

Overview

Smaller, lighter and more **Powerful KiloBUC® series** allows significant high-power BUC / SSPA size and weight reduction and at the same time substantially improves thermal efficiency, which leads to higher reliability and longer MTBF. That's why IRT offers 3 years warranty for this product line!

The IRT Technologies 600W to 1000W C- and Ku-Band KiloBUC® series are very compact, light and extremely powerful. Weighing only 75 lbs at 500W and 125lbs at 1000W output power, this new Tropo- KiloBUC® product family is the most powerful and feature rich for its size: up to 1000W output power. IRT KiloBUC® features best in class RF characteristics, RF sample port, true RMS power measurements, extensive monitor and control capabilities enabled via Ethernet, Serial and/or Analog Interfaces. KiloBUC® remarkably compact size and high thermal efficiency results in overall system size and cost reduction making it the ideal candidate for mobile and fixed VSAT applications.



Key Features

- **Extremely high power density**
 - Lightweight compact package up to 1000W output power
- **Superior RF performance**
 - Superior Phase Noise: 8 dB better than IESS308/309 recommendation
 - Spurious emission below -60 dBc
 - Wide range Gain Control
 - Highest Linearity at small back – off
- **RF Overdrive protection**
- **Available in different frequency options**
 - C-Band-Super-ext, Palapa, Insat
 - Ku-Band – Ext and Stand Ku-Band in one unit; switchable LO
- **Extensive M&C capability**
 - Serial: RS 232 & RS 485
 - Ethernet: embedded Web browser (HTTP) & SNMPv3 support
- **Available in GaAs configuration (C-Band only)**
- **Input and output True RMS power detection**
- **Field upgradable software**
- **Redundancy ready with no need of external controller**
- **Status LED**
- **Analogue Interface**

Options & Accessories

- **Internal 10 MHz Reference clock**
- **Autosense 10 MHz Reference clock**
- **ALC option**
- **Antenna Mounting kit**
- **1:1 and 1:2 Redundancy Kit**
- **Remote Control Panel**

600W-1000W C- and Ku-Band Block-Up-Converter Specification



Super High-Power Density KiloBUC® 600W – 1000W C & Ku Band GaAs / GaN BUC/SSPA

		C-Band	Ku-band				
RF Parameters							
RF Frequency Band, GHz		5.85-6.425GHz	13.75-14.5GHz				
IF Frequency Range, MHz		950-1525MHz	950-1700MHz				
LO Frequency		4.9GHz/12.8GHz	12.8GHz				
Conversion Gain, dB		75 minimum, 77 typical					
Gain Flatness, dB		+/-1 typical +/-1.5 maximum over full band +/-0.4 maximum over any 40MHz					
Gain Stability, dB		+/-1.5 maximum over full temperature range					
Gain Control, dB		20dB minimal dynamic range					
Linearity at Pout=Plin: 2 tone IMD Spectral Re-growth		-25dBc max -30dBc for QPSK at 1 x symbol rate					
Input Impedance, Ohm		50					
Input/Output VSWR		1.4: 1 / 1.3 : 1					
Noise Power Density, dBm/Hz		-68 in Transmit Band, -140 in Receive Band					
Spurious Emission dBc; Non-signal related / Signal related (at Plin)		-60 / -55 max					
AM/PM conversion at Plinear, °/dB		1.0 maximum					
Group Delay		Ripple 1 nsec p-p max over any 40 MHz band					
BUC Parameters							
LO Frequency, MHz		4900/12.8-13.05 switchable					
Type of Conversion		Single conversion, non – inverting					
External 10 MHz Frequency		Over IF L band cable with multiplexing					
Phase Noise, dBc/Hz		-70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz: -95 @ 100kHz: -115 @ 1MHz					
Power							
AC Voltage Range		190-265VAC 50-60Hz; PFC					
Mechanical & Environment							
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		CPR137 / WR75 Grooved					
RF Sample		N-type female					
AC Power In		3 pin MS style					
M&C Interface-Serial – Ethernet		MS3112E14-19S					
IRT Part Number	Prated (dBm/W)	Plinear (dBm/W)	P Cons at Prated	P Cons at Plin	Size	Weight	GaAs/GaN
TPB-CB00580-HMA X*	59/800	56/400	3300W	3000W	25.6" x 20" x 10.84"	132lbs/60kg	GaAs
TPB-CB00590- HMA X*	60/1000	57/500	3500W	3300W	25.6" x 20" x 10.84"	132lbs/60kg	GaAs
TPB-CB00600- HMS X*	60/1000	57/500	3300W	2400W	25.6" x 20" x 10.84"	132lbs/60kg	GaN
TPB-KXB0580- HMS X*	58/600	55/300	4000W	3500W	24" x 20" x 12.75"	114lbs/52kg	GaN
TPB-KXB0590- HMS X*	59/800	56/400	4200W	3600W	24" x 20" x 12.75"	114lbs/52kg	GaN
TPB-KXB0600- HMS X*	60/1000	57/500	4600W	3750W	24" x 20" x 12.75"	114lbs/52kg	GaN

Specifications are subject to change without notice

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