



## X-Band Internal Reference PLL LNB

Model : SPCR4300AN

### ELECTRICAL SPECIFICATIONS

| NO. | ITEM                           | SPECIFICATIONS                                                                                       |
|-----|--------------------------------|------------------------------------------------------------------------------------------------------|
| -1  | RF Input Frequency             | 7.25 to 7.75GHz                                                                                      |
| -2  | IF Output Frequency            | 950 to 1450MHz                                                                                       |
| -3  | Local Frequency                | 6.3GHz                                                                                               |
| -4  | Local Frequency Initial Offset | ±6.3KHz max. @+23°C                                                                                  |
| -5  | Local Frequency Stability      | ±12.5KHz max. @over temp.                                                                            |
| -6  | Local Phase Noise              | -75dBc/Hz max. @ 1KHz<br>-85dBc/Hz max. @ 10KHz<br>-95dBc/Hz max. @ 100KHz<br>-105dBc/Hz max. @ 1MHz |
| -6  | Local Leakage                  | -60dBm max at waveguide flange.                                                                      |
| -7  | Noise Figure                   | 0.7dB typ. @+23°C                                                                                    |
| -8  | Gain                           | 62dB±4dB @Over temp. and freq.                                                                       |
| -9  | Gain Flatness                  | ±2.0dB max. @Over band                                                                               |
| -10 | Amplitutde Response            | ± 1.5dB max. @ over any 120MHz band<br>± 0.5dB max. @ over any 10MHz band                            |
| -11 | Gain Stability                 | ±1.0dB max. @Over a 24hr at +25°C.                                                                   |
| -12 | Input VSWR                     | 2.5:1 max.                                                                                           |
| -13 | Output VSWR                    | 2.0:1 max.                                                                                           |
| -14 | Image Rejection                | -60dBc max.                                                                                          |
| -15 | P1dB                           | +15dBm min.                                                                                          |
| -16 | Signal Independent Spurious    | -60dBm max. @RX-band                                                                                 |
| -17 | Signal Related Spurious        | -65dBc max. @0dBm output, RX-band                                                                    |
| -18 | Densense level                 | -40dBm, 7.9 - 8.4GHz<br>@No more than 0.1dB of noise figure degradation                              |
| -19 | Overdrive                      | -20dBm @Non-damaging                                                                                 |
| -20 | Input DC Power                 | +15 to +24VDC, 500mA<br>@ Multiplexed on a single coaxial connector with the IF.                     |
| -21 | Input Interface                | WR-112 waveguide, FPBR-84 flange                                                                     |
| -22 | Output Interface               | 50Ω, N-type female coaxial connector.                                                                |

### MECHANICAL SPECIFICATIONS

| NO. | ITEM   | SPECIFICATIONS                  |
|-----|--------|---------------------------------|
| -1  | Size   | (L) 113mm x (W) 70mm x (H) 55mm |
| -2  | Weight | approx. 550g                    |
| -3  | Color  | White, Munsel N9.5, semigloss   |

### ENVIRONMENTAL SPECIFICATIONS

| NO. | ITEM                        | SPECIFICATIONS             |
|-----|-----------------------------|----------------------------|
| -1  | Operating Temperature       | -40°C to +60°C             |
| -2  | Operating Altitude          | 10,000 ft ASL              |
| -3  | Operating Relative Humidity | 100%, condensing           |
| -4  | Non-operating Temperature   | -50°C to +70°C             |
| -5  | Non-operating Altitude      | 50,000 ft. ASL             |
| -6  | F Shock                     | 20g, 11ms, half sine       |
| -7  | Vibration                   | MIL-STD-810E, method 514-4 |

