TIMCO ENGINEERING, Inc.

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TEST REPORT

FCC PART 15

for

FCC ID: AXI11373020

Applicant	**VERTEX STANDARD USA, INC.**
Address	**8000 WEST SUNRISE BLVD. FT. LAUDERDALE FL 33322 USA**
Model Number	EVX-261-D0-5
Product Description	VHF 2 WAY PORTABLE TANSCEIVER
Date Sample Received	6/30/2016
Final Test Date	8/11/2016
Tested By	Cory Leverett
Approved By	Sid Sanders
Test Results	☒ PASS ☐ FAIL

Report Number	Version Number	Description	Issue Date
1235BUT16TestReport_	Rev1	Initial Issue	8/17/2016
1235BUT16TestReport_	Rev2	Added A2LA Accredited Symbol	8/18/2016

A2LA ACCREDITED
Testing Cert. # 0955.01

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GENERAL REMARKS

The attached report shall not be reproduced except in full without the written permission of Timco Engineering Inc.

The test results only relate to the item tested.

SUMMARY OF TESTING RESULTS

The device under test does:
☒ Fulfill the general approval requirements as identified in this test report and was selected by the customer.
☐ Not fulfill the general approval requirements as identified in this test report

ATTESTATIONS

This equipment has been tested in accordance with the standards identified in this test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report.

All instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 17025 requirements.

A2LA ACCREDITED
Testing Cert. # 0955.01

I attest that the necessary measurements were made at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, FL 32669

Tested by: _____
Name and Title: Cory Leverett Project Manager/Testing Technician

Date: 8/16/2016

Reviewed and approved by: _____
Name and Title: Sid Sanders, Engineer

Date: 8/17/2016

GENERAL INFORMATION

The test results relate only to the items tested.	
EUT Description	**VHF 2 WAY PORTABLE TANSCEIVER**
FCC ID	**AXI11373020**
Model Number	**EVX-261-D0-5**
Highest Tuned Frequency	174 MHz
I/O Port Type	MIC/SP Jack converted to USB through FIF-12 adapter
EUT Power Source	☐ 110–120Vac/50– 60Hz
	☐ 12.6 VDC Nominal
	☒ Battery Operated Exclusively
Test Item	☐ Prototype
	☒ Pre-Production
	☐ Production
Environmental Condition in the laboratory	Temperature: 24-26ºC Relative humidity: 50-65% Barometric Pressure: 1016.2mb

EUT CABLES USED FOR TESTING

Description	Type	Connector	Length
FIF-12	Shielded	USB A – Din	Less than 3 M

TEST INFORMATION

Regulatory Standard	CFR Title 47 FCC Rule part 15B § 15.109, 15.107
Test Procedures	FCC Part 15.31, 15.33, 15.35 ANSI C63.4 – 2014
Operational Modes	Configured as computer peripheral with host PC and provided software running a continuous update loop.
Setup	The EUT was configured as a computer peripheral through a supplied FIF-12 USB programming adapter and USB cable, the setup used was a tabletop arrangement for IT equipment as specified in the standard
Modifications required for Testing	None
Deviation from the standard/ procedure	No deviation
Host PC Model	HP Compaq 2510p with HP 381090-001 ITE Supply

RESULTS SUMMARY

Requirement	**Frequency MHz**	**Level (dBuV/ m)**		**RESULTS Pass/ Fail**
15.109 Radiated Emissions	30 – 88	40.0		Pass
	80 – 216	43.0		
	216 – 960	46.0		
	Above 960	54.0		
15.107 AC Powerline Conducted	**Frequency MHz**	**Quasi Peak Limits (dBµV)**	**Average Limits (dBµV)**	**RESULTS Pass/ Fail**
	0.15 – 0.5	66 – 56	56 – 46 *	Pass
	0.5 – 5.0	56	46	
	5.0 – 30	60	50	

Decrease with logarithm of frequency

RADIATED SPURIOUS EMISSIONS

Rule Part No.: FCC Part 15 Subpart B

Requirements: FCC Part 15.109(a) Radiated Emission Limit

Class B Field Strength Limits @ 3 Meters	
Frequency (MHz)	**Level (dBuV/m)**
30 – 88	40.0
80 – 216	43.5
216 – 960	46.0
Above 960	54.0

Procedure: FCC Part 15.33(b)(1) Frequency range of radiated measurements

FCC Part 15.35(a) Measurement detector functions and bandwidths

ANSI C63.4 Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment 9 kHz to 40 GHz

§ 11.2 Operating conditions
§ 11.3 Peripherals / Accessories
§ 11.5 Tabletop equipment arrangement
§ 11.9 Radiated emission measurements

Configuration: The EUT is configured as a computer peripheral through a USB cable connected to a partially configured host PC. A firmware update to the EUT was used to transfer data between the EUT and the host PC.

30–200 MHZ PEAK PLOT

Results - Meets Requirements

Ant Polarity: T1 (Blue) = Vertical, T2 (Black) = Horizontal

RADIATED SPURIOUS EMISSIONS

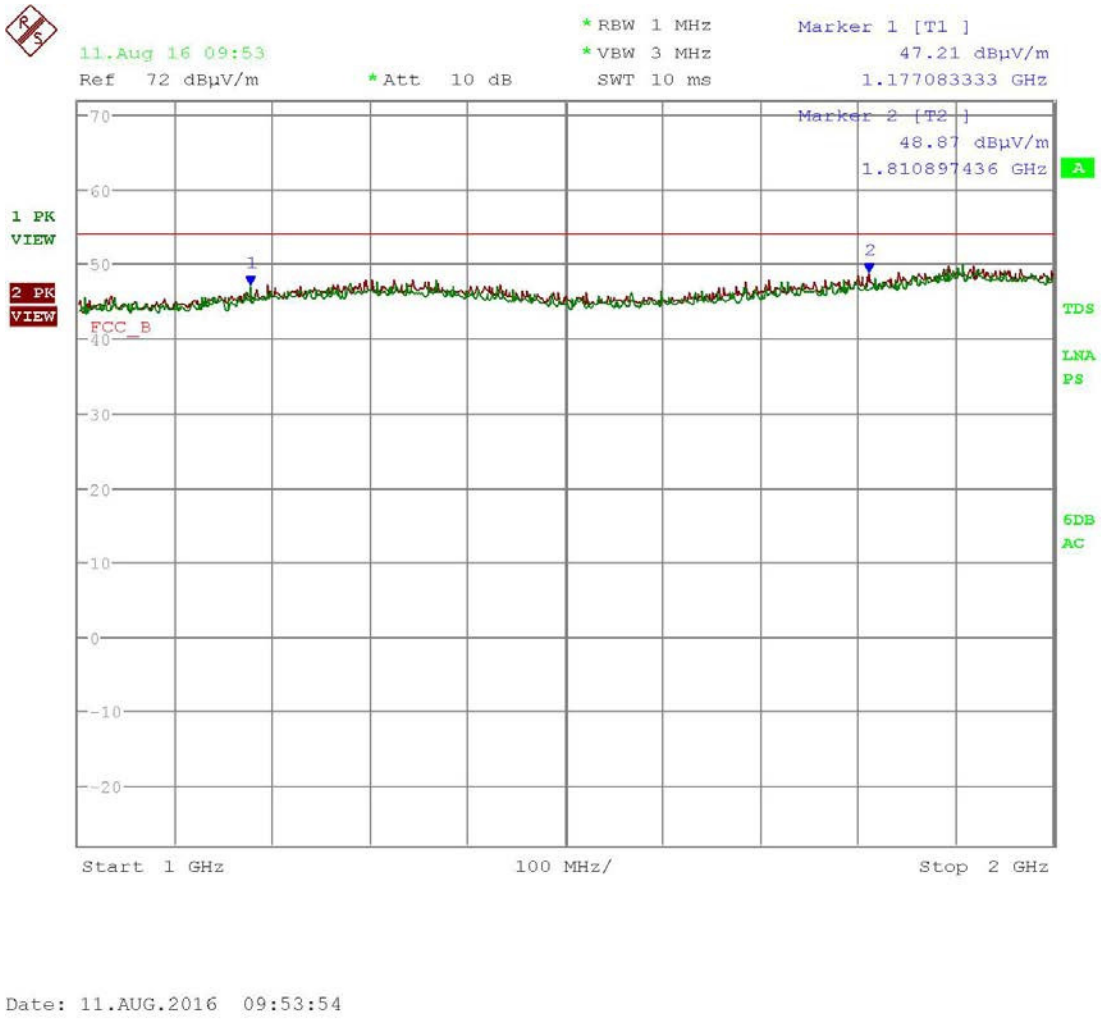
200-1000 MHZ PEAK PLOT

Results - Meets Requirements

Ant Polarity: T1 (Blue) = Vertical, T2 (Black) = Horizontal

RADIATED SPURIOUS EMISSIONS

1000-2000 MHZ PEAK PLOT



Results - Meets Requirements

Ant Polarity: T1 (Blue) = Vertical, T2 (Black) = Horizontal

POWER LINE CONDUCTED INTERFERENCE

Rules Part No.: FCC Subpart B

Requirements: FCC 15.107 (a) Conducted Limits

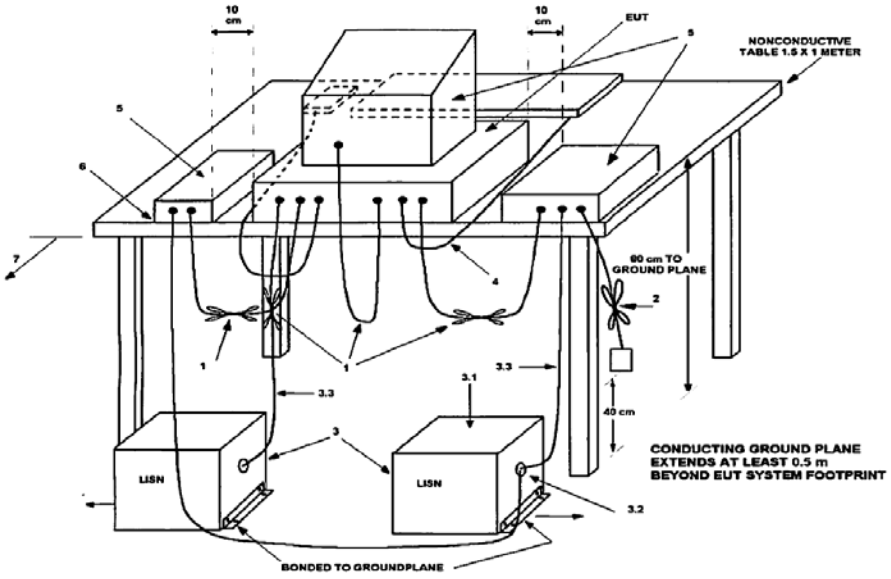
Frequency (MHz)	Quasi Peak Limits (dBµV)	Average Limits (dBµV)
0.15 – 0.5	66 – 56 *	56 – 46 *
0.5 – 5.0	56	46
5.0 – 30	60	50
* Decrease with logarithm of frequency		

Procedure: ANSI C63.4 Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment 9 kHz to 40 GHz

§ 11.2 Operating conditions
§ 11.3 Peripherals / Accessories
§ 11.5 Tabletop equipment arrangement
§ 11.8 AC power-line conducted emission measurements

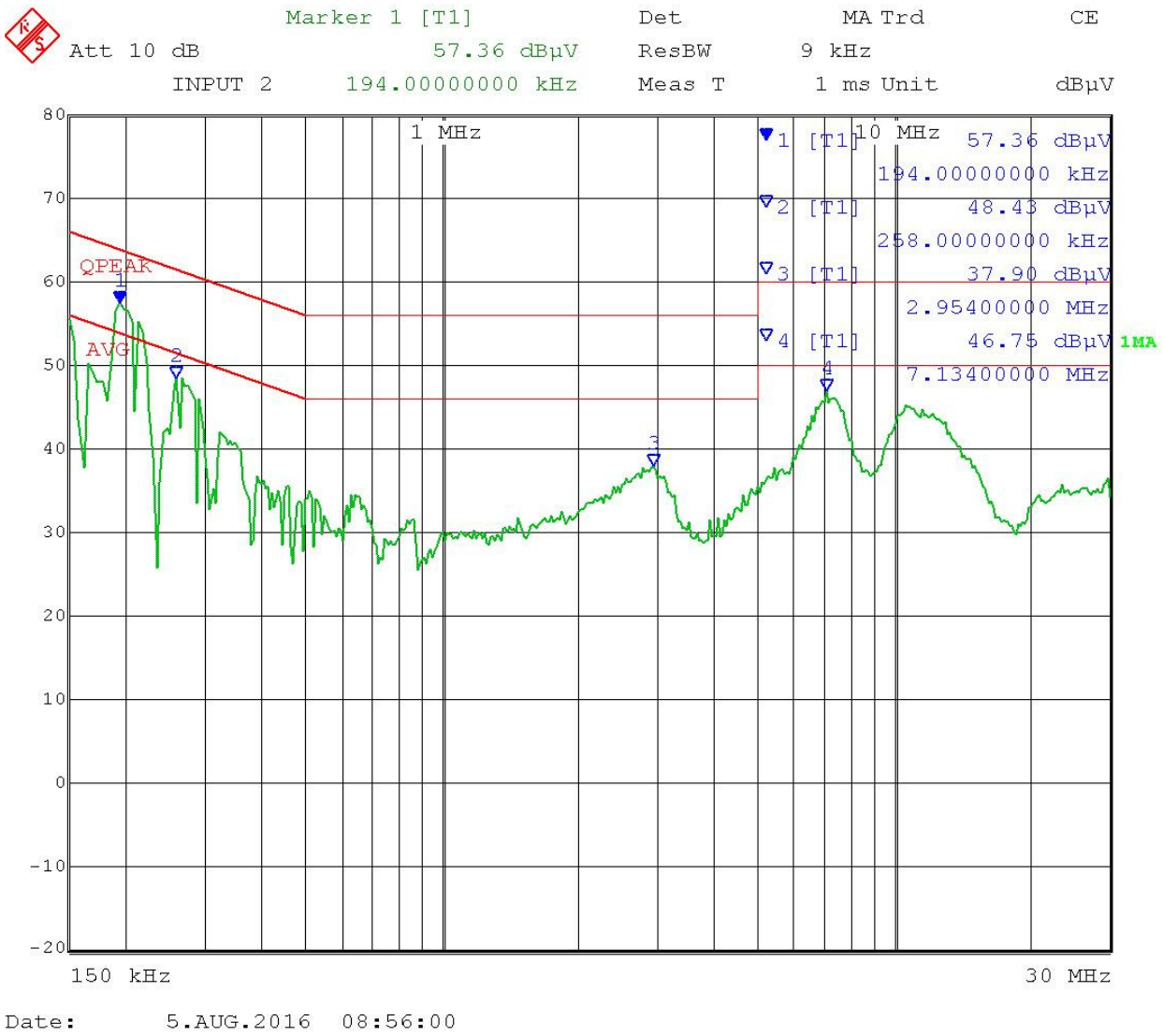
Configuration: The EUT is configured as a computer peripheral through a USB cable connected to a partially configured host PC. A firmware update to the EUT was used to transfer data between the EUT and the host PC

Setup:



POWER LINE CONDUCTED INTERFERENCE

POWERLINE 1 PEAK PLOT



Results - Meets Requirements

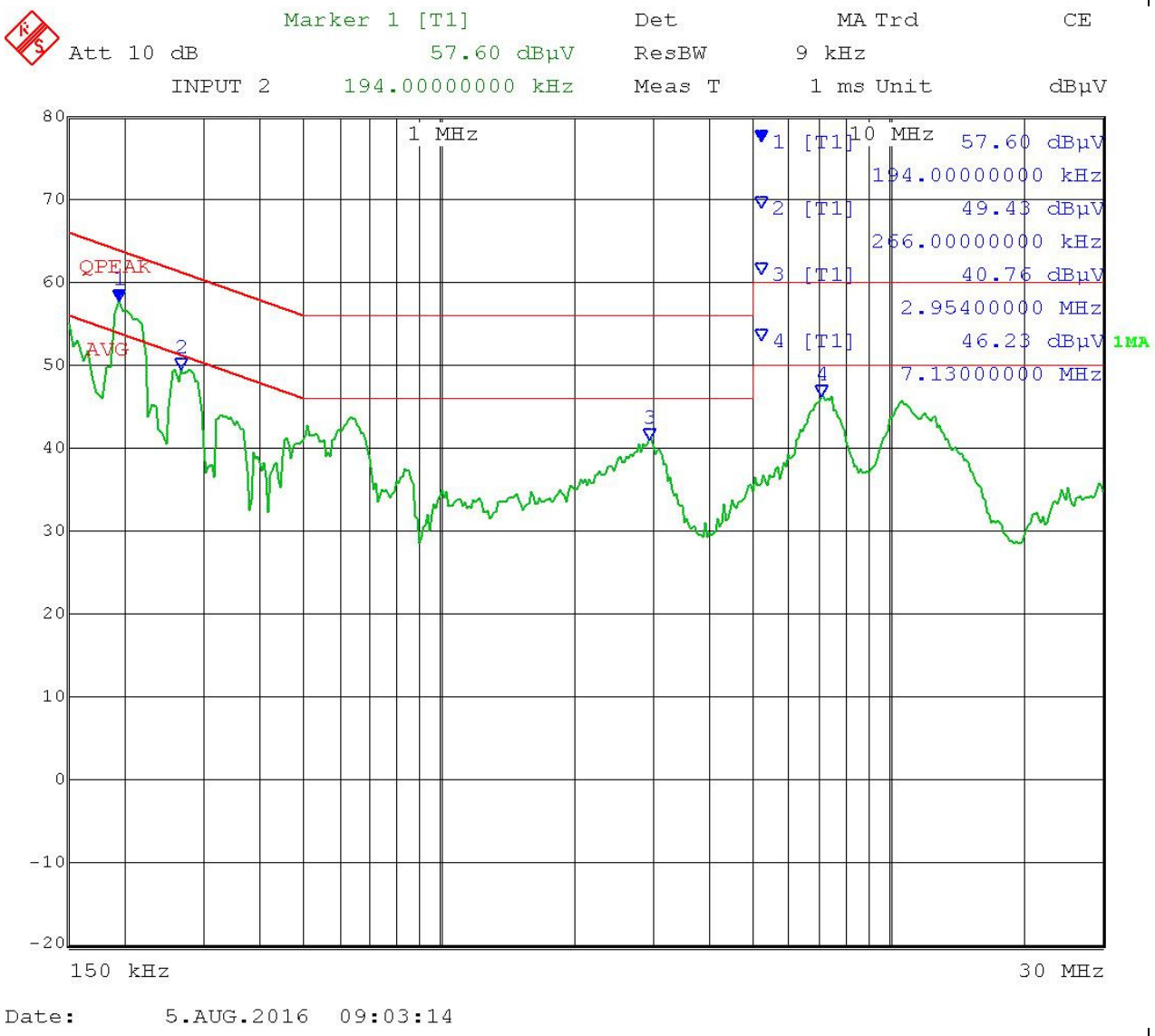
POWER LINE CONDUCTED INTERFERENCE

POWERLINE 1 QUASI-PEAK PLOT

Results - Meets Requirements

POWER LINE CONDUCTED INTERFERENCE

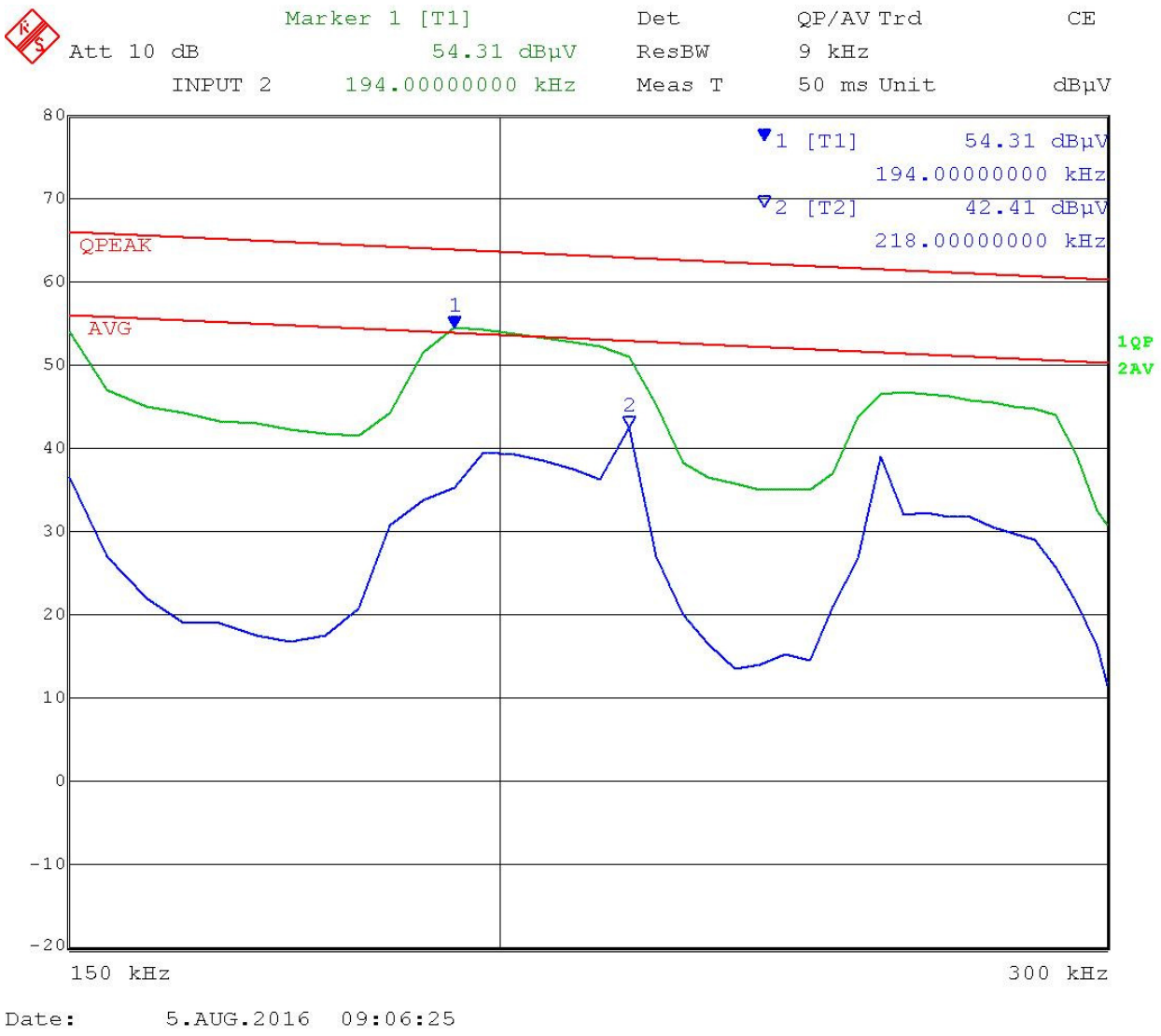
POWERLINE 2 PEAK PLOT



Results - Meets Requirements

POWER LINE CONDUCTED INTERFERENCE

POWERLINE 2 QUASI-PEAK PLOT



Results - Meets Requirements

TEST EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
Antenna: Biconical 1096 Chamber	Eaton	94455-1	1096	07/14/15	07/14/17
Antenna: Log-Periodic 1122	Electro-Metrics	LPA-25	1122	07/14/15	07/14/17
LISN (Primary)	Electro-Metrics	ANS-25/2	2604	07/13/15	07/13/17
LISN (Secondary)	Electro-Metrics	EM-7820	2682	05/08/15	05/08/17
CHAMBER	Panashield	3M	N/A	04/25/16	12/31/17
Antenna: Double-Ridged Horn/ETS Horn 2	ETS-Lindgren Chamber	3117	00041534	02/25/15	02/25/17
Software: Field Strength Program	Timco	N/A	Version 4.0 NO	NA	NA
EMI Test Receiver R & S ESU 40 Chamber	Rohde & Schwarz	ESU 40	100320	04/01/16	04/01/18
Coaxial Cable - BMBM-1000-00 Silver	Semflex	LISN Cable	BMBM-1000-00	01/05/16	01/04/17
Coaxial Cable - Chamber 3 cable set (Primary)	Micro-Coax	Chamber 3 cable set (Primary)	KMKM-0244-00; KMKM-0670-00; KFKF-0198-00	12/05/15	12/05/17
Bore-sight Antenna Positioning Tower	Sunol Sciences	TLT2	N/A	NA	NA

*** EMI RECEIVER SOFTWARE VERSION**

The receiver firmware used was version 4.43 Service Pack 3

END OF REPORT