



# TR Multicoax Series 20/40/70

40 GHz Signals on Consumer Product Test System

Market: Semiconductor  
Application: Functional Test

## Challenge

A major consumer product company was developing sub-system that required 40GHz+ signals to come off the board and out to instrumentation for functional testing of production units. Test time needed to be short. The high-speed channels created a great challenge with SMA/SMP connectors due to the system's limited space constraints. Also connector wear led to cycling and repeatability issues resulting in false failures.

## Solution

Ardent recommended a Quick latch, compression mount version of TR which increased first pass yield rates on functional test of the sub-system. This improved repeatability of measurements and proved to be a great solution for high volume testing. This design greatly reduced the cost of the board with no reflow and no wasted parts.

## Benefits

- Improved repeatability of measurements
- Time saving solution for high volume testing
- Greatly reduced the cost of the board with no reflow and no wasted parts

## More Information

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*"We don't have to worry about repeatability issues of soldered components anymore."*

- Signal Integrity Engineer

Specifications subject to change without notice

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

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## Specifications

### Electrical Specifications

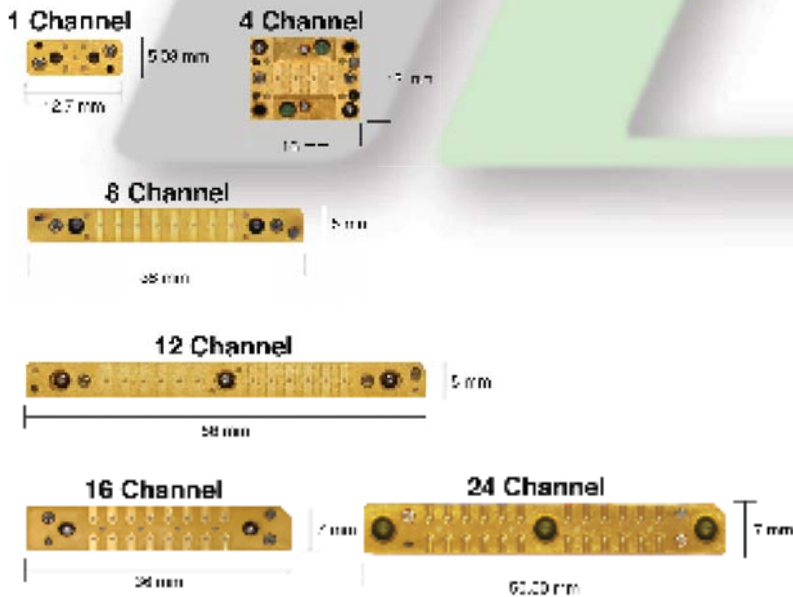
Frequency Range	DC to 70 GHz
Return Loss <sup>1</sup>	-18 dB through 70 GHz
Insertion Loss <sup>2</sup>	-1.5 dB through 40 GHz, -3 dB through 70 GHz
Crosstalk	-70 dB through 70 GHz
Impedance <sup>1</sup>	50 Ω +/- 2.5 Ω
Phase Matching	+/- 2 ps standard

### Mechanical Specifications

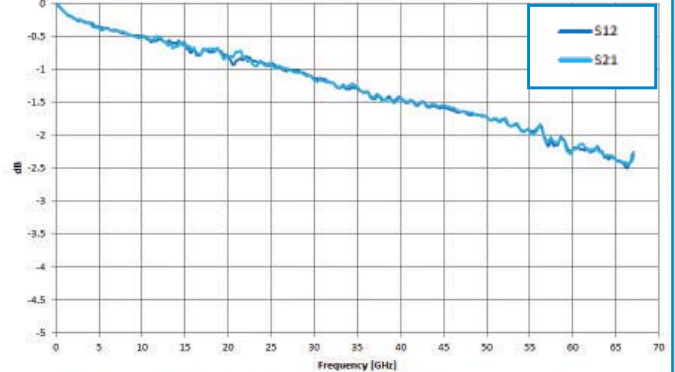
Pitch	2.54 mm
Cables	.047" diameter cables <sup>3</sup>
Connectors	SMA, SMK (2.92 mm), or V (1.85 mm)
Cable Length	6"/152 mm, 12"/304 mm, 24"/608 mm
Insertion Life	1,000+ mating cycles
Field Replaceable Interface	Yes
Footprint	Microstrip & Stripline compatible

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.

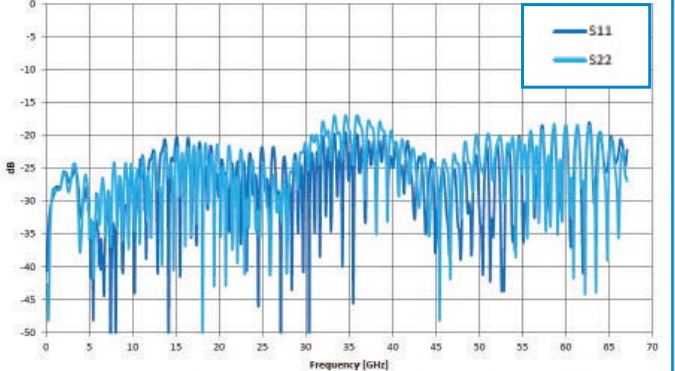
## Footprints



### Insertion Loss



### Return Loss



### Crosstalk

