



# RS1Z19

## Full Ku-Band PLL VSAT LNB



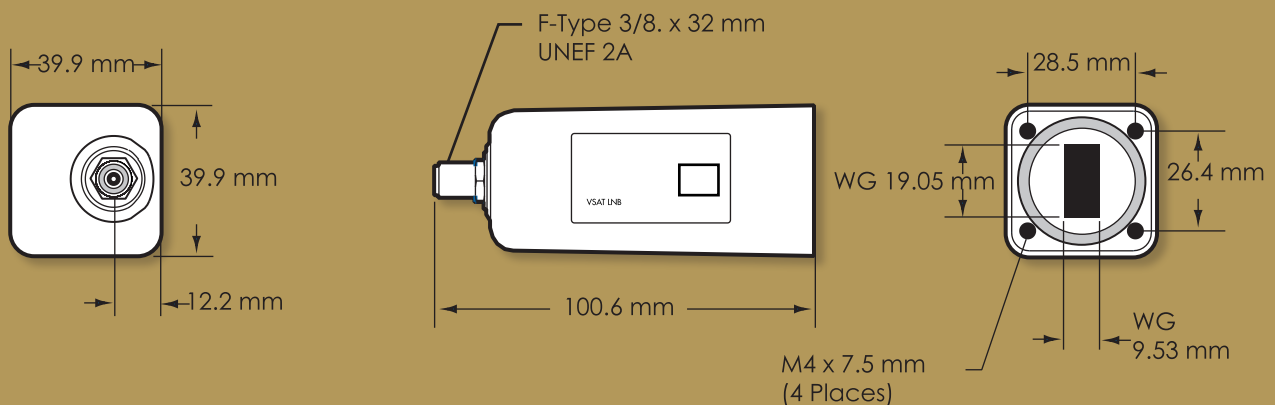
### RS1Z19

#### Ku-Band LNB

- Low Cost PLL LNB
- Full Ku-Band Frequency Range in Two Switchable Bands
- Band Switching with 22 kHz Tone
- PLL-Type Local Oscillator with Internal +/- 25 ppm Reference
- Input Transmit Reject Filtering
- Compact, Lightweight Form Factor
- O-ring, Hardware Included
- CE Compliant
- RoHS Compliant



### Dimensions



## SPECIFICATIONS

RS1Z19

Full Ku-Band PLL VSAT LNB

### Electrical Specifications

| Parameter  |                 | Minimum | Typical | Maximum | Unit   | Note                                 |
|--|-----------------|---------|---------|---------|--------|--------------------------------------|
| RF Input Frequency Range                           | Low Band        | 10.70   |         | 11.70   | GHz    |                                      |
|  | High Band       | 11.70   |         | 12.75   | GHz    |                                      |
| IF Output Frequency Range                          | Low Band        | 950     |         | 1950    | MHz    |                                      |
|  | High Band       | 1100    |         | 2150    | MHz    |                                      |
| Local Oscillator Frequency                         | Low Band        |         | 9.75    |         | MHz    | nominal                              |
|  | High Band       |         | 10.60   |         | MHz    |                                      |
| Local Oscillator Tolerance                         | Overall         |         |         | ± 25    | ppm    | From Nominal                         |
| Local Oscillator Integrated Phase Noise (SSB)      | @ 1 kHz         |         |         | -75     | dBc/Hz |                                      |
|  | @ 10 kHz        |         |         | -76     | dBc/Hz |                                      |
|  | @ 100 kHz       |         |         | -86     | dBc/Hz |                                      |
|  | @ 1 MHz         |         |         | -104    | dBc/Hz |                                      |
| Local Oscillator Integrated Phase Noise            | 1kHz – 10 MHz   |         | 1.6     | 2.0     | °      | DSB RMS phase jitter                 |
| Noise Figure @ 25° C                               | w/o OMT-TRF     |         | 0.8     | 1.1     | dB     |                                      |
| Conversion Gain                                    |                 | 52      | 57      | 63      | dB     |                                      |
| Tx Signal Immunity<br>(change relative to nominal) | Conversion Gain |         |         | 0.2     | dB     | With Tx signal from 13.75-14.5 GHz   |
|  | Noise Figure    |         |         | 0.2     | dB     | At -20 dBm on the input              |
| In-band Gain Variation                             | Overall         |         |         | 6       | dB     | Max – Min                            |
|  | Any 36 MHz      |         |         | 1.5     | dB     |                                      |
|  | Any 500 MHz     |         |         | 5.0     | dB     |                                      |
| Image Band Rejection                               |                 | 35      |         |         | dB     |                                      |
| IF Output IP3                                      |                 | +10     |         |         | dBm    | Carrier Spacing > 5 MHz              |
| IF Output P1dB                                     |                 | 3       |         |         | dBm    |                                      |
| IF Output Spurious                                 | In-band         |         |         | -40     | dBc    | @ IF O/P carrier = -15 dBm in 10 kHz |
|  | Out-of-Band     |         |         | -25     | dBm    |                                      |
| IF Output Impedance                                |                 |         | 75      |         | Ohm    |                                      |
| IF Output Return Loss                              |                 | 10      |         |         | dB     |                                      |
| IF Output Connector                                |                 |         |         |         |        | F-Type Female                        |
| Control Tone Frequency                             |                 | 18      |         | 26      | kHz    | Per EN 61319-1                       |
| Control Tone Level                                 | Low Band        | 0       |         | 100     | mV     | pp                                   |
|  | High Band       | 400     | 600     | 800     | mV     |                                      |
| Supply Voltage                                     |                 | 10      |         | 24      | V      |                                      |
| Supply Current                                     |                 |         |         | 100     | mA     |                                      |
| RF Input Connector                                 |                 |         |         |         |        | WR-75 Flange, grooved                |

### General Specifications

| Parameter                    |  | Minimum | Typical | Maximum | Unit | Note         |
|------------------------------|--|---------|---------|---------|------|--------------|
| Weight                       |  |         |         | 170     | g    |              |
| Operating Temperature        |  | -40     |         | +55     | °C   |              |
| Moisture/Humidity Protection |  |         | IP67    |         |      | Per EN 60529 |



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SKTSE-003.2  
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