

# JRC STW RESONATOR

## NSVS1135

Application  
**304.30MHz Resonator**

Electrical Specification: (Table 1)

The device characteristics are measured in the circuit shown in Fig.2.

Table 1. Electrical Specifications

(@25 °C)

Item		Spec.	Typ.
Center frequency	Absolute frequency	-	304.300 MHz
	Tolerance from 304.3MHz	-	± 100kHz
Insertion Loss	@Minimum Loss	2.5 dB max.	-
Temperature Stability	Turnover Temperature	-	33 °C
	Temperature Coefficient	-	-0.034 ppm/°C <sup>2</sup>
DC Insulation Resistance between any two terminals		1.0M ohm min	-
RF Equivalent	Motional Resistance (R <sub>M</sub> )	-	10.5 ohm
RLC Model (fig.1)	Motional Inductance (L <sub>M</sub> )	-	50.08 μH
	Motional Capacitance (C <sub>M</sub> )	-	5.462 fF
	Shunt Static Capacitance (C <sub>0</sub> )	-	3.60 pF

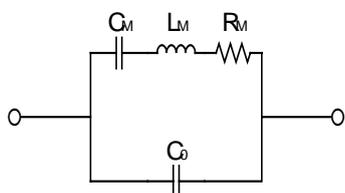


Fig.1 RF Equivalent RLC Model

Maximum Rating: (Table 2)

Table2. Maximum Ratings

Item	Rating
Maximum Input Power	+5dBm
Operating Temperature Range	-30~+85°C
Storage Temperature	-40~+90°C

Mechanical Specifications: (Fig.3)

Package is designed as small as 3.5x3.5x1.0[mm<sup>3</sup>] for SMD (Surface Mount Device) type.

**Notice:**

This part is electrostatic discharge sensitive and may be damaged by improper handling.

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<http://www.jrc.co.jp/jp/product/device/saw/index.html> (Japanese)

<http://www.jrc.co.jp/eng/product/saw/index.html> (English)

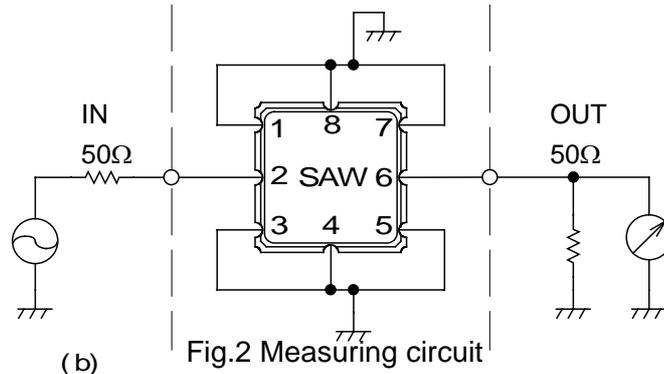


Fig.2 Measuring circuit

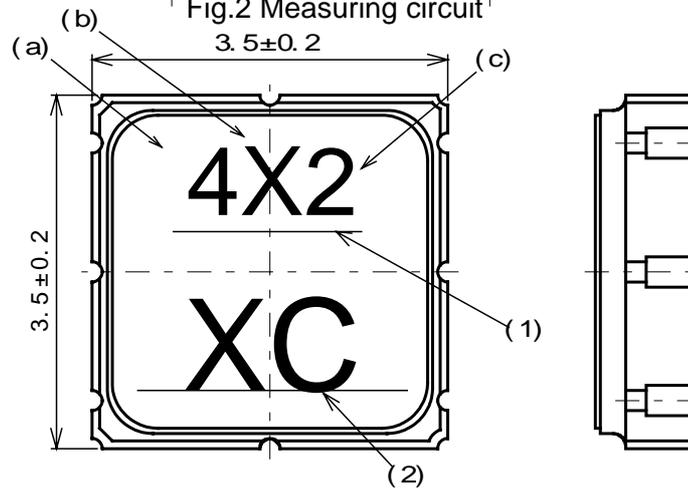


Fig.3 Package dimensions (in mm)

Marking

(1) Lot Number

(a) Year

(b) Month

\*Oct--- X

Nov--- Y

Dec--- Z

(c) Date

\*1-9--- 0

10-19--- 1

20-31--- 2

(2) Part Number Mark

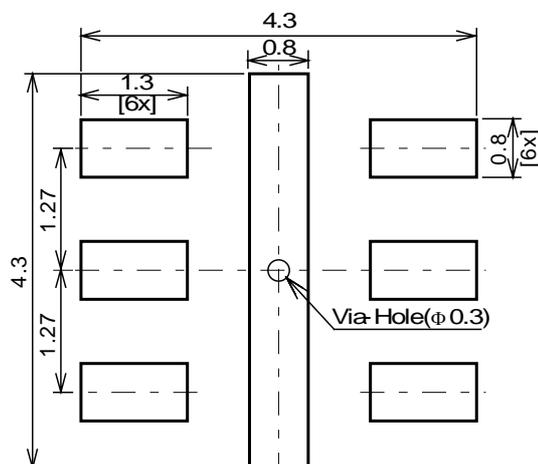


Fig.4 Desirable land area (in mm)

Pin no.	Connection
1	GND
2	IN/OUT
3	GND
4	GND
5	GND
6	OUT/IN
7	GND
8	GND

**Notice**

1. Use this component within operating temperature range. It might not be satisfied with electrical specification without operating temperature range. When it is used less than  $-30^{\circ}\text{C}$  or more than  $+85^{\circ}\text{C}$ , it might be a cause of degradation or destruction of the component. Even if it endures during a short time, it causes degradation of qualification.
2. When soldering iron is used, solder with the temperature at the tip of soldering iron:  $350^{\circ}\text{C}$  max., the time of soldering: 10 seconds max., the power of soldering iron: 30W max..
3. Notice that the allowed time of soldering with soldering iron is accumulated time, when soldering is repeated.
4. As rapid temperature change for cleaning after reflow soldering might be a cause of destruction clean this component after confirming that temperature of this component goes down to room temperature.
5. Confirm that there are not any influence for qualification to this component in mounting on PCB when this component is cleaned.
6. As it might be a cause of degradation or destruction to apply static electricity to this component, do not apply static electricity or excessive voltage while assembling and measuring. And do not transport this component with bare hand.

**Note**

1. This specification specifies the quality of this component as a single unit. Make sure that this component is evaluated and confirmed against this specification when it is mounted to your products.
2. The information contained herein may be changed without prior notice. It is therefore advisable to contact Japan Radio Company before proceeding with the design of equipment incorporating this product.
3. The products are designed to be used with ordinary electronic equipment (data and communications equipment, office equipment, audio-video equipment, measuring instruments, etc). Japan Radio Company does not assume any liability for the case using the products with the application required high reliability or safety extremely (such as space equipment, sea-bottom equipment, medical equipment etc). When intending to use any our product please contact our sales representatives in advance.