

INTRODUCTION

Fast, easy breadboarding of circuits using the PA140CX are possible with the EK34 PC board. Mounting holes are provided and the provision for standard banana jacks simplifies connection and testing. The amplifier may be mounted horizontally or vertically. Components are labeled on both sides of the board for ease in probing.

A multitude of circuit configurations are possible, so only several component locations have specific functions and will usually be necessary. This kit is not suitable for use with PA140CC or PA140CD.

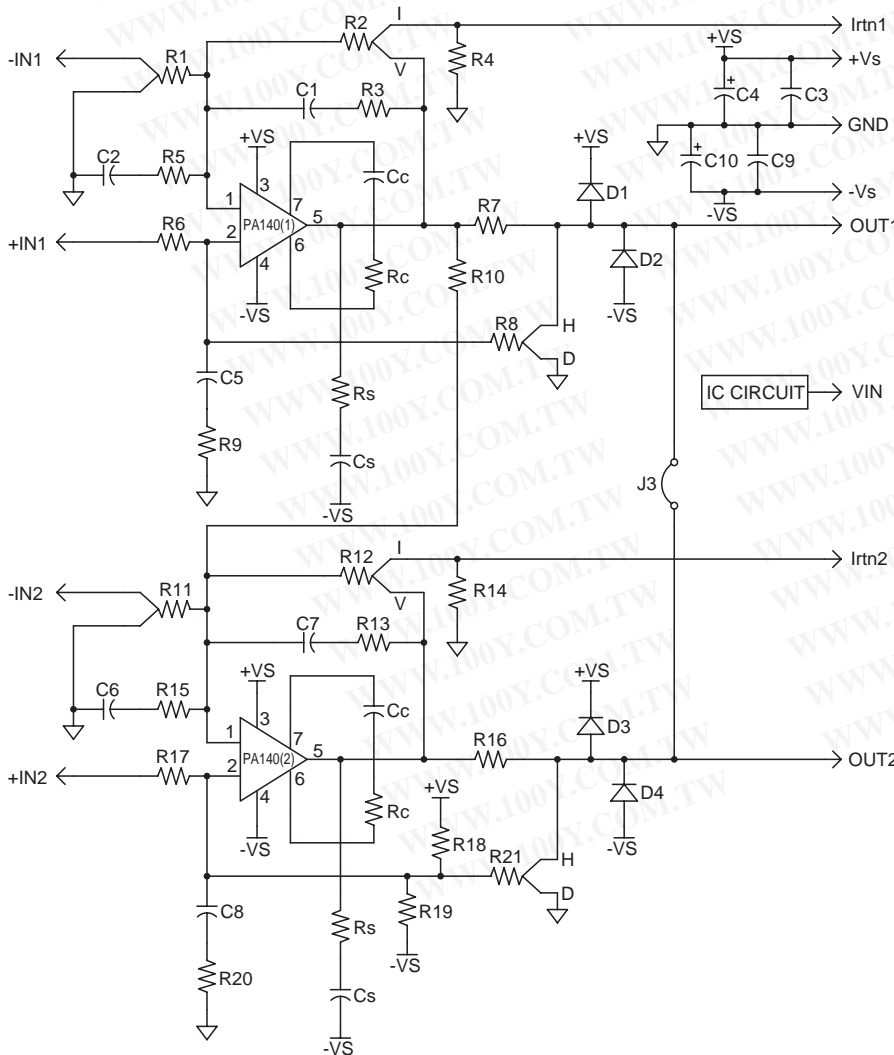
PARTS LIST

Part #	Description	Quantity
Eval 34	Evaluation Board PA40/140CX	1
Clamp04	Clamp for HS29	2
MS08	Pin Recp. D=.077 15/Pack	1
TW14	Thermal Washer TO220 10/Pack	1
HS29	Heat Sink, 2.7 DEG/W	1

TYPICAL COMPONENT FUNCTIONS

COMPONENT	FUNCTION
C1,7	Alone is a roll off, with R3, 13 is a current out stability network (ref. AN19)
C2,6	With R6, 15 forms noise gain compensation network (ref. AN25)
C3,4	Supply bypass, .22 to 1 μ F ceramic
C5,8	With R9, 20 forms a Howland stability network, can jumper both to ground +IN
Cc	With Rc sets compensation to match desired gain
Cs	330pF with Rs forms required snubber network (can omit if $Cload \geq 330pf$)
D1-4	Flyback protection diodes
R1,11	Inverting inputs, install to input line or to ground
R2,12	Negative feedback, install to V for voltage out or to I for current output (ref. AN19)
R3,13	With C1, 7 forms a stability network for current output (ref. AN19)
R4,14	Current sense for current outputs (ref. AN13)
R5,15	With C2, 6 forms noise gain compensation network (ref. AN25)

EQUIVALENT SCHEMATIC



R6,17	Input R for Howland current pump or differential, usually shorted for non-inverting
R7,19	Current sense for Howland current pump. Could also be used to isolate large Loads (ref. AN25)
R8,21	Positive feedback, install to H for a Howland current pump, to D for a differential circuit
R9,20	With C5, 8 forms a Howland stability network, can jumper both to ground +IN
R10	With an equal value R12 provides gain = -1 for a bridge slave (ref. AN3,20)
R18,19	Can provide mid-supply reference for single supply bridge (ref. AN3, 20)
Rc	With Rc sets compensation to match desired gain
Rs	100 Ω with Cs forms required snubber network (can omit if $Cload \geq 330pf$)

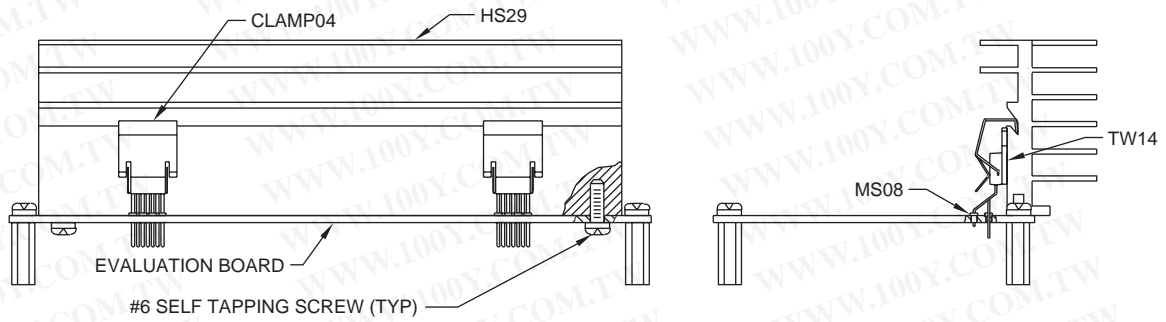
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[Http://www.100y.com.tw](http://www.100y.com.tw)

EK34

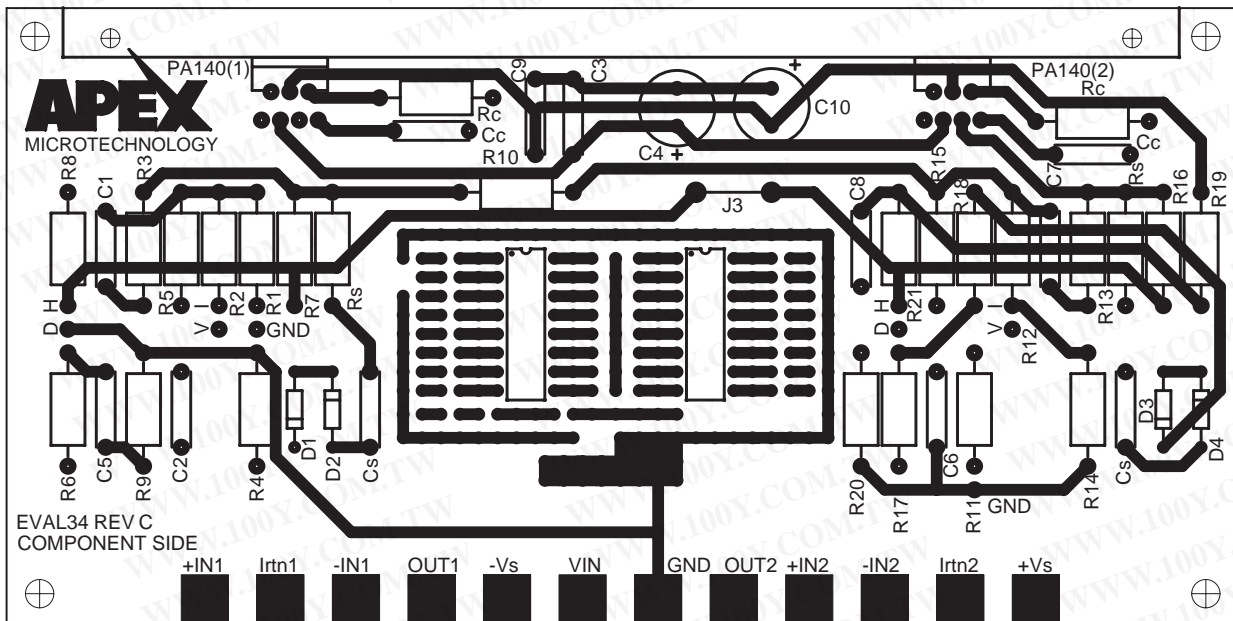
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EVALUATION KIT
 FOR PA40/140CX PIN-OUT

FIGURE 1.



EVAL34 TOP



EVAL34 BOTTOM

