

Ka Band Block Upconverter (BUC) 14.0 to 14.5GHz, 16W

LW30-797808

TYPICAL APPLICATIONS

- Next generation Sat Comm Systems
- Airborne applications
- Man pack/Flyaway applications

PRODUCT FEATURES

- IESS 308/309 compliant
- Adjustable gain
- Temperature compensated
- GUI controlled (RS-422 protocol)
- Lock detect output
- Output power detector option
- Integrated output isolator

GENERAL DESCRIPTION

The LW30-797808 is a high performance power BUC with an integral driver and GaN power amplifier sections. 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 Ω System (unless otherwise noted)

PARAMETER	MIN	TYP	MAX	UNITS
IF Input frequency	950		1450	MHz
Output Frequency	14.0		14.5	GHz
Maximum Operating Power (MOP)		42		dBm
Conversion gain at MOP		65		dB
ACPR at MOP (BPSK, QPSK, 8PSK 10Msps, $\alpha=0.2$)			-20	dBc
Input Return Loss		13		dB
Output Return Loss (Integrated Isolator)		14		dB
Noise Figure (maximum gain)		10		dB
Gain ripple over frequency (fixed temp at MOP)			4	dB p-p
Gain ripple over temperature (fixed frequency at MOP)			3	dB p-p
Gain Control range		15		dB

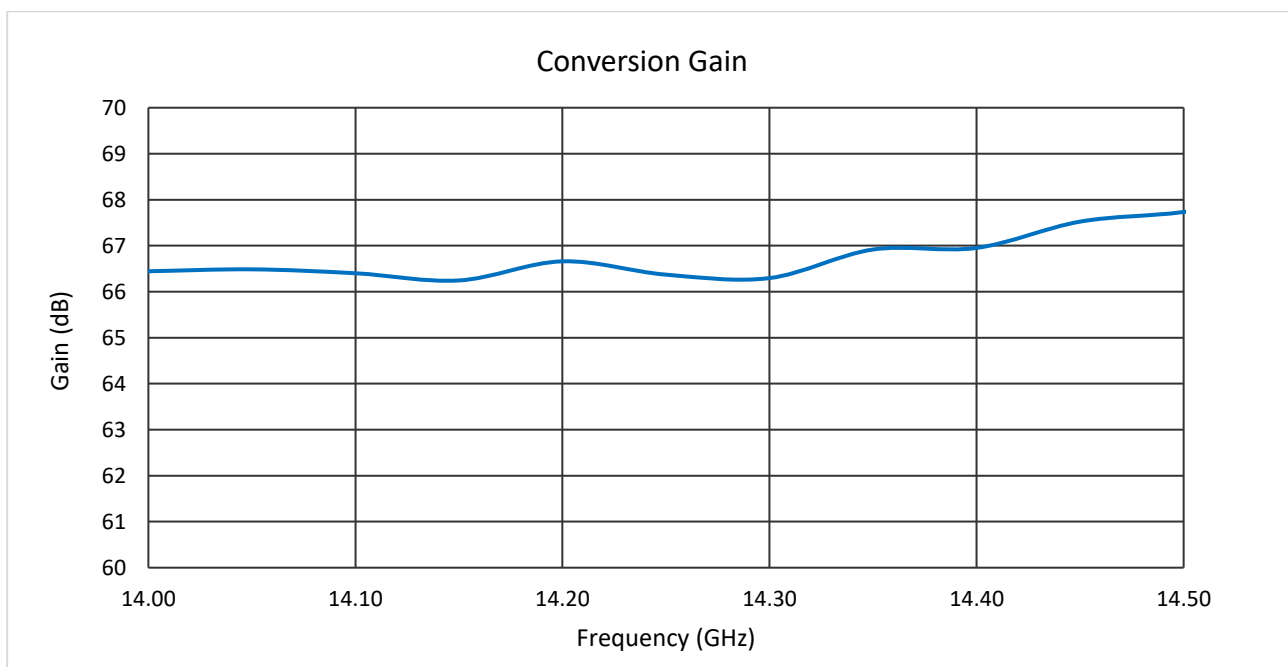
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PARAMETER	MIN	TYP	MAX	UNITS
Spurious Outputs (Signal related in band)		-60		dBc
Spurious Outputs (LO leakage)		-45		dBc
Frequency reference (external on L band input)		50		MHz
Phase Noise 100Hz offset from carrier			-50	dBc/Hz
1kHz offset from carrier			-75	dBc/Hz
10kHz offset from carrier			-85	dBc/Hz
100kHz offset from carrier			-95	dBc/Hz
1MHz offset from carrier			-105	dBc/Hz
10MHz offset from carrier			-112	dBc/Hz
Power Consumption at MOP (+28V supply) 75% TX duty cycle			120	W
Operating temperature range	-30		60	°C
Storage temperature range	-40		85	°C

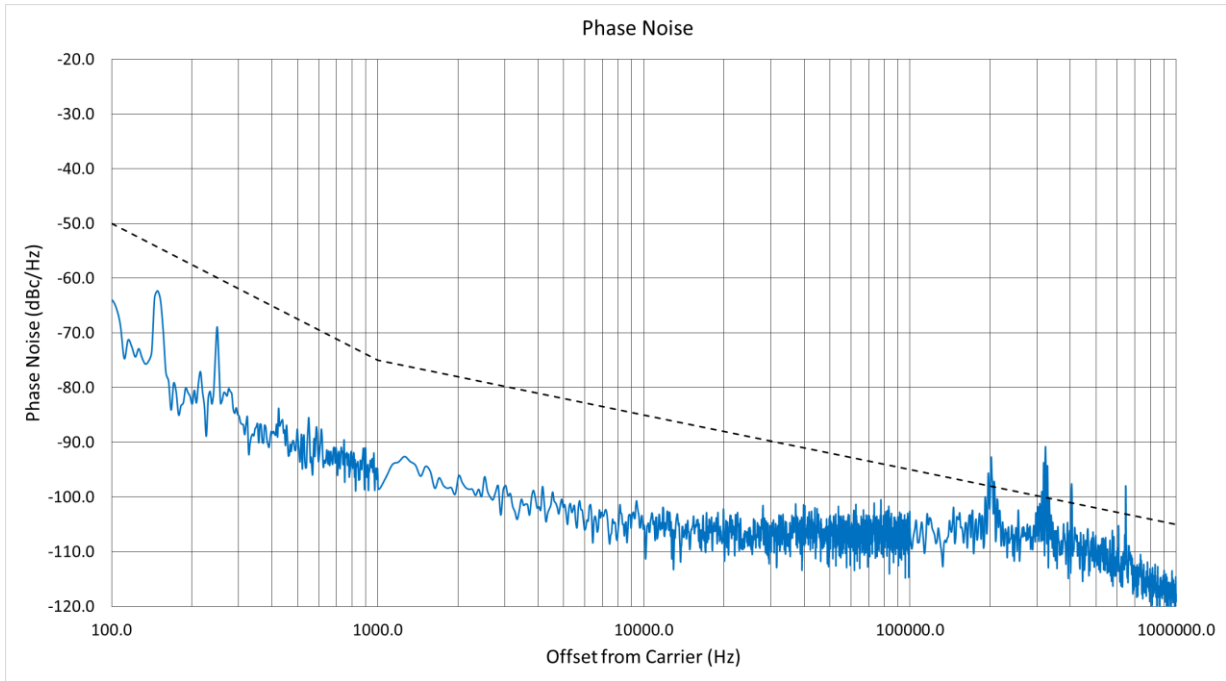
MECHANICAL CHARACTERISTICS

PARAMETER	VALUE	UNITS
Dimensions (typ)	170.5 x 123 x 25.5 (L x W x H) main BUC housing (Excluding mounting lugs)	mm
Weight (max)	1.0	kg
IF/RF connectors	IF - SMA female, RF – WR62 (WG18)	-
Control/Power connector	15 pin Micro D socket	-
Cooling	Conduction cooled through the baseplate	-

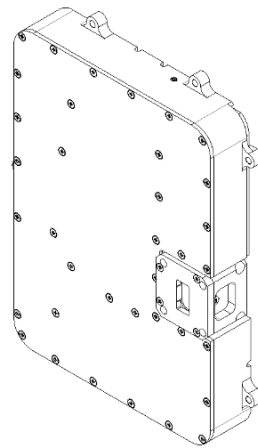
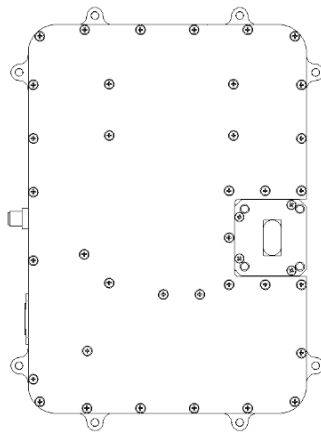
PERFORMANCE DATA



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MECHANICAL OUTLINE



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