

# Sierra-X Line

## X Band GaAs SSPA BUC

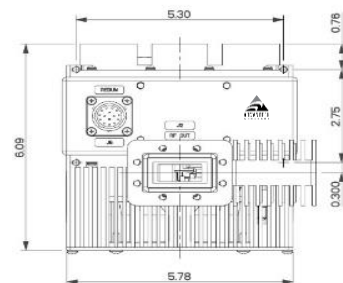
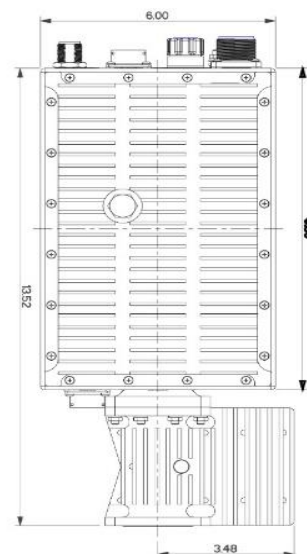
### Overview

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 GaAs: 20W / 25W / 40W / 50W

### Features

- Compact size
- Available in AC or DC
- Up to 50W of RF Output power
- Up to 25W 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 GaAs SSPA BUC

Technical Specifications				
X-Band				
Electrical Characteristics	20W	25W	40W	50W
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	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)			
	<b>@ 100 Hz</b>	<b>@ 1 KHz</b>	<b>@ 10 KHz</b>	<b>@ 100 KHz</b>
Local Oscillator Phase Noise	-63 dBc/Hz max	-73 dBc/Hz max	-83 dBc/Hz max	-93 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	20W	25W	40W	50W
Power consumption (at rated power) AC version	150W	175W	200W	250W
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-SML-GaAs-X-19289-1

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