



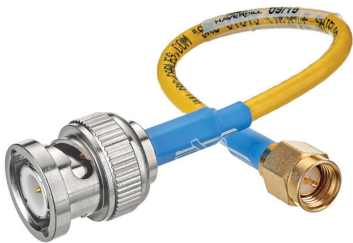
RF & Microwave Cable Assembly Solutions



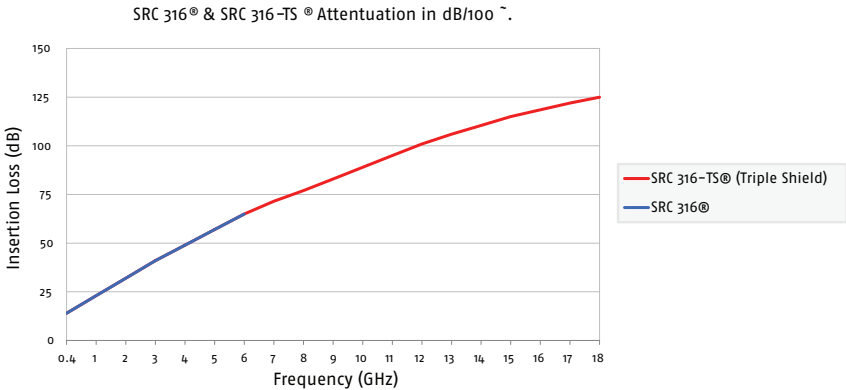


Winchester products are now under the Win™ brand
from Winchester Interconnect.

SRC 316® AND SRC 316-TS® Triple-Shield



- 90 dB to 110 dB Shielding vs. 40 dB
- 20% Lower loss and twice as flexible
- Replaces Standard Mil-C-17 316, 174, 188
- Pre-treated, cross-linked dielectric
- Ideal for test cables and instrumentation



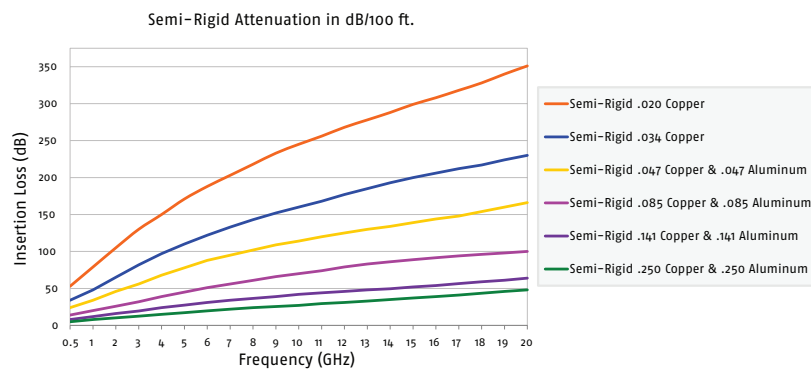
Cable Series

	SRC 316		SRC 316-TS (triple shield)	
Electrical	Impedance Ohm	50	50	
	Capacitance pF/ft @ 1 GHz	29	29	
	Velocity of Propagation	71%	71%	
	Shielding dB	90	110	
	Max Voltage VRMS	1500	1500	
	Halogen	Passes IEC 754	Passes IEC 754	
Mechanical	Center Conductor	Silver Plated Copper		Silver Plated Copper
	Dimension-inches (mm)	.020	(.51)	.020 (.51)
	Dielectric	Cellular X-Linked High Density Polyolefin		Cellular X-Linked High Density Polyolefin
	Shield 1	Al Mylar Tape	.003 (.076)	Al Mylar Tape .003 (.076)
	Shield 2	SC	97% coverage	SC 97% coverage
	Shield 3			SC 97% coverage
	Jacket	PVC (White)	.099 Outer Diameter	PVC (Yellow) .120 Outer Diameter.
	Bend Radius-inches	.25		.3
Environmental	Temperature Range °C	-40 +105		-40 +105
	Flame Rating	UL 1581		UL 1581
Attenuation	Frequency	Insertion Loss (Db/100 ft)		
	400 MHz	14.8		14.6
	900 MHz	22		21.8
	2 GHz	34.8		34.6
	6 GHz	64.8		64.5
	12 GHz	na		97.7
	18 GHz	na		125.8
Average Power	Frequency	Average Power (Watts) @ 20° C @ Sea Level		
	400 MHz	60		60
	900 MHz	50		50
	2 GHz	20		20
	6 GHz	10		10
	12 GHz	na		10
	18 GHz	na		10

Semi-Rigid Cable/Cable Assemblies

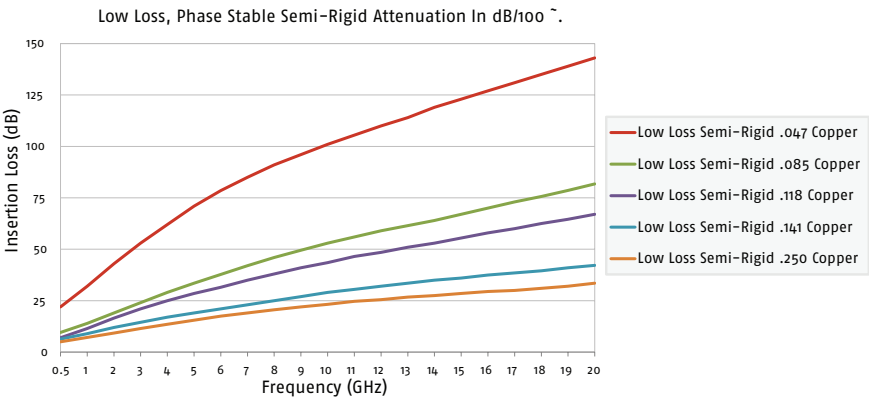


- Excellent power handling and electrical performance
- Superior choice for tactical and shock or vibration applications
- Precision CNC cutting and machining to .002 in tolerance for phase matching
- Copper or Aluminum shield (30% less weight, similar performance)
- Factory offers various plating options for copper tubing



Cable Series										
		.020	.034	.047	.085	.141	.250	.047	.085	.141
Electrical	Impedance Ohm	50	50	50	50	50	50	50	50	50
	Capacitance pF/ft @ 1 GHz	29	29	29	29	29	29	29	29	29
	Max Voltage VRMS	750	2000	2000	5000	5000	7500	2000	5000	5000
	Cutoff Frequency	270 GHz	155 GHz	110 GHz	61 GHz	34 GHz	20 GHz	110 GHz	61 GHz	34 GHz
Mechanical	Shield	Bare Copper	Bare Copper	Bare Copper	Bare Copper	Bare Copper	Bare Copper	SnPlateAl	SnPlateAl	SnPlateAl
	Center Conductor	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel
	Dimension-inches (mm)	.0044 (.112)	.008 (.203)	.011 (.288)	.020 (.51)	.026 (.91)	.064 (1.62)	.011 (.288)	.020 (.51)	.026 (.91)
	Dielectric	PTFE .015	PTFE .026	PTFE .037	PTFE .066	PTFE .116	PTFE .209	PTFE .037	PTFE .066	PTFE .116
	Bend Radius-inches	.05	.05	.05	.1	.15	.5	.05	.1	.15
	Cable Outer Diameter-inches (mm)	.020 (.508)	.034 (.864)	.047(1.19)	.085 (2.16)	.141 (3.58)	.250 (6.35)	.047 (1.19)	.085 (2.16)	.141 (3.58)
Environmental	Temperature Range �C	-55/+85	-55/+100	-55/+100	-55/+125	-55/+125	-55/+125	-55/+100	-55/+125	-55/+125
Attenuation	Frequency	Insertion Loss (Db/100 ft)								
	.5 GHz	53	34	24	14	8	5	26	15	8.3
	1 GHz	76	48	34	20	11	7.5	37	21	12.1
	5 GHz	171	110	79	46	28	21	85	49	30.1
	10 GHz	245	159	114	68	42	33	122	72	45.4
	20 GHz	351	230	166	100	64	48	177	107	70
Average Power	Frequency	Average Power (Watts) @ 20� C @ Sea Level								
	.5 GHz	20	36	81	232	601	2100	85	241	600
	1 GHz	14	25	57	162	418	1400	60	169	450
	5 GHz	6	11	25	70	174	875	27	73	180
	10 GHz	5	8	17	48	118	350	18	50	120
	20 GHz	3	5	12	33	78	200	13	34	70

Low Loss and Phase Stable Semi-Rigid Cable/Cable Assemblies



- Low density PTFE dielectric gives superior low-loss performance
- Higher temperature range, better power handling, and more phase stable than standard semi-rigid
- Available with high performance connectors
- Factory offers various plating options for copper tubing



		Cable Series				
		.047	.085	.118	.141	.250
Electrical	Impedance Ohm	50	50	50	50	50
	Velocity of Propagation	83%	83%	83%	83%	83%
	Capacitance pF/ft @ 1 GHz	24.5	24.5	24.5	24.5	24.5
	Max Voltage VRMS	2000	2500	3000	5000	7500
Mechanical	Cutoff Frequency	118 GHz	60 GHz	46 GHz	36 GHz	20 GHz
	Shield	Bare Copper	Bare Copper	Bare Copper	Bare Copper	Bare Copper
	Center Conductor	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper
	Dimension-inches (mm)	.013 (.323)	.023 (.571)	.032 (.813)	.046 (1.156)	.074 (1.88)
	Dielectric	LD PTFE Tape .0375	LD PTFE Tape .066	LD PTFE Tape .097	LD PTFE Tape .120	LD PTFE Tape .209
	Bend Radius-inches	.125	.250	.400	.500	1.000
	Cable Outer Diameter-inches (mm)	.047 (1.24)	.085 (2.18)	.118 (2.30)	.141 (3.58)	.250 (6.35)
Environmental	Temperature Range °C	-55/+200	-55/+200	-55/+200	-55/+200	-55/+200
Attenuation	Insertion Loss (dB/100 ft)					
	.5 GHz	22	9.57	7	6.3	5
	1 GHz	31	13.9	12	9	7.1
	5 GHz	71	34.6	28	20.5	16.2
	10 GHz	100	52.6	41	29.3	23.2
	20 GHz	143	81.8	67	42.2	33.5
Average Power	Frequency	Average Power (Watts) @ 20° C @ Sea Level				
	.5 GHz	124	341	634	900	2716
	1 GHz	88	242	446	622	1902
	5 GHz	39	108	200	269	818
	10 GHz	27	77	144	186	562
	20 GHz	19	58	96	126	348

Vortex Ultra Low Loss Phase Stable Flexible Cable Assemblies



Cable Assemblies Attributes

- Cable assemblies are 100% tested for Insertion Loss and VSWR
- Designed for Low structural VSWR, which reduces variations in attenuation and phase compared to lower VoP cable assemblies
- Our global engineering team is available to assist in solving your technical requirements
- Certified soldered cable assemblies per IPC/WHMA-A-620
- Connector interfaces meet MIL-STD-348
- Connectors meet the environmental specifications of MIL-PRF-39012
- Cable and Connector Retention: Meets MIL-T-81490 and MIL-C-87104
- Torque Resistance: Meets MIL-T-81490 and MIL-C-87104
- Flexure Life: Meets MIL-C-87104
- Standard and ruggedized cable assemblies available
- Connector Mating Durability: 500 cycles minimum per MIL-PRF-39012
- Phase matched cable assemblies available

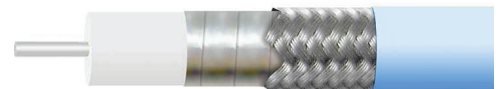
Connector Materials

- Outer Bodies: Passivated Stainless Steel
- Inner Bodies: Passivated Stainless Steel
- Contacts: Gold Plated
- Insulators: PTFE and PLTFE

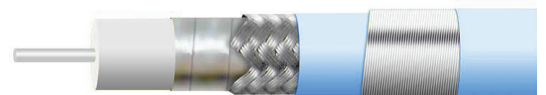
Available Connector Interfaces

- 2.4, 2.9, SMA, TNC, and Type N
- Connectors are available with or without lock wire holes

Standard Cable Construction



Ruggedized Cable Construction



SRC-140/210 Cable Specifications

Cable Series			
		SRC-140	SRC-210 (Ruggedized)
Electrical	Max Frequency (GHz)	50	50
	Impedance	50 Ohms	50 Ohms
	Velocity of Propagation	83% Nominal	83% Nominal
	Time Delay (ns/ft)	1.22	1.22
	Capacitance (pF/ft)	24	24
	VSWR (cable only)	<1.15:1	<1.15:1
	Attenuation	See Information Below	See Information Below
	Average Power	See Information Below	See Information Below
	RF Shielding (dB) to 18 GHz	>90	>90
Mechanical	Cable Outer Diameter-inches	.140	.210
	Jacket Color	Blue	Blue
	Jacket Material	FEP	FEP
	Dielectric	EPTFE	EPTFE
	Cable and Connector Retention	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
	Torque Resistance	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
	Internally Ruggedized	No	Yes
	Crush Resistance	Meets MIL-T-81490 and MIL-C-87104	Exceeds MIL-T-81490 and MIL-C-87104 >150 Pounds per Linear Inch
	Flexure Life	Meets MIL-C-87104	Meets MIL-C-87104
	Bend Radius-inches	.5	.5
	Weight (lbs per 100 ft)	1.9	4.6
Environmental	Temperature Range °C	-65 to +165	-65 to +165
	Custom/Special Operating Temperature Range °C	-65 to +200	-65 to +200
	Flame Rating	UL94 V-0	UL94 V-0
Attenuation	Frequency	Insertion Loss (dB/foot)	Average Power (Watts) @ 20° C @ Sea Level
	.04 GHz	.075	550
	1 GHz	.120	450
	2 GHz	.170	300
	4 GHz	.240	225
	8 GHz	.350	150
	12 GHz	.440	120
	18 GHz	.560	100
	26 GHz	.690	80
	32 GHz	.780	71
	40 GHz	.890	60
	50 GHz	1.020	50

SRC-150/215 Cable Specifications

Cable Series			
		SRC-150	SRC-215 (Ruggedized)
Electrical	Max Frequency (GHz)	40	40
	Impedance	50 Ohms	50 Ohms
	Velocity of Propagation	83% Nominal	83% Nominal
	Time Delay (ns/ft)	1.22	1.22
	Capacitance (pF/ft)	24	24
	VSWR (cable only)	<1.15:1	<1.15:1
	Attenuation	See Information Below	See Information Below
	Average Power	See Information Below	See Information Below
	RF Shielding (dB) to 18 GHz	>90	>90
Mechanical	Cable Outer Diameter-inches	.150	.210
	Jacket Color	Blue	Blue
	Jacket Material	FEP	FEP
	Dielectric	EPTFE	EPTFE
	Cable and Connector Retention	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
	Torque Resistance	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
	Internally Ruggedized	No	Yes
	Crush Resistance	Meets MIL-T-81490 and MIL-C-87104	Exceeds MIL-T-81490 and MIL-C-87104 >150 Pounds per Linear Inch
	Flexure Life	Meets MIL-C-87104	Meets MIL-C-87104
	Bend Radius-inches	.5	.5
	Weight (lbs per 100 ft)	2.3	4.9
Environmental	Temperature Range °C	-65 to +165	-65 to +165
	Custom/Special Operating Temperature Range °C	-65 to +200	-65 to +200
	Flame Rating	UL94 V-0	UL94 V-0
Attenuation	Frequency	Insertion Loss (dB/foot)	Average Power (Watts) @ 20° C @ Sea Level
	.04 GHz	.070	600
	1 GHz	.110	500
	2 GHz	.160	370
	4 GHz	.220	260
	6 GHz	.270	210
	8 GHz	.320	180
	12 GHz	.390	150
	18 GHz	.490	120
	26 GHz	.590	100
	32 GHz	.660	95
	40 GHz	.750	75

SRC-190/260 Cable Specifications

Cable Series			
		SRC-190	SRC-260 (Ruggedized)
Electrical	Max Frequency (GHz)	32	32
	Impedance	50 Ohms	50 Ohms
	Velocity of Propagation	83% Nominal	83% Nominal
	Time Delay (ns/ft)	1.22	1.22
	Capacitance (pF/ft)	24	24
	VSWR (cable only)	<1.15:1	<1.15:1
	Attenuation	See Information Below	See Information Below
	Average Power	See Information Below	See Information Below
	RF Shielding (dB) to 18 GHz	>90	>90
Mechanical	Cable Outer Diameter-inches	.190	.260
	Jacket Color	Blue	Blue
	Jacket Material	FEP	FEP
	Dielectric	EPTFE	EPTFE
	Cable and Connector Retention	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
	Torque Resistance	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
	Internally Ruggedized	No	Yes
	Crush Resistance	Meets MIL-T-81490 and MIL-C-87104	Exceeds MIL-T-81490 and MIL-C-87104 >150 Pounds per Linear Inch
	Flexure Life	Meets MIL-C-87104	Meets MIL-C-87104
	Bend Radius-inches	.500	.500
	Weight (lbs per 100 ft)	3.7	9.3
Environmental	Temperature Range °C	-65 to +165	-65 to +165
	Custom/Special Operating Temperature Range °C	-65 to +200	-65 to +200
	Flame Rating	UL94 V-0	UL94 V-0
Attenuation	Frequency	Insertion Loss (dB/foot)	Average Power (Watts) @ 20° C @ Sea Level
	.04 GHz	.05	1000
	1 GHz	.08	800
	2 GHz	.12	550
	4 GHz	.16	400
	8 GHz	.23	290
	10 GHz	.26	250
	12 GHz	.29	220
	14 GHz	.32	210
	16 GHz	.34	200
	18 GHz	.36	195
	20 GHz	.38	190
	22 GHz	.40	185
	24 GHz	.42	180
	26 GHz	.44	175
	28 GHz	.46	170
	30 GHz	.47	160
	32 GHz	.49	150

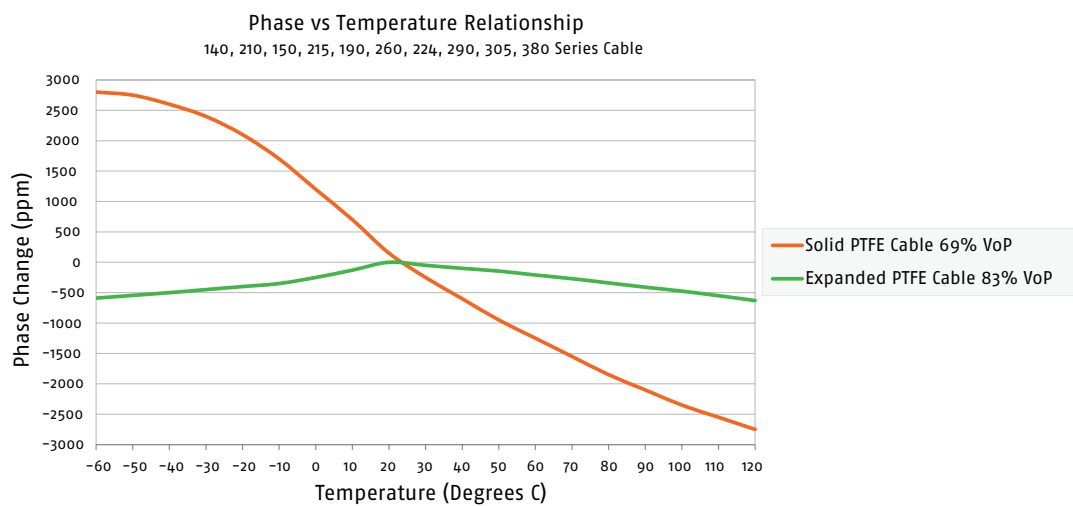
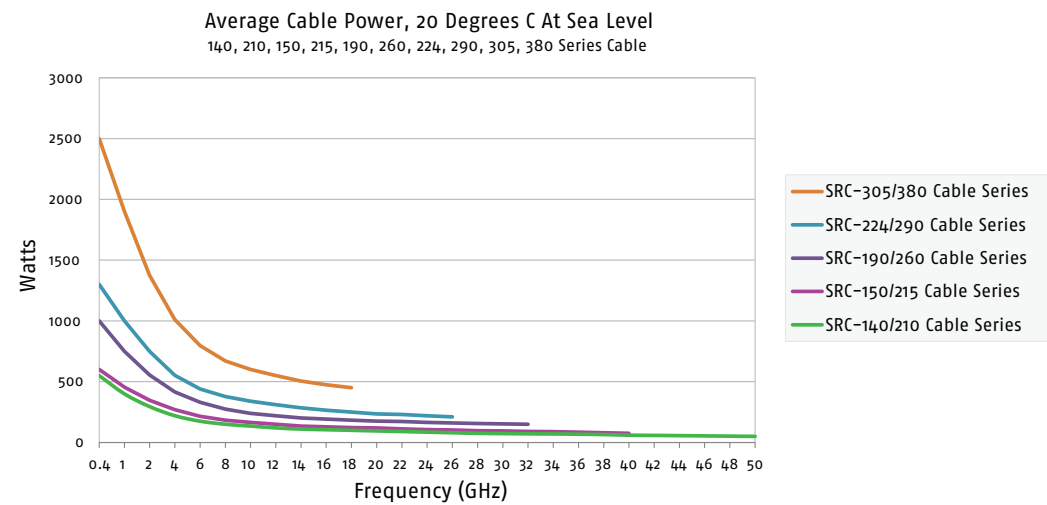
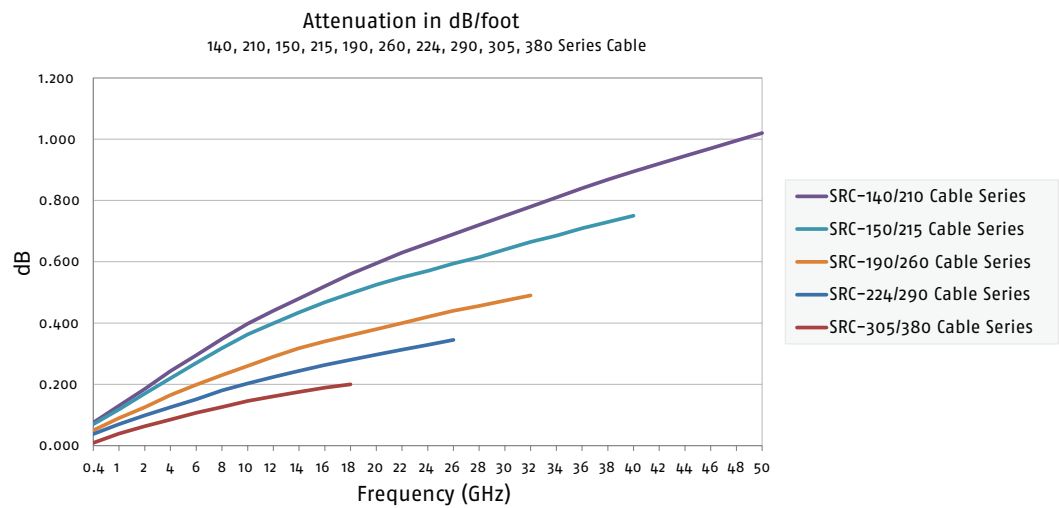
SRC-224/290 Cable Specifications

Cable Series			
		SRC-224	SRC-290 (Ruggedized)
Electrical	Max Frequency (GHz)	26.5	26.5
	Impedance	50 Ohms	50 Ohms
	Velocity of Propagation	83% Nominal	83% Nominal
	Time Delay (ns/ft)	1.22	1.22
	Capacitance (pF/ft)	24	24
	VSWR (cable only)	<1.15:1	<1.15:1
	Attenuation	See Information Below	See Information Below
	Average Power	See Information Below	See Information Below
	RF Shielding (dB) to 18 GHz	>90	>90
Mechanical	Cable Outer Diameter-inches	.224	.290
	Jacket Color	Blue	Blue
	Jacket Material	FEP	FEP
	Dielectric	EPTFE	EPTFE
	Cable and Connector Retention	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
	Torque Resistance	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
	Internally Ruggedized	No	Yes
	Crush Resistance	Meets MIL-T-81490 and MIL-C-87104	Exceeds MIL-T-81490 and MIL-C-87104 >150 Pounds per Linear Inch
	Flexure Life	Meets MIL-C-87104	Meets MIL-C-87104
	Bend Radius-inches	.750	.750
Environmental	Weight (lbs per 100 ft)	4.8	10.1
	Temperature Range °C	-65 to +165	-65 to +165
	Custom/Special Operating Temperature Range °C	-65 to +200	-65 to +200
Attenuation	Flame Rating	UL94 V-0	UL94 V-0
	Frequency	Insertion Loss (dB/foot)	Average Power (Watts) @ 20° C @ Sea Level
	.04 GHz	.038	1300
	1 GHz	.061	1100
	2 GHz	.087	800
	4 GHz	.125	520
	6 GHz	.155	450
	8 GHz	.180	380
	10 GHz	.203	350
	12 GHz	.224	310
	14 GHz	.244	300
	16 GHz	.263	280
	18 GHz	.280	270
	26.5 GHz	.347	210

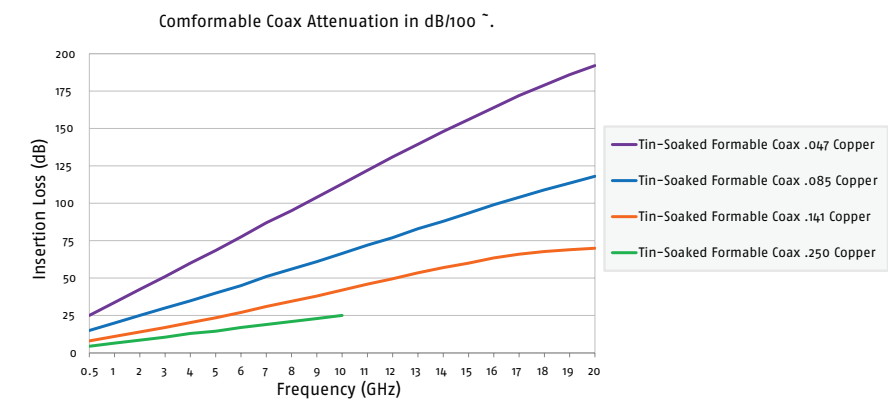
SRC-305/380 Cable Specifications

Cable Series			
		SRC-305	SRC-380 (Ruggedized)
Electrical	Max Frequency (GHz)	18	18
	Impedance	50 Ohms	50 Ohms
	Velocity of Propagation	83% Nominal	83% Nominal
	Time Delay (ns/ft)	1.22	1.22
	Capacitance (pF/ft)	24	24
	VSWR (cable only)	<1.15:1	<1.15:1
	Attenuation	See Information Below	See Information Below
	Average Power	See Information Below	See Information Below
	RF Shielding (dB) to 18 GHz	>90	>90
Mechanical	Cable Outer Diameter-inches	.305	.380
	Jacket Color	Blue	Blue
	Jacket Material	FEP	FEP
	Dielectric	EPTFE	EPTFE
	Cable and Connector Retention	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
	Torque Resistance	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
	Internally Ruggedized	No	Yes
	Crush Resistance	Meets MIL-T-81490 and MIL-C-87104	Exceeds MIL-T-81490 and MIL-C-87104 >150 Pounds per Linear Inch
	Flexure Life	Meets MIL-C-87104	Meets MIL-C-87104
	Bend Radius-inches	1.0	1.0
Environmental	Weight (lbs per 100 ft)	8.2	16.5
	Temperature Range °C	-65 to +165	-65 to +165
	Custom/Special Operating Temperature Range °C	-65 to +200	-65 to +200
Attenuation	Flame Rating	UL94 V-0	UL94 V-0
	Frequency	Insertion Loss (dB/foot)	Average Power (Watts) @ 20° C @ Sea Level
	.04 GHz	.009	2500
	1 GHz	.044	1900
	2 GHz	.063	1350
	4 GHz	.090	900
	6 GHz	.110	750
	8 GHz	.130	650
	10 GHz	.146	600
	12 GHz	.161	580
	14 GHz	.175	550
	16 GHz	.188	525
	18 GHz	.200	450

Vortex Attenuation, Average Power, and Phase vs. Temperature



Tin-Soaked Formable Coax Cable Assemblies

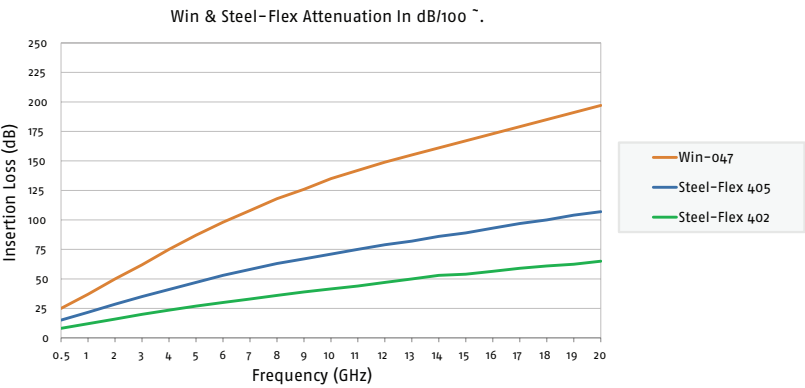


- Excellent electrical performance – better power handling
- Durable, pre-treated PTFE dielectric and phase stable characteristics
- Hand formable is ideal for prototypes or as an alternative to semi-rigid
- Wide selection of connectors suitable for most applications

Cable Series					
		.047	.085	.141	.250
Electrical	Impedance Ohm	50	50	50	50
	Capacitance pF/ft @ 1 GHz	30	29.5	29.3	29.6
	Velocity of Propagation	70%	70%	70%	70%
	Max Voltage VRMS	1000	1500	1900	5000
	Frequency Range	DC to 20 GHz	DC to 20 GHz	DC to 20 GHz	DC to 18 GHz
Mechanical	Center Conductor	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper
	Dimension-inches (mm)	.007 (.18)	.020 (.51)	.036 (.91)	.065 (1.65)
	Dielectric	PTFE .033	PTFE .066	PTFE .116	PTFE .209
	Jacket	Cu/Sn Composite	Cu/Sn Composite	Cu/Sn Composite	Cu/Sn Composite
	Bend Radius-inches	.125	.125	.250	.375
	Cable Outer Diameter-inches (mm)	.047 (1.19)	.085 (2.16)	.141 (3.58)	.250 (6.35)
Environmental	Temperature Range °C	-65 +150	-65 +150	-65 +150	-65 +150
Attenuation	Insertion Loss (dB/100 ft)				
	.5 GHz	25	15	8	4.4
	1 GHz	36	20.8	12	6.7
	5 GHz	128	74	45	27
	10 GHz	162	95	65	36
	20 GHz	192	118	70	NA
Average Power	Average Power (Watts) @ 20° C @ Sea Level				
	.5 GHz	45	180	600	1900
	1 GHz	32.5	130	450	1400
	5 GHz	13	35	120	350
	10 GHz	11	26	88	200
	20 GHz	10.5	20	70	NA

Win and Steelflex Flexible Alternative For RG405/RG402

- Flexible alternative for 047 (Win-047), 085 (405) and 141 (402) semi-rigid coax
- Low cost with good electrical performance 110 dB Shielding
- .1 in (Win-047), .5 in (405) and .8 in (402) bend radius, stable after multiple flexures
- Custom, armored metal boots & PVC shrink for durable solder joints

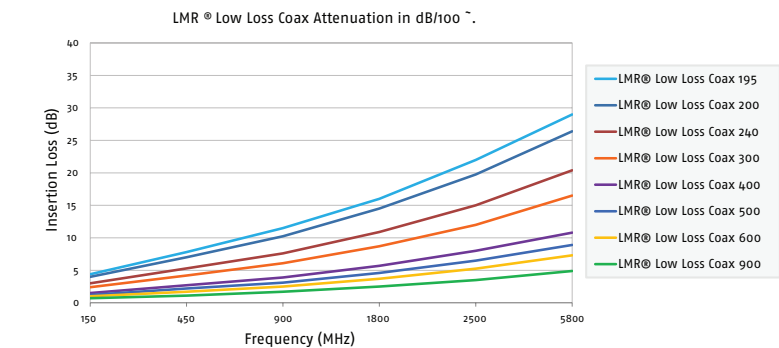


Cable Series				
	Win 047	405	402	
Electrical	Impedance Ohm	50	50	50
	Capacitance pF/ft @ 1 GHz	20.4	29.4	29.4
	Max Voltage VRMS	500	2,000	5,000
	Frequency Range	110	.05 to 63 GHz	.05 to 34 GHz
	Shielding	>110	>110	>110
	Max Structural VSWR @ 18 GHz	1.20:1	1.20:1	1.20:1
Mechanical	Center Conductor	Silver Plated Copper	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel
	Dimension-inches (mm)	.0013	.020 (.51)	.037 (.91)
	Dielectric	PTFE .034	PTFE .064	PTFE .117
	Jacket	FEP .063	FEP .104	FEP .163
	Bend Radius-inches	.1	.5	.8
Environmental	Temperature Range °C	-55 +165	-55 +200	-55 +200
Attenuation	Insertion Loss (dB/100 ft)			
	1 GHz	43	19.2	11.2
	5 GHz	83	45.7	27
	10 GHz	129	67.5	41
	18 GHz	176	95.1	58
	40 GHz	273	154.3	67
	60 GHz	338	191	na
Average Power	Average Power (Watts) @ 20° C @ Sea Level			
	1 GHz	32	130	620
	5 GHz	12.5	50	220
	10 GHz	9	40	150
	18 GHz	6.5	20	120
	40 GHz	3.4	10	28
	60 GHz	3.0	10	na

Times Microwave LMR™ Low-Loss Coax For Wireless Applications

LMR Jacket Options

- "d" Foil/braid w/waterproofing compound around the foil/braid
- "f" Non-halogen, low smoke, "CMP/MPP" and CSA 'FT4' rated
- "r" Fire retardant, PVC, less expensive alternative to 'f'
- "p" PVC jacket, more fl xible than PE jacket (also available in white)



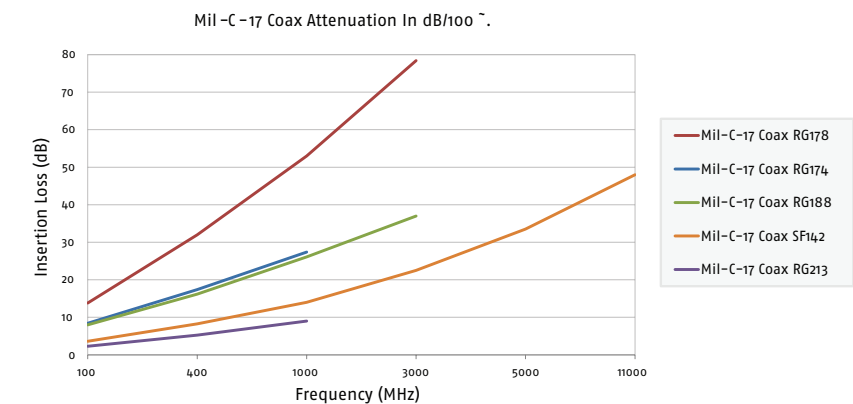
		Cable Series							
		195	200	240	300	400	500	600	900
Electrical	Impedance Ohm	50	50	50	50	50	50	50	50
	Capacitance pF/ft @ 1 GHz	24.3	24.5	24.2	24.1	23.9	23.6	23.4	23.4
	Velocity of Propagation	80%	83%	84%	85%	85%	86%	87%	87%
	Max Voltage VRMS	1000	1000	1500	2000	2500	3000	4000	5000
	Shielding (dB)	>90	>90	>90	>90	>90	>90	>90	>90
	Cutoff Frequency (GHz)	41	39	31	24.5	16.2	12.6	10.3	6.9
Mechanical	Center Conductor	Bare Copper	Bare Copper	Bare Copper	Bare Copper	Bare Copper Clad Aluminum	Bare Copper Clad Aluminum	Bare Copper Clad Aluminum	Bare Copper Tube
	Dimension-inches (mm)	.037 (.94)	.044 (1.12)	.056 (1.42)	.070 (1.78)	.108 (2.74)	.142 (3.61)	.176 (4.47)	.262 (6.65)
	Dielectric	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE
	Outer Conductor	Aluminum Tape	Aluminum Tape	Aluminum Tape	Aluminum Tape	Aluminum Tape	Aluminum Tape	Aluminum Tape	Aluminum Tape
	Braid	Tinned Cu	Tinned Cu	Tinned Cu	Tinned Cu	Tinned Cu	Tinned Cu	Tinned Cu	Tinned Cu
	Jacket	PE (d,f,r,p)	PE (d,f,r,p)	PE (d,f,r,p)	PE (d,f,r,p)	PE (d,f,r,p)	PE (d,f)	PE (d,f)	PE (d,f)
	Bend Radius-inches (mm)	.5 (12.7)	.5 (12.7)	.75 (19.1)	.88 (22.2)	1.0 (25.4)	1.25 (31.8)	1.50 (38.1)	3.00 (76.2)
	Repeated Bend Radius-inches (mm)	2.0 (50.8)	2.0 (50.8)	2.5 (63.5)	3.0 (76.2)	4.0 (101.6)	5.0 (127.0)	6.0 (152.4)	9.0 (228.6)
	Cable Outer Diameter-inches (mm)	.195 (4.95)	.195 (4.95)	.240 (6.10)	.300 (7.62)	.405 (10.29)	.500 (12.7)	.590 (14.99)	.870 (22.10)
Environmental	Temperature Range °C	-40 +85	-40 +85	-40 +85	-40 +85	-40 +85	-40 +85	-40 +85	-40 +85

Power Rating

Insertion Loss (dB/100 ft)								
150 MHz	4.4	4	3	2.4	1.5	1.2	1	0.7
450 MHz	7.8	7	5.3	4.2	2.7	2.2	1.7	1.2
900 MHz	11.1	9.9	7.6	6.1	3.9	3.1	2.5	1.7
1800 MHz	16	14.2	10.9	8.7	5.7	4.6	3.7	2.5
2500 MHz	19	16.9	12.9	10.4	6.8	5.5	4.4	3
5800 MHz	29.9	26.4	20.4	16.5	10.8	8.9	7.3	4.9
Average Power (Watts) @ 20° C @ Sea Level								
150 MHz	.39	.45	.60	.92	1.5	1.93	2.4	3.89
450 MHz	.22	.26	.38	.52	.83	1.09	1.35	2.19
900 MHz	.15	.18	.26	.36	.58	.75	.93	1.51
1800 MHz	.22	.13	.18	.25	.40	.52	.63	1.03
2500 MHz	.09	.11	.15	.21	.33	.42	.52	.86
5800 MHz	.06	.07	.10	.13	.21	.26	.32	.52

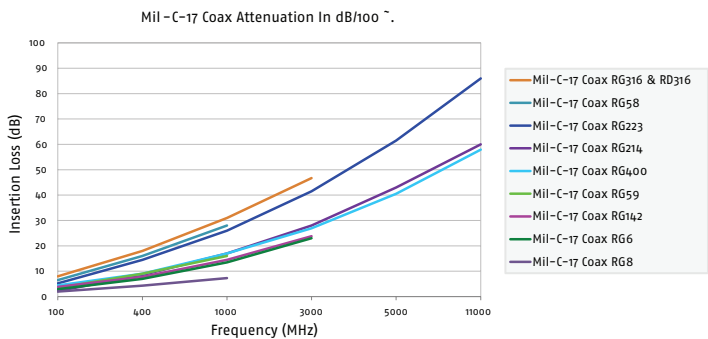
Mil-C-17 Coax Cable Assemblies

- Quick turnaround
- Meet all MIL-C-17 requirements
- Factory offers all solder and crimp connectors



Cable Series						
	SF142	RG174	RG178	RG188	RG213	
Electrical	Impedance Ohm	50	50	50	50	
	Capacitance pF/ft @ 1 GHz	29.4	30.8	29.4	30.8	
	Velocity of Propagation	69.5%	66%	69.5%	69.5%	66%
	Shielding (dB)	90	40	40	40	60
	Max Voltage VRMS	1,900	1,500	750	1,200	5,000
	Power (Max Freq) Watts	52	26	110	220	320
	Cutoff Frequency (MHz)	34,000	1000	3000	3000	1000
Mechanical	Center Conductor	Silver Plated Copper Clad Steel	Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Bare Copper
	Dimension-inches (mm)	.037 (.94)	.0189 (.48)	.012 (.30)	.0201 (.50)	.0888 (2.26)
	Dielectric	PTFE .116	PE .060	PTFE .033	PTFE .06	PE .285
	Jacket	FEP .195	PVC-IIA .110	FEP .071	PTFE .105	PVC-IIA .405
	Bend Radius-inches	1	0.5	0.4	0.5	2
Environmental	Temperature Range °C	-55 +200	-40 +85	-40 +150	-55 +250	-40 +85
Power Rating	Insertion Loss (dB/100 ft)					
	100 MHz	3.6	8.4	13.8	8	2.3
	400 MHz	7.4	17	27.8	16.2	4.8
	1000 MHz	12	27.4	44.4	26.1	9
	3000 MHz	23	na	78.4	46.7	na
	5000 MHz	31	na	na	na	na
	11000 MHz	48	na	na	na	na
	Average Power (Watts) @ 20° C @ Sea Level					
	100 MHz	1796	68	240	400	1400
	400 MHz	864	32	120	275	660
	1000 MHz	522	18	75	150	400
	3000 MHz	277	na	40	130	na
	5000 MHz	202	na	na	na	na
	11000 MHz	122	na	na	na	na

Mil-C-17 Coax Cable Assemblies



		Cable Series									
		RG6	RG8	RG58	RG59	RG142	RG214	RG223	RG316	RD316	RG400
Electrical	Impedance Ohm	76	50	50	75	50	50	50	50	50	50
	Capacitance pF/ft @ 1 GHz	20.6	29.6	30.8	20.6	29.4	30.8	30.8	29.4	29.4	29.4
	Velocity of Propagation	66%	66%	66%	66%	69.5%	66%	66%	69.5%	69.5%	69.5%
	Shielding (dB)	40	40	40	40	60	60	60	40	60	40
	Max Voltage VRMS	3000	4000	1900	2300	1900	5000	1900	1200	900	1900
	Power (Max Freq) Watts	NA	320	90	130	1100	330	86	210	210	1050
	Cutoff Frequency (MHz)	3000	1000	1000	1000	8000	11000	12400	3000	3000	12400
Mechanical	Center Conductor	Copper Clad Steel	Bare Copper	Bare Copper	Copper Clad Steel	Silver Plated Copper Clad Steel	Bare Copper	Silver Plated Copper Clad	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad
	Dimension-inches (mm)	.0285 (.72)	.0888 (2.26)	.032 (.81)	.0226 (.55)	.037 (.94)	.0888 (2.26)	.035 (.89)	.021 (.53)	.021 (.53)	.039 (.98)
	Dielectric	PE .185	PE .285	PE .116	PE .146	PTFE .116	PE .285	PE .116	PTFE .060	PTFE .060	PTFE .116
	Jacket	PVC-II .332	PVC-IIA .405	PVC-I .195	PVC-IIA .242	FEP .195	PVC-IIA .425	PVC-IIA .212	FEP .098	FEP .114	FEP-IX .195
	Bend Radius-inches	3	2	1	1.2	1	2.5	1	0.5	0.5	1
Environmental	Temperature Range °C	-40+80	-40+80	-40+80	-40+80	-55+200	-40+85	-40+85	-55 +200	-55 +200	-55 +200
Power Rating	Insertion Loss (dB/100 ft)										
	100 MHz	2.9	2	6.5	3.4	3.8	2.2	5.2	8	8	4.4
	400 MHz	6.5	4.3	10.2	9	7.8	6.8	12	16.2	16.2	9
	1000 MHz	9.8	7.3	28	16	12.8	8	21	26.1	26.1	14.7
	3000 MHz	23	na	na	na	23.8	28	40	46.7	46.7	26.9
	5000 MHz	na	na	na	na	na	42	58	na	na	36.1
	11000 MHz	na	na	na	na	na	60	86	na	na	57.9
	Average Power (Watts) @ 20° C @ Sea Level										
	100 MHz	310	100	360	270	1800	990	395	580	580	1,470
	400 MHz	150	47	182	130	900	500	196	270	270	710
	1000 MHz	90	28	98	80	530	300	120	150	150	430
	3000 MHz	50	na	na	na	260	190	70	90	90	230
	5000 MHz	na	na	na	na	na	150	55	na	na	170
	11000 MHz	na	na	na	na	na	60	20	na	na	100

Cable Assembly Part Number

Vortex Assembly Example

Diagram of a Vortex cable assembly. The assembly consists of two SMA connectors (labeled 'a') connected to a cable, which is then connected to an N connector (labeled 'b'). The length of the cable is indicated as 24.2 inches (0242).

nnn - nnn - nnn nnnn

Connector 'a' (SMA male is 157)

Connector 'b' (N male is 257)

Cable Series (SRC-190 cable is 190)

Length in Inches (24.2" is 0242)

EXAMPLE PART NUMBER 157-257-1900242

Note:
1 millimeter equals 0.03937 inches

Standard Assembly Example

Diagram of a Standard cable assembly. The assembly consists of two SMA connectors (labeled 'a') connected to a cable, which is then connected to an N connector (labeled 'b'). The length of the cable is indicated as 24.2 inches (0242).

nnn - nnn - nnnn

Connector 'a' (SMA male is 150)

Connector 'b' (N male is 250)

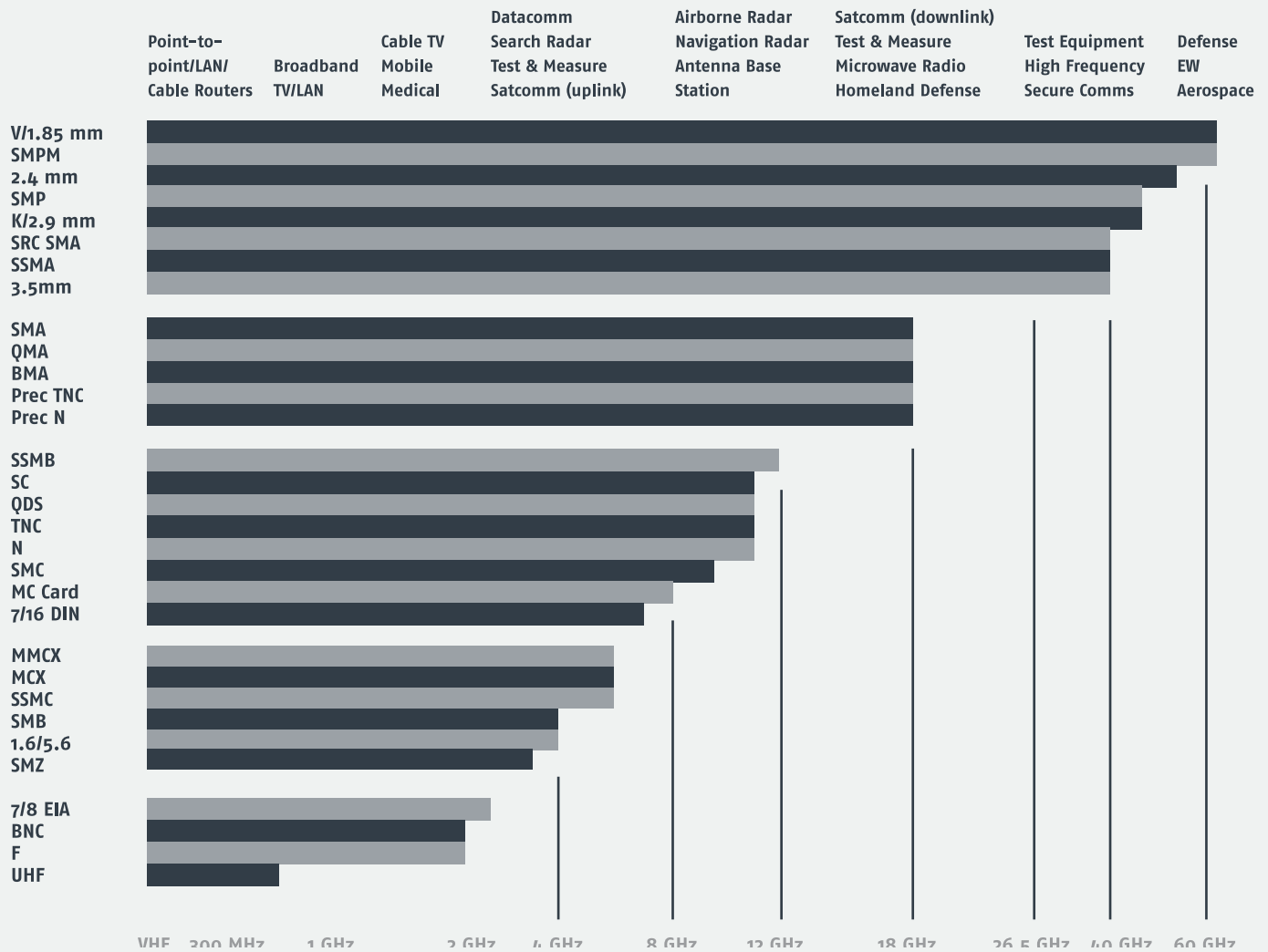
Length in Inches (24.2" is 0242)

EXAMPLE PART NUMBER 150-250-0242

Note:
1 millimeter equals 0.03937 inches

Connector Type		Connector Style		Cable Type (Continued)		SRC Custom Cables	
SMA	1	Male Straight	50	LMR100	10	HF047	27
N	2	Male Right Angle	51	LMR195	96	HF086	28
BNC	3	Male Low Profil	52	LMR195DB	64	HF141	29
SMB	4	Male Reverse Polarity	53	LMR195PVC	95	SRC-402SF	66
TNC	5	Male Misc	54	LMR200	87	SRC-405SF	67
MCX	6	Male Precision	55	LMR240	88	SRC316	SRC 316
SMC	7	With Wire Hole	56	LMR300	73	SRC316 Triple Shield	SRC 316TS
F	8	Vortex	57	LMR300DB	65	Semi-Rigid	
SMZ	9	Female Straight	60	LMR400	89	.020 Copper	22
SMP	A	Female Bulkhead	61	LMR400DB	40	.034 Copper	36
SSMA	B	Female 4 Hole Flange	62	LMR500	93	.047 Copper	47
SSMB	C	Female 2 Hole Flange	63	LMR600	90	.047 Conformable	48
MMCX	D	Female Misc	64	LMR600DB	62	.047 Aluminum - Tin Plate	49
2.9mm	E	Female Right Angle	65	LMR900DB	07	.047 Bare Copper	37
UHF	F	Cable Type		LMR1200	94	.085 Bare Copper	33
UHF (mini)	G			LMR1200DB	12	.085 Copper - Tin Plate	78
SSMC	H	RG6	06	T-FLEX 401	24	.085 Conformable	98
7/16 DIN	J	RG58	58	T-FLEX 402	80	.085 Conf w/Jacket	05
2.4mm	L	RG59	59	T-FLEX 405	82	.085 Aluminum - Tin Plate	77
SMPM	M	RG142	86	Vortex Cables		.116 Copper	16
BLINDMATE	N	SF142	91	SRC-140	140	.141 Copper	76
1.6/5.6	P	RG174	00	SRC-210	210	.141 Conformable	97
3.5mm	Q	RG178	99	SRC-150	150	.141 Conf w/Jacket	15
7/8 EIA	R	RD178	11	SRC-215	215	.141 Aluminum - Tin Plate	75
QMA	S	RG179	85	SRC-190	190	.141 Bare Copper	63
SC	T	RD179	92	SRC-260	260	.250 Copper	25
V(1.85mm)	V	RG188	18	SRC-224	224	.250 Aluminum-Tin Plated	19
MC Card	X	RG196	68	SRC-290	290	.250 Conformable	26
HN	I	RG213	13	SRC-305	305	Miscellaneous Cable Types	
SC	T	RG214	14	SRC-390	390	.085 75 Ohm	71
QC-SMA	R	RG223	23			1/4" Andrews Superfl x	20
QC-2.9	K	RG316	83			1/2" Andrews Superfl x	03
		RD316	84			1/2" Andrews Foam Helix	02
		RG393	39				
		RG400	44				

Selection Guide

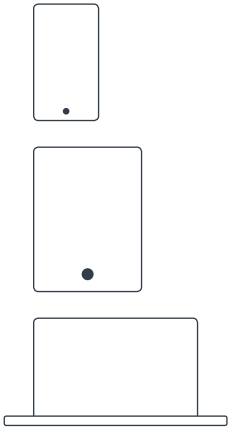


Find Your Cable Assembly Solution Everywhere You Are

Build Cables to Your Specifications

www.winconn.com/configurator/

Adapts For Use on Laptops & Mobile Devices

A screenshot of the Winchester Interconnect website's 'interactive cable assembly configurator'. The page has a dark header with the company logo and navigation links. Below the header, a progress bar shows four steps: '1. Select Cable' (active), '2. Select Connector A', '3. Select Connector B', and '4. Review & Get Quote'. The main content area is titled 'SELECT CABLE' and contains three input fields: 'MAXIMUM Operating Frequency' with a radio button for 'GHz' and a 'Select All' option, 'Cable Type' with a dropdown menu, and 'Cable Lengths' with a dropdown menu. A 'PROCEED TO CONNECTOR A' button is located at the top right of the form.

Simple Navigation

With our online Cable Configurator you can build the right cable assembly for your specific requirements. The Cable Configurator takes you through a series of filtered fields where you choose a Cable Type, Length and Frequency, and also specify Connector Types.

It's an easy-to-follow, prompted process that results in a fully assembled configuration, from which you can Request a Quote.



Winchester Product Brands

Stronger and more unified, Winchester Interconnect now offers solutions under four powerful product brands. Be assured that all of the solutions you rely on today are available from Winchester Interconnect.

For more information, talk to your current sales expert or visit winconn.com/brands.

