

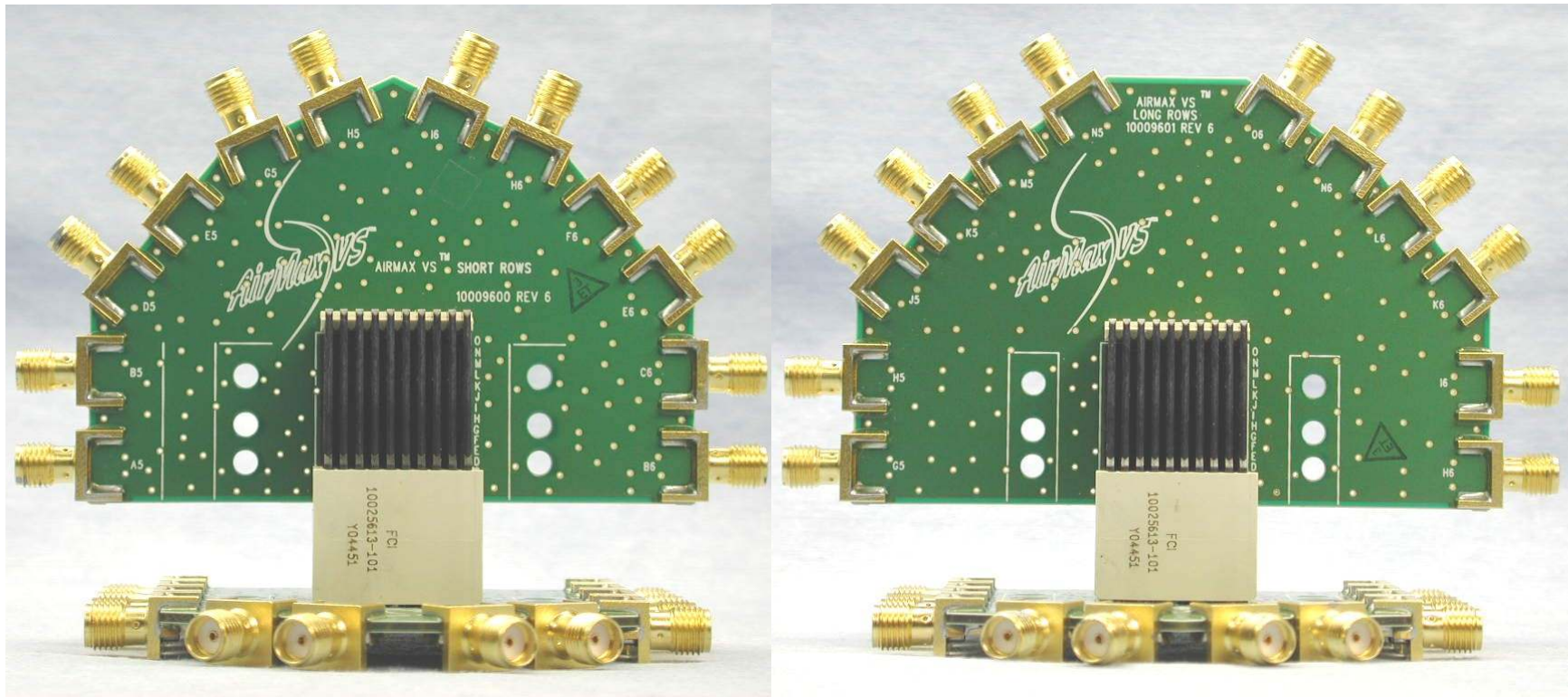


AirMax VS[®]

Signal Integrity Performance

Aug 2003

Test fixtures were designed with low-loss board material and optimized routing to enable the most accurate measurement possible of the performance of AirMax VS[®].



Eye Patterns through AirMax VS[®]

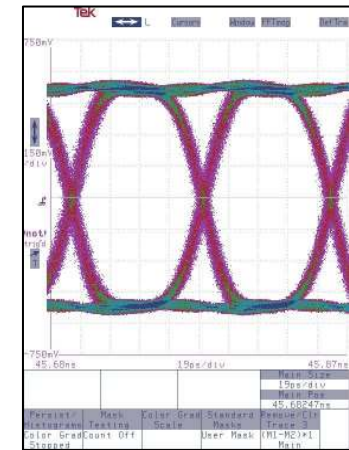
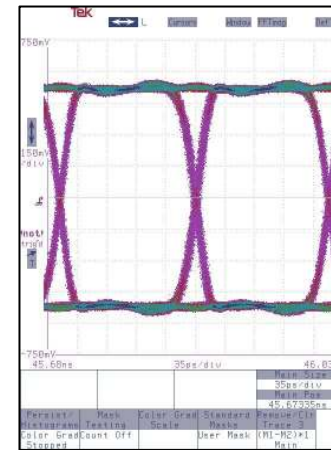
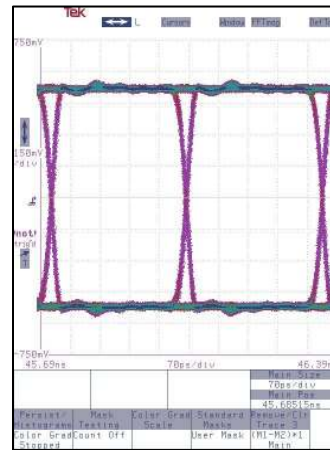
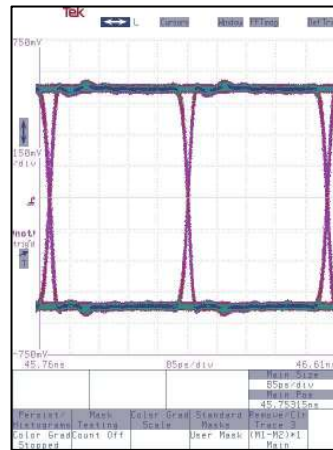
2.5 Gbps

3.125 Gbps

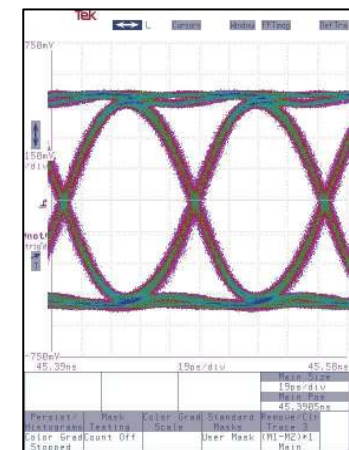
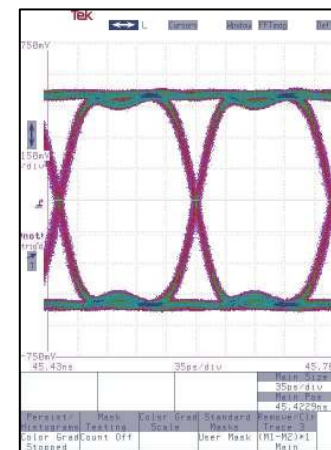
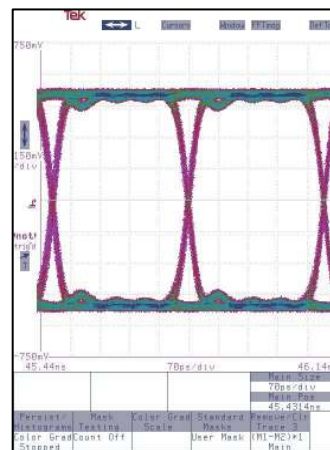
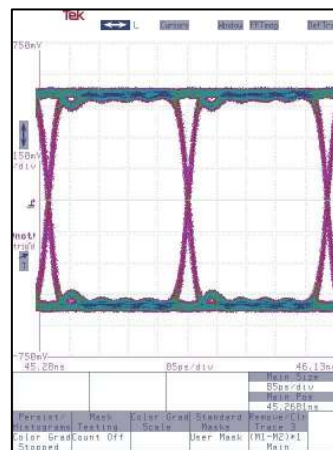
6.25 Gbps

12 Gbps

Reference
Eye
(INPUT)

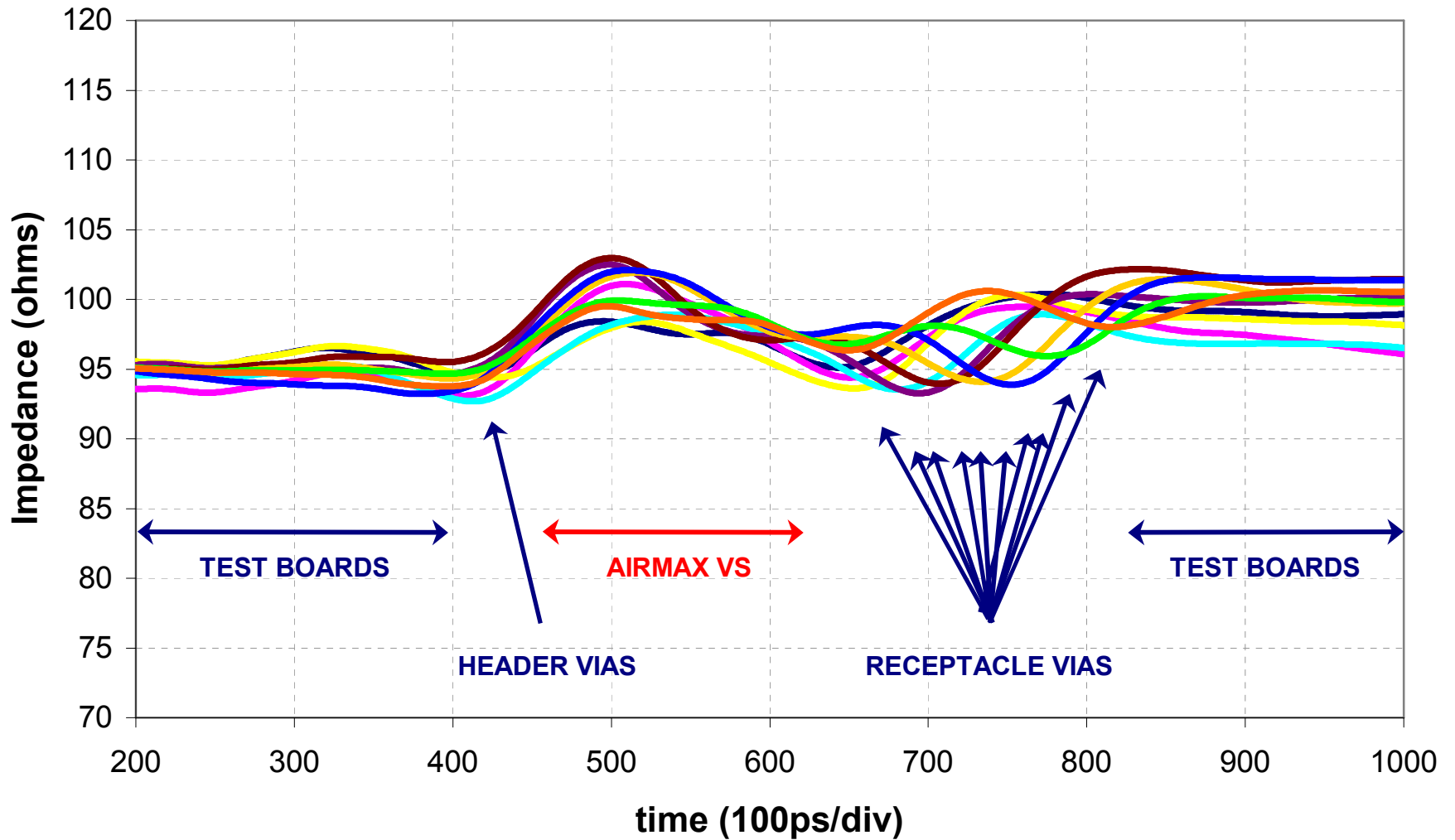


Eye through
AirMax VS[™]
(OUTPUT)

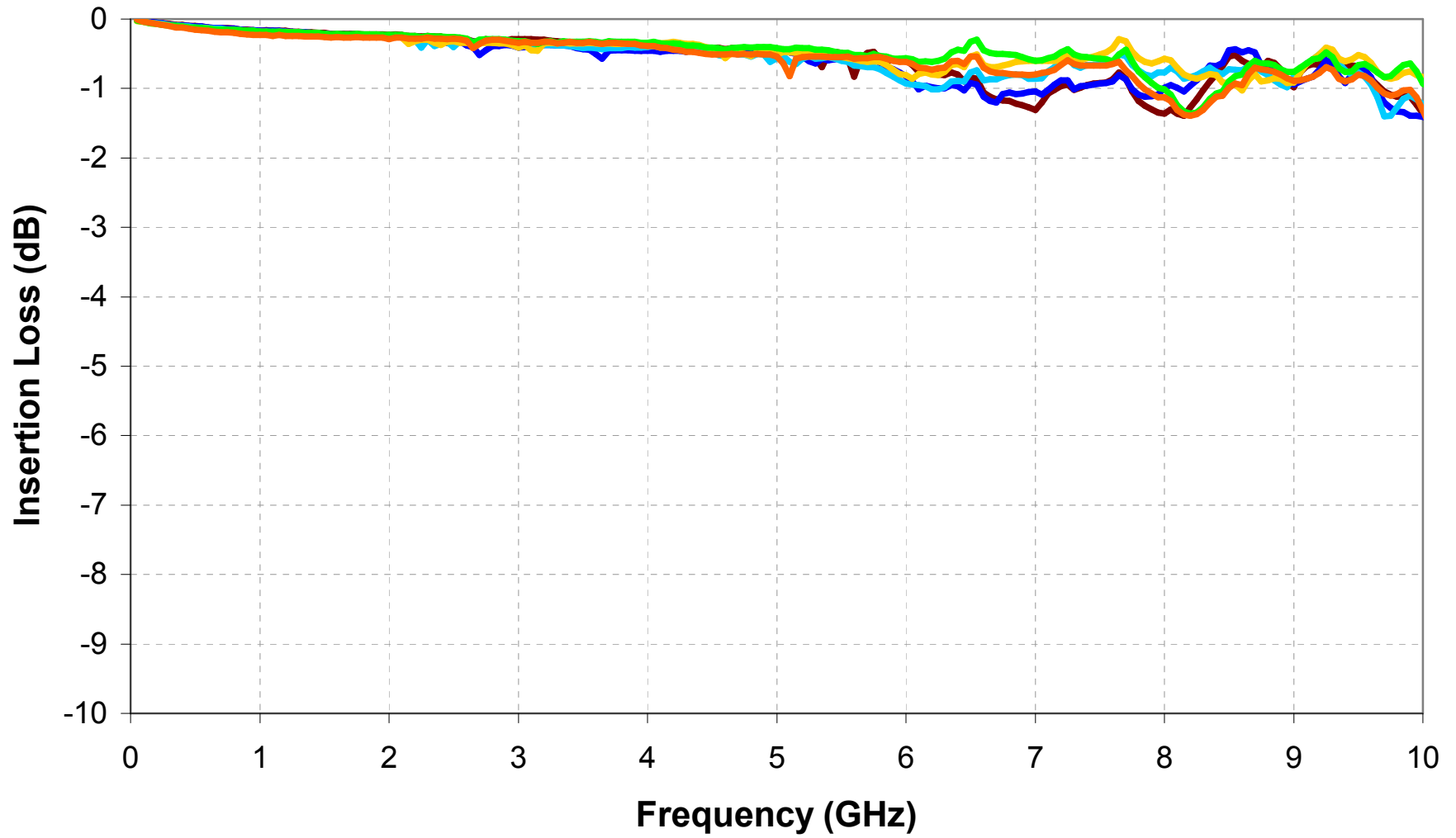


Differential Impedance

Risetime: 55ps (20-80%) = 80ps (10-90%)

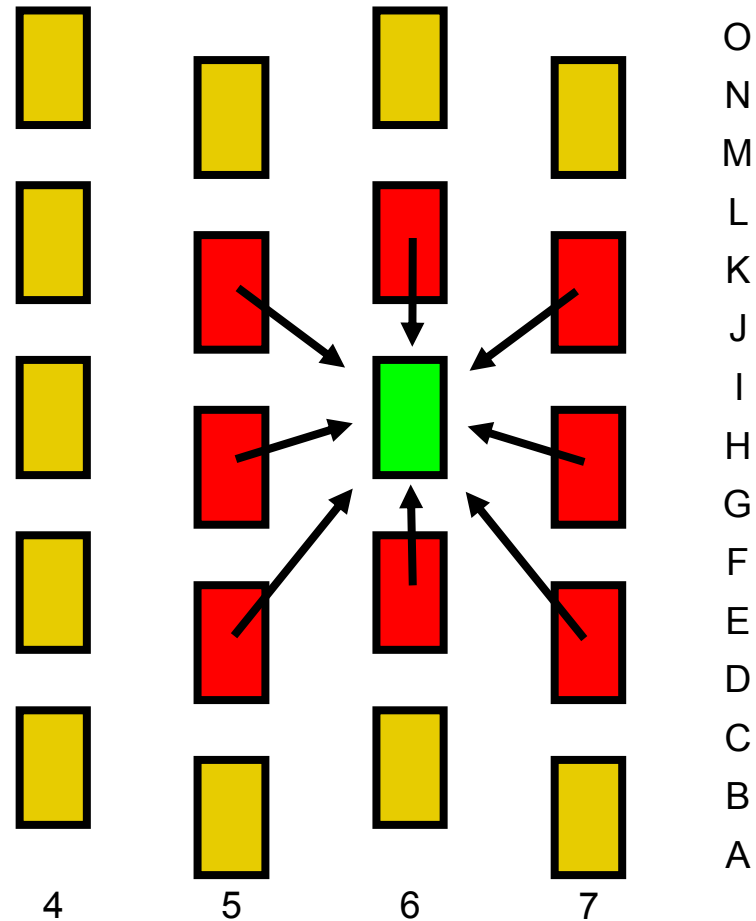
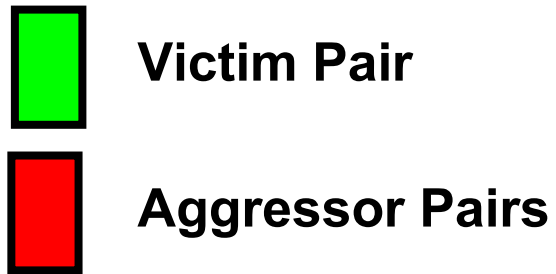


Differential Insertion Loss



Example of Worst-Case Multi-Pair Active Crosstalk Measurement for Pair HI6

Includes peak crosstalk from pairs DE5, GH5, JK5, EF6, KL6, DE7, GH7, and JK7.



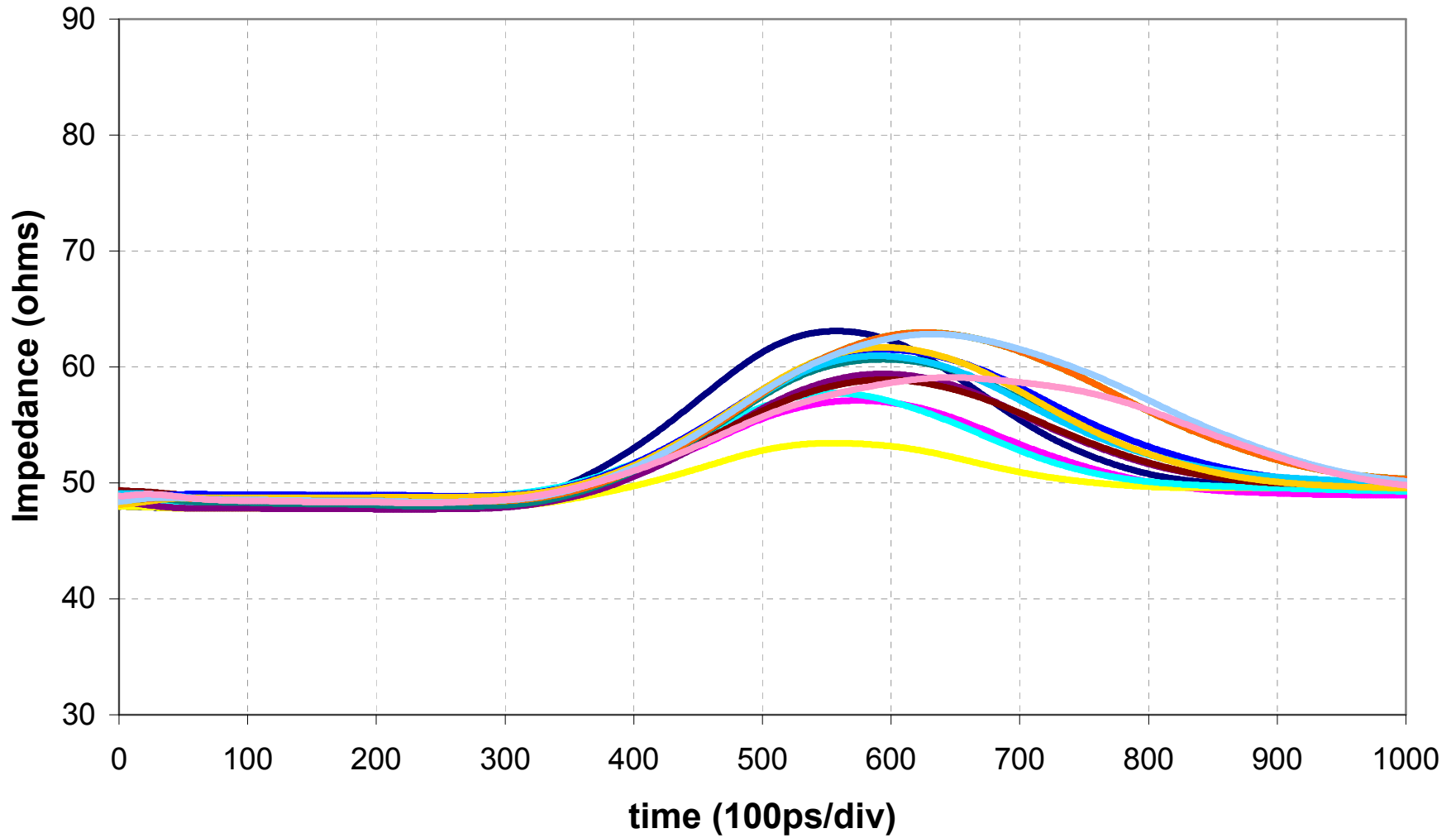
| Worst-Case Near-End Crosstalk AirMax VS® wired for differential (Signal Injected into HEADER Side) | | | |
|---|--|--|--|
| | 55ps (20-80%) 80ps (10-90%) | 105ps (20-80%) 150ps (10-90%) | 150ps (20-80%) 220ps (10-90%) |
| AB | 1.5 % | 1.1 % | 0.9 % |
| BC | 2.0 % | 1.5 % | 1.2 % |
| DE | 1.8 % | 1.4 % | 1.2 % |
| EF | 1.9 % | 1.5 % | 1.3 % |
| GH | 2.0 % | 1.5 % | 1.2 % |
| HI | 1.8 % | 1.6 % | 1.3 % |
| JK | 2.1 % | 1.9 % | 1.6 % |
| KL | 1.8 % | 1.6 % | 1.5 % |
| MN | 1.9 % | 1.6 % | 1.4 % |
| NO | 1.1 % | 0.9 % | 0.8 % |

| Worst-Case Far-End Crosstalk AirMax VS® wired for differential | | | |
|---|--|--|--|
| | 55ps (20-80%) 80ps (10-90%) | 105ps (20-80%) 150ps (10-90%) | 150ps (20-80%) 220ps (10-90%) |
| AB | 1.5 % | 1.0 % | 0.7 % |
| BC | 0.9 % | 0.6 % | 0.5 % |
| DE | 2.7 % | 1.5 % | 1.1 % |
| EF | 1.8 % | 0.9 % | 0.6 % |
| GH | 2.4 % | 1.4 % | 1.0 % |
| HI | 1.7 % | 0.9 % | 0.7 % |
| JK | 2.3 % | 1.3 % | 0.9 % |
| KL | 1.5 % | 0.8 % | 0.6 % |
| MN | 1.3 % | 0.8 % | 0.6 % |
| NO | 0.5 % | 0.4 % | 0.3 % |

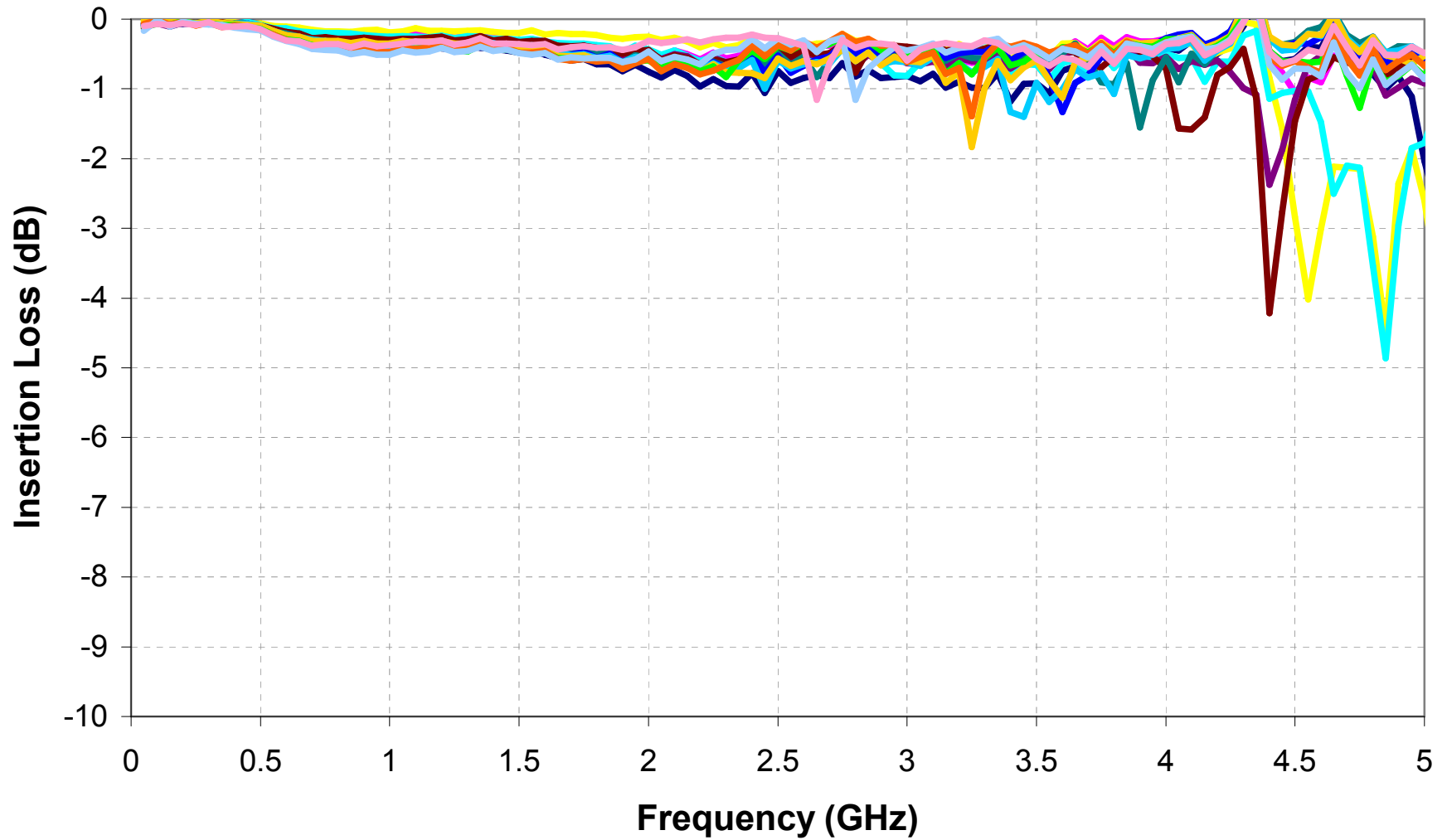
Note: The multi-pair active crosstalk shown above is calculated as the sum of the absolute values of the single-pair active crosstalk peaks from each adjacent pair. This is sometimes referred to as “asynchronous” crosstalk, and must be interpreted as the absolute worst-case value.

Single-Ended Impedance

Rise Time: 150ps (20-80%) = 220ps (10-90%)

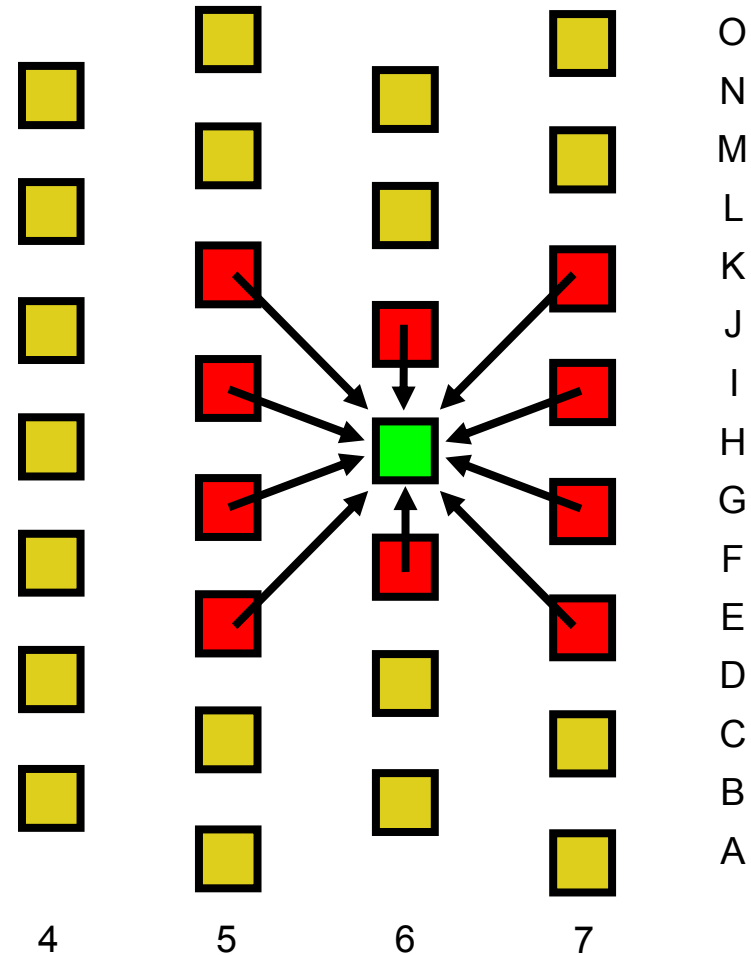


Single-Ended Insertion Loss



Example of Worst-Case Multi-Active Crosstalk Measurement for H6

Includes peak crosstalk from lines E5, G5, I5, K5, F6, J6, E7, G7, I7, and K7.



Note: The multi-active crosstalk shown in this table is calculated as the sum of the absolute values of the single-active crosstalk peaks from each adjacent signal. This is sometimes referred to as “asynchronous” crosstalk, and must be interpreted as the absolute worst-case value.

| Worst-Case Multi-Active Crosstalk AirMax VS[®] wired for single-ended | | |
|---|--|--|
| | Near-End | Far-End |
| | 150ps(20-80%) 220ps(10-90%) | 150ps(20-80%) 220ps(10-90%) |
| A | 5.0 % | 2.0 % |
| B | 7.3 % | 2.9 % |
| C | 7.3 % | 2.4 % |
| D | 7.4 % | 2.4 % |
| E | 6.0 % | 2.6 % |
| F | 6.2 % | 2.4 % |
| G | 7.2 % | 2.9 % |
| H | 7.6 % | 2.9 % |
| I | 8.0 % | 2.5 % |
| J | 8.7 % | 2.8 % |
| K | 6.6 % | 2.6 % |
| L | 7.6 % | 2.7 % |
| M | 8.0 % | 2.8 % |
| N | 7.8 % | 2.8 % |
| O | 4.2 % | 1.7 % |