

Keysight 11636A
50 Ohm Type-N Power Divider
DC to 18 GHz

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11636A Power Divider

Introduction

From DC to 18 GHz, the 11636A provides excellent output power symmetry between the two output ports. Low temperature and power coefficients ensure attenuation stability. Each power divider is calibrated at four frequencies, and this data is provided on a sticker that is permanently attached to the unit.

Stable interface dimensions, which ensure long life and a high repeatability of insertion loss, are provided by injection molded interface connector insulators that maintain concentricity.

Any port may be used as an input, as the 11636A provides a symmetrical 6 dB division. The 11636A can be used as a power combiner. When signals are input at two of the ports, the sum of the two appears at the third.

Specifications

Maximum Input Power: 1.0 W CW, 1 kW peak (5 msec pulse width)

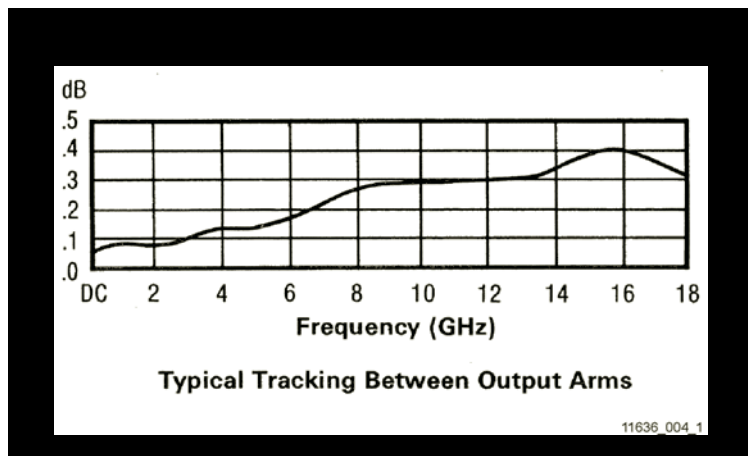
Frequency Range: DC to 18 GHz

Input/Output SWR:

- DC to 10.0 GHz: ≤ 1.25
- 10.0 GHz to 18 GHz: ≤ 1.35

Tracking Between Output Ports:

Frequency Range (GHz)	Tracking (dB)
DC to 4.0	0.2
4.0 to 10.0	0.4
10.0 to 18.0	0.5

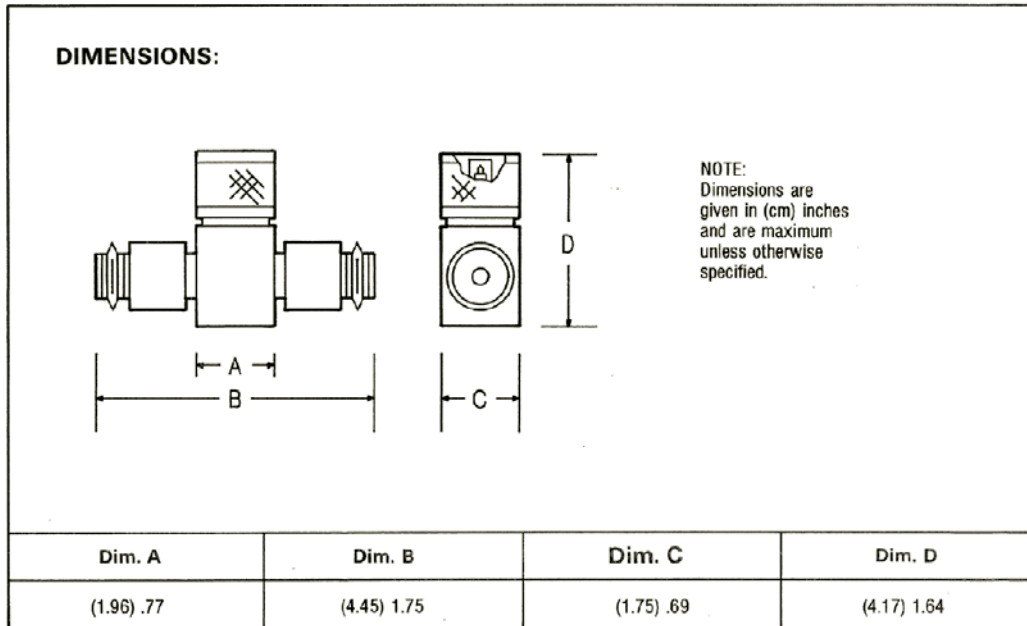


Calibration Data: Insertion loss at DC, 6.0, 12.0 and 18.0 GHz (data is supplied on a permanently attached sticker).

Number of Ports: Three

Connectors: One Type-N male, two Type-N female

Dimensions:



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Nominal Insertion Loss (Input to One Output Port): 6.0 dB (−0.2 dB, +1.2 dB maximum to 10.0 GHz; +1.5 dB maximum to 18.0 GHz)

Typical Phase Tracking: $\pm 2^\circ$ between output ports.

Power Coefficient: <0.005 dB/dB/W

Temperature Coefficient: <0.0004 dB/dB/°C

Adjustments

The 11636A power divider requires no electrical or mechanical adjustments.

Service

The circuit elements of the 11636A are split into three identical channels. A malfunction will usually occur in only one channel and can be verified by moving the connection to another channel of the divider.

An ohmmeter can be used to check the continuity of the inner conductor connections. The resistance from either output center conductor to the input center conductor should be 33.3 ohms \pm 2 ohms.

There are no replaceable components for the power divider. A worn or damaged power divider must be replaced in whole.

Table 1 Type-N Adapters Available from Keysight Technologies

Description	Part Number
Type-N (m) to 3.5 mm (m)	1250-1743
Type-N (m) to 3.5 mm (f)	1250-1744
Type-N (f) to 3.5 mm (f)	1250-1745
Type-N (f) to 3.5 mm (m)	1250-1750
Type-N (m) to 2.4 mm (m)	11903A
Type-N (f) to 2.4 mm (f)	11903B
Type-N (f) to 2.4 mm (m)	11903C
Type-N (m) to 2.4 mm (f)	11903D

Equipment and Supplies

The following equipment and supplies are required for the maintenance and use of, but are not supplied with, your 11636A power divider.

Item	Part Number
Type-N gage set (part of the 85032F calibration kit)	85054-60059
Torque wrench, 3/4", 136 N-cm (12 in-lb)	8710-1766
Document: <i>Connector Care for RF and Microwave Coaxial Connectors</i>	08510-90064

Cleaning Connectors

For information on cleaning connectors, refer to the *Connector Care for RF and Microwave Coaxial Connectors* document. It can be viewed online by searching for part number 08510-90064 at www.keysight.com.

Contacting Keysight

Assistance with test and measurement needs and information on finding a local Keysight office are available on the Web at:

www.keysight.com/find/assist

NOTE In any correspondence or telephone conversation, refer to the Keysight product by its model number and full serial number. With this information, the Keysight representative can determine whether your product is still within its warranty period.

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