

Receive state, self biased, VDD_LNA = 3.3 V, VGG_LNA = 0 V, VDD_SW = 3.3 V, VSS_SW = -3.3 V, CTRL_SW = 3.3 V, transmit state off, T_A = 25°C, unless otherwise noted.

Table 4.

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions/Comments
OVERALL FUNCTION						
Frequency Range		14		18	GHz	
RECEIVE STATE						
Small Signal Gain		16	18		dB	ANT to RX_OUT
Gain Flatness			±0.9		dB	
Input Return Loss			13		dB	ANT to RX_OUT
Output Return Loss			18		dB	ANT to RX_OUT
OP1dB		12	14		dBm	ANT to RX_OUT
P _{SAT}			16.5		dBm	ANT to RX_OUT
OIP3			25.5		dBm	ANT to RX_OUT P _{OUT} per tone = 0 dBm
Noise Figure			3		dB	ANT to RX_OUT
Isolation						
ANT to TX_IN			26		dB	Transmit state off
RX_OUT to TX_IN			46		dB	Transmit state off
RF Settling Time						
0.1 dB			17		ns	50% CTRL_SW to 0.1 dB of final RF output
0.05 dB			22		ns	50% CTRL_SW to 0.05 dB of final RF output
Switching Speed						
Rise and Fall Time	t _{RISE} , t _{FALL}		2		ns	10% to 90% of RF output
Turn On and Turn Off Time	t _{ON} , t _{OFF}		10		ns	50% CTRL_SW to 90% of RF output
VDD_LNA		3.3	5.0	5.5	V	
I _{DQ_LNA}			80		mA	Self biased

SPDT switch bias at VDD_SW = 3.3 V, VSS_SW = -3.3 V.

Table 5.

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions/Comments
SUPPLY CURRENT						
Positive	IDD_SW		14		μA	VDD_SW and VSS_SW
Negative	ISS_SW		120		μA	
DIGITAL CONTROL INPUTS						
Voltage						
Low		0		0.8	V	
High		1.2		3.3	V	
Current (Low and High)			<1		μA	

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Switching Speed						
Rise and Fall Time	t _{RISE} , t _{FALL}		2		ns	10% to 90% of RF output
Turn On and Turn Off Time	t _{ON} , t _{OFF}		10		ns	50% CTRL_SW to 90% of RF output
VDD_LNA		2.0	3.3	3.6	V	
I _{DQ_LNA}			80		mA	Self biased

SPDT switch bias at VDD_SW = 3.3 V, VSS_SW = -3.3 V.

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