



RF INTERCONNECT

FULL LINE SOLUTIONS CATALOG

PRECISION 50 Ω (18 TO 130 GHz) • STANDARD 50 Ω & 75 Ω (SUB-6 GHz & 12G-SDI) • TECH SUPPORT

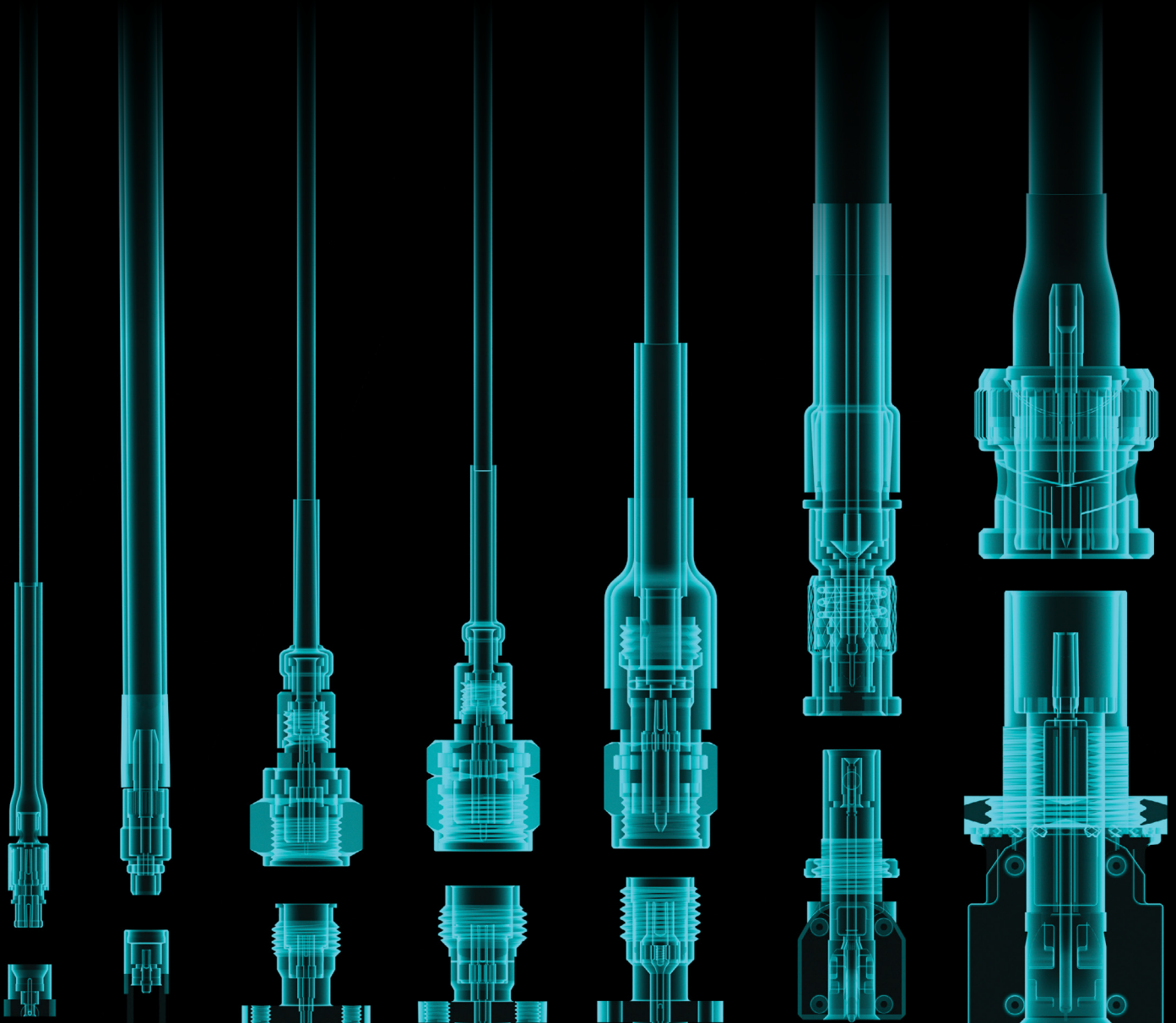


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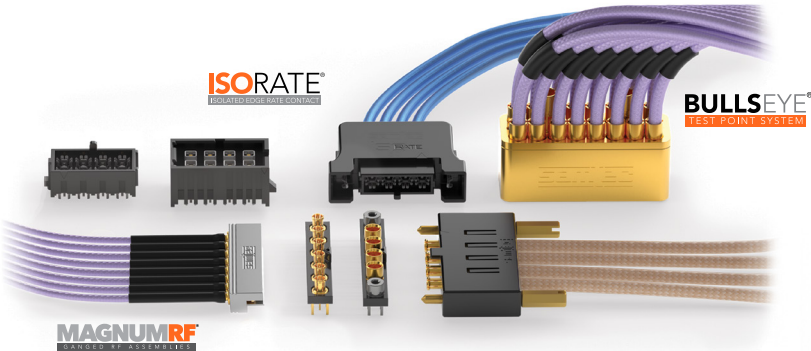
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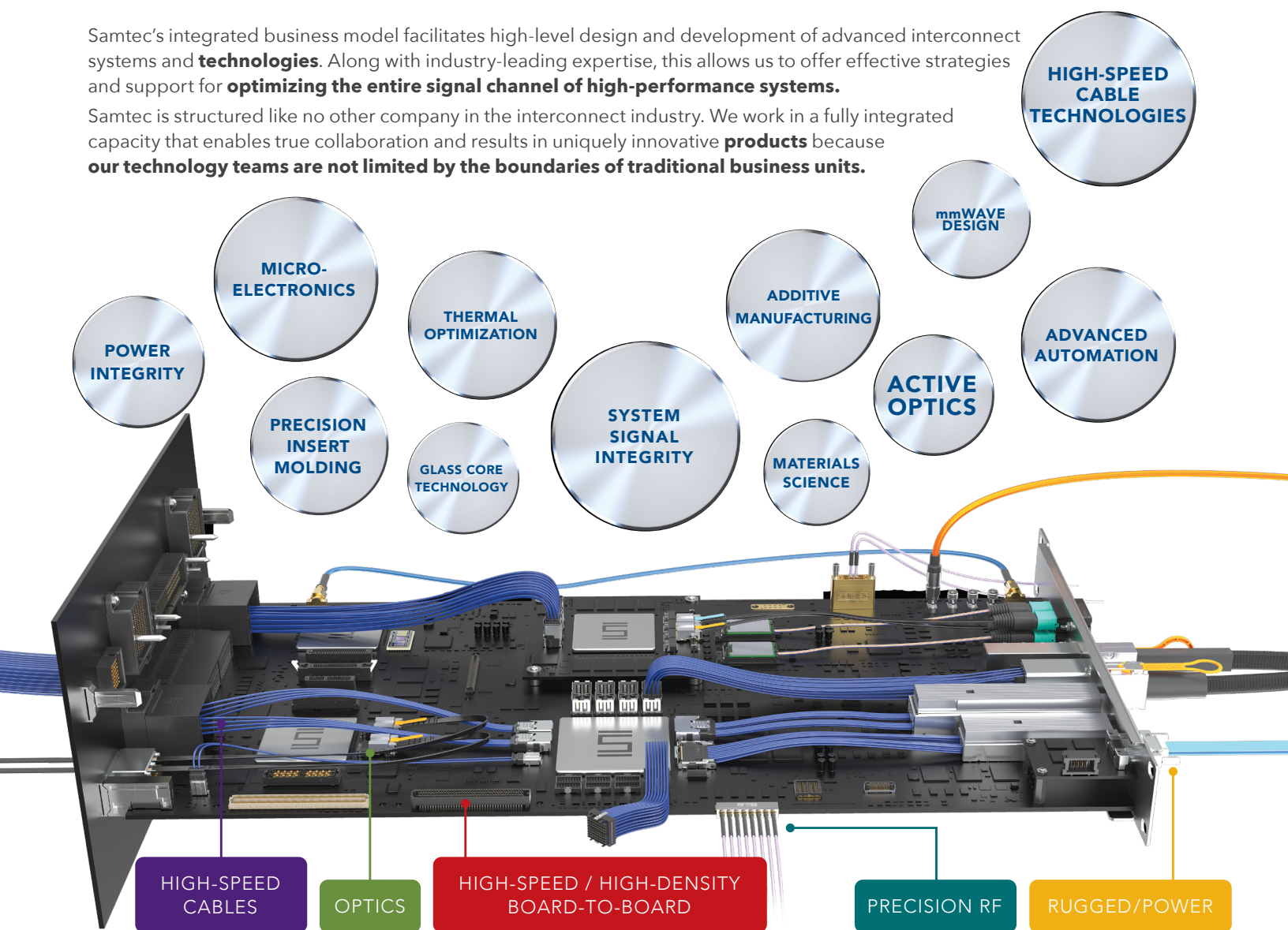
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INTEGRATION LEADS TO INNOVATION

FULL SYSTEM OPTIMIZATION FROM SILICON-TO-SILICON™

Samtec's integrated business model facilitates high-level design and development of advanced interconnect systems and **technologies**. Along with industry-leading expertise, this allows us to offer effective strategies and support for **optimizing the entire signal channel of high-performance systems**.

Samtec is structured like no other company in the interconnect industry. We work in a fully integrated capacity that enables true collaboration and results in uniquely innovative **products** because **our technology teams are not limited by the boundaries of traditional business units**.



SILICON-TO-SILICON™ SOLUTIONS

NEXT GENERATION CONNECTIVITY TO 224 Gbps & BEYOND

As bandwidth, scale and power requirements continue to challenge conventional engineering methods, Samtec strives to help **optimize the landscape of your entire system** - and develop solutions, together.

Samtec's industry-leading signal integrity expertise, full system optimization strategies, innovative products and technologies help address the challenges of **next gen data transmission to 224 Gbps & beyond**.

COMPLETE RF INTERCONNECT SOLUTIONS

PRECISION 50 Ω (18 to 130 GHz) • STANDARD 50 Ω & 75 Ω (SUB-6 GHz & 12G-SDI) • TECH SUPPORT

Samtec offers complete RF interconnect solutions supporting traditional sub-6 GHz frequencies to 130 GHz microwave/mmWave frequencies (sub-Terahertz spectrum). Products include end-to-end RF cable assemblies, board connectors, cable connectors, adaptors and Samtec Original RF solutions.

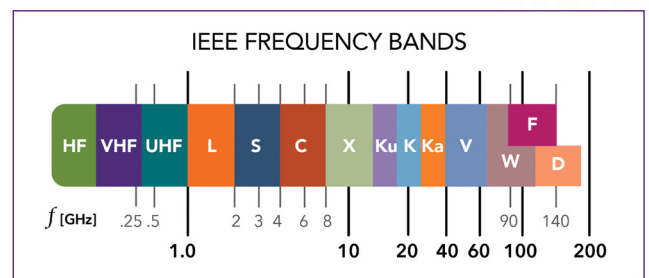
Technical Support

High-level design and development of advanced interconnect systems, along with industry-leading expertise, allows effective strategies and support for optimizing the entire signal channel.

RF technical support includes launch optimization, simulation and testing. Customization of products, both quick-turn modifications or new designs, is also available.

Applications

- Test and Measurement
- Military, Aerospace, Satellite, Radar
- 5G/6G, Low Latency Wireless Communications
- Automotive, Telematics
- Broadcast & 12G-SDI
- Industrial, Monitoring, Instrumentation



PRECISION RF, 50 Ω

Interface	1.00 mm	1.35 mm	1.85 mm	2.40 mm	2.92 mm	3.50 mm	SSMA	SMA	Ganged SMPM	SMPM	SMPMT	SMP3	SMP	N Type	TNCA
Frequency	110 GHz	90 GHz	67 GHz	50 GHz	40 GHz	34 GHz	34 GHz	18/26.5 GHz	65 GHz	65 GHz	65 GHz	65 GHz	65 GHz	18 GHz	18 GHz

STANDARD RF, 50 Ω & 75 Ω

Interface	MHF	SMA	MCX	MMCX	TNC	BNC (50 Ω)	SMB (50 & 75 Ω)	Ganged (50 & 75 Ω)	BNC (75 Ω)	HD BNC (75 Ω)	DIN 1.0/2.3 (75 Ω)
Frequency	6 GHz	6 GHz	6 GHz	6 GHz	6 GHz	4 GHz	4 GHz	5 GHz	12 GHz	12 GHz	12 GHz

CABLE ASSEMBLIES

- Precision, high frequency or standard, low frequency
- Assemblies available with the following cable types:
 - Low-loss microwave/millimeter wave from .047 to .277, semi-flexible
 - New **Nitrowave®** cable! Phase and amplitude stable with flexure, with an outer jacket colored in **distinctive Samtec orange**. Performance is optimized for next generation frequency targets.
 - Armored versions for crush, torque and pull resistance
 - RG type (316, 174, 178, 58, 179, 6)
 - 12G-SDI optimized
 - 0.81 mm and 1.13 mm Micro High Frequency (MHF)



- Discrete and ganged solutions
- Cable lengths standard up to 10 meters (> 10 meters as custom RSP)
- Phase matching in pairs down to 1 ps
- Cable management available
- **Mix & Match Solutions for Any Application:** Samtec offers a variety of end options for each product series; this blends application-specific customization with the simplicity and lead-time efficiencies of an off-the-shelf assembly



ANY
RF Connector

ANY
Microwave Cable

ANY
Application



BOARD CONNECTORS, CABLE CONNECTORS & ADAPTORS

- Precision, high frequency or standard, low frequency solutions
- Board-to-board or cable-to-board applications
- Threaded, bulkhead, push-on or bayonet coupling
- Solderless compression mount: vertical & edge launch
- Soldered: through-hole, surface mount, edge mount or mixed technology
- Balanced connectors for high-volume pick-and-place automation
- 12G-SDI optimized broadcast video solutions (BNC, High-Density BNC, DIN 1.0/2.3)
- Cable connectors for use with industry standard cables: offer the flexibility to terminate to an industry-standard cable specified for your application
- Adaptors for 50 Ω precision RF applications: in-series and between-series



Ganged Solutions



Complete Mated Sets



50 Ω , 75 Ω & 12G-SDI Solutions



Precision Interconnects

PRECISION RF

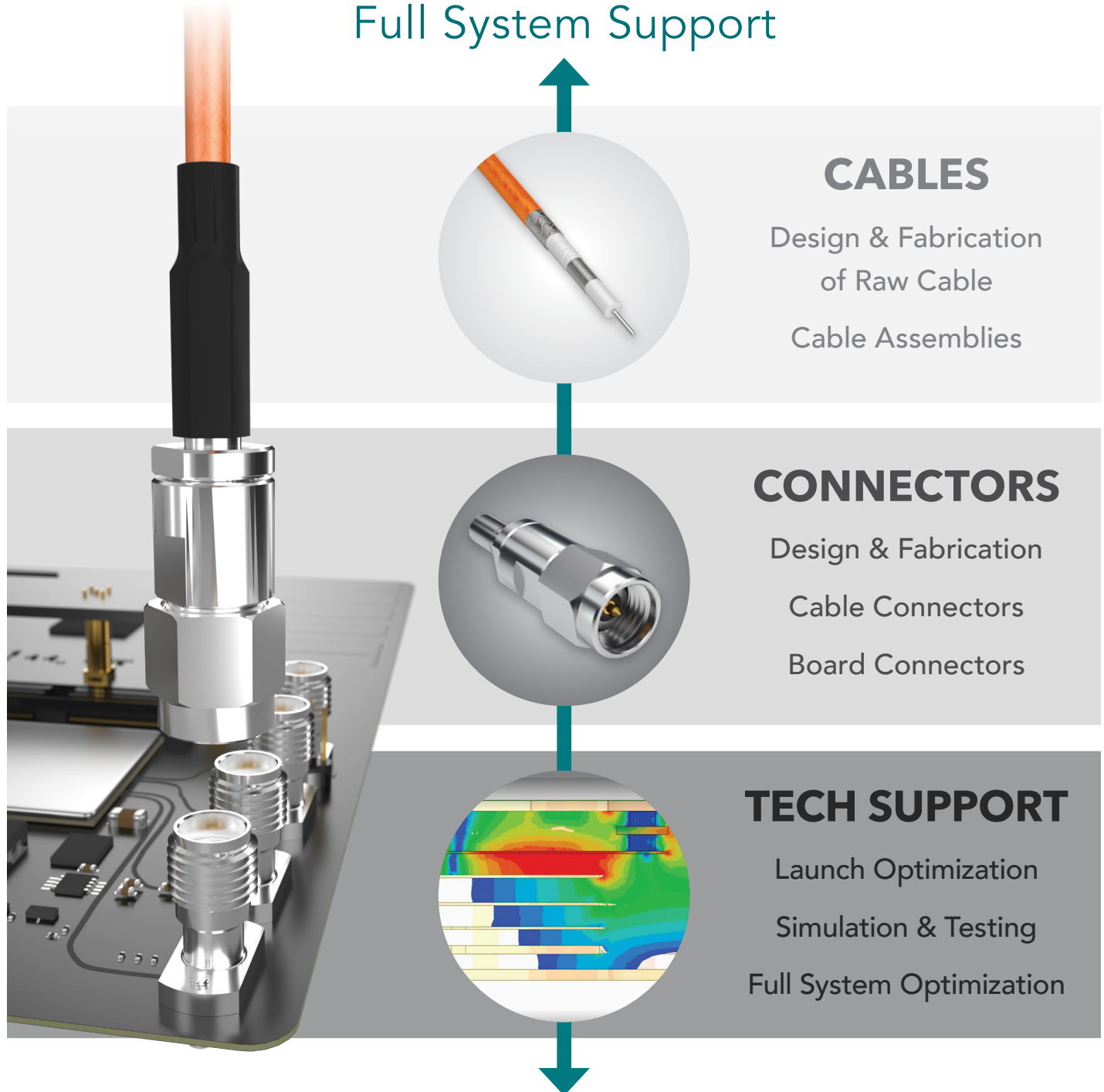
MICROWAVE / MILLIMETER WAVE CABLE ASSEMBLIES & INTERCONNECTS

Samtec's RF product line includes 18 to 130 GHz High Frequency, Precision RF solutions for microwave and mmWave applications, including end-to-end cable assemblies, adaptors, cable connectors and board level interconnects. Our focus is on delivering high-quality RF products that meet precision and performance expectations, blended with industry-leading system-level signal integrity expertise.

Vertical Integration

=

Full System Support



NITROWAVE® CABLE TECHNOLOGY

HIGH-PERFORMANCE, PHASE & AMPLITUDE STABLE

DC TO
130
GHz

Samtec's new **Nitrowave® Phase & Amplitude Stable RF Cable** offers improved stability with flexure. The coaxial structure – with an outer jacket colored in **distinctive Samtec orange** – is designed to meet the demands of aerospace, defense, datacom, computer/semiconductor, and instrumentation markets. Performance is optimized at frequencies beyond traditional industry targets to support emerging applications.

NITROWAVE® CABLE TECHNOLOGY

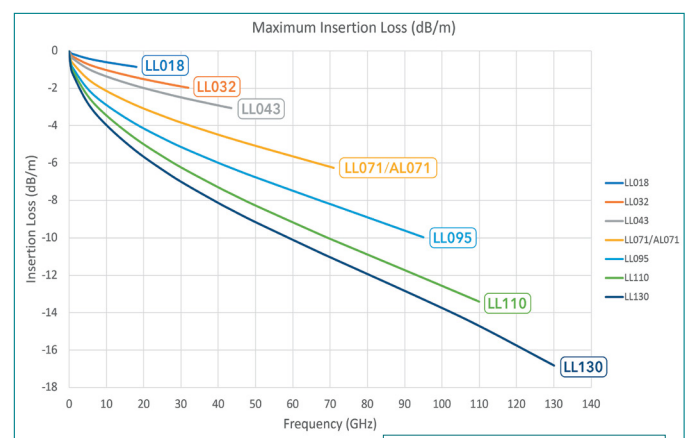
- High-performance, low-loss microwave cable assemblies
- Phase and amplitude stable with flexure
- Consistent contact resistance between layers
- Lower density dielectric minimizes loss
- State-of-the-art shielding techniques and Dynamic Performance Layer (DPL)
- Silver plating enhancements mitigate corrosion potential
- Electrical performance optimized at next gen frequencies (GHz): 18, 32, 43.5, 71, 95, 110, 130
- Mechanical and environmental robustness
- Typical phase vs. temp & power handling
- Armored versions for crush, abrasion, kink, and torque resistance with enhanced tensile strength



Series	LL018	LL032	LL043	LL071	AL071*	LL095	LL110	LL130
Impedance (Ω)	50							
Max Frequency (GHz)	18	32	43.5	71	71	95	110	130
Outer Dia. (inches)	0.309	0.182	0.141	0.094	0.207	0.076	0.068	0.060
Min Static Bend Radius	1.25	0.375	0.25	0.125	0.625	0.156	0.125	0.125
Velocity of Propagation (%)	77							
Min Shielding Effectiveness (dB)	-90							
Temp Range (°C)	-65 °C to +125 °C							
Insertion Loss	See Maximum IL Chart							
End 1/End 2	1.00 mm, 1.35 mm, 1.85 mm, 2.40 mm, 2.92 mm, SMPM, SMP, SMA, N Type, TNCA							

*Armored Cable

MAXIMUM INSERTION LOSS (dB/m)



Frequency for Emerging Applications

18 GHz, 32 GHz, 43.5 GHz, 71 GHz, 95 GHz, 110 GHz, 130 GHz

HIGH-PERFORMANCE ARMORED MICROWAVE CABLE

Cable Assemblies AL071



FEATURES

Impedance:
50 Ω
Outer Diameter:
0.207"
Bend Radius:
0.625"
Velocity of Propagation:
77 %
Min. Shielding Effectiveness:
-90 dB
Temp Range:
-65 °C to +125 °C

Note:
*Use "XXX" for overall length with phase matching option.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	*OVERALL LENGTH	PHASE MATCHING	PHASE MATCHING CABLES
AL071 = High-Performance Armored Cable to 71 GHz	Specify END OPTIONS from chart		-"XXXX" = Overall Length in millimeters -0100 (100 mm) 3.94" min.	Leave blank for no phase matching -1 = 1 Pico Seconds -2 = 2 Pico Seconds -5 = 5 Pico Seconds	Leave blank for 1 cable. (Only available with no phase matching option) -02 to 16 = No. of cables

PRELIMINARY

XXXX = OAL (millimeters)

LL071-18SP-18SP-XXXX-X-XX

END OPTION	INTERFACE TYPE	GENDER	MAXIMUM RETURN LOSS (PER END)	MAXIMUM VSWR (PER END)	FREQUENCY
-18SP	1.85 mm	PLUG	21.53	1.183	DC TO 71 GHz

Armoring over LL071 (AL071 Series)

LL071

HIGH-PERFORMANCE MICROWAVE CABLE

Cable Assemblies LL130



FEATURES

Impedance:
50 Ω
Outer Diameter:
0.060"
Bend Radius:
0.125"
Velocity of Propagation:
77 %
Min. Shielding Effectiveness:
-90 dB
Temp Range:
-65 °C to +125 °C

Note:
*Use "XXX" for overall length with phase matching option.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	*OVERALL LENGTH	PHASE MATCHING	PHASE MATCHING CABLES
LL130 = High-Performance Cable to 130 GHz	Specify END OPTIONS from chart		-"XXXX" = Overall Length in millimeters -0100 (100 mm) 3.94" min.	Leave blank for no phase matching -1 = 1 Pico Second -2 = 2 Pico Seconds -5 = 5 Pico Seconds	Leave blank for 1 cable. (Only available with no phase matching option) -02 to 16 = No. of cables

PRELIMINARY

XXXX = OAL (millimeters)

LL130-10SP-10SP-XXXX-X-XX

END OPTION	INTERFACE TYPE	GENDER	MAXIMUM RETURN LOSS (PER END)	MAXIMUM VSWR (PER END)	FREQUENCY
-10SP	1.00 mm	PLUG	19.90	1.225	DC TO 130 GHz
-10SJ	1.00 mm	JACK	19.90	1.225	

HIGH-PERFORMANCE MICROWAVE CABLE

Cable Assemblies LL110

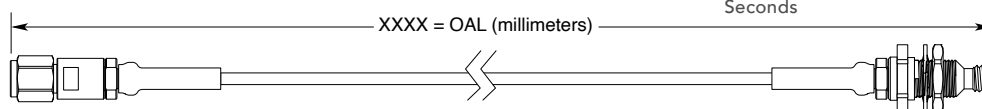


FEATURES

Impedance:
50 Ω
Outer Diameter:
0.068"
Bend Radius:
0.125"
Velocity of Propagation:
77 %
Min. Shielding Effectiveness:
-90 dB
Temp Range:
-65 °C to +125 °C

Note:
*Use "XXX" for overall length with phase matching option.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	*OVERALL LENGTH	PHASE MATCHING	PHASE MATCHING CABLES
LL110 = High-Performance Cable to 110 GHz	Specify END OPTIONS from chart		-"XXXX" = Overall Length in millimeters -0100 (100 mm) 3.94" min.	Leave blank for no phase matching -1 = 1 Pico Second -2 = 2 Pico Seconds -5 = 5 Pico Seconds	Leave blank for 1 cable. (Only available with no phase matching option) -02 to 16 = No. of cables



LL110-10SP-10BJ-XXXX-X-XX

END OPTION	INTERFACE TYPE	GENDER	MAXIMUM RETURN LOSS (PER END)	MAXIMUM VSWR (PER END)	FREQUENCY
-10SP	1.00 mm	PLUG	19.90	1.225	DC TO 110 GHz
-10BJ	1.00 mm	BULKHEAD JACK	19.90	1.225	

Cable Assemblies LL095



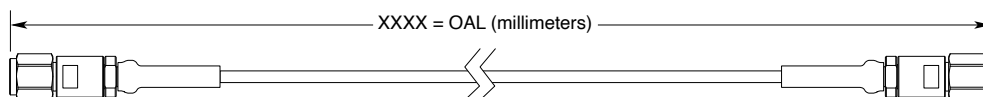
FEATURES

Impedance:
50 Ω
Outer Diameter:
0.076"
Bend Radius:
0.156"
Velocity of Propagation:
77 %
Min. Shielding Effectiveness:
-90 dB
Temp Range:
-65 °C to +125 °C

Note:
*Use "XXX" for overall length with phase matching option.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	*OVERALL LENGTH	PHASE MATCHING	PHASE MATCHING CABLES
LL095 = High-Performance Cable to 95 GHz	Specify END OPTIONS from chart		-"XXXX" = Overall Length in millimeters -0100 (100 mm) 3.94" min.	Leave blank for no phase matching -1 = 1 Pico Second -2 = 2 Pico Seconds -5 = 5 Pico Seconds	Leave blank for 1 cable. (Only available with no phase matching option) -02 to 16 = No. of cables

-MOSJ
PRELIMINARY



LL095-10SP-10SP-XXXX-X-XX

END OPTION	INTERFACE TYPE	GENDER	MAXIMUM RETURN LOSS (PER END)	MAXIMUM VSWR (PER END)	FREQUENCY
-10SP	1.00 mm	PLUG	19.90	1.225	DC TO 95 GHz
-MOSJ	SMPM	JACK	19.90	1.225	
					DC TO 65 GHz

HIGH-PERFORMANCE MICROWAVE CABLE

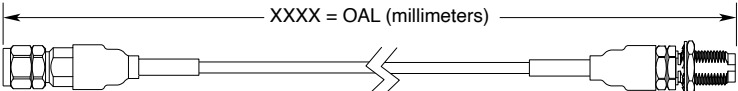
Cable Assemblies LL071



FEATURES

Impedance:
50 Ω
Outer Diameter:
0.094"
Bend Radius:
0.125"
Velocity of Propagation:
77 %
Min. Shielding Effectiveness:
-90 dB
Temp Range:
-65 °C to +125 °C

Note:
*Use "XXX" for overall length
with phase matching option.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	•OVERALL LENGTH	PHASE MATCHING	PHASE MATCHING CABLES
LL071 = High-Performance Cable to 71 GHz	Specify END OPTIONS from chart		–“XXXX” = Overall Length in millimeters –0100 (100 mm) 3.94" min.	Leave blank for no phase matching –1 = 1 Pico Second –2 = 2 Pico Seconds –5 = 5 Pico Seconds	Leave blank for 1 cable. (Only available with no phase matching option) –02 to 16 = No. of cables
 XXXX = OAL (millimeters) LL071-18SP-18BJ-XXXX-X-XX					

END OPTION	INTERFACE TYPE	GENDER	MAXIMUM RETURN LOSS (PER END)	MAXIMUM VSWR (PER END)	FREQUENCY
-18SP	1.85 mm	PLUG	21.53	1.183	DC TO 71 GHz
-18BJ	1.85 mm	BULKHEAD JACK	21.53	1.183	
-92SP	2.92 mm	PLUG	21.53	1.183	DC TO 43.5 GHz

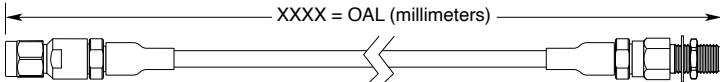
Cable Assemblies LL043



FEATURES

Impedance:
50 Ω
Outer Diameter:
0.141"
Bend Radius:
0.25"
Velocity of Propagation:
77 %
Min. Shielding Effectiveness:
-90 dB
Temp Range:
-65 °C to +125 °C

Note:
*Use "XXX" for overall length
with phase matching option.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	*OVERALL LENGTH	PHASE MATCHING	PHASE MATCHING CABLES
LL043 = High-Performance Cable to 43.5 GHz	Specify END OPTIONS from chart		–“XXXX” = Overall Length in millimeters –0100 (100 mm) 3.94" min.	Leave blank for no phase matching –1 = 1 Pico Second –2 = 2 Pico Seconds –5 = 5 Pico Seconds	Leave blank for 1 cable. (Only available with no phase matching option) –02 to 16 = No. of cables
 LL043-92SP-92BJ-XXXX-X-XX					

END OPTION	INTERFACE TYPE	GENDER	MAXIMUM RETURN LOSS (PER END)	MAXIMUM VSWR (PER END)	FREQUENCY
-92SP	2.92 mm	PLUG	21.53	1.183	DC TO 43.5 GHz
-92BJ	2.92 mm	BULKHEAD JACK	21.53	1.183	
-24SP	2.40 mm	PLUG	21.53	1.183	DC TO 43.5 GHz
-24BJ	2.40 mm	BULKHEAD JACK	21.53	1.183	
-01SP	SMA	PLUG	22.51	1.162	DC TO 26.5 GHz
-01BJ	SMA	BULKHEAD JACK	22.51	1.162	

HIGH-PERFORMANCE MICROWAVE CABLE

Cable Assemblies

LL032

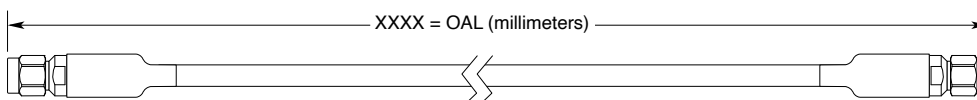


FEATURES

Impedance:
50 Ω
Outer Diameter:
0.182"
Bend Radius:
0.375"
Velocity of Propagation:
77 %
Min. Shielding Effectiveness:
-90 dB
Temp Range:
-65 °C to +125 °C

Note:
*Use "XXX" for overall length with phase matching option.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	*OVERALL LENGTH	PHASE MATCHING	PHASE MATCHING CABLES
LL032 = High-Performance Cable to 32 GHz	Specify END OPTION from chart		-"XXXX" = Overall Length in millimeters -0100 (100 mm) 3.94" min.	Leave blank for no phase matching -1 = 1 Pico Second -2 = 2 Pico Seconds -5 = 5 Pico Seconds	Leave blank for 1 cable. (Only available with no phase matching option) -02 to 16 = No. of cables



LL032-92SP-92SP-XXXX-X-XX

END OPTION	INTERFACE TYPE	GENDER	MAXIMUM RETURN LOSS (PER END)	MAXIMUM VSWR (PER END)	FREQUENCY
-92SP	2.92 mm	PLUG	22.51	1.162	DC TO 32 GHz

Cable Assemblies

LL018



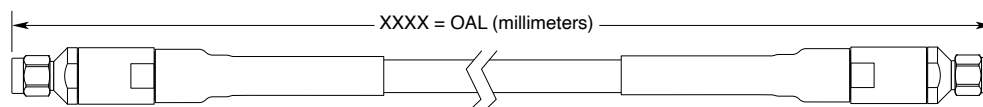
FEATURES

Impedance:
50 Ω
Outer Diameter:
0.309"
Bend Radius:
1.25"
Velocity of Propagation:
77 %
Min. Shielding Effectiveness:
-90 dB
Temp Range:
-65 °C to +125 °C

Note:
*Use "XXX" for overall length with phase matching option.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	*OVERALL LENGTH
LL018 = High-Performance Cable to 18 GHz	Specify END OPTION from chart		-"XXXX" = Overall Length in millimeters -0100 (100 mm) 3.94" minimum

PRELIMINARY



LL018-01SP-01SP-XXXX

END OPTION	INTERFACE TYPE	GENDER	MAXIMUM RETURN LOSS (PER END)	MAXIMUM VSWR (PER END)	FREQUENCY
-01SP	SMA	PLUG	22.51	1.162	DC TO 18 GHz

50 Ω μWAVE/mmWAVE CABLE SPECIFICATIONS

STANDARD OFF-THE-SHELF ASSEMBLIES

Series		RF047-A	RF25S	RF40S	RF08S	RF086	RF23C	RF23S	RF402	RF180	RF280
Type		.047 (29 AWG), low loss flexible	Samtec 25 AWG, flexible	RG 40S, .086, (24 AWG), semi- flexible	.08S (24 AWG), low loss flexible	.086 (23 AWG), low loss flexible	Samtec 23 AWG, flexible, copper shield	Samtec 23 AWG, flexible	RG 402, .141 (19 AWG), semi- flexible	.178 (16 AWG), low loss flexible	.277 (11 AWG), low loss flexible
Electrical											
Max. Frequency (GHz)		110	40	20	50	67	50	35	20	27	18
Max. Insertion Loss (dB/m)	1 GHz	1.21	0.79	0.72	0.69	0.65	0.68	0.72	0.40	0.27	0.17
	26 GHz	7.43	3.80 @ 20 GHz	4.26 @ 20 GHz	4.28	3.90	4.27	3.71 @ 20 GHz	2.30 @ 20 GHz	1.23 @ 18 GHz	0.79 @ 18 GHz
	40 GHz	9.68	—		5.59	5.06	5.59	—	—		
	50 GHz	11.14	—		6.47	5.81	6.46	—			
Propagation Delay (ns/m)		4.76		4.79	4.75	4.20	4.76	4.72	4.79	4.17	4.02
Velocity of Propagation		70%				80%	70%		70%	80%	83%
Capacitance (pF/m)		95.00	96.80	104.97	88.20	83.37	97.80	95.45	98.07	82.00	
Construction											
Center Conductor	Material	Solid Silver Plated Copper									
	AWG (mm/in.)	29 (.2870 / .0113)	25 (.4570 / .0180)	24 (.5100 / .0200)		23 (.5740 / .0226)			19 (.9200 / .0362)	16 (1.3000 / .0512)	11 (2.2600 / .0889)
Dielectric	Material	PFA	Solid FEP	PTFE	Solid PTFE	Foam FEP	FEP	Solid FEP	PTFE	PTFE Tape	
	Dia. (mm/in.)	.9220 / .0363	1.4700 / .0578	1.6800 / .0660	1.6300 / .0640	1.6150 / .0636	1.8470 / .0727	1.8470 / .0727	2.9800 / .1170	3.6800 / .1450	6.3500 / .2500
Shield	Material	1) Ag Plated Cu 2) Ag Plated Cu		Tinned Cu	Spiral Strip Ag Plated Cu	1) Ag Plated Cu 2) Ag Plated Cu	1) Ag Plated Cu 2) Cu Tape 3) Ag Plated Cu	1) Ag Plated Cu 2) Ag Plated Cu	Tinned Cu	1) Flat Ag Plated Cu 2) Al Polyester 3) Round Ag Plated Cu	
Outer Braid	Dia. (mm/in.)	1.1700 / .0460	1.8600 / .0735	2.2000 / .0860	2.1300 / .0840	2.1080 / .0830	2.2730 / .0895	2.2480 / .0885	3.5800 / .1410	4.5200 / .1780	7.0400 / .2770
Jacket	Material	FEP		—	FEP				—	FEP	
	Dia. (mm/in.)	1.4200 / .0560	2.0600 / .0810	3.2000 / .1260	2.6400 / .1040	2.5400 / .1000	2.6670 / .1050	2.5900 / .1020	4.5800 / .1803	4.9500 / .1950	7.6200 / .3000
Mechanical											
Operating Temp		-65° C to 125° C		-40° C to 200° C	-40° C to 125° C	-65° C to 125° C	-55° C to 125° C	-65° C to 125° C	-40° C to 200° C	-40° C to 150° C	-55° C to 200° C
Min. Bend Radius		3.18 mm	9.00 mm	6.35 mm	13.20 mm	8.90 mm	3.18 mm	8.89 mm	10.90 mm	24.80 mm	38.10 mm
Connector Options		1.00 mm, 1.35 mm, 1.85 mm, 2.40 mm, 2.92 mm, SMA, SMP, SMPM, Ganged SMPM (Magnum RF*), SMPMT, SMP3	SMA, SMP		2.92 mm, 2.40 mm	1.85 mm, 2.40 mm, 2.92 mm, SMA, SMP, SMPM, Ganged SMPM (Magnum RF*)	2.40 mm, 2.92 mm, SMA, SMP, SMPM	3.50 mm	SMA	SMA, TNCA, N Type	SMA, TNCA, N Type

For complete specifications, visit samtec.com or contact RFGroup@samtec.com

1.00 mm TO 110 GHz

1.00 mm Cable Assemblies RF047-A



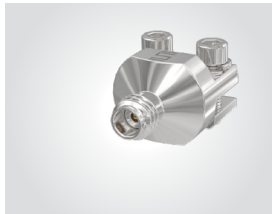
SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF047-A = (1.2 mm) .047" overshield DIA 29 AWG millimeter wave cable	-10BJ = 1.00 mm Bulkhead Straight Jack -10SP = 1.00 mm Straight Plug		-"XXXX" = Overall Length in millimeters -0100 (100 mm) 3.94" minimum
ALSO AVAILABLE 1.35 mm, 1.85 mm, 2.40 mm, 2.92 mm, SMPM, SMP, SMP3, SMA = RF047-A			NITROWAVE® CABLES • LL130 • LL110 • LL095

VSWR

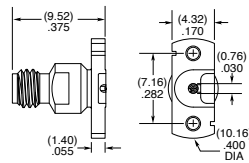
1.40 max. (DC to 90 GHz)
1.50 max. (90 GHz to 110 GHz)

1.00 mm Board Connectors 100

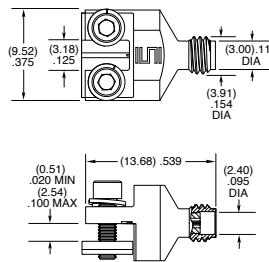
Cable Mates:
RF047-A, LL130, LL110,
LL095



100	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	OPTION	PACKAGING
	-J = Jack	-P = PCB Mount	-VP = 50 μ" (1.27 μm) Gold center contact, Passivated outer body	-ST = Straight	-CM = Compression Mount Stripline -CMM = Compression Mount Microstrip -EL = Edge Launch	-1 = Without Screws (-CM & -CMM only) -2 = With Screws (.016" to .125" PCB thickness) (-CM & -CMM only) -3 = With Screws (.069" to .178" PCB thickness) (-CMM only) -01 = .040" to .100" PCB thickness (-EL only)	Leave blank for individually bagged -B = Bulk packaged



-CM & -CMM



-EL

1.00 mm Cable Connectors PRF10



CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF10-J-C-VP-047D-SS	.047 Semi-Rigid
PRF10-P-C-VP-047D-SS	.047 Semi-Rigid

For a complete list of 1.00 mm cable connectors, visit www.samtec.com?PRF10

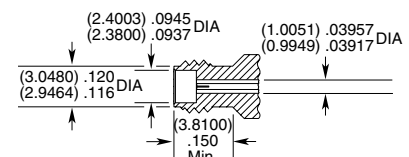
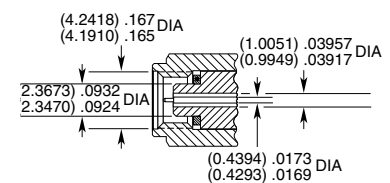
J-C = Cable Jack

P-C = Cable Plug

VP = Plating (75 μ" Gold center contact, passivated outer contact)

SS = Straight, Solder Clamp

INTERFACE STANDARD



1.35 mm TO 90 GHz

1.35 mm Cable Assemblies RF047-A



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF047-A = (1.2 mm) .047" overshield DIA 29 AWG millimeter wave cable	-13BJ = 1.35 mm Bulkhead Straight Jack -13SP = 1.35 mm Straight Plug		-"XXXX" = Overall Length in millimeters -0100 (100 mm) 3.94" minimum

ALSO AVAILABLE

1.00 mm, 1.85 mm, 2.40 mm, 2.92 mm,
SMPM, SMP, SMP3, SMA = RF047-A

VSWR

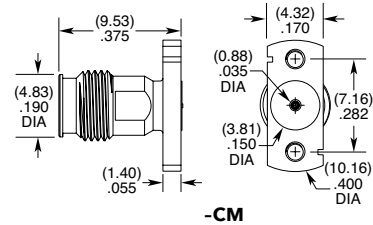
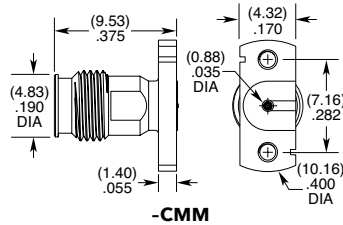
RF047-A: 1.40 max.

1.35 mm Board Connectors 135

Cable Mates:
RF047-A



135	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	OPTION	PACKAGING
	-J = Jack	-P = PCB Mount	-VP = 50 μ" (1.27 μm) Gold center contact, Passivated outer contact	-ST = Straight	-CM = Compression Mount Stripline -CMM = Compression Mount Microstrip	-1 = Without screws -2 = With screws	Leave blank for individually bagged. -B = Bulk packaged



1.35 mm Cable Connectors PRF13



CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF13-P-C-VP-047A-SS	Temp-Flex 1000671047
PRF13-J-C-VP-047A-BS	Temp-Flex 1000671047

For a complete list of 1.35 mm cable connectors, visit www.samtec.com?PRF13

P-C = Cable Plug

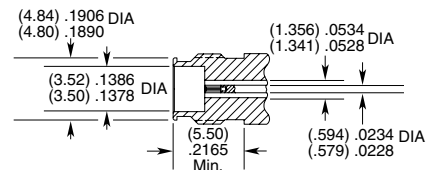
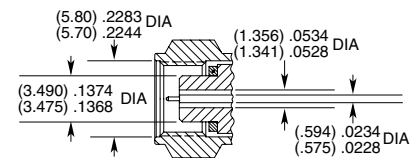
J-C = Cable Jack

VP = Plating (75 μ" Gold center contact, passivated outer contact)

SS = Straight, Solder Clamp

BS = Bulkhead, Solder Clamp

INTERFACE STANDARD



1.85 mm TO 67 GHz

1.85 mm Cable Assemblies

RF047-A, RF086



VSWR

RF047-A: 1.40 max.
RF086: 1.40 max.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF047-A = (1.2 mm) .047" overshield DIA 29 AWG millimeter wave cable RF086 = (2.18 mm) .086" overshield DIA 23 AWG millimeter wave cable	-18SJ = 1.85 mm Straight Jack -18SP = 1.85 mm Straight Plug		- "XXXX" = Overall Length in millimeters -0100 (100 mm) 3.94" minimum
ALSO AVAILABLE 1.00 mm, 1.35 mm, 2.40 mm, 2.92 mm, SMPM, SMP, SMP3, SMA = RF047-A 2.40 mm, 2.92 mm, SMPM, SMP, SMA = RF086			NITROWAVE® CABLES • LL071 • AL071

1.85 mm Board Connectors

185

Cable Mates:
RF047-A, RF086
LL071, AL071



TERMINATION	A	B
-EL	(9.52) .375	(5.84) .230
-ELW	(12.70) .500	(9.53) .375

185	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	OPTION	PACKAGING
	-J = Jack	-P = PCB Mount	-EP = 50 μ" (1.27 μm) Gold center contact, Passivated outer contact (not available for -AL. Specify -EG plating for -AL)	-ST = Straight	-CM = Compression Mount Stripline	-1 = Without Screws (-CM & -CMM only)	Leave blank for individually bagged.
					-CMM = Compression Mount Microstrip	-2 = With Screws (-CM & -CMM only)	-B = Bulk packaged
					-EL = Edge Launch		
					-ELW = Edge Launch Wide		
					-AL = 30° Angled Launch (specify -EG for plating)	-01 = .040" to .100" PCB thickness (-EL & -ELW only)	
B	-EL & -ELW						
(5.84) .230							
(9.53) .375							

1.85 mm Cable Connectors

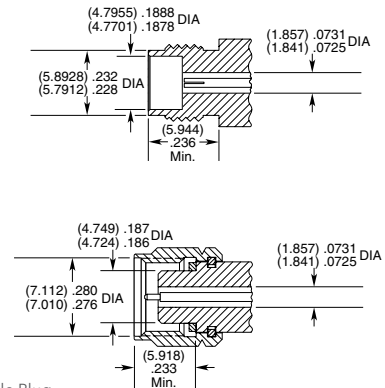
PRF18



CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF18-J-C-EP-085-BS	Harbour SS405
PRF18-P-C-EP-085-SS	Harbour SS405
PRF18-P-C-EE-085-SD	Harbour SS405
PRF18-J-C-EP-086-SS	Temp-Flex 1001935086
PRF18-J-C-EP-047A-SS	Temp-Flex 1000671047
PRF18-P-C-EP-047A-SS	Temp-Flex 1000671047
PRF18-J-C-EP-047D-SS	.047 Semi-Rigid
PRF18-P-C-EP-047D-SS	.047 Semi-Rigid
PRF18-P-C-EE-047D-SD	.047 Semi-Rigid
PRF18-P-C-EE-047H-SD	EZ-47-LA Semi-Rigid
PRF18-P-C-EP-070-SD	EZ-70-LA Semi-Rigid
PRF18-J-C-EE-405-SD	RG 405 Semi-Rigid
PRF18-P-C-EE-405-SD	RG 405 Semi-Rigid
PRF18-P-C-EP-086E-SS	Dynawave DF165

For a complete list of 1.85 mm cable connectors, visit www.samtec.com?PRF18

INTERFACE STANDARD



P-C = Cable Plug
J-C = Cable Jack
EE = Plating (50 μ" gold center contact, & outer contact)
EP = Plating (50 μ" gold center contact, passivated outer contact)
SS = Straight, Solder Clamp
SD = Straight, Direct Solder
BS = Bulkhead, Solder Clamp

2.40 mm TO 50 GHz

2.40 mm Cable Assemblies

RF047-A, RF085,
RF086, RF23C



VSWR

RF047-A: 1.35 max.
RF086: 1.40 max.
RF085: 1.40 max.
RF23C: 1.40 max.

SERIES

RF047-A

= (1.2 mm) .047" overshield DIA 29 AWG millimeter wave cable

RF086

= (2.18 mm) .086" overshield DIA 23 AWG millimeter wave cable

RF085

= (2.16 mm) .085" overshield DIA 24 AWG millimeter wave cable

RF23C

= MWC-2350CU-01 millimeter wave cable with copper foil shield

END 1 CONNECTOR

-24SJ

= 2.40 mm Straight Jack

-24SP

= 2.40 mm Straight Plug

END 2 CONNECTOR

OVERALL LENGTH

-“XXXX”

= Overall Length in millimeters

–0100 (100 mm)
3.94" minimum

ALSO AVAILABLE

1.00 mm, 1.35 mm, 1.85 mm,
2.92 mm, SMPM, SMP, SMP3, SMA = RF047-A

1.85 mm, 2.92 mm, SMPM, SMP, SMA = RF086

2.92 mm = RF085

2.92 mm, SMPM, SMP, SMA = RF23C

NITROWAVE® CABLES

• LL043

2.40 mm Board Connectors

240

Cable Mates:

RF047-A, RF086,
RF085, RF23C, LL043



240 – GENDER – TYPE – PLATING – ORIENTATION – TERMINATION – OPTION – PACKAGING

–J
= Jack

–P
= PCB Mount

–EP
= 50 μ" (1.27 μm)
Gold center contact,
Passivated outer contact

–ST
= Straight

–CM
= Compression Mount Stripline

–CMM
= Compression Mount Microstrip

–EL
= Edge Launch

–ELW
= Edge Launch Wide

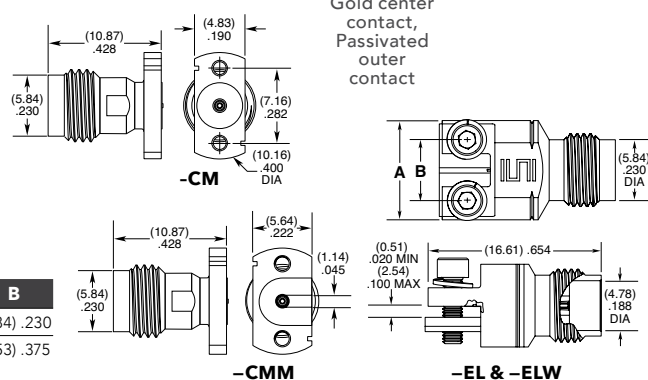
–1
= Without Screws
(–CM & –CMM only)

–2
= With Screws
(–CM & –CMM only)

–01
= .040" to .100" PCB thickness
(–EL & –ELW only)

Leave blank for individually bagged

–B
= Bulk packaged



TERMINATION	A	B
–EL	(9.52) .375	(5.84) .230
–ELW	(12.70) .500	(9.53) .375

2.40 mm Cable Connectors

PRF24



CONNECTORS FOR INDUSTRY STANDARD CABLES

PRF24-J-C-EP-085-SS	Harbour SS405
PRF24-J-C-EP-405-BS	RG 405
PRF24-P-C-EE-085-SD	Harbour SS405
PRF24-P-C-EP-120A-SS	Semflex HP120
PRF24-J-C-EP-160-SS	Semflex HP160
PRF24-P-C-EP-160-SS	Semflex HP160
PRF24-J-C-EP-140B-SS	IW 1401
PRF24-P-C-EP-140B-SS	IW 1401
PRF24-J-C-EP-150B-SS	IW 1501
PRF24-J-C-EP-150-SS	Dynawave DF150
PRR24-J-C-EP-086-SS	Temp-Flex 1001935086
PRF24-P-C-EP-086-SS	Temp-Flex 1001935086

For a complete list of 2.40 mm cable connectors, visit www.samtec.com?PRF24

P-C = Cable Plug

J-C = Cable Jack

EE = Plating (50 μ" gold center contact & outer contact)

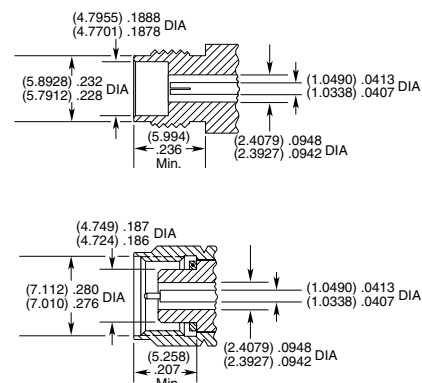
EP = Plating (50 μ" gold center contact, passivated outer contact)

SS = Straight, Solder Clamp

SD = Straight, Direct Solder

BS = Bulkhead, Solder Clamp

INTERFACE STANDARD



2.92 mm TO 40 GHz

2.92 mm Cable Assemblies

RF047-A, RF086,
RF085, RF23C



VSWR

RF047-A: 1.35 max.
RF086: 1.40 max.
RF085: 1.40 max.
RF23C: 1.40 max.

SERIES

RF047-A

= (1.2 mm) .047" overshield DIA
29 AWG millimeter wave cable

RF086

= (2.18 mm) .086" overshield DIA
23 AWG millimeter wave cable

RF085

= (2.16 mm) .085" overshield DIA
24 AWG millimeter wave cable

RF23C

= MWC-2350CU-01 millimeter wave
cable with copper foil shield

END 1 CONNECTOR

-92SJ

= 2.92 mm Straight Jack

-92SP

= 2.92 mm Straight Plug

END 2 CONNECTOR

OVERALL LENGTH

-“XXXX”

= Overall Length in
millimeters

-0100 (100 mm)
3.94" minimum

ALSO AVAILABLE

1.00 mm, 1.35 mm, 1.85 mm,
2.40 mm, SMPM, SMP, SMP3, SMA = RF047-A

1.85 mm, 2.40 mm, SMPM, SMP, SMA = RF086

2.40 mm = RF085

2.40 mm, SMPM, SMP, SMA = RF23C

NITROWAVE® CABLES

- LL071
- LL043
- LL032

2.92 mm Board Connectors

292

Cable Mates:

RF047-A, RF085,
RF086, RF23C, LL071,
LL043, LL032



TERMINATION	A	B
-EL	(9.52) .375	(5.84) .230
-ELW	(12.70) .500	(9.53) .375

292

GENDER

-J
= Jack

TYPE

-P
= PCB
Mount

PLATING

-EP
= 50 μ"
(1.27 μm)
Gold center
contact,
Passivated
outer
contact

ORIENTATION

-ST
= Straight

TERMINATION

-CM
= Compression
Mount Stripline

-CMM
= Compression
Mount Microstrip

-EL
= Edge Launch

-ELW
= Edge Launch
Wide

OPTION

-1
= Without
Screws
(-CM
& -CMM
only)

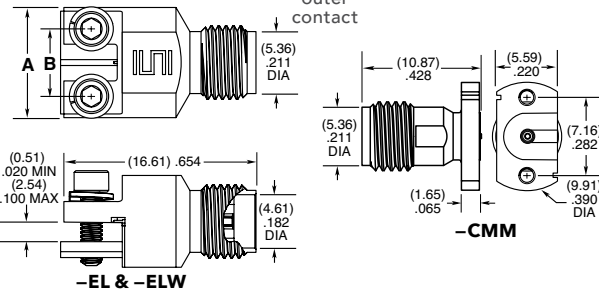
-2
= With
Screws
(-CM
& -CMM
only)

-01
= .040" to
.100" PCB
thickness
(-EL &
-ELW
only)

PACKAGING

Leave blank for
individually
bagged.

-B
= Bulk
packaged



2.92 mm Cable Connectors

PRF92

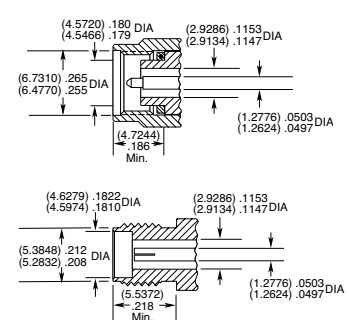


CONNECTORS FOR INDUSTRY STANDARD CABLES

PRF92-P-C-EE-405-SD	RG 405 Semi-Rigid
PRF92-P-C-EE-085A-SD	.085 Semi-Rigid
PRF92-P-C-EP-160-SS	Semflex HP160
PRF92-P-C-EP-150B-SS	IW 1501
PRF92-P-C-EP-142-SS	Harbour LL142
PRF92-J-C-EP-085-SS	Harbour SS405
PRF92-J-C-EP-085-BS	Harbour SS405
PRF92-P-C-EP-085-SS	Harbour SS405
PRF92-P-C-EE-402-SD	RG 402
PRF92-P-C-EP-190-SS	Semflex HP190
PRF92-J-C-EP-160-SS	Semflex HP160
PRF92-P-C-EP-120A-SS	Semflex HP120
PRF92-P-C-EP-140-SS	Dynawave DF140
PRF92-P-C-EP-047D-SS	.047 Semi-Rigid
PRF92-J-C-EP-047D-SS	.047 Semi-Rigid
PRF92-P-C-EP-150-SS	Dynawave DF150
PRF92-P-C-EE-118-SD	Haverhill HC35004
PRF92-J-C-EP-402-SS	RG 402
PRF92-J-C-EP-047D-4S	.047 Semi-Rigid
PRF92-P-C-EP-086-SS	Temp-Flex 1001935086
PRF92-P-C-EP-200-SS	Times Max Gain 200

For a complete list of 2.92 mm cable connectors, visit www.samtec.com/PRF92

INTERFACE STANDARD



P-C = Cable Plug

J-C = Cable Jack

EE = Plating (50 μ" Gold center contact & outer contact)

EP = Plating (50 μ" Gold center contact, passivated outer contact)

SS = Straight, Solder Clamp

SD = Straight, Direct Solder

BS = Bulkhead, Solder Clamp

4S = 4-hole flange, Solder Clamp

3.50 mm TO 34 GHz

3.50 mm Cable Assemblies RF23S



VSWR

RF23S: 1.30 max

SERIES

RF23S

= MWC-2350-01 microwave cable with 23 AWG solid FEP Dielectric

END 1 CONNECTOR

-35SJP

= 3.50 mm Straight Jack

-35SPP

= 3.50 mm Straight Plug

END 2 CONNECTOR

OVERALL LENGTH

-"XXXX"

= Overall Length in millimeters

-0100 (100 mm) 3.94" min.

3.50 mm Cable Connectors PRF35



CONNECTORS FOR INDUSTRY STANDARD CABLES

PRF35-P-C-EP-405-SS	RG 405, Semi-Rigid
PRF35-J-C-EP-402-SS	RG 402, .141, Semi-Rigid
PRF35-J-C-EP-402-BS	RG 402, .141, Semi-Rigid
PRF35-P-C-EP-402-SS	RG 402, .141, Semi-Rigid
PRF35-P-C-EP-120A-SS	Semflex HP120
PRF35-J-C-EP-160-SS	Semflex HP160
PRF35-P-C-EP-160-SS	Semflex HP160
PRF35-P-C-EP-210A-SS	Micro-Coax UFA210A

For a complete list of 3.50 mm cable connectors, visit www.samtec.com?PRF35

P-C = Cable Plug

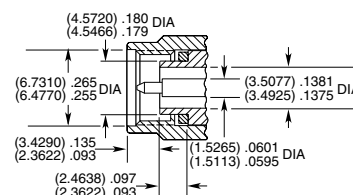
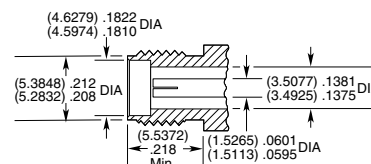
J-C = Cable Jack

EP = Plating (50 µ" Gold center contact, passivated outer contact)

SS = Straight, Solder Clamp

BS = Bulkhead, Solder Clamp

INTERFACE STANDARD



SSMA TO 34 GHz

SSMA Cable Connectors PRFS1



CONNECTORS FOR INDUSTRY STANDARD CABLES

PRFS1-J-C-EE-405-BD	RG 405, Semi-Rigid
PRFS1-P-C-EE-405-SD	RG 405, Semi-Rigid
PRFS1-P-C-EP-141A-SS	Harbour SS402

For a complete list of SSMA cable connectors, visit www.samtec.com?PRFS1

P-C = Cable Plug

J-C = Cable Jack

EE = Plating (50 µ" Gold center contact & outer contact)

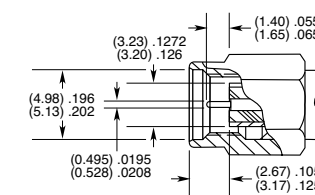
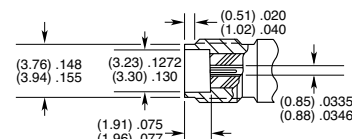
EP = Plating (50 µ" Gold center contact, passivated outer contact)

SS = Straight, Solder Clamp

SD = Straight, Direct Solder

BD = Bulkhead, Direct Solder

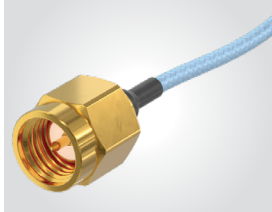
INTERFACE STANDARD



SMA TO 26.5 GHz

SMA Cable Assemblies

RF047-A, RF086,
RF23C, RF25S, RF402,
RF405, RF180, RF280



VSWR

RF047-A: 1.30 max.
RF086: 1.30 max.
RF23C: 1.30 max.
RF180: 1.35 max.
RF280: 1.35 max.

Additional connector
options available.
Contact RFGroup@samtec.com

SERIES

RF047-A

= (1.2 mm) .047" overshield DIA
29 AWG millimeter wave cable

RF086

= (2.18 mm) .086" overshield DIA
23 AWG millimeter wave cable

RF23C

= MCW-2350CU-01 millimeter
wave cable with copper foil shield

RF25S

= MWC-2550-01 microwave cable
with 25 AWG solid FEP dielectric

RF402

= RG 402 (.141") 19 AWG
semi-flexible microwave cable

RF405

= RG 405 (.086") 24 AWG
semi-flexible microwave cable

RF180

= (4.52 mm) .178" overshield DIA,
16 AWG microwave cable

RF280

= (7 mm) .277" overshield DIA,
11 AWG microwave cable

END 1 CONNECTOR

-01SP1*

= SMA Straight Plug

-01RP1*

= SMA Right-angle Plug
(RF047-A, RF086, RF23C & RF25S not available)

-01BJ1*

= SMA Bulkhead Jack
(RF402 & RF405 not available)

-01SB

= Straight Bulkhead Jack, Sealed
(RF047-A, RF086 & RF23C only)

*Remove last "1" from end connector
when specifying RF047-A, RF086,
RF23C, RF180 & RF280.

END 2 CONNECTOR

OVERALL LENGTH

- "XXXX"

= Overall Length in millimeters

-0100 (100 mm) 3.94" minimum
(RF047-A, RF086, RF23C,
RF25S, RF402, & RF405)

-0152 (152 mm) 5.984" minimum
(RF180)

-0200 (200 mm) 7.87" minimum
(RF280)

NITROWAVE® CABLES

- LL043
- LL018

ALSO AVAILABLE

1.00 mm, 1.35 mm, 1.85 mm, 2.40 mm,
2.92 mm, SMPM, SMP, SMP3 = RF047-A

1.85 mm, 2.40 mm, 2.92 mm,
SMPM, SMP = RF086

2.40 mm, 2.92 mm, SMPM, SMP = RF23C

SMP = RF25S, RF405

TNCA, N Type = RF180

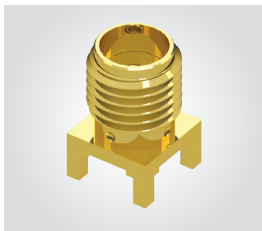
TNCA, N Type = RF280

SMA Board Connectors

SMA-TH, SMA-SM,
SMA-MT, SMA-EM

Cable Mates:

RF047-A, RF086,
RF23C, RF25S, RF402,
RF405, RF180, RF280,
LL043, LL018



SMA

GENDER

-J
= Jack

TYPE

-P
= PCB
Mount

PLATING

-H
= 30 μ" (0.76 μm) Gold
center contact,
3 μ" (0.08 μm) Gold
outer contact

-GF
= 10 μ" (0.25 μm) Gold
center contact,
3 μ" (0.08 μm) Gold
outer contact
(-SM1 only)

-HG
= 30 μ" (0.76 μm) Gold
center contact,
10 μ" (0.08 μm) Gold
outer contact
(-EM-01 only)

ORIENTATION

-ST
= Straight

-RA
= Right-angle

TERMINATION

-TH1
= Through-hole

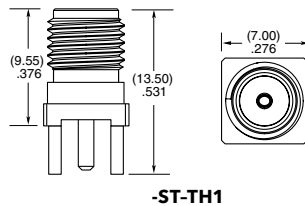
-SM1
= Surface Mount
(-GF-RA only)

-EM1
= Edge Mount
(-ST only)

-EM3
= Drop-in Edge Mount
(-ST only)

-EM-01
= Edge Mount, 4 post
(-ST-HG only)

-MT1
= Mixed Technology
(-ST only)

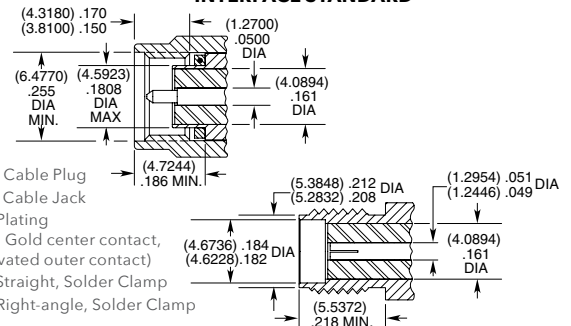


CONNECTORS FOR INDUSTRY STANDARD CABLES

PRF01-P-C-EP-120C-SS	Harbour LL120
PRF01-J-C-EP-142-SS	Harbour LL142
PRF01-P-C-EP-142-SS	Harbour LL142
PRF01-P-C-EP-142-RS	Harbour LL142
PRF01-P-C-EP-142A-SS	Harbour SB142
PRF01-P-C-EP-335-SS	Harbour LL335
PRF01-P-C-EP-335A-SS	Harbour LL335i
PRF01-P-C-EP-190-SS	Semflex HP190
PRF01-P-C-EP-190-RS	Semflex HP190
PRF01-P-C-EP-305-SS	Semflex HP305
PRF01-P-C-EP-290-SS	Semflex LA290

For a complete list of SMA cable connectors, visit www.samtec.com/PRF01

INTERFACE STANDARD



P-C = Cable Plug
J-C = Cable Jack

EP = Plating

(50 μ" Gold center contact,
passivated outer contact)

SS = Straight, Solder Clamp

RS = Right-angle, Solder Clamp

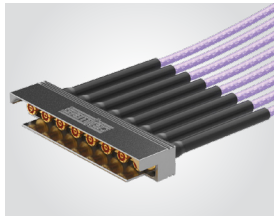
SMA Cable Connectors



SMPM TO 65 GHZ

SMPM Ganged Cable: GC47, GC86

Mates With:
GPPC



SERIES	NO. OF ROWS	NO. OF POSITIONS	OPTION	ASSEMBLY LENGTH
--------	-------------	------------------	--------	-----------------

GC47
= Ganged SMPM
with (1.2 mm) .047"
overshield DIA 29 AWG
millimeter wave cable

-1

-02, -04,
-06, -08, -10

Leave blank for
no screws

-S
= Screw

- "XXXX"
= Assembly Length
in millimeters
-0100 (100 mm)
3.94" minimum

GC86
= Ganged SMPM
with (2.18 mm) .086"
overshield DIA 23 AWG
millimeter wave cable

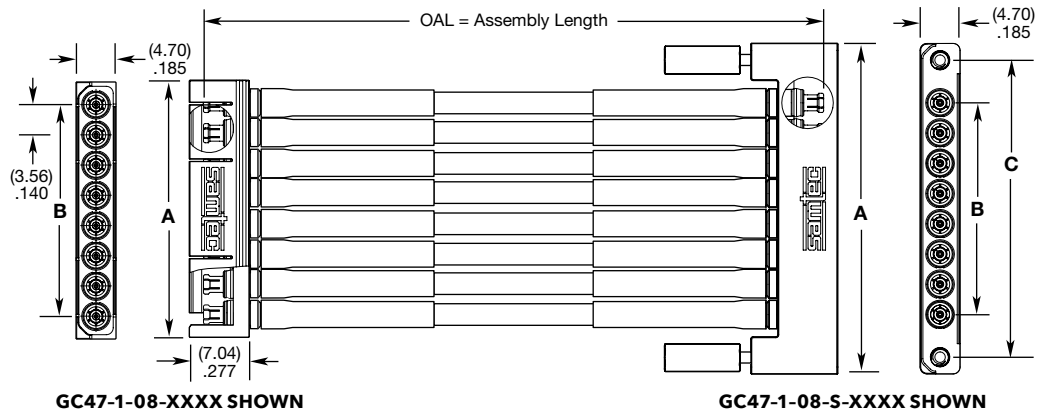
OPTION	NO. OF POSITIONS	A	B	C
BLANK	-02	(8.89) .350	(3.56) .140	N/A
	-04	(16.00) .630	(10.67) .420	N/A
	-06	(23.11) .910	(17.78) .700	N/A
	-08	(30.23) 1.190	(24.89) .980	N/A
	-10	(37.34) 1.470	(32.00) 1.260	N/A
-S	-02	(17.53) .690	(3.56) .140	(13.59) .535
	-04	(24.64) .970	(10.67) .420	(20.70) .815
	-06	(31.75) 1.250	(17.78) .700	(27.81) 1.095
	-08	(38.86) 1.530	(24.89) .980	(34.93) 1.375
	-10	(45.97) 1.810	(32.00) 1.260	(42.04) 1.655

ALSO AVAILABLE

Other RF options for end 2
Contact RFGroup@samtec.com

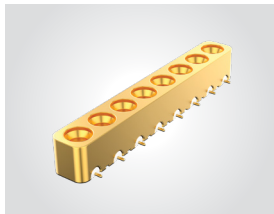
Notes:
Cable lengths longer than
1000 mm (39.37") are not
supported with S.I. test data.

Some sizes, styles and
options are non-standard,
non-returnable.



SMPM Ganged Block: GPPB

Mates With:
PRFIA



GPPB	GENDER	NO. OF ROWS	NO. OF POSITIONS	PLATING	ST	SM	CHANNEL PITCH
------	--------	-------------	------------------	---------	----	----	---------------

-PF
= Plug
Full Detent

-1

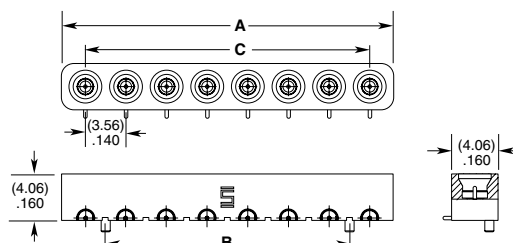
-02, -04, -06,
-08, -10

-EG
= 50 μ" (1.27 μm)
heavy Gold
center contact,
10 μ" (0.25 μm)
Gold outer body

-1N
= 3.56 mm
(.140") Pitch

-PS
= Plug
Smooth Bore

-PC
= Catcher's
Mitt



GPPB-PF-1-08-EG-ST-SM-1N SHOWN

NO. OF POSITIONS	A	B	C
-02	(7.62) .300	N/A	(3.56) .140
-04	(14.73) .580	(7.11) .280	(10.67) .420
-06	(21.84) .860	(14.22) .560	(17.78) .700
-08	(28.96) 1.14	(21.34) .840	(24.89) .980
-10	(36.07) 1.42	(28.45) 1.12	(32.00) 1.26

ALSO AVAILABLE

(8.33 mm) .328" Pitch
(5.08 mm) .200" Pitch
Edge Mount termination
Contact RFGroup@samtec.com

SMPM TO 65 GHz

GPPC	GENDER	1	NO. OF POSITIONS	PLATING	ORIENTATION	TERMINATION	OPTION	SCREW SIZE
	-PF = Plug Full Detent -PS = Plug Smooth Bore -PC = Catcher's Mitt (-ST-SL & -RA-SM only)		-02, -04, -06, -08, -10 (Per Row)	-EG = 50 μ " (1.27 μ m) heavy Gold center contact, 10 μ " (0.25 μ m) extra Gold outer body (-EM-1N & -RA-SM only) -HG = 30 μ " (0.76 μ m) Gold center contact, 10 μ " (0.25 μ m) Gold outer body (-ST-SL only)	-ST = Straight -RA = Right-angle (-SM only)	-SM = Surface Mount (Right-angle only) -EM-1N = Edge Mount -SL = Stub Launch	Leave blank for no screws -S = Screw (not available with -SM)	-ST-SL only; Leave blank for non screw option -1 = (2.11 mm) .083" to (2.62 mm) .103" PCB thickness -2 = (1.24 mm) .049" to (1.75 mm) .069" PCB thickness -3 = (.38 mm) .015" to (.89 mm) .035" PCB Thickness

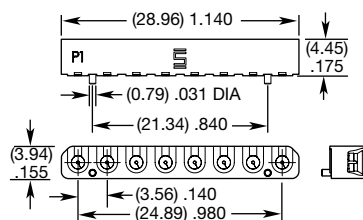
SMPM

Ganged Block:

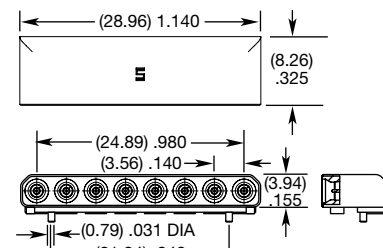
GPPC-ST-SL, GPPC-RA-SM, GPPC-EM

Mates With:

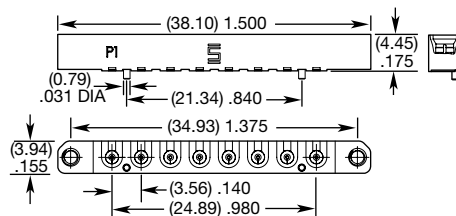
GC47, GC86



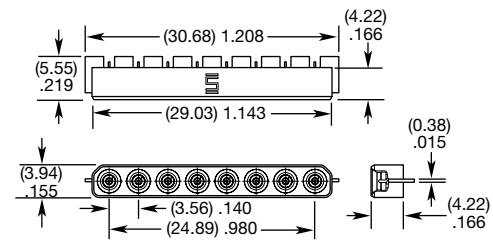
GPPC-PS-1-08-XX-ST-SL SHOWN



GPPC-PS-1-08-XX-RA-SM SHOWN



GPPC-PS-1-08-XX-ST-SL-S-1 SHOWN



GPPC-PS-1-08-XX-ST-EM-1N SHOWN

Notes:

Some sizes, styles and options are non-standard, non-returnable.

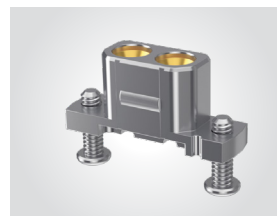
DUAL PORT SOLDERLESS COMPRESSION MOUNT

SMPM Ganged Block:

GPPC-CMM

Mates With:

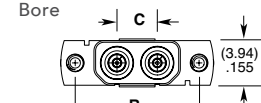
GC47, GC86, PRFIA



GPPC	GENDER	1	2	PLATING	ORIENTATION	TERMINATION	PACKAGING
------	--------	---	---	---------	-------------	-------------	-----------

-PF
= Plug Full Detent

-PS
= Plug Smooth Bore



GPPC-PX-1-2-EP-ST-CMM-X SHOWN

-EP
= 50 μ " (1.27 μ m) heavy Gold center contact, Passivated outer body

-ST
= Straight

-CMM
= Compression Mount

Leave blank for individually bagged

-B
= Full Tray (Multiples of 100 required)

NO. OF POSITIONS	A	B	C
-02	(7.62) .300	(10.92) .430	(3.56) .140

See Page 29 for SMPM In-Series Bullet Adaptors or visit Samtec.com?PRFIA

SMPP TO 65 GHz

SMPP Cable Assemblies

RF047-A, RF086, RF23C



VSWR

RF047-A: 1.40 max.
RF086: 1.40 max.
RF23C:
 1.20 max. (DC to 26.5 GHz)
 1.40 max. (26.5 GHz to 50 GHz)

SERIES

RF047-A
 = (1.2 mm) .047" overshield DIA
 29 AWG millimeter cable

RF086
 = (2.18 mm) .086" overshield DIA
 23 AWG millimeter cable

RF23C
 = MWC-2350CU-01 millimeter wave
 cable with copper foil shield

END 1 CONNECTOR

-MOSP
 = SMPP Straight Plug, Full Detent

-MOSJ
 = SMPP Straight Jack

-MORJ
 = SMPP Right-angle Jack
 (RF047-A only)

-MOBJ
 = SMPP Straight Bulkhead Jack
 (RF047-A only)

-MTSJ
 = SMPP Threaded Straight Jack
 (RF047-A & RF086 only)

END 2 CONNECTOR

OVERALL LENGTH

-"XXXX"
 = Overall Length
 in millimeters

-0100 (100 mm)
 3.94" minimum

NITROWAVE® CABLES

• LL095

ALSO AVAILABLE

1.00 mm, 1.35 mm, 1.85 mm, 2.40 mm,
 2.92 mm, SMP, SMP3, SMA = RF047-A

1.85 mm, 2.40 mm, 2.92 mm, SMP, SMA = RF086

2.40 mm, 2.92 mm, SMP, SMA = RF23C

SMPP Cable Connectors

PRFM0



CONNECTORS FOR INDUSTRY STANDARD CABLES

PRFM0-J-C-EE-085-BD	Harbour SS405
PRFM0-J-C-EE-047A-BD	Temp-Flex 1000671047
PRFM0-J-C-HG-047A-SD	Temp-Flex 1000671047
PRFM0-J-C-EE-047A-RD	Temp-Flex 1000671047
PRFM0-P-C-HG-047A-SD	Temp-Flex 1000671047
PRFM0-J-C-EE-047B-SD	Temp-Flex 1001935047
PRFM0-J-C-EE-086-SD	Temp-Flex 1001935086
PRFM0-P-C-EE-086-SD	Temp-Flex 1001935086

For a complete list of SMPP cable connectors, visit www.samtec.com?PRFM0

P-C = Cable Plug

J-C = Cable Jack

EE = Plating (50 μ" Gold center contact & outer contact)

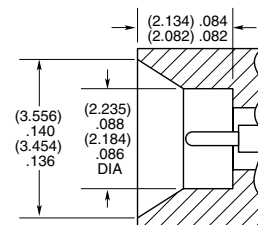
HG = Plating (30 μ" Gold center contact, 10 μ" Gold outer contact)

SD = Straight, Direct Solder

BD = Bulkhead, Direct Solder

RD = Right-angle, Direct Solder

INTERFACE STANDARD (CATCHER'S MITT)



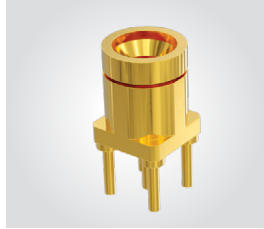
SMPPM TO 65 GHz

SMPPM Board Connectors

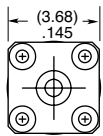
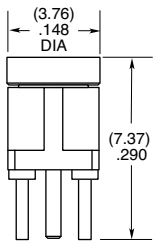
SMPPM-SM, SMPPM-TH,
SMPPM-RA, SMPPM-MT,
SMPPM-EM

Cable Mates:

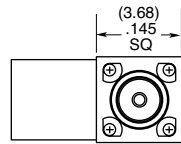
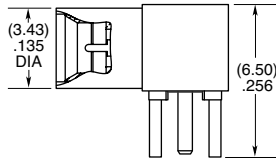
RF047-A, RF086, RF23C,
LL095



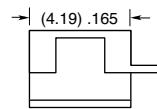
SMPPM	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	OPTION
	-PF = Full Detent	-P = PCB Mount	-HG = 30 μ " (0.76 μ m) Gold center contact, 10 μ " (0.25 μ m) Gold outer contact (-ST only)	-ST = Straight	-EM = Drop-in Edge Mount (-ST only)	-1 = Standard
	-PS = Smooth Bore		-HF = 30 μ " (0.76 μ m) Gold center contact, 3 μ " (0.08 μ m) Gold outer contact (-RA only)	-RA = Right-angle (-TH required)	-TH = Through-hole	-2 = Reverse Mount (-EE and -SM only; see website for print)
	-PC = Catcher's Mitt (-ST-TH, -ST-MT & -ST-SM only)		-EG = 50 μ " (1.27 μ m) Gold center contact, 10 μ " (0.25 μ m) Gold outer body (-MT & -SM only)		-SM = Surface Mount (-ST only)	
			-EE = 50 μ " (1.27 μ m) extra heavy Gold center contact and outer body (SM-2 only)		-MT = Mixed Technology (-ST only)	



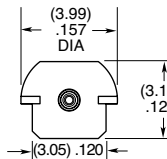
-ST-TH-1



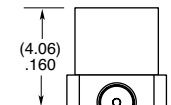
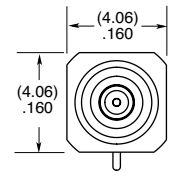
-RA-TH-1



-ST-EM-1



-ST-EM-1



-ST-SM-1

SMPPM THREADED TO 65 GHz

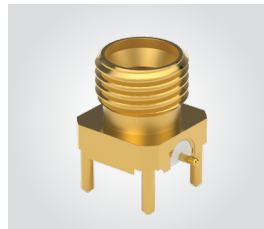
See Page 29 for SMPPM In-Series Bullet
Adaptors or visit samtec.com?PRFIA

SMPMT Board Connectors

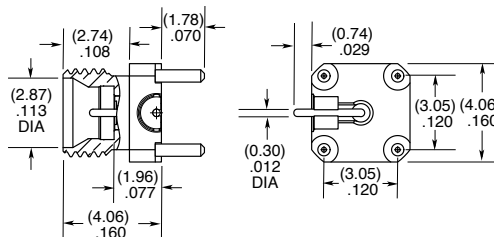
SMPMT-MT

Cable Mates:

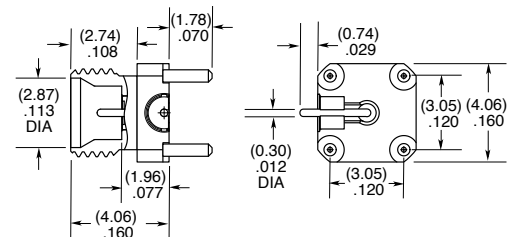
RF047-A, RF086, RF23C



SMPMT	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	OPTION
	-PF = Full Detent	-P = PCB Mount	-EG = 50 μ " (1.27 μ m) Gold center contact, 10 μ " (0.25 μ m) Gold outer body	-ST = Straight	-MT = Mixed Technology	-1 = Standard
	-PS = Smooth Bore					



SMPMT-PF-P-EG-ST-MT-1

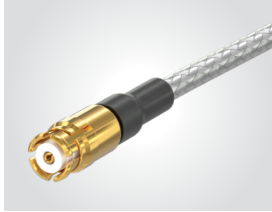


SMPMT-PS-P-EG-ST-MT-1

SMP TO 40 GHz

SMP Cable Assemblies

RF047-A, RF086, RF23C, RF25S, RF405



VSWR

RF047-A: 1.50 max.
RF086: 1.50 max.
RF23C: 1.50 max.
RF25S: Contact Samtec
RF405: Contact Samtec

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF047-A = (1.2 mm) .047" overshield DIA 29 AWG millimeter wave cable	-00SJ = SMP Straight Jack (RF047-A, RF086 & RF23C only)		- "XXXX" = Overall Length in millimeters
RF086 = (2.18 mm) .086" overshield DIA 23 AWG millimeter wave cable	-00MJ = SMP Right-angle Jack (RF047-A, RF086 & RF23C only)		-0100 (100 mm) 3.94" minimum
RF23C = MWC-2350CU-01 millimeter wave cable with copper foil shield	-00BF = SMP Bulkhead Jack, Full Detent (RF086 & RF23C only)		
RF25S = MWC-2550-01 microwave cable with 25 AWG solid FEP dielectric	-00BL = SMP Bulkhead Jack, Limited Detent (RF086 & RF23C only)		
RF405 = RG 405 (.086") 24 AWG semi-flexible microwave cable	-00BS = SMP Bulkhead Jack, Smooth Bore (RF086 & RF23C only)		
	-00BC = SMP Bulkhead Jack, Catcher's Mitt (RF086 & RF23C only)		
	-00SJ7 = SMP Straight Jack (RF25S & RF405 only)		
	-00RJ7 = SMP Right-angle Jack (RF25S & RF405 only)		

ALSO AVAILABLE

1.00 mm, 1.35 mm, 1.85 mm, 2.40 mm,
 2.92 mm, SMPM, SMP3, SMA = RF047-A

1.85 mm, 2.40 mm, 2.92 mm,
 SMPM, SMA = RF086

2.40 mm, 2.92 mm, SMPM, SMA = RF23C

SMA = RF25S

SMA = RF405

SMP Cable Connectors

PRF00



CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF00-J-C-EE-047A-RD	Temp-Flex 1000671047
PRF00-J-C-EE-085A-SD	.086 Semi-Rigid
PRF00-PF-C-KK-047D-BD	.047 Semi-Rigid

For a complete list of SMP cable connectors, visit www.samtec.com?PRF00

J-C = Cable Jack

EE = Plating (50 µ" Gold center contact & outer contact)

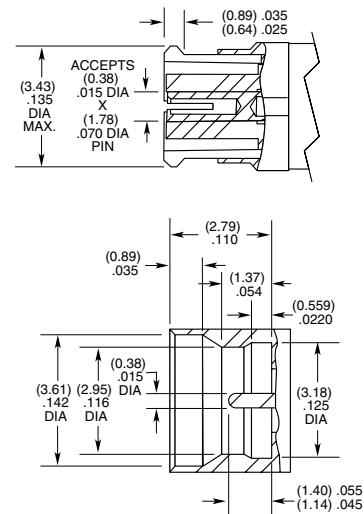
KK = Plating (100 µ" Gold over Nickel center contact, passivated outer contact)

BD = Bulkhead, Direct Solder

SD = Straight, Direct Solder

RD = Right-angle, Direct Solder

INTERFACE STANDARD (FULL DETENT)



SMP TO 40 GHz

SMP Board Connectors

SMP-TH, SMP-EM,
SMP-MT, SMP-SM

Cable Mates:

RF047-A, RF086,
RF23C, RF405, RF25S



SMP	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
-----	--------	------	---------	-------------	-------------

-PF
= Plug, Full Detent

-PL
= Plug, Limited Detent

-PS
= Plug, Smooth Bore

-PC
= Plug, Catcher's Mitt

-P
= PCB Mount

-HG
= 30 μ " (0.76 μ m)
Gold center contact,
10 μ " (0.25 μ m)
Gold outer body

-ST
= Straight

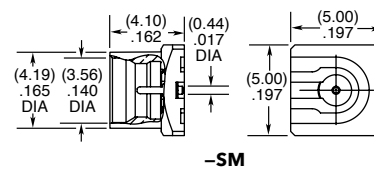
-SM
= Surface Mount

-TH"X"
= Through-hole
(Specify "X"
from chart)

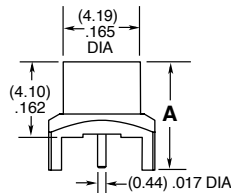
-MT"X"
= Mixed Technology
(Specify "X"
from chart)

-EM
= Edge Mount
(-PF, -PL & -PS only)

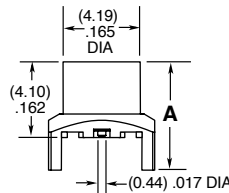
OPTION (X)	A (HEIGHT DIM.)	BOARD THICKNESS
1 (-MT only)	(5.88) .2315	(1.60 mm) .062" PCB
2 (-MT only)	(6.72) .2645	(2.36 mm) .093" PCB
3 (-TH only)	(5.88) .2315	(1.60 mm) .062" PCB
4 (-TH only)	(6.72) .2645	(2.36 mm) .093" PCB



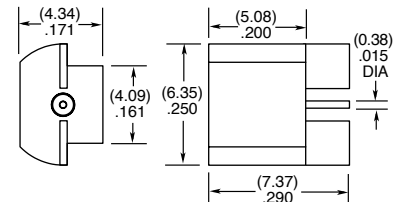
-SM



-TH(X)



-MT(X)



-EM

ALSO AVAILABLE

Low Frequency options.
Contact RFGroup@samtec.com

SMP Bullet Adaptor

SMP-B



SMP	J	TYPE	PLATING	ORIENTATION	BULLET LENGTH
-----	---	------	---------	-------------	---------------

-B
= Bullet Adaptor

-HG
= 30 μ " (0.76 μ m)
Gold center contact,
10 μ " (0.25 μ m)
Gold outer body

-ST
= Straight

-0625
= (6.25 mm) .246"

-0645
= (6.45 mm) .254"

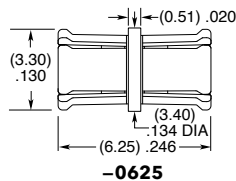
-0725
= (7.25 mm) .285"

-0825
= (8.25 mm) .325"

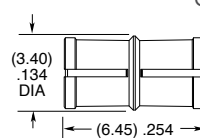
-0925
(9.25 mm) .364"

-1325
(13.25 mm) .522"

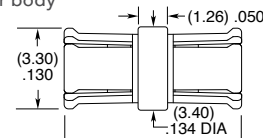
-1450
= (14.50 mm) .571"



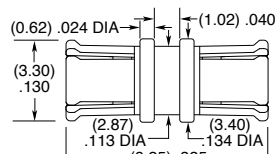
-0625



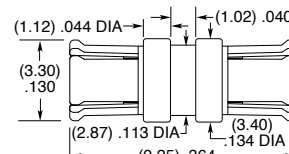
-0645



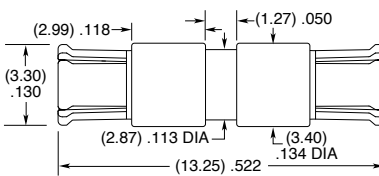
-0725



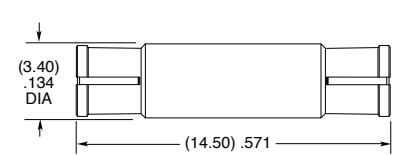
-0825



-0925



-1325



-1450

SMP3 TO 65 GHz

SMP3 Assemblies RF047-A



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
--------	-----------------	-----------------	----------------

RF047-A
= (1.2 mm) .047" overshield DIA
29 AWG millimeter wave cable

-M3RJ
= SMP3 Right-angle Jack

-"XXXX"
= Overall Length in millimeters
-0100 (100 mm) 3.94" minimum

PRELIMINARY

ALSO AVAILABLE

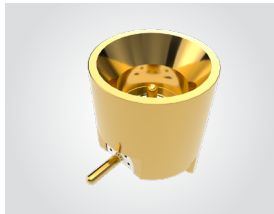
1.00 mm, 1.35 mm, 1.85 mm, 2.40 mm, 2.92 mm,
SMPM, SMP, SMA = RF047-A

VSWR

RF047-A: (DC to 65 GHz)

SMP3 Board Connectors SMP3

Cable Mates:
RF047-A



SMP3	GENDER	TYPE	PLATING	ORIENTATION	MT	OPTION	"XR"
------	--------	------	---------	-------------	----	--------	------

-PF
= Full Detent

-P
= PCB Mount

-EE
= 50 μ "
(1.27 μ m)
extra heavy
Gold center
contact and
outer body

-ST
= Straight

-K
= Polyimide film
Pick & Place Pad

Leave blank for
Tray Packaging

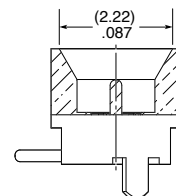
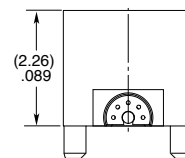
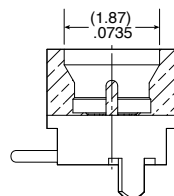
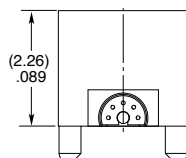
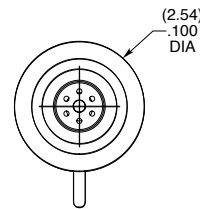
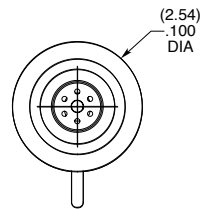
-PS
= Smooth Bore

-PC
= Catcher's
Mitt

-TR
= Tape & Reel

-FR
= Full Reel
Tape & Reel
(must order
max. quantity
per reel;
contact Samtec
for quantity
breaks)

PRELIMINARY



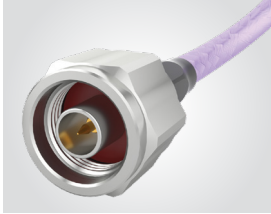
-PF & -PS SHOWN

-PC SHOWN

N TYPE TO 18 GHz

N Type Cable Assemblies

RF180, RF280



VSWR

RF 180:
1.35 max. (-06SP & -06BJ)
1.45 max. (-06RP)

RF 280:
1.35 max. (-06SP & -06BJ)
1.35 max. (DC to 14 GHz) (-06RP)
1.50 max. (14 GHz to 18 GHz)

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF180 = (4.52 mm) .178" overshield DIA, 16 AWG microwave cable	-06SP = N Type Straight Plug		-"XXXX" = Overall length in millimeters
RF280 = (7 mm) .277" overshield DIA, 11 AWG microwave cable	-06RP = N Type Right-angle Plug		-0152 (152 mm) 5.984" minimum (RF180)
	-06BJ = N Type Straight Bulkhead Jack		-0200 (200 mm) 7.87" minimum (RF280)

ALSO AVAILABLE

SMA, TNCA = RF180

SMA, TNCA = RF280

N Type Cable Connectors

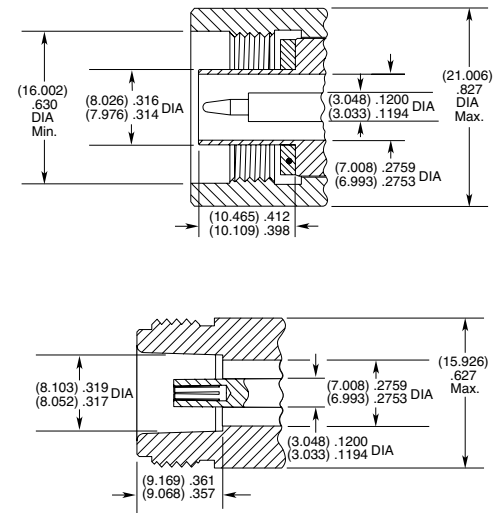
PRF06



CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF06-P-C-EP-141A-SS	Harbour SS402
PRF06-J-C-EP-142-BS	Harbour LL142
PRF06-P-C-EP-142-SS	Harbour LL142
PRF06-P-C-EP-142-RS	Harbour LL142
PRF06-P-C-EP-142A-SS	Harbour SB142
PRF06-J-C-EP-335-BS	Harbour LL335
PRF06-P-C-EP-335-SS	Harbour LL335
PRF06-P-C-EP-335-RS	Harbour LL335
PRF06-P-C-EP-335A-SS	Harbour LL335i
PRF06-P-C-EP-335A-SS	Harbour LL335i
PRF06-P-C-EP-335A-RS	Harbour LL335i
PRF06-J-C-EP-160A-BS	Harbour LL160
PRF06-P-C-EP-160A-SS	Harbour LL160
PRF06-P-C-EP-160A-RS	Harbour LL160
PRF06-P-C-EP-120A-SS	Semflex HP120
PRF06-J-C-EP-190-BS	Semflex HP190
PRF06-P-C-EP-190-SS	Semflex HP190
PRF06-P-C-EP-190-RS	Semflex HP190
PRF06-J-C-EP-290-BS	Semflex LA290
PRF06-P-C-EP-290-SS	Semflex LA290
PRF06-P-C-EP-290-RS	Semflex LA290
PRF06-P-C-EP-305-SS	Semflex HP305
PRF06-J-C-EP-402-4S	RG 402, .141, semi-rigid
PRF06-P-C-EP-300A-SS	Times Max Gain 300
PRF06-P-C-EP-180B-SS	IW 1801
PRF06-P-C-EP-135-SS	Dynawave DF440W
PRF06-P-C-EP-270A-RS	Dynawave DF218
PRF06-P-C-EP-160B-SS	ATM CF-210
PRF06-P-C-EP 135B-SS	Lab-Flex 160S
PRF06-P-C-EP-284-SS	Micro-Coax UFB311A

For a complete list of N Type cable connectors, visit www.samtec.com?PRF06

INTERFACE STANDARD

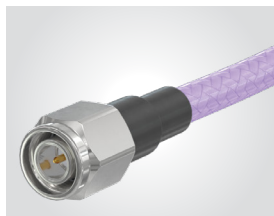


P-C = Cable Plug
J-C = Cable Jack
EP = Plating (50 μ" Gold center contact, passivated outer contact)
SS = Straight, Solder Clamp
RS = Right-angle, Solder Clamp
BS = Bulkhead, Solder Clamp
4S = 4-hole Flange, Solder Clamp

TNCA TO 18 GHz

TNCA Cable Assemblies

RF180, RF280



VSWR

RF180: 1.35 max. (-04SP & -04BJ)
1.45 max. (-04RP)
RF280: 1.35 max. (-04SP & -04BJ)

SERIES

RF180
= (4.52 mm) .178" overshield DIA,
16 AWG microwave cable

RF280
= (7 mm) .277" overshield DIA,
11 AWG microwave cable

END 1 CONNECTOR

-04SP
= TNCA Straight Plug

-04RP
= TNCA Right-angle Plug
(RF180 only)

-04BJ
= TNCA Straight Bulkhead Jack

END 2 CONNECTOR

OVERALL LENGTH

-"XXXX"
= Overall length
in millimeters

-0152 (152 mm)
5.984" minimum
(RF180)

-0200 (200 mm)
7.87" minimum
(RF280)

ALSO AVAILABLE

SMA, N Type = RF180

SMA, N Type = RF280

TNCA Cable Connectors

PRF04

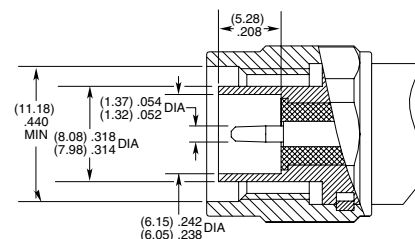
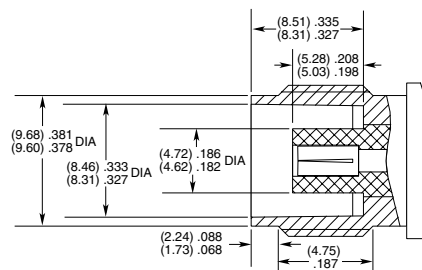


CONNECTORS FOR INDUSTRY STANDARD CABLES

PRF04-P-C-EP-142-RS	Harbour LL142
PRF04-J-C-EP-142-BS	Harbour LL142
PRF04-P-C-EP-142-SS	Harbour LL142
PRF04-P-C-EP-335-SS	Harbour LL335
PRF04-P-C-EP-290-SS	Semflex LA290
PRF04-J-C-EP-190-BS	Semflex HP190
PRF04-P-C-EP-190-RS	Semflex HP190
PRF04-P-C-EP-190-SS	Semflex HP190
PRF04-P-C-EP-335A-RS	Harbour LL335i
PRF04-J-C-EP-335A-BS	Harbour LL335i
PRF04-P-C-EP-300A-SS	Times Max Gain 300
PRF04-P-C-EP-200-SS	Times Max Gain 200
PRF04-P-C-EP-160A-SS	Harbour LL160
PRF04-J-C-EP-270A-BS	Dynawave DF218
PRF04-P-C-EP-135-SS	Dynawave DF440W
PRF04-P-C-EP-300A-SS	Times Max Gain 300
PRF04-J-C-EP-210A-BS	Micro-Coax UFA210A
PRF04-P-C-EP-210A-SS	Micro-Coax UFA210A
PRF04-P-C-EP-284-SS	Micro-Coax UFB311A
PRF04-J-C-EP-127-4S	Storm VSR150

For a complete list of TNCA cable connectors,
visit www.samtec.com?PRF04

INTERFACE STANDARD



P-C = Cable Plug
J-C = Cable Jack
EP = Plating (50 μ" Gold center contact, passivated outer contact)
SS = Straight, Solder Clamp
RS = Right-angle, Solder Clamp
BS = Bulkhead, Solder Clamp
4S = 4-Hole Flange

IN-SERIES PRECISION RF ADAPTORS

**1.85 mm, 2.40 mm, 2.92 mm
In-Series Adaptors**
PRFIA



VSWR

-185: 1.30 max.
-240: 1.20 max.
-292: 1.15 max.

PRFIA	CONNECTOR	END 1 GENDER	END 2 GENDER	ORIENTATION	1
	-185 = 1.85 mm	-P = Plug	-P = Plug (Only available with -P on end 1)	-S = Straight	Required for -292 Jack-to-Jack adaptor (PRFIA-292-J-J-S-1) Leave blank for all other part numbers.
	-240 = 2.40 mm	-J = Jack			
	-292 = 2.92 mm		-J = Jack		
	PRFIA-185-J-J-S			PRFIA-292-J-J-S-1	
	PRFIA-185-P-J-S			PRFIA-292-P-J-S	
	PRFIA-240-P-P-S			PRFIA-292-P-P-S	

**SMMP
In-Series Adaptor:**
PRFIA

Mates With:
SMMP, GPPB, GPPC



VSWR

1.15 max. (DC to 26.5 GHz)
1.35 max. (26.5 GHz to 40 GHz)
1.50 max. (40 GHz to 65 GHz)

PRFIA	SMMP	END 1 GENDER	END 2 GENDER	ORIENTATION	-S LENGTH	-SP LENGTH
		-J = Jack	-J = Jack	-S = Straight -SP = Spring Loaded	Use with -S orientation	Use with -SP orientation
					-1 = (5.33 mm) .210"	-1 = (10.45 mm) .412" max. extension; (9.65 mm) .380" max. compression
					-2 = (8.31 mm) .327"	-2 = (16.50 mm) .650" max. extension; (13.96 mm) .550" max. compression
					-3 = (12.70 mm) .500"	-3 = (16.50 mm) .650" max. extension; (13.96 mm) .550" max. compression
					-4 = (4.22 mm) .166"	-4 = (4.22 mm) .166"
		-S-1 SHOWN	-S-2 SHOWN			
		-S-3 SHOWN	-S-4 SHOWN			
		-SP-1 SHOWN (COMPRESSED)	-SP-2 SHOWN (COMPRESSED)			

BETWEEN-SERIES PRECISION RF ADAPTORS

1.00 mm to 1.85 mm Adaptors

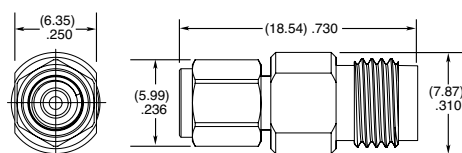
PRFBA



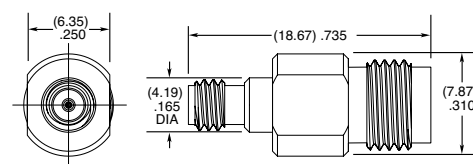
PRFBA	CONNECTOR	END 1 GENDER	CONNECTOR	END 2 GENDER	ORIENTATION
	-100 = 1.00 mm	-P = Plug -J = Jack	-185 = 1.85 mm	-P = Plug -J = Jack	-S = Straight

VSWR

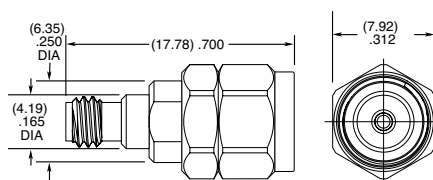
1.12 max. (DC to 26.5 GHz)
1.25 max. (26.5 GHz to 40 GHz)
1.30 max. (40 GHz to 50 GHz)
1.35 max. (50 GHz to 67 GHz)



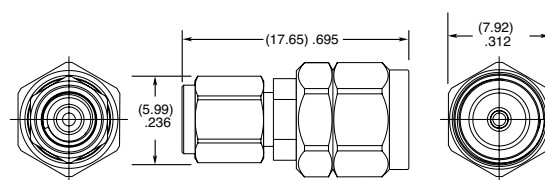
PRFBA-100-P-185-J-S



PRFBA-100-J-185-J-S



PRFBA-100-J-185-P-S



PRFBA-100-P-185-P-S

2.92 mm to SMPM Adaptors

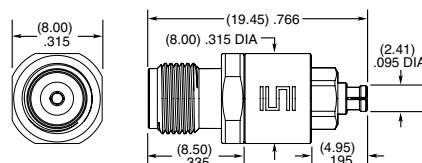
PRFBA



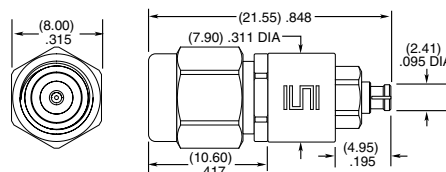
VSWR

1.30 max. (DC to 40 GHz)

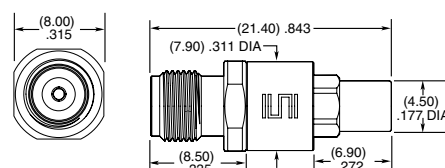
PRFBA	CONNECTOR	END 1 GENDER	CONNECTOR	END 2 GENDER	ORIENTATION	1
	-292 = 2.92 mm	-P = Plug -J = Jack	-SMPM	-J = Jack -PF = Plug Full Detent	-S = Straight	Required for Jack-to-Jack adaptor (PRFBA-292-J-SMPM-J-S-1) Leave blank for all other part numbers.



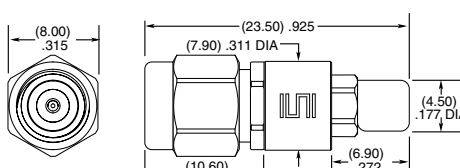
PRFBA-292-J-SMPM-J-S-1



PRFBA-292-P-SMPM-J-S



PRFBA-292-J-SMPM-PF-S



PRFBA-292-P-SMPM-PF-S

ORIGINAL SOLUTIONS PRECISION RF

PRECISION ALIGNMENT FEATURES

- Eliminates misalignment that can occur during board assembly
- Ensures repeatable peak connector performance
- Available on 100, 135, 185, 240, 292 & GPPC-CMM Series

DC TO
130
GHz

DIFFERENTIAL PAIR TEST & MEASUREMENT

- Two-port SMPM ganged solution (GPPC-CMM Series)
- Solderless compression mount design
- Saves board real estate (2x the spacing savings)
- Cable-to-board or board-to-board

DC TO
65
GHz

RIGHT-ANGLE, LOW PROFILE, GANGED SMPM

- Extremely low profile, high-density, right-angle connector (GPPC-RA-SM Series)
- Belly-to-belly, surface mount PCB connection for maximum density
- Body height: 3.94 mm (.155")

DC TO
65
GHz

COUNTERWEIGHT SOLUTIONS

- Enables efficient board assembly (eliminates hand soldering)
- Balanced for automated, high-volume pick-and-place automation
- Edge mount SMA (26.5 GHz) or 2.92 mm (40 GHz)

DC TO
40
GHz

ANALOG OVER ARRAY™ CONNECTORS

- Enhanced open-pin-field arrays simultaneously run analog, digital, and power signals
- Reference designs and evaluation kits
- Industry-leading crosstalk and return loss performance

DC TO
36
GHz

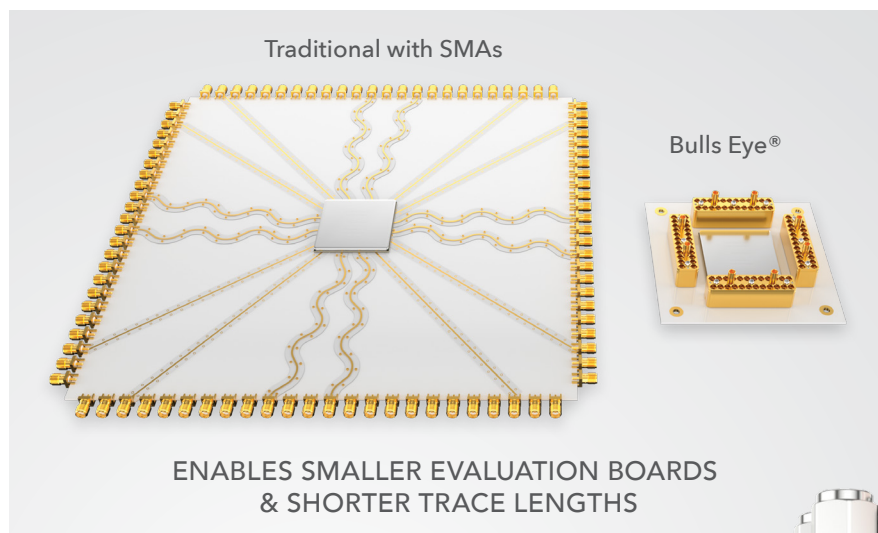


SERIES	100/135/185/240/292/GPPC	GPPC-CMM	GPPC-RA-SM	RSP (SMA/2.92 mm)	ANALOG OVER ARRAY™
Application	Precision Alignment	Differential Pair Testing	Extremely Low Profile	Balanced Edge Mount	Analog, Digital & Power
URL	samtec.com/alignment	samtec.com?GPPC-CMM	samtec.com?GPPC-RA-SM	Contact: RFGroup@samtec.com	samtec.com/AOA

PRODUCT FAMILY	BULLS EYE®	RUGGED BLIND MATE	URSA™ I/O	MAGNUM RF®
URL	samtec.com/BullsEye	samtec.com/blindmate	samtec.com/URSA	samtec.com/magnumRF

TEST & MEASUREMENT

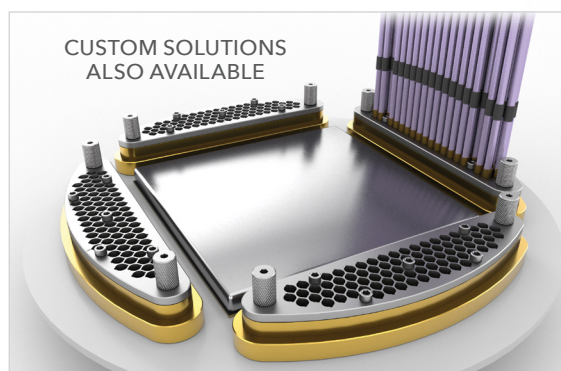
OPTIMIZED PERFORMANCE TO 130 GHz **BULLSEYE®**
TEST POINT SYSTEM



Bulls Eye® High-Performance Test

The Bulls Eye® high-performance test assembly features a high-density, space-saving design that enables smaller evaluation boards and shorter trace lengths in test and measurement applications to 130 GHz.

- Compression mounts to the board for placement directly adjacent to the SerDes being characterized
- Solderless design improves cost and is easy to use within a lab setting
- Microwave cable assemblies: .047" and .086", and Nitrowave® phase and amplitude stable in distinctive Samtec orange
- End 2 connection to instrumentation: 1.00 mm, 1.35 mm, 1.85 mm, 2.40 mm or 2.92 mm
- High-density, space-saving design
- Single row or double row
- Applications: High-speed digital test, SerDes characterization, ATE, high-density multi-port panel and I/O connections including Quantum Computing racks, or high-density cable-to-board

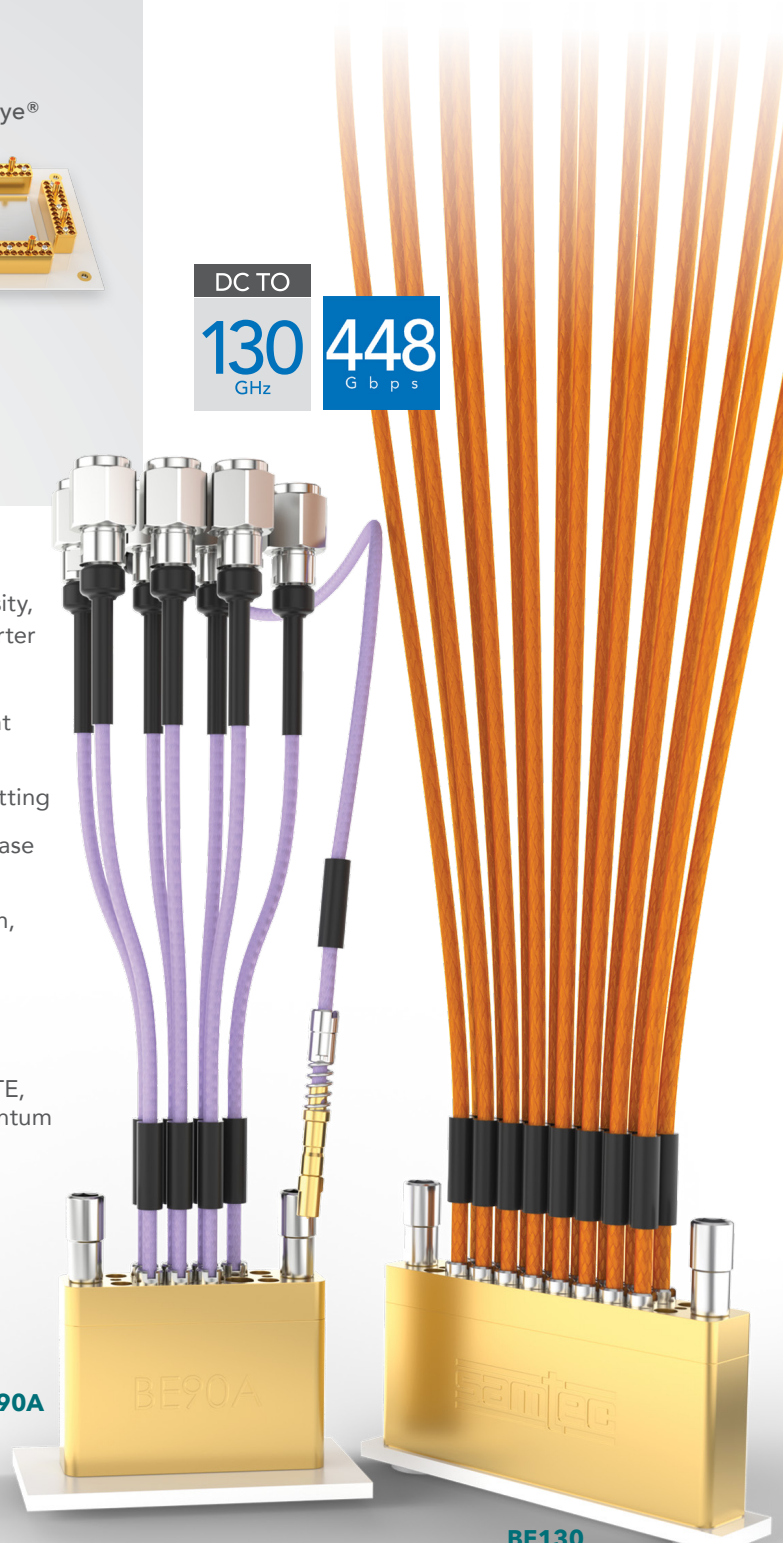


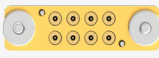
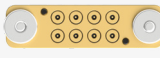
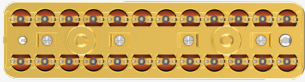
DC TO
130
GHz

448
Gbps

BE90A

BE130



ASSEMBLY	130 GHz	90 GHz	71 GHz	70 GHz	50 GHz	40 GHz
Block Bottom View						
SerDes Characterization	448 Gbps PAM4	448/224 Gbps PAM4	224 Gbps PAM4	112 Gbps PAM4	56 Gbps PAM4	
Phase Matching	0.5 (half) ps	1, 2 or 5 ps	0.5 (half), 1, 2 or 5 ps	2 or 5 ps	2 or 5 ps	
End 2 Connector	1.00 mm	1.00 mm; 1.35 mm	1.85 mm	1.85 mm	2.40 mm	2.92 mm
Cable Type	High-Performance Nitrowave®	.047	High-Performance Nitrowave®	.086	MWC-2350CU-01	
PCB Transition	Microstrip/CPW or Stripline					
Bulls Eye® Connector Design	Spring-Loaded Contact; 360° Grounding				Pogo-Pin for Signal & Ground	
Number of Rows/Positions	1x: 2, 4, 8, 12 2x: 4, 8, 12, 16		2x: 4, 8	1x: 2, 4, 8, 12 2x: 3, 4, 6, 8, 10, 12, 14, 16		2x: 3, 4, 6, 8, 10, 12, 14, 16
Impedance	50 Ω					
Series	BE130	BE90A	BE71A	BE70A	BE40A	

130 GHz ASSEMBLIES WITH NITROWAVE[®] CABLE

BE130	TRANSMISSION TYPE	END 2	PHASE MATCH (RANGE)	2	POSITIONS PER ROW	OVERALL LENGTH
	-S = Stripline -M = Microstrip	-10SP = 1.00 mm Straight Plug	-1 = 1.0 Pico-second -2 = 2.0 Pico-seconds -5 = 5.0 Pico-seconds -N = No Phase Matching		-04, -08, -12, -16	-"XXXX" = Overall length in millimeters -0070 (070 mm) 3.0315" minimum

DC TO

130

GHz

-

448

Gbps

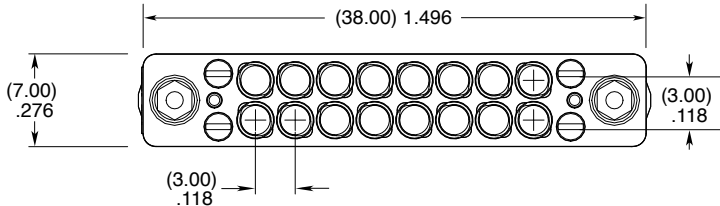
BE130

End 2 Connectors:

1.00 mm (130 GHz)



PRELIMINARY



Footprint

8 POSITIONS PER ROW SHOWN

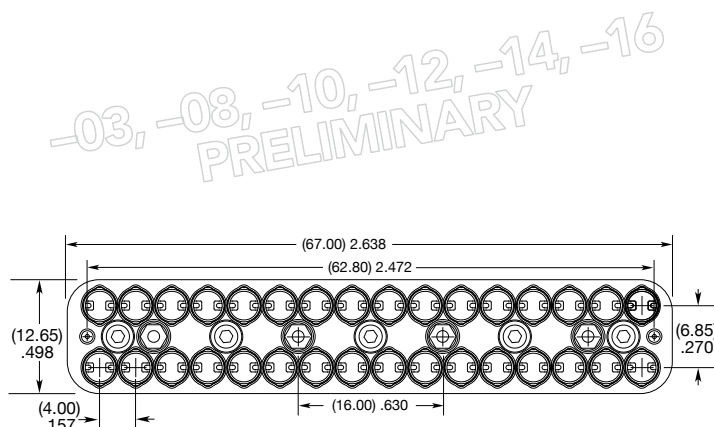
71 GHz ASSEMBLIES WITH NITROWAVE® CABLE

BE71A	TRANSMISSION TYPE	END 2	PHASE MATCH (RANGE)	PHASE MATCH (LOCATION)	2	POSITIONS PER ROW	OVERALL LENGTH
	-S = Stripline -M = Microstrip	-18SP = 1.85 mm Straight Plug -18BJ = 1.85 mm Straight Jack	-H = 0.5 Pico-second -1 = 1.0 Pico-second -2 = 2.0 Pico-seconds -5 = 5.0 Pico-seconds -N = No Phase Matching	-R = In-row -A = Across-row		-03, -04, -06, -08, -10, -12, -14, -16	"XXXX" = Overall length in millimeters -0152 (152 mm) 5.984" minimum

DC TO
71
GHz

PAM 4
224
Gbps

BE71A
End 2 Connectors:
1.85 mm

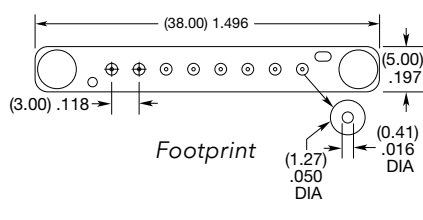


16 POSITIONS PER ROW SHOWN

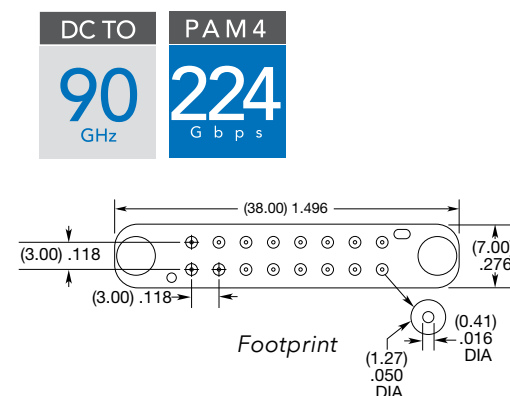
90 GHz ASSEMBLIES

BE90A	TRANSMISSION TYPE	END 2	PHASE MATCHING	ROW OPTION	POSITIONS PER ROW	OVERALL LENGTH
	-S = Stripline -M = Microstrip	-10BJ = 1.00 mm Straight Jack -10SP = 1.00 mm Straight Plug -13BJ = 1.35 mm Straight Jack -13SP = 1.35 mm Straight Plug	-1 = 1.0 Pico-second -2 = 2.0 Pico-seconds -5 = 5.0 Pico-seconds -N = No Phase Matching	-1 = Single Row (-02, -04, -08 & -12 positions only) -2 = Double Row (-04, -08, -12 & -16 positions only)	-02, -04, -08, -12, -16	"XXXX" = Overall length in millimeters -0152 (152 mm) 5.984" minimum (Single Row) -0100 (100 mm) 3.937" minimum (Double Row)

BE90A
End 2 Connectors:
1.00 mm, 1.35 mm



8 POSITIONS PER ROW -1 SHOWN

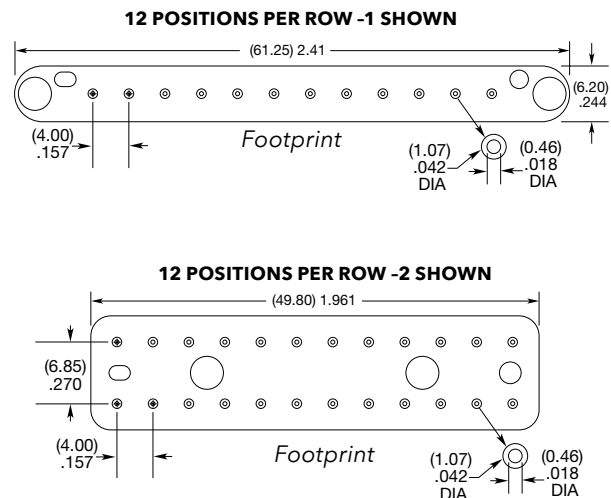


8 POSITIONS PER ROW -2 SHOWN

70 GHz ASSEMBLIES

BE70A	TRANSMISSION TYPE	END 2	PHASE MATCHING	ROW OPTION	POSITIONS PER ROW	OVERALL LENGTH
	-S = Stripline -M = Microstrip	-18SJ = 1.85 mm Straight Jack -18SP = 1.85 mm Straight Plug	-2 = 2.0 Pico-seconds -5 = 5.0 Pico-seconds -N = No Phase Matching	-1 = Single Row (-02, -04, -08 & -12 positions only) -2 = Double Row (-03 through -16 positions only)	-02, -03, -04, -06, -08, -10, -12, -14, -16	"XXXX" = Overall length in millimeters -0152 (152 mm) 5.984" minimum
DC TO	PAM 4					
70 GHz	112 Gbps					

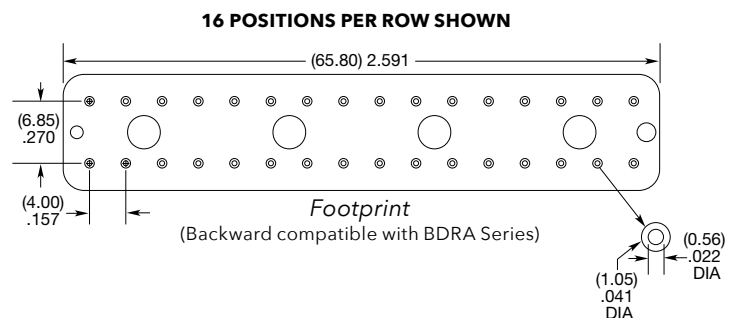
BE70A
End 2 Connectors:
1.85 mm (70 GHz)



50 GHz & 40 GHz ASSEMBLIES

BE40A	TRANSMISSION TYPE	END 2	PHASE MATCHING	2	POSITIONS PER ROW	OVERALL LENGTH
	-S = Stripline -M = Microstrip	-92SJ = 40 GHz, 2.92 mm Straight Jack -24SJ = 50 GHz, 2.40 mm Straight Jack -92SP = 40 GHz, 2.92 mm Straight Plug -24SP = 50 GHz, 2.40 mm Straight Plug	-2 = 2.0 Pico-seconds -5 = 5.0 Pico-seconds -N = No Phase Matching		-03, -04, -06, -08, -10, -12, -14, -16	"XXXX" = Overall length in millimeters -0152 (152 mm) 5.984" minimum
DC TO	PAM 4					
50 GHz	56 Gbps					

BE40A
End 2 Connectors:
2.40 mm (50 GHz)
2.92 mm (40 GHz)



RUGGED, BLIND MATE MODULES & CONTACTS

MODULAR, CONFIGURABLE SOLUTIONS

Samtec offers a flexible blind-mate module solution for RF and optical that is ideal for rugged applications. Choose from numerous options to create a customized module that meets the needs of your application. These pages highlight a few of the many options available; contact the RFGroup@samtec.com for more options or information.

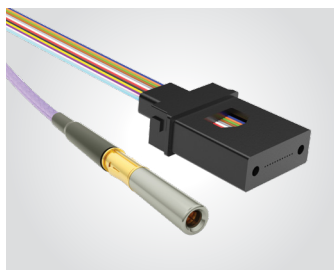
STEPS FOR BUILDING A SOLUTION



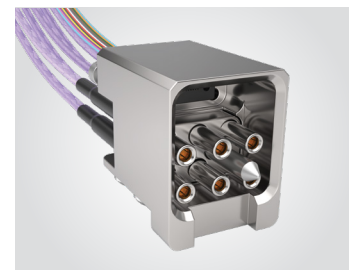
1. Choose Block



2. Choose Contact



3. Choose Cable Option
(RF/Optical)



4. Finished Solution

VITA™ 90 VNX™ BLOCK OPTIONS

A variety of slot profiles available to support a range of VNX+™ configurations and applications requiring RF, video or high-sensitivity sensor connectivity. Samtec models fill a variety of needs.

PAM 4
56
Gbps

DC TO
110
GHz



Part Numbers	Type A	Type B	Type C	Type D	Type E	Type F	Type G
Plug-In Module Connector							
Block	RSP-239120-01	ASP-223034-01	RSP-224882-01	RSP-233089-01	RSP-233410-01	RSP-233193-01	RSP-244881-01
Mating Backplane Connector							
Block	RSP-222466-01	ASP-223035-01	RSP-224881-01	RSP-233088-01	RSP-233409-01	RSP-233192-01	RSP-244880-01
Contacts	(4) GPCC-16, (16) GPCC-20***	N/A	(6) GPCC-20***	(8) GPCC-16	(6) GPCC-16	(10) GPCC-20***	(24) GPCC-20***
Optics Slot	(2) MT Ferrules**	(2) MT Ferrules**	(1) MT Ferrule**	N/A	(1) MT Ferrule**	N/A	N/A

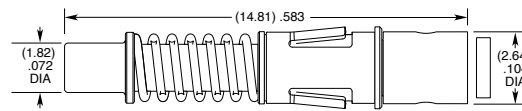
**Pluggable with Samtec's FireFly™ or FireHawk™ assemblies using an MT ferrule on End 2

***Size 20 contacts (GPCC-20) are available with RF047-A millimeter wave cable for a full assembly

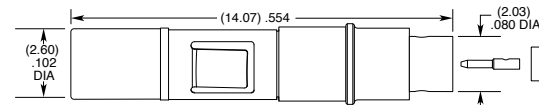
Note:
VITA/VNX/VNX+/FMC/FMC+/
XMC/XMC+/QMC are all respective
trademarks of VITA

SIZE 16 & SIZE 20 CONTACT OPTIONS

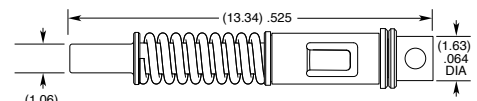
GPCC	SIZE	SERIES	GENDER	TYPE	PLATING	CABLE CALLOUT	ORIENTATION	OPTION
	-16 = Size 16	-N = Size 16 only	-P = Pin	-C = Cable	GG = 10 μ " (0.25 μ m) Gold center contact, 10 μ " (0.25 μ m) Gold outer body	-086F = CCA-086F-PTFE, 75 Ω (Size 16, pin only)	-SD = Direct Solder	-1 -2 (Socket, Size 20 only)
	-20 = Size 20	-V = Size 20 only	-S = Socket			-047J = CCA-047J-PTFE, 75 Ω (Size 16, socket only)		
						-047A = CCA-047-PFA, 50 Ω (Size 20 only)		



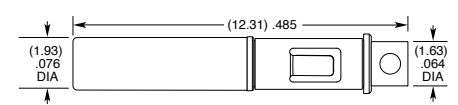
-16 PIN



-16 SOCKET



-20 PIN

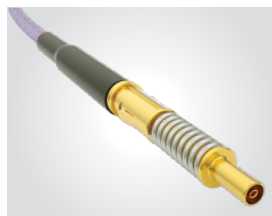


-20 SOCKET

CABLE ASSEMBLY OPTIONS

View complete specifications at: samtec.com?GPCC-16 or samtec.com?GPCC-20

RF047-A	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
---------	-----------------	-----------------	----------------



-MTSJ
= Threaded SMPM Jack

-M0SJ
= SMPM Jack

-20VP
= Size 20 Pin

-20VS
= Size 20 Socket

-"XXXX"
= Overall Length in millimeters
-0100 (100 mm) 3.94" minimum

COMING SOON

Nano RF connector compliant to VITA™ 67.3 standard & speeds
Contact RFGroup@samtec.com

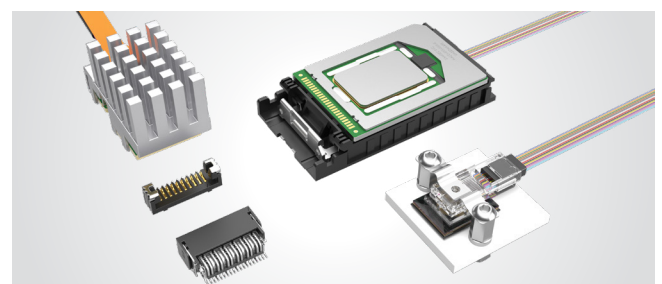
ALSO AVAILABLE

1.00 mm, 1.35 mm, 1.85 mm, 2.40 mm, 2.92 mm, SMA

OPTICAL OPTIONS

View complete specifications at: samtec.com?RF047-A

Samtec's rugged mid-board optical transceivers are available with industry standard MT ferrule end options: FireFly™, FireHawk™ and Halo®. Contact RFGroup@samtec.com for assistance with this solution.



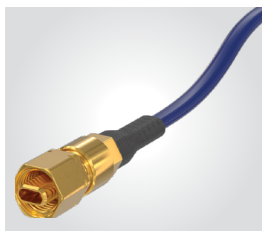
NEXT GEN FLEXIBLE WAVEGUIDE

HIGH FREQUENCY • FLEXIBLE CABLE • SMALL FORM FACTOR • LOW LOSS

Samtec's new, high frequency micro waveguide technology is designed to support the demands of next generation millimeter wave systems. It uses a cable design allowing flexibility and a reduced size, and supports frequencies up to 75 GHz (V-band), but with a loss performance greatly improved over coaxial cables.

V-BAND CABLE

V-Band Cable Assemblies WF15



SERIES	CORE TYPE	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
WF15 = 50-75 GHz	-S = Solid	-75TP = 75 GHz Threaded Plug	-75TP = 75 GHz Threaded Plug	-“XXXX” = Overall Length in millimeters -0102 (102 mm) 4.016" min.

XXXX = OAL (millimeters)

ADAPTORS

V-Band Adaptors WGBA



WGBA	SERIES	END 1 SERIES	END 2 SERIES	GENDER	ORIENTATION
	-BA = Between Series Adaptor	-385 = UG385/U	-75T = 50 to 75 GHz Threaded Waveguide	-J = Jack	-S = Straight

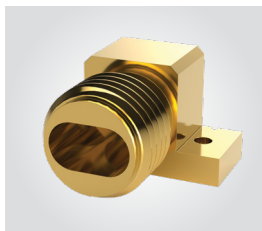
#4-40 UNC-2B
C' Bore DIA .140 X .030 Deep
4 Holes Equally Spaced

Top View Dimensions: 45° TYP, (19.05) .750 DIA, (1.88) .074, (14.29) .5625 DIA, (1.70) .067 DIA, (3.76) .148

Side View Dimensions: (6.00) .236, (0.76) .030, (3.96) .156, (1.56) .0615 DIA, (3.30) .130, M7 X 0.75-6G Thread

BOARD CONNECTORS

V-Band Board Connectors 75T



SERIES	GENDER	TYPE	PLATING OPTION	ORIENTATION	TERMINATION
75T = 50 to 75 GHz Threaded Waveguide	-J = Jack	-P = PCB	-EE = 50 μ " (1.27 μ m) Extra Heavy Gold center contact and outer body	-RA = Right-angle	-CM = Compression mount stripline

Side View Dimensions: (5.00) .197, (11.99) .472, (8.20) .323, (0.88) .035 DIA, (3.41) .134 DIA, (5.84) .230, 2 X 0-80 UNF-2B THRU

Top View Dimensions: (11.00) .433, (6.35) .250, (7.42) .292, (1.87) .074

LOW FREQUENCY CABLE SPECIFICATIONS



STANDARD OFF-THE-SHELF ASSEMBLIES

SERIES	MH081	MH113	RF178	RF174	IJ5C [†] (IsoRate®)	RF316, IJ5C, IJ5H, GRF1-C, GRF1H-C	RS316	RF058	RF179, GRF7-C, GRF7H-C	RFB8T	RFC8T	RFB6T	RFC6T	RFA6T	C28S		
TYPE	50 Ω CABLES								75 Ω CABLES						100 Ω CABLES		
	0.81 mm (34 AWG)	1.13 mm (31 AWG)	RG 178 (28 AWG)	RG 174 (24 AWG)	Samtec 26 AWG, high-temp micro coax	RG 316 (24 AWG)	RG 316, double shielded (24 AWG)	RG 58 (20 AWG)	RG 179 (28 AWG)	Belden 1855A (23 AWG)	12G-SDI, Belden 4855R (23 AWG)	Belden 1694A (18 AWG)	12G- SDI, Belden 4694R (18 AWG)	RG 6 (18 AWG)	Samtec 28 AWG, shielded twisted pair		
ELECTRICAL																	
Impedence	Ω	50 ± 3	50 ± 2		50 ± 5	50 ± 2		50 ± 3		75 ± 3						100 ± 5	
Insertion Loss (dB/m)	100 MHz	1.00	0.60	0.50	0.40	0.68	0.30	1.40 @ 2 GHz	0.20	0.30	0.12		0.07	0.06	0.07	-----	
	1 GHz	3.10	1.90	1.70	1.40	2.37	1.25	1.60 @ 3 GHz	0.80	0.80	0.37	0.36	0.21	0.19	0.21	-----	
	6 GHz	8.60	4.90	5.90	4.40	6.53	4.25	2.20 @ 5 GHz	5.40	3.60	0.97	0.91	0.59	0.51	0.59	-----	
Propagation Delay	nS/m	4.70	4.70	4.83	5.06	4.17	4.83	-----	5.05	4.83	4.12	4.06		3.92	4.03	-----	
Current Rating	Amps	1.20	2.10	3.00	5.00	3.00	5.00	-----		3.00	5.00	4.70	-----	16.00	-----		
Capacitance	pF/m	100.00	95.00	96.00	101.00	85.60	96.00	95.80	102.00	64.00	55.70	53.40	53.14	52.20	53.14	38.00	
CONSTRUCTION																	
Center Conductor	Material	Silver Plated Copper		Silver Plated Copper Clad Steel	Bare Copper	Silver Plated Copper	Silver and Copper Plated Steel	Silver Plated Copper Clad Steel	Tinned Copper	Silver Plated Copper	Bare Copper	Silver Plated Copper	Bare Copper	Silver Plated Copper	Bare Copper	Silver Plated Copper	
	AWG	34	31	28	24	26	24		20	28	23		18			28	
Dielectric	Material	FEP		PTFE	KLPE	Foamed FEP	PTFE	FEP	Solid Polyethylene	PTFE	FHDPE	PE (Foam)	FHDPE	PE (Foam)	FHDPE	FEP	
Shield	Material	Silver Plated Copper	Tinned Copper	Silver Plated Copper	Tinned Copper	Silver Plated Copper			Tinned Copper	Silver Plated Copper	1. Al Foil-Polyester Tape-Al Foil 2. Tinned Copper		1. Bonded Al Foil 2. Al Wire		1. Al Foil-Polyester Tape-Al Foil 2. Tinned Copper		Silver Plated Copper
Jacket	Material	PFA	FEP		PVC	FEP			PVC	FEP	PVC						
MECHANICAL																	
Operating Temp		-40 °C to +90 °C		-50 °C to +165 °C	-20 °C to +80 °C	-40 °C to +200 °C	-55 °C to +165 °C		-50 °C to +90 °C	-50 °C to +165 °C	-30 °C to +75 °C		-20 °C to +75 °C	-30 °C to +75 °C	-20 °C to +105 °C		
Bend Radius	Min	5.00 mm	6.80 mm	10.20 mm	25.40 mm	3.18 mm	12.80 mm	12.80 mm	49.50 mm	10.20 mm	38.10 mm	41.00 mm	69.85 mm	70.00 mm	69.85 mm	19.05 mm	
Connector Options		MHF1, MHF3, MHF4	MHF1, SMA	MMCX, MCX, SMA, SMB, BNC, TNC, N Type	MMCX, MMCXV, MCX, SMA, SMB, BNC, TNC, N Type, Ganged	IsoRate®	MMCX, MMCXV, MCX, SMA, SMB, BNC, TNC, N Type, Ganged	MMCX, MCX, SMA, BNC, TNC	SMA, TNC, N Type	MCX, MMCX7, SMB, BNC, DIN 1.0/2.3, Ganged	HD-BNC, DIN 1.0/2.3		BNC, HD-BNC, DIN 1.0/2.3			CJT	

[†] ALSO USES RG 316

RUGGED U.FL / MHF® 1 SOLUTIONS

FEATURES

- Extended ferrule length provides a metalized strain relief for increased durability
- 500 mating cycles
- Mixed technology PCB connector for improved durability, prevents shearing (RSP-237256-XX)
- Intermateable with industry standard U.FL/MHF® 1 board connectors (RSP-122811-01)
- 50 Ohm impedance
- Frequency: DC to 10 GHz
- .047" low-loss flexible cable, 29 AWG (RF047-A)
- Mated height (with right-angle cable connector):
 - 4 mm max. (-11RP9 HMHF1 + RSP-122811-01)
 - 4.75 mm max. (-11RP9 HMHF1 + RSP-237256-XX)
- Visit samtec.com/rugged-ufl or contact RFGroup@samtec.com for more information

Extended ferrule protects solder joint for a rugged, durable connection

500 mating cycles

MATED HEIGHTS

Max 4.75 mm

Max 4 mm

50 Ω U.FL/MHF® 1 RF CABLE TO 10 GHZ

MHF® is a registered trademark of I-PEX® Inc.

SERIES

RF047-A

= (1.2 mm) .047" overshield DIA
29 AWG millimeter wave cable

END 1 CONNECTOR

Specify END OPTION from chart

END 2 CONNECTOR

OVERALL LENGTH

—"XXXX"

= Overall Length in millimeters

~0100 (100 mm) 3.94" minimum

U.FL/MHF® 1 Cable Assemblies

RF047-A



STRIPPED & TINNED (Dimensions in mm)

CALLOUT	A	B	C
-303030	3.0	3.0	3.0
-303040	3.0	3.0	4.0
-403030	4.0	3.0	3.0
-403040	4.0	3.0	4.0
-404040	4.0	4.0	4.0

Both center conductor and braid shield are stripped, only the center conductor is tinned.

RELATED SOLUTIONS

Micro High Frequency (MHF® 1) to 6 GHz

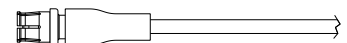
- On 0.81 mm cable (MH081 Series)

- On 1.13 mm cable (MH113 Series)

END OPTIONS

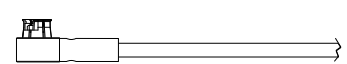
-11SP9 = HMHF1

U.FL/MHF® 1 Straight Plug



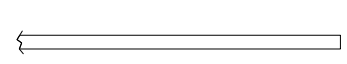
-11RP9 = HMHF1

U.FL/MHF® 1 Right-Angle Plug,
Metal Strain Relief



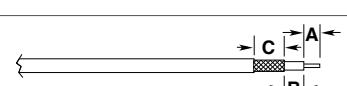
-SING =

Single Ended
(End 2 Callout)



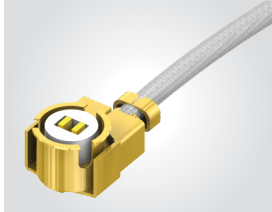
-XXXXXX =

Stripped & Tinned
(End 2 Callout)



50 Ω MICRO HIGH FREQUENCY RF CABLES TO 6 GHz

MHF® Cable Assemblies MH081, MH113



SPECIFICATIONS

Outer Contact Material:
Au plated Phosphor Bronze
Center Contact Material:
Au plated Phosphor Bronze (MHX)
Insulator Material:
PBT (MHX)
PTFE (SMA)
Operating Temperature:
-40 °C to +90 °C
Voltage Rating:
170 V max
Dielectric Withstanding Voltage:
200 Vrms

0.81 mm Cable:

Capacitance:
100 pF/meter
Max Attenuation (cable only):
3.1 dB @ 1 GHz
Conductor Size:
36 AWG, (0.81 mm) .032" dia.
Conductor Material:
Silver Plated Copper
Conductor Resistance:
1.40 Ω/meter max
Insulator Diameter:
(0.4 mm) .016"
Insulator Material: FEP
Shield Material:
Silver Plated Copper
Jacket Material: PFA
Jacket Diameter:
(0.81 mm) .032" dia.
Bend Radius: 5.0 mm
Jacket Temp Rating:
-40 °C to +90 °C

1.13 mm Cable:

Capacitance:
95 pF/meter
Max Attenuation (cable only):
2 dB @ 1 GHz
Conductor Size:
32 AWG, (1.13 mm) .045" dia.
Conductor Material:
Silver Plated Copper
Conductor Resistance:
0.60 Ω/meter max
Insulator Diameter:
(0.66 mm) .026"
Insulator Material:
FEP
Shield Material:
Tinned Copper
Jacket Material:
FEP
Jacket Diameter:
(1.13 mm) .045" dia.
Bend Radius:
6.8 mm
Jacket Temp Rating:
-40 °C to +90 °C

SERIES

MH081
= 0.81 mm Cable
MH113
= 1.13 mm Cable

END 1 CONNECTOR

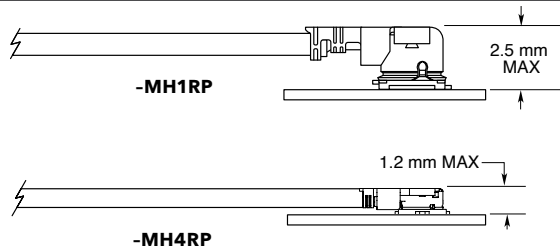
Specify END OPTIONS from chart

END 2 CONNECTOR

OVERALL LENGTH

-0030
= 1.18" (30 mm)
-0050
= 1.97" (50 mm)
-0100
= 3.94" (100 mm)
-0150
= 5.91" (150 mm)
-0300
= 11.81" (300 mm)

APPLICATION

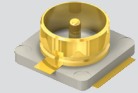


EXTRACTION TOOLS

MH1RP = RSP-122893-01
MH4RP = RSP-122893-03

MATING SOLUTIONS

MH1RP end mates with RSP-122811-01 (Cycles: 30 max.)



MH4RP end mates with RSP-122811-03



MHF® is a registered trademark of I-PEX® Inc.

END OPTIONS

-MH1RP = MHF1 Type Plug (3.9 μ" (0.1 μm) Gold on Center Contact, 1.9 μ" (0.05 μm) Gold on Shell)	
-MH4RP = MHF4 Type Plug (10 μ" (0.25 μm) Gold on Center Contact, 1.9 μ" (0.05 μm) Gold on Shell) (MH4RP is not available with MH1RP & MH3RP) (MH081 only)	
-01BJ1 = SMA Straight Bulkhead Jack (MH081 only) -01BJ2 = SMA Straight Bulkhead Jack, Reversed Polarity -01SB1 = SMA Straight Jack, Sealed Bulkhead -01SR1 = SMA Straight Jack, Sealed Bulkhead, Reversed Polarity (30 μ" (0.76 μm) Gold on Center Contact, Gold Flash on Shell)	
-SING = Single Ended (End 2 callout)	
XXXXXX = Stripped & Tinned (End 2 callout)	

STRIPPED & TINNED (Dimensions in mm)

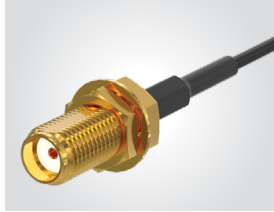
CALLOUT	A	B	C
-303030	3.0	3.0	3.0
-303040	3.0	3.0	4.0
-403030	4.0	3.0	3.0
-403040	4.0	3.0	4.0
-404040	4.0	4.0	4.0

Both center conductor and braid shield are stripped, only the center conductor is tinned.

50 Ω SMA TO 6 GHz

SMA Cable Assemblies

RF174, RF178, RF316, RS316, RF058



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF174 = RG 174 Cable	-01SP1 = SMA Straight Plug		-“XXXX” = Overall Length in millimeters
RF178 = RG 178 Cable (-01BJ1 & -01BR1 only)	-01RP1 = SMA Right-angle Plug		-0100 (100 mm) 3.94" minimum
RF316 = RG 316 Cable, Single Braid Shield	-01BJ1 = SMA Straight Bulkhead Jack		
RS316 = RG 316 Cable, Double Shield (-01SP1 & -01BJ1 only)	-01SB1 = Straight Bulkhead Jack, Sealed		
RF058 = RG 58 Cable (-01SP1, -01BJ1 & -01SB1 only)	-01SR1 = Straight Bulkhead Jack, Sealed, Reversed Polarity		
	-01BR1 = Straight Bulkhead Jack, Reversed Polarity		
	-01PN1 = 4-Hole Panel Mount Jack		

ALSO AVAILABLE

50 Ω: MCX, MMCX, SMB, BNC, TNC,
N Type = RF174, RF178, RF316

50 Ω: MCX, MMCX, BNC, TNC = RS316

50 Ω: TNC = RF058

SMA Cable Connectors

SMA-CA



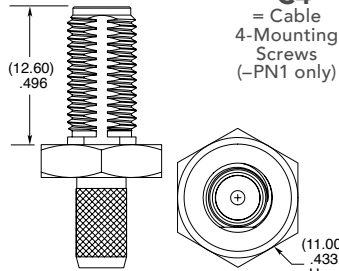
Supplied with pins, washers, nuts and ferrules. See website for dimensions.

SMA	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	PACKAGING	
	-J = Jack	-C = Cable -C4 = Cable 4-Mounting Screws (-PN1 only)	-H = 30 μ" (0.76 μm) Gold center contact, 3 μ" (0.08 μm) Gold outer contact (N/A with -BH1S)	-ST = Straight	-BH1 = Bulkhead RG 174 / 316 Cable -BH2 = Bulkhead RG 178 Cable -BR1 = Bulkhead RG 174 / 316, Reversed Polarity -BR2 = Bulkhead RG 178 Cable, Reversed Polarity	-BH1S = Bulkhead RG 316 Cable, Double Shield -B10 = Bulkhead RG 58 Cable -PN1 = 4-Hole Panel Mount RG 174 / 316 Cable -S10 = Sealed Bulkhead RG 58 Cable	Leave blank for individually bagged. -B = Bulk packaged (-BH1 only)

12.60
.496

(11.00)
.433
Hex.

-S10, -B10



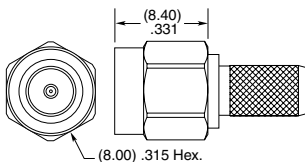
-S10, -B10



SMA Board Connectors

See page 19 for Board Connectors

SMA	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	PACKAGING
	-P = Plug	-C = Cable	-H = 30 μ" (0.76 μm) Gold center contact, 3 μ" (0.08 μm) Gold outer contact (-CA1, -C10 only)	-ST = Straight -RA = Right-angle	-CA1 = RG 174 / 316 Cable -C10 = RG 58 Cable (-ST only) -CA1S = RG 316 Double Shielded Cable (-ST only)	Leave blank for individually bagged. -B = Bulk packaged (-CA1 only)



-ST-C10

Supplied with pins, washers, nuts and ferrules. See website for dimensions.

50 Ω MCX TO 6 GHz

MCX Cable Assemblies

RF174, RF178, RF316, RS316



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF174 = RG 174 Cable	-02SJ1 = MCX Straight Jack		-“XXXX” = Overall Length in millimeters
RF178 = RG 178 Cable	-02RP1 = MCX Right-angle Plug (RS316 not available)		-0100 (100 mm) 3.94" minimum
RF316 = RG 316 Cable, Single Braid Shield	-02SP1 = MCX Straight Plug		
RS316 = RG 316 Cable, Double Shielded			

ALSO AVAILABLE

50 Ω: MMCX, SMA, SMB, BNC, TNC,

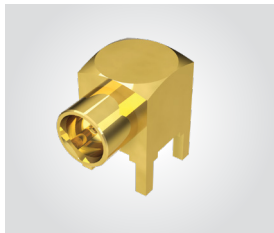
N Type = RF174, RF178, RF316

50 Ω: MMCX, SMA, BNC, TNC = RS316

MCX Board Connectors

MCX-TH, MCX-SM, MCX-EM, MCX-MT

Cable Mates:
RF174, RF178, RF316, RS316, GRF1H-C, IJ5H



MCX	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	-J = Jack	-P = PCB Mount	-H = 30 μ" (0.76 μm) Gold center contact, 3 μ" (0.08 μm) Gold outer contact	-ST = Straight -RA = Right-angle	-TH1 = Through-hole (-ST plug not available) -TH2 = Elevated Through-hole (-ST plug only) -SM1 = Surface Mount (Jack only) -EM1 = Edge Mount (-ST jack only) -MT1 = Mixed Technology (-ST jack only)
	-P = Plug				
		-ST-SM1 (Jack)	-RA-TH1 (Plug)		

MCX Cable Connectors

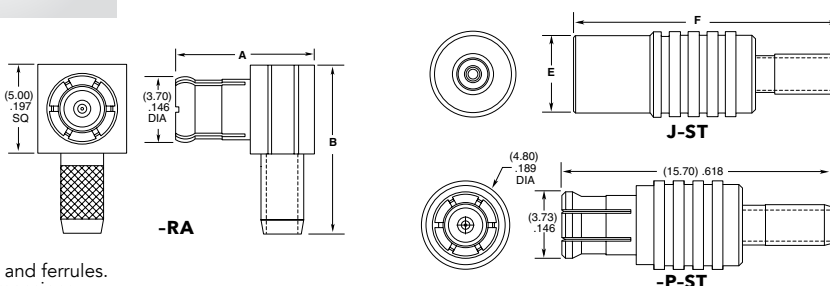
MCX-CA



CONNECTORS FOR INDUSTRY STANDARD CABLES	
MCX-J-C-H-ST-CA1	RG 174/316 Cable
*MCX-J-C-H-ST-CA2	RG 178 Cable
MCX-J-C-HF-ST-CA1S	RG 316 Double Shielded Cable
*MCX-P-C-H-ST-CA1	RG 174/316 Cable
MCX-P-C-H-ST-CA2	RG 178 Cable
MCX-P-C-HF-ST-CA1S	RG 316 Double Shielded Cable
*MCX-P-C-H-RA-CA1	RG 174/316 Cable
MCX-P-C-H-RA-CA2	RG 178 Cable

P-C = Cable Plug
J-C = Cable Jack
H or HF = Plating (30 μ" Gold center contact,
3 μ" Gold outer contact)
ST = Straight
RA = Right-angle

*Add "-B" to the end of the part number for bulk packaging



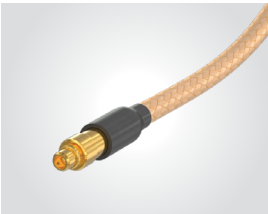
TYPE (-RA)	A	B
-P-CA1	(7.78) .306	(9.50) .374
-P-CA2	(8.58) .338	(10.00) .394

TYPE (-ST)	E	F
-J-CA1	(4.50) .177	(15.50) .610
-J-CA2	(4.78) .188	(15.00) .591
-J-CA1S	(4.50) .177	(15.50) .610

Supplied with pins and ferrules.
See website for dimensions.

50 Ω MMCX TO 6 GHz

MMCX Cable Assemblies



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF174 = RG 174 Cable	−03SP1 = MMCX Straight Plug		−"XXXX" = Overall Length in millimeters
RF178 = RG 178 Cable (−03SP1 & −03RP1 only)	−03RP1 = MMCX Right-angle Plug		−0100 (100 mm) 3.94" minimum
RF316 = RG 316 Cable, Single Braid Shield	−V3SP1 = MMCXV Straight Plug, High Vibration		
RS316 = RG 316 Cable, Double Shielded (−03SP1 only)	−V3RP1 = MMCXV Right-angle Plug, High Vibration		
	−V3SJ1 = MMCXV Straight Jack, High Vibration		

ALSO AVAILABLE

50 Ω : MCX, SMA, SMB, BNC, TNC,
N Type = RF174, RF178, RF316

50 Ω : MCX, SMA, BNC, TNC = RS316

MMCX
Board Connectors
MMCX-SM, MMCX-TH,
MMCX-MT, MMCX-EM

Cable Mates:

RF174, RF178, RF316, RS316,
GRF1H-C, IJ5H



MMCX	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	-J = Jack -P = Plug	-P = PCB Mount	-H = 30 μ" (0.76 μm) Gold center contact, 3 μ" (0.08 μm) Gold outer contact	-ST = Straight -RA = Right-angle	-TH1 = Through-hole -MT1 = Mixed Technology (-ST only) -SM1 = Surface Mount (-RA plug not available) -EM1 = Edge Mount (-ST only)

MMCX
Cable Connectors
MMCX-CA



CONNECTORS FOR INDUSTRY STANDARD CABLES	
MMCX-P-C-H-ST-CA1	RG 174/316 Cable
MMCX-P-C-H-ST-CA2	RG 178 Cable
MMCX-P-C-HF-ST-CA1S	RG 316 Double Shielded Cable
MMCX-P-C-H-RA-CA1	RG 174/316 Cable
MMCX-P-C-H-RA-CA2	RG 178 Cable

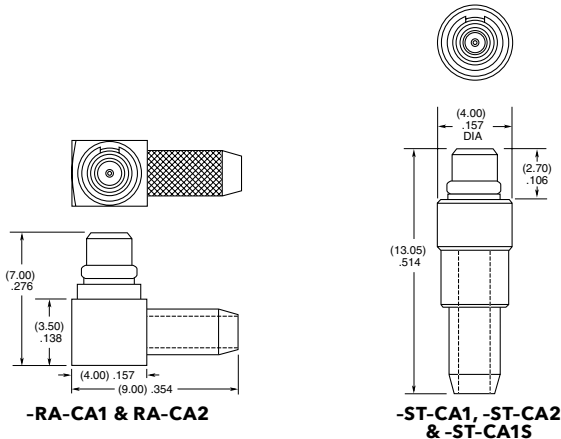
Add "-B" to the end of the part number for bulk packaging

P-C = Cable Plug

H or HF = Plating (30 μ " Gold center contact,
3 μ " Gold outer contact)

ST = Straight

RA = Right-angle



Supplied with pins and ferrules.
See website for dimensions.

50 Ω TNC TO 6 GHz

TNC Cable Assemblies

RF174, RF178, RF316, RS316, RF058



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF174 = RG 174 Cable	-05SP3 = TNC Straight Plug (RF058 not available)		-“XXXX” = Overall Length in millimeters
RF178 = RG 178 Cable		-05BJ3 = TNC Straight Bulkhead Jack (RS316 & RF058 not available)	-0100 (100 mm) 3.94” minimum
RF316 = RG 316 Cable, Single Braid Shield		-05SR3 = TNC Straight Plug, Reversed Polarity (RF058 only)	
RS316 = RG 316 Cable, Double Shielded			
RF058 = RG 58 Cable			

ALSO AVAILABLE

50 Ω: MCX, MMCX, SMA, SMB, BNC,
N Type = RF174, RF178, RF316

50 Ω: MCX, MMCX, SMA, BNC = RS316

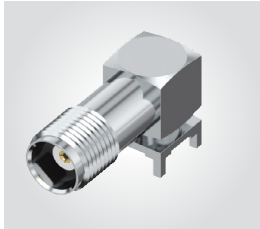
50 Ω: SMA, N Type = RF058

TNC Board Connectors

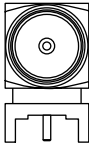
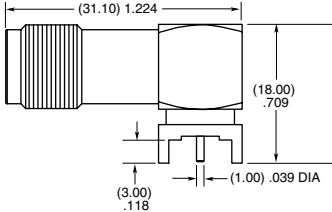
TNC-TH

Cable Mates:

RF174, RF178, RF316, RS316, RF058, GRF1H-C



TNC	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	-J = Jack	-P = PCB Mount	-H = 30 μ" (0.76 μm) Gold center contact, Nickel on shell	-RA = Right-angle	-TH1 = Through-hole

TNC Cable Connectors

TNC-CA



CONNECTORS FOR INDUSTRY STANDARD CABLES	
TNC-P-C-GN-ST-CA1	RG 174/316 Cable
TNC-P-C-GN-ST-CA2	RG 178 Cable
TNC-P-C-GN-SR-C10	RG 58 Cable
TNC-J-C-GN-ST-BH1	RG 174/316 Cable, Bulkhead
TNC-J-C-GN-ST-BH2	RG 178 Cable, Bulkhead

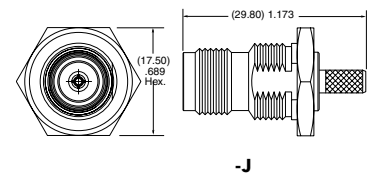
P-C = Cable Plug

J-C = Cable Jack

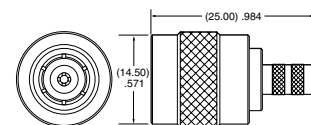
GN = Plating (10 μ" Gold on contact, Nickel on body)

ST = Straight

SR = Straight Reverse Polarity



-J



-P

Supplied with pins, washers, nuts and ferrules. See website for dimensions.

50 Ω BNC TO 4 GHz

BNC Cable Assemblies

RF174, RF178, RF316, RS316



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF174 = RG 174 Cable	-04SP3 = BNC Straight Plug (RS316 not available)		-“XXXX” = Overall Length in millimeters
RF178 = RG 178 Cable	-04BJ2 = BNC Bulkhead Jack		-0100 (100 mm) 3.94" minimum
RF316 = RG 316 Cable, Single Braid Shield	ALSO AVAILABLE 50 Ω: MCX, MMCX, SMA, SMB, TNC, N Type = RF174, RF178, RF316 50 Ω: MCX, MMCX, SMA, TNC = RS316		
RS316 = RG 316 Cable, Double Shielded			

BNC Cable Connectors

BNC5-CA



Supplied with pins, washers, nuts, gaskets and ferrules. See website for dimensions.

CONNECTORS FOR INDUSTRY STANDARD CABLES	
*BNC5-P-C-GN-ST-CA1	RG 174/316 Cable
*BNC5-P-C-GN-ST-CA2	RG 178 Cable
*BNC5-J-C-GN-ST-BH1	RG 174/316 Cable, Bulkhead
BNC5-J-C-GN-ST-BH2	RG 178 Cable, Bulkhead
BNC5-J-C-GN-ST-BH1S	RG 316 Double Shielded Cable, Bulkhead

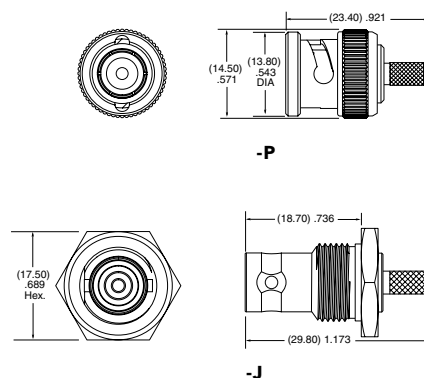
*Add "-B" to the end of the part number for bulk packaging

P-C = Cable Plug

J-C = Cable Jack

GN = Plating (10 μ" Gold on contact, Nickel on body)

ST = Straight



50 Ω SMB TO 4 GHz

SMB Cable Assemblies RF174, RF178, RF316



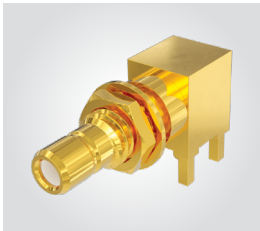
SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF174 = RG 174 Cable	-07SP1 = SMB Straight Plug		-“XXXX” = Overall Length in millimeters
RF178 = RG 178 Cable	-07RP1 = SMB Right-angle Plug		-0100 (100 mm) 3.94" minimum
RF316 = RG 316 Cable, Single Braid Shield	-07BJ1 = SMB Bulkhead Jack		
	-07BJ2 = SMB Bulkhead Jack (RF178 only)		

ALSO AVAILABLE

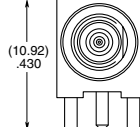
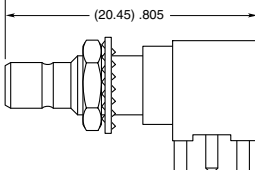
50 Ω: MCX, MMCX, SMA, BNC, TNC,
N Type = RF174, RF178, RF316

SMB Board Connectors SMB5-TH

Cable Mates:
RF174, RF178, RF316,
GRF1H-C, IJ5H



SMB5	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	-J = Jack	-P = PCB Mount	-H = 30 μ" (0.76 μm) Gold center contact, 3 μ" (0.08 μm) Gold outer contact	-RA = Right-angle	-TH1 = Through-hole

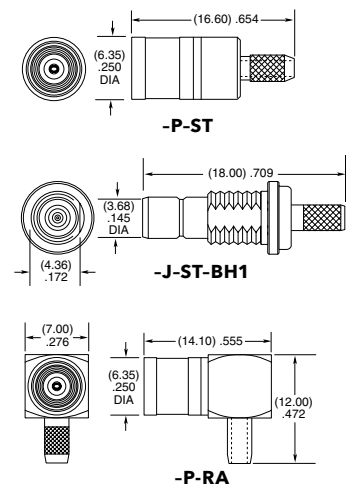



SMB Cable Connectors SMB5-CA



CONNECTORS FOR INDUSTRY STANDARD CABLES	
SMB5-P-C-H-ST-CA1	RG 174/316 Cable
SMB5-P-C-H-RA-CA1	RG 174/316 Cable
SMB5-J-C-H-ST-CA2	RG 178 Cable
SMB5-J-C-H-ST-BH1	RG 316 Cable, Bulkhead

P-C = Cable Plug
J-C = Cable Jack
H = Plating (30 μ" Gold center contact, 3 μ" Gold on outer contact)
ST = Straight
RA = Right-angle



Supplied with pins, washers,
nuts and ferrules. See website
for dimensions.

BNC Cable Assemblies

RFC6T, RFA6T,
RFB6T, RF179



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RFC6T* = 12G-SDI, Belden 4694R Cable	-74SP3 = 75 Ω BNC Straight Plug		-“XXXX” = Overall Length in millimeters
RFA6T = RG 6 Cable	-D4SP3 = 75 Ω BNC Die Cast Straight Plug (RFA6T, RFB6T, RF179 only)		-0300 (300 mm) 11.81" minimum (RFA6T, RFB6T, RFC6T)
RFB6T = Belden 1694A Cable	-74BJ3 = 75 Ω BNC Bulkhead Jack (RF179 only)		-0100 (100 mm) 3.94" minimum (RF179)
RF179 = RG 179 Cable	-74RP3 = 75 Ω BNC Right-angle Plug (RFA6T, RFB6T, RFC6T only)		

ALSO AVAILABLE

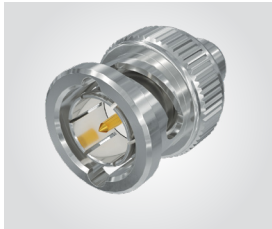
75 Ω: DIN 1.0/2.3, HDBNC = RFA6T, RFB6T, RFC6T

75 Ω: DIN 1.0/2.3, SMB, MCX, MMCX = RF179

*Designed to meet SMPTE 2082
12G-SDI specifications.

BNC Cable Connectors

BNC7T-CA



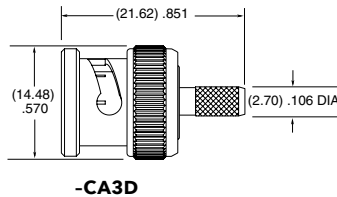
Supplied with pins, washers,
nuts, gaskets and ferrules.
See website for dimensions.

CONNECTORS FOR INDUSTRY STANDARD CABLES	
**BNC7T-P-C-GN-ST-CA3	Machined, RG 179 Cable
**BNC7T-P-C-GN-RA-CA3	Machined, RG 179 Cable
**BNC7T-P-C-GN-ST-CA6	*Machined, RG 6 Cable
**BNC7T-P-C-GN-RA-CA6	*Machined, RG 6 Cable
**BNC7T-P-C-GN-ST-CA6B	Belden 4694R Cable
**BNC7T-P-C-GN-RA-CA6B	Belden 4694R Cable
**BNC7T-J-C-GN-ST-BH3	Machined, Bulkhead, RG 179 Cable
BNC7T-P-C-GN-ST-CA3D	Die Cast, RG 179 Cable
BNC7T-P-C-GN-ST-CA6D	Die Cast, RG 179 Cable

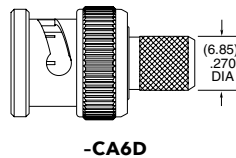
P-C = Cable Plug
J-C = Cable Jack
GN = Plating (10 μ" Gold on contact,
Nickel on outer contact and shell)
ST = Straight
RA = Right-angle

**Add "-B" to the end of the part number for bulk packaging

*Designed to meet SMPTE 2082 12G-SDI specifications.

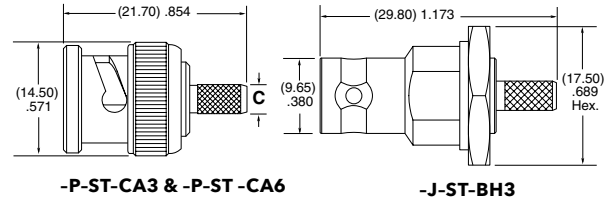


-CA3D



-CA6D

DIE CAST



-P-ST-CA3 & -P-ST-CA6

-J-ST-BH3

MACHINED

Note:
Additional plating options available
on Cable Assemblies, Cable
Connectors and Board Connectors.
Contact RFGroup@samtec.com

TERMINATION	C (DIA)
-CA3	(2.70) .106
-CA6	(6.85) .270

75 Ω DIE CAST BNC TO 12 GHz

BNC Board Connectors

BNC7T-TH, BNC7T-BH, BNC7T-BM, BNC7T-EM

Cable Mates:

RF179, RFA6T, RFB6T, RFC6T, GRF7H-C



BNC7T	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	PACKAGING
	-J = Jack	-P = PCB Mount	-GN = 10 μ" (0.25 μm) Gold contact, 100 μ" (2.54 μm) Nickel Shell	-ST = Straight -RA = Right-angle Bulkhead/Panel Mount	-TH2D = Tall Through-hole Die Cast (-ST only) -BH2D* = Low Profile Die Cast Bulkhead Through-hole (-RA only) -BM1D* = Low Profile Die Cast Bulkhead Mixed Technology for (1.60 mm) .062" PCB (-RA only) -BM2D* = Low Profile Die Cast Bulkhead Mixed Technology for (3.18 mm) .125" PCB (-RA only) -EM1D* = Edge Mount Die Cast Bulkhead/Panel Mount for (1.60 mm) .062" PCB (-ST only) -EM2D* = Edge Mount Die Cast Bulkhead/Panel Mount for (2.40 mm) .093" PCB (-ST only)	Leave blank for individually bagged. -B = Bulk packaged (-BH2D only)
	-RA-BM1D (BALANCED FOR PICK-AND-PLACE)					
	-RA-BH2D					
	-ST-EM1D & -ST-EM2D					
	-ST-TH2D					

Notes:
Contact RFGroup@samtec.com for 12G-SDI PCB mount launch characteristics.

Designed to meet SMPTE 2082 12G-SDI specifications.

Additional plating options available on Board Connectors. Contact RFGroup@samtec.com

*Lock washers & knurled nuts supplied with bulkhead/panel mount options

75 Ω MACHINED BNC TO 12 GHz

BNC Board Connectors

BNC7T-TH, BNC7T-BH, BNC7T-EM

Cable Mates:

RF179, RFA6T, RFB6T, RFC6T, GRF7H-C



BNC7T	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	PACKAGING
	-J = Jack	-P = PCB Mount	-GN = 10 μ" (0.25 μm) Gold contact, 100 μ" (2.54 μm) Nickel Shell	-ST = Straight -RA = Right-angle Bulkhead/Panel Mount	-TH1 = Standard Through-hole (-ST only) -BH1* = Standard Bulkhead Through-hole (-RA only) -EM1* = Edge Mount Bulkhead/Panel Mount for (1.60 mm) .062" PCB (-ST only) -EM2* = Edge Mount Bulkhead/Panel Mount for (2.40 mm) .093" PCB (-ST only)	Leave blank for individually bagged. -B = Bulk packaged (-BH1 only)
	-ST-EM1 & -ST-EM2					
	-ST-TH1					
	-RA-BH1					

Notes:
Contact RFGroup@samtec.com for 12G-SDI PCB mount launch characteristics.

Designed to meet SMPTE 2082 12G-SDI specifications.

Additional plating options available on Board Connectors. Contact RFGroup@samtec.com

*Lock washers & knurled nuts supplied with bulkhead/panel mount options

RFA6T, RFB6T, RFB8T,
RFC6T, RFC8T



*Designed to meet SMPTE 2082 12G-SDI specifications.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RFC6T* = 12G-SDI, Belden 4694R Cable RFC8T* = 12G-SDI, Belden 4855R Cable RFA6T = RG 6 Cable RFB6T = Belden 1694A Cable RFB8T = Belden 1855A Cable	–H4SP3 = 75 Ω High-Density BNC Straight Plug		–“XXXX” = Overall Length in millimeters –0300 (300 mm) 11.81" minimum
ALSO AVAILABLE 75 Ω: DIN 1.0/2.3, BNC = RFB6T, RFA6T, RFC6T 75 Ω: DIN 1.0/2.3 = RFB8T, RFC8T			

HIGH-DENSITY BNC Board Connectors

Cable Mates:

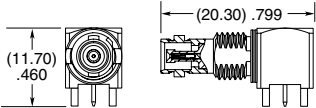
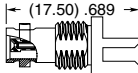
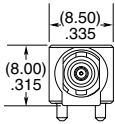
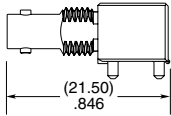
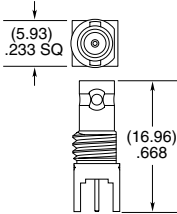
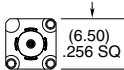
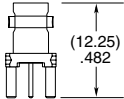
RFA6T, RFB6T, RFB8T,
RFC6T, RFC8T



Notes:

Designed to meet SMPTE 2082 12G-SDI specifications.

Additional plating options available
on Cable Assemblies, Cable
Connectors and Board Connectors.
Contact RFGroup@samtec.com

HDBNC	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	PACKAGING
	-J = Jack	-P = PCB Mount	-GN = 10 μ" (0.25 μm) Gold contact, 100 μ" (2.54 μm) Nickel shell	-ST = Straight -RA = Right-angle	-BH1 = Through-hole -BH2 = Through-hole (2.36 mm) .093" PCB (-RA only) -BM1D = Die Cast Bulkhead Mixed Technology for (1.60 mm) .062" PCB (-RA only) -BM2D = Die Cast Bulkhead Mixed Technology for (3.18 mm) .125" PCB (-RA only)	Leave blank for individually bagged. -B Bulk packaged (-BHX only)
						
	-RA-BH2		-ST-EM1			
						
	-RA-BM1D & -BM2D (BALANCED FOR PICK-AND-PLACE)		-ST-BH1	-ST-TH1	-EM1 = Edge Mount (-ST only) -TH1 = Through-hole, Three Legs (-ST only)	

HIGH-DENSITY BNC Cable Connectors



Supplied with pins and ferrules.
See website with dimensions.

Designed to meet SMPTE 2082
12G-SDI specifications.

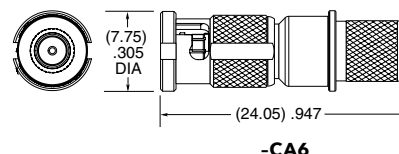
CONNECTORS FOR INDUSTRY STANDARD CABLES	
HDBNC-P-C-GN-ST-CA6	RG 6, Belden 1694A or Belden 4694R Cable
HDBNC-P-C-GN-ST-CA8	Belden 1855A or Belden 4855R Cable

Add "-B" to the end of the part number for bulk packaging (100 max.)

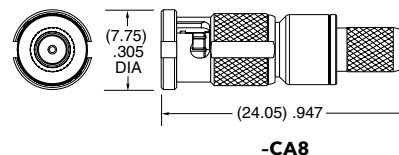
P-C = Cable Plug

GN = Plating (10 μ " Gold on contact, Nickel on outer contact & shell)

ST = Straight



-CA6



-CA8

DIN Cable Assemblies

RFA6T, RFB6T, RF179, RFB8T, RFC6T, RFC8T



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RFC6T* = 12G-SDI, Belden 4694R Cable	-78SP4 = 75 Ω DIN Straight Plug		-“XXXX” = Overall length in millimeters
RFC8T* = 12G-SDI, Belden 4855R Cable	ALSO AVAILABLE		
RFA6T = RG 6 Cable	75 Ω: HDBNC, BNC = RFB6T, RFA6T, RFC6T		
RFB6T = Belden 1694A Cable	75 Ω: BNC, SMB, MCX, MMCX = RF179		
RF179 = PCB 179 Cable	75 Ω: HDBNC = RFB8T, RFC8T		
RFB8T = Belden 1855A Cable			
	-0100 (100 mm) 3.94" minimum (RF179)		
	-0300 (300 mm) 11.81" minimum (RFA6T, RFB6T, RFB8T, RFC6T, RFC8T)		

*Designed to meet SMPTE 2082 12G-SDI specifications.

DIN Board Connectors

DIN7A-TH, DIN7A-BH

Cable Mates:

RFA6T, RFB6T, RF179, RFB8T, RFC6T, RFC8T, GRF7H-C



Notes:
Contact RFGroup@samtec.com for 12G-SDI PCB mount launch characteristics.

Designed to meet SMPTE 2082 12G-SDI specifications.

Additional plating options available on Cable Assemblies, Cable Connectors and Board Connectors. Contact RFGroup@samtec.com

DIN7A	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	PACKAGING
	-J = Jack	-P = PCB Mount	-GF = 10 μ" (0.25 μm) Gold center contact, 3 μ" (0.08 μm) Gold outer contact, (100 μ" (2.54 μm) Nickel body -RA only)	-ST = Straight (-TH1 only) -RA = Right-angle (-BH1 only)	-TH1 = Through-hole (-ST only) -BH1 = Bulkhead Through-hole (-RA only)	Leave blank for individually bagged. -B = Bulk packaged (-BH1 only)

DIN Cable Connectors

DIN7A-CA



CONNECTORS FOR INDUSTRY STANDARD CABLES	
DIN7A-PP-C-GF-ST-CA3	RG 179
DIN7A-PP-C-GF-ST-CA6	*RG 6, Belden 1694A or Belden 4694R Cable
DIN7A-PP-C-GF-ST-CA8	*Belden 1855A or Belden 4855R Cable

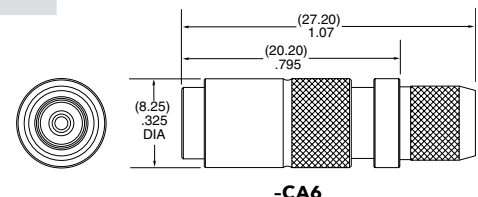
Add "-B" to the end of the part number for bulk packaging (100 max.)

*Designed to meet SMPTE 2082 12G-SDI specifications.

PP-C = Push Pull Plug Cable

GF = Plating (10 μ" Gold on center contact, Flash Gold on outer contact, Nickel on Shell)

ST = Straight



Supplied with pins and ferrules.
See website for dimensions

ORIGINAL SOLUTIONS LOW FREQUENCY RF

SHIELDED TWISTED PAIR SYSTEM

- 100 Ω differential pair
- 28 AWG shielded twisted pair cable assembly
- High-reliability BeCu contacts
- 1/4-turn bayonet lock

DC TO
4
GHz

GANGED MICRO-MINI SYSTEMS

- 50 Ω & 75 Ω board stacking and cable assemblies
- High-performance rugged contacts
- Variety of End 2 connectors (GRF1H-C, GRF7H-C Series)

DC TO
6
GHz

ISORATE® SYSTEMS

- 50 Ω board stacking and cable assemblies
- Isolated signal systems for 90 percent performance of traditional RF at 50 percent of the cost

DC TO
9.5
GHz

MINI & MICRO-MINI INTERCONNECTS

- 75 Ω impedance (MMCX7 & MCX7 Series)
- Higher extraction forces (MMCXV Series)
- Not intermateable with standard MMCX, MCX

DC TO
6
GHz

HIGH-CYCLE U.FL CABLE PLUG

- 500 cycle U.FL compatible plug (HMHF1 Series)
- .047" DIA low-loss flexible cable (RF047-A Series)

DC TO
10
GHz

High Frequency Original RF Solutions Available.
See page 31

CABLE SOLUTIONS

SERIES	C28S/CJT	GRF1-C/GRF7-C	GRF1H-C/GRF7H-C	RF047-A	IJ5C/IJ5H
Application	Shielded Twisted Pair	50 Ω & 75 Ω Micro-Mini Ganged	50 Ω & 75 Ω Micro-Mini Hybrid Ganged	50 Ω .047 DIA Flexible Cable	50 Ω IsoRate®
URL	samtec.com?C28S samtec.com?CJT-BH samtec.com?CJT-TH	samtec.com?GRF1-C samtec.com?GRF7-C	samtec.com?GRF1H-C samtec.com?GRF7H-C	samtec.com?RF047-A	samtec.com?IJ5C samtec.com?IJ5H

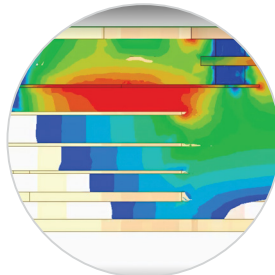
BOARD-TO-BOARD SOLUTIONS

SERIES	GRF1-P/GRF1-J	GRF7-P/GRF7-J	MMCX7	MCX7	MMCXV	IJ5/IP5
Application	50 Ω Micro-Mini Ganged	75 Ω Micro-Mini Ganged	75 Ω Mini and Micro-Mini Interconnects		High-Vibration Micro-Mini	50 Ω IsoRate®
URL	samtec.com?GRF1-P samtec.com?GRF1-J	samtec.com?GRF7-P samtec.com?GRF7-J	samtec.com?MMCX7-TH samtec.com?MMCX7-CA	samtec.com?MCX7 samtec.com?MCX7-CA	samtec.com?MMCXV-TH samtec.com?MMCXV-EM samtec.com?MMCXV-CA	samtec.com?IJ5 samtec.com?IP5

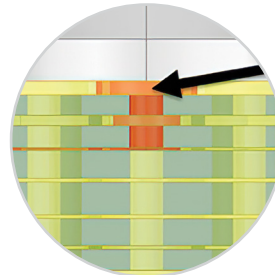
RF DESIGN, DEVELOPMENT & TECHNICAL SUPPORT

SIGNAL INTEGRITY & RF DESIGN EXPERTISE & SUPPORT

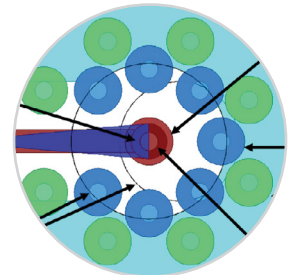
- Launch optimization & design services
- Simulation
- Prototyping
- Physical test and measurement verification
- Full channel analysis, system support
- Application specific design and development assistance



E-field Simulation



3D Modeling



Launch Optimization

TECHNICAL RESOURCES

Samtec's Technical Library contains white papers, application/technical notes, published papers, webinars and presentations on high-performance system design. These resources underscore how Samtec supports interconnectivity needs across multiple industries, applications, performance requirements and operating environments.

WHITE PAPERS

- Wideband RF Launches
- Impacts of Solder Reflow on RF Connectors
- Millimeter Wave Design
- Visit samtec.com/tech-library

TECHNICAL REPORTS

- Precision Alignment in Test and Measurement Applications: samtec.com/alignment

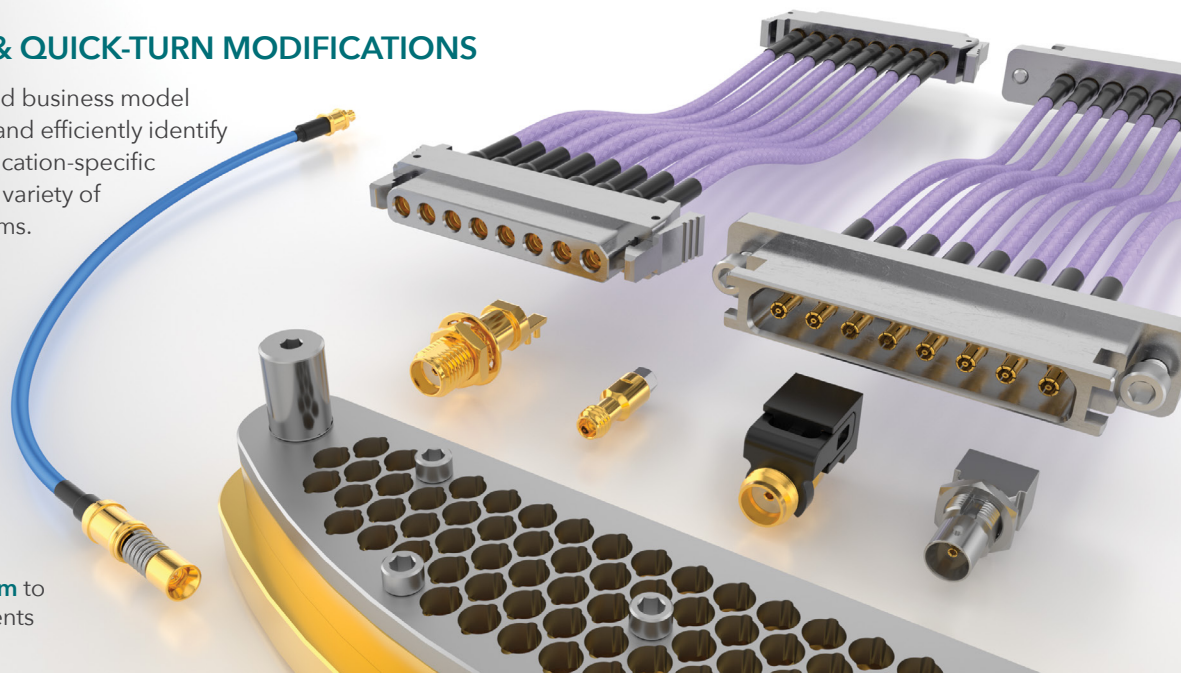
PRESENTATIONS & WEBINARS

- Understanding Transmission Line Discontinuities: samtec.com/system-impedance
- Precision RF Connector PCB Launches for 224 Gbps Devices: samtec.com/rf-launches-224

CUSTOM SOLUTIONS & QUICK-TURN MODIFICATIONS

Samtec's fully vertically integrated business model enables the flexibility to quickly and efficiently identify and/or develop innovative, application-specific interconnect solutions to meet a variety of demands in digital/analog systems.

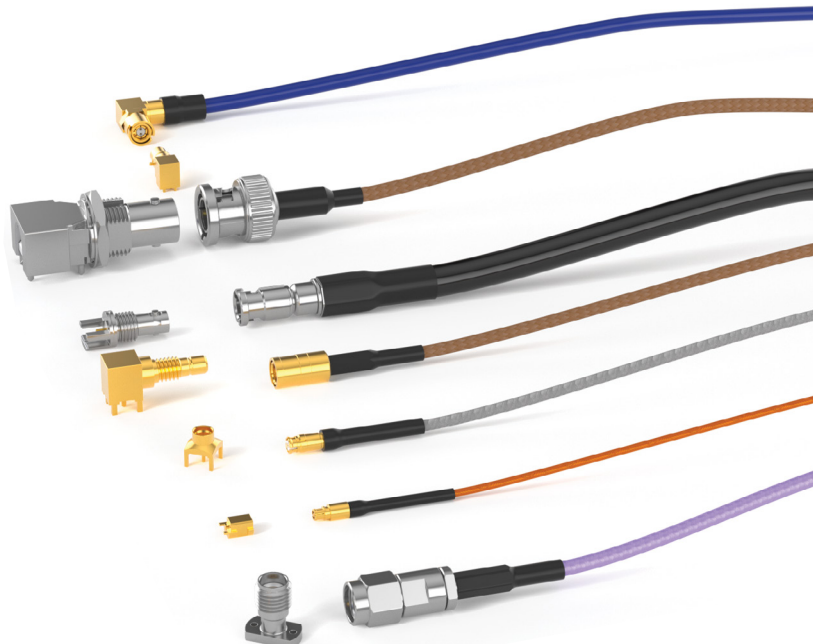
- Board termination types
- Tin dipping capabilities
- Heat-shrink tubing
- Alternate platings
- Pick & place machine designs
- Automated assembly counterweights
- Contact RFGroup@samtec.com to discuss your system requirements



RF PRODUCT INDEX

Precision RF products highlighted in bold.

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