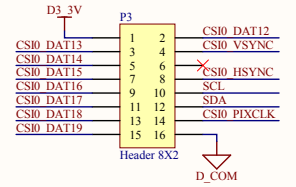
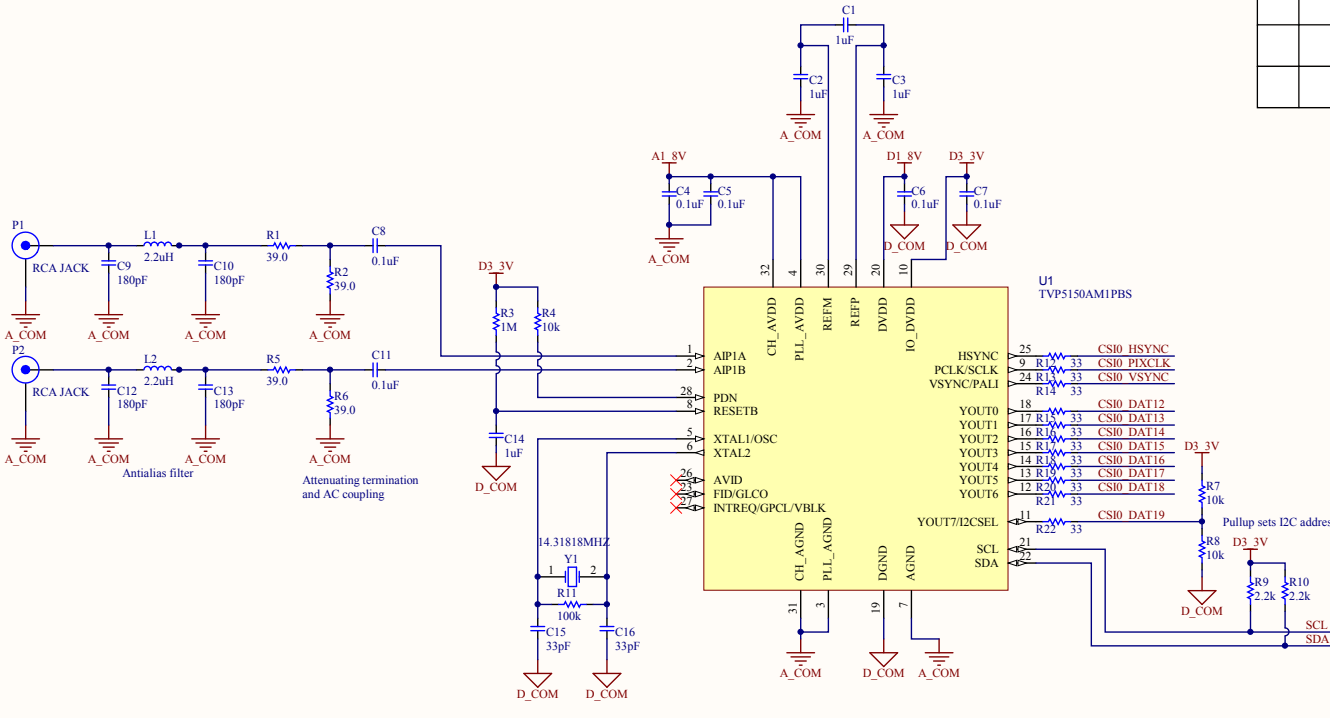
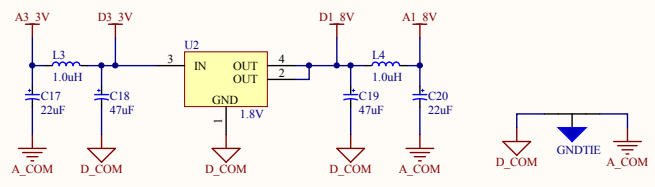


REV	ECO #	Change Information	Date	By



- CSIO\_PIXCLK Input 3.3V CMOS Camera0 PIXCLK
- CSIO\_HSYNC Input 3.3V CMOS Camera0 HSYNC
- CSIO\_DATA\_EN Input 3.3V CMOS Camera0 data enable
- CSIO\_VSYNC Input 3.3V CMOS Camera0 VSYNC
- CSIO\_DAT12 Input 3.3V CMOS Camera0 data bit0
- CSIO\_DAT13 Input 3.3V CMOS Camera0 data bit1
- CSIO\_DAT14 Input 3.3V CMOS Camera0 data bit2
- CSIO\_DAT15 Input 3.3V CMOS Camera0 data bit3
- CSIO\_DAT16 Input 3.3V CMOS Camera0 data bit4
- CSIO\_DAT17 Input 3.3V CMOS Camera0 data bit5
- CSIO\_DAT18 Input 3.3V CMOS Camera0 data bit6
- CSIO\_DAT19 Input 3.3V CMOS Camera0 data bit7



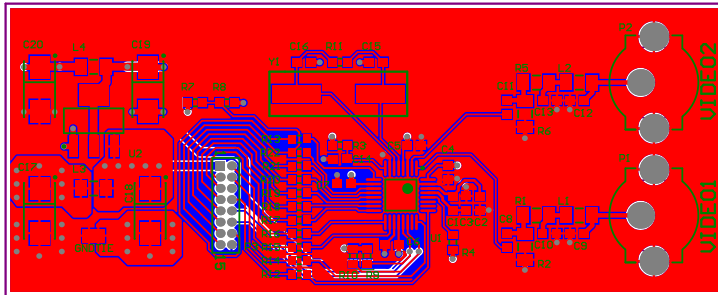
Force America, INC  
1601 Airport Road  
Waukesha, WI, 53211  
(262) 896-3500

Title		Revision	
Size B	Number	A	
Date: 9/16/2013	SCH#:	Sheet 1 of 1	
File: TYP5150AM1.SchDoc		Drawn By: PIM	

TYP5150AM1.PcbDoc  
Multilayer Composite Print

© 2013 Force America

TVP5150AM1 Breakout Board



Top Layer

Bottom Layer

Multi-Layer

Top Overlay  
Mechanical 1

1 oz, .062" (+/- 10%) thk, FR4, SMOBC  
Soldermask Color "Green"

Layer Stack Up Detail

Layer  
Name

Top Layer - 1oz finished wt. copper

GROUND PLANE - 1oz. copper plane

MID LAYER - 1 oz. copper plane

Bottom Layer - 1oz. finished wt. copper

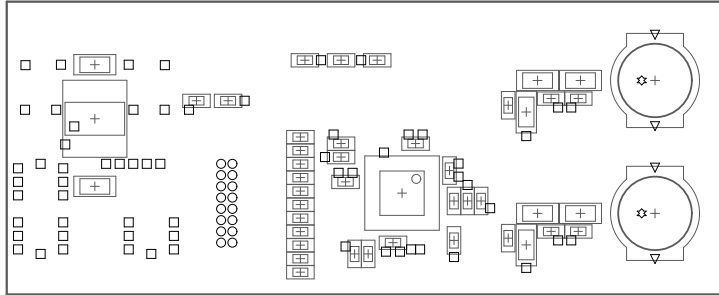
9/16/2013



## Printed Circuit Board Assembly List

**Assembly P/N:** <Parameter PartNumber not found>  
**Description:** Bill of Materials For Project [TYP5150AM1\_Breakout.PrjPCB] (No PCB)  
**Date:** 9/16/2013  
**Rev:** A  
**SCH#:** <Parameter SchematicNumber not found>

#	Quantity	Designator	Description	Mfgr	Mfgr Part #	Footprint	Vendor	Vendor Part #
1	4	C1, C2, C3, C14	CAP CER 1UF 10V 10% X5R 0603	Kemet	C0603C105K8PAC TU	CAPC1608N	Digi-Key	399-3118-1-ND
2	6	C4, C5, C6, C7, C8, C11	CAP CERAMIC .100UF 50V X7R 0603	Kemet	C0603C104K5RAC TU	CAPC1608N	Digi-Key	399-5089-1-ND
3	4	C9, C10, C12, C13	CAP CER 180PF 50V 5% NP0 0603	Samsung	CL10C181JB8NNN C	CAPC1608N	Digi-Key	1276-1255-1-ND
4	2	C15, C16	CAP CERAMIC 33PF 50V 0603 SMD	Panasonic - ECG	ECJ-1VC1H330J	CAPC1608N	Digi-Key	PCC330ACVCT-ND
5	2	C17, C20	CAP TANTALUM 22UF 25V 10% SMD	AVX Corporation	TAJC226K025RNJ	TC6032-2412	Digi-Key	478-1712-1-ND
6	2	C18, C19	CAP TANT 47UF 10V 10% 2312	AVX Corporation	TAJC476K010RNJ	TC6032-2412	Digi-Key	478-3910-1-ND
7	2	L1, L2	INDUCTOR MULTILAYER 2.2UH 1206	Abracon Corporation	AIML-1206-2R2K-T	RESC3216N	Digi-Key	535-11667-1-ND
8	2	L3, L4	INDUCTOR MULTILAYER 1.0UH 1206	Abracon Corporation	AIML-1206-1R0K-T	RESC3216N	Digi-Key	535-11661-1-ND
9	2	P1, P2	CONN RCA JACK METAL VERT YEL PCB	CUI Inc	RCJ-024	RCA/TRC-007	Digi-Key	CP-1409-ND
10	1	P3	CONN HEADER 16POS UNSHD VERT T/H	FCI	20021111- 00016T4LF	MHDR2X8	Digi-Key	609-3715-ND
11	4	R1, R2, R5, R6	RES 39.0 OHM 1/4W 1% 1206 SMD	Yageo	RC1206FR-0739RL	RESC3216N	Digi-Key	311-39.0FRCT-ND
12	1	R3	Res, 1M 1/10w 5%, 0603 pkg.	Panasonic	ERJ-3GEYJ105V	RESC1608N	Digi-Key	P1.0MGCT-ND
13	3	R4, R7, R8	Res, 10K 1/10w 5%, 0603 pkg.	Panasonic	ERJ-3GEYJ103V	RESC1608N	Digi-Key	P10KGCT-ND
14	2	R9, R10	Res, 2.2K 1/10w 5%, 0603 pkg.	Panasonic	ERJ-3GEYJ222V	RESC1608N	Digi-Key	P2.2KGCT-ND
15	1	R11	Res, 100k 1/10w 5%, 0603 pkg.	Panasonic	ERJ-3GEYJ104V	RESC1608N	Digi-Key	P100KGCT-ND
16	11	R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22	RES 33 OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ330V	RESC1608N	Digi-Key	P33GCT-ND
17	1	U1	Ultralow Power NTSC/PAL/SECAM 9-Bit Video Decoder with Robust Sync Detector, 32-Pin TQFP	Texas Instruments	TVP5150AM1PBS	PBS32_N	Digi-Key	296-32781-ND
18	1	U2	IC REG LDO 1.8V 0.8A SOT223	National Semiconductor	LM1117MP- 1.8/NOPB	SOT223-4N	Digi-Key	LM1117MP- 1.8/NOPBCT-ND
19	1	Y1	CRYSTAL 14.31818MHZ 18PF SMD	Citizen	HCM49- 14.31818MABJ-UT	HC49/US	Digi-Key	300-8551-1-ND



1 oz, .062" (+/- 10%) thk, FR4, SMOBC  
 Soldermask Color "Green"

Symbol	Hit Count	Tool Size	Plated	Hole Type
□	63	15mil (0.381mm)	PTH	Round
○	16	23.622mil (0.6mm)	PTH	Round
⊗	2	70.866mil (1.8mm)	PTH	Round
▽	4	79mil (2.0066mm)	PTH	Round
	85 Total			

Drill Drawing

Layer Stack Up Detail

Layer  
 Name

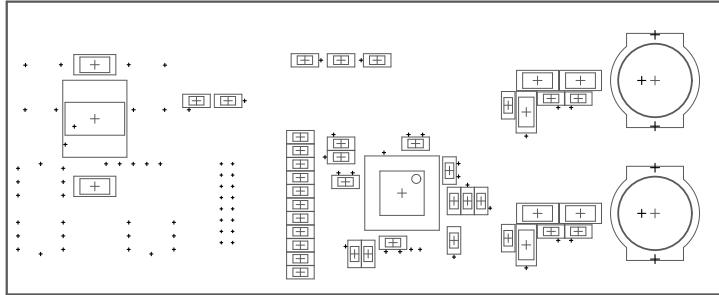
Top Layer - 1oz finished wt. copper

GROUND PLANE - 1oz. copper plane

MID LAYER - 1 oz. copper plane

Bottom Layer - 1oz. finished wt. copper

Mechanical 1



## Drill Guide

## Mechanical 1

1 oz, .062" (+/- 10%) thk, FR4, SMOBC  
Soldermask Color "Green"

### Layer Stack Up Detail

Layer Name
------------

Top Layer - 1oz finished wt. copper
-------------------------------------

GROUND PLANE - 1oz. copper plane
----------------------------------

MID LAYER - 1 oz. copper plane
--------------------------------

Bottom Layer - 1oz. finished wt. copper
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