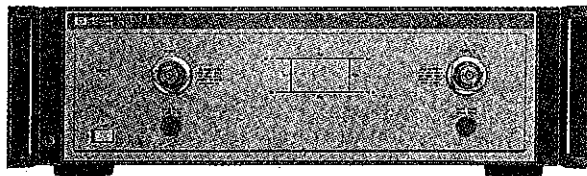


NETWORK ANALYZERS

Test Sets

HP 8510 Series



HP 8517B

S-Parameter Test Sets

Several S-parameter test sets are available for the HP 8510C network analyzer for broadband coaxial measurements from 45 MHz to 50 GHz. The HP 8514B, 8515A, and 8517B test sets have an architecture that develops a separate reference channel for each incident port. RF switching is done with a built-in electronic switch. For active device measurements, the test sets include the ability to apply dc bias (external) to the test port center conductors. Also available are two 90 dB step attenuators (60 dB in the HP 8517B) which allow control of the port 1 and port 2 signal levels.

Pulsed-RF Measurement Test Sets

The HP 85110A/L test sets are specially configured for operation in pulsed-RF measurement systems (HP 85108). Four 90 dB step attenuators protect each input of the fundamentally-mixed down converter to allow measurement of test devices with output power of 20 watts CW or 50 watts CW (HP 85110L).

Coaxial Test Set General Information

	HP 8514B	HP 8515A	HP 8517B	HP 85110A	HP 85110L
Frequency range (GHz)	0.045 to 20	0.045 to 26.5	0.045 to 50	2 to 20	0.045 to 2
Test ports (port 1 or 2): Nominal operating power level (dBm)	2 to -6	-5 to -25	+2 to -29 +5 to -18 ¹	0 to -3	0
Test ports (port 1 or 2): Max. power in (CW)	+20 dBm	+2 dBm	+13 dBm	+43 dBm (20 W)	+47 dBm (50 W)
Test port connector type	3.5 mm (M)		2.4 mm (m)	3.5 mm (m)	7 mm
Impedance dc bias	50 Ω nominal 500 mA, 40 Vdc maximum				
Attenuation range (incident signal)	0 to 90 dB, in 10 dB steps (0 to 60 dB for HP 8517B)				

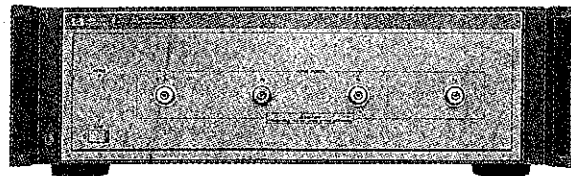
¹HP 8517B Option 007

Millimeter-Wave Series Test Set Modules

An HP Q/U/V/W 85104A test set module contains all of the necessary waveguide hardware (frequency multiplier, isolators, directional couplers, and harmonic mixers) compactly integrated into one box. Any pair of the test set modules can be connected to the HP 85105A millimeter-wave controller for S-parameter millimeter-wave measurement capability. These modules are easy to maneuver and make the system extremely simple to set up.

Millimeter-Wave Test Set General Information

	HP Q85104A	HP U85104A	HP V85104A	HP W85104A
Frequency range (GHz)	33 to 50	40 to 60	50 to 75	75 to 110
Test ports (port 1 or 2): Nominal operating power level (dBm)	0	0	0	-3
Test ports (port 1 or 2): Max. power in (CW) for .1 dB compression (dBm)	-10	-10	-10	-10
Test port connector type	WR-22	WR-19	WR-15	WR-10



HP 8511B

Frequency Converters

With the HP 8511A (26.5 GHz) and 8511B (50 GHz) frequency converters, the HP 8510 becomes a general-purpose four-channel magnitude/phase receiver. Add your own power splitters for transmission measurements, and bridges or directional couplers for reflection measurements. Since one input is used for system phase-lock, the other three inputs are available for measurements of multi-port devices, subsystems, and antennas. All four inputs have precision 3.5 mm (HP 8511A) or 2.4 mm (HP 8511B) connectors.

Multiple Test Set Operation

A single HP 8510C system may be configured with two test sets. In this configuration the test sets have different addresses, and the user may select between them from the front panel of the HP 8510 without reconnections. This capability is useful, for example, when combining a microwave coaxial test set with a millimeter-wave test set in the same HP 8510 system.

IF switching (Option 001): In the multiple test set configuration, the 20 MHz IF signal is daisy-chained from the test sets to the HP 8510. This capability requires test set Option 001 in one of the two test sets.

The RF signal must be routed to the desired test set using a coaxial RF switch and an HP 11713A switch driver. The switch driver is controlled automatically by the HP 8510C over the HP 8510 system interface bus.

Key Literature

HP 8510C Family Network Analyzer Technical Data, p/n 5091-8484E

Ordering Information

- HP 8511A Frequency Converter
 - Opt 001 Add IF Switching
- HP 8511B Frequency Converter
 - Opt 001 Add IF Switching
- HP 8514B S-Parameter Test Set
 - Opt 001 Add IF Switching
 - Opt 002 Delete Step Attenuators and Bias Tees
 - Opt 003 High Forward Dynamic Range
- HP 8515A S-Parameter Test Set
 - Opt 001 Add IF Switching
 - Opt 002 Delete Step Attenuators and Bias Tees
- HP 8517B S-Parameter Test Set
 - Opt 001 Add IF Switching
 - Opt 002 Delete Step Attenuators and Bias Tees
 - Opt 004 High Power Test Set Configuration
 - Opt 007 High Dynamic Range Configuration
- HP 85110A Pulsed-RF S-Parameter Test Set
 - Opt 001 Add IF Switching
- HP 85110L Pulsed-RF S-Parameter Test Set
 - Opt 001 Add IF Switching
- HP Q85104A Test Set Module
- HP U85104A Test Set Module
- HP V85104A Test Set Module
- HP W85104A Test Set Module
- HP 85105A Millimeter-Wave Controller



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