

## Package : VCSP50L3

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### 1. Structure and materials

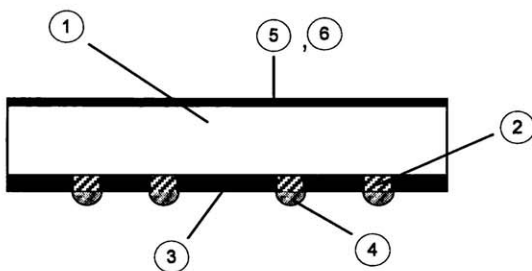


Fig. 1 Structure

No.	Item	Materials
①	Die	Silicon
②	Cu Post	Cu
③	Mold Compound	Epoxy Resin
④	Ext. terminal	Sn-3Ag-0.5Cu Solder
⑤	Mold Compound	Polyamide-imide Resin
⑥	Marking	Laser Marking

Dehydrated weight : 9.7 mg

### 2. Tape and Reel information

#### 2. 1. Packing specification

Tape	Embossed carrier tape
Quantity	2,500pcs/Reel
Direction of feed	E2 (See Fig. 2)

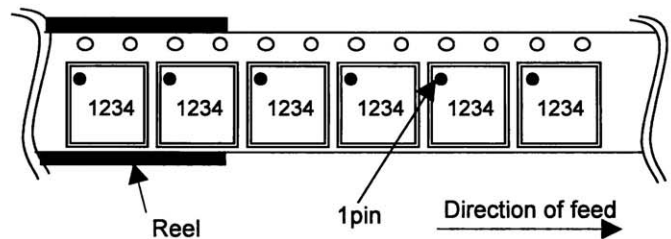


Fig. 2 Typical Tape and Reel configuration

#### 2. 2. Tape and Reel specification

##### 2. 2. 1. Tape and reel dimensions (See the table on page 2/4)

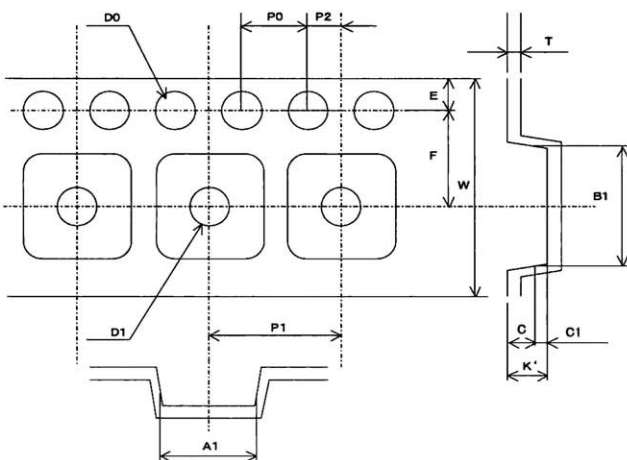


Fig. 3 Tape dimensions

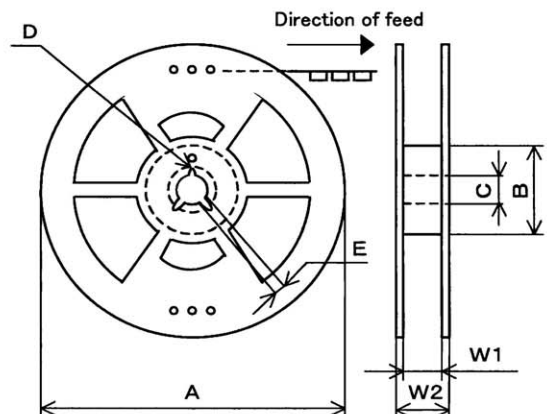


Fig. 4 Reel dimensions

(Tape dimensions)

A1	B1	C	C1	D0	D1	E	F	K'	P0	P1	P2	T	W
3.40 ±0.1	3.40 ±0.1	(0.60)	(0.25)	φ1.5 +0.1 -0	φ1.5 +0.1 -0	1.75 ±0.1	5.5 ±0.1	0.85 ±0.1	4.0 ±0.1	8.0 ±0.1	2.0 ±0.1	0.3 ±0.05	12.0 ±0.3

(Reel dimensions)

A	B	C	D	E	W1	W2
φ330 +0 -1.5	50 MIN	φ13.0 ±0.2	φ20.2 MIN	1.5 MIN	13.4 ±1.0	17.4 ±1.0

(Unit : mm)

2. 3. Leader and Trailer

2. 3. 1. Leader

No component pockets are 50 pockets(400mm) or more.

2. 3. 2. Trailer

No component pockets are 20 pockets(160mm) or more.

Tape is free from reel.

2. 4. Label for Reel and Box

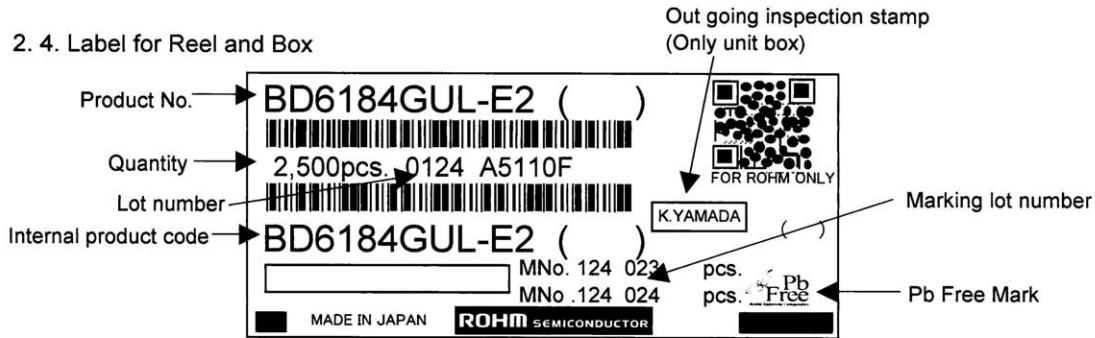


Fig. 5 Label example

2. 5. Packing style

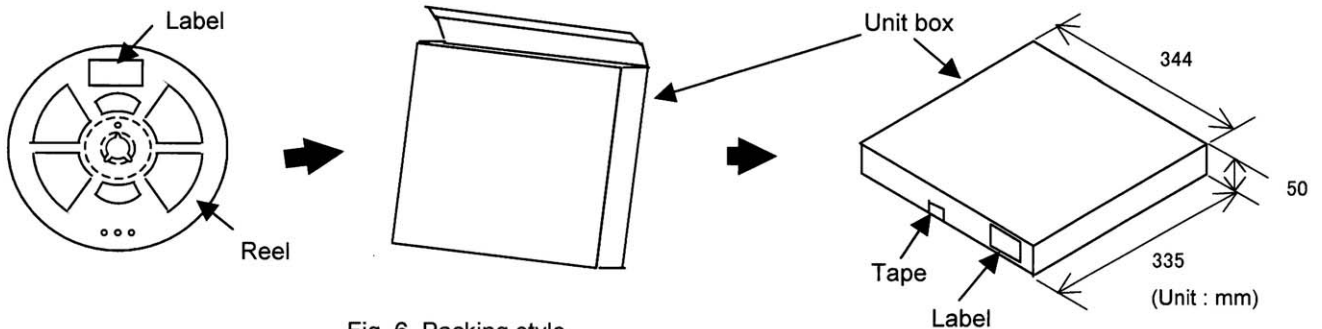


Fig. 6 Packing style

2. 6. Shipping style

5 unit boxes or less per shipping box.

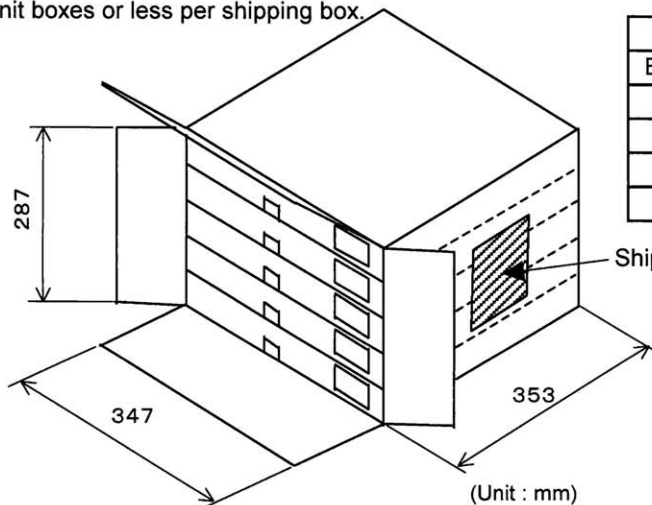
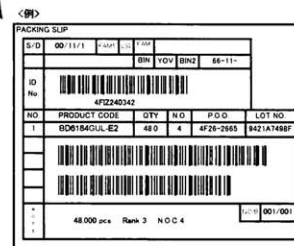


Fig. 7 Shipping box dimensions and shipping style

2.7. Packing materials

Item	Material	Antistatic
Embossed carrier tape	PS	Yes
Cover tape	PET + PE	Yes
Reel	PS	Yes
Unit box	Cardboard	None
Shipping box	Cardboard	None



- <Shipping label>
1. Product code
  2. Q' TY
  3. N.O.C
  4. LOT No.

2. 8. Others

2. 8. 1. Peelback strength

Cover tape peelback strength is 0.2 to 0.7N.

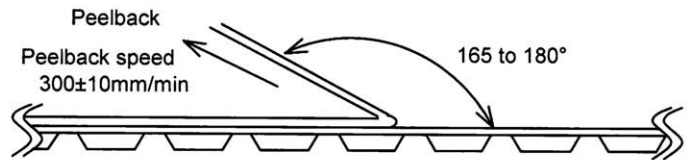


Fig. 8 Test method

2. 8. 2. Missing ICs

- (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 to 30°C
- Humidity : 40 to 70% RH

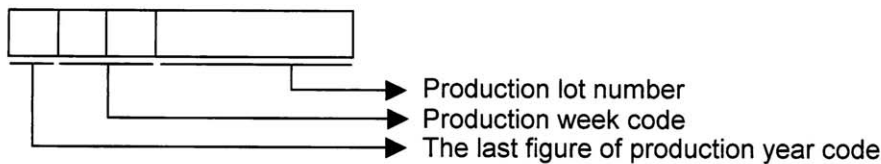
3. 2. Storage period

-Specified storage period : 1 year

3. 3. Specified storage period until soldering

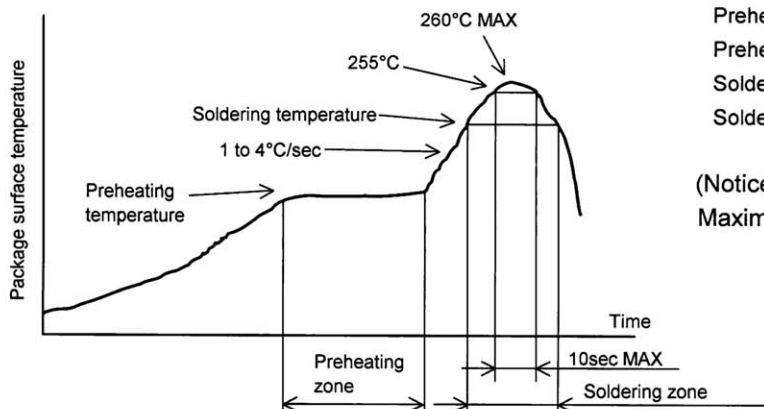
This package dose not require additional drying treatment as long as the moisture condition at the mounting process is within our recommended mounting condition.

4. Marking lot number



5. Soldering conditions

5. 1. Recommended temperature profile for reflow



- Preheating temperature ; 130°C to 190°C
- Preheating zone ; 120sec MAX
- Soldering temperature ; 220°C to 230°C
- Soldering zone ; 60sec MAX

(Notice)  
Maximum 3-times soldering

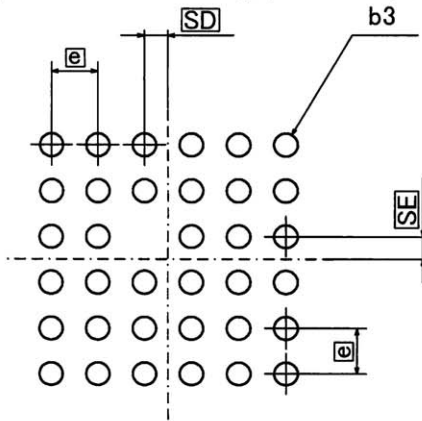
5. 2. About mounting with Sn-Pb solder paste.

Mounting with Sn-Pb solder paste is not recommended because it has a possibility of reducing reliability to connect with Sn-3.0Ag-0.5Cu solder balls.

5. 3. The wave soldering method is not supported.

5. 4. Partial heat supply method (by soldering iron) is not supported.

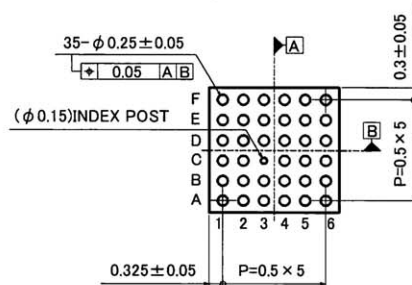
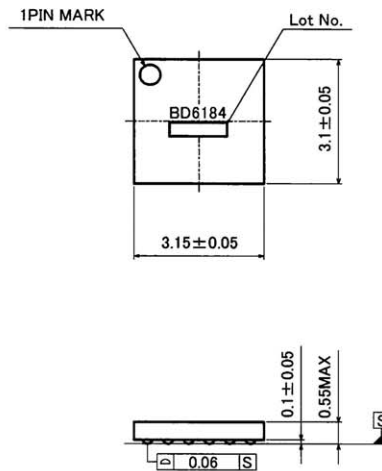
**6. Footprint dimensions** (Optimize footprint dimensions to the board design and soldering condition)



Symbol	Reference Value
e	0.50
b3	Φ0.25
SD	0.25
SE	0.25

(Unit : mm)

**7. External dimensions**



(Unit : mm)

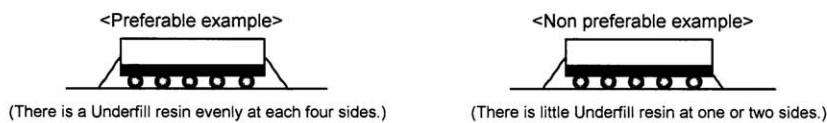
**8. Precautions**

8. 1. Caution for handling

Silicon substrate surface is exposing to the side of this package.  
Therefore, please pay careful attention to chip and crack, and handle without touching the side of package.

8. 2. Regarding the underfill material

In some case, the underfill material is applied in order to reinforce the solder junction of package.  
Since there is a case that solder joint reliability may deteriorate according to the resin material or coating condition, please evaluate it sufficiently for its application. In term of the coating condition, it is preferable that there is an enough material beyond the each four sides of package.



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