

# AMPD5W

## 5W Linear RF Power Amplifier

### Overview:

DTC's highly efficient linear 5W RF power amplifier covers 1200MHz to 5GHz (available in banded options) in a non-sealed 'plain' form factor ideal for use by system integrators.

The amplifier incorporates a low loss transmit/receive switch and low noise amplifier providing an RF return path for transceiver platforms.

The amplifier meets the stringent requirements of successful DVB-T transmission, and can be used for COFDM, 64QAM, 16QAM, QPSK, CW and similar applications.

The DTC 5W amplifier is ideal for digital transmission applications in surveillance, law enforcement, military UAV and UGV, airborne data/telemetry and television broadcasting.

The 5W amplifier is compatible with DTC's Phase 4 and Phase 5 IP Mesh Radio, SOLO8 Software Defined Radio and SOLO7 Transmitters and OEM PCBs. A full set of cable accessories are available to provide seamless connectivity between the amplifier and each product family.



### Features and Benefits:

- 5W linear RMS output power
- High power gain >20dB
- High efficiency >16%
- Integral transmit/receive switch
- Low noise RF return path, gain typically 4dB
- Small size
- High linearity

### Product Information:

#### Product Code

AMPD5W-xxxxx-B-OEM	5W power amplifier with bypass
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xxxxxx denotes frequency range

#### Compatible Products

SOL8SDR-C	SOL08 Software Defined Radio, Concealment
SOL08SDR-R	SOL08 Software Defined Radio, Robust
D17XX-OEM	IP Mesh Radio Phase 4 PCB
D1740-OEM	IP Mesh Radio Phase 5 PCB
D1500-OEM	SOLO7 Nano Transmitter PCB
D1600-OEM	SOLO7 HD Nano Transmitter PCB
SOL7TX/NTX/HDNTX/BNTX	SOLO7 Transmitter product family

#### Accessory Options (sold separately)

CA3693	5W amp to D1806 (SOL8SDR-C) cable
CA3694	5W amp to D17XX-OEM (P4) PCB cable
CA3695	5W amp to D1740-OEM (P5) PCB cable
CA3696	5W amp to 4-way Lemo power breakout cable
CA3697	5W amp to SOL8SDR-R cable

#### Related Documents

100288	AMPD5W OEM Integration Document
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## 5W Linear RF Power Amplifier

### Technical Specification:

#### Interfaces

RF in/out	SMA-F
Power and data connection	2.0mm JST 7-way connector

#### RF Performance

Operating power (RMS)	37dBm
Gain	>20dB (dependent on frequency variant)
Input/output return loss	10dB minimum 12dB typical
Shoulder performance at Fc +/- (BW/2)	30dBc typical
Harmonic performance	67dBc typical
Efficiency	16% typical
Impedance	50Ω
Bypass gain (bypass mode only)	4dB typical

#### Physical

Dimensions	93mm (L incl. SMAs), 50mm (W), 18mm (H)
Sealing	None
Weight	140g

#### Power

DC input	10V to 18V
Current draw	3.5A typ @ 10V full power 37dBm

#### 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

120170	1200~1700MHz
*165240	1650~2400MHz
*198270	1980~2700MHz
*440500	4400~5000MHz

\*Future development

Export of encrypted products is subject to regulatory export controls.

For further information contact your Sales Account Manager, one of our Regional Sales Offices, or email [solent.enquiries@domotactical.com](mailto:solent.enquiries@domotactical.com)

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