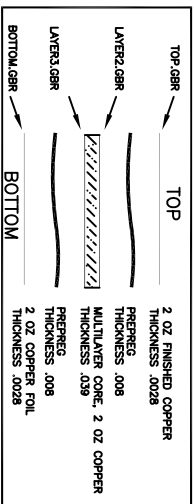



NOTES:

1. ALL DIMENSIONS ARE IN INCHES WITH [MM SHOWN IN BRACKETS].
2. STANDARDS:
MUST BE NONH COMPLANT.
CLASS 2 AND SMALLER IPC-A-600 CRITERIA FOR ACCEPTABILITY.
3. BOARD CONSTRUCTION:
FABRICATE BOARD USING UL APPROVED, NEMA GRADE FR-4 OR BETTER,
LAMINATES AND PREPARED MATERIALS MUST COMPLY WITH IPC-4101.
FABRICATE BOARD AS SHOWN BELOW
MINIMUM BOARD THICKNESS IS .062 ±.006.



4. HOLE SIZES APPLY TO FINISHED HOLES, AFTER PLATING AND SOLDER COATING. HOLE SIZE TOLERANCES ARE AS FOLLOWS:
- | PLATED THROUGH HOLES | + .004 / - .002 |
|----------------------|-----------------|
| NON-PLATED HOLES | + .002 / - .002 |
5. HOLE LOCATIONS:
- HOLES ARE TO BE LOCATED ACCORDING TO X,Y DATA PROVIDED IN THE FOLLOWING ELECTRONIC DRILL FILE: TTH0108-05.DRL
- ALL HOLES SHALL BE LOCATED WITHIN A 100 MIL SWARTHER TOLERANCE ZONE SURROUNDING THE HOLE POSITION OR HOLE CENTER.
- | | |
|--|--------|
|  | ± .006 |
|--|--------|

6. **ARTWORK REGISTRATION:**
REGISTRATION OF COMPONENT SIDE ARTWORK TO DRILL PATTERN SHALL BE ± 0.03 .
REGISTRATION OF SOLDER SIDE ARTWORK TO COMPONENT SIDE ARTWORK SHALL BE ± 0.03 .
7. **SOLDER MASK:**
BOTH SIDES OF THE PCB ARE TO BE COATED WITH A THERMAL CURED, LIQUID PHOTO-IMAGABLE, SOLDER RESIST COATING IN ACCORDANCE WITH IPC-SM-840. SOLDERMASK COLOR = GREEN
8. **BOARD FINISH:**
BOARD FINISH IS ELECTROLESS NICKEL IMMERSION GOLD (ENIG).
ENIG PLATING SHALL BE IN ACCORDANCE WITH IPC-4582.
9. **BOW AND TWIST:**
THE MAXIMUM ALLOWABLE BOW AND TWIST SHALL BE .75%
AS MEASURED PER IPC-1M-650, METHOD 2.4.2Z.
10. **BOARD CLEANLINESS:**
THE MAXIMUM CONTAMINATION ON THE COMPLETED BOARD SHALL NOT EXCEED
60g/MCH AS MEASURED WITH AN IMMOGRAPH.
11. **SILKSCREEN:**
SILKSCREEN LEGEND IS TO BE APPLIED TO BOTH SIDES OF THE PCB, USING APPROPRIATE
NON-CONDUCTIVE, WHITE INK COMPATIBLE WITH SOLDERMASK MATERIAL, PER IPC-SM-840.
NO MARKINGS ALLOWED ON PADS.

- PCB PART NUMBER:**
REFER TO CHART FOR PCB PART NUMBER.

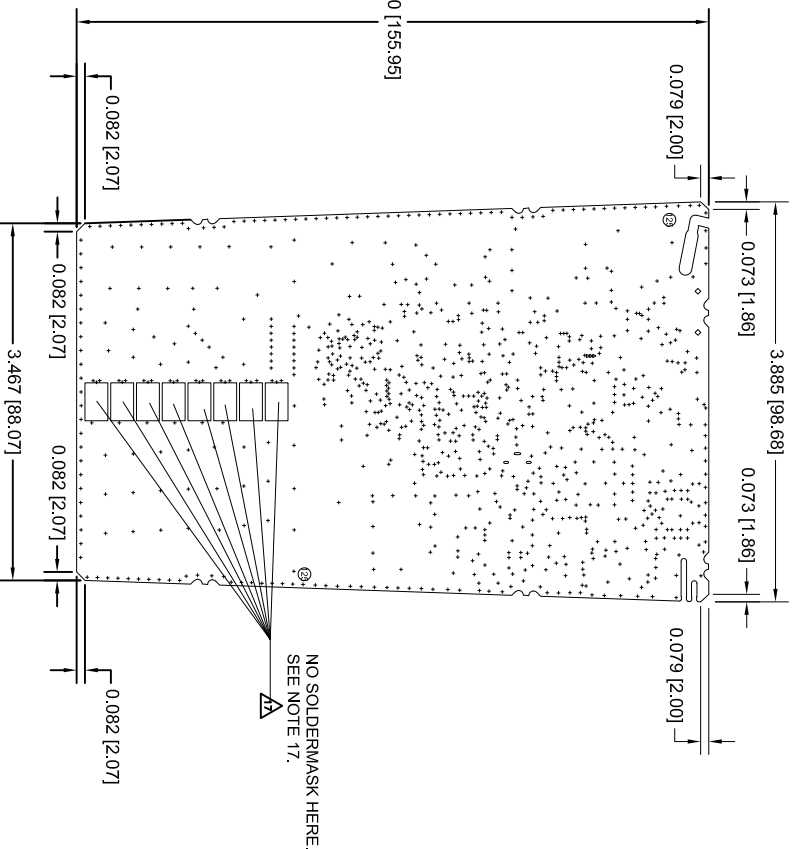
- 14 PANELIZATION**
FABRICATOR SHALL STEP AND REPEAT PCB ARTWORK AND DRILL INFORMATION TO FABRICATE BOARD IN A 2-UP ARRAY AS DIAGRAMMED.

- 14** PANELIZATION
FABRICATOR SHALL STEP AND REPEAT PCB ARTWORK AND DRILL INFORMATION TO FABRICATE BOARD IN A 2-UP ARRAY AS DIAGRAMMED.

- △ 15 TOOLING HOLES**
FOUR #125 NON-PLATED TOOLING HOLES TO BE ADDED TO ARRAY AS SHOWN. THESE FOUR #.125 HOLES ARE NOT INCLUDED IN DRILL FILES AND MUST BE ACCOMPLISHED BY FABRICATOR.

- 16 OUTLINE** WHERE COMPLETE DIMENSIONAL INFORMATION IS NOT SHOWN, REFERENCE GERBER FILES [ARRAY.GBR] AND [OUTLINE.GBR] FOR BOARD OUTLINE AND ARRAY OUTLINES.

- 17 SENSING PADS
DO NOT COVER THESE 8 LARGE, "SENSING PADS" WITH SOLDERMASK. THEY ARE TO BE ENO FINISH LIKE ALL COMPONENT PADS.



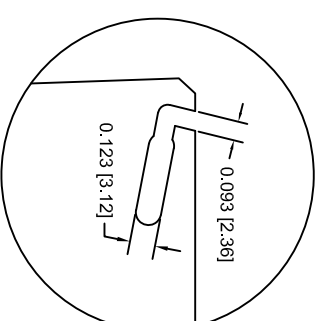
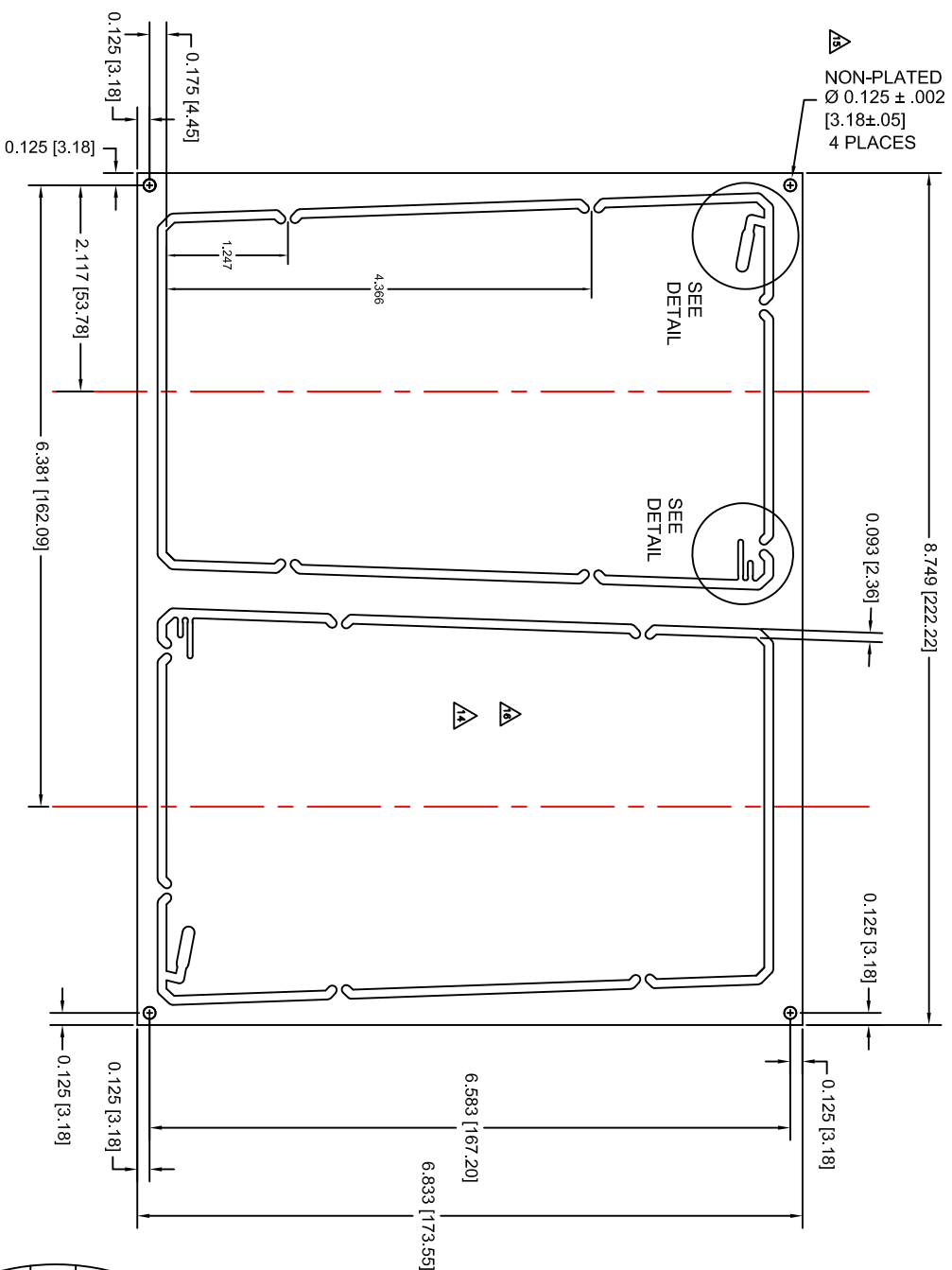
ECN #	REV	REVISION DESCRIPTION	BY	DATE
	1	RELEASE FOR PHOTO	RW	4/1/19
	2	RELEASE FOR PHOTO	RW	2/10/20
	3	RELEASE FOR PHOTO	RW	8/4/20
	4	RELEASE FOR PHOTO BOARD OUTLINE CHANGED, ARTWORK CHANGED SOLDER MASK NOW GREEN, SILSCREEN WHITE ADDED NOTE 17	RW	1/18/21
	5	UPDATED GROUNDING FOR J7 ON PCB	RW	10/24/22

DRILL CHART TOP to BOTTOM			
ALL UNITS ARE IN INCHES			
FIGURE	FINISHED SIZE	PLATED	QTY
▲	0.006	PLATED	3
+	0.012	PLATED	935
◇	0.058	PLATED	2
Ⓢ	0.125	NON-PLATED	2
0	0.047x0.02	PLATED	2
0	0.065x0.02	PLATED	1

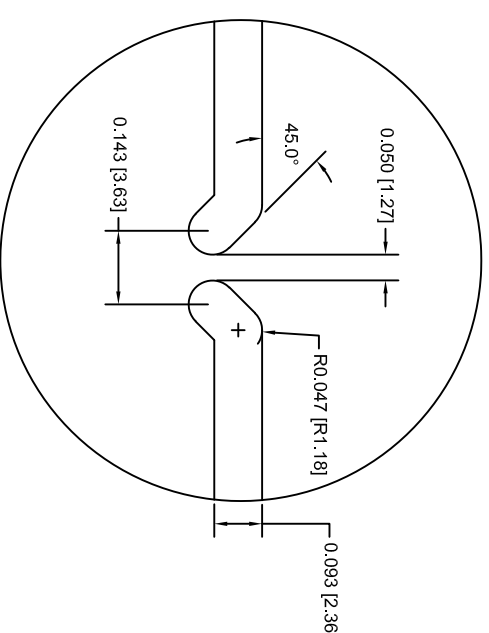
13
PART NUMBER

OBsolete	TF0108-01
OBsolete	TF0108-02
OBsolete	TF0108-03
OBsolete	TF0108-04
	TF0108-05

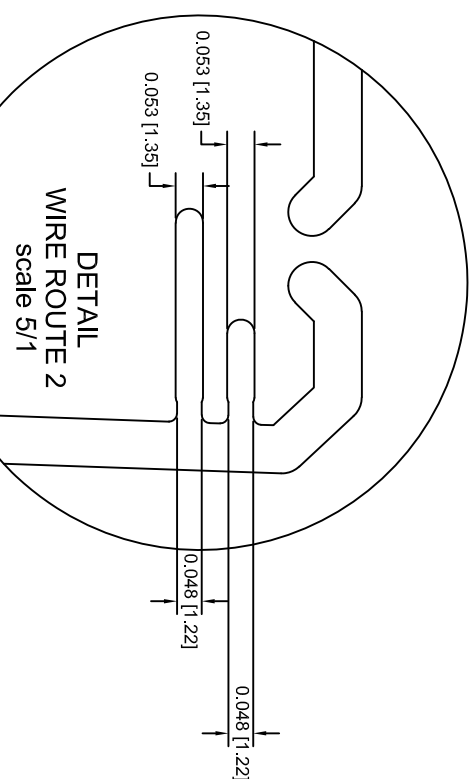
twist <h1>hink</h1>	
DESIGN TECHNOLOGY STRATEGY	
130 Central Ave., Suite 400 Holland, Michigan 49423	
CONFIDENTIAL	
DO NOT SCALE DRAWING UNLESS SPECIFICALLY NOTED DIMENSIONING & TOLERANCING PER ASME Y14.5M/1994 TOLERANCES: X .# ±.015 UNLESS OTHERWISE SPECIFIED	
ANGLES: ±.05° XXX ±.0006	
DATE: 8/4/20 SCALE: 1/1 SHEET 1 OF 2	
DOC. REV.	



DETAIL
WIRE ROUTE 1
scale 2/1



BREAK TAB DETAIL
scale 5/1



DATE: 8/4/20		SCALE: 1/1	SHEET 2 OF 2	DOC. REV
DOCUMENT NUMBER				
TTF0108				5