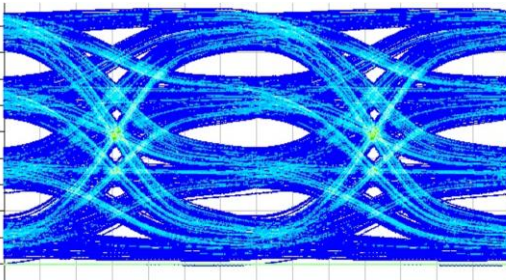


ISI-224 – Advanced ISI Loss Modeling Platforms

Improves SERDES Testing – Test Pre-Silicon – EDA Kit Friendly

FEATURES

- **Extreme Signal Integrity**
- Suited for **224G PAM4 characterization and compliance testing**
- **100% NIST Traceable Tested**
- Very **low return-loss** out to 112 GHz
- Industry best resolution **-7dB to -25dB** at 56GHz Nyquist, **1dB loss increments**
- Causal+Passive tested S-parameters included
- Suited for Design-of-Experiments (DOE)
- Spread weave material used – no group



INCLUDES

- **Insertion Loss Platforms** – Provides IL ranging from 8db to 28db at 56 GHz, 1dB resolution
- **NIST traceable TDR impedance compliance report**
- Wild River Technology Test Plan assistance included

224 Gbaud Advanced SERDES Inter-symbol Interference Loss Platform Set

The ISI-224 is an advanced inter-symbol interference (ISI) platform specifically designed for the demanding signal integrity requirements of 224 Gbaud PAM-4. The laminate system is ultra-low weave, with similar copper roughness profile expected in practical backplanes. Group delay variation and Block resonance, an important loss consideration for data rates exceeding 25 Gbps, has been eliminated with special layout techniques, homogenous laminate system, pristine connector launch design, and the use of controlled weave dielectric material.

The ISI-224 Loss Modeling Platforms are composed of 21 stripline differential pairs of various lengths with 1dB resolution.



For more information WRT applications support at info@wildrivertech.com

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ISI-224 platform set specifications

Table 1 – ISI-224 platform set specifications

PC board material	Low loss
Insertion loss	Typical values see Tables 3 (excludes cable losses)
Return loss	27 dB typical at 56 GHz
Connectors	1.35mm or 1.00mm vertical launch female, compression mount, replaceable. All connector launches are NIST traceable tested.

Table 2 – ISI-224 Insertion Loss for each fixed variable trace length

IL @ 56 Gb/s	Length	
	in.	mm
-6.7 dB	2.21	56.13
-7.6 dB	2.57	65.28
-8.7 dB	3.00	83.82
-9.5 dB	3.33	84.58
-10.3 dB	3.66	92.96
-11.7 dB	4.08	103.63
-12.5 dB	4.44	112.78
-13.3 dB	4.78	121.41
-14.3 dB	5.14	130.56
-15.0 dB	5.51	139.95
-16.4 dB	5.97	151.64

IL @ 56 Gb/s	Length	
	in.	mm
-17.2 dB	6.32	160.52
-18.6 dB	6.67	169.42
-19.6 dB	7.02	178.31
-20.1 dB	7.38	187.45
-20.4 dB	7.60	193.04
-21.3 dB	7.97	202.44
-22.3 dB	8.34	211.84
-23.8 dB	8.71	221.23
-24.4 dB	9.08	230.63
-25.1 dB	9.45	240.03

Option: Skew Matched Cables

Table 3 – Suggested Skew matched Cable Pairs - TBD



Ultra-low Skew Cable Assembly Pair

1mm or 1.35mm male connector on both ends, 1 meter long black 1206 type cable, no-modes thru 56GHz, 16dB return loss or better through 50 GHz, 5 degrees (0.35ps) skew, red/green heat shrink for cable determination, additional heat shrink at 220mm (8.66") from end of cable pair for mechanical separation, label in center of cable for replacement part number.

Compliant with RoHS Directive 2011/65/EU in its entirety, inclusive of any further amendments or modifications of said Directive. 3-year replacement guarantee.

Each matched cable pair comes with graphs of insertion loss and return loss for each cable, plus a thumb drive containing the measured s-parameter files.

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Ordering Instructions

Part Number	Model	Description
P/N 917-0002-00	Model ISI-224-1.35mm	10-56 Gbpsec Advanced SERDES Intersymbol Interference Loss Platform Set, assembled with 1.35mm connectors
P/N 917-0003-00	Model ISI-224-1.00mm	10-56 Gbpsec Advanced SERDES Intersymbol Interference Loss Platform Set, assembled with 1.00mm connectors

