CEL California Eastern Laboratories

Evaluation Board Document

µPG2314T5N-EVAL-A

Evaluation Board

- Bias and Matching Circuits
- Output Power Control
- PCB Information
- Typical Performance
- Schematic and Assembly Drawing

Matching and Bias Circuits

As shown in the circuit schematic on the next page, the uPG2314T5N requires relatively simple matching circuits. The inductor L1 is for input matching and should be placed close to the device. At the output essentially no matching circuit is required. L2 functions as an RF choke and C2 is DC block capacitor.

The uPG2314T5N is a two stage PA. The first stage bias is through Vcc1. A small section of transmission line between the device and the bypass capacitor, C1, is needed to provide enough isolation between RF and DC paths.

Output Power Control

The output power of uPG2314T5N can be adjusted by the voltage on Vcont pin. The control curve is shown on the data sheet. To turn off the PA, Vbias+Venable pin should be set to 0V.

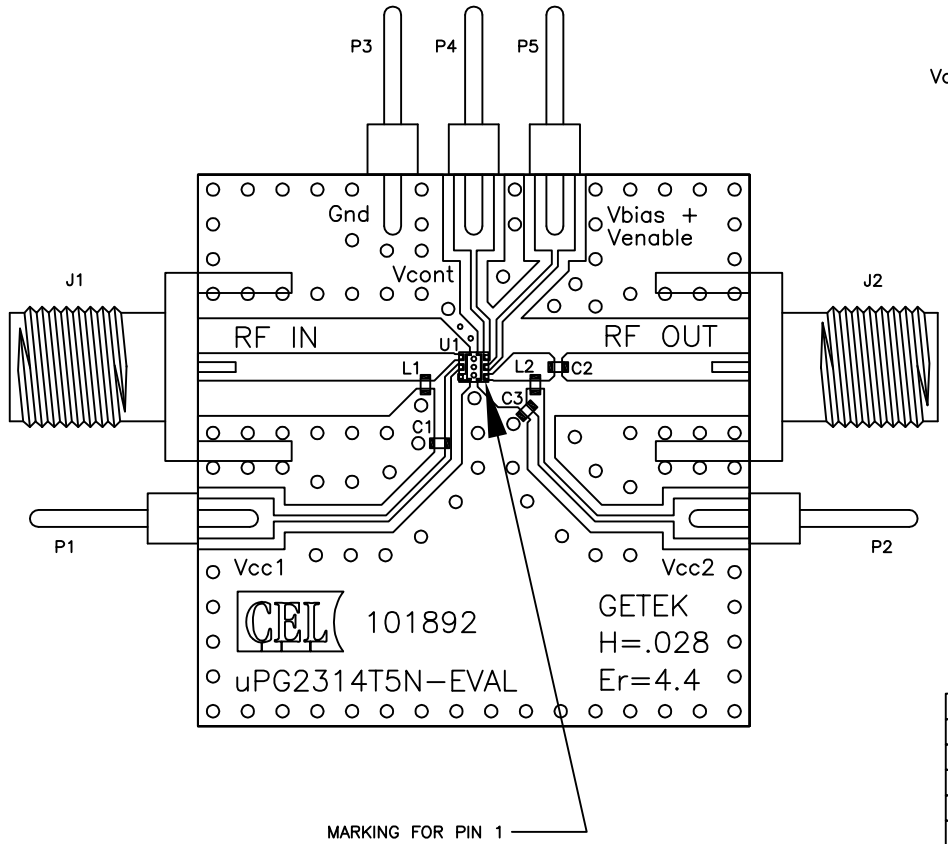
PCB Information

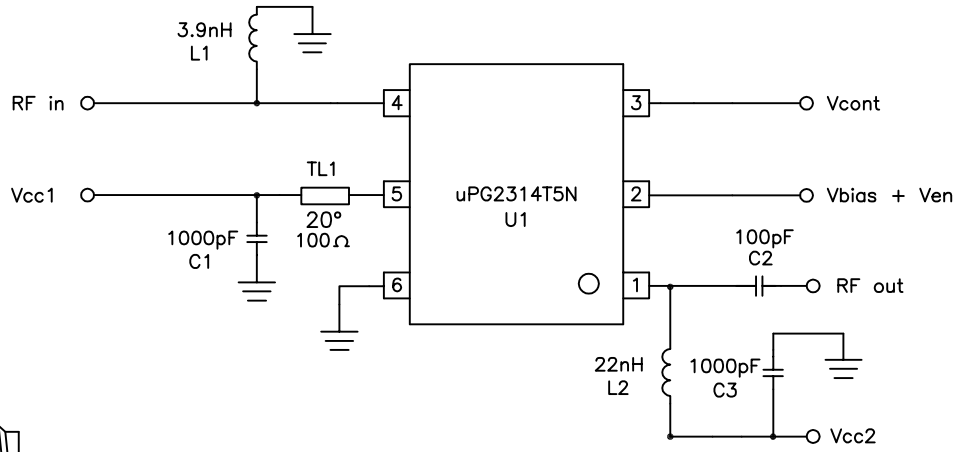
The PCB is Getek two layer board. The board thickness is 28mil.

Typical Performance

Refer to the data sheet for typical performance curves.

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED





QTY	PART NUMBER OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL/SPECIFICATION	ITEM NO.
1	LQG15HS22NJ02	L2	0402 22nH IND +/-5% MURATA	9
1	LQG15HS3N9S02	L1	0402 3.9nH IND +/-0.3nH MURATA	8
1	GRM1555C1H101JZ01D	C2	0402 100pF CAP +/-5% MURATA	7
2	GRM1555C1H102JA01D	C1,C3	0402 1000pF CAP +/-5% MURATA	6
		TL1	100 Ω ,20 ° @ 2.45GHz	5
5	2340-6111 TG	P1,P2,P3,P4,P5	PIN HEADER 3M	4
2	142-0701-841	J1,J2	SMA FEMALE CONNECTOR E.F.JOHNSON	3
1	uPG2314T5N	U1	NEC GaAs PA uPG2314T5N	2
1	CL-101892	DRAWING	COMPONENT LAYOUT DRAWING	1

PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES
DECIMALS .XX± .01 .XXX± .005
ANGULAR ± 1°
DO NOT SCALE DRAWING

MATERIAL

FINISH

APPROVALS		
Drawing by:	Hugues de Saint Salvy	2005/12/14
Designed by:	Hugues de Saint Salvy	2005/12/14
Checked by:		
Project Engineer:		
Quality Control:		

CEL CALIFORNIA EASTERN LABS
4590 PATRICK HENRY DR. SANTA CLARA CA. 95054

TITLE:
uPG2314T5N-EVAL-A
ASSEMBLY DRAWING

SIZE	FSCM NO.	DWG NO.	REV
C		AD-101892	-

SCALE 2:1 | RELEASE DATE PROTOTYPE | SHEET 1 OF 1