

HPI Series 450 Group



Emerson Network Power Connectivity Solutions offers the **Semflex** HPI 450 test cable assembly series. This line incorporates high performance HPI450 cable with equally high performance connectors providing excellent test cables for a wide range of applications up to 12 GHz. These assemblies feature low loss triple shielded cable with a standard Polyurethane jacket and optional FEP Teflon® and jacket. The triple shielded construction of these cables give outstanding shielding effectiveness of greater than -90dB at 18GHz. The precision stainless steel connector designs include: N, TNC, HC and SC and 7/16, in which both jack and plugs, right angles, bulkheads and four hole flanges 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 12 GHz.

Key Features & Benefits

- Precision high performance stainless steel connectors
- Low loss PTFE tape Dielectric
- Polyurethane outer jacket; options include FEP, Nomex®
- Triple shielded for >-90 dB leakage at 12GHz

Applications

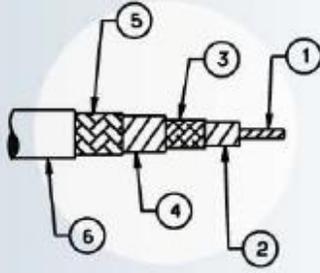
- High performance, low loss, RF signal distribution
- High temperature (+200° C)
- Low temperature(-65°C)
- High power signal distribution

Available Connectors

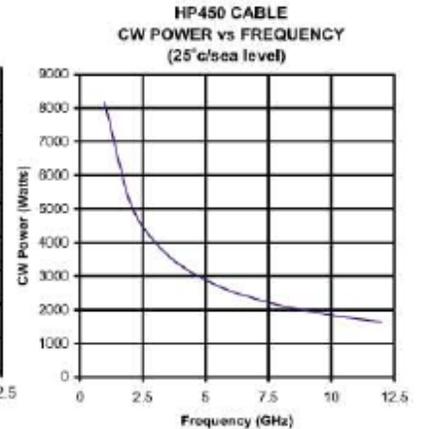
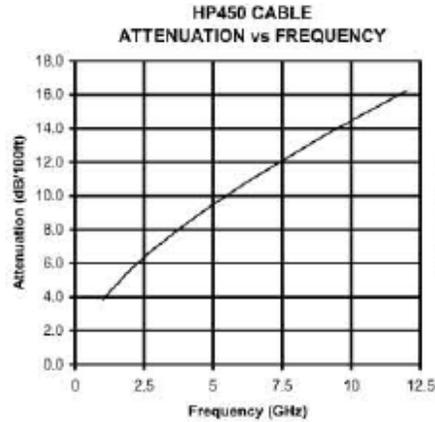
- TNC, N, SC, HN, 7/16
- Straight, right angle, swept right angle male; straight, flange and bulkhead female

Nomex® and Teflon® are registered trademarks of DuPont®

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, Nomex
- * Silver plating per ASTM-B-298



JACKET OPTIONS



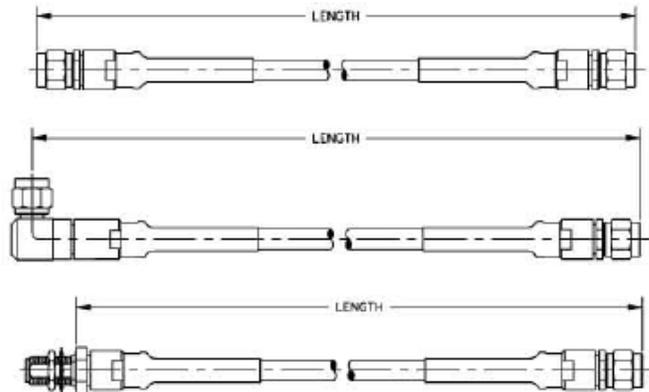
DESCRIPTION	CODE
BASIC FEP JACKET	BF
BASIC POLYURETHANE JACKET	BP
NOMEX RUGGEDIZED JACKET OVER FEP	AN

CONNECTOR CODES



CONNECTOR STYLE	MALE			FEMALE		
	STR	RA	SWEPT RA	STR	BULKHD	FLANGE
N TYPE	N1	N2	N6	N3	N4	N5
TNC	T1	T2	T8	T3	T4	T5
SC	SC1	SC2	SC8	SC3	SC4	SC5
HN	HN1			HN3		
7-16	G1	G2		G3	G4	G5

HOW TO MEASURE LENGTH



HOW TO SPECIFY PART NUMBER

□ □ □
CONNECTOR TYPE

4 5
CABLE

□ □
OPTION

B
CENTER CONDUCTOR

□ □ □
CONNECTOR TYPE

□ □ □ □
LENGTH (INCHES)

FOR EXAMPLE:

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

PART NUMBER IS: N 1 4 5 B SC 3 0036

Additional Specifications

Assembly	
Connectors	TNC, N, SC, HN, 7/16 straight, right angle, swept right angle male; straight, flange and bulkhead female
Cable size	.520 inches, nominal outer diameter (Polyurethane)
Electricals	
Velocity of Propagation	76.5%
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	>15kV
Phase Stability vs. Flexure	<.003 deg (deg of bend per GHz)
Mechanical/ Environmental	
Nominal Diameter	0.520 inches 1.32 cm
Minimum Bend Radius	2.5 inches 6.35 cm
Temperature	-65 °C to + 200°C
Weight	0.21 lb./ft 312g/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	Polyurethane
Outer Shield	Silver Copper
Inter Shield	Aluminum Polymer
Inter Conductor	Silver Copper
Dielectric	Micro-porous PTFE
Center Conductor	Silver Copper