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Solid State Broadband High Power RF Amplifier

The 5031 is a 1,000-Watt broadband amplifier that covers the 500 – 1000 MHz frequency range. This 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 5031 comes with an extended multiyear warranty backed by Ophir RF's commitment to total customer satisfaction.



FE MODEL SHOWN

MODEL 5031

**500 - 1000 MHz
1,000 WATTS
LINEAR POWER RF AMPLIFIER**

| | Parameter | Specification @ 25° C |
|----------------------|------------------------|-------------------------------|
| Electrical | | |
| 1 | Frequency Range | 500 – 1000 MHz |
| 2 | Saturated Output Power | 1,000 Watts typical |
| 3 | Power at P1dB | 500 Watts Minimum |
| 4 | Small Signal Gain | +51 dB Minimum |
| 5 | Gain Flatness | ± 2.5 dB Maximum |
| 6 | IP ₃ | +65 dBm typical |
| 7 | Input VSWR | 2:1 max |
| 8 | Harmonics | -20 dBc Min @ 500 Watts |
| 9 | Spurious Signals | < -60 dBc typical @ 500 Watts |
| 10 | Input/Output Impedance | 50 Ohms nominal |
| 11 | AC Input Power | 5000 Watts Maximum |
| 12 | AC Input | 180 – 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 |
| Mechanical | | |
| 16 | Dimensions (3RU) | 19" x 8.75" x 26" |
| 17 | Weight | 100 lb. max |
| 18 | Connectors | Type-N |
| 19 | Grounding | Chassis |
| 20 | Cooling | Internal Forced Air |
| Environmental | | |
| 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

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



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FRONT PANEL CONTROLLER FEATURES

- ◊ Forward Power Monitoring
- ◊ Reflected Power Monitoring
- ◊ Gain Control (Continuously Variable VVA 20dB)
- ◊ 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 even with variances in temperature, 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**