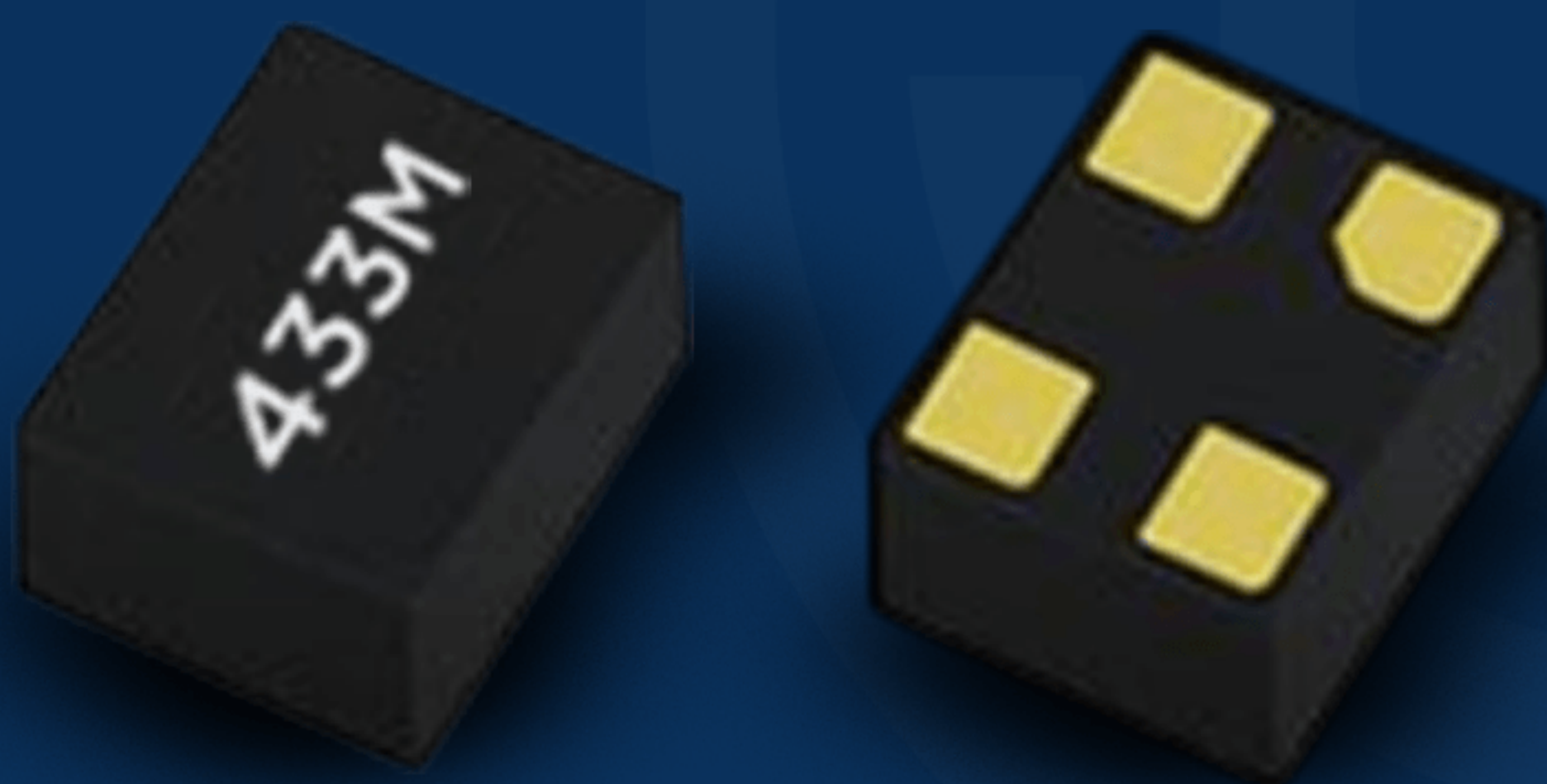


# CATÁLOGO DE PRODUTOS RSE

PRODUTO: **RESSONADOR SAW  
433M**



**RSE**  
Automação e Componentes Eletrônicos

# RESSONADOR SAW

## 433M

### SAW RESSONATOR

## SPECIFICATION

CUSTOMER : \_\_\_\_\_

PRODUCT : \_\_\_\_\_ SAW RESONATOR \_\_\_\_\_

MODELNO : \_\_\_\_\_ R433M-B13  $\pm$  50KHz \_\_\_\_\_

PREPARED : \_\_\_\_\_ CHECKED : \_\_\_\_\_

APPROVED : \_\_\_\_\_ D A T E : \_\_\_\_\_ 2020-05-01 \_\_\_\_\_

CUSTOMER RECEIVED:

CUSTOMER RECEIVED:		
CHECKED	APPROVED	DATE

SAW RESSONATOR

History Record

Date	Spec. No.	Part No.	Customer No.	Modify Content	Remark

1. Scope

This specification shall cover the characteristics of 1-port SAW resonator with R433M used for remote-control security.

2. Electrical Specification

2.1 Maximum Rating

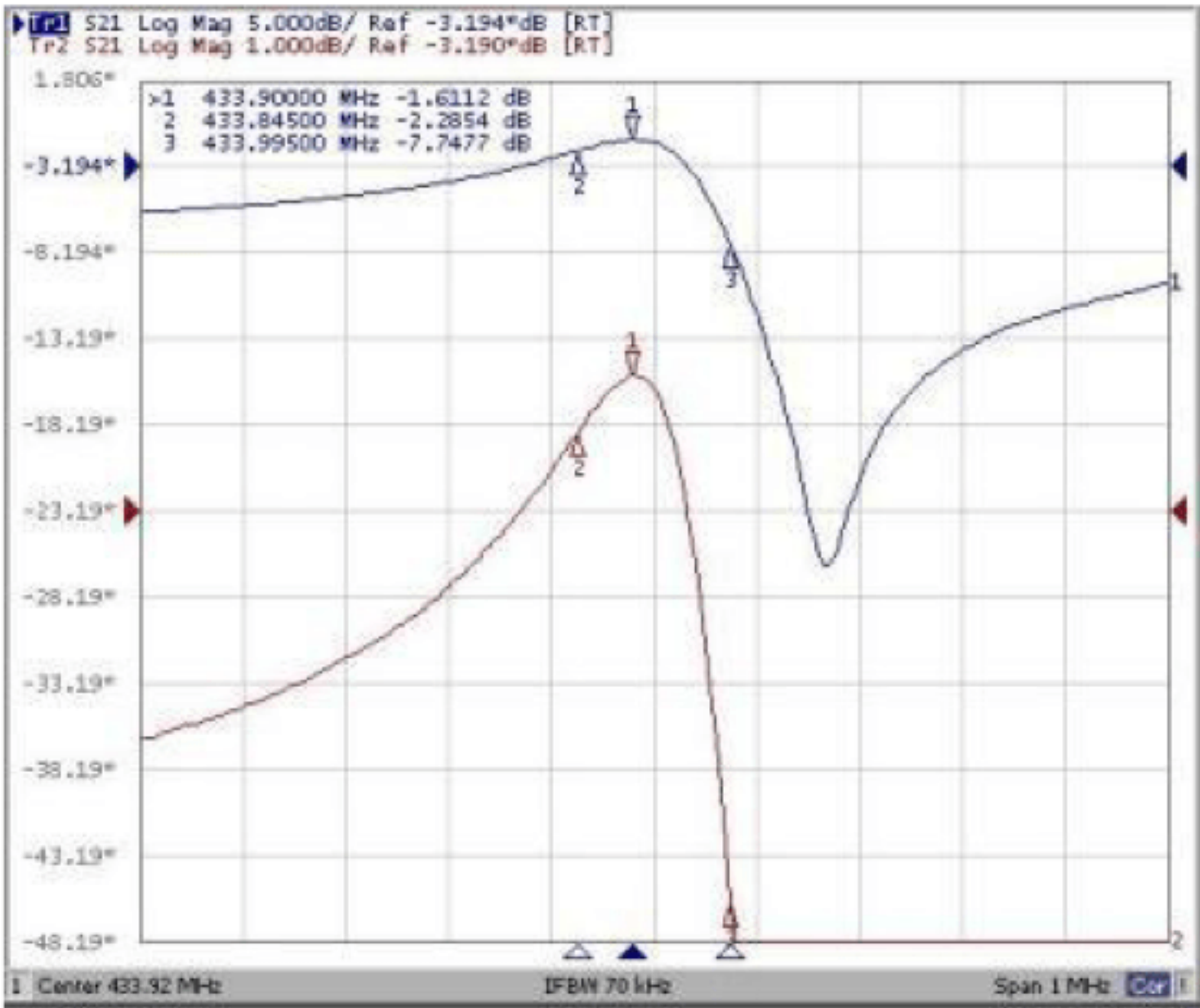
DC Voltage VDC	10V
AC Voltage Vpp	10V 50Hz/60Hz
Operation temperature	-40 °C to +85 °C
Storage temperature	-45 °C to +85 °C
Max Input Power	10dBm



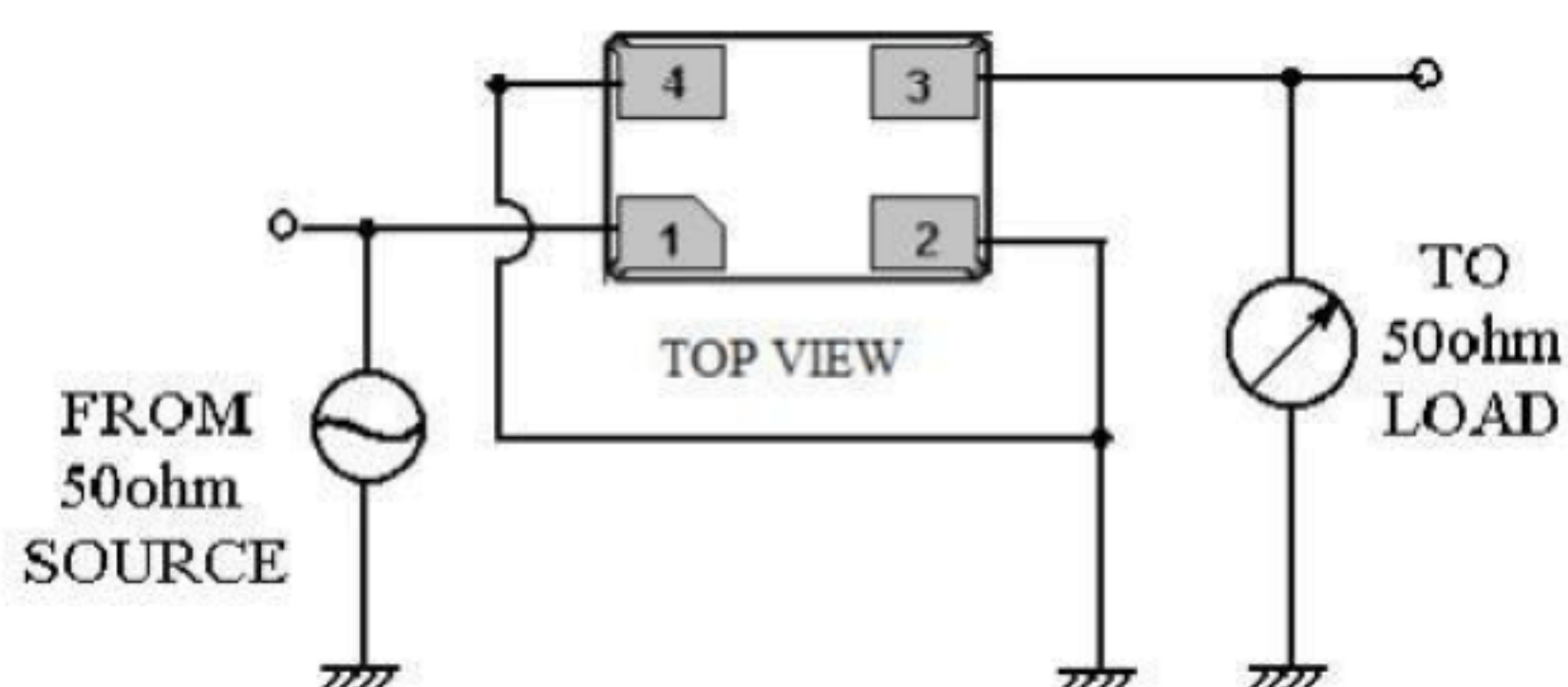
# SAW RESSONATOR

## 2.2 Electronic Characteristics

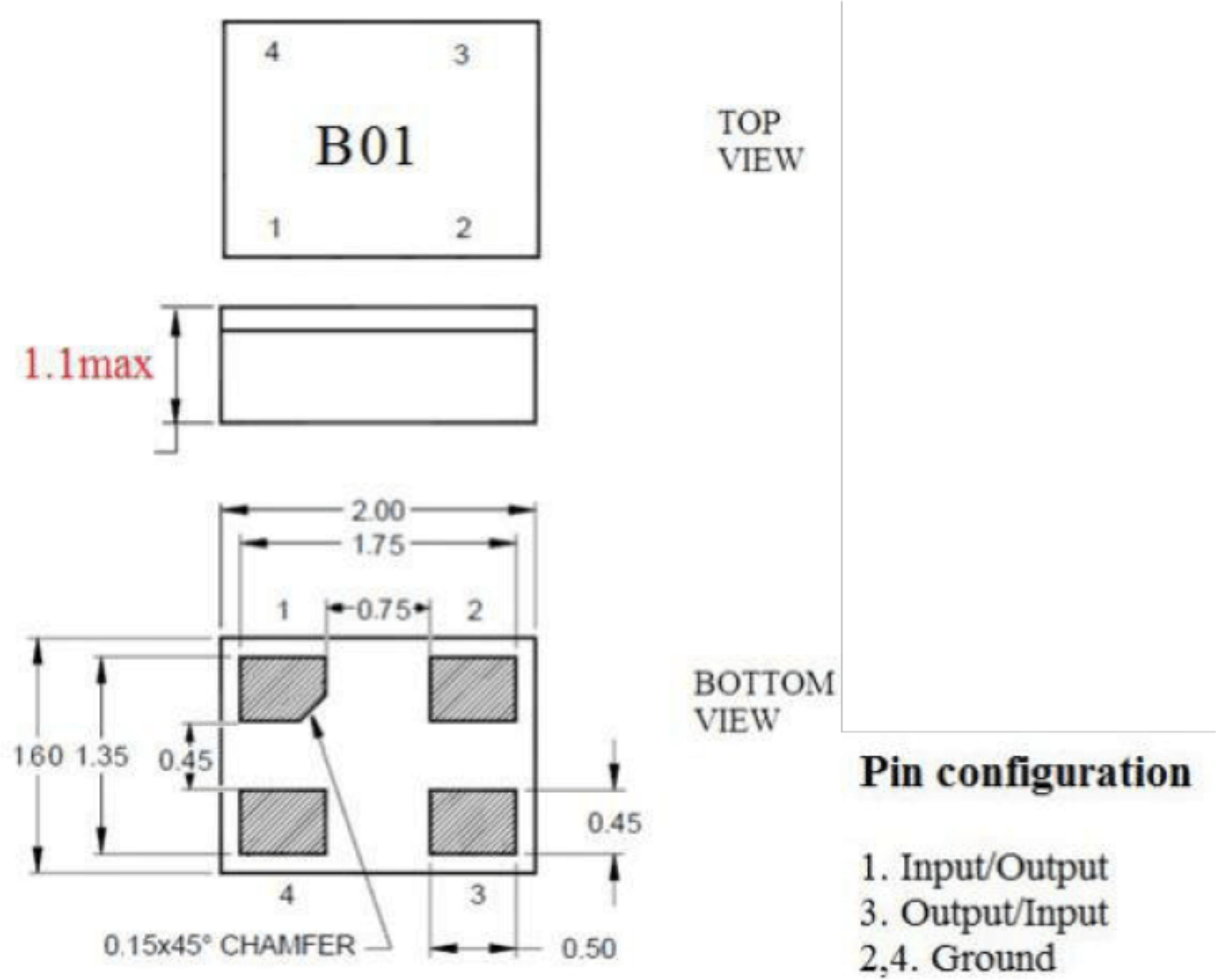
Item		Unites	Minimum	Typical	Maximum
Center Frequency		MHz	433.870	433.920	434.970
Insertion Loss		dB		1.8	2.2
Quality Factor	Unload Q		8300	12000	
	50Ω Loaded Q		850	1500	
Temperature	Turnover Temperature	°C	10	25	40
Stability	Freq temp Coefficient	ppm/ °C		0 032	
Frequency Aging		ppm/yr		<±10	
DC. Insulation Resistance		MΩ	1.0		
RF Equivalent RLC Model	Motional Resistance R1	Ω		18	26
	Motional Inductance L1	μH		79.82	
	Motional Capacitance C1	fF		1.685	
Transducer Static Capacitance C0		pF		2 3	



# SAW RESSONATOR



## 4. DIMENSION



### 4.1 Material information:

Its material is make of quartz piezoelectric crystal.  
package is make of ceramic.

**5. Environment Characteristic****5- 1 High temperature exposure**

Subject the device to +85 °C for 16 hours. Then release the filter into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in 2-2.

**5-2 Low temperature exposure**

Subject the device to -40 °C for 16 hours. Then release the device into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in 2-2.

**5-3 Temperature cycling**

Subject the device to a low temperature of -40 °C for 30 minutes. Following by a high temperature of +85 °C for 30 Minutes. Then release the device into the room conditions for 24 hours prior to the measurement. It shall meet the specifications in 2-2.

**5-4 Resistance to solder heat**

Dip the device terminals no closer than 1.5mm into the solder bath at 260 °C  $\pm$  10 °C for 10  $\pm$  1 sec. Then release the device into the room conditions for 4 hours. The device shall meet the specifications in 2-2.

**5-5 Solderability**

Subject the device terminals into the solder bath at 245 °C  $\pm$  5 °C for 5s, More than 95% area of the terminals must be covered with new solder. It shall meet the specifications in 2-2.

**5-6 Mechanical shock**

Drop the device randomly onto the concrete floor from the height of 1m 3 times. the device shall fulfill the specifications in 2-2.

**5-7 Vibration**

Subject the device to the vibration for 1 hour each in x,y and z axes with the amplitude of 1.5 mm at 10 to 55 Hz. The device shall fulfill the specifications in 2-2.

**6. Remark****6.1 Static voltage**

Static voltage between signal load & ground may cause deterioration & destruction of the component. Please avoid static voltage.

**6.2 Ultrasonic cleaning**

Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning

**6.3 Soldering**

Only leads of component may be soldered. Please avoid soldering another part of component.

**7. Packing****7.1 Dimensions**

(1) Carrier Tape: Figure 1

(2) Reel: Figure 2



## SAW RESSONATOR

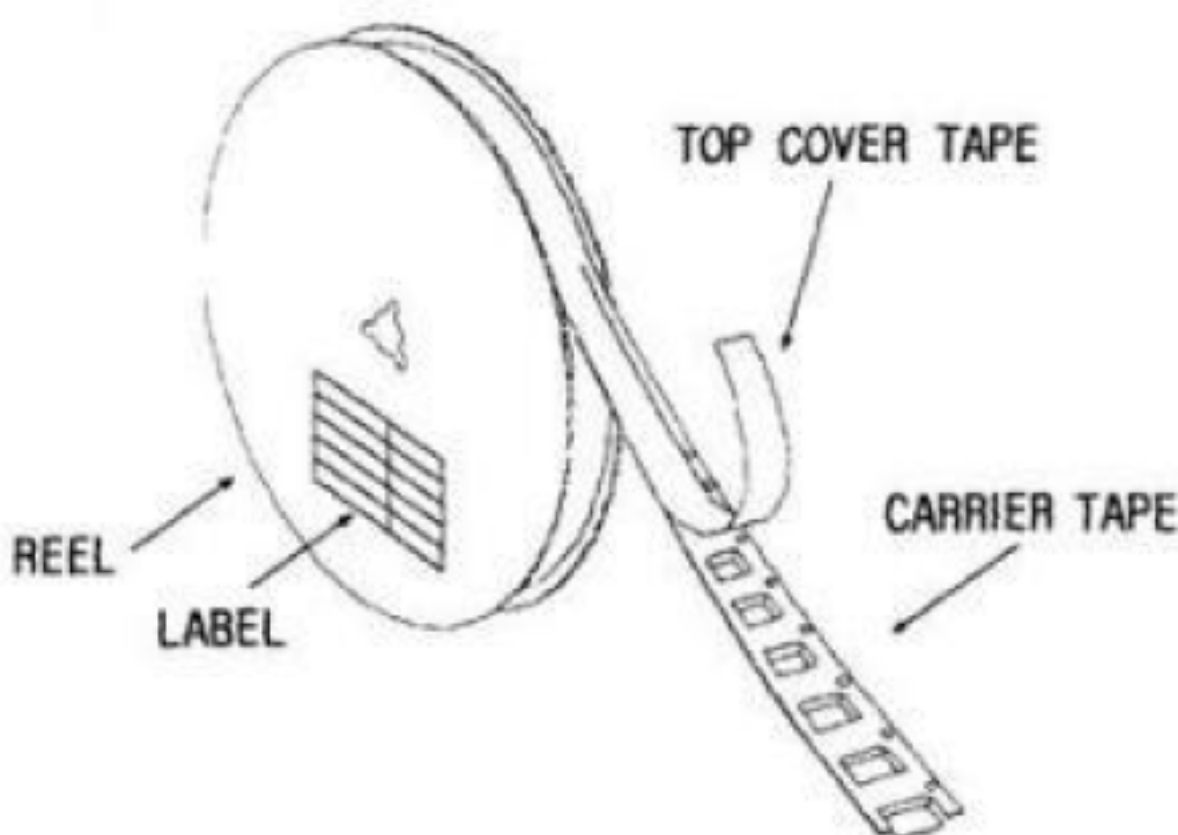
(3) The product shall be packed properly not to be damaged during transportation and storage.

7.2 Reeling Quantity

1000 pcs/reel    7”

7.3 Taping Structure

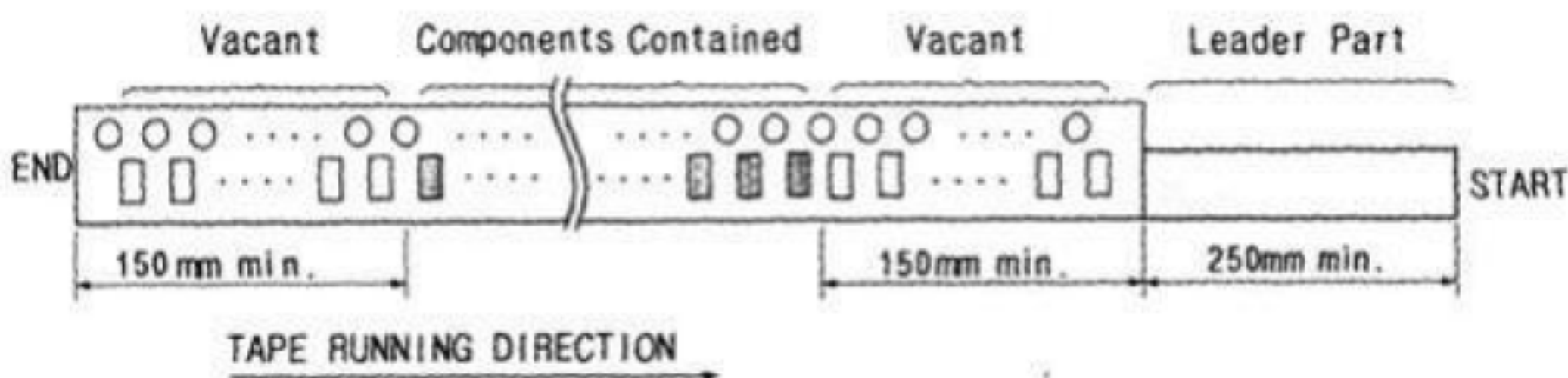
(1) The tape shall be wound around the reel in the direction shown below.



(2) Label

Device Name	
User Product Name	
Quantity	
Lot No.	

(3) Leader part and vacant position specifications.



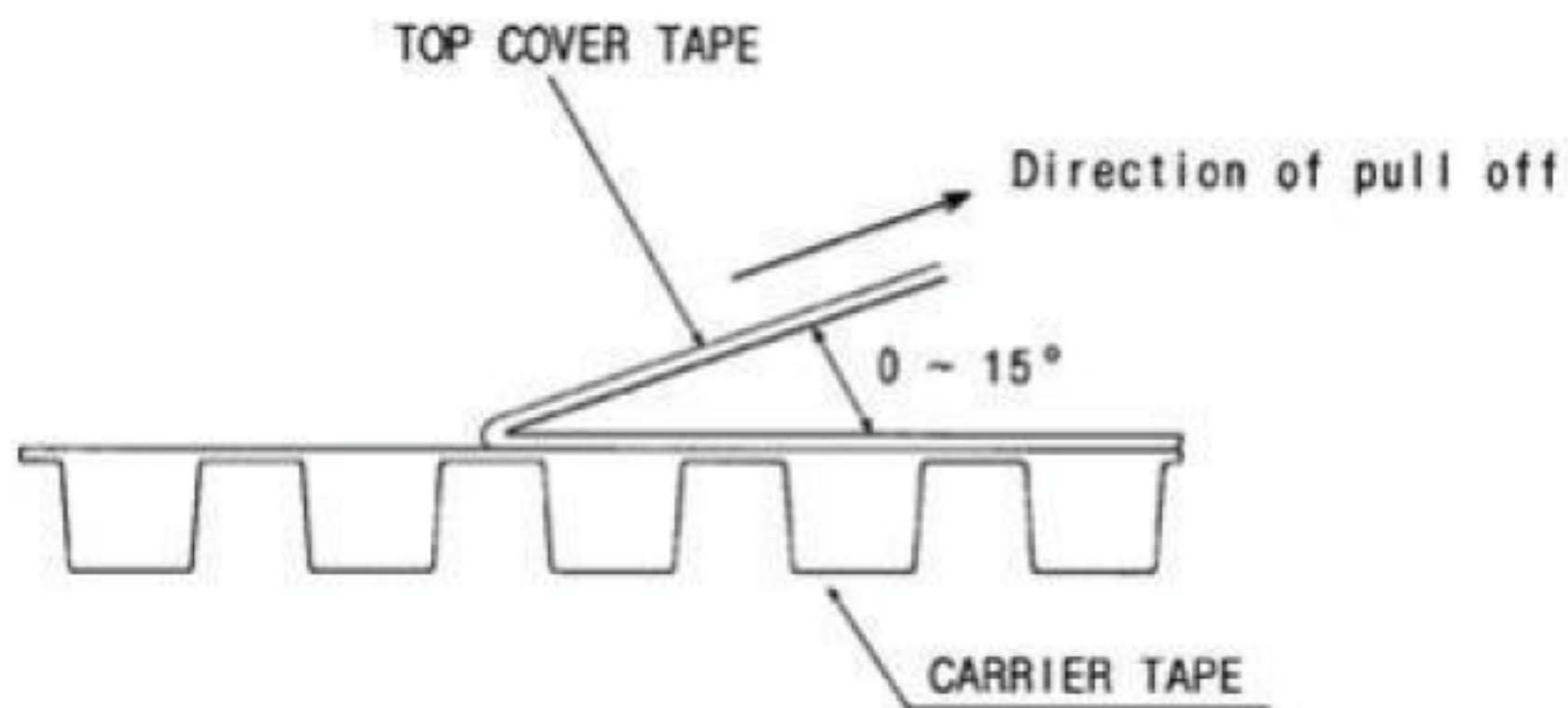
## 8. TAPE SPECIFICATIONS

8.1 Tensile Strength of Carrier Tape: 4.4N/mm width

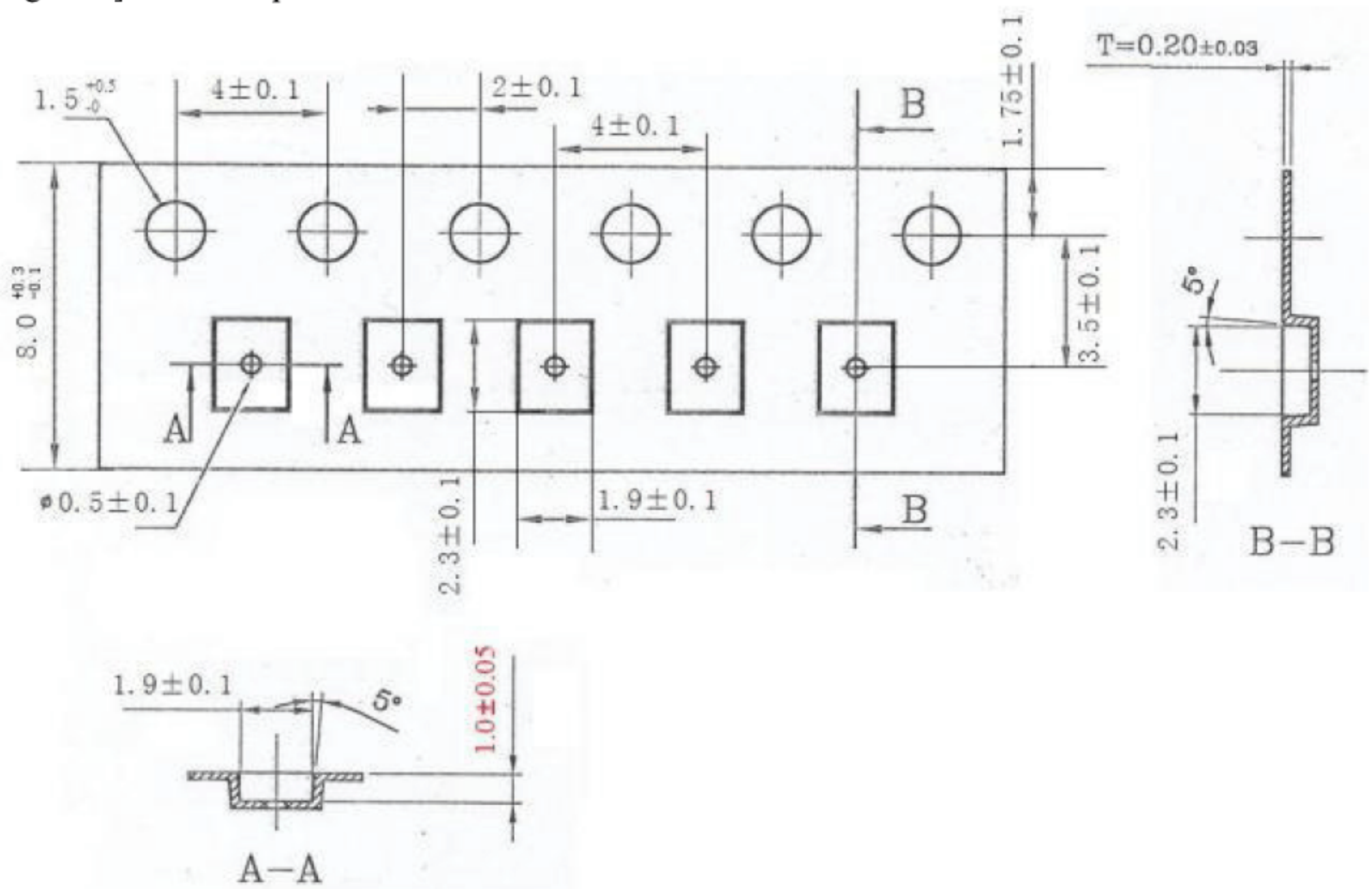
8.2 Top Cover Tape Adhesion (See the below figure)

- (1) pull off angle: 0~15°
- (2) speed: 300mm/min.
- (3) force: 20~70g

## SAW RESSONATOR



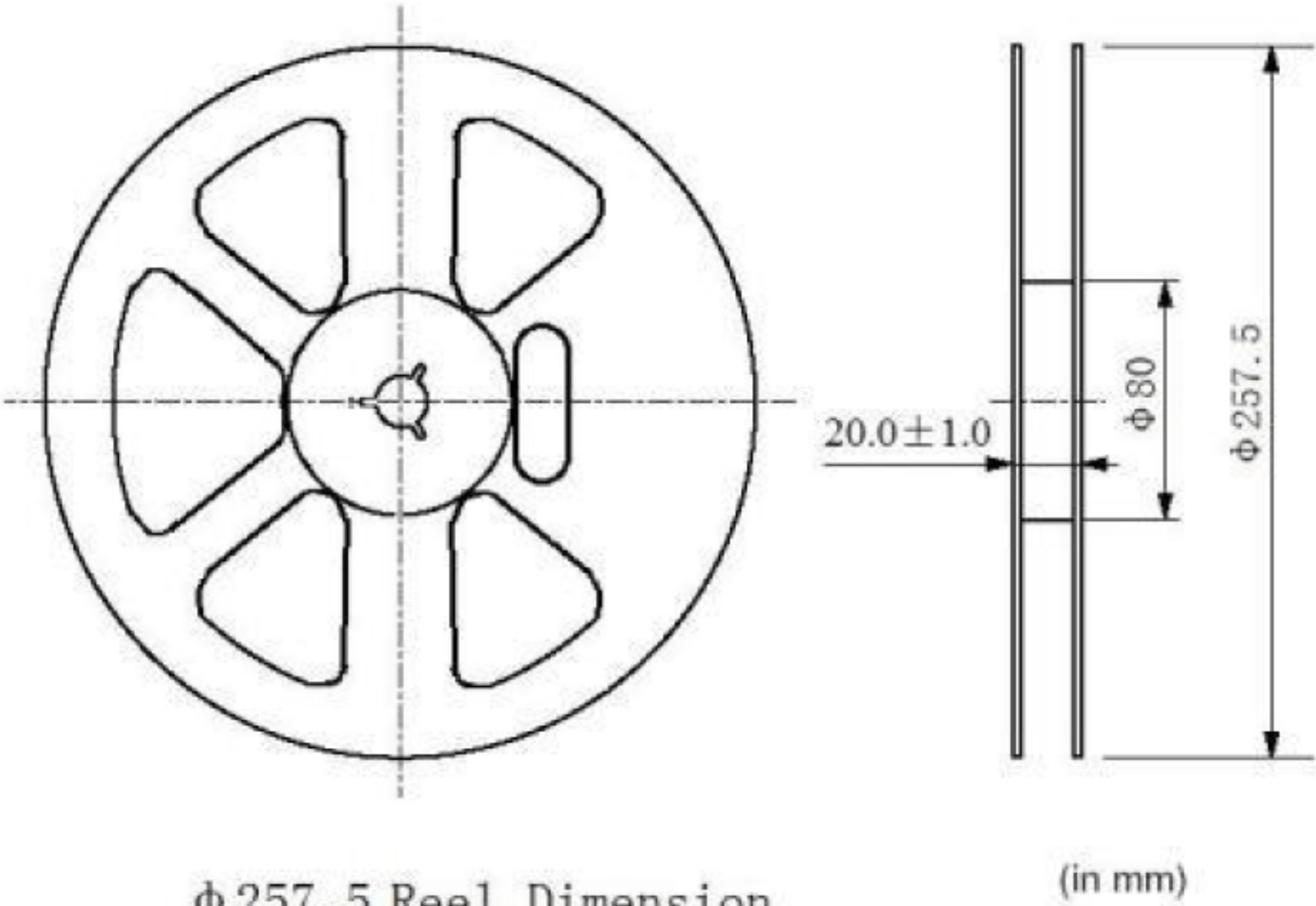
[Figure 1] Carrier Tape Dimensions



[Figure 2] 10000 pcs/reel



# SAW RESSONATOR



- RoHS compatible

