DATE: 2018/05/24

Accton Technology Corp.

PRELIMINARY SPECIFICATION

ITEM: CRYSTAL RESONATOR

DSX211S

96.000MHz

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1. ELECTRICAL CHARACTERISTICS

(This test shall be performed under the conditions of temp.at +25 ± 3°C, Relative Humidity 60% max.)

(1)	NOMINAL FREQUENCY	96.000000 MHz
(2)	OVERTONE ORDER	Fundamental
(3)	LOAD CAPACITANCE(CL)	8.0 pF
(4)	FREQUENCY TOLERANCE	±12 ppm max. (at +25 ± 3 °C)
(5)	DRIVE LEVEL	0.01 ~ 400 μW
(6)	SERIES RESISTANCE	20 Ω max. (at Series)
(7)	OPERATING TEMPERATURE RANGE	-40 ~ +105 °C
(8)	FREQUENCY CHARACTERISTICS OVER TEMPERATURE (Including Aging 5 years ref. +25 deg.C, Frequency Perturbation)	±16 ppm max. / -40 ~ +105 °C (ref. to +25°C)
(9)	SHUNT CAPACITANCE	2.0pF max.
(10)	INSULATION RESISTANCE	500MΩ min. / DC 100 ± 15V
(11)	STORAGE TEMPERATURE RANGE	-40 ~ +105 °C
(12)	.SPURIOUS MODE SERIES RESISTANCE	1100 Ω min. (F0±700kHz)

2. CONSTRUCTION

(1)	DIMENSIONS AND MARKING	Refer to 4.

3. OTHER SPECIFICATIONS

(1)	EMBOSS CARRIER TAPE & REEL	Refer to 5.
(2)	PACKING	Refer to 6.
(3)	REFLOW CONDITIONS (REFERENCE)	Refer to 7.
(4)	LAND PATTERN (REFERENCE)	Refer to 8.
(5)	OTHER HANDLING INSTRUCTIONS	Refer to 9.

4. DIMENSIONS AND MARKING

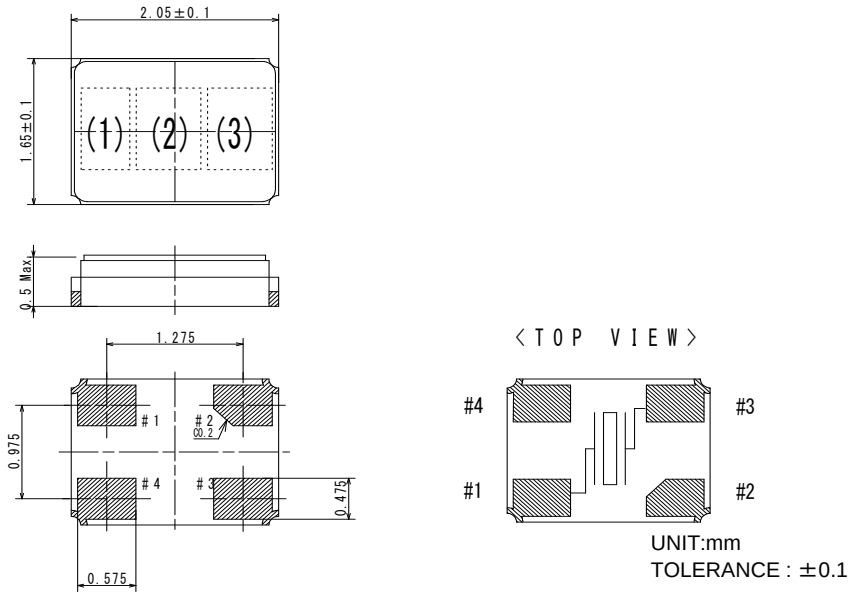


Figure-1

Logo(1) and Nominal Frequency (2) and Manufacturing lot No.(3)

Logo(1) = " D "

Nominal Frequency (2) = Mark two digits from upper decimal point
(ex. 96.000000 MHz ----> 96)

Manufacturing lot No.(3)
Year : The last digit of the year
week : We gave the sequence of week numbers 01(first week) for production date.
there are starting from 1st of Jan. However,add '0' figure to the first week during the nine weeks.
The week means are from Sunday to Saturday.

(ex. 2018/5/24 ---> 821)

5. EMBOSS CARRIER TAPE & REEL

(1) Dimensions of embossed carrier tape

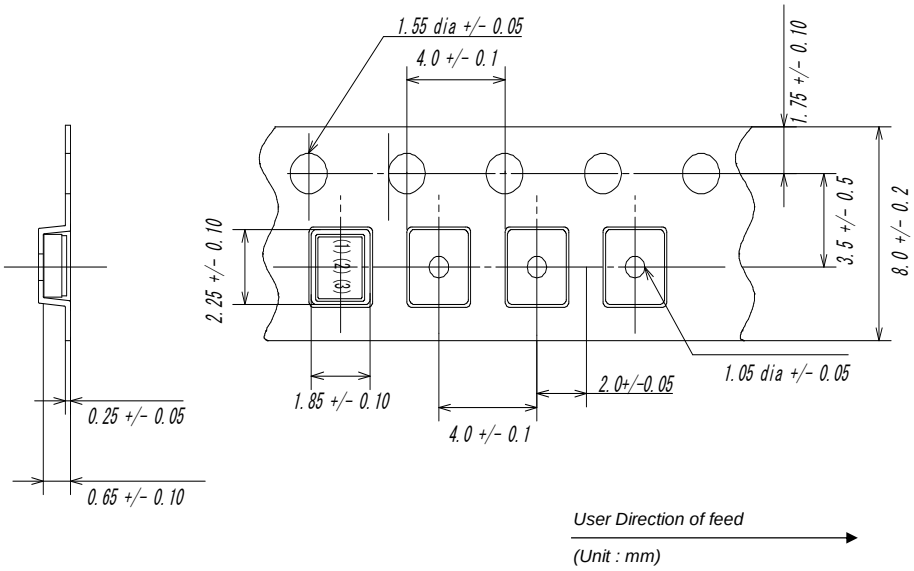


Figure-2

(2) Dimensions of tape reel

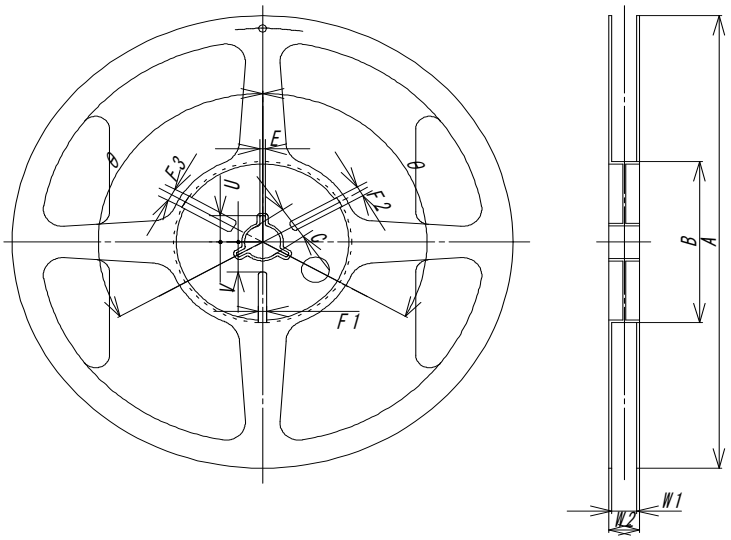


Figure-3

TITLE DSX211S TYPE QUARTZ CRYSTAL SPECIFICATION	REMARK		
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(Unit:mm)

Item			Mark	Dimensions Angle
Flange	Diameter		A	Φ180 +0.0 / -3.0
	Inside of Frange		W1	9.0 ± 0.3
	Outside of Frange		W2	11.4 ± 1.0
	Inside Diameter		B	Φ60 +1.0 / -0.0
Center Core	Center Core Slit	Width	F1	3.0 ± 0.2
			F2	4.0 ± 0.2
			F3	5.0 ± 0.2
		Length	V	11.9 +0.5 / -0.0
		Angle	θ	120°
	Spindle Diameter		C	Φ13 ± 0.2
	Key Seats	Width	E	2.0 ± 0.5
		Length	U	10.5 ± 0.4
		Angle	θ	120°

(3) Storage condition
Temperature : +40 °C max.
Relative Humidity : 80% max.
(It is a guaranteed term because it obtains an excellent soldering: 6 months)

(4) Standard packing quantity

3,000 pcs/reel

(5) Material of the tape

Tape	Material
Carrier tape	Polystyrene+Carbon
Cover tape	Polyester

(6) Label contents

Type
Our specification No.
Your Part No.
Lot No.
Nominal Frequency
Quantity
Our Company Name
Producting Country

Stick a label on the each reel.

(7) Taping dimension

Leader	Cover-tape	The length of cover-tape in the leader is more than 400mm including empty embossed area.
	Carrier-tape	After all products were packaged, must remain more than twenty pieces or 400mm empty area, which should be sealed by cover-tape.
Trailer	Cover-tape	The empty embossed area which are sealed by cover-tape must remain more than 40mm.
	Carrier-tape	

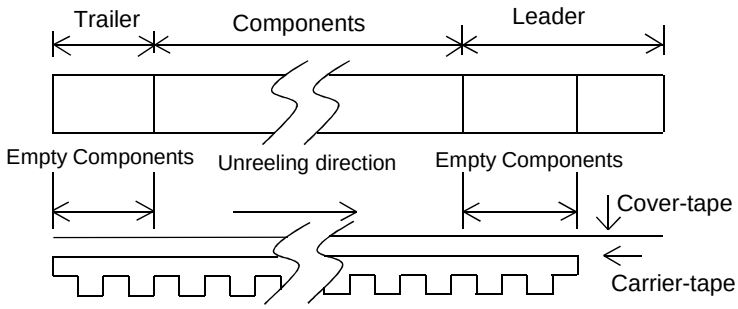


Figure-4

(8) Joint of tape
The carrier-tape and cover-tape should not be jointed.

(9) Release strength of cover tape
It has to between 0.1 ~ 0.7N under following condition.
Pulling direction 165 ~ 180 °
Speed 300mm/min
Otherwise unless specified.

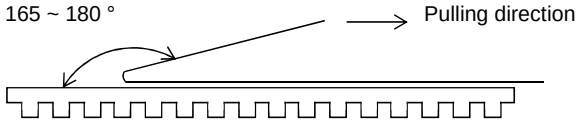
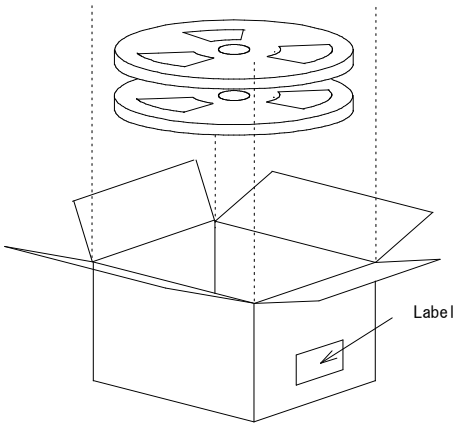


Figure-5

Other standards shall be based on JIS C 0806 $_{-1990}$.

6. PACKING

(1) STORAGE METHOD



Label contents

The type of product
Lot No.
Specification
Quantity
Shipment Day
Remark

Figure-6

(2) BOX SIZE

From lot size packingsize shall be changed.
In the upper and lower part and the opening in box it shall be protected products using aircushion sheets.

7. REFLOW CONDITIONS (REFERENCE)

During the solder reflow process, please complete within following temperature, period.
Reflow soldering shall be allowed only 2 times.

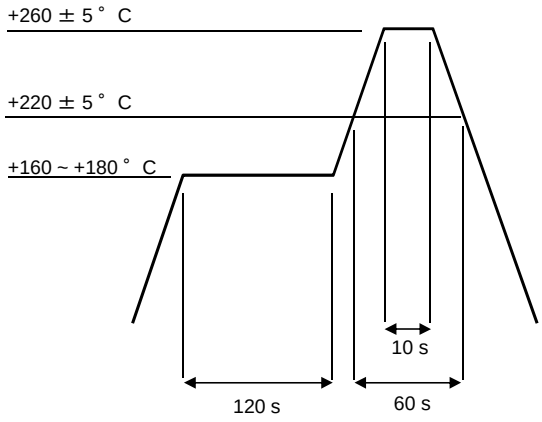
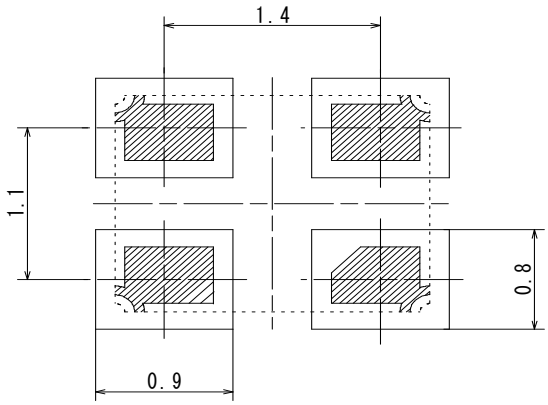


Figure-7

HANDSOLDERING METHOD : +350 ± 10 °C , 3+1/-0s Each terminal once
(Please take care so that a soldering iron should not touch a product directly.)

8. LAND PATTERN (REFERENCE)



Unit : mm

Figure-8

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9. DSX211S TYPE QUARTZ CRYSTAL HANDLING INSTRUCTIONS

(1) SOLDERING
Please perform the attached Reflow conditions to reference within 2 times.

(2) MOUNT
Crystal products are designed to be compatible with automatic mounting.
Be sure to have a mounting test in advance by using the actual mounting machine and check that the characteristics of the products are not damaged by the automatic mounting.
In the process where the boad is warped, such as board separation process, be careful that the warping does not influence the characteristics and soldering of crystal products.
Since mounting by Ultrasonic welding and processing have a possibility of an excessive vibration spreading inside a crystal resonator and becoming the cause of characteristic deterioration and not oscillating, it does not recommend.

(3) WASHING
About use of the washing liquid of a basin system, an alcoholic system, and a chlorofluorocarbon-replacing material system, it is checking that it is satisfactory.
However please consult in advance about other washing liquid.
Although the check about ultrasonic washing is performed, since it is an examination with a simple substance, the check for the second time by the use state is recommended.

(4) THE CAUTIONS ON USE
The piece of crystal it is processed very smaller than the conventional thing inside DSX211S series crystal unit may be damaged, if excessive excitation electric power is applied.
Please use it below with the value specified on a catalog and specifications.
Please refrain from forming patterns between crystal land pattern's since there is a possibility to cause crack in base.
If the temperature is higher than +280 °C, there is a possibility for the sealing alloy to remelt.
Avoid using the product at temperature higher than specified.

(5) HANDLING OF A PRODUCT
DSX211S series has sufficient intensity to fall and vibration.
However when too much shock is added according to a certain cause, the use after a characteristic check is recommended.

(6) STORAGE
Since the soldering nature of a terminal may be degraded, please avoid storage in high temperature and a humid place.
Please keep it in the place which direct rays do not hit and dew condensation does not generate.