4 points measurement according to Valdes (Proceedings of the IRE 42, 1954, page 420, case 7)

TCDQU 46LB2 Cu coated block, 2005, was in LHC during operation, Cu coating is oxidized.

 $R_{ssquare} = 1.5*10^{-3} \text{ Ohm}$

TCDQU003 Cu coated block, 2005, was never in LHC, but had bake-out at surface: Cu looks rather fine.

 $R_{ssquare} = 1.4*10^{-3} Ohm$

Graphite R_{ssquare} is slightly higher: 1.6-1.7 *10⁻³ Ohm.

Conclusion:

DC resistivity measurement of Cu coated graphite blocks is not sensitive enough to measure degradation of resistivity of copper coating due oxidation of Copper coating.

RF impedance measurement could give better resolution. Nicolo Biancacci, BE-ABP could do this measurement.

Wil Vollenberg; 11-01-2016