## SHOULDER

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:	MCF14DIP-21M15D-E		
PREPARED 编 制:	LEO	CHECKED 审核: YORK	
APPROVED 批准:	LIUMING	DATE日期: 2012-11-23	

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

## 更改历史记录

#### History Record

更改日期 Date	规格书编号 Spec No	产品型号 Part No	客户产品型号 Customer No	更改内容描述 Modify Content	备注 Remark

#### SPECIFICATION SHEET

#### □ APPLICATION

This Standard Will Apply to The Quartz Crystals.

#### □ ELECTRICAL DATA

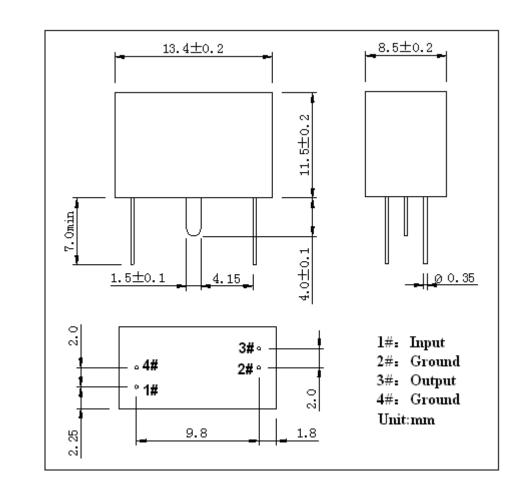
NO	Speciality	Parameter		
01	Holder type	21M15D		
02	Mode of Oscillations	Fundamental		
03	Center Frequency	21.4MHz		
04	Pass bandwidth	±7.5KHz min (at 3.0dB)		
05	Pass band ripple	2.0dB max		
06	Insertion loss	3.5dB max		
07	Stop Band width	±25KHz max (at 80dB)		
08	Terminating impedance	<b>1.6</b> KΩ//1.5pf		
09	Operating Tem. Range	-40~+85°C		
10	Insulated Resistance	500MΩ(max)(DC100V)		
11	Aging per Year	±3ppm		
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### SPECIFICATION SHEET

1. Marking :			
	SDE		
	21M15D		
	211113D		
2.Shock Test :	Dropping from 50 cm height,3 times on 30mm-thick- hard wood,		
	After testing, the electrical data follows the requirement.		
3. Vibration Test:	30 minutes in each direction 10 to 55 Hz, amplitude 0.75mm,		
5. violation rest .	After testing, the electrical data follows the requirement.		
4.Terminal strength :	Tensile: Fix main body of crystal. Load 0.9kg pulling force along,		
	teminal axial for 30±5 seconds. The terminal can not he 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.		
5.Sealing :	The crystal unit shall be immersed in alcohol for 5 minutes with 5kg		
J.Seamig .	pressure per cm2 .Taking out, Testing the resistance between down-		
	lead and fundamental. The resistance shall be at least $500M\Omega(max)$		
	(DC100V).		
	2~3 min		
6.Temperature cycle :	$2 \sim 3$ mm -40°C to +85°C		
	30min 30min		
	After cycling three times, there is no distinct damage on the surface.		
	Capacity testing requirement as vibration.		

#### SPECIFICATION SHEET

7.Solderability :	The lead(2to2.5mm from terminal to bottom) is immersed in a
7.50 defuelinty .	$230\pm5^{\circ}$ C Solder bath within 2±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	The(2 to 2.5mm from terminal to bottom) is immersed in a
soldering heat :	$350\pm10^{\circ}$ C solder bath within $3.5\pm0.5$ seconds.
e	After testing, without distinct damage on the surface.
	Capacity testing requirement as vibration.
9. Resistance to heat :	Resistance to the lowest temperature: Stored at $-40\pm3$ °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±2°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±3°C and RH93%±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.



Title	Dimensions(13.4*8.5*11.5)		Article	21M15D	Page 1 of 1
Date	2012-6-15	Size	mm	Spec.No.	21.4
Issued			Discussed		
Checked			Approved		