

## X Band Block Upconverter (BUC) 7.9 – 8.4GHz

**LW30-797810**

### TYPICAL APPLICATIONS

- SSPA/TWTA Power Amplifier systems
- Can be used in conjunction with Linwave power amplifiers

### PRODUCT FEATURES

- IESS 308 compliant
- Adjustable gain
- Temperature compensated
- Lock detect output
- Automatic internal/external reference detection and switching
- Integral high performance output filtering

### GENERAL DESCRIPTION

The LW30-797810 is a high performance BUC designed for use with external power amplifiers or integration into customers' systems. The design allows for flexibility in the customers' requirements with a number additional features being available.

Extended temperature range and harsh environment models are also available. Please contact factory for alternative connector and frequency options.



### ELECTRICAL CHARACTERISTICS - Operational $T_A = 25\text{ }^\circ\text{C}$ , 50 $\Omega$ System (unless otherwise noted)

PARAMETER	MIN	TYP	MAX	UNITS
RF Output Frequency	7.9		8.4	GHz
IF Input frequency	950		1450	MHz
Small signal gain	-1	1	+3	dB
Output power ( $P_{1dB}$ )	0			dBm
Third Order Intercept Point	+10			dBm
Input Return Loss		13		dB
Output Return Loss		14		dB
Noise Figure			18	dB
Gain Flatness (full band)	-1		+1	dB
Spurious Outputs (Signal related in band)		-60		dBc
Spurious Outputs (LO leakage)		-45		dBm
Frequency reference (internal or external on L band input)		10		MHz

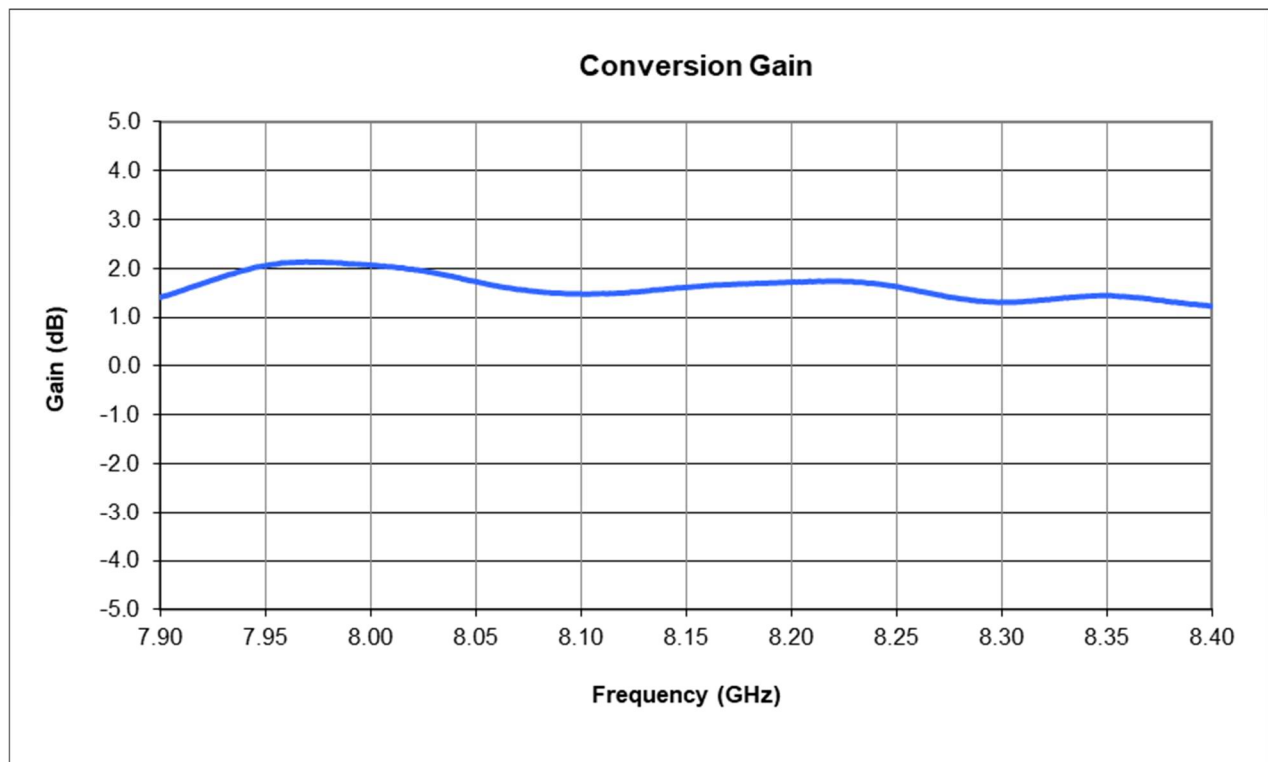
*Linwave reserves the right to make changes, without notice, in the products, including circuits, standard cells, and/or software, described or contained herein in order to improve design and/or performance.*

PARAMETER		MIN	TYP	MAX	UNITS
Phase Noise	100Hz offset from carrier			-61	dBc/Hz
	1kHz offset from carrier			-71	dBc/Hz
	10kHz offset from carrier			-81	dBc/Hz
	100kHz offset from carrier			-91	dBc/Hz
	1MHz offset from carrier			-91	dBc/Hz
Power Consumption +15V			700	mA	
Operating temperature range		-20		60	°C
Storage temperature range		-40		85	°C

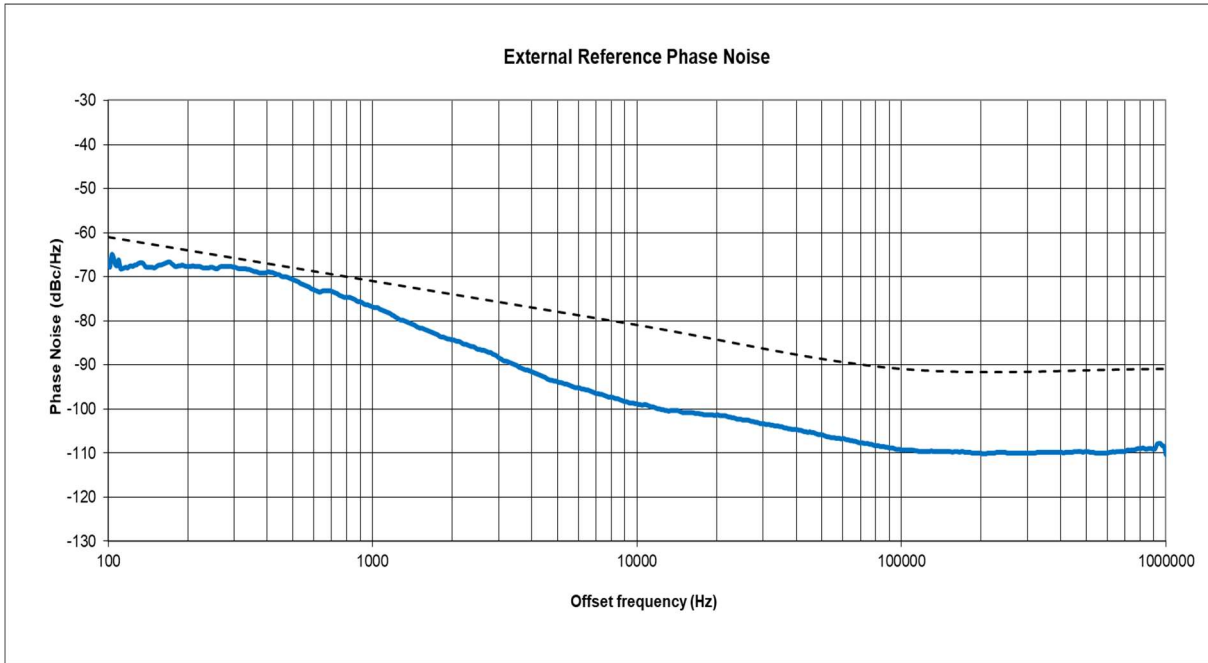
## MECHANICAL CHARACTERISTICS

PARAMETER	VALUE	UNITS
Dimensions (max)	135 x 82.5 x 27 (L x W x H) Mounting holes, 4 x $\varnothing$ 3.2mm through	mm
Weight (max)	550	g
IF/RF connectors	SMA female	-
Control/Power connector	9 pin D plug (male)	-
Cooling	Conduction cooled	-

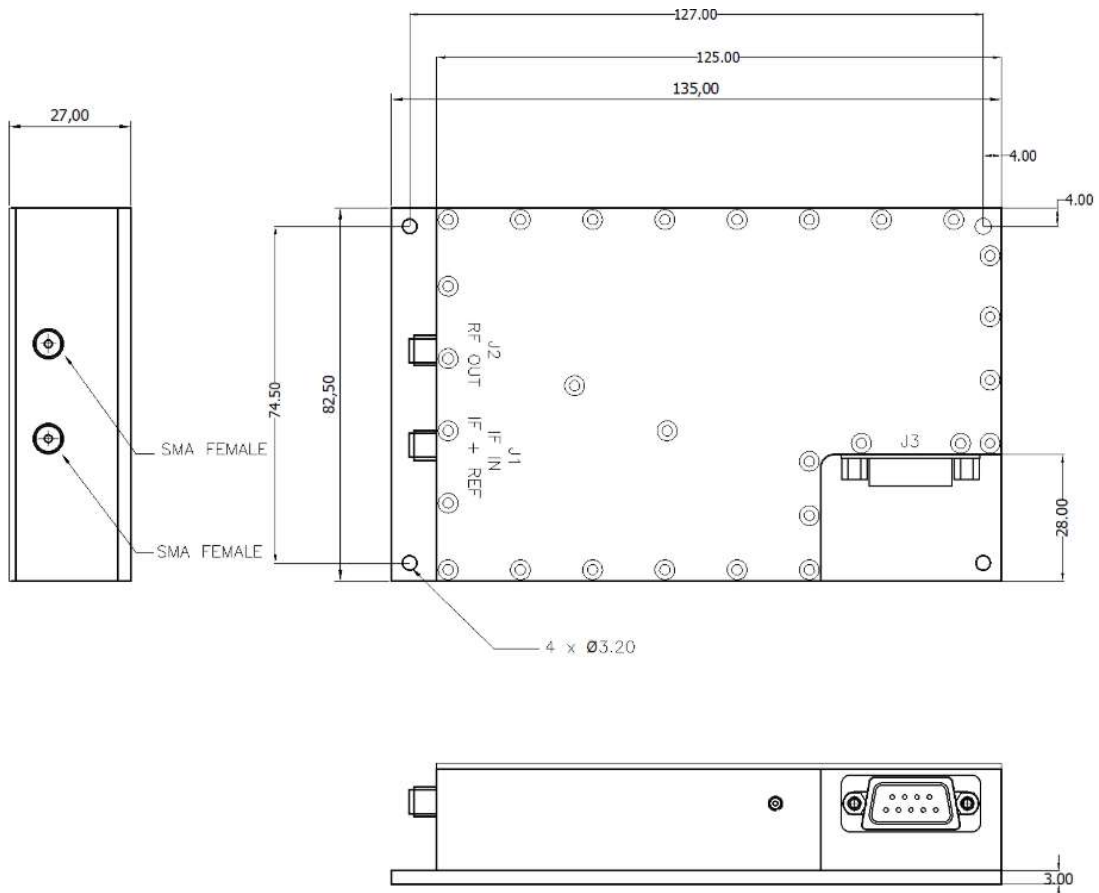
## PERFORMANCE DATA



*Linwave reserves the right to make changes, without notice, in the products, including circuits, standard cells, and/or software, described or contained herein in order to improve design and/or performance.*



## MECHANICAL OUTLINE



Linwave reserves the right to make changes, without notice, in the products, including circuits, standard cells, and/or software, described or contained herein in order to improve design and/or performance.