

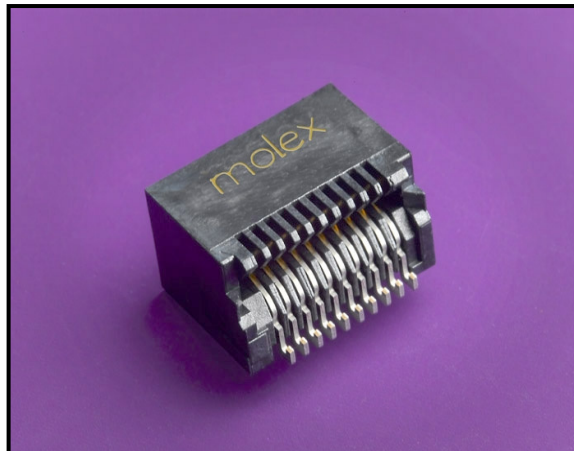
## MODEL SUMMARY

An SFP+ application, defined by SFF-8431, could be an electrical-to-optical module or an electrical-to-electrical device such as a passive cable. SFP+ applications are intended to support Datacom applications. Examples of these applications are 10 Gbps Ethernet, 8.5 Gbps Fibre Channel, 10.51 Gbps Fibre Channel, 10 Gbps Ethernet with FEC and Telecom (SONET OC-192 and G.709 "OTU-2").

The SFF-8083 specification defines the SFP/SFP+ host connector. It includes both the dimensional requirements and the high-speed signal integrity requirements.

The SFF-8432 specification defines the requirements for the improved SFP+ cage and modules in order to address EMC compliance.

### SFP / SFP+ Host Connector



Further information regarding this connector series and other related Molex SFP+ connectors can be found at <http://www.molex.com/>.

## APPLICABLE PART NUMBERS: 74441-0001,-0004,-0010,-0014,-0021,-0031

<b>MODEL TYPE:</b> S-parameter	<b>MODEL FORMAT:</b> Touchstone (*.snp)
<b>MODEL FILENAME:</b> EE-74441-003.s8p	
<b>MODEL BASIS:</b> Measurement	<b>MODEL SOURCE:</b> Agilent E8364B & N4421 4-port PNA
<b>BANDWIDTH:</b> 10MHz - 20.48 GHz	<b>RESOLUTION:</b> 10 MHz steps
<b>REFERENCE:</b> 50 ohms	<b>NUMBER OF POINTS:</b> 2048
<b>NUMBER OF CHANNELS:</b> 2 differential	<b>NUMBER OF PORTS:</b> 8 single-ended
<b>CHANNEL TYPE:</b> Coupled pairs + reference	<b>VALIDATION:</b> Yes
<b>MODEL APPLICATION:</b> SFP & SFP+ (SFF-8431)	<b>MAX. DATA RATE:</b> 11.10 Gbps

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<b>REVISION:</b> <b>A</b>	<b>ECN INFORMATION:</b> <b>EC No:</b> UCP2007-XXXX <b>DATE:</b> 2007 / 8 / 13	<b>TITLE:</b> <b>SFP/ SFP+ Host Connector Model</b> <b>MOLEX CONFIDENTIAL</b>	<b>SHEET No.</b> <b>1 of 6</b>
<b>DOCUMENT NUMBER:</b> <b>EE-74441-003</b>	<b>CREATED / REVISED BY:</b> <b>P. Casher</b>	<b>CHECKED BY:</b> <b>D. Stevenson</b>	<b>APPROVED BY:</b> <b>D. Dunham</b>
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## TERMINAL TO MODEL PORT MAPPING TABLE

### Available Model Signal Paths

Terminals	Input Ports	Description	Output Ports	Description
12	1	RD-, Host Board	2	RD-, Module Board
13	3	RD+, Host Board	4	RD+, Module Board
18	5	TD+, Host Board	6	TD+, Module Board
19	7	TD-, Host Board	8	TD-, Module Board

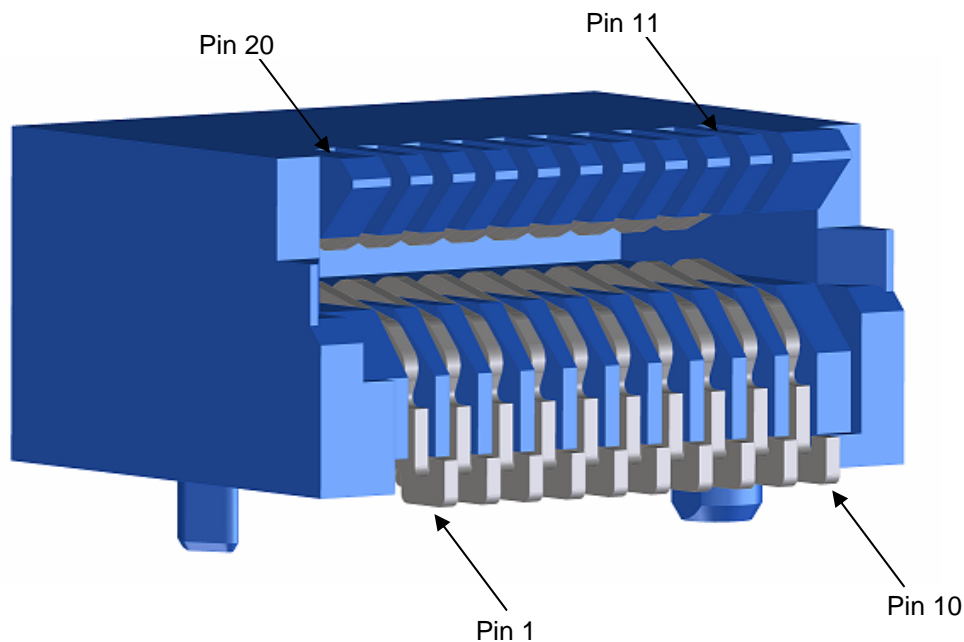
### Non-available Signal Paths

Terminals
1,2,3,4,5,6,7,8,9,10 11,14,15,16,17,20

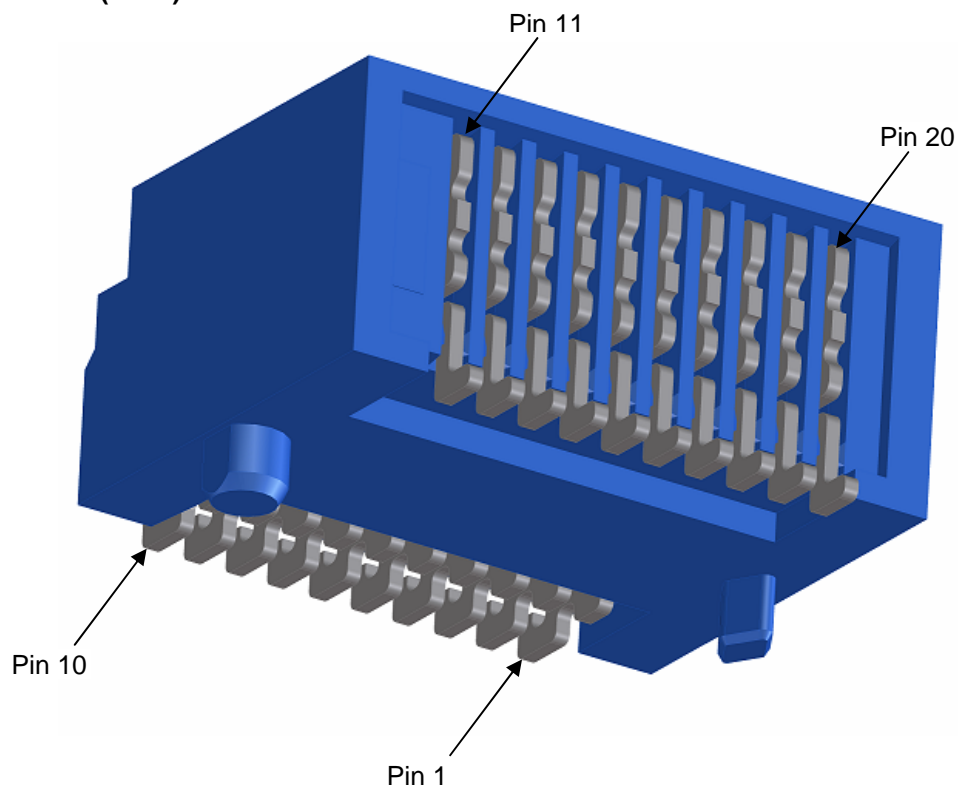
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## PART ILLUSTRATIONS

**View A  
Front**



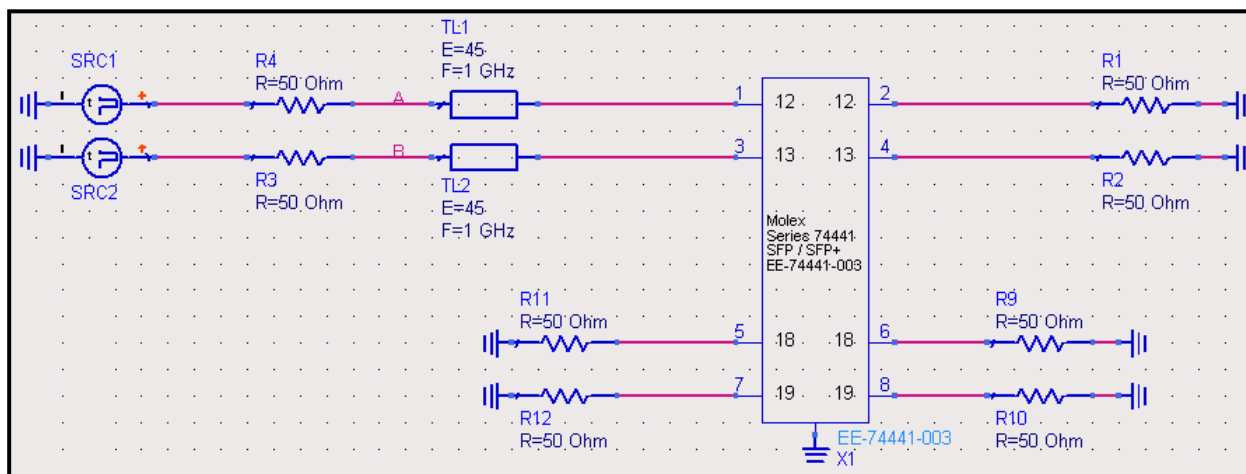
**View B  
Reverse (Back)**



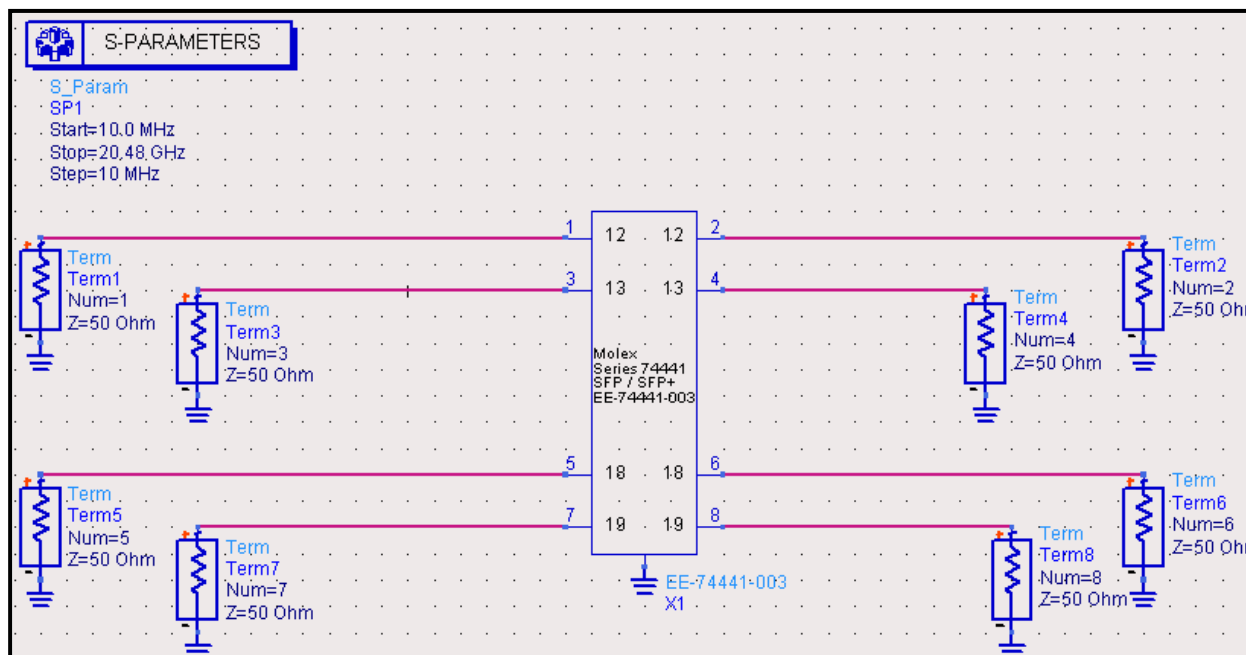
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## REFERENCE SCHEMATICS

### Time Domain Schematic



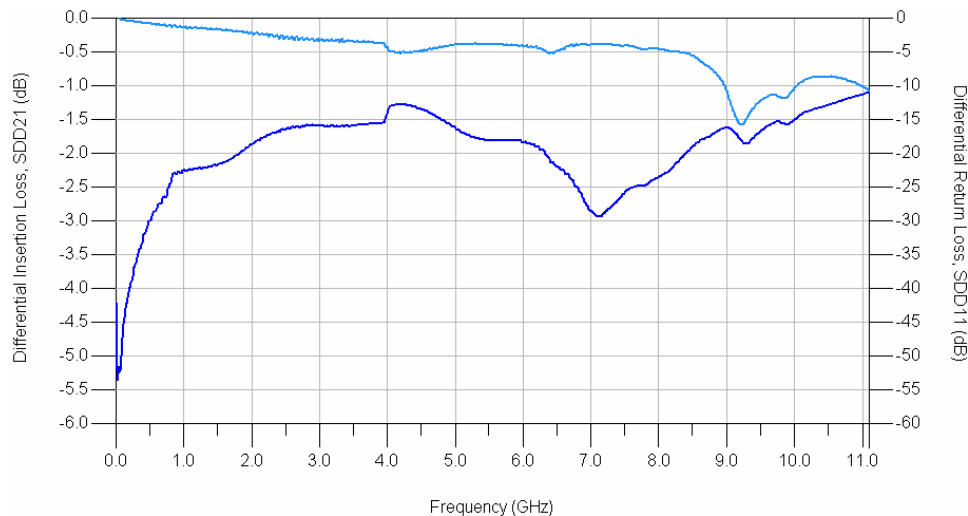
### Frequency Domain Schematic



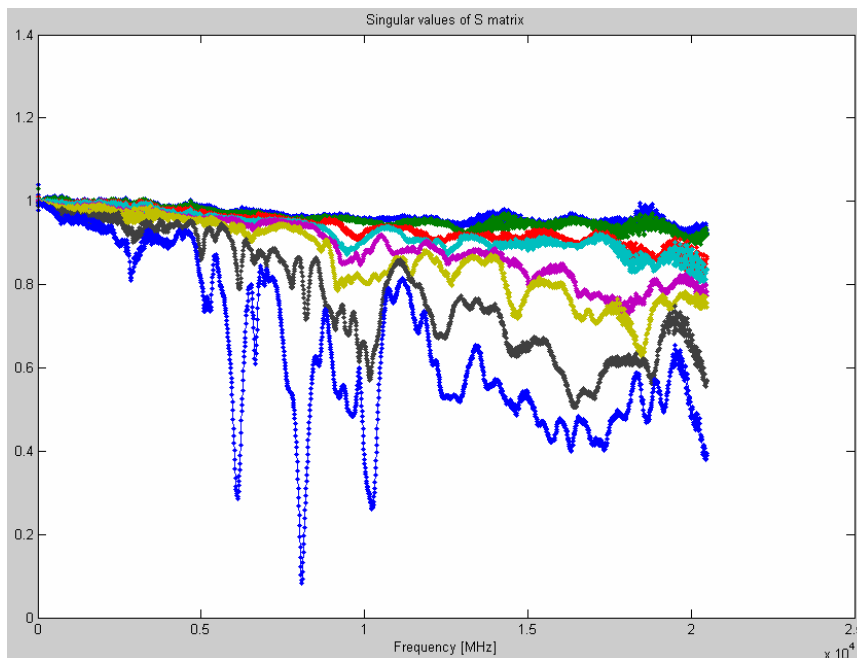
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## REFERENCE RESULTS

### Differential Frequency Domain Insertion and Return Loss



### Passivity



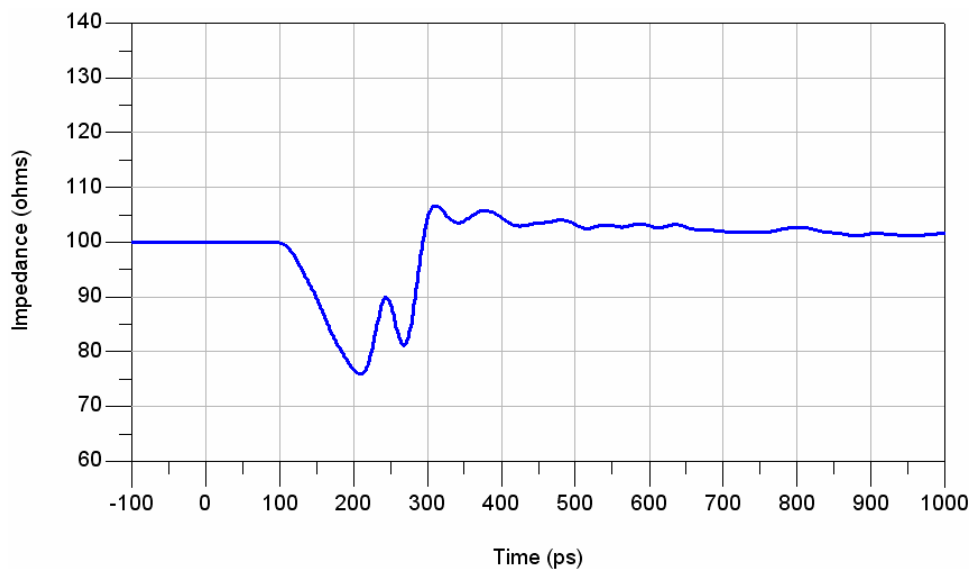
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## REFERENCE RESULTS

### Differential Time Domain

#### TDR Response

- Based on Reference Time Domain Schematic
- Rise-time of 25ps (20-80%)



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