

## HPI Series 120 Group



Emerson Network Power Connectivity Solutions offers the **Semflex** HPI 120 test cable assembly series. This line incorporates high performance HPI120 cable with equally high performance connectors providing excellent test cables for a wide range of applications up to 50 GHz. These assemblies feature low loss triple shielded cable with a standard FEP Teflon® jacket and optional polyurethane, ruggedized and armored jackets. The triple shielded construction of these cables give outstanding shielding effectiveness of greater than -90dB at 18GHz. The precision stainless steel connector designs include: 2.4mm, 2.92mm, 3.5mm and SMA, in which both jack and plugs, right angles, bulkheads and four hole flangs are available. All the connector interfaces are designed to meet MIL-C-39012, MIL-STD-348a or applicable industry specifications. These cable assemblies feature low loss, excellent VSWR, and good phase stability over a wide range of applications up to 50 GHz.

### Key Features & Benefits

- Precision high performance stainless steel connectors
- Low loss PTFE tape Dielectric
- FEP outer jacket; options include polyurethane, armor, ruggedized jacketing
- Triple shielded for >-90 dB leakage at 18GHz

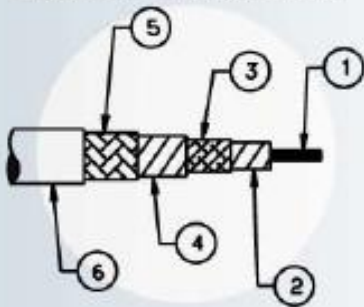
### Applications

- High frequency (50 GHz)
- High performance, low loss, RF signal distribution
- High temperature (+200° C)
- Low temperature(-65°C)

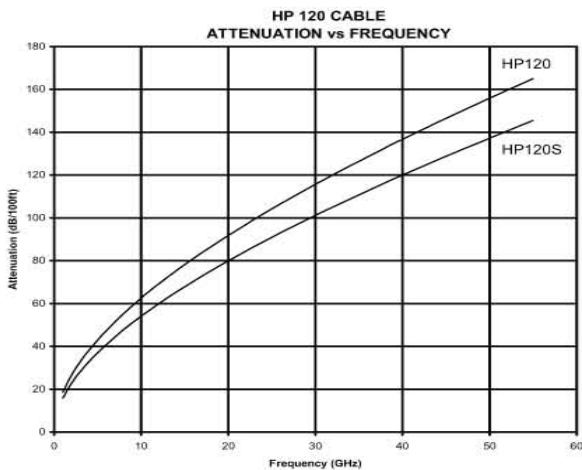
### Available Connectors

- SMA, 3.5mm, 2.4mm, 2.92mm
- Straight male, straight female

## Cable Construction



1. Center conductor: Silver plated copper \*
  2. Dielectric: Microporous PTFE tape
  3. Outer conductor: Silver plated copper flat braid\*
  4. Shield interlayer: Metalized tape
  5. Braid: Silver plated copper round braid \*
  6. Jacket options: Extruded FEP, polyurethane, armor, ruggedized
- \* Silver plating per ASTM-B-298



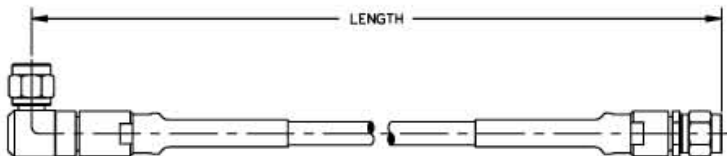
HP120S is solid center conductor  
HP120 is stranded center conductor

CENTER CONDUCTOR	
STYLE	CODE
SOLID WIRE	S
** BASIC STRANDED WIRE	B

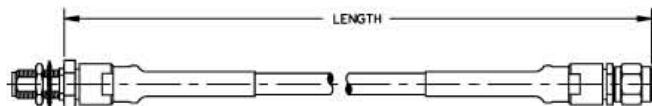
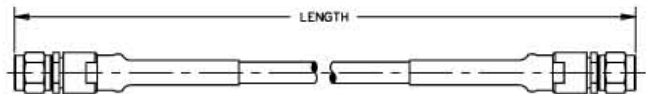
\*\* SPECIAL ORDER ONLY

JACKET OPTIONS	
DESCRIPTION	CODE
BASIC FEP JACKET	BF
BASIC POLYURETHANE JACKET	BP
BRAIDED SPRING RUGGEDIZED, WITH SLATE GREY POLYURETHANE JACKET	LC
STAINLESS STEEL FLEXIBLE ARMOR OVER BASIC FEP JACKET	SF

### HOW TO MEASURE LENGTH



CONNECTOR CODES						
CONNECTOR STYLE	MALE			FEMALE		
	STR	RA	SWEPT RA	STR	BULKHD	FLANGE
SMA	S1	S2	S6	S3	S4	S6
2.4MM	Z1	Z2	Z6	Z3	Z4	Z5
2.92MM	X1	X2	X6	X3	X4	X5
3.5MM	M1	M2	M6	M3	M4	M5



### HOW TO SPECIFY PART NUMBER

□ □ □  
CONNECTOR TYPE

1 2  
CABLE

□ □  
OPTION

S  
CENTER CONDUCTOR

□ □ □  
CONNECTOR TYPE

□ □ □ □  
LENGTH (INCHES)

FOR EXAMPLE:

SMA STRAIGHT MALE TO SMA STRAIGHT FEMALE, BASIC FEP JACKET, 36 INCHES LONG.  
NOTE: USE LEADING ZEROS WHEN SPECIFYING LENGTH.

PART NUMBER IS: S 1 12 B F S S 3 0036

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## Connectivity Solutions

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## Additional Specifications

Assembly	
Connectors	SMA, 3.5mm, 2.4mm, 2.92mm, straight jack and straight plug, right angle, swept right angle male; straight, flange and bulkhead female
Cable size	.125 inches, nominal outer diameter (FEP)
Standard Lengths	
Electricals	
Velocity of Propagation	76%
RF Leakage Min. @ 18GHz	-90 dB/ft
Impedance	50 Nominal
Capacitance	27 pF/ft 88.58 pF/m
Delay	1.34 ns/ft 4.40 ns/m
Breakdown Voltage	>10kV
Phase Stability vs. Flexure	<.003 deg (deg of bend per GHz)
Mechanical/ Environmental	
Nominal Diameter	0.125 inches 0.318 cm
Minimum Bend Radius	.5 inches 1.27 cm
Temperature	-65 °C to + 200°C
Weight	0.02 lb./ft 29.31g/m
Materials and Finishes Connector	
Body	Stainless Steel
Nut	Stainless Steel
Gasket	Silicon Rubber
Contact	BeCu / Gold plated
Insulator	PTFE
Materials and Finishes Cable	
Cable Jacket	FEP
Outer Shield	Silver Copper
Inter Shield	Aluminum Polymer
Inter Conductor	Silver Copper
Dielectric	Micro-porous PTFE
Center Conductor	Silver Copper