

Super High Power Density 150W to 400W C-Band BUC/SSPA



AntBUC®

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 400W C-Band AntBUC® series are very compact, light and extremely powerful. Weighing only 22 lbs at 200W and 52lbs at 400W output power, this new C-band AntBUC® product family is the most powerful and feature rich for its size: up to 400W 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 200W PSAT in 15.3" x 8.7" x 4.2"
- Extremely High Power Density – up to 400W PSAT in 18.5" x 13.5" x 10"!
- Superior RF Performance:
 - ✓ Phase noise 8-10dB better than IESS308/309
 - ✓ Psat up to 56 dBm
 - ✓ Spurious below -60dBc
 - ✓ Wide dynamic range of Gain Control
 - ✓ High linearity
- RF Overdrive Protection
- Available in various C-Band frequency options
- Field Upgradable Software
- Internal / Autosense 10MHz Reference Optional
- Input and Output True RMS Power Detection
- Configuration via RS-232 Serial Console, Packet Protocol RS-485 - User Friendly HTTP Based GUI and SNMP
- Automated Level Control (ALC) Option
- Redundant Ready - No External Redundancy Controller Required.
- 48VDC Isolated Power Supply Option (up to 200W only)
- Status LED

AntBUC®

150W to 400W C-Band Block-Up-Converter GaN Specification

Parameter		
RF Performance		
RF Frequency Range-Available in/switched:	5.85-6.425GHz (other frequency options available)	
IF Frequency Range	950-1525MHz	
LO Frequency	4.9GHz	
Conversion	Single Conversion; Non-Inverting	
Conversion Gain	75dB min, 77dB typ	
Gain Flatness	+/-1dB typ +/-1.5dB max over full band; +/-0.5dB max over any 40MHz	
Gain Stability over temperature	+/-1.5dB over full temperature range	
Gain Control	20dB min dynamic range	
External Reference Frequency	10MHz multiplexed with IF In	
External Reference Required Phase Noise	-130dBc/Hz @ 100Hz -140dBc/Hz @ 1kHz -150dBc/Hz @ 10kHz -155dBc/Hz @ 100 kHz	
Up-Converter Phase Noise	-68dBc/Hz @ 100Hz; -80dBc/Hz @ 1kHz; -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz	
Linearity: 2 tone IMD Spectral Re-growth	-25dBc at P linear -30dBc for QPSK at 1.5xsymbol rate at Plinear+1dB	
Noise Power Density:	Transmit Band	-85dBm/Hz max
	Receive Band	-150dBm/Hz max
Output Spurious: Non-signal related		-60dBc
Signal related		-55dBc
Power		
AC Voltage Range	90-265VAC 50-60Hz Auto-Ranging PFC	
48VDC Isolated optional	40-72VDC Isolated	
Environmental		
Cooling	Forced Air	
Operating temperature	-40°C to +55°C	
Relative Humidity	Up to 100% condensing	
Interfaces		
IF Input Connector	N-type female	
RF Output Connector	CPR137 grooved	
RF Sample	N-type female	
AC Power In	MS3112E12-3P	
M&C Interface-Serial, Analog and Ethernet	MS3112E14-19S	
Redundant Interface	MS3112E14-19P	

IRT Part Number	Prated(dBm/W)	Plinear(dBm/W)	P Cons at Prated	P Cons at Plin	Size	Weight
TPB-CB00520-HMSX*	52/150	49/80	850W	650W	15.4"x8.7"x4.25"	26lbs/12kg
TPB-CB00530-HMSX*	53/200	50/100	1000W	750W	15.4"x8.7"x4.25"	26lbs/12kg
TPB-CB00540-HMSX*	54/250	51/125	1600W	1350W	18.5"x13.5"x10"	50lbs/22kg
TPB-CB00550-HMSX*	55/300	52/150	1800W	1600W	18.5"x13.5"x10"	50lbs/22kg
TPB-CB00560-HMSX*	56/400	53/200	2000W	1800W	18.5"x13.5"x10"	50lbs/22kg

