

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, pre-distortion, input and output level control, and RF output power to drive an amplifier to saturation. It typically provides a 4x power increase with multi-carrier 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 ² C
DC Power:	+12 Volts, <1200 mA (typ.)

Typical Performance w/ TWTA or SSPA

Intermodulation (C/I):	>25 dBc @ 3 dB OPBO >30 dBc @ ≥4 dB OPBO
LO Leakage	<-65 dBm
Image Rejection	> 60dBc
SSB Phase Noise	<u>Offset</u>
	10 Hz -36 dBc/Hz
	100 Hz -66
	1 KHz -76
	10 KHz -86
	100 KHz -96
	1 MHz -106



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, I²C

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.

