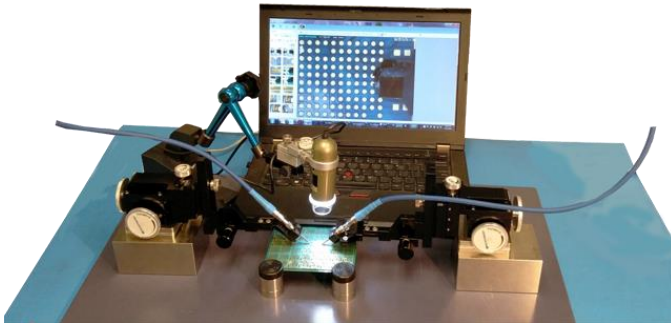


# RF Probing in a Box

## Easy-to-use 20 GHz RF Probing Solution



**Benchtop RF probe station**

### Overview

“RF Probing in a Box” is designed for RF measurements, such as testing of antennas, RF modules, and fixtures. Constant shrinking size of circuit components makes soldering semi-rigid RF cables to test gigahertz circuits impractical.

S-Probe’s strong beryllium copper (BeCu) tips makes it ideal for direct probing of uneven surfaces, such as solder bumps and circuit components. Microprobes are not suitable for this type of measurements due to their fragility.

“RF Probing in a Box” is the most flexible benchtop station for probing with both ruggedized RF probes and microprobes. It comprises the S-Probes, TCS60 calibration substrate, TP250 precision positioners, PCB holders, microscope and FP40 flex positioner. A user can easily configure the probe station to probe RF PCBs in minutes.

### RF Probing in a Box:

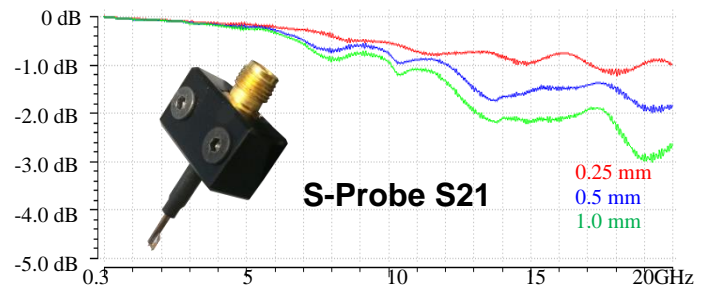
- 1) Precision probe positioner (TP250) x 2
  - 2) TP250 base (PB-BLK15) x 2
  - 3) Rugged S-Probe (SP-GR-xx15yy) x 2
  - 4) Calibration substrate (TCS50 or TCS70) x 1
  - 5) PCB Holder (PH100) x 2
  - 6) Dino-Lite Microscope (AM4113ZTL) x 1
  - 7) Flex Positioner (FP40-HDM1) x 1
- \* Required Bench Size: 10" x 20"

### Part No. Information

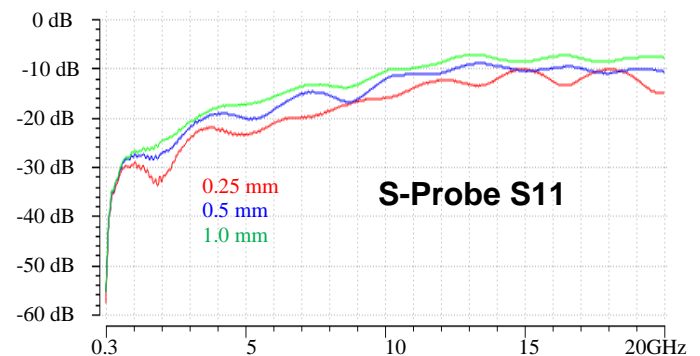
- **SP-Kit-01025** – with 0.25 mm/10 mil pitch S-Probe
- **SP-Kit-0104** – with 0.4 mm/16 mil pitch S-Probe
- **SP-Kit-0105** – with 0.5 mm/20 mil pitch S-Probe
- **SP-Kit-0108** – with 0.8 mm/32 mil pitch S-Probe
- **SP-Kit-0110** – with 1.0 mm/40 mil pitch S-Probe
- **SP-Kit-0112** – with 1.2 mm/48 mil pitch S-Probe
- **SP-Kit-0114** – with 1.4 mm/56 mil pitch S-Probe
- **SP-Kit-0116** – with 1.6 mm/64 mil pitch S-Probe

### Features:

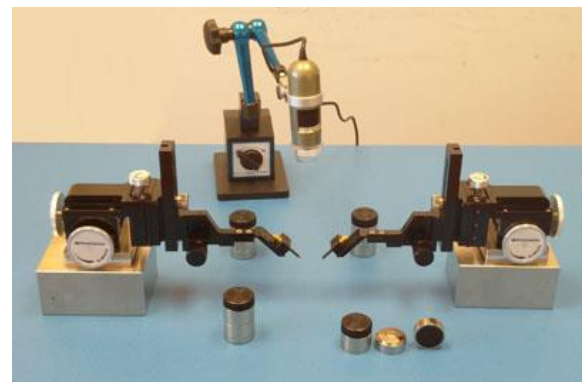
- **Applications:** antenna measurements, RF module testing, S-Parameter measurements of module test fixture
- **Ease of Use:** quick setup in minutes
- **High Bandwidth:** DC to 20 GHz
- **Ruggedness:** Strong S-Probe allowing direct probing on uneven solder bumps
- **Probe-tip Calibration:** accurate measurements without the need of soldering semi-rigid RF cables



**Un-calibrated S21 for 0.25/0.5/1.0 mm pitch**

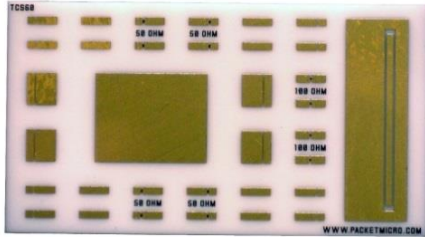


**Un-calibrated S11 for 0.25/0.5/1.0 mm pitch**



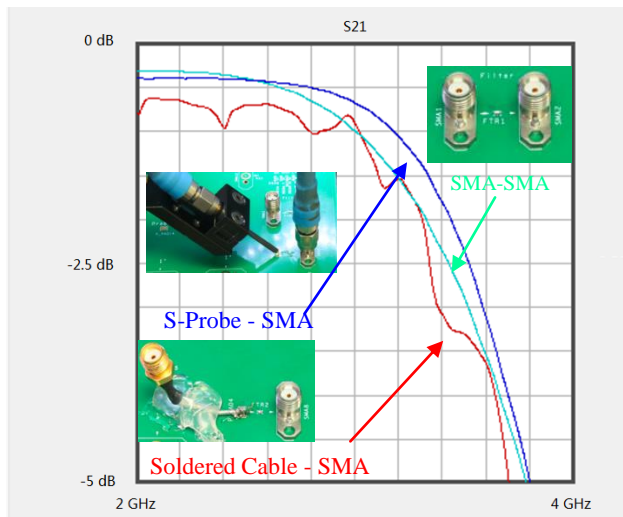
## Calibration Substrate

S-Probe product family includes a TCS70 calibration substrate with short, open, load, and thru (SOLT) standards for S-parameter calibrations. This substrate enables a user to move the measurement reference point directly to the probe tips for accurate, repetitive testing.



## RF Measurement

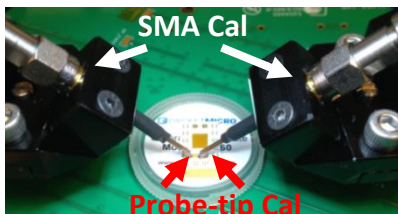
The following S21 measurement of a TDK 2.45 GHz low pass filter (P/N: DEA102500LT-6307A1, Size 0402) shows that S-Probe performance is better than that of soldering a coaxial cable.



**RF Measurement Comparison**

## 2-Port Probe-Tip Calibration

Probe-tip calibration allows accurate, repetitive S-Parameter measurements.

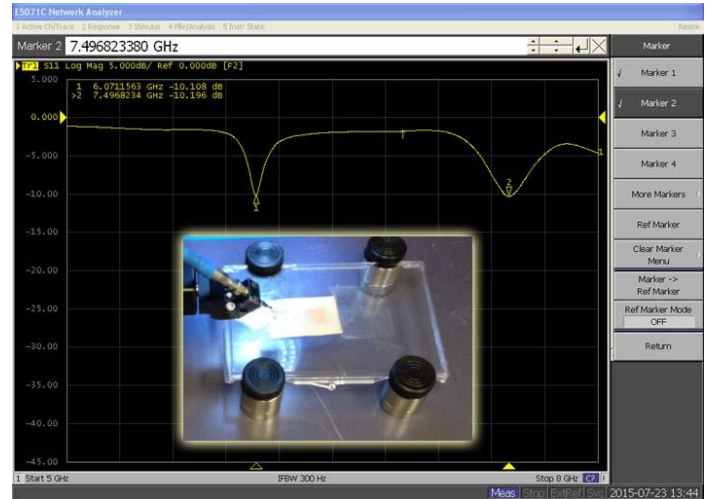


2-probe measurement of TCS70 Thru

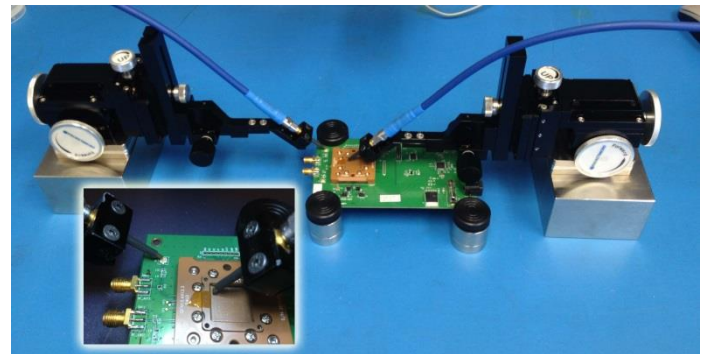
## About PacketMicro

PacketMicro, based in Silicon Valley, provides a wide range of gigahertz probes, probe positioner, bench-top probe stations, and digital microscopes. In addition, PacketMicro offers wireless radio modules and engineering services in the areas of Bluetooth Smart, ZigBee, and wireless sensor networks. PacketMicro customers include many Fortune 100 companies. For more information, please visit [www.packetmicro.com](http://www.packetmicro.com).

## Application Setup



**S11 and setup of antenna measurement**



**Setup for RF-module fixture measurement**

