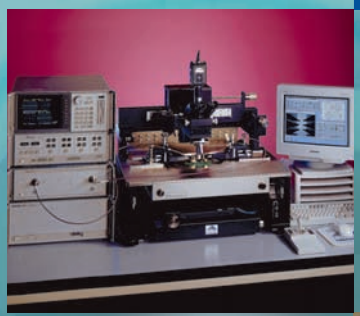
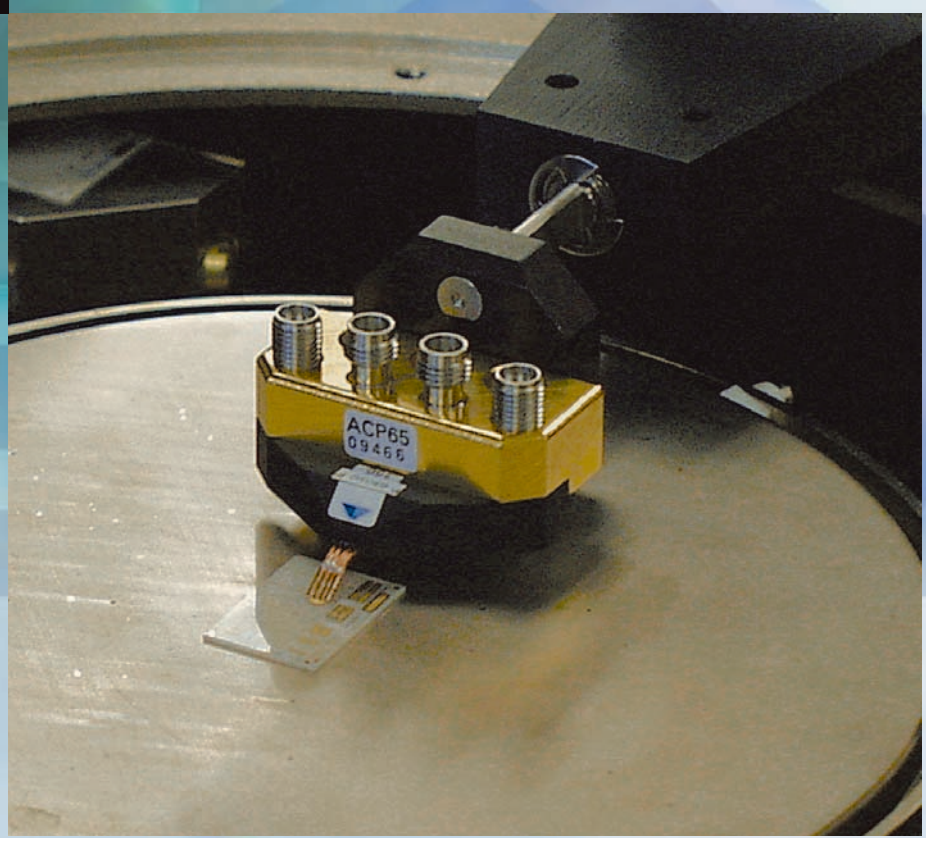
40/80 Gb/s High Performance Quadrant Probe





Enables superior evaluation of high-speed mixed mode ICs on wafer

This special purpose probe is designed to provide wide bandwidth RF connections and simultaneous resonant free power bypass connections for the special needs of high-speed mixed mode IC's for optical networks. The Air Coplanar® construction provides unsurpassed tip visibility and contact compliance with production-ready ruggedness.

CASCADE® MICROTECH

Innovating Test Technologies

Features

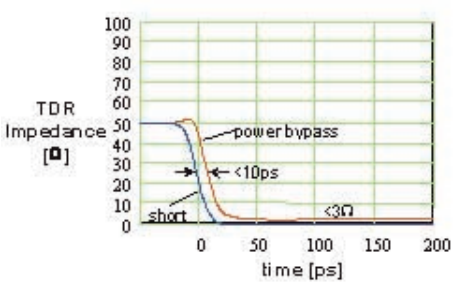
- Low RF loss and excellent impedance control over very wide bandwidth
- High performance resonance-free bypass for low impedance power supplies
- May be mounted in probe card frame
- Durable Air CoPlanar tip technology for long contact life

Benefits

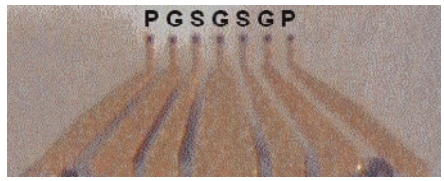
- Allows on-wafer evaluation of high-performance digital circuits
- Minimal distortion of high-speed digital signals
- Maximized eye diagram test performance at wafer test
- Functional at-speed testing for known-good-die
- Long life for production testing

Typical Performance

Contact configuration and pitch:
PGSGSGP-150 microns only
Recommended overtravel:
75-125 µm
Max. safe overtravel: 250 µm
Max. pad height variation: ~15 µm
Functional temperature range:
-65 to +150°C



High performance power bypass lines provide low impedance to the device.



Durable ACP tip technology for long contact life.

RF/High-Speed Digital Lines (GSG)

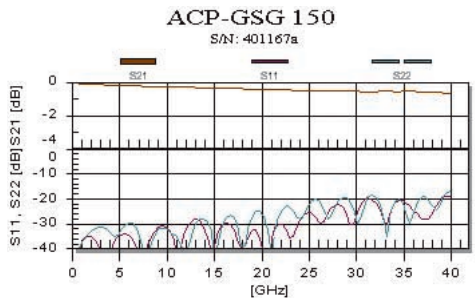
Insertion loss (S21):
ACP40 version: <1.0 dB @ 40 GHz
ACP65 version: <1.2 dB @ 60 GHz
Return loss (S11 and S22):
>20 dB to 20 GHz
>10 dB to 40 GHz (ACP40 only)
>10 dB to 60 GHz (ACP65 only)
Crosstalk (@40 GHz): <-40 dB (1%)
Connector type:
ACP40 version: 2.92 mm (K-conn.)
ACP65 version: 1.85 mm (V-conn.)
Max. RF power : 5W
(CW @ 40 GHz)

High-Performance Power Bypass Lines (P)

Connector type on ACP40 version:
2.92 mm (K-conn.)
Total capacitance: 10 nF
(X7R dielectric)
Recommended on-chip bypass:
None, or as shown below
Circuit model: as shown below
Nominal inductance: ~0.4 nH
(measured tip-to-tip with G-S probe over alumina substrate)
Maximum voltage: 16 V
Maximum DC current: ~1 A

Recommended Accessories

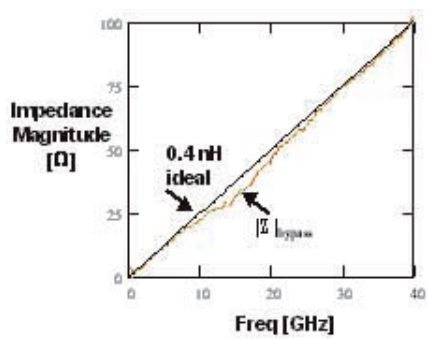
Contact Substrate . . . . . *.005-018*
40 GHz Cable . . . . . *.101-162*
65 GHz Cable . . . . . *.104-540*
Probe Card Frame (1-4 probes in a quadrant array)
Consult factory for part number



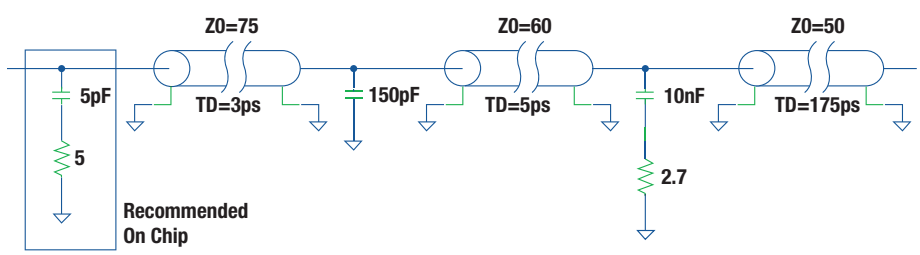
Typical RF line performance (ACP40 version).

Ordering Information

40 Gb/s version . . . . . .
. . . . . *SP-ACP40-PGSGSGP-1*
80 Gb/s version . . . . . .
. . . . . *SP-ACP65-PGSGSGP-1*



High performance power bypass is resonance-free over a wide bandwidth.



Nominal high-performance bypass circuit model.

CASCADE MICROTECH

Innovating Test Technologies for better measurements faster

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