



## TR Multicoax Series 20/40/70

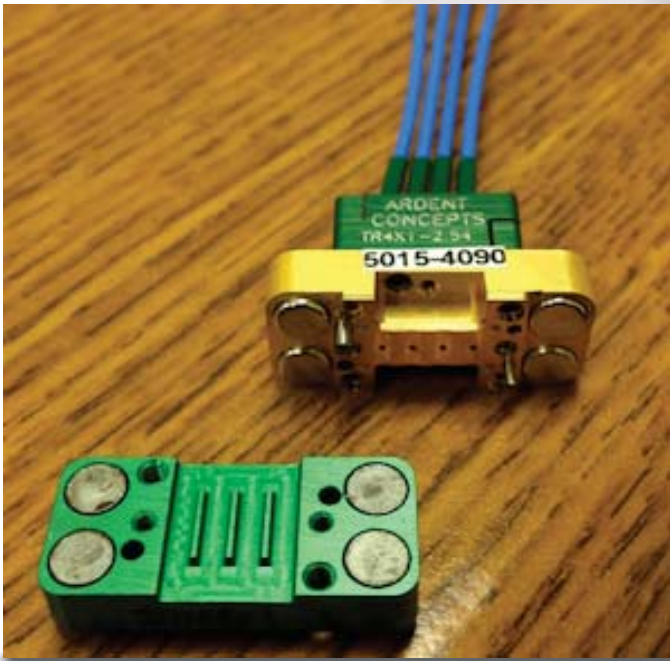
40 GHz Signals on Consumer Product Flex Board System

Market: Semiconductor

Application: Functional Test

### Challenge

A major consumer product company was developing a test system that required 40GHz+ signals to come off of a flex board out to instrumentation. The .5-1.00mm flex thickness requirement created a great challenge with all standard solder down connectors. The cycling and repeatability were also going to be an issue with the standard solder down solutions available.



*"Using a magnetic TR Multicoax solved the issues solder down connectors couldn't by getting high speed signals off our flex board and out to instrumentation."*

- Design Engineer

### Solution

Ardent developed a magnetic 4-channel connector solution that fit into a small area. Total size for this connector was just 9x27mm. This solution provided a high-density connection that dramatically reduced the amount of real estate needed on the board for high-speed connections and eliminated the need for traditional surface mount connectors. This design greatly reduced the cost of the board with no reflow and no wasted parts. This solution improved repeatability of measurements and is a great solution for high volume testing.

### Benefits

- Improved repeatability of measurements
- High volume testing capabilities and high-speed connections
- Space saving
- Reduced cost of board with no reflow and no wasted parts

### More Information

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## Specifications

### Electrical Specifications

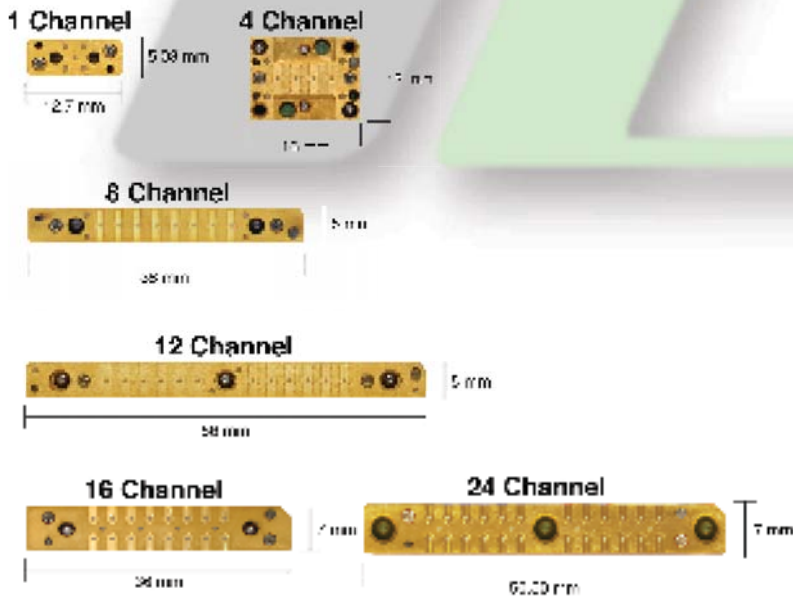
Frequency Range	DC to 70 GHz
Return Loss <sup>1</sup>	-18 dB through 70 GHz
Insertion Loss <sup>2</sup>	-1.5 dB through 40 GHz, -3 dB through 70 GHz
Crosstalk	-70 dB through 70 GHz
Impedance <sup>1</sup>	50 $\Omega$ +/- 2.5 $\Omega$
Phase Matching	+/- 2 ps standard

### 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



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