



5300 Beethoven Street, Los Angeles, CA 90066  
 TEL: (310)306-5556 • FAX: (310)821-7413  
 WEB: www.ophirrf.com • E-MAIL: sales@ophirrf.com

**MODEL 4042**  
**2 - 30 MHz**  
**500 WATTS**  
**LINEAR POWER RF AMPLIFIER**

**Solid State  
 Band-specific High  
 Power RF Amplifier**

The 4042 is a 500 Watt band-specific amplifier that covers the 2 – 30 MHz frequency range. This small and lightweight amplifier utilizes Class A/AB linear power devices that provide an excellent 3<sup>rd</sup> 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<sub>RF</sub> amplifiers, the 4042 comes with an extended multiyear warranty.

	Parameter	Specification @ 25 °C
<b>Electrical</b>		
1	Frequency Range	2 – 30 MHz
2	Saturated Output Power	500 Watts typical
3	Power Output @ 1dB Comp.	300 Watts min
5	Small Signal Gain	+57 dB min
6	Small Signal Gain Flatness	± 2.0 dB max
7	IP <sub>3</sub>	+61 dBm typical
8	Input VSWR	2:1 max
9	Harmonics	-15 dBc typical @ 300 Watts
10	Spurious Signals	< -60 dBc typical @ 300 Watts
11	Input/Output Impedance	50 Ohms nominal
12	AC Input Power	1800 Watts max
13	AC Input	180 – 240 VAC, single phase
14	RF Input	0 dBm max.
15	RF Input Signal Format	CW/AM/FM/PM/Pulse
16	Class of Operation	AB
<b>Mechanical</b>		
17	Dimensions	19" x 7.0" x 20"
18	Weight	60 lb. max
19	Connectors	Type-N
20	Grounding	Chassis
21	Cooling	Internal Forced Air
<b>Environmental</b>		
22	Operating Temperature	0° C to +50° C
23	Operating Humidity	95% Non-condensing
24	Operating Altitude	Up to 10,000' Above Sea Level
25	Shock and Vibration	Normal Truck Transport

Specifications subject to change without notice.



**FE MODEL SHOWN**

**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 (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 an even 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**

