
MEC

PRODUCT SPECIFICATION

QUARTZ CRYSTAL

FREQUENCY COMPONENTS

PRODUCT TYPE	: PÔHJW
NOMINAL FREQUENCY	: FFÈÍ JGMHZ
PART NO	: ÁÔÍ JW-FFÈÍ JGM1Ì H0F
REVISION	: L

SPECIFICATION FOR 49U QUARTZ CRYSTAL UNIT.**Part Number : J E6; W3307; 40 3: 52H****1. SCOPE**

This specification shall cover the characteristics of the Quartz Crystal with 11.0592MHz.

2. CUSTOMER NO :

2-1 Application. :

2-2 Holder Type. : HC-49U Package. (Pb-free)

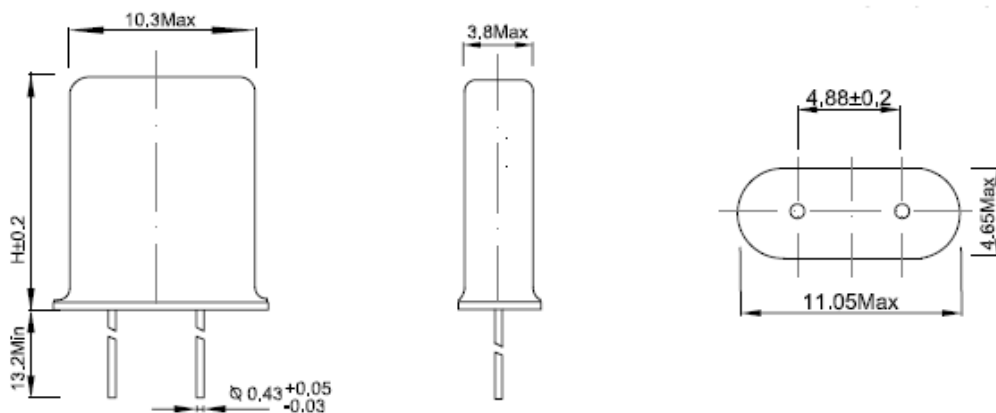
2-3 Mode of Oscillation. : AT-Cut, Fundamental.

3. ELECTRICAL CHARACTERISTICS

No.	Item.	Specification.
3-1	Nominal Center Frequency. (Fo)	11.059200MHz
3-2	Mode of Oscillation	AT Fundamental
3-3	Load Capacitance (pF)	18pF
3-4	Frequency Tolerance at 25°C±2°C. (ppm)	±30 ppm (RT/ppm)
3-5	Stability Temperature Characteristics. (ppm)	±50 ppm (TC/ppm)
3-6	Operating Temperature Range. (°C)	-20°C ~ +70°C
3-7	Storage Temperature Range. (°C)	-40°C ~ +85°C
3-8	Equivalent Resistance. (Ω)	35 Ω Maximum
3-9	Drive Level. (uW)	100 μW
3-10	Shunt Capacitance. (pF)	7 pF Maximum.
3-11	Insulation Resistance. (Ω)	DC 100V ± 15V. / ≥500 MΩ Minimum.
3-12	Measuring Equipment.	See Table 1
3-13	Aging.	±5 ppm / Year.

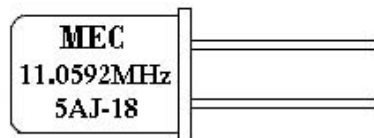
4. DIMENSIONS and MARKING.

4-1 Dimensions. (Not to Scale, Unit : mm, HC-49U , H: 13.5mm)



4-2 Marking System.

Marking :



Year code : 5=2015
 Moth code : A= Jan
 Frequency : 11.0592MHz

A - Jan	E - May	J - Sept
B - Feb	F - June	K - Oct
C - Mar	G - Jul	L - Nov
D - Apr	H - Aug	M - Dec

5 .MECHANICAL CHARACTERISTICS

No.	Item.	Condition of Test.
6-1	Shock Test.	The crystal unit is dropped from the height of 60cm in free fall condition on a 30mm-thick hard wood board for 3 times. Frequency change should be less than : $\pm 5\text{ppm}$ Resistance change should be less than : $\pm 15\%$ Test of hermitic ability no bubble in water at $80^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 3 minutes.
6-2	Vibration Test.	Subject the electrical characteristics should be $\pm 5\text{ppm}$ in measurement of frequency and $\pm 15\%$ if the measurement of resistance.
6-3	Solder-ability Test.	Dip the quartz crystal unit terminal no closer than 1.5mm into the solder bath at $230^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 5 ± 1 seconds. More than 95% of the terminals surface shall be covered with the solder.
6-4	Resistance to the Solder Heat.	The temperature shall be $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$, immersion duration shall be 10 seconds. Using a heat shunt board. And then the quartz crystal unit shall be released to standard room temperature condition for 1 hour before with measurement shall be made. Electric characteristics shall be satisfy the spec.
6-5	Moisture.	Keep the quartz crystal unit at $60^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and 90% RH for 96 hours. Then release the crystal unit in to the room condition for 1 hours prior to the measurement. It shall fulfill the spec.
6-6	High Temperature Exposure.	Subject the quartz crystal unit to $70^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 96 hours. Then release the crystal unit in to the room condition for 1 hours prior to the measurement. It shall meet the spec.
6-7	Low Temperature Exposure.	Subject the quartz crystal unit to $-20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 96 hours. Then release the crystal unit in to the room condition for 1 hours prior to the measurement. It shall meet with the tolerance of the spec.
6-8	Hermetical Test.	No bubble in water at $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 3 minutes.
6-9	Lead Pulling Test.	Weight along with the direction of lead without any shock $\sim 0.9\text{ kg}$ for $5 \sim 10$ seconds. The product shall show no evidence damage and shall satisfy the initial electric characteristics.
6-10	Lead Bending Test.	Lead shall be subject to withstand against bending of 90° twice at it's stem. And then the lead shall show no evidence damage and shall satisfy the initial electric characteristics. The quartz crystal unit shall be held by it's body in such a manner that the axes of it's terminal are vertical. A mass having 0.45kg shall be inclined through an angle of 90° in the vertical plane, taking 2 seconds. There should be no damage in the lead and any change in electric characteristics.

6. SEALING.

The quartz crystal unit shall be immersed in water at a temperature of 80°C or higher.

Inspection shall be made after 5 minutes while the crystal unit still in the water.

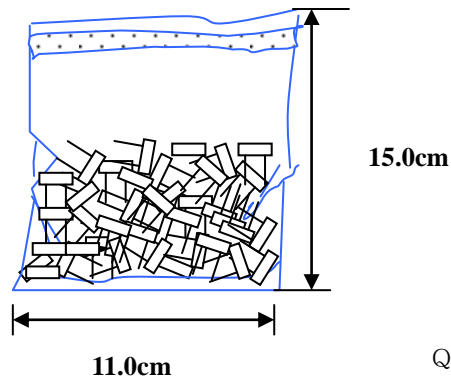
Without leakage as determined by repetitive bubbles ember from the crystal unit.

7. REVIEW OF SPECIFICATION.

When something gets doubtful with this specification, we shall jointly work to get an agreement.

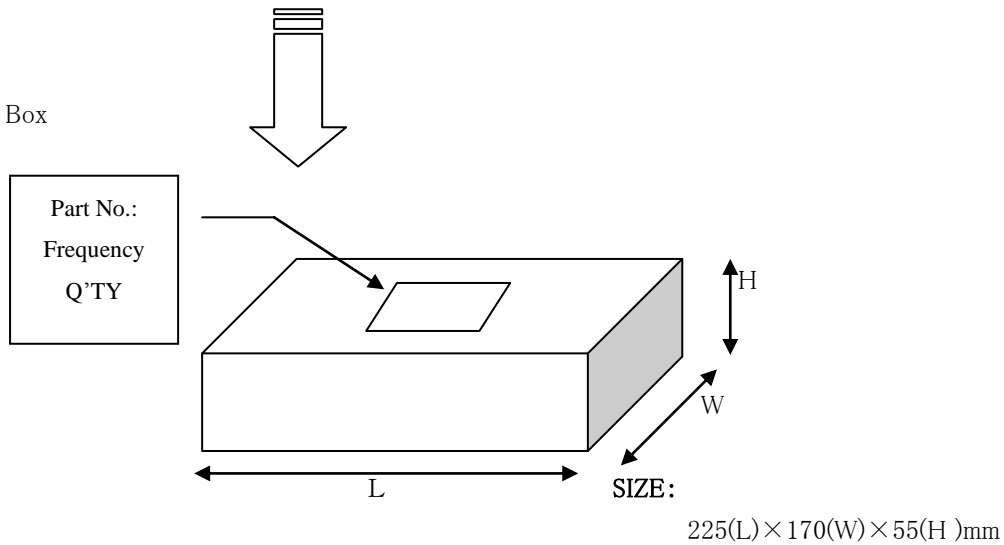
8. PACKING METHODE AND WEIGHT.

■ Bulk



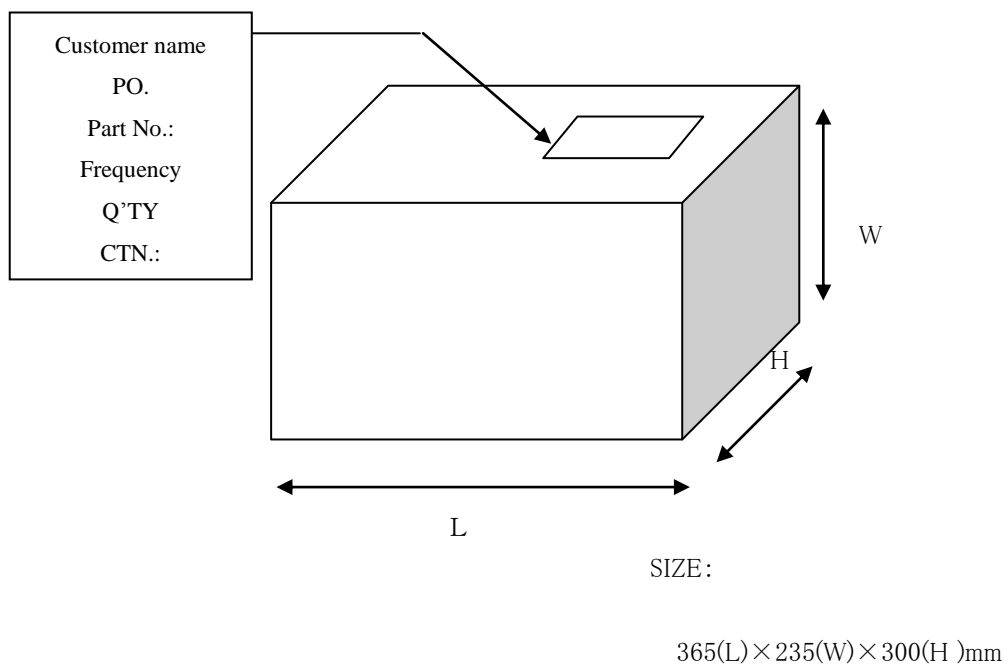
Quantity: 200pcs/bag

■ Inner Box



5 bags in each inner box (Each 200pcs in vinyl packing)

■ Outer Carton



10 boxes in each outer carton, Q'TY: 10,000pcs

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REVIEW OF SPECIFICATIONS

- 1) When something get doubtful with this specifications, we shall jointly work to get an agreement.
- 2) This specification limits the quality of the components as a single unit. Please insure the component is thoroughly evaluated in your application circuit.
- 3) Please do not use this component in any application that deviates from its intended use as noted within the specification. It may cause any mishaps.
- 4) Please return one of this specification after your signature of acceptance. In case of no return within 3 months from submission date. This specification should be treated as accepted.

When using our products, the following precautions should be taken.

- (1) Safety designing of apparatus or a system allowing for failures of electronic components used in the system

In general, failures will occur in electronic components at a certain probability. MOBICON HOLDINGS LTD makes every effort to improve the quality and reliability of electronic component products. However, it is impossible to completely eliminate the probability of failures. Therefore, when using MOBICON HOLDINGS LTD electronic component products, systems should be carefully designed to ensure redundancy in the event of an accident which would result in injury or death, fire, or social damage, to ensure the prevention of the spread of fire, and the prevention of faulty operation.

- (2) Quality Level of various kinds of parts, and equipment in which the parts can be utilized
Electronic components have a standard quality level unless otherwise specified.
- (3) This specifications is subject to change without notice.
The contents of this specifications are based on data which is correct as of 2002, and they may be changed without notice. If our products are used for mass-production design, please enquire consult with a member of our company's sales staff by way of precaution.
- (4) Reprinting and copying of this specifications without prior written permission from MOBICON HOLDINGS LTD are not permitted.

- (5) Industrial Property Problems

In the event any problems associated with industrial property of a third party arising as a result of the use of our products. MOBICON HOLDINGS LTD assumes no responsibility for problems other than problems directly associated with the constitution and manufacturing method of the products.