Ultra-Compact GaAs / GaN 20W-120W C Band BUC / SSPA

Smaller, lighter and more Powerful, the PicoBUC® 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 SpacePath Communications offers 3 years warranty for this product line!

This series provides up to 120W maximum output power in ultra-compact package and features best in class RF characteristics, embedded output isolator, extensive monitor and control capabilities, enabled via Ethernet, Serial and/or Analog Interfaces.

With low power consumption and smart heat extraction technology, this series remarkably compact size and high thermal efficiency results in overall system size and cost reduction making it the ideal candidate for mobile DSNG and fixed medium earth station applications.

Features

- Ultra-compact design and light weight
  - Up to 120W Psat in 15.2x15.2x10.6 cms
- 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
- Built In Output Isolator provides full output VSWR Protection
- Input and output True RMS power detection
- Redundancy ready with no external controller required
- Status LED
- Field upgradable software
- 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

Options

- Internal 10MHz Reference clock
- Built in auto-ranging AC Power Supply
- DC supply via IFL (20W / 40W units only)
- Automatic Level Control (ALC)
- Antenna Mounting Kit
- 1:1 and 1:2 Redundancy Kit
- Remote Control Panel

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 minimum dynamic range
Linearity at Pout=Plin: 2 tone IMD Spectral Regrowth	-25dBc max -30dBc for QPSK at 1 x symbol rate
Input Impedance, Ohm	50Ohm
Input/Output VSWR	1.4:1 / 1.3:1
Noise Power Density, dBm/Hz	-70 in Transmit Band, -145 in Receive Band
Spurious Emission dBc; Non-signal related / Signal related (at Plin)	-60 / -55 max
AM/PM conversion at Plinear, ^{0}/dB	1.0 maximum
Group Delay	Ripple 1 nsec p-p max over any 40MHz band
BUC Parameters	
LO Frequency, MHz	4900MHz
Type of Conversion	Single conversion, non-inverting
External 10MHz	Over IF L Band cable with multiplexing
Phase Noise, dBc/Hz	-70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz; -95 @ 100kHz; -115 @ 1MHz
Power	
48V DC Voltage Range	32-72VDC Isolated (other options available)
AC Voltage Range	90-265V AC 50-60Hz auto-ranging; PFC
Mechanical & Environmental	
Size	15.2 x 15.2 x 10.6 cms
Weight	2.7KG (6lbs)
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	MS3112E12-3P
RS485 – Ethernet – SNMPv3	MS3112E14-19S

SpacePath Part Number	Output Power (W)	Psat (dBm / W)	Prated (dBm / W)	Plinear (dBm / W)	P Cons at Prated	P Cons at Plin	GaAs / GaN
STS20C	20W	44 / 25	43/ 20	40 / 10	140W	90W	GaAs**
STS40C	40W	47 / 50	46 / 40	43 / 20	220W	190W	GaAs**
STS60C	60W	48 / 60	48 / 60	45 / 30	350W	320W	GaN
STS80C	80W	49 / 80	49 / 80	46 / 40	390W	340W	GaN
STS100C	100W	50 / 100	50 / 100	47 / 50	420W	350W	GaN
STS120C	120W	51 / 120	51 / 120	48 / 60	450W	360W	GaN

** This power level is also available in GaN

Specifications are subject to change without notice