

**Name of Test:** Field Strength of Spurious Radiation (Cont.)

J) Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a non-radiating cable. With the antennas at both ends horizontally polarized and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.

K) Repeat step J) with both antennas vertically polarized for each spurious frequency.

L) Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps J) and K) by the power loss in the cable between the generator and the antenna and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna.

M) The levels recorded in step L) are absolute levels of radiated spurious emissions in dBm. The radiated spurious emissions in dB can be calculated by the following:

Radiated spurious emissions dB =

$$10\log_{10}(\text{TX power in watts}/0.001) - \text{the levels in step l)}$$

*NOTE: It is permissible that other antennas provided can be referenced to a dipole.*

**Test Equipment**

Asset	Description	s/n	Cycle	Last Cal
<b>Transducer</b>				
X i00088	EMCO 3109-B 25MHz-300MHz	2336	24 mo.	Sep-05
X i00089	Aprel 2001 200MHz-1GHz	001500	24 mo.	Sep-05
X i00103	EMCO 3115 1GHz-18GHz	9208-3925	24 mo.	Jan-05
<b>Amplifier</b>				
X i00028	HP 8449A	2749A00121	12 mo.	May-05
<b>Spectrum Analyzer</b>				
X i00029	HP 8563E	3213A00104	12 mo.	May-05
X i00033	HP 85462A	3625A00357	12 mo.	Sep-05
<b>Substitution Generator</b>				
X i00067	HP 8920A Communication TS	3345U01242	12 mo.	Jun-05
X i00207	HP 8753D Network Analyzer	3410A08514	12 mo.	Jul-05

All ports terminated.