



iPB™ Series

**Super High Power Density
100W-1000W C-Band and
50 W-1000W Ku-Band
Rack Mount GaN/GaAs SSPA/BUC**

Overview

The IRT Technologies Intelligent Power Block-Up Converter **iPB™ Series** is Smaller, lighter and more powerful 50W-1000W Ku-Band and 100W-1000W C-Band Rack Mount BUC / SSPA **iPB™ 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 new IRT Technologies **50W-1000W BUC/SSPA iPB™ Series** are very compact, light and extremely powerful. Using patent pending Z-combining method and advanced GaN technology new IRT 50W - 1000W Rack Mount BUC / SSPA has truly outstanding power density - up to 1000W Psat C- and Ku-Band in 6RU light compact package. IRT 50W - 1000W Rack Mount BUC / SSPA 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. Redundant truly hot swappable power supply gives even higher overall reliability.



Key Features

- **Extremely high power density - up to 1000W Psat C-Band and Ku-Band in 19" Rackmount, 6RU**
 - Compact package: 5Ru up to 1kW C-Band and 6RU up to 1kW Ku-Band
- **Superior RF performance**
 - Superior Phase Noise: 5- 8 dB better than IESS308/309 recommendation
 - Highest Linearity at small back off
 - Wide dynamic range of Gain Control
- **RF Overdrive protection**
- **Built In Output Isolator – full output VSWR Protection**
- **RF Sample port**
- **Redundancy ready with no need of external controller**
- **True RMS forward and reflected power monitors**
- **User friendly front panel display and control buttons**
- **SNMPv3**
- **Field upgradable SW**
- **Analogue Interface**

Options & Accessories

- **Internal 10 MHz Reference clock**
- **Autosense 10 MHz Reference clock**
- **Automated Level Control (ALC) Option**
- **ALC option**
- **SSPA option available**

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IPB™ Series

Super High Power Density
100W-1000W C-Band and
50 W-1000W Ku-Band
Rack Mount GaN/GaAs SSPA/BUC

IPB™ SERIES 100W-1000W C-Band and 50W-1000W Ku-Band Rack Mount SSPA/BUC Specification					
		C-Band	Ku-band		
RF Parameters					
RF Frequency Band, GHz	5.85-6.425GHz (other options available)		14-14.5GHz 13.75-14.5GHz		
IF Frequency Range, MHz	950-1525MHz (other options available)		950-1700MHz		
LO Frequency	4.9GHz/12.8GHz;		Single Conversion; non-inverting		
Conversion Gain, dB	75dB min, 77dB typ				
Gain Flatness, dB	+/-1dB typ +/-1.5dB max over full band; +/-0.5dB max over any 40MHz				
Gain Stability, dB	+/-1.0dB over full temperature range				
Gain Control, dB	20dB minimal dynamic range				
Linearity: 2 tone IMD Spectral Re-growth	-24dBc at P linear -30dBc for QPSK at 1.5xsymbol rate at Plinear				
Noise Power Density, dBm/Hz	-68dBc/Hz @ 100Hz; -80dBc/Hz @ 1kHz; -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz				
Spurious Emission;	Non-signal related				-60dBc
	/ Signal related (at Plin)				-65dBc
Power					
AC Voltage Range	90-265VAC 50-60 Hz Auto-Ranging; PFC				
Mechanical & Environment					
Cooling	Forced Air				
Operating temperature / Relative Humidity	0°C .. +50°C / Up to 99% non-condensing				
Interfaces					
IF Input Connector	N – type female				
RF Output Connector	CPR137/WR75 Grooved				
AC Power In	NEMA Connector rear panel				
M&C Interface-Serial – Ethernet	DSUB Connectors, RJ45 rear panel				
IRT Part Number	Prated (dBm/W)	Plinear (dBm/W)	P Cons at Prated (dBm/W)	P Cons at Plin (dBm/W)	RU
C-Band					
IPB*-CB00500-RMSX*	50/100	47/50	400W	320W	2RU
IPB-CB00530-RMSX*	53/200	50/100	900W	700W	3RU
IPB-CB00540-RMSX*	54/250	51/125	1000W	750W	3RU
IPB-CB00560-RMSX*	56/400	53/200	2000W	1800W	4RU
IPB-CB00590-RMSX*	59/800	56/400	4000W	3500W	5RU
IPB-CB00600-RMSX*	60/1000	57/500	4200W	3600W	5RU
Ku- Band					
IPB-KXB0470-RMSX*	47/50	44/25	300W	260W	2RU
IPB-KXB0500-RMSX*	50/100	47/50	600W	520W	3RU
IPB-KXB0530-RMSX*	53/200	50/100	1100W	800W	4RU
IPB-KXB0540-RMSX*	54/250	51/125	1500W	1200W	5RU
IPB-KXB0550-RMSX*	55/300	52/150	2000W	1700W	5RU
IPB-KXB0560-RMSX*	56/400	53/200	2300W	2000W	5RU
IPB-KXB0570-RMSX*	57/500	54/250	2500W	2200W	5RU
IPB-KXB0590-RMSX*	59/800	56/400	4500W	4000W	6RU
IPB-KXB0600-RMSX*	60/1000	57/500	4800W	4200W	6RU

Specifications are subject to change without notice

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