

# 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 °C, 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 **LA290S Cable, FEP Jacket** **Straight SMA Male to Straight SMA Male,** **12 in. Long**

Part Number: **S1** **L29** **BF** **S1** **0012**

Interface 1  
 ↓  
 Connector Selection Order  
 ↓  
 Interface 2

	Interface Type	Cable Type	
		L19 LA190S	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"



# HPI Series Cable Assemblies

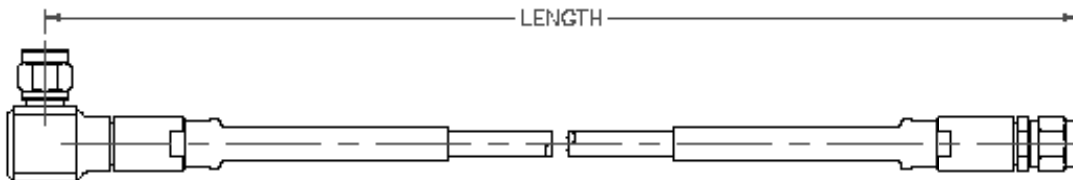
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## HPI Series Assemblies Construction and Lengths Definitions



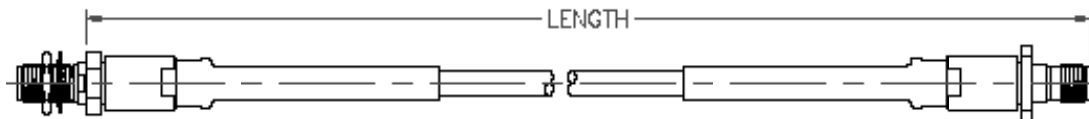
Straight Male/Female

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

