Semi-Flex® Cable Assemblies DC – 26.5 GHz

Anti-Torque Design

INTRODUCTION

A tried and proven alternative to traditional semi-rigid coaxial cables, Carlisle Interconnect Technologies' (CarlisleIT) Semi-Flex® Coaxial Cable Assemblies are:

» Comparable in performance to semi-rigid cables

» Hand-formable for use within RF/microwave systems

» Ideal for connecting components within the box

» Capable of connecting to external equipment

With an outer conductor comprised of a tin-filled copper wire braid (which enables easy forming/reforming by hand), a copper/poly foil inner layer, and a semi-rigid-style dielectric and center conductor, our Semi-Flex Cables provide enhanced shielding and performance that exceeds traditional conformable cables.

The conformable properties of the cable allow for easy hand-forming and shape retention, making field installation quick and simple without compromising electrical performance. The malleable nature of the outer jacket eliminates solder joint failures and allows for bends directly behind the fillet. These features, along with CarlisleIT's anti-torque connector designs (see inset above), remarkably extend the assemblies' working life, even after many connect/disconnect cycles.

Semi-Flex Cable Assemblies also help users meet deadlines, reduce cost, eliminate tooling and drafting needs, and simplify manufacturing processes all at once.

FEATURES

» Hand-formable without the need for bending tools

» Excellent electrical performance; comparable to semi-rigid cables

» 100% shielded with two metal outer conductors for reduced leakage

» Superior flexibility and bending radius compared to semi-rigid

» Quick and easy assembly

» Available in various lengths and connector options

» One-week lead time

CUSTOM SOLUTIONS

In addition to our standard offering, CarlisleIT is proud to offer a vast library of modified designs and customized options which may include:

» Non-standard connector options

» Additional testing

» Phase matching

Our team of on-site engineers can help develop the right solution for your application needs.

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HOW TO ORDER

1) Select your cable code from the Semi-Flex Cable Information Table.
2) Select your connector codes from the Connector Codes Table. (Consult factory if your connector is not shown.)
3) Build your assembly part number from the Part Number Guide.

SEMI-FLEX® CABLE INFORMATION

Description	Cable Code	Jacket Type	Max Frequency (GHz)	Max Insertion Loss (dB p/ft.)	VSWR @ Max Freq.	Available Connectors								
						MCX	TNC	N	BMA	SMA	K	SMP	SMPM	1.85 mm
.047" Type	604	None*	20	1.90	1.50:1	●				●	●	●	●	
.086" Type	600	None*	26.5	1.48	1.17:1	●	●	●	●	●	●	●	●	●
	620	Standard**	26.5	1.48	1.17:1									
	650	High Temp†	18	1.16	1.17:1									
.141" Type	601	None*	26.5	0.94	1.17:1	●	●	●	●	●	●	●		●
	621	Standard**	26.5	0.94	1.17:1									
	651	High Temp†	18	0.73	1.17:1									
.250" Type	606	None*	18	0.48	1.15:1		●	●		●				

* = Tin-filled copper braid outer conductor only   ** = Polyurethane coating over outer conductor   † = FEP coating over outer conductor
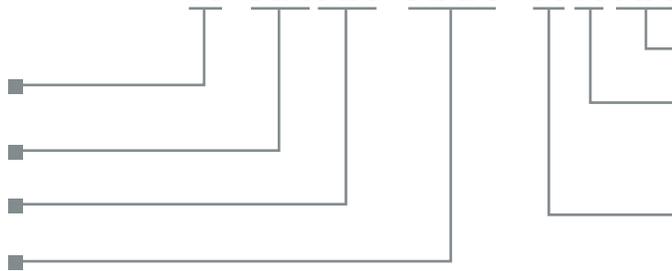
CONNECTOR CODES

Series	MCX	TNC	N	BMA	SMA	K (2.92 mm)	SMP	SMPM	1.85 mm
Max Frequency (GHz)	6	18	18	22	26.5	40	40	65	65
CONNECTOR CODES									
Plug	M6	30	18	R1	36	K6	G6	R6	V6
Right-Angle Plug	M7	31	19	–	37	–	G7	R7	--
Jack	M8	32	20	R2	38	K8	G8	R8	V8
Panel Jack	M9	33	21	R4	39	K9	G9	R9	--
Bulkhead Jack	M0	34	22	R3	40	K0	--	--	V0

NOTE: Max frequency is limited by the lowest frequency component (cable or connector) within an assembly configuration

PART NUMBER GUIDE

X - XX XX - XXX - X X XX

- Length in inches

"Y" – ROHS Compliant
"1" – NOT ROHS Compliant

2nd Connector Code

1st Connector Code

CarlisleIT Cable Code

- Specify:
  "2" – For application frequency ≤ 18 GHz
  "3" – For application frequency > 18 GHz

- Specify:
  "3" – Standard product
  "5" – Anti-torque connector (for SMA or K cable assemblies)

Notes:
Connector codes should be listed in increasing numerical sequence, and numbers should precede codes with letters.
Examples: 1-3640-601-5212 and 1-36G6-600-5212

CARLISLE
INTERCONNECT TECHNOLOGIES

See CarlisleIT's full line of RF/Microwave cable assemblies at:
CarlisleIT.com/products/cable-assemblies-harnesses/rf-microwave-cable-assemblies

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