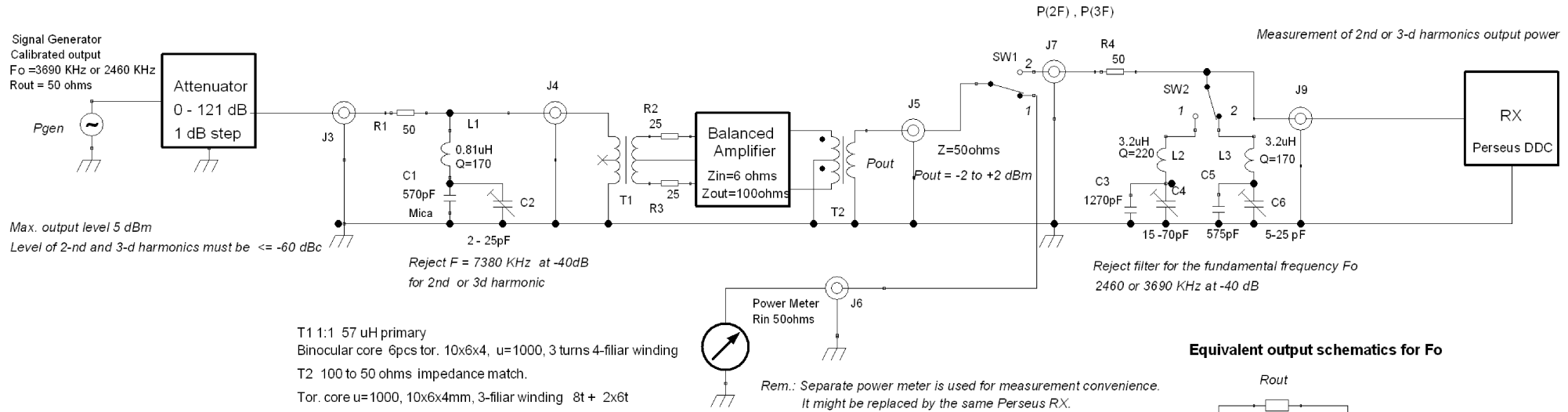


Single Tone Measurements of OIP2 and OIP3 of Wideband Antenna Amplifiers



2nd harmonic OIP2[2Fo] :

1. Set SW1 to 1, set $F_o = 3690$ KHz
2. Set with attenuator the output power P_{out} to be 0 dBm
3. Set SW1 to 2; set SW2 to 2 to reject fundamental freq. F_o
4. Set SW1 to 2; set SW2 to 2 to reject fundamental freq. F_o
5. Set RX to 7380 KHz, CW mode, s/rate 125K, preamp off, preselector off, dither on
6. Measure the peak level of 2nd harmonic $P(2F)$
7. $OIP2 = 2 * P_{out} - P(2F) - 3.6$ [in dB]
8. Increase the P_{out} with 3 dB and make sure that the output level of 2nd harmonic is increased with 6 dB.

3d harmonic OIP3 [3Fo]:

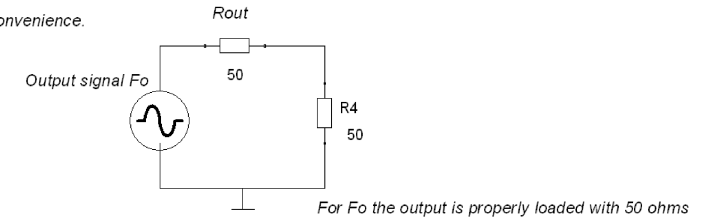
1. Set SW1 to 1, set $F_o = 2460$ KHz
2. Set with attenuator the output power P_{out} to be 0 dBm
3. Set SW1 to 2; set SW2 to 1 to reject fundamental freq. F_o
4. Set SW1 to 2; set SW2 to 1 to reject fundamental freq. F_o
5. Set RX to 7380 KHz, CW mode, s/rate 125K, preamp off, preselector off, dither on
6. Measure the peak level of 3d harmonic $P(3F)$
7. $OIP3 = [3 * P_{out} - P(3F)] * 0.5 - 3.6$ [in dB]
8. Increase the P_{out} with 3 dB and make sure that the output level of 3d harmonic is increased with 9 dB.

Comparison with 2-tone IMD test

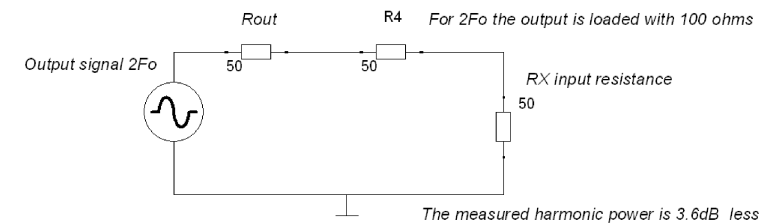
$$IP2[2\text{-tone}] = IP2[2Fo] - 6$$

$$IP3[2\text{-tone}] = IP3[3Fo] - 9.5$$

Equivalent output schematics for F_o



Equivalent output schematics for 2Fo or 3Fo



Title Single Tone IMD Measurement Setup		
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