50W Ku-Band BUC / SSPB Airborne Grade
Second Generation Advanced GaN Technology

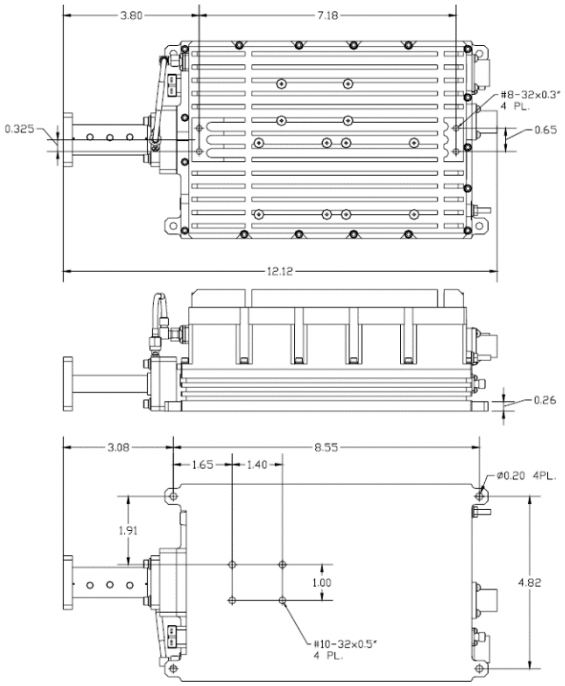
50W SSPBM-K 2500-G Series

- RTCA/DO-160G
- MIL-STD-188-164

Designed to meet the most stringent Airborne Standards

Features

- Low profile, ideal for Airborne SATCOM applications
- Saturated output power of 50W in a single compact package
- Weatherproof construction, meets RTCA/DO-160G
- M&C via RS-232/RS-485 configurations



Overview

Based on GaN technology the new 2500-G Series Ku-Band BUCs provide high power density in a compact size. Advantech Wireless' solid expertise in Earth Station SSPB has now been combined with the specific features and operational requirements of airborne operation.

The 2500-G Series' rugged and conservative thermal design allows operation over an extreme temperature range. These new Ku-Band BUCs are designed to meet DO-160G specifications.

*Other power levels available upon request

Accessories

- High Reliability GaN design
- Extreme Temperature Operating Range: -55°C to + 70°C
- Low Energy Consumption

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General Specifications	
Parameter	**Limit of Specification**
Operating Frequency	13.75 – 14.50 GHz
L-Band input (BUC)	950 – 1700 MHz
P_{SAT}	+47.0 dBm typ
P_{Linear}	+44.0 dBm min.
Spectral Regrowth	-30 dBc max. @ 1.0 x symbol rate (QPSK, 0.2 roll-off) @ Plinear
Gain @ minimum attenuation	68 dB min, @ 23 °C and central frequency
Gain adjustment range	20 dB min. in 0.1 dB steps
Gain flatness per 750 MHz	3 dB p-p max
Gain slope over 40 MHz	1dB p-p dB max
Gain variation over temperature	± 3.0 dB p-p, over the entire bandwidth.
Input Impedance and VSWR	50 Ω 1.29:1 max (-18 dB, max Return Loss)
Output VSWR	1.50:1 , typ (-14 dB, typ Return Loss)
Noise power density	-80 dBm/Hz in Transmit Band, -145 dBm/4 kHz (in Receive Band (@ 12.75 GHz)
Spurious In-Band and Out of Band	-55 dBc max at P_{Linear}
Local Oscillator freq.	12.8 GHz
Phase Noise (max.)	-53 dBc/Hz at 10Hz -93 dBc/Hz at 100 kHz -63 dBc/Hz at 100Hz -103 dBc/Hz at 1 MHz -73 dBc/Hz at 1000Hz -83 dBc/Hz at 10 kHz
External Reference Power Level	0 dBm ± 3 dB
External Reference Frequency	10 MHz ± 0.1 Hz (- 55 °C to + 70 °C)
Ref. 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
M&C Electrical Interface	RS-232 and RS-485 options
Physical Characteristics	
Dimensions	L x W x H 12.12" x 5.52" x 3.40" (307.8 x 140.2 x 86.3 mm)
Weight	9.25 lbs (4.2 kg)
Input Voltage	+21 to +35 V DC (+28 V DC nominal)
Power consumption	7.0 A typical @ 28 V DC (200 W) @ PLIN; 11.8 A typical @ 28 V DC (330 W) @ PSAT
Interface Connectors	IF Input (L-Band): N-Type (female) RS232/RS485: MS3112 type RF output: WR75 G DC line: MS3112 type
Environmental Characteristics	
Temperature	Operating Temperature: -55°C to +70°C Non-Operating: -55°C to +85 °C
Other	In accordance with applicable parts of RTCA/DO-160G Category A1

Ref.: PB-SSPBM-2G-2500G-Ku-50W-18145

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