

M-FLEX® Cable Assemblies DC - 70 GHz



INTRODUCTION

M-FLEX® Microwave Coaxial Cables are a family of flexible cables designed to accept semi-rigid cable connectors. Unlike other single or double-braided “RG”-type flexible cables, M-FLEX cables are true MIL-DTL compliant microwave cables capable of operating at frequencies up to 70 GHz. The extended frequency range is the result of a precision helically-wrapped, silver-plated, copper-foil inner shield which allows for outstanding flexibility while providing 100% coverage.

M-FLEX Coaxial Cable Assemblies are a tried and proven alternative to traditional semi-rigid coaxial cables, capable of:

- » Comparable electrical performance to semi-rigid cables
- » Easy routing within RF/Microwave Systems due to its flexibility
- » External connections to other equipment

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, allowing you to:

- » Meet deadlines
- » Reduce cost
- » Eliminate tooling and drafting needs
- » Simplify manufacturing costs

FEATURES

- » Excellent electrical performance
- » RF shielding greater than 90 dB to minimize crosstalk and maximize system performance
- » Helical shield for improved loss and phase stability
- » Same line size as semi-rigid cable to optimize assembly loss and VSWR
- » Improved flexibility compared to semi-rigid and Semi-Flex®
- » Available in various lengths and connector options
- » Designed for standard, readily-available solder-on connectors

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.

M-FLEX® Cable Assemblies

HOW TO ORDER

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

M-FLEX Cable Information

Part Number	Description	Outer Diameter	Cable Code	Jacket Type	Max Frequency (GHz)	Max Insertion Loss (db/ft)	VSWR @ Max Frequency	Available Connectors									
								MCX	TNC	N	BMA	SMA	K	SMP	SMPM	1.85 mm	
HGE055D	Flexible .047" Type	.055"	410	FEP	70	3.79	1.25:1	•				•	•	•	•	•	
HFE100D	Flexible .086" Type	.100"	411	FEP	40	1.66	1.25:1	•	•	•	•	•	•	•	•	•	
HFE160D	Flexible .141" Type	.160"	413	FEP	33	0.89	1.25:1		•	•	•	•					

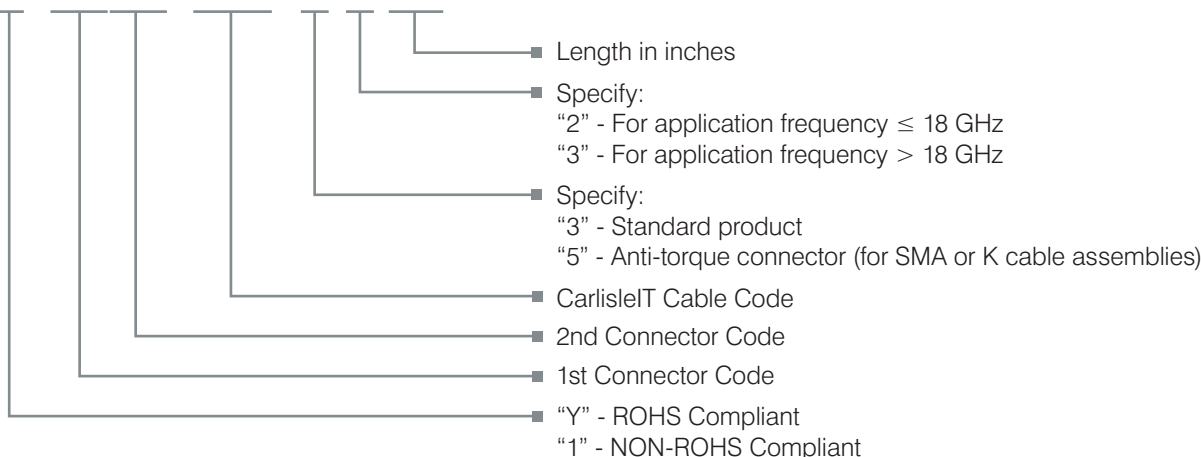
Connector Codes

Series:	MCX	TNC	N	BMA	SMA	K (2.92 mm)	SMP	SMPM	1.85 mm
Typical 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



Notes:
 Connector codes should be listed in increasing numerical sequence and numeric codes should precede alpha-numeric.
 Examples: 1-3640-413-5212 and 1-36G6-411-5212



Learn More:
CarlisleIT.com/prod-info/m-flex

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