MEC®

CERAMIC RESONATOR SPECIFICATION

PART NO. : **ZTACC4.0MG**

E L E C T R I C A L C H A R A C T E R I S T I C S

1.	Oscillation Frequency (Fosc)	4.0MHz ± 0.5%
2.	Resonant Impedance (Ro)	30 Ohm max.
3.	Temperature Characteristics of Oscillation Frequency	± 0.4% max. (-20°C ~ +80°C)
4.	Rating Voltage:	
	D.C. Voltage	6V
	Load Voltage	15Vpp
5.	Insulation Resistance	100 MOhm min. @ 10V DC
6.	Frequency Drift vs Temperature	< ± 0.3%
7.	Operating Temperature Range	-20°C ~ +80°C
8.	Storage Temperature Range	-55°C ~ +85°C
9.	Frequency Aging	± 0.3% max. for 10 years

M E A S U R E M E N T

Measurement Condition

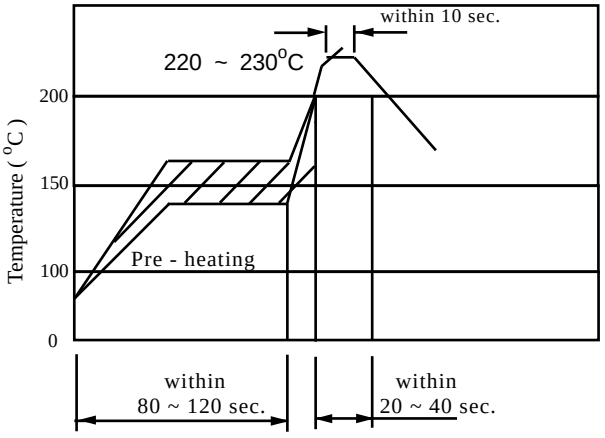
The reference temperature shall be 25°C ± 2°C. The measurement shall be performed at the temperature range of 5°C ~ 35°C unless otherwise the result is doubtful.

M E A S U R E M E N T C I R C U I T A N D E Q U I P M E N T

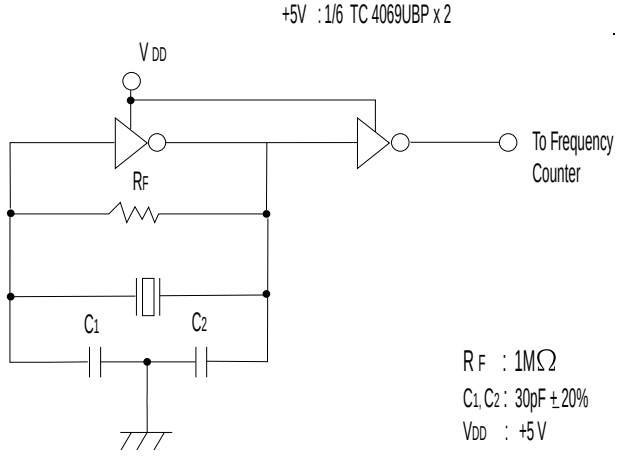
Oscillating frequency shall be measured by the standard test circuit.

Resonant impedance shall be measured by *HP8751A Network Analyzer.*

Recommended Reflow Soldering Standard Conditions



Test Circuit (C_1, C_2 = 30pF)



MOBICON
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Prepared by: Leo Wong
Checked By: _____
DOC. No: ZTACC4_0MG

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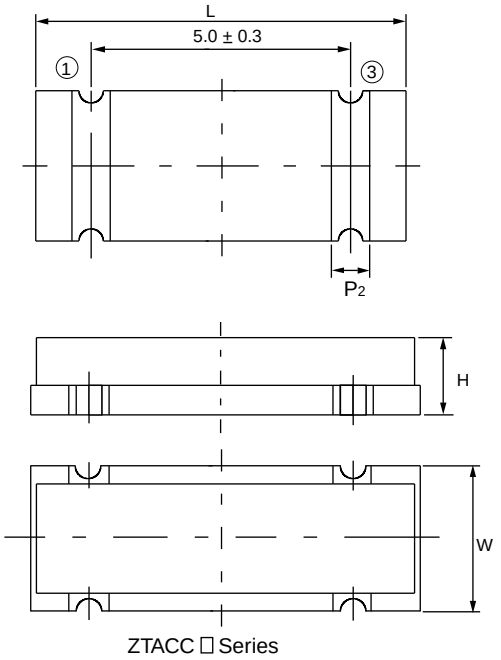
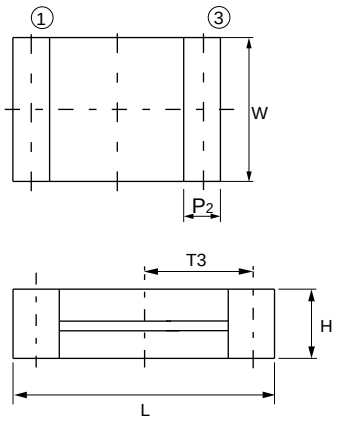
MECHANICAL DIMENSIONS



ZTACC □ Series

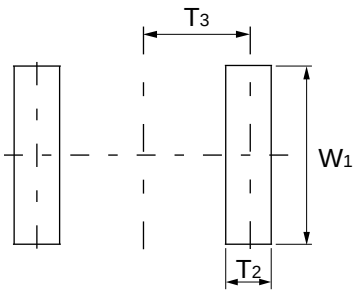


ZTACS/ CV □ Series

① Input
② Ground
③ Output

Type / Item	DIMENSION (mm)								
	L	W	H	P1	P2	T1	T2	T3	W1
ZTACC	7.4 ± 0.3	3.4 ± 0.3	1.8 ± 0.3	-	1.2 ± 0.3	1.5 ± 0.3	1.7 ± 0.3	2.5 ± 0.3	4.0 ± 0.3
ZTACS	4.7 ± 0.3	4.1 ± 0.2	1.6 ± 0.3	-	0.8 ± 0.4	1.3 ± 0.2	0.8 ± 0.2	1.95 ± 0.2	5.1 ± 0.2
ZTACV	3.7 ± 0.2	3.1 ± 0.2	1.2 ± 0.3	-	0.7 ± 0.3	1.0 ± 0.2	0.7 ± 0.2	1.5 ± 0.2	4.1 ± 0.2

RECOMMENED LAND PATTERN



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PHYSICAL AND ENVIRONMENTAL CHARACTERISRICS

No.	Item	Condition of Test		Performance Requirements
1	Humidity	Keep the resonator at 40 ± 2°C and 90~95% RH for 96 ± 4 hours. Then release the resonator into the room condition for 1 hour prior to the measurement.		*It*
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.		*shall*
3	Mechanical Shock	Drop the resonator randomly onto a wooden floor from the height of 100cm 3 times.		*fulfill*
4	Soldering Test	Passed through the reflow oven under the following condition, and left at room temperature for 1 hour before measurement.		*the*
		Temperature at the surface of the substrate:	Time	
		Preheat 150 ± 5°C	60 ± 10 sec.	*specifications*
		Peak 240 ± 5°C	10 ± 3 sec.	
5	High Temperature Exposure	Subject the resonator to 80 ± 5°C for 96 ± 4 hours. Then release the resonator into the room conditions for 1 hour prior to the measurement.		*in Table 1.*
6	Low Temperature	Subject the resonator to –20 ± 5°C for 96 ± 4 hours. Then release the resonator into the room conditions for 1 hour prior to the measurement.		

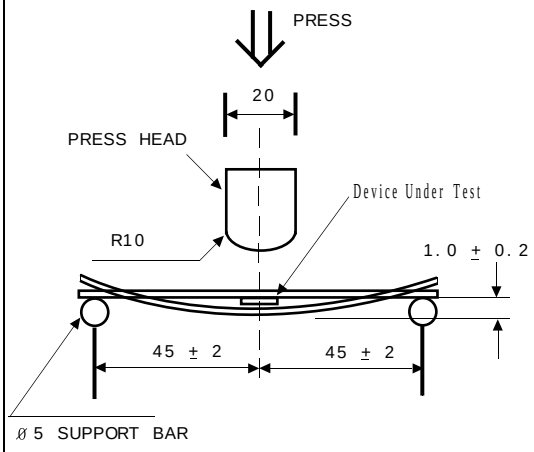
7	Temperature Cycling	Subject the resonator to -20°C for 30 min. followed by a high temperature of 85°C for 30 min. cycling shall be repeated 5 times with a transfer time of 15 seconds. At the room temperature for 1 hour prior to the measurement.	It shall fulfill the specifications in Table 1.
8	Solderability	Dipped in 230 ± 5°C seconds with resin flux (25wt% ethanol solution.)	The terminals shall be at least 95% covered by solder.
9	Board Bending	Mount a glass epoxy board (width = 40mm, thickness = 1.6mm), then bend it to 1mm displacement and keep it for 5 seconds. (See the following figure) 	Mechanical damage such as breaks shall not occur.

TABLE 1

Item	Specification
Oscillation Frequency Change	ΔF/ Fosc ≦ 0.3% max.
Resonant Impedance	Within ± 10 Ω

REVIEW OF SPECIFICATIONS

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

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