

S-parameter test sets

Description

Combining the 8510C network analyzer with an 8514B, 8515A, or 8517B results in a system for making full S-parameter measurements. The dual port architecture of the test sets develops a separate reference channel for each incident port. RF switching is done with a single built-in electronic switch.



Test set general information

	8514B	8515A	8517B	85110A	85110L	85105A/85104A			
Frequency range (GHz)	0.045 to 20	0.045 to 26.5	0.045 to 50	2 to 20	0.045 to 2	33 to 50	40 to 60	50 to 75	75 to 110
Test ports (port 1 or 2)									
Nominal operating power level (dBm)	2 to -6	-5 to -25	+2 to -29 +5 to -16 ¹	0 to -3	0	0	0	0	-3
Connector type	3.5 mm (m)	3.5 mm (m)	2.4 mm (m)	3.5 mm (m)	7 mm	WR-22	WR-19	WR-15	WR-10
Impedance, DC bias	50 Ω nominal, 500 mA, 40 Vdc maximum					Waveguide impedance, no bias			
Attenuation range (incident signal)	0 to 90 dB, in 10 dB steps		0 to 60 dB, in 10 dB steps	0 to 90 dB, in 10 dB steps		N/A	N/A	N/A	N/A
RF input connector (rear panel)									
Max. input power	+16 dBm	+14 dBm	+16 dBm	+14 dBm	+14 dBm	+13 dBm	+13 dBm	+13 dBm	+13 dBm
Connector type	3.5 mm (f)	3.5 mm (f)	2.4 mm (f)	3.5 mm (f)	3.5 mm (f)	3.5 mm (f)	3.5 mm (f)	3.5 mm (f)	3.5 mm (f)

Ordering information

The following options are available on the test sets:

Option 001: Add IF switching. Allows four test sets with different addresses to be connected to the 8510 at the same time. The test set in use is selected from the 8510C front panel. The 20 MHz IF signal is daisy-chained from the test sets to the 8510. IF switching is performed automatically without reconnections.

Option 002: Delete step attenuators and bias tees (8514B, 8515A, 8517B only). If attenuators are not required, but bias is required, bias can be applied externally using the 11612A/B bias tees.

Option 003: Forward configuration (8514B only).

Forward coupler configuration; optimization for forward dynamic range.

Option 004: High power configuration (8517B only).

Optimized for testing of high power devices (up to 1 watt) by moving the port 2 step attenuator before the b2 sampler.

Option 007: High power and high dynamic range configuration (8517B only). Adds broadband amplifiers at the input, and before each sampler. Requires 8510C firmware revision 7.0.

1. 8517B Option 007