

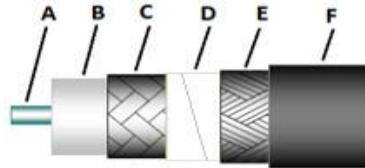
CABLE SPECIFICATIONS

Lab-Flex® 180SP



DATA SHEET PART SERIES: Lab-Flex® SHEET 1 OF 2

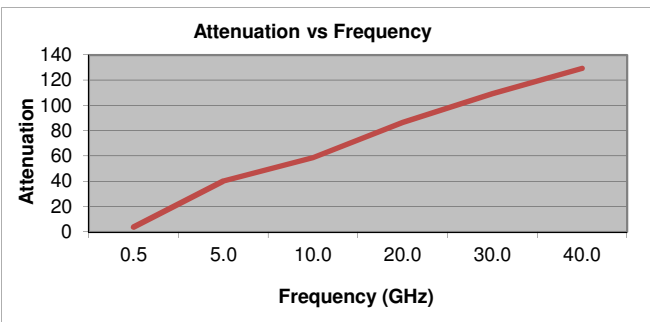
Lab-Flex® 180SP is ideal for high flexure applications requiring size low loss cable and durability over flexure. With a 78% velocity expanded PTFE dielectric Lab-Flex 180SP cable has 30% lower loss than solid dielectrics of the same size.



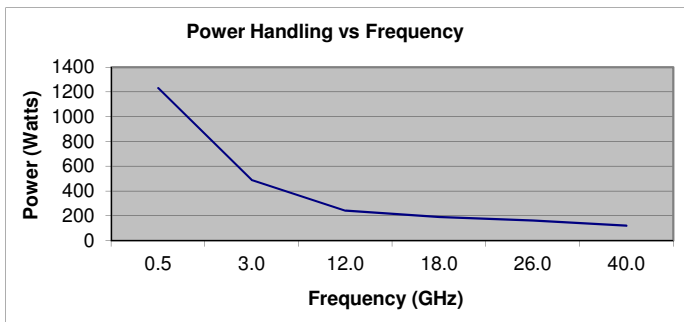
1.0 Electrical Data			
Frequency, Max (GHz)	40.0		
Impedance, nominal (Ω)	50		
Velocity of Propagation (%)	78		
Shielding Effectiveness, 18 GHz (dB/ft)	>-90dB		
Capacitance (pF/ft)	27		
Delay (ns/ft), (ns/meter)	1.3	4.268504	
Attenuation k1 (db/100ft) @ 23 deg C	0.52747		Attenuation (Typical) at any Frequency =k1 x SqRt (FMHz) + k2 x (FMHz)
Attenuation k2 (db/100ft) @ 23 deg C	0.0006		

2.0 Mechanical/Environmental Data			
Weight (lbs/100ft), (Kg/100m)	2.70	4.06	
Temperature Range (°C)	-65 to +85*		
Minimum Bend Radius (inch), (mm)	0.47	11.94	

3.0 Construction Data			
Inner Conductor (inch)	A	-	Stranded SPC
Dielectric (inch)	B	-	Expanded PTFE
First Outer Shield (inch)	C	-	SPC Flat Braid
Second Outer Shield (inch)	D	-	Conductive Tape
Third Outer Shield (inch)	E	-	SPC Round Braid
Jacket (inch O.D.)	F	0.180	Polyurethane



(dB per 100 feet)



*CW Power in watts at sea level and 23°C

Frequency GHz	1.0	12.0	18.0	26.0	32.0	40.0
Typical Loss dB/100ft	17.3	65.0	81.6	100.7	113.6	129.5

Frequency GHz	1.0	6.0	18.0	26.0	32.0	40.0
CW Power in Watts	870.0	340.0	190.0	160.0	140.0	120.0

CABLE SPECIFICATIONS

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DATA SHEET PART SERIES: Lab-Flex® SHEET 2 OF 2

Standard Connectors:

Cable Code	Connector Code	Series	Gender	Type	C-Nut Style*	Body Material*	Body Finish*	Loss per GHz	Frequency Max GHz
180SP	SMS	SMA	(Male)	Straight	H	SS	P	0.01	18
180SP	SFS	SMA	(Female)	Straight	N/A	SS	P	0.015	18
180SP	SMR	SMA	(Male)	R/A	H	SS	P	0.02	18
180SP	MMS	2.4mm	(Male)	Straight	H	SS	P	0.01	40
180SP	MFS	2.4mm	(Female)	Straight	N/A	SS	P	0.015	40
180SP	KMS	2.9mm	(Male)	Straight	H	SS	P	0.01	40
180SP	KFS	2.9mm	(Female)	Straight	N/A	SS	P	0.015	40
180SP	NMS	Type-N	(Male)	Straight	H	SS	P	0.01	18
180SP	NMR	Type-N	(Male)	R/A	H	SS	P	0.02	18
180SP	NFBS	Type-N	(Female) Bulkhead	Straight	N/A	SS	P	0.015	18
180SP	TMS	TNC	(Male)	Straight	H	SS	P	0.01	18

* C-nut Style: H= Hex, K=Knurled, HK= Hex Nut & Knurled
 *Body Materials: B=Brass, SS=Stainless Steel, Be= Beryllium Copper
 *Body Finish: N= Nickel, S=Silver, G=Gold, P= Passivated, T= Tri-metal
 Sex of connector is determined by center pin

Standard Options:

Cable Code	Option Code	Option Description	Option Details
180SP	+/-2.8PS	Phase Match	Standard Tolerance of +/-2.8PS
180SP	RoHS	RoHS Compliant	Per EU Directive 2002/95/EC
180SP	W	Weatherized	Weatherized Jacket (With Pel-Seal)
180SP	D/DD	Dust Cap one side/Both Sides	
180SP	E/EE	Extended Booting One Side/ Both Sides	
180SP	A	Armor	
180SP	AW	Armor with weatherized Jacket	
180SP	MC	Monocoil with Silicone Jacket	

*for RoHS complaint assemblies (-ROHS) is required to be added to end of standard part number
 ex. NMS-180SP-120.0-NMS-ROHS

*for phase matched assemblies (+/-2.8PS) is require to be added to the end of standard part number
 ex. NMS-180SP-120.0-NMS+/-2.8PS

Custom Options:

The above connectors and options the most common types used. Florida RF Labs offers a wide range of cables, connectors and options. If you do not see an option you require please consult the sales department.