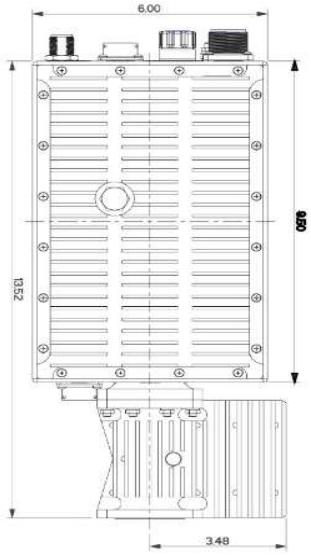
Sierra - Line

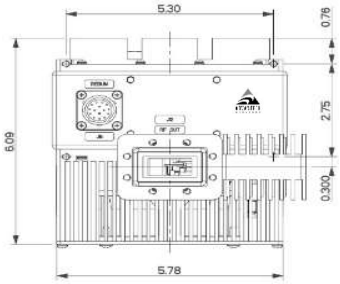
X Band GaAs SSPA BUC

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.

- X-Band GaAs: 25W / 30W / 50W / 60W





X-Band

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/External 10MHz reference with Auto-sensing
- Optional output sample port
- Optional Remote control unit

Sierra-Line X-Band GaAs SSPA BUC

Technical Specifications

X-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	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)	- 25dBc at Plin (MIL-STD-188-164B)				
	@ 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	**25W**	**30W**	**50W**	**60W**
Power consumption (at rated power) AC version	150W	175W	200W	250W
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			
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	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

Ref.: PB-AWT-SML-GaAs-X-22306

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