0.4 mm board-to-board connector First-article inspection

Insert-molded terminals in a glass- and mineral-reinforced LCP insulator.

INSPECTION STAGE	SAMPLE SCOPE	DRAWING REVISION
P1 pilot run	5 parts from one cavity	Rev. C

Dimensional results

All dimensions in mm

All five parts met the Rev. C limits for each of the three features.

Feature and inspection stage	Drawing limit	Mean	Maximum
Terminal coplanarity FEAT-01 / After reflow	≤ 0.05	0.0396	0.044
Insulator base flatness FEAT-02 / Before reflow	≤ 0.08	0.0584	0.066
Terminal position FEAT-03 / Before reflow	Ø 0.10	0.064	0.08

Measurement methods

FEAT-01 Laser displacement scan of the terminals against the SMT mounting plane (A).

FEAT-02 Coordinate measuring machine (CMM) inspection of the insulator base.

FEAT-03 CMM / vision measurement in the A | B | C datum reference frame.

Datum reference frame for terminal position

A SMT mounting plane

B Locating pin or hole axis

C Width center plane