

# 50 Watt Linear Ku-band Airborne Cabin Internal Amplifier

**XTSALin-50K-B1A**



**13.75 to 14.5 GHz**  
**High efficiency GaN design**  
**SNMP/RS485 Interface**  
**ARINC 791**

## Key Specifications

<b>Frequency Range</b>	Output: 13.75-14.5 GHz, Input: 950-1700 MHz
<b>Linear Power (<math>P_{LIN}</math>)</b>	50 W (47.0 dBm)
<b>Intermodulation Distortion @ <math>P_{LINEAR}</math></b>	-25 dBc
<b>Spectral Regrowth @ <math>P_{LINEAR}</math></b>	-26 dBc, 1SR offset, QPSK
<b>Dimensions (L x H x W)</b>	14.0" x 9.0" x 2.95" (355 x 229 x 75 mm)
<b>Weight</b>	14.5 lbs typical (6.58 kg)
<b>Prime Power, Typical</b>	100-120 VAC, 420 VA @ $P_{LIN}$ , 400 Hz nominal
<b>Operating Temperature</b>	Per DO-160G Category A1

## Options:

Without integral block upconverter

WR-75 output

Visit [www.xicomtech.com](http://www.xicomtech.com) for:

- OUTLINE DRAWING
- INTERFACES
- BLOCK DIAGRAM
- REDUNDANCY OPTIONS



# 50 Watt Linear Ku-Band Airborne Cabin Internal Amplifier

Additional Performance Specifications			XTSALin-50K-B1A
Flange Power	Maximum Power 71 W (48.5 dBm)		Linear Power min 50 W (47.0 dBm)
Gain			Small Signal 70 dB min
Gain Small Signal Variation	Any 40 MHz 1.0 dB max		Any 750 MHz 3.0 dB max
Gain Slope	±0.04 dB/MHz max		
Gain Stability	24 hr Constant Temp ±0.25 dB max		Constant Drive ±1.0 dB max
Attenuation Range	25 dB min, 0.1 dB steps		
AM/PM Conversion	2.0°/dB at P <sub>LINEAR</sub>		
Harmonic Output	-60 dBc max		
Tx Band Noise Power Output	-70 dBW/4 KHz max		
Rx Band Noise Power Output	10.95 to 12.75 GHz -150 dBW/4 KHz		
Group Delay Any 80 MHz	Linear max 0.01 nS/MHz	Parabolic max 0.001 nS/MHz <sup>2</sup>	Ripple max 0.5 nS/pk-pk
Residual AM Noise	to 10 KHz -50 dBc	10 to 500 KHz -20 (1.5*Logf) dBc	above 500 KHz -85 dBc
Phase Noise Continuous	5 dB below IESS Profile		
Phase Noise Spurious	AC Fundamental -50 dBc		Sum of All Spurs (less AC) -45 dBc
VSWR	Input 1.5:1 max		Output 1.3:1 max
Environmental	Per DO-160G Category A1		
Shock and Vibration	Per DO-160G Category B (shock); Category S (vibration)		

