



80W / 100W / 125W Ku-Band 150W / 200W / 250W C, X-Band GaAs based SSPA BUC Rack-mount

Overview

Designed for use primarily in satellite communications applications. These units are characterized by high linearity and high power efficiency, as well as excellent thermal efficiency and dependability over the full operating temperature range.

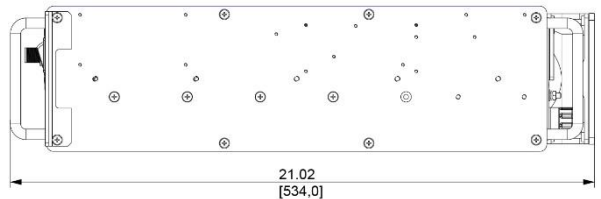
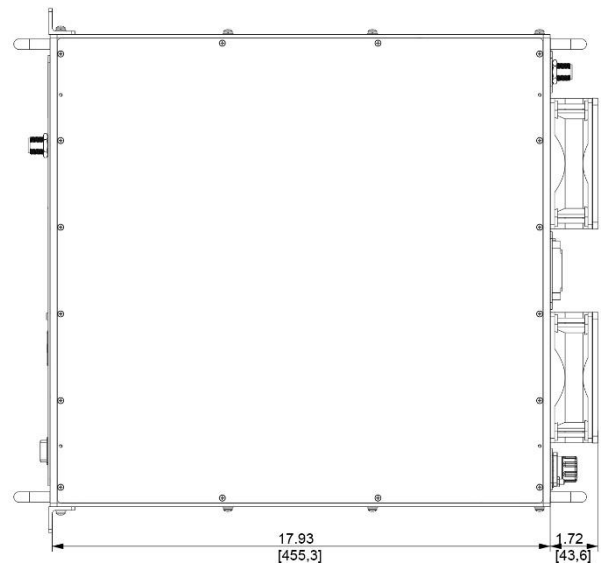
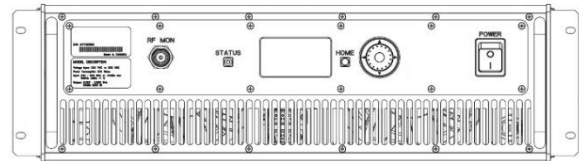
- Ku-Band GaAs: 80W / 100W / 125W
- C-Band GaAs: 150W / 200W / 250W
- X-Band GaAs: 150W / 200W / 250W

Features

- Redundancy ready
- Light weight and compact – highest power density on the market
- High thermal dissipation efficiency
- Over temperature shutdown
- High Mean Time Before Failure (MTBF over 100K hours)
- Monitor & Control Interface
- Serial and Analog M&C
- Internet web page interface
- Alarms: Voltage/Current/Temperature/Summary
- Control: Mute/Gain
- RF power detection

Options

- Frequency range options available
- 1:1 and 1:2 Redundancy Systems
- Extended Warranty
- BUC: BUILT IN with or without internal 10 MHz ref
- Lower power can be provided





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Technical Specifications

Ku-Band				
Electrical Characteristics	80W	100W	125W	
RF Output at P1dB	49 dBm	50 dBm	51 dBm	
RF Output at P Lin	46 dBm	47 dBm	48 dBm	
Output Frequency Range	Lower Ku: 12.75 – 13.25 GHz	Standard Ku: 14.00 – 14.50 GHz	Extended Ku: 13.75 – 14.50 GHz	
Input Frequency Range	Lower Ku: 950 – 1450 MHz	Standard Ku: 950 – 1450 MHz	Extended Ku: 950 – 1700 MHz	
Local Oscillator Frequency	Lower Ku: 11.80 GHz	Standard Ku: 13.05 GHz	Extended Ku: 12.80 GHz	
Gain Stability Over Temp.	Low Ku Band: ± 1.5 dB nominal; ± 2.25 dB max Standard Band: ± 1.5 dB nominal; ± 2.0 dB max Extended Band: ± 1.5 dB nominal; ± 2.25 dB max			
Gain Variation at fixed temp	Low Ku Band: ± 0.75 dB over max over 40 MHz; ± 2.25 dB over full band Standard Band: ± 0.5 dB over max over 40 MHz; ± 2.0 dB over full band Extended Band: ± 0.75 dB over max over 40 MHz; ± 2.25 dB over full band			
Linear Gain	70 dB min.			
User Adjustable Gain	20 dB nominal in 0.5 dB steps			
C-Band				
Electrical Characteristics	150W	200W	250W	
RF Output at P1dB	52 dBm	53 dBm	54 dBm	
RF Output at P Lin	49 dBm	50 dBm	51 dBm	
Output Frequency Range	Lower C: 5.725 – 6.425 GHz	Standard C: 5.85 – 6.425 GHz	Extended C: 5.85 – 6.725 GHz	Insat C: 6.725 – 7.025 GHz
Input Frequency Range	Lower C: 975 – 1675 MHz	Standard C: 950 – 1525 MHz	Extended C: 950 – 1825 MHz	Insat C: 1275 – 1575 MHz
Local Oscillator Frequency	Lower C: 4.75 GHz	Standard C: 4.9 GHz	Extended C: 4.9 GHz	Insat C: 5.45 GHz
Gain Stability Over Temperature	± 1.5 dB nominal			
Gain Variation at fixed temperature	± 0.5 dB over max over 36 MHz; ± 2.0 dB over full band			
Linear Gain	70 dB min.			
User Adjustable Gain	20 dB in 0.5 dB steps			
X-Band				
Electrical Characteristics	150W	200W	250W	
RF Output at P1dB	52 dBm	53 dBm	54 dBm	
RF Output at P Lin	49 dBm	50 dBm	51 dBm	
Output Frequency Range	7.9 – 8.4 GHz			
Input Frequency Range	950 – 1450 MHz			
Local Oscillator Frequency	6.95 GHz			
Gain Stability Over Temperature	± 1.5 dB nominal			
Gain Variation at fixed temperature	± 0.5 dB over max over 40 MHz; ± 2.0 dB over full band			
Linear Gain	70 dB min.			
User Adjustable Gain	20 dB in 0.5 dB steps			



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Technical Specifications					
Ku, C, X Band					
Spectral Re-growth	-30dBc @PLinear				
Third order IMD (2 equal tones 5MHz apart)	-25 dBc, with 2 equal carriers at 3dB total power back off from rated power (P Sat -3dB)				
10MHz Reference	0dBm ± 5.0 dB - External via IF / (Internal 10MHz reference optional)				
	@ 100 Hz	@ 1 KHz	@ 10 KHz	@ 100 KHz	@ 1 MHz
Ref Phase Noise Requirement		-140 dBc/Hz max	-150 dBc/Hz max	-155 dBc/Hz max	
Local Oscillator Phase Noise	-63 dBc/Hz max	-73 dBc/Hz max	-83 dBc/Hz max	-93 dBc/Hz max	-103 dBc/Hz max
Output Spurious	-55dBc max @PLinear				
Harmonics	-50dBc max @PLinear				
VSWR	Input (1:50:1) Output (1.30:1)				
Power consumption					
Ku-Band	80W	100W	125W		
Power consumption (at rated power) AC version	1000W	1100W	1250W		
C-Band	150W	200W	250W		
Power consumption (at rated power) AC version	1100W	1200W	1350W		
X-Band	150W	200W	250W		
Power consumption (at rated power) AC version	1250W	1400W	1500W		
Power requirement	220 VAC				
Interface					
Output Interface	Ku-Band: Waveguide, WR75G (Grooved) C-Band: Waveguide, CPR 137G (Grooved) X-Band: Waveguide, CPR 112G (Grooved)				
Input Interface	N-Type Female, 50 Ohms				
Connectors	AC (NEMA Type)	Ethernet: Rj45	M&C: DB15	RS-845: DB9	Redundancy: DB15
Mechanical					
Dimensions (L x W x H)	3RU				
Weight	52lbs / 23.5kg				
Environmental					
	Temperature Range (ambient)				
	0°C to + 50°C				

Ref.: PB-ALTX-Rack-3RU-GaAs-20338