

# 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:**

- 2 Mode options available:
  - Bypass mode (up to 2W RMS output power)
  - Non-bypass mode (up to 2.8W RMS output power)
- Low loss bypass mode <2.5dB
- High power gain >20dB
- High efficiency >16%
- Small size
- High linearity

**Product information:**

**Product Includes:**

|                    |  |
|--------------------|--|
| AMP2W-xxxxxx-B-OEM | Plain 2W power amplifier with bypass (xxxxxx denotes frequency range), D1806 required for integration with SOL8SDR-C |
| AMP2W-xxxxxx-OEM   | Plain 2W power amplifier non-bypass (xxxxxx denotes frequency range)   |

**Accessory Options (sold seperately):**

|       |                                     |
|-------|-------------------------------------|
| D1806 | SOL8SDR-C Gecko active breakout PCB |
|-------|-------------------------------------|

**Related Documents:**

|  |
|--|
| Plain 2W Power Amplifier OEM Integration Guide |
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### Technical Specification:

#### Interfaces

|                         |                     |
|-------------------------|---------------------|
| RF In / Out             | SMA-F               |
| Power & Data Connection | JST 6-way connector |

#### RF Performance

|                                       |  |
|---------------------------------------|--|
| Operating power (RMS)                 | 34.5dBm (non-bypass mode)<br>33dBm (bypass mode) |
| Gain                                  | >20dB (dependant on frequency variant)           |
| Input/Output Return loss              | 10dB minimum<br>12dB typical                     |
| Shoulder Performance at Fc +/- (BW/2) | 27dBc minimum                                    |
| Harmonic Performance                  | 50dBc typical                                    |
| Efficiency                            | 16% typical                                      |
| Impedance                             | 50 Ohm   |
| Insertion loss (bypass mode only)     | 2.5dB typical                                    |

#### Physical

|            |                              |
|------------|------------------------------|
| Dimensions | L 95.3mm, W 48.3mm, H 12.5mm |
| Sealing    | None                         |
| Weight     | 110g                         |

#### Power

|              |                                 |
|--------------|---------------------------------|
| DC Input     | 10-18V                          |
| Current Draw | 2A typ @ 10V full power 34.5dBm |

#### Environment

|                   |  |
|-------------------|--|
| Temperature Range | -10 to 50°C (requires external heatsink) |
|-------------------|--|

#### Features / Options

|                    |            |
|--------------------|------------|
| Thermal Shutdown   | +85C       |
| TTL Enable/Disable | High Speed |

#### Frequency Range Options

|              |                      |
|--------------|----------------------|
| 320~470MHz   | Bypass & Non-Bypass  |
| 450~600MHz   | Bypass & Non-Bypass* |
| 1200~1700MHz | Bypass & Non-Bypass  |
| 1650~2400MHz | Bypass & Non-Bypass  |
| 1980~2700MHz | Bypass & Non-Bypass  |
| 4400~5000MHz | Bypass & Non-Bypass* |

\*Not currently available

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