01/07/04 **High Frequency Measurement**

Compliance Certification Services, Morgan Hill Open Field Site

Test Engr:William Zhuang
Project #:
Company Name:ALVARIUN LTD.
EUT Descrip.:Outdoor Radio Unit w/ PAWSAH9-9 Omni Vertical
EUT M/N:FCC ID: LKT-IF-900
Test Target:15.209
Mode Oper:CONT TX Max Pwr 8FSK

Test Equipment:

EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz
T73; S/N: 6717 @1m	T86 Miteq 924341	HP 8593EM Analyzer	

Hi Frequency Cables
☑ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☑ (12 ft)

Peak Measurements:
1 MHz Resolution Bandwidth
1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
1.807	9.8	48.0	35.4	27.7	1.3	-44.1	0.0	1.0	33.9	21.3	74.0	54.0	-40.1	-32.7	Low Ch H
1.807	9.8	48.0	35.4	27.7	1.3	-44.1	0.0	1.0	33.9	21.3	74.0	54.0	-40.1	-32.7	Low Ch V
2.715	9.8	48.6	36.2	30.7	1.9	-44.0	0.0	1.0	38.2	25.9	74.0	54.0	-35.8	-28.1	Low Ch H
2.715	9.8	48.5	36.2	30.7	1.9	-44.0	0.0	1.0	38.1	25.8	74.0	54.0	-35.9	-28.2	Low Ch V
1.830	9.8	47.6	35.3	27.8	1.3	-44.1	0.0	1.0	33.7	21.3	74.0	54.0	-40.3	-32.7	Mid Ch V
1.830	9.8	47.6	35.3	27.8	1.3	-44.1	0.0	1.0	33.6	21.3	74.0	54.0	-40.4	-32.7	Mid Ch H
2.745	9.8	49.1	36.4	30.8	1.9	-44.0	0.0	1.0	38.8	26.1	74.0	54.0	-35.2	-27.9	Mid Ch V
2.745	9.8	48.7	36.5	30.8	1.9	-44.0	0.0	1.0	38.4	26.2	74.0	54.0	-35.6	-27.8	Mid Ch H
1.852	9.8	48.7	35.4	27.9	1.4	-44.1	0.0	1.0	34.9	21.5	74.0	54.0	-39.1	-32.5	High Ch H
1.852	9.8	47.8	35.4	27.9	1.4	-44.1	0.0	1.0	34.0	21.5	74.0	54.0	-40.0	-32.5	High Ch V
2.778	9.8	49.5	36.8	30.9	1.9	-44.0	0.0	1.0	39.4	26.6	74.0	54.0	-34.6	-27.4	High Ch V
2.778	9.8	49.1	36.5	30.9	1.9	-44.0	0.0	1.0	39.0	26.4	74.0	54.0	-35.0	-27.6	High Ch H
All of above are noise floor, and no signal found up to 10 GHz								1.0							
								1.0							V
								1.0							V
								1.0							V
								1.0							V
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								1.0							V
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								1.0							H

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		