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</table>

**Micro USB Connectors**

**Quick Reference Guide**

- **Features**: Optimized design, provides a robust connection even after thousands of insertions.
- **Benefits**: Improved reliability, lower insertion forces, and improved assembly.
- **Applications**: Connectors for mobile devices, industrial control systems, medical equipment, and consumer electronics.

**Frequently Asked Questions**

**Question 1**: What does TID mean?

**Answer 1**: TID stands for Test Identification Number. To acquire a TID number, a manufacturer must submit a test report to USB IF for approval. The test report must include information such as the connector's design, the test results, and the manufacturer's test of the connector's performance.

**Question 2**: Why is DIP soldering used?

**Answer 2**: TE Connectivity is a major supplier of all sorts of cable assemblies. A cable assembly can be fully customized to the customer's needs. There is the possibility to integrate complex (active) modules into the cable.

**Question 3**: Can TE Connectivity also produce custom cable assemblies?

**Answer 3**: Yes, TE Connectivity is a major supplier of all sorts of cable assemblies. A cable assembly can be fully customized to the customer's needs. There is the possibility to integrate complex (active) modules into the cable.

**Question 4**: What does splash proof mean?

**Answer 4**: Splash proof connector means that a certain amount of water sprayed on them. Even a heavy Monsoon would be not problem for this connector series.
**TE Connectivity: Micro USB Connectors**

### Type A and B plugs and AB receptacles

<table>
<thead>
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<th>Plug</th>
<th>Receptacle</th>
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<tr>
<td>Type A</td>
<td>Type B</td>
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<tr>
<td>Type A</td>
<td>Type AB</td>
</tr>
<tr>
<td>Type B</td>
<td>Type AB</td>
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</table>

**Plug**
- Type A plugs are typically used for connection to "master" devices. Type B plugs are used for connections to "slave" devices. The device itself often features a receptacle that can accept only Type B (slave) plugs or both Type A and B plugs (device can function as master or slave). This receptacle is known as an "AB" receptacle.

**Soldering Type**
- SMT (Surface Mount Technology) is used for soldering. This involves soldering the components to the printed circuit board without the need for a solder paste.

**Mount Type**
- Standard: The connector is mounted to the board using screws.
- Mid Mount: The connector is mounted below the board surface, reducing the overall height of the device.
- Reversed: The connector is mounted on the backside of the board, allowing for connection from the back of the device.

**Appearance of Flangeless Micro USB in the Customer Model**

- **With Flange**: The micro USB connector with flange leaves a gap between the connector and the phone cover. From an aesthetic point of view, this is less desirable. Furthermore, the gap allows for dust intrusion.
- **Flangeless**: The flangeless micro USB connector looks better in combination with the cover. The function of the flange is picked up by the shell.

**Cable Assemblies**

The cable assemblies feature either axial sealing or radial sealing possibilities to the phone cover. Splash-proof sealing all around; waterproof sealing can be applied as well.

**TE Connectivity's mobile device cable assembly product line**

The products are designed to be compliant with the waterproof and anxiety level industry standards. TE Connectivity's mobile device cable assembly product line is the latest generation interconnects for mobile devices, including mobile phones and tablet computers. The products are designed to be compliant with the waterproof and anxiety level industry standards. TE Connectivity's mobile device cable assembly product line is the latest generation interconnects for mobile devices, including mobile phones and tablet computers. The products are designed to be compliant with the waterproof and anxiety level industry standards.
**Type A and B plugs and B and AB receptacles**

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**Soldering Type**

- **SMT Dip**: Dip (4 legs) or Dip (2 legs)
- **DIP type**: 2 or 4 through-hole solder legs that provide additional strength to the connector. They prevent the connector from being ripped off the board if an exceptionally large force is applied to the connector (for example, when the device is dropped with an inserted plug).

**Mount Type**

- **Standard**: Standard vs. Mid Mount
- **Mid Mount**: A micro USB connector has a height of 2.51mm. With standard onboard mounting, this height is a given. However, by “sinking” the connector into the board, the height in the end application can be reduced. This mount type is called Mid Mount. Depending on the requirements, several heights can be achieved.
- **Reversed**: The micro USB plug always needs to be plugged into the devices with the USB logo facing the user. Reversed types allow for mounting on the opposite board side while the plug insertion direction is still correct. This is achieved by flipping the mating interface.

**Flangeless**

The micro USB connector with flange leaves a gap between the connector and the phone cover. From an aesthetic point of view, this is less desirable. Furthermore, the gap allows for dust intrusion.

**Flangeless appearance in the Customer Model**

**Splash-Proof**

The offer either axial sealing or radial sealing possibilities to the phone cover.

**Cable Assemblies**

TE Connectivity’s mobile device cable assembly product line is the latest generation interconnects for mobile devices, including mobile phones and tablet computers. The products are designed to be compliant with the electromagenetic and safety used industry standards. TE Connectivity’s mobile device cable assembly product line is suitable for mobile phones, tablets, and other devices. The cable length, colors and configurations can be adjusted toward customers’ needs.

**Cable assembly features**

- Solder-proof sealing element
- Sealing material on the outside of the cover
- Water proof sealing can be applied as well
- All holes in the shield are covering the housing sealing
- Either SMD or DIP soldering for holding feature can be applied
- All holes in the shield are covering the housing sealing
- TE Connectivity’s mobile device cable assembly product line is the latest generation interconnects for mobile devices, including mobile phones and tablet computers. The products are designed to be compliant with the electromagenetic and safety used industry standards. TE Connectivity’s mobile device cable assembly product line is suitable for mobile phones, tablets, and other devices. The cable length, colors and configurations can be adjusted toward customers’ needs.
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Mount Type

Standard vs. Mid Mount
A micro USB connector has a height of 2.51mm. With standard onboard mounting, this height is a given. However, by “sinking” the connector into the board, the height in the end application can be reduced. This mount type is called Mid Mount.

Reversed
The micro USB plug always needs to be plugged into the devices with the USB logo facing the user. Reversed types allow for mounting on the opposite board site while the plug insertion direction is still correct. This is achieved by flipping the mating interface. Reversed mounting is available in both standard reversed (on board) and reversed mid mount types.

Appearance of Flangeless Micro USB in the Customer Model

Cable Assemblies

TE Connectivity’s mobile device cable assembly product line is the latest generation components for mobile devices, including mobile phones and tablet computers. The products are designed to be compliant with the worldwide and widely used industry standards (USB, HDMI, etc.) and can be supplied fully assembled or in the kit form. TE offers either axial sealing or radial sealing possibilities to the phone cover.

Splash-Proof
The offers either axial sealing or radial sealing possibilities to the phone cover.
# Micro USB Connectors

<table>
<thead>
<tr>
<th>Type</th>
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## Frequently Asked Questions

**Question 1**
What does TE mean?

**Answer 1**
TE Connectivity is a major supplier of all sorts of cable assemblies. A cable assembly can be fully customized to the customer needs. There is even the possibility to integrate complete (blank) modules into the assembly.

**Question 2**
Does TE Connectivity also produce custom cable assemblies?

**Answer 2**
Yes, TE Connectivity can be a major supplier of all sorts of cable assemblies. A cable assembly can be fully customized to the customer needs. There is even the possibility to integrate complete (blank) modules into the assembly.

**Question 3**
What does TID mean?

**Answer 3**
TID stands for Test Identification Number. In order to acquire a TID number each test must be accompanied by a Test Identification Number. A TID number is an identifier that identifies a specific test result and allows the manufacturer of the pass of fail determination.

**Question 4**
What does splash proof mean?

**Answer 4**
Our splash proof series of connectors are designed to withstand a moderate amount of water splashed on them. From a heavy shower would not be predicable for this connector series.

## Quick Reference Guide

**Micro USB Connectors**

The USB (Universal Serial Bus) is a standardized product controlled by USB implementers. USB is characterized by easy integration of power and data transport within one connector. The USB connector is a complete interconnection technology for I/O devices and has many variants available, ranging from DIP type soldering, SMT type soldering, standard mount, reverse mount and mid mount. TE Connectivity’s technological capability enables its micro USB connector series as very efficient cost saving solution for our customers.

**Features**
- Best possible design flexibility
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- Best possible design flexibility
- Support for all power levels
- High design freedom
- Secure resistance against break off.
- Cost savings achieved by the integration of power and data transport within one connector.
- Cost efficiency achieved by the integration of power and data transport within one connector.
- The large portfolio and highly customizable product provides the best possible design flexibility.

**Benefits**
- Exact size connector
- High design freedom
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**Applications**
- Telescopes
- PDA products
- GPS units
- Mobile electronic devices
- Digital cameras and camcorders

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**5-1773464-3 CD 1M 10/2012**

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Te Connectivity micro USB connectors are well known for their reliability, robustness and the system’s reversibility in many USB applications. The TE USB system is a complete interconnection technology for USB devices and has many variants available, ranging from DIP type soldering, SMT type soldering, standard mount, reverse mount and mid mount. TE Connectivity’s technological capability enables its micro USB connector series as very efficient cost saving solution for our customers.

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Micro USB Connectors

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</tbody>
</table>

Question 1: Why is DIP soldering used?
Answer 1: TE Connectivity is a major supplier of all sorts of cable assemblies. A cable assembly can be fully customized to the customer needs. There is now the possibility to integrate complete (active) modules into the cable. DIP type hold downs are more rugged than SMD soldered brackets. Therefore they provide a better resistance against break off.

Question 3: Does TE Connectivity also produce custom cable assemblies?
Answer 3: TE Connectivity is a major supplier of all sorts of cable assemblies. A cable assembly can be fully customized to the customer needs. There is now the possibility to integrate complete (active) modules into the cable.

Micro USB Connectors

Features
- Cost-efficient solution
- Increased robustness
- High design freedom
- Superior durability
- Small size connector
- Digital cameras and camcorders
- Tablets
- Home electronic devices
- GPS units
- Cell phones/smartphones

Quick Reference Guide

Frequently Asked Questions

Question 2: What are TID numbers?
Answer 2: TID stands for Test Identification Number. In order to acquire a TID number, the USB connector needs to be subjected to compliance testing performed by a USB approved independent test facility. USB IF will evaluate the test results and assign the manufacturer of the pass of full determination.

Question 4: What does splash proof mean?
Answer 4: Our splash proof series of connectors are designed to withstand a moderate aerosol of water splashed on them. From a heavy downpour it would not be possible for this connector series.

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