## **LBUC-Series**



Linearizer Technology Product Brief Rev 1

The **LBUC-Series** linearizer is a frontend mini-system used in conjunction with a TWTA, MPM, or SSPA amplifier to provide superior HPA linearity performance. It provides IF to RF frequency conversion, RF gain, predistortion, input and output level control, and RF output power to drive an amplifier to saturation. It typically provides a 4x power increase with multicarrier traffic and advanced digital modulation. The **LBUC-Series** is available at X-, Ka-, and Q- Satcom bands.

## **Typical Uplink Frequency Bands**

Frequency Range	IF Input	RF Output
	.950 – 1.45 GHz	7.90 – 8.40 GHz (X-Band)
	1.00 – 2.00 GHz	30.0 – 31.0 GHz (Ka-Band)
	7.10 – 9.10 GHz	43.5 – 45.5 GHz (Q-Band)

*multi-band BUCs and additional frequencies available	
General Performance	
Input Power Level for HPA Rated Power:	-20 dBm nom. (adjustable)
Output Power for HPA Saturation:	up to +20 dBm
Gain:	> 40 dB (typ.)
Gain Flatness:	< ± 0.5 dB over any 500 MHz
Gain Slope:	< 0.02 dB/MHz
Gain Stability:	< ± 1.0 dB, -20 to +85°C
User Gain Attenuator Range:	32 dB (typ.)
Control:	0 to X Volts or 8/9 Bit Digital
	(.25/.15 dB step)
Static Phase Shift to HPA Rated Power:	< ± 5 degrees
AM/PM Conversion to HPA Rated Power:	< 2 degrees/dB
Input and Output VSWR:	1.35:1
RF Interface Connectors:	SMA, 2.92 mm Female
DC Interface:	15 Pin Male D-Sub
Controller Interface:	Analog or I <sup>2</sup> C
DC Power:	+12 Volts, <1200 mA (typ.)

Model: LBUC-Sories

SN: XXXXXX XREV

Santa Survey

ARCOLT

RECOLT

REC

LBUC-Series 4.55" L x 4.30" W x 1.20" H (cm) 11.6 L x 10.92 W x 3.05 H

## **FEATURES/OPTIONS**

Compact Package

Multiple Interface Options

Analog, I<sup>2</sup>C

**Temperature Compensation** Extended Range -20 to +85°C

Analog or Digital User Attenuator 32 dB, 0-X Volts, 8/9 bit digital

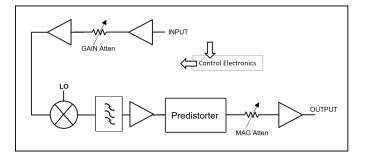
TTL MUTE Function
Phase Lock Alarm

Contact us for additional custom features.

## Typical Performance w/ TWTA or SSPA

>25 dBc @ 3 dB OPBO Intermodulation (C/I): >30 dBc @ ≥4 dB OPBO LO Leakage <-65 dBm Image Rejection > 60dBc SSB Phase Noise Offset -36 dBc/Hz 10 Hz 100 Hz -66 1 KHz -76 10 KHz -86 100 KHz -96

1 MHz



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