

CABLE POWER LOSS DETERMINATION FOR VIRTUAL METROLOGY

ABSTRACT

A method for modeling cable loss is described. The method includes receiving a measurement of reverse power and forward power at a radio frequency (RF) generator. The method further includes computing theoretical power delivered to a matching network as a difference between the forward power and the reverse power and calculating a ratio of the reverse power to the forward power to generate an RF power reflection ratio. The method further includes identifying a cable power attenuation fraction based on a frequency of the RF generator and calculating a cable power loss as a function of the RF power reflection ratio, the cable power attenuation fraction, and the theoretical power. The method includes calculating actual power to be delivered to the impedance matching network based on the theoretical power and the cable power loss and sending the calculated actual power to the RF generator to generate an RF signal.

Fig.1