

Abbreviated Specifications for USB-SA124A

Frequency

Frequency Range: 100kHz to 12.4GHz

Internal Frequency Reference Accuracy: $\pm 1\text{ppm}$ (standard); 1×10^{-7} (option-02)

Resolution Bandwidth: 1Hz to 250kHz and 6MHz

Amplitude (RBW $\leq 100\text{kHz}$)

Range: +10dBm to Displayed Average Noise Level (DANL)

Absolute Accuracy (0dB to DANL): $\pm 1.5\text{dB}$ (100kHz to 6GHz)

$\pm 2.5\text{dB}$ (6GHz to 12.4GHz)

Displayed Average Noise Level (dBm/Hz):

100kHz to 10MHz	-147 dBm
10MHz to 100MHz	-151 dBm
100MHz to 3.0GHz	-152 dBm
3.0GHz to 5.5GHz	-145 dBm
5.5GHz to 7.0GHz	-149 dBm
7.0GHz to 8.0GHz	-147 dBm
8.0GHz to 11.0GHz	-134 dBm
11.0GHz to 12.4GHz	-129 dBm

Test Conditions

0dB input attenuation, RBW =
VBW, RBW $\leq 100\text{kHz}$, reference
level -70dBm, video averaging of
16, and Image Rejection on.

Residual Responses (RBW = 6.5kHz):

100kHz to 10MHz	-100 dBm
10MHz to 8.0GHz	-93 dBm
8.0GHz to 11.0 GHz	-82 dBm
11.0GHz to 12.4GHz	-85 dBm

Test Conditions

0dB input attenuation, RBW=VBW,
reference level -70dBm, video
averaging=16, Image Rejection on.

SSB Phase Noise at 10GHz (Typical):

Frequency Offset	dBc/Hz
100Hz	-72
1KHz	-80
10kHz	-87
100kHz	-87
1MHz	-110

Test Conditions

-10 dBm carrier, 10 dB input
attenuation, -20dBc/Hz reference
level, video averaging of 10, and
Image Rejection on.

Measuring Receiver (Typical after 30min warm-up and $\pm 3^\circ\text{C}$ of ref. start temp.)

Operating Frequency: 100kHz to 12.4GHz

Modulation Measurement Accuracy: $\pm 1\%$ for AM and FM

Synchronous Level Detector: $\pm 0.25\text{dBc}$ (+0dBm to -127dBm, 100kHz to 1.0GHz)

$\pm 0.25\text{dBc}$ (+0dBm to -117dBm, 1.0GHz to 6.0GHz)

$\pm 0.25\text{dBc}$ (+0dBm to -102dBm, 6.0GHz to 12.4GHz)

Calibration Interval: 1-Year

Operating Temperature: 0°C to $+50^\circ\text{C}$ without de-rating specifications