Sagenet
Connectivity that Empowers

BUC, 10W 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: WR-75G, waveguide grooved with gasket

Specifications:

ELECTRICAL

- **Input Characteristics**
  - Input Frequency: 950-1450MHz
  - Input Power No damage: +13dBm max
  - Input Impedance: 75Ω
  - Input VSWR: 2:1 max
- **Output Characteristics**
  - Output Frequency: 14-14.5GHz
  - Typical Saturated Output Power: 40dBm (10W)
  - Typical P1dB Linear Output Power: 39.0dBm (8W)
  - P1dB Output Power: 38.0dBm min at any given Frequency, Temperature, and DC Supply Voltage
  - ACPR @38.0dBm output power: 24dBc min compliance with IESS308/SSOG308
  - Output VSWR: 2.5:1max
- **Gain, Noise and Spurs Characteristics**
  - Small Signal Gain: 62 ± 5dB max
  - Output Noise 14-14.5GHz: -90dBm/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
      - RMS P.N: 2.5 degrees max
  - Ext reference required performance
    - Frequency: 10MHz sine-wave
      - 10MHz uncertainty: ±35ppm min
    - Power at the Input port: -5 to +5 dBm
      - Input power over these boundaries will cause the BUC to shut down with no damage
    - 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: 80W typical
  - Non-Damage Voltage: 0-30VDC

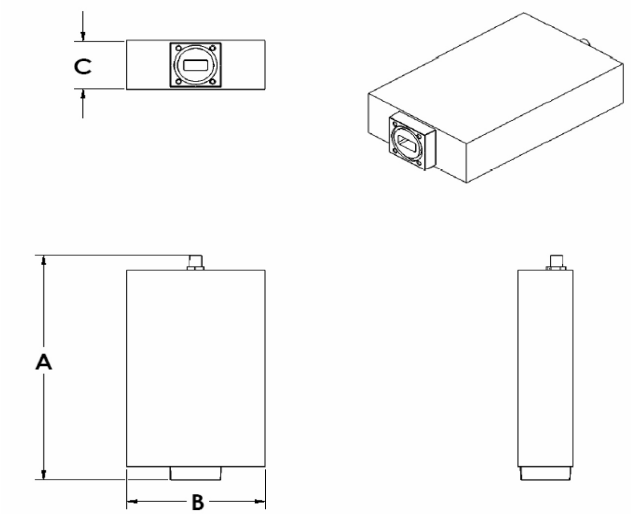
ENVIRONMENTAL

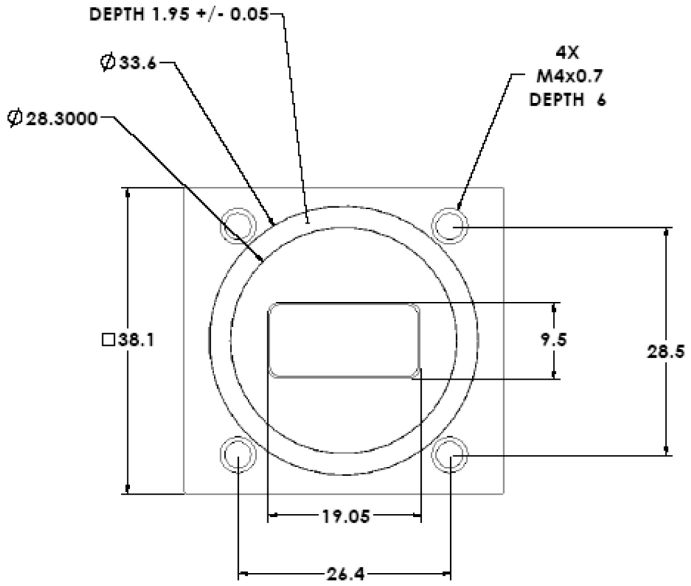
- Operating Temperature: -40ºC to +60ºC
- Non Operating Temperature (storage): -50ºC to +80ºC
- Relative Humidity 0 to 100%, condensing

PHYSICAL

- BUC is typically installed on a Ku-band antenna transmit port
- Dimensions 190mm (A) X 170mm (B) X 90mm (C) –see drawing
- Connectors
  - Input: (IF, DC and 10MHz Ref.): coaxial Type F female, environmentally sealed
  - Output: WR75G wave guide flange
  - Weight: 5 Kg max

Outline Drawings:





To learn more about SageNet's BUC 10W Ku Transmitter, visit our website, www.sagenet.com, or call 1-866-480-2263.

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