

C-Band 3020XPT / 3050XPT

Inverted Spectrum Transmitter

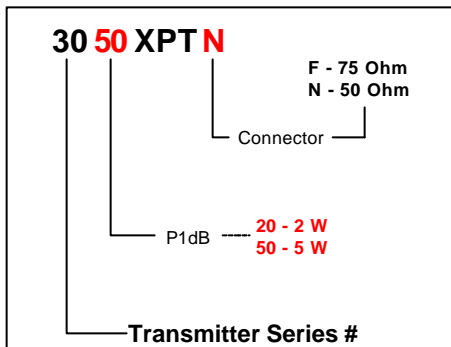


Norsat C-band transmitters offer state-of-the-art performance and reliability in a small package.

This product is ideal for demanding VSAT applications, such as:

- Point-of-Sale and Inventory Control
- Information/Data Distribution and Access
- Telecommuting and Tele-Education
- Portable, Monitoring and Emergency Communications
- DVB Network return paths

How to Order a 3000XPT Series Transmitter



Norsat Advantages

- Small package for low-cost, direct-to-feed mounting
- 2w, 5w minimum output power under all operating conditions for reliable uplink performance
- Power efficient for remote site applications
- Low in-band noise emissions for up to 100 times improved system capacity
- Single cable L-Band Interface with 10 MHz reference and 15 - 24 VDC power supply for simple installation
- Temperature compensated gain control for constant performance over dynamic conditions



Norsat 3020XPT / 3050XPT Transmitter Specifications

SPECIFICATIONS AVAILABLE – based on unit ordered

Input Frequency Range

- 950 to 1525 MHz

Input Impedance

- N-Connector: 50 Ohms
- F-Connector: 75 Ohms

Input VSWR

- 2 :1 (Return loss=10 dB)

Output Frequency Range

- 5.850 to 6.425 GHz

Output Power P_{RATED}

- 33 (2w), 37 (5w) dBm minimum

Gain

- 53 (2W), 57 (5W) dB minimum
- 63 (2W), 67 (5W) dB maximum

Gain Flatness

- = 5.0 dB p-p over the 575 MHz band
- = 2.0 dB p-p over any 36 MHz

Gain Variation over Temperature

- = 5.0 dB p-p over full range
- = 2.0 dB p-p over any 40°C

Local Oscillator Frequency

- 7.375 GHz

Spectral Inversion

- Inverting

External Reference Signal Frequency

- 10 MHz

External Reference Level

- -5 to +5 dBm Sine Wave

Recommended 10 MHz External Reference Phase Noise

- -135 dBc/Hz at 100 Hz
- -140 dBc/Hz at 1 kHz
- -150 dBc/Hz at 10 kHz
- -150 dBc/Hz at 100 kHz

Phase Noise (SSB) Maximum

- -66 dBc/Hz at 100 Hz
- -75 dBc/Hz at 1 kHz
- -83 dBc/Hz at 10 kHz
- -96 dBc/Hz at 100 kHz

Spurious

- **In Band (5.85 – 6.425 GHz)**
 - = -50 dBc (IF ON) @ P1dB
 - = -20 dBm (IF OFF)
- **In Receive Band (3.625 – 4.25 GHz)**
 - = -70 dBc (IF ON) @ P1dB
 - = -95 dBm (IF OFF)
- **Out of Band**
 - = -50 dBc (IF ON) @ P1dB
 - = -20 dBm (IF OFF)
- **LO Leakage**
 - = -30 dBm

Control and Monitoring Functions

No DC voltage shall be applied to the power amplifier when any of the following occurs:

- On loss of phase lock of the local oscillator
- On loss of the 10 MHz Frequency Reference signal
- On power up until the LO is phase locked. An indication of this condition is a reduction of the power consumption of the Transmitter to below 6W

Input Connector

- Type "N" (Female)
- Type "F" (Female)

Output Waveguide

- CPR-137G grooved waveguide flange

Size

- 3020XPT: 150mm x 300mm x 58mm
- 3050XPT: 170mm x 300mm x 58mm

Mass

- 3020XPT: 3.0 kg
- 3050XPT: 3.5 kg

Operating Temperature

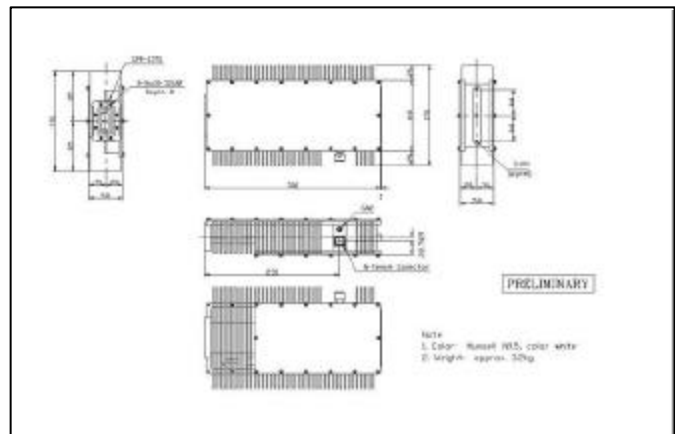
- -40 to +55°C

DC Power

- +15 to +24 VDC

Power Consumption

- 3020XPT: 40W
- 3050XPT: 60W



3020XPTN Drawings