

SELECTION GUIDE

1.85mm
RF Connectors

DC to 67 GHz precision interconnect solutions for panel interfaces, feedthrough transitions, threaded input structures and PCB launch applications.

67 GHz
SERIES CAPABILITY

50 Ω
PRECISION INTERFACE

Panel to PCB
APPLICATION RANGE

INTRODUCTION

What Is a 1.85mm Connector?

DEFINITION

A 1.85mm connector is a precision 50 ohm RF interface designed for high-frequency interconnect applications through 67 GHz. It is commonly used where repeatable interface quality, compact transition structures and controlled mechanical geometry are required in instrumentation, fixtures, enclosures and PCB-related RF work.



WHY ENGINEERS USE IT

- Supports applications through 67 GHz
- Precision interface for high-frequency RF paths
- Suitable for panel, enclosure and PCB transition work
- Useful where mating repeatability and controlled dimensions matter

TYPICAL USE CASES

- Microwave and high-frequency instrumentation
- Precision front-panel interfaces
- Bulkhead and enclosure transitions
- PCB launch and board-edge transitions
- Test fixtures and evaluation structures

WHY THIS CATALOG

- Organized by installation and transition structure
- Built for first-round family and model filtering
- Intended for drawing-based review after initial selection
- Structured for practical engineering comparison

REFERENCE

Core Electrical & Mechanical Reference

Series-level reference information for first-round evaluation of 1.85mm connector electrical capability, interface characteristics and key mechanical constraints.

ELECTRICAL OVERVIEW

Frequency Range	Up to 67 GHz
Impedance	50 ohms
VSWR	Model dependent; refer to latest drawing / test report
Durability	Model dependent mating-cycle rating
Contact Resistance	Center and outer conductor values per latest verified data
Insulation Resistance	Model dependent; confirm by drawing

MECHANICAL OVERVIEW

Interface Type	1.85mm precision RF interface
Styles	Flange-mount, feedthrough, threaded input and launch types
Materials	Stainless steel / BeCu / PTFE or model-specific material set
Mounting Logic	Panel, enclosure, threaded and PCB-related transitions
Temperature Range	According to series specification
Selection Basis	Geometry, mounting pattern and final mating condition

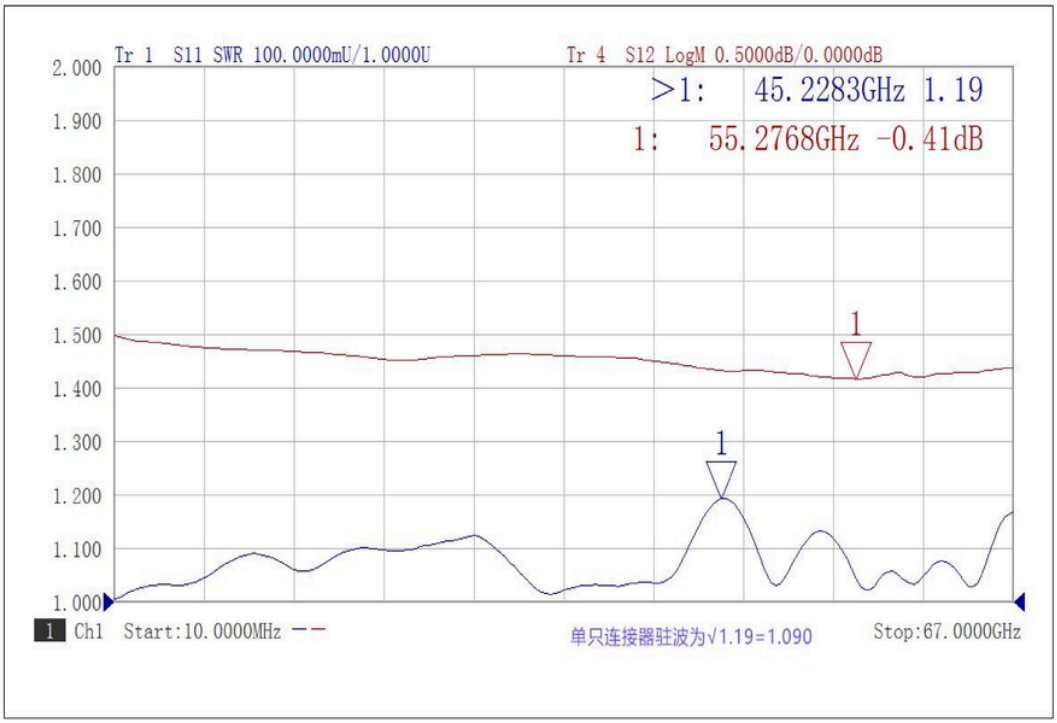
FINAL NOTE

Final RF and mechanical suitability depend on connector structure, mating condition, tolerance control and end-use configuration. Confirm against the latest drawing before final approval.

TECHNICAL REFERENCE

Representative Performance Reference

Representative RF test data for first-round evaluation of 1.85mm connector performance through 67 GHz.



ENGINEERING TAKEAWAYS

- Representative performance supports first-round evaluation through 67 GHz
- RF results are sensitive to connector structure, mating condition and installation geometry
- Final-use configuration should be considered before confirming model suitability

TECHNICAL NOTE

Representative data is for selection reference only. Final RF performance depends on structure, mating condition, assembly quality and actual transition geometry.

Representative connector-level reference data through 67 GHz should be reviewed together with the latest verified drawing and actual mating configuration.

PORTFOLIO MAP

Product Family Overview

The 1.85mm portfolio in this catalog is organized by installation and transition structure, covering flange-mount, feedthrough, threaded input and PCB launch formats.

FAMILY 01

Removable Flange-Mount Connectors

For precision panel and fixture interfaces requiring replaceable flange-fixed structures.

FAMILY 02

Air Feedthrough Connectors

For wall, enclosure and bulkhead transitions where a controlled through-wall RF path is required.

FAMILY 03

Threaded Input Connectors

For compact rear-thread or threaded input structures requiring mechanical retention and panel integration.

FAMILY 04

Vertical Mount Adapter Connectors

For compact vertical transition configurations between interface and mounted RF geometry.

FAMILY 05

End Launch Connectors

For board-edge and controlled PCB launch transitions where connector launch geometry must match the target PCB interface.

NEXT STEP

Use the quick selection guide on the next page to move directly into the most relevant family.

SELECTION ENTRY

Quick Selection Guide

Start from the required mounting or transition structure, then confirm the family with drawing dimensions.

IF YOU NEED	RECOMMENDED FAMILY	BEST FOR	CHECK FIRST
A replaceable panel or fixture interface	Removable Flange-Mount Connectors	Panel and fixture RF interfaces	Gender, flange pattern, mounting geometry
A through-wall or enclosure RF transition	Air Feedthrough Connectors	Enclosure, wall and bulkhead transitions	Flange style, ØD1, length, installation space
A compact rear-thread input structure	Threaded Input Connectors	Threaded panel input and compact rear retention	Bore / pin dimensions, rear diameter, thread spec
A compact vertical transition structure	Vertical Mount Adapter Connectors	Vertical interface mounting transitions	Mounting pattern, contact geometry, mechanical fit
A board-edge RF transition	End Launch Connectors	PCB and board-edge launch structures	Board interface dimensions, contact geometry, launch details

METHOD

How to Choose the Right 1.85mm Connector

The correct 1.85mm connector is determined by interface gender, mounting or transition structure, critical dimensions and final mating conditions.

STEP 1

Define the interface gender

Start with male or female based on the mating side of your system.

STEP 2

Define the mounting or transition structure

Confirm whether the connector is used on a panel, wall, enclosure, threaded input, vertical mount or PCB launch structure.

STEP 3

Define the structural format

Choose the flange pattern, rear-thread format or launch structure that matches the installation logic.

STEP 4

Confirm critical dimensions

Check bore, pin, flange size, rear diameter, exposed length, board interface dimensions or other structure-specific parameters.

STEP 5 — VERIFY FINAL MATING CONDITIONS

Confirm final mating interface, tolerance limits, assembly quality and actual RF transition conditions before final selection.

Before requesting a drawing or quote

- Interface gender
- Structural family
- Key mounting or transition format
- Critical dimensions
- Frequency target
- Final mating condition

Also confirm

- Available installation space
- Panel / enclosure / PCB structure
- Need for 2D drawing or 3D file
- Tolerance sensitivity

DETAILED SELECTION

Removable Flange-Mount Connectors

Removable flange-mount 1.85mm connectors are used where a fixed RF interface is required on a panel or fixture, while still allowing replacement, maintenance and configuration flexibility.

WHY CHOOSE THIS FAMILY

- Suitable for panel and fixture interfaces requiring flange-fixed integration
- Replaceable connector format for maintenance and configuration flexibility
- Available in female and male interface variants
- Applicable to precision front-side RF access structures

FEMALE VS MALE

- Choose female structures for receptacle-side mating requirements
- Choose male structures for plug-side RF interface requirements

FLANGE PATTERN LOGIC

- Square flange groups provide broader mounting support
- Compact or narrower flange groups fit tighter installation footprints

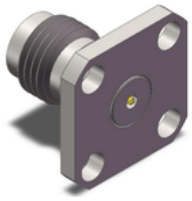
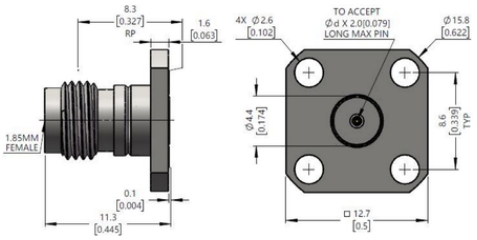
SELECTION CHECKPOINTS

- Interface gender
- Flange pattern
- Socket bore or pin-related dimensions
- Installation footprint and final mating condition

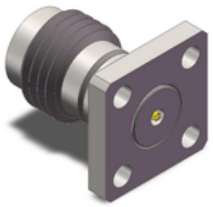
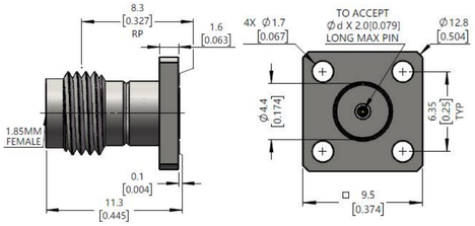
REMOVABLE FLANGE-MOUNT

1.85mm Female Removable Flange-Mount Connectors

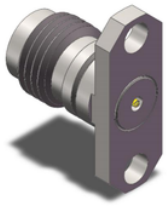
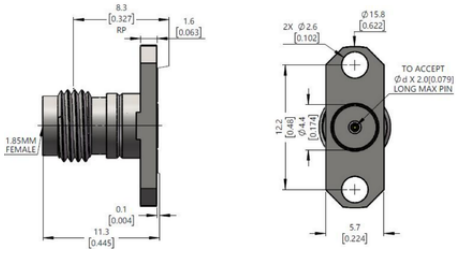
Best for panel and fixture interfaces requiring a female RF connection in replaceable flange-mounted formats.

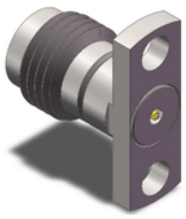
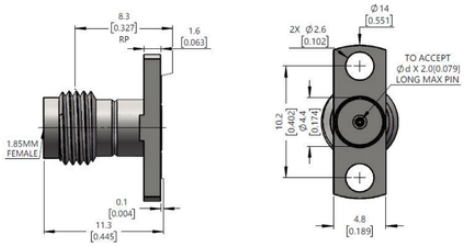
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VST-CPS185F30-F01	0.30 [0.012]

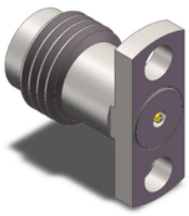
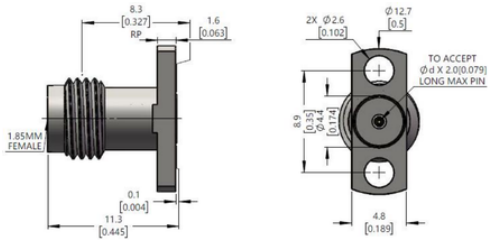
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VST-CPS185F30-F02	0.30 [0.012]

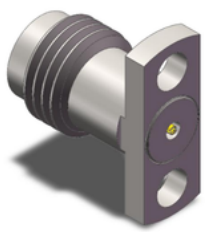
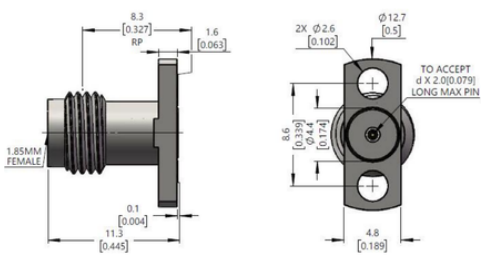
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PRODUCT MODEL	SOCKET BORE ØD
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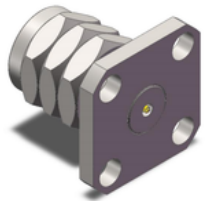



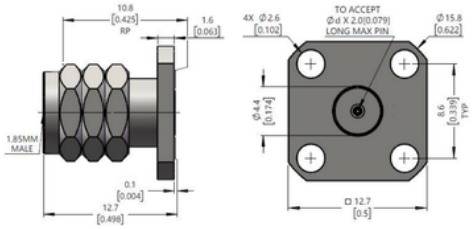
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REMOVABLE FLANGE-MOUNT

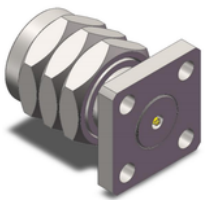
1.85mm Male Removable Flange-Mount Connectors

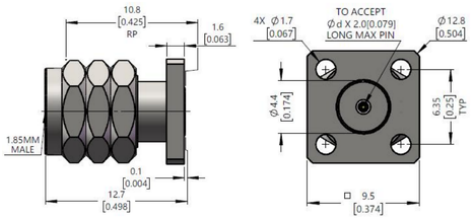
Best for panel and fixture interfaces requiring a male RF connection in replaceable flange-mounted formats.



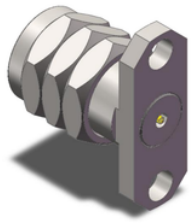


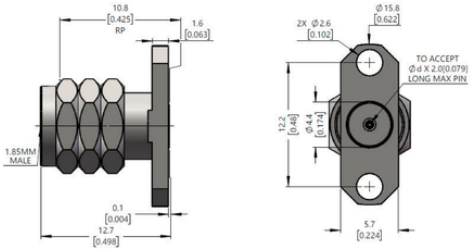
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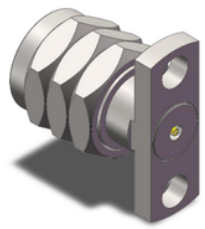


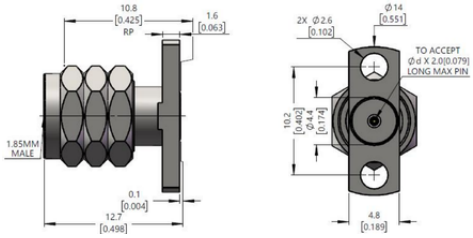
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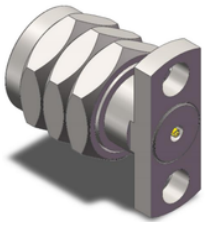


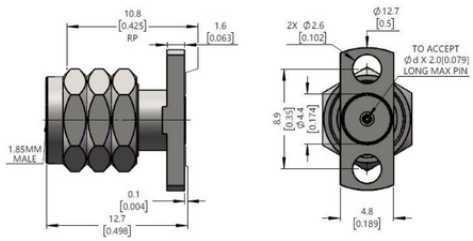
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PRODUCT MODEL	SOCKET BORE ØD
VST-CPS185M23-F05	0.23 [0.009]
VST-CPS185M30-F05	0.30 [0.012]





PRODUCT MODEL	SOCKET BORE ØD
VST-CPS185M23-F06	0.23 [0.009]
VST-CPS185M30-F06	0.30 [0.012]

DETAILED SELECTION

Air Feedthrough Connectors

Air feedthrough connectors are intended for wall, panel and enclosure transitions where a controlled RF path must pass through a mechanical boundary while preserving interface precision and installation stability.

AIR FEEDTHROUGH

For exposed pass-through geometry

Used where the transition relies on exposed conductor geometry and selectable protrusion length.

DIELECTRIC FEEDTHROUGH

For supported transition structure

Pass-through connector structures for walls, panels and enclosure transitions.

METAL FEEDTHROUGH

For compact robust integration

Used where a compact metal-supported transition is preferred for stronger mechanical integration.

WHY CHOOSE THIS FAMILY

- Suitable for wall, enclosure and bulkhead transitions
- Provides a precision RF path through a mechanical boundary
- Available in multiple flange patterns for different installation formats
- Supports panel-integrated RF transition structures

COMMON STRUCTURE GROUPS

- Square flange feedthrough
- Compact flange feedthrough
- Narrow or elongated flange feedthrough

KEY SELECTION VARIABLES

- Flange pattern
- ØD1 / center-related dimensions
- Length L
- Available wall or panel space

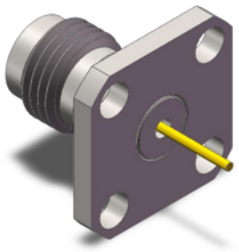
SELECTION CHECKPOINTS

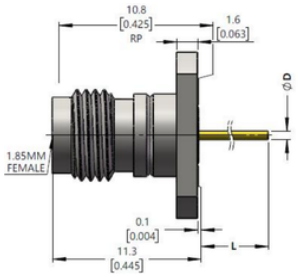
- Flange geometry
- Total length
- Panel or enclosure thickness condition
- Final use configuration

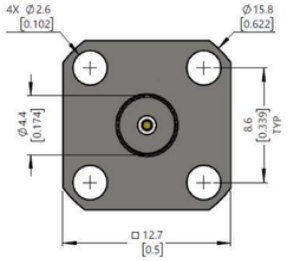
AIR FEEDTHROUGH

1.85mm Air Feedthrough Connectors

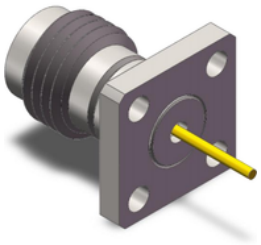
Best for through-wall RF transitions requiring precise interface continuity across panel, enclosure or bulkhead structures.

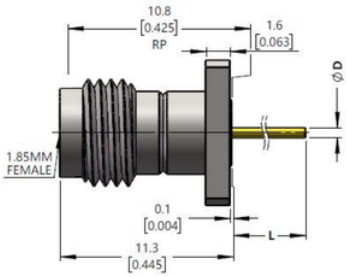


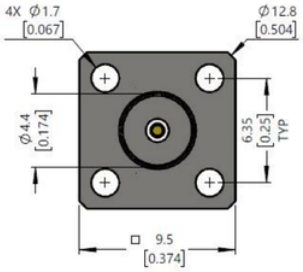




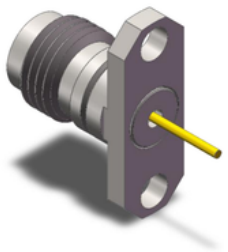
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2	VST-CPD185F12-F01-047	0.30 [0.012]	1.2 [0.047]	7	VST-CPD185F25-F01-236	0.64 [0.025]	6 [0.236]
3	VST-CPD185F12-F01-080	0.30 [0.012]	2 [0.079]	8	VST-CPD185F31-F01-276	0.80 [0.031]	7 [0.276]
4	VST-CPD185F23-F01-145	0.58 [0.023]	3.7 [0.145]				
5	VST-CPD185F23-F01-230	0.58 [0.023]	5.85 [0.230]				

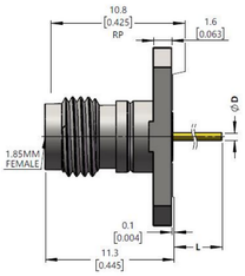


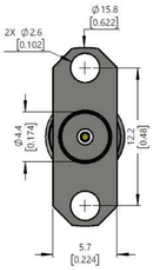




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3	VST-CPD185F12-F02-080	0.30 [0.012]	2 [0.079]	8	VST-CPD185F31-F02-276	0.80 [0.031]	7 [0.276]
4	VST-CPD185F23-F02-145	0.58 [0.023]	3.7 [0.145]				
5	VST-CPD185F23-F02-230	0.58 [0.023]	5.85 [0.230]				





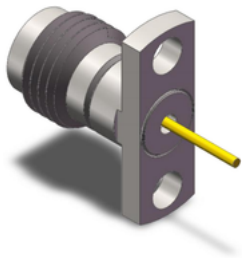


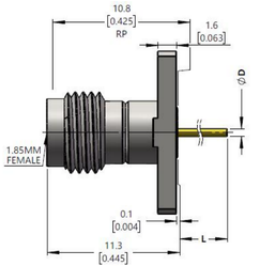
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4	VST-CPD185F23-F04-145	0.58 [0.023]	3.7 [0.145]				
5	VST-CPD185F23-F04-230	0.58 [0.023]	5.85 [0.230]				

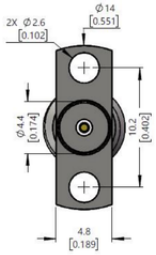
AIR FEEDTHROUGH

1.85mm Air Feedthrough Connectors

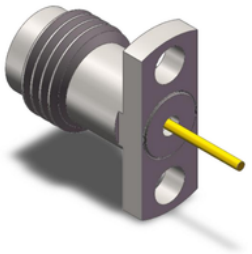
Best for through-wall RF transitions requiring precise interface continuity across panel, enclosure or bulkhead structures.

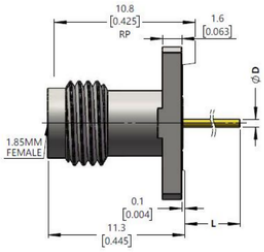


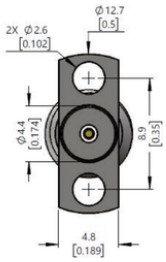




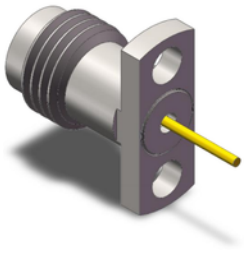
NO.	PRODUCT MODEL	ØD1	LENGTH (L)	NO.	PRODUCT MODEL	ØD1	LENGTH (L)
1	VST-CPD185F09-F05-276	0.23 [0.009]	7 [0.276]	6	VST-CPD185F23-F05-750	0.58 [0.023]	19.1 [0.752]
2	VST-CPD185F12-F05-047	0.30 [0.012]	1.2 [0.047]	7	VST-CPD185F25-F05-236	0.64 [0.025]	6 [0.236]
3	VST-CPD185F12-F05-080	0.30 [0.012]	2 [0.079]	8	VST-CPD185F31-F05-276	0.80 [0.031]	7 [0.276]
4	VST-CPD185F23-F05-145	0.58 [0.023]	3.7 [0.145]	9			
5	VST-CPD185F23-F05-230	0.58 [0.023]	5.85 [0.230]	10			

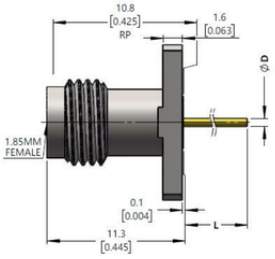


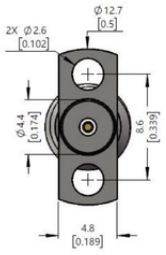




NO.	PRODUCT MODEL	ØD1	LENGTH (L)	NO.	PRODUCT MODEL	ØD1	LENGTH (L)
1	VST-CPD185F09-F06-276	0.23 [0.009]	7 [0.276]	6	VST-CPD185F23-F06-750	0.58 [0.023]	19.1 [0.752]
2	VST-CPD185F12-F06-047	0.30 [0.012]	1.2 [0.047]	7	VST-CPD185F25-F06-236	0.64 [0.025]	6 [0.236]
3	VST-CPD185F12-F06-080	0.30 [0.012]	2 [0.079]	8	VST-CPD185F31-F06-276	0.80 [0.031]	7 [0.276]
4	VST-CPD185F23-F06-145	0.58 [0.023]	3.7 [0.145]	9			
5	VST-CPD185F23-F06-230	0.58 [0.023]	5.85 [0.230]	10			





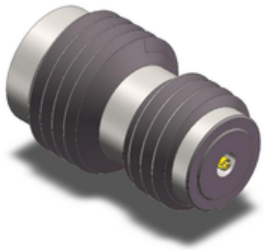


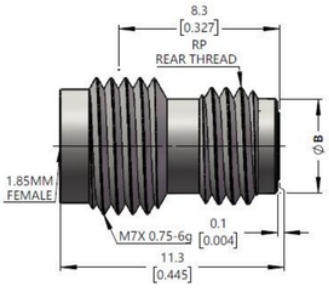
NO.	PRODUCT MODEL	ØD1	LENGTH (L)	NO.	PRODUCT MODEL	ØD1	LENGTH (L)
1	VST-CPD185F09-F07-276	0.23 [0.009]	7 [0.276]	6	VST-CPD185F23-F07-750	0.58 [0.023]	19.1 [0.752]
2	VST-CPD185F12-F07-047	0.30 [0.012]	1.2 [0.047]	7	VST-CPD185F25-F07-236	0.64 [0.025]	6 [0.236]
3	VST-CPD185F12-F07-080	0.30 [0.012]	2 [0.079]	8	VST-CPD185F31-F07-276	0.80 [0.031]	7 [0.276]
4	VST-CPD185F23-F07-145	0.58 [0.023]	3.7 [0.145]	9			
5	VST-CPD185F23-F07-230	0.58 [0.023]	5.85 [0.230]	10			

THREADED INPUT

1.85mm Threaded Input Connectors

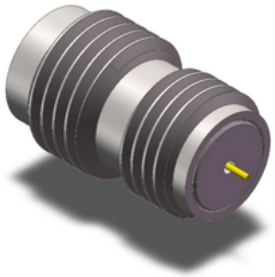
Best for compact panel input structures requiring rear-thread retention or threaded installation.

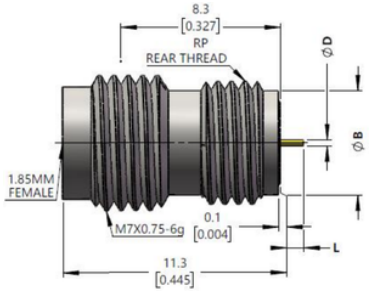






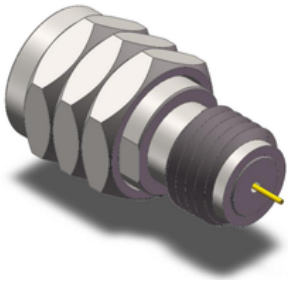
NO.	PRODUCT MODEL	SOCKET BORE ØD	REAR DIAMETER ØB	REAR THREAD SPECIFICATION
1	VST-CPS185F23-Y01	0.23 [0.009]	5.4 [0.213]	1/4-36UNS-2A
2	VST-CPS185F30-Y01	0.30 [0.012]	5.4 [0.213]	1/4-36UNS-2A
3	VST-CPS185F23-Y02	0.23 [0.009]	4.8 [0.190]	M6X0.75-6g
4	VST-CPS185F30-Y02	0.30 [0.012]	4.8 [0.190]	M6X0.75-6g

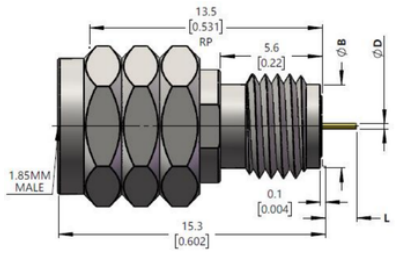


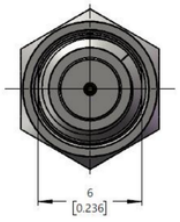




NO.	PRODUCT MODEL	PIN DIAMETER ØD	EXPOSED LENGTH (L)	REAR DIAMETER ØB	REAR THREAD SPECIFICATION
1	VST-CPD185F12-Y01-047	0.30 [0.012]	1.2 [0.047]	5.4 [0.213]	1/4-36UNS-2A
2	VST-CPD185F12-Y01-080	0.30 [0.012]	2.0 [0.080]	5.4 [0.213]	1/4-36UNS-2A
3	VST-CPD185F12-Y02-047	0.30 [0.012]	1.2 [0.047]	4.8 [0.190]	M6X0.75-6g
4	VST-CPD185F12-Y02-080	0.30 [0.012]	2.0 [0.080]	4.8 [0.190]	M6X0.75-6g







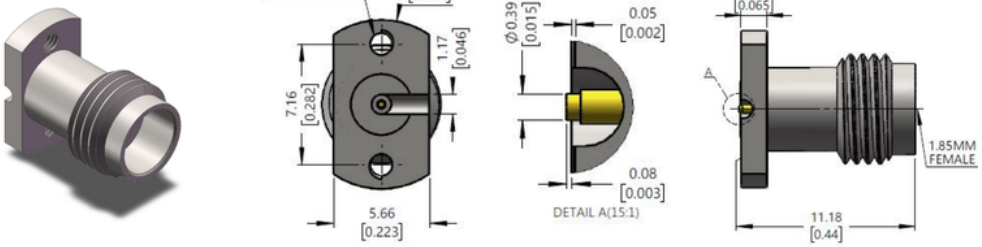
NO.	PRODUCT MODEL	PIN DIAMETER ØD	EXPOSED LENGTH (L)	REAR DIAMETER ØB	REAR THREAD SPECIFICATION
1	VST-CPD185M12-Y02-080	0.30 [0.012]	2.0 [0.080]	4.8 [0.190]	M6X0.75-6g

VERTICAL MOUNT ADAPTER

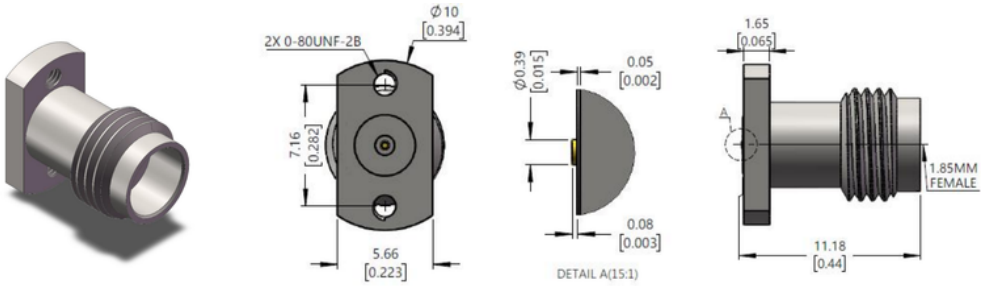
1.85mm Vertical Mount Adapter Connectors

Best for compact vertical RF transition structures where the interface must be aligned to a mounted RF geometry.

PRODUCT MODEL	VST-CPD185F1351-F09



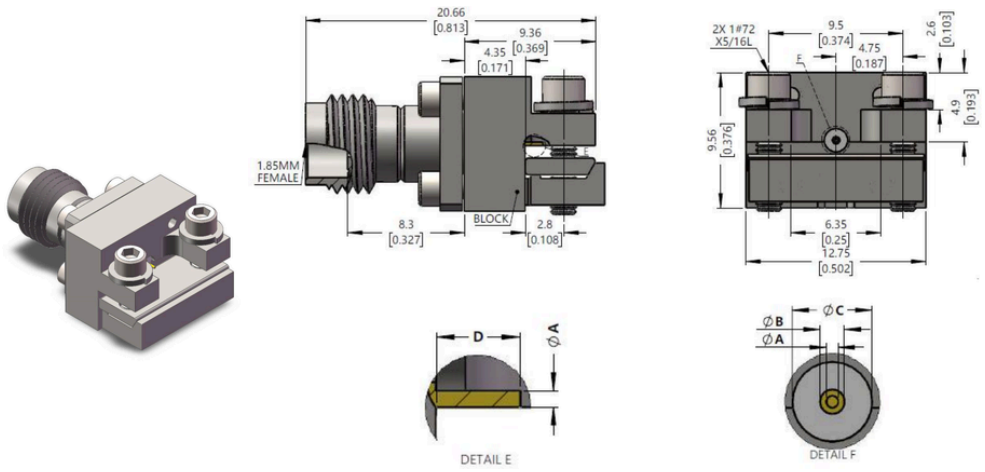
PRODUCT MODEL	VST-CPD185F1351-F09E



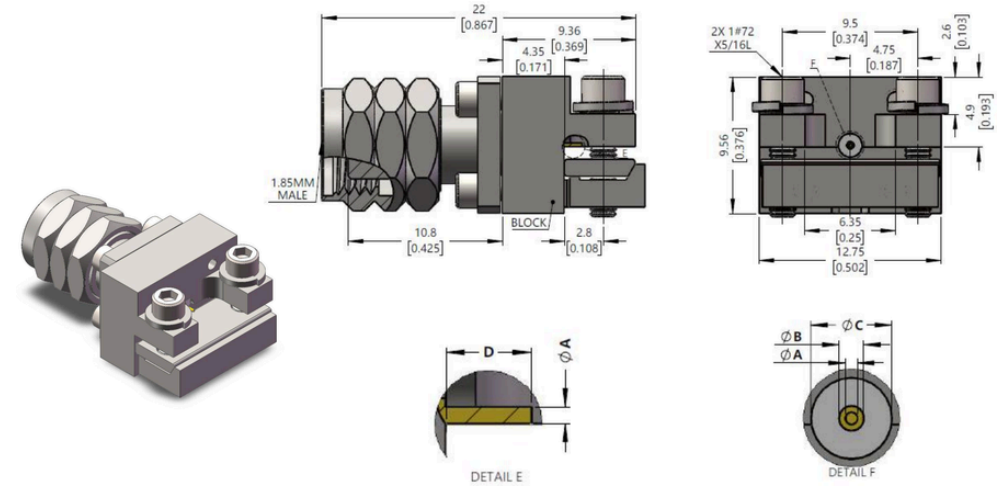
END LAUNCH

1.85mm End Launch Connectors

Best for controlled board-edge RF transitions where launch geometry must match the target PCB interface.



NO.	PRODUCT MODEL	PIN DIAMETER ØA	PIN DIAMETER ØB	DIELECTRIC DIAMETER ØC	PIN LENGTH D
1	VST-CPEL185F2305-A06	0.13 [0.005]	0.23 [0.009]	0.75 [0.030]	0.75 [0.030]
2	VST-CPEL185F2304-A06	0.23 [0.009]	0.23 [0.009]	0.75 [0.030]	0.75 [0.030]
3	VST-CPEL185F3005-A06	0.18 [0.007]	0.30 [0.012]	1.00 [0.039]	0.75 [0.030]



NO.	PRODUCT MODEL	PIN DIAMETER ØA	PIN DIAMETER ØB	DIELECTRIC DIAMETER ØC	PIN LENGTH D
1	VST-CPEL185M2305-A07	0.13 [0.005]	0.23 [0.009]	0.75 [0.030]	0.75 [0.030]
2	VST-CPEL185M2304-A07	0.23 [0.009]	0.23 [0.009]	0.75 [0.030]	0.75 [0.030]
3	VST-CPEL185M3005-A07	0.18 [0.007]	0.30 [0.012]	1.00 [0.039]	0.75 [0.030]

*PCB stack-up, launch geometry and grounding pattern should be confirmed before final selection.

Precision RF Interconnect Solutions

Vinstronics

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