

PRODUCTS SPECIFICATION

DESCRIPTION : SMI Connector and Patch Cord
CUSTOMER :
COMOSS P/N : SMIPP and SPF Series
Date of Issue : July/10/2005
Version : 1.0
Designer : Keith

Approval



Customer Signature



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Subject: Product Specification –SMI Connector and Patch Cord

1.0 General

This specification describes the optical, mechanical and environmental characteristics of SMI Connector and Patch Cord. All performances are designed for complying with IEEE Std. 1394b-2002 and SMI specification.

2.0 Series Description

SMIPP Series (Connector)

Please review the detail order information at COMOSS website.

SPF Series (Patch Cord)

Please review the detail order information at COMOSS website.

3.0 Application

(1) Maximum distance: 50 meters

(2) Ambient Temperature Range: -25 to +70 °C

4.0 Overall Dimensions

See attachment

5.0 Mating half:

SMIDX series

6.0 Sample Quantities by Performance Group

Sample Description	Number of Sample				
	A	B	C	D	E
SMI Cable Assembly of 7±0.1m	11	11	11	11	0
SMI Cable Assembly of 3±0.1m	0	0	0	0	11

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Performance Group A - SMI Connectors and Patch Cords Insertion Loss				
Item	Description	Testing Method and condition	Characteristic and Measuring Method	Requirements
A1	Insertion Loss	ANSI/EIA 455-34 A	Cut back method	Insertion loss 3.0dB Max
Performance Group B – SMI Connectors and Patch Cords Mechanical Performance				
Item	Description	Testing Method and condition	Characteristic and Measuring Method	Requirements
B1	Visual and Mechanical Inspection	TIA/ EIA -455-13A		Appearance: No damage
B2	Mating and unmating forces	TIA/ EIA -455-187 25±3 mm/ min.	Insertion force	29.4N Maximum
			Pull-out force	4.9N to 29.4N
B3	Mating Cycle	TIA/ EIA -455-21A 500 times,		Appearance: No damage
B4	None		Insertion Loss ANSI/EIA -455-34A	Insertion loss: Initial 3.0dB maximum Final 3.5dB maximum
Performance Group D – SMI Connectors and Patch Cords Environmental Performance				
Item	Description	Testing Method and condition	Characteristic and Measuring Method	Requirements
C1	Temperature Cycle	TIA/ EIA -455-3A -25 °C to 70 °C 30min. 10 cycles		Appearance: No damage
C2	None		Insertion Loss ANSI/EIA -455-34A	Insertion loss: Initial 3.0dB maximum Final 3.5dB maximum
C3	Moisture Resistance	TIA/ EIA -455-5B -10 °C to 65 °C RH: 90% 10 cycles		Appearance: No damage
C4	None		Insertion Loss ANSI/EIA -455-34A	Insertion loss: Initial 3.0dB maximum Final 3.5dB maximum

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C5	Resistance to Dry Heat	TIA/ EIA -455-4B 70 °C, 240hr		Appearance: No damage	
C6	None		Insertion Loss ANSI/EIA -455-34A	Insertion loss: Initial 3.0dB maximum Final 3.5dB maximum	
C7	Resistance to Cold	TIA/ EIA -455-188 -25 °C, 240hr		Appearance: No damage	
C8	None		Insertion Loss ANSI/EIA -455-34A	Insertion loss: Initial 3.0dB maximum Final 3.5dB maximum	

**Performance Group D – SMI Connectors and Patch Cords Mechanical Shock
And Mechanical Vibration Environmental Performance**

Item	Description	Testing Method and condition	Characteristic and Measuring Method	Requirements
D1	Resistance to Shock	TIA/ EIA -455-14A Condition C; 100G, 3axes, 3 times; mated; energized	Continuity	Detector sensitivity at 50% of open circuit voltage for 1 μ sec.
D2	None		Insertion Loss ANSI/EIA -455-34A	Insertion loss: Initial 3.0dB maximum Final 3.5dB maximum
D3	Resistance to Vibration	TIA/ EIA -455-11B 10-55-10 Hz/min. Amplitude 1.5mm P-P 3 axes, 24cycles Mated; energized	Continuity	Detector sensitivity at 50% of open circuit voltage for 1 μ sec.
D4	None		Insertion Loss ANSI/EIA -455-34A	Insertion loss: Initial 3.0dB maximum Final 3.5dB maximum

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Performance Group E – SMI Connectors and Patch Cords General Tests				
Item	Description	Testing Method and condition	Characteristic and Measuring Method	Requirements
E1	Robustness of connection at joint (axial direction)	ANSI/EIA 364-38A-83 (90) Pull at a rate of 50 mm/min Fixed the inner housing only	Visual ANSI/EIA -455-13A	Push-pull type only 29.4N minimum With latch engaged. Appearance: No damage
E2	Robustness of optical fiber cord clamp (pull in axial direction)	ANSI/EIA 455-6 B (92) Fix plug housing and apply load of 49N for one minute on cable axis.	Visual ANSI/EIA -455-13A	Appearance: No damage
E3	Robustness of optical fiber cord clamp (Bending)	ANSI/EIA 455-1 B (98) Condition I, dimension “X” =5.5 times cable diameter; 100 cycles with pulling force 2.0N in each of two planes.	Visual ANSI/EIA -455-13A	Appearance: No damage