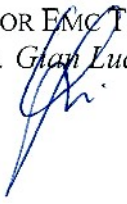
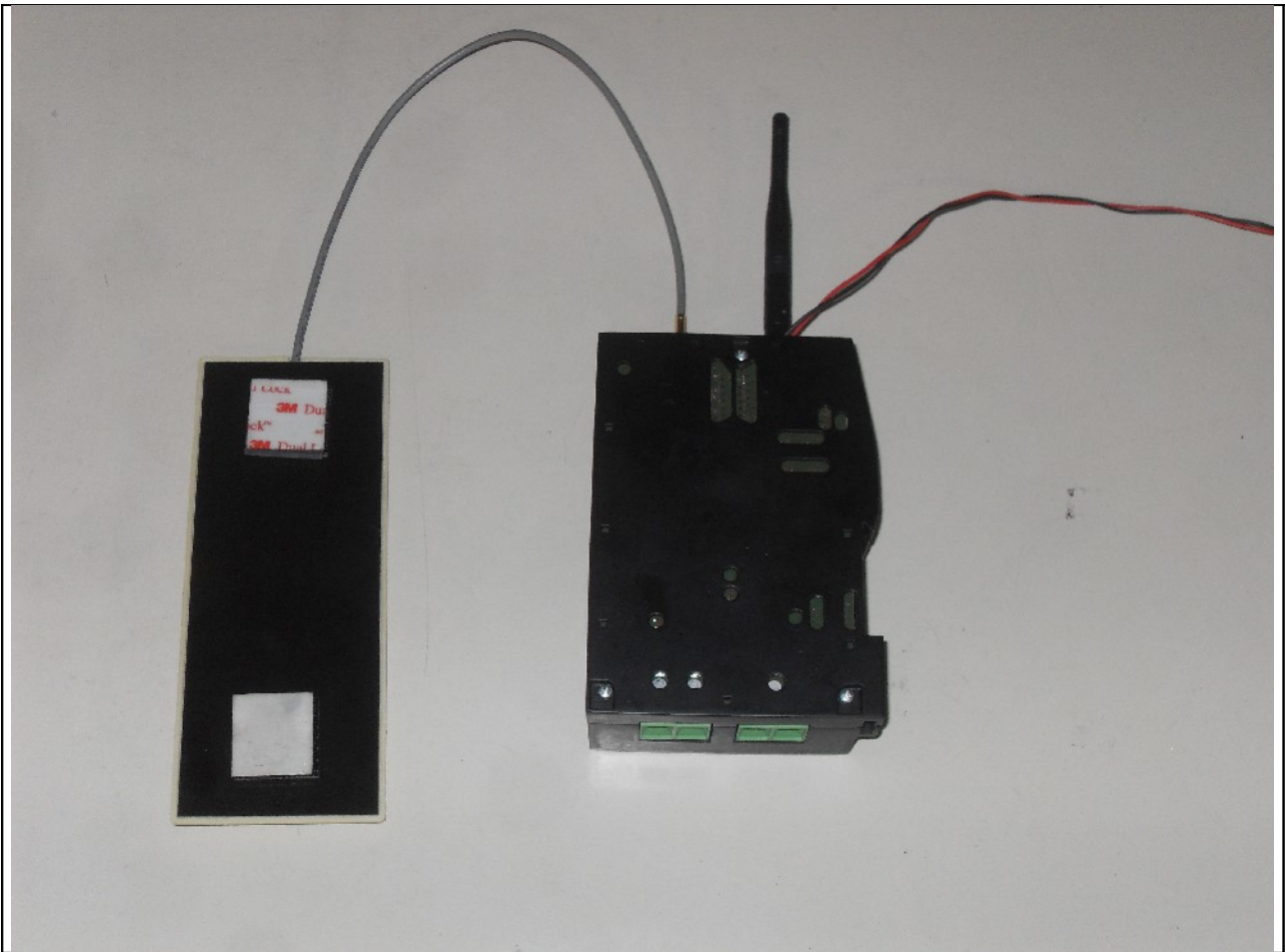


  CE MARKING ELECTROMAGNETIC COMPATIBILITY ELECTRICAL SAFETY LASER SPECTROSCOPY ENVIRONMENTAL PHYSIC		 www.tuv.com TÜV Rheinland ID: 9105021519	Organizzazione con Sistema di Gestione certificato Company with Management System certified ISO 9001:2008 
G.S.D. Srl PISA - Italy		Test Report n. FCC-16516	
		Rev. 01	
Manufacturer		Power-One Italy S.p.A.	
Address		Via San Giorgio, 642 52028 Terranuova Bracciolini (AR) Italy	
Test Family Name		VSN400 CELLULAR LOGGER CARD	
Testing Laboratory Name		G.S.D. S.r.l.	
Address		Via Marmiceto, 8 56121 Ospedaletto Pisa (PI) Italy	
Tel/Fax		+39 050 984254 / +39 050 984262	
P.IVA/VAT		01343950505	
http – e-mail		www.gsd.it - info@gsd.it	
		FCC Listed: Registration Number: 424037	
Location and Date of Issue		Pisa, 2016 April 01	
G.S.D. s.r.l. Via Marmiceto, 8 56121 OSPEDALETTO - PISA Tel. 050.984254 - Fax 050.984262 P. IVA 01343950505 SENIOR EMC TEST MANAGER Dr. Gian Luca Genovesi  QUALITY MANAGER Dr. David Pelliccia 			

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1. MANUFACTURER AND EUT IDENTIFICATION¹	
Manufacturer	Power-One Italy S.p.A..
Address	Via San Giorgio, 642 52028 Terranuova Bracciolini (AR) Italy
Test Family Name	VSN400 CELLULAR LOGGER CARD
Date of reception	2016 January 20
Sampling	Laboratory sample for certification
Test Item Description	WiFi and Cellular Device
Nominal Input Voltage	12 Vdc
FCC ID	X6W-3N89E contains FCC ID: UDV-SIM7100A

¹A detailed documentation is preserved in the internal fascicle.



*Fig. 1.1
Equipment Photo*

2. REFERENCE STANDARDS

Tests and measurements are performed accordingly to the reference standards given in the table below:

<i>TEST</i>	<i>STANDARD</i>
Emissions: Radiated – Section 15.209	FCC Rules and Regulations, Title 47 Part 15 – Sub part C ANSI C63.4 (2014) – 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

3. TEST GENERALITY, RESULT, CONDITION, MEASUREMENT UNCERTAINTY**Sub-part 2.1033(b)****Test And Measurement Data**

All tests and measurement data shown were performed in accordance with FCC Rules and Regulations, Volume II; Part 2 and the following individual Parts: 15.209; Intentional Radiators

Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing: In accordance with ANSI C63.4-2014, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures.

All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst-case measurements.

Summary of Test Results

<i>TEST</i>	<i>RESULT</i>
<i>Emissions: radiated Section 15.209</i>	<i>Pass</i>

Measurement uncertainty

<i>TEST</i>	<i>EXPANDED UNCERTAINTY</i>
Conducted Emission – 50Ω/50μH (150 kHz - 30 MHz)	± 3.5 dB
Radiated Emission – (Semianechoic Room) (30 MHz - 18 GHz)	± 4.7 dB

Climatic Conditions

<i>PARAMETER</i>	<i>VALUE</i>
Temperature	(293 ± 3) K
Relative humidity	(50 ± 5) %

Extensions

The results refer only to the sampled EUT and under the specified conditions.

Test Mode: the EUT was powered by 12Vdc. WiFi ON LTE/WCDMA ON

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4. RADIATED EMISSIONS

In the following table you can find the limits established by the reference standard:

FREQUENCY RANGE (MHz)	Field Strength <i>QUASI-PEAK LIMITS</i> [dB (μV/m)]
0.009 ÷ 0.490	48.15 ÷ 13.8 @ 300m
0.490 ÷ 1.705	33.8 ÷ 23 @ 30m
1.705 ÷ 30	29.5 @ 30m
30 ÷ 88	40
88 ÷ 216	43,5
216 ÷ 960	46
Above 960	54

Test Equipment

EQUIPMENT	MANUFACTURER	MODEL	CAL. DUE
EMI Receiver	Keysight	N9038A	01/2017
Anechoic Chamber	Comtest	CSA01	01/2017
High Pass Filter	MiniCircuits	VHP-39	01/2017
Notch Filter	K&L	3N45-2442/T84	01/2017
Notch Filter	Wainwright	WRTC10-1700- 2100-20-40-40	01/2017
Preamplifier	SHF	97AP	01/2017
Loop Antenna	ETS	6509	01/2017
Horn Antenna	Alpha Industries	61932500	01/2017
Bilog Antenna	Schaffner	CBL6112B	01/2017
Horn Antenna	EMCO	3115	01/2017
Controller	Deisel	HD100	01/2017
Turn Table	Deisel	MA240	01/2017
LISN	GSD	NTW06	01/2017

Test procedure: RE22R02**Notes**

Azimuth position EUT-Antenna corresponding to 0° identifies the rotating table orientation (TT) in which the instrument to be tested shows the front part turned towards the antenna. Positive grades individuate clockwise rotations of TT when this one is observed from the top. For negative degrees, TT rotation is anticlockwise.

Antenna height respect to the mass plane is conventionally individuated with: MA=XXX where XXX indicates the height (always positive for e>100) expressed in cm.

Antenna horizontal polarization is indicated by POL=H.

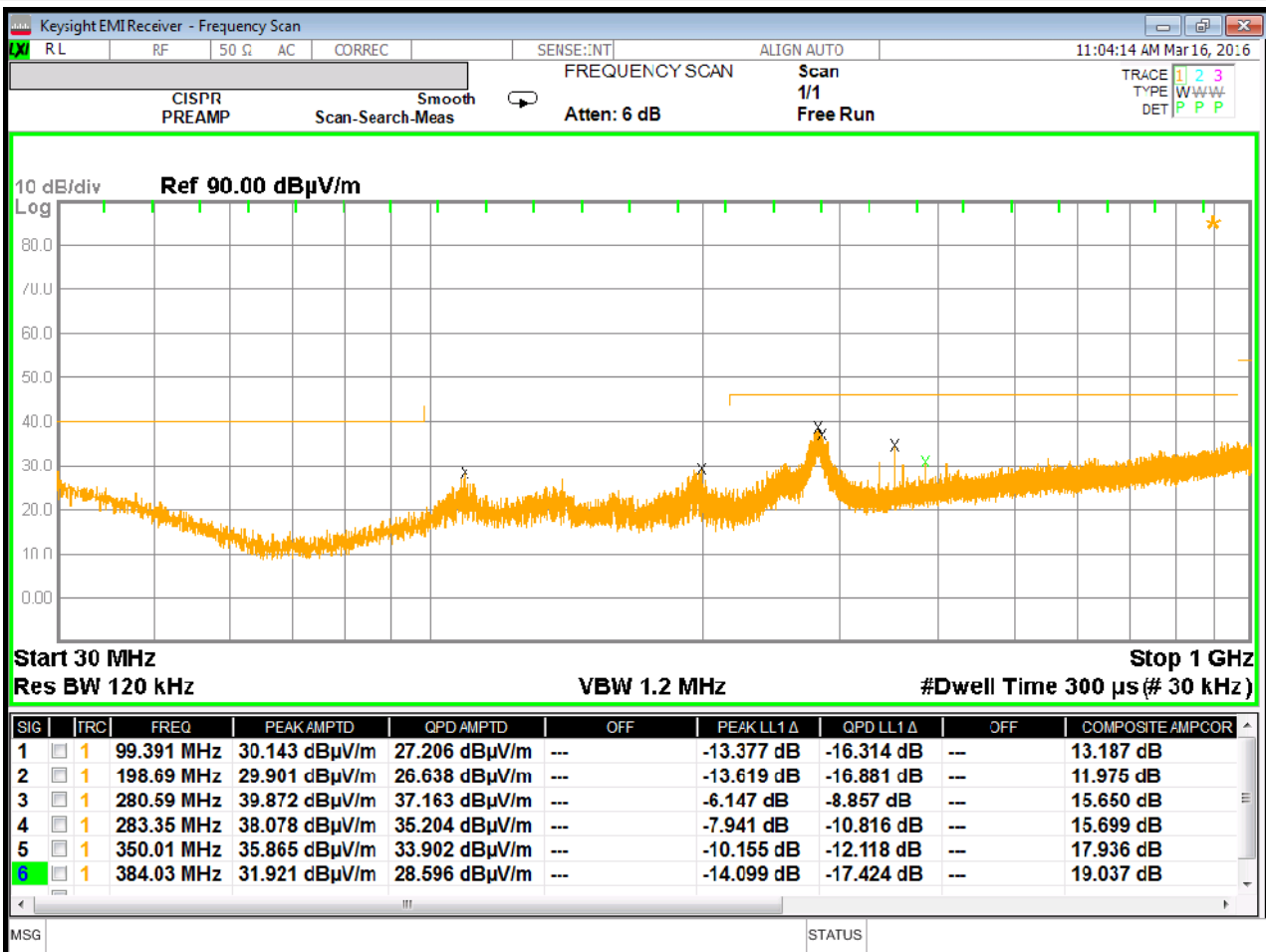
Antenna vertical polarization is indicated by POL=V.

EUT was tested in the three orthogonal planes.

Results and conclusions

In all the operative conditions, equipment complied with the standard limits. Graphics in following figures show the most significant registrations of the performed measurements.

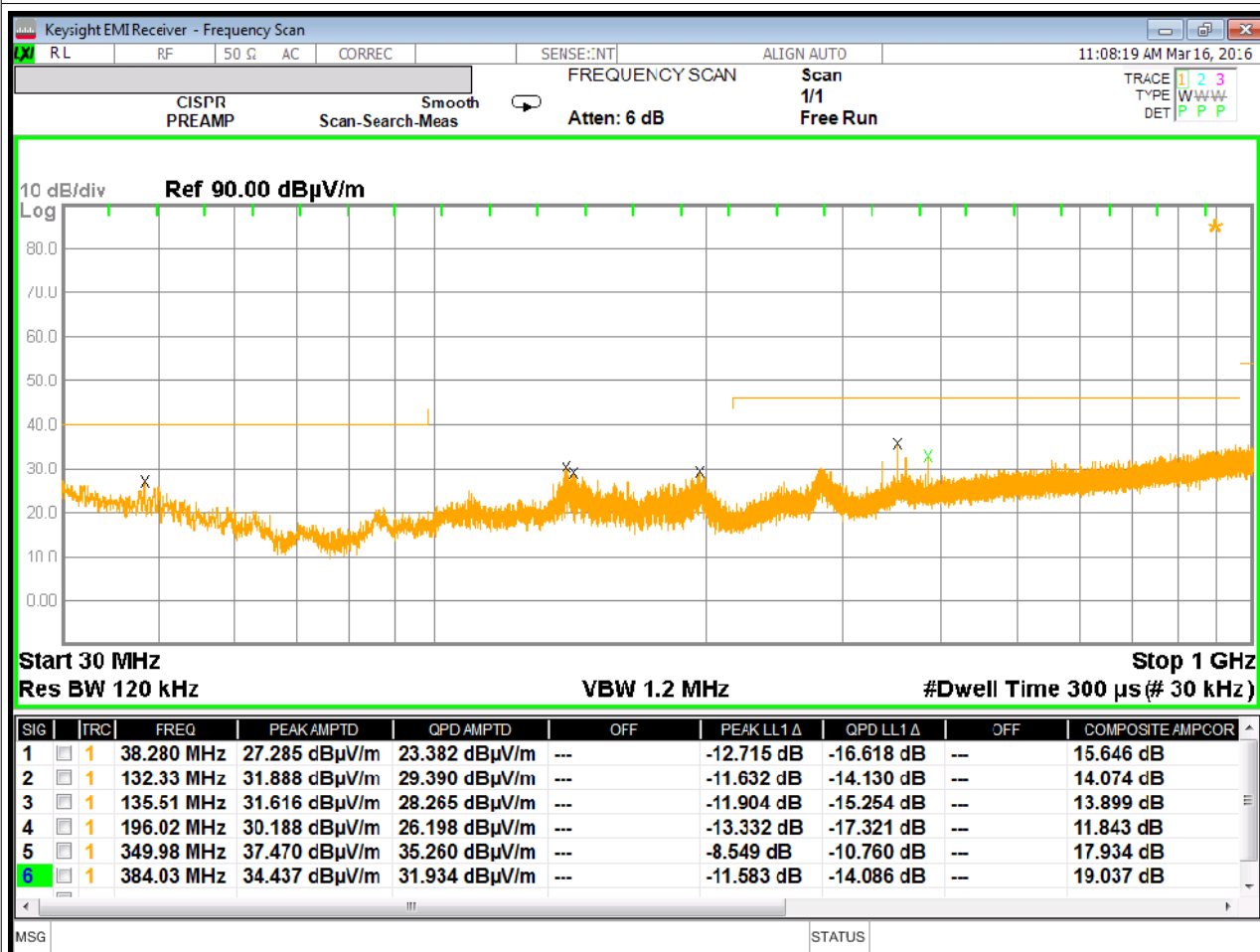
Radiated Emissions



Note:

Horizontal Polarization
EUT operating, WiFi and LTE ON

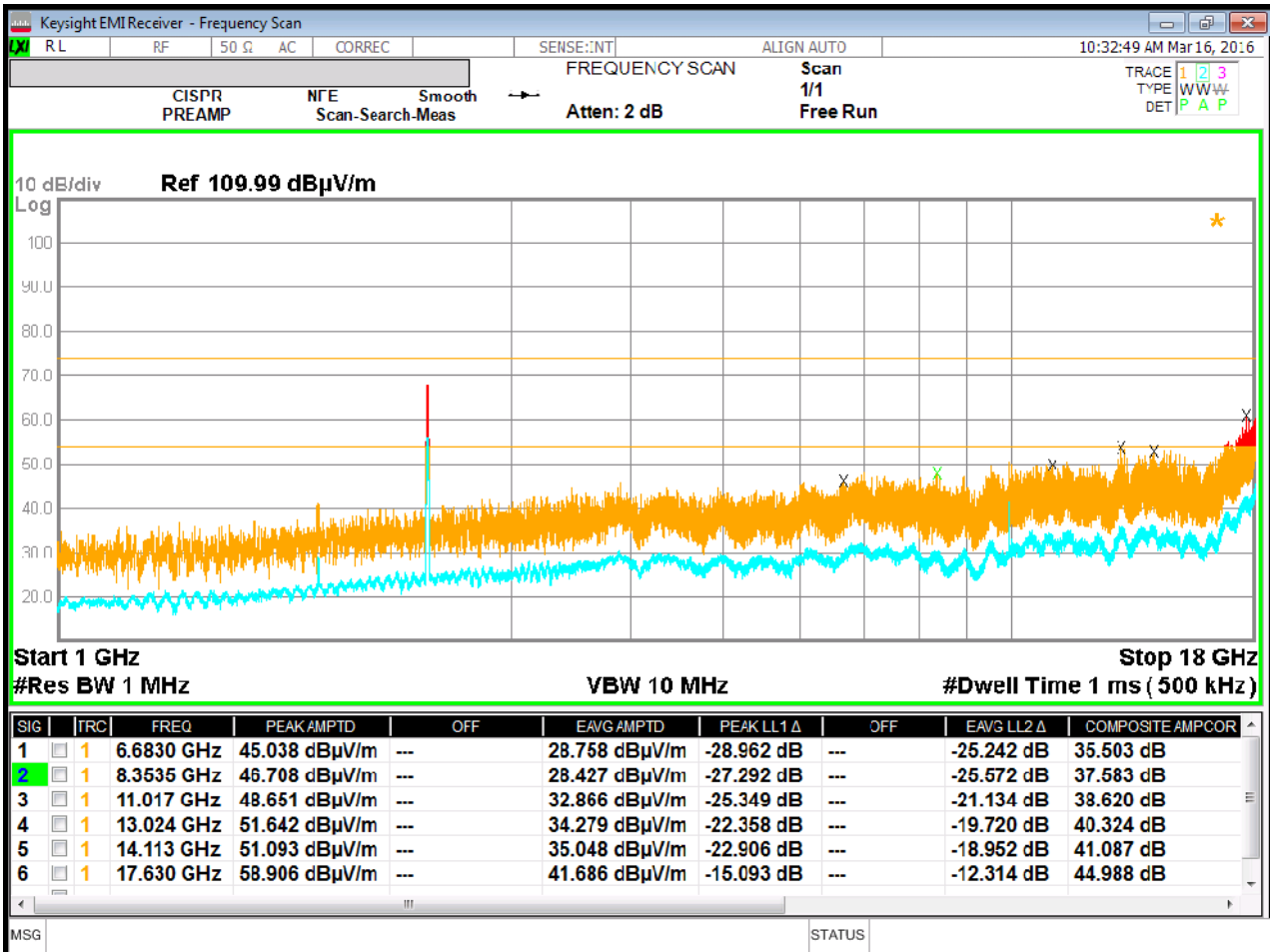
Radiated Emissions



Note:

Horizontal Polarization
EUT operating, WiFi and LTE ON

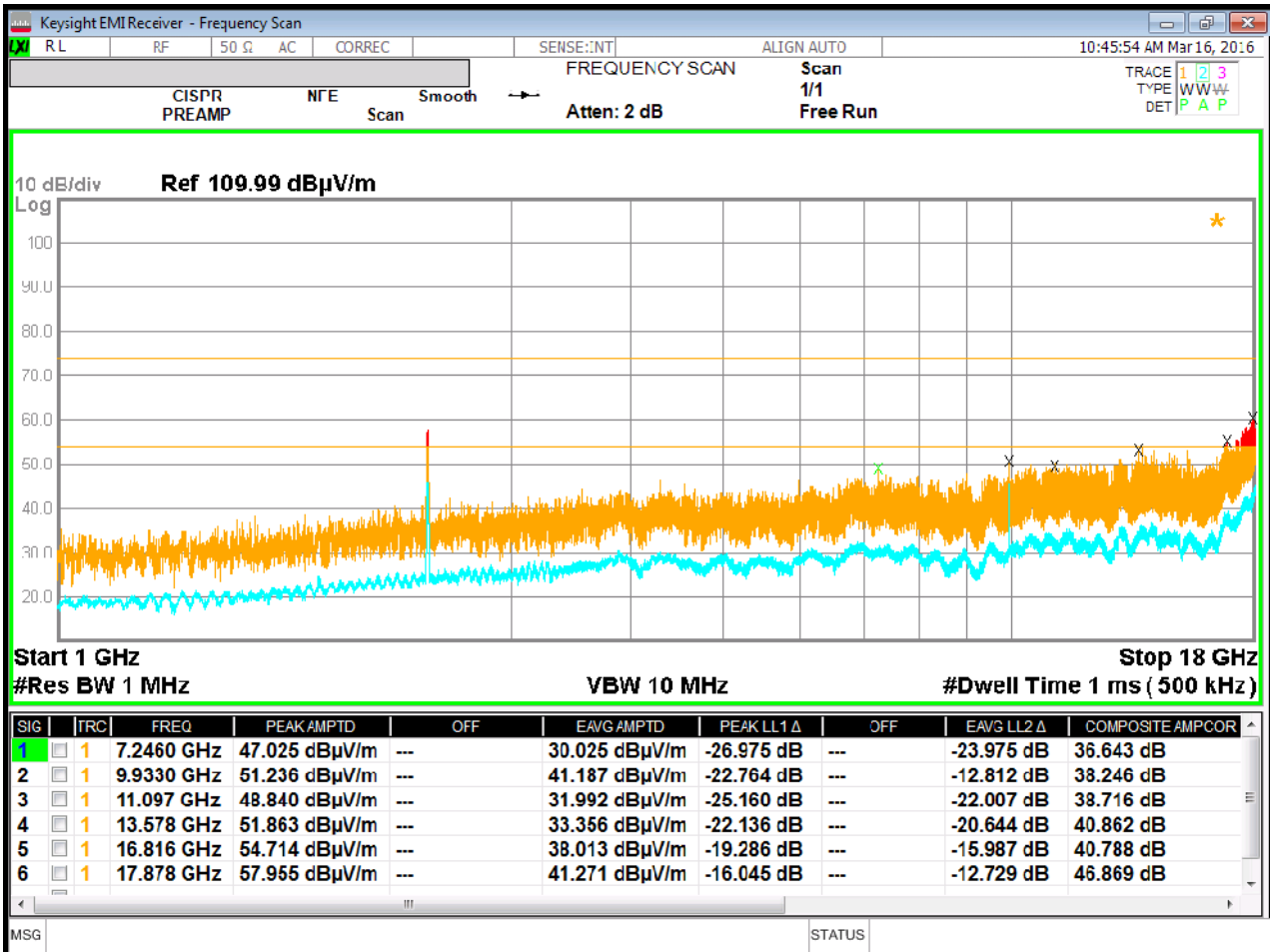
Radiated Emissions



Note:

Vertical Polarization
EUT operating, WiFi and LTE ON

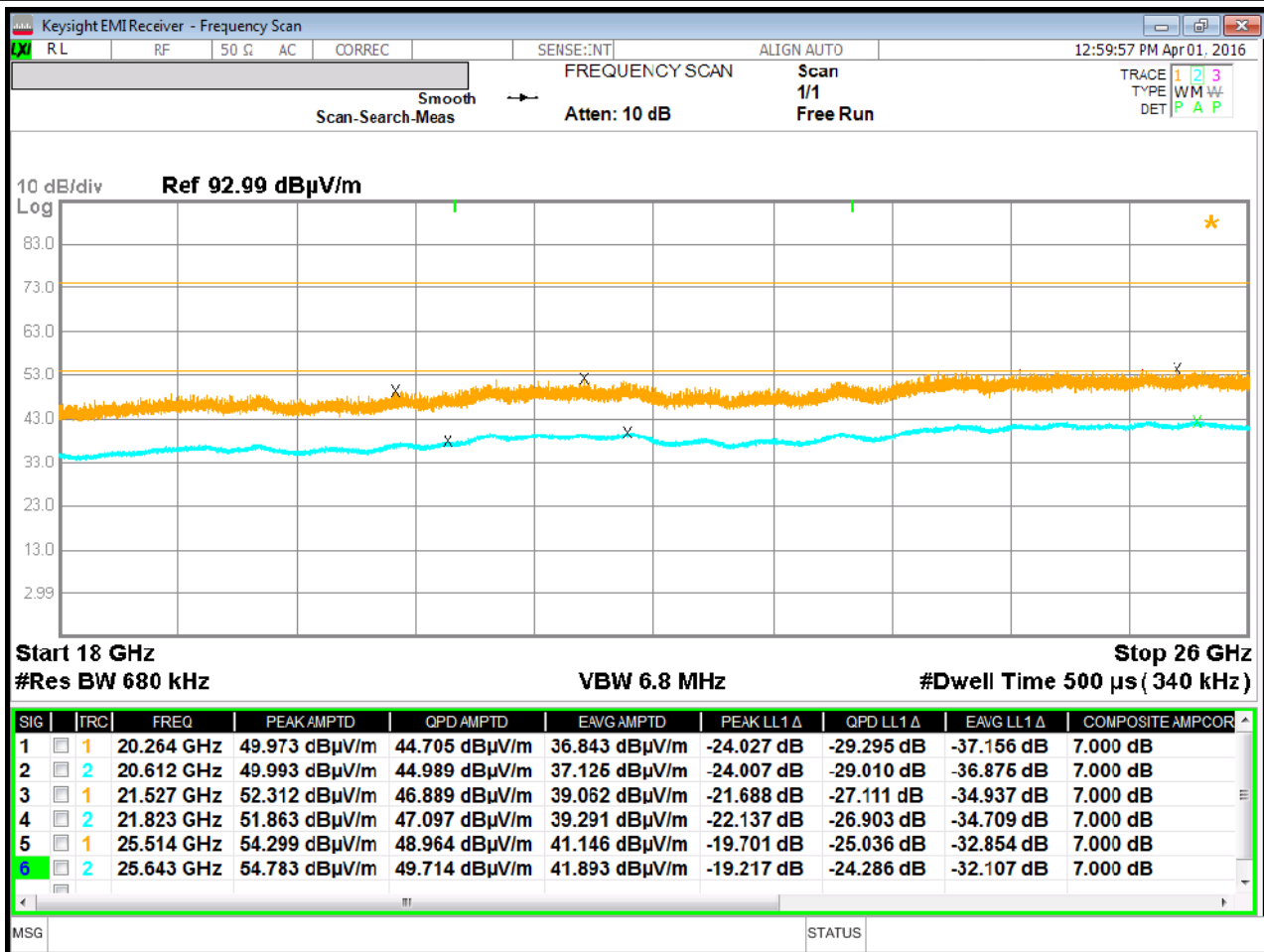
Radiated Emissions



Note:

Horizontal Polarization
EUT operating, WiFi and LTE ON

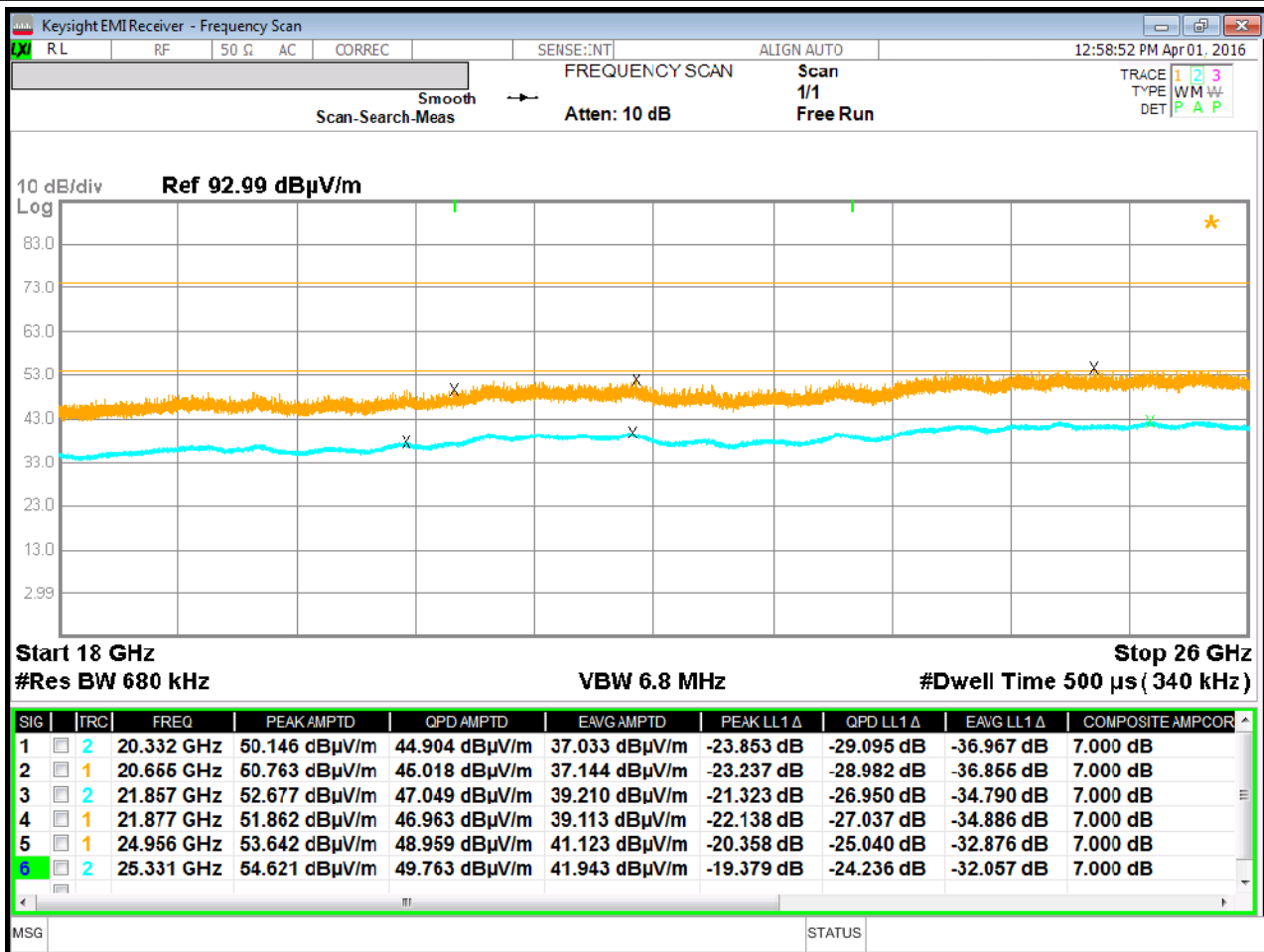
Radiated Emissions



Note:

Horizontal Polarization
EUT operating, WiFi and LTE ON

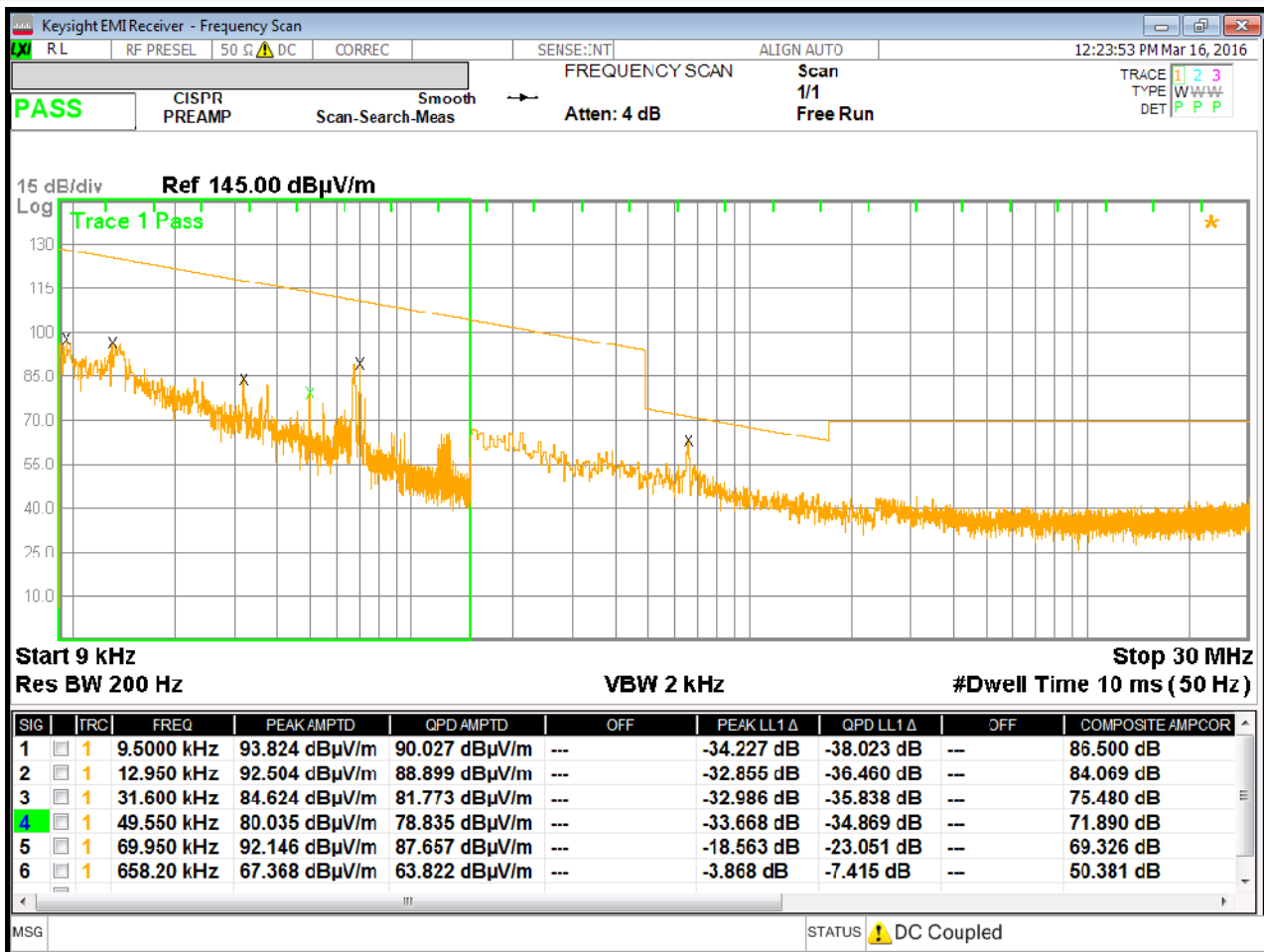
Radiated Emissions



Note:

Vertical Polarization
 EUT operating, WiFi and LTE ON

Radiated Emissions



Note:

Horizontal Polarization
EUT operating, WiFi and LTE ON

5. PHOTO

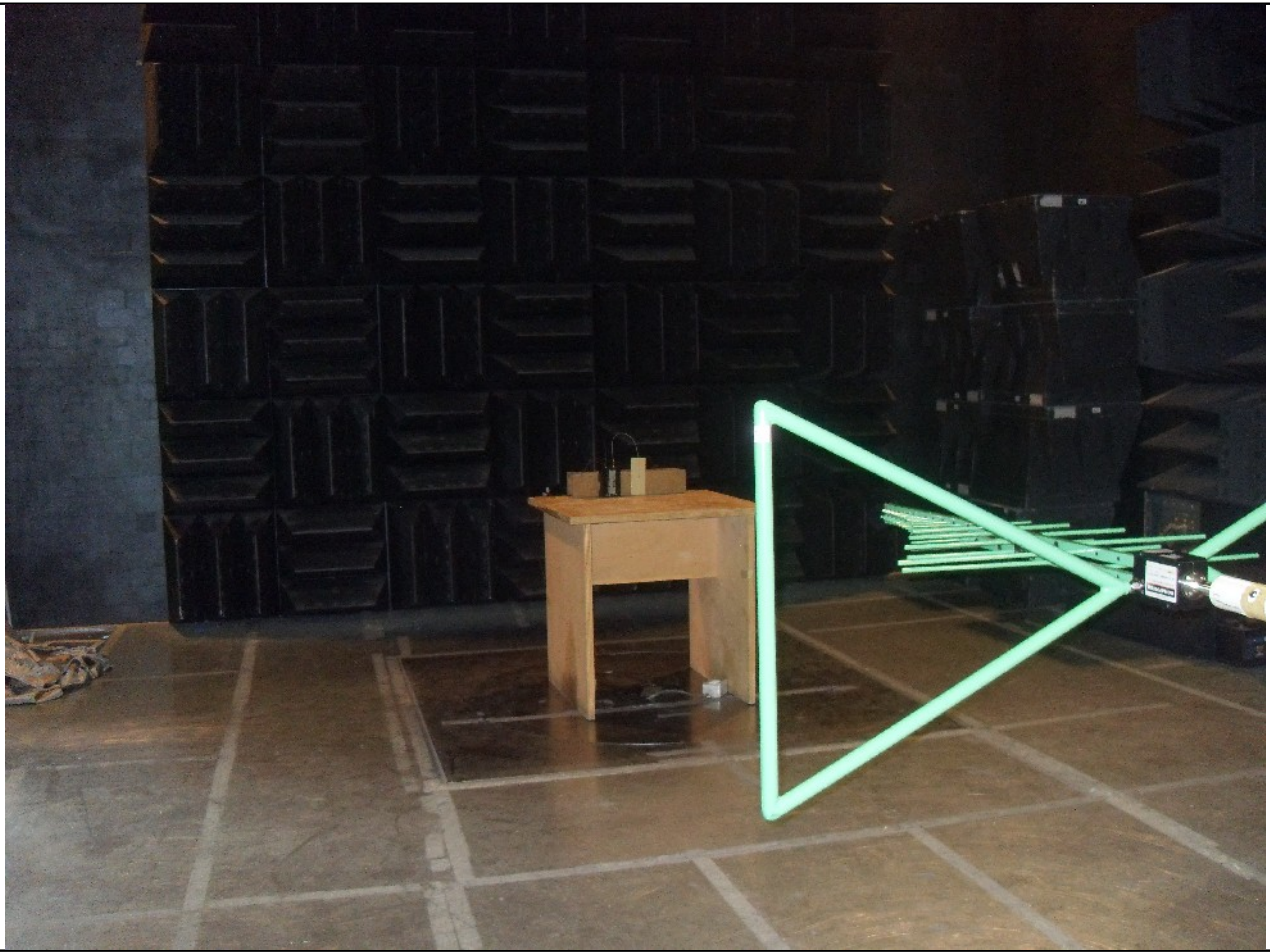


Fig. 5.1

Radiated Emissions Test Set-up

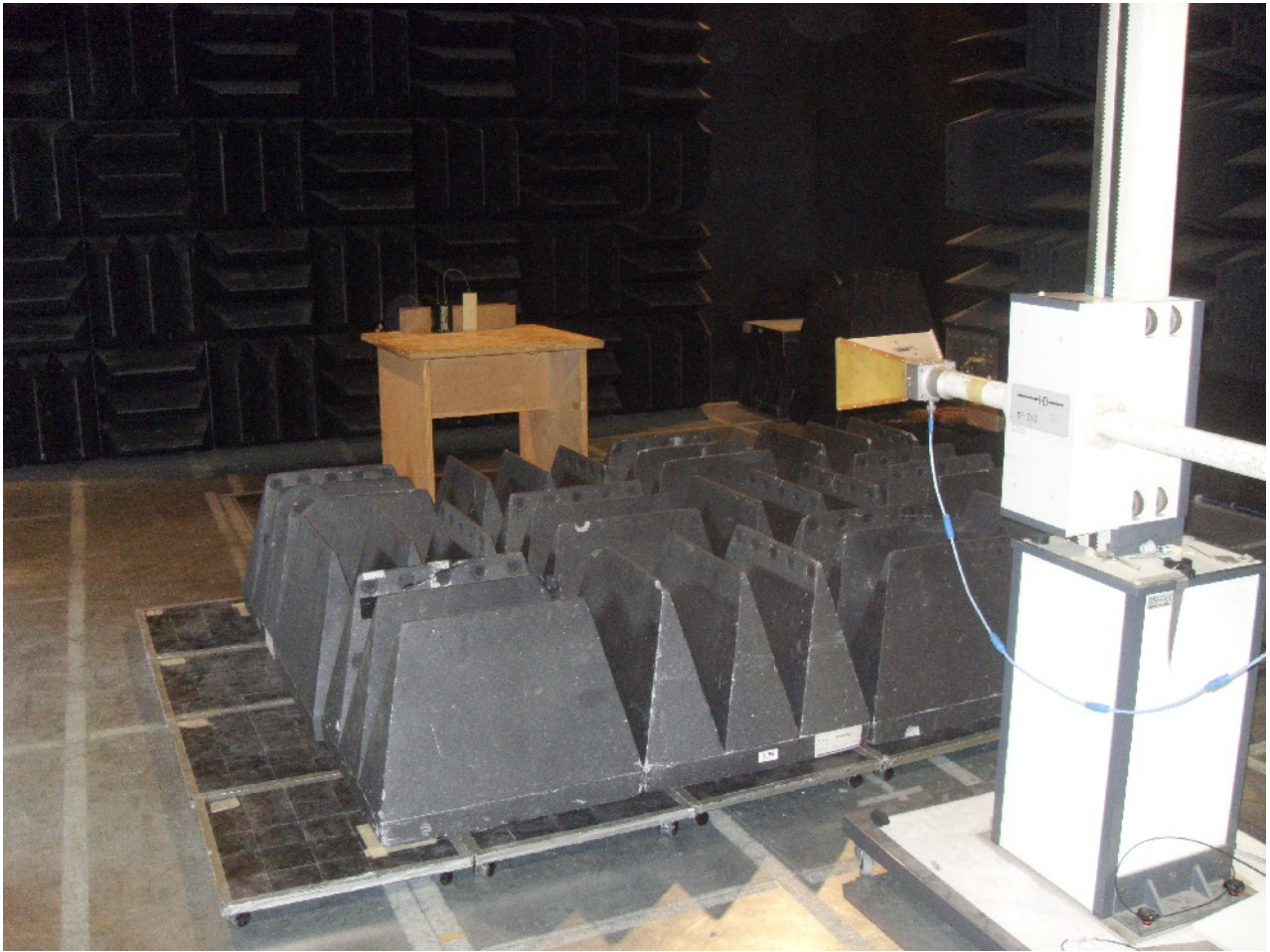


Fig. 5.2

Radiated Emissions Test Set-up



Fig. 5.3

Radiated Emissions Test Set-up



Fig. 5.4

Radiated Emissions Test Set-up