



Ku-Band 1220XRT / 1240XRT

Non-Inverted Spectrum Transmitter

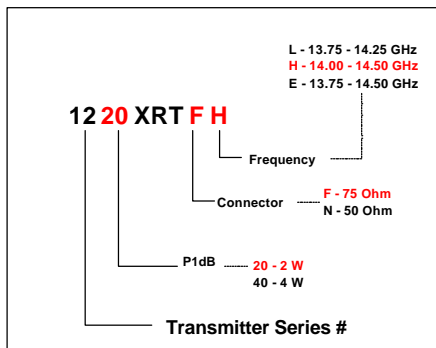


Norsat Ku-band transmitters offer state-of-the-art performance and reliability in a small, lightweight, package.

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 1200XRT Series Transmitter



Norsat Advantages

- Small, lightweight package for low-cost, direct-to-feed mounting
- 33 (2w), 36 (4w) dBm 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 14.5 - 24 VDC power supply for simple installation
- Next generation single RF board design and advanced MMICs for greater reliability
- Temperature compensated gain control for constant performance over dynamic conditions

Norsat 1220XRT / 1240XRT Transmitter Specifications

SPECIFICATIONS AVAILABLE – based on unit ordered

Input Frequency Range

- 0.95 to 1.45 GHz
- 0.95 to 1.70 GHz (Extended Band)

Input Impedance

- 50 Ohms – N connector (Optional Product)
- 75 Ohms – F connector (Standard Product)

Input VSWR

- 2 : 1

Output Frequency Ranges

- 13.75 to 14.25 GHz – L (Optional Product)
- 14.00 to 14.50 GHz – H (Standard Product)
- 13.75 to 14.50 GHz – E (Optional Product)

Output Power

- 1200XRT (P1dB) – 33,36 dBm minimum
- 1200XRT (saturated) – 33.7,36.7 dBm Minimum

Nominal Gain

- 50 (2W), 60 (4W) dB minimum
- 53 (2W), 63 (4W) dB maximum

Gain Stability over temperature

- = 4 dB p-p at any constant frequency

Gain Stability in-band at any constant temperature

- = 1.5 dB p-p in any 54 MHz band
- = 5 dB p-p over full 500 MHz band

Local Oscillator Frequency

- 12.05 GHz – L
- 13.05 GHz – H
- 12.05 GHz – E

Spectral Inversion

- Non-Inverting

External Reference Signal Frequency

- 10 MHz

External Reference Level

- -5 to + 5 dBm

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

Spurious

- In Band (320KHz) = -40dBc
- In Band Full Span = -23 dBm
- Out of Band (3GHz Span) = -45 dBm
- In Rx Band = -153dBm/Hz

Phase Noise (SSB) Maximum

- = -30 dBc/Hz at 10 Hz
- = -60 dBc/Hz at 100 Hz
- = -70 dBc/Hz at 1 kHz
- = -80 dBc/Hz at 10 kHz
- = -90 dBc/Hz at 100 kHz

In Band Noise Emissions SSPA ON

- = -90 dBm/Hz

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 Options

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

Output Waveguide

- WR-75 (Isolator)

Size

- 2W – 152mm x 130mm x 42mm
- 4W – 220mm x 181mm x 50mm

Mass

- 2W – 1.8 kg
- 4W – 2.5 kg

Operating Temperature

- -40 to +55 degrees Celsius

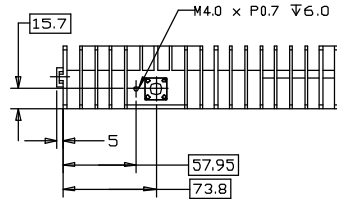
DC Power

- 15 to 24 VDC

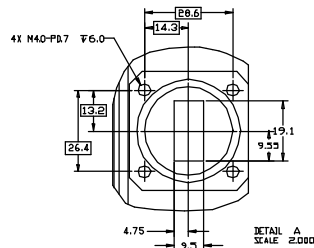
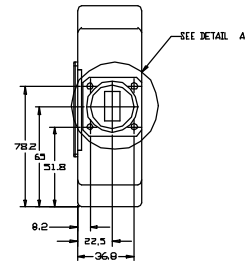
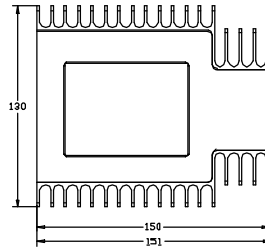
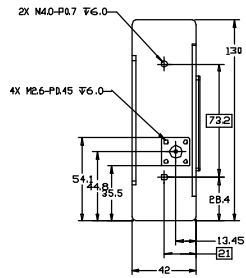
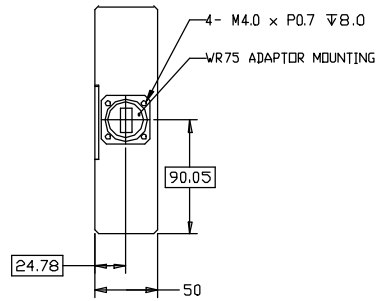
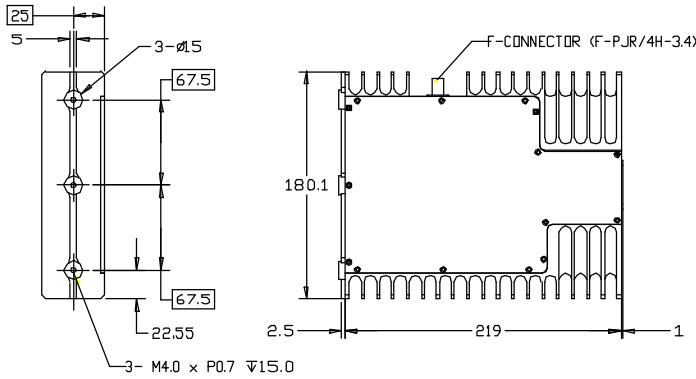
Power Consumption

- = 26 W (2W)
- = 60 W (4W)

Norsat 1200XRT Series Transmitter Specifications



**1240 XRT FH
Mechanical diagram**



**1220 XRT FH
Mechanical diagram**