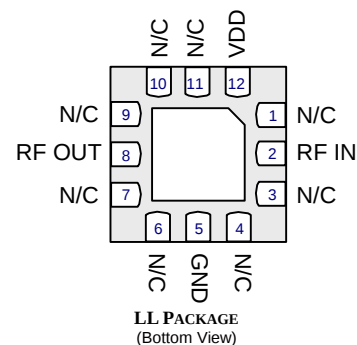


ABSOLUTE MAXIMUM RATINGS

DC Supply Voltage, RF Off 4 V
 Drain Current 40 mA
 Total Power Dissipation 0.15 W
 RF Input Power +10 dBm
 Operation Ambient Temperature -40°C to +85°C
 Storage Temperature Range -65°C to 150°C
 Package Peak Temp. for Solder Reflow (40 seconds maximum exposure).... 260°C (+0 -5)

Note: Exceeding these ratings could cause damage to the device. All voltages are with respect to Ground. Currents are positive into, negative out of specified terminal.

PACKAGE PIN OUT


RoHS / Pb-free NiPdAu Finish

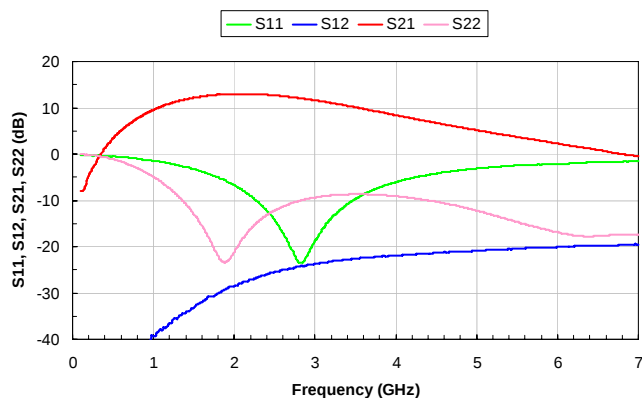
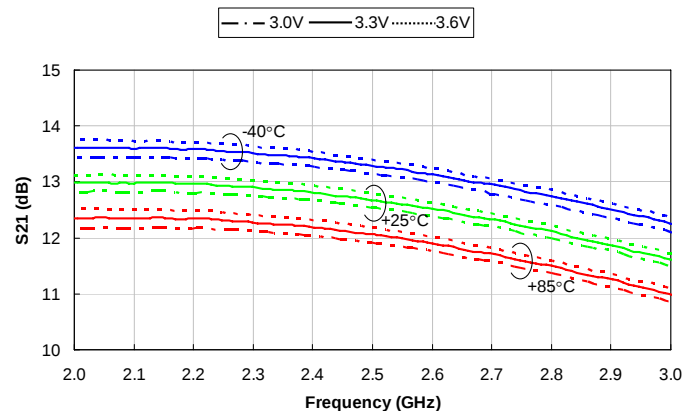
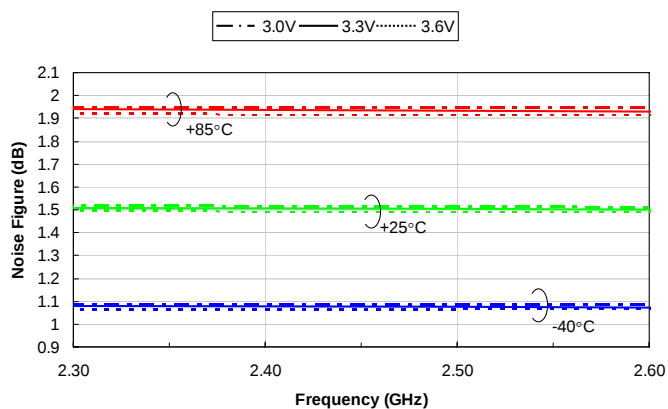
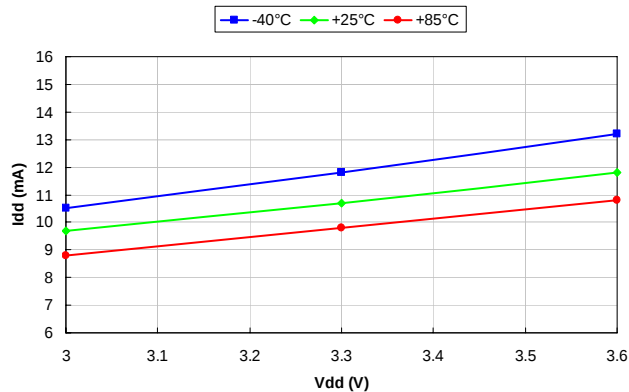
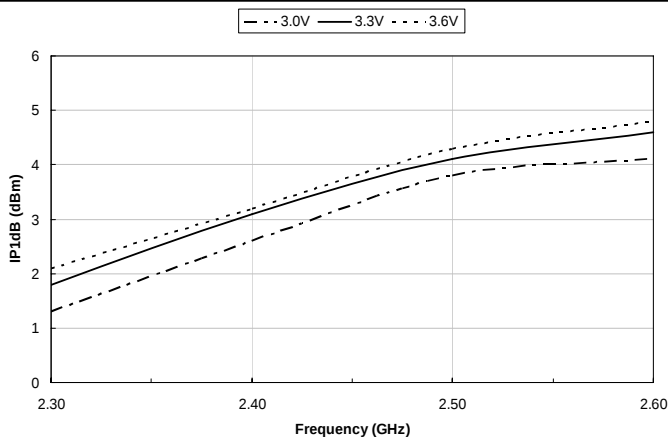
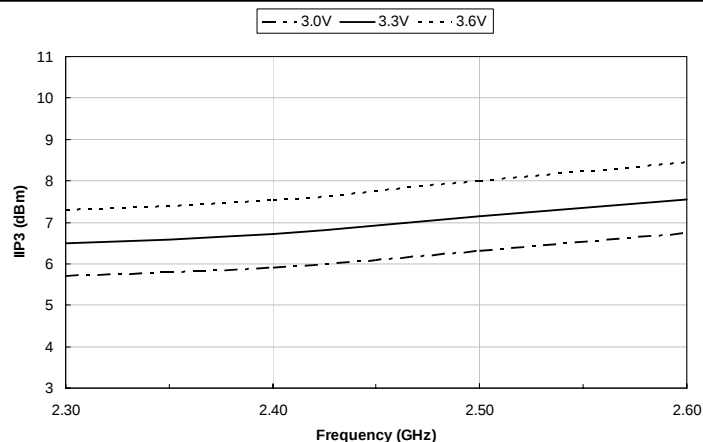
FUNCTIONAL PIN DESCRIPTION

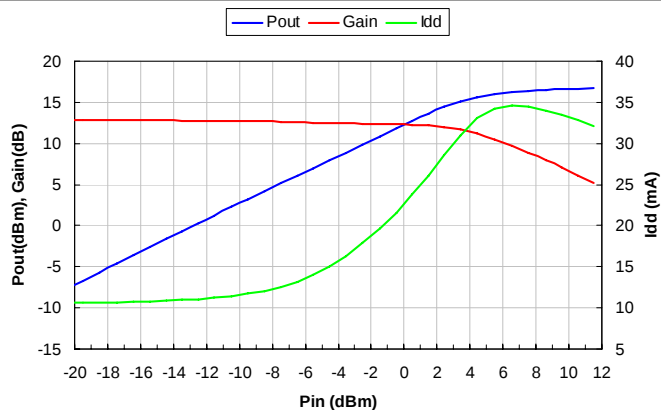
Name	Pin #	Description
RF IN	2	RF input for the low noise amplifier. This pin is AC-coupled and does not require a DC-blocking capacitor.
RF OUT	8	RF output for the low noise amplifier. This pin is AC-coupled and does not require a DC-blocking capacitor.
VDD	12	Supply voltage.
GND	5	Ground.
N/C	1,3,4,6,7,9,10,11, Center Metal	Not Connected. They can be treated either as open pins or connected to ground.

ELECTRICAL CHARACTERISTICS

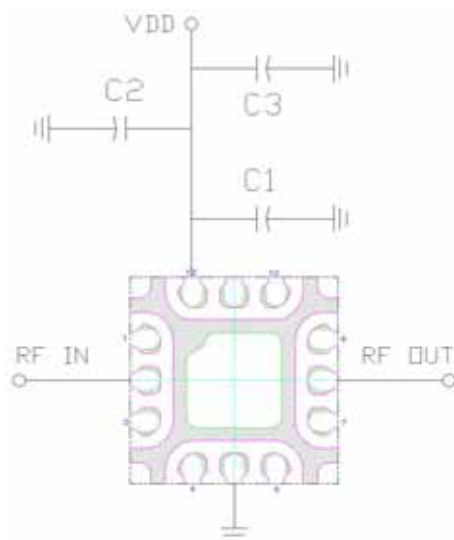
Test conditions: $V_{DD} = 3.3V$, $I_{DD} = 10.5mA$, $T_A = +25^{\circ}C$ (Room Temperature)

Parameter	Symbol	Test Conditions	LX5561			Units
			Min	Typ	Max	
Application Frequency Range	f		2.4		2.5	GHz
Small-Signal Gain	S21			13.0		dB
Noise Figure	NF			1.5	1.8	dB
Input 3 rd Order Intercept Point	IIP3	Freq. 1 = 2.412GHz, Freq. 2 = 2.432GHz		6.5		dBm
Input P1dB	IP1dB	Freq. = 2.45GHz		2.5		dBm
Input Return Loss	S11			12		dB
Output Return Loss	S22			12		dB
Supply Voltage	V_{DD}			3.3		V
Supply Current	I_{DD}			10.5		mA

S-PARAMETER

GAIN OVER TEMP

NOISE FIGURE OVER TEMP

CURRENT OVER TEMP

INPUT P1dB (+25°C)

INPUT IP3 (+25°C)


POWER SWEEP @ 2.45GHZ


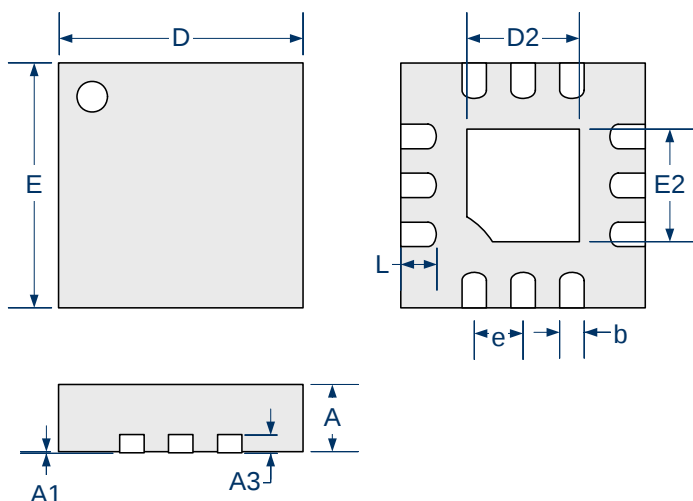
(Vdd=3.3V, Idq=10.5mA at Room Temperature)

APPLICATION SCHEMATIC

BOM LIST

Reference Designator	Part Description	Case
C1	Capacitor, 1 nF	0402
C2	Capacitor, 1 μ F	0603
C3	Capacitor, 10 μ F	0805

NOTES

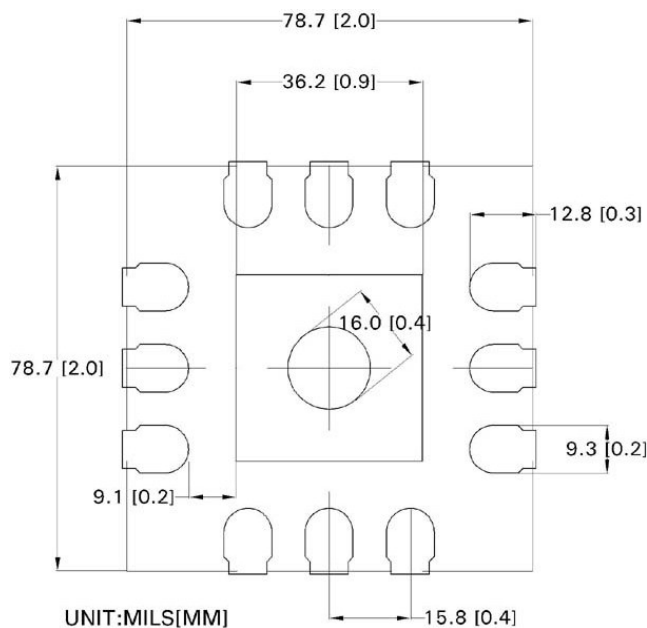
- It is recommended to place C1 at 20-50mil from MLP package outline.
- C2 and C3 are used for standalone evaluation board test only. They are not needed in final applications.

PACKAGE DIMENSIONS
LL 12-Pin MLPQ Plastic (2x2mm)


Dim	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.40	0.50	0.016	0.020
A1	0.00	0.05	0.000	0.002
A3	0.15 REF		0.006 REF	
b	0.15	0.25	0.006	0.010
D	2.00 BSC		0.079 BSC	
D2	0.77	1.02	0.030	0.040
E	2.00 BSC		0.079 BSC	
E2	0.77	1.02	0.030	0.040
e	0.40 BSC		0.016 BSC	
L	0.19	0.39	0.007	0.015

Note:

- Dimensions do not include mold flash or protrusions; these shall not exceed 0.155mm(.006") on any side. Lead dimension shall not include solder coverage.



UNIT:MILS[MM]

Recommended Land Pattern



LX5561

InGaAs – E-Mode pHEMT Low Noise Amplifier

PRODUCTION DATA SHEET

NOTES

www.Microsemi.com

NOTES

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