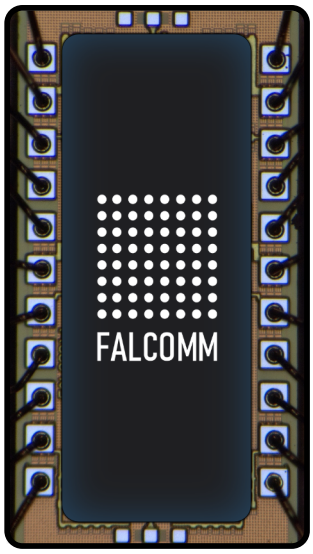
FCM1401: 14 GHz High-Efficiency CMOS Power Amplifier for Ku-Band Applications



PRODUCT DESCRIPTION

Falcomm's FCM1401 is a high-efficiency 14 GHz CMOS power amplifier designed for Ku-band applications such as satellite communications and high-frequency data links.

Powered by Falcomm's patented Dual-Drive™ architecture, the FCM1401 delivers exceptional power-added efficiency in a compact form factor ideal for integration into dense phased array systems.

Its unmatched efficiency and performance reduce thermal management requirements, lowers overall system power consumption, and is compatible with additional efficiency-enhancing techniques.

BENEFITS INCLUDE

- Best-in-Class Efficiency
- Plug-and-Play
- Compact Form Factor

APPLICATIONS

- IoT devices
- Satellite Communication
- Mobile User Equipment
- Cellular Base Stations
- Automotive Radar
- Fixed Wireless Access

FEATURES

- **2-Stage PAE_{MAX} = 49.6 %**
- **PA-Stage DE_{MAX} = 56.7 %**
- **P_{SAT} = 20 dBm**
- **Gain = 23 dB**
- **Efficiency Maintained at Lower Supply Voltage**
- **High Data Rate Modulation Speeds**

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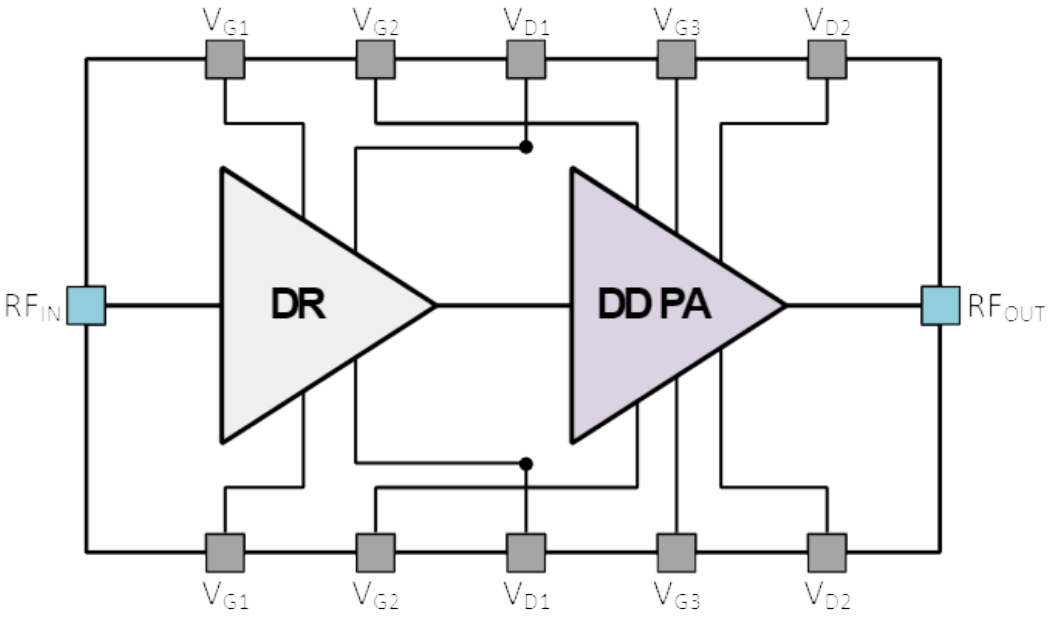
RECOMMENDED OPERATING CONDITIONS

Parameter	Typ	Units
VG1	200 to 250	mV
VG2	200 to 300	mV
VG3	0.9 to 1.1	V
VD1	0.6 to 0.9	V
VD2	1.7 to 2.0	V
Input Power at Psat	0	dBm
Max Power Dissipation	200	mW
Quiescent Current	40	mA

FUNCTIONAL BLOCK DIAGRAM



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