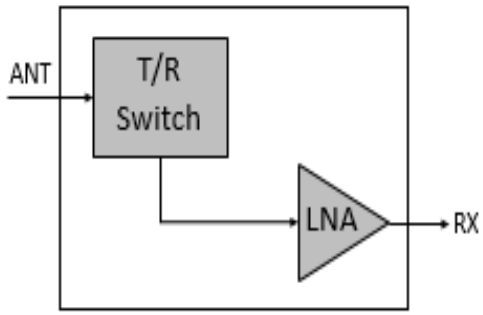
Front End Module

PRE-RELEASE DATASHEET RFFEMRX07

Features:

- RF frequency: 2 TO 7 GHz
- RX return losses: 36/24 dB
- RX Gain : 32 dB
- RX Noise figure: 2 dB
- RX Output p1 dB:19.5 dBm
- DC Drain Bias Voltage:4
- DC Gate Bias Voltage:-0.65
- DC Supply Current:77 mA
- Rx voltage: 4V/-0.6V
- 0.1um GaAs pHEMT Technology

Functional Block Diagram:



Description:

RFFEMRX07 is a high performance fully integrated RF front end module (FEM) design for use in 2 TO 7 GHz for Wi-Fi 6 , Bluetooth, Zigbee, IoT application. RFFEMRX07 is designed for ease of use & maximum flexibility.

TX performance is focused on high linearity, gain and low IM3 levels. RX performance is focused on low Noise Figure, high gain. This simplifies the total front-end solution by reducing the bill of materials, system foot print, and manufacturing cost.

Wi-Fi 6 Front End Module integrates RF SPDT Switch, Driver amplifier in TX Path and RF SPDT Switch, LNA in RX Path into a single devices. This integrated chip is designed using 0.1um GaAs pHEMT process.

Application:

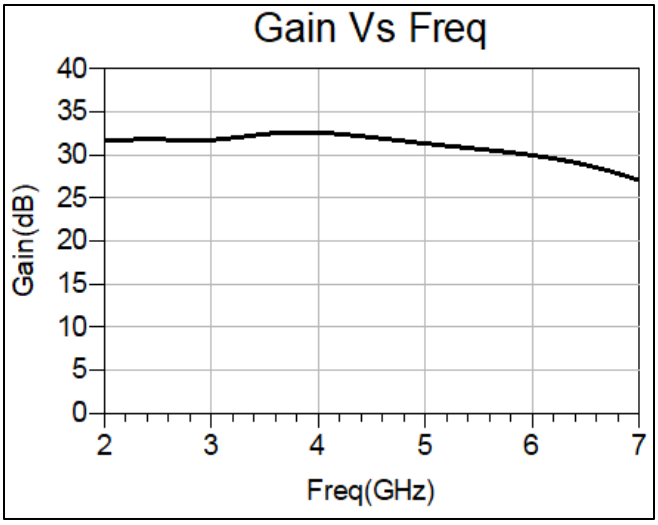
- Wi-Fi 6
- Bluetooth Application
- Zigbee
- Satellite Communication
- TDD/FDD System
- Internet of Things

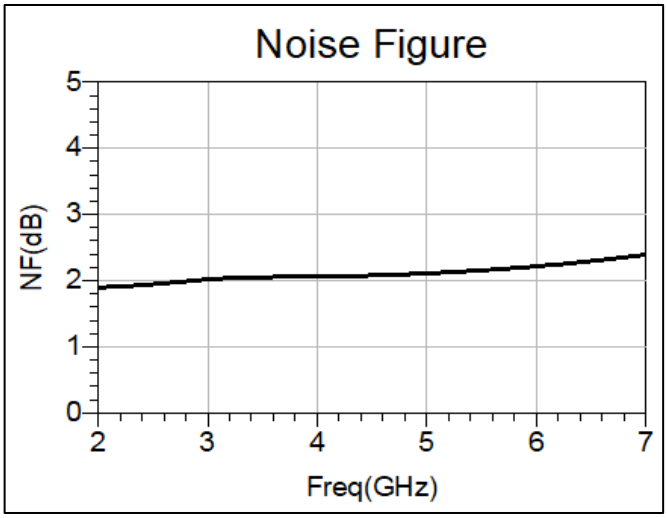
Electrical Specification:-

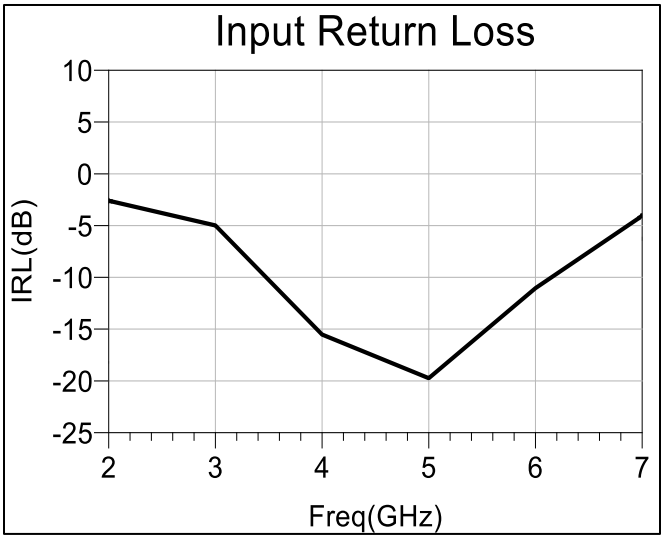
Recieve Mode: RX_IN to RX_OUT.

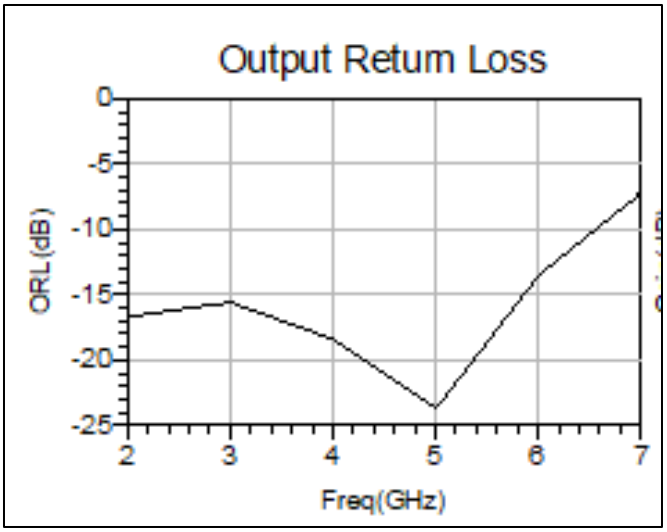
(Freq=2 - 7 GHz, VDD= 4V, VGG= -0.6 5V Idc= 77 mA, Zo=50Ω)

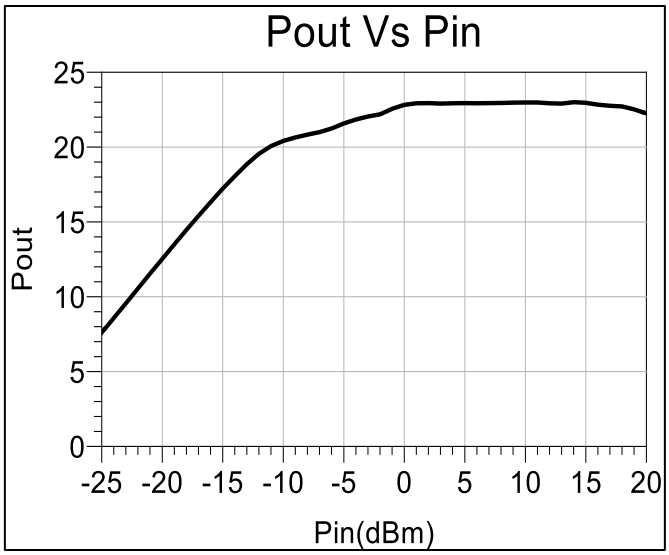
Parameter	Frequency (GHz)	Units	Typ.
RF Frequency	2-7	GHz	-
Small Signal Gain	2	dB	32
	5		31
	7		29
Output P1dB	2	dBm	19.5
	5		
	7		
Saturated Output Power	2	dBm	
	5		
	7		
Output Third-Order Intercept, OIP3 (@Pin=-10dBm, Δf = 100MHz)	2	dBm	
	5		
	7		
Input Return Loss	2	dB	4
	5		20
	7		5
Output Return Loss	2	dB	17
	5		24
	7		8
Noise Figure	2	dB	1.9
	5		2
	7		2
Biasing Conditions			
Drain Voltage (VDD)	---	V	4/-0.6
Gate Voltage (VGG)	---	V	-0.65
Drain Current (Id)	---	mA	77

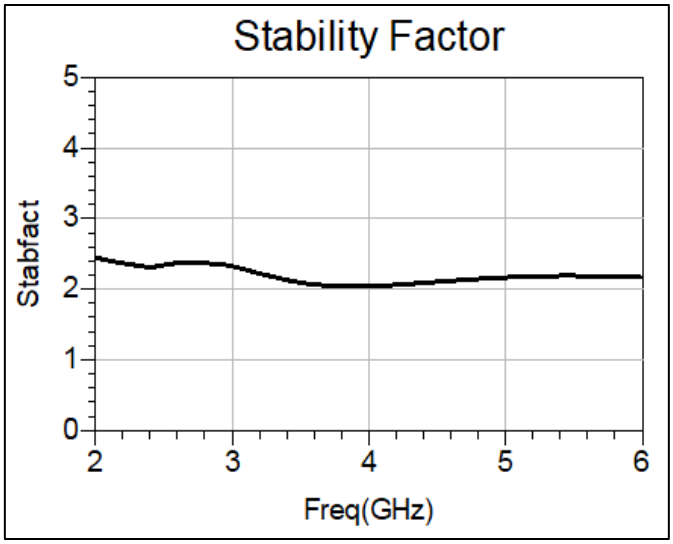




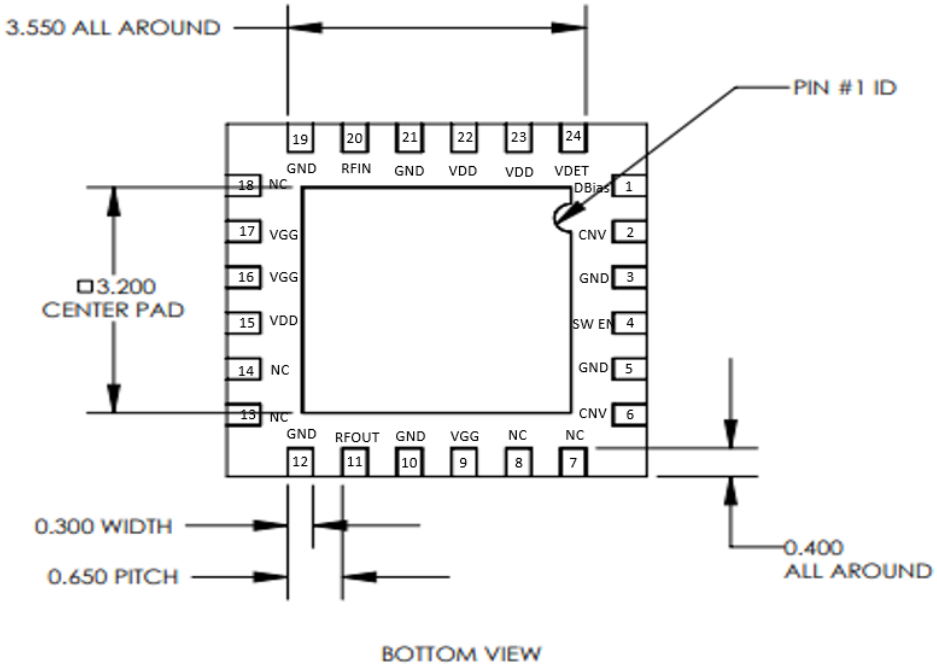








Functional



Description:-

Pin number	Pin name	Description
7,8,13,14,18	NC	Not Connected
3,5,10,12,19,21	GND	RF Ground
15,22,23	VDD	Drain Bias voltage
9,16,17	VGG	Gate Bias voltage
20	RF_IN	RF Input
11	RF_OUT	RF Output
1	DBias	Detector Bias
24	VDET	Detected Voltage
2,6	CNV	Switch Control Voltage
4	SW_EN	Antenna

Disclaimer

Contact information

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