

# 16W / 20W / 25W / 30W / 40W/ 50W/ 60W C-Band BUC/SSPB Second Generation GaN Technology

SSPBMg-C Band  
SSPBMg-Cx Band  
SSPBMg-Ci Band  
SSPBMg-Cp-Band

2200-G series

## Features

- Output power of 16W to 60W in a single compact package
- High linearity
- Full M&C capability via RS485 and Ethernet port
- Weatherproof construction
- CE marking
- Waveguide Output Isolator

## Overview

Based on GaN technology the new G-Series C-Band BUCs provide high power density in a compact size. Combined with the traditional Advantech features, these new series of BUCs provide the ultimate in performance and convenience.

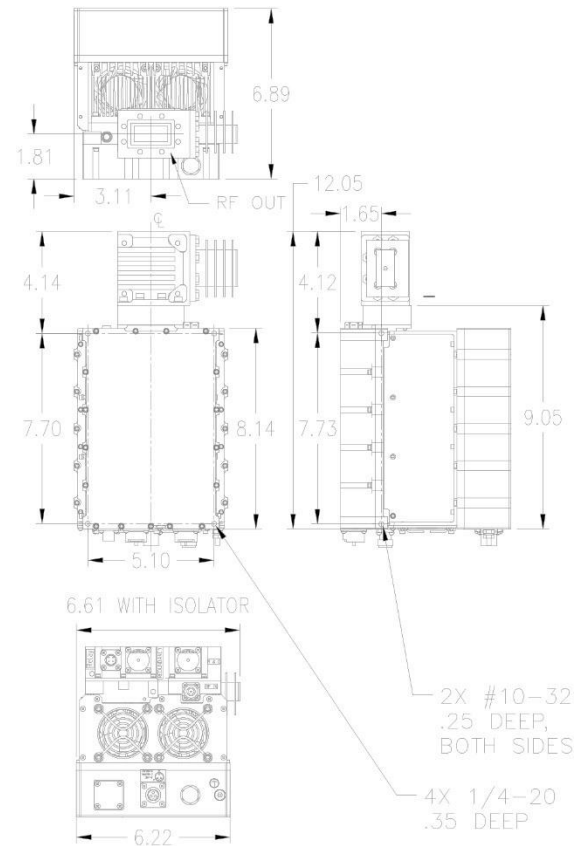
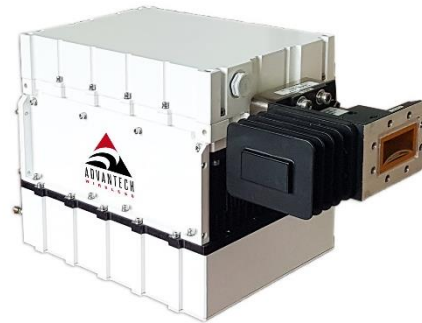
The products in the new G-Series C-Band BUCs are available as SSPB (BUC). The product described in this bulletin is for a 16W-60W BUC.

## Accessories

- Mounting kits
- Remote M&C panel with optional SNMP
- Flexible and rigid waveguides
- Boom mounting kit
- Replacement fans

## Options

- Internal reference with auto-sensing
- External RX Reject filter, 35 dBc rejection



## Outline

## 16W / 20W / 25W / 30W / 40W/ 50W / 60W C-Band BUC/SSPB Second Generation GaN Technology

General Specifications							
	16W	20W	25W	30W	40W	50W	60W
Operating Frequency	C-Band 5.85 – 6.425 GHz						
	Cx-Band 5.85 – 6.725 GHz						
	Ci-Band 6.725 – 7.025 GHz						
	Cp-Band 6.425 – 6.725 GHz						
L-Band input (BUC)	950 – 1450 MHz or 950 – 1700 MHz						
Output Power P <sub>SAT</sub> (typical)	+42.0 dBm	+43.0 dBm	+44.0 dBm	+45.0 dBm	+46.0 dBm	+47.0 dBm	+47.8 dBm
P <sub>LINEAR</sub> / Equivalent P1dB (dBm)	+38.0 /+41.0	+39.0/+42.0	+40.0 /+43.0	+41.0 /+44.0	+42.0 /+45.0	+43.0 /+46.0	+43.8 /+46.8
	P <sub>LINEAR</sub> is the power at which the IMD specs are met and the spectral regrowth is <-30 dBc @ 1.0 x symbol rate for QPSK/OQPSK/8PSK modulation						
Gain SSPB (BUC)	62 dB min	63 dB min	64 dB min	65 dB min	66 dB min	67 dB min	68 dB min
Gain SSPA	52 dB min	53 dB min	54 dB min	55 dB min	56 dB min	57 dB min	58 dB min
Gain adjustment range	20 dB in 0.1 dB steps						
Gain flatness over full band	4 dB p-p max						
Gain slope over 40 MHz	1 dB p-p max						
Gain variation over temperature	± 1.5 dB max						
Input Impedance and VSWR	50 Ω 1.5:1						
Output VSWR	1.25:1						
Noise power density	-75 dBm/Hz in Transmit Band, -135 dBm/Hz in Receive Band						
Spurious	-55 dBc max at P <sub>LINEAR</sub>						
AM/PM conversion	<1.0°/dB at P <sub>LINEAR</sub>						
Spectral regrowth	-30 dBc max at Linear power @ 1.0 symbol rate for QPSK/OPSK/8PSK modulation						
Group delay	Ripple 1 nsec p-p max						
Local Oscillator freq.	4.9 GHz for C-Band and Cx-Band		5.76 GHz for Ci-Band		5.4 GHz for Cp-Band		
Phase Noise	-53 dBc/Hz at 10Hz -63 dBc/Hz at 100Hz		-73 dBc/Hz at 1000Hz -83 dBc/Hz at 10 kHz		-93 dBc/Hz at 100 kHz		
External Reference Frequency	10 MHz (Option 1: Internal 10MHz reference; Option 2: Internal 10MHz reference with autosensing)						
Phase noise (max)	-120 dBc/Hz at 10Hz -135 dBc/Hz at 100Hz		-150 dBc/Hz at 1000Hz -155 dBc/Hz at 10 kHz		-160 dBc/Hz at 100 kHz		
<b>Weight &amp; Dimensions</b>							
Dimensions	L x W x H 11.23"x6.22"x6.57" (285.24x158x166.9 mm)						
Weight	13.23 (6 kg)						
Input voltage	DC 48V (40v – 60V), 27V (21V – 35V) AC 90 – 265 VAC (47 – 63 Hz)						
Power consumption (typical)	260W@P <sub>sat</sub> , 200W@ P <sub>LINEAR</sub>			280W@P <sub>sat</sub> , 240W@ P <sub>LINEAR</sub>		340W@P <sub>sat</sub> , 280W@ P <sub>LINEAR</sub>	
Interfaces	Input (RF or L-Band): DC line :		N type female MS3102 type		RF output: AC line:		Grooved CPR 137 MS3102 type
	DC Main Power MS3102, Serial RS485, Ethernet MS3112, External 10 MHz via L-band IF AC Main Power MS3102, INT 10MHz with Autosensing, Ethernet MS3112, Redundant ready						
Environmental	Temperature Operating: -30°C to +55°C Option: - 40°C to +55°C Storage: -55°C to +85°C Humidity: 100% condensing Altitude: 10,000' AMSL de-rated by 2 °C/1000' from AMSL						

Ref.: PB-SSPBMg-2G-C-16W-60W-18283

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