

Sierra-X Line

X Band GaN SSPA BUC

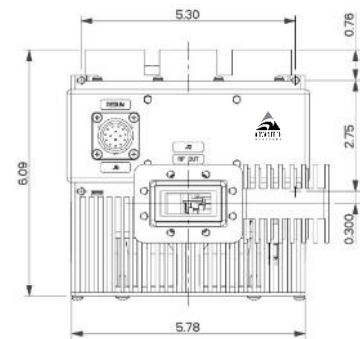
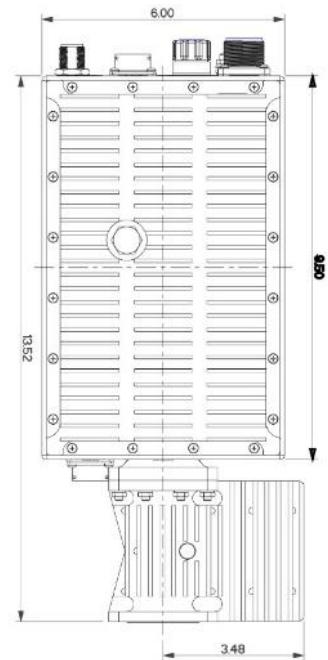
Overview

The Sierra-X 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.

- X-Band: 40W / 50W / 60W / 80W / 100W

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
- 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
- Other frequency ranges available
- Internal 10MHz reference
- Optional output sample port
- Optional Remote control unit



X-Band

Sierra-X Line GaN SSPA BUC

Technical Specifications

X-Band					
Electrical Characteristics	40W	50W	60W	80W	100W
RF Output at P Sat	46 dBm	47 dBm	48 dBm	49 dBm	50 dBm
RF Output at P Lin	43 dBm	44 dBm	45 dBm	46 dBm	47 dBm
Output Frequency Range	7.9 – 8.4 GHz				
Input Frequency Range	950 – 1450 MHz				
Local Oscillator Frequency	6.95 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				
Third order IMD (2 equal tones 5MHz apart)	-25 dBc, with 2 equal carriers (5MHz spacing) at 3dB total power back off from rated power (P Sat -3dB)				
	@ 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	60W	80W	100W
Power consumption (at rated power) AC version	375W	400W	450W	475W	500W
Power requirement	110-220 VAC or 48 VDC isolated				
Prime Power Voltage	90 – 265 VAC (high power models 190 – 265)				
Prime Power Frequency	47 – 63 Hz				

Interface

Output Interface	Waveguide, CPR 112G (Grooved)				
Input Interface	N-Type Female, 50 Ohms, F-Type Female, 75 Ohms (optional)				
Connectors	DC Connector: MS3102R16-11P AC Connector: MS3102R16-10P	M&C: MS3112E14-19P		Redundancy: MS3112E14-15P (Optional)	

Mechanical

Cooling	Forced Air				
Dimensions (L x W x H)	9.3 x 6.0 x 5.8 / 23.6 x 15.2 x 14.7				
Weight	14.7 / 6.7				

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-19289-1

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