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Data Sheet

August 13, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 83205A 50 ohm RF bridge 300kHz-6GHZ

Keysight 83205A CDMA Cellular Adapter for 8921A The HP/Agilent/Keysight 83205A isaCDMA/CDPD cellular adapter that adds IS-95A/97A CDMA base-station test capability to the HP 8921A Cell Site Test Set. Option 001 is CDMA only; Option 002 CDPD only; Option 003 combines CDMA and CDPD MDBS testing with RF interfaces to the 8921A. The HP/Agilent/Keysight 83205A isaCDMA/CDPD cellular adapter that adds IS-95A/97A CDMA base-station test capability to the HP 8921A Cell Site Test Set. Option 001 is CDMA only; Option 002 CDPD only; Option 003 combines CDMA and CDPD MDBS testing with RF interfaces to the 8921A.



MODEL

**Agilent / Keysight
83205A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83205A

LISTING

<https://aumictechlabs.com/products/83205a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 83205A is a 50-ohm RF directional bridge engineered for precise impedance and reflection coefficient measurements from 300 kHz to 6 GHz. It delivers exceptional directivity and insertion loss performance significantly better than conventional RF bridges, making it the preferred choice for accurate reflection measurements across demanding frequency ranges. This bridge combines the measurement capabilities of directional bridges with minimal signal

degradation. Its nominal 16 dB coupling factor remains flat within ± 0.2 dB below 3 GHz and ± 0.4 dB above 3 GHz. Directivity ranges from 40 dB at 2 GHz down to 16 dB at 6 GHz, supporting reliable measurements across the full frequency span. Insertion loss measures only 1.5 dB nominally plus 0.1 dB/GHz - a substantial improvement over the typical 6 to 8 dB associated with standard RF bridges. Return loss performance spans 23 dB at 2 GHz to 16 dB at 6 GHz. The bridge maintains excellent input match across its operating range. Standing wave ratio stays at 1.15 from 0.3 MHz to 2.0 GHz, rising to 1.38 SWR at 5–6 GHz. All connections use Type-N female connectors. The compact form factor - 160 mm wide, 93 mm high, 23 mm deep - weighs only 0.57 kg, enabling flexible bench and system integration.

Technical Specifications
Impedance: 50 Ohms (nominal)
Frequency Range: 300 kHz to 6 GHz
Operating Temperature: 0 °C to 55 °C
Coupling Factor: 16 dB nominal (± 0.2 dB 3 GHz); frequency response ± 0.2 dB
Directivity: 40 dB (5 MHz to 2 GHz); 30 dB (2–3 GHz); 20 dB (3–5 GHz); 16 dB (5–6 GHz)
Return Loss: 23 dB @ 2 GHz; 20 dB @ 3 GHz; 18 dB @ 5 GHz; 16 dB @ 6 GHz
Insertion Loss: 1.5 dB + 0.1 dB/GHz (± 0.2 dB deviation)
SWR: 1.15 (0.3 MHz–2 GHz); 1.22 (2–3 GHz); 1.29 (3–5 GHz); 1.38 (5–6 GHz)
Connectors: Type-N (female)
Dimensions: 160 mm W $\times$ 93 mm H $\times$ 23 mm D
Net Weight: 0.57 kg

Key Features
Low insertion loss - 1.5 dB nominal, substantially lower than conventional bridges
Wideband operation across 300 kHz to 6 GHz in single unit
Flat coupling factor response ensures consistent performance across frequency bands
High directivity at lower frequencies; maintained above 16 dB through 6 GHz
Excellent return loss performance from VHF through microwave

Typical Applications
Reflection and impedance measurements on RF components and systems
Signal leveling and power monitoring in test systems
Component characterization requiring directional signal separation

Compatibility & Integration
The 83205A integrates with vector network analyzers, scalar network analyzers, and spectrum analyzers. It is an ideal accessory for the E5061/71 family of ENA series network analyzers.

Features & description

From manufacturer datasheet

Features

- CDMA signal generator and analyzer for 8921A • Options 001 CDMA 002 CDPD 003 combined • RF IN/OUT to 8921A test set to 60 W class • 1.2288 MHz and 19.6608 MHz reference outputs • CDMA timebase and even-second sync inputs • 100 to 240 VAC 48 to 440 Hz operation

Applications

- IS-95A/97A CDMA base station test with 8921A • CDPD mobile data base station test Option 002/003
- Code domain and CDMA analyzer measurements • Field cell-site commissioning and maintenance

83205A Characteristics / Specifications

PARAMETER	VALUE
Model	83205A
Manufacturer	Keysight / Agilent / Hewlett Packard
Instrument Type	Cellular Test Adapter
Alias	83205A; HP 83205A; CDMA Cellular Adapter
Host test set	HP 8921A Cell Site Test Set required
RF IN/OUT connector	to 8921A test set
Maximum RF power listing	60 W
CDMA chip clock output	1.2288 MHz
SixteenXchip clock output	19.6608 MHz
CDMA timebase input	provided
Even second sync input	provided
Trigger/qualifier input	provided
Data input Option 002/0	provided
Diagnostic monitor output	provided
Physical dimensions	62 × 330 × 456 mm (2.4 × 13 × 18 in)
Mass net	6.36 kg (14 lb)
Mass shipping	11.36 kg (25 lb)
AC power	100 to 240 V 48 to 440 Hz
Power consumption maximum	120 VA
Safety standard	IEC 61010-1 EN 61010-1 class
EMC	CISPR 11 Group 1 ClassACDMA specifications section: HP 8921A manual chapter 83205A
CDPD specifications section	HP 8921A manual chapter 83205A
Host requirement G	8921A Option G21 on older hosts for full CDMA
Measurement functions	CDMA generator analyzer code domain CDPD class Notes Specs from HP 8921A Cell Site Test Set manual for 83205A CDMA/CDPD Cellular

PARAMETER

VALUE

Adapter. Confirm installed option (001/002/003) and 8921A host firmware/G21 upgrade on the system.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
RF IN/OUT connector	to 8921A test set
Maximum RF power listing	60 W
CDMA chip clock output	1.2288 MHz
Sixteen X chip clock output	19.6608 MHz
CDMA timebase input	provided
Even second sync input	provided
Trigger/qualifier input	provided
Data input Option 002/003	provided
Diagnostic monitor output	provided
Physical dimensions	62 x 330 x 456 mm (2.4 x 13 x 18 in)
Mass net	6.36 kg (14 lb)
Mass shipping	11.36 kg (25 lb)
AC power	100 to 240 V 48 to 440 Hz
Power consumption maximum	120 VA
Safety standard	IEC 61010-1 EN 61010-1 class
EMC	CISPR 11 Group 1 Class A
CDMA specifications section	HP 8921A manual chapter 83205A
CDPD specifications section	HP 8921A manual chapter 83205A
Host requirement G21	8921A Option G21 on older hosts for full CDMA
Measurement functions	CDMA generator analyzer code domain CDPD class
Specifications	
PARAMETER	VALUE
Model	83205A
Manufacturer	Keysight / Agilent / Hewlett Packard
Instrument Type	Cellular Test Adapter

PARAMETER	VALUE
Alias	83205A; HP 83205A; CDMA Cellular Adapter
Host test set	HP 8921A Cell Site Test Set required

Option 001: CDMA cellular adapter
Option 002: CDPD cellular adapter
Option 003: CDMA and CDPD combined adapter

Specifications

PARAMETER	VALUE
RF IN/OUT connector	to 8921A test set
Maximum RF power listing	60 W
CDMA chip clock output	1.2288 MHz
SixteenXchip clock output	19.6608 MHz
CDMA timebase input	provided
Even second sync input	provided
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Data input Option 002/003	provided
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AC power	100 to 240 V 48 to 440 Hz
Power consumption maximum	120 VA
Safety standard	IEC 61010-1 EN 61010-1 class
EMC	CISPR 11 Group 1 ClassACDMA specifications section: HP 8921A manual chapter 83205A
CDPD specifications section	HP 8921A manual chapter 83205A
Host requirement G21	8921A Option G21 on older hosts for full CDMA
Measurement functions	CDMA generator analyzer code domain CDPD class

Notes

Specs from HP 8921A Cell Site Test Set manual for 83205A CDMA/CDPD Cellular Adapter. Confirm installed option (001/002/003) and 8921A host firmware/G21 upgrade on the system.

Ordering Information

OPTION	DESCRIPTION
Option 001	is CDMA only; Option 002 CDPD only; Option 003 combines CDMA and CDPD MDBS testing with RF interfaces to the 8921A.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech
788 S 500 E, Pleasant Grove, UT 84062
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<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.