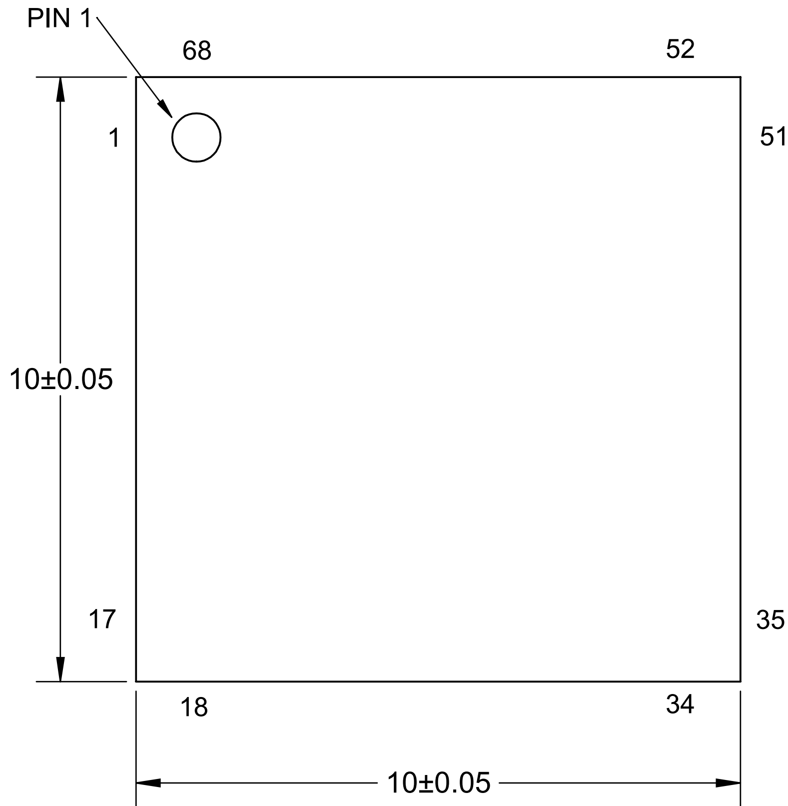
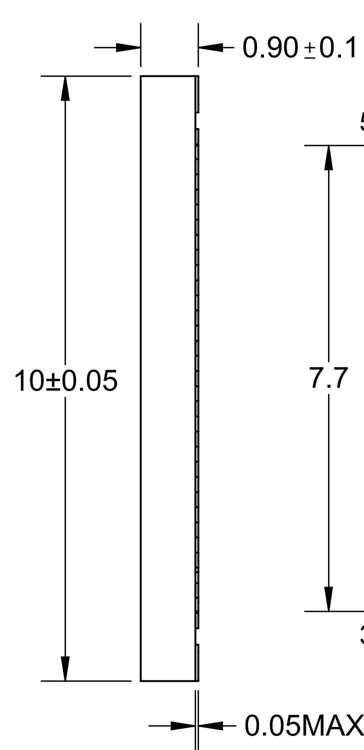
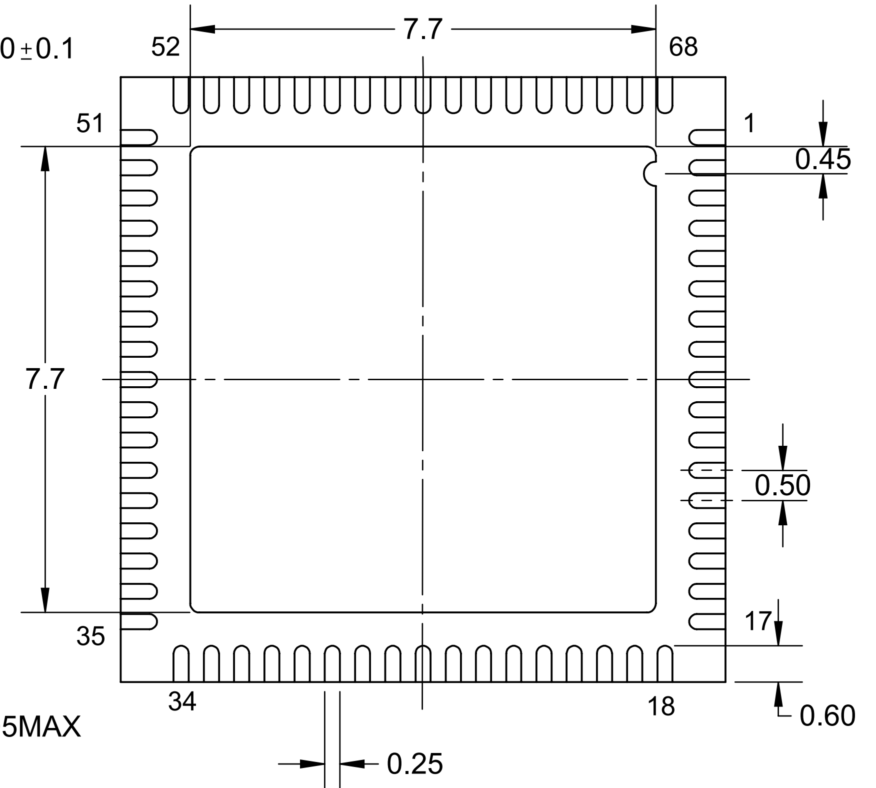
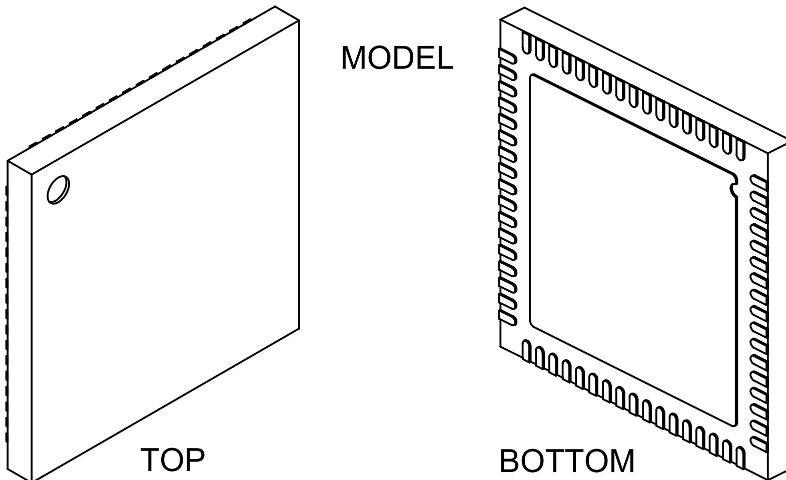






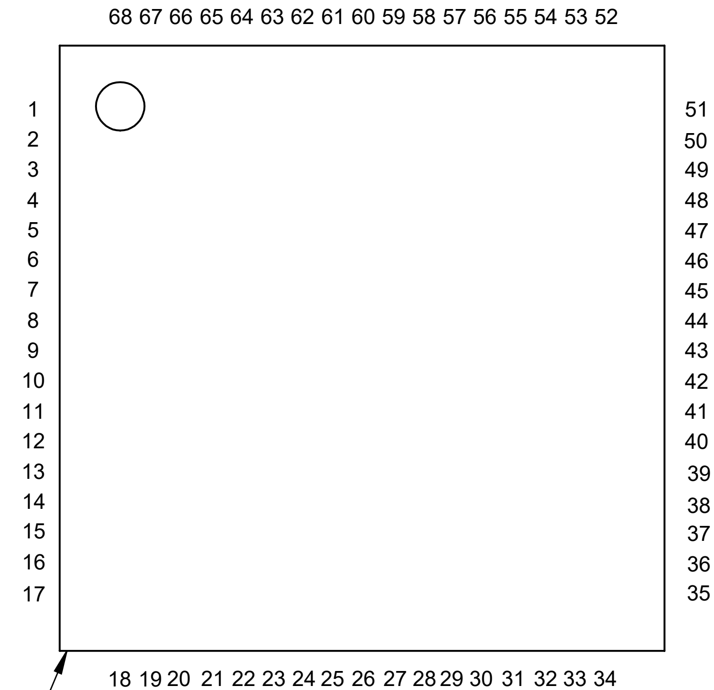


Notes: (Unless Otherwise Specified).
1) BODY: PLASTIC, SEMICONDUCTOR GRADE
2) SUBSTRATE: BT COPPER 0.038mm
3) SUBSTRATE PLATING: NiAu
4) SUBSTRATE THICKNESS: 0.25mm
5) DIE PAD: 7.7 x 7.7mm MAX EXPOSED PAD
6) JEDEC OUTLINE: MO-220
7) DIMENSIONS IN mm

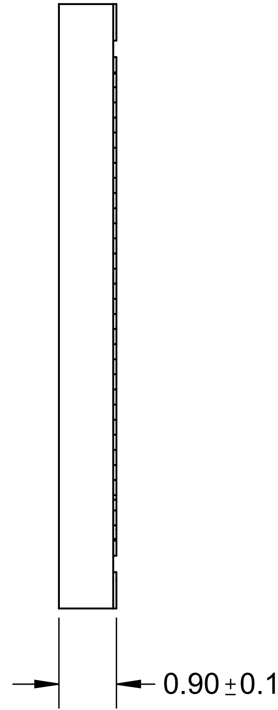
APPROVALS		DATE	TopLine®			
DRAWN	T. Au	6/28/2022				
ENG	M. Hart	6/28/2022	TITLE 68-LEAD 10mm P0.5mm LQFN DAISY CHAIN PAD 7.7mm			
MFG						
QA			SCALE 8:1	SIZE A	DRAWING NO. 456805	REV A
CUST						
REVISED			DO NOT SCALE DRAWING		SHEET 1 OF 5	

DAISY CHAIN PATTERN

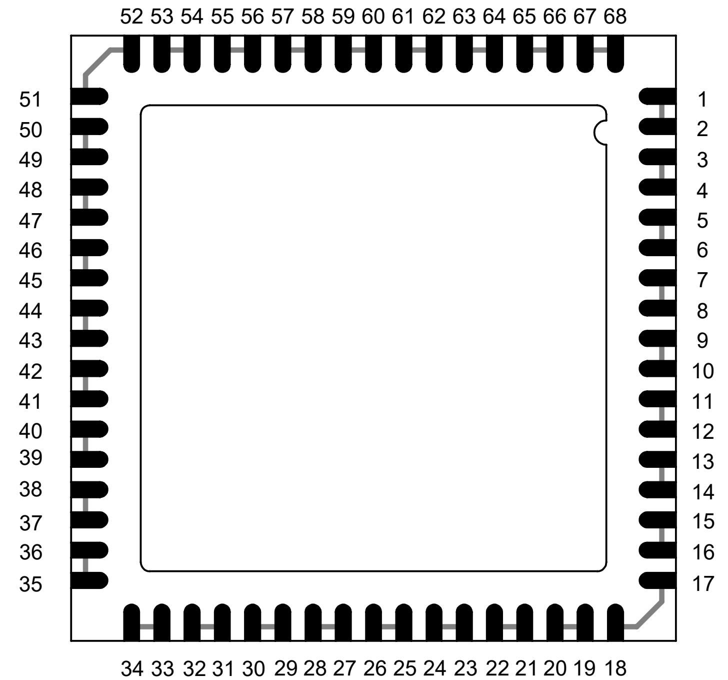
TOP VIEW



SIDE VIEW

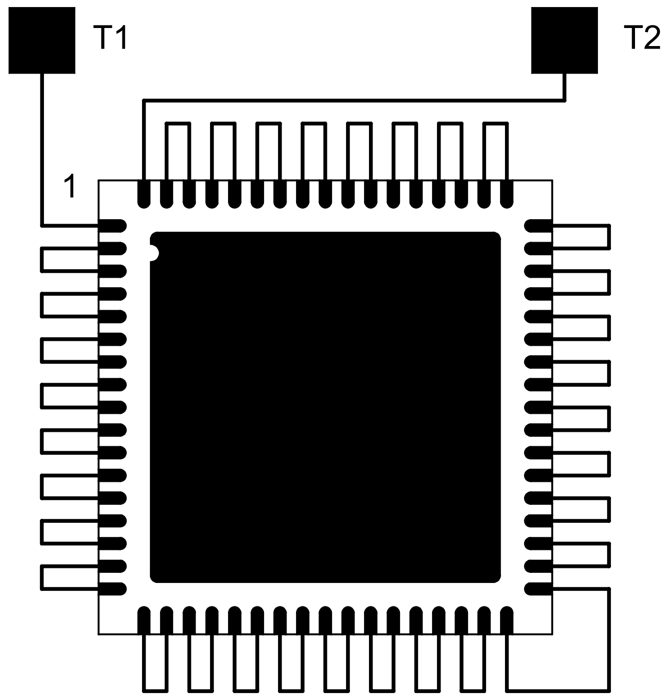


BOTTOM VIEW

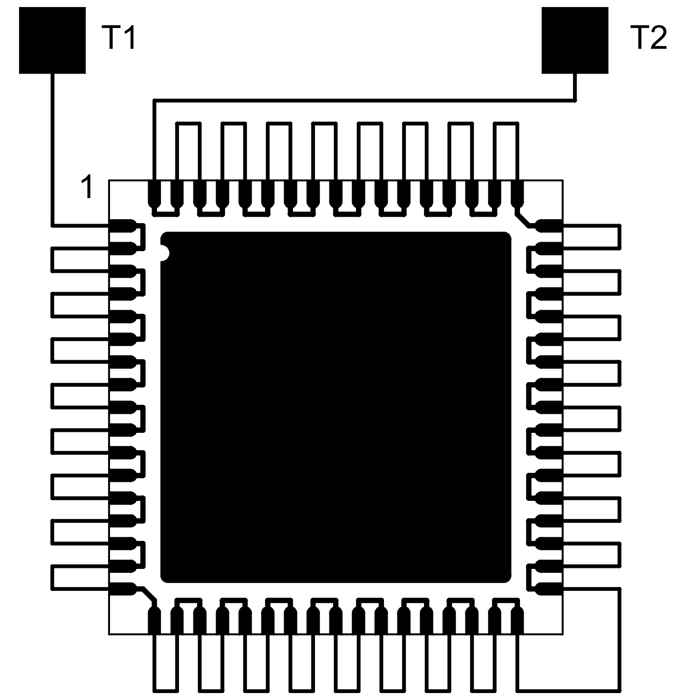


NOTE:
1. DAISY CHAIN ARE WITH INTERNAL COPPER TRACES INSIDE THE COMPONENT.

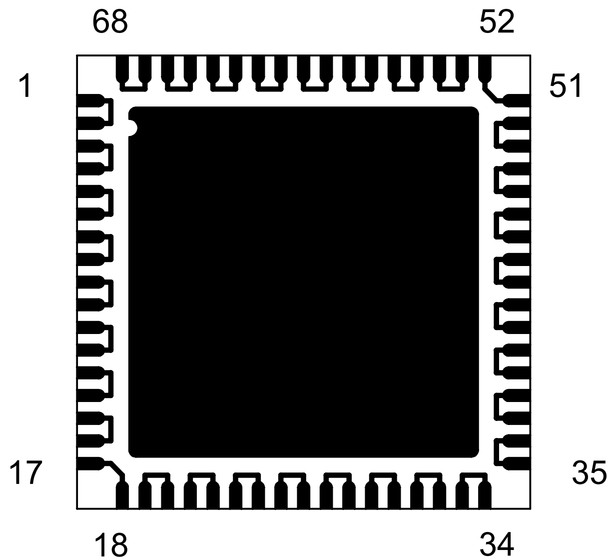
TopLine®			
TITLE	68-LEAD 10mm P0.5mm LQFN DAISY CHAIN PAD 7.7mm		
SCALE 8:1	SIZE A	DRAWING NO. 456805	REV A
DO NOT SCALE DRAWING		SHEET 2 OF 5	



RECOMMENDED
PCB PADS

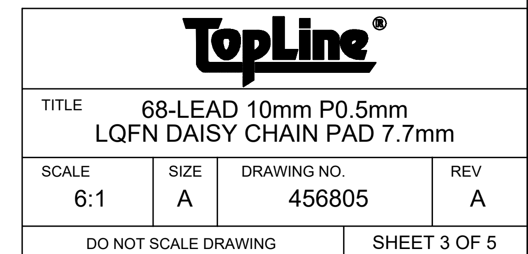


AFTER MOUNTING
ON PCB



VIEW FROM TOP

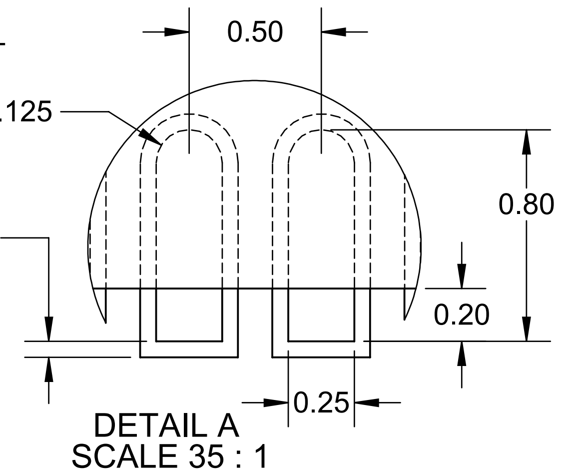
DAISY CHAIN NET LIST		
PINS	PINS	PINS
1 ~ 2	3 ~ 4	5 ~ 6
7 ~ 8	9 ~ 10	11 ~ 12
13 ~ 14	15 ~ 16	17 ~ 18
19 ~ 20	21 ~ 22	23 ~ 24
25 ~ 26	27 ~ 28	29 ~ 30
31 ~ 32	33 ~ 34	35 ~ 36
37 ~ 38	39 ~ 40	41 ~ 42
43 ~ 44	45 ~ 46	47 ~ 48
49 ~ 50	51 ~ 52	53 ~ 54
55 ~ 56	57 ~ 58	59 ~ 60
61 ~ 62	63 ~ 64	65 ~ 66
67 ~ 68		



TITLE	68-LEAD 10mm P0.5mm LQFN DAISY CHAIN PAD 7.7mm		
SCALE 6:1	SIZE A	DRAWING NO. 456805	REV A
DO NOT SCALE DRAWING		SHEET 3 OF 5	

PC BOARD LAYOUT
DIMENSIONS IN MM
VIEW FROM TOP

10.4
10
68
52
PIN 1
51
SOLDER MASK OPENING
COMPONENT PAD
PCB PAD
PCB THERMAL PAD
DESIGN OPTIONAL
SEE NOTE 7 & 8
10.4
7.7
10
7.2
0.50
SOLDER MASK OPENING
COMPONENT PAD
COMPONENT
OUTLINE
35
17
18
34
A

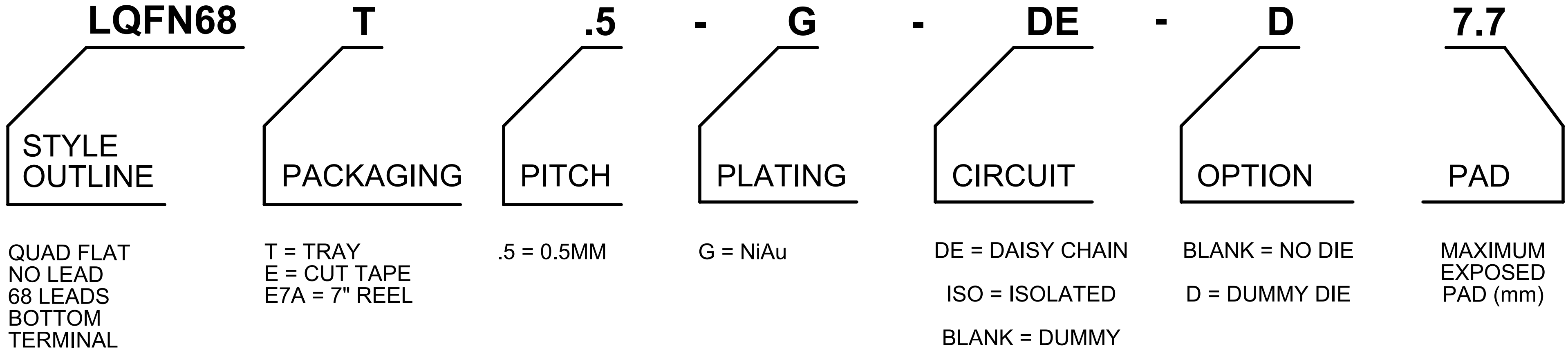


Notes: (Unless Otherwise Specified).
1) DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE.
   DESIGNERS SHOULD USE THEIR OWN KNOWLEDGE BASE WHEN DESIGNING THE PCB.
2) SURROUND EACH SIDE OF I/O PERIMETER PADS WITH 0.060~0.075 mm (NSMD) SOLDER MASK
   OPENING (2.4~3.0mils) OPTIONALLY OK TO USE RECTANGLE (NSMD) 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 APERATURES INSTEAD OF ONE LARGE APERATURE TO CONTROL PASTE AMOUNTS.
   C) APPLY 50% TO 80% SOLDER PASTE COVERAGE IN THE PAD AREA.

TopLine®

TITLE	68-LEAD 10mm P0.5mm LQFN DAISY CHAIN PAD 7.7mm		
SCALE 8:1	SIZE A	DRAWING NO. 456805	REV A
DO NOT SCALE DRAWING		SHEET 4 OF 5	

PART NUMBERING SYSTEM



PART NUMBER	DAISY CHAIN	PACKAGING	RoHS Pb-FREE	Plating	DUMMY DIE
LQFN68T.5-G-DE-D7.7	YES	JEDEC TRAY	YES	NiAu	YES
LQFN68T.5-G-ISO-7.7	ISOLATED	JEDEC TRAY	YES	NiAu	NO

OTHER PART NUMBER COMBINATIONS AVAILABLE. CONTACT TOPLINE.

TopLine®			
TITLE: 68-LEAD 10mm P0.5mm LQFN DAISY CHAIN PAD 7.7mm			
SCALE: NONE	SIZE: A	DRAWING NO.: 456805	REV: A
DO NOT SCALE DRAWING		SHEET 5 OF 5	