

SiGe WIDEBAND DIRECT MODULATOR RFIC, 100 - 4000 MHz

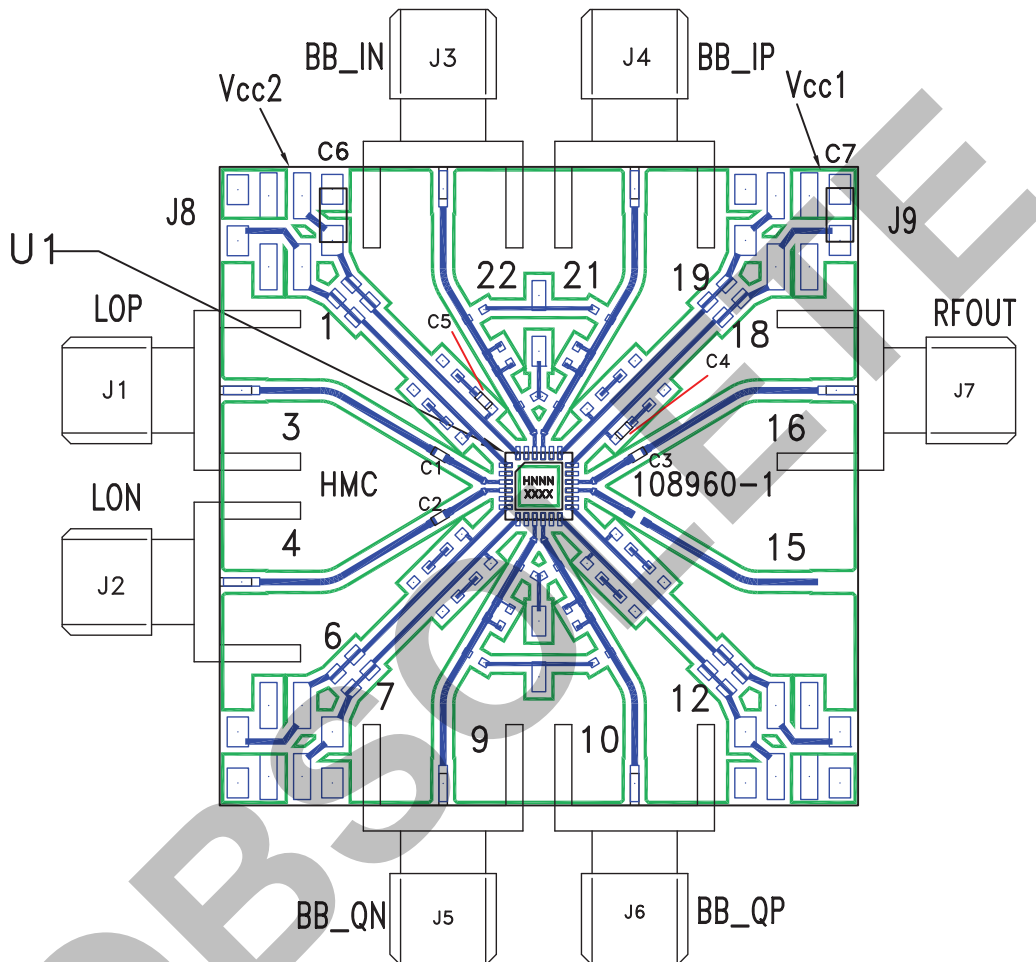


Pin Descriptions

Pin Number	Function	Description	Interface Schematic
1, 6, 7, 13, 15	N/C	Not connected.	
2, 5, 8, 11, 12, 14, 17, 19, 20, 23	GND	These pins and the ground paddle should be connected to a high quality RF/DC ground.	
3, 4	LOP, LON	LO inputs. Need DC decoupling capacitors. The ports could be driven single ended or differentially.	
9, 10	QN, QP	Q channel differential baseband input. These high impedance ports should be biased around 1.5V DC. Nominal recommended baseband input is around 1.6V pp differential.	
16	RFOUT	RF output. 50 Ohms. Needs DC blocking capacitor.	
18	Vcc1	Supply voltage for the mixer and output stages 79mA @ +5.0V.	
21, 22	IP, IN	I channel differential baseband input. These high impedance ports should be at the same bias voltage (VbbDC) as Qn & Qp.	
24	Vcc2	Supply voltage for the LO stage 88mA @ +5V.	



Evaluation PCB



List of Materials for Evaluation PCB 108962 [1]

Item	Description
J1 - J7	PC Mount SMA Connector
J8, J9	DC Molex Connector
C1 - C3	100 pF Chip Capacitor, 0402 Pkg.
C4, C5	1000 pF Chip Capacitor, 0402 Pkg.
C6, C7	4.7 uF, Case A, Tantalum
U1	HMC497LP4 Modulator
PCB [2]	108960 Eval Board

[1] Reference this number when ordering complete evaluation PCB

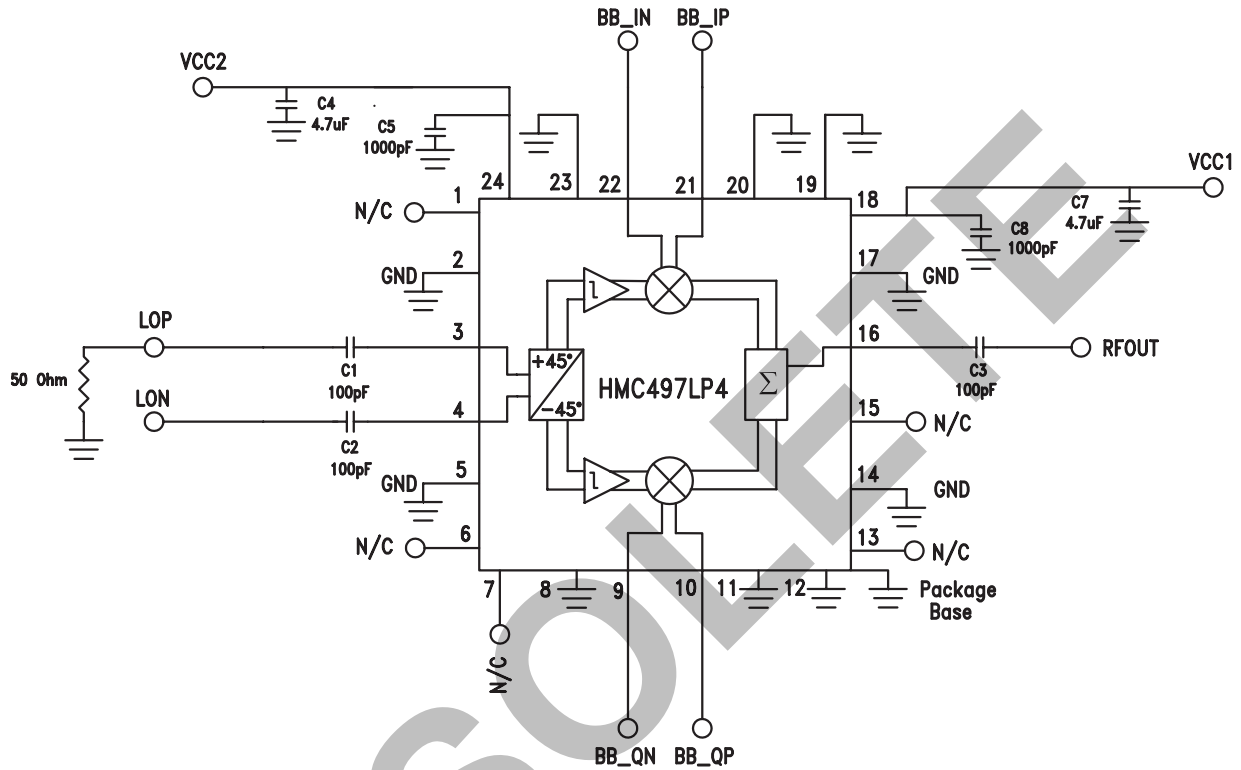
[2] Circuit Board Material: Rogers 4350

The circuit board used in the final application should use RF circuit design techniques. Signal lines should have 50 ohm impedance while the package ground leads and exposed paddle should be connected directly to the ground plane similar to that shown. A sufficient number of via holes should be used to connect the top and bottom ground planes. The evaluation circuit board shown is available from Hittite upon request.

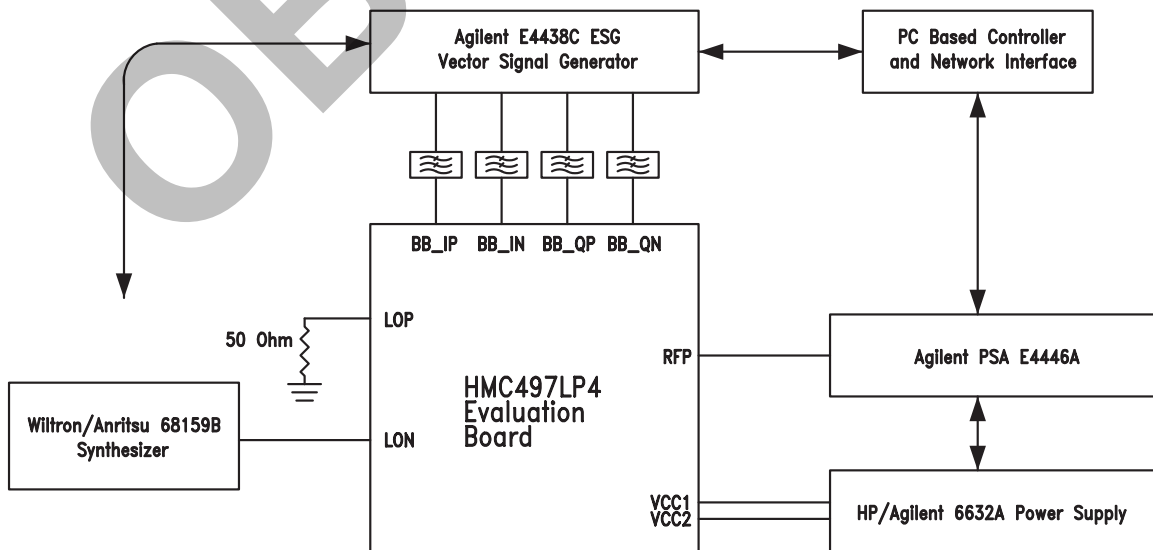


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Application & Evaluation PCB Schematic



Characterization Set-up



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**SiGe WIDEBAND DIRECT
MODULATOR RFIC, 100 - 4000 MHz****Notes:**

OBSOLETE