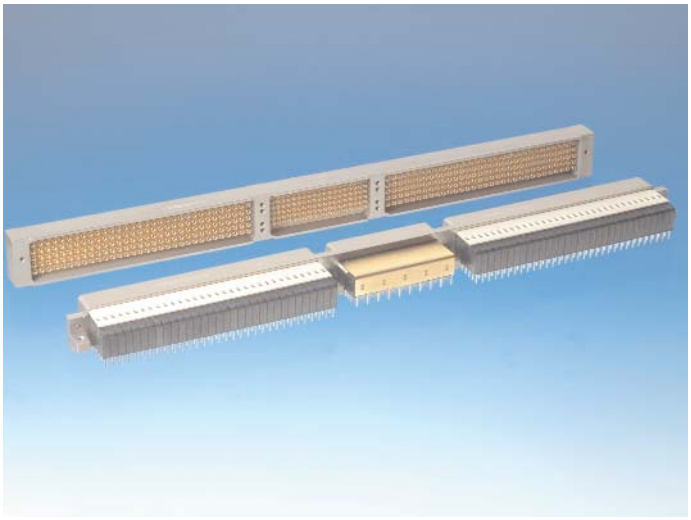


VME64x Ruggedized Connectors

- COTS and custom applications
- Designed for severe environments with high levels of shock and vibration
- Compatible with IEEE-1101.2 -1992*
- Complies with ANSI/VITA 1.7 high current standard for VME64x
- Stackable design of high speed modules feature round pins to mate with Hypertac® contacts
- Optimized lead traces within modules provide superior performance in high speed applications
- Aluminum frames for ruggedness and conduction cooling
- Keying feature assures proper mating

General Specifications

	P1 / P2	P0	J1 / J2	J0
Design criteria	IEEE-1101.2 1992			
Contact gender	Male pin		Hypertac .5mm socket	Hypertac .4mm socket
Contact termination style	Solder tail		Solder or press-fit	
Contact spacing	2.54 mm (5 row)	2 mm (6 row 5 + 1 shield row)	2.54 mm (5 row)	2 mm (6 row)
Contact current rating	2.5 amps	1 amp	2.5 amps	1 amp
Temperature range	minus -55 C to + 125 C			
Insulation resistance	>5000 megohm			
Insulator material	30 % glass filled LCP			
Flammability rating	94 V-O			
Pin contact material	BeCu			
Socket contact material			BeCu wires / brass body	
Plating mating contacts	50 micro-inch gold / 50 micro-inch nickel			
Plating contact termination	Tin lead (60- 40) / 50 micro inch nickel (MIL-P-81728)			
Suggested PCB hole diameter solder tail	1.00 mm +/- 0.05 mm after plating	0.75 mm +/- 0.05 mm after plating	1.00 mm +/- 0.05 mm after plating	0.60 mm +/- 0.05 mm after plating
Suggested PCB hole press fit compliant tail			1.00mm +/- 0.05 after plating	0.70 mm +/- 0.05 mm after plating

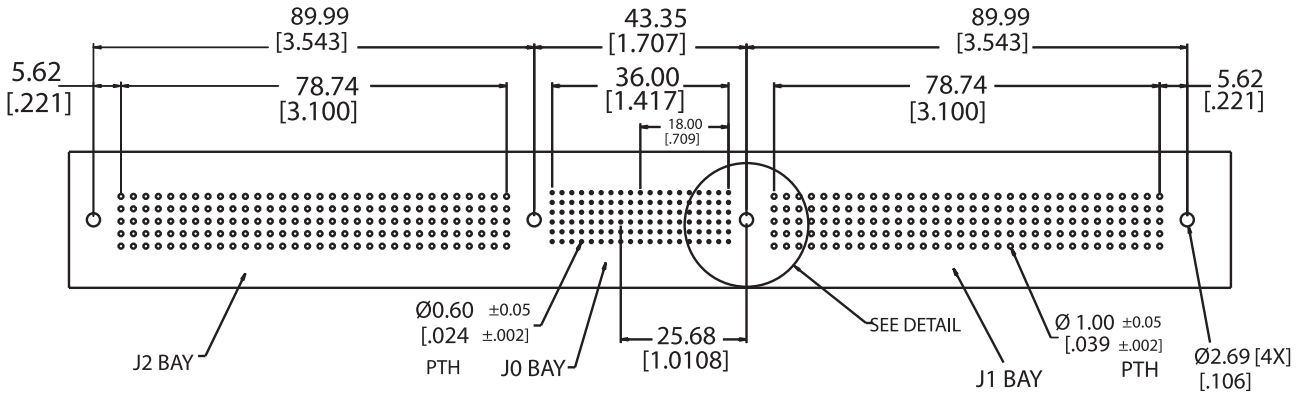
3D CONFIG

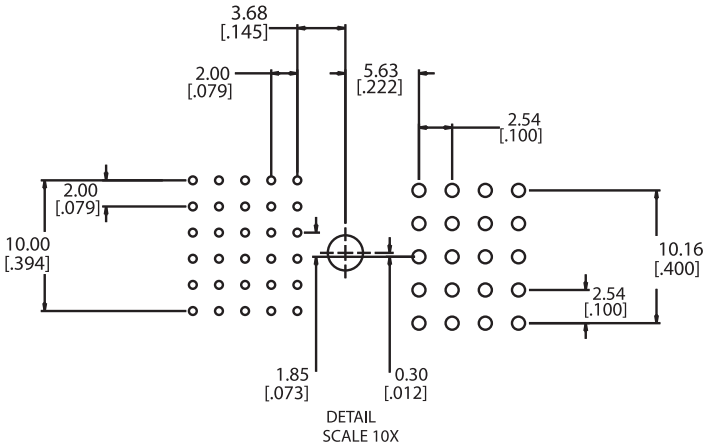
Configure and download 3D connector models or 2D drawings on this product. Please visit www.hypertronics.com for more details

* Contact factory for detail

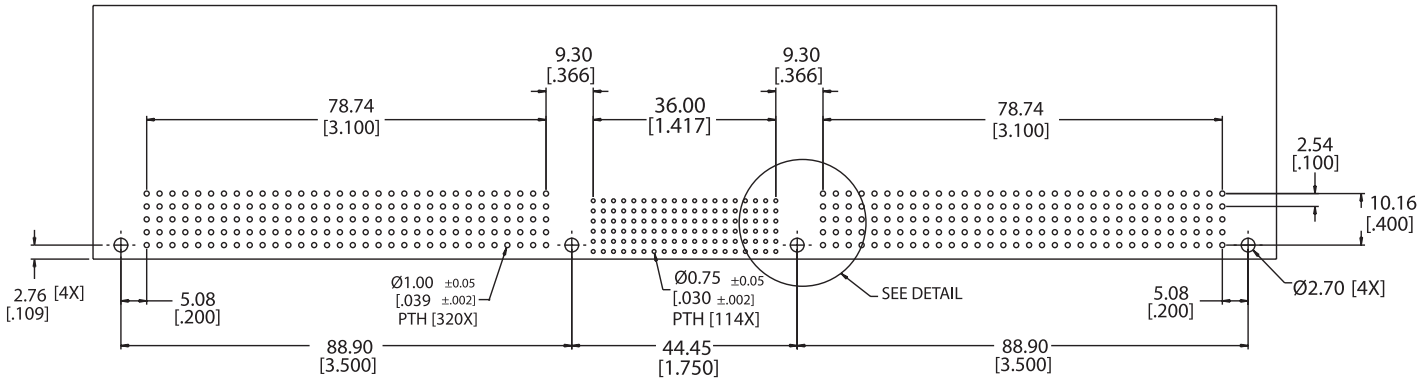
Performance Specifications				
	P1 / P2	**P0**	**J1 / J2**	**J0**
CRD (contact resistance at rated curent)		4.85 milliohm average		4.85 milliohm average
LLCR (low level contact resistance		7.20 milliohm average		7.25 milliohm average
DWV		1000 VRMS		1000 VRMS
Contact life (mate / demate)		> 4000 cycles		
Mating force		27.3 LBf average		27.3 LBf average
Demating force		22.4 LBf average		22.4 LBf average
Vibration				
Frequency		10 to 2000 to 10 HZ		10 to 2000 to 10 HZ
Amplitude		0.05 da 15 G		0.05 da 15 G
Duration		4.0 hours, 3 axis, 12 hour total		4.0 hours, 3 axis, 12 hour total
Test current		100 ma		100 ma
Sweep time		20 minutes		20 minutes
No circuit interruptions occurred		@ 10 Nano second resolu-		@ 10 Nano second resolu-
Mechanical Shock				
Peak value		100 G		100 G
Duration		6 Millisecond		6 Millisecond
Number of shocks		3 shock / 3 axis (18 total)		3 shock / 3 axis (18 total)
No circuit interruptions occurred		@ 10 Nano second resolu-		@ 10 Nano second resolu-

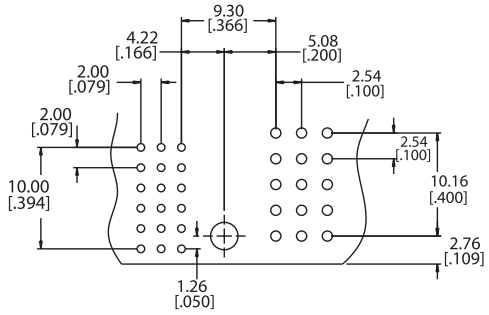
Backplane PCB layout





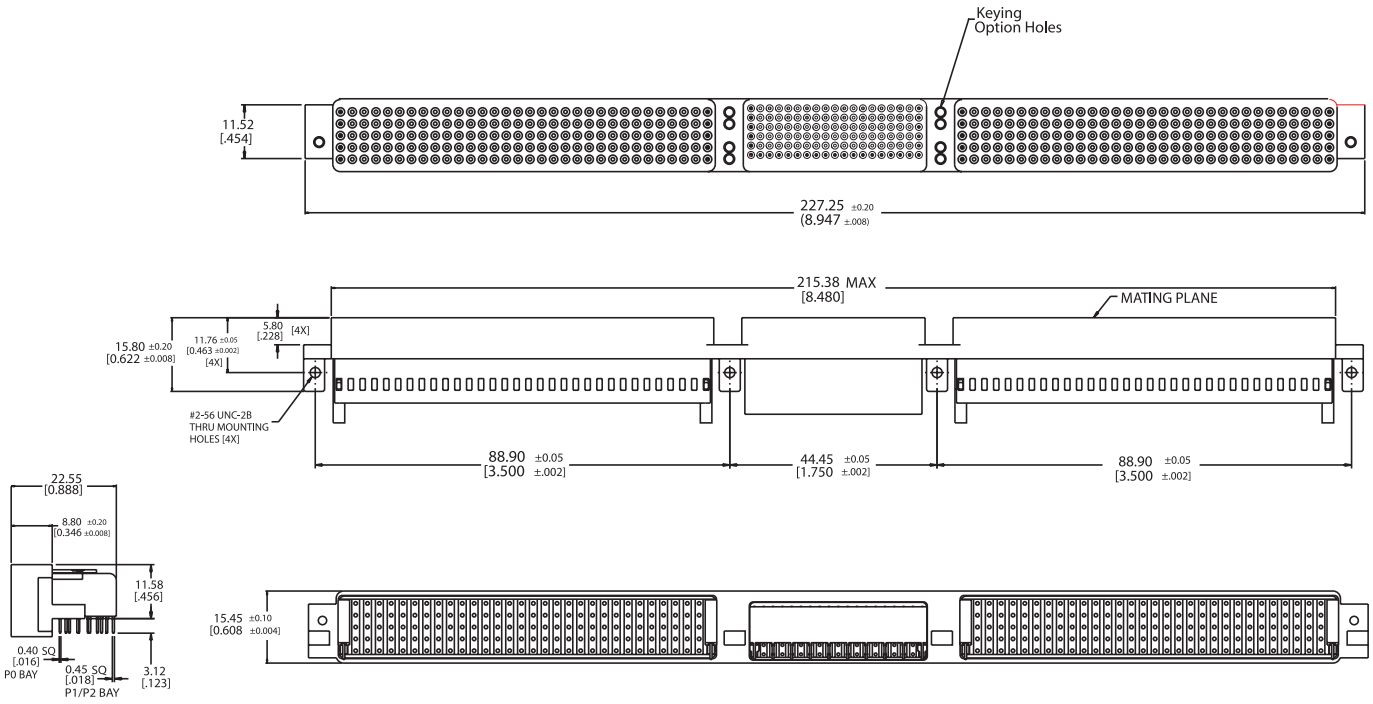
Daughter card PCB layout



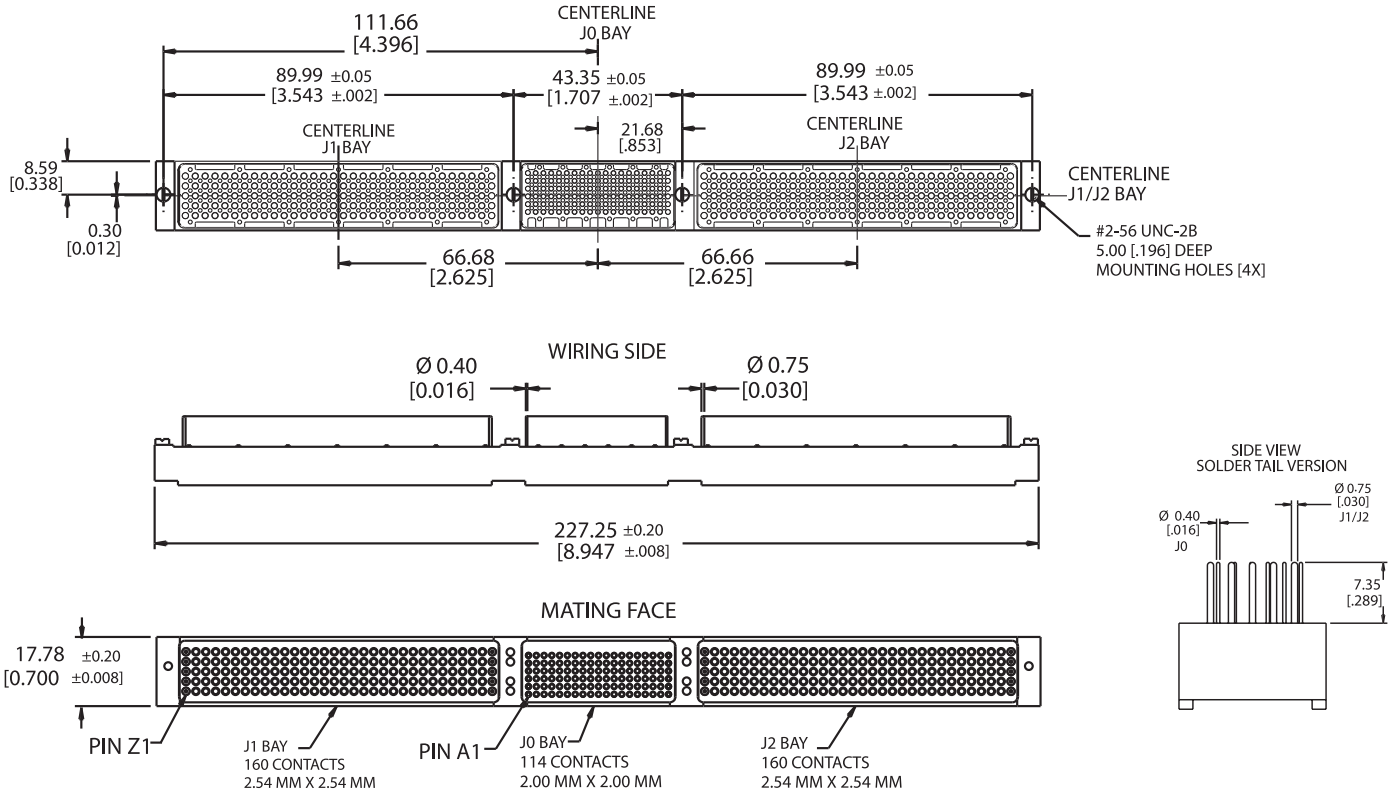


SCALE 4X

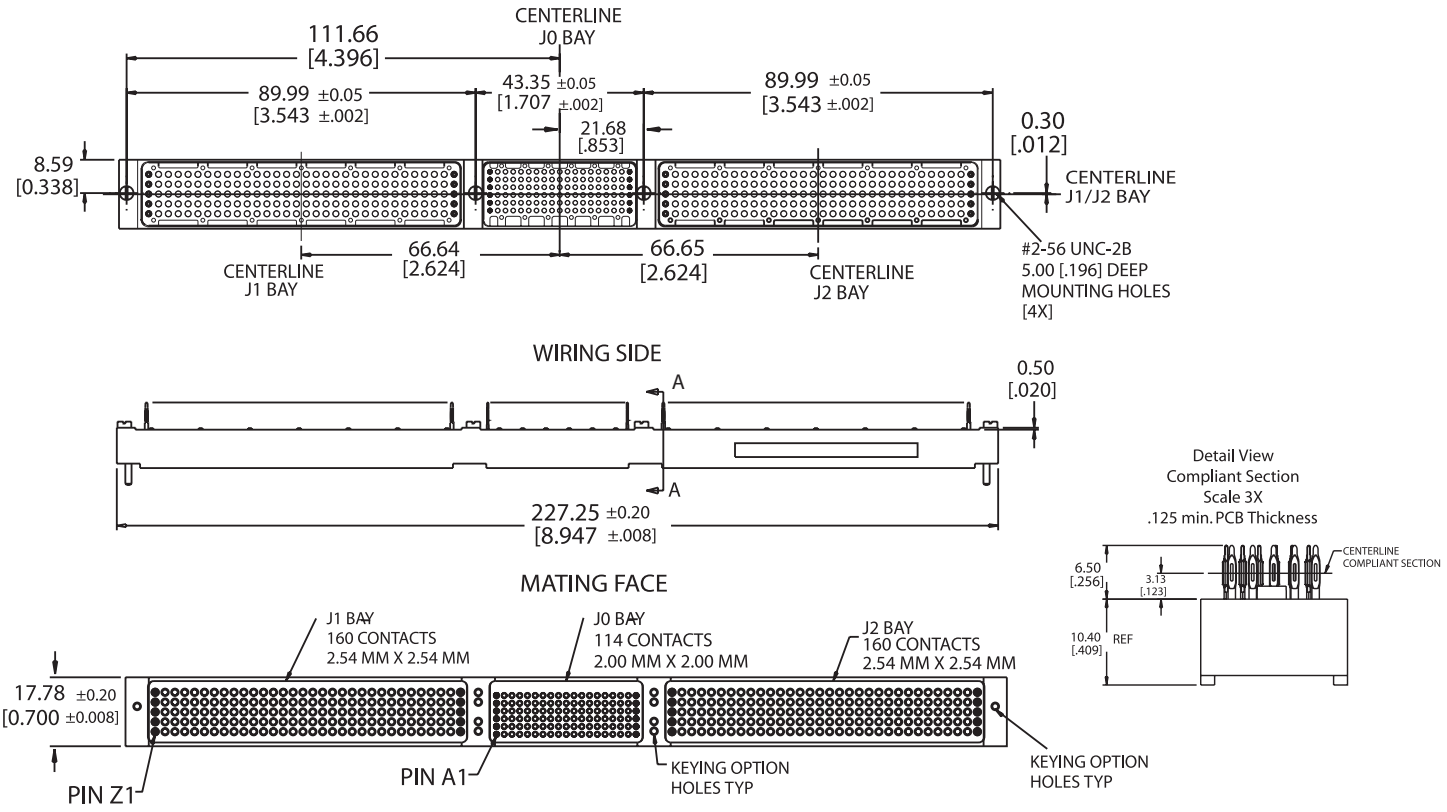
Male assembly - KVME434MR00BH



Receptacle assembly - solder tails - KVME434FD00AH

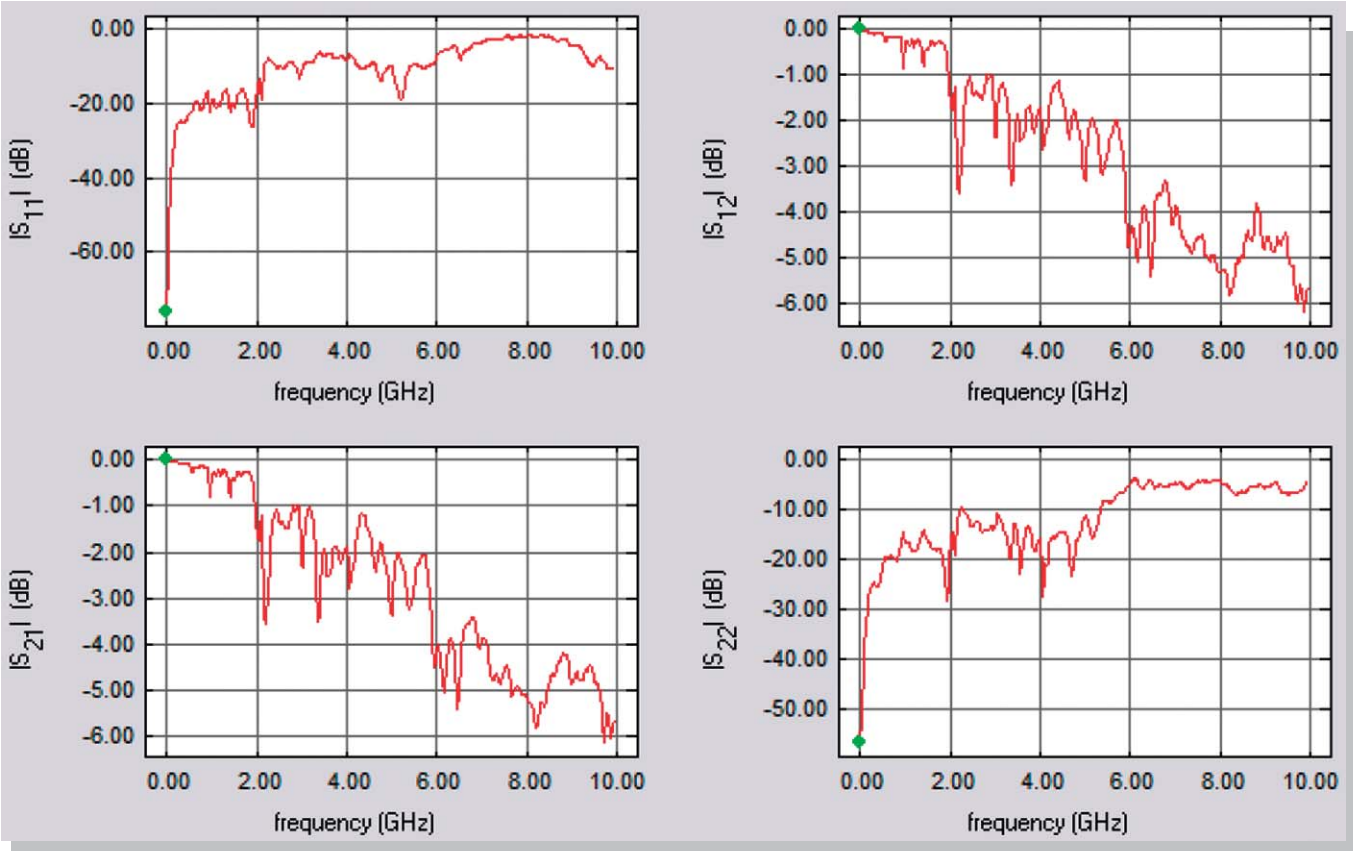


Receptacle assembly - compliant tails - KVME434FC00AH



J0/P0 High Speed Electrical Performance

1. Differential S-parameter [1, 2]



2. Propagation Delay and Skew

Propagation delay through the intrinsic connector assembly is estimated by making a measurement on the reflected signal received on the same broadband fixture that is used to obtain the full vector scattering parameters. In these measurements, there is no inclusion of any other pin lengths other than what is within the intrinsic connector.

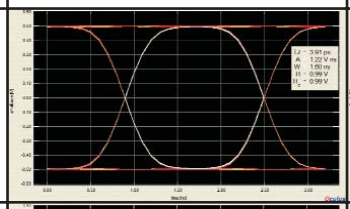
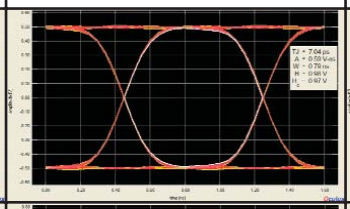
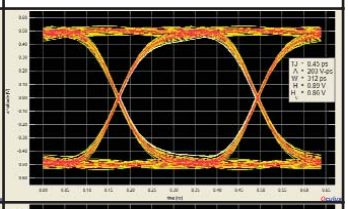
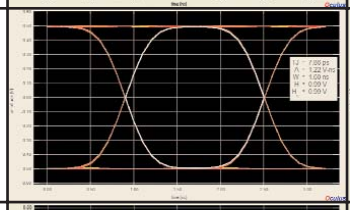
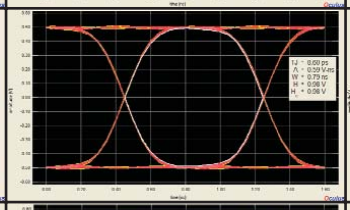
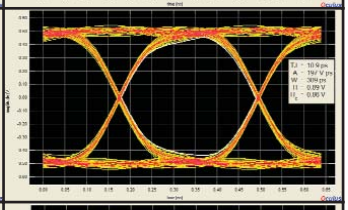
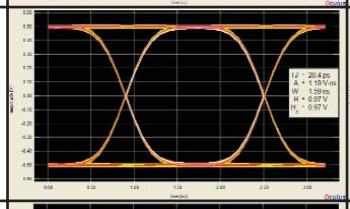
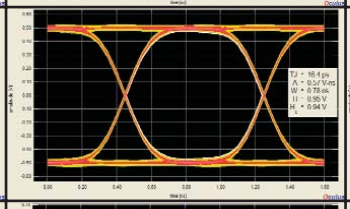
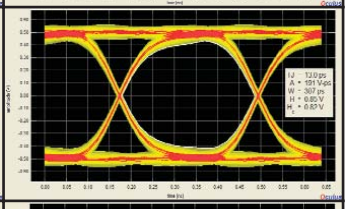
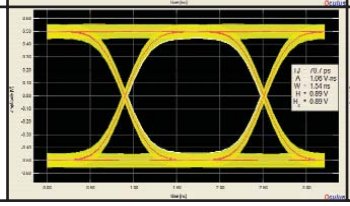
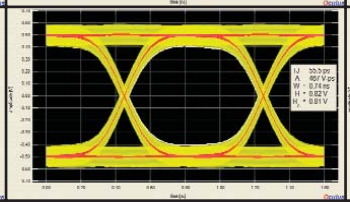
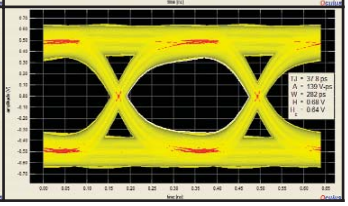
Parameters	***Connector Row***				
	a	***b***	***c***	***d***	***e***
Propagation Delay (ps)	*68*	*90*	*112*	*134*	*156*
Skew (ps)	22	22	22	22	
Maximum Data Rate [2]	3.125 Gb/s				

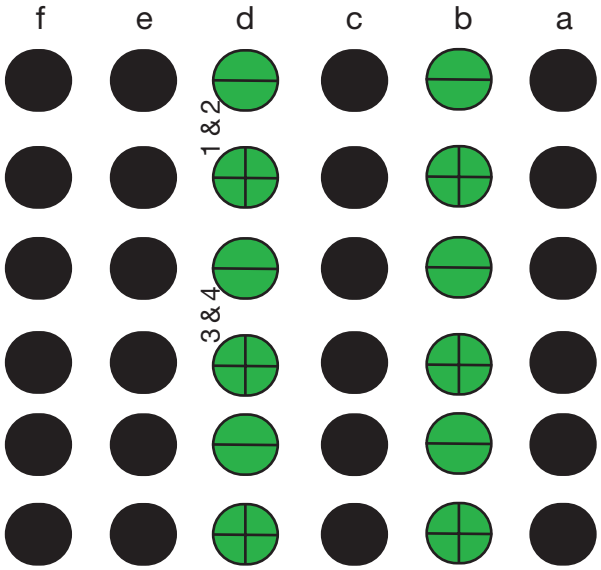
Notes:

1) Pattern illustrated in the figure on next page was used in the S-parameter and cross talk measurements.

2) Please refer to the full characterization test report for details

3. Connector Eye-Pattern-Diagram [1, 2]

	622 Mb/s	1.25 Gb/s	3.125 Gb/s
Intrinsic			
With inclusion of PCB VIAs			
With inclusion of near end cross talk (aggressor/ victim = 30%)			
With inclusion of near end cross talk (aggressor/ victim = 100%)			



Differential Pairs

Ground

Notes:

1) Pattern illustrated in the figure above was used in the S-parameter and cross talk measurements.

2) Please refer to the full characterization test report for details