



**EQUIPMENT Short Form SPECIFICATION
2W Ku-Band BUC (ODU)
14-14.5GHz**

Gilat Marketing P/N AN7000

**Gilat P/Ns:
AN-7000-XX**

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1. Interface Definition

1.1. Electrical Interfaces

1.1.1. Input Signals (supplied to the ODU via its input connector):

1.1.1.1. DC power

1.1.1.2. IF in

1.1.1.3. 10MHz (External reference)

1.1.2. Output Signals

RF (Ku Band), through a wave-guide output port.

1.1.2.1. Physical Interfaces

Input port: 75-Ohm F-Type connector (Female).

Output port: Wave-guide Output, WR-75G, and Grooved with Gasket.

2. Characteristics

The following subparagraphs define the performance and physical characteristics.

2.1. Electrical Characteristics (Temperature Range -40° to 60°C)

2.1.1. Input Characteristics

2.1.1.1. Input Frequency 950-1450MHz

2.1.1.2. Input Power No damage +13dBm max.

2.1.1.3. Input Impedance 75Ω

2.1.1.4. Input VSWR 2:1 max.

2.1.2. Output Characteristics

2.1.2.1. Output Frequency 14-14.5GHz

2.1.2.2. Saturated Output Power 33dBm Typ.
at any given Frequency, Temperature,
and DC Supply Voltage.



2.1.2.3. P1dB Output Power 31dBm min.
at any given Frequency, Temperature,
and DC Supply Voltage.

2.1.2.4. ACPR @30.0dBm output power 24dBc min.
compliance with IESS308/SSOG308

2.1.2.5. Output VSWR 2.5:1max.

2.1.3. Line-Up Noise and Spurs Characteristics

2.1.3.1. Small Signal Gain 52 ± 5dB max.

2.1.3.2. Output Noise 14-14.5GHz -94dBm/Hz max.

2.1.3.3. Spurs Level at:
13.6-14.9GHz -25dBm max.

28-29GHz -20dBm max.

Otherwise ETSI Compliant



2.1.4. LO Characteristics

2.1.4.1. LO Characteristics for PLL

2.1.4.1.1. LO Frequency 13.05GHz

2.1.4.1.2. Phase Noise

2.1.4.1.2.1	100Hz	-55dBc/Hz max.
2.1.4.1.2.2	1KHz	-65dBc/Hz max.
2.1.4.1.2.3	10KHz	-75dBc/Hz max.
2.1.4.1.2.4	100KHz	-95dBc/Hz max.
2.1.4.1.2.5	1MHz	-100dBc/Hz max.

2.1.4.2. Ext reference requirement

2.1.4.2.1. Frequency 10MHz
sine-wave

2.1.4.2.1.1 10MHz uncertainty ± 35 ppm min.

2.1.4.2.2. Power at the Input port -5 to +5 dBm

2.1.4.2.2.1 The BUC should be shutdown
10MHz input.

2.1.4.2.3. Phase Noise (maximum):

2.1.4.2.3.1	at 100Hz	-125dBc/Hz
2.1.4.2.3.2	at 1KHz	-135dBc/Hz
2.1.4.2.3.3	at 10KHz	-140dBc/Hz



3. DC Characteristics

3.1.1.1. Input Voltage Range	13-26V
3.1.1.2. DC Power Consumption	20W max
3.1.1.3. Non-Damage Voltage	0-30V

3.2. Physical Characteristics

3.2.1. Configuration

The unit shall be Feed mount.

3.2.2. Dimensions

The dimensions of the units will not exceed the maximum dimensions shown in figure 4.

The dimensions and Outline of the unit shall comply with the requirements specified in source control drawing.

3.2.3. Connectors

Connectors shall as follow:

3.2.3.1. Input (IF, DC and 10MHz Ref.): F - type female , environmentally sealed .

3.2.3.2. Output: WR75G wave guide flange.
(See figure 3)

3.2.4. Weight

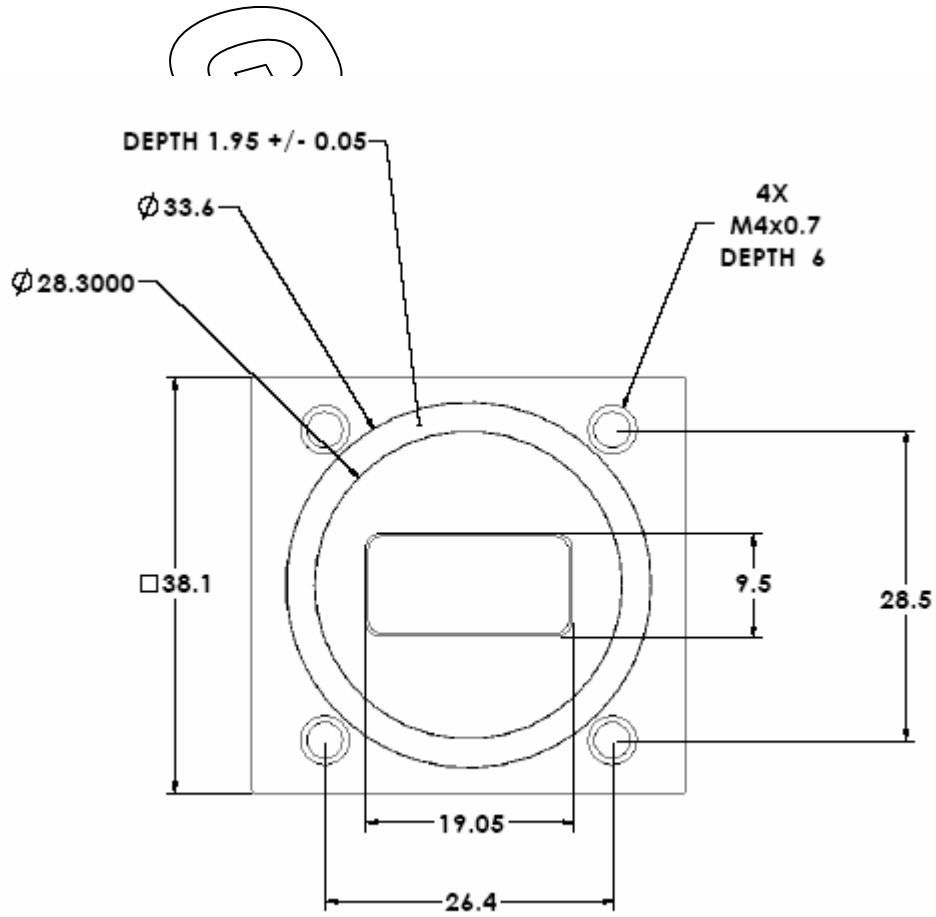
The weight of the Ku-band transmitter shall be less than 1000 grams.

3.2.5. Sealing

The unit should be environmentally sealed (connectors, covers and wave guide port) against humidity, rain, dust and sand for the lifetime of unit.



Figure 3 : Wave- guide Interface



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Figure 4 : Maximal unit dimensions

Gilat P.N	A [mm]	B [mm]	C [mm]
AN7000XX	220	110	55

