Benthowave Instrument Inc
Underwater Sound Solutions
http://www.benthowave.com

BII-5011 Power Amplifier
Driving Sonar Transducer / Projector

DESCRIPTION
The Benthowave model BII-5011 is 7 watt, linear wideband power amplifier, which offers low distortion and low power consumption to battery-powered underwater acoustic system.

APPLICATIONS
| Source Level Capability: 177.7 +DI (dB re µPa) | Underwater Sound Velocimeter / Sound Velocity Probe |
| Amplifying Pulse Signal to Drive Ultrasonic Transducer | Short Range Navigation, Inspection and Survey |
| Low Power Underwater Acoustic System | Object Detection & Tracking, Distance Gage |

ABSOLUTE MAXIMUM RATINGS
| DC Supply Voltage: | +36 VDC |
| Output Peak Current: | 350 mA |

SPECIFICATIONS
| Signal Type: | Pulse, Pulse/Burst SINE, Chirp/FM, Arbitrary Waveform Spread Spectrum FSK and PSK Signals Whale and Dolphin's Clicks, Whistles and Pulse Trains |
| Gain: | 26 dB |
| Power Bandwidth (-3 dB): | 3 MHz |
| Maximum Input Level: | ±2 Vpp |
| Input Impedance: | 10 kΩ |
| Supply Voltage: | +12 to +24 VDC |
| Suggested DC Supply | Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the above rated voltage. DO NOT use switching mode DC power supply. |
| Quiescent Current: | 19 mA |
| Power Capability: | 3.0 W @ +12VDC Power Supply |
| Minimum Load: | 25 Ω @ +12VDC Power Supply |
| Operating Temperature: | -10°C to 85°C |
| Storage Temperature: | -40°C to 85°C |
| Size: | Diameter: 101.6 mm (4 in) or custom Height: 50.8 mm (2 in) |
| Mounting: | 4 x ØD4.87mm through-holes or custom |
| Weight: | 68 grams |

Frequency Response
TERMINALS and WIRINGS:

Input Terminal
Pin 1: IN-, Blue, 6” Wire
Pin 2: IN+, Yellow 6” Wire
Pin 3: NC
Pin 4: NC
Pin 5: Shield, Black, 6” Wire

Output and Power Supply Terminal
Pin 1: +Vs, Red, 6” Wire
Pin 2: COM, Black 6” Wire
Pin 3: OUT+, Yellow 6” Wire
Pin 4: NC
Pin 5: OUT- Blue 6” Wire

SUGGESTED WIRING:

Signal Source
IN+(IN+)
IN-(IN-)
+12 to +24VDC
+Vs
COMMON

BII-5011

OUT+
OUT-

Load

Note: 1. DO NOT connect Out- or Out+ to common or grounding.
2. Shield, Pin 5 of Input Terminal, can be connected to system shieldings if any.

SHIPMENT:
1. Assembled BII-5011 board Qty.: 1
2. Input Plug with 6” wires Qty.: 1
3. Output and Power Supply Plug with 6” wires Qty.: 1

Physical Size:

- 4 - Φ4.9mm (0.192 inch) mounting holes
- Equally Spaced on 86.4mm (3.4 inch) P.C.D.
- P.C.D.: Pitch Circle Diameter

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