Semflex

High Performance Test Cable Assembly

Connectivity for
Business-Critical Continuity™

HPI Series
305 Group

Emerson Network Power Connectivity Solutions offers the **Semflex** HPI 305 test cable assembly series. This line incorporates high performance HPI305 cable with equally high performance connectors providing excellent test cables for a wide range of applications up to 18 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: N, TNC, Extended TNC, SMA, SC and HN, 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 18 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 performance, low loss, RF signal distribution
- High temperature (+200° C)
- Low temperature(-65°C)
- High power signal distribution

Available Connectors

- SMA, TNC, Extended TNC, N, SC, HN
- Straight, right angle, swept right angle male; straight, flange and bulkhead female

Semflex
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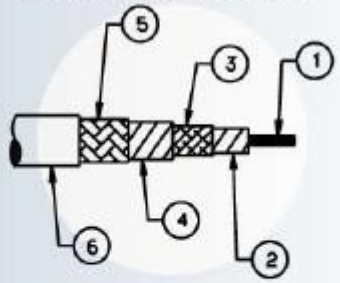
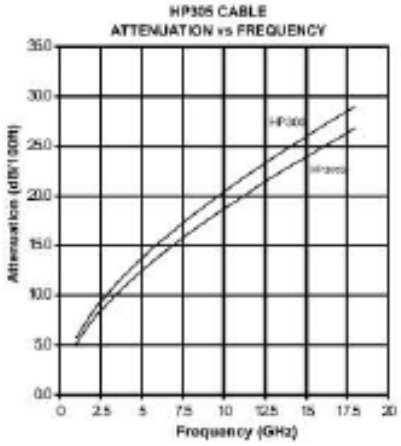
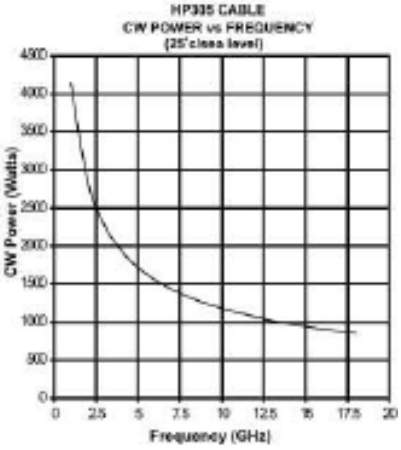
Cable Construction



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 armor, ruggedized

* Silver plating per ASTM-B-298





HP305S is solid center conductor
HP305 is stranded center conductor

CENTER CONDUCTOR

STYLE	CODE
SOLID WIRE	S
** BASIC STRANDED WIRE	B

** SPECIAL ORDER ONLY

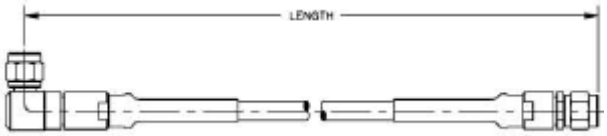
JACKET OPTIONS

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

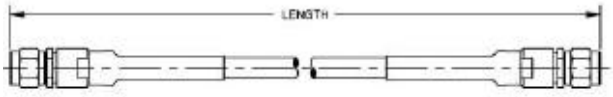
CONNECTOR CODES

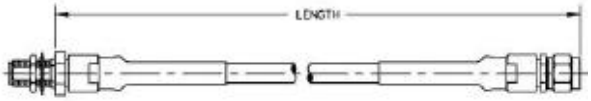
CONNECTOR STYLE	MALE			FEMALE		
	STR	RA	SWEPT RA	STR	BULKHD	FLANGE
SMA	S1	S2	S6	S3	S4	S5
N TYPE	N1	N2	N6	N3	N4	N5
TNC	T1	T2	T6	T3	T4	T5
* ETNC	ET1	ET2	ET6	ET3	ET4	ET5
SC	SC1			SC3		
HN	HN1			HN3		
7MM	Y1					

* EXTENDED FREQUENCY RANGE



HOW TO MEASURE LENGTH





HOW TO SPECIFY PART NUMBER

□□□	30	□□	S	□□□	□□□□
CONNECTOR TYPE	CABLE	OPTION	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:	S1	30	BF	S	S3	0036

Emerson Network Power
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Connectivity Solutions

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Additional Specifications

Assemby	
Connectors	SMA, TNC, Extended TNC, N, SC, HN, straight, right angle, swept right angle male; straight, flange and bulkhead female
Cable size	.305 inches, nominal outer diameter (FEP)
Standard Lengths	
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	0.305 inches 0.775 cm
Minimum Bend Radius	1.7 inches 4.318 cm
Temperature	-65 °C to + 200°C
Weight	0.09 lb./ft 134g/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

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