

AMP2W

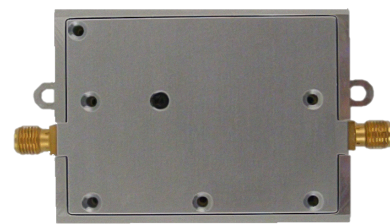
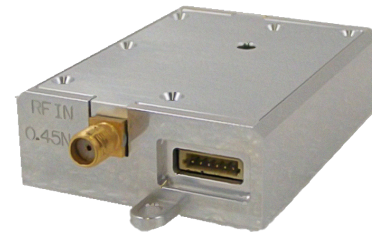
2W Linear RF Power Amplifier

Overview:

DTC's high efficiency RF power amplifier covering 200MHz to 6GHz (available in banded options) in a non-sealed 'plain' form factor ideal for use by system integrators. The product is available in two variants. The bypass variant provides a low loss RF return path for use with transceiver platforms without internal transmit/receive switching. The non-bypass variant is ideal where this is not required and provides a higher output power.

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 DTC plain 2W amplifier is ideal for digital transmission applications in surveillance, law enforcement, military UAV and UGV, airborne data/telemetry and television broadcasting.



Features and Benefits:

Two mode options available:

- Bypass mode (up to 2W RMS output power)
- Non-bypass mode (up to 2.8W RMS output power)

Low gain bypass mode typically 3dB

High power gain >20dB

High efficiency >16%

Small size

High linearity

Product Information:

Product Includes

AMP2W-xxxxxx-B-OEM CA3442	2W power amplifier with bypass 2W amp to D1806, 70mm
AMP2W-xxxxxx-OEM CA3443 CA3471	2W power amplifier non-bypass 2W amp to D1740-OEM PCB cable 2W amp to D170x/D1713-OEM PCB cable

xxxxxx denotes frequency range

Accessory Options (sold seperately)

CA3425	2W amp to D1806, 150mm
CA3442	2W amp to D1806, 70mm
CA3443	2W amp to D1740-OEM PCB cable
CA3471	2W amp to D170x/D1713-OEM PCB cable
D1806	SOL8SDR-C Gecko active breakout PCB (for integration with SOL8SDR-C)
SOL8SDR-C	Software Defined Radio, Concealment (for use with bypass amplifiers)
SOL8SDR-C-CAKIT-A/B/C	Cable accessory kits A, B and C for SOL8SDR-C. Refer to CAKIT guide.

Related Documents

100245	2W Power Amplifier OEM Integration Document
100210	SOL8SDR-C OEM Integration Document

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Technical Specification:

Interfaces

RF in/out	SMA-F
Power and data connection	JST 6-way connector

RF Performance

Operating power (RMS)	34.5dBm (non-bypass mode) 33dBm (bypass mode)
Gain	>20dB (dependent on frequency variant)
Input/output return loss	10dB minimum 12dB typical
Shoulder performance at Fc +/- (BW/2)	27dBc minimum
Harmonic performance	50dBc typical
Efficiency	16% typical
Impedance	50Ω
Bypass gains (bypass mode only)	3dB typical

Physical

Dimensions	83mm (L incl. SMAs), 47mm (W), 18mm (H)
Sealing	None
Weight	110g

Power

DC input	8V to 18V
Current draw	2A typ @ 10V full power 34.5dBm

Environment

Temperature range	-10°C to 50°C (requires external heatsink)
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Features / Options

Thermal shutdown	+85°C
TTL enable/disable	High speed

Frequency Range Options

032047	320~470MHz
*045060	450~600MHz
120170	1200~1700MHz
165240	1650~2400MHz
198270	1980~2700MHz
440500	4400~5000MHz

*Future development

Export of encrypted products is subject to United Kingdom regulatory export controls.

For further information contact your Sales Account Manager, one of our Regional Sales Offices, or email solent.enquiries@domotactical.com

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