



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 ¹	-18 dB through 70 GHz
Insertion Loss ²	-1.5 dB through 40 GHz, -3 dB through 70 GHz
Crosstalk	-70 dB through 70 GHz
Impedance ¹	50 Ω +/- 2.5 Ω
Phase Matching	+/- 2 ps standard

Mechanical Specifications

Pitch	2.54 mm
Cables	.047" diameter cables ³
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: ¹Largely a function of PCB design. ²Measurement includes 3" of cable. ³Consult factory for additional cable options.

Footprints

