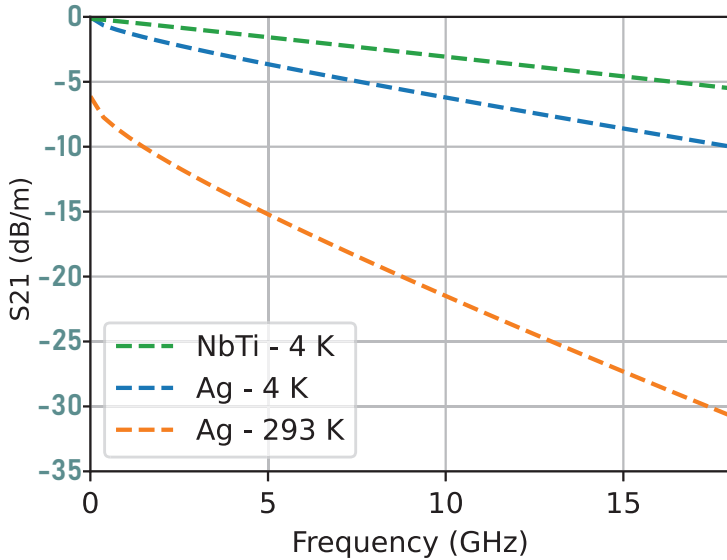




Signal line

Cri/oFlex®

Product sheet



Indication of loss based on measured data

Tackle your cryogenic cabling challenge

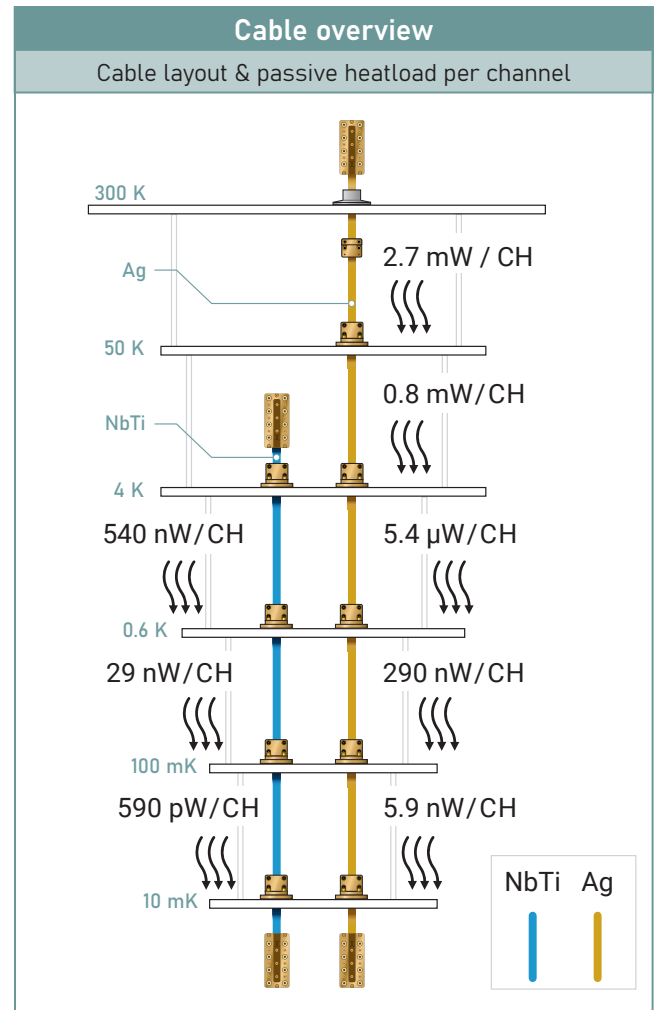
Bringing many channels to your cold stage, signal lines provide a simple and elegant solution for a wide range of applications.

Key features

- High-density microwave channels
- Resilient against thermal cycling
- Optional filtering & signal conditioning
- Integrated vacuum feedthrough
- Low thermal load

General Properties	
Connector	
Connector Type	SMA female / SMP
Connector Material	Goldplated Brass/BeCu PEEK/PTFE
Housing	Goldplated O ₂ -Free Copper
Flex	
Flex length	200 to 1100 mm
Amount of channels	8 Channels
Thickness	0.3 mm
Materials	Polyimide & Silver (Ag) or NbTi
Transmission type	Stripline
Minimum bending radius	5 mm
Required length for longitudinal rotation	10 cm / 180° rotation
Vacuum Feedthrough	
Leak rate	<10 ⁻⁹ mbar L s ⁻¹
Compatible vacuum connections	KF25/40, ISO 100 side and top loader ports

Electrical Properties	
Impedance	Designed for 50 Ω
Operating frequency	DC to 10 GHz
Maximum crosstalk (channel-to-channel), L=200 mm	< -40 dB





Signal line

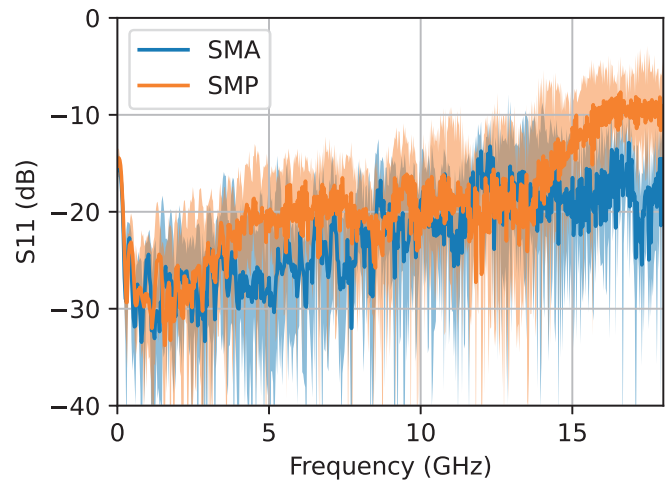
Cri/oFlex® Product sheet

Measurements

All measurements shown on this page are based on a flex cable containing eight channels without components. The mean is shown with a thick line and the spread of all channels is shown with the transparent area.

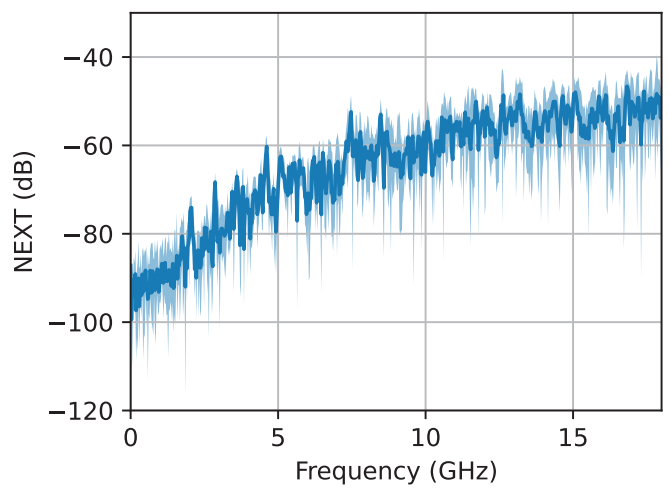
S11 – Reflection

Typical reflections for two types of connectors (SMA & SMP) are shown. Reflections are generally similar for both the Ag- and NbTi platform and are not significantly affected by temperature.



S31 – Near end crosstalk (NEXT)

NEXT is crosstalk between ports on the same side of the cable. It is therefore connectorblock dependent. Here we show results for an SMA connectorblock. SMP connectorblocks yield similar results. The NEXT always remains below -40dB up to 18 GHz. We see similar results for both the Ag- & NbTi platform.



S41 – Equal level far end crosstalk (EL-FEXT)

EL-FEXT is crosstalk between ports on the opposite side of the cable corrected for cable loss. These measurements are from a Ag- based cable at room temperature. We see comparable results for both the Ag- & NbTi platform. The length of this cable is 80 cm.

