Quality is more than a word

Impedance measurement in temperature and humidity characteristic test for passive element

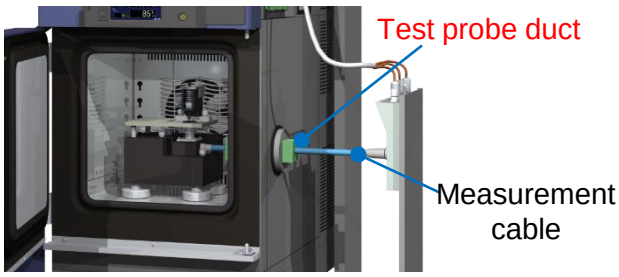
Optimal for evaluating the temperature and humidity characteristics of passive element for high frequencies

Passive elements such as capacitors and inductors used in 5th generation mobile communication systems (5G) have impedance, capacitance, inductance, that change depending on the frequency and ambient temperature. Therefore, it is necessary to evaluate the temperature characteristics in the high frequency band. On the other hand, temperature and bending stress on the measurement cable are going to be negative influence on the measurement results. For this reason, we would like to introduce an application that can reduce stress by using a test probe duct in the through hole of the constant temperature chamber and can accurately evaluate the temperature characteristics using an impedance analyzer.

Features

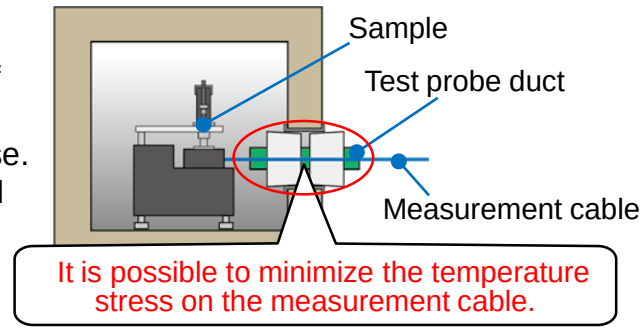
Overview of test probe duct

The test probe duct avoids sudden temperature changes and bending of the measurement cable. For this reason, to minimize influence on the test result as much as possible contributes for accurate temperature characterization.



Reduces temperature stress on the measurement cable

With the test probe duct, contributes to minimize temperature changes in the measurement cable. If there is a sudden temperature stress to the measurement cable, it will be the cause of the noise. By using a test probe duct, temperature stress and noise are minimized.

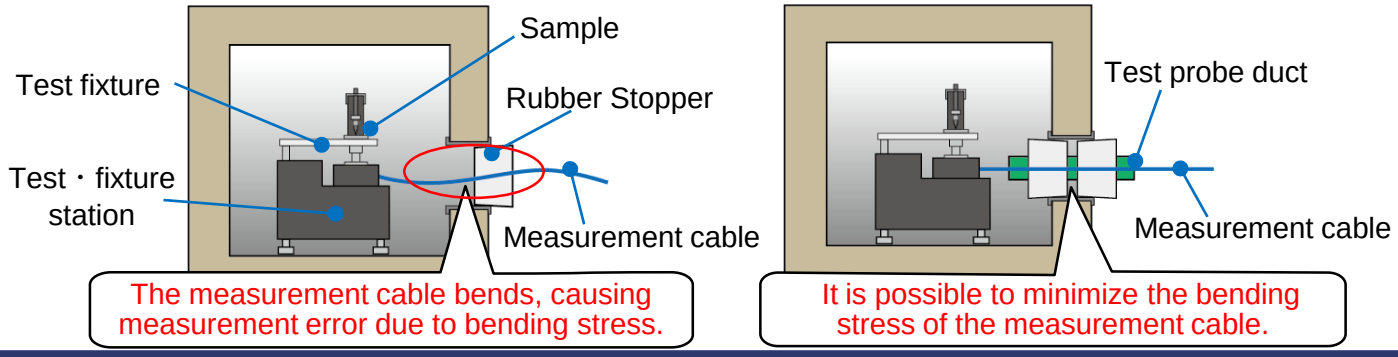


Reduces bending stress on the measurement cable

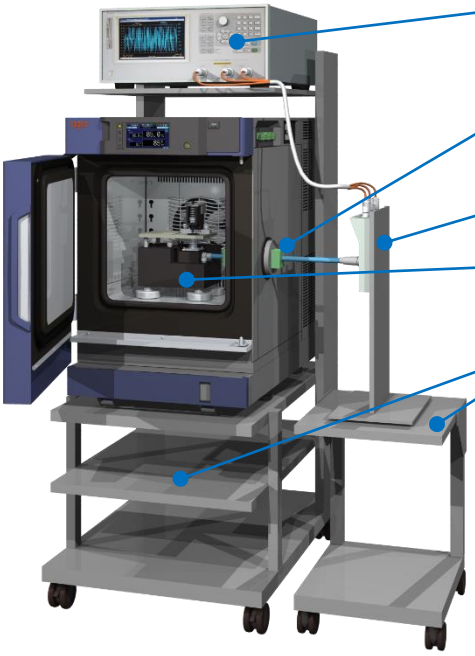
With the test probe duct, contributes to bending of the measurement cable. In case the bending of the measurement cable, measurement error will may occur. By using the test probe duct, bending stress and measurement error are minimized.

<When the test probe duct is not used>

< When the test probe duct use>



Equipment



Impedance Analyzer（※）

Test probe duct , Rubber stopper

Fixed in a through hole of Φ100mm.

Test stand , Measurement cable（※）

Test・fixture station , Test・fixture （※）

Keysight Technologies Co. dedicated stand

①Temperature chamber and Impedance Analyzer can be installed.
②Test stand can be installed,

PC communication function GP－IB

It is possible to control the temperature chamber and Impedance Analyzer at the same time.

（※) Impedance Analyzer, Test・stand, Measurement cable, Test・fixture station, Test・fixture is a product of Keysight Technologies Corporation.
Please contact Keysight Technologies Co. for the above products.

Chambers lineup list

Temperature chamber lineup

Model	Temperature Range (C)	Internal Dimensions （mm） W・H・D	Volume
SU(SH)-222	-20～+150	300×300×250	22.5L
SU(SH)-242	-40～+150		
SU(SH)-242-5 (5C/min)			
SU(SH)-262	-60～+150		

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