TOP VIEW

PIN 1

A

A

4

2.54

0.34

4

SIDE VIEW

6° 0.635

4 3.65 3.52

0.175±0.050
TYP

0.84

SECTION A-A

BOTTOM VIEW
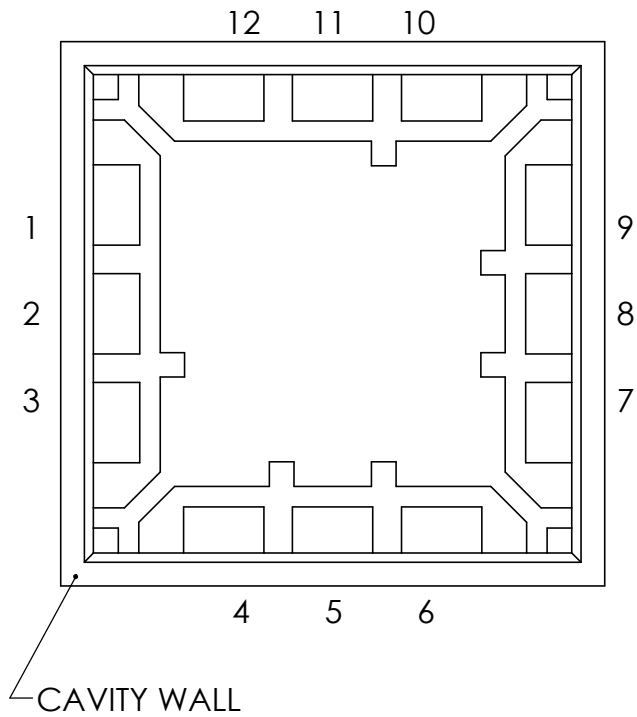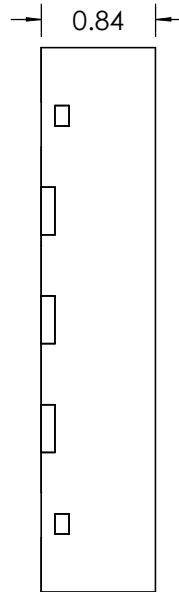
0.80 TYP. 0.35

PIN 1

4 2.54

1.60

2.54 0.40

4

Notes: (Unless Otherwise Specified)
1) BODY; PLASTIC, SEMICONDUCTOR GRADE
2) LEAD FRAME: COPPER, C-194F/H
3) LEAD FRAME PLATING: Ni, Pd, Au
4) FRAME THICKNESS: 0.203mm
5) DIE PAD: 2.54 X 2.54mm
6) JEDEC OUTLINE: MO-220

TOP VIEW

12   11   10

1

2

3

4   5   6

CAVITY WALL

9

8

7

SIDE VIEW
(BEFORE LID ATTACH)

0.84

BOTTOM VIEW

10   11   12

45° CHAMFER

9

8

7

1

2

3

0.80 TYP.

6   5   4

4

4
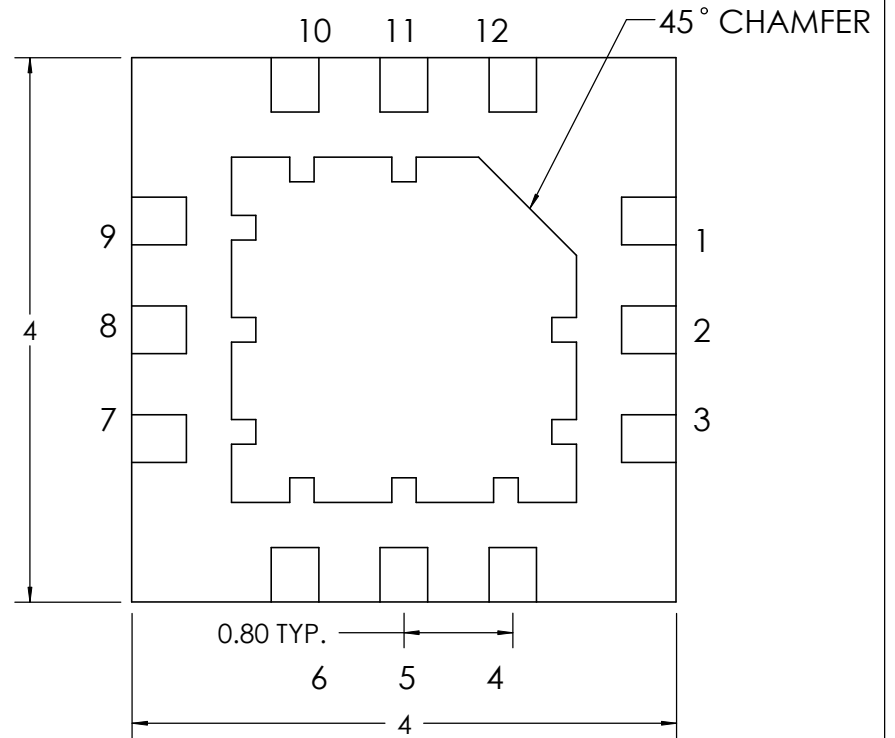
Mirror Semiconductor
www.MirrorSemi.com

TITLE:

12-LEAD 4mm P=0.80mm
QFN CAVITY PACKAGE
LEAD NUMBERING

SCALE	SIZE	DWG. NO.	REV
18:1	**A**	**481270** **M-QFN12W.8**	**A**
DO NOT SCALE DRAWING		SHEET 2 OF 4	

BOND DIAGRAM
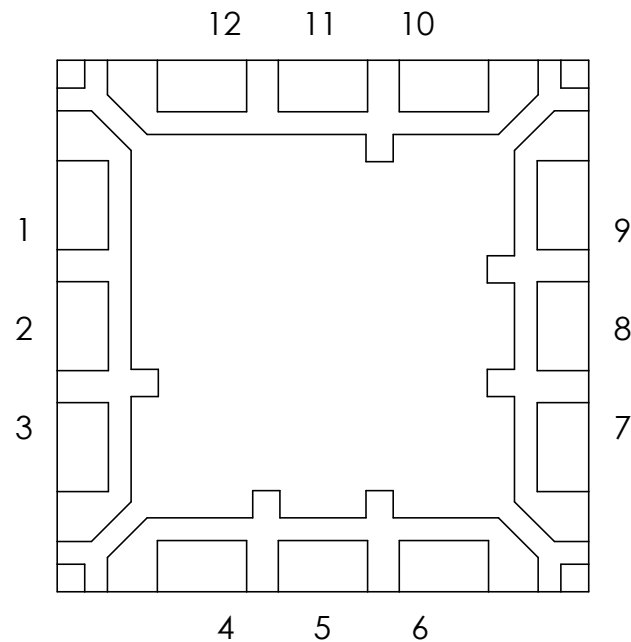
SOLDER MASK OPENING

COMPONENT PAD

PCB PAD

COMPONENT PAD

PCB THERMAL PAD DESIGN OPTIONAL SEE NOTE 7, 8

SOLDER MASK OPENING

4.40
4
1.60
0.80
4.40
4
1.60
0.35
2.39
2.54
A

0.060~0.075 MASK OPENING

0.285~0.300 MIN.

R0.18
0.80
0.60
0.35
0.20

DETAIL A
SCALE 40 : 1
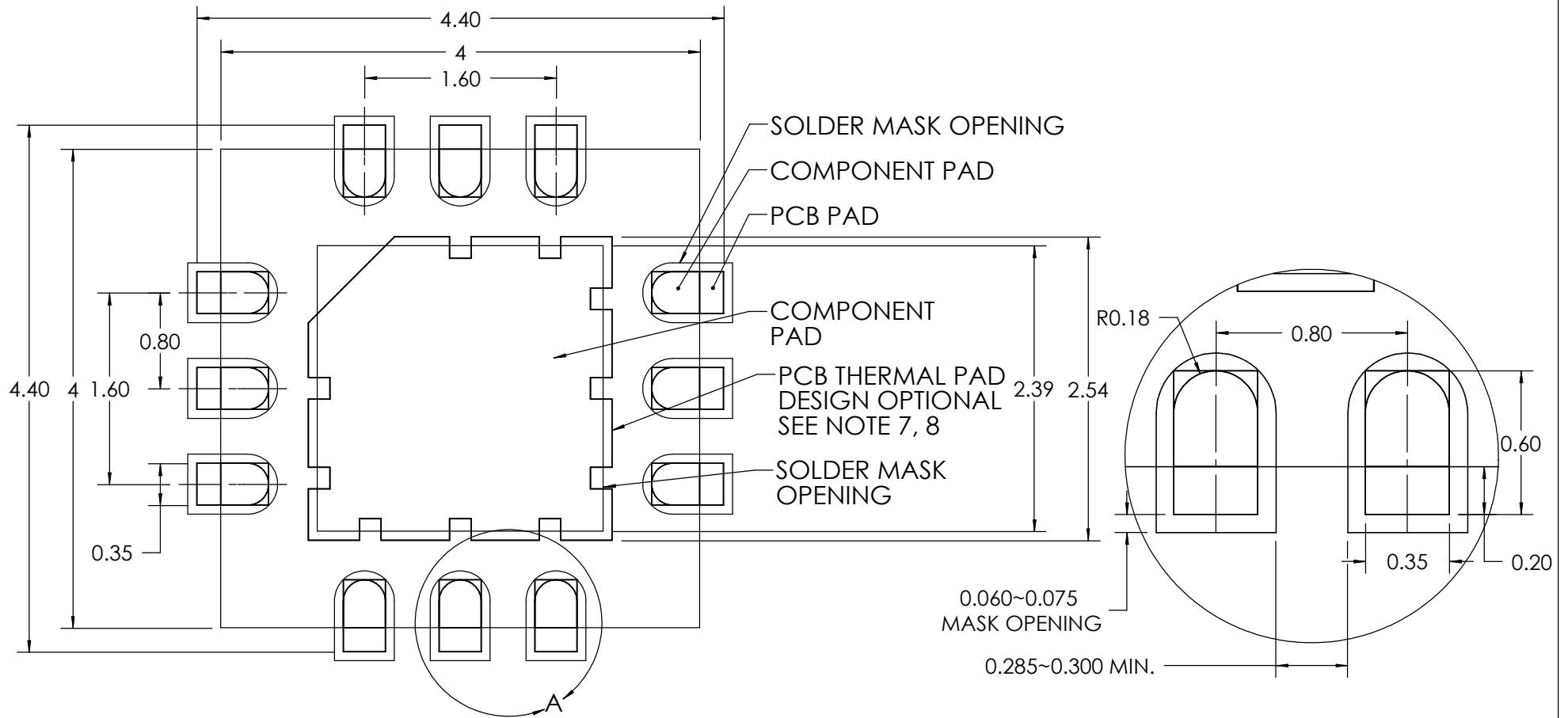
Notes: (Unless Otherwise Specified).
1. DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN KNOWLEDGE BASE WHEN DESIGNING THE PCB.
2. SURROUND EACH SIDE OF I/O PERIMETER PADS WITH 0.060~0.075 mm (2.4~3.0mils) NSMD SOLDER MASK OPENING. OPTIONALLY OK TO USE RECTANGLE (NSMD) MASK 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 SUITE 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.

Mirror Semiconductor			
www.MirrorSemi.com			
TITLE: 12-LEAD 4mm P=0.80mm QFN CAVITY PACKAGE RECOMMENDED PCB LAYOUT			
SCALE	SIZE	DWG. NO.	REV
20:1	A	481270 M-QFN12W.8	A
DO NOT SCALE DRAWING			SHEET 4 OF 4