

FEATURES

- Basic Compressor/Limiter Circuit
 - Threshold Adjust
 - Compression Ratio
 - Output Gain
- External Control Voltage Input
- Preassembled and Pretested
- ZIF Socket for THAT4305
- XLR Input/Output Connectors
- Generous Prototyping Area
- Complete Documentation Package
 - Schematic & Assembly Drawing

APPLICATIONS

- Verification of 4305 Performance
- Compressor/Limiter Application Evaluation
- Prototyping 4305 Applications
- PCB Layout Reference Design

Description

The THAT 4305-DEMO Compressor Demonstration System is a self-contained circuit board that simplifies evaluating the performance of a 4305 Analog Engine Dynamics Processor IC. It features the 4305 connected in a basic three-control (ratio, threshold and gain) compressor/limiter circuit. An external ($\pm 15V$) power supply is required.

Completely assembled and tested, the 4305-DEMO comes with XLR connectors for signal input and output. A ZIF socket is provided for easy insertion of a 4305. To simplify testing of the 4305 VCA section, the board includes an external control voltage (CV) input. The RMS detector output is

available at a test point to facilitate direct measurements of the detector. Both the power supply and external CV inputs are made via standard five-way binding posts.

To facilitate prototyping specific applications, spare circuit board area is perforated with plated-through holes. This makes the board particularly useful for experimentation.

With a 4305-DEMO and standard audio cables, an engineer can start testing the performance of basic 4305 circuitry and begin trying out additional circuit ideas in minutes.

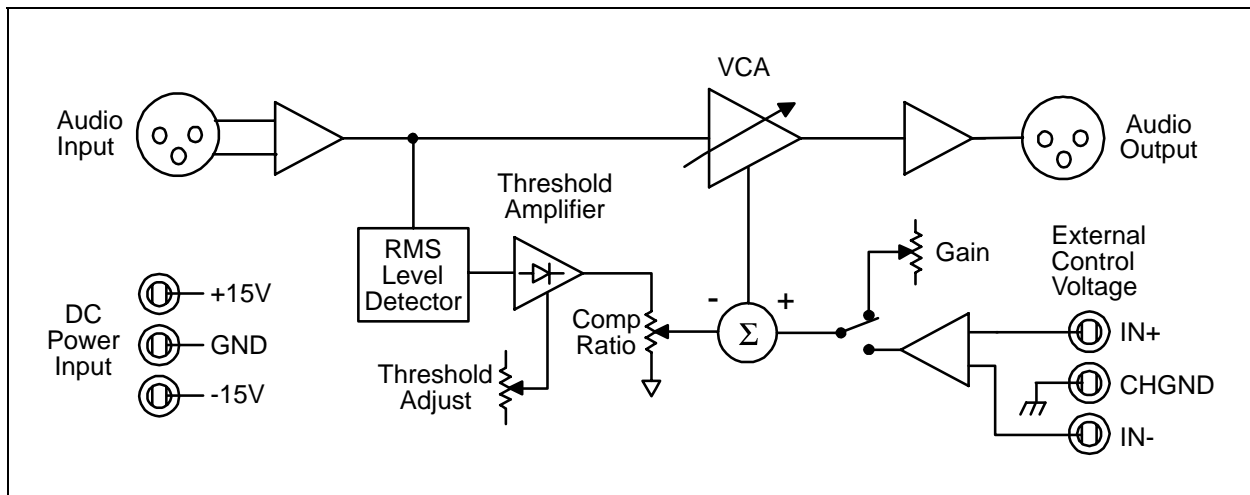


Figure 1. THAT 4305-DEMO block diagram

SPECIFICATIONS¹

Absolute Maximum Ratings²

Positive Supply Voltage (V_{CC})	+18V	Operating Temperature Range (T_{OP})	0 to +70 °C
Negative Supply Voltage (V_{EE})	-18V	Storage Temperature Range (T_{ST})	0 to +100 °C

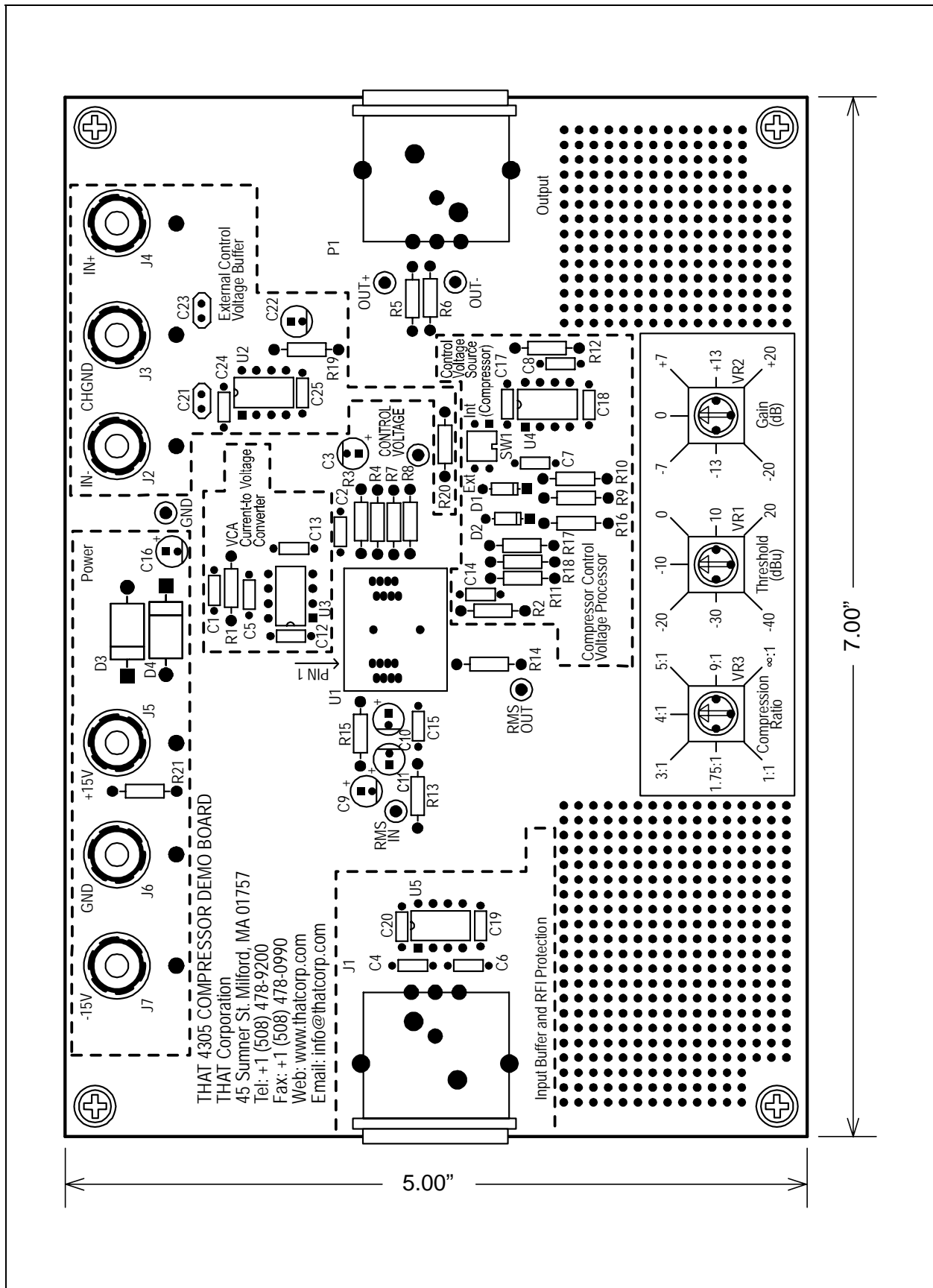
Typical Power Supply Requirements²

Parameter	Symbol	Conditions	Min	Max	Units
Positive Supply Voltage	V_{CC}		+8	+15	V
Negative Supply Voltage	V_{EE}		-8	-15	V

Electrical Characteristics²

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Gain Range		Internal Control	-20	—	+20	dB
		External Control	-90	—	+30	dB
Control Voltage Constant		External Control	—	100	—	mV/dB
Supply Current	I_S	± 15 V Supply	—	28	40	mA
Input Impedance, Audio	Z_{IN}	Differential	—	20	—	k Ω
Input Impedance, Control	Z_{IN}	Differential	—	80	—	k Ω
Input Overload	$V_{IN (Max)}$	$V_{CC} = -V_{EE} = 15$ V	—	+19	—	dBV
Output Impedance	Z_{OUT}	Single-ended	—	100	—	Ω
Minimum Resistive Load	$R_{L MIN}$		—	2k	—	Ω
Dimensions				5 x 7 x 1.5		in
Weight				0.4		lb

1. All specifications subject to change without notice.
2. Unless otherwise noted, $T_A = 25^\circ\text{C}$, $V_{CC} = +15\text{V}$, $V_{EE} = -15\text{V}$.



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Figure 2. 4305-DEMO outline drawing

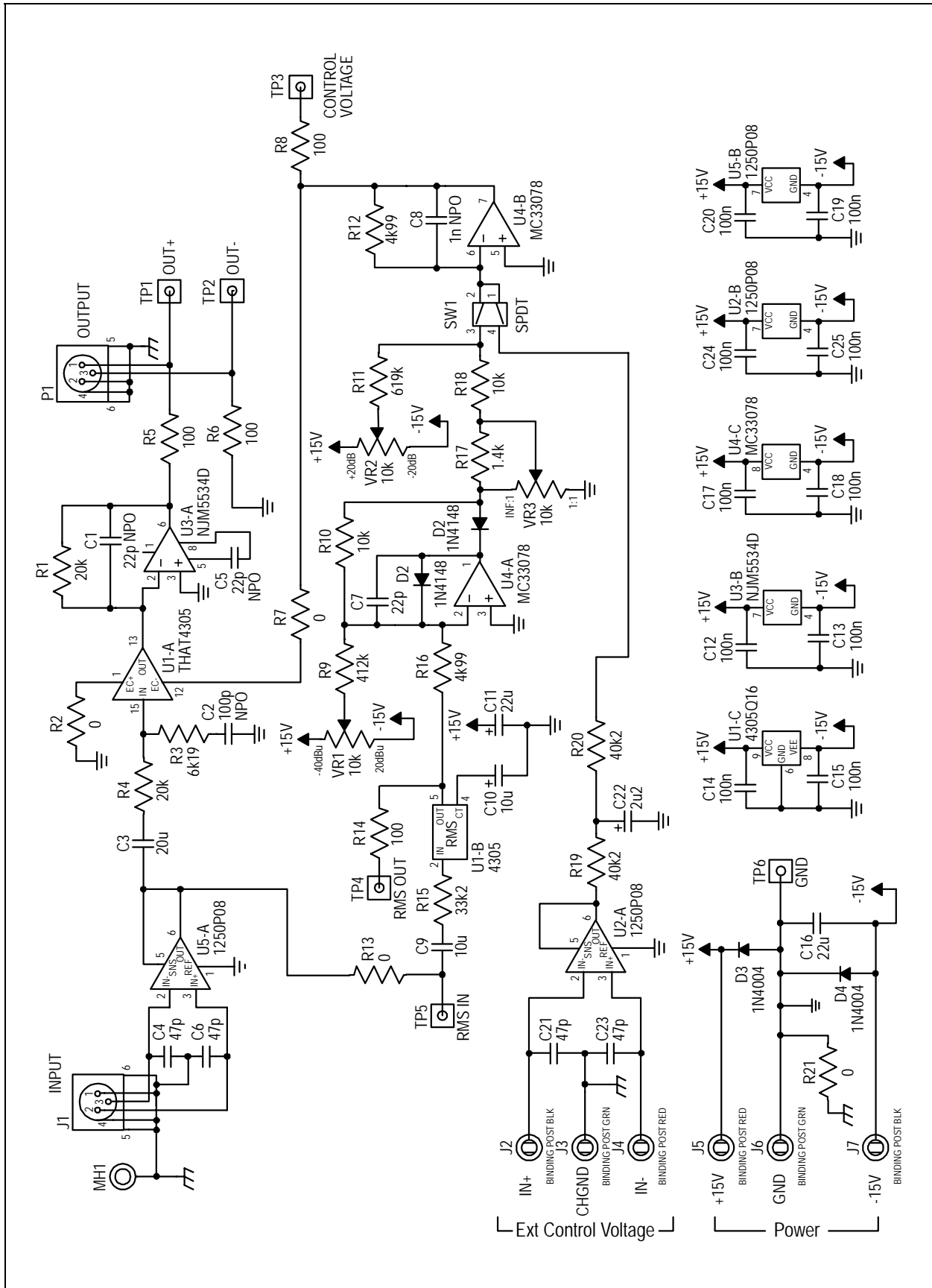


Figure 3. 4305-DEMO schematic