

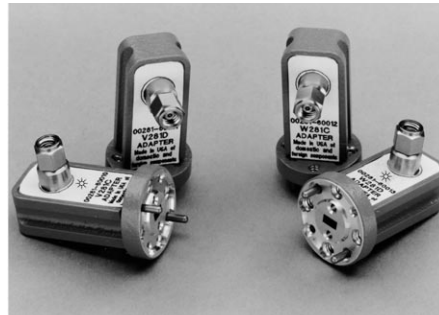
Agilent V/W281C,D

mm-Wave-to Coax Adapters

50 to 110 GHz

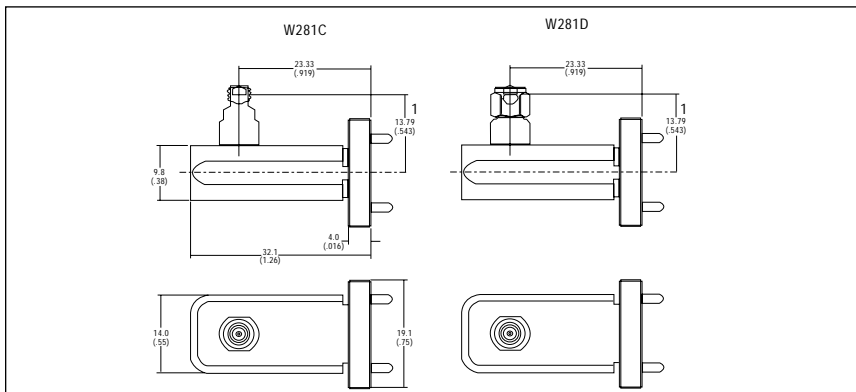
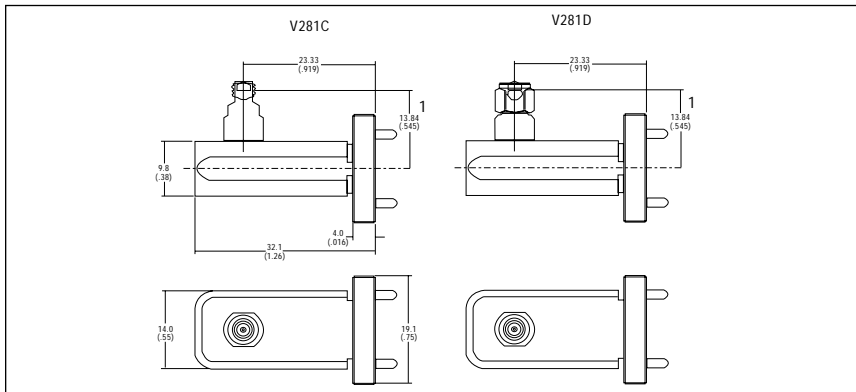
Product Overview

- Excellent repeatability
- Measurement versatility
- WR-15, WR-10 (V,W band waveguide)
- Precision 1-mm coax connectors



Increased measurement versatility
Coax measurements to 110 GHz. The Agilent Technologies V/W281C,D precision 1 millimeter waveguide-to-coax adapters offer a simple, low SWR transition between transmission media. Take advantage of stable, low loss, and low SWR waveguide when measuring coaxial devices at higher frequencies. Or keep the convenience of coax, even when testing waveguide components. V/W281 adapters increase the versatility of test systems, like the Agilent 8510XF, to measure both coax and waveguide components.

Excellent accuracy
Low SWR transitions reduce mismatch uncertainty and excellent repeatability ensures consistent measurements. Available with both male and female connectors, these adapters help microwave engineers combine the best test components from each transmission media. With the V/W281 adapters, engineers can balance the merits of coax and waveguide to achieve the best combination of accuracy, cost, and ease-of-use.



1. Length from mating surface of 1-mm connector to center line of waveguide aperture.



Specifications

Specifications describe the instrument's warranted performance over the temperature range 0 to 55 °C (except where noted). **Supplemental characteristics** are intended to provide information useful in applying the instrument by giving typical but nonwarranted performance parameters. These are denoted as "typical," "nominal," or "approximate."

Coax-to-waveguide adapters

Model number	Coax connector type ¹	Waveguide number	Frequency (GHZ)	Supplemental characteristics		
				Return loss better than:	Insertion loss ²	Repeatability ^{3,4} typically better than:
V281C	1 mm (f)	WR-15	50 to 75	-16 dB	≥-0.8 dB	-45 dB
V281D	1 mm (m)	WR-15	50 to 75	-16 dB	≥-0.8 dB	-45 dB
W281C	1 mm (f)	WR-10	75 to 110	-16 dB	≥-1 dB	-40 dB
W281D	1 mm (m)	WR-10	75 to 110	-16 dB	≥-1 dB	-40 dB

1. f = jack, m = plug

2. Maximum insertion loss for a single adapter.

3. At the coaxial port only.

4. Repeatability = $20 \log |\Delta G|$ where $|\Delta G| = |G_{m_1} - G_{m_2}|$. This is the difference between two measurements G_{m_1} and G_{m_2} before and after one disconnect/connect cycle at the coax port. Repeatability depends upon proper torque and pin depth.

Environmental Specifications

	Non-operating	Operating
Temperature	-40 to +75 °C	0 to 55 °C
Altitude	<15,000 meters (50,000 ft)	<15,000 meters (50,000 ft)

Note: Storage or operation within an environment other than that specified above may cause damage to the product and may void the warranty.

Non-operating environmental specifications apply to storage and shipment. Products should be stored in a clean, dry environment. Operating environmental specifications apply when the product is in use. Products should not be operated in a condensing environment.

Care, connection, and torque

For more information, review the Operating Service Guide for the V/W281C,D adapters, 00281-90056.

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