



Q-FLEX

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RF INTERCONNECT

FULL LINE SOLUTIONS CATALOG

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

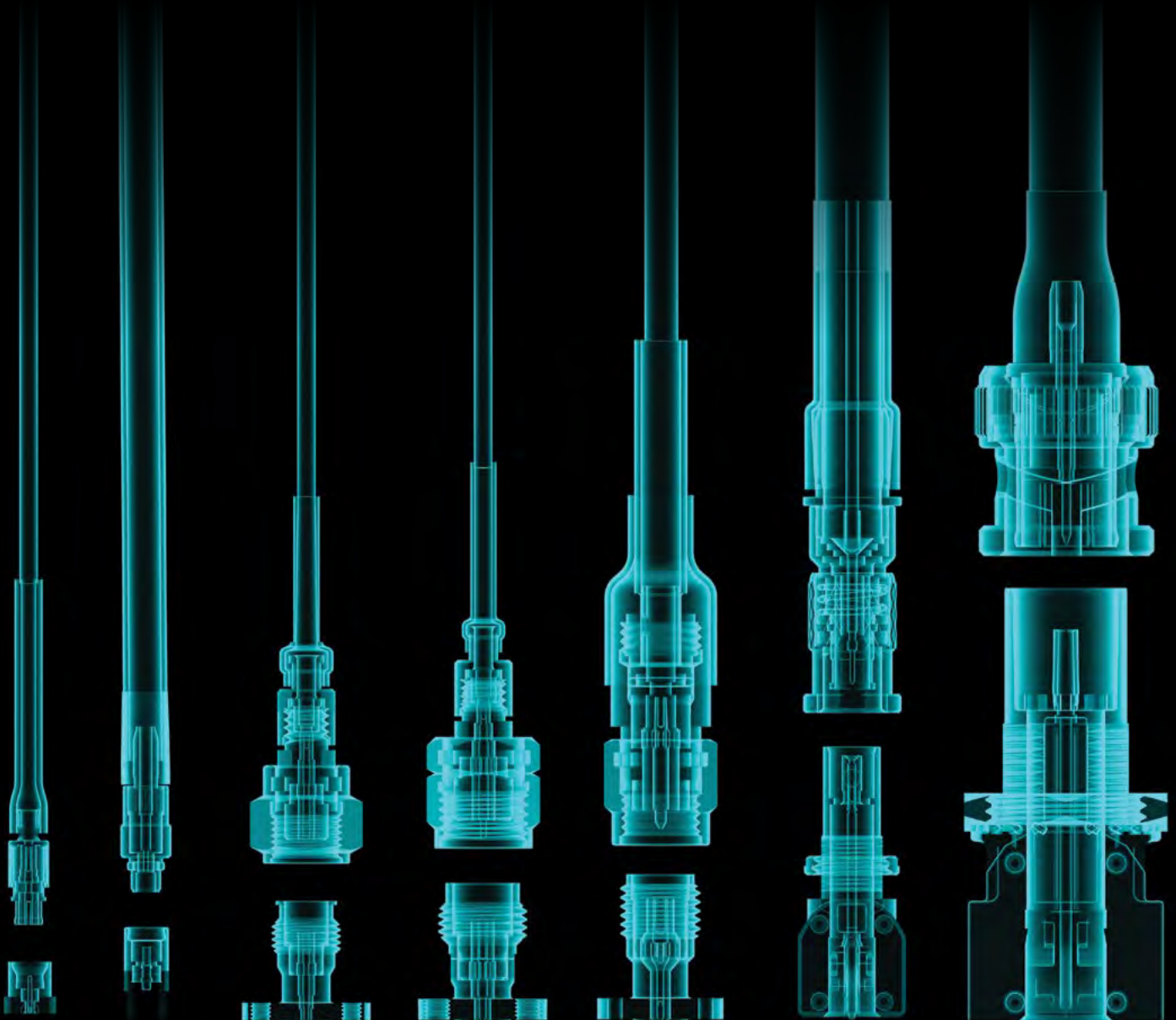
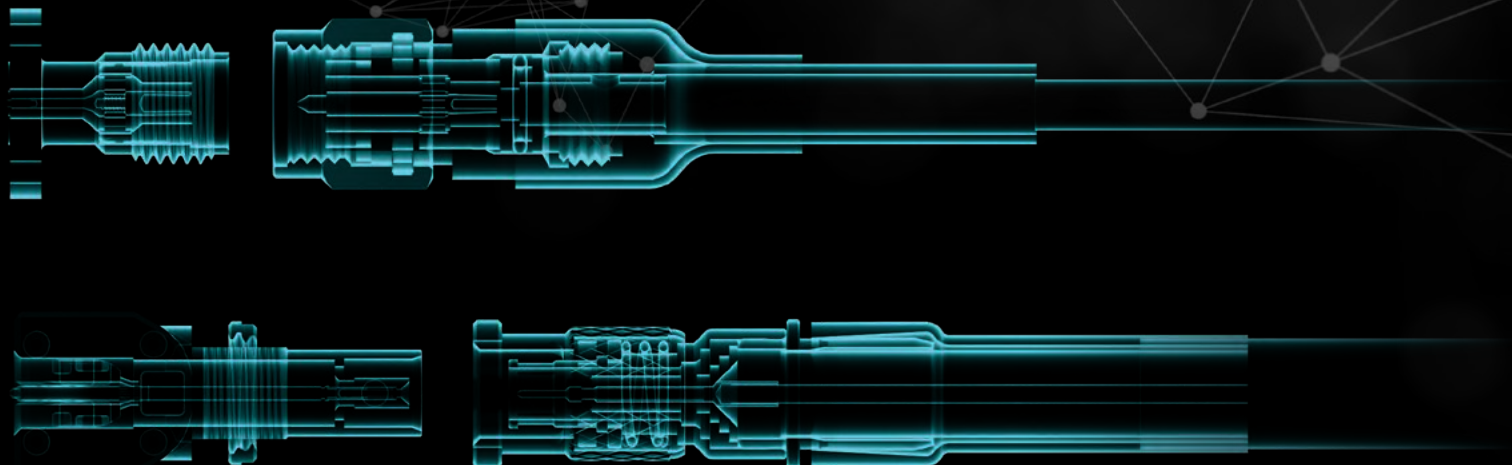


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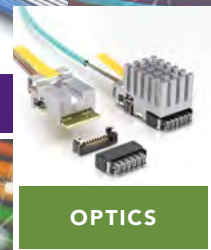
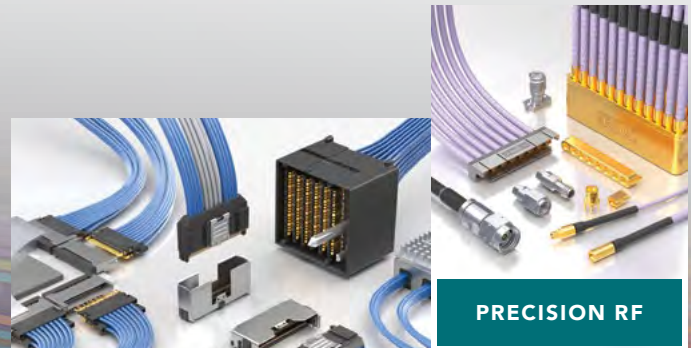
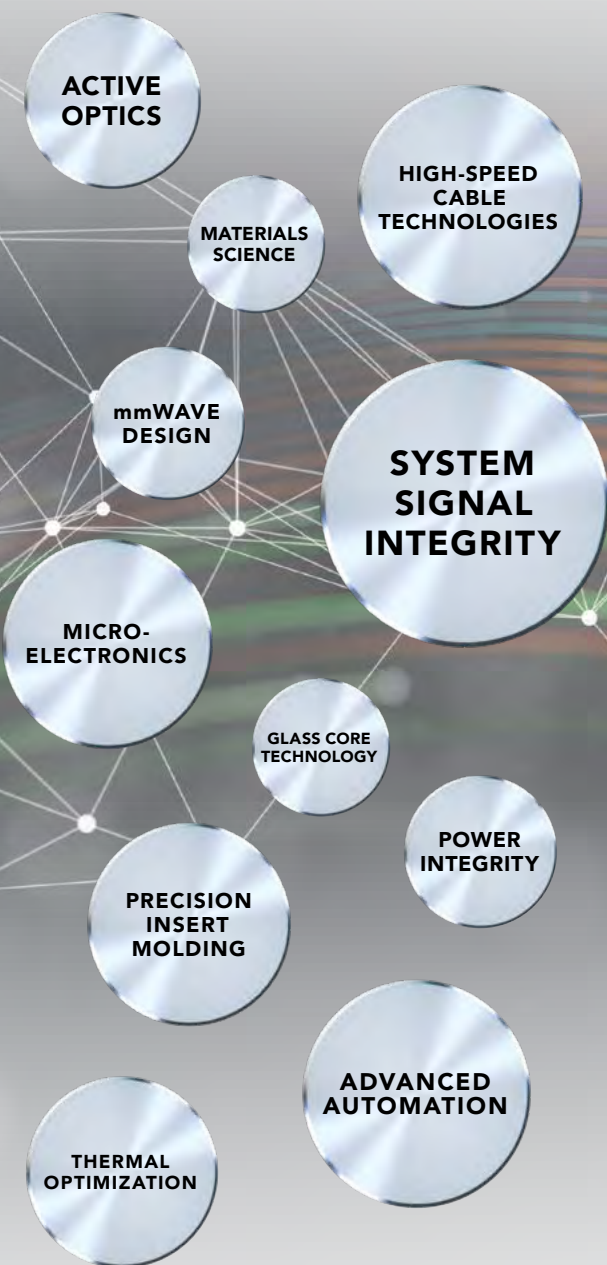
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INTEGRATION LEADS TO INNOVATION

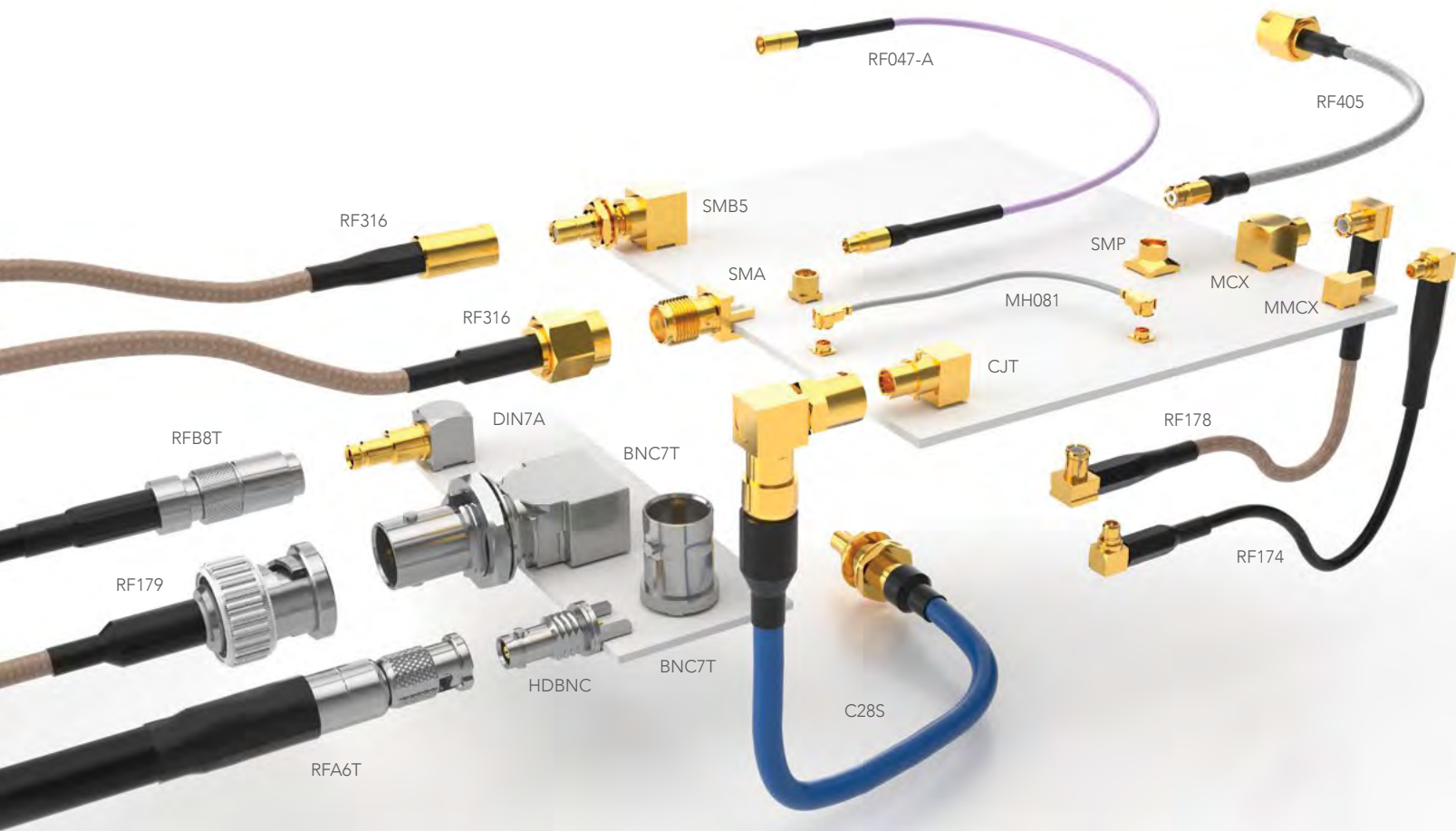
Samtec's integrated approach provides high-level design and development of advanced interconnect systems and **TECHNOLOGIES**, along with industry-leading expertise that allows us to offer effective strategies and support for optimizing the entire signal channel of high-performance systems.

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.



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](https://www.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



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.



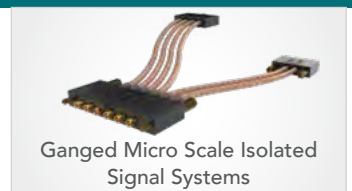
12G-SDI BROADCAST VIDEO SOLUTIONS

- 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



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

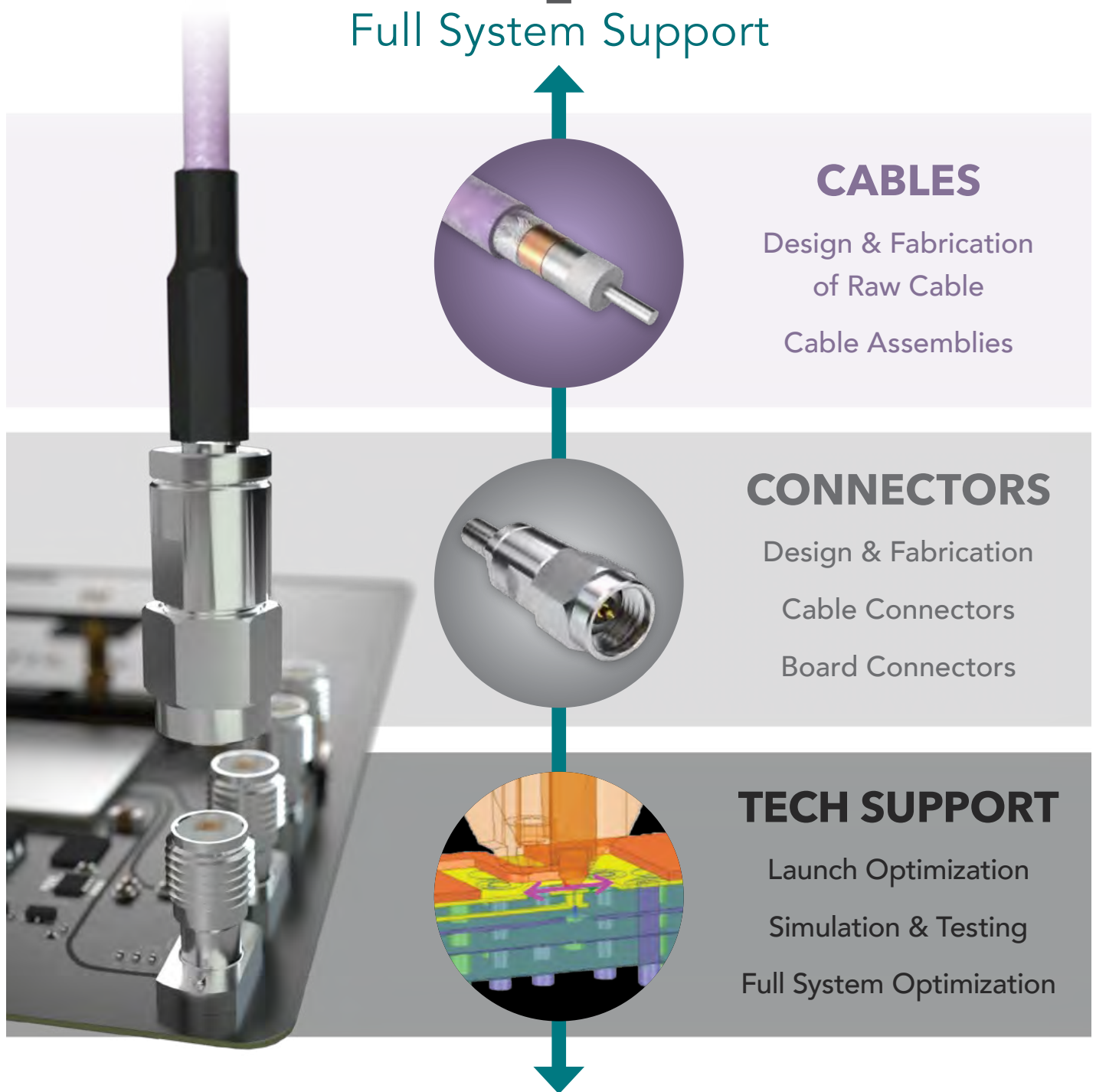


PRECISION RF

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



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 Fluoropolymer	PTFE		PFA	Solid PTFE	Foam Fluoropolymer	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.

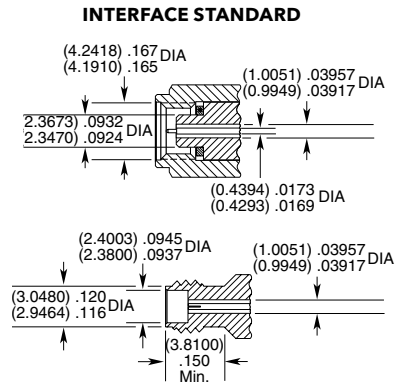
1.00 mm TO 110 GHz

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



1.35 mm TO 90 GHz

1.35 mm Cable Assemblies RF047-A



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF047-A = (1.2 mm) .047" overshield DIA 29 AWG millimeter wave cable	-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

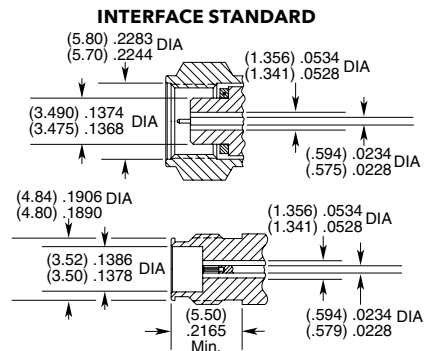
Contact Samtec

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



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)

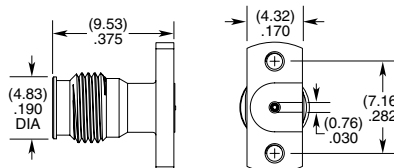
-ST
= Straight

-CM
= Compression Mount

-1
= Without screws

-CMM
= Compression Mount Microstrip

-2
= With screws



1.85 mm TO 65 GHz

1.85 mm Cable Assemblies

RF047-A, RF086



VSWR

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

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF047-A = (1.2 mm) .047" overshield DIA 29 AWG millimeter wave cable RF086 = (2.18 mm) .086" overshield DIA 23 AWG millimeter wave cable	-18SJ = 1.85 mm Straight Jack -18SP = 1.85 mm Straight Plug		-“XXXX” = Overall Length in millimeters -0100 (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			

1.85 mm Cable Connectors

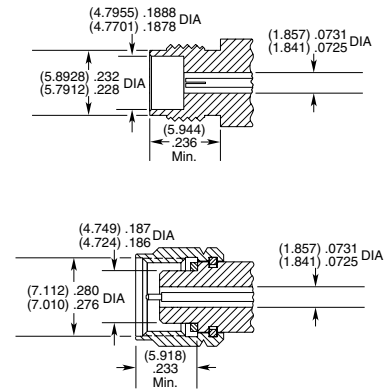
PRF18



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



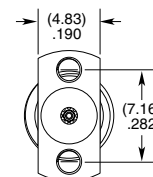
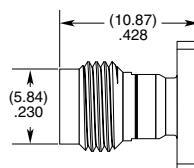
1.85 mm Board Connectors

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 Screws -2 = With Screws



2.40 mm TO 50 GHz

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

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

END 1 CONNECTOR

-24SJ
= 2.40 mm Straight Jack
-24SP
= 2.40 mm Straight Plug

END 2 CONNECTOR

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

OVERALL LENGTH

-“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

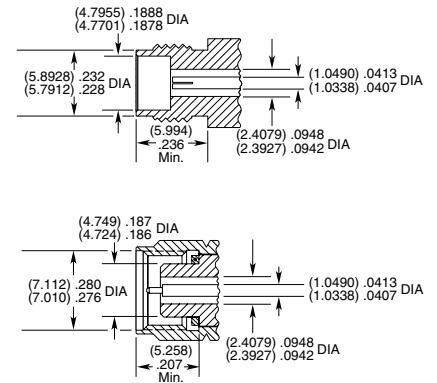


CONNECTORS FOR INDUSTRY STANDARD CABLES

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-P-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

-J
= Jack

TYPE

-P
= PCB Mount

PLATING

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

ORIENTATION

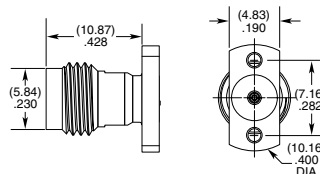
-ST
= Straight

TERMINATION

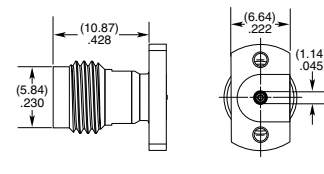
-CM
= Compression Mount Stripline
-CMM
= Compression Mount Microstrip

OPTION

-1
= without Screws
-2
= With Screws



-CM SHOWN



-CMM SHOWN

2.92 mm TO 40 GHz

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

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

END 1 CONNECTOR

-92SJ

= 2.92 mm Straight Jack

-92SP

= 2.92 mm Straight Plug

END 2 CONNECTOR

OVERALL LENGTH

-"XXXX"

= Overall Length in
 millimeters

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

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

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

2.92 mm Cable Connectors

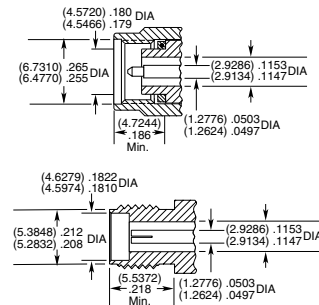
PRF92



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

-J
 = Jack

TYPE

-P
 = PCB
 Mount

PLATING

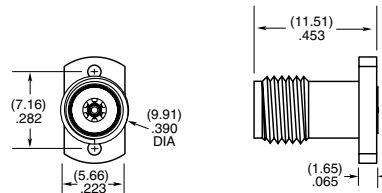
-HP
 = 30 μ" (0.76 μm)
 Gold center contact,
 Passivated outer contact

ORIENTATION

-ST
 = Straight

TERMINATION

-CM2
 = Compression
 Mount



3.50 mm TO 34 GHz

3.50 mm Cable Assemblies RF23S



VSWR

RF23S: 1.30 max

SERIES

RF23S
= MWC-2350-01 microwave cable with 23 AWG solid FEP Dielectric

END 1 CONNECTOR

-35SJP
= 3.50 mm Straight Jack
-35SPP
= 3.50 mm Straight Plug

END 2 CONNECTOR

OVERALL LENGTH

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

3.50 mm Cable Connectors PRF35

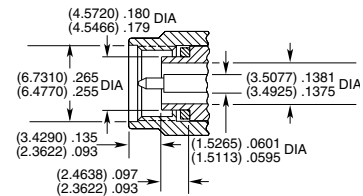
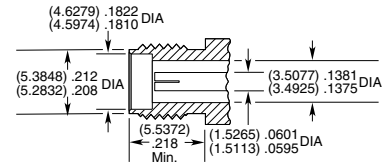


CONNECTORS FOR INDUSTRY STANDARD CABLES

PRF35-P-C-EP-405-SS	RG 405, .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

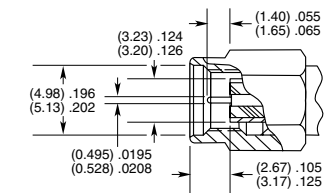
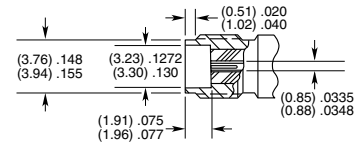


CONNECTORS FOR INDUSTRY STANDARD CABLES

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 TO 18 GHz

SMA Cable Assemblies

RF25S, RF402, RF405, RF180, RF280



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

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)	-01SP1* = SMA Straight Plug -01RP1* = SMA Right-angle Plug (RF25S not available) -01BJ1* = SMA Bulkhead Jack (RF402 & RF405 not available)	-“XXXX” = Overall Length in millimeters -0100 (100 mm) 3.94" minimum

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

ALSO AVAILABLE

SMP = RF25S, RF405

TNCA, N Type = RF180

TNCA, N Type = RF280

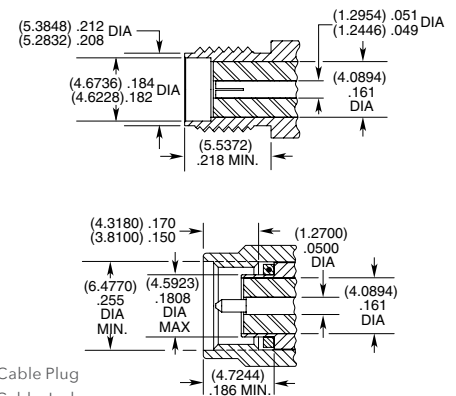
SMA Cable Connectors

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



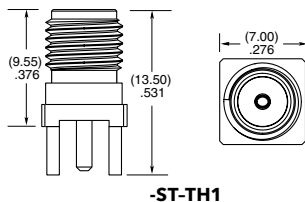
SMA Board Connectors

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)



SMPM TO 65 GHz

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	-MOSP = SMPM Straight Plug, Full Detent -MOSJ = SMPM Straight Jack -MORJ = SMPM Right-angle Jack (RF047-A only) -MOBJ = 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

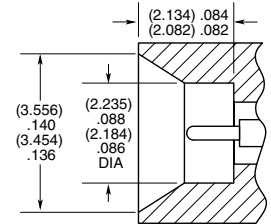


CONNECTORS FOR INDUSTRY STANDARD CABLES	
PRFM0-J-C-EE-047A-BD	.047 Temp-Flex, low loss flexible, 29 AWG
PRFM0-J-C-EE-085-BD	Harbour SS405, flexible alternative to RG 405
PRFM0-J-C-EE-047A-RD	.047 Temp-Flex, low loss flexible, 29 AWG
PRFM0-J-C-EE-086-SD	.086 Temp-Flex, low loss flexible
PRFM0-J-C-EE-047B-SD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

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

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

INTERFACE STANDARD (CATCHERS MITT)



SMPM Board Connectors

SMPM-SM, SMPM-TH, SMPM-RA

Cable Mates:
RF047-A, RF086, RF23C

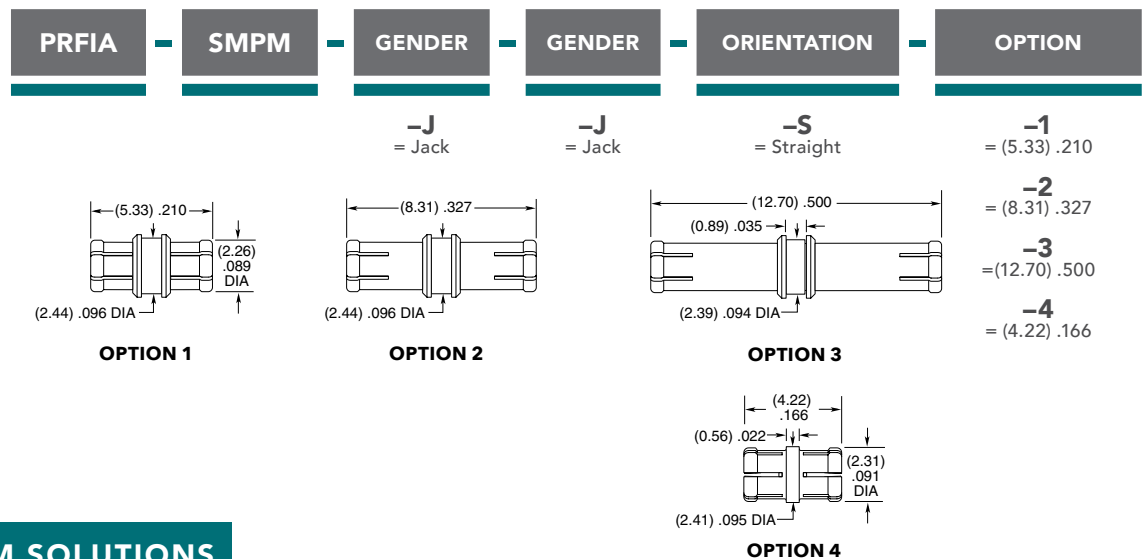


SMPM	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION	1
	-PF = Full Detent -PS = Smooth Bore -PC = Catchers Mitt (-ST-TH only)	-P = PCB Mount	-HG = 30 μ" (0.76 μm) Gold center contact, 10 μ" (0.25 μm) Gold outer contact (-ST only) -HF = 30 μ" (0.76 μm) Gold center contact, 3 μ" (0.08 μm) Gold outer contact (-RA only) -EE = 50 μ" (1.27 μm) Gold center contact and outer body (-SM only)	-ST = Straight -RA = Right-angle (-TH required)	-EM = Drop-in Edge Mount (-ST only) -TH = Through-hole -SM = Surface Mount (-ST only)	
	<p>-ST-SM-1</p>	<p>-ST-EM-1</p>		<p>-ST-TH-1</p>	<p>-RA-TH-1</p>	

SMPM TO 65 GHz

SMPM Bullet Adaptor PRFIA

Mates With:
SMPM, GPPB



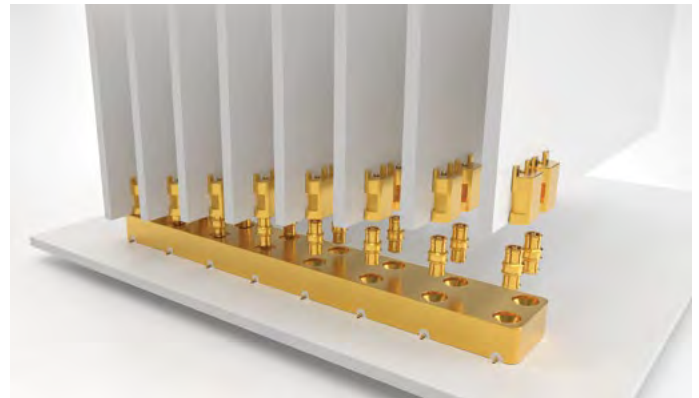
GANGED SMPM SOLUTIONS

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")

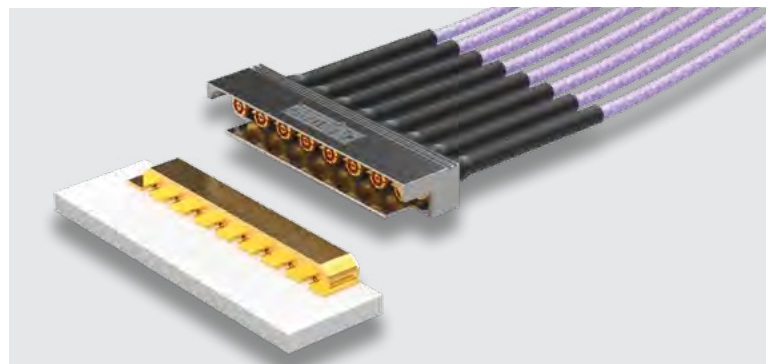


CABLE-TO-BOARD GANGED, MULTI-POSITION SMPM CABLE ASSEMBLY

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 TO 40 GHz

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

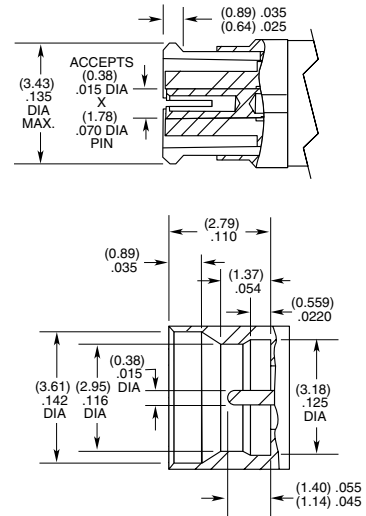
PRF00



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 TO 40 GHz

SMP Board Connectors SMP-TH, SMP-EM

Cable Mates:
RF405, RF255



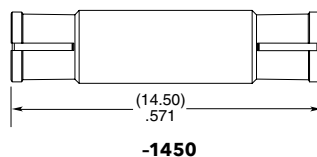
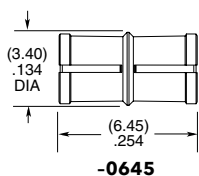
SMP	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	<p>-PF = Plug, Full Detent</p> <p>-PL = Plug, Limited Detent</p> <p>-PS = Plug, Smooth Bore</p> <p>-PC = Plug, Catcher's Mitt</p>	<p>-P = PCB Mount</p>	<p>-GF = 10 μ" (0.25 μm) Gold center contact, Gold Flash outer contact (-TH2 only)</p> <p>-HH = 30 μ"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

<p>-PF/-PL/-PS-TH2</p>	<p>-PC-TH2</p>	<p>-EM3</p>
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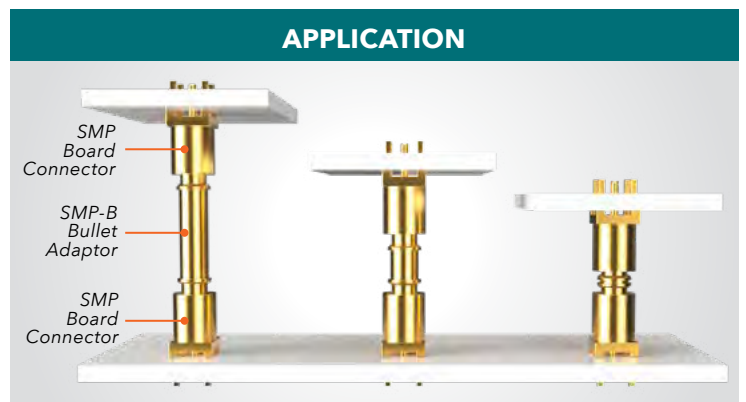
SMP Bullet Adaptor SMP-B



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



APPLICATION



Compensates for axial & radial misalignment

N TYPE TO 18 GHz

N Type 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	-06SP = N Type Straight Plug -06RP = N Type Right-angle Plug -06BJ = N Type Straight Bulkhead Jack		-"XXXX" = Overall length in millimeters -0100 (100 mm) 3.94" minimum

ALSO AVAILABLE

SMA, TNCA = RF180
SMA, TNCA = RF280

N Type Cable Connectors

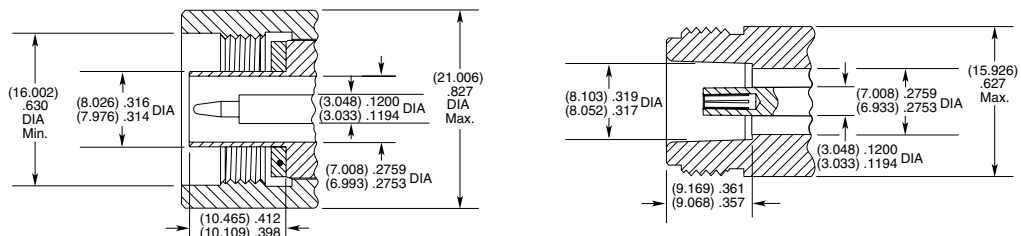
PRF06



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
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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

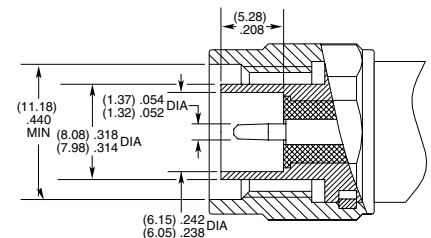
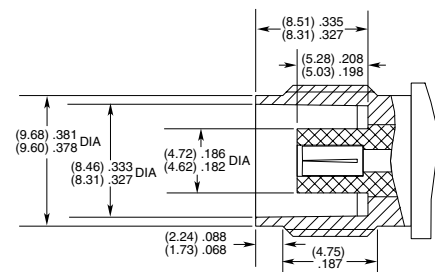
PRF04



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



HIGH-PERFORMANCE TEST ASSEMBLIES TO 70 GHz

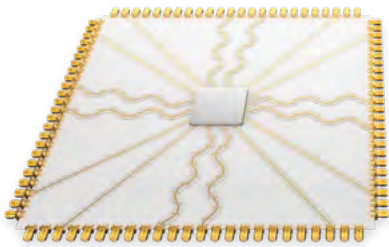
FEATURES & BENEFITS

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.

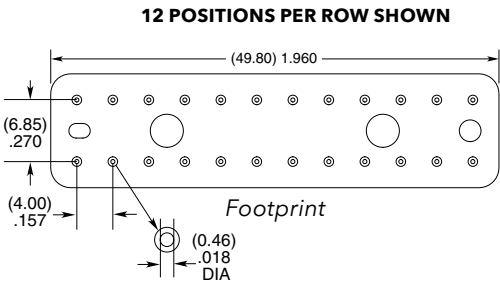
PRODUCT FAMILY CROSS REFERENCE GUIDE

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	

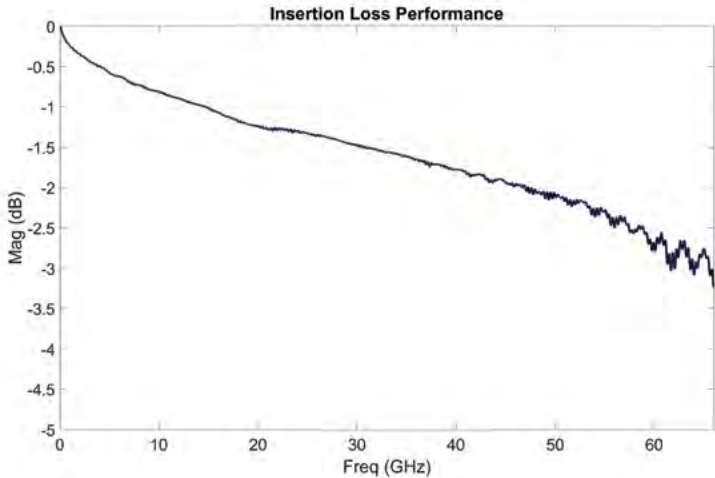
70 GHz ASSEMBLIES

BE70A	TRANSMISSION TYPE	END 2	PHASE MATCHING	2	POSITIONS PER ROW	OVERALL LENGTH
	-S = Stripline	-18SJ = 1.85 mm Straight Jack	-2 = 2.0 Pico-second		-03, -04, -06, -08, -10, -12, -14, -16	-“XXXX” = Overall length in millimeters
	-M = Microstrip	-18SP = 1.85 mm Straight Plug	-5 = 5.0 Pico-second			-0152 (0152 mm) 5.984" to -9999 (9999 mm) 393.7"
			-N = No Phase Matching			

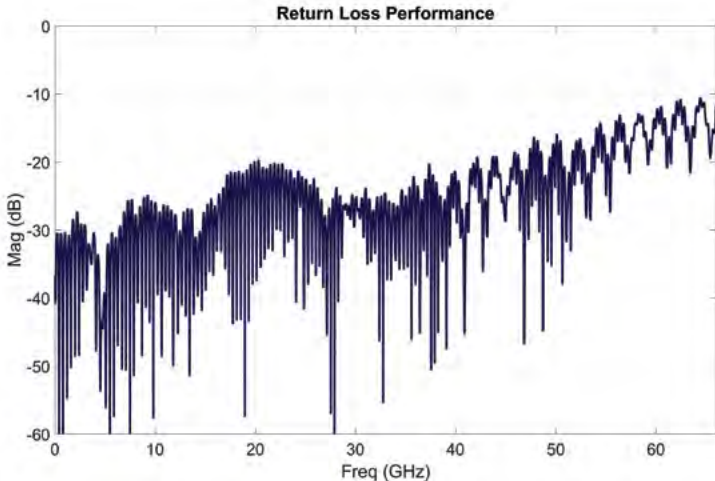
BE70A
End 2 Connectors:
1.85 mm (70 GHz)



BE70A, 2 X 4 FOOTPRINT, 12-INCH CABLE



~3 dB LOSS: BREAKOUT REGION + BE70A



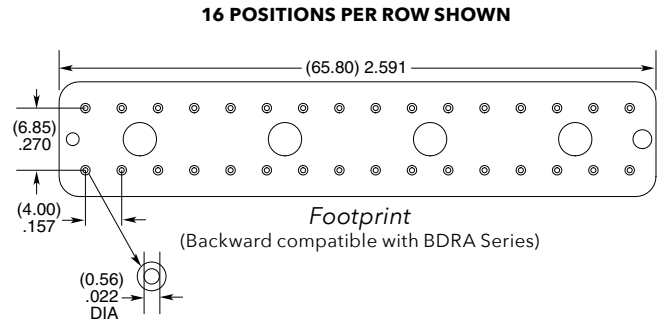
MEASURED: 1.975 mm STRIPLINE + BREAKOUT REGION + BE70A

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)

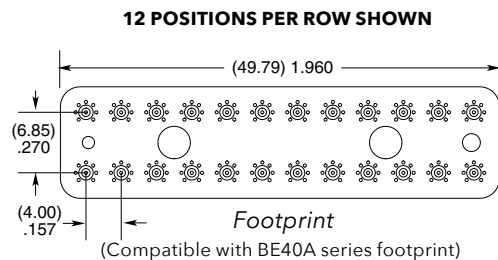
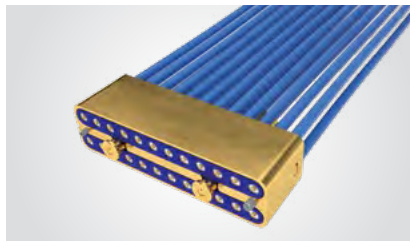


20 GHz ASSEMBLIES

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

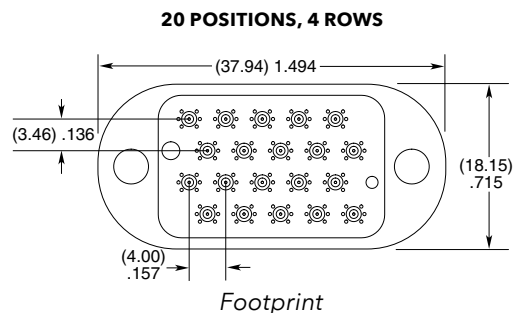
End 2 Connectors:
2.92 mm



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



NEXT GENERATION WAVEGUIDE TECHNOLOGY

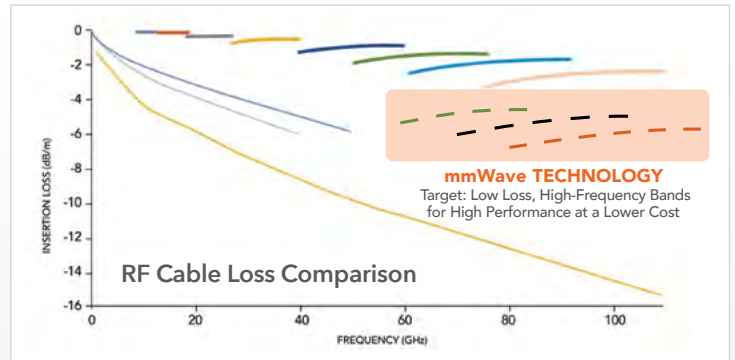
ULTRA SMALL FORM FACTOR • LOW LOSS DIELECTRIC • FLEXIBLE CABLE

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.



STANDARD LOW LOSS MICROWAVE CABLE

- Samtec
- Competitor 1
- Competitor 2

EXISTING RIGID WAVEGUIDE TECHNOLOGY

- WR90
- WR42
- WR19
- WR12
- WR62
- WR28
- WR15
- WR10

Flexible Cable Construction



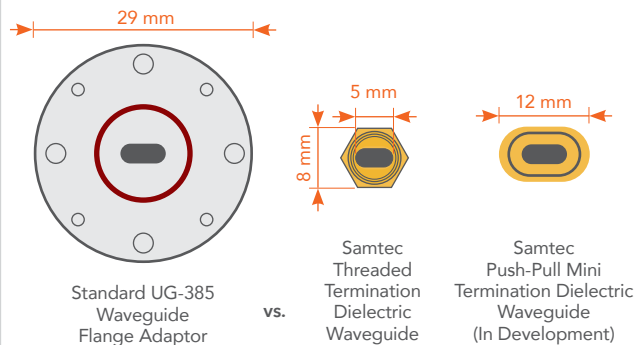
Low Loss Dielectric
(Target: 8 dB/meter)

Stripline Routing



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

Ultra-Small Form Factor



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														
Impedance	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



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 Ωv/meter max
Insulator Diameter:
(0.66 mm) .026"
Insulator Material:
FEP
Shield Material:
Tinned Copper
Jacket Material:
FEP
Jacket Diameter:
(1.13 mm) .045" dia
Bend Radius:
6.8 mm
Jacket Temp Rating:
-40 °C to +90 °C

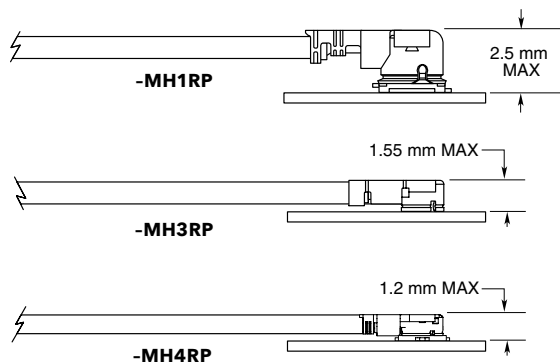
SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
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MH081
= 0.81 mm Cable
MH113
= 1.13 mm Cable

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)

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

<p>-MH1RP = MHF1 Type Plug (3.9 μ" (0.1 μm) Gold on Center Contact, 1.9 μ" (0.05 μm) Gold on Shell)</p>	
<p>-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)</p>	
<p>-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)</p>	
<p>-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)</p>	
<p>-SING = Single Ended (End 2 callout)</p>	
<p>XXXXXX = Stripped & Tinned (End 2 callout)</p>	

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.

50 Ω SMA TO 6 GHz

SMA Cable Assemblies

RF174, RF178, RF316, RS316, RF058



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

ALSO AVAILABLE

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

50 Ω: MCX, MMCX, BNC, TNC = RS316

50 Ω: TNC = RF058

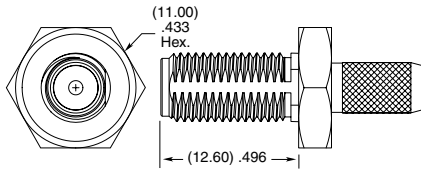
SMA Cable Connectors

SMA-CA



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

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



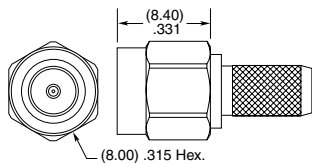
-S10, -B10



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) -HF = 30 μ" (0.76 μm) Gold center contact, 3 μ" (0.08 μm) Gold outer contact (-CA1S only)	-ST = Straight -RA = Right-angle	-CA1 = RG 174 / 316 Cable -C10 = RG 58 Cable (-ST only) -CA1S = RG 316 Double Shielded Cable (-ST only)



-ST-C10

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

50 Ω MCX TO 6 GHz

MCX Cable Assemblies

RF174, RF178, RF316, RS316



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

ALSO AVAILABLE

50 Ω: MMCX, SMA, SMB, BNC, TNC,

N Type = RF174, RF178, RF316

50 Ω: MMCX, SMA, BNC, TNC = RS316

MCX 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

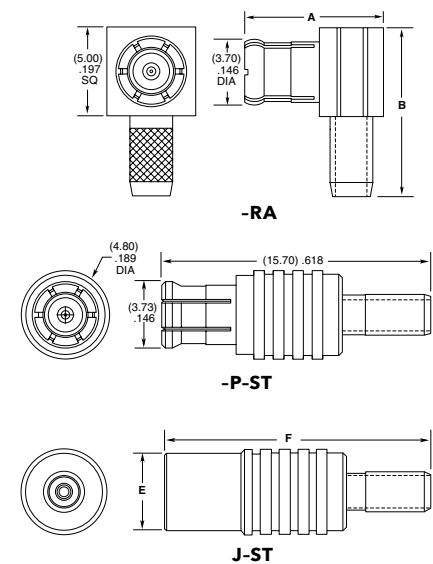
H or HF = Plating (30 μ" Gold center contact, 3 μ" Gold outer contact)

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



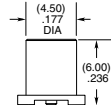
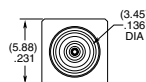
MCX Board Connectors

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

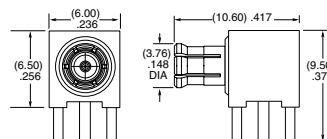
Cable Mates:
RF174, RF178, RF316, RS316, GRF1H-C, IJ5H



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		-“XXXX” = Overall Length in millimeters -0100 (100 mm) 3.94" minimum
RF178 = RG 178 Cable (-03SP1 & -03RP1 only)	-03RP1 = MMCX Right-angle Plug		
RF316 = RG 316 Cable, Single Braid Shield	-V3SP1 = MMCXV Straight Plug, High Vibration		
RS316 = RG 316 Cable, Double Shielded (-03SP1 only)	-V3RP1 = MMCXV Right-angle Plug, High Vibration		
	-V3SJ1 = MMCXV Straight Jack, High Vibration		

ALSO AVAILABLE

50 Ω: MCX, SMA, SMB, BNC, TNC,
N Type = RF174, RF178, RF316
50 Ω: MCX, SMA, BNC, TNC = RS316

MMCX Cable Connectors

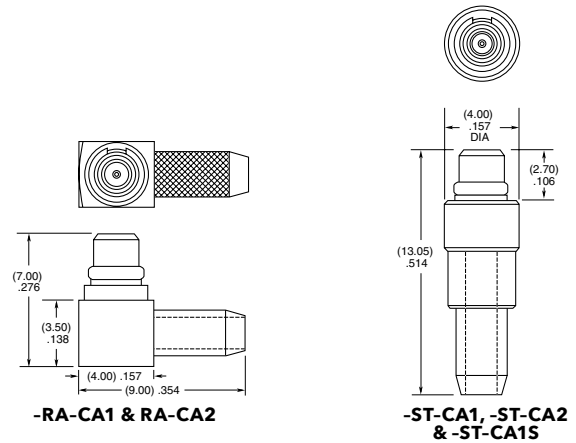
MMCX-CA



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

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

Supplied with pins and ferrules.
See website for dimensions.



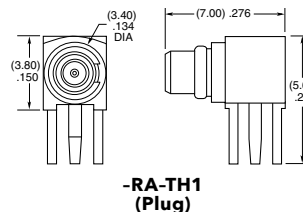
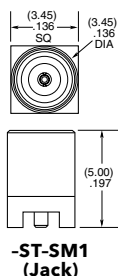
MMCX Board Connectors

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 -RA = Right-angle	-TH1 = Through-hole -MT1 = Mixed Technology (-ST only) -SM1 = Surface Mount (-RA plug not available) -EM1 = Edge Mount (-ST only)



50 Ω TNC TO 6 GHz

TNC Cable Assemblies

RF174, RF178, RF316, RS316, RF058



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

ALSO AVAILABLE

50 Ω: MCX, MMCX, SMA, SMB, BNC,
N Type = RF174, RF178, RF316
50 Ω: MCX, MMCX, SMA, BNC = RS316
50 Ω: SMA, N Type = RF058

TNC Cable Connectors

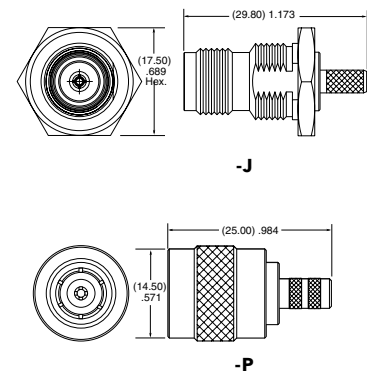
TNC-CA



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 μm Gold on contact, Nickel on body)
ST = Straight
SR = Straight Reverse Polarity



TNC Board Connectors

TNC-TH

Cable Mates:
RF174, RF178, RF316, RS316, RF058, GRF1H-C



TNC	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
-----	--------	------	---------	-------------	-------------

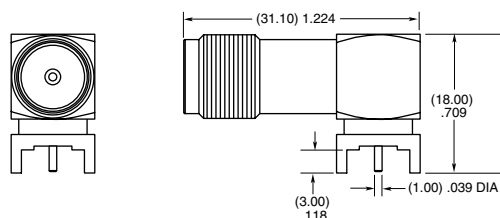
-J
= Jack

-P
= PCB Mount

-H
= 30 μm (0.76 μm) Gold center contact, Nickel on shell

-RA
= Right-angle

-TH1
= Through-hole



50 Ω BNC TO 4 GHz

BNC Cable Assemblies RF174, RF178, RF316, RS316



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF174 = RG 174 Cable	-04SP3 = BNC Straight Plug (RS316 not available)	-04BJ2 = BNC Bulkhead Jack	-"XXXX" = Overall Length in millimeters -0100 (100 mm) 3.94" minimum
RF178 = RG 178 Cable			
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			

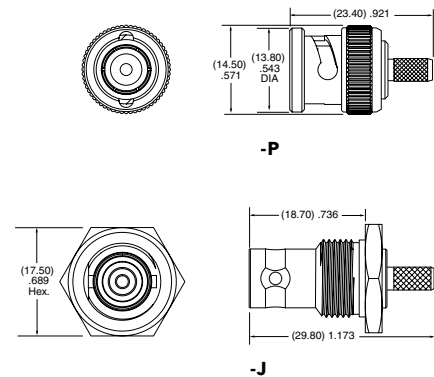
BNC Cable Connectors BNC5-CA



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



50 Ω SMB TO 4 GHz

SMB Cable Assemblies RF174, RF178, RF316



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

ALSO AVAILABLE

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

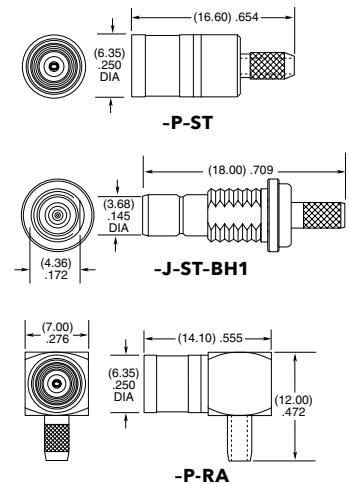
SMB Cable Connectors SMB5-CA



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

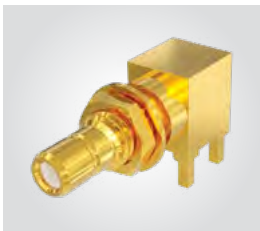
P-C = Cable Plug
J-C = Cable Jack
H = Plating (30 μ" Gold center contact,
3 μ" Gold on outer contact)
ST = Straight
RA = Right-angle

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



SMB Board Connectors SMB5-TH

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



SMB5	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
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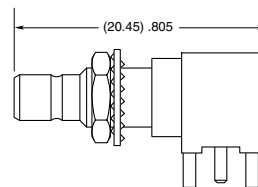
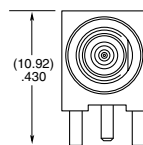
-J
= Jack

-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





75 Ω BNC TO 12 GHz

BNC Cable Assemblies

RFC6T, RFA6T, RFB6T, RF179



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



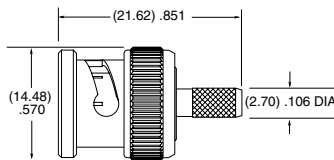
Supplied with pins, washers, nuts, gaskets and ferrules. See website for dimensions.

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

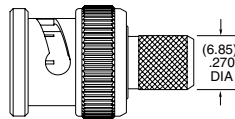
P-C = Cable Plug
J-C = Cable Jack
GN = Plating (10 μ" Gold on contact, Nickel on outer contact and shell)
ST = Straight
RA = Right-angle

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

DIE CAST

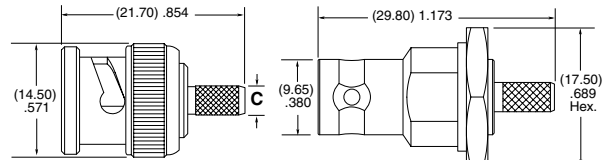


-CA3D



-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 RFGGroup@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



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

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)

*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



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

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)

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

75 Ω DIN 1.0/2.3 TO 12 GHz

DIN Cable Assemblies

RFA6T, RFB6T, RF179, RFB8T, RFC6T, RFC8T



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	ALSO AVAILABLE 75 Ω: HD-BNC™, BNC = RFB6T, RFA6T, RFC6T 75 Ω: BNC, SMB, MCX, MMCX = RF179 75 Ω: HD-BNC™ = RFB8T, RFC8T	-“XXXX” = Overall length in millimeters -0100 (100 mm) 3.94" minimum (RF179) -0300 (300 mm) 11.81" minimum (RFA6T, RFB6T, RFB8T, RFC6T, RFC8T)

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

DIN Cable Connectors

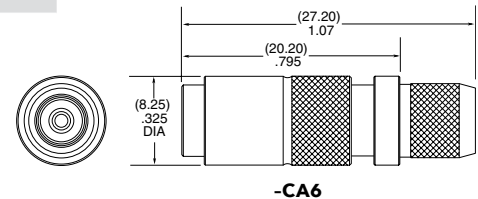
DIN7A-CA



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

*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

Supplied with pins and ferrules. See website for dimensions

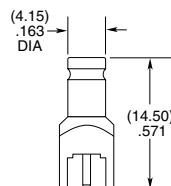
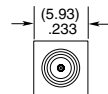
DIN Board Connectors

DIN7A-TH, DIN7A-BH

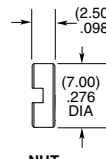
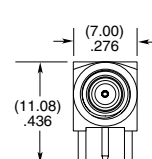
Cable Mates:
 RFA6T, RFB6T, RF179, RFB8T, RFC6T, RFC8T, GRF7H-C



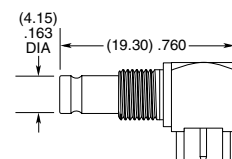
DIN7A	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	-J = Jack	-P = PCB Mount	-GF = 10 μ" (0.25 μm) Gold center contact, 3 μ" (0.08 μm) Gold outer contact, (100 μ" (2.54 μm) Nickel body -RA only)	-ST = Straight (-TH1 only) -RA = Right-angle (-BH1 only)	-TH1 = Through-hole (-ST only) -BH1 = Bulkhead Through-hole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



-ST-TH1



NUT



-RA-BH1

Notes:
 Contact RFGGroup@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 RFGGroup@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

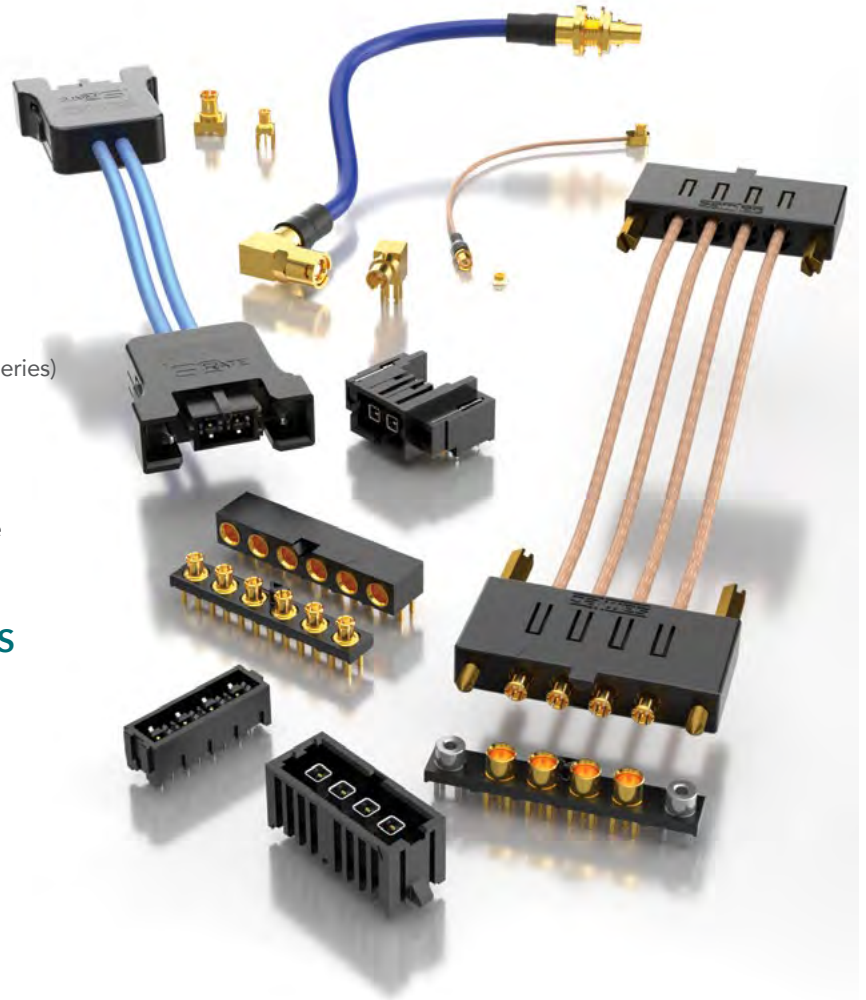
- 50 Ω board stacking and cable assemblies
- Isolated signal systems for 90 percent performance of traditional RF at 50 percent of the cost

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



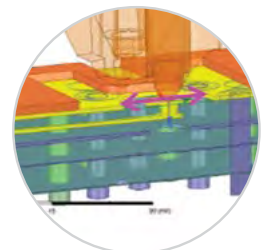
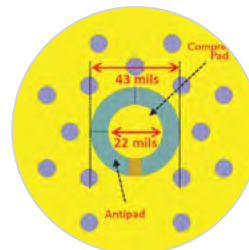
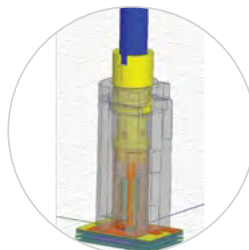
QUICK-TURN MODIFICATIONS & CUSTOMS • STANDARDS & NEW DESIGNS

- 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



Series	Description	Page	Series	Description	Page
135	50 Ω Precision 1.35 mm Compression Jacks	8	RF047	50 Ω Flexible RF Cable Assembly, (.047" DIA) 28 AWG	37
185	50 Ω Precision 1.85 mm Compression Jacks	9	RF047-A	50 Ω .047" Overshield DIA, 29 AWG mmWave Cable	8, 9, 10, 11, 14
240	50 Ω Precision 2.40 mm Compression Jacks	10	RF058	50 Ω RF Cable Assembly, RG 58 Cable	26, 29
292	50 Ω Precision 2.92 mm Compression Jacks	11	RF085	50 Ω .085" Overshield DIA 24 AWG mmWave Cable	10, 11
BE70A	70 GHz Bulls Eye® Assembly, Double Row	21	RF086	50 Ω .086" Overshield DIA 23 AWG mmWave Cable	9, 10, 11, 14
BE40A	50 GHz & 40 GHz Bulls Eye® Assembly, Double Row	22	RF23C	50 Ω MWC-2350CU-01 mmWave Cable with Copper Shield	10, 11, 14
BDRA	20 GHz Bulls Eye® Assembly, Double Row	22	RF23S	50 Ω MWC-2350-01 μWave Cable with 23 AWG Solid FEP Dielectric	12
BNC5-CA	50 Ω BNC Cable Connectors	30	RF255	50 Ω MWC-2550-01 μWave Cable with 25 AWG Solid FEP Dielectric	13, 16
BNC7T	75 Ω 12G-SDI BNC Jacks	33	RF120	50 Ω MWC-19550-FCU-01 19 AWG mmWave Cable	10, 11
BNC7T-CA	75 Ω 12G-SDI BNC Cable Connectors	32	RF174	50 Ω RF Cable Assembly, RG 174 Cable	26, 27, 28, 29, 30, 31
BQRA	20 GHz Bulls Eye® Assembly, Quad Row	22	RF178	50 Ω RF Cable Assembly, RG 178 Cable	26, 27, 28, 29, 30, 31
C28S	100 Ω Shielded Twisted Pair Twinax Cable Assembly	37	RF179	75 Ω RF Cable Assembly, RG 179 Cable	32, 35, 36
CJT	100 Ω Twinax Jacks	37	RF180	50 Ω .178" Overshield DIA, 16 AWG μWave Cable	13, 18, 19
DIN7A	75 Ω, 12G-SDI DIN 1.0/2.3 Jacks	35	RF280	50 Ω .277" Overshield DIA, 11 AWG μWave Cable	13, 18, 19
DIN7A-CA	75 Ω, 12G-SDI DIN 1.0/2.3 Cable Connectors	35	RF316	50 Ω RF Cable Assembly, RG 316 Cable	26, 27, 28, 29, 30, 31
GC47	50 Ω Precision Ganged SMPM Cable Assembly	15	RF402	50 Ω RG 402 19 AWG Semi-flexible μWave Cable	13
GPPB	50 Ω Precision Ganged SMPM Block, Board-to-Board	15	RF405	50 Ω RG 405 24 AWG Semi-flexible μWave Cable	13, 16
GPPC	50 Ω Ganged SMPM Cable Board Mates	15	RFA6T	75 Ω RF Cable Assembly, RG 6 Cable	32, 34, 35
GRF1-C	5.00 mm 50 Ω Ganged Micro-Mini RF Plugs, Cable	37	RFB6T	75 Ω RF Cable Assembly, 1694A Cable	32, 34, 35
GRF1H-C	5.00 mm 50 Ω Ganged Hybrid Micro-Mini RF Cable	37	RFB8T	75 Ω RF Cable Assembly, 1855A Cable	34, 35
GRF1-J	5.00 mm 50 Ω Ganged Micro-Mini RF Jacks, PCB Mount	37	RFC6T	75 Ω RF Cable Assembly, Belden 4694R Cable	32, 34, 35
GRF1-P	5.00 mm 50 Ω Ganged Micro-Mini RF Plugs, PCB Mount	37	RFC8T	75 Ω RF Cable Assembly, Belden 4855R Cable	34, 35
GRF7-C	5.00 mm 75 Ω Ganged Micro-Mini RF Plugs, Cable	37	RS316	50 Ω RF Cable Assembly, Double-Shielded RG 316 Cable	26, 27, 28, 29, 30
GRF7H-C	5.00 mm 75 Ω Ganged Hybrid Micro-Mini RF Cable	37	SMB5	50 Ω SMB Jacks	31
GRF7-P	5.00 mm 75 Ω Ganged Micro-Mini RF Plugs, PCB Mount	37	SMB5-CA	50 Ω SMB Cable Connectors	31
GRF7-J	5.00 mm 75 Ω Ganged Micro-Mini RF Jacks, PCB Mount	37	SMB7H	75 Ω SMB Jacks	36
HDBNC	75 Ω, 12G-SDI High-Density BNC Jacks	34	SMB7H-CA	75 Ω SMB Cable Connectors	36
HDBNC-CA	75 Ω, 12G-SDI High-Density Cable Connectors	34	SMA	50 Ω Precision SMA Jacks	13
IJ5	4.00 mm IsoRate® 50 Ω High Isolation RF Jack Strip	37	SMA-CA	50 Ω SMA Low Frequency Cable Connectors	26
IJ5C	4.00 mm IsoRate® 50 Ω High Isolation RF Cable	37	SMP	50 Ω Precision SMP Plugs & Bullet Adaptors	17
IJ5H	4.00 mm IsoRate® 50 Ω High Isolation Hybrid Cable	37	SMPM	50 Ω Precision SMPM Plugs	14
IP5	4.00 mm IsoRate® 50 Ω High Isolation RF Plug Strip	37	TNC	50 Ω TNC Jacks	29
MCX	50 Ω MCX Jacks & Plugs	27	TNC-CA	50 Ω TNC Cable Connectors	29
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			





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