

100W, 125W, 150W, 200W, 250W Ku-Band 150W, 200W, 250W, 300W, 400W, 500W C, X-Band GaN based SSPA BUC Rack-mount

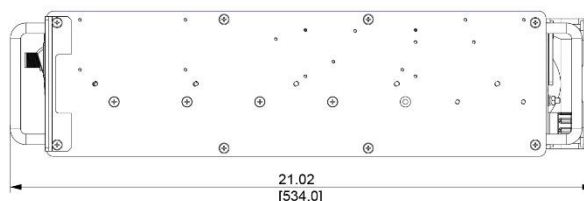
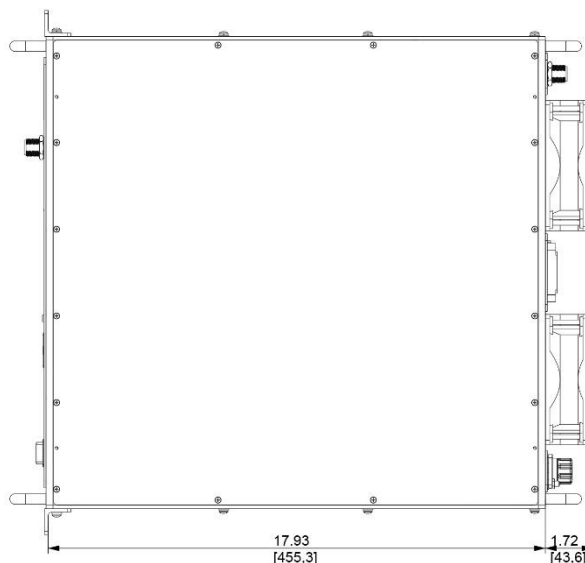
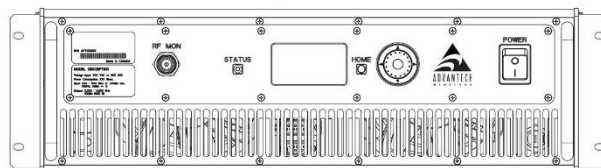
Overview

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: 100W / 125W / 150W / 200W / 250W
- C-Band: 150W / 200W / 250W / 300W / 400W / 500W
- X-Band: 150W / 200W / 250W / 300W / 400W / 500W

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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150W, 200W, 250W, 300W, 400W, 500W C, X-Band
GaN based SSPA BUC Rack-mount

Technical Specifications						
Ku-Band						
Electrical Characteristics	100W	125W	150W	200W	250W	
RF Output at P Sat	50 dBm	51 dBm	52 dBm	53 dBm	54 dBm	
RF Output at P Lin	47 dBm	48 dBm	49 dBm	50 dBm	51 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	300W	400W	500W
RF Output at P Sat	52 dBm	53 dBm	54 dBm	55 dBm	56 dBm	57 dBm
RF Output at P Lin	49 dBm	50 dBm	50.5 dBm	52 dBm	53 dBm	54 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	300W	400W	500W
RF Output at P Sat	52 dBm	53 dBm	54 dBm	55 dBm	56 dBm	57 dBm
RF Output at P Lin	49 dBm	50 dBm	51 dBm	52 dBm	53 dBm	54 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	100W	125W	150W	200W	250W	
Power consumption (at rated power) AC version	780W	800W	1600W	1650W	1650W	
C-Band	150W	200W	250W	300W	400W	500W
Power consumption (at rated power) AC version	880W	900W	1000W	1900W	2000W	2200W
X-Band	150W	200W	250W	300W	400W	500W
Power consumption (at rated power) AC version	900W	1000W	1100W	2100W	2300W	2500W
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
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Ref.: PB-AWT-Rack-3RU-GaN-19297

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