

# SAW Resonator R30431



## Features

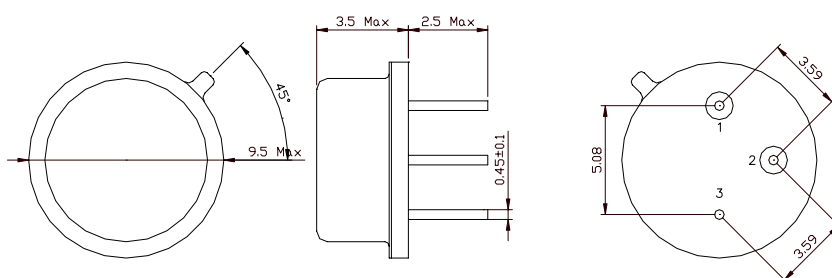
- 1-port Resonator
- Quartz Frequency Stabilization
- For transmitters or Local Oscillators

## Package Dimension – S5050



| Pin Configuration |        |
|-------------------|--------|
| 2                 | Input  |
| 6                 | Output |
| 1, 3, 4, 5, 7, 8  | Ground |

## Package Dimension – TO-39



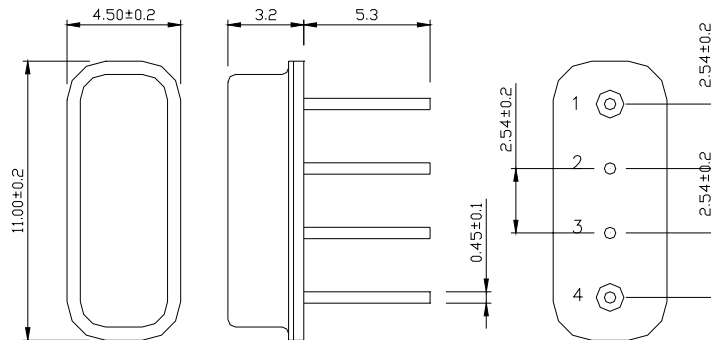
| Pin Configuration |             |
|-------------------|-------------|
| 1                 | Input       |
| 2                 | Output      |
| 3                 | Case ground |

|  |                                                                                                                                   |           |             |     |
|--|-----------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|-----|
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|  |                                                                                                                                   | Rev. Date | 2004-04-20  |     |
|  |                                                                                                                                   | Rev.      | NS3104-AS01 | 1/6 |

# SAW Resonator R30431



## Package Dimension – F-11



| Pin Configuration |             |
|-------------------|-------------|
| 1                 | Input       |
| 4                 | Output      |
| 2, 3              | Case ground |

## Marking Configuration

ITF<sup>1)</sup>

30431<sup>2)</sup>

1) Manufacturer name

2) Marking Number

\* Ink or Laser Marking available

\* Front 4 digits for S5050

## Maximum Ratings

| Parameter                   | Unit | Minimum | Typical | Maximum |
|-----------------------------|------|---------|---------|---------|
| Operating Temperature Range | °C   | -10     | 25      | 60      |
| Storage Temperature Range   | °C   | -40     | -       | 85      |
| Power Handling Capability   | dBm  | -       | 0       | -       |

Electrostatics Sensitive Device (ESD)

|                                                                                     |                                                                                                                                   |           |             |     |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|-----|
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|                                                                                     |                                                                                                                                   | Rev. Date | 2004-04-20  |     |
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# SAW Resonator R30431



## Electrical Specification

$F_R = 304.300\text{MHz}$

Terminating source impedance :  $50\Omega$  and matching network

Terminating load impedance :  $50\Omega$  and matching network

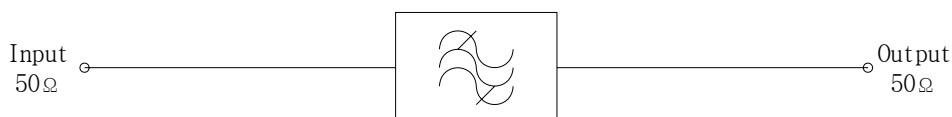
|                                      |                                 | Minimum | Typical         | Maximum |
|--------------------------------------|---------------------------------|---------|-----------------|---------|
| Resonance Frequency ( $F_R$ )        | MHz                             | 304.225 | 304.300         | 304.375 |
| Insertion Loss                       | dB                              | -       | 1.5             | 2.5     |
| 50 ohm Loaded Q<br>Unloaded Q        |                                 |         | 2,000<br>13,900 |         |
| Trun-over Temperature                | $^{\circ}\text{C}$              | 10      | 25              | 40      |
| Temperature Coefficient of Frequency | $\text{ppm}/^{\circ}\text{C}^2$ | -       | -0.032          | -       |

### Notes :

- 1) All specifications are based on the matching schematic shown below
- 2) All specifications are measured by Agilent Network analyzer and full 2 port calibration at room temperature

## Matching Schematic

( Actual matching values may vary due to PCB layout and parasitics )

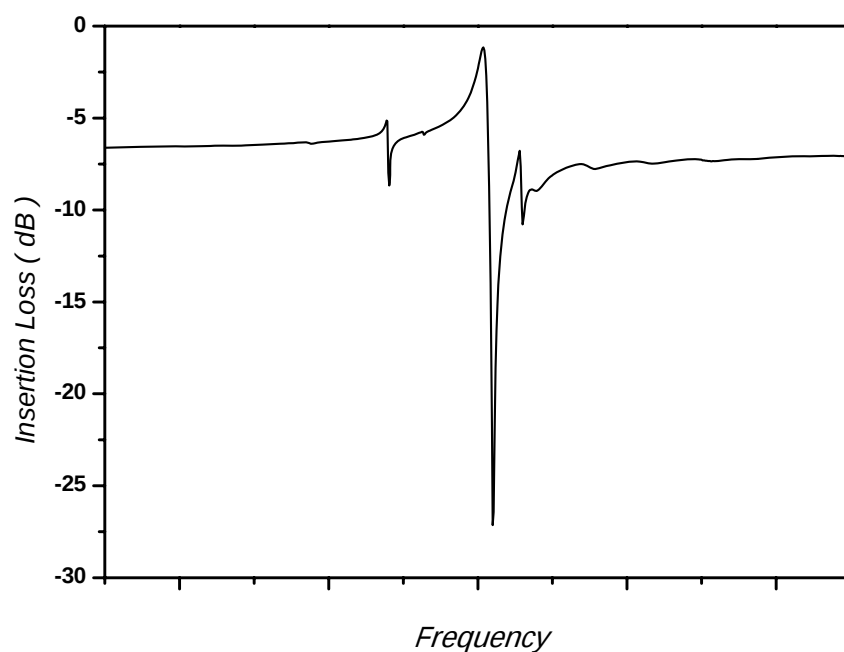


|                                                                                                                     |                                                                                                                                   |           |             |     |
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## Frequency Response



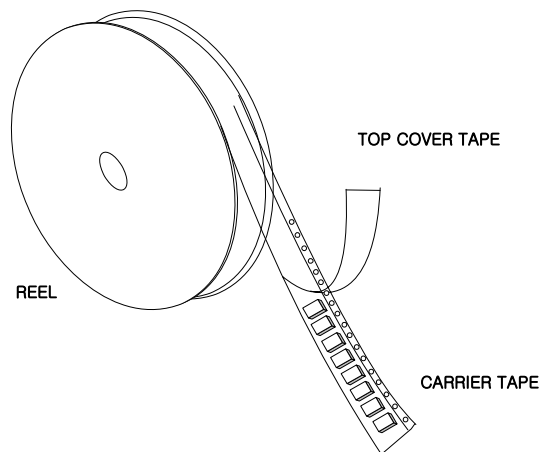
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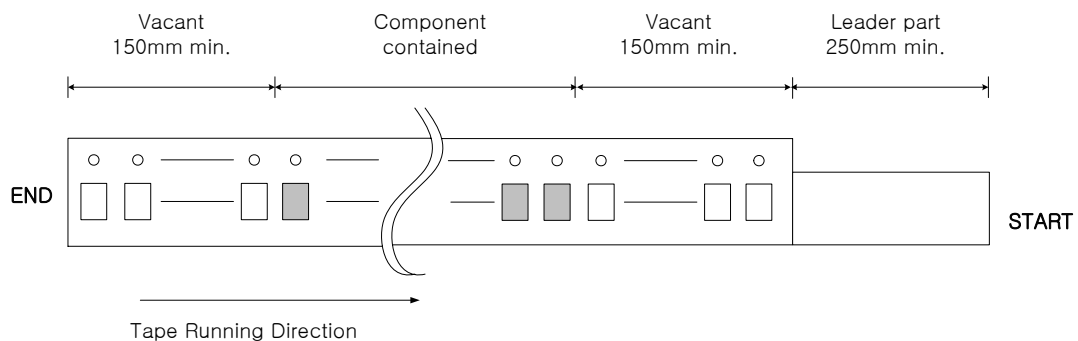
## Packing Specification

1. Reeling Quantity : 1000 pcs / reel
2. Taping Structure : The tape shall be wound around the reel in the direction shown below.



## Tape Specification

1. Leader part and vacant position specification

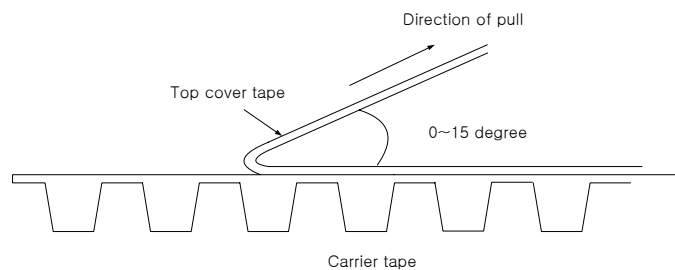


2. Tensile strength of carrier tape

4.4N/mm width

3. Top cover tape adhesion

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

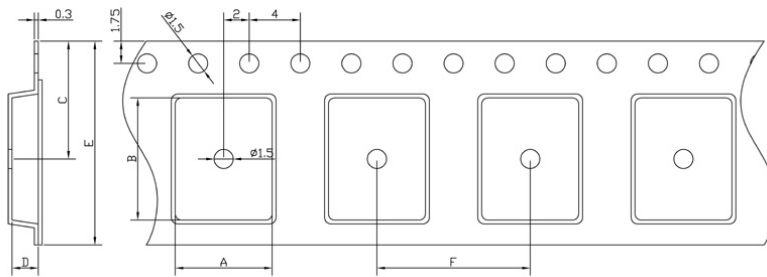


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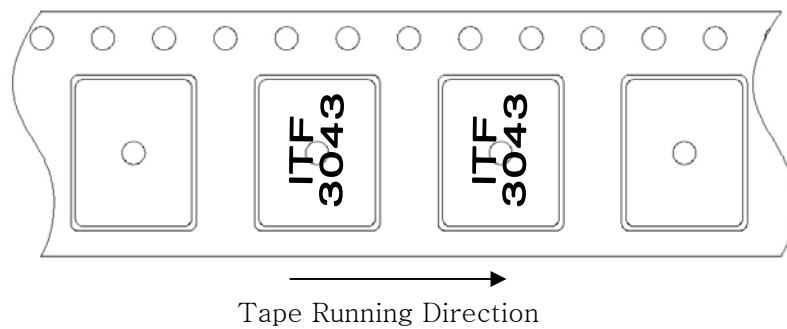


## Carrier Tape Dimensions [unit : mm]



|   |                 |
|---|-----------------|
| A | $5.50 \pm 0.1$  |
| B | $5.50 \pm 0.1$  |
| C | $7.25 \pm 0.1$  |
| D | $1.95 \pm 0.1$  |
| E | $12.00 \pm 0.1$ |
| F | $8.00 \pm 0.1$  |

## Part Direction



## Reel Dimensions [unit : mm]



|                                                                                     |                                                                                                                                   |           |             |     |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|-----|
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