



2-watt Ku-band BUC

Interface Definitions:

- **Electrical**
 - Input Signals (supplied to the BUC via its input connector):
 - DC power
 - L-band input signal
 - 10 MHz LO (External reference)
 - Output Signals:
 - RF (Ku-band), through a waveguide output port
- **Physical**
 - Input port: 75-Ohm F-Type connector (Female)
 - Output port: Waveguide Output, WR-75 G, and Grooved with Gasket



Specifications:

ELECTRICAL

- **Input L-band Signal Characteristics**
 - Input Frequency: 950-1,450 MHz
 - Input Power No damage: +13 dBm max
 - Input Impedance: 75Ω
 - Input VSWR: 2:1 max
- **Output Characteristics**
 - Output Frequency: 14-14.5 GHz
 - Typical Saturated Output Power: 33 dBm (2 watts)
 - Typical P1dB Linear Output Power: 31.8 dBm (1.5 watts)
 - P1dB Output Power: 31 dBm min at any given frequency, temperature, and DC Supply Voltage
 - ACPR @30.0 dBm output power: 24 dBc min compliance with IESS308/SSOG308
 - Output VSWR: 2.5:1 max
- **Line-Up, Noise and Spurs Characteristics**
 - Small Signal Gain: 52 ± 5 dB max
 - Output Noise 14-14.5 GHz: -94 dBm/Hz max
 - Spurs Level at:
 - 13.6 -14.9 GHz: -25 dBm max
 - 28 - 29 GHz: -20 dBm max

Features

- High performance, efficient operation
- Compact & lightweight design
- Fanless package for demanding outdoor environments

Specifications (continued):

• LO Characteristics

- LO Characteristics for PLL
 - LO Frequency: 13.05 GHz
 - Phase Noise
 - 100Hz: -55 dBc/Hz max
 - 1KHz: -65 dBc/Hz max
 - 10KHz: -75 dBc/Hz max
 - 100KHz: -95 dBc/Hz max
 - 1MHz: -100 dBc/Hz max
- External reference requirement
 - Frequency: 10 MHz continuous wave
 - 10 MHz uncertainty: ± 35 ppm min
 - Power at the Input port: -5 to +5 dBm
- The BUC will shutdown with no 10 MHz input
 - Phase Noise (maximum):
 - at 100 Hz: -125 dBc/Hz
 - at 1 KHz: -135 dBc/Hz
 - at 10 KHz: -140 dBc/Hz

• DC Characteristics

- Input Voltage Range: 13-26 VDC
- DC Power Consumption: 20 watts maximum
- Non-Damage Voltage: 0-30 VDC

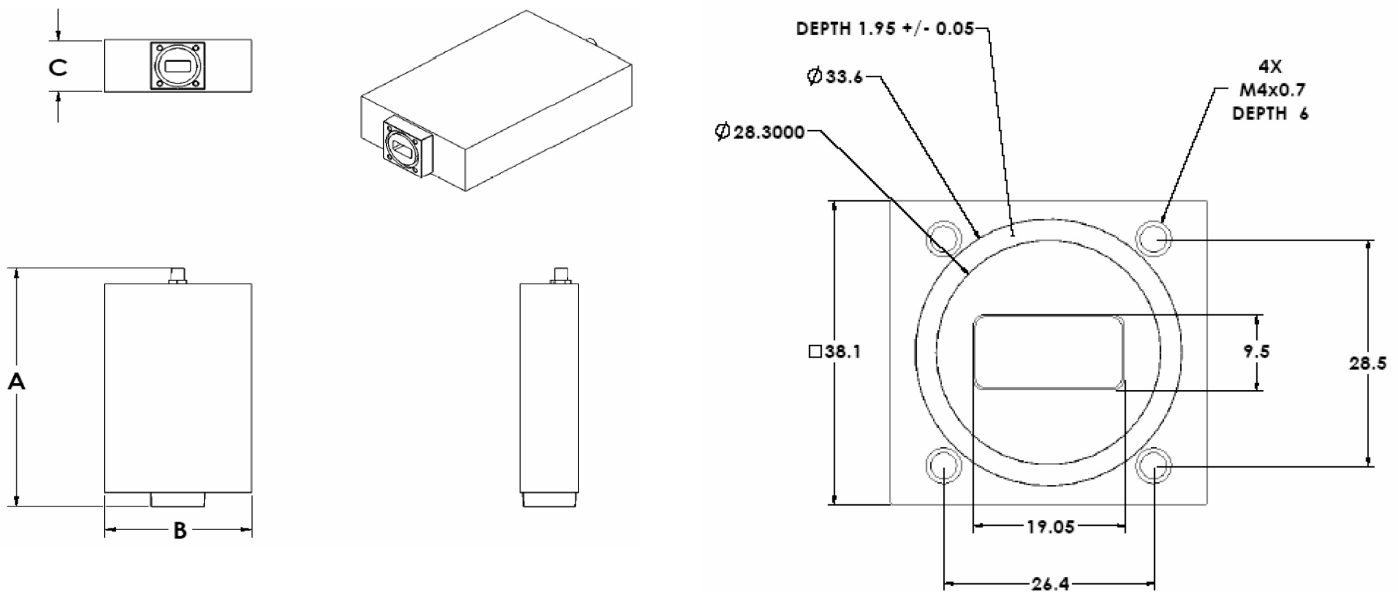
ENVIRONMENTAL

- Operating Temperature: -40°C to +60°C
- Non Operating Temperature (storage): -50°C to +80°C
- Relative Humidity 0 to 100%, condensing

PHYSICAL

- BUC is typically installed on a ku-band antenna transmit port
- Dimensions 190 mm (A) X 110 mm (B) X 60 mm (C) –see drawing below
- Connectors
 - Input (IF, DC and 10 MHz Ref.): F - type female ,environmentally sealed
 - Output: WR75G waveguide flange
 - Weight: 800 g

Outline Drawings:



Design and specifications are subject to change without notice.

To learn more about SageNet's 2-watt Ku-band BUC, visit our website, www.sagenet.com, or call 1-866-480-2263.

BUC2WKuTransmitterDS110415