



IBUC2e C-Band Intelligent Block Upconverter Low Energy Consumption Model

IBUC Advantages

Integrated BUC/SSPA for higher performance and reliability.

Low energy consumption for use with Modems equipped with limited capacity BUC power supplies. DC power supplied via IFL coax.

High linearity.

Low phase noise better than IESS308/309 requirements by a minimum of 10 dB.

Embedded Web pages provide management for small networks using any Web browser.

AGC or ALC circuits hold gain or output level constant.

30 dB User-adjustable gain in 0.1 dB steps preserves modem dynamic range.

Advanced user interfaces:

- TCP/IP HTTP with embedded Web pages via RJ-45 connector
- SNMP
- TELNET through TCP/IP
- FSK through TX IFL cable
- RS232/485 serial port
- Hand-held terminal



IBUC2 offers significant benefits:

- High performance in a compact, cost effective package
- Simple design and installation
- Simplified 1+1 configuration

New interfaces connect you to extensive M&C facilities for network management or local access. This powerful M&C enables:

- **Trouble-free commissioning** with easy, point-and-click installation/configuration
- Continuous **verification** of performance with time-stamped alarm history
- Simplified **monitoring** of terminal status

IBUC2 comes with a complete set of diagnostic tools including:

- 10 MHz input detector
- Input voltage and current monitoring
- Transmit L-band input level detector
- Transmit RF output level detector
- User configurable thresholds and alarms

Unique to the **IBUC** are internal AGC and ALC functions that satisfy demanding applications with stringent specifications.

IBUC2e

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Frequency range	RF	IF	SSB Phase Noise	External refer-	IBUC
Band 1 Std C	5850 to 6425 MHz	950 to 1525 MHz	10 Hz	-115 dBc/Hz	-54 dBc/Hz
Band 2 Palapa/STI	6425 to 6725 MHz	975 to 1275 MHz	100 Hz	-140 dBc/Hz	-79 dBc/Hz
Band 3 INSAT	6725 to 7025 MHz	1150 to 1450 MHz	1 kHz	-150 dBc/Hz	-89 dBc/Hz
Band 4 Ext. C	5850 to 6650 MHz	950 to 1750 MHz	10 kHz	-155 dBc/Hz	-94 dBc/Hz
Band 5 Full C	5850 to 6725 MHz	975 to 1850 MHz	100 kHz	n/a	-100 dBc/Hz
			1 MHz	n/a	-110 dBc/Hz
Input			External Reference (multiplexed on TX IFL)		
VSWR / Impedance	1.5:1 max / 50 Ohm		Frequency	10 MHz	
Input Connector	Type N female (50 Ohm)		Level	-12 to +5 dBm	
Input Connector options	Type F (75 Ohm), TNC (50 Ohm)		Internal Reference - optional		
Input power detector	-55 to -20 dBm		Local Oscillator Frequency		
Gain			Sense	Inverting	Non-inverting
Small Signal Gain (L-band to RF) with attenuator set to 0 dB			Band 1	7375 MHz	4900 MHz
5 W	68 dB min		Band 2	7700 MHz	n/a
10 W	71 dB min		Band 3	8175 MHz	n/a
15 W	73 dB min		Band 4	7600 MHz	4900 MHz
20 W	74 dB min		Band 5	7700 MHz	4900 MHz (IF 950-1825 MHz)
Attenuator range	30 dB variable in 0.1 dB steps		IBUC Power Supply		
Gain flatness	<u>Bands 1/2/3</u>	<u>Bands 4/5</u>	Voltage	5W, 10W	18 to 75 VDC
Full band	3 dB p-p max	4 dB p-p max		15W, 20W	48V ± 11V
36 MHz	1 dB p-p max	1.5 dB p-p max			DC via coax only
1 MHz	0.25 dB p-p	0.25 dB p-p	Power Consumption		
Gain variation over temperature			5 W	50 W	
Open loop	3 dB p-p max	4 dB p-p max	10 W	65 W	
With AGC	1 dB p-p max	1 dB p-p max	15 W	100 W	
			20 W	120 W	
RF Output			Monitor and Control		
Interface	CPR-137G or N(f)		Ethernet (HTTP, Telnet, SNMP) via RJ-45 connector,		
VSWR	1.5:1 max		RS232/485, Hand-held Terminal , MS-type connector,		
Rated output power	P _{1dB}		FSK multiplexed on TX IFL.		
5 W	+37 dBm min		Environmental		
10 W	+40 dBm min		Operating temperature		
15 W	+41.8 dBm min		-40°C to +60°C		
20 W	+43 dBm min		Relative humidity		
			100% condensing		
IMD3 (2 carriers, 3 dB TOBO)	-27 dBc max		Altitude		
Level stability with ALC	±0.5 dB		10,000 ft., (3,000 m) ASL		
Output power detector range	Rated power to -20 dB		Mechanical		
Power reading accuracy	± 1.0 dB max		5W,10W		
Spurious	In Band	-70 dBc	10.5 x 6 x 3.8 in.		
	Out of Band	Complies with EN 301 443 and MIL-STD 188-164B	9.3 lbs		
Harmonics	-50 dBc max		15W, 20W		
Output Noise Power Density			10.5 x 6 x 5.2 in.		
	TX < -83 dBm/Hz		10.8 lbs		
	RX < -145 dBm/Hz				

Specifications are subject to change without notice.

IBUC 2e C-Band Data Sheet 2/29/16



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