Key Features

- 0.27 dB Noise Figure @ RT
- +/-0.10 dB Gain Flatness
- 50 Ohm Impedance
- 180 – 210 MHz
- 27.0 dB Gain
- 10.0 dBm Output P1dB
- 1.25:1 VSWR
- 23.0 dBm Output IP3
- >34 years MTBF
- Unconditional Stable
- RoHS Compliant
- Meet MIL-STD-202g

Product Description

WBA0180210A is integrated with WanTcom proprietary low noise amplifier technology, high frequency micro electronic assembly techniques, and high reliability design to realize optimum low noise figure, wideband, high linearity, and unconditional stable performances together. With single DC operation, the amplifier has room temperature super conductive alike low noise performance with the best input and output matching in the specified frequency range. The amplifier has standard SMA connectorized WP-11 Gold plated housing.

Applications

- Magnetic Resonance Imaging
- VHF Communications
- Defense
- Measurement
- Fixed Wireless

Specifications

Summary of the electrical specifications at room temperature

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Absolute Maximum Ratings

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<td>400</td>
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<td>Input CW RF Power</td>
<td>dBm</td>
<td>10</td>
</tr>
<tr>
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<tr>
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<td>°C</td>
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<tr>
<td>Thermal Resistance</td>
<td>°C/ W</td>
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</tbody>
</table>

Ordering Information

- Without Output Bias-T: WBA0180210A
- With Output Bias-T: WBA0180210ABT

Specifications and information are subject to change without notice.
WBA0180210A
0.27 dB ULTRA LOW NOISE FIGURE 180 – 210 MHz AMPLIFIER

REV A
January 2017

Typical Data:

Passband Performance @ 21 C

Wideband Performance @ 21 C

Noise Figure @ 21 C

P1dB & IP3 @ 21 C

Outline, WP-11 Housing

UNITs: INCH
BODY: Brass
Finish: Gold Plating
RF Connector: SMA F Gold Field Replaceable
Vdd PWR: Feed through

Vdd IN Pin and Ground Turret are not installed for BT versions

Specifications and information are subject to change without notice.

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Application Notes:

A. ESD Safe

Always handle the amplifier at ESD safe environment! ESD may damage the amplifier permanently.

B. SMA Torque Wrench Selection

Always use a torque wrench with 5 ~ 6 inch-lb coupling torque setting for mating the SMA cables to the amplifier. Never use torque more than 8 inch-lb wrench for tightening the mating cable to the connector. Otherwise, the permanent damage may occur to the SMA connectors of the amplifier. 8710-1582 (5 inch-lb) is one of the ideal torque wrench choice from Agilent Technology.

C. DC Power Line Connection

Strip the insulation layer at the end of DC power supply wire. The stripped distance should be in the range of 0.100” to 0.200”. The 24 ~ 26 American Wire Gauge wire is suitable. Wound the stripped terminal wire about 1 turn only on the DC feed thru center pin. Solder the wounded wire and the center pin together. Make sure use smaller soldering iron tip such as 0.010” for this process soldering. Excessive heat and large tip may damage the feed thru pin. Clean the soldering area by Q-tip with alcohol to remove the flux and residue.

Repeat the process to solder the DC return wire on the ground turret with higher temperature and larger soldering tip such as 0.020”.

D. Mounting the Amplifier

Use three pieces of #4-40 with longer than 9/16” screws for mounting the amplifier on a metal-based chase. Flat and spring washers are needed to prevent the screw loosening during the shock and vibration tests. Always use the appropriate torque setting of the power screwdriver to mount them.

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