

Denali-Line

Ku, C, X Band GaAs SSPA BUC

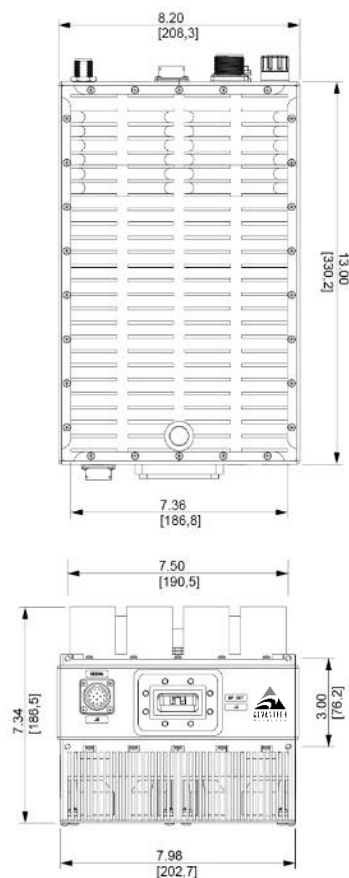
Overview

An ideal solution for both mobile and fixed Communication terminals. The Denali-Line SSPAs / BUCs are designed for high efficiency resulting in an optimal compact form factor with high performance and reliability. With the advanced customer interface and HTTP embedded web page, the operator is able to monitor and control the BUC and the System Redundancy.

- Ku-Band GaAs: 40W / 50W
- C-Band GaAs: 80W / 100W / 125W
- X-Band GaAs: 80W / 100W / 125W

Features

- Compact size
- Available in AC
- Up to 125W of Linear power
- Built-in monitoring of critical parameters such as: RF power detection, mute control, over temperature shutdown, summary alarm
- IP55 rated housing and fan (weather proof construction)
- M&C Interfaces included: RS485, RS232, Ethernet and dry-contacts
- WEB interface and SNMP monitoring
- Redundant Ready
- 1:1 and 1:2 built into the BUC eliminating external controller
- Ku-Band: Optional Dual LO (Switchable). covers both regular and ext. Ku-Band
- Other frequency ranges available
- Internal 10MHz reference
- Optional output sample port
- Optional Remote control unit





Denali-Line GaAs SSPA BUC

Technical Specifications

Ku-Band			
Electrical Characteristics	40W		50W
RF Output at P1dB	46 dBm		47 dBm
RF Output at P Lin	43 dBm		44 dBm
Output Frequency Range	Low Ku Band: 12.75 – 13.25 GHz	Standard Ku: 14.00 – 14.50 GHz	Extended Ku: 13.75 – 14.50 GHz
Input Frequency Range	Low Ku Band: 950 – 1450 MHz	Standard Ku: 950 – 1450 MHz	Extended Ku: 950 – 1700 MHz
Local Oscillator Frequency	Low Ku Band: 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	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 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	80W	100W	125W
RF Output at P Sat	49 dBm	50 dBm	51 dBm
RF Output at P Lin	46 dBm	47 dBm	48 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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Denali-Line GaAs SSPA BUC

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	40W		50W	
Power consumption (Watts)	450W		500W	
C-Band	80W	100W	125W	
Power consumption (Watts)	475W	500W	550W	
X-Band	80W	100W	125W	
Power consumption (Watts)	525W	550W	600W	

Power requirement Ku-Band: 110-220 VAC C, X-Band: 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, F-Type Female, 75 Ohms (optional)		
Connectors	AC Connector: MS3102R16-10P	M&C: MS3112E14-19P	Redundancy: MS3112E14-15P (Optional)

Mechanical

Cooling	Forced Air
Dimensions (L x W x H)	Ku-Band: 12.8 x 8.2 x 7.1 / 32.5 x 20.8 x 18.0 C-Band, X-Band: 13 x 8.2 x 6.3 / 33.02 x 20.83 x 16
Weight	27.8 / 12.5

Environmental

Temperature Range (ambient)	Humidity	Altitude
-40°C to + 55°C (operating) -40°C to + 75°C (storage)	0 to 100% (condensing)	10,000 ft ASL

Ref.: PB-AWT-DL-GaAs-19109

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