

Sierra-Line

Ku, C Band GaAs SSPA BUC

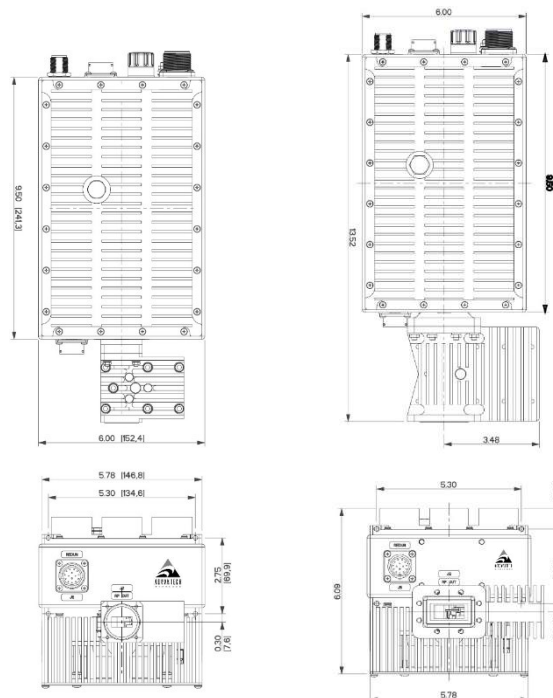
Overview

The Sierra-Line SSPAs / BUCs are an ideal solution for both mobile and fixed Communication terminals. The Sierra-Line SSPAs / BUCs are designed for high efficiency resulting in an optimal compact form factor with high performance and reliability. With 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: 20W / 25W / 30W
- C-Band GaAs: 25W / 30W / 50W / 60W

Features

- Compact size
- Available in AC or DC
- Up to 50W 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 with Auto-sensing
- Optional output sample port
- Optional Remote control unit



Ku-Band

C-Band



Sierra-Line GaAs SSPA BUC

Technical Specifications

Ku-Band			
Electrical Characteristics	20W	25W	30W
RF Output at Psat	43 dBm	44 dBm	45 dBm
RF Output at P1dB	42 dBm	43 dBm	44 dBm
RF Output at P Lin	39 dBm	40 dBm	41 dBm
Output Frequency Range	Low Ku: 12.75 – 13.25 GHz	Standard Ku: 14.00 – 14.50 GHz	Extended Ku: 13.75 – 14.50 GHz
Input Frequency Range	Low Ku: 950 – 1450 MHz	Standard Ku: 950 – 1450 MHz	Extended Ku: 950 – 1700 MHz
Local Oscillator Frequency	Low Ku: 11.80 GHz	Standard Ku: 13.05 GHz	Extended Ku: 12.80 GHz

C-Band				
Electrical Characteristics	25W	30W	50W	60W
RF Output at Psat	44 dBm	45 dBm	47 dBm	48 dBm
RF Output at P1dB	43 dBm	44 dBm	46 dBm	47 dBm
RF Output at P Lin	40 dBm	41 dBm	43 dBm	44 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

Ku, C Band					
Gain Stability Over Temp.	± 1.5 dB nominal; ± 2.0 dB max				
Gain Variation at fixed temp	± 0.5 dB over max over 40 MHz; ± 2.0 dB over full band				
User Adjustable Gain	20 dB nominal in 0.5 dB steps				
Linear Gain	70 dB nominal				
Max Input Power w/o Damage	0 dBm				
Gain flatness Over Full Band	± 2.0 dB max				
Gain Slope	± 0.4 dB max / 40 MHz max.				
Gain Variation	± 2.0 dB over max over operating temperature range				
Gain Adjustment Range	20 dB in 0.1 dB steps				
In/Output Return Loss (VSWR)	14 dB min. (1.5:1 max)				
Spectral Re-growth	-30dBc @PLinear				
Third order IMD (2 equal tones 5MHz apart)	-25 dBc at Plin				
Local Oscillator Phase Noise	@ 100 Hz -63 dBc/Hz max	@ 1 KHz -73 dBc/Hz max	@ 10 KHz -83 dBc/Hz max	@ 100 KHz -93 dBc/Hz max	@ 1 MHz -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	20W	25W	30W	
Power consumption (at rated power) AC version	150W	200W	225W	
C -Band	25W	30W	50W	60W
Power consumption (at rated power) AC version	150W	175W	200W	250W
AC Power requirement	110-220 VAC / 47 – 63 Hz or optional 48 VDC isolated			

Interface			
Input Interface	N-Type Female, 50 Ohms		
Connectors	DC Connector: MS3102R16-11P AC Connector: MS3102R16-10P	M&C: MS3112E14-19P	Redundancy: MS3112E14-15P

Mechanical	
Cooling	Forced Air
Dimensions (L x W x H)	9.3 x 6.0 x 5.8 in / 23.6 x 15.2 x 14.7 cm
Weight	Ku-Band: 12.9 lbs / 6.3 kg C-Band: 14.7 lbs / 6.7 kg

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

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