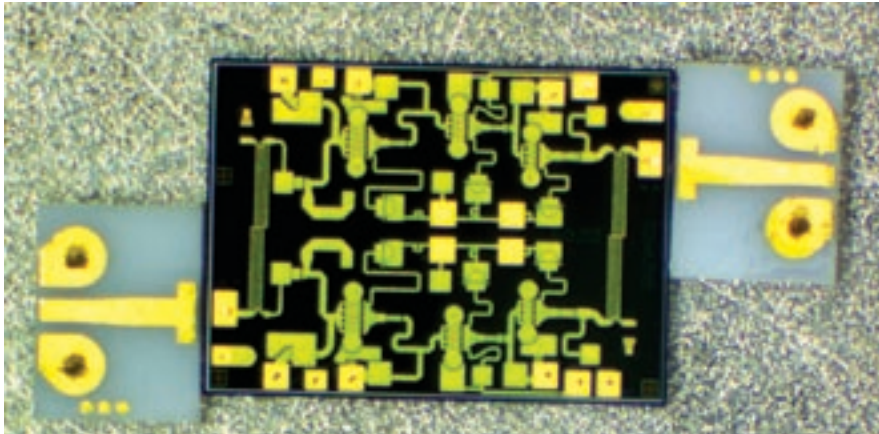




Jmicro Technology, Inc.

PP™ 0513

CPW-MICROSTRIP ADAPTER SUBSTRATES WITH COMPENSATIONS



Features

- DC-50 GHz
- 99.6% Alumina
- Low insertion loss and very good return loss for years of consistent repeatable measurements
- Wire bond/Diebond compatible
- Available Calibration Kit (PP™ CM05LX)
- Compatible with CPW Probes with 125 micron to 250 micron pitch
- Consistent measurement results with high correlation sample to sample

J microTechnology, Inc PP™ 0513 CPW-Microstrip Adapter Substrates (TFN) offer a new level of controlled test tooling and test methodology for the characterization, qualification and reliability testing of high performance MMIC chips through 50 GHz. The PP™ 0513 is a microwave quality ceramic substrate with a precision CPW to microstrip transition and a compensated bond pad for wirebond or ribbon bond to a MMIC die. The compensated bond pad corrects for the parasitics of the wire or ribbon at the frequency of operation. The CPW-mstrp section electrical parameters can be removed by standard calibration techniques using the PP™ CM05LX to achieve precise measurement that reflect operation of the MMIC chip in an integrated assembly.

The PP™ 0513 are available in 4 styles of compensation.

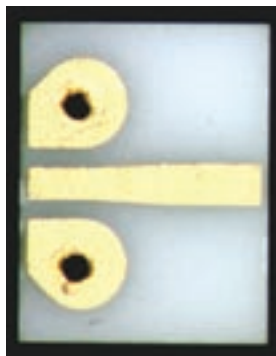
PP™ 0513_0 Bond Pad 3 mil X 4.5 mil

PP™ 0513_1 Bond Pad 4 mil X 18 mil

PP™ 0513_2 Bond Pad 6 mil X 12 mil

PP™ 0513_3 Bond Pad 3 mil X 10 mil

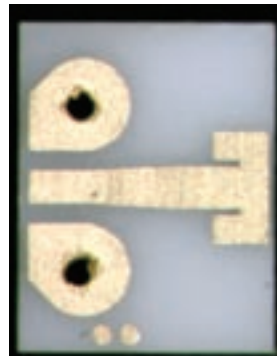
These 4 configurations offer a range of compensations to cover a variety of wire or ribbon bond parasitic characteristics.



PP™ 0513_0



PP™ 0513_1



PP™ 0513_2

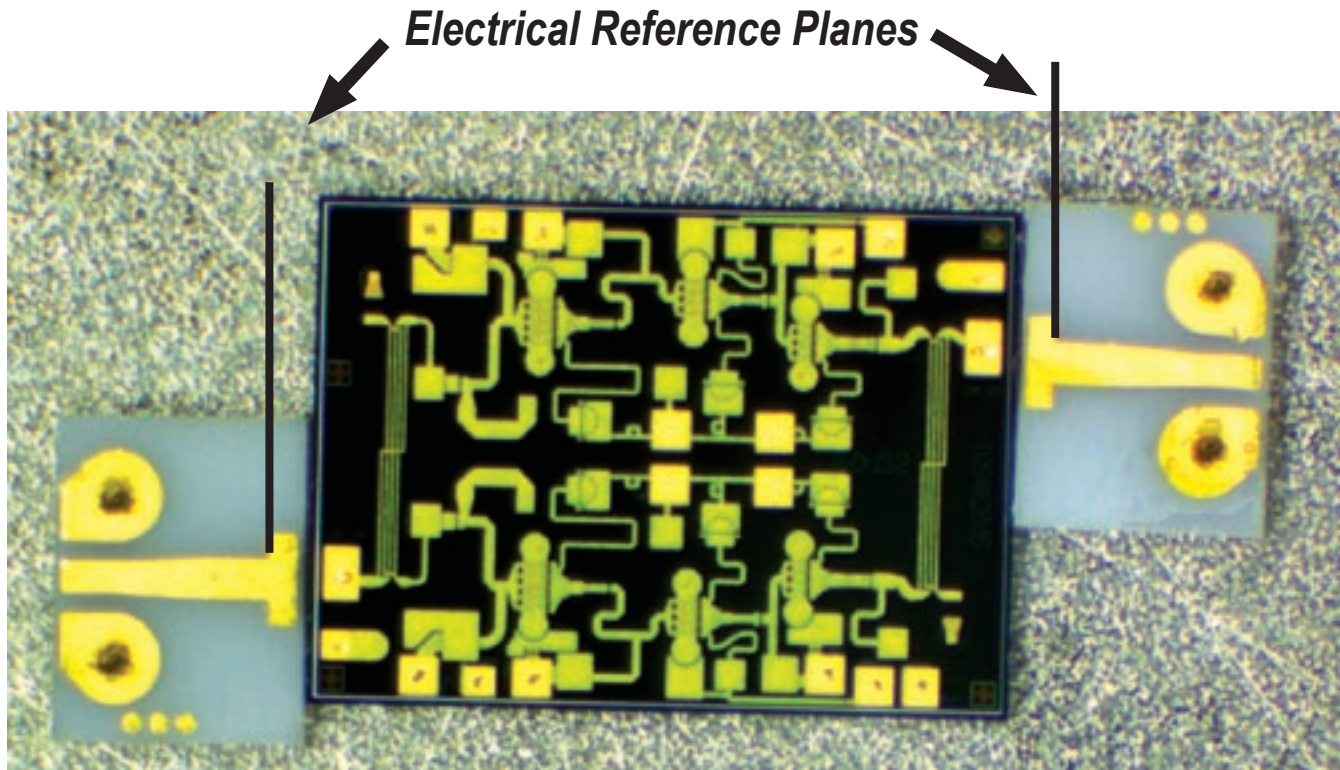


PP™ 0513_3

PP™ 0513

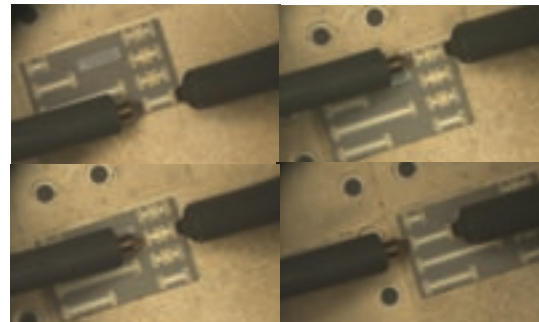
Use:

The PP™ 0513 are used in the same manner as the PP™ 0503. A MMIC device is mounted to a carrier with the appropriate PP™ 0513 style die bonded in line with the input and output MMIC chip bond pads. Shown in picture below. Wire or ribbons are bonded between the MMIC chip and the PP™ 0513 with the appropriately designed and controlled loop height.



Calibration

The PP™ CM05LX is the calibration standard to use for calibration or the moving of the electrical reference plane to the edge of the bond pad on the PP™ 0513. Calibration using the PP™ CM05LX is standard and routine, performed either from the Vector Network Analyzer front panel or an external controller. Photos show the probes contacting the PP™ CM05LX for both OSLT or TRL calibration.



Measurements

All electrical measurements would be the same as the MMIC would be in a normal assembly. Thus the MMIC measured performance reflects the actual expected performance.



JmicroTechnology
3744 NW Bluegrass Place
Portland, OR 97229-7068
(503) 614 - 9509 [voice]
(503) 531 - 9325 [fax]