PicoBUC® SUPER COMPACT
40W/50W/60W KU-BAND BUC/SSPA GAN

The IRT Technologies 40W-60W BUC / SSPB / SSPA powered by GaN technology PicoBUC® series are revolutionary in size, weight and power density - PicoBUC® offers superior performance in an extremely compact package that can fit in your palm!

Weighing at only 8.8lbs, our feature-rich GaN PicoBUC® is exceptionally powerful for its size: up to 60W Psat. Built in AC power supply provides the customer with the simplest and least expensive plug-into-the wall solution. IRT GaN PicoBUC® features best in class RF characteristics, embedded WG circulator, extensive monitor and control capabilities enabled via Ethernet, Serial and/or Analog Interfaces.

PicoBUC®’s 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 feedhorn mounting, which makes it a most economical solution for fixed VSAT applications.

KEY FEATURES

- Up to 60W Psat Output Power
- Only 290W Power consumption at 60W output
- 200W power consumption at 3dB back of
- Superior RF performance
- Switchable LO option - standard and Extended Ku- Band in one unit
- RF overdrive protection
- Internal / Autosense 10 MHz Reference Options
- Output power measurement - True RMS detector optional
- Built in Waveguide Output Circulator provides full output VSWR Protection
- Configuration via RS-232 serial console, packet protocol RS-485 and User friendly Ethernet HTTP based GUI and SNMP support
- 48VDC isolated power supply
- Built in auto-ranging AC power supply optional
- Redundant ready with no external controller
- Field upgradable software
- Status LED
- Antenna Mounting kit optional

RF PERFORMANCE

- RF Freq. Range-Available in/switched: 14-14.5GHz / 13.75-14.5GHz
- IF Frequency Range: 950-1450MHz / 950-1700MHz
- LO Frequency (Switchable): 13.05GHz / 12.8GHz
- Conversion: Single Conversion; Non-Inverting
- Saturated Power:
  - 40W: 46dBm typ.
  - 50W: 47dBm typ.
  - 60W: 48dBm typ.
- Linear Power:
  - 40W: 43dBm min.
  - 50W: 44dBm min.
  - 60W: 45dBm min.
- Conversion Gain:
  - 40W: 72dB min, 75dB typ
- Gain Flatness:
  - +/-1dB typ +/-0.5dB max over full band; +/-1.5dB max over any 40MHz

Gain Stability
Gain Control
External Reference Frequency
External Reference Required
Phase Noise
Up-Converter Phase Noise
Linearity:
2 tone IMD
Spectral Re-growth
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
- 28VDC Voltage Range: 24-75VDC Isolated (optional)
- AC Voltage Range (optional): 90-265VAC 50-60Hz Auto-Ranging
- Power Consumption
  - DC power in (@ Psat / @ Plin):
  - AC power in (@ Psat / @ Plin):
    - 16W: 250W typ. / 180W typ.
## MECHANICAL

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Size</td>
<td>6.5” x 7.6” x 4.2”</td>
</tr>
<tr>
<td>Weight</td>
<td>8.8lbs</td>
</tr>
<tr>
<td>Cooling</td>
<td>Forced Air</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40 C to +55 C</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>Up to 100% condensing</td>
</tr>
</tbody>
</table>

## 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

**DC Isolated**

<table>
<thead>
<tr>
<th>Power</th>
<th>Part Number</th>
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<tbody>
<tr>
<td>40W</td>
<td>TPB-KXB0460-HMS1</td>
</tr>
<tr>
<td>50W</td>
<td>TPB-KXB0470-HMS1</td>
</tr>
<tr>
<td>60W</td>
<td>TPB-KXB0480-HMS1</td>
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</table>

**AC Auto-ranging**

<table>
<thead>
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<th>Power</th>
<th>Part Number</th>
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</thead>
<tbody>
<tr>
<td>40W</td>
<td>TPB-KXB0460-HMS0</td>
</tr>
<tr>
<td>50W</td>
<td>TPB-KXB0470-HMS0</td>
</tr>
<tr>
<td>60W</td>
<td>TPB-KXB0480-HMS0</td>
</tr>
</tbody>
</table>