Super Compact 80-125W 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

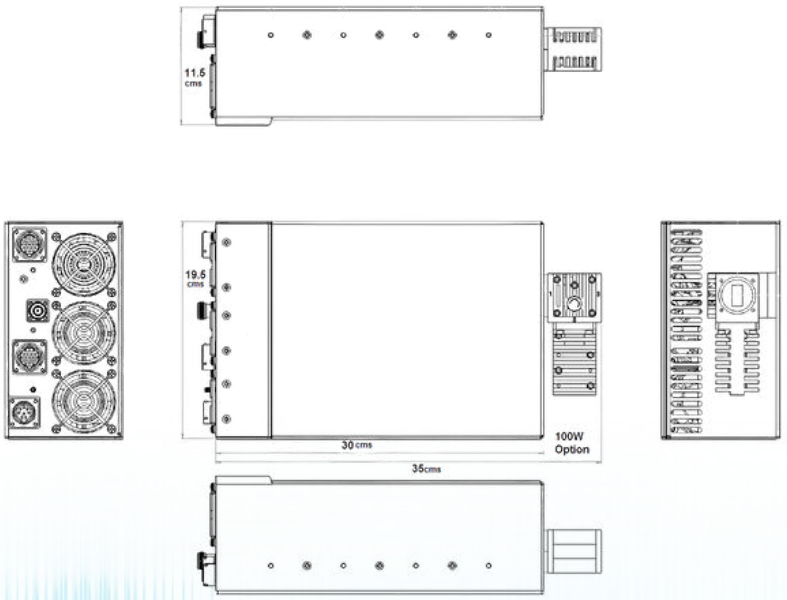
Features

- Extremely high power density - Up to 125W Psat in 8Kg, 34.5 x 21.5 x 10 cms.
- 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				
		80W	100W	125W
RF Frequency Range-Available in/switched:		14-14.5GHz 13.75-14.5GHz		
IF Frequency Rage		950-1450MHz 950-1700MHz		
LO Frequency		13.05GHz 12.8GHz		
Conversion		Single Conversion; non-inverting		
Saturated Power		49dBm min	50dBm min	51dBm min
Linear Power		46dBm min	47dBm min	48dBm min
Conversion Gain		75dB min, 77dB 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	580W typ	600W typ
Power Consumption at 3dB back off	380W typ	500W typ	520W 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.

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