

5300 Beethoven Street, Los Angeles, CA 90066 TEL: (310)306-5556 • FAX: (310)577-9887
WEB: www.ophirrf.com • E-MAIL: sales@ophirrf.com

## **MODEL 5802007**

1.805 - 2.2 GHz 10 WATTS LINEAR POWER RF AMPLIFIER

## Solid State Broadband High Power RF Amplifier

The 5802007 is a 10 Watt broadband amplifier that covers the 1.805 – 2.2 GHz frequency range. This small and lightweight amplifier utilizes Class A/AB linear power devices that provide an excellent 3<sup>rd</sup> 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<sub>RF</sub> amplifiers, the 5802007 comes with an extended warranty.

ParameterSpecification @ 25° CElectrical1Frequency Range1.805 - 2.2 GHz2Saturated Output Power10 Watts Min.31dB Compression Power8 Watts Min.4Small Signal Gain+40 dB min5Gain Flatness± 0.75 dB max6IP3+49 dBm typical7Input VSWR2:1 max8Harmonics-20 dBc typical @ 8 Watts9Spurious Signals<-60 dBc typical @ 8 Watts10Input/Output Impedance50 Ohms nominal11DC Input13 VDC nominal13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical16Dimensions (w/ Heatsink)8.3" x 5.2" x 3.4"17Weight (w/ Heatsink)4 Lbs.18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans provided21Baseplate Temperature0° C to +50° C			
1Frequency Range1.805 – 2.2 GHz2Saturated Output Power10 Watts Min.31dB Compression Power8 Watts Min.4Small Signal Gain+40 dB min5Gain Flatness± 0.75 dB max6IP3+49 dBm typical7Input VSWR2:1 max8Harmonics-20 dBc typical @ 8 Watts9Spurious Signals<-60 dBc typical @ 8 Watts10Input/Output Impedance50 Ohms nominal11DC Input Current6 Amps max12DC Input13 VDC nominal13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical1Connectors18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans provided		Parameter Parameter	Specification @ 25° C
2Saturated Output Power10 Watts Min.31dB Compression Power8 Watts Min.4Small Signal Gain+40 dB min5Gain Flatness $\pm 0.75$ dB max6IP3+49 dBm typical7Input VSWR2:1 max8Harmonics-20 dBc typical @ 8 Watts9Spurious Signals<-60 dBc typical @ 8 Watts10Input/Output Impedance50 Ohms nominal11DC Input Current6 Amps max12DC Input13 VDC nominal13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical1019GroundingChassis20CoolingHeatsink and fans providedEnvironmental1Sura Cooling	<b>Electrical</b>		
31dB Compression Power8 Watts Min.4Small Signal Gain+40 dB min5Gain Flatness $\pm 0.75$ dB max6IP3+49 dBm typical7Input VSWR2:1 max8Harmonics-20 dBc typical @ 8 Watts9Spurious Signals<-60 dBc typical @ 8 Watts10Input/Output Impedance50 Ohms nominal11DC Input Current6 Amps max12DC Input13 VDC nominal13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical1Umensions (w/ Heatsink)18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans providedEnvironmental	1	Frequency Range	1.805 – 2.2 GHz
4Small Signal Gain+40 dB min5Gain Flatness $\pm$ 0.75 dB max6IP3+49 dBm typical7Input VSWR2:1 max8Harmonics-20 dBc typical @ 8 Watts9Spurious Signals<-60 dBc typical @ 8 Watts10Input/Output Impedance50 Ohms nominal11DC Input Current6 Amps max12DC Input13 VDC nominal13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical1Veight (w/ Heatsink)18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans provided	2	Saturated Output Power	10 Watts Min.
5Gain Flatness± 0.75 dB max6IP3+49 dBm typical7Input VSWR2:1 max8Harmonics-20 dBc typical @ 8 Watts9Spurious Signals<-60 dBc typical @ 8 Watts10Input/Output Impedance50 Ohms nominal11DC Input Current6 Amps max12DC Input13 VDC nominal13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical1Umensions (w/ Heatsink)18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans provided	3	1dB Compression Power	8 Watts Min.
6IP3+49 dBm typical7Input VSWR2:1 max8Harmonics-20 dBc typical @ 8 Watts9Spurious Signals< -60 dBc typical @ 8 Watts10Input/Output Impedance50 Ohms nominal11DC Input Current6 Amps max12DC Input13 VDC nominal13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical1Veight (w/ Heatsink)18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans provided	4	Small Signal Gain	+40 dB min
7Input VSWR2:1 max8Harmonics-20 dBc typical @ 8 Watts9Spurious Signals< -60 dBc typical @ 8 Watts10Input/Output Impedance50 Ohms nominal11DC Input Current6 Amps max12DC Input13 VDC nominal13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical116Dimensions (w/ Heatsink)8.3" x 5.2" x 3.4"17Weight (w/ Heatsink)4 Lbs.18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans provided	5	Gain Flatness	<u>+</u> 0.75 dB max
8Harmonics-20 dBc typical @ 8 Watts9Spurious Signals< -60 dBc typical @ 8 Watts10Input/Output Impedance50 Ohms nominal11DC Input Current6 Amps max12DC Input13 VDC nominal13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical16Dimensions (w/ Heatsink)8.3" x 5.2" x 3.4"17Weight (w/ Heatsink)4 Lbs.18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans provided	6	IP <sub>3</sub>	+49 dBm typical
9Spurious Signals< -60 dBc typical @ 8 Watts	7	Input VSWR	2:1 max
10Input/Output Impedance50 Ohms nominal11DC Input Current6 Amps max12DC Input13 VDC nominal13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical16Dimensions (w/ Heatsink)8.3" x 5.2" x 3.4"17Weight (w/ Heatsink)4 Lbs.18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans provided	8	Harmonics	-20 dBc typical @ 8 Watts
11DC Input Current6 Amps max12DC Input13 VDC nominal13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical	9	Spurious Signals	< -60 dBc typical @ 8 Watts
12DC Input13 VDC nominal13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical	10	Input/Output Impedance	50 Ohms nominal
13RF Input+10 dBm max14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical16Dimensions (w/ Heatsink)8.3" x 5.2" x 3.4"17Weight (w/ Heatsink)4 Lbs.18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans providedEnvironmental	11	DC Input Current	6 Amps max
14RF Input Signal FormatCW/AM/FM/PM/Pulse15Class of OperationABMechanical	12	DC Input	13 VDC nominal
15Class of OperationABMechanical16Dimensions (w/ Heatsink)8.3" x 5.2" x 3.4"17Weight (w/ Heatsink)4 Lbs.18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans providedEnvironmental	13	RF Input	+10 dBm max
MechanicalImage: Mechanical16Dimensions (w/ Heatsink) $8.3" \times 5.2" \times 3.4"$ 17Weight (w/ Heatsink)4 Lbs.18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans providedEnvironmentalImage: Method set of the set o	14	RF Input Signal Format	CW/AM/FM/PM/Pulse
16Dimensions (w/ Heatsink)8.3" x 5.2" x 3.4"17Weight (w/ Heatsink)4 Lbs.18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans providedEnvironmentalImage: Constant of the second	15	Class of Operation	AB
17Weight (w/ Heatsink)4 Lbs.18ConnectorsSMA female19GroundingChassis20CoolingHeatsink and fans providedEnvironmentalImage: Constant of the second of the se	Mechanical		
18     Connectors     SMA female       19     Grounding     Chassis       20     Cooling     Heatsink and fans provided       Environmental     Image: Chassis	16	Dimensions (w/ Heatsink)	8.3" x 5.2" x 3.4"
19     Grounding     Chassis       20     Cooling     Heatsink and fans provided       Environmental	17	Weight (w/ Heatsink)	4 Lbs.
20     Cooling     Heatsink and fans provided       Environmental	18	Connectors	SMA female
Environmental	19	Grounding	Chassis
	20	Cooling	Heatsink and fans provided
21 Baseplate Temperature 0° C to +50° C	Environmental		
	21	Baseplate 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

Specifications subject to change without notice

Date: