



Airfast RF Power Solutions for Avionics

Freescale expands RF power portfolio for air traffic control

Product Presentation - Announcing:

AFV121KH – Industry's highest RF power transistor for ATC

AFIC10275N – Industry's most integrated solution for ATC

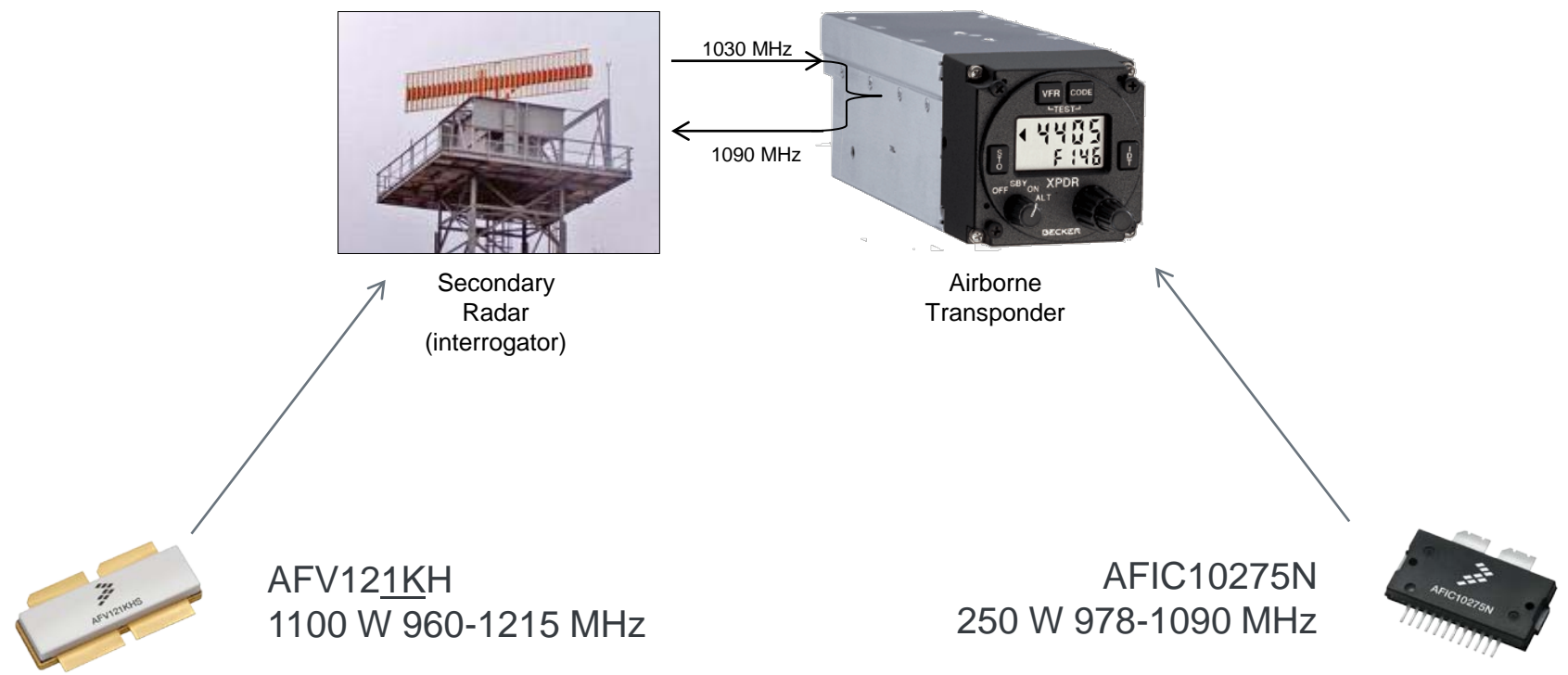


May 2015



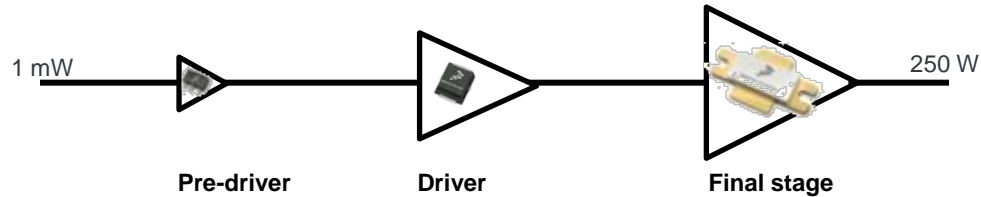
Two New Solutions for Air Traffic Control

Improving air traffic control and next-generation aircraft-to-aircraft communications, such as Automatic Dependent Surveillance – Broadcast (ADS-B)

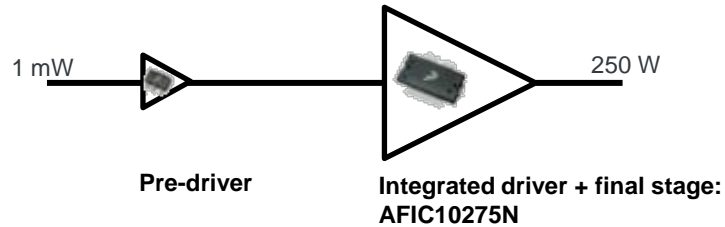


AFIC10275N: Avionics Industry's Most Highly Integrated Solution

Example of prior airborne power amplifier:

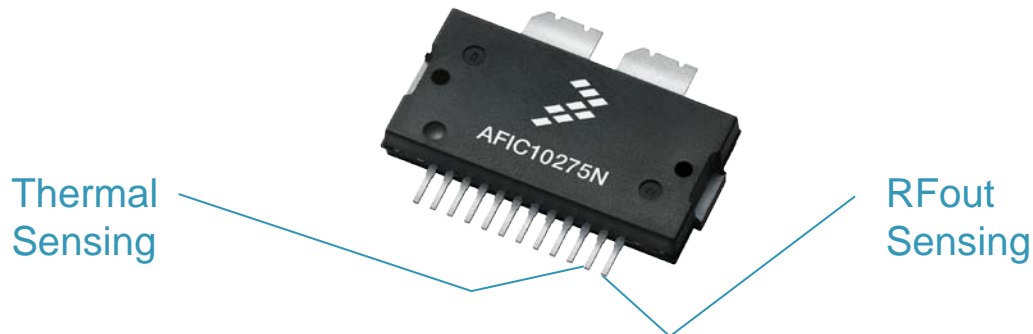


Now with AFIC10275N:

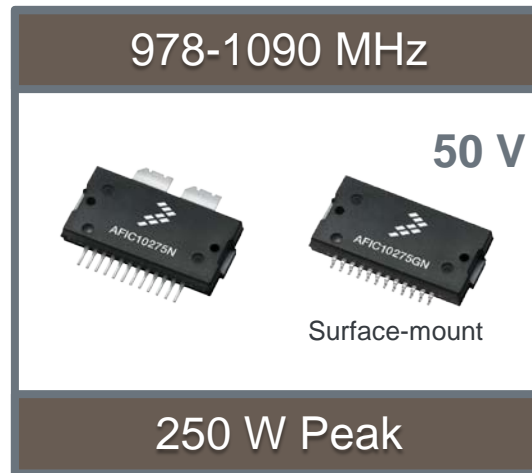


- Less space
- Less weight
- Better reliability
- Better integration

With integrated features:



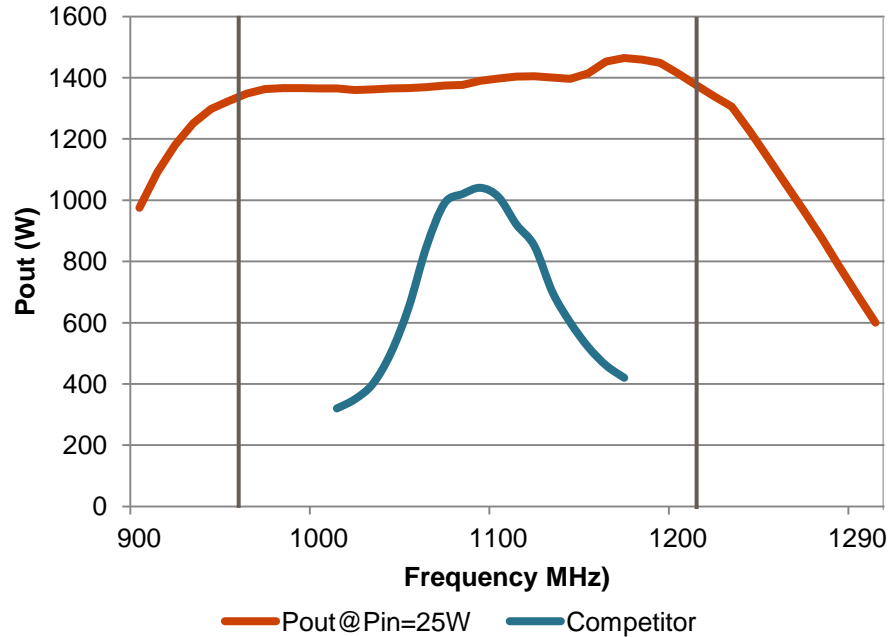
AFIC10275N: Dual-stage LDMOS Integrated Power Amplifier



- New generation: Airfast for avionics – **more power in less space**
- Dual-stage IC: 31 dB gain – **size and weight reduction**
- 62% efficiency – **power consumption reduction**
- Housed in TO-270 over-molded plastic package – **weight reduction**
- Matched input, unmatched output – **broadband for reuse in multiple designs**
- >10:1 VSWR – **ruggedness**
- Product Longevity Program: warranted availability until 2030 – **secure supply**
- Recommended driver: Freescale MMG3014N (25 dBm) – **one-stop shop**



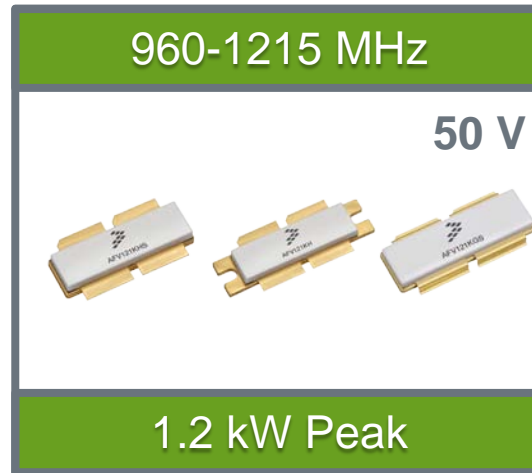
AFV121KH: Avionics Industry's Highest Power Transistor



AFV121KH broadband performance is higher than narrowband performance of existing solutions



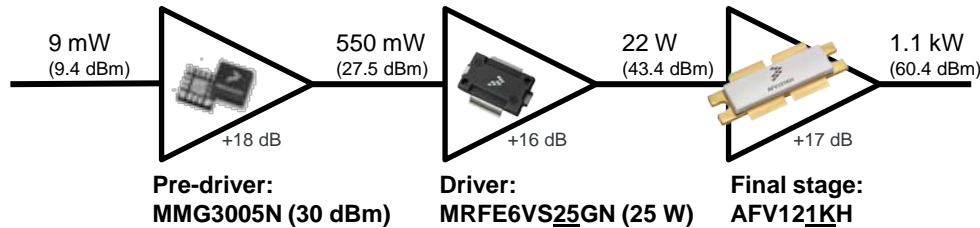
AFV121KH: 1.2 kW LDMOS Transistor



- New generation: Airfast for avionics – **more power in less space (fewer transistors per system)**
 - >1 kW over full 960-1215 MHz band
 - Gain >17 dB and efficiency > 50% over full band
- Designed for long-pulse applications (> 2ms, including Mode S ELM) – **latest ATC mandates supported**
- Pre-matched Input and Output – **fit both DME and ADS-B (economy of scale)**
- Housed in NI-1230 air cavity ceramic package
- Handles > 20:1 VSWR – **high ruggedness**
- Product Longevity Program: warranted availability until 2030 – **secure supply**
- Recommended driver: MRFE6VS25GN (25 W) – **one-stop shop**

AFV121KH Recommended Lineup

- Fits both narrowband (ADS-B transponders, TCAS) and wideband (DME) systems



more Information

From the Product Summary Pages

- Data sheets
- Simulation models – ADS and AWR
- MTTF calculators
- S-parameters

AFV121KH:

AFIC10275N:

From www.freescale.com/RFpower

- Product Selector Guide
- Parametric search
- App notes – > 30 available
- White papers & webinars
- Freescale Product Longevity Program

On the web

- Blogs & Twitter – @RFLeonard
- YouTube.com/Freescale
- RF Engineering Tools App
for Android & iOS
- On eTailers & Freescale Approved Distributors



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