COMTECH™

Fluent in the Future™

Bobcat 50X

50W X-band GaN SATCOM Block Upconverter

- **Powerful:** 25W linear power (single carrier)
- **Efficient:** 160W DC power draw at linear power
- **Compact:** 5.1 lbs in 115 cu inch package
- **Rugged:** - -40C to +60C, MIL-STD-810 environment
- **Flexible:** Interchangeable with Ka- and Ku-band Bobcats
  OpenBMIP over Ethernet option

The smallest, most rugged X-band Block Upconverter to provide 25W 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 Comtech Bobcat™. Go to xicomtech.com to see to see our interchangeable X-, Ku- and Ka-band Bobcat product line for solutions across the spectrum.

Bobcat 50X

50W X-band GaN SATCOM BUC

Frequency and Input Levels

RF Output Frequency	7.9 to 8.4 GHz
IF Input Frequency	950 to 1450 MHz
(other options available)	
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

Phase Noise with Optional BUC

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

Output RF Power and Linearity

Eq. Saturated Power, P_{SAT}	47 dBm (50W)
Maximum CW Power, P_{MAX}	46 dBm (40W)
Linear Power, P_{LIN} (min)	44 dBm (25W)
Spectral Regrowth @ P_{LIN}	30 dBc max @
(QPSK, OQPSK, 5.0 SR, alpha=0.2)	>1 SR offset
Intermodulation Products @ P_{LIN}	-25 dBc max
wrt sum of 2 equal carriers	
AM to PM Conversion @ P_{LIN}	2.0°/dB max

Phase Linearity and VSWR

Transmit Phase Linearity up to P_{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	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

Prime Power/Environment/Interfaces

22-56 VDC Prime Power	160W @ P_{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 and RS-232 (SNMP Option)

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_{LIN}	-60 dBc
(excludes 1 MHz band)	

Weight and Dimensions

Weight	5.1 lb (2.31 kg)
Dimensions	5.8” x 5.1” x 3.9” (14.7cm x 12.95cm x 9.9cm)

About Us

Comtech Telecommunications Corp. is a leading global technology company providing terrestrial and wireless network solutions, next-generation 9-1-1 emergency services, satellite and space communications technologies, and cloud native solutions to commercial and government customers around the world. Our unique culture of innovation and employee empowerment unleashes a relentless passion for customer success. With multiple facilities located in technology corridors throughout the United States and the world, Comtech leverages its global presence, technology leadership and decades of experience to create the world’s most innovative communications solutions.

3550 Bassett Street. Santa Clara, CA 95054 USA
Phone: +1-408-213-3000
Fax: +1-408-213-3001

sales@xicomtech.com
www.xicomtech.com
www.comtech.com

Document Bobcat 50X Rev 3a, Model XTLIN-25X-B1, 03/12/2023. Note: Technical specifications are subject to change without notice.

COMTECH