

KU-BAND EXTERNAL REFERENCE PLL LNB

MODEL PLV814xER

ELECTRICAL SPECIFICATIONS

Rev. B

| No | Item | Specification | | | | Remarks |
|-----|------------------------------------|---|--------------------|--------------------|--------------------|---------|
| | SPC Model Number | PLV814AER | PLV814BER | PLV814CER | PLV814DER | |
| -1 | RF Input Frequency | 11.70 to 12.20 GHz | 12.25 to 12.75 GHz | 10.95 to 11.70 GHz | 12.20 to 12.70 GHz | |
| -2 | IF Output Frequency | 950 to 1450 MHz | 950 to 1450 MHz | 950 to 1700 MHz | 950 to 1450 MHz | |
| -3 | Local Frequency | 10.75 GHz | 11.30 GHz | 10.00 GHz | 11.25 GHz | |
| -4 | Local Frequency Stability | Phase locked to external reference. | | | | |
| -5 | Requirement for External Reference | Supplied through the center conductor of IF cable. [Frequency] 10MHz (sine wave) [Input Level] 0 to -10dBm @75 Ω at IF output [Phase Noise] -134dBc/Hz max. @100Hz -144dBc/Hz max. @1KHz -154dBc/Hz max. @10KHz -154dBc/Hz max. @100KHz | | | | |
| -6 | Local Phase Noise | -65dBc/Hz max. @100Hz -75 dBc/Hz max. @1kHz -85 dBc/Hz max. @10kHz -95 dBc/Hz max. @100kHz -105 dBc/Hz max. @1MHz | | | | |
| -7 | Local Oscillator Leakage | -60 dBm max. @ Waveguide input. | | | | |
| -8 | Noise Figure | 1.3 dB max. @+25°C | | | | |
| -9 | Gain | 55 to 70 dB @ Over frequency & temperature | | | | |
| -10 | Gain Ripple | 1dBp-p max per 27 MHz segment across the operating frequency band @+25°C | | | | |
| -11 | Input VSWR | 2.5: 1typical (w/o isolator) | | | | |
| -12 | Output VSWR | 2.0:1 typical @ 75 Ω | | | | |
| -13 | Image Rejection | 45 dB min. | | | | |
| -14 | 1 dB Gain Compression Point | +0 dBm min. | | | | |
| -15 | Spurious in Rx Band | -124dBm max. @Waveguide input excluding Rx out ±1 MHz. Measure at RF Input power -85dBm | | | | |
| -16 | RF Input Stability | Conditionally stable (No oscillation) Source input VSWR < 3.0:1 at any phase angle. (w/o isolator) | | | | |
| -17 | Input Voltage | +15 to +24 V @ Supplied through center conductor of the IF cable. | | | | |
| -18 | Current | 500 mA max. | | | | |
| -19 | Intercept Point | +10 dBm min. | | | | |
| -20 | IF Output Stability | No oscillation when IF output is shorten at any phase angle or it's electrical equivalent conditions of termination. | | | | |

MECHANICAL SPECIFICATIONS

| No | Item | Specification | Remarks |
|----|------------------|---|---------|
| -1 | Input Interface | WR-75, Waterproof - Mated with matching flange and O-ring | |
| -2 | Output Interface | F-Type, 75 Ω, female, Waterproof Fit center conductor 0.028 to 0.045 "dia. | |
| -3 | Size | 150(L) mm x 70(W) mm x 40(H) mm max. | |
| -4 | Weight | approx. 500 g | |
| -5 | Paint/Color | White: Munsell N9.5 semi-gloss | |
| -6 | Label | SPC Label unless other specified | |

ENVIRONMENTAL SPECIFICATIONS

The unit will be sealed and will meet the best commercial environmental specifications for exposure to precipitation, water, sand, salt, dust and sun, etc.

| No | Item | Specification | Remarks |
|----|-----------------------|---|---------|
| -1 | Operating Temperature | -40°C to +60°C | |
| -2 | Storage Temperature | -40°C to +80°C | |
| -3 | Thermal Gradient | -40°C/Hour | |
| -4 | Relative Humidity | Up to 100%, condensation and frost | |
| -5 | Vibration | 5G (f: 50Hz, T: 5min, Direction: X,Y,Z) | |
| -6 | Shock | 15G (Direction: X,Y,Z) | |
| -7 | Altitude | Up to 10,000 feet @Operating | |