



**Signal Microwave
VLF40-00x 40GHz K
Connector Series**

Signal Microwave VLF40-00X the Transparent Connector

2.92 mm Connectors for the High Speed Digital Industry with Superior Electrical Performance



VLF40-001

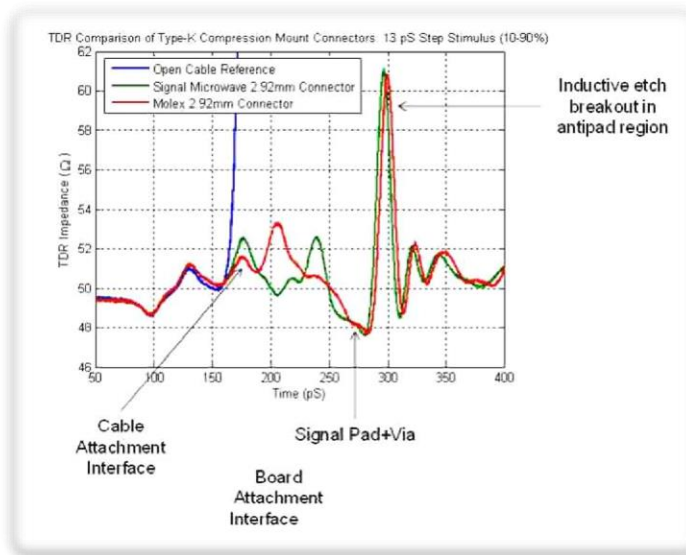


VLF40-002

TDR's systems were used to measure the connector impedance of: **1)** two Molex connectors connected back to back, **2)** a South West Microwave Thru adapter **3)** a Signal Microwave Connector back to back assembly. These configurations are optimized to show the minimum impedance discontinuities of these connectors and this information is helpful as a figure of merit of each connectors signal integrity performance. In the real world, the connector supplier may not provide the pad stack up interface or accurate connector models. As a result, when the board is manufactured the connector launch is vastly different than shown in these impedance traces. To assure an optimal connector launch, Signal Microwave provides the Engineer a superior connector, free optimized pad stack up, accurate connector models and technical support to help the Engineer design a connector "system" that is truly transparent, reducing the chance of a costly redesign.

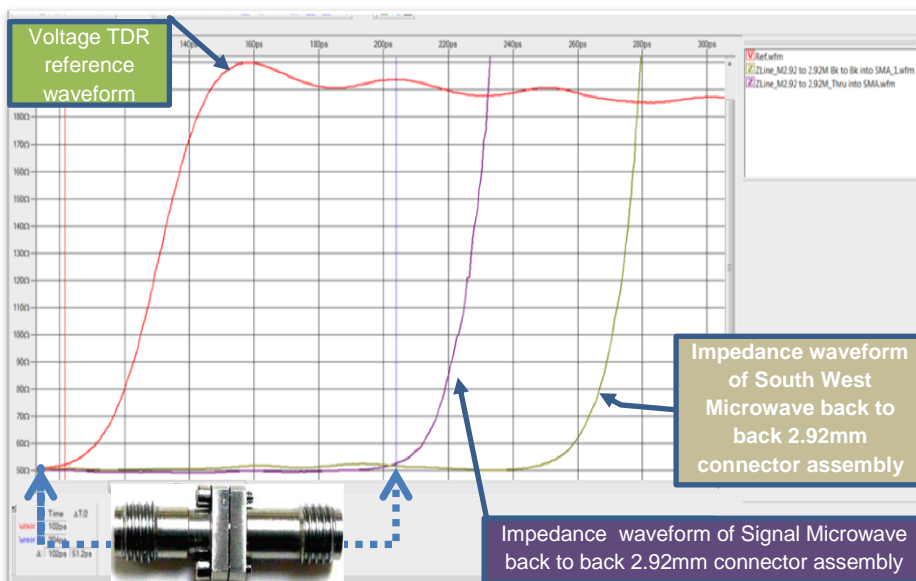
- 40 GHz Bandwidth
- 2.92 mm Interface
- No Soldering Required
- Compression Fit
- Board Mounted
- Vertical Launch
- Free Connector pad Stack-up Interface
- Free Connector Simulation File

Time Domain (TDR) Connector Competitive Analysis



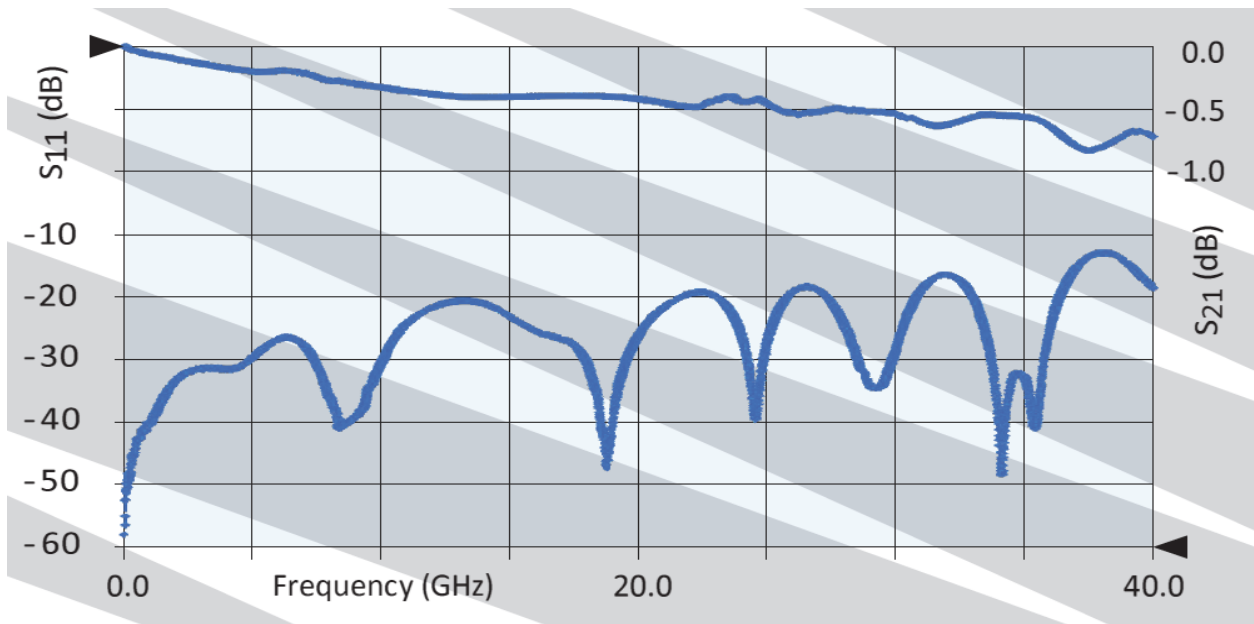
Left) This impedance plot compares a Molex (red waveform) and Signal Microwave (Signal Microwave) 2.92mm connectors in the time domain. Both connectors are connected back to back.

Notice: Signal Microwave connector impedance profile is flatter with less reflection.





Left) A 50 ohm impedance plot comparing a South West Microwave Thru adapter (gold waveform) containing one solid internal conductor signal connection with the Signal Microwave (purple waveform) that consists of two Signal Microwave 2.92mm connectors connected back to back with another 2.92mm connector. The blue brackets the physical length of where the two connectors are the same length. Even though the SW Microwave connector assembly is not a contiguous connection the impedance profile of both connectors is complementary.

Frequency Domain S11/S21 Plot to 40 GHz



Signal Microwave VLF40-00x 40GHz 2.92mm Vertical Launch Connector Series

	Part Number	PCB Mounting Interface (bottom)	Mechanical	Connector Interface (top)	Notes	Simulation Tools
	VLF40-001	Molex Compatible SMA 27 GHz Connector	Traditional .625" 2 hole flange with two additional threaded holes used for mounting to a PC board	2.92mm K Connector for 40 GHz performance	Drop in replacement for Molex 73251-1850	<p>FREE Connector Simulation File</p> <p>FREE Connector to Pad stack-up Interface</p>
	VLF40-002	Molex Compatible 2.92mm interface for 40 GHz performance	Non-traditional flange with two threaded holes for mounting to PC board. Compatible board launch geometry and a 2.92mm interface for 40 GHz with a similar flange size	2.92mm K Connector for 40 GHz performance	Drop in replacement for Molex 73252-0091	<p>FREE Connector Simulation File</p> <p>FREE Connector to Pad stack-up Interface</p>



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