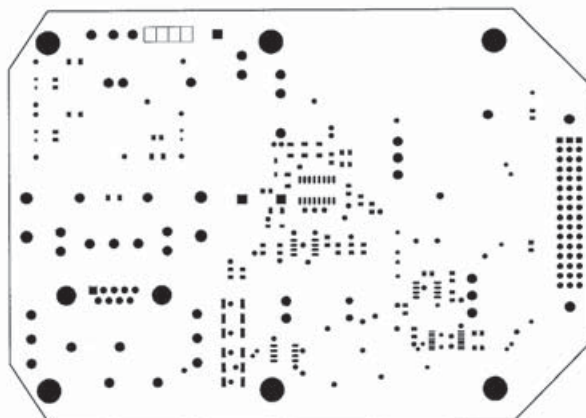


Stacking Chart _____

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[illegible]

 TIDELAND SIGNAL CORP. 4310 CONCORDS ROW HOUSTON, TEXAS 77092		TITLE POWERWORK POWER SUPPLY SB2 SYS6	
THIS DRAWING FORMER'S PROPERTY AND CONFIDENTIAL INFORMATION AND ITS LOANED TO TIDELAND SIGNAL CORPORATION. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, OR INFORMATIONAL, OR BY ANY INFORMATION SYSTEM, WITHOUT PERMISSION.			
DESIGN	DATE	DESIGN BY	DWG. SIZE
Jennell	08/29/02	ANALYSIS & DESIGN GROUP	B
CHECKED	DATE	DWG. NO.	
HF	08 APR 03	HOUSTON, TEXAS 77092 (281 444 1827)	
PROJ. ENGR.	DATE	BY	DO NOT SCALE
PHD, J. G. J. G.		EX	DRAWING
SHEET 7		OF 12	

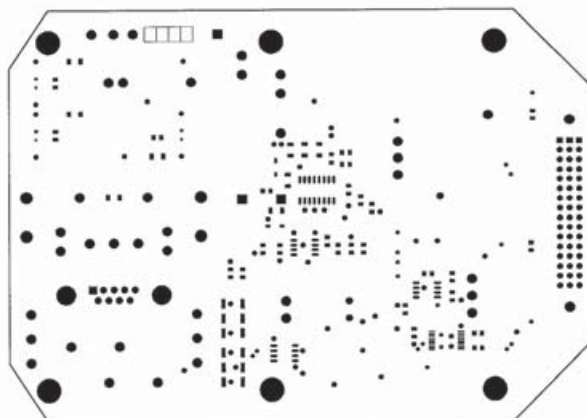


Stocking Chart _____

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A	X3 DEL.	AS A				JM	RE	AVG	68
REV EDN	DESCRIPTION					BY	CHK	DATE	APPR
ATTENTION - MANUAL REVISIONS ARE							NOT PERMITTED		

 TIDE LAND SIGNAL CORP. 4310 DIRECTORS WSW HOUSTON, TEXAS 77092				TITLE ARTWORK	
THIS DRAWING ORIGINALLY REPRESENTED THE CONCEPTUAL INFORMATION AND IS LOANED TO THE CLIENT FOR THEIR USE. COOPERATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED OR IN ANY MANNER BE USED FOR ANY PURPOSE OTHER THAN INTENDED. REVISED, OR IMPROVED AND THAT IT SHALL BE RETURNED ON DEMAND.				POWER SUPPLY SB2 SYS6	
OWNER	DATE	DESIGN BY	DWG. SIZE	PRINT NUMBER	REV.
Formalis	09/21/82	ANALYSIS & DESIGN GROUP			
CHECKED	DATE	BY	B	349.1337-AWK	A
W.E. DARR	09/21/82	P.O. BOX 24450 HOUSTON, TEXAS 77224 (281) 446 4923			
PRINT PLANT	DWG. SIZE	SCALE	DO NOT SCALE DRAWING	SCALE	
PRR, St. Louis	11L				
				SHEET 8	OF 12



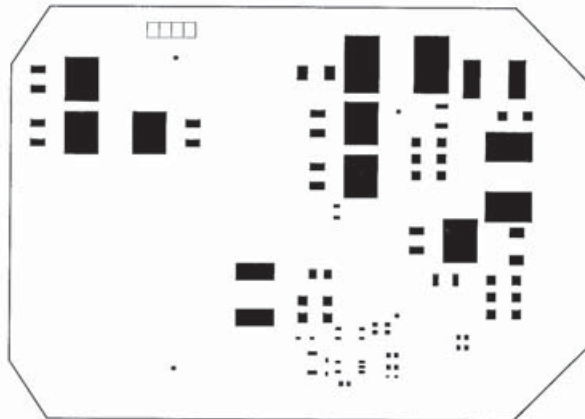
VERIFY PLDT
DATE APR 08 2005

Stocking Chart _____

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[illegible]

 TIDELAND SIGNAL CORP. 4310 DIRECTORS RD. HOUSTON, TEXAS 77032				TITLE ARTWORK POWER SUPPLY SB2 SYS6	
THIS DRAWING UNDER PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED TO RECIPIENT UNDER AGREEMENT TO BE KEPT IN STRICTLY CONFIDENTIAL. IT IS NOT TO BE REPRODUCED, IN WHOLE OR IN PART, OR USED FOR ANY PURPOSE, OTHER THAN THAT SPECIFIED. RETURN, OR DESTROY, AND REPORT THAT IT WAS, BE RETURNED ON DEMAND.					
DESIGN J. WALLIS 09/21/82	DATE 09/21/82	DESIGN BY ANALYSIS & DESIGN GROUP 3-5 BOX 24120 HOUSTON, TEXAS 77234 (281) 486-4323	AWD. SIZE B	PART NUMBER 349.1337-AWK	REV A
CHANGED BY HE 02APR86					
PROJECT NAME PTH 6646	DATE 04/01/86	DRAWN DO NOT SCALE DRAWING	SCALE 1" = 1"	SHEET 8	OF 12

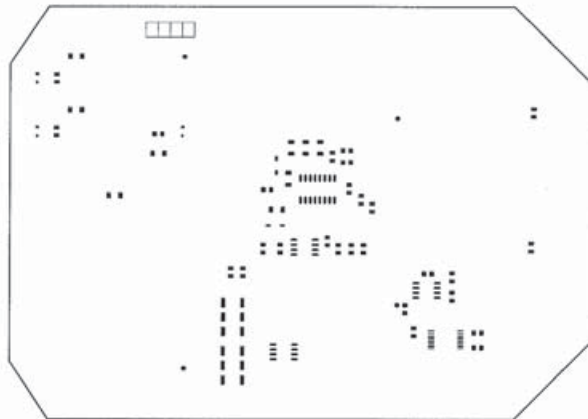
Stacking Chart _____

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[illegible]

 TIDELAND SIGNAL CORP. #312 DIRECTORS ROW HOUSTON, TEXAS 77052		TITLE ARTWORK POWER SUPPLY S82 SYS6			
THIS DRAWING CONVEYS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED TO YOU BY TIDELAND SIGNAL CORPORATION. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, OR BY INFORMATION STORAGE AND RETRIEVAL SYSTEMS, WITHOUT THE WRITTEN PERMISSION OF TIDELAND SIGNAL CORPORATION. IT IS TO BE RETURNED TO THE ORIGINATOR.					
DRAWN	DATE	DESIGN BY	DWG. SIZE	PART NUMBER	REV
J. M. HILL	08/25/82	ANALYSIS & DESIGN GROUP	B	349.1337-AWK	A
CHECKED	DATE	P.O. BOX 24430			
HF	08/25/82	HOUSTON, TEXAS 77024			
PROJ. ENGR.	DATE	EX	DO NOT SCALE		
J. M. Hill	08/25/82		DRAWING		
			SCALE	SHEET 9	OF 12

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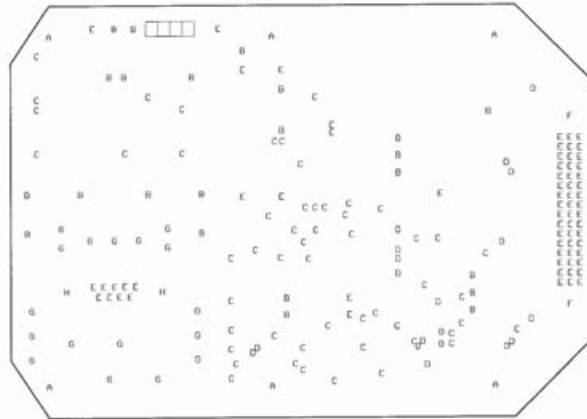
DATE APR 8 8 2005

Layer Name Bottom Paste Mask

Stacking Chart

REV	EDN	DESCRIPTION	BY	CHK	DATE	APPROV
A		X3 REL. AS A	JM	HF	4/5/05	PM

		TIDELAND SIGNAL CORP.		TITLE	
4300 DIRECTORS RD		HOUSTON, TEXAS 77062		ARTWORK	
THIS DRAWING CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN WHOLE OR IN PART OR USED FOR ANY PURPOSES OTHER THAN PERFORMANCE, REPAIR, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.				POWER SUPPLY	
				SB2 SYS6	
DESIGN	DATE	DESIGN BY	DWG SIZE	PART NUMBER	REV
J. Vaneili	08-21-02	ANALYSIS & DESIGN GROUP	B	349.1337-AWK	A
CHECKED	DATE	R.C. SCB 34433			
HF	08 APR 05	HOUSTON, TEXAS 77234			
		(281) 485-1822			
PROJ ENGR	DATE	UL	DO NOT SCALE	SCALE	SHEET 10 OF 12
PM	4/5/05		DRAWING		



THIRTY FIVE
DATE APR 08 2005

Layer Name _____ Drill Drawing for Through Hole
Stacking Chart _____

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[illegible]

 TIDELAND SIGNAL CORP. 4310 DISCOVERY ROW HOUSTON, TEXAS 77092		TITLE ARTWORK POWER SUPPLY SB2 SYS6	
THIS DRAWING ENCLOSES PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED TO YOU BY TIDELAND SIGNAL CORPORATION UNDER THE UNDERSTANDING THAT IT IS NOT TO BE REPRODUCED OR IN ANY MANNER BE USED FOR ANY PURPOSE OTHER THAN THAT INTENDED. DRAWING, REVISION, CANCELLATION AND CHART IT SHALL BE RETURNED ON DEMAND.			
DRAWN	DATE	DESIGN BY	DRAW SIZE
N/avail	09/21/02	ANALYSIS & DESIGN GROUP	
		J.L. BOSS (2440)	
		HOUSTON, TEXAS 77078	
		TEL. 281.4422	
CHKD	DATE	BY	SCALE
06/04/05			
06/04/05			
SCALE	DATE	BY	SCALE
1" = 2'-0"	04/20/05		
		DO NOT SCALE DRAWING	SCALE
		SHEET	11 OF 12

USING ARTWORK 3491337-AWK REMOVAL
LAYERS WITH SOLDERMASK AND SUBSTRATE
OR LAYERS.

TOP CIRCUIT AND LAYER # 4 (BOTTOM CIRCUIT)
2. COPPER ON FR-4 SUBSTRATE OF THICKNESS
SEALER.

(INTERNAL GROUND) AND LAYER # 3 (INTERNAL CIRCUIT)
2. COPPER ON FR-4 MATERIAL, SEED TO MAKE
BOARD CURED INHERENT.

2. COPPER ON LAYER # 2 NOT TO EXCEED 30 MILS.

2. AS FOLLOWS:

1 oz copper (1.4 mils plus plating) → Top Circuit Layer
FR-4 plus prepreg (12 mils minimum) → Internal Ground Plane
2 oz copper (2.8 mils) → Internal Circuit Layer
FR-4 plus prepreg
2 oz copper (2.8 mils) → Internal Circuit Layer
FR-4 plus prepreg (12 mils minimum) → Bottom Circuit Layer
1 oz copper (1.4 mils plus plating)

5.5 TOLERANCE TO BE 0.010 INCHES.

6. FACTOR WITHIN TO BE 0.008 INCH.

7. IF LIQUID SOLDER MASK OVER BARE COPPER (EMONG)
BOTTOM LAYERS.

8. TO BE HOT AIR LEVELLED.

9. TO BE PLATED THROUGH WITH MINIMUM 0.001 INCHES COPPER.

10. SIZES APPLY AFTER PLATING, WITH TOLERANCE +/- 0.002 INCHES.

11. SIZES APPLY TO CLEARANCE HOLE FOR USE, WHICH MAY BE MILLED.

12. THROUGH HOLES MARKED WITH ARROW (→), TWO PLACES.

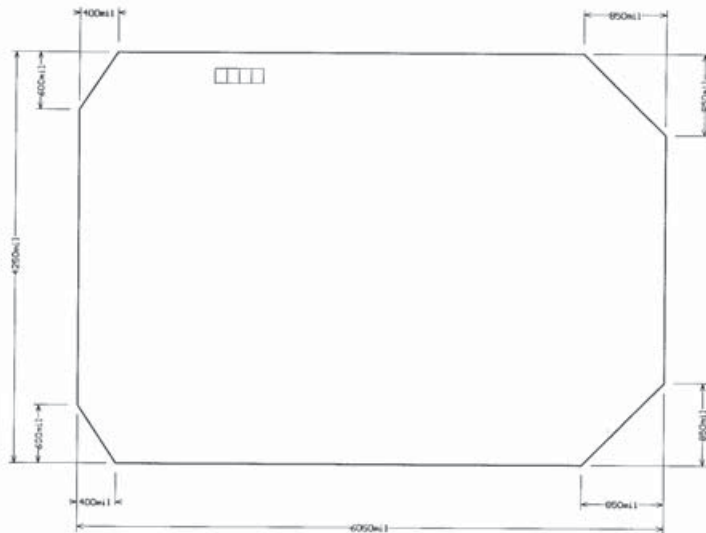
13. Holes.

14. ON SLOTS WITH NON-CONDUCTIVE WHITE INK.

15. BE PERMANENTLY MARKED ON SOLDER SIDE WITH
16. EITHER SPECIFIED ON THIS DRAWING AND ON THE PURCHASE
17. ORDER IN AREA INDICATED BY (---).

18. LISTED UL SUPPLIER MARK AS RECOMMENDED FOR UL LISTING.

19. DATE CODE TO SHOW YEAR AND WEEK OF MANUFACTURE.



VERIFICATION
DATE: APR 08 2005



Layer Name Mechanical Layer 1

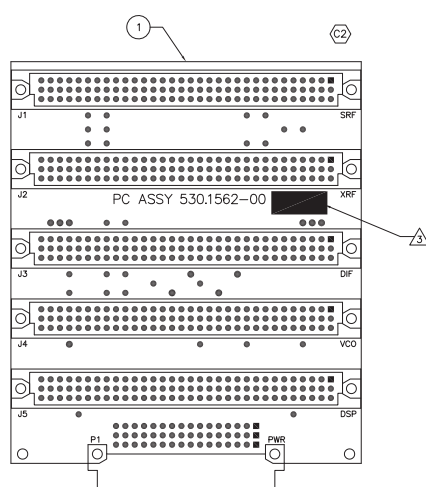
Stacking Chart

REV	DATE	DESCRIPTION	BY	CHK	DATE	APPROV
A	01/04/05	1st DEL. AS A	HF			
B	01/04/05	2nd DEL. AS A	HF			
C	01/04/05	3rd DEL. AS A	HF			
D	01/04/05	4th DEL. AS A	HF			
E	01/04/05	5th DEL. AS A	HF			
F	01/04/05	6th DEL. AS A	HF			
G	01/04/05	7th DEL. AS A	HF			
H	01/04/05	8th DEL. AS A	HF			
I	01/04/05	9th DEL. AS A	HF			
J	01/04/05	10th DEL. AS A	HF			
K	01/04/05	11th DEL. AS A	HF			
L	01/04/05	12th DEL. AS A	HF			
M	01/04/05	13th DEL. AS A	HF			
N	01/04/05	14th DEL. AS A	HF			
O	01/04/05	15th DEL. AS A	HF			
P	01/04/05	16th DEL. AS A	HF			
Q	01/04/05	17th DEL. AS A	HF			
R	01/04/05	18th DEL. AS A	HF			
S	01/04/05	19th DEL. AS A	HF			
T	01/04/05	20th DEL. AS A	HF			

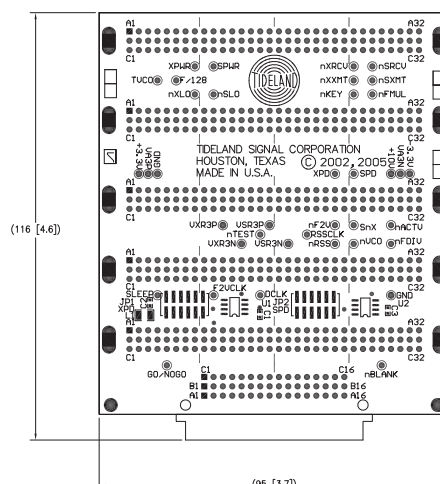
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED

		TIDELAND SIGNAL CORP.		TITLE	
4310 DIRECTORS ROW		HOUSTON, TEXAS 77032		ARTWORK	
THIS DRAWING CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSES OTHER THAN THE PURCHASE, REPAIR, OR INSTALLATION AND THAT IT SHALL BE RETURNED TO THE COMPANY.				POWER SUPPLY SB2 SYS6	
DESIGN	DATE	DESIGN BY	DATE	DATE	REV
JVannelli	08/25/02	ANALYSIS & DESIGN GROUP			
CHECKED	DATE	P.L.C. 3491337			
HF	01/04/05	HOUSTON, TEXAS 77032			
PROF. ENGR	DATE	UL	EX	DO NOT SCALE	SCALE
HF	01/04/05			DRAWING	
				SHEET	12 OF 12

1. FOR SCHEMATIC SEE 530.1562-SCH.
2. ASSEMBLE IN STATIC FREE AREA.
3. MARK ASSEMBLY REVISION LETTER IN AREA SHOWN.
4. MAX. COMPONENT HEIGHT TOP-12 [.5], BOTTOM-5 [.2].
5. MAX. LEAD PROTRUSION: 2.3 [.09].
6. REMOVED.
7. BOARD ASSY SHALL MEET REQUIREMENTS OF IPC-A-610 CLASS 3.



TOP



BOTTOM

APPROVED FOR:
_____ **ONLY**
_____ **INT.** _____ **DATE**

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ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED.

TOLERANCE SPECIFIED		MATERIAL	
1. THROAT	THROAT TOLERANCE MILLIMETERS	2. FINISH	
3. RADIUS	RADIUS TOLERANCE MILLIMETERS	4. DRILL	DATE DRUGS W/MS
5. HOLE	HOLE TOLERANCE MILLIMETERS	6. DATE	DATE
7. HOLE	HOLE TOLERANCE MILLIMETERS	8. DATE	DATE
9. HOLE	HOLE TOLERANCE MILLIMETERS	10. DATE	DATE
11. HOLE	HOLE TOLERANCE MILLIMETERS	12. DATE	DATE
13. HOLE	HOLE TOLERANCE MILLIMETERS	14. DATE	DATE
15. HOLE	HOLE TOLERANCE MILLIMETERS	16. DATE	DATE
17. HOLE	HOLE TOLERANCE MILLIMETERS	18. DATE	DATE
19. HOLE	HOLE TOLERANCE MILLIMETERS	20. DATE	DATE
21. HOLE	HOLE TOLERANCE MILLIMETERS	22. DATE	DATE
23. HOLE	HOLE TOLERANCE MILLIMETERS	24. DATE	DATE
25. HOLE	HOLE TOLERANCE MILLIMETERS	26. DATE	DATE
27. HOLE	HOLE TOLERANCE MILLIMETERS	28. DATE	DATE
29. HOLE	HOLE TOLERANCE MILLIMETERS	30. DATE	DATE
31. HOLE	HOLE TOLERANCE MILLIMETERS	32. DATE	DATE
33. HOLE	HOLE TOLERANCE MILLIMETERS	34. DATE	DATE
35. HOLE	HOLE TOLERANCE MILLIMETERS	36. DATE	DATE
37. HOLE	HOLE TOLERANCE MILLIMETERS	38. DATE	DATE
39. HOLE	HOLE TOLERANCE MILLIMETERS	40. DATE	DATE
41. HOLE	HOLE TOLERANCE MILLIMETERS	42. DATE	DATE
43. HOLE	HOLE TOLERANCE MILLIMETERS	44. DATE	DATE
45. HOLE	HOLE TOLERANCE MILLIMETERS	46. DATE	DATE
47. HOLE	HOLE TOLERANCE MILLIMETERS	48. DATE	DATE
49. HOLE	HOLE TOLERANCE MILLIMETERS	50. DATE	DATE
51. HOLE	HOLE TOLERANCE MILLIMETERS	52. DATE	DATE
53. HOLE	HOLE TOLERANCE MILLIMETERS	54. DATE	DATE
55. HOLE	HOLE TOLERANCE MILLIMETERS	56. DATE	DATE
57. HOLE	HOLE TOLERANCE MILLIMETERS	58. DATE	DATE
59. HOLE	HOLE TOLERANCE MILLIMETERS	60. DATE	DATE
61. HOLE	HOLE TOLERANCE MILLIMETERS	62. DATE	DATE
63. HOLE	HOLE TOLERANCE MILLIMETERS	64. DATE	DATE
65. HOLE	HOLE TOLERANCE MILLIMETERS	66. DATE	DATE
67. HOLE	HOLE TOLERANCE MILLIMETERS	68. DATE	DATE
69. HOLE	HOLE TOLERANCE MILLIMETERS	70. DATE	DATE
71. HOLE	HOLE TOLERANCE MILLIMETERS	72. DATE	DATE
73. HOLE	HOLE TOLERANCE MILLIMETERS	74. DATE	DATE
75. HOLE	HOLE TOLERANCE MILLIMETERS	76. DATE	DATE
77. HOLE	HOLE TOLERANCE MILLIMETERS	78. DATE	DATE
79. HOLE	HOLE TOLERANCE MILLIMETERS	80. DATE	DATE
81. HOLE	HOLE TOLERANCE MILLIMETERS	82. DATE	DATE
83. HOLE	HOLE TOLERANCE MILLIMETERS	84. DATE	DATE
85. HOLE	HOLE TOLERANCE MILLIMETERS	86. DATE	DATE
87. HOLE	HOLE TOLERANCE MILLIMETERS	88. DATE	DATE
89. HOLE	HOLE TOLERANCE MILLIMETERS	90. DATE	DATE
91. HOLE	HOLE TOLERANCE MILLIMETERS	92. DATE	DATE
93. HOLE	HOLE TOLERANCE MILLIMETERS	94. DATE	DATE
95. HOLE	HOLE TOLERANCE MILLIMETERS	96. DATE	DATE
97. HOLE	HOLE TOLERANCE MILLIMETERS	98. DATE	DATE
99. HOLE	HOLE TOLERANCE MILLIMETERS	100. DATE	DATE

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 2007-2007-2007

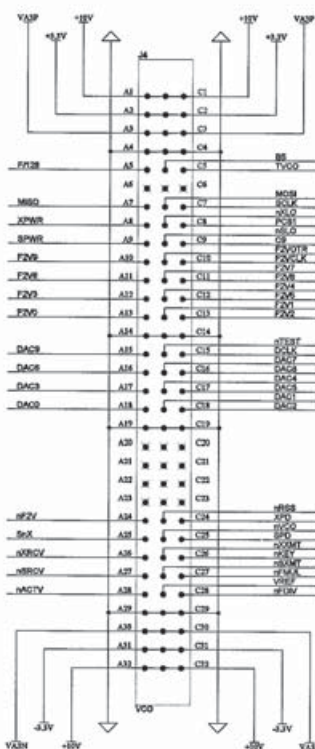
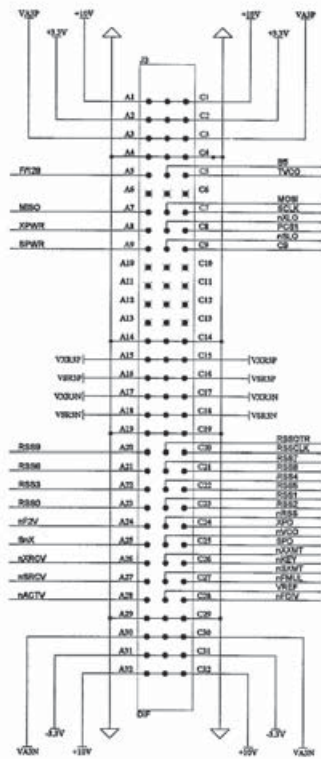
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 XXX INT. XXXXXX DATE

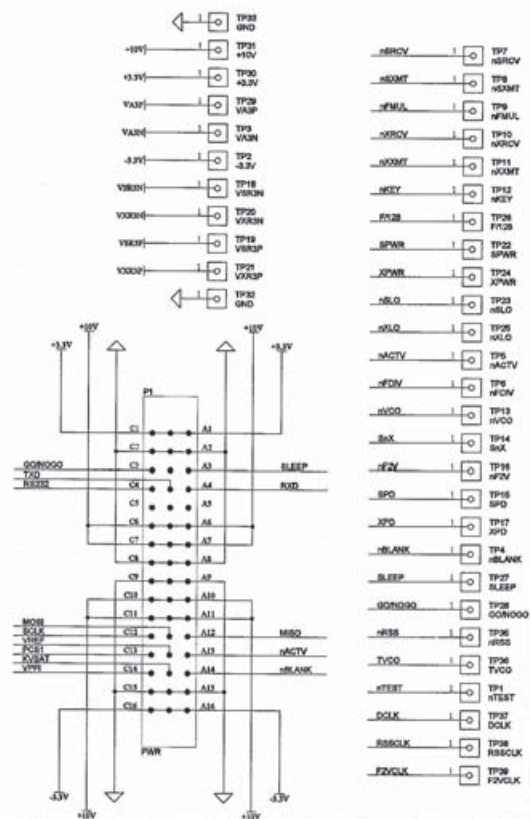
	Seabacon 2 System 6 – BACKPLANE 6001562-6-CH 5-May-2006 G:\Development\Hofmester\CCO6 - Seabacon\main\TOP	Tolstolod Signal Corp 4300 Directors Row Houston, Texas 77062 713-461-4501 REV: 8 (3-4-17) 1 OF 4

ORIGINAL



	BACKPLANE - DIF & VCO S001560-00H 6 May 2006 © 2006 Texas Instruments Incorporated. All rights reserved. "Document ID" #001560-00H	Vishay Signal Corp 4310 Directors Row Houston, Texas 77062 713-681-6101 REV: B 3 OF 4
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ORIGINAL



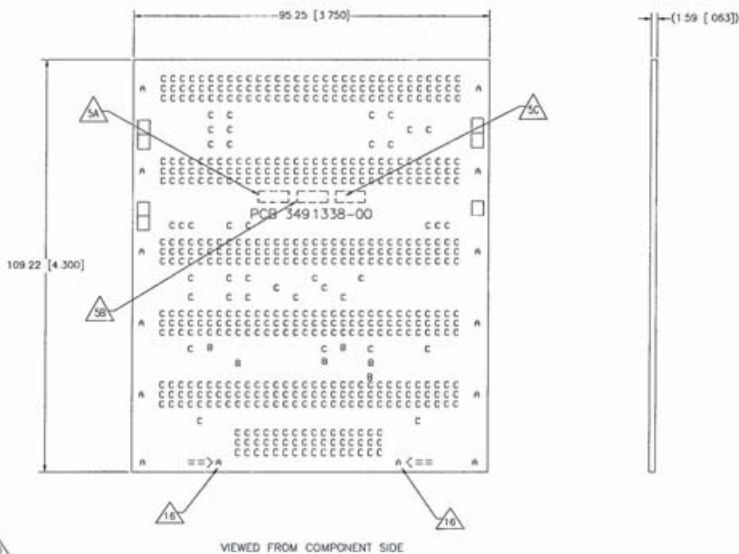
		+15V	+3.3V	
		BACKPLANE - DSP & Power Supply		Highland Signal Corp 4310 Edwards Road Houston, Texas 77062 713-967-6523
		500150-SCH		REV: B
		S-Max-2006		11-02-22
		C:\Users\Brent\Documents\2006 - Documents\2006-PWR-SCH		4 OF 4

ORIGINAL

NOTES: UNLESS OTHERWISE SPECIFIED

- 1 ALL DIMENSIONS ARE BASIC
- 2 THIS MULTI-LAYER BOARD SHALL MEET THE REQUIREMENTS OF IPC-6011 & IPC-6012A, TYPE 3, CLASS 3
- 3 MANUFACTURE USING ARTWORK 3491338-AWK REV B, LAYER 1 THRU LAYER 7, TOP & BOTTOM SOLDERMASK AND TOP & BOTTOM SILKSREEN FOR MANUFACTURING PURPOSES THIS ARTWORK SHALL NOT BE REPRODUCED TO OR FROM A REPRODUCIBLE MEDIA THAT IS LESS THAN A STABLE BASE MATERIAL.
- 4 COPPER CLAD LAMINATE AND PREPREG MATERIALS SHALL CONFORM TO TYPE OF PER MIL-S-13949. SPECIFIC MATERIAL REQUIREMENTS, THICKNESS AND LAYER ARRANGEMENTS SHALL BE IN ACCORDANCE WITH FIGURE 1
- 5 BOARD MUST BE PERMANENTLY MARKED, ON COMPONENT SIDE, WITH:
 - A. REVISION LETTER SPECIFIED ON THIS DRAWING AND ON THE PURCHASE ORDER IN COPPER IN AREA INDICATED BY (---)
 - B. CURRENTLY LISTED UL SUPPLIER MARK AS RECOGNIZED FOR UL LISTING (---)
 - C. A FOUR DIGIT DATE CODE YEAR AND WEEK OF MANUFACTURE (---)
- 6 MINIMUM CONDUCTOR WIDTH, MINIMUM SPACING BETWEEN CONDUCTORS, & MINIMUM ANNUAL RING PER IPC-6011 & 6012A, TYPE 3, CLASS 3
- 7 ALL PLATED THRU HOLES SHALL HAVE A MINIMUM OF 0.00008 [0.00003] - 0.00020 [0.0008] GOLD
- 8 ALL HOLE SIZES ARE AFTER PLATING, WITH TOLERANCE ± 0.05 [± 0.02]
- 9 SOLDERMASK : GREEN
- 10 SILKSREENS SHALL BE APPLIED TO BOTH SIDES OF BOARD PER MASTER PATTERN SILKSREENS USING NON-CONDUCTIVE WHITE EPOXY INK
- 11 BOARD MUST BE 100% BARE BOARD TESTED POINT TO POINT ON MANHA SYSTEM OR EQUIVALENT. TEST CERTIFICATION MUST BE PROVIDED. TEST CERTIFICATION MUST INCLUDE 40VDC TEST VOLTAGE, 50 OHM OPEN SENSITIVITY, 2.5 MEGOHM SHORT AND 300mA MAX TEST CURRENT
- 12 BOARD FLATNESS TOLERANCE TO BE 0.25 [0.10] 25.4 [1.00]
- 13 EDGE CLEARANCE FOR LAYER 2 (CND) NOT TO EXCEED 0.76 [0.30]
- 14 USE PCB LAMINATE WITH A WATER ABSORPTION LESS THAN OR EQUAL TO 0.13%
- 15 TOP AND BOTTOM LAYERS TO BE FINISH BY GOLD IMMERSION PROCESS 0.00008 [0.00003] - 0.00020 [0.00008] GOLD OVER NICKEL (ENIG) PER IPC-4552
- 16 DO NOT PLATE THROUGH HOLES MARKED WITH ARROW (==>) TWO PLACES)

HOLE SCHEDULE				
DIAMETER	QTY	SYM	PLTD	
#2.79 [#.110]	12	A	YES	
#0.61 [#.024]	6	B	YES	
#1.07 [#.042]	566	C	YES	
#2.79 [#.110]	2	A	NO	16



LAYERS STACKED AS FOLLOWS:

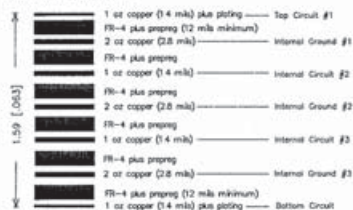
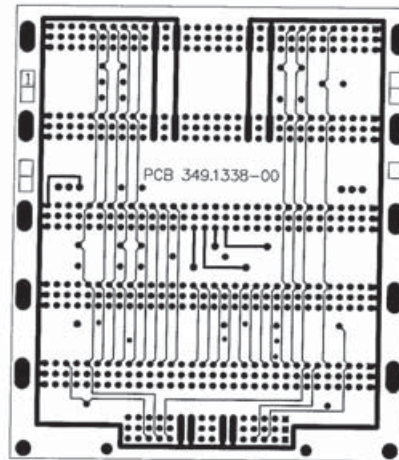


FIGURE 1
SCALE: NONE

REV	DATE	DESCRIPTION	BY	CHK	DATE	APPROV
D	4618	UPDATED NOTES	PHS	BP	10/01/07	201
C	3743	REVISED FIG 1 & NOTE 3	PHS	HF	12/22/05	KON
B	3743	ADDED TIME DELAY CIRCUIT	PHS	HF	06/MAY/05	PFM
A	---	X2 RELEASED AS REV. A	PHS	HF	06/MAY/05	PFM

UNLESS OTHERWISE SPECIFIED		MATERIAL	
1. DIMENSIONS 1. DIMENSIONS - MILLIMETERS	2. DIMENSIONS - INCHES	3. DIMENSIONS - MILLIMETERS	4. DIMENSIONS - INCHES
A = 25.4	B = 2.54	A = 25.4	B = 2.54
C = 12.7	D = 1.27	C = 12.7	D = 1.27
5. DIMENSIONS - MILLIMETERS		6. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
7. DIMENSIONS - MILLIMETERS		8. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
9. DIMENSIONS - MILLIMETERS		10. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
11. DIMENSIONS - MILLIMETERS		12. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
13. DIMENSIONS - MILLIMETERS		14. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
15. DIMENSIONS - MILLIMETERS		16. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
17. DIMENSIONS - MILLIMETERS		18. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
19. DIMENSIONS - MILLIMETERS		20. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
21. DIMENSIONS - MILLIMETERS		22. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
23. DIMENSIONS - MILLIMETERS		24. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
25. DIMENSIONS - MILLIMETERS		26. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
27. DIMENSIONS - MILLIMETERS		28. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
29. DIMENSIONS - MILLIMETERS		30. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
31. DIMENSIONS - MILLIMETERS		32. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
33. DIMENSIONS - MILLIMETERS		34. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
35. DIMENSIONS - MILLIMETERS		36. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
37. DIMENSIONS - MILLIMETERS		38. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
39. DIMENSIONS - MILLIMETERS		40. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
41. DIMENSIONS - MILLIMETERS		42. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
43. DIMENSIONS - MILLIMETERS		44. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
45. DIMENSIONS - MILLIMETERS		46. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
47. DIMENSIONS - MILLIMETERS		48. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
49. DIMENSIONS - MILLIMETERS		50. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
51. DIMENSIONS - MILLIMETERS		52. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
53. DIMENSIONS - MILLIMETERS		54. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
55. DIMENSIONS - MILLIMETERS		56. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
57. DIMENSIONS - MILLIMETERS		58. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
59. DIMENSIONS - MILLIMETERS		60. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
61. DIMENSIONS - MILLIMETERS		62. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
63. DIMENSIONS - MILLIMETERS		64. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
65. DIMENSIONS - MILLIMETERS		66. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
67. DIMENSIONS - MILLIMETERS		68. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
69. DIMENSIONS - MILLIMETERS		70. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
71. DIMENSIONS - MILLIMETERS		72. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
73. DIMENSIONS - MILLIMETERS		74. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
75. DIMENSIONS - MILLIMETERS		76. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
77. DIMENSIONS - MILLIMETERS		78. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
79. DIMENSIONS - MILLIMETERS		80. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
81. DIMENSIONS - MILLIMETERS		82. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
83. DIMENSIONS - MILLIMETERS		84. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
85. DIMENSIONS - MILLIMETERS		86. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
87. DIMENSIONS - MILLIMETERS		88. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
89. DIMENSIONS - MILLIMETERS		90. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
91. DIMENSIONS - MILLIMETERS		92. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
93. DIMENSIONS - MILLIMETERS		94. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
95. DIMENSIONS - MILLIMETERS		96. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
97. DIMENSIONS - MILLIMETERS		98. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	
99. DIMENSIONS - MILLIMETERS		100. DIMENSIONS - INCHES	
A = 25.4		B = 2.54	
C = 12.7		D = 1.27	

3491338D CMC 02E007 10-42



Layer Name TOP LAYER -- SIGNAL LAYER #1

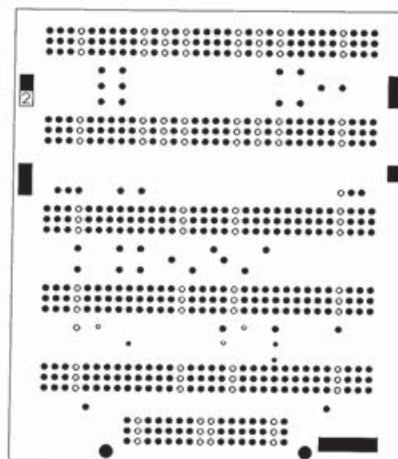
Stacking Chart 1

REV	CON	DESCRIPTION	BY	CHK	DATE	ADVD
B	3243	ADDED DELAY CIRCUITS ON SPD 8 XPD	JTM	HF	4-13-05	✓
A		X2 RELEASED AS A			4-04-05	

ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED

VERIFY PLOT
DATE MAY 05 2005

		TIDELAND SIGNAL CORP. 4310 DIRECTORS ROW HOUSTON, TEXAS 77082		TITLE ARTWORK BACKPLANE SBCN-2 SYS-6	
THIS DRAWING CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED OR FURTHER COPIED OR USED FOR ANY PURPOSE OTHER THAN PERFORMANCE, REPAIR, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.					
DRAWN JUANILLI		DATE 08-27-02		DESIGN BY ANALYSIS & DESIGN GROUP	DWG SIZE B
CHECKED HF		DATE 06/04/05		P.O. BOX 34430 HOUSTON, TEXAS 77234 (281) 491-4823	PART NUMBER 349.1338-AWK
PROJ ENGR ✓		DATE 06/04/05		EX	DO NOT SCALE DRAWING
					SHEET 1 of 15

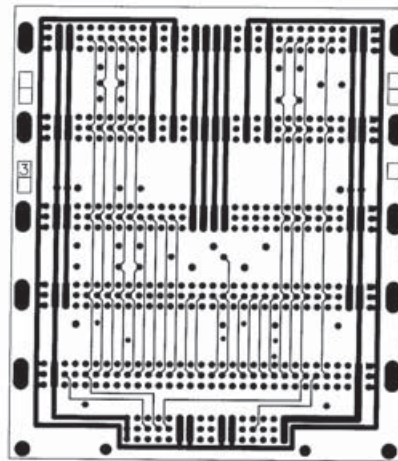
Stacking Chart

2					
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B	3743	ADDED DELAY CIRCUITS ON SPD @ XPO	JTM	UF	4-13-06	(U)			
A		X2 RELEASED AS A			4-04-06				
REV	EON	DESCRIPTION	BY	CHK	DATE	APV			
ATTENTION - MANUAL REVISIONS ARE			NOT PERMITTED						

VERIFY PLOT
DATE MAY 05 2005

		TIDELAND SIGNAL CORP. 4300 DIRECTORS ROW HOUSTON, TEXAS 77092		TITLE ARTWORK BACKPLANE SBCN-2 SYS-6	
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DRAWN	DATE	DESIGN BY	DWG SIZE	PART NUMBER	REV
Juanelli	05/27/02	ANALYSIS & DESIGN GROUP P.O. BOX 34430 HOUSTON, TEXAS 77234 (281) 481-4823	B	349.1338-AWK	B
CHECKED	DATE				
HF	06/04/05				
PROJ ENGR	DATE	UL	EX	DO NOT SCALE	SCALE
FROM DE MORGAN				DRAWING	
				SHEET 2	OF 15



DATE MAY 05 2005

Stacking Chart _____

		3			
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B	3P+3	ADDED DELAY CIRCUITS ON SPD B XPO	JTM	HF	4-13-08					
A		X2 RELEASED AS A			4-04-05					
REV	EEN	DESCRIPTION	BY	CNK	DATE					
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED										

 TIDELAND SIGNAL CORP. 430 DIRECTORS ROW HOUSTON, TEXAS 77092		TITLE ARTWORK BACKPLANE SBCN-2 SYS-6	
THIS DRAWING EXCLUDES PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION TO THE UNDERSIGNED PARTY. IT WILL NOT BE REPRODUCED IN ANY OR SINGLE OR USED FOR ANY PURPOSE OTHER THAN PRINTING, RETROFIT, OR INSTALLATION AND THERE IT SHALL BE RETURNED TO ORNED.			
DRAWN J. Vanelli 09-27-02 CHECKED HF REVISIONS PROJ ENGR DATE 09/28/02	DESIGN BY: ANALYSIS & DESIGN GROUP P.O. BOX 24430 HOUSTON, TEXAS 77234 (281) 481-4823	DWG SIZE PART NUMBER B 349.1338-AWK	REV B
LL EX DO NOT SCALE DRAWING	SCALE		SHEET 3 OF 15



DATE MAY 15 2005

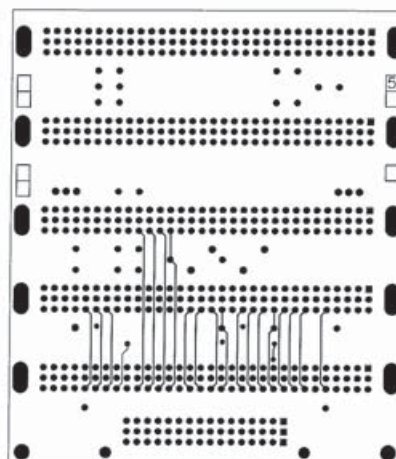
Stocking Chart _____

		4		
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 TIDELAND SIGNAL CORP. 4310 DIRECTORS ROW HOUSTON, TEXAS 77092		TITLE ARTWORK BACKPLANE SBCN-2 SYS-6	
THIS DRAWING CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION TO THE UNDERSIGNED PARTY. IT WILL NOT BE REPRODUCED IN PART OR WHOLE OR USED FOR ANY PURPOSE OTHER THAN THE PROMISE, QUOTE, UNQUOTE, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.			
DRW/N J.uanelli 08/27/02 CHECKED H.F. <i>philly</i> 10/05 PROJ ENGR DATE 08/27/2002	DESIGN BY: ANALYSIS & DESIGN GROUP P.O. BOX 34430 HOUSTON, TEXAS 77234 (281) 481-4623	DWG SIZE B	PART NUMBER 349.1338-AWK
REV B	SCALE DO NOT SCALE DRAWING		
SHEET 4 OF 13		DATE 08/27/2002	

ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED

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VERIFY PLOT
DATE MAY 05 2005

Stocking Chart _____

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B	3743	ADDED DELAY CIRCUITS ON SPD & XPD	JTM	HF	4-13-06	TW			
A	X2 RELEASED AS A				4-04-05				
REV	EON	DESCRIPTION	BY	CHK	DATE	APV			
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED									

 TIDELAND SIGNAL CORP. 4310 DIRECTORS ROW HOUSTON, TEXAS 77092				TITLE ARTWORK BACKPLANE SBCN-2 SYS-6			
THIS DRAWING CONVEYS PROPERTY AND CONFIDENTIAL INFORMATION AND IS LOANED TO TIDELAND SIGNAL CORPORATION BY THE UNDERSIGNED. IT IS NOT TO BE REPRODUCED OR IN ANY MANNER USED FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED. APPROVE, BE SUBSTITUTED AND THAT IT SHALL BE RETURNED ON DEMAND.							
DRAWN J. Mavelli	DATE 09/27/02	DESIGN BY ANALYSIS & DESIGN GROUP P.O. BOX 34430 HOUSTON, TEXAS 77234 (281) 461-4623	DWG. SIZE B	PART NUMBER 349.1338-AWK	REV B		
CHECKED 06 MAR 05	DATE 06 MAR 05						
PROJ. ENGR 06 MAR 2005	DATE 06 MAR 2005	UL	EX	DO NOT SCALE DRAWING	SCALE	SHEET 5 of 15	

13-Apr-2005
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VERIFY PLOT
DATE MAY 05 2005

Stocking Chart _____

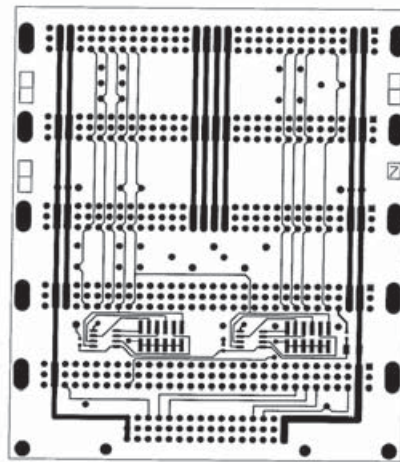
				6	
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B	3743	ADDED DELAY CIRCUITS ON SPD & XPD	JTH	WF	4-13-06	✓
A		X2 RELEASED AS A			4-04-06	
REV	ECN	DESCRIPTION	BY	CHK	DATE	APV

ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED

		TIDELAND SIGNAL CORP. 4310 DIRECTORS ROW HOUSTON, TEXAS 77092		TITLE ARTWORK BACKPLANE SBCN-2 SYS-6	
THIS DRAWING CONVEYS PROPERTY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN WHOLE OR PART OR COPIED FOR ANY PURPOSE OTHER THAN PERFORMANCE, REVIEW, OR INSPECTION AND THAT IT SHALL BE RETURNED ON DEMAND.					
DRAWN	DATE	DESIGN BY	DWG SIZE	PART NUMBER	REV
Juanelli	09/27/02	ANALYSIS & DESIGN GROUP P.O. BOX 344930 HOUSTON, TEXAS 77234 (281) 481-4823	B	349.1338-AWK	B
CHECKED	DATE	UL	EX	DO NOT SCALE DRAWING	SCALE
WF	09/27/02				
PROJ/ENGR	DATE	SHEET 6 OF 15			

13-Apr-2005
10:05:20
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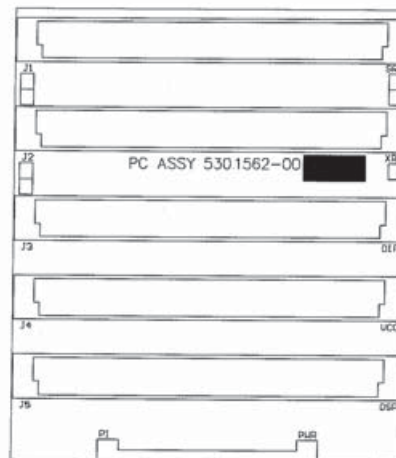
VERIFY PLOT
DATE MAY 3 5 2005

Layer Name _____ BOTTOM LAYER -- SIGNAL LAYER #4
Stacking Chart _____ [7]

B	3743	ADDED DELAY CIRCUITS ON GP0 & XPD	JTM	HF	4-13-05	3/11			
A		X2 RELEASED AS A			4-04-05				
REV	ECN	DESCRIPTION	BY	CHK	DATE	APUD			

ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED

		TIDELAND SIGNAL CORP.		TITLE	
4310 DIRECTORS ROW		HOUSTON, TEXAS 77092		ARTWORK	
THIS DRAWING CONVEYS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN PART OR WHOLE OR USED FOR ANY PURPOSE OTHER THAN MAINTENANCE, REPAIR, OR INSTALLATION AND THAT IT SHALL BE RETURNED TO US.				BACKPLANE	
				SBCN-2 SYS-6	
DESIGN	DATE	DESIGN BY	DWG SIZE	PART NUMBER	REV
JUARELLI	09/27/02	ANALYSIS & DESIGN GROUP	B	349.1338-AWK	B
CHECKED	DATE	P.O. BOX 34430			
HF	06/04/05	HOUSTON, TEXAS 77234			
		(281) 461-1823			
DOJ ENR	DATE	UL	EX	DO NOT SCALE	SCALE
Jim	06/04/05			DRAWING	
				SHEET 7 of 15	



Stocking Chart _____

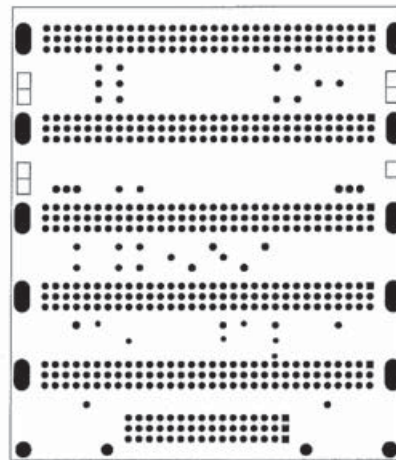
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[illegible]

VERIFY PLOT
DATE MAY 05 2005

	TIDELAND SIGNAL CORP. 4310 DIRECTORS ROW HOUSTON, TEXAS 77092			TITLE ARTWORK BACKPLANE SBCN-2 SYS-6	
	THIS DRAWING CONVEYS INFORMATION AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION TO THE UNDERSIGNED PARTY. IT IS NOT TO BE REPRODUCED IN ANY FORM OR MANNER OR USED FOR ANY PURPOSE OTHER THAN THE PRINTING, REPAIR, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.				
DRAWN J.uanelli	DATE 05-27-02	DESIGN BY: ANALYSIS & DESIGN GROUP P.O. BOX 34430 HOUSTON, TEXAS 77234 (281) 461-4823	Dwg SIZE B	PART NUMBER 349.1338-AWK	REV B
CHECKED HE	DATE 06-04-02				
DFG ENGR J.uanelli	DATE 05-27-02	UL EX	DO NOT SCALE DRAWING	SCALE	SHEET 8 of 15

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VERIFY PLOT
DATE MAY 25 2005

Stocking Chart _____

[illegible]

 TIDELAND SIGNAL CORP. 4310 DIRECTORS ROW HOUSTON, TEXAS 77092		ARTWORK BACKPLANE SBCN-2 SYS-6	
THIS DOCUMENT CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN PART OR WHOLE OR USED FOR ANY PURPOSE OTHER THAN PROVIDED HEREIN. RETURN, OR INSTALLATION AND THAT IT SHALL BE RETURNED IN DETAILED.			
DRMAN JVanelli 09-27-02 CHECKED HFC 09/27/02 PROJ ENGR DATE 09/27/02	DESIGN BY: ANALYSIS & DESIGN GROUP P.O. BOX 31430 HOUSTON, TEXAS 77234 (281) 481-4823	OWD SIZE B	PART NUMBER 349.1338-AWK
REV 1	DO NOT SCALE DRAWING		
SHEET 9 OF 15		SCALE	

ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED

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Stacking Chart _____

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[illegible]

ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED

 TIDELAND SIGNAL CORP. 4310 DIRECTORS ROW HOUSTON, TEXAS 77092	TITLE ARTWORK	
	BACKPLANE SBCN-2 SYS-6	
THIS DOCUMENT CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN PART OR WHOLE OR USED FOR ANY PURPOSE OTHER THAN PROMPTED, REPAIR, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.		
DRAWN J.uanelli 09-27-02 CHECKED HE PMJ 09-27-02 PROJ ENGR DATE 09-27-02 UL	DESIGN BY: ANALYSIS & DESIGN GROUP P.O. BOX 34130 HOUSTON, TEXAS (281) 481-4823	DWG SIZE B PART NUMBER 349.1338-AWK B SHEET 10 of 15



VERIFY PLOT
DATE MAY 05 2005



Layer Name Bottom Overlay
Stacking Chart

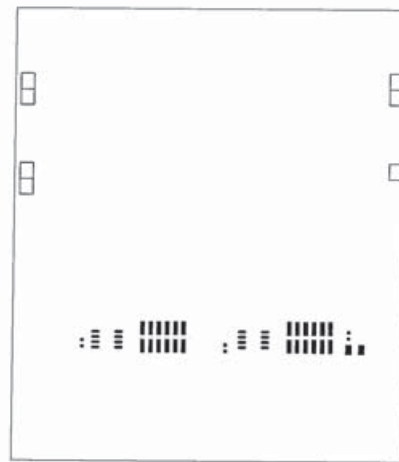
REV	ECN	DESCRIPTION	BY	CHK	DATE	APPROVED
B	3243	ADDED DELAY CIRCUITS ON SPD & XPO	JTH	AF	4-13-05	
A		X2 RELEASED AS A			4-04-05	
REV	ECN	DESCRIPTION	BY	CHK	DATE	APPROVED

ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED

 TIDELAND SIGNAL CORP. 4310 DIRECTORS RD HOUSTON, TEXAS 77002		TITLE ARTWORK BACKPLANE SBCN-2 SYS-6	
THIS DRAWING CHANGES FREQUENTLY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED OR USED FOR ANY PURPOSE OTHER THAN PROVIDED, HEREIN, BY INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.		DWG SIZE B	PART NUMBER 349.1338-AWK
DRAWN JUANILLI	DATE 05/27/02	DESIGN BY ANALYSIS & DESIGN GROUP P.O. BOX 24430 HOUSTON, TEXAS 77224 (281) 488-4823	REV B
CHECKED HE	DATE 05/05/05	DO NOT SCALE	SCALE
PROJ ENGR HE	DATE 05/05/05	UL	EX
SHEET 11 of 15			



13-Apr-2005
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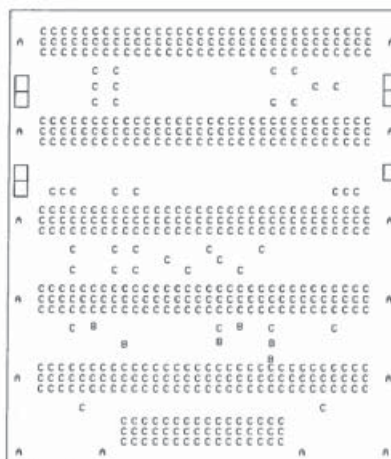
Stacking Chart _____

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B	32*	ADDED DELAY CIRCUITS ON SPD & XPD	JTH	WF	4-13-06	
A		X2 RELEASED AS A			4-04-05	
REV	CON	DESCRIPTION	BY	CHK	DATE	ADU
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED						

		TIDELAND SIGNAL CORP. 4300 DIRECTORS ROW HOUSTON, TEXAS 77082		TITLE ARTWORK COPY PLANE SBCN-2 SYS-6	
THIS DRAWING CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION AND IS THE PROPERTY OF THE LENDER. IT IS NOT TO BE REPRODUCED IN PART OR WHOLE OR USED FOR ANY PURPOSE OTHER THAN APPROVED, REPAIR, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.					
ORIGIN Jmanelli 09-27-02	DATE 09-27-02	DESIGN BY: ANALYSIS & DESIGN GROUP P.O. BOX 31430 HOUSTON, TEXAS 77234 (281) 461-4823	DWG SIZE B	PART NUMBER 349.1338-AWK	REV B
CHECKED HF 06 MAY 405 PPM Jmanelli	DATE 05-04-05	UL	EX	DO NOT SCALE DRAWING	SCALE SHEET 13 OF 15

13-Apr-2005
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VERIFY PLANT
DATE MAY 05 2005

Stocking Chart _____

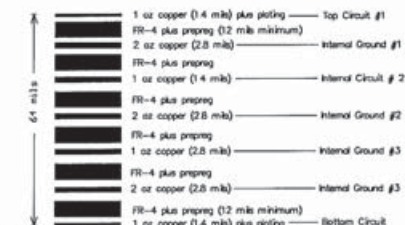
n	14	110mil	2.794mm
c	566	42mil	1.0668mm
B	6	24mil	0.6096mm
	586	Total	

13-Apr-2005
10:05:31
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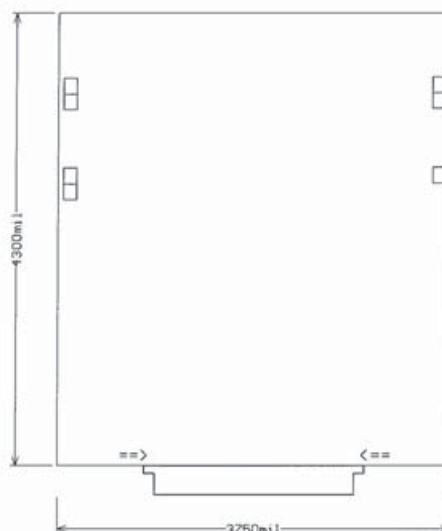
B	3743	ADDED DELAY CIRCUITS ON SPD & XPD						JTM	HCF	4-13-08	CW
A	X2 RELEASED MS A										4-04-08
REV	ECD	DESCRIPTION						BY	CHK	DATE	ADV
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED											

		TIDELAND SIGNAL CORP. 4310 DIRECTORS RD HOUSTON, TEXAS 77092		TITLE ARTWORK BACKPLANE SBCN-2 SYS-6	
THIS DRAWING CONVEYS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED OR IN PART OR WHOLE OR USED FOR ANY PURPOSE OTHER THAN THAT INTENTANCE, REPAIR, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.					
DRAWN	DATE	DESIGN BY	DWG. SIZE	PART NUMBER	REV
Juanelli	09/27/05	ANALYSIS & DESIGN GROUP P.O. BOX 34430 HOUSTON, TEXAS 77234 (281) 481-4823	B	349.1338-AWK	B
CHECKED	DATE	UL	EX	DO NOT SCALE DRAWING	SCALE
HF GEMMAY	05				
PROJ. ENGR	DATE			SHEET	14 OF 15
ROD	01/04/2006				

1. MANUFACTURE USING ARTWORK 349.1338-AWK REVISION B, SEVEN COPIES LAYERS WITH SOLDER MASK AND SKI-CURED ON BOTH UPPER LAYERS.
2. LAYER # 1 (TOP CIRCUIT) AND LAYER # 4 (BOTTOM CIRCUIT) TO BE 1 OUNCE COPPER ON FR-4 SUBSTRATE OF THICKNESS 12 MILS OR GREATER.
3. LAYERS # 2, #4, #5 (INTERNAL GROUND) AND LAYERS # 3, #5 (INTERNAL CIRCUIT) TO BE 2 OUNCE COPPER ON FR-4 MATERIAL, SIZED TO MAKE THICKNESS OF BOARD 0.063 INCHES NOMINAL.
4. EDGE CLEARANCE ON LAYERS # 2, #4, #5 NOT TO EXCEED 30 MILS.
5. LAYERS STACKED AS FOLLOWS:



7. BOARD FLATNESS TOLERANCE TO BE 0.015 IN/INCH.
8. MINIMUM CONDUCTOR THICKNESS TO BE 0.012 INCH.
9. PHOTOIMAGABLE LIQUID SOLDER MASK OVER BARE COPPER (SMBG) ON TOP AND BOTTOM LAYERS.
10. HOLES TO BE PLATED THOUGH WITH MINIMUM 0.001 INCHES COPPER.
11. HOLE SIZES APPLY AFTER PLATING, WITH TOLERANCE +/- 0.002 INCHES.
12. DO NOT PLATE THROUGH HOLES MANIPULATED WITH ARROW (→), TWO PLACES.
13. SOLDERED BOND SIDES WITH NON-CONDUCTIVE WHITE INK.
14. BOARD MUST BE PERMANENTLY MARKED ON SOLDER SIDE WITH:
 - REVISION LETTER SPECIFIED ON THIS DRAWING AND ON THE PURCHASE ORDER IN COPPER IN AREA INDICATED BY []
 - CURRENTLY LISTED UL SUPPLIER MARK AS RECORDED FOR UL LISTING.
 - DATE, PLACE, CODE TO SPECIFY DATE OF MANUFACTURE.



VERIFY PLOT
MAY 3 5 2005
DATE

Stocking Chart _____

B	3743	ADDED DELAY CIRCUITS ON SPD & XPO				JTH	AF	4-13-06	(S)
A		X2 RELEASED AS A						4-04-06	
REV	EON	DESCRIPTION				BY	CHK	DATE	APPROV
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED									

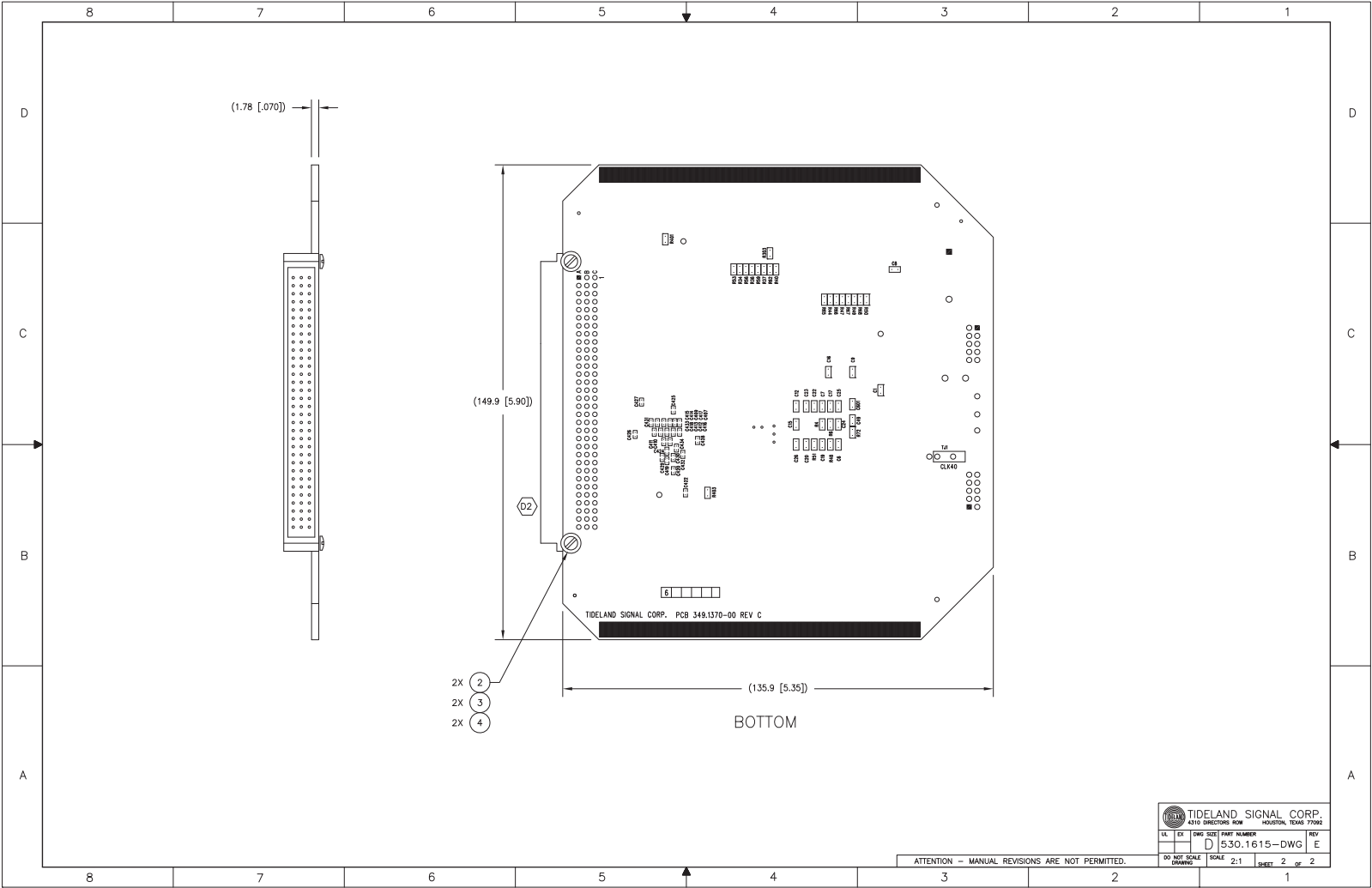
		TIDELAND SIGNAL CORP. 4310 DIRECTORS RD HOUSTON, TEXAS 77092		TITLE ARTWORK BACKPLANE SBCN-2 SYS-6	
THIS DRAWING CONVEYS INFORMATION AND CONVEYANCE INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN PART OR WHOLE OR USED FOR ANY PURPOSE OTHER THAN PERFORMANCE, REPAIR, OR PREPARATION AND THAT IT SHALL BE RETURNED ON DEMAND.					
DRAWN	DATE	DATE BY	DWG SIZE	PART NUMBER	REV
J. Wallis	08-22-02	ANALYSIS & DESIGN GROUP P.O. BOX 34130 HOUSTON, TEXAS 77234 (281) 481-8822	B	349.1338-AWK	B
CHECKED	DATE				
HE OBAMAJS					
PCB ENGR	DATE	EX	DO NOT SCALE	SCALE	SHEET 15 of 15
PCB ENGR			DRAWING		

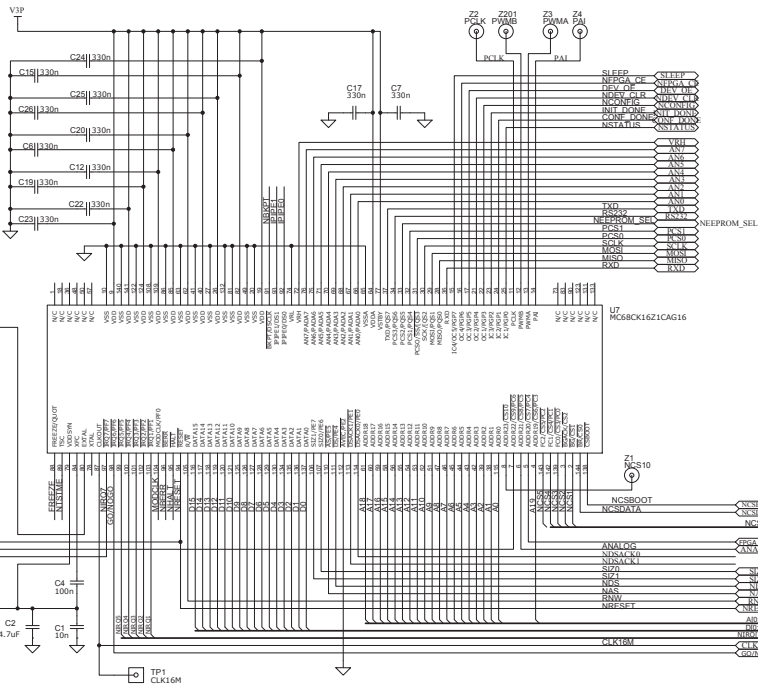
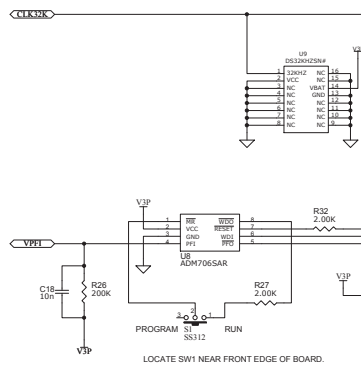
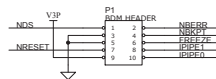
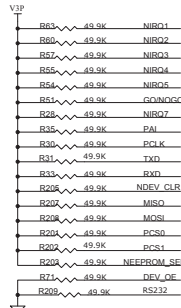
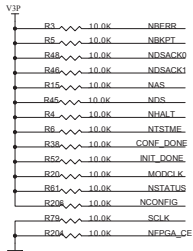
Components _____	53
Nets _____	95
Holes _____	586

13-Apr-2005

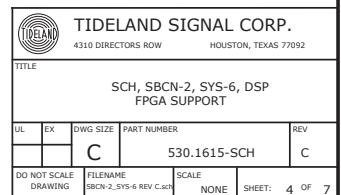
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TIDELAND SIGNAL CORP. 4310 DIRECTORS ROW HOUSTON, TEXAS 77092				
TITLE SCH, SBCN-2, SYS-6, DSP 68HC16 CPU				
UL	EX	DWG SIZE	PART NUMBER	REV
		C	530.1615-SCH	C
DO NOT SCALE DRAWING		FILENAME SBCN-2, SYS-6 REV C.kot	SCALE NONE	SHEET: 2 OF 7



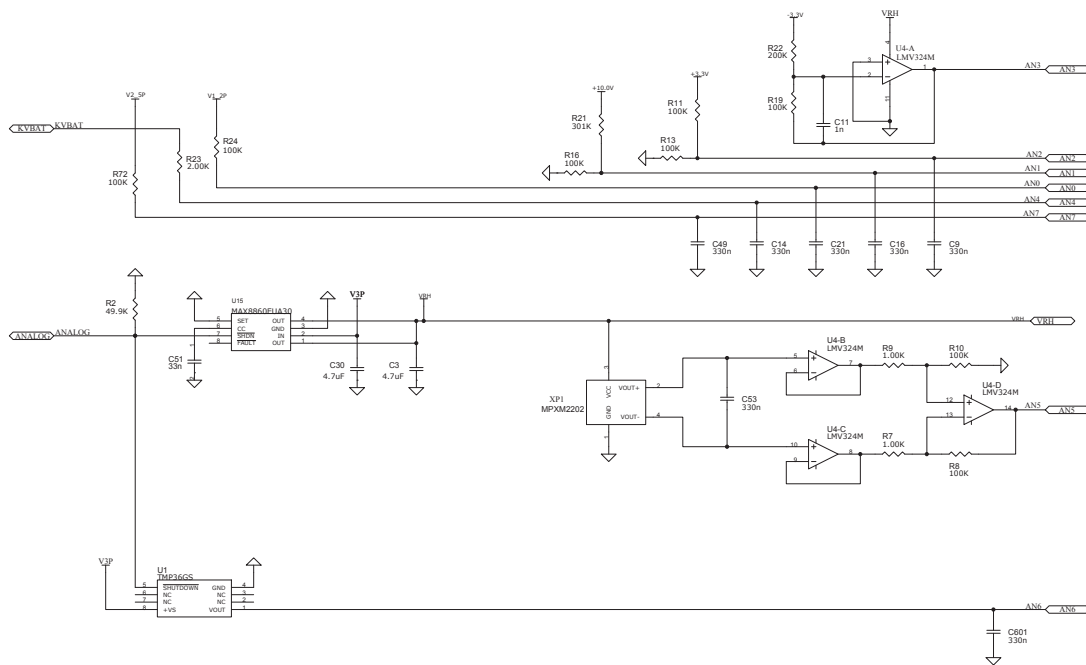
4

3

2

1

NOTE: LOCATE C9, C14, C21, C49, C601 NEAR U7



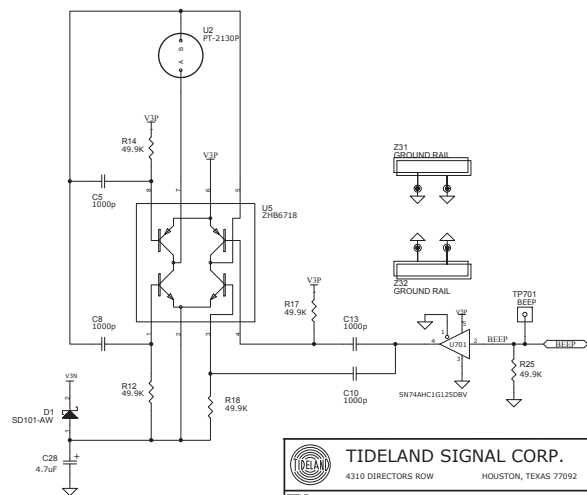
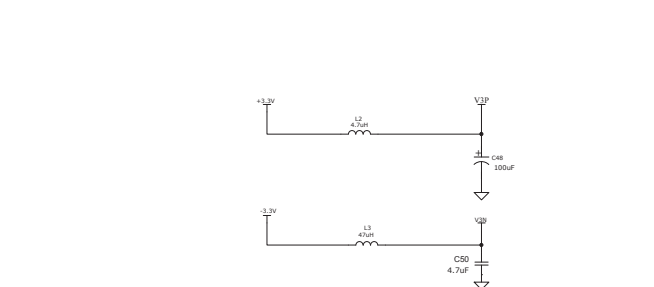
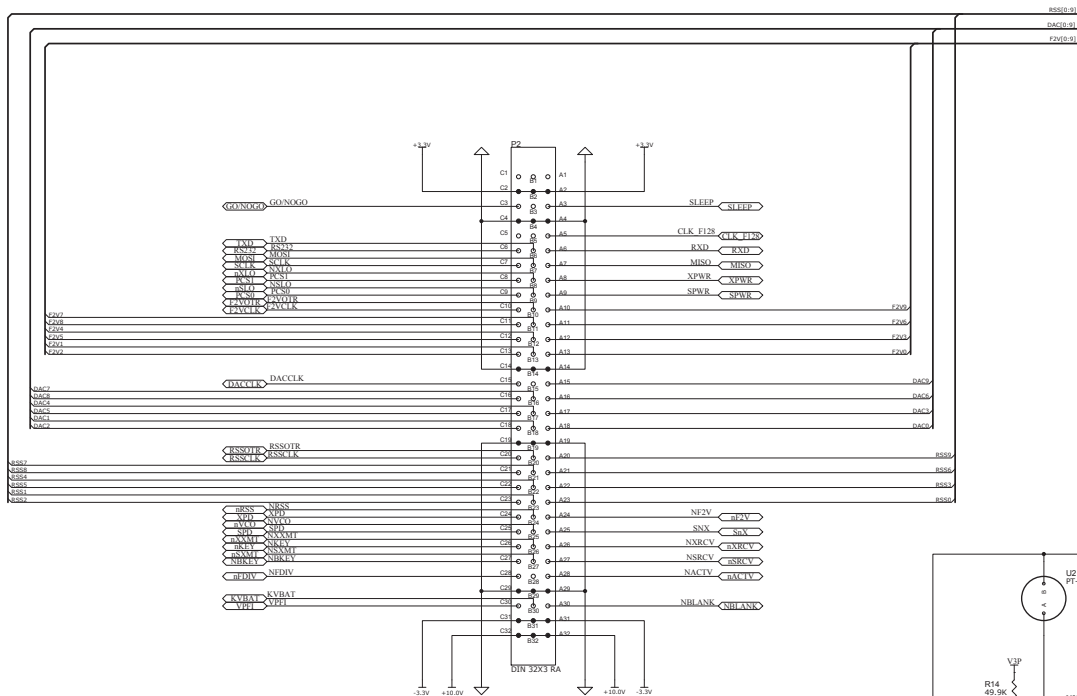
		TIDELAND SIGNAL CORP.	
		4310 DIRECTORS ROW HOUSTON, TEXAS 77092	
TITLE			
SCH, SBCN-2, SYS-6, DSP ANALOG WEATHER STATION			
UL	EX	DWG SIZE	PART NUMBER
		C	530.1615-SCH
DO NOT SCALE DRAWING		FILENAME SBCN-2, SYS-6 REV C.sch	SCALE NONE
		SHEET:	6 OF 7

4

3

2

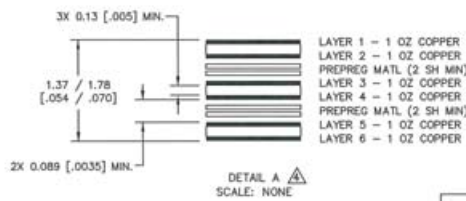
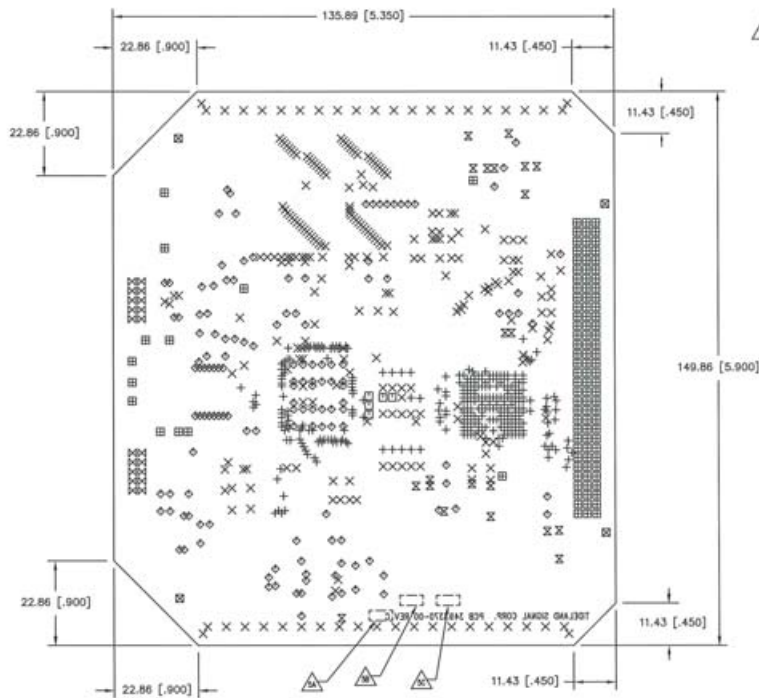
1



		TIDELAND SIGNAL CORP.	
4310 DIRECTORS ROW		HOUSTON, TEXAS 77092	
TITLE			
SCH, SBCN-2, SYS-6, DSP BEEPER AND BACKPLANE PORTS			
UL	EX	DWG SIZE	PART NUMBER
		C	530.1615-SCH
DO NOT SCALE	FILENAME	SCALE	SHEET: 7 OF 7
DRAWING	SBCN-2, SYS-6, REV C.sch	NONE	

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE BASIC.
2. THIS MULTILAYER BOARD SHALL MEET THE REQUIREMENTS OF IPC-6011, CLASS 3, IPC-4552.
3. MANUFACTURE USING ARTWORK 348.1370-000 REV C, SIX COPPER LAYERS WITH SOLDER MASK, SILKSCREEN, AND PASTE MASK ON BOTH OUTER LAYERS. FOR MANUFACTURING PURPOSES THIS ARTWORK SHALL NOT BE REPRODUCED TO OR FROM A REPRODUCIBLE MEDIA THAT IS LESS THAN A STABLE BASE MATERIAL.
4. COPPER CLAD LAMINATE AND PREPREG MATERIALS SHALL CONFORM TO TYPE FR-4. SPECIFIC MATERIAL REQUIREMENTS, THICKNESS AND LAYER ARRANGEMENTS SHALL BE IN ACCORDANCE WITH DETAIL A.
5. BOARD MUST BE PERMANENTLY MARKED, ON LAYER #6 (BOTTOM CIRCUIT) WITH:
 - A. REVISION LETTER SPECIFIED ON THIS DRAWING AND ON THE PURCHASE ORDER IN COPPER IN AREA INDICATED BY C-1.
 - B. CURRENTLY LISTED UL SUPPLIER MARK AS RECOGNIZED FOR UL LISTING C-1.
 - C. A FOUR DIGIT DATE CODE YEAR AND WEEK OF MANUFACTURE C-1.
6. MINIMUM CONDUCTOR WIDTH 0.15 [0.06]
7. EDGE CLEARANCE ON INTERNAL LAYERS 2 & 5 NOT TO EXCEED 0.76 [0.30]
8. TOP AND BOTTOM LAYERS TO BE FINISHED BY GOLD IMMERSION PROCESS, 0.00008 [0.00003]-0.00020 [0.00008] GOLD OVER NICKEL (ENIG) PER IPC-4552.
9. ALL PLATED THRU HOLES SHALL HAVE A MINIMUM OF 0.00008 [0.00003]-0.00020 [0.00008] GOLD.
10. ALL HOLE SIZES ARE AFTER PLATING, WITH TOLERANCE ±0.05 [±0.002]
11. SOLDERMASK GREEN.
12. SILKSCREEN SHALL BE APPLIED TO BOTH SIDES OF BOARD PER MASTER PATTERN SILKSCREENS, USING NON-CONDUCTIVE WHITE EPOXY INK.
13. BOARD MUST BE 100% BARE BOARD TESTED POINT TO POINT ON MANA SYSTEM OR EQUIVALENT. TEST CERTIFICATION MUST BE PROVIDED. 2.5 MEGOHM SHORT AND 300mA MAX. TEST CURRENT.
14. USE PCB LAMINATE WITH A WATER ABSORPTION LESS THAN OR EQUAL TO 0.13%.
15. BOARD FLATNESS TO BE 0.25 [0.10] 25.4 [1.00]/25.4 [1.00]

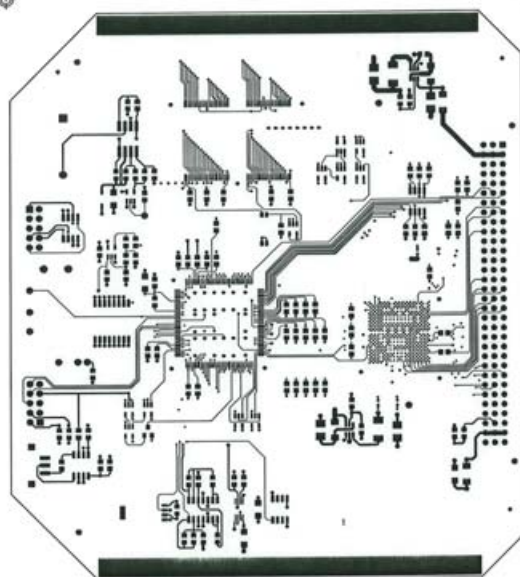


DIA. MM	DIA. IN	QTY.	SYN.	PLTD
0.25	.010	342	+	YES
0.30	.012	268	X	YES
0.41	.016	5	U	YES
0.45	.018	139	◇	YES
0.64	.025	21	X	YES
0.97	.038	20	D	YES
1.07	.042	109	H	YES
2.75	.110	4	Ø	NO

REV	DATE	DESCRIPTION	BY	CHK	DATE	APP
C	5/25/88	ADDED 40MHz OSC. CIRCUIT	HA	HF	2/15/89	PFM
B	5/24/88	CHG L401, L404, C403, C404, C408	HA	HF	2/22/89	PFM
A	—	RELEASED FOR PRODUCTION	HA	HF	10/24/89	RH

UNLESS OTHERWISE SPECIFIED		NATIONAL	
1. DIMENSIONS UNLESS OTHERWISE SPECIFIED	2. TOLERANCES UNLESS OTHERWISE SPECIFIED	3. FINISH	4. TIDELAND SIGNAL CORP. 4510 DIRECTION BLVD. ADDISON, TEXAS 75103
1. DIMENSIONS UNLESS OTHERWISE SPECIFIED	2. TOLERANCES UNLESS OTHERWISE SPECIFIED	3. FINISH	4. TIDELAND SIGNAL CORP. 4510 DIRECTION BLVD. ADDISON, TEXAS 75103
1. DIMENSIONS UNLESS OTHERWISE SPECIFIED	2. TOLERANCES UNLESS OTHERWISE SPECIFIED	3. FINISH	4. TIDELAND SIGNAL CORP. 4510 DIRECTION BLVD. ADDISON, TEXAS 75103

ORIGINAL

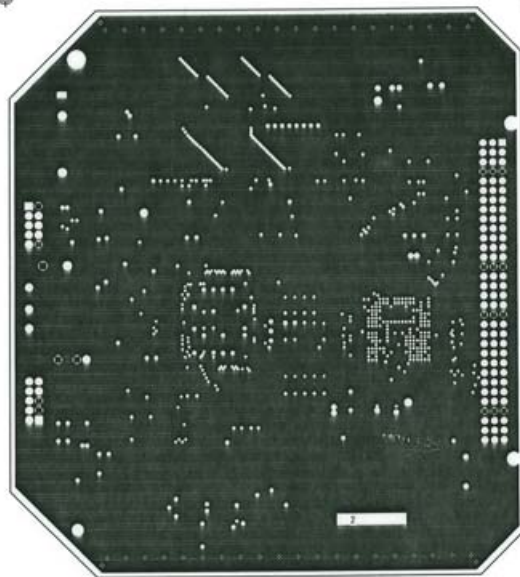


VERIFY PLOT
DATE SEP 23 2009

REV	EDN	DESCRIPTION	BY	CHK	DATE	SPD
C	5258	ADDED R504, R505	ION	HF	03SEP08	PFM
B	5241	CHG L401, L404, C403, C404, C406	ION	HF	12JUL08	PFM
A		RELEASE FOR PRODUCTION	ION	HF	07APR09	PFM

ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED

 TIDELAND SIGNAL CORP. 4300 DIRECTORS RD HOUSTON, TEXAS 77062		TITLE AWK, SBCN-2, SYS-6, DSP 68HC16 CPU	
THIS DRAWING ENGINEER PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN PART OR WHOLE OR USED FOR ANY PURPOSE OTHER THAN PERFORMANCE, REPAIR, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.		LAYER 1 TOP	
DRAWN ION DATE 13 AUG 08	DESIGN BY P. F. MUELLER	SUB SIZE B	PART NUMBER 349.1370-AWK
CHECKED HF DATE 07APR09	PROJ ENGR EXB DATE 07APR09	UL EX DO NOT SCALE DRAWING	SCALE 1 : 1 SHEET 1 of 13

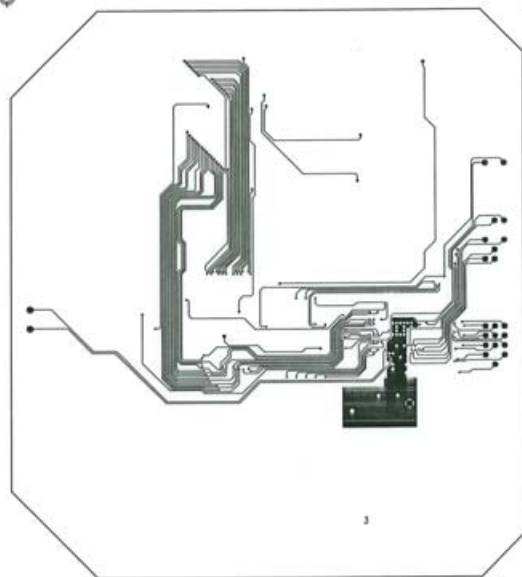


VERIFY PLOT
DATE SEP 23 2009

REV	DATE	DESCRIPTION	BY	CHK	DATE	HPUS
C	5258	ADDED R504, R505	ION	HF	07SEP09	PFM
B	5241	CHG L405, L406, C403, C404, C406	ION	HF	02JUL08	PFM
A		RELEASE FOR PRODUCTION	ION	HF	07APR09	PFM
REV	ECN	DESCRIPTION	BY	CHK	DATE	HPUS

ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED

 TIDELAND SIGNAL CORP. 4310 DEXTER RD HOUSTON, TEXAS 77062		TITLE AWK, SBCN-2, SYS-6, DSP 68HC16 CPU	
THIS DRAWING ENGINEER'S PROPERTY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE OTHER THAN PROVIDED, HEREON, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.		LAYER 2 GND PLANE	
DRAWN ION 13 AUG 08	DATE 13 AUG 08	DESIGN BY P. F. WUELLER	DWS REZE B
CHECKED HF 07APR09	DATE 07APR09	PART NUMBER 349.1370-AWK	REV C
PROJ ENGR ENR 07APR09	DATE 07APR09	DO NOT SCALE DRAWING	SCALE 1 : 1
		SHEET 2	OF 13



VERIFY PLOT
DATE SEP 23 2009

REV	ECN	DESCRIPTION	BY	CHK	DATE	APPROV
C	5258	ADDED R504, R505	ION	HF	02SEP08	PFM
B	5241	CHG L401, L404, C403, C404, C406	ION	HF	12JUL08	PFM
A		RELEASE FOR PRODUCTION	ION	HF	07APR08	PFM

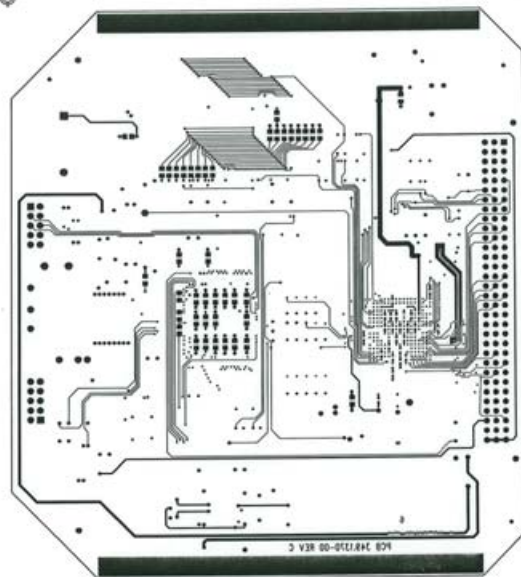
TIDELAND SIGNAL CORP. 4360 GERRITSON RD HOUSTON, TEXAS 77062		TITLE AWK, SBCN-2, SYS-6, DSP 68HC16 CPU	
THIS DRAWING EMBODIES PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED OR PART OR WHOLE BE USED FOR ANY PURPOSE OTHER THAN PRESENTED, REPAIR, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.		LAYER 3 ROUTING	
DESIGN ION 13 AUG 08	DATE 13 AUG 08	DESIGN BY P. F. MUELLER	DWS SIZE B
CHECKED HF 07APR08	DATE 07APR08	PART NUMBER 349.1370-AWK	REV C
PROJ ENGR EMB 07APR08	DATE 07APR08	DO NOT SCALE DRAWING	SCALE 1 : 1
		SHEET 3	OF 13

ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED



C	5250	ADDED R504, R505	JDN	HF	63SEP89	PFL	
B	5241	CHG L40L L40A, C403, C404, C406	JDN	HF	12JUL89	PFL	
A		RELEASE FOR PRODUCTION	JDN	HF	27APR89	PFL	
REV	ECON	DESCRIPTION	BY	CHK	DATE	NONE	
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED							

 TIDALAN SIGNAL CORP. 4315 DIRECTORS RD. HOUSTON, TEXAS 77032		TITLE AWK, SBCN-2, SYS-6, DSP 68HC16 CPU	
THIS DRAWING REMAINS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDALAN SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN PART OR IN WHOLE OR USED FOR ANY PURPOSE OTHER THAN THE PURCHASING, REPAIRS, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.			
LAYER 5 POWER			
DRAWN ION	DATE 13 AUG 06	DESIGNED BY P. F. WUELLER	SUB SIZE B
CHECKED HF STAFFORD	DATE 13 AUG 06	PART NUMBER 349.1370-AWK	REV C
PROJ ENG END STAFFORD	DATE 13 AUG 06	ISL EX DO NOT SCALE DIMENSIONS	SCALE 1 : 1 SHEET 5 OF 13

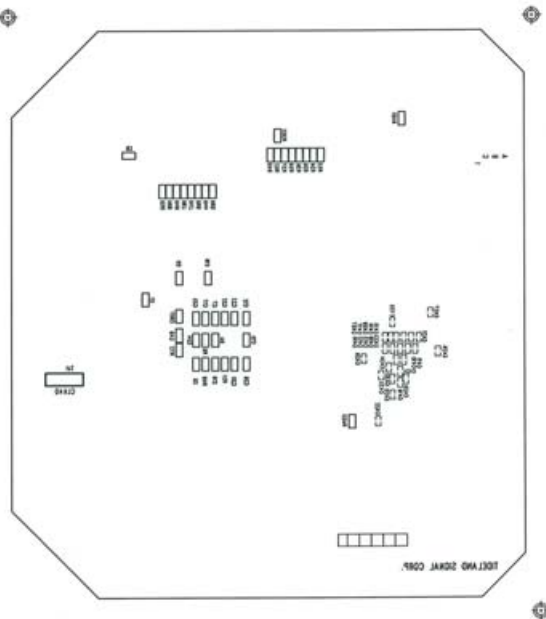


VERIFY PLOT
DATE SEP 23 2006

				 TIDELAND SIGNAL CORP. 4310 CORNELIUS RD HOUSTON, TEXAS 77062				TITLE AWK, SBCN-2, SYS-6, DSP 68HC16 CPU					
				THIS DRAWING CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED OR USED IN ANY MANNER OTHER THAN FOR THE PURPOSES SPECIFIED IN THE ORDER AND THAT IT SHALL BE RETURNED ON DEMAND.				LAYER 6 BOTTOM					
C 5258		ADDED R504, R555		ION	HF	03SEP08	PTM	DRAWN ION DATE 13 AUG 08		DESIGN BY P. F. MUELLER	SUB REZE B	PART NUMBER 349.1370-AWK	REV C
B 5241		CHG L401, L404, C403, C404, C406		ION	HF	12JUL08	PTM	CHECKED HF 07APR09					
A		RELEASE FOR PRODUCTION		ION	HF	07APR09	PTM						
REV	ION	DESCRIPTION		BY	CHK	DATE	APRD						
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED													
				PROJ ENGR EBB	DATE 07APR09	DL	EX	DO NOT SCALE DRAWING	SCALE 1 : 1	SHEET 6	OF 13		

[illegible]

	TIDALAN SIGNAL CORP.				TITLE AWK, SBCN-2, SYS-6, DSF 68HC16 CPU	
	4310 SELECTION RD HOUSTON, TEXAS 77062					
THIS TIDALAN DRAWING PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED TO YOUR FIRM, COMPANY OR TO THE UNDERDRAWER THAT IT SHALL NOT BE REPRODUCED IN PART OR WHOLE OR USED FOR ANY PURPOSE OTHER THAN INDICATED, REPAIRS, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.						
TSS						
ORIGIN ION	DATE 13 AUG 68	DESIGN BY P. F. WUELLER	DWG SIZE B	SHEET NUMBER 349.1370-AWK	REV C	
CHECKED WF	DATE 07APR69					
PROJ ENG ERB	DATE 07APR69	VL	EX	DO NOT SCALE DRAWING	SCALE 1 : 1	SHEET 7 of 13

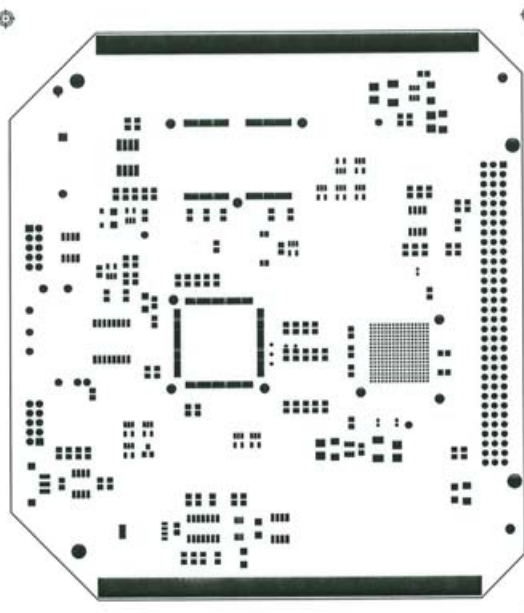


VERIFY PLANT
DATE SEP 23 2009

REV	ICH	DESCRIPTION	BY	CHK	DATE	APPROV
C	5258	ADDED R504, R505	ICH	HF	03SEP08	PFM
B	5241	CHG L401, L404, C403, C404, C405	ICH	HF	12JUL08	PFM
A		RELEASE FOR PRODUCTION	ICH	HF	07APR09	PFM

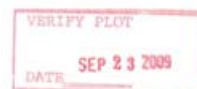
 TIDELAND SIGNAL CORP. 4360 DIRECTORS RD HOUSTON, TEXAS 77062		TITLE AWK, SBCN-2, SYS-6, DSP 68HC16 CPU BSS	
DESIGN BY ICH 13 AUG 08 P. F. MUELLER		DWG NO B	
CHECKED HF 07APR09		DWT NUMBER 349.1370-AWK	
DESIGNED BY ICH 13 AUG 08 P. F. MUELLER		REV C	
POST ENGR ERS 07APR09		DO NOT SCALE DIMENSIONS 1 : 1 SHEET 8 OF 13	

ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED



VERIFY PLOT
DATE SEP 23 2008

								TIDELAND SIGNAL CORP.				4310 DIRECTORS RD HOUSTON, TEXAS 77062				TITLE AWK, SBCN-2, SYS-6, DSP 68HC16 CPU																							
				THIS DRAWING IS UNCLASSIFIED AND CONFIDENTIAL INFORMATION AND IS LOANED TO THE USER BY THE USER'S COMPANY. IT IS NOT TO BE REPRODUCED OR USED FOR ANY PURPOSE OTHER THAN THE PURPOSE FOR WHICH IT WAS LOANED. IT IS TO BE RETURNED TO THE USER'S COMPANY WHEN IT IS NO LONGER NEEDED.								TSM																											
C 5258				ADDED R504, R505				ION HF 03SEP08				PFW				DRAWN				DATE 13 AUG 08				DESIGN BY P. F. MUELLER				DWS SIZE B				PART NUMBER 349.1370-AWK				REV C			
B 5241				CHG L401, L404, C403, C404, C406				ION HF 02JUL08				PFW				CHECKED HF 07APR09																							
A				RELEASE FOR PRODUCTION				ION HF 07APR09				PFW																											
REV ECH				DESCRIPTION				BY CHK DATE				APUD																											
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED																																							

[illegible]

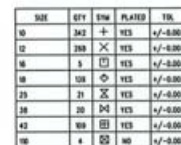
 TIDELAND SIGNAL CORP. 4312 DIRECTORS ROW HOUSTON, TEXAS 77002		TITLE AWK, SBCN-2, SYS-6, DSP 68HC16 CPU	
THIS DRAWING CONVEYS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION TO THE UNDERSIGNED THAT IT WILL NOT BE REPRODUCED IN PART OR WHOLE OR USED FOR ANY PURPOSES OTHER THAN INVESTIGATION, REVIEW, OR IMPLEMENTATION OF THAT IT SHALL BE RETURNED ON DEMAND.			
DRAWN ION DATE 13 AUG 08		DESIGN BY P. F. WUELLER	
CHECKED JF 07APR09		SUB SIZE B	
PART NUMBER 349.1370-AWK		REV C	
PROJ ENG END 07APR09		SCALE 1 : 1	
SHEET 10		OF 13	



										 TIDELAND SIGNAL CORP. 420 DIRECTORS Bldg HOUSTON, TEXAS 77002		TITLE AWK, SBCN-2, SYS-6, DSP 68HC16 CPU						
										THIS MESSAGE CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN WHOLE OR IN PART OR USED FOR ANY PURPOSE OTHER THAN THE DEVELOPMENT, DESIGN, OR EVALUATION AND THAT IT SHALL BE RETURNED ON DEMAND.		TSP						
C	3258	ADDED 8504, 8505	ION	HT	05SEP89	PFM	DATE	DISSEM BY	DISC SIZE	PART NUMBER	REV							
B	5241	CHC 1401, 1404, C403, C404, C406	ION	HT	12AUG89	PFM	13 AUG 89	P. F. MUELLER										
A		RELEASE FOR PRODUCTION	ION	HT	STAFFED	PFM	CHECKED	DATE	B	349.1370-AWK	C							
					HT		STAFFED											
REV	ENR	DESCRIPTION	BY	CHK	DATE	ADUS	PROJ ENR	QTRAPRO	DATE	SL	EX	DO NOT SCALE (DRAWING)	SCALE	1 : 1	SHEET	11	OF	13



										 TIDELAND SIGNAL CORP. 4310 DEXTERSON ROAD HOUSTON, TEXAS 77062		TITLE AWK, SBCN-2, SYS-6, DSP 68HC16 CPU					
										THIS DRAWING ENCOMPASSES PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN WHOLE OR IN PART OR LOANED FOR ANY PURPOSE OTHER THAN THE SPECIFIC DESIGN, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.		BSP					
C 5208		ADDED R504, R505		ION	HT	63SEP68	PFM	DATE	13 AUG 68	DESIGN BY	P. F. WUELLER	DWG. SIZE	A	PART NUMBER	349.1370-AWK	REV	C
B 5241		CHG L40L L40A, C403, C404, C406		ION	HT	02AUG68	PFM	CHECKED	DATE	HT	STAPLED	B	349.1370-AWK				
A		RELEASE FOR PRODUCTION		ION	HT	STAPLED	PFM										
REV ECDN		DESCRIPTION		BY	CHK	DATE	APVD										
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED																	

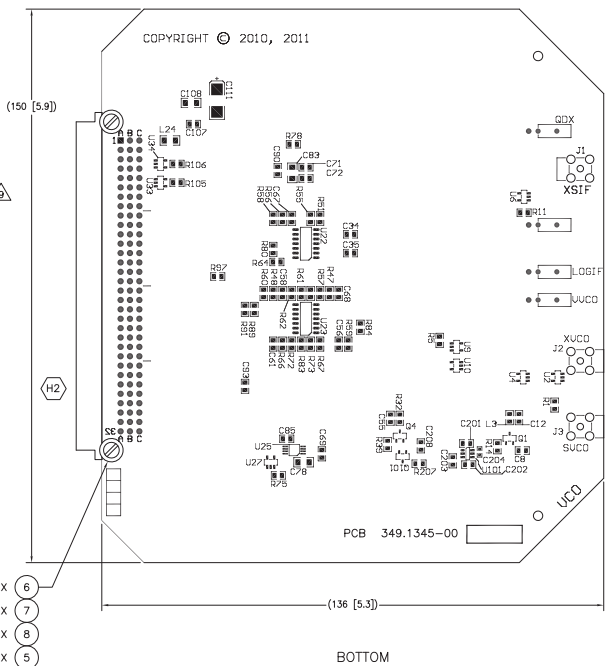
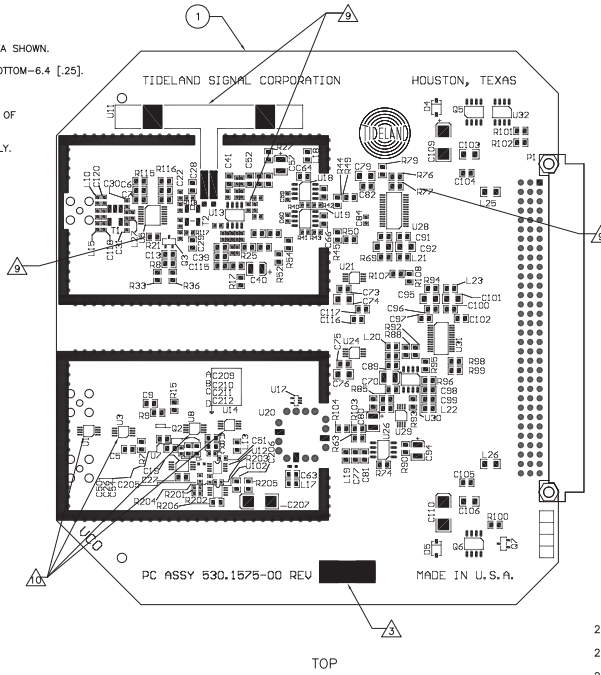


		TIDAL SIGNAL CORP.				TITLE	
4315 DICKENS RD HOUSTON, TEXAS 77002		AWK, SBCN-2, SYS-6, DSP 68HC16 CPU					
THIS DRAWING REMAINS PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDAL SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED OR IN ANY MANNER OR USED FOR ANY PURPOSE, OTHER THAN EVALUATION, REVIEW, OR SIMULATION AND THAT IT SHALL BE RETURNED ON DEMAND.							
						FAB	
COMPANION DATE 13 AUG 68	DESIGNED BY P. F. WUELLER	SUB SIZE B	PART NUMBER 349.1370-AWK	REV C			
CHECKED BY WF 87APR68							
PROJ ENGR ENR 87APR68	DATE 13 AUG 68	DL	EX	DO NOT SCALE DIMENSIONS	SCALE 1 : 1	SHEET 13	OF 13

VERIFY PLOT
DATE SEP 23 2009

NOTES: UNLESS OTHERWISE SPECIFIED

- FOR SCHEMATIC SEE 530.1575-SCH.
- ASSEMBLE IN STATIC FREE AREA.
- MARK ASSEMBLY REVISION LETTER IN AREA SHOWN.
- MAX. COMPONENT HEIGHT TOP-10 [.4], BOTTOM-6.4 [.25].
- MAX. LEAD PROTRUSION: 2.3 [.09].
- BOARD ASSY SHALL MEET REQUIREMENTS OF IPC-A-610B CLASS 3.
- ENSURE ITEMS 9 & 10 ARE SEATED FULLY. REMOVED.
- U11, C53, R21, R77 ARE ADDED AT TEST.
- U1, U3, U8, AND U14 SOLDER PER MANUFACTURER'S SPECIFICATION.
- DENOTES REVISION SYMBOL.



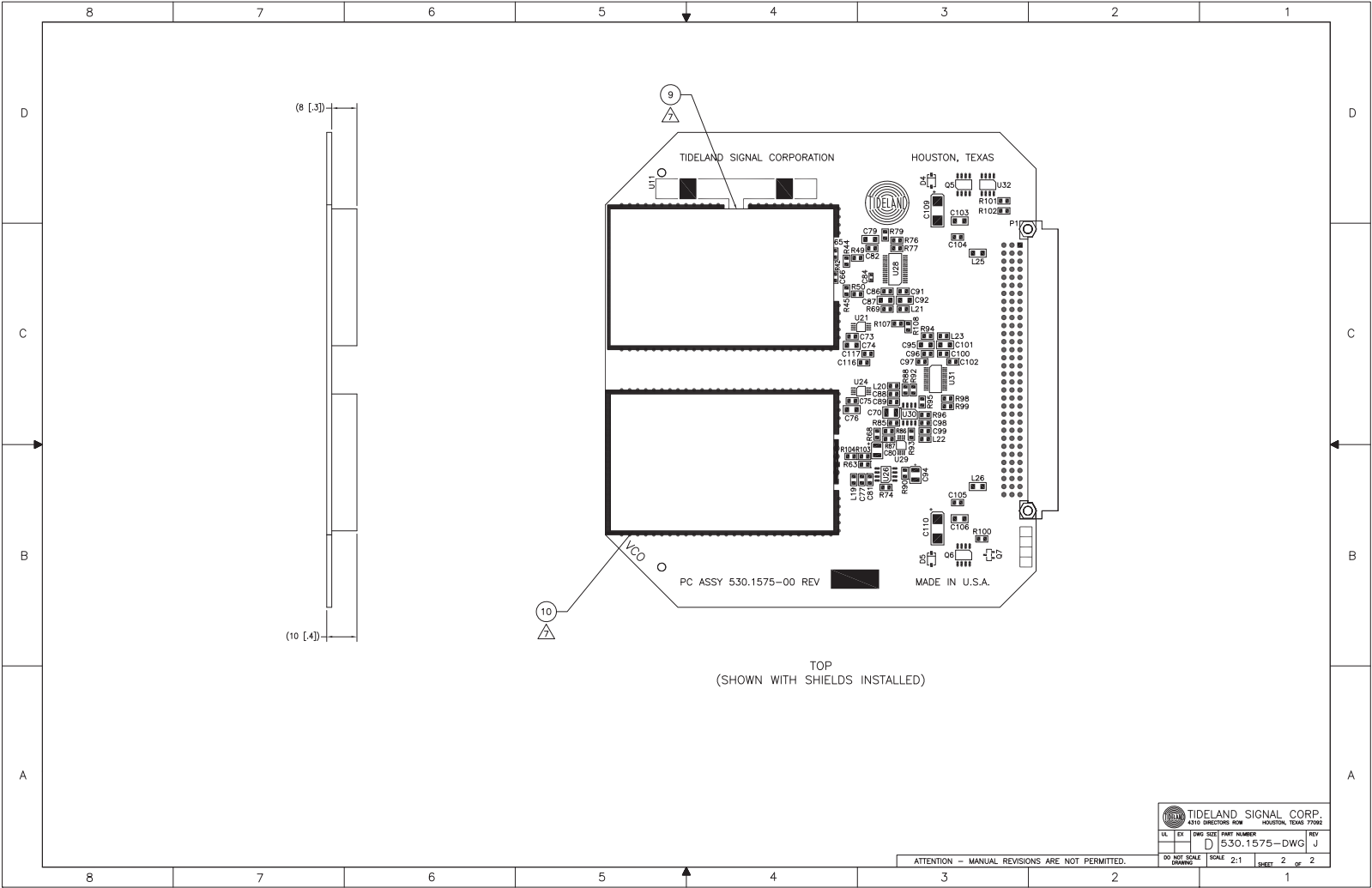
APPROVED FOR:
____ ONLY
____ INT. ____ DATE

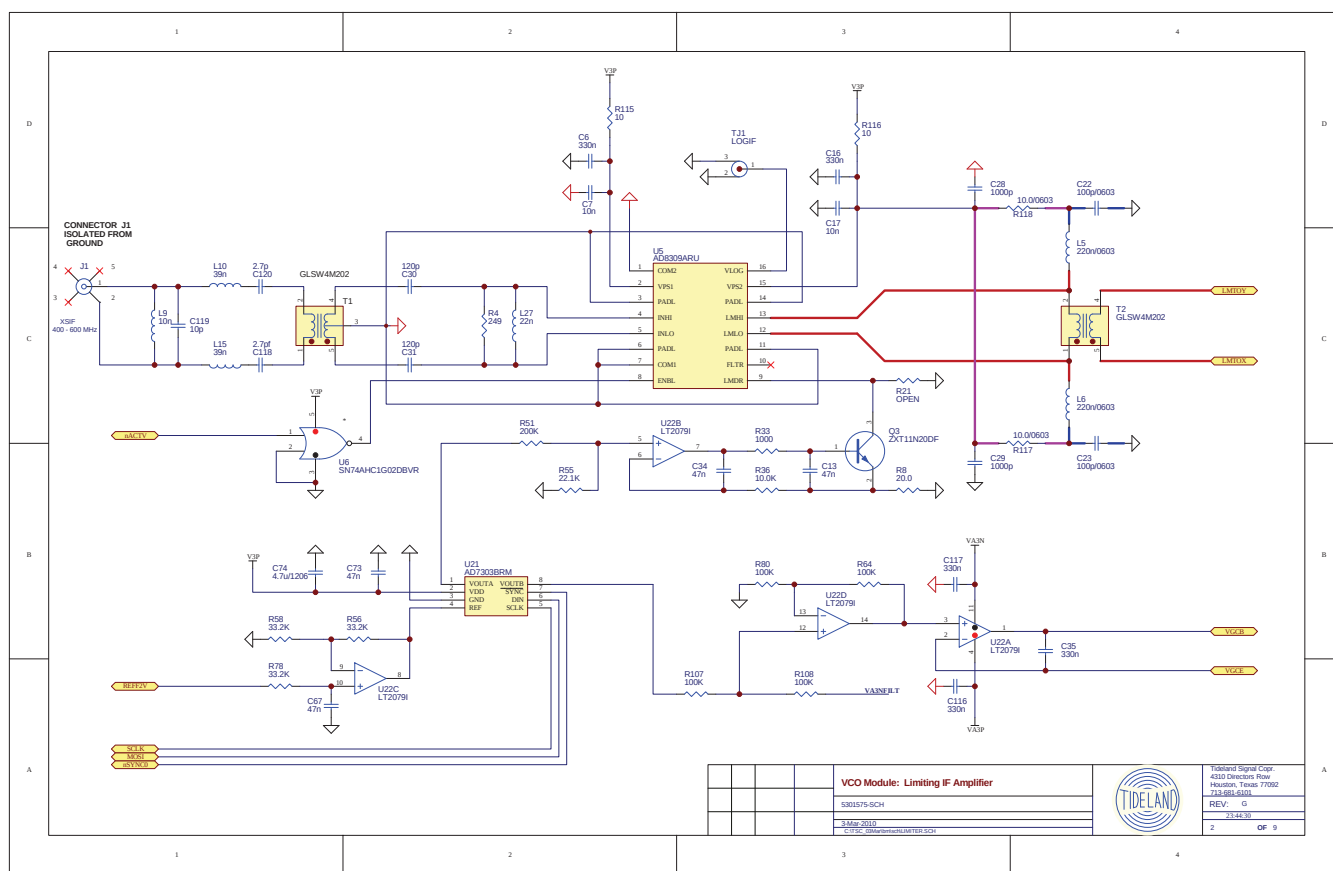
DASH OPTION	
DASH NO.	DESCRIPTION
-00	VCO, SBON-2 SYS 6 (UNTUNED)
-01	OBSOLETE
-02	VCO, SBON-2 SYS 6 (TUNED)

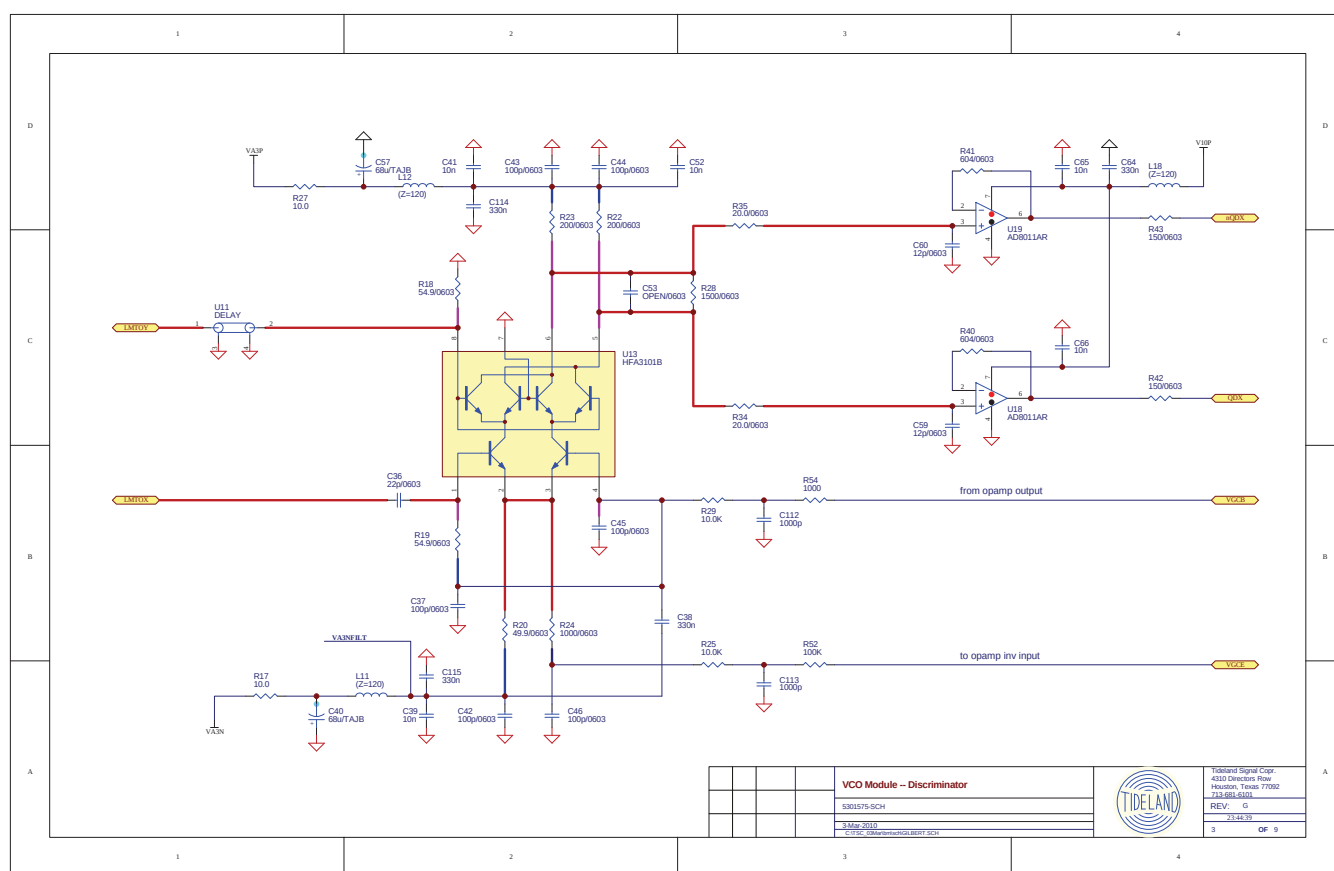
REV	EDN	ZONE	DESCRIPTION	BY	CHK	DATE	APVD
J	6351	C3-1	1) ADDED DASH OPTION TABLE	HA	LM	18JAN13	PFM
H	6240		2) DELETED NOTE 8	HA	JS	07SEP12	PFM
G	5069		NEW PRESCLER CIRCUIT	HA	PFM	18MAY10	ERB
F	4821		X6 MODIFIED, RELEASED AS F	7GB	HF	06DEC07	ERB

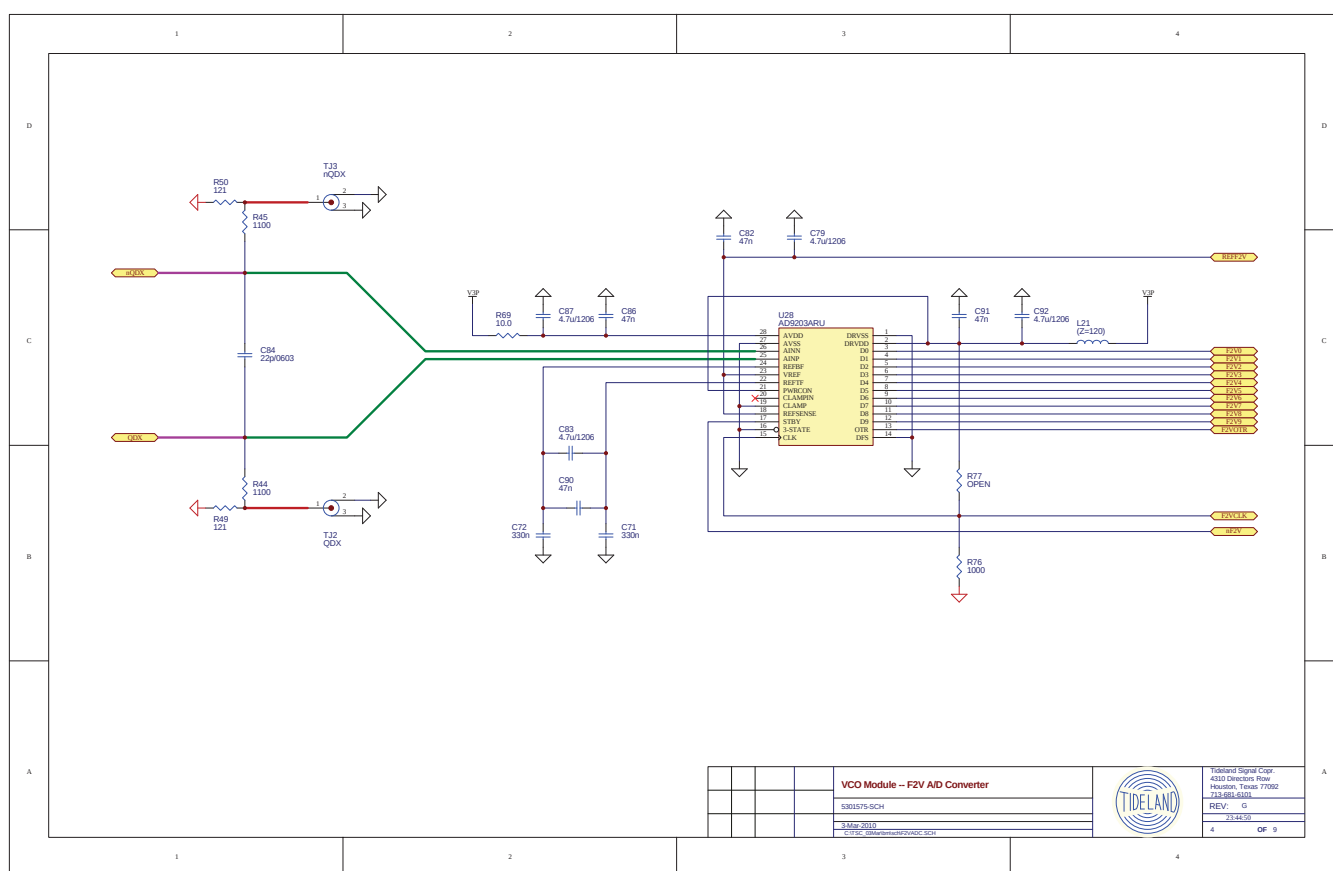
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED.

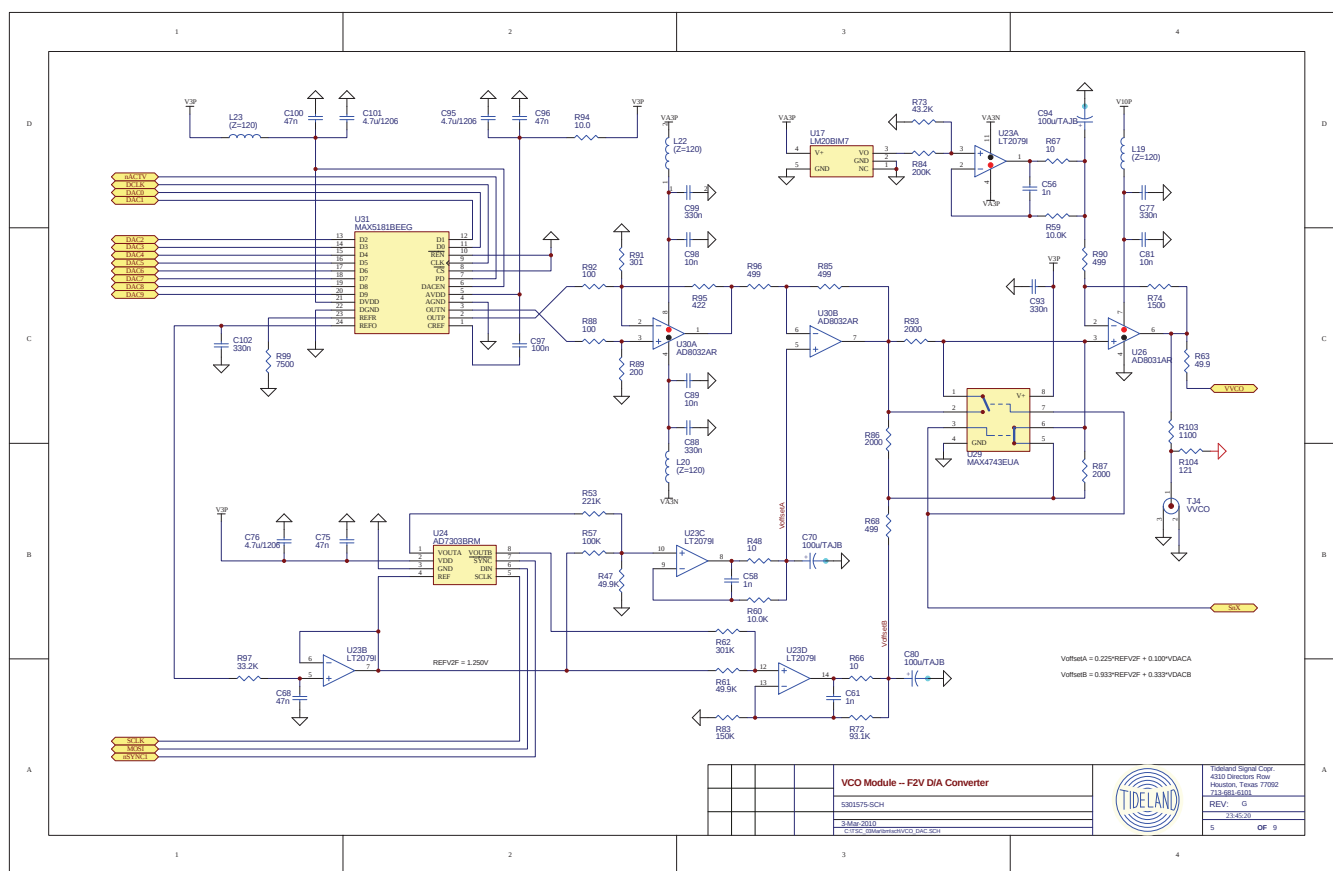
UNLESS OTHERWISE SPECIFIED		MATERIAL		TIDELAND SIGNAL CORP.	
1. TOLERANCE	2. TOLERANCE	3. TOLERANCE	4. TOLERANCE	5. TOLERANCE	6. TOLERANCE
MILLIMETERS	INCHES	MILLIMETERS	INCHES	MILLIMETERS	INCHES
.1 = .004	.1 = .004	.1 = .004	.1 = .004	.1 = .004	.1 = .004
.2 = .008	.2 = .008	.2 = .008	.2 = .008	.2 = .008	.2 = .008
.3 = .012	.3 = .012	.3 = .012	.3 = .012	.3 = .012	.3 = .012
.4 = .016	.4 = .016	.4 = .016	.4 = .016	.4 = .016	.4 = .016
.5 = .020	.5 = .020	.5 = .020	.5 = .020	.5 = .020	.5 = .020
.6 = .024	.6 = .024	.6 = .024	.6 = .024	.6 = .024	.6 = .024
.7 = .028	.7 = .028	.7 = .028	.7 = .028	.7 = .028	.7 = .028
.8 = .032	.8 = .032	.8 = .032	.8 = .032	.8 = .032	.8 = .032
.9 = .036	.9 = .036	.9 = .036	.9 = .036	.9 = .036	.9 = .036
1.0 = .040	1.0 = .040	1.0 = .040	1.0 = .040	1.0 = .040	1.0 = .040
1.1 = .044	1.1 = .044	1.1 = .044	1.1 = .044	1.1 = .044	1.1 = .044
1.2 = .048	1.2 = .048	1.2 = .048	1.2 = .048	1.2 = .048	1.2 = .048
1.3 = .052	1.3 = .052	1.3 = .052	1.3 = .052	1.3 = .052	1.3 = .052
1.4 = .056	1.4 = .056	1.4 = .056	1.4 = .056	1.4 = .056	1.4 = .056
1.5 = .060	1.5 = .060	1.5 = .060	1.5 = .060	1.5 = .060	1.5 = .060
1.6 = .064	1.6 = .064	1.6 = .064	1.6 = .064	1.6 = .064	1.6 = .064
1.7 = .068	1.7 = .068	1.7 = .068	1.7 = .068	1.7 = .068	1.7 = .068
1.8 = .072	1.8 = .072	1.8 = .072	1.8 = .072	1.8 = .072	1.8 = .072
1.9 = .076	1.9 = .076	1.9 = .076	1.9 = .076	1.9 = .076	1.9 = .076
2.0 = .080	2.0 = .080	2.0 = .080	2.0 = .080	2.0 = .080	2.0 = .080
2.1 = .084	2.1 = .084	2.1 = .084	2.1 = .084	2.1 = .084	2.1 = .084
2.2 = .088	2.2 = .088	2.2 = .088	2.2 = .088	2.2 = .088	2.2 = .088
2.3 = .092	2.3 = .092	2.3 = .092	2.3 = .092	2.3 = .092	2.3 = .092
2.4 = .096	2.4 = .096	2.4 = .096	2.4 = .096	2.4 = .096	2.4 = .096
2.5 = .100	2.5 = .100	2.5 = .100	2.5 = .100	2.5 = .100	2.5 = .100
2.6 = .104	2.6 = .104	2.6 = .104	2.6 = .104	2.6 = .104	2.6 = .104
2.7 = .108	2.7 = .108	2.7 = .108	2.7 = .108	2.7 = .108	2.7 = .108
2.8 = .112	2.8 = .112	2.8 = .112	2.8 = .112	2.8 = .112	2.8 = .112
2.9 = .116	2.9 = .116	2.9 = .116	2.9 = .116	2.9 = .116	2.9 = .116
3.0 = .120	3.0 = .120	3.0 = .120	3.0 = .120	3.0 = .120	3.0 = .120
3.1 = .124	3.1 = .124	3.1 = .124	3.1 = .124	3.1 = .124	3.1 = .124
3.2 = .128	3.2 = .128	3.2 = .128	3.2 = .128	3.2 = .128	3.2 = .128
3.3 = .132	3.3 = .132	3.3 = .132	3.3 = .132	3.3 = .132	3.3 = .132
3.4 = .136	3.4 = .136	3.4 = .136	3.4 = .136	3.4 = .136	3.4 = .136
3.5 = .140	3.5 = .140	3.5 = .140	3.5 = .140	3.5 = .140	3.5 = .140
3.6 = .144	3.6 = .144	3.6 = .144	3.6 = .144	3.6 = .144	3.6 = .144
3.7 = .148	3.7 = .148	3.7 = .148	3.7 = .148	3.7 = .148	3.7 = .148
3.8 = .152	3.8 = .152	3.8 = .152	3.8 = .152	3.8 = .152	3.8 = .152
3.9 = .156	3.9 = .156	3.9 = .156	3.9 = .156	3.9 = .156	3.9 = .156
4.0 = .160	4.0 = .160	4.0 = .160	4.0 = .160	4.0 = .160	4.0 = .160
4.1 = .164	4.1 = .164	4.1 = .164	4.1 = .164	4.1 = .164	4.1 = .164
4.2 = .168	4.2 = .168	4.2 = .168	4.2 = .168	4.2 = .168	4.2 = .168
4.3 = .172	4.3 = .172	4.3 = .172	4.3 = .172	4.3 = .172	4.3 = .172
4.4 = .176	4.4 = .176	4.4 = .176	4.4 = .176	4.4 = .176	4.4 = .176
4.5 = .180	4.5 = .180	4.5 = .180	4.5 = .180	4.5 = .180	4.5 = .180
4.6 = .184	4.6 = .184	4.6 = .184	4.6 = .184	4.6 = .184	4.6 = .184
4.7 = .188	4.7 = .188	4.7 = .188	4.7 = .188	4.7 = .188	4.7 = .188
4.8 = .192	4.8 = .192	4.8 = .192	4.8 = .192	4.8 = .192	4.8 = .192
4.9 = .196	4.9 = .196	4.9 = .196	4.9 = .196	4.9 = .196	4.9 = .196
5.0 = .200	5.0 = .200	5.0 = .200	5.0 = .200	5.0 = .200	5.0 = .200
5.1 = .204	5.1 = .204	5.1 = .204	5.1 = .204	5.1 = .204	5.1 = .204
5.2 = .208	5.2 = .208	5.2 = .208	5.2 = .208	5.2 = .208	5.2 = .208
5.3 = .212	5.3 = .212	5.3 = .212	5.3 = .212	5.3 = .212	5.3 = .212
5.4 = .216	5.4 = .216	5.4 = .216	5.4 = .216	5.4 = .216	5.4 = .216
5.5 = .220	5.5 = .220	5.5 = .220	5.5 = .220	5.5 = .220	5.5 = .220
5.6 = .224	5.6 = .224	5.6 = .224	5.6 = .224	5.6 = .224	5.6 = .224
5.7 = .228	5.7 = .228	5.7 = .228	5.7 = .228	5.7 = .228	5.7 = .228
5.8 = .232	5.8 = .232	5.8 = .232	5.8 = .232	5.8 = .232	5.8 = .232
5.9 = .236	5.9 = .236	5.9 = .236	5.9 = .236	5.9 = .236	5.9 = .236
6.0 = .240	6.0 = .240	6.0 = .240	6.0 = .240	6.0 = .240	6.0 = .240
6.1 = .244	6.1 = .244	6.1 = .244	6.1 = .244	6.1 = .244	6.1 = .244
6.2 = .248	6.2 = .248	6.2 = .248	6.2 = .248	6.2 = .248	6.2 = .248
6.3 = .252	6.3 = .252	6.3 = .252	6.3 = .252	6.3 = .252	6.3 = .252
6.4 = .256	6.4 = .256	6.4 = .256	6.4 = .256	6.4 = .256	6.4 = .256
6.5 = .260	6.5 = .260	6.5 = .260	6.5 = .260	6.5 = .260	6.5 = .260
6.6 = .264	6.6 = .264	6.6 = .264	6.6 = .264	6.6 = .264	6.6 = .264
6.7 = .268	6.7 = .268	6.7 = .268	6.7 = .268	6.7 = .268	6.7 = .268
6.8 = .272	6.8 = .272	6.8 = .272	6.8 = .272	6.8 = .272	6.8 = .272
6.9 = .276	6.9 = .276	6.9 = .276	6.9 = .276	6.9 = .276	6.9 = .276
7.0 = .280	7.0 = .280	7.0 = .280	7.0 = .280	7.0 = .280	7.0 = .280
7.1 = .284	7.1 = .284	7.1 = .284	7.1 = .284	7.1 = .284	7.1 = .284
7.2 = .288	7.2 = .288	7.2 = .288	7.2 = .288	7.2 = .288	7.2 = .288
7.3 = .292	7.3 = .292	7.3 = .292	7.3 = .292	7.3 = .292	7.3 = .292
7.4 = .296	7.4 = .296	7.4 = .296	7.4 = .296	7.4 = .296	7.4 = .296
7.5 = .300	7.5 = .300	7.5 = .300	7.5 = .300	7.5 = .300	7.5 = .300
7.6 = .304	7.6 = .304	7.6 = .304	7.6 = .304	7.6 = .304	7.6 = .304
7.7 = .308	7.7 = .308	7.7 = .308	7.7 = .308	7.7 = .308	7.7 = .308
7.8 = .312	7.8 = .312	7.8 = .312	7.8 = .312	7.8 = .312	7.8 = .312
7.9 = .316	7.9 = .316	7.9 = .316	7.9 = .316	7.9 = .316	7.9 = .316
8.0 = .320	8.0 = .320	8.0 = .320	8.0 = .320	8.0 = .320	8.0 = .320
8.1 = .324	8.1 = .324	8.1 = .324	8.1 = .324	8.1 = .324	8.1 = .324
8.2 = .328	8.2 = .328	8.2 = .328	8.2 = .328	8.2 = .328	8.2 = .328
8.3 = .332	8.3 = .332	8.3 = .332	8.3 = .332	8.3 = .332	8.3 = .332
8.4 = .336	8.4 = .336	8.4 = .336	8.4 = .336	8.4 = .336	8.4 = .336
8.5 = .340	8.5 = .340	8.5 = .340	8.5 = .340	8.5 = .340	8.5 = .340
8.6 = .344	8.6 = .344	8.6 = .344	8.6 = .344	8.6 = .344	8.6 = .344
8.7 = .348	8.7 = .348	8.7 = .348	8.7 = .348	8.7 = .348	8.7 = .348
8.8 = .352	8.8 = .352	8.8 = .352	8.8 = .352	8.8 = .352	8.8 = .352
8.9 = .356	8.9 = .356	8.9 = .356	8.9 = .356	8.9 = .356	8.9 = .356
9.0 = .360	9.0 = .360	9.0 = .360	9.0 = .360	9.0 = .360	9.0 = .360
9.1 = .364	9.1 = .364	9.1 = .364	9.1 = .364	9.1 = .364	9.1 = .364
9.2 = .368	9.2 = .368	9.2 = .368	9.2 = .368	9.2 = .368	9.2 = .368
9.3 = .372	9.3 = .372	9.3 = .372	9.3 = .372	9.3 = .372	9.3 = .372
9.4 = .376	9.4 = .376	9.4 = .376	9.4 = .376	9.4 = .376	9.4 = .376
9.5 = .380	9.5 = .380	9.5 = .380	9.5 = .380	9.5 = .380	9.5 = .380
9.6 = .384	9.6 = .384	9.6 = .384	9.6 = .384	9.6 = .384	9.6 = .384
9.7 = .388	9.7 = .388	9.7 = .388	9.7 = .388	9.7 = .388	9.7 = .388
9.8 = .392	9.8 = .392	9.8 = .392	9.8 = .392	9.8 = .392	9.8 = .392
9.9 = .396	9.9 = .396	9.9 = .396	9.9 = .396	9.9 = .396	9.9 = .396
10.0 = .400	10.0 = .400	10.0 = .400	10.0 = .400	10.0 = .400	10.0 = .400

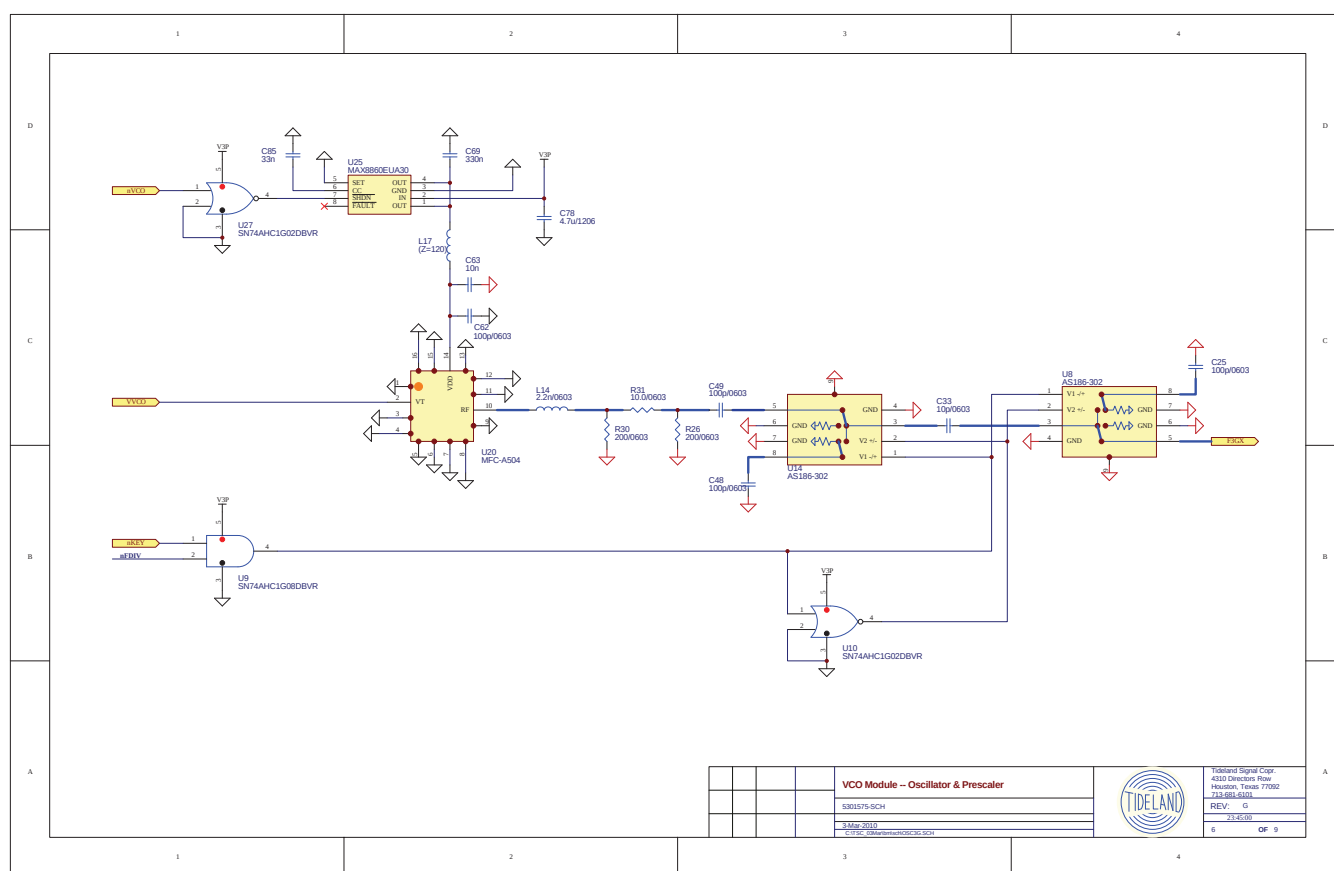


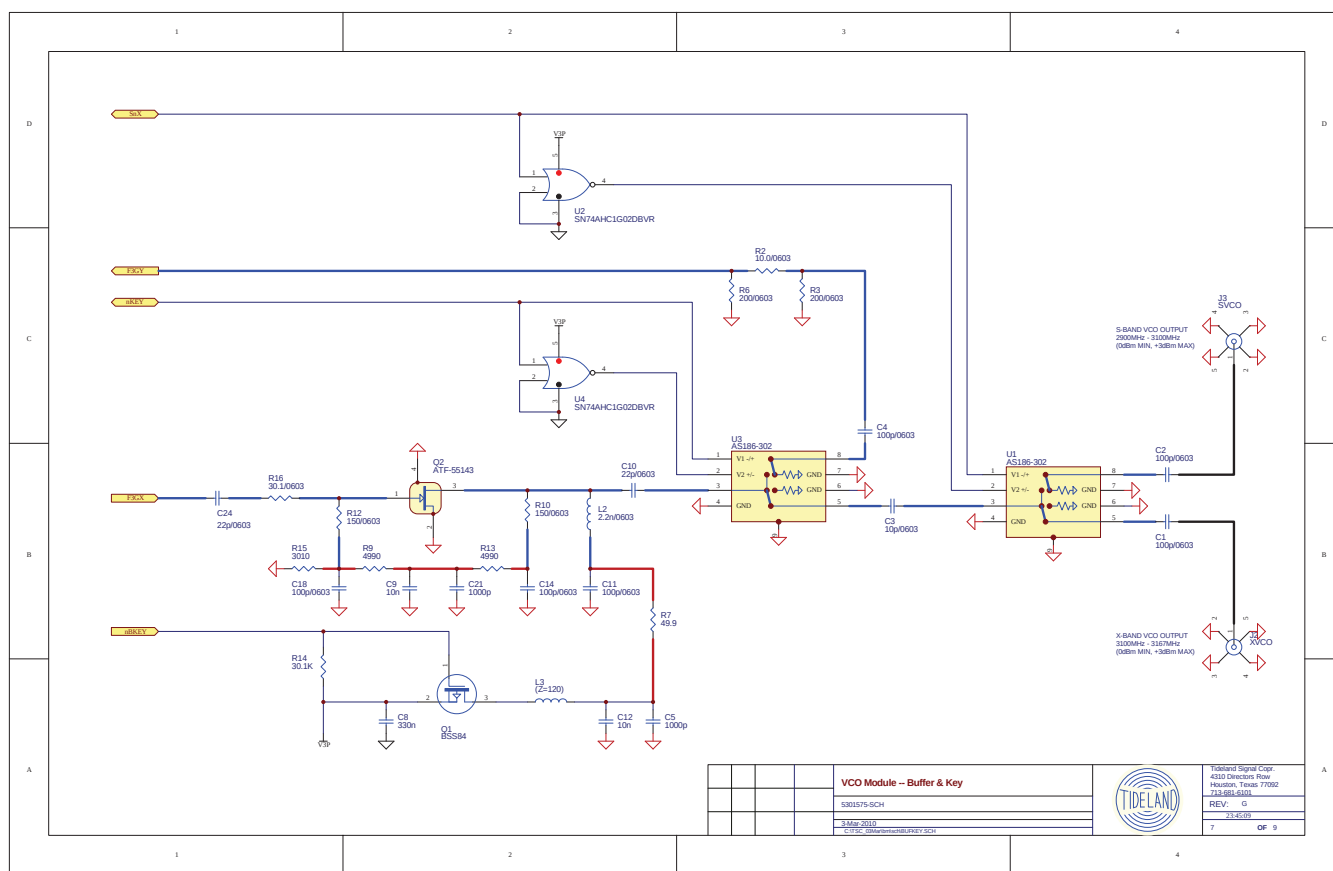


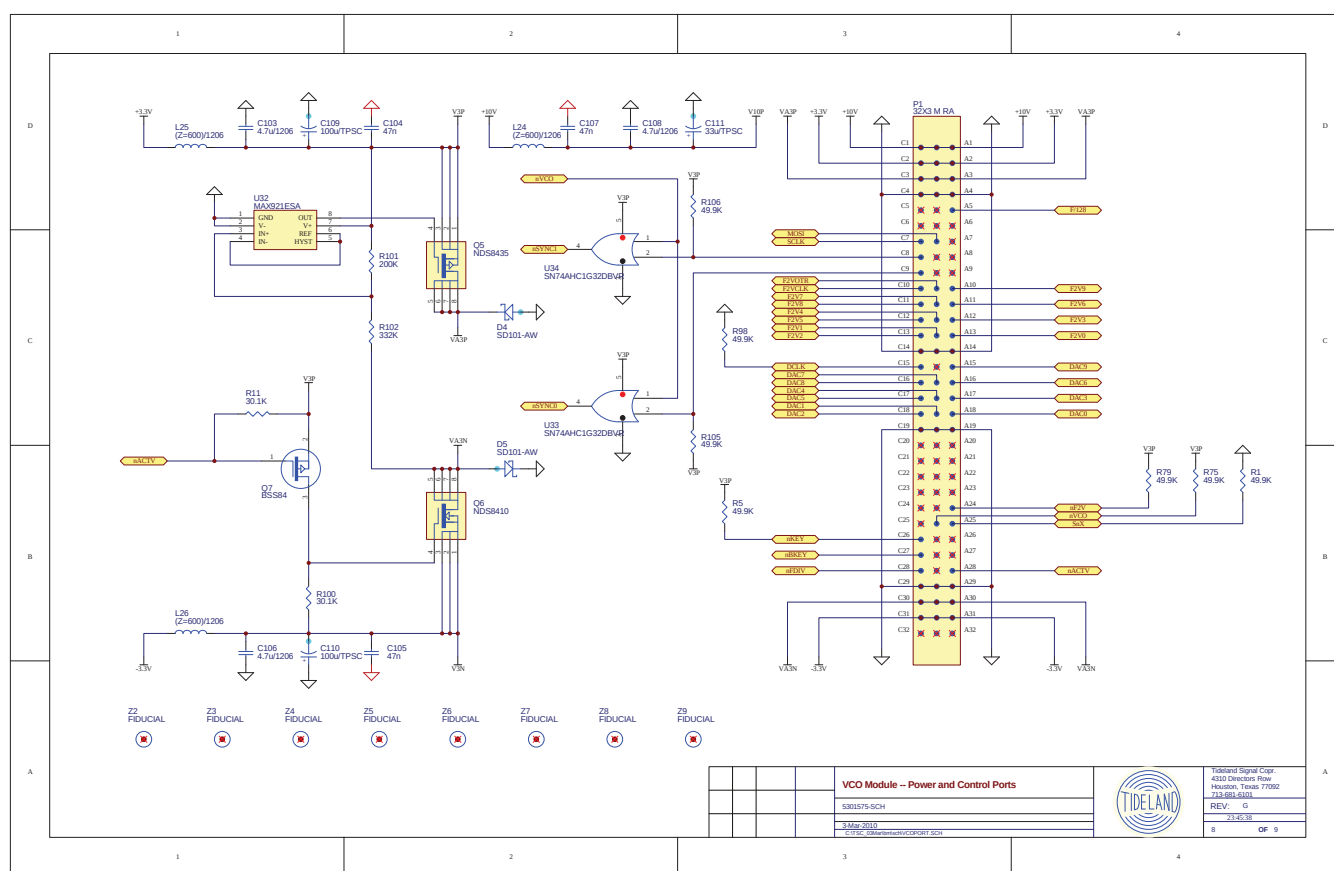


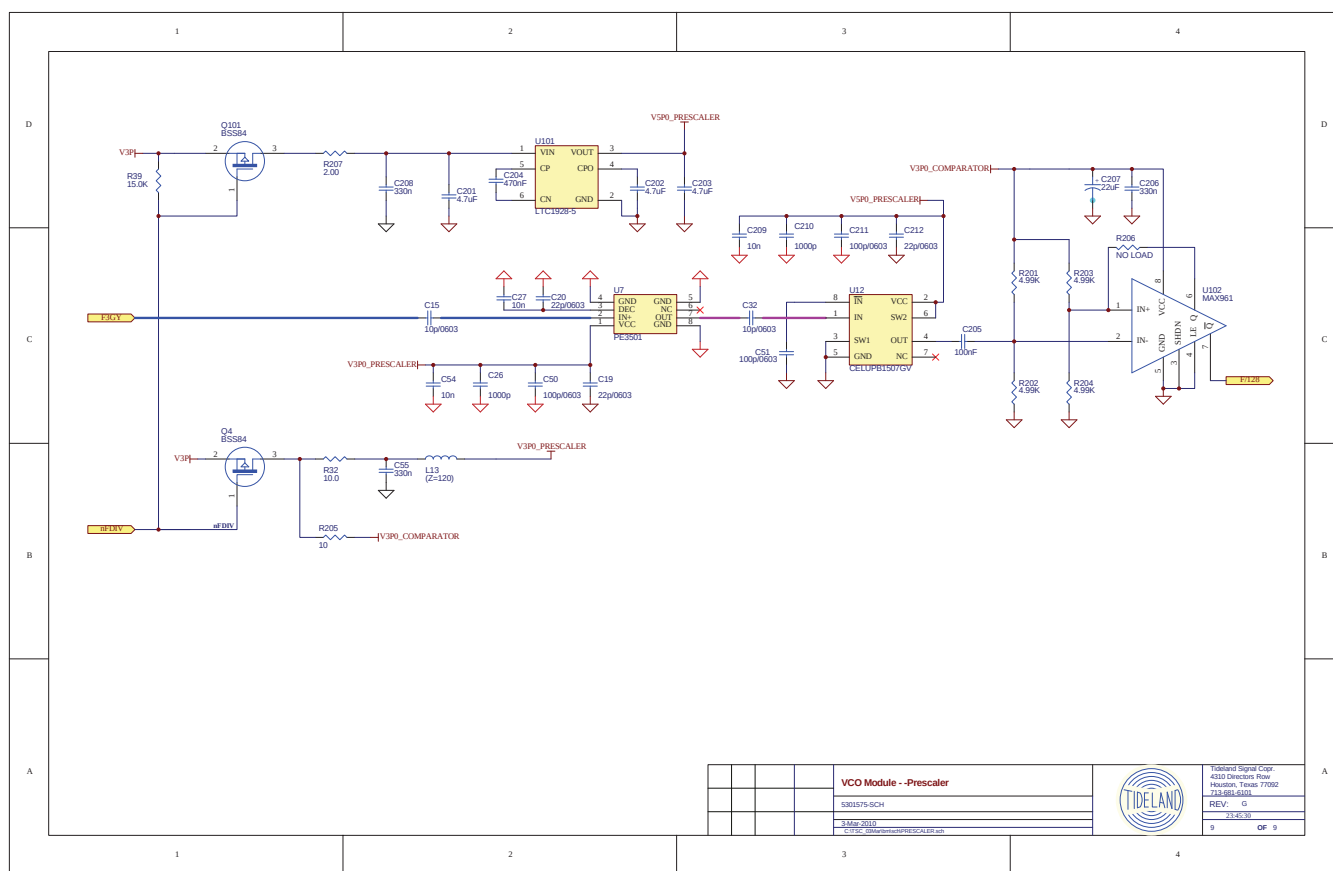












NOTES: UNLESS OTHERWISE SPECIFIED

- ALL DIMENSIONS ARE BASIC.
- THIS MULTILAYER BOARD SHALL MEET THE REQUIREMENTS OF IPC-4101, CLASS 3.
- MANUFACTURE USING AIRWORK 241345-REV 6 FOUR COPPER LAYERS WITH SOLDER MASK, SUCTIONED, AND PASTE MASK ON BOTH OUTER LAYERS. FOR MANUFACTURING PURPOSES THE AIRWORK SHALL NOT BE REDUCED TO OR FROM A REPRODUCIBLE MEDIA THAT IS LESS THAN A STABLE BASIC MATERIAL.
- LAYER #1 (TOP CIRCUIT) AND LAYER #2 (INTERNAL GROUND) TO BE 1 OZ. COPPER ON ROUGH ROUGH SUBSTRATE OF THICKNESS 0.41 [0.016] NOMINAL. SELECTIVE COATING 3.38 NOMINAL. LAYER #3 (INTERNAL SIGNAL & POWER) AND LAYER #4 (BOTTOM CIRCUIT) TO BE 1 OZ. COPPER ON FR-4 MATERIAL OF THICKNESS 0.41 [0.016] NOMINAL. SELECTIVE COATING 4.2 TO 4.8 TYPICAL. CORE TO BE FR-4 MATERIAL, TOTO TO HAVE OVERALL BOARD THICKNESS 1.58 [0.063] NOMINAL. COPPER CLAD LAMINATE AND PREPARED MATERIALS SHALL CONFORM TO TYPE OF PER MIL-STD-883C SPECIFIC MATERIAL REQUIREMENTS, THERMAL, AND LAYER ARRANGEMENTS SHALL BE IN ACCORDANCE WITH FIGURE 1.
- BOARD MUST BE PERMANENTLY MARKED, ON SOLDER SIDE, WITH:
 - A REVISION LETTER SPECIFIED ON THIS DRAWING AND ON THE PURCHASE ORDER IN COPPER IN AREA INDICATED BY []
 - CURRENTLY LISTED UL SUPPLIER MARK AS RECOMMENDED FOR UL LISTING []
 - A FOUR DIGIT DATE CODE YEAR AND WEEK OF MANUFACTURE []
- MINIMUM CONDUCTOR WIDTH 0.20 [0.008]
- EDGE CLEARANCE ON INTERNAL LAYERS NOT TO EXCEED 0.76 [0.030]
- TOP AND BOTTOM LAYERS TO BE FINISHED BY GOLD MASON PROCESS, 0.00008 [0.00008]-0.00008 [0.00008] GOLD SURFACE OVER EXPOSED COPPER.
- ALL PLATED THRU HOLES SHALL HAVE A MINIMUM OF 0.03 [0.001] THK PLATED COPPER.
- ALL HOLE SIZES ARE AFTER PLATING, TOL. 0.05 [0.002]
- SOLDERMASK OVER BASE COPPER PROCESS SHALL BE EMPLOYED ON TOP AND BOTTOM AS FOLLOWS: TH-LEAD PLATE TO BE USED ONLY AS A COPPER ETCHANT RESIST AND THEN COMPLETELY REMOVED, CHEMICALLY PHOTOGRAPHABLE LIQUID SOLDER MASK COLOP. THEN, TO BE APPLIED OVER BASE COPPER FOLLOWED BY 63/37 IN-LEAD PLATING TO COVER ALL EXPOSED BRACES, PADS, AND WALLS OF PLATED THRU HOLES. EXCESS SOLDER SHALL BE REMOVED AND HOLES SHALL BE CLEARED.
- SOLDERMASK SHALL BE APPLIED TO BOTH SIDES OF BOARD PER MASTER PATTERN SOLDERMASK, USING NON-CONDUCTIVE WHITE EPOXY INK.
- BOARD MUST BE USED BASE BOARD TESTED POINT TO POINT ON MAIN SYSTEM OR EQUIPMENT. TEST CERTIFICATION MUST BE PROVIDED. TEST CERTIFICATION MUST INCLUDE ANODE TEST VOLTAGE, 50 OHM OPEN SENSITIVITY, 2.5 MEGOHM SHORT AND 300mA MAX TEST CURRENT.
- USE PCB LAMINATE WITH A WATER ABSORPTION LESS THAN OR EQUAL TO 0.12%.
- BOARD FLATNESS TO BE 0.25 [0.010] 2.54 [1.000]/2.54 [1.000]
- EXPOSED PADS TO BE NOT AIR LEVELS.
- DO NOT PLATE THRU THESE "V" HOLES.

HOLE SCHEDULE				
DR	DR	QTY	DR	PLT
2.79	170	2	C	NPLTD
2.54	100	2	D	NPLTD
1.70	287	12	G	PLTD
1.07	242	101	C	PLTD
0.88	238	12	F	PLTD
0.41	238	203	B	PLTD
0.51	229	270	A	PLTD
1.07	042	3	C	NPLTD

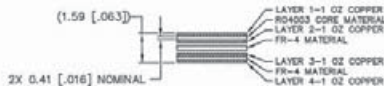
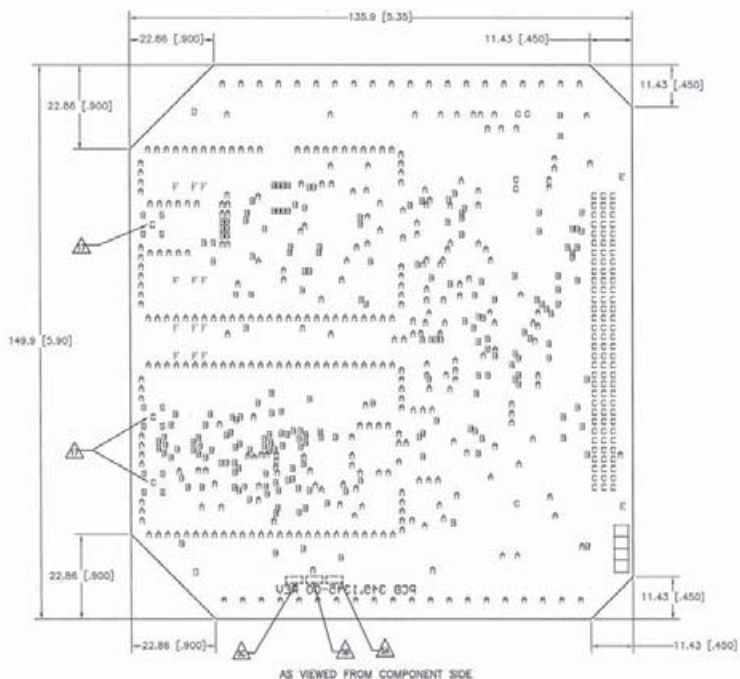
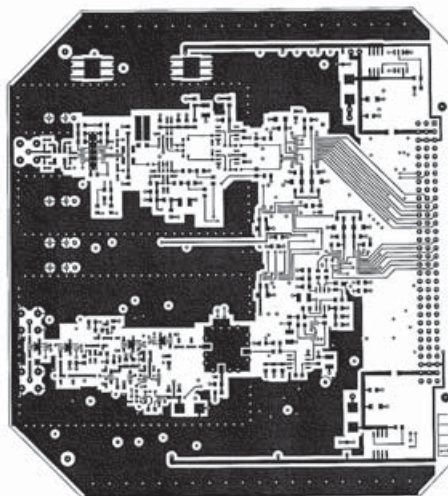


FIGURE 1
SCALE: NONE

UNLESS OTHERWISE SPECIFIED		MATERIAL	
1. SOLDERMASK	2. SOLDERMASK	3. SOLDERMASK	4. SOLDERMASK
5. SOLDERMASK	6. SOLDERMASK	7. SOLDERMASK	8. SOLDERMASK
9. SOLDERMASK	10. SOLDERMASK	11. SOLDERMASK	12. SOLDERMASK
13. SOLDERMASK	14. SOLDERMASK	15. SOLDERMASK	16. SOLDERMASK
17. SOLDERMASK	18. SOLDERMASK	19. SOLDERMASK	20. SOLDERMASK
21. SOLDERMASK	22. SOLDERMASK	23. SOLDERMASK	24. SOLDERMASK
25. SOLDERMASK	26. SOLDERMASK	27. SOLDERMASK	28. SOLDERMASK
29. SOLDERMASK	30. SOLDERMASK	31. SOLDERMASK	32. SOLDERMASK
33. SOLDERMASK	34. SOLDERMASK	35. SOLDERMASK	36. SOLDERMASK
37. SOLDERMASK	38. SOLDERMASK	39. SOLDERMASK	40. SOLDERMASK
41. SOLDERMASK	42. SOLDERMASK	43. SOLDERMASK	44. SOLDERMASK
45. SOLDERMASK	46. SOLDERMASK	47. SOLDERMASK	48. SOLDERMASK
49. SOLDERMASK	50. SOLDERMASK	51. SOLDERMASK	52. SOLDERMASK
53. SOLDERMASK	54. SOLDERMASK	55. SOLDERMASK	56. SOLDERMASK
57. SOLDERMASK	58. SOLDERMASK	59. SOLDERMASK	60. SOLDERMASK
61. SOLDERMASK	62. SOLDERMASK	63. SOLDERMASK	64. SOLDERMASK
65. SOLDERMASK	66. SOLDERMASK	67. SOLDERMASK	68. SOLDERMASK
69. SOLDERMASK	70. SOLDERMASK	71. SOLDERMASK	72. SOLDERMASK
73. SOLDERMASK	74. SOLDERMASK	75. SOLDERMASK	76. SOLDERMASK
77. SOLDERMASK	78. SOLDERMASK	79. SOLDERMASK	80. SOLDERMASK
81. SOLDERMASK	82. SOLDERMASK	83. SOLDERMASK	84. SOLDERMASK
85. SOLDERMASK	86. SOLDERMASK	87. SOLDERMASK	88. SOLDERMASK
89. SOLDERMASK	90. SOLDERMASK	91. SOLDERMASK	92. SOLDERMASK
93. SOLDERMASK	94. SOLDERMASK	95. SOLDERMASK	96. SOLDERMASK
97. SOLDERMASK	98. SOLDERMASK	99. SOLDERMASK	100. SOLDERMASK

ORIGINAL

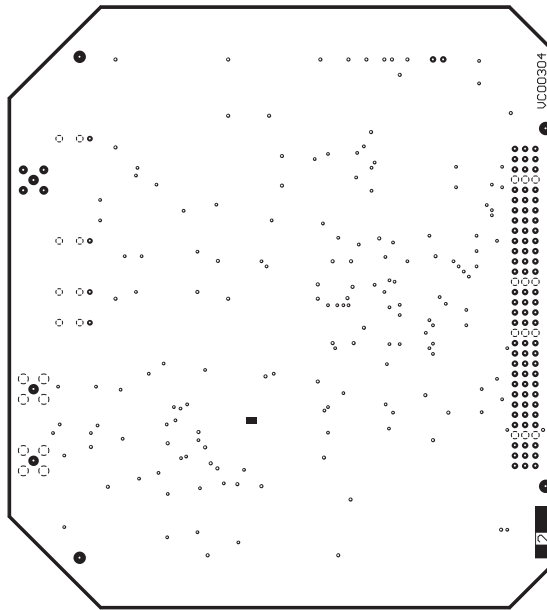
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B	5068	New Prescaler Circuit	URN	1/30/90A
F	4826	X5 REL. AS F	JTH	1/30/90P
X5	3923	CHANGED INPUT TO U6	JTH	8/3/90A
X4	3923	CHANGE TOP SOLDER MASK	JTH	7/1/90A
X3	3923		JTH	6/10/90A
X2	3923		JV	3/30/90A
X1	3923		JV	5/30/80D
REV	EDN	DESCRIPTION	BY	CHK DATE APPRO

ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED

 TIDAL SIGNAL CORP. 4302 CRENSHAW BLVD. HOUSTON, TEXAS 77002				TITLE ARTWORK UCO MODULE SB2 SYS6	
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DRAWN	DATE	DESIGN BY	DWG. SIZE	PAGE NUMBER	REV
12/28/66	12/28/66	PAUL YEEB & DESIGN GROUP P.O. BOX 24430 HOUSTON, TEXAS 77224 (281) 445-1823	B	349-1345-AWK	G
CHECKED	DATE	BY	SCALE		
12/28/66	12/28/66	ER	DO NOT SCALE		
				SHEET 1	OF 12



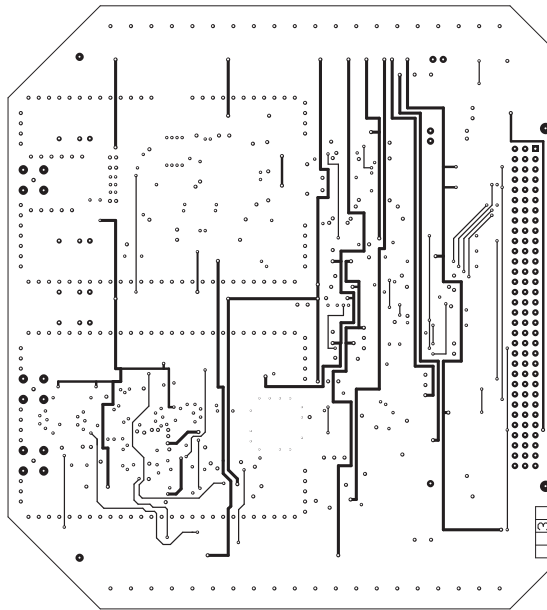
Layer Name Internal Plane 1

Stacking Chart 2

REV	ECN	DESCRIPTION	BY	CHK	DATE	APUD
G	5069	New Prescaler Circuit	WBM		100304	
F	4821	X5 REL. AS F	JTM		100107	
X5	3923	CHANGED INPUT TO U6	JTM		80304	
X4	3923	CHANGE TOP SOLDER MASK	JTM		71404	
X3	3923		JTM		51004	
X2	3923		JV		30304	
X1	3923		JV		90803	
REV	ECN	DESCRIPTION	BY	CHK	DATE	APUD

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DRAWN BMcginley		DATE 03/04/10		DESIGN BY ANALYSIS & DESIGN GROUP	
CHECKED		DATE		P.O. BOX 34430	
				HOUSTON, TEXAS 77234	
				(281) 461-1823	
PROJ ENGR		DATE		UL	
				EX	
				DO NOT SCALE	
				DRAWING	
				SCALE	
				SHEET 2 OF 12	



Layer Name_____Mid Layer 1

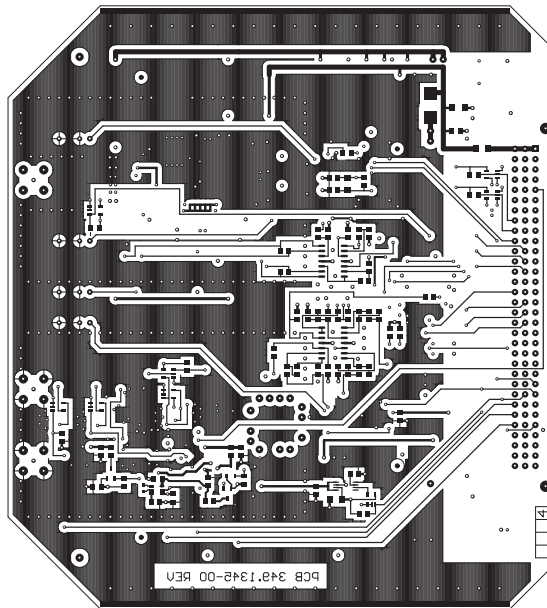
Stacking Chart_____3

REV	ECN	DESCRIPTION	BY	CHK	DATE	APVD
G	5069	New Prescaler Circuit	WBM		100304	
F	4821	X5 REL. AS F	JTM		100107	
X5	3923	CHANGED INPUT TO U6	JTM		80304	
X4	3923	CHANGE TOP SOLDER MASK	JTM		71404	
X3	3923		JTM		51004	
X2	3923		JV		30304	
X1	3923		JV		90803	
REV	ECN	DESCRIPTION	BY	CHK	DATE	APVD

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				SB2 SYS6	
DRAWN	DATE	DESIGN BY:	DWG SIZE	PART NUMBER	REV
BMcginley	03/04/10	ANALYSIS & DESIGN GROUP	B	349.1345-AWK	G
CHECKED	DATE	P.O. BOX 34430			
		HOUSTON, TEXAS 77234			
		(281) 461-4823			
PROJ ENGR	DATE	UL	EX	DO NOT SCALE DRAWING	SCALE
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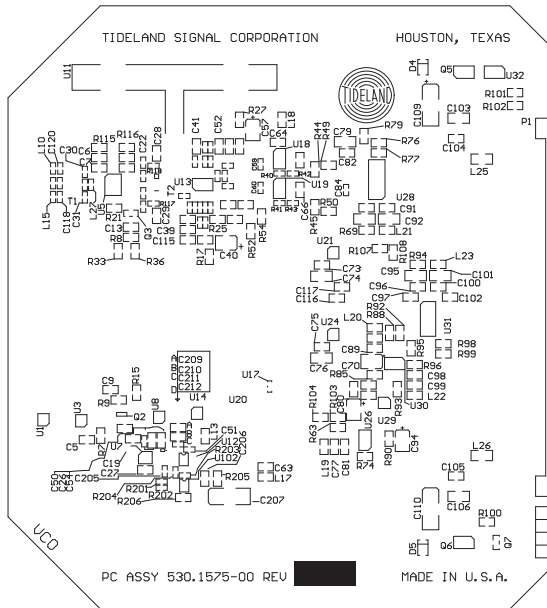
Layer Name_____Bottom Layer

Stacking Chart_____4

G	5069	New Prescaler Circuit	WBM	100304		
F	4821	X5 REL. AS F	JTM	100107		
X5	3923	CHANGED INPUT TO U6	JTM	80304		
X4	3923	CHANGE TOP SOLDER MASK	JTM	71404		
X3	3923		JTM	51004		
X2	3923		JV	30304		
X1	3923		JV	90803		
REV	ECN	DESCRIPTION	BY	CHK	DATE	APVD
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				SB2 SYS6	
DRAWN	DATE	DESIGN BY	DWG SIZE	PART NUMBER	REV
BMcginley	03-04-10	ANALYSIS & DESIGN GROUP	B	349.1345-AWK	G
CHECKED	DATE	P.O. BOX 34430			
		HOUSTON, TEXAS 77234			
		(281) 461-1823			
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Layer Name_____Top Overlay

Stacking Chart_____

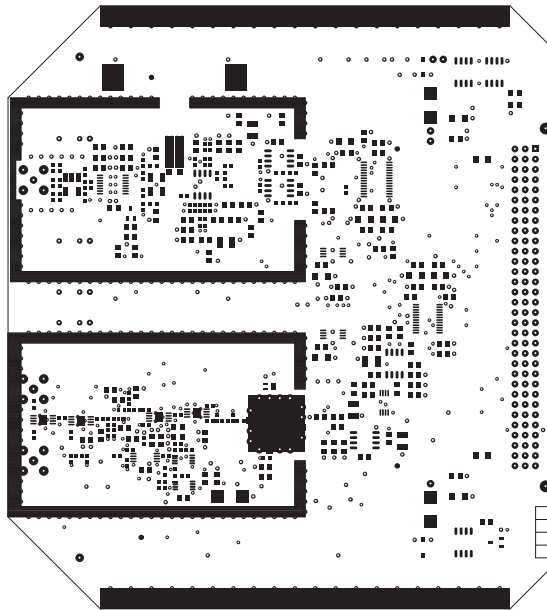
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G	5069	New Prescaler Circuit	WBM		100304	
F	4921	X5 REL. AS F	JTM		100107	
X5	3923	CHANGED INPUT TO U6	JTM		80304	
X4	3923	CHANGE TOP SOLDER MASK	JTM		71404	
X3	3923		JTM		51004	
X2	3923		JV		30304	
X1	3923		JV		90803	
REV	ECN	DESCRIPTION	BY	CHK	DATE	APVD

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DRAWN		DATE	DESIGN BY	DWG SIZE	PART NUMBER
BMcginley		03/04/10	ANALYSIS & DESIGN GROUP	B	349.1345-AWK
CHECKED		DATE	P.O. BOX 34430	REV	
			HOUSTON, TEXAS 77234	G	
			(281) 461-4823		
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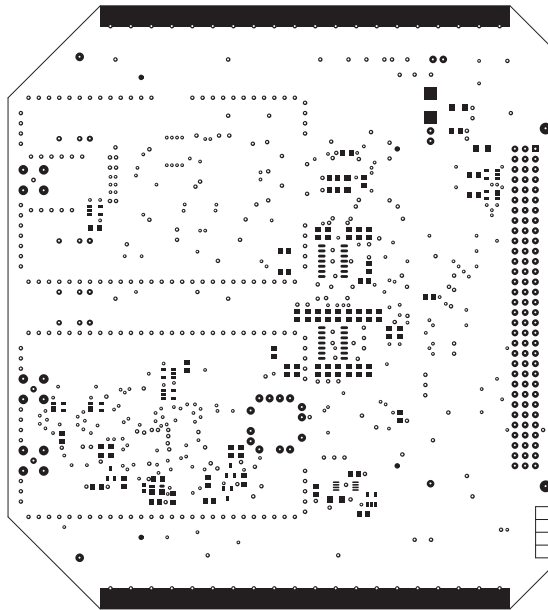
Layer Name_____Top Solder Mask

Stacking Chart_____

G	5069	New Prescaler Circuit	WBM		100304	
F	4821	X5 REL. AS F	JTM		100107	
X5	3923	CHANGED INPUT TO U6	JTM		80304	
X4	3923	CHANGE TOP SOLDER MASK	JTM		71404	
X3	3923		JTM		51004	
X2	3923		JV		30304	
X1	3923		JV		90803	
REV	ECN	DESCRIPTION	BY	CHK	DATE	APVD
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED						

		TIDELAND SIGNAL CORP.		TITLE	
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				SB2 SYS6	
DRAWN	DATE	DESIGN BY	DWG SIZE	PART NUMBER	REV
BMcginley	03/04/10	ANALYSIS & DESIGN GROUP	B	349.1345-AWK	G
CHECKED	DATE	P.O. BOX 34430			
		HOUSTON, TEXAS 77234			
		(281) 461-4823			
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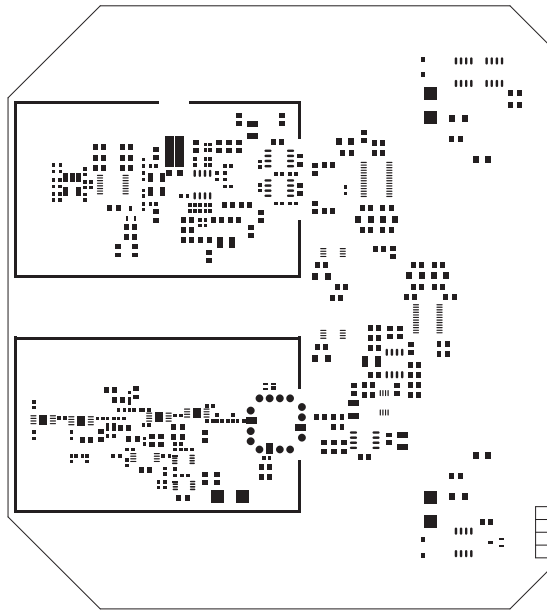
Layer Name_____Bottom Solder Mask

Stacking Chart_____

G	5069	New Prescaler Circuit	WBM	100304		
F	4821	X5 REL. AS F	JTM	100107		
X5	3923	CHANGED INPUT TO U6	JTM	80304		
X4	3923	CHANGE TOP SOLDER MASK	JTM	71404		
X3	3923		JTM	51004		
X2	3923		JU	30304		
X1	3923		JU	90803		
REV	ECN	DESCRIPTION	BY	CHK	DATE	APUD
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED						

		TIDELAND SIGNAL CORP.		TITLE	
4310 DIRECTORS ROW		HOUSTON, TEXAS 77092		ARTWORK	
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				SB2 SYS6	
DRAWN	DATE	DESIGN BY	DWG SIZE	PART NUMBER	REV
BMcginley	03/04/10	ANALYSIS & DESIGN GROUP	B	349.1345-AWK	G
CHECKED	DATE	P.O. BOX 34430			
		HOUSTON, TEXAS 77234			
		(281) 461-1823			
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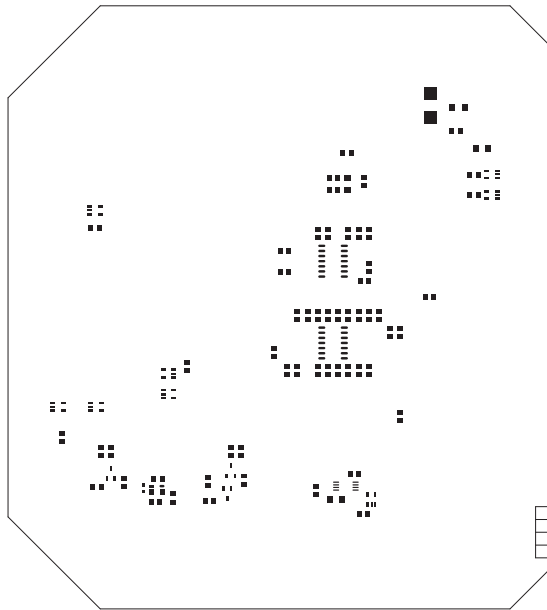
Layer Name_____Top Paste Mask

Stacking Chart_ [] [] [] []

REV	ECN	DESCRIPTION	BY	CHK	DATE	APVD
G	5069	New Prescaler Circuit	WBM		100304	
F	4821	X5 REL. AS F	JTM		100107	
X5	3923	CHANGED INPUT TO U6	JTM		80304	
X4	3923	CHANGE TOP SOLDER MASK	JTM		71404	
X3	3923		JTM		51004	
X2	3923		JV		30304	
X1	3923		JV		90803	
ATTENTION	- MANUAL REVISIONS ARE NOT PERMITTED					

		TIDELAND SIGNAL CORP.		TITLE	
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				SB2 SYS6	
DRAWN	DATE	DESIGN BY	DWG SIZE	PART NUMBER	REV
BMcginley	03/04/10	ANALYSIS & DESIGN GROUP	B	349.1345-AWK	G
CHECKED	DATE	P.O. BOX 34430			
		HOUSTON, TEXAS 77234			
		(281) 461-4823			
PROJ ENGR	DATE	UL	EX	DO NOT SCALE DRAWING	SCALE
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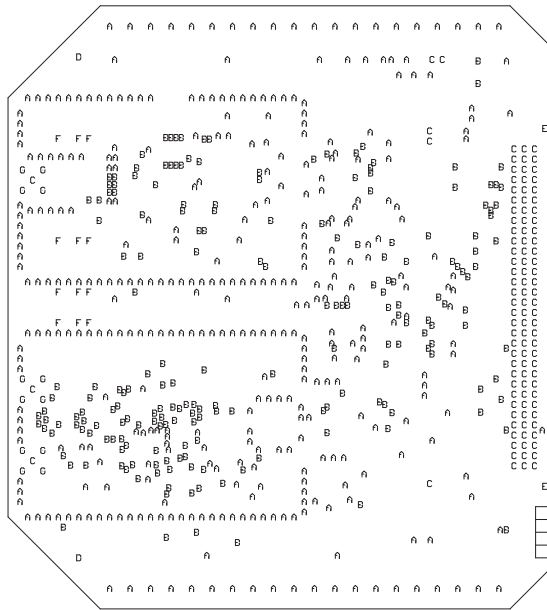
Layer Name Bottom Paste Mask

Stacking Chart

REV	ECN	DESCRIPTION	BY	CHK	DATE	APUD
G	5069	New Prescaler Circuit	WBM		100304	
F	4821	X5 REL. AS F	JTM		100107	
X5	3923	CHANGED INPUT TO U6	JTM		80304	
X4	3923	CHANGE TOP SOLDER MASK	JTM		71404	
X3	3923		JTM		51004	
X2	3923		JU		30304	
X1	3923		JU		90803	
ATTENTION	- MANUAL REVISIONS ARE NOT PERMITTED					

		TIDELAND SIGNAL CORP.		TITLE	
4310 DIRECTORS ROW		HOUSTON, TEXAS 77092		ARTWORK	
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				SB2 SYS6	
DRAWN	DATE	DESIGN BY	DWG SIZE	PART NUMBER	REV
BMcginley	03/04/10	ANALYSIS & DESIGN GROUP	B	349.1345-AWK	G
CHECKED	DATE	P.O. BOX 34430			
		HOUSTON, TEXAS 77234			
		(281) 461-4823			
PROJ ENGR	DATE	UL	EX	DO NOT SCALE DRAWING	SCALE
					SHEET 10 OF 12

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E	2	110mil	2.794mm
D	2	100mil	2.54mm
G	12	67mil	1.7018mm
C	104	42mil	1.0668mm
F	12	35mil	0.889mm
A	370	20mil	0.508mm
B	203	16mil	0.4064mm
	705	Total	

Layer Name_____Drill Drawing for Through Hole

Stacking Chart_____

REV	ECN	DESCRIPTION	BY	CHK	DATE	APVD
G	5069	New Prescaler Circuit	WBM		100304	
F	4921	X5 REL. AS F	JTM		100107	
X5	3923	CHANGED INPUT TO U6	JTM		80304	
X4	3923	CHANGE TOP SOLDER MASK	JTM		71404	
X3	3923		JTM		51004	
X2	3923		JV		30304	
X1	3923		JV		90803	
ATTENTION	- MANUAL REVISIONS ARE NOT PERMITTED					

		TIDELAND SIGNAL CORP.		TITLE	
4310 DIRECTORS ROW		HOUSTON, TEXAS 77092		ARTWORK	
THIS DRAWING EMBODIES PROPRIETARY AND CONFIDENTIAL INFORMATION AND IS LOANED BY TIDELAND SIGNAL CORPORATION WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED IN PART OR WHOLE OR USED FOR ANY PURPOSE OTHER THAN MAINTENANCE, REPAIR, OR INSTALLATION AND THAT IT SHALL BE RETURNED ON DEMAND.				UCO MODULE	
				SB2 SYS6	
DRAWN	DATE	DESIGN BY	DWG SIZE	PART NUMBER	REV
BMcginley	03-04-10	ANALYSIS & DESIGN GROUP	B	349.1345-AWK	G
CHECKED	DATE	P.O. BOX 34430			
		HOUSTON, TEXAS 77234			
		(281) 461-1823			
PROJ ENGR	DATE	UL	EX	DO NOT SCALE	SCALE
				DRAWING	
				SHEET	11 OF 12

FABRICATION NOTES:

1. MANUFACTURE USING ARTWORK 349.1345-AWK REVISION G, FOUR COPPER LAYERS WITH SOLDER MASK AND SILKSCREEN ON BOTH OUTER LAYERS.
2. LAYER # 1 (TOP CIRCUIT) AND LAYER # 2 (INTERNAL GROUND) TO BE 1 OUNCE COPPER ON ROGERS RO4003 SUBSTRATE OF THICKNESS 0.016 INCHES NOMINAL, DIELECTRIC CONSTANT 3.38 NOMINAL.
3. LAYER # 3 (INTERNAL SIGNAL & POWER) AND LAYER # 4 (BOTTOM CIRCUIT) TO BE 1 OUNCE COPPER ON FR-4 MATERIAL OF THICKNESS 0.016 INCHES NOMINAL, DIELECTRIC CONSTANT 4.2 TO 4.8 TYPICAL.
4. CORE TO BE FR-4 MATERIAL, SIZED TO MAKE OVERALL BOARD THICKNESS 0.063 INCHES NOMINAL.
5. LAYERS TO BE STACKED AS FOLLOWS:
- 1 oz copper (1.4 mils) plus plating — Top Circuit
RO4003 core material (16 mils)
1 oz copper (1.4 mils) — Internal Ground
FR-4 material
1 oz copper (1.4 mils) — Internal Power
FR-4 material (16 mils)
1 oz copper (1.4 mils) plus plating — Bottom Circuit
6. EDGE CLEARANCE ON INTERNAL LAYERS NOT TO EXCEED 30 MILS.
7. BOARD FLATNESS TOLERANCE TO BE 0.010 INCH/INCH.
8. MINIMUM CONDUCTOR WIDTH TO BE 0.008 INCH.
9. PHOTODEVELOPABLE LIQUID SOLDER MASK OVER BARE COPPER (SMOBC) ON TOP AND BOTTOM LAYERS.
10. DRILLED HOLES TO BE PLATED THROUGH WITH MINIMUM 0.001 INCHES COPPER.
11. DRILLED HOLE SIZES APPLY AFTER PLATING, WITH TOLERANCE +/- 0.002 INCHES.
12. DO NOT PLATE THROUGH HOLES MARKED WITH ARROW (==>), SEVEN PLACES:
--- UPPER LEFT CORNER AND LOWER LEFT CORNER OF BOARD,
--- J1, J2, J3 CENTER CONDUCTORS,
--- P1 MOUNTING HOLES.
13. TOP AND BOTTOM LAYERS TO BE FINISHED BY GOLD IMERSION PROCESS, 3 TO 8 MICRONS GOS GOLD SURFACE OVER EXPOSED COPPER.
14. SILKSCREEN BOTH SIDES WITH NON-CONDUCTIVE WHITE INK.
- BOARD MUST BE PERMANENTLY MARKED ON SOLDER SIDE WITH:
--- REVISION LETTER SPECIFIED ON THIS DRAWING AND ON THE PURCHASE ORDER IN COPPER IN AREA INDICATED BY []
--- CURRENTLY LISTED UL SUPPLIER MARK AS RECOGNIZED FOR UL LISTING,
--- FOUR DIGIT DATE CODE TO SHOW YEAR AND WEEK OF MANUFACTURE.

Layer Name_____Mechanical Layer 1

Stacking Chart_____

Components _____ 327

Nets _____ 208

Holes _____ 705

8-Mar-2010

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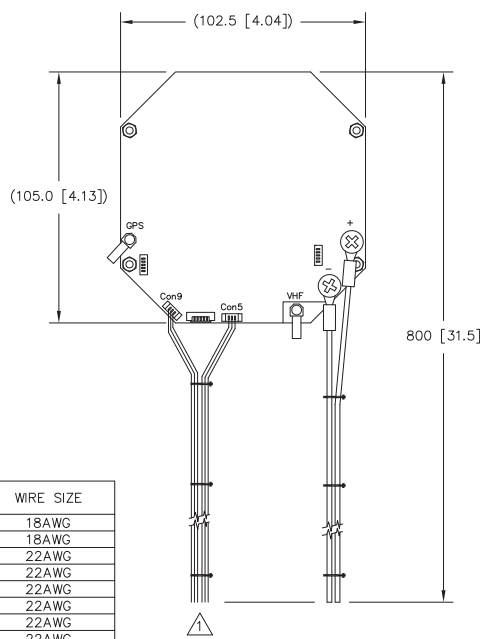
C:\TSC\PCB\UCO_REUG.PCB

G	5069	New Prescaler Circuit	WBM	100304		
F	4921	X5 REL. AS F	JTM	100107		
X5	3923	CHANGED INPUT TO U6	JTM	80304		
X4	3923	CHANGE TOP SOLDER MASK	JTM	71404		
X3	3923		JTM	51004		
X2	3923		JV	30304		
X1	3923		JV	90803		
REV	ECN	DESCRIPTION	BY	CHK	DATE	APUD
ATTENTION - MANUAL REVISIONS ARE NOT PERMITTED						

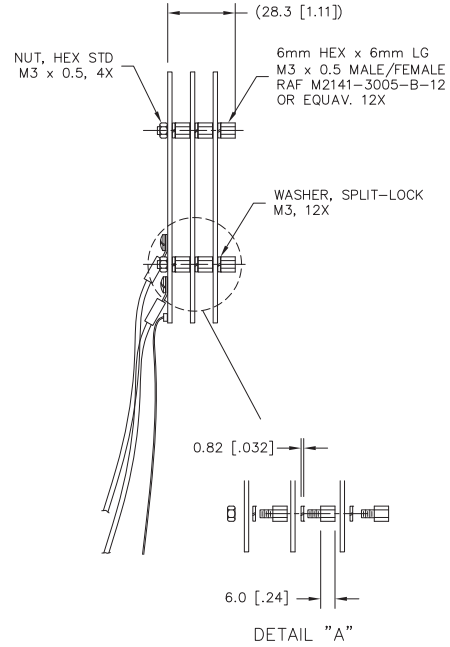
		TIDELAND SIGNAL CORP.		TITLE	
4310 DIRECTORS ROW		HOUSTON, TEXAS 77092		ARTWORK	
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				SB2 SYS6	
DRAWN	DATE	DESIGN BY	DWG SIZE	PART NUMBER	REV
BMcginley	03-04-10	ANALYSIS & DESIGN GROUP	B	349.1345-AWK	G
CHECKED	DATE	P.O. BOX 34430			
		HOUSTON, TEXAS 77234			
		(281) 461-1823			
PROJ ENGR	DATE	UL	EX	DO NOT SCALE DRAWING	SCALE
					SHEET 12 OF 12

NOTES: UNLESS OTHERWISE SPECIFIED

1. MAKE ONE BUNDLE OF 6 WIRES FROM "Con5" AND "Con9".



AIS INFORMER V10 CONNECTOR	WIRE SIZE
-VDC	BLK 18AWG
+VDC	RED 18AWG
CON5-2	BLK 22AWG
CON5-1	BRN 22AWG
CON5-3	RED 22AWG
CON9-2	GRN 22AWG
CON9-1	BLK 22AWG
CON9-3	BRN 22AWG



REV	ECN	DESCRIPTION	BY	CHK	DATE	APVD
A	6109	RLSE FOR PRODUCTION	HA	FS	16APR12	PFM

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DWG SIZE	NEXT ASSEMBLY	USED ON

NOTICE
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UNLESS OTHERWISE SPECIFIED	
1. TOLERANCE MILLIMETERS	TOLERANCE INCHES
X = ±0.8	X' = ±0.03 0.762
.X = ±0.4	.X' = ±0.015 0.381
.XX = ±0.13	.XX' = ±0.005 0.127
2. ANGULAR ± 0° 30'	
3. ALL DIMENSIONS ARE IN MILLIMETERS OR MILLIMETER (INCHES)	
4. TOLERANCES ARE NON-ACCUMULATIVE.	
5. MACHINED INSIDE CORNERS 0.5R MAX.	
6. INTERPRET DWG PER ASME Y14.5-2009	
SURFACE FINISH	125
REMOVE BURRS AND SHARP EDGES	

MATERIAL	
FINISH	
DRAWN	DATE
HA	12SEP11
CHECKED	DATE
FS	16APR12
PROJ ENGR	DATE
PPM	16APR12

TIDELAND SIGNAL CORP. 4310 DIRECTORS ROW HOUSTON, TEXAS 77092	
TITLE INFORMER, V-10 EMBEDDED AIS ATON	
UL	EX
C	
DWG SIZE	PART NUMBER
560.1072-DWG	A
SCALE	SHEET
1:1	1 of 1

5601072A.DWG 16APR12 12:00