

TEST REPORT

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EUT DESCRIPTION RADIOMODULE EQUIPMENT (IEEE 802.15.4 Protocol)

EUT TRADEMARK Power-one

EUT MODEL EMB-PWO

REFERENCE STANDARDS : Class II permissive change (FCC Part 15.247)

TEST REPORT NUMBER FCCTR_121295-1

TEST REPORT ISSUE DATE 30/11/2012

TESTING LABORATORY Prima Ricerca & Sviluppo S.r.l.
Via Campagna, 92 -22020 Faloppio (Co) –Italy

TESTING LOCATION As Above

DATE OF TEST SAMPLE RECEIPT 25/10/2012

DATE OF TEST 25-26/10/2012

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Enrico Banfi

APPROVED BY Giacomo Armellini





The test results reported in this test report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained. Reproduction of this Test Report, should not be reproduced, except in full, without the written authorization of the Laboratory

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2 RELEASE CONTROL RECORD

TEST REPORT NUMBER	REASON OF CHANGE	DATE OF ISSUE
FCCTR_121295-0	Original Release	30/11/2012
FCCTR_121295-1	Typing error	12/12/2012
FCCTR_121295-2	Missing dattta	08/01/2013

3 TECHNICAL INFORMATION OF EQUIPMENT UNDER TEST (EUT)

3.1 E.U.T. identification

Brand name:	Power-One
EUT description	RADIOMODULE EQUIPMENT (IEEE 802.15.4 Protocol)
Model name	EMB-PWO
Serial Number	Not present
Country of manufacturer:	ITALY
Wi-Fi module	Microchip MRF24WBOMB
ZigBee module	EMB-PWO (PCB ZGX.V0J02.2) FCC ID: X6W-EMBZ
Antenna Type	2 different antenna type: - A24-HASM450 (antenna gain 1,14~2,14 dBi) - BT-STUBBY (antenna gain 0 dBi)
CHANGES INTRODUCED IN THE EUT (REF. FCCTR_120174-1)	Additional antenna assembly types adopted for Zigbee radio part: 1. Three different antenna/cable assemblies: <ul style="list-style-type: none"> ○ CableBelden, type RF 195 Series (RG type: 58/U), <u>15 meter long</u> + Mobile Mark Antenna, type ECO5-2400-BLK in the "PT" pigtail cable option which provides a direct coax into the antenna ○ Coaxial CableBelden, type RF 195 Series (RG type: 58/U), <u>15 meter long</u> + RF Antenna Technologies, type EA-79F (1/2 wave antenna) with swivel RP-SMA connector ○ Coaxial cable Belden (RG type 316/U), 15 meter long+ RF Antenna Technologies, type EA-79F (1/2 wave antenna) with swivel RP-SMA connector 2. All used antenna employ a permanently attached or "unique" antenna coupler (all connections between the module and the antenna, including the cable).

ASSEMBLY GAIN OF ANTENNA & RF CABLE COMBINATION (SEE ABOVE TABLE)

External Coaxial Cable	Coaxial cable Length [m]	Cable Att [dB/m] @2.5GHz	Total Cable Attenuation [dB]	Internal Coaxial Cable Insertion Loss [dB] @3GHz	Connector Insertion Loss	Antenna Gain [dBi]	Assembly Gain [dB]
RF195	15	0,6	9	2	0,2	5	-6,2



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RG316	15	1,55	23,25	2	0,2	3	-22,45
RG316	10	1,55	15,5	2	0,2	3	-14,7

3.2 Technical data

FCC class:	Intentional radiators
Operating frequency range :	2,400 – 2,483 MHz
Supply voltage:	5Vdc
Typical usage :	Data concentrator for photovoltaic inverters
EUT single or system:	Single
Composed by	Single unit
EUT dimensions :	See photographic documentation

3.3 Modifications incorporated in E.U.T.

The following items are the modifications introduced in the equipment under test :

- None

3.4 Ports identification

This section contains descriptions of all ports, the length and the type of the cable provided by manufacturer needed for the tests. Moreover it is specified if the ports are ever or optionally connected.

Port	Description	Connection
1 Enclosure	Plastic case	Screws
2 AC power input/output ports	Port not present	---
3 DC power input/output ports	5Vdc	Connector
4 Signal and control ports	2 x RS485	RJ11
5 Telecomm. ports	1 ETHERNET	RJ45
5 Antenna port	2 x antenna connector	SMA connector

Note: During the tests all cables must be what provided the manufacturer or the same that used in the real employment of the EUT.

3.5 Auxiliary equipment

- Notebook Toshiba, mod Satellite Pro C660

4 TEST CONDITIONS

4.1 Operating test modes and test conditions

The equipment has been tested according to the operative conditions described in the user/installation manual provided by the manufacturer and by following reference standards :
Reference Standard:

- FCC Part 15, Subpart C § 15.207; § 15.209; § 15.247

In the following table there are the operating conditions adopted during tests identified by an indicator (#..) at which has been referred the item “Operating condition of the equipment under test” of all technical sheets of the tests (see Section 4)

Operating condition	Description
#1	System switched ON, WiFi and ZigBee carrier set on at maximum power, continuous ping via LAN

4.2 Test overview

The appliance is classified as “*intentional radiator*” in conformity to FCC Part 15 Sub. C
The application is mainly used as data concentrator for photovoltaic inverters.

Note :

For the compliance to § 15.247 requirements, the host product Model CDD contains the RF component Microchip 802.11b MRF24WBOMB miniCard and radio module EMB-PWO (PCB ZGX.V0J02.2) integrated by the host product Manufacturer according to the RF module Manufacturer instructions. That modules was authorized by FCC with the grant of certification according to 47 CFR FCC Part 15 Subpart C so the EUT does not require additional testing (for the Wi-Fi module see Report No. 30853571.001 issued by TUV Rheinland on 06/03/2009 for the ZigBee module see Report No. FCCTR_111254B_5 issued by Prima Ricerca & Sviluppo on 30/08/2012)

5 REFERENCE STANDARD FOR PERFORMED TESTS

Reference standard :	Title :
FCC Part 15 part A	Code of Regulations Part 15 (Radio Frequency Devices), Subpart A (General) of the Federal Communication Commission (FCC)
FCC Part 15 part C	Code of Regulations Part 15 (Radio Frequency Devices), Subpart C (Intentional Radiators) of the Federal Communication Commission (FCC)
ANSI C63.4	American National Standard for Methods of Measuring of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz – 40 GHz

6 SUMMARY OF TEST RESULTS

6.1 Emission tests

Port		Phenomena	Basic standard	Operating condition ¹	Result
1	Enclosure	Radiated Emissions	FCC Part 15 § 15.209, § 15.247(d)	#1	Within the limit
2	Antenna Port	RF conducted Spurious Emissions at the Transmitter Antenna Terminal	FCC Part 15 § 15.247 (d), 15.209	#1	Within the limit
2	Antenna Port	Maximum Peak Output Power	FCC Part 15 §15.247 (b) (3)	#2	Within the limit

¹ Ref. Tab. of Section 2



7 TEST RESULTS

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**TEST
1.**

MAXIMUM PEAK OUTPUT POWER

REFERENCE DOCUMENT FCC CFR 47 Part 15

- **TEST LOCATION:** Semi-anechoic chamber
- **TEST EQUIPMENT USED FOR TEST:** EMI receiver Rohde & Schwarz Mod. ESU40
Chase Antenna Mod. CBL 6111
Rohde & Schwarz Antenna Mod. HBL050
Spectrum Analyzer Rohde & Schwarz Mod. FSP40
- **TESTED PORT:** Antenna Port
- **EMISSION LIMITS:** Acc. to Section 15.247 of reference document
- **UNCERTAINTY OF MEASURE:** Combined uncertainty = ± 1.75 dB
Total uncertainty = (k=2) ± 3.5 dB

TEST CONDITIONS:	MEASURED
Ambient temperature : 15 - 35 °C	23,5 \pm 3 °C
Ambient humidity : 25 - 75 %rH	39 \pm 5 %rH
Pressure : 85 - 106 kPa (860 mbar - 1060 mbar)	950 \pm 50 mbar
Voltage :	115Vac 60Hz

OPERATING CONDITION (Rif. Section. 2) : #1

RESULT: WITHIN THE LIMIT



CONDUCTED MEASUREMENT @ ANTENNA PORT

Channel	Output Power (dBm)	Limit (dBm)
Ch11	21.34	30
Ch18	20.77	30
Ch26	20.31	30

RADIATED MEASUREMENT

ANTENNA PORT CONFIGURATION		
ANTENNA ASSEMBLY	Coaxial Cable:	BALDEN, type RF 195 Series (RG type: 58/U)
	Cable Length:	15m
	Antenna:	Mobile Mark Antenna, type ECO5-2400-BLK
Channel	Output Power (dBm)	Limit (dBm)
Ch11	15.14	30
Ch26	14.11	30

ANTENNA PORT CONFIGURATION		
ANTENNA ASSEMBLY	Coaxial Cable:	BALDEN, type RF 195 Series (RG type: 58/U)
	Cable Length:	15m
	Antenna:	RF Antenna Technologies, type EA-79F (1/2 wave antenna)
Channel	Output Power (dBm)	Limit (dBm)
Ch11	13.14	30
Ch26	12.11	30

ANTENNA PORT CONFIGURATION		
ANTENNA ASSEMBLY	Coaxial Cable:	BALDEN, type RG 316/U
	Cable Length:	15m
	Antenna:	RF Antenna Technologies, type EA-79F (1/2 wave antenna)
Channel	Output Power (dBm)	Limit (dBm)
Ch11	6.64	30
Ch26	5.61	30



**TEST
2.**

RADIATED SPURIOUS EMISSIONS

**REFERENCE
DOCUMENT**

FCC CFR 47 Part 15

- **TEST LOCATION:** Semi-anechoic chamber
- **TEST EQUIPMENT USED FOR TEST:** EMI receiver Rohde & Schwarz Mod. ESU40
Chase Antenna Mod. CBL 6111
Rohde & Schwarz Antenna Mod. HBL050
- **TESTED PORT:** Enclosure
- **EMISSION LIMITS:** Acc. to Section 15.247 of reference document
- **UNCERTAINTY OF MEASURE:** Combined uncertainty = ± 1.75 dB
Total uncertainty = (k=2) ± 3.5 dB

TEST CONDITIONS:	MEASURED
Ambient temperature : 15 - 35 °C	23,5 \pm 3 °C
Ambient humidity : 25 - 75 %rH	39 \pm 5 %rH
Pressure : 85 - 106 kPa (860 mbar - 1060 mbar)	950 \pm 50 mbar
Voltage :	115Vac 60Hz

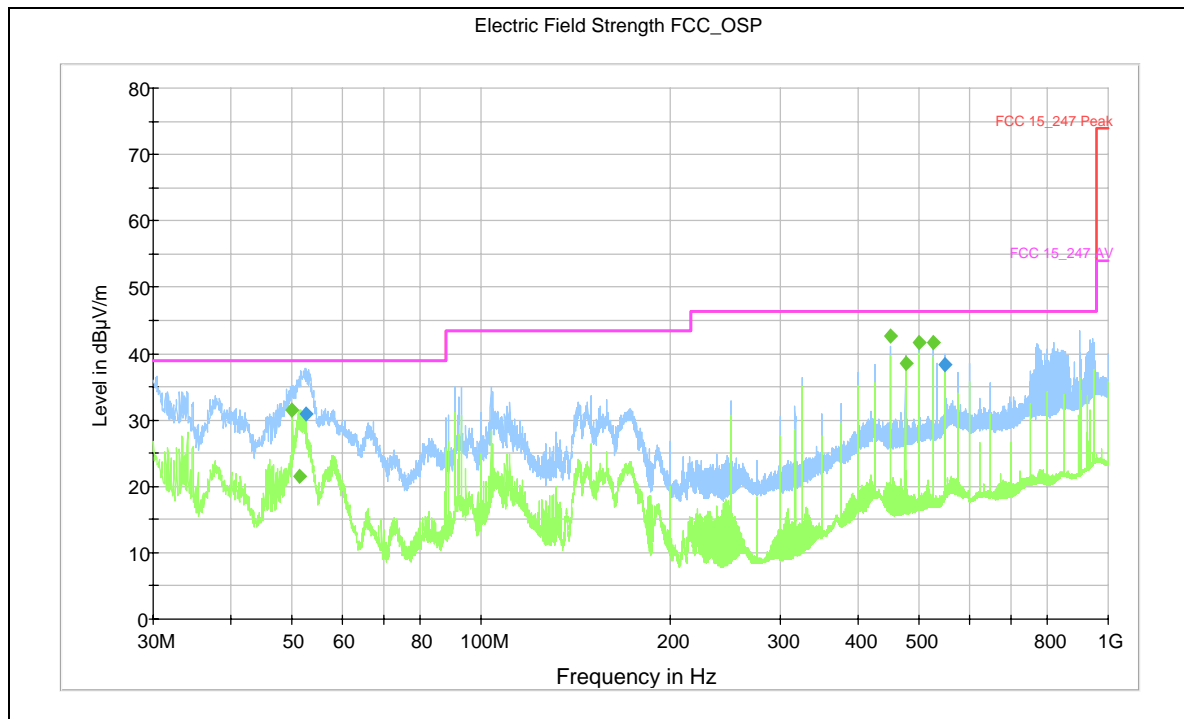
OPERATING CONDITION (Rif. Section. 2) : #1

RESULT: WITHIN THE LIMIT



ANTENNA PORT CONFIGURATION		
ANTENNA ASSEMBLY	Coaxial Cable:	BALDEN, type RF 195 Series (RG type: 58/U)
	Cable Length:	15m
	Antenna:	Mobile Mark Antenna, type ECO5-2400-BLK

MEASUREMENT RESULT	
ANTENNA POLARIZATION	VERTICAL
FREQUENCY RANGE	30MHz – 1GHz
ZIGBEE CHANNEL	11 (WORST CASE)



Quasi – Peak Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Margin (dB)	Limit (dBµV/m)
52.680000	30.9	100.0	V	201.0	8.10	39.00
550.000000	38.2	100.0	V	201.0	8.20	46.40

Average - Final Result

Frequency (MHz)	Average (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Margin (dB)	Limit (dBµV/m)
50.000000	31.4	100.0	V	99.0	7.60	39.00
51.240000	21.5	100.0	V	167.0	17.50	39.00
450.000000	42.7	142.0	V	68.0	3.70	46.40
475.000000	38.5	124.0	V	201.0	7.90	46.40



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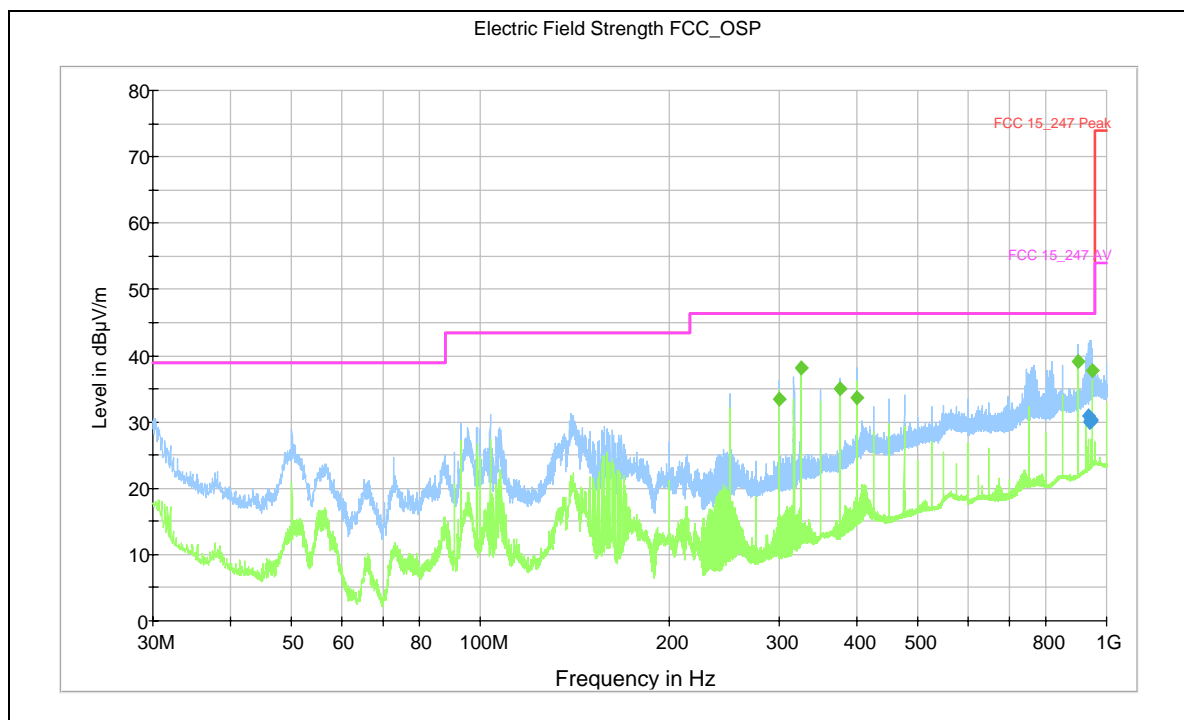
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500.000000	41.7	124.0	V	201.0	4.70	46.40
525.000000	41.7	100.0	V	201.0	4.70	46.40



ANTENNA PORT CONFIGURATION		
ANTENNA ASSEMBLY	Coaxial Cable:	BALDEN, type RF 195 Series (RG type: 58/U)
	Cable Length:	15m
	Antenna:	Mobile Mark Antenna, type ECO5-2400-BLK

MEASUREMENT RESULT	
ANTENNA POLARIZATION	HORIZONTAL
FREQUENCY RANGE	30MHz – 1GHz
ZIGBEE CHANNEL	11 (WORST CASE)



Quasi – Peak Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
935.640000	30.9	1000.0	120.000	126.0	H	111.0	28.7	15.50	46.40
939.680000	30.0	1000.0	120.000	201.0	H	201.0	28.9	16.40	46.40
939.760000	30.1	1000.0	120.000	301.0	H	111.0	28.9	16.30	46.40
943.080000	30.2	1000.0	120.000	201.0	H	201.0	29.0	16.20	46.40
944.160000	30.3	1000.0	120.000	100.0	H	111.0	29.1	16.20	46.40
944.560000	30.3	1000.0	120.000	250.0	H	23.0	29.1	16.10	46.40

Average Final Result

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
300.000000	33.5	1000.0	120.000	100.0	H	201.0	15.8	12.90	46.40
325.000000	38.1	1000.0	120.000	100.0	H	174.0	16.2	8.30	46.40
375.000000	34.9	1000.0	120.000	100.0	H	201.0	17.7	11.50	46.40
400.000000	33.7	1000.0	120.000	100.0	H	201.0	18.9	12.70	46.40



900.000000	39.1	1000.0	120.000	100.0	H	188.0	27.5	7.30	46.40
950.000000	37.8	1000.0	120.000	100.0	H	173.0	29.3	8.60	46.40

ANTENNA PORT CONFIGURATION	
ANTENNA ASSEMBLY	Coaxial Cable: BALDEN, type RF 195 Series (RG type: 58/U)
	Cable Length: 15m
	Antenna: Mobile Mark Antenna, type ECO5-2400-BLK

MEASUREMENT RESULT	
FREQUENCY RANGE	1GHz – 12.75GHz

Zigbee: Ch11 (2.405GHz) VERTICAL POLARIZATION							
Freq. (GHz)	Level (dBμV/m)	Margin (dB)	Limit (dBμV/m) *	Height (cm)	Pol.	Azimuth (deg)	Notes
4.810	53.4	39.12	92.52	125.0	V	23.0	2nd harmonic of zigbee ch11 Carrier
7.215	79.1	13.42	92.52	100.0	V	16.0	3rd harmonic of zigbee ch11 Carrier
9.620	78.0	14.52	92.52	194.0	V	-15.0	4th harmonic of zigbee ch11 Carrier

Zigbee: Ch11 (2.405GHz) HORIZONTAL POLARIZATION							
Freq. (GHz)	Level (dBμV/m)	Margin (dBm)	Limit (dBμV/m) *	Height (cm)	Pol.	Azimuth (deg)	Notes
4.810	57.5	35.02	92.52	150.0	H	23.0	2nd harmonic of zigbee ch11 Carrier
7.215	66.7	25.82	92.52	100.0	H	271.0	3rd harmonic of zigbee ch11 Carrier
9.620	67.5	25.02	92.52	125.0	H	23.0	4th harmonic of zigbee ch11 Carrier

Zigbee: Ch26 (2.480GHz) VERTICAL POLARIZATION							
Freq. (GHz)	Level (dBμV/m)	Margin (dB)	Limit (dBμV/m) *	Height (cm)	Pol.	Azimuth (deg)	Notes
7.440	66.0	25.49	91.49	100.0	V	181.0	3rd harmonic of zigbee ch11 Carrier
9.920	69.0	22.49	91.49	250.0	V	-1.0	4th harmonic of zigbee ch11 Carrier

Zigbee: Ch26 (2.480GHz) HORIZONTAL POLARIZATION							
Freq. (GHz)	Level (dBμV/m)	Margin (dBm)	Limit (dBμV/m) *	Height (cm)	Pol.	Azimuth (deg)	Notes
7.440	61.8	29.69	91.49	100.0	H	181.0	3rd harmonic of zigbee ch11 Carrier
9.920	71.0	20.49	91.49	100.0	H	-1.0	4th harmonic of zigbee ch11 Carrier

* par 15.247 (d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power Attenuation below the general limits specified in §15.209(a) is not required.

ANTENNA PORT CONFIGURATION		
ANTENNA ASSEMBLY	Coaxial Cable:	BALDEN, type RF 195 Series (RG type: 58/U)
	Cable Length:	15m
	Antenna:	RF Antenna Technologies, type EA-79F (1/2 wave antenna)

MEASUREMENT RESULT	
FREQUENCY RANGE	1GHz – 12.75GHz

Zigbee: Ch11 (2.405GHz) VERTICAL POLARIZATION							
Freq. (GHz)	Level (dBμV/m)	Margin (dB)	Limit (dBμV/m) *	Height (cm)	Pol.	Azimuth (deg)	Notes
7.215	77.7	12.82	90.52	100.0	V	-1.0	3rd harmonic of zigbee ch11 Carrier
9.620	77.2	13.32	90.52	250.0	V	-1.0	4th harmonic of zigbee ch11 Carrier
Zigbee: Ch11 (2.405GHz) HORIZONTAL POLARIZATION							
Freq. (GHz)	Level (dBμV/m)	Margin (dBm)	Limit (dBμV/m) *	Height (cm)	Pol.	Azimuth (deg)	Notes
7.215	65.5	24.62	90.52	100.0	H	269.0	3rd harmonic of zigbee ch11 Carrier
9.620	74.6	15.92	90.52	100.0	H	-1.0	4th harmonic of zigbee ch11 Carrier

Zigbee: Ch26 (2.480GHz) VERTICAL POLARIZATION							
Freq. (GHz)	Level (dBμV/m)	Margin (dB)	Limit (dBμV/m) *	Height (cm)	Pol.	Azimuth (deg)	Notes
7.440	65.9	23.59	89.49	100.0	V	181.0	3rd harmonic of zigbee ch11 Carrier
9.920	68.6	20.89	89.49	250.0	V	1.0	4th harmonic of zigbee ch11 Carrier
Zigbee: Ch26 (2.480GHz) HORIZONTAL POLARIZATION							
Freq. (GHz)	Level (dBμV/m)	Margin (dBm)	Limit (dBμV/m) *	Height (cm)	Pol.	Azimuth (deg)	Notes
7.440	61.9	27.59	89.49	100.0	H	181.0	3rd harmonic of zigbee ch11 Carrier
9.920	71.3	18.19	89.49	100.0	H	1.0	4th harmonic of zigbee ch11 Carrier

* par 15.247 (d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power Attenuation below the general limits specified in §15.209(a) is not required.



ANTENNA PORT CONFIGURATION		
ANTENNA ASSEMBLY	Coaxial Cable:	BALDEN, type RG 316/U
	Cable Length:	15m
	Antenna:	RF Antenna Technologies, type EA-79F (1/2 wave antenna)

MEASUREMENT RESULT	
FREQUENCY RANGE	1GHz – 12.75GHz

Zigbee: Ch11 (2.405GHz) VERTICAL POLARIZATION							
Freq. (GHz)	Level (dBμV/m)	Margin (dB)	Limit (dBμV/m) *	Height (cm)	Pol.	Azimuth (deg)	Notes
7.215	77.6	6.42	84.02	100.0	V	1.0	3rd harmonic of zigbee ch11 Carrier
9.620	77.2	6.82	84.02	250.0	V	1.0	4th harmonic of zigbee ch11 Carrier
Zigbee: Ch11 (2.405GHz) HORIZONTAL POLARIZATION							
Freq. (GHz)	Level (dBμV/m)	Margin (dBm)	Limit (dBμV/m) *	Height (cm)	Pol.	Azimuth (deg)	Notes
7.215	66.6	17.42	84.02	100.0	H	271.0	3rd harmonic of zigbee ch11 Carrier
9.620	75.7	8.32	84.02	100.0	H	-1.0	4th harmonic of zigbee ch11 Carrier

Zigbee: Ch26 (2.480GHz) VERTICAL POLARIZATION							
Freq. (GHz)	Level (dBμV/m)	Margin (dB)	Limit (dBμV/m) *	Height (cm)	Pol.	Azimuth (deg)	Notes
7.440	65.4	17.59	82.99	100.0	V	181.0	3rd harmonic of zigbee ch11 Carrier
9.920	70.6	12.39	82.99	250.0	V	-1.0	4th harmonic of zigbee ch11 Carrier
Zigbee: Ch26 (2.480GHz) HORIZONTAL POLARIZATION							
Freq. (GHz)	Level (dBμV/m)	Margin (dBm)	Limit (dBμV/m) *	Height (cm)	Pol.	Azimuth (deg)	Notes
7.440	61.0	21.99	82.99	100.0	H	181.0	3rd harmonic of zigbee ch11 Carrier
9.920	73.9	9.09	82.99	100.0	H	-1.0	4th harmonic of zigbee ch11 Carrier

* par 15.247 (d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power Attenuation below the general limits specified in §15.209(a) is not required.

**TEST
3.**

**RF conducted Spurious Emissions at the Transmitter
Antenna Terminal**

REFERENCE DOCUMENT FCC CFR 47 Part 15

- **TEST LOCATION:** Radio Test Area
- **TEST EQUIPMENT USED FOR TEST:** Rohde & Schwarz Spectrum analyzer Mod. FSP40
- **TESTED PORT:** Antenna Port
- **EMISSION LIMITS:** Acc. to Section 15.247 of reference document
- **UNCERTAINTY OF MEASURE:** Combined uncertainty = ± 1.75 dB
Total uncertainty = $(k=2) \pm 3.5$ dB

TEST CONDITIONS:	MEASURED
Ambient temperature : 15 - 35 °C	23,5 \pm 3 °C
Ambient humidity : 25 - 75 %rH	39 \pm 5 %rH
Pressure : 85 - 106 kPa (860 mbar - 1060 mbar)	950 \pm 50 mbar
Voltage :	115Vac 60Hz

OPERATING CONDITION (Rif. Section. 2) : #1

RESULT: WITHIN THE LIMIT



MEASUREMENT RESULT	
ZIGBEE CHANNEL	11
FREQUENCY RANGE	9kHz – 150kHz
CONDUCTED PEAK CARRIER POWER	21.34dBm
CONDUCTED SPURIOUS LIMIT	1.34dBm
RESULT	NO SPURIOUS DETECTED



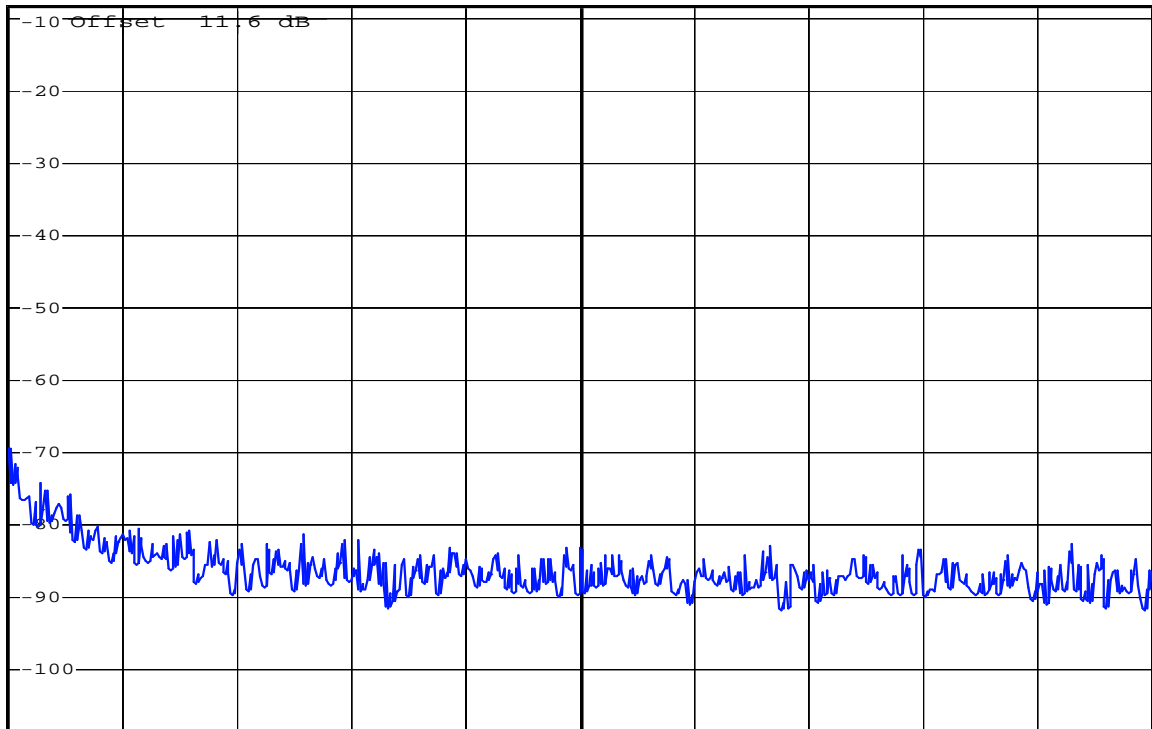
* RBW 300 Hz

* VBW 1 kHz

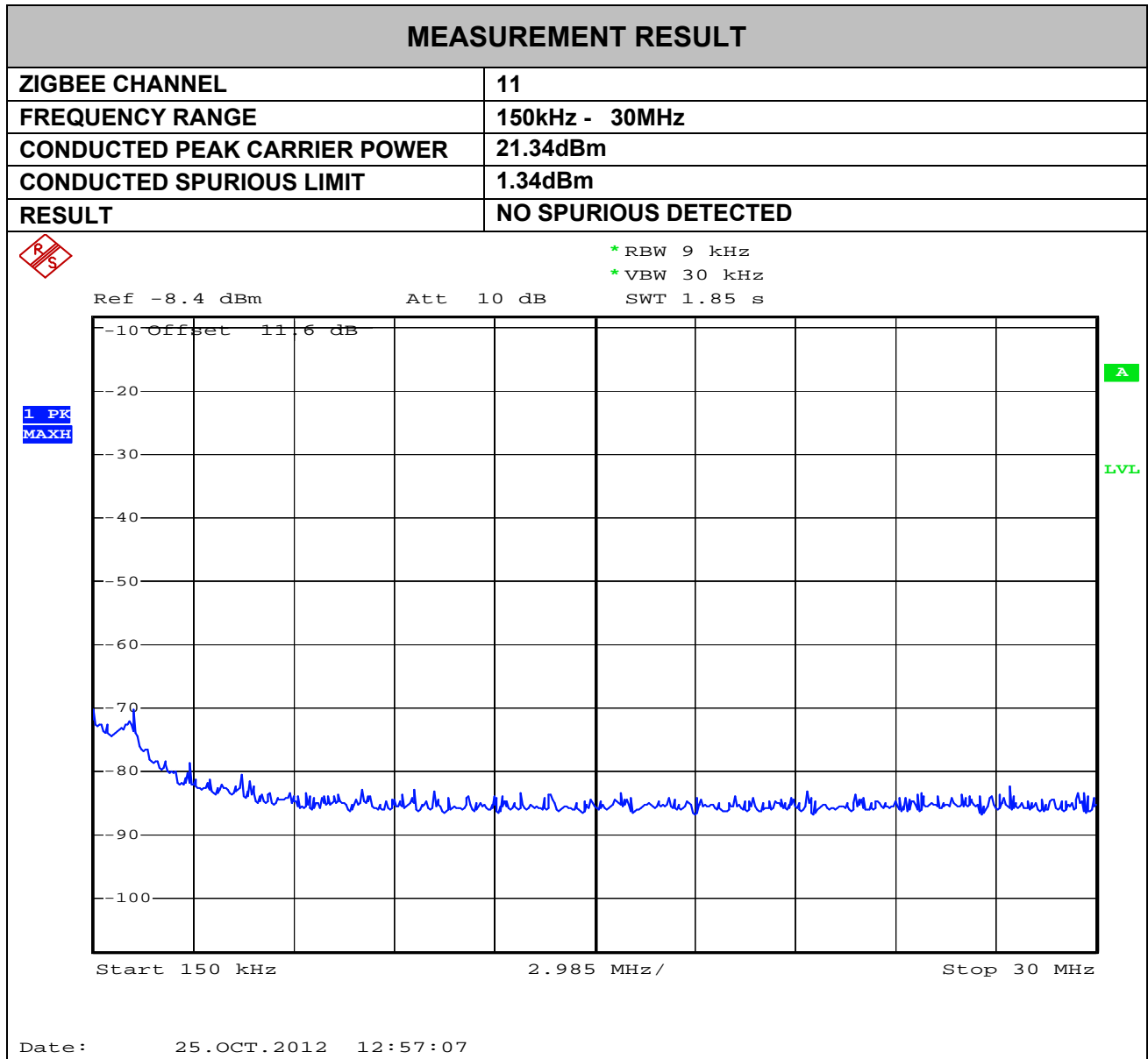
Ref -8.4 dBm

Att 10 dB

SWT 1.6 s

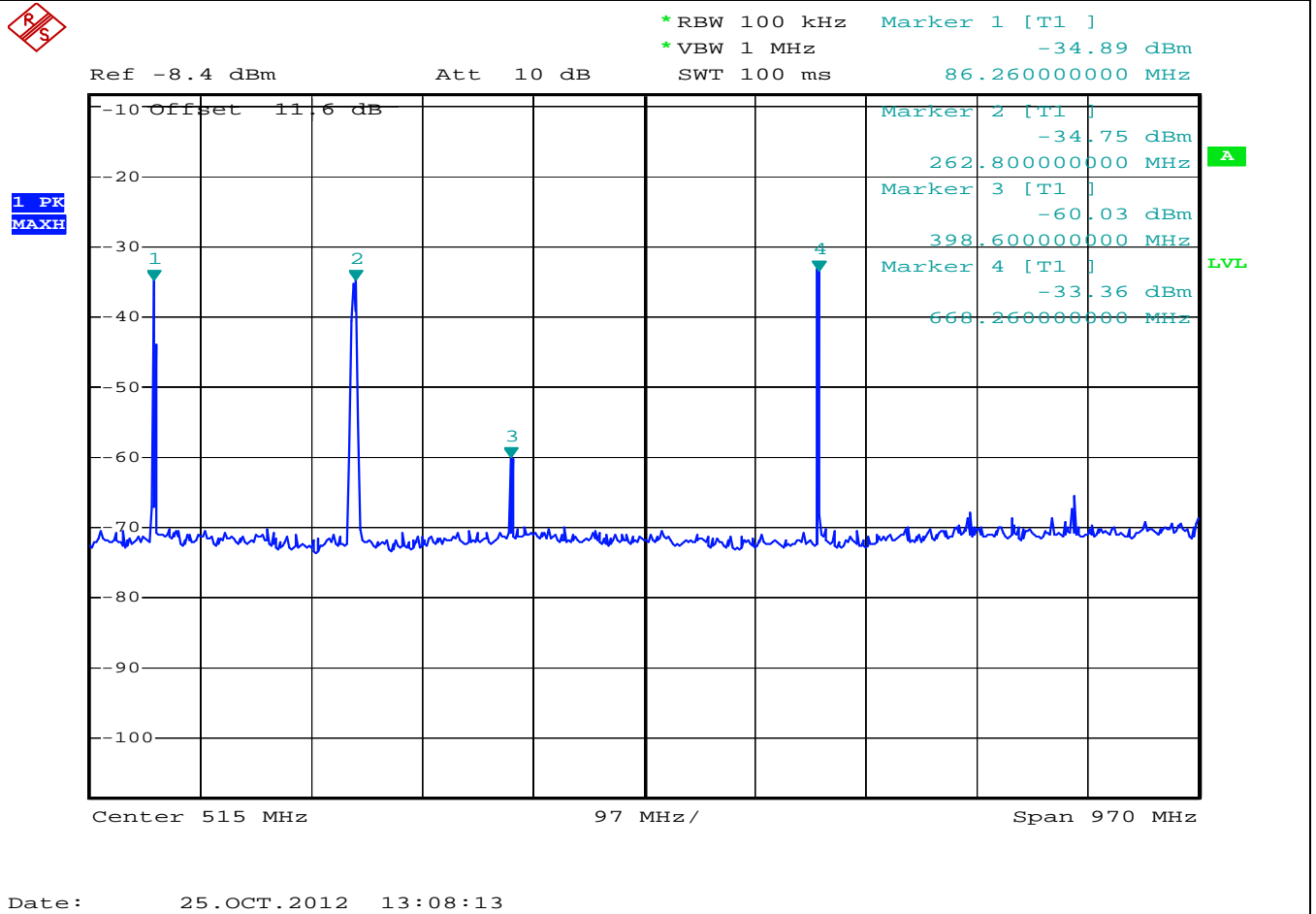


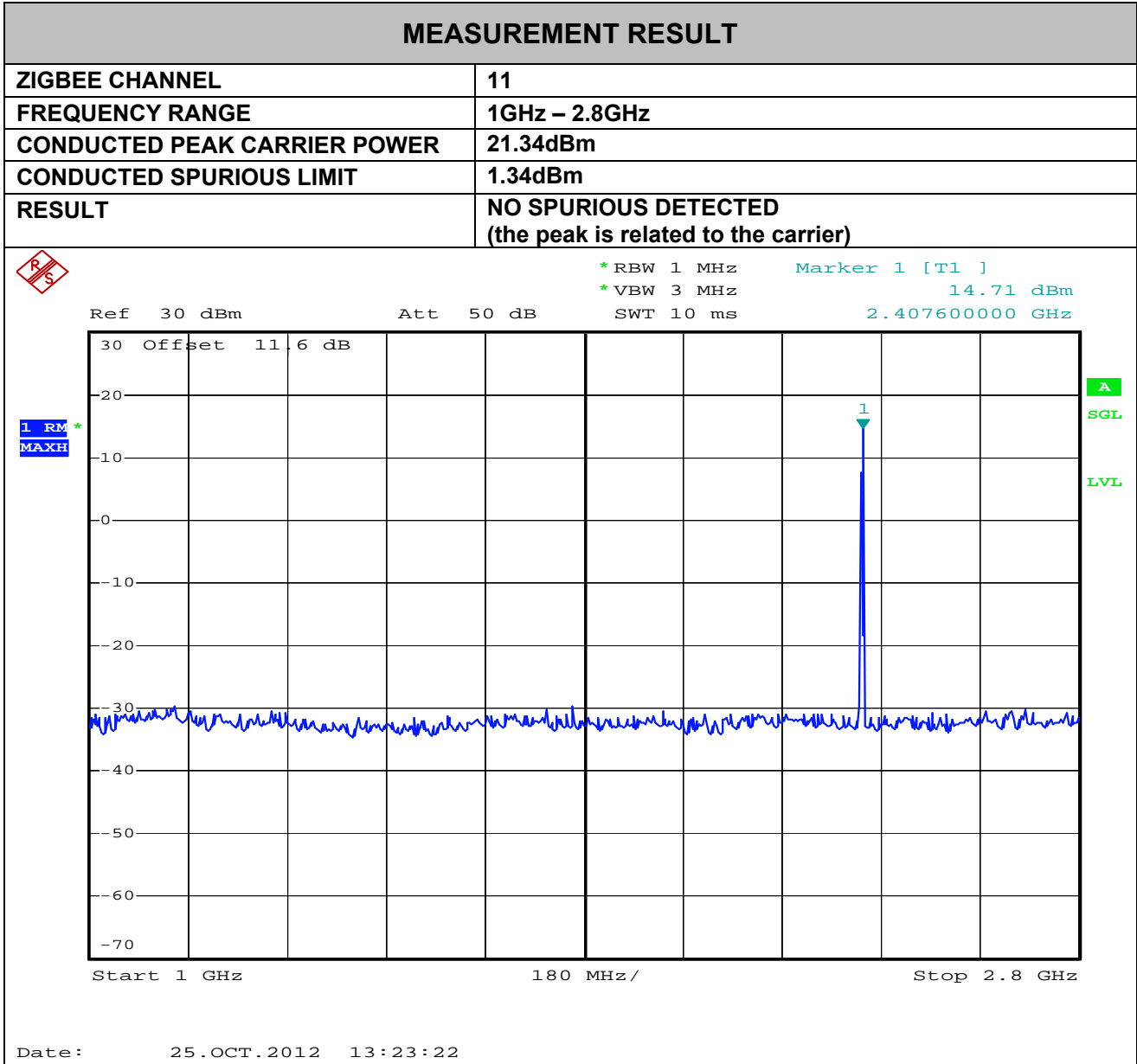
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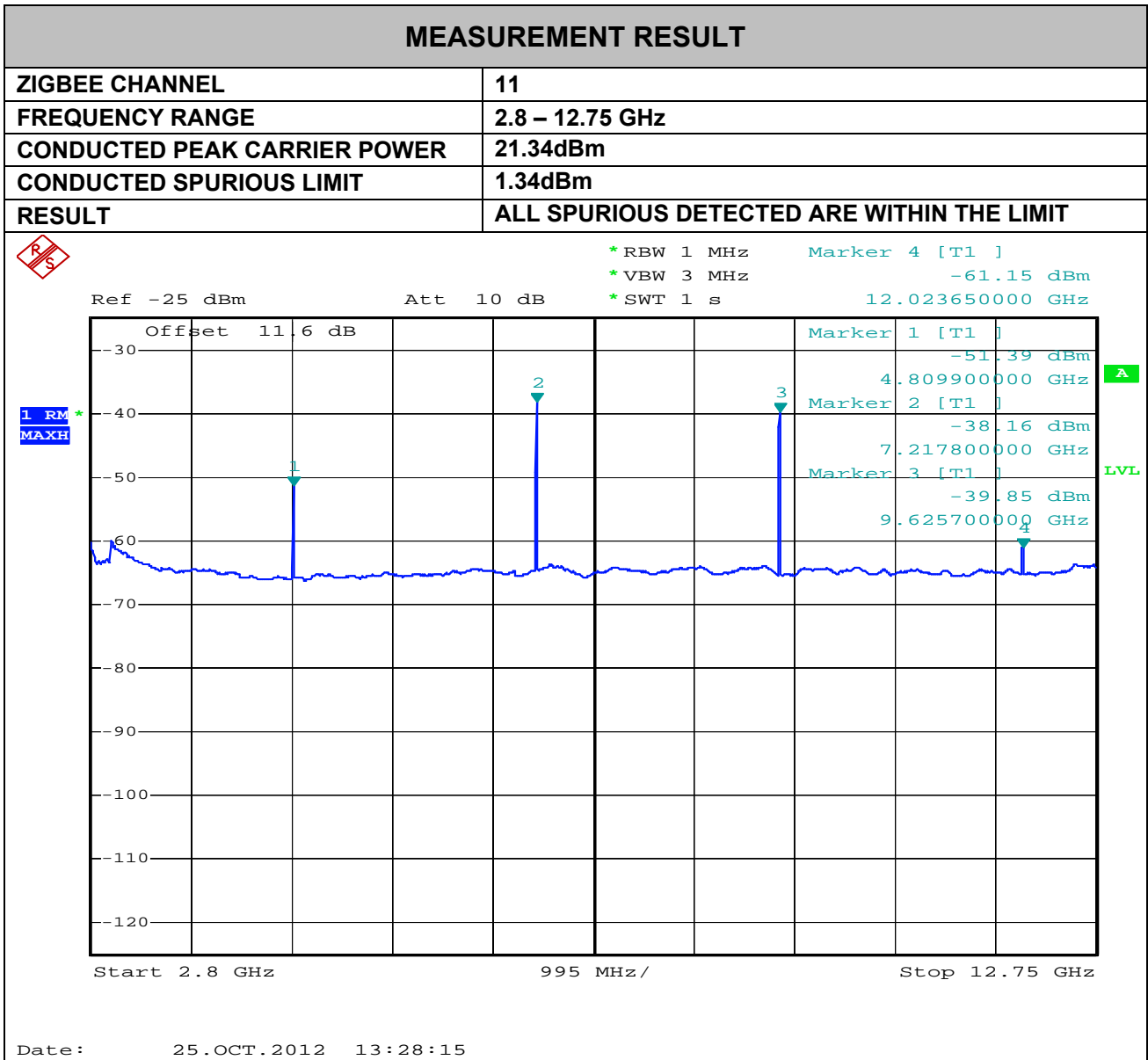


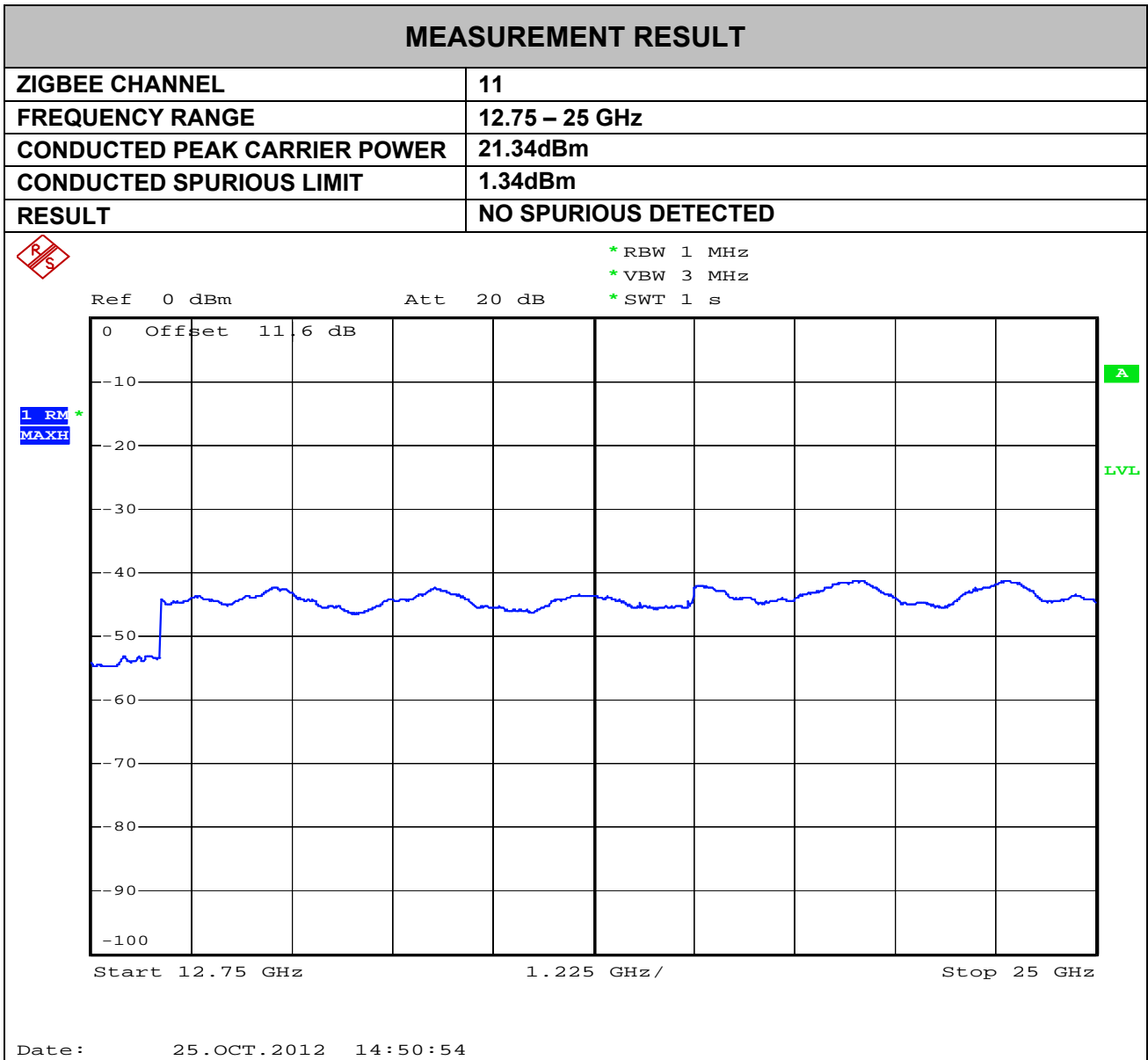


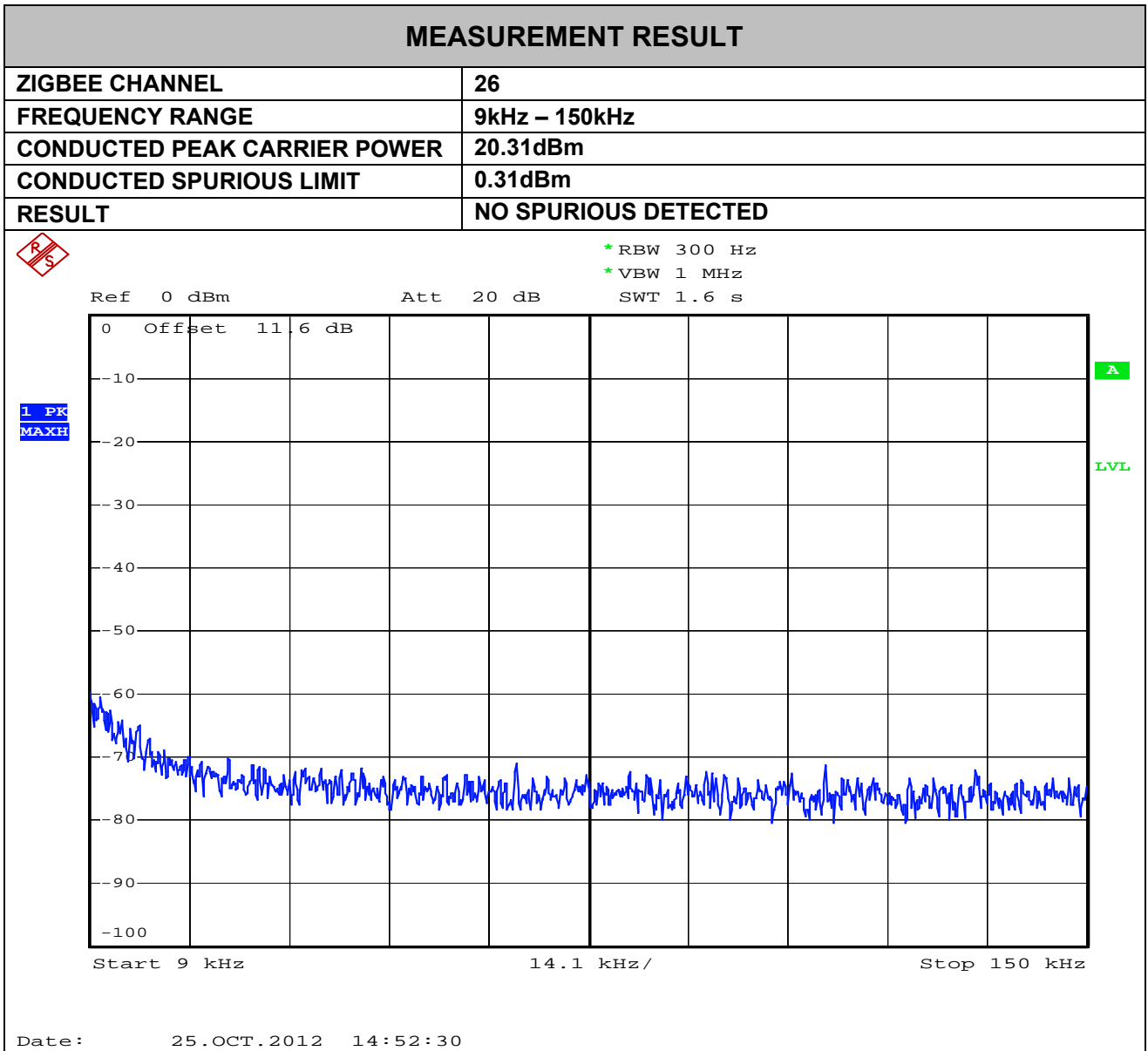
MEASUREMENT RESULT	
ZIGBEE CHANNEL	11
FREQUENCY RANGE	30MHz – 1GHz
CONDUCTED PEAK CARRIER POWER	21.34dBm
CONDUCTED SPURIOUS LIMIT	1.34dBm
RESULT	ALL SPURIOUS DETECTED ARE WITHIN THE LIMIT

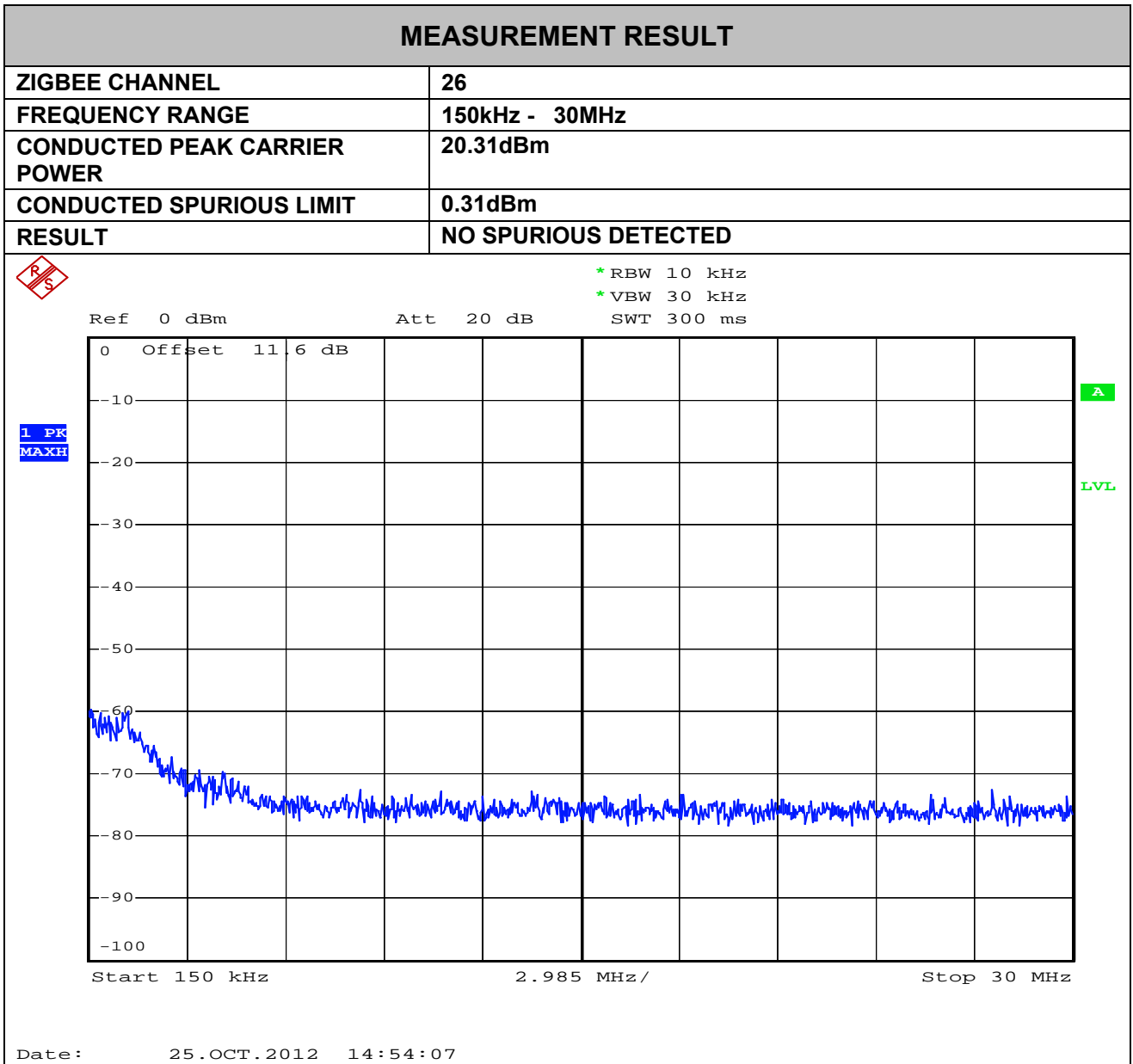


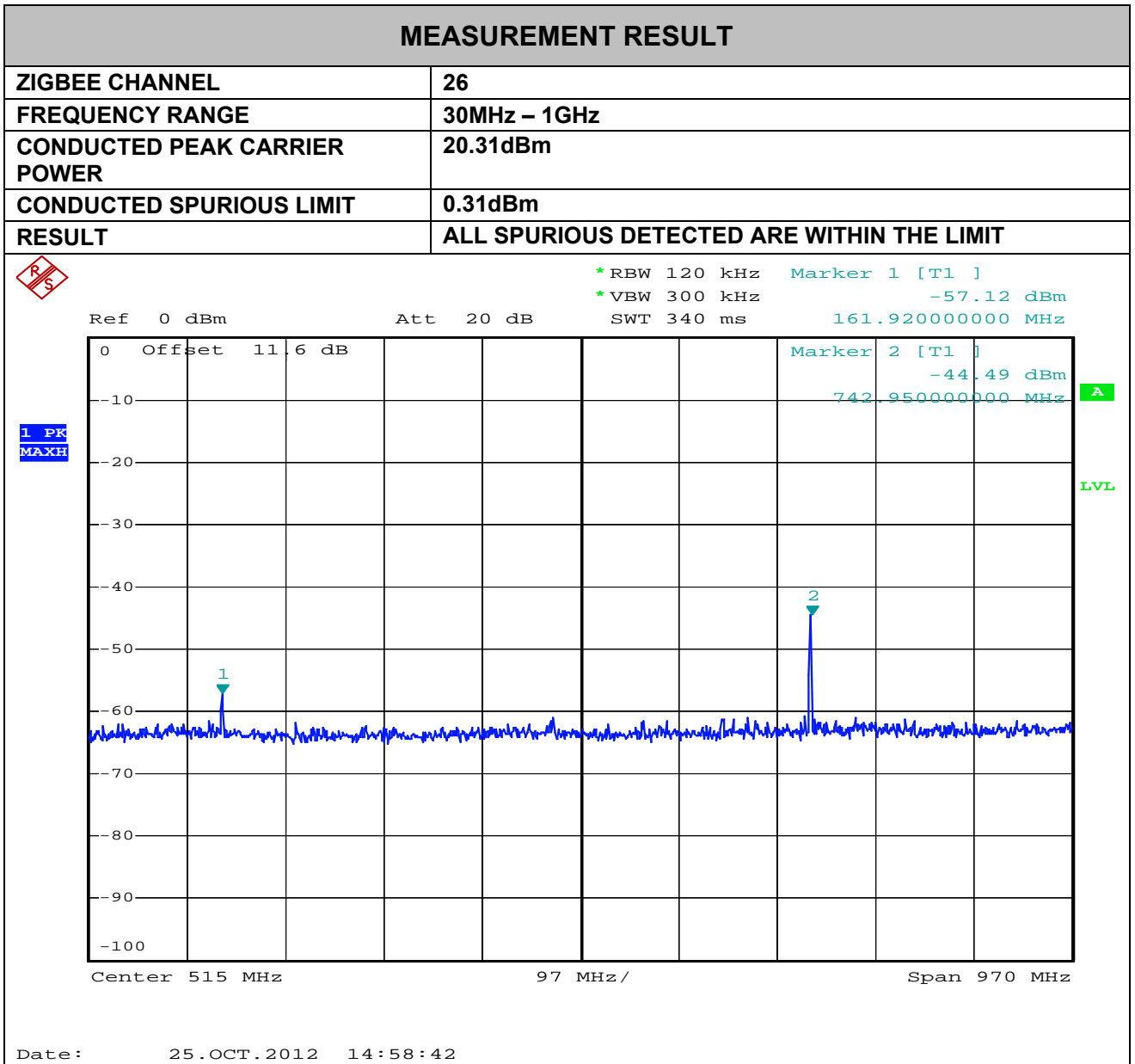


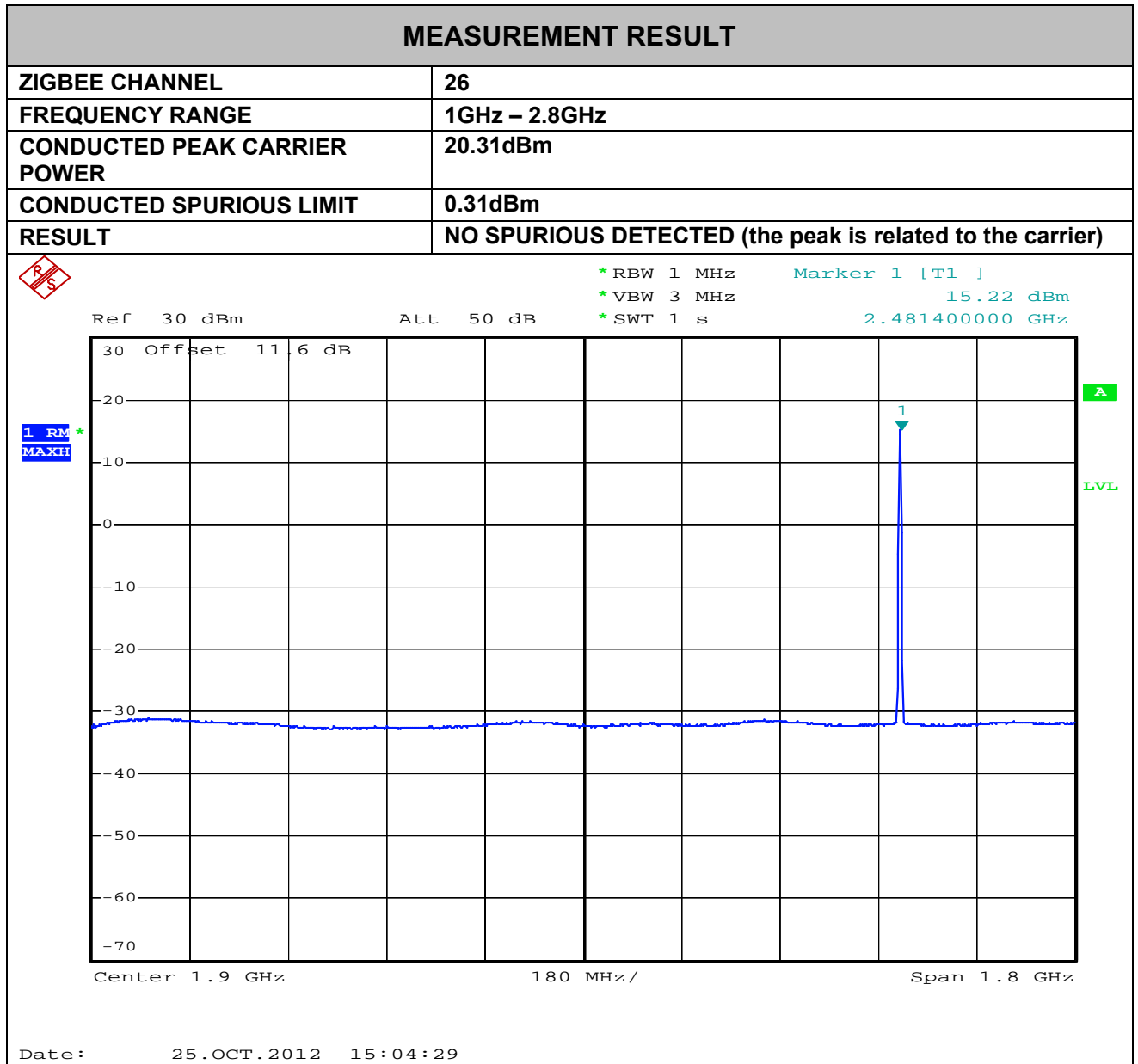


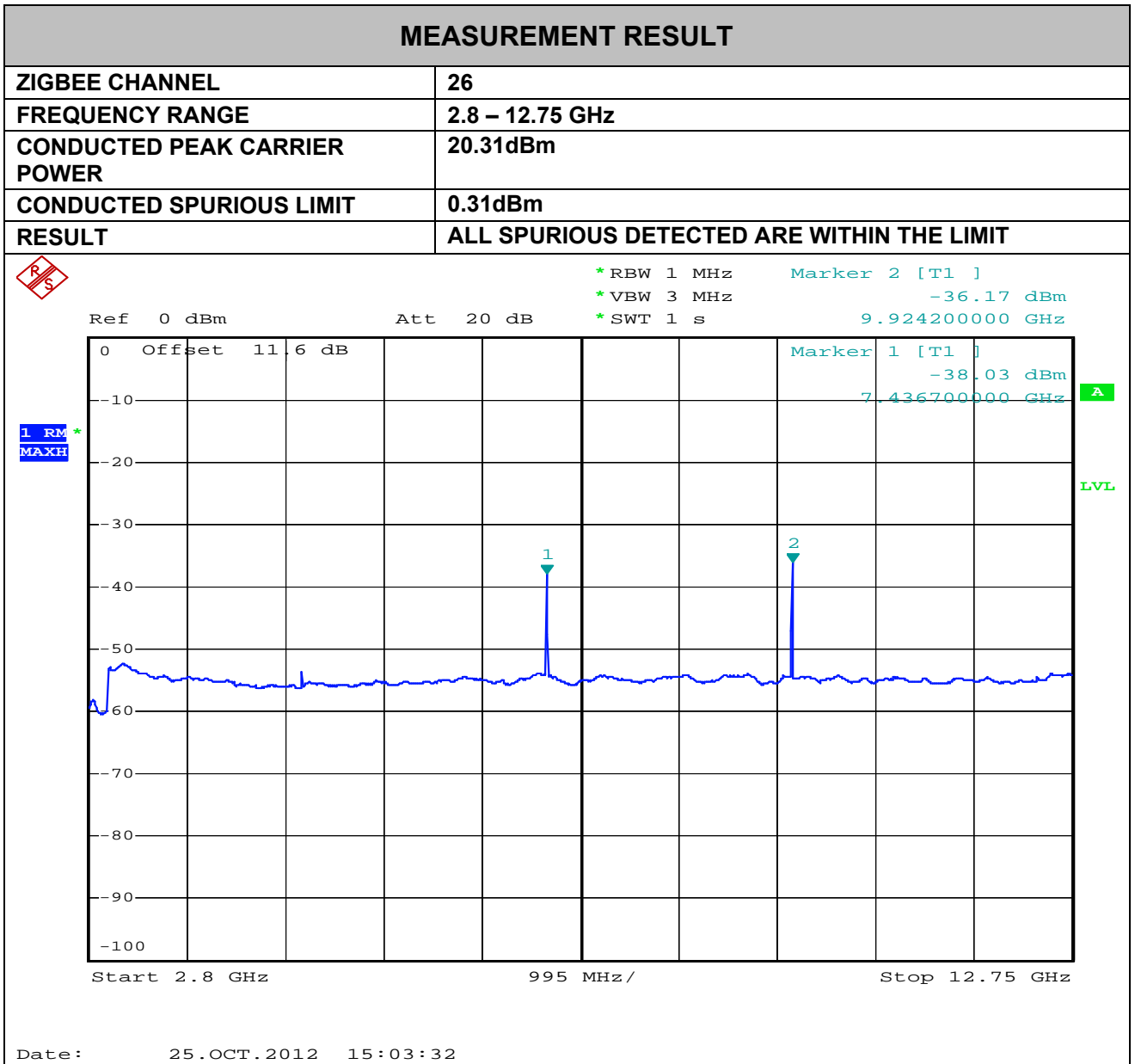


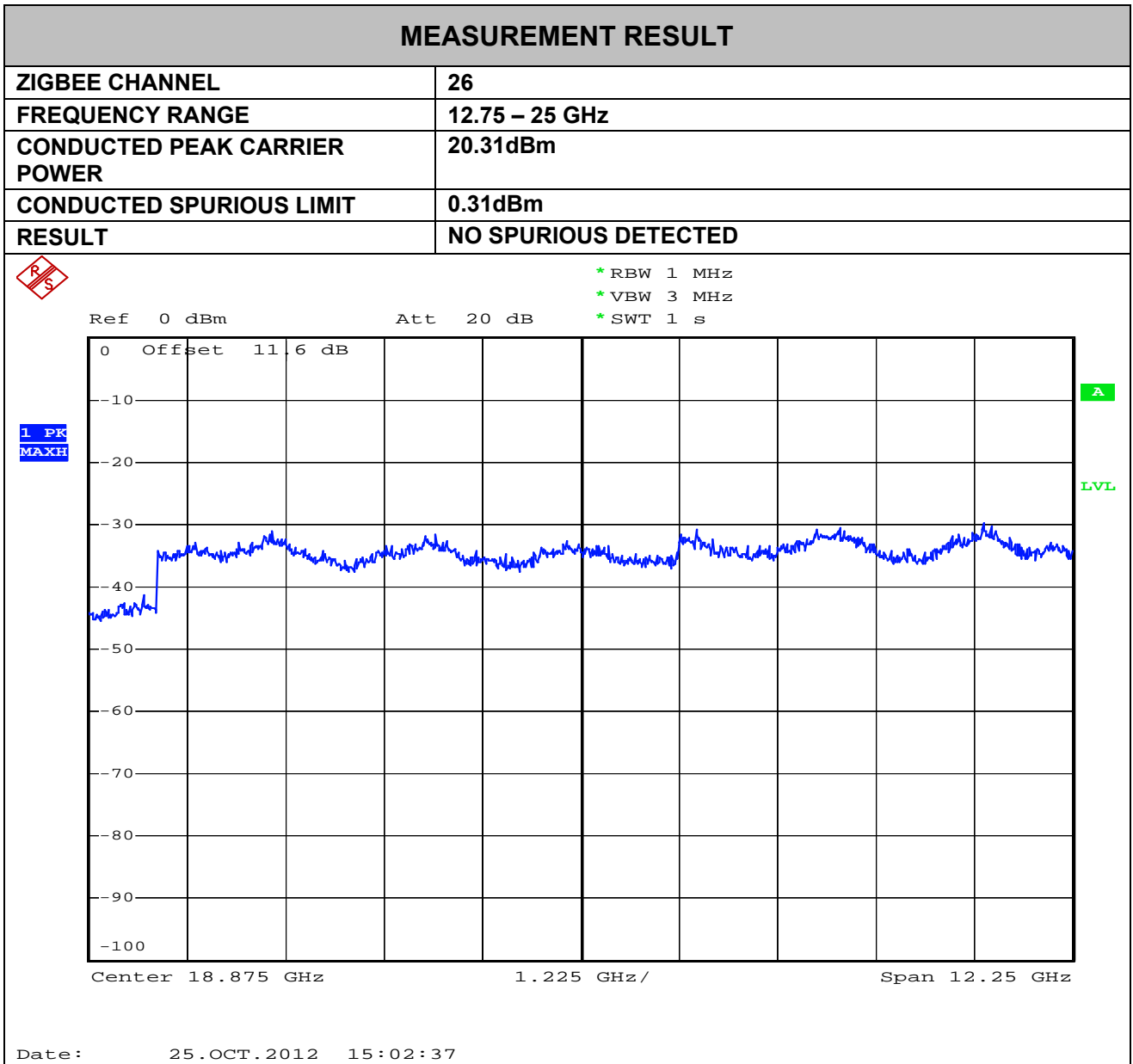












8 LIST OF EQUIPMENT USED

EQUIPMENT	IDENTIFICATION NUMBER	CAL. DUE	CERTIFICATE NUMBER
EMI TEST RECEIVER 20HZ 40GHZ	EMC.359	JAN-2013	WAITING CALIBRATION CERTIFICATE FROM INRIM
ARTIFICIAL MAINS NETWORK	EMC.173	JAN-2013	WAITING CALIBRATION CERTIFICATE FROM INRIM
RF SEMI-ANECHOIC CHAMBER (CSSA)	EMC.191	AUG- 2013	PRS NSA-2012
BILOG ANTENNA	EMC.023	MAY 2014	SAIBERSDORF EH- A315/11
LOG PERIODICA ANTENNA	EMC.391	DEC 2012	RHODE & S.
VOLTAGE GENERATOR	EMC.397	FEB.2013	SPS A4909D
SPECTRUM ANALYZER 4 KHZ – 40 GHZ	EMC.332	DEC 2013	PRS EMC332_2012

9 EUT PHOTOGRAPHIC DOCUMENTATION

PHOTO N° 1 – SYSTEM IDENTIFICATION



PHOTO N°2-RADIATED EMISSION SET UP

