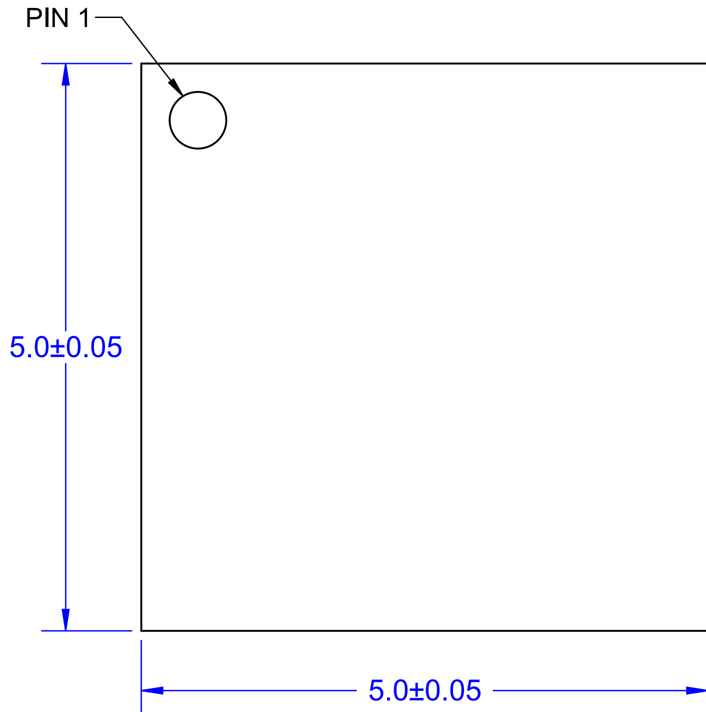
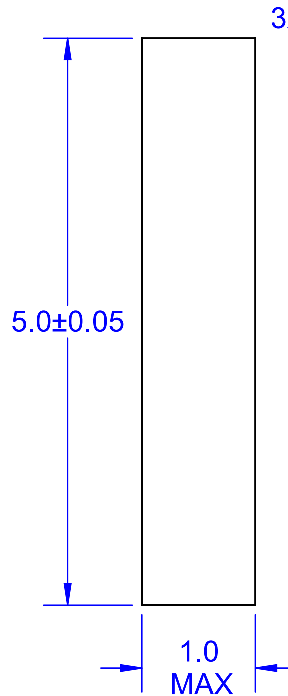
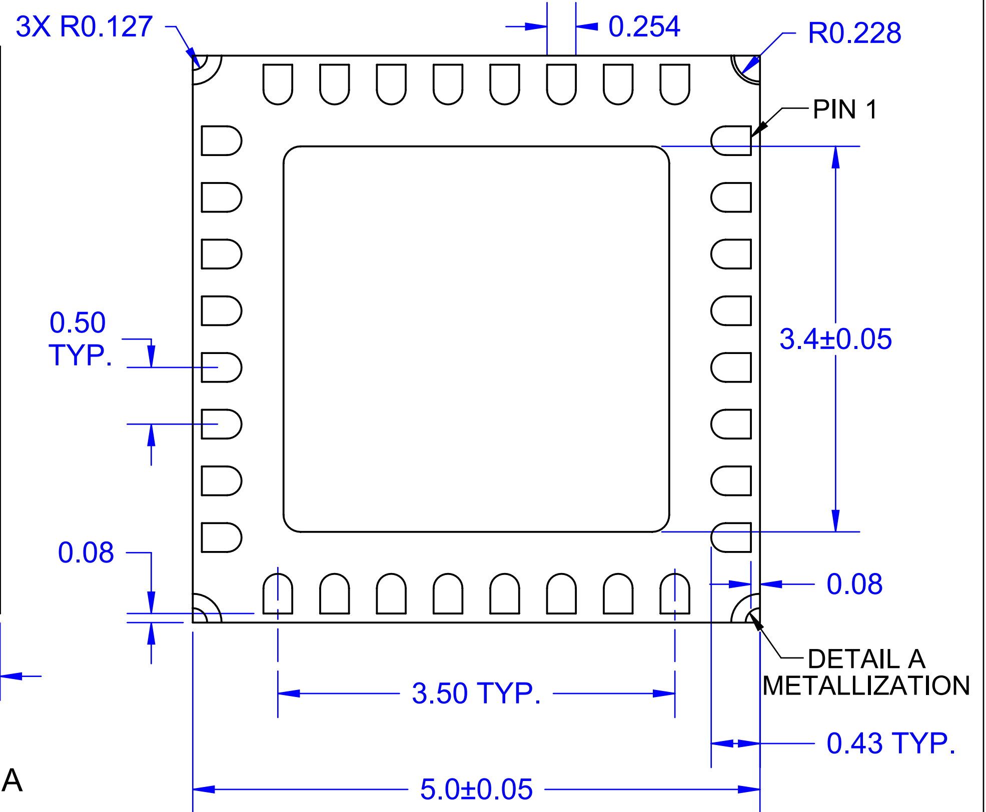
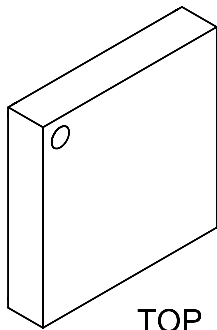
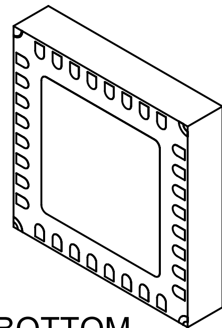


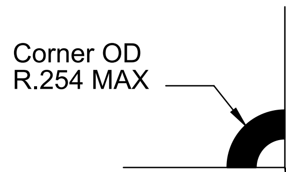

MODEL




DETAIL A

METALLIZATION
4 CORNERS




NOTE: ACTUAL SHAPE OF CORNER PADS VARY.

Notes:
1) BODY: CERAMIC Alumina $Al_2O_3$ WHITE.
2) Lead MATERIAL: Ni 1.27um (MIN) Au 0.76~1.5um.
3) PLATING: See PART NUMBER TABLE.
4) DAISY CHAIN: Wire Bonds Inside Package.
5) SnPb PLATING OPTIONAL.
6) LID: CERAMIC Alumina BLACK (WHITE OPTIONAL).

**PART NUMBER TABLE**

| Part Number | Daisy Chain | Dummy Die | Lead Plating |
|---|---|---|---|
| CQFN32T.5-DE-SC | YES | NO | SnPb |
| CQFN32T.5-DE-SC-D | YES | YES | SnPb |
| CQFN32T.5G-DE | YES | NO | NiAu |
| CQFN32T.5G-DE-D | YES | YES | NiAu |

| APPROVALS | | DATE |
|---|---|---|
| DRAWN | T.Au | 09/26/14 |
| ENG | M. Hart | 09/26/14 |
| MFG | | |
| QA | | |
| CUST | | |
| REVISED | | |

TopLine®

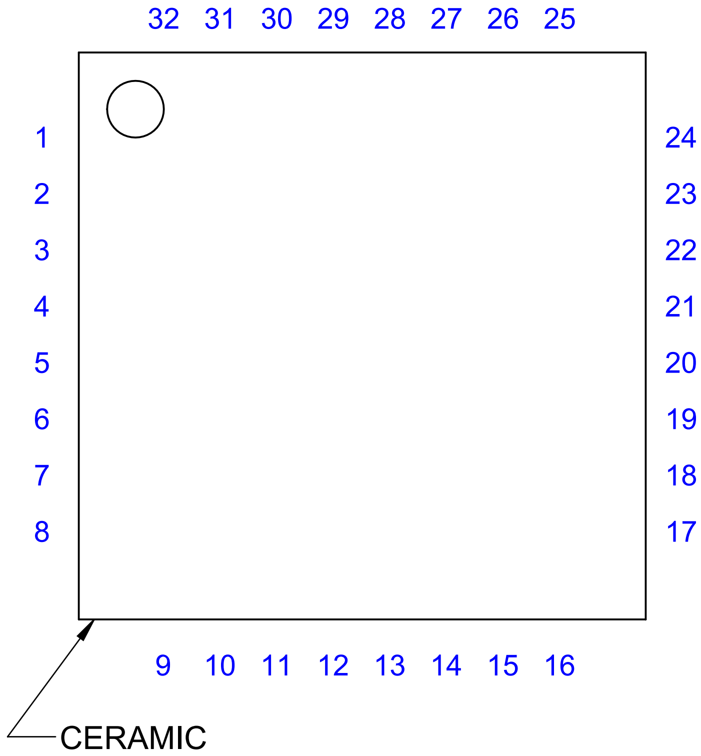
TITLE: 32-LEAD 5mm P=0.5mm CQFN CERAMIC PACKAGE

| SCALE | SIZE | DRAWING NO. | REV |
|---|---|---|---|
| 15:1 | A | 353200 | A |

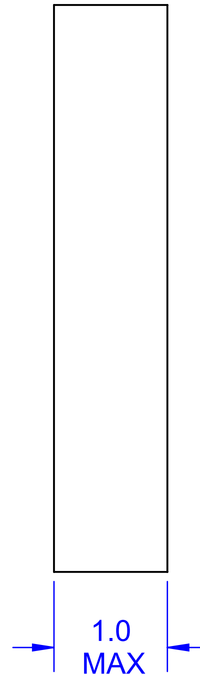
DO NOT SCALE DRAWING

# DAISY CHAIN PATTERN

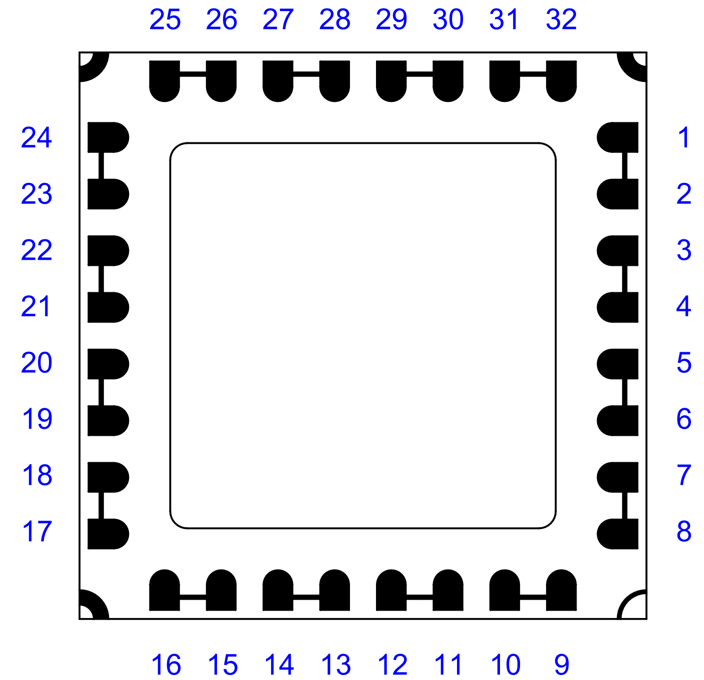
## TOP VIEW




## SIDE VIEW

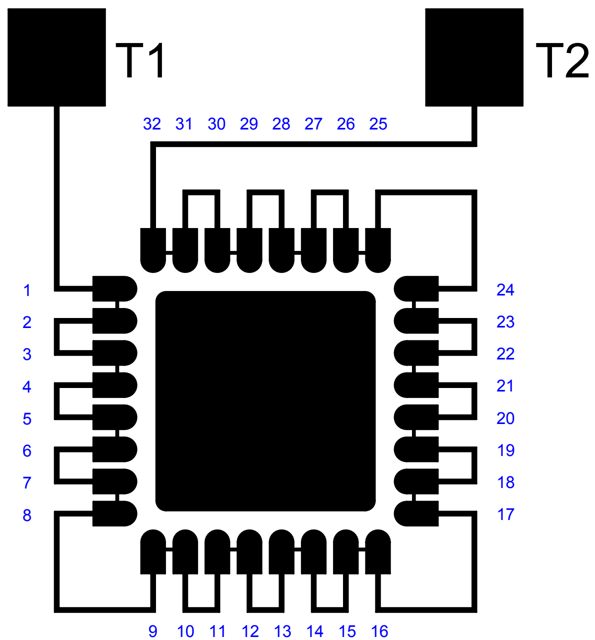



## BOTTOM VIEW

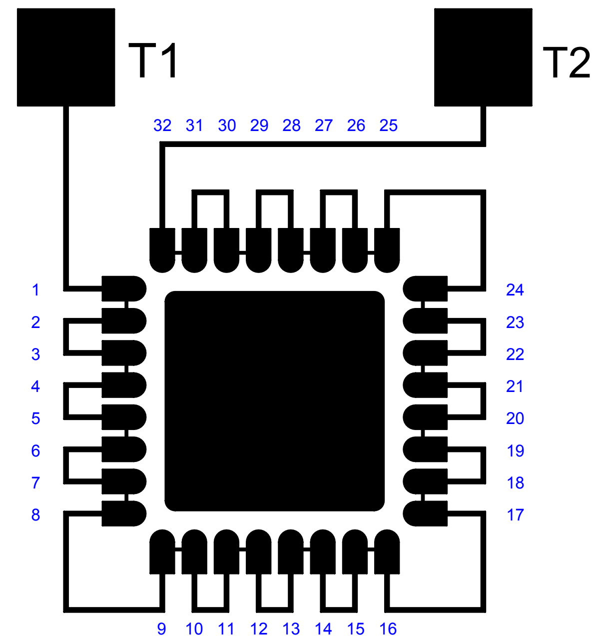



NOTE:
1. PACKAGE DAISY CHAIN BY WIRE BONDING TO INTERNAL BOND PADS.

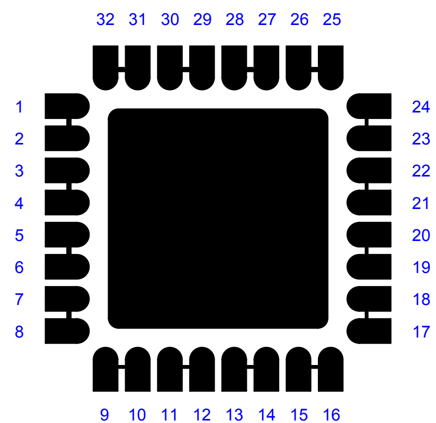
| TopLine® | | | |
|---|---|---|---|
| TITLE 32-LEAD 5mm P=0.5mm CQFN CERAMIC PACKAGE | | | |
| SCALE 15:1 | SIZE A | DRAWING NO. 353200 | REV A |
| DO NOT SCALE DRAWING | | SHEET 2 OF 4 | |




PCB PAD & TRACING




AFTER MOUNTING
CQFN ONTO PCB




CQFN BEFORE MOUNTING

TopLine®

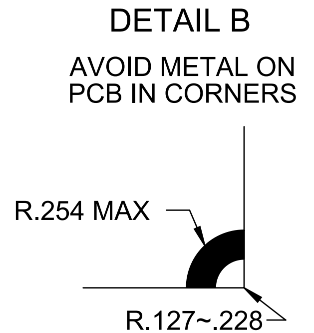
| TITLE | CQFN CERAMIC PACKAGE DAISY CHAIN SCHEMATIC | | |
|---|---|---|---|
| SCALE 8.5:1 | SIZE A | DRAWING NO. 353200 | REV A |
| DO NOT SCALE DRAWING | | SHEET 3 OF 4 | |

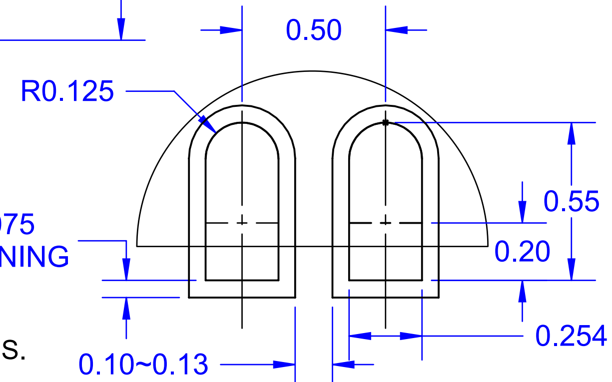
**PC BOARD LAYOUT**
**DIMENSIONS IN MM**
**VIEW FROM TOP**

5.36
5
3.50
4X CORNERS
PCB METALLIZATION
KEEP OUT DETAIL B
PIN 1
0.50
SOLDER MASK OPENING
PCB PAD
COMPONENT PAD
PCB THERMAL PAD
DESIGN OPTIONAL
SEE NOTE 7 & 8
5.36 5 3.50
3.40
0.25
SOLDER MASK OPENING
COMPONENT PAD
COMPONENT
OUTLINE
A

DETAIL B

AVOID METAL ON
PCB IN CORNERS




DETAIL A
SCALE 40:1

Notes: (Unless Otherwise Specified).
1) DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE.
   DESIGNERS SHOULD USE THEIR OWN KNOWLEDGE BASE WHEN DESIGNING THE PCB.
2) SURROUND EACH SIDE OF I/O PERIMETER PADS WITH 0.060~0.075 mm (NSMD) SOLDER MASK
   OPENING (2.4~3.0mils) OPTIONALLY OK TO USE RECTANGLE (NSMD) MASK OPENING AROUND I/O PADS.
3) ROUNDED PCB LAND PADS REDUCE SOLDER BRIDGING. PAD CHAMFER ANGLE MAY VARY.
4) PCB LANDS SHOULD BE 0.2mm LONGER THAN THE PACKAGE I/O PADS.
5) THE WIDTH OF PERIMETER PCB PADS SHOULD MATCH (1:1) THE WIDTH OF THE PACKAGE PADS.
6) REFER TO INDUSTRY REFERENCES SUCH AS IPC-SM-782 FOR PCB LAND PATTERN DESIGN.
7) THERMAL GROUND PADS MAY BE CHANGED TO SUITE REQUIREMENTS OF THE DESIGNER.
   A) MAKE COPPER THERMAL PAD AS LARGE AS POSSIBLE.
   B) DRILL MULTIPLE THERMAL VIAS 0.25~0.33mm DIAMETER USING 0.8~1.2mm PITCH GRID.
   C) PLATE THERMAL VIA BARRELS WITH 1-OUNCE COPPER (18µm).
   D) TENT (COVER) THERMAL VIAS WITH SOLDER MASK 0.1mm LARGER THAN THE VIA DIAMETER.
8) STENCIL DESIGN MAY BE CHANGED TO SUIT REQUIREMENTS OF THE DESIGNER.
   A) LASER CUT STENCIL 0.125mm (5mil) THICK. APERTURE SIZE-TO-LAND RATIO OF 1:1.
   B) THE SOLDER PASTE OPENING IN THE THERMAL PAD AREA SHOULD BE A MATRIX ARRAY OF
   SMALLER APERTURES INSTEAD OF ONE LARGE APERTURE TO CONTROL PASTE AMOUNTS.
   C) APPLY 50% TO 80% SOLDER PASTE COVERAGE IN THE PAD AREA.

TopLine®

| TITLE | 32-LEAD 5mm P=0.5mm CQFN CERAMIC PACKAGE | | |
|---|---|---|---|
| SCALE | SIZE | DRAWING NO. | REV |
| 18:1 | A | 353200 | A |
| DO NOT SCALE DRAWING | | SHEET 4 OF 4 | |