

Agilent 772D, 773D

Directional Couplers

2 to 18 GHz

Product Overview



| | Agilent 772D | Agilent 773D |
|-------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Description | Dual directional coupler | Directional coupler |
| Frequency range | 2 to 18 (GHz) | 2 to 18 (GHz) |
| Minimum directivity (GHz) | 39 dB (0.1 – 2) typical 30 dB (2 – 12.4) 27 dB (12.4 – 18) 20 dB (18 – 20) typical | 39 dB (0.1 – 2) typical 30 dB (2 – 12.4) 27 dB (12.4 – 18) 21 dB (18 – 20) typical |
| Maximum main line SWR (GHz) | 1.05 (0.1 – 2) typical 1.28 (2 – 12.4) 1.40 (12.4 – 18) 1.29 (18 – 20) typical | 1.04 (0.1 – 2) typical 1.21 (2 – 12.4) 1.27 (12.4 – 18) 1.16 (18 – 20) typical |
| Maximum coupled line SWR (GHz) | 1.08 (0.1 – 2) typical 1.30 (2 – 12.4) 1.40 (12.4 – 18) 1.17 (18 – 20) typical | 1.07 (0.1 – 2) typical 1.30 (2 – 12.4) 1.40 (12.4 – 18) 1.17 (18 – 20) typical |
| Nominal coupling | 20 dB (2 – 18) | 20 dB (2 – 18) |
| Max. coupling variation with Freq. | <±1.0 dB (2 – 18 GHz) | <±1.0 dB (2 – 18 GHz) |
| Tracking between auxiliary arms | <±0.7 dB** | N/A* |
| Maximum main line | <0.26 dB (0.1 – 2) typical | < 0.15 dB (0.1 – 2) typical |
| Residual loss (GHz) | <1.5 dB (2 – 18) | <0.9 dB (2 – 18) <0.9 dB (18 – 20) typical |
| Main line power handling | 0.1 – 2100 W (50 dBm) avg. typ. | 100 W (50 dBm) avg. typ. |
| Capability | 250 W (54 dBm) pk. typ. 2 – 1850 W (47 dBm) avg. 250 W (54 dBm) pk. 18 – 20 | 250 W (54 dBm) pk. typ. 50 W (47 dB m) avg. 250 W (54 dBm) pk. 50 W (47 dB m) avg. typ. 250 W (54 dBm) pk. typ. |
| Net weight | 2.6 kg | 0.8 kg |
| Dimensions (cm) | 39.1 (L) x 13.34 (W) x 4.13 (H) | 18.4 (L) x 10.5 (W) x 3.0 (H) |

* With test port shorted and not including source match ripple.

+ Typical relative tracking between 772D and 773D is <±0.7 dB.

New Performance Standards in Microwave Couplers

The Agilent Technologies 772D dual directional coaxial coupler and 773D directional coupler are high directivity couplers designed for broadband swept reflectometer measurements and leveling applications in the 2 to 18 GHz frequency range. With their wide frequency coverage, one of these couplers can replace several couplers without performance degradation, thus adding convenience and economy by reducing setup and calibration time. The high directivity and low main line SWR make it possible to achieve excellent source match. The smaller size and light weight of the 773D directional coupler make it much easier to use on the bench. The addition of threaded mounting holes makes it an ideal candidate for use inside equipment in leveling loop applications. Low SWR and flat coupling variation from 2 to 18 GHz and high power capability make these couplers ideal for your most demanding measurement needs.



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Innovating the HP Way

Connectors

Agilent 772D

Test port APC-7; input, incident, and reflected ports Type-N (F)

Agilent 773D

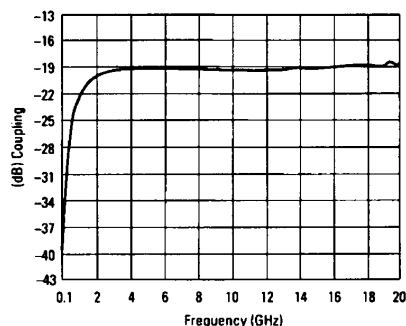
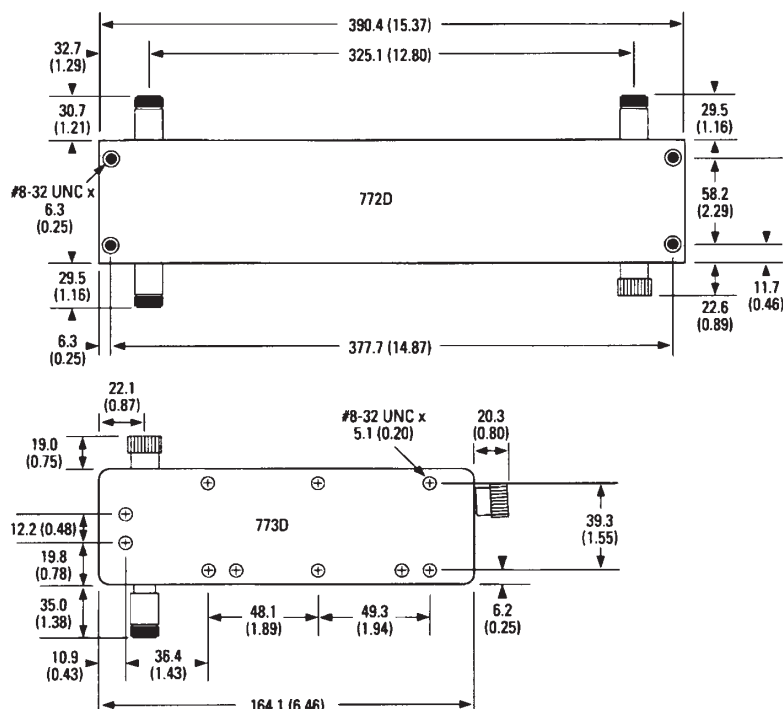
Input and output ports APC-7; coupled port Type-N (F)

Agilent 772D, 773D Option 001

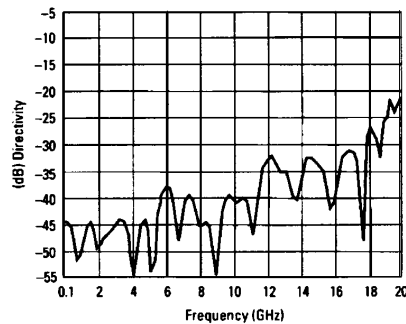
All connectors Type-N (F)

Outline Drawings

Dimensions in millimeters (inches)



Typical coupling



Typical directivity

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Agilent Technologies aims to maximize the value you receive, while minimizing your risk and problems. We strive to ensure that you get the test and measurement capabilities you paid for and obtain the support you need. Our extensive support resources and services can help you choose the right Agilent products for your applications and apply them successfully. Every instrument and system we sell has a global warranty. Support is available for at least five years beyond the production life of the product. Two concepts underlie Agilent's overall support policy: "Our Promise" and "Your Advantage."

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