

LR250 Hart EEx-de - Spurious Emissions Measured in accordance with ETSI 302 372 -1 /8.4

Product Name: LR250 Hart EEx-de

Model: 7ML5431

DUT Serial #: 060208-128 (DP1-13)

Test Date: DEC 05, 2008

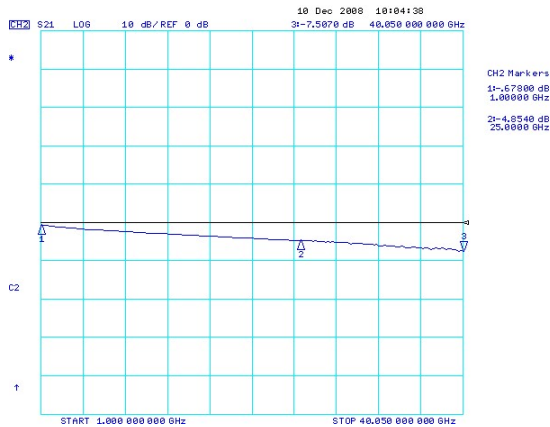
Test Silo: CF Concrete Silo (Dimension: diameter = 23m, high = 81m)

Test Location: St Mary's Cement, 400 Waverly Road South, Bowmanville, Ontario, L1C 3K3

Operators: Gabriel Serban, Thoai Bui

Equipment:

- Spectrum analyzer: Agilent E4446A SN MY48250002
- Wideband Antenna: 1-18GHz – Spectrum technologies DRH0118, SN 980114
- Wideband Antenna: 18-40GHz – ETS Lindgren 3116, SN 00027169
- Cable: Megaphase 20588 – 1GVT4



Cable attenuation

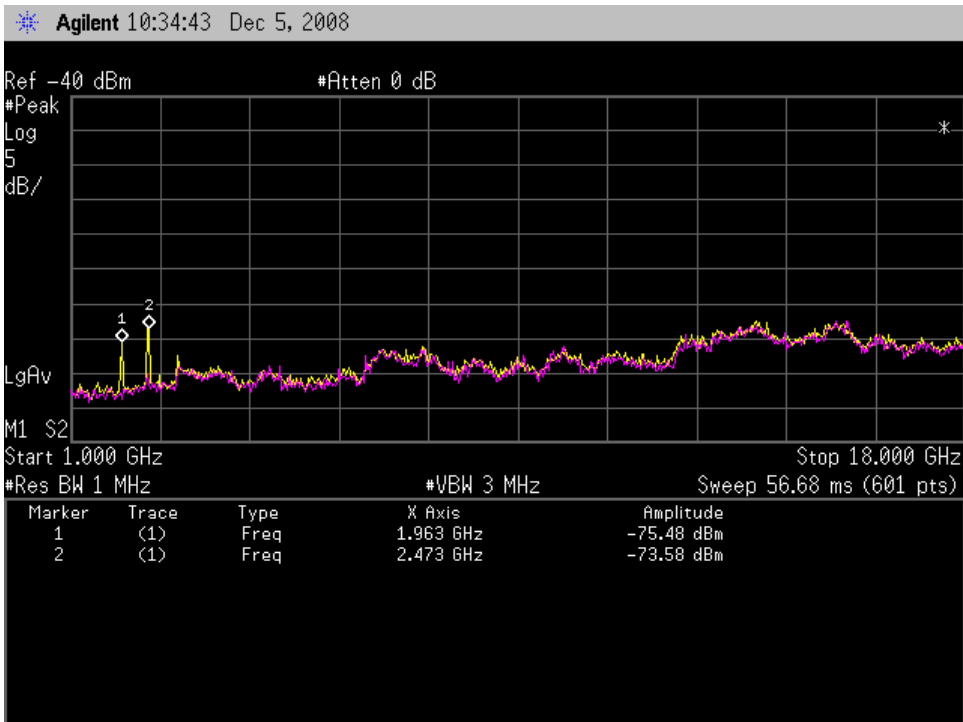
Test setup:

LR250 Hart EEx-de with 4" horn attached to the CF Concrete Silo. The antenna scans several times around the DUT and process connection at 0.3m to ensure the maximum measured unintentional emission.

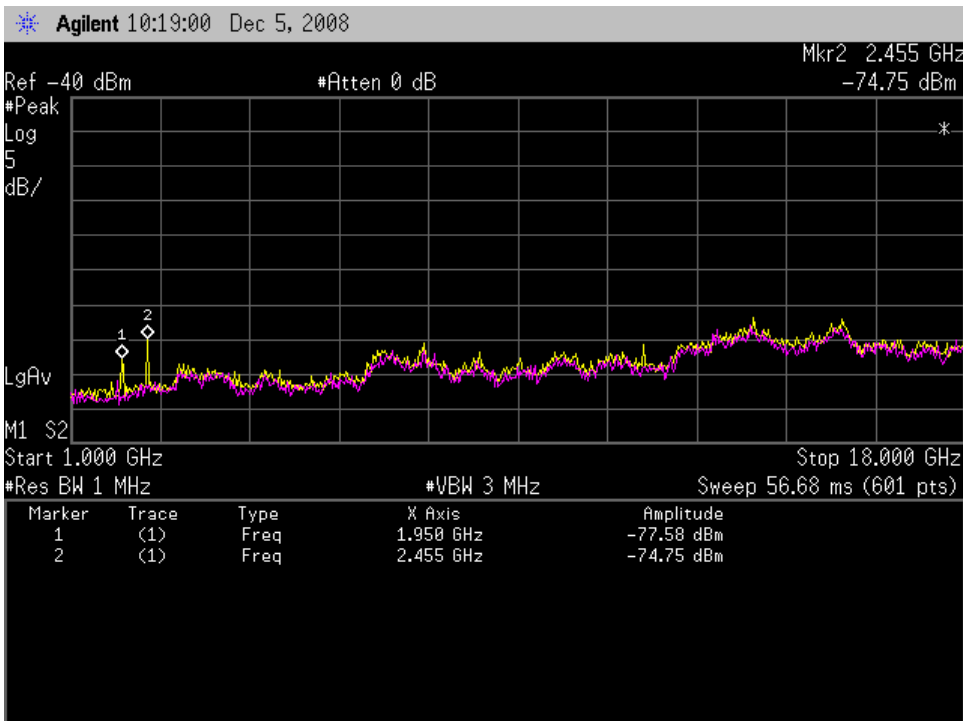
Measurements have been done from 1GHz to 40.0GHz. (limits imposed by available equipment)

Test results:

Scan Frequency	Antenna Polarization	Measured (dBm)	Limit (dBm)	Results
1-18GHz	Horizontal	No leakage signal	≥ 1 GHz: -41.3	Complied
1-18GHz	Vertical	No leakage signal		Complied
18-40GHz	Horizontal	No leakage signal		Complied
18-40GHz	Vertical	No leakage signal		Complied
25GHz/50MHz span	Horizontal	No leakage signal		Complied
25GHz/50MHz span	Vertical	No leakage signal		Complied



1-18GHz scan. Horizontal polarization
 Purple – baseline; Yellow - measurement.
 PCS (1.9GHz) and ISM (2.45GHz) parasite signals present,
Result: No signal leakage from tank or unit enclosure



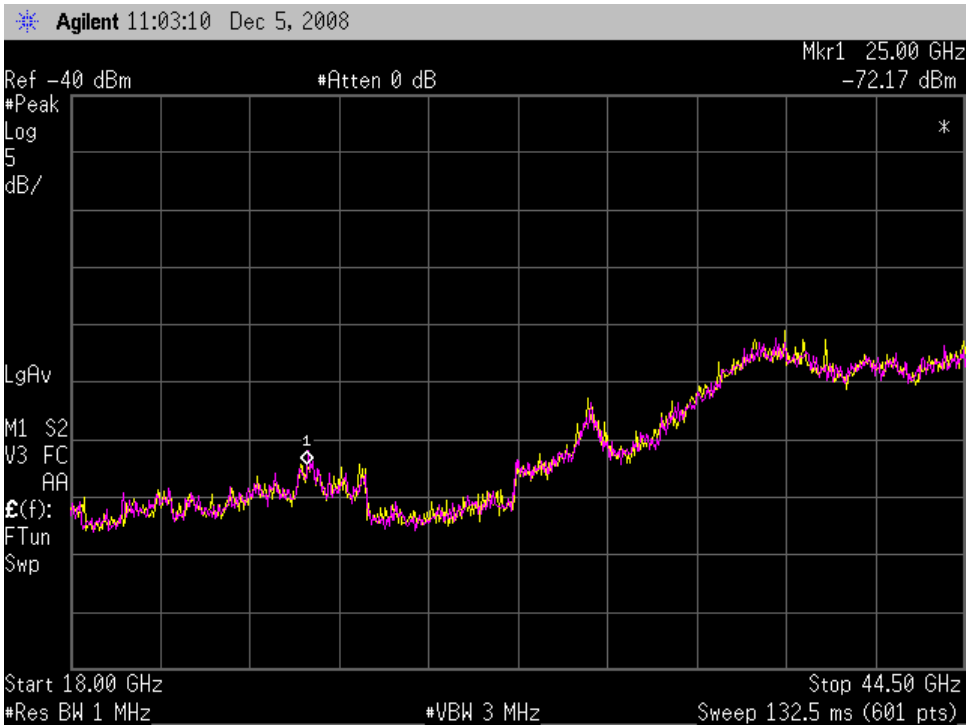
1-18GHz scan. Vertical polarization
 Purple – baseline; Yellow - measurement.
 PCS (1.9GHz) and ISM (2.45GHz) parasite signals present,
Result: No signal leakage from tank or unit enclosure



18-40GHz scan. Horizontal polarization

Purple – baseline; Yellow - measurement. Horizontal polarization

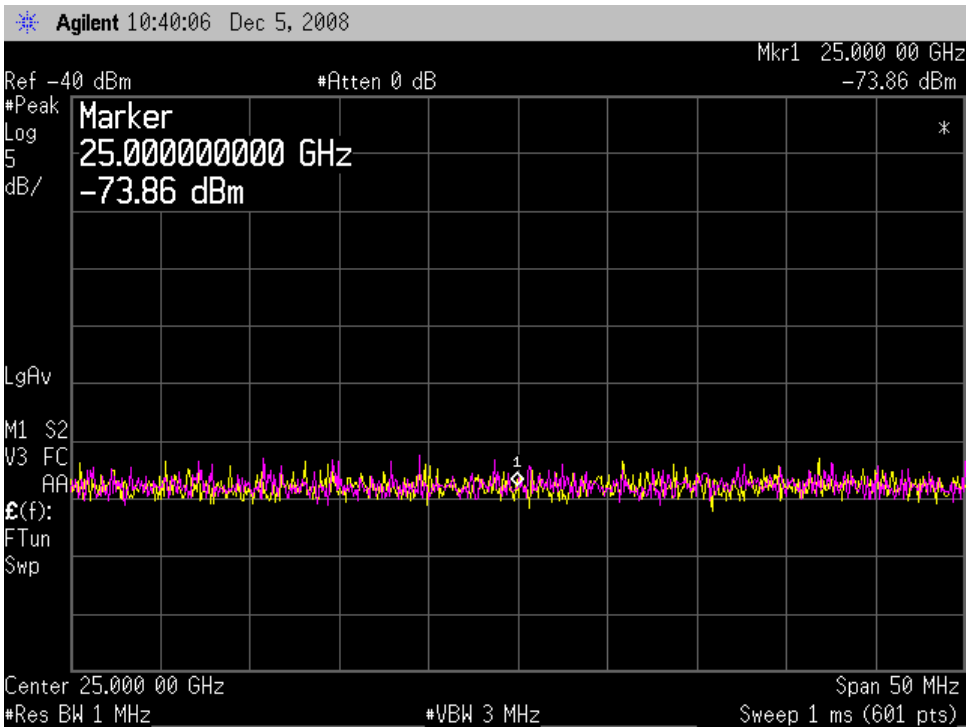
Result: No signal leakage from tank or unit enclosure



18-40GHz scan. Vertical polarization

Purple – baseline; Yellow - measurement. Vertical polarization

Result: No signal leakage from tank or unit enclosure



25GHz center, 50MHz span. Horizontal polarization
Purple – baseline; Yellow - measurement. Horizontal polarization
Result: No signal leakage from tank or unit enclosure



25GHz center, 50MHz span. Vertical polarization
Purple – baseline; Yellow - measurement. Vertical polarization
Result: No signal leakage from tank or unit enclosure



Test Location: St Mary's Cement



Test setup for 1-18GHz scan.



Test setup for 1-18GHz scan.



Test setup for 18-44.5GHz scan.



Test setup for 18-44.5GHz scan.