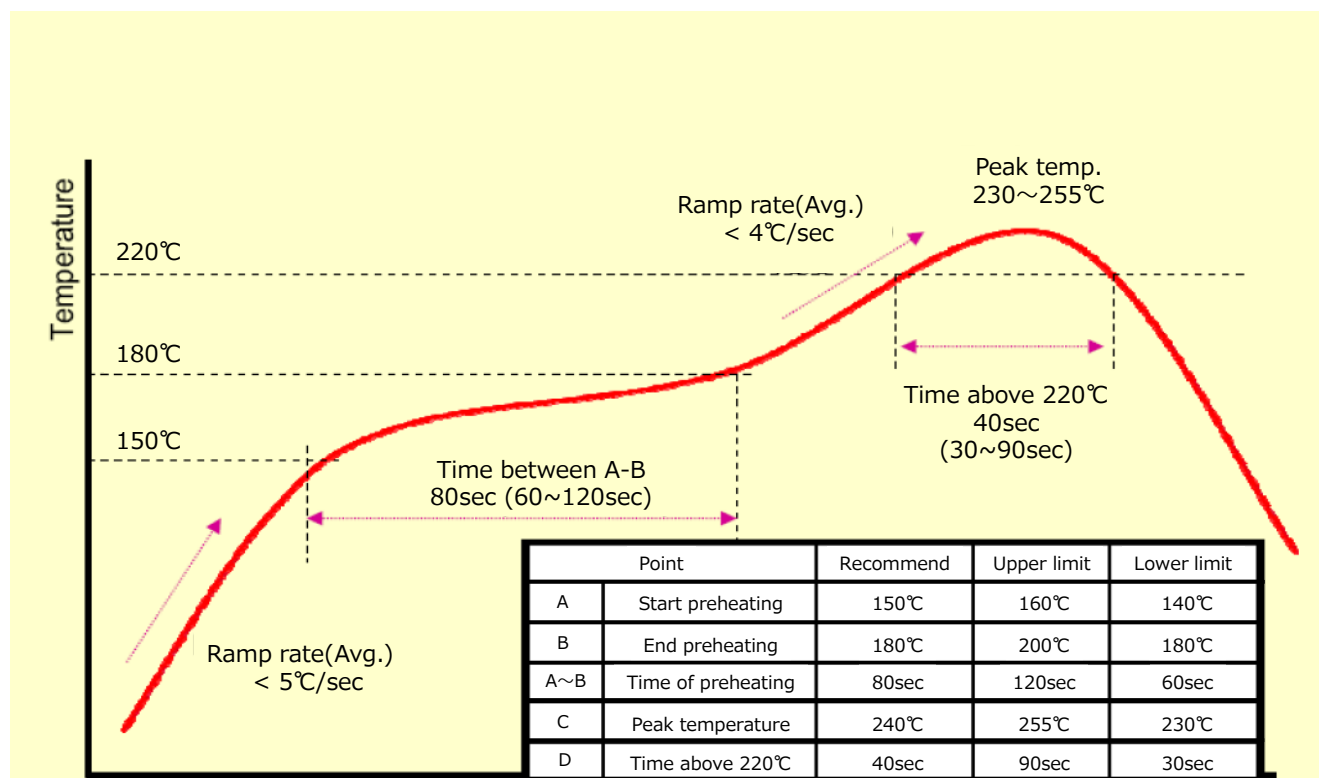


19. RECOMMENDED REFLOW CONDITION

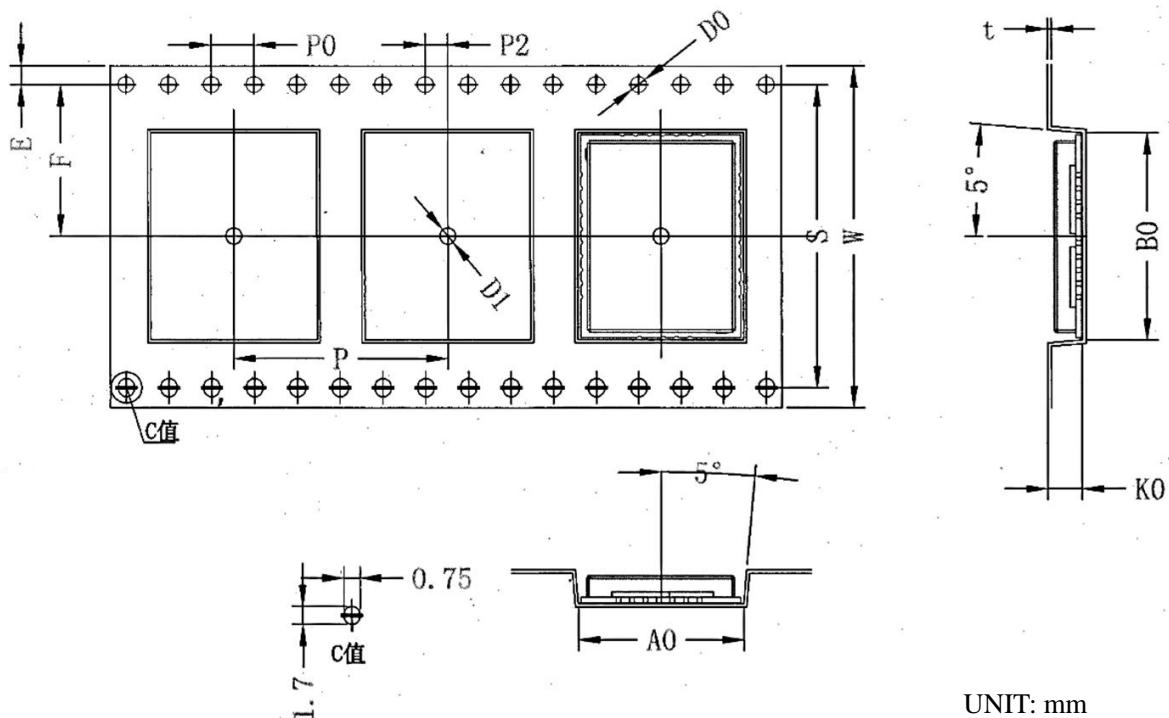


※Reflow solder can be operated only once

Fig.6. Recommended Reflow Profile

20. PACKING (TBD)

20.1 Taping dimensions



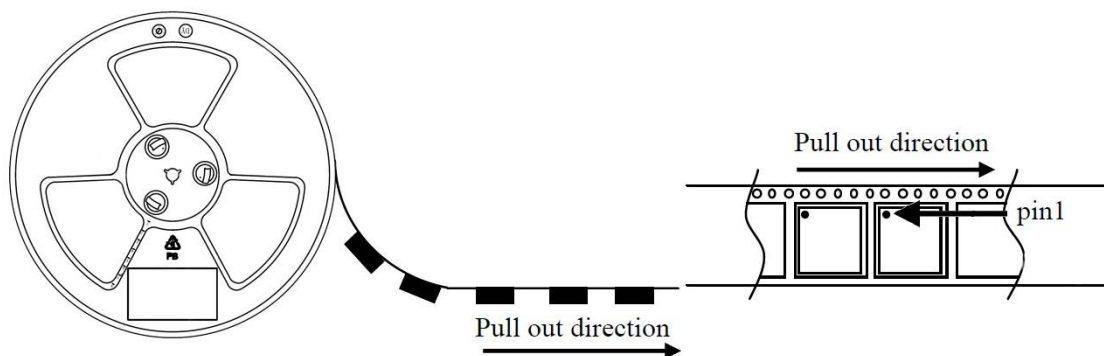
Symbol	A0	B0	D0	D1	E	F	P0	P	P2	K0	S	t	W
Dimensions (mm)	15.55	19.4	1.5	2.0	1.75	14.2	4.0	20.0	2.0	3.2	28.4	0.35	32.0
Tolerance (mm)	±0.1	±0.1	+0.1 / 0.0	MIN.	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05	±0.3

<Material of tape> Pocket: PS, Cover tape: PE

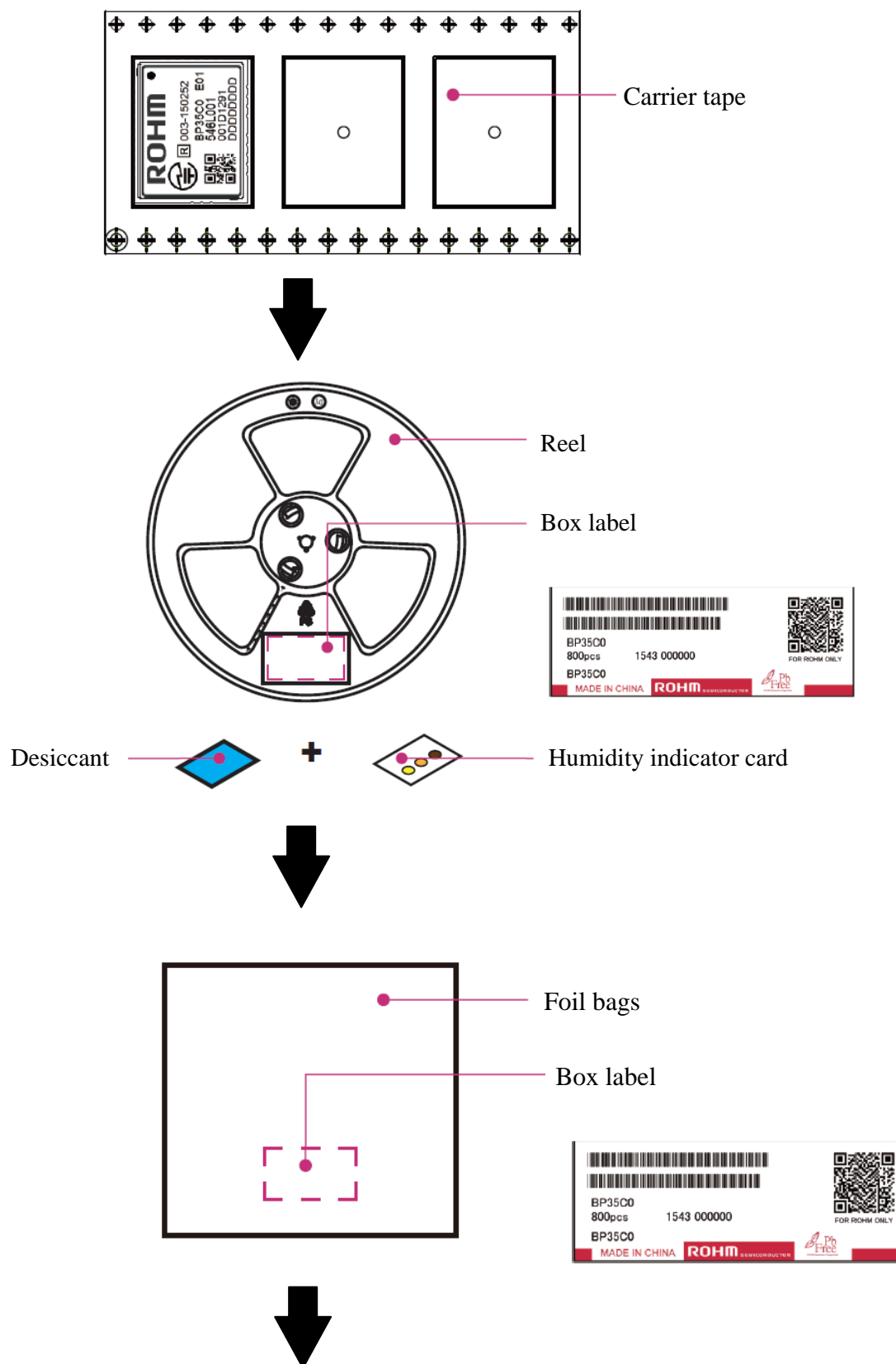
20.2 Taping packaging specification

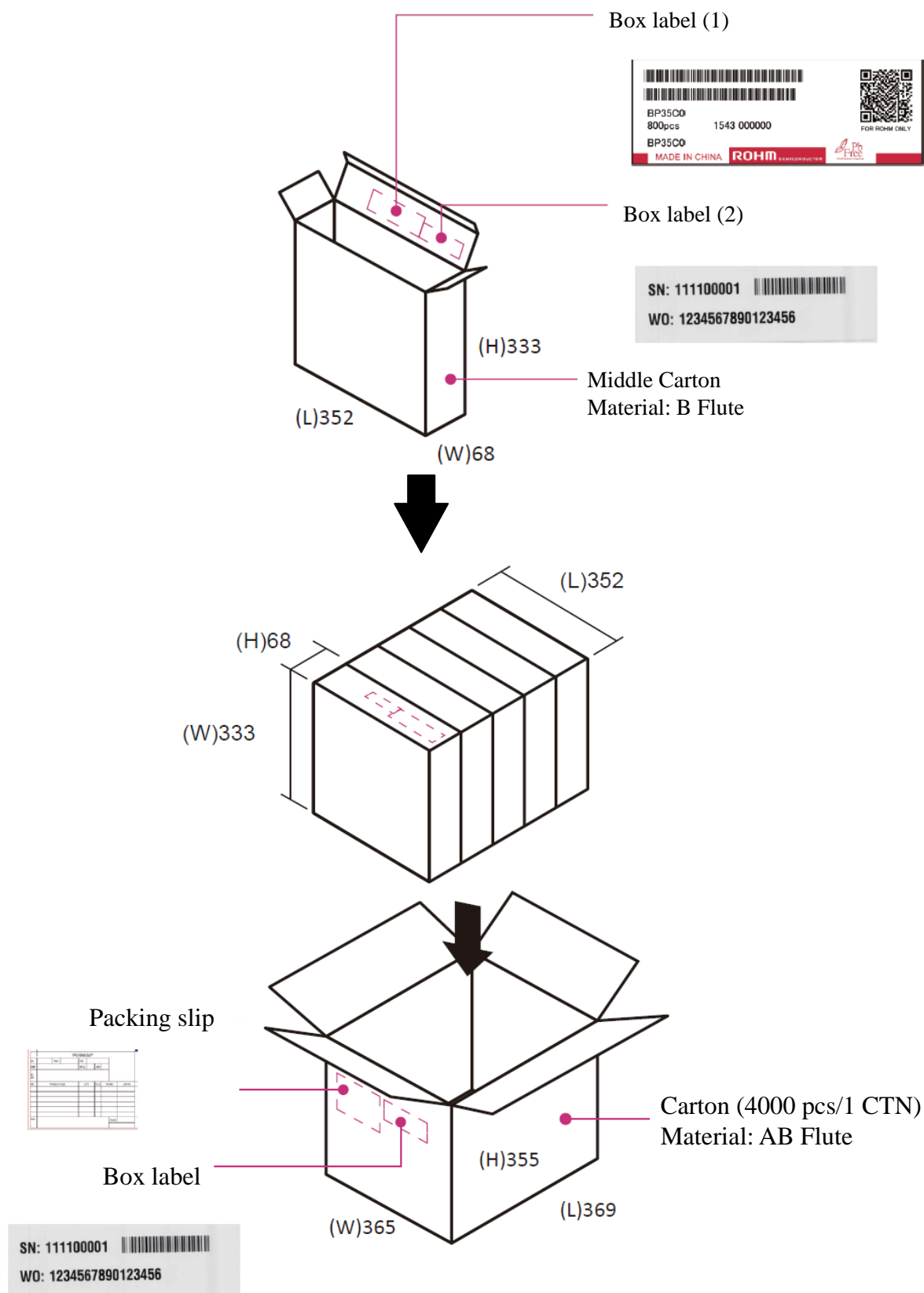
Pull-Out direction of taping and direction of pin 1 are shown below.

The taping of the products is done so that the adsorption side of the mounter may become a shield case side.

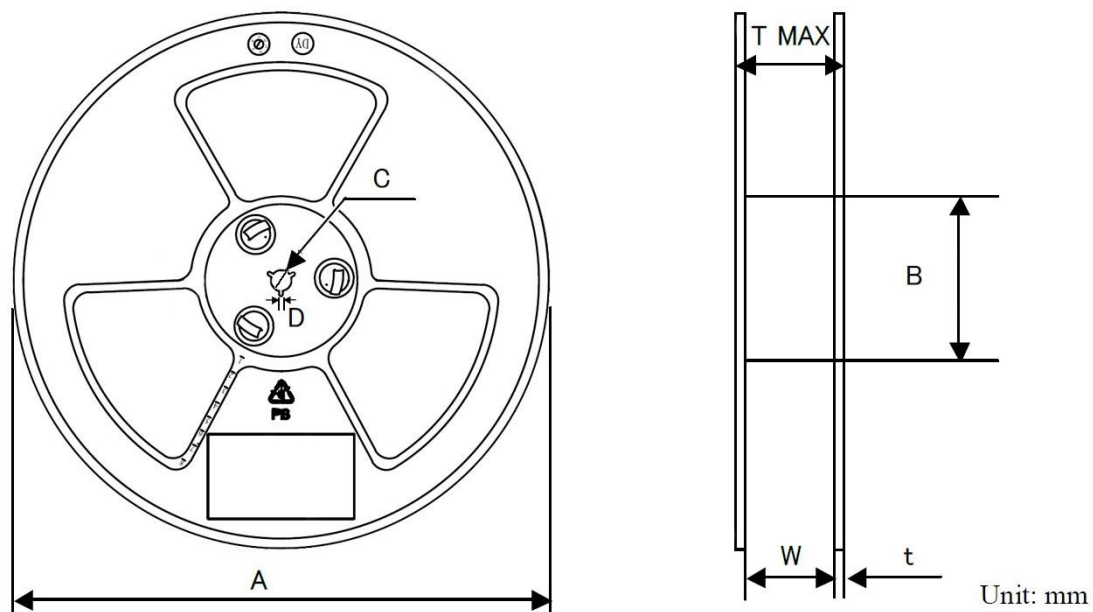


20.3 Packaging method





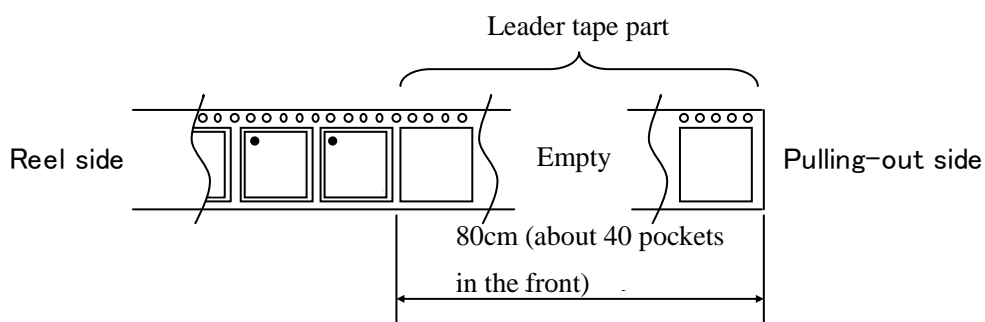
20.4 Reel Dimensions



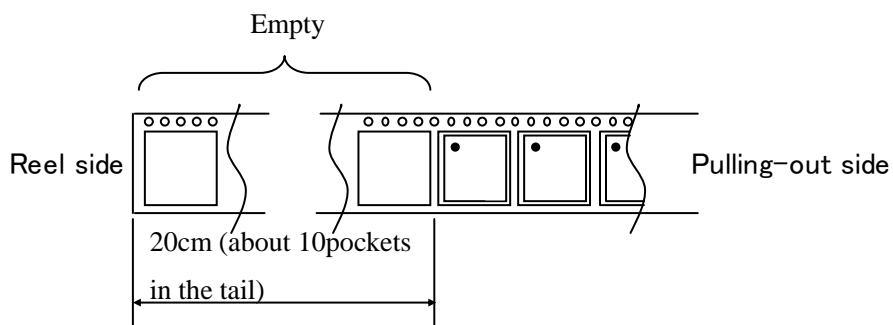
Reel size/ Tape size	A	B	C	D	W	t	T MAX
Dimensions (mm)	330	100	13.3	2.5	32.5	2.0	36
Tolerance (mm)	±2.0	±2.0	±1.0	±0.5	+2.0/ -0.0	±0.5	+2.0/ -1.0

20.5 Leader and Trail Tape

There will be 40 pockets at Leader tape.



There will be 10 pockets at Trail tape.
 The end of Trail tape is not fixed to Reel.



20.6 Missing product ratio

	Rate of incident	Remark
Consecutive missing products	0%	Except Leader and Trail tapes
Non-Consecutive missing products	MAX 0.1% / 1 reel	

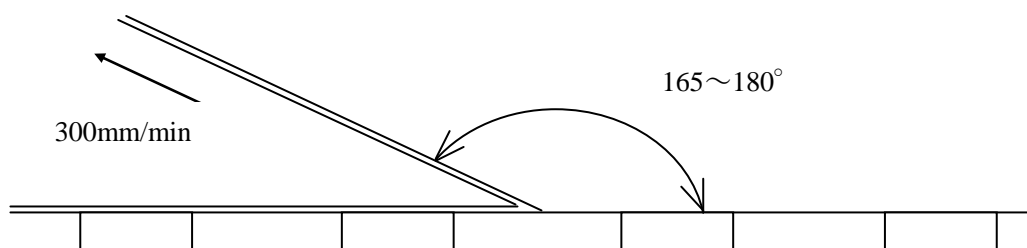
20.7 Standard Packaging Quantity

Type	Package Quantity
BP35C5	800 pcs / reel

- Please be sure to order product with multiple number of the Standard Packaging Quantity.
- The quantity of “Standard Package Quantity” may change in future.

20.8 Peel-off strength of Cover Tape

Peel-off strength of Cover tape is: 0.1~0.7N (10gf~70gf) with peeling speed of 300mm/min.



20.9 Packing Label

The label with following things is stuck at the packing case.

- ① Type name (BP35C5)
- ② Quantity
- ③ Lot No.
- ④ Shipment inspection stamp
- ⑤ Country of origin
- ⑥ Manufacturing company name (Trade mark)
- ⑦ Logotype of lead free

Please refer to the following example of the label indication.

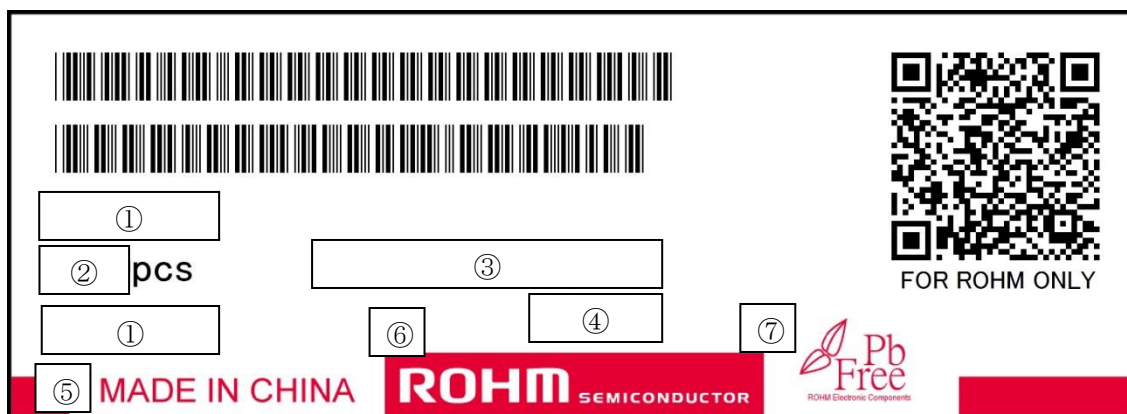


Fig.7. Packing Label Spec

21. Product Weight

1.4 gram

22. Manufacturing Country

China

23. Precautions for Use

- 1) This product allows the reflow process only once.
(with ROHM's recommended reflow condition)
During the reflow process, the solder inside the product may be re-fused or re-melt.
Please note this and pay special attention.
- 2) If this product is laid neglected, it will absorb moisture from the surrounding environment.
Keep this Product with below mentioned condition, and reflow mount it within 72 hours of opening the laminated bag.
<Store condition>
Temperature: 5 °C ~ 40 °C
Relative Humidity: 50±10 %RH
- 3) If storage in the desiccator where is humidity under the recommended values, be sure to protect this product from static electricity.
- 4) Be sure to use after baking process with the following conditions when it passed 72 hours after opening;
 - Baking condition: 125 °C / 24 hours (Not in reel state), Baking times: up to once
- 5) When a mounter is used to place this product, its recognition should be taken with the reverse side (pad) of product. It is not recommended to use the dimensions of product for recognition as its tolerance is big.
- 6) There are cases where lot numbers are different in the same reel.
- 7) There are cases where serial numbers (MAC address) are not in sequence in the same reel.
- 8) About soldering parts of mounting on this product, presence of soldering fillet does not be asked.
- 9) With respect to a label affixed to this product, defects other than "peeling", "sticking-out", and "extreme defect in character recognition" are overlooked.
- 10) This product is assumed to be mounted on glass epoxy board.
If the product is mounted on other materials board such as ceramic, be sure to evaluate it sufficiently.
- 11) RF-SW (pin 27, pin 29 ANT terminal) which is mounted inside the module is a product very weak to static electricity on the specification. Be sure to use after taking sufficient measures against static electricity.
- 12) Please note that it is likely to come off when the stress joins the shield case.
- 13) Use this product without cleaning residue of flux.
- 14) About wireless communication
 1. Wireless communication may be unstable due to radio wave environment and communication environment, does not guarantee 100 % data transfer, ROHM assumes absolutely no responsibility even if data is missing.
 2. UDP does not provide for the arrival of consecutive packet send data arrival is not guaranteed.
 3. Please fully verify with customers before installing this product in customer's set and doing full-scale operation.
 4. ROHM assumes no responsibility for any damage or malfunction caused by data interception, loss, theft, leakage to a third party.

24. Precautions as Radio Equipment

24.1. For Japan region (ARIB STD-T108)

BP35C5 has acquired the “Construction design certification” (Article 38-24 (1) of the Radio Act) for “Radio Equipment: Specified low power equipment of less than 13 GHz prescribed in Article 2-1 (8) Type of Specified Radio Equipment.”

Consequently, BP35C5 is available for use as radio equipment only in Japan without making an application for radio station license.

- Construction Design Certification Number: **005-102391**

To safely use BP35C5 as radio equipment, be sure to observe the following.

- 1) The marking of this Product indicates that it has acquired the “Technical Regulations Conformity Certification.”
Do not erase the marking or affix any label on the marking.
- 2) Never disassembly or modify this Product. Doing so may be subject to punishment under the Radio Act.
- 3) To use the dedicated external antenna, contact your ROHM representative in advance.

24.2. For United States region (FCC Part 15)

BP35C5 module has received Federal Communications Commission (FCC) CFR47 Telecommunications, Part 15 Subpart C “Intentional Radiators” modular approval in accordance with Part 15.212 Modular Transmitter approval. Modular approval allows the end user to integrate the BP35C5 module into a finished product without obtaining subsequent and separate FCC approvals for intentional radiation, provided no changes or modifications are made to the module circuitry. Changes or modifications could void the user's authority to operate the equipment. The end user must comply with all of the instructions provided by the Grantee, which indicate installation and/or operating conditions necessary for compliance.

The finished product is required to comply with all applicable FCC equipment authorizations regulations, requirements and equipment functions not associated with the transmitter module portion. For example, compliance must be demonstrated to regulations for other transmitter components within the host product; to requirements for unintentional radiators (Part 15 Subpart B “Unintentional Radiators”), such as digital devices, computer peripherals, radio receivers, etc.; and to additional authorization requirements for the non-transmitter functions on the transmitter module (i.e., Verification, or Declaration of Conformity) (e.g., transmitter modules may also contain digital logic functions) as appropriate.

1. LABELING AND USER INFORMATION REQUIREMENTS

The BP35C5 module has been labeled with its own FCC ID number, and if the FCC ID is not visible when the module is installed inside another device, then the outside of the finished product into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording as follows:

Contains Transmitter Module FCC ID: ANSBP35C5

or

Contains FCC ID: ANSBP35C5

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

A user's manual for the finished product should include the following statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Additional information on labeling and user information requirements for Part 15 devices can be found in KDB Publication 784748 available at the FCC Office of Engineering and Technology(OET) Laboratory Division Knowledge Database (KDB) <https://apps.fcc.gov/oetcf/kdb/index.cfm>

2. RF EXPOSURE

All transmitters regulated by FCC must comply with RF exposure requirements. KDB 447498 General RF Exposure Guidance provides guidance in determining whether proposed or existing transmitting facilities, operations or devices comply with limits for human exposure to Radio Frequency (RF) fields adopted by the Federal Communications Commission (FCC).

From the BP35C5 FCC Grant: Output power listed is conducted. This grant is valid only when the module is sold to OEM integrators and must be installed by the OEM or OEM integrators. This transmitter is restricted for use with the specific antenna(s) tested in this application for Certification and must not be co-located or operating in conjunction with any other antenna or transmitters within a host device, except in accordance with FCC multi-transmitter product procedures.

3. APPROVED EXTERNAL ANTENNA TYPES

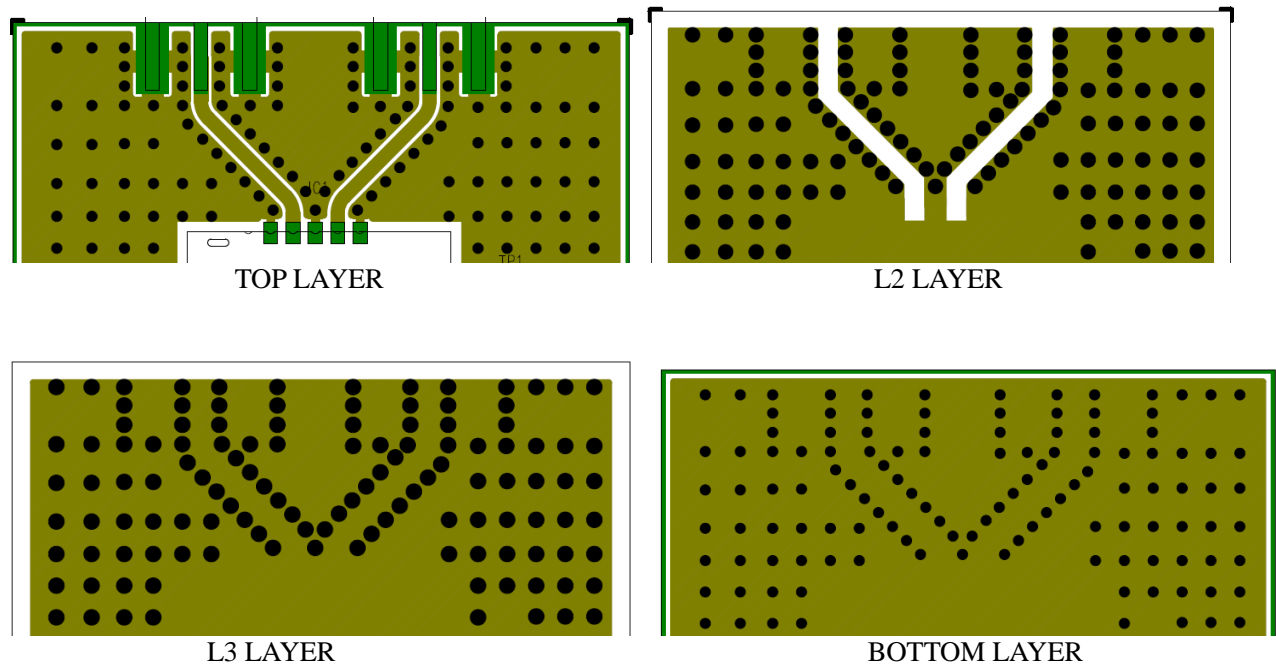
To maintain modular approval in the United States, only the antenna types that have been tested shall be used. It is permissible to use different antenna manufacturer provided the same antenna type and antenna gain (equal to or less than) is used. Testing of the BP35C5 module was performed with the antenna types listed in Table 1 Tested External Antenna Types.

TABLE 1: Tested External Antenna Types

Type	Gain (dBi)
Dipole	+3

4. RF Trace Layout Design

The BP35C5 modular transmitter is certified with a PCB edge SMA connector and micro-strip trace layout as shown in Fig.8. The host PCB can follows this trace design to maintain compliance under the modular grant (FCC).



PCB details:
4 layer through hole
FR-4
Thickness: 1.2mm

Fig.8. RF trace routing

25. Firmware**25.1 Firmware licensing**

With respect to the built-in firmware of this Product, agree to the following licensing prior to use.

- 1) This software is firmware dedicated to BP35C5. Do not use the firmware for any product other than BP35C5.
- 2) Do not assign, transfer, sub-license, or lend this Software to any third parties.
- 3) Reverse engineering, decompilation, disassembly, reproduction, and change of this Software are prohibited.
- 4) ROHM shall not guarantee any and all operations performed by using this Software.
- 5) Since this software will be updated, be sure to implement the update function of this software on the customer's set main unit. Please inquire about the update method separately.
- 6) In the event of a defect or the like to be attributed to ROHM under normal use for the Software during the first six (6) months from (1) Initial delivery date of BP35C5 or (2) Date of this specification change, customer must notify ROHM immediately.
- 7) Please note that ROHM does not pay any costs (including but not limited to outsourcing expenses, repair expenses, product collection expenses, alternative procurement costs, etc.) paid by customers from third parties due to defects etc. without prior consent of ROHM.
- 8) In any case, the amount borne by ROHM due to defects etc. of the software shall be no more than the last six (6) months of the total sales value of BP35C5 from ROHM to the customer.
- 9) If the provisions of Article 25.1 of this specification, the provisions of the basic contract to be concluded, any contracts and memoranda, incidental thereto, and other specifications of this specification between customer and ROHM contradict or conflict, the provisions of this section shall prevail.

25.2 Firmware version

- 1) The version of firmware written to this Product is the latest version at the time when it is manufactured.
- 2) Firmware may not be the latest version depending on the shipment timing.
- 3) The version of firmware is subject to change without prior notice. ROHM shall not be in any way responsible or liable for damages of customers caused by such changes.
- 4) The version of firmware written to this Product cannot be distinguished by the appearance of the Product.
- 5) The same firmware is written to products contained in the same package.