



TEST SUMMARY

High Speed Edge Card

1.0 SCOPE

This specification covers the High Speed Edge Card Header Assembly. The Edge Card Assembly is a 12.5Gb/s application on 0.75mm and 0.80mm pitch. Contacts are gold plated on the mating end with tin plating on the press-fit pc tail side. The Header orientation is vertical on the pc board.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND PART NUMBER(S)

<u>Product Name</u>	<u>Part Number</u>
Edge Card Header Assembly 0.062" Edgecard	75594
Edge Card Header Assembly 0.093" Edgecard	76421
Edge Card Header Assembly 0.062" Edgecard	76991
Edge Card Header Assembly 0.093" Edgecard	76993
Edge Card Header Assembly 0.093" Edgecard	170673
Edge Card Header Assembly 0.062" Edgecard	170672

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate sales drawings for the information on dimensions, materials, plating and markings.

2.3 PRODUCT SPECIFICATION TITLE AND DOCUMENT NUMBER

Title: PS-75594-999 Product Specification

Title: TS-75594-002 SI Guideline / Fixture Definition

Title: AS-75594-001 Application Specification

Title: AS-76693-101 Connector Installation

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

3.1 TESTING PROCEDURES AND SEQUENCES

For test procedures see the applicable test report. For sequences see pages 3 through 7.

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TEST SUMMARY

3.1 TESTING PROCEDURES AND SEQUENCES (CONTINUED)

Test Sequence	TEST GROUP						
	A	B	C	D	E	F	G
Engaging / Separating force	X	X	X	X			
Insulation test	X	X	X	X			
Voltage Stress Test	X	X	X	X			
Contact Resistance	X	X	X	X			
Mechanical Operation (Durability)	X	X	X			X	
High Temperature	X			X			
Corrosion – (Mixed Flowing Gas)	X						
Contact Normal force							X
Dust		X	X				
Vibration		X					
Shock		X					
Thermal shock			X				
Damp Heat – Cyclic			X				
Damp Heat – Steady state						X	
Static Load Retention				X			
Electrical Load and Temp (Current Carrying)					X		
Differential Impedance – Propagation Delay (Skew)						X	
Cross-Talk						X	
Attenuation						X	
Return Loss						X	
Terminal Retention to Housing							X
Housing Card Slot Bottoming Force							X
Assembly Insertion into PC Board							X
Compliant Tail Retention to PC Board							X
Number of Samples	8	8	8	8	3	3	N/A
Number of defects permitted	0	0	0	0	0	0	0

3.2 AGENCY APPROVALS

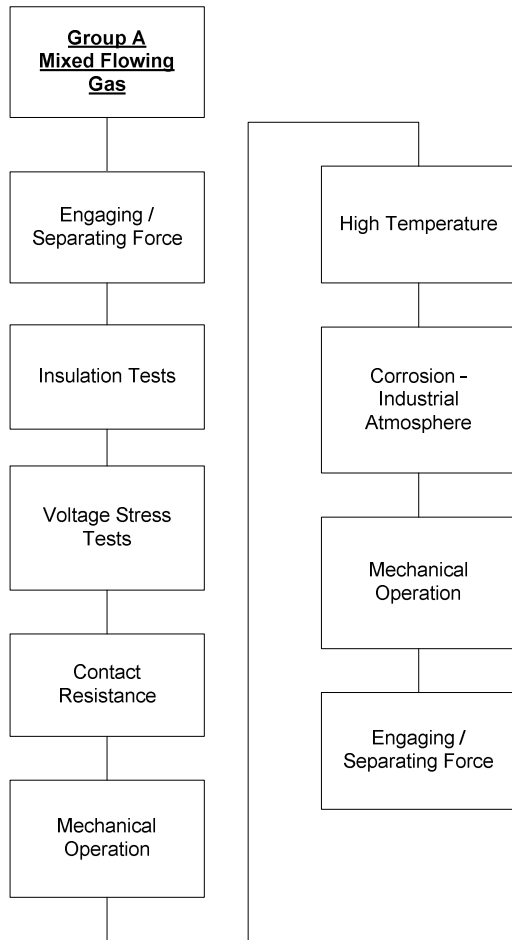
UL File # E29179
 CSA Certificate # 1827355 (LR 19980)

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TEST SUMMARY

Group A



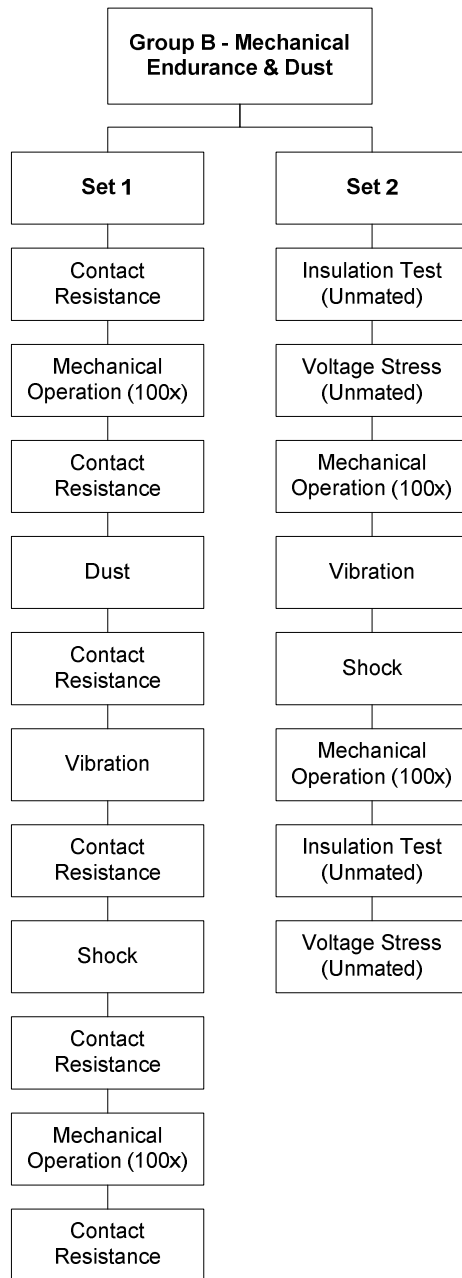
Set 1 - Samples evaluated by contact resistance performance.
Set 2 - Samples evaluated by DWV & IR performance.
Set 3 - Samples for Current Carrying Capacity

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Group B

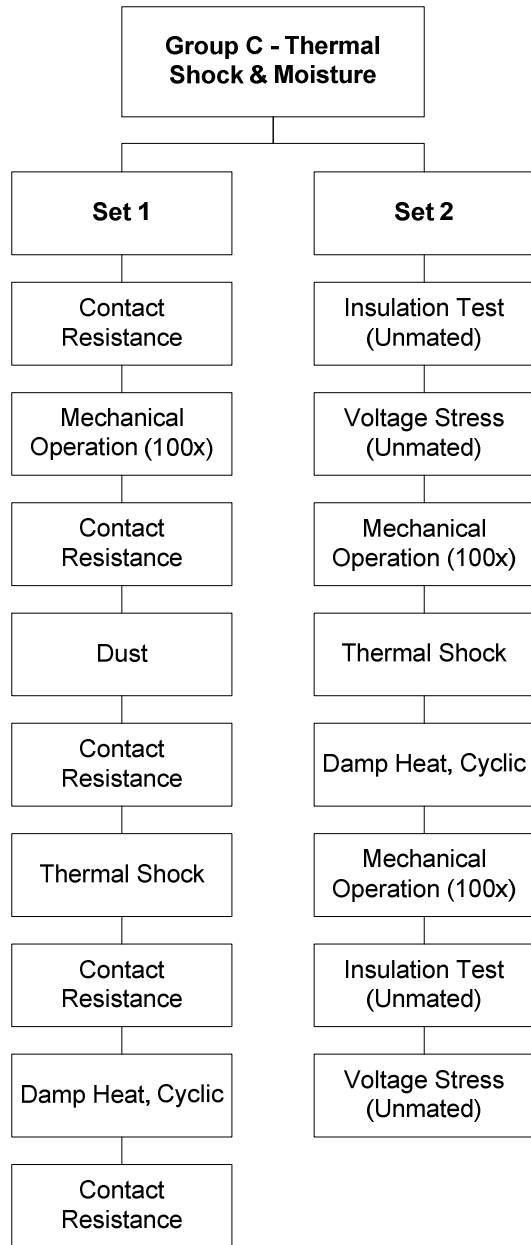


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Group C

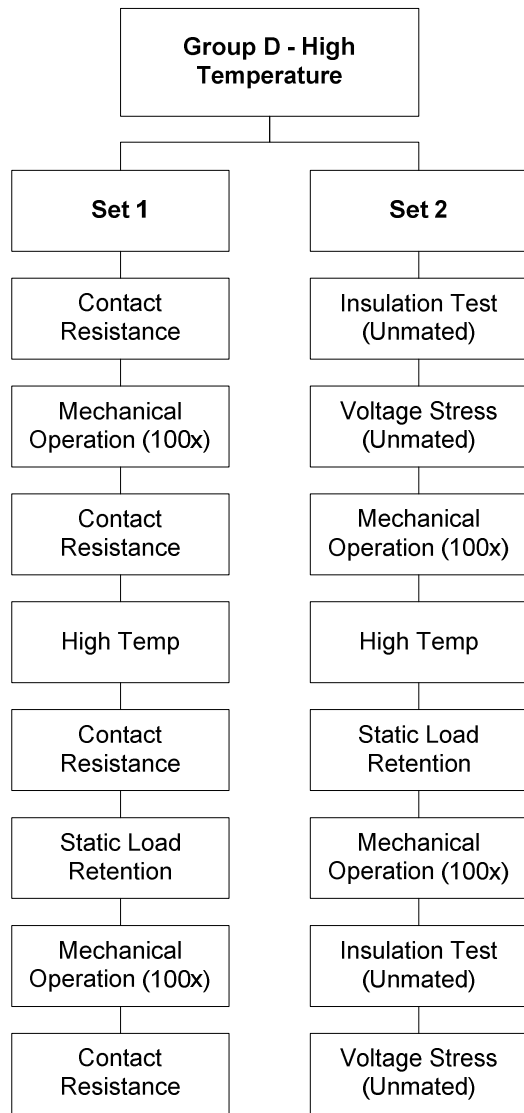


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Group D

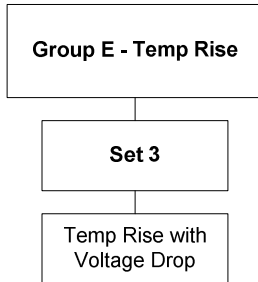


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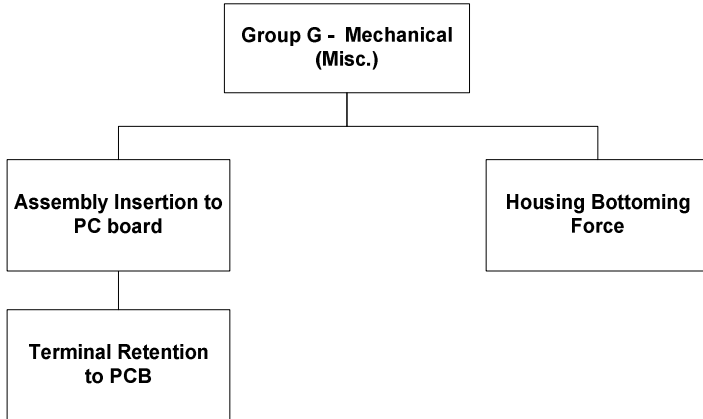
Group E



Group F

High Speed Electrical Performance
See Test Specification TS-75594-002

Group G



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4.0 QUALIFICATION

Laboratory conditions are in accordance with **EIA-364**.

5.0 PERFORMANCE

5.1 ELECTRICAL PERFORMANCE

Section	Item	Requirement	Mean	Min.	Max.
5.1.1	Initial Contact Resistance (low level)	60 mΩ max.	9.0	5.5	22.7
5.1.2	Dielectric Strength (Insulation Voltage Stress)	No Breakdown at 80Vrms	ALL PASS		
5.1.3	Current-Carrying Capacity (Electrical Load and Temp)	1.52 Amps / Pin @ 30°C T-Rise	ALL PASS		
5.1.4	Insulation Resistance	10 MOhm min. after moisture	ALL PASS		
5.1.5	Differential Impedance	80 - 110 Ohms	ALL PASS		
5.1.6	Differential Return Loss	15 dB @ 4 GHz 10 dB @ 5 GHz 7 dB @ 7 GHz 5 dB @ 12 GHz	ALL PASS		
5.1.7	Differential Attenuation	1dB @ 5.5 GHz 2 dB @ 6.0 GHz 3 dB @ 11 GHz	ALL PASS		
5.1.8	Differential Pair Cross-talk	< 4 %	n/a	n/a	3.3 %
5.1.9	Propagation Characteristics (Skew)	6ps maximum within differential pair	n/a	n/a	6ps

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5.2 MECHANICAL PERFORMANCE

Section	Item	Requirement	Actual Measurements	
			Min.	Max.
5.2.1	Mechanical Operation (Durability Cycling)	200 mating cycles without damage that would impair normal operation	ALL PASS	
5.2.2	Engaging Force (per terminal)	1.0N Max.	0.42N	0.62N
5.2.3	Separating Force (per terminal)	0.06N Min.	0.11N	0.41N
5.2.4	Housing Card Slot Bottoming Force	200N for 1 minute without damage	ALL PASS	
5.2.5	Header Insertion into PCB (per compliant pin)	35.5N Max.	13.0 N	22.0N
5.2.6	Compliant Pin Retention (per compliant pin)	2.2N Min.	4.3N	10.0N

NOTE: ACTUAL MEASUREMENTS BASED ON 170 CIRCUITS PRODUCT.

5.3 ENVIRONMENTAL PERFORMANCE

Section	Item	Requirement	Actual Measurements
5.3.1	High Temperature Life	LLCR 10 mΩ max. Delta	ALL PASS
5.3.2	Corrosion Atmosphere (Mixed Flowing Gas)	LLCR 10 mΩ max. Delta	ALL PASS
5.3.3	Dust	LLCR 10 mΩ max. Delta	ALL PASS
5.3.4	Vibration (sinusoidal)	LLCR 10 mΩ max. Delta	ALL PASS
		< 1 μs disturbance monitored	ALL PASS
5.3.5	Mechanical Shock	LLCR 10 mΩ max. Delta	ALL PASS
		< 1 μs disturbance monitored	ALL PASS
5.3.6	Thermal Shock	< 1 μs disturbance monitored	ALL PASS
5.3.7	Damp Heat, Cyclic	LLCR 10 mΩ max. Delta	ALL PASS
5.3.8	Damp heat, Steady State	LLCR 10 mΩ max. Delta	ALL PASS

6.0 FIXTURES AND TEST EQUIPMENT - (SEE APPLICABLE TEST REPORTS)

7.0 OTHER INFORMATION

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