

SOLAMP Robust 5W Amplifier

COFDM – Video, Audio Telemetry and IP Products

June 2016 Data Sheet



DTC SOLAMP Robust 5W amplifiers bring a new level of performance and reliability to microwave transmission of digitally modulated signals. Linearization technology is used to minimize distortion and provide superior signal quality for complex multi-carrier modulations while minimizing the DC power consumption.

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. In addition, reverse polarity protection, short/open circuit protection are standard features, and low RF output power warning is also available. An optional, small, fanned heat sink is available for cooling the amplifier to desired levels. Fan power is available from the PA.

Chassis connectors may be optionally sealed for airborne applications. The DTC 5W amplifier line is ideal for digital transmission applications in surveillance, law enforcement, military UAV and UGV, airborne data/telemetry and television broadcasting.

Features:

- Designed for Digital Modulation - COFDM, QPSK, BPSK
- Ultra linear or saturated operation
- High efficiency
- Operating gain - 17 dB typical
- RF ports are open and short protected
- Short circuit/over-voltage protection
- Reverse polarity protection
- 12 - 30 Vdc Power Supply range
- Low output Power warning on L and C band Amplifiers
- Robust packaging
- Status indicator light (red/green)

Options:

- Integrated Heat Sink
- RF Output Automatic Level Control
- Water Resistant, Sealed Enclosure
- Type N or TNC RF connectors, DB-9 for DC
- Custom Feed Lines and other Accessories

DTC - Solent
Fusion 2,1100 Parkway
Whiteley, Hampshire
PO15 7AB, UK
T: +44 1489 566 750

DTC - Tampa
3845 Gateway Center Blvd Ste 360
Pinellas Park
FL 33782, USA
T: +1 727 471 6900

DTC - Randers
Haraldsvej 64B
DK-8960
Randers SØ
Denmark
T: +45 8791 8100

DTC - Brazil
Av. das Nações Unidas
12551-17º andar - Sala 1725
04578-903
São Paulo
T: +55 11 3443 7545

SOLAMP Robust 5W Amplifier

COFDM – Video, Audio Telemetry and IP Products

June 2016 Data Sheet

Specification:

Electrical

Frequency range	1.15 to 1.45 GHz 1.65 to 1.90 GHz 2.00 to 2.50 GHz 3.10 to 3.50 GHz 4.40 to 5.00 GHz
Input/output protection	Open and short circuit
I/O Impedance	50ohm, >10dB return loss
Non-harmonic spurious output	> 60 dBc Typ (L Band >65dBc Typ)
Input Power	+20 dBm (+3dBm overdrive capability)
Modulation formats	COFDM, QAM,BPSK, QPSK
Reverse polarity protection	
Gain flatness	±0.5 dB across operating band
Operating gain	5W: (17 dB typ.)
Output power	+39 dBm typ (+40dBm typ for S Band)
ACPR	-32 dBc typ
OIP3 @ Pop (typ)	5W: 39 dBm
EVM	2.5% typ
PA mute on PTO	
Status LED	ON/STBY
Supply voltage	+12 Vdc to +30 Vdc
Supply current	5W output: 3.8 A (typ.) @ 12 Vdc (S-Band)

Environmental

Operating temperature	-15 to +65 °C, Baseplate
Relative humidity	0 to 95%, non-condensing
Environmentally protected	Water resistant not hermetically sealed

Mechanical

DC input connector	Amphenol PTO 4 pin
	- A Pin - V+
	- B Pin - Low Power Warning (some models) (normal high, goes low if o/p is 6 dB less than 37 dBm)
	- C Pin - Ground
	- D Pin – RF output control (input, low=RF power off)
Housing anodized)	Milled aluminium (nickel plated or black)

Dimensions (with heat sink);

SOLAMP5W-115140/200250 H	76.2mm x W 122mm x L 170.2mm
SOLAMP5W-165190/310350 H	81.3mm x W 122mm x L 170.2mm
SOLAMP5W-440500	H 88.9mm x W 134.6mm x L 45.7mm
Weight	Approx 1.3kg
RF input	SMA female (sealed)
RF output	TNC female (sealed)
User camera type	PAL or NTSC

Product Code:

SOLAMP5W-115140
SOLAMP5W-165190
SOLAMP5W-200250
SOLAMP5W-310350
SOLAMP5W-440500
Built-in fan available in selected models

DTC - Solent
Fusion 2,1100 Parkway
Whiteley, Hampshire
PO15 7AB, UK
T: +44 1489 566 750

DTC - Tampa
3845 Gateway Center Blvd Ste 360
Pinellas Park
FL 33782, USA
T: +1 727 471 6900

DTC - Randers
Haraldsveg 64B
DK-8960
Randers SØ
Denmark
T: +45 8791 8100

DTC - Brazil
Av. das Nações Unidas
12551- 17ºandar - Sala 1725
04578-903
São Paulo
T: +55 11 3443 7545