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MODEL 4114
370-450 MHz
250 WATTS
LINEAR POWER RF AMPLIFIER

**Solid State
 Broadband High
 Power RF
 Amplifier**

The 4114 is a 250 Watt band specific amplifier that covers the 370-450 MHz frequency range. This small and lightweight amplifier utilizes Class A linear power devices that provide an excellent 3rd order intercept point, high gain, and a wide dynamic range.

Due to robust engineering and employment of the most advanced devices and components, this amplifier achieves high efficiency operation with proven reliability. Like all OPHIR_{RF} amplifiers, the Model 4114 comes with a five (5) year warranty backed by Ophir RF's commitment to total customer satisfaction.

| | <u>Parameter</u> | <u>Specification @ 25° C</u> |
|-----------------------------|------------------------------|-------------------------------|
| <u>Electrical</u> | | |
| 1 | Frequency Range | 370-450 MHz |
| 2 | Saturated Output Power | 250 Watts Minimum |
| 3 | Power out at 1dB compression | 200 Watts Minimum |
| 4 | Small Signal Gain | +58 dB min |
| 5 | Power Flatness | +/- 0.25 dB max |
| 6 | IP ₃ | +61 dBm typical |
| 7 | Input VSWR | 2:1 max |
| 8 | Harmonics | -20 dBc typical @ 200W |
| 9 | Spurious Signals | < -60 dBc typical @ 200W |
| 10 | Input/Output Impedance | 50 Ohms nominal |
| 11 | AC Input Power | 1500 Watts Maximum |
| 12 | AC Input | 90-240 VAC, single phase |
| 13 | RF Input | 0 dBm max |
| 14 | RF Input Signal Format | CW/AM/FM/PM/Pulse |
| 15 | Class of Operation | Class A |
| <u>Mechanical</u> | | |
| 16 | Dimensions | 19" x 5.25" x 26" |
| 17 | Weight | 60 Lbs. |
| 18 | RF Connectors | Type-N |
| 19 | Grounding | Chassis |
| 20 | Cooling | Internal Forced Air |
| <u>Environmental</u> | | |
| 21 | Operating Temperature | 0° C to +50° C |
| 22 | Operating Humidity | 95% Non-condensing |
| 23 | Operating Altitude | Up to 10,000' Above Sea Level |
| 24 | Shock and Vibration | Normal Truck Transport |

Specifications subject to change without notice

INCLUDES INTERNAL ISOLATOR FOR FULL OPERATION INTO ANY VSWR!

ORDERING MODELS

- RE Rear RF Connector model with Front Panel Controller Ethernet, IEEE-488 and RS232
- FE Front RF Connector model with Front Panel Controller Ethernet, IEEE-488 and RS232
- R Rear RF Connector model
- F Front RF Connector model



FE MODEL SHOWN



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FRONT PANEL CONTROLLER FEATURES (Optional)

- ◇ Forward Power Monitoring (dBm or Watts)
- ◇ Reflected Power Monitoring (dBm or Watts)
- ◇ Gain Control (20 dB dynamic range of adjustment)
- ◇ Fault Status
- ◇ Full Protection Of any VSWR Condition, Open or Short, into any Phase Angle
- ◇ Remote Control Access via the Ethernet, RS-232, or IEEE-488 Communications ports
- ◇ Integrated Automatic Leveling Control to allow end-user to maintain Output level, with variances in temperature, or input RF level
- ◇ Standby/Enable Control
- ◇ Front Panel Display for easy viewing of System Status Locally
- ◇ Keypad buttons for full local control

CIRCUIT CONTROL (WITH FRONT PANEL CONTROLLER)

- ◇ Standby (amplifier disable)
- ◇ Gain/power setting with 20dB range
- ◇ VSWR protection Reset
- ◇ ALC On/ Off

CIRCUIT INDICATIONS (WITH FRONT PANEL CONTROLLER)

- ◇ Forward Power
- ◇ Reflected power
- ◇ VSWR Fault
- ◇ Temp Fault
- ◇ Gain Setting (VVA) percentage

CIRCUIT PROTECTIONS

- ◇ Thermal Overload
- ◇ Over Current
- ◇ Over Voltage
- ◇ Open or Short VSWR Conditions (*With Front Panel Controller*)

RFPA SYSTEM OPTIONS

- ◇ Switched Filter Bank
- ◇ Input Power Requirements
- ◇ Ruggedized Version
- ◇ Cabinet Requirements
- ◇ Outdoor Version
- ◇ Sample Ports
- ◇ Racking Options
- ◇ Many More!
- ◇ **Consult Factory with Specific Requirements**

