

Super Compact 80W Ku-Band GaN BUC / SSPA

The IRT Ku Band SSPA series is powered by GaN technology and is one of the smallest, lightweight efficient units available today.

With best in class RF characteristics, RF sample port, true RMS power measurements, extensive monitor and control capabilities enabled via Ethernet, Serial and/or Analogue interfaces.

Designed for portable, mobile and VSAT on the move applications. Its small size and weight allows and high thermal efficiency, which makes it a most economical solution for fixed VSAT applications.

Options

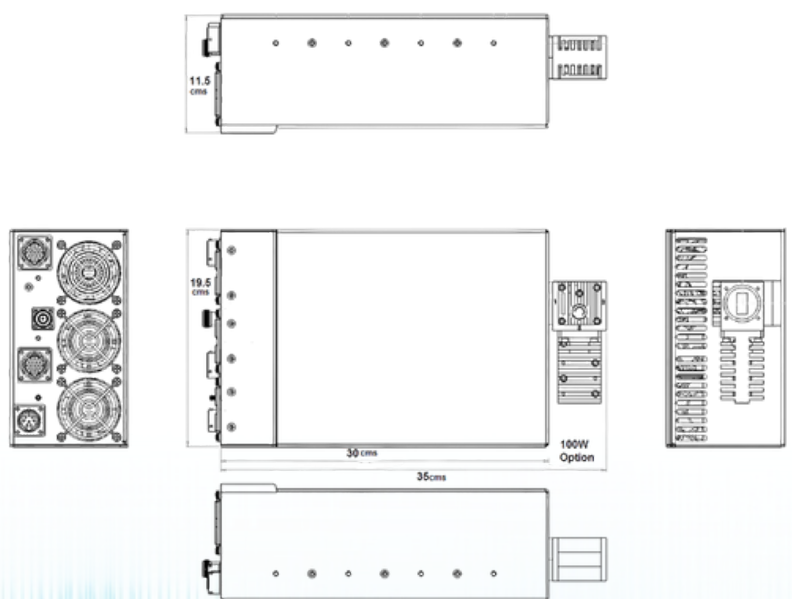
- Internal 10MHz Reference
- Available in both standard and extended Ku-Band
- Automated Level Control (ALC) option
- Antenna Mounting Kit
- Switchable LO option - Standard and Extended Ku-Band in one unit

Features

- Extremely high power density
- Superior RF performance:
 - o Phase noise 8-10dB better than IESS308/309
 - o Psat up to 50dBm
 - o Spurious below -60dBc
 - o Wide dynamic range of Gain control
 - RF overdrive protection
 - Status LED
 - Input and Output True RMS power detection
 - Configuration via RS-232 serial console, packet protocol RS-485 - User friendly HTTP based GUI and SNMP optional
 - Redundant ready with no external controller required
 - Field upgradeable software



Outline





RF Parameters		
Model Number		TPB-KXB0490-HMSX
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
Saturated Power		49dBm min
Linear Power		46dBm min
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 0dBm+/-5dB multiplexed with IF In
External Reference Required Phase Noise		-130dBc/Hz @100Hz -140dBc/Hz @ 1kHz -150dBc/Hz @ 10kHz -155dBc/Hz @ 100kHz
Up-Converter Phase Noise		-70dBc/Hz@ 100Hz -80dBc/Hz @ 1kHz -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz
Linearity:	2 tone IMD	-24dBc at P linear
	Spectral Re-growth	-30dBc for QPSK at 1.5 x symbol rate at 2dB back off from rated power
Noise Power Density:	Transmit Band	-85dBm/Hz max
	Receive Band	-148dBm/Hz max
Output Spurious:	Non-signal related	-60dBc
	Signal related	-55dBc
Power & Mechanical		
AC Voltage Range		90-265VAC 50-60Hz Auto-Ranging PFC (48VDC Isolated optional)
Power Consumption at rated power		450W typ
Power Consumption at 3dB back off		380W typ
Size / Weight / Cooling		34.5 x 21.5 x 10cms / 8KG / 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		WR75 grooved
AC Power In		MS3112E12-3P
M&C Interface-Serial, Analog, Ethernet		MS3112E14-19S
Redundancy Interface		MS3112E14-19P

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.