

5300 Beethoven Street, Los Angeles, CA 90066 TEL: (310)306-5556 • FAX: (310)577-9779

WEB: www.ophirrf.com • E-MAIL: sales@ophirrf.com

MODEL 5303009

2.0 - 4.0 GHz 25 WATTS LINEAR POWER RF AMPLIFIER

Solid State Broadband High Power RF Amplifier

The 5303009 is a 25 Watt broadband amplifier that covers the 2.0 – 4.0 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 5303009 comes with an extended multiyear warranty.

Electrical Specification 1 Frequency Range 2.0 – 4.0 GHz 2 Saturated Output Power 25 Watts typical 3 Power Output @ 1dB Comp. 20 Watts min 4 Small Signal Gain +12 dB min 5 Gain Flatness ± 1.5 dB max 6 IP3 +53 dBm typical 7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 1 dB comp. 9 Spurious Signals > -60 dBc 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 12 Amps max 12 DC Input 12 - 15 VDC nominal 13 RF Input Overdrive +10 dB over 1 dB Compression 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical To Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Adequate Heatsink Required			
1 Frequency Range 2.0 – 4.0 GHz 2 Saturated Output Power 25 Watts typical 3 Power Output @ 1dB Comp. 20 Watts min 4 Small Signal Gain +12 dB min 5 Gain Flatness ± 1.5 dB max 6 IP3 +53 dBm typical 7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 1 dB comp. 9 Spurious Signals > -60 dBc 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 12 Amps max 12 DC Input 12 - 15 VDC nominal 13 RF Input Overdrive +10 dB over 1 dB Compression 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical 16 Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis		<u>Parameter</u>	<u>Specification</u>
2 Saturated Output Power 25 Watts typical 3 Power Output @ 1dB Comp. 20 Watts min 4 Small Signal Gain +12 dB min 5 Gain Flatness ± 1.5 dB max 6 IP3 +53 dBm typical 7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 1 dB comp. 9 Spurious Signals > -60 dBc 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 12 Amps max 12 DC Input 12 - 15 VDC nominal 13 RF Input Overdrive +10 dB over 1 dB Compression 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical 16 Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	<u>Electrical</u>		
3 Power Output @ 1dB Comp. 20 Watts min 4 Small Signal Gain +12 dB min 5 Gain Flatness ± 1.5 dB max 6 IP3 +53 dBm typical 7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 1 dB comp. 9 Spurious Signals > -60 dBc 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 12 Amps max 12 DC Input 12 - 15 VDC nominal 13 RF Input Overdrive +10 dB over 1 dB Compression 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	1	Frequency Range	2.0 – 4.0 GHz
4 Small Signal Gain +12 dB min 5 Gain Flatness ± 1.5 dB max 6 IP3 +53 dBm typical 7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 1 dB comp. 9 Spurious Signals > -60 dBc 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 12 Amps max 12 DC Input 12 - 15 VDC nominal 13 RF Input Overdrive +10 dB over 1 dB Compression 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical 16 Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	2	Saturated Output Power	25 Watts typical
5 Gain Flatness ± 1.5 dB max 6 IP ₃ +53 dBm typical 7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 1 dB comp. 9 Spurious Signals > -60 dBc 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 12 Amps max 12 DC Input 12 - 15 VDC nominal 13 RF Input Overdrive +10 dB over 1 dB Compression 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical 16 Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	3	Power Output @ 1dB Comp.	20 Watts min
1	4	Small Signal Gain	+12 dB min
7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 1 dB comp. 9 Spurious Signals > -60 dBc 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 12 Amps max 12 DC Input 12 - 15 VDC nominal 13 RF Input Overdrive +10 dB over 1 dB Compression 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical 16 Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	5	Gain Flatness	<u>+</u> 1.5 dB max
8 Harmonics -20 dBc typical @ 1 dB comp. 9 Spurious Signals > -60 dBc 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 12 Amps max 12 DC Input 12 - 15 VDC nominal 13 RF Input Overdrive +10 dB over 1 dB Compression 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical 16 Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	6	IP ₃	+53 dBm typical
9	7	Input VSWR	2:1 max
10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 12 Amps max 12 DC Input 12 – 15 VDC nominal 13 RF Input Overdrive +10 dB over 1 dB Compression 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical 16 Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	8	Harmonics	-20 dBc typical @ 1 dB comp.
11 DC Input Current 12 Amps max 12 DC Input 12 – 15 VDC nominal 13 RF Input Overdrive +10 dB over 1 dB Compression 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	9	Spurious Signals	> -60 dBc
12 DC Input 12 – 15 VDC nominal 13 RF Input Overdrive +10 dB over 1 dB Compression 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	10	Input/Output Impedance	50 Ohms nominal
13 RF Input Overdrive +10 dB over 1 dB Compression 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	11	DC Input Current	12 Amps max
14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A/AB Linear Mechanical 16 Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	12	DC Input	12 – 15 VDC nominal
15 Class of Operation A/AB Linear Mechanical 16 Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	13	RF Input Overdrive	+10 dB over 1 dB Compression
Mechanical Barry 1 Barry 2 Mechanical 16 Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	14	RF Input Signal Format	CW/AM/FM/PM/Pulse
16 Dimensions 8.8" x 9.9" x 1.2" 17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	15	Class of Operation	A/AB Linear
17 Weight 5 lb. max 18 Connectors SMA female 19 Grounding Chassis	<u>Mechanical</u>		
18 Connectors SMA female 19 Grounding Chassis	16	Dimensions	8.8" x 9.9" x 1.2"
19 Grounding Chassis	17	Weight	5 lb. max
	18	Connectors	SMA female
20 Cooling Adequate Heatsink Required	19	Grounding	Chassis
	20	Cooling	Adequate Heatsink Required
<u>Environmental</u>	<u>Environmental</u>		
Operating Temperature 0° C to +50° C	21	Operating Temperature	0° C to +50° C
22 Operating Humidity 95% Non-condensing	22	Operating Humidity	95% Non-condensing
23 Operating Altitude Up to 10,000' Above Sea Level	23	Operating Altitude	Up to 10,000' Above Sea Level
24 Shock and Vibration Normal Truck Transport	24	Shock and Vibration	Normal Truck Transport

AVAILABLE OPTIONS

- ♦ Gain Adjustment
- ♦ Automatic Level Control
- ♦ Extended Temperature Range
- ♦ Thermal Overload
- ♦ Over Current
- ◊ Over Voltage

