

Package : UQFNxxxV3030/4040/5050series

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1. Structure and materials

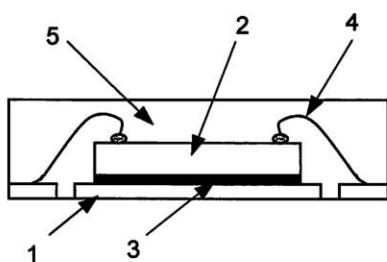


Fig. 1 Structure

| No. | Item | Materials |
|-----|------------|--|
| 1 | Lead Frame | Cu-Alloy (External lead : Pb free solder plating) |
| 2 | Die | Silicon |
| 3 | Die Attach | Ag Paste |
| 4 | Wire | Au |
| 5 | Molding | Epoxy Resin |

2. Tape and Reel information

2.1. Packing specification

| | |
|-------------------|---------------------------|
| Tape | Embossed carrier tape |
| Quantity | See the table on page 4/4 |
| Direction of feed | E2(See Fig. 2) |

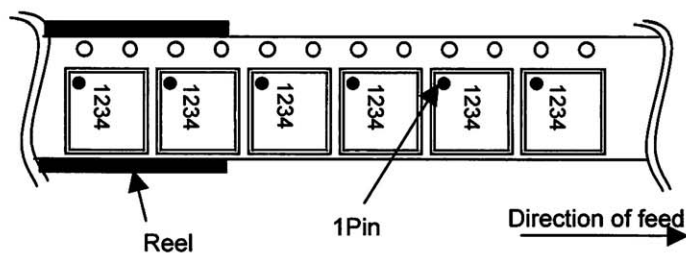


Fig. 2 Typical Tape and Reel configuration

2.2. Tape and Reel specification

2.2.1. Tape and reel dimensions (See the table on page 4/4)

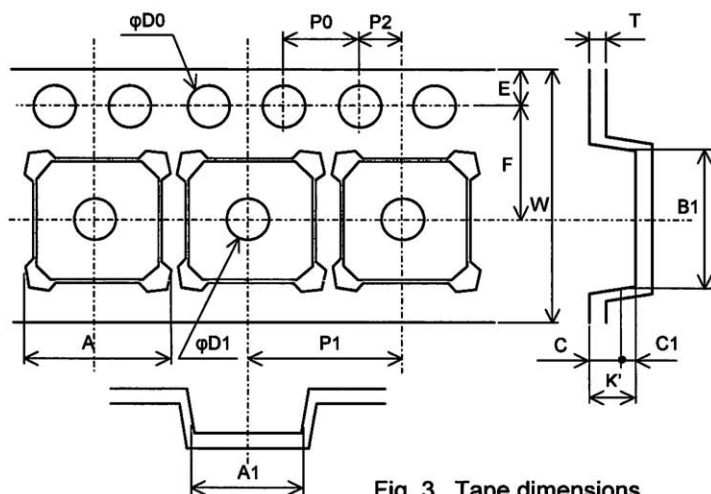


Fig. 3 Tape dimensions

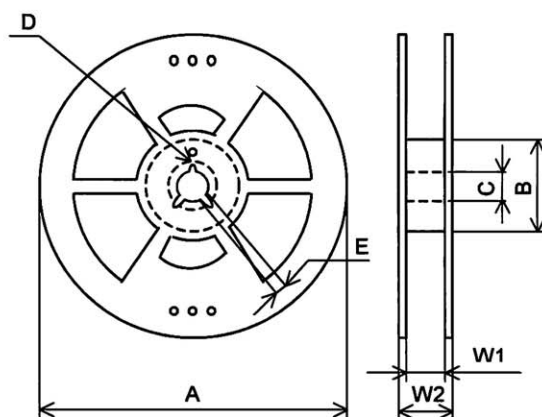


Fig. 4 Reel dimensions

2.3. Leader and Trailer

2.3.1. Leader

No component pockets are 25 pockets or more.

2.3.2. Trailer

No component pockets are 10 pockets or more.

Tape is free from reel.

2.4. Label for Reel and Box

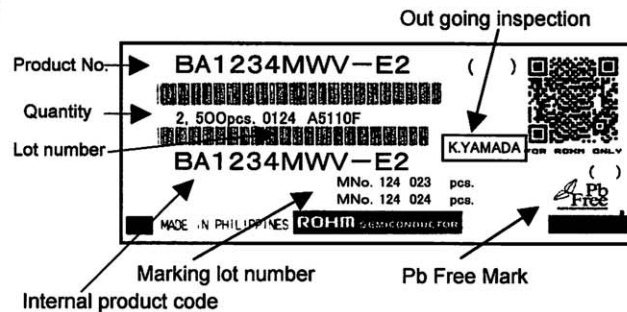


Fig. 5 Label example

2.5. Packing style

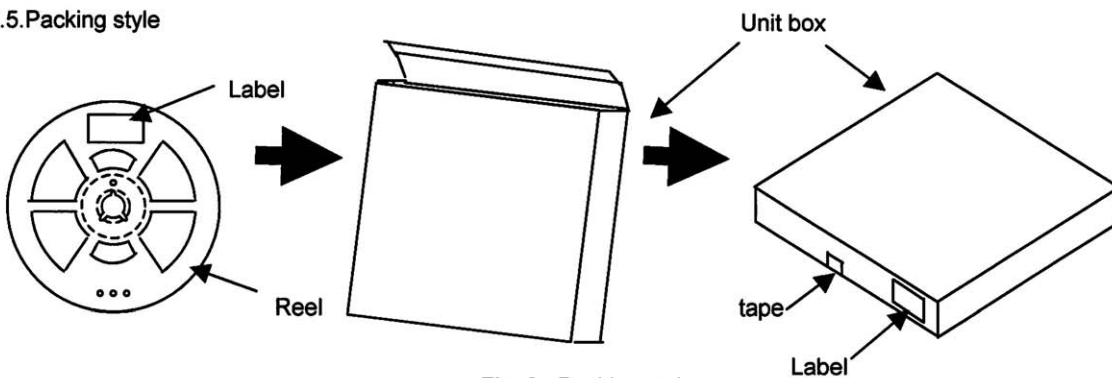


Fig. 6 Packing style

2.6. Shipping style

5 unit boxes or less per shipping box

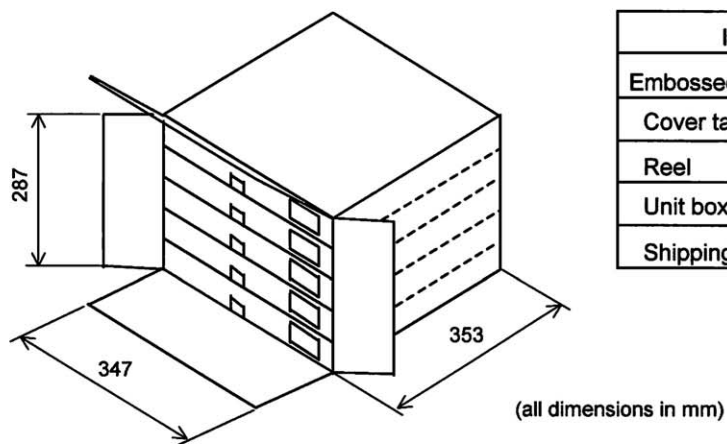


Fig. 7 Shipping box dimensions and Shipping style

2.7. Packing materials

| Item | Material |
|-----------------------|-----------|
| Embossed carrier tape | PS |
| Cover tape | PET + PE |
| Reel | PS |
| Unit box | Cardboard |
| Shipping box | Cardboard |

2.8. Others

2.8.1. Peelback strength

Cover tape peelback strength is 0.2~0.7N.

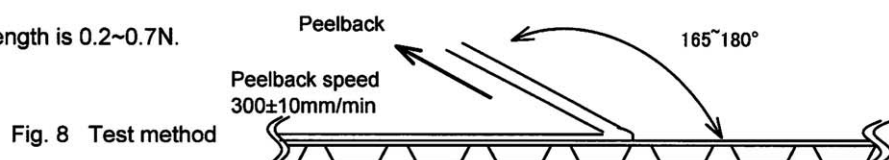


Fig. 8 Test method

2.8.2. Dropouts

(1) No consecutive dropouts.

(2) A maximum 0.1% of specified number of products in each packing may be missing.

3. Storage conditions

3.1. Storage environment

Recommended storage conditions are as follows :

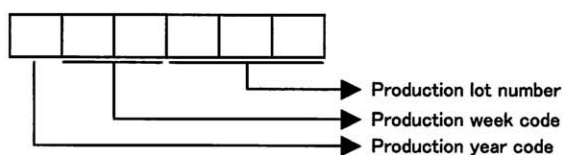
-Temperature : 5~30°C

-Humidity : 40~70% RH

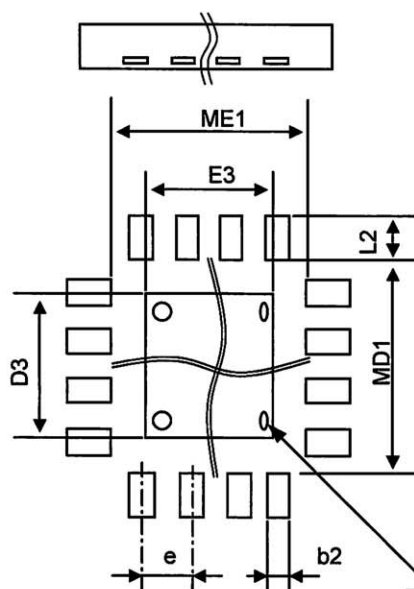
3.2. Storage period

-Specified storage period : 1 year

4. Marking lot number



5. Footprint dimensions (Optimize footprint dimensions to the board design and soldering condition)



(all dimensions in mm)

| Package | Land pitch e | Land | | | |
|--------------|-----------------|-------|------|--------|-------|
| | | space | | length | width |
| | | MD1 | ME1 | L2 | b 2 |
| UQFN036V5050 | 0.40 | 3.60 | 3.60 | 1.00 | 0.22 |
| UQFN040V5050 | 0.40 | 4.00 | 4.00 | 0.80 | 0.22 |

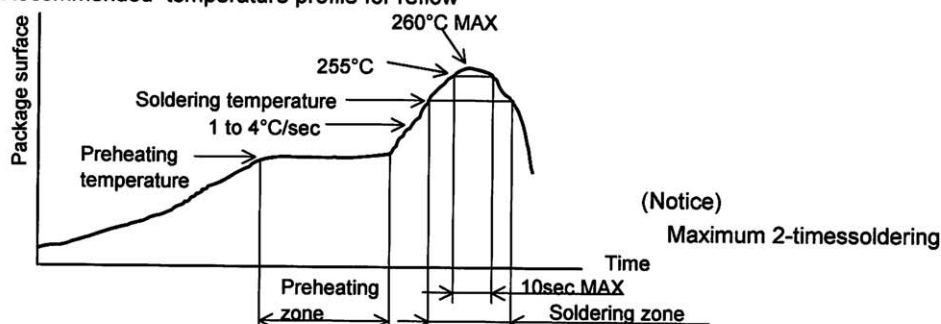
| Package | Radiation land | | Thermal Via | |
|--------------|----------------|-------------|-------------|----------|
| | length D3 | width E3 | Pitch | Diameter |
| UQFN036V5050 | 2.60 | 2.60 | 1.20 | φ0.300 |
| UQFN040V5050 | 3.20 | 3.20 | 1.20 | φ0.300 |

Thermal Via

*The lead toe and lead side fillet may not be achieved because of non-lead packages.

6. Soldering conditions

6.1. Recommended temperature profile for reflow

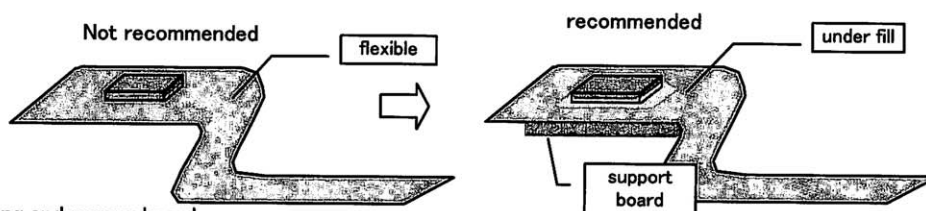


6.2. The wave soldering method is not supported.

6.3 Notice information of board mounting

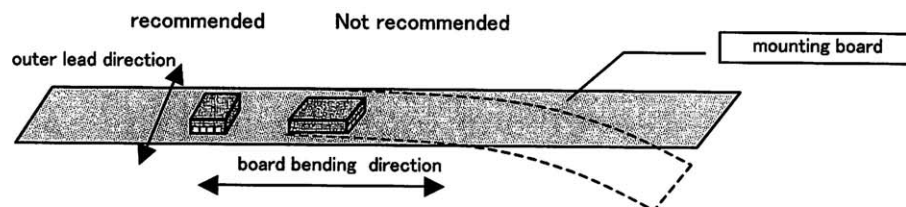
Mounting on flexible film

Mounting on flexible film, film bend may occur lack of lead from package, usage of support board and under fill is recommended.

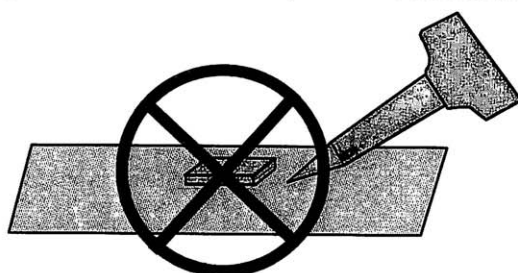


Mounting on long and narrow board

Mounting on long and narrow board, bending stress may occur a lack of lead from package, bending board direction and outer lead direction is recommended as drawing (vertically layout) and under fill usage is recommended.



6.4 Rework by soldering iron is not allowed or it may cause mold crack and terminal open.



| Package | Quantity (pcs) | Tape dimensions (all dimensions in mm) | | | | | | | | | | | | | |
|--------------|-------------------|--|-------|--------|--------|---------|------|------|-------|------|------|------|-------|-------|------|
| | | A1 | B1 | C | C1 | D0 | D1 | E | F | K' | P0 | P1 | P2 | T | W |
| UQFN036V5050 | 2500 | 5.2 | 5.2 | (1.15) | (0.65) | φ1.5 | φ1.5 | 1.75 | 5.5 | 1.80 | 4.0 | 8.0 | 2.0 | 0.3 | 12.0 |
| UQFN040V5050 | 2500 | 5.2 | 5.2 | (1.15) | (0.65) | φ1.5 | φ1.5 | 1.75 | 5.5 | 1.80 | 4.0 | 8.0 | 2.0 | 0.3 | 12.0 |
| Tolerance | | ±0.05 | ±0.05 | - | - | +0.1/-0 | ±0.1 | ±0.1 | ±0.05 | ±0.1 | ±0.1 | ±0.1 | ±0.05 | ±0.05 | ±0.2 |

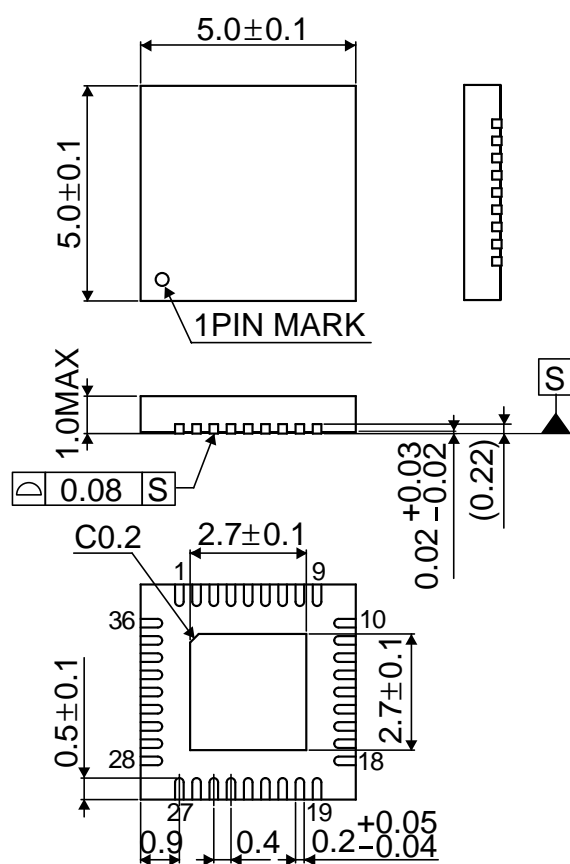
<Reel dimensions >

<Dehydrated weight >

| Package | Reel dimensions (all dimensions in mm) | | | | | | | Dehydrated weight (g) |
|--------------|--|--------|-------|-------|-----|--------|------|--------------------------|
| | A | B | C | D | E | W1 | W2 | |
| UQFN036V5050 | φ330 | φ60 | φ13.0 | φ20.2 | 1.5 | 13.0 | 17.4 | 0.063 |
| UQFN040V5050 | φ330 | φ60 | φ13.0 | φ20.2 | 1.5 | 13.0 | 17.4 | 0.064 |
| Tolerance | - | +1.0/0 | ±0.2 | MIN | MIN | +1.0/0 | ±1.0 | |

Package Dimensions

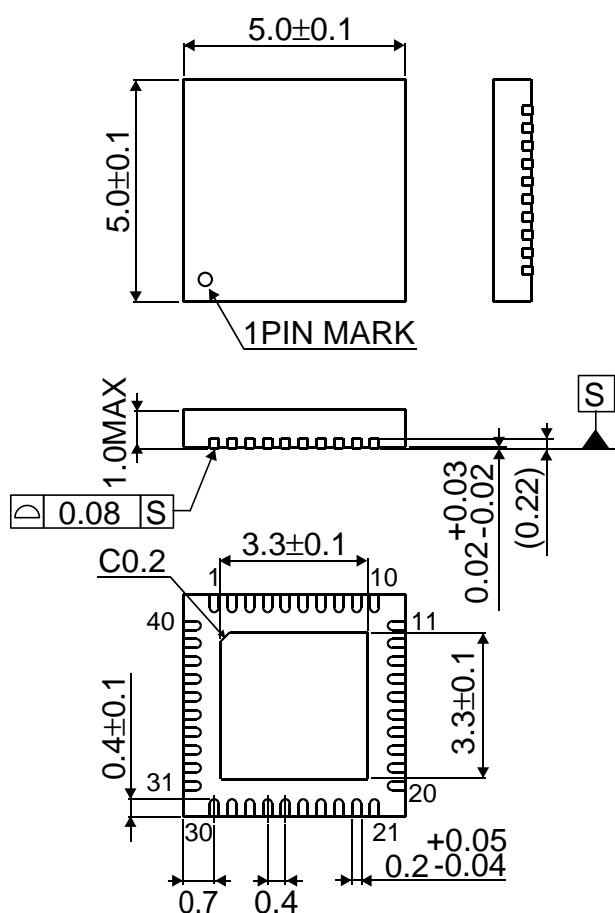
UQFN036V5050



(Unit : mm)

Package Dimensions

UQFN040V5050



(Unit : mm)

Notes

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