

TEST REPORT

REPORT NO: SATEL-TR-TiM
TEST PERIOD: 26.10.2009
TEST SITE: Satel / R&D Dept., Salo

DEVICE UNDER TEST: SATEL-TA13

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
-

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	459.99999	-0.02ppm
+20 °C	6,5 V	459.99999	-0.02ppm
+20 °C	7,5 V	459.99998	-0.04ppm
+20 °C	10,2 V	459.99998	-0.04ppm
+20 °C	12,0 V	459.99999	-0.02ppm
+20 °C	13,8 V	459.99999	-0.02ppm
+20 °C	23,8V	460.00000	0.00ppm
+20 °C	28,0 V	460.00000	0.00ppm
+20 °C	32,2 V	460.00000	0.00ppm

b) Frequency stability vs. temperature variations

Temperature	Voltage	Frequency	ppm error
-30°C	12,0 V	460.00047	1.02ppm
-20°C	12,0 V	460.00006	0.13ppm
-10°C	12,0 V	460.99999	-0.02ppm
± 0°C	12,0 V	460.99992	-0.17ppm
+10°C	12,0 V	460.99984	-0.35ppm
+20°C	12,0 V	460.99995	-0.11ppm
+30°C	12,0 V	460.00006	0.13ppm
+40°C	12,0 V	460.00012	0.26ppm
+50°C	12,0 V	460.00012	0.26ppm