

**Linwave Miniature Ku Band Power BUC**

LW30-110265

**Linwave are pleased to announce the launch of a family of Integrated BUCs.**

Ku band BUC with 25W of output power, the BUC offers high performance in a common footprint.

The BUC integrates Linwave's upconverter and SSPA technologies into a small compact module.

Comprehensive monitor & control and user definable options offer flexible solutions for mobile, fly away and fixed applications.

Custom frequency bands are also available for niche applications.

*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.*

Data sheet Iss 01, dated 06/01/16 DS00-110265-01, No. 2035

*For price, delivery and to place orders please contact  
Linwave Technology Ltd, Marlin Building, Sadler Road, Lincoln, LN6 3RS  
Company Reg No 4478971 (England)  
Phone: +44 (0) 1522 681811 Fax: +44 (0) 1522 681911  
Email [enquiries@linwave.co.uk](mailto:enquiries@linwave.co.uk) Website [www.linwave.co.uk](http://www.linwave.co.uk)  
© 2016 Linwave Technology*

# LW30-110265

| Parameter              | Limits        | Units      | Comments                                                   |
|------------------------|---------------|------------|------------------------------------------------------------|
| IF frequency           | 950 to 1700   | MHz        | 950 to 1450MHz<br>available as option                      |
| Output Frequency       | 13.75 to 14.5 | GHz        | 14.0 to 14.5GHz<br>available as option                     |
| LO frequency           | 12.8          | GHz        | 13.05GHz for 14.0 to 14.5GHz<br>option                     |
| Output Power $P_{sat}$ | 43.5          | dBm        | typ                                                        |
| Output Power $P_{1dB}$ | 43            | dBm        | typ                                                        |
| Small signal gain      | 50            | dB         | typ                                                        |
| Gain flatness          | $\pm 2$       | dB         | Max, full band                                             |
| Gain slope             | $\pm 0.25$    | dB         | Any 40MHz B/W                                              |
| Gain vs. Temperature   | $\pm 2$       | dB         | -30 to +60°C basplate temperature                          |
| Input Return loss      | 13            | dB         | max                                                        |
| Output return loss     | 13            | dB         | max                                                        |
| Noise Figure           | 20            | dB         | typ                                                        |
| IMD                    | -25           | dBc        | 3dB total back off from $P_{1dB}$ , 2<br>tones 10MHz apart |
| Spurious               |               |            |                                                            |
| In band signal related | -60           | dBc        | max                                                        |
| Non signal related     | -60           | dBc        | max                                                        |
| Local oscillator       | -50           | dBc        | max                                                        |
| Harmonics              | -40           | dBc        | 2nd harmonic at $P_{1dB}$                                  |
| Group delay            | 1.0           | ns (pk-pk) | Ripple                                                     |
| (any 40MHz)            | 0.01          | ns/MHz     | Linear                                                     |

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.

Data sheet Iss 01, dated 06/01/16 DS00-110265-01, No. 2035

For price, delivery and to place orders please contact  
 Linwave Technology Ltd, Marlin Building, Sadler Road, Lincoln, LN6 3RS  
 Company Reg No 4478971 (England)  
 Phone:+44 (0) 1522 681811 Fax:+44 (0) 1522 681911  
 Email [enquiries@linwave.co.uk](mailto:enquiries@linwave.co.uk) Website [www.linwave.co.uk](http://www.linwave.co.uk)  
 © 2016 Linwave Technology

|                                  |                                                               |                     |                                                                      |
|----------------------------------|---------------------------------------------------------------|---------------------|----------------------------------------------------------------------|
|                                  | 0.003                                                         | ns/MHz <sup>2</sup> | Parabolic                                                            |
| Reference frequency              | 10                                                            | MHz                 | Diplexed onto IF input                                               |
| Reference input power            | -5 to +5                                                      | dBm                 |                                                                      |
| Phase Noise (offset)             |                                                               |                     | Typical values.                                                      |
| 100Hz                            | -70                                                           | dBc/Hz              | Compliant to IESS308                                                 |
| 1kHz                             | -75                                                           | dBc/Hz              | Performance depends upon the quality of the external 10MHz reference |
| 10KHz                            | -90                                                           | dBc/Hz              |                                                                      |
| 100KHz                           | -110                                                          | dBc/Hz              |                                                                      |
| 1MHz                             | -118                                                          | dBc/Hz              |                                                                      |
| Input supply voltages            | +12                                                           | V                   | Adjustable to +10V                                                   |
|                                  | -12                                                           | V                   | 100mA max, gate supply                                               |
| Input power                      | 200                                                           | W                   | typ                                                                  |
| Dimensions                       | 190 x 90 x50                                                  | mm                  | +/- 1mm                                                              |
| Weight                           | 1.6                                                           | Kg                  | max                                                                  |
| M&C functions                    | TX enable/disable<br>Over temperature alarm (disables SSPA)   | Open = fault        | Open collector output, external pull up required.                    |
| Baseplate temperature monitoring | Output voltage = 1000mV + (20mV*t)<br>t= °C<br>(eg. 50°C =2V) | V                   | Output voltage proportional to baseplate temperature                 |

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.

Data sheet Iss 01, dated 06/01/16 DS00-110265-01, No. 2035

For price, delivery and to place orders please contact  
 Linwave Technology Ltd, Marlin Building, Sadler Road, Lincoln, LN6 3RS  
 Company Reg No 4478971 (England)  
 Phone:+44 (0) 1522 681811 Fax:+44 (0) 1522 681911  
 Email [enquiries@linwave.co.uk](mailto:enquiries@linwave.co.uk) Website [www.linwave.co.uk](http://www.linwave.co.uk)  
 © 2016 Linwave Technology