

### PRODUCT DESCRIPTION

The LW30-797753 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 of additional features being available.

Extended operational temperature range (-55°C to +85°C) and harsh environment variants (DO-160) are also available. Please contact factory for alternative connector and frequency options.

### PRODUCT FEATURES

- IESS 308/309 compliant
- Adjustable gain
- Four output bands (1GHz)
- Temperature compensated
- GUI controlled (bespoke protocol)
- Integral output filtering
- iDirect OpenBMIP™ standard compatible

### TYPICAL APPLICATIONS

- Next generation SATCOM systems
- Manpack/flyaway applications

### OPTIONS

- RS 422, CANBUS, serial or custom control interface
- DO-160G, MIL-STD-461F, MIL-STD-810G compatible
- Custom mechanical outlines – hermetically sealed

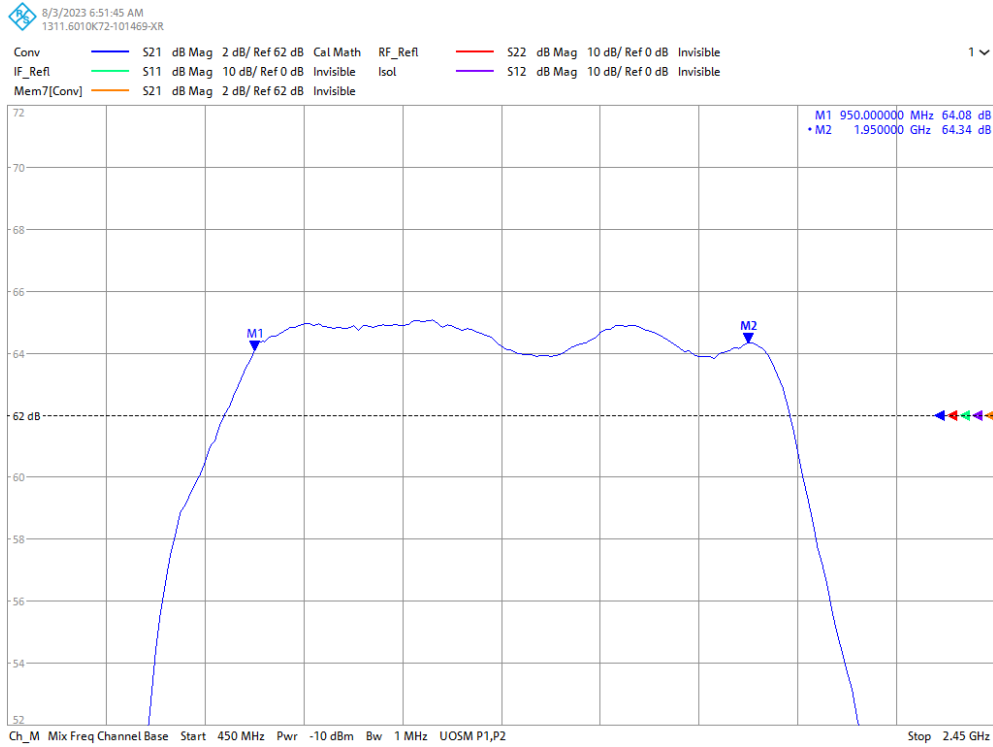
### ELECTRICAL SPECIFICATION:

Operational $T_A = 25^\circ\text{C}$ (unless otherwise noted)	
IF Input frequency (Band 1 and Band 2) (Band 3 and Band 4)	950 - 1950 MHz 1000 - 2000 MHz
Output Frequency Band 1	27.5 - 28.5 GHz
Output Frequency Band 2	28.25 - 29.25 GHz
Output Frequency Band 3	29.0 – 30.0 GHz
Output Frequency Band 4	30.0 – 31.0 GHz
Maximum Operating Power (MOP)	40 dBm
Conversion gain at MOP	63 dB
ACPR at MOP (BPSK, 1Msps, $\alpha=0.2$ , 1.2MHz integration bandwidth, 1.2MHz offset from centre frequency)	-20 dBc max.
Input Return Loss	14 dB
Output Return Loss (Integrated Isolator)	14 dB
Noise Figure (maximum gain)	8 dB

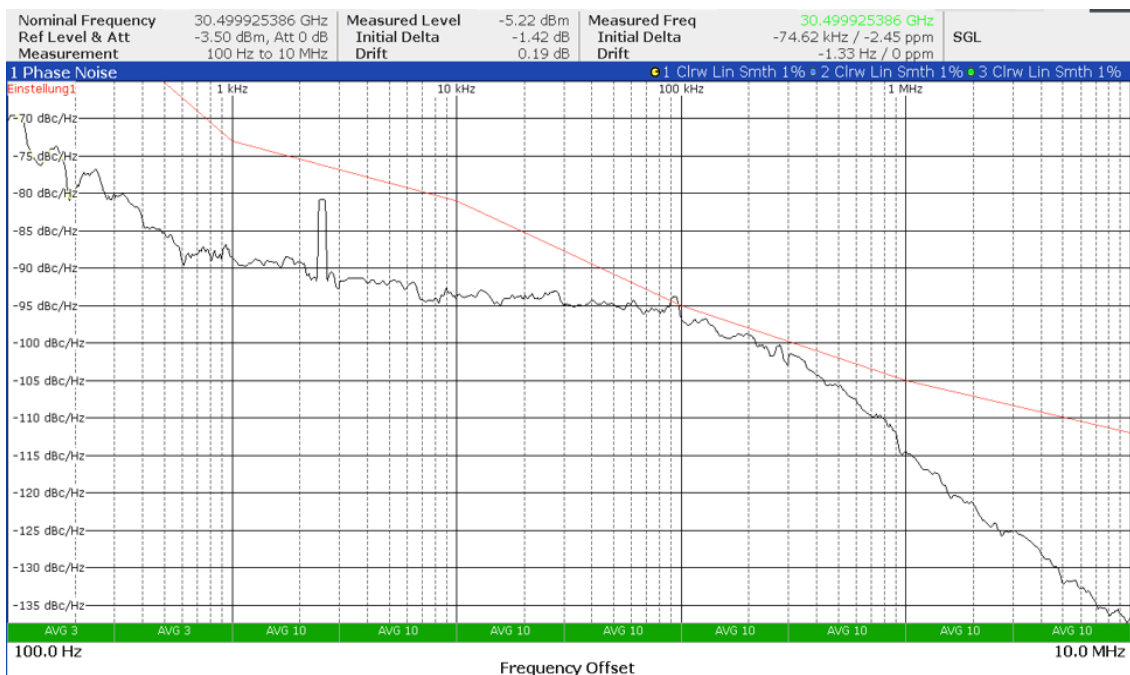
Operational $T_A = 25^\circ\text{C}$ (unless otherwise noted)	
Gain ripple over frequency (1GHz band, fixed temp at MOP)	4 dB pk-pk
Gain ripple over temperature (fixed frequency at MOP)	4 dB pk-pk
Gain Control Range (IF input attenuator)	20 dB
Spurious Outputs (Signal related in band)	-60 dBc
Spurious Outputs (LO leakage)	-45 dBc
Phase Noise 100Hz offset from carrier	-60 dBc/Hz
1kHz offset from carrier	-85 dBc/Hz
10kHz offset from carrier	-92 dBc/Hz
100kHz offset from carrier	-97 dBc/Hz
1MHz offset from carrier	-110 dBc/Hz
10MHz offset from carrier	-130 dBc/Hz
Power Consumption at MOP (+7V, +17V)	115W
Operating Temperature Range	-30 to +85°C
Storage Temperature Range	-40 to +85°C

### PERFORMANCE DATA

#### Band 1 SSG



#### Output Phase Noise



### MECHANICAL OUTLINE

Mechanical Characteristics:	
Dimensions (typ) including mounting lugs and WG isolator output	139 x 117 x 40 mm
Weight (max)	0.9 kg
IF/RF connectors	IF - SMA female, RF – WR28 (WG22)
Control/power connector	37 pin D plug/male
Cooling	Conduction cooled through the baseplate
Sealing	O-ring gasket sealed, non-hermetic

