

AMP2x1W

Dual 1W Power Amplifier

Overview:

DTC's high efficiency dual 1W RF power amplifier covers 320MHz to 5GHz (available in banded options) in a non-sealed 'plain' form factor ideal for use by system integrators. The dual power amplifier with bypass provides a low gain LNA return path for use with transceiver platforms which do not provide RF switching for an external PA.

This amplifier is designed to meet the stringent requirements of the DVB-T spectral mask and may be used for COFDM, QPSK, QAM, CW and similar applications. The RF input and output ports provide excellent return loss for filter matching.

The dual 1W RF power amplifier is ideal for digital transmission applications in surveillance, law enforcement, military UAV and UGV, airborne data/telemetry and television broadcasting.



Input Panel



Output Panel

Features and Benefits:

- Twin independent amplifier paths for MIMO applications
- LNA compensates for switching losses
- I²C bus to facilitate amplifier configuration with compatible DTC devices
- High efficiency
- Thermal shutdown
- Over-voltage and reverse polarity input protection
- High linearity
- Small, lightweight design

Product information:

Product Code

AMP2x1W-xxxxxx-B-OEM	Dual 1W power amplifier with bypass
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xxxxxx denotes frequency range

Accessory Options (sold separately)

CA3462	1W amp to D1806, 60mm
D1806	SOL8SDR-C Gecko active breakout PCB (for integration with SOL8SDR-C)
SOL8SDR-C	Software Defined Radio, Concealment (for use with bypass amplifiers)

Related Documents

100269	Dual 1W Power Amplifier OEM Integration Document
100210	SOL8SDR-C OEM Integration Document

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Technical Specification:

IO

RF input	SMP male x 2
RF output	SMP male x 2
Power and data	JST 8-way 1.5mm connector

Transmit RF Performance

Operating power (P1dB)	39dBm typical
Power gain	10dB minimum
Gain flatness	±1dB typical
Input return loss	-10dB minimum
Harmonic performance	50dBc typical
Efficiency	15% minimum
EVM	4% typical

Receive RF Performance

Gain	3-6dB
Gain flatness	±1dB typical
1/2 RF rejection	25dB minimum 30dB typical
Noise figure	3-5dB
P1dB	-10dBm

Power

Input voltage range	9-19VDC (12VDC typical), reverse polarity protected
DC current draw	0.9A typical

Physical

Dimensions	59mm (W), 44mm (L), 15mm (D)
Weight	75g

Environment

Temperature range	-10°C to +55°C (heatsink required)
PA shutoff temperature	80°C

Frequency Options

032047	320~470MHz
100170	1.00~1.70GHz
165240	1.65~2.40GHz
198270	1.98~2.70GHz
440500	4.40~5.00GHz

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