

RF Amplifiers with Zero-Distortion™ Technology

FEATURES

- Silicon-based for improved Θ_{JC} and Class 2 ESD
- Flat gain across wide bandwidths
- Zero-Distortion™ technology
- Consistent performance over operating conditions
- Narrow gain variation over voltage and temperature

SILICON ADVANTAGES

IDT RF Amplifiers utilize advanced RF silicon semiconductor technology offering advantages over other technologies such as GaAs

- Manufacturing robustness with:
 - Higher electrostatic discharge (ESD) immunity
 - MSL1 moisture sensitivity-level performance
- Excellent RF performance over temperature with low current drain
- Higher reliability
- Higher levels of integration with simpler packaging assemblies that lower total cost

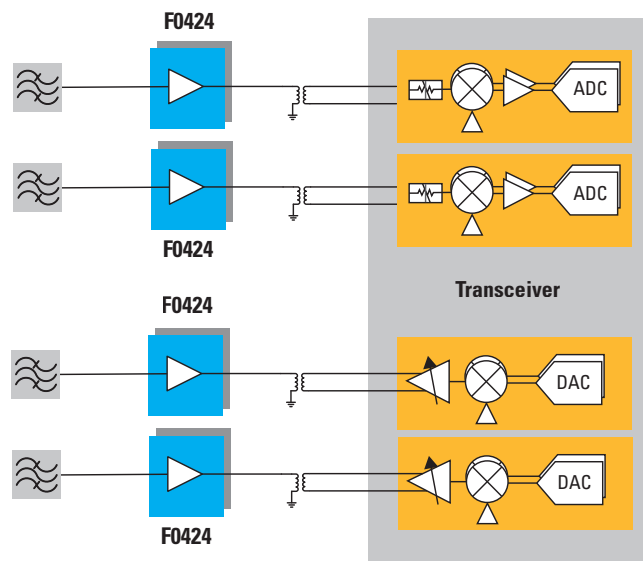
APPLICATIONS

- Wireless base stations
- Repeaters and DAS
- Point-to-point infrastructure
- Public Safety infrastructure
- Military communication
- Industrial equipment



IDT's RF amplifier portfolio offers a variety of gain, noise figure and linearity features, in either differential or single-ended input impedances. The products feature innovative Zero-Distortion™ technology, enabling high output IP3 with very low current consumption – setting them apart from simple gain block amplifiers.

In addition, the RF amplifiers feature built-in broadband baluns to support wideband applications with differential inputs and outputs. The products are designed for high-reliability operation, using a SiGe amplifier die together with an integrated passive device (IPD) die and proven, high-volume QFN packaging.

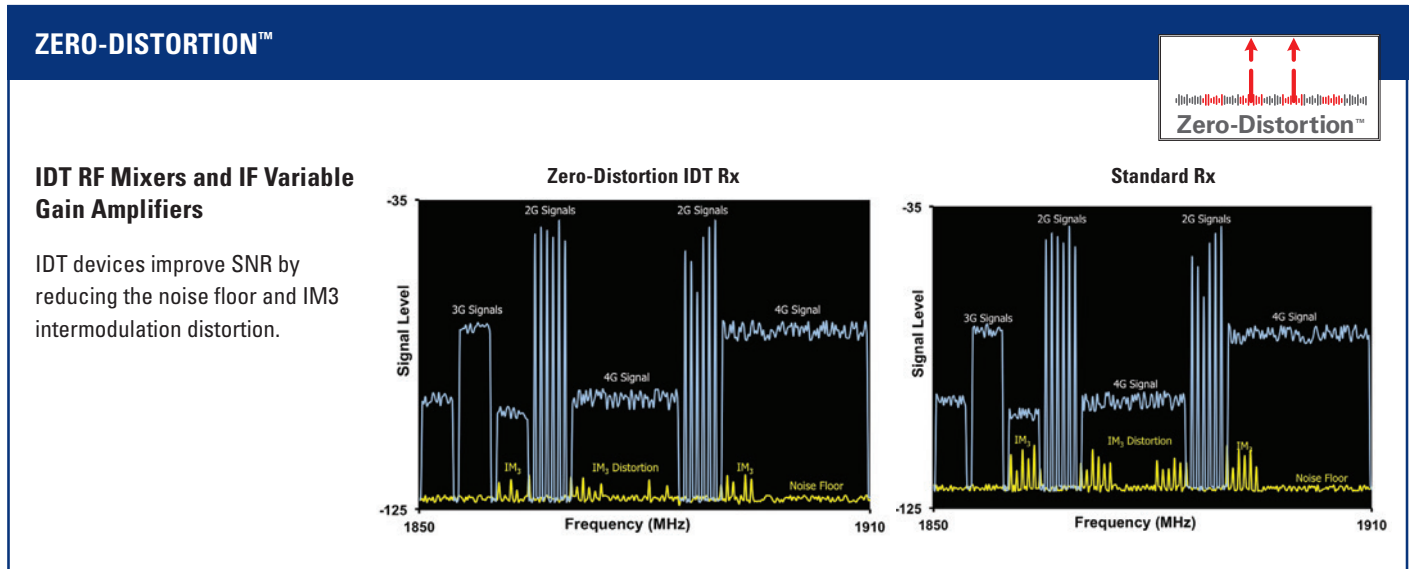


Sub-6GHz System Diagram with F0424 Broadband Amplifier

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Zero-Distortion™ Technology

IDT devices improve SNR by reducing the noise floor and IM3 intermodulation distortion, as shown below in yellow. This is key for crowded spectrum environments as it enhances quality of service and frees up under-utilized spectrums.



Featured RF Amplifiers

Product	Description	Input Freq (MHz)	Supply Voltage (V)	Gain (dB)	Package
F0424	High-Gain Broadband RF Amplifier 600MHz to 4200MHz	600 - 4200	3.15 - 5.25	17	8-DFN
F1420	RF Amplifier 700MHz to 1.1GHz	700 - 1100	4.75 - 5.25	17.4	24-QFN
F1421	RF Amplifier 1700MHz to 2.2GHz	1700 - 2200	4.75 - 5.25	20.3	24-QFN
F1423	Differential Input, Single-ended Output Amplifier	600 - 3000	4.75 - 5.25	13.1	24-QFN

To request samples, download documentation or learn more visit: idt.com/rfamps

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