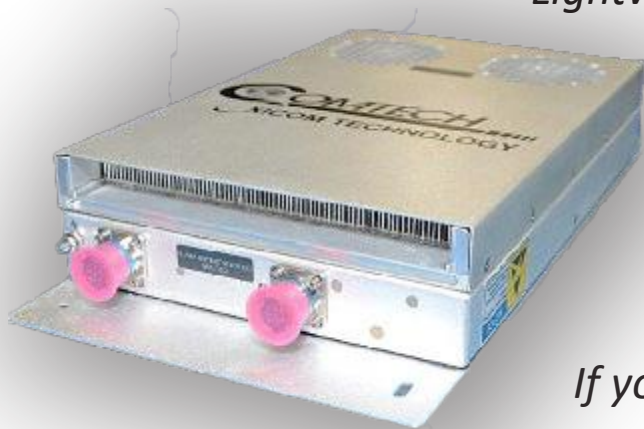


# Falcon 40Ka

## 40W Ka-band GaN Airborne Cabin Internal Solid-State Amplifier

- POWERFUL:** 20W linear power (single carrier)
- EFFICIENT:** 225W AC power draw at linear power
- LIGHTWEIGHT:** 15 lbs (6.8 kg)
- COMPACT:** 9.0 x 18.0 x 3.25 inch ARINC package
- RELIABLE:** Certified to DO-160 Category A1



*Lightweight, efficient reliable Ka-band SSPA and block upconverter that provides 20W 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 Falcon™.*



Go to [xicomtech.com](http://xicomtech.com) to see our full Falcon product line for solutions across the spectrum.

# FALCON 40KA

## 40W Ka-band GaN Airborne SSA

### Frequency and Input Levels

RF Output Frequency	1 GHz selectable in 27.5 to 30.0 GHz (27.5-28.5, 28.25-29.25, 29.0-30.0 GHz)
IF Input Frequency	950 to 1950 MHz
Input Level, No Damage	+10 dBm max
LO Reference Frequency	External 10 MHz
LO Reference Level	0 dBm $\pm$ 5 dB
IF/REF Input Impedance	50 ohms

### Output RF Power and Linearity

Eq. Saturated Power, $P_{SAT}$	40W (46 dBm)
Maximum CW Power, $P_{MAX}$	25W (44 dBm)
Linear Power, $P_{LIN}$ (min)	20W (43 dBm)
Spectral Regrowth @ $P_{LIN}$ (QPSK, OQPSK, @ > 1SR offset)	26 dBc max @
Intermodulation Products wrt sum of 2 equal carriers	-25 dBc max
AM to PM Conversion @ $P_{LIN}$	2.0°/dB max

### GAIN

Small Signal (typical)	70 dB
Gain Attenuation Range	25 dB in 0.1 dB steps
Gain Variation (over 120 MHz)	0.8 dB p-p max
Gain Variation (over 1 GHz)	2.0 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	2.0 dB p-p max

### Noise and Spurious

Noise Power Transmit Band	-70 dBW/4 kHz
Noise Power Receive Band	-140 dBW/4 kHz
AC Line Spurious fundamental	-50 dBc
sum of all spurs	-45 dBc
Harmonics	-60 dBc
Output Spurious @ $P_{LIN}$ (excludes 1 MHz band)	-55 dBc

### Phase Noise

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

100-120 VAC, 400 Hz nominal	225W @ $P_{LIN}$
Operating/Non Operating Temp Range	
	Per DO-160G Category A
Environmental	Per DO-160G Category A
Shock	Per DO-160G Category A
Vibration	Per DO-160G Category A
M&C Interface	Ethernet SNMP/serial RS-485

### Weight and Dimensions

Weight	15 lb (6.8 kg)
Dimensions	9.0" x 18.0" x 3.25" (23.0cm x 45.7cm x 8.3cm)

FOR ADDITIONAL INFORMATION VISIT [WWW.XICOMTECH.COM](http://WWW.XICOMTECH.COM)  
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