250W-500W Ku-Band GaN BUC / SSPA

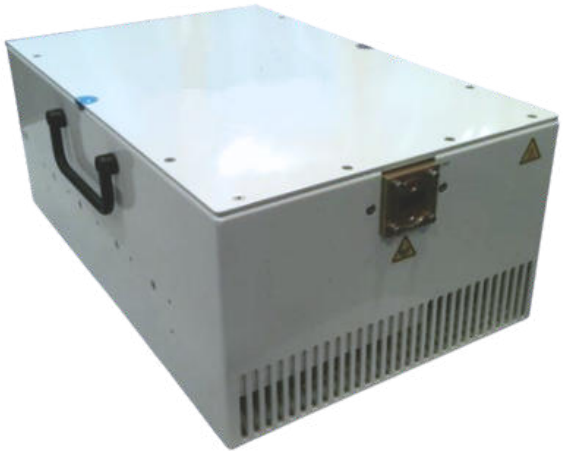
The STS250/300/400/500 Ku Band series is powered by GaN technology and is one of the smallest, lightweight effi-cient units available today.

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
- BUC or SSPA optional
- Automated Level Control (ALC) option
- Antenna Mounting Kit
- Switchable LO option - Standard and Extended Ku-Band in one unit
- External Rackmount Remote M&C Panel



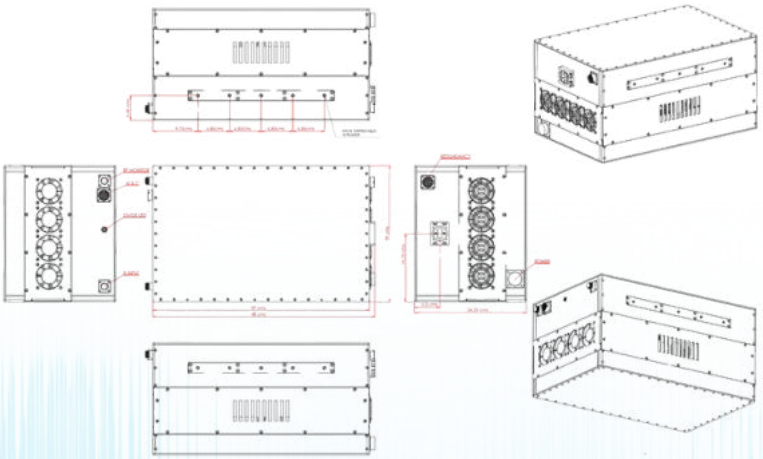
Features

- Extremely high power density - Up to 500W Psat in 34Kg, 48 x 29 x 24.25 cms.
- Superior RF performance:

o Phase noise 8-10dB better than IESS308/309
o Psat up to 56 dBm
o Spurious below –60dBc
o High Linearity
o Wide dynamic range of Gain control

- RF overdrive protection
- 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
- Status LED
- Field replaceable detachable power supply

Outline



RF Parameters					
		250W	300W	400W	500W
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		54dBm min	55dBm min	56dBm min	57dBm min
Linear Power		51dBm min	52dBm min	53dBm min	54dBm 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		-68dBc/Hz@ 100Hz -80dBc/Hz @ 1kHz -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz			
Linearity:	2 tone IMD	-25dBc 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	-60dBc			

Power & Mechanical				
AC Voltage Range	190-265VAC 50-60Hz Auto-Ranging PFC			
Power Consumption at rated power	1700W	2000W	2300W	2500W
Power Consumption at 3dB back off	1400W	1700W	2000W	2300W
Size / Weight / Cooling	48 x 29 x 24.25cms / 34KG / 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.