

## Overview

Smaller, lighter and more Powerful AntBUC® series allows significant high-power BUC / SSPA size and weight reduction and at the same time substantially improves thermal efficiency, which leads to higher reliability and longer MTBF. That's why IRT offers 3 years warranty for this product line!

The IRT Technologies powered by GaN technology 150W to 500W C-Band AntBUC® series are very compact, light and extremely powerful. Weighing only 22 lbs at 250W and 52lbs at 500W output power, this new C-band AntBUC® product family is the *most powerful and feature rich for its size*: up to 500W at saturated power. IRT AntBUC® features best in class RF characteristics, RF sample port, true RMS power measurements, extensive monitor and control capabilities enabled via Ethernet, Serial and/or Analog Interfaces. AntBUC® remarkably compact size and high thermal efficiency results in overall system size and cost reduction making it the ideal candidate for mobile and fixed VSAT applications.



## Key Features

- **Extremely High Power Density**
  - Up to 250W Psat in 15.9" x 9" x 5.2"
  - Up to 500W Psat in 18.5" x 13.5" x 10"
- **Superior RF performance**
  - Superior Phase Noise: 8 dB better than IESS308/309 recommendation
  - Spurious emission below -60 dBc
  - Wide range Gain Control
  - Highest Linearity at small back – off
- **RF Overdrive Protection**
- **Available in different frequency options**
  - Super-extended 5.85-6.725GHz
  - Palapa 6.425-6.725GHz
  - Insat 6.725-7.025GHz
- **Extensive M&C capability**
  - Serial: RS 232 & RS 485
  - Ethernet: embedded Web browser (HTTP) & SNMPv3 support
- **Built In Output Isolator provides full output VSWR Protection**
- **Input and output True RMS power detection**
- **Field upgradable software**
- **Redundancy ready with no need of external controller**
- **Status LED**
- **Analogue Interface**

## Options & Accessories

- **Internal 10 MHz Reference clock**
- **Autosense 10 MHz Reference clock**
- **ALC option**
- **Antenna Mounting kit**
- **1:1 and 1:2 Redundancy Kit**
- **Remote Control Panel**



AntBUC®

# Super High Power Density 150W – 500W C band GaN Powered BUC/SSPA

## 150W to 500W C-Band Block-Up-Converter GaN Specification

### RF Parameters

Output Frequency Band, GHz	5.85-6.425GHz/5.85-6.725GHz; other options available	
Input L band Frequencies. MHz	950-1525MHz/950-1825MHz	
Conversion Gain, dB	75 minimum, 77 typical	
Gain Flatness, dB	+/-1 typical +/-1.5 maximum over full band +/-0.4 maximum over any 40MHz	
Gain Stability, dB	+/-1.5 maximum over full temperature range	
Gain Control, dB	20dB minimal dynamic range	
Linearity at Pout=Plin:	2 tone IMD Spectral Re-growth	-25dBc max at -30dBc for QPSK at 1 x symbol rate
Input Impedance, Ohm	50	
Input/Output VSWR	1.4 : 1 / 1.3 : 1	
Noise Power Density, dBm/Hz	-70 in Transmit Band, -145 in Receive Band (10.7 GHz – 12.8 GHz)	
Spurious Emission dBc; Non-signal related / Signal related(at Plin)	-60 / -55 max	
AM/PM conversion at Plinear, °/dB	1.0 maximum	
Group Delay	Ripple 1 nsec p-p max over any 40 MHz band	

### BUC Parameters

LO Frequency, MHz	4900
Type of Conversion	Single conversion, non – inverting
External 10 MHz Frequency	Over IF L band cable with multiplexing
Phase Noise, dBc/Hz	-70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz: -95 @ 100kHz: -115 @ 1MHz

### Power

AC Voltage Range	90–265V AC 50–60Hz auto–ranging; PFC for 150,200 and 250W 190-265V AC 50-60Hz PFC for 300,400 and 500W models
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### Mechanical & Environment

Size 150-250W / 300-500W	15.9"x9"x5.2" / 18.5"x13.5"x10"
Weight 150-250W/ 300-500W	26lbs(12kg) / 65lbs (30kg)
Cooling	Forced Air
Operating temperature / Relative Humidity	-40°C to +55°C / Up to 100% condensing

### Interfaces

IF Input Connector	N – type female
RF Output Connector	CPR137 Grooved
AC Power In	3 pin MS style
RS485 – Ethernet – SNMPv3	MS3112E14-19S

IRT Part Number	Output Power (W)	Prated (dBm/W)	Plinear (dBm/W)	P Cons at Prated	P Cons at Plin
TPB-CB00520-HMS X*	<b>150W</b>	52/150	49/80	850W	700W
TPB-CB00530-HMS X*	<b>200W</b>	53/200	50/100	900W	720W
TPB-CB00540-HMS X*	<b>250W</b>	54/250	51/125	1000W	750W
TPB-CB00550-HMS X*	<b>300W</b>	55/300	52/150	1700W	1500W
TPB-CB00560-HMS X*	<b>400W</b>	56/100	53/200	1900W	1600W
TPB-CB00570-HMS X*	<b>500W</b>	57/500	54/250	2000W	1650W

Specifications are subject to change without notice

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