Bobcat 32Ka

32W Ka-band GaN SATCOM Block Upconverter

**POWERFUL:** 16W linear power (single carrier)

**EFFICIENT:** 160W DC power draw at linear power

**COMPACT:** 4.5 lbs in 110 cu inch package

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

**FLEXIBLE:** Interchangeable with X- and Ku-band Bobcats, Dual-band 29-30/30-31GHz option

The smallest, most rugged Ka-band Block Upconverter to provide 16W 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.
**Frequency and Input Levels**

RF Output Frequency 30.0 to 31.0 GHz  
(Other options available)

IF Input Frequency 1000 to 2000 MHz

Input Level, No Damage +10 dBm max

LO Reference Frequency External 10 MHz

LO Reference Level 0 dBm ± 5 dB

IF/REF Input Impedence 50 ohms

**Output RF Power and Linearity**

Eq. Saturated Power, \( P_{\text{SAT}} \) 45 dBm (32W)

Maximum CW Power, \( P_{\text{MAX}} \) 44 dBm (25W)

Linear Power, \( P_{\text{LIN}} \) (min) 42 dBm (16W)

Spectral Regrowth @ \( P_{\text{LIN}} \) 30 dBc max @  
(QPSK, OQPSK, 5.0 SR, alpha=0.2) >1 SR offset

Intermodulation Products @ \( P_{\text{LIN}} \) -25 dBc max @ w.rt 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 \( P_{\text{LIN}} \) 
- over any 2 MHz ±0.2 radian
- over any 36 MHz ±0.4 radian
- over any 72 MHz ±0.5 radian
- over any 90 MHz ±0.6 radian
- over any 120 MHz ±0.7 radian

Input VSWR 1.5:1

Output VSWR 1.3:1

**Gain**

Small Signal (typical) 55 dB ±5 dB

Gain Attenuation Range 25 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 -150 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 160W @ \( P_{\text{LIN}} \)

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 4.5 lb (2.0 kg)

Dimensions 3.5” x 4.4” x 7.6”  
(8.89cm x 11.18cm x 19.30cm)

For additional information visit: www.xicomtech.com

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