

Amplifier for RF Font End and A/D Voltage Reference

This is a small board that will amplify the output of an AD8307 RF Power Circuit and make it compatible with PSHNA and other test equipment.

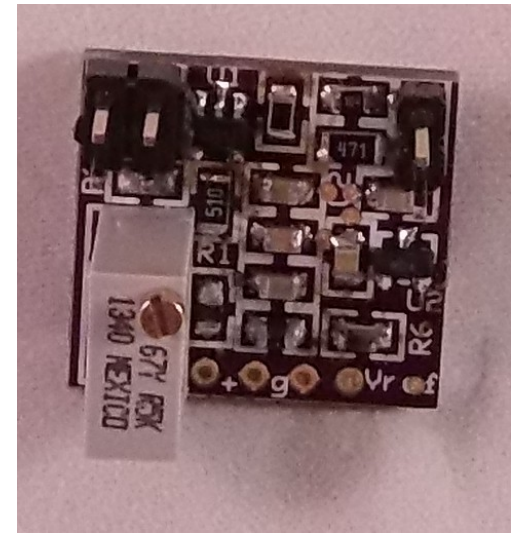
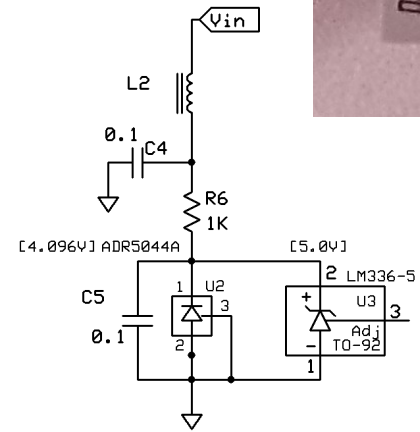
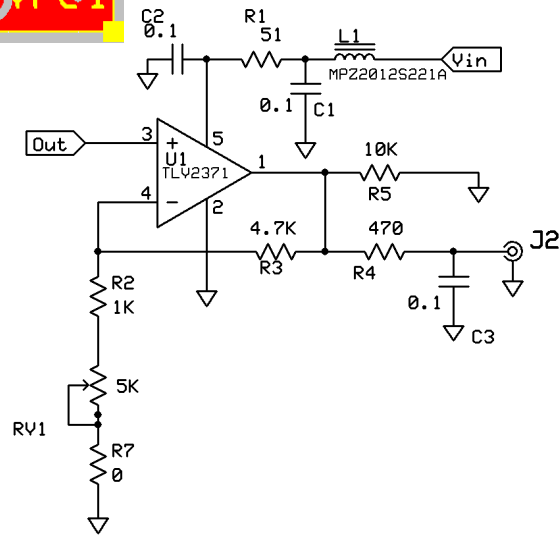
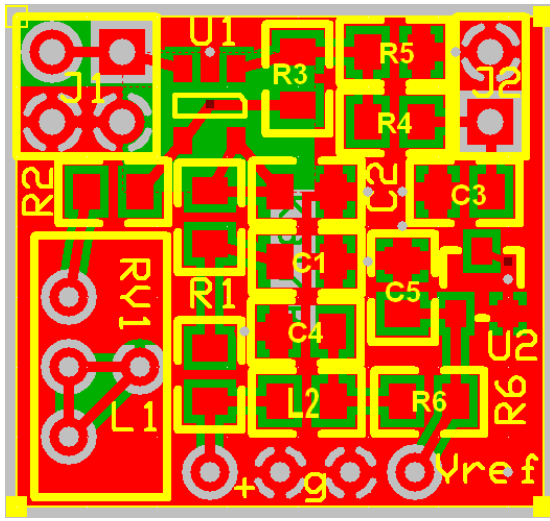
The board also has provision for a high precision Voltage Reference that can be used for A/D conversion on Arduino and other microprocessors.

Gerbers and PCB's may be obtained from OSH Park, https://oshpark.com/shared_projects/ljNb5cUo
or

Just the Gerbers from my web site: http://www.k9ivb.net/RF_Power_Meter

The Schematic and BOM are on following pages.

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Amplifier for RF Front End and A/D Voltage Reference

K9I4B

Rev 1.0
8/22/2014

Page # or name

Power Amp Ref BOM

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REF Des	Value	Description	Mfg	Mfg #	Pkg	Mouser
C1, 2, 3, 4, 5	0.1	Multilayer Ceramic Capacitors MLCC - SMD/SMT 25volts 0.1uF X7R 10%	Kemet		[0805]	80-C0805C104K3R
J1		2x2 0.1" Header				
J2		2x1 0.1" Header				
L1, 2	MPZ2012S221A	FERRITE CHIP 220 OHM 3A	TDK	MPZ2012S221A	[0805]	810-MPZ2012S221A
R1	51	Thick Film Resistors - SMD 1/8watt 51ohms 5	Vishay	CRCW080551R0JNEA	[0805]	71- CRCW080551R0JNEA
R2,6	1K	Thick Film Resistors - SMD 1/8watts 1Kohms 1%	KOA	RK73H2ATTD1001F	[0805]	660- RK73H2ATTD1001F
R3	4.7K	Thick Film Resistors - SMD 1/8watt 4.7Kohms 1%	Vishay	CRCW08054K70FKEA	[0805]	71- CRCW08054K70FKEA
R4	470	Thick Film Resistors - SMD 1/4watt 470ohms 5%	Vishay	CRCW0805470RJNEA	[0805]	71-CRCW0805J-470- E3
RV1	5K trimpot	Trimmer Resistors - Through Hole 2K ohm 10% 1/4" squ 20 turn	BI Technologies / TT electronics	67YR5KLF		858-67YR5KLF
R7	0	Short in PCB Bottom side				
U1	TLV2371	Operational Amplifiers - Op Amps 550- uA/Channel 3-MHz RRIO Op Amp	TI	TLV2371IDBVT	SOT-23-3	595-TLV2371IDBVT
U2	ADR5044A	Voltage References Prec Micropwr Shunt Mode 4.096 Vout	Analog Devices	ADR5044ARTZ- REEL7	SOT-23-3	584-ADR5044ARTZ-R7
U3	LM336-5	Voltage References 5.0V Ref Diode	TI	LM336Z-5.0/NOPB	TO-92	926-LM336Z-50/NOPB
Note U3 is optional for U2. Solder on board in place of U2 for 5V ref						
PCB		Amp-Vref	OSH Park	https://oshpark.com/shared_projects/ljNb5cUo		