

ShenZhen JingGuangHua Electronic Co., Ltd.



# 承认书

SPECIFICATION FOR APPROVAL

	制作 <b>(</b> F	Prepare by	/)	检查(Check by)	批准(Approve by)			
备	注:	RoHS	<u>complia</u>	nce with Direc	tive (EU) 2015/863			
日	期:	Date		2021	-02-08			
频	率:	答: Frequency 9.000MHz						
物料	编号:	Code No		9BC090	0001C2080C3			
客户	料号:	Part No						
货	货 名:Description			HC-49S 石英晶体谐振器				
客户名称: c		Customer	stomer 深圳市立创电子商务有限公司					

客户批准	
Approve by customer	
批准日期	
Approval date	

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#### 1、 Specifications

1	规格型号 Holder Type	HC-49SB
2	标称频率 Nominal Frequency	9.000 MHz
3	振动模式 Mode of Oscillation	基频
4	调整频差 Frequency Tolerance at 25℃	±20ppm
5	温度频差 Temperature Frequency Stability	$\pm$ 30ppm
6	工作温度 Operating Temperature Range	-40~85℃
7	贮存温度 Storage Temperature Range	- <b>40~90</b> ℃
8	负载电容 Load Capacitance	12.5 pF
9	静电容 Shunt capacitance	≪7 pf
10	等效电阻 Equivalent Series Resistance	80 Ω Max
11	激励功率 Drive Level	50uW
12	绝缘阻抗 Insulation Resistance	500MΩ min./DC100V

### 2 Frequency stability over temperature range (AT cut)

Temperature	Frequency Stability								
Range	±3PPM	±5PPM	$\pm$ 7.5PPM	$\pm 10$ PPM	$\pm 20$ PPM	$\pm 30$ PPM	$\pm 50$ PPM	$\pm$ 70PPM	
<b>0</b> °C <b>~</b> +50°C	☆			$\overleftrightarrow$	${\searrow}$		${\swarrow}$	${\not\sim}$	
−10°C <b>~</b> +60°C			☆	\$	☆			\$	
-20°℃ <sup>~</sup> +70°C				\$				Å	
−30°C~+70°C					${\bigtriangledown}$				
-40℃ <sup>~</sup> +85℃						☆	$\overset{\wedge}{\succ}$	Å	
-40°C <sup>~</sup> +125℃						$\overset{\wedge}{\bowtie}$	$\stackrel{\wedge}{\sim}$	\$	



深圳市晶光华电子有限公司

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#### 3、 Dimensions (unit:mm)



### 4, Recommended Reflow profile

Condition:





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### 5、 Reliability specifications

NO	Item	Condition	Standard
		Free drop from 75cm height on a hard	Frequency change:
1.	Drop Test	wooden board for 3 times. (Board is	≪5ppm
		thickness more than 30 mm.)	<b>Rr</b> as specification
2.	Mechanical Shock	Half sine wave, 1000G, 0.5mS, three times for all 3 directions	Frequency change: ≤5ppm Rr as specification
3.	Vibration	Frequency range:10~55hz Amplitude:1.52mm Sweep time:1mintutes perpendicular axes each test time:2Hrs	Frequency change: ≤5ppm Rr as specification
4.	Solderability	Temperature:245 $^{\circ}$ C $\pm$ 5 $^{\circ}$ CImmersing depth:0.5mm minimumImmersion time:5 $\pm$ 1sec.Flux:Rosin resin methyl alcohol solvent(1:4)	90% exhibit tin ok
5.	Resistance to soldering heat	Test temperature:260 $^{\circ}C \pm 5 ^{\circ}C$ Test time :10 $\pm$ 1sec.	Frequency change: ≤10ppm Rr as specification
6.	High Temp &Humidity	85±3℃& RH85%, 500±12 hours	Frequency change: ≪10ppm Rr as specification
7.	Low temperature storage	-40±3℃, 500±12 hours	Frequency change: ≤10ppm Rr as specification
8.	High temperature storage	+85±3℃,500±12 hours	Frequency change: ≪10ppm Rr as specification
9.	Temperature cycling	-40±3℃/10min~+85±3℃/10min, 100cycles	Frequency change: ≪10ppm Rr as specification



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### 6, Packaging standard

Dimension of Inside Package 内包装尺寸图

Dimensions of outside Package



外包装尺寸图





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#### 7-1.MARKING

- (1) Marking Labels are affixed to reel, inner carton and outer carton.
- (2) Each label contains the following information.
  - (a) Manufacture's name or symbol
  - (b) Parts name or type
  - (c) Frequency
  - (d) Quantity
  - (e) Reel number
  - (f) Manufacturer's code (EIAJ code)

#### 7-2. QUANTITY

200pcs/bag

#### 7-3. STORAGE ENVIRONMENT

- ♦ Storage the reel at normal temperature and humidity
- ♦ Open the packing just before using
- ♦ Do not expose the sun
- ♦ Do not storage with some erosive chemicals
- $\diamond$  Nothing is allowed to put on the reel or carton to prevent mechanical damage

#### 7-4. HANDLING

 $\diamond$   $\;$  Handle with care to prevent the damage of tape, reel and products.

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