

## Model: TURBUC14G14.5G-40

The TURBUC14G14.5G-40 is a block up-converter operating in the Ku-band. It features an integrated local oscillator frequency of 950~1450 MHz and output RF frequency of 14~14.5 GHz. Providing up to 10W of saturated output power, it also supports switchable functionality between internal and external references.

### Features:

- IF Frequency: 950~1450 MHz.
- RF Frequency: 14~14.5 GHz.
- Saturated output power: 10W.
- External/Internal Reference Adaptive.

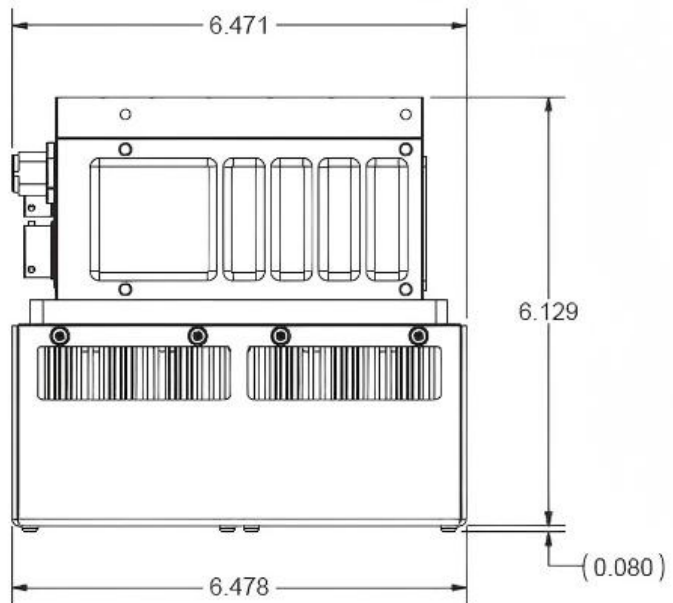
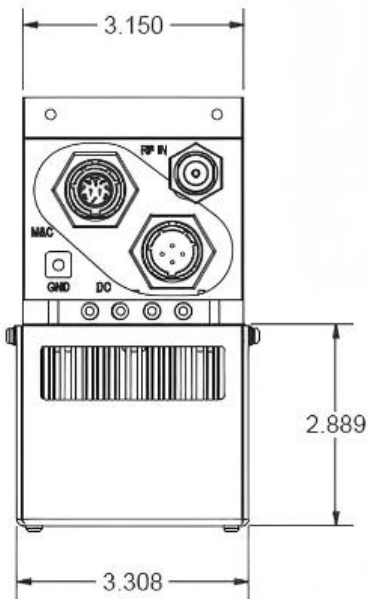
### Electrical

| Parameter                      | Value                                | Units  | Desc.   |
|--------------------------------|--------------------------------------|--------|---|
| IF Input Freq.                 | 950~1450                             | MHz    | 13.05GHz@LO                                       |
| RF Output Freq.                | 14~14.5                              | GHz    |   |
| Output Power Psat              | ≥40                                  | dBm    |   |
| Gain                           | ≥60                                  | dB     |   |
| Gain Flatness                  | ≤±2                                  | dB     |   |
| Phase Noise                    | ≤-75@1KHz                            | dBc/Hz |   |
|                                | ≤-85@10KHz                           |        |   |
|                                | ≤-95@100KHz                          |        |   |
|                                | ≤-110@1MHz                           |        |   |
| Output Spurious                | ≤ -60                                | dBc    | In Band   |
|                                | ≤ -50                                | dBc    | Out Of Band                                       |
| Reference Mode                 | External/Internal Reference Adaptive |        | External reference with fallback to Internal ref. |
| External Reference Level       | ≥+5                                  | dBm    | Sine wave, 10MHz                                  |
| Input VSWR                     | ≤2:1                                 |        |   |
| Output VSWR                    | ≤2:1                                 |        |   |
| DC Supply                      | +18~+24                              | V      |   |
| Communication Interface        | RS485                                |        |   |
| Ingress Protection (IP) Rating | IP65                                 |        |   |
| Temperature range              | -30~65                               | °C     |   |

## Outline Drawing:



Unit:inch



### Notes:

The dimensions of the module is yet to be determined.

## Interface Table:

| Type             | Definition   | Desc.  |
|------------------|--|--|
| Waveguide WR75G  | RF OUT   | Straight   |
| N Female         | IF IN  | 50 ohm   |
| M8 Female, 4 pin | Monitoring & Control<br>1 = DC Input<br>2 = A pos+ RS485<br>3 = B neg- RS485<br>4 = Common (GND) | 1、 LO Frequency Setting<br>2、 Digital Attenuator Setting<br>3、 Internal/External Reference Status Query<br>4、 PLL Lock Status Monitoring<br>5、 DC Power Supply Status Monitoring |
| SMA              | External Reference Input   | 10MHz  |

**Note:** The PLL frequency and the Digital Attenuator attenuation will be done by writing a number in the relevant register as per the communication protocol.

## Ordering Information:

| Part Number       | Description                                | Revision |
|-------------------|--|----------|
| TURBUC14G14.5G-40 | Block Up-converter , 14~14.5 GHz, Psat:10w | Rev.1.0  |

### Notes:

1. Dimensions and specifications may be changed without prior notice.
2. Standard Warranty: three years.