Keysight E9304A Option H19

Product Note

The Keysight E9304A Option H19 modifies the standard E9304A power sensor by adding a 10 dB attenuator which shifts the power range to -50 dBm to +30 dBm and extends the upper frequency range to 18 GHz. This product note documents the signal characteristic for this option.

NOTE **For information concerning the operation and connections, refer to the E9304A Power Sensors Operating and Service Guide.**

KEYSIGHT TECHNOLOGIES

Specifications

All specifications for the E9304A Option H19 are identical to E9304A with the following exceptions:

Table 1-1 Frequency Range and Connector Type

Frequency Range	Connector	Power Range
9 kHz to 18 GHz	Type-N (m)	10 nW to 1 W (–50 dBm to +30 dBm)

Table 1-2 Maximum SWR (25°C ± 10°C)

Frequency	SWR
9 kHz to < 8 GHz	1.15
8 GHz to < 12.4 GHz	1.25
12.4 GHz to 18 GHz	1.28

Table 1-3 Maximum SWR (0°C to +55°C)

Frequency	SWR
9 kHz to < 8 GHz	1.17
8 GHz to < 12.4 GHz	1.26
12.4 GHz to 18 GHz	1.29

Max DC Volts: 10 Volts

NOTE Maximum Calibration Factor uncertainties are shown in the following tables. The calibration report that is shipped with each power sensor indicates the Cal Factor uncertainty data for that specific sensor as measured at the factory. Refer to the E9304A Power Sensors Operating and Service Guide for more information about Calibration Factor and Reflection Coefficient data.

Table 1-4 Cal Factor Uncertainty (Low Power Path, –50 dBm to 0 dBm)

Frequency	Uncertainty (25°C ±10°C)	Uncertainty (0°C to +55°C)
9 kHz to < 6 GHz	1.7%	2.0%
6 GHz to < 14 GHz	1.8%	2.0%
14 GHz to 18 GHz	2.0%	2.2%

Table 1-5 Cal Factor Uncertainty (High Power Path, 0 dBm to +30 dBm)

Frequency	Uncertainty (25°C ±10°C)	Uncertainty (0°C to +55°C)
9 kHz to < 500 MHz	2.3%	3.5%
500 MHz to < 1.2 GHz	2.8%	4.5%
1.2 GHz to < 6 GHz	2.3%	2.6%
6 GHz to < 14 GHz	2.4%	2.8%
14 GHz to 18 GHz	2.7%	3.8%

The Keysight E9304A Option H19 has no field serviceable parts. If you need service or calibration for your power sensor, you must return it to Keysight Technologies.

Inspect the shipping container. If the container or packing material is damaged, it should be kept until the contents of the shipment have been checked mechanically and electrically. If there is mechanical damage or if the instrument does not pass the performance tests, notify the nearest Keysight Technologies office. Keep the damaged shipping materials (if any) for inspection by the carrier and a Keysight Technologies representative.

To contact Keysight for sales and technical support, refer to Keysight worldwide website at: www.keysight.com/find/assist.

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