| Specification | AXDA9000 | Rev.: 1 | Date: 2016-07-04 |
|---|---|---|---|

**Type:** **Low Noise Selective Distribution Amplifier in 19” rack (1 HU)**

## Features:

- **Ultra-Low Phase Noise**
- **Up to 16 outputs**
- **Very high inter-channel and reverse isolation**
- **Centre frequencies 5 MHz, 10 MHz or 100 MHz standard, any frequency between 5 MHz and 100 MHz available**
- **Best suited to distribute AXTAL 9000 Series references**
- **Slim 19” rack with 1 HU**


## Available frequency references for AXDA9000:

| Item | (D)OCXO | GPS-disciplined OCXO | Rubidium |
|---|---|---|---|
| **Model** | AXIOM9000 | AXGPS9000 | AXRB9000 |
| **Features** | DOCXO option<br>Ultra-low noise<br>Very high stability | Low noise<br>Stability $10^{-11}$ | Excellent long-term stability |

| Parameter | min. | typ. | max. | Unit | Condition |
|---|---|---|---|---|---|
| **Available frequencies** | 5 | | 100 | MHz | |
| **Standard frequencies** | 5.000 / 10.000 / 100.000 | | | MHz | |
| **RF Input** | | | | | |
| Number of inputs | 1 | | | | |
| Input impedance | 50 | | | Ω | |
| Input level operating (Note 2) | +0 | | +15 | dBm | |
| Input level nominal (Note 2) | +7 | | +12 | dBm | Recommended level |
| Input VSWR | | | 1.2 | | @ nominal frequency |
| **RF outputs** | | | | | |
| RF output ports | 4, 8, 16 | | | | Option 1 |
| Signal waveform | Sine wave | | | | |
| Load $R_L$ | 50 | | | Ω | ±10% |
| Output VSWR | | | 1.2 | | @ nominal frequency |
| Output level per channel | +14 | +16 | | dBm | (Note 3) |
| Isolation reverse & output | 100 | | | dB | |
| Harmonics | | -60 | -50 | dBc | |
| Spurious | | | -90 | dBc | |
| **AC Supply voltage $V_S$** | 100 | 230 | 240 | V | |
| **AC Supply input frequency** | 50 | | 60 | Hz | |
| **Power consumption** | | | 20 | W | |
| **Operating temperature range** | -10 | | +60 | °C | |
| **Enclosure (see drawing) (WxDxH)** | 483x250x44 | | | mm | |
| **RF Connectors** | BNC female | | | | @ Rear plate |
| **Weight** | | 4 | | kg | |

**Notes:**

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated
2. AC input indicator “green” above +5 dBm, AC overload indicator “red” above +16 dBm
3. Unused outputs must be terminated with 50 Ω

## Absolute Maximum Ratings

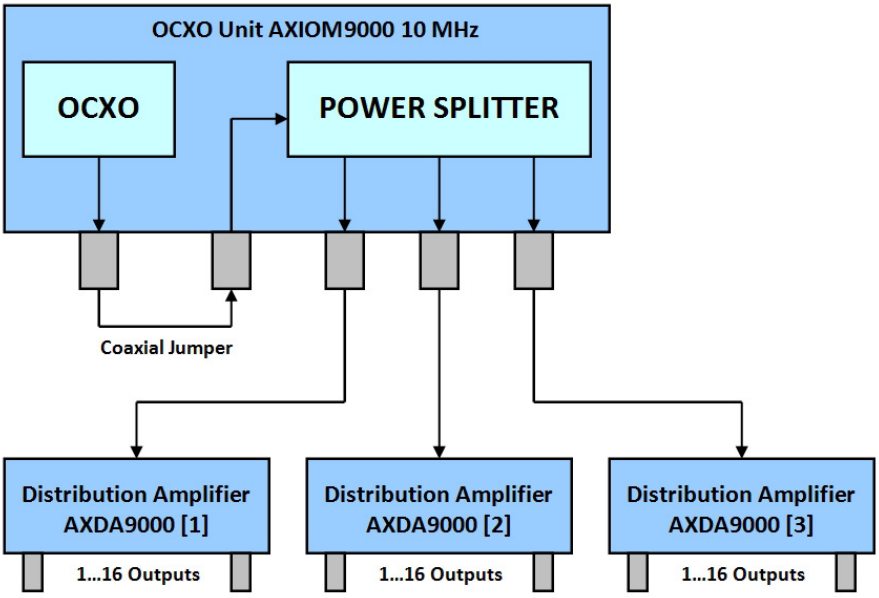
| Parameter | min. | max. | Unit | Condition |
|---|---|---|---|---|
| AC Supply Voltage $V_S$ | 90 | 260 | V | |
| AC Supply input frequency | 47 | 63 | Hz | |
| AC Supply input current | | 1 | A | Fuse accessible at rear plate |
| Maximum RF input level | | +20 | dBm | |
| Load $R_L$ | 0 | ∞ | Ω | No damage |
| Storage Temperature | -20 | +70 | °C | |

## Ordering Code

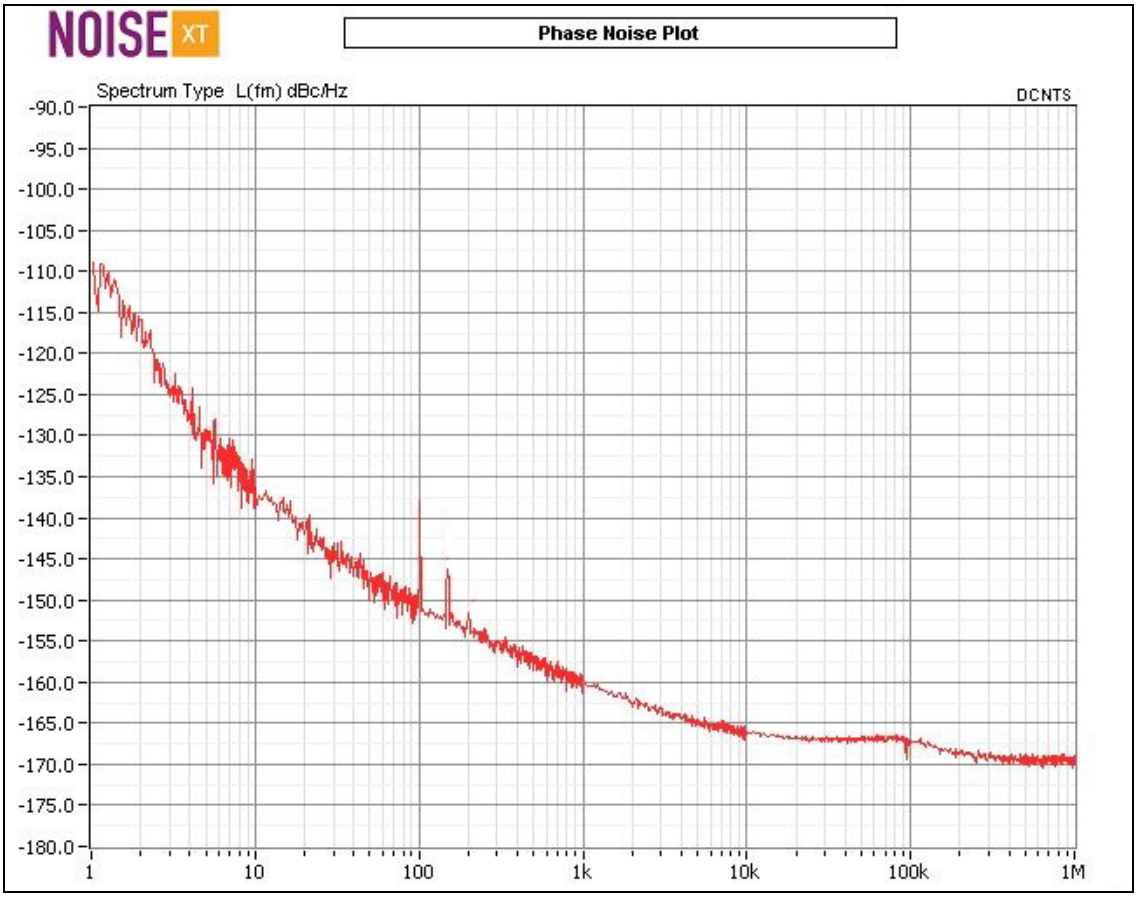
| Model | Option 1 [Output ports] | Revision | Frequency [MHz] |
|---|---|---|---|
| AXDA9000 | 4, 8, 16 | Rev.1 | 10.000 |

**Example: AXDA9000-16_Rev.1 – 10.000 MHz**

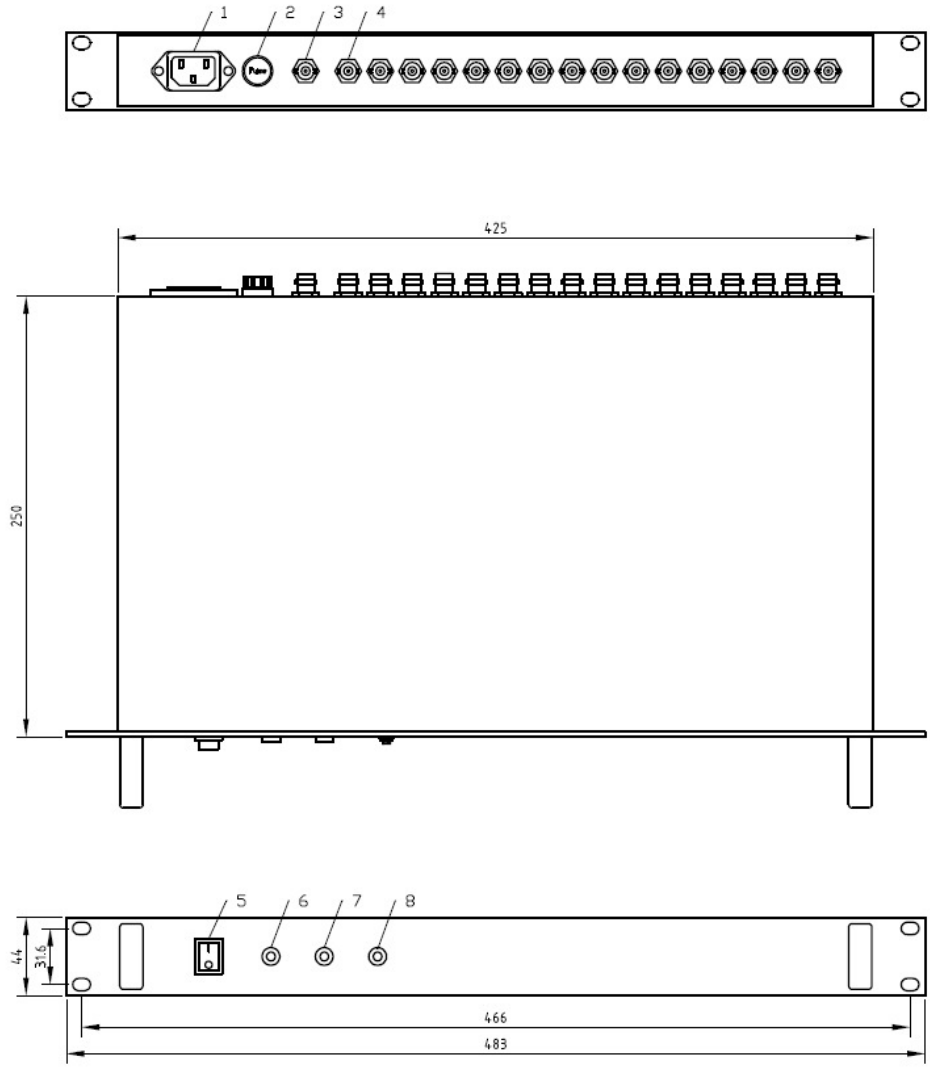
## Frequency distribution of optional frequency reference AXIOM9000 with AXDA9000




## Typical Phase Noise Performance of AXIOM9000-ULN distributed with AXDA9000



## Enclosure drawing




## Connections and operation

| # | Panel | Symbol | Function |
|---|---|---|---|
| **1** | **Rear** | POWER IN | AC Supply Input (IEC 60320-1 / C14) |
| **2** | | FUSE | 1 A Slow 5x20 mm Fuse |
| **3** | | IN | RF input |
| **4** | | OUT | RF outputs 4…16* |
| **5** | **Front** | POWER SWITCH | Power Switch ON/OFF |
| **6** | | POWER ON | LED – Power On Indicator |
| **7** | | AC INPUT | LED – RF Input Indicator |
| **8** | | AC OVERLOAD | LED – RF Overload Indicator |

*Unused outputs must be terminated with 50 Ω loads

## Handling & Testing

| Parameter | Procedure / Test condition |
|---|---|
| Sinusoidal vibration | max. 0.15 mm <10 Hz, 1 g at 10~2000 Hz |
| Random vibration | max. 0.001 $g^2$/Hz, 10~2000 Hz |
| Mechanical shock | max. 10 g, 11 ms half sine |
| Handling and Testing | Careful handling. |
| DGUV Requirement 3 Tested | ✖ Yes ☐ No |
| RoHS-Compliant | ✖ Yes ☐ No |

Data sheet is for information purposes only and may be subject to modifications or may be discontinued without notice.

## Revision History

| Rev. | Drawing | Date [dd.mm.yyyy] | Remarks | Author | Checked |
|---|---|---|---|---|---|
| 1 | D0 | 04.07.2016 | First issue | HH | BN |