

4918 Broadband Antenna Coupler



Highlights

- Extended frequency range up to 6 GHz
- Precise results with further optimized RF match
- Excellent coupling values for all kind of devices
- High repeatability using sliders
- Usable for high transmission power
- Unchanged physical dimensions allows reuse of existing shuttles and RF Shields

Wide Frequency Range

The 4918 Broadband Antenna Coupler is an evolution of the 4916 Antenna Coupler with the target to increase the usable frequency range and also to lower the coupling loss to the device under test.

Frequency range of the different Antenna Couplers:

4814 Antenna Coupler	350 - 495 MHz
4916 Antenna Coupler	700 - 2700 MHz
4918 Broadband Antenna Coupler	500 - 6000 MHz

The Broadband Antenna Coupler can cover additional frequency range on the lower end and on the upper end compared to the 4916. This makes the coupler an ideal choice for LTE, WiMAX and Wi-Fi (2.4 and 5 GHz) besides 2G and 3G.

Precise Measurements with High Accuracy

The deviation between different 4918 Antenna Couplers is kept very low and in addition the coupling loss values are further reduced compared to the 4916 Antenna Coupler. Also the frequency response is very flat over the entire frequency range minimizing distortion to a level below measurement resolution. All these improvements allow very accurate measurements which are usually only achievable with a direct connection.

Three Different Shuttles for High-Precision Measurements

It is essential for repeatable testing to position the device under test correctly and reliably on the Antenna Coupler. There are three different kinds of shuttles available from Aeroflex to allow repeatable positioning of all kind of devices. The standard shuttle has five snap-in positions, which are spaced 2 cm or 0.8 inch apart. This is close enough to find a suitable position for good coupling values, but also wide enough to avoid handling errors. The XY Shuttle brings the mobile phone even closer to the coupling antenna, further improving measurement accuracy and repeatability. The position of the mobile phone over the coupler can be adjusted in two dimensions (vertical and horizontal). Five snap-in positions in each dimension guarantee reproducible results if the same position is used for any type of devices. The PDA shuttle is similar to the standard shuttle and is designed to carry larger devices like 5 inch smart phones.

Shielding Avoids False Results and Protects Against Interference

Testing wireless devices requires transmitting and receiving RF signals at different frequencies and power levels. Without an appropriate shielding of the test environment from the outside world, interference is an obvious problem. These interference effects range from bad measurement results to dropped connections. Four different RF Shields are available from Aeroflex to enclose the 4918 Antenna Coupler, providing the necessary isolation for reliable testing and distorting other networks.

PRELIMINARY SPECIFICATIONS

FREQUENCY RANGE (CONTINUOUS)

Usable

500 to 6000 MHz

Optimized

700 to 3800 MHz

RF Match (optimized range)

VSWR

<2.3, typ. <1.9

Return Loss

<-8 dB, typ. <-10 dB

Coupling Deviation

To Reference Unit

<0.7 dB

Between Two Units

<1.4 dB

Max. Power

Mobile Phone

+40 dBm

At 4918's QMA Connector

+28 dBm

RF Connector

On Board

QMA (Quick SMA)

RF cable N-Type or TNC

WEIGHT

Board

Approx. 700 g (1.5 lbs.)

Shuttle

Approx. 130 g (0.3 lbs.)

DIMENSIONS

Board

175 x 255 x 50 mm (6.89 x 10 x 1.9")

Standard Shuttle

160 x 120 x 55 mm (6.3 x 4.7 x 1.9")

XY Shuttle

218 x 125 x 33 mm (8.6 x 4.9 x 1.3")

PDA Shuttle

160 x 120 x 65 mm (6.3 x 4.7 x 2.5")

STANDARD DELIVERY

4918 Broadband Antenna Coupler

XY Shuttle

ORDERING INFORMATION

4918 Broadband Antenna Coupler AG 248 700

Shuttles, Coupling Kits:

Standard Shuttle AG 248 691

XY Shuttle AG 248 698

PDA Shuttle AG 248 692

Tablet Coupling Kit for 4931/4932 AG 248 467

Tablet Coupling Kit for 4933 AG 248 466

Cables, only needed if used without RF Shield:

RF Connecting Cable (1,5 m) N – QMA AG 382 844

RF Connecting Cable (1,5 m) TNC – QMA AG 382 843

RF Shield:

4921 RF Shield AG 248 346

4931 RF Shield AG 100 010

4932 RF Shield AG 100 020

4933 RF Shield AG 100 101



For the very latest specifications visit www.aeroflex.com

CHINA Beijing

Tel: [+86] (10) 6539 1166
Fax: [+86] (10) 6539 1778

CHINA Shanghai

Tel: [+86] 21 2028 3588
Fax: [+86] 21 2028 3558

CHINA Shenzhen

Tel: [+86] (755) 3301 9358
Fax: [+86] (755) 3301 9356

FINLAND

Tel: [+358] (9) 2709 5541
Fax: [+358] (9) 804 2441

FRANCE

Tel: [+33] 1 60 79 96 00
Fax: [+33] 1 60 77 69 22

GERMANY

Tel: [+49] 89 99641 0
Fax: [+49] 89 99641 160

HONG KONG

Tel: [+852] 2832 7988
Fax: [+852] 2834 5364

INDIA

Tel: [+91] 80 [4] 115 4501
Fax: [+91] 80 [4] 115 4502

JAPAN

Tel: [+81] (3) 3500 5591
Fax: [+81] (3) 3500 5592

KOREA

Tel: [+82] (2) 3424 2719
Fax: [+82] (2) 3424 8620

SCANDINAVIA

Tel: [+45] 9614 0045
Fax: [+45] 9614 0047

SINGAPORE

Tel: [+65] 6873 0991
Fax: [+65] 6873 0992

TAIWAN

Tel: [+886] 2 2698 8058
Fax: [+886] 2 2698 8050

UK Stevenage

Tel: [+44] (0) 1438 742200
Fax: [+44] (0) 1438 727601
Freephone: 0800 282388

USA

Tel: [+1] (316) 522 4981
Fax: [+1] (316) 522 1360
Toll Free: 800 835 2352

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www.aeroflex.com
info-test@eroflex.com



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