



## TR Multicoax Series | Equal Trace

### Description

TR Multicoax Equal Trace delivers superior signal integrity from multiple high speed channels in an arc footprint making it ideal for applications where equal and short trace lengths are imperative for performance tuning. In these cases, TR can help to minimize needing to create serpentine trace routing map patterns to achieve a specific overall length. This helps to ensure signals reach their destination at the same time in data and clock routing for peak performance. The tight pitch of TR Multicoax gets the connector closer to the device to reduce signal loss.

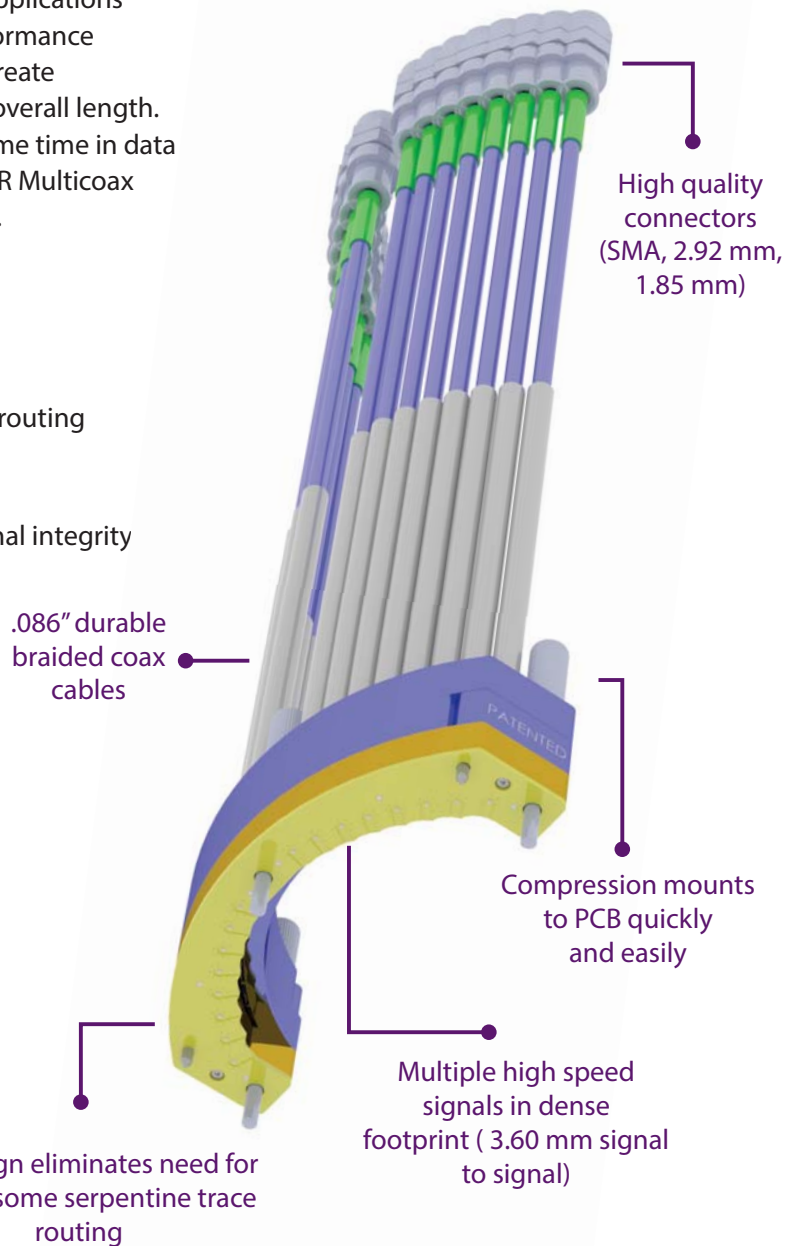
### Key Benefits

- OIF IC-TROSA Standard compliant
- Superior signal integrity to 70 GHz+
- Helps mitigate the need for cumbersome serpentine trace routing
- Allows for shorter trace lengths to reduce signal loss
- Better long term repeatability of connector performance
- Solderless system eliminates signal distortion for clean signal integrity
- Quick connection of multiple signals to PCB
- Reusable across programs for exponential cost savings

### Applications

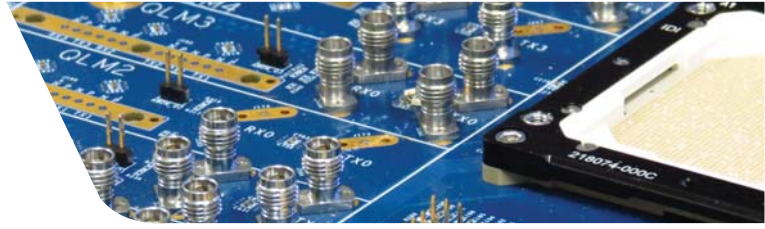
The TR Multicoax Series product line is also ideal for use in:

- > **Communications**
  - IC TOSA/ROSA/TROSA
  - OIF Standard ICs
  - Optical Connector Breakout Boards (OSFP, QSFP, QSFP-DD)
- > **Semiconductor Design & Test**
  - Customer IC Evaluation Boards
  - Mobile Chipsets
  - High Speed SerDes
- > **Automated Test & Measurement**
  - > **Medical**
- > **Custom Applications**





**ARDENT  
CONCEPTS**  
An Amphenol Company



# TR Multicoax Series | Equal Trace

ELECTRONICS PARTS



株式会社 イス・イー・アール

## Specifications

### Electrical Specifications

Frequency Range	DC to 70 GHz
Return Loss <sup>1</sup>	Less than -15 dB to 67 GHz
Insertion Loss <sup>2</sup>	-1.5 dB through 40 GHz, -3 dB through 70 GHz
Crosstalk	-70 dB through 70 GHz
Impedance <sup>1</sup>	50 Ω +/- 2.5 Ω
Phase Matching	+/- 2 ps standard

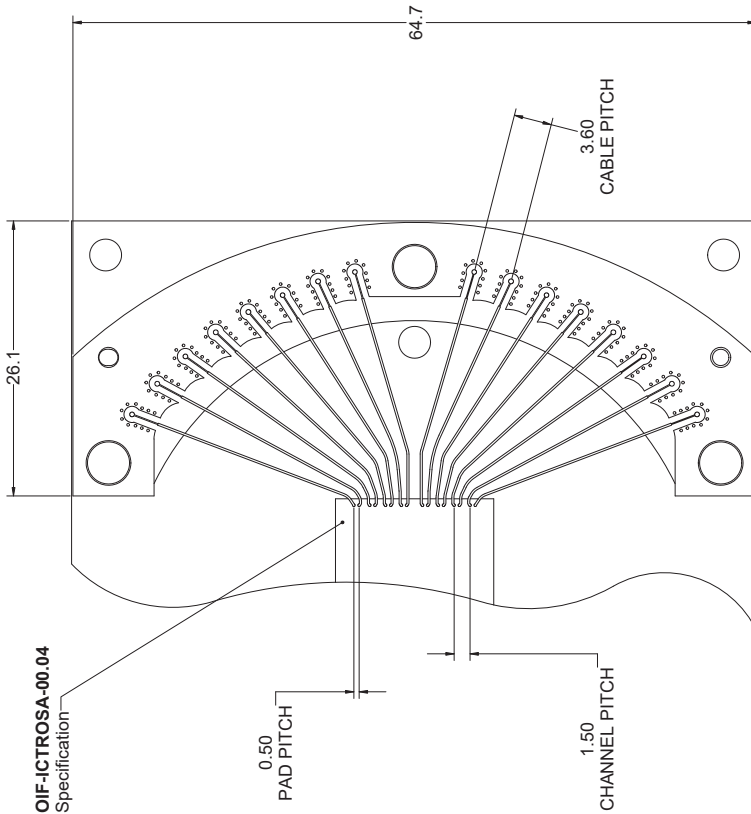
Notes: <sup>1</sup>Largely a function of PCB design. <sup>2</sup>Measurement includes 6" of cable.

<sup>3</sup>Consult factory for additional cable options.

### Mechanical Specifications

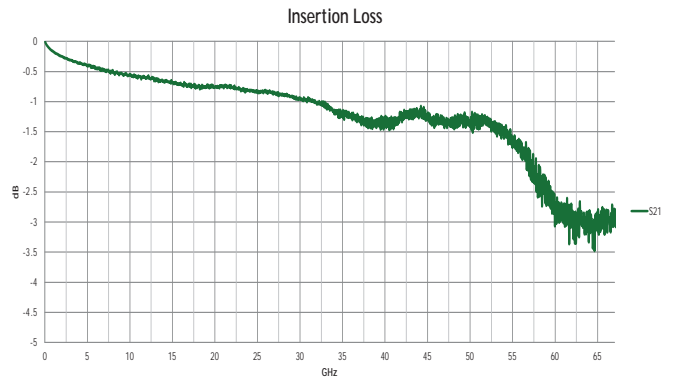
Pitch	3.60 mm
Cables	.086" diameter cables <sup>3</sup>
Connectors	SMA, SMK (2.92 mm), or V (1.85 mm)
Cable Length	6"/152 mm, 12"/304 mm, 24"/608 mm
Insertion Life	1,000+ mating cycles
Field Replaceable Interface	Yes
Footprint	Microstrip & Stripline compatible

## Footprint



## Measurement Data

Note: Measurement includes TR70 Equal Trace with 6 Inches of 086 Cable, 1.85 mm Male Connector, and TR Interface

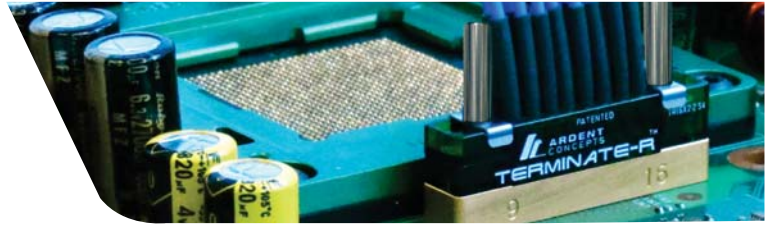


Specifications subject to change without notice

US Patent Numbers 6,787,709, 6,909,056, 7,126,062, 7,556,503, 8,926,342.

© Ardent Concepts 2016 Revision 4/2016

[www.ardentconcepts.com/tr](http://www.ardentconcepts.com/tr)



## TR Multicoax Series | Equal Trace



株式会社 イス・イー・アール

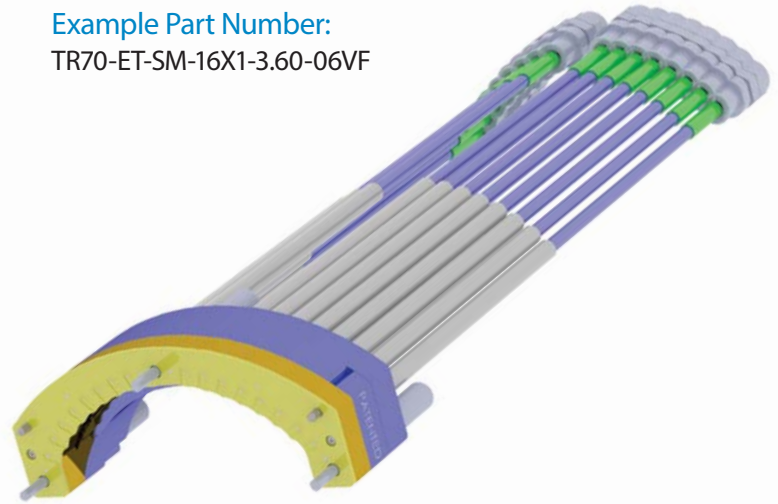
### Ordering Information

Frequency (GHz)	Equal Trace	Mounting Option	# of channels (Form Factor)	Pitch (mm)	Cable Length & Connector Type
20, 40, 70	ET	Straight Mount (SM)	16 (16X1)	3.60 mm	6" (06), 12" (12), 24" (24) 2.92 mm Male or Female (KM or KF) 1.85 mm Male or Female (VM or VF)

For custom applications please consult factory

Example Part Number:

TR70-ET-SM-16X1-3.60-06VF



### Related Products

#### QUICKLINK Coaxial Connector



- Superior signal integrity DC to 70 GHz+
- Reusable across programs promotes exponential cost savings
- Board component reduction while increasing reliability and density
- Rapid connection to PCB - No threading or tools required

#### CA Series™ - Connectors & Interposers



- 32 Gbps+
- Area array to 0.4mm pitch
- Compression mount & solderless
- Pure vertical interface – no offset required
- Ideal for high shock and vibration/extreme temperatures applications

[www.ardentconcepts.com/tr](http://www.ardentconcepts.com/tr)

### More Information

For questions  
please contact us:

Phone: (603)474-1760

E-mail: [info@ardentconcepts.com](mailto:info@ardentconcepts.com)

Ardent Concepts, Inc.  
4 Merrill Industrial Drive  
Hampton, NH 03874

Sales: [sales@ardentconcepts.com](mailto:sales@ardentconcepts.com)

Technical: [support@ardentconcepts.com](mailto:support@ardentconcepts.com)

For our full product portfolio, datasheets, additional resources/videos, case studies and app notes please visit our website at: [www.ardentconcepts.com](http://www.ardentconcepts.com)