

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: \_\_\_\_\_ MCF11DIP-21M12C-E \_\_\_\_\_

PREPARED 编制: \_\_\_\_\_ LEO \_\_\_\_\_ CHECKED 审核: \_\_\_\_\_ YORK \_\_\_\_\_

APPROVED 批准: \_\_\_\_\_ LIUMING \_\_\_\_\_ DATE 日期: \_\_\_\_\_ 2013-10-21 \_\_\_\_\_

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



## SPECIFICATION SHEET

<input type="checkbox"/> APPLICATION This Standard Will Apply to The Quartz Crystals.		
<input type="checkbox"/> ELECTRICAL DATA		
NO	Speciality	Parameter
01	Holder type	MCF11DIP
02	Mode of Oscillations	Fundamental
03	Center Frequency	21.4MHz
04	Pass bandwidth	$\pm 6.0\text{KHz}$ min (at 3dB)
05	Pass band ripple	2.0dB max
06	Insertion loss	3.0dB max
07	Stop Band width	$\pm 20\text{KHz}$ max (at 60dB)
08	Terminating impedance	$1.5\text{K}\ \Omega // 2.0\text{pf}$
09	Operating Tem. Range	$-40\sim +85\text{ }^\circ\text{C}$
10	Insulated Resistance	$500\text{M}\ \Omega$ (max)(DC100V)
11	Aging per Year	$\pm 3\text{ppm}$
12	Attenuation Guaranteed	60dB( $\pm 25\sim \pm 300\text{KHZ}$ )

□ MECHANICAL DATA

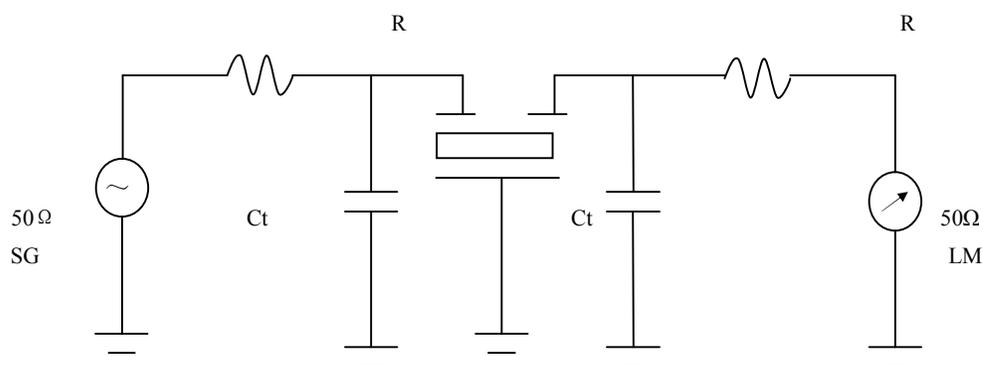
1. Marking:	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p style="text-align: center;">SDE 21M12C-E</p> </div>
2. Shock Test:	<p>Dropping from 75 cm height, 3 times on 30mm-thick- hard wood, After testing, the electrical data follows the requirement.</p>
3. Vibration Test:	<p>30 minutes in each direction 10 to 55 Hz, amplitude 0.75mm, After testing, the electrical data follows the requirement.</p>
4. Terminal strength:	<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>
5. Sealing:	<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>
6. Temperature cycle:	<p>2~3 min -40℃ to +85℃ 30min 30min After cycling three times, there is no distinct damage on the surface. Capacity testing requirement as vibration.</p>

# SPECIFICATION SHEET

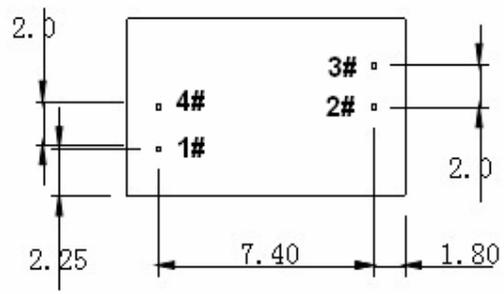
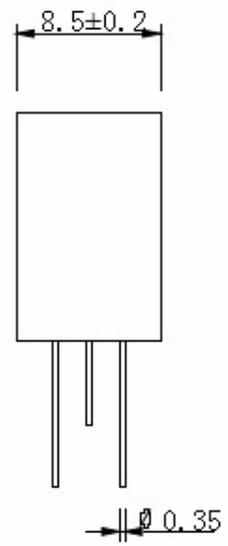
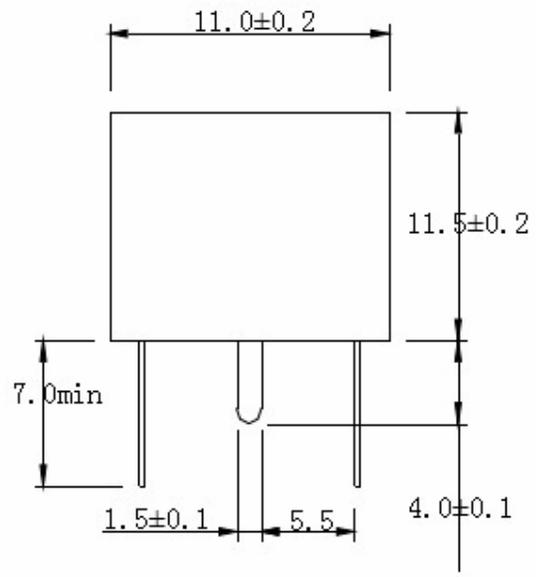
## □ MECHANICAL DATA

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 $-40 \pm 3^{\circ}\text{C}$ 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 $85 \pm 2^{\circ}\text{C}$ 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:  $1450\Omega (\pm 5\%)$ , Ct: 2.0pf



**1#: Input**  
**2#: Ground**  
**3#: Output**  
**4#: Ground**  
**Unit:mm**