



Air Traffic Control Radar Products

S and X-Band
Solid State GaN
Power Amplifiers

S, X, Ku, and Ka-Band
RPs and Limiters

L, S, X, Ku and Ka-Band
Magnetrons

- Solid State Power Amplifiers • Integrated Microwave Assemblies • Receiver Protectors
- Control Components • Transmitters • Amplifiers • Modulators • Magnetrons
- Crossed Field Amplifiers • Ring Loop Traveling Wave Tubes • Power Couplers



S-Band Solid State GaN Power Amplifiers for ATC

- Frequency range: 2.7 to 2.9 GHz
- BIT and controls via EIA-422 remote connection
- 1.3 kW pulsed modules
- Built-in VSWR protection
- Compliant to NTIA regulatory requirements
- Provide high gain, excellent pulse fidelity
- Excellent pulse fidelity with low AM/PM, phase-noise and spectral regrowth performance
- Easy to maintain

For use in Air Traffic Control radar systems

S-Band GaN High Power Transmitters

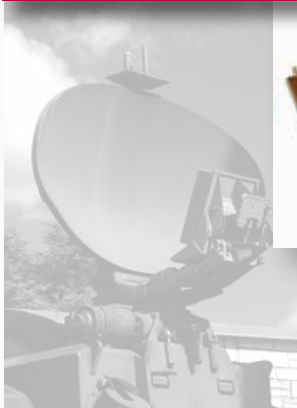
- Transmitter cabinet with 12 kW minimum peak output power
- Soft fail by virtue of power combining
- Full redundancy
- >160 dB of power attenuation available
- Designed for ATC shelter applications

S-Band GaN High Power SSPAs

- 1.3 kW pulsed modules that can be power combined for higher peak power output
- Internal processor with BITE monitoring
- Self protecting



X-Band SSPA's for airborne radar systems



X-Band GaN High Power SSPAs

- Frequency range: 9.0 to 10.0 GHz
- BIT and controls
- 1 kW pulsed modules at 10% duty
- High efficiency GaN transistors
- Can be combined for higher power levels
- Easy to maintain



Magnetrons

- L, S, X, Ku and Ka Band Magnetrons
- Excellent frequency stability
- Mechanically Tunable frequency
- Air cooled anode
- Peak power up to 1 MW



Air Traffic Control Radar Products

CPI BMD is a major worldwide supplier of components for many ground based radar systems.

ATC is a service provided by ground-based controllers who direct aircraft on the ground and through controlled airspace. The primary purpose of the ATC systems is to prevent aircraft collisions and to organize and expedite the flow of airplane traffic in both commercial and military markets.

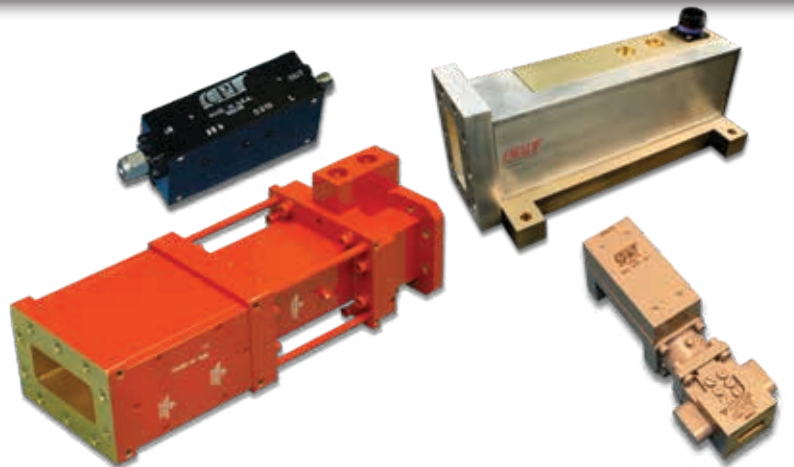
CPI BMD is a major worldwide supplier of components for many ground based radar systems such as: Air Surveillance Radar, Air Route Surveillance Radar, Terminal Doppler Weather Radar (TDWR), Surface Movement Radar and Precision Approach Control and Landing Systems.

At CPI Beverly Microwave Division, we provide high quality microwave products supporting air traffic control radar with either Klystron or magnetron based technology.

Check out all our ATC radar products at www.cpii.com/bmd

Receiver Protectors and Limiters

- S, X, Ku, and Ka-Bands
- High peak power
- Very fast recovery times
- Low output leakage
- Superior broadband isolation
- Fast recovery time
- Low noise figures



Air Traffic Control Radar Product Platforms

Customized for your application.

Magnetrons

Typical Operating Parameters			
Band	Frequency (GHz)	Peak Power	Duty Cycle
L	1 - 2	1 W	Various
S	2.7 – 2.9	800 kW	Various
X	8.5 – 9.6	250 kW	Various
Ku	15.6 – 16.7	40 kW	Various
Ka	32.9 – 33.5	60 kW	Various

Receiver Protectors and Limiters

Typical Operating Parameters						
Band	Peak Power	Average Power	Insertion loss	Recovery Time	Flat Leak	Spike Leak
S	Up to 1.25 MW	Up to 10 kW	< 0.8 dB	<1 μs	< 50 mW	< 250 mW
X	Up to 300 kW	Up to 300 kW	< 1.0 dB	<1 μs	< 50 mW	< 250 mW
Ku	Up to 300 kW	Up to 300 kW	< 1.0 dB	<1 μs	< 50 mW	< 250 mW
Ka	Up to 300 kW	Up to 300 kW	< 1.0 dB	<1 μs	< 50 mW	< 250 mW

Solid State GaN Power Amplifiers

Typical Operating Parameters			
Band	Frequency (GHz)	Peak Power (kW)	Duty Cycle
S	2.7 - 3.7	1.3	10%
X	9.0 – 10.0	1.0	10%

With our history of producing high power, high quality products, let us help you with your air traffic control radar needs.

CPI: At the Heart of Leading Technologies

Communications & Power Industries (CPI) develops, manufactures and globally distributes components and subsystems used in the generation, amplification, transmission and reception of microwave signals for a wide variety of systems including radar, electronic warfare and communications (satellite and point-to-point) systems for military and commercial applications, specialty products for medical diagnostic imaging and the treatment of cancer, as well as microwave and RF energy generating products for various industrial and scientific pursuits.

The values listed above represent specified limits for the product and are subject to change. The data should be used for basic information only. Formal, controlled specifications may be obtained from CPI for use in equipment design.

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