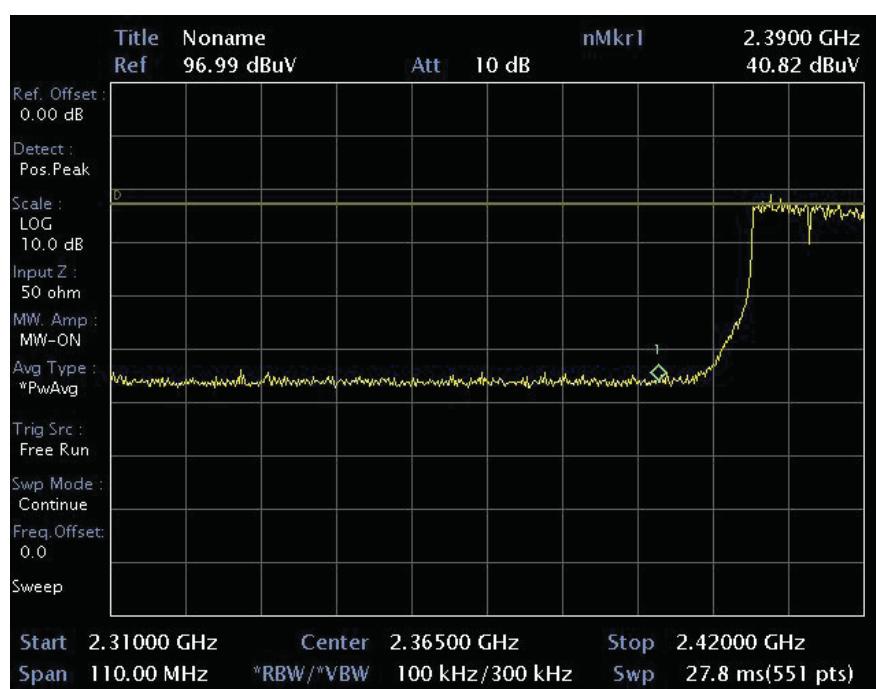


Certification Service Technology Inc.

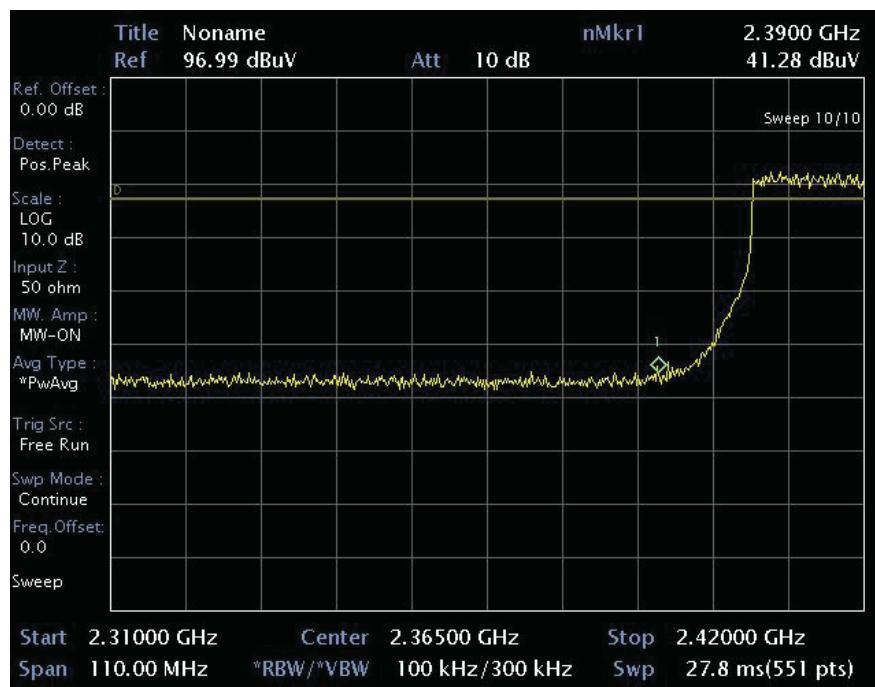
Report No. : CSTS-A10-FCC001

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Detect mode	Peak	Polarization	X-Plane
Note	IEEE802.11g – CH1 (2412 MHz) HOR.		



VER.

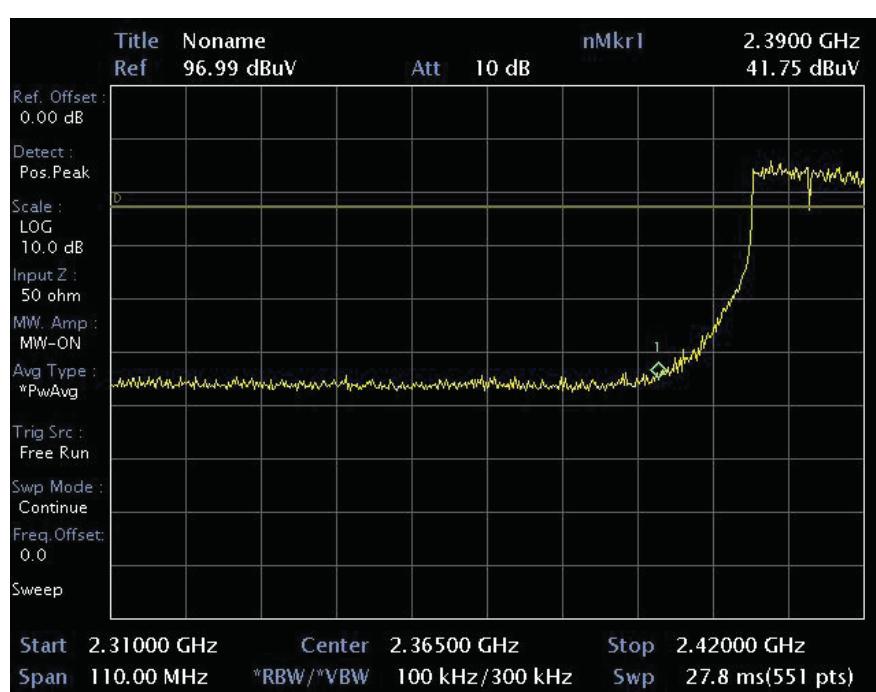


Certification Service Technology Inc.

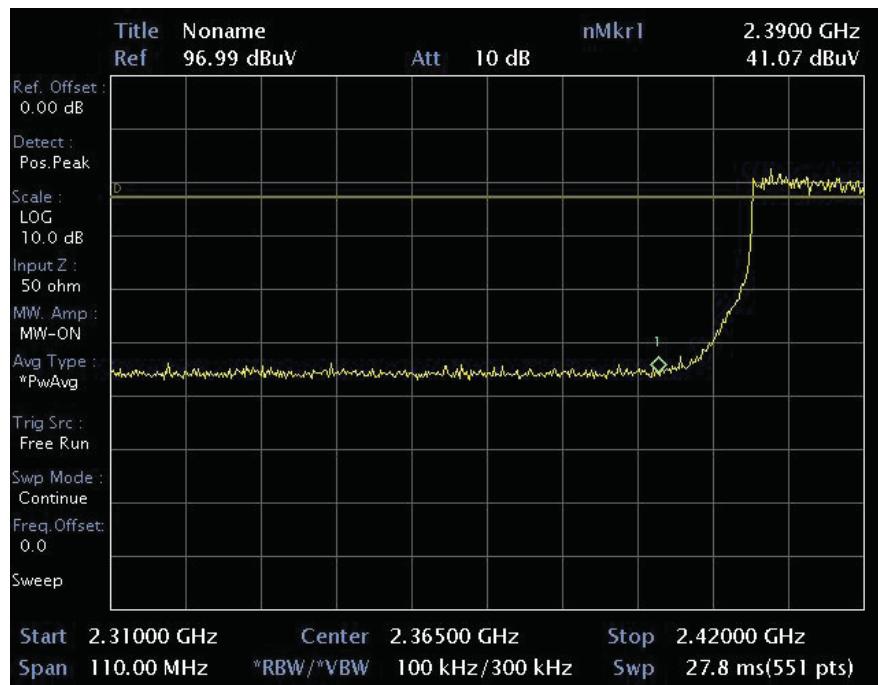
Report No. : CSTS-A10-FCC001

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Detet mode	Peak	Polarization	Y-Plane
Note	IEEE802.11g – CH1 (2412 MHz) HOR.		



VER.

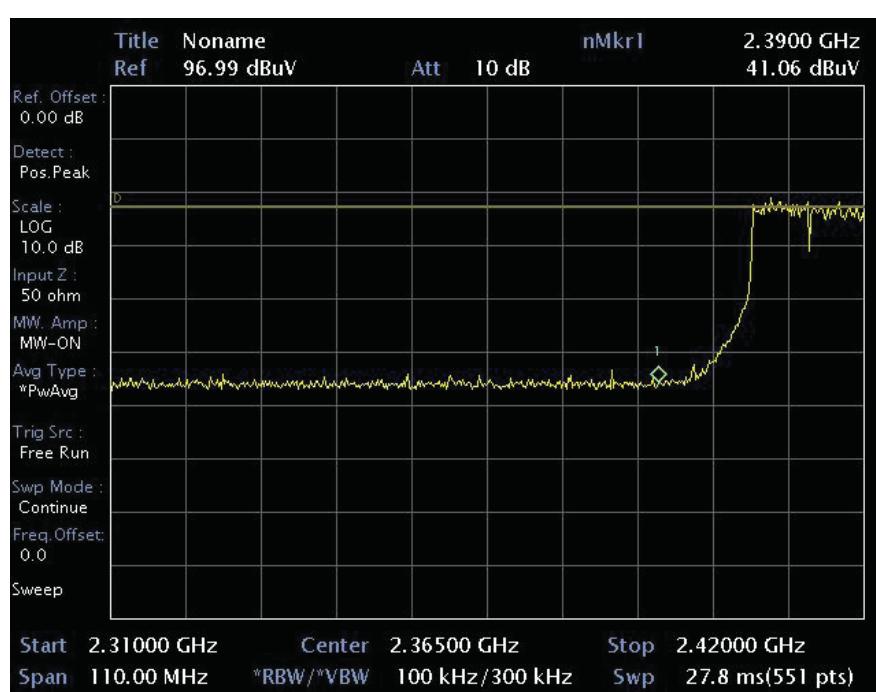


Certification Service Technology Inc.

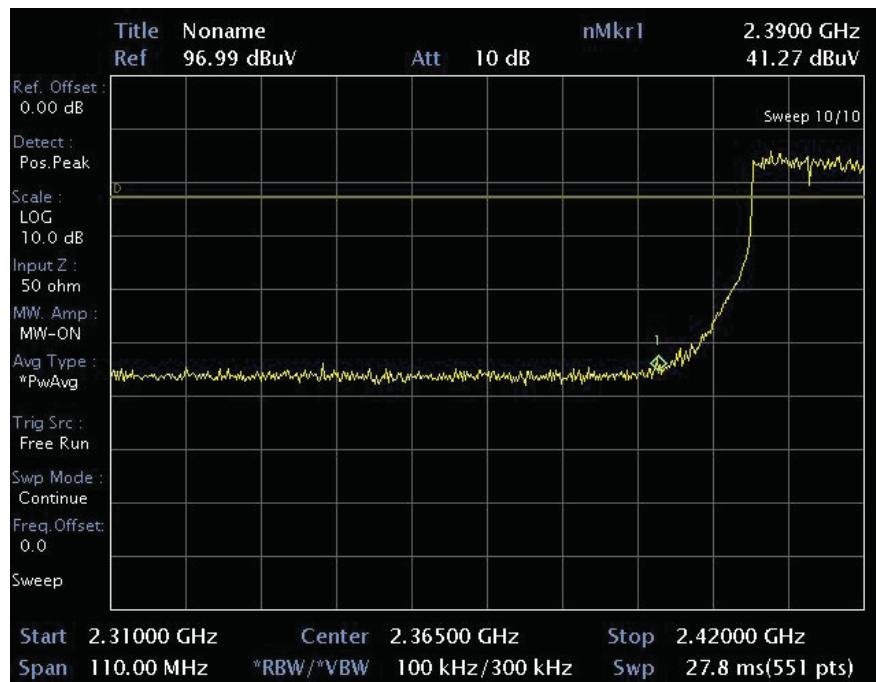
Report No. : CSTS-A10-FCC001

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Detect mode	Peak	Polarization	Z-Plane
Note	IEEE802.11g – CH1 (2412 MHz) HOR.		



VER.

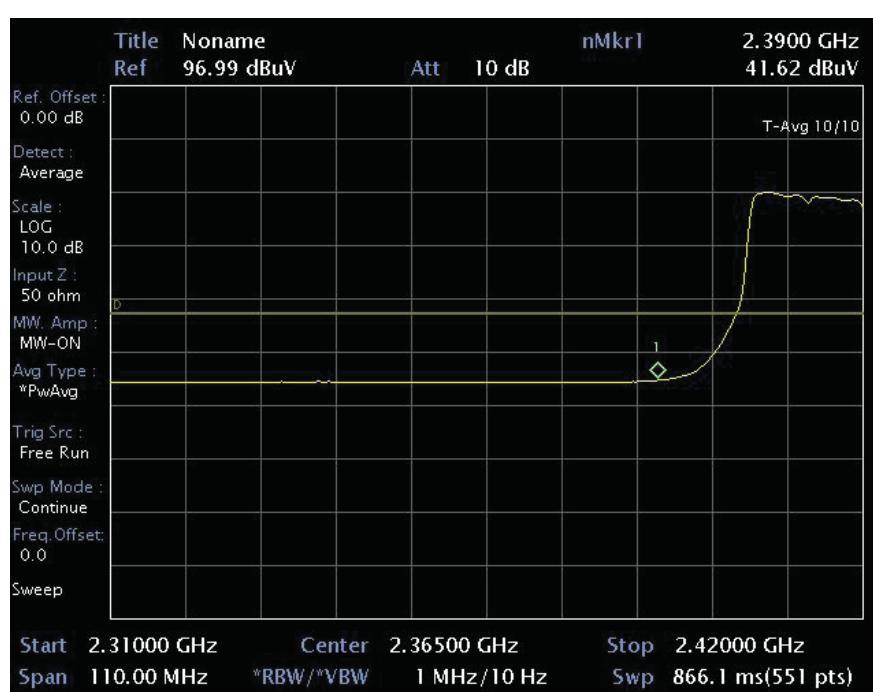


Certification Service Technology Inc.

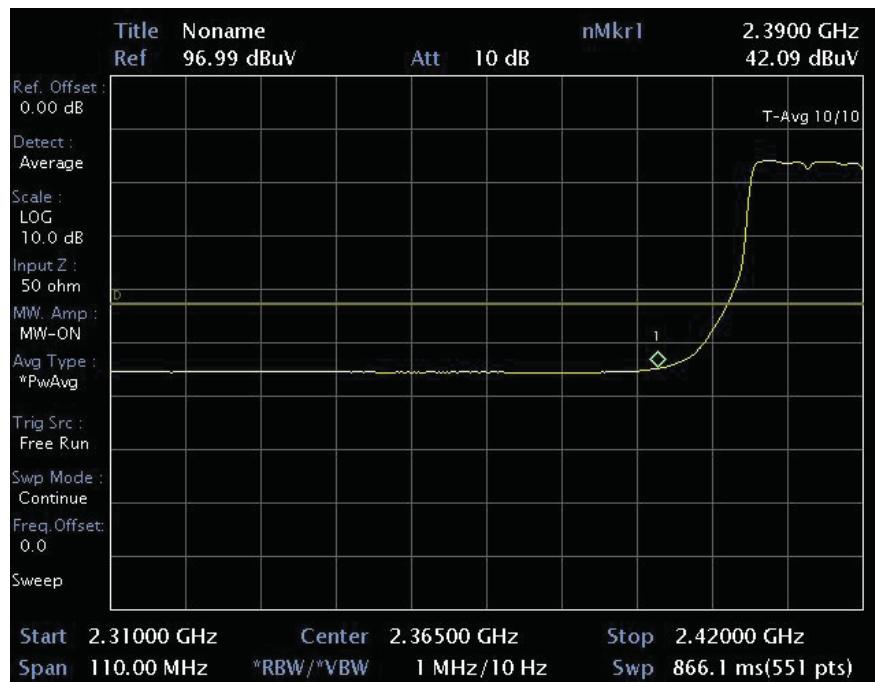
Report No. : CSTS-A10-FCC001

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Detect mode	Average	Polarization	X-Plane
Note	IEEE802.11g – CH1 (2412 MHz) HOR.		



VER.

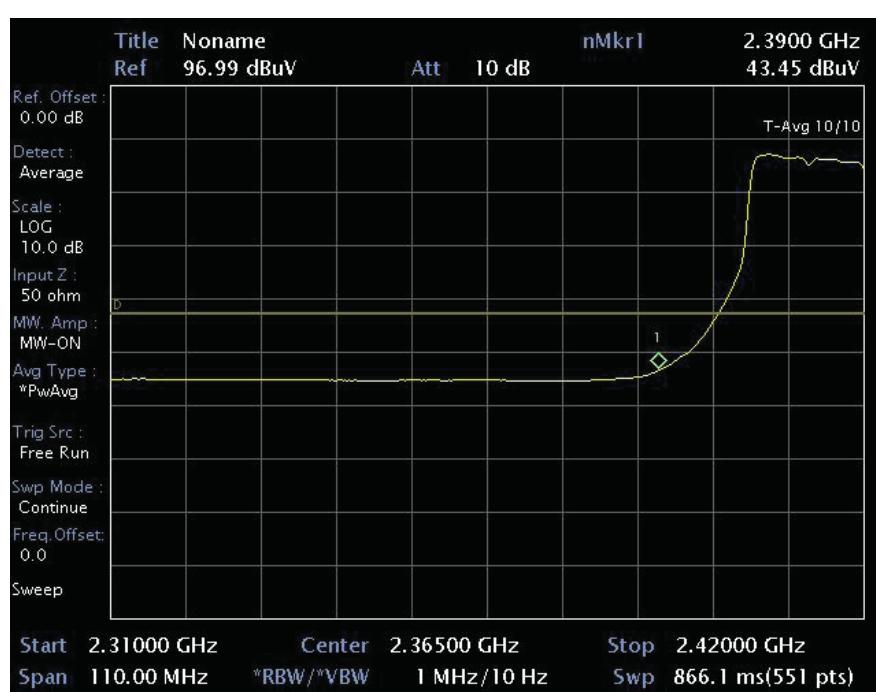


Certification Service Technology Inc.

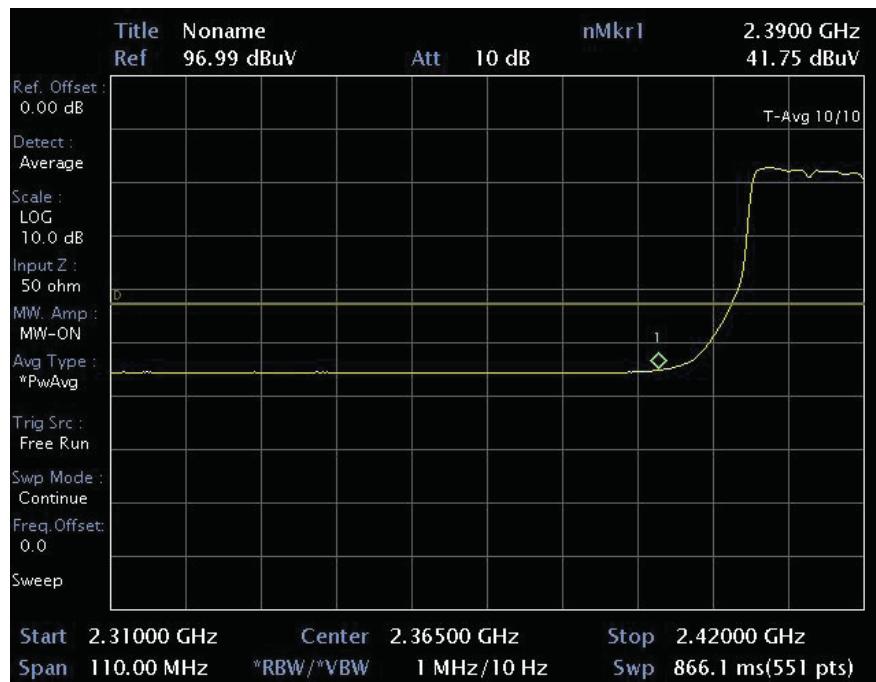
Report No. : CSTS-A10-FCC001

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Detect mode	Average	Polarization	Y-Plane
Note	IEEE802.11g – CH1 (2412 MHz) HOR.		



VER.

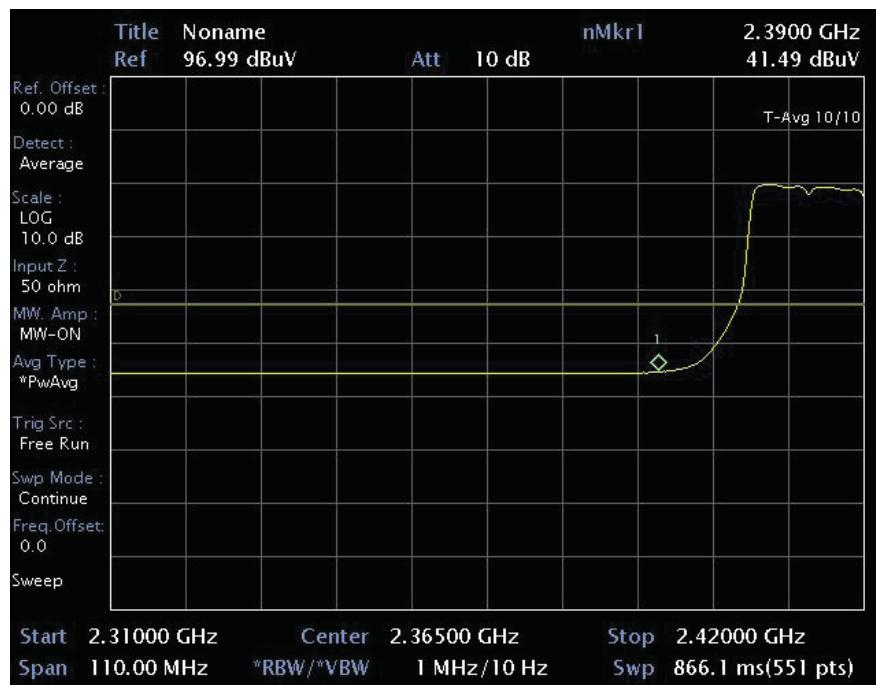


Certification Service Technology Inc.

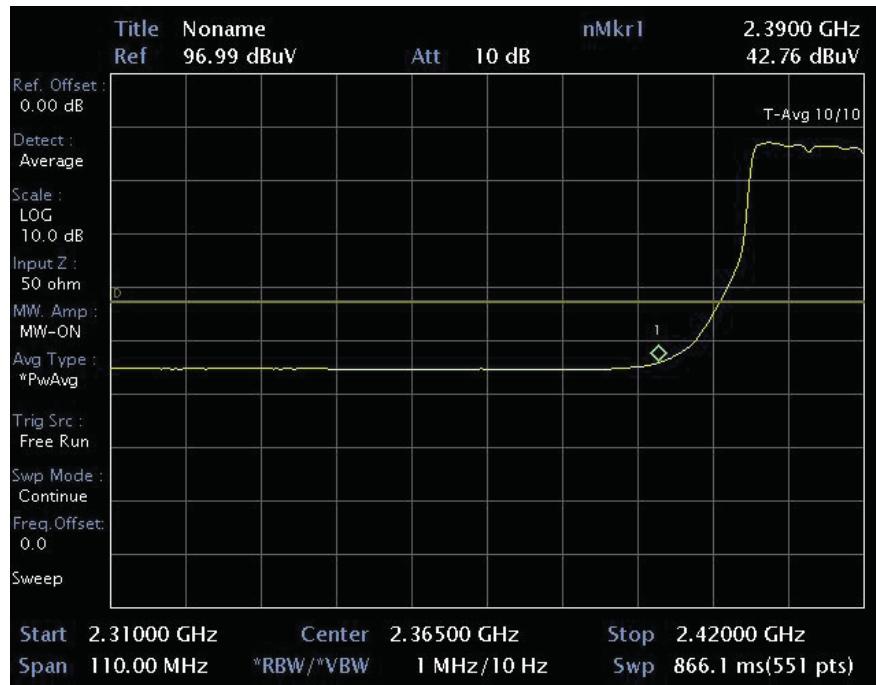
Report No. : CSTS-A10-FCC001

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Detect mode	Average	Polarization	Z-Plane
Note	IEEE802.11g – CH1 (2412 MHz) HOR.		



VER.

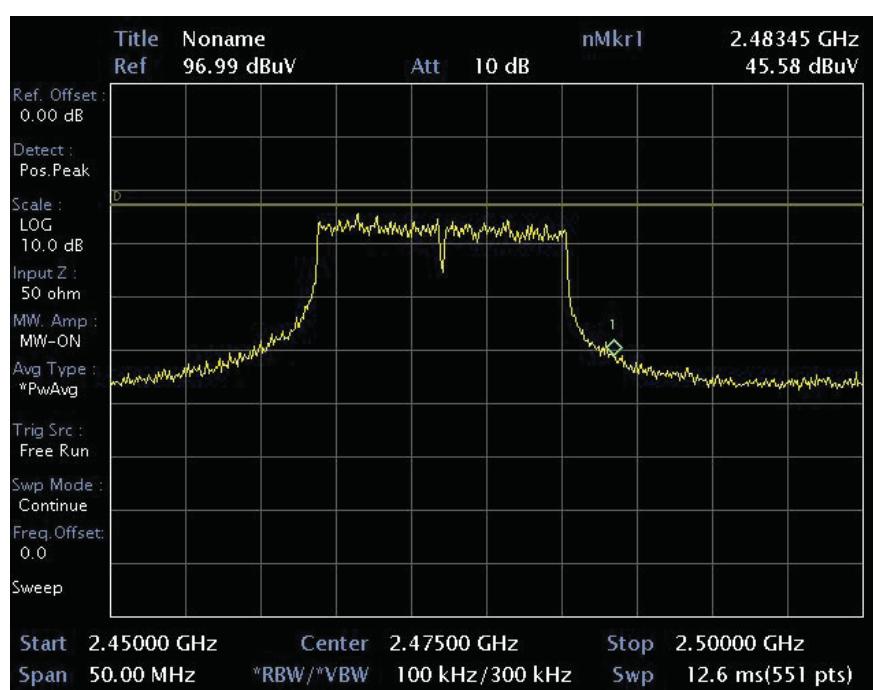


Certification Service Technology Inc.

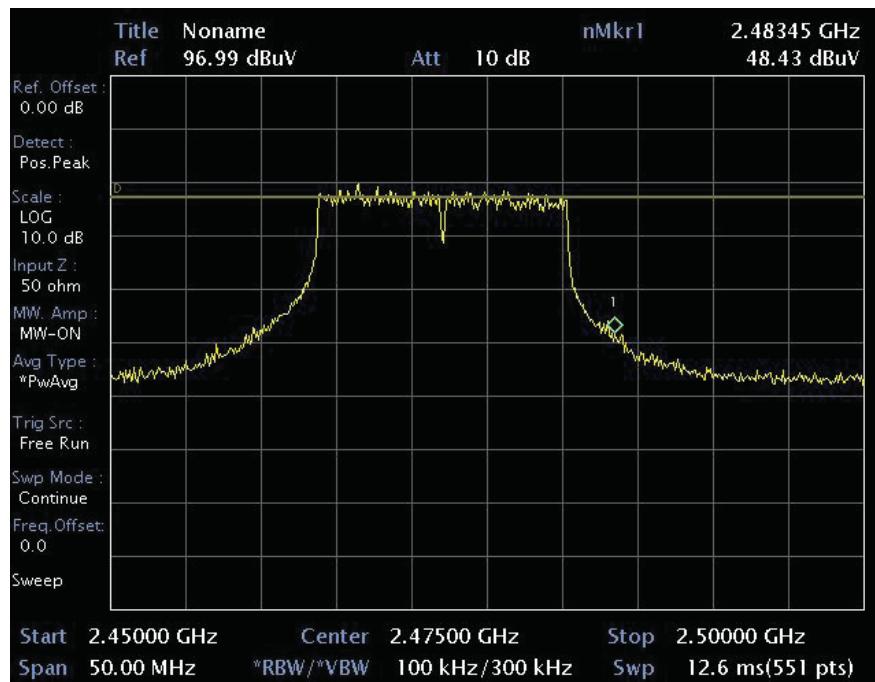
Report No. : CSTS-A10-FCC001

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Detect mode	Peak	Polarization	X-Plane
Note	IEEE802.11g – CH13 (2472 MHz) HOR.		



VER.

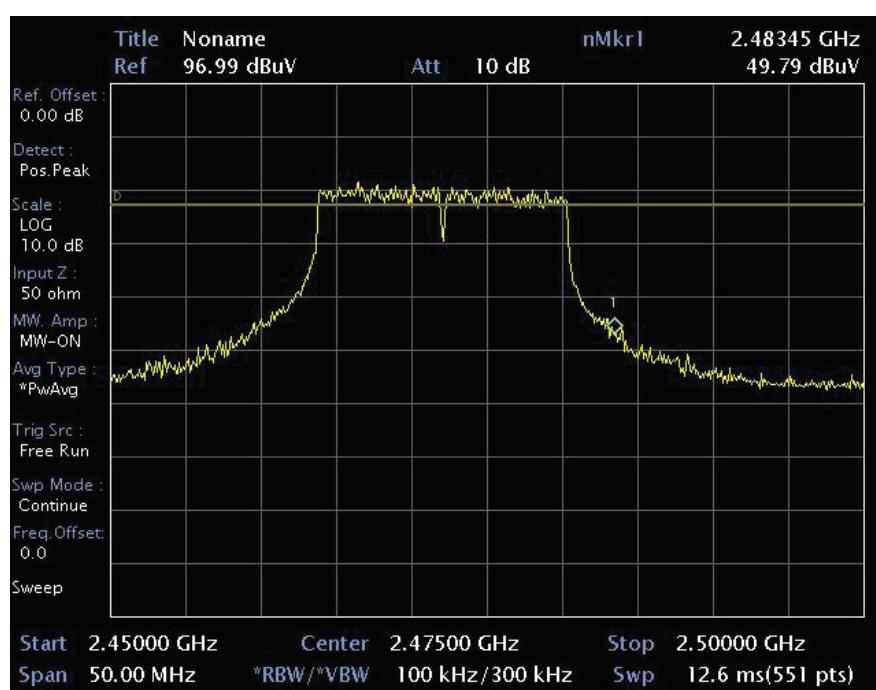


Certification Service Technology Inc.

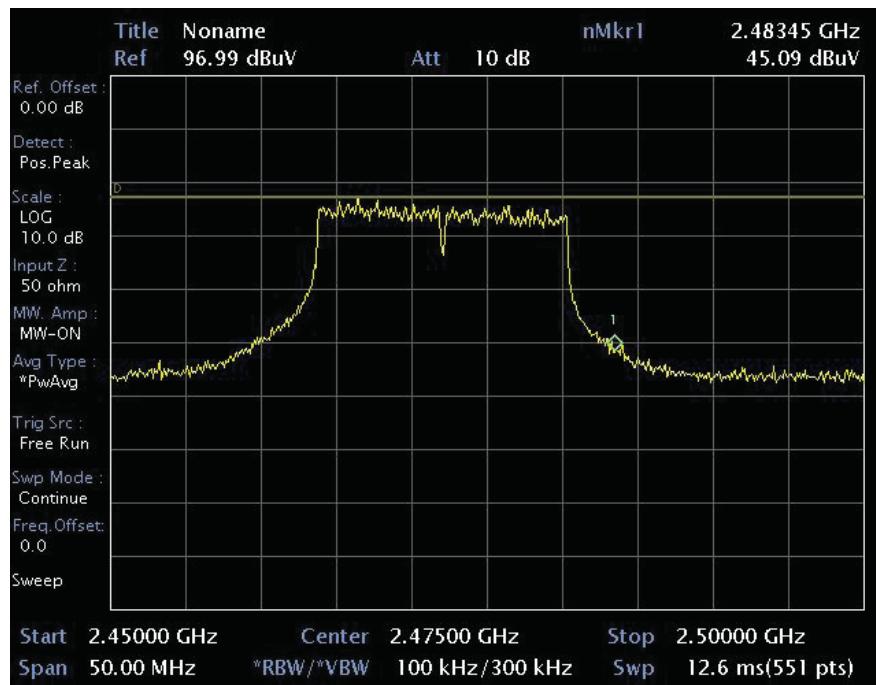
Report No. : CSTS-A10-FCC001

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Detec mode	Peak	Polarization	Y-Plane
Note	IEEE802.11g – CH13 (2472 MHz) HOR.		



VER.

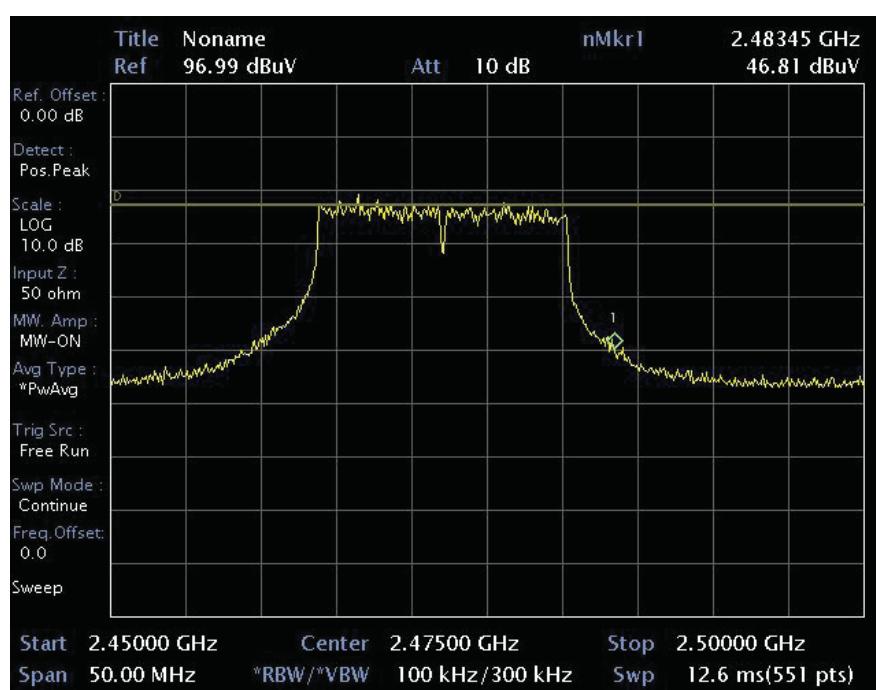


Certification Service Technology Inc.

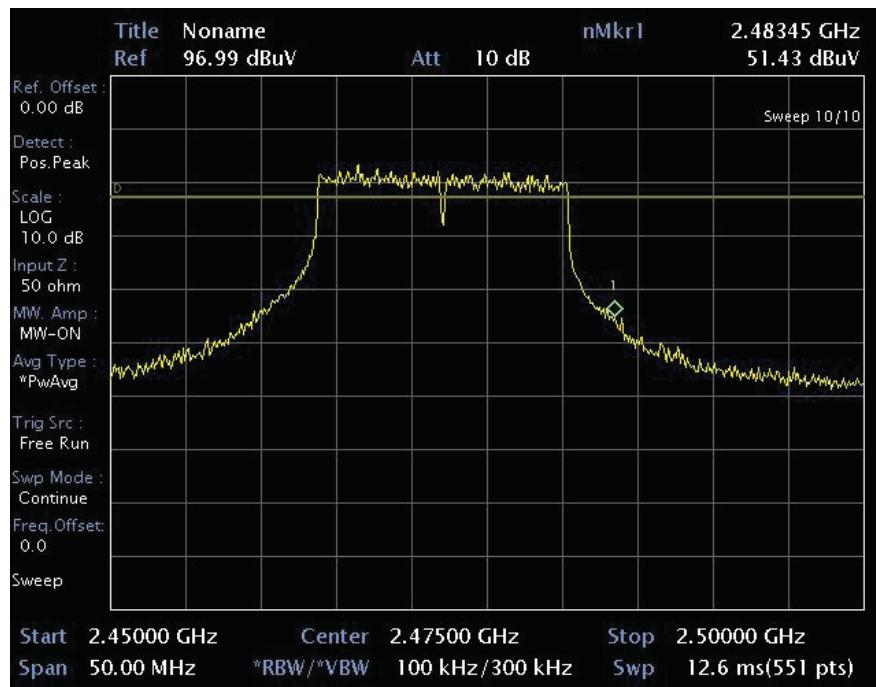
Report No. : CSTS-A10-FCC001

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Detect mode	Peak	Polarization	Z-Plane
Note	IEEE802.11g – CH13 (2472 MHz) HOR.		



VER.

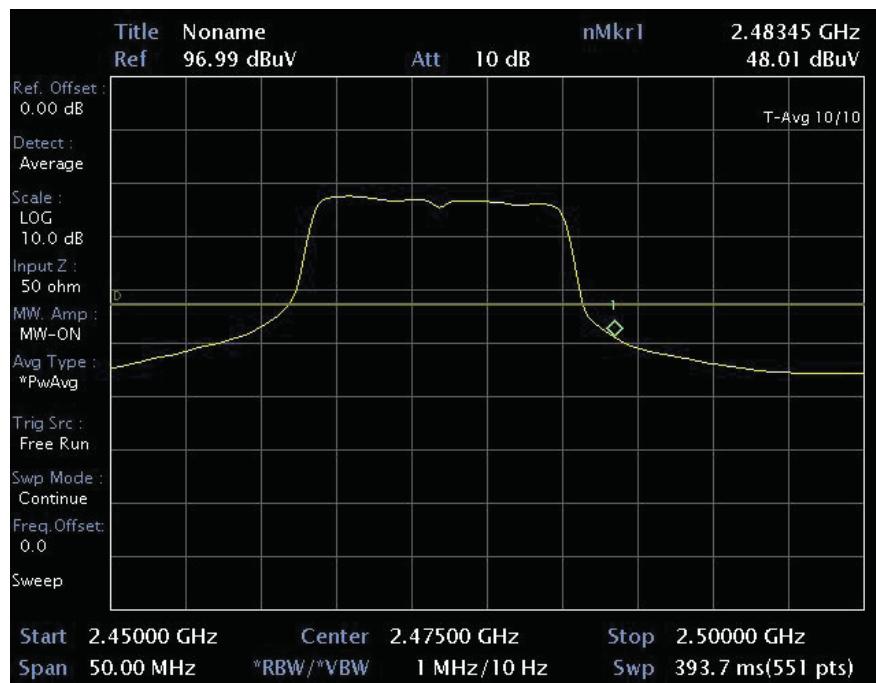


Certification Service Technology Inc.

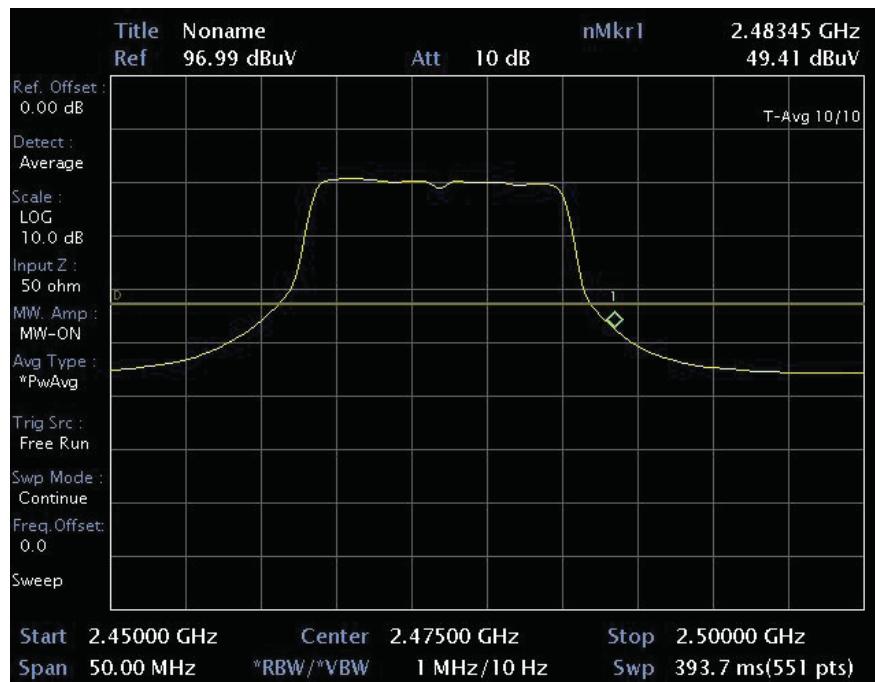
Report No. : CSTS-A10-FCC001

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Detect mode	Average	Polarization	X-Plane
Note	IEEE802.11g – CH13 (2472 MHz) HOR.		



VER.

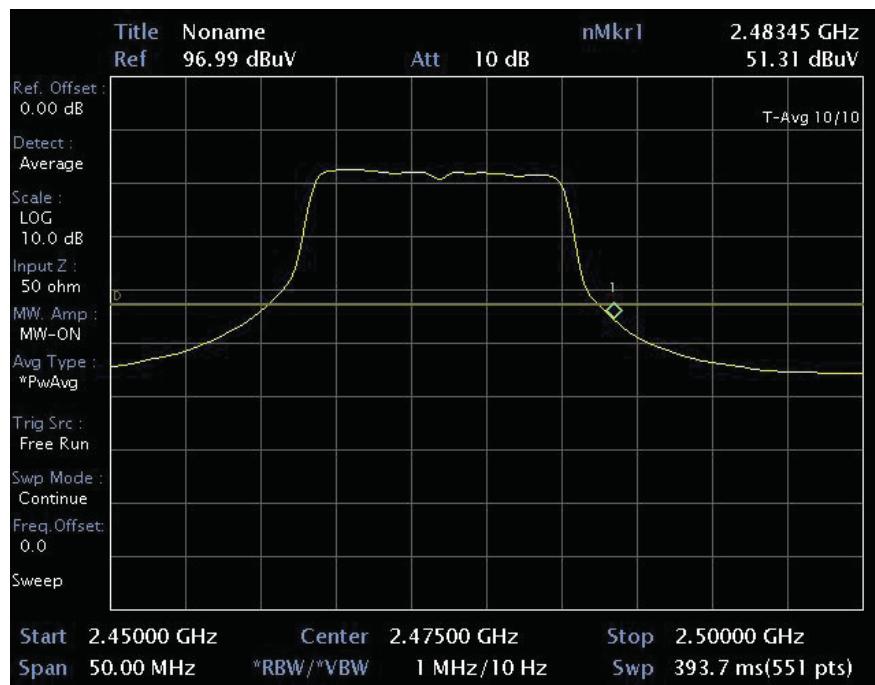


Certification Service Technology Inc.

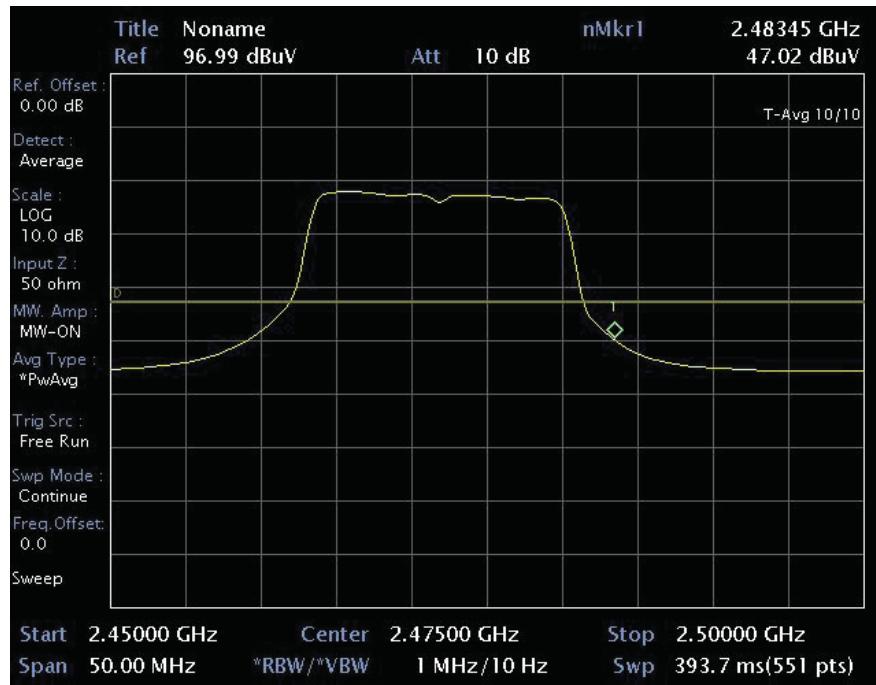
Report No. : CSTS-A10-FCC001

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Detect mode	Average	Polarization	Y-Plane
Note	IEEE802.11g – CH13 (2472 MHz) HOR.		



VER.

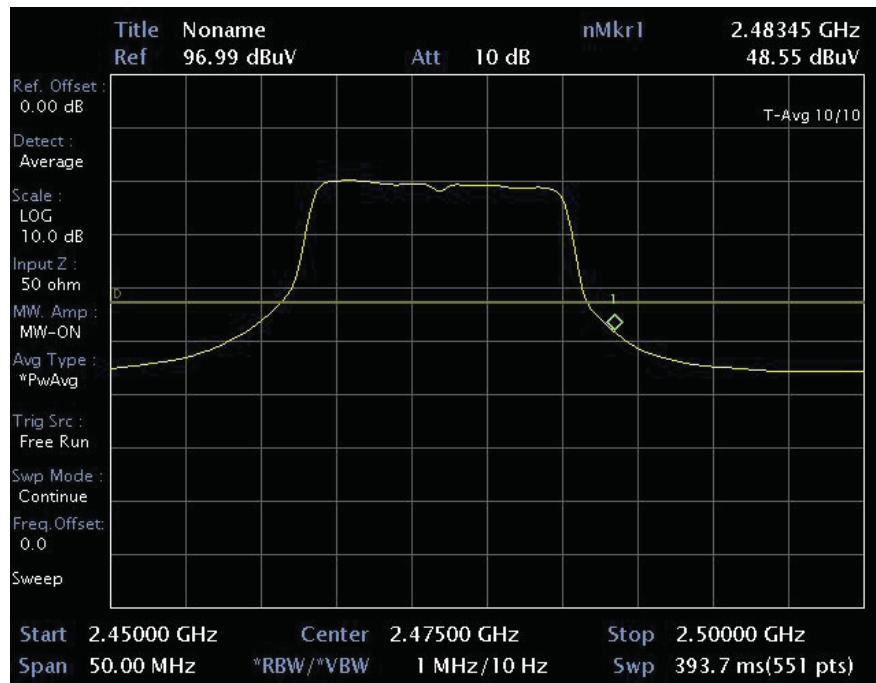


Certification Service Technology Inc.

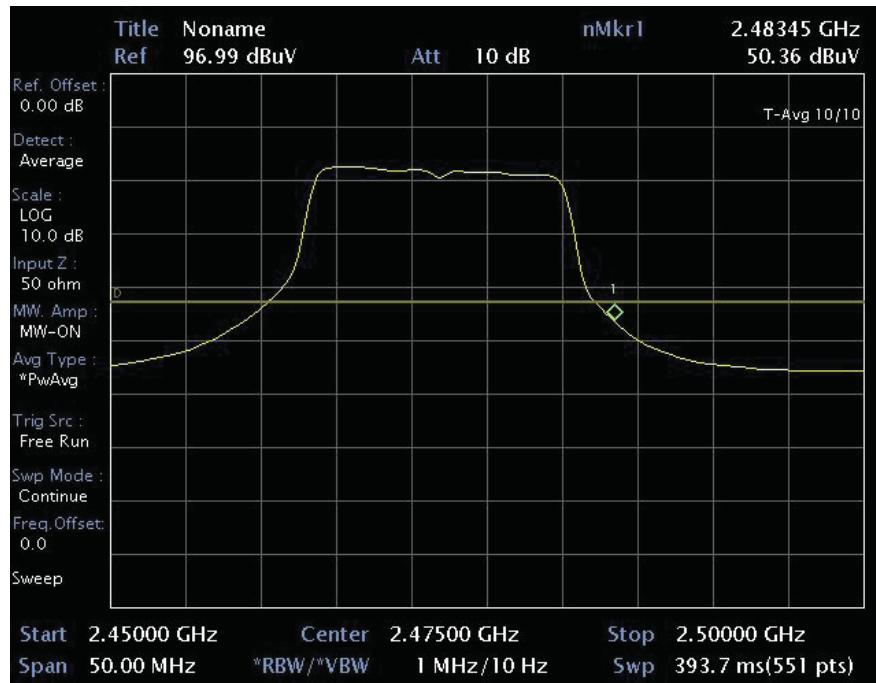
Report No. : CSTS-A10-FCC001

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Detect mode	Average	Polarization	Z-Plane
Note	IEEE802.11g – CH13 (2472 MHz) HOR.		



VER.



3.5 6 dB Band

3.5.1 Test Instruments

Description	Manufacturer	Model No.	Serial No.	Next of Calibration
Spectrum Analyzer	Advantest	R3273	121100554	Jun. 15, 2010
RF Test Room	-	-	-	-

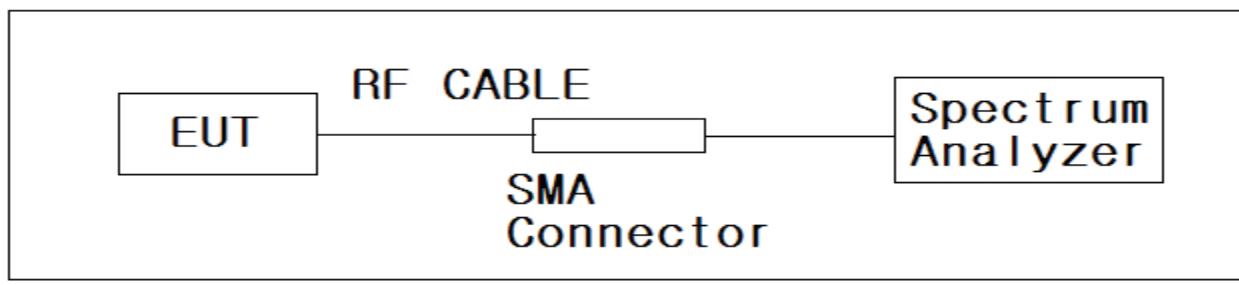
Note : 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to RRL, KRISS, KTL and HCT.
2. The calibration interval of horn ant. and loop ant. is 24 months

3.5.2 Limit

(a) Operation under the provisions of this Section is limited to frequency hopping and digitally modulated intentional radiators that comply with the following provisions :

(2) systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

3.5.3 Test Configuration



3.5.4 Test Procedure

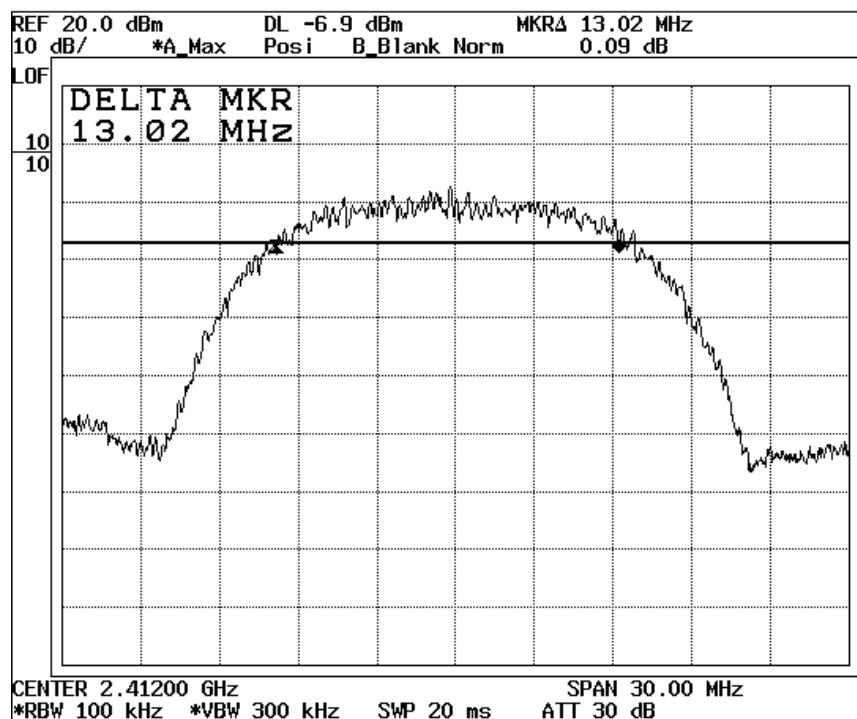
The transmitter output is connected to the Spectrum analyzer. The Spectrum analyzer is set to the 6dB Band.

3.5.5 6 dB Band Test Result

Test Item	6 dB Band
Test Mode	802.11b
Test Site	RF Room
Measurement Method	Conducted

Channel No.	Frequency (MHz)	Measure (kHz)	Limit (kHz)	Result
1	2412	13020	>500	Pass
7	2442	12960	>500	Pass
13	2472	12360	>500	Pass

Channel 1.

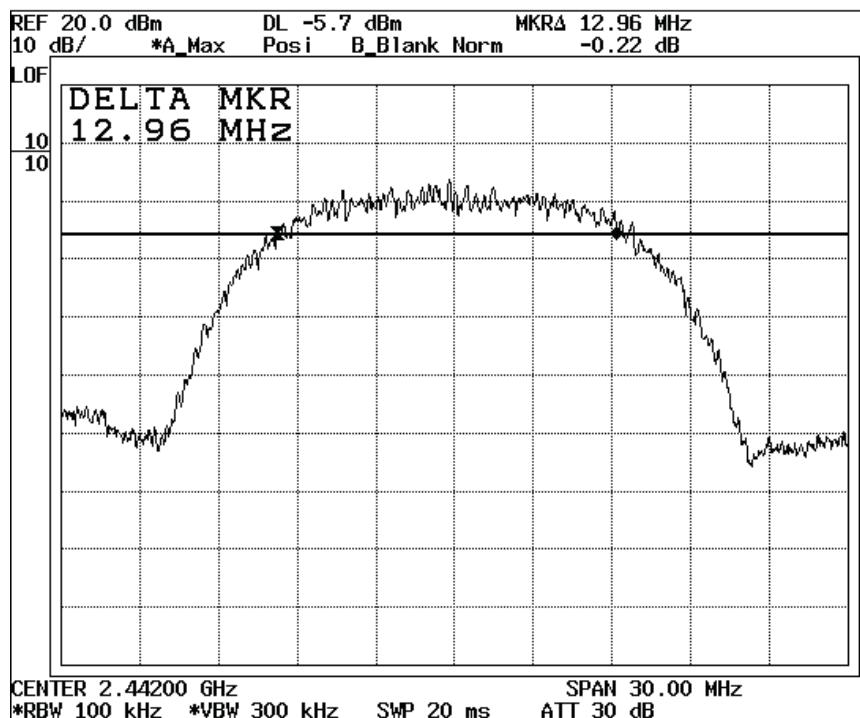


Certification Service Technology Inc.

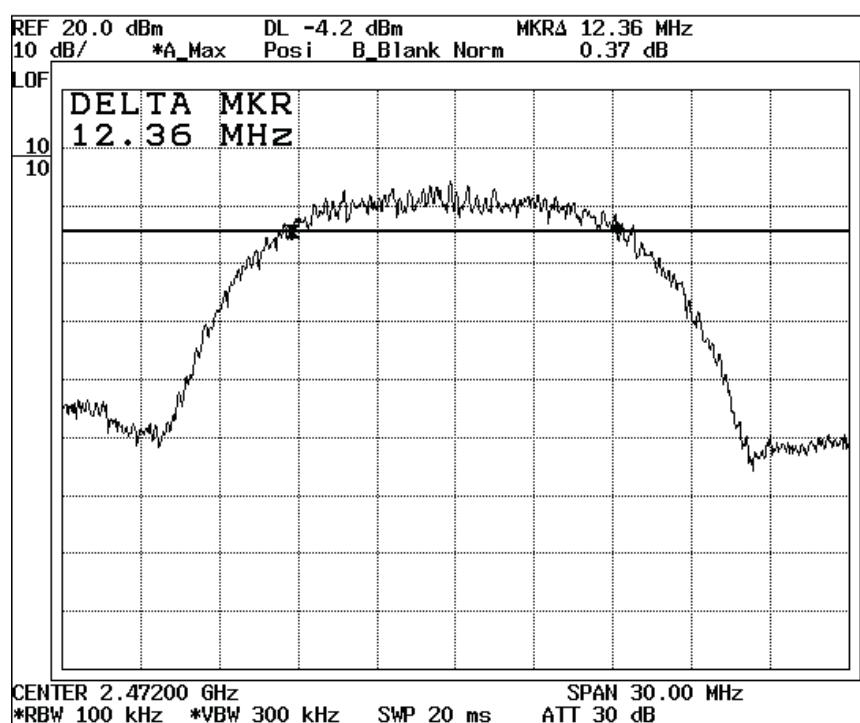
Report No. : CSTS-A10-FCC001

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Channel 7.



Channel 13.



Certification Service Technology Inc.

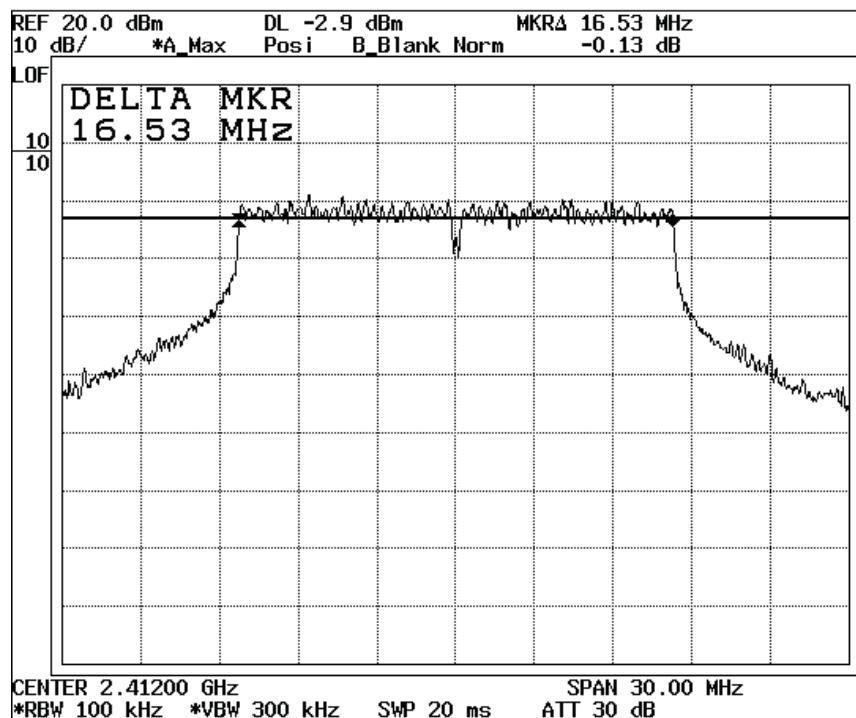
Report No. : CSTS-A10-FCC001

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Test Item	6 dB Band
Test Mode	802.11g
Test Site	RF Room
Measurement Method	Conducted

Channel No.	Frequency (MHz)	Measure (kHz)	Limit (kHz)	Result
1	2412	16530	>500	Pass
7	2442	16500	>500	Pass
13	2472	16500	>500	Pass

Channel 1.

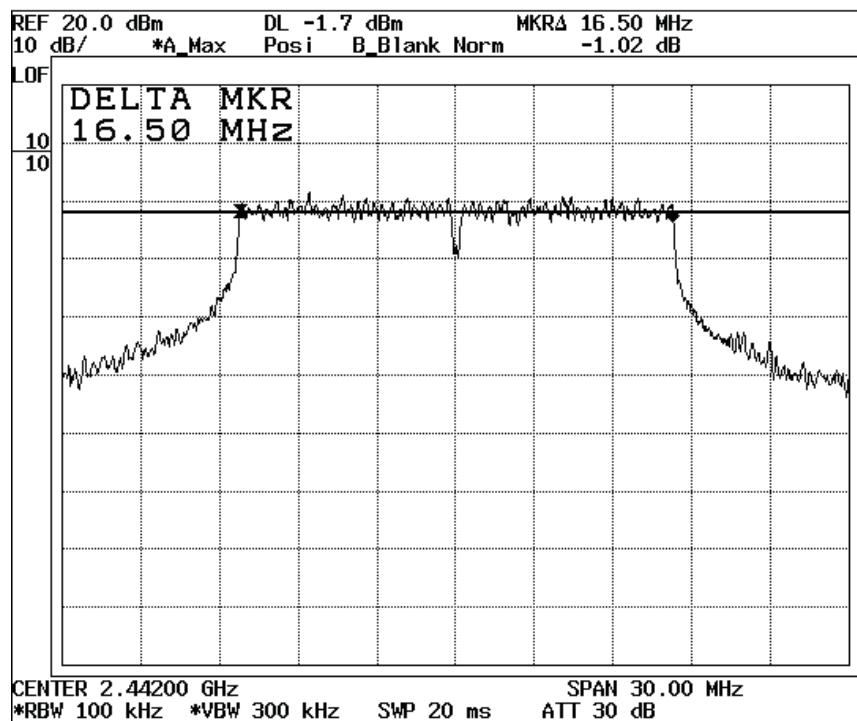


Certification Service Technology Inc.

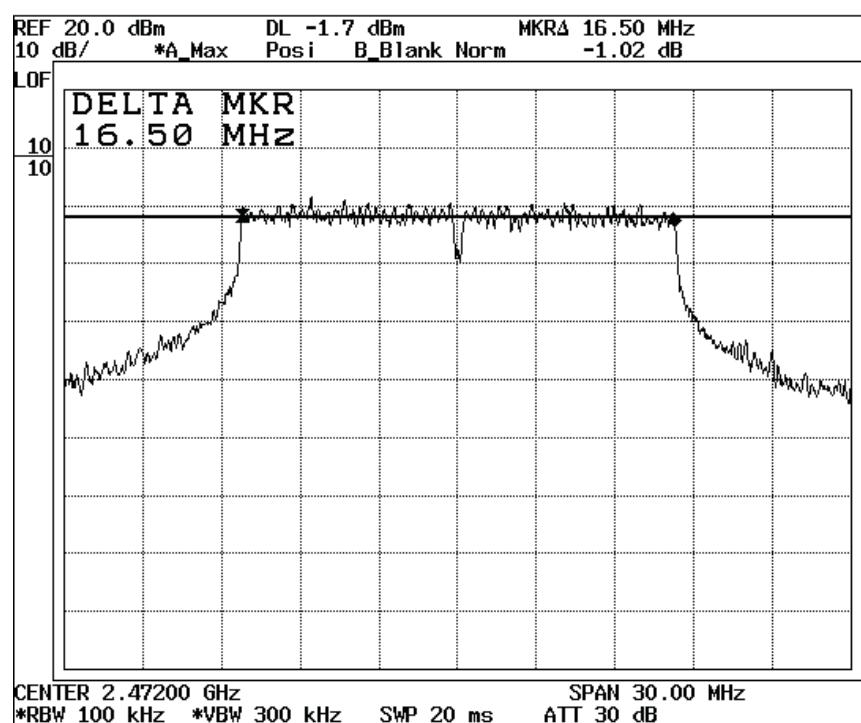
Report No. : CSTS-A10-FCC001

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Channel 7.



Channel 13.



3.6 Power Density

3.6.1 Test Instruments

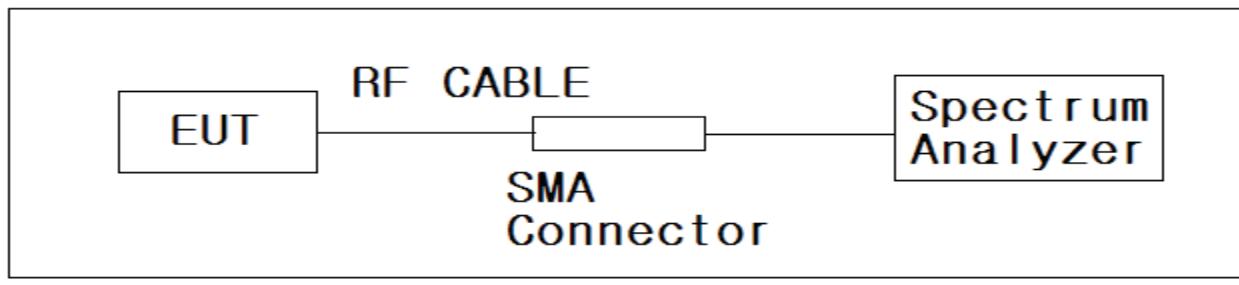
Description	Manufacturer	Model No.	Serial No.	Next of Calibration
Spectrum Analyzer	Advantest	R3273	121100554	Jun. 15, 2010
RF Test Room	-	-	-	-

Note : 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to RRL, KRISS, KTL and HCT.
2. The calibration interval of horn ant. and loop ant. is 24 months

3.6.2 Limit

Section 15.247 (e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (v) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

3.6.3 Test Configuration



3.6.4 Test Procedure

The transmitter output is connected to the Spectrum analyzer. The Spectrum analyzer is set to the Power Density.

3.6.5 Power Density Test Result

Certification Service Technology Inc.

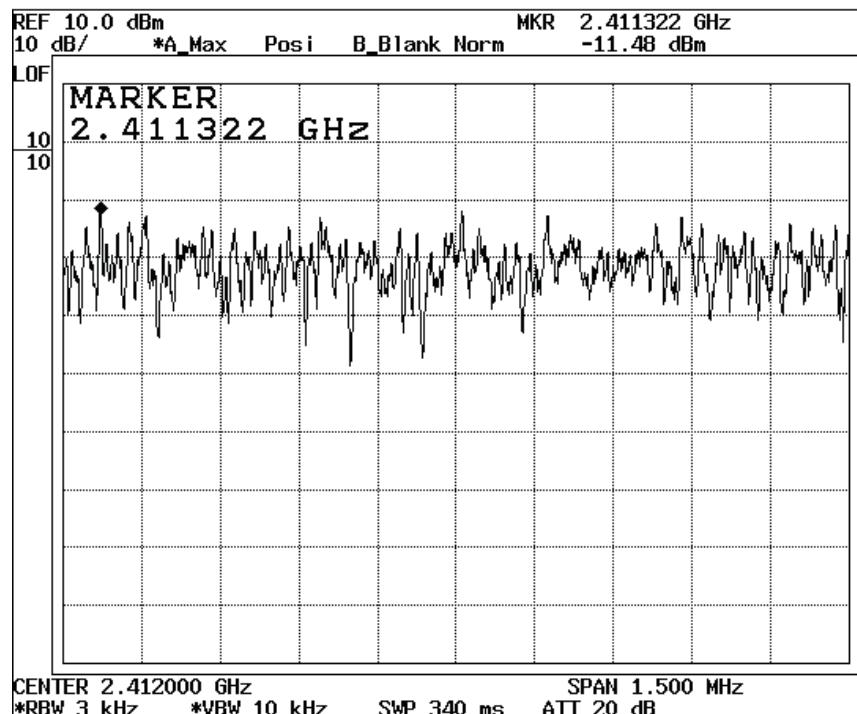
Report No. : CSTS-A10-FCC001

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Test Item	Power Density
Test Mode	802.11b
Test Site	RF Room
Measurement Method	Conducted

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-11.48	< 8	Pass
7	2442	-10.04	< 8	Pass
13	2472	-10.48	< 8	Pass

Channel 1.

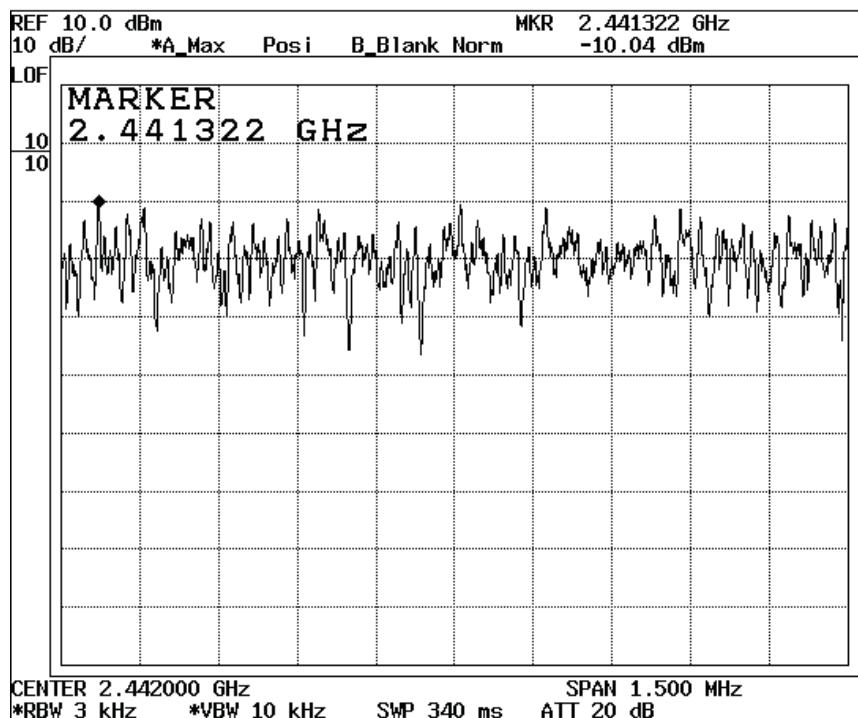


Certification Service Technology Inc.

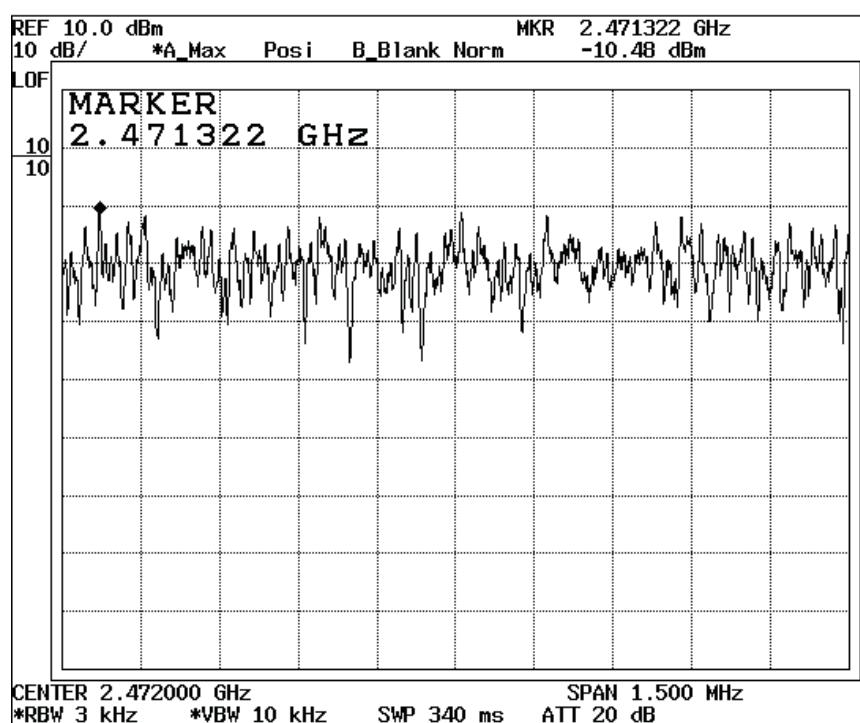
Report No. : CSTS-A10-FCC001

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Channel 7.



Channel 13.



Certification Service Technology Inc.

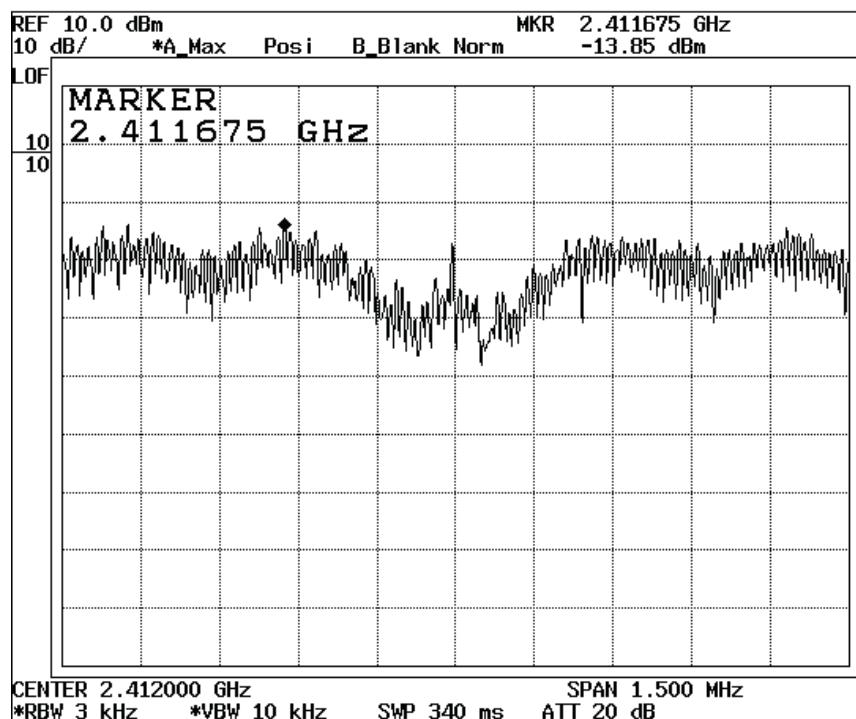
Report No. : CSTS-A10-FCC001

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Test Item	Power Density
Test Mode	802.11g
Test Site	RF Room
Measurement Method	Conducted

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-13.85	< 8	Pass
7	2442	-12.66	< 8	Pass
13	2472	-13.17	< 8	Pass

Channel 1.

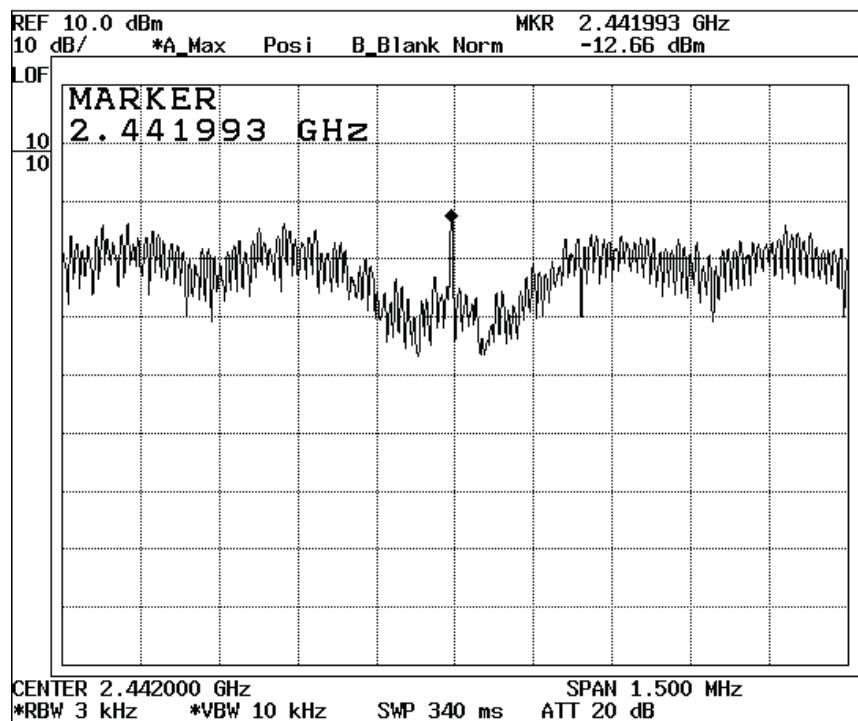


Certification Service Technology Inc.

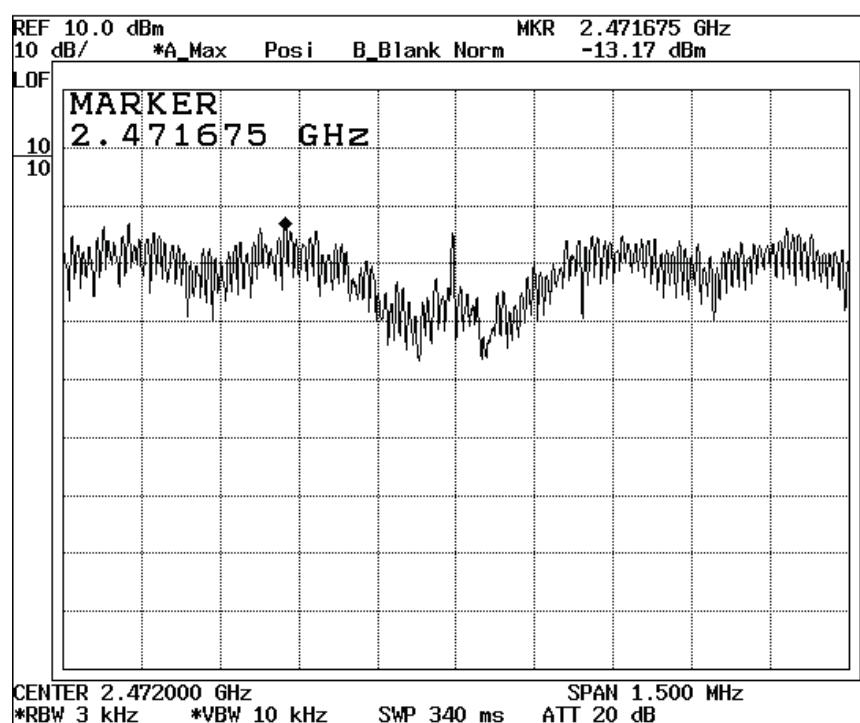
Report No. : CSTS-A10-FCC001

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Channel 7.



Channel 13.



3.7 RF Exposure

3.7.1 Test Instruments

Description	Manufacturer	Model No.	Serial No.	Next of Calibration
Spectrum Analyzer	Advantest	R3273	121100554	Jun. 15, 2010
RF Test Room	-	-	-	-

Note : 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to RRL, KRISS, KTL and HCT.
 2. The calibration interval of horn ant. and loop ant. is 24 months

3.7.2 Limit

According to §15.247(b)(4) and §1.1307(b)(1), Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1093 RF exposure is calculated.

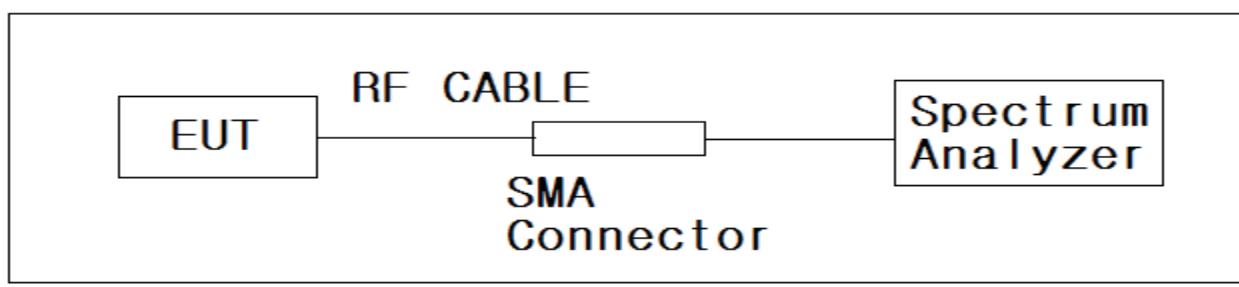
Limits for Maximum permissive Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3 – 1.34	614	1.63	*(100)	30
1.34 – 30	824/f	2.19/f	*(180/f ²)	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	/	/	f/1500	30
1500 - 15000	/	/	1.0	30

f=frequency in MHz

*=Plane-wave equivalent power density

3.7.3 Test Configuration



3.7.4 Test Result

EUT	VTV-A10
Operating Frequency band	2412 ~ 2472 MHz
Device category	Portalbe (<20 cm separation)
Exposure classification	General Population/ Uncontrolled exposure ($S = 1\text{mW/cm}^2$)
Max. output power	13.96 dBm (24.89 mW)
Antenna gain(Max)	1.05 dBi (Numeric gain : 1.273)
Evaluation applied	MPE Evaluation

Note :

1. The maximum output power is 13.96 dBm (24.89 mW) at 2472 MHz (with 1.273 numeric antenna gain)
2. For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20 cm, even if the caluculations indicate that the MPE distance would be lesser.

$$S = PG/4\pi R^2$$

- S = Power density
- P = Power input to antenna
- G = power gain of the antenna in the direction of interest relative to an isotropic radiator
- R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal : 13.96 (dBm)

Maximum peak output power at antenna input terminal : 24.89 (mW)

Antenna Gain(typical) : 1.05 (dBi)

Maximum antenna gain : 1.273(numeric)

Prediction distance : 20 (cm)

Predication frequency : 2472 (MHz)

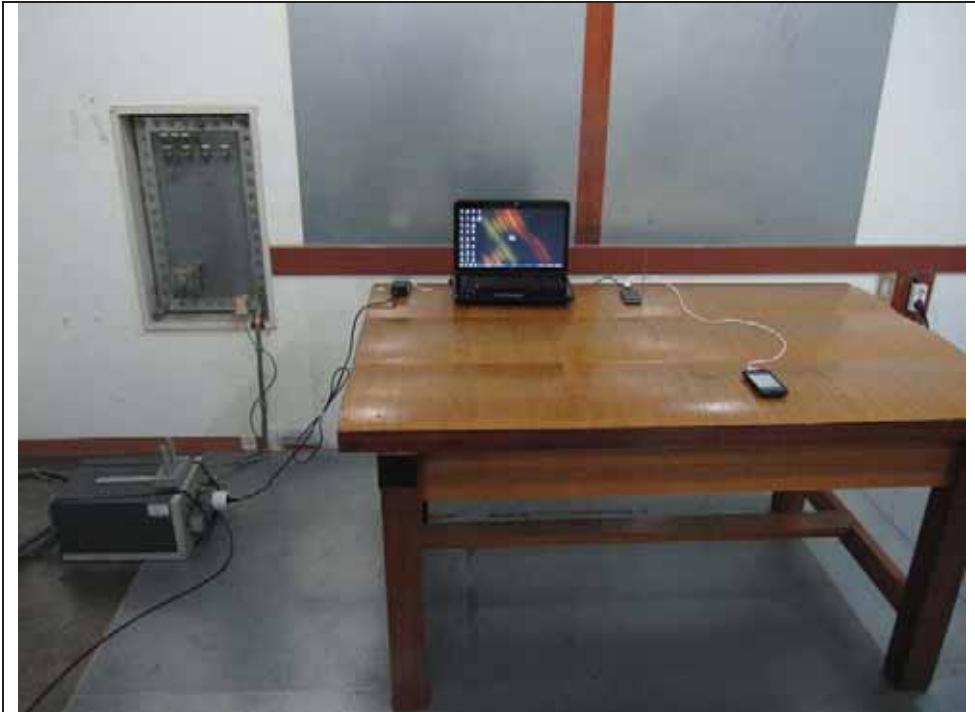
MPE limit for uncontrolled exposure at prediction frequency : 1 (mW/cm^2)

Power densit at predication frequency : 0.006 (mW/cm^2)

Note : The power density at 20 cm does not exceed the 1mW/cm^2 limit. Therefore, the exposure condition is compliant with FCC rules.

Appendix A. The Photo of Test Setup

- **Front View of Conducted Emission**



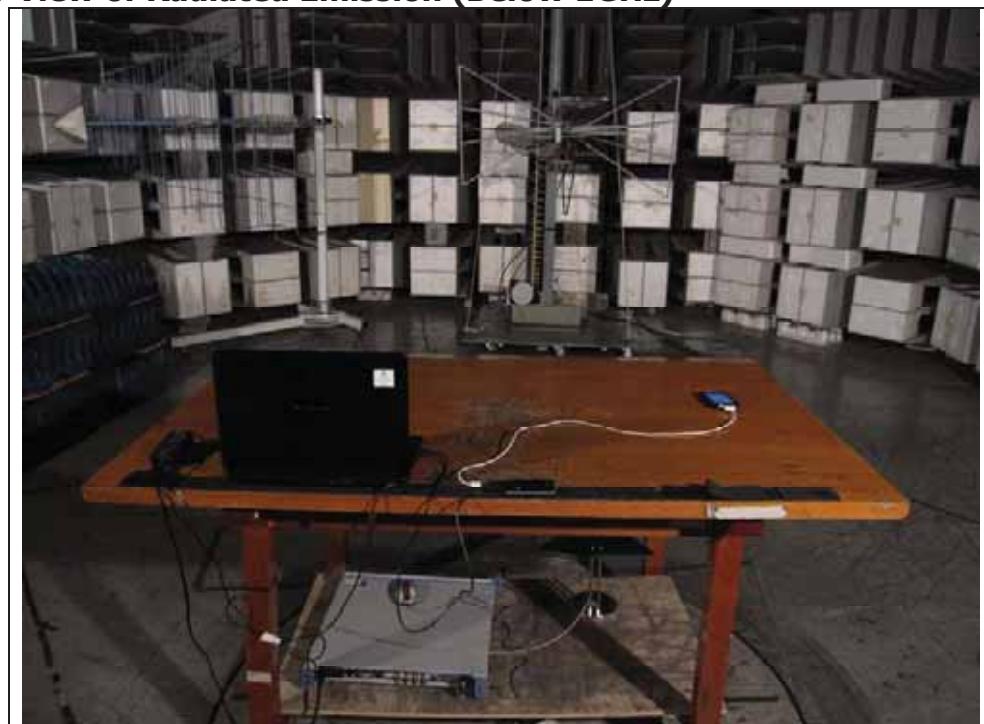
- **Rear View of Conducted Emission**



● **Front View of Radiated Emission (Below 1GHz)**



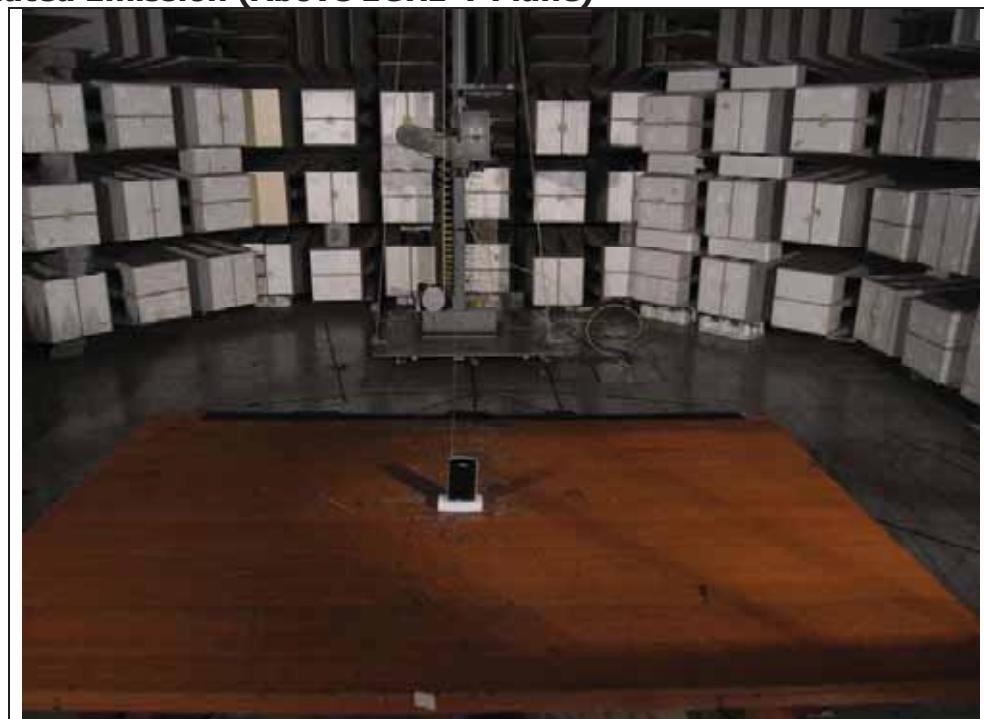
● **Rear View of Radiated Emission (Below 1GHz)**



● **Radiated Emission (Above 1GHz-X Plane)**



● **Radiated Emission (Above 1GHz-Y Plane)**



● **Radiated Emission (Above 1GHz-Z Plane)**

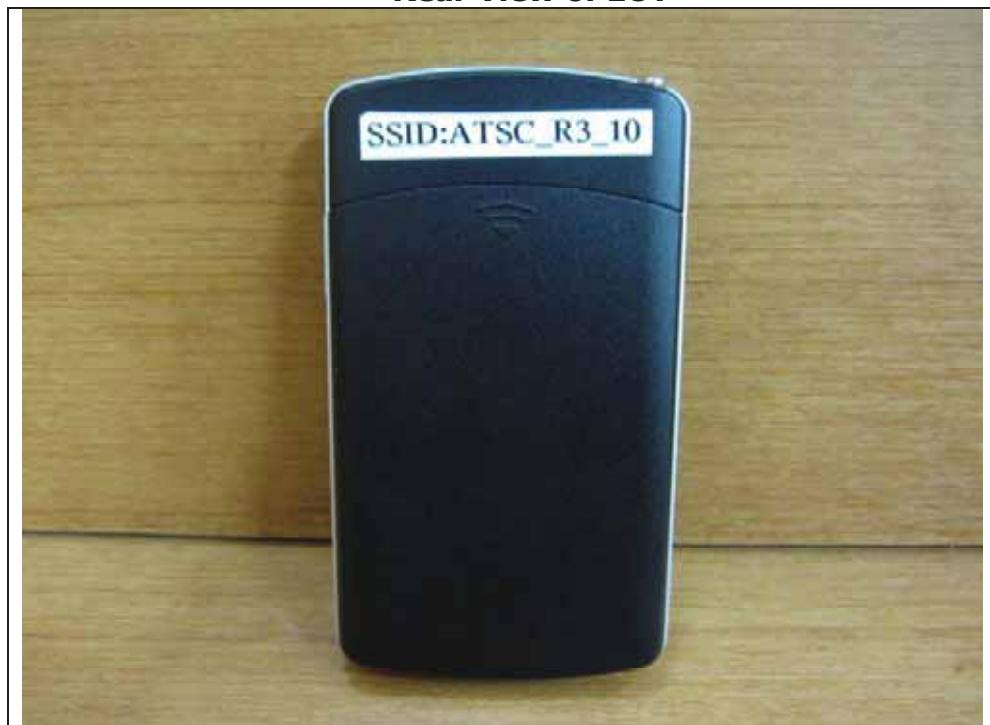


Appendix B. The Photo of Equipment Under Test

Front View of EUT



Rear View of EUT



Inside View of EUT

