

Transimpedance Amplifier

TA107



Accessory for use with the PSM1700 or PSM1735 Frequency Response Analyzers for high impedance measurement.



APPLICATION

The PSM range from N4L provide impedance measurement either with passive shunts or with external accessories that offer an accurate and flexible solution to many impedance analysis applications.

Accessories include the 'LCR Active Head' or 'Impedance Analysis Interface' that give a convenient measurement solution to general purpose LCR applications from 10uHz to 35MHz and an impedance range of 1mOhm to 500MOhm.

Above 500MOhm, the measurement techniques utilized within the 'LCR Active Head' or 'IAI' are not ideal, due partly to the exceptionally low current associated with high impedance analysis and also the parasitic capacitance of the connection leads to a sample under test.

SOLUTION

A recognized measurement technique for high impedance analysis applications is to measure the current flowing through a component or material under test with a transimpedance amplifier. N4L have therefore developed the TA107 for use with the PSM1700 or PSM1735, significantly increasing the maximum impedance measurement range.

OPERATION

The TA107 uses a virtual earth connection from a sample holder as shown above (not supplied standard).

SPECIFICATION (When used with a PSM1735)

Impedance range:	Using PSM generator output	1M Ohm to 100G Ohm
	Using PSM + LPA400 Amplifier	10M Ohm to 1T Ohm
Frequency range:	DC to 100kHz	Nominal Gain: 10 ⁷ volts per amp
Input current range:	5pA to 500nA	Max output voltage: 5Vpk
Input connector:	BNC	Output connector: BNC
Dimensions:	130 x 90 x 45 mm	Weight: 400 g
Input power:	9V ac adaptor supplied standard or ± 12V dc (Aux o/p on PSM1735)	