

深圳市炬烜科技有限公司
CHIP SUN TECHNOLOGY CO., LTD

**APPROVAL
SHEET**



CUSTOMER:

DESCRIPTION:

ZTTCS16.00MHz CERAMIC RESONATOR

MANUFACTURER PART NO.:

ZTTCS16.00MT

CUSTOMER PART NO.:

USED IN MODEL:

承 认 APPROVAL		
工程部 TECHNOLOGY DEPT.	品质部 QUALITY DEPT.	采购部 PURCHASING DEPT.

Date: March 15, 2023

深圳市炬烜科技有限公司

CHIP SUN TECHNOLOGY CO., LTD

地址 ADD: 深圳市龙华新区大浪腾龙路淘金地电子商务孵化基地 B 座 206
Rm. Rm 206, Tower B, Taojindi Building, Tenglong Road, Dalang Street,
Longhua New District, Shenzhen, China

电话 TEL: 86-755-83458796 传真 FAX: 86-755-83459818

网址 WEB ADD: <http://www.chinachipsun.com>

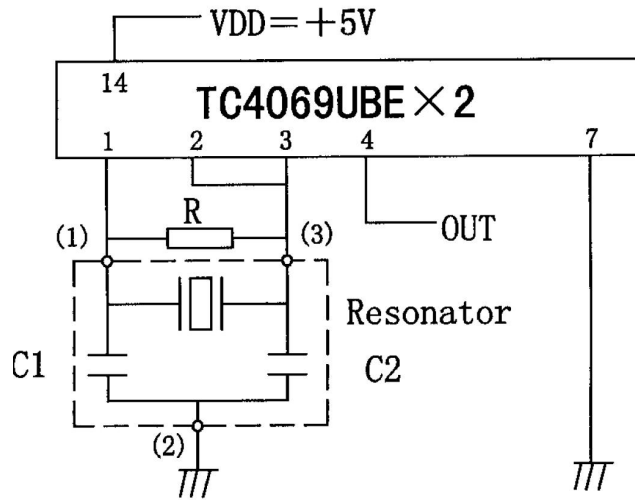
E-MAIL: sales01@chinachipsun.com



<p>1. Scope:</p> <p>The specification shall cover of SMD ceramic resonator with 16.00MHz used for oscillation circuit</p> <p>2. Spec. No.:</p> <p>3. Part No.: ZTTCS16.00MG</p> <p>4. Electrical Characteristics</p> <p>4.1 Nominal Frequency</p> <p>4.2 Frequency Tolerance</p> <p>4.3 Resonant Resistance</p> <p>4.4 Build-in Capacitance</p> <p>4.5 Temperature Stability (-20°C~+80°C)</p> <p>4.6 Insulation Resistance</p> <p>4.7 Aging for 10 years</p> <p>4.8 Withstanding Voltage</p> <p>4.9 Max Voltage</p> <p style="padding-left: 20px;">DC</p> <p style="padding-left: 20px;">AC</p> <p>4.10 Operating Temperature</p> <p>4.11 Storage Temperature</p> <p>5 Measurement</p> <p>5.1 Measurement Condition</p> <p>Measurement shall be carried out at the standard temperature of 25±2°C ,and humidity 55±5% under normal air pressure. If no specific requirements, Test can be carried out under 5-35°C ,and humidity 45-65%.</p> <p>5.2 Measuring Circuit and Equipment</p> <p>Nominal frequency shall be measured by the standard test circuit as shown in Fig.1, Resonant Resistance shall be measured by network analyzer.</p>	<p>16.000MHz</p> <p>±0.5%max</p> <p>40 Ω max</p> <p>30pF</p> <p>±0.5% max</p> <p>5×10⁸ Ω min</p> <p>±0.3% max</p> <p>100VDC 5 sec</p> <p>6V DC</p> <p>15V P-P</p> <p>-20°C~+80°C</p> <p>-35°C~+85°C</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

CHIP SUN TECHNOLOGY CO., LTD

DESCRIPTION	SMD CERAMIC RESONATOR ZTTCS 16.00MHZ ±0.5%
DATE	2023.03.15



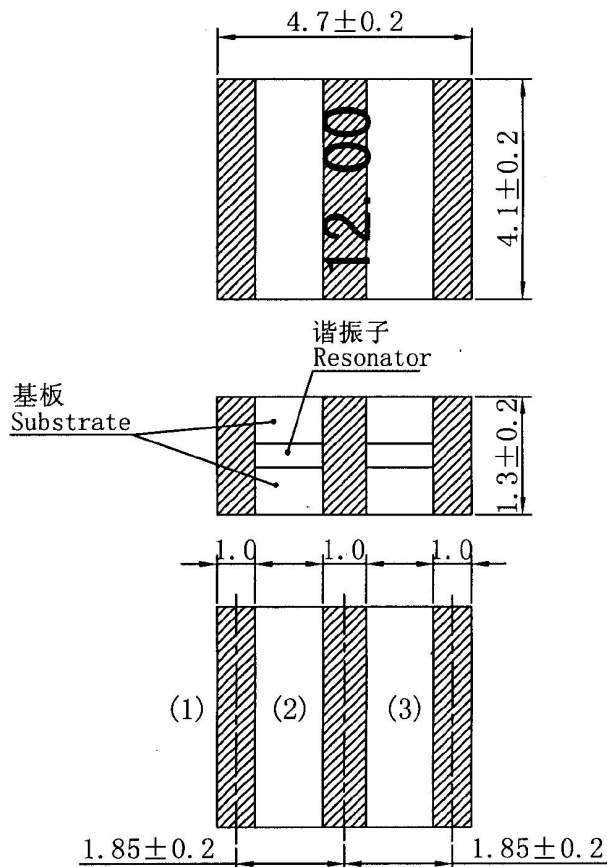
R = 1MΩ
C1=C2=30PF

图1 测试电路
Fig.1 Measuring Circuit

6. Outline

6.1 Appearance: Mark shall be clear; appearance shall be smooth and no damage.

6.2 Dim



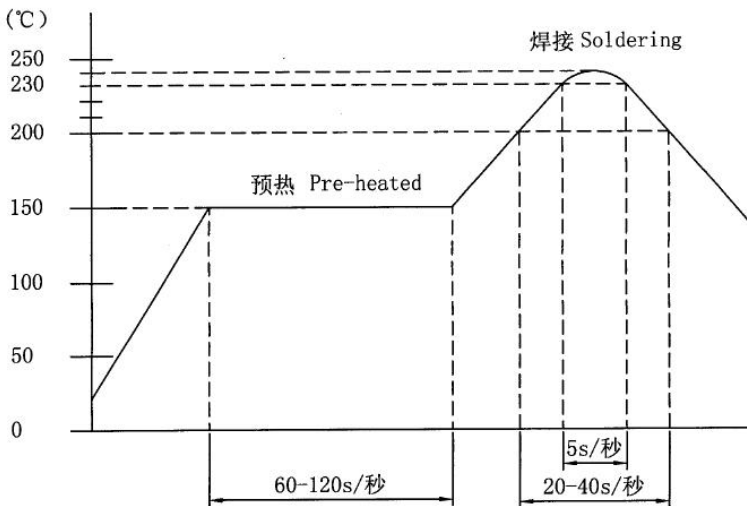
(1) (3) : Input/Output
(2) : Ground

Unit: mm

CHIP SUN TECHNOLOGY CO., LTD

DESCRIPTION SMD CERAMIC RESONATOR ZTTCS 16.00MHZ ±0.5%

DATE 2023.03.15

<p>7. Physical Characteristics</p> <p>7.1 Random Drop</p>	<p>Resonator shall be measured after 3 times random frops from the height of 1.0mm on wooden floor</p>	<p>No visible damage and it meet Table 1</p>
<p>7.2 Vibration</p>	<p>Resonator shall be measured after being applied vibration of amplitude of 1.5mm with 10-55Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours</p>	<p>No damage and it meet Table 1.</p>
<p>7.3 Solder ability</p>	<p>The electrode of resonator are immersed in aide solder for 5scc and then immersed in soldering bath of 230+5°C,for3+0.5scc.</p>	<p>At least 75% electrode shall be covered with solder.</p>
<p>8. Environmental Characteristics</p> <p>8.1 Humidity</p>	<p>After being placed in a chamber with 90-95%R.H.at 60+2°C for 100 hours and then being placed in room temperature for 1 hour, resonator shall be measured.</p>	<p>It shall meet Table 1</p>
<p>8.2 Resistance to Solder Heat</p> <p>(1) Reflow solder</p>	<p>After resonator is soldered for 1 time in following temperature conditions, and then be placed in natural condition for 24-25 hours. Resonator shall be measured.</p> 	<p>No visible damage and it meet Table 1.</p>
<p>(2) Solder by Iron</p>	<p>Resonator is soldered at 280+5°C for 3+0.5sec. Then be placed in natural condition for 24 hours, Iron do not touch resonator while soldering.</p>	<p>No visible damage and it meet Table 1.</p>

CHIP SUN TECHNOLOGY CO., LTD

<p>DESCRIPTION</p>	<p>SMD CERAMIC RESONATOR ZTTCS 16.00MHZ ±0.5%</p>
<p>DATE</p>	<p>2023.03.15</p>

8.3 High Temperature	After being placed in a chamber with $85\pm 2^{\circ}\text{C}$,for 100 hours and then being placed in room temperature for 1 hour, resonator shall be measured.	It shall meet Table1
8.4 Low Temperature	After being placed in a chamber with $-40\pm 2^{\circ}\text{C}$,for 100 hours and then being placed in room temperature for 1 hour, resonator shall be measured.	It shall meet Table1
8.5 Heat Shock	After being kept at room temperature, resonator shall be placed at temperature of -55°C .for 30 minutes, then be placed at temperature. 85°C .for 30 minutes. After that returned to -55°C again. Repeated above cycle for 5times. After being kept in room temp.for 1 hour, resonator shall be measured.	It shall meet Table1

Table 1

Item	Variation
Oscillation Frequency	$\pm 5\%$ Max. (Please refer to initial value)
Resonant Resistance	$40\ \Omega$ Max.

CHIP SUN TECHNOLOGY CO., LTD

DESCRIPTION	SMD CERAMIC RESONATOR ZTTCS 16.00MHZ $\pm 0.5\%$
DATE	2023.03.15