EUT technical characteristics

Transmitter technical characteristics.		Note
Stand-alone/fixed use		
Assigned frequency range	**902 – 928MHz**	
Operating frequency range	**905 - 925 MHz**	
RF channel spacing	**5 MHz**	
Maximum rated output power	**28 dBm – antenna Omni 7 dBi gain** **23 dBm – antenna Flat panel 13 dBi gain.**	At transmitter 50 Ω RF output connector
Antenna connection	***N-type connector**	External antenna
Transmitter 99% power bandwidth	**5 MHz**	
Type of multiplexing	**OFDM**	
Modulating test signal (baseband)	**PRBS**	
Maximum transmitter duty cycle in normal use	**50 %**	
Transmitter duty cycle supplied for test	**100 %**	

Antenna information			
Type	**Manufacturer**	**Model**	**Gain**
Omni	MAXRAD	AN 1247 AU-Ant-0.9G-7-Omni	7 dBi
Flat Panel	MARS	AU-Ant-0.9G-12-120	13 dBi
Cable to external antenna	NA	LMR-400(CB1123)	0.7 dB cable loss

* *According to FCC p.15.203 transmitter with standard type connector is subject of professional installation and responsibility.*

4.1.1 Environmental evaluation and exposure limit according to FCC CFR 47 part 1, §1.1307, §1.1310

Limit for power density for general population/uncontrolled exposure is 0.6(mW/cm^2)
The power density calculation is $S = [(Pt/0.6) /4\pi r^2]$.
Where
Pt - The transmitted power (EIRP) (mW)
r - The distance from the unit. (cm)
The 0.6 (mW/cm^2) limit can be calculated from the above based on the following data:
Pt- the transmitted power whish is equal to the output power 28 dBm plus external antenna gain 7 dBi . The maximum EIRP = 35 dBm = 3162 mW.
Maximum allowed distance "r", where RF exposure limits may not be exceeded,
= SQRT(5270/4π) and is more than 20.5 cm from the unit antenna.

4.2 EUT test configuration

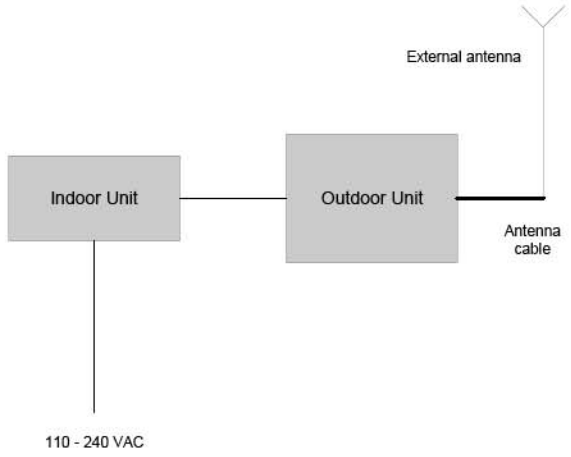

Fig. 1 BA VL 900 test configuration.