



C-Band **IBUC G**

500W GaN **IBUC** for multicarrier application.



The IBUC Advantage

All IBUCs are equipped with cutting-edge intelligent technology:

- Highest quality & exacting performance guaranteed through individual unit testing over temperature
- Superior linearity for maximum useable output power
- Amplifier overdrive protection
- User-selectable AGC/ALC for optimal performance & compatibility with modem adaptive coding
- New high capacity microprocessor & extended M&C functions

ULTIMATE MANAGEMENT & CONTROL

- » Local Web Interface & NMS-Friendly SNMP «
- » 70+ User Configurable Thresholds & Alarms «
- » Upgraded Event Log with 1,000 Sensor Readings «
- » Performance Trend Analysis Tools & Statistical logs «
- » Embedded Web Pages for Universal Web Browser Access «

Multicarrier
Application

500W
 P_{Lin} 250W

GaN
Tech
Amplifier

3
Year
Warranty

Applications

The new IBUC **G** now supports multicarrier transmission across the full C-band spectrum. The **IBUC G** delivers the highest available output power, making it an ideal solution for high data rate multicarrier applications such as maritime, broadband, broadcast and network hubs. The 500W model produces +54 dBm of linear output power.

Gallium Nitride amplifier technology enables smaller packaging for antenna mounting, eliminating the losses in long waveguide runs. And the greater power efficiency translates to an appreciable reduction in power consumption. Comparing favorably with earlier technology TWTAs, the GaN **IBUC G** delivers maximum linear output power with the reliability of solid state.

Options

- 1+1 Transmit Redundancy with Eco-Mode
- High Stability Internal 10 MHz Reference with Auto-Detection
- Several Factory Select Bands
- Mounting Brackets
- Type N or F-Type Input Connectors
- Handheld Terminal

C-Band IBUC G

Frequency Range	RF (MHz)	IF (MHz)	
Sense		Inverting	Non-Inverting
Band 1 Std C	5850 to 6425	950 to 1525	950 to 1525
Band 2 Palapa	6425 to 6725	975 to 1275	1125 to 1425
Band 4 Ext C	5850 to 6650	950 to 1750	950 to 1750
Band 5 Full C	5850 to 6725	975 to 1850	950 to 1825

Input

VSWR/ Impedance	1.5:1 / 50 Ohm
Input Connector	Type N Female (50 Ohm)
Input Connector Options	Type F (75 Ohm), TNC (50 Ohm)
Input Power Detector Range	-50 to -15 dBm

Gain

Small Signal Gain (L-band to RF) with attenuator set to 0 dB 83 dB min

Attenuator Range 30 dB variable in 0.1 dB steps

Gain Flatness

Full Band	4 dB p-p max
36 MHz	1.5 dB p-p max
1 MHz	0.25 dB p-p

Gain Variation Over Temperature

	Bands 1/2	Bands 4/5
Open Loop	3 dB p-p max	4 dB p-p max
With AGC	1 dB p-p max	1 dB p-p max

RF Output

Interface	CPR-137G
VSWR	1.3:1 max

Output Power

	500W	
	Band 1	Bands 2/4/5
at P_{Sat} (typ)	+57 dBm	+56.5 dBm
at P_{Lin} (min)	+54 dBm	+53.5 dBm

P_{Lin} is the maximum linear power as defined by MIL STD 188-164B

Two tone measured @ 5MHz and 150 MHz Spacing

Noise power ratio (NPR) @ 51 dBm Pout

For Bands 2/4/5 and 51.5 dBm Pout 19 dB min

For Band 1

Level stability with ALC ± 0.5 dB

Output power detector range Rated power to -20 dB

Power reading accuracy ± 1.0 dB max.

Spurious @ P_{Lin}

In Band -70 dBc

Out of Band Complies with EN 301 443 & MIL-STD 188-164B

Harmonics @ P_{Lin} -50 dBc max.

Output Noise Power Density

Tx < - 76 dBm/Hz

Rx < - 145 dBm/Hz

SSB Phase Noise

	External Reference	IBUC G
10 Hz	-115 dBc/Hz	-54 dBc/Hz
100 Hz	-140 dBc/Hz	-79 dBc/Hz
1 KHz	-150 dBc/Hz	-89 dBc/Hz
10 KHz	-155 dBc/Hz	-94 dBc/Hz
100 KHz	N/A	-100 dBc/Hz
1 MHz	N/A	-110 dBc/Hz

External Reference (Multiplexed on TX IFL)

Frequency & Level 10 MHz -12 to +5 dBm

Internal Reference- Optional

Local Oscillator Frequency

	Sense	Inverting	Non-Inverting
Band 1		7375 MHz	4900 MHz
Band 2		7700 MHz	5300 MHz
Band 4		7600 MHz	4900 MHz
Band 5		7700 MHz	4900 MHz

IBUC Power Supply

Voltage	200 to 240 VAC	
Power Consumption	500W	
	Band 1	Bands 2/4/5
at P_{Lin}	1750 VA	1550 VA
at P_{Sat}	2250 VA	2000 VA

Monitor & Control

Ethernet (HTTP, Telnet, SNMPv2c) via RJ45 Connector

RS232/485, Handheld Terminal via MS-Type Connector

FSK multiplexed on TX IFL

Environmental

Operating Temperature	-40°C to +55°C
Relative Humidity	100% Condensing
Altitude	10,000 ft (3,000 m) ASL

Mechanical

Size	24 x 10 x 7.4 x in. 610 x 254 x 188 mm
Weight	40 lbs 18 kg

Specifications subject to change without notice.

Updated 12/4/2020