



# Test Report of HDMI cable

28AWG \* 4M

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2009/5/23

## .Test Equipments Information

ID	Product and Serial Number	Description with series number	Manufacture
1	E5071B()	S-parameter Network Analyzer	Agilent
2	DSA8200(B020709)	Time Domain Reflector(TDR)	Tektronix

## .Device Under Test(DUT) Information

Length(m)	4	Tested Pairs	4	Pairs
Temperature	20	°C	Humidity	40
Batch Number		Bundle Number		%
Testing following	HDMI			
Comments	28AWG HDMI Cable 4.0M			
Technician	System Manager	Test Result	<b>Pass</b>	

## .Tested Parameters List

.-HDMI Cat2 TDR IL	Pass
.-HDMI Cat2 TDR FEXT	Pass
.-HDMI Cat2 Cable Absolute Impedance	Pass
.-HDMI Cat2 Transition Area Impedance	Pass
.-HDMI Cat2 Differential Delay	Pass
.-HDMI Cat2 Inter Pair Skew	Pass
.-HDMI Cat2 Intra Pair Skew	Pass

**Summary Result**

**HDMI Cat2 TDR IL summary result.**

Start	Stop	Lim From	Lim To	P1	P2	P3	P4
1	825	-5	-5	-4.75	-4.25	-4.3	-4.58
825	2475	-5	-12	-8.28	-8.35	-8.33	-8.93
2475	4125	-12	-20	-10.16	-10.84	-10.63	-11.47
4125	5100	-20	-25	-12.25	-13.66	-13.19	-14.26
MHz	MHz	dB	dB	Pass	Pass	Pass	Pass

**HDMI Cat2 TDR FEXT summary result.**

Start	Stop	Lim From	Lim To	P1-P2	P1-P3	P1-P4	P2-P3	P2-P4	P3-P4
1	5000	-20	-20	-43.8	-44.06	-43.35	-45.08	-41.13	-43.15
MHz	MHz	dB	dB	Pass	Pass	Pass	Pass	Pass	Pass

**HDMI Cat2 Cable Absolute Impedance summary result @ 200 ps, (Low:10 %, High:90 %)**

Pair Num	Result	Spc Max	Spc Min	Max value	Min Value	△Value	Avg	Unit
P1	Pass	110	90	102.72	101.77	0.95	102.24	Ohms
P2	Pass	110	90	103.82	101.82	2.00	102.82	Ohms
P3	Pass	110	90	103.1	101.65	1.45	102.38	Ohms
P4	Pass	110	90	102.3	100.6	1.70	101.45	Ohms

**HDMI Cat2 Transition Area Impedance summary result @ 200 ps, (Low:10 %, High:90 %)**

Pair Num	Result	Spc Max	Spc Min	Max value	Min Value	△Value	Avg	Unit
P1	Pass	125	75	102.17	93.83	8.34	98	Ohms
P2	Pass	125	75	102.04	91.62	10.42	96.83	Ohms
P3	Pass	125	75	101.89	93.72	8.17	97.8	Ohms
P4	Pass	125	75	104.47	91.89	12.58	98.18	Ohms

**HDMI Cat2 Differential Delay summary result @ 200 ps, (Low:10 %, High:90 %)**

Pair Num	Result	Spc Max	Value	Unit
P1	Pass	5.05	4.6083	ns/m
P2	Pass	5.05	4.5921	ns/m
P3	Pass	5.05	4.6275	ns/m
P4	Pass	5.05	4.6387	ns/m

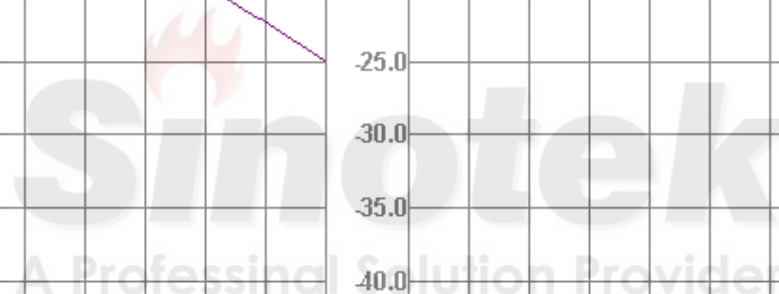
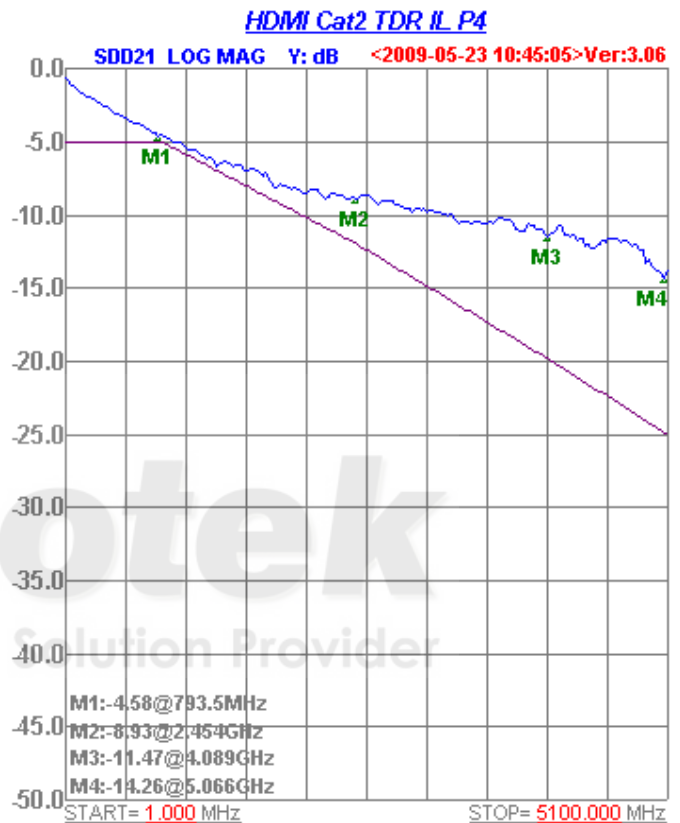
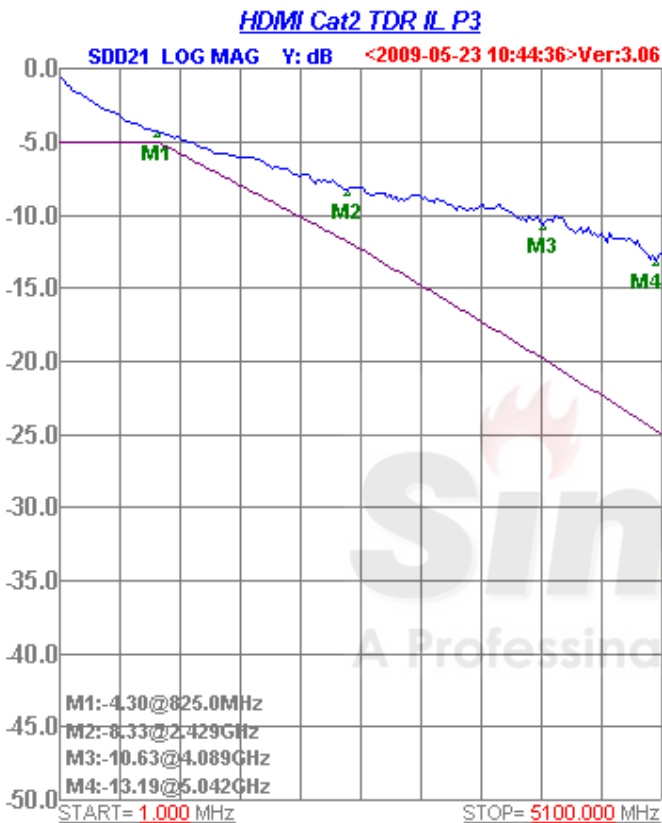
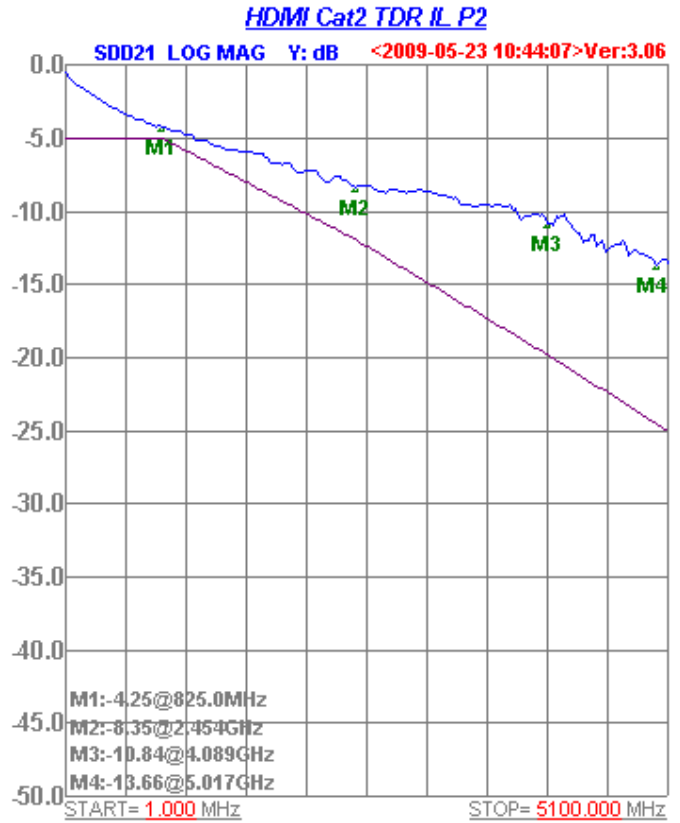
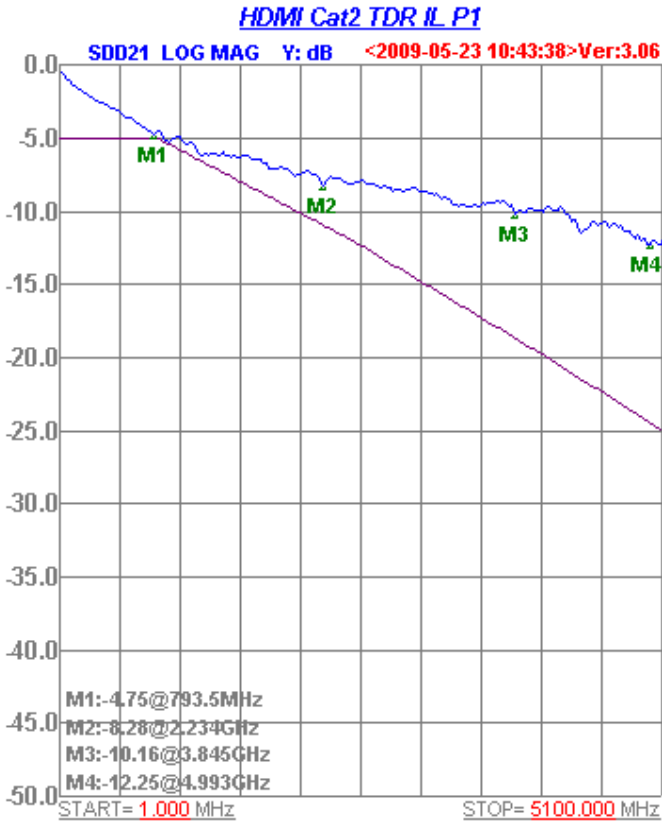
**HDMI Cat2 Inter Pair Skew summary result @ 200 ps, (Low:10 %, High:90 %)**

Pair Num	Result	Spc Max	Value	Unit
All	Pass	1780	181.49	ps

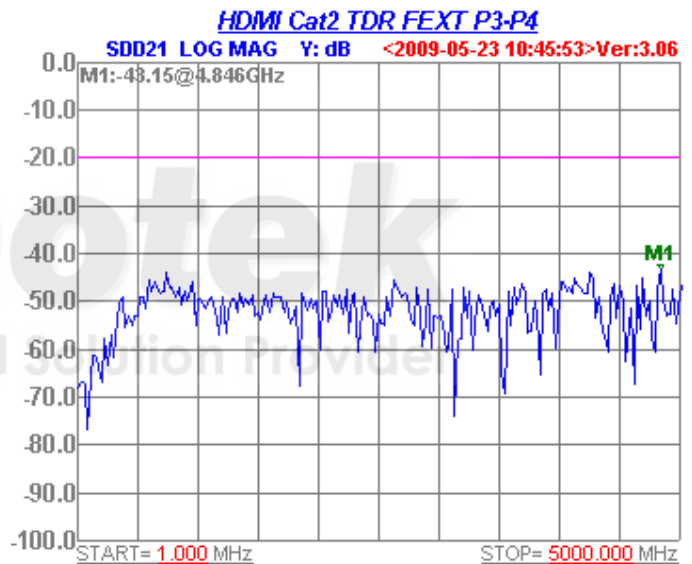
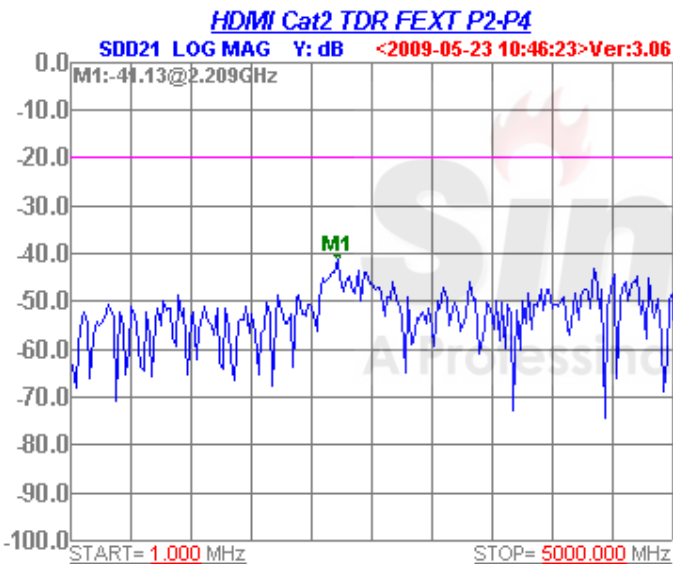
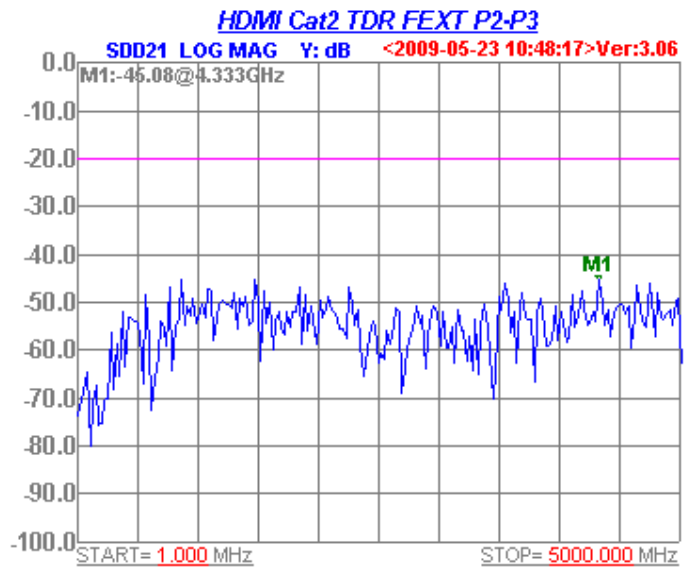
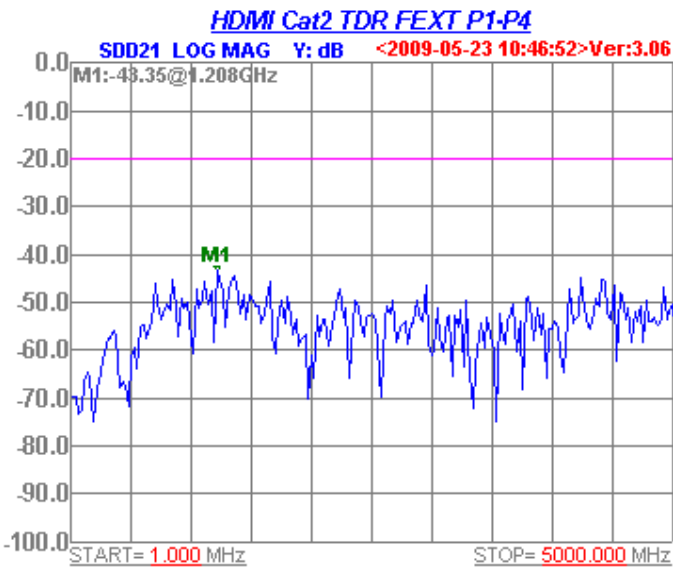
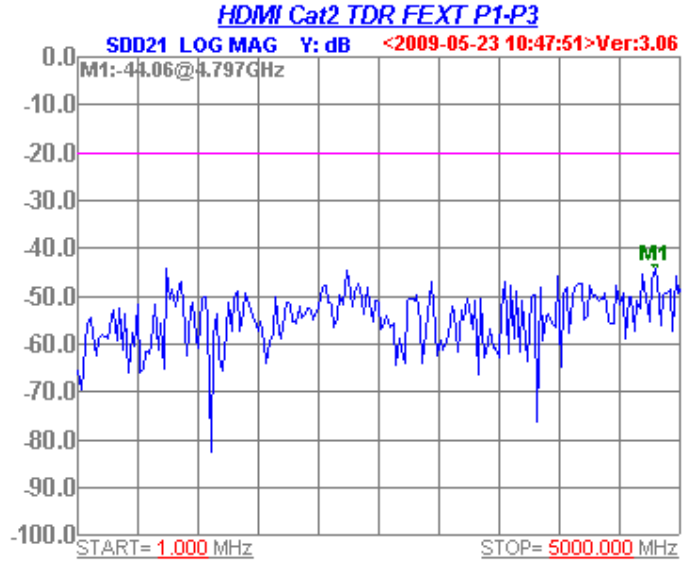
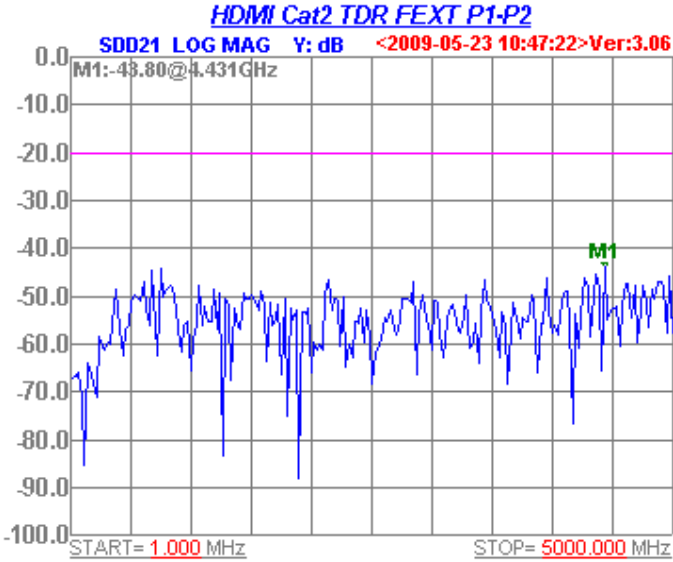
**HDMI Cat2 Intra Pair Skew summary result @ 200 ps, (Low:10 %, High:90 %)**

Pair Num	Result	Spc Max	Value	Unit
P1	Pass	112	-93.23	ps
P2	Pass	112	7.77	ps
P3	Pass	112	20.45	ps
P4	Pass	112	87.96	ps

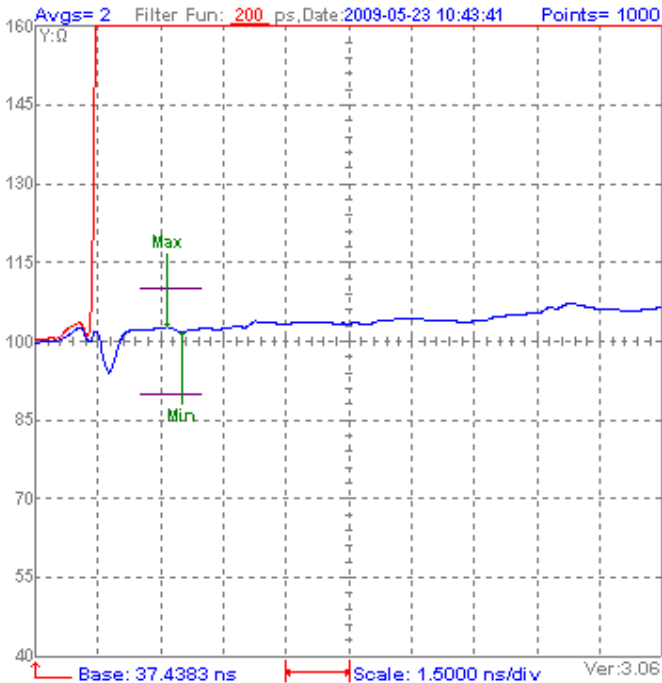
HDMI Cat2 TDR IL Graphic result



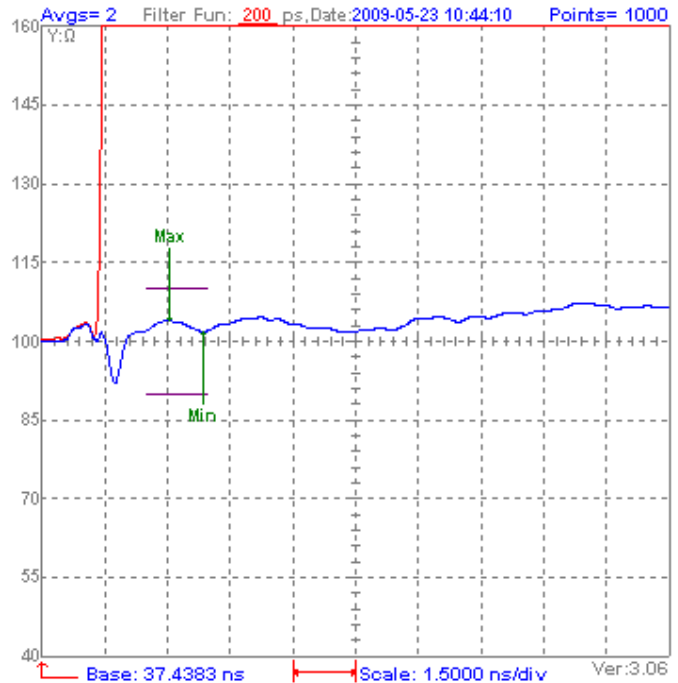
**HDMI Cat2 TDR FEXT Graphic result**



**HDMI Cat2 Cable Absolute Impedance Graphic result**



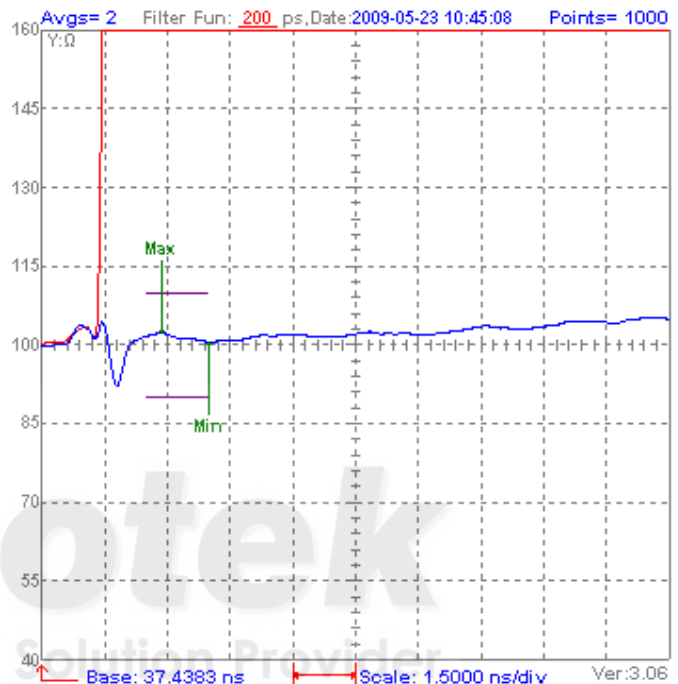
Parameter Name: <b>HDMI Cat2 Cable Absolute Impedance P1</b>	
Spec Max: <b>110</b> Ω	Spec Min: <b>90</b> Ω
Max: <b>102.72</b> Ohms at <b>40.5883</b> ns	Min: <b>101.77</b> Ohms at <b>40.9333</b> ns
Δ Ω: <b>0.95</b>	Avg: <b>102.24</b> Ohms
Result: <b>Pass</b>	



Parameter Name: <b>HDMI Cat2 Cable Absolute Impedance P2</b>	
Spec Max: <b>110</b> Ω	Spec Min: <b>90</b> Ω
Max: <b>103.82</b> Ohms at <b>40.4833</b> ns	Min: <b>101.82</b> Ohms at <b>41.2933</b> ns
Δ Ω: <b>1.99</b>	Avg: <b>102.82</b> Ohms
Result: <b>Pass</b>	

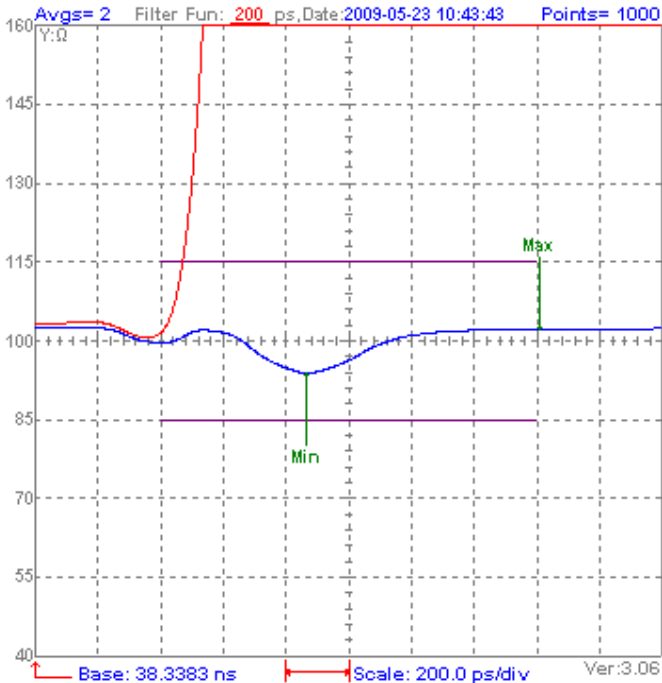


Parameter Name: <b>HDMI Cat2 Cable Absolute Impedance P3</b>	
Spec Max: <b>110</b> Ω	Spec Min: <b>90</b> Ω
Max: <b>103.10</b> Ohms at <b>40.3483</b> ns	Min: <b>101.65</b> Ohms at <b>39.9283</b> ns
Δ Ω: <b>1.44</b>	Avg: <b>102.38</b> Ohms
Result: <b>Pass</b>	

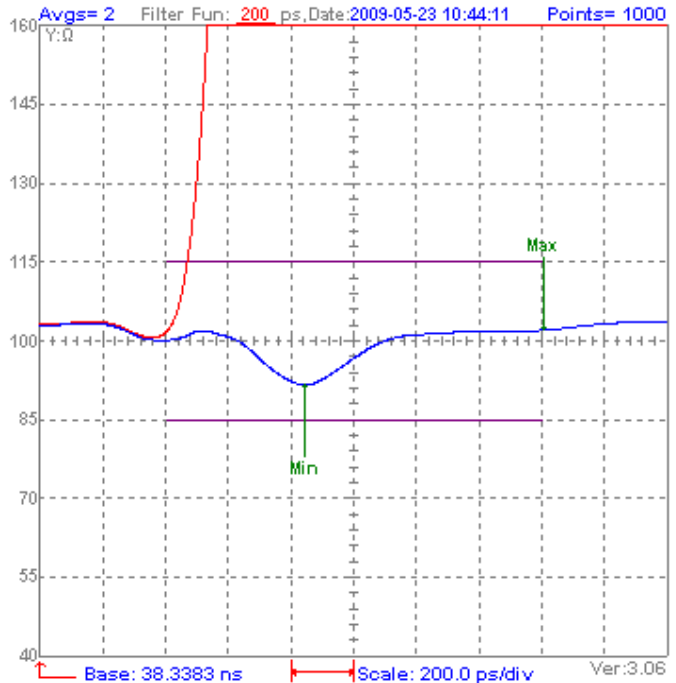


Parameter Name: <b>HDMI Cat2 Cable Absolute Impedance P4</b>	
Spec Max: <b>110</b> Ω	Spec Min: <b>90</b> Ω
Max: <b>102.30</b> Ohms at <b>40.2883</b> ns	Min: <b>100.60</b> Ohms at <b>41.4283</b> ns
Δ Ω: <b>1.70</b>	Avg: <b>101.45</b> Ohms
Result: <b>Pass</b>	

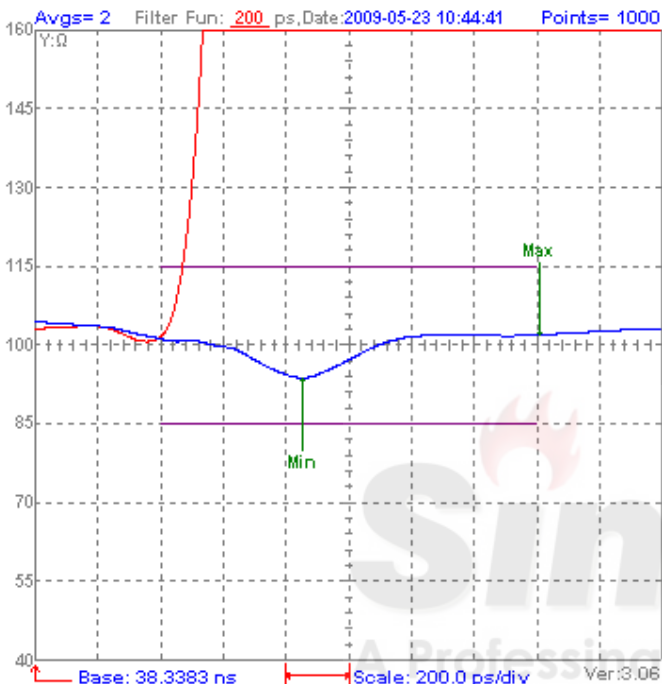
**HDMI Cat2 Transition Area Impedance Graphic result**



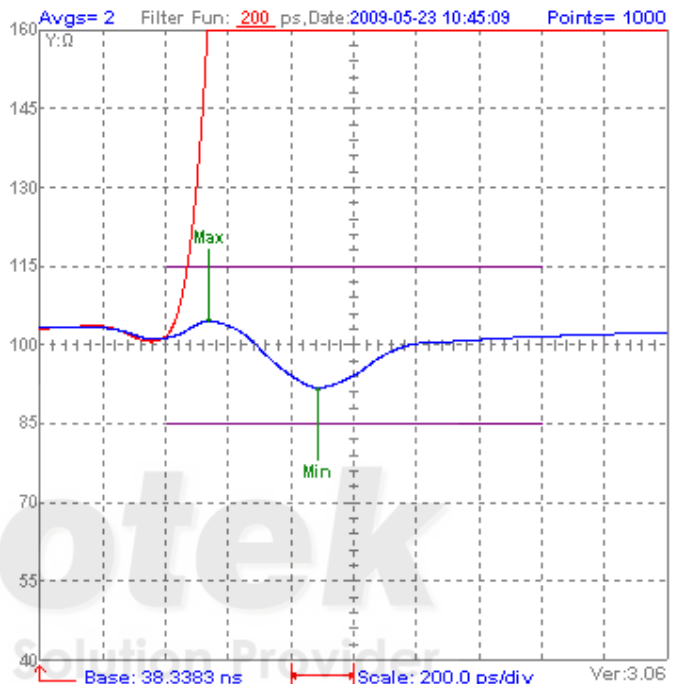
Parameter Name: <b>HDMI Cat2 Transition Area Impedance P1</b>	
Spe Max: <u>115</u> Ω;Ext: <u>125</u> Ω	Spe Min: <u>85</u> Ω;Ext: <u>75</u> Ω
Max: <u>102.17</u> Ohms at <u>39.9423</u> ns	Min: <u>93.83</u> Ohms at <u>39.2043</u> ns
Δ Ω: <u>8.34</u>	Avg: <u>98.00</u> Ohms
Duration Max: <u>250</u> ps	Result: <u>Pass</u>



Parameter Name: <b>HDMI Cat2 Transition Area Impedance P2</b>	
Spe Max: <u>115</u> Ω;Ext: <u>125</u> Ω	Spe Min: <u>85</u> Ω;Ext: <u>75</u> Ω
Max: <u>102.04</u> Ohms at <u>39.9423</u> ns	Min: <u>91.62</u> Ohms at <u>39.1843</u> ns
Δ Ω: <u>10.42</u>	Avg: <u>96.83</u> Ohms
Duration Max: <u>250</u> ps	Result: <u>Pass</u>

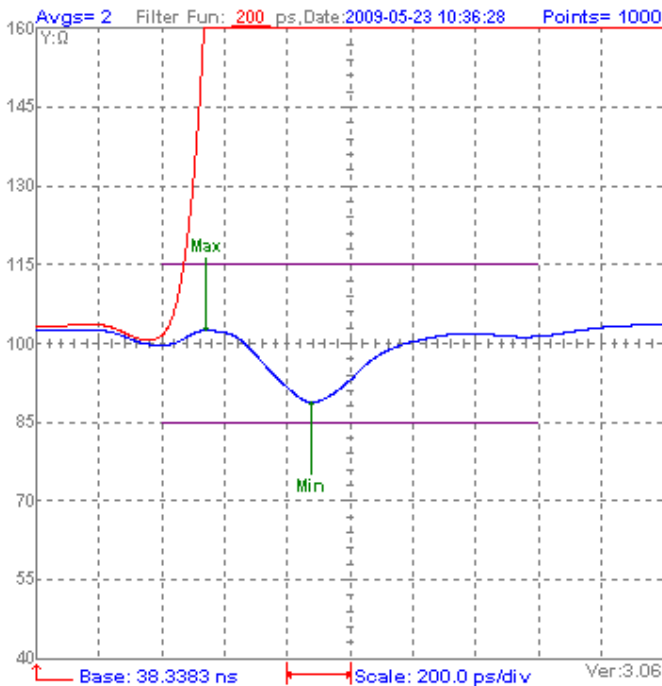


Parameter Name: <b>HDMI Cat2 Transition Area Impedance P3</b>	
Spe Max: <u>115</u> Ω;Ext: <u>125</u> Ω	Spe Min: <u>85</u> Ω;Ext: <u>75</u> Ω
Max: <u>101.89</u> Ohms at <u>39.9423</u> ns	Min: <u>93.72</u> Ohms at <u>39.1903</u> ns
Δ Ω: <u>8.17</u>	Avg: <u>97.80</u> Ohms
Duration Max: <u>250</u> ps	Result: <u>Pass</u>

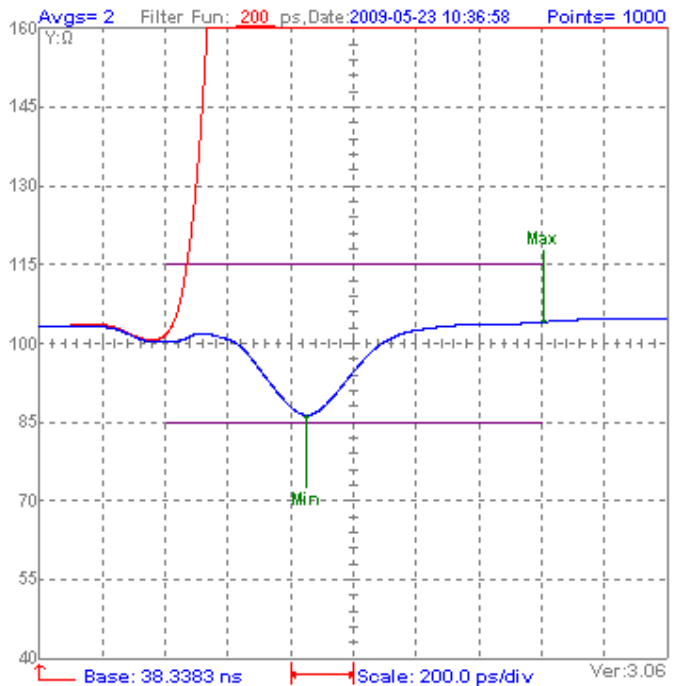


Parameter Name: <b>HDMI Cat2 Transition Area Impedance P4</b>	
Spe Max: <u>115</u> Ω;Ext: <u>125</u> Ω	Spe Min: <u>85</u> Ω;Ext: <u>75</u> Ω
Max: <u>104.47</u> Ohms at <u>38.8783</u> ns	Min: <u>91.89</u> Ohms at <u>39.2263</u> ns
Δ Ω: <u>12.59</u>	Avg: <u>98.18</u> Ohms
Duration Max: <u>250</u> ps	Result: <u>Pass</u>

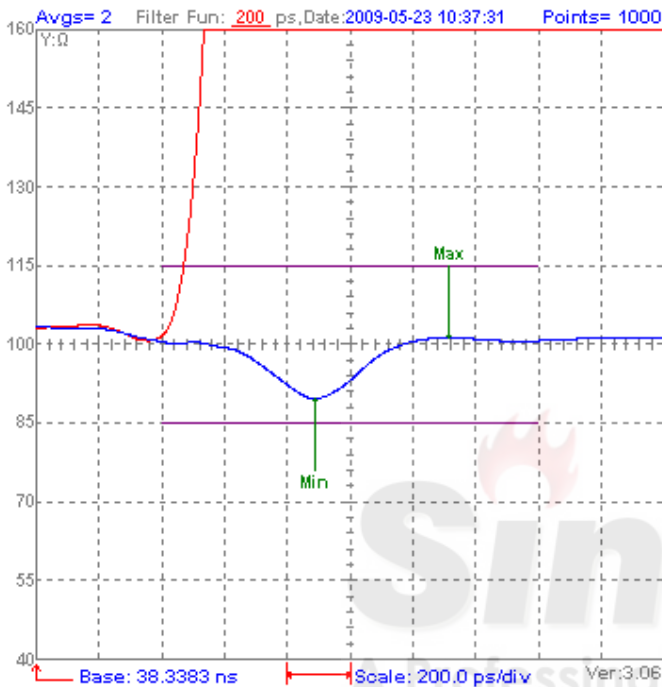
**HDMI Cat2 Transition Area Impedance Graphic result**



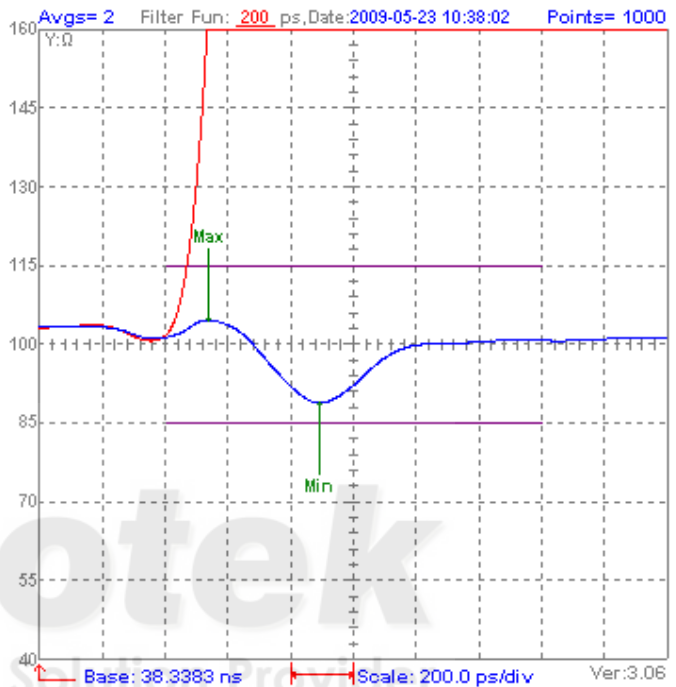
Parameter Name: HDMI Cat2 Transition Area Impedance P1	
Spe Max: 115 Ω; Ext: 125 Ω	Spe Min: 85 Ω; Ext: 75 Ω
Max: 102.45 Ohms at 38.8803 ns	Min: 88.80 Ohms at 39.2163 ns
Δ Ω: 13.65	Avg: 95.62 Ohms
Duration Max: 250 ps	Result: Pass



Parameter Name: HDMI Cat2 Transition Area Impedance P2	
Spe Max: 115 Ω; Ext: 125 Ω	Spe Min: 85 Ω; Ext: 75 Ω
Max: 104.07 Ohms at 39.9423 ns	Min: 86.36 Ohms at 39.1903 ns
Δ Ω: 17.71	Avg: 95.22 Ohms
Duration Max: 250 ps	Result: Pass



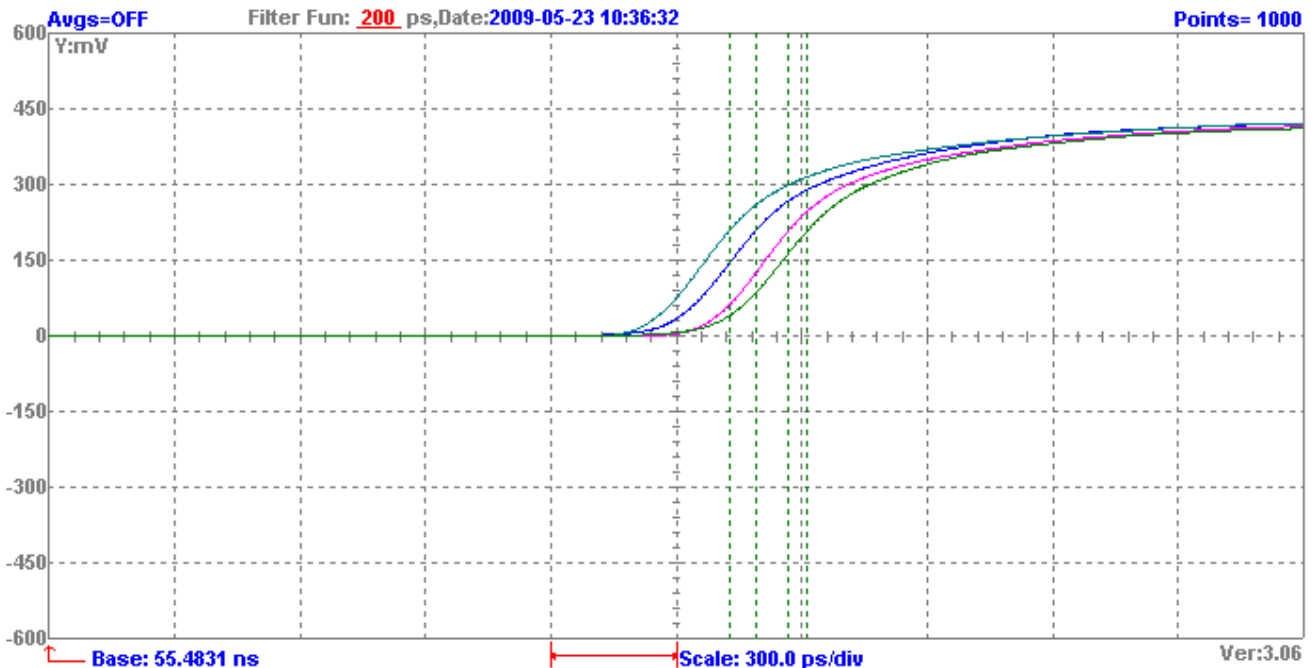
Parameter Name: HDMI Cat2 Transition Area Impedance P3	
Spe Max: 115 Ω; Ext: 125 Ω	Spe Min: 85 Ω; Ext: 75 Ω
Max: 101.29 Ohms at 39.6523 ns	Min: 89.66 Ohms at 39.2243 ns
Δ Ω: 11.63	Avg: 95.48 Ohms
Duration Max: 250 ps	Result: Pass



Parameter Name: HDMI Cat2 Transition Area Impedance P4	
Spe Max: 115 Ω; Ext: 125 Ω	Spe Min: 85 Ω; Ext: 75 Ω
Max: 104.60 Ohms at 38.8763 ns	Min: 88.83 Ohms at 39.2303 ns
Δ Ω: 15.76	Avg: 96.71 Ohms
Duration Max: 250 ps	Result: Pass

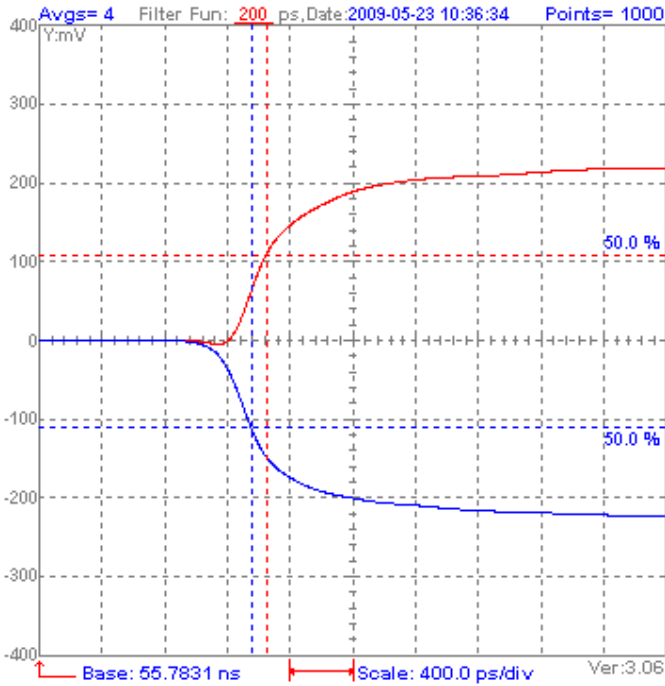


**HDMI Cat2 Inter Pair Skew Graphic result**

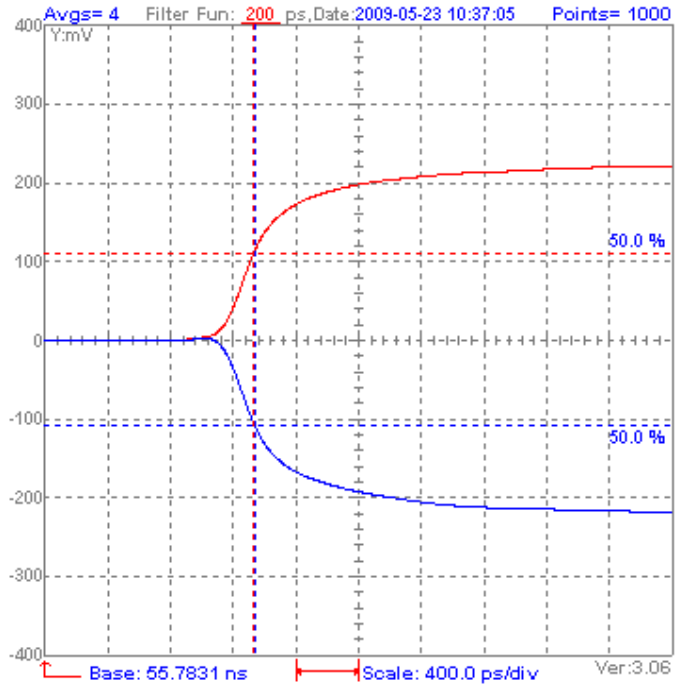


Parameter Name: <b>HDMI Cat2 Inter Pair Skew</b>	
Spc Inter Skew: <b>1780.00</b> ps, DUT Length: <b>4</b> meters	
Max Line: <b>57.2929</b> ns	Min Line: <b>57.1114</b> ns
Mode: <b>TDI Method</b>	$\Delta$ Value: <b>0.1815</b> ns
Skew: <b>181.49</b> ps	Result: <b>Pass</b>

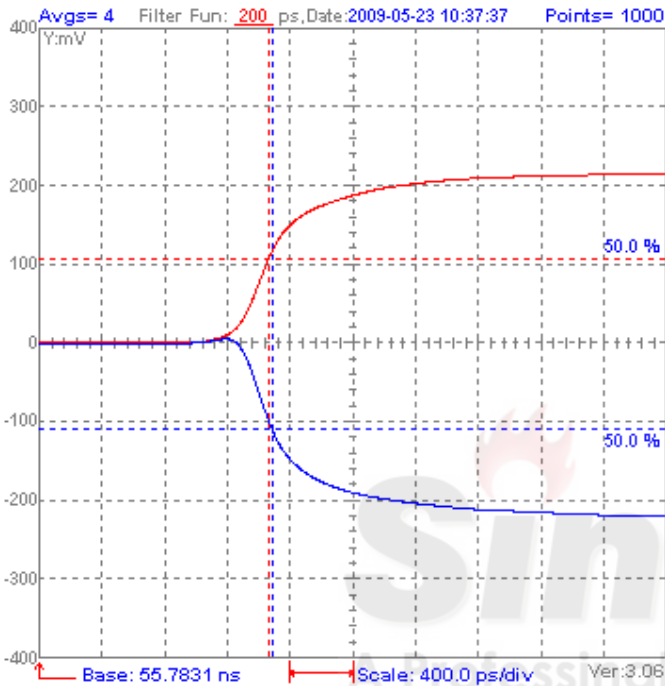
**HDMI Cat2 Intra Pair Skew Graphic result**



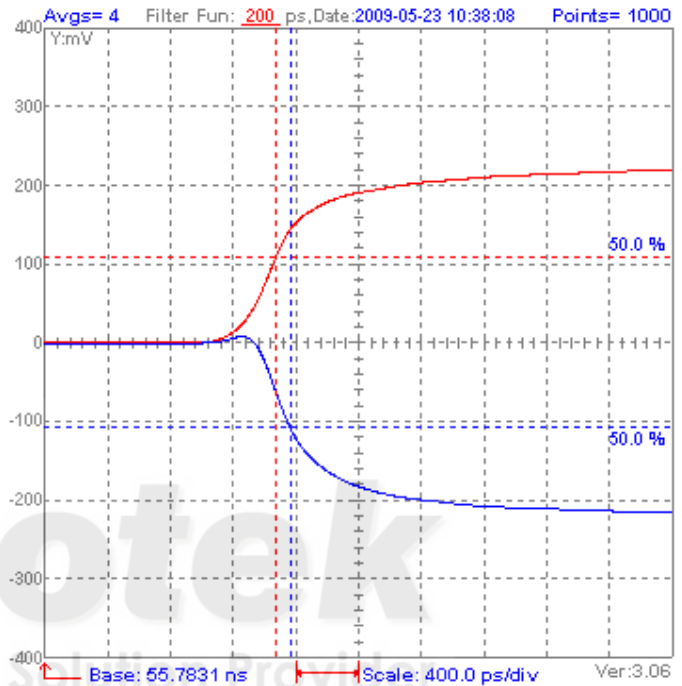
Parameter Name: <b>HDMI Cat2 Intra Pair Skew P1</b>	
Spc Skew: <u>112.0</u> ps, DUT Length: <u>4</u> meters	
Mode: TDT Method, Relative: 50%	
Δ Value: <u>93.23</u> ps	Skew: <u>-93.2</u> ps
Result: <b>Pass</b>	



Parameter Name: <b>HDMI Cat2 Intra Pair Skew P2</b>	
Spc Skew: <u>112.0</u> ps, DUT Length: <u>4</u> meters	
Mode: TDT Method, Relative: 50%	
Δ Value: <u>7.77</u> ps	Skew: <u>7.8</u> ps
Result: <b>Pass</b>	



Parameter Name: <b>HDMI Cat2 Intra Pair Skew P3</b>	
Spc Skew: <u>112.0</u> ps, DUT Length: <u>4</u> meters	
Mode: TDT Method, Relative: 50%	
Δ Value: <u>20.45</u> ps	Skew: <u>20.5</u> ps
Result: <b>Pass</b>	



Parameter Name: <b>HDMI Cat2 Intra Pair Skew P4</b>	
Spc Skew: <u>112.0</u> ps, DUT Length: <u>4</u> meters	
Mode: TDT Method, Relative: 50%	
Δ Value: <u>87.96</u> ps	Skew: <u>88.0</u> ps
Result: <b>Pass</b>	