Jameco Part Number 325024

文件编号：

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SPECIFICATIONS FOR APPROVAL

Customer JAMECO

Part No: TKD-QR-24MHZ000-20P-US Freq 24.000MHz

JAMECO NO. : 325024 Products: HC-49S

Accepted Model: Spec.No: Quartz Crystal

Sample Order: Date: 2005-7-12

Approved By:

菁 盛 企 業 有 限 公 司

GOLDSUN ELECTRONICS Co., Ltd

公司地址：台北縣中和市中正路 716 號 10F (遠東世紀廣場 L 棟)

10F, NO.716 CHUNG CHENG ROAD., CHUNGHO CITY, TAIPEI HSIEN, TAIWAN, R.O.C.

Features

1. Cost effective with excellent reliability
2. Excellent aging
3. Low profile

Partner Number

TKD-QR-24MHZ000-20P-US JAMECO NO. 325024

Electrical Characteristics

Frequency Range	24.000MHz
Calibration Tolerance	+/-30ppm
Temperature Stability	+/-50ppm
Load Capacitance	20pF
Series Resistance	40 Ohm
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-40°C to +85°C
Operating Mode	Fundamental
Drive Level	0.5Mw
Insulation Resistance	500MOHm Min at 100V
Shunt Capacitance	7 pF, Max
Aging	<10 ppm/Yr
Type	HC49US

Reliability Test

Mechanical Performance Tests

1. Shock: The crystal unit is dropped from the height of 50 cm in free fall condition a 30 mm thick hardwood board for three times. (Spec.No.A)
2. Vibration: Subject the sample to 1.5-minute cycles of frequencies of 10 to 55 Hz and amplitudes of 1.5 mm for two hours in each of the X,Y and Z directions, for 6 hours in total. (Spec.No.A)
3. Tensile Strength : Apply a 1.5 kg tensile load to each terminal and sustain it for 30±5 seconds. (Spec.No.A.C.)
4. Bending Strength of Terminal: Apply a 0.5kg load to one of the terminals, and after tilting the main unit for 90^0,restore to its original attitude. Then , tilt it in an opposite direction for $90^{0,}$ and restore toits original attitude .(Spec. NO.A.C)

5. Solderability: Dip terminals in RMA flux for 5±0.5 sec .under room temperature. Dip terminals in a 230±5℃ solder bath for 5±0.5 seconds. The solder shall leave an undipped terminal length of 2 mm at their base . (Spec.No.D)
6. Resistance to Soldering Heat:: Dip terminals in a 260±5℃ solder bath for 10±0.5 seconds. The solder shall leave an undipped terminal length of 2mm at their base. (Spec.No.A)
7. Leakage Test: Take measurements with a helium leak age detector. (Spec.No.E.)

Environmental Tests:

1. Cold:Expose the sample in an inoperative mode to 500 hours in a -40℃.(Spec.No.A)
2. Dry Heat: Expose the sample in an inoperative mode to 500 hours in a +85℃.(Spec.No.B)
3. Damp Heat :Expose the sample in an inoperative mode to 500 hours in a +65℃,and 95%RH. (Spec.No.B)
4. Thermal Shock: Subject the sample to 5 temperature variation cycles at -40℃for 30 minutes and +100℃ for the next 30 minutes in each cycle . (Spec.No.A)

Spec. NO	Specification
A	Any variation between the pre-and post-test frequencies shall remain within ±5PPM.The post-test equivalent series resistance shall remain within its specified tolerance range.
B	Any variation between the pre-and post-test frequencies shall remain within ±10PPM.The post-test equivalent series resistance shall remain within its specified tolerance range.
C	After each test, no visible damage shall be manifested, nor shall the hermetic

	seal break down..
D	At least 90% of each dipped area shall be covered by fresh solder.
E	$1\times10^{2}\mu Pa\cdot m^{3}/s$ Max.

✦ Measurements shall be taken at 25±2℃,and after each test ,the sample be exposed to one to two hours at 25±2℃.

Package Dimension (Unit: mm)

Example