



50W
SSPBM-X 2200-G series

Features

- Output power of 50W in a single compact package
- High linearity
- Full M&C capability via RS485 or Ethernet port
- Weatherproof construction
- CE marking

Overview

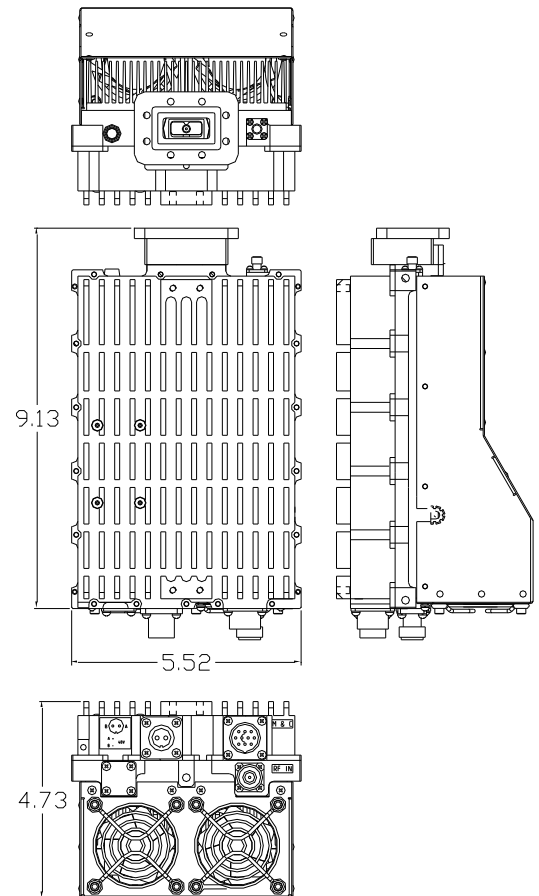
Based on GaN technology the new G-Series X-Band BUCs provide high power density in a compact size. Combined with the traditional Advantech features, these new series of BUCs provide the ultimate in performance and convenience. The products in the new G-Series X-Band BUCs are available as SSPA or SSPB (BUC).. The product described in this bulletin is for a 50W BUC.

Options

- Ethernet port
- Internal reference *with* auto-sensing
- Waveguide Output Isolator
- EXTRA-Lightweight

Accessories

- Mounting kits
- External Receive Reject Filter (70 dB)
- Remote M&C panel with optional SNMP
- Flexible and rigid waveguides
- Boom mounting kit
- Replacement fans



EXTRA-Lightweight

50W X-Band SSPB GaN

General Specifications

	50W
Operating Frequency	7.9 – 8.4 GHz
L-Band input (BUC)	950 – 1450 MHz
Output Power	P_{SAT} (typical) +47.0 dBm
P_{LINEAR}	+44.0 dBm P_{LINEAR} 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 QPSK/OQPSK/8PSK modulation
Gain	SSPB (BUC) 68 dB min
Gain adjustment range	20 dB in 0.1 dB steps
Gain flatness over full band	3 dB p-p max
Gain slope over 40 MHz	1dB p-p dB max
Gain variation over temperature	± 1.5 dB max
Input Impedance and VSWR	50 Ω 1.3:1
Output VSWR	2:1 (with optional Output Isolator) 1.25:1
Noise power density	-80 dBm/Hz in Transmit Band, -110 dBm/Hz in Receive Band (7.25GHz – 7.75 GHz)
Spurious	-55 dBc max at P_{LINEAR}
AM/PM conversion	<2.0°/dB at P_{LINEAR}
Third order IMD (two tones)	-25 dBc two signal 5 MHz apart at P_{LINEAR}
Spectral regrowth	30 dBc @ P_{LINEAR}
Group delay	Ripple 1 nsec p-p max
Local Oscillator freq.	6.95 GHz
Phase Noise	-53 dBc/Hz at 10Hz -83 dBc/Hz at 10 kHz -63 dBc/Hz at 100Hz -93 dBc/Hz at 100 kHz -73 dBc/Hz at 1000Hz
External Reference Frequency	10 MHz Optional; Internal 10MHz reference
phase noise (max)	-120 dBc/Hz at 10Hz -155 dBc/Hz at 10 kHz -135 dBc/Hz at 100Hz -160 dBc/Hz at 100 kHz -150 dBc/Hz at 1000Hz
Weight & Dimensions	
Dimensions	L x W x H 8.13"x5.52"x5.0" (206.5x140x127 mm)
Weight	9.2 lbs. (4.2 kg) option EXTRA-Lightweight 6.6 lbs. (3 kg)
Input voltage	DC 48V (40v – 60V) AC 90 – 265 VAC (47 – 63 Hz) note: not available for EXTRA-Lightweight
Power consumption (nominal)	300W@ P_{sat} , 250W@ P_{LINEAR} 1
Interfaces	Input (L-Band) N type female RF output CPR112 Grooved DC line MS3102 type AC line MS3102 type MS3112 type RS485/Ethernet (optional) RS485/RS232 or Ethernet (optional)
Environmental	Temperature Operating -30°C to +55 °C Option 1 -40°C to +55 °C Option 2 -50°C to +50 °C Storage -55°C to +85 °C Humidity 100% condensing Altitude 10,000' AMSL, de-rated by 2 °C/1000' from AMSL

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