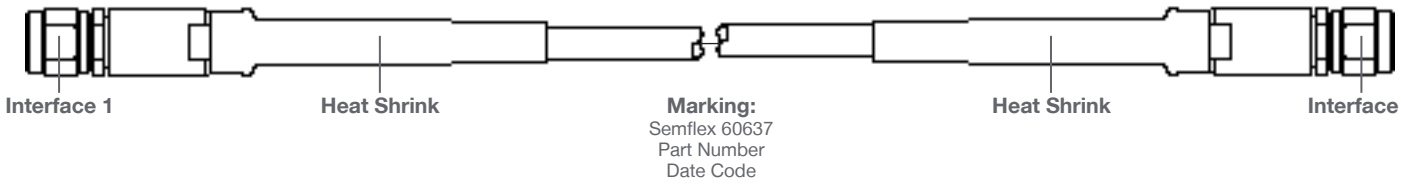
HPI Series Cable Assemblies

With LA Type Cable



Specifications

	Frequency GHz, max.	Insertion Loss SMA-SMA, 1ft. @ 18 GHz, dB, max.	Shielding dB@ 18 GHz, min.	Cable Diameter in., nominal	Inside Bend Radius in., min.	Operating Temperature ℃, nominal
LA190S	28	0.47	100	0.189	1.1	-65 to +165
LA290S	18	0.63	100	0.292	1.6	-65 to +165

Insertion Loss Calculator

Cable Insertion Loss, dB/ in. @ Freq (GHz) =
IL = Cable Loss + Connector Loss + Connector Loss

Cable Loss, dB/ in. @ Freq (GHz) =
$L \times [(k1 \times \sqrt{F}) + (k2 \times F)] / 1200$

Connector Loss, dB @ Freq (GHz) =
$k3 \times \sqrt{F}$

IL = Insertion Loss (dB)
L = Length (in.)
F = Frequency (GHz)

Cable Constants	LA190S	LA290S
Max., Freq. GHz	28	18
k1	7.38	4.24
k2	0.32	0.19

Connector Constants, k3	Straight	Right Angle
2.92mm, SMA	0.03	0.05
N, TNC	0.05	0.07

VSWR Guide

Freq. GHZ	Interface	VSWR* (max.)
28	2.92mm Straight	1.30
26	SMA Straight	1.30
26	SMA Right Angle	1.35
18	N Straight	1.35
18	N Right Angle	1.40
18	TNC Straight	1.35
18	TNC Straight	1.40

*Contact factory for detailed VSWR specifications

Ordering Instructions

HPI Series Assembly — Cable Type: LA290S Cable, FEP Jacket — Interface Type: Straight SMA Male to Straight SMA Male, — Length (in.): 12 in. Long

Part Number:

Interface Type 1	Cable Type		Interface Type 2	Length (in.)
S1	L29	BF	S1	0012

Interface 1 → Connector Selection Order → Interface 2

	Interface Type	Cable Type L19 LA190S	Cable Type L29 LA290S
X1	2.92mm Male Straight	Y	-
S1	SMA Male Straight	Y	Y
S2	SMA Male Right Angle	-	Y
S4	SMA Female Bulkhead	-	Y
N1	N Male Straight	-	Y
N2	N Male Right Angle	-	Y
N4	N Female Bulkhead	-	Y
T1	TNC Male Straight	-	Y
T2	TNC Male Right Angle	-	Y
T4	TNC Female Bulkhead	-	Y

Length

Min. 6 in.
Example: 0006=6 in.; 0120=120 in.
See Assemblies Lengths Definition

Standard Length Tolerance	
6”~120”	-0”, +0.5”
120”~180”	-0”, +1”
180”~480”	-0”, +4”

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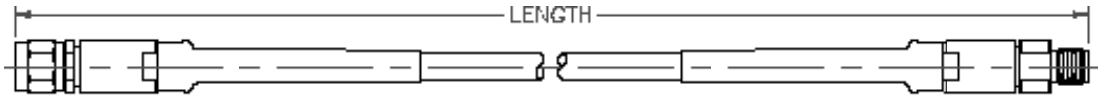
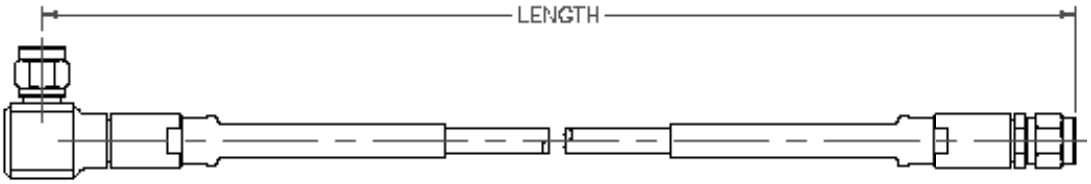
Semflex microwave solutions

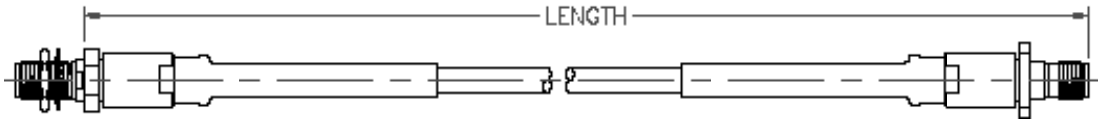
HPI Series Assemblies Construction and Lengths Definitions



Straight Male/Female — Straight Male/Female



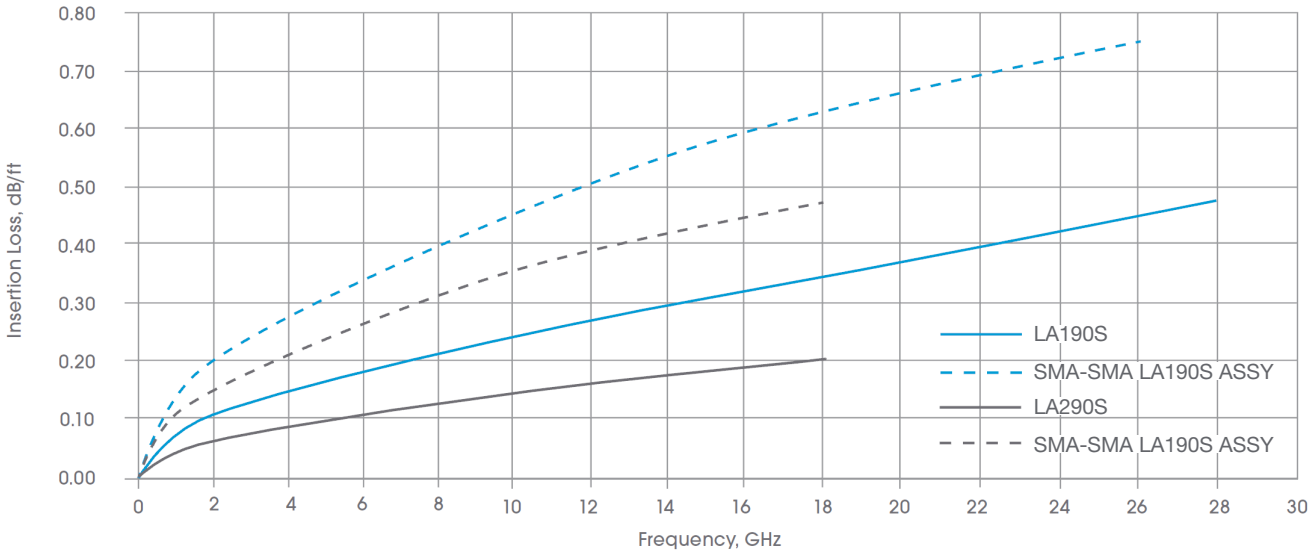
Right Angle/Swept Male — Straight Male/Female



Female Bulkhead — Female Flange

Typical Insertion Loss Performance of LA Cables and Assemblies

LA Cables and SMA-SMA Cable Assemblies Insertion Loss, dB/ft



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