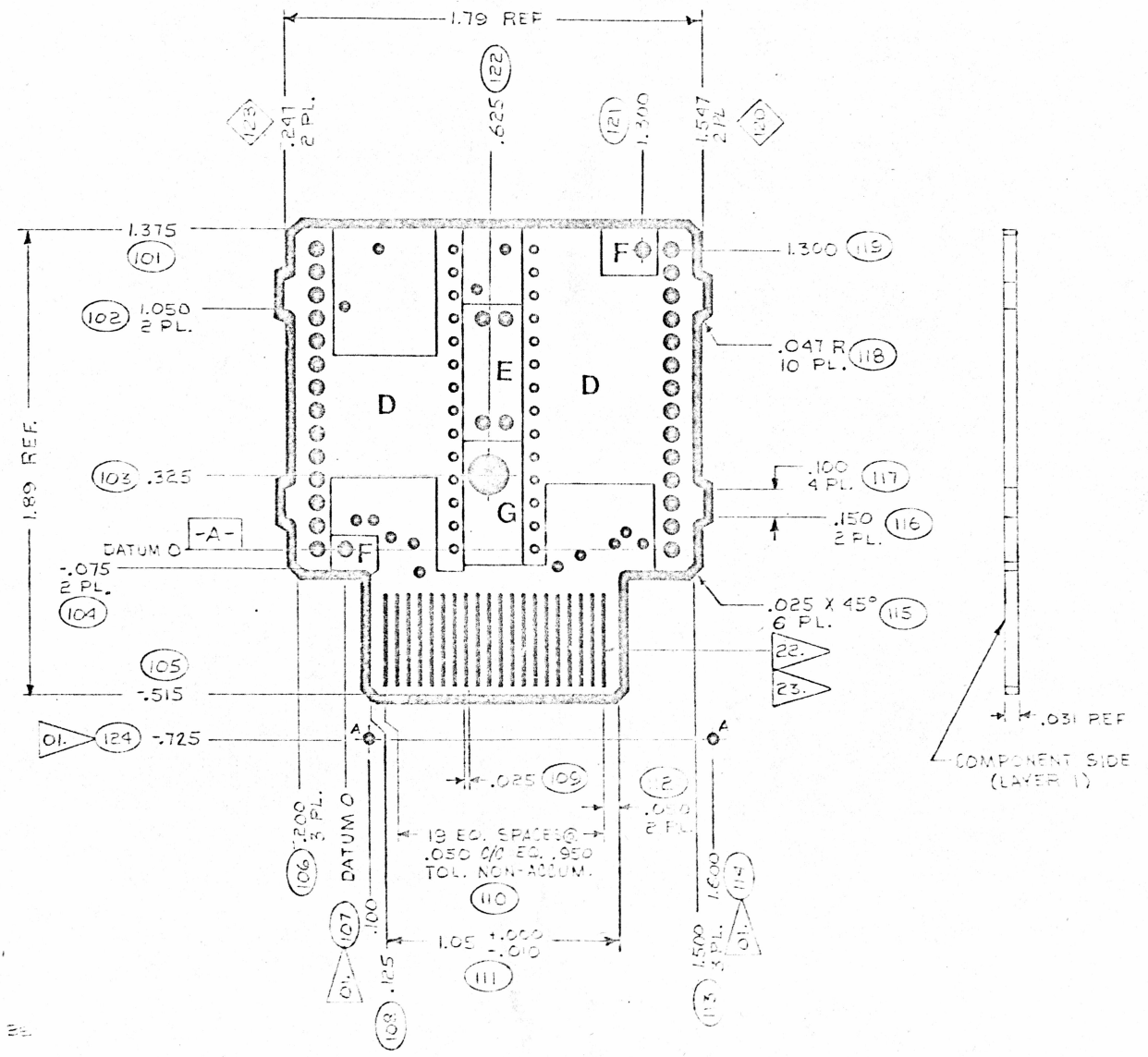


NOTES: UNLESS OTHERWISE SPECIFIED

01. EXTERNAL TOOLING HOLE DIMENSIONS.
02. MINIMUM ANNUAL RING .001 EXCEPT BREAK OUT PERMITTED ON TRIMMED PADS.
03. MAX. INTERNAL RADIUS .062 MAX. EXTERNAL RADIUS .063.
04. NO DEBURR REQUIRED.
05. CRAZING AND DELAMINATION WITHIN A MAX. OF .030 BOARD PERIMETER SHALL BE ACCEPTABLE.
06. HOLE LOCATION $\pm .015$ FIRST OR $\pm .010$ SECOND.
07. ALL HOLES NOT DIMENSIONED ARE ON .025 INCH GRID INCREMENTS IN RELATION TO DATUM 0.
08. DECIMAL HOLE DIAMETERS AND HOLE TOLERANCES GOVERN HOLE SIZE. NUMBERS IN PARENTHESES ARE FOR REFERENCE ONLY.
09. FINISHED ARTWORK CONDUCTOR WIDTH AND SPACING TO BE .012 \pm .004.
10. BOARD WARP OR TWIST SHALL NOT EXCEED .020 INCH PER INCH LENGTHWISE AND SHALL NOT EXCEED .018 INCH PER INCH CROSSWISE.
11. NO CLEARANCE REQUIRED FROM CONDUCTOR TO EDGE OF BOARD AND SLOTS.
12. MATERIAL SHALL BE .031 THK NEMA GRADE FR-4 OR G-10 WITH ONE OZ. COPPER BOTH SIDES.
13. PROCESSES: TIN LEAD 60/40 PLATE, .0003 THK MIN, PER QQ-5-571 "REFLOWED" BEFORE SOLDER MASK IS APPLIED.
14. SOLDER MASK SHALL BE SCREENED ON BOTH SIDES USING PC 401 OR APPROVED EQUIVALENT. COLOR TO BE GREEN.
15. SOLDER MASK IS PERMITTED TO BLEED ON PADS OF CONDUCTOR SIDE WHERE PADS ARE TRIMMED AND ON COMPONENT SIDE OF BOARD.
16. MARK PER ANSI Y32-16-1968; METHOD SILK SCREEN; HEIGHT PER ARTWORK PROVIDED; COLOR CONTRASTING (F100); METHOD 1; CLASS 1F.
17. REGISTRATION MARKS TO BE USED FOR POSITIONING MARKING AT HOLES SHOWN.
18. THIS PWB IS AN UL RECOGNIZED COMPONENT AND, SUCH AS, MUST DISPLAY THE VENDORS MARK RECOGNIZED BY UL IN THE AREA OF THE PWB INDICATED.
19. SOLDER MASK ALLOWED TO BLEED A MAX. OF .005 ONTO THE PAD.
20. NO ANNUAL RING REQUIREMENTS ON OVAL PADS.
21. SOLDER MASK PERMITTED TO COVER TIN-LEAD-PLATED COPPER AREAS GREATER THAN .250 INCH.
22. ELECTROLESS NICKEL PLATE PER QLI, CLASS 8 (F-38, METHOD 2) THICKNESS TO BE .0003 MIN. OR ELECTROPLATE A LOW STRESS NICKEL .0002 MIN. THK. FREE FROM VISIBLE BLISTERS, PITS, NODULES, CRACKS, OR OTHER DEFECTS. IPC TAPE TEST SHOWS NO SEPARATION OF NICKEL FROM COPPER. NO COHESIVE FAILURE OR NO SEPARATION OF SUBSEQUENT TOP COAT. PLATING SHALL COVER CARDSIDE CONNECTOR CONTACTS UP TO SOLDER MASK.
23. ELECTROPLATE GOLD PER MIL-G-45204, QLI OR F-34, QLI 2 .000015 MIN. THK. MIN. GOLD PLATING THICKNESS ON FINISHED PCB .000005. GOLD SHALL BE ADHERENT (IPC TAPE TEST), HAVE UNIFORM COVERAGE AND GOLD COLOR WITH NO EVIDENCE OF POROSITY.
24. ALL HOLES TO BE WITHIN .014 INCH TRUE POSITION TO DATUM 0 WHEN FINNED TO PLANE A.
25. ASSY. NO. NOT REQUIRED.
26. PLATING MATERIAL OF PWB (LESS THE EDGE CONNECTOR CONTACTS) MAY BE TIN LEAD (REF 3) OR GOLD/NI (REF 22 & 23).

27. THE QUALITY OF THE PRODUCT SHALL ENTIRELY ALL OF THE RESPONSIBILITY OF ACCEPTABLE CHARACTERISTICS AS PER QLI 2 (2) SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER. THE QUALITY OF THE PRODUCT SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER. THE QUALITY OF THE PRODUCT SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER.

| REVISIONS | | | | |
|-----------|-----|---------------------------------|------|----------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| | | ADD NOTE 27 (2) DIM. 23 WAS 200 | | |



| LTR | FINISHED HOLE DIA | REMARKS |
|-----|-------------------|--------------|
| G | .200 \pm .004 | |
| F | .062 \pm .003 | INTL TOOLING |
| E | .046 \pm .002 | |
| D | .039 \pm .002 | |
| C | .031 | UNLETTERED |
| B | .125 \pm .002 | INTL TOOLING |
| A | SHOP OPTION | EXTL TOOLING |
| | UNSUPPORTED | PLATED THRU |
| | .001 | .001 |

| INVENTORY CONTROL NUMBER | THIS DRAWING | HOLE CONFIGURATION | DRILL DECK | LAYER 1 (COMP. SIDE) | LAYER 2 (COND. SIDE) | MARKING | CONDUCTOR SIDE | SOLDER MASK | COMPONENT SIDE | SOLDER MASK |
|--------------------------|--------------|--------------------|------------|----------------------|----------------------|---------|----------------|-------------|----------------|-------------|
| | | | | | | | | | | |

| DIMENSION IDENTIFIERS | |
|-----------------------|----------|
| LAST USED | NOT USED |
| 124 | 125-200 |

UNLESS OTHERWISE SPECIFIED
 • DIMENSIONS ARE IN INCHES
 • TOLERANCES
 ANGLES 25°
 3 PLACE DECIMALS ± .010
 2 PLACE DECIMALS ± .02
 • DIMENSIONS IN ACCORDANCE WITH ANSI Y14.5

DATE: 4/21/87
 DRAWN BY: B
 CHECKED BY: B
 DATE: 6-20-87
 PRODUCT ENG: 2
 TOOLING ENG: 2
 DATE: 4/21/87
 PROJECT ENG: 2
 DATE: 4/21/87
 DESIGN AUTHORITY RELEASE: 5

TEXAS INSTRUMENTS
 INCORPORATED
 CALCULATOR PRODUCTS DIVISION

PRINTED WIRING BOARD,
 PRODUCT 417

SIZE: D
 DRAWING NO: 1056654

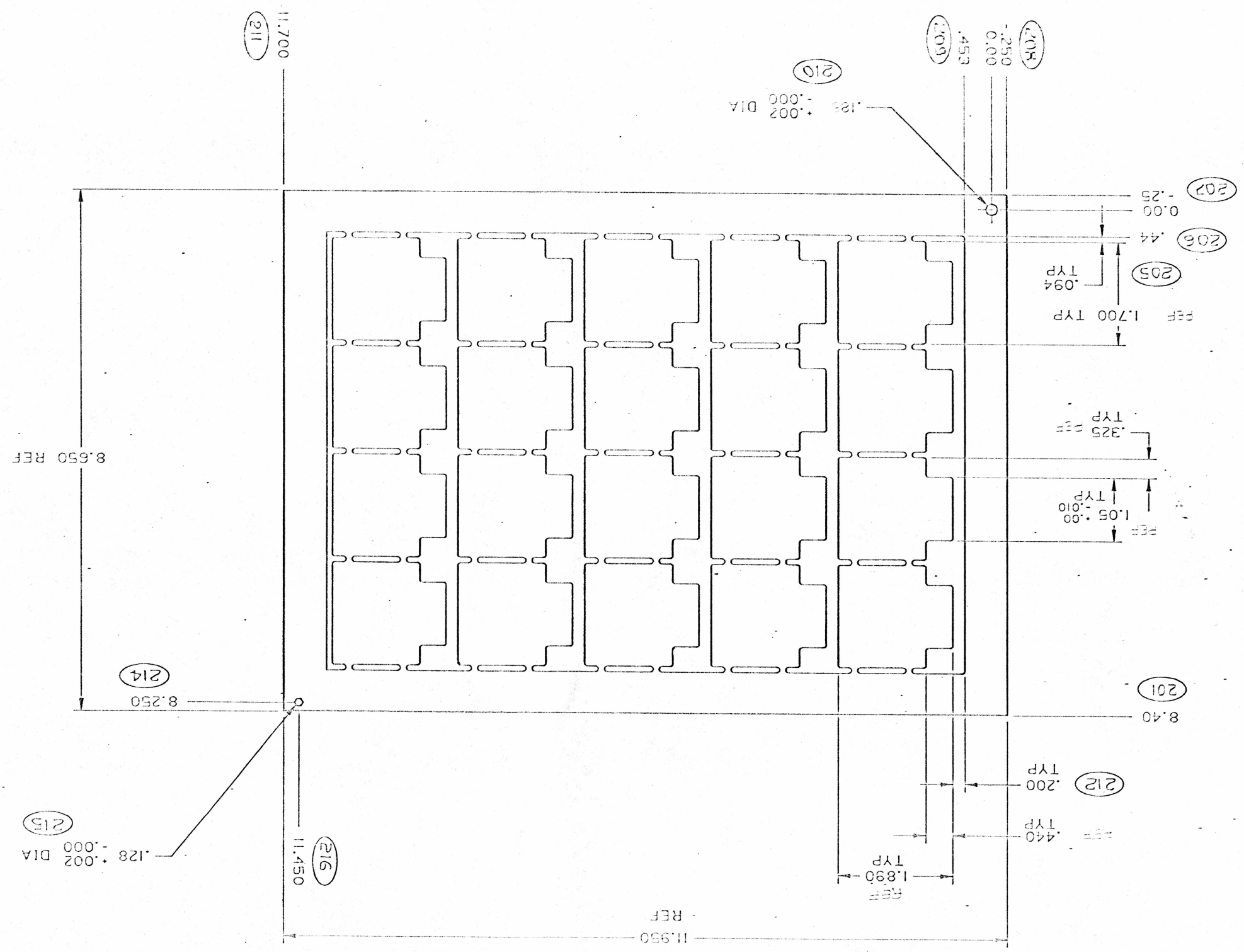
REVISION-LEVEL CONTROL

THIS IS A COMPUTER GENERATED ORIGINAL
DO NOT REVISE MANUALLY

SCALE: NONE
DATE: 02-28-83
DRAWN BY: J.L.
CHECKED BY: D
JOB NO: 1056654

| | |
|----------------------------------|-------------|
| DIMENSION IDENTIFICATION NUMBERS | |
| USED | NOT USED |
| 201-23 | 202-204, 25 |

A
B
C
D



1 2 3 4 5 6 7 8

1056654 2