

**FCC PART 15 SUBPART C TEST REPORT**

**for**

**Wireless Microphone**

**Model No.: WU-8256H**

**FCC ID: QDVODVWU-8256H**

**of**

**Applicant: NINGBO PROMIC TECHNOLOGY CO., LTD.**

**Address: No. 5, Ningbo Free Trade Zone, West Area, Ningbo, Zhejiang,  
China 315800**

**Tested and Prepared**

**by**

**Worldwide Testing Services (Taiwan) Co., Ltd.**

**FCC Registration No.: 930600**

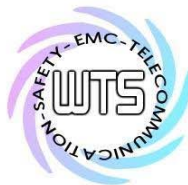
**Industry Canada filed test laboratory Reg. No. IC 5679A-1**

**A2LA Accredited No.: 2732.01**



**Report No.: W6M20904-9710-P-15**

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.  
TEL: 886-2-66068877 FAX: 886-2-66068879 E-mail: [wtst@wtst-lab.com](mailto:wtst@wtst-lab.com)



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# **Worldwide Testing Services(Taiwan) Co., Ltd.**

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## **1 General Information**

### **1.1 Notes**

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems. The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.

The test report may only be reproduced or published in full.

Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.

### **Tester:**

May 12, 2009

Kevin

Date

WTS-Lab.

Name

Signature

### **Technical responsibility for area of testing:**

May 12, 2009

Chang Tse-Ming

Date

WTS

Name

Signature



# **Worldwide Testing Services(Taiwan) Co., Ltd.**

Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

## **1.2 Testing laboratory**

### **1.2.1 Location**

OATS

No.5-1, Shuang Sing Village,  
LiShuei Rd., Wanli Township,  
Taipei County 207, Taiwan (R.O.C.)

Company

Worldwide Testing Services(Taiwan) Co., Ltd.  
6F, NO. 58, LANE 188, RUEY-KUANG RD.  
NEIHU, TAIPEI 114, TAIWAN R.O.C.

Tel : 886-2-66068877

Fax : 886-2-66068879

### **1.2.2 Details of accreditation status**

**Accredited testing laboratory**

**A2LA accredited number: 2730.01**

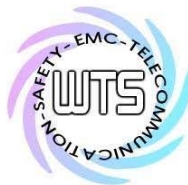
**FCC filed test laboratory Reg. No. 930600**

**Industry Canada filed test laboratory Reg. No. IC 5679A-1**



**Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd. :**

Name:	./.
Accredited number:	./.
Street:	./.
Town:	./.
Country:	./.
Telephone:	./.
Fax:	./.



Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

## **1.3 Details of approval holder**

Name:	NINGBO PROMIC TECHNOLOGY CO., LTD.
Street:	No. 5, Ningbo Free Trade Zone, West Area,
Town:	Ningbo, Zhejiang,
Country:	China 315800
Telephone:	+86-574-8686-0690
Fax:	+86-574-8686-0689
Teletex:	./.

## **1.4 Application details**

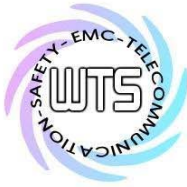
Date of receipt of test item:	April 13, 2009
Date of test:	From April 14, 2009 to May 12, 2009

## **1.5 General information of Test item**

Type of test item:	Wireless Microphone
Model Number:	WU-8256H
Multi-listing model number:	WU-16H, WU-256B, WU-16B
Photos:	see Annex

## **Technical data**

Frequency band:	902-928 MHz
Operation Frequency:	902.5-927.5 MHz
Frequency 1:	902.5 MHz
Frequency 2:	915.0 MHz
Frequency 3:	927.5 MHz
Operation modes:	simplex
Modulation Type:	FM
Antenna type:	integral antenna
Power supply:	Battery ( 9 Vdc )



# **Worldwide Testing Services(Taiwan) Co., Ltd.**

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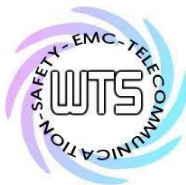
## **Manufacturer: (if different from applicant)**

Name: ./.  
Street: ./.  
Town: ./.  
Country: ./.

Additional information: ./.

## **1.6 Test standards**

Technical standard : FCC RULES PART 15 SUBPART C § 15.249 (2008-10)



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## **2 Technical test**

### **2.1 Summary of test results**

No deviations from the technical specification(s) were ascertained in the course of the tests performed.



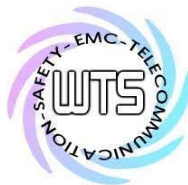
**or**

The deviations as specified in 2.5 were ascertained in the course of the tests performed.



### **2.2 Test environment**

Temperature:	23 °C
Relative humidity content:	20 ... 75 %
Air pressure:	86 ... 103 kPa
Details Power supply:	Battery ( 9 Vdc )
Extreme conditions parameters:	Not required



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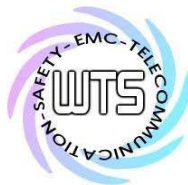
Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

## 2.3 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2008/9/18	2009/9/17
ETSTW-CE 002	PREREULATOR MODE DC POWER SUPPLY	None	None	None	Function Test	
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2009/3/27	2010/3/26
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2008/9/15	2009/9/14
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2009/5/9	2010/5/8
ETSTW-CE 008	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2008/9/18	2009/9/17
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2008/7/25	2009/7/24
ETSTW-CE 015	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T8-02	20307	FCC	2008/9/22	2009/9/21
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2008/9/24	2009/9/23
ETSTW-RE 002	Function Generator	33220A	MY43004982	Agilent	2007/10/12	2009/10/11
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2008/10/8	2009/10/7
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2008/9/22	2009/9/21
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2008/9/18	2009/9/17
ETSTW-RE 011	PROGRAMMABLE LINEAR POWER SUPPLY	LPS-305	30503070165	MOTECH	Function Test	
ETSTW-RE 017	Log-Periodic Antenna	HL025	352886/001	R&S	2009/5/4	2010/5/3
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2008/10/27	2009/10/26
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function Test	
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2008/8/27	2009/8/26
ETSTW-RE 028	Log-Periodic Dipole Array Antenna	3148	34429	EMCO	2009/4/15	2010/4/14
ETSTW-RE 029	Biconical Antenna	3109	33524	EMCO	2009/4/15	2010/4/14
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2009/3/23	2010/3/22
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2008/9/1	2009/8/31
ETSTW-RE 033	WaveRunner 6000A Serie Oscilloscope	WAVERUNNER 6100A	LCRY0604P14508	LeCroy	2008/6/27	2009/6/26
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2008/9/1	2009/8/31
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2009/1/8	2011/1/7
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2009/5/1	2010/4/30
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2008/5/22	2009/5/21
ETSTW-RE 047	ESA-E SERIES SPECTRUM ANALYZER	E4445A	MY46181369	Agilent	2008/6/26	2009/6/25
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2008/9/1	2009/8/31
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2009/4/14	2011/4/13
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2008/7/1	2009/6/30
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	2008/9/1	2009/8/31



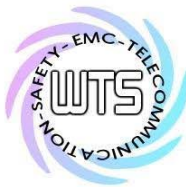


# ***Worldwide Testing Services(Taiwan) Co., Ltd.***

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ETSTW-RE 065	Amplifier	AMF-6F-18002650-25-10P	941608	MITEQ	2009/4/21	2010/4/20
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2008/10/28	2009/10/27
ETSTW-RE 073	Power Meter	N1911A	MY45100769	Agilent	2009/1/9	2011/1/8
ETSTW-RE 074	Power Sensor	N1921A	MY45241198	Agilent	2009/1/9	2011/1/8
ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	2008/10/9	2009/10/8
ETSTW-RE 092	Match Pad	MDCS1510	None	WOKEN	2008/10/9	2009/10/8
ETSTW-RE 093	LUMPED ELEMENT POWER DIVIDER	PL2-10	146	MCLI	2009/3/6	2010/3/5
ETSTW-RE 094	Precision Coaxial Termination	HP 909F	03941	Agilent	2008/12/19	2009/12/18
ETSTW-RE 095	Digital Thermo-Hygro Meter	0410	01	WISEWIND	2009/3/24	2010/3/23
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2008/9/23	2009/9/22
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2008/9/22	2009/9/21
ETSTW-Cable 001	Microwave Cable	SUCOFLEX 104	238094	HUBER+SUHNER	2008/9/22	2009/9/21
ETSTW-Cable 002	Microwave Cable	SUCOFLEX 104	238093	HUBER+SUHNER	2008/9/22	2009/9/21
ETSTW-Cable 003	Microwave Cable	SUCOFLEX 104	209953	HUBER+SUHNER	2008/9/22	2009/9/21
WTSTW-SW 001	EMI TEST SOFTWARE	Harmonics-1000	None	EMC PARTNER	HARCS Version 4.16 Firmware Version 2.18	
WTSTW-SW 002	EMI TEST SOFTWARE	EZ EMC	None	Farad	Version ETS-03A1	
WTSTW-SW 003	EMI TEST SOFTWARE	i2	None	AUDIX	Version 3.2007-8-17b	



## **2.4 General Test Procedure**

**POWER LINE CONDUCTED INTERFERENCE:** The procedure used was ANSI STANDARD C63.4-2003 using a 50μH LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

**RADIATION INTERFERENCE:** The test procedure used was according to ANSI STANDARD C63.4-2003 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

**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 dBμV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

Freq (MHz)	METER READING + ACF + CABLE LOSS (to the receiver) = FS
33	20 dBμV + 10.36 dB + 6 dB = 36.36 dBμV/m @3m

**ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES:** The EUT was placed on a table 80 cm height and with dimensions of 1m by 1.5m (non metallic table). The EUT was placed in the centre of the table. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to 10<sup>th</sup> harmonic of the fundamental.

Peak readings were taken in three (3) orthogonal planes and the highest readings.

Measurements were made by Worldwide Testing Services(Taiwan) Co., Ltd. at the registered open field test site located at No.5-1, Shuang Sing Village, LiShuei Rd., Wanli Township, Taipei County 207, Taiwan (R.O.C.) The Registration Number: 930600.

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.



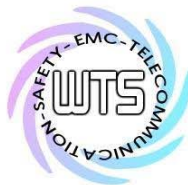
Registration number: W6M20904-9710-P-15

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**3 Test results (enclosure)**

Test case	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.249 (a)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spurious Emissions radiated – Transmitter operating	15.249 (e)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spurious Emissions conducted – Transmitter operating	15.249 (e)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radiated Emission from Digital Part	15.109	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Out of Band Spurious Emission, Band edge-Transmitter operating	15.249 (e)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Power Line Conducted Emission	15.207	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The follows is intended to leave blank.



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### **3.1 Peak Output Power (transmitter)**

FCC Rule: 15.249 (b)

This measurement applies to equipment with an integral antenna and to equipment with an antenna connector and equipped with an antenna as declared by the applicant.

The power was measured with modulation (declared by the applicant).

Model: WU-8256H      Date: 2009/5/7  
Mode: 902.5MHz      Temperature: 24 °C      Engineer: Kevin  
Polarization: Horizontal      Humidity: 51 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
902.496	43.86	peak	26.28	70.14	94.00	-23.86	100	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
902.488	58.62	peak	26.28	84.90	94.00	-9.10	120	150

Mode: 915.0MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
915.004	46.44	peak	26.59	73.03	94.00	-20.97	180	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
914.972	59.70	peak	26.59	86.29	94.00	-7.71	130	150



# **Worldwide Testing Services(Taiwan) Co., Ltd.**

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Mode: 902.5MHz

Polarization: Horizontal

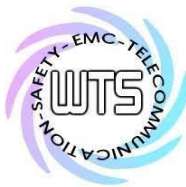
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
927.528	46.53	peak	26.87	73.40	94.00	-20.60	140	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
927.512	61.07	peak	26.87	87.94	94.00	-6.06	130	150

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 017, ETSTW-RE 018, ETSTW-RE 028, ETSTW-RE 030, ETSTW-RE 043

Explanation: The diagrams for the field strength measurements are included in appendix.



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### **3.2 Equivalent isotropic radiated power**

Because using an permanent antenna there are no deviations from the radiated test results according 3.1.

### **3.3 RF Exposure Compliance Requirements**

Not applicable for this Wireless Microphone for the low power level.

### **3.4 Out of Band Radiated Emissions**

FCC Rule: 15.249 (d)(e), 15.35(b)

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

For frequency above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.

Limits:

Frequency of Emission (MHz)	Field strength (microvolts/meter)	Field Strength (dB microvolts/meter)
30 - 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.5
Above 960	500	54.0

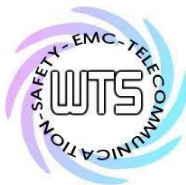
For frequencies above 1 GHz (Peak measurements).

Limit + 20 dB      $54.0 \text{ dB}\mu\text{V/m} + 20 \text{ dB} = 74\text{dB}\mu\text{V/m}$

Or

Must be attenuated at least 50dB below the level of fundament

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 017, ETSTW-RE 018, ETSTW-RE 028, ETSTW-RE 029, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043



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## 3.5 Spurious emission (tx)

Spurious emission was measured with modulation (declared by manufacturer).

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

For frequencies above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.

SAMPLE CALCULATION OF LIMIT. ALL results will be updated by an automatic measuring system in accordance with point 2.3.

The peak and average spurious emission plots was measured with the average limits.

The critical peak value listed in the table agree with the above calculated limits.

### Summary table with radiated data of the test plots

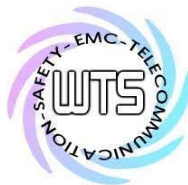
Model: WU-8256H Date: 2009/5/8  
 Mode: 902.5 MHz Temperature: 24 °C Engineer: Kevin  
 Polarization: Horizontal Humidity: 51 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
107.375	12.33	peak	12.13	24.46	43.50	-19.04	130	150
868.136	7.23	peak	25.70	32.93	46.00	-13.07	190	150

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
1805.611	44.54	---	-8.48	36.06	---	74.00	54.00	-37.94	210	150
2707.500	42.46	---	-4.06	38.40	---	74.00	54.00	-35.60	280	150
3610.000	42.19	---	-0.79	41.40	---	74.00	54.00	-32.60	120	150
4512.500	39.74	---	-2.05	37.69	---	74.00	54.00	-36.31	180	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
264.830	11.64	peak	14.26	25.90	46.00	-20.10	170	150
976.152	5.90	peak	27.24	33.14	54.00	-20.86	310	150



# ***Worldwide Testing Services(Taiwan) Co., Ltd.***

Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
1805.611	48.42	---	-8.48	39.94	---	74.00	54.00	-34.06	180	150
2707.500	41.68	---	-4.06	37.62	---	74.00	54.00	-36.38	250	150
3610.000	41.66	---	-0.79	40.87	---	74.00	54.00	-33.13	310	150
4512.500	40.04	---	-2.05	37.99	---	74.00	54.00	-36.01	180	150

Mode: 915.0 MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
90.601	14.75	peak	10.62	25.37	43.50	-18.13	240	150
913.026	5.72	peak	26.54	32.26	46.00	-13.74	130	150

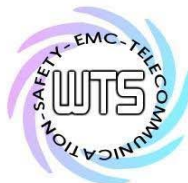
Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
1829.659	45.12	---	-8.38	36.74	---	74.00	54.00	-37.26	120	150
2743.487	45.66	---	-3.88	41.78	---	74.00	54.00	-32.22	140	150
3660.000	41.64	---	-0.24	41.40	---	74.00	54.00	-32.60	80	150
4575.000	40.33	---	-1.80	38.53	---	74.00	54.00	-35.47	200	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
252.385	11.95	peak	13.89	25.84	46.00	-20.16	280	150
877.956	7.46	peak	25.80	33.26	46.00	-12.74	260	150

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
1829.659	49.02	---	-8.38	40.64	---	74.00	54.00	-33.36	110	150
2743.487	43.84	---	-3.88	39.96	---	74.00	54.00	-34.04	140	150
3660.000	42.11	---	-0.24	41.87	---	74.00	54.00	-32.13	210	150
4575.000	40.62	---	-1.80	38.82	---	74.00	54.00	-35.18	110	150





# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

Mode: 927.5 MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
93.307	13.97	peak	10.85	24.82	43.50	-18.68	280	150
840.080	6.55	peak	25.57	32.12	46.00	-13.88	210	150

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
1853.707	46.38	---	-8.29	38.09	---	74.00	54.00	-35.91	210	150
2785.571	45.03	---	-3.67	41.36	---	74.00	54.00	-32.64	50	150
3710.000	41.78	---	0.24	42.02	---	74.00	54.00	-31.98	180	150
4637.500	40.80	---	-1.62	39.18	---	74.00	54.00	-34.82	80	150

Polarization: Vertical

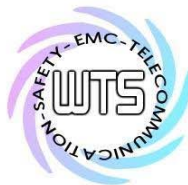
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
248.056	12.28	peak	13.78	26.06	46.00	-19.94	140	150
879.359	7.53	peak	25.82	33.35	46.00	-12.65	130	150

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
1853.707	50.30	---	-8.29	42.01	---	74.00	54.00	-31.99	210	150
2782.500	43.54	---	-3.69	39.85	---	74.00	54.00	-34.15	50	150
3710.000	42.26	---	0.24	42.50	---	74.00	54.00	-31.50	60	150
4637.500	40.25	---	-1.62	38.63	---	74.00	54.00	-35.37	170	150

- Note**
1. Correction Factor = Antenna factor + Cable loss - Preamplifier
  2. The formula of measured value as: Test Result = Reading + Correction Factor
  3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average
  4. All not in the table noted test results are more than 20 dB below the relevant limits.
  5. See the attached diagram as appendix.

**TEST RESULT (Transmitter):** The unit DOES meet the FCC requirements.

Test equipment used: ETSTW-RE 055



Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

## **3.6 Radiated Emissions from Digital Part**

**Summary table with radiated data of the test plots**

Model: WU-8256H

Date:

Mode:

Temperature:

°C

Engineer:

Polarization:

Horizontal

Humidity:

%

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 017, ETSTW-RE 018, ETSTW-RE 028, ETSTW-RE 029, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043

Explanation: The test is not applicable because the EUT is only transmitter.



Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

### **3.7 Radiated Emission on the band edge**

From the following plots, they show that the fundamental emissions are confined in the specified band and they are at least 50 dB below the carrier level at band edge (902.5 and 927.5 MHz). It meets the requirement of section 15.249(d).

Test conditions Tnom = 24°C, Vnom = 9V Frequency [ MHz ]	Transmitter field strength of Radiated Emission	Transmitter field strength of Radiated Emission
	(Peak Detector)	(Average Detector)
	[dBμV/m]	
902.000	35.60	--
928.000	31.33	--

Limit:

Frequency Range (MHz)	Limit (dBμV/m)	
902 – 928	Peak	Average
2400 – 2483.5		
5725 – 5875	74	54
24000 - 24250		

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 017, ETSTW-RE 018, ETSTW-RE 028, ETSTW-RE 029, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043

Explanation: Please see attached diagram as appendix.



## 3.8 Power Line Conducted Emission

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.

Frequency	Level (dBμV)	
	quasi-peak	average
150 kHz	lower limit line	Lower limit line

Model: WU-8256H

Date: --

Mode: --

Temperature: -- °C Engineer: --

Polarization: N

Humidity: -- %

Frequency (MHz)	Reading (dBμV)		Factor (dB) Corr.	Result (dBμV)		Limit (dBμV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
--	--	--	--	--	--	--	--	--

Polarization: L1

Frequency (MHz)	Reading (dBμV)		Factor (dB) Corr.	Result (dBμV)		Limit (dBμV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
--	--	--	--	--	--	--	--	--

### Limits:

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Test equipment used: ETSTW-CE 001, ETSTW-CE 003, ETSTW-CE 004, ETSTW-CE 006

Explanation: This test is not required because there is no AC power line or signal line for this EUT.



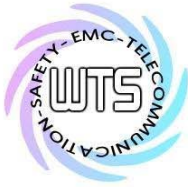
## **Appendix**

### **A Measurement diagrams**

1. Fundamental Field Strength
2. Spurious Emissions radiated
3. Radiated Emission on the band edge

### **B Photos**

1. External Photos
2. Internal Photos
3. Set Up Photo of Radiated Emission



# **Worldwide Testing Services(Taiwan) Co., Ltd.**

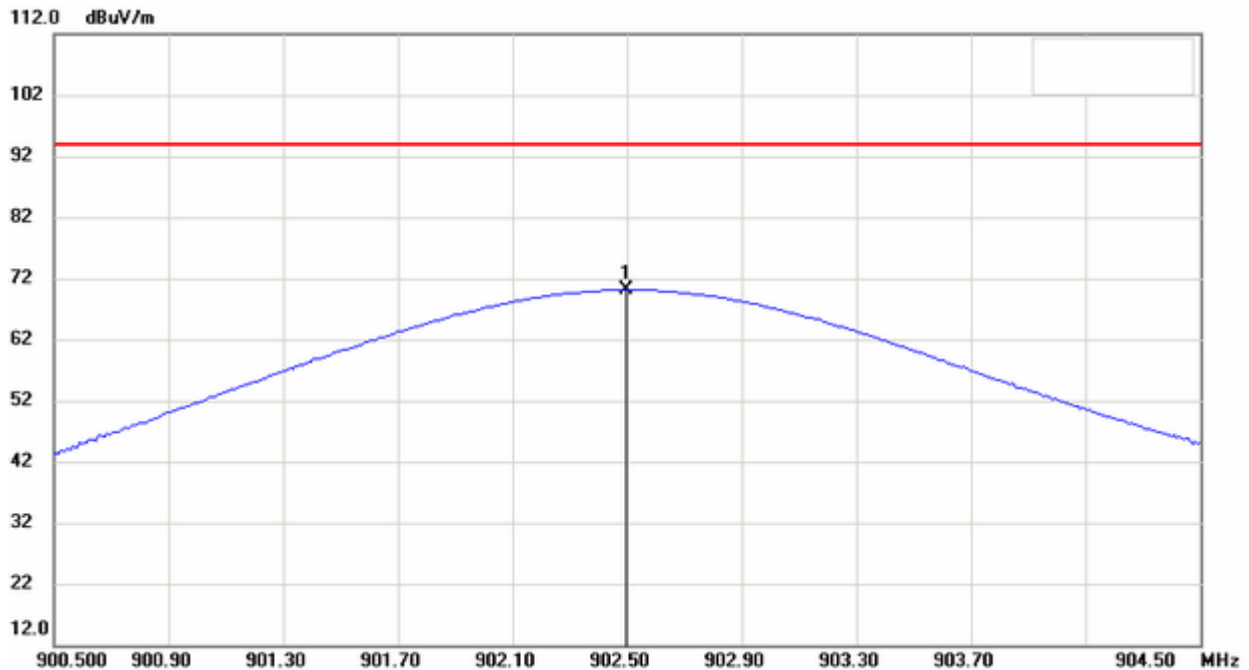
Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

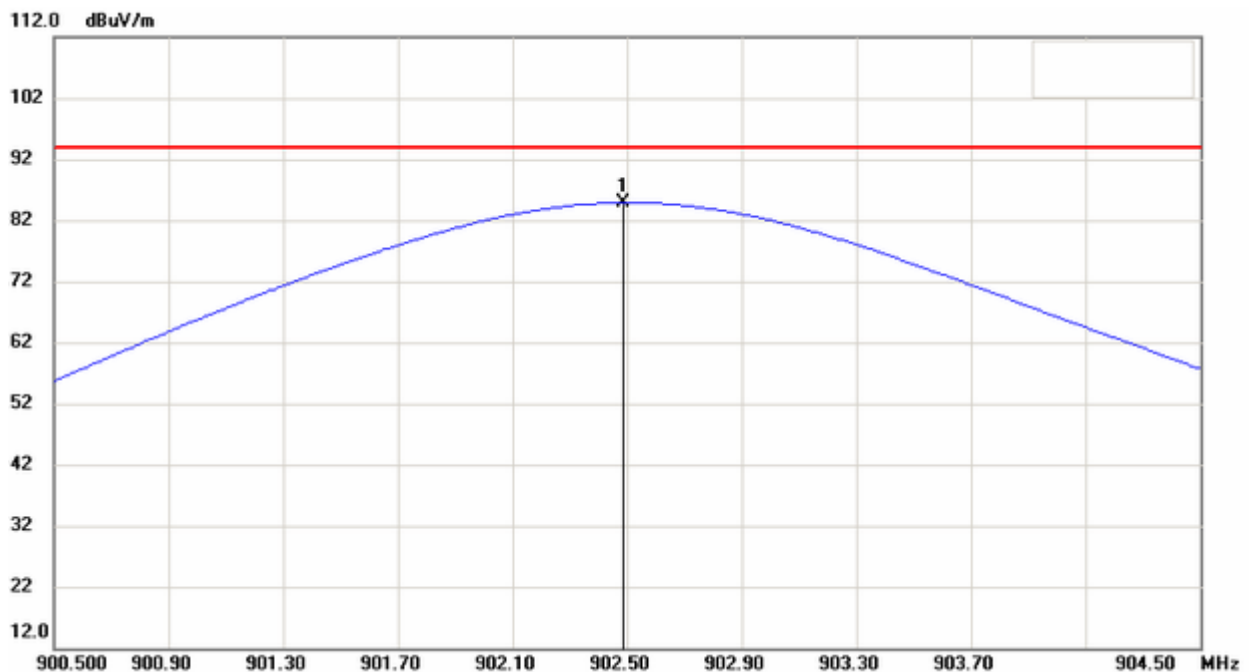
Fundamental Field Strength

902.5 MHz

Antenna Polarization H



Antenna Polarization V



**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

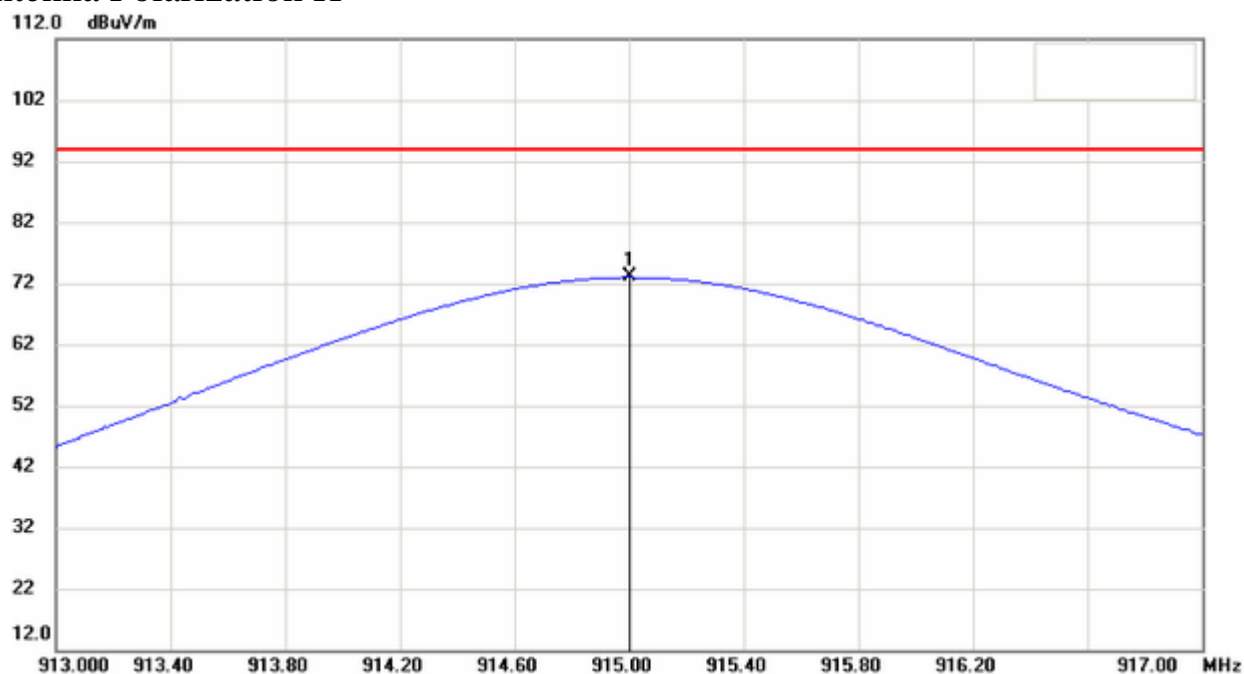


Registration number: W6M20904-9710-P-15

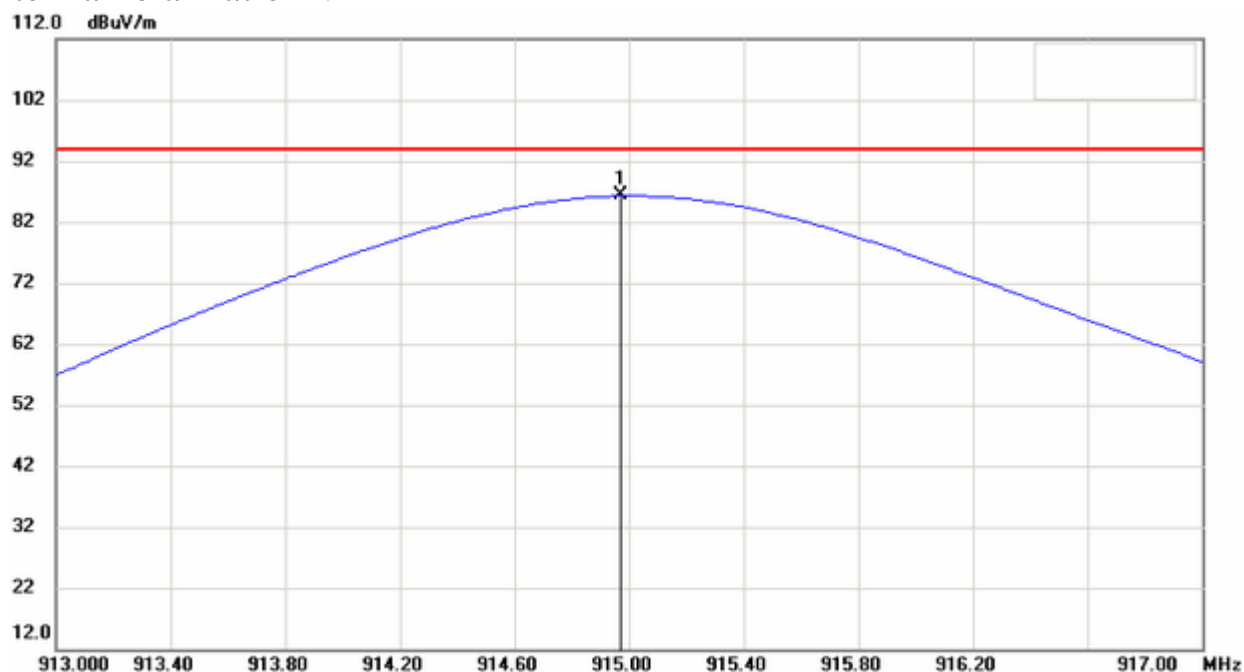
FCC ID: QDVODVWU-8256H

915.0 MHz

Antenna Polarization H

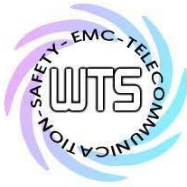


Antenna Polarization V



**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

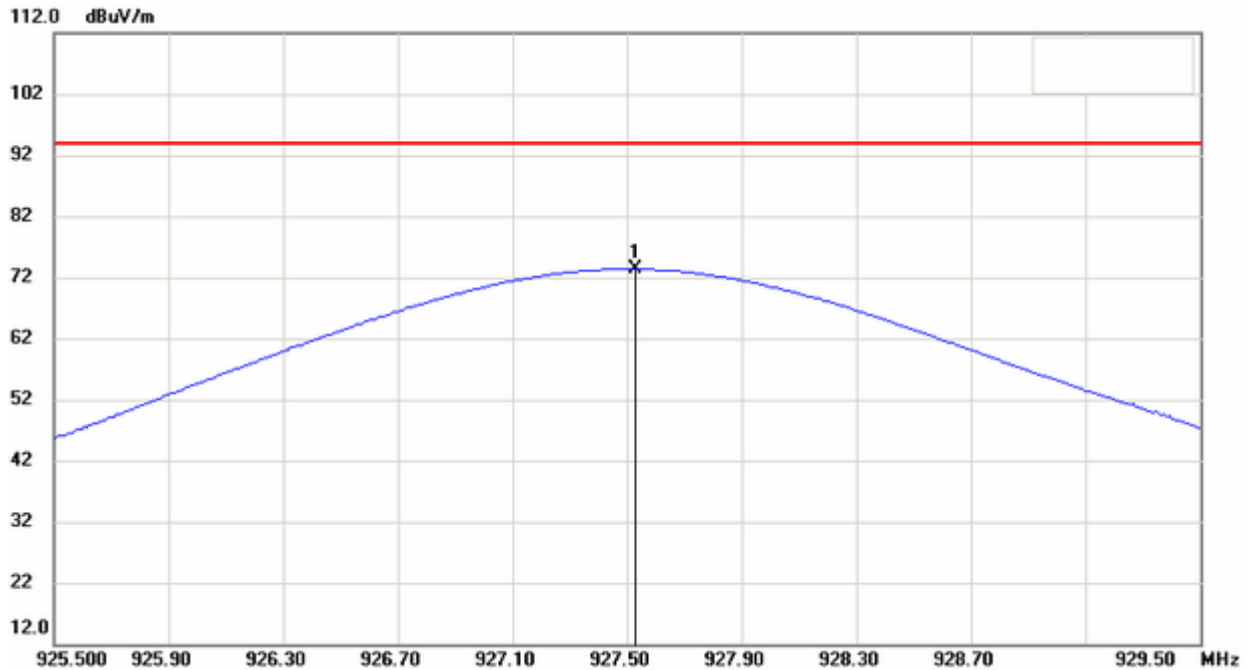


Registration number: W6M20904-9710-P-15

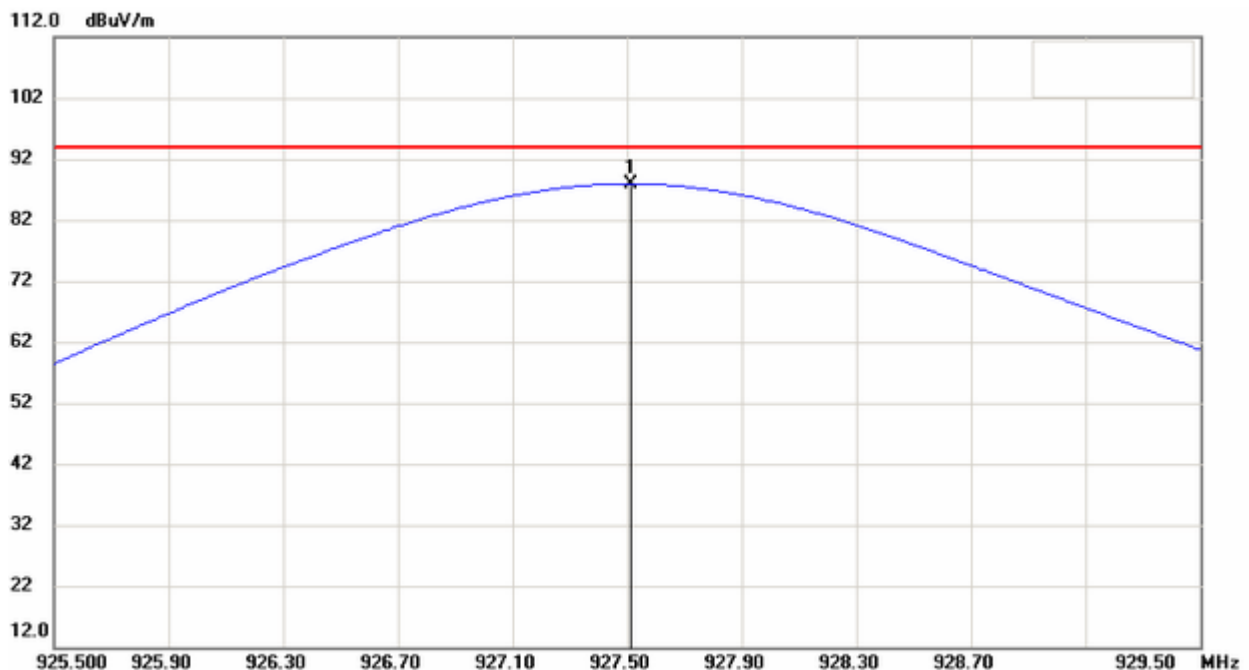
FCC ID: QDVODVWU-8256H

927.5 MHz

Antenna Polarization H



Antenna Polarization V



**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.





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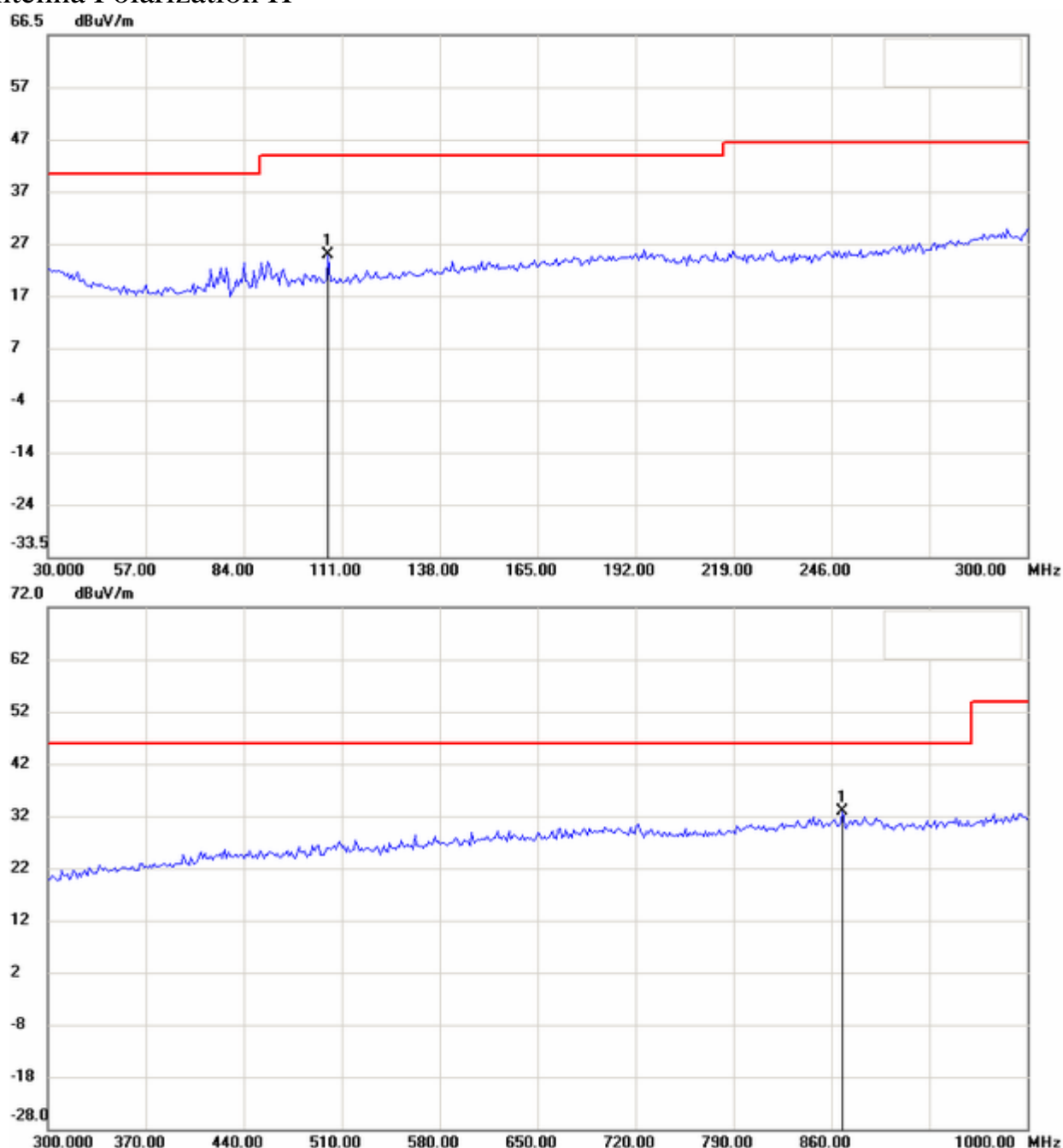
Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

Spurious Emissions radiated

902.5 MHz

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

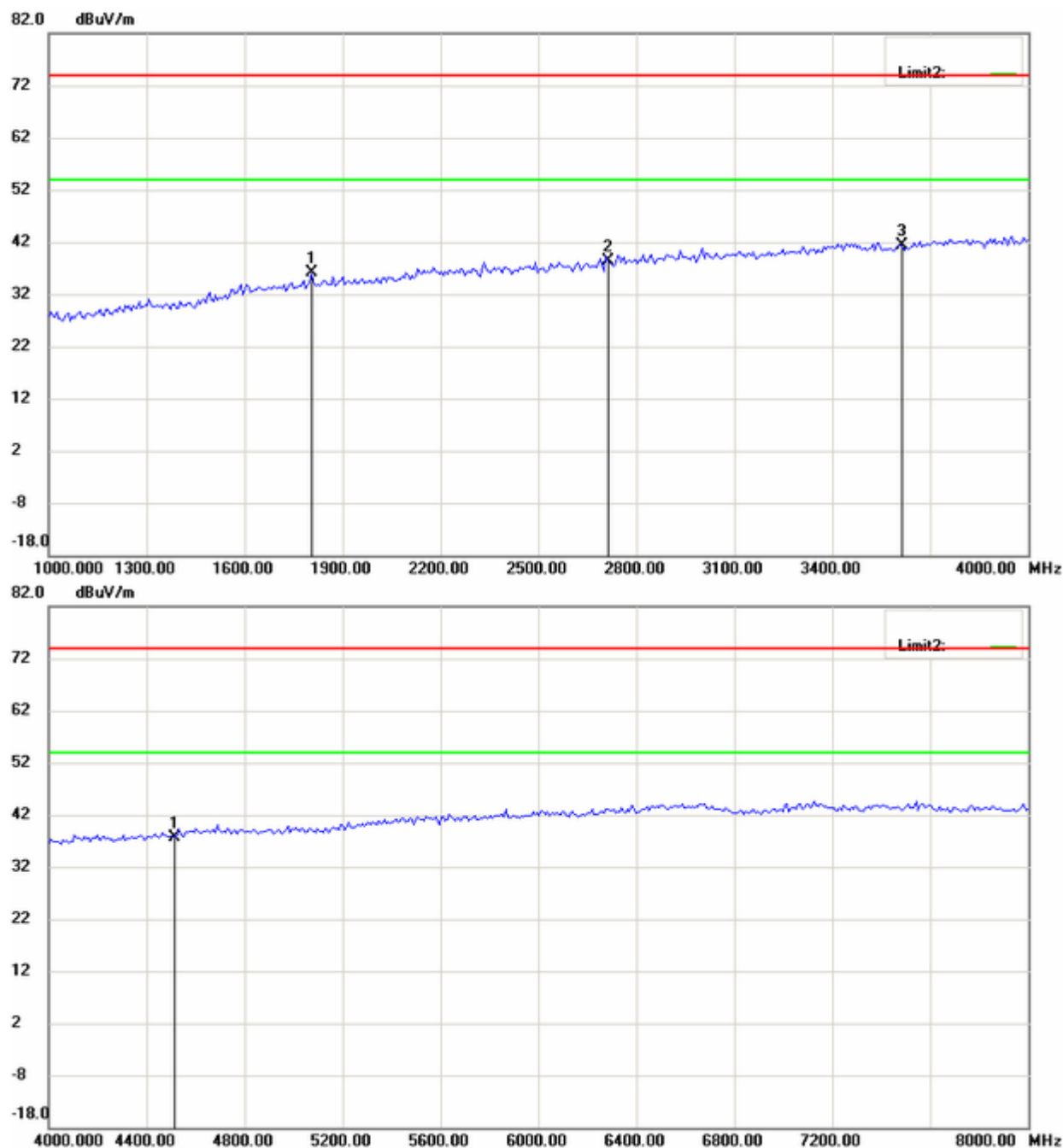
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# ***Worldwide Testing Services(Taiwan) Co., Ltd.***

Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

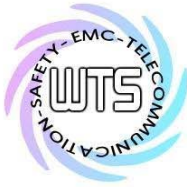


Up Line: Peak Limit Line

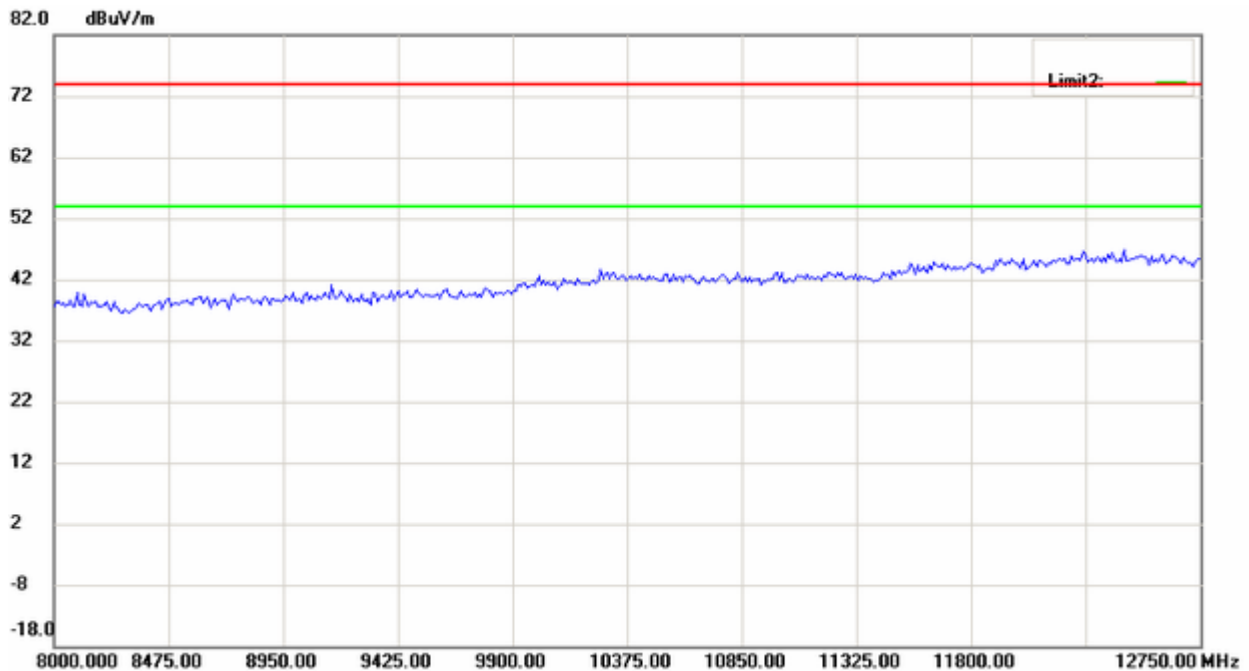
Down Line: Ave Limit Line

Note:

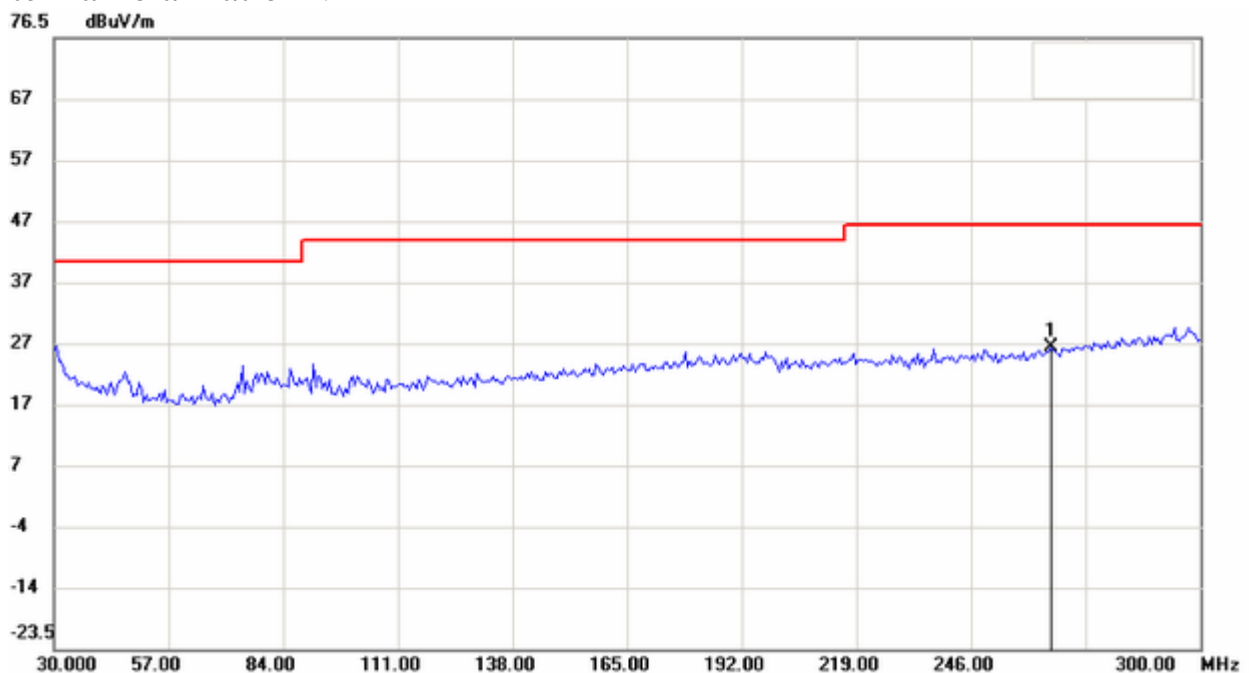
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M20904-9710-P-15  
FCC ID: QDVODVWU-8256H



## Antenna Polarization V



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

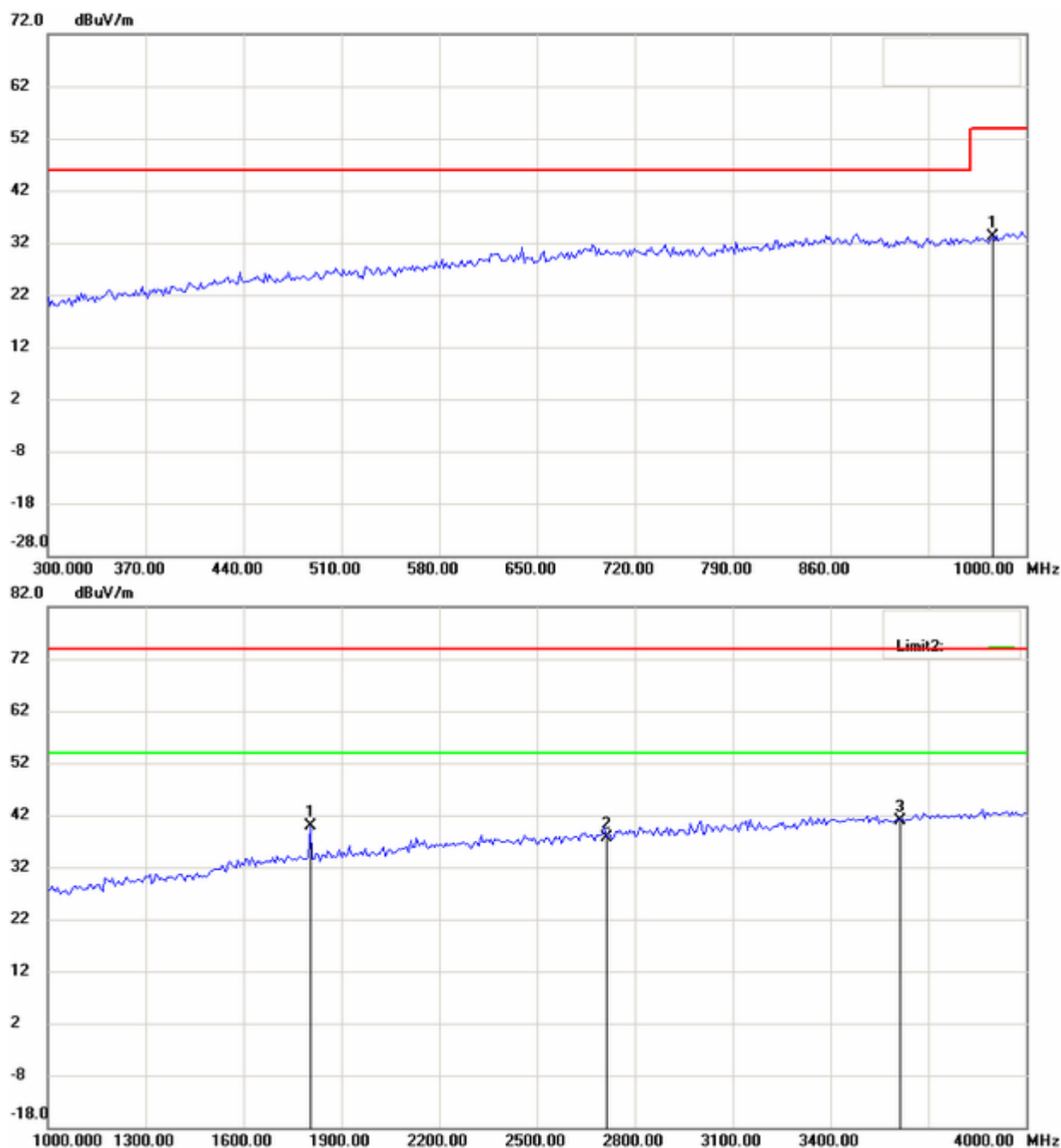
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

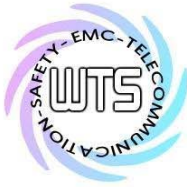


Up Line: Peak Limit Line

Down Line: Ave Limit Line

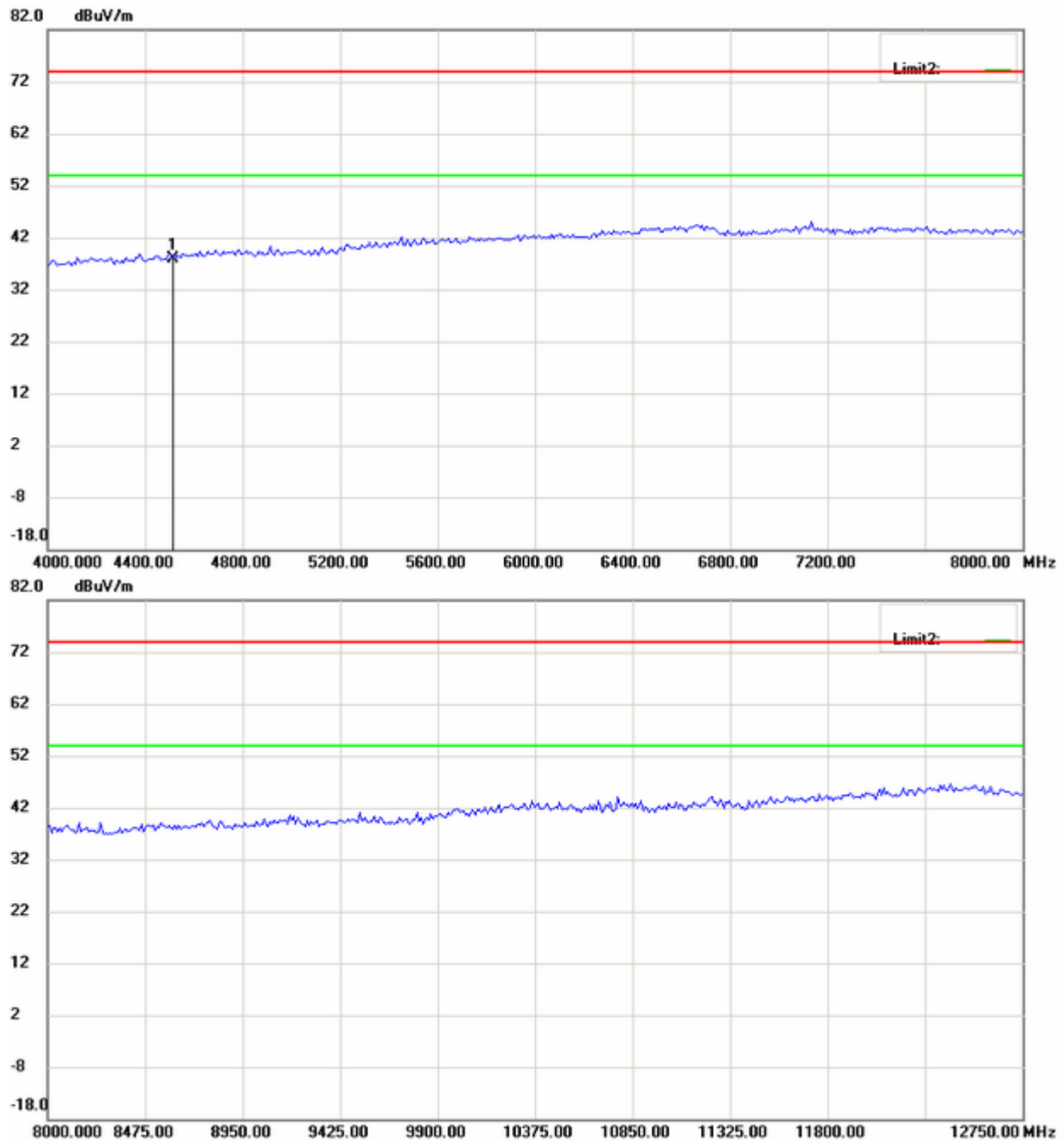
Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# ***Worldwide Testing Services(Taiwan) Co., Ltd.***

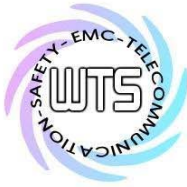
Registration number: W6M20904-9710-P-15  
FCC ID: QDVODVWU-8256H



Up Line: Peak Limit Line  
Down Line: Ave Limit Line

Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



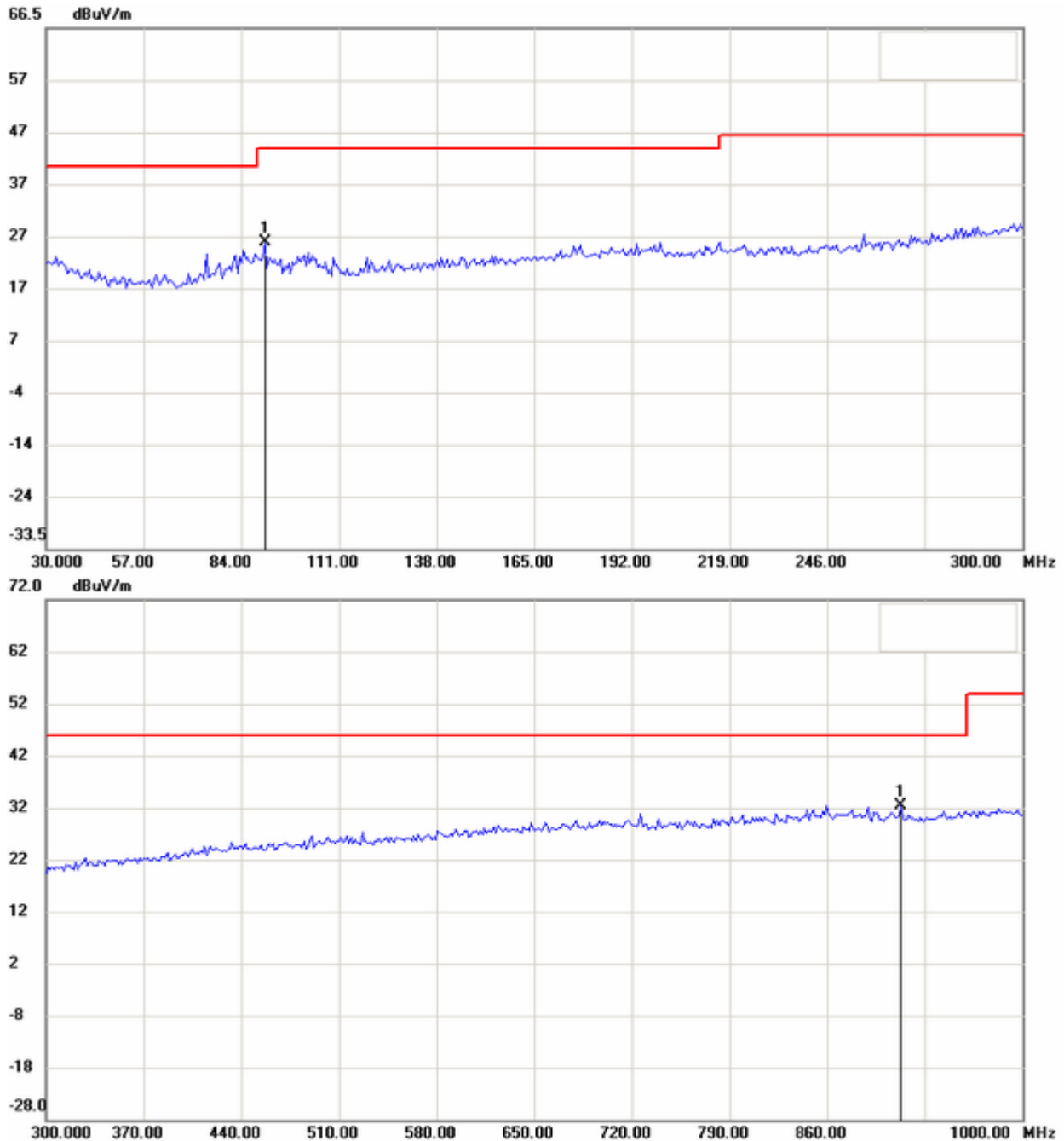
# ***Worldwide Testing Services(Taiwan) Co., Ltd.***

Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

915.0 MHz

Antenna Polarization H

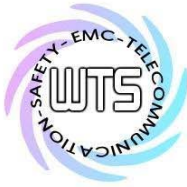


Up Line: Peak Limit Line

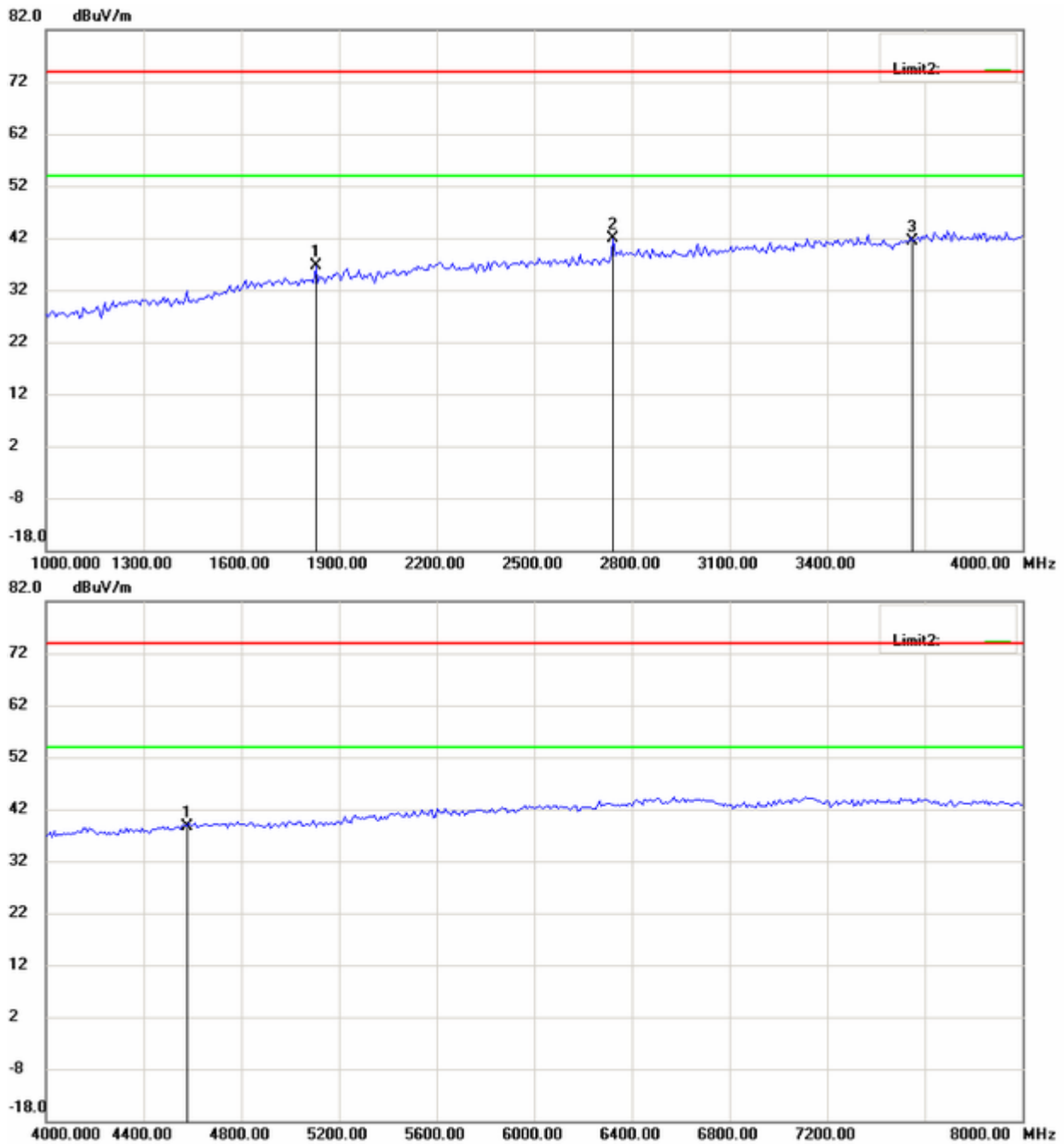
Down Line: Ave Limit Line

Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M20904-9710-P-15  
FCC ID: QDVODVWU-8256H

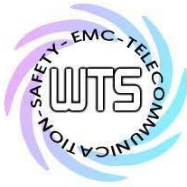


Up Line: Peak Limit Line

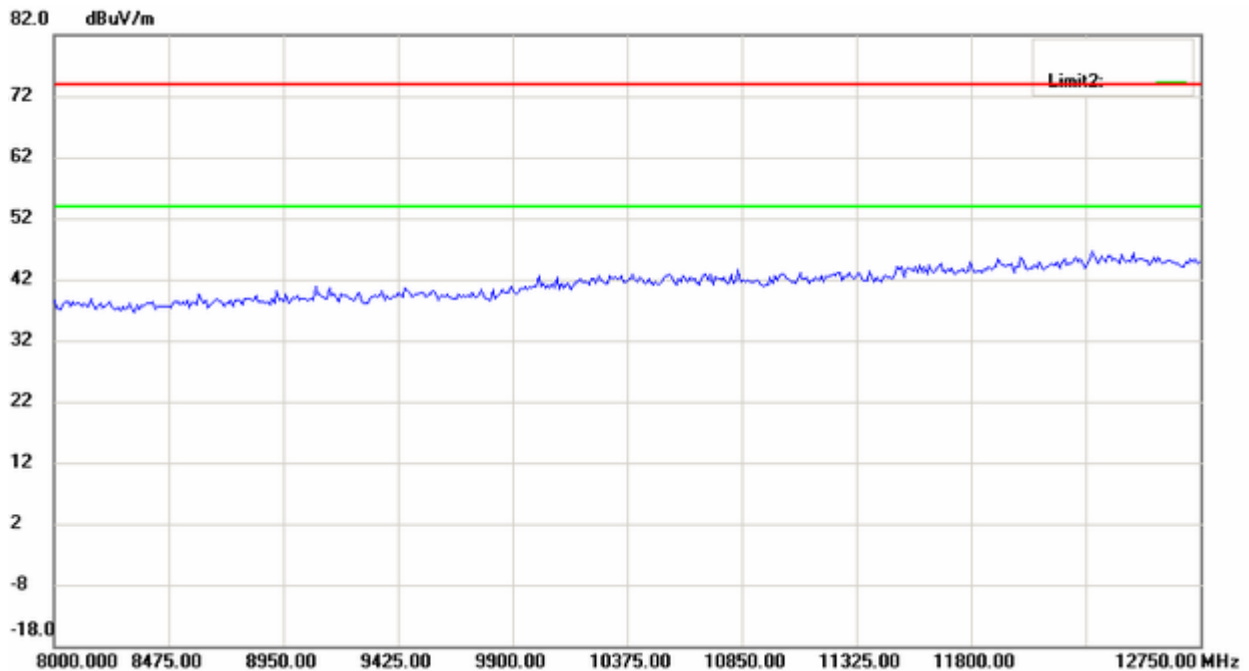
Down Line: Ave Limit Line

Note:

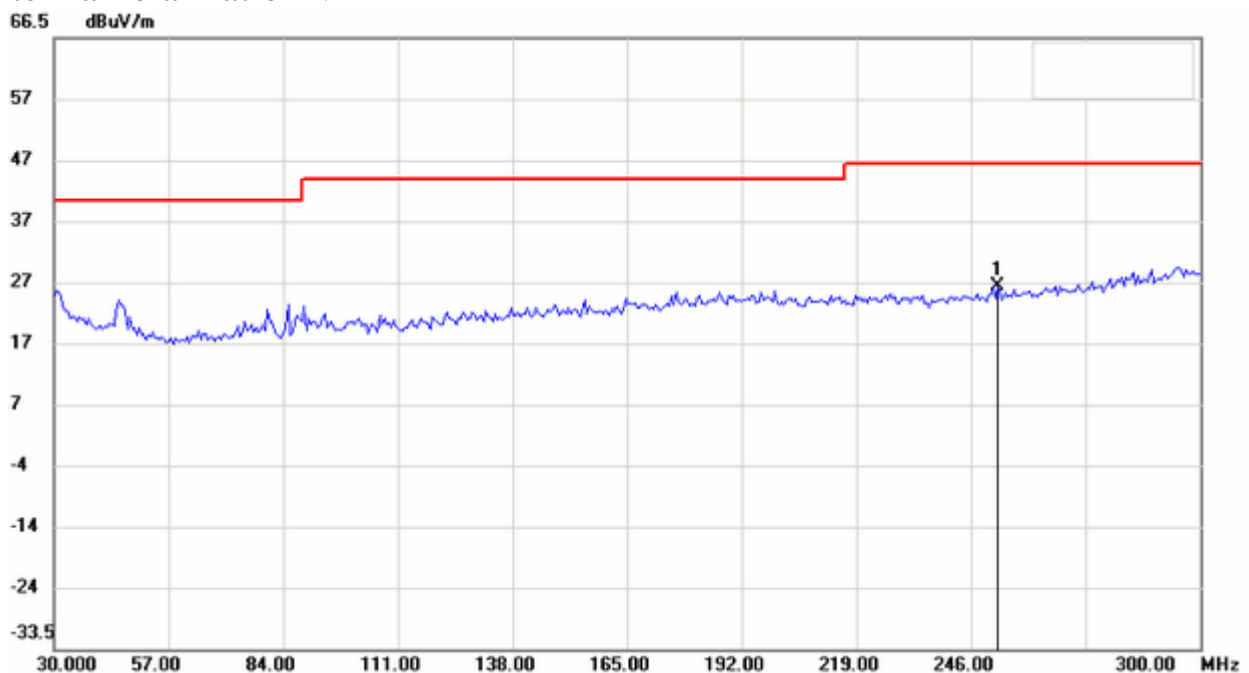
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M20904-9710-P-15  
FCC ID: QDVODVWU-8256H



## Antenna Polarization V



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

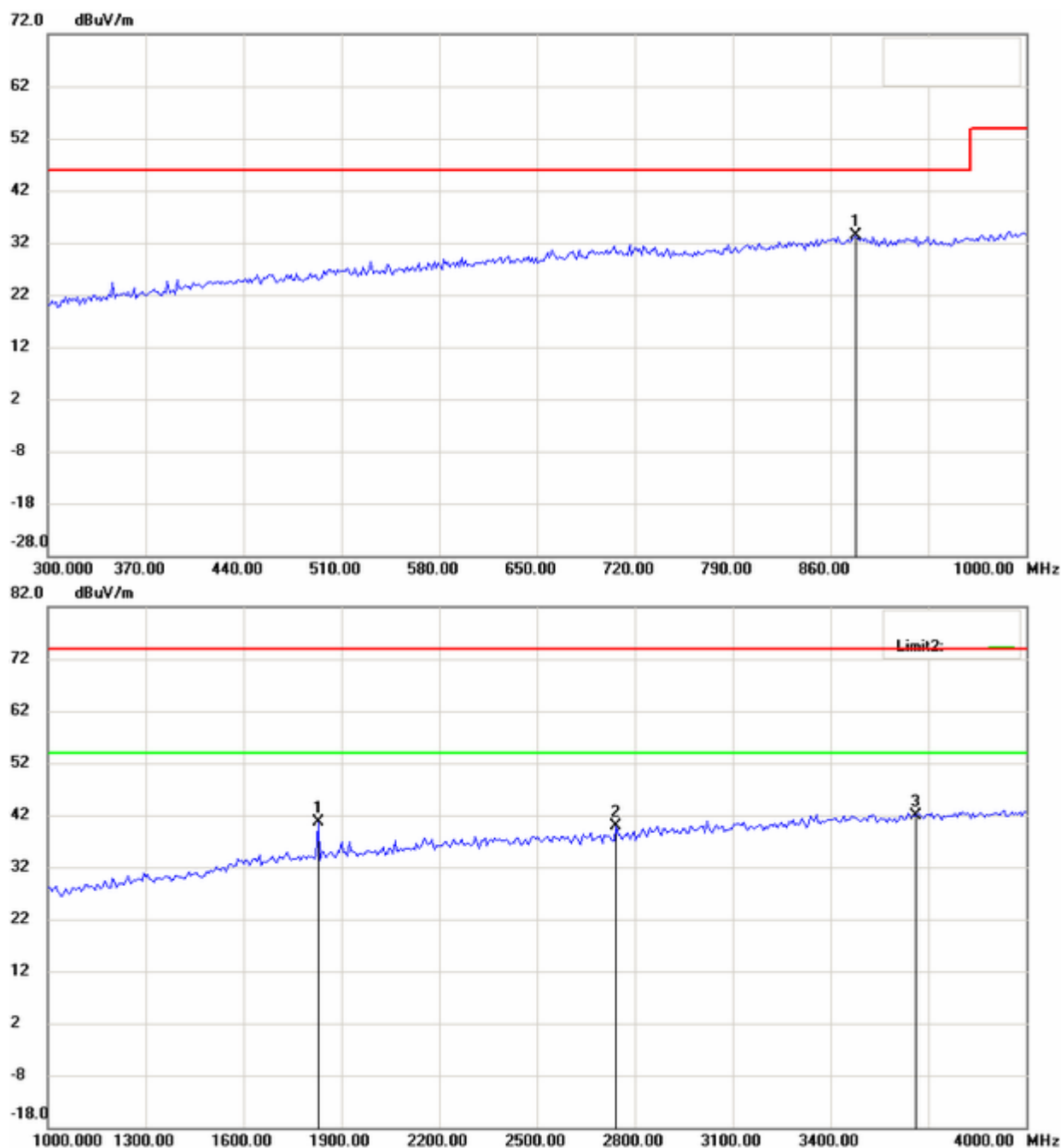




# ***Worldwide Testing Services(Taiwan) Co., Ltd.***

Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

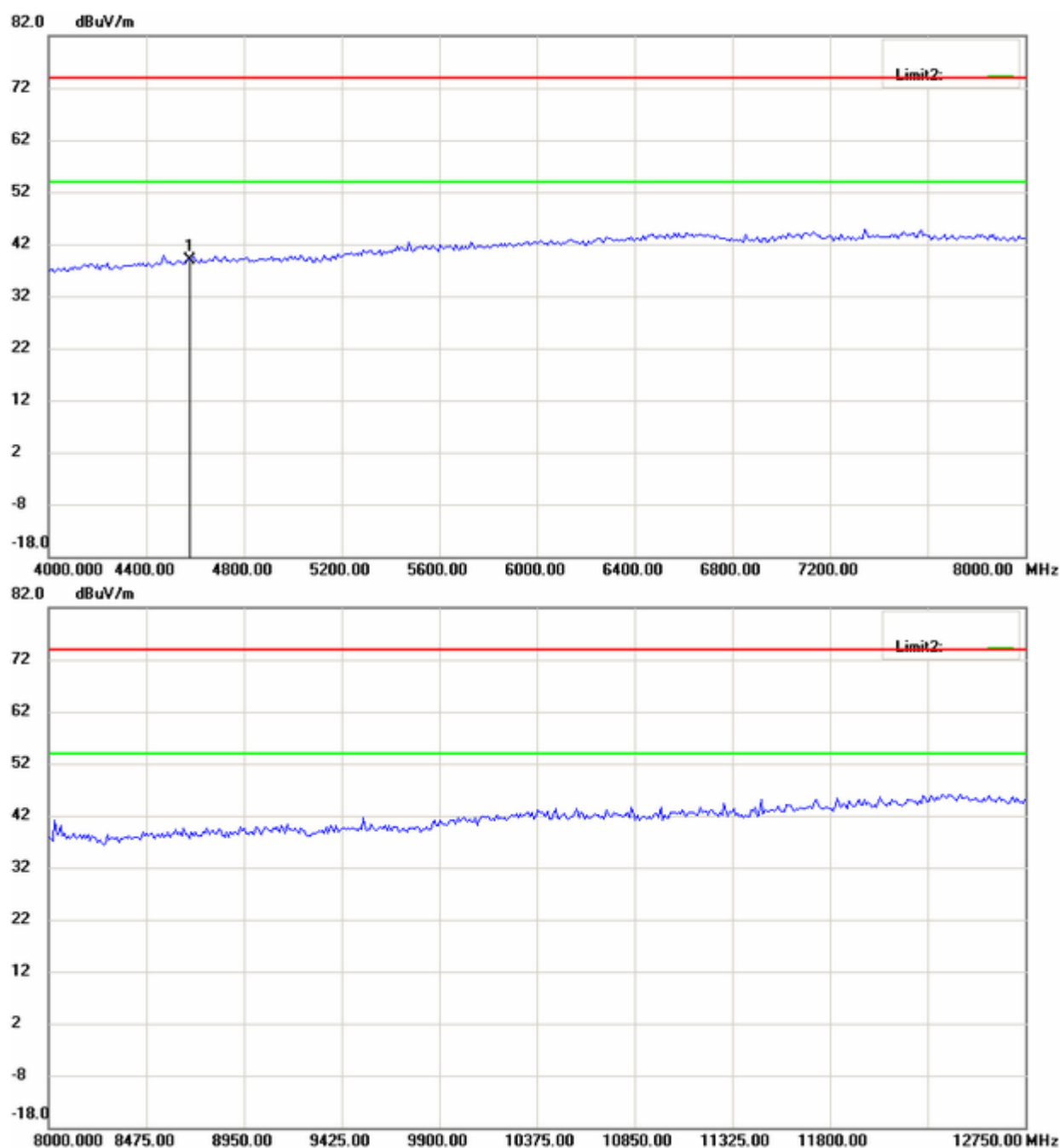
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# ***Worldwide Testing Services(Taiwan) Co., Ltd.***

Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H



**Up Line: Peak Limit Line**

**Down Line: Ave Limit Line**

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



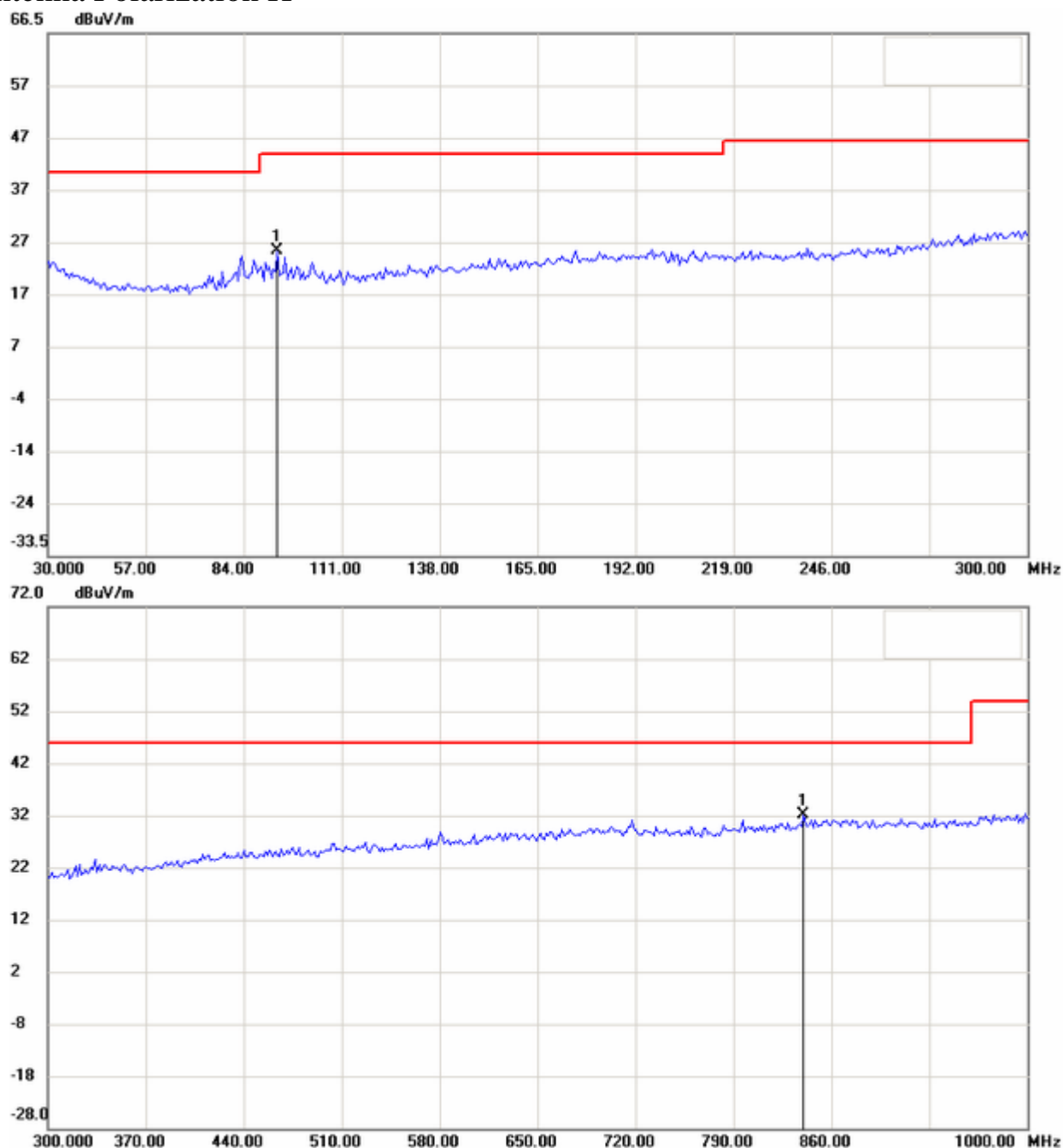
# ***Worldwide Testing Services(Taiwan) Co., Ltd.***

Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

927.5 MHz

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

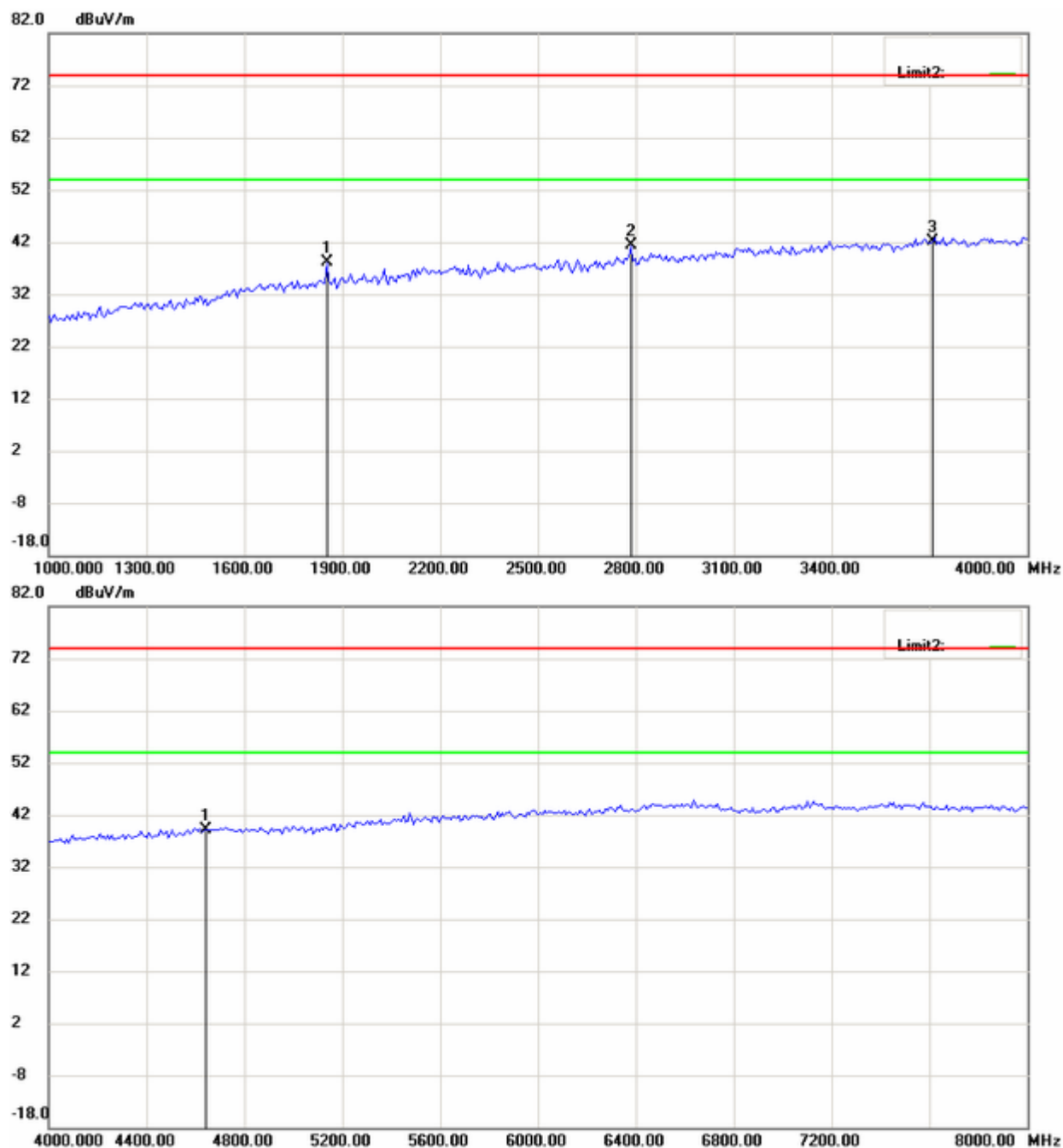
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# ***Worldwide Testing Services(Taiwan) Co., Ltd.***

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FCC ID: QDVODVWU-8256H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

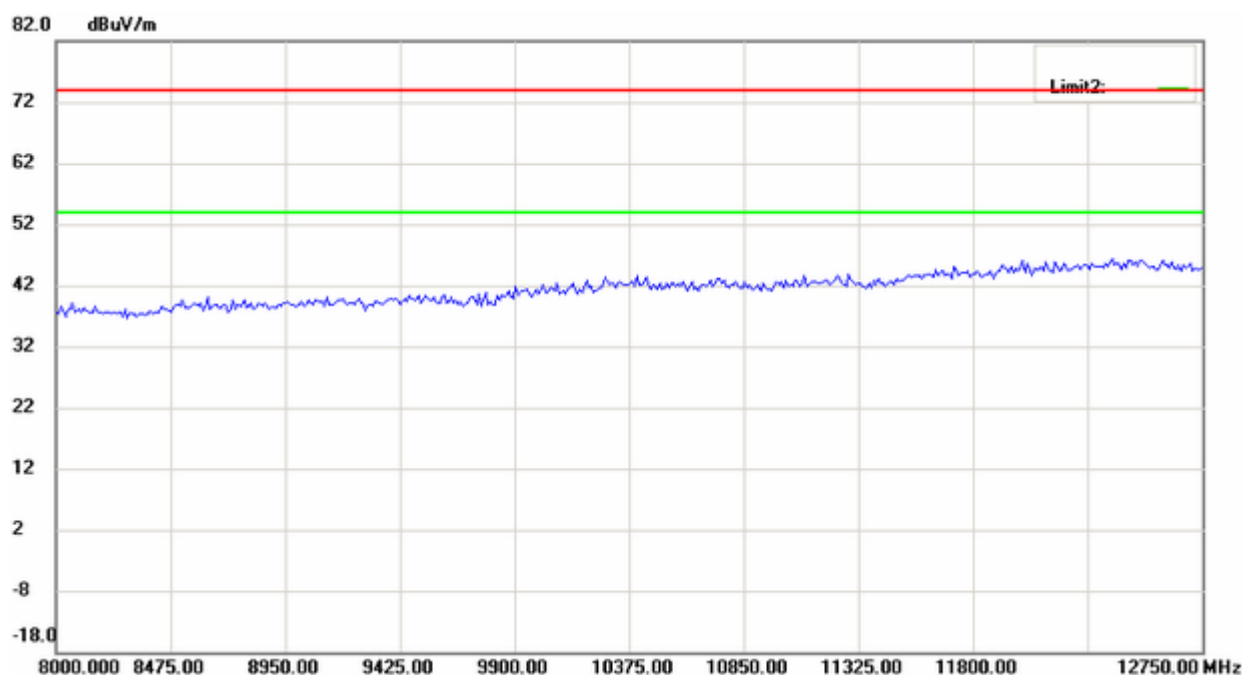
Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

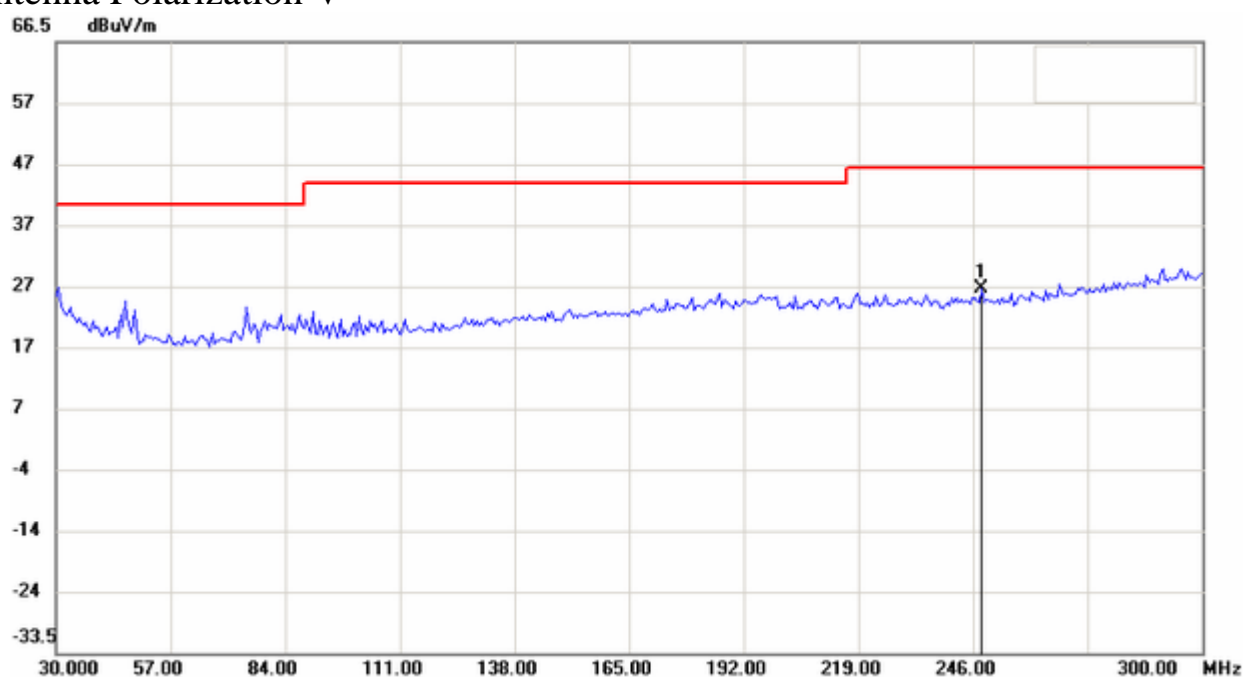


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## Antenna Polarization V

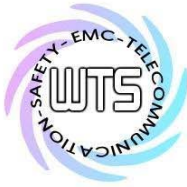


Up Line: Peak Limit Line

Down Line: Ave Limit Line

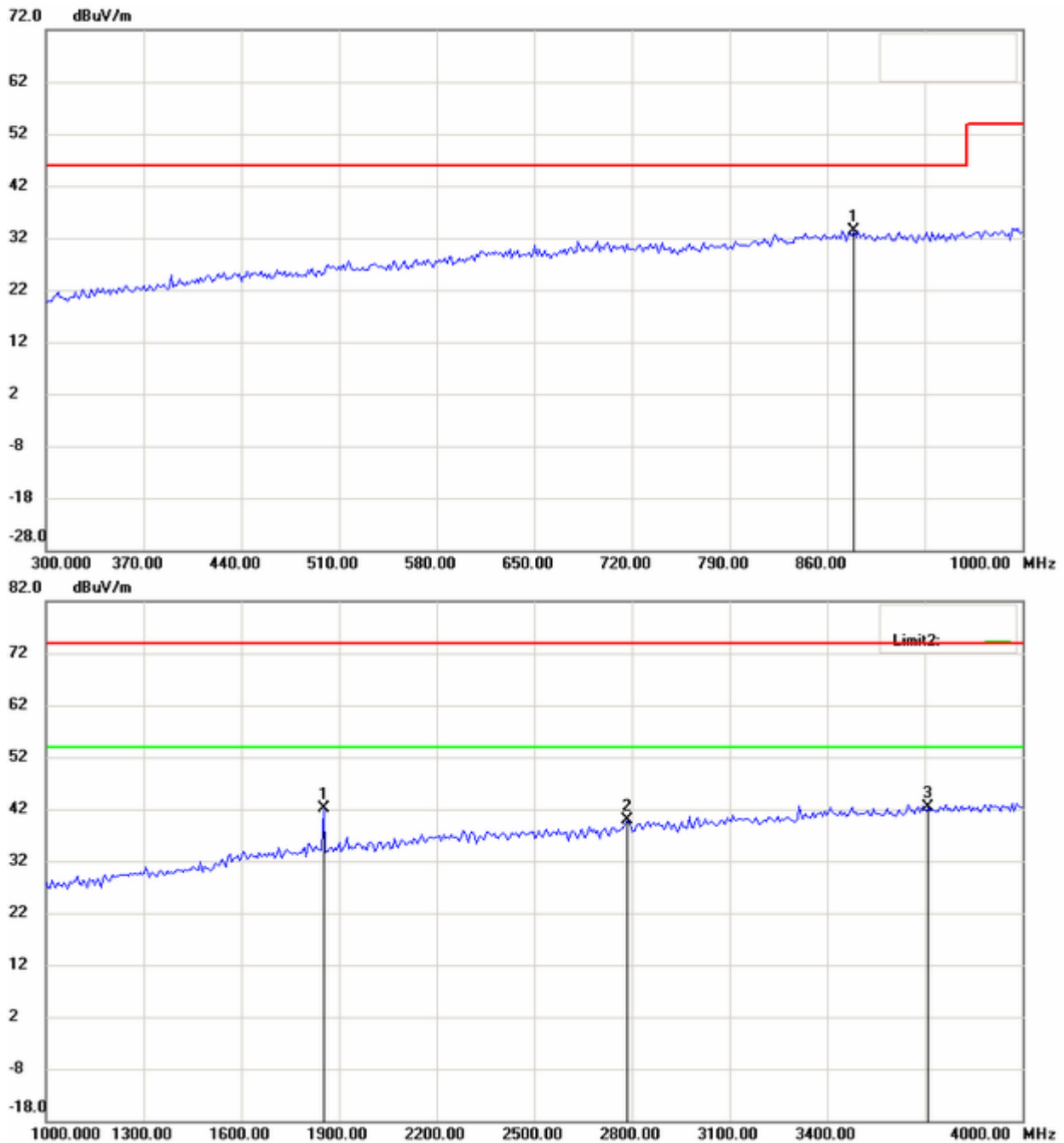
Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
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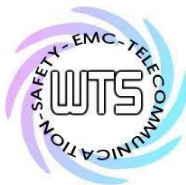
Registration number: W6M20904-9710-P-15  
FCC ID: QDVODVWU-8256H



Up Line: Peak Limit Line  
Down Line: Ave Limit Line

Note:

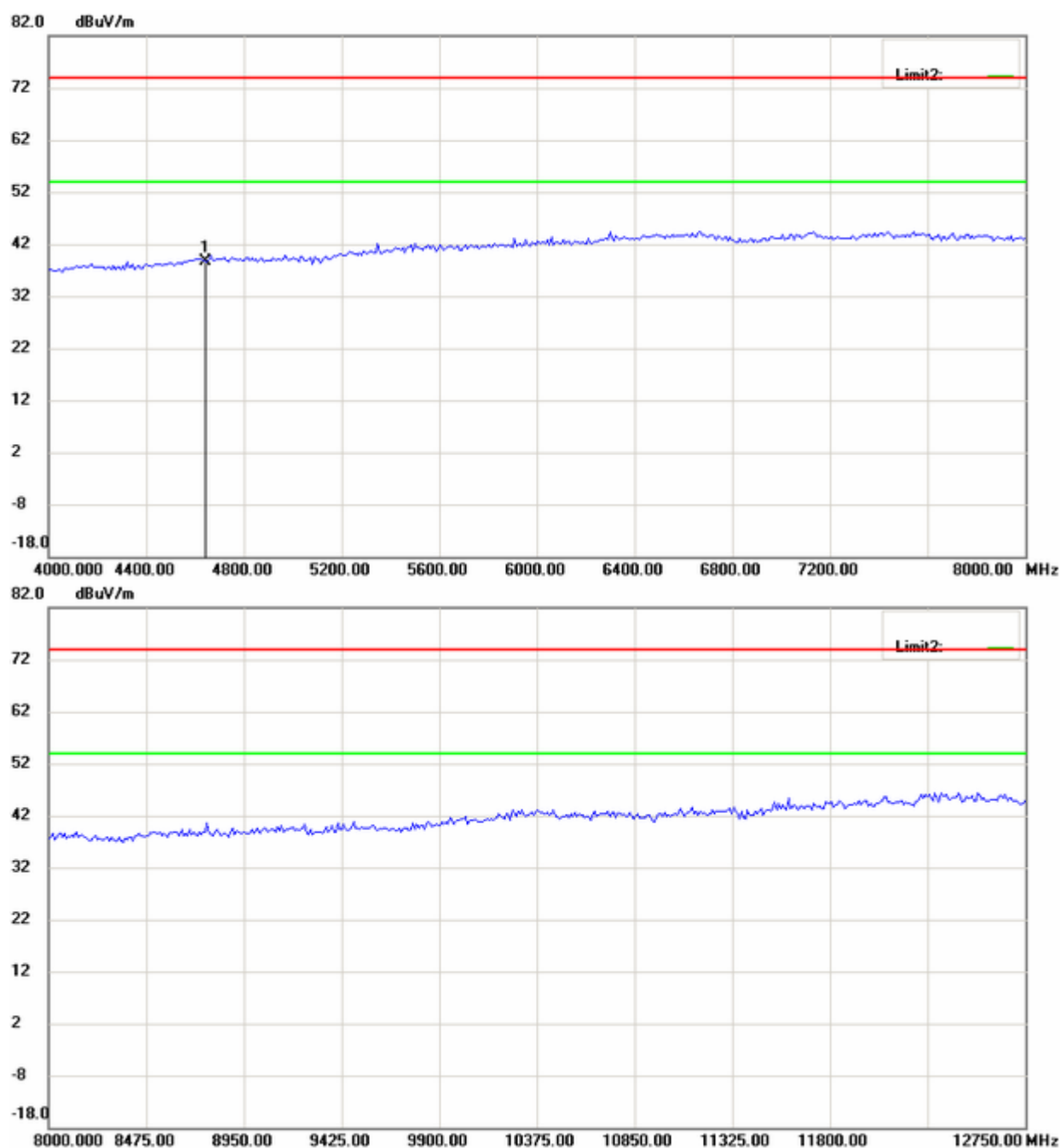
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



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FCC ID: QDVODVWU-8256H



**Up Line: Peak Limit Line**

**Down Line: Ave Limit Line**

**Note:**

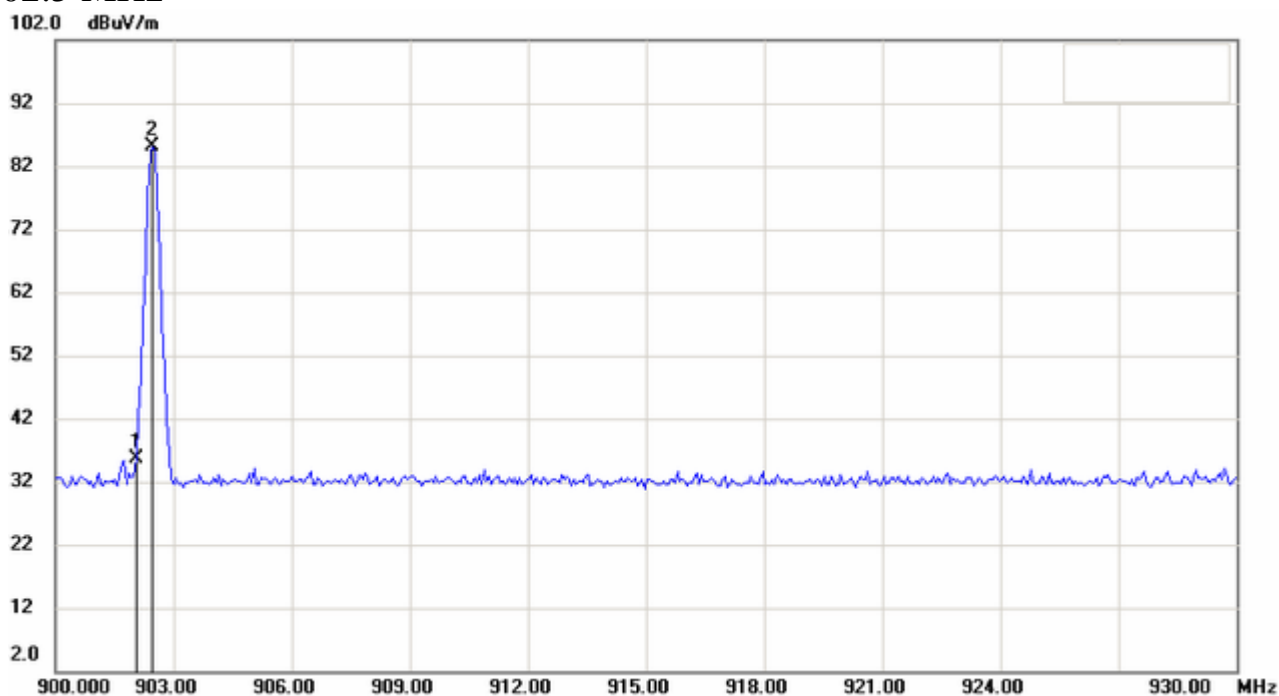
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

Registration number: W6M20904-9710-P-15

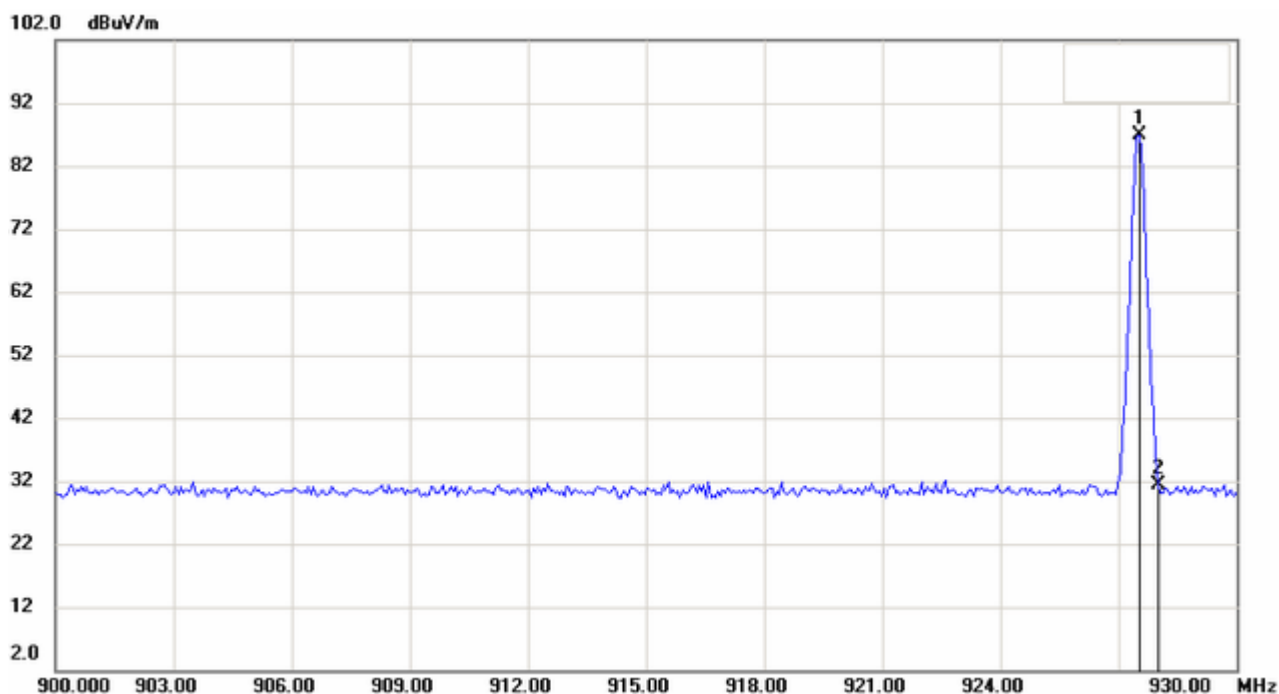
FCC ID: QDVODVWU-8256H

Radiated Emission on the band edge

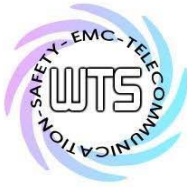
902.5 MHz



927.5 MHz







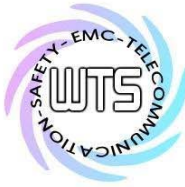
## *Worldwide Testing Services(Taiwan) Co., Ltd.*

Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

External Photos

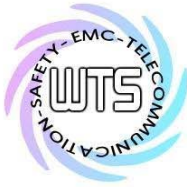




## **Worldwide Testing Services(Taiwan) Co., Ltd.**

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FCC ID: QDVODVWU-8256H





## Worldwide Testing Services(Taiwan) Co., Ltd.

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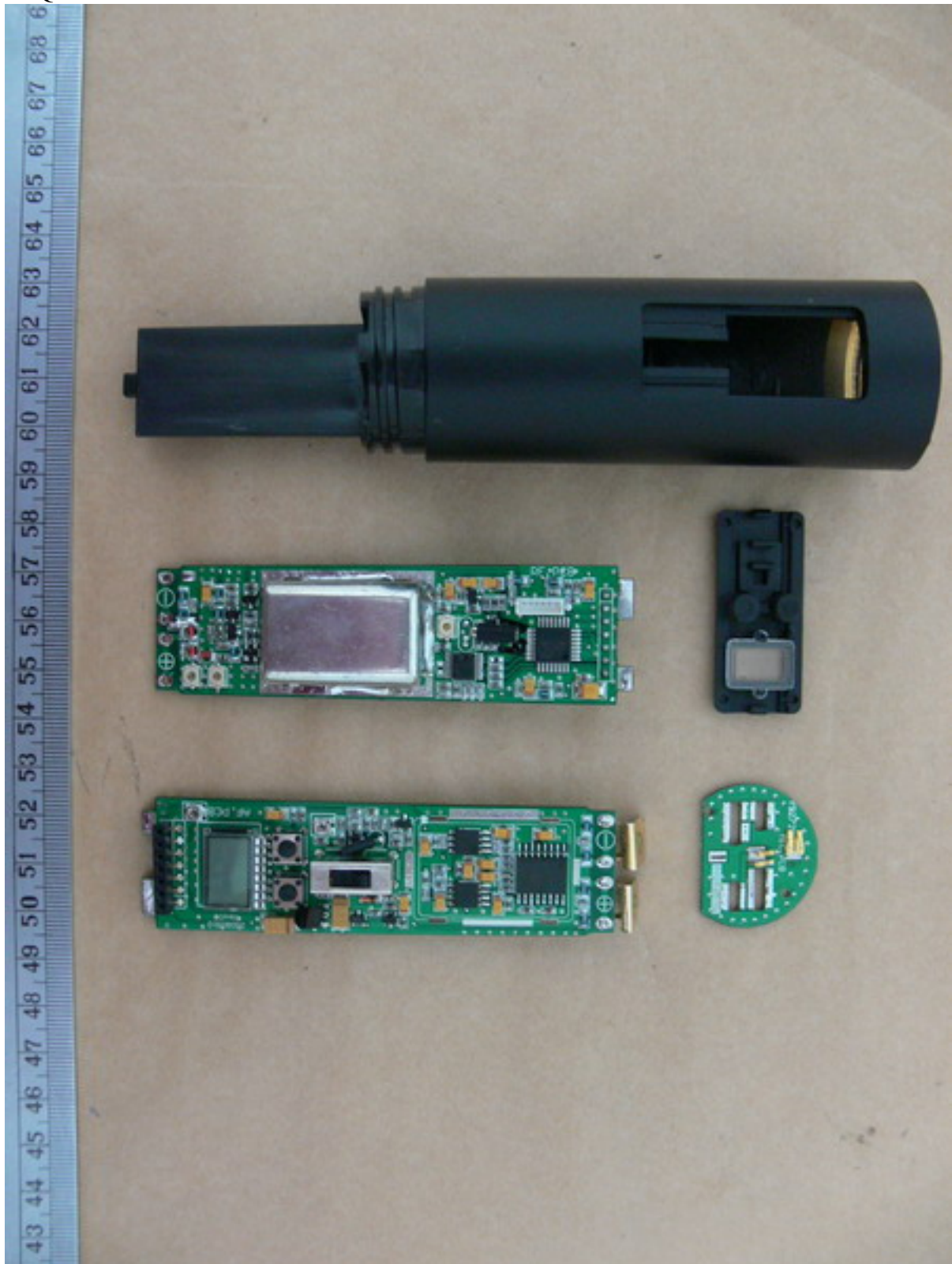
FCC ID: QDVODVWU-8256H

Internal Photos

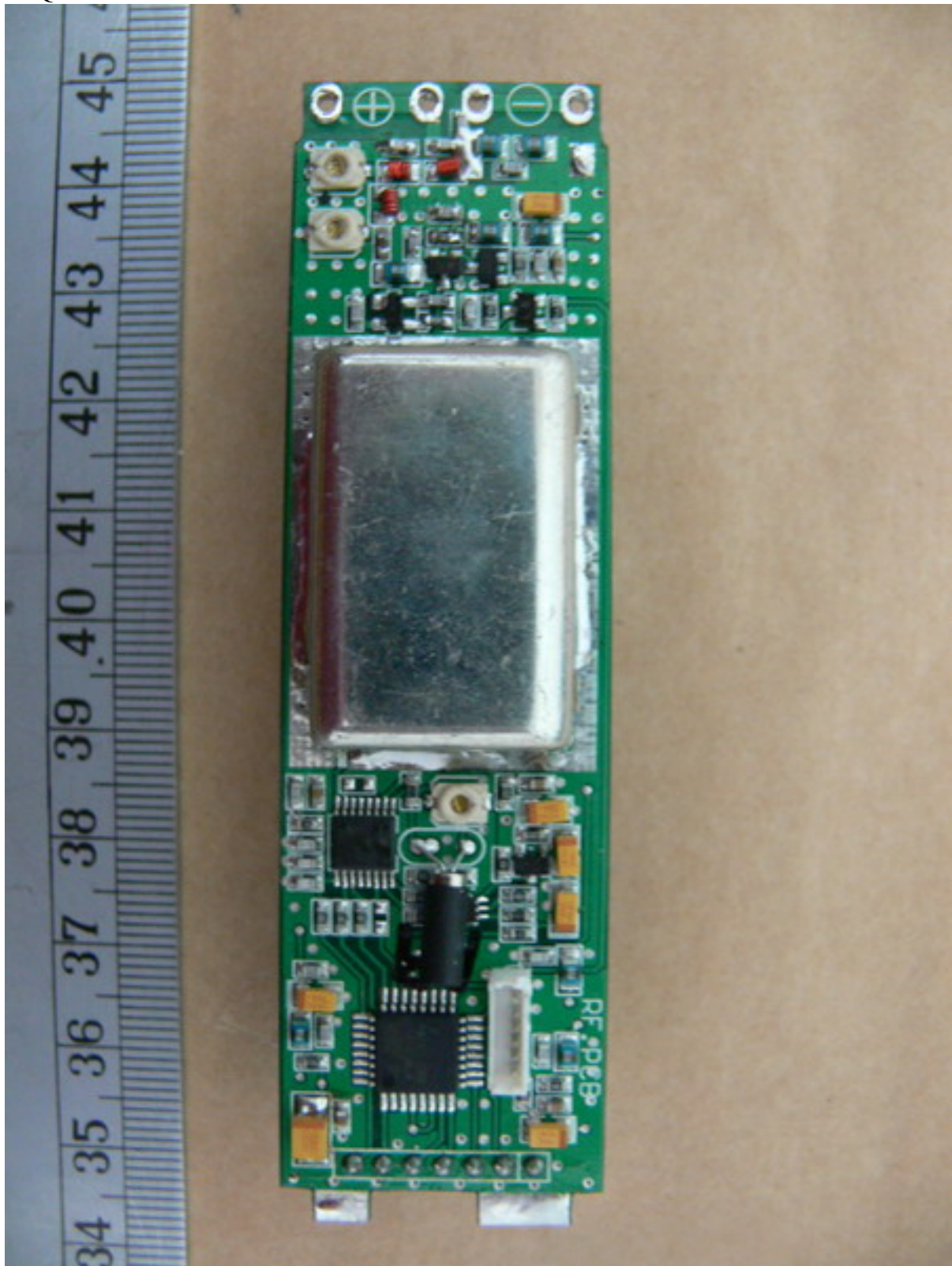




Registration number: W6M20904-9710-P-15  
FCC ID: QDVODVWU-8256H

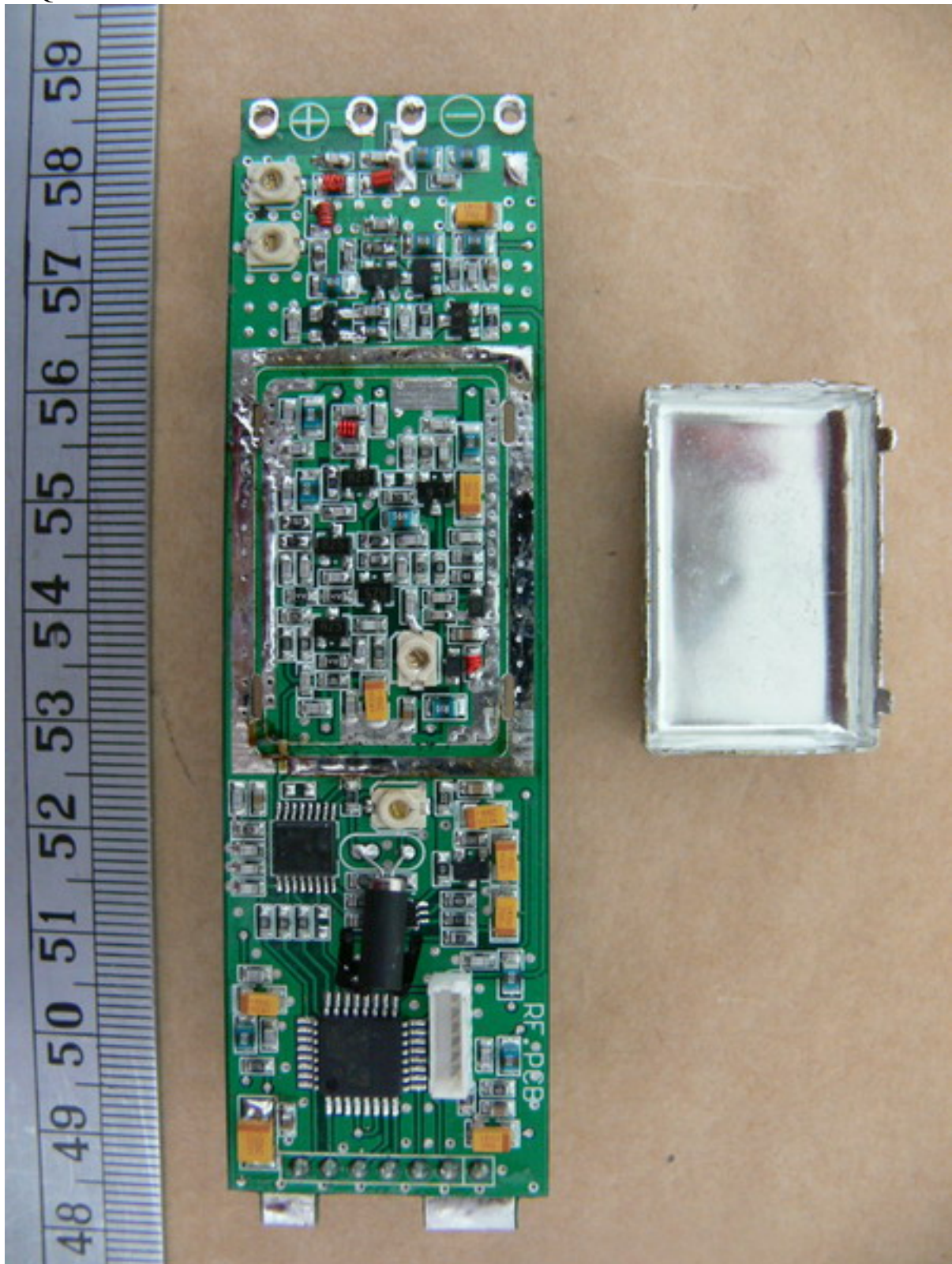


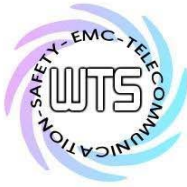
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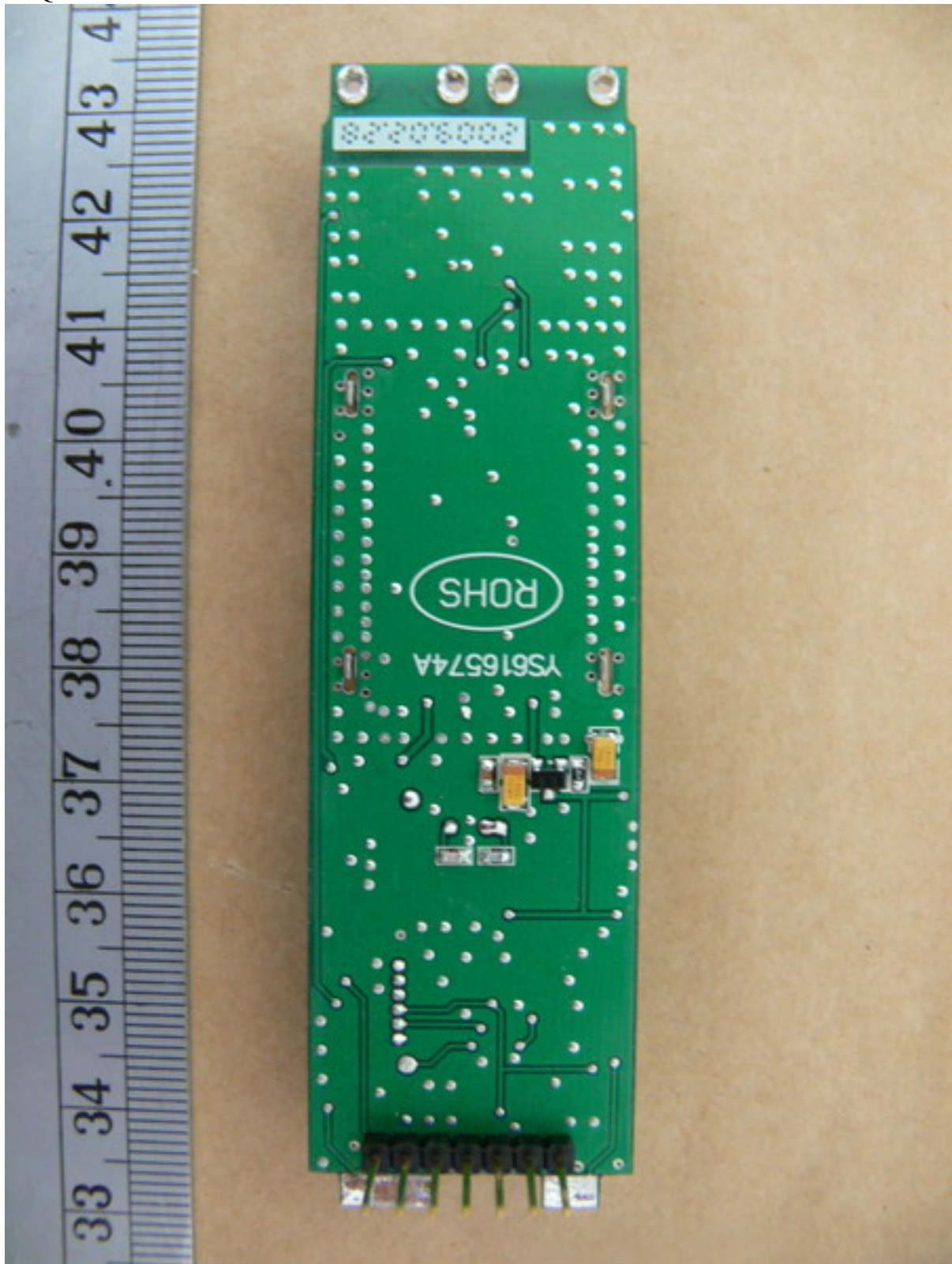


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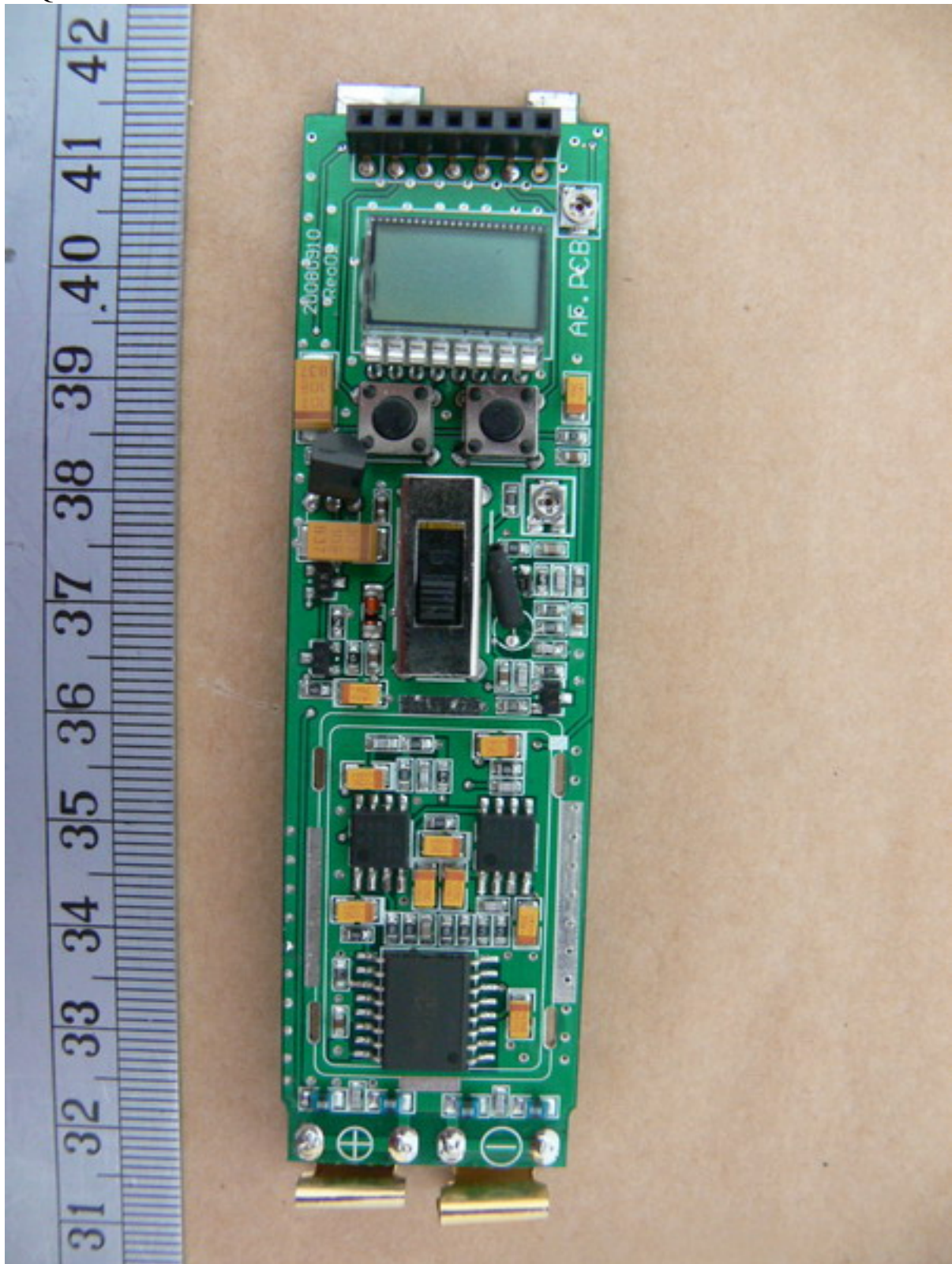


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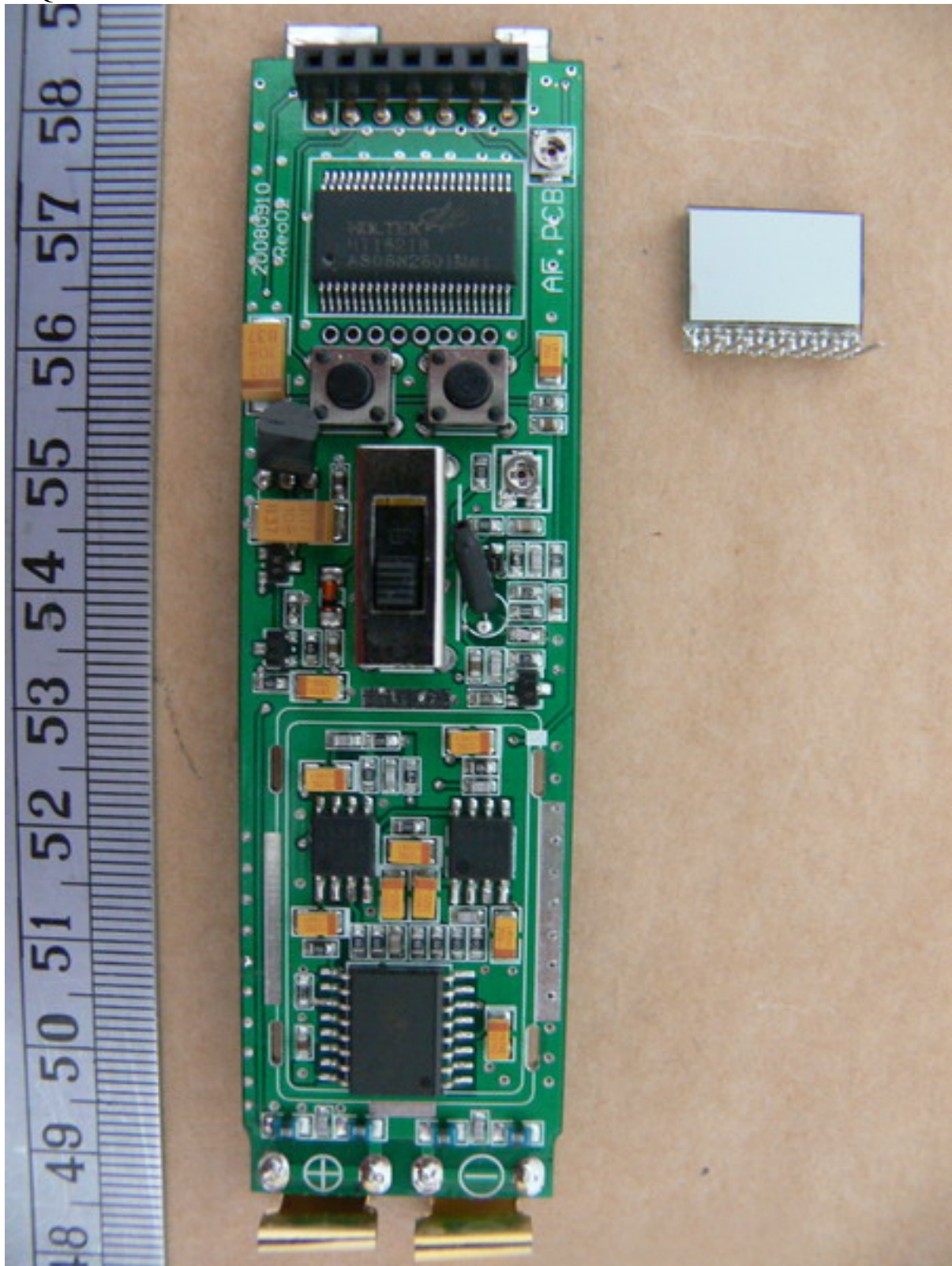


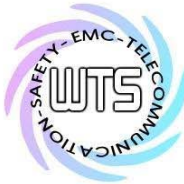
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Registration number: W6M20904-9710-P-15  
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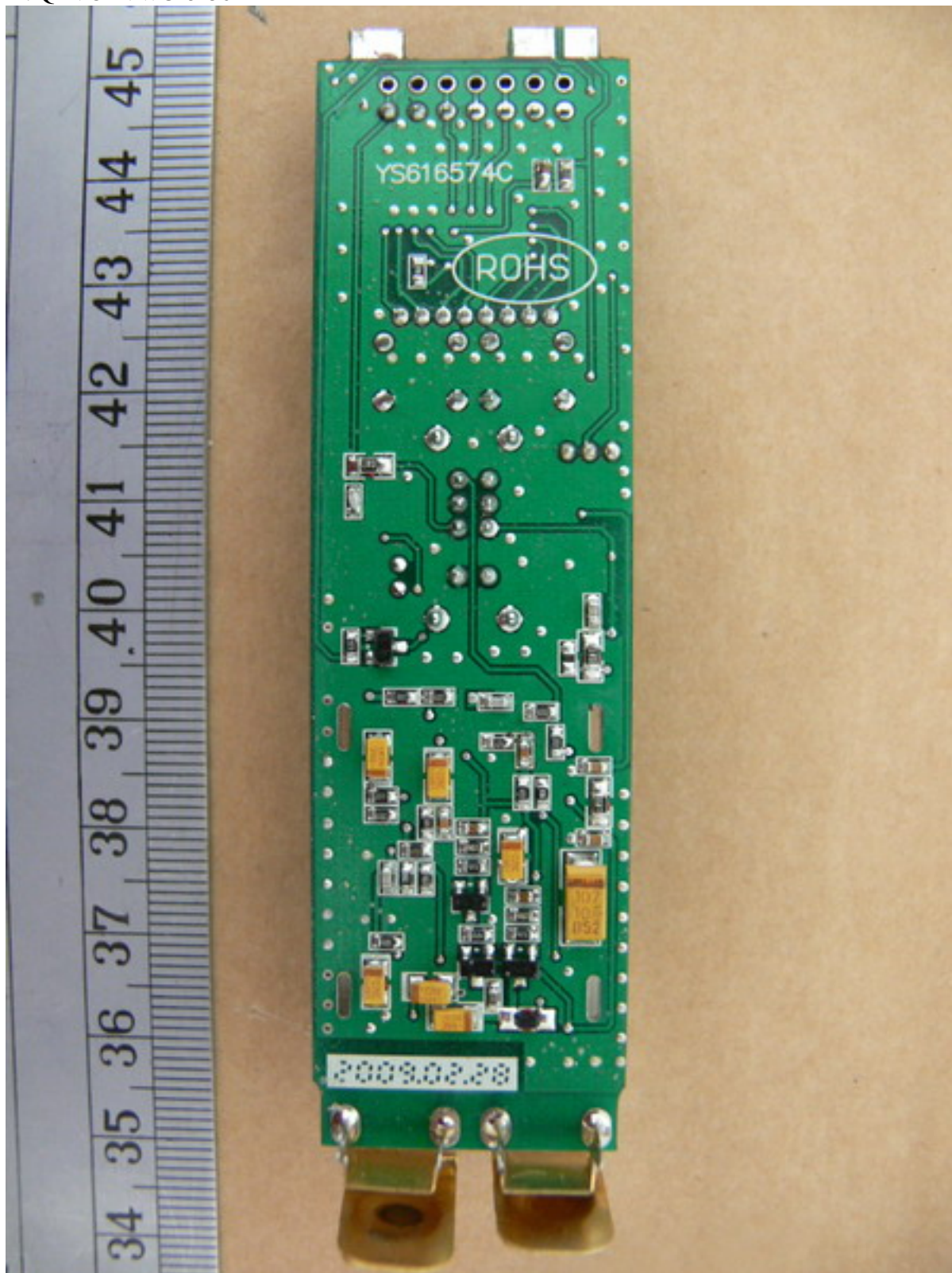




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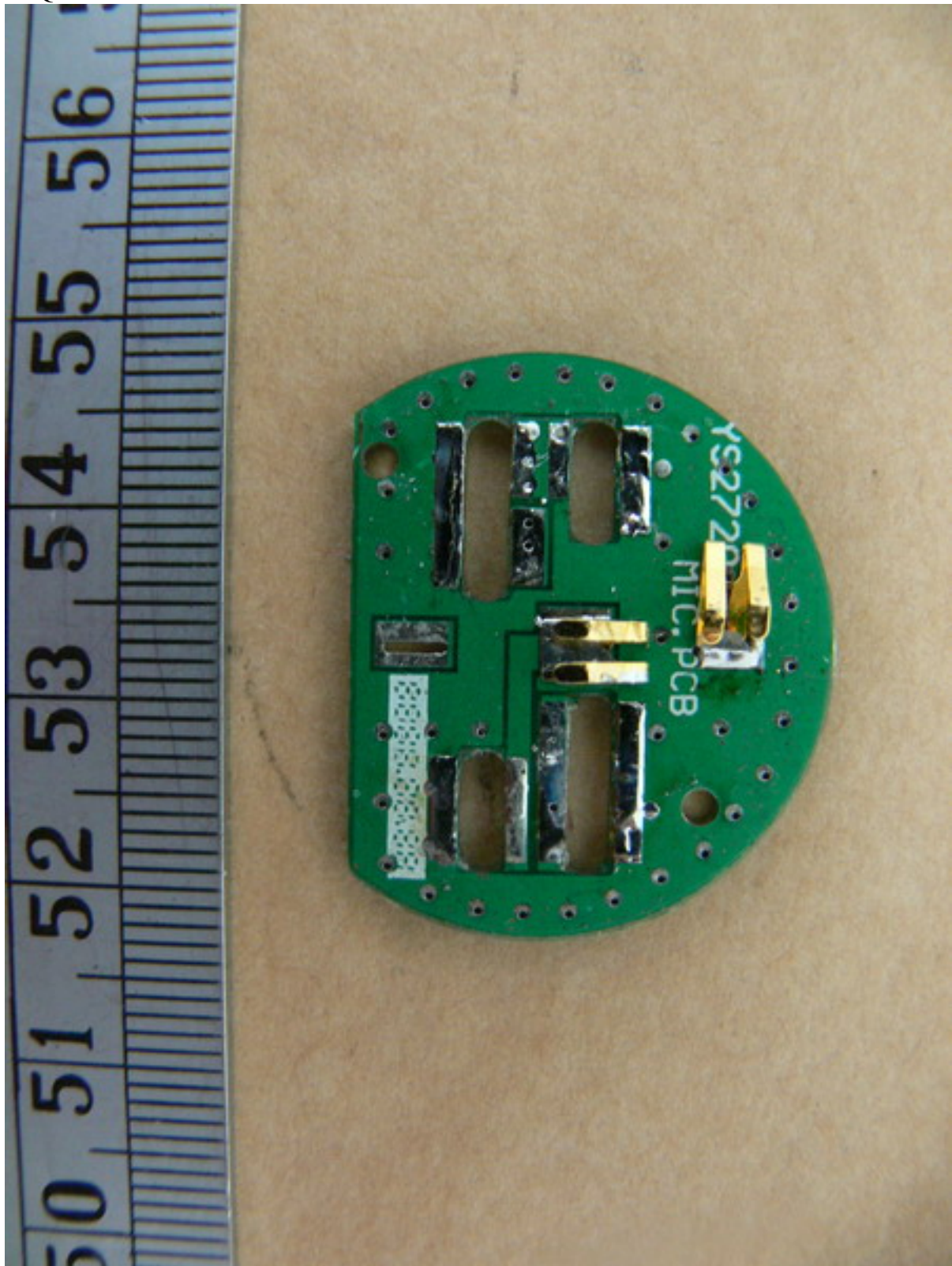
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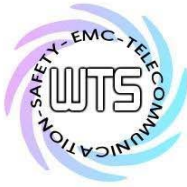
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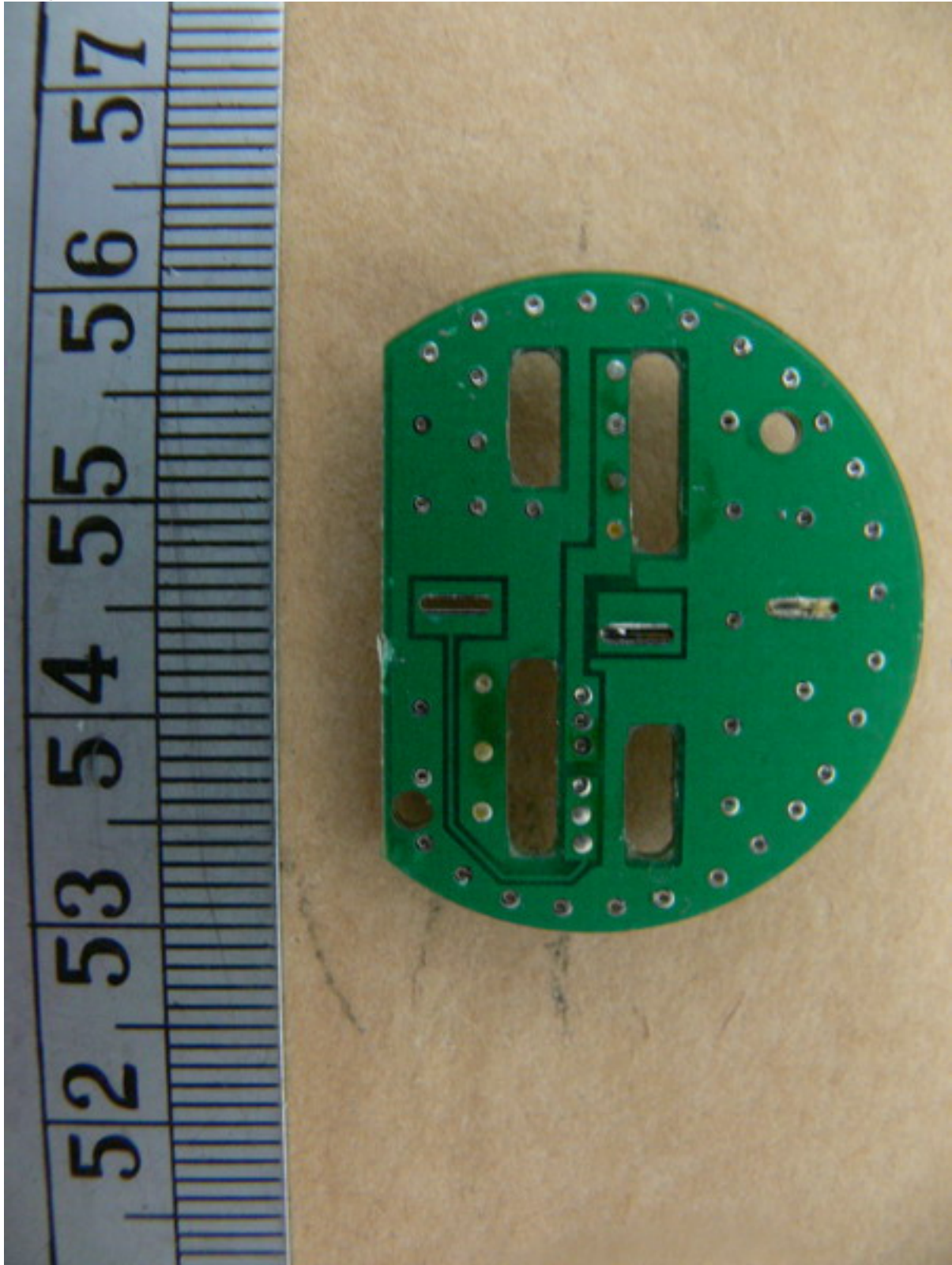


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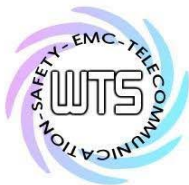




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FCC ID: QDVODVWU-8256H







Registration number: W6M20904-9710-P-15

FCC ID: QDVODVWU-8256H

Set Up Photo of Radiated Emission

