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Solid State Broadband High Power RF Amplifier

The 5174-005 is a 100 Watt broadband amplifier that covers the 1.0 – 3.0 GHz frequency range. This small and lightweight amplifier utilizes Class A/AB 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 5174-005 comes with an extended multiyear warranty.



FE Model Shown

MODEL 5174-005

**1.0 - 3.0 GHz
100 WATTS
LINEAR POWER RF AMPLIFIER**

	Parameter	Specification @ 25° C
Electrical		
1	Frequency Range	1.0 – 3.0 GHz
2	Saturated Output Power	100 Watts typical
3	Power Output @ 1dB Comp.	80 Watts min
4	Small Signal Gain	+51 dB min
5	Small Signal Gain Flatness	± 2.0 dB max
6	IP ₃	+59 dBm typical
7	Input VSWR	2:1 max
8	Harmonics	-20 dBc typical @ 80 Watts
9	Spurious Signals	< -60 dBc typical @ 80 Watts
10	Input/Output Impedance	50 Ohms nominal
11	AC Input Power	1500 Watts max
12	AC Input	100 – 240 VAC, single phase
13	RF Input	+10 dBm max
14	RF Input Signal Format	CW/Pulse
15	Pulse Width	25nS min.
16	Duty Cycle	25%
17	RF Rise/Fall Time	10nS max.
18	Class of Operation	A/AB
Mechanical		
19	Dimensions	19" x 8.75" x 26"
20	Weight	80 lb. max
21	Connectors	Type-N
22	Grounding	Chassis
23	Cooling	Internal Forced Air
Environmental		
24	Operating Temperature	0° C to +50° C
25	Operating Humidity	95% Non-condensing
26	Operating Altitude	Up to 10,000' Above Sea Level
27	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



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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, phase 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**

