

PicoBUC®

SUPER COMPACT 16W / 20W / 25W KU-BAND BUC



The IRT Technologies PicoBUC® series are revolutionary in size and weight - PicoBUC® offers superior performance in an extremely compact package that can fit in your palm! Weighing at only 5.5lbs, the PicoBUC® is the most powerful and feature rich for its size: Up to 30W Psat. Built in AC power supply provides the customer with the simplest and least expensive plug-into-the wall solution. IRT PicoBUC® features best in class RF characteristics, embedded WG circulator, extensive monitor and control capabilities enabled via Ethernet, Serial and/or Analog Interfaces. PicoBUC® remarkably small size and low power consumption results in better heat extraction that leads to overall system size and cost reduction making it the ideal candidate for portable, mobile and VSAT on the move applications. Its small size and weight allows direct feed horn mounting, which makes it a most economical solution for fixed VSAT applications

KEY FEATURES

- Up to 25W P1dB / 30W Psat in this super-compact and light weight package 6.5"x6.5"x3.7" only!
- Ideal for feed horn mounting
- Superior RF performance:
 - ✓ Phase noise 6dB better than IESS308/309
 - ✓ P1dB of 44dBm min
 - ✓ Spurious below -60dBc
 - ✓ Wide dynamic range of Gain Control
- Integrated L-Band to Ku-Band up converter
- Switchable LO option - standard and Extended Ku-Band in one unit
- Internal 10 MHz Reference clock optional
- Low power consumption
- Built In WG Circulator provides full output VSWR Protection
- Output power measurement - True RMS detector
- Configuration via RS-232 serial console, packet protocol RS-485 - User friendly HTTP based GUI and SNMP optional
- 48VDC isolated power supply
- Built in auto-ranging AC power supply optional
- Redundant ready with no need of external controller
- Field upgradable software
- Status LED
- Antenna Mounting kit optional

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16W / 20W / 25W L- to Ku-Band Block-Up-Converter Specification

Parameter	16W	20W	25W
RF Performance			
RF Frequency Range-Available in/switched:	14-14.5GHz		13.75-14.5GHz
IF Frequency Range	950-1450MHz		950-1700MHz
LO Frequency	13.05GHz		12.8GHz
Conversion	Single Conversion; non-inverting		
Output Power at 1dB compression point	42dBm min	43dBm min	44dBm min
Saturated Power	43dBm typ	44dBm typ	45dBm typ
Conversion Gain	72dB min, 75dB typ		
Gain Flatness	+/-1dB typ +/-1.5dB max over full band; +/-0.5dB max over any 40MHz		
Gain Stability	+/-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	-70dBc/Hz @ 100Hz; -80dBc/Hz @ 1kHz; -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz		
Linearity: 2 tone IMD Spectral Re-growth	-25dBc at 3dB total power back off from P1dB -30dBc for QPSK at 1.5xsymbol rate at 2dB back off from P1dB		
Noise Power Density: Transmit Band	-85dBm/Hz max		
Receive Band	-140dBm/Hz max		
Output Spurious: Non-signal related	-60dBc		
Signal related	-55dBc		
Power			
48V DC Voltage Range	36-72VDC Isolated		
AC Voltage Range (optional)	90-265VAC 50-60Hz auto-ranging		
Power Consumption DC power in/AC power in	135W/150W	160W/180W	200W/180W
Mechanical			
Size	6.5"x6.5"x3.7"		
Weight	5.5lbs		
Cooling	Forced Air		
Operating temperature	-40°C to +60°C		
Relative Humidity	Up to 100% condensing		
Interfaces			
IF Input Connector	N-type female		
RF Output Connector	WR75 grooved		
AC Power In	MS3112E10-8P		
RS485-RS232-Ethernet-SNMP	MS3112E14-19S		
Part Numbering Information			
Power Supply Option	16W	20W	25W
DC Isolated	TPB-KXB0420-HMA1	TPB-KXB0430-HMA1	TPB-KXB0440-HMA1
AC Auto-ranging	TPB-KXB0420-HMA0	TPB-KXB0430-HMA0	TPB-KXB0440-HMA0

Rev.04

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