

TEST REPORT

REPORT NO: **SATEL-TR-13122012-TiM**

TEST PERIOD: 13.12.2012

TEST SITE: Satel / R&D Dept., Salo

DEVICE UNDER TEST: **SATEL-TA13 (PCB:SPL0005g PSN:1223000148)**

TESTS PERFORMED: Frequency Stability vs. temperature and voltage variations

TEST STANDARD: acc. to 47 CFR 2.1055.

LIST OF MEASURING EQUIPMENT:

- Power supply Thurlby Thandar Instruments EX354T Serial nro. 140816
- Temperature test chamber Vötsch VT4002 Serial nro. 58566085500010
- Spectrum analyzer Rohde & Schwarz FSEA Serial nro. 826029/013, Calibrated 2012-Jun-28

TESTS PERFORMED BY:

Timoteus Marttila

TEST RESULTS

Test performed at transmitter frequency 460.000 MHz.

a) Frequency stability vs. voltage variations

Temperature	Voltage	Frequency	ppm error
+20 °C	5,5 V	459.99997	-0.07ppm
+20 °C	6,5 V	459.99996	-0.09ppm
+20 °C	7,5 V	459.99996	-0.09ppm
+20 °C	10,2 V	459.99996	-0.09ppm
+20 °C	12,0 V	459.99997	-0.07ppm
+20 °C	13,8 V	459.99997	-0.07ppm
+20 °C	23,8V	459.99997	-0.07ppm
+20 °C	28,0 V	459.99998	-0.04ppm
+20 °C	32,2 V	459.99998	-0.04ppm

b) Frequency stability vs. temperature variations

Temperature	Voltage	Frequency	ppm error
-30°C	12,0 V	460.00045	0.98ppm
-20°C	12,0 V	460.00018	0.39ppm
-10°C	12,0 V	460.00015	0.33ppm
± 0°C	12,0 V	459.99999	-0.02ppm
+10°C	12,0 V	459.99996	-0.09ppm
+20°C	12,0 V	459.99997	-0.07ppm
+30°C	12,0 V	459.99996	-0.09ppm
+40°C	12,0 V	459.99992	-0.17ppm
+50°C	12,0 V	459.99988	-0.26ppm