

规格书编号

**SPEC NO :**

# 产品规格书

# SPECIFICATION

CUSTOMER 客户: \_\_\_\_\_  
PRODUCT 产品: \_\_\_\_\_ CRYSTAL FILTER \_\_\_\_\_  
MODEL NO 型号: \_\_\_\_\_ UM-5-21M20B \_\_\_\_\_  
PREPARED 编制: \_\_\_\_\_ LEO \_\_\_\_\_ CHECKED 审核: \_\_\_\_\_ YORK \_\_\_\_\_  
APPROVED 批准: \_\_\_\_\_ LIUMING \_\_\_\_\_ DATE 日期: \_\_\_\_\_ 2014-2-18 \_\_\_\_\_

客户确认 CUSTOMER RECEIVED:		
审核 CHECKED	批准 APPROVED	日期 DATE

无锡市好达电子有限公司  
Shoulder Electronics Limited

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# SPECIFICATION SHEET

APPLICATION

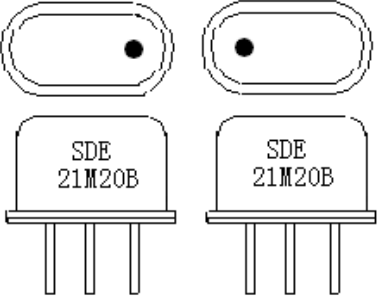
This Standard Will Apply to The Quartz Crystals.

ELECTRICAL DATA

NO	Speciality	Parameter
01	Holder type	MCF UM-5*2
02	Mode of Oscillations	Fundamental
03	Center Frequency	21.4MHz
04	Pass bandwidth	±10KHz min (at 3dB)
05	Pass band ripple	1.0dB max
06	Insertion loss	2.5dB max
07	Stop Band width	±40KHz max (at 40dB)
08	Terminating impedance	2000 Ω //2.0pf//6.0pf
09	Operating Tem. Range	-20~+70℃
10	Insulated Resistance	500M Ω (max)(DC100V)
11	Aging per Year	±3ppm

SPECIFICATION SHEET

□ MECHANICAL DATA

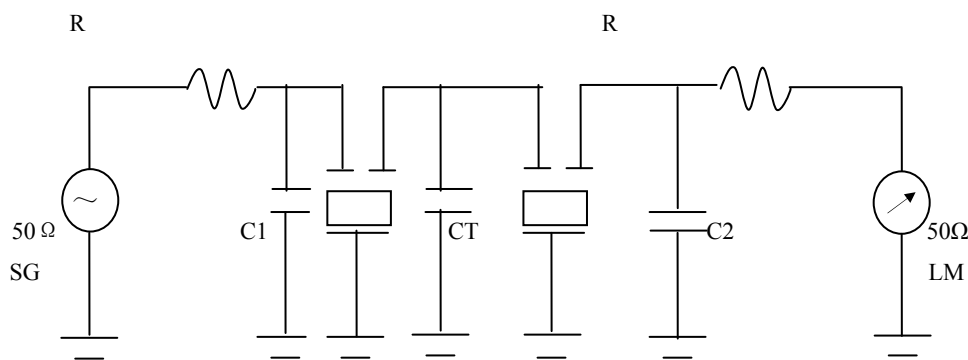
<p>1. Marking:</p>	
<p>2. Shock Test:</p>	<p>Dropping from 50 cm height, 3 times on 30mm-thick- hard wood, After testing, the electrical data follows the requirement.</p>
<p>3. Vibration Test:</p>	<p>30 minutes in each direction 10 to 55 Hz, amplitude 0.75mm, After testing, the electrical data follows the requirement.</p>
<p>4. Terminal strength:</p>	<p>Tensile: Fix main body of crystal. Load 0.9kg pulling force along, terminal axial for 30±5 seconds. The terminal can not be pulled out or broken. Bending: Hang 450g object on lead terminal. Bend 90 degree for 2 to 3 seconds. Return to the former place with the same speed and then do it again oppositely. The down-lead does not become broken and loosed.</p>
<p>5. Sealing:</p>	<p>The crystal unit shall be immersed in alcohol for 5 minutes with 5kg pressure per cm<sup>2</sup>. Taking out, Testing the resistance between down-lead and fundamental. The resistance shall be at least 500M Ω (max) (DC100V).</p>
<p>6. Temperature cycle:</p>	<p>2~3 min -20°C to +70°C 30min 30min After cycling three times, there is no distinct damage on the surface. Capacity testing requirement as vibration.</p>

# SPECIFICATION SHEET

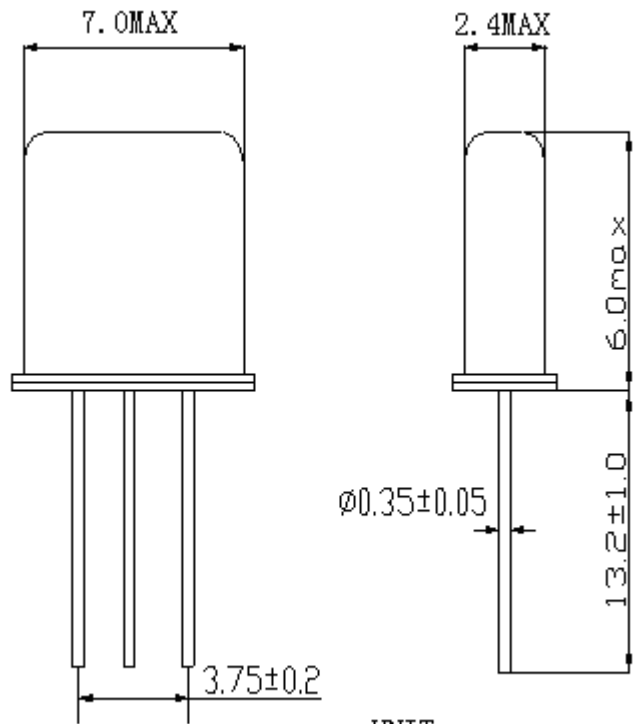
## □ MECHANICAL DATA

7.Solderability:	The lead(2to2.5mm from terminal to bottom) is immersed in a $230 \pm 5^{\circ}\text{C}$ Solder bath within $2 \pm 0.5$ seconds. The dipping surface of the lead shall be at least 95% covered with a Continuous new solder coating. Capacity testing requirement as vibration.
8. Resistance to soldering heat:	The(2 to 2.5mm from terminal to bottom) is immersed in a $350 \pm 10^{\circ}\text{C}$ solder bath within $3.5 \pm 0.5$ seconds. After testing, without distinct damage on the surface. Capacity testing requirement as vibration.
9. Resistance to heat:	Resistance to the lowest temperature: Stored at $-25 \pm 3^{\circ}\text{C}$ for 2 hours and then at normal temperature for 2 hours before testing. Capacity testing requirement as vibration. Resistance to the highest temperature: Stored at $70 \pm 2^{\circ}\text{C}$ for 2 hours and then at normal temperature for 2 hours before testing. Capacity testing requirement as vibration.
10. Invariable humidity:	Stored at $40 \pm 3^{\circ}\text{C}$ and $\text{RH}93\% \pm 2\%$ for 48 hours and then at normal condition for 2 hours before testing. Without distinct damage to the surface. Capacity testing requirement as vibration.

## Test Circuit



R: 1950Ω, C1,C2: 2.0pf, CT:6.0pf



UNIT : mm