Selecting the correct oscilloscope probe ensures accuracy and can improve the performance of your test instrument. TPI offers a wide range of high quality oscilloscope probes designed to meet the most demanding applications.

The IP series monolithic probes have switchable attenuation and are available in 60 and 250MHz. These probes are ideal for technicians that need a basic oscilloscope probe.

The slimline design P and SP series probes are available in fixed or switchable attenuation. These series of probes are perfect for the technician needing additional features such as replaceable cable and interchangeable probe tip. The compensation adjustment for these probes is located in the BNC to eliminate noise pickup.

TPI also offers three models of high voltage differential probes all with high common mode rejection, wide bandwidth, and fast rise times. Differential probes enable the viewing of signals not referenced to earth ground and provide better performance than a matched pair of single ended oscilloscope probes when measuring these types of signals.

Several important factors must be taken into account when selecting the correct probe. For best performance a probe with twice the bandwidth as the scope should be selected.

- The probe should have sufficient bandwidth and rise time for the test instrument and application. Choose a probe with at least an equal bandwidth as the scope it will be used with. For best performance a probe with twice the bandwidth as the scope should be selected.
- For oscilloscope probes, the input capacitance of your oscilloscope should be within the compensation range specification of the probe. In addition, if your oscilloscope has readout function, select a probe with this capability.
- For differential probes, make sure the maximum differential voltage is adequate for your application and the common mode rejection specification meets the requirements of the tests being performed.

Refer to the oscilloscope and differential probe specification tables to select the correct probe for your application.
Oscilloscope Probe Specifications

### DIFFERENTIAL PROBE SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>Bandwidth</th>
<th>Attenuation</th>
<th>Cable Length</th>
<th>Input Impedance</th>
<th>Rise Time</th>
<th>Compensation</th>
<th>Readout</th>
<th>ETC1010</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP250</td>
<td>600MHz x10</td>
<td>300V/22pF</td>
<td>45cm double insulated</td>
<td>300V</td>
<td>14.5pF</td>
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### FAQ DIFFERENTIAL PROBES

#### What can you measure with a differential probe?
With 20 MHz bandwidth, a switchable attenuation of 20:1, and 200:1 (part no. AD925), you can measure high-voltage circuits, motor speed controls, power supply design, and high-power electronic converters.

#### What does the maximum differential voltage specification tell me?
This specification provides you with the maximum voltage between the inputs of the differential probe can be subjected to. This is important because the maximum voltage should never be exceeded.

#### What is input impedance?
Impedance is a measure of how much a signal will be restricted. In general, it is best to have high resistance and low capacitance to ensure signal quality, accuracy of tests, and to ensure the probe doesn’t load down the circuit under test.

#### Why is common rejection ratio (CMRR) important for differential probes?
CMRR is a measure of how well a differential probe will reject signals common to both test points, leaving the desired signal to be displayed by the scope.