Table 1-10. Specifications for HP 8510 with HP 8511A Test Set (Cont'd)

INTRODUCTION AND GENERAL CHARACTERISTICS

The combination of the HP 8511A test set with an HP 8510A network analyzer and an HP 8340A sweeper forms a four channel receiver/signal processor that operates over the frequency range of 45 MHz to 26.5 GHz.

Specification Assumptions

The specifications of this table assume that the following conditions are met:

- The RF source is an HP 8340A synthesized sweeper operating in stepped sweep mode.
- The temperature is in the range of 0° C to 55° C.
- RF source power levels at the input ports are as follows:

	Power at Input Port	
Test	45 MHz-18 GHz	18 GHz-26.5 GHz
Compression	-10 dBm	-15 dBm
Crosstalk	-10 dBm	-15 dBm
Conversion Gain	-15 dBm	-20 dBm
Tracking	-15 dBm	-20 dBm
High Level Noise	-15 dBm	-20 dBm

Frequency Range

45 MHz to 26.5 GHz

Input Ports

Connector Type: Precision 3.5 mm Female
Impedance: 50 ohms nominal
Damage Input Level: > +13 dBm
Minimum Port Input Power (for Phase Lock):

0.045 - 8 GHz	> -40 dBm
8 - 18 GHz	> -38 dBm
18 - 26.5 GHz	> -35 dBm

Maximum Port Input Power (for Phase Lock):

0.45 - 26.5 Ghz	-5 dBm

Table 1-10. Specifications for HP 8510 with HP 8511A Test Set (Cont'd)

HARDWARE AND SYSTEM PERFORMANCE SPECIFICATIONS

Table of System Errors

The following table lists the specifications for the various sources of system error. The values listed are the verification limits for uncorrected measurements.

Source of System Errors

Error Source	Verification Limit		
	.045-8GHz	8-18GHz	18-26.5GHz
Conversion Gain[1]	+2 dB to -12 dB		
Tracking Magnitude Slope Magnitude Ripple[2] Phase Ripple[2]	 ± 0.08 dB/GHz ± .5 dB ± 5 deg		
Crosstalk[3]	≤ -80 dB	≤ -80 dB	≤ -80 dB
Low-Level Noise (Noise Floor)[4]	≤ -95 dBm	≤ -90 dBm	≤ -85 dBm
High-Level Noise (Trace Noise) Ratio - Magnitude Ratio - Phase	 .012 dB rms .100 deg rms	 .020 dB rms .150 deg rms	 .040 dB rms .250 deg rms
Compression (.1 dB point)	≥ -10 dBm	≥ -10 dBm	≥ -15 dBm
Input Port Return Loss[5]	≥ 17 dB	≥ 15 dB	≥ 9 dB
Tracking Drift (Typical)	Magnitude .001 x Δ^{o} C, Linear Phase (0.1 + .01 x f(GHz) x Δ^{o} C, Degrees		