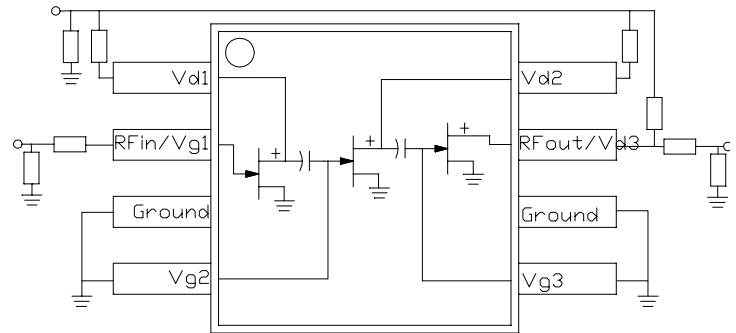


2.4V 0.5W RF Power Amplifier IC for DECT ITT1203GJ

Advanced Information

FEATURES

- Single Positive Supply
- 50% Power Added Efficiency
- 50% Duty Cycle
- 1800 to 2000 MHz Operation
- 8 Pin MSOP Full Downset Plastic Package
- Accommodates Battery Charging Conditions up to 3.6 Volts
- Self-Aligned MSAG®-Lite MESFET Process



DESCRIPTION

The ITT1203GJ is a DECT Power amplifier based on GaAsTEK's Self-Aligned MSAG® MESFET Process. This product is designed for use in 2.4 DECT handsets and basestations.

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

Rating	Symbol	Value	Unit
DC Supply Voltage	V _{DD}	3.6	Vdc
RF Input Power	P _{IN}	3	mW
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{STG}	-40 to +150	°C

ELECTRICAL CHARACTERISTICS V_{DD}= 2.4 V, P_{IN}= 0 dBm, Duty Cycle = 50 %, T_A=25 °C, Output externally matched to 50 Ω

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	<i>f</i>	1880		1930	MHz
Output Power, <i>f</i> = 1890 MHz	P _{OUT}		27		dBm
Power Gain	G _P		27		dB
Power Added Efficiency, <i>f</i> = 1890 MHz	η		50		%
Harmonics	—		-30		dBc
Input VSWR	—		—	2.0:1	—
Off Isolation (V _{DD} =0 V)	—		40		dB
Load Mismatch (V _{DD} = 4.5 V, VSWR = 8:1, P _{IN} = 0 dBm)	—	No Degradation in Power Output			
Stability (P _{IN} = 0 dBm, V _{DD} = 0-4.5 V, Load VSWR = 5:1, fixed phases)	—	All non-harmonically related outputs more than 60 dB below desired signal			

