

Puma 120Ka

120W Ka-band GaN Solid-State Amplifier (SSPA) / Block Upconverter (BUC)

- POWERFUL:** 60W linear power
- EFFICIENT:** 800W AC power draw at linear power
- COMPACT:** 34 lbs in 7.0 x 10.31 x 18 inch package
- RUGGED:** -40C to +60C, MIL-STD-810 environment
- FLEXIBLE:** Single-, Dual-, Tri- or Quad-band internal BUC options within the 27.5 to 31 GHz band
OpenBMIP over Ethernet option

The most powerful, rugged Ka-band SSPA/Block Upconverter to provide 60W of linear power for satcom uplinks

High efficiency GaN solid-state design enables big power with high efficiency, while handling the toughest environments.

If you need a sleek, powerful SSPA or BUC to speed up your transportable terminal – you need a Puma™

Go to xicomtech.com to see our full X-, Ku- and Ka-band line of Puma products for solutions across the spectrum.



Puma 120Ka

120W Ka-band GaN SSPA / BUC

Frequency and Input Levels

RF Output Frequency 27.5 to 30 GHz
(other frequencies available in 27.5 to 31 GHz band)

Input Level, No Damage +10 dBm max

IF/Ref Input Impedance 50 ohms

With optional BUC

IF Input Frequency 950 to 3450 MHz

LO Reference Frequency External 10 MHz

LO Reference Level 0 dBm \pm 5 dB

Output RF Power and Linearity

Eq. Saturated Power, P_{SAT} 120W (51 dBm)

Maximum CW Power, P_{MAX} 100W (50 dBm)

Linear Power, P_{LIN} (min) 60W (47.8 dBm)

Linearity @ P_{LIN}

Noise Power Ratio -19 dBc max

Spectral Regrowth @ P_{LIN} -30 dBc max

(QPSK, OQPSK @ 1SR offset)

Intermodulation Products -25 dBc max

wrt sum of 2 equal carriers

AM to PM Conversion 2.0°/dB max

GAIN

Small Signal (typical) 70 dB \pm 5 dB

Gain Attenuation Range 25 dB, 0.1 dB steps

Gain Variation (over any 1 GHz) 3.0 dB p-p max

Gain Variation (over full band) 5.0 dB p-p max

Gain Slope (max) 0.04 dB/MHz

Gain Stability, over 24 hours 1.0 dB p-p max

Gain Variation over Temp 2.0 dB p-p max

Noise and Spurious

Noise Power Transmit Band -75 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_{LIN} -60 dBc

(excludes 1 MHz band)

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

Phase Linearity and VSWR

Transmit Phase Linearity up to P_{LIN}

over any 2 MHz \pm 0.2 radian

over any 36 MHz \pm 0.4 radian

over any 72 MHz \pm 0.5 radian

over any 90 MHz \pm 0.6 radian

over any 120 MHz \pm 0.7 radian

Input VSWR 1.5:1

Output VSWR 1.3:1

Prime Power/Environment/Interfaces

90-264 VAC Prime Power 800 @ 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/RS-422/RS-485
and Serial RS-232
(Optional SNMP)

Weight and Dimensions

Weight 34 lb typical (15.42 kg)

Dimensions 7.0" x 10.31" x 18.0"
(17.78cm x 26.18cm x 45.72cm)

For additional information visit: www.xicomtech.com

email: sales@xicomtech.com • Phone: +1.408.213.3000