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4914 天线耦合板

AEROFLEX
A passion for performance.

Highlights

- A radio frequency adapter for all TETRA radio terminals
- Easy handling
- Precise results with excellent RF match
- High repeatability using snap positions
- Low coupling loss with most radio terminals

Terminals for TETRA and other radio systems in the 400 MHz range usually do not have a standard antenna connector to link them with a test system. Without expensive and difficult to handle special adapters, it is almost impossible to test a hand-portable radio.

Solution for Untrained Personnel...

Aeroflex's 4914 Antenna Coupler now enables users to reliably and safely test different hand-portable radios in few steps only. Handling has become so easy that the antenna coupler can even be used by untrained staff. The shuttle provided with the 4914 holds the radio terminal and allows for taking high precision measurements at sound repeat accuracy while the radio is positioned accurately.

...And for Radio Professionals

Engineers and technicians in service shops also appreciate testing different types of radio terminals with just one adapter. The coupling technology has been optimized for the vertical polarization of TETRA antennas. In order to achieve a minimum coupling loss, the radio can be fixed on the shuttle in any of 25 different positions. The coupling loss is determined as a function of type of radio and antenna. The correction factor is stored in the settings of an instrument like the 2305 Stabilock® and automatically used when measurement results are established. In the specified frequency range, the flat frequency response of the antenna coupler helps to avoid deviations across different frequency bands.

For especially large and heavy radio terminals, Aeroflex offers a PDA shuttle. This option helps to lock even explosion-proof and large terminals in a safe and repeatable position over the coupling plate.

This way, technicians can ensure that each measurement is performed as quickly and precisely as the first one to guarantee optimum safety and reliability for users in the public safety and security services.

Shielding

The impact of operational networks on the radio equipment under test can be minimized, as must be interference of the networks by the test. The Aeroflex 4921 RF Shield helps solves both these issues: The shielding device was developed specifically for use with Aeroflex's couplers 4914 and 4916, and offers safe handling with a warranted shielding factor of 80 dB. This way, any impact even from nearby base stations can be ruled out.

Learning from Cellular Technology

With the 4914 Antenna Coupler, Aeroflex introduced a coupling technology in the 400 MHz range that has been tried and tested for long in mobile phone service. Service shops take advantage of Aeroflex's long lasting experience in checking mobile phones easily, quickly and safely with antenna couplers.

It goes without saying that the antenna coupler can also be used with mobile phone systems using the 400 MHz range, e.g. CDMA 450.

SPECIFICATIONS

Frequency Range

350 to 495 MHz

VSWR at RF Connector

<3.0

Typical Coupling Attenuation

TETRA	*10 dB*
CDMA450	*20 dB*

Coupling Deviation

To reference unit	*<0.7 dB*
Between two units	*<0.7 dB*

Maximum level

At radio terminal	*+40 dBm*
At QMA connector of the 4914	*+33 dBm*

RF Connector

QMA

Weight

Coupler	*ca. 700 g (1.5 lb)*
Shuttle	*ca. 100 g (0.22 lb)*

Dimensions

Coupler	*175 x 255 x 50 mm (6.9 x 10 x 2")*
Shuttle	*218 x 125 x 33 mm (8.5 x 5 x 1.3")*

ORDERING INFORMATION

4914 Antenna Coupler	AG 248 719
4914 Antenna Coupler Package (with cable for instrument with N-type jack)	AG 248 699
4921 RF Sheld and 4914 package (with RF Shield and cable)	AG 248 353
PDA Shuttle for 4914 and 4916	AG 248 692