

Package : VSON***X series (E2)

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1. Structure and materials

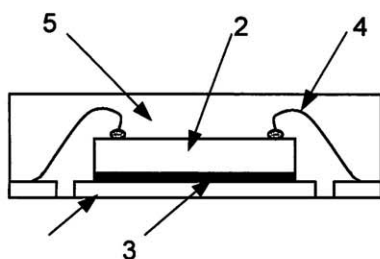


Fig. 1 Structure

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)

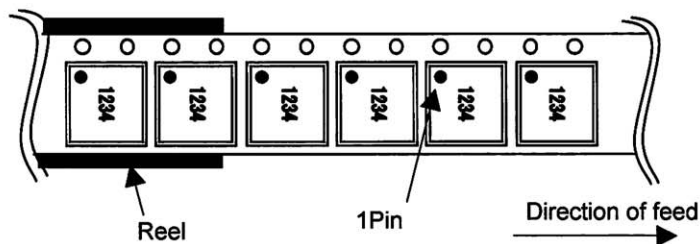


Fig. 2 Typical Tape and Reel configuration

2.2. Tape and Reel specification

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

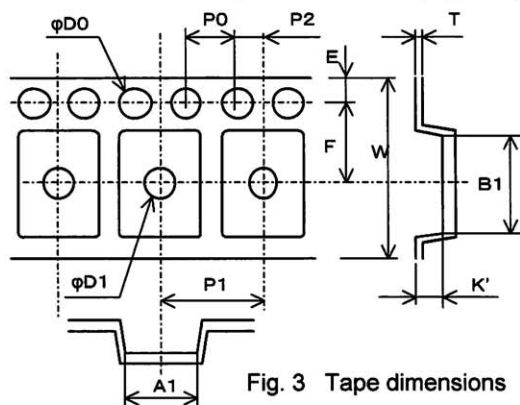


Fig. 3 Tape dimensions

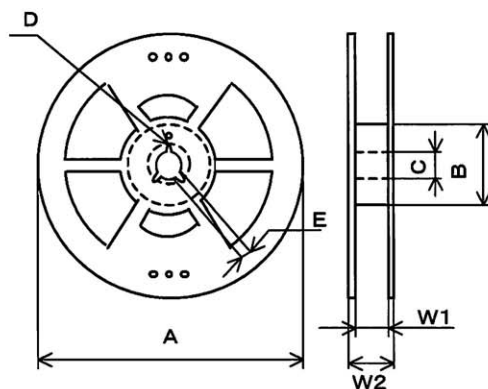


Fig. 4 Reel dimensions

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

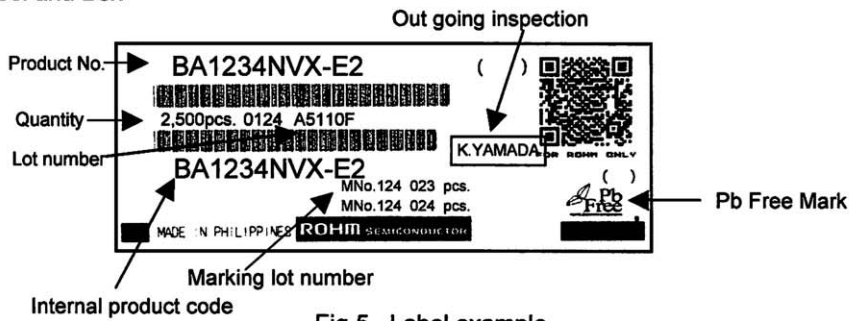


Fig.5 Label example

2.5. Packing style Label

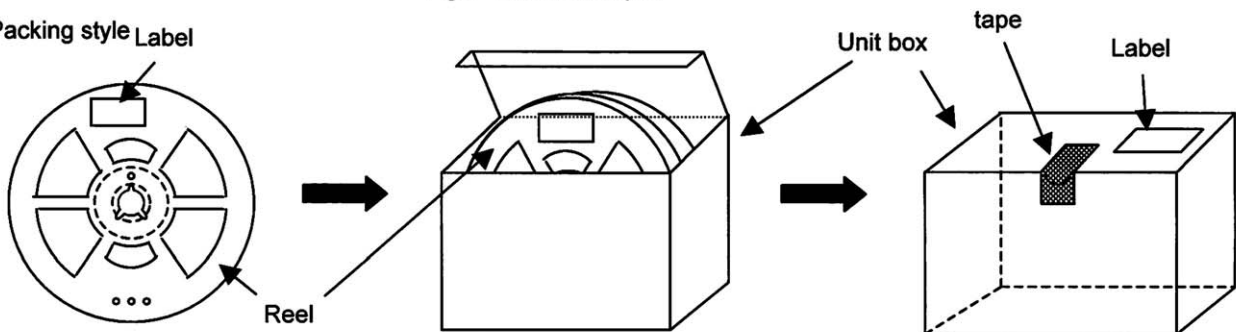
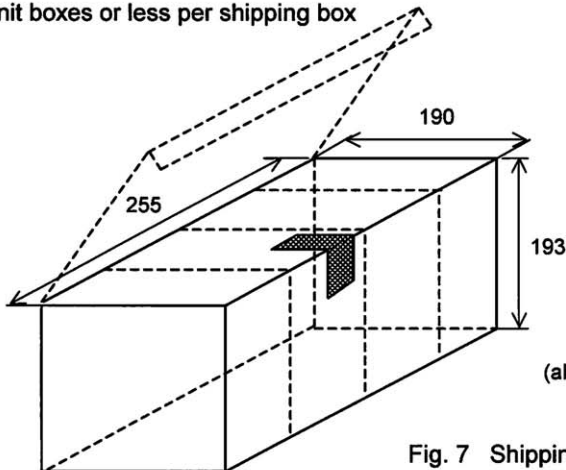


Fig. 6 Packing style

2.6. Shipping style

4 unit boxes or less per shipping box



(all dimensions in mm)

2.7. Packing materials

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

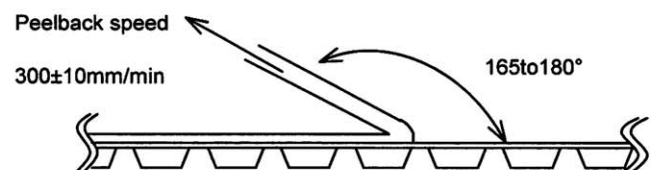
Fig. 7 Shipping box dimensions and Shipping style

2.8. Others

2.8.1. Peelback strength

Cover tape peelback strength is 0.2to0.7N.

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

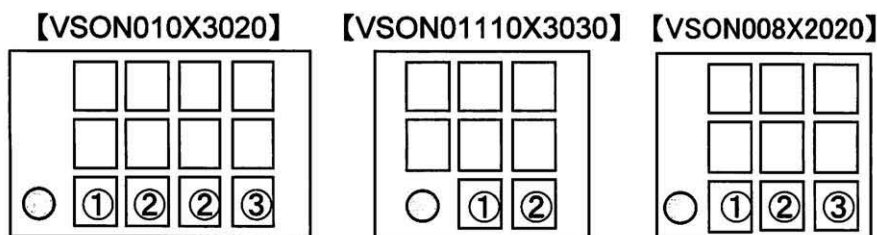
Recommended storage conditions are as follows :

- Temperature : 5to30°C
- Humidity : 40to70% RH

3.2. Storage period

- Specified storage period : 1year

4. Marking lot number



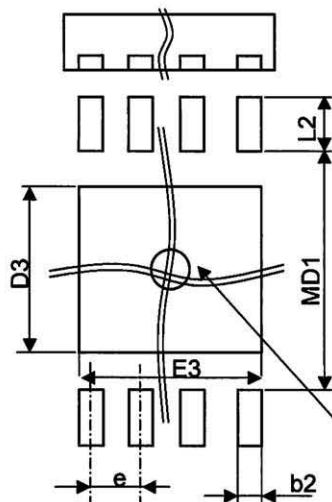
- ① Production year's week code
- ② One last digit of week number
- ③ Production lot number

Production year's week code

Week	0	1	2	3	4	5
Even year	A	B	C	D	E	F
Odd year	U	V	W	X	Y	Z

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

(all dimensions in mm)



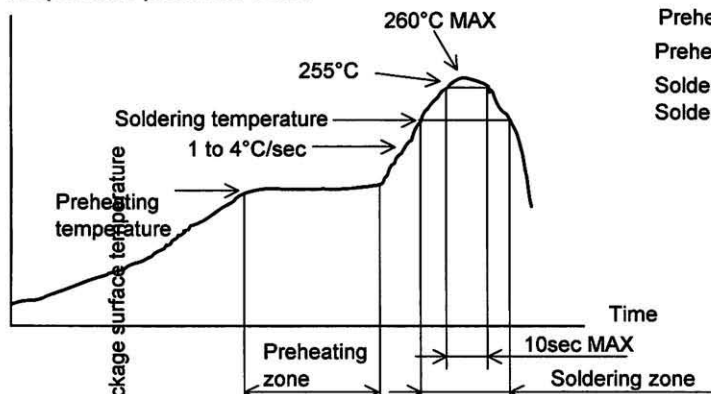
Package	Land pitch e	Land space MD1	Land length ≥L2	Land width b2
VSON010X3020	0.50	1.0	0.60	0.27
VSON010X3030	0.50	2.0	0.80	0.27
VSON008X2020	0.50	1.2	0.60	0.27

Package	Radiation land length D3	Radiation land width E3	Thermal via	
			Pitch	Diameter
VSON010X3020	0.54	2.49	-	φ0.3
VSON010X3030	1.00	2.10	-	φ0.3
VSON008X2020	0.70	1.60	-	φ0.3

*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



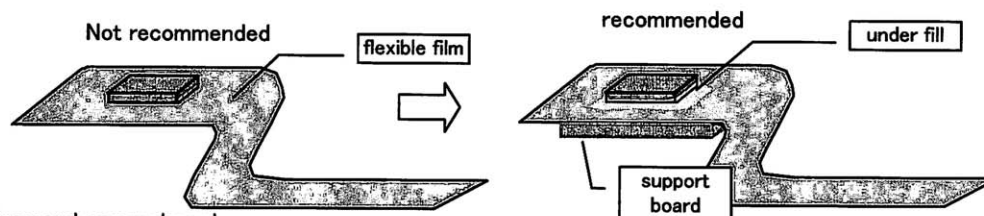
- Preheating temperature ; 130°C to 190°C
- Preheating zone ; 120sec MAX
- Soldering temperature ; 220°C to 230°C
- Soldering zone ; 60sec MAX

6.2. The wave soldering method is not supported.

6.3 Notice information of board mounting

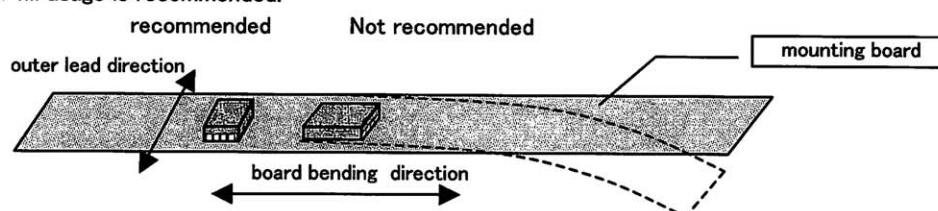
Mounting on flexible film

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

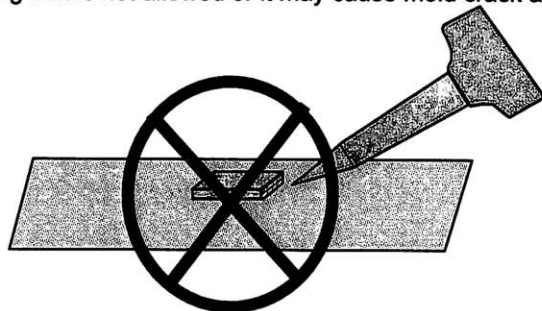


Mounting on long and narrow board

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.



(Tape dimensions)

Package	Quantity (pcs)	Tape dimensions (all dimensions in mm)											
		A1	B1	D0	D1	E	F	K'	P0	P1	P2	T	W
VSON010X3020	4000	2.25 ±0.1	3.25 ±0.1	φ1.5 +0.1/0	φ1.0 ±0.1	1.75 ±0.1	5.5 ±0.05	0.85 ±0.1	4.0 ±0.1	4.0 ±0.1	2.0 ±0.05	0.3 ±0.05	12.0 ±0.2
VSON010X3030	4000	3.3 ±0.1	3.3 ±0.1	φ1.5 +0.1/0	φ1.1 ±0.1	1.75 ±0.1	5.5 ±0.05	0.75 ±0.1	4.0 ±0.1	4.0 ±0.1	2.0 ±0.05	0.25 ±0.05	12.0 ±0.2
VSON008X2020	4000	2.20 ±0.05	2.20 ±0.05	φ1.5 +0.1/0	φ0.8 ±0.1	1.75 ±0.1	3.5 ±0.05	0.85 ±0.05	4.0 ±0.1	4.0 ±0.1	2.0 ±0.05	0.3 ±0.05	8.0 ±0.2

<Reel dimensions >

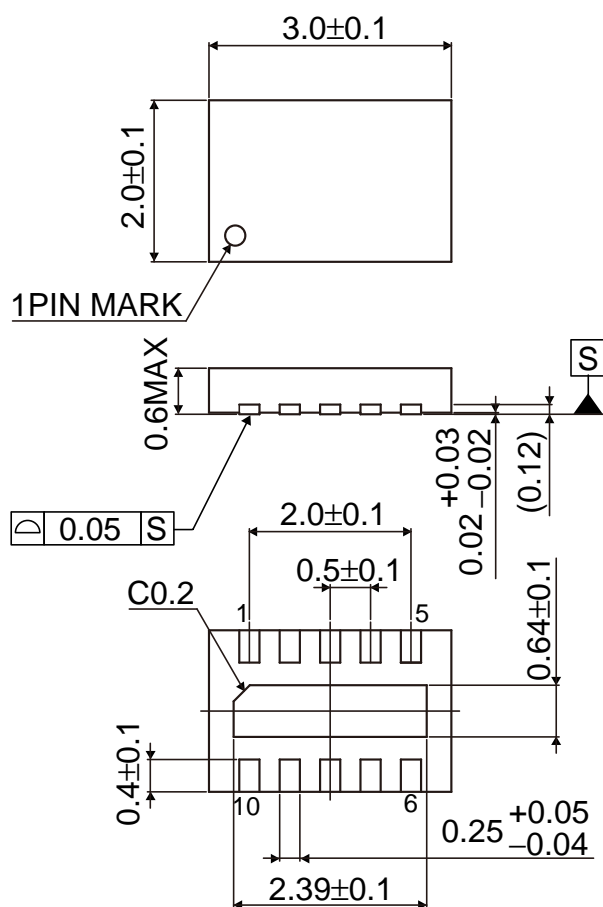
Package	Reel dimensions (all dimensions in mm)						
	A	B	C	D	E	W1	W2
VSON010X3020	φ180	φ60	φ13.0	φ20.2	1.5	13.0	15.4
VSON010X3030	φ180	φ60	φ13.0	φ20.2	1.5	13.0	15.4
VSON008X2020	φ180	φ60	φ13.0	φ20.2	1.5	13.0	15.4
Tolerance	-	+1.0/0	±0.2	MIN	MIN	+1.0/0	±1.0

<Dehydrated weight >

Dehydrated weight (g)
0.009
0.014
0.006

Package Dimensions

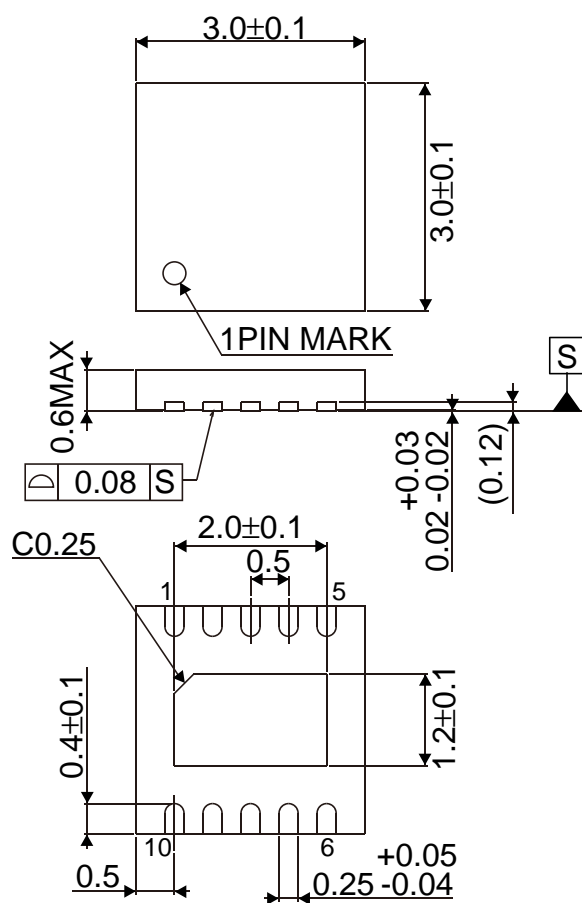
VSON010X3020



(Unit : mm)

Package Dimensions

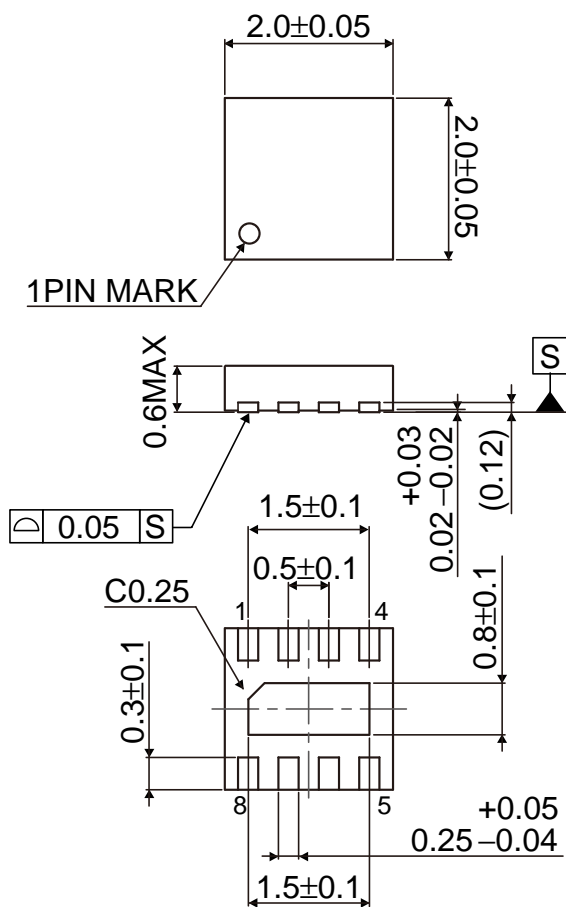
VSON010X3030



(Unit : mm)

Package Dimensions

VSON008X2020



(Unit : mm)

Notes

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