IRT Super Compact 16W / 20W / 25W Ku-Band BUC / SSPA

The STS16/20/25Ku Band series offers superior performance 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 clock
- Available in both standard and extended Ku-Band
- Antenna Mounting Kit
- Built in auto-ranging AC power supply
- Switchable LO option - Standard and Extended Ku-Band in one unit
- Lo Ku Band option (see page 3)

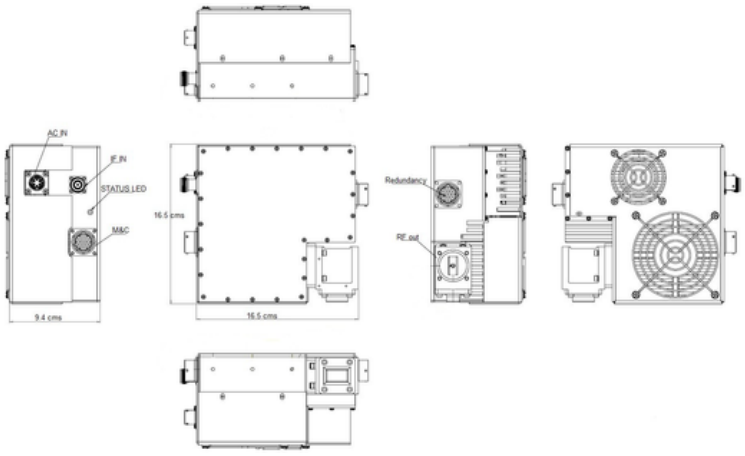
Features

- Up to 25W P1dB in this super compact and lightweight package - 2.5Kg 16.5 x 16.5 x 9.5 cms.
- Superior RF performance:
- Phase noise 6dB better than IESS308/309

o P1dB of 44dBm min
o Spurious below –60dBc
o Wide dynamic range of Gain control

- Available in different frequency options
- Integrated L-Band to Ku-Band upconverter
- Built in WG Circulator provides full output VSWR protection
- Output power measurement - True RMS detector
- 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
- 48VDC Isolated power supply
- Ideal for feed horn mounting
- Low power consumption

Outline



RF Parameters				
		16W	20W	25W
RF Frequency Range-Available in/switched:		14-14.5GHz	14-14.5GHz / 13.75-14.5GHz	13.75-14.5GHz
IF Frequency Rage		950-1525MHz	950-1525MHz / 950-1700MHz	950-1700MHz
LO Frequency		13.05GHz	13.05GHz / 12.8GHz	12.8GHz
Conversion		Single Conversion; non-inverting		
Output Power at 1dB compression point		42dBm min	43dBm min	44dBm min
Saturated Power		43dBm min	44dBm min	45dBm 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 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	-25dBc at 3dB total power back off from P1dB		
	Spectral Re-growth	-30dBc for QPSK at 1.5 x symbol rate at 2dB back off from P1dB		
Noise Power Density:	Transmit Band	-85dBm/Hz max		
	Receive Band	-140dBm/Hz max		
Output Spurious:	Non-signal related	-60dBc		
	Signal related	-55dBc		

Power & Mechanical			
48V DC Voltage Range	36-72VDC Isolated		
AC Voltage Range (optional)	90-265VAC 50-60Hz Auto-Ranging		
Power Consumption DC power in/AC power in	135W/150W	160W/180W	200W/180W
Size	16.5 x 16.5 x 9.5 cms		
Weight	2.5KG		
Cooling	Forced Air		
Operating Temperature / Relative Humidity	-40°C to +60°C / Up to 100% condensing		

Interfaces	
IF Input Connector	N-type Female
RF Output Connector	WR75 grooved
AC Power In	MS3112E10-8P
RS485 – Ethernet – SNMPv3	MS3112E14-19S

LO Ku Band Option - RF Parameters				
		16W	20W	25W
RF Frequency Range		12.75-13.25GHz		
IF Frequency Rage		950-1450MHz		
LO Frequency		11.8GHz		
Conversion		Single Conversion; non-inverting		
Output Power at 1dB compression point		42dBm min	43dBm min	44dBm min
Saturated Power		43dBm min	44dBm min	45dBm 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 reference from Modem's 10Mhz reference out over IFL cable		
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	-25dBc at 3dB total power back off from rated power		
	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	-140dBm/Hz max		
Output Spurious:	Non-signal related	-60dBc		
	Signal related	-55dBc		
VSWR		1.5:1 max		
RF level off feature		RF signal must be Shut-Off if lost the PLL		
Ext. reference input level		-5 dBm / +5 dBm		

Power & Mechanical			
48V DC Voltage Range	36-72VDC Isolated		
AC Voltage Range (optional)	90-265VAC 50-60Hz Auto-Ranging		
Power Consumption - DC power in/AC power in	135W/150W	160W/180W	200W/180W
Size	6.5" x 7.6" x 4.2"		
Weight	7.5lbs		
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	WR75 grooved
AC Power In	MS3112E10-8P
RS485 – Ethernet – SNMPv3	MS3112E14-19S