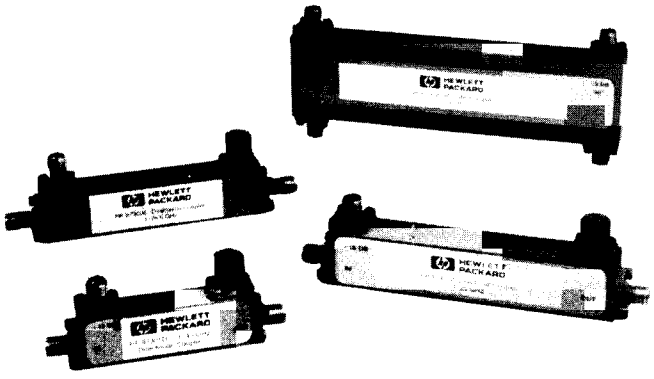
MICROWAVE TEST ACCESSORIES

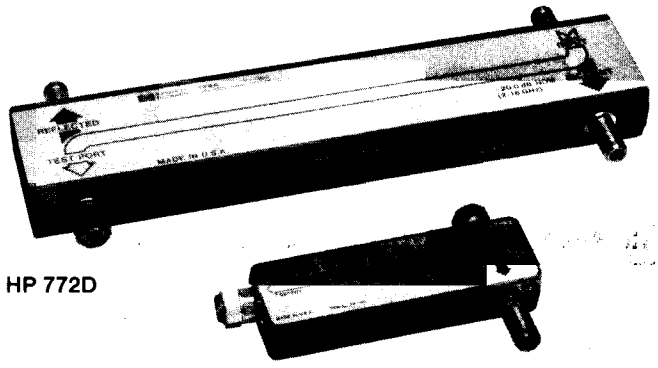
Coaxial Single-and Dual-Directional Couplers, 90° Hybrid Coupler

HP 770 Series, 11691D, 11692D, 87300 B/C, 87301D, 87310B



HP 87300B, 87301D, 87310B

NEW



HP 772D

HP 773D

HP 87300 Series Directional Couplers

Hewlett-Packard offers a line of compact, broadband directional and hybrid couplers that are designed for signal monitoring or, when combined with a coaxial detector, signal leveling. The HP 87300B is supplied with SMA (f) connectors, the HP 87300C had 3.5 mm (f) connectors, the HP 87301D has 2.4 mm (f) standard or optional 2.92 mm (f) connectors.

The HP 87310B is a 3 dB hybrid coupler intended for applications requiring a phase difference of 90 degrees between signals. The HP 87310B features SMA (f) connectors.

HP 87300 Series Specifications

HP Model	Frequency Range (GHz)	Nominal Coupling & (dB) Variation	Minimum Directivity (dB)	SWR Maximum	Insertion Loss (dB)	Price
HP 87300B	**1-20**	**10±.5**	**16**	**1.35**	**<1.4**	**$475**
HP 87300C	1-26.5	10±1	1-12.4:14 12.4-26.5:12	1-12.4:1.35 12.4-26.5:1.50	1-12.4:<1.1 12.4-26.5:<1.6	$825
HP 87301D	1-40	13±1	1-20:14 20-40:10	1-20:1.5 20-40:1.7	1-20:<1.1 20-40:<1.8	$1,200
HP87310B	**1-18**	**3 dB ±.5**		**1.35**	**<1.8**	**$985**

HP 773D Directional Coupler & HP 772D Dual-Directional Coupler

The HP 772D and 773D are high-performance couplers designed for broadband swept measurements in the 2 to 18 GHz range. The HP 773D is ideal for leveling broadband sources when used with an HP 8474B detector. (See also the HP 83036C directional detector). For reflectometer applications, the HP 772D is the best coupler to use with HP power sensors and power meters (such as the HP 438A dual power meter). Forward and reverse power measurements on transmitters, components, or other broadband systems are made simpler by using the HP 772D. The broadband design allows using a single test setup and calibration for tests spanning the entire 2 to 18 GHz frequency range.

HP 774D - 778D Dual-Directional Couplers

The economical HP 774D-778D couplers cover frequency spreads of more than 2:1, each centered on one of the important VHF/UHF bands. With their high directivity and mean coupling accuracy of ±0.5 dB, these are ideal couplers in reflectometer applications. The close tracking of the auxiliary arms make these couplers particularly useful for reflectometers driven by sweep oscillators such as the HP 8350B with its appropriate plug-in. Power ratings are 50 W average, 10 KW peak.

HP 772-779D, 11691D, 11692D Specifications

HP Model	Frequency Range (GHz)	Nominal Coupling (dB)	Maximum Coupling Variation (dB)	Minimum Directivity (dB)	SWR Primary Line Maximum (50Ω Nom.)	Price
HP 772D	2-18	20	±0.9	2-12.4: 30 12.4-18: 27	2-12.4: 1.3 12.4-18: 1.4	$2,350
HP 773D	2-18	20	±0.9	2-12.4: 30 12.4-18: 27	1.2[4]	$1,250
HP 774D	0.215-0.450	20	±1	40	1.15	$1,100
HP 775D[1]	0.450-0.940	20	±1	40	1.15	$1,100
HP 776D[1]	0.940-1.90	20	±1	40	1.15	$1,100
HP 777D	1.90-4.0	20	±0.4	30	1.2	$1,190
HP 778D	0.10-2.0	20	±1.5	0.1-1 GHz: 36[2] 1-2 GHz: 32	1.1	$1,190
HP 779D	1.7-12.4	20 ± 0.5	±0.75	1.7-4 GHz: 30 4-12.4 GHz: 26	1.2[4]	$1,300
HP 11691D	2-18	22	±1.0	2-8 GHz: 30 dB 8-18 GHz: 26 dB	1.2[4]	$1,895
HP 11692D	2-18	22	±1 incident to test port	2-8 GHz: 30 8-18 GHz: 26[3]	2-12.4 GHz: 1.3 12.4-18 GHz: 1.4	$3,225

HP 772D Standard Connectors
Primary Line: APC-7, APC-7; Auxiliary Arms: N(f)
Opt 001 Primary Line, N(f), N(f) −$15

HP 774D-777D Standard connectors
Primary Line: N(m), N(f)
Auxiliary Arm: N(f), N)f) NA

HP 778D Standard connectors
Primary Line: N(m), N(f); Auxiliary Arms: N(f), N(f)
Opt 011 Primary Line, APC-7, N(f) + $25
Opt 012 Primary Line, N(m), N(f) $0

HP 779D Standard connectors
Primary Line N(m) input, N(f) output; auxiliary arm N(f)
Opt 010 Primary Line N(f) input, N(m) output; auxiliary output N(f) $0
Other options: APC-7 on any or all ports Contact HP

HP 11691D and 773D Standard connectors
Primary line: APC-7, APC-7; Auxiliary Arm: N(f)
Opt 001 All N(f) − $30
Opt 005 (11691D only) All APC-7 + $25

HP 11692D Standard connectors
Primary line: N(f), APC-7; Auxiliary Arms: N(f), N(f)
Opt 001 Primary Line, N(f), N(f) − $15
Opt 002 Primary Line, N(f), N(m) − $15

[1]Maximum auxiliary arm tracking: 0.3 dB for HP 776D;0.5 dB for HP 777D
[2]30 dB, 0.1 to 2 GHz, input port.
[3]24 dB with Type N connector on the test port.
[4]Apparent SWR at the output port of a coupler when used in a closed-loop leveling system.