



Flexible Microwave Cable Assemblies deliver high performance with proven cable technology and connector termination expertise

High-performance, Flexible Microwave Cable Assemblies replace stiff and difficult-to-install semi-rigid assemblies. Constructed from Temp-Flex® coaxial cables and Molex RF connectors, the Flexible Microwave Cables offer excellent electrical properties and are assembled using proprietary techniques to minimize Voltage Standing Wave Ratio (VSWR) and insertion loss for the ideal cable and connector combination.

The cables come standard with silver-plated conductors, fluoropolymer (FEP) dielectric, double shields and FEP jacket. The solid-core low-loss cables use proprietary low-loss FEP dielectric with 70% velocity of propagation (VOP). The air-dielectric ultra-low-loss cables use a unique air-enhanced design with up to 87% VOP.

Connector options include SMA, 2.92, SMP, SMPM and many others.

Features and Benefits

Cable impedance of 50 +/- 1 Ohms	Provides consistent electrical performance
Dual shielded using helically wrapped foil covered by a braided shield	Delivers excellent shielding effectiveness greater than 100 dB
Solid-core low-loss fluoropolymer (FEP) assemblies	Provides assemblies with low VSWR (Voltage Standing Wave Ratio)
Air-Dielectric Ultra-Low-Loss assemblies	Used for assemblies with lowest possible attenuation
Proprietary Air-Dielectric Ultra-Low-Loss connector-to-cable termination expertise	Ensures optimized cable assembly performance

Flexible Microwave Cable Assemblies

89762 Assemblies with Standard RF Connectors and Temp-Flex® Cables in Solid-Core Low-Loss and Air-Dielectric Ultra-Low-Loss Options



Flexible Microwave Cable Assemblies with Temp-Flex® Solid-Core Low-Loss and Air-Dielectric Ultra-Low-Loss Cables

Ordering Information

Connector Availability Matrix*

RF Connector Type	Orientation	Temp-Flex® Solid-Core Low Loss Cable			Temp-Flex® Air-Dielectric Ultra Low Loss Cable		
		Part numbers are for design reference only; not published on molex.com					
		047SC-2901	086SC-2401	141SC-1901	047-2801	086-2201	141-1701
SMPM Jack	Straight	X	X		X	X	
	Right Angle	X	X		X	X	
SMP Jack	Straight	X	X	X	X	X	X
	Right Angle	X	X	X	X	X	X
SMA Plug	Straight	X	X	X	X	X	X
	Right Angle	X	X	X	X	X	X
SMA Jack	Straight	X	X	X	X	X	X
2.92mm Plug	Straight	X	X	X	X	X	X
2.4mm Plug	Straight	X	X		X	X	
Type N Plug	Straight		X	X		X	X
TNC Jack	Straight	X	X				

*Complete, in-house, high-performance cable assembly solutions with the above connector options (additional connector options are available or in development)

Temp-Flex® Cable Performance Characteristics*

Cable Part No.*	Impedance (Ohms)	VOP (%)	Capacitance	Static Bend Radius (min.)	Center Conductor	Insulation	Jacket	Outside Diameter	Cut-Off Frequency
047SC-2901	50+1	70	29 pF/ft	0.20"	0.0113"	FEP	FEP	.056"	112 GHz
086SC-2401				0.30"	0.0201"			.101"	62 GHz
141SC-1901				0.50"	0.036"			.157"	41 GHz
047-2801		87	23.3 pF/ft	0.20"	0.0126"			.055"	143 GHz
086-2201		86.4	23.6 pF/ft	0.38"	0.0253"			.101"	72 GHz
141-1701		87	23.3 pF/ft	0.75"	0.0453"			.158"	42 GHz

*Part numbers are for design reference only; not published on molex.com

Temp-Flex® Air-Dielectric Ultra-Low-Loss cables

Order No.	Connector-to-Connector	Cable Type	Length (mm/inches)	Voltage Standing Wave Ratio (VSWR)	Insertion Loss (dB)		
89762-1320	2.92mm ST Plug to 2.92mm ST Plug	086 Ultra-Low-Loss	152.40 / 6.00	1.40 max. to 40 GHz	0.8		
89762-1321			228.60 / 9.00		1.2		
89762-1322			304.80 / 12.00		1.6		
89762-1323			381.00 / 15.00		2.0		
89762-1324			457.20 / 18.00		2.4		
89762-1325			3048.00 / 120.00		16.0		
89762-1370	SMA ST Plug to SMA ST Plug	141 Ultra-Low-Loss	152.40 / 6.00	1.35 max. to 26 GHz	0.35		
89762-1371			304.80 / 12.00		0.70		
89762-1372			3048.00 / 120.00		7.00		
89762-1400	SMA ST Plug to SMP ST Jack	086 Ultra-Low-Loss	152.40 / 6.00	1.50 max. to 26 GHz	0.70		
89762-1401			228.60 / 9.00		1.05		
89762-1402			304.80 / 12.00		1.40		
89762-1403			3048.00 / 120.00		14.0		
89762-1420			SMP ST Jack to SMP ST Jack		152.40 / 6.00	1.70 max. to 26 GHz	0.75
89762-1421					228.60 / 9.00		1.12
89762-1422	304.80 / 12.00	1.50					
89762-1423	3048.00 / 120.00	15.0					

Temp-Flex® Solid-Core Low-Loss cables

Order No.	Connector-to-Connector	Cable Type	Length (mm/inches)	Voltage Standing Wave Ratio (VSWR)	Insertion Loss (dB)
89762-1540	2.92mm ST Plug to 2.92mm ST Plug	086 Low-Loss	152.40 / 6.00	1.50 max. to 40 GHz	0.92
89762-1541			228.60 / 9.00		1.33
89762-1542			304.80 / 12.00		1.674
89762-1543			381.00 / 15.00		2.15
89762-1544			457.20 / 18.00		2.56
89762-1545			3048.00 / 120.00		16.5
89762-1620		141 Low-Loss	152.40 / 6.00	1.45 max. to 40 GHz	0.59
89762-1621			228.60 / 9.00		0.84
89762-1622			304.80 / 12.00		1.08
89762-1623			381.00 / 15.00		1.33
89762-1624			457.20 / 18.00		1.57
89762-1625			3048.00 / 120.00		9.9
89762-1580		047 Low-Loss	152.40 / 6.00	1.50 max. to 26 GHz	1.40
89762-1581			228.60 / 9.00		2.05
89762-1582			304.80 / 12.00		2.72
89762-1583			381.00 / 15.00		3.36
89762-1584			457.20 / 18.00		4.01
89762-1585			3048.00 / 120.00		26.2