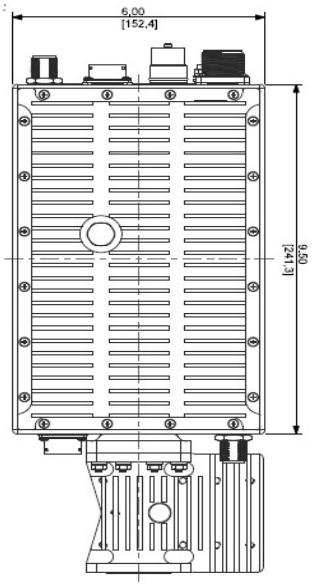
Sierra-Line

X and XL Band GaN SSPA BUC



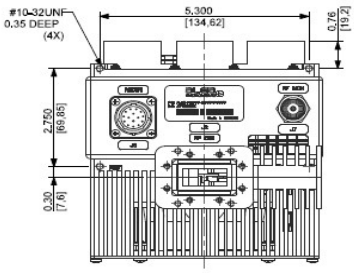
Overview

The Sierra-Line SSPAs / BUCs are an ideal solution for both mobile and fixed Communication terminals. The Sierra-X 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.



Features

- Compact size
- Available in AC or DC
- Up to 100W of RF Output Power
- Up to 50W of Linear power
- Built-in monitoring of critical parameters such as: RF power detection, mute control, over temperature shutdown, summary alarm
- IP67 rated housing and fan (weather proof construction)
- M&C Interfaces included: RS485, RS232, Ethernet and dry-contacts
- WEB interface and SNMP monitoring
- 1:1 and 1:2 built-in Redundant Ready to eliminate external controller



Options

- Int/Ext 10MHz reference with Auto-sensing
- Output sample port
- Remote control unit

Sierra-X Line GaN SSPA BUC

Technical Specifications

X and XL-Band

Electrical Characteristics	40W	50W	80W	100W
RF Output at P Sat	46 dBm	47 dBm	49 dBm	50 dBm
RF Output at P Lin	43 dBm	44 dBm	46 dBm	47 dBm
Output Frequency Range	Standard X-band: 7.9 – 8.4 GHz/XL-band: 7.145 to 7.250 GHz			
Input Frequency Range	Standard X-band: 950 – 1450 MHz/ XL-band: 965-1070 MHz			
Local Oscillator Frequency	Standard X-band: 6.95 GHz/ XL-band: 6.180 GHz			
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 (QPSK, 8PSK at 1.0 x Symbol Rate offset, Alpha 0.25)				
	@ 100 Hz	**@ 1 KHz**	**@ 10 KHz**	**@ 100 KHz**	**@ 1 MHz**
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	-60dBc max @PLinear				
Harmonics	-60dBc max @PLinear				
AM/PM	< 2deg/dB at PLin				
VSWR	Input (1:50:1) Output (1.30:1)				

Power consumption

X -Band	40W	50W	80W	100W
Power consumption (at rated power) AC version	375W	400W	475W	500W
Power requirement	110-220 VAC or optional 48 VDC isolated			
Prime Power Voltage	90 – 265 VAC			
Prime Power Frequency	47 – 63 Hz			

Interface

Output Interface	Waveguide, CPR 112G (Grooved)		
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	
	40W – 50W	80W – 100W
Dimensions (L x W x H)	9.3 x 5.8 x 6.1 in / 23.6 x 14.7 x 15.5 cm	13.5 x 5.8 x 6.1 in / 34.3 x 14.7 x 15.5 cm
Weight	14.0 lbs / 6.4 kg	15.0 lbs / 6.8 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

Ref.: PB-AWT-SMLg-X-26276

NORTH AMERICA

USA
info.usa@advantechwireless.com

CANADA
Info.canada@advantechwireless.com

EUROPE

UNITED KINGDOM
info.uk@advantechwireless.com

SOUTH AMERICA

info.latam@advantechwireless.com

BRAZIL
info.brazil@advantechwireless.com

ASIA

info.asia@advantechwireless.com

INDIA
info.india@advantechwireless.com

Specifications are subject to change without notice.