Bobcat 40X

40W X-band GaN SATCOM Block Upconverter

**POWERFUL:** 20W linear power (single carrier)

**EFFICIENT:** 120W DC power draw at linear power

**COMPACT:** 5.3 lbs in 116 cu inch package

**RUGGED:** -40C to +60C, MIL-STD-810 environment

**FLEXIBLE:** Interchangeable with Ka- and Ku-band Bobcats

The smallest, most rugged X-band Block Upconverter to provide 20W of linear power for satcom uplinks.

High efficiency GaN solid-state design enables big power from a box while still handling the toughest environments.

If you need a sleek, powerful BUC to speed up your compact terminal - you need a Bobcat™.

Go to [xicomtech.com](http://xicomtech.com) to see our interchangeable X-, Ku- and Ka-band Bobcat product line for solutions across the spectrum.
Bobcat 40X
40W X-band GaN SATCOM BUC

**Frequency and Input Levels**

- RF Output Frequency: 7.9 to 8.4 GHz (other options available)
- IF Input Frequency: 950 to 1450 MHz
- Input Level, No Damage: +10 dBm max
- LO Reference Frequency: External 10 MHz
- LO Reference Level: 0 dBm ± 5 dB
- IF/REF Input Impedance: 50 ohms

**Output RF Power and Linearity**

- Eq. Saturated Power, \( P_{\text{SAT}} \): 46 dBm (40W)
- Maximum CW Power, \( P_{\text{MAX}} \): 45 dBm (32W)
- Linear Power, \( P_{\text{LIN}} \) (min): 43 dBm (20W)
- Spectral Regrowth @ \( P_{\text{LIN}} \): 30 dBc max @ (QPSK, OQPSK, 5.0 SR, alpha=0.2)
- Intermodulation Products @ \( P_{\text{LIN}} \): -25 dBc max wrt sum of 2 equal carriers
- AM to PM Conversion @ \( P_{\text{LIN}} \): 2.0°/dB max

**Phase Noise**

- Phase Noise (max):
  - 100 Hz: -63 dBc/Hz
  - 1 kHz: -73 dBc/Hz
  - 10 kHz: -83 dBc/Hz
  - 100 kHz: -93 dBc/Hz
  - 1 MHz: -103 dBc/Hz
- Reference Phase Noise (max):
  - 10 Hz: -125 dBc/Hz
  - 100 Hz: -155 dBc/Hz
  - 1 kHz: -165 dBc/Hz

**Phase Linearity and VSWR**

- Transmit Phase Linearity up to \( P_{\text{LIN}} \):
  - ±0.2 radian over any 2 MHz
  - ±0.4 radian over any 36 MHz
  - ±0.5 radian over any 72 MHz
  - ±0.6 radian over any 90 MHz
  - ±0.7 radian over any 120 MHz
- Input VSWR: 1.5:1
- Output VSWR: 1.3:1

**GAIN**

- Small Signal (typical): 55 dB ±5 dB
- Gain Attenuation Range: 20 dB in 0.1 dB steps
- Gain Variation (over 40 MHz): 1.0 dB p-p max
- Gain Variation (over full band): 3.0 dB p-p max
- Gain Slope (max): 0.04 dB/MHz
- Gain Stability, over 24 hours: 0.5 dB p-p max
- Gain Variation over Temp: 4.0 dB p-p max

**Noise and Spurious**

- Noise Power Transmit Band: -76 dBW/4 kHz
- Noise Power Receive Band: -76 dBW/4 kHz
- AC Line Spurious:
  - sum of all spurs: -30 dBc
  - single sideband sum: -36 dBc
- Harmonics: -60 dBc
- Output Spurious @ \( P_{\text{LIN}} \) (excludes 1 MHz band): -60 dBc

**Prime Power/Environment/Interfaces**

- 22-56 VDC Prime Power: 120W @ \( P_{\text{LIN}} \)
- Operating Temp Range: -40° to +60°C
- Non-Operating Temp Range: -50° to +70°C
- Altitude (max): 12,000 ft. MSL
- Humidity: 100% condensing
- Shock/Vibration: Normal transportation
- M&C Interface: Ethernet or Serial Rs-232 (SNMP with v3 Option)

**Weight and Dimensions**

- Weight: 5.3 lb (2.4 kg)
- Dimensions: 3.9” x 5.1” x 5.8” (9.91cm x 12.95cm x 14.73cm)

For additional information visit: [www.xicomtech.com](http://www.xicomtech.com)
email: sales@xicomtech.com • Phone: +1.408.213.3000

---