

Puma 300X

300W X-band GaN Solid-State Amplifier (SSPA) / Block Upconverter (BUC)

POWERFUL: 150W linear power
EFFICIENT: 875W AC power draw at linear power
COMPACT: 32 lbs in 6.8 x 10.5 x 17 inch package
RUGGED: -40C to +60C, MIL-STD-810 environment
SILENT: Low leakage for multi-carrier low PIM



The most powerful, rugged X-band SSPA/Block Upconverter to provide 150W 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 300X

300W X-band GaN SSPA / BUC

Frequency and Input Levels

RF Output Frequency	7.9 to 8.4 GHz
Input Level, No Damage	+10 dBm max
IF/Ref Input Impedance	50 ohms

With optional BUC

IF Input Frequency	950 to 1450 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}	300W (54.8 dBm)
Maximum CW Power, P_{MAX}	200W (53 dBm)
Linear Power, P_{LIN} (min)	150W (51.8 dBm)

Linearity @ P_{LIN}

Spectral Regrowth @ P_{LIN} (QPSK, OQPSK @ 1SR offset)	-30 dBc max
Intermodulation Products wrt sum of 2 equal carriers	-25 dBc max
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 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	-75 dBW/4 kHz
Noise Power Receive Band	-75 dBW/4 kHz
AC Line Spurious sum of all spurs	-30 dBc
single sideband sum	-36 dBc
Harmonics	-60 dBc
Output Spurious @ P_{LIN} (excludes 1 MHz band)	-60 dBc

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	875 @ 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/serial RS-232 (SNMP with v3 Option)

Weight and Dimensions

Weight	32 lb (14.5 kg)
Dimensions	6.8" x 10.5" x 17" (17.2cm x 26.7cm x 43.2cm)

For additional information visit: www.xicomtech.com
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