



## **EAGLEPA® SERIES**

### **HIGH ABOVE, MOST POWERFUL AND LINEAR**

### **250W / 300W / 350W / 400W KU-BAND**

### **GaN POWERED SSPA / BUC**

**High Above The Competition EaglePA® Series World's Smallest and Lightest The Most Powerful and Linear GaN Powered Ku-Band SSPA / BUC 250W / 300W / 350W / 400W available on the market today EaglePA® Series allows significant high power Solid State Power Amplifier / Block Up Converter 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 Powered by GaN Technology 250W / 300W / 350W / 400W Ku-Band SSPAs / BUCs EaglePA® series are very compact, light and extremely powerful. Using patent pending Z-combining method and advanced GaN technology new IRT 250W / 300W / 350W / 400W Ku-Band EaglePA® SSPA / BUC has truly outstanding power density - up to 400W Psat in this super compact 14.8"x13"x10.3" package weighing only 55 lbs. IRT 250W / 300W / 350W / 400W Ku-Band EaglePA® BUC 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. 250W / 300W / 350W / 400W Ku-Band EaglePA® BUC 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 - Up To 400W Psat in 14.8" x 13" x 10.3" Only!**
- **Superior RF Performance:**
  - ✓ Phase noise 8-10dB better than IESS308/309
  - ✓ Psat up to 55.5 dBm
  - ✓ Spurious below -60dBc
  - ✓ Wide dynamic range of Gain Control
- **RF Overdrive Protection**
- **BUC or SSPA Optional**
- **Field Upgradable Software**
- **Internal / Autosense 10MHz Reference Optional**
- **Field Replaceable Detachable Power Supply**
- **Switchable LO Option - Standard and Extended Ku-Band in One Unit**
- **Input and Output True RMS Power Detection**
- **Configuration via RS-232 serial console, packet protocol RS-485 - User friendly HTTP based GUI and SNMP**
- **Automated Level Control (ALC) Optional**
- **Redundant Ready - No External Redundancy Controller Required.**
- **Status LED**
- **Antenna Mounting Kit Optional**
- **External Rackmount Remote M&C Panel Optional**

800 Boulevard Saint-Jose  
La Prairie, QC  
Canada J5R 6W9  
+1-450-444-1227  
www.irttechnologies.com

Canada (Headquarters)  
sales@irttechnologies.com

USA  
usa\_sales@irttechnologies.com

Europe  
europe\_sales@irttechnologies.com

Asia Pacific  
asia\_sales@irttechnologies.com





## EaglePA® Series 250W / 300W / 350W / 400W Ku-Band GaN SSPA / BUC

Parameter	250W	300W	350W	400W
<b>RF Performance</b>				
RF Frequency Range-Available in/switched:	14-14.5GHz		13.75-14.5GHz	
IF Frequency Range	950-1450MHz		950-1700MHz	
LO Frequency	13.05GHz		12.8GHz	
Conversion	Single Conversion; non-inverting			
Saturated Power	54dBm typ	55dBm typ	55.5dBm typ	56dBm typ
Linear Power	51dBm min	52dBm min	52.5dBm min	53dBm 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 over temperature	+/-1.5dB over full temperature range			
Gain Stability over input power	3dB typ 4dB max from 10dB back off to rated power			
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 @ 100 kHz	
Up-Converter Phase Noise	-68dBc/Hz @ 100Hz; -80dBc/Hz @ 1kHz; -90dBc/Hz @ 10kHz		-95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz	
Linearity: 2 tone IMD Spectral Re-growth	-24dBc at P linear; -30dBc for QPSK at 1.5xsymbol rate at Plinear+1dB			
Noise Power Density:	Transmit Band	-85dBm/Hz max		
	Receive Band	-148dBm/Hz max		
Output Spurious: Non-signal related	-60dBc			
	Signal related	-55dBc		
<b>Power</b>				
AC Voltage Range	190-265VAC 50-60Hz Auto-Ranging PFC			
Power Consumption at rated power	1500W	1750W	2000W	2150W
Power Consumption at 3 dB back off	1200W	1400W	1700W	1900W
<b>Mechanical</b>				
Size	18.3" x 14.2" x 10.6"			
Weight	75lbs			
Cooling	Forced Air			
Operating temperature	-40°C to +55°C			
Relative Humidity	Up to 100% condensing			
<b>Interfaces</b>				
IF Input Connector	N-type female			
RF Output Connector	WR75 grooved			
RF Sample	N-type female			
AC Power In	MS3112E12-3P			
M&C Interface-Serial, Analog and Ethernet	MS3112E14-19S			
Redundant Interface	MS3112E14-19P			
<b>Part Numbering Information</b>				
IRT Part Number	250W	300W	350W	400W
AC Power Supply	TPB-KXB0540-HMS0	TPB-KXB0550-HMS0	TPB-KXB0555-HMS0	TPB-KXB0560-HMS0

\*Specifications are subject to change without prior notice

Rev.05

800 Boulevard Saint-Jose  
La Prairie, QC  
Canada J5R 6W9  
+1-450-444-1227  
www.irttechnologies.com

Canada (Headquarters)  
sales@irttechnologies.com

USA  
usa\_sales@irttechnologies.com

Europe  
europe\_sales@irttechnologies.com

Asia Pacific  
asia\_sales@irttechnologies.com

