

SA818/DRA818 500mW/1W TRANSMITTER

AUDIO ONLY

HAYWIRE SHOWN ON PWA (TOP)
NO RF SECTION (TALKIE TOASTER)

-22 TO -23 CHANGES

U4-18 (MIC-IN) IS NOW DC ISOLATED

-23 TO -24 CHANGES

ADD D4 TO PROVIDE HI/LO POWER CONTROL;
CONNECTION TO BRD\$4-CTL

NOTE ON USE OF D2/VR1

ADD DS1 (SCHOTTKY DIODE) TO ELIMINATE NEED FOR VR2
SA818 SYMBOL UPDATED

17 NOV 2022

CHANGE C13 TO 10UF TO ALLOW TIME FOR DRA818
TO INITIALIZE AND BE SETUP FOR OPERATION
THROUGH THE SERIAL INTERFACE. (1000ms)

16 FEB 2023

ADD NOTES ON SCHEMATIC FOR TEST CONFIGURATION
SAME NOTES ON BOARD LAYOUT

-24 TO -29 CHANGES

CHANGE TO SPLIT PD* AND PTT* SIGNALS

HI(100mW)/LOW(500mW) IS JUMPER

AUDIO TEST PATH BYPASSES ATTENUATORS

ADD LEDs TO PTT AND PD SIGNALS

FIX R8/R9 ORIENTATION (SWAP RX/TX)

R37 MOVE TO OTHER SIDE OF R15

REWORK INPUT TO U10 SO BOTH DRA818 AND
HOST CAN DRIVE AUDIO AMP

-29 TO -32 CHANGES

ADD PAD AND ISOLATION FOR POWER CONTROL

ADD 0.050" (v) TO 'HAMMOND_1599E_SA818H' LIBRARY PART

-32 TO -33 CHANGES

ADD STATIC DRAIN RESISTORS
R7, R10, R17, R19

-33 TO -34 CHANGES

ADD ATTENUATOR
R2, R21, R22

-34 TO -36 CHANGES

CORRECT VR1 PINOUT

-36 UPDATES

UPDATE 'HAMMOND_1599E_SA818L' PACKAGE
WITH DRILL DIMENSIONS
ADD MCMaster SPACER LIST

McMASTER-CARR SPACER PART NUMBERS

SCREW M2.5x0.45	92000A104
SCREW M3.0x0.5	92000A116
12mm SPACER M2.5x0.45	95947A007
14mm SPACER M2.5x0.45	95947A009
12mm SPACER M3.0x0.5	95947A008
14mm SPACER M3.0x0.5	95947A010

ATTENUATOR NETWORK PART NUMBERS

CRCW120611R5FKEA	541-11.5FCT-ND
CRCW120617R4FKEA	541-17.4FCT-ND
CRCW120623R7FKEA	541-23.7FCT-ND
CRCW120637R4FKEA	541-37.4FCT-ND
CRCW120645R3FKEA	541-45.3FCT-ND
CRCW120652R3FKEA	541-52.3FCT-ND
CRCW120671R5FKEA	541-71.5FCT-ND
CRCW120695R3FKEA	541-95.3FCT-ND
CRCW1206115RFKEA	541-115FCT-ND
CRCW1206130RFKEA	541-130FCT-ND
CRCW1206150RFKEA	541-150FCT-ND
CRCW1206221RFKEA	541-221FCT-ND
CRCW1206294RFKEA	541-294FCT-ND
CRCW1206432RFKEA	541-432FCT-ND

PWA RELEASED AS 2D354 102-73181-36

PWB RELEASED AS 2D354 102-73181-36

TOP_FULL BOARD ASSY BOT_COMPACT BOARD-ID

DRAWING FRAME SHOWN ON CIRCUIT BOARD

Drawn Date

KC0JFQ 2019-05-13

Designed Date

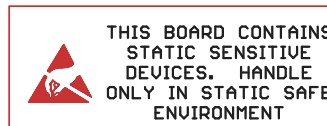
KC0JFQ 2019-05-13

MARK ZERO POINT FOR PICK & PLACE FILE ON PRINTED CIRCUIT BOARD

TITLE: DRA818 AMP (SPLIT PTT/PD) A102_73181_36

CAGE Series FOX TRANSMITTER Number 2 Layers Rev
2D354 102 B 73181 36

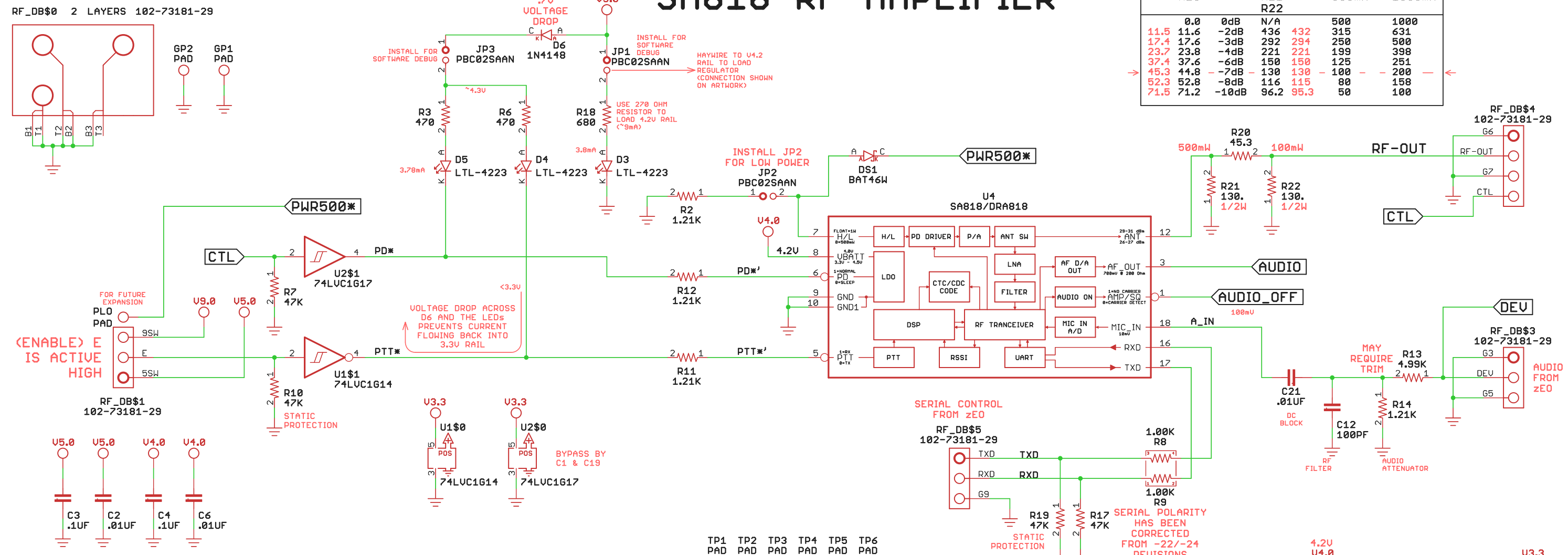
Date: 2/14/24 5:22 PM 2/14/24 5:23 PM Sheet: 1/3



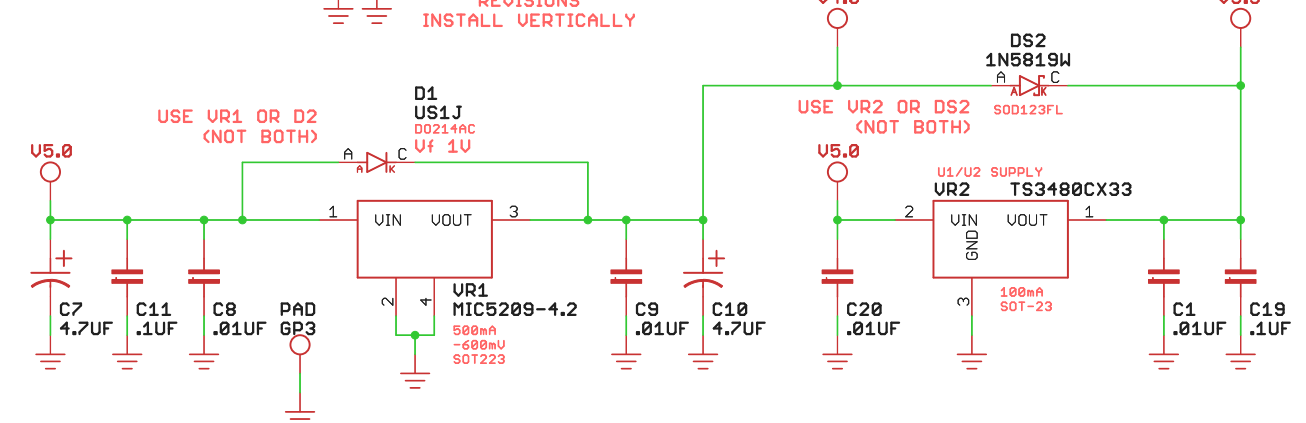
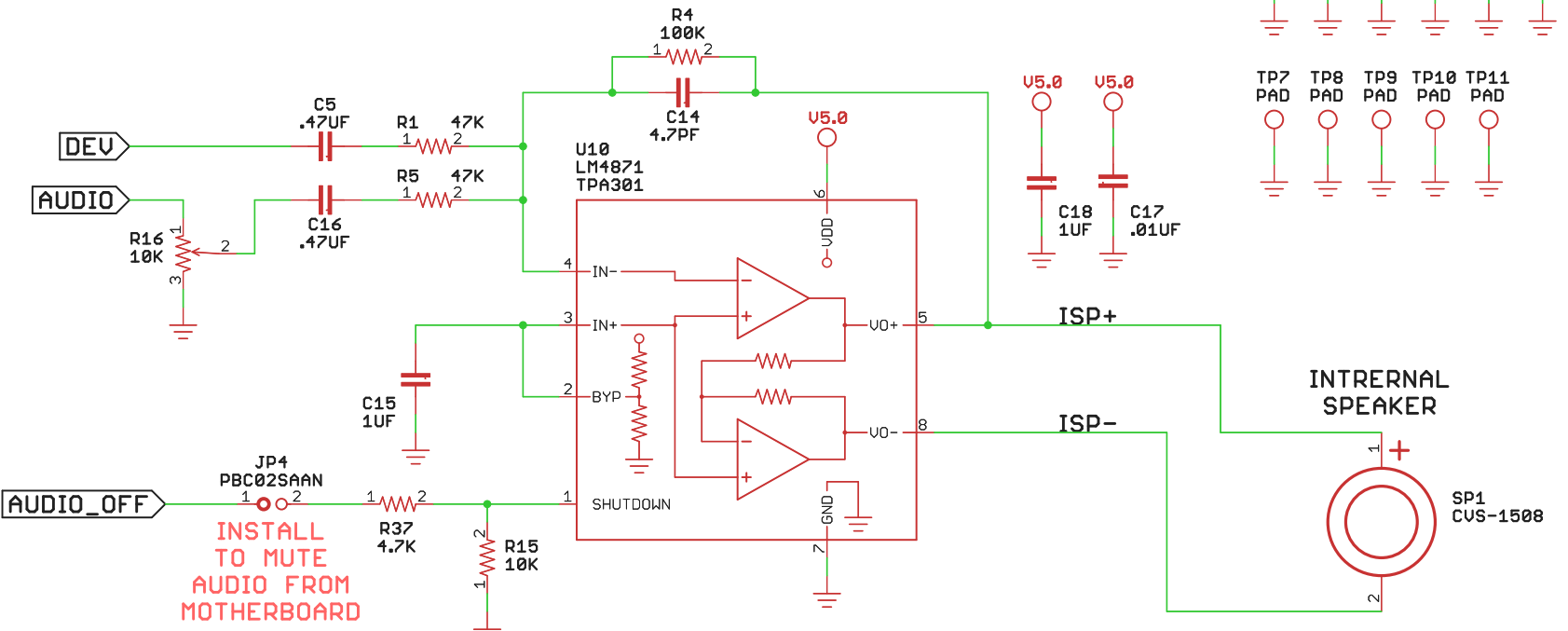
The University of Iowa
Department of Physics & Astronomy
Iowa City, IA, USA

SA818 RF AMPLIFIER

	R20	R21	R22	500mW	1000mW
	0.0	0dB	N/A	500	1000
	11.5	11.6	-2dB	436	432
	17.4	17.6	-3dB	292	294
	23.7	23.8	-4dB	221	221
	37.4	37.6	-6dB	150	150
	45.3	44.8	-7dB	130	130
	52.3	52.8	-8dB	116	115
	71.5	71.2	-10dB	96.2	95.3
				50	100



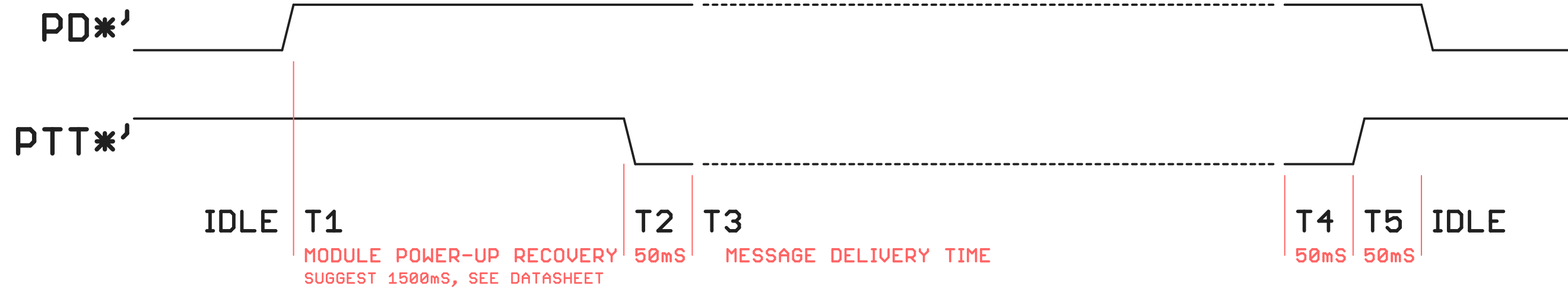
AUDIO AMPLIFIER



Drawn	KC0JFQ	Date	2019-05-13
Designed	KC0JFQ	Date	2019-05-13
TITLE: DR818 AMP (SPLIT PTT/PD)		A102_73181_36	
CAGE	Series	Number	2 Layers
2D354	102	B 73181	36
Date: 2/14/24 5:22 PM		2/14/24 5:23 PM Sheet: 2/3	

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MODULE TIMING



Drawn	Date
KC0JFQ	2019-05-13
Designed	Date
KC0JFQ	2019-05-13

The University of Iowa Department of Physics & Astronomy Iowa City, IA, USA					
TITLE: DRA818 AMP (SPLIT PTT/PD)			A102_73181_36		
CAGE	Series	B	Number	2 Layers	Rev
2D354	102 FOX TRANSMITTER		73181		36
Date: 2/14/24 5:22 PM		2/14/24 5:23 PM		Sheet: 3/3	