OM Power

Exhibit 5: EMI Test Report

External Radio Frequency

Power Amplifier OM2500A

Model OM2500A

Array Solutions

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EMI Test Report
For OM POWER

Product Name:	OM2500A
Regulation:	FCC, Part 97, Subpart D
Date of Test:	April 11, 2012
Tested by:	Jozef Lang, OM Power LTD
Test Method:	FCC, Part 97.317 (a) (1) (2) (3), (b) (1) (2), (c) (i) (ii) Part 97.307 (d), (e)
Responsible Parties	
Manufacturer:	OM Power LTD Slovakia
Applicant:	Array Solutions

EUT Type/Model#: Linear Amplifier OM2500A

Test Location: OM Power LTD Laboratory

EUT Description

The EUT (OM2500A) is a Linear Amplifier for Amateur Radio. The tests were run in a typical configuration including the following support equipment:

1. H.F. Transceiver
2. Power Supply for Transceiver

Reason for Test

Qualification for FCC Part 97

Changes made during test: none
Deviations from standard test method: none

Test Summary

The OM2500A complied with FCC Part 97 Subpart D, 97.307 and 97.317. Limits for Amateur Radio equipment when tested in the system configuration defined herein.

The following table indicates the measurement points and test results for the harmonic emissions to the tenth order:

Power Gain per 97.317				**Spurious emmisions per 97.307d**			
Frequency f1, MHz	**Input Power, W**	**Output Power, W**	**Amplifier Gain, dB**	**2f1, dBc**	**3f1, dBc**	**4f1, dBc**	**5-10f1, dBc worst case**
1,850	66,2	1500	13,55	52,5	77,1	100,4	80,8
3,750	67,8	1500	13,45	52,2	78,4	98,2	86,9
7,150	67,0	1500	13,50	53,6	74,8	90,1	92,4
10,125	65,1	1500	13,63	56,8	77,1	104,2	92,6
14,175	63,8	1500	13,71	63,8	75,8	98.6	94,4
18,100	63,2	1500	13,75	66,4	75,3	90,3	90,7
21,225	60,7	1500	13,93	73,4	77,6	94,2	101,3
Amplifier was not capable of operationon any frequency betweeb 24 and 35MHz as measured at the points below per 97-317 –(b) (1) (2).							
24,000	50	48,7	-0,11				
26,000	50	48,6	-0,12				
27,120	50	48,6	-0,12				
28,000	50	48,5	-0,13				
35,000	50	48,4	-0,14				
1,850	30	757	14,02				
3,750	30	737	13,90				
7,150	30	728	13,85				
10,125	30	741	13,93				
14,175	30	775	14,12				
18,100	30	783	14,16				
21,225	30	807	14,30				
24,930*	30	829	14,41				
28,500*	30	883	14,69				
After owner modification to activate 24 – 28MHz bands							
24,930*	57,6	1500	14,16	56,3	67,4	76,5	83,8
28,500*	53,5	1500	14,48	56,6	65,0	89.9	95,4

*Not usable as shipped, data applicable only after enabling of 24 and 28MHz bands

The following table indicates the measurments points and test results for the Inter Modulation Distortions to the 11-th order

Inter- modulation in dB relative to 1500W per 97.307					
Order:	**D3**	**D5**	**D7**	**D9**	**D11 and higher**
Freq. MHz	**dB**	**dB**	**dB**	**dB**	**dB**
1,850	44,0	50,4	55,0	61,4	66,2
3,650	41,8	53,8	55,5	61,2	66,8
7,050	41,0	50,2	55,6	58,8	66,2
10,100	40,9	48,6	58,6	65,3	72,1
14,150	40,3	49,2	56.5	60.2	66,8
18,100	41,6	50,1	55,4	62,3	65,2
21,150	41,4	47,4	56,1	62,7	69,3
24,900 *	41,8	53,6	60,7	67,1	76,4
28,500 *	41,4	55,8	65,5	68,8	72,3

* usable after authorized owner modification

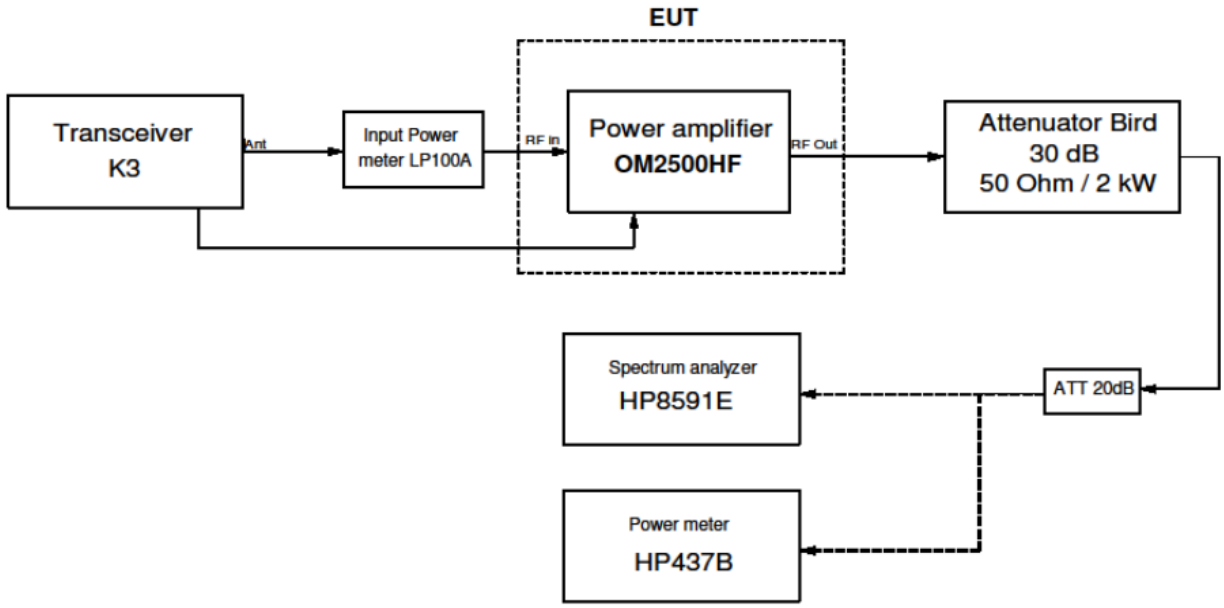

Fig.1: Setup Block Diagram for OM2500A

Serial Number:
Power (rated): 240VAC 50/60Hz
Power (tested): 240 VAC 50Hz
Internal Options: none
Frequencies amplified: Amateur radio bands from 1.8 MHz through 29.7 MHz

Support Equipment Data:
Description: HF Transceiver
Manufacturer / Model: ELECRAFT Model No. K3
Serial Number: 4191
Power: 230 VAC 50Hz
Internal Options: None
Frequencies Generated: from 1.8 MHz to 54 MHz

Cables Description
Transceiver Ant. To Input Power Meter – RG58/U, 1,5m length
Input Power Meter to EUT input – RG58/u, 25 cm length
Output Power Meter to Dummy Attenuator – RG213/U, 1,5m length
Dummy Attenuator / out to Spectrum Analyzer – RG58/U, 1.5 m length

EUT I/O Ports
OM2500A
- Key-In (Transmit/Receive Relay Control)
- RF INPUT 50 Ohm
- RF OUTPUT A1 50 Ohm
- Mains AC Input 240V 50/60 Hz

Test Equipment List

#	Equipment type	Manufacturer	Model #	Serial #	Used
1	Spectrum analyzer	Hewlett Packard	HP 8591E	3313000605	Yes
2	2kW 30dB Attenuator	BIRD	8329-300	263	Yes
3	20dB Attenuator	Spinner	BN 52 86 38		Yes
4	Power meter	Hewlett Packard	HP 437B	3043U04049	Yes
5	Power sensor	Hewlett Packard	HP 8482A		Yes
6	HF Transceiver	Elecraft	K3	4191	Yes
7	Two-Tone Generator	Elecraft	build in K3		Yes