The NXA is a fully automated phase noise analyzer. Its dual channel architecture allows the system to use a cross-correlation process to cancel its internal noise floor. This reliable technique provides access to the unique noise floor performance of the DCNTS.

A completely new user interface based on a large 14 inch touchscreen simplifies the operation, focusing the user on the measurement result itself and not on the measurement technique. Experts can always access advanced settings if needed.

Quick and easy phase noise plots can be obtained without any training so the NXA-6 can be operated by any manufacturing technician. This is the only instrument that combines great ease of use and state of the art performance.

With its internal frequency references, measurements are made extremely easy without the hassle of connecting cables and tweaking settings. However, when ultimate performance is required, the capability to use external reference sources like crystal oscillators, saws or slos pushes the instrument noise floor down to the thermal noise.

The NXA-6 can measure absolute phase noise, residual phase noise and offers options for amplitude noise as well as measuring phase and amplitude noise on pulsed signals. These unique features combined with extremely close to the carrier analysis makes it the most complete analyzer of the market.

**Functional Specifications**

- **Input Frequency:** 2 MHz to 6 GHz using external References
  5 MHz to 6 GHz using internal References
  2 channels baseband inputs DC to 40 MHz
- **Offset analysis:** 0.01 Hz to 40 MHz
- **Accuracy:** +/- 2dB 1 kHz to 1 MHz offset, +/-3 dB above
- **Operating mode:** Manual or Remote scripting control (ATE over Ethernet)
- **Input RF Connector:** Precision N-Type
- **Tuning Voltage Connectors:** 2 BNC-F for external references DC-FM control
- **External Ref. Sources:** SMA-F

NXA-6
6 GHz Phase Noise Analyzer
Typical Phase Noise Floor

Low Frequency Band:
Input Frequency: 2 MHz to 1.6 GHz
LO Input Level: +5 to +17 dBm
Nominal Conditions: Kphi=0.600 V/rd or +20dBm Input Power at 100 MHz

<table>
<thead>
<tr>
<th>Offset (Hz)</th>
<th>1</th>
<th>10</th>
<th>100</th>
<th>1K</th>
<th>10K</th>
<th>100K</th>
<th>1M</th>
<th>10M</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 MHz Internal Noise Floor</td>
<td>-125</td>
<td>-158</td>
<td>-168</td>
<td>-180</td>
<td>-185</td>
<td>-190</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>100 MHz Internal Noise Floor</td>
<td>-105</td>
<td>-138</td>
<td>-153</td>
<td>-166</td>
<td>-172</td>
<td>-185</td>
<td>-187</td>
<td></td>
</tr>
<tr>
<td>1 GHz Internal Noise Floor</td>
<td>-85</td>
<td>-118</td>
<td>-135</td>
<td>-149</td>
<td>-155</td>
<td>-168</td>
<td>-170</td>
<td></td>
</tr>
</tbody>
</table>

Improved noise floor can be obtained by increasing the number of cross-correlations.

High Frequency Band:
Input Frequency: 1.6 GHz to 6 GHz
RF Input Power: 0 to +15 dBm
LO Input Level: +7 to +15 dBm
Nominal Conditions: Kphi=0.300 V/rd or +15dBm Input Power at 2 GHz

<table>
<thead>
<tr>
<th>Offset (Hz)</th>
<th>1</th>
<th>10</th>
<th>100</th>
<th>1K</th>
<th>10K</th>
<th>100K</th>
<th>1M</th>
<th>10M</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Source Noise Floor</td>
<td>-125</td>
<td>-135</td>
<td>-150</td>
<td>-160</td>
<td>-175</td>
<td>-183</td>
<td>-188</td>
<td>-188</td>
</tr>
<tr>
<td>2 GHz Internal Noise Floor</td>
<td>-79</td>
<td>-112</td>
<td>-129</td>
<td>-143</td>
<td>-149</td>
<td>-162</td>
<td>-164</td>
<td></td>
</tr>
<tr>
<td>6 GHz Internal Noise Floor</td>
<td>-69</td>
<td>-102</td>
<td>-119</td>
<td>-133</td>
<td>-139</td>
<td>-152</td>
<td>-154</td>
<td></td>
</tr>
</tbody>
</table>

Improved noise floor can be obtained by increasing the number of cross-correlations.

Averaging configuration used in specifications:

<table>
<thead>
<tr>
<th>Offset (Hz)</th>
<th>1</th>
<th>10</th>
<th>100</th>
<th>1K</th>
<th>10K</th>
<th>100K</th>
<th>1M</th>
<th>10M</th>
</tr>
</thead>
<tbody>
<tr>
<td># of cross correlations</td>
<td>10</td>
<td>10</td>
<td>100</td>
<td>100</td>
<td>1k</td>
<td>1k</td>
<td>10k</td>
<td>10k</td>
</tr>
</tbody>
</table>

Please add +5dB for specifications

Signal Processing
Measurement Units: Noise in dBc/Hz, Spurs in dBc.
Cross-correlation: 1 to 100,000 depending on offsets
Display functions: Smooth, spec-line, frequency & level markers, spurs list
Integrated power: in dBc, rad rms, rad², deg rms, deg², Hz rms, Hz²
Jitter: Sec rms, Secpp, UIpp
Spectrum: Variable FFT windows, spurious detection algorithms
Real RBW: 3mHz to 146kHz for spurious detection and speed tuning

General Specifications
Weight: 35 Kgs
Size: 6U, 19" rack mountable (260 x 570 x 445mm)
Operating Voltage: 100-240 VAC 50/60Hz 4A max

Product specifications and descriptions in this document subject to change without notice.