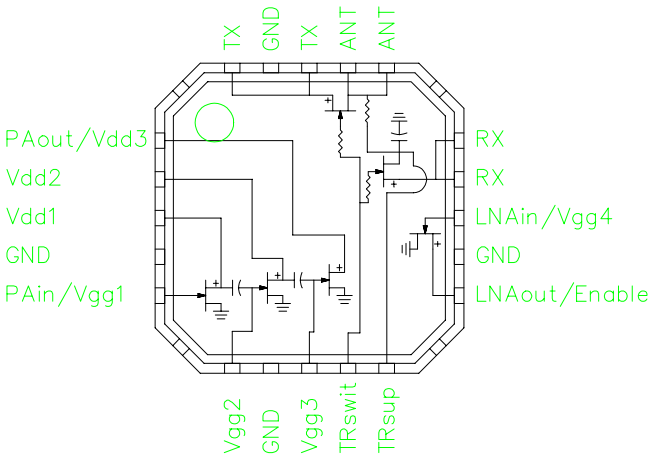
2.4V Integrated RF Front-End for DECT
ITT1204GL

ADVANCED INFORMATION

FEATURES

- 2.4V Operation
- Single Positive Supply
- 45% Power Added Efficiency
- 100% Duty Cycle
- 1.6 dB LNA Noise Figure
- 20 Pin MLP Plastic Package
- Self-Aligned MSAG®-Lite MESFET Process



Package bottom is electrical and thermal ground

DESCRIPTION

The ITT1204GL is an integrated DECT front-end based on GaAsTEK's GaAs Self-Aligned MSAG® MESFET Process. This product has an integrated power amplifier, low noise amplifier, and switch in one surface mount package.

MAXIMUM RATINGS (T_A = 25 °C unless otherwise noted)

Rating	Symbol	Value	Unit
DC Supply Voltage	V_{DD}	+5.5	V
Reverse DC Supply Voltage	$-V_{DD}$	-0.7	V
RF Input Power, PA_{IN}	P_{IN}	+10	mW
RF Input Power, LNA_{IN}	P_{IN}	+10	mW
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-40 to +175	°C

ELECTRICAL CHARACTERISTICS V_{DD}= 2.4V, TR_{SUP}=2.4V, T_s=31 °C (Note 1), Output externally matched to 50 Ω

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency	f	1880	—	1930	MHz
Transmit Path (PA + T/R Switch) $V_{DD1,2,3}$=2.4V, P_{IN}= -2 dBm, TR_{SWIT}=2.4V, LNA_{ENABLE}=0.0V, f=1900 MHz					
Load Power (at Ant)	P_{OUT}		25		dBm
Current Consumption	$I_{DD1,2,3}$		350		mA
Input VSWR				2:1	
Harmonics	—		-39		dBc
Duty Cycle	—			100	%
Forward Isolation (RF_{IN} to Ant) Power Amplifier inactive	—		52		dB
Receive Path (T/R Switch + LNA) $V_{DD1,2,3}$=0.0V, LNA_{ENABLE}=2.4V, TR_{SWIT}=0.0V, f=1900 MHz					
Current Consumption	LNA_{ENABLE}		4.5		mA
Noise Figure (Ant to LNA_{OUT})	NF		3.5		dB
Gain (Ant to LNA_{OUT})	G		15		dB
Third-Order Input Intercept Point	IIP_3		3.5		dBm
Switch:					
Reverse Isolation (LNA_{OUT} to ANT) LNA active	—		18		dB
Forward Isolation (RF_{IN} to LNA_{OUT}) LNA inactive	—		35		dB

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