



5200 Beethoven Street, Los Angeles, CA 90066

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MODEL 5227-004

80 - 1000 MHz

500 WATTS

LINEAR POWER RF AMPLIFIER

Solid State Broadband High Power RF Amplifier

The 5227-004 is a 500 Watt broadband amplifier that covers the 80 – 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 5227-004 comes with an extended multiyear warranty backed by Ophir RF's commitment to total customer satisfaction.

Specifications subject to change without notice



FE MODEL SHOWN

| | Parameter | Specification @ 25° C |
|----------------------|------------------------|--|
| Electrical | | |
| 1 | Frequency Range | 80 – 1000 MHz |
| 2 | Saturated Output Power | 80-95 MHz, 500 W min. (57 dBm) 95-300 MHz, 900 W min. (59.6 dBm) 301-700 MHz, 560 W min. (57.5 dBm) 700-1000 MHz, 500 W min. (57 dBm) |
| 3 | Power at P1dB | 80-95 MHz, 400 W min. (56 dBm) 95-300 MHz, 800 W min. (59 dBm) 301-700 MHz, 500 W min. (57 dBm) 700-1000 MHz, 350 W min. (55.4 dBm) |
| 4 | Small Signal Gain | +58 dB Minimum |
| 5 | Gain Flatness | ± 6.0 dB Maximum |
| 6 | IP ₃ | +64 dBm typical |
| 7 | Input VSWR | 2:1 max |
| 8 | Harmonics | -20 dBc Min @ 400 Watts |
| 9 | Spurious Signals | < -60 dBc typical @ 400 Watts |
| 10 | Input/Output Impedance | 50 Ohms nominal |
| 11 | AC Input Power | 6000 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 (5RU) | 19" x 8.75" x 26" |
| 17 | Weight | 100 lb. max |
| 18 | Connectors | Type-N for RF input/output |
| 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 |

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, 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***Included Forward and Reflected Sample Ports 60dB (+/-1.0dB) down from fundamental***
- ◇ Racking Options
- ◇ Many More!
- ◇ **Consult Factory with Specific Requirements**