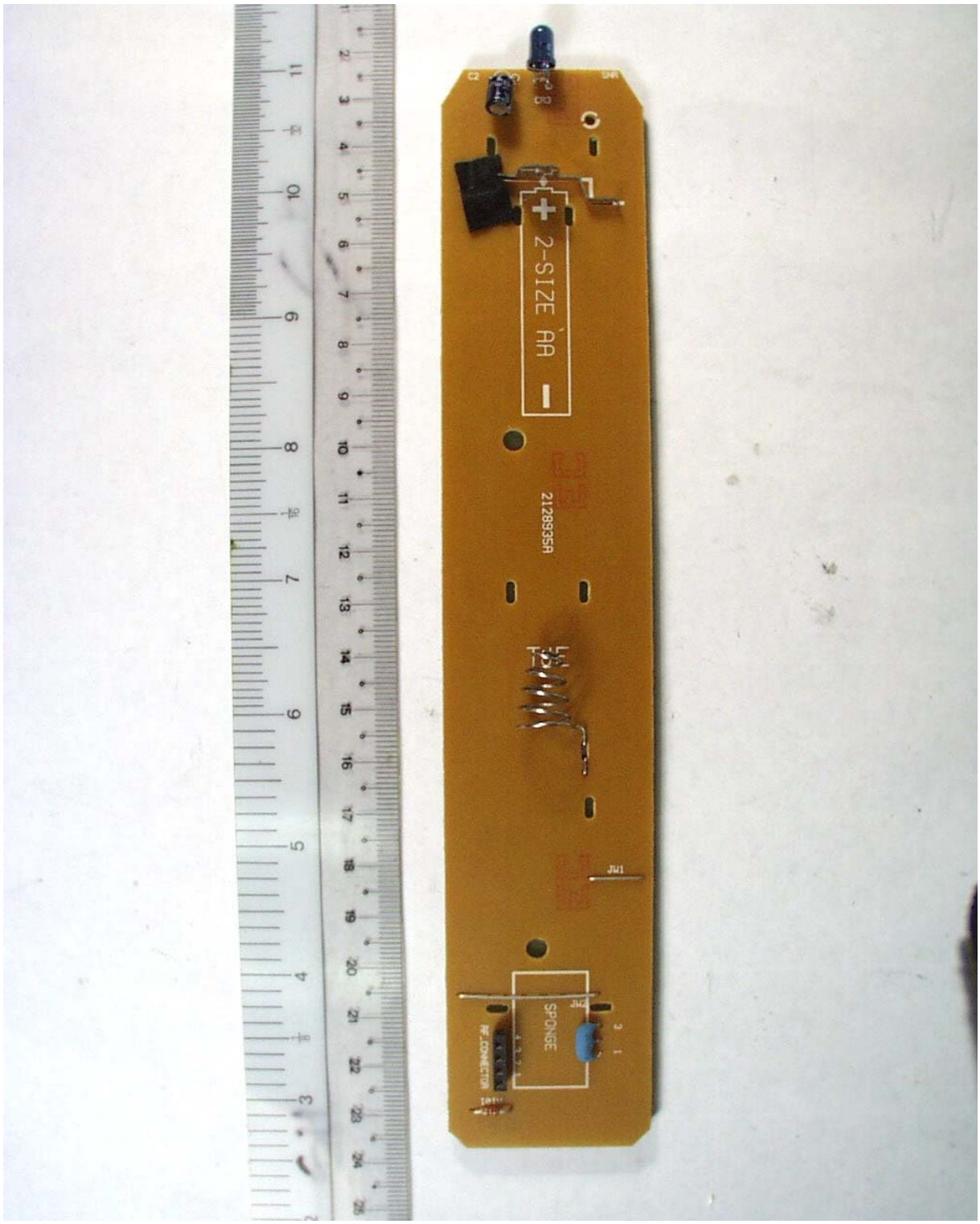
PCB PHOTOGRAPHS



Keypad Bottom View – RF Remote Controller

PCB PHOTOGRAPHS



Component Side (Main PCB)– RF Remote Controller

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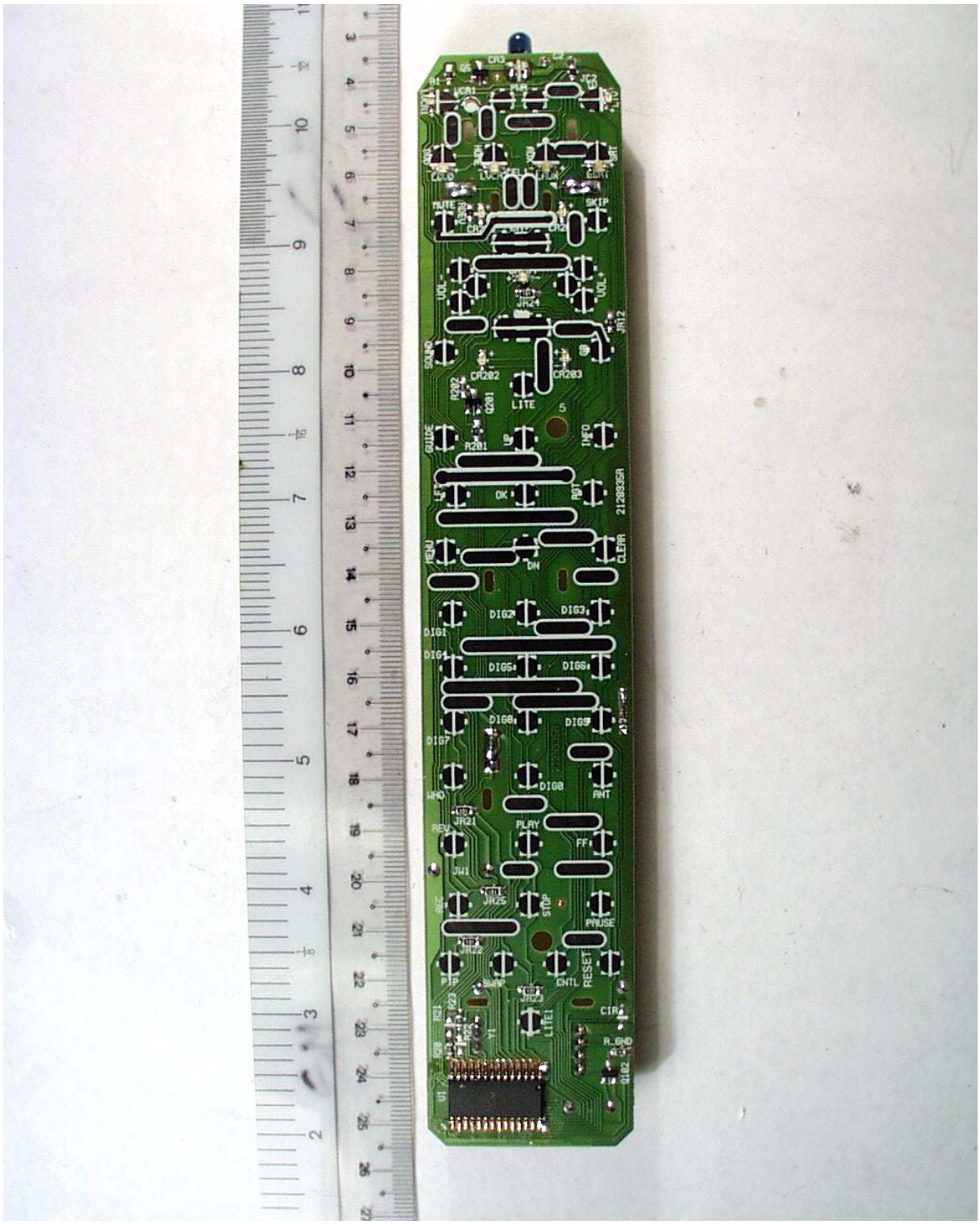
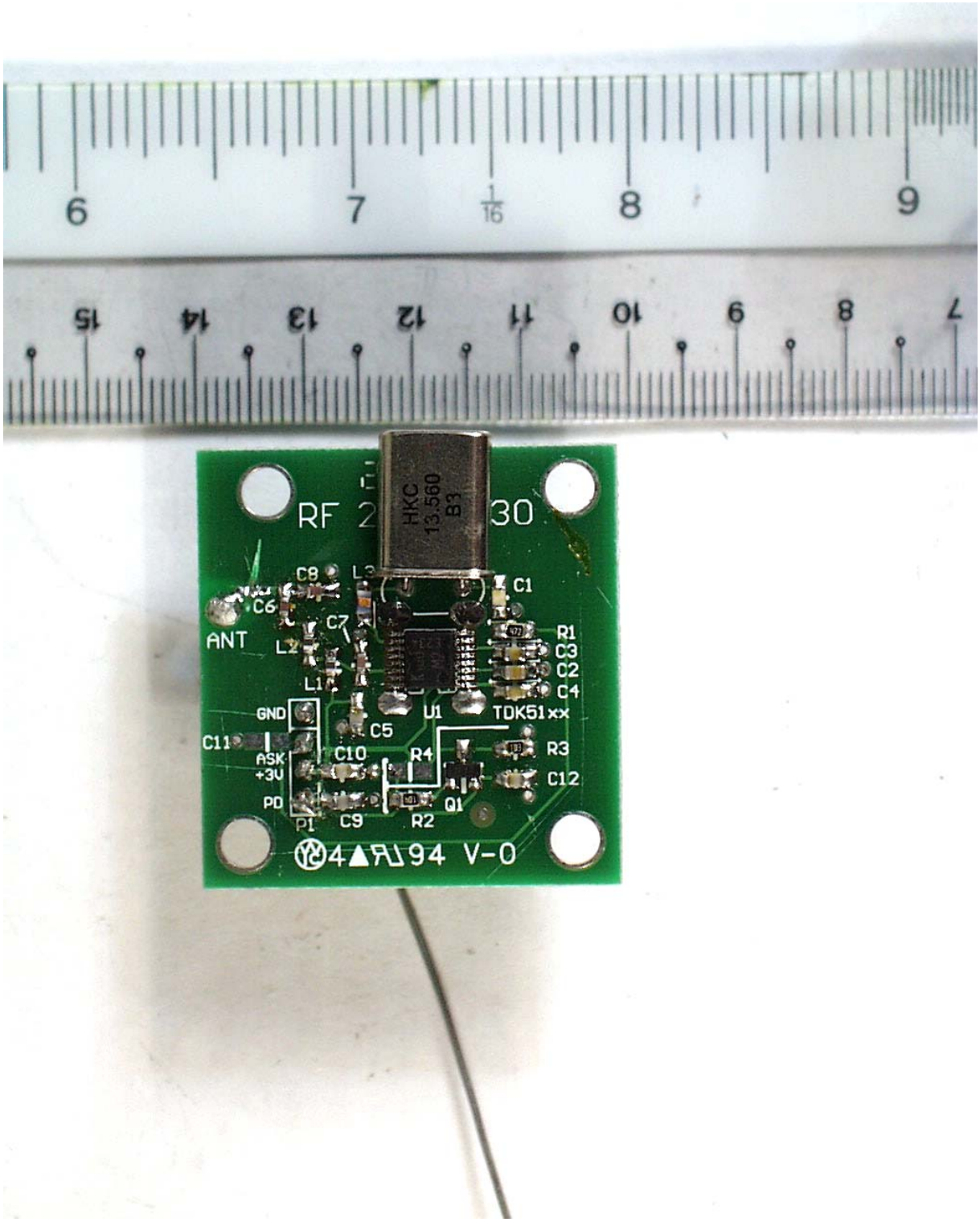
PCB PHOTOGRAPHS



Trace Side (Main PCB)– RF Remote Controller

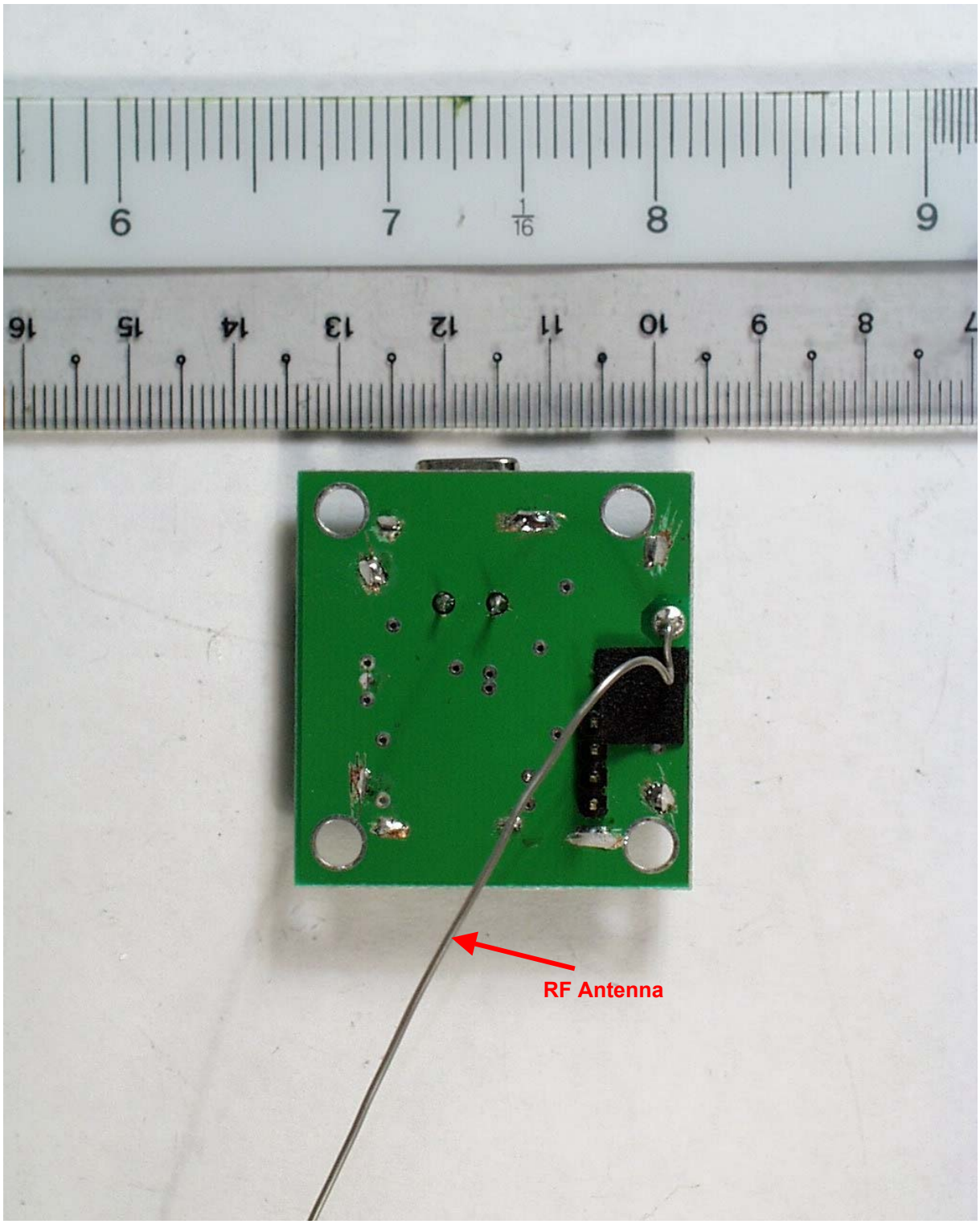
PCB PHOTOGRAPHS



Component Side (RF Module)– RF Remote Controller

EUT PHOTOGRAPHS / DIAGRAMS ANNEX B

PCB PHOTOGRAPHS



Trace Side (RF Module)– RF Remote Controller

ANNEX C

USER MANUAL
TECHNICAL DESCRIPTION
BLOCK & CIRCUIT DIAGRAMS

(Please refer to manufacturer for details)

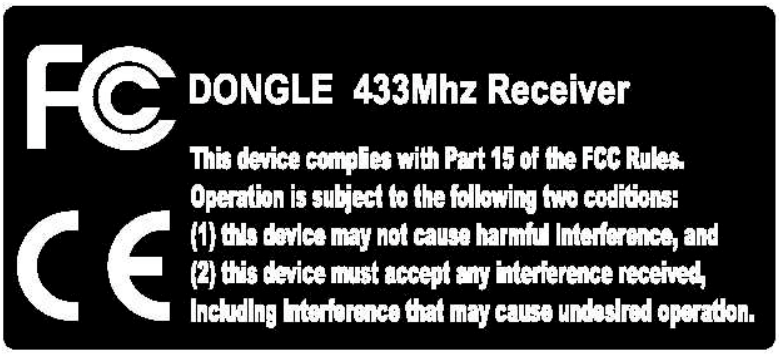
ANNEX D

FCC LABEL & POSITION

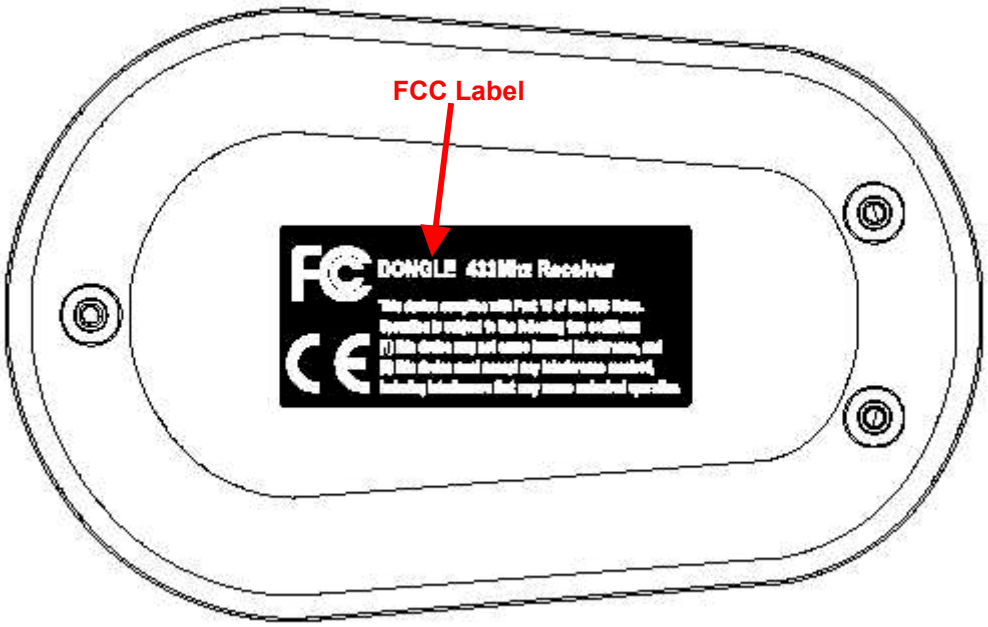
FCC LABEL & POSITION ANNEX D

Labelling requirements per Section 2.925 & 15.19

The label shown will be permanently affixed at a conspicuous location on the device and be readily visible to the user at the time of purchase.



Sample Label of RF Dongle

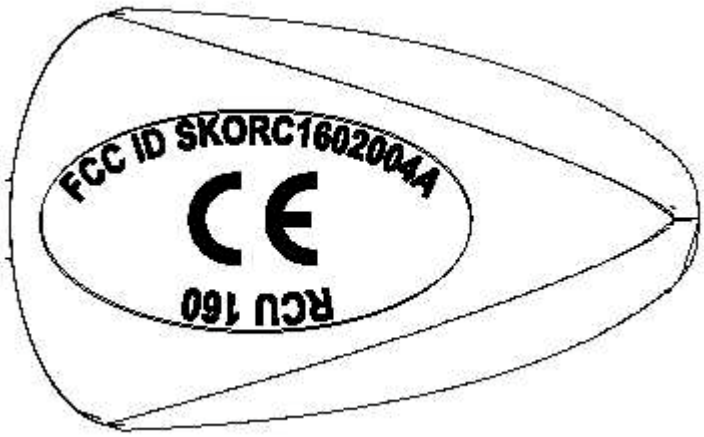


Physical Location of FCC Label on RF Dongle

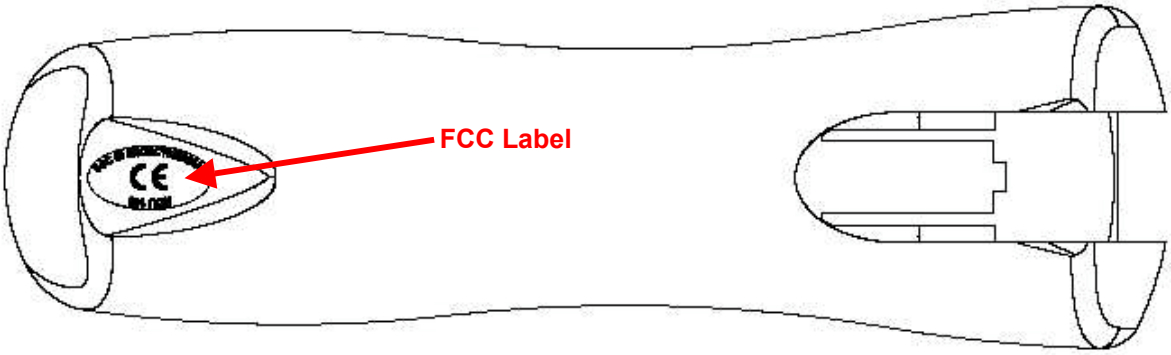
FCC LABEL & POSITION ANNEX D

Labelling requirements per Section 2.925 & 15.19

The label shown will be permanently affixed at a conspicuous location on the device and be readily visible to the user at the time of purchase.



Sample Label of RF Remote Controller



Physical Location of FCC Label on RF Remote Controller