

4 WATT POWER AMPLIFIER

Wideband power amplifier covering 6-18 GHz

TECHNICAL SPECIFICATIONS

Frequency Range	6-18 GHz
Fundamental Rated Output Power at 1dB Compression @ 25°C	35 dBm min, 35.5 dBm typ, 6-9 GHz 35 dBm min, 36.0 dBm typ, 9-14 GHz 32 dBm min, 34.0 dBm typ, 14-16 GHz 35 dBm min, 35.3 dBm typ, 16-18 GHz
Variation in Rated Output Power at P1dB Compression vs Temperature	+0.5 dB typical @ -54°C -0.2 dB typical @ 50°C
Saturated Output Power	0.5 dB above P1 dB
Input Power Window for Saturated Output Power	-2.0 - +4.0 dBm typ, +25°C
Amplitude Matching to Reference	±0.3 dB typical, ±1.75 dB max
Phase Matching to Reference	±7 degrees typ, ±20 degrees max
Small Signal Gain	34.0 dB average, 25°C 38.0 dB average, -54°C 33.5 dB average, +50°C
Harmonic Output Level @ P1dB	Typically better than -15 dBc
Output Two-Tone Third Order	Typically +39 dBm
L/R Switch Performance	Non-reflective ports
L/R Switching Speed	80 nS typical
L/R Switch Video Leakage	<-50 dBm
L/R Switch Isolation	Typically better than 10 dB
Modulation:	
PRF	500 kHz max.
Switching Time	60 ns ON & OFF typical
In/Out VSWR	2:1
Load VSWR * †	2:1 for 85% of band, 3:1 max
Power Supply ‡	3 A typ off +8.25 V rail at P1 dB 20 mA typ off -12 V @ P1 dB
Notes:	
	* At 3:1 VSWR, the output power will reduce by 1.2dB due to mismatch loss
	† Unit must be operated with 50 ohm load at output
	‡ No internal rail regulation. Recommended rail regulation is ±2.5%



KEY FEATURES

- > 4 W nominal CW power
- > 6-18 GHz frequency range
- > Dual outputs, switchable
- > Modulation input control
- > Compact module
53 mm x 50 mm x 10 mm
- > Bare aluminium finish (6061),
cooling via baseplate

APPLICATIONS

- > Phased array transmitter element
- > Radar or electronic warfare systems
- > Laboratory use

OPTIONS

- > With SMA connectors
- > With GPO connectors

The wideband power amplifier covers a 6-18 GHz frequency range and is suitable for radar and electronic warfare applications.

Built in pre-amplification takes the low level signal to a power ready to transmit. The built in switch network allows selection of between two different outputs, making this ideal to use with separate antenna element polarisations within a phased array.

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L3Harris reserves the right to amend specifications in the light of continuing development.

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