



KiloBUC®

Super High-Power Density 500W – 1000W Tropo-Band GaN Powered BUC/SSPA

Overview

Smaller, lighter and more **Powerful Troposcatter 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 500W to 1000W Troposcatter 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 Troposcatter applications.



Key Features

- **Extremely high power density**
 - Lightweight design: 74/100 lbs. (34/46 kg)
Compact package: 21"x13"x9.5 and 1k in 20.5"x18"x10.8".
- **Superior RF performance**
 - Superior Phase Noise: 8-10 dB better than IESS308/309 recommendation
 - Up to 60 dBm Psat
 - Wide dynamic range of Gain Control
 - High linearity at small back off
 - Low noise power density
- **RF Overdrive Protection**
- **Input and Output True RMS Power Detection**
- **Full output VSWR Protection**
- **Field upgradable SW**
- **Reflected power detection**
- **Status LED**
- **Analogue Interface**
- **Available as SSPA**

Options & Accessories

- **Internal 10 MHz Reference clock**
- **Autosense 10 MHz Reference clock**
- **Automated Level Control (ALC) Option**
- **Quick disconnect WR187 output optional**

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500W to 1000W TROPOSCATTER Block-Up-Converter GaN Specification

RF Parameters						
RF Frequency Band, GHz	4.4-5.0GHz					
IF Frequency Range, MHz	950-1550MHz					
LO Frequency	5.95GHz					
Conversion	Single Conversion; inverting					
Conversion Gain, dB	75dB min, 78dB typ					
Gain Flatness, dB	+/-1dB typ +/-1.5dB max over full band; +/-0.5dB max over any 40MHz					
Gain Stability, dB	+/-1.5dB over full temperature range					
Gain Control, dB	20dB minimal 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 @ 100 kHz					
Up-Converter Phase Noise, dBm/Hz	-68dBc/Hz @ 100Hz; -80dBc/Hz @ 1kHz; -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz					
Linearity: 2 tone IMD Spectral Re-growth	-25dBc max at Plinear -26dBc for QPSK at 1.5 x symbol rate at Pout=(Plinear+1dB)					
Noise Power density	-70dBm/Hz max					
Spurious Emission	Non-signal related /		-65dBc			
	Signal related (at Plin)		-60dBc			
Power						
AC Voltage Range	180-265VAC 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	CPR187 grooved; Quick disconnect WR187 optional					
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
TPB-CBT0570-HMS0	57/500	54/250	1800W	1100W	21"x13"x9.5"	75lbs/34kg
TPB-CBT0600-HMS0	60/1000	57/500	3300W	2000W	20.5"x18"x10.8"	100lbs/46kg

Specifications are subject to change without notice

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