

SSFPF Cable Assemblies - SFP+ 10Gb/s Direct-Attach Copper



For more Information
please call

1-800-Belden1

**General Description:**

SFP+ to SFP+ Direct-Attach Copper, 10Gb/s, Black

Usage (Overall)**Suitable Applications:**

Data Centers, Main Equipment Rooms, Telecommunications Rooms, Work Area, 1-10G Ethernet, 1/2/4/8G Fiber Channel, 10G Fiber Channel over Ethernet, SDR, DDR, QDR, FDR-10 Infiniband, Storage Area Networks (SAN), Network Attached Storage (NAS) and High Performance Computing.

Cable Characteristics (Connectivity)**DAC Specs-Length:**

Length	# Pairs	AWG	Conductor material	Cable Type	Cable O.D.
0.5 M to 3.0 M	2	30	Solid Copper Silver Plated	Twinax	4.5 mm (0.178 in.)
>3.0 M to 7.0 M	2	24	Solid Copper Silver Plated	Twinax	6.3 mm (0.248 in.)

Insulation**Insulation Material:**

Insulation Material
PO - Polyolefin

Outer Shield**Outer Shield Material:**

Layer #	Outer Shield Material	Coverage (%)
1	Aluminum Foil-Polyester Tape	100.000
2	Aluminum Braid	85.000

Outer Jacket**Outer Jacket Material:**

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cabling**Overall Cabling:**

Black

Physical Characteristics (Connectivity)**Materials****Materials:**

Description	Material	Color
SFP+ Backshell	Nickel plated zinc alloy diecast	Bright Nickel
SFP+ Pull Tab	PVC	Black
PCB bare board	Improved FR4 UL94V-0	
PCB Contacts	Gold plated contacts	
Boot	PVC	Black

Mechanical Characteristics (Connectivity)**Footprint/Type:**

SFP+ to SFP+

Termination Interface:

Termination	Connection	Durabilities
SFP+	Mated Connection	100

Cable/Connector Retention:

170 N

Plug/Connector Retention:

90 N

Insertion Force to Cage:

18.000 N

Withdraw Force from Cage:

12.500 N

METRIC MEASUREMENT VERSION

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Storage Temperature Range:	-40°C To +80°C
Installation Temperature Range:	0°C To +70°C
Operating Temperature Range:	0°C To +70°C
Min. Bend Radius (Overall Cable):	31.750 mm
Flex Cycle Rating:	100 min.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

CEC/C(UL) Specification:	CL2
CSA Specification:	FT4
IEEE Specification:	IEEE802.3
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2006
MIL Order #39 (China RoHS):	Yes
Other Specification:	SFF-8431 (Electrical), SFF-8432 (Mechanical)

Transmission Characteristics (Connectivity)

Electrical Characteristics (Overall)

Electrical Characteristics:

Electrical Parameters	SSFP-P0M5-1	SSFP-P1M0-1	SSFP-P2M0-1	SSFP-P3M0-1	SSFP-P5M0-1	SSFP-P7M0-1
Dielectric Strength	300 v	300 v	300 v	300 v	300 v	300 v
Current Rating	0.5 A	0.5 A	0.5 A	0.5 A	0.5 A	0.5 A
Insulation Resistance	1000 M-Ohms Min.	1000 M-Ohms Min.	1000 M-Ohms Min.	1000 M-Ohms Min.	1000 M-Ohms Min.	1000 M-Ohms Min.
Contact Resistance	50 m-Ohms Max.	50 m-Ohms Max.	50 m-Ohms Max.	50 m-Ohms Max.	50 m-Ohms Max.	50 m-Ohms Max.
ESD (contacts)	1kV	1kV	1kV	1kV	1kV	1kV
ESD (direct/air discharge to module)	8KV/16kV	8KV/16kV	8KV/16kV	8KV/16kV	8KV/16kV	8KV/16kV
Impedance	90 to 110 Ohms	90 to 110 Ohms	90 to 110 Ohms	90 to 110 Ohms	90 to 110 Ohms	90 to 110 Ohms
Propagation Delay	5.2 nsec/m	5.2 nsec/m	5.2 nsec/m	5.2 nsec/m	4.5 nsec/m	4.5 nsec/m
Intra-Pair skew	15 psec/m	15 psec/m	15 psec/m	15 psec/m	15 psec/m	15 psec/m
Insertion Loss @5 Ghz	2 dB	3.5 dB	7 dB	10.5 dB	10.5 dB	14.7 dB
Difference Waveform Distortion Penalty (dWDPc)	-	1.68 dB	-	3.7 dB	-	-
Voltage Modulation Amplitude Loss (L)	-	1.07 dB	-	3.5 dB	-	-
Voltage Modulation Amplitude Loss to Crosstalk Ratio (VCR)	-	38.4 dB	-	37.0 dB	-	-
AC Common-Mode Voltage (Vcm)	-	8.8 mVrms	-	9.4 mVrms	-	-
Differential-Mode Return Loss Margin (SDDxx) (0.01-4.1GHz)	-	4.0 dB	-	6.4 dB	-	-
Differential-Mode Return Loss Margin (SDDxx) (4.1-11.1GHz)	-	3.6 dB	-	3.8 dB	-	-
Common-Mode Return Loss Margin (SCCxx) (0.01-2.5GHz)	0 dB	0.1 dB	-	0.5 dB	-	-
Common-Mode Return Loss Margin (SCCxx) (2.5-11.1GHz)	1.0 dB	1.0 dB	-	1.0 dB	-	-
Common to Differential Mode conversion (SCDxx) (0.01-4.1GHz)	-	13.6 dB	-	14.5 dB	-	-
Common to Differential Mode conversion (SCDxx) (4.1-11.1GHz)	-	5.8 dB	-	5.2 dB	-	-

Notes (Overall)

Product Family

Product List:

Belden P/N	Description
SSFP-P0M5-1	DAC, SFP+ 10Gb/s 0.5M
SSFP-P01M0-1	DAC, SFP+ 10Gb/s 1M
SSFP-P02M0-1	DAC, SFP+ 10Gb/s 2M
SSFP-P03M0-1	DAC, SFP+ 10Gb/s 3M
SSFP-P05M0-1	DAC, SFP+ 10Gb/s 5M
SSFP-P07M0-1	DAC, SFP+ 10Gb/s 7M
QSF-P0M5-1	DAC, QSFP+ 40Gb/s 0.5M
QSF-P01M0-1	DAC, QSFP+ 40Gb/s 1M
QSF-P02M0-1	DAC, QSFP+ 40Gb/s 2M
QSF-P03M0-1	DAC, QSFP+ 40Gb/s 3M
QSF-P05M0-1	DAC, QSFP+ 40Gb/s 5M
QSF-P00M5-1	DAC, QSFP+/4SFP+ 40Gb/s 0.5M
QSF-P01M0-1	DAC, QSFP+/4SFP+ 40Gb/s 1M
QSF-P02M0-1	DAC, QSFP+/4SFP+ 40Gb/s 2M
QSF-P03M0-1	DAC, QSFP+/4SFP+ 40Gb/s 3M
QSF-P05M0-1	DAC, QSFP+/4SFP+ 40Gb/s 5M



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Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
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