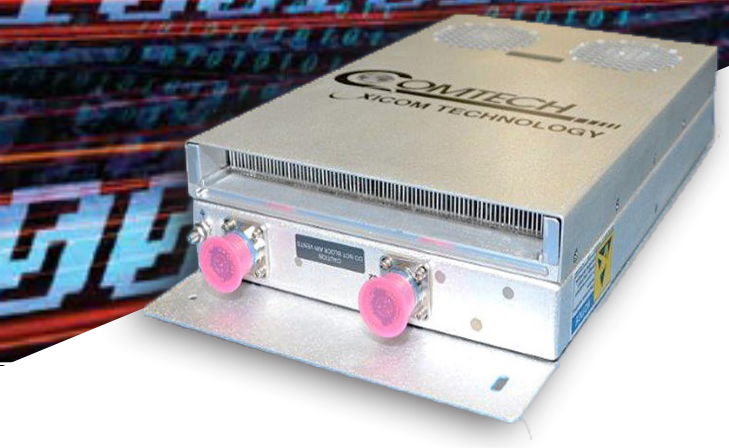
50 Watt Linear Ku-band Airborne Cabin Internal Amplifier



XTSALin-50K-B1A

13.75 to 14.5 GHz

High efficiency GaN design

SNMP/RS485 Interface

ARINC 791

Key Specifications

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

Options:

Without integral block upconverter

WR-75 output

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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_{LINEAR}		
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^2	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)		

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