



# BUC, 4W Ku Transmitter

## Interface Definitions:

- **Electrical**
  - Input Signals (supplied to the BUC via its input connector):
    - DC power
    - IF in
    - 10MHz (External reference)
  - Output Signals:
    - RF (Ku Band), through a wave-guide output port
- **Physical**
  - Input port: 75-Ohm F-Type connector (Female)
  - Output port: Wave-guide Output, WR-75G, and Grooved with Gasket

## Specifications:

### ELECTRICAL

- **Input Characteristics**
  - Input Frequency: 950-1450MHz
  - Input Power No damage: +13dBm max
  - Input Impedance: 75 $\Omega$
  - Input VSWR: 2:1 max
- **Output Characteristics**
  - Output Frequency: 14-14.5GHz
  - Typical Saturated Output Power: 36dBm (4W)
  - Typical P1dB Linear Output Power: 34.8dBm (3W)
  - P1dB Output Power: 33.5dBm min at any given Frequency, Temperature, and DC Supply Voltage
  - ACPR @32.5dBm output power: 24dBc min compliance with IESS308/SSOG308
  - Output VSWR: 2.5:1max
- **Line-Up, Noise and Spurs Characteristics**
  - Small Signal Gain: 55  $\pm$  5dB max
  - Output Noise 14-14.5GHz: -94dBm/Hz max
  - Spurs Level at: -
    - 13.6 -14.9GHz: -25dBm max
    - 28 - 29GHz: -20dBm max
    - Otherwise: ETSI Compliant



## Features

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

## Specifications (continued):

### • LO Characteristics

- LO Characteristics for PLL
  - LO Frequency: 13.05GHz
  - Phase Noise
    - 100Hz: -55dBc/Hz max
    - 1KHz: -65dBc/Hz max
    - 10KHz: -75dBc/Hz max
    - 100KHz: -95dBc/Hz max
    - 1MHz: -100dBc/Hz max
- Ext reference requirement
  - Frequency: 10MHz sine-wave
    - 10MHz uncertainty:  $\pm 35$ ppm min
  - Power at the Input port: -5 to +5 dBm
    - The BUC will shutdown at 10MHz input
  - Phase Noise (maximum):
    - at 100Hz: -125dBc/Hz
    - at 1KHz: -135dBc/Hz
    - at 10KHz: -140dBc/Hz

### • DC Characteristics

- Input Voltage Range: 13-26V
- DC Power Consumption: 33W max
- Non-Damage Voltage: 0-30V

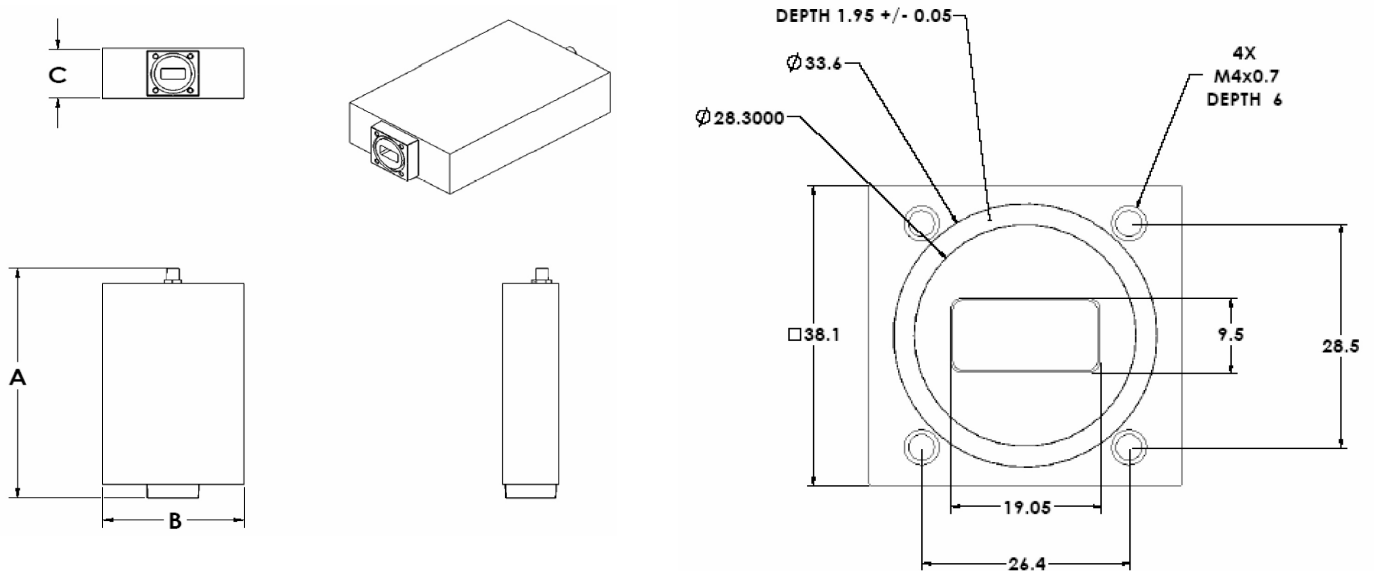
## ENVIRONMENTAL

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

## PHYSICAL

- Configuration
  - The unit is Feed mount
- Dimensions 196.4mm (A) X 120mm (B) X 51mm (C) –see drawing
- Connectors
  - Input: (IF, DC and 10MHz Ref.): F - type female ,environmentally sealed
  - Output: WR75G wave guide flange
  - Weight: 1.2 Kg

## Outline Drawings:



To learn more about SageNet's BUC 4W Ku Transmitter, visit our website, [www.sagenet.com](http://www.sagenet.com), or call 1-866-480-2263.

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