Key Features
- 20 ~ 150 MHz
- 2 ~ 4 dB noise figure
- 49.0 dBm output IP3
- 37.0 dB Gain
- +/-0.50 dB Gain Flatness
- 35 dBm P1dB
- 1.5:1 VSWR
- Single Power Supply
- >34 years MTBF
- Unconditional stable
- RoHS compliant

Product Description
WPM0003R integrates 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 +10.0V DC operation, the amplifier has optimal input and output matching in the specified frequency range at 50-Ohm impedance system. The amplifier has standard WanTcom WPM-1 gold plated pallet.

The amplifier is designed to meet the rugged standard of MIL-STD-202.

Specifications
Summary of the electrical specifications WPM0003R at room temperature

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Absolute Maximum Ratings

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Functional Block Diagram

Ordering Information

| Model Number | WPM0003R | WPM-1 | WBPA0003R | WP-6 |

Specifications and information are subject to change without notice.
WPM0003R
20 - 150 MHz 4 WATTS WIDE BAND POWER AMPLIFIER

February 2012

Specifications and information are subject to change without notice.

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Typical Data

Outline,

1. WPM-1 Pallet

UNITS:
INCH

BODY:
Brass

Finish:
Gold Plating

RF Launch:
Microstrip

V_{dd} PWR:
Feed through

Gain @ 25C

Input & Output Return Losses @ 25C

Reverse Isolation @ 25C

P1dB & IP3 @ 25C

NF @ 25C

Stability Factor k @ 25C
WanTcom, Inc
Phone 01 952 448 6088 + FAX: 01 952 448 7188 + e-mail: sales@wantcominc.com + Web site: www.wantcominc.com

Specifications and information are subject to change without notice.

2. WP-6

Application Notes:

1. WBPA0003R

A. 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 in WP-6 housing. Never use torque more than 8 inch-lb wrench for tightening the mating cable to the connector. Otherwise, the permanent damage will occur to the SMA connectors of the amplifier. 8710-1582 (5 inch-lb) is one of the ideal torque wrench choice from Agilent Technology.

B. 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 to 2 turns on the DC feed thru center pin. Solder the wounded wire and the center pin together. 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.

C. Mounting the Amplifier

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

2. WPM0003F

D. Mounting the Amplifier

Use four pieces of #2-56 or M2.5 with longer than 3/8” screws for mounting the amplifier on a metal-based chase or heat sink. The thermal compound is recommended between the bottom of the pallet and heat sink for maximum heat dissipation. The sufficient heat sink is required. Flat and spring washers are needed to prevent the screw looseness during the shock and vibration. Always use the appropriate torque setting of the power screwdriver to mount the amplifier.

Always be very careful to solder the RF and DC connections to the amplifier. Use 0.01” diameter soldering iron tip to solder the connections. Do not touch any components of the amplifier.

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