

CONSTANT IMPEDANCE CONNECTOR SYSTEM

ABSTRACT

5 A connection system that employs constant impedance connectors with attenuation or
filtering components or both embedded therein or within an adaptor removably insertable within
an adaptor housing for use in diverse environments, such as in a cryogenically cooled quantum
computer. The connection system provides a higher density of cables traversing through a
hermetic sealed top plate, and which are accessible to chill blocks to reduce the thermal energy
10 from the signal lines. Attenuators or filter circuits are embedded in the constant impedance
connector housings, or provided in adaptors that connect on each end to form mating constant
impedance connections, in order to reduce signal strength as the signal progresses through the
cryogenic environment and to remove extraneous electrical signal noise.

15 Fig. 1