

iPA™ SERIES SUPER HIGH POWER DENSITY 100W / 150W / 200W KU-BAND RACK MOUNT GAN POWERED SSPA

The IRT Technologies Intelligent Power Amplifier *iPA™* Series is Smaller, lighter and more powerful 100W / 150W / 200W Ku-Band Rack Mount SSPA *iPA™* Series allows significant high power 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 powered by GaN technology 100W / 150W / 200W Ku-Band SSPA *iPA™* Series are very compact, light and extremely powerful. Using patent pending Z-combining method and advanced GaN technology new IRT 100W / 150W / 200W Ku-Band Rack Mount SSPA has truly outstanding power density - up to 200W Psat in 4RU light compact package. IRT 100W / 150W / 200W Ku-Band Rack Mount 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 200W Psat in 19" Rackmount, 4RU only!
- Superior RF performance:
 - ✓ High Linearity
 - ✓ Psat up to 53 dBm
 - ✓ Spurious below -65dBc
 - ✓ Wide dynamic range of Gain Control
- RF Overdrive Protection
- Available in both standard and Extended Ku-Band
- Field upgradable software
- Full VSWR protection
- Redundant Hot Swappable Power Supply
- Input and Output RF Sample port
- Configuration via RS-232 serial console, packet protocol RS-485 - User friendly HTTP based GUI and SNMP
- User Friendly Front Panel with Menu Driven Display
- Automated Level Control (ALC) Option
- Redundant Ready - No External Redundancy Controller Required.
- Built-in Power Metering

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iPA™ SERIES 100W / 150W / 200W Ku-Band Rack Mount SSPA Specification

Parameter	100W	150W	200W
RF Performance			
RF Frequency Range-Available	13.75-14.5GHz		
Rated Power	50dBm/100W min	52dBm/150W min	53dBm/200W min
Saturated Power	50dBm/100W typ	52dBm/150W typ	53dBm/200W typ
Linear power	47dBm min	49dBm min	50dBm 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 over temperature	+/-1dB 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		
Noise Figure	6dB max		
AM/PM Conversion	1.5 deg/dB max up to rated power		
Group Delay	Linear: 0.02 nsec/MHz max; Parabolic: 0.003 nsec/MHz**2 max; Ripple: 1nsec p-p max		
Input Return Loss	16dB min		
Output Return Loss	20dB min		
Linearity: 2 tone IMD Spectral Re-growth	-24dBc at P linear -30dBc for QPSK at 1.5xsymbol rate at Plin		
Output Spurious:	-65dBc		
Power			
AC Voltage Range	90-265VAC 50-60Hz auto-ranging PFC		
Power Consumption at rated power	650W	1000W	1200W
Power Consumption at 3 dB back off	500W	800W	1000W
Mechanical			
Size	4RU		
Weight	36lbs		
Cooling	Forced Air		
Operating temperature	0°C to +55°C		
Relative Humidity	Up to 99% non-condensing		
Interfaces			
RF Input Connector	N-type female rear panel		
RF Output Connector	WR75 grooved rear panel		
RF Sample	N-type female front panel		
AC Power In	NEMA Connector rear panel		
M&C Interface-Serial, Analog and Ethernet	DSUB Connectors, RJ45 rear panel		
Redundant Interface	HD15 Connector rear panel		
Part Numbering Information			
	100W	150W	200W
IRT Part Number	IPA-KXB0500-RMS0	IPA-KXB0520-RMS0	IPA-KXB0530-RMS0

Specifications are subject to change without notice

Rev.04

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