Sample: 1.65Gbps DVI
35m 22AWG STP CABLE

EYE DIAGRAM AFTER MAX3815 RECEIVE EQ

MAX3815 OUTPUT AT 1.65Gbps

JITTER = 190ps
$2^{10} - 1$ PRBS
AT 1.65Gbps

100ps/div

ADDITIVE DIFFERENTIAL JITTER

> 0.2UIp-p
DUE TO
DIFF-TO-CM CONVERSION

FAIL

ADDITIVE DIFFERENTIAL JITTER
< 0.1UIp-p
DUE TO
DIFF-TO-CM CONVERSION

PASS

DIFF-TO-CM CONVERSION (dB)
= DIFF-TO-CM (SCD21) - DIFF-TO-DIFF (SDD21)

0           250     500    750    1000   1250   1500   1750  2000
SKEW (ps)
SKEW (mUI)

0 100 200 300 400 500 600 700 800 900 1000 1100 1200
JITTER = 190ps

210 - 1 PRBS
AT 1.65Gbps

ADDITIVE DIFFERENTIAL JITTER

< 0.1UIp-p
DUE TO
DIFF-TO-CM CONVERSION

DIFF-TO-CM CONVERSION (dB)

= DIFF-TO-CM (SCD21) - DIFF-TO-DIFF (SDD21)

12.5MHz = 0.05 x min bit rate
165MHz = 0.1 x max bit rate
330MHz = 0.2 x max bit rate
660MHz = 0.4 x max bit rate
990MHz = 0.6 x max bit rate
1320MHz = 0.8 x max-bitrate

TEST FREQUENCY (MHz)

INTRAPAIR SKEW
FROM DC TO 2GHz

0 100 200 300 400 500 600 700 800 900 1000 1100 1200
SKEW (ps) OR (mUI)

0 100 200 300 400 500 600 700 800 900 1000 1100 1200
35m STP
22AWG, D2