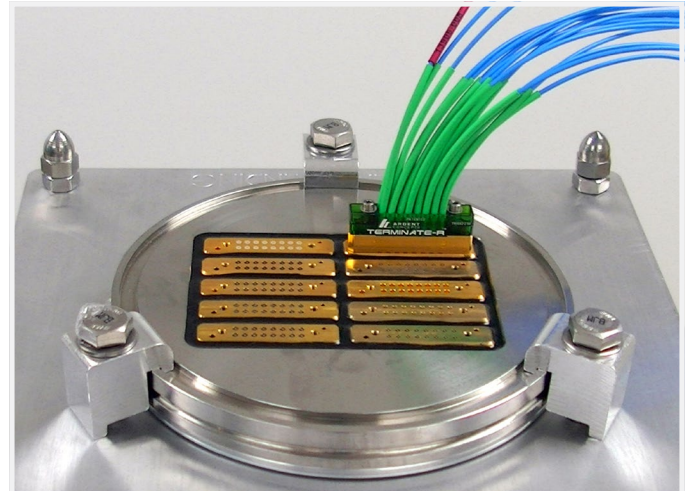


HFT

50Ω HERMETIC FEEDTHROUGH

50Ω Hermetic Feedthrough is ideal for applications where hermeticity is crucial to the transmission of multiple high-speed signals. In these applications, TR Multicoax connectors are mated to the hermetic feedthrough on either end ensuring an impedance matched 50Ω channel between any two chambers. The feedthrough is fixed to a flange (such as an ISO flange) with screws in blind-holes from the inside of the vacuum. The hermetic feedthrough is completely sealed using epoxy potting.



TARGET MARKETS



FEATURES

- Leak-proof design
- Extremely dense form factor
- TR Multicoax assembly mates with just a few captive screws
- Robust interface

BENEFITS

- Max leak rate 4×10^{-9} mbar*L/s
- Can fit 160+ channels in standard ISO 100 flange
- Quick connection of multiple high-speed lanes
- Ensures no signal degradation up to 1000 mates/de-mates

PART NUMBERS

16 Channel, 2.54mm Pitch 50Ω Hermetic Feedthrough	HFT-16X2-2.54-1
16 Channel, 4.00mm Pitch 50Ω Hermetic Feedthrough	HFT-16X2-4.00-1
24 Channel, 2.54mm Pitch 50Ω Hermetic Feedthrough	HFT-24X2-2.54-1

TECHNICAL INFORMATION

MATERIAL

- Victrex Peek 450G
- 303 Stainless Steel with gold over nickel plate
- BeCu Alloy 172 with gold over nickel plate

MECHANICAL

- 16 and 24 channel versions
- O-Ring (oHFT) and Direct-to-Flange (UD-HFT) versions also available (see applicable datasheets)
- Mechanical Cycles: 1000

ELECTRICAL

- Qualified at 20 GHz; stable characteristics out to 40 GHz
- Return Loss: ≤ -12 dB to 20 GHz
- Insertion Loss: ≤ -1 dB to 20 GHz

PACKAGING

- Individually packaged in anti-static bag

SPECIFICATION

- Impedance: $50\Omega \pm 5\Omega$, measured at 50 picosecond rise time
- 2.54mm/4.00mm pitch signal to signal

ENVIRONMENTAL

- Max leak rate 4×10^{-9} mbar*L/s
- Qualified at room temperature (contact Ardent Concepts for operation at other temperature ranges)

TOOLING INFORMATION

- 4 mounting holes in ISO flange or bulkhead required for feedthrough mounting. Feedthrough provides mounting and tooling for TR connector to attach to the feedthrough

TARGET MARKETS/APPLICATIONS

- Dilution refrigerators/Cryogenic devices
- Quantum Computing
- Vacuum Chambers
- Anywhere where RF signals need to be passed through a sealed wall

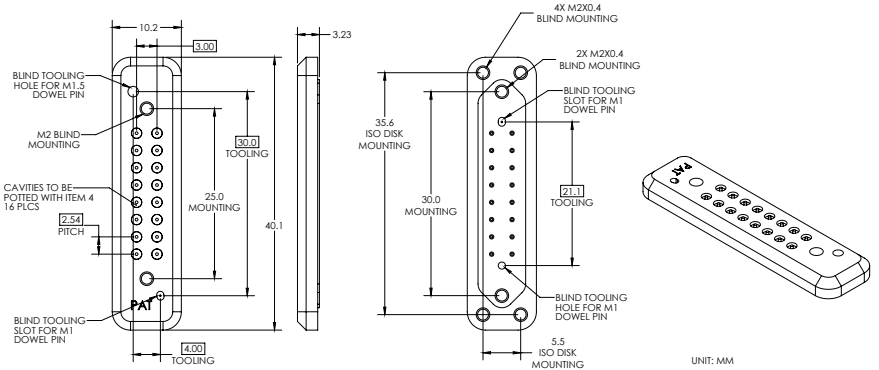


Fig. 1: FT-16X2-2.54-1

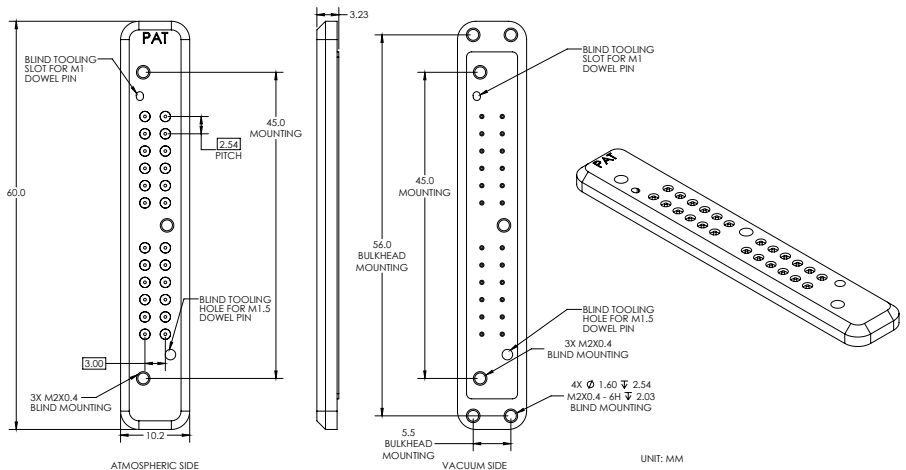


Fig. 2: FT-24X2-2.54-1