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5802027-001

1.800-1.885 GHz 12 WATTS LINEAR POWER RF AMPLIFIER

Solid State Band-Specific High Power RF Amplifier

The 5802027-001 is a 12 Watt amplifier that covers the 1.800-1.885GHz 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 with operation proven reliability. Like all OPHIR_{RF} amplifiers, the 5802027-001 comes with an extended warranty.

Electrical Specification @ 25 °C Electrical 1 Frequency Range 1.800-1.885GHz 2 Instantaneous Bandwidth 60 MHz min 3 Saturated Output Power 12 Watts typical 4 Power Output @ 1dB Comp. 10 Watts min 5 Small Signal Gain +45 dB min 6 Gain Flatness ±1.0 dB max 7 IP₃ * +50 dBm min 8 Input VSWR 2:1 max. 9 10 Harmonics -20 dBc typical @ 10 W Pout 11 Spurious Signals > -60 dBc typical @ 10 W Pout 12 DC Input Current 5.0 Amps max 13 DC Input 13 VDC nominal 14 RF Input Signal Format CW/AM/FM/PM/Pulse 16 Class of Operation AB 17 AB 18 Dimensions (With Heatsink and Fans) 8 lb. max 20 Connectors SMA female 21 Grounding Chassis 22 Cooling Adequate Heatsink Required<	1		
1		<u>Parameter</u>	Specification @ 25 °C
1	<u>Electrical</u>		
3 Saturated Output Power 4 Power Output @ 1dB Comp. 5 Small Signal Gain 6 Gain Flatness ±1.0 dB max 7 IP3 * +50 dBm min 8 Input VSWR 2:1 max. 9 10 Harmonics -20 dBc typical @ 10 W Pout 11 Spurious Signals > -60 dBc typical @ 10 W Pout 12 DC Input Current 5.0 Amps max 13 DC Input 13 VDC nominal 14 RF Input +10 dBm max 15 RF Input Signal Format CW/AM/FM/PM/Pulse 16 Class of Operation AB 17 Mechanical 18 Dimensions (With Heatsink and Fans) 19 Weight (With Heatsink and Fans) 20 Connectors SMA female 21 Grounding Chassis 22 Cooling Adequate Heatsink Required Environmental 23 Baseplate Temperature 0° C to +70° C 24 Operating Altitude Up to 10,000' Above Sea Level	1	Frequency Range	1.800-1.885GHz
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5 Small Signal Gain +45 dB min 6 Gain Flatness ±1.0 dB max 7 IP3* +50 dBm min 8 Input VSWR 2:1 max. 9 -20 dBc typical @ 10 W Pout 10 Harmonics -20 dBc typical @ 10 W Pout 11 Spurious Signals > -60 dBc typical @ 10 W Pout 12 DC Input Current 5.0 Amps max 13 DC Input 13 VDC nominal 14 RF Input +10 dBm max 15 RF Input Signal Format CW/AM/FM/PM/PM/Pulse 16 Class of Operation AB 17 Mechanical 8.5" x 3.5" x 5.2" 19 Weight (With Heatsink and Fans) 8 lb. max 20 Connectors SMA female 21 Grounding Chassis 22 Cooling Adequate Heatsink Required Environmental 0° C to +70° C 24 Operating Humidity 95% Non-condensing 25 Operating Altitude Up to 10,000' Above Sea Level	3	Saturated Output Power	12 Watts typical
6	4	Power Output @ 1dB Comp.	10 Watts min
7	5	Small Signal Gain	+45 dB min
8 Input VSWR 2:1 max. 9	6	Gain Flatness	±1.0 dB max
9 10 Harmonics -20 dBc typical @ 10 W Pout 11 Spurious Signals >-60 dBc typical @ 10 W Pout 12 DC Input Current 5.0 Amps max 13 DC Input 13 VDC nominal 14 RF Input +10 dBm max 15 RF Input Signal Format CW/AM/FM/PM/Pulse 16 Class of Operation AB 17 Mechanical 18 Dimensions (With Heatsink and Fans) Weight (With Heatsink and Fans) 20 Connectors SMA female 21 Grounding Chassis 22 Cooling Adequate Heatsink Required Environmental 23 Baseplate Temperature O° C to +70° C 24 Operating Humidity 95% Non-condensing Up to 10,000' Above Sea Level	7	IP ₃ *	+50 dBm min
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11 Spurious Signals > -60 dBc typical @ 10 W Pout 12 DC Input Current 5.0 Amps max 13 DC Input 13 VDC nominal 14 RF Input +10 dBm max 15 RF Input Signal Format CW/AM/FM/PM/Pulse 16 Class of Operation AB 17 Mechanical 18 Dimensions (With Heatsink and Fans) 19 Weight (With Heatsink and Fans) 20 Connectors SMA female 21 Grounding Chassis 22 Cooling Adequate Heatsink Required Environmental 23 Baseplate Temperature 0° C to +70° C 24 Operating Humidity 95% Non-condensing 15 Operating Altitude Up to 10,000' Above Sea Level	9		
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13 DC Input 13 VDC nominal 14 RF Input +10 dBm max 15 RF Input Signal Format CW/AM/FM/PM/Pulse 16 Class of Operation AB 17 AB Mechanical Bumensions (With Heatsink and Fans) 8.5" x 3.5" x 5.2" 19 Weight (With Heatsink and Fans) 8 lb. max 20 Connectors SMA female 21 Grounding Chassis 22 Cooling Adequate Heatsink Required Environmental Operating Humidity 95% Non-condensing 24 Operating Humidity Up to 10,000' Above Sea Level	11	Spurious Signals	> -60 dBc typical @ 10 W Pout
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16 Class of Operation AB 17 Mechanical 18 Dimensions (With Heatsink and Fans) 19 Weight (With Heatsink and Fans) 20 Connectors SMA female 21 Grounding Chassis 22 Cooling Adequate Heatsink Required Environmental 23 Baseplate Temperature 24 Operating Humidity 25 Operating Altitude Up to 10,000' Above Sea Level	14	RF Input	+10 dBm max
Mechanical 18 Dimensions (With Heatsink and Fans) 19 Weight (With Heatsink and Fans) 20 Connectors SMA female 21 Grounding Chassis 22 Cooling Adequate Heatsink Required Environmental 23 Baseplate Temperature O° C to +70° C 24 Operating Humidity 95% Non-condensing !5 Operating Altitude Up to 10,000' Above Sea Level	15	RF Input Signal Format	CW/AM/FM/PM/Pulse
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21 Grounding Chassis 22 Cooling Adequate Heatsink Required Environmental 23 Baseplate Temperature 0° C to +70° C 24 Operating Humidity 95% Non-condensing 25 Operating Altitude Up to 10,000' Above Sea Level	19		8 lb. max
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Environmental 23 Baseplate Temperature 0° C to +70° C 24 Operating Humidity 95% Non-condensing 25 Operating Altitude Up to 10,000' Above Sea Level	21	Grounding	Chassis
Baseplate Temperature 0° C to +70° C Operating Humidity 95% Non-condensing Operating Altitude Up to 10,000' Above Sea Level	22	Cooling	Adequate Heatsink Required
Operating Humidity 95% Non-condensing Operating Altitude Up to 10,000' Above Sea Level	<u>Environmental</u>		
Operating Altitude Up to 10,000' Above Sea Level	23	Baseplate Temperature	0° C to +70° C
	24	Operating Humidity	95% Non-condensing
Shock and Vibration Normal Truck Transport	<u>?</u> 5	Operating Altitude	Up to 10,000' Above Sea Level
	26	Shock and Vibration	Normal Truck Transport



* IP₃ is measured with a two tone signal, 500 KHz spacing.

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