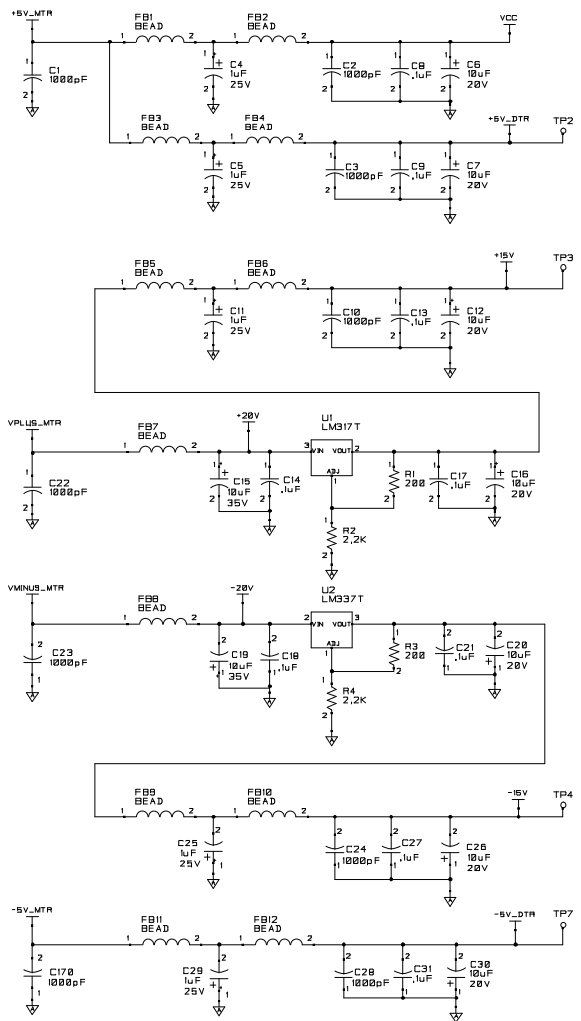
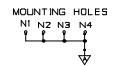
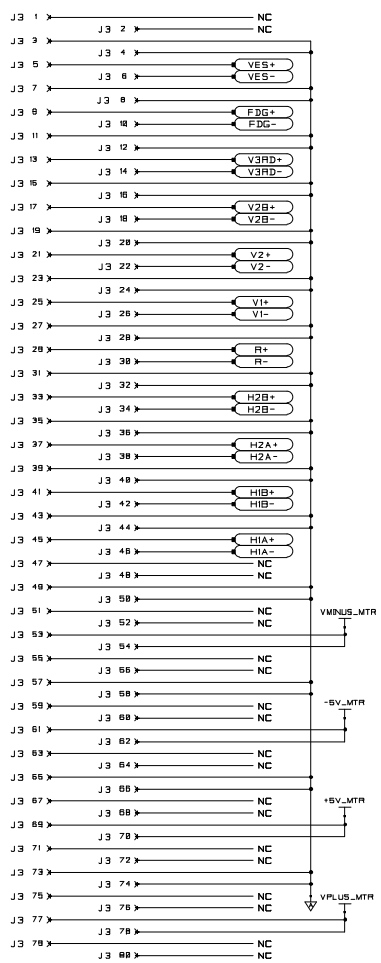
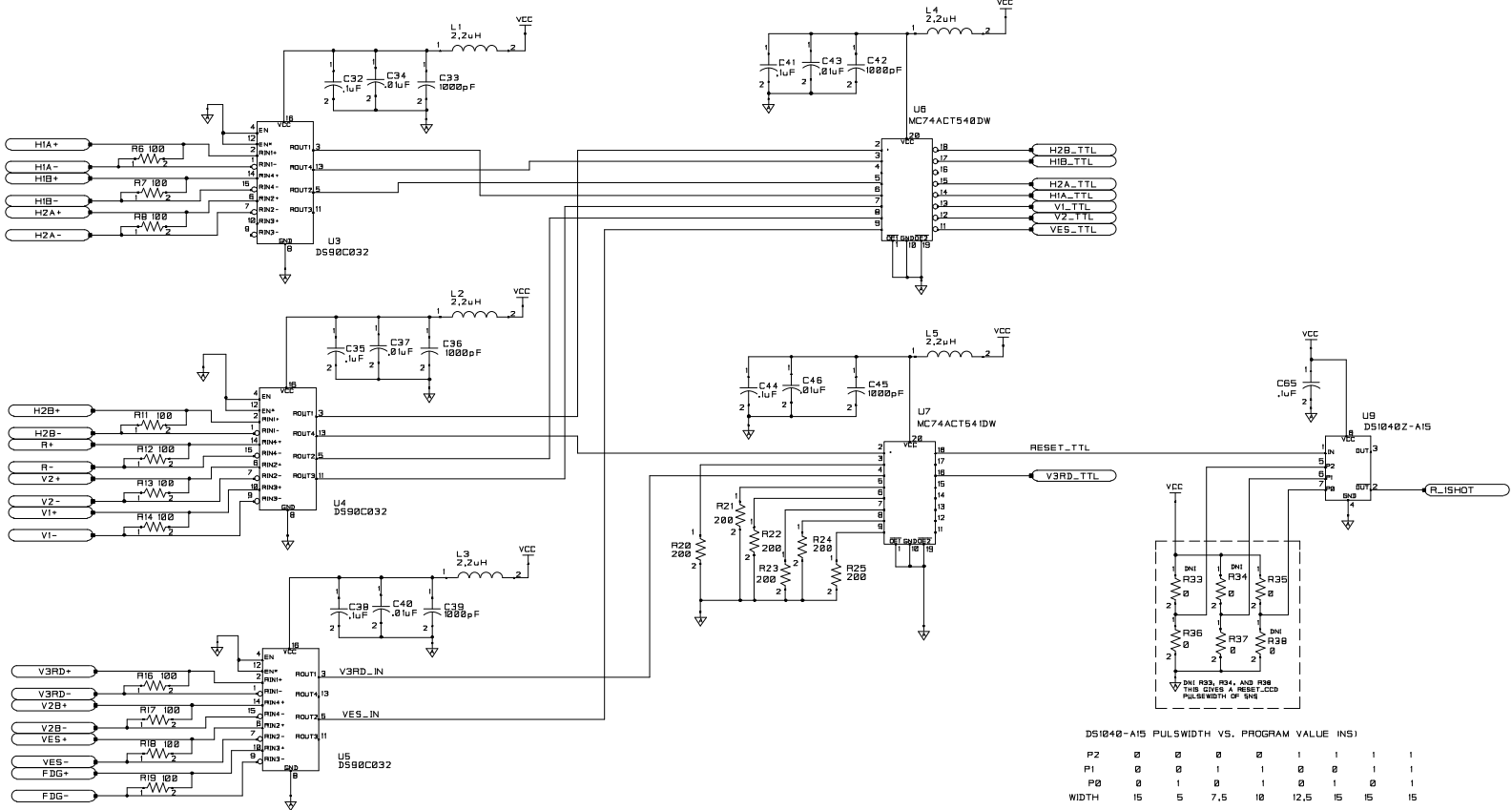


REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL



UNLESS OTHERWISE SPECIFIED		MATERIAL	DIMENSIONS APPLY AFTER FINISH	
DIN, ARE IN		FINISH	WHERE TOTAL TOLERANCE IS .015	
2 PL DEC TOL .1			INCHES OR LESS AND ON ALL	
3 PL DEC TOL .1			THREADS, IN ALL OTHER PLACES	
ANGULAR TOL .1			DIMENSIONS APPLY BEFORE FINISH	
BLUFF ROUGHNESS		DIR P.L.SCHAEFER 11/29/01 NAME: KAI-1003 IMAGER BOARD	CHK	SIZE
EDGES			ENGR	CODE
INSIDE RADI			ENGR	DWG NO.
NEXT ASSY			QA	1E9768
APPLICATION	USE ON	NEXT ASSY	FINAL ASSY	REV
				1A
QUANTITY	REQD	INSIDE RADI	REL DATE	SCALE
DIVISION FROM WHICH THIS		DIMENSIONS APPLY AFTER FINISH		REVISIONS
PLATE/ROUGHNESS/SQUARENESS		WHERE TOTAL TOLERANCE IS .015		
ECC. MUST BE WITHIN STATES		INCHES OR LESS AND ON ALL		
DIMENSIONAL TOLERANCES		THREADS, IN ALL OTHER PLACES		
		DIMENSIONS APPLY BEFORE FINISH		
		DIR P.L.SCHAEFER 11/29/01		
		NAME: KAI-1003		
		IMAGER BOARD		
		CHK	SIZE	DWG NO.
		ENGR	CODE	1E9768
		ENGR	DWG NO.	REV
		QA	1E9768	1A
		REL DATE	SCALE	PROGRAM CADSTAR
				SHEET 1 OF 6

REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL

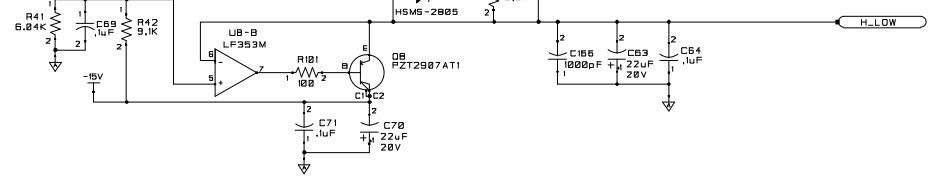
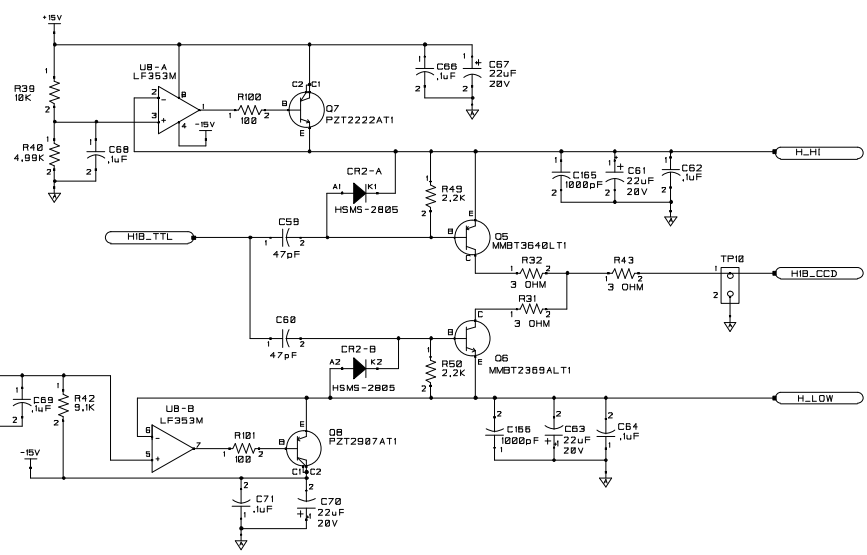
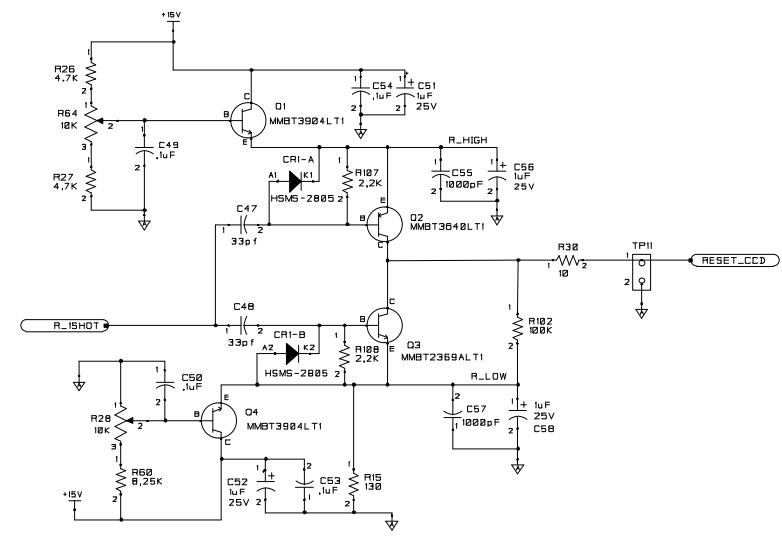
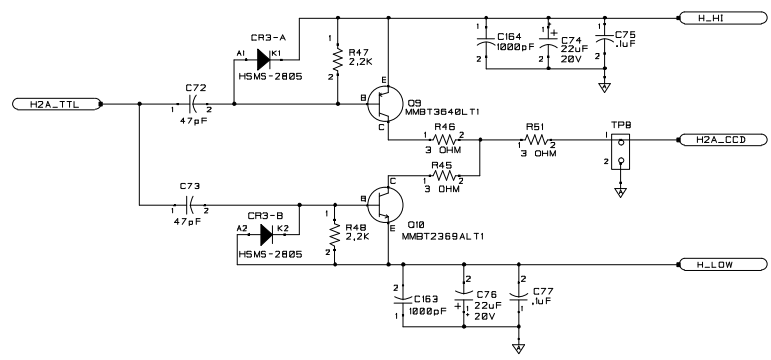


DS1040-A15 PULSWIDTH VS. PROGRAM VALUE (NS)

P2	0	0	0	0	1	1	1	1
P1	0	0	1	1	0	0	1	1
P0	0	1	0	1	0	1	0	1
WIDTH	15	5	7.5	10	12.5	15	15	15

DR	SIZE D	CODE 32153	DWG NO. 1E9768	REV 1A
REL DATE	SCALE	PROGRAM CADSTAR	SHEET 2 OF 6	

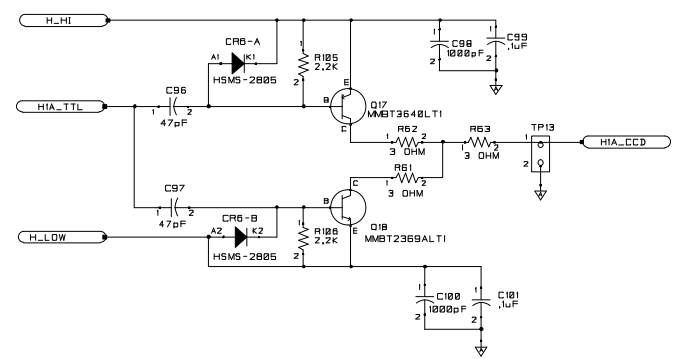
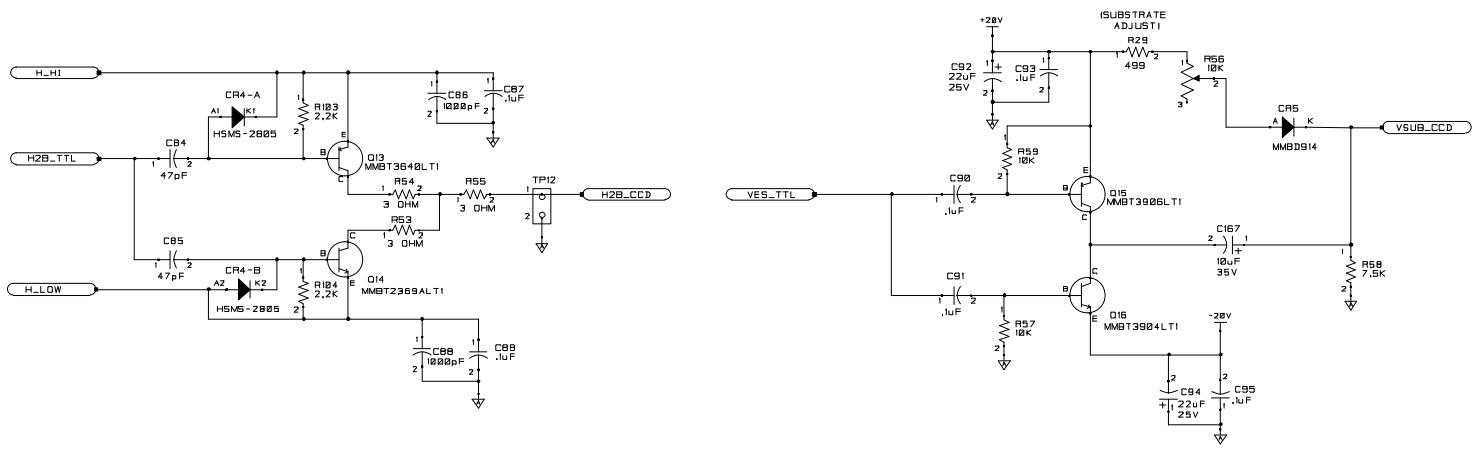
REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL



DR	SIZE	CODE	DRG. NO.	REV
REL. DATE	SCALE	PROGRAM	CADSTAR	SHEET 3 OF 6

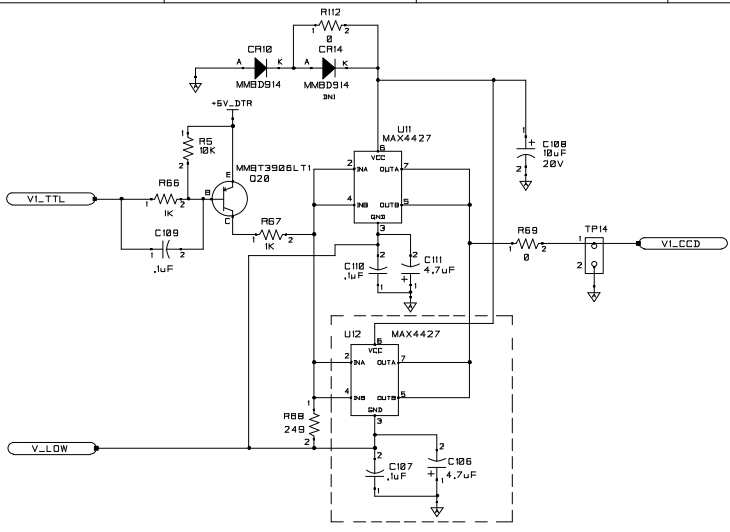
1E9768
IA

REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL

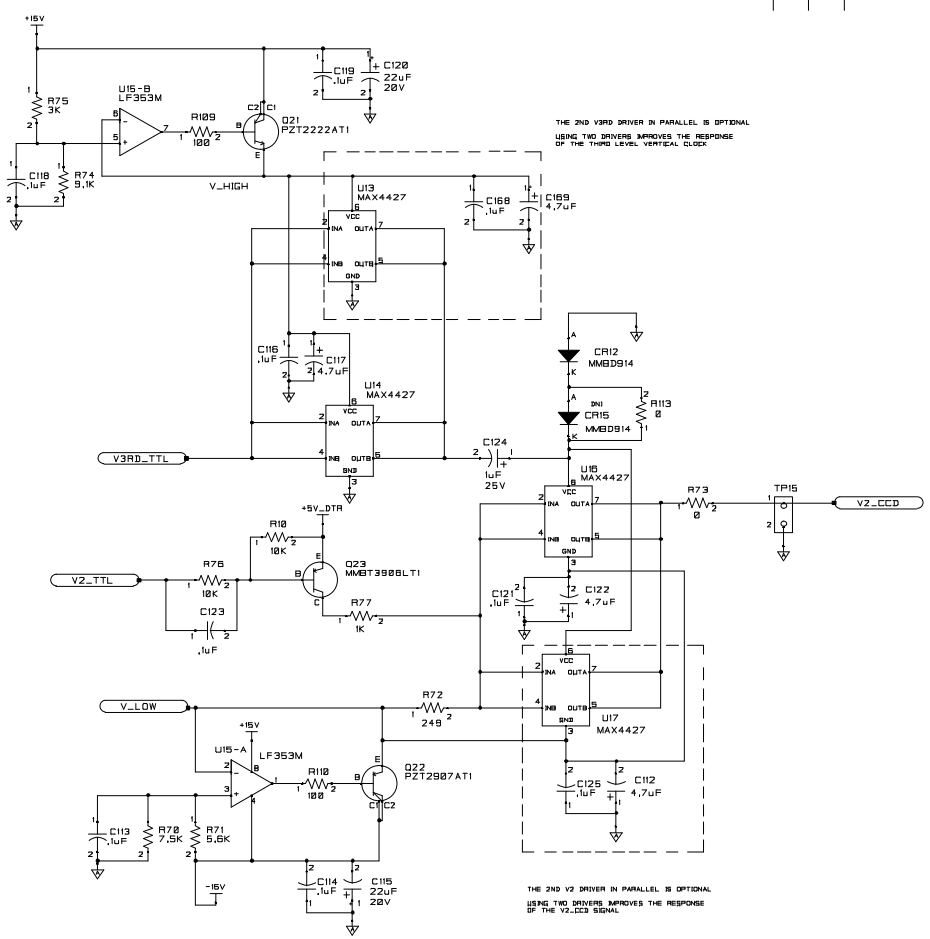


DR	SIZE	CODE	DWG. NO.	REV
REL. DATE	D	32153	1E9768	1A
	SCALE	PROGRAM	CADSTAR	SHEET 4 OF 6

REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL



THE 2ND V1 DRIVER IN PARALLEL IS OPTIONAL
USING TWO DRIVERS IMPROVES THE RESPONSE
OF THE VLCCD SIGNAL.

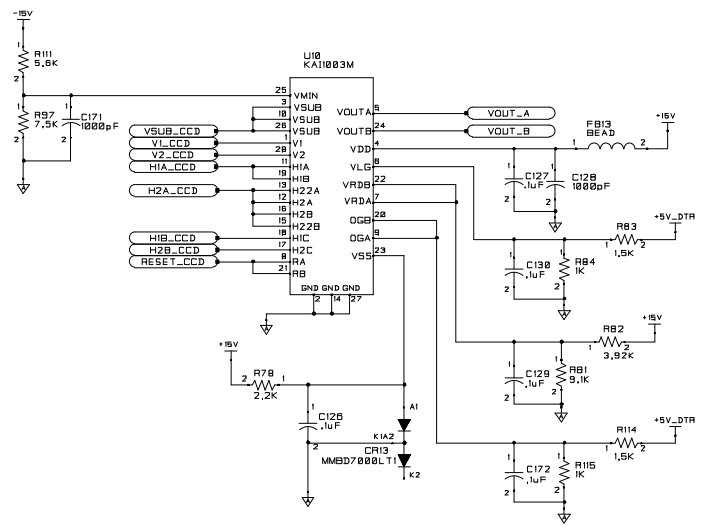
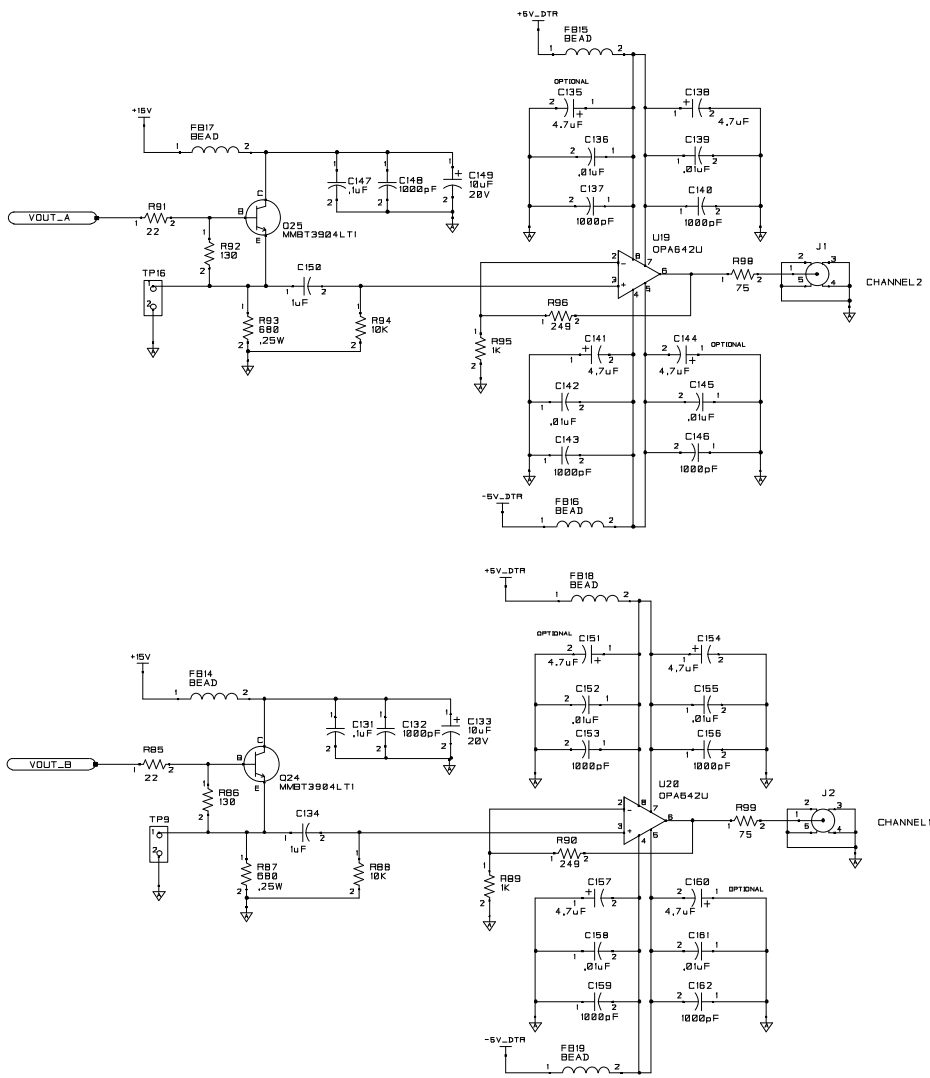


THE 2ND V3RD DRIVER IN PARALLEL IS OPTIONAL
USING TWO DRIVERS IMPROVES THE RESPONSE
OF THE THIRD LEVEL VERTICAL CLOCK.

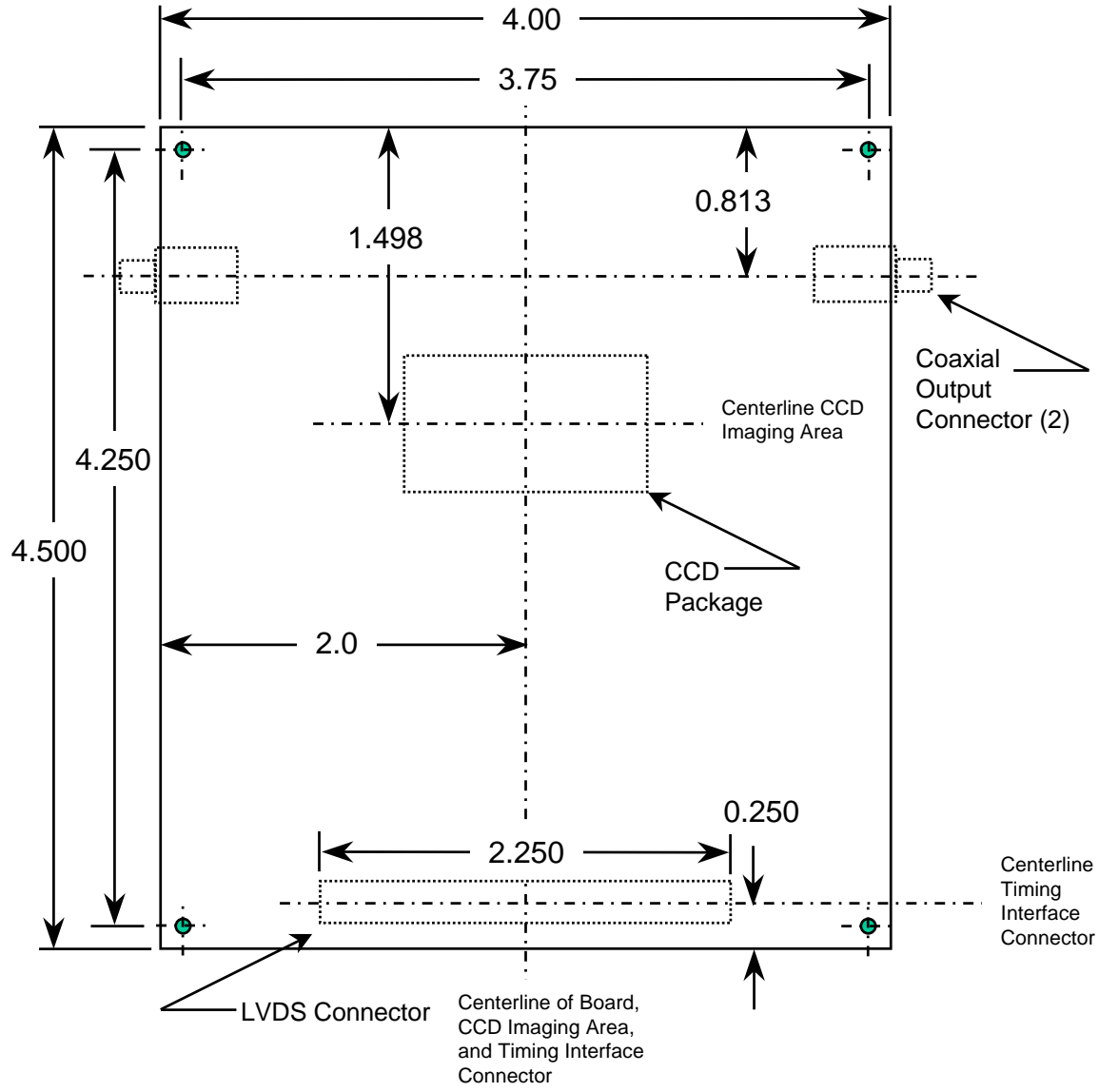
THE 2ND V2 DRIVER IN PARALLEL IS OPTIONAL
USING TWO DRIVERS IMPROVES THE RESPONSE
OF THE VLCCD SIGNAL.

DR	SIZE D	CODE 32153	DWG NO. 1E9768	REV 1A
REL DATE	SCALE	PROGRAM CADSTAR	SHEET 5 OF 6	

REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL



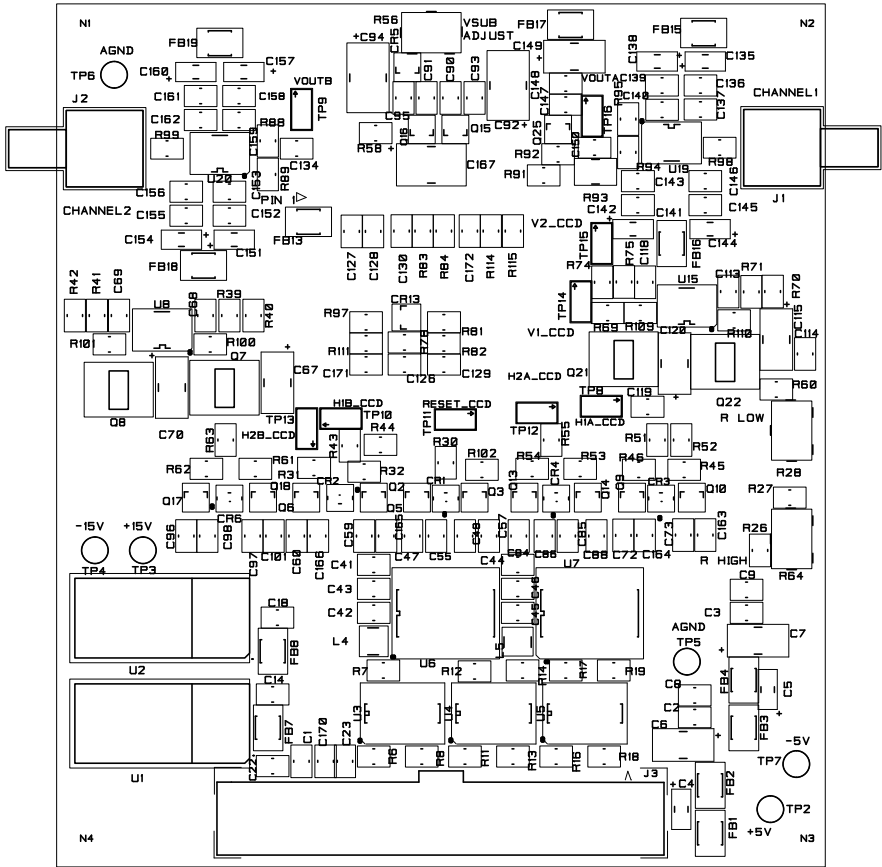
DR	SIZE D	CODE 32153	DWG NO. 1E9768	REV 1A
REL DATE	SCALE	PROGRAM CADSTAR	SHEET 6 OF 6	



1E9768 PRINTED CIRCUIT BOARD
 KAI-1003
 IMAGER BOARD MECHANICAL DRAWING
 7/02/2001

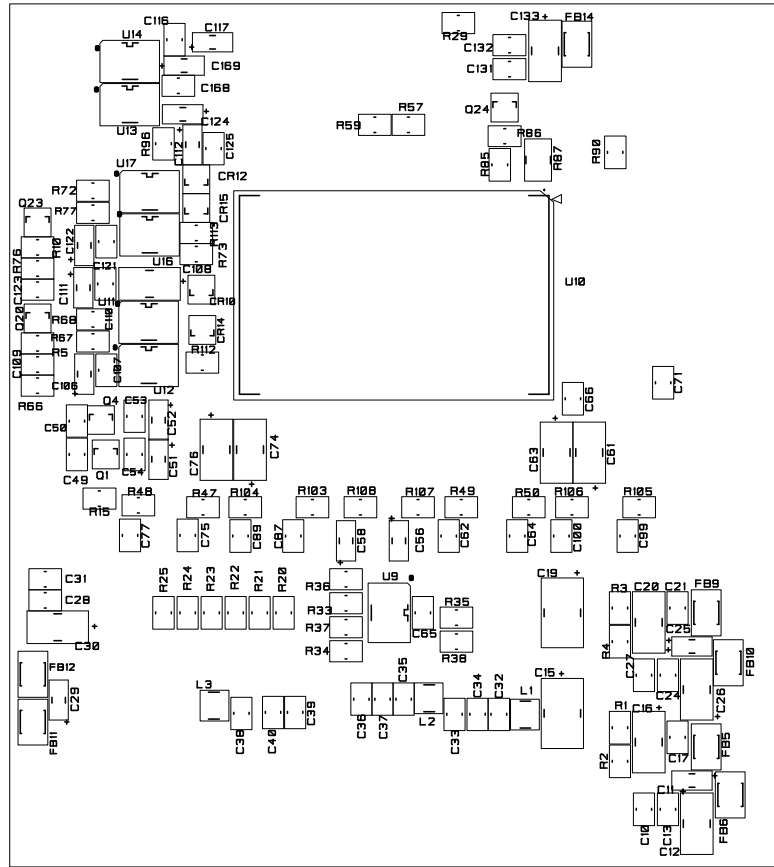
N5

N6



N7

PRIMARY SIDE SILKSCREEN



SECONDARY SIDE ASSY

BOARD NAME: KAI1003 IMAGER BOARD					
BOARD # 1E9768					
PARTS LIST REV1A					
DATE: 10/31/2001					
KEMD #	MANUFACTURER	PART NUMBER	DESCRIPTION	QTY	REF
1E1112	COILCRAFT	1008CS-222XKBC	INDUCTOR, SMT, 2.2UH	5	L1-5
233152	FAIR RITE	2743019447	FERRITE BEAD	19	FB1-19
586506	ON SEMICONDUCTOR	MMBD7000LT1	DIODE	1	CR13
902510	HEWLET PACK	HSMS-2805-T31	DUAL DIODE	5	CR1-4, CR6
616293	ON SEMICONDUCTOR	MMBD914LT1	DIODE	3	CR5, CR10, CR12
4B4317	ON SEMICONDUCTOR	MMBT2369ALT1	SW TRANSISTOR NPN	5	Q3, Q6, Q10, Q14, Q18
236307	ON SEMICONDUCTOR	MMBT3640LT1	TRANSISTOR PNP	5	Q2, Q5, Q9, Q13, Q17
616292	ON SEMICONDUCTOR	MMBT3904LT1	G.P. TRANSISTOR NPN	5	Q1, Q4, Q16, Q24-Q25
233838	ON SEMICONDUCTOR	MMBT3906LT1	G.P. TRANSISTOR PNP	3	Q15, Q20, Q23
960472	ON SEMICONDUCTOR	PZT2222AT1	SW TRANSISTOR NPN	2	Q7, Q21
960471	ON SEMICONDUCTOR	PZT2907AT1	SW TRANSISTOR PNP	2	Q8, Q22
254471	AVX	08055A102JATMA	CAP 1000PF,50VDC,5%	36	C1-3, C10, C22-24, C28, C33, C36, C39 C42, C45, C55, C57, C86, C88, C98, C100 C128, C132, C137, C140, C143, C146 C148, C153, C156, C159, C162-166, C170-171
7B9716	KEMET	C0805C104K5RAC	CAP .1UF,50VDC,10%	51	C8-9, C13-14, C17-18, C21, C27, C31-32 C35, C38, C41, C44, C49-50, C53-54, C62 C64-66, C68-69, C71, C75, C77, C87 C89-91, C93, C95, C99, C101, C104 C109-110, C113-114, C116, C118-119 C121, C123, C126-127, C129-131, C147 C34, C37, C40, C43, C46, C136, C139 C142, C145, C152, C158, C161
980646	KEMET	C0805C103K5RAC	CAP .01UF,50VDC,10%	13	C59-60, C72-73, C84-85, C96-97 C47-48 C4-5, C11, C25, C29, C51-52, C56, C58, C124 C138, C141, C154, C157 C6-7, C12, C16, C20, C26, C30, C108 C133, C149 C15, C19, C167 C61, C63, C67, C70, C74, C76, C115, C120 C92, C94 C111, C117, C122 C134, C150 R28, R56, R64 R35-37, R69, R73, R112-113 R5, R10, R39, R57, R59, R88, R94 R6-8, R11-14, R16-19, R100-101, R109-110 R66-67, R77, R84, R89, R95, R115 R102 R29 R15, R86, R92 R83, R114 R1, R3, R20-25 R2, R4, R47-50, R78, R103-108 R85, R91 R68, R72, R90, R96 R31-R32, R43, R45-46, R51, R53-55, R61-63 R75 R41 R87, R93 R98-99 R8 R42, R74, R81 R26-27 R71, R111 R76 R40 R58, R70, R76, R97 R60 R102
755551	AVX	08051A470JATMA	CAP 47PF,50VDC,5%	8	C59-60, C72-73, C84-85, C96-97
4B3897	AVX	0805SA330JATMA	CAP 33PF,50VDC,5%	2	C47-48
785076	HITACHI	TMC-MA1E105MTR	CAP 1UF,25VDC,20%	10	C4-5, C11, C25, C29, C51-52, C56, C58, C124
335666	KEMET	T491A475M010AS	CAP 4.7UF,10VDC,20%	4	C138, C141, C154, C157
258541	HITACHI	TMCMC1D106MTR	CAP 10UF,20VDC,20%	10	C6-7, C12, C16, C20, C26, C30, C108 C133, C149
770251	KEMET	T491D106K035AS	CAP 10UF,35VDC,10%	3	C15, C19, C167
8B0987	AVX	TAJ226M020R	CAP 22UF,20VDC,20%	8	C61, C63, C67, C70, C74, C76, C115, C120
7B9280	AVX	TPSD226K025R0200	CAP 22UF,25VDC,10%	2	C92, C94
4B4495	KEMET	T491B475M020AS	CAP 4.7UF,20VDC,20%	3	C111, C117, C122
7B9655	AVX	1206YC105MATRA	CAP 1UF,16V,20%	2	C134, C150
770026	BOURNS	3266W-1-103	10K POT, .5W	3	R28, R56, R64
257516	DALE ELECTRONICS	CRCW0805-000	RESISTOR 0 OHM	7	R35-37, R69, R73, R112-113
233981	DALE ELECTRONICS	CRCW08051002FT	RESISTOR 10K, 1/10W,1%	7	R5, R10, R39, R57, R59, R88, R94
980690	DALE ELECTRONICS	CRCW0805101JT	RESISTOR 100, 1/10W,5%	15	R6-8, R11-14, R16-19, R100-101, R109-110
250796	DALE ELECTRONICS	CRCW0805102JT	RESISTOR 1K, 1/10W,5%	7	R66-67, R77, R84, R89, R95, R115
254478	DALE ELECTRONICS	CRCW0805104JT	RESISTOR 100K, 1/10W,5%	1	R102
902559	DALE ELECTRONICS	CRCW0805-4990-FT	RESISTOR 499 OHM 1%	1	R29
941226	DALE ELECTRONICS	CRCW08051300FT	RESISTOR 130, 1/10W,1%	3	R15, R86, R92
917658	DALE ELECTRONICS	CRCW0805-1501-FT	RESISTOR 1.5K OHM 1%	2	R83, R114
783957	DALE ELECTRONICS	CRCW08052000-FT	RESISTOR 200, 1/10W,1%	8	R1, R3, R20-25
257083	DALE ELECTRONICS	CRCW08052201-FT	RESISTOR 2.2K, 1/10W,1%	13	R2, R4, R47-50, R78, R103-108
255345	DALE ELECTRONICS	CRCW0805220FT	RESISTOR 22, 1/10W,5%	2	R85, R91
902504	DALE ELECTRONICS	CRCW08052490FT	RESISTOR 249, 1/10W,1%	4	R68, R72, R90, R96
903960	DALE ELECTRONICS	CRCW0805302JT	RESISTOR 3 OHM, 1/10W,5%	12	R31-R32, R43, R45-46, R51, R53-55, R61-63
232539	DALE ELECTRONICS	CRCW0805-302-JT	RESISTOR 3K, 1/10W, 5%	1	R75
255503	DALE ELECTRONICS	CRCW08056041FT	RESISTOR 6.04K, 1/10W,1%	1	R41
739757	DALE ELECTRONICS	CRCW1210681JT	RESISTOR 680, 1/4W,5%	2	R87, R93
954554	DALE ELECTRONICS	CRCW080575R0-FT	RESISTOR 75, 1/10W,1%	2	R98-99
901768	DALE ELECTRONICS	CRCW0805-3921-FT	RESISTOR 3.92 KOHM 1%	1	R8
253950	DALE ELECTRONICS	CRCW0805912JT	RESISTOR 9.1K, 1/10W,5%	3	R42, R74, R81
253549	DALE ELECTRONICS	CRCW0805-472-JT	RESISTOR 4.7K, 1/10W, 5%	2	R26-27
258531	DALE ELECTRONICS	CRCW0805-562-JT	RESISTOR 5.6K, 1/10W, 5%	2	R71, R111
255504	DALE ELECTRONICS	CRCW08057500FT	RESISTOR 7.5K, 1/10W,1%	1	R76
255502	DALE ELECTRONICS	CRCW0805-4991-FT	RESISTOR 4.99K, 1/10W, 1%	1	R40
960211	DALE ELECTRONICS	CRCW0805-752-JT	RESISTOR 7.5K, 1/10W, 5%	4	R58, R70, R76, R97
2B1397	DALE ELECTRONICS	CRCW0805-8251-FT	RESISTOR 8.25K, 1/10W 1%	1	R60
254478	DALE ELECTRONICS	CRCW0805104JT	RESISTOR 100K, 1/10W,5%	1	R102

232841	DALE ELECTRONICS	CRCW0805100JT	RESISTOR 10, 1/10W, 5%	1	R30	
691935	NATIONAL SEMI	DS90C032TM	LVDS LINE RECEIVER	3	U3-5	
734408	NATIONAL SEMI	LF353M	DUAL JFET OPAMP	2	U8, U15	
498310	NATIONAL SEMI	LM317T	VOLTAGE REGULATOR	1	U1	
241054	NATIONAL SEMI	LM337T	VOLTAGE REGULATOR	1	U2	
4B4249	MAXIM	MAX4427CSA	DUAL MOSFET DRIVERS	3	U11, U14, U16	
954091	ON SEMICONDUCTOR	MC74ACT540DW	OCTAL BUFFER INVERTING	1	U6	
903888	ON SEMICONDUCTOR	MC74ACT541DW	OCTAL BUFFER INVERTING	1	U7	
5C2040	BURR BROWN	OPA642U	OPAMP	2	U19-20	
	MILL MAX	7149311631018	CCD SINGLE PIN SOCKETS	28	U10 HOLES	
999979	AMP	104549-9	CONN 80 PIN	1	J3	
911244	AMP	221014-1	SMB, RIGHT ANGLE	2	J1-2	
901613	COMPONENT CORP.	TP-104-01-00	TEST POINT, BLACK	2	TP5-6	
901614	COMPONENT CORP.	TP-104-01-02	TEST POINT, RED	4	TP2-4, TP7	
DO NOT INSTALL:						
R33, R34, R38, R52, R44						
CR14, CR15						
TP8-16						
C135, C144, C151, C160, C106-107, C112, C125, C168-169						
U12, U13, U17						
DO NOT INSTALL (using KSC-1000 Based Timing Boards):						
U9						
5C2045	DALLAS SEMI	DS1040Z-A15	PROG 1SHOT	1	U9	
	[Install shorting resistor (0-ohm) between pads for pins 1 and 2 of U9]					