



5300 Beethoven Street, Los Angeles, CA 90066
TEL: (310)306-5556 • FAX: (310)577-9887
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MODEL 5090

10 kHz - 225 MHz
2500 WATTS
LINEAR POWER RF AMPLIFIER

Solid State Broadband High Power RF Amplifier

The 5090 is a 2500 Watt broadband amplifier that covers the 0.01-225 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 5090 comes with an extended multiyear warranty backed by Ophir RF's commitment to total customer satisfaction.

	Parameter	Specification @ 25° C
Electrical		
1	Frequency Range	0.01 – 225 MHz
2	Saturated Output Power	2500 Watts (10KHz-100MHz) Min 2000 Watts (100-225MHz) Min
3	Power Output @ 1dB Comp.	2000 Watts (10KHz-100MHz) Min 1300 Watts (100-225MHz) Min
4	Small Signal Gain	+64 dB min
5	Gain Flatness	± 4.5 dB min
6	IP ₃	+68 dBm min
7	Input VSWR	2:1 max
8	Harmonics	-15 dBc typical @ 1800 Watts
9	Spurious Signals	-60 dBc typical @ 1800 Watts
10	Input/Output Impedance	50 Ohms nominal
11	AC Input Power	12000 Watts max
12	AC Input	186 – 264 VAC 3-Phase
13	Nominal RF Input	0 dBm
14	RF Input Overdrive	+10 dBm max
15	RF Input Signal Format	CW/AM/FM/PM
16	Class of Operation	AB
Mechanical		
17	Dimensions* (W x H x D)	31" x 43" x 35"
18	Weight*	450 lb. max
19	RF Connectors	Type-N
20	Grounding	Chassis
21	Cooling	Internal Forced Air
Environmental		
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

ORDERING MODELS

- ◇ RE - Rear panel RF connectors with IEEE488, Ethernet and RS232
- ◇ FE - Front panel RF connectors with IEEE488, Ethernet 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

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

CIRCUIT INDICATIONS

- ◇ 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

