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## MODEL 5120

20-500 MHz

100 WATTS

LINEAR POWER RF AMPLIFIER

### Solid State Broadband High Power RF Amplifier

The 5120 is a 100 Watt broadband amplifier that covers the 20-500 MHz frequency range. This 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 5120 comes with an extended multiyear warranty backed by Ophir RF's commitment to total customer satisfaction.

	Parameter	Specification @ 25° C
<b><u>Electrical</u></b>		
1	Frequency Range	20-500 MHz
2	Saturated Output Power	100 Watts Typical
3	Power at P1dB	60 Watts Minimum
4	Small Signal Gain	+51 dB Minimum
5	Gain Flatness	± 2.0 dB Maximum
6	IP <sub>3</sub>	+59 dBm typical
7	Input VSWR	2:1 max
8	Harmonics	-20 dBc min @ 60 Watts
9	Spurious Signals	< -60 dBc typical @ 60 Watts
10	Input/Output Impedance	50 Ohms nominal
11	AC Input Power	600 Watts Maximum
12	AC Input	100 – 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/AB
<b><u>Mechanical</u></b>		
16	Dimensions	19" x 5.25" x 21"
17	Weight	40 Lbs.
18	RF Connectors	Type-N
19	Grounding	Chassis
20	Cooling	Internal Forced Air
<b><u>Environmental</u></b>		
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



**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
- ◇ Reflected Power Monitoring
- ◇ 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 even 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**

