

High Performance Dynamic Applications Lab-Flex® S Specifications

General Specifications	Lab Flex 115S	Lab Flex 180SP	Lab Flex 235SP	Lab Flex 335SP	Lab Flex 490S
MIL Number	N/A	N/A	N/A	N/A	N/A
Diameter	0.105	0.18	0.235	0.335	0.49
Frequency, Max(GHz)	65	40	26.5	18	10
Loss @ 5 GHz (dB/100ft)	57.6	34	21	15	8.5

Construction Data	Lab Flex 115S	Lab Flex 180SP	Lab Flex 235SP	Lab Flex 335SP	Lab Flex 490S
Impedance, Nominal (Ω)	50	50	50	50	50
Velocity of Propagation (%)	76	78	78	78	80
Shielding Effectiveness, 18 GHz	>90	>90	>90	>90	>90
Capacitance (pF/ft)	27	27	27	27	25.5
Delay (ns/ft)	1.34	1.3	1.3	1.3	1.27

Mechanical Specifications	Lab Flex 115S	Lab Flex 180SP	Lab Flex 235SP	Lab Flex 335SP	Lab Flex 490S
Weight (lbs/100ft)	1.4	2.7	5.1	9	19.2
Temperature Range ($^{\circ}\text{C}$)	-55 to +200	-65 to +85	-65 to +85	-65 to +85	-55 to +200
Minimum Bend Radius (inches)	0.5	0.9	1.2	1.6	2.5

Construction Data	Lab-Flex 115S	Lab Flex 180SP	Lab Flex 235SP	Lab Flex 335SP	Lab Flex 490S
Inner Conductor	Stranded SC	Stranded SC	Stranded SC	Stranded SC	Stranded SC
Dielectric	Expanded PTFE	Expanded PTFE	Expanded PTFE	Expanded PTFE	Expanded PTFE
First Outer Shield	Flat Braid SC	Flat Braid SC	Flat Braid SC	Flat Braid SC	Flat Braid SC
Second Outer Shield	Conductive Tape	Conductive Tape	Conductive Tape	Conductive Tape	Conductive Tape
Third Outer Shield	Braid SC	Braid SC	Braid SC	Braid SC	Braid SC



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Jacket	FEP	PUR	PUR	PUR	FEP
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Attenuation (dB/100ft)

GHz	115S	180SP	235SP	335SP	490S
1	29.48	17.28	11.51	5.67	3.8
3	52.08	30.69	20.61	10.77	6.9
6	75	44.46	30.08	16.55	10.07
10	89	59.95	40.27	20.59	13.4
12	109	64.98	44.4	26.04	
18	136	81.57	56.12	34.37	
26	167	100.65	69.77		
32	188	113.56			
40	213	129.49			
50	243				
65	296				

Max Cable Loss at +25°C & Sea Level

Average Power Rating (Watts)

GHz	115S	180SP	235SP	335SP	490S
1	390	870	1240	3020	2300
3	220	490	840	2160	1300
6	160	340	580	1470	875
10	120	290	487	1107	650
12	110	240	400	990	
18	90	190	250	590	
26	70	160	260		
32	70	140			
40	60	120			
50	50				



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Power handling is specified for ambient conditions at sea level and +25°C



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