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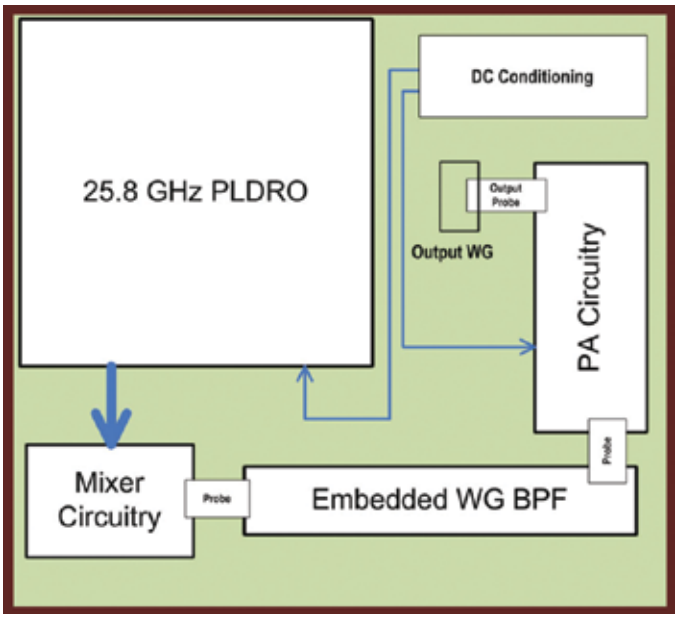
SCU-27012720-01
Ka-band Integrated Transmitter Assembly

Description

Model SCU-27012720-01 is an Integrated Transmitter Assembly (ITA) designed for a Ka band communication system with a target data rate of 1 Mbps to 50 Mbps for nano-satellite spaceflight use. It is essentially a single-side-band (SSB) up-converter, which up-converts a QPSK modulated 1000 MHz IF signal on the top of an internal 25.8 GHz local oscillator signal and then send the 26.8 GHz RF signal to an external circular horn antenna after amplifying it to half watt level. This ITA is to provide a pure-spectrum up-converted USB signal and an up to 27 dBm linear operation range.



Features

- Highly integrated compact module
- High conversion efficiency & quality spectrum
- Rugged design

Specifications

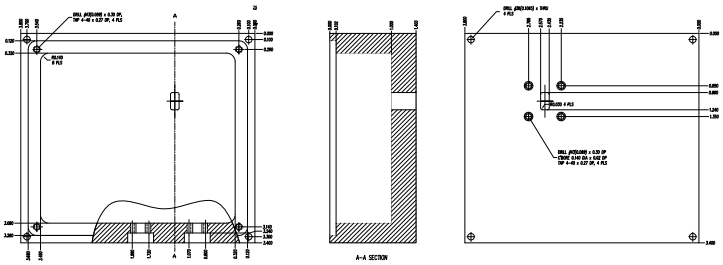
Freq: 26.8 GHz (nom) ± 5 PPM at 20 °C
Freq temperature coe: ≤ 0.5 PPM/°C
Transmitter power: +27 dBm = ½ watt
Spectrum regrowth (linearity): Suitable for QPSK modulation with a Nyquist roll-off of between 0.2 and 0.35.
2nd Harmonic: ≤ -50 dBc
3rd Harmonic & spurious: ≤ -60 dBc
Package outline: 3.4" X 3.8" X 1.3"
Unregulated input supply voltage: 8.0 V
Supply current to ITA: < 1.95 A (maximum)
Total ITA power: 12.0 Watts (maximum)
Operating temperature: -25°C to +65°C
Storage temperature: -40°C to +85°C
Vacuum operation: < 1.0 x 10E-6 torr

Applications

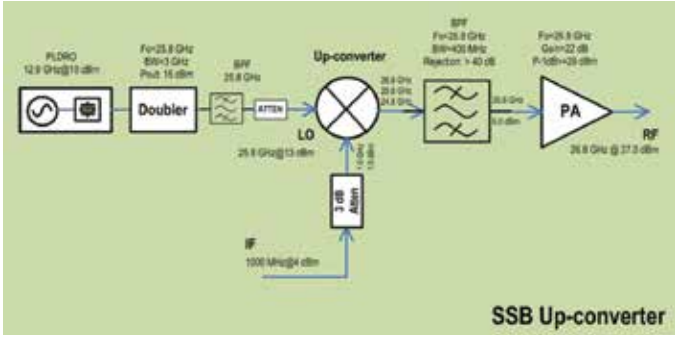
- SATCOM
- Point-to-point communication
- EW system

Outline

Dimensions are in inches



ITA Block Diagram



This is a preliminary datasheet. Specs and outline may change in the final offer.