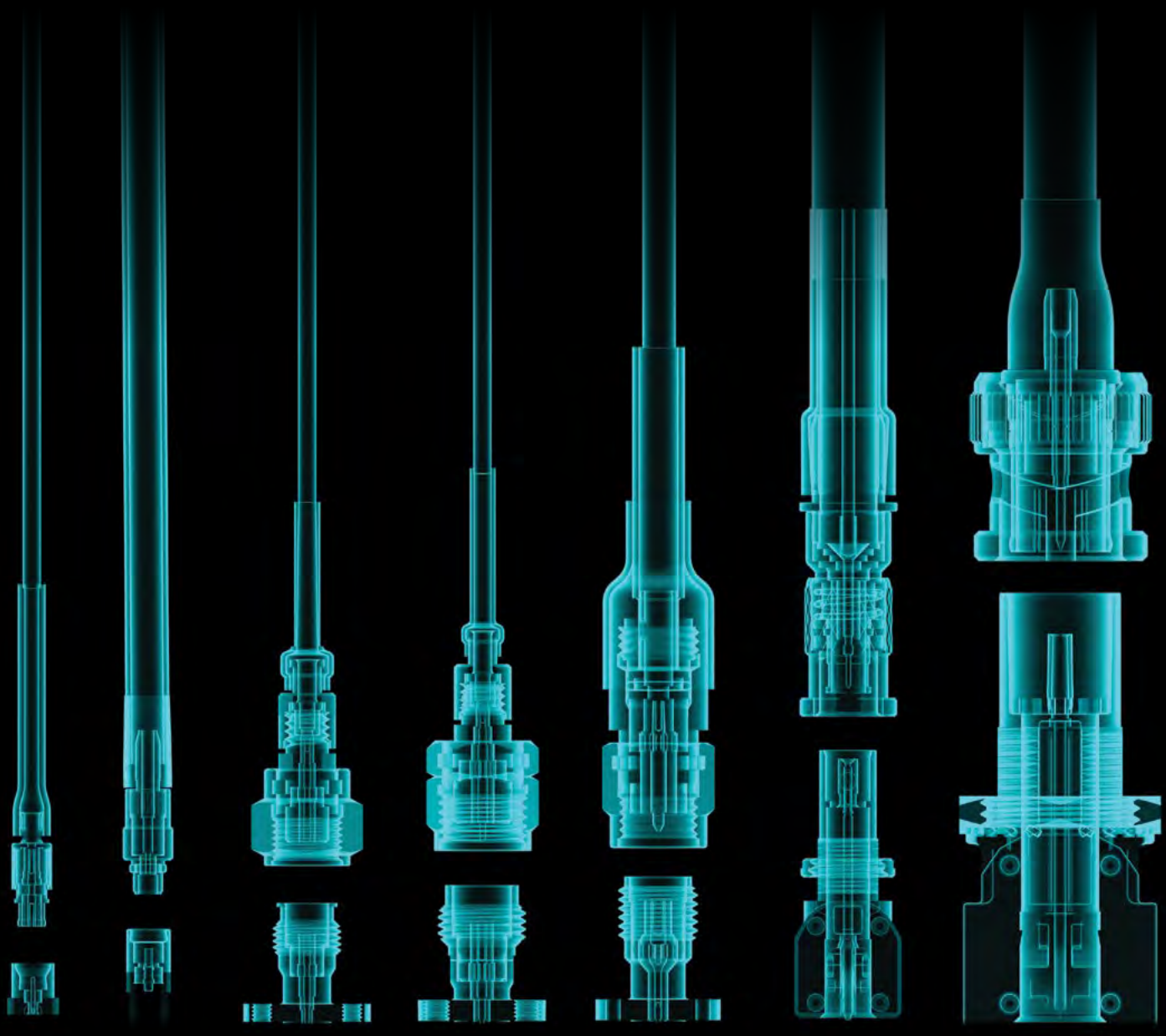
samtec

RF INTERCONNECT

FULL LINE SOLUTIONS CATALOG

50 Ω & 75 Ω • PRECISION RF • NON-MAGNETIC • 12G-SDI • ORIGINAL SOLUTIONS



2021

TABLE OF CONTENTS

TECHNICAL EXPERTISE & SUPPORT 3
Integration Leads to Innovation

RF PRODUCT OVERVIEW 4-5
50 Ω & 75 Ω, Precision, 12-SDI, Non-Magnetic and Original Solutions

HIGH-FREQUENCY PRECISION RF SOLUTIONS 6-19
18 GHz to 110 GHz Cable Assemblies, Cable Connectors and Board Connectors

TEST & MEASUREMENT 20-22
Bulls Eye® High-Performance Test Assemblies to 70 GHz

NEXT GENERATION WAVEGUIDE TECHNOLOGY 23
Ultra-Small Form Factor Waveguide Technology

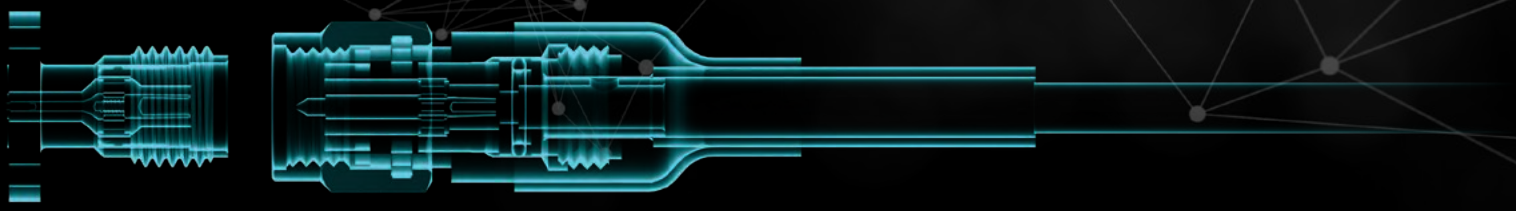
50 Ω STANDARD RF SOLUTIONS 24-31
3 GHz to 6 GHz Cable Assemblies, Cable Connectors and Board Connectors

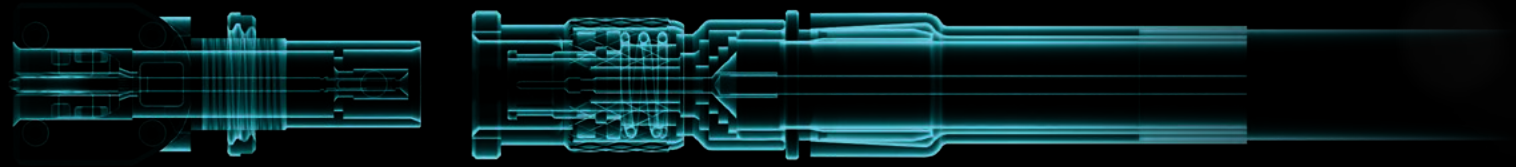
75 Ω STANDARD RF SOLUTIONS 32-36
4 GHz to 12 GHz 12G-SDI Cable Assemblies, Cable Connectors and Board Connectors

ORIGINAL SOLUTIONS 37
Shielded Twisted Pair, Ganged Micro Mini, IsoRate®, Mini & Micro-Mini and High-Cycle U.FL RF Connectors

CUSTOM RF SOLUTIONS 38
Custom Cable Connectors & Assemblies

PRODUCT INDEX 39

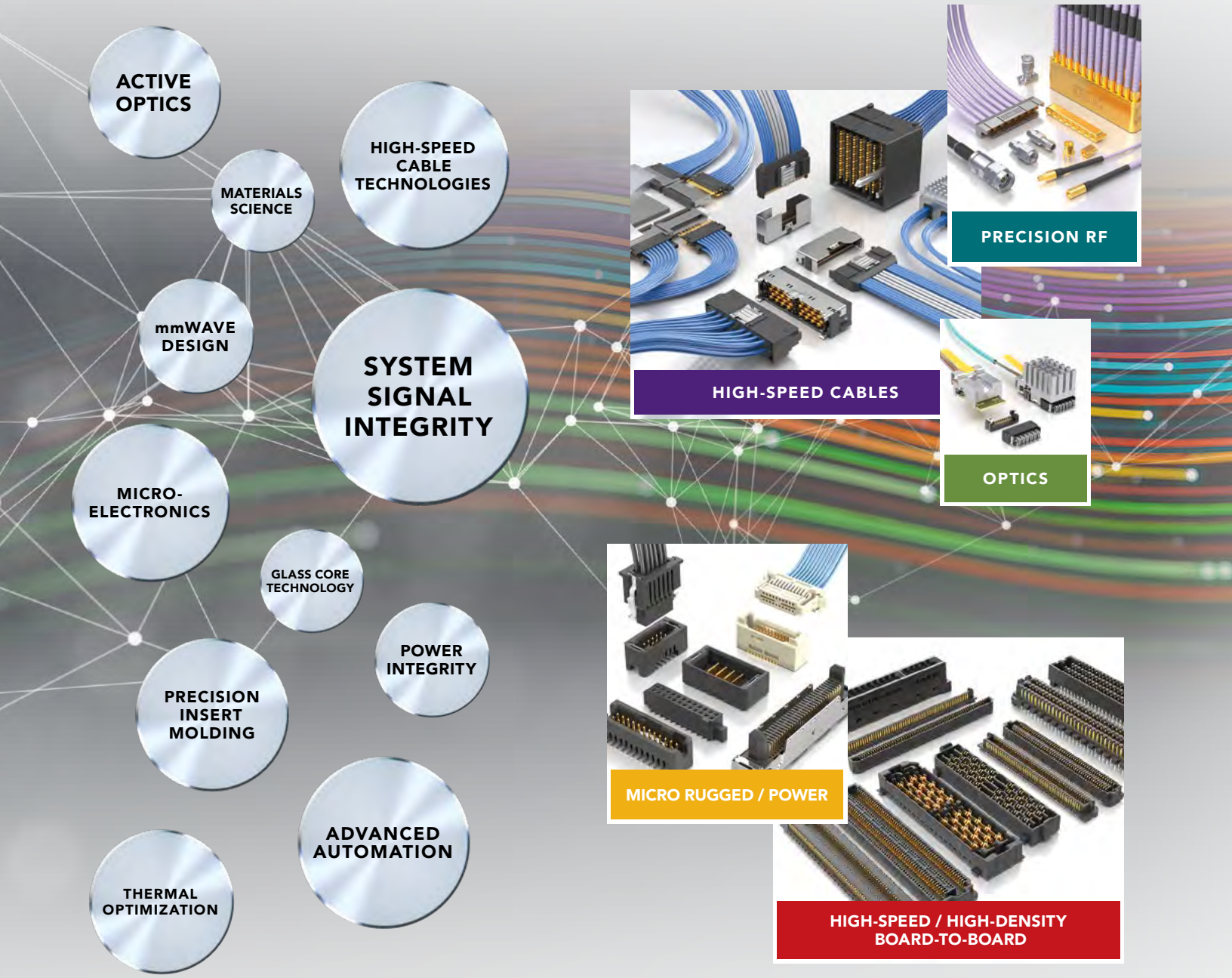




INTEGRATION LEADS TO INNOVATION

Samtec's integrated approach provides high-level design and development of advanced interconnect systems and **TECHNOLOGIES**, along with industry-leading expertise that allows us to offer effective strategies and support for optimizing the entire signal channel of high-performance systems.

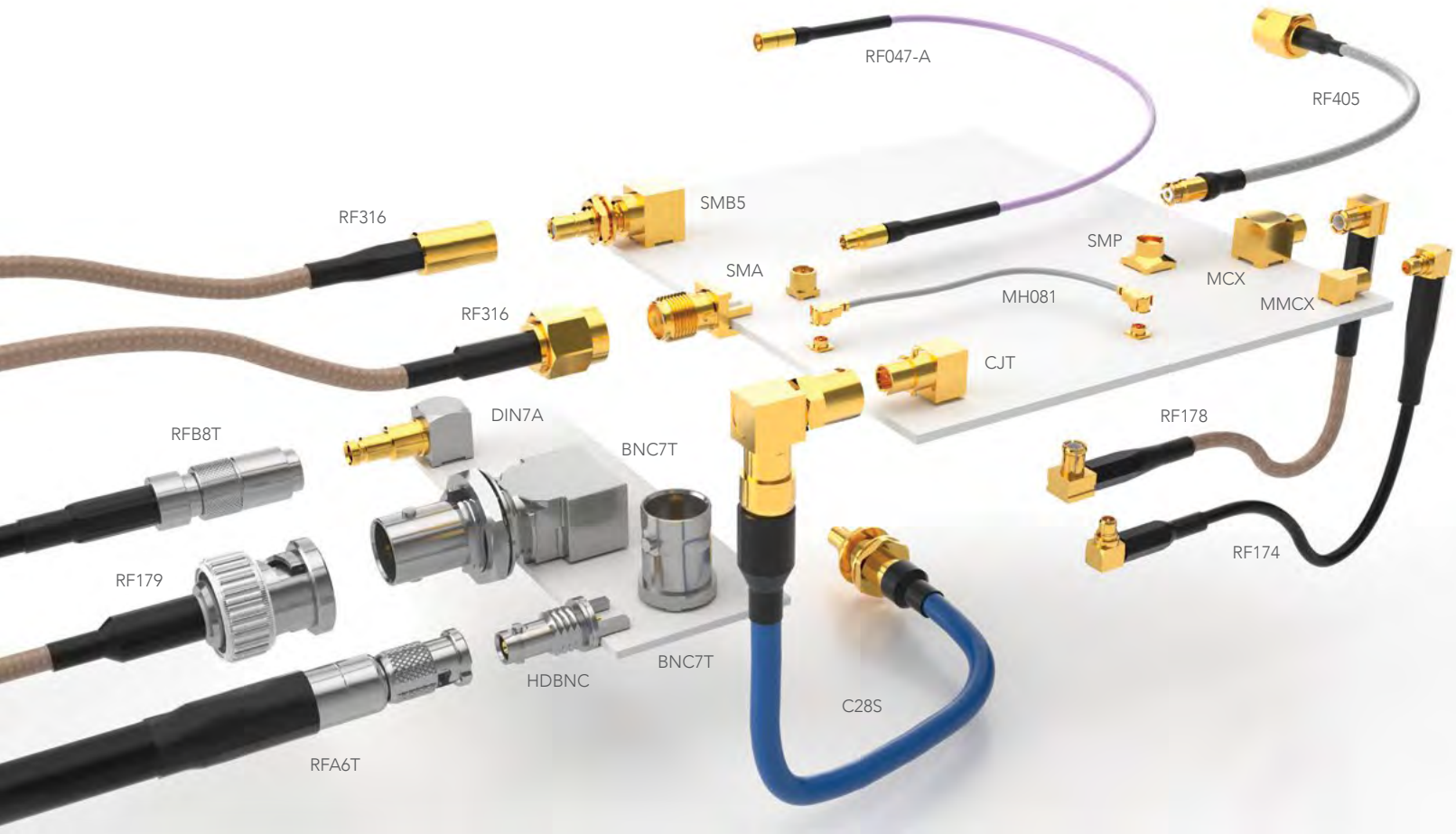
Samtec is structured like no other company in the interconnect industry. We work in a fully integrated capacity that enables true collaboration and results in uniquely innovative **PRODUCTS** because our technology teams are not limited by the boundaries of traditional business units.



samtec.com/s2s/technology-centers

COMPLETE RF INTERCONNECT SOLUTIONS

50 Ω & 75 Ω • PRECISION • 12G-SDI • NON-MAGNETIC • ORIGINAL SOLUTIONS



FULL LINE RF CABLE ASSEMBLIES & CONNECTORS

As a manufacturer of a broad line of electronic interconnects, Samtec offers full RF solution capabilities. In addition to high-frequency precision RF and high-performance test systems, Samtec's full line includes:

- Micro High-Frequency U.FL and W.FL
- 50 Ω and 75 Ω cable assemblies, cable connectors and board level interconnects
- Ganged and high isolation cable systems
- 100 Ω shielded twisted pair cable assemblies
- Micro-mini interconnects
- Non-magnetic RF solutions
- High-frequency, precision (18 GHz to 110 GHz)

Samtec is the service leader in the industry with the resources and willingness to provide technical support for launch optimization, simulation and test & measurement. Visit **samtec.com/RF** for additional information.

50 Ω RF CABLES & CONNECTORS

- High-frequency cables: semi-flexible, solid, foamed or air enhanced dielectric
- Variety of straight and right-angle jacks, plugs and bulkhead jacks
- Double-shielded RG 316 cable
- Micro high-frequency U.FL/W.FL assemblies
- Wide variety of industry standard cables with mix & match cable connectors
- Precision interconnects supporting frequencies from 18 to 110 GHz

Precision Interconnects

NON-MAGNETIC RF SOLUTIONS

- Truly non-magnetic RF solutions; 100% inspected for magnetic permeability
- Nearly all Samtec interconnects can be ordered as non-magnetic
- Supported by Samtec's quick-turn lead times and unmatched service
- Ideal for medical imaging, advanced driver assistance systems, hand held devices, etc.
- Contact RFGroup@samtec.com

75 Ω RF CABLES & CONNECTORS

- Wide variety of industry standard cables with mix & match cable connectors
- Low-Profile BNC with Pick & Place capability, optimized for high volume manufacturing
- RFB8T Series (with Belden 1855A cable)
- Wide variety of terminations: BNC, HD-BNC™, DIN 1.0/2.3, SMB
- Straight and right-angle, die cast options
- 12G-SDI optimized 75 Ω interconnects

HD-BNC™ is a trademark of Amphenol.

Low-Profile BNC with Pick & Place Capability

12G-SDI BROADCAST VIDEO SOLUTIONS

- Samtec has the largest variety of 12G-SDI optimized products
- Analysis and launch optimization: RFGroup@samtec.com
- 75 Ω BNC, HD-BNC™ and DIN 1.0/2.3
- Right-angle, vertical, edge mount, low-profile and standard or tall through-hole
- For additional details, please visit: samtec.com/12gsdi

12G-SDI Broadcast Video

SAMTEC ORIGINAL SOLUTIONS

- High vibration and 75 Ω MMCX
- Ganged micro-miniature high-performance RF cable assemblies with rugged contacts
- Circular RF shielded twisted pair system
- IsoRate® cost-efficient high-performance isolated signal systems
- Machined U.FL to 500 cycles

Ganged Micro Scale Isolated Signal Systems

PRECISION RF

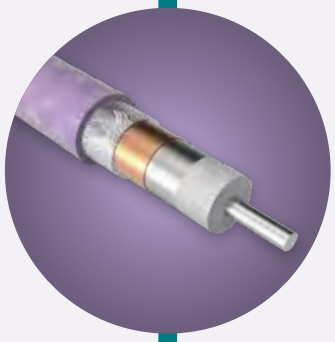
MICROWAVE / MILLIMETER WAVE CABLE ASSEMBLIES & INTERCONNECTS

The Samtec RF product line includes 18 to 110 GHz High-Frequency, Precision RF solutions for microwave and mmWave applications, including full cable assemblies, 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



CABLES

Design & Fabrication of Raw Cable

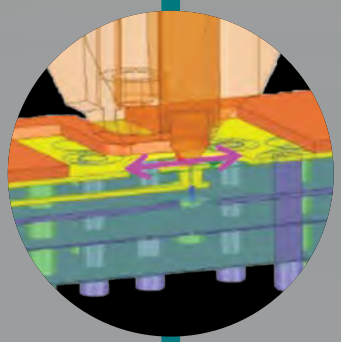
Cable Assemblies

CONNECTORS

Design & Fabrication

Cable Connectors

Board Connectors



TECH SUPPORT

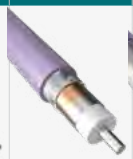
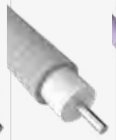
Launch Optimization

Simulation & Testing

Full System Optimization

50 Ω
µWAVE/mmWAVE CABLES

STANDARD OFF-THE-SHELF ASSEMBLIES

TYPE		MWC-2550-01	MWC-2350-01	MWC-2350CU-01	MWC-19550-FCU-01	RG 405 (.086")	RG 402 (.141")	.047 Low-Loss Flexible	.085 Low-Loss Flexible	.086 Low-Loss Flexible	.178 Low-Loss Flexible	.277 Low-Loss Flexible
											 *	 **
ELECTRICAL												
Max. Frequency (GHz)		40	35	50	45	20	20	65	50	65	27	18
Max. Insertion Loss (dB/m)	**1 GHz**	0.79	0.72	0.68	0.43	0.72	0.40	1.21	0.69	0.65	0.27	0.17
	26 GHz	3.80 @ 20 GHz	3.71 @ 20 GHz	4.27	2.78	4.26 @ 20 GHz	2.30 @ 20 GHz	7.43	4.28	3.90	1.23 @ 18 GHz	0.79 @ 18 GHz
	40 GHz	–	–	5.59	3.66	–	–	9.68	5.59	5.06	–	–
	50 GHz	–	–	6.46	–	–	–	11.14	6.47	5.81	–	–
Propagation Delay (ns/m)		4.76	4.72	4.76	4.12	4.79	4.79	4.76	4.75	4.20	4.17	4.02
Velocity of Propagation		70%			81%	70%		70%		80%		83%
Capacitance (pF/m)		96.80	95.45	97.80	82.39	104.97	98.07	95.00	88.2	83.37	82.00	
CONSTRUCTION												
Center Conductor		Solid Silver Plated Copper										
Dielectric		FEP			Foam Fluoro-polymer	PTFE		PFA	Solid PTFE	Foam Fluoro-polymer	PTFE Tape	
Shield		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) Ag Plated Cu 2) Ag Plated Cu	Spiral Strip Ag Plated Cu	1) Ag Plated Cu 2) Ag Plated Cu	1) Flat Ag Plated Cu 2) Al Polyester 3) Round Ag Plated Cu	
Jacket		FEP				—	—	FEP				
MECHANICAL												
Operating Temp		-40° C to 200° C		-65° C to 125° C	-65° C to 150° C	-40° C to 125° C	-40° C to 125° C	-55° C to 105° C	-55° C to 200° C	-65° C to 150° C	-55° C to 200° C	
Min. Bend Radius		9.00 mm	12.00 mm	6.00 mm	12.50 mm	6.00 mm	10.90 mm	5.00 mm	13.20 mm	8.90 mm	24.80 mm	38.10 mm
Connector Options		SMA, SMP	3.50 mm	2.92 mm, 2.40 mm, SMPM	2.92 mm, 2.40 mm	SMA, SMP	SMA	1.35 mm, 1.85 mm, 2.40 mm, 2.92 mm, SMPM	2.92 mm, 2.40 mm	1.85 mm, 2.40 mm, 2.92 mm, SMPM	SMA, TNCA, N Type	SMA, TNCA, N Type
PART NUMBER												
Series		RF25S	RF23S	RF23C	RF120	RF405	RF402	RF047-A	RF085	RF086	RF180	RF280

*Shown at ~1/2 scale. ** Shown at 1/3 scale.

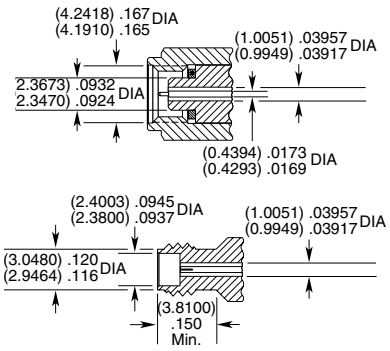
1.00 mm TO 110 GHz

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

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 milimeter wave cable	**-13SJ** = 1.35 mm Straight Jack **-13SP** = 1.35 mm Straight Plug		**–"XXXX"** = Overall Length in millimeters –0100 (0100 mm) 3.94" minimum

ALSO AVAILABLE

1.85 mm, 2.40 mm, 2.92 mm, SMPM = RF047-A

VSWR

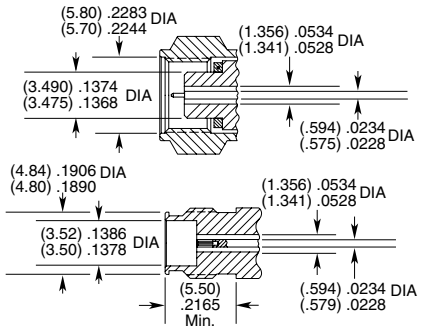
Contact Samtec

1.35 mm Cable Connectors
PRF13

CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF13-P-C-VP-047A-SS	.047 Temp-Flex, low loss flexible, 29 AWG
PRF13-J-C-VP-047A-BS	.047 Temp-Flex, low loss flexible, 29 AWG

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

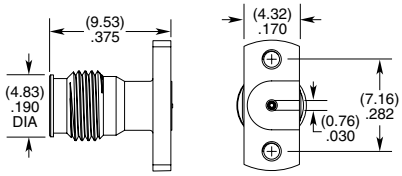
INTERFACE STANDARD



1.35 mm Board Connectors
135

Cable Mates:
RF047-A

135	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	OPTION
	–J = Jack	**–P** = PCB Mount	**–VP** = Plating (75 µ" gold center contact, passivated outer contact)	**–ST** = Straight	**–CM** = Compression Mount **–CMM** = Compression Mount Microstrip	**–1** = Without screws **–2** = With screws



1.85 mm Cable Assemblies
RF047-A, RF086

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 (0100 mm) 3.94" minimum

ALSO AVAILABLE

2.40 mm, SMPM, 2.92 mm = RF086

1.35 mm, 2.40 mm, SMPM, 2.92 mm = RF047-A

VSWR

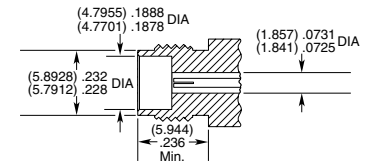
RF047-A: 1.40 max.
RF086: 1.40 max.

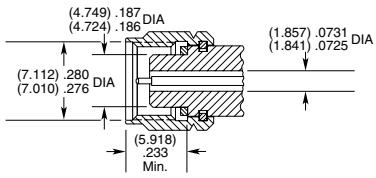
1.85 mm Cable Connectors
PRF18

CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF18-J-C-EP-047D-SS	.047, semi-rigid
PRF18-P-C-EP-047D-SS	.047, semi-rigid
PRF18-J-C-EP-086-SS	.086 Temp-Flex, low loss flexible
PRF18-P-C-EP-086-SS	.086 Temp-Flex, low loss flexible
PRF18-J-C-EE-405-SD	RG 405, .085, semi-rigid
PRF18-J-C-EP-085-BS	Harbour SS405, flexible alternative to RG 405
PRF18-P C-EE-085-SD	Harbour SS405, flexible alternative to RG 405
PRF18-P-C-EP-085-SS	Harbour SS405, flexible alternative to RG 405
PRF18-P-C-EP-047A-SS	.047 Temp-Flex, low loss flexible, 29 AWG
PRF18-J-C-EP-047A-SS	.047 Temp-Flex, low loss flexible, 29 AWG

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

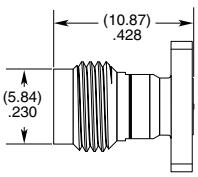


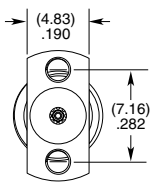


1.85 mm Board Connectors
185

Cable Mates:
RF047-A, RF086

185	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	OPTION
	–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	**–1** = Without Srews **–2** = With Srews





2.40 mm Cable Assemblies
RF047-A, RF085, RF086, RF23C, RF120

VSWR

RF047-A: 1.35 max.
RF086: 1.40 max.
RF085: 1.40 max.
RF23C: 1.40 max.
RF120: 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

RF085
= (2.16 mm) .085" overshield DIA 24 AWG millimeter wave cable

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

RF120
= MWC-19550-FCU-01 19 AWG millimeter wave cable

–24SJ
= 2.40 mm Straight Jack

–24SP
= 2.40 mm Straight Plug

ALSO AVAILABLE

1.35 mm, 1.85 mm, 2.92 mm, SMPM = RF047-A

1.85 mm, 2.92 mm, SMPM = RF086

2.92 mm = RF085

2.92 mm, SMPM = RF23C

2.92 mm = RF120

–"XXXX"
= Overall Length in millimeters

–0100 (100 mm) 3.94" minimum (RF047-A, RF085, RF086, RF120)

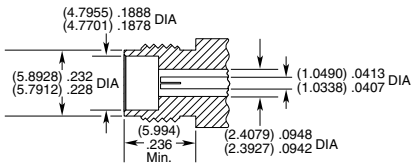
–0152 (0152 mm) 5.984" minimum (RF23C)

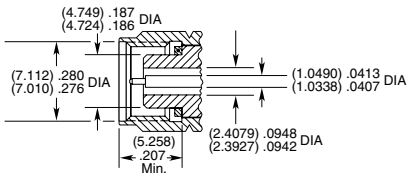
2.40 mm Cable Connectors
PRF24

CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF24-J-C-EP-085-SS	Harbour SS405, flexible alternative to RG 405
PRF24-J-C-EP-405-BS	RG 405, .085, semi-rigid
PRF24-P-C-EE-085-SD	Harbour SS405, flexible alternative to RG 405
PRF24-P-C-EP-120A-SS	Semflex HP120, low loss flexible
PRF24-J-C-EP-160-SS	Semflex HP160, low loss flexible
PRF24-P-C-EP-160-SS	Semflex HP160, low loss flexible
PRF24-J-C-EP-140B-SS	IW 1401, low loss flexible
PRF24-P-C-EP-140B -SS	IW 1401, low loss flexible
PRF24-J-C-EP-150B-SS	IW 1501, low loss flexible
PRF24-J-C-EP-150-SS	Dynawave DF150, low loss flexible
PRR24-J-C-EP-086-SS	.086 Temp-flex, low loss flexible
PRF24-P-C-EP-086-SS	.086 Temp-flex, low loss flexible

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





2.40 mm Board Connectors
240

Cable Mates:
RF047-A, RF086, RF085, RF23C, RF120

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

–J
= Jack

–P
= PCB Mount

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

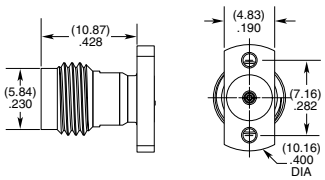
–ST
= Straight

–CM
= Compression Mount Stripline

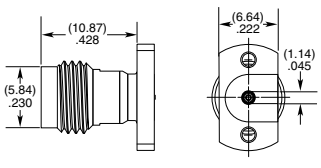
–CMM
= Compression Mount Microstrip

–1
= without Screws

–2
= With Screws



-CM SHOWN



-CMM SHOWN

2.92 mm Cable Assemblies

RF047-A, RF086, RF085, RF23C, RF120

VSWR

RF047-A: 1.35 max.
RF086: 1.40 max.
RF085: 1.40 max.
RF23C: 1.40 max.
RF120: 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

RF085
= (2.16 mm) .085" overshield DIA
24 AWG millimeter wave cable

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

RF120
= MWC-19550-FCU-01 19 AWG millimeter wave cable

–92SJ
= 2.92 mm Straight Jack

–92SP
= 2.92 mm Straight Plug

ALSO AVAILABLE

1.35 mm, 1.85 mm, 2.40 mm, SMPM = RF047-A

1.85 mm, 2.40 mm, SMPM = RF086

2.40 mm = RF085

2.40 mm, SMPM = RF23C

2.40 mm = RF120

–"XXXX"
= Overall Length in millimeters

–0100 (100 mm) 3.94" minimum (RF047-A, RF085, RF086, RF120)

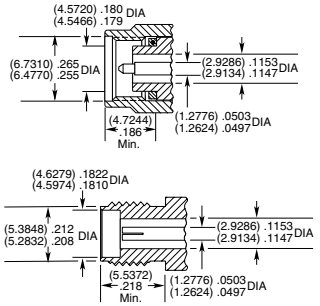
–0152 (0152 mm) 5.984" minimum (RF23C)

2.92 mm Cable Connectors

PRF92

CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF92-P-C-EE-405-SD	RG 405, .085, semi-rigid
PRF92-P-C-EE-085A-SD	.085, semi-rigid, 23AWG
PRF92-P-C-EP-160-SS	Semflex HP160, low loss flexible
PRF92-P-C-EP-150B-SS	IW 1501, low loss flexible
PRF92-P-C-EP-142-SS	Harbour LL142, low loss flexible
PRF92-J-C-EP-085-SS	Harbour SS405, flexible alternative to RG 405
PRF92-J-C-EP-085-BS	Harbour SS405, flexible alternative to RG 405
PRF92-P-C-EP-085-SS	Harbour SS405, flexible alternative to RG 405
PRF92-P-C-EE-402-SD	RG 402, .141, semi-rigid
PRF92-P-C-EP-190-SS	Semflex HP190, low loss flexible
PRF92-J-C-EP-160-SS	Semflex HP160, low loss flexible
PRF92-P-C-EP-120A-SS	Semflex HP120, low loss flexible
PRF92-P-C-EP-140-SS	Dynawave DF140, low loss flexible
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, low loss flexible
PRF92-P-C-EE-118-SD	Haverhill HC35004, .118, semi-rigid
PRF92-J-C-EP-402-SS	RG 402, .141, semi-rigid
PRF92-J-C-EP-047D-4S	.047, semi-rigid
PRF92-J-C-EP-405-4S	RG 405, .085, semi-rigid
PRF92-P-C-EE-405-SD	RG 405, .085, semi-rigid
PRF92-P-C-EP-086-SS	.086 Temp-Flex, low loss flexible
PRF92-P-C-EP-200-SS	Times Max Gain 200, low loss flexible

INTERFACE STANDARD



P-C = Cable Plug
J-P = 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

2.92 mm Board Connectors

292

Cable Mates:
RF047-A, RF085, RF086, RF23C, RF120

292	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION

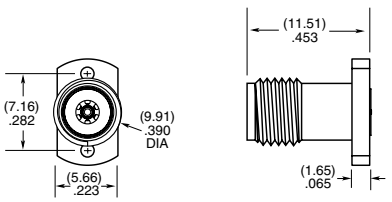
–J
= Jack

–P
= PCB Mount

–HP
= 30 µ" (0.76 µm) Gold center contact, Passivated outer contact

–ST
= Straight

–CM2
= Compression Mount



3.50 mm TO 34 GHz

3.50 mm Cable Assemblies
RF23S

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF23S = MWC-2350-01 microwave cable with 23 AWG solid FEP Dielectric		**–35SJP** = 3.50 mm Straight Jack **–35SPP** = 3.50 mm Straight Plug	**–"XXXX"** = Overall Length in millimeters –0100 (100 mm) 3.94" min.

VSWR

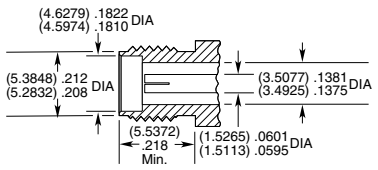
RF23S: 1.30 max

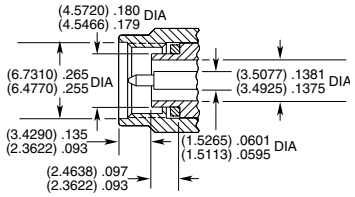
3.50 mm Cable Connectors
PRF35

CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF35-P-C-EP-405-SS	RG 405, .085, 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, low loss flexible
PRF35-J-C-EP-160-SS	Semflex HP160, low loss flexible
PRF35-P-C-EP-160-SS	Semflex HP160, low loss flexible

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





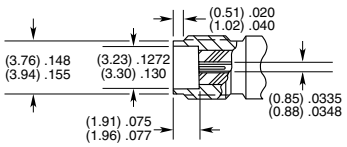
SSMA TO 34 GHz

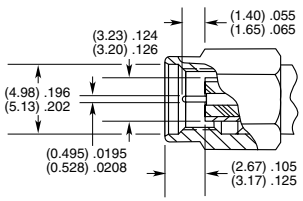
SSMA Cable Connectors
PRFS1

CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRFS1-J-C-EE-405-BD	RG 405, .085, semi-rigid
PRFS1-P-C-EE-405-SD	RG 405, .085, semi-rigid
PRFS1-P-C-EP-141A-SS	Harbour SS402, flexible alternative to RG 402

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 Cable Assemblies
RF25S, RF402, RF405, RF180, RF280

SERIES	–	END 1 CONNECTOR	–	END 2 CONNECTOR	–	OVERALL LENGTH

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

–01SP1*
= SMA Straight Plug

–01RP1*
= SMA Right-angle Plug (RF25S not available)

–01BJ1*
= SMA Bulkhead Jack (RF402 & RF405 not available)

*Remove last "1" from end connector when specifying RF180 & RF280.

–"XXXX"
= Overall Length in millimeters

–0100 (100 mm) 3.94" minimum

VSWR

RF25S: 1.60 max.
RF402: 1.50 max.
RF405: 1.35 max.
RF180: 1.35 max.
RF280: 1.35 max.

Additional connector options available.
Contact RFGroup@samtec.com

ALSO AVAILABLE

SMP = RF25S, RF405

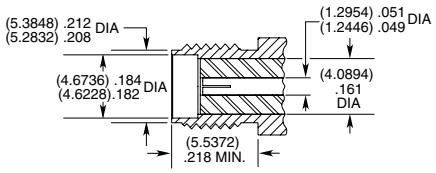
TNCA, N Type = RF180

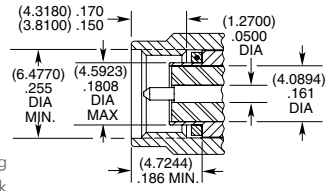
TNCA, N Type = RF280

SMA Cable Connectors
PRF01

CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF01-P-C-EP-120B-SS	IW 1201, low loss flexible
PRF01-P-C-EP-120-SS	Harbour LL120, low loss flexible
PRF01-P-C-EP-142-SS	Harbour LL142, low loss flexible
PRF01-P-C-EP-190-SS	Semflex HP190, low loss flexible
PRF01-P-C-EP-335-SS	Harbour LL335, low loss flexible
PRF01-P-C-EP-290-SS	Semflex LA290, low loss flexible
PRF01-P-C-EP-142A-SS	Harbour SB142, low loss flexible
PRF01-P-C-EP-142-RS	Harbour LL142, low loss flexible
PRF01-P-C-EP-190-RS	Semflex HP190, low loss flexible
PRF01-J-C-EP-142-SS	Harbour LL142, low loss flexible
PRF01-P-C-EP-141A-SS	Harbour SS402, flexible alternative to RG 402
PRF01-P-C-EP-160-RS	Semflex HP160, low loss flexible
PRF01-P-C-EP-305-SS	Semflex HP305, low loss flexible
PRF01-P-C-EP-335A-SS	Harbour LL335i, low loss flexible
PRF01-P-C-EE-402-SD	RG 402, .141, semi-rigid
PRF01-P-C-EP-150-SS	Dynawave DF150, low loss flexible
PRF01-J-C-EE-405-SD	RG 405, .085, semi-rigid
PRF01-P-C-EE-047D-SD	.047, semi-rigid
PRF01-J-C-EE-047D-4D	.047, semi-rigid
PRF01-J-C-EE-047D-SD	.047, semi-rigid
PRF01-P-C-EP-160-SS	Semflex HP160, low loss flexible
PRF01-P-C-EE-405-SD	RG 405, .085, semi-rigid
PRF01-P-C-EP-200-SS	Times Max Gain 200, low loss flexible

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
RS = Right-angle, Solder Clamp
4D = 4-hole flange, Direct Solder

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

Cable Mates:
RF25S, RF402, RF405, RF180, RF280

SMA	–	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

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

–ST
= Straight

–RA
= Right-angle

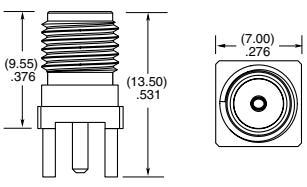
–TH1
= Through-hole

–SM1
= Surface Mount (-GF-RA only)

–EM1
= Edge Mount (-ST only)

–EM3
= Drop-in Edge Mount (-ST only)

–MT1
= Mixed Technology (-ST only)



-ST-TH1

SMPM Cable Assemblies

RF047-A, RF086, RF23C

VSWR

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

SERIES	–	END 1 CONNECTOR	–	END 2 CONNECTOR	–	OVERALL LENGTH

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

–M0SP
= SMPM Straight Plug, Full Detent

–M0SJ
= SMPM Straight Jack

–M0RJ
= SMPM Right-angle Jack
(RF047-A only)

–M0BJ
= SMPM Straight Bulkhead Jack
(RF047-A only)

–"XXXX"
= Overall Length in millimeters

–0100 (0100 mm) 3.94" minimum
(RF047-A, RF086)

–0152 (0152 mm) 5.984" minimum
(RF23C)

ALSO AVAILABLE

1.85 mm, 2.40 mm, 2.92 mm = RF086

1.35 mm, 1.85 mm, 2.40 mm,
2.92 mm = RF047-A

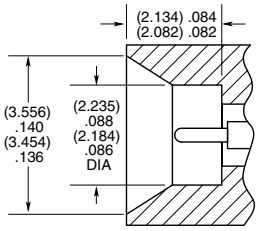
2.40 mm, 2.92 mm = RF23C

SMPM Cable Connectors

PRFM0

CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRFM0-J-C-EE-047A-BD	.047 Temp-Flex, low loss flexible, 29 AWG
PRFM0-J-C-EE-085-BD	Harbour SS405, flexible alternative to RG 405
PRFM0-J-C-EE-047A-RD	.047 Temp-Flex, low loss flexible, 29 AWG
PRFM0-J-C-EE-086-SD	.086 Temp-Flex, low loss flexible
PRFM0-J-C-EE-047B-SD	.047 Temp-Flex, low loss flexible, 28 AWG
PRFM0-P-C-HG-047A-SD	.047 Temp-Flex, low loss flexible, 29 AWG
PRFM0-J-C-HG-047A-SD	.047 Temp-Flex, low loss flexible, 29 AWG

INTERFACE STANDARD (CATCHERS MITT)

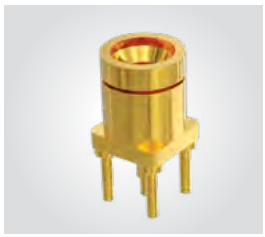


P-C = Cable Plug
J-C = Cable Jack
EE = Plating (50 µ" Gold center contact, & outer contact)
HG = Plating (30 µ" Gold center contact, 10 µ" Gold outer contact)
SD = Straight, Direct Solder
BD = Bulkhead, Direct Solder
RD = Right-angle, Direct Solder

SMPM Board Connectors

SMPM-SM, SMPM-TH,
SMPM-RA

Cable Mates:
RF047-A, RF086, RF23C



SMPM	–	GENDER	–	TYPE	–	PLATING	–	ORIENTATION	–	TERMINATION	–	1

–PF
= Full Detent

–PS
= Smooth Bore

–PC
= Catchers Mitt
(–ST–TH only)

–P
= PCB
Mount

–HG
= 30 µ" (0.76 µm)
Gold center contact,
10 µ" (0.25 µm)
Gold outer contact
(–ST only)

–HF
= 30 µ" (0.76 µm)
Gold center contact,
3 µ" (0.08 µm)
Gold outer contact
(–RA only)

–EE
= 50 µ" (1.27 µm)
Gold center contact
and outer body
(–SM only)

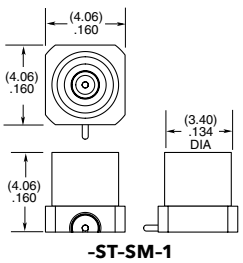
–ST
= Straight

–RA
= Righ-angle
(–TH required)

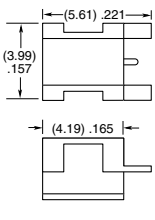
–EM
= Drop-in
Edge Mount
(–ST only)

–TH
= Through-hole

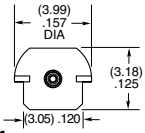
–SM
= Surface Mount
(–ST only)

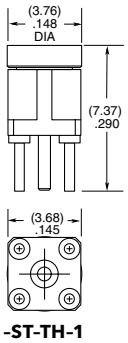


-ST-SM-1

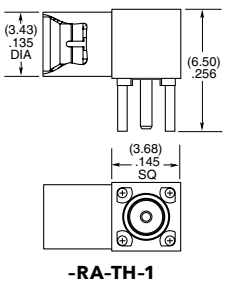


-ST-EM-1





-ST-TH-1



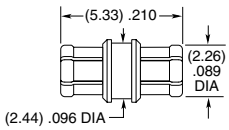
-RA-TH-1

SMPM TO 65 GHz

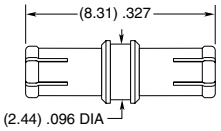
SMPM
Bullet Adaptor
PRFIA

Mates With:
SMPM, GPPB

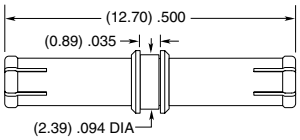
PRFIA	–	SMPM	–	GENDER	–	GENDER	–	ORIENTATION	–	OPTION
				–J = Jack		–J = Jack		–S = Straight		–1 = (5.33) .210 –2 = (8.31) .327 –3 =(12.70) .500 –4 = (4.22) .166



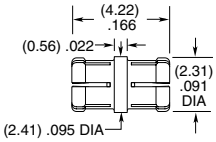
OPTION 1



OPTION 2



OPTION 3

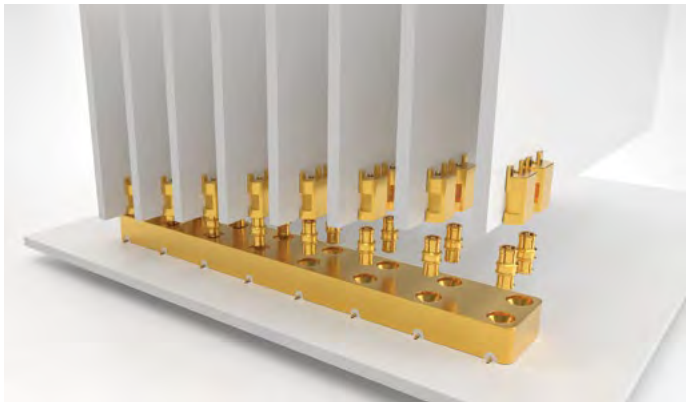


OPTION 4

GANGED SMPM SOLUTIONS

BOARD-TO-BOARD GANGED, MULTI-POSITION SMPM BLOCKS

Series: GPPB
Mates with: PRFIA

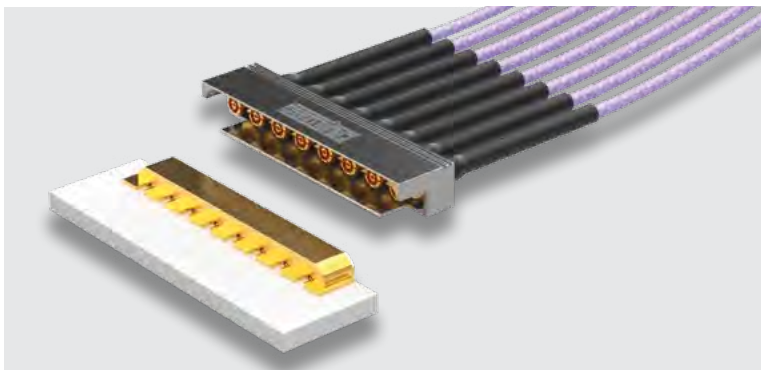


FEATURES

- High-density, space-saving design
- 8.33 mm (.328") pitch (3.56 mm (.140") pitch in development)
- Push-on interface with varying retention forces
- Bullet adaptors enable blind mate applications accommodating axial and radial misalignment
- Board height options: 4.22 mm (.166") , 5.33 mm (.210"), 8.31 mm (.327"), 12.70 mm (.500")

CABLE-TO-BOARD GANGED, MULTI-POSITION SMPM CABLE ASSEMBLY

Cable Assembly: GC47
Board Mate: GPPC



FEATURES

- High-density, space-saving design
- Pitch: 3.56 mm (.140")
- Push-on interface for quick installation
- .047 low-loss flexible microwave/millimeter wave cable

Applications include: 5G wireless, mmWave, military/defense, telecom, radar, test & measurement, applications that are space limited and require high operating frequency

SMP Cable Assemblies
RF25S, RF405

VSWR

RF25S: Contact Samtec
RF405: Contact Samtec

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF25S = MWC-2550-01 microwave cable with 25 AWG solid FEP dielectric **RF405** = RG 405 (.086") 24 AWG semi-flexible microwave cable	**–00SJ7** = SMP Straight Jack **–00RJ7** = SMP Right-angle Jack		**–"XXXX"** = Overall Length in millimeters –0100 (100 mm) 3.94" minimum

ALSO AVAILABLE

SMA = RF25S

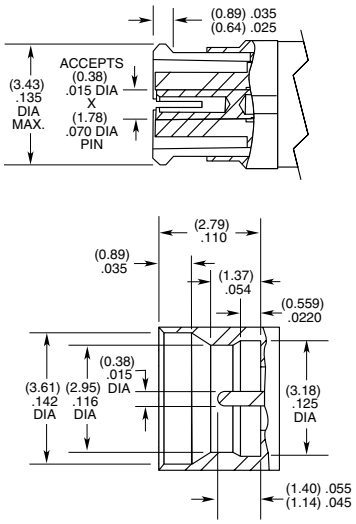
SMA = RF405

SMP Cable Connectors
PRF00

CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF00-J-C-EE-047A-RD	.047 Temp-Flex, low loss flexible, 29 AWG
PRF00-J-C-EE-085A-SD	.085, semi-rigid, 23 AWG
PRF00-PF-C-KK-047D-BD	.047, semi-rigid

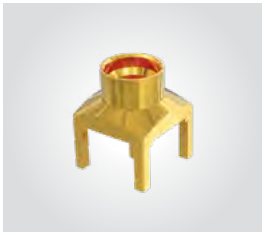
J-C = Cable Jack
EE = Plating (50 µ" Gold center contact & outer contact)
KK = Plating (100 µ" Gold over Nickel center contact, passivated outer contact)
BD = Bulkhead, Direct Solder
SD = Straight, Direct Solder
RD = Right-angle, Direct Solder

INTERFACE STANDARD (FULL DETENT)

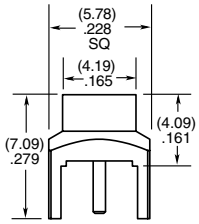


SMP Board Connectors
SMP-TH, SMP-EM

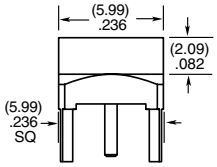
Cable Mates:
RF405, RF25S



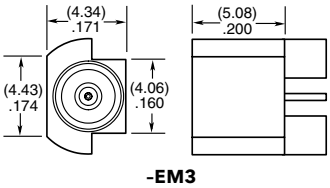
SMP	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–PF = Plug, Full Detent **–PL** = Plug, Limited Detent **–PS** = Plug, Smooth Bore **–PC** = Plug, Catcher's Mitt	**–P** = PCB Mount	**–GF** = 10 µ" (0.25 µm) Gold center contact, Gold Flash outer contact (–TH2 only) **–HH** = 30 µ" (0.76 µm) Gold center and outer contact (–EM3)	**–ST** = Straight	**–TH2** = Through-hole **–EM3** = Drop-in Edge Mount (Not available with –PC)



-PF/-PL/-PS-TH2



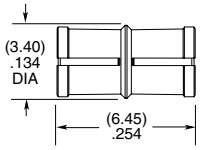
-PC-TH2



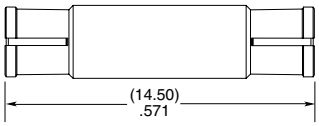
-EM3

SMP Bullet Adaptor
SMP-B

SMP	J	TYPE	PLATING	ORIENTATION	BULLET LENGTH
		–B = Bullet Adaptor	**–GF** = 10 µ" (0.25 µm) Gold center contact, Gold Flash outer contact	**–ST** = Straight	**–0645** = 6.45 mm (.254") **–1450** = 14.50 mm (.571")



-0645



-1450

APPLICATION

Compensates for axial & radial misalignment

N Type Cable Assemblies
RF180, RF280

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	**–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	**–06RP** = N Type Right-angle Plug	-0100 (100 mm) 3.94" minimum
	–06BJ = N Type Straight Bulkhead Jack	**–06BJ** = N Type Straight Bulkhead Jack	

VSWR

RF180: 1.35 max.
RF280: 1.35 max.

ALSO AVAILABLE

SMA, TNCA = RF180

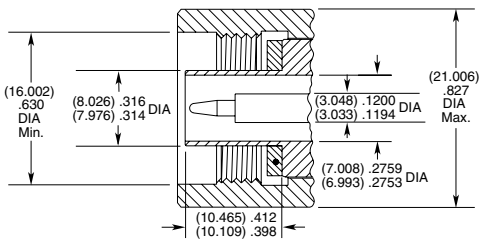
SMA, TNCA = RF280

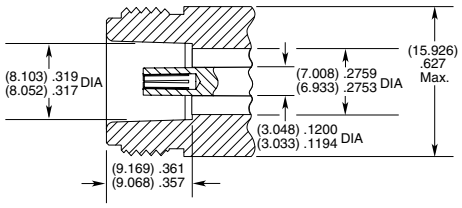
N Type Cable Connectors
PRF06

CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF06-P-C-EP-142-SS	Harbour LL142, low loss flexible
PRF06-P-C-EP-190-SS	Semflex HP190, low loss flexible
PRF06-P-C-EP-335-SS	Harbour LL335, low loss flexible
PRF06-P-C-EP-290-SS	Semflex LA290, low loss flexible
PRF06-P-C-EP-142A-SS	Harbour SB142, low loss flexible
PRF06-P-C-EP-305-SS	Semflex HP305, low loss flexible
PRF06-P-C-EP-335-RS	Harbour LL335, low loss flexible
PRF06-J-C-EP-142-BS	Harbour LL142, low loss flexible
PRF06-J-C-EP-190-BS	Semflex HP190, low loss flexible
PRF06-P-C-EP-120A-SS	Semflex HP120, low loss flexible
PRF06-J-C-EP-402-4S	RG 402, .141, semi-rigid
PRF06-P-C-EP-142-RS	Harbour LL142, low loss flexible
PRF06-P-C-EP-190-RS	Semflex HP190, low loss flexible
PRF06-J-C-EP-290-BS	Semflex LA290, low loss flexible
PRF06-P-C-EP-141A-SS	Harbour SS402, flexible alternative to RG 402
PRF06-J-C-EP-335-BS	Harbour LL335, low loss flexible
PRF06-P-C-EP-335A-SS	Harbour LL335i, low loss flexible
PRF06-P-C-EP-290-RS	Semflex LA290, low loss flexible
PRF06-P-C-EP-300A-SS	Times Max Gain 300, low loss flexible
PRF06-P-C-EP-335A-RS	Harbour LL335i, low loss flexible
PRF06-P-C-EP-160B-SS	ATM CF-210, low loss flexible
PRF06-P-C-EP-270A-RS	Dynawave DF218, low loss flexible

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

INTERFACE STANDARD





TNCA TO 18 GHz

TNCA Cable Assemblies
RF180, RF280

VSWR

RF180: 1.35 max.
RF280: 1.35 max.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF180 = (4.52 mm) .178" overshield DIA, 16 AWG microwave cable **RF280** = (7 mm) .277" overshield DIA, 11 AWG microwave cable	**–04SP** = TNCA Straight Plug **–04RP** = TNCA Right-angle Plug **–04BJ** = TNCA Straight Bulkhead Jack		**-"XXXX"** = Overall length in millimeters -0100 (100 mm) 3.94" minimum

ALSO AVAILABLE

SMA, N Type = RF180

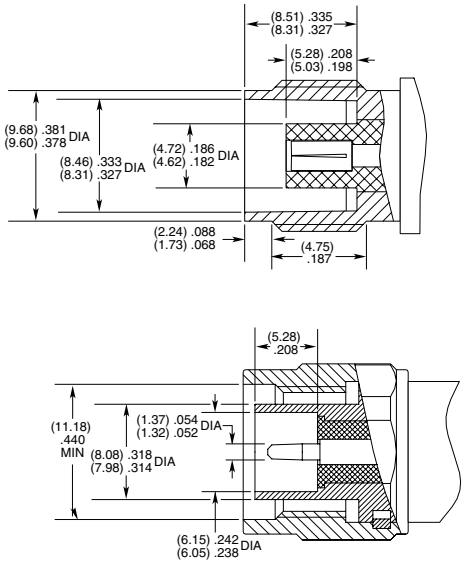
SMA, N Type = RF280

TNCA Cable Connectors
PRF04

CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRF04-P-C-EP-142-RS	Harbour LL142, low loss flexible
PRF04-J-C-EP-142-BS	Harbour LL142, low loss flexible
PRF04-P-C-EP-142-SS	Harbour LL142, low loss flexible
PRF04-P-C-EP-335-SS	Harbour LL335, low loss flexible
PRF04-P-C-EP-290-SS	Semflex LA290, low loss flexible
PRF04-J-C-EP-190-BS	Semflex HP190, low loss flexible
PRF04-P-C-EP-190-RS	Semflex HP190, low loss flexible
PRF04-P-C-EP-190-SS	Semflex HP190, low loss flexible
PRF04-P-C-EP-335A-RS	Harbour LL335i, low loss flexible
PRF04-J-C-EP-335A-BS	Harbour LL335i, low loss flexible
PRF04-P-C-EP-300A-SS	Times Max Gain 300, low loss flexible
PRF04-P-C-EP-200-SS	Times Max Gain 200, low loss flexible

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

INTERFACE STANDARD



BULLSEYE®
TEST POINT SYSTEM

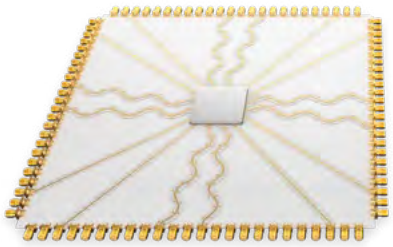
HIGH-PERFORMANCE TEST ASSEMBLIES TO 70 GHz

FEATURES & BENEFITS

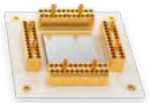
The high-density array designs and advanced cabling solutions within Samtec's Bulls Eye® product family support test and measurement applications to 70 GHz.

- Compression interface to the board provides easy on/off and eliminates soldering costs
- High-density, space-saving design
- Enables smaller evaluation boards and shorter trace lengths
- Installation: while the attach process for each series is similar, each have unique specifications that need to be observed

Traditional with SMAs



Bulls Eye®



HIGH-DENSITY & SPACE-SAVING

Enables smaller evaluation boards and shorter trace lengths.

PRODUCT FAMILY CROSS REFERENCE GUIDE

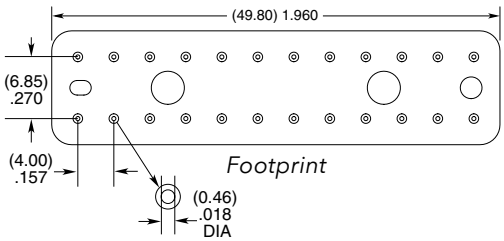
ASSEMBLY	70 GHz	50 GHz	40 GHz	20 GHz	
End 2 Connectors	1.85 mm	2.40 mm (50 GHz)	2.92 mm (40 GHz)	2.92 mm (2 Row)	2.92 mm (4 Row)
Samtec Series	BE70A	BE40A		BDRA	BQRA
Cable Type	.086	MWC-2350CU-01		MWC-2350-01	
Cable Management	Yes				
PCB Transmission	Microstrip or Stripline			Stripline	
Design	Spring-Loaded Contact; 360° Grounding 	Pogo-Pin for Signal & Ground 		Fixed-Pin for Signal; Elastomer & Block for Ground 	
No. of Positions	2x 3, 4, 6, 8, 10, 12, 14, 16			2x 12	20
Impedance	50 Ω				
FPGA Development Kit		Xilinx® Zynq® UltraScale+™ RFSoC ZCU1275			Xilinx® Virtex® UltraScale™ FPGA VCU110

BE70A	–	TRANSMISSION TYPE	–	END 2	–	PHASE MATCHING	–	2	–	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-second **–5** = 5.0 Pico-second **–N** = No Phase Matching				**–03, –04, –06, –08, –10, –12, –14, –16**		**–"XXXX"** = Overall length in millimeters –0152 (0152 mm) 5.984" to –9999 (9999 mm) 393.7"

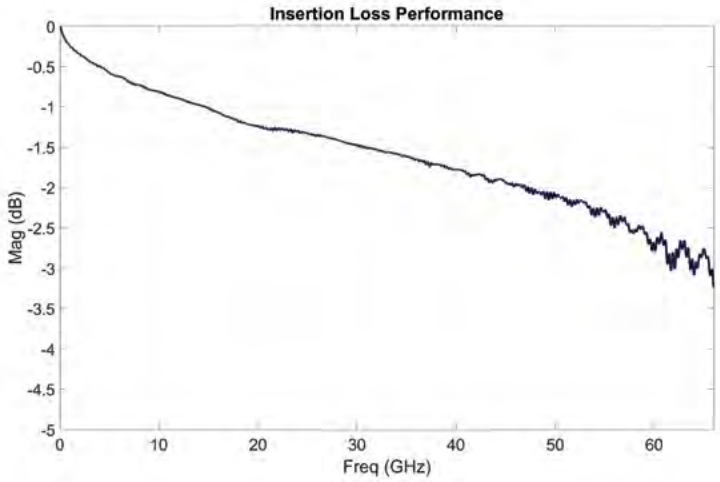
BE70A

End 2 Connectors:
1.85 mm (70 GHz)

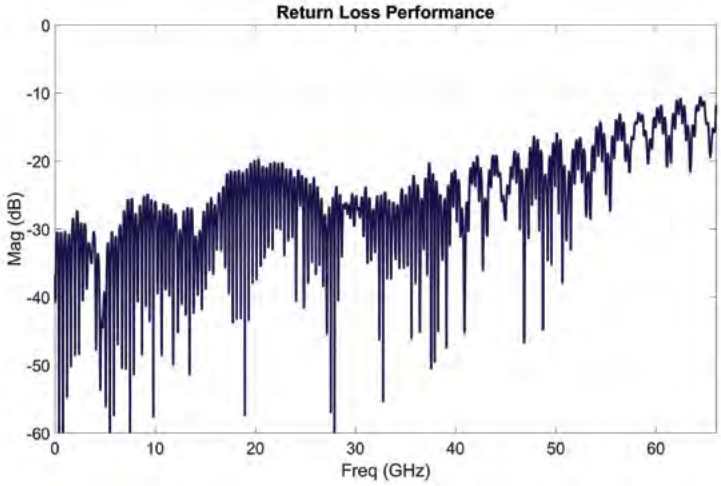
12 POSITIONS PER ROW SHOWN



BE70A, 2 X 4 FOOTPRINT, 12-INCH CABLE



~3 dB LOSS: BREAKOUT REGION + BE70A



MEASURED: 1.975 mm STRIPLINE + BREAKOUT REGION + BE70A

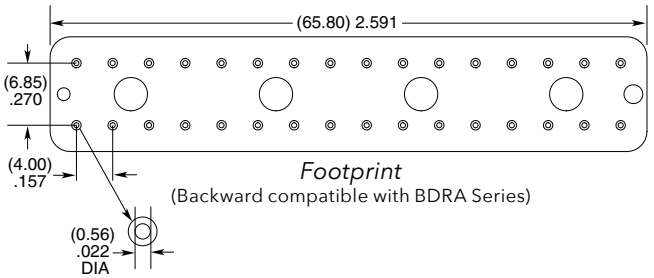
50 GHz & 40 GHz ASSEMBLIES

BE40A	–	TRANSMISSION TYPE	–	END 2	–	PHASE MATCHING	–	2	–	POSITIONS PER ROW	–	OVERALL LENGTH
		–S = Stripline **–M** = Microstrip		**–92SJ** = 40 GHz, 2.92 mm Straight Plug **–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-second **–5** = 5.0 Pico-second **–N** = No Phase Matching				**–03, –04, –06, –08, –10, –12, –14, –16**		**–"XXXX"** = Overall length in millimeters –0152 (0152 mm) 5.984" to –9999 (9999 mm) 393.7"

BE40A

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

16 POSITIONS PER ROW SHOWN



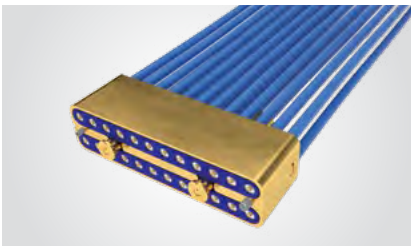
Footprint
(Backward compatible with BDRA Series)

20 GHz ASSEMBLIES

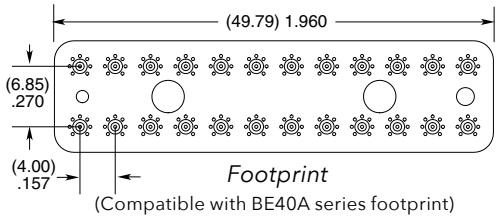
BDRA	–	END 2	–	PHASE MATCHING	–	12	–	OVERALL LENGTH
		–92SJP = 2.92 mm Straight Jack **–92SPP** = 2.92 mm Straight Plug		**–2** = 2.0 Pico-second **–5** = 5.0 Pico-second **–10** = 10.0 Pico-second		**–12** = Number of phase matched pairs		**–"XXXX"** = Overall length in millimeters –0100 (100 mm) 3.94" to –9999 (9999 mm) 393.7"

BDRA

End 2 Connectors:
2.92 mm



12 POSITIONS PER ROW SHOWN



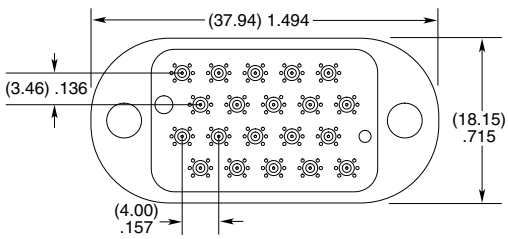
Footprint
(Compatible with BE40A series footprint)

BQRA	–	END 2	–	PHASE MATCHING	–	10	–	OVERALL LENGTH
		–92SJP = 2.92 mm Straight Jack **–92SPP** = 2.92 mm Straight Plug		**–2** = 2.0 Pico-second **–5** = 5.0 Pico-second **–10** = 10.0 Pico-second		**–10** = Number of phase matched pairs		**–"XXXX"** = Overall length in millimeters –0100 (100 mm) 3.94" to –9999 (9999 mm) 393.7"

BQRA

End 2 Connectors:
2.92 mm

20 POSITIONS, 4 ROWS



Footprint

NEXT GENERATION WAVEGUIDE TECHNOLOGY

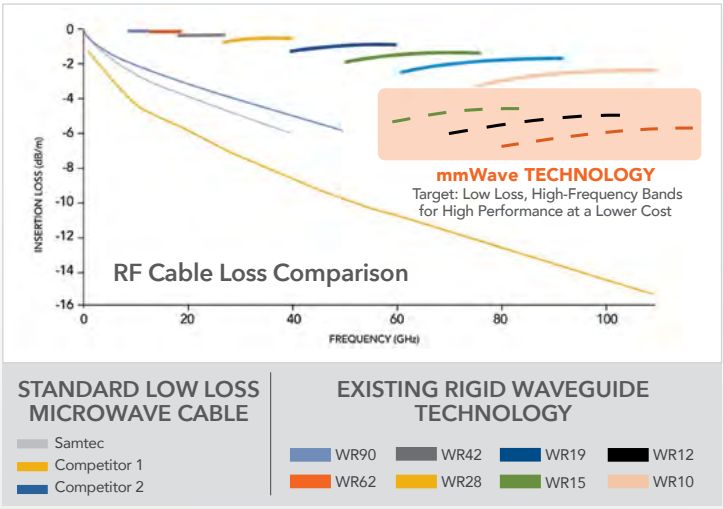
ULTRA SMALL FORM FACTOR • LOW LOSS DIELECTRIC • FLEXIBLE CABLE

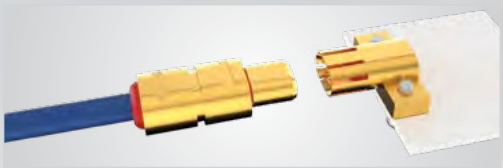
To support the demands of next generation systems, Samtec is developing innovative interconnect solutions such as our new mmWave technology, which enables a high-frequency, ultra-small form factor, and highly flexible waveguide design.

Samtec High-Frequency Micro Waveguides offer high-performance at a lower overall cost than traditional metallic waveguides. Products currently in testing:

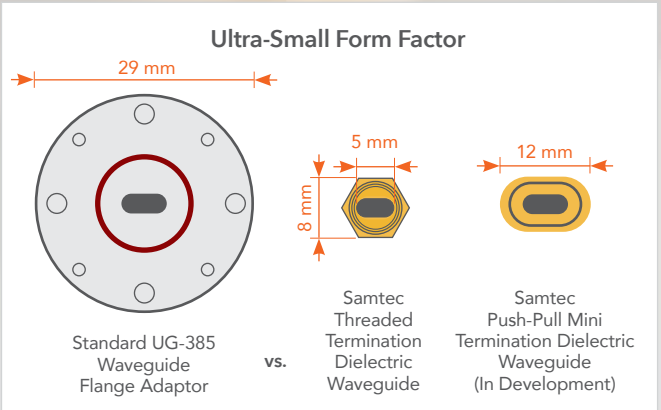
- Threaded Termination Cable and mating PCB Launch Right-Angle Connector
- In Development: Push-Pull Style Mini Termination Cable and mating PCB Launch Right-Angle Connector
- Roadmap: Low Loss Dielectric Push-Pull Mini Termination Cable and Vertical PCB Launch Connector
- Adaptors to traditional waveguide interfaces also available

Contact **RFGroup@samtec.com** for additional details.





Push-Pull Mini Termination Cable & PCB Launch Right-Angle Connector
(In Development)



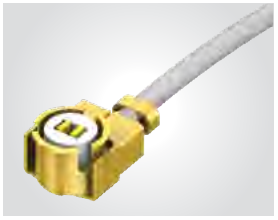
LOW-FREQUENCY CABLES

STANDARD OFF-THE-SHELF ASSEMBLIES

TYPE		50 Ω CABLES						75 Ω CABLES						100 Ω CABLES
		RG 178	CTB-2650F-01	RG 174	RG 316	RG 316 DS	RG 58	RG 179	BELDEN 1855A	BELDEN 1694A	BELDEN 4855R	BELDEN 4694R	RG 6	TPS-28100-RF
ELECTRICAL														
Impedence	Ω	50 ± 2		50 ± 5	50 ± 2	50 ± 3		75 ± 3						100 ± 5
Insertion Loss (dB/m)	100 MHz	0.50	0.68	0.40	0.30	1.4 @ 2 GHz	0.20	0.30	0.12	0.07	0.12	0.06	0.07	------
	1 GHz	1.70	2.37	1.40	1.25	1.6 @ 3 GHz	0.80	0.80	0.37	0.21	0.36	0.19	0.21	------
	6 GHz	5.90	6.53	4.40	4.25	2.2 @ 5 GHz	5.40	3.60	0.97	0.59	0.91	0.51	0.59	------
Propagation Delay	nS/m	4.83	4.17	5.06	4.83	------	5.05	4.83	4.12	4.06		3.92	4.03	------
Current Rating	Amps	3	3	5	5	------	------	3	5	------	4.70	16	------	------
Capacitance	pF/m	96	85.6	101	96	95.8	102	64	55.7	53.14	53.40	52.20	53.14	38
CONSTRUCTION														
Center Conductor	Material	Silver Plated Copper Clad Steel	Silver Plated Copper	Bare 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
	AWG	30	26	26	26	26	20	30	23	18	23	18	18	28
Dielectric	Material	PTFE	Foamed FEP	KLPE	PTFE	FEP	Solid Polyethylene	PTFE	FHDPE	FHDPE	PE (Foam)		FHDPE	FEP
Shield	Material	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	FEP		PVC	FEP		PVC	FEP	PVC	PVC	PVC		PVC	PVC
	Temp Rating	-50 °C to +165 °C	-40 °C to +200 °C	-20 °C to +80 °C	-55 °C to +165 °C	------	-50 °C to +90 °C	-50 °C to +165 °C	-30 °C to +75 °C	-30 °C to +75 °C	-30 °C to +75 °C	-20 °C to +75 °C	-30 °C to +75 °C	-20 °C to +105 °C
MECHANICAL														
Bend Radius	Min	10.2 mm	3.175 mm	25.4 mm	12.7 mm	12.8 mm	48.3 mm	10.2 mm	38.1 mm	69.85 mm	41 mm	70 mm	69.85 mm	19.05 mm
Connector Options		MMCX, MCX, SMA, SMB, BNC, TNC, N Type	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	HD-BNC™, DIN 1.0/2.3	BNC, HD-BNC™, DIN 1.0/2.3		CJT
PART NUMBER														
Series		RF178	IJ5C	RF174	RF316, IJ5C, IJ5H, GRF1-C, GRF1H-C	RS316	RF058	RF179, GRF7-C, GRF7H-C	RFB8T	RFB6T	RFC8T	RFC6T	RFA6T	C28S

50 Ω MICRO HIGH FREQUENCY RF CABLES TO 6 GHz

MHF Cable Assemblies
MH081, MH113



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
MH081 = 0.81 mm Cable **MH113** = 1.13 mm Cable	Specify END OPTIONS from chart		**–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)

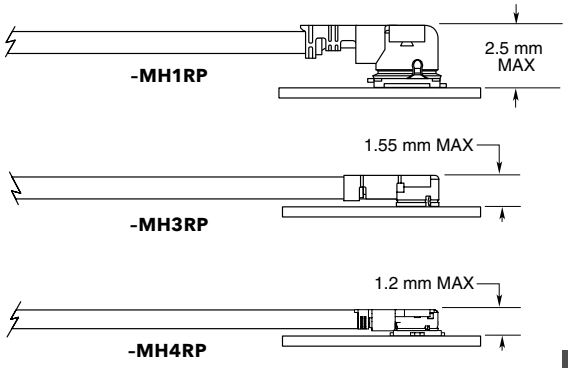
SPECIFICATIONS

Outer Contact Material:
Au plated Phosphor Bronze
Center Contact Material:
Au plated Phosphor Bronze (MHX)
Au plated BeCu (SMA)
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 Ωv/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

APPLICATION



EXTRACTION TOOLS

MH1RP = RSP-122893-01
MH3RP = RSP-122893-02
MH4RP = RSP-122893-03

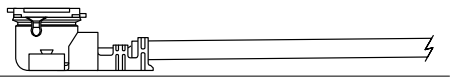
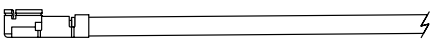
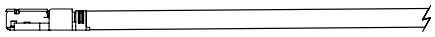
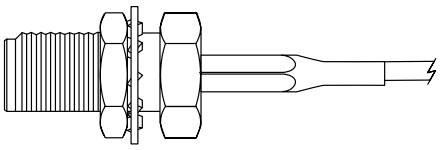
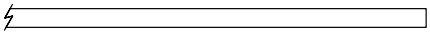
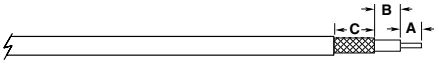
MATING SOLUTIONS

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

MH3RP end
mates with RSP-122811-02

MH4RP
end mates with RSP-122811-03

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)	
–MH3RP = MHF3 Type Plug (3.9 µ" (0.1 µm) Gold on Center Contact, 1.9 µ" (0.05 µm) Gold on Shell) (MH081 only)	
–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 centerconductor is tinned.

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

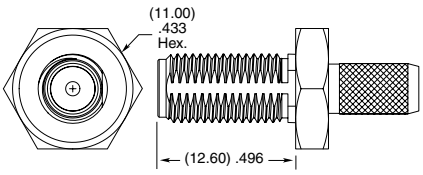
50 Ω: TNC = RF058

SMA Cable Connectors

SMA-CA

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

SMA	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–J = Jack	**–C** = Cable	**–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
		–C4 = Cable 4-Mounting Screws (–PN1 only)	**–HF** = 30 µ" (0.76 µm) Gold center contact, 3 µ" (0.08 µm) Gold outer contact (–BH1S only)		**–BH1S** = Bulkhead RG 316 Cable, Double Shield
					–BH2 = Bulkhead RG 178 Cable
					–B10 = Bulkhead RG 58 Cable
					–BR1 = Bulkhead RG 174 / 316, Reversed Polarity
					–PN1 = 4-Hole Panel Mount RG 174 / 316 Cable
					–BR2 = Bulkhead RG 178 Cable, Reversed Polarity
					–S10 = Sealed Bulkhead RG 58 Cable

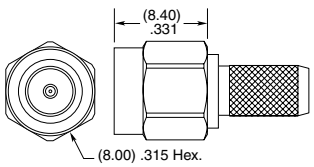


-S10, -B10

SMA Board Connectors

See page 145 for Board Connectors

SMA	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–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	**–CA1** = RG 174 / 316 Cable
				–RA = Right-angle	**–C10** = RG 58 Cable (–ST only)
			–HF = 30 µ" (0.76 µm) Gold center contact, 3 µ" (0.08 µm) Gold outer contact (–CA1S only)		**–CA1S** = RG 316 Double Shielded Cable (–ST only)



-ST-C10

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

MCX Cable Assemblies
RF174, RF178, RF316, RS316

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF174 = RG 174 Cable	**–02SJ1** = MCX Straight Jack	**–02SJ1** = MCX Straight Jack	**–"XXXX"** = Overall Length in millimeters
RF178 = RG 178 Cable	**–02RP1** = MCX Right-angle Plug (RS316 not available)	**–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	**–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 Cable Connectors
MCX-CA

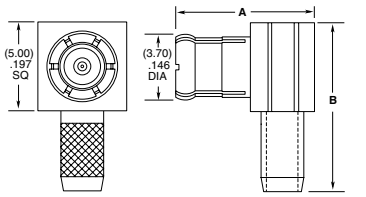
Supplied with pins and ferrules.
See website for dimensions.

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

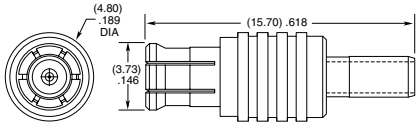
P-C = Cable Plug
J-C = Cable Jack
H or HF = Plating (30 µ" Gold center contact, 3 µ" Gold outer contact)
ST = Straight
RA = Right-angle

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

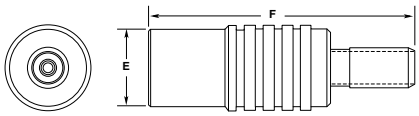
TYPE (-ST)	E	F
–J–CA1	(4.50) .177	(15.50) .610
–J–CA2	(4.78) .188	(15.00) .591
–J–CA1S	(4.50) .177	(15.50) .610



-RA



-P-ST

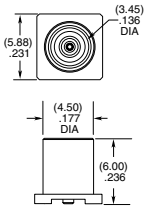


J-ST

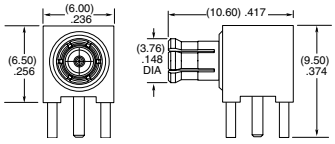
MCX Board Connectors
MCX-TH, MCX-SM, MCX-EM, MCX-MT

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	**–TH1** = Through-hole (–ST plug not available)
	–P = Plug			**–RA** = Right-angle	**–TH2** = Elevated Through-hole (–ST plug only)
					–SM1 = Surface Mount (Jack only)
					–EM1 = Edge Mount (–ST Jack only)
					–MT1 = Mixed Technology (–ST Jack only)



-ST-SM1 (Jack)



-RA-TH1 (Plug)

50 Ω MMCX TO 6 GHz

MMCX Cable Assemblies

RF174, RF178, RF316, RS316

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

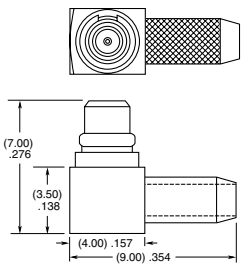
MMCX Cable Connectors

MMCX-CA

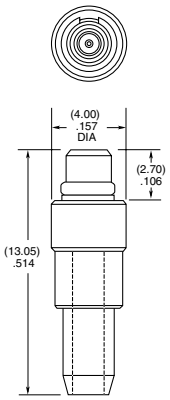
Supplied with pins and ferrules.
See website for dimensions.

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

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



-RA-CA1 & RA-CA2



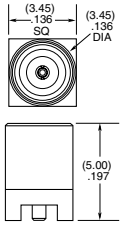
-ST-CA1, -ST-CA2 & -ST-CA1S

MMCX Board Connectors

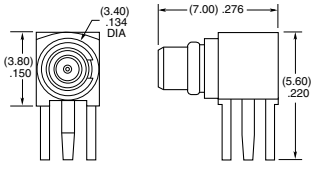
MMCX-SM, MMCX-TH, MMCX-MT, MMCX-EM

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

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



-ST-SM1 (Jack)



-RA-TH1 (Plug)

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

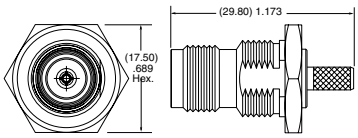
50 Ω: SMA, N Type = RF058

TNC Cable Connectors
TNC-CA

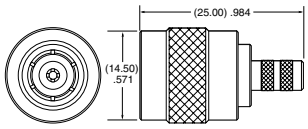
Supplied with pins, washers, nuts and ferrules. See website for dimensions.

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



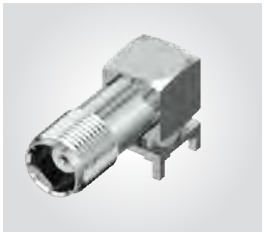
-J



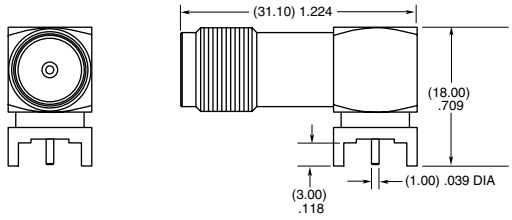
-P

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



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)	**–04SP3** = BNC Straight Plug (RS316 not available)	**–"XXXX"** = Overall Length in millimeters
RF178 = RG 178 Cable	**–04BJ2** = BNC Bulkhead Jack	**–04BJ2** = BNC Bulkhead Jack	–0100 (100 mm) 3.94" minimum
RF316 = RG 316 Cable, Single Braid Shield			
RS316 = RG 316 Cable, Double Shielded			

ALSO AVAILABLE

50 Ω: MCX, MMCX, SMA, SMB, TNC,

N Type = RF174, RF178, RF316

50 Ω: MCX, MMCX, SMA, TNC = RS 316

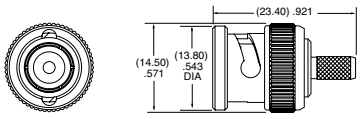
BNC Cable Connectors

BNC5-CA

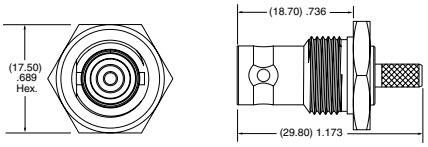
Supplied with pins, washers, nuts, gaskets and ferrules. See website for dimensions.

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

P-C = Cable Plug
J-C = Cable Jack
GN = Plating (10 µ" Gold on contact, Nickel on body)
ST = Straight



-P



-J

SMB Cable Assemblies
RF174, RF178, RF316

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

ALSO AVAILABLE

50 Ω: MCX, MMCX, SMA, BNC, TNC,

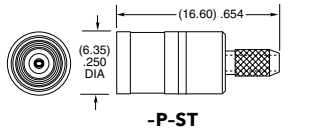
N Type = RF174, RF178, RF316

SMB Cable Connectors
SMB5-CA

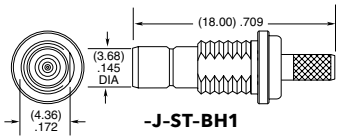
Supplied with pins, washers, nuts and ferrules. See website for dimensions.

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

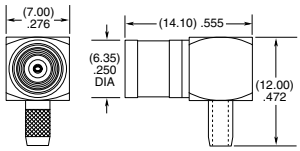
P-C = Cable Plug
J-C = Cable Jack
H = Plating (30 µ" Gold center contact, 3 µ" Gold on outer contact)
ST = Straight
RA = Right-angle



-P-ST



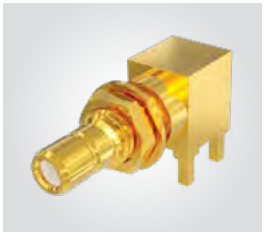
-J-ST-BH1



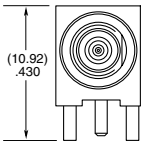
-P-RA

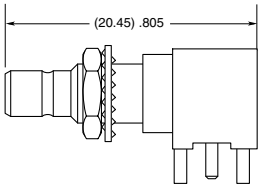
SMB Board Connectors
SMB5-TH

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





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	**–74SP3** = 75 Ω BNC Straight Plug	**–"XXXX"** = Overall Length in millimeters
RFA6T = RG 6 Cable	**–D4SP3** = 75 Ω BNC Die Cast Straight Plug	**–D4SP3** = 75 Ω BNC Die Cast Straight Plug	–0300 (300 mm) 11.81" minimum (RFA6T, RFB6T, RFC6T)
RFB6T = Belden 1694A Cable	**–74BJ3** = 75 Ω BNC Bulkhead Jack (RF179 only)	**–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)	**–74RP3** = 75 Ω BNC Right-angle Plug (RFA6T, RFB6T, RFC6T only)	

ALSO AVAILABLE

75 Ω: DIN 1.0/2.3, HD-BNC™ = 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

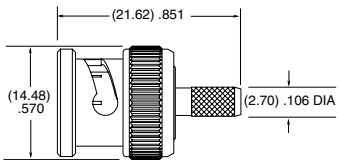
Supplied with pins, washers, nuts, gaskets and ferrules. See website for dimensions.

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, Belden 1694A or Belden 4694R Cable
BNC7T-P-C-GN-RA-CA6	*Machined, RG 6, Belden 1694A or 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

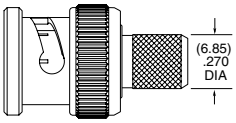
*Designed to meet SMPTE 2082 12G-SDI specifications.

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

DIE CAST

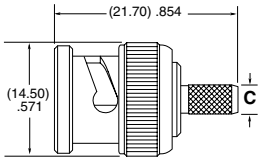


-CA3D

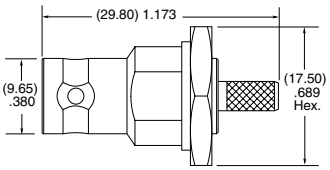


-CA6D

MACHINED



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



-J-ST-BH3

TERMINATION	C (DIA)
–CA3	(2.70) .106
–CA6	(6.85) .207

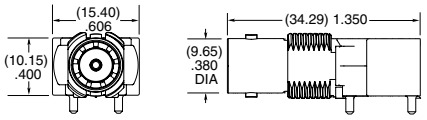
Note:
Additional plating options available on Cable Assemblies, Cable Connectors and Board Connectors. Contact RFGroup@samtec.com

75 Ω DIE CAST BNC TO 12 GHz

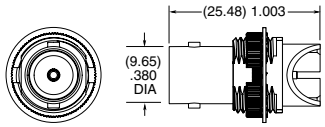
BNC Board Connectors
BNC7T-TH, BNC7T-BH, BNC7T-BM, BNC7T-EM

Cable Mates:
RF179, RFA6T, RFB6T, RFC6T, GRF7H-C

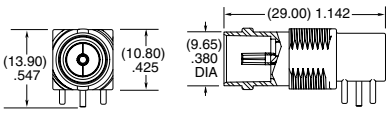
BNC7T	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–J = Jack	**–P** = PCB Mount	**–GN** = 10 µ" (0.25 µm) Gold contact, 100 µ" (2.54 µm) Nickel Shell	**–ST** = Straight **–RA** = Right-angle Bulkhead/Panel Mount	**–TH2D** = Tall Through-hole Die Cast (–ST only) **–BH2D*** = Low-Profile Die Cast Bulkhead 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)



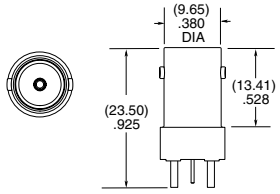
-RA-BM1D
(BALANCED FOR PICK-AND-PLACE)



-ST-EM1D & -ST-EM2D



-RA-BH2D



-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

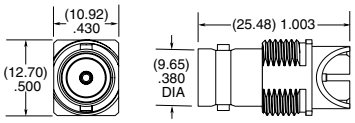
*Lock washers & knurled nuts supplied with bulkhead/panel mount options

75 Ω MACHINED BNC TO 12 GHz

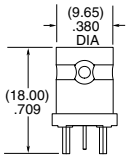
BNC Board Connectors
BNC7T-TH, BNC7T-BH, BNC7T-EM

Cable Mates:
RF179, RFA6T, RFB6T, RFC6T, GRF7H-C

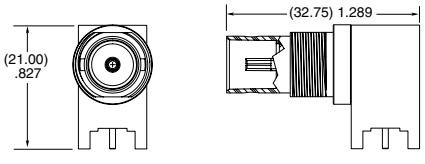
BNC7T	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–J = Jack	**–P** = PCB Mount	**–GN** = 10 µ" (0.25 µm) Gold contact, 100 µ" (2.54 µm) Nickel Shell	**–ST** = Straight **–RA** = Right-angle Bulkhead/Panel Mount	**–TH1** = Standard Through-hole (–ST only) **–BH1*** = Standard Bulkhead Through-hole (–RA 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)



-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

75 Ω HD-BNC™ TO 12 GHz

HD-BNC™ Cable Assemblies
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

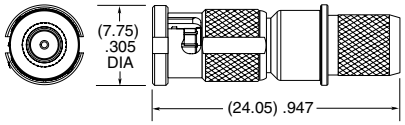
HD-BNC™ Cable Connectors
HDBNC-CA

Supplied with pins and ferrules. See website with dimensions.

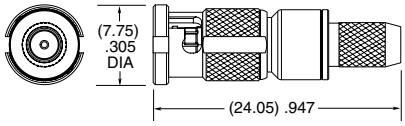
Designed to meet SMPTE 2082 12G-SDI specifications.

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

P-C = Cable Plug
GN = Plating (10 µ" Gold on contact, Nickel on outer contact & shell)
ST = Straight



-CA6



-CA8

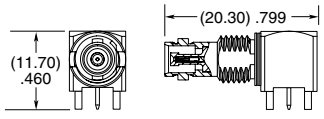
HD-BNC™ Board Connectors
HDBNC-TH, HDBNC-EM, HDBNC-BH, HDBNC-BM

Cable Mates:
RFA6T, RFB6T, RFB8T, RFC6T, RFC8T

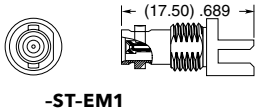
Notes:
Designed to meet SMPTE 2082 12G-SDI specifications.

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

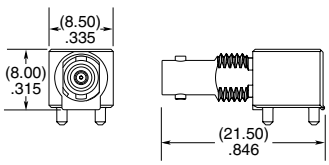
HDBNC	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–J = Jack	**–P** = PCB Mount	**–GN** = 10 µ" (0.25 µm) Gold contact, 100 µ" (2.54 µm) Nickel shell	**–ST** = Straight **–RA** = Right-angle	**–BH1** = Through-hole **–BH2** = Through-hole (2.36 mm) .093" PCB (-RA only) **–BM1D** = Die Cast Bulkhead Mixed Technology for (1.60 mm) .062" PCB (-RA only) **–BM2D** = Die Cast Bulkhead Mixed Technology for (3.18 mm) .125" PCB (-RA only) **–EM1** = Edge Mount (–ST only) **–TH1** = Through-hole (–ST only), Three Legs



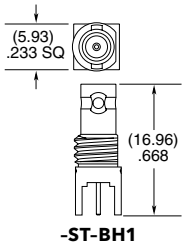
-RA-BH2



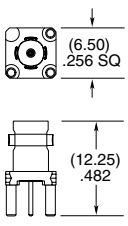
-ST-EM1



-RA-BM1D & -BM2D (BALANCED FOR PICK-AND-PLACE)



-ST-BH1



-ST-TH1

75 Ω DIN 1.0/2.3 TO 12 GHz

12G SDI

DIN Cable Assemblies
RFA6T, RFB6T, RF179, 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 **RF179** = RG 179 Cable **RFB8T** = Belden 1855A Cable		**–78SP4** = 75 Ω DIN Straight Plug	**–"XXXX"** = Overall length in millimeters –0100 (100 mm) 3.94" minimum (RF179) –0300 (300 mm) 11.81" minimum (RFA6T, RFB6T, RFB8T, RFC6T, RFC8T)

ALSO AVAILABLE

75 Ω: HD-BNC™, BNC = RFB6T, RFA6T, RFC6T

75 Ω: BNC, SMB, MCX, MMCX = RF179

75 Ω: HD-BNC™ = RFB8T, RFC8T

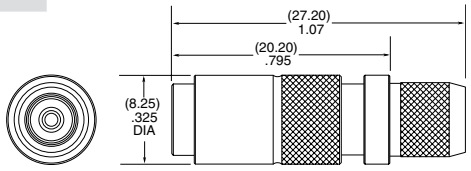
DIN Cable Connectors
DIN7A-CA

Supplied with pins and ferrules.
See website for dimensions

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

*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

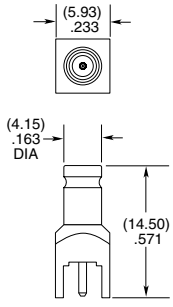


-CA6

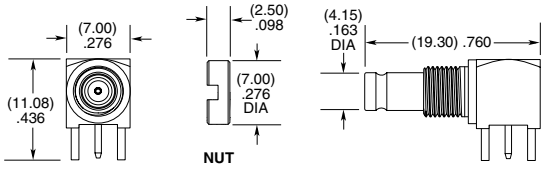
DIN Board Connectors
DIN7A-TH, DIN7A-BH

Cable Mates:
RFA6T, RFB6T, RF179, RFB8T, RFC6T, RFC8T, GRF7H-C

DIN7A	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–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)



-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 Cable Assemblies, Cable Connectors and Board Connectors. Contact RFGroup@samtec.com

SMB Cable Assemblies
RF179

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF179 = RG 179 Cable	**–77SP1** = 75 Ω SMB Straight Plug **–77RP1** = 75 Ω SMB Right-angle Plug		**–"XXXX"** = Overall Length in millimeters –0100 (100 mm) 3.94" minimum

ALSO AVAILABLE

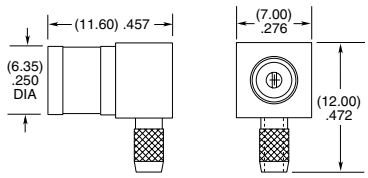
75 Ω: DIN 1.0/2.3, BNC, MCX, MMCX = RF179

SMB Cable Connectors
SMB7H-CA

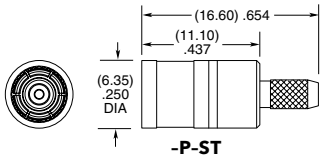
Supplied with pins and ferrules.
See website for dimensions

CONNECTORS FOR INDUSTRY STANDARD CABLES	
SMB7H -P-C-H-ST-CA3	RG 179 Cable
SMB7H-P-C-HF-RA-CA3	RG 179 Cable

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



-P-RA

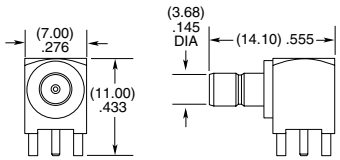


-P-ST

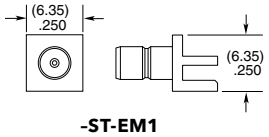
SMB Board Connectors
SMB7H-TH, SMB7H-EM

Cable Mates:
RF179, GRF7H-C

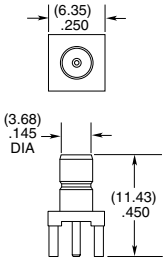
SMB7H	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–J = Jack	**–P** = PCB Mount	**–H** = 30 µ" (0.76 µm) Gold center contact, 3 µ" (0.08 µm) Gold outer contact	**–ST** = Straight **–RA** = Right-angle	**–TH1** = Through-hole ((0.90 mm) .035" DIA Signal Pin) **–TH2** = Through-hole ((0.51 mm) .020" DIA Signal Pin) (–ST only) **–EM1** = Edge Mount (–ST only)



-RA-TH1



-ST-EM1



-ST-TH1 & -ST-TH2

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

ORIGINAL RF SOLUTIONS

SHIELDED TWISTED PAIR SYSTEM

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

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)

ISORATE® SYSTEMS

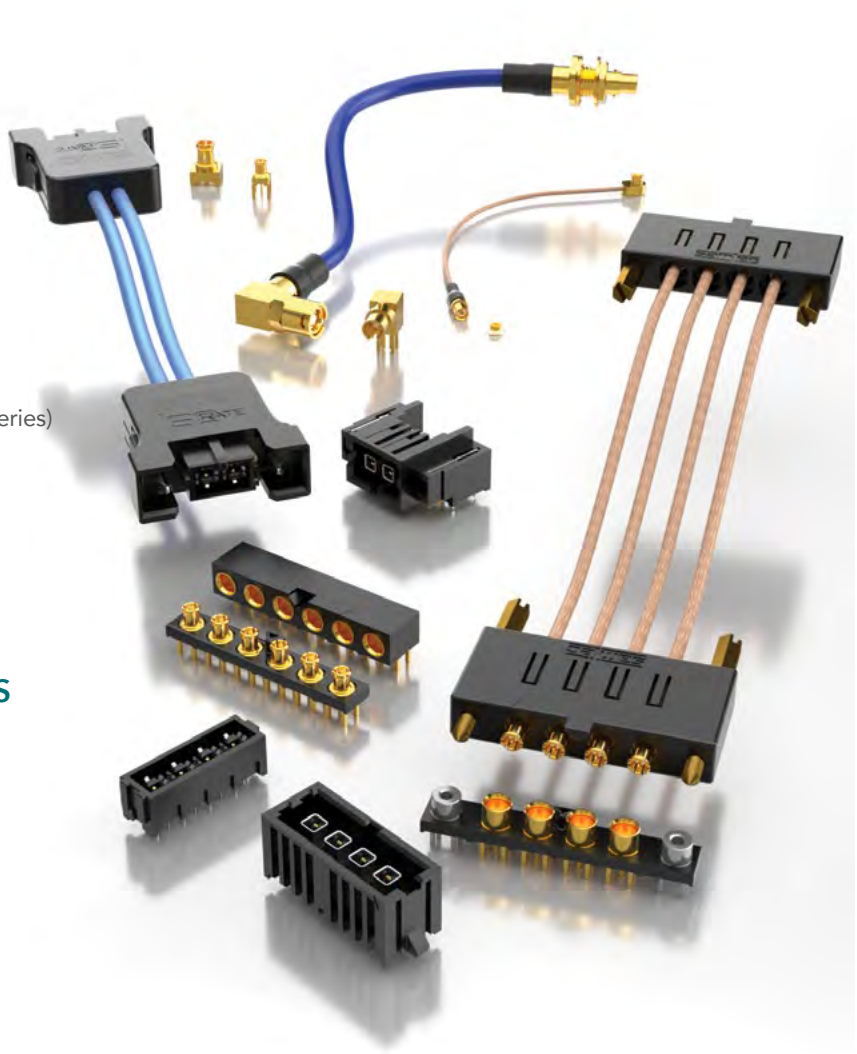
- 50 Ω board stacking and cable assemblies
- Isolated signal systems for 90 percent performance of traditional RF at 50 percent of the cost

MINI & MICRO-MINI INTERCONNECTS

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

HIGH-CYCLE U.FL CABLE PLUG

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



CABLE SOLUTIONS

SERIES	C28S/CJT	GRF1-C/GRF7-C	GRF1H-C/GRF7H-C	RF047	IJ5C/IJ5H
Application	Shielded Twisted Pair	50 Ω & 75 Ω Micro-Mini Ganged	50 & 75 Ω Micro-Mini Hybrid Ganged	50 Ω .047 DIA flexible cable	50 Ω IsoRate®
URL	**samtec.com?C28S samtec.com?CJT**	**samtec.com?GRF1-C samtec.com?GRF7-C**	**samtec.com?GRF1H-C samtec.com?GRF7H-C**	**samtec.com?RF047**	**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-SM samtec.com?MCX7-TH samtec.com?MCX7-CA**	**samtec.com?MMCXV-TH samtec.com?MMCXV-EM samtec.com?MMCXV-CA**	**samtec.com?IP5 samtec.com?IJ5**

CUSTOM RF APPLICATION SPECIFIC SOLUTIONS

EXTREME FLEXIBILITY • QUICK-TURN MODIFICATIONS • CUSTOM DESIGNS

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. Contact RFGroup@samtec.com to discuss your application.

CUSTOMIZED CABLE ASSEMBLIES • EXTREME FLEXIBILITY

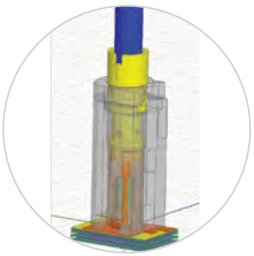
- Mix & Match solutions for any application
- Choose any cable connector
- Choose any standard cable

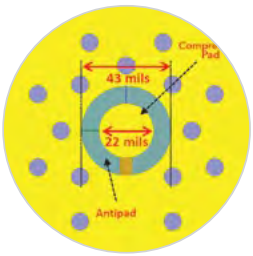
QUICK-TURN MODIFICATIONS & CUSTOMS • STANDARDS & NEW DESIGNS

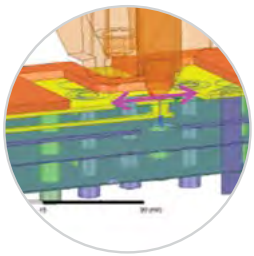
- Termination types
- Custom tail lengths / designs
- Right-angle height adjustment
- Heat-shrink tubing
- High-frequency applications
- Pick & Place machine designs
- Alternate platings
- Custom labels
- Test & Measurement solutions

TECHNICAL SUPPORT • FULL SYSTEM DESIGN & DEVELOPMENT

- Launch design
- Prototyping
- Fabrication
- Simulations
- Launch optimization support
- Full system test & measurement





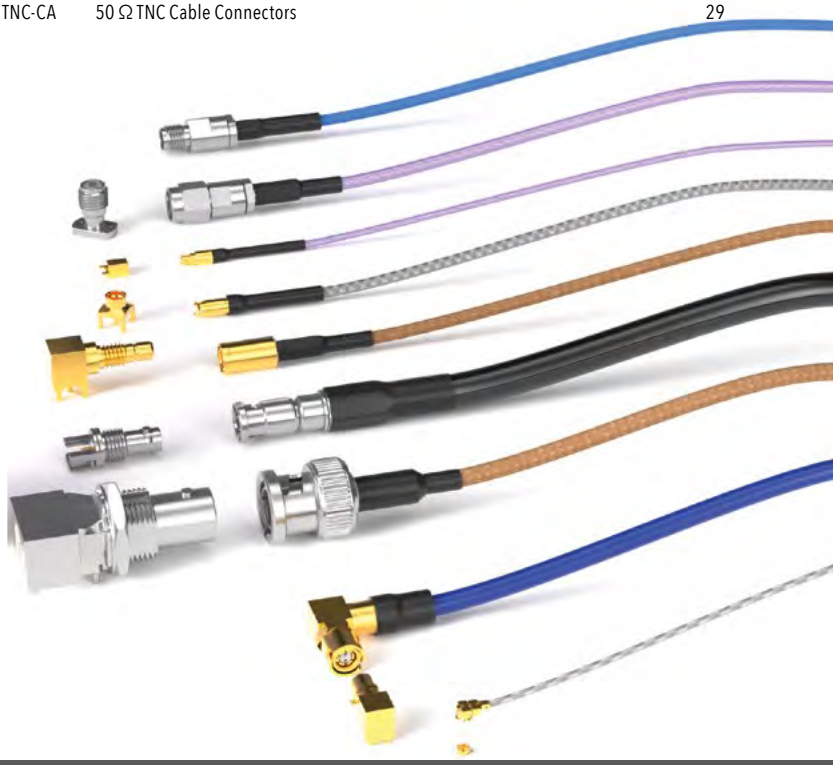


RF PRODUCT INDEX

Precision RF products highlighted in bold.

Series	Description	Page
135	**50 Ω Precision 1.35 mm Compression Jacks**	**8**
185	**50 Ω Precision 1.85 mm Compression Jacks**	**9**
240	**50 Ω Precision 2.40 mm Compression Jacks**	**10**
292	**50 Ω Precision 2.92 mm Compression Jacks**	**11**
BE70A	**70 GHz Bulls Eye® Assembly, Double Row**	**21**
BE40A	**50 GHz & 40 GHz Bulls Eye® Assembly, Double Row**	**22**
BDRA	**20 GHz Bulls Eye® Assembly, Double Row**	**22**
BNC5-CA	50 Ω BNC Cable Connectors	30
BNC7T	75 Ω 12G-SDI BNC Jacks	33
BNC7T-CA	75 Ω 12G-SDI BNC Cable Connectors	32
BQRA	**20 GHz Bulls Eye® Assembly, Quad Row**	**22**
C28S	100 Ω Shielded Twisted Pair Twinax Cable Assembly	37
CJT	100 Ω Twinax Jacks	37
DIN7A	75 Ω, 12G-SDI DIN 1.0/2.3 Jacks	35
DIN7A-CA	75 Ω, 12G-SDI DIN 1.0/2.3 Cable Connectors	35
GC47	**50 Ω Precision Ganged SMPM Cable Assembly**	**15**
GPPB	**50 Ω Precision Ganged SMPM Block, Board-to-Board**	**15**
GPPC	**50 Ω Ganged SMPM Cable Board Mates**	**15**
GRF1-C	5.00 mm 50 Ω Ganged Micro-Mini RF Plugs, Cable	37
GRF1H-C	5.00 mm 50 Ω Ganged Hybrid Micro-Mini RF Cable	37
GRF1-J	5.00 mm 50 Ω Ganged Micro-Mini RF Jacks, PCB Mount	37
GRF1-P	5.00 mm 50 Ω Ganged Micro-Mini RF Plugs, PCB Mount	37
GRF7-C	5.00 mm 75 Ω Ganged Micro-Mini RF Plugs, Cable	37
GRF7H-C	5.00 mm 75 Ω Ganged Hybrid Micro-Mini RF Cable	37
GRF7-P	5.00 mm 75 Ω Ganged Micro-Mini RF Plugs, PCB Mount	37
GRF7-J	5.00 mm 75 Ω Ganged Micro-Mini RF Jacks, PCB Mount	37
HDBNC	75 Ω, 12G-SDI High-Density BNC Jacks	34
HDBNC-CA	75 Ω, 12G-SDI High-Density Cable Connectors	34
IJ5	4.00 mm IsoRate® 50 Ω High Isolation RF Jack Strip	37
IJ5C	4.00 mm IsoRate® 50 Ω High Isolation RF Cable	37
IJ5H	4.00 mm IsoRate® 50 Ω High Isolation Hybrid Cable	37
IP5	4.00 mm IsoRate® 50 Ω High Isolation RF Plug Strip	37
MCX	50 Ω MCX Jacks & Plugs	27
MCX7	75 Ω MCX Jacks & Plugs	37
MCX7-CA	75 Ω MCX Cable Connectors	37
MCX-CA	50 Ω MCX Cable Connectors	27
MMCX	50 Ω MMCX Jacks & Plugs	28
MMCX-CA	50 Ω MMCX Cable Connectors	28
MMCX7	75 Ω MMCX Jacks & Plugs	37
MMCXV	50 Ω MMCX High-Vibration Jacks & Plugs	37
MMCXV-CA	50 Ω MMCX High-Vibration Cable Connectors	37
MH081	50 Ω Micro High-Frequency RF Cable, 0.81 mm DIA	25
MH113	50 Ω Micro High-Frequency RF Cable, 1.13 mm DIA	25
PRF00	**Precision SMP Cable Connectors, 40 GHz**	**16**
PRF01	**Precision SMA Cable Connectors, 18 GHz**	**13**
PRF04	**Precision TNCA Cable Connectors, 18 GHz**	**19**
PRF06	**Precision N Type Cable Connectors, 18 GHz**	**18**
PRF10	**Precision 1.00 mm Cable Connectors, 110 GHz**	**8**
PRF13	**Precision 1.35 mm Cable Connectors, 90 GHz**	**8**
PRF18	**Precision 1.85 mm Cable Connectors, 65 GHz**	**9**
PRF24	**Precision 2.40 mm Cable Connectors, 50 GHz**	**10**
PRF92	**Precision 2.92 mm Cable Connectors, 40 GHz**	**11**
PRF35	**Precision 3.50 mm Cable Connectors, 34 GHz**	**12**
PRFIA	**Precision SMPM Bullet Adaptors, 65 GHz**	**15**
PRFM0	**Precision SMPM Cable Connectors, 65 GHz**	**14**
PRFS1	**Precision SSMA Cable Connector, 34 GHz**	**12**

Series	Description	Page
RF047	50 Ω Flexible RF Cable Assembly, (.047" DIA) 28 AWG	37
RF047-A	**50 Ω .047" Overshield DIA, 29 AWG mmWave Cable**	**8, 9, 10, 11, 14**
RF058	50 Ω RF Cable Assembly, RG 58 Cable	26, 29
RF085	**50 Ω .085" Overshield DIA 24 AWG mmWave Cable**	**10, 11**
RF086	**50 Ω .086" Overshield DIA 23 AWG mmWave Cable**	**9, 10, 11, 14**
RF23C	**50 Ω MWC-2350CU-01 mmWave Cable with Copper Shield**	**10, 11, 14**
RF23S	**50 Ω MWC-2350-01 µWave Cable with 23 AWG Solid FEP Dielectric**	**12**
RF25S	**50 Ω MWC-2550-01 µWave Cable with 25 AWG Solid FEP Dielectric**	**13, 16**
RF120	**50 Ω MWC-19550-FCU-01 19 AWG mmWave Cable**	**10, 11**
RF174	50 Ω RF Cable Assembly, RG 174 Cable	26, 27, 28, 29, 30, 31
RF178	50 Ω RF Cable Assembly, RG 178 Cable	26, 27, 28, 29, 30, 31
RF179	75 Ω RF Cable Assembly, RG 179 Cable	32, 35, 36
RF180	**50 Ω .178" Overshield DIA, 16 AWG µWave Cable**	**13, 18, 19**
RF280	**50 Ω .277" Overshield DIA, 11 AWG µWave Cable**	**13, 18, 19**
RF316	50 Ω RF Cable Assembly, RG 316 Cable	26, 27, 28, 29, 30, 31
RF402	**50 Ω RG 402 19 AWG Semi-flexible µWave Cable**	**13**
RF405	**50 Ω RG 405 24 AWG Semi-flexible µWave Cable**	**13, 16**
RFA6T	75 Ω RF Cable Assembly, RG 6 Cable	32, 34, 35
RFB6T	75 Ω RF Cable Assembly, 1694A Cable	32, 34, 35
RFB8T	75 Ω RF Cable Assembly, 1855A Cable	34, 35
RFC6T	75 Ω RF Cable Assembly, Belden 4694R Cable	32, 34, 35
RFC8T	75 Ω RF Cable Assembly, Belden 4855R Cable	34, 35
RS316	50 Ω RF Cable Assembly, Double-Shielded RG 316 Cable	26, 27, 28, 29, 30
SMB5	50 Ω SMB Jacks	31
SMB5-CA	50 Ω SMB Cable Connectors	31
SMB7H	75 Ω SMB Jacks	36
SMB7H-CA	75 Ω SMB Cable Connectors	36
SMA	**50 Ω Precision SMA Jacks**	**13**
SMA-CA	50 Ω SMA Low Frequency Cable Connectors	26
SMP	**50 Ω Precision SMP Plugs & Bullet Adaptors**	**17**
SMPM	**50 Ω Precision SMPM Plugs**	**14**
TNC	50 Ω TNC Jacks	29
TNC-CA	50 Ω TNC Cable Connectors	29



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