MINI USB CONNECTORS

TE Connectivity's (TE) USB connectors are designed to an industry standard controlled by the USB Implementers Forum. USB is characterized by widespread market adoption and consists of several form factors to accommodate different device requirements. The Mini USB connector is one of the smallest USB connectors. It has a polarized mating geometry, and is useful for both smaller handheld devices as well as larger permanent instrumentation. All of TE's Mini USB connectors meet the USB 2.0-specification (480 Mbps), are specified for up to 5000 mating-cycles and are available in both Type AB and Type B orientations.

TE's Mini USB connectors are well known for their reliability, robustness and the system's versatility in addressing USB application needs. The TE USB portfolio is a broad interconnection technology for I/O devices and has many variants of PCB retention, orientation, position, offset and more. TE's technology capability enables its mini USB connector series to be an efficient, cost-saving solution for customers.

Features & Benefits

- Reliable and robust design can provide a stable connection, even after thousands of insertions
- The integration of power and data transportation in one connector can provide cost savings
- A large portfolio and highly customizable products provide design flexibility

Applications

- Handheld Consumer Electronics
- Industrial Control
- Surveillance
- Automotive Infotainment
- Robotic Control

General Specifications

TE offers a broad selection of high quality mini USB connectors. A number of parameters/features are common and apply to all mini USB connectors in our portfolio.

	Parameter	Value	Unit
Performance	Industry standard	USB 2.0	
	Data rate	480	Mbps
	Max. current rating	1	A
	Max. voltage rating	30	V
	Durability	5,000	Matings
	Moisture Sensitivity Level (MSL)	1	
	Operating temperature range	See table on page 5	

	Feature	Value	Unit
Design Aspects	Number of Contacts	5	
	Contact pitch	0.8	mm
		0.031	in
	Contact length (tail-length)	See table on page 5	
	Recommended PCB thickness	See table on page 5	

	Material	
Material	Housing	Thermoplastic
	Shell	Nickel or Tin over Nickel
	Mating contact area	Gold

	Parameter	Value
Process Aspects	Contact termination process	See table on page 5
	Pick & place capable	
	Max. reflow temperature	
	Packaging	

Compliance
A statement of compliance can be generated for any available mini USB part number on te.com

Selection Guide

TE offers mini USB connectors with a number of options to optimize designs. Below are explanations of the different design options we offer. On page 5 there is a part number table which lists these features for each available part number.

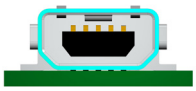
Mini USB Type A, B or AB

The choice to use a Type A, B or AB connector depends on the mating plug being used and the application. Type AB mates with both Type A and Type B plugs.

Type A

Type B

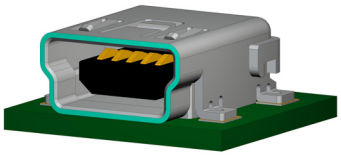
Type AB



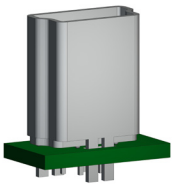
Orientation and Position

TE offers mini USB connectors in right angle (R/A) or a vertical orientations.

Right Angle



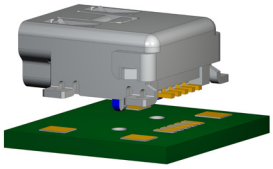
Vertical



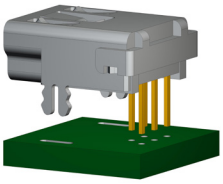
Contact Termination Type

TE offers mini USB connectors for both surface mount (SMT) and through hole (T/H) termination.

Surface Mount

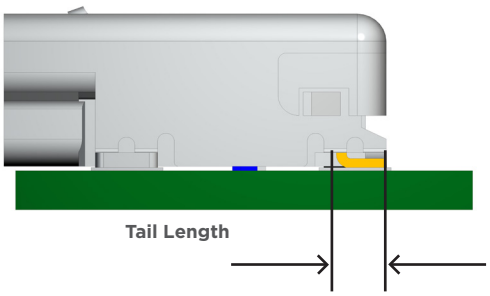


Through Hole

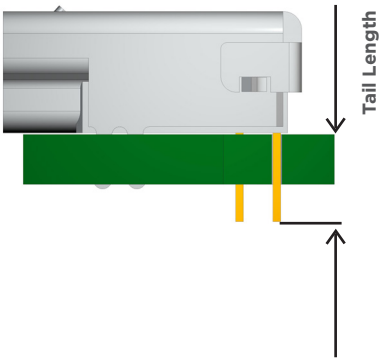


Tail Length

Surface Mount

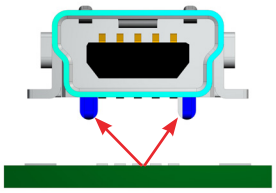


Through Hole



Locating Post

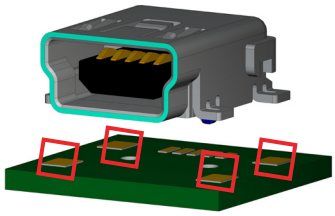
Some of our SMT connectors have a feature called a locating post which serves the purpose of positioning the connector on the PCB during reflow.



PCB Retention Type

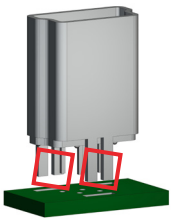
Our connectors are designed to have a strong mechanical retention when being soldered to a PCB. Depending on your PCB design there are three different solutions for holding the connector to the PCB after SMT.

SMT Hold-downs



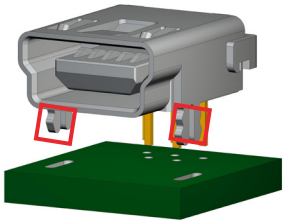
The PCB needs to have pads to which the hold-down features on the connector are soldered to.

Straight Legs



The PCB needs to have holes in which the DIPs of the connector will be inserted and soldered to.

Board Locks



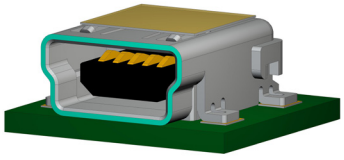
The PCB needs to have holes in which the DIPs of the connector will be inserted and soldered to.

Note that a connector with this kind of DIP has a press-fit insertion into the holes of the PCB.

Pick and Place Capability

Some of our mini USB connectors are pick and place capable. This means that the connecor has either a “tape” (on right angle connectors) or a “cap” (on vertical connectors) that will simplify the pickup of the connector with a vacum tool.

Tape



Cap

Right Angle Orientation

TE Part Number	Interface Type	Process (TH or SMT)	Max. Soldering Temp.	Pick & Place Capable	Locating Posts	PCB Retention	DIP	Tail Length	Packaging Method
1734035-1	B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tray
1734035-2	B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tape & Reel
1734035-3	B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tape & Reel
1734035-4	B	Solder tabs	N/A	Yes (Tape)	Yes	SMT Hold-Down	No	1.15	Tape & Reel
1734035-5	B	SMT	260°C	Yes (Tape)	Yes	SMT Hold-Down	No	1.15	Tape & Reel
1734205-1 (Plug)	B	Solder tabs	N/A	No	No	None	No	N/A	Bag
1734327-1	A	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tray
1734327-2	A	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tape & Reel
1734328-1	A/B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tray
1734328-2	A/B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tape & Reel
1734510-1	B	TH	260°C	No	No	Straight Leg	Yes (2)	2.85	Tray
1734510-2	B	TH	265°C	No	No	Straight Leg	Yes (2)	2.85	Tray
1775051-1	A/B	SMT	260°C	Yes (Tape)	No	SMT Hold-Down	No	1.15	Tape & Reel
2041492-1	B	SMT	260°C	Yes (Tape)	Yes	SMT Hold-Down	No	1.15	Tape & Reel
1-1734035-1	B	SMT	260°C	No	No	SMT Hold-Down	No	1.15	Tray
1-1734035-2	B	SMT	260°C	No	No	SMT Hold-Down	No	1.15	Tape & Reel
1-1734035-3	B	SMT	260°C	No	No	SMT Hold-Down	No	1.15	Tape & Reel
1-1734327-1	B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tray
1-1734327-2	B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tape & Reel
1-1734328-1	A/B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tray
1-1734328-2	A/B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tape & Reel
1-1734510-1	B	TH	240°C	No	No	Straight Leg	Yes (2)	3.25	Tray
2-1734035-1	B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tray
2-1734035-2	B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tape & Reel
2-1734035-3	B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tape & Reel
2-1734035-4	B	SMT	260°C	Yes (Tape)	Yes	SMT Hold-Down	No	1.15	Tape & Reel
2-1734327-2	B	SMT	260°C	No	Yes	SMT Hold-Down	No	1.15	Tape & Reel
4-1734035-2	B	SMT	260°C	Yes (Tape)	No	SMT Hold-Down	No	1.15	Tape & Reel

Vertical Orientation

P/N	Type	Process (TH or SMT)	Max. Soldering Temp.	Pick & Place Capable	Locating Posts	PCB Retention	DIP	Tail Length	Packaging Method
1734753-1	B	TH	240°C	No	No	Straight Leg	Yes (3)	2.00	Tray
1734753-2	B	TH	240°C	No	No	Straight Leg	Yes (3)	2.00	Tray
1734753-3	B	TH	240°C	Yes (Cap)	No	Straight Leg	Yes (3)	2.00	Tape & Reel
1775060-1	B	TH	240°C	No	No	Straight Leg	Yes (3)	1.20	Tray
2041517-1	B	TH	260°C	No	No	Boardlocks	Yes (3)	2.00	Tape & Reel
2041517-2	B	TH	260°C	Yes (Cap)	No	Boardlocks	Yes (3)	2.00	Tape & Reel

TE Technical Support Center

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