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MODEL 5812015

2.4 - 2.5 GHz 10 WATTS

Solid State Band-specific High Power RF Amplifier

The 5812015 is a 10 Watt band-specific amplifier that covers the 2.4 - 2.5 GHz frequency range. This small lightweight amplifier and utilizes Class A/AB linear power devices that provide 3rd excellent order an intercept point, high gain, and a wide dynamic range.

Due to robust engineering and employment of the most advanced devices and components, this amplifier efficiency achieves high operation with proven reliability. Like all OPHIR_{RF} amplifiers, the 5812015 comes with an extended

Electrical Specification @ 25° C Electrical 1 Frequency Range 2.4 − 2.5 GHz 2 Saturated Output Power 10 Watts typical 3 Power Output @ 1dB Comp. 8 Watts min 4 Small Signal Gain +41 dB min 5 Gain Flatness ± 0.75 dB max 6 IP₃ +49 dBm typical 7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 8 Watts 9 Spurious Signals > -60 dBc typical @ 8 Watts 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 3.5 Amps max 12 DC Input DC Input Current 12 VDC nominal 13 RF Input Hout GBm max 14 RF Input Signal Format CW/AM/FM/PM/PM/Pulse 15 Class of Operation A Mechanical 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4.0" max 18 Connectors SMA female <th></th> <th></th> <th></th>			
1 Frequency Range 2.4 - 2.5 GHz 2 Saturated Output Power 10 Watts typical 3 Power Output @ 1dB Comp. 8 Watts min 4 Small Signal Gain +41 dB min 5 Gain Flatness ± 0.75 dB max 6 IP3 +49 dBm typical 7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 8 Watts 9 Spurious Signals > -60 dBc typical @ 8 Watts 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 3.5 Amps max 12 DC Input 12 VDC nominal 13 RF Input +10 dBm max 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A Mechanical 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4.0" x 2.8" can an a		<u>Parameter</u>	Specification @ 25° C
2 Saturated Output Power 10 Watts typical 3 Power Output @ 1dB Comp. 8 Watts min 4 Small Signal Gain +41 dB min 5 Gain Flatness ± 0.75 dB max 6 IP3 +49 dBm typical 7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 8 Watts 9 Spurious Signals > -60 dBc typical @ 8 Watts 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 3.5 Amps max 12 DC Input DC Input 12 VDC nominal 13 RF Input +10 dBm max 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A Mechanical A 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4.0" x 2.8" x 3.3" 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan Environmental Operating Humidity	<u>Electrical</u>		
3 Power Output @ 1dB Comp. 8 Watts min 4 Small Signal Gain +41 dB min 5 Gain Flatness ± 0.75 dB max 6 IP3 +49 dBm typical 7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 8 Watts 9 Spurious Signals > -60 dBc typical @ 8 Watts 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 3.5 Amps max 12 DC Input 12 VDC nominal 13 RF Input +10 dBm max 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A Mechanical A 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan Environmental Operating Temperature 0° C	1	Frequency Range	2.4 – 2.5 GHz
4 Small Signal Gain +41 dB min 5 Gain Flatness ± 0.75 dB max 6 IP3 +49 dBm typical 7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 8 Watts 9 Spurious Signals > -60 dBc typical @ 8 Watts 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 3.5 Amps max 12 DC Input 12 VDC nominal 13 RF Input +10 dBm max 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A Mechanical A 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan Environmental 21 Operating Temperature 0° C to +50° C 22 Operating Altitude <th>2</th> <th>Saturated Output Power</th> <th>10 Watts typical</th>	2	Saturated Output Power	10 Watts typical
5 Gain Flatness ± 0.75 dB max 6 IP ₃ +49 dBm typical 7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 8 Watts 9 Spurious Signals > -60 dBc typical @ 8 Watts 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 3.5 Amps max 12 DC Input 12 VDC nominal 13 RF Input +10 dBm max 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A Mechanical A 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan Environmental 21 Operating Temperature 0° C to +50° C 22 Operating Altitude Up to 10,000' Above Sea Level	3	Power Output @ 1dB Comp.	8 Watts min
1	4	Small Signal Gain	+41 dB min
7 Input VSWR 2:1 max 8 Harmonics -20 dBc typical @ 8 Watts 9 Spurious Signals > -60 dBc typical @ 8 Watts 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 3.5 Amps max 12 DC Input 12 VDC nominal 13 RF Input +10 dBm max 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A Mechanical A 16 Dimensions (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan 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	5	Gain Flatness	<u>+</u> 0.75 dB max
8 Harmonics -20 dBc typical @ 8 Watts 9 Spurious Signals > -60 dBc typical @ 8 Watts 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 3.5 Amps max 12 DC Input 12 VDC nominal 13 RF Input +10 dBm max 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A Mechanical 16 Dimensions (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan 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	6	IP ₃	+49 dBm typical
9 Spurious Signals > -60 dBc typical @ 8 Watts 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 3.5 Amps max 12 DC Input 12 VDC nominal 13 RF Input +10 dBm max 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A Mechanical 16 Dimensions (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan 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	7	Input VSWR	2:1 max
10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 3.5 Amps max 12 DC Input 12 VDC nominal 13 RF Input +10 dBm max 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A Mechanical 16 Dimensions (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan 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	8	Harmonics	-20 dBc typical @ 8 Watts
11 DC Input Current 12 DC Input 13 RF Input 14 RF Input Signal Format 15 Class of Operation 16 Dimensions (with heatsink) 17 Weight (with heatsink) 18 Connectors 19 Grounding 20 Cooling Environmental 21 Operating Temperature 22 Operating Altitude 3.5 Amps max 3.5 Amps max 4 IV VDC nominal 42 VDC nominal 42 VDC nominal 44 V V V V V V V V V V V V V V V V V V	9	Spurious Signals	> -60 dBc typical @ 8 Watts
12 DC Input 12 VDC nominal 13 RF Input +10 dBm max 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A Mechanical 16 Dimensions (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan 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	10	Input/Output Impedance	50 Ohms nominal
13 RF Input +10 dBm max 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A Mechanical 16 Dimensions (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan 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	11	DC Input Current	3.5 Amps max
14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation A Mechanical 16 Dimensions (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan 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	12	DC Input	12 VDC nominal
15 Class of Operation A Mechanical 16 Dimensions (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan 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	13	RF Input	+10 dBm max
MechanicalDimensions (with heatsink)4.0" x 2.8" x 3.3"17Weight (with heatsink)4 lb. max18ConnectorsSMA female19GroundingChassis20CoolingNeeds 2" Clearing From FanEnvironmental21Operating Temperature0° C to +50° C22Operating Humidity95% Non-condensing23Operating AltitudeUp to 10,000' Above Sea Level	14	RF Input Signal Format	CW/AM/FM/PM/Pulse
16 Dimensions (with heatsink) 4.0" x 2.8" x 3.3" 17 Weight (with heatsink) 4 lb. max 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan 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	15	Class of Operation	Α
17 Weight (with heatsink) 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan 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	<u>Mechanical</u>		· ·
18 Connectors SMA female 19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan 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	16	Dimensions (with heatsink)	4.0" x 2.8" x 3.3"
19 Grounding Chassis 20 Cooling Needs 2" Clearing From Fan 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	17	Weight (with heatsink)	4 lb. max
20 Cooling Needs 2" Clearing From Fan 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	18	Connectors	SMA female
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	19	Grounding	Chassis
21 Operating Temperature 0° C to +50° C 22 Operating Humidity 95% Non-condensing 23 Operating Altitude Up to 10,000' Above Sea Level	20	Cooling	Needs 2" Clearing From Fan
22 Operating Humidity 95% Non-condensing 23 Operating Altitude Up to 10,000' Above Sea Level	<u>Environmental</u>		
23 Operating Altitude Up to 10,000' Above Sea Level	21	Operating Temperature	0° C to +50° C
	22	Operating Humidity	95% Non-condensing
24 Shock and Vibration Normal Truck Transport	23	Operating Altitude	Up to 10,000' Above Sea Level
Specifications subject to change without notice.	24	Shock and Vibration	

FEATURES

- ♦ Forward Power Monitor, 0 4 Volts
- ♦ Enable/Disable Control Enable 0 Volts, Disable 5 Volts, Threshold 1.3~1.4 Volts
- ♦ Heatsink and Fan