



5200 Beethoven Street, Los Angeles, CA 90066  
 TEL: (310)306-5556 • FAX: (310)821-7413  
 WEB: www.ophirrf.com • E-MAIL: sales@ophirrf.com

**MODEL 5204**  
**2.0 - 4.0 GHz**  
**500 WATTS**  
**RF POWER AMPLIFIER**

**Solid State Broadband High Power RF Amplifier**

The 5204 is a very high power broadband amplifier that covers the 2000-4000 MHz frequency range. This amplifier utilizes Class A linear power devices that provide an excellent 3<sup>rd</sup> order intercept point, high gain, a wide dynamic range, and an industry leading P1dB performance.

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 5204 comes with an extended multiyear warranty backed by Ophir RF's commitment to total customer satisfaction.

	<u>Parameter</u>	<u>Specification @ 25° C</u>
<b><u>Electrical</u></b>		
1	Frequency Range	2.0-4.0 GHz
2	Power at P <sub>SAT</sub>	600 Watts Nominal 500 Watts Minimum
3	Power at P <sub>1dB</sub>	250 Watts Nominal 200 Watts Minimum
4	Small Signal Gain	+57 dB Minimum
5	Gain Flatness	± 2.50 dB Maximum
6	IP <sub>3</sub>	+59 dBm typical
7	Input VSWR	2:1 max
8	Harmonics	-20 dBc min @ P <sub>1dB</sub> Compression
9	Spurious Signals	< -60 dBc typical @ P <sub>1dB</sub> Compression
10	Input/Output Impedance	50 Ohms nominal
11	AC Input Power	7,000 Watts Maximum
12	AC Input	208 VAC Phase to Phase, 120 VAC Phase to GND; 50/60 Hz, 3Ø, 4-wire <b>Single Phase is optional</b>
13	RF Input	0 dBm nominal <b>+3 dB Maximum</b>
14	RF Input Signal Format	CW/AM/FM/PM/Pulse
15	Class of Operation	Class A
<b><u>Pulse Characteristics</u></b>		
16	Pulse Width	0.1 µS to CW
17	Pulse Rate (PRF)	CW to 1 MHz
18	Duty Cycle	0.1% to 100%
19	RF Rise and Fall	25 nS Maximum
20	Delay	10 nS Maximum
21	Pulse Width Distortion (Droop)	0.5 dB Maximum
22	Pulse Off Isolation	60 dB Minimum
23	Pulse Input Trigger Signal	TTL Level: 5V Enable, 0V Disable
24	Blanking Time	1 µS Maximum



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<b><u>Mechanical</u></b>		
25	Dimensions	31" x 24" x 31"(H x W x D)
26	Weight	400 lbs. / 182 Kg
27	RF Connectors	Type-N Female Input and Output
28	Grounding	Chassis
29	Cooling	Internal Forced Air
<b><u>Environmental</u></b>		
30	Operating Temperature	0° C to +50° C
31	Operating Humidity	95% Non-condensing
32	Operating Altitude	Up to 10,000' Above Sea Level
33	Shock and Vibration	Normal Truck Transport

	<b><u>Parameter</u></b>
<b><u>Front Panel Controller</u></b>	
34	Forward Power Monitoring (dBm or Watts)
35	Reflected Power Monitoring (dBm or Watts)
36	Gain Control (25 dB dynamic range of adjustment)
37	Fault Status
38	Full Protection Of any VSWR Condition, Open or Short, any Phase.
39	Remote Control Access via the Ethernet, RS-232, or IEEE-488.
40	Integrated Automatic Leveling Control to allow end-user to maintain output even with variances in temperature, or input RF level
41	Standby/Enable Control
42	Front Panel Display for easy viewing of System Status Locally
43	Keypad buttons for full local control
<b><u>Circuit Protections</u></b>	
44	Thermal Overload
45	Over Current
46	Over Voltage
47	Open or Short VSWR Conditions
<b><u>Circuit Control</u></b>	
48	Standby (amplifier disable)
49	Gain/power setting with 25 dB range
50	VSWR protection Reset
51	ALC On/ Off
<b><u>Circuit Indications</u></b>	
52	Forward Power
53	Reflected power
54	VSWR Fault
55	Temp Fault
56	Gain Setting (VVA) percentage



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**MODEL 5296**  
**700 - 6000 MHz**  
**300 WATTS**  
**RF POWER AMPLIFIER**



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

