USBBFTV

Description

USBBFTV is a complete ruggedized solution around USB2.0 Type-B standard using a Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) to connect the two plug and receptacle parts.

This solution allows you to insert a standard USB 2.0 cordset into a metallic plug which will protect it from shocks, dust and fluids. The assembly of this ruggedized plug doesn't require any tools and can be assembled easily in the field. Perfectly adapted to the USB2.0 standard, you have two coding possibilities to facilitate coupling when you have several receptacles on a panel.

The corresponding USBBFTV receptacle dedicated to be mounted on your panel enables you to reinforce and protect your system against leakage, shocks, vibrations and much more. This receptacle part is delivered with a defined coding when ordered but can be conveniently changed with our dedicated USBF ODE tool.

Main features

MAIN CHARACTERISTICS
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Improved EMI protection
- Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device - Shell size 15
- Plug retention in the receptacle: 100N in the axis
- Mating cycles: 500 minimum

DATA TRANSMISSION
- USB-B
- USB specification 2.0
- Data rate: up to 480 Mb/s for high speed USB

ENVIRONMENTAL PROTECTION
- Sealing (when mated): IP68 (temporary immersion)
- Salt spray: - 48 h with nickel plating ✓
                - 500 h with olive drab cadmium
                - 500 h with black zinc nickel ✓
                - 500 h with Tin-zinc plating ✓
                - 1000 h with marine bronze shell ✓
- Fire retardant / Low smoke: UL94 V0 and EN45545
- Vibrations: 10 - 500 Hz, 10 g, 3 axes: no discontinuity > 1micro s
- Shocks: IK06 > weight of 250 g drop from 40 cm [15.75 in] onto connectors (mated pair)
- Temperature range: - 40°C / +85°C

APPLICATIONS
- Battlefield communication systems
- C5ISR
- Data acquisition and transmission in harsh environment
- Navy
- Rail Mass Transit
- Industrial process control
- Robotics
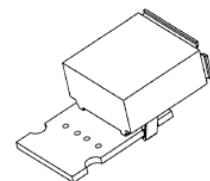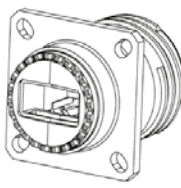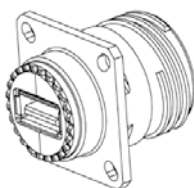- CNC machines
- Oil & Gas

✓ : RoHS compliant

How to order :

Back terminations

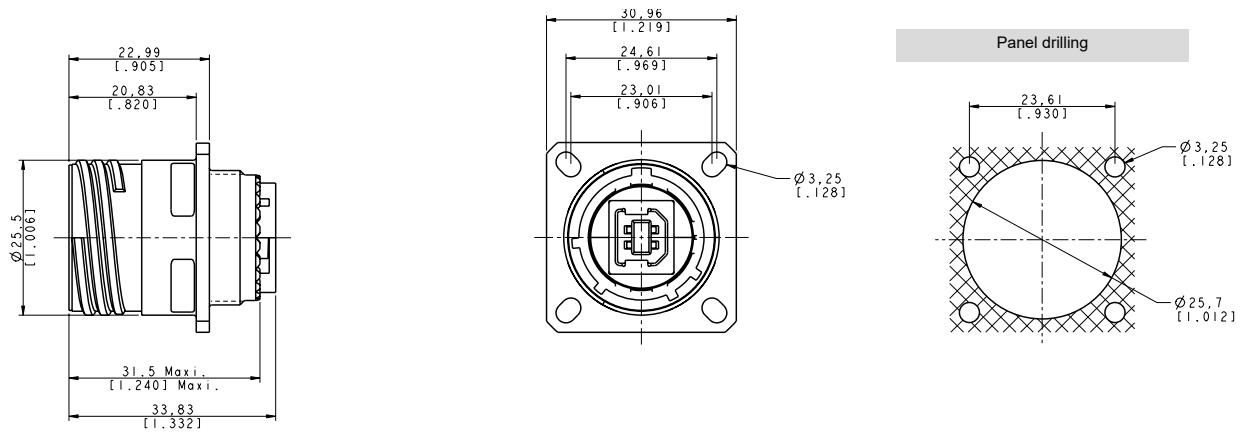| Type 1: female USB-A	Type 2: solder 4 Tinned holes to solder your cable	View of the PCB of the Type 2 version with 4 tinned holes for solder termination

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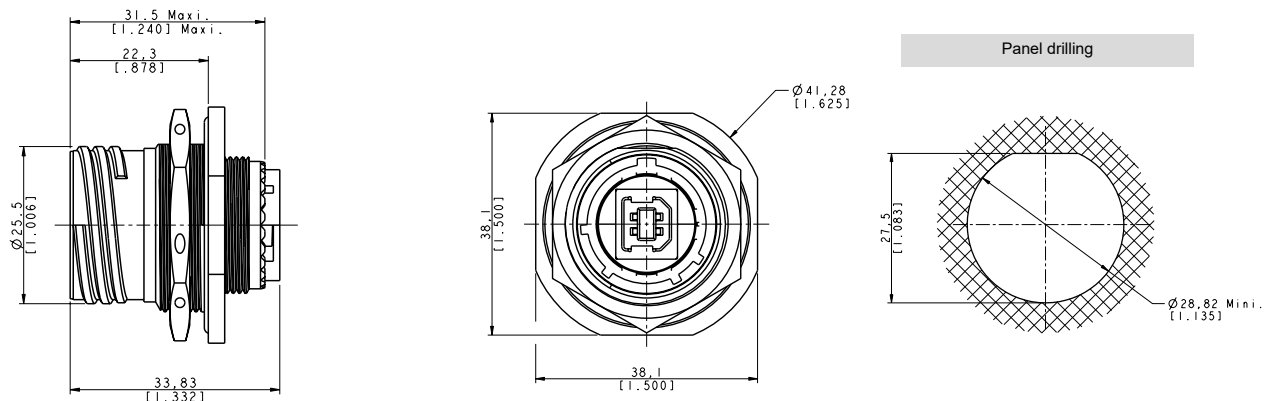
USBBFTV

Overall dimension

Plug - Shell type 6

Part number type: **USBBF TV 6 X**
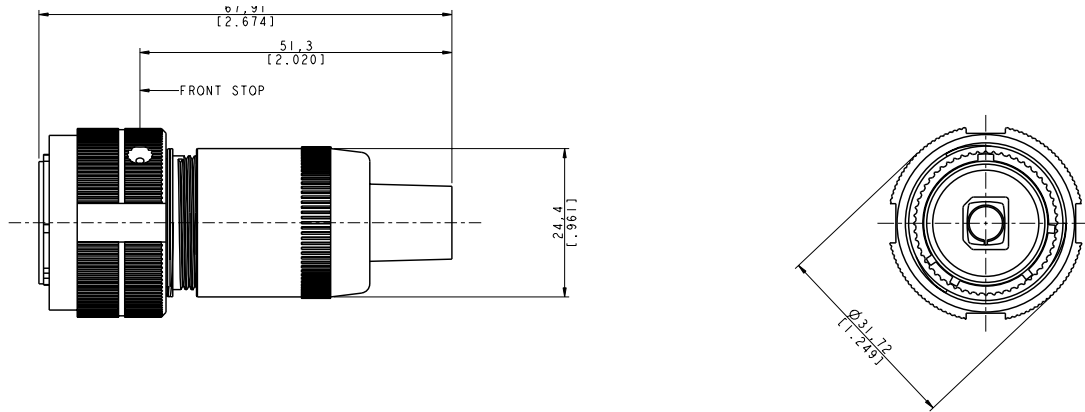
67,91 [2.674]
51,3 [2.020]
FRONT STOP
24,4 [.961]
Ø31,72 [1.249]

Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back terminations type 1

Part number type: **USBBF TV 2 X X**

22,99 [.905]
20,83 [.820]
Ø25,5 [1.006]
31,5 Maxi. [1.240] Maxi.
33,83 [1.332]

30,96 [1.219]
24,61 [.969]
23,01 [.906]
Ø3,25 [.128]

Panel drilling

23,61 [.930]
Ø3,25 [.128]
Ø25,7 [1.012]

Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back terminations type 1

Part number type: **USBBF TV 7 X X**

31,5 Maxi. [1.240] Maxi.
22,3 [.878]
Ø25,5 [1.006]
33,83 [1.332]

Ø41,28 [1.625]
38,1 [1.500]
38,1 [1.500]

Panel drilling

27,5 [1.083]
Ø28,82 Mini. [1.135]

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USB3.2
USB2.0
Cables and cordsets
Adapters and access points
Rugged electronics
Accessories
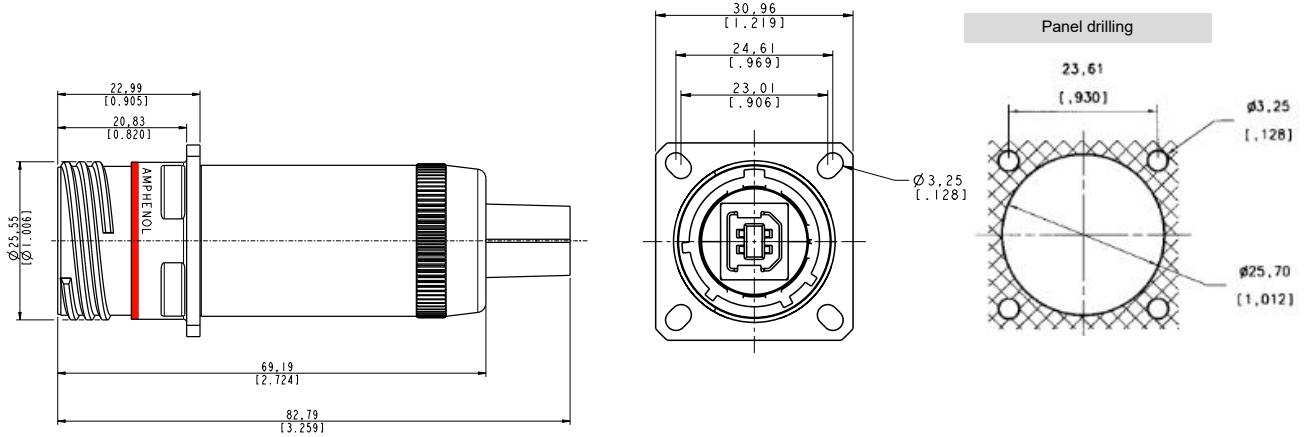Assembly instructions
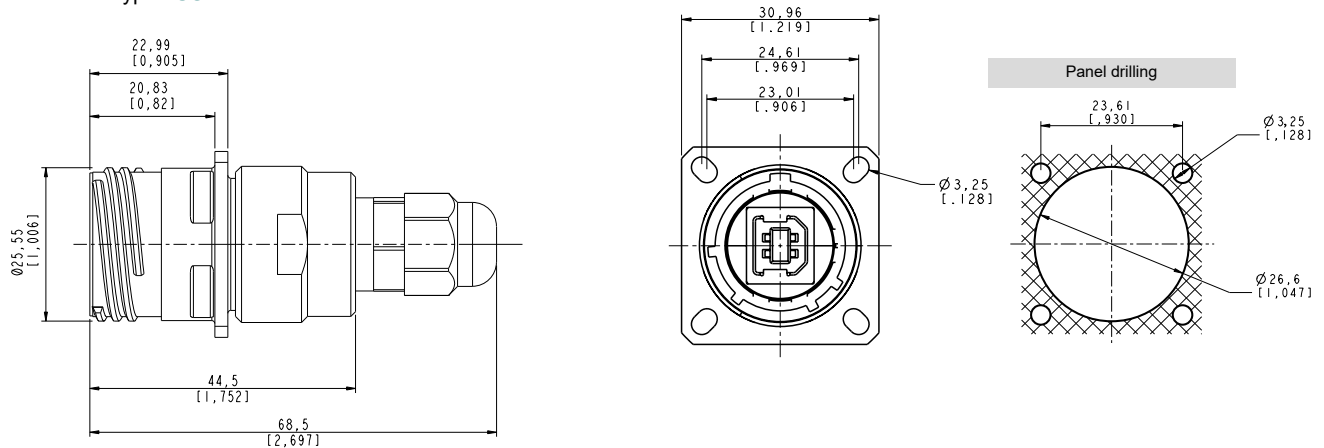How to order

USBBFTV

Overall dimension

Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back termination type 1 - Metal backshell

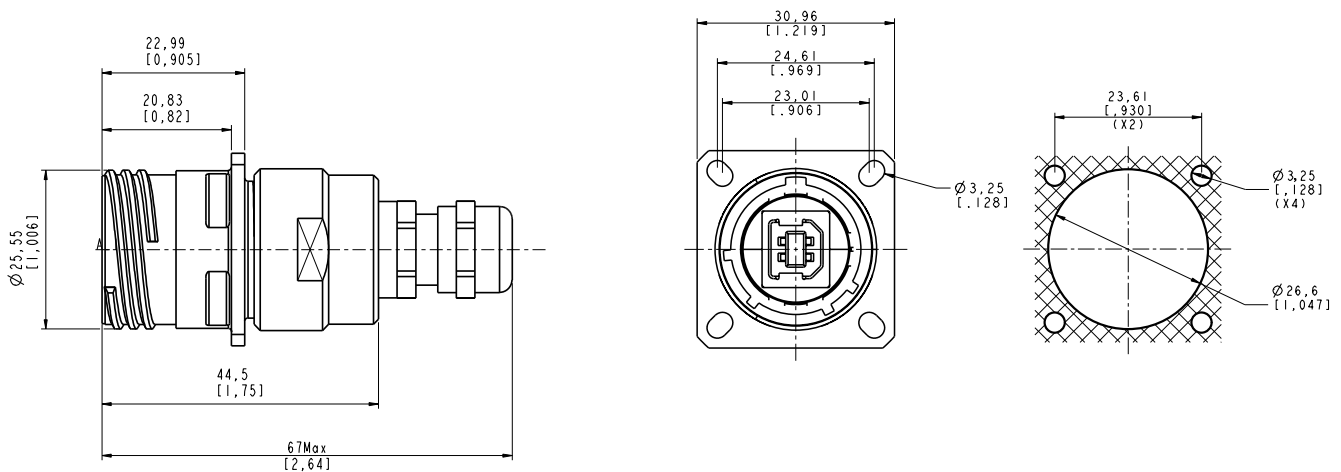Part number type: **USBBF TV 2PE 1 X**

Panel drilling

Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back termination type 2 - Metal backshell

Part number type: **USBBF TV 2PE 2 X**

Panel drilling

Part number type: **USBBF TV 2PEM 2 X**
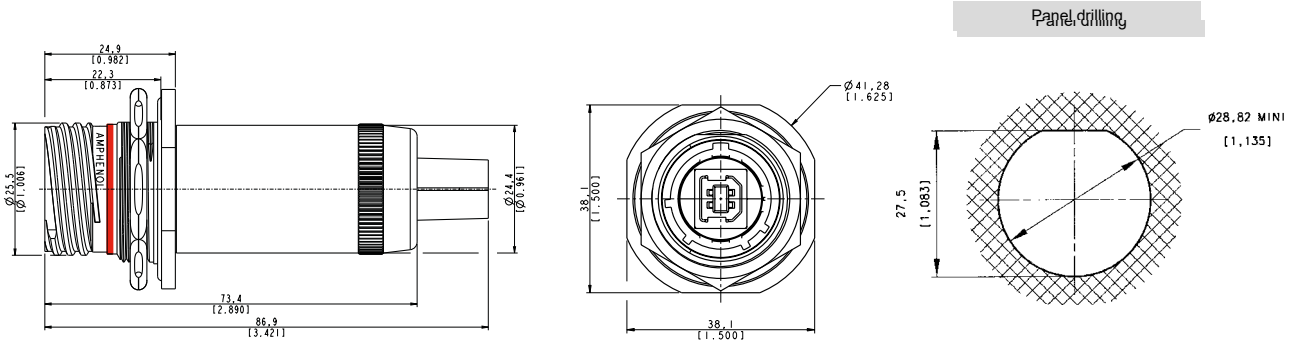
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USBBFTV

Overall dimension

Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back termination type 1 - Metal backshell

Part number type: **USBBF TV 7PE 1 X**

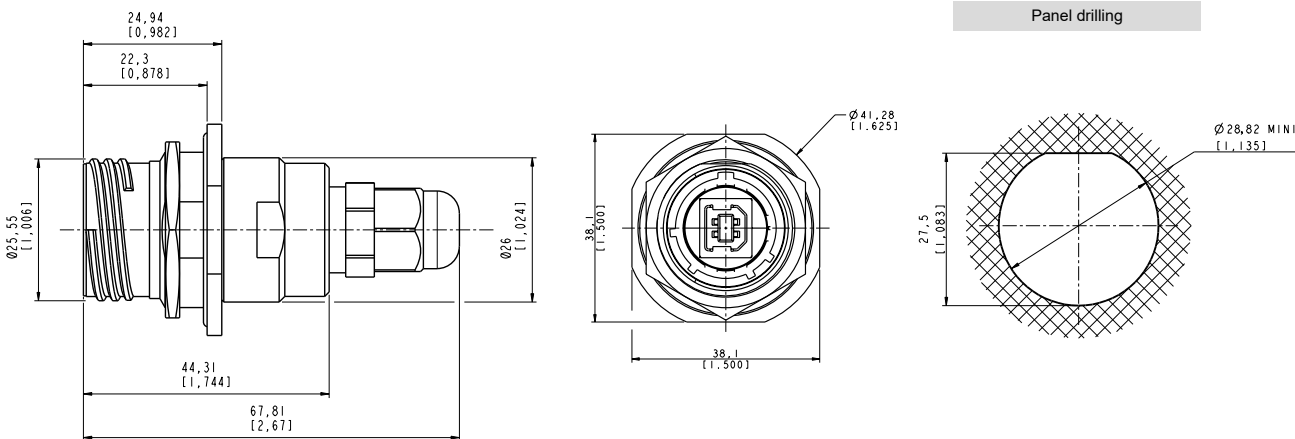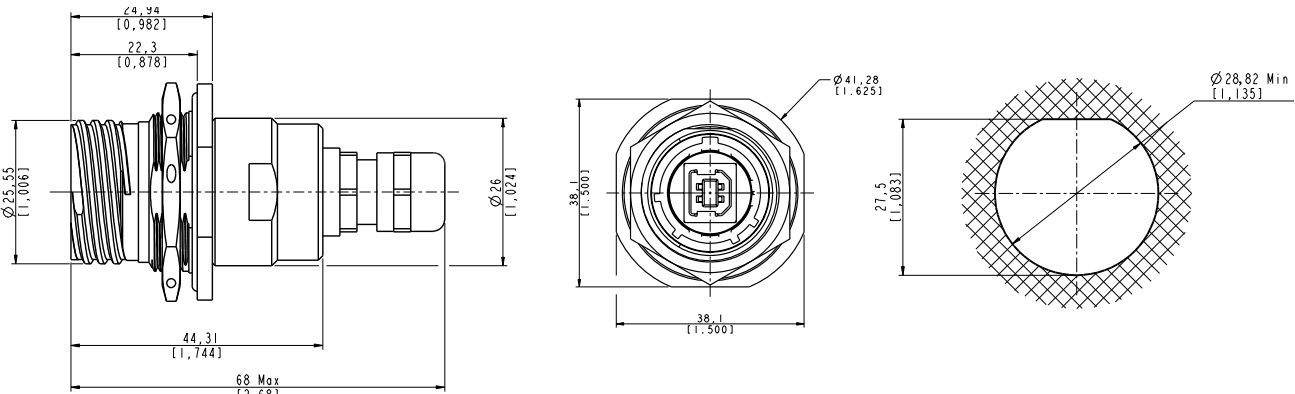Panel drilling

Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back termination type 2 - Metal backshell

Part number type: **USBBF TV 7PE 2 X**

Panel drilling

Part number type: **USBBF TV 7PEM 2 X**

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USB3.2

USB2.0

Cables and cordsets

Adapters and access points

Rugged electronics

Accessories

Assembly instructions

How to order

USBBFTV - TRANSVERSALLY SEALED RECEPTACLE

Description

The transversally sealed receptacle is in all aspects equivalent to the standard and in addition, is improved with compound at the rear of the receptacle. This will prevent the sealing of the receptacle when unmated with his plug or protective cap.

The hermetic solution, as the transversally sealed one is compounded at the rear of the receptacle. Helium leakage is less than 1.10-6 cm^3 per second [0.1 micron cubit ft per hour] at one bar [15 psi] pressure differential. This test is performed on all of the hermetic receptacles.

Main features

MAIN CHARACTERISTICS
- Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device - Shell size 15
- 2 mechanical coding/polarization possibilities by the user (receptacle insert rotation)
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Improved EMI protection
- USBFTV plug retention in the receptacle: 100 N in the axis
- Mating cycles: 500 minimum

DATA TRANSMISSION
- USB-B
- USB specification 2.0
- Data rate: up to 480 Mb/s for high speed USB

ENVIRONMENTAL PROTECTION
- Sealing (when mated): IP68 (temporary immersion)
- Salt spray: - 48 h with nickel plating ✓
                 - 500 h with olive drab cadmium
                 - 500 h with black zinc nickel ✓
                 - 500 h with Tin-zinc plating ✓
                 - 1000 h with marine bronze shell ✓
- Fire retardant / Low smoke: UL94 V0 and EN45545
- Vibrations: 10 - 500 Hz, 10 g, 3 axes: no discontinuity > 1micro s
- Shocks: IK06 > weight of 250 g drop from 40 cm [15.75 in] onto connectors (mated pair)
- Temperature range: - 40°C / +85°C

APPLICATIONS
- Battlefield communication systems
- C5ISR
- Data acquisition and transmission in harsh environment
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- Rail Mass Transit
- Industrial process control
- Robotics
- CNC machines
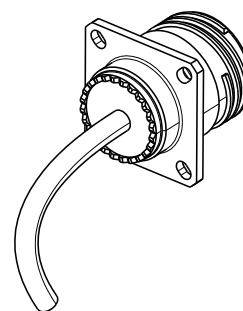- Oil & Gas

✓ : RoHS compliant

How to order : Please refer to page 125

Back terminations
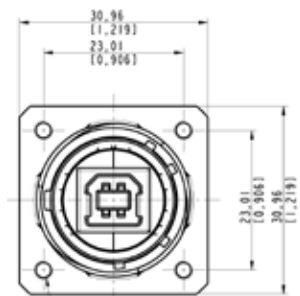
USB cable end type A	USB cable type «OPEN»

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USBBFTV - STAND OFF RECEPTACLE
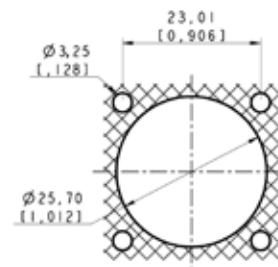
Description
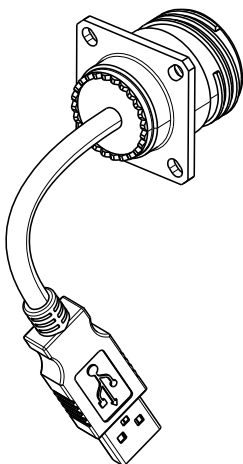
The USBBFTV enhanced design allows you to mount the connector shell directly on the PC board. Soldering your contacts directly on the board saves you a lot of space inside of your system. As this double-flange of this connector is directly fixed on the board, mechanical stresses are absorbed by the shell and not the contacts. In addition to this benefit, the sealing is improved by the compounded receptacle.

Overall dimension

Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - PC Tails

USB3.2

USB2.0

Cables and cordsets

Adapters and access points

Rugged electronics

Accessories

Assembly instructions

How to order

Part number	Plating
USBBF TV 2 5 N F459	Nickel ✓
USBBF TV 2 5 G F459	Olive drab cadmium
USBBF TV 2 5 ZN F459	Black Zinc Nickel ✓

✓ : RoHS compliant

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USBBFTV - STAND OFF RECEPTACLE

Overall dimension

Receptacle - Jam nut receptacle - Hex nut mounting - Shell type 7 - PC Tails

PCB Layout

Panel drilling

Part number	Plating
USBBF TV 7 5 N F459	Nickel ✓
USBBF TV 7 5 G F459	Olive drab cadmium
USBBF TV 7 5 ZN F459	Black Zinc Nickel ✓

✓ : RoHS compliant

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