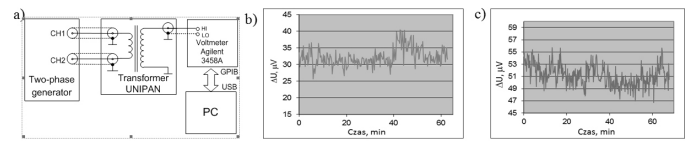


## 03CM022 A Study on the Potential Use of Commercial Digital Two-Phase Generators in Impedance Comparison Bridges

Krzysztof Musiol<sup>24</sup>, Marian Kampik<sup>24</sup>

Two commercial two-phase digital AC voltage sources, WW2572A from Tabor Electronics and SYS-2722 from Audio Precision, were tested for their potential use in impedance comparator bridges. The mutual relative stability of magnitudes and phase shifts of their output voltages were evaluated. Results of relative amplitude and phase shift stability measurements prove that it is possible to obtain uncertainty of impedance comparison at  $10^{-5}$  level using the WW2572A or SYS-2722 as the two-phase AC voltage source in the balanced comparator bridge.

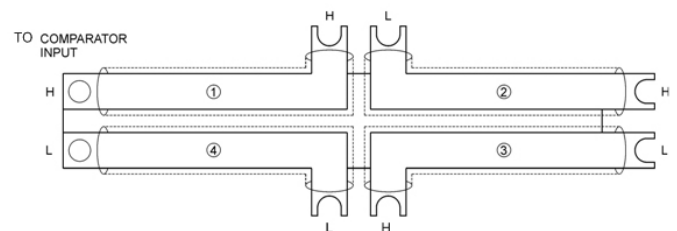


**Magnitude stability measurement: a) circuit, b), c) results for WW2572A and SYS-2722, respectively**

## 03CM023 Extending the scale of inductance using 1:1 comparator bridge

Krzysztof Musiol<sup>24</sup>, Tadeusz Skubis<sup>24</sup>

An idea of using 1:1 comparison for 10:1 and 1:10 impedance transfer is described in the paper. Results of measurements performed for 10:1 transfer of inductance are discussed. The results achieved prove that using 1:1 comparator bridge and applying proposed procedure is possible to transfer unit to the objects of 10 times smaller values with relative uncertainty only a little higher than uncertainty estimated for 1:1 comparison.



**Summing branch-joint**