



## TR Multicoax Series 20/40/70

Cable to Cable Interconnect for Wafer Probing

Market: Semiconductor  
Application: Functional Test

### Challenge

A Test Engineer at a major IC manufacturer was using a Probe Station for silicon wafer characterization. The customer used a large number of SMA Connectors (48) to take signals from their wafer test head to test instrumentation. Every time a new wafer test head was loaded into the probe station, it required the customer to disconnect and then reconnect 48 individual cables—a very time consuming (>1 hour) endeavor. The customer was looking for a time saving solution that would allow them to quickly disconnect and reconnect the cables, letting them get back to testing more quickly.

### Solution

Ardent worked with the IC manufacturer to develop a cable to cable version of TR™ that allowed them to connect and disconnect cables without having to disconnect their 48 SMA connections.

### Benefits

- Reduced their set-up time from over an hour to less than 5 minutes (>800% improvement)
- Improved durability by reducing connector wear



*"Functional test has never been easier or quicker. TR has made our set-up time about 800% faster."*

- Lab Manager

### More Information

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## Specifications

### Electrical Specifications

Frequency Range	DC to 70 GHz
Return Loss <sup>1</sup>	-18 dB through 70 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

### Mechanical Specifications

Pitch	2.54 mm
Cables	.047" 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

Notes: <sup>1</sup>Largely a function of PCB design. <sup>2</sup>Measurement includes 3" of cable. <sup>3</sup>Consult factory for additional cable options.

## Footprints

