HERMON LABORATORIES

November 15, 2005

American TCB
6731 Whittier Ave
Suite C110
McLean, VA 22101
Attn: Mr. Timothy Johnson, Examining Engineer

RE: your e-mail dated November 14, 2005; Vyyo Ltd.
FCC ID: PBJV284, ATCB002867

Dear Mr. Johnson,
Please find below the answer to your question.

1). The 1.9 dB voltage division correction factor generally represents the worst case for ideal source, internal impedance 75 Ohm and load. In this configuration the difference between measurements at 50 Ohm and 75 Ohm loads will be expressed by the following equation:
V@50 Ohm / V@75 Ohm= Vemf(50/(75+50))/ Vemf(75/(75+75))= 0.8 or in logarithmic units
20 log 0.8 = -1.9 dB.

For power correction the situation is even better:
P@75 Ohm (dBm) = V@75 Ohm (dBuV) - 108.7 dB
P@50 Ohm (dBm) = V@50Ohm (dBuV) - 107 dB

Assuming the correction factor will be added, we obtain
P@50 Ohm (dBm) = V@50 Ohm (dBuV) - 107 dB - 1.9 dB = V@50 Ohm (dBuV) - 108.9 dB or 0.2 dB correction.
The similar corrections used in ESA series of spectrum analyzers from Agilent for 50 and 75 Ohm inputs.
The 75 Ohm to 50 Ohm direct transaction corresponds to VSWR=1.5 or 0.2 reflection coefficient. The most of spectrum analyzers yields the same VSWR, so generally saying this is still uncertain will it give the result closer to the "true" one or not. Moreover, the VSWR of the EUT output port is not considered at all, which may be much higher than at the spectrum analyzer input. That is why, we used VSWR=1.5 0.2 reflection coefficient for spectrum analyzer and VSWR=2 0.33 reflection coefficient for EUT antenna port in the measurement uncertainty calculations. These parameters fully cover the range of measurements.

Sincerely,

Michael Nikishin,
EMC& Radio group leader
Hermon Laboratories