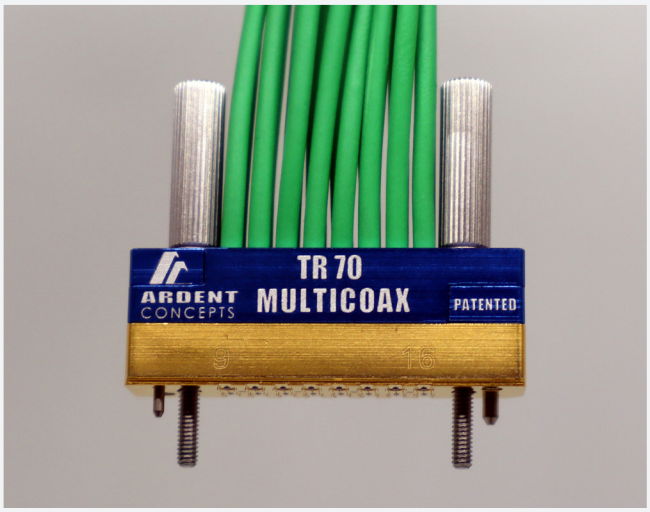
TR Multicoax™ Series Connectors

TR70™ MULTICOAX CONNECTOR

The TR70 Multicoax Connector by Ardent Concepts is a high-performance solution designed for applications requiring superior signal integrity in high-frequency environments. Supporting frequencies up to 70 GHz, this connector features a solderless, compression mount interface, which minimizes signal loss and maximizes durability across multiple cycles. The TR70 is particularly suited for demanding fields like semiconductor testing, defense & aerospace environments, and custom or exploratory applications, offering unmatched reliability and ease of integration for both analog and digital channels.

In contrast to traditional solder-down coaxial connectors, the TR Multicoax minimizes PCB space usage by 80%. Its ease of reusability allows flexible movement across PCB positions without requiring additional surface mount components. The TR70 Multicoax offers a streamlined solution for engineers developing cutting-edge systems.



TARGET MARKETS

FEATURES

- Reliable, high-speed compression mount technology
- Completely solderless system
- Competitively dense form factors available
- Reusable across programs

BENEFITS

- Superior signal integrity up to 70 GHz
- Better long term repeatability of connector performance
- Eliminates signal distortion for clean signal integrity
- Quick connection of multiple signals to PCB
- No more failing of snap-in connectors
- 80% space savings over SMPs
- Promotes exponential cost savings

TR70™ Multicoax Connector

PERFORMANCE

Mechanical Specifications[1]	
Coax-to-Coax Pitch	2.54mm and 4mm (within a row)
Channels	Standard: 4, 8, 12, 16, 24
Cabling	.047" diameter low-loss flexible coax
Cable Length	6"/152mm, 12"/304mm, 24"/608mm
Board-Mount Insertion Life	1,000 mating cycles
PCB Footprint	Compression Mount, Non-SMT, Noble Plated
Interface (Cable end to Equipment)	Female or Male – V (1.85mm)

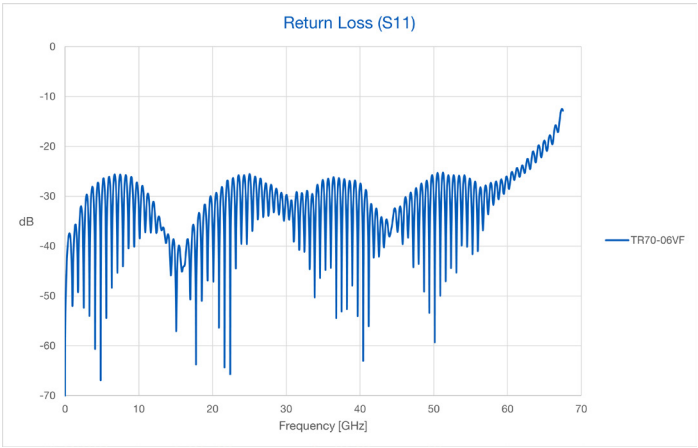
[1]Mechanical specifications vary; contact factory for options

Electrical Specifications	
Frequency Range	DC to 67.5 GHz
Return Loss[1]	Refer to Return Loss (S11) for nominal value
Insertion Loss[2]	Refer to Insertion Loss (S21) for nominal value
Crosstalk	Crosstalk is largely a function of PCB footprint design. Please consult factory for more information
Impedance	50Ω Nominal
Phase Matching[3]	Cable Length ≤ 9" [229mm] = ± 2ps for all cables in an assembly

[1]Gated measurements include TR70 cable, interface, and PCB footprint transition

[2]De-embedded measurements include TR Multicoax assembly only

[3]Phase tolerance is heavily based on cable length. Consult factory for phase matching specification of assemblies > 9 [229mm]



NOTE: Return loss and Insertion Loss data shown is representative of nominal performance. This data is provided for reference only and does not constitute a production-validated specification.

SAMPLE DRAWING