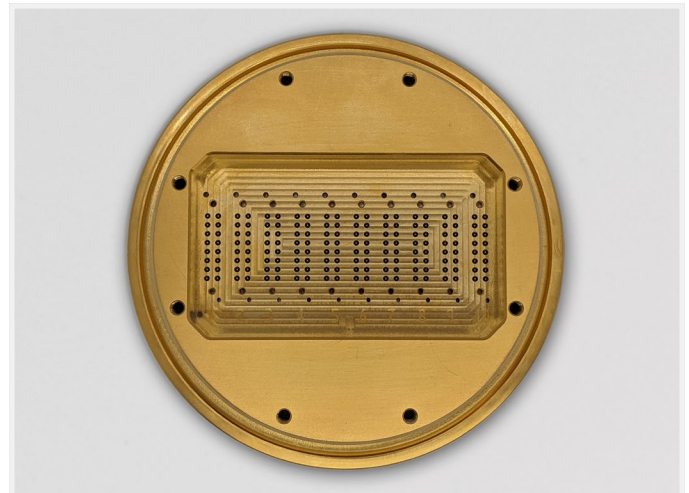


## UD-HFT

### ULTRA DENSITY 50Ω HERMETIC FEEDTHROUGH

Ultra Density 50Ω Hermetic Feedthrough (UD-HFT) is ideal for applications where hermeticity of high volume RF systems 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 directly tooled into a flange (such as an ISO flange).



#### TARGET MARKETS



#### FEATURES

- Leak-proof design
- Direct-to-flange design provides extremely dense form factor
- TR Multicoax assembly mates with just a few captive screws
- Robust interface

#### BENEFITS

- Max leak rate  $4 \times 10^{-9}$  mbar\*L/s
- Can fit 300+ 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

Hermetic Feedthrough, Ultra Density,  
 16X2 Channel, 2.54mm Pitch, 10 Locations

HFT-UD-16X2-2.54-10X1-A

## TECHNICAL INFORMATION

### MATERIAL

- Victrex Peek 450G
- BeCu Alloy 172
- 316L Stainless Steel with gold over nickel plate
- BeCu Alloy 172 with gold over nickel plate

### MECHANICAL

- 16, 24, and 32 channel configurations
- Potted (HFT) and O-Ring (oHFT) versions also available (see applicable datasheets)
- Mechanical Cycles: 1000

### ELECTRICAL

- Qualified at 20 GHz; stable characteristics out to 40 GHz
- Return Loss:  $\leq -12$  dB to 20 GHz
- Insertion Loss:  $\leq -1$  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  $4 \times 10^{-9}$  mbar\*L/s
- Qualified at room temperature (contact Ardent Concepts for operation at other temperature ranges)

### TARGET MARKETS/APPLICATIONS

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

