

INELCO[®]
THE DISTINCTION

compu-shield[®]

usb





INELCO the home of unparalleled quality and service in Interconnection and Electronic Components is a European driven company, manufacturing European ideas, solutions and quality in Asia. INELCO's mission is to fulfill the requirements of their partners and customers and remains the best choice for cost-effective solutions. INELCO is the supplier of interconnection and electronic components and systems for networking, telecommunications and industrial applications. INELCO's product range includes modular (Western) plugs and jacks (modcon[®]), with and without integrated transformers (intrajack[®]), shielded and unshielded as well as terminals (voice services[®]), SFPs (compu-shield[®]), M12 (circon[®]), discrete components (discom[®] transformers, coils and inductors), USBs and other additional products and services.

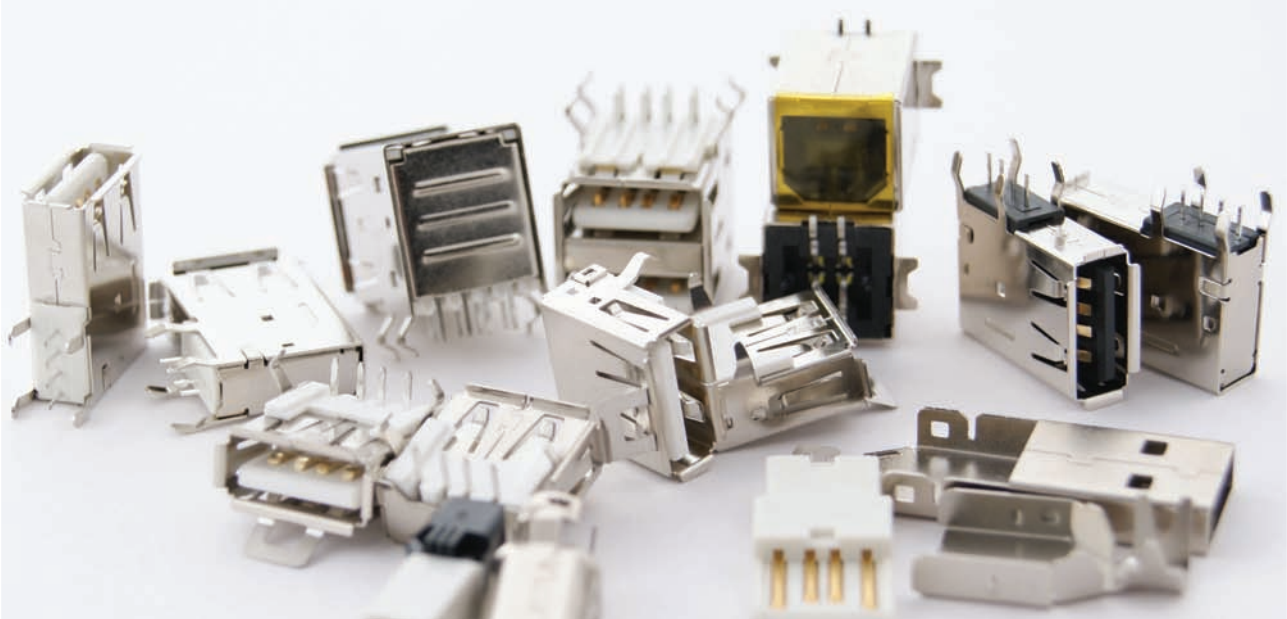


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USB Plugs and Jacks



Part Numbers

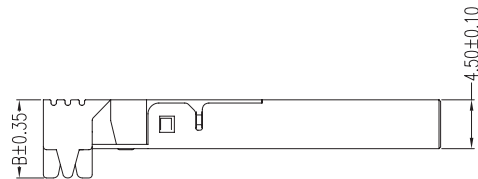
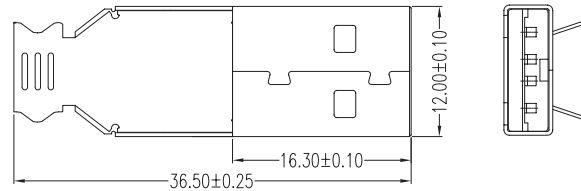
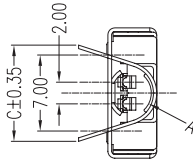
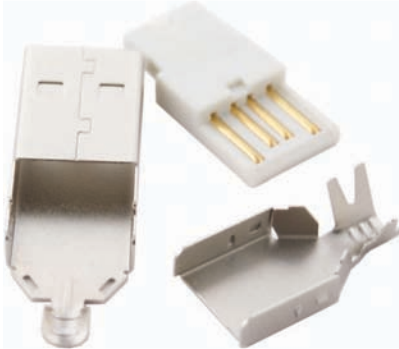
XXXX X X X X X X X X - O

- Options: *Packing/ Printing, ... : T: Tray, R: Reel, S: Special*
- Contact Plating Gold *0 = Flashgold 1 = 3 μ", 2 = 6 μ", 3 = 15 μ", 4 = 30 μ", 5 = 50 μ"*
- Shield Plating *T: Tin, N: Nickel*
- Shield Material *C: Copper Alloy, S: Stainless Steel, I: Sheet Iron*
- Housing Color *N: Nature, E: Ebony, W: White, B: Blue*
- Housing Material *L: LCP, P: PBT, A: ABS, T: PA6T, G: PA9T, F: FR52*
- Version Counter *1 - 9*
- Mounting on PCB *H: Horizontal, V: Vertical*
- Type of Connector *P: Plug
For Jacks: T: THT, S: SMT, F: Fasten/ Solder, H: Hybrid*

U	USB
2/ 3	Version (2.0/ 3.0 = 3.1)
A/ B/ C	Type of USB Connector
S/ P/ M/ X/ U/ 1/ 2	Standard/ Powered/ Mini 5 Pin / Mini 10 Pin/ Micro/ Generation

USB 2.0 A Standard Plug

U2ASP1



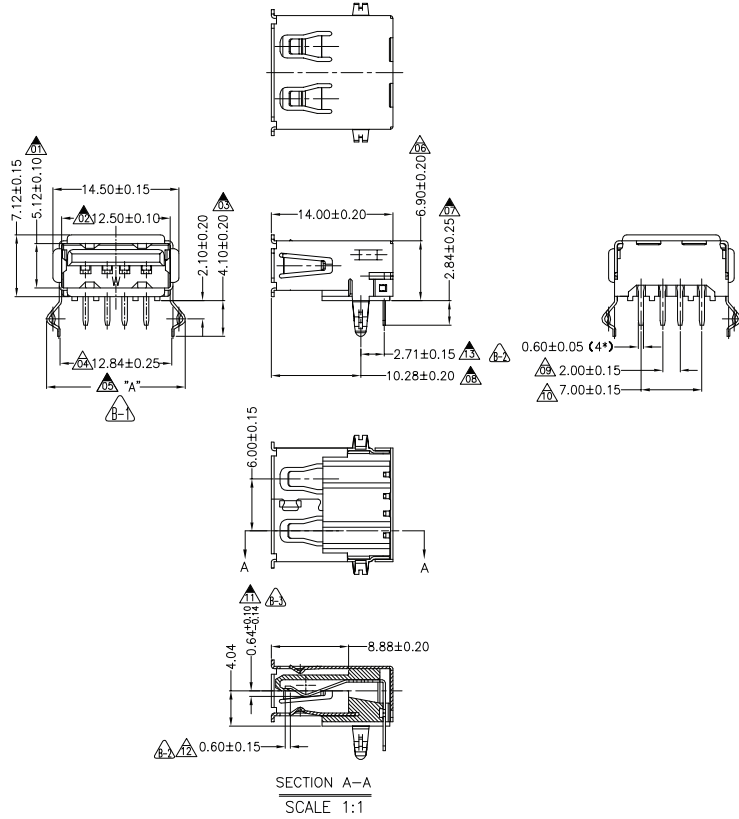
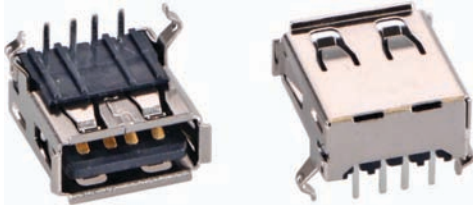
Specification

- Current Rating 1.5 A at 250 V AC
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -20°C to +60°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

	(A)	(B)	(C)
OD:4.2	6.2	7.9	
OD:5.0	7.0	9.0	
OD:6.0	8.5	10.4	
OD:2.0	5.8	5.65	
OD:3.0	5.77	7.17	

USB 2.0 A Standard Jacks

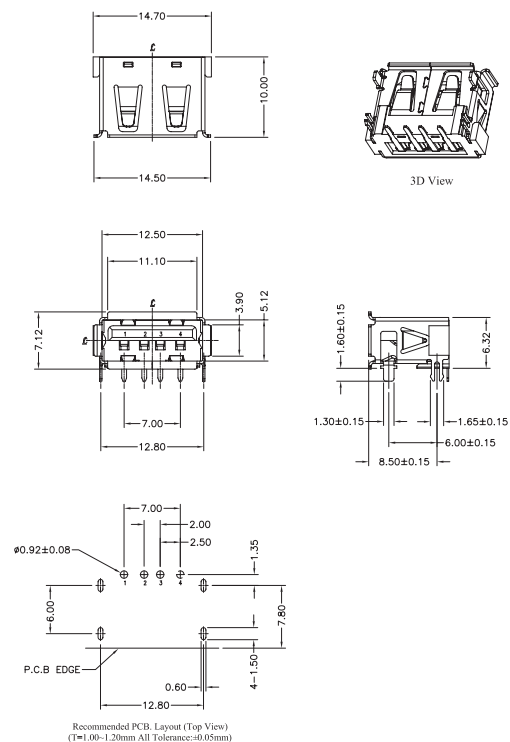
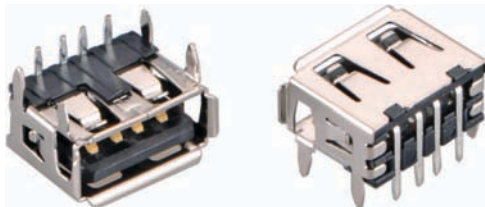
U2ASTH1



Specification

- Current Rating 1.5 A at 250 V AC
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -20°C to +60°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

U2ASTH5

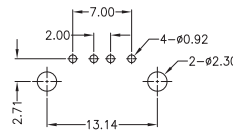
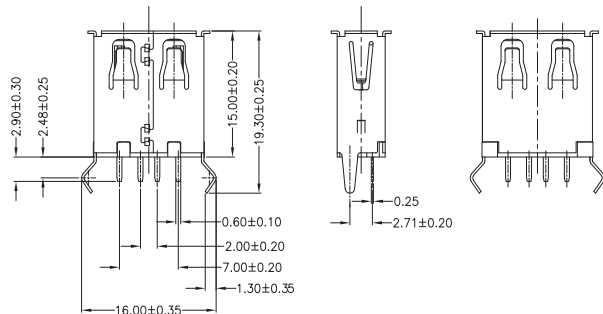
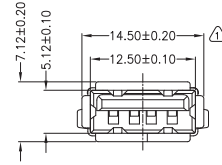


Specification

- Current Rating 1.5 A at 250 V AC
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -20°C to +60°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

USB 2.0 A Standard Jacks

U2ASTV1

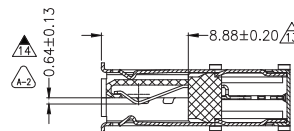
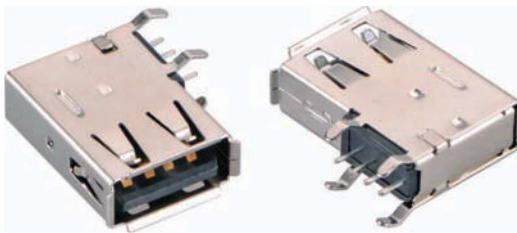


RECOMMENDED P.C.B HOLE LAYOUT
TOP VIEW(TOLERANCE:±0.10)

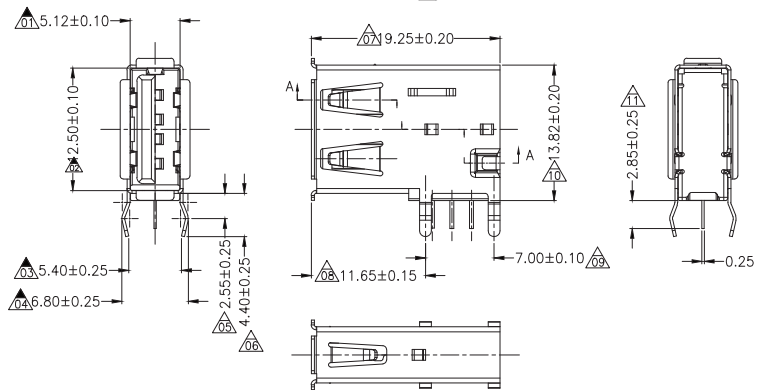
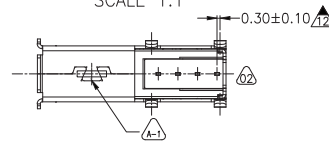
Specification

- Current Rating 1.5 A
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -20°C to +60°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

U2ASTV2



SECTION A-A
SCALE 1:1

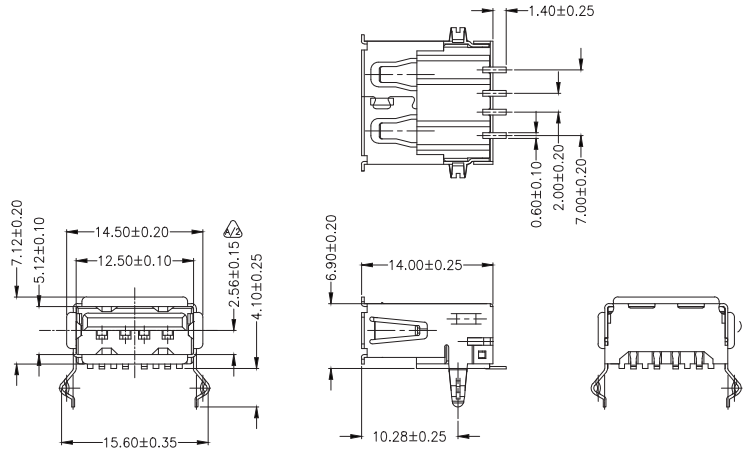


Specification

- Current Rating 1.5 A at 250 V AC
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -20°C to +60°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

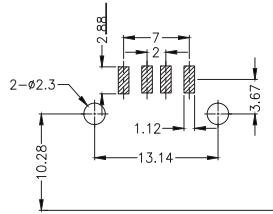
USB 2.0 A Standard Jacks

U2ASSH1



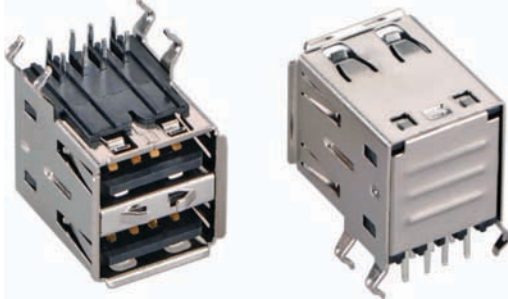
Specification

- Current Rating 1.5 A
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 20 mΩ max.
- Withstanding Voltage 750 V AC
- Temperature Range -40°C to +105°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.



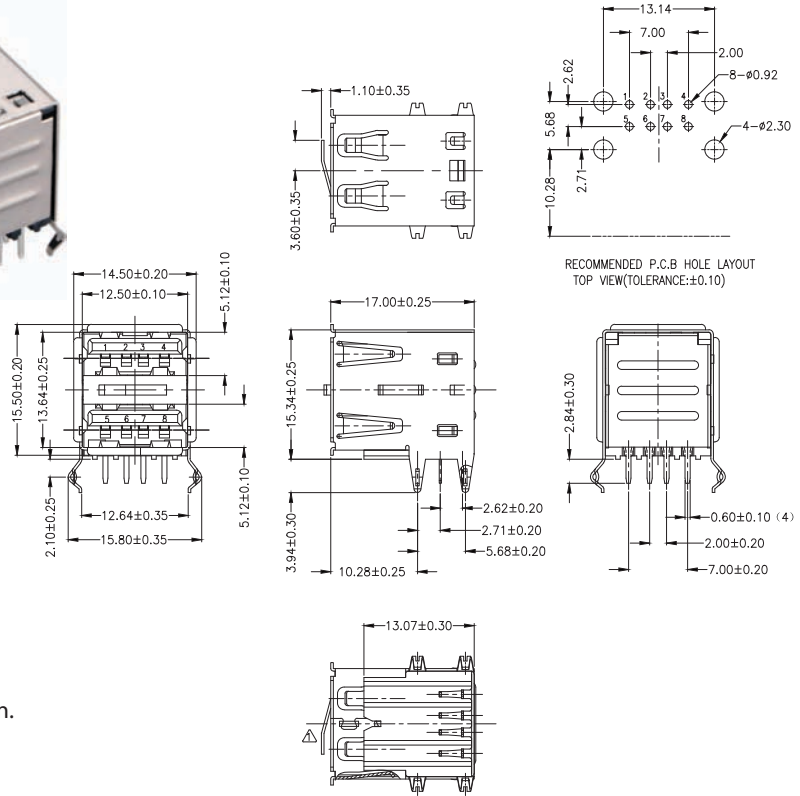
USB 2.0 A Standard Jacks Doublestacks

U2AST21H1



Specification

- Current Rating 1.5 A
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -20°C to +60°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

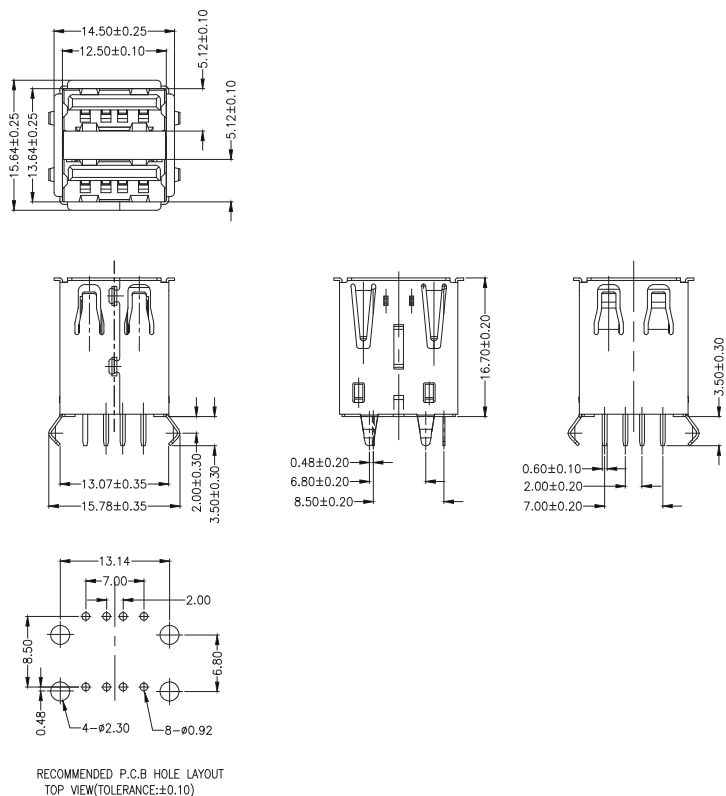


U2AST21V1



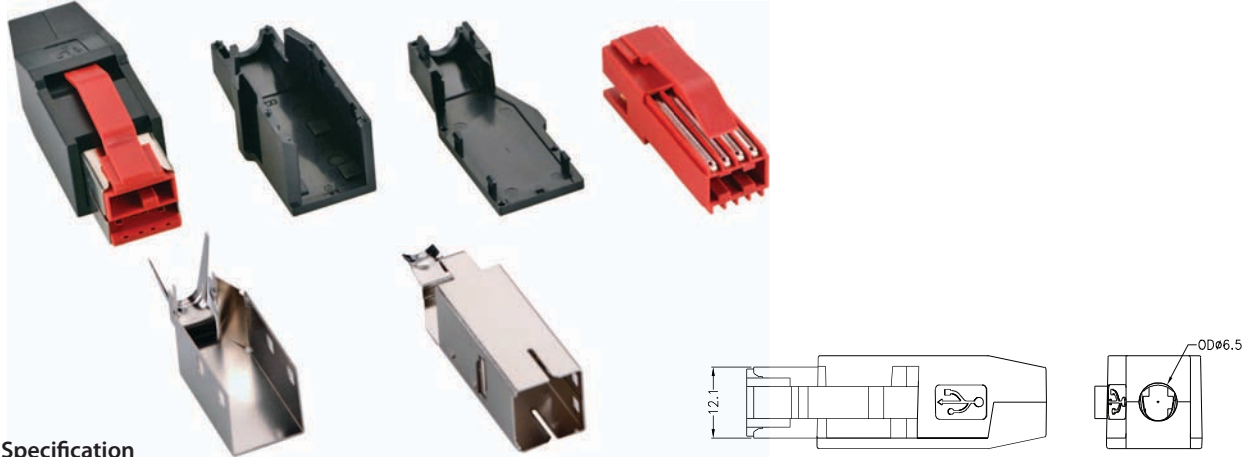
Specification

- Current Rating 1.5 A
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -20°C to +60°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.



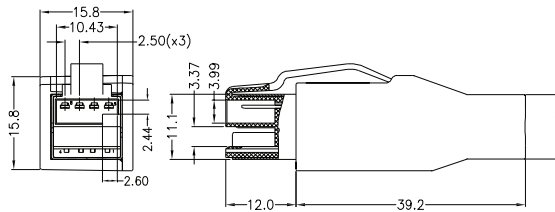
USB 2.0 A Powered Plug and Jack

U2APP1

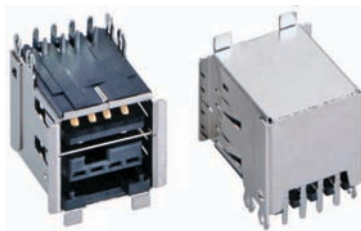


Specification

- Current Rating
 - Powered 3 A
 - USB 1 A
- Voltage Rating 12 V DC
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 100 V AC
- Temperature Range -20°C to +85°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

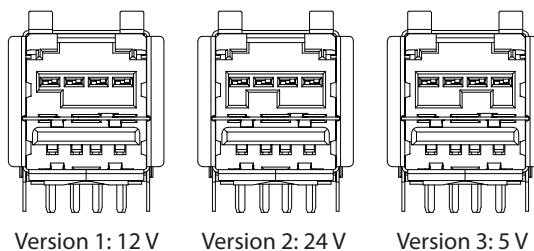
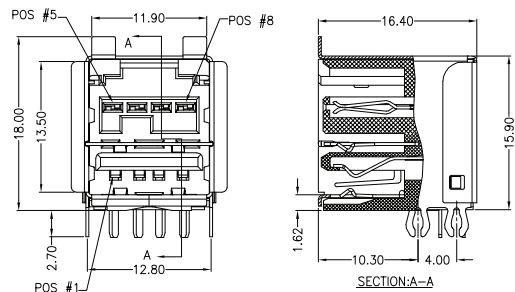
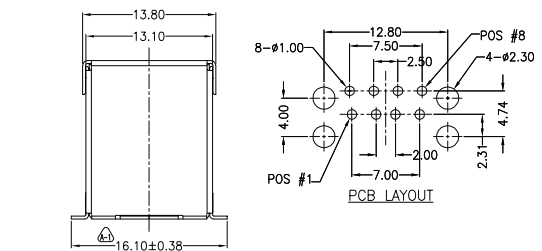


U2APTH1/2/3



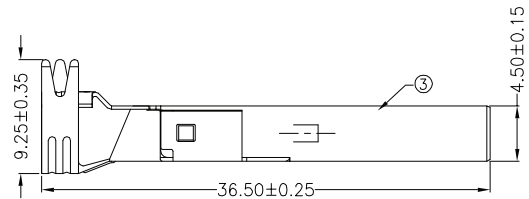
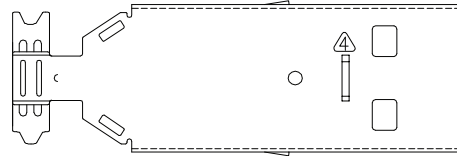
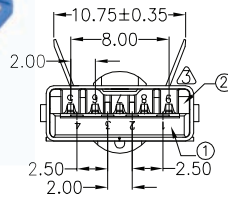
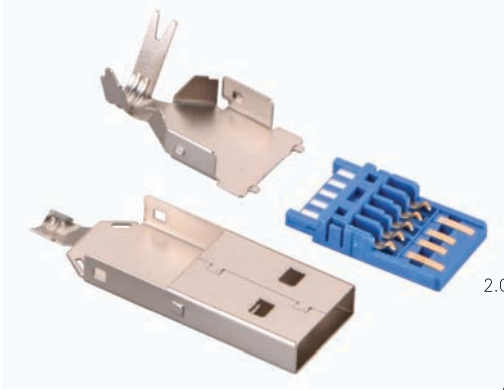
Specification

- Current Rating
 - Powered 3 A
 - USB 1 A
- Voltage Rating See Drawing
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 100 V AC
- Temperature Range -20°C to +85°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.



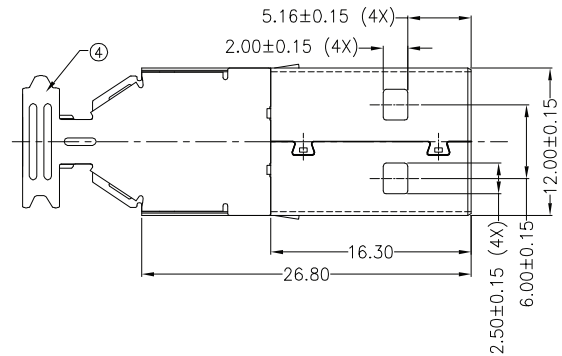
USB 3.1 Gen 1 A Standard Plug

U3ASP1



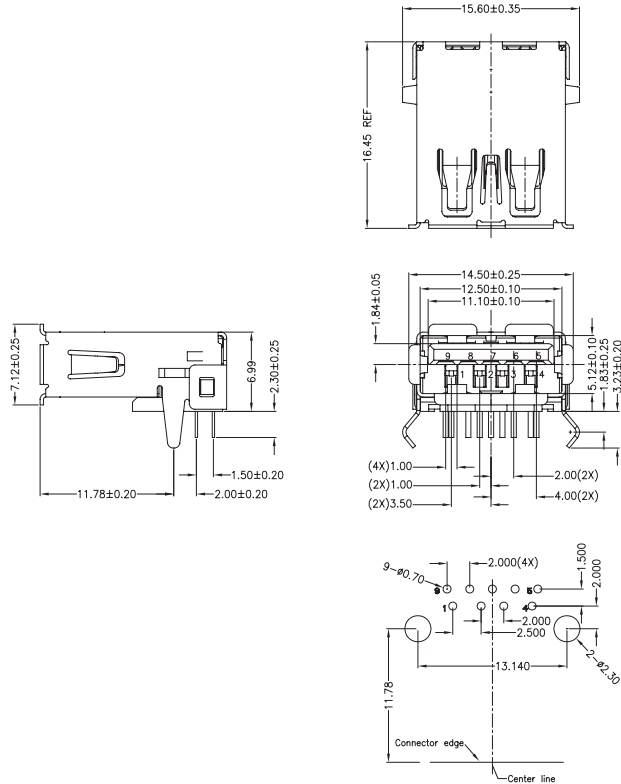
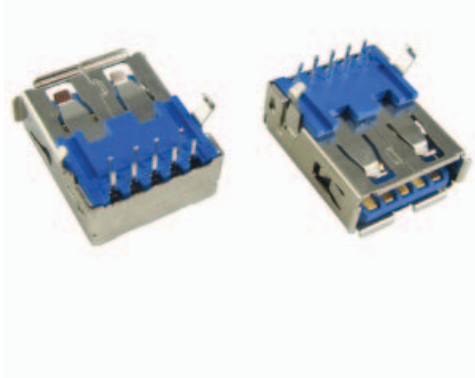
Specification

- Current Rating
 - 1.8 A for Pin 1 & Pin 4
 - 0.25 A for Other Contacts
- Voltage Rating
 - 30 V
- Insulation Resistance
 - 100 MΩ min.
- Contact Resistance
 - 30 mΩ max. for Pin 1 & Pin 4
 - 50 mΩ max. for Other Contacts
- Withstanding Voltage
 - 100 V AC
- Temperature Range
 - 20°C to +85°C
- Durability
 - 1,500 Cycles min.
- Insertion Force
 - 35 N max.
- Extraction Force
 - 10 N min.



USB 3.1 Gen 1 A Standard Jacks

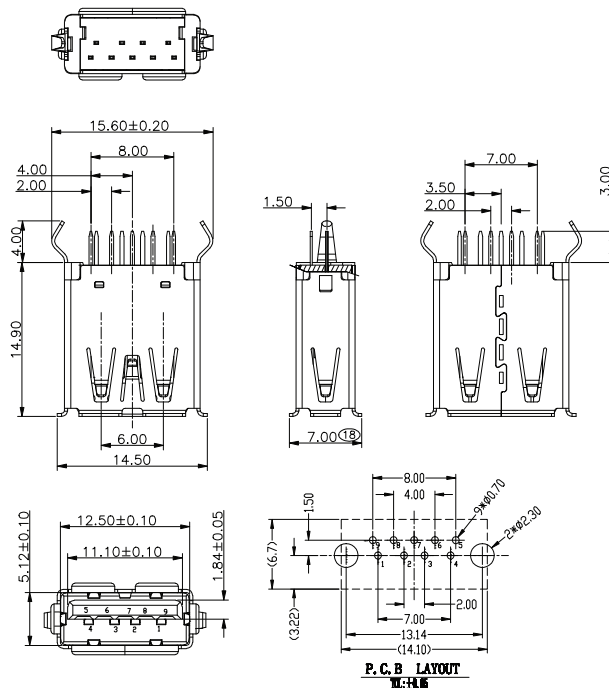
U3ASTH1



Specification

- Current Rating 1.8 A at 250 V AC
- Voltage Rating 30 V
- Insulation Resistance 100 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 100 V AC
- Temperature Range -25°C to +85°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

U3ASTV1

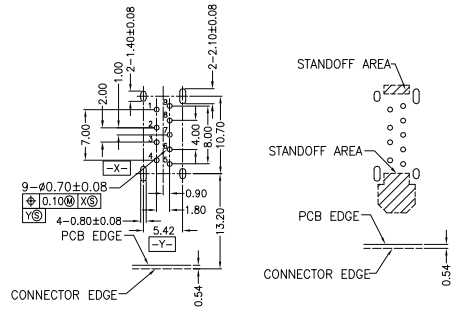
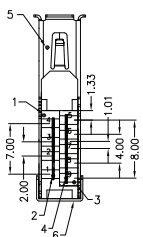
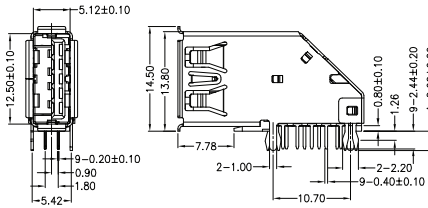
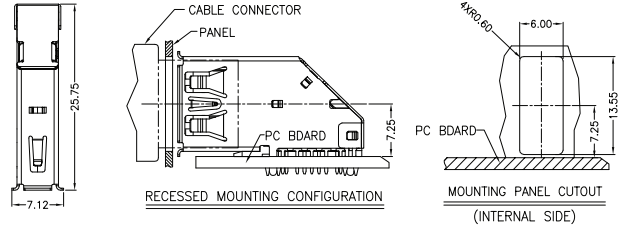


Specification

- Current Rating 1.5 A at 250 V AC
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 100 V AC
- Temperature Range -40°C to +85°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

USB 3.1 Gen 1 A Standard Jack

U3ASTV2



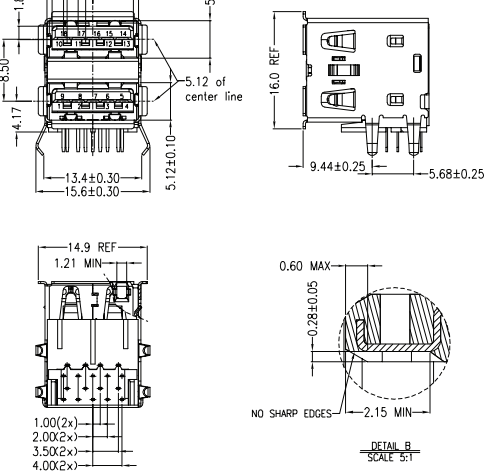
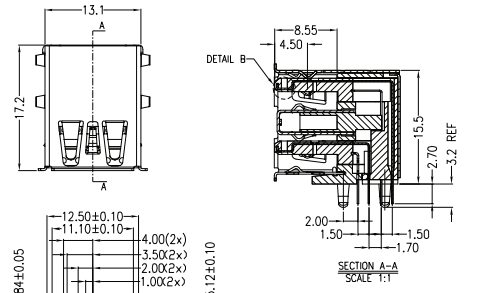
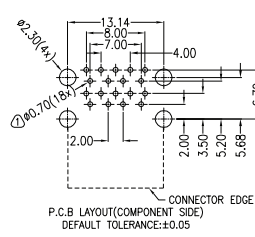
RECOMMENDED PCB LAYOUT (COMPONENT SIDE VIEW)
THK=1.60 ALL TOL IS ±0.10

Specification

- Current Rating: 1.8 A for Pin 1 & Pin 4
0.25 A for Other Contacts
- Voltage Rating: 30 V
- Insulation Resistance: 100 MΩ min.
- Contact Resistance: 30 mΩ max. for Pin 1 & Pin 4
50 mΩ max. for Other Contacts
- Withstanding Voltage: 100 V AC
- Temperature Range: -20°C to +85°C
- Durability: 1,500 Cycles min.
- Insertion Force: 35 N max.
- Extraction Force: 10 N min.

USB 3.1 Gen 1 A Standard Jacks Doublestack

U3AST21H1

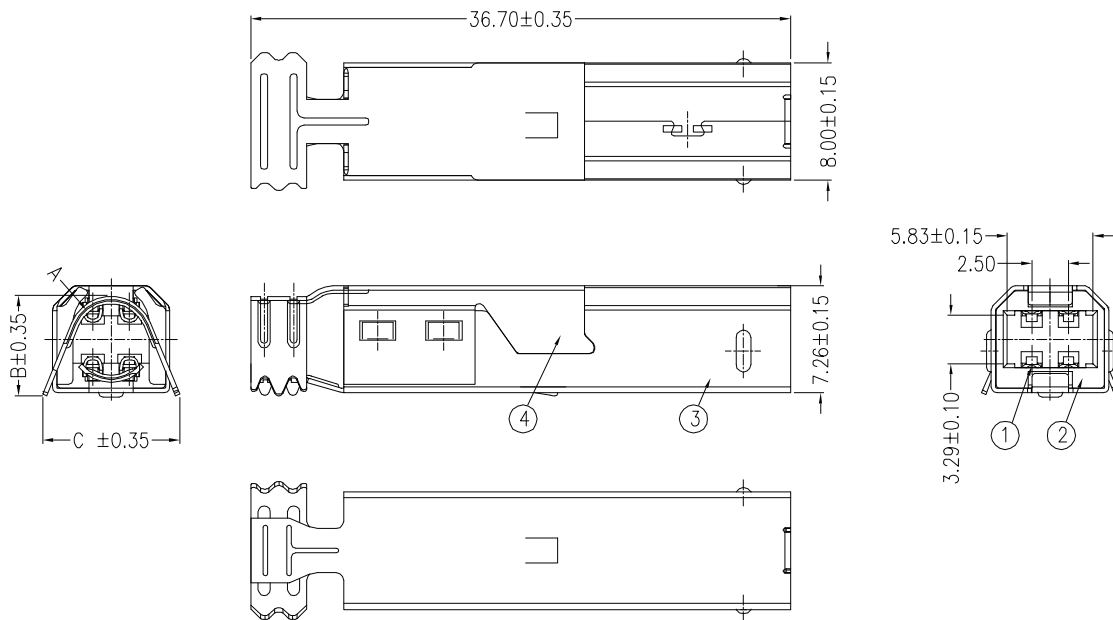
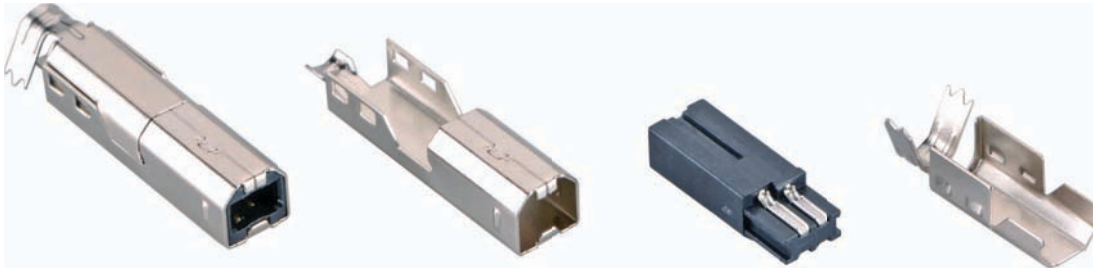


Specification

- Current Rating: 1.8 A for Pin 1 & Pin 4
0.25 A for Other Contacts
- Voltage Rating: 30 V
- Insulation Resistance: 100 MΩ min.
- Contact Resistance: 30 mΩ max. for Pin 1 & Pin 4
50 mΩ max. for Other Contacts
- Withstanding Voltage: 100 V AC
- Temperature Range: -20°C to +85°C
- Durability: 1,500 Cycles min.
- Insertion Force: 35 N max.
- Extraction Force: 10 N min.

USB 2.0 B Standard Plug

U2BSP1



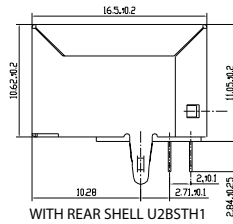
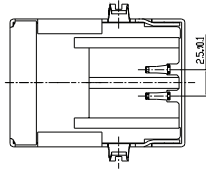
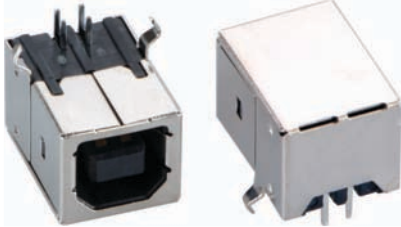
(A)	(B)	(C)
OD:5.0	6.8	9.5
OD:4.2	5.8	5.75

Specification

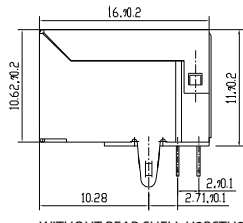
- Current Rating 1.5 A
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -20°C to +60°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

USB 2.0 B Standard Jacks

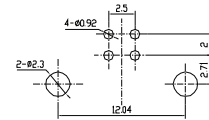
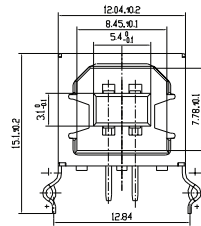
U2BSTH1/ H2



WITH REAR SHELL U2BSTH1



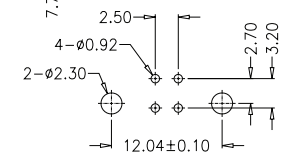
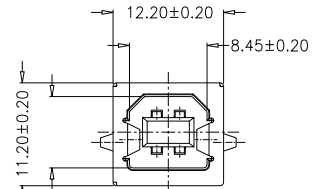
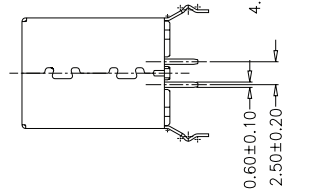
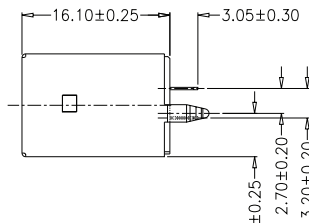
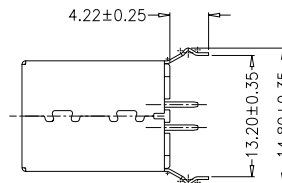
WITHOUT REAR SHELL U2BSTH2



Specification

- Current Rating 1.5 A
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -20°C to +60°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

U2BSTV1



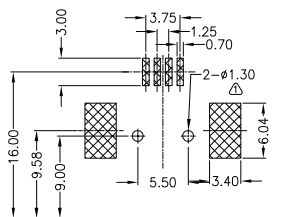
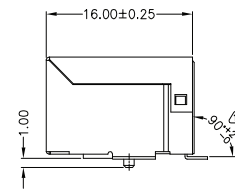
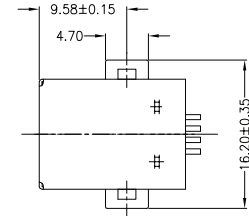
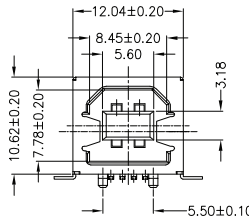
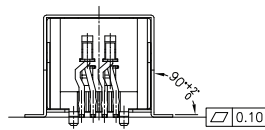
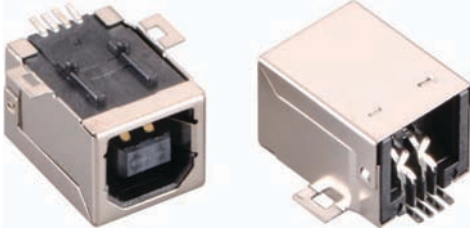
RECOMMENDED P.C.B HOLE LAYOUT
TOP VIEW (TOLERANCE: ±0.10)

Specification

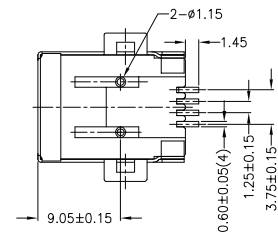
- Current Rating 1.5 A
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -20°C to +60°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

USB 2.0 B Standard Jacks

U2BSSH1



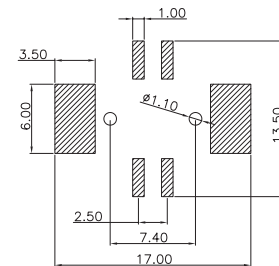
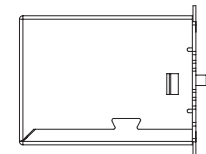
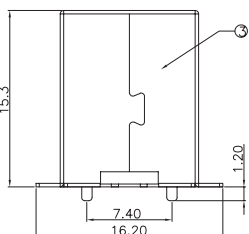
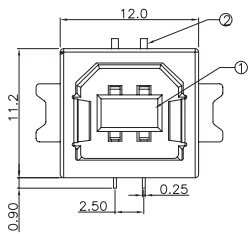
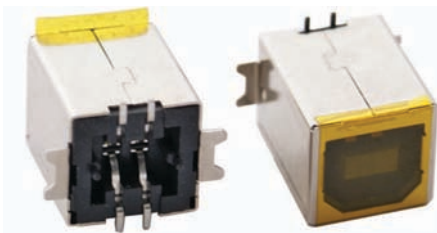
RECOMMENDED P.C.B HOLE LAYOUT
TOP VIEW (TOLERANCE:±0.10)



Specification

- Current Rating 1.5 A
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -20°C to +60°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

U2BSSV1



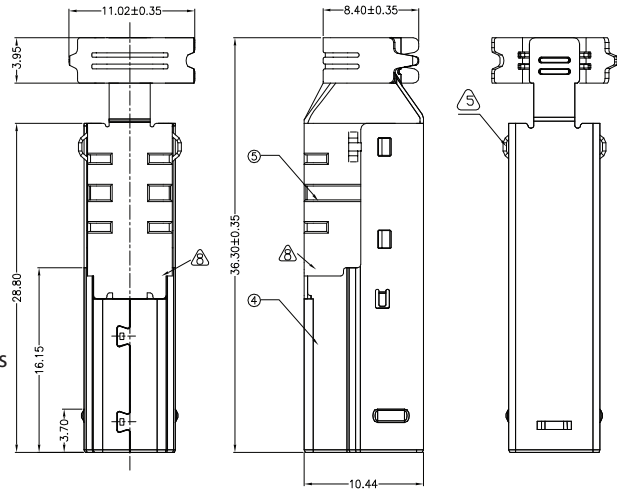
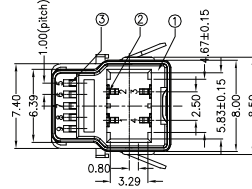
TOP VIEW
PCB LAYOUT RECOMMENDED

Specification

- Current Rating 1 A
- Voltage Rating 30 V
- Insulation Resistance 100 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -20°C to +85°C
- Durability 1,500 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

USB 3.1 Gen 1 B Standard Plug

U3BSP1

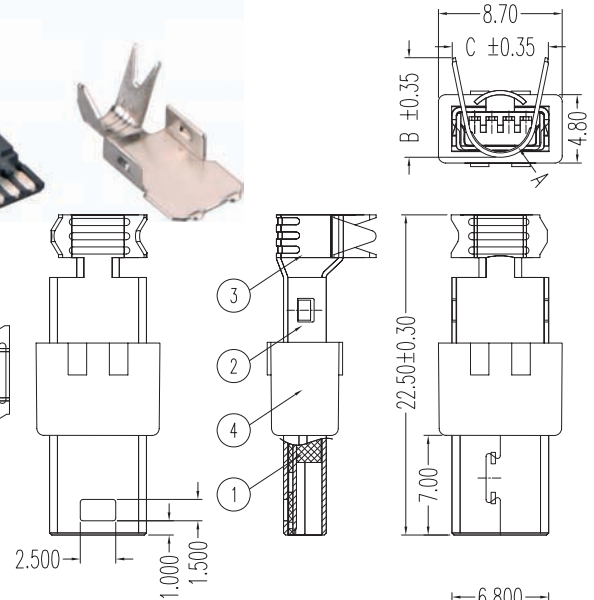
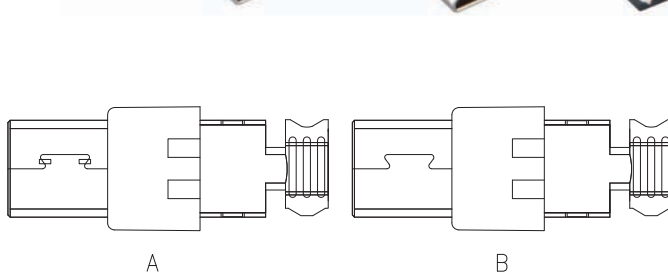


Specification

- Current Rating
 - 1.8 A for Pin 1 & Pin 4
 - 0.25 A for Other Contacts
- Voltage Rating
 - 30 V
- Insulation Resistance
 - 100 MΩ min.
- Contact Resistance
 - 30 mΩ max. for Pin 1 & Pin 4
 - 50 mΩ max. for Other Contacts
- Withstanding Voltage
 - 100 V AC
- Temperature Range
 - 20°C to +85°C
- Durability
 - 1,500 Cycles min.
- Insertion Force
 - 35 N max.
- Extraction Force
 - 10 N min.

USB 2.0 B Mini Plug

U2BMP1

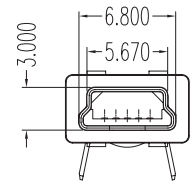


Specification

- Current Rating 1 A
- Voltage Rating 30 V
- Insulation Resistance 100 MΩ min.
- Contact Resistance 50 mΩ max.
- Withstanding Voltage 100 V AC
- Temperature Range -20°C to +60°C
- Durability 5,000 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

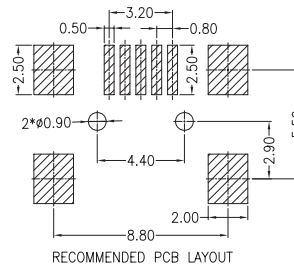
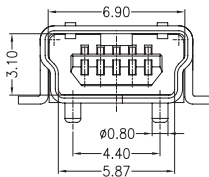
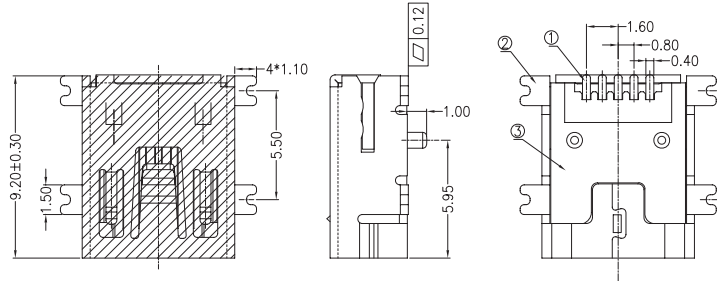
table 2

	(A)	(B)	(C)
OD:4.4		7.0	7.75
OD:3.4		6.15	6.5
△ OD:5.0		7.0	9.0



USB 2.0 B Mini Jacks 5 Pin

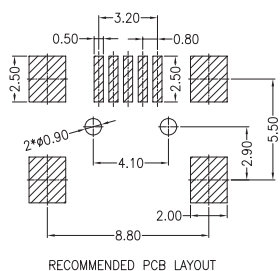
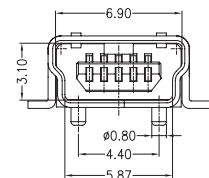
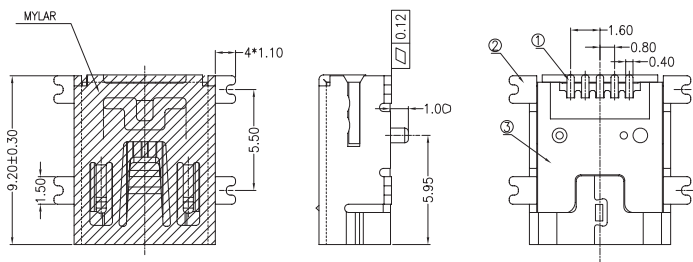
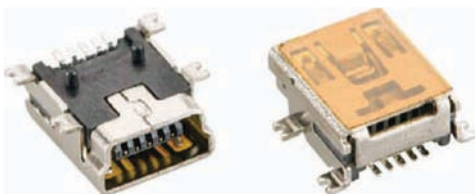
U2BMSH1



Specification

- Current Rating 1 A
- Voltage Rating 30 V
- Insulation Resistance 100 MΩ min.
- Contact Resistance 50 mΩ max.
- Withstanding Voltage 100 V AC
- Temperature Range -20°C to +60°C
- Durability 5,000 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

U2BMSH4

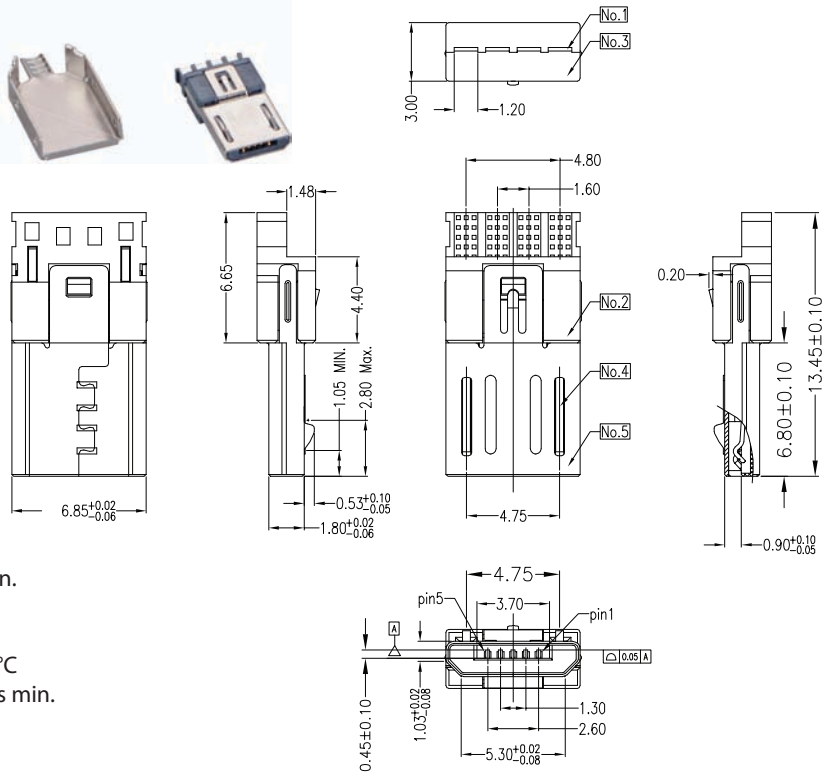


Specification

- Current Rating 1 A
- Voltage Rating 30 V
- Insulation Resistance 100 MΩ min.
- Contact Resistance 50 mΩ max.
- Withstanding Voltage 100 V AC
- Temperature Range -20°C to +60°C
- Durability 5,000 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

USB 2.0 B Micro Plug 5 Pin for Solder

U2BUP1

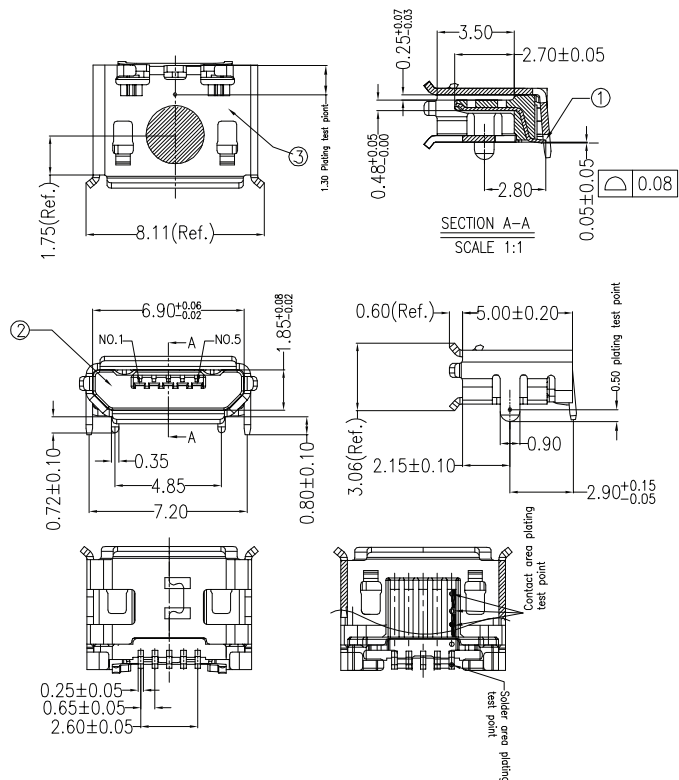


Specification

- Current Rating 1.5 A
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 100 V AC
- Temperature Range -20°C to +85°C
- Durability 10,000 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 8 N min.

USB 2.0 B Micro Jack SMT

U2BUSH1

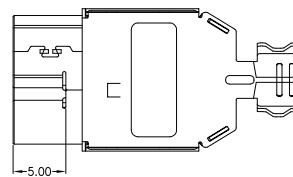
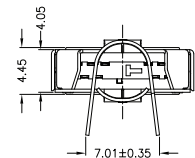
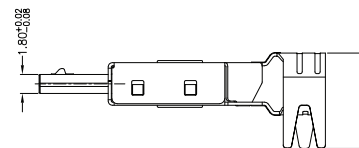
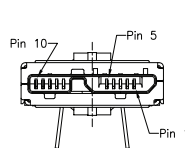
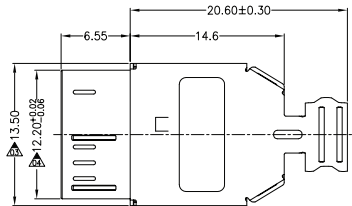
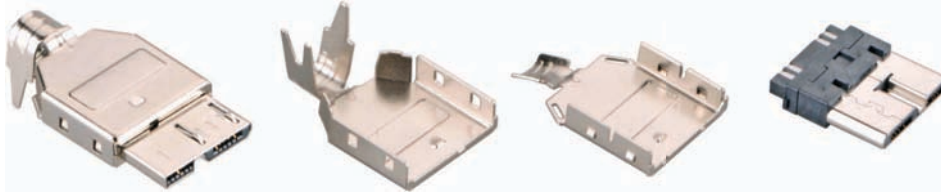


Specification

- Current Rating 1.8 A
- Voltage Rating 30 V
- Insulation Resistance 1,000 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 100 V AC
- Temperature Range -20°C to +85°C
- Durability 10,000 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 8 N min.

USB 3.1 Gen 1 B Micro Plug

U3BUP1

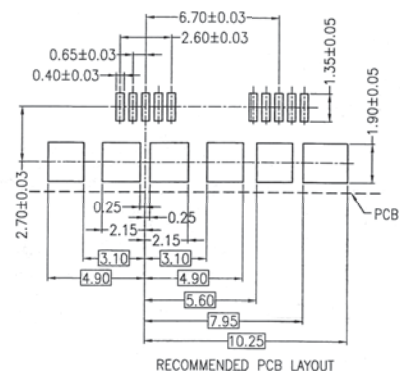
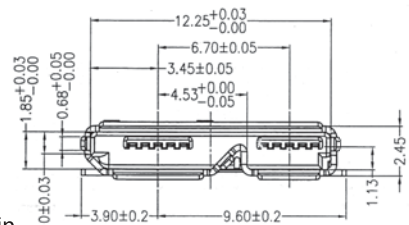
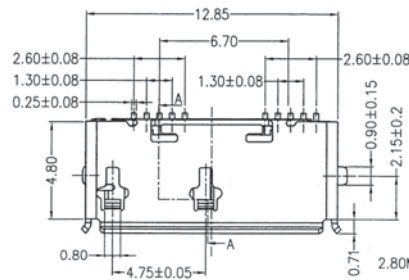


Specification

- Current Rating 1.5 A
- Voltage Rating 30 V
- Insulation Resistance 100 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 500 V AC
- Temperature Range -25°C to +85°C
- Durability 10,000 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 10 N min.

USB 3.1 Gen 1 B Micro Jacks

U3BUSH1

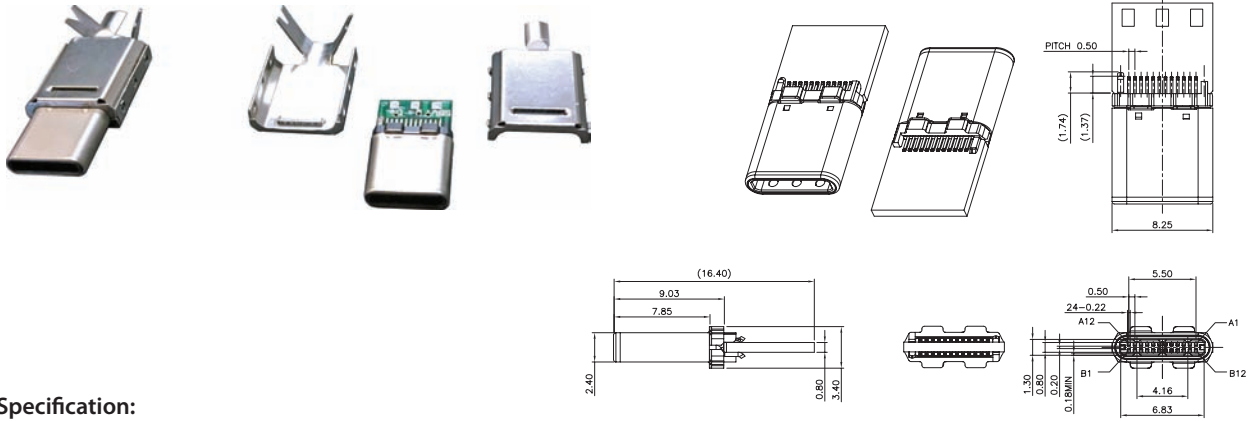


Specification

- Current Rating 1.5 A
- Voltage Rating 30 V
- Insulation Resistance 100 MΩ min.
- Contact Resistance 30 mΩ max.
- Withstanding Voltage 100 V AC
- Temperature Range -0°C to +50°C
- Durability 10,000 Cycles min.
- Insertion Force 35 N max.
- Extraction Force 8 N min.

USB 2.0 C Plugs

U2CP1



Specification:

- Current Rating
- Contact Resistance

5 A for V_{BUS} Pin, 1.25 A for V_{CONN} Pin
40 m Ω max. for initial
10 m Ω change after test
measure at 20 mV, 100 mA

- Insulation Resistance
- Withstanding Voltage
- Temperature Range
- Mechanical Characteristics

Insertion Force
Extraction Force

5 - 20 N
10 N min. initial;
8 - 20 N after test
10,000 cycles min.

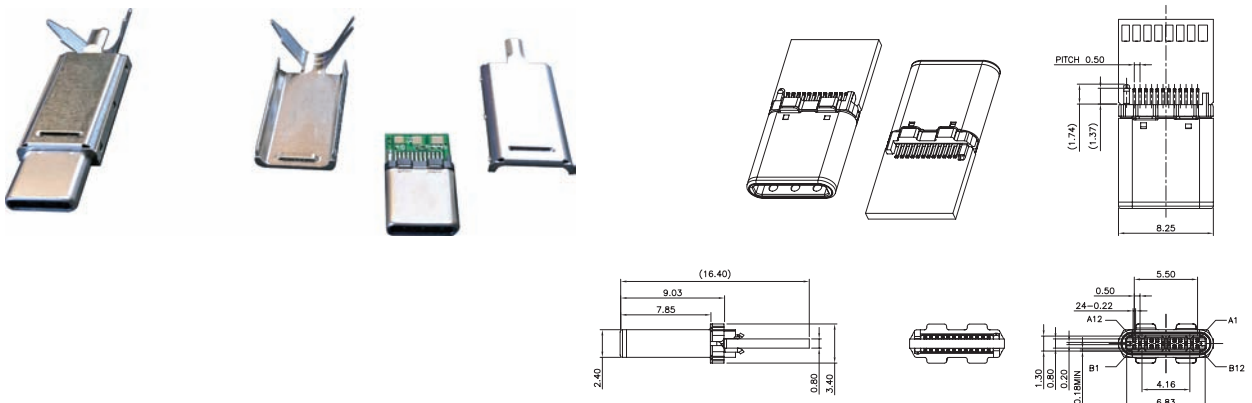
- Durability

Top Side

Bottom Side

Recommended PCBA
Tolerance: ± 0.05 mm

U2CP2



Specification:

- Current Rating
- Contact Resistance

5 A for V_{BUS} Pin, 1.25 A for V_{CONN} Pin
40 m Ω max. for initial
10 m Ω change after test
measure at 20 mV, 100 mA

- Insulation Resistance
- Withstanding Voltage
- Temperature Range
- Mechanical Characteristics

Insertion Force
Extraction Force

5 - 20 N
10 N min. initial;
8 - 20 N after test
10,000 cycles min.

- Durability

Top Side

Bottom Side

Recommended PCBA
Tolerance: ± 0.05 mm

