KEYSIGHT TECHNOLOGIES (AGILENT HP)

11691D

The Keysight (Agilent HP) 11691D is a high-performance single directional coaxial coupler designed for broadband RF and microwave applications in the 2 to 18 GHz frequency range. With a nominal coupling of 20 dB and high directivity (up to 30 dB), it is ideal for precision broadband reflectometry and source leveling. It features low SWR on the primary line and APC-7 RF connectors.

SPECIFICATIONS

Physical

Dimensions (W×H×D)	152 mm × 37 mm × 236 mm mm

RF Performance

Frequency Range	2 to 18 GHz
Nominal Coupling	20 dB
Maximum Coupling Variation	±1 dB (incident to test port)
Minimum Directivity (2 to 8 GHz)	30 dB
Maximum Primary Line SWR (2 to 12.4 GHz)	1.3
Maximum Primary Line SWR (12.4 to 18 GHz)	1.4

Electrical & Power Ratings

Nominal Impedance	50 Ω

Mechanical & Connectors

Primary Line Input Connector Type	APC-7
Primary Line Output Connector Type	APC-7
Coupled Port (Auxiliary) Connector Type	Type-N female (N(f))
Configuration	Single coaxial directional coupler

Performance

Maximum Input Power (Average)	50 W
Maximum Input Power (Peak)	250 W
Maximum Auxiliary Line SWR (2 to 12.4 GHz)	1.4
Maximum Auxiliary Line SWR (12.4 to 18 GHz)	1.5
Insertion Loss	< 0.8 dB (to 12.4 GHz), < 1.0 dB (12.4 to 18 GHz) (excluding coupling loss)

Option 001 Specifications

Option 001 Primary Line Connectors	Type-N female
Option 001 Minimum Directivity (2 to 12.4 GHz)	22 dB
Option 001 Minimum Directivity (12.4 to 18 GHz)	20 dB
Option 001 Maximum Primary Line SWR (2 to 12.4 GHz)	1.4
Option 001 Maximum Primary Line SWR (12.4 to 18 GHz)	1.5
Option 001 Maximum Auxiliary Line SWR (2 to 12.4 GHz)	1.4
Option 001 Maximum Auxiliary Line SWR (12.4 to 18 GHz)	1.5

Performance (Standard)

Minimum Directivity (8 to 12.4 GHz)	26 dB
Minimum Directivity (12.4 to 18 GHz)	24 dB

General

Coupling Calibration	Calibration table at 1 GHz increments printed on nameplate

TECHNOLOGY

Coaxial Directional Coupler

APPLICATIONS

Broadband reflectometry, leveling broadband sources