



## Fact Sheet

# RF Mobile Radio Solutions

### Applications

- Public safety
  - Portables/handhelds
  - Mobiles
- Professional mobile radio
  - Portables/handhelds
  - Mobiles
- Marine radios
- SCADA pipeline or utility remote monitoring
- Trunked mobile radios
- Amateur radios

Freescale Airfast mobile radio products deliver the performance needed for today's public safety and professional mobile radio applications. Airfast mobile radio devices combine exceptionally high gain and efficiency with industry-leading ruggedness, stability and low thermal resistance packaging. Designs using these new Airfast devices can be significantly lower in cost than module-based designs and are much simpler than traditional discrete designs.

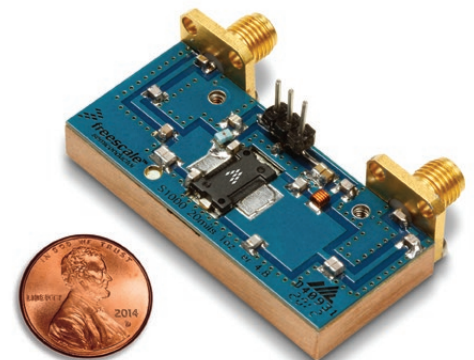
Additionally, Freescale drivers provide compact, integrated and cost-effective solutions for mobile radio systems while Freescale's low noise amplifiers simplify receive-path implementation with industry-leading noise performance and multi-band operation.

### Airfast Mobile Radio Transistors

Part Number	Frequency (MHz)	Output Power (W)	Supply Voltage (V)	Gain (dB/MHz)	Efficiency (%/MHz)	Package	Availability
AFT05MS006N	To 941	6	7.5	18.3/520	73/520	PLD-1.5W	Now
AFT09MS007N	To 941	7	7.5	15.2/870	71/870	PLD-1.5W	Now
AFT09MS015N	To 941	16	12.5	17.2/870	77/870	PLD-1.5W	Now
AFT05MS031N/GN	To 520	31	12.5/13.6	17.7/520	71/520	TO-270-2	Now
AFT09MS031N/GN	To 941	31	12.5/13.6	17.2/870	71/870	TO-270-2	Now
AFT09MP055N/GN	764-941	57	12.5	17.5/870	69/870	TO-270 WB-4	Now
AFT05MP075N/GN	To 520	70	12.5	18.5/520	68.5/520	TO-270 WB-4	Now

### Airfast Product Advantages

- Reliability and stability
  - Best ruggedness in the industry even with simultaneous overvoltage and 3 dB overdrive (able to survive VSWRs of > 65:1)
  - Integrated stability enhancements
  - Integrated ESD protection circuitry
- High gain eliminates stages, simplifies design support
- Form factor reference designs



Airfast Land Mobile Evaluation Board

## Design Flexibility

Freescale offers a complete portfolio of devices specifically engineered to meet the needs of the land mobile industry as well as a complete range of tools, models and design support. Freescale is the trusted global supplier of RF power devices.

## Why Choose Freescale?

- More than 50 years delivering RF power devices for land mobile
- Best-in-class RF performance
- Industry-leading package designs
- Consistent and repeatable RF performance
- Consistent high quality
- Proven long-term reliability
- High-volume manufacturing capability
- Assured long-term supply
- Freescale offers comprehensive global in-region support to help you with your design
  - Asia (China)
  - Americas (U.S.)
  - Europe (France)

## Mobile Radio Drivers

Part Number	Frequency (MHz)	Saturated Output Power (W)	Supply Voltage (V)	Gain (dB/MHz)	Package	Availability
MMG3014N	To 950	0.25	5	19.5/900	SOT-89	Now
MMG3004N	400–950	0.5	5	19.5/900	PQFN 5 × 5	Now
MMZ09312B	400–950	1	5	31/900	QFN 3 × 3	Now
MMZ09332B	136–174	1	5	26.5/136	QFN 3 × 3	Q2 2014
	400–530	1.5	5	31/530	QFN 3 × 3	Q2 2014
	760–870	2	5	29/760	QFN 3 × 3	Q2 2014
MMZ09363B	760–950	4	5	38/760	QFN 3 × 3	Q3 2014

## Mobile Radio Low Noise Amplifiers

Part Number	Frequency (MHz)	Noise Figure (dB)	Gain (dB/MHz)	P1dB (dBm)	OIP3 (dBm)	Supply Voltage (V)	Package	Availability
MBC13917	To 950	2.3	47/450	2.2	10.9	2.1–3.3	MLPD-6	Now
MBC13916	To 950	1.25	19/900	2.5	11	2.7–5	SOT-343R	Now
MML09211H	400–950	0.52	21.3/900	22	32.6	5	DFN 2 × 2	Now

## MRF15xx Mobile Radio LDMOS Transistors

Our comprehensive portfolio of third-generation mobile radio parts continues to lead the industry. The devices feature extremely competitive gain, efficiency and thermal performance with a choice of package mounting options. Long life availability ensures that legacy designs will continue to be supported. Refer to [freescale.com/RFpower](http://freescale.com/RFpower) for more information on the MRF15xx series of mobile radio devices.

## RF Mobile Radio Packages



Representative examples. Does not include all available packages for mobile radio products.

For more information, visit [freescale.com/RF](http://freescale.com/RF)

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