

MOBICON

Electronic Components

PRODUCT SPECIFICATION

MEC

Ceramic Resonator

SPECIFICATION

This specifications is subject to change without notice.

MOBICON HOLDINGS LTD.		
Prepared By	Sign.	Approved By
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PART NO. :

ZTA9.83MT

ELECTRICAL CHARACTERISTICS

1. SCOPE

This specification shall cover the characteristics of the ceramic resonator with 9.83MHz for the clock oscillation of microprocessor etc.

2.SPECIFICATION NO :

3.FACTORY NO : ZTA9.83MT

4.ELECTRICAL SPECIFICATION

No	Item	Requirements
4.1	Oscillation Frequency (Fosc)	9.83MHz±0.5%
4.2	Resonant Impedance (Ro)	25Ω max
4.3	Temperature Coefficient of Oscillation Frequency	±0.3% max (-20 to +80)
4.4	Withstanding Voltage	100 VDC 5 sec.max
4.5	Rating Voltage (1) D.C. Voltage (2) A.C. Voltage	6 V.D.C. 15 Vpp.
4.6	Insulation Resistance	100M Ω min. (at 10 VDC)
4.7	Operating Temperature	-20 to +80
4.8	Storage Temperature	-55 to +85
4.9	Aging Rate (Fosc)	±0.3% max (10 year)

5.MEASUREMENT

5.1 Measurement Condition

The reference temperature shall be 25 ±2 . The measurement

shall be performed at the temperature range of 5 to 35

unless otherwise the result is doubtful.

5.2 Measurement Circuit and Equipment

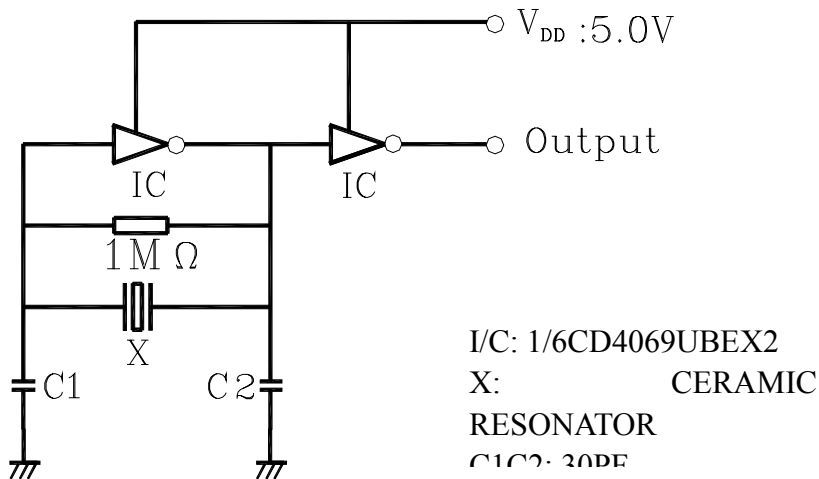
Oscillating frequency shall be measured by the standard test Circuit.

Resonant impedance shall be measured by HP8751A Network Analyzer.

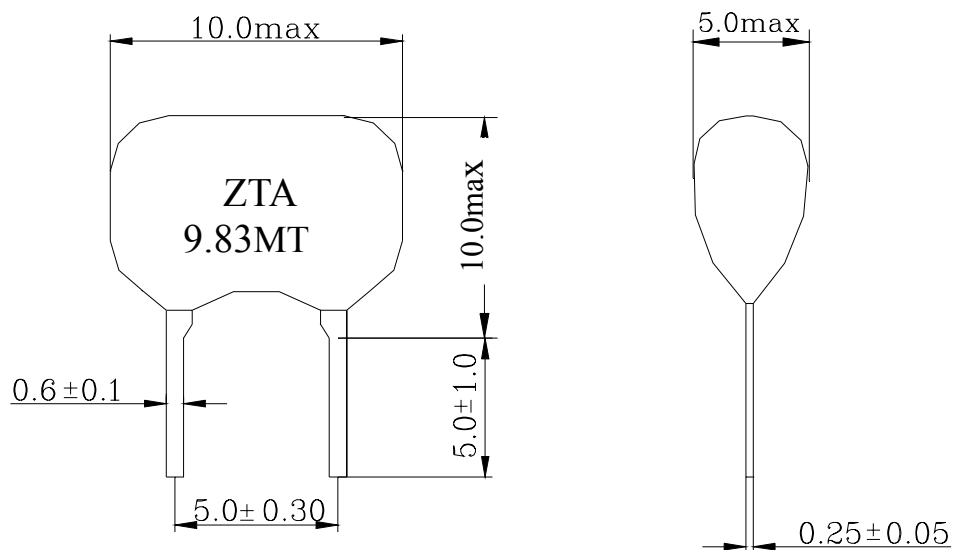
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REVIEW OF SPECIFICATIONS

5.2 MEASUREMENT CIRCUIT



6.0 DIMENSIONS



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REVIEW OF SPECIFICATIONS

7. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

No	Item	Condition of Test	Performance Requirements
7.1	Humidity	Keep the resonator at 40 ± 2 and $90-95\%$ RH for 96 ± 4 hours. Then release the resonator into the room condition for 1 hour prior to the measurement.	It shall fulfill the specifications in Table 1.
7.2	Vibration	Subject the resonator to vibration for 2 hours each in x,y and z axis with the amplitude of 1.5mm, the frequency shall be varied uniformly between the limits of 10—55Hz	It shall fulfill the specifications in Table 1.
7.3	Mechanical Shock	Drop the resonator randomly onto a concrete floor from the height of 100 cm 3 times.	It shall fulfill the specifications in Table 1.
7.4	Resistance to Solder Heat	Dip the resonator terminals no closer than 2 mm into the solder bath 260 ± 5 for 10 ± 1 sec.	It shall fulfill the specifications in Table 1.
7.5	Solderability	Dip the resonator terminals no closer than 2 mm into the solder bath at 235 ± 5 for 2 ± 0.5 sec.	More than 95% of the terminal surface of the resonator shall be covered with fresh solder.
7.6	High Temperature Exposure	Subject the resonator to 80 ± 5 for 96 ± 4 hours. Then release the resonator into the room conditions for 1 hour prior to the measurement.	It shall fulfill the specifications in Table 1.
7.7	Low Temperature	Subject the resonator to -40 ± 5 for 96 ± 4 hours. Then release the resonator into the room conditions for 1 hour prior to the measurement.	It shall fulfill the specifications in Table 1.
7.8	Temperature Cycling	Subject the resonator to -40 for 30 min. followed by a high temperature of 80 for 30 min. Cycling shall be repeated 5 times with a transfer time of 15 sec. at the room condition. Then release the resonator into the room temperature for 1 hour prior to the measurement.	It shall fulfill the specifications in Table 1.

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REVIEW OF SPECIFICATIONS

7. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

(Continued from the preceding page)

No	Item	Condition of Test	Performance Requirements
7.9	Lead Fatigue (1) Pulling Test	Weight along with the direction of terminals without any shock 0.5 kg for 10±1 sec.	The resonator shall show no evidence of damage and shall fulfill all the initial electric characteristics.
	(2) Bending Test	Lead shall be subject to withstand against 90 degree bending at its stem. This operation shall be done towards both directions.	

TABLE1

Item	Specification
Oscillation Frequency Change	0.3% max.(from initial value)
Resonant Impedance	30 max

8. REVIEW OF SPECIFICATIONS

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

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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.