

# Thermocouples

## for use with Reflow Tracker® systems

### PA0210 FAST RESPONSE EXPOSED JUNCTION

This is the standard thermocouple used throughout the reflow industry and is constructed from type K thermocouple wire. Each conductor is PTFE insulated and then twisted together to prevent tangling in use. The wire diameter is 0.2 mm (.007 in), providing a good compromise between size and strength. The thermocouple tip is pre-tinned to ease soldering to the PCB. We recommend the use of an activated flux and high temperature solder to attach this thermocouple to the PCB assembly.

<b>Thermocouple Material</b>	Type K Special Limits of Accuracy
<b>Accuracy</b>	±1.1°C or 0.4% of the reading (whichever is greater)
<b>Length</b>	800 mm (31.4 in)*
<b>Conductor Diameter</b>	0.2 mm (.007 in)
<b>Temperature</b>	265°C (509°F) maximum

\* Other lengths available on request

### PA1683 FINE WIRE

This thermocouple has been developed specifically for use with BGA and ultra fine pitch surface mount components. The type K thermocouple conductors are 0.1 mm (.003 in) in diameter, each insulated with PTFE. The two conductors are then over-wrapped with a single outer PTFE sheath to prevent tangling in use. The recommended attachment method is activated flux and high temperature solder. For BGA, the accepted practice is to drill through the PCB and insert the tip until it touches a ball, and then bond the thermocouple wire in place.

<b>Thermocouple Material</b>	Type K to British Standard Class I
<b>Accuracy</b>	±1.5°C or 0.4% of the reading (whichever is greater)
<b>Length</b>	500 mm (19.6 in)
<b>Conductor Diameter</b>	0.1 mm (.003 in)
<b>Temperature</b>	265°C (509°F) maximum

### PA1571 ULTRA FINE DIAMETER, MINERAL INSULATED

The PA1571 is intended for use in high temperature applications. It is a Type K mineral insulated thermocouple with an Inconel outer sheath. The overall diameter is 0.5 mm (.01 in). It can operate to 1000°C (1832°F). Attachment method will depend on the application, but can include ceramic cement or mechanical fixtures.

<b>Thermocouple Material</b>	Type K to British Standard Class I
<b>Accuracy</b>	±1.5°C or 0.4% of the reading (whichever is greater)
<b>Length</b>	600 mm (23.6 in)
<b>Conductor Diameter</b>	NA (outer sheath is 0.5 mm / .01 in)
<b>Temperature</b>	1000°C (1832°F) maximum

### PA0215 FIBER INSULATED PROBE

Exposed junction type K thermocouple constructed from 0.2 mm (.007 in) wire with glass fiber insulation. This probe is designed for continuous use up to 500°C (932°F) and is, therefore ideally suited to high temperature soldering applications. For best results, we recommend that the probe is attached using an activated flux and high temperature solder.

<b>Thermocouple Material</b>	Type K Special Limits of Accuracy
<b>Accuracy</b>	±1.1°C or 0.4% of the reading (whichever is greater)
<b>Length</b>	800 mm (31.4 in)
<b>Conductor Diameter</b>	0.2 mm (.007 in)
<b>Temperature</b>	500°C (932°F) maximum

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